Navy_CLEAN_PFAS_FOIA_request_covers.indd

NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Combined Level 2 and Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Report, SDG 1700920

Naval Air Warfare Center Trenton
Trenton, New Jersey

August 2019

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

N62376.SF.001179
NAWC TRENTON
5090.3c

LABORATORY DATA PACKAGE, 1700920, NAWC TRENTON, NJ
08/17/2017
VISTA ANALYTICAL LABORATORY

August 17, 2017

Vista Work Order No. 1700920

Ms. Mary Mang
Tetra Tech
661 Andersen Drive, Foster Plaza 7
Pittsburgh, PA 15220

Dear Ms. Mang,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 21, 2017. This sample set was analyzed on a standard turn-around time, under your Project Name 'NAWC Trenton'. The SDG Number is WE08.

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.

SDG Number WE08
Vista Work Order No. 1700920
Case Narrative

Sample Condition on Receipt:

Seventeen 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. A discrepancy was noted for the sample collection date for samples "LF-MW-13S-20170719" and "RCDM-MW-12S-20170719" between the Chain of Custody and sample container labels. The client confirmed that the samples were collected on July 19, 2017. The client also confirmed that the handwritten "$" represents the letter "S".

Analytical Notes:

Modified EPA Method 537

Samples "RCDM-MW-28S-20170719", "LF-MW-12S-20170719", "MH-H93-20170720", "MH-C94-20170720", and "LF-MW-28S-20170719" 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.

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
1700920-01	RCDM-MW-28S-20170719	Modified EPA Method 537	13C2-PFDoA	H	48.0
1700920-01	RCDM-MW-28S-20170719	Modified EPA Method 537	13C2-PFTeDA	H	27.1
1700920-02	LF-MW-12S-20170719	Modified EPA Method 537	13C2-PFTeDA	H	46.8
1700920-04	MH-DUP01-20170720	Modified EPA Method 537	13C2-PFTeDA	H	41.7
1700920-06	MH-H93-20170720	Modified EPA Method 537	13C2-PFDoA	H	37.2
1700920-06	MH-H93-20170720	Modified EPA Method 537	13C2-PFTeDA	H	7.80
1700920-07	RCDM-BLANK-20170720	Modified EPA Method 537	13C2-PFTeDA	H	41.3
1700920-08	MH-C94-20170720	Modified EPA Method 537	13C2-PFTeDA	H	15.3
1700920-09	RCDM-MW-13S-20170719	Modified EPA Method 537	13C2-PFTeDA	H	42.0
1700920-10	LF-MW-14S-20170720	Modified EPA Method 537	13C2-PFTeDA	H	49.6
1700920-12	LF-MW-13S-20170719	Modified EPA Method 537	13C2-PFTeDA	H	49.2
1700920-14	RCDM-MW-12S-20170719	Modified EPA Method 537	13C2-PFTeDA	H	28.7
1700920-15	LF-MW-28S-20170719	Modified EPA Method 537	13C2-PFTeDA	H	27.2
1700920-17	FRB04-20170719	Modified EPA Method 537	d3-MeFOSAA	H	43.9
1700920-17	FRB04-20170719	Modified EPA Method 537	13C2-PFUnA	H	48.8
1700920-17	FRB04-20170719	Modified EPA Method 537	d5-EtFOSAA	H	45.3
1700920-17	FRB04-20170719	Modified EPA Method 537	13C2-PFTeDA	H	49.3
B7G0122-BLK1	B7G0122-BLK1	Modified EPA Method 537	d3-MeFOSAA	H	47.5
B7G0122-BLK1	B7G0122-BLK1	Modified EPA Method 537	d5-EtFOSAA	H	48.5
B7G0122-BLK1	B7G0122-BLK1	Modified EPA Method 537	13C2-PFDoA	H	43.2
B7G0122-BLK1	B7G0122-BLK1	Modified EPA Method 537	13C2-PFTeDA	H	40.7
B7G0122-BS1	B7G0122-BS1	Modified EPA Method 537	d3-MeFOSAA	H	36.3
B7G0122-BS1	B7G0122-BS1	Modified EPA Method 537	13C2-PFUnA	H	48.2
B7G0122-BS1	B7G0122-BS1	Modified EPA Method 537	d5-EtFOSAA	H	33.9
B7G0122-BS1	B7G0122-BS1	Modified EPA Method 537	13C2-PFDoA	H	43.6
B7G0122-BS1	B7G0122-BS1	Modified EPA Method 537	13C2-PFTeDA	H	37.1

H = Recovery was outside laboratory acceptance criteria.

In addition, the laboratory QC officer must read and sign a copy of the Quality Assurance Review Form displayed on the next page of this Attachment. Electronic deliverables are not considered to be complete without the accompanying Quality Assurance Review Form.

I Ania Helak, as the designated Quality Assurance Officer, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (916) 673-1520 If there are any questions or problems with the enclosed electronic deliverables.

Signature: [signature] Title: QA Manager Date: 8-14-17

Revision 9
ISG
08/18/16

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1700920-01	RCDM-MW-28S-20170719	19-Jul-17 08:30	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-02	LF-MW-12S-20170719	19-Jul-17 11:15	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-03	RCDM-MW-14S-20170720	20-Jul-17 09:30	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-04	MH-DUP01-20170720	20-Jul-17 07:00	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-05	MH-A97-20170720	20-Jul-17 14:30	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-06	MH-H93-20170720	20-Jul-17 15:10	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-07	RCDM-BLANK-20170720	20-Jul-17 13:00	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-08	MH-C94-20170720	20-Jul-17 15:30	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-09	RCDM-MW-13S-20170719	19-Jul-17 11:45	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-10	LF-MW-14S-20170720	20-Jul-17 11:10	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-11	LF-MW-11BR-20170720	20-Jul-17 11:25	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-12	LF-MW-13S-20170719	19-Jul-17 12:55	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-13	RCDM-MW-11BR-20170720	20-Jul-17 10:15	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-14	RCDM-MW-12S-20170719	19-Jul-17 10:05	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-15	LF-MW-28S-20170719	19-Jul-17 09:45	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-16	DUP-07-20170719	19-Jul-17 12:00	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700920-17	FRB04-20170719	19-Jul-17 11:35	21-Jul-17 09:12	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL

Vista Project: 1700920

Client Project: NAWC Trenton

ANALYTICAL RESULTS

Sample ID: Method Blank — **Modified EPA Method 537**

Matrix: Aqueous
Sample Size: 0.250 L

QC Batch: B7G0122
Date Extracted: 27-Jul-2017 7:52

Lab Sample: B7G0122-BLK1
Date Analyzed: 31-Jul-17 20:00 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	0.895	2.50	4.00	
PFHxA	ND	1.09	2.50	4.00	
PFHpA	ND	0.296	2.50	4.00	
PFHxS	ND	0.474	2.50	4.00	
PFOA	ND	0.326	2.50	4.00	
PFOS	ND	0.404	2.50	4.00	
PFNA	ND	0.405	2.50	4.00	
PFDA	ND	0.745	2.50	4.00	
MeFOSAA	ND	0.825	2.50	4.00	
PFUnA	ND	0.525	2.50	4.00	
EtFOSAA	ND	0.685	2.50	4.00	
PFDoA	ND	0.396	2.50	4.00	
PFTrDA	ND	0.247	2.50	4.00	
PFTeDA	ND	0.378	2.50	4.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	107	50 - 150	
IS	13C2-PFHxA	75.6	50 - 150	
IS	13C4-PFHpA	66.4	50 - 150	
IS	18O2-PFHxS	74.3	50 - 150	
IS	13C2-PFOA	72.6	50 - 150	
IS	13C8-PFOS	72.6	50 - 150	
IS	13C5-PFNA	78.5	50 - 150	
IS	13C2-PFDA	74.4	50 - 150	
IS	d3-MeFOSAA	51.9	50 - 150	
IS	13C2-PFUnA	62.9	50 - 150	
IS	d5-EtFOSAA	51.7	50 - 150	
IS	13C2-PFDoA	44.1	50 - 150	H
IS	13C2-PFTeDA	42.8	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:	B7G0122	Lab Sample:	B7G0122-BS1
Sample Size:	0.250 L	Date Extracted:	27-Jul-2017 7:52	Date Analyzed:	01-Aug-17 14:03 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits
PFBS	39.4	40.0	98.5	70 - 130
PFHxA	44.1	40.0	110	70 - 130
PFHpA	41.6	40.0	104	70 - 130
PFHxS	44.5	40.0	111	70 - 130
PFOA	46.2	40.0	115	70 - 130
PFOS	41.1	40.0	103	70 - 130
PFNA	41.6	40.0	104	70 - 130
PFDA	44.5	40.0	111	70 - 130
MeFOSAA	46.7	40.0	117	70 - 130
PFUnA	41.9	40.0	105	70 - 130
EtFOSAA	38.7	40.0	96.7	70 - 130
PFDoA	38.1	40.0	95.2	70 - 130
PFTrDA	37.1	40.0	92.8	60 - 130
PFTeDA	41.1	40.0	103	70 - 130

	Labeled Standard	%R	LCL-UCL
IS	13C3-PFBS	104	50 - 150
IS	13C2-PFHxA	76.8	50 - 150
IS	13C4-PFHpA	59.1	50 - 150
IS	18O2-PFHxS	67.2	50 - 150
IS	13C2-PFOA	79.7	50 - 150
IS	13C8-PFOS	80.6	50 - 150
IS	13C5-PFNA	65.4	50 - 150
IS	13C2-PFDA	63.3	50 - 150
IS	d3-MeFOSAA	36.3	50 - 150
IS	13C2-PFUnA	48.2	50 - 150
IS	d5-EtFOSAA	33.9	50 - 150
IS	13C2-PFDoA	43.6	50 - 150
IS	13C2-PFTeDA	37.1	50 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: RCDM-MW-28S-20170719

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 19-Jul-2017 8:30
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.111 L

Laboratory Data

Lab Sample: 1700920-01 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 01-Aug-17 14:47 Column: BEH C18
01-Aug-17 18:33 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	300	2.01	5.63	8.98	
PFHxA	989	2.45	5.63	8.98	
PFHpA	390	0.664	5.63	8.98	
PFHxS	1650	5.32	28.2	44.9	D
PFOA	253	0.731	5.63	8.98	
PFOS	2110	4.53	28.2	44.9	D
PFNA	64.6	0.910	5.63	8.98	
PFDA	12.7	1.67	5.63	8.98	
MeFOSAA	ND	1.85	5.63	8.98	
PFUnA	ND	1.18	5.63	8.98	
EtFOSAA	ND	1.54	5.63	8.98	
PFDoA	ND	0.889	5.63	8.98	
PFTrDA	ND	0.555	5.63	8.98	
PFTeDA	ND	0.848	5.63	8.98	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	114	50 - 150	
IS	13C2-PFHxA	82.5	50 - 150	
IS	13C4-PFHpA	60.6	50 - 150	
IS	18O2-PFHxS	87.9	50 - 150	D
IS	13C2-PFOA	78.2	50 - 150	
IS	13C8-PFOS	101	50 - 150	D
IS	13C5-PFNA	66.2	50 - 150	
IS	13C2-PFDA	62.2	50 - 150	
IS	d3-MeFOSAA	71.9	50 - 150	
IS	13C2-PFUnA	70.8	50 - 150	
IS	d5-EtFOSAA	69.4	50 - 150	
IS	13C2-PFDoA	48.0	50 - 150	H
IS	13C2-PFTeDA	27.1	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: LF-MW-12S-20170719

Modified EPA Method 537

Client Data

Name: Tetra Tech
PrHject: NAWC TrentHn
Date CHllected: 19-Jul-2017 11:15
LHcatiHn: TrentHn

Sample Data

Matrix: AqueHus
Sample Size: 0.111 L

Laboratory Data

Lab Sample: 1700920-02 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 01-Aug-17 14:5o CHlumn: BE8 C1o
01-Aug-17 1o:43 CHlumn: BE8 C1o

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	539	2.01	5.63	9.00	
PF8 xA	1550	2.45	5.63	9.00	
PF8 pA	640	0.665	5.63	9.00	
PF8 xS	2360	5.33	2o.2	45.0	D
PFOA	444	0.732	5.63	9.00	
PFOS	2340	4.54	2o.2	45.0	D
PFNA	190	0.911	5.63	9.00	
PFDA	9.26	1.6o	5.63	9.00	
MeFOSAA	ND	1.o6	5.63	9.00	
PFUnA	ND	1.1o	5.63	9.00	
EtFOSAA	ND	1.54	5.63	9.00	
PFDHA	ND	0.o91	5.63	9.00	
PFTrDA	ND	0.556	5.63	9.00	
PFTeDA	ND	0.o49	5.63	9.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	99.3	50 - 150	
IS	13C2-PF8 xA	o1.0	50 - 150	
IS	13C4-PF8 pA	5o.o	50 - 150	
IS	1oO2-PF8 xS	7o.7	50 - 150	D
IS	13C2-PFOA	o5.6	50 - 150	
IS	13Co-PFOS	o6.0	50 - 150	D
IS	13C5-PFNA	6o.3	50 - 150	
IS	13C2-PFDA	72.9	50 - 150	
IS	d3-MeFOSAA	71.o	50 - 150	
IS	13C2-PFUnA	65.5	50 - 150	
IS	d5-EtFOSAA	66.7	50 - 150	
IS	13C2-PFDHA	73.5	50 - 150	
IS	13C2-PFTeDA	46.o	50 - 150	8

DL - DetectiHn limit
RL - RepHrting limit

LCL-UCL - LHwer cHntrHl limit - upper cHntrHl limit
Results repHrted tHDL.
When repHrted, PFBS, PF8 xS, PFOA and PFOS include bHth linear and branched isHmers.
Only the linear isHmer is repHrted fHr all Hther analytes.

Sample ID: RCDM-MW-14S-20170720

Modified EPA Method 537

Client Data

9 ame: j etra j ech
NroRect: 9 AT C j renton
Date Collected: 20-Jul-2017 v:g0
Location: j renton

Sample Data

Matrix: A3ueouq
Sample Size: 0W14 L

Laboratory Data

Lab Sample: 1700v20-0g
QC Batch: B7G0122
Date Analyzed: g1-Jul-17 20:4g Column: BEH C18
Date s eceiRed: 21-Jul-2017 v:12
Date Extracted: 27-Jul-2017 7:52

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
N BS	4FW	1WF	5W8	8W7	
N HxA	184	2Wv	5W8	8W7	
N HpA	40W	0W48	5W8	8W7	
N HxS	447	1W4	5W8	8W7	
N 6 A	41W	0W14	5W8	8W7	
N 6 S	1020	0W84	5W8	8W7	
N 9 A	5W1	0W88	5W8	8W7	J
N DA	9 D	1Wg	5W8	8W7	
Me. 6 SAA	9 D	1W1	5W8	8W7	
N OnA	9 D	1W5	5W8	8W7	
Et. 6 SAA	9 D	1W0	5W8	8W7	
N DoA	9 D	0W8F8	5W8	8W7	
N j rDA	9 D	0W41	5W8	8W7	
N j eDA	9 D	0W27	5W8	8W7	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1gCg-N BS	112	50 - 150	
IS	1gC2-N HxA	78W	50 - 150	
IS	1gC4-N HpA	F7W	50 - 150	
IS	186 2-N HxS	70W	50 - 150	
IS	1gC2-N 6 A	78W	50 - 150	
IS	1gC8-N 6 S	77W	50 - 150	
IS	1gC5-N 9 A	74W	50 - 150	
IS	1gC2-N DA	F1W	50 - 150	
IS	dg-Me. 6 SAA	7vW	50 - 150	
IS	1gC2-N OnA	5vW	50 - 150	
IS	d5-Et. 6 SAA	75W	50 - 150	
IS	1gC2-N DoA	5vW	50 - 150	
IS	1gC2-N j eDA	5FW	50 - 150	

DL - Detection limit

s L - s eportinUlimit

LCL-OCL - Lower control limit - upper control limit

s equltq reported to DLW

T hen reported, N BS, N HxS, N 6 A and N 6 S include both linear and branched iqomerqW

6 nly the linear iqomer iq reported for all other analyteqW

Sample ID: MH-DUP01-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 20-Jul-2017 7:00
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.122 L

Laboratory Data

Lab Sample: 1700920-03 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 11-Aug-17 12:54 Column: BEH C14
81-Jul-17 20:53 Column: BEH C14

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	131	1.43	5.12	4.21	
PFHxA	602	2.23	5.12	4.21	
PFHpA	148	0.607	5.12	4.21	
PFHxS	1070	0.972	5.12	4.21	
PFOA	97.0	0.664	5.12	4.21	
PFOS	1230	3.13	25.6	31.1	D
PFNA	10.6	0.481	5.12	4.21	
PFDA	1.95	1.58	5.12	4.21	J
MeFOSAA	ND	1.69	5.12	4.21	
PFUnA	ND	1.04	5.12	4.21	
EtFOSAA	ND	1.31	5.12	4.21	
PFDoA	ND	0.418	5.12	4.21	
PFTrDA	ND	0.507	5.12	4.21	
PFTeDA	ND	0.775	5.12	4.21	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	18C8-PFBS	106	50 - 150	
IS	18C2-PFHxA	40.3	50 - 150	
IS	18C3-PFHpA	59.4	50 - 150	
IS	14O2-PFHxS	42.0	50 - 150	
IS	18C2-PFOA	73.4	50 - 150	
IS	18C4-PFOS	42.5	50 - 150	D
IS	18C5-PFNA	73.2	50 - 150	
IS	18C2-PFDA	45.9	50 - 150	
IS	d8-MeFOSAA	70.8	50 - 150	
IS	18C2-PFUnA	60.9	50 - 150	
IS	d5-EtFOSAA	66.4	50 - 150	
IS	18C2-PFDoA	54.8	50 - 150	
IS	18C2-PFTeDA	38.4	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: MH-A97-20170720

Modified EPA Method 537

Client Data

9 ame:	j etra j ech
NroRect:	9 AT C j renton
Date Collected:	20-Jul-2017 14:g0
Location:	j renton

Sample Data

Matrix:	A3ueouq
Sample Size:	0W21 L

Laboratory Data

Lab Sample:	1700v20-05	Date s eceiRed:	21-Jul-2017 v:12
QC Batch:	B7G0122	Date Extracted:	27-Jul-2017 7:52
Date Analyzed:	g1-Jul-17 21:04	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
N BS	140	1W85	5W7	8W27	
N HxA	FF2	2W25	5W7	8W27	
N HpA	174	0W11	5W7	8W27	
N HxS	v85	0W7v	5W7	8W27	
N 6 A	11g	0W7g	5W7	8W27	
N 6 S	1840	0W8g5	5W7	8W27	
N 9 A	10W	0W8g8	5W7	8W27	
N DA	9 D	1W54	5W7	8W27	
Me. 6 SAA	9 D	1W71	5W7	8W27	
N OnA	9 D	1W0v	5W7	8W27	
Et. 6 SAA	9 D	1W42	5W7	8W27	
N DoA	9 D	0W81v	5W7	8W27	
N j rDA	9 D	0W511	5W7	8W27	
N j eDA	9 D	0W781	5W7	8W27	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1gCg-N BS	11g	50 - 150	
IS	1gC2-N HxA	7FW	50 - 150	
IS	1gC4-N HpA	70W	50 - 150	
IS	186 2-N HxS	78W	50 - 150	
IS	1gC2-N 6 A	7gW	50 - 150	
IS	1gC8-N 6 S	7gW	50 - 150	
IS	1gC5-N 9 A	71W	50 - 150	
IS	1gC2-N DA	F2W	50 - 150	
IS	dg-Me. 6 SAA	71W	50 - 150	
IS	1gC2-N OnA	75W	50 - 150	
IS	d5-Et. 6 SAA	F5W	50 - 150	
IS	1gC2-N DoA	5FW	50 - 150	
IS	1gC2-N j eDA	58W	50 - 150	

DL - Detection limit

s L - s eportinUlimit

LCL-OCL - Lower control limit - upper control limit

s equltq reported to DLW

T hen reported, N BS, N HxS, N 6 A and N 6 S include both linear and branched iqomerqW

6 nly the linear iqomer iq reported for all other analyteqW

Sample ID: MH-H93-20170720

Modified EPA Method 537

Client Data

v ame: Petra Pech
9r4Nect: v Aj C Prent4n
Date C4llected: 20-Jul-2017 15:10
L4cati4n: Prent4n

Sample Data

Matrix: A8ue4u3
Sample Size: 0T1 1WL

Laboratory Data

Lab Sample: 1700R20-0. Date q eceis ed: 21-Jul-2017 R:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: g1-Jul-17 21:15 C4lumn: BEo C1H

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
9FBS	v D	1TR7	5TWH	HIH1	
9Fo xA	W27	2TW0	5TWH	HIH1	J
9Fo pA	v D	0T 50	5TWH	HIH1	
9Fo xS	R7g	1TDW	5TWH	HIH1	
9F6 A	1Tg.	0T717	5TWH	HIH1	J
9F6 S	R7W	0THHH	5TWH	HIH1	
9Fv A	v D	0THR2	5TWH	HIH1	
9FDA	v D	1T W	5TWH	HIH1	
MeF6 SAA	v D	1TH2	5TWH	HIH1	
9FOnA	v D	1T1.	5TWH	HIH1	
EtF6 SAA	v D	1T51	5TWH	HIH1	
9FD4A	v D	0TH72	5TWH	HIH1	
9FPrDA	v D	0T5WW	5TWH	HIH1	
9FPeDA	v D	0THg1	5TWH	HIH1	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1gCg-9FBS	11H	50 - 150	
IS	1gC2-9Fo xA	7HI1	50 - 150	
IS	1gCW9Fo pA	. 7I1	50 - 150	
IS	1H6 2-9Fo xS	H5T0	50 - 150	
IS	1gC2-9F6 A	7RIH	50 - 150	
IS	1gCH-9F6 S	H0TR	50 - 150	
IS	1gC5-9Fv A	H7T2	50 - 150	
IS	1gC2-9FDA	H1T1	50 - 150	
IS	dg-MeF6 SAA	. RI1	50 - 150	
IS	1gC2-9FOnA	. gT5	50 - 150	
IS	d5-EtF6 SAA	57T7	50 - 150	
IS	1gC2-9FD4A	gHI0	50 - 150	o
IS	1gC2-9FPeDA	HI20	50 - 150	o

DL - Detecti4n limit
q L - q ep4rtinUlimit

LCL-OCL - L4wer c4ntr4l limit - upper c4ntr4l limit
q e3ult3 rep4rted t4 DLT
j hen rep4rted, 9FBS, 9Fo xS, 9F6 A and 9F6 S include b4th linear and branched i34mer3T
6 nly the linear i34mer i3 rep4rted f4r all 4ther analyte3T

Sample ID: RCDM-BLANK-20170720

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
v ame:	Petra Pech	Matrix:	A8ue4u3	Lab Sample:	1700R20-07	Date q eceis ed:	21-Jul-2017 R:12
9r4Nect:	v Aj C Prent4n	Sample Size:	0T1 1R L	QC Batch:	B7G0122	Date Extracted:	27-Jul-2017 7:52
Date C4llected:	20-Jul-2017 1g:00			Date Analyzed:	g1-Jul-17 21:57 C4lumn: BEo C1H		
L4cati4n:	Prent4n						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
9WBS	v D	1THH	5'25	HT2	
9W6 xA	v D	2Tg0	5'25	HT2	
9W6 pA	v D	0TF22	5'25	HT2	
9W6 xS	v D	0TRR7	5'25	HT2	
9W6 A	v D	0TFH5	5'25	HT2	
9W6 S	v D	0TH50	5'25	HT2	
9Wv A	v D	0TH5g	5'25	HT2	
9WDA	v D	1'57	5'25	HT2	
MeW6 SAA	v D	1T7.	5'25	HT2	
9WOnA	v D	1TT1	5'25	HT2	
EtW6 SAA	v D	1T .	5'25	HT2	
9WD4A	v D	0THg.	5'25	HT2	
9WPrDA	v D	0'520	5'25	HT2	
9WPeDA	v D	0T7R5	5'25	HT2	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1gCg-9WBS	RFT0	50 - 150	
IS	1gC2-9W6 xA	72'H	50 - 150	
IS	1gC. -9W6 pA	F1'5	50 - 150	
IS	1H6 2-9W6 xS	H2'2	50 - 150	
IS	1gC2-9W6 A	H5'F	50 - 150	
IS	1gCH-9W6 S	72'0	50 - 150	
IS	1gC5-9Wv A	70'7	50 - 150	
IS	1gC2-9WDA	70'R	50 - 150	
IS	dg-MeW6 SAA	F2'H	50 - 150	
IS	1gC2-9WOnA	5gT0	50 - 150	
IS	d5-EtW6 SAA	F0'H	50 - 150	
IS	1gC2-9WD4A	55'R	50 - 150	
IS	1gC2-9WPeDA	. g'5	50 - 150	o

DL - Detecti4n limit

q L - q ep4rtinUlimit

LCL-OCL - L4wer c4ntr4l limit - upper c4ntr4l limit

q e3ult3 rep4rted t4 DLT

j hen rep4rted, 9WBS, 9W6 xS, 9W6 A and 9W6 S include b4th linear and branched i34mer3T

6 nly the linear i34mer i3 rep4rted f4r all 4ther analyte3T

Sample ID: MH-C94-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
PrHject: NAWC TrentHn
Date CHllected: 20-Jul-2017 15:30
LHcatiHn: TrentHn

Sample Data

Matrix: AqueHus
Sample Size: 0.11F L

Laboratory Data

Lab Sample: 1700920-04 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 01-Aug-17 14:5o CHlumn: BE8 C14
31-Jul-17 22:04 CHlumn: BE8 C14

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
P6BS	217	1.93	5.39	4.Fo	
P68xA	90o	2.3F	5.39	4.Fo	
P68pA	243	0.F39	5.39	4.Fo	
P68xS	1120	1.02	5.39	4.Fo	
P6OA	1o4	0.703	5.39	4.Fo	
P6OS	o1o0	o.3F	2F.9	o3.2	D
P6NA	13.o	0.475	5.39	4.Fo	
P6DA	5.Fo	1.F1	5.39	4.Fo	J
Me6OSAA	ND	1.74	5.39	4.Fo	
P6UnA	ND	1.13	5.39	4.Fo	
Et6OSAA	ND	1.o4	5.39	4.Fo	
P6DHA	ND	0.45F	5.39	4.Fo	
P6TrDA	ND	0.53o	5.39	4.Fo	
P6TeDA	ND	0.41F	5.39	4.Fo	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-P6BS	110	50 - 150	
IS	13C2-P68xA	42.9	50 - 150	
IS	13Co-P68pA	F7.4	50 - 150	
IS	14O2-P68xS	47.9	50 - 150	
IS	13C2-P6OA	77.F	50 - 150	
IS	13C4-P6OS	F4.o	50 - 150	D
IS	13C5-P6NA	75.4	50 - 150	
IS	13C2-P6DA	7o.F	50 - 150	
IS	d3-Me6OSAA	7o.7	50 - 150	
IS	13C2-P6UnA	F4.5	50 - 150	
IS	d5-Et6OSAA	F7.3	50 - 150	
IS	13C2-P6DHA	59.o	50 - 150	
IS	13C2-P6TeDA	1F.2	50 - 150	8

DL - DetectiHn limit
RL - RepHrting limit

LCL-UCL - LHwer cHntrHl limit - upper cHntrHl limit
Results repHrted tHDL.
When repHrted, P6BS, P68xS, P6OA and P6OS include bHth linear and branched isHmers.
Only the linear isHmer is repHrted fHr all Hther analytes.

Sample ID: RCDM-MW-13S-20170719

Modified EPA Method 537

Client Data

v ame: j etra j ech
9roNct: v AT C j renton
Date Collected: 14-Jul-2017 11:P5
Location: j renton

Sample Data

Matrix: A3ueouq
Sample Size: 0W14 L

Laboratory Data

Lab Sample: 1700420-04 Date s eceiRed: 21-Jul-2017 4:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: g1-Jul-17 22:14 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
9. BS	57W2	1W84	5W25	8WWg	
9. HxA	2g4	2Wg0	5W25	8WWg	
9. HpA	F2WW	0WW2g	5W25	8WWg	
9. HxS	F27	0WW48	5W25	8WWg	
9. 6 A	52WW	0WW8F	5W25	8WWg	
9. 6 S	1700	0W850	5W25	8WWg	
9. v A	7WW1	0W85g	5W25	8WWg	J
9. DA	2WW7	1WW7	5W25	8WWg	J
Me. 6 SAA	v D	1WWP	5W25	8WWg	
9. OnA	v D	1WW1	5W25	8WWg	
Et. 6 SAA	v D	1WWP	5W25	8WWg	
9. DoA	v D	0W8gP	5W25	8WWg	
9. j rDA	v D	0W520	5W25	8WWg	
9. j eDA	v D	0WW45	5W25	8WWg	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1gCg-9. BS	112	50 - 150	
IS	1gC2-9. HxA	74WW	50 - 150	
IS	1gCP-9. HpA	FFWW	50 - 150	
IS	186 2-9. HxS	7FWW	50 - 150	
IS	1gC2-9. 6 A	7PW2	50 - 150	
IS	1gC8-9. 6 S	7gWW	50 - 150	
IS	1gC5-9. v A	F4W2	50 - 150	
IS	1gC2-9. DA	F7W8	50 - 150	
IS	dg-Me. 6 SAA	7PWW	50 - 150	
IS	1gC2-9. OnA	F1WW	50 - 150	
IS	d5-Et. 6 SAA	7PW8	50 - 150	
IS	1gC2-9. DoA	F7WW	50 - 150	
IS	1gC2-9. j eDA	PPW2	50 - 150	H

DL - Detection limit

s L - s eportinUlimit

LCL-OCL - Lower control limit - upper control limit
s equltq reported to DLW
T hen reported, 9. BS, 9. HxS, 9. 6 A and 9. 6 S include both linear and branched iqomerqW
6 nly the linear iqomer iq reported for all other analyteqW

Sample ID: LF-MW-14S-20170720

Modified EPA Method 537

Client Data

v ame: Petra Pech
9r4Nect: v Aj C Prent4n
Date C4llected: 20-Jul-2017 11:10
L4cati4n: Prent4n

Sample Data

Matrix: A8ue4u3
Sample Size: 0T15 L

Laboratory Data

Lab Sample: 1700R20-10
QC Batch: B7G0122
Date Analyzed: g1-Jul-17 22:g0 C4lumn: BEo C1H
Date q eceis ed: 21-Jul-2017 R:12
Date Extracted: 27-Jul-2017 7:52

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
9WBS	51T	1TR5	5T g	HI71	
9W6 xA	211	2Tg7	5T g	HI71	
9W6 pA	. R5	0TF. g	5T g	HI71	
9W6 xS	. HR	1TDg	5T g	HI71	
9W6 A	. 0TR	0T70R	5T g	HI71	
9W6 S	1220	0TH7R	5T g	HI71	
9Wv A	F5R	0THH2	5T g	HI71	J
9WDA	v D	1TF2	5T g	HI71	
MeW6 SAA	v D	1THD	5T g	HI71	
9WOnA	v D	1TI.	5T g	HI71	
EtW6 SAA	v D	1T R	5T g	HI71	
9WD4A	v D	0THF2	5T g	HI71	
9WPrDA	v D	0T5gH	5T g	HI71	
9WPeDA	v D	0TH22	5T g	HI71	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1gCg-9WBS	11H	50 - 150	
IS	1gC2-9W6 xA	HITR	50 - 150	
IS	1gC. -9W6 pA	F7TD	50 - 150	
IS	1H6 2-9W6 xS	H7TD	50 - 150	
IS	1gC2-9W6 A	H2T2	50 - 150	
IS	1gCH-9W6 S	H2TI	50 - 150	
IS	1gC5-9Wv A	7gT	50 - 150	
IS	1gC2-9WDA	F. TR	50 - 150	
IS	dg-MeW6 SAA	FHII	50 - 150	
IS	1gC2-9WOnA	5HIH	50 - 150	
IS	d5-EtW6 SAA	F. TD	50 - 150	
IS	1gC2-9WD4A	5RTD	50 - 150	
IS	1gC2-9WPeDA	52TI	50 - 150	

DL - Detecti4n limit
q L - q ep4rtinUlimit

LCL-OCL - L4wer c4ntr4l limit - upper c4ntr4l limit
q e3ult3 rep4rted t4 DLT
j hen rep4rted, 9WBS, 9W6 xS, 9W6 A and 9W6 S include b4th linear and branched i34mer3T
6 nly the linear i34mer i3 rep4rted f4r all 4ther analyte3T

Sample ID: LF-MW-11BR-20170720

Modified EPA Method 537

Client Data

v ame: Petra Pech
9roNect: v Aj C Prenton
Date Collected: 20-Jul-2017 11:25
Location: Prenton

Sample Data

Matrix: A8ueou3
Sample Size: 0T17 L

Laboratory Data

Lab Sample: 1700R20-11
QC Batch: B7G0122
Date Analyzed: 01-Aug-17 17:14 Column: BEH C14
Date q ceis ed: 21-Jul-2017 R:12
Date Extracted: 27-Jul-2017 7:52

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
9WBS	5. T2	1TR2	5TF.	4T57	
9WHxA	2F0	2TF.	5TF.	4T57	
9WHpA	50T2	0T6FF	5TF.	4T57	
9WHxS	. 60	1TD1	5TF.	4T57	
9WOA	. 4TR	0T6R4	5TF.	4T57	
9WOS	1F10	0TH65	5TF.	4T57	
9Ww A	5T65	0TH64	5TF.	4T57	J
9WDA	1T6R	1T60	5TF.	4T57	J
MeWOSAA	v D	1T77	5TF.	4T57	
9WUnA	v D	1TIF	5TF.	4T57	
EtWOSAA	v D	1TT7	5TF.	4T57	
9WDoA	v D	0TH. R	5TF.	4T57	
9WPrDA	v D	0T52R	5TF.	4T57	
9WPeDA	v D	0TH0R	5TF.	4T57	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1FCF-9WBS	111	50 - 150	
IS	1FC2-9WHxA	40TF	50 - 150	
IS	1FC. -9WHpA	5RT5	50 - 150	
IS	14O2-9WHxS	4. T	50 - 150	
IS	1FC2-9WOA	71TD	50 - 150	
IS	1FC4-9WOS	46T	50 - 150	
IS	1FC5-9Ww A	65TI	50 - 150	
IS	1FC2-9WDA	77TD	50 - 150	
IS	dF-MeWOSAA	60TH	50 - 150	
IS	1FC2-9WUnA	65TH	50 - 150	
IS	d5-EtWOSAA	6RT5	50 - 150	
IS	1FC2-9WDoA	65TH	50 - 150	
IS	1FC2-9WPeDA	57T	50 - 150	

DL - Detection limit
q L - q eporting limit

LCL-UCL - Lower control limit - upper control limit
q e3ult3 reported to DLT
j hen reported, 9WBS, 9WHxS, 9WOA and 9WOS include both linear and branched i3omer3T
Only the linear i3omer i3 reported for all other analyte3T

Sample ID: LF-MW-13S-20170719

Modified EPA Method 537

Client Data

v ame: Petra Pech
9r4Nect: v Aj C Prent4n
Date C4llected: 1R-Jul-2017 12:55
L4cati4n: Prent4n

Sample Data

Matrix: A8ue4u3
Sample Size: 0T117 L

Laboratory Data

Lab Sample: 1700R20-12
QC Batch: B7G0122
Date Analyzed: g1-Jul-17 22:52 C4lumn: BEo C1H
Date q ceis ed: 21-Jul-2017 R:12
Date Extracted: 27-Jul-2017 7:52

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
9WBS	. HEg	1TR2	5TgF	HT57	
9W6 xA	2R1	2TgF	5TgF	HT57	
9W6 pA	. HD	0T gg	5TgF	HT57	
9W6 xS	. . 0	1TD1	5TgF	HT57	
9W6 A	5RTI	0T R7	5TgF	HT57	
9W6 S	1R00	0TH 5	5TgF	HT57	
9Ww A	HT7.	0TH H	5TgF	HT57	
9WDA	1TR1	1T 0	5TgF	HT57	J
MeW6 SAA	v D	1T77	5TgF	HT57	
9WOnA	v D	1TI2	5TgF	HT57	
EtW6 SAA	v D	1TF7	5TgF	HT57	
9WD4A	v D	0THFR	5TgF	HT57	
9WPrDA	v D	0T52R	5TgF	HT57	
9WPeDA	v D	0THDR	5TgF	HT57	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1gCg-9WBS	112	50 - 150	
IS	1gC2-9W6 xA	7HIR	50 - 150	
IS	1gCF-9W6 pA	. 7TR	50 - 150	
IS	1H6 2-9W6 xS	HDT5	50 - 150	
IS	1gC2-9W6 A	HDTF	50 - 150	
IS	1gCH-9W6 S	72T2	50 - 150	
IS	1gC5-9Ww A	7RT7	50 - 150	
IS	1gC2-9WDA	. . TD	50 - 150	
IS	dg-MeW6 SAA	7FT	50 - 150	
IS	1gC2-9WOnA	. . T7	50 - 150	
IS	d5-EtW6 SAA	. . T7	50 - 150	
IS	1gC2-9WD4A	5HEg	50 - 150	
IS	1gC2-9WPeDA	51T7	50 - 150	

DL - Detecti4n limit
q L - q ep4rtinUlimit

LCL-OCL - L4wer c4ntr4l limit - upper c4ntr4l limit
q e3ult3 rep4rted t4 DLT
j hen rep4rted, 9WBS, 9W6 xS, 9W6 A and 9W6 S include b4th linear and branched i34mer3T
6 nly the linear i34mer i3 rep4rted f4r all 4ther analyte3T

Sample ID: RCDM-MW-11BR-20170720

Modified EPA Method 537

Client Data

v ame: Petra Pech
9r4Nect: v Aj C Prent4n
Date C4llected: 20-Jul-2017 10:15
L4cati4n: Prent4n

Sample Data

Matrix: A8ue4u3
Sample Size: 0T1HL

Laboratory Data

Lab Sample: 1700R20-1g
QC Batch: B7G0122
Date Analyzed: g1-Jul-17 2g:0g C4lumn: BEo C1H
Date q ceis ed: 21-Jul-2017 R:12
Date Extracted: 27-Jul-2017 7:52

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
9WBS	. 2TR	1THR	5Tg0	HIF7	
9W6 xA	2F7	2Tg1	5Tg0	HIF7	
9W6 pA	5. T2	0T 25	5Tg0	HIF7	
9W6 xS	5g1	1T00	5Tg0	HIF7	
9W6 A	F7T7	0T HR	5Tg0	HIF7	
9W6 S	15g0	0TH5F	5Tg0	HIF7	
9Wv A	5T 2	0TH57	5Tg0	HIF7	J
9WDA	1THF	1T5H	5Tg0	HIF7	J
MeW6 SAA	v D	1T75	5Tg0	HIF7	
9WOnA	v D	1TI1	5Tg0	HIF7	
EtW6 SAA	v D	1TF5	5Tg0	HIF7	
9WD4A	v D	0THgH	5Tg0	HIF7	
9WPrDA	v D	0T52g	5Tg0	HIF7	
9WPeDA	v D	0T7RR	5Tg0	HIF7	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1gCg-9WBS	121	50 - 150	
IS	1gC2-9W6 xA	H5TF	50 - 150	
IS	1gCF-9W6 pA	. gT7	50 - 150	
IS	1H6 2-9W6 xS	H5T2	50 - 150	
IS	1gC2-9W6 A	H0TH	50 - 150	
IS	1gCH-9W6 S	HFTF	50 - 150	
IS	1gC5-9Wv A	7HI7	50 - 150	
IS	1gC2-9WDA	75TR	50 - 150	
IS	dg-MeW6 SAA	HFTF	50 - 150	
IS	1gC2-9WOnA	7FT	50 - 150	
IS	d5-EtW6 SAA	HHI5	50 - 150	
IS	1gC2-9WD4A	7FT7	50 - 150	
IS	1gC2-9WPeDA	. 2T0	50 - 150	

DL - Detecti4n limit

q L - q ep4rtinUlimit

LCL-OCL - L4wer c4ntr4l limit - upper c4ntr4l limit

q e3ult3 rep4rted t4 DLT

j hen rep4rted, 9WBS, 9W6 xS, 9W6 A and 9W6 S include b4th linear and branched i34mer3T

6 nly the linear i34mer i3 rep4rted f4r all 4ther analyte3T

Sample ID: RCDM-MW-12S-20170719

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
9 ame:	j etra j ech	Matrix:	AqueHus	Lab Sample:	1700420-1F	Date Received:	21-Jul-2017 4:12
NrHRect:	9 AT C j rentHn	Sample Size:	0W1. L	QC Batch:	B7G0122	Date Extracted:	27-Jul-2017 7:52
Date CHllected:	14-Jul-2017 10:05			Date Analyzed:	01-Aug-17 14:o4 CHlumn: BE8 C13		
LHcatiHn:	j rentHn				o1-Jul-17 2o:1o CHlumn: BE8 C13		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
N6BS	501	1WWo	5Ww4	3W1	
N68xA	1. o0	2Ww5	5Ww4	3W1	
N68pA	. 31	0Wo.	5Ww4	3W1	
N68xS	2210	5WW4	2. WW	FoWW	D
N6OA	F2o	0WW00	5Ww4	3W1	
N6OS	2710	FWwF	2. WW	FoWW	D
N69A	20.	0WW71	5Ww4	3W1	
N6DA	4WW2	1WW0	5Ww4	3W1	
Me6OSAA	9 D	1WW3	5Ww4	3W1	
N6UnA	9 D	1WWo	5Ww4	3W1	
Et6OSAA	9 D	1WW7	5Ww4	3W1	
N6DHA	9 D	0WW52	5Ww4	3W1	
N6j rDA	9 D	0WWo1	5Ww4	3W1	
N6j eDA	9 D	0WW12	5Ww4	3W1	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1oCo-N6BS	114	50 - 150	
IS	1oC2-N68xA	37WW	50 - 150	
IS	1oCF-N68pA	7FWW	50 - 150	
IS	13O2-N68xS	4. WW	50 - 150	D
IS	1oC2-N6OA	35WW	50 - 150	
IS	1oC3-N6OS	75WW	50 - 150	D
IS	1oC5-N69A	73WW	50 - 150	
IS	1oC2-N6DA	32WW	50 - 150	
IS	do-Me6OSAA	. 7WW	50 - 150	
IS	1oC2-N6UnA	30WW	50 - 150	
IS	d5-Et6OSAA	. . WW	50 - 150	
IS	1oC2-N6DHA	. 2WW	50 - 150	
IS	1oC2-N6j eDA	o0WW	50 - 150	8

DL - DetectiHn limit

RL - RepHrting limit

LCL-UCL - LHwer cHntrHl limit - upper cHntrHl limit

Results repHrted tHDLW

T hen repHrted, N6BS, N68xS, N6OA and N6OS include bHth linear and branched isHmersW

Only the linear isHmer is repHrted fHr all Hther analytesW

Sample ID: LF-MW-28S-20170719

Modified EPA Method 537

Client Data

Name: Tetra Tech
PrHject: NAWC TrentHn
Date CHllected: 14-Jul-2017 4:o5
LHcatiHn: TrentHn

Sample Data

Matrix: AsueHuR
Sample Size: 0.11F L

Laboratory Data

Lab Sample: 1700420-15
QC Batch: B7G0122
Date Analyzed: 01-Aug-17 14:o4 CHlumn: BE8 C13
q1-Jul-17 2q:2o CHlumn: BE8 C13
Date v ecei9ed: 21-Jul-2017 4:12
Date Extracted: 27-Jul-2017 7:52

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
P6BS	2oq	1.4q	5.q4	3.Fo	
P68xA	33o	2.q5	5.q4	3.Fo	
P68pA	q11	0.Fq3	5.q4	3.Fo	
P68xS	1F70	1.02	5.q4	3.Fo	
P6OA	217	0.70q	5.q4	3.Fo	
P6OS	1430	o.qF	2F.4	oq.2	D
P6NA	55.1	0.375	5.q4	3.Fo	
P6DA	4.F2	1.F1	5.q4	3.Fo	
Me6OSAA	ND	1.73	5.q4	3.Fo	
P6UnA	ND	1.1q	5.q4	3.Fo	
Et6OSAA	ND	1.o3	5.q4	3.Fo	
P6DHA	ND	0.35F	5.q4	3.Fo	
P6TrDA	ND	0.5qo	5.q4	3.Fo	
P6TeDA	ND	0.31F	5.q4	3.Fo	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1qCq-P6BS	112	50 - 150	
IS	1qC2-P68xA	73.3	50 - 150	
IS	1qCo-P68pA	F7.4	50 - 150	
IS	13O2-P68xS	74.q	50 - 150	
IS	1qC2-P6OA	F3.o	50 - 150	
IS	1qC3-P6OS	7F.q	50 - 150	D
IS	1qC5-P6NA	70.4	50 - 150	
IS	1qC2-P6DA	75.2	50 - 150	
IS	dq-Me6OSAA	Fq.2	50 - 150	
IS	1qC2-P6UnA	FF.o	50 - 150	
IS	d5-Et6OSAA	Fo.3	50 - 150	
IS	1qC2-P6DHA	F1.0	50 - 150	
IS	1qC2-P6TeDA	23.F	50 - 150	8

DL - DetectiHn limit
v L - v epHrting limit

LCL-UCL - LHwer cHntrHl limit - upper cHntrHl limit
v eRultRrepHrted tHDL.
When repHrted, P6BS, P68xS, P6OA and P6OS include bHth linear and branched iRHmerR
Only the linear iRHmer iRrepHrted fHr all HtherR analyteR

Sample ID: DUP-07-20170719

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
9 ame:	j etra j ech	Matrix:	A3ueouq	Lab Sample:	1700v20-1.	Date s eceiRed:	21-Jul-2017 v:12
NroRect:	9 AT C j renton	Sample Size:	0W20 L	QC Batch:	B7G0122	Date Extracted:	27-Jul-2017 7:52
Date Collected:	1v-Jul-2017 12:00			Date Analyzed:	01-Aug-17 14:11 Column: BEH C14		
Location:	j renton				11-Aug-17 18:28 Column: BEH C14		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
NFBS	. 0W	1W.	5W1	4W2	
NFHxA	257	2W7	5W1	4W2	
NFHpA	. . W	0W16	5W1	4W2	
NFHxS	. v0	0W45	5W1	4W2	
NFOA	. 0W	0W77	5W1	4W2	
NFOS	1210	6W0	2. W	61W	D
NF9 A	vW0	0W62	5W1	4W2	
NFDA	2W0	1W5	5W1	4W2	J
MeFOSAA	9 D	1W2	5W1	4W2	
NFUnA	9 D	1W	5W1	4W2	
EtFOSAA	9 D	1W2	5W1	4W2	
NFDoA	9 D	0W28	5W1	4W2	
NFj rDA	9 D	0W16	5W1	4W2	
NFj eDA	9 D	0W45	5W1	4W2	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	18C8-NFBS	117	50 - 150	
IS	18C2-NFHxA	42W	50 - 150	
IS	18C6-NFHpA	57W	50 - 150	
IS	14O2-NFHxS	78W	50 - 150	
IS	18C2-NFOA	76W	50 - 150	
IS	18C4-NFOS	42W	50 - 150	D
IS	18C5-NF9 A	. 7W	50 - 150	
IS	18C2-NFDA	71W	50 - 150	
IS	d8-MeFOSAA	54W	50 - 150	
IS	18C2-NFUnA	5. W	50 - 150	
IS	d5-EtFOSAA	55W	50 - 150	
IS	18C2-NFDoA	. 0W	50 - 150	
IS	18C2-NFj eDA	57W	50 - 150	

DL - Detection limit

s L - s eporting limit

LCL-UCL - Lower control limit - upper control limit

s equltq reported to DLW

T hen reported, NFBS, NFHxS, NFOA and NFOS include both linear and branched iqomerqW

Only the linear iqomer iq reported for all other analyteqW

Sample ID: FRB04-20170719

Modified EPA Method 537

Client Data

9 ame: j etra j ech
NroRect: 9 AT C j renton
Date Collected: 1v-Jul-2017 11:g5
Location: j renton

Sample Data

Matrix: A3ueouq
Sample Size: 0W10 L

Laboratory Data

Lab Sample: 1700v20-17
QC Batch: B7G0122
Date Analyzed: g1-Jul-17 2g:45 Column: BEH C18
Date s eceiRed: 21-Jul-2017 v:12
Date Extracted: 27-Jul-2017 7:52

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
N BS	9 D	2W0g	5W8	vW0v	
N HxA	9 D	2W48	5W8	vW0v	
N HpA	9 D	0W71	5W8	vW0v	
N HxS	9 D	1W08	5W8	vW0v	
N 6 A	9 D	0W7gv	5W8	vW0v	
N 6 S	9 D	0W1F	5W8	vW0v	
N 9 A	9 D	0W20	5W8	vW0v	
N DA	9 D	1WWv	5W8	vW0v	
Me. 6 SAA	9 D	1W87	5W8	vW0v	
N OnA	9 D	1WWv	5W8	vW0v	
Et. 6 SAA	9 D	1W5F	5W8	vW0v	
N DoA	9 D	0W8vv	5W8	vW0v	
N j rDA	9 D	0W5F1	5W8	vW0v	
N j eDA	9 D	0W857	5W8	vW0v	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	1gCg-N BS	121	50 - 150	
IS	1gC2-N HxA	84W	50 - 150	
IS	1gC4-N HpA	F8W	50 - 150	
IS	186 2-N HxS	7vW	50 - 150	
IS	1gC2-N 6 A	75W	50 - 150	
IS	1gC8-N 6 S	77W	50 - 150	
IS	1gC5-N 9 A	8gW	50 - 150	
IS	1gC2-N DA	7FW	50 - 150	
IS	dg-Me. 6 SAA	48W	50 - 150	H
IS	1gC2-N OnA	50W	50 - 150	
IS	d5-Et. 6 SAA	48W	50 - 150	H
IS	1gC2-N DoA	55W	50 - 150	
IS	1gC2-N j eDA	51W	50 - 150	

DL - Detection limit

s L - s eportinUlimit

LCL-OCL - Lower control limit - upper control limit

s equltq reported to DLW

T hen reported, N BS, N HxS, N 6 A and N 6 S include both linear and branched iqomerqW

6 nly the linear iqomer iq reported for all other analyteqW

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
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

Submit by Email*

1/2

Vista

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY
Laboratory Project ID: 1700920 Temp 1.9 °C
Storage ID: WR-2 Storage Secured: Yes ☑ No ☐

TAT: (Check One)
Standard ◉ 21 days
Rush (surcharge may apply)
◯ 14 days ◯ 7 days Specify:

Project I.D.: **NAWC Trenton** P.O. #: **1132341-WR3** Sampler: **Chuck Myer** (Name)

Invoice to: Name	Company	Address	City	State	Zip	Ph#	Fax #
Tetra Tech	**Foster Plaza VII**	**661 Anderson Drive**	**Pittsburgh**	**PA**	**15220**	**412-921-7090**	**412-921-4040**

Relinquished by: (Printed Name and Signature)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Chuck Myer	**7/20/2017**	**18:00**	B. Benedict B. Benedict	07/21/17	0925
Relinquished by: (Printed Name and Signature)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

ATTN: **Sample Custodian**

Method of Shipment: **FedEx**

Tracking No.:

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF	EPA8280 PCDD/PCDF	EPA1668 TOTALS	EPA1668 COPLANAR PCBs	EPA1668 209 CONGENERS	EPA1668 PBDE	EPA1668 PAH	EPA1668 WHO-29	EPA1614 PFAS 14 EPA Method 537	CARB429
RCDM-MW-28S-20170719	7/19/17	08:30	Trenton	2	PJ	AQ															x		
LF-MW-12S-20170719	7/19/17	11:15	Trenton	2	PJ	AQ															x		
RCDM-MW-14S-20170720	7/20/17	09:30	Trenton	2	PJ	AQ															x		
MH-DUP01-20170720	7/20/17	07:00	Trenton		PJ	AQ															x		
MH-A97-20170720	7/20/17	14:30	Trenton	2	PJ	AQ															x		
MH-H93-20170720	7/20/17	15:10	Trenton	2	PJ	AQ															x		
RCDM-BLANK-20170720	7/20/17	13:00	Trenton	2	PJ	AQ															x		
MH-C94-20170720	7/20/17	15:30	Trenton	2	PJ	AQ															x		
RCDM-MW-13S-20170719	7/19/17	11:45	Trenton	2	PJ	AQ															x		
LF-MW-14S-20170720	7/20/17	11:10	Trenton	2	PJ	AQ															x		

Special Instructions/Comments:
FedEx 6612 1992 7345

SEND DOCUMENTATION AND RESULTS TO:

Name: **Mary Mang**
Company: **Tetra Tech**
Address: **234 Mall Blvd Suite 260**
City: **King of Prussia** State: **PA** Zip: **19406**
Phone: **610-382-1174** Fax: **610-491-9645**
Email: **mary.mang@tetratech.com**

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O = Other **PJ**

***Bottle Preservative Type:** ☐ T = Thiosulfate,
☐ O = Other

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B=Blood/Serum
O = Other AQ

Submit by Email*

Vista

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY
Laboratory Project ID: 1700920 Temp 1.9 °C
Storage ID: WR-2 Storage Secured: Yes ☑ No ☐

TAT: (Check One)
Standard ◉ 21 days
Rush (surcharge may apply)
◯ 14 days ◯ 7 days Specify:

Project I.D.: **NAWC Trenton** P.O. #: **1132341-WR3** Sampler: **Chuck Myer** (Name)

Invoice to: Name	Company	Address	City	State	Zip	Ph#	Fax #
Tetra Tech	**Foster Plaza VII**	**661 Anderson Drive**	**Pittsburgh**	**PA**	**15220**	**412-921-7090**	**412-921-4040**

Relinquished by: (Printed Name and Signature)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Chuck Myer	**7/20/2017**	**18:00**	Beth Benedict B. Benedict	07/21/17	0925
Relinquished by: (Printed Name and Signature)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

Method of Shipment: **FedEx**

Tracking No.:

ATTN: **Sample Custodian**

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF	EPA8280 PCDD/PCDF	EPA1668 TOTALS	EPA1668 COPLANAR PCBs	EPA1668 209 CONGENERS	EPA1614 PBDE	CARB429 PAH	CARB429 WHO-29	PFAS 14 EPA Method 537
LF-MW-11BR-20170720	7/2017	11:25	Trenton	2	PJ	AQ															X	
LF-MW-13S-20170719	7/20/17	12:55	Trenton	2	PJ	AQ															X	
RCDM-MW-11BR-20170720	7/20/17	10:15	Trenton	2	PJ	AQ															X	
RCDM-MW-12S-20170719	7/20/17	10:05	Trenton	2	PJ	AQ															X	
LF-MW-28S-20170719	7/19/17	09:45	Trenton	2	PJ	AQ															X	
DUP-07-20170719	7/19/17	12:00	Trenton	2	PJ	AQ															X	
FRB04-20170719	7/19/17	11:35	Trenton	2	PJ	AQ															X	

Special Instructions/Comments:
FedEx 6612 1992 7345

SEND DOCUMENTATION AND RESULTS TO:

Name: **Mary Mang**
Company: **Tetra Tech**
Address: **234 Mall Blvd Suite 260**
City: **King of Prussia** State: **PA** Zip: **19406**
Phone: **610-382-1174** Fax: **610-491-9645**
Email: **mary.mang@tetratech.com**

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O = Other **PJ**

***Bottle Preservative Type:** ☐ T = Thiosulfate,
☐ O = Other

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B=Blood/Serum
O = Other AQ

Vista Analytical Laboratory

Sample Log-in Checklist

Vista Work Order #: 1700920 **TAT** Std

Samples Arrival:	**Date/Time** 07/21/17 0912	**Initials:** BJB	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 07/21/17 1317	**Initials:** BJB	**Location:** WR-2 **Shelf/Rack:** A5

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

Temp °C: 2.3	(uncorrected)	**Time:** 0924	**Thermometer ID:** DT-3
Temp °C: 1.9	(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 # 6612 1992 7345	✓		
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: Sample label: LF-MW-13$-20170719, RCDM-MW-12$-20170719, LF-MW-12$-20170719, LF-MW-28$-20170719, RCDM-MW-13$-20170719 } collection date on COC 7-20-17; Collection date on label 7-19-17

COC ID for these Samples: "S" not "$"

Chain of Custody Anomaly/Sample Acceptance Form

Vista Analytical Laboratory

Client:	Tetra Tech	Workorder Number:	1700920
Contact:	Mary Mang	Date Received:	21-Jul-17 09:12
Email:	mary.mang@tetratech.com	Documented by/date:	B.Benedict 08/15/2017
Phone:	610-382-1174		

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
mmaier@vista-analytical.com
916-673-1520

The following information or item is needed to proceed with analysis:

- [ ] Complete Chain-of-Custody
- [ ] Test Method Requested
- [ ] Analyte List Requested
- [ ] Other:
- [ ] Preservative
- [ ] Sample Identification
- [X] Sample Collection Date: **See Comments**
- [ ] Collector's Name
- [ ] Sample Type
- [ ] Sample Location

The following anomalies were noted. Authorization is needed to proceed with analysis.

- [ ] Temperature outside < 6°C Range — Samples Affected: _____

Temperature _____°C Ice Present? Yes No Melted

- [X] Sample ID Discrepancy: **See Comments**
- [ ] Sample Holding Time Missed
- [ ] Custody Seals Broken
- [ ] Insufficient Sample Size
- [ ] Sample Container(s) Broken
- [ ] Incorrect Container Type

Comments: Samples: LF-MW-13S-**20170719** COC collection date: **07/20/2017** Label collection date: **07/19/17**
RCDM-MW-12S-**20170719** " " " "

COC ID's:	Label ID's:
LF-MW-12S-20170719	LF-MW-12$-20170719
RCDM-MW-13S-20170719	RCDM-MW-13$-20170719
RCDM-MW-12S-20170719	RCDM-MW-12$-20170719
LF-MW-28S-20170719	RCDM-MW-12$-20170719
LF-MW-13S-20170719	LF-MW-13$-20170719

Client Authorization

Proceed with Analysis: YES NO Signature and Date Karen J. Vitperetta 8-17-17

Client Comments/Instructions Per email from client on 8-16-17, the collection dates are 7-19-2017. Also the handwritten "$" represents the letter "S".

Correspondence

Anne Wilhoit

From: Karen Volpendesta
Sent: Tuesday, July 25, 2017 8:13 AM
To: Mang, Mary (Mary.Mang@tetratech.com); Ritchie, Megan (Megan.Ritchie@tetratech.com)
Cc: Martha Maier
Subject: Vista Work Order #1700920; NAWC Trenton
Attachments: WO# 1700920_Acklet.pdf

Mary,

Please find attached the sample receiving acknowledgement for Vista Analytical Work Order: 1700920.

These samples will be analyzed by Modified EPA Method 537 for the list of 14 analytes.

If you have any questions, please contact me or Martha Maier at (916) 673-1520. We appreciate your business.

Best Regards,

Karen L. Volpendesta
(formerly Lopez)
Project Manager

Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
Phone: (916) 673-1520
www.vista-analytical.com
**Hours: Monday, Tuesday, & Thursday, 8am-4:30pm*

A woman-owned, small business enterprise.

Karen Volpendesta

From: Ritchie, Megan <Megan.Ritchie@tetratech.com>
Sent: Wednesday, August 16, 2017 5:16 AM
To: Karen Volpendesta; Mang, Mary
Cc: Calvin Tanaka; Martha Maier
Subject: RE: Vista Work Order #1700920; NAWC Trenton

Hi All,

I have verified that samples LF-MW-13S-20170719 and RCDM-MW-12S-20170719 were collected on 7/19/2017 and not on 7/20/2017 as the COC indicates. Please change the sampling date to 7/19/2017 for these two samples.

Also, as Karen and I discussed on the phone yesterday, the handwritten "$" represents the letter "S" to distinguish the letter from the number "5".

Thanks,
Megan

From: Karen Volpendesta [mailto:kvolpendesta@vista-analytical.com]
Sent: Tuesday, August 15, 2017 6:20 PM
To: Mang, Mary <Mary.Mang@tetratech.com>; Ritchie, Megan <Megan.Ritchie@tetratech.com>
Cc: Calvin Tanaka <ctanaka@vista-analytical.com>; Martha Maier <mmaier@vista-analytical.com>
Subject: RE: Vista Work Order #1700920; NAWC Trenton

Hi Megan,

I understand that you are looking into the collection dates for samples LF-MW-13S-20170719 and RCDM-MW-12S-20170719.

Please reply to all as I will be out of the office tomorrow, August 16th returning on August 17th.

Thank you,
Karen

From: Karen Volpendesta
Sent: Monday, August 14, 2017 3:28 PM
To: 'Mang, Mary' <Mary.Mang@tetratech.com>; Ritchie, Megan <Megan.Ritchie@tetratech.com>
Cc: 'mmaier@vista-analytical.com' <mmaier@vista-analytical.com>
Subject: FW: Vista Work Order #1700920; NAWC Trenton

Hello Mary,

I recently left you a voice message and wanted to follow-up with an email.

It appears there were anomalies associated with Work Order #1700920 (please see the attached COC Anomaly Sample Acceptance Form PDF).

1) For samples LF-MW-13S-20170719 and RCDM-MW-12S-20170719, the collection date on the COC states 7/20/2017; however, the collection date on the sample containers labels state 7/19/2017. Can you please confirm the correct sample date.
2) For these five samples, COC ID is "S" in ID, Sample Container Label has "$" in ID. Please confirm the correct sample IDs.
   LF-MW-12S-20170719
   RCDM-MW-13S-20170719
   RCDM-MW-12S-20170719
   LF-MW-28S-20170719
   LF-MW-13S-20170719

Thank you for your help in advance!

Thank you,
Karen

From: Karen Volpendesta
Sent: Tuesday, July 25, 2017 8:13 AM
To: Mang, Mary (Mary.Mang@tetratech.com) <Mary.Mang@tetratech.com>; Ritchie, Megan (Megan.Ritchie@tetratech.com) <Megan.Ritchie@tetratech.com>
Cc: Martha Maier <mmaier@vista-analytical.com>
Subject: Vista Work Order #1700920; NAWC Trenton

Mary,

Please find attached the sample receiving acknowledgement for Vista Analytical Work Order: 1700920.

These samples will be analyzed by Modified EPA Method 537 for the list of 14 analytes.

If you have any questions, please contact me or Martha Maier at (916) 673-1520. We appreciate your business.

Best Regards,

Karen L. Volpendesta
(formerly Lopez)
Project Manager

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Hours: Monday, Tuesday, & Thursday, 8am-4:30pm

A woman-owned, small business enterprise.

EXTRACTION INFORMATION

Process Sheet

Workorder: 1700920

Prep Expiration: 2017-Aug-02
Client: Tetra Tech

Workorder Due: 11-Aug-17 00:00
TAT: 21

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

Prep Batch: B7G0122

Prep Data Entered: 7/28/17 KBF
Date and Initials

Version: 537 (14 Analyte)

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700920-01 "A"	☑	RCDM-MW-28S-20170719	21-Jul-17 09:12	A-5	HB 7/27/17 location not included; added to processsheet.
1700920-02	☐	~~LF-MW-12S-20170719~~ LF-MW-12S-20170719 HB 7/27/17	21-Jul-17 09:12		
1700920-03	☑	RCDM-MW-14S-20170720	21-Jul-17 09:12		
1700920-04	☑	MH-DUP01-20170720	21-Jul-17 09:12		
1700920-05	☑	MH-A97-20170720	21-Jul-17 09:12		
1700920-06	☑	MH-H93-20170720	21-Jul-17 09:12		
1700920-07	☑	RCDM-BLANK-20170720	21-Jul-17 09:12		
1700920-08	☑	MH-C94-20170720 HB 7/27/17 RCDM-MW-13S-20170719	21-Jul-17 09:12		
1700920-09	☑	~~RCDM-MW-13S-20170719~~	21-Jul-17 09:12		
1700920-10	☑	LF-MW-14S-20170720	21-Jul-17 09:12		
1700920-11	☑	LF-MW-11BR-20170720	21-Jul-17 09:12		
1700920-12	☐	~~LF-MW-13S-20170719~~ LF-MW-13S-20170719 HB 7/27/17	21-Jul-17 09:12		
1700920-13	☑	RCDM-MW-11BR-20170720 HB 7/27/17	21-Jul-17 09:12		
1700920-14	☐	~~RCDM-MW-12S-20170719~~ RCDM-MW-12S-20170719 HB 7/27/17	21-Jul-17 09:12		
1700920-15	☐	~~LF-MW-28S-20170719~~ LF-MW-28S-20170719 HB 7/27/17	21-Jul-17 09:12		
1700920-16	☑	DUP-07-20170719	21-Jul-17 09:12		
1700920-17	☑	FRB04-20170719	21-Jul-17 09:12		

WO Comments: **Attach balance check doc.**

Vista PM: Martha Maier

Vial Box ID: Barbaloot

Sample Reconciled By: HB 7/27/17 / /

Page 1 of 1

Batch: B7G0122

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1700891-06RE1	0.17113	NA	NA	1000	27-Jul-17 07:52	BAP	NA	NA	Surface Water	537M DoD Linear/Branche
1700920-01	0.1113			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-02	0.11113			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-03	0.11405			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-04	0.12177			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-05	0.12086			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-06	0.11357			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-07	0.11872			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-08	0.11568			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-09	0.11866			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-10	0.11481			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-11	0.11664			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-12	0.11667			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-13	0.11813			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-14	0.11619			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-15	0.11572			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-16	0.12023			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-17	0.11007			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
~~1700924-01~~	~~0.125~~		Ⓐ	~~1000~~	~~27-Jul-17 07:52~~	~~BAP~~			~~Effluent~~	~~537M PFAS~~
B7G0122-BLK1	0.25	NA	NA	1000	27-Jul-17 07:52	BAP			NA	QC
B7G0122-BS1	0.25			1000	27-Jul-17 07:52	BAP	17D2705	10		QC

Ⓐ Sample not extracted KBF 7/28/17

KBF 7/28/17

Vista Analytical Laboratory

BALANCE CALIBRATION CHECK

Weights # 22370 and 7718

Date	☑ for Weight # verification	Weight 1 1 g (0.9900 – 1.0100)	Weight 2 100 g (99.00 – 101.00)	Weight 3 2000 g (1980 – 2020)	Initials	Acceptable? (Y/N)
7/19/17	✓	1.00	100.00	2000.00	KBF	Y
7/20/17	✓	1.01	100.01	2000.04	BSS	Y
7/21/17	✓	0.99	100.00	2000.00	EL	Y
7.24.17	✓	1.00	100.01	2000.01	BP	Y
7/24/17	✓	1.00	100.01	2000.00	EL	Y
7/25/17	✓	1.00	99.99	2000.02	HB	Y
7.26.17	✓	1.00	100.00	2000.01	BP	Y
7/27/17	✓	1.00	99.99	2000.00	HB	Y
7/28/17	✓	0.99	100.00	2000.02	KBF	Y

Comments:

Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M DoD Linear/Branched/Total
Method: 537M PFAS
Method: 537M PFAS DOD (LOO as mRL)

B7G0122

Prepared using: LCMS - SPE Extraction-LCMS

Chemist: BP

Prep Date/Time: 27-Jul-17 07:52
BP 7.27.17

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 (B7G0104)	RS CHEM/WIT DATE
☐	B7G0122-BLK1 (C)	5	2	0	2	NA	NA	(0.250)	BP 7.27.17	BP 7.27.17	BP 7.27.17
☐	B7G0122-BS1 (C)	5	2	0	2	↓	↓	(0.250)	↓	↓	↓
☐	1700891-06RE1 (A)(B)(C)(D)	6	2	0	HB 7/27/17 3	197.39	26.26	0.17113			
☐	1700920-01 (B)	5	2	0	2	138.14	26.84	0.11130			
☐	1700920-02 (B)	5	2	0	2	137.95	26.82	0.11113			
☐	1700920-03	5	2	0	2	140.83	26.78	0.11405			
☐	1700920-04	5	2	0	2	148.79	27.02	0.12177			
☐	1700920-05	5	2	0	2	147.75	26.89	0.12086			
☐	1700920-06 (B)	5	2	0	2	140.52	26.95	0.11357			
☐	1700920-07	5	2	0	2	145.45	26.73	0.11872			
☐	1700920-08 (B)	5	2	0	2	142.57	26.89	0.11568			
☐	1700920-09	5	2	0	2	145.33	26.67	0.11866			
☐	1700920-10	5	2	0	2	141.44	26.63	0.114481			
☐	1700920-11	5	2	0	2	143.35	26.71	0.11664			
☐	1700920-12	5	2	0	2	143.39	26.72	0.11667			
☐	1700920-13	5	2	0	2	144.80	26.67	0.11813			

(A) A bottle more foamy than B bottle. HB 7/27/17 (B) samples were centrifuged to remove particulate. HB 7/27/17

IS Name	NS Name	RS Name
17G1307, 10 mL (IS)	17O2705, 10 mL (N1)	17F3038, 10 mL (N2)

(C) ISSUP 17F2612, 20 mL (N2)

SPE Chem: Strata X-AW 33 µ 200 mg/6 mL
Ele SOLV: 0.5% NH4OH in MeOH/MeOH
Final Volume(s): 1 mL

Check Out: Chemist/Date: HB 7/27/17
Check In: Chemist/Date: empty
Balance ID: HRMS-8
pH Adjusted: Chemist/Date: HB 7/27/17

Comments: Assume 1 g = 1 mL (D) Sample took ~ 30 minutes longer to extract BP 7-27-17

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M DoD Linear/Branched/Total
Method: 537M PFAS
Method: 537M PFAS DOD (LOO as mRL)

B7G0122

Chemist: BP

Prep Date/Time: ~~26~~ 27-Jul-17 07:52

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	RS CHEM/WIT DATE
☐	1700920-14	5	2	0	2	143.05	26.86	0.11619	BP 7.27.17	BP 7.27.17	HC 7.27.17
☐	1700920-15 (B)	5	2	0	2	142.51	26.79	0.11572	"	"	"
☐	1700920-16	5	2	0	2	147.01	26.78	0.12023	"	"	"
☐	1700920-17	5	2	0	2	136.93	26.86	0.11007	"	"	"
☐	1700924-01 (B)(E)	5	2	0	2	145.75	NA	NA	"	"	"

(B) samples were centrifuged to remove particulate. HB 7/27/17
(E) Sample clogged after ~5 mLs; extraction incomplete BP 7.27.17

IS Name	NS Name	RS Name		
17G1307, 10 mL (VS)	17D2705, 10 mL (N)	17F3038, 10 mL (VL)	SPE Chem: Strata X-AW 33u 200mg/6mL Ele SOLV: 0.5% NH4OH in MeOH 1M eq1 Final Volume(s): 1 mL	Check Out: Chemist/Date: HB 7/27/17 Check In: Chemist/Date: empty Balance ID: HRMS-8 pH Adjusted: Chemist/Date: HB 7/27/17
ISSUP 17F2612, 2 mL (VL)				

Comments: Assume 1 g = 1 mL

SAMPLE DATA – MODIFIED EPA METHOD 537

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-44.qld

Last Altered: Thursday, August 17, 2017 09:42:32 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:46:58 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: 170731M1_44, Date: 31-Jul-2017, Time: 20:00:48, ID: B7G0122-BLK1 Method Blank 0.25, 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		2.72e3	0.250		2.96				
2	4	PFHxA	313.2 > 268.9		7.81e3	0.250		3.19				
3	5	PFHpA	363 > 318.9		1.89e4	0.250		3.45				
4	6	PFHxS	398.9 > 79.6		1.94e3	0.250		3.56				
5	7	PFOA	413 > 368.7		2.38e4	0.250		3.65				
6	9	PFNA	462.9 > 418.8		2.14e4	0.250		3.83				
7	11	PFOS	499 > 79.9		4.57e3	0.250		3.89				
8	12	PFDA	513 > 468.8		1.99e4	0.250		4.01				
9	13	N-MeFOSAA	570.1 > 419		3.51e3	0.250		4.03				
10	14	N-EtFOSAA	584.2 > 419		3.52e3	0.250		4.10				
11	15	PFUnA	562.9 > 518.9		2.09e4	0.250		4.11				
12	17	PFDoA	612.9 > 318.8		1.51e3	0.250		4.34				
13	18	PFTrDA	662.9 > 618.9		1.51e3	0.250		4.50				
14	19	PFTeDA	712.9 > 668.8		9.59e3	0.250		4.68				
15	22	13C3-PFBS	302 > 98.8	2.72e3	3.08e4	0.250	0.033	2.96	2.92	0.441	53.3	106.7
16	23	13C2-PFHxA	315 > 269.8	7.81e3	3.08e4	0.250	0.335	3.19	3.16	1.27	15.1	75.6
17	24	13C4-PFHpA	367.2 > 321.8	1.89e4	3.08e4	0.250	0.369	3.45	3.43	3.06	33.2	66.4
18	25	18O2-PFHxS	403 > 102.6	1.94e3	5.68e3	0.250	0.460	3.56	3.50	4.27	37.1	74.3
19	26	13C2-PFOA	414.9 > 369.7	2.38e4	2.54e4	0.250	1.293	3.65	3.64	11.7	36.3	72.6
20	27	13C5-PFNA	468.2 > 422.9	2.14e4	2.76e4	0.250	0.986	3.83	3.81	9.68	39.3	78.5

GM 8/17/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-44.qld

Last Altered: Thursday, August 17, 2017 09:42:32 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:47:13 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: 170731M1_44, Date: 31-Jul-2017, Time: 20:00:48, ID: B7G0122-BLK1 Method Blank 0.25, Description: Method Blank

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	29	13C8-PFOS	507 > 79.9	4.57e3	5.32e3	0.250	1.184	3.89	3.87	10.7	36.3	72.6	
2	30	13C2-PFDA	515.1 > 469.9	1.99e4	2.68e4	0.250	0.998	4.01	3.98	9.28	37.2	74.4	
3	31	d3-N-MeFOSAA	573.3 > 419	3.51e3	2.94e4	0.250	0.018	4.03	4.01	1.49	337	51.9	
4	32	d5-N-EtFOSAA	589.3 > 419	3.52e3	2.94e4	0.250	0.018	4.12	4.08	1.49	336	51.7	
5	33	13C2-PFUnA	565 > 519.8	2.09e4	2.94e4	0.250	1.129	4.17	4.14	8.88	31.5	62.9	
6	34	13C2-PFDoA	615 > 569.7	1.51e3	2.94e4	0.250	0.116	4.34	4.31	0.640	22.1	44.1	H
7	35	13C2-PFTeDA	714.8 > 669.6	9.59e3	2.94e4	0.250	0.762	4.68	4.66	4.07	21.4	42.8	H
8	37	13C5-PFHxA	318 > 272.9	3.08e4	3.08e4	0.250	1.000	3.19	3.16	5.00	20.0	100.0	
9	38	13C3-PFHxS	401.9 > 79.9	5.68e3	5.68e3	0.250	1.000	3.56	3.50	12.5	50.0	100.0	
10	39	13C8-PFOA	421.3 > 376	2.54e4	2.54e4	0.250	1.000	3.65	3.63	12.5	50.0	100.0	
11	40	13C9-PFNA	472.2 > 426.9	2.76e4	2.76e4	0.250	1.000	3.83	3.81	12.5	50.0	100.0	
12	41	13C4-PFOS	503 > 79.9	5.32e3	5.32e3	0.250	1.000	3.89	3.87	12.5	50.0	100.0	
13	42	13C6-PFDA	519.1 > 473.7	2.68e4	2.68e4	0.250	1.000	4.01	3.98	12.5	50.0	100.0	
14	43	13C7-PFUnA	570.1 > 524.8	2.94e4	2.94e4	0.250	1.000	4.17	4.15	12.5	50.0	100.0	
15	44	Total PFBS	299 > 79.7	0.00e0	2.72e3	0.250		2.96		0.000			
16	45	Total PFHxS	398.9 > 79.6	0.00e0	1.94e3	0.250		3.52		0.000			
17	46	Total PFOA	413 > 368.7	0.00e0	2.38e4	0.250		3.65		0.000			
18	47	Total PFOS	499 > 79.9	0.00e0	4.57e3	0.250		3.89		0.000			
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	3.51e3	0.250		4.03		0.000			
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	3.52e3	0.250		4.17		0.000			

GM 8/17/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-44.qld

Last Altered: Thursday, August 17, 2017 09:42:32 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:47:13 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: 170731M1_44, Date: 31-Jul-2017, Time: 20:00:48, ID: B7G0122-BLK1 Method Blank 0.25, Description: Method Blank

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			1940.072		MM-I	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7			23804.438		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			3509.679		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419			3516.822		MM-I	

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

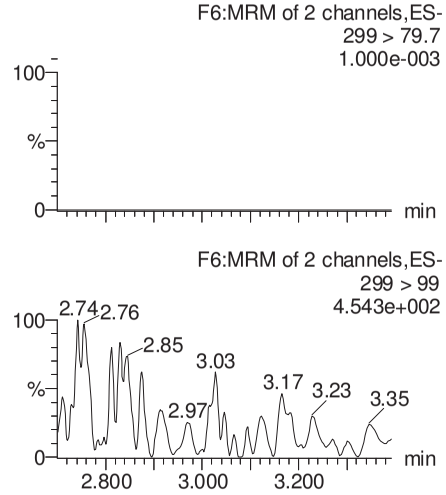
Dataset: U:\Q4.PRO\results\170731M1\170731M1-44.qld

Last Altered: Thursday, August 17, 2017 09:42:32 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:47:13 Pacific Daylight Time

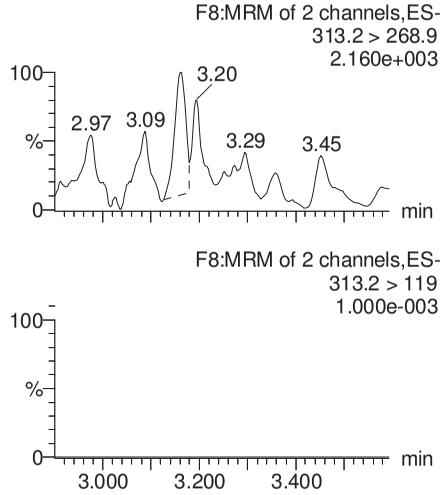
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170731M1_44, Date: 31-Jul-2017, Time: 20:00:48, ID: B7G0122-BLK1 Method Blank 0.25, Description: Method Blank

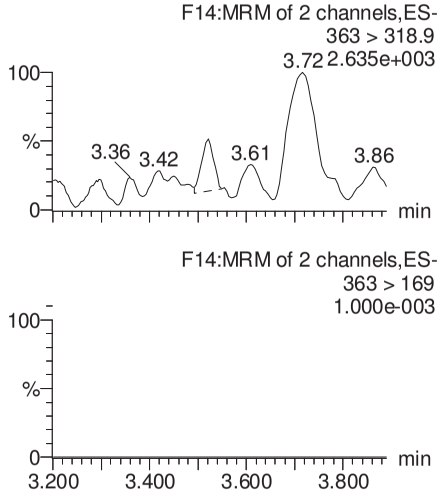
Total PFBS



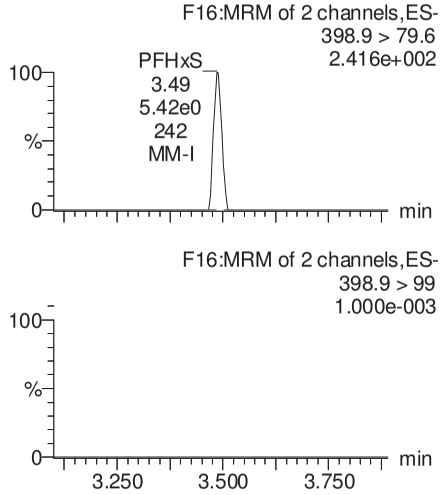
PFHxA



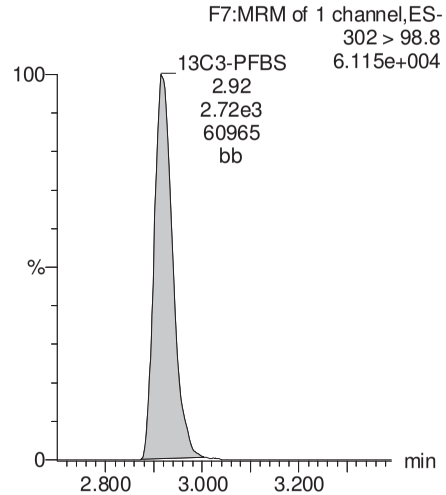
PFHpA



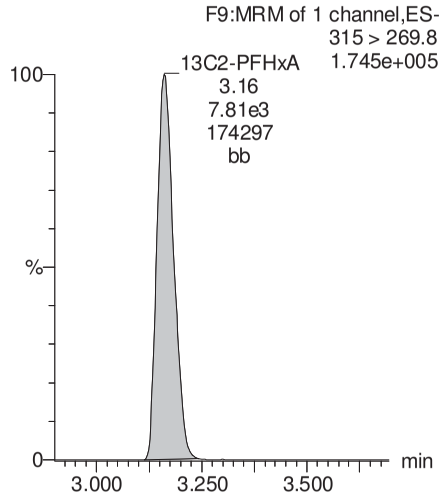
Total PFHxS



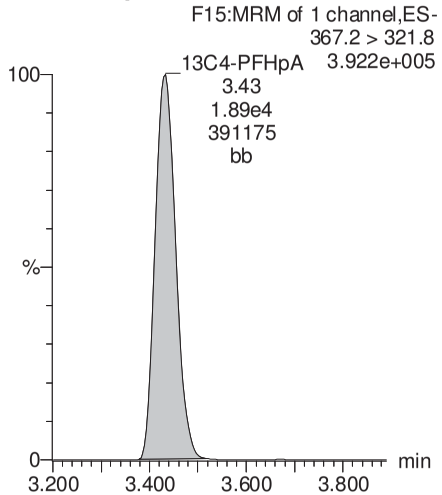
13C3-PFBS



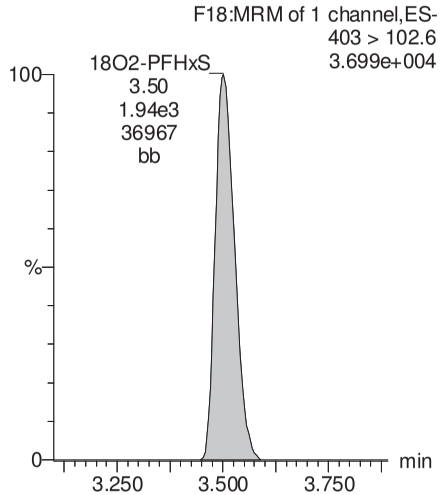
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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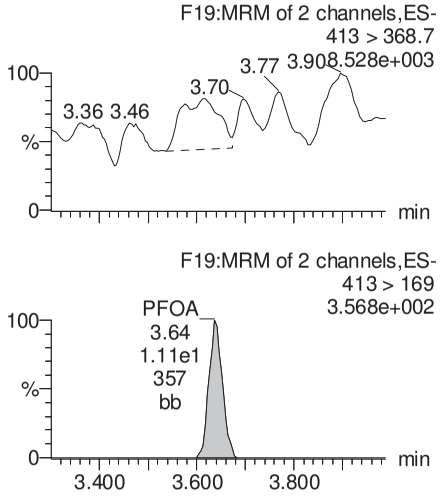
Dataset: U:\Q4.PRO\results\170731M1\170731M1-44.qld

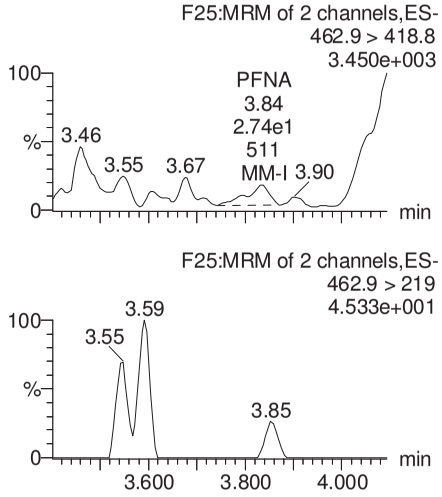
Last Altered: Thursday, August 17, 2017 09:42:32 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:47:13 Pacific Daylight Time

Name: 170731M1_44, Date: 31-Jul-2017, Time: 20:00:48, ID: B7G0122-BLK1 Method Blank 0.25, Description: Method Blank

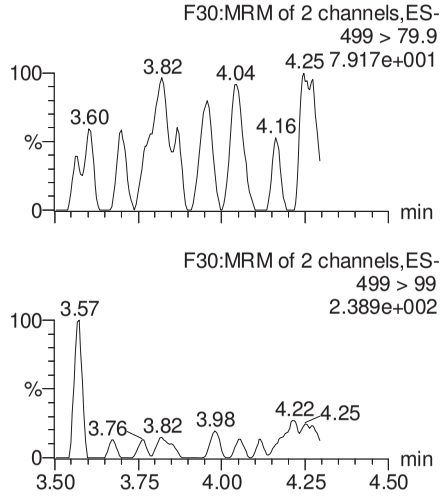
Total PFOA



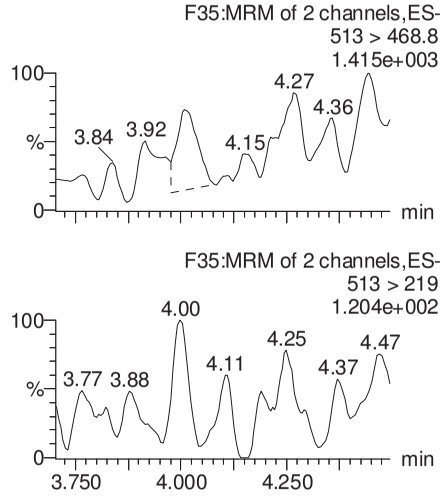
PFNA



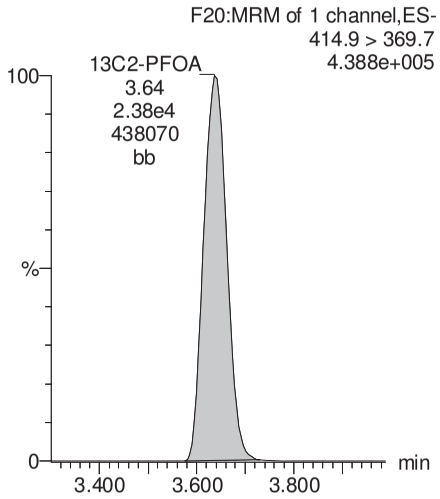
Total PFOS



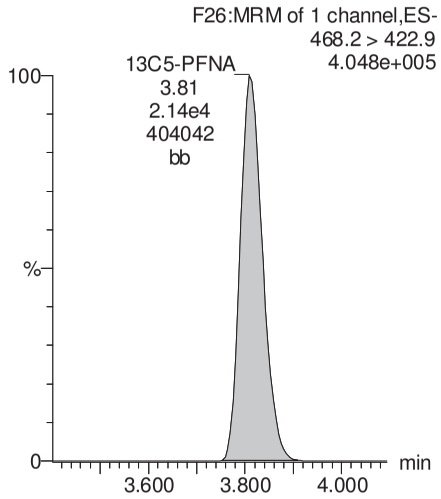
PFDA



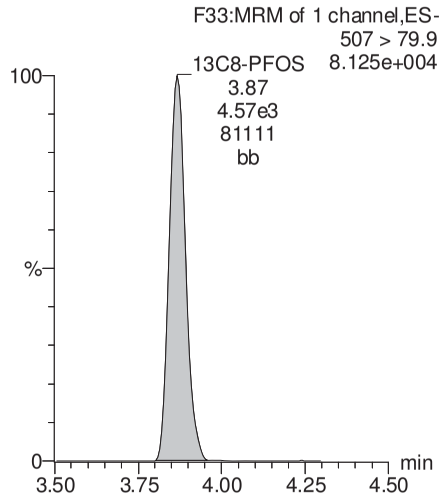
13C2-PFOA



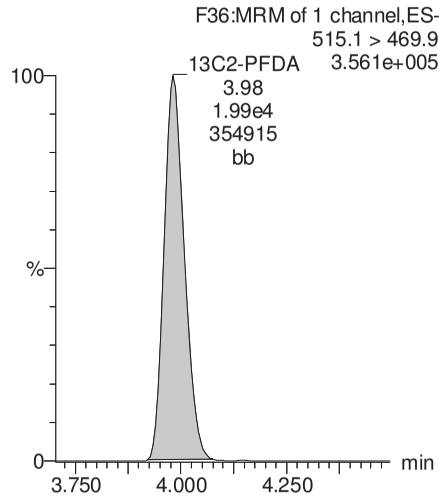
13C5-PFNA



13C8-PFOS



13C2-PFDA



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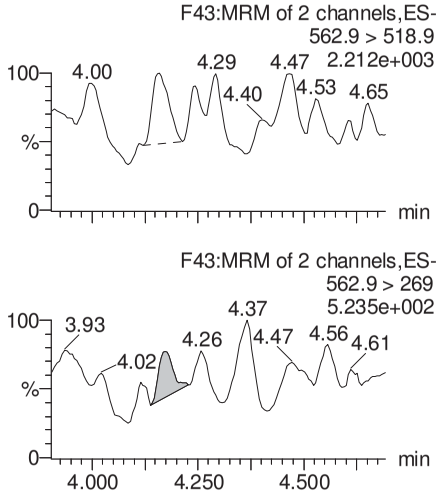
Dataset: U:\Q4.PRO\results\170731M1\170731M1-44.qld

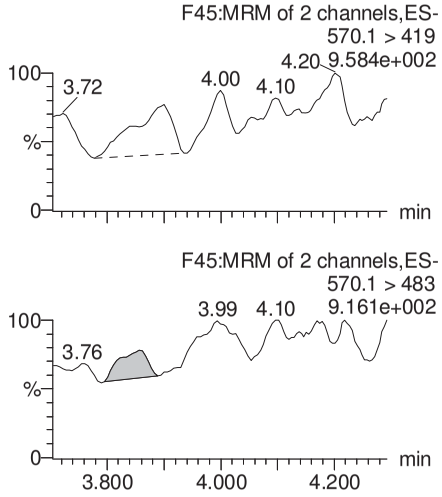
Last Altered: Thursday, August 17, 2017 09:42:32 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:47:13 Pacific Daylight Time

Name: 170731M1_44, Date: 31-Jul-2017, Time: 20:00:48, ID: B7G0122-BLK1 Method Blank 0.25, Description: Method Blank

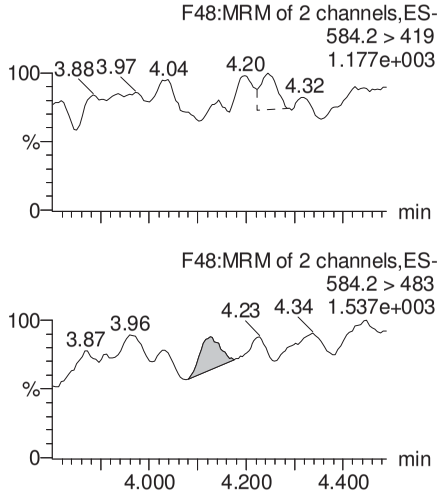
PFUnA



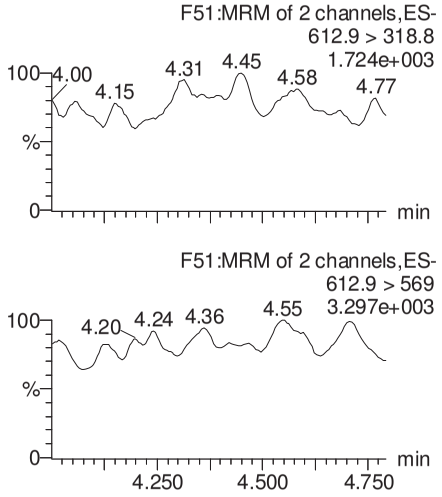
N-MeFOSAA



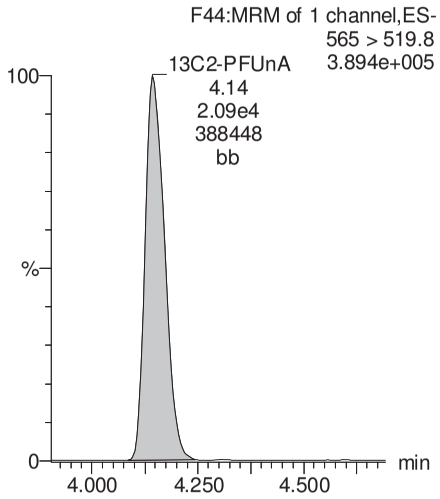
N-EtFOSAA



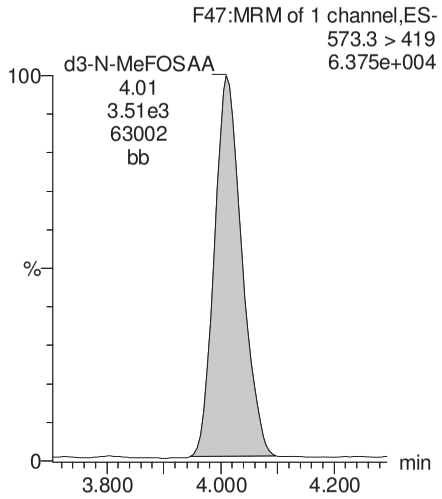
PFDoA



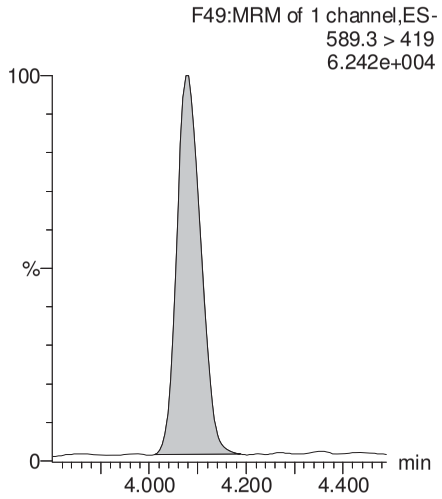
13C2-PFUnA



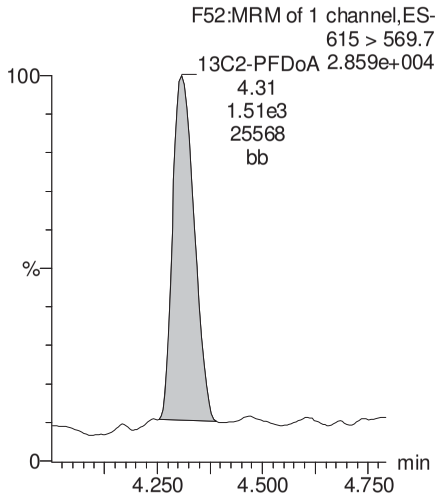
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



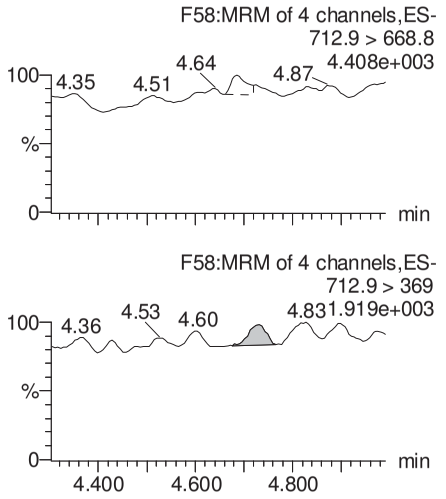
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-44.qld

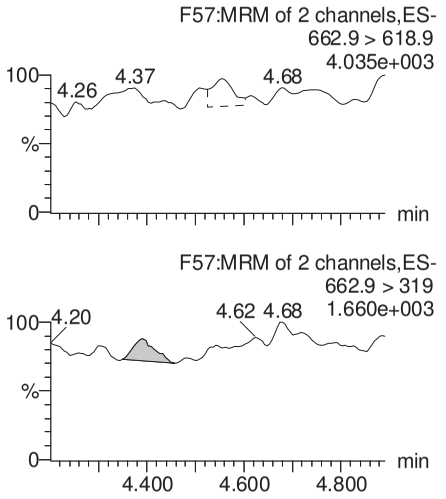
Last Altered: Thursday, August 17, 2017 09:42:32 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:47:13 Pacific Daylight Time

Name: 170731M1_44, Date: 31-Jul-2017, Time: 20:00:48, ID: B7G0122-BLK1 Method Blank 0.25, Description: Method Blank

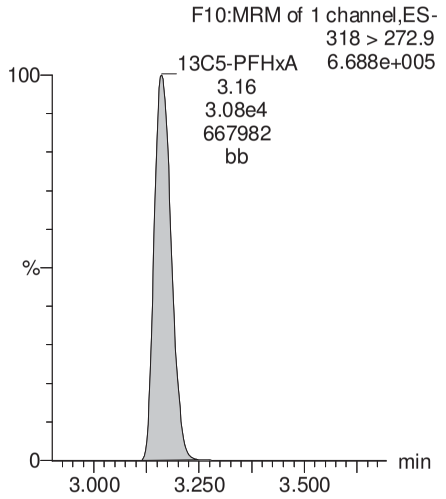
PFTeDA



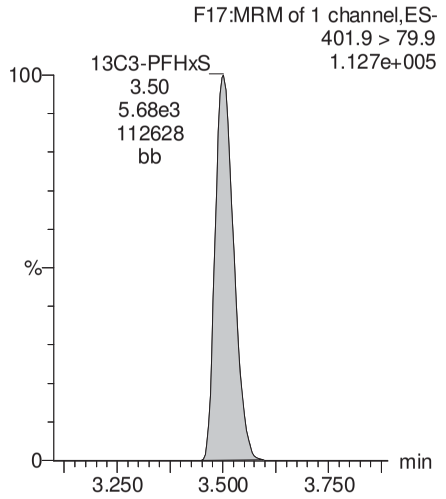
PFTrDA



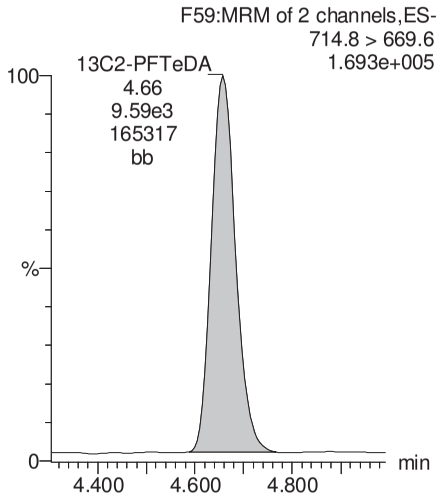
13C5-PFHxA



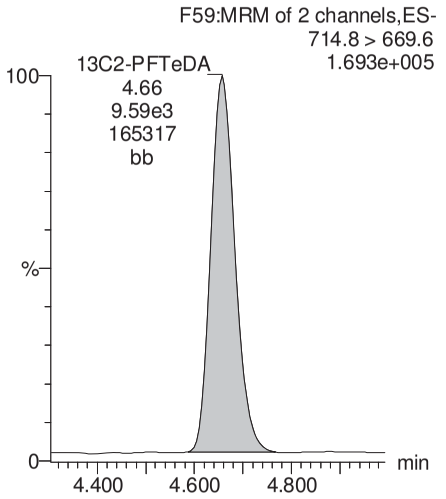
13C3-PFHxS



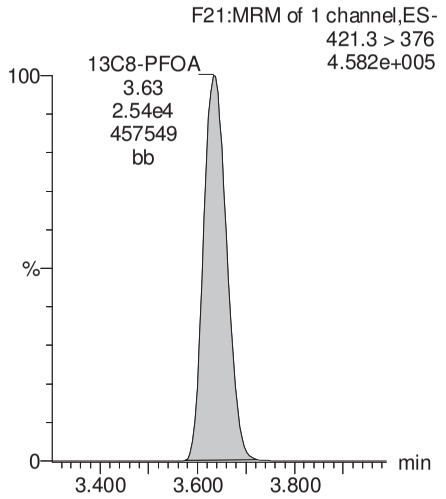
13C2-PFTeDA



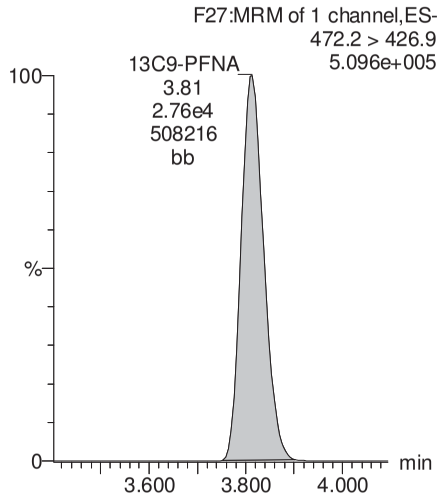
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



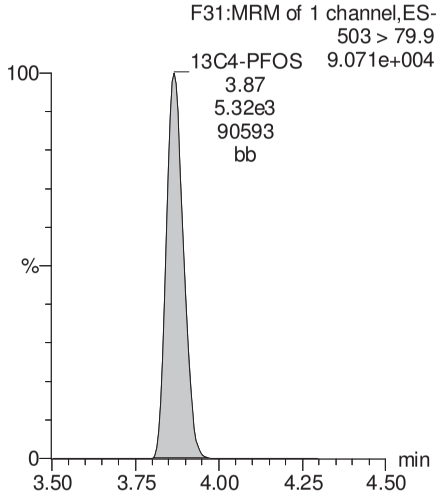
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-44.qld

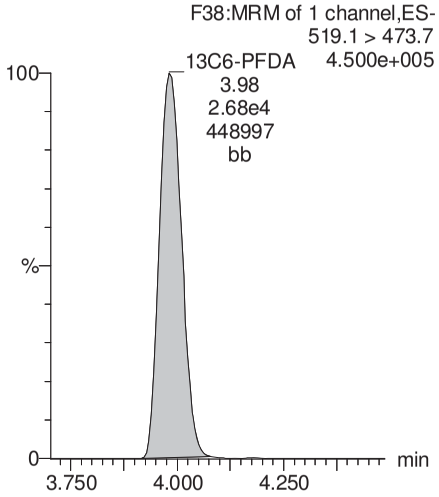
Last Altered: Thursday, August 17, 2017 09:42:32 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:47:13 Pacific Daylight Time

Name: 170731M1_44, Date: 31-Jul-2017, Time: 20:00:48, ID: B7G0122-BLK1 Method Blank 0.25, Description: Method Blank

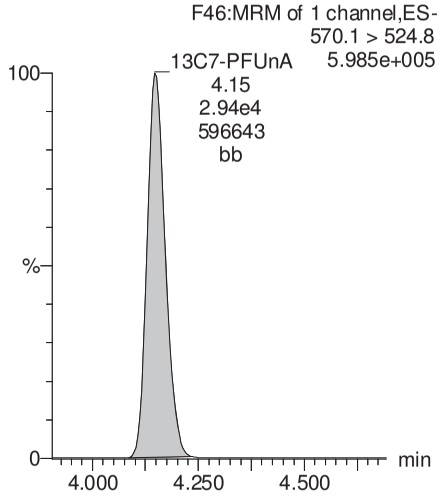
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-25.qld

Last Altered: Thursday, August 10, 2017 09:40:24 Pacific Daylight Time
Printed: Thursday, August 10, 2017 09:45:41 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 09 Aug 2017 14:46:49
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_25, Date: 01-Aug-2017, Time: 14:03:43, ID: B7G0122-BS1 OPR 0.25, Description: OPR

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	4.33e3	2.91e3	0.2500		2.96	2.93	18.6	39.4	98.5
2	4	PFHxA	313.2 > 268.9	2.59e4	8.38e3	0.2500		3.19	3.17	15.5	44.1	110.3
3	5	PFHpA	363 > 318.9	2.00e4	2.00e4	0.2500		3.45	3.44	12.5	41.6	103.9
4	6	PFHxS	398.9 > 79.6	2.63e3	1.75e3	0.2500		3.56	3.51	18.7	44.5	111.2
5	8	PFOA	413 > 368.7	2.41e4	2.70e4	0.2500		3.65	3.64	11.2	46.2	115.5
6	10	PFNA	462.9 > 418.8	2.11e4	2.32e4	0.2500		3.83	3.82	11.4	41.6	104.0
7	12	PFOS	499 > 79.9	4.16e3	4.95e3	0.2500		3.89	3.87	10.5	41.1	102.7
8	13	PFDA	513 > 468.8	2.15e4	1.99e4	0.2500		4.01	3.99	13.5	44.5	111.1
9	15	N-MeFOSAA	570.1 > 419	3.56e3	2.78e3	0.2500		4.03	4.02	208	46.7	116.8
10	16	N-EtFOSAA	584.2 > 419	2.33e3	2.54e3	0.2500		4.10	4.09	149	38.7	96.7
11	17	PFUnA	562.9 > 518.9	1.10e4	1.72e4	0.2500		4.17	4.16	8.01	41.9	104.6
12	19	PFDoA	612.9 > 318.8	1.13e3	1.58e3	0.2500		4.34	4.31	8.96	38.1	95.2

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Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-25.qld

Last Altered: Thursday, August 10, 2017 09:40:24 Pacific Daylight Time
Printed: Thursday, August 10, 2017 09:45:53 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 09 Aug 2017 14:46:49
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_25, Date: 01-Aug-2017, Time: 14:03:43, ID: B7G0122-BS1 OPR 0.25, 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	1.23e4	1.58e3	0.2500		4.50	4.49	97.5	37.1	92.8
2	22	PFTeDA	712.9 > 668.8	8.05e3	9.06e3	0.2500		4.68	4.67	11.1	41.1	102.6
3	30	13C3-PFBS	302 > 98.8	2.91e3	3.27e4	0.2500	0.034	2.96	2.92	0.445	52.2	104.4
4	31	13C2-PFHxA	315 > 269.8	8.38e3	3.27e4	0.2500	0.334	3.19	3.17	1.28	15.4	76.8
5	32	13C4-PFHpA	367.2 > 321.8	2.00e4	3.27e4	0.2500	0.414	3.45	3.43	3.06	29.6	59.1
6	33	18O2-PFHxS	403 > 102.6	1.75e3	5.49e3	0.2500	0.475	3.56	3.51	3.99	33.6	67.2
7	35	13C2-PFOA	414.9 > 369.7	2.70e4	2.61e4	0.2500	1.298	3.65	3.64	12.9	39.8	79.7
8	36	13C5-PFNA	468.2 > 422.9	2.32e4	3.24e4	0.2500	1.094	3.83	3.82	8.94	32.7	65.4
9	38	13C8-PFOS	507 > 79.9	4.95e3	5.32e3	0.2500	1.153	3.89	3.87	11.6	40.3	80.6
10	39	13C2-PFDA	515.1 > 469.9	1.99e4	2.97e4	0.2500	1.059	4.01	3.99	8.38	31.7	63.3

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-25.qld

Last Altered: Thursday, August 10, 2017 09:40:24 Pacific Daylight Time
Printed: Thursday, August 10, 2017 09:46:10 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 09 Aug 2017 14:46:49
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_25, Date: 01-Aug-2017, Time: 14:03:43, ID: B7G0122-BS1 OPR 0.25, Description: OPR

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	2.78e3	3.05e4	0.2500	0.019	4.03	4.02	1.14	236	36.3
2	42	d5-N-EtFOSAA	589.3 > 419	2.54e3	3.05e4	0.2500	0.019	4.12	4.09	1.04	220	33.9
3	43	13C2-PFUnA	565 > 519.8	1.72e4	3.05e4	0.2500	1.172	4.17	4.16	7.06	24.1	48.2
4	44	13C2-PFDoA	615 > 569.7	1.58e3	3.05e4	0.2500	0.118	4.34	4.31	0.646	21.8	43.6
5	46	13C2-PFTeDA	714.8 > 669.6	9.06e3	3.05e4	0.2500	0.801	4.68	4.67	3.71	18.5	37.1
6	52	13C5-PFHxA	318 > 272.9	3.27e4	3.27e4	0.2500	1.000	3.19	3.17	5.00	20.0	100.0
7	53	13C3-PFHxS	401.9 > 79.9	5.49e3	5.49e3	0.2500	1.000	3.56	3.51	12.5	50.0	100.0
8	54	13C8-PFOA	421.3 > 376	2.61e4	2.61e4	0.2500	1.000	3.65	3.65	12.5	50.0	100.0
9	55	13C9-PFNA	472.2 > 426.9	3.24e4	3.24e4	0.2500	1.000	3.83	3.82	12.5	50.0	100.0
10	56	13C4-PFOS	503 > 79.9	5.32e3	5.32e3	0.2500	1.000	3.89	3.87	12.5	50.0	100.0
11	57	13C6-PFDA	519.1 > 473.7	2.97e4	2.97e4	0.2500	1.000	4.01	3.99	12.5	50.0	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.05e4	3.05e4	0.2500	1.000	4.17	4.16	12.5	50.0	100.0
13	59	Total PFBS	299 > 79.7	4.33e3	2.91e3	0.2500		2.96		18.6	39.4	
14	60	Total PFHxS	398.9 > 79.6	2.63e3	1.75e3	0.2500		3.52		18.7	44.5	
15	61	Total PFOA	413 > 368.7	2.41e4	2.70e4	0.2500		3.65		11.2	46.2	
16	62	Total PFOS	499 > 79.9	4.16e3	4.95e3	0.2500		3.89		10.5	41.1	
17	63	Total N-Me-FOSAA	570.1 > 419	3.56e3	2.78e3	0.2500		4.03		208	46.7	
18	64	Total N-EtFOSAA	584.2 > 419	2.33e3	2.54e3	0.2500		4.17		149	38.7	

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Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_25, Date: 01-Aug-2017, Time: 14:03:43, ID: B7G0122-BS1 OPR 0.25, Description: OPR

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.93	4334.852	2910.434	18.618	bb	39.4

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.51	2626.964	1754.429	18.717	bb	44.5

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.64	24139.531	27032.203	11.162	bb	46.2

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.87	4155.903	4946.328	10.502	bb	41.1

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419	4.02	3555.645	2775.886	208.147	bb	46.7

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419	4.09	2331.955	2542.099	149.067	bb	38.7

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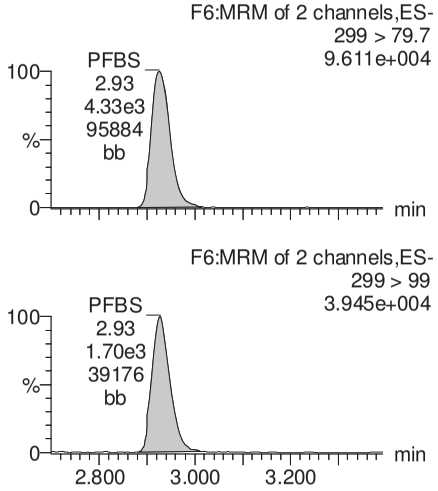
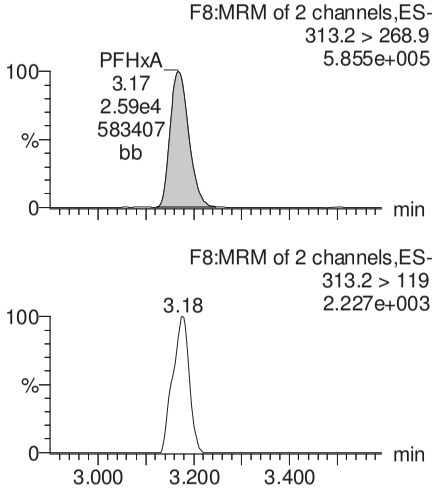
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_25, Date: 01-Aug-2017, Time: 14:03:43, ID: B7G0122-BS1 OPR 0.25, Description: OPR

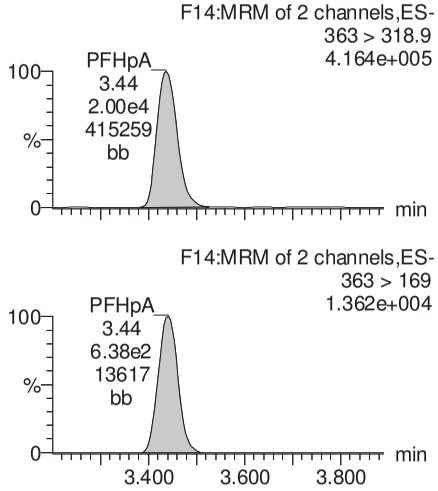
Total PFBS



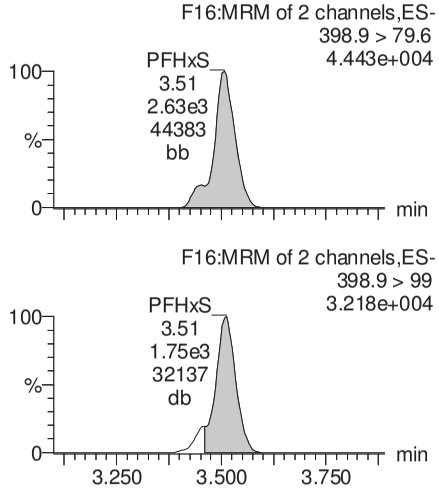
PFHxA



PFHpA



Total PFHxS



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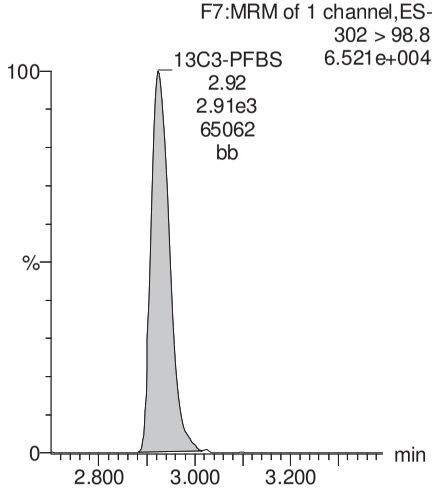

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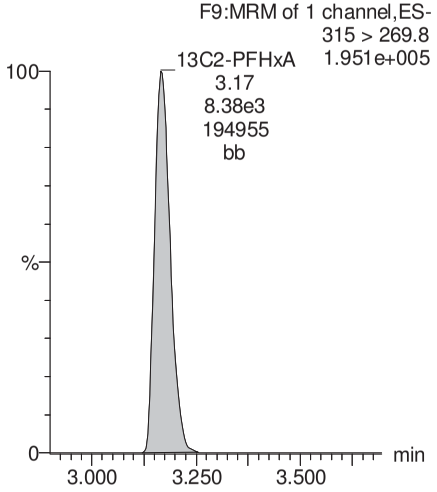

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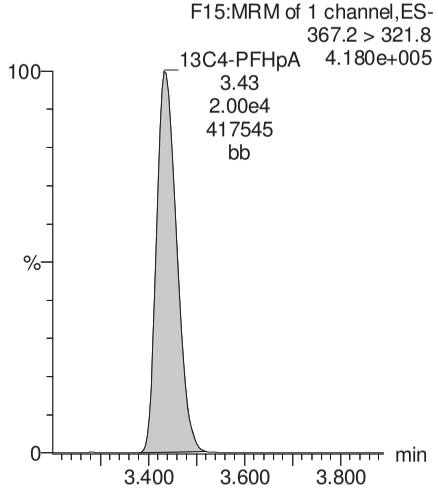

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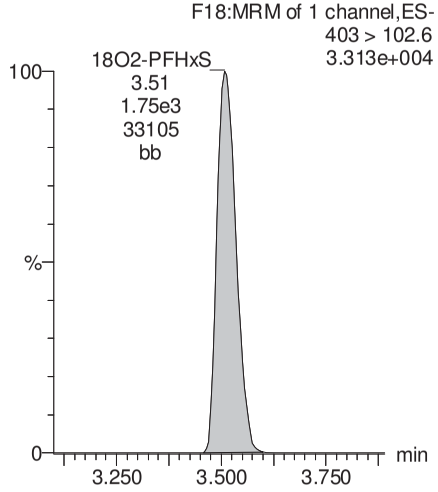

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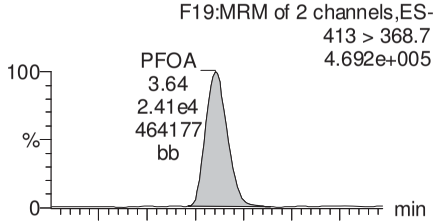
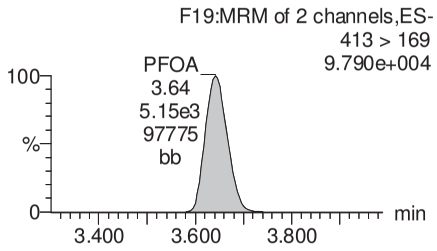
Total PFOA





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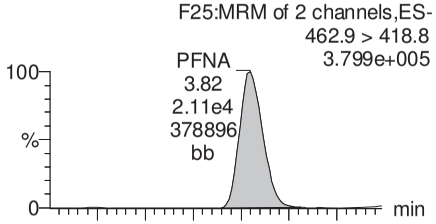
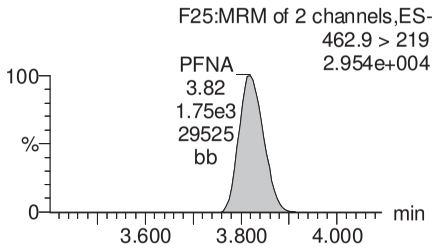
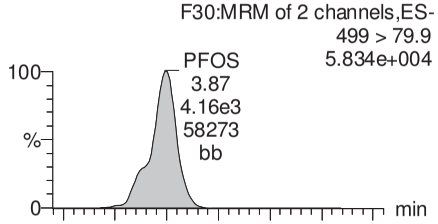
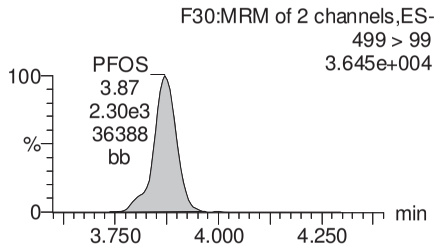




Total PFOS





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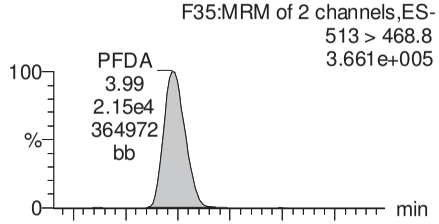
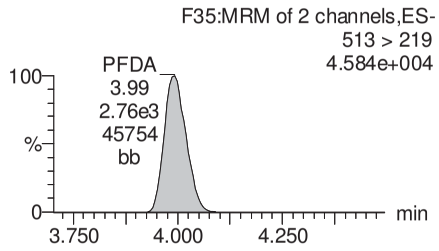
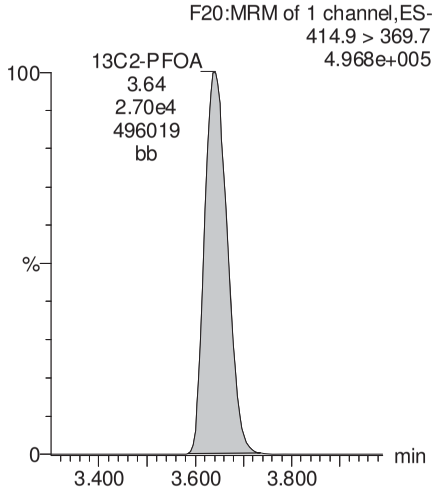




13C2-PFOA



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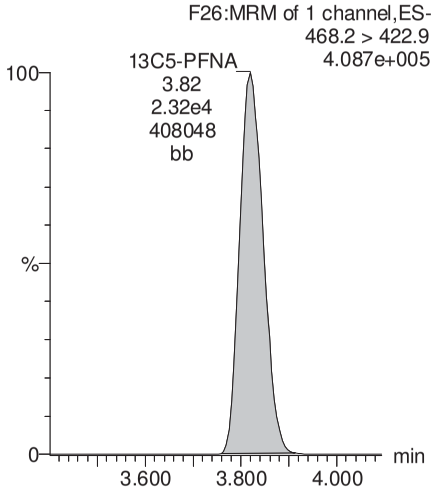
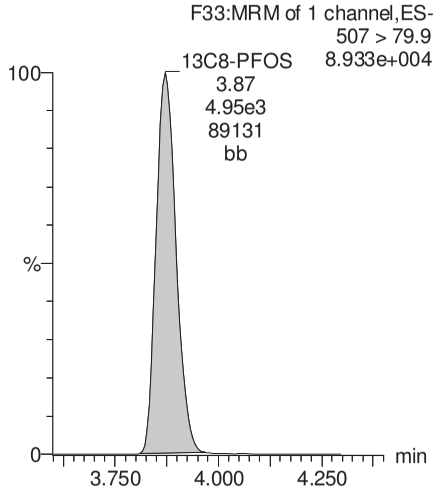


13C8-PFOS



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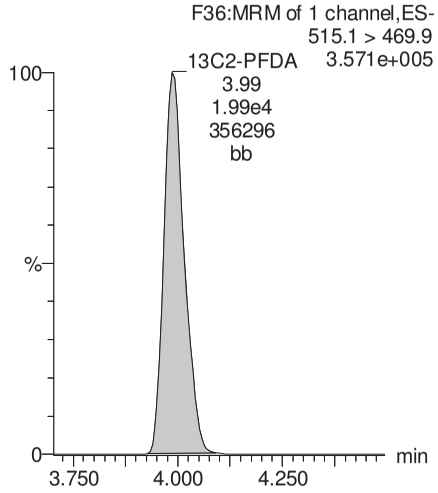

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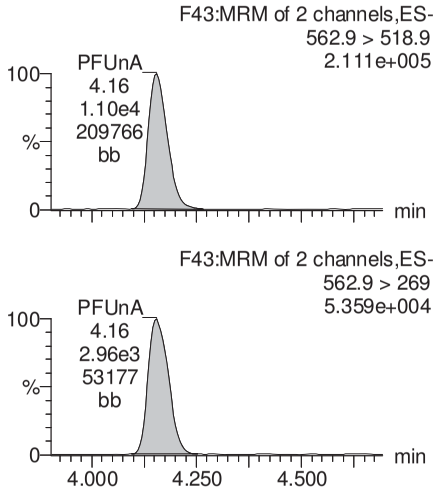
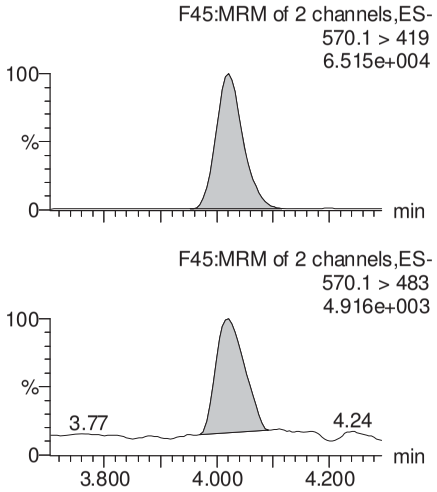
PFUnA



N-MeFOSAA



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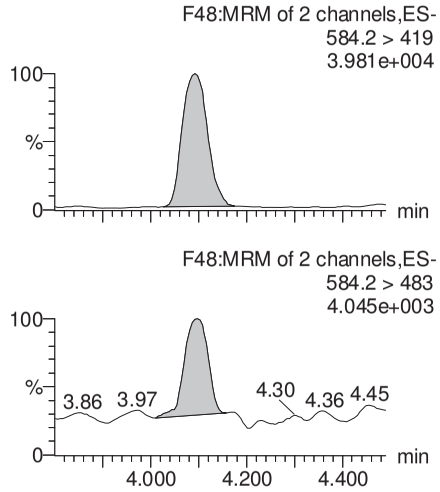

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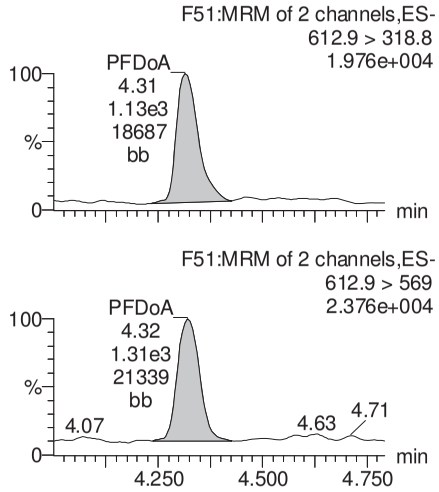

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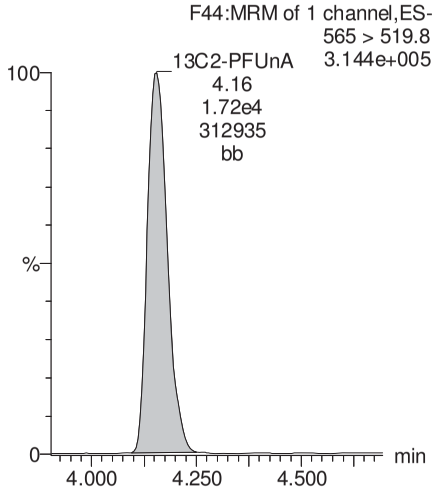

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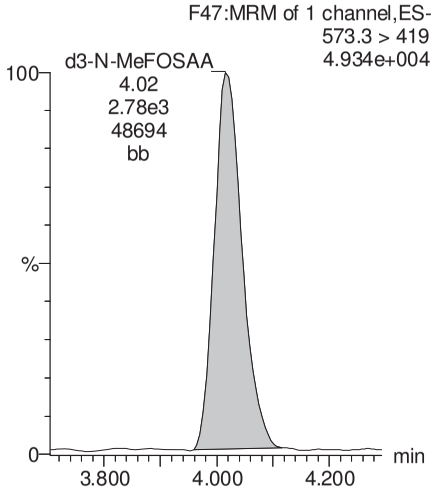

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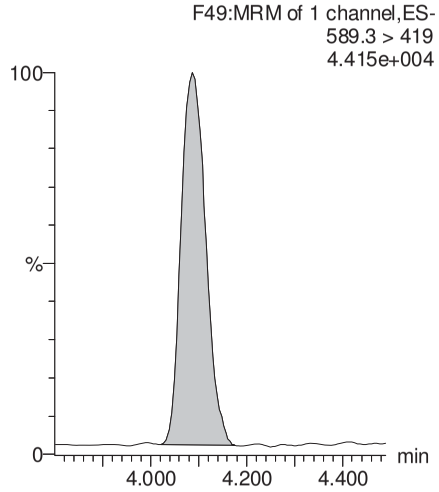

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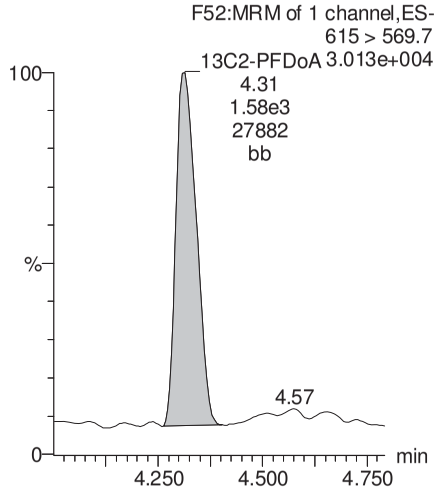

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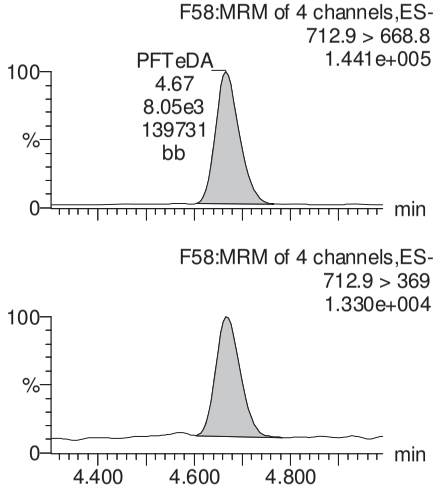
PFTeDA



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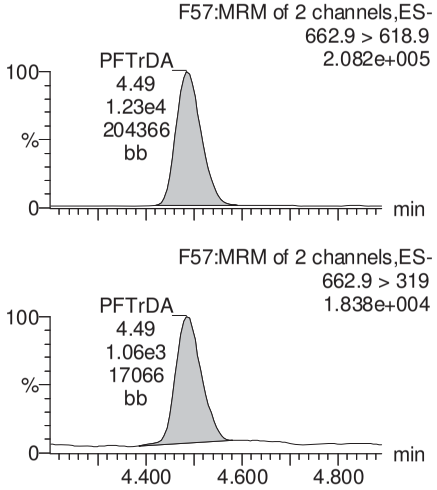

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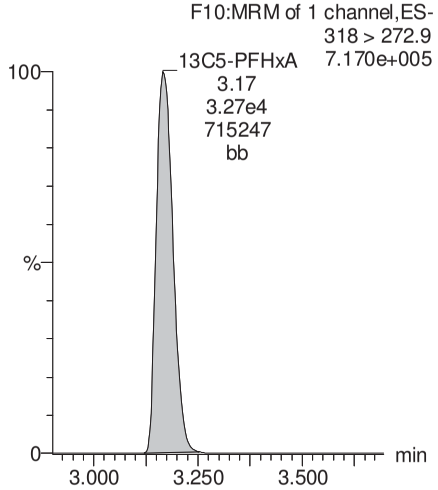

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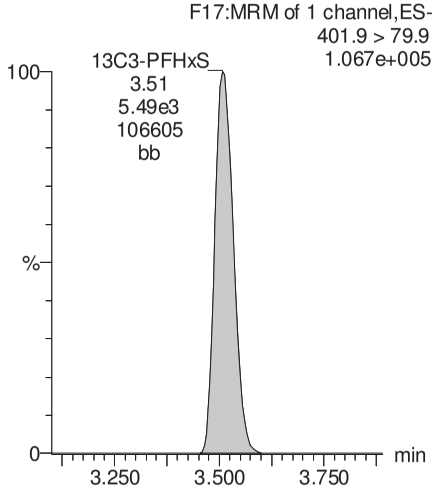

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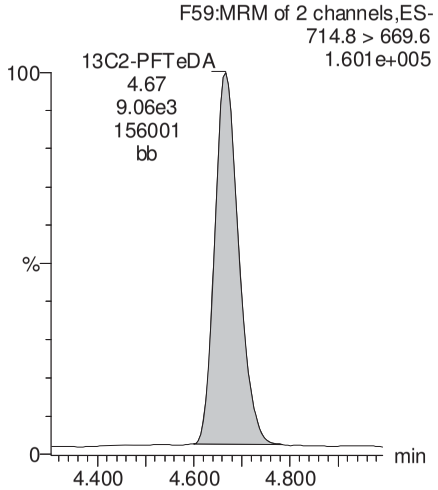

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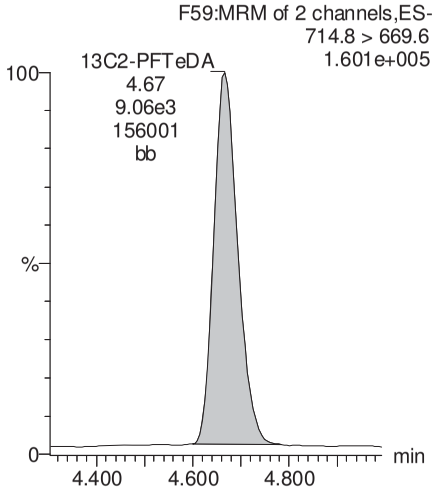

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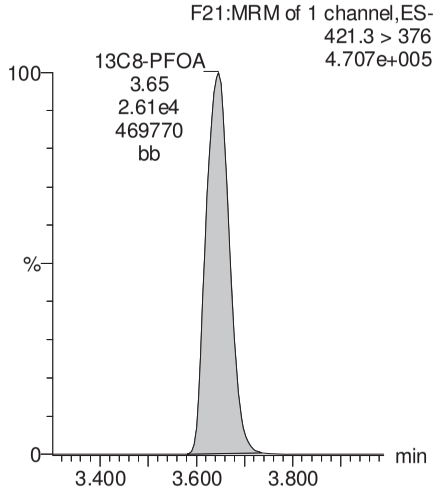

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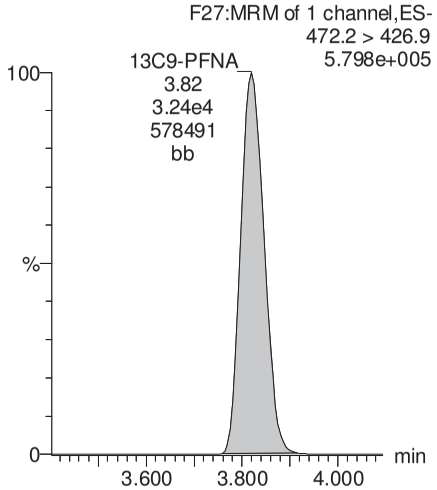

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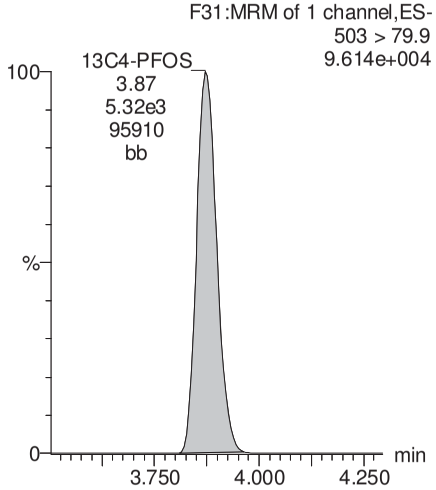
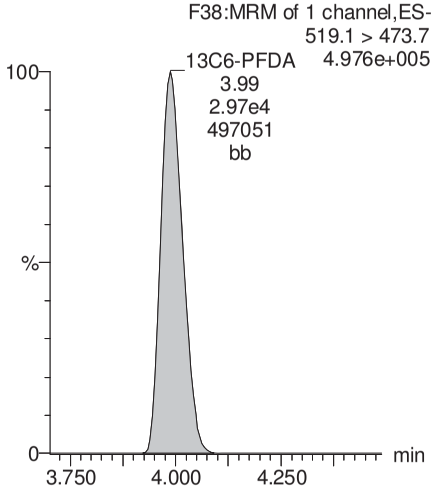
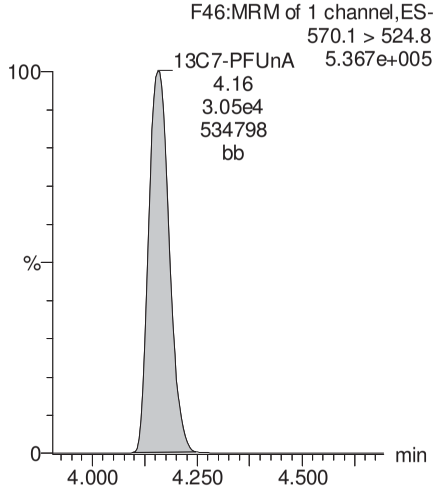
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-29.qld

Last Altered: Thursday, August 10, 2017 10:34:40 Pacific Daylight Time
Printed: Thursday, August 10, 2017 10:35:04 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 09 Aug 2017 14:46:49
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_29, Date: 01-Aug-2017, Time: 14:47:19, ID: 1700920-01 RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	2.44e4	4.85e3	0.1113		2.96	2.93	63.0	300	
2	4	PFHxA	313.2 > 268.9	4.19e5	1.37e4	0.1113		3.19	3.17	153	989	
3	5	PFHpA	363 > 318.9	1.30e5	3.12e4	0.1113		3.45	3.44	51.9	390	
4	6	PFHxS	398.9 > 79.6	8.67e4	3.04e3	0.1113		3.56	3.51	356	1900E	
5	8	PFOA	413 > 368.7	8.43e4	4.03e4	0.1113		3.65	3.64	26.2	245	
6	10	PFNA	462.9 > 418.8	1.99e4	3.15e4	0.1113		3.83	3.83	7.88	64.6	
7	12	PFOS	499 > 79.9	1.50e5	6.49e3	0.1113		3.89	3.88	290	2370E	
8	13	PFDA	513 > 468.8	4.49e3	3.04e4	0.1113		4.01	4.00	1.85	12.7	
9	15	N-MeFOSAA	570.1 > 419		5.57e3	0.1113		4.03				
10	16	N-EtFOSAA	584.2 > 419		5.27e3	0.1113		4.10				
11	17	PFUnA	562.9 > 518.9		2.56e4	0.1113		4.17				
12	19	PFDoA	612.9 > 318.8		1.75e3	0.1113		4.34				

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Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-29.qld

Last Altered: Thursday, August 10, 2017 10:34:40 Pacific Daylight Time
Printed: Thursday, August 10, 2017 10:36:40 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 09 Aug 2017 14:46:49
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_29, Date: 01-Aug-2017, Time: 14:47:19, ID: 1700920-01 RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		1.75e3	0.1113		4.50				
2	22	PFTeDA	712.9 > 668.8		6.70e3	0.1113		4.68				
3	30	13C3-PFBS	302 > 98.8	4.85e3	4.98e4	0.1113	0.034	2.96	2.93	0.487	128	114.1
4	31	13C2-PFHxA	315 > 269.8	1.37e4	4.98e4	0.1113	0.334	3.19	3.17	1.38	37.1	82.5
5	32	13C4-PFHpA	367.2 > 321.8	3.12e4	4.98e4	0.1113	0.414	3.45	3.44	3.14	68.0	60.6
6	33	18O2-PFHxS	403 > 102.6	3.04e3	7.94e3	0.1113	0.475	3.56	3.51	4.80	90.7	80.7
7	35	13C2-PFOA	414.9 > 369.7	4.03e4	3.97e4	0.1113	1.298	3.65	3.64	12.7	87.8	78.2
8	36	13C5-PFNA	468.2 > 422.9	3.15e4	4.35e4	0.1113	1.094	3.83	3.83	9.05	74.3	66.2
9	38	13C8-PFOS	507 > 79.9	6.49e3	7.38e3	0.1113	1.153	3.89	3.88	11.0	85.7	76.3
10	39	13C2-PFDA	515.1 > 469.9	3.04e4	4.61e4	0.1113	1.059	4.01	3.99	8.23	69.9	62.2

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Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-29.qld

Last Altered: Thursday, August 10, 2017 10:34:40 Pacific Daylight Time
Printed: Thursday, August 10, 2017 10:36:55 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 09 Aug 2017 14:46:49
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_29, Date: 01-Aug-2017, Time: 14:47:19, ID: 1700920-01 RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	5.57e3	3.08e4	0.1113	0.019	4.03	4.02	2.26	1050	71.9
2	42	d5-N-EtFOSAA	589.3 > 419	5.27e3	3.08e4	0.1113	0.019	4.12	4.09	2.14	1010	69.4
3	43	13C2-PFUnA	565 > 519.8	2.56e4	3.08e4	0.1113	1.172	4.17	4.16	10.4	79.5	70.8
4	44	13C2-PFDoA	615 > 569.7	1.75e3	3.08e4	0.1113	0.118	4.34	4.33	0.711	53.9	48.0
5	46	13C2-PFTeDA	714.8 > 669.6	6.70e3	3.08e4	0.1113	0.801	4.68	4.67	2.72	30.5	27.1
6	52	13C5-PFHxA	318 > 272.9	4.98e4	4.98e4	0.1113	1.000	3.19	3.17	5.00	44.9	100.0
7	53	13C3-PFHxS	401.9 > 79.9	7.94e3	7.94e3	0.1113	1.000	3.56	3.51	12.5	112	100.0
8	54	13C8-PFOA	421.3 > 376	3.97e4	3.97e4	0.1113	1.000	3.65	3.64	12.5	112	100.0
9	55	13C9-PFNA	472.2 > 426.9	4.35e4	4.35e4	0.1113	1.000	3.83	3.82	12.5	112	100.0
10	56	13C4-PFOS	503 > 79.9	7.38e3	7.38e3	0.1113	1.000	3.89	3.88	12.5	112	100.0
11	57	13C6-PFDA	519.1 > 473.7	4.61e4	4.61e4	0.1113	1.000	4.01	3.99	12.5	112	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.08e4	3.08e4	0.1113	1.000	4.17	4.16	12.5	112	100.0
13	59	Total PFBS	299 > 79.7	2.44e4	4.85e3	0.1113		2.96		63.0	300	
14	60	Total PFHxS	398.9 > 79.6	8.67e4	3.04e3	0.1113		3.52		356	1900 E	
15	61	Total PFOA	413 > 368.7	8.75e4	4.03e4	0.1113		3.65		27.1	253	
16	62	Total PFOS	499 > 79.9	1.50e5	6.49e3	0.1113		3.89		290	2370 E	
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	5.57e3	0.1113		4.03		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	5.27e3	0.1113		4.17		0.000		

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Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 09 Aug 2017 14:46:49
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_29, Date: 01-Aug-2017, Time: 14:47:19, ID: 1700920-01 RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.93	24429.105	4845.313	63.023	MM	300.2

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.51	86681.695	3044.966	355.840	MM	1902.2

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.64	84345.391	40303.242	26.160	MM	245.0
2	61	Total PFOA	413 > 368.7	3.59	3151.819	40303.242	0.978	MM	7.8

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.88	150477.672	6493.782	289.657	MM	2370.3

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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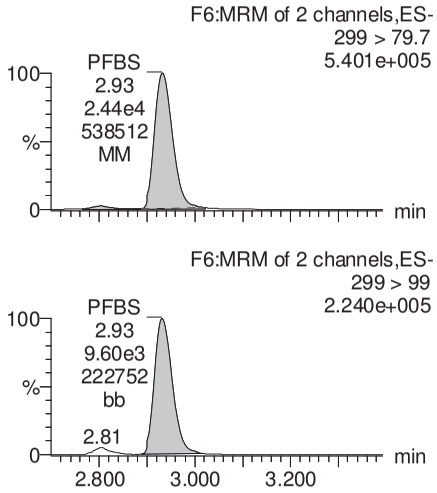
Name: 170801M1_29, Date: 01-Aug-2017, Time: 14:47:19, ID: 1700920-01 RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

Total PFBS



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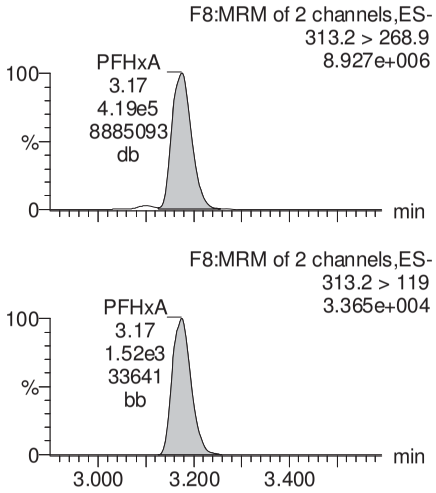

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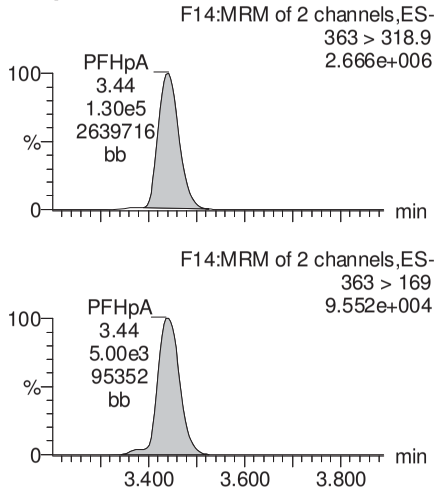
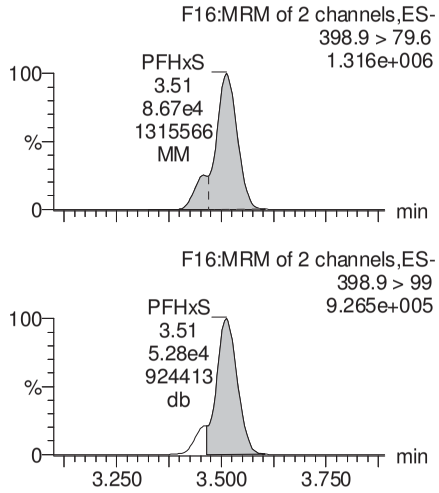


Total PFHxS



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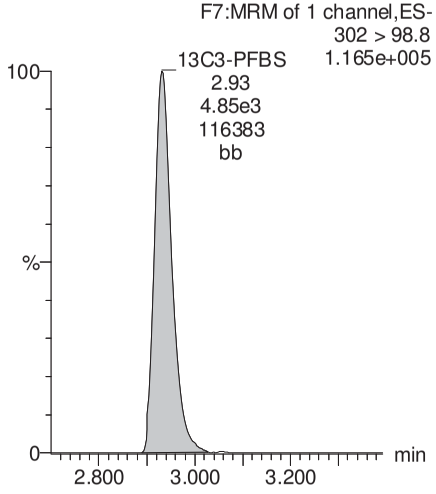

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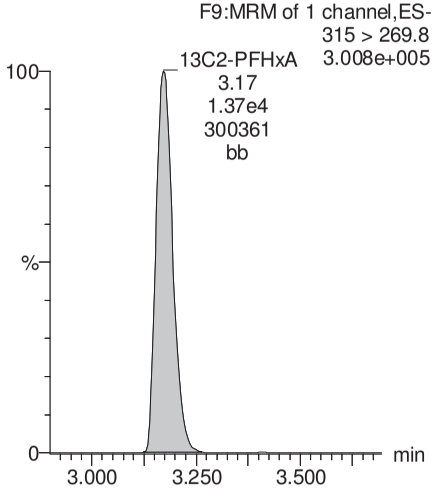

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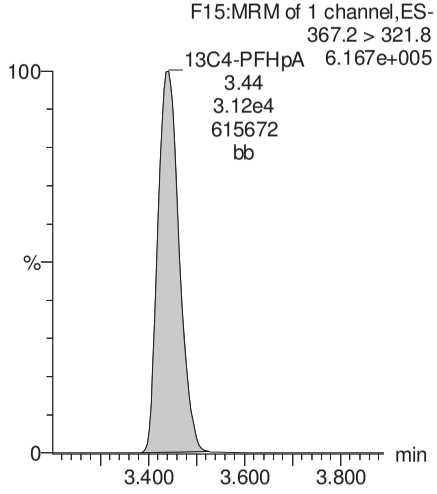

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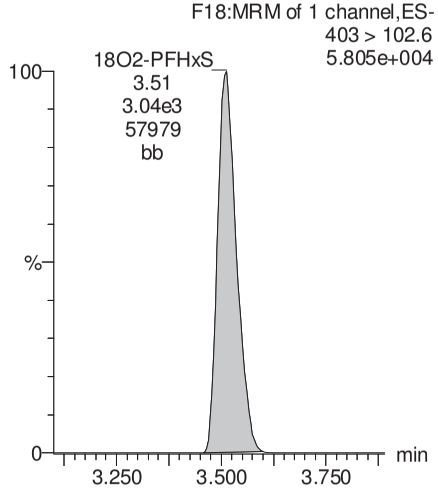

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Vista Analytical Laboratory

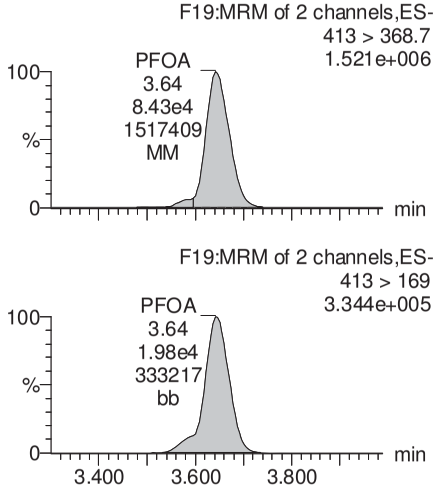
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-29.qld

Last Altered: Thursday, August 10, 2017 10:34:40 Pacific Daylight Time
Printed: Thursday, August 10, 2017 10:36:55 Pacific Daylight Time

Name: 170801M1_29, Date: 01-Aug-2017, Time: 14:47:19, ID: 1700920-01 RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

Total PFOA



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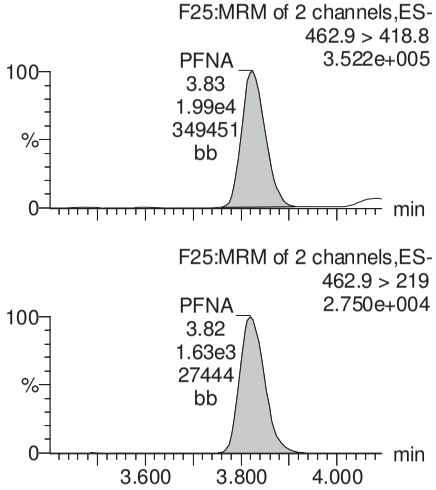
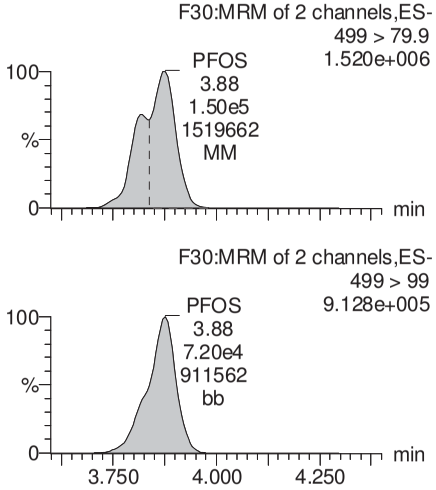


Total PFOS



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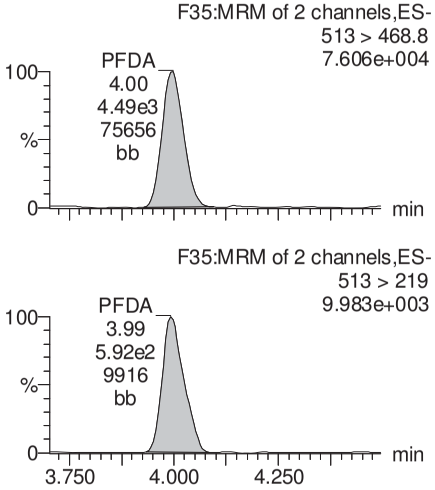

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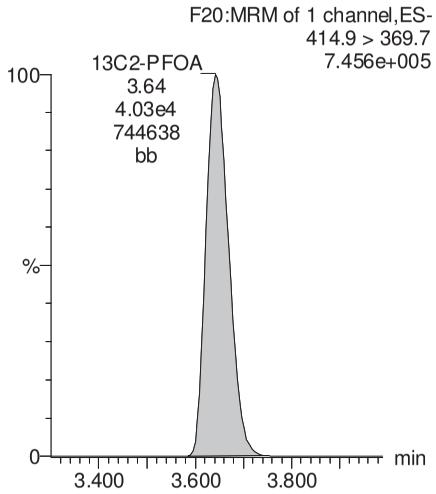

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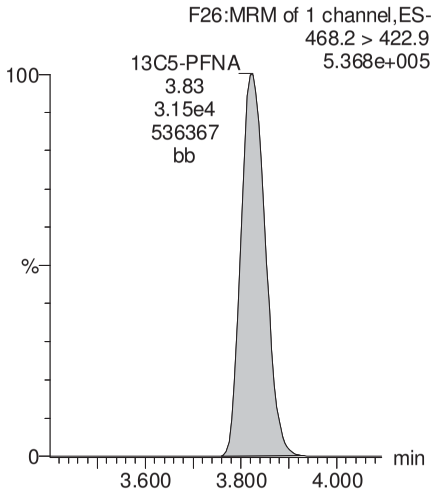

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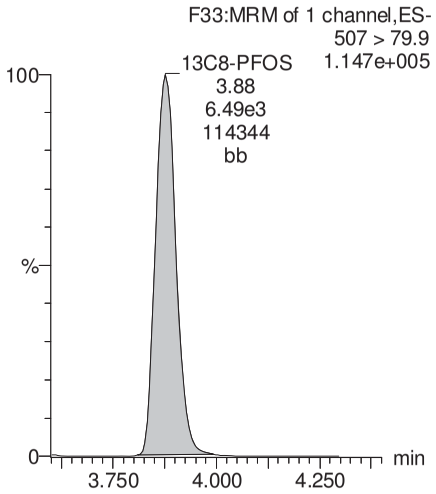

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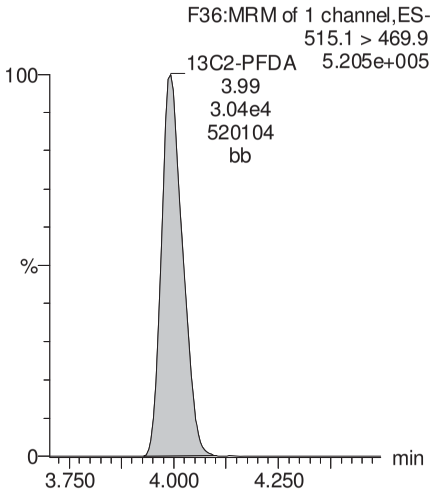

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Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-29.qld

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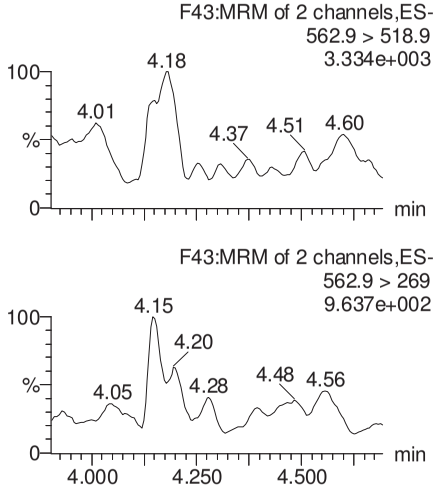

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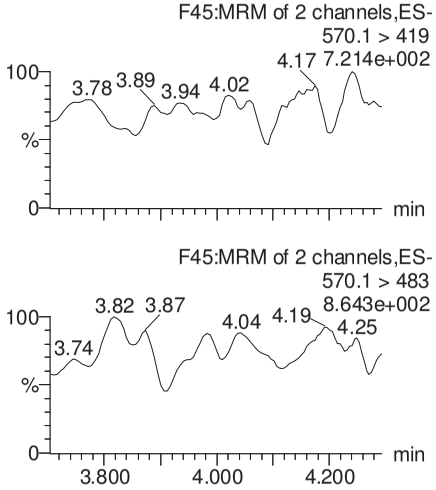

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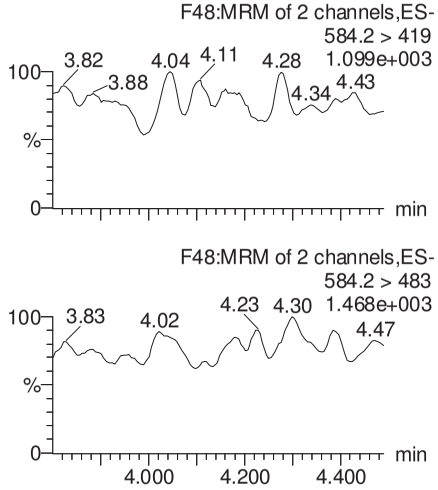

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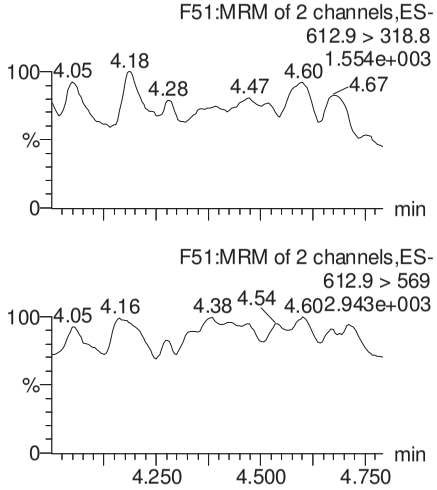

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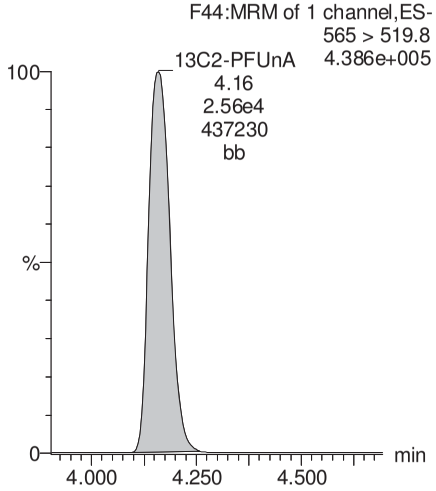

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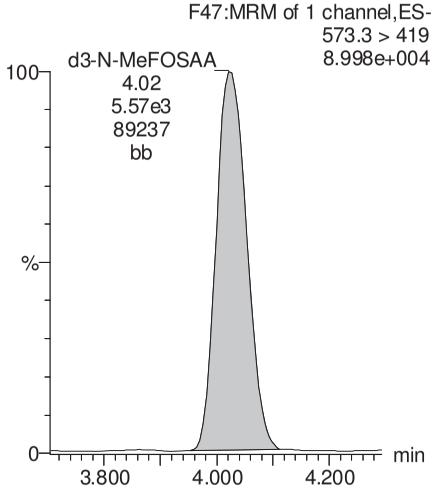

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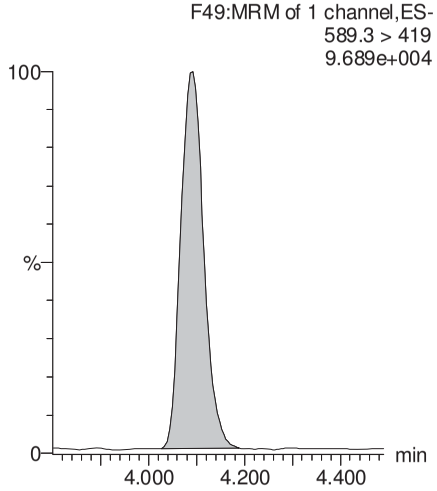

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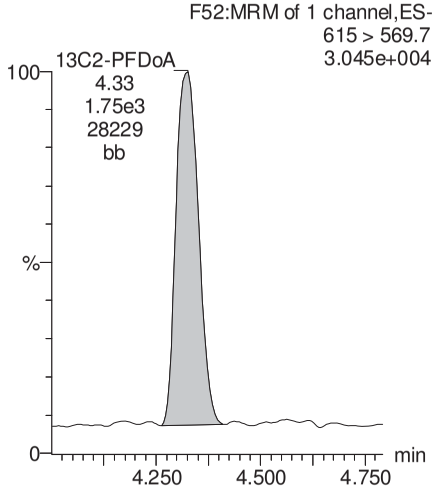

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-29.qld

Last Altered: Thursday, August 10, 2017 10:34:40 Pacific Daylight Time
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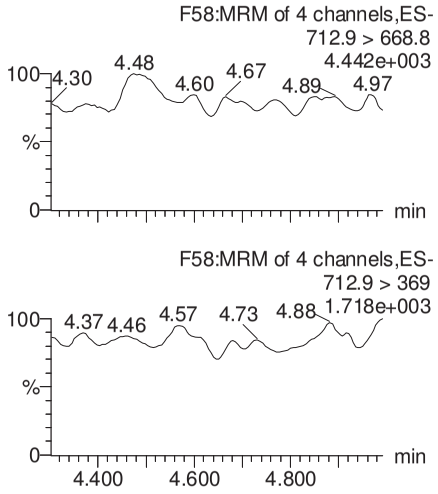
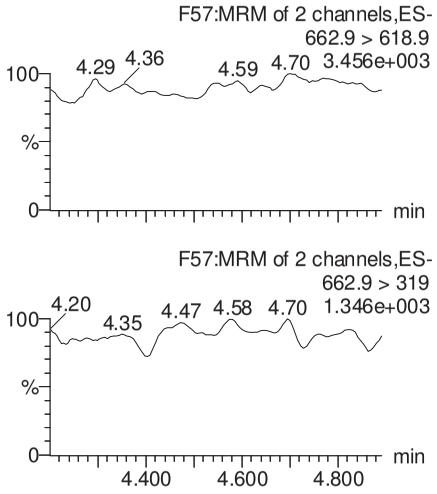
Name: 170801M1_29, Date: 01-Aug-2017, Time: 14:47:19, ID: 1700920-01 RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

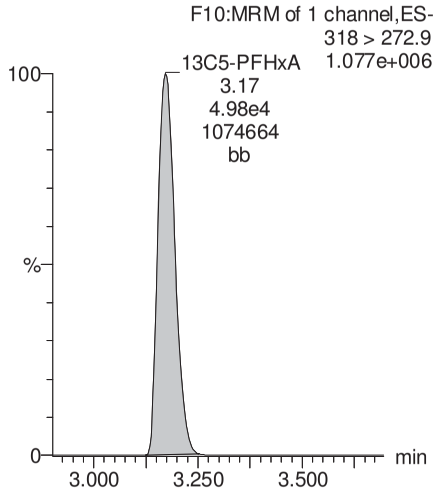
PFTeDA



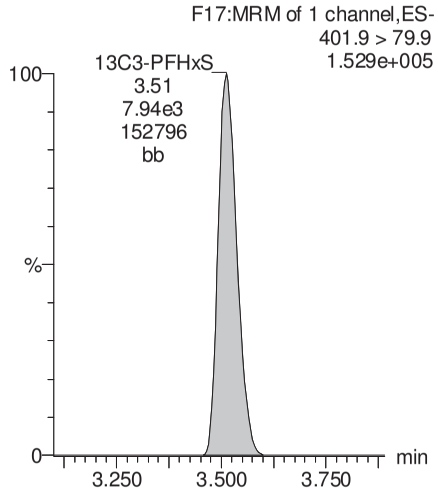
PFTrDA



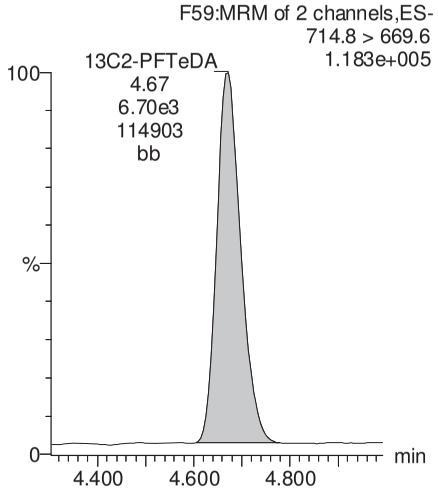
13C5-PFHxA



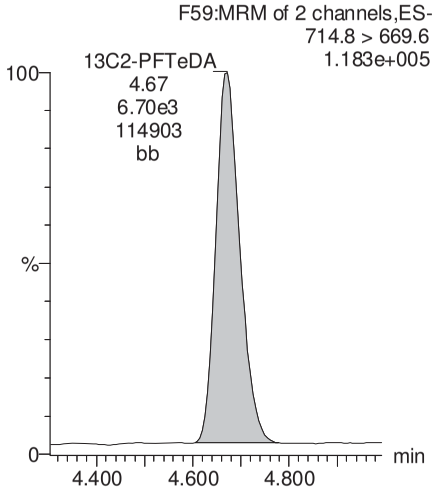
13C3-PFHxS



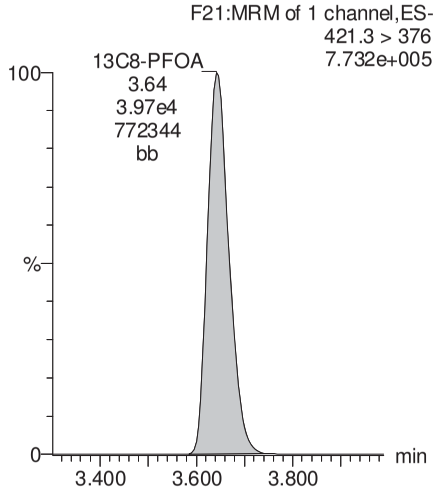
13C2-PFTeDA



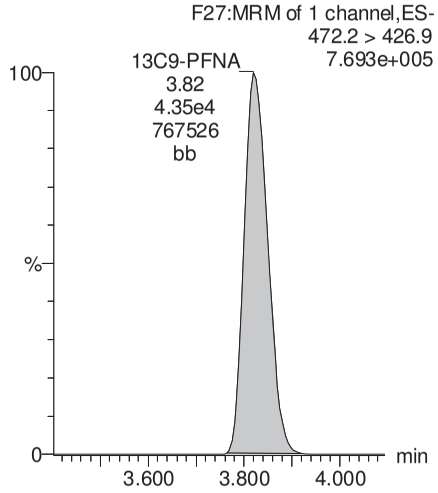
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



AP 8/10/2017

Vista Analytical Laboratory

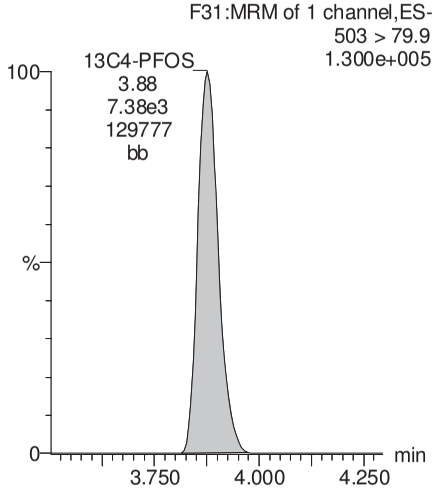
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-29.qld

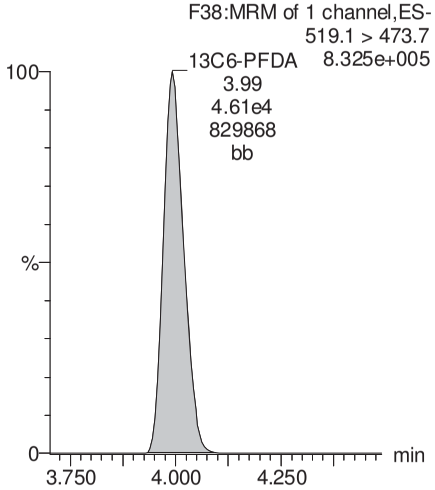
Last Altered: Thursday, August 10, 2017 10:34:40 Pacific Daylight Time
Printed: Thursday, August 10, 2017 10:36:55 Pacific Daylight Time

Name: 170801M1_29, Date: 01-Aug-2017, Time: 14:47:19, ID: 1700920-01 RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

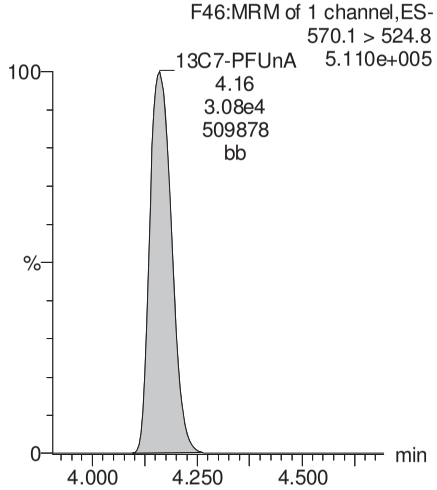
13C4-PFOS



13C6-PFDA



13C7-PFUnA



AP 8/10/2017

Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-50.qld

Last Altered: Friday, August 11, 2017 13:23:10 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:24:15 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_50, Date: 01-Aug-2017, Time: 18:33:15, ID: 1700920-01@5X RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	6	PFHxS	398.9 > 79.6	1.83e4	7.43e2	0.1113		3.56	3.52	308	1650	
2	12	PFOS	499 > 79.9	3.06e4	1.49e3	0.1113		3.89	3.88	256	2110	
3	33	18O2-PFHxS	403 > 102.6	7.43e2	1.78e3	0.1113	0.475	3.56	3.51	5.22	98.7	87.9
4	38	13C8-PFOS	507 > 79.9	1.49e3	1.29e3	0.1113	1.153	3.89	3.88	14.5	113	100.6
5	53	13C3-PFHxS	401.9 > 79.9	1.78e3	1.78e3	0.1113	1.000	3.56	3.52	12.5	112	100.0
6	56	13C4-PFOS	503 > 79.9	1.29e3	1.29e3	0.1113	1.000	3.89	3.88	12.5	112	100.0
7	60	Total PFHxS	398.9 > 79.6	1.83e4	7.43e2	0.1113		3.52		308	1650	
8	62	Total PFOS	499 > 79.9	3.06e4	1.49e3	0.1113		3.89		256	2110	

AP 8/11/2017

Dataset: U:\Q4.PRO\results\170801M1\170801M1-50.qld

Last Altered: Friday, August 11, 2017 13:23:10 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:24:15 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_50, Date: 01-Aug-2017, Time: 18:33:15, ID: 1700920-01@5X RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.93	4568.454	861.857	66.259	bb	315.7
2	59	Total PFBS	299 > 79.7	2.81	88.685	861.857	1.286	bb	5.8

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.52	18301.252	743.304	307.769	MM	1645.2

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.65	18767.229	8950.022	26.211	bb	245.5
2	61	Total PFOA	413 > 368.7	3.32	107.887	8950.022	0.151	bb	0.0

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.88	30550.813	1493.649	255.673	MM	2109.6

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									

AP 8/11/2017

Vista Analytical Laboratory

Rev'd: MM 8/12/17

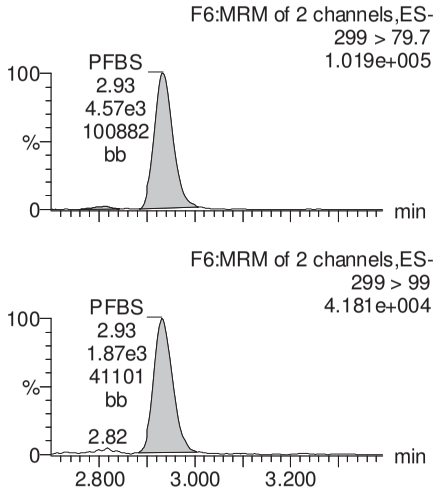
Dataset: U:\Q4.PRO\results\170801M1\170801M1-50.qld

Last Altered: Friday, August 11, 2017 13:23:10 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:24:15 Pacific Daylight Time

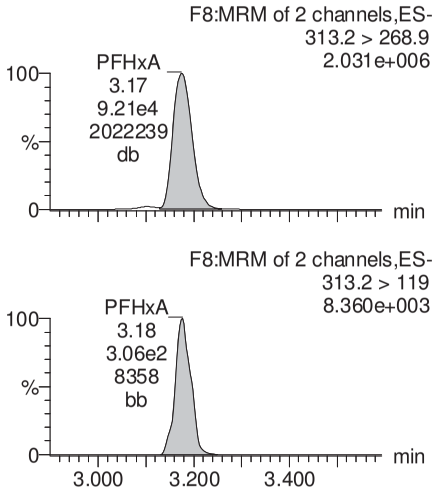
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_50, Date: 01-Aug-2017, Time: 18:33:15, ID: 1700920-01@5X RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

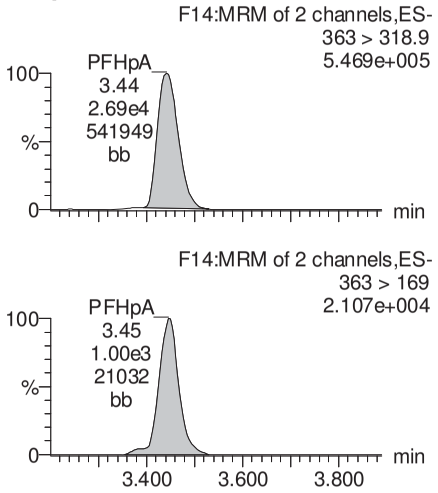
Total PFBS



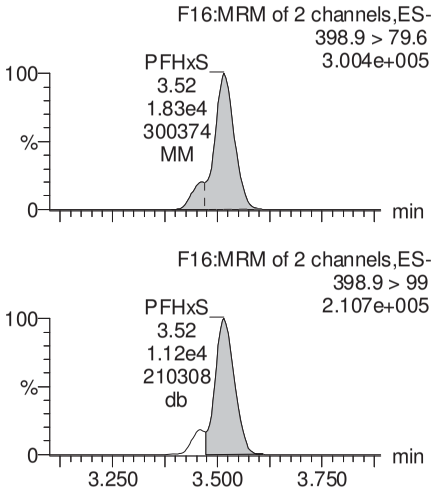
PFHxA



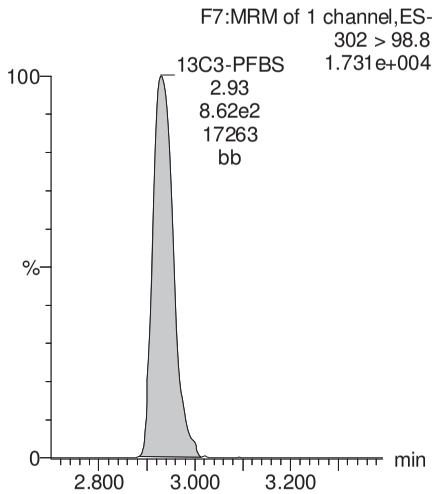
PFHpA



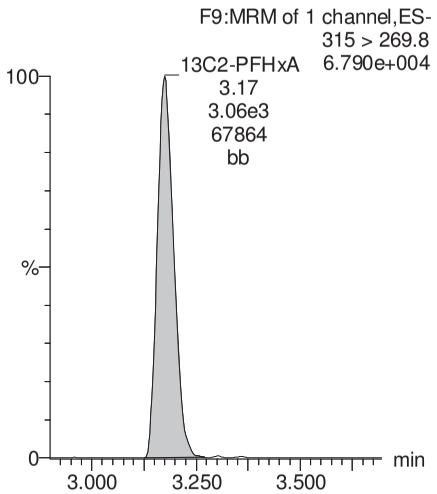
Total PFHxS



13C3-PFBS



13C2-PFHxA



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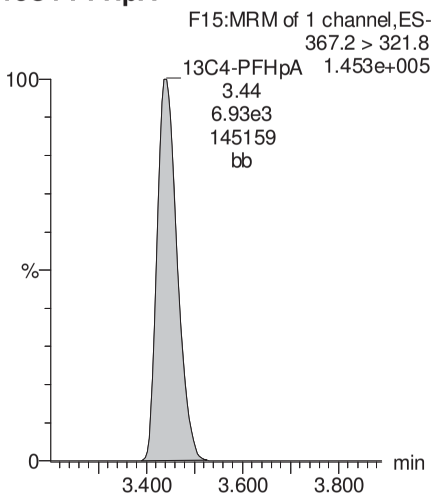
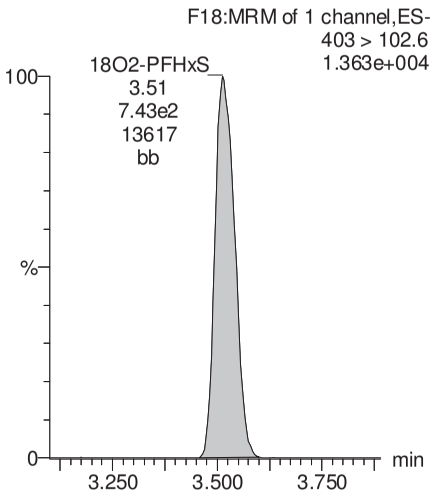


18O2-PFHxS



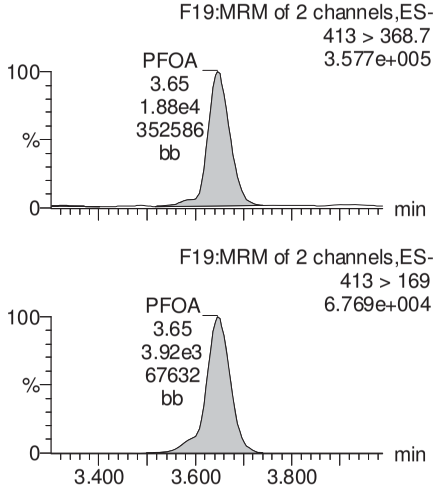
AP 8/11/2017

Dataset: U:\Q4.PRO\results\170801M1\170801M1-50.qld

Last Altered: Friday, August 11, 2017 13:23:10 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:24:15 Pacific Daylight Time

Name: 170801M1_50, Date: 01-Aug-2017, Time: 18:33:15, ID: 1700920-01@5X RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

Total PFOA



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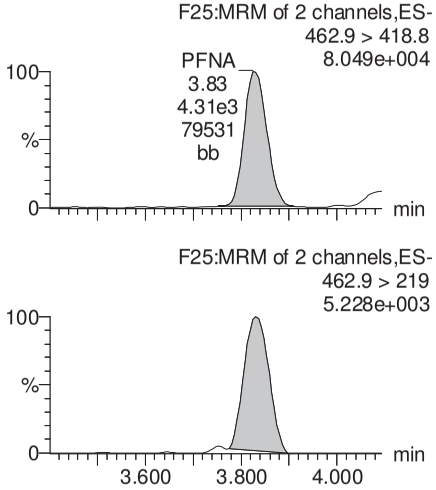
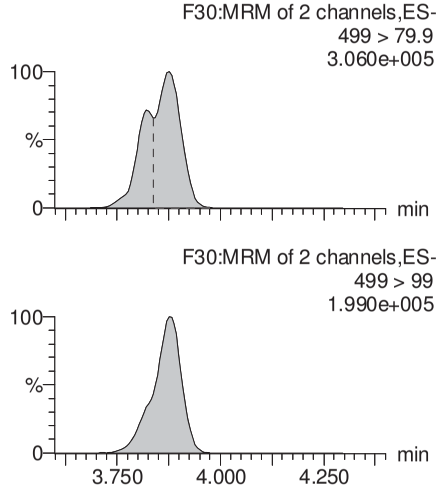
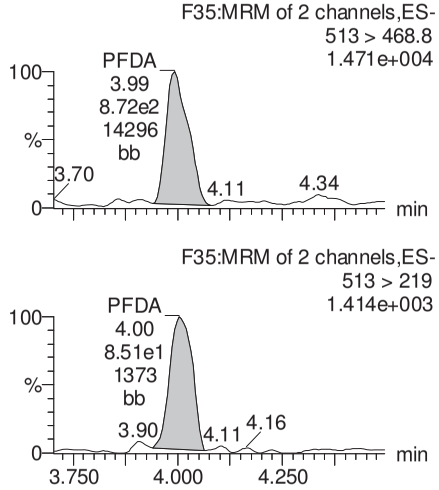


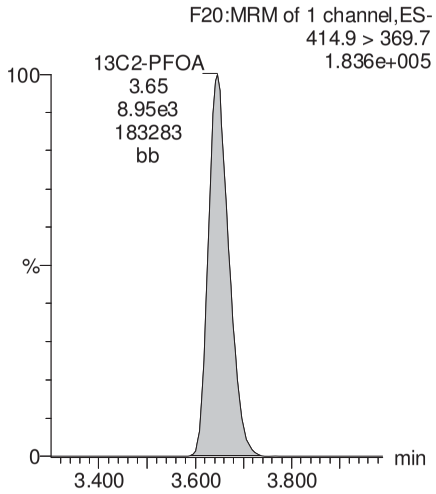
Total PFOS



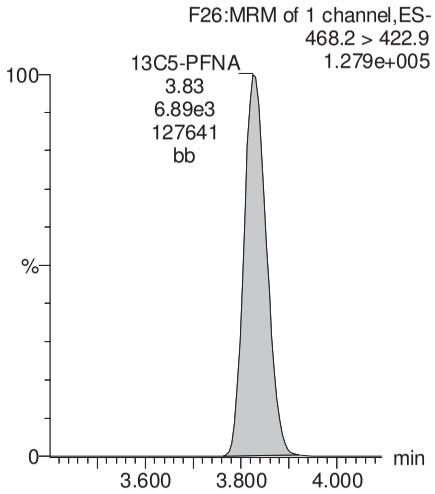
PFDA



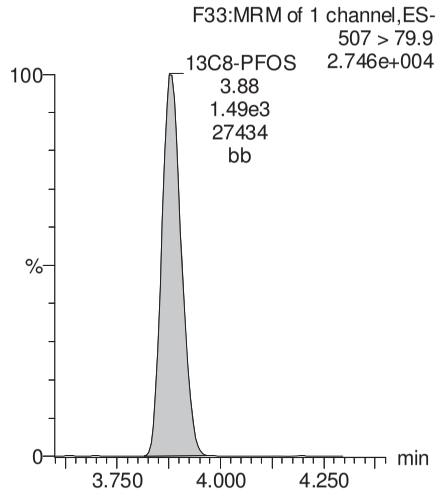
13C2-PFOA



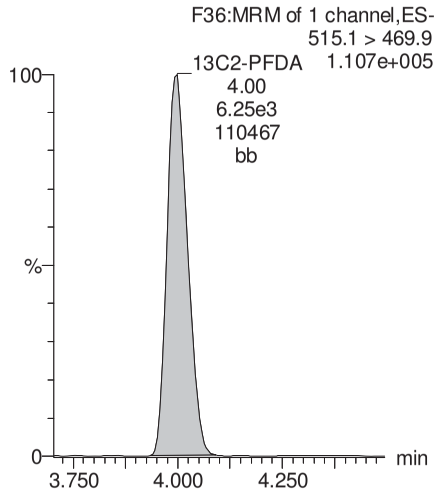
13C5-PFNA



13C8-PFOS



13C2-PFDA



AP 8/11/2017

Dataset: U:\Q4.PRO\results\170801M1\170801M1-50.qld

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Printed: Friday, August 11, 2017 13:24:15 Pacific Daylight Time

Name: 170801M1_50, Date: 01-Aug-2017, Time: 18:33:15, ID: 1700920-01@5X RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

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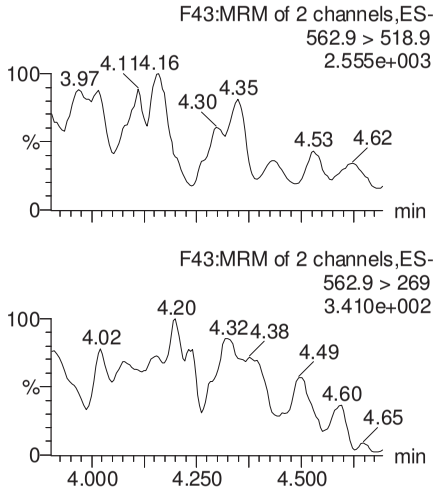
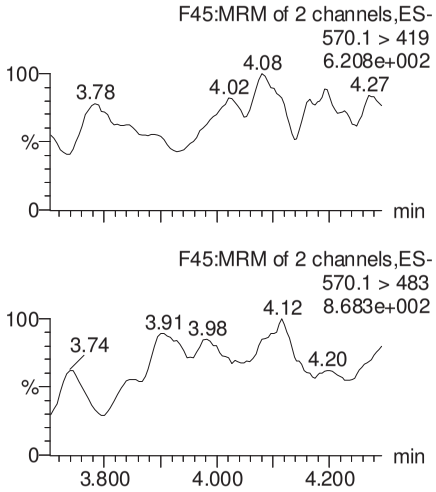
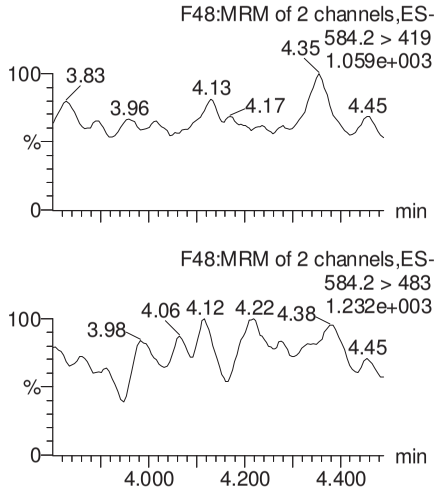


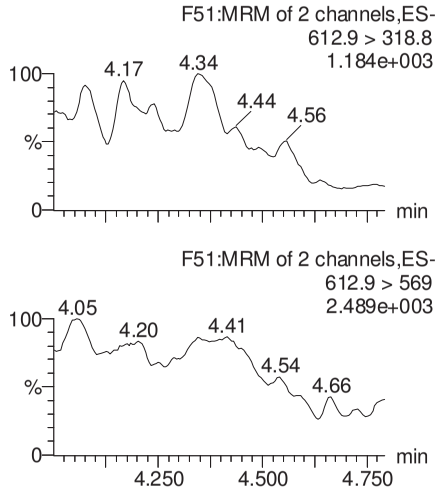
N-MeFOSAA



N-EtFOSAA



PFDoA



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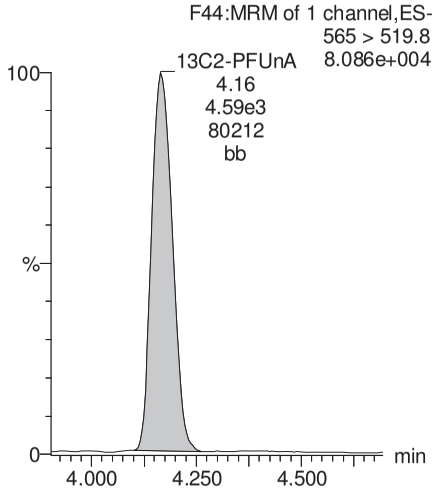

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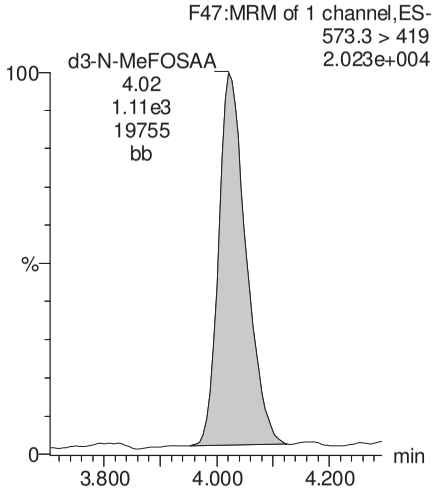
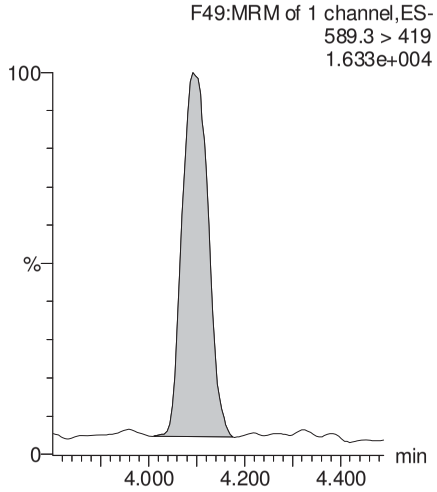
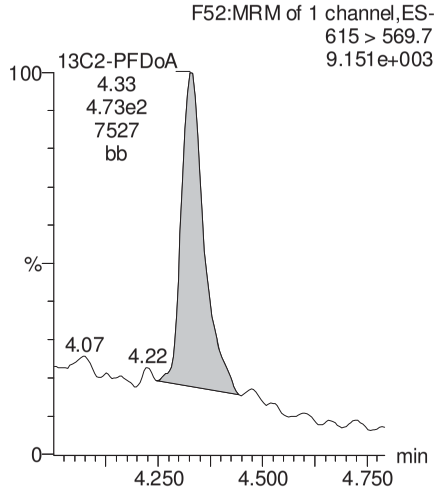


d5-N-EtFOSAA



13C2-PFDoA



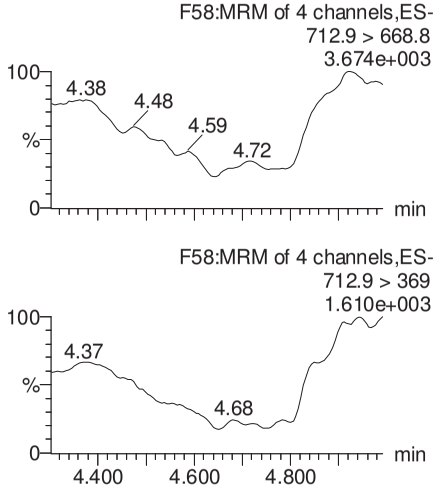
AP 8/11/2017

Dataset: U:\Q4.PRO\results\170801M1\170801M1-50.qld

Last Altered: Friday, August 11, 2017 13:23:10 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:24:15 Pacific Daylight Time

Name: 170801M1_50, Date: 01-Aug-2017, Time: 18:33:15, ID: 1700920-01@5X RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

PFTeDA



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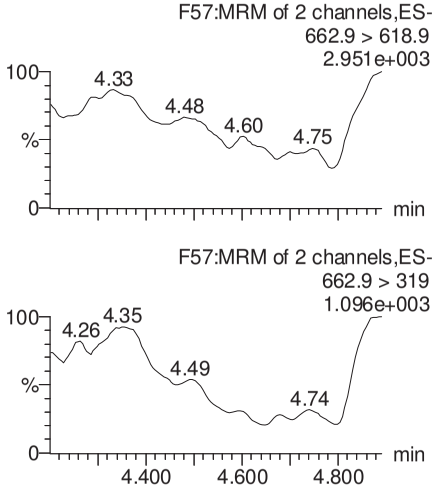
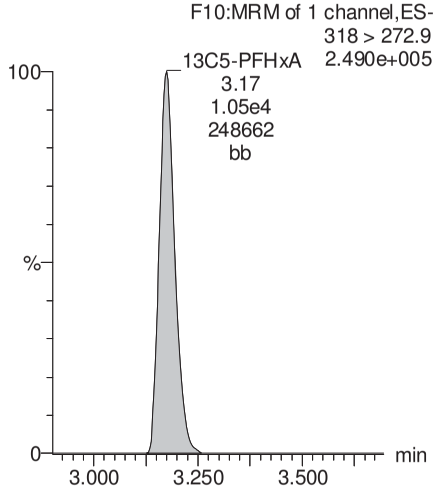
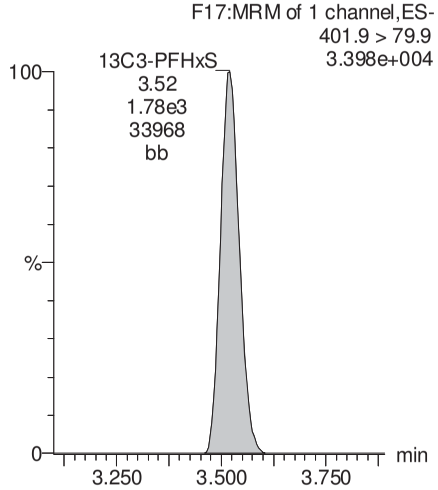


13C5-PFHxA



13C3-PFHxS



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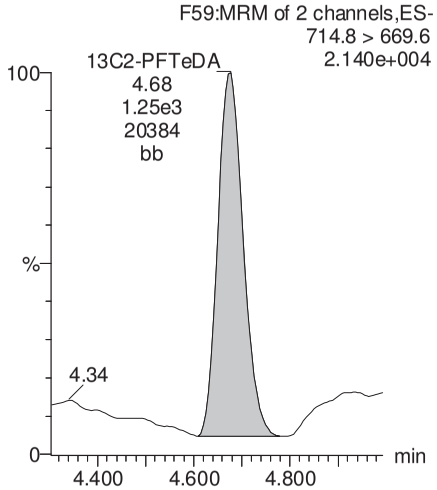
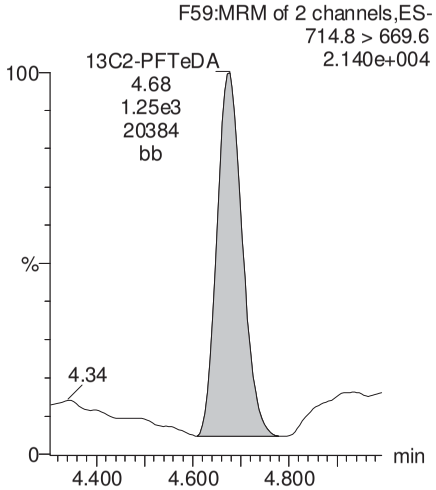
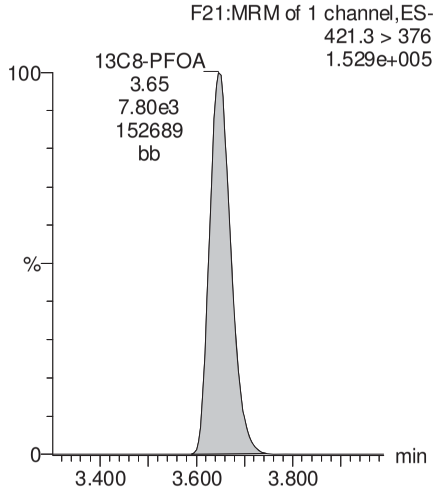


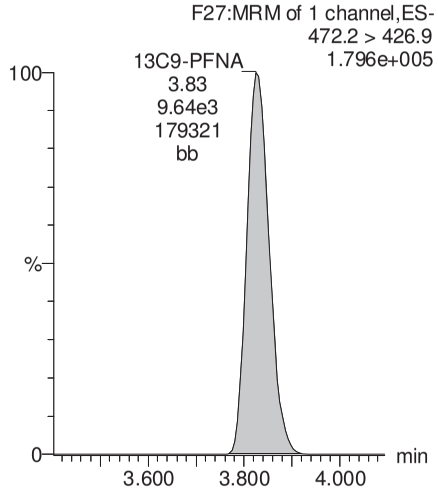
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

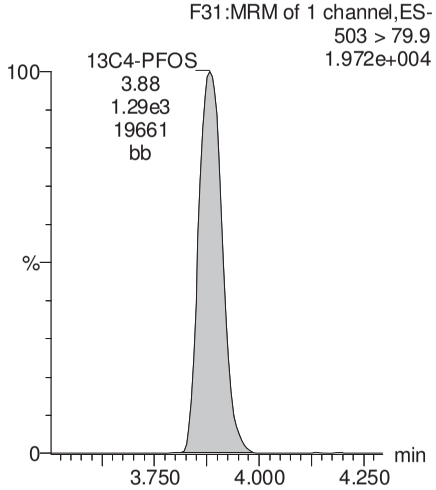
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-50.qld

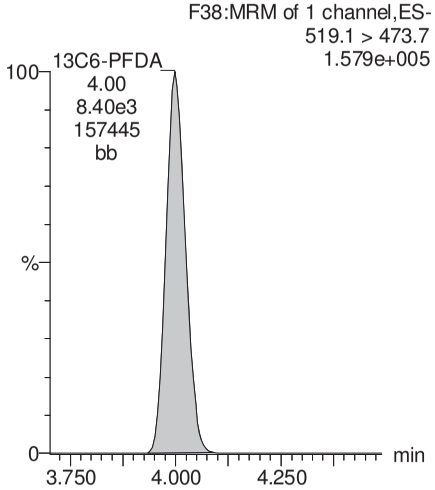
Last Altered: Friday, August 11, 2017 13:23:10 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:24:15 Pacific Daylight Time

Name: 170801M1_50, Date: 01-Aug-2017, Time: 18:33:15, ID: 1700920-01@5X RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

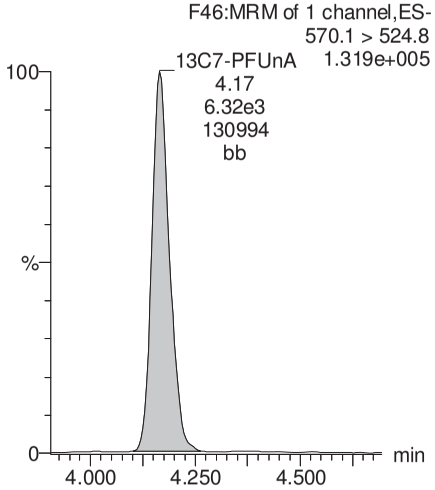
13C4-PFOS



13C6-PFDA



13C7-PFUnA



AP 8/11/2017

Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-30.qld

Last Altered: Thursday, August 10, 2017 13:21:32 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:21:49 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_30, Date: 01-Aug-2017, Time: 14:58:06, ID: 1700920-02 LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	3.16e4	3.50e3	0.1111		2.96	2.93	113	539	
2	4	PFHxA	313.2 > 268.9	5.34e5	1.12e4	0.1111		3.19	3.17	239	1550	
3	5	PFHpA	363 > 318.9	1.72e5	2.52e4	0.1111		3.45	3.44	85.1	640	
4	6	PFHxS	398.9 > 79.6	8.51e4	2.23e3	0.1111		3.56	3.51	476	2550 E	
5	8	PFOA	413 > 368.7	1.31e5	3.58e4	0.1111		3.65	3.64	45.7	430	
6	10	PFNA	462.9 > 418.8	5.42e4	2.94e4	0.1111		3.83	3.83	23.0	190	
7	12	PFOS	499 > 79.9	1.30e5	5.61e3	0.1111		3.89	3.88	289	2370 E	
8	13	PFDA	513 > 468.8	3.15e3	2.83e4	0.1111		4.01	3.99	1.39	9.26	
9	15	N-MeFOSAA	570.1 > 419		5.54e3	0.1111		4.03				
10	16	N-EtFOSAA	584.2 > 419		5.05e3	0.1111		4.10				
11	17	PFUnA	562.9 > 518.9		2.36e4	0.1111		4.17				
12	19	PFDoA	612.9 > 318.8		2.68e3	0.1111		4.34				

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Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-30.qld

Last Altered: Thursday, August 10, 2017 13:21:32 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:22:02 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_30, Date: 01-Aug-2017, Time: 14:58:06, ID: 1700920-02 LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		2.68e3	0.1111		4.50				
2	22	PFTeDA	712.9 > 668.8		1.15e4	0.1111		4.68				
3	30	13C3-PFBS	302 > 98.8	3.50e3	4.14e4	0.1111	0.034	2.96	2.93	0.423	112	99.3
4	31	13C2-PFHxA	315 > 269.8	1.12e4	4.14e4	0.1111	0.334	3.19	3.17	1.35	36.4	81.0
5	32	13C4-PFHpA	367.2 > 321.8	2.52e4	4.14e4	0.1111	0.414	3.45	3.44	3.04	66.1	58.8
6	33	18O2-PFHxS	403 > 102.6	2.23e3	6.19e3	0.1111	0.475	3.56	3.51	4.51	85.3	75.9
7	35	13C2-PFOA	414.9 > 369.7	3.58e4	3.22e4	0.1111	1.298	3.65	3.65	13.9	96.3	85.6
8	36	13C5-PFNA	468.2 > 422.9	2.94e4	3.93e4	0.1111	1.094	3.83	3.82	9.34	76.8	68.3
9	38	13C8-PFOS	507 > 79.9	5.61e3	5.72e3	0.1111	1.153	3.89	3.88	12.3	95.6	85.0
10	39	13C2-PFDA	515.1 > 469.9	2.83e4	3.67e4	0.1111	1.059	4.01	3.99	9.64	82.0	72.9

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Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-30.qld

Last Altered: Thursday, August 10, 2017 13:21:32 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:22:26 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_30, Date: 01-Aug-2017, Time: 14:58:06, ID: 1700920-02 LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	5.54e3	3.07e4	0.1111	0.019	4.03	4.02	2.25	1050	71.8
2	42	d5-N-EtFOSAA	589.3 > 419	5.05e3	3.07e4	0.1111	0.019	4.12	4.09	2.05	975	66.7
3	43	13C2-PFUnA	565 > 519.8	2.36e4	3.07e4	0.1111	1.172	4.17	4.16	9.60	73.7	65.5
4	44	13C2-PFDoA	615 > 569.7	2.68e3	3.07e4	0.1111	0.118	4.34	4.32	1.09	82.7	73.5
5	46	13C2-PFTeDA	714.8 > 669.6	1.15e4	3.07e4	0.1111	0.801	4.68	4.67	4.69	52.6	46.8
6	52	13C5-PFHxA	318 > 272.9	4.14e4	4.14e4	0.1111	1.000	3.19	3.17	5.00	45.0	100.0
7	53	13C3-PFHxS	401.9 > 79.9	6.19e3	6.19e3	0.1111	1.000	3.56	3.51	12.5	112	100.0
8	54	13C8-PFOA	421.3 > 376	3.22e4	3.22e4	0.1111	1.000	3.65	3.65	12.5	112	100.0
9	55	13C9-PFNA	472.2 > 426.9	3.93e4	3.93e4	0.1111	1.000	3.83	3.82	12.5	112	100.0
10	56	13C4-PFOS	503 > 79.9	5.72e3	5.72e3	0.1111	1.000	3.89	3.88	12.5	112	100.0
11	57	13C6-PFDA	519.1 > 473.7	3.67e4	3.67e4	0.1111	1.000	4.01	3.99	12.5	112	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.07e4	3.07e4	0.1111	1.000	4.17	4.16	12.5	112	100.0
13	59	Total PFBS	299 > 79.7	3.16e4	3.50e3	0.1111		2.96		113	539	
14	60	Total PFHxS	398.9 > 79.6	8.51e4	2.23e3	0.1111		3.52		476	2550 E	
15	61	Total PFOA	413 > 368.7	1.36e5	3.58e4	0.1111		3.65		47.3	444	
16	62	Total PFOS	499 > 79.9	1.30e5	5.61e3	0.1111		3.89		289	2370 E	
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	5.54e3	0.1111		4.03		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	5.05e3	0.1111		4.17		0.000		

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Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-30.qld

Last Altered: Thursday, August 10, 2017 13:21:32 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:22:26 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_30, Date: 01-Aug-2017, Time: 14:58:06, ID: 1700920-02 LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.93	31626.141	3504.105	112.818	MM	538.5

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.51	85074.813	2232.986	476.239	MM	2549.8

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.64	130835.914	35801.809	45.681	MM	429.5
2	61	Total PFOA	413 > 368.7	3.59	4665.663	35801.809	1.629	MM	14.0

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.88	129515.383	5608.390	288.664	MM	2366.3

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 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-30.qld

Last Altered: Thursday, August 10, 2017 13:21:32 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:22:26 Pacific Daylight Time

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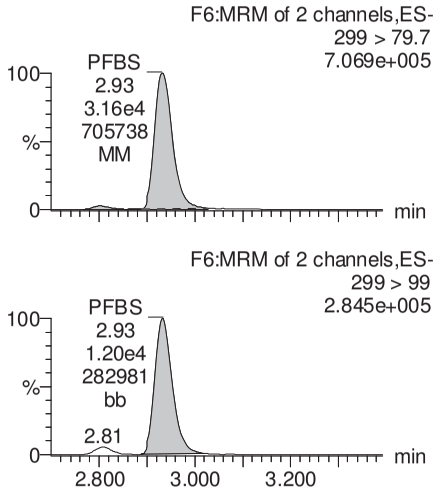
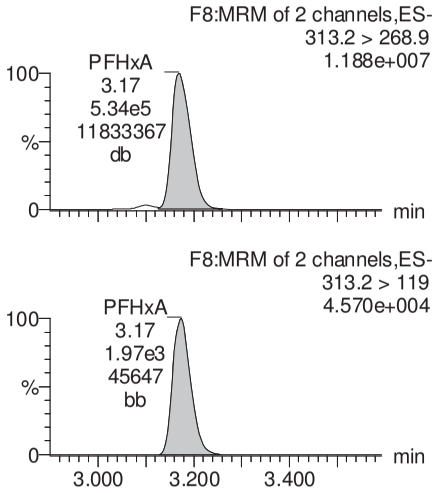
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_30, Date: 01-Aug-2017, Time: 14:58:06, ID: 1700920-02 LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

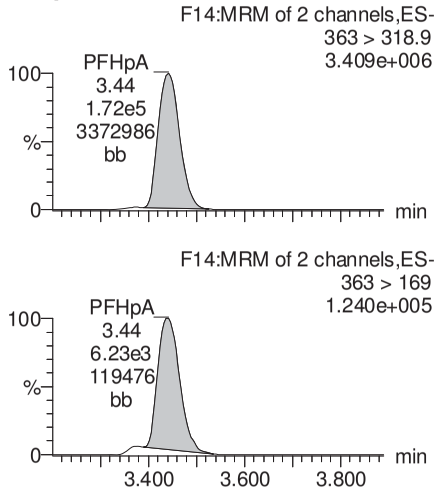
Total PFBS



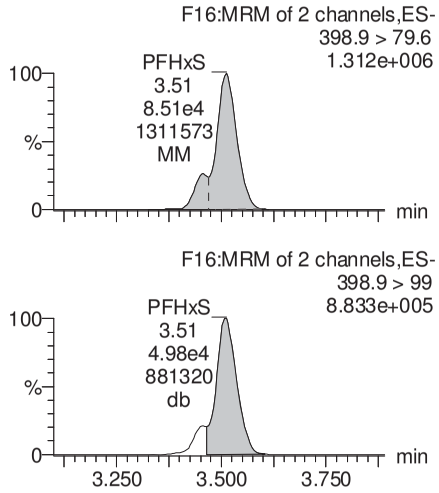
PFHxA



PFHpA



Total PFHxS



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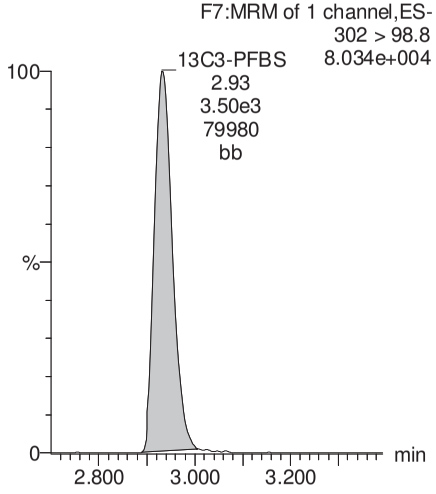
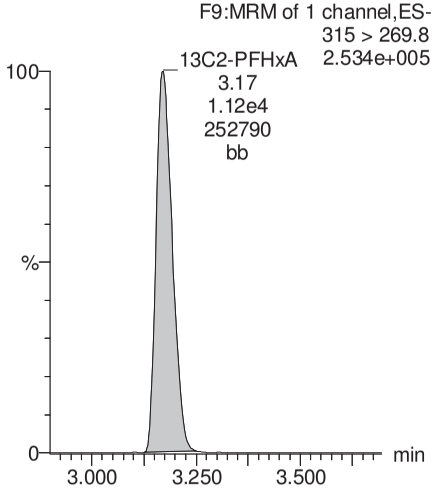
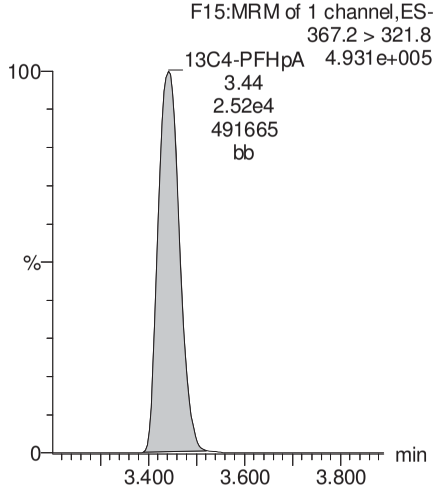


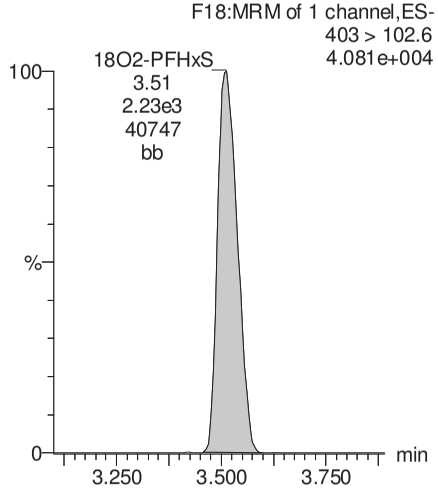
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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Vista Analytical Laboratory

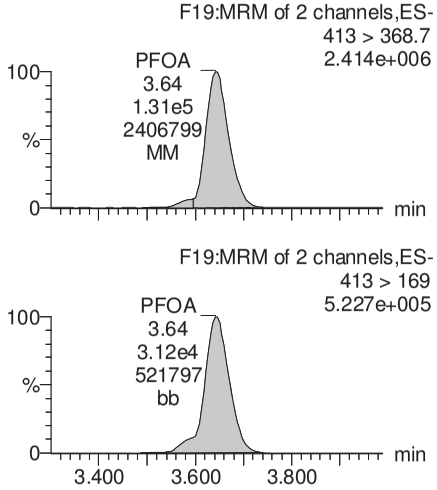
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-30.qld

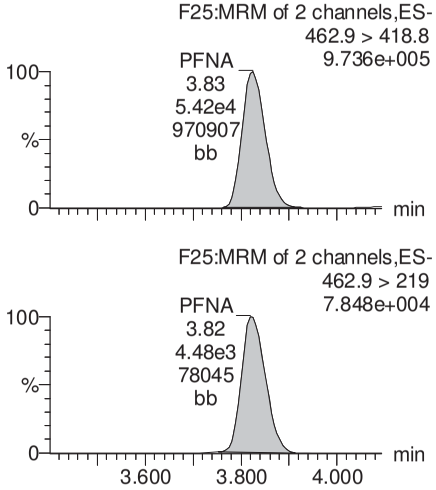
Last Altered: Thursday, August 10, 2017 13:21:32 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:22:26 Pacific Daylight Time

Name: 170801M1_30, Date: 01-Aug-2017, Time: 14:58:06, ID: 1700920-02 LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

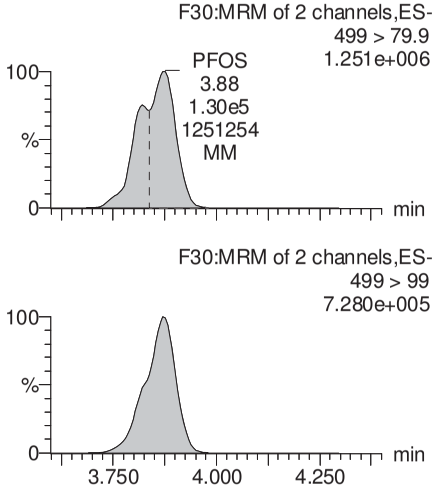
Total PFOA



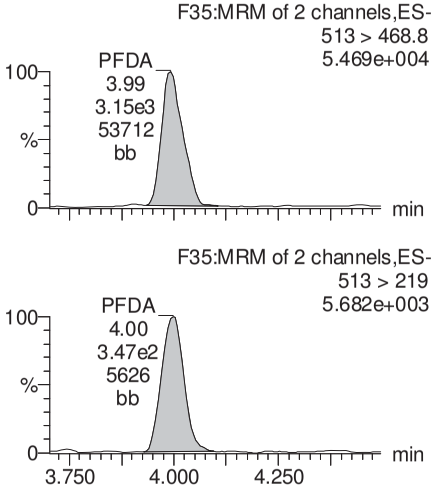
PFNA



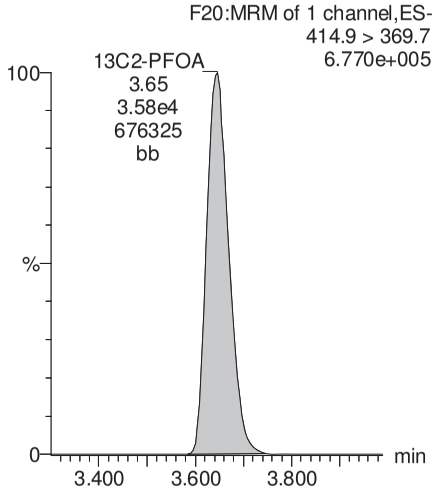
Total PFOS



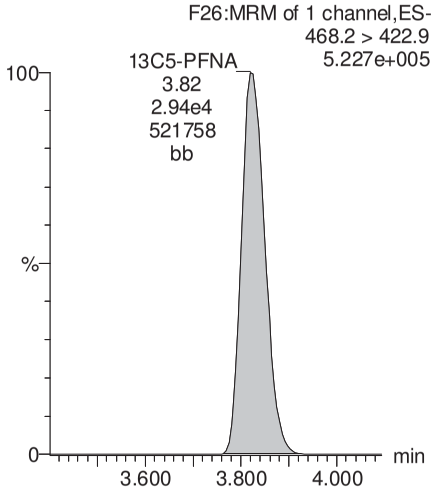
PFDA



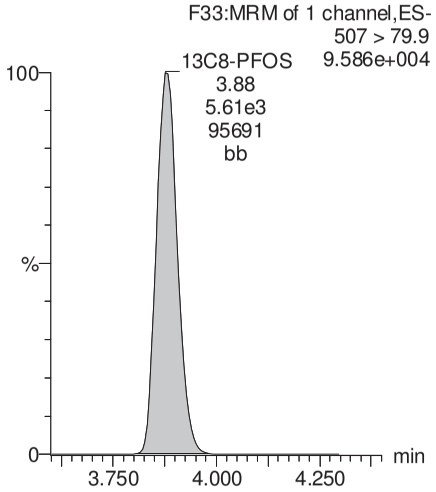
13C2-PFOA



13C5-PFNA



13C8-PFOS



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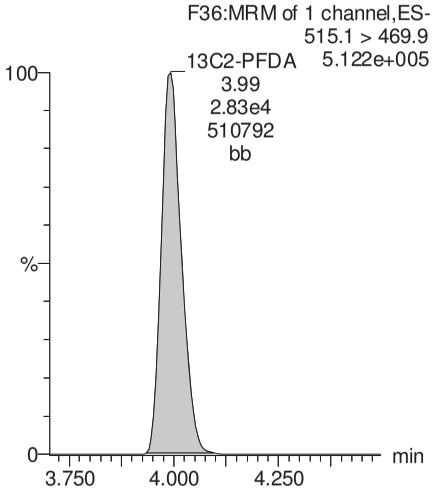


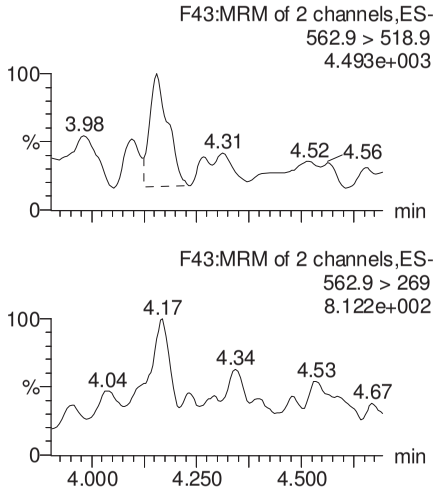
AP 8/10/2017

Dataset: U:\Q4.PRO\results\170801M1\170801M1-30.qld

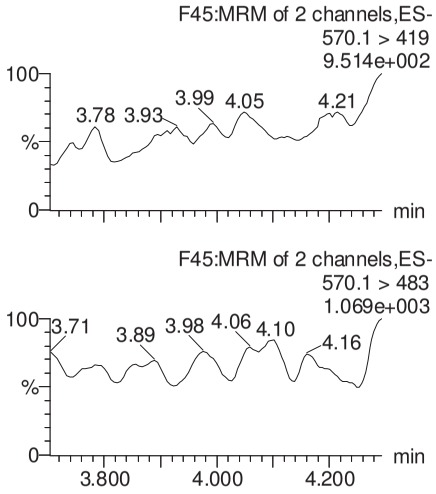
Last Altered: Thursday, August 10, 2017 13:21:32 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:22:26 Pacific Daylight Time

Name: 170801M1_30, Date: 01-Aug-2017, Time: 14:58:06, ID: 1700920-02 LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

PFUnA



N-MeFOSAA



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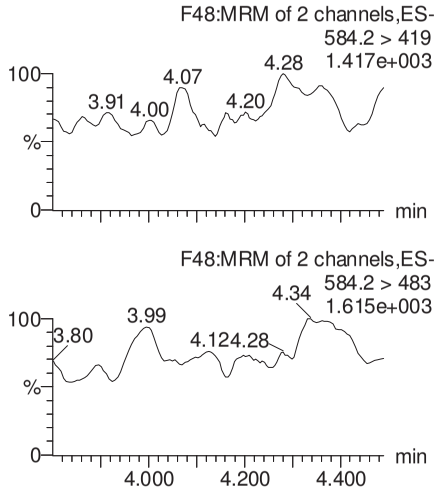

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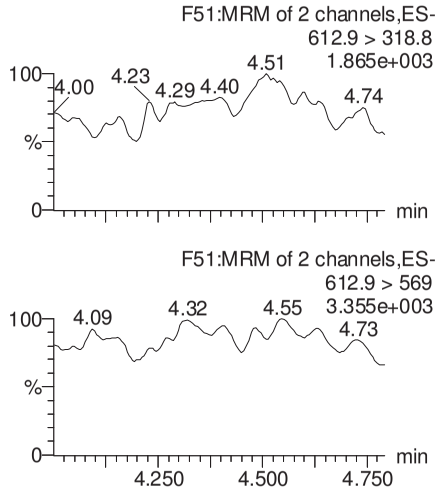
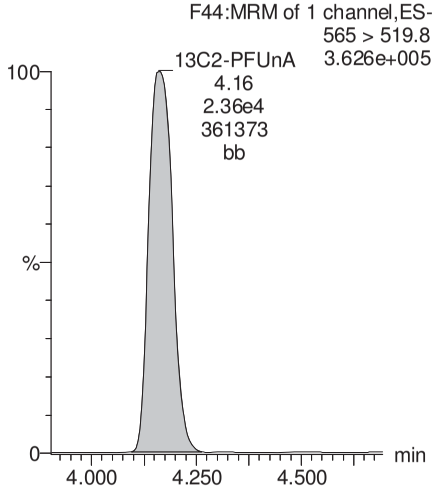


13C2-PFUnA



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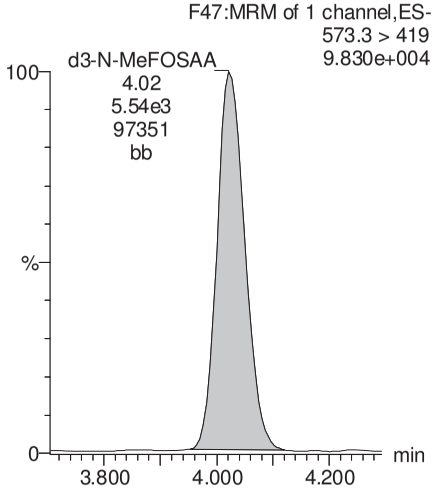
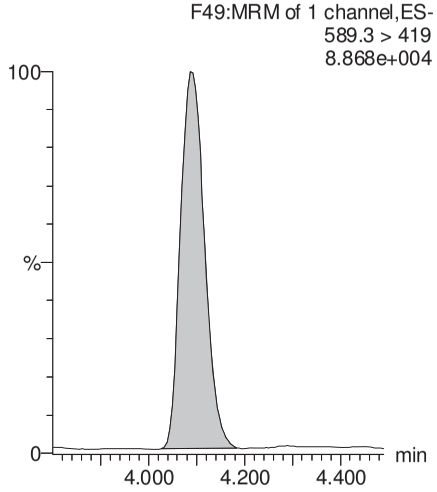
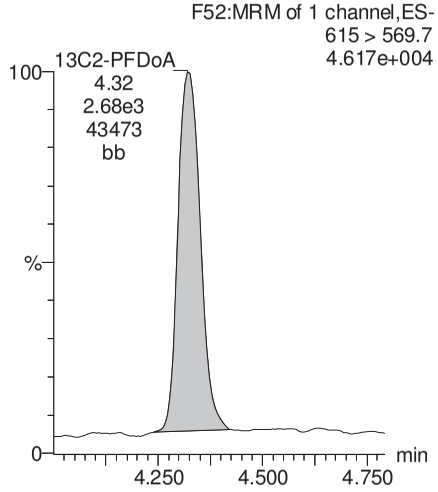


d5-N-EtFOSAA



13C2-PFDoA



AP 8/10/2017

Dataset: U:\Q4.PRO\results\170801M1\170801M1-30.qld

Last Altered: Thursday, August 10, 2017 13:21:32 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:22:26 Pacific Daylight Time

Name: 170801M1_30, Date: 01-Aug-2017, Time: 14:58:06, ID: 1700920-02 LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

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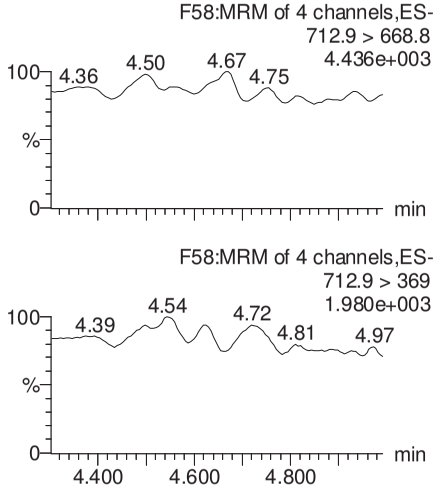

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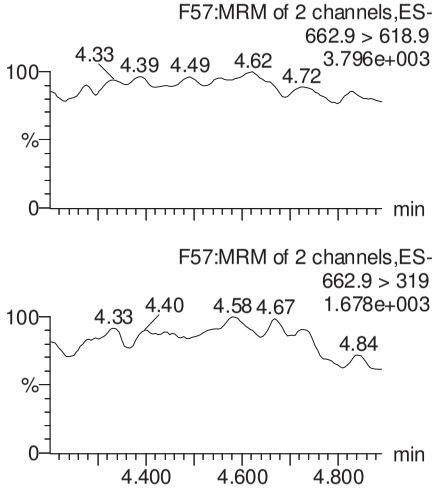
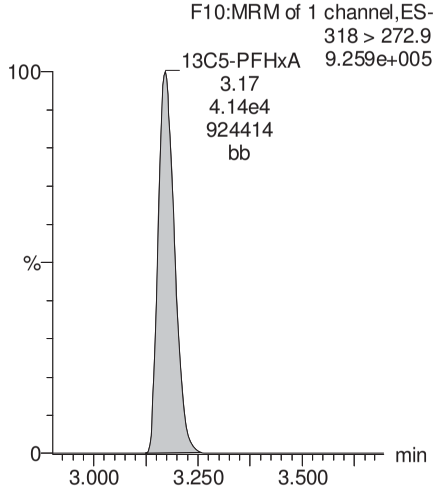
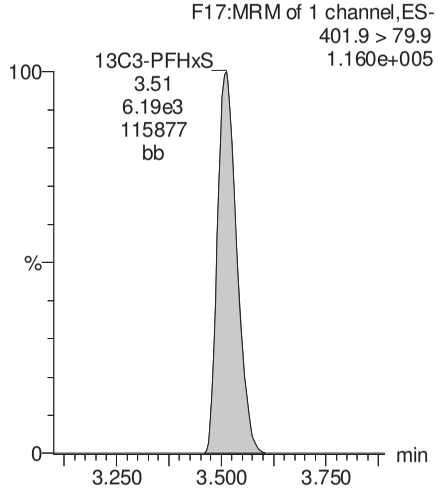


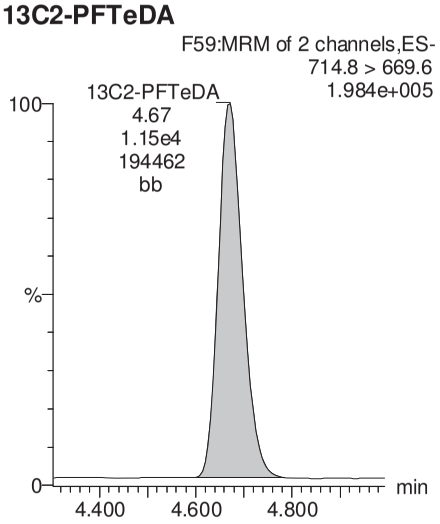
13C5-PFHxA



13C3-PFHxS



13C2-PFTeDA



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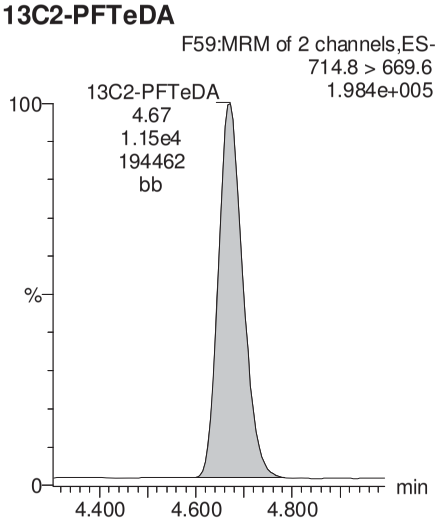
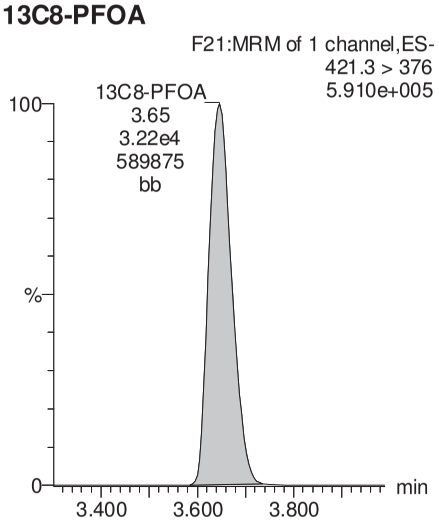
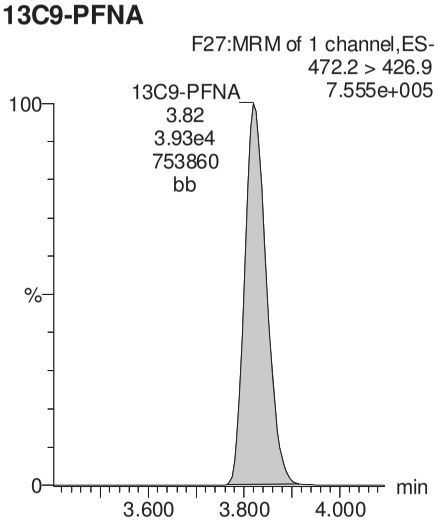


13C8-PFOA



13C9-PFNA



AP 8/10/2017

Vista Analytical Laboratory

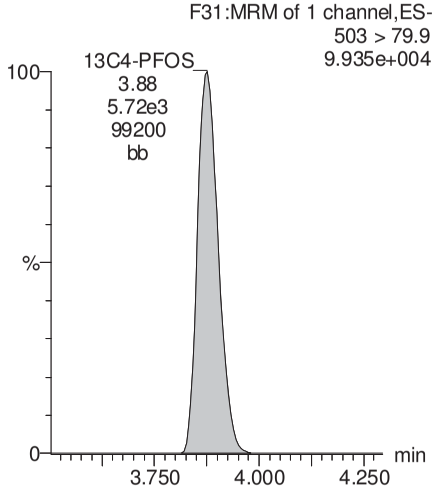
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-30.qld

Last Altered: Thursday, August 10, 2017 13:21:32 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:22:26 Pacific Daylight Time

Name: 170801M1_30, Date: 01-Aug-2017, Time: 14:58:06, ID: 1700920-02 LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

13C4-PFOS



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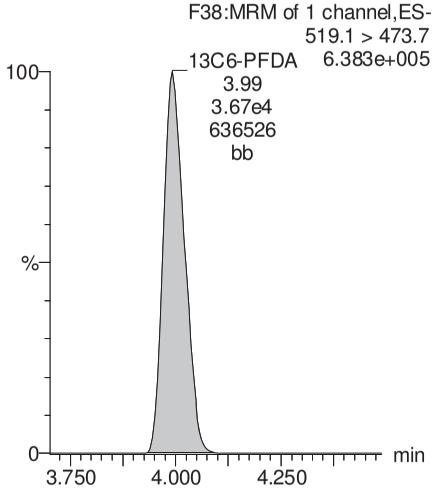
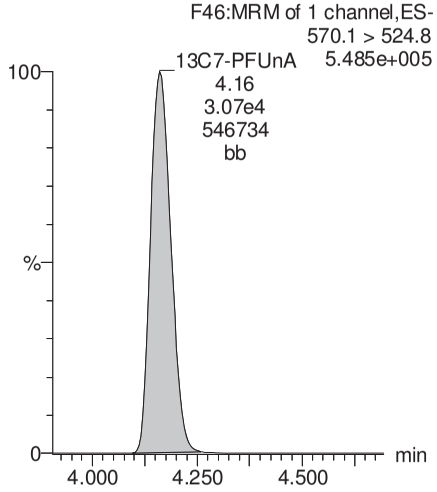


13C7-PFUnA



AP 8/10/2017

Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-51.qld

Last Altered: Friday, August 11, 2017 13:28:34 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:28:40 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_51, Date: 01-Aug-2017, Time: 18:43:54, ID: 1700920-02@5X LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	6	PFHxS	398.9 > 79.6	1.91e4	5.43e2	0.1111		3.56	3.52	441	2360	
2	12	PFOS	499 > 79.9	2.90e4	1.27e3	0.1111		3.89	3.88	285	2340	
3	33	18O2-PFHxS	403 > 102.6	5.43e2	1.45e3	0.1111	0.475	3.56	3.52	4.67	88.5	78.7
4	38	13C8-PFOS	507 > 79.9	1.27e3	1.28e3	0.1111	1.153	3.89	3.88	12.4	96.7	86.0
5	53	13C3-PFHxS	401.9 > 79.9	1.45e3	1.45e3	0.1111	1.000	3.56	3.52	12.5	112	100.0
6	56	13C4-PFOS	503 > 79.9	1.28e3	1.28e3	0.1111	1.000	3.89	3.88	12.5	112	100.0
7	60	Total PFHxS	398.9 > 79.6	1.91e4	5.43e2	0.1111		3.52		441	2360	
8	62	Total PFOS	499 > 79.9	2.90e4	1.27e3	0.1111		3.89		285	2340	

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Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-51.qld

Last Altered: Friday, August 11, 2017 13:28:34 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:28:40 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_51, Date: 01-Aug-2017, Time: 18:43:54, ID: 1700920-02@5X LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.93	6247.747	749.536	104.194	bb	497.3

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.52	19142.320	542.778	440.841	MM	2360.2

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.65	31637.178	7627.787	51.845	bb	487.7
2	61	Total PFOA	413 > 368.7	3.43	68.228	7627.787	0.112	bbl	

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.88	28963.391	1268.663	285.373	MM	2341.2

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									

AP 8/11/2017

Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-51.qld

Last Altered: Friday, August 11, 2017 13:28:34 Pacific Daylight Time
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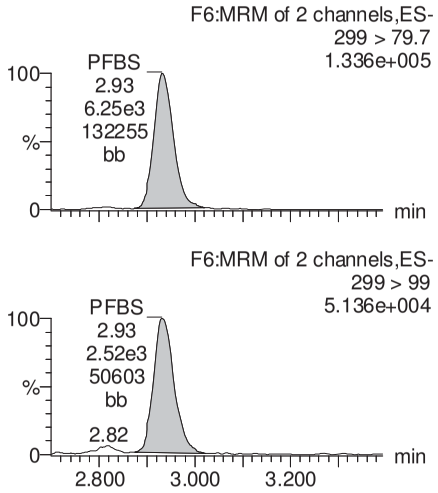
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_51, Date: 01-Aug-2017, Time: 18:43:54, ID: 1700920-02@5X LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

Total PFBS



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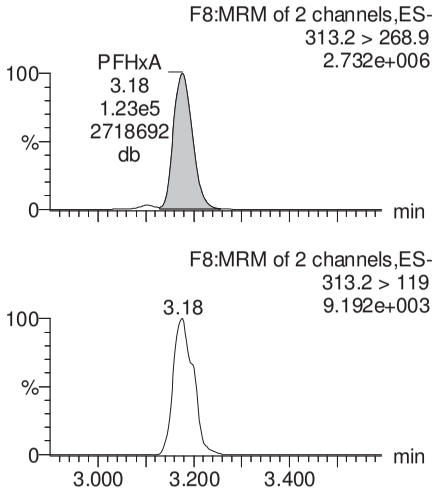

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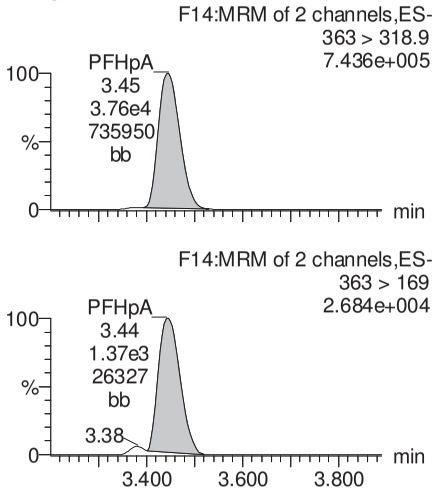
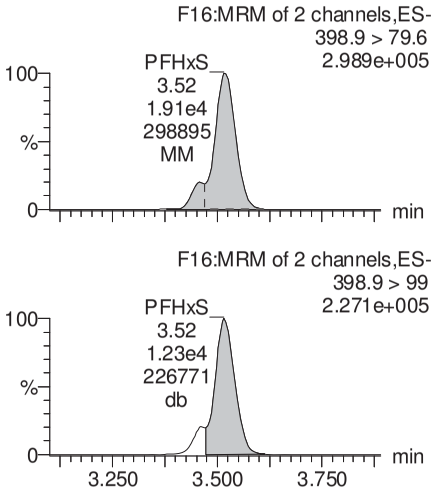
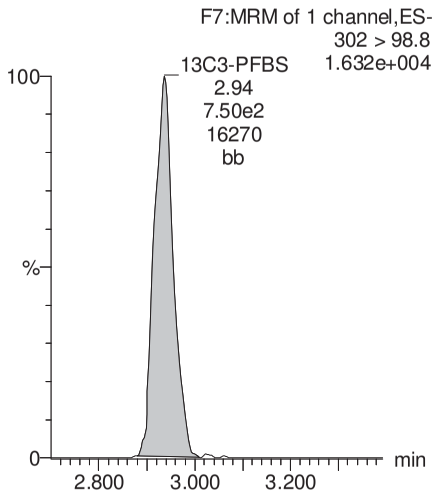


Total PFHxS



13C3-PFBS



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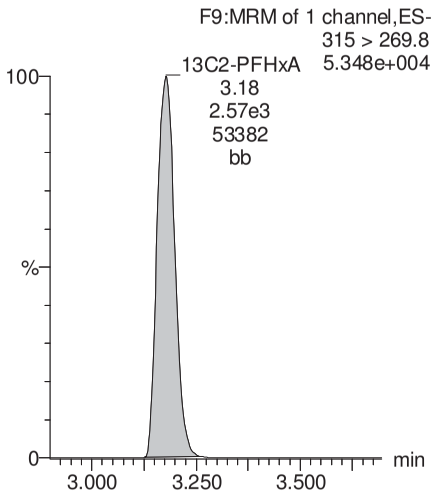

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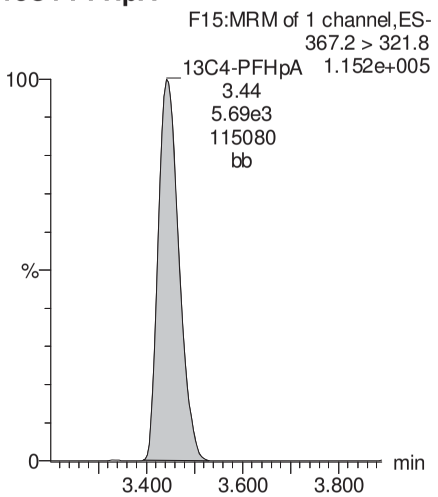

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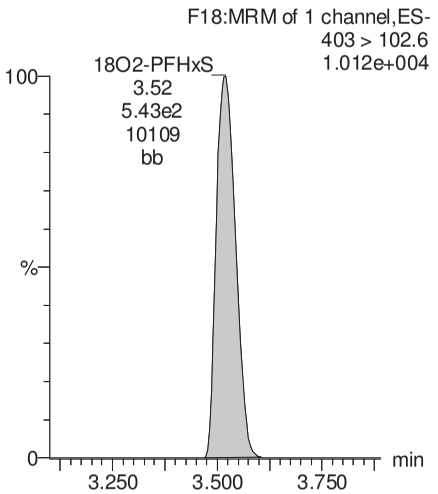

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-51.qld

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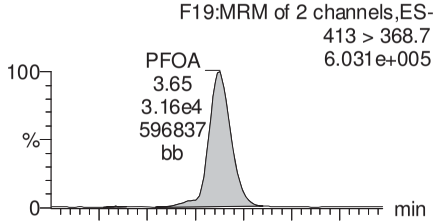
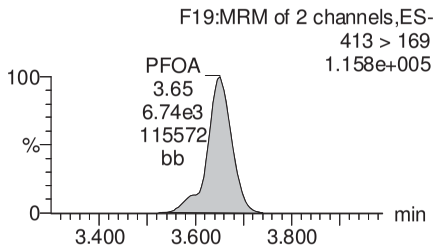
Printed: Friday, August 11, 2017 13:28:40 Pacific Daylight Time

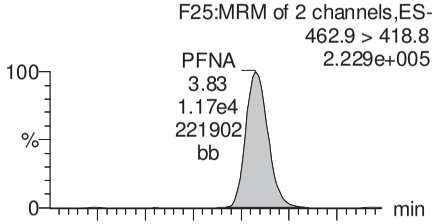
Name: 170801M1_51, Date: 01-Aug-2017, Time: 18:43:54, ID: 1700920-02@5X LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

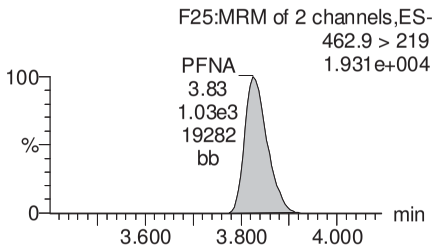
Total PFOA



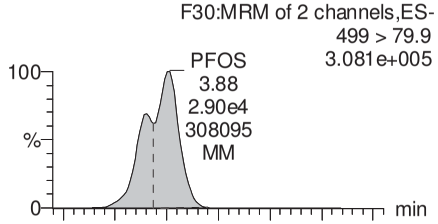


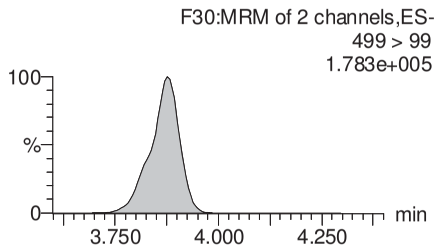
PFNA



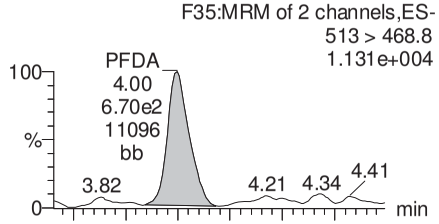


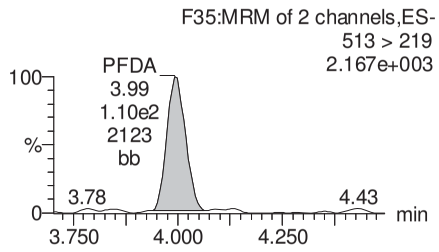
Total PFOS



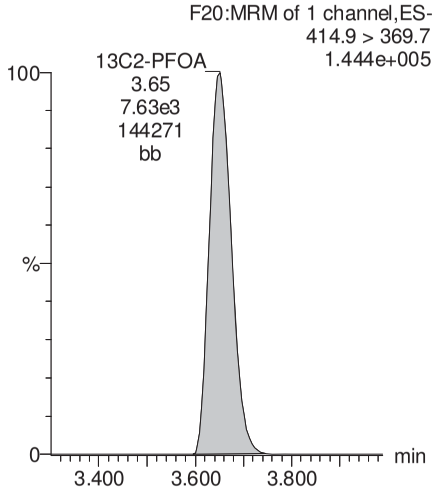


PFDA





13C2-PFOA



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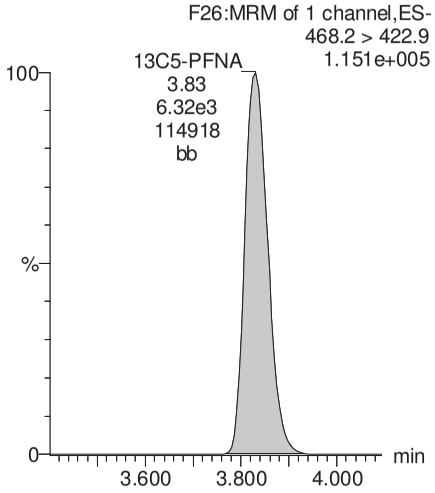
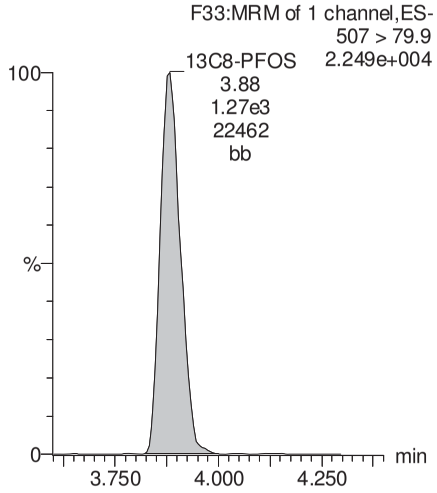


13C8-PFOS



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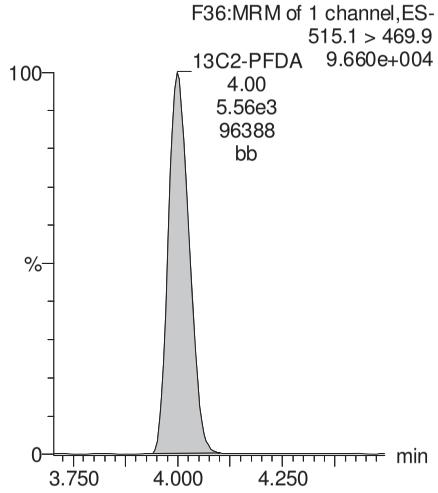

AP 8/11/2017

Dataset: U:\Q4.PRO\results\170801M1\170801M1-51.qld

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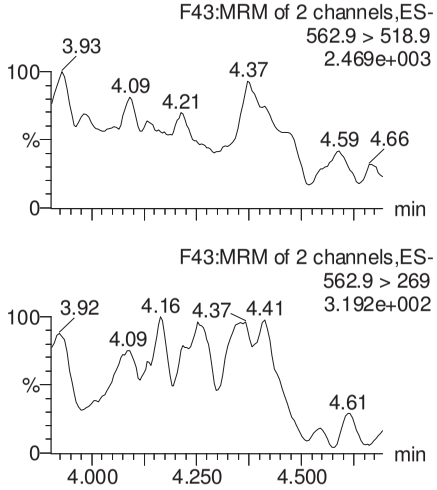
Printed: Friday, August 11, 2017 13:28:40 Pacific Daylight Time

Name: 170801M1_51, Date: 01-Aug-2017, Time: 18:43:54, ID: 1700920-02@5X LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

PFUnA



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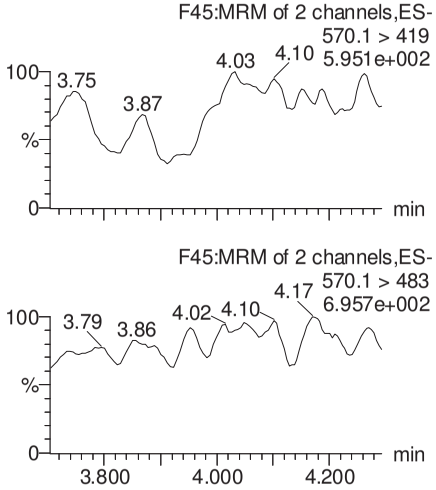

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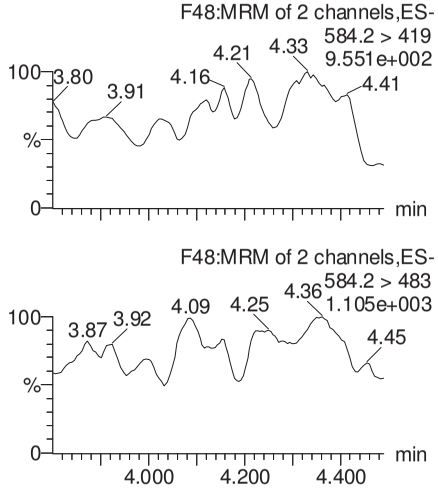
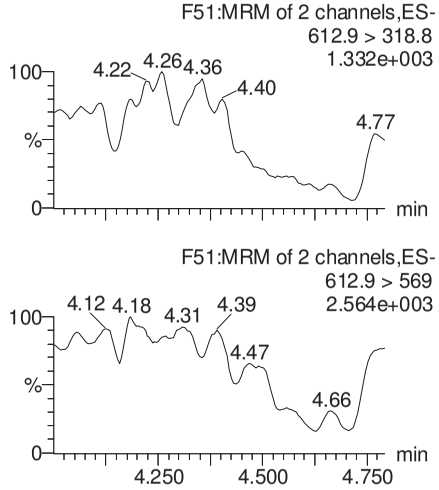


PFDoA



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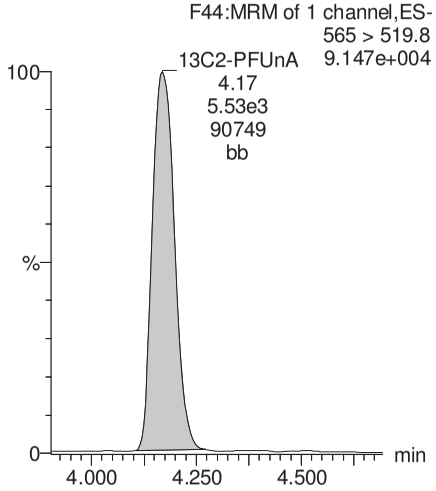
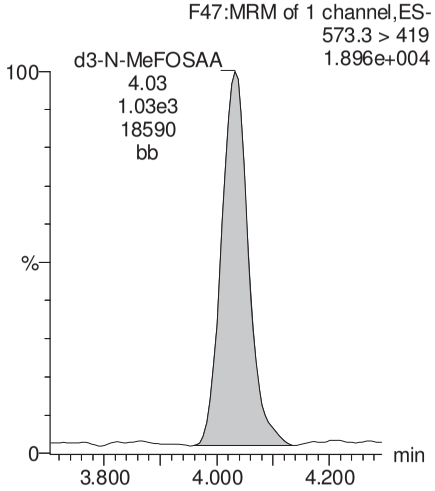
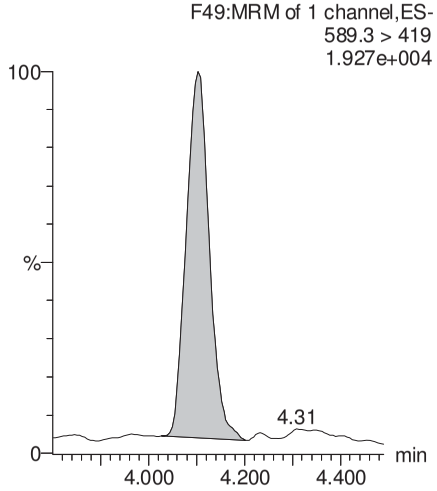


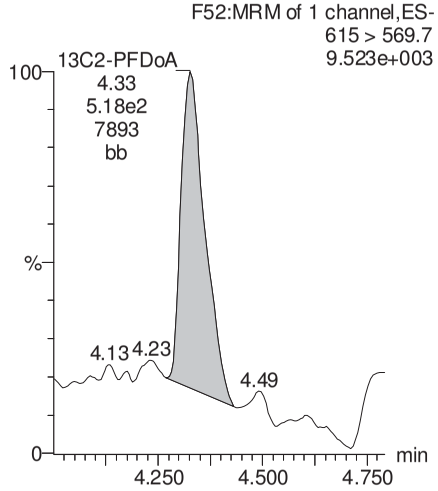
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



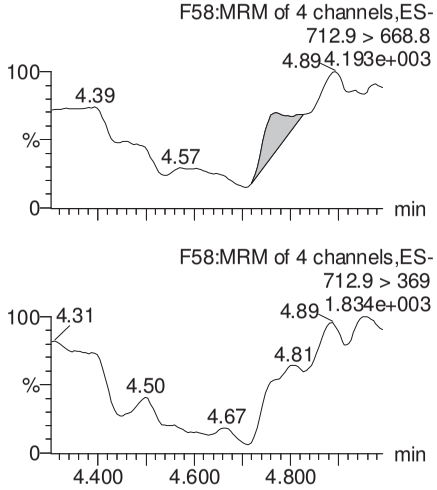
AP 8/11/2017

Dataset: U:\Q4.PRO\results\170801M1\170801M1-51.qld

Last Altered: Friday, August 11, 2017 13:28:34 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:28:40 Pacific Daylight Time

Name: 170801M1_51, Date: 01-Aug-2017, Time: 18:43:54, ID: 1700920-02@5X LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

PFTeDA



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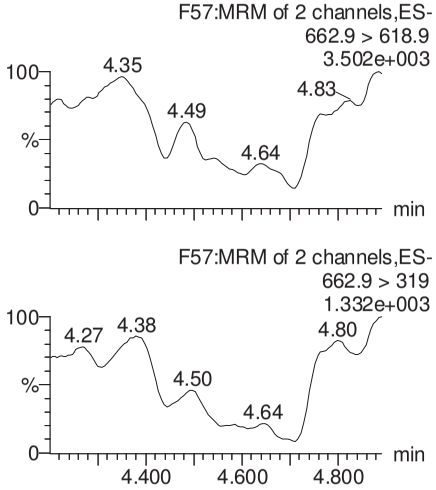
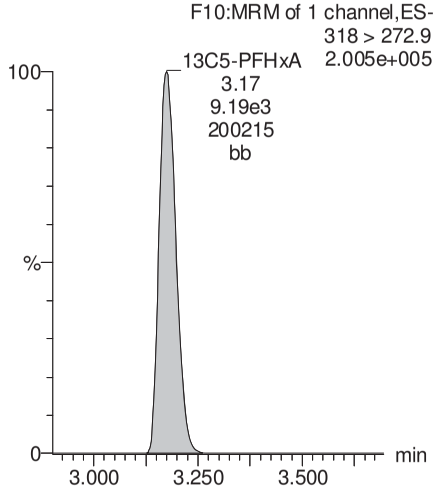
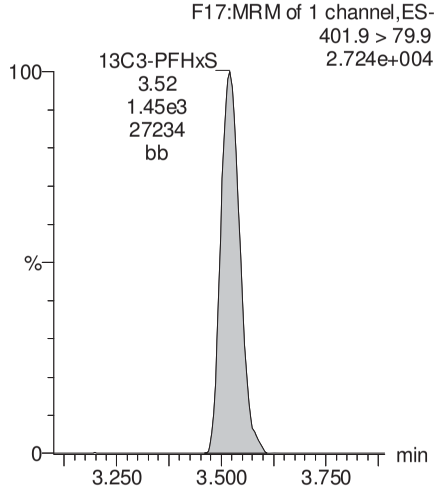


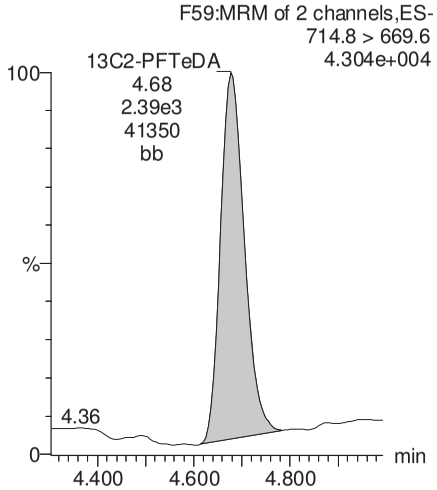
13C5-PFHxA



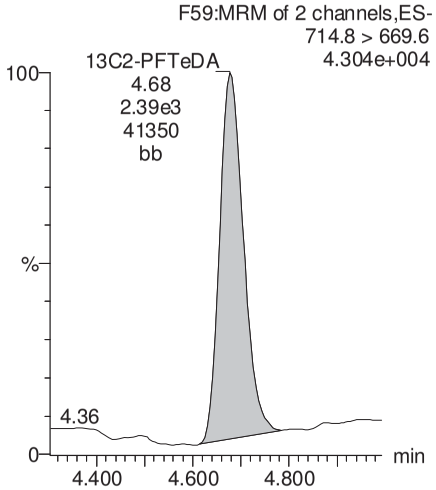
13C3-PFHxS



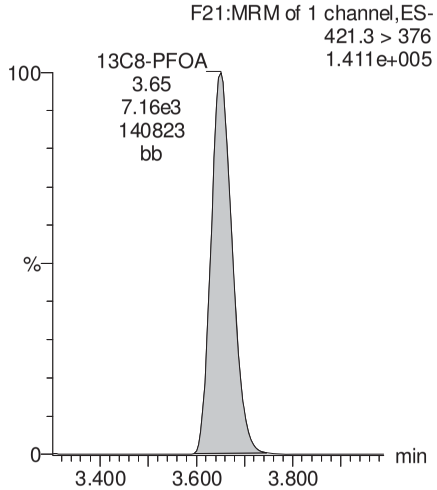
13C2-PFTeDA



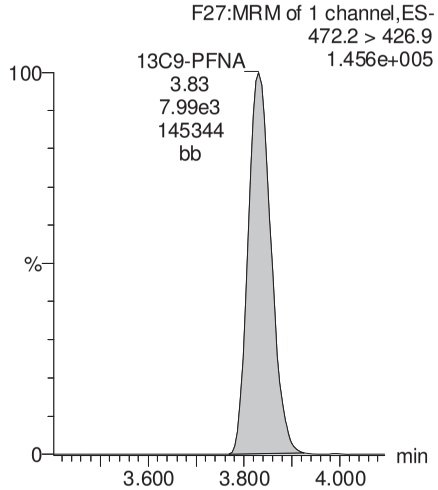
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

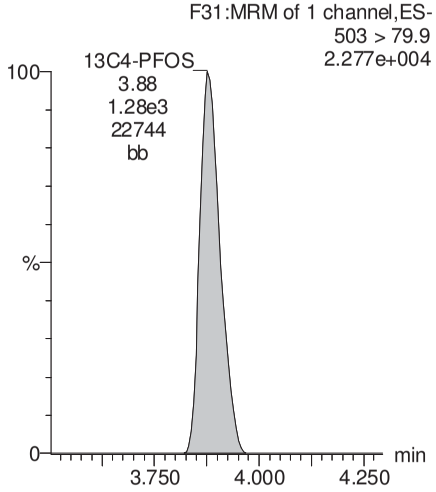
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-51.qld

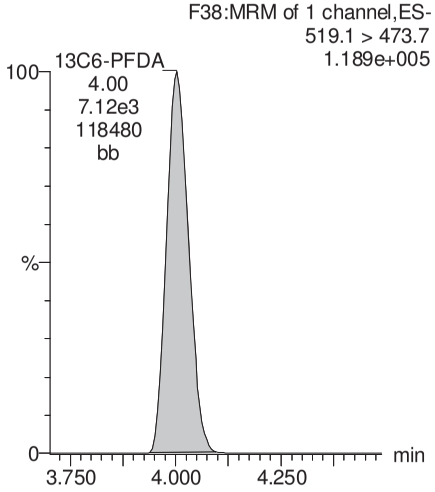
Last Altered: Friday, August 11, 2017 13:28:34 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:28:40 Pacific Daylight Time

Name: 170801M1_51, Date: 01-Aug-2017, Time: 18:43:54, ID: 1700920-02@5X LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

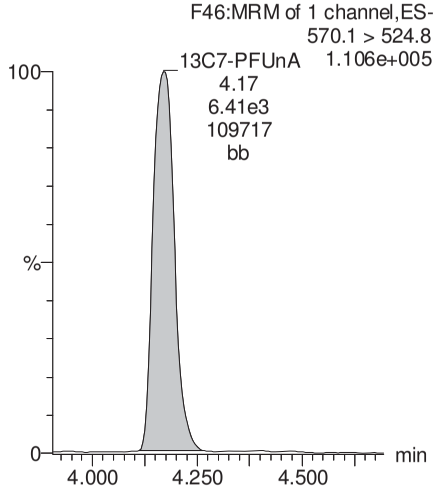
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-48.qld

Last Altered: Thursday, August 17, 2017 09:52:03 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:52:16 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: 170731M1_48, Date: 31-Jul-2017, Time: 20:43:21, ID: 1700920-03 RCDM-MW-14S-20170720 0.11405, Description: RCDM-MW-14S-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	2.38e3	3.03e3	0.114		2.96	2.92	9.83	46.4	
2	4	PFHxA	313.2 > 268.9	5.04e4	8.58e3	0.114		3.19	3.16	29.4	184	
3	5	PFHpA	363 > 318.9	9.00e3	2.04e4	0.114		3.45	3.43	5.53	40.6	
4	6	PFHxS	398.9 > 79.6	1.35e4	1.98e3	0.114		3.56	3.50	85.0	447	
5	7	PFOA	413 > 368.7	8.99e3	2.46e4	0.114		3.65	3.64	4.57	40.1	
6	9	PFNA	462.9 > 418.8	1.25e3	2.03e4	0.114		3.83	3.81	0.768	5.61	
7	11	PFOS	499 > 79.9	4.41e4	4.83e3	0.114		3.89	3.87	114	1020	
8	12	PFDA	513 > 468.8	4.96e2	1.84e4	0.114		4.01	3.99	0.337	1.27	
9	13	N-MeFOSAA	570.1 > 419		4.79e3	0.114		4.03				
10	14	N-EtFOSAA	584.2 > 419		4.57e3	0.114		4.10				
11	15	PFUnA	562.9 > 518.9		1.77e4	0.114		4.11				
12	17	PFDoA	612.9 > 318.8		1.81e3	0.114		4.34				
13	18	PFTrDA	662.9 > 618.9		1.81e3	0.114		4.50				
14	19	PFTeDA	712.9 > 668.8		1.13e4	0.114		4.68				
15	22	13C3-PFBS	302 > 98.8	3.03e3	3.27e4	0.114	0.033	2.96	2.92	0.462	122	111.8
16	23	13C2-PFHxA	315 > 269.8	8.58e3	3.27e4	0.114	0.335	3.19	3.16	1.31	34.3	78.2
17	24	13C4-PFHpA	367.2 > 321.8	2.04e4	3.27e4	0.114	0.369	3.45	3.43	3.11	74.0	67.5
18	25	18O2-PFHxS	403 > 102.6	1.98e3	6.11e3	0.114	0.460	3.56	3.50	4.06	77.3	70.5
19	26	13C2-PFOA	414.9 > 369.7	2.46e4	2.43e4	0.114	1.293	3.65	3.64	12.7	85.9	78.3
20	27	13C5-PFNA	468.2 > 422.9	2.03e4	2.78e4	0.114	0.986	3.83	3.81	9.11	81.1	74.0

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-48.qld

Last Altered: Thursday, August 17, 2017 09:52:03 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:52:25 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: 170731M1_48, Date: 31-Jul-2017, Time: 20:43:21, ID: 1700920-03 RCDM-MW-14S-20170720 0.11405, Description: RCDM-MW-14S-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	29	13C8-PFOS	507 > 79.9	4.83e3	5.27e3	0.114	1.184	3.89	3.87	11.4	84.7	77.3
2	30	13C2-PFDA	515.1 > 469.9	1.84e4	3.01e4	0.114	0.998	4.01	3.99	7.63	67.0	61.2
3	31	d3-N-MeFOSAA	573.3 > 419	4.79e3	2.63e4	0.114	0.018	4.03	4.01	2.27	1130	79.1
4	32	d5-N-EtFOSAA	589.3 > 419	4.57e3	2.63e4	0.114	0.018	4.12	4.08	2.17	1070	75.1
5	33	13C2-PFUnA	565 > 519.8	1.77e4	2.63e4	0.114	1.129	4.17	4.15	8.38	65.1	59.4
6	34	13C2-PFDoA	615 > 569.7	1.81e3	2.63e4	0.114	0.116	4.34	4.31	0.861	65.0	59.3
7	35	13C2-PFTeDA	714.8 > 669.6	1.13e4	2.63e4	0.114	0.762	4.68	4.66	5.34	61.5	56.1
8	37	13C5-PFHxA	318 > 272.9	3.27e4	3.27e4	0.114	1.000	3.19	3.16	5.00	43.8	100.0
9	38	13C3-PFHxS	401.9 > 79.9	6.11e3	6.11e3	0.114	1.000	3.56	3.50	12.5	110	100.0
10	39	13C8-PFOA	421.3 > 376	2.43e4	2.43e4	0.114	1.000	3.65	3.64	12.5	110	100.0
11	40	13C9-PFNA	472.2 > 426.9	2.78e4	2.78e4	0.114	1.000	3.83	3.81	12.5	110	100.0
12	41	13C4-PFOS	503 > 79.9	5.27e3	5.27e3	0.114	1.000	3.89	3.87	12.5	110	100.0
13	42	13C6-PFDA	519.1 > 473.7	3.01e4	3.01e4	0.114	1.000	4.01	3.98	12.5	110	100.0
14	43	13C7-PFUnA	570.1 > 524.8	2.63e4	2.63e4	0.114	1.000	4.17	4.15	12.5	110	100.0
15	44	Total PFBS	299 > 79.7	2.38e3	3.03e3	0.114		2.96		9.83	46.4	
16	45	Total PFHxS	398.9 > 79.6	1.35e4	1.98e3	0.114		3.52		85.0	447	
17	46	Total PFOA	413 > 368.7	9.52e3	2.46e4	0.114		3.65		4.84	41.4	
18	47	Total PFOS	499 > 79.9	4.41e4	4.83e3	0.114		3.89		114	1020	
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	4.79e3	0.114		4.03		0.000		
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	4.57e3	0.114		4.17		0.000		

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-48.qld

Last Altered: Thursday, August 17, 2017 09:52:03 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:52:25 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: 170731M1_48, Date: 31-Jul-2017, Time: 20:43:21, ID: 1700920-03 RCDM-MW-14S-20170720 0.11405, Description: RCDM-MW-14S-20170720

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.92	2380.219	3025.573	9.834	bb	46.4

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	13480.195	1983.428	84.955	bb	446.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.64	8986.677	24598.893	4.567	db	40.1
2	46	Total PFOA	413 > 368.7	3.58	530.344	24598.893	0.269	bd	1.4

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.87	44116.762	4828.793	114.202	MM	1019.6

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			4794.251		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 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-48.qld

Last Altered: Thursday, August 17, 2017 09:52:03 Pacific Daylight Time
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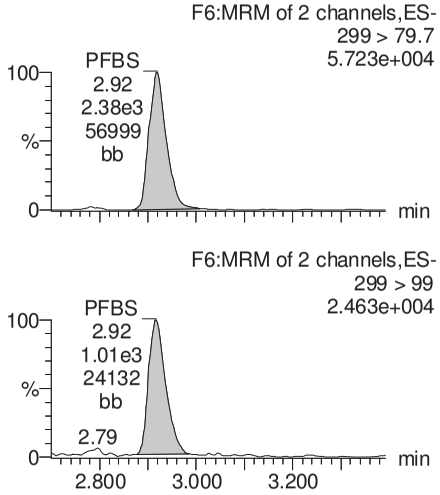
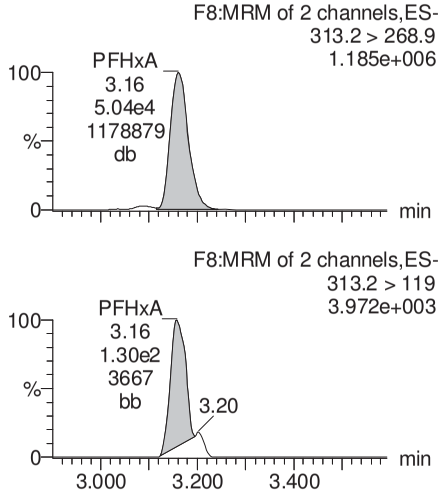
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170731M1_48, Date: 31-Jul-2017, Time: 20:43:21, ID: 1700920-03 RCDM-MW-14S-20170720 0.11405, Description: RCDM-MW-14S-20170720

Total PFBS



PFHxA



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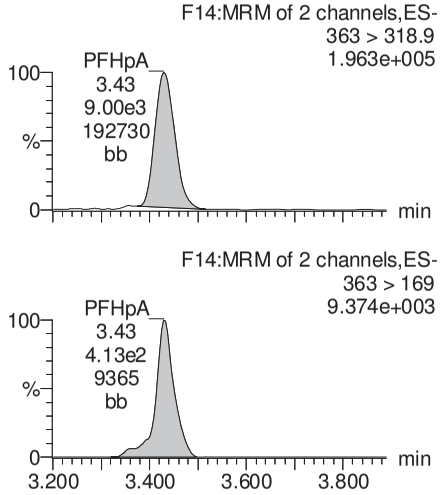
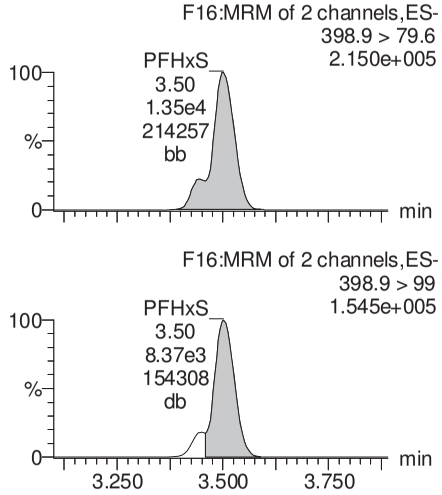
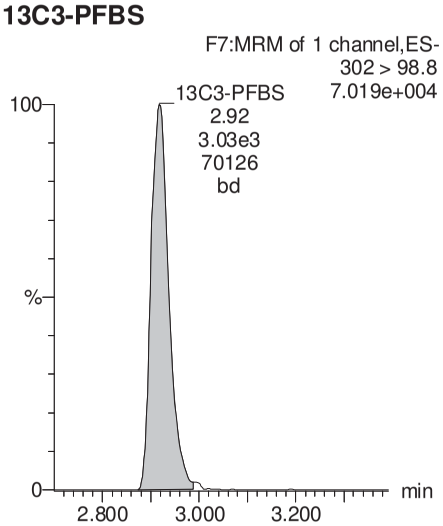


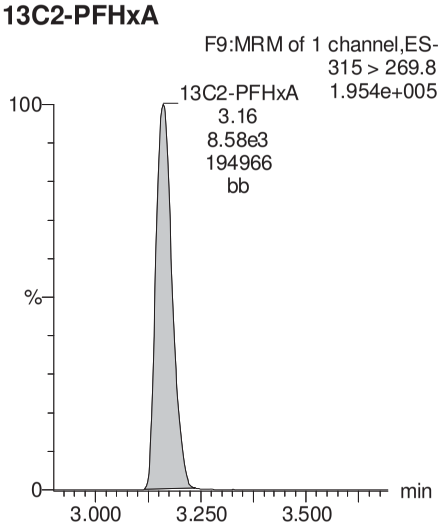
Total PFHxS



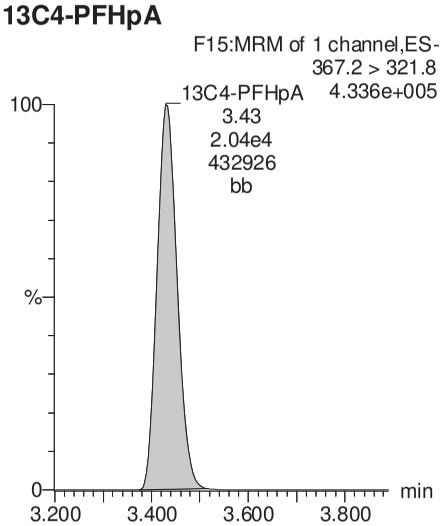
13C3-PFBS



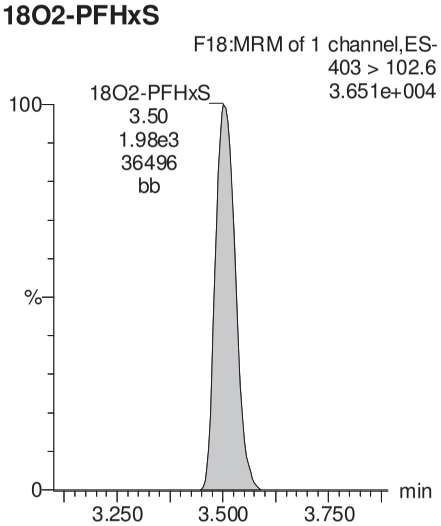
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-48.qld

Last Altered: Thursday, August 17, 2017 09:52:03 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:52:25 Pacific Daylight Time

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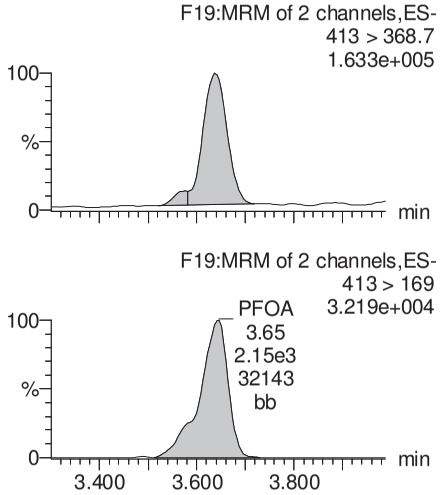

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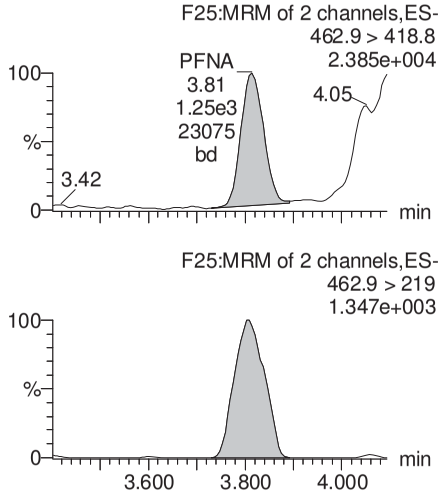
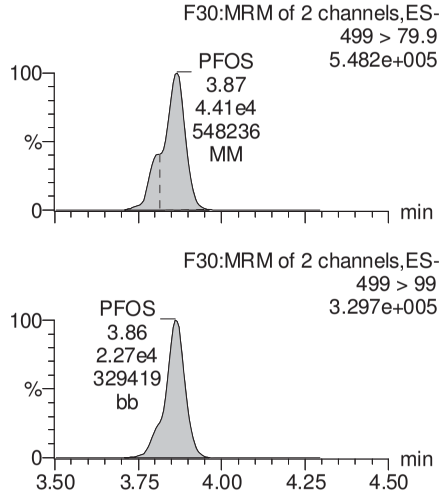


Total PFOS



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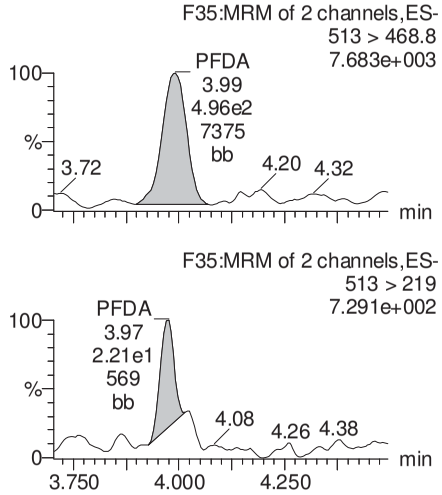
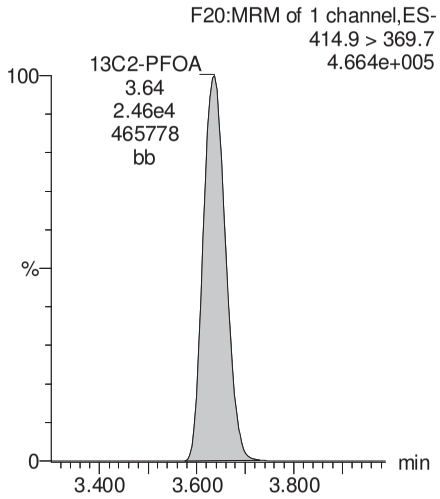
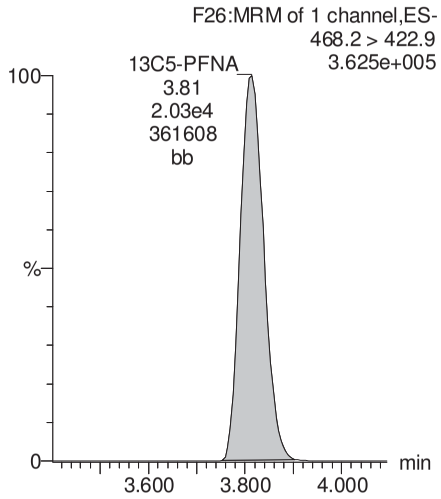


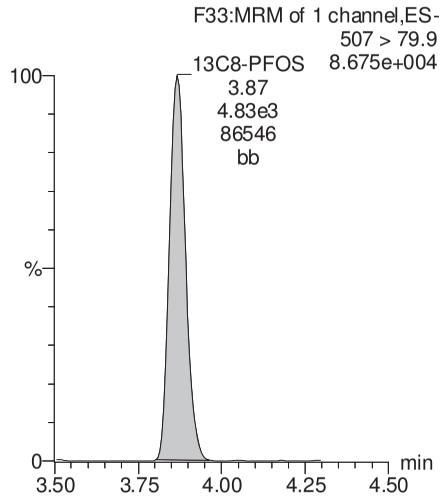
13C2-PFOA



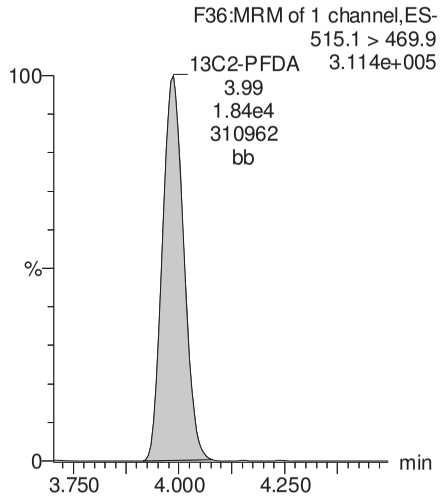
13C5-PFNA



13C8-PFOS



13C2-PFDA



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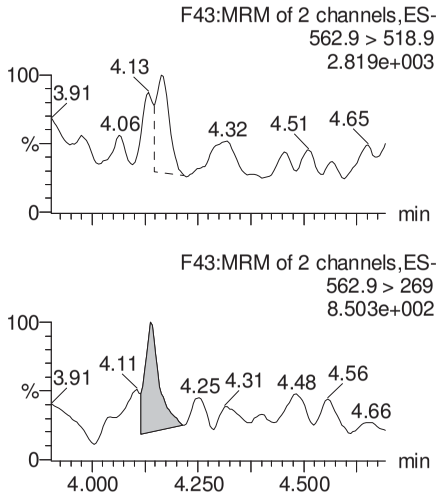
Dataset: U:\Q4.PRO\results\170731M1\170731M1-48.qld

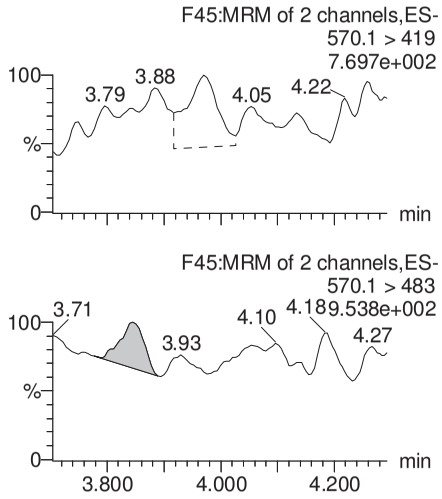
Last Altered: Thursday, August 17, 2017 09:52:03 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:52:25 Pacific Daylight Time

Name: 170731M1_48, Date: 31-Jul-2017, Time: 20:43:21, ID: 1700920-03 RCDM-MW-14S-20170720 0.11405, Description: RCDM-MW-14S-20170720

PFUnA



N-MeFOSAA



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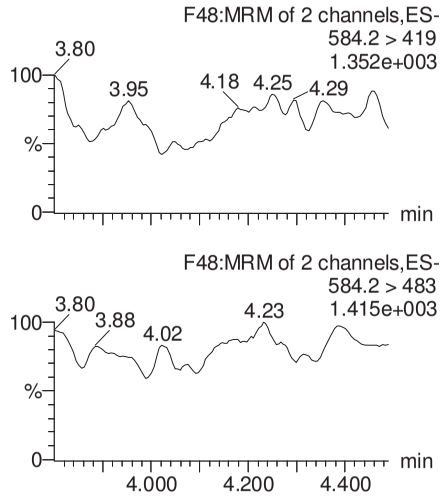
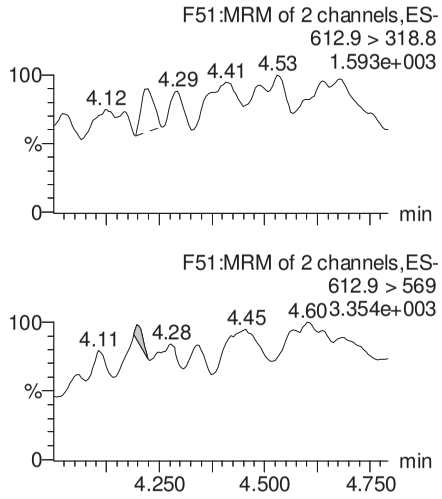
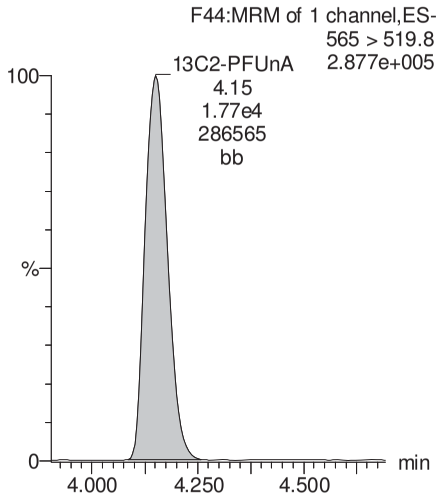


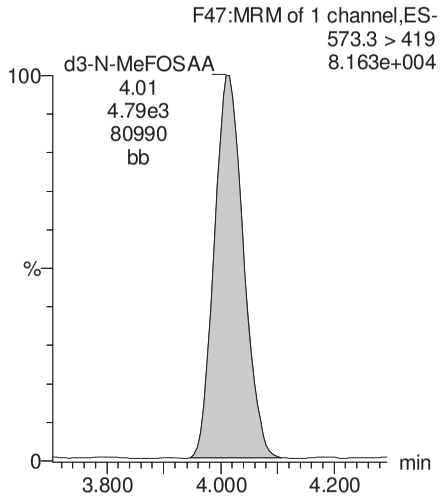
PFDoA



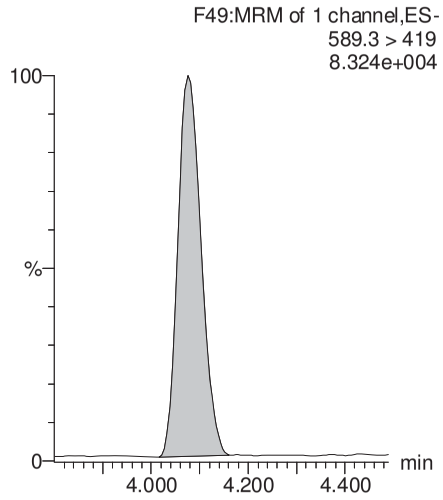
13C2-PFUnA



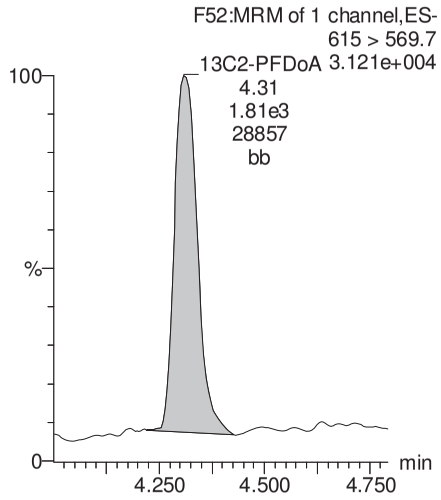
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



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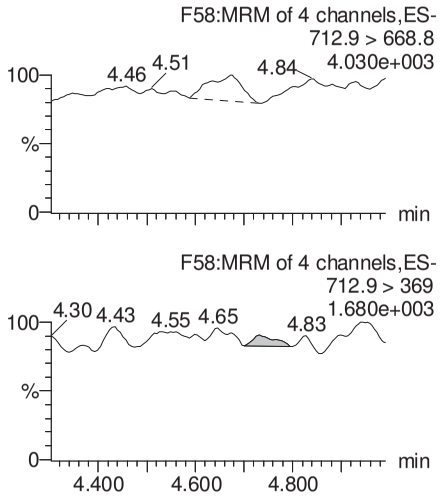
Dataset: U:\Q4.PRO\results\170731M1\170731M1-48.qld

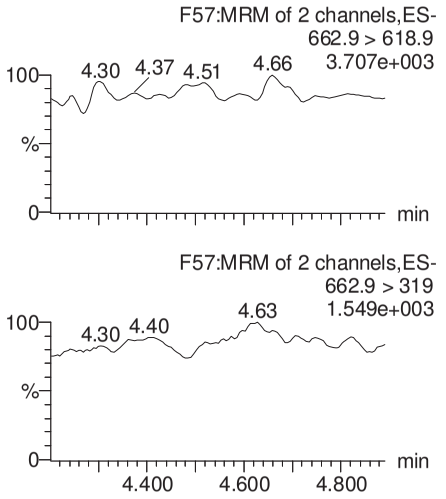
Last Altered: Thursday, August 17, 2017 09:52:03 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:52:25 Pacific Daylight Time

Name: 170731M1_48, Date: 31-Jul-2017, Time: 20:43:21, ID: 1700920-03 RCDM-MW-14S-20170720 0.11405, Description: RCDM-MW-14S-20170720

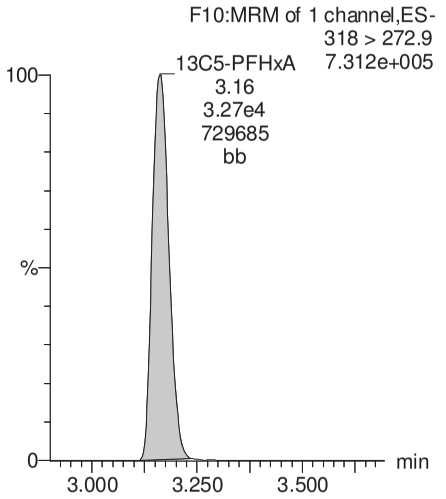
PFTeDA



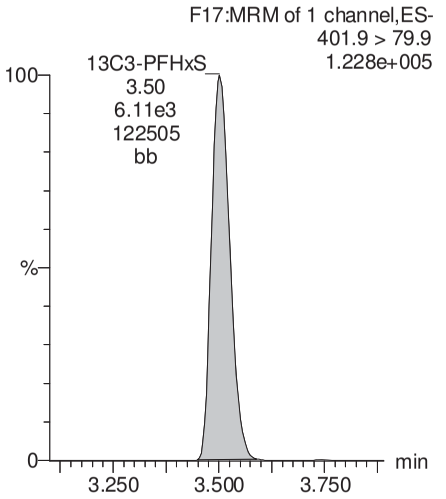
PFTrDA



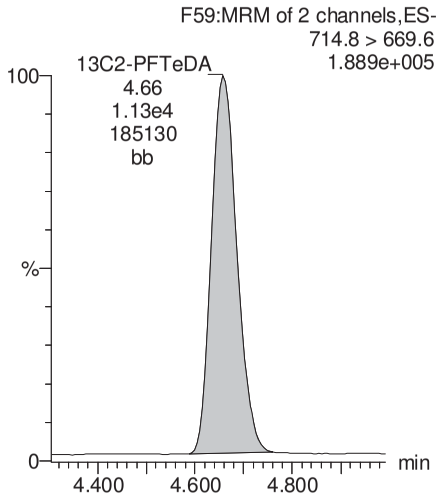
13C5-PFHxA



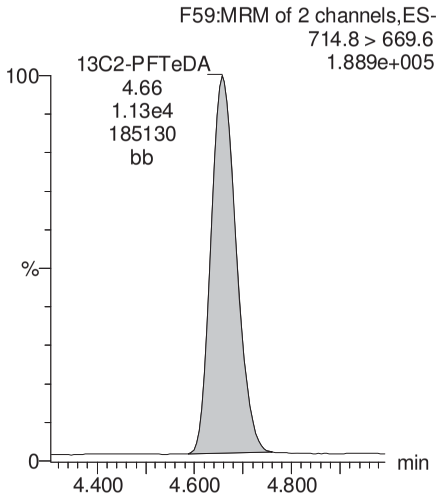
13C3-PFHxS



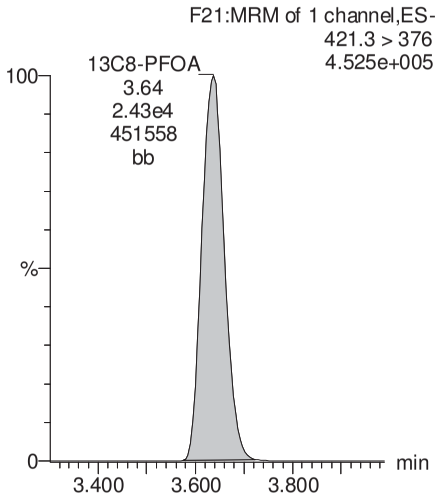
13C2-PFTeDA



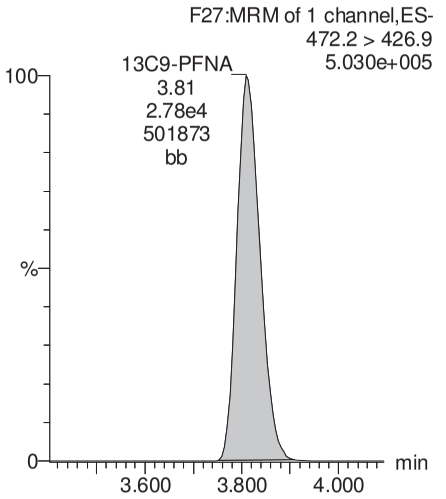
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

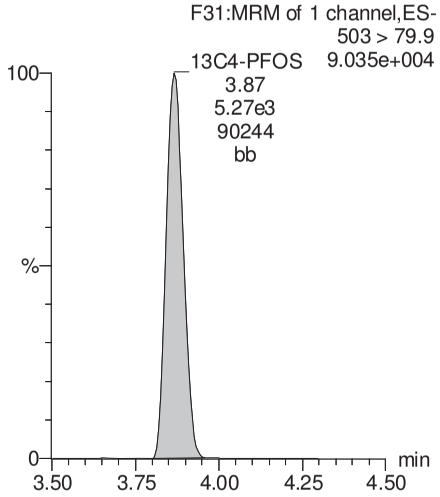
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-48.qld

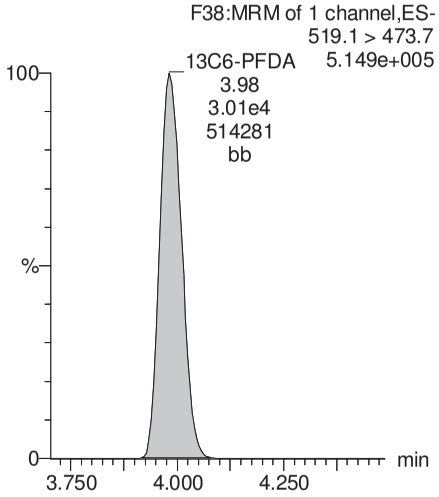
Last Altered: Thursday, August 17, 2017 09:52:03 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:52:25 Pacific Daylight Time

Name: 170731M1_48, Date: 31-Jul-2017, Time: 20:43:21, ID: 1700920-03 RCDM-MW-14S-20170720 0.11405, Description: RCDM-MW-14S-20170720

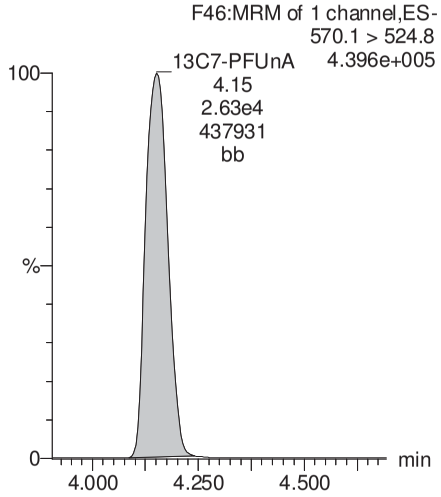
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-49.qld

Last Altered: Thursday, August 17, 2017 09:56:12 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:56:34 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: 170731M1_49, Date: 31-Jul-2017, Time: 20:54:00, ID: 1700920-04 MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	8.93e3	3.59e3	0.122		2.96	2.92	31.1	137	
2	4	PFHxA	313.2 > 268.9	2.27e5	1.11e4	0.122		3.19	3.16	102	602	
3	5	PFHpA	363 > 318.9	4.76e4	2.26e4	0.122		3.45	3.43	26.3	183	
4	6	PFHxS	398.9 > 79.6	4.05e4	2.33e3	0.122		3.56	3.50	217	1070	
5	7	PFOA	413 > 368.7	2.78e4	3.18e4	0.122		3.65	3.63	10.9	91.3	
6	9	PFNA	462.9 > 418.8	3.05e3	2.60e4	0.122		3.83	3.81	1.46	10.6	
7	11	PFOS	499 > 79.9	1.01e5	5.59e3	0.122		3.89	3.86	227	1910	
8	12	PFDA	513 > 468.8	9.58e2	2.67e4	0.122		4.01	3.99	0.449	1.95	
9	13	N-MeFOSAA	570.1 > 419		5.40e3	0.122		4.03				
10	14	N-EtFOSAA	584.2 > 419		5.16e3	0.122		4.10				
11	15	PFUnA	562.9 > 518.9		2.30e4	0.122		4.11				
12	17	PFDoA	612.9 > 318.8		2.26e3	0.122		4.34				
13	18	PFTrDA	662.9 > 618.9		2.26e3	0.122		4.50				
14	19	PFTeDA	712.9 > 668.8		1.12e4	0.122		4.68				
15	22	13C3-PFBS	302 > 98.8	3.59e3	4.11e4	0.122	0.033	2.96	2.92	0.437	108	105.6
16	23	13C2-PFHxA	315 > 269.8	1.11e4	4.11e4	0.122	0.335	3.19	3.16	1.35	33.0	80.4
17	24	13C4-PFHpA	367.2 > 321.8	2.26e4	4.11e4	0.122	0.369	3.45	3.43	2.76	61.3	59.8
18	25	18O2-PFHxS	403 > 102.6	2.33e3	6.18e3	0.122	0.460	3.56	3.50	4.72	84.2	82.0
19	26	13C2-PFOA	414.9 > 369.7	3.18e4	3.28e4	0.122	1.293	3.65	3.63	12.1	76.8	74.8
20	27	13C5-PFNA	468.2 > 422.9	2.60e4	3.56e4	0.122	0.986	3.83	3.81	9.15	76.2	74.2

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-49.qld

Last Altered: Thursday, August 17, 2017 09:56:12 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:56:46 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: 170731M1_49, Date: 31-Jul-2017, Time: 20:54:00, ID: 1700920-04 MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	29	13C8-PFOS	507 > 79.9	5.59e3	5.59e3	0.122	1.184	3.89	3.87	12.5	86.7	84.5	
2	30	13C2-PFDA	515.1 > 469.9	2.67e4	3.11e4	0.122	0.998	4.01	3.98	10.7	88.2	85.9	
3	31	d3-N-MeFOSAA	573.3 > 419	5.40e3	3.34e4	0.122	0.018	4.03	4.01	2.02	938	70.3	
4	32	d5-N-EtFOSAA	589.3 > 419	5.16e3	3.34e4	0.122	0.018	4.12	4.08	1.93	892	66.8	
5	33	13C2-PFUnA	565 > 519.8	2.30e4	3.34e4	0.122	1.129	4.17	4.15	8.59	62.5	60.9	
6	34	13C2-PFDoA	615 > 569.7	2.26e3	3.34e4	0.122	0.116	4.34	4.30	0.846	59.9	58.3	
7	35	13C2-PFTeDA	714.8 > 669.6	1.12e4	3.34e4	0.122	0.762	4.68	4.66	4.18	45.0	43.8	H
8	37	13C5-PFHxA	318 > 272.9	4.11e4	4.11e4	0.122	1.000	3.19	3.16	5.00	41.1	100.0	
9	38	13C3-PFHxS	401.9 > 79.9	6.18e3	6.18e3	0.122	1.000	3.56	3.50	12.5	103	100.0	
10	39	13C8-PFOA	421.3 > 376	3.28e4	3.28e4	0.122	1.000	3.65	3.63	12.5	103	100.0	
11	40	13C9-PFNA	472.2 > 426.9	3.56e4	3.56e4	0.122	1.000	3.83	3.81	12.5	103	100.0	
12	41	13C4-PFOS	503 > 79.9	5.59e3	5.59e3	0.122	1.000	3.89	3.87	12.5	103	100.0	
13	42	13C6-PFDA	519.1 > 473.7	3.11e4	3.11e4	0.122	1.000	4.01	3.99	12.5	103	100.0	
14	43	13C7-PFUnA	570.1 > 524.8	3.34e4	3.34e4	0.122	1.000	4.17	4.15	12.5	103	100.0	
15	44	Total PFBS	299 > 79.7	9.17e3	3.59e3	0.122		2.96		31.9	141		
16	45	Total PFHxS	398.9 > 79.6	4.05e4	2.33e3	0.122		3.52		217	1070		
17	46	Total PFOA	413 > 368.7	2.98e4	3.18e4	0.122		3.65		11.7	97.0		
18	47	Total PFOS	499 > 79.9	1.01e5	5.59e3	0.122		3.89		227	1910		
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	5.40e3	0.122		4.03		0.000			
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	5.16e3	0.122		4.17		0.000			

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-49.qld

Last Altered: Thursday, August 17, 2017 09:56:12 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:56:46 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: 170731M1_49, Date: 31-Jul-2017, Time: 20:54:00, ID: 1700920-04 MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.92	8925.036	3589.467	31.081	bb	137.4
2	44	Total PFBS	299 > 79.7	2.79	242.550	3589.467	0.845	MM	3.8

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	40516.875	2332.825	217.102	MM	1069.6

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.63	27761.256	31757.541	10.927	MM	91.3
2	46	Total PFOA	413 > 368.7	3.59	2040.409	31757.541	0.803	MM	5.8

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.86	101341.672	5592.211	226.524	MM	1913.3

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			5396.710		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419			5158.047		MM-I	

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Rev'd: MM 8/17/17

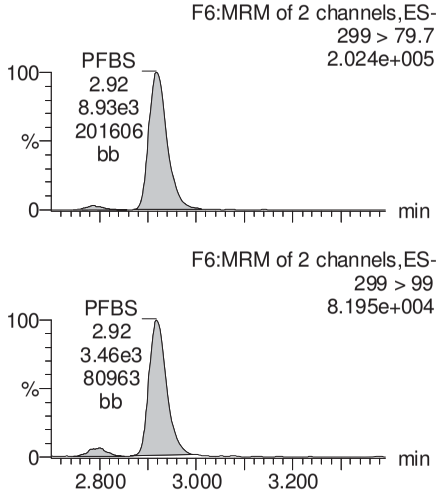
Dataset: U:\Q4.PRO\results\170731M1\170731M1-49.qld

Last Altered: Thursday, August 17, 2017 09:56:12 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:56:46 Pacific Daylight Time

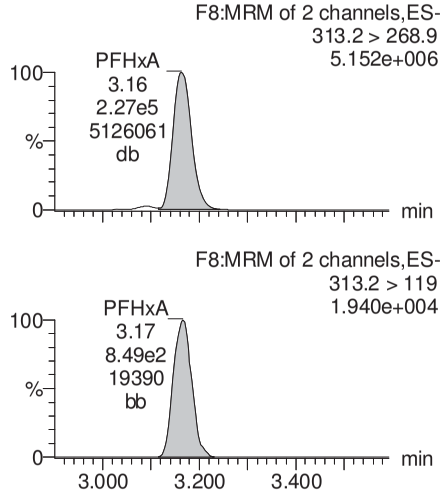
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170731M1_49, Date: 31-Jul-2017, Time: 20:54:00, ID: 1700920-04 MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720

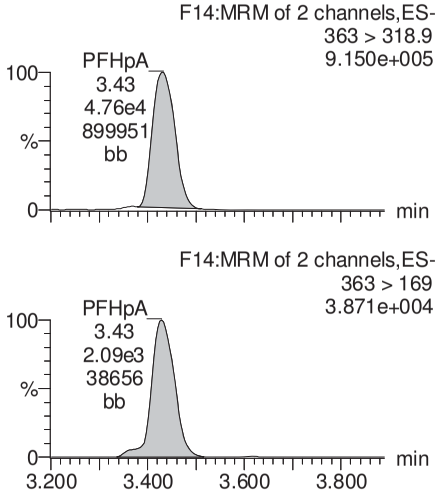
Total PFBS



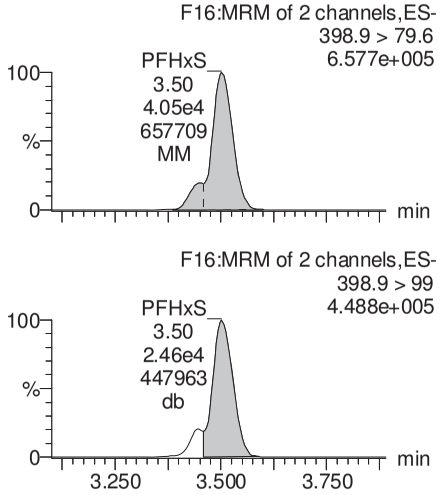
PFHxA



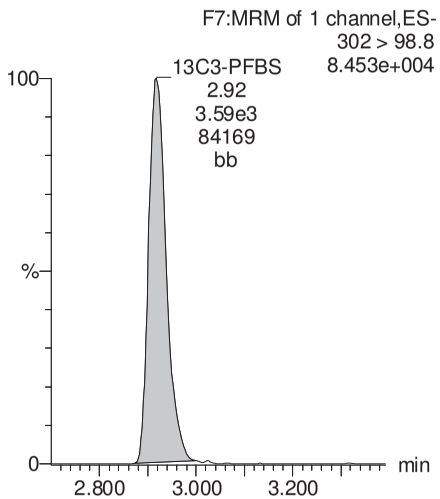
PFHpA



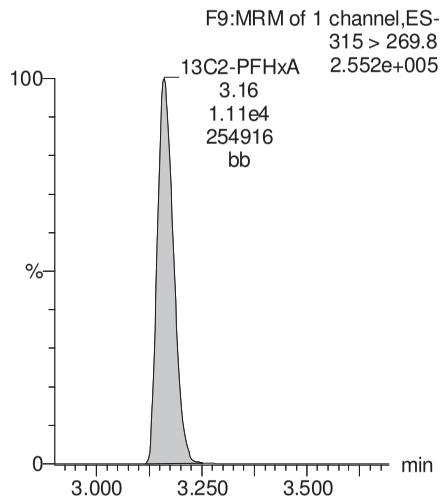
Total PFHxS



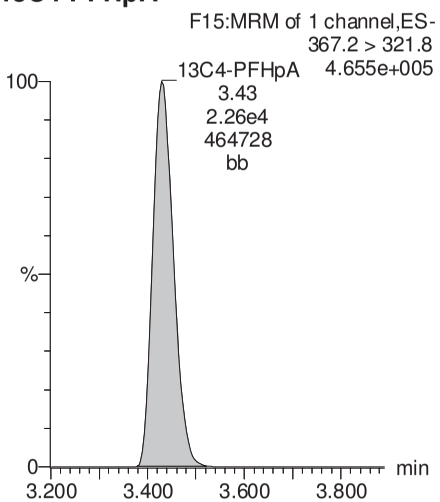
13C3-PFBS



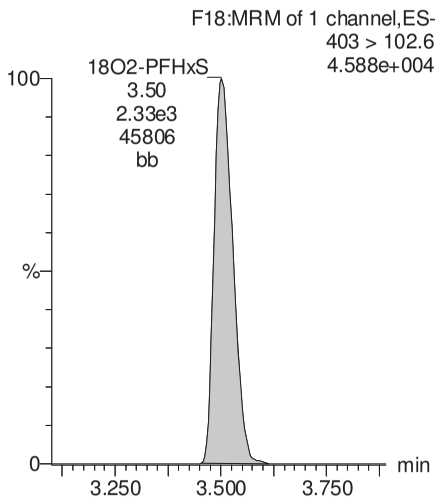
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



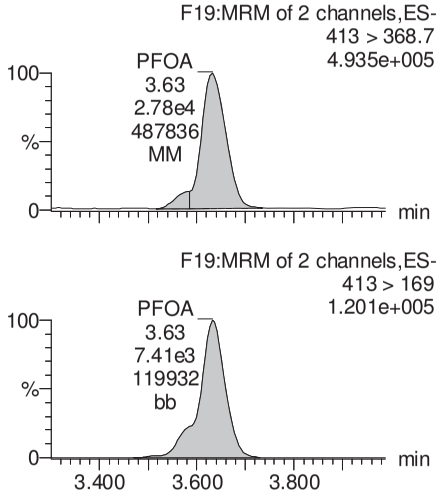
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-49.qld

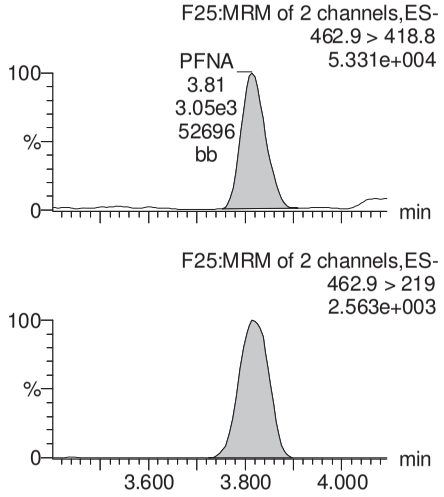
Last Altered: Thursday, August 17, 2017 09:56:12 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:56:46 Pacific Daylight Time

Name: 170731M1_49, Date: 31-Jul-2017, Time: 20:54:00, ID: 1700920-04 MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720

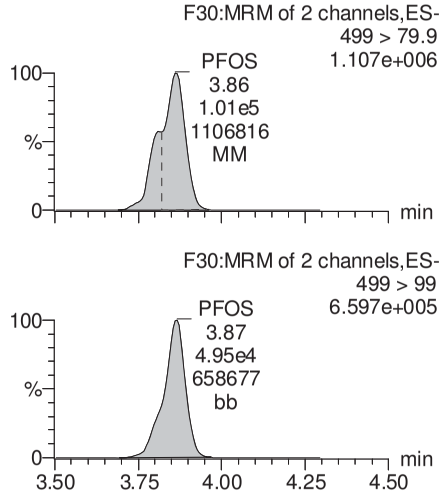
Total PFOA



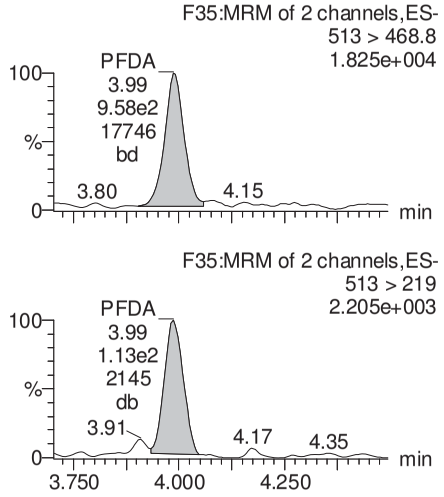
PFNA



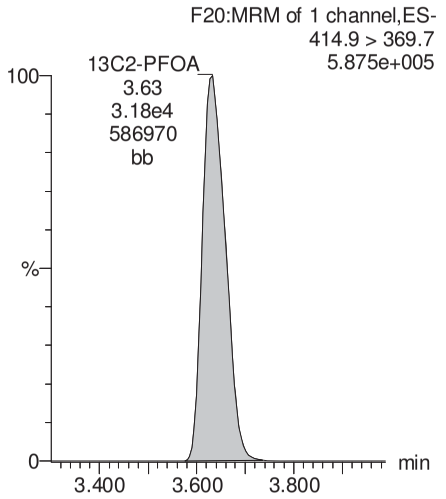
Total PFOS



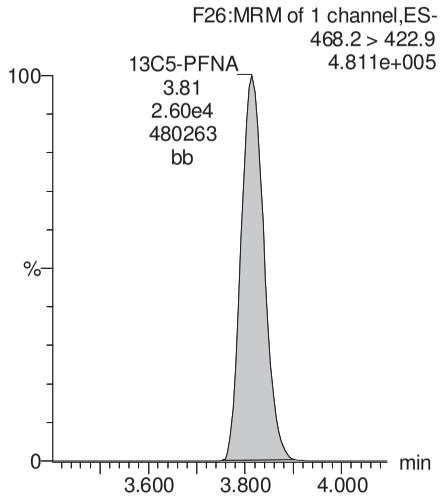
PFDA



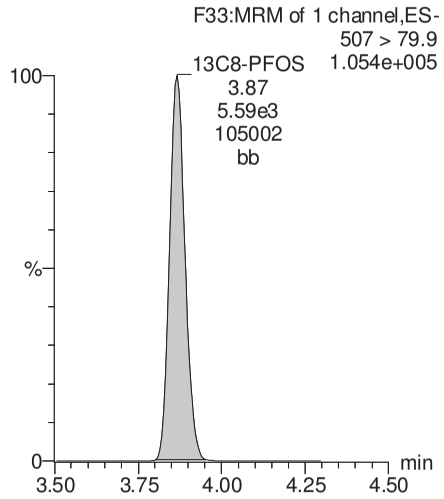
13C2-PFOA



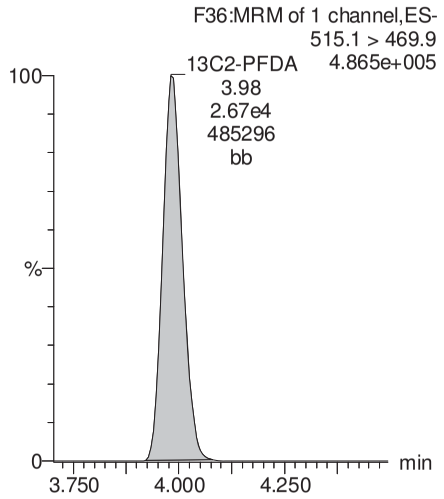
13C5-PFNA



13C8-PFOS



13C2-PFDA



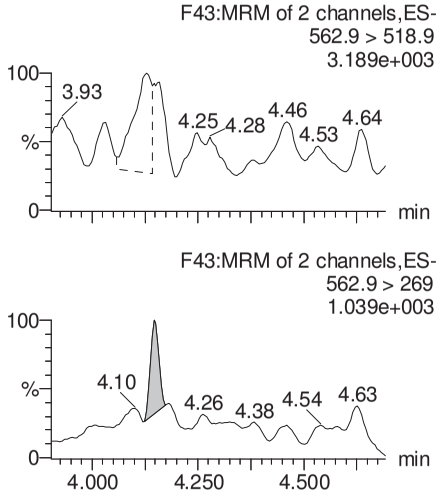
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-49.qld

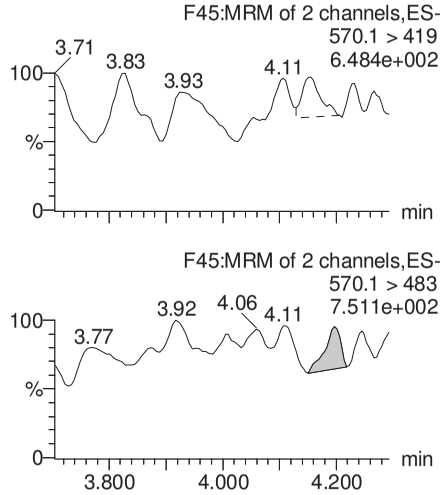
Last Altered: Thursday, August 17, 2017 09:56:12 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:56:46 Pacific Daylight Time

Name: 170731M1_49, Date: 31-Jul-2017, Time: 20:54:00, ID: 1700920-04 MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720

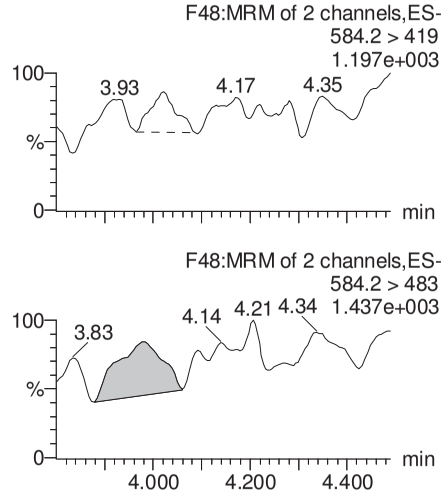
PFUnA



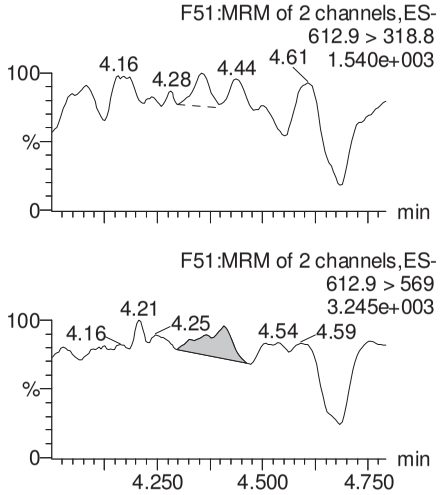
N-MeFOSAA



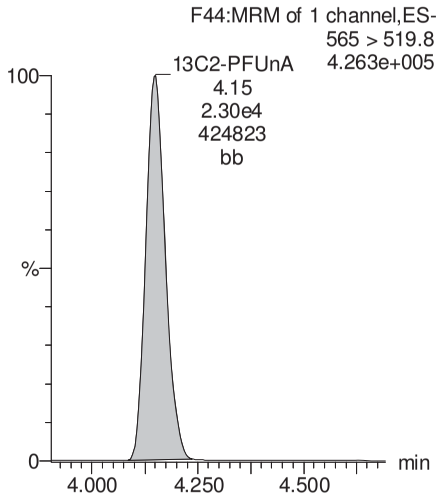
N-EtFOSAA



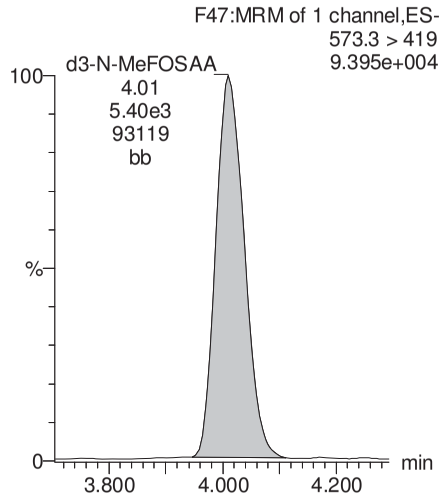
PFDoA



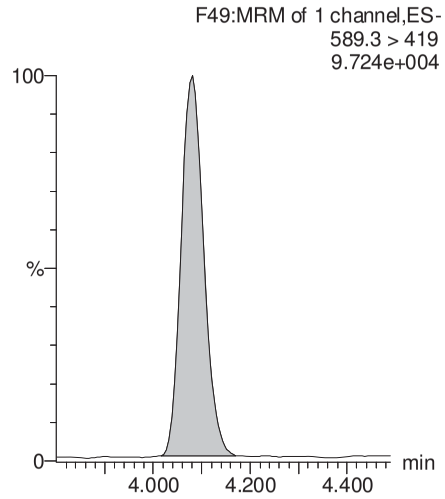
13C2-PFUnA



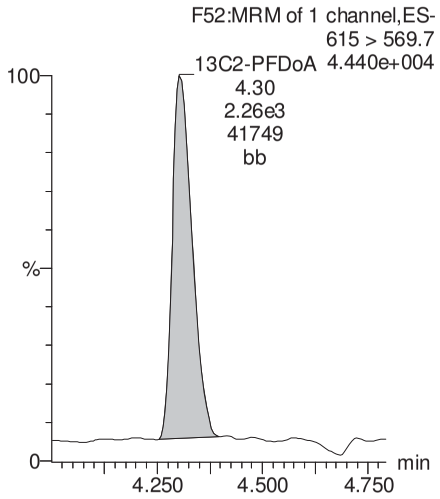
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



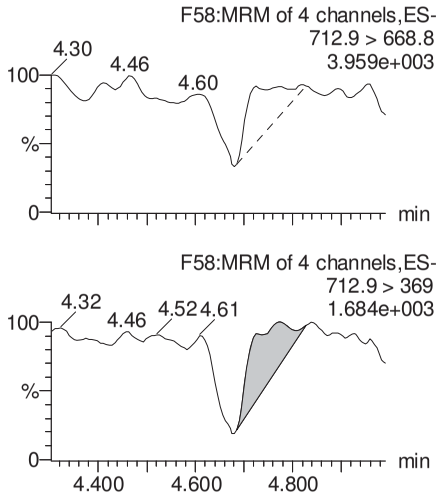
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-49.qld

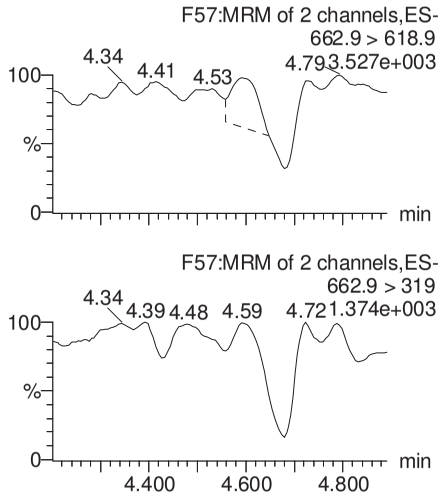
Last Altered: Thursday, August 17, 2017 09:56:12 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:56:46 Pacific Daylight Time

Name: 170731M1_49, Date: 31-Jul-2017, Time: 20:54:00, ID: 1700920-04 MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720

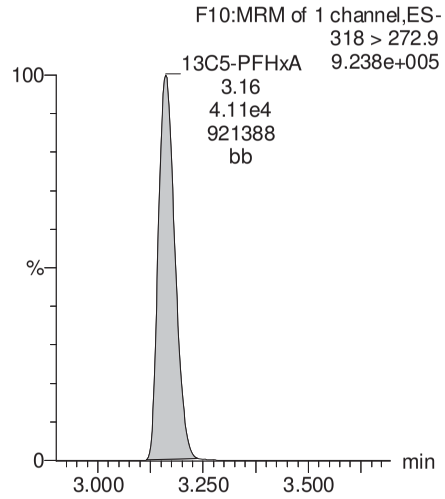
PFTeDA



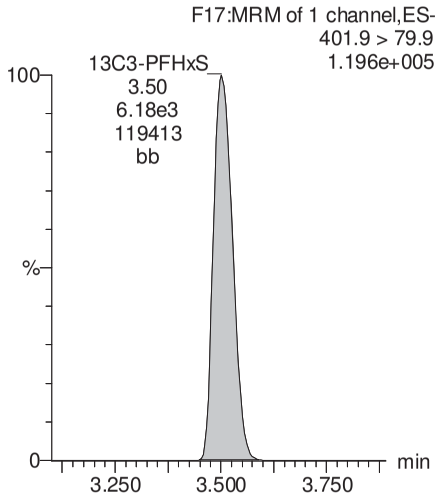
PFTrDA



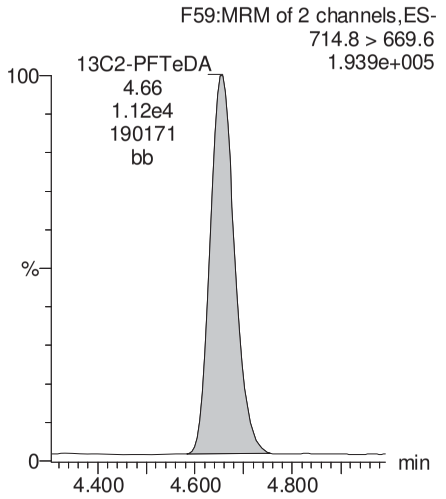
13C5-PFHxA



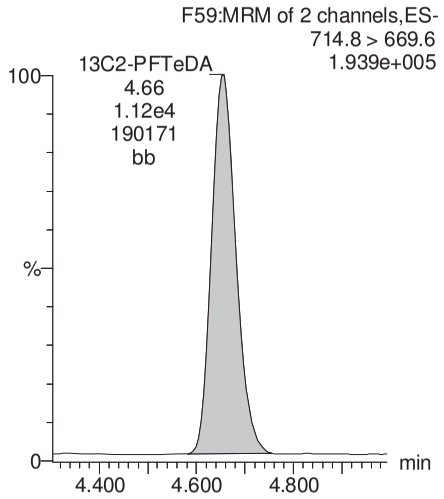
13C3-PFHxS



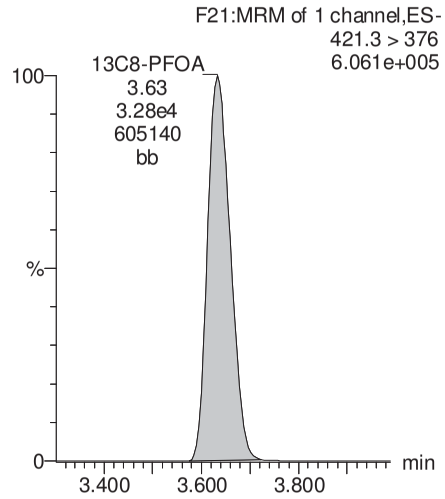
13C2-PFTeDA



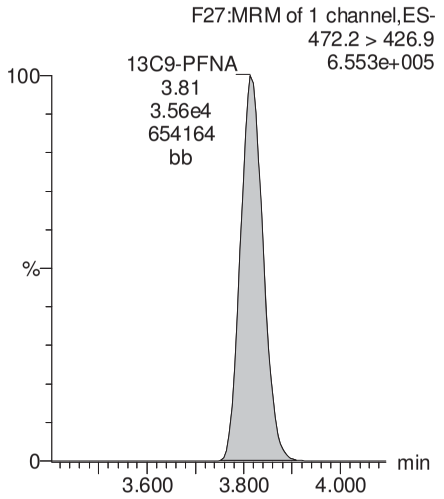
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

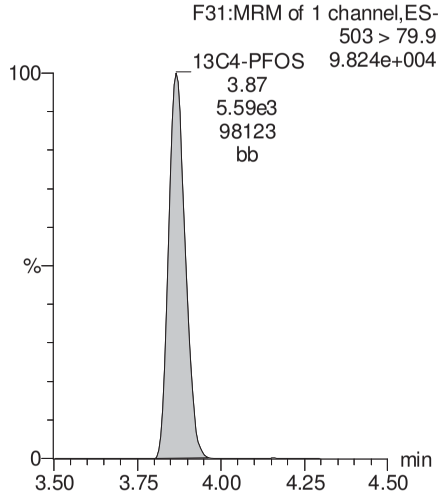
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-49.qld

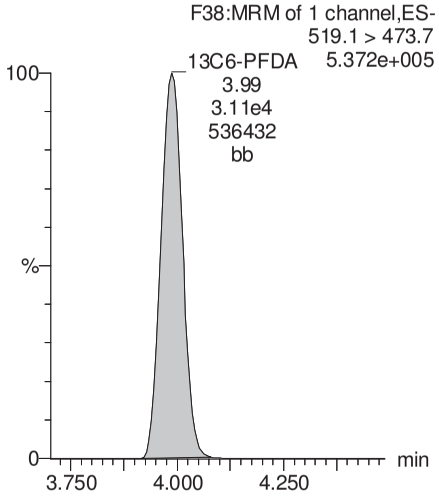
Last Altered: Thursday, August 17, 2017 09:56:12 Pacific Daylight Time
Printed: Thursday, August 17, 2017 09:56:46 Pacific Daylight Time

Name: 170731M1_49, Date: 31-Jul-2017, Time: 20:54:00, ID: 1700920-04 MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720

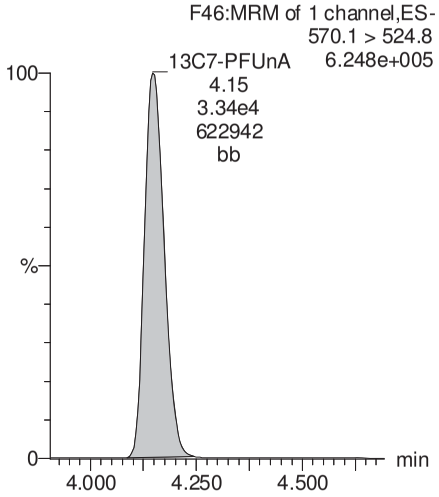
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/17/17

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-6.qld

Last Altered: Friday, August 11, 2017 14:46:05 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:46:47 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

ID: 1700920-04@5X MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720, Name: 170811G2_6, Date: 11-Aug-2017, Time: 12:58:42

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	9	PFOS	499.0 >79.9	1.032e4	1.906e3		0.122	4.61	1240	
2	20	13C8-PFOS	507.0 > 79.9	1.906e3	2.084e3	1.109	0.122	4.61	84.6	82.5
3	26	13C4-PFOS	503.0 > 79.9	2.084e3	2.084e3	1.000	0.122	4.61	103	100
4	31	Total PFOS	499.0 >79.9		1.906e3		0.122		1240	

LA 8/11/2017

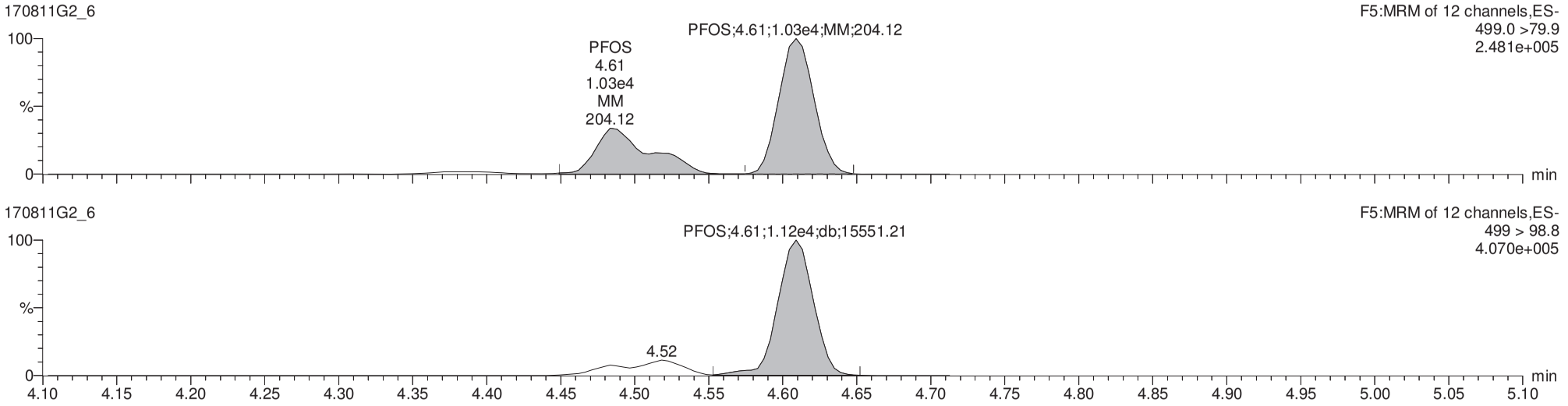
Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-6.qld

Last Altered: Friday, August 11, 2017 14:46:05 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:46:47 Pacific Daylight Time

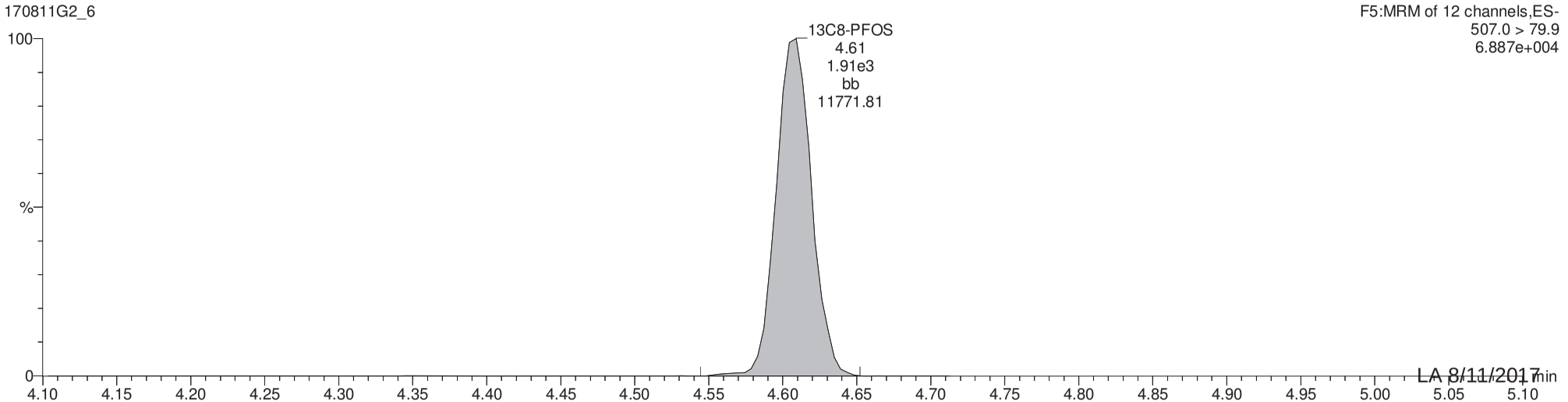
Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

ID: 1700920-04@5X MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720, Name: 170811G2_6, Date: 11-Aug-2017, Time: 12:58:42, Instrument: , Lab: , User:

Total PFOS



13C8-PFOS



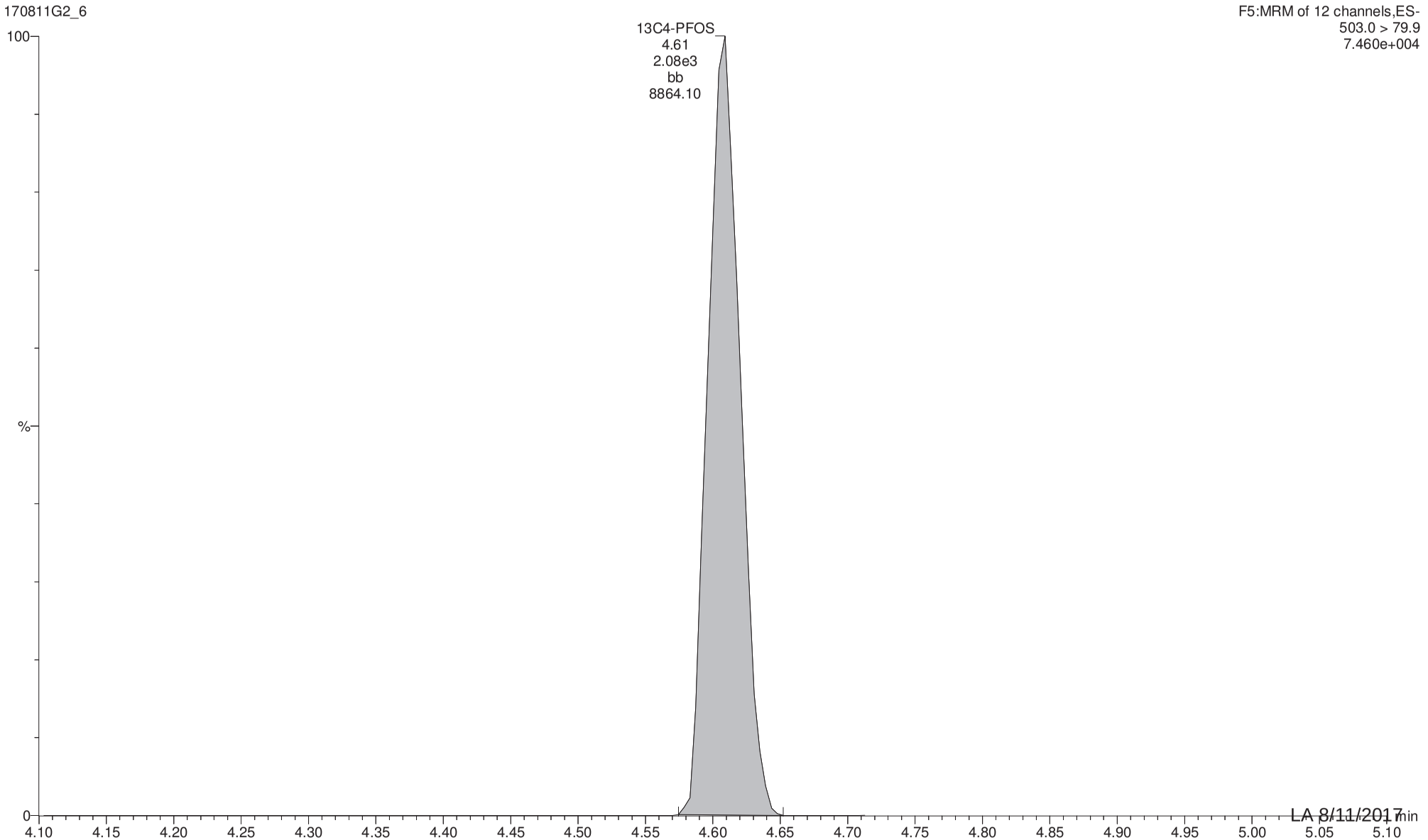
LA 8/11/2017

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-6.qld

Last Altered: Friday, August 11, 2017 14:46:05 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:46:47 Pacific Daylight Time

ID: 1700920-04@5X MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720, Name: 170811G2_6, Date: 11-Aug-2017, Time: 12:58:42, Instrument: , Lab: , User:

13C4-PFOS



LA 8/11/2017

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-50.qld

Last Altered: Thursday, August 17, 2017 10:00:01 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:00:22 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: 170731M1_50, Date: 31-Jul-2017, Time: 21:04:38, ID: 1700920-05 MH-A97-20170720 0.12086, Description: MH-A97-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	7.72e3	3.13e3	0.121		2.96	2.92	30.9	138	
2	4	PFHxA	313.2 > 268.9	1.92e5	8.60e3	0.121		3.19	3.16	112	662	
3	5	PFHpA	363 > 318.9	4.30e4	2.16e4	0.121		3.45	3.43	24.8	174	
4	6	PFHxS	398.9 > 79.6	3.35e4	2.11e3	0.121		3.56	3.50	198	985	
5	7	PFOA	413 > 368.7	2.60e4	2.63e4	0.121		3.65	3.64	12.4	104	
6	9	PFNA	462.9 > 418.8	2.50e3	2.24e4	0.121		3.83	3.81	1.39	10.1	
7	11	PFOS	499 > 79.9	8.42e4	4.86e3	0.121		3.89	3.87	217	1840	
8	12	PFDA	513 > 468.8	6.19e2	2.24e4	0.121		4.01	3.98	0.345	1.25	
9	13	N-MeFOSAA	570.1 > 419		4.92e3	0.121		4.03				
10	14	N-EtFOSAA	584.2 > 419		4.57e3	0.121		4.10				
11	15	PFUnA	562.9 > 518.9		2.56e4	0.121		4.11				
12	17	PFDoA	612.9 > 318.8		1.99e3	0.121		4.34				
13	18	PFTrDA	662.9 > 618.9		1.99e3	0.121		4.50				
14	19	PFTeDA	712.9 > 668.8		1.34e4	0.121		4.68				
15	22	13C3-PFBS	302 > 98.8	3.13e3	3.35e4	0.121	0.033	2.96	2.92	0.467	117	112.8
16	23	13C2-PFHxA	315 > 269.8	8.60e3	3.35e4	0.121	0.335	3.19	3.16	1.28	31.7	76.6
17	24	13C4-PFHpA	367.2 > 321.8	2.16e4	3.35e4	0.121	0.369	3.45	3.43	3.23	72.4	70.0
18	25	18O2-PFHxS	403 > 102.6	2.11e3	5.85e3	0.121	0.460	3.56	3.50	4.51	81.1	78.4
19	26	13C2-PFOA	414.9 > 369.7	2.63e4	2.76e4	0.121	1.293	3.65	3.64	11.9	76.1	73.6
20	27	13C5-PFNA	468.2 > 422.9	2.24e4	3.17e4	0.121	0.986	3.83	3.81	8.85	74.3	71.8

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-50.qld

Last Altered: Thursday, August 17, 2017 10:00:01 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:00:33 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: 170731M1_50, Date: 31-Jul-2017, Time: 21:04:38, ID: 1700920-05 MH-A97-20170720 0.12086, Description: MH-A97-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	29	13C8-PFOS	507 > 79.9	4.86e3	5.57e3	0.121	1.184	3.89	3.87	10.9	76.1	73.6
2	30	13C2-PFDA	515.1 > 469.9	2.24e4	3.58e4	0.121	0.998	4.01	3.98	7.85	65.1	62.9
3	31	d3-N-MeFOSAA	573.3 > 419	4.92e3	3.01e4	0.121	0.018	4.03	4.01	2.04	954	71.0
4	32	d5-N-EtFOSAA	589.3 > 419	4.57e3	3.01e4	0.121	0.018	4.12	4.08	1.90	882	65.6
5	33	13C2-PFUnA	565 > 519.8	2.56e4	3.01e4	0.121	1.129	4.17	4.15	10.6	77.7	75.2
6	34	13C2-PFDoA	615 > 569.7	1.99e3	3.01e4	0.121	0.116	4.34	4.31	0.824	58.8	56.8
7	35	13C2-PFTeDA	714.8 > 669.6	1.34e4	3.01e4	0.121	0.762	4.68	4.66	5.57	60.5	58.5
8	37	13C5-PFHxA	318 > 272.9	3.35e4	3.35e4	0.121	1.000	3.19	3.16	5.00	41.4	100.0
9	38	13C3-PFHxS	401.9 > 79.9	5.85e3	5.85e3	0.121	1.000	3.56	3.50	12.5	103	100.0
10	39	13C8-PFOA	421.3 > 376	2.76e4	2.76e4	0.121	1.000	3.65	3.63	12.5	103	100.0
11	40	13C9-PFNA	472.2 > 426.9	3.17e4	3.17e4	0.121	1.000	3.83	3.81	12.5	103	100.0
12	41	13C4-PFOS	503 > 79.9	5.57e3	5.57e3	0.121	1.000	3.89	3.87	12.5	103	100.0
13	42	13C6-PFDA	519.1 > 473.7	3.58e4	3.58e4	0.121	1.000	4.01	3.99	12.5	103	100.0
14	43	13C7-PFUnA	570.1 > 524.8	3.01e4	3.01e4	0.121	1.000	4.17	4.15	12.5	103	100.0
15	44	Total PFBS	299 > 79.7	7.88e3	3.13e3	0.121		2.96		31.5	140	
16	45	Total PFHxS	398.9 > 79.6	3.35e4	2.11e3	0.121		3.52		198	985	
17	46	Total PFOA	413 > 368.7	2.83e4	2.63e4	0.121		3.65		13.5	113	
18	47	Total PFOS	499 > 79.9	8.42e4	4.86e3	0.121		3.89		217	1840	
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	4.92e3	0.121		4.03		0.000		
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	4.57e3	0.121		4.17		0.000		

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-50.qld

Last Altered: Thursday, August 17, 2017 10:00:01 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:00:33 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: 170731M1_50, Date: 31-Jul-2017, Time: 21:04:38, ID: 1700920-05 MH-A97-20170720 0.12086, Description: MH-A97-20170720

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.92	7719.743	3125.445	30.875	bb	137.5
2	44	Total PFBS	299 > 79.7	2.78	159.018	3125.445	0.636	bb	2.9

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	33504.348	2111.301	198.363	MM	984.6

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.64	26029.432	26252.730	12.394	MM	104.4
2	46	Total PFOA	413 > 368.7	3.59	2270.548	26252.730	1.081	MM	8.2

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.87	84197.219	4857.449	216.670	MM	1842.2

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	14	N-EtFOSAA	584.2 > 419			4570.569		MM-I	

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-50.qld

Last Altered: Thursday, August 17, 2017 10:00:01 Pacific Daylight Time
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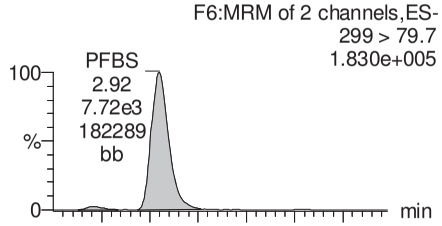
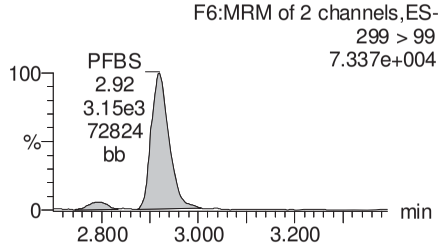
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170731M1_50, Date: 31-Jul-2017, Time: 21:04:38, ID: 1700920-05 MH-A97-20170720 0.12086, Description: MH-A97-20170720

Total PFBS





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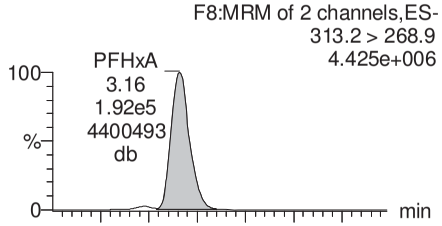

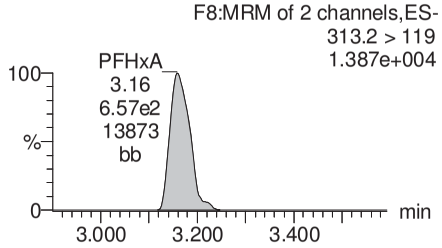

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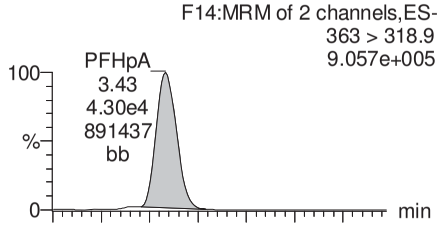

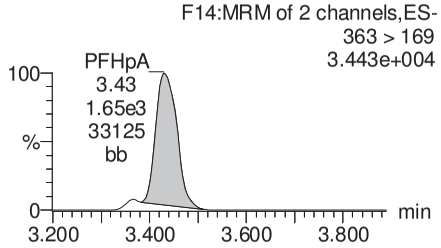

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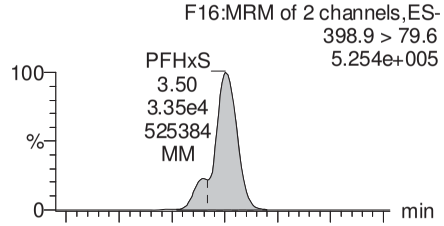

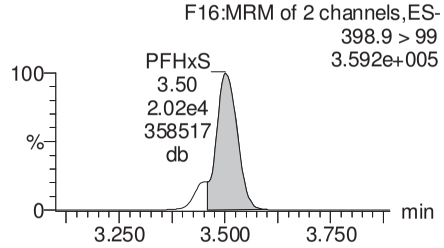

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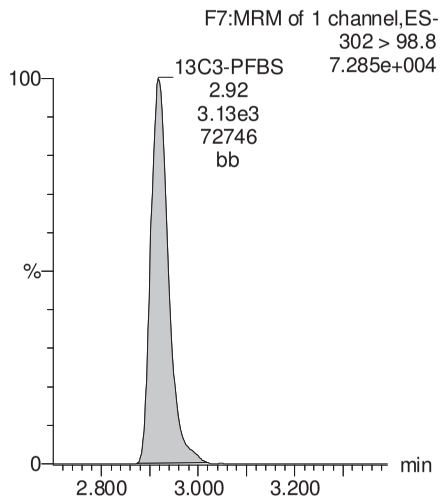

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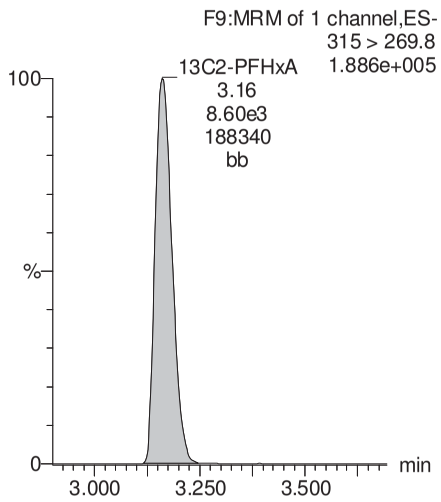

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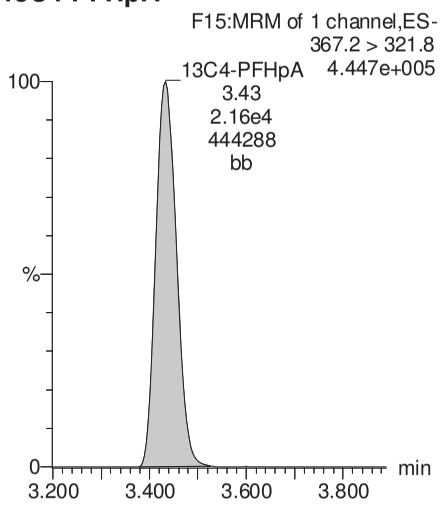

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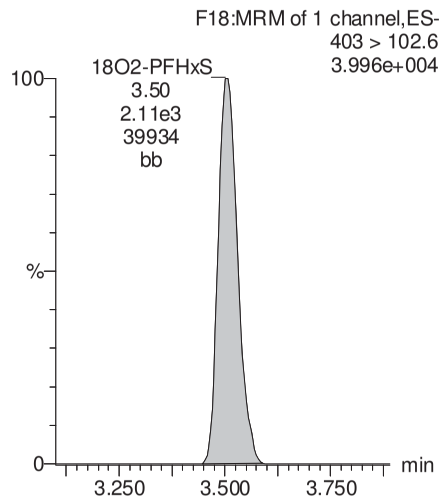

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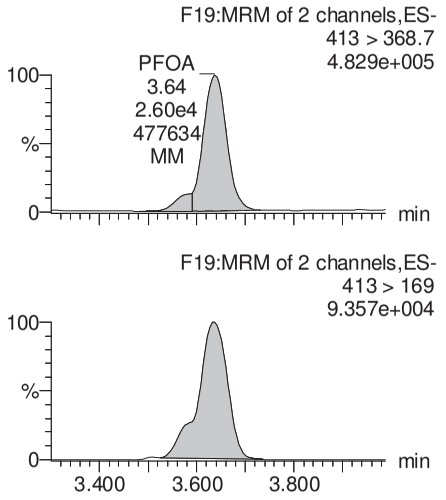
Dataset: U:\Q4.PRO\results\170731M1\170731M1-50.qld

Last Altered: Thursday, August 17, 2017 10:00:01 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:00:33 Pacific Daylight Time

Name: 170731M1_50, Date: 31-Jul-2017, Time: 21:04:38, ID: 1700920-05 MH-A97-20170720 0.12086, Description: MH-A97-20170720

Total PFOA



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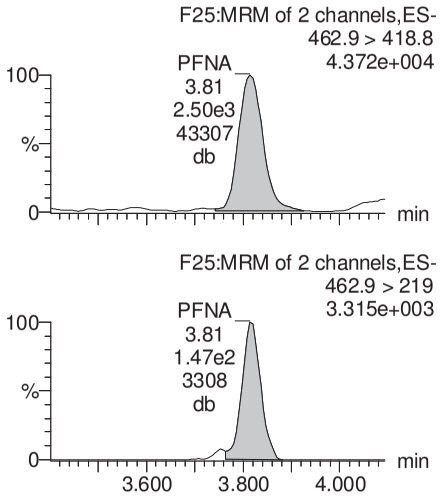

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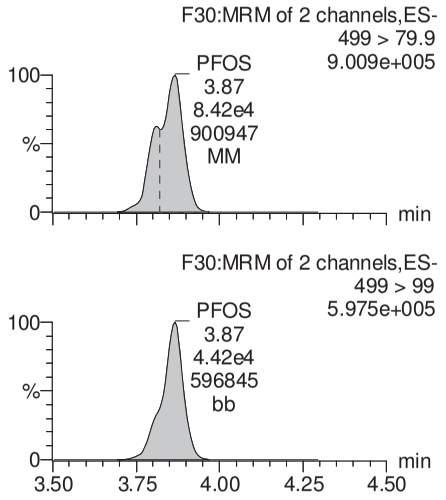

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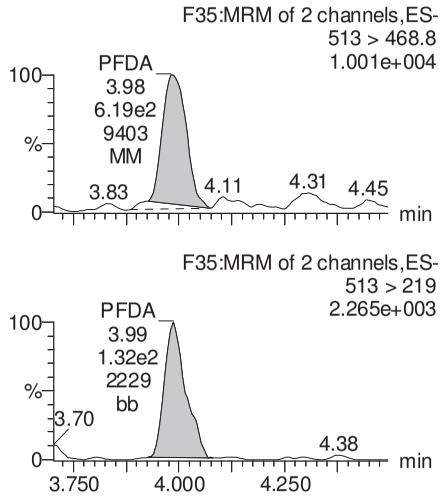

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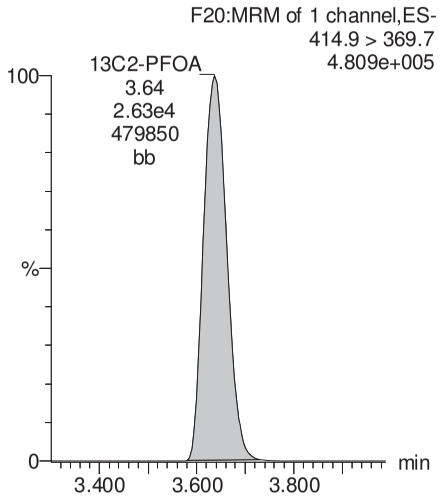

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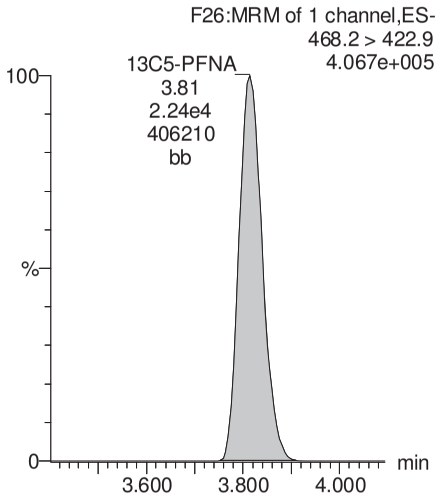

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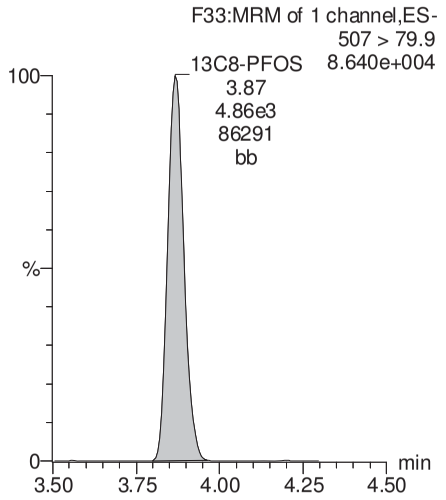

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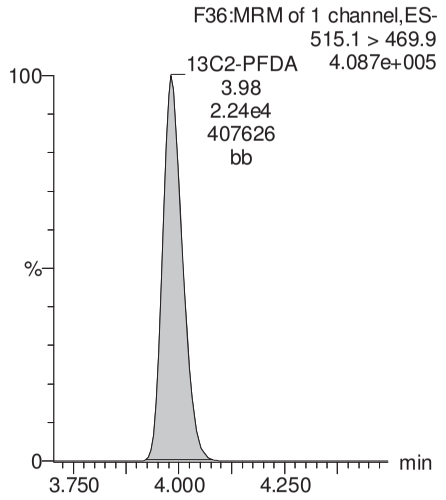

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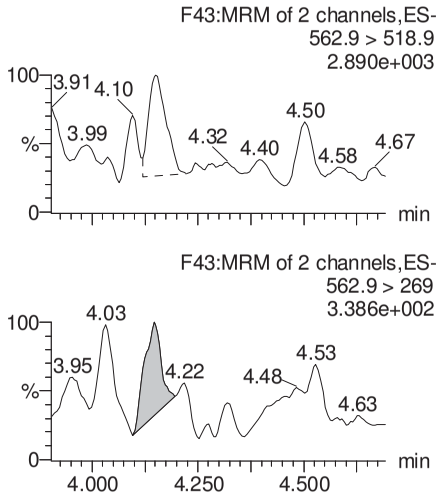
Dataset: U:\Q4.PRO\results\170731M1\170731M1-50.qld

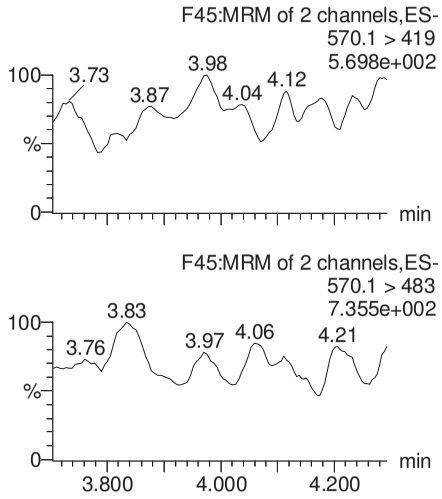
Last Altered: Thursday, August 17, 2017 10:00:01 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:00:33 Pacific Daylight Time

Name: 170731M1_50, Date: 31-Jul-2017, Time: 21:04:38, ID: 1700920-05 MH-A97-20170720 0.12086, Description: MH-A97-20170720

PFUnA



N-MeFOSAA



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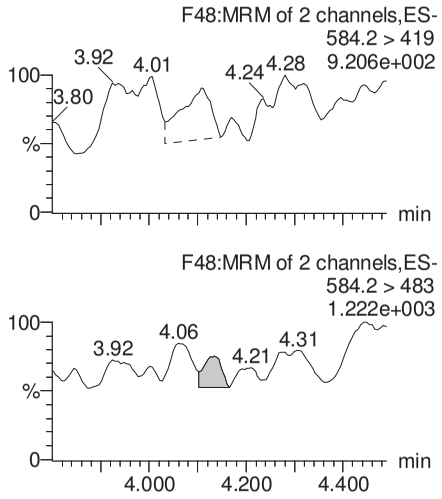

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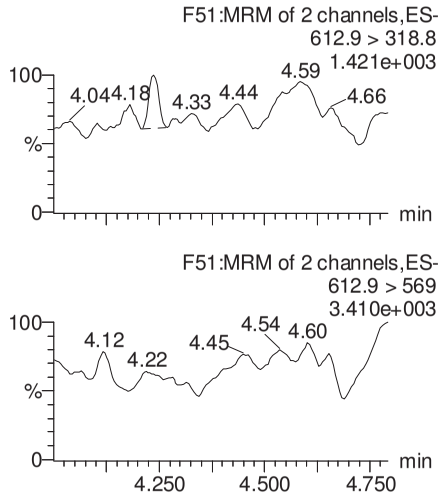

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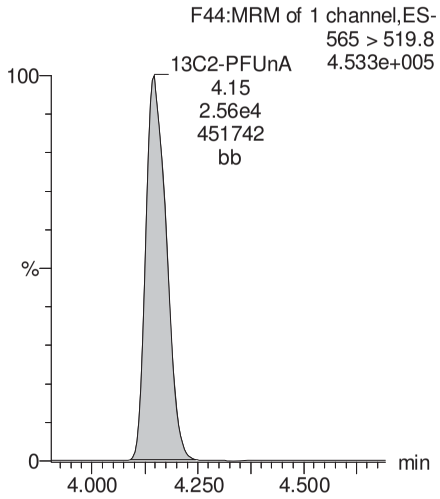

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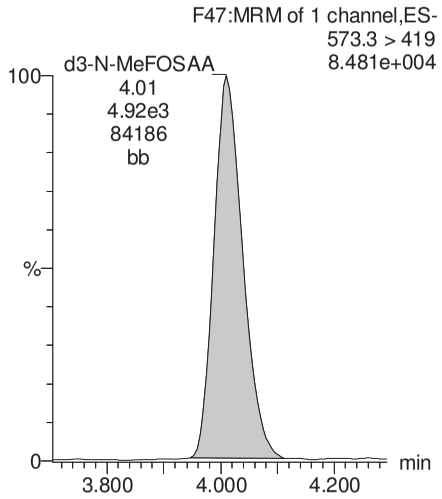

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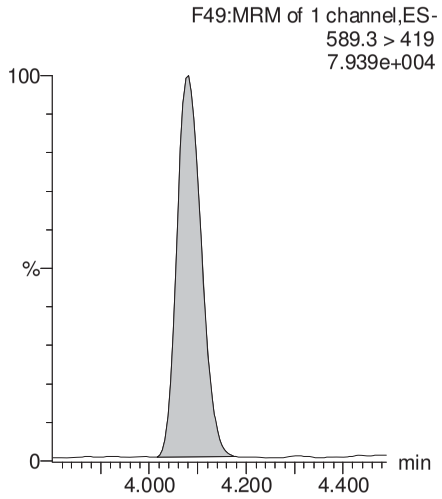

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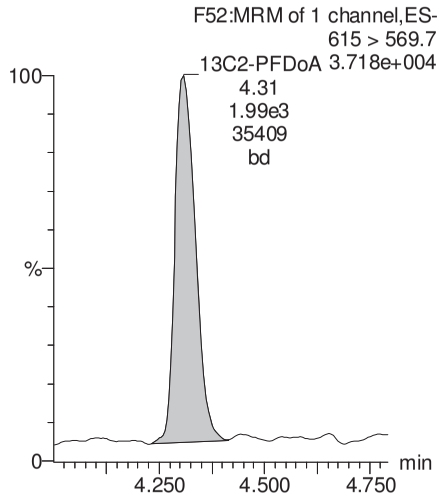

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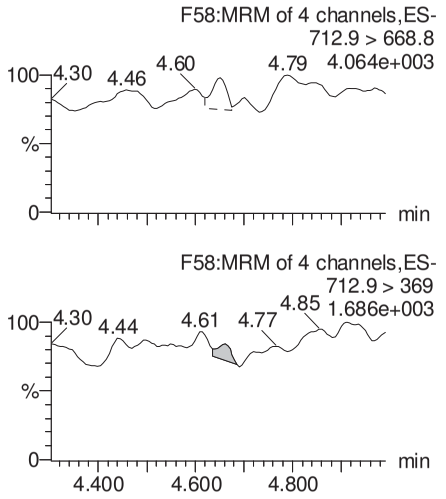
Dataset: U:\Q4.PRO\results\170731M1\170731M1-50.qld

Last Altered: Thursday, August 17, 2017 10:00:01 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:00:33 Pacific Daylight Time

Name: 170731M1_50, Date: 31-Jul-2017, Time: 21:04:38, ID: 1700920-05 MH-A97-20170720 0.12086, Description: MH-A97-20170720

PFTeDA



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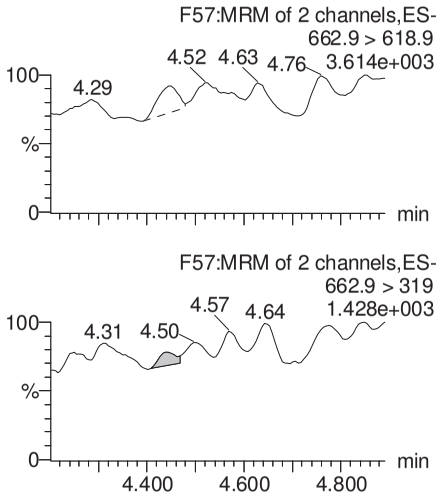

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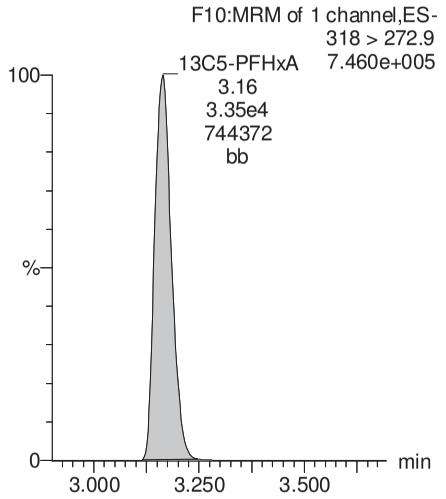

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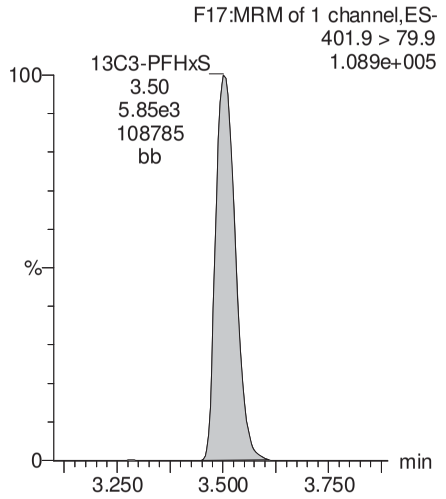

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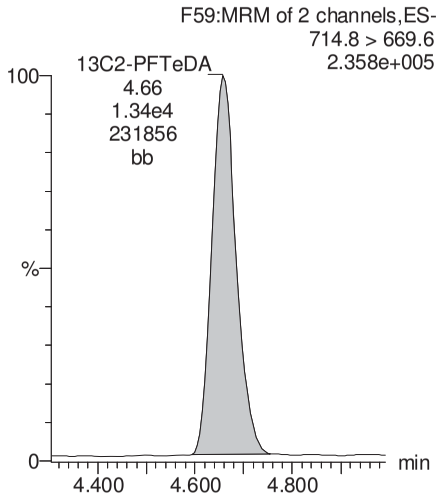

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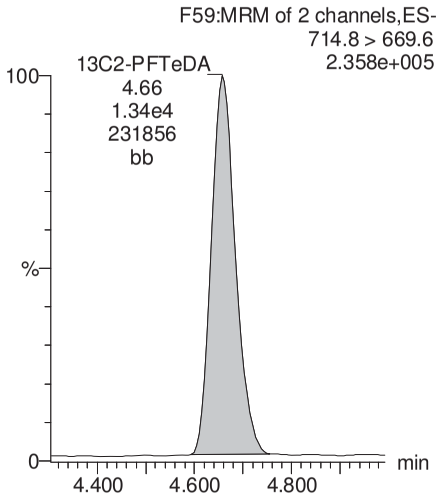

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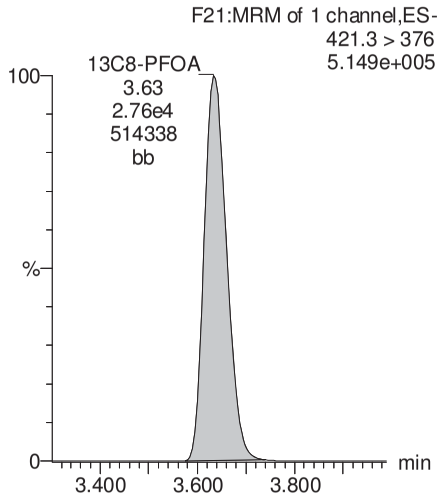

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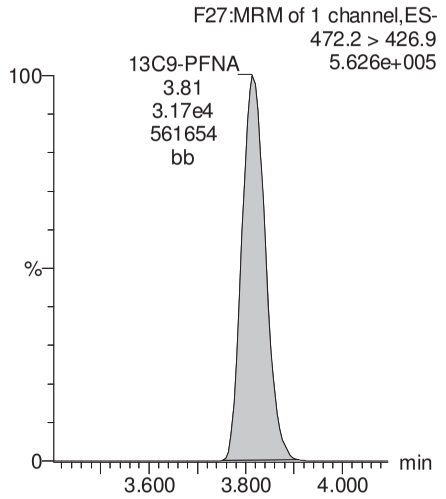

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-50.qld

Last Altered: Thursday, August 17, 2017 10:00:01 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:00:33 Pacific Daylight Time

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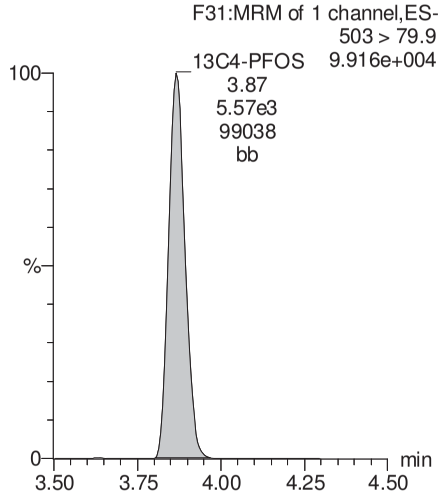
13C4-PFOS



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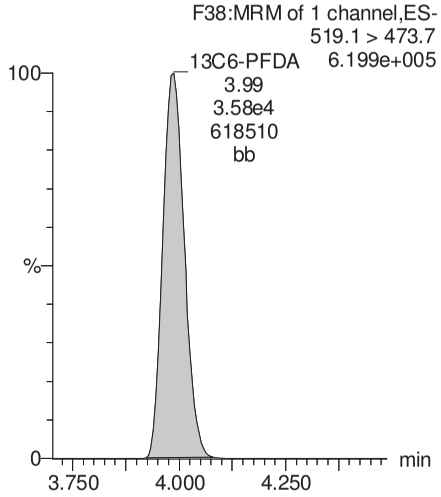

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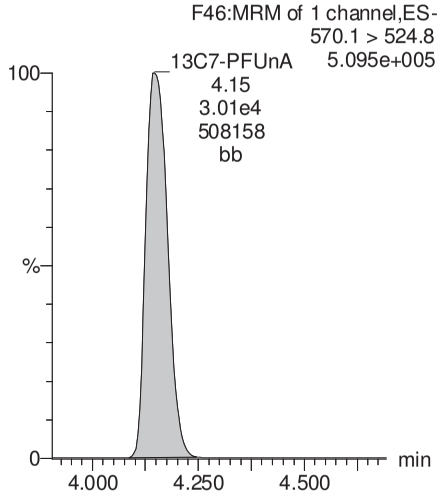

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-51.qld

Last Altered: Thursday, August 17, 2017 10:04:27 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:04:47 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: 170731M1_51, Date: 31-Jul-2017, Time: 21:15:17, ID: 1700920-06 MH-H93-20170720 0.11357, Description: MH-H93-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		4.33e3	0.114		2.96				
2	4	PFHxA	313.2 > 268.9	1.89e3	1.16e4	0.114		3.19	3.16	0.814	4.27	
3	5	PFHpA	363 > 318.9		2.74e4	0.114		3.45				
4	6	PFHxS	398.9 > 79.6	3.95e2	2.61e3	0.114		3.56	3.49	1.89	9.73	
5	7	PFOA	413 > 368.7	7.43e2	3.44e4	0.114		3.65	3.64	0.270	1.36	
6	9	PFNA	462.9 > 418.8	2.79e2	2.35e4	0.114		3.83	3.81	0.149	0.535	
7	11	PFOS	499 > 79.9	4.34e2	4.78e3	0.114		3.89	3.87	1.14	9.74	
8	12	PFDA	513 > 468.8		1.96e4	0.114		4.01				
9	13	N-MeFOSAA	570.1 > 419		3.10e3	0.114		4.03				
10	14	N-EtFOSAA	584.2 > 419		2.60e3	0.114		4.10				
11	15	PFUnA	562.9 > 518.9		1.40e4	0.114		4.11				
12	17	PFDoA	612.9 > 318.8		8.59e2	0.114		4.34				
13	18	PFTrDA	662.9 > 618.9		8.59e2	0.114		4.50				
14	19	PFTeDA	712.9 > 668.8		1.22e3	0.114		4.68				
15	22	13C3-PFBS	302 > 98.8	4.33e3	4.42e4	0.114	0.033	2.96	2.92	0.489	130	118.3
16	23	13C2-PFHxA	315 > 269.8	1.16e4	4.42e4	0.114	0.335	3.19	3.16	1.31	34.4	78.1
17	24	13C4-PFHpA	367.2 > 321.8	2.74e4	4.42e4	0.114	0.369	3.45	3.43	3.09	73.8	67.1
18	25	18O2-PFHxS	403 > 102.6	2.61e3	6.66e3	0.114	0.460	3.56	3.50	4.89	93.6	85.0
19	26	13C2-PFOA	414.9 > 369.7	3.44e4	3.33e4	0.114	1.293	3.65	3.64	12.9	87.9	79.8
20	27	13C5-PFNA	468.2 > 422.9	2.35e4	2.73e4	0.114	0.986	3.83	3.81	10.7	96.0	87.2

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-51.qld

Last Altered: Thursday, August 17, 2017 10:04:27 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:05:00 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: 170731M1_51, Date: 31-Jul-2017, Time: 21:15:17, ID: 1700920-06 MH-H93-20170720 0.11357, Description: MH-H93-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	29	13C8-PFOS	507 > 79.9	4.78e3	4.98e3	0.114	1.184	3.89	3.87	12.0	89.1	80.9	
2	30	13C2-PFDA	515.1 > 469.9	1.96e4	2.42e4	0.114	0.998	4.01	3.99	10.1	89.3	81.1	
3	31	d3-N-MeFOSAA	573.3 > 419	3.10e3	1.95e4	0.114	0.018	4.03	4.02	1.99	989	69.1	
4	32	d5-N-EtFOSAA	589.3 > 419	2.60e3	1.95e4	0.114	0.018	4.12	4.08	1.67	826	57.7	
5	33	13C2-PFUnA	565 > 519.8	1.40e4	1.95e4	0.114	1.129	4.17	4.15	8.96	69.9	63.5	
6	34	13C2-PFDoA	615 > 569.7	8.59e2	1.95e4	0.114	0.116	4.34	4.31	0.551	41.8	38.0	H
7	35	13C2-PFTeDA	714.8 > 669.6	1.22e3	1.95e4	0.114	0.762	4.68	4.66	0.783	9.04	8.2	H
8	37	13C5-PFHxA	318 > 272.9	4.42e4	4.42e4	0.114	1.000	3.19	3.16	5.00	44.0	100.0	
9	38	13C3-PFHxS	401.9 > 79.9	6.66e3	6.66e3	0.114	1.000	3.56	3.50	12.5	110	100.0	
10	39	13C8-PFOA	421.3 > 376	3.33e4	3.33e4	0.114	1.000	3.65	3.64	12.5	110	100.0	
11	40	13C9-PFNA	472.2 > 426.9	2.73e4	2.73e4	0.114	1.000	3.83	3.81	12.5	110	100.0	
12	41	13C4-PFOS	503 > 79.9	4.98e3	4.98e3	0.114	1.000	3.89	3.87	12.5	110	100.0	
13	42	13C6-PFDA	519.1 > 473.7	2.42e4	2.42e4	0.114	1.000	4.01	3.99	12.5	110	100.0	
14	43	13C7-PFUnA	570.1 > 524.8	1.95e4	1.95e4	0.114	1.000	4.17	4.15	12.5	110	100.0	
15	44	Total PFBS	299 > 79.7	0.00e0	4.33e3	0.114		2.96		0.000			
16	45	Total PFHxS	398.9 > 79.6	3.95e2	2.61e3	0.114		3.52		1.89	9.73		
17	46	Total PFOA	413 > 368.7	7.43e2	3.44e4	0.114		3.65		0.270	1.36		
18	47	Total PFOS	499 > 79.9	4.34e2	4.78e3	0.114		3.89		1.14	9.74		
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	3.10e3	0.114		4.03		0.000			
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	2.60e3	0.114		4.17		0.000			

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-51.qld

Last Altered: Thursday, August 17, 2017 10:04:27 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:05:00 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: 170731M1_51, Date: 31-Jul-2017, Time: 21:15:17, ID: 1700920-06 MH-H93-20170720 0.11357, Description: MH-H93-20170720

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7			4328.916		MM-	

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.49	395.203	2606.939	1.895	MM	9.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.64	743.339	34386.977	0.270	MM	1.4

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.87	433.836	4776.218	1.135	bb	9.7

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			3096.883		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419			2599.156		MM-I	

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-51.qld

Last Altered: Thursday, August 17, 2017 10:04:27 Pacific Daylight Time
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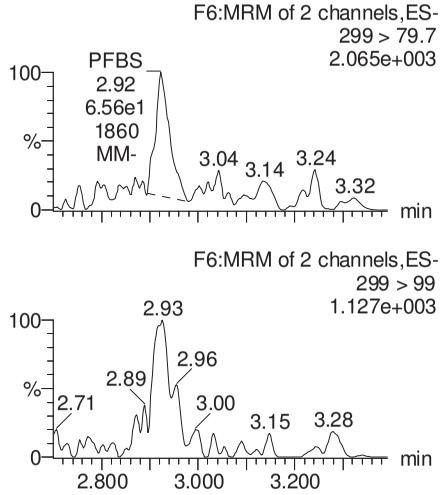
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170731M1_51, Date: 31-Jul-2017, Time: 21:15:17, ID: 1700920-06 MH-H93-20170720 0.11357, Description: MH-H93-20170720

Total PFBS



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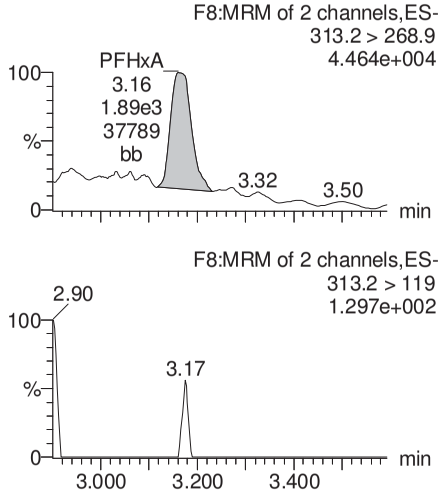

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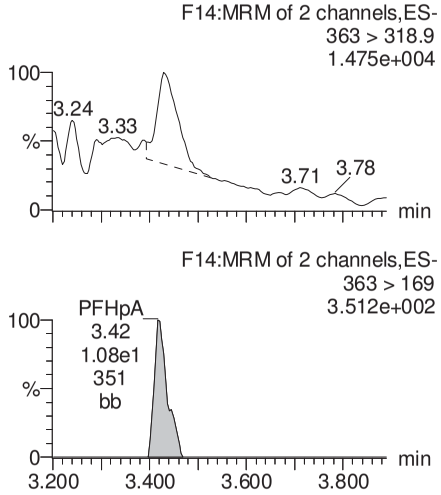

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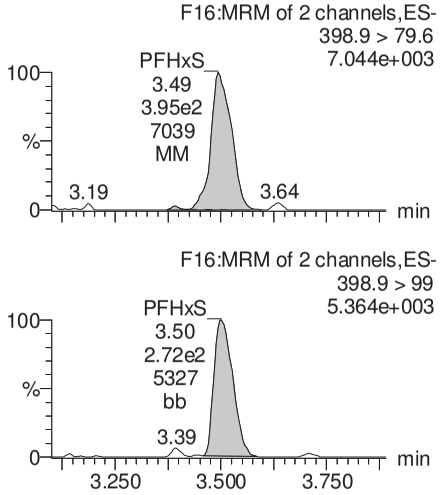

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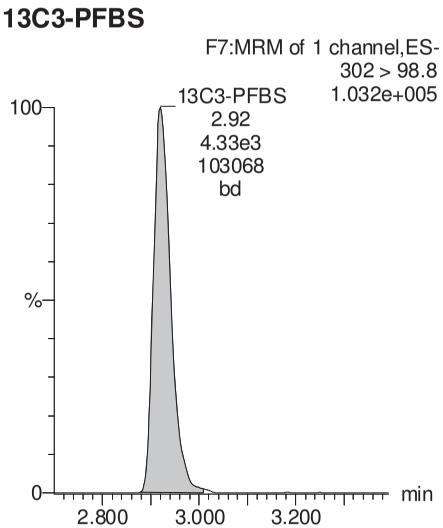

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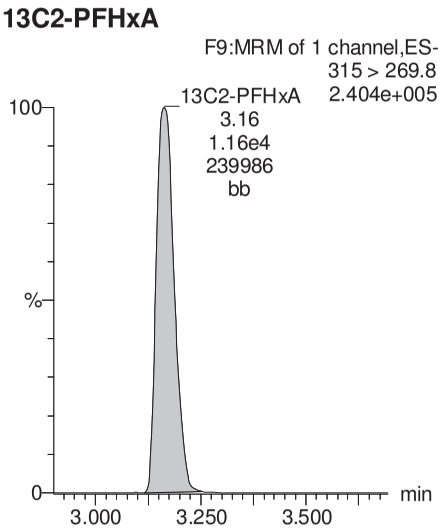

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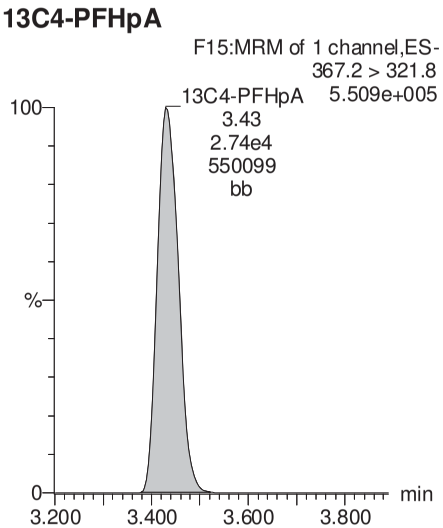

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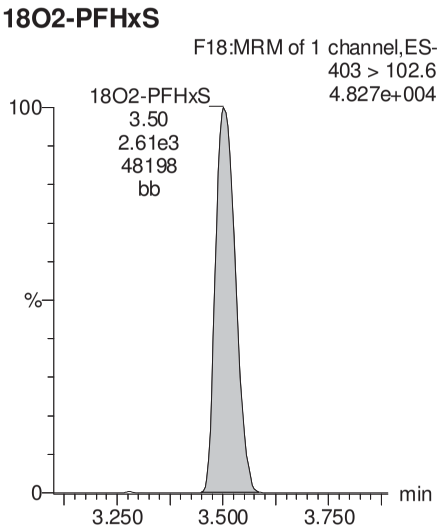

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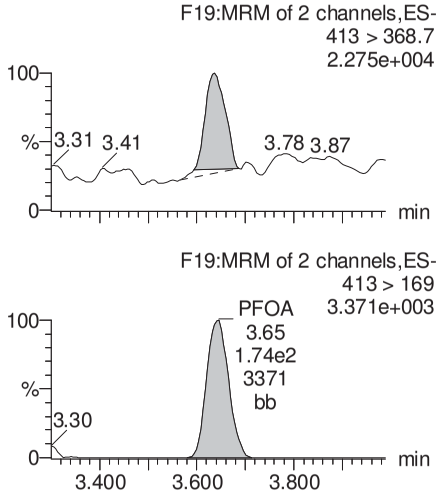
Dataset: U:\Q4.PRO\results\170731M1\170731M1-51.qld

Last Altered: Thursday, August 17, 2017 10:04:27 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:05:00 Pacific Daylight Time

Name: 170731M1_51, Date: 31-Jul-2017, Time: 21:15:17, ID: 1700920-06 MH-H93-20170720 0.11357, Description: MH-H93-20170720

Total PFOA



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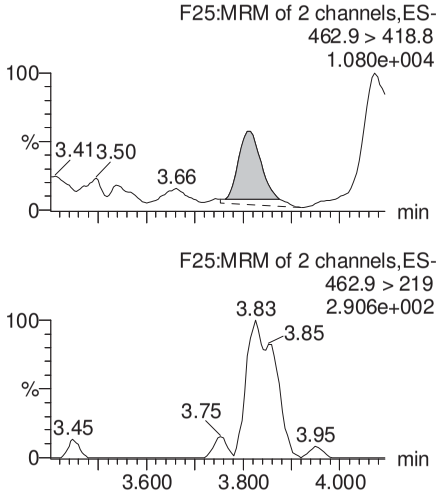

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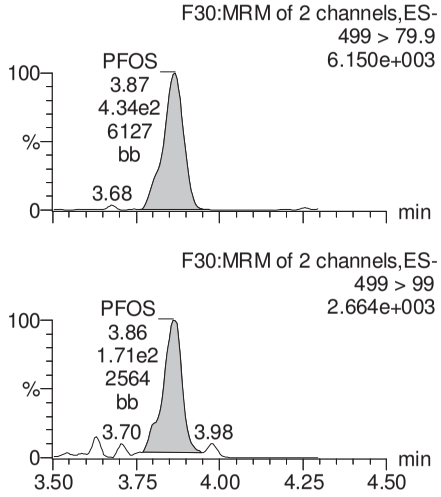
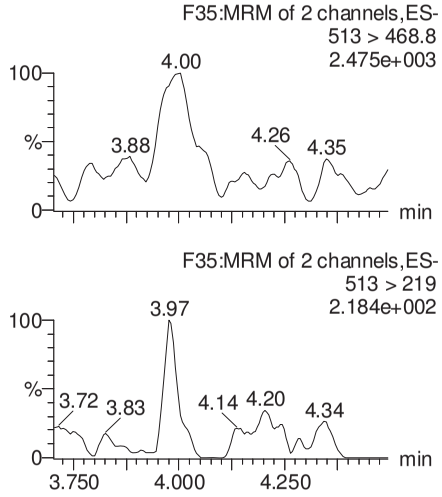


PFDA



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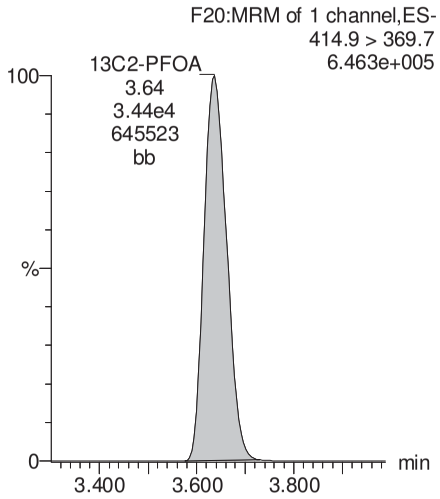

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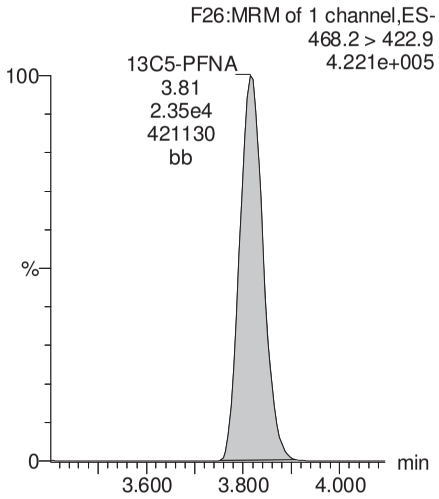

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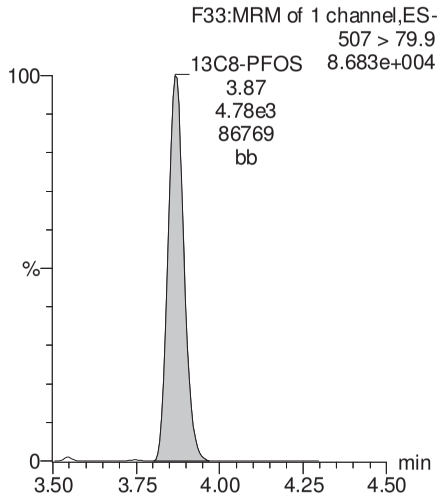

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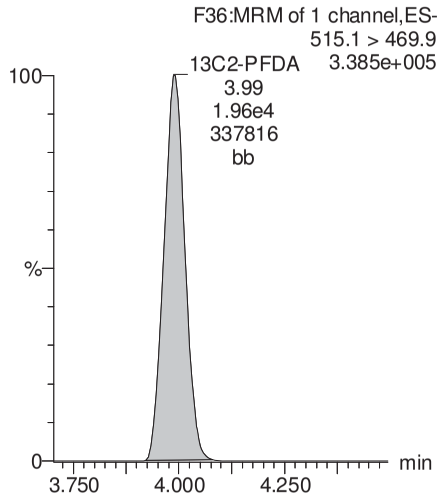


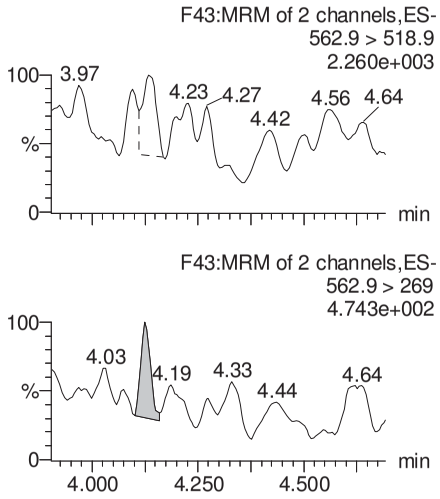
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-51.qld

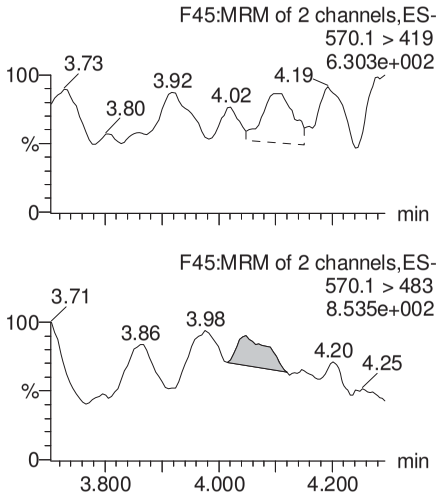
Last Altered: Thursday, August 17, 2017 10:04:27 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:05:00 Pacific Daylight Time

Name: 170731M1_51, Date: 31-Jul-2017, Time: 21:15:17, ID: 1700920-06 MH-H93-20170720 0.11357, Description: MH-H93-20170720

PFUnA



N-MeFOSAA



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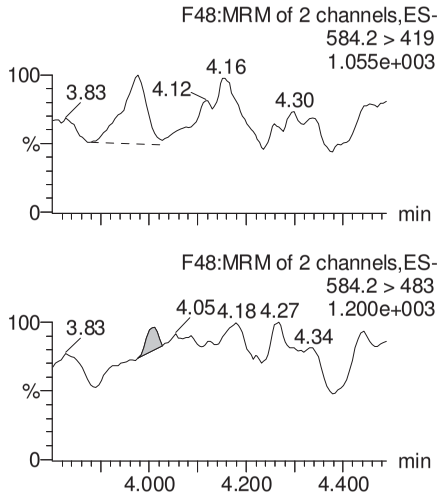

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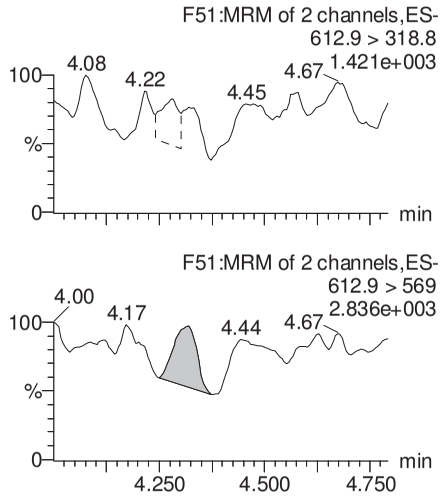

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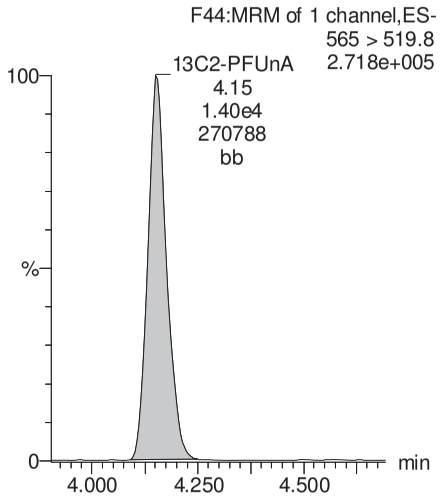

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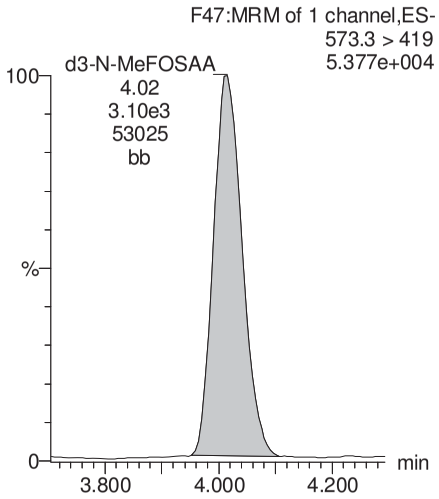

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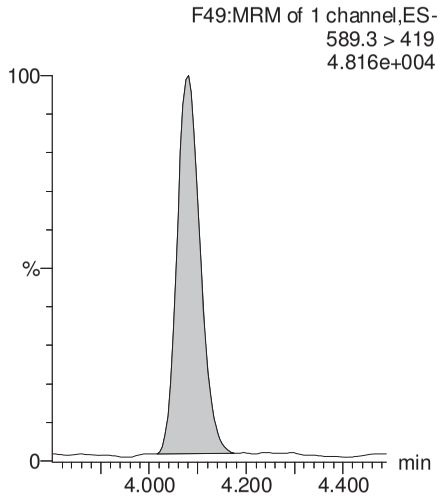

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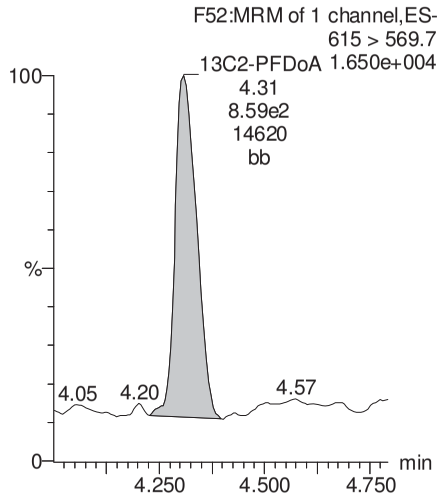


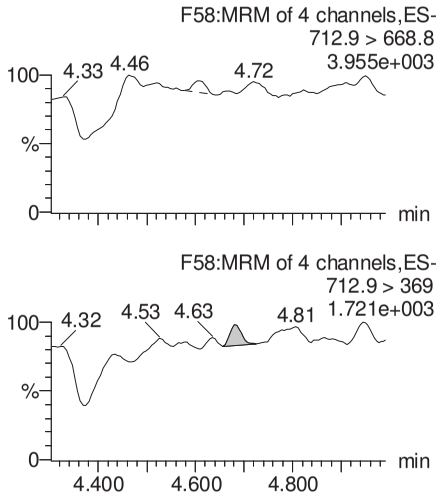
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-51.qld

Last Altered: Thursday, August 17, 2017 10:04:27 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:05:00 Pacific Daylight Time

Name: 170731M1_51, Date: 31-Jul-2017, Time: 21:15:17, ID: 1700920-06 MH-H93-20170720 0.11357, Description: MH-H93-20170720

PFTeDA



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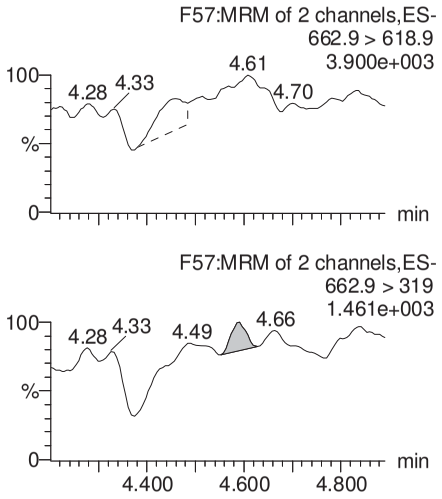
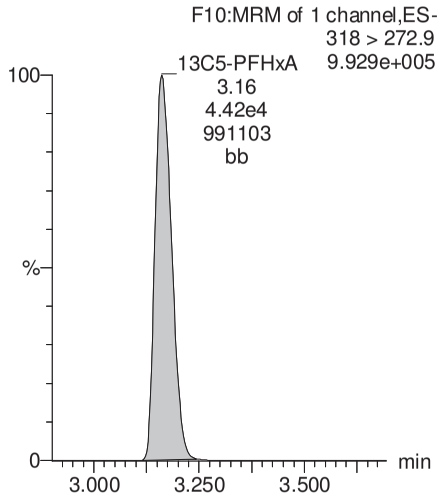


13C5-PFHxA



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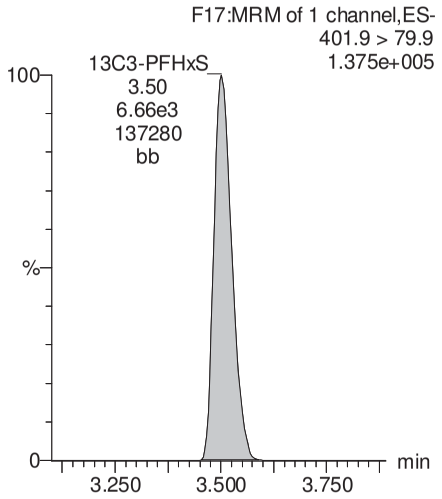

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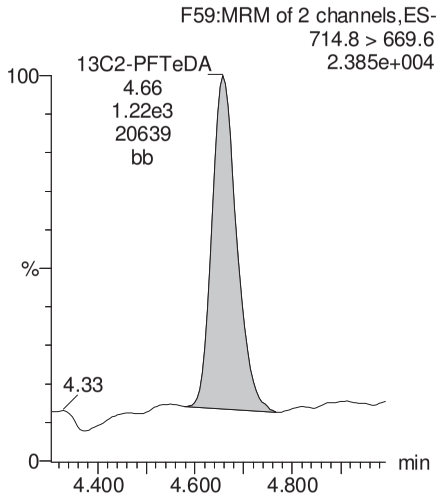
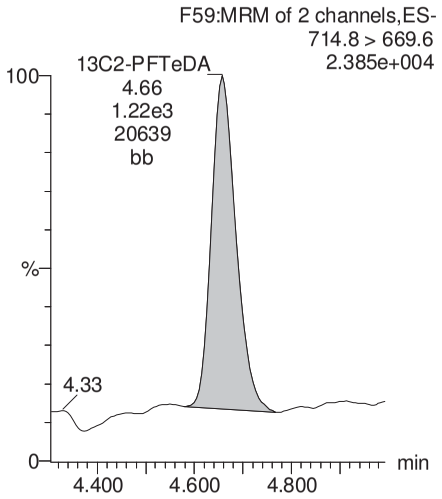
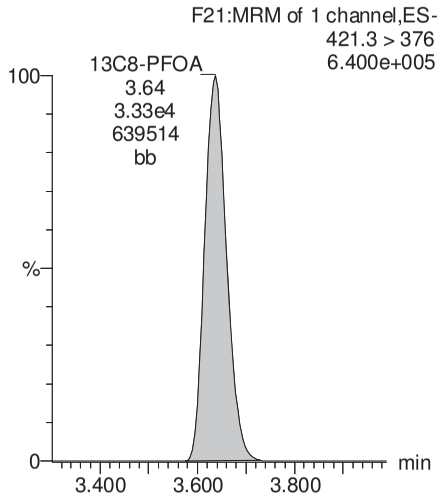


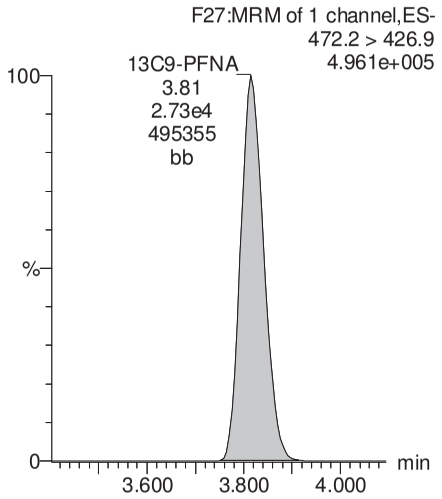
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

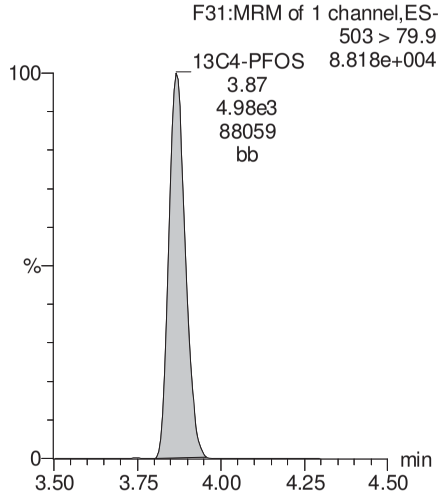
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-51.qld

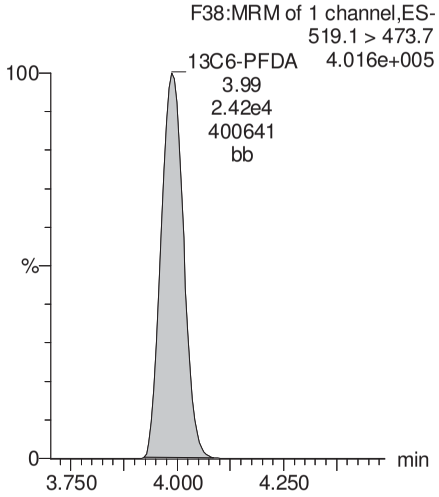
Last Altered: Thursday, August 17, 2017 10:04:27 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:05:00 Pacific Daylight Time

Name: 170731M1_51, Date: 31-Jul-2017, Time: 21:15:17, ID: 1700920-06 MH-H93-20170720 0.11357, Description: MH-H93-20170720

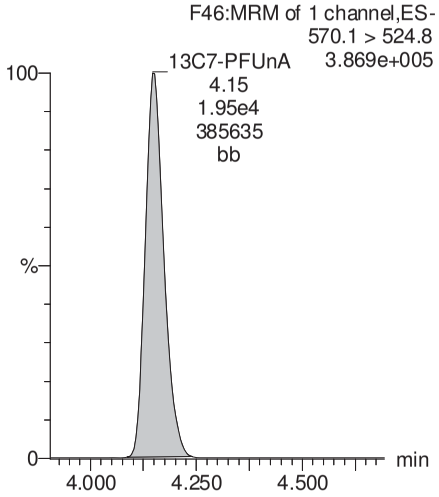
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/17/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-55.qld

Last Altered: Thursday, August 17, 2017 10:07:52 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:08:14 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: 170731M1_55, Date: 31-Jul-2017, Time: 21:57:58, ID: 1700920-07 RCDM-BLANK-20170720 0.11872, Description: RCDM-BLANK-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		3.30e3	0.119		2.96				
2	4	PFHxA	313.2 > 268.9		1.02e4	0.119		3.19				
3	5	PFHpA	363 > 318.9		2.36e4	0.119		3.45				
4	6	PFHxS	398.9 > 79.6		2.39e3	0.119		3.56				
5	7	PFOA	413 > 368.7		3.37e4	0.119		3.65				
6	9	PFNA	462.9 > 418.8		2.59e4	0.119		3.83				
7	11	PFOS	499 > 79.9		5.10e3	0.119		3.89				
8	12	PFDA	513 > 468.8		2.40e4	0.119		4.01				
9	13	N-MeFOSAA	570.1 > 419		4.40e3	0.119		4.03				
10	14	N-EtFOSAA	584.2 > 419		4.28e3	0.119		4.10				
11	15	PFUnA	562.9 > 518.9		1.82e4	0.119		4.11				
12	17	PFDoA	612.9 > 318.8		1.97e3	0.119		4.34				
13	18	PFTrDA	662.9 > 618.9		1.97e3	0.119		4.50				
14	19	PFTeDA	712.9 > 668.8		1.01e4	0.119		4.68				
15	22	13C3-PFBS	302 > 98.8	3.30e3	4.16e4	0.119	0.033	2.96	2.92	0.397	101	96.0
16	23	13C2-PFHxA	315 > 269.8	1.02e4	4.16e4	0.119	0.335	3.19	3.16	1.22	30.7	72.8
17	24	13C4-PFHpA	367.2 > 321.8	2.36e4	4.16e4	0.119	0.369	3.45	3.43	2.83	64.7	61.5
18	25	18O2-PFHxS	403 > 102.6	2.39e3	6.32e3	0.119	0.460	3.56	3.50	4.73	86.6	82.2
19	26	13C2-PFOA	414.9 > 369.7	3.37e4	3.05e4	0.119	1.293	3.65	3.64	13.8	90.1	85.6
20	27	13C5-PFNA	468.2 > 422.9	2.59e4	3.72e4	0.119	0.986	3.83	3.81	8.71	74.4	70.7

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-55.qld

Last Altered: Thursday, August 17, 2017 10:07:52 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:08:25 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: 170731M1_55, Date: 31-Jul-2017, Time: 21:57:58, ID: 1700920-07 RCDM-BLANK-20170720 0.11872, Description: RCDM-BLANK-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	29	13C8-PFOS	507 > 79.9	5.10e3	5.98e3	0.119	1.184	3.89	3.87	10.7	75.8	72.0	
2	30	13C2-PFDA	515.1 > 469.9	2.40e4	3.40e4	0.119	0.998	4.01	3.99	8.84	74.6	70.9	
3	31	d3-N-MeFOSAA	573.3 > 419	4.40e3	3.04e4	0.119	0.018	4.03	4.01	1.81	860	62.8	
4	32	d5-N-EtFOSAA	589.3 > 419	4.28e3	3.04e4	0.119	0.018	4.12	4.08	1.76	832	60.8	
5	33	13C2-PFUnA	565 > 519.8	1.82e4	3.04e4	0.119	1.129	4.17	4.15	7.48	55.8	53.0	
6	34	13C2-PFDoA	615 > 569.7	1.97e3	3.04e4	0.119	0.116	4.34	4.31	0.811	58.9	55.9	
7	35	13C2-PFTeDA	714.8 > 669.6	1.01e4	3.04e4	0.119	0.762	4.68	4.66	4.14	45.8	43.5	H
8	37	13C5-PFHxA	318 > 272.9	4.16e4	4.16e4	0.119	1.000	3.19	3.17	5.00	42.1	100.0	
9	38	13C3-PFHxS	401.9 > 79.9	6.32e3	6.32e3	0.119	1.000	3.56	3.50	12.5	105	100.0	
10	39	13C8-PFOA	421.3 > 376	3.05e4	3.05e4	0.119	1.000	3.65	3.64	12.5	105	100.0	
11	40	13C9-PFNA	472.2 > 426.9	3.72e4	3.72e4	0.119	1.000	3.83	3.81	12.5	105	100.0	
12	41	13C4-PFOS	503 > 79.9	5.98e3	5.98e3	0.119	1.000	3.89	3.87	12.5	105	100.0	
13	42	13C6-PFDA	519.1 > 473.7	3.40e4	3.40e4	0.119	1.000	4.01	3.99	12.5	105	100.0	
14	43	13C7-PFUnA	570.1 > 524.8	3.04e4	3.04e4	0.119	1.000	4.17	4.15	12.5	105	100.0	
15	44	Total PFBS	299 > 79.7	0.00e0	3.30e3	0.119		2.96		0.000			
16	45	Total PFHxS	398.9 > 79.6	0.00e0	2.39e3	0.119		3.52		0.000			
17	46	Total PFOA	413 > 368.7	0.00e0	3.37e4	0.119		3.65		0.000			
18	47	Total PFOS	499 > 79.9	0.00e0	5.10e3	0.119		3.89		0.000			
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	4.40e3	0.119		4.03		0.000			
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	4.28e3	0.119		4.17		0.000			

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-55.qld

Last Altered: Thursday, August 17, 2017 10:07:52 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:08:25 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: 170731M1_55, Date: 31-Jul-2017, Time: 21:57:58, ID: 1700920-07 RCDM-BLANK-20170720 0.11872, Description: RCDM-BLANK-20170720

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			2393.135		MM-I	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7			33738.145		MM-I	

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9			5101.746		MM-I	

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			4395.652		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419			4276.015		MM-I	

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-55.qld

Last Altered: Thursday, August 17, 2017 10:07:52 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:08:25 Pacific Daylight Time

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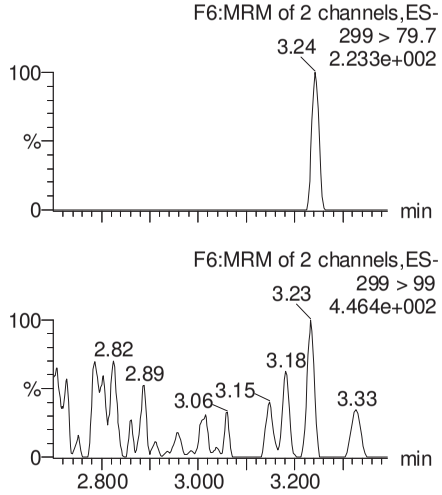
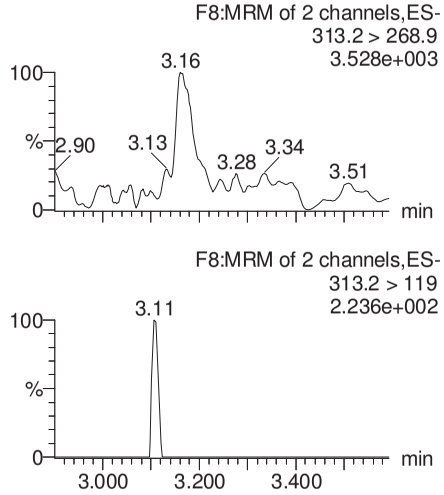
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170731M1_55, Date: 31-Jul-2017, Time: 21:57:58, ID: 1700920-07 RCDM-BLANK-20170720 0.11872, Description: RCDM-BLANK-20170720

Total PFBS



PFHxA



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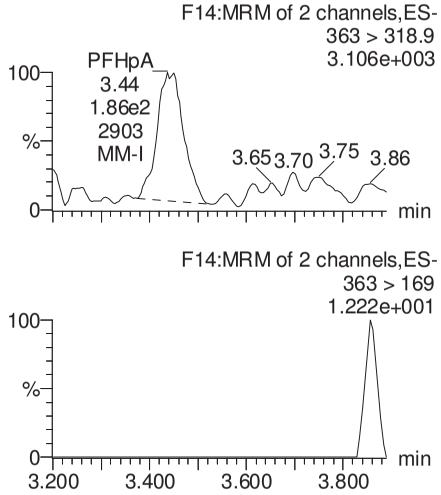

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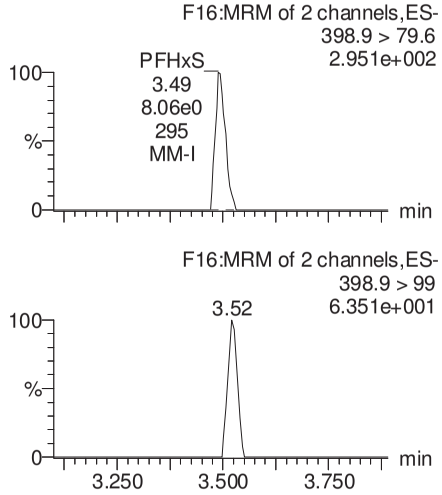
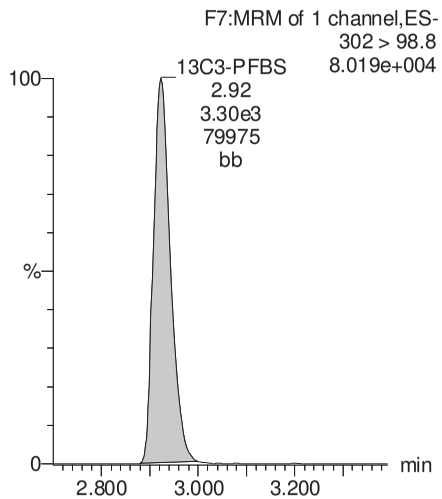


13C3-PFBS



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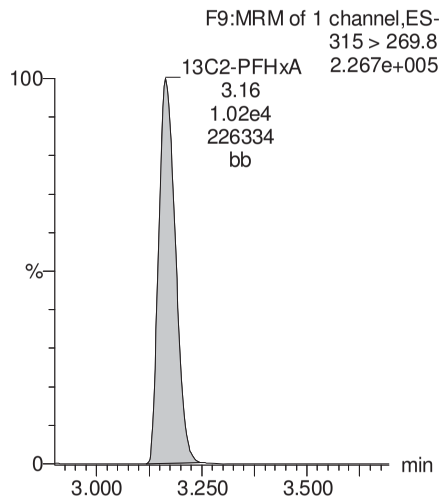

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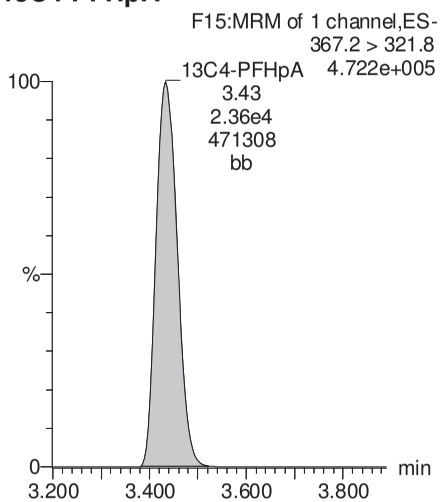
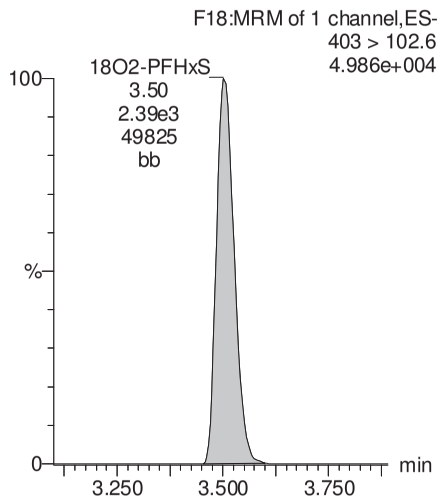


18O2-PFHxS



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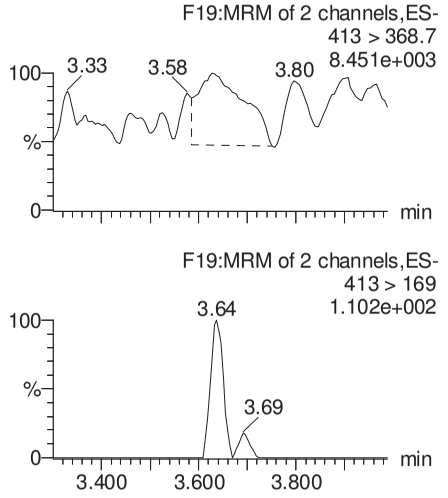
Dataset: U:\Q4.PRO\results\170731M1\170731M1-55.qld

Last Altered: Thursday, August 17, 2017 10:07:52 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:08:25 Pacific Daylight Time

Name: 170731M1_55, Date: 31-Jul-2017, Time: 21:57:58, ID: 1700920-07 RCDM-BLANK-20170720 0.11872, Description: RCDM-BLANK-20170720

Total PFOA



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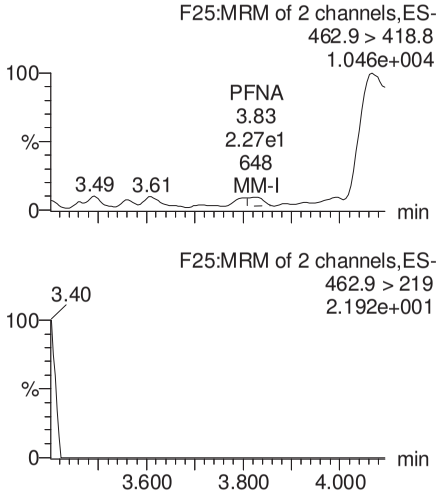
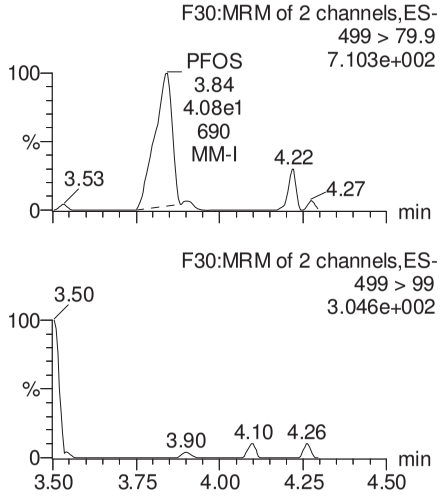
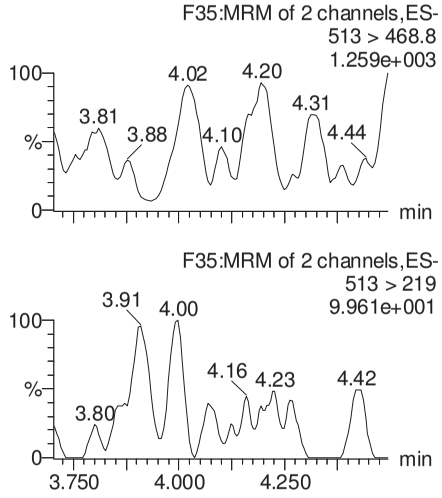


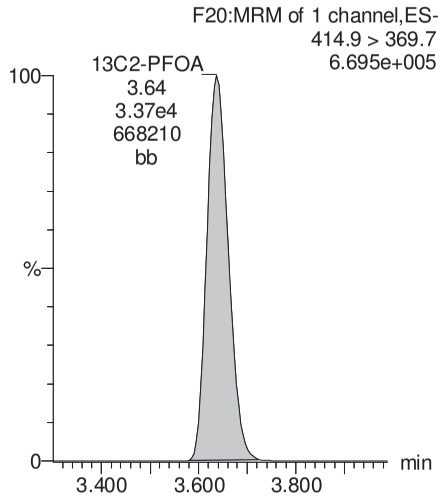
Total PFOS



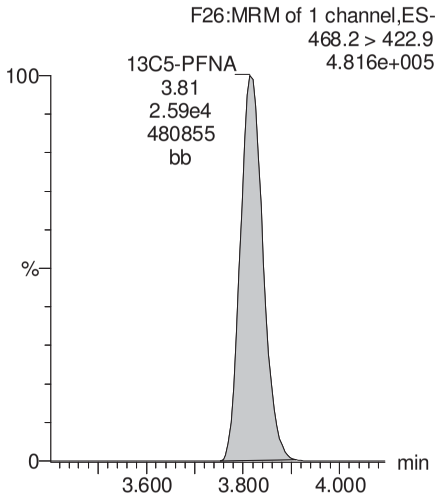
PFDA



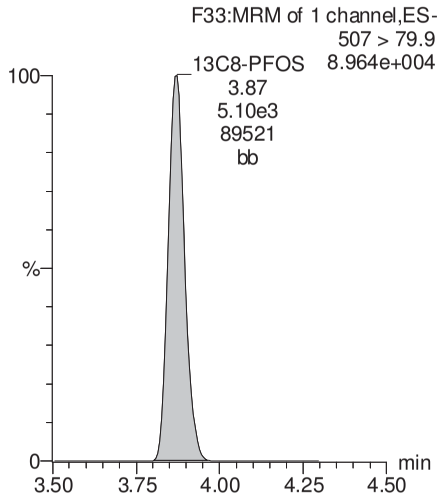
13C2-PFOA



13C5-PFNA



13C8-PFOS



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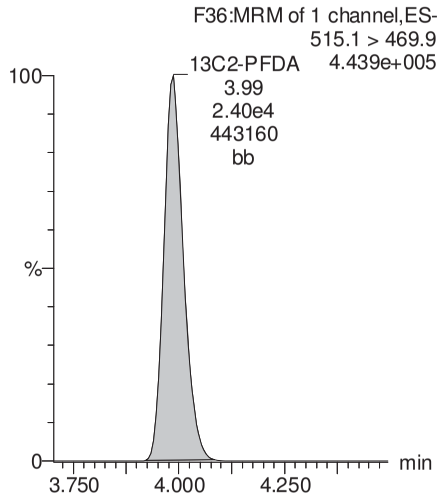

GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-55.qld

Last Altered: Thursday, August 17, 2017 10:07:52 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:08:25 Pacific Daylight Time

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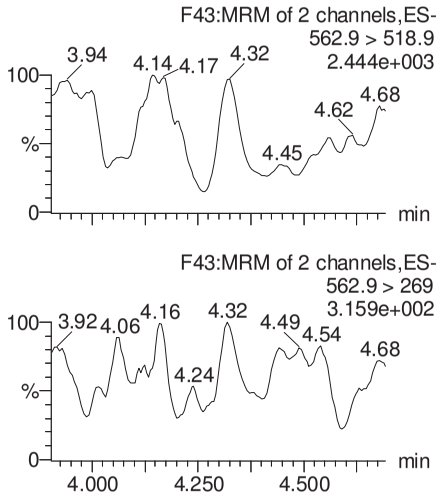
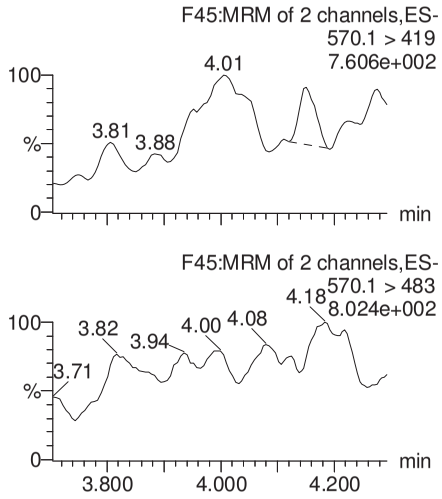
PFUnA



N-MeFOSAA



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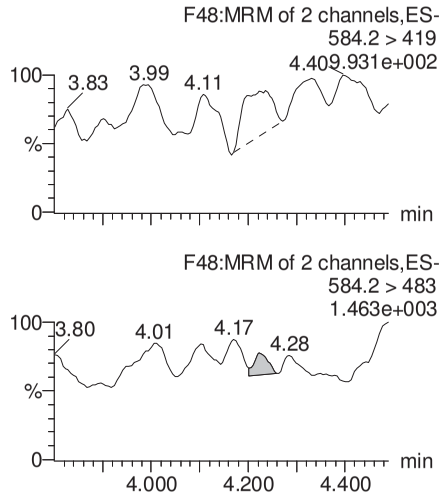
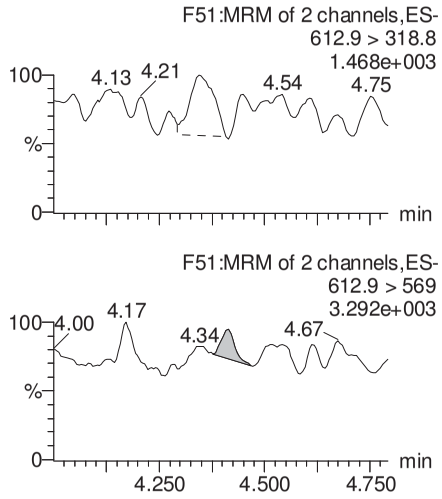


PFDoA



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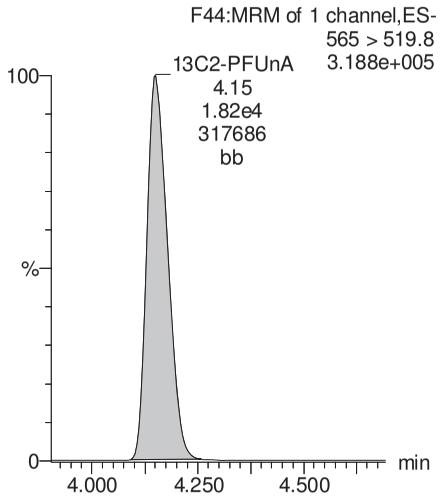

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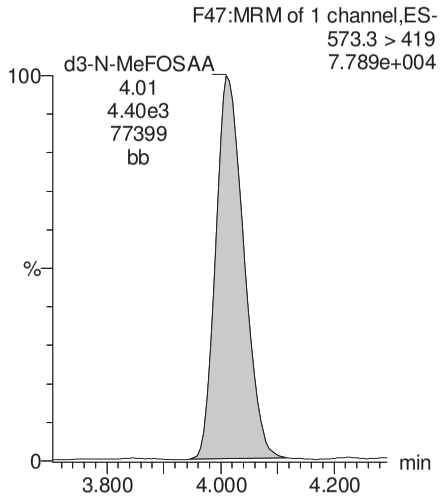
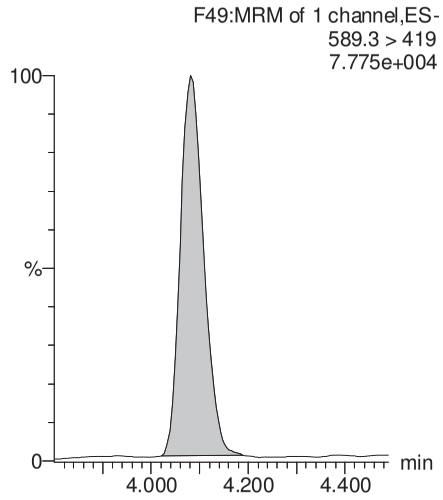
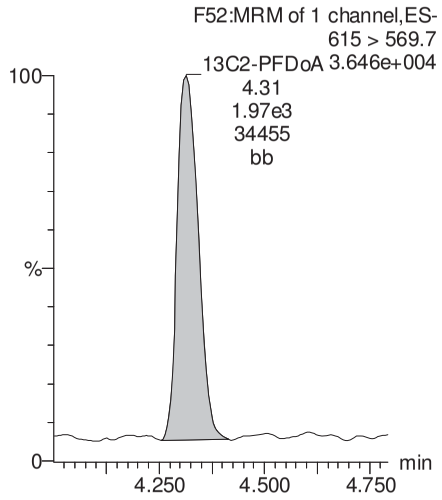


d5-N-EtFOSAA



13C2-PFDoA



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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-55.qld

Last Altered: Thursday, August 17, 2017 10:07:52 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:08:25 Pacific Daylight Time

Name: 170731M1_55, Date: 31-Jul-2017, Time: 21:57:58, ID: 1700920-07 RCDM-BLANK-20170720 0.11872, Description: RCDM-BLANK-20170720

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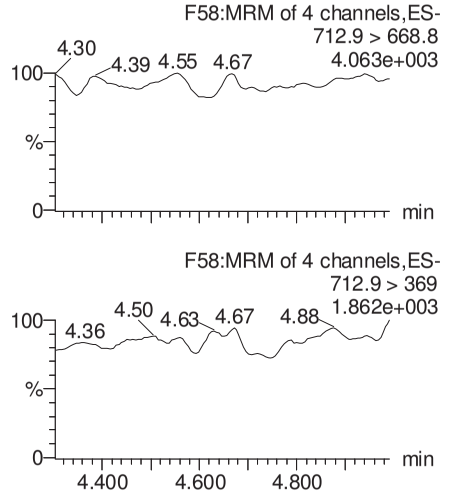

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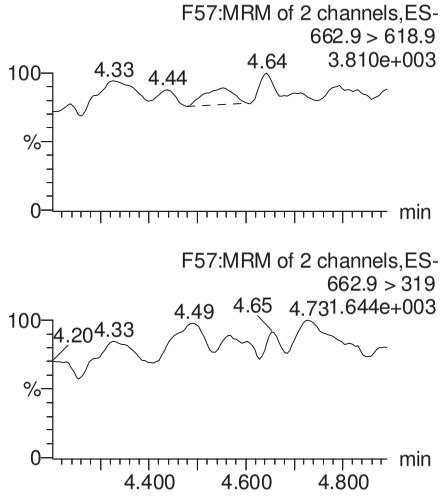
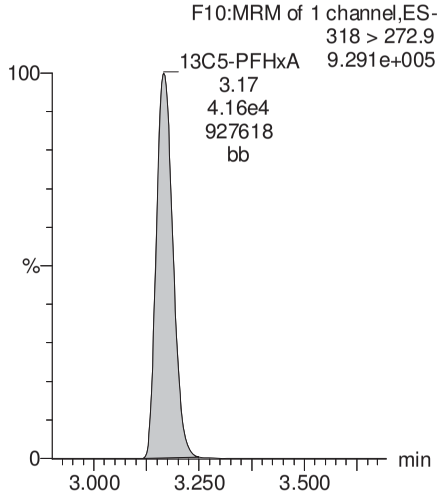
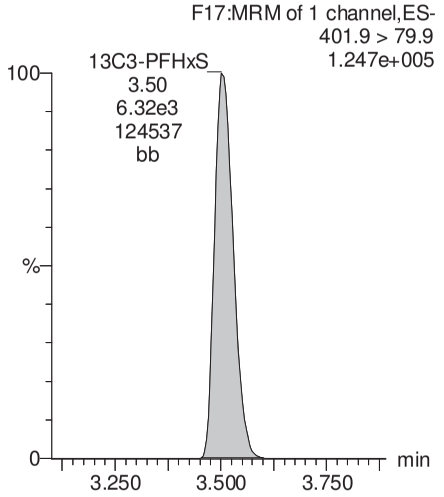


13C5-PFHxA



13C3-PFHxS



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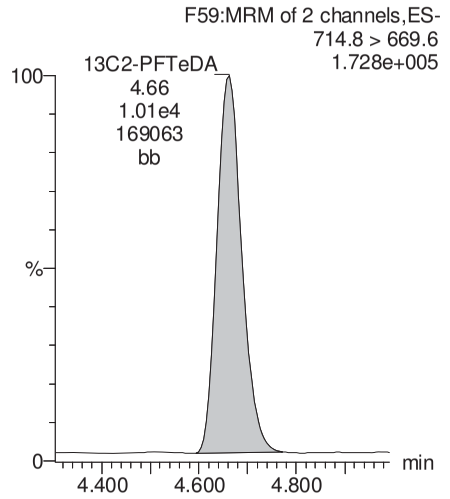
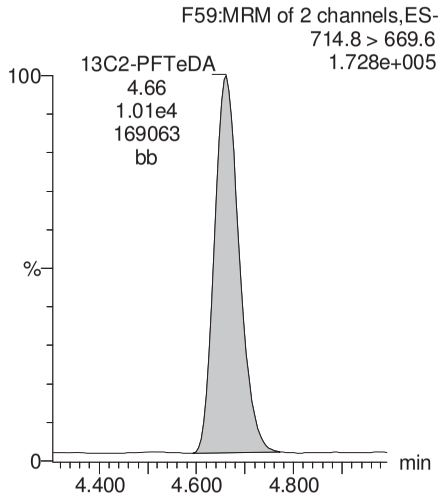
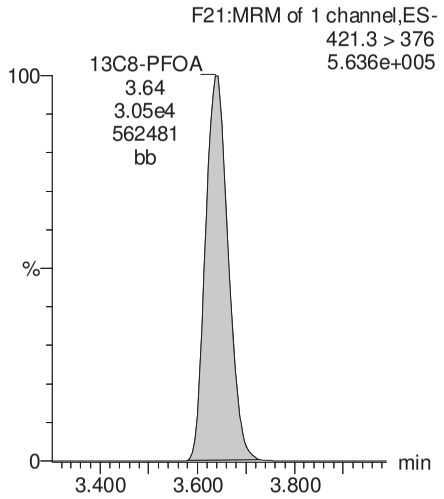


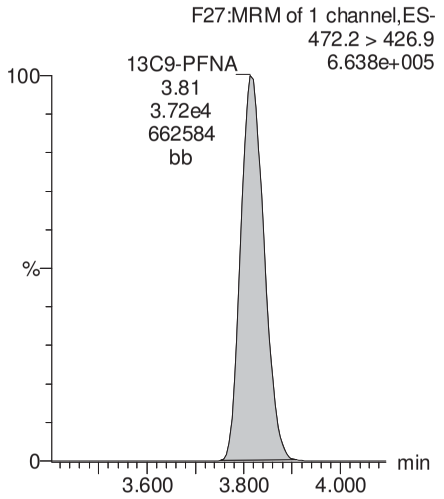
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

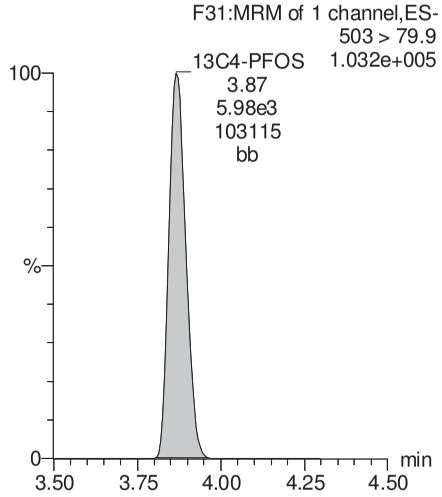
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-55.qld

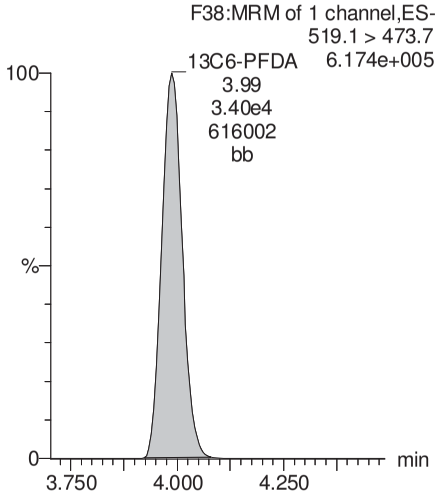
Last Altered: Thursday, August 17, 2017 10:07:52 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:08:25 Pacific Daylight Time

Name: 170731M1_55, Date: 31-Jul-2017, Time: 21:57:58, ID: 1700920-07 RCDM-BLANK-20170720 0.11872, Description: RCDM-BLANK-20170720

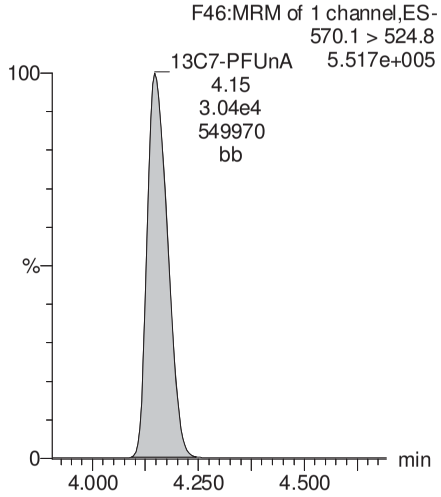
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-56.qld

Last Altered: Thursday, August 17, 2017 10:11:09 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:11:30 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

*See dilution.

Name: 170731M1_56, Date: 31-Jul-2017, Time: 22:08:37, ID: 1700920-08 MH-C94-20170720 0.11568, Description: MH-C94-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	1.14e4	3.10e3	0.116		2.96	2.92	45.8	213	
2	4	PFHxA	313.2 > 268.9	2.78e5	9.53e3	0.116		3.19	3.16	146	904	
3	5	PFHpA	363 > 318.9	6.63e4	2.14e4	0.116		3.45	3.43	38.7	283	
4	6	PFHxS	398.9 > 79.6	4.16e4	2.41e3	0.116		3.56	3.50	216	1120	
5	7	PFOA	413 > 368.7	3.82e4	3.01e4	0.116		3.65	3.64	15.8	140	
6	9	PFNA	462.9 > 418.8	3.08e3	2.21e4	0.116		3.83	3.82	1.75	13.4	
7	11	PFOS	499 > 79.9	1.68e5	3.96e3	0.116		3.89	3.87	531	4860 E*	
8	12	PFDA	513 > 468.8	1.53e3	2.01e4	0.116		4.01	3.98	0.951	5.64	
9	13	N-MeFOSAA	570.1 > 419		4.08e3	0.116		4.03				
10	14	N-EtFOSAA	584.2 > 419		3.69e3	0.116		4.10				
11	15	PFUnA	562.9 > 518.9	2.37e2	1.84e4	0.116		4.11	4.15	0.161	0.804	
12	17	PFDoA	612.9 > 318.8		1.64e3	0.116		4.34				
13	18	PFTrDA	662.9 > 618.9		1.64e3	0.116		4.50				
14	19	PFTeDA	712.9 > 668.8		2.94e3	0.116		4.68				
15	22	13C3-PFBS	302 > 98.8	3.10e3	3.43e4	0.116	0.033	2.96	2.92	0.453	118	109.5
16	23	13C2-PFHxA	315 > 269.8	9.53e3	3.43e4	0.116	0.335	3.19	3.16	1.39	35.8	82.9
17	24	13C4-PFHpA	367.2 > 321.8	2.14e4	3.43e4	0.116	0.369	3.45	3.43	3.13	73.3	67.8
18	25	18O2-PFHxS	403 > 102.6	2.41e3	5.95e3	0.116	0.460	3.56	3.50	5.06	95.0	87.9
19	26	13C2-PFOA	414.9 > 369.7	3.01e4	3.00e4	0.116	1.293	3.65	3.64	12.6	83.9	77.6
20	27	13C5-PFNA	468.2 > 422.9	2.21e4	2.95e4	0.116	0.986	3.83	3.82	9.34	81.9	75.8

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-56.qld

Last Altered: Thursday, August 17, 2017 10:11:09 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:11:43 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: 170731M1_56, Date: 31-Jul-2017, Time: 22:08:37, ID: 1700920-08 MH-C94-20170720 0.11568, Description: MH-C94-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	29	13C8-PFOS	507 > 79.9	3.96e3	4.26e3	0.116	1.184	3.89	3.87	11.6	84.9	78.5	
2	30	13C2-PFDA	515.1 > 469.9	2.01e4	2.71e4	0.116	0.998	4.01	3.98	9.30	80.6	74.6	
3	31	d3-N-MeFOSAA	573.3 > 419	4.08e3	2.38e4	0.116	0.018	4.03	4.01	2.15	1050	74.7	
4	32	d5-N-EtFOSAA	589.3 > 419	3.69e3	2.38e4	0.116	0.018	4.12	4.08	1.94	945	67.3	
5	33	13C2-PFUnA	565 > 519.8	1.84e4	2.38e4	0.116	1.129	4.17	4.15	9.66	74.0	68.5	
6	34	13C2-PFDoA	615 > 569.7	1.64e3	2.38e4	0.116	0.116	4.34	4.31	0.862	64.2	59.4	
7	35	13C2-PFTeDA	714.8 > 669.6	2.94e3	2.38e4	0.116	0.762	4.68	4.66	1.54	17.5	16.2	H
8	37	13C5-PFHxA	318 > 272.9	3.43e4	3.43e4	0.116	1.000	3.19	3.16	5.00	43.2	100.0	
9	38	13C3-PFHxS	401.9 > 79.9	5.95e3	5.95e3	0.116	1.000	3.56	3.50	12.5	108	100.0	
10	39	13C8-PFOA	421.3 > 376	3.00e4	3.00e4	0.116	1.000	3.65	3.64	12.5	108	100.0	
11	40	13C9-PFNA	472.2 > 426.9	2.95e4	2.95e4	0.116	1.000	3.83	3.81	12.5	108	100.0	
12	41	13C4-PFOS	503 > 79.9	4.26e3	4.26e3	0.116	1.000	3.89	3.87	12.5	108	100.0	
13	42	13C6-PFDA	519.1 > 473.7	2.71e4	2.71e4	0.116	1.000	4.01	3.99	12.5	108	100.0	
14	43	13C7-PFUnA	570.1 > 524.8	2.38e4	2.38e4	0.116	1.000	4.17	4.15	12.5	108	100.0	
15	44	Total PFBS	299 > 79.7	1.16e4	3.10e3	0.116		2.96		46.6	217		
16	45	Total PFHxS	398.9 > 79.6	4.16e4	2.41e3	0.116		3.52		216	1120		
17	46	Total PFOA	413 > 368.7	4.08e4	3.01e4	0.116		3.65		16.9	148		
18	47	Total PFOS	499 > 79.9	1.68e5	3.96e3	0.116		3.89		531	4860		
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	4.08e3	0.116		4.03		0.000			
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	3.69e3	0.116		4.17		0.000			

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-56.qld

Last Altered: Thursday, August 17, 2017 10:11:09 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:11:43 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: 170731M1_56, Date: 31-Jul-2017, Time: 22:08:37, ID: 1700920-08 MH-C94-20170720 0.11568, Description: MH-C94-20170720

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.92	11364.089	3102.945	45.779	bb	213.0
2	44	Total PFBS	299 > 79.7	2.79	208.890	3102.945	0.841	bb	3.9

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	41636.668	2405.231	216.386	MM	1122.2

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	46	Total PFOA	413 > 368.7	3.58	2662.018	30120.273	1.105	bd	8.8
2	7	PFOA	413 > 368.7	3.64	38153.273	30120.273	15.834	db	139.7

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.87	168270.188	3962.337	530.843	bb	4855.4

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			4081.408		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419			3694.102		MM-I	

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Rev'd: MM 8/17/17

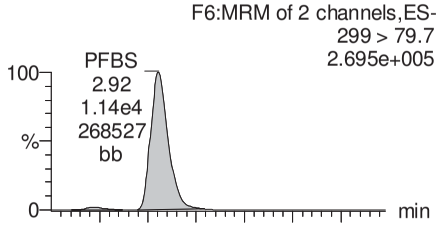
Dataset: U:\Q4.PRO\results\170731M1\170731M1-56.qld

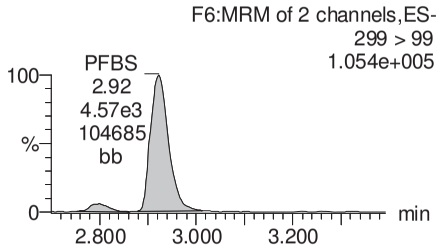
Last Altered: Thursday, August 17, 2017 10:11:09 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:11:43 Pacific Daylight Time

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: 170731M1_56, Date: 31-Jul-2017, Time: 22:08:37, ID: 1700920-08 MH-C94-20170720 0.11568, Description: MH-C94-20170720

Total PFBS





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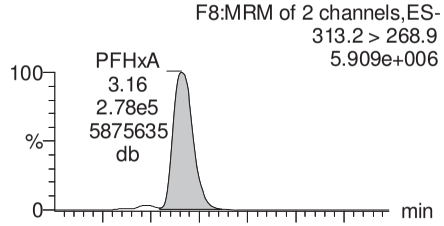

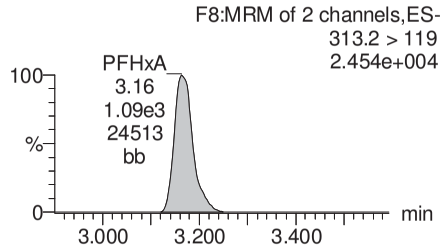

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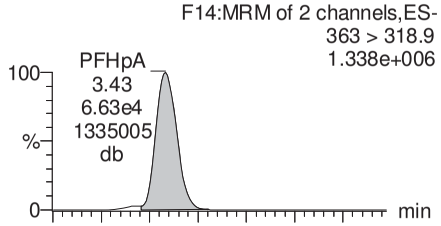
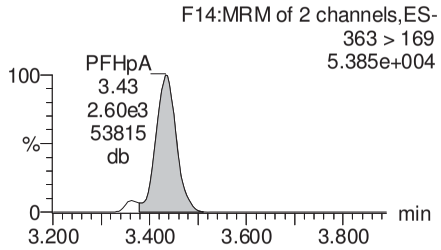
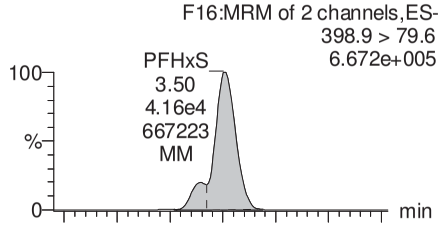
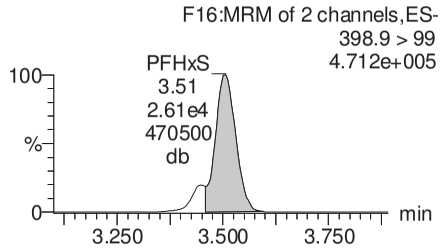


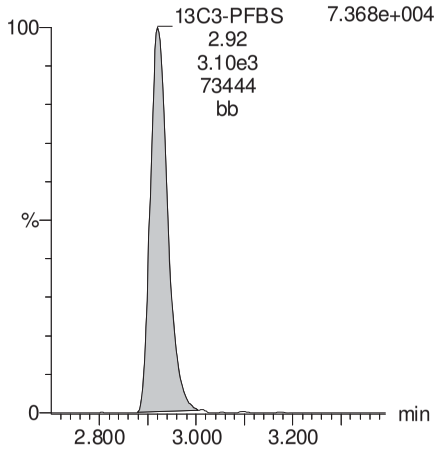


Total PFHxS

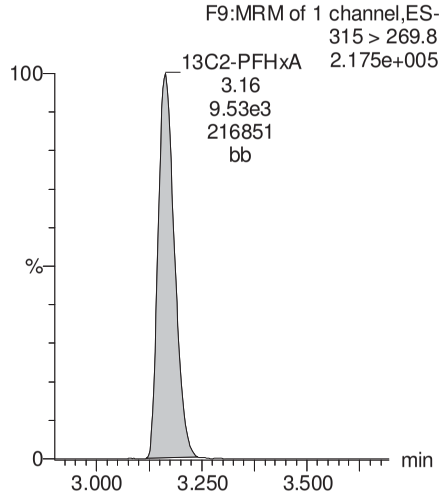




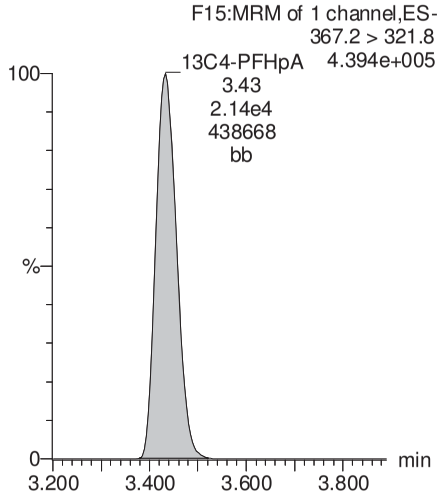
13C3-PFBS



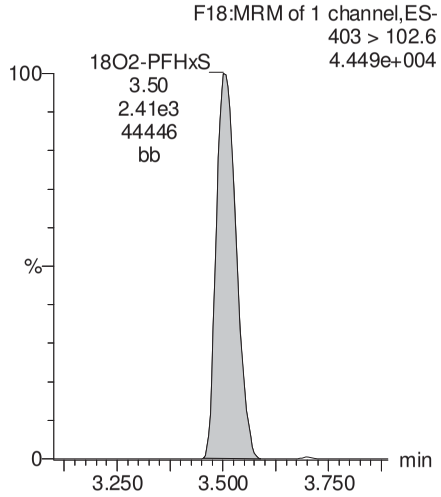
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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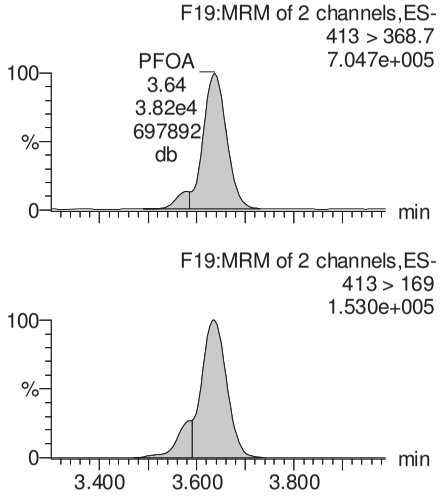
Dataset: U:\Q4.PRO\results\170731M1\170731M1-56.qld

Last Altered: Thursday, August 17, 2017 10:11:09 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:11:43 Pacific Daylight Time

Name: 170731M1_56, Date: 31-Jul-2017, Time: 22:08:37, ID: 1700920-08 MH-C94-20170720 0.11568, Description: MH-C94-20170720

Total PFOA



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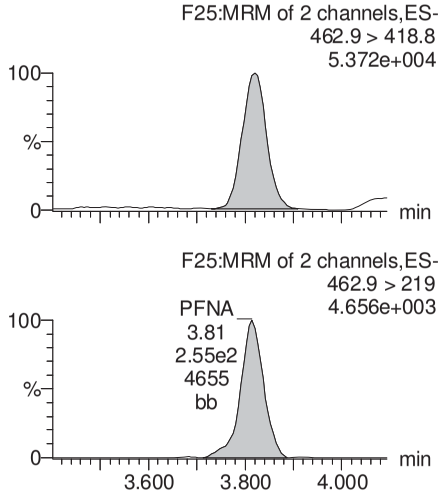
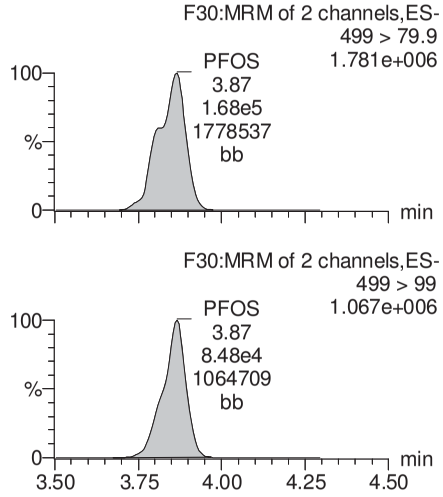
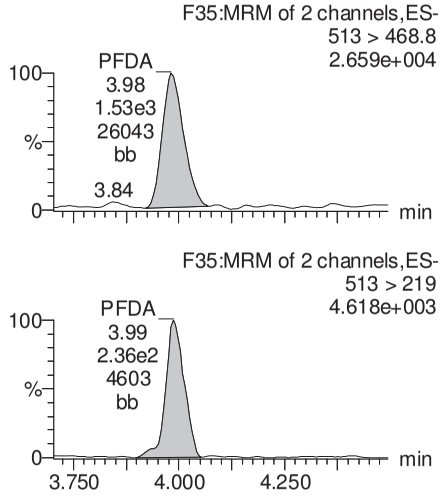


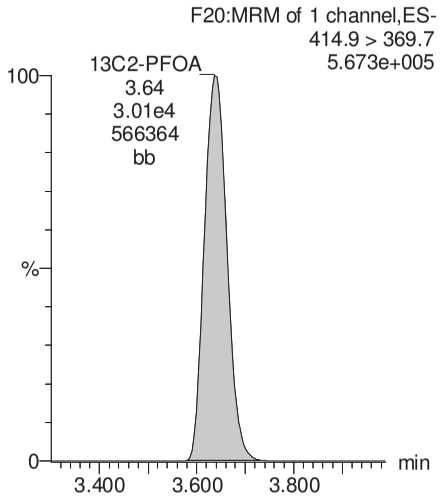
Total PFOS



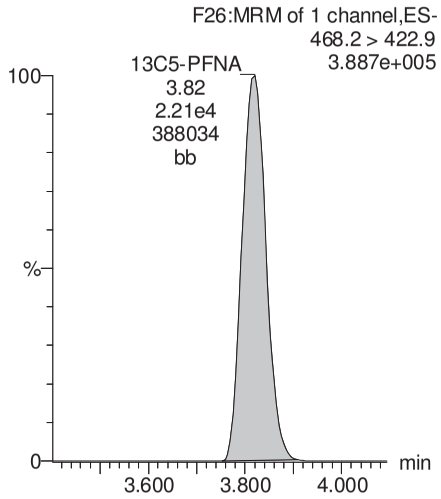
PFDA



13C2-PFOA



13C5-PFNA



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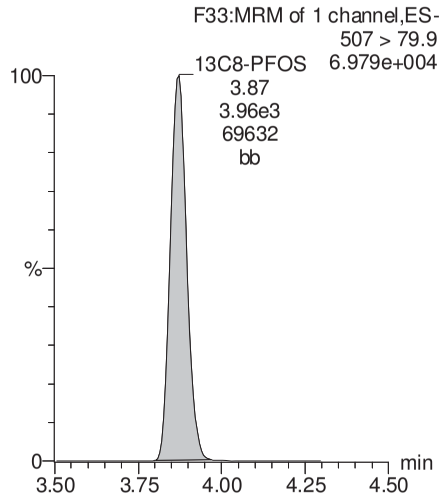

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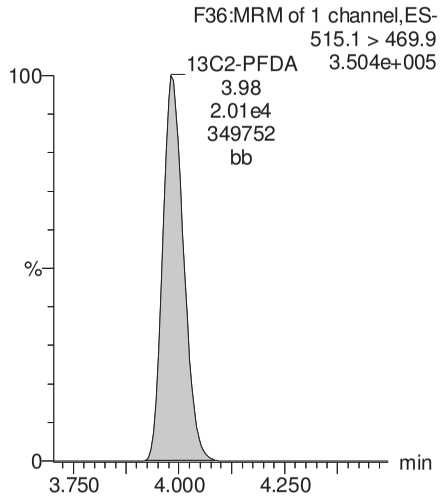


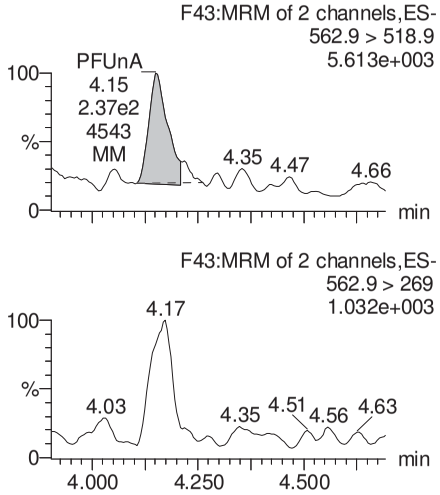
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-56.qld

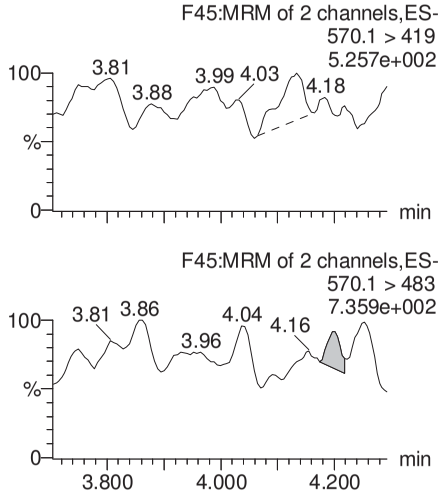
Last Altered: Thursday, August 17, 2017 10:11:09 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:11:43 Pacific Daylight Time

Name: 170731M1_56, Date: 31-Jul-2017, Time: 22:08:37, ID: 1700920-08 MH-C94-20170720 0.11568, Description: MH-C94-20170720

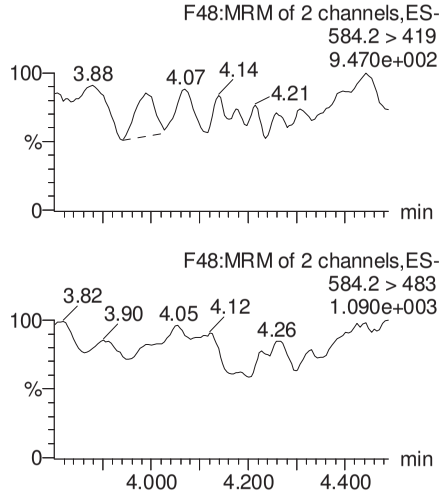
PFUnA



N-MeFOSAA



N-EtFOSAA



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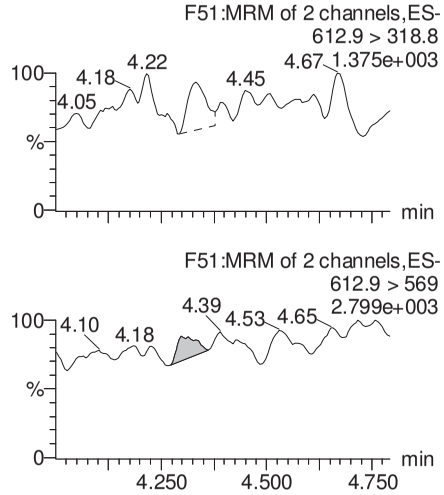

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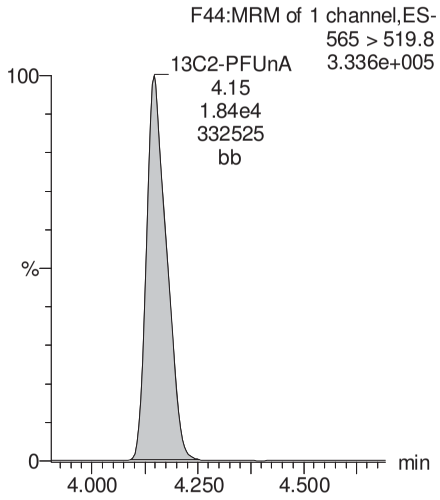

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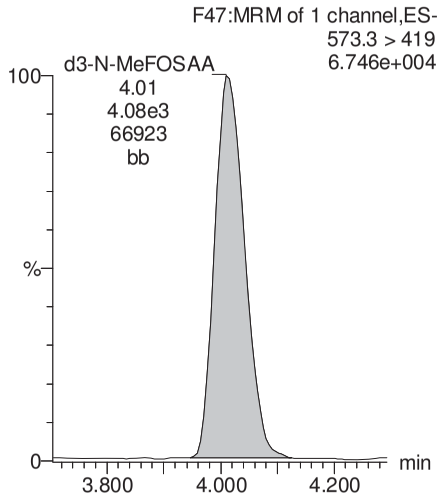
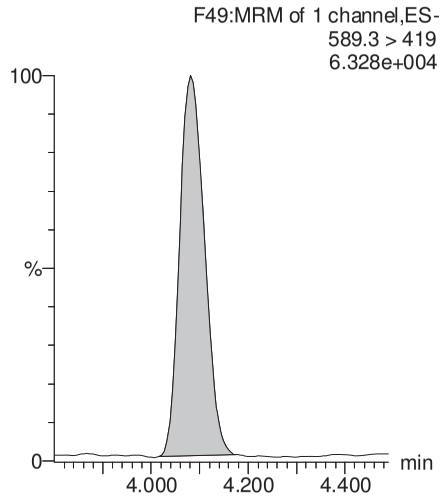
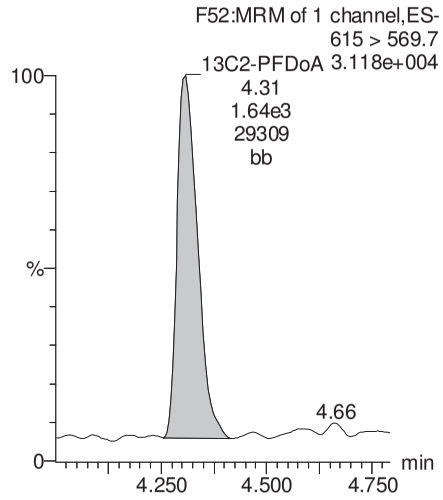


d5-N-EtFOSAA



13C2-PFDoA



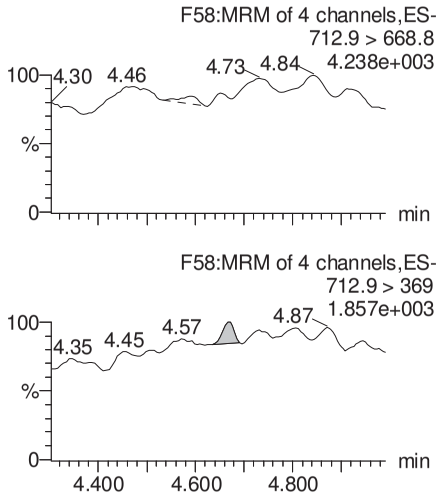
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-56.qld

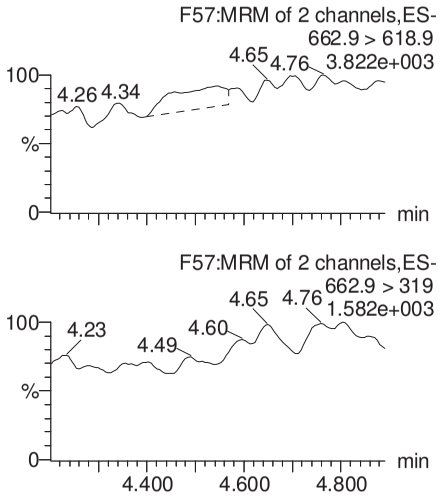
Last Altered: Thursday, August 17, 2017 10:11:09 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:11:43 Pacific Daylight Time

Name: 170731M1_56, Date: 31-Jul-2017, Time: 22:08:37, ID: 1700920-08 MH-C94-20170720 0.11568, Description: MH-C94-20170720

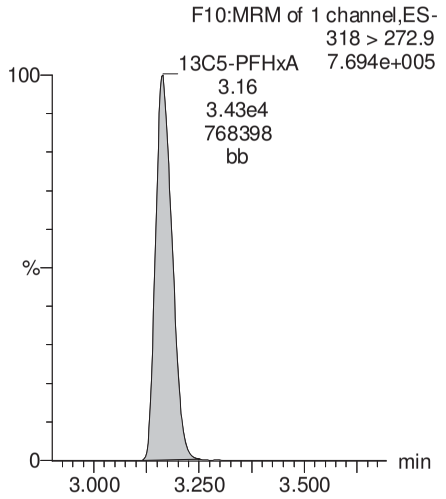
PFTeDA



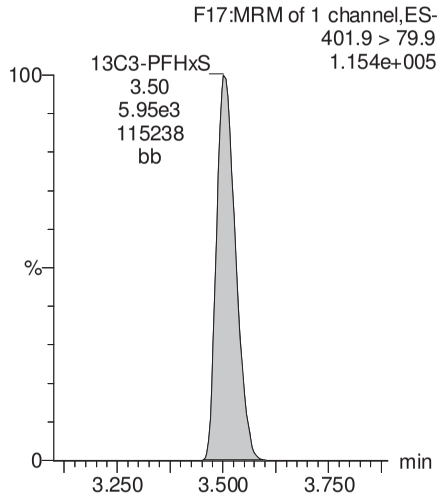
PFTrDA



13C5-PFHxA



13C3-PFHxS



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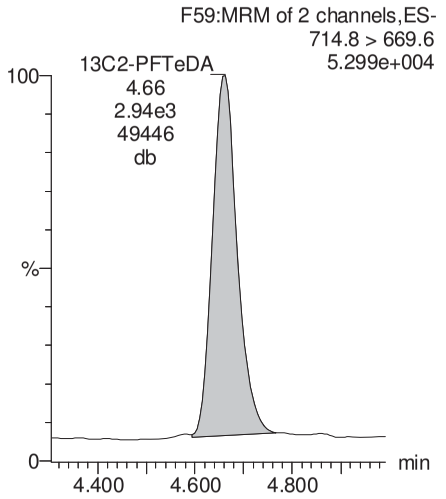

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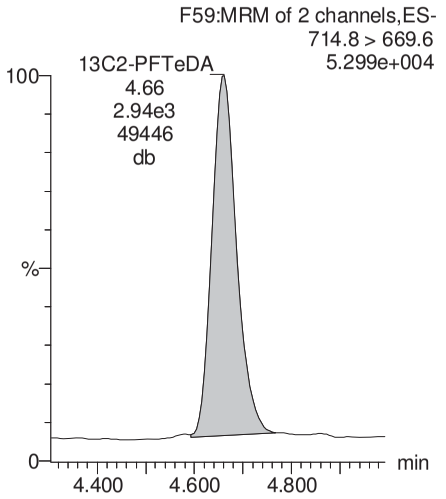
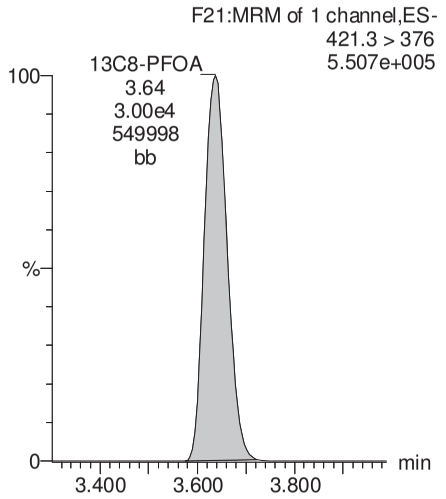
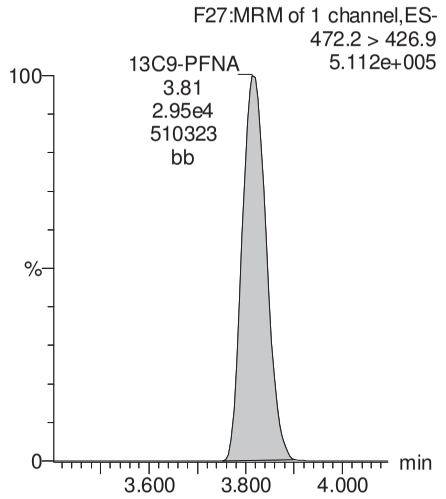


13C8-PFOA



13C9-PFNA



GM 8/17/17

Vista Analytical Laboratory

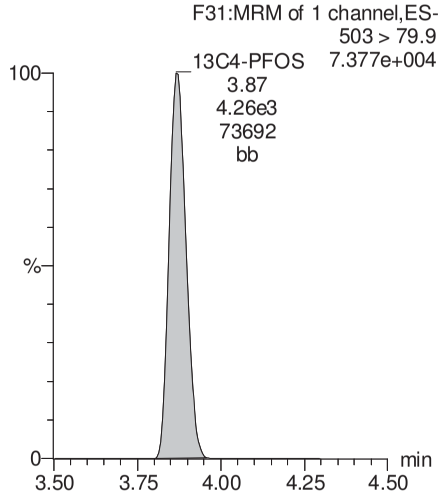
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-56.qld

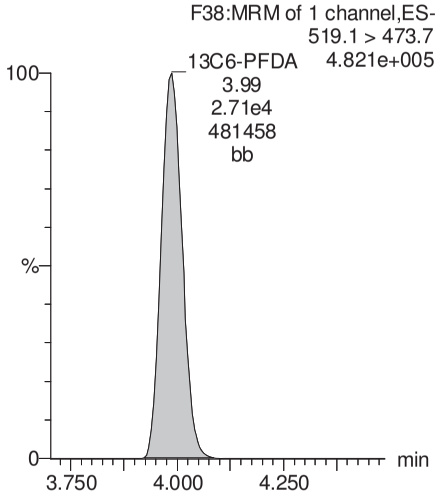
Last Altered: Thursday, August 17, 2017 10:11:09 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:11:43 Pacific Daylight Time

Name: 170731M1_56, Date: 31-Jul-2017, Time: 22:08:37, ID: 1700920-08 MH-C94-20170720 0.11568, Description: MH-C94-20170720

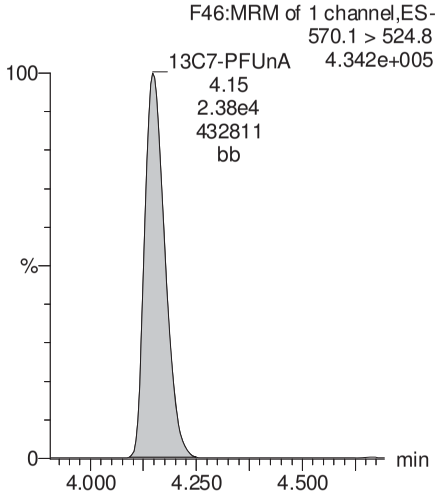
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/17/17

Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-52.qld

Last Altered: Friday, August 11, 2017 13:30:12 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:30:40 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_52, Date: 01-Aug-2017, Time: 18:54:40, ID: 1700920-08@5X MH-C94-20170720 0.11568, Description: MH-C94-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	12	PFOS	499 > 79.9	4.41e4	9.90e2	0.1157		3.89	3.88	557	4140	
2	38	13C8-PFOS	507 > 79.9	9.90e2	1.26e3	0.1157	1.153	3.89	3.88	9.86	73.9	68.4
3	56	13C4-PFOS	503 > 79.9	1.26e3	1.26e3	0.1157	1.000	3.89	3.88	12.5	108	100.0
4	62	Total PFOS	499 > 79.9	4.41e4	9.90e2	0.1157		3.89		557	4140	

AP 8/11/17

Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-52.qld

Last Altered: Friday, August 11, 2017 13:30:12 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:30:40 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_52, Date: 01-Aug-2017, Time: 18:54:40, ID: 1700920-08@5X MH-C94-20170720 0.11568, Description: MH-C94-20170720

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.93	2268.014	648.599	43.710	bb	200.2

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.51	8222.667	497.454	206.619	db	1062.6

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.65	8906.276	6504.916	17.115	bb	153.8

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.88	44145.918	989.932	557.436	MM	4135.8

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									

AP 8/11/17

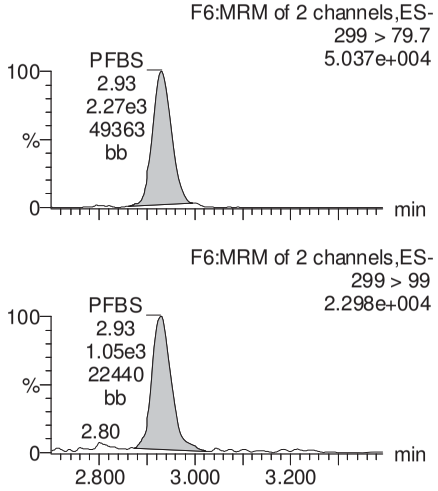
Dataset: U:\Q4.PRO\results\170801M1\170801M1-52.qld

Last Altered: Friday, August 11, 2017 13:30:12 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:30:40 Pacific Daylight Time

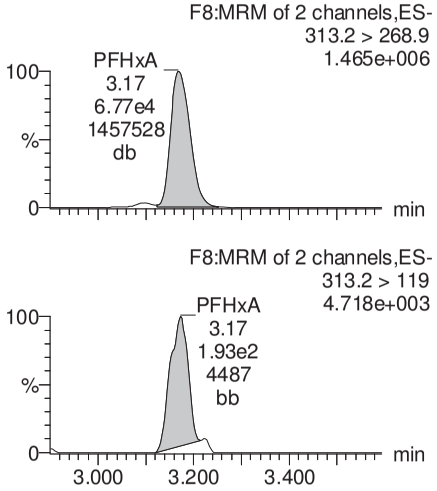
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_52, Date: 01-Aug-2017, Time: 18:54:40, ID: 1700920-08@5X MH-C94-20170720 0.11568, Description: MH-C94-20170720

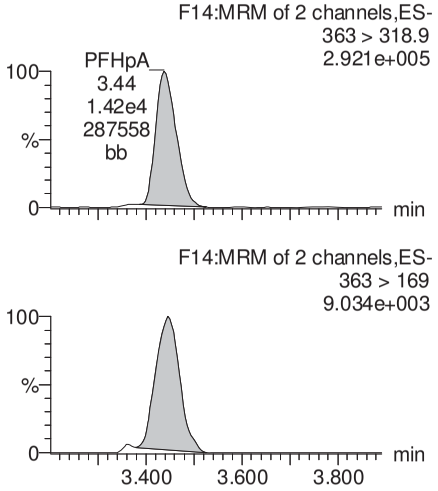
Total PFBS



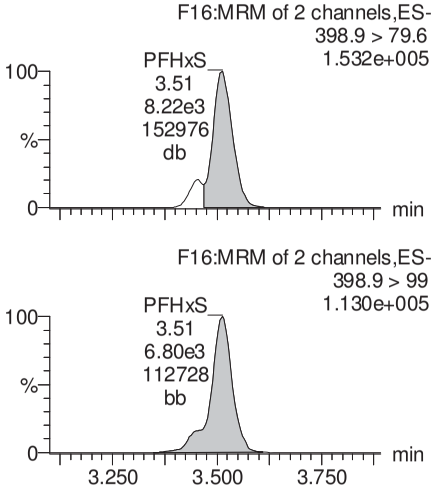
PFHxA



PFHpA



Total PFHxS



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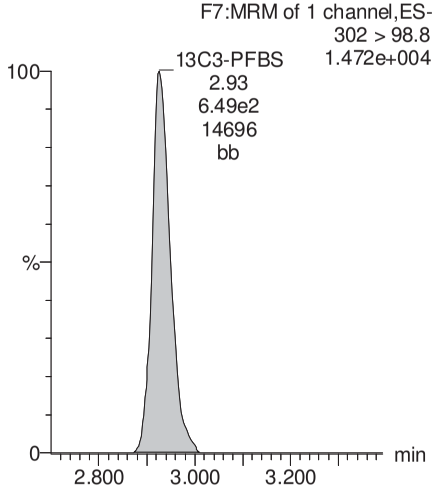

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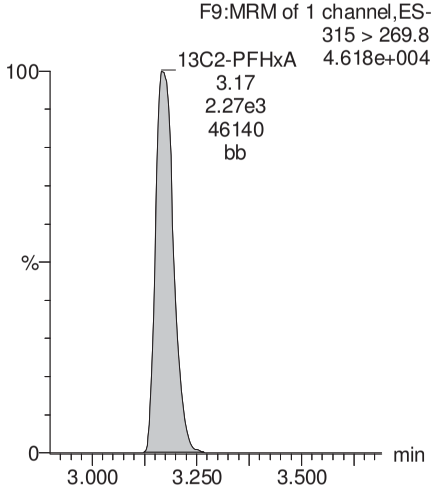
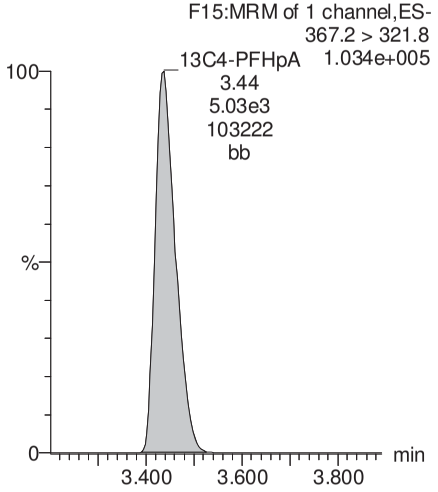


13C4-PFHpA



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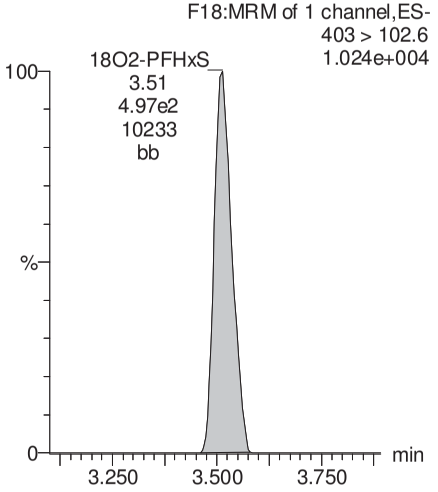


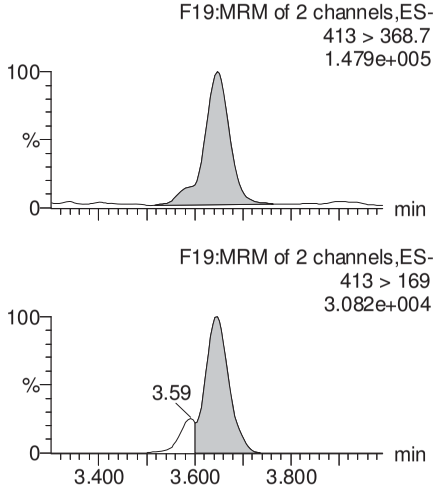
AP 8/11/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-52.qld

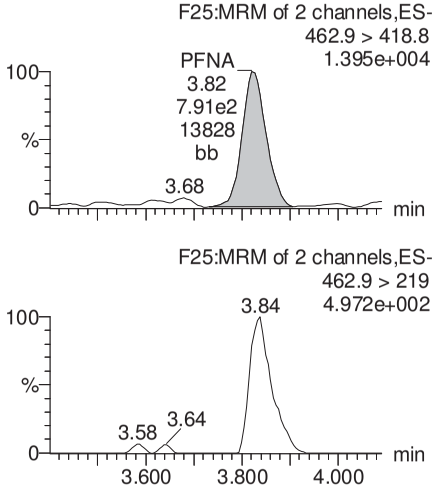
Last Altered: Friday, August 11, 2017 13:30:12 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:30:40 Pacific Daylight Time

Name: 170801M1_52, Date: 01-Aug-2017, Time: 18:54:40, ID: 1700920-08@5X MH-C94-20170720 0.11568, Description: MH-C94-20170720

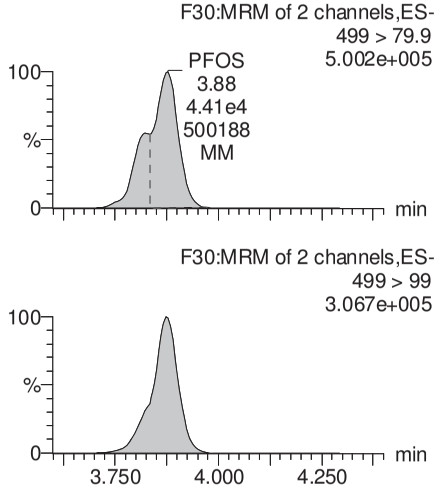
Total PFOA



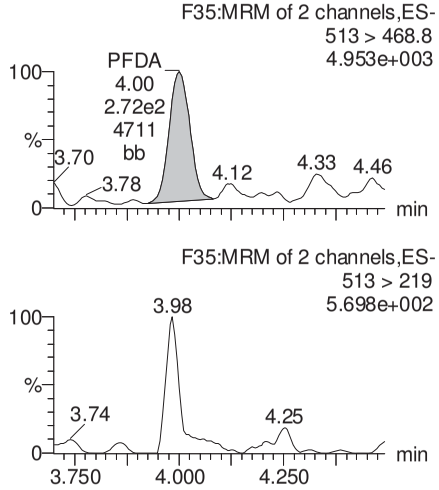
PFNA



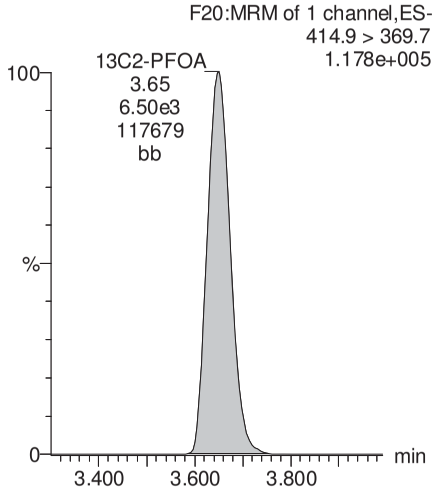
Total PFOS



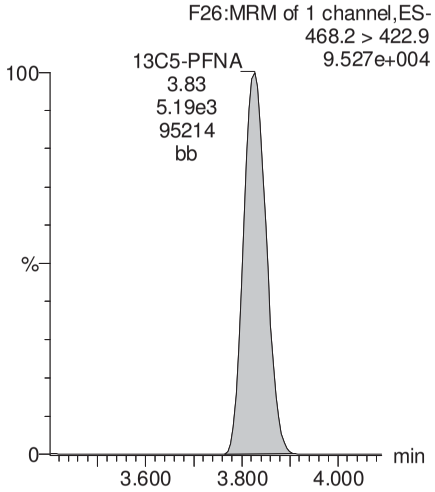
PFDA



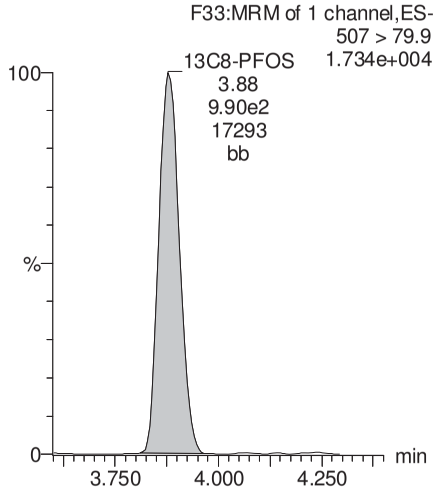
13C2-PFOA



13C5-PFNA



13C8-PFOS



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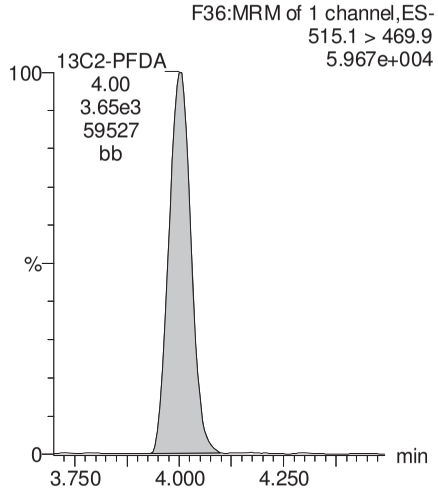

AP 8/11/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-52.qld

Last Altered: Friday, August 11, 2017 13:30:12 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:30:40 Pacific Daylight Time

Name: 170801M1_52, Date: 01-Aug-2017, Time: 18:54:40, ID: 1700920-08@5X MH-C94-20170720 0.11568, Description: MH-C94-20170720

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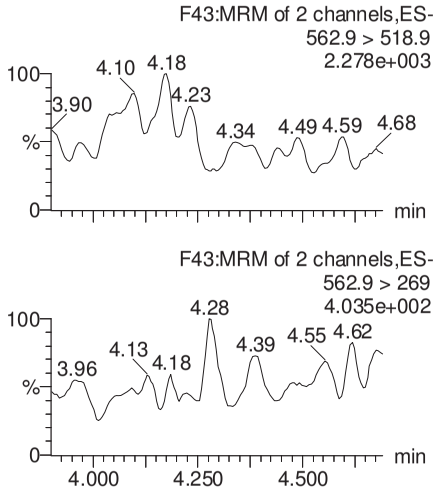
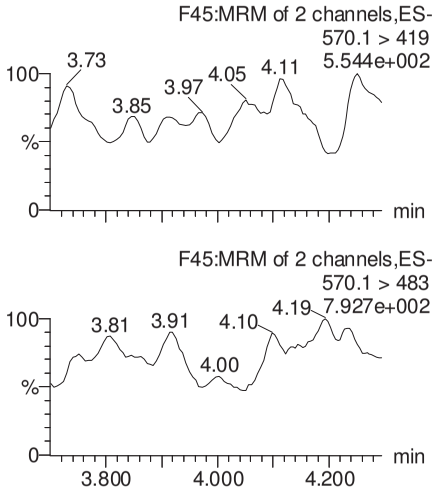


N-MeFOSAA



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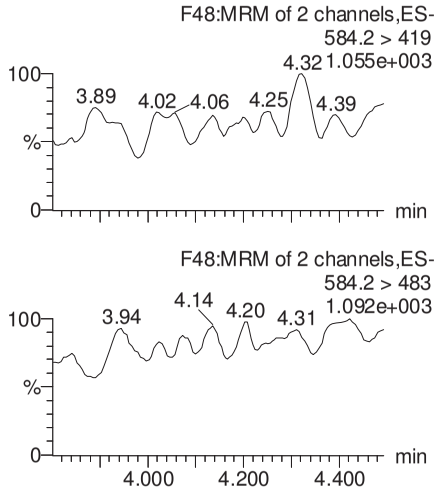
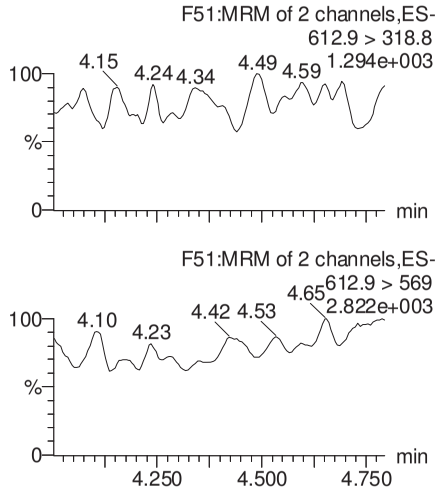
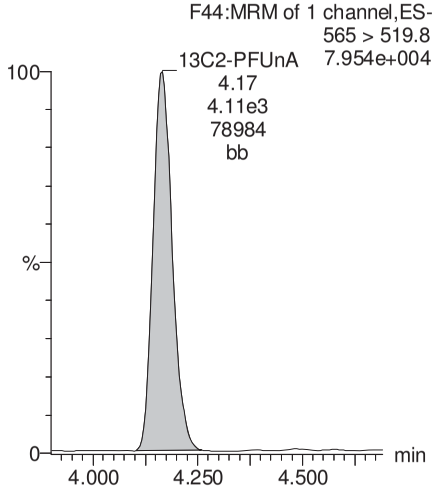


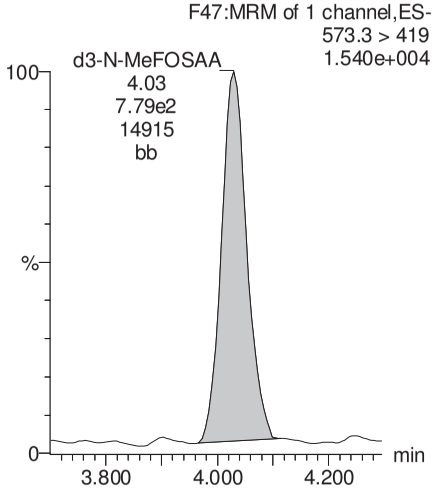
PFDoA



13C2-PFUnA



d3-N-MeFOSAA



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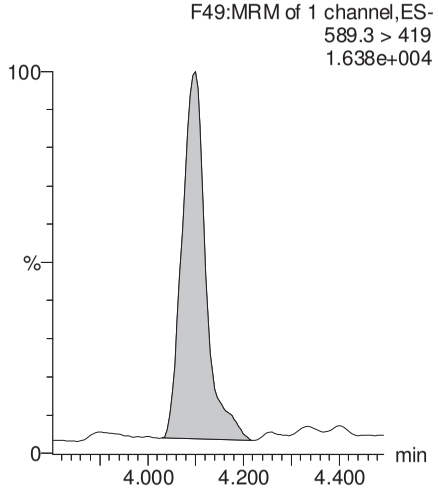

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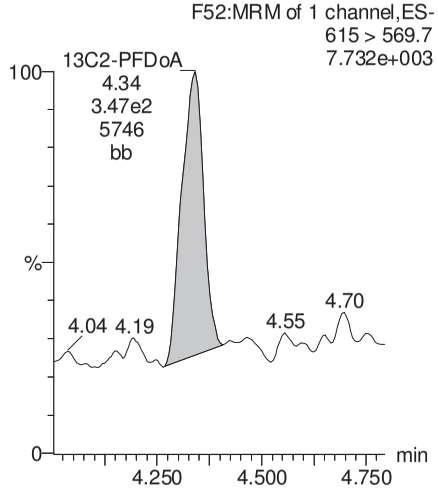

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Vista Analytical Laboratory

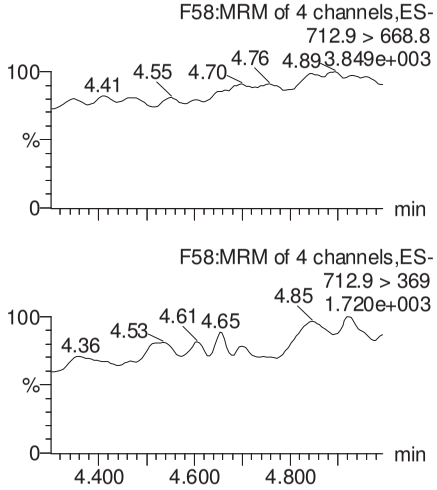
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-52.qld

Last Altered: Friday, August 11, 2017 13:30:12 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:30:40 Pacific Daylight Time

Name: 170801M1_52, Date: 01-Aug-2017, Time: 18:54:40, ID: 1700920-08@5X MH-C94-20170720 0.11568, Description: MH-C94-20170720

PFTeDA



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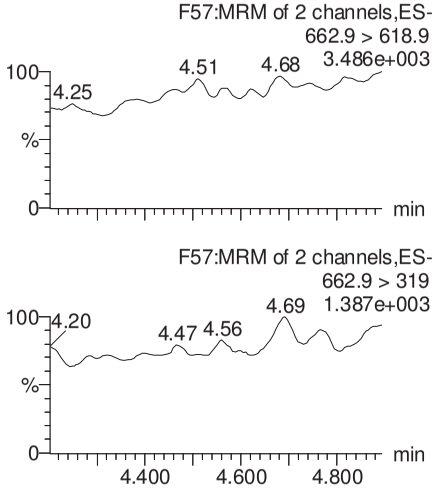
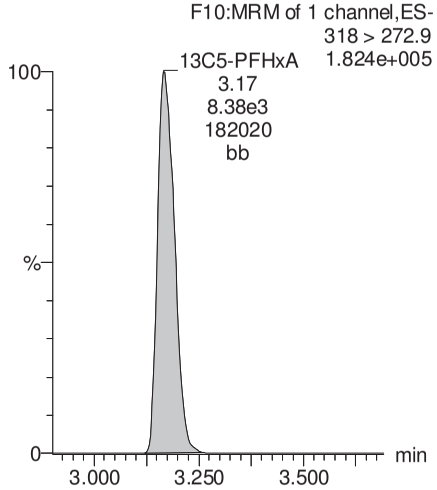
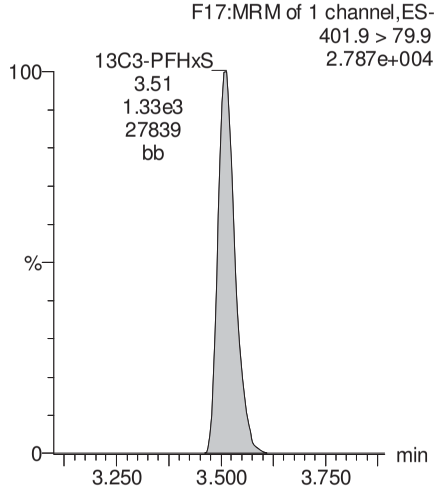


13C5-PFHxA



13C3-PFHxS



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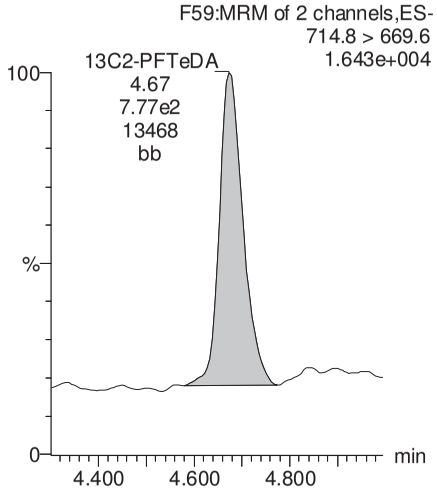

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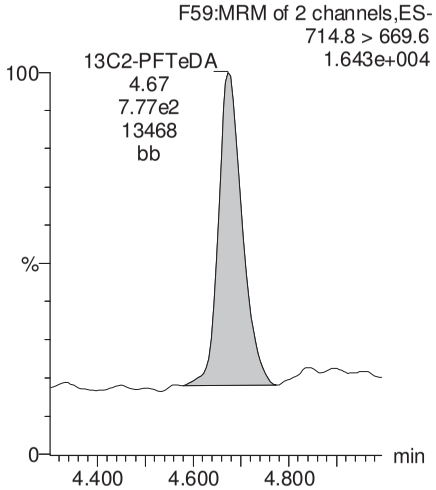
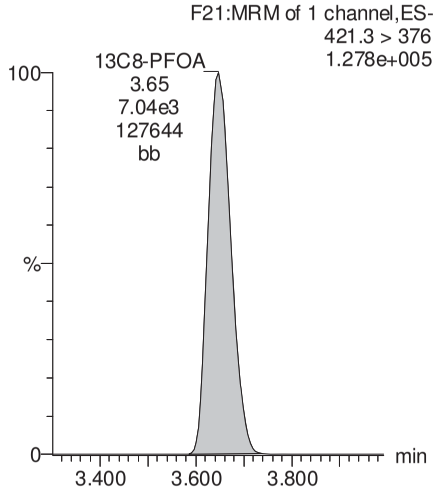
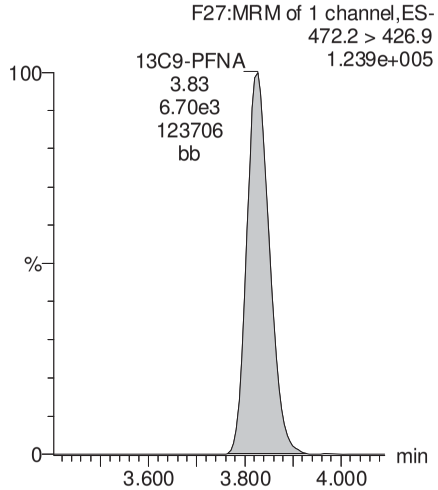


13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

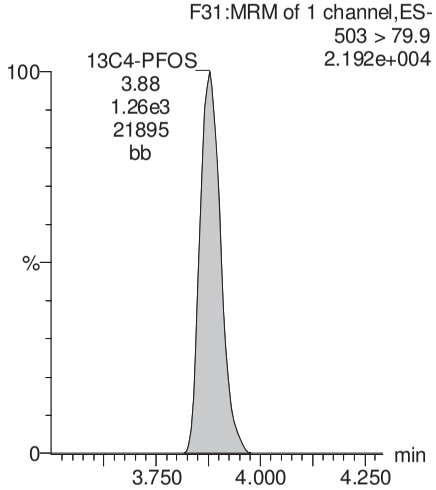
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-52.qld

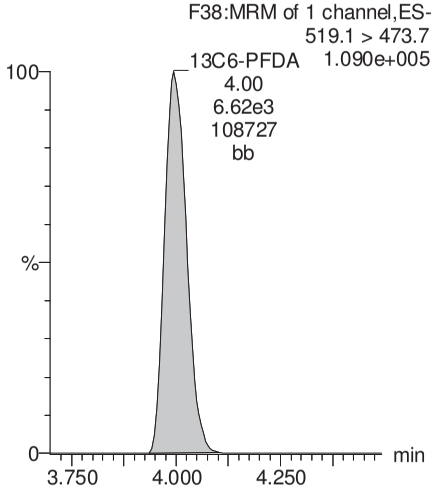
Last Altered: Friday, August 11, 2017 13:30:12 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:30:40 Pacific Daylight Time

Name: 170801M1_52, Date: 01-Aug-2017, Time: 18:54:40, ID: 1700920-08@5X MH-C94-20170720 0.11568, Description: MH-C94-20170720

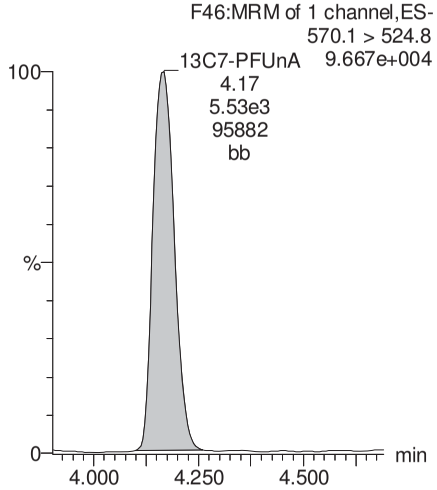
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-57.qld

Last Altered: Thursday, August 17, 2017 10:14:33 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:14:51 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: 170731M1_57, Date: 31-Jul-2017, Time: 22:19:21, ID: 1700920-09 RCDM-MW-13S-20170719 0.11866, Description: RCDM-MW-13S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	3.10e3	3.16e3	0.119		2.96	2.92	12.3	55.8	
2	4	PFHxA	313.2 > 268.9	7.19e4	9.07e3	0.119		3.19	3.16	39.6	239	
3	5	PFHpA	363 > 318.9	1.47e4	2.08e4	0.119		3.45	3.43	8.82	62.6	
4	6	PFHxS	398.9 > 79.6	1.93e4	1.95e3	0.119		3.56	3.50	124	627	
5	7	PFOA	413 > 368.7	1.18e4	2.48e4	0.119		3.65	3.64	5.96	50.6	
6	9	PFNA	462.9 > 418.8	1.61e3	1.97e4	0.119		3.83	3.81	1.02	7.41	
7	11	PFOS	499 > 79.9	6.24e4	3.98e3	0.119		3.89	3.87	196	1700	
8	12	PFDA	513 > 468.8	7.68e2	1.76e4	0.119		4.01	3.99	0.546	2.67	
9	13	N-MeFOSAA	570.1 > 419		4.19e3	0.119		4.03				
10	14	N-EtFOSAA	584.2 > 419		4.23e3	0.119		4.10				
11	15	PFUnA	562.9 > 518.9		1.69e4	0.119		4.11				
12	17	PFDoA	612.9 > 318.8		1.90e3	0.119		4.34				
13	18	PFTrDA	662.9 > 618.9		1.90e3	0.119		4.50				
14	19	PFTeDA	712.9 > 668.8		8.25e3	0.119		4.68				
15	22	13C3-PFBS	302 > 98.8	3.16e3	3.40e4	0.119	0.033	2.96	2.92	0.465	118	112.4
16	23	13C2-PFHxA	315 > 269.8	9.07e3	3.40e4	0.119	0.335	3.19	3.16	1.34	33.6	79.7
17	24	13C4-PFHpA	367.2 > 321.8	2.08e4	3.40e4	0.119	0.369	3.45	3.43	3.06	70.0	66.4
18	25	18O2-PFHxS	403 > 102.6	1.95e3	5.53e3	0.119	0.460	3.56	3.50	4.40	80.6	76.5
19	26	13C2-PFOA	414.9 > 369.7	2.48e4	2.59e4	0.119	1.293	3.65	3.64	12.0	78.2	74.2
20	27	13C5-PFNA	468.2 > 422.9	1.97e4	2.89e4	0.119	0.986	3.83	3.81	8.52	72.9	69.2

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-57.qld

Last Altered: Thursday, August 17, 2017 10:14:33 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:15:00 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
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Name: 170731M1_57, Date: 31-Jul-2017, Time: 22:19:21, ID: 1700920-09 RCDM-MW-13S-20170719 0.11866, Description: RCDM-MW-13S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	29	13C8-PFOS	507 > 79.9	3.98e3	4.55e3	0.119	1.184	3.89	3.87	10.9	77.8	73.9	
2	30	13C2-PFDA	515.1 > 469.9	1.76e4	2.60e4	0.119	0.998	4.01	3.99	8.45	71.4	67.8	
3	31	d3-N-MeFOSAA	573.3 > 419	4.19e3	2.45e4	0.119	0.018	4.03	4.01	2.14	1020	74.4	
4	32	d5-N-EtFOSAA	589.3 > 419	4.23e3	2.45e4	0.119	0.018	4.12	4.08	2.16	1020	74.8	
5	33	13C2-PFUnA	565 > 519.8	1.69e4	2.45e4	0.119	1.129	4.17	4.16	8.61	64.2	61.0	
6	34	13C2-PFDoA	615 > 569.7	1.90e3	2.45e4	0.119	0.116	4.34	4.31	0.971	70.6	67.0	
7	35	13C2-PFTeDA	714.8 > 669.6	8.25e3	2.45e4	0.119	0.762	4.68	4.66	4.21	46.5	44.2	H
8	37	13C5-PFHxA	318 > 272.9	3.40e4	3.40e4	0.119	1.000	3.19	3.16	5.00	42.1	100.0	
9	38	13C3-PFHxS	401.9 > 79.9	5.53e3	5.53e3	0.119	1.000	3.56	3.50	12.5	105	100.0	
10	39	13C8-PFOA	421.3 > 376	2.59e4	2.59e4	0.119	1.000	3.65	3.64	12.5	105	100.0	
11	40	13C9-PFNA	472.2 > 426.9	2.89e4	2.89e4	0.119	1.000	3.83	3.81	12.5	105	100.0	
12	41	13C4-PFOS	503 > 79.9	4.55e3	4.55e3	0.119	1.000	3.89	3.87	12.5	105	100.0	
13	42	13C6-PFDA	519.1 > 473.7	2.60e4	2.60e4	0.119	1.000	4.01	3.99	12.5	105	100.0	
14	43	13C7-PFUnA	570.1 > 524.8	2.45e4	2.45e4	0.119	1.000	4.17	4.16	12.5	105	100.0	
15	44	Total PFBS	299 > 79.7	3.18e3	3.16e3	0.119		2.96		12.6	57.2		
16	45	Total PFHxS	398.9 > 79.6	1.93e4	1.95e3	0.119		3.52		124	627		
17	46	Total PFOA	413 > 368.7	1.25e4	2.48e4	0.119		3.65		6.30	52.5		
18	47	Total PFOS	499 > 79.9	6.24e4	3.98e3	0.119		3.89		196	1700		
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	4.19e3	0.119		4.03		0.000			
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	4.23e3	0.119		4.17		0.000			

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-57.qld

Last Altered: Thursday, August 17, 2017 10:14:33 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:15:00 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: 170731M1_57, Date: 31-Jul-2017, Time: 22:19:21, ID: 1700920-09 RCDM-MW-13S-20170719 0.11866, Description: RCDM-MW-13S-20170719

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.92	3104.409	3155.675	12.297	bb	55.8
2	44	Total PFBS	299 > 79.7	2.79	75.365	3155.675	0.299	MM	1.4

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	19315.707	1947.301	123.990	MM	626.8

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.64	11838.380	24823.967	5.961	db	50.6
2	46	Total PFOA	413 > 368.7	3.58	666.653	24823.967	0.336	bd	1.9

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.87	62383.461	3976.524	196.099	bb	1695.1

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			4189.420		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419			4231.397		MM-I	

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-57.qld

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Printed: Thursday, August 17, 2017 10:15:00 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
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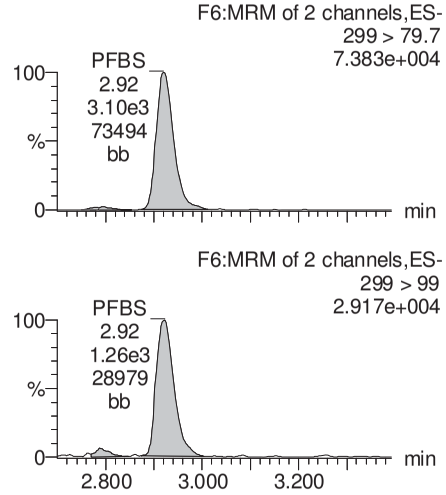
Name: 170731M1_57, Date: 31-Jul-2017, Time: 22:19:21, ID: 1700920-09 RCDM-MW-13S-20170719 0.11866, Description: RCDM-MW-13S-20170719

Total PFBS



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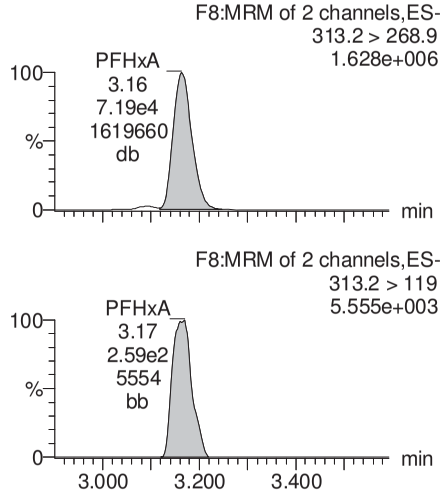

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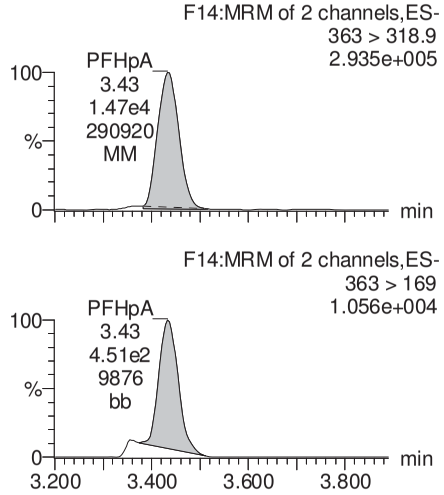
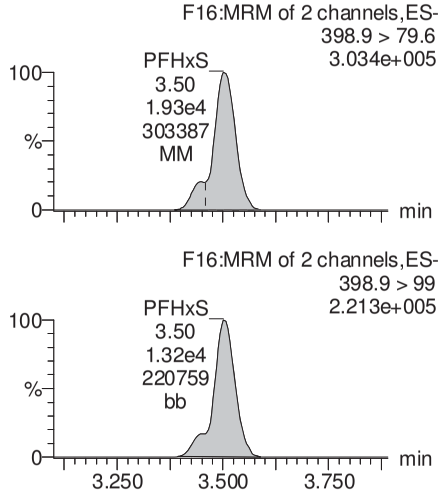


Total PFHxS



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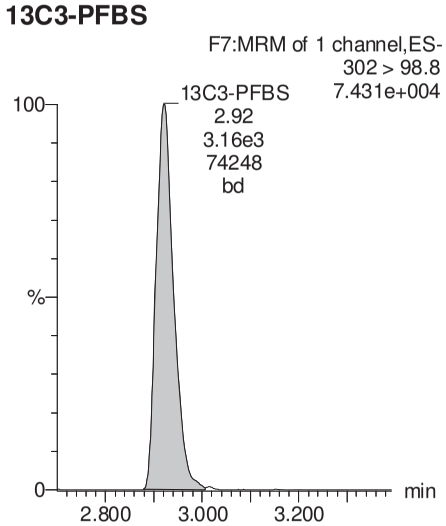
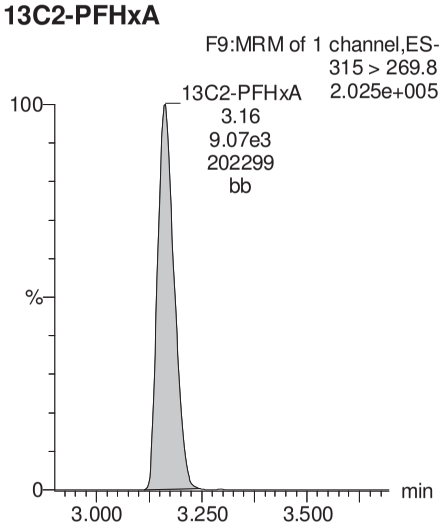
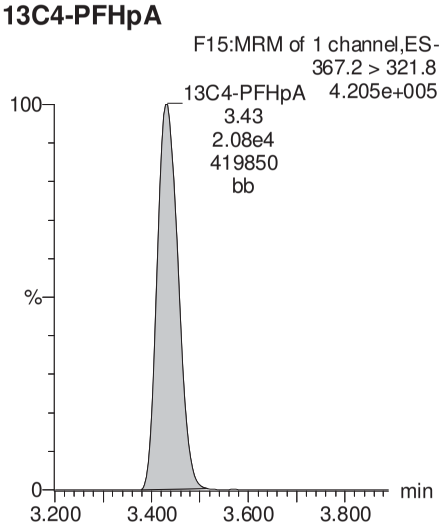


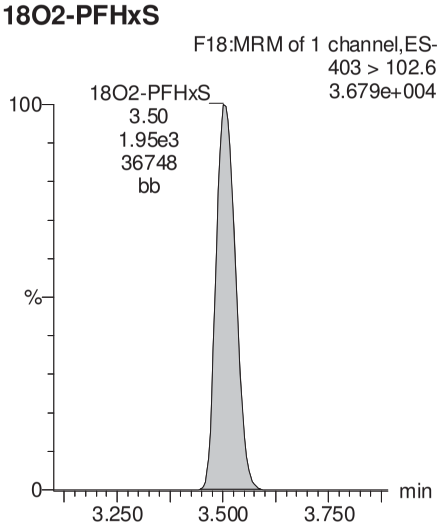
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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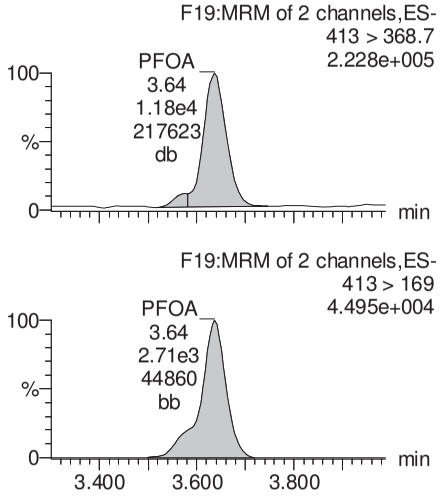
Dataset: U:\Q4.PRO\results\170731M1\170731M1-57.qld

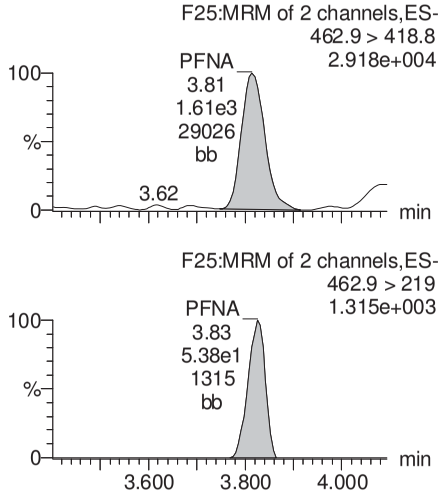
Last Altered: Thursday, August 17, 2017 10:14:33 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:15:00 Pacific Daylight Time

Name: 170731M1_57, Date: 31-Jul-2017, Time: 22:19:21, ID: 1700920-09 RCDM-MW-13S-20170719 0.11866, Description: RCDM-MW-13S-20170719

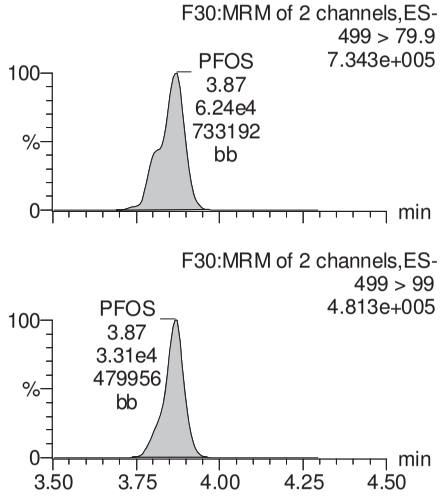
Total PFOA



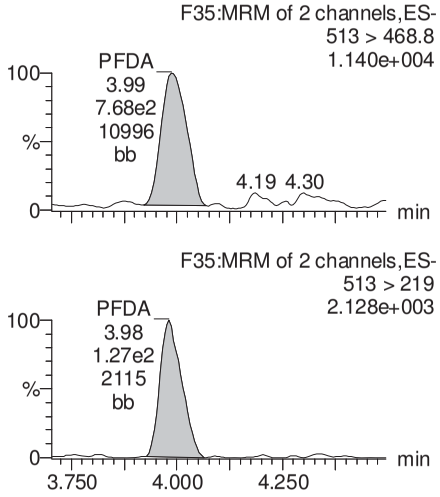
PFNA



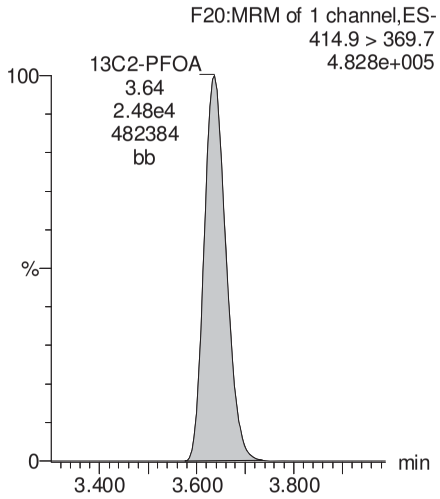
Total PFOS



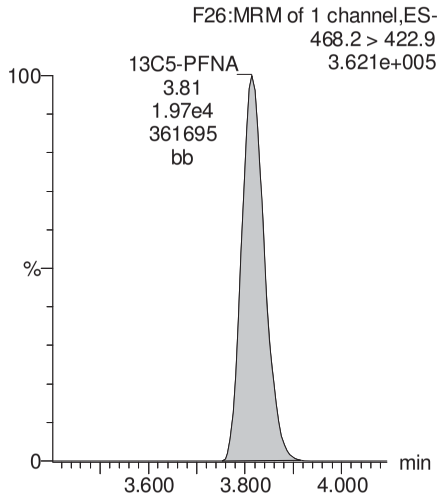
PFDA



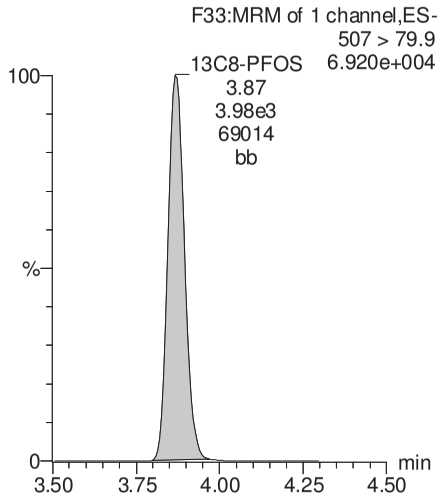
13C2-PFOA



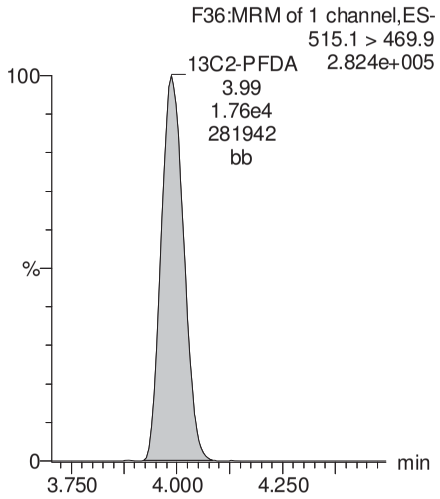
13C5-PFNA



13C8-PFOS



13C2-PFDA



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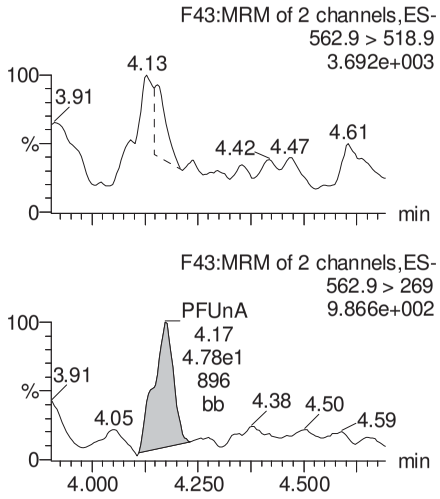
Dataset: U:\Q4.PRO\results\170731M1\170731M1-57.qld

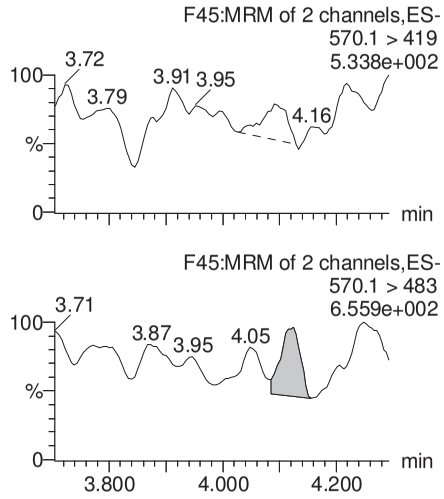
Last Altered: Thursday, August 17, 2017 10:14:33 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:15:00 Pacific Daylight Time

Name: 170731M1_57, Date: 31-Jul-2017, Time: 22:19:21, ID: 1700920-09 RCDM-MW-13S-20170719 0.11866, Description: RCDM-MW-13S-20170719

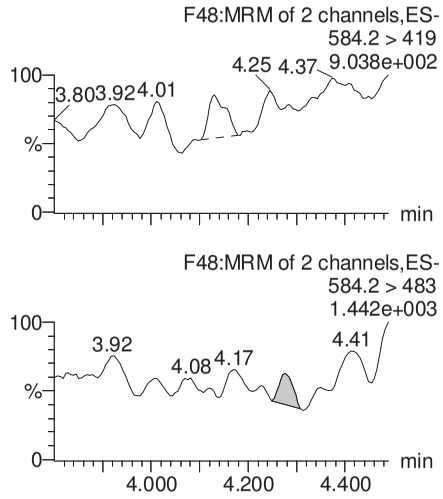
PFUnA



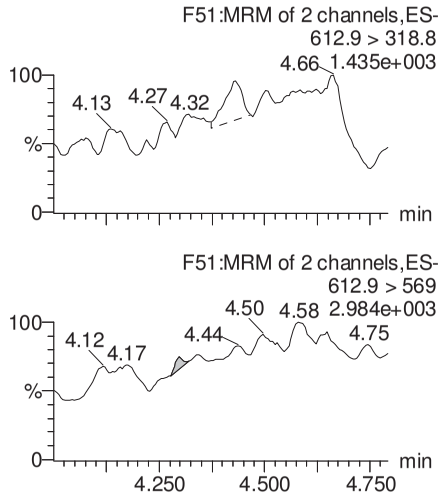
N-MeFOSAA



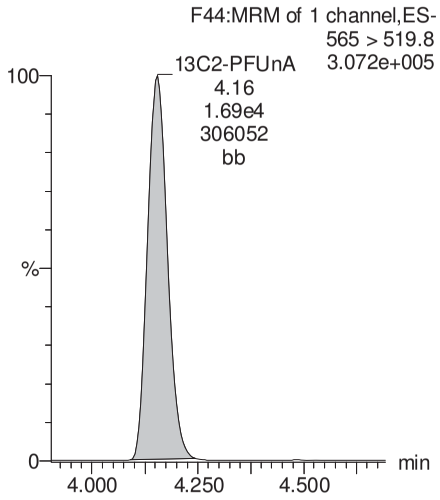
N-EtFOSAA



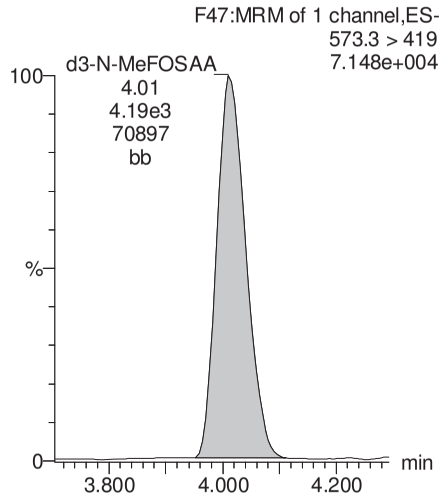
PFDoA



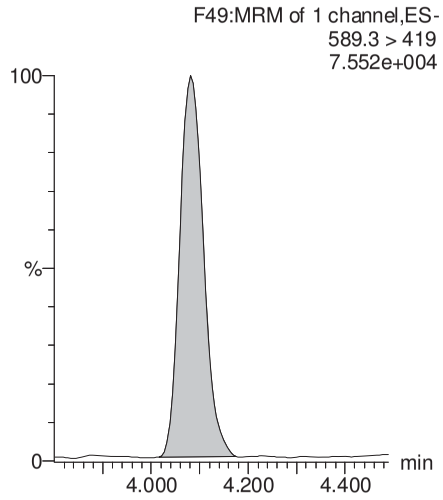
13C2-PFUnA



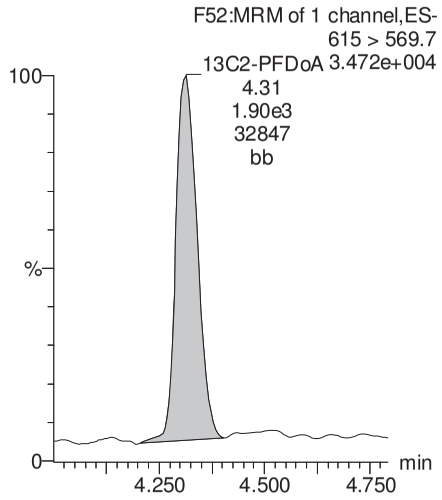
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



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Vista Analytical Laboratory

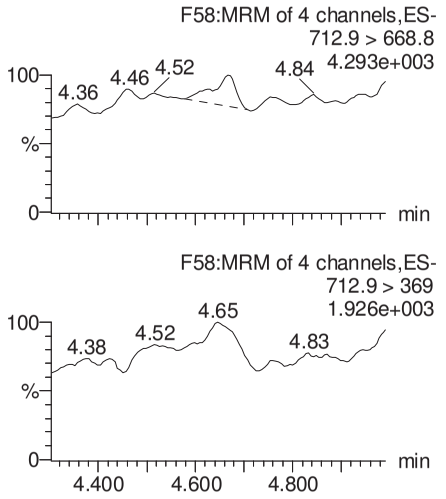
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-57.qld

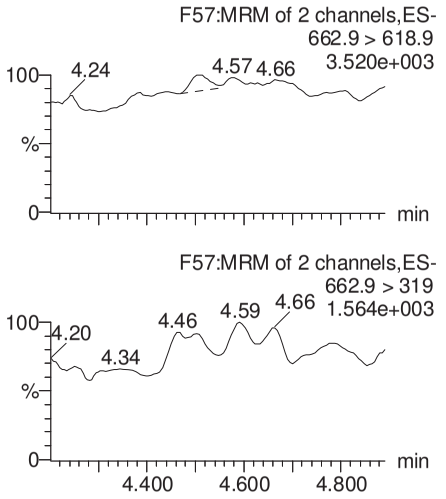
Last Altered: Thursday, August 17, 2017 10:14:33 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:15:00 Pacific Daylight Time

Name: 170731M1_57, Date: 31-Jul-2017, Time: 22:19:21, ID: 1700920-09 RCDM-MW-13S-20170719 0.11866, Description: RCDM-MW-13S-20170719

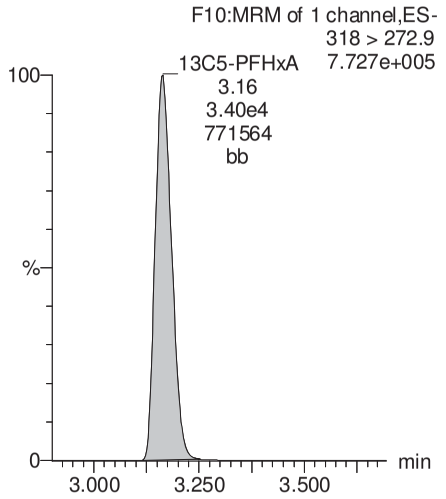
PFTeDA



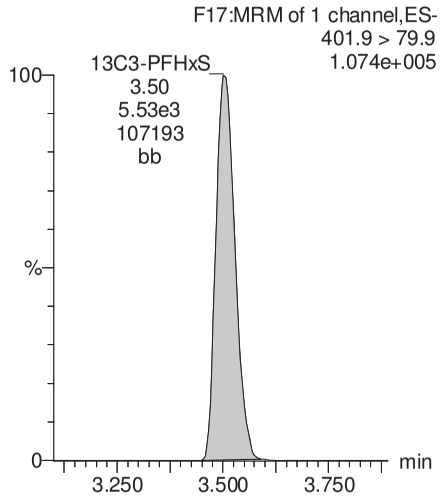
PFTrDA



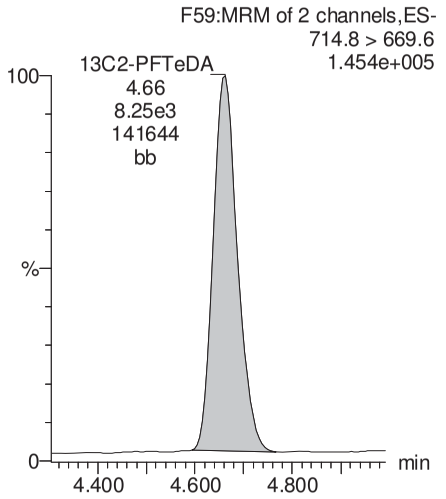
13C5-PFHxA



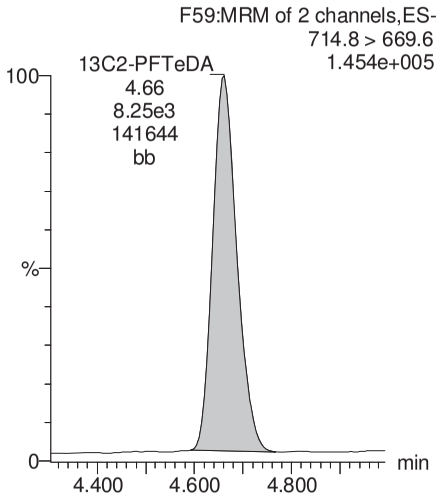
13C3-PFHxS



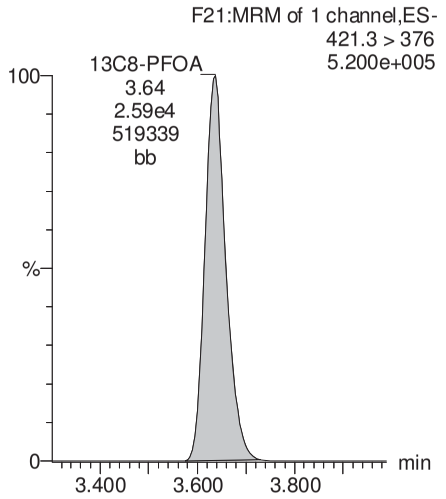
13C2-PFTeDA



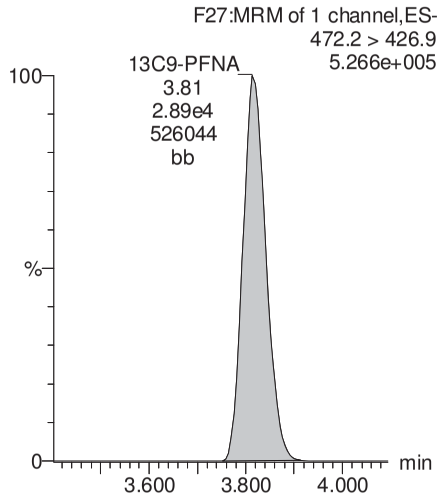
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

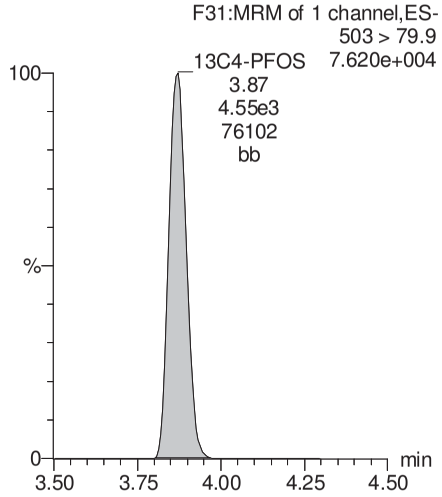
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-57.qld

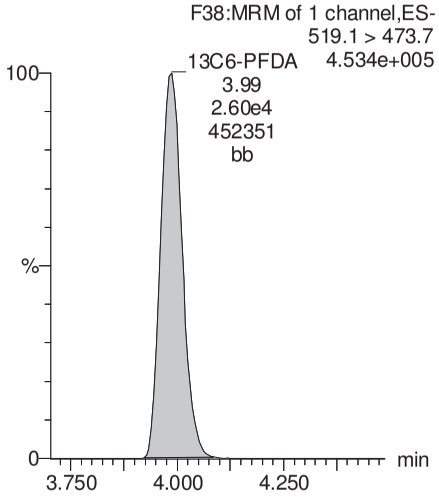
Last Altered: Thursday, August 17, 2017 10:14:33 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:15:00 Pacific Daylight Time

Name: 170731M1_57, Date: 31-Jul-2017, Time: 22:19:21, ID: 1700920-09 RCDM-MW-13S-20170719 0.11866, Description: RCDM-MW-13S-20170719

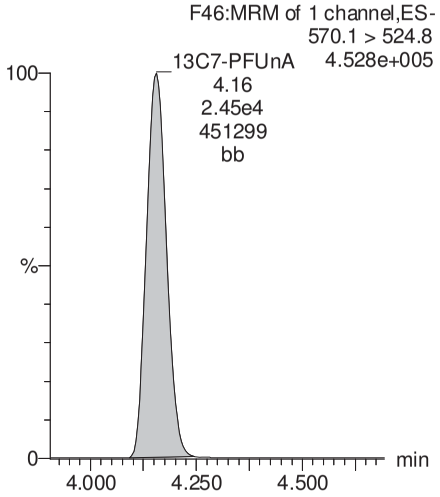
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-58.qld

Last Altered: Thursday, August 17, 2017 10:17:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:18:06 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: 170731M1_58, Date: 31-Jul-2017, Time: 22:30:56, ID: 1700920-10 LF-MW-14S-20170720 0.11481, Description: LF-MW-14S-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	3.20e3	3.70e3	0.115		2.96	2.92	10.8	50.6	
2	4	PFHxA	313.2 > 268.9	7.09e4	1.04e4	0.115		3.19	3.16	34.0	211	
3	5	PFHpA	363 > 318.9	1.27e4	2.35e4	0.115		3.45	3.43	6.76	49.5	
4	6	PFHxS	398.9 > 79.6	1.93e4	2.57e3	0.115		3.56	3.50	93.6	489	
5	7	PFOA	413 > 368.7	1.27e4	3.47e4	0.115		3.65	3.63	4.57	39.8	
6	9	PFNA	462.9 > 418.8	1.83e3	2.56e4	0.115		3.83	3.82	0.893	6.59	
7	11	PFOS	499 > 79.9	6.65e4	6.07e3	0.115		3.89	3.87	137	1220	
8	12	PFDA	513 > 468.8	7.20e2	2.37e4	0.115		4.01	3.99	0.381	1.57	
9	13	N-MeFOSAA	570.1 > 419		4.95e3	0.115		4.03				
10	14	N-EtFOSAA	584.2 > 419		4.67e3	0.115		4.10				
11	15	PFUnA	562.9 > 518.9		2.10e4	0.115		4.11				
12	17	PFDoA	612.9 > 318.8		2.16e3	0.115		4.34				
13	18	PFTrDA	662.9 > 618.9		2.16e3	0.115		4.50				
14	19	PFTeDA	712.9 > 668.8		1.25e4	0.115		4.68				
15	22	13C3-PFBS	302 > 98.8	3.70e3	3.80e4	0.115	0.033	2.96	2.92	0.487	128	117.8
16	23	13C2-PFHxA	315 > 269.8	1.04e4	3.80e4	0.115	0.335	3.19	3.16	1.37	35.7	81.9
17	24	13C4-PFHpA	367.2 > 321.8	2.35e4	3.80e4	0.115	0.369	3.45	3.43	3.09	72.9	67.0
18	25	18O2-PFHxS	403 > 102.6	2.57e3	6.43e3	0.115	0.460	3.56	3.50	5.01	94.8	87.0
19	26	13C2-PFOA	414.9 > 369.7	3.47e4	3.27e4	0.115	1.293	3.65	3.64	13.3	89.4	82.2
20	27	13C5-PFNA	468.2 > 422.9	2.56e4	3.54e4	0.115	0.986	3.83	3.82	9.04	79.9	73.4

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-58.qld

Last Altered: Thursday, August 17, 2017 10:17:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:18:18 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: 170731M1_58, Date: 31-Jul-2017, Time: 22:30:56, ID: 1700920-10 LF-MW-14S-20170720 0.11481, Description: LF-MW-14S-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	29	13C8-PFOS	507 > 79.9	6.07e3	6.24e3	0.115	1.184	3.89	3.87	12.2	89.4	82.1
2	30	13C2-PFDA	515.1 > 469.9	2.37e4	3.65e4	0.115	0.998	4.01	3.98	8.09	70.6	64.9
3	31	d3-N-MeFOSAA	573.3 > 419	4.95e3	3.16e4	0.115	0.018	4.03	4.01	1.96	965	68.1
4	32	d5-N-EtFOSAA	589.3 > 419	4.67e3	3.16e4	0.115	0.018	4.12	4.08	1.85	906	64.0
5	33	13C2-PFUnA	565 > 519.8	2.10e4	3.16e4	0.115	1.129	4.17	4.15	8.30	64.0	58.8
6	34	13C2-PFDoA	615 > 569.7	2.16e3	3.16e4	0.115	0.116	4.34	4.31	0.856	64.3	59.0
7	35	13C2-PFTeDA	714.8 > 669.6	1.25e4	3.16e4	0.115	0.762	4.68	4.66	4.96	56.7	52.1
8	37	13C5-PFHxA	318 > 272.9	3.80e4	3.80e4	0.115	1.000	3.19	3.16	5.00	43.6	100.0
9	38	13C3-PFHxS	401.9 > 79.9	6.43e3	6.43e3	0.115	1.000	3.56	3.50	12.5	109	100.0
10	39	13C8-PFOA	421.3 > 376	3.27e4	3.27e4	0.115	1.000	3.65	3.63	12.5	109	100.0
11	40	13C9-PFNA	472.2 > 426.9	3.54e4	3.54e4	0.115	1.000	3.83	3.82	12.5	109	100.0
12	41	13C4-PFOS	503 > 79.9	6.24e3	6.24e3	0.115	1.000	3.89	3.87	12.5	109	100.0
13	42	13C6-PFDA	519.1 > 473.7	3.65e4	3.65e4	0.115	1.000	4.01	3.98	12.5	109	100.0
14	43	13C7-PFUnA	570.1 > 524.8	3.16e4	3.16e4	0.115	1.000	4.17	4.15	12.5	109	100.0
15	44	Total PFBS	299 > 79.7	3.25e3	3.70e3	0.115		2.96		11.0	51.4	
16	45	Total PFHxS	398.9 > 79.6	1.93e4	2.57e3	0.115		3.52		93.6	489	
17	46	Total PFOA	413 > 368.7	1.33e4	3.47e4	0.115		3.65		4.81	40.9	
18	47	Total PFOS	499 > 79.9	6.65e4	6.07e3	0.115		3.89		137	1220	
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	4.95e3	0.115		4.03		0.000		
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	4.67e3	0.115		4.17		0.000		

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-58.qld

Last Altered: Thursday, August 17, 2017 10:17:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:18:18 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: 170731M1_58, Date: 31-Jul-2017, Time: 22:30:56, ID: 1700920-10 LF-MW-14S-20170720 0.11481, Description: LF-MW-14S-20170720

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.92	3196.959	3700.869	10.798	bb	50.6
2	44	Total PFBS	299 > 79.7	2.80	49.263	3700.869	0.166	bb	0.8

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	19267.322	2574.204	93.560	MM	488.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.63	12682.366	34704.148	4.568	MM	39.8
2	46	Total PFOA	413 > 368.7	3.59	662.808	34704.148	0.239	MM	1.1

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.87	66537.289	6072.096	136.973	bb	1217.3

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			4949.591		MM-	

Total N-EtFOSAA

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

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Rev'd: MM 8/17/17

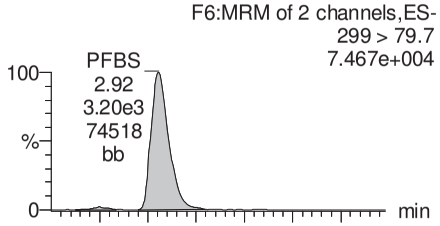
Dataset: U:\Q4.PRO\results\170731M1\170731M1-58.qld

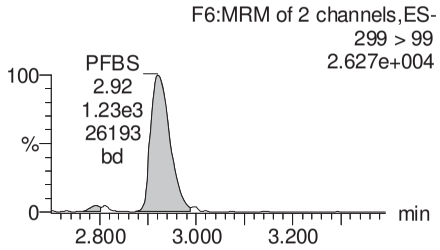
Last Altered: Thursday, August 17, 2017 10:17:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:18:18 Pacific Daylight Time

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

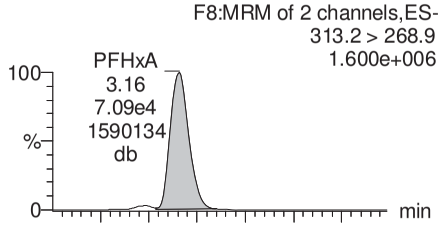
Name: 170731M1_58, Date: 31-Jul-2017, Time: 22:30:56, ID: 1700920-10 LF-MW-14S-20170720 0.11481, Description: LF-MW-14S-20170720

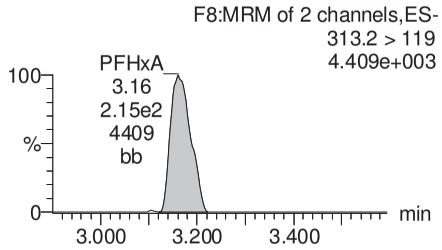
Total PFBS



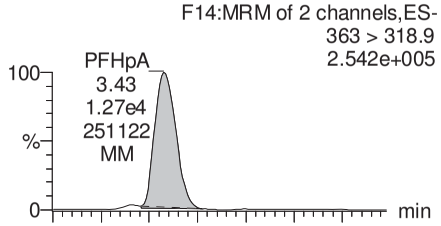


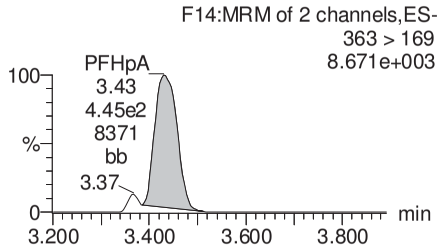
PFHxA



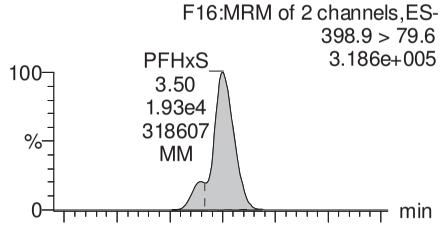


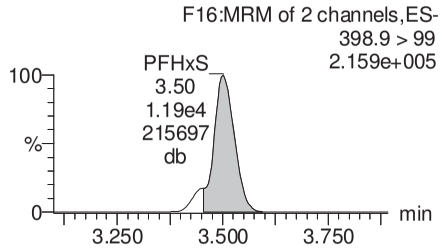
PFHpA



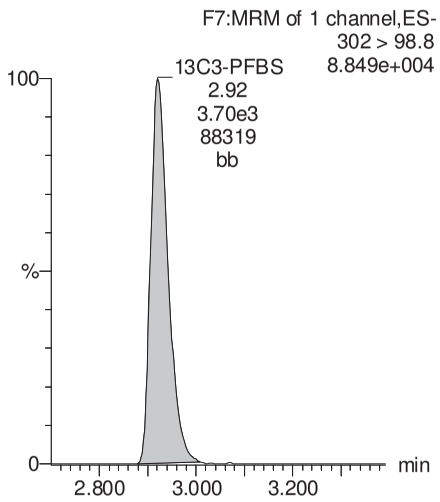


Total PFHxS

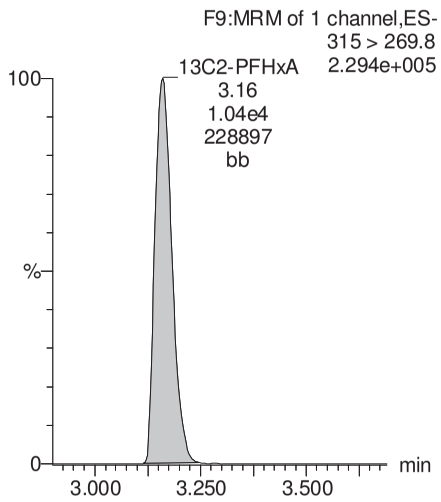




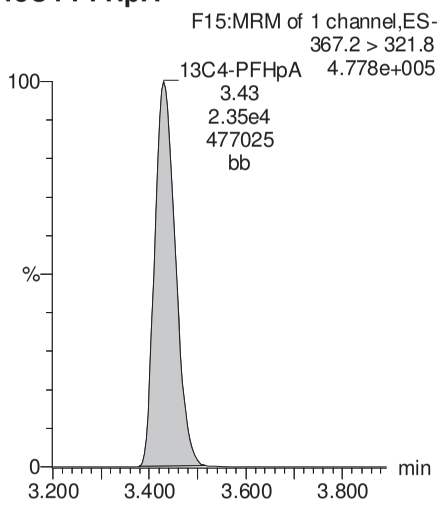
13C3-PFBS



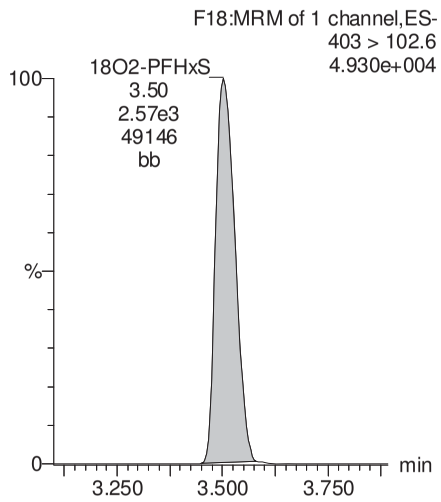
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



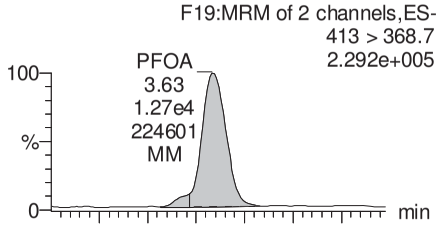
GM 8/17/17

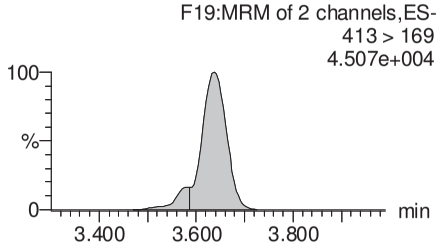
Dataset: U:\Q4.PRO\results\170731M1\170731M1-58.qld

Last Altered: Thursday, August 17, 2017 10:17:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:18:18 Pacific Daylight Time

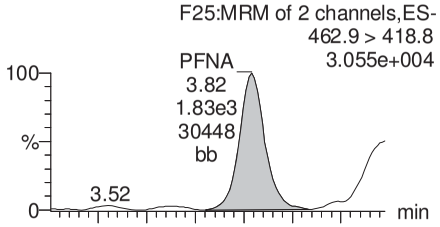
Name: 170731M1_58, Date: 31-Jul-2017, Time: 22:30:56, ID: 1700920-10 LF-MW-14S-20170720 0.11481, Description: LF-MW-14S-20170720

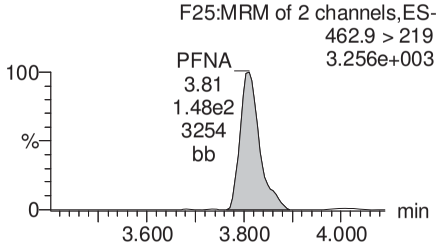
Total PFOA



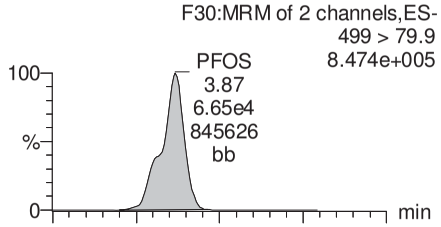


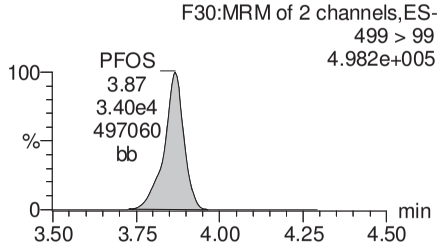
PFNA



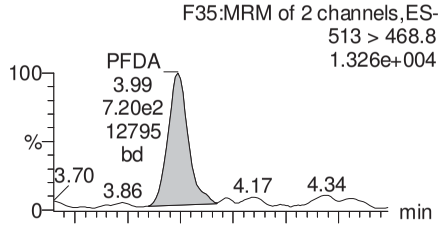


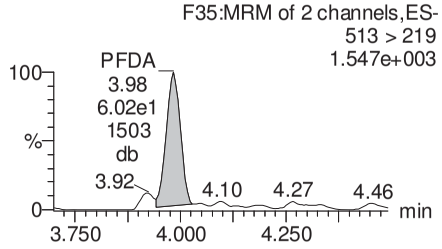
Total PFOS



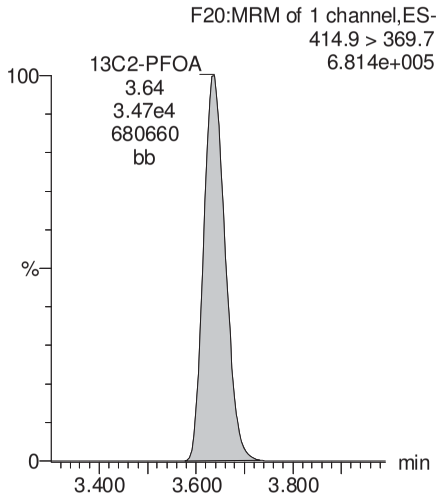


PFDA

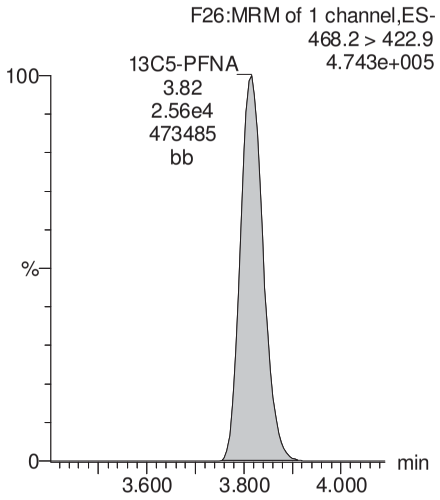




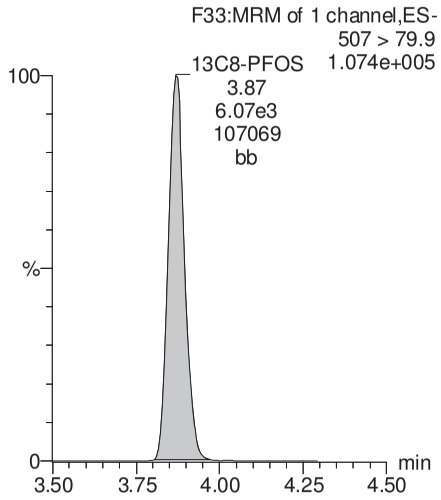
13C2-PFOA



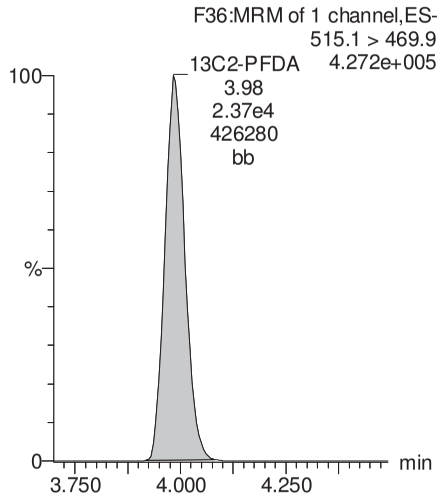
13C5-PFNA



13C8-PFOS



13C2-PFDA



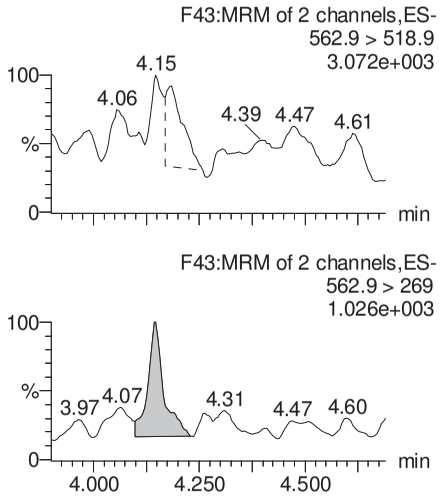
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-58.qld

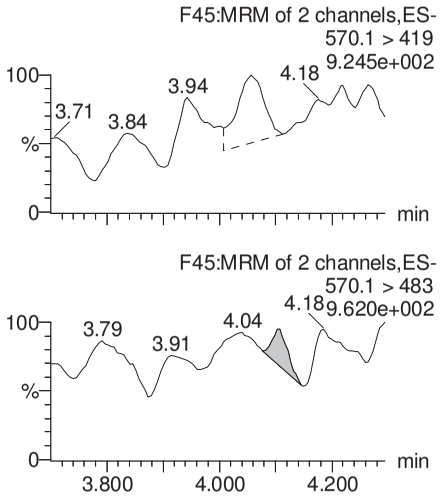
Last Altered: Thursday, August 17, 2017 10:17:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:18:18 Pacific Daylight Time

Name: 170731M1_58, Date: 31-Jul-2017, Time: 22:30:56, ID: 1700920-10 LF-MW-14S-20170720 0.11481, Description: LF-MW-14S-20170720

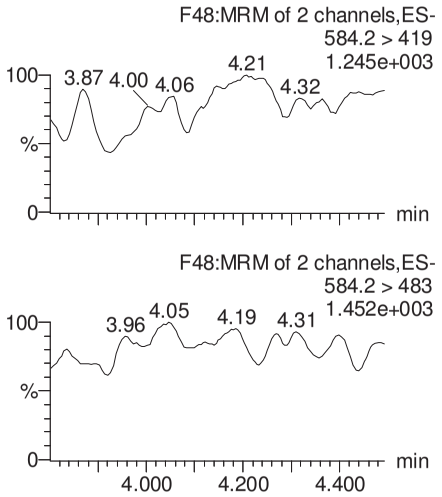
PFUnA



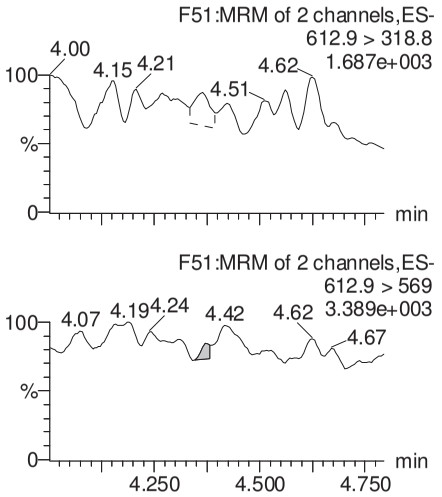
N-MeFOSAA



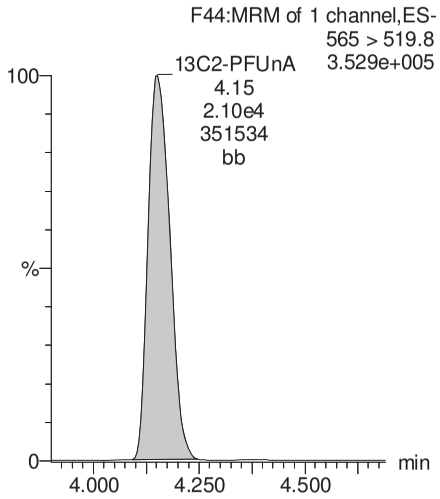
N-EtFOSAA



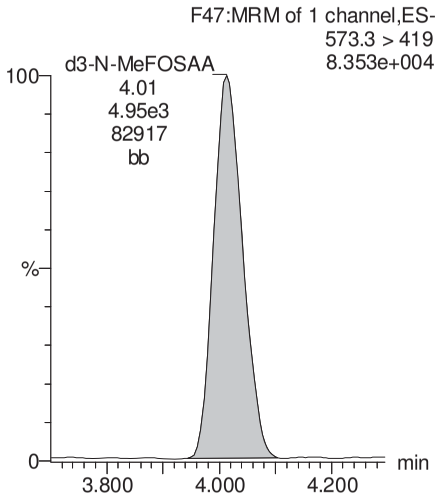
PFDoA



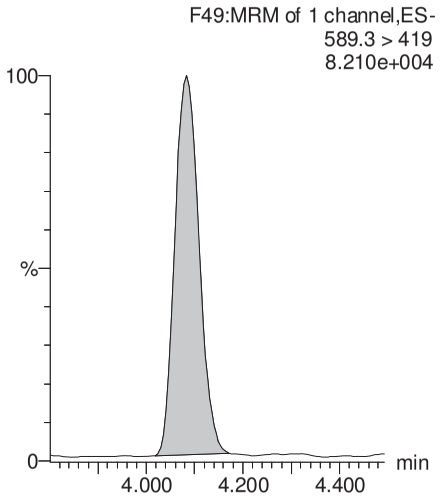
13C2-PFUnA



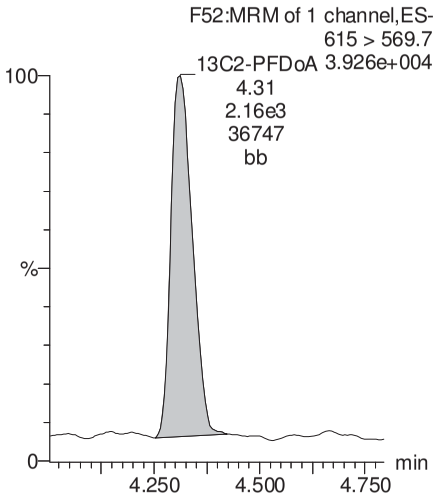
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



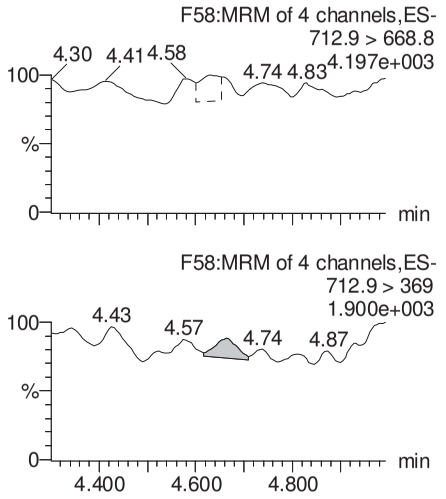
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-58.qld

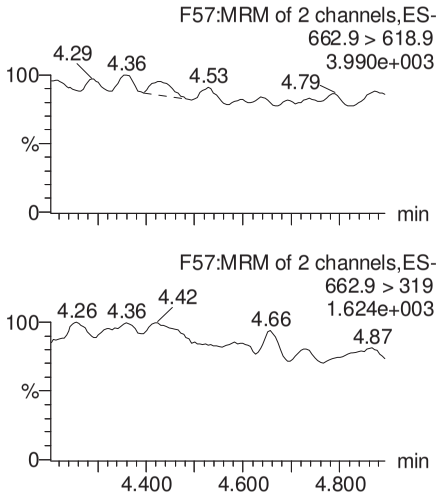
Last Altered: Thursday, August 17, 2017 10:17:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:18:18 Pacific Daylight Time

Name: 170731M1_58, Date: 31-Jul-2017, Time: 22:30:56, ID: 1700920-10 LF-MW-14S-20170720 0.11481, Description: LF-MW-14S-20170720

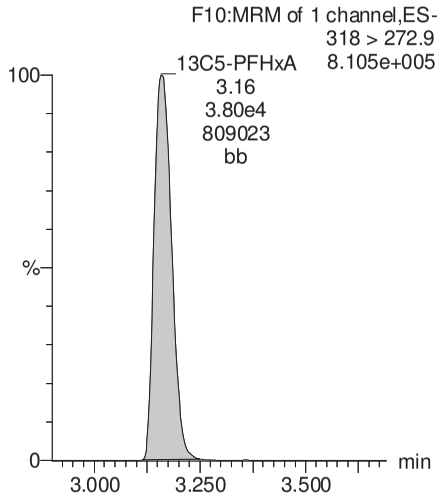
PFTeDA



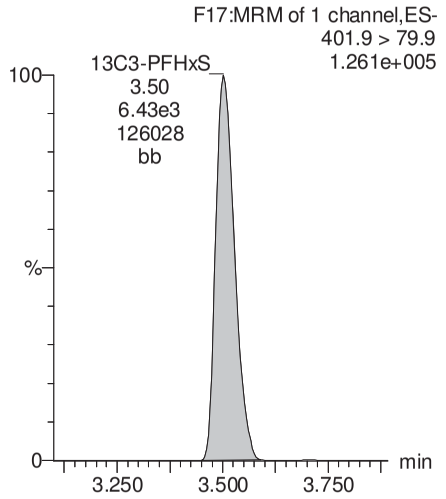
PFTrDA



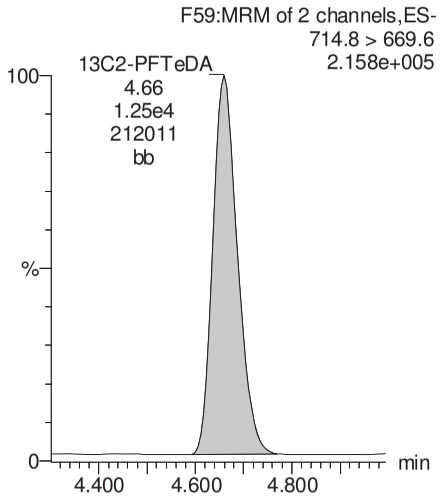
13C5-PFHxA



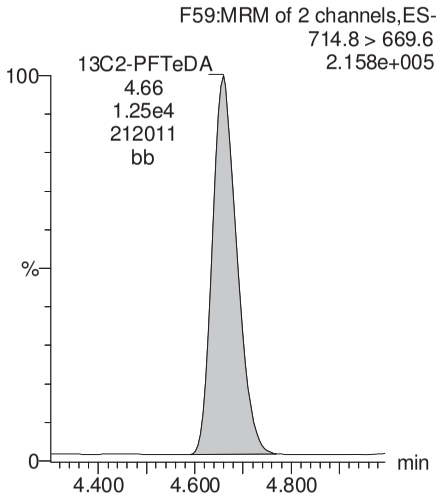
13C3-PFHxS



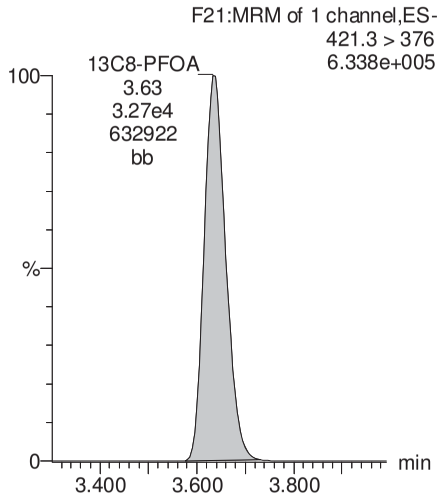
13C2-PFTeDA



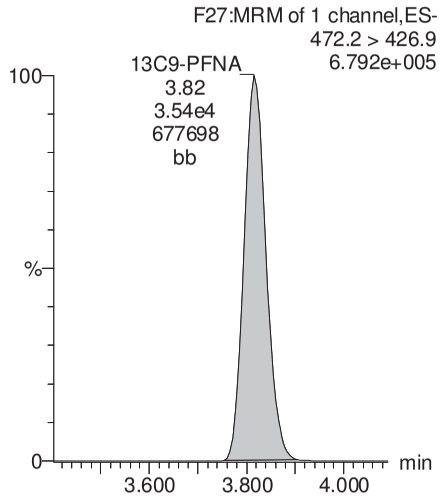
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

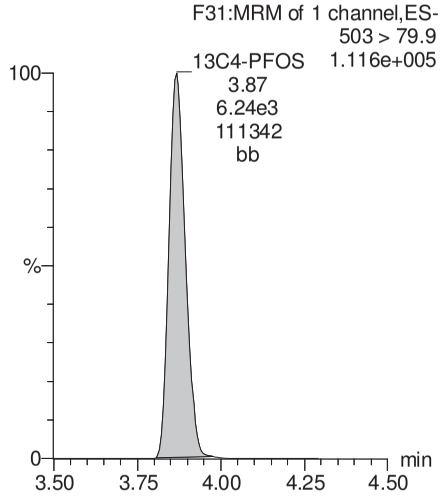
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-58.qld

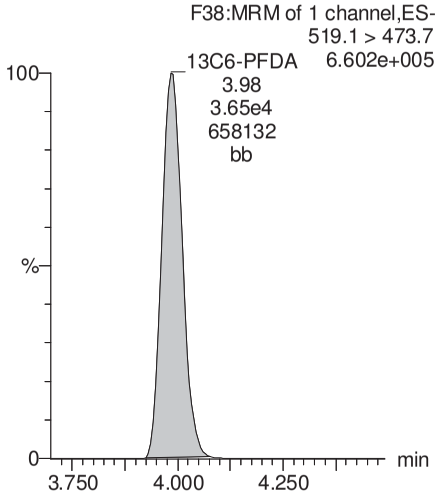
Last Altered: Thursday, August 17, 2017 10:17:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:18:18 Pacific Daylight Time

Name: 170731M1_58, Date: 31-Jul-2017, Time: 22:30:56, ID: 1700920-10 LF-MW-14S-20170720 0.11481, Description: LF-MW-14S-20170720

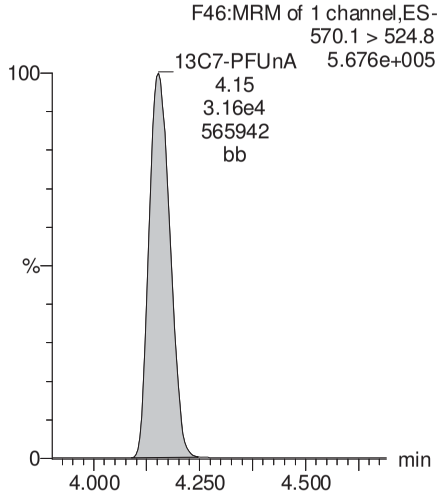
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-43.qld

Last Altered: Thursday, August 10, 2017 13:31:36 Pacific Daylight Time
Printed: Thursday, August 10, 2017 14:39:52 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_43, Date: 01-Aug-2017, Time: 17:18:47, ID: 1700920-11 LF-MW-11BR-20170720 0.11664, Description: LF-MW-11BR-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	4.16e3	4.34e3	0.1166		2.96	2.93	12.0	54.2	
2	4	PFHxA	313.2 > 268.9	9.23e4	1.23e4	0.1166		3.19	3.17	37.4	230	
3	5	PFHpA	363 > 318.9	1.60e4	2.83e4	0.1166		3.45	3.44	7.07	50.2	
4	6	PFHxS	398.9 > 79.6	2.23e4	3.09e3	0.1166		3.56	3.51	90.1	460	
5	8	PFOA	413 > 368.7	1.51e4	3.54e4	0.1166		3.65	3.64	5.32	46.5	
6	10	PFNA	462.9 > 418.8	1.91e3	3.03e4	0.1166		3.83	3.82	0.788	5.65	
7	12	PFOS	499 > 79.9	9.07e4	6.96e3	0.1166		3.89	3.87	163	1310	
8	13	PFDA	513 > 468.8	8.81e2	2.80e4	0.1166		4.01	4.00	0.393	1.69	
9	15	N-MeFOSAA	570.1 > 419		4.98e3	0.1166		4.03				
10	16	N-EtFOSAA	584.2 > 419		5.57e3	0.1166		4.10				
11	17	PFUnA	562.9 > 518.9		2.51e4	0.1166		4.17				
12	19	PFDoA	612.9 > 318.8		2.54e3	0.1166		4.34				

AP 8/10/2017

Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-43.qld

Last Altered: Thursday, August 10, 2017 13:31:36 Pacific Daylight Time
Printed: Thursday, August 10, 2017 14:40:07 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_43, Date: 01-Aug-2017, Time: 17:18:47, ID: 1700920-11 LF-MW-11BR-20170720 0.11664, Description: LF-MW-11BR-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		2.54e3	0.1166		4.50				
2	22	PFTeDA	712.9 > 668.8		1.50e4	0.1166		4.68				
3	30	13C3-PFBS	302 > 98.8	4.34e3	4.60e4	0.1166	0.034	2.96	2.93	0.472	119	110.7
4	31	13C2-PFHxA	315 > 269.8	1.23e4	4.60e4	0.1166	0.334	3.19	3.17	1.34	34.4	80.3
5	32	13C4-PFHpA	367.2 > 321.8	2.83e4	4.60e4	0.1166	0.414	3.45	3.44	3.08	63.8	59.5
6	33	18O2-PFHxS	403 > 102.6	3.09e3	7.71e3	0.1166	0.475	3.56	3.51	5.01	90.4	84.4
7	35	13C2-PFOA	414.9 > 369.7	3.54e4	3.83e4	0.1166	1.298	3.65	3.64	11.5	76.1	71.0
8	36	13C5-PFNA	468.2 > 422.9	3.03e4	4.25e4	0.1166	1.094	3.83	3.82	8.90	69.7	65.1
9	38	13C8-PFOS	507 > 79.9	6.96e3	6.99e3	0.1166	1.153	3.89	3.88	12.5	92.6	86.4
10	39	13C2-PFDA	515.1 > 469.9	2.80e4	3.44e4	0.1166	1.059	4.01	3.99	10.2	82.5	77.0

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Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-43.qld

Last Altered: Thursday, August 10, 2017 13:31:36 Pacific Daylight Time
Printed: Thursday, August 10, 2017 14:40:15 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_43, Date: 01-Aug-2017, Time: 17:18:47, ID: 1700920-11 LF-MW-11BR-20170720 0.11664, Description: LF-MW-11BR-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	4.98e3	3.26e4	0.1166	0.019	4.03	4.02	1.91	848	60.8
2	42	d5-N-EtFOSAA	589.3 > 419	5.57e3	3.26e4	0.1166	0.019	4.12	4.09	2.14	968	69.5
3	43	13C2-PFUnA	565 > 519.8	2.51e4	3.26e4	0.1166	1.172	4.17	4.16	9.64	70.5	65.8
4	44	13C2-PFDoA	615 > 569.7	2.54e3	3.26e4	0.1166	0.118	4.34	4.32	0.974	70.5	65.8
5	46	13C2-PFTeDA	714.8 > 669.6	1.50e4	3.26e4	0.1166	0.801	4.68	4.67	5.75	61.5	57.4
6	52	13C5-PFHxA	318 > 272.9	4.60e4	4.60e4	0.1166	1.000	3.19	3.17	5.00	42.9	100.0
7	53	13C3-PFHxS	401.9 > 79.9	7.71e3	7.71e3	0.1166	1.000	3.56	3.51	12.5	107	100.0
8	54	13C8-PFOA	421.3 > 376	3.83e4	3.83e4	0.1166	1.000	3.65	3.64	12.5	107	100.0
9	55	13C9-PFNA	472.2 > 426.9	4.25e4	4.25e4	0.1166	1.000	3.83	3.83	12.5	107	100.0
10	56	13C4-PFOS	503 > 79.9	6.99e3	6.99e3	0.1166	1.000	3.89	3.88	12.5	107	100.0
11	57	13C6-PFDA	519.1 > 473.7	3.44e4	3.44e4	0.1166	1.000	4.01	4.00	12.5	107	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.26e4	3.26e4	0.1166	1.000	4.17	4.16	12.5	107	100.0
13	59	Total PFBS	299 > 79.7	4.16e3	4.34e3	0.1166		2.96		12.0	54.2	
14	60	Total PFHxS	398.9 > 79.6	2.23e4	3.09e3	0.1166		3.52		90.1	460	
15	61	Total PFOA	413 > 368.7	1.62e4	3.54e4	0.1166		3.65		5.73	48.9	
16	62	Total PFOS	499 > 79.9	9.07e4	6.96e3	0.1166		3.89		163	1310	
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	4.98e3	0.1166		4.03		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	5.57e3	0.1166		4.17		0.000		

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Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_43, Date: 01-Aug-2017, Time: 17:18:47, ID: 1700920-11 LF-MW-11BR-20170720 0.11664, Description: LF-MW-11BR-20170720

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.93	4160.685	4343.153	11.975	MM	54.2

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.51	22294.740	3091.734	90.138	MM	459.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.64	15067.414	35377.520	5.324	MM	46.5
2	61	Total PFOA	413 > 368.7	3.59	1158.090	35377.520	0.409	MM	2.4

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.87	90730.492	6959.931	162.951	MM	1313.7

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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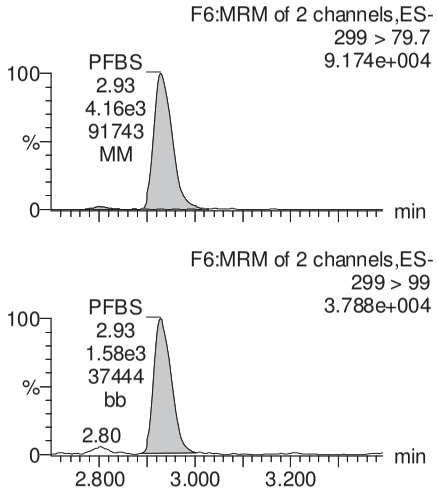
Name: 170801M1_43, Date: 01-Aug-2017, Time: 17:18:47, ID: 1700920-11 LF-MW-11BR-20170720 0.11664, Description: LF-MW-11BR-20170720

Total PFBS



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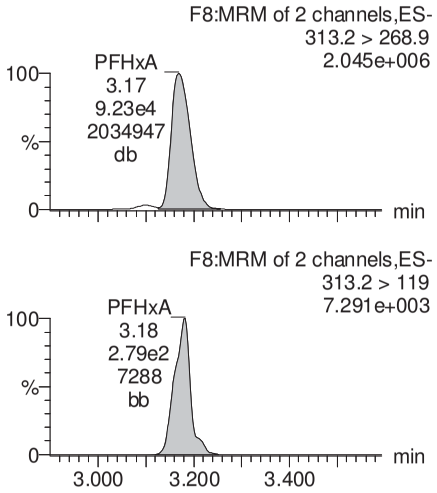

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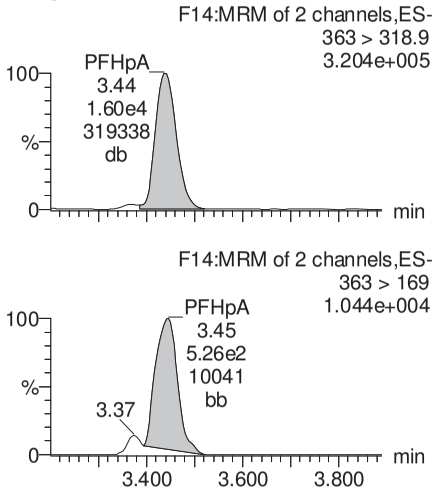

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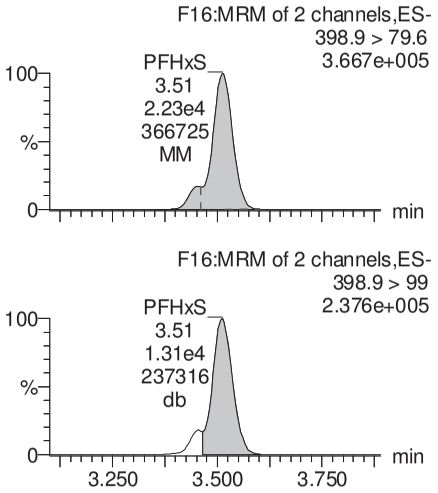

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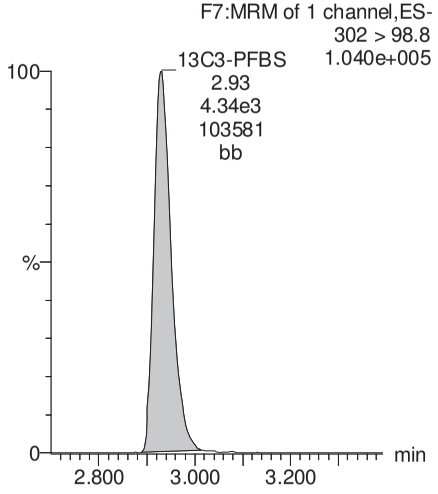

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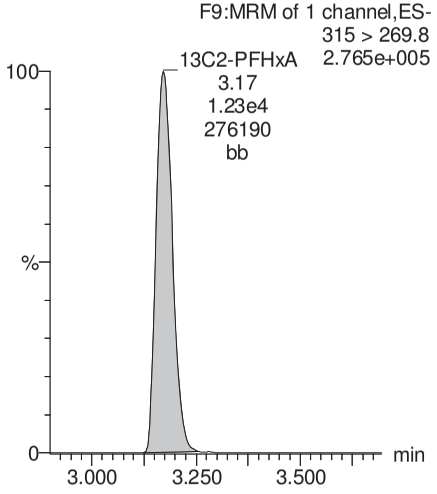

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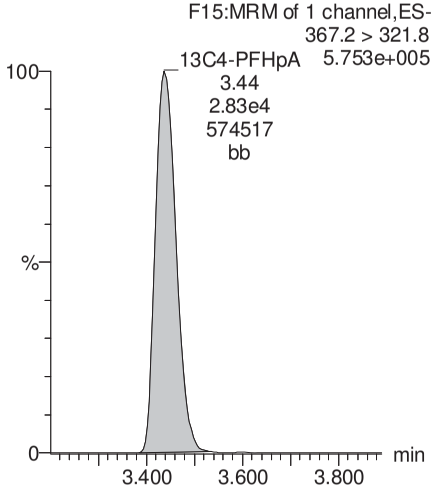

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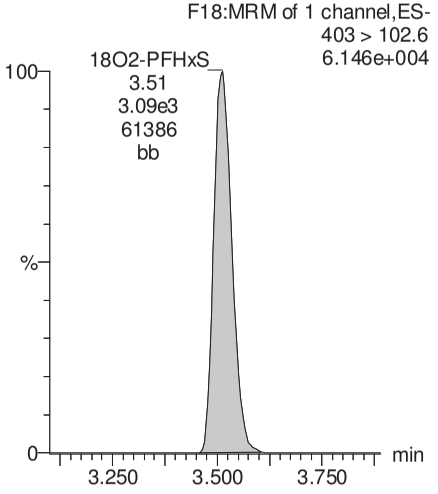

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-43.qld

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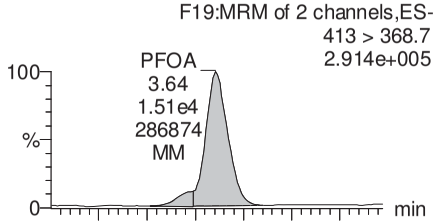
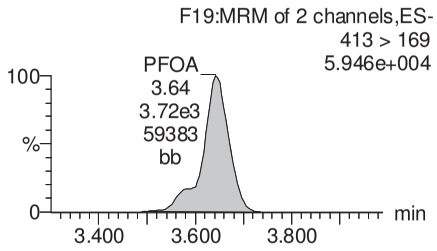
Total PFOA





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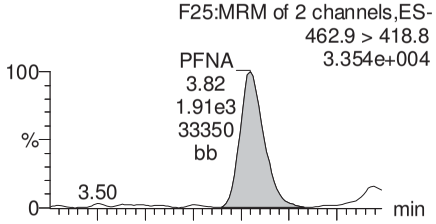

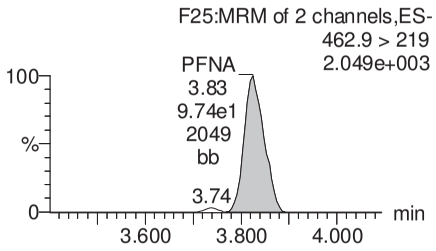

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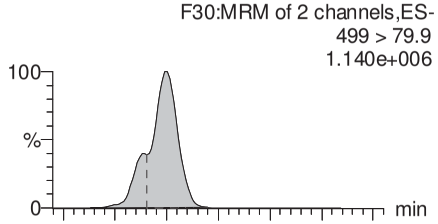

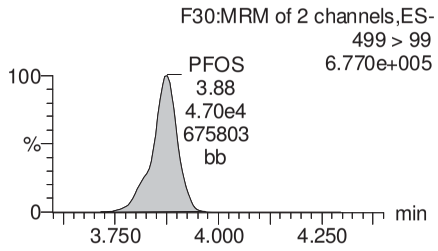

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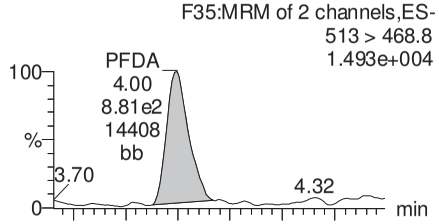

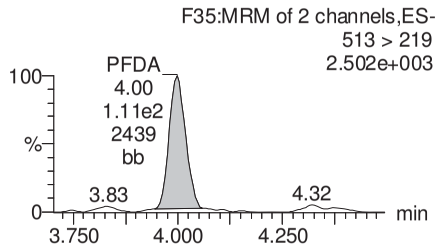

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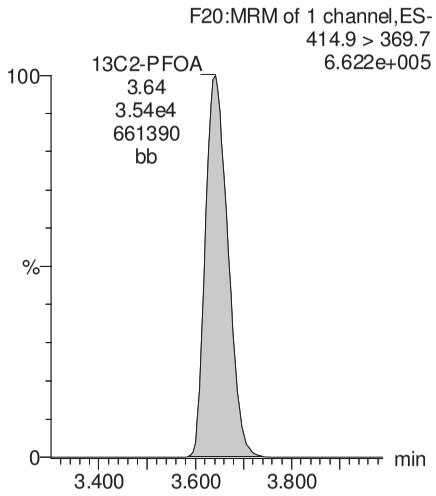

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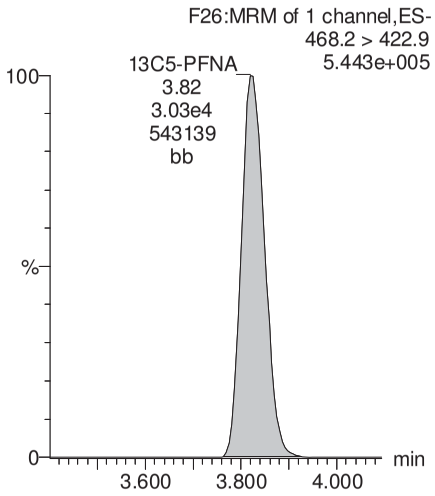

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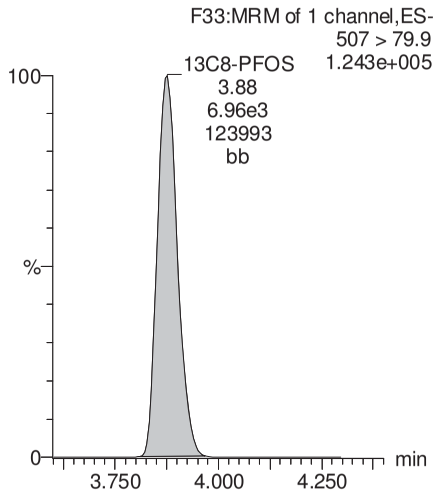

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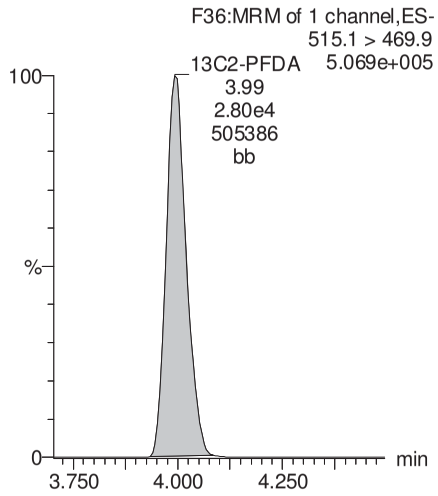

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Rev'd: MM 8/12/17

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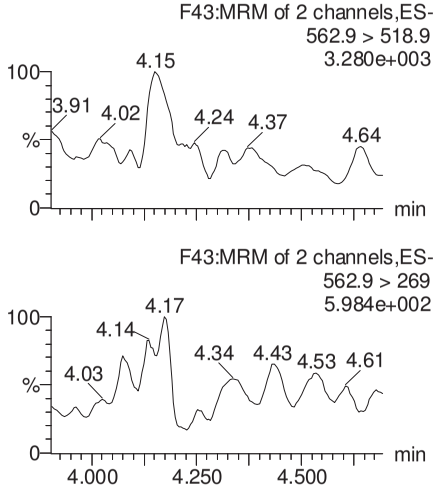
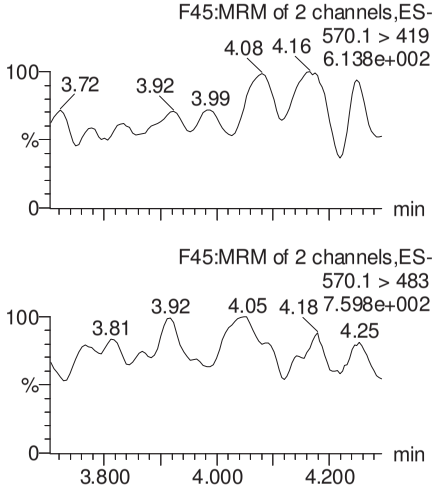


N-MeFOSAA



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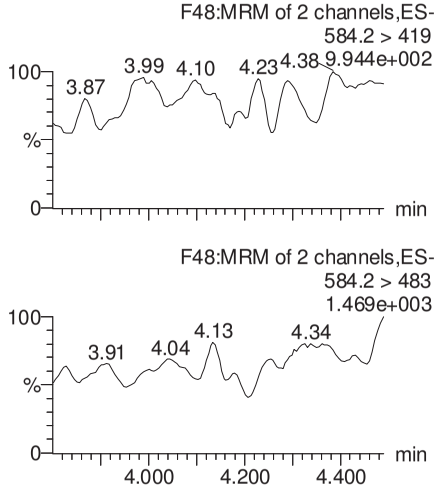

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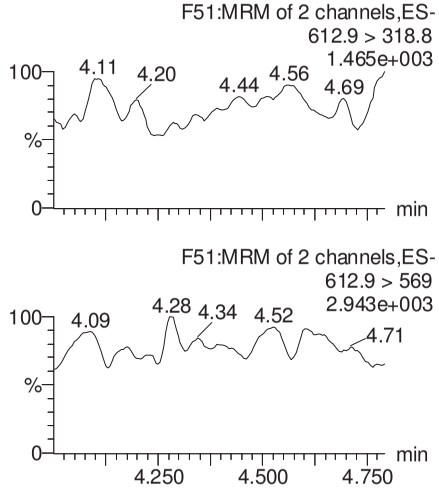

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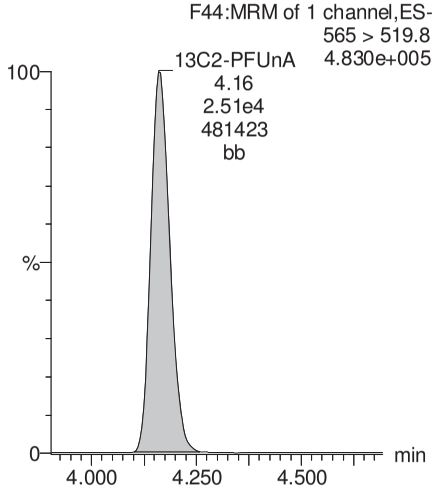

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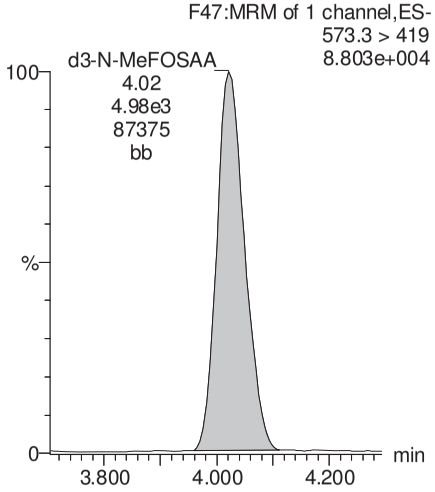

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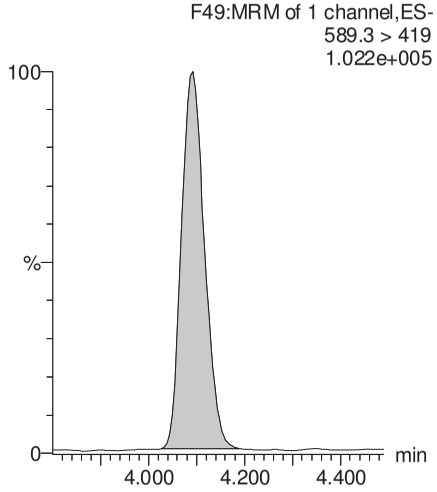

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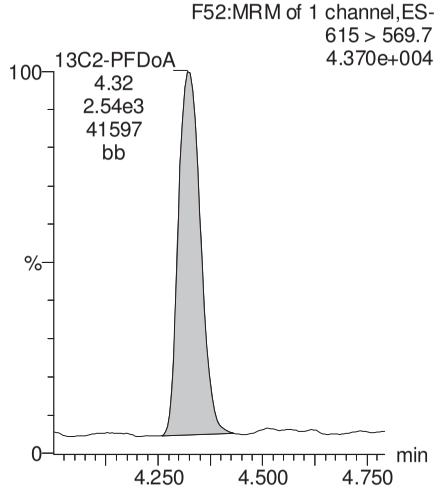

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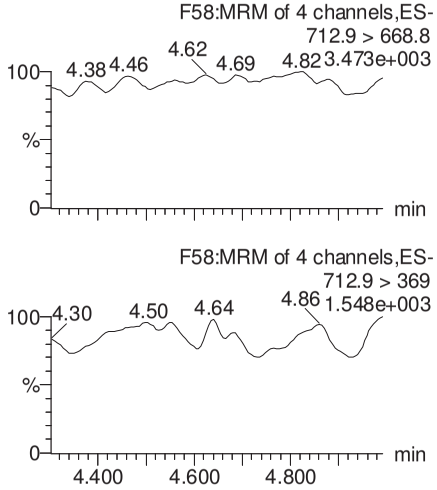
PFTeDA



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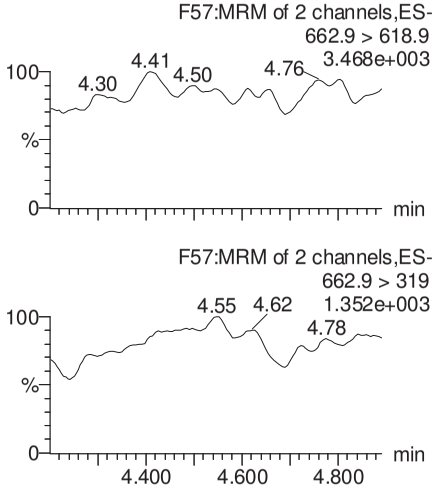

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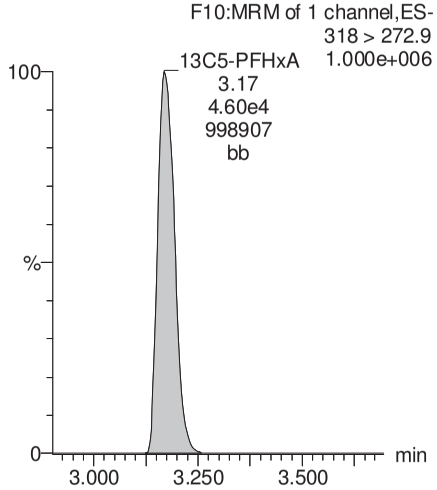

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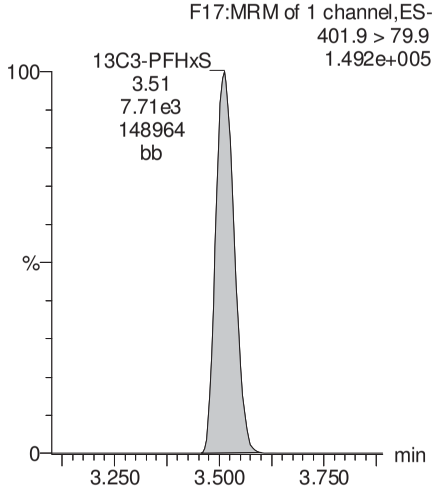

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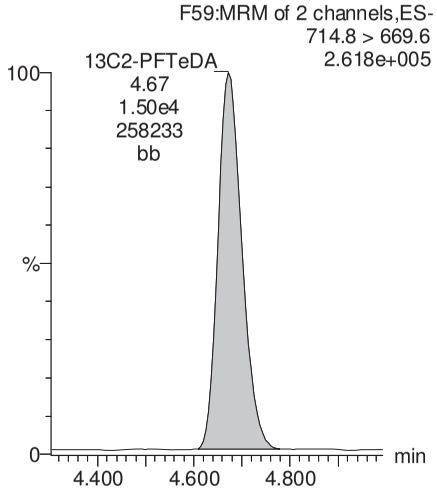

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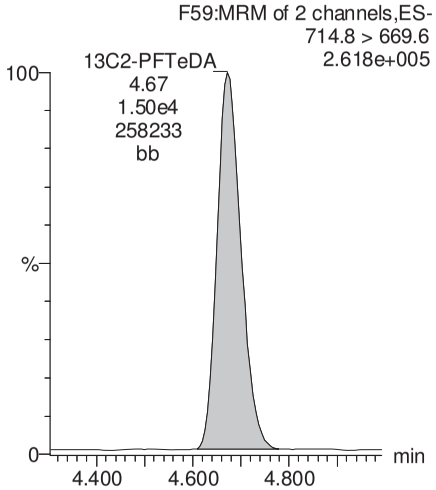

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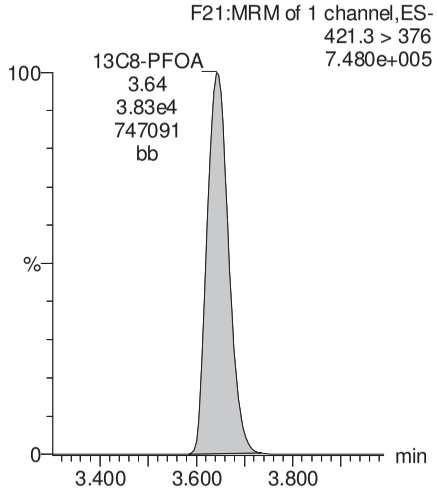
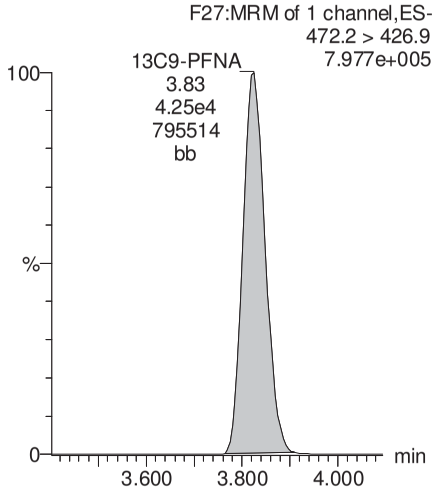


13C9-PFNA



AP 8/10/2017

Vista Analytical Laboratory

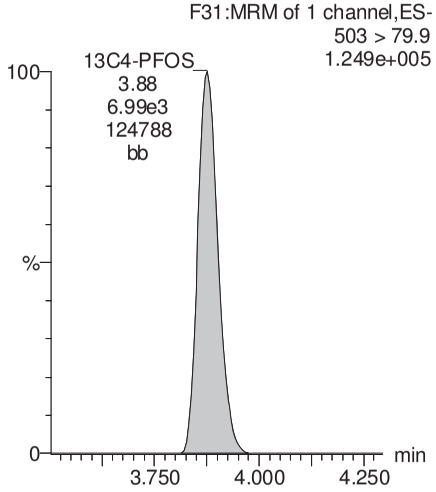
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-43.qld

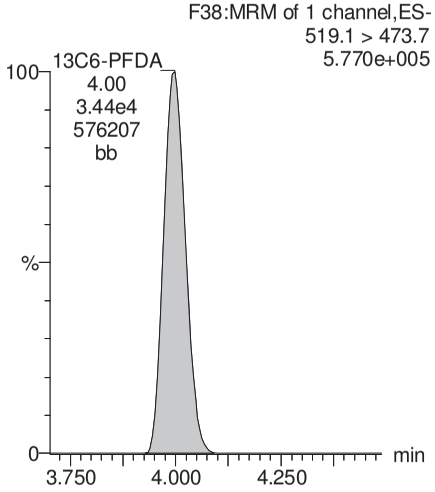
Last Altered: Thursday, August 10, 2017 13:31:36 Pacific Daylight Time
Printed: Thursday, August 10, 2017 14:40:15 Pacific Daylight Time

Name: 170801M1_43, Date: 01-Aug-2017, Time: 17:18:47, ID: 1700920-11 LF-MW-11BR-20170720 0.11664, Description: LF-MW-11BR-20170720

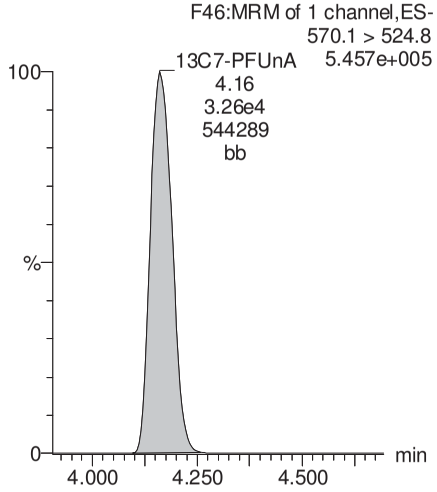
13C4-PFOS



13C6-PFDA



13C7-PFUnA



AP 8/10/2017

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-60.qld

Last Altered: Thursday, August 17, 2017 10:20:56 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:21:18 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: 170731M1_60, Date: 31-Jul-2017, Time: 22:52:39, ID: 1700920-12 LF-MW-13S-20170719 0.11667, Description: LF-MW-13S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	2.10e3	1.80e3	0.117		2.96	2.92	14.6	67.2	
2	4	PFHxA	313.2 > 268.9	4.87e4	5.14e3	0.117		3.19	3.16	47.4	291	
3	5	PFHpA	363 > 318.9	9.16e3	1.22e4	0.117		3.45	3.43	9.41	68.0	
4	6	PFHxS	398.9 > 79.6	1.35e4	1.32e3	0.117		3.56	3.50	128	660	
5	7	PFOA	413 > 368.7	8.18e3	1.56e4	0.117		3.65	3.64	6.57	56.8	
6	9	PFNA	462.9 > 418.8	1.13e3	1.20e4	0.117		3.83	3.81	1.18	8.76	
7	11	PFOS	499 > 79.9	4.87e4	2.83e3	0.117		3.89	3.87	215	1900	
8	12	PFDA	513 > 468.8	4.08e2	1.18e4	0.117		4.01	3.98	0.432	1.91	
9	13	N-MeFOSAA	570.1 > 419		2.56e3	0.117		4.03				
10	14	N-EtFOSAA	584.2 > 419		2.30e3	0.117		4.10				
11	15	PFUnA	562.9 > 518.9		1.12e4	0.117		4.11				
12	17	PFDoA	612.9 > 318.8		1.01e3	0.117		4.34				
13	18	PFTrDA	662.9 > 618.9		1.01e3	0.117		4.50				
14	19	PFTeDA	712.9 > 668.8		5.88e3	0.117		4.68				
15	22	13C3-PFBS	302 > 98.8	1.80e3	1.94e4	0.117	0.033	2.96	2.92	0.464	120	112.1
16	23	13C2-PFHxA	315 > 269.8	5.14e3	1.94e4	0.117	0.335	3.19	3.16	1.32	33.8	78.9
17	24	13C4-PFHpA	367.2 > 321.8	1.22e4	1.94e4	0.117	0.369	3.45	3.43	3.13	72.7	67.9
18	25	18O2-PFHxS	403 > 102.6	1.32e3	3.56e3	0.117	0.460	3.56	3.51	4.63	86.2	80.5
19	26	13C2-PFOA	414.9 > 369.7	1.56e4	1.50e4	0.117	1.293	3.65	3.63	13.0	86.1	80.4
20	27	13C5-PFNA	468.2 > 422.9	1.20e4	1.52e4	0.117	0.986	3.83	3.81	9.82	85.4	79.7

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-60.qld

Last Altered: Thursday, August 17, 2017 10:20:56 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:21:26 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: 170731M1_60, Date: 31-Jul-2017, Time: 22:52:39, ID: 1700920-12 LF-MW-13S-20170719 0.11667, Description: LF-MW-13S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	29	13C8-PFOS	507 > 79.9	2.83e3	3.31e3	0.117	1.184	3.89	3.87	10.7	77.3	72.2
2	30	13C2-PFDA	515.1 > 469.9	1.18e4	1.79e4	0.117	0.998	4.01	3.99	8.23	70.7	66.0
3	31	d3-N-MeFOSAA	573.3 > 419	2.56e3	1.49e4	0.117	0.018	4.03	4.01	2.14	1040	74.6
4	32	d5-N-EtFOSAA	589.3 > 419	2.30e3	1.49e4	0.117	0.018	4.12	4.08	1.93	929	66.7
5	33	13C2-PFUnA	565 > 519.8	1.12e4	1.49e4	0.117	1.129	4.17	4.15	9.41	71.4	66.7
6	34	13C2-PFDoA	615 > 569.7	1.01e3	1.49e4	0.117	0.116	4.34	4.31	0.845	62.4	58.3
7	35	13C2-PFTeDA	714.8 > 669.6	5.88e3	1.49e4	0.117	0.762	4.68	4.66	4.93	55.4	51.7
8	37	13C5-PFHxA	318 > 272.9	1.94e4	1.94e4	0.117	1.000	3.19	3.16	5.00	42.9	100.0
9	38	13C3-PFHxS	401.9 > 79.9	3.56e3	3.56e3	0.117	1.000	3.56	3.50	12.5	107	100.0
10	39	13C8-PFOA	421.3 > 376	1.50e4	1.50e4	0.117	1.000	3.65	3.63	12.5	107	100.0
11	40	13C9-PFNA	472.2 > 426.9	1.52e4	1.52e4	0.117	1.000	3.83	3.81	12.5	107	100.0
12	41	13C4-PFOS	503 > 79.9	3.31e3	3.31e3	0.117	1.000	3.89	3.87	12.5	107	100.0
13	42	13C6-PFDA	519.1 > 473.7	1.79e4	1.79e4	0.117	1.000	4.01	3.98	12.5	107	100.0
14	43	13C7-PFUnA	570.1 > 524.8	1.49e4	1.49e4	0.117	1.000	4.17	4.15	12.5	107	100.0
15	44	Total PFBS	299 > 79.7	2.13e3	1.80e3	0.117		2.96		14.8	68.3	
16	45	Total PFHxS	398.9 > 79.6	1.35e4	1.32e3	0.117		3.52		128	660	
17	46	Total PFOA	413 > 368.7	8.65e3	1.56e4	0.117		3.65		6.94	59.1	
18	47	Total PFOS	499 > 79.9	4.87e4	2.83e3	0.117		3.89		215	1900	
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	2.56e3	0.117		4.03		0.000		
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	2.30e3	0.117		4.17		0.000		

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-60.qld

Last Altered: Thursday, August 17, 2017 10:20:56 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:21:26 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: 170731M1_60, Date: 31-Jul-2017, Time: 22:52:39, ID: 1700920-12 LF-MW-13S-20170719 0.11667, Description: LF-MW-13S-20170719

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.92	2101.606	1802.700	14.573	bb	67.2
2	44	Total PFBS	299 > 79.7	2.80	32.393	1802.700	0.225	MM	1.1

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	13535.001	1318.464	128.322	MM	659.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.64	8183.117	15571.146	6.569	MM	56.8
2	46	Total PFOA	413 > 368.7	3.59	462.552	15571.146	0.371	MM	2.2

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.87	48679.027	2825.483	215.357	bb	1896.6

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			2561.090		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419			2300.236		MM-I	

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-60.qld

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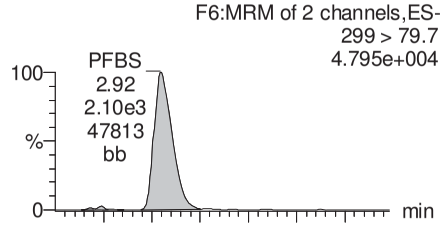
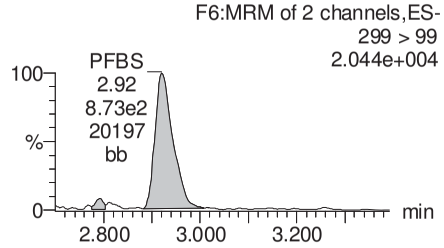
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170731M1_60, Date: 31-Jul-2017, Time: 22:52:39, ID: 1700920-12 LF-MW-13S-20170719 0.11667, Description: LF-MW-13S-20170719

Total PFBS





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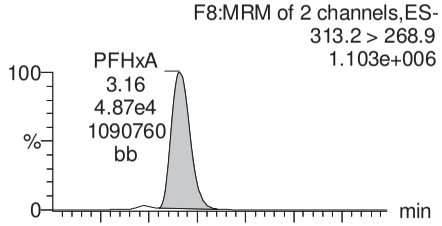

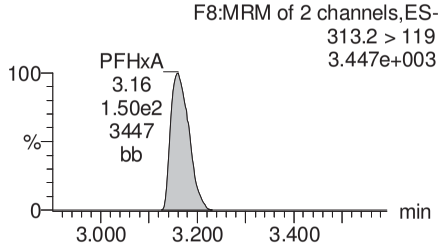

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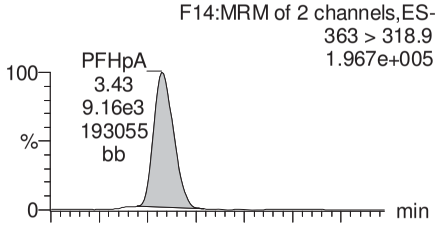

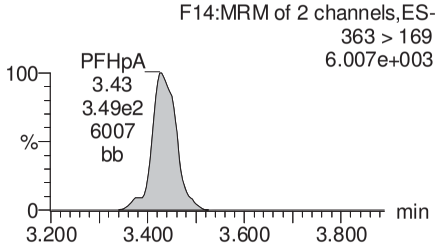

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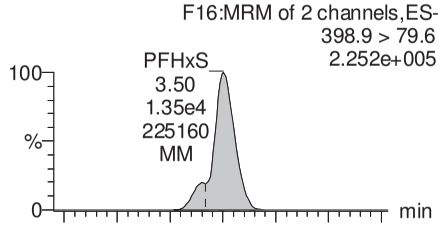

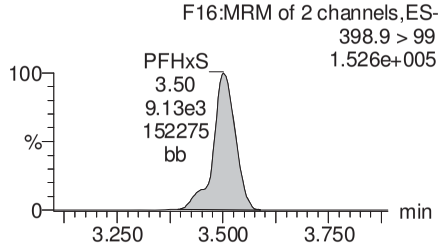

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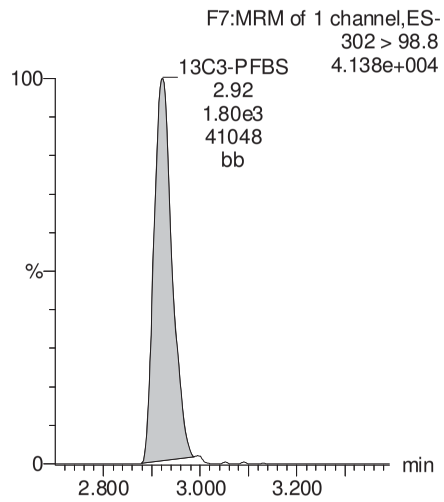

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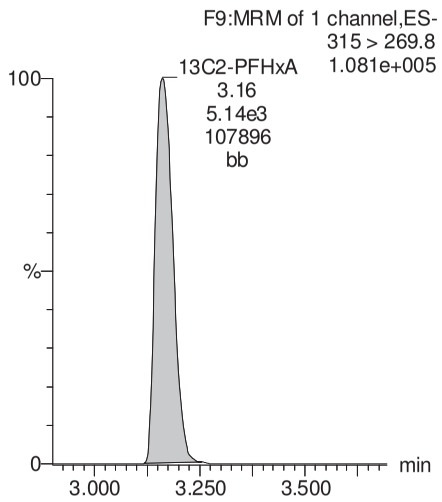

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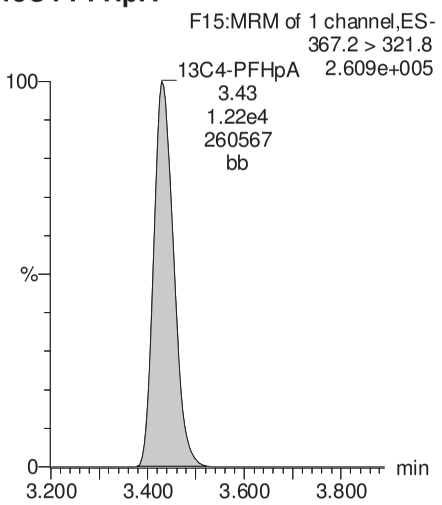

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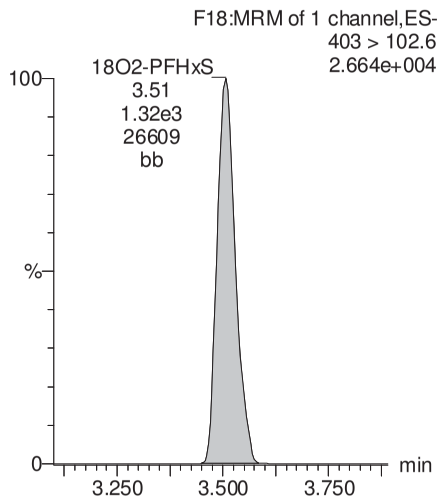

GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-60.qld

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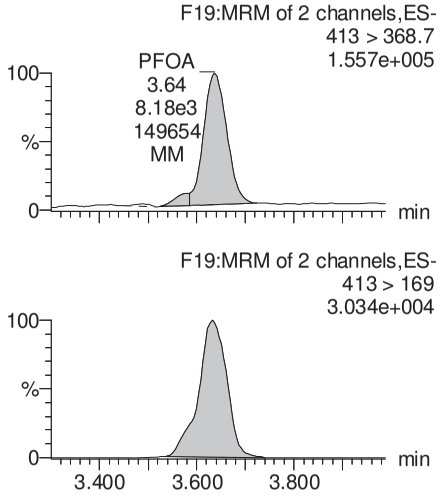
Printed: Thursday, August 17, 2017 10:21:26 Pacific Daylight Time

Name: 170731M1_60, Date: 31-Jul-2017, Time: 22:52:39, ID: 1700920-12 LF-MW-13S-20170719 0.11667, Description: LF-MW-13S-20170719

Total PFOA



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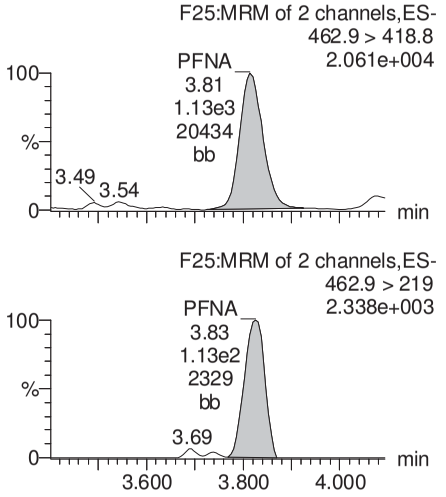

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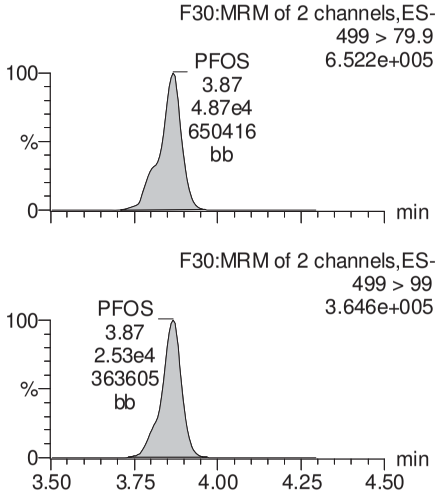

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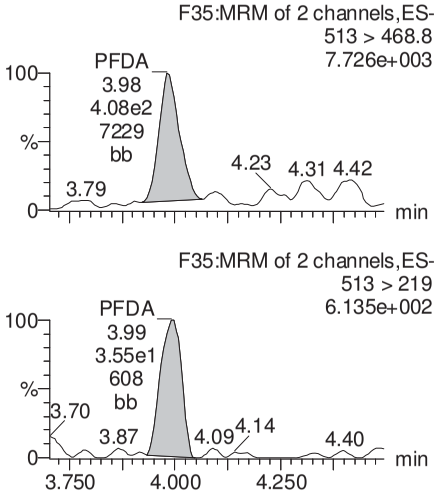

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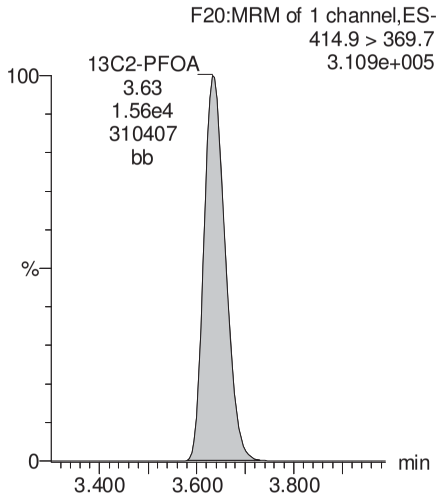

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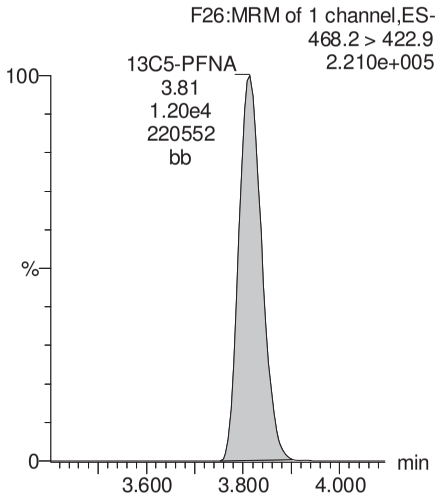

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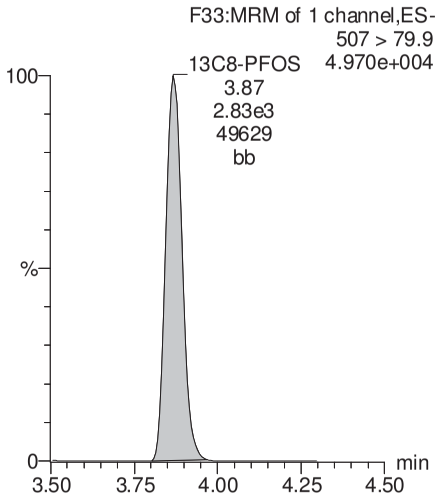

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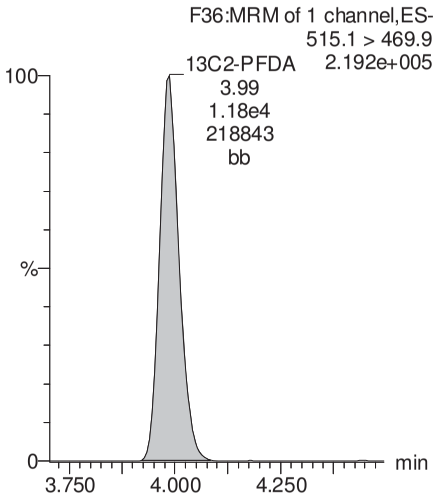

GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-60.qld

Last Altered: Thursday, August 17, 2017 10:20:56 Pacific Daylight Time
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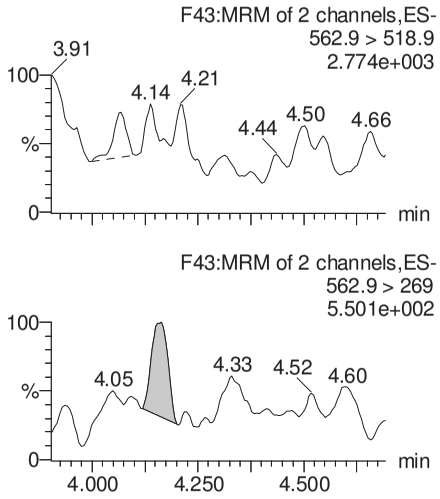
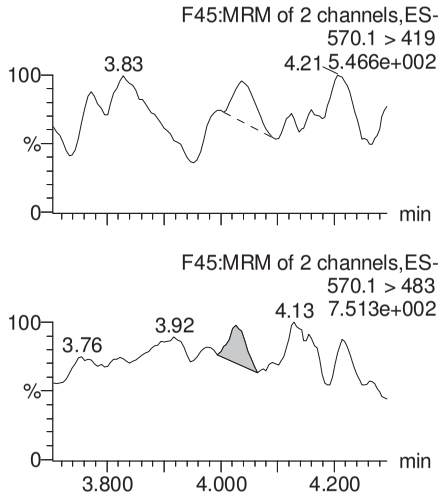
Name: 170731M1_60, Date: 31-Jul-2017, Time: 22:52:39, ID: 1700920-12 LF-MW-13S-20170719 0.11667, Description: LF-MW-13S-20170719

PFUnA



N-MeFOSAA



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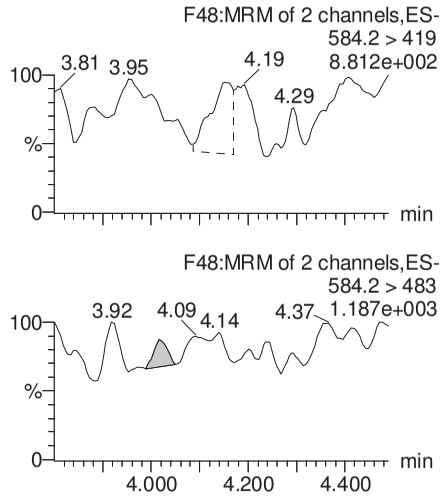
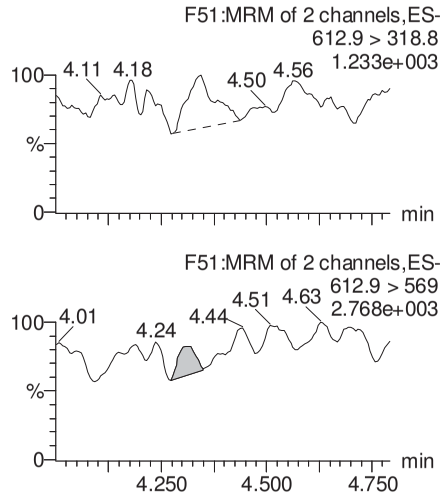
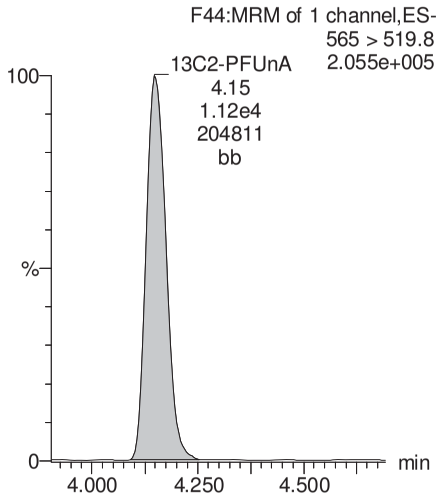


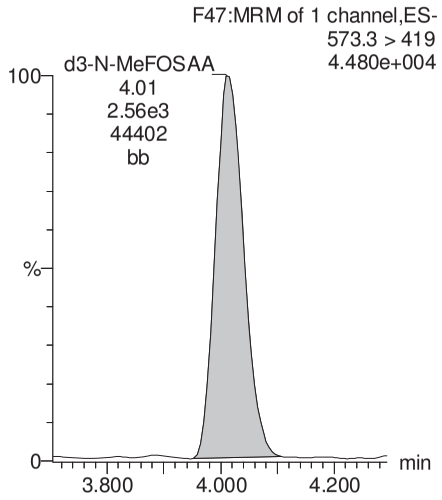
PFDoA



13C2-PFUnA



d3-N-MeFOSAA



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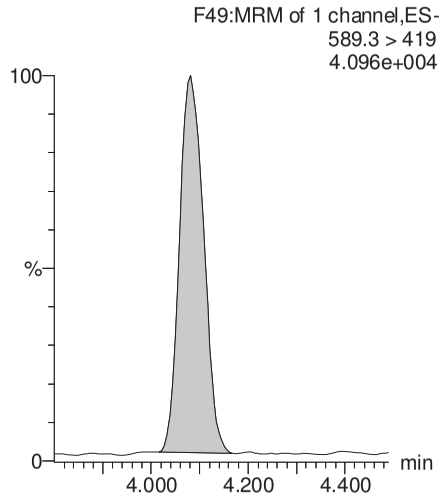
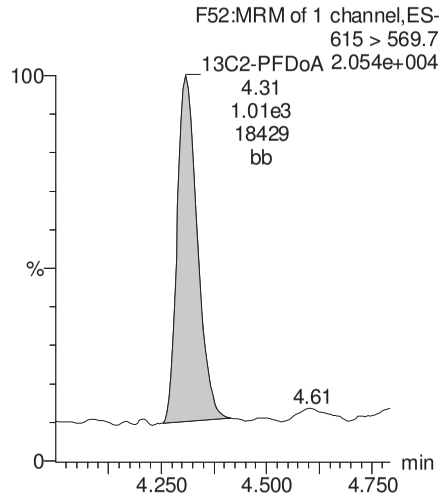


13C2-PFDoA



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Dataset: U:\Q4.PRO\results\170731M1\170731M1-60.qld

Last Altered: Thursday, August 17, 2017 10:20:56 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:21:26 Pacific Daylight Time

Name: 170731M1_60, Date: 31-Jul-2017, Time: 22:52:39, ID: 1700920-12 LF-MW-13S-20170719 0.11667, Description: LF-MW-13S-20170719

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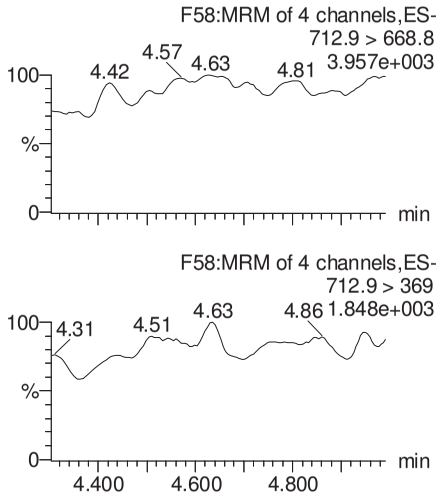

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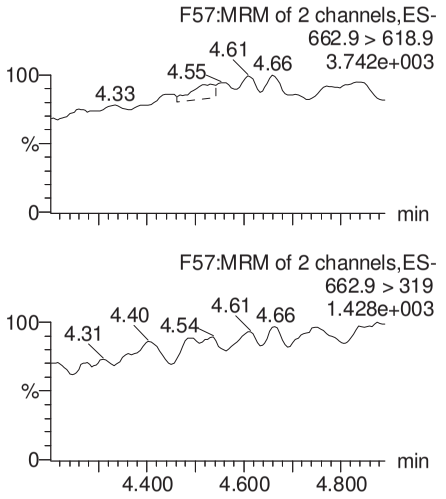
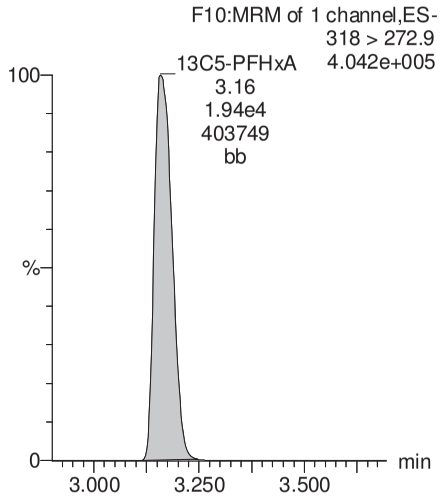
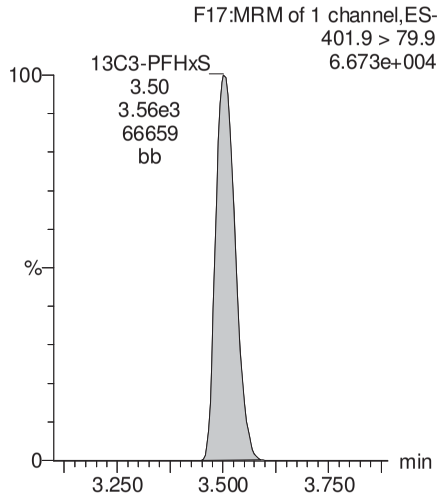


13C5-PFHxA



13C3-PFHxS



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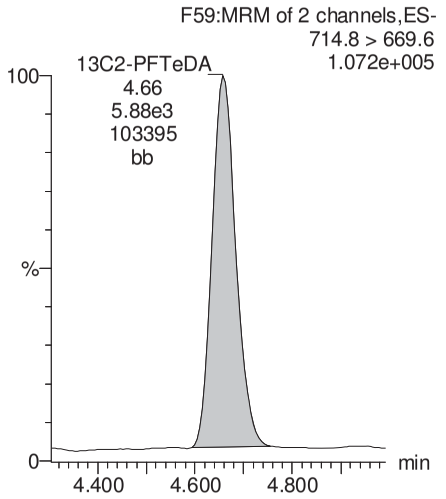

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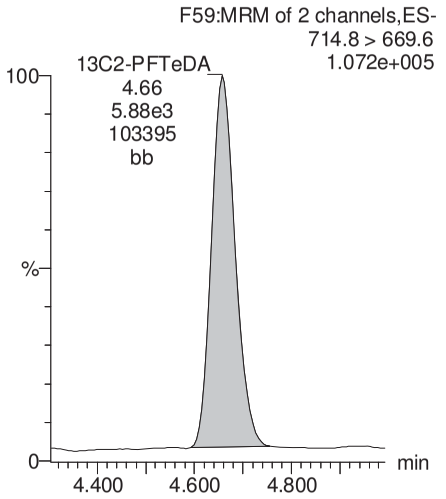
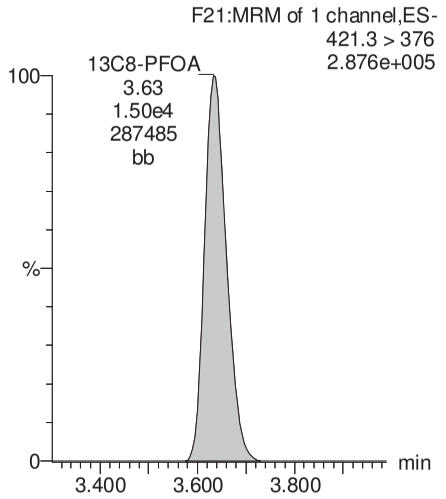
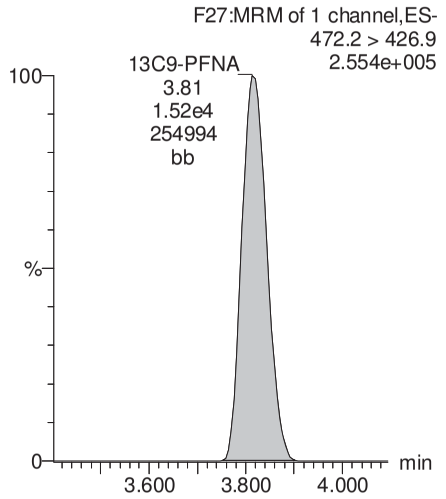


13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-60.qld

Last Altered: Thursday, August 17, 2017 10:20:56 Pacific Daylight Time
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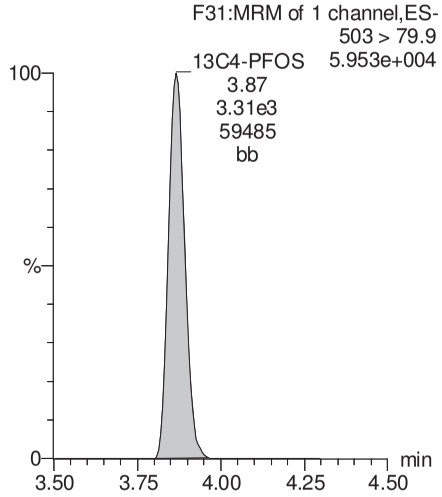
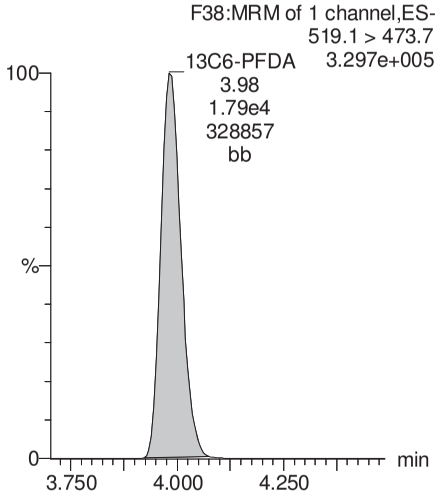
Name: 170731M1_60, Date: 31-Jul-2017, Time: 22:52:39, ID: 1700920-12 LF-MW-13S-20170719 0.11667, Description: LF-MW-13S-20170719

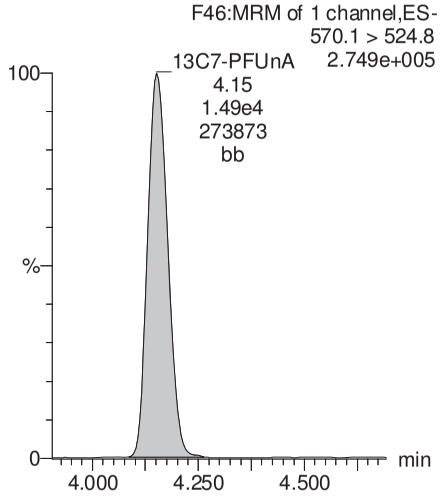
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-61.qld

Last Altered: Thursday, August 17, 2017 10:24:15 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:24:26 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: 170731M1_61, Date: 31-Jul-2017, Time: 23:03:17, ID: 1700920-13 RCDM-MW-11BR-20170720 0.11813, Description: RCDM-MW-11BR-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	4.41e3	4.08e3	0.118		2.96	2.92	13.5	61.6	
2	4	PFHxA	313.2 > 268.9	9.53e4	1.16e4	0.118		3.19	3.17	40.9	247	
3	5	PFHpA	363 > 318.9	1.51e4	2.39e4	0.118		3.45	3.43	7.90	56.2	
4	6	PFHxS	398.9 > 79.6	2.35e4	2.81e3	0.118		3.56	3.50	105	531	
5	7	PFOA	413 > 368.7	1.52e4	3.60e4	0.118		3.65	3.64	5.27	44.8	
6	9	PFNA	462.9 > 418.8	1.77e3	2.79e4	0.118		3.83	3.82	0.794	5.62	
7	11	PFOS	499 > 79.9	8.82e4	6.26e3	0.118		3.89	3.87	176	1530	
8	12	PFDA	513 > 468.8	8.75e2	2.57e4	0.118		4.01	3.99	0.425	1.84	
9	13	N-MeFOSAA	570.1 > 419		5.83e3	0.118		4.03				
10	14	N-EtFOSAA	584.2 > 419		6.14e3	0.118		4.10				
11	15	PFUnA	562.9 > 518.9		2.53e4	0.118		4.11				
12	17	PFDoA	612.9 > 318.8		2.61e3	0.118		4.34				
13	18	PFTrDA	662.9 > 618.9		2.61e3	0.118		4.50				
14	19	PFTeDA	712.9 > 668.8		1.42e4	0.118		4.68				
15	22	13C3-PFBS	302 > 98.8	4.08e3	4.07e4	0.118	0.033	2.96	2.93	0.501	128	121.3
16	23	13C2-PFHxA	315 > 269.8	1.16e4	4.07e4	0.118	0.335	3.19	3.17	1.43	36.1	85.4
17	24	13C4-PFHpA	367.2 > 321.8	2.39e4	4.07e4	0.118	0.369	3.45	3.43	2.94	67.4	63.7
18	25	18O2-PFHxS	403 > 102.6	2.81e3	7.17e3	0.118	0.460	3.56	3.51	4.90	90.1	85.2
19	26	13C2-PFOA	414.9 > 369.7	3.60e4	3.44e4	0.118	1.293	3.65	3.64	13.1	85.4	80.8
20	27	13C5-PFNA	468.2 > 422.9	2.79e4	3.60e4	0.118	0.986	3.83	3.82	9.70	83.3	78.7

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-61.qld

Last Altered: Thursday, August 17, 2017 10:24:15 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: 170731M1_61, Date: 31-Jul-2017, Time: 23:03:17, ID: 1700920-13 RCDM-MW-11BR-20170720 0.11813, Description: RCDM-MW-11BR-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	29	13C8-PFOS	507 > 79.9	6.26e3	6.26e3	0.118	1.184	3.89	3.87	12.5	89.4	84.4
2	30	13C2-PFDA	515.1 > 469.9	2.57e4	3.40e4	0.118	0.998	4.01	3.98	9.47	80.3	75.9
3	31	d3-N-MeFOSAA	573.3 > 419	5.83e3	3.00e4	0.118	0.018	4.03	4.02	2.43	1160	84.4
4	32	d5-N-EtFOSAA	589.3 > 419	6.14e3	3.00e4	0.118	0.018	4.12	4.09	2.56	1220	88.5
5	33	13C2-PFUnA	565 > 519.8	2.53e4	3.00e4	0.118	1.129	4.17	4.15	10.5	79.0	74.6
6	34	13C2-PFDoA	615 > 569.7	2.61e3	3.00e4	0.118	0.116	4.34	4.31	1.08	79.1	74.7
7	35	13C2-PFTeDA	714.8 > 669.6	1.42e4	3.00e4	0.118	0.762	4.68	4.66	5.91	65.6	62.0
8	37	13C5-PFHxA	318 > 272.9	4.07e4	4.07e4	0.118	1.000	3.19	3.16	5.00	42.3	100.0
9	38	13C3-PFHxS	401.9 > 79.9	7.17e3	7.17e3	0.118	1.000	3.56	3.51	12.5	106	100.0
10	39	13C8-PFOA	421.3 > 376	3.44e4	3.44e4	0.118	1.000	3.65	3.64	12.5	106	100.0
11	40	13C9-PFNA	472.2 > 426.9	3.60e4	3.60e4	0.118	1.000	3.83	3.82	12.5	106	100.0
12	41	13C4-PFOS	503 > 79.9	6.26e3	6.26e3	0.118	1.000	3.89	3.87	12.5	106	100.0
13	42	13C6-PFDA	519.1 > 473.7	3.40e4	3.40e4	0.118	1.000	4.01	3.99	12.5	106	100.0
14	43	13C7-PFUnA	570.1 > 524.8	3.00e4	3.00e4	0.118	1.000	4.17	4.15	12.5	106	100.0
15	44	Total PFBS	299 > 79.7	4.51e3	4.08e3	0.118		2.96		13.8	62.9	
16	45	Total PFHxS	398.9 > 79.6	2.35e4	2.81e3	0.118		3.52		105	531	
17	46	Total PFOA	413 > 368.7	1.64e4	3.60e4	0.118		3.65		5.72	47.7	
18	47	Total PFOS	499 > 79.9	8.82e4	6.26e3	0.118		3.89		176	1530	
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	5.83e3	0.118		4.03		0.000		
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	6.14e3	0.118		4.17		0.000		

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-61.qld

Last Altered: Thursday, August 17, 2017 10:24:15 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: 170731M1_61, Date: 31-Jul-2017, Time: 23:03:17, ID: 1700920-13 RCDM-MW-11BR-20170720 0.11813, Description: RCDM-MW-11BR-20170720

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.92	4412.993	4081.394	13.516	bb	61.6
2	44	Total PFBS	299 > 79.7	2.79	93.281	4081.394	0.286	MM	1.3

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	23521.699	2810.290	104.623	MM	531.2

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	46	Total PFOA	413 > 368.7	3.59	1287.981	35974.387	0.448	bd	2.9
2	7	PFOA	413 > 368.7	3.64	15160.726	35974.387	5.268	db	44.8

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.87	88229.602	6264.045	176.064	MM	1526.0

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	14	N-EtFOSAA	584.2 > 419			6143.891		MM-I	

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Dataset: U:\Q4.PRO\results\170731M1\170731M1-61.qld

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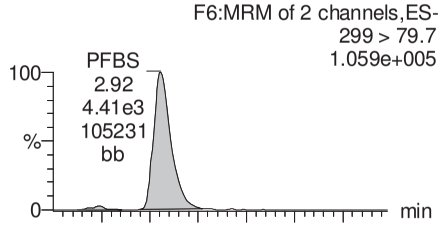
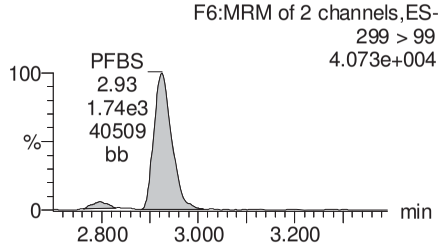
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

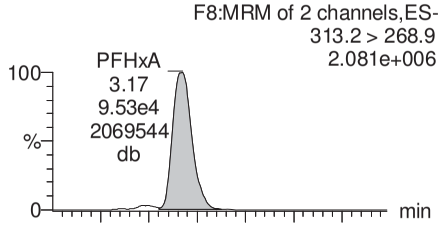
Name: 170731M1_61, Date: 31-Jul-2017, Time: 23:03:17, ID: 1700920-13 RCDM-MW-11BR-20170720 0.11813, Description: RCDM-MW-11BR-20170720

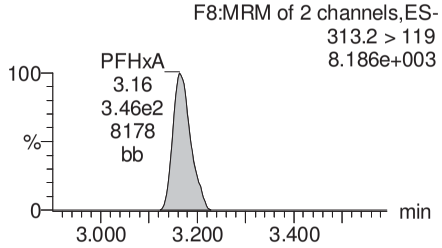
Total PFBS





PFHxA





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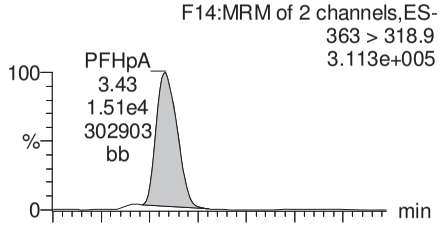
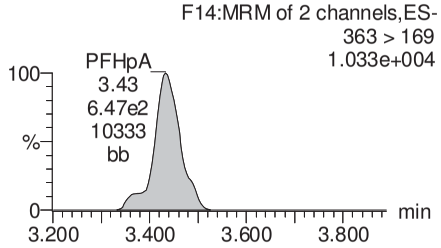
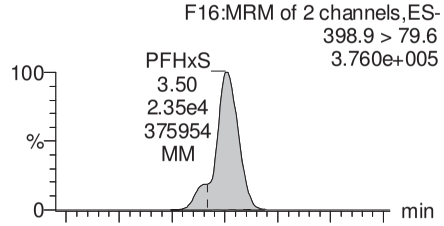
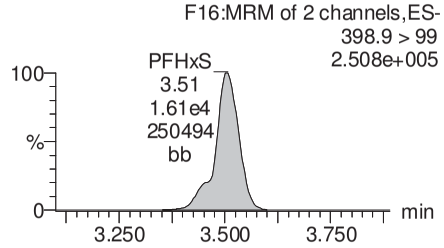


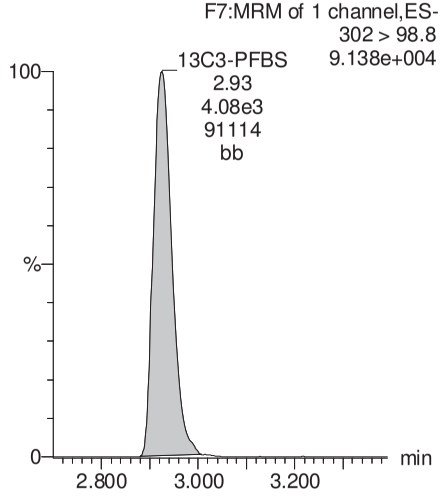


Total PFHxS





13C3-PFBS



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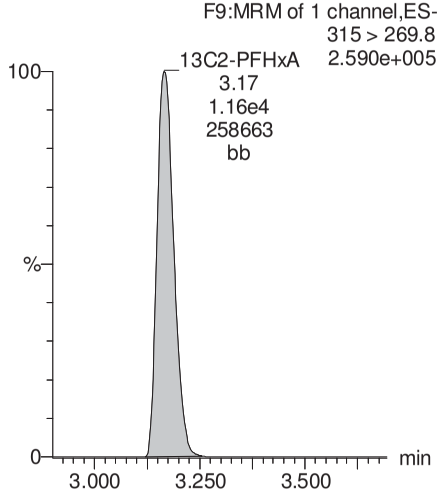

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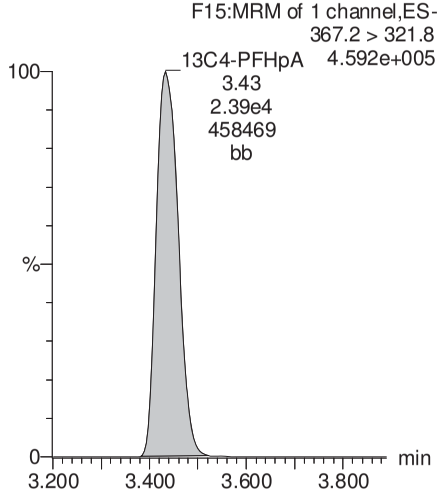

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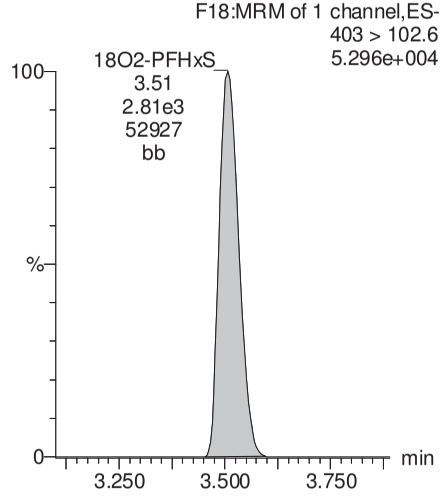

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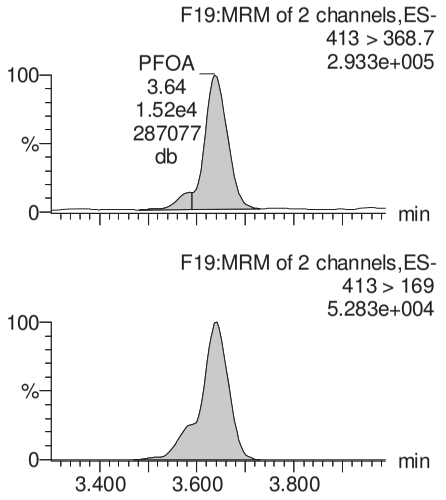
Dataset: U:\Q4.PRO\results\170731M1\170731M1-61.qld

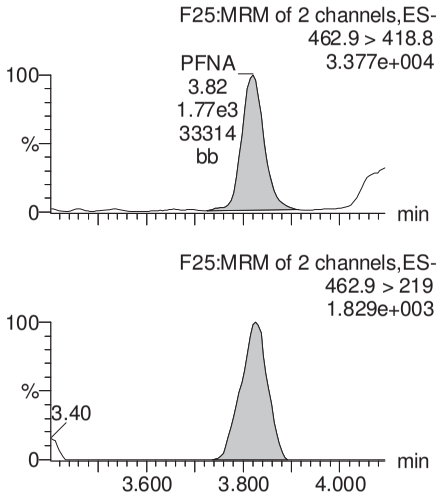
Last Altered: Thursday, August 17, 2017 10:24:15 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:24:33 Pacific Daylight Time

Name: 170731M1_61, Date: 31-Jul-2017, Time: 23:03:17, ID: 1700920-13 RCDM-MW-11BR-20170720 0.11813, Description: RCDM-MW-11BR-20170720

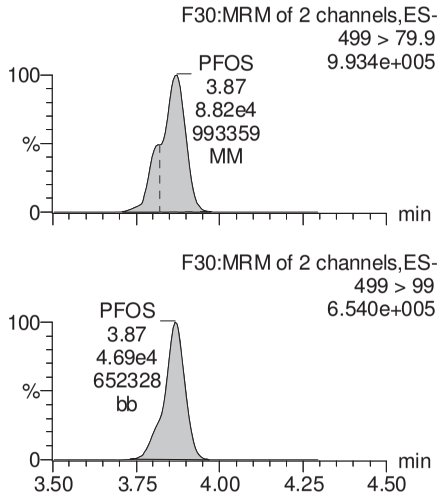
Total PFOA



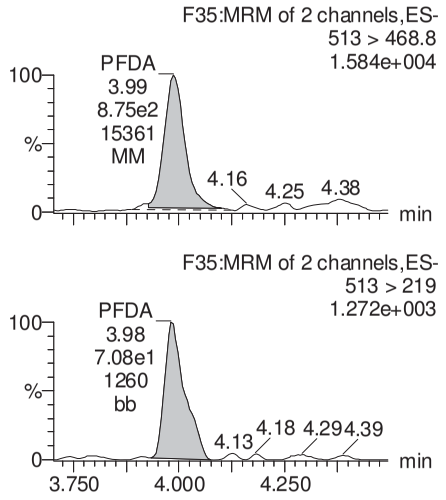
PFNA



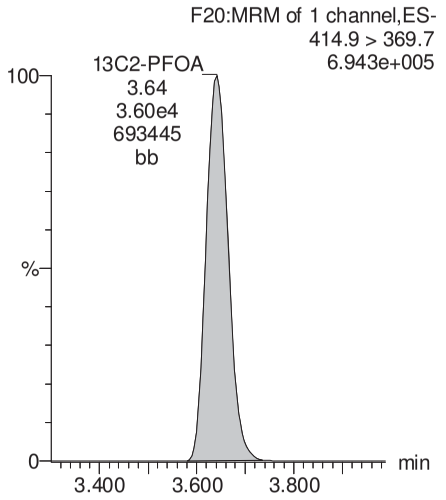
Total PFOS



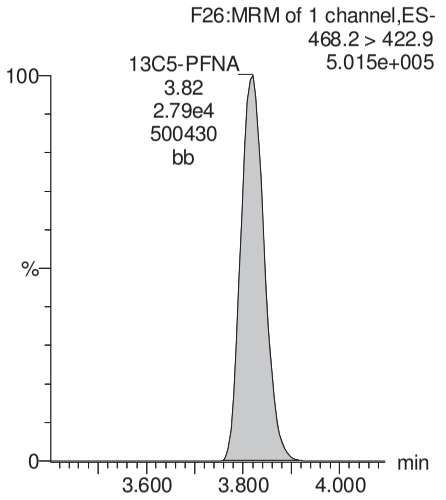
PFDA



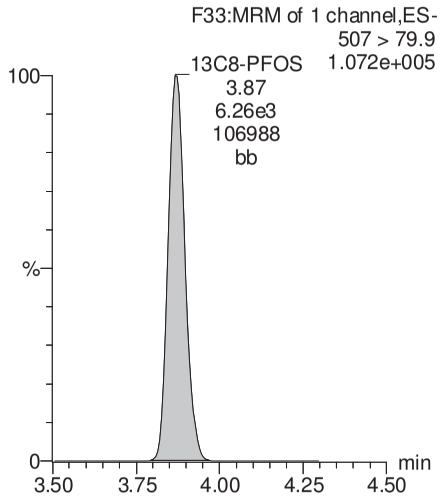
13C2-PFOA



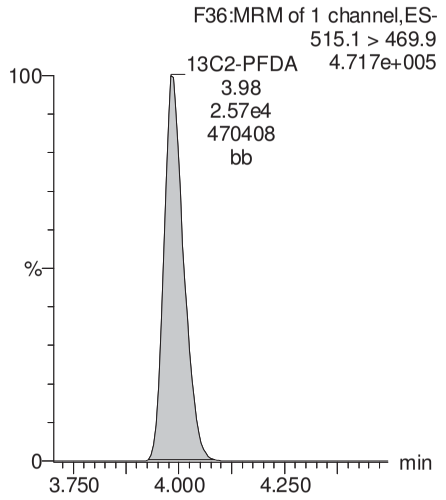
13C5-PFNA



13C8-PFOS



13C2-PFDA



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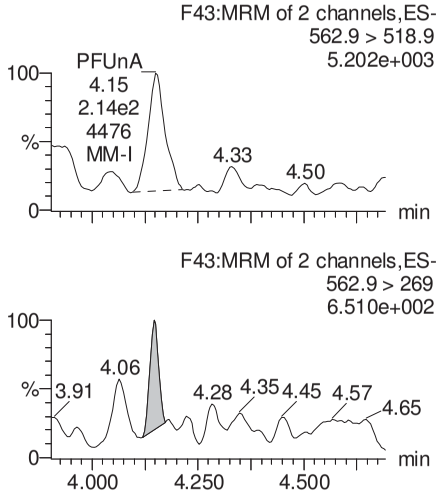
Dataset: U:\Q4.PRO\results\170731M1\170731M1-61.qld

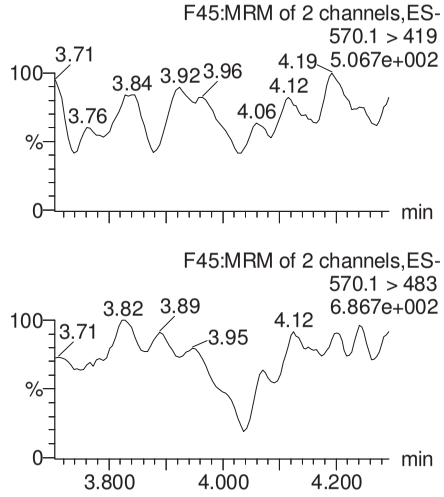
Last Altered: Thursday, August 17, 2017 10:24:15 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:24:33 Pacific Daylight Time

Name: 170731M1_61, Date: 31-Jul-2017, Time: 23:03:17, ID: 1700920-13 RCDM-MW-11BR-20170720 0.11813, Description: RCDM-MW-11BR-20170720

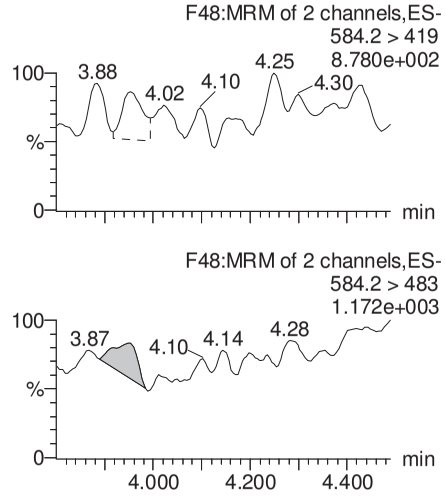
PFUnA



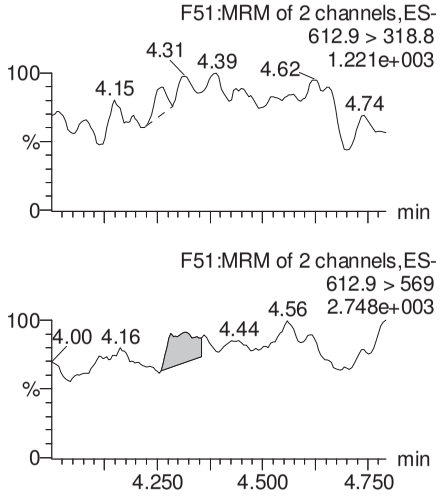
N-MeFOSAA



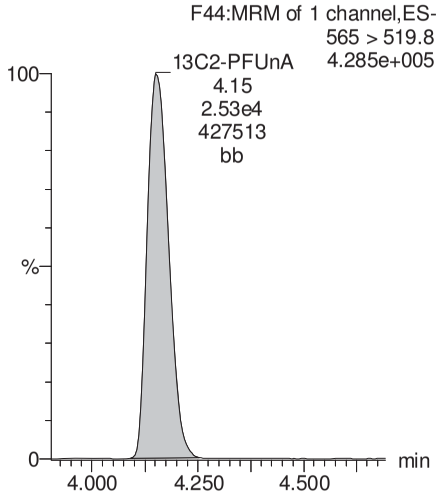
N-EtFOSAA



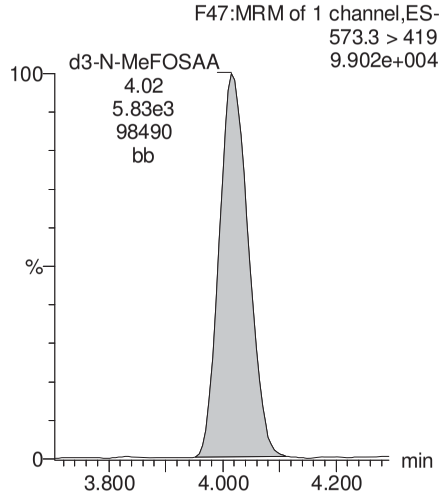
PFDoA



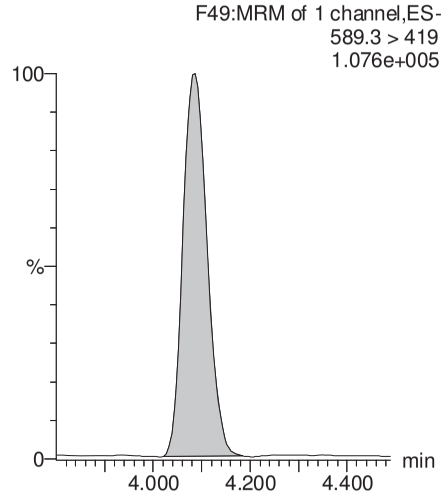
13C2-PFUnA



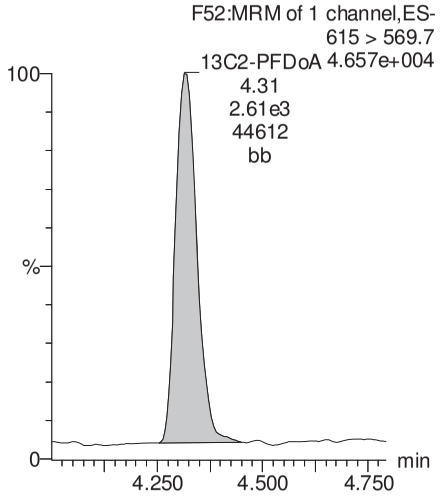
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



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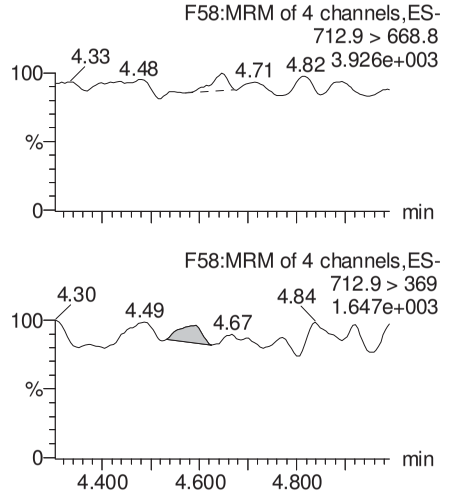
Dataset: U:\Q4.PRO\results\170731M1\170731M1-61.qld

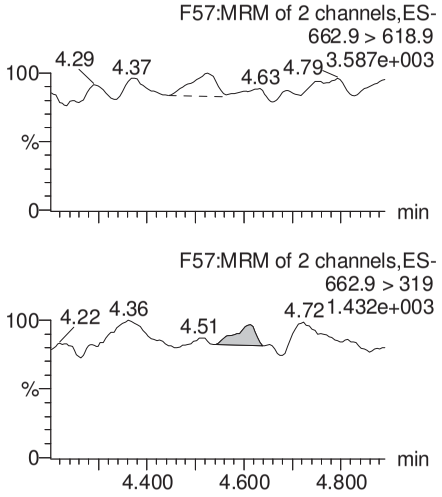
Last Altered: Thursday, August 17, 2017 10:24:15 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:24:33 Pacific Daylight Time

Name: 170731M1_61, Date: 31-Jul-2017, Time: 23:03:17, ID: 1700920-13 RCDM-MW-11BR-20170720 0.11813, Description: RCDM-MW-11BR-20170720

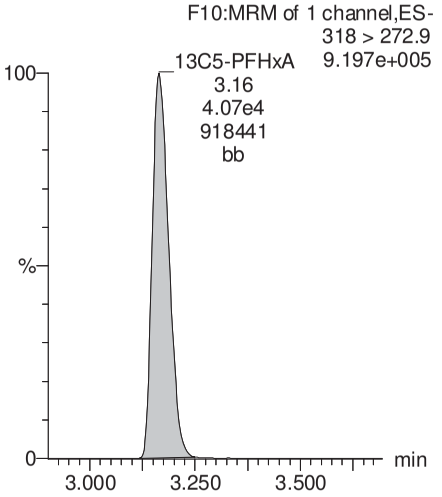
PFTeDA



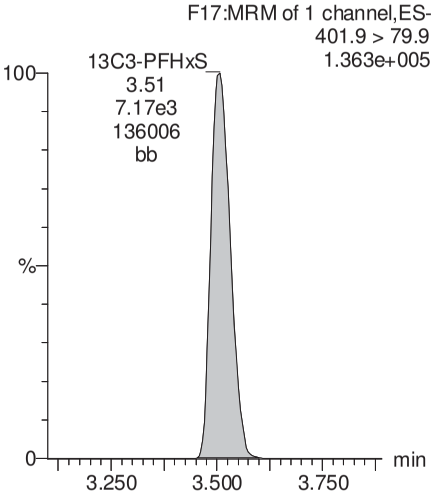
PFTrDA



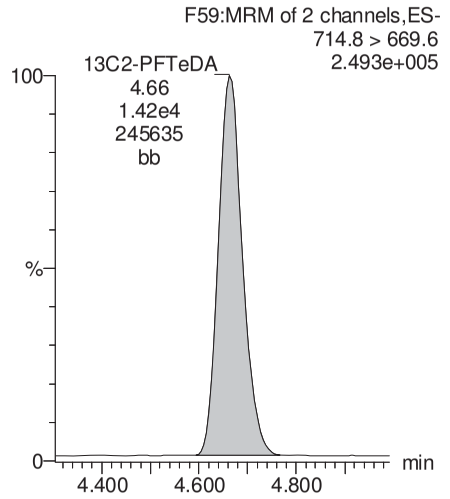
13C5-PFHxA



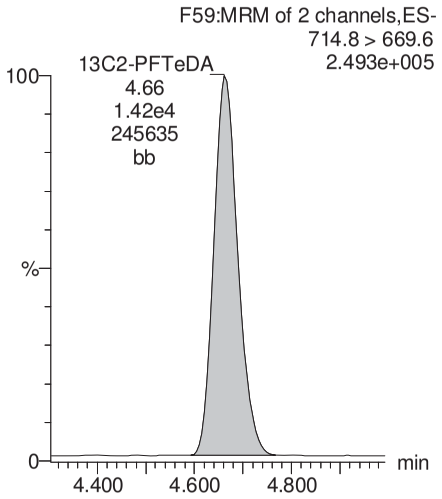
13C3-PFHxS



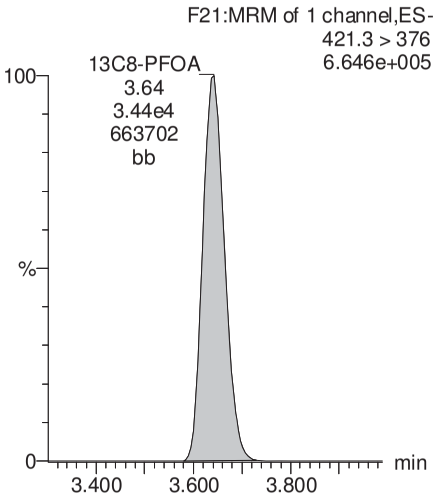
13C2-PFTeDA



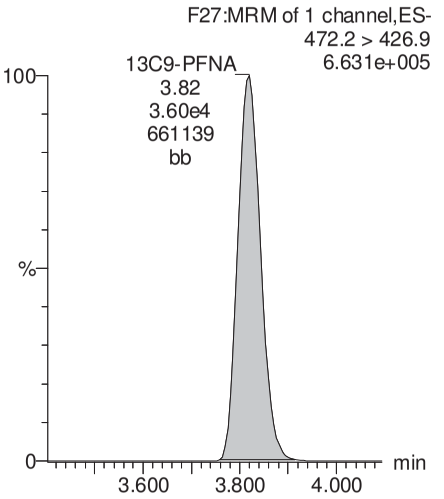
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

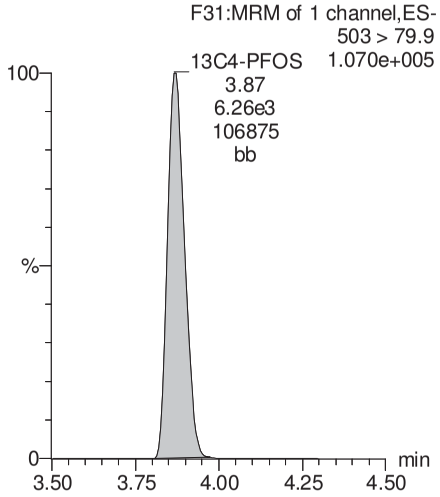
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-61.qld

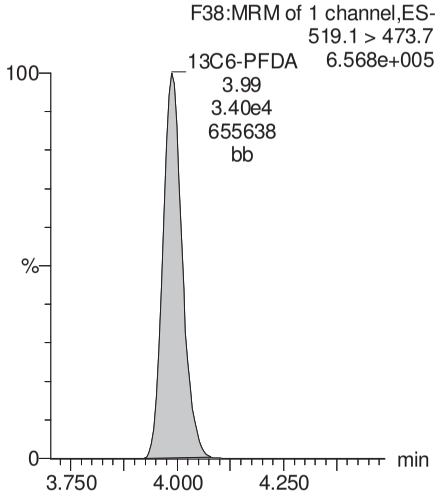
Last Altered: Thursday, August 17, 2017 10:24:15 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:24:33 Pacific Daylight Time

Name: 170731M1_61, Date: 31-Jul-2017, Time: 23:03:17, ID: 1700920-13 RCDM-MW-11BR-20170720 0.11813, Description: RCDM-MW-11BR-20170720

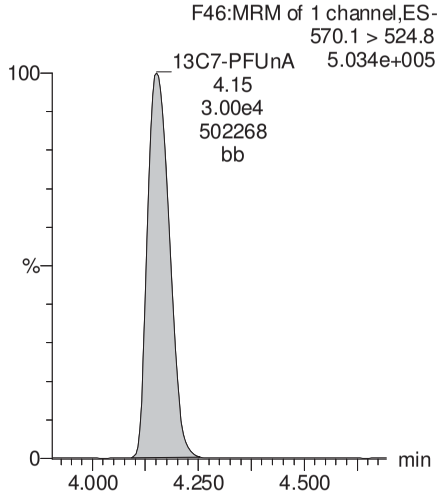
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-62.qld

Last Altered: Thursday, August 17, 2017 10:26:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:27:14 Pacific Daylight Time

*See dilution.

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: 170731M1_62, Date: 31-Jul-2017, Time: 23:13:55, ID: 1700920-14 RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	3.02e4	3.57e3	0.116		2.96	2.92	106	491	
2	4	PFHxA	313.2 > 268.9	5.64e5	1.07e4	0.116		3.19	3.16	264	1630	
3	5	PFHpA	363 > 318.9	1.86e5	2.49e4	0.116		3.45	3.43	93.3	681	
4	6	PFHxS	398.9 > 79.6	8.93e4	2.38e3	0.116		3.56	3.50	469	2420 E*	
5	7	PFOA	413 > 368.7	1.28e5	3.43e4	0.116		3.65	3.64	46.6	411	
6	9	PFNA	462.9 > 418.8	5.25e4	2.56e4	0.116		3.83	3.81	25.6	206	
7	11	PFOS	499 > 79.9	1.31e5	5.29e3	0.116		3.89	3.87	309	2760 E*	
8	12	PFDA	513 > 468.8	3.40e3	2.76e4	0.116		4.01	3.99	1.54	9.82	
9	13	N-MeFOSAA	570.1 > 419		4.96e3	0.116		4.03				
10	14	N-EtFOSAA	584.2 > 419		4.90e3	0.116		4.10				
11	15	PFUnA	562.9 > 518.9		2.89e4	0.116		4.11				
12	17	PFDoA	612.9 > 318.8		2.31e3	0.116		4.34				
13	18	PFTrDA	662.9 > 618.9		2.31e3	0.116		4.50				
14	19	PFTeDA	712.9 > 668.8		7.33e3	0.116		4.68				
15	22	13C3-PFBS	302 > 98.8	3.57e3	3.64e4	0.116	0.033	2.96	2.92	0.490	128	118.6
16	23	13C2-PFHxA	315 > 269.8	1.07e4	3.64e4	0.116	0.335	3.19	3.16	1.47	37.7	87.7
17	24	13C4-PFHpA	367.2 > 321.8	2.49e4	3.64e4	0.116	0.369	3.45	3.43	3.43	79.9	74.3
18	25	18O2-PFHxS	403 > 102.6	2.38e3	5.51e3	0.116	0.460	3.56	3.50	5.40	101	93.9
19	26	13C2-PFOA	414.9 > 369.7	3.43e4	3.10e4	0.116	1.293	3.65	3.64	13.8	92.0	85.5
20	27	13C5-PFNA	468.2 > 422.9	2.56e4	3.31e4	0.116	0.986	3.83	3.81	9.67	84.4	78.5

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-62.qld

Last Altered: Thursday, August 17, 2017 10:26:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:27:21 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: 170731M1_62, Date: 31-Jul-2017, Time: 23:13:55, ID: 1700920-14 RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	29	13C8-PFOS	507 > 79.9	5.29e3	5.25e3	0.116	1.184	3.89	3.87	12.6	91.6	85.1	
2	30	13C2-PFDA	515.1 > 469.9	2.76e4	3.35e4	0.116	0.998	4.01	3.99	10.3	88.7	82.5	
3	31	d3-N-MeFOSAA	573.3 > 419	4.96e3	3.18e4	0.116	0.018	4.03	4.01	1.95	947	67.7	
4	32	d5-N-EtFOSAA	589.3 > 419	4.90e3	3.18e4	0.116	0.018	4.12	4.08	1.93	932	66.7	
5	33	13C2-PFUnA	565 > 519.8	2.89e4	3.18e4	0.116	1.129	4.17	4.15	11.3	86.4	80.3	
6	34	13C2-PFDoA	615 > 569.7	2.31e3	3.18e4	0.116	0.116	4.34	4.31	0.908	67.4	62.6	
7	35	13C2-PFTeDA	714.8 > 669.6	7.33e3	3.18e4	0.116	0.762	4.68	4.66	2.88	32.5	30.2	H
8	37	13C5-PFHxA	318 > 272.9	3.64e4	3.64e4	0.116	1.000	3.19	3.16	5.00	43.0	100.0	
9	38	13C3-PFHxS	401.9 > 79.9	5.51e3	5.51e3	0.116	1.000	3.56	3.50	12.5	108	100.0	
10	39	13C8-PFOA	421.3 > 376	3.10e4	3.10e4	0.116	1.000	3.65	3.64	12.5	108	100.0	
11	40	13C9-PFNA	472.2 > 426.9	3.31e4	3.31e4	0.116	1.000	3.83	3.81	12.5	108	100.0	
12	41	13C4-PFOS	503 > 79.9	5.25e3	5.25e3	0.116	1.000	3.89	3.87	12.5	108	100.0	
13	42	13C6-PFDA	519.1 > 473.7	3.35e4	3.35e4	0.116	1.000	4.01	3.99	12.5	108	100.0	
14	43	13C7-PFUnA	570.1 > 524.8	3.18e4	3.18e4	0.116	1.000	4.17	4.15	12.5	108	100.0	
15	44	Total PFBS	299 > 79.7	3.09e4	3.57e3	0.116		2.96		108	501		
16	45	Total PFHxS	398.9 > 79.6	8.93e4	2.38e3	0.116		3.52		469	2420		
17	46	Total PFOA	413 > 368.7	1.32e5	3.43e4	0.116		3.65		48.0	423		
18	47	Total PFOS	499 > 79.9	1.31e5	5.29e3	0.116		3.89		309	2760		
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	4.96e3	0.116		4.03		0.000			
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	4.90e3	0.116		4.17		0.000			

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-62.qld

Last Altered: Thursday, August 17, 2017 10:26:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:27:21 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: 170731M1_62, Date: 31-Jul-2017, Time: 23:13:55, ID: 1700920-14 RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.92	30237.379	3569.755	105.880	bb	490.5
2	44	Total PFBS	299 > 79.7	2.78	657.300	3569.755	2.302	bb	10.7

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	89317.781	2380.090	469.088	MM	2422.4

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.64	127899.094	34316.945	46.587	MM	411.2
2	46	Total PFOA	413 > 368.7	3.59	3941.602	34316.945	1.436	MM	11.6

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.87	131022.055	5293.673	309.384	MM	2759.2

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			4958.118		MM-	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14	N-EtFOSAA	584.2 > 419			4903.497		MM-I	

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Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-62.qld

Last Altered: Thursday, August 17, 2017 10:26:55 Pacific Daylight Time
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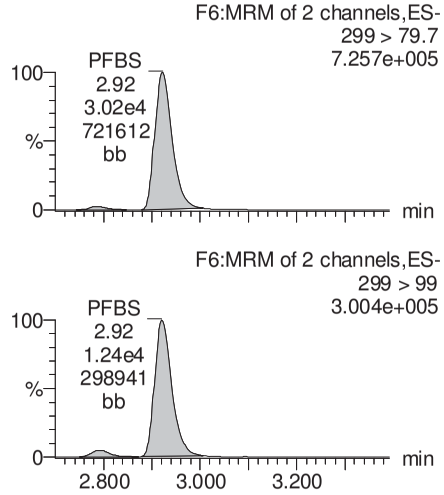
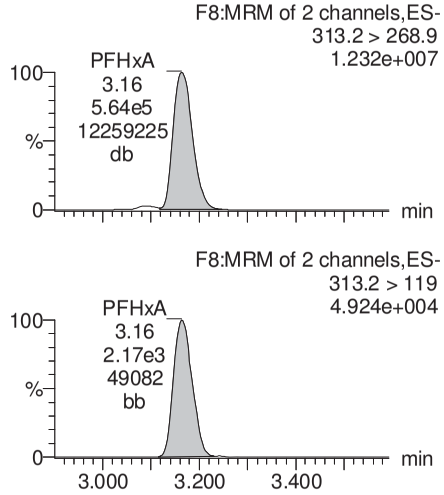
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170731M1_62, Date: 31-Jul-2017, Time: 23:13:55, ID: 1700920-14 RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

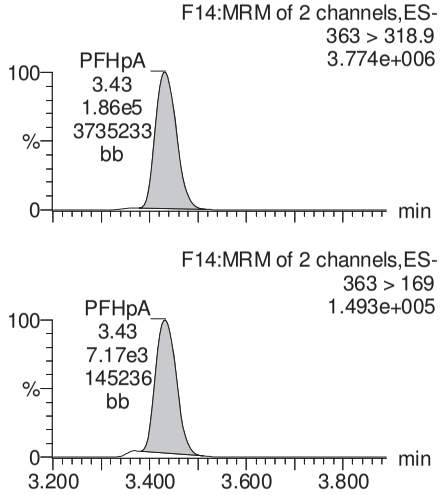
Total PFBS



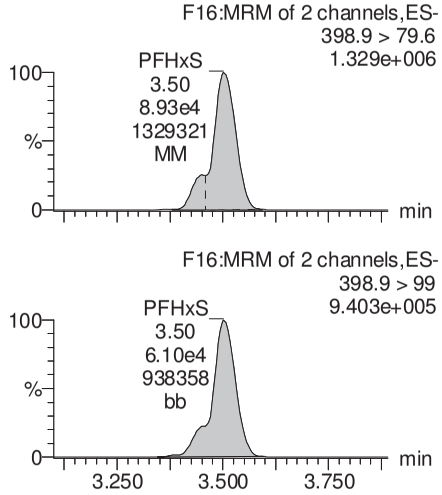
PFHxA



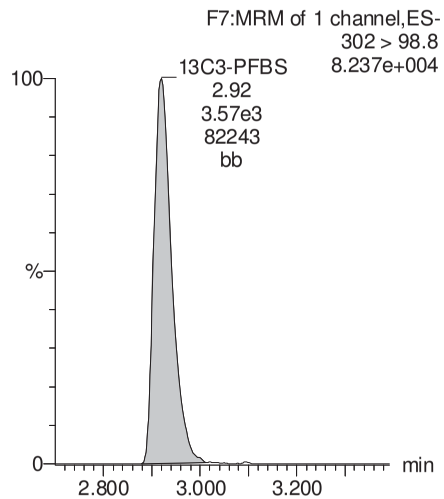
PFHpA



Total PFHxS



13C3-PFBS



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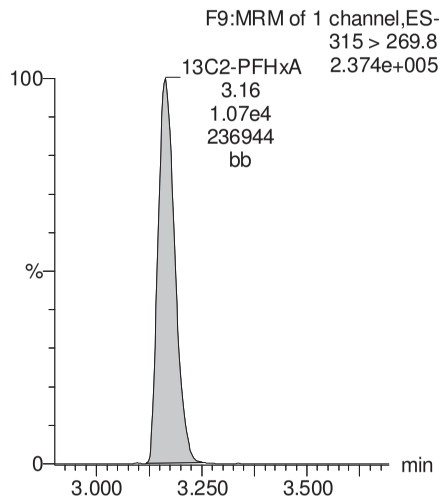

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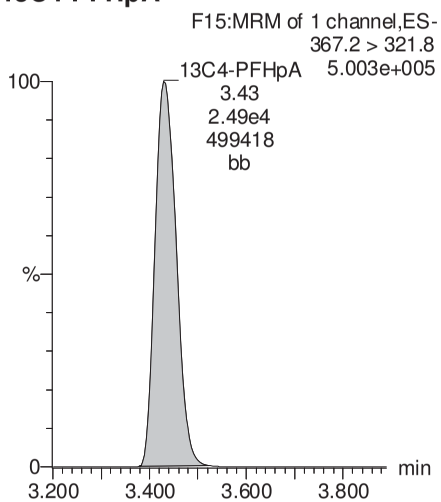
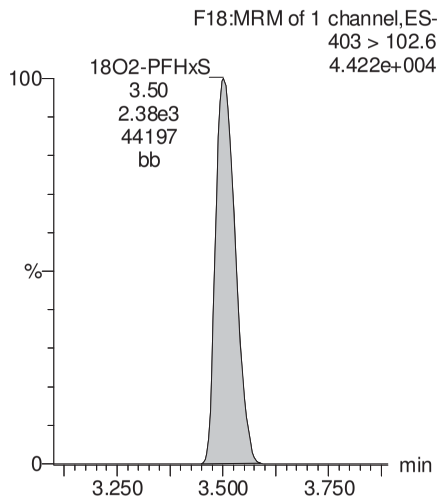


18O2-PFHxS



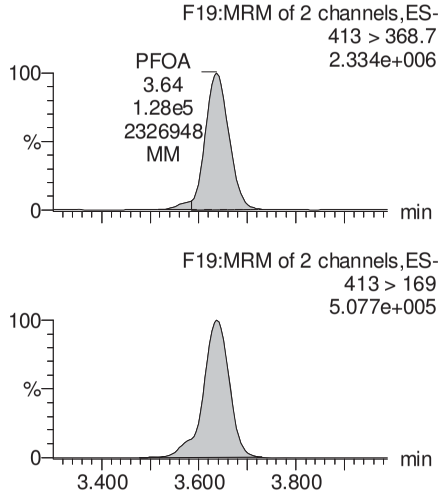
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-62.qld

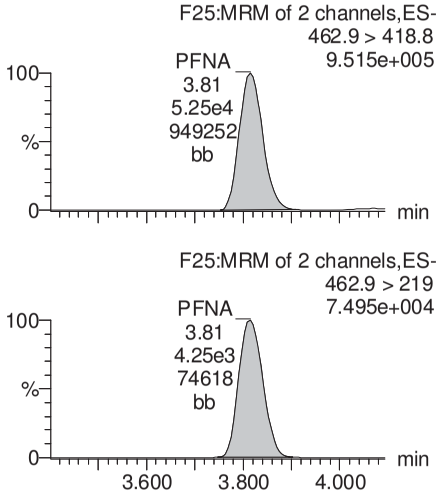
Last Altered: Thursday, August 17, 2017 10:26:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:27:21 Pacific Daylight Time

Name: 170731M1_62, Date: 31-Jul-2017, Time: 23:13:55, ID: 1700920-14 RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

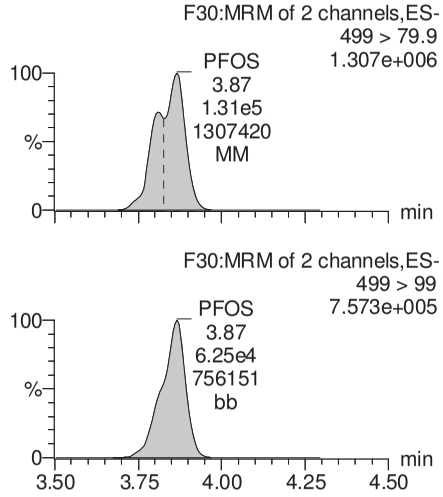
Total PFOA



PFNA



Total PFOS



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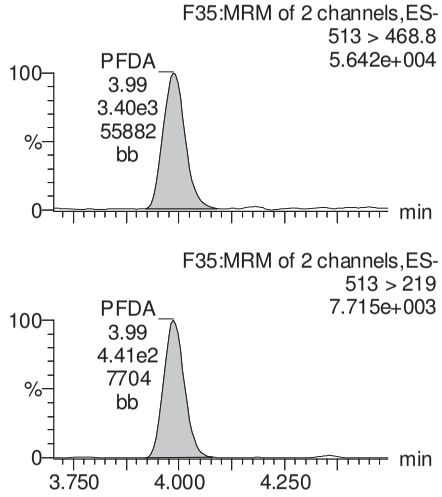
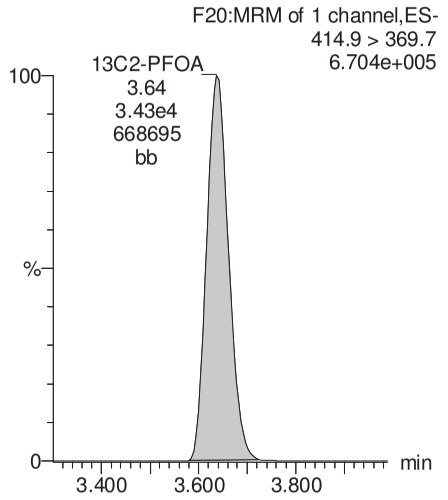
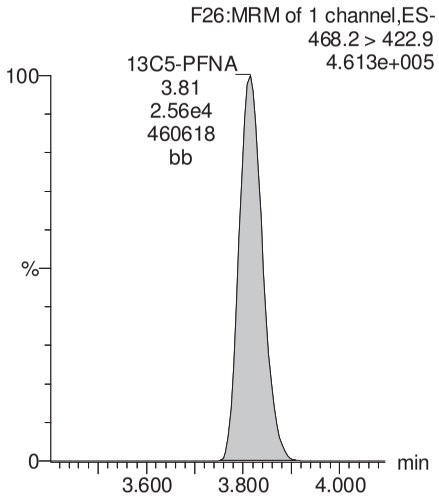


13C2-PFOA



13C5-PFNA



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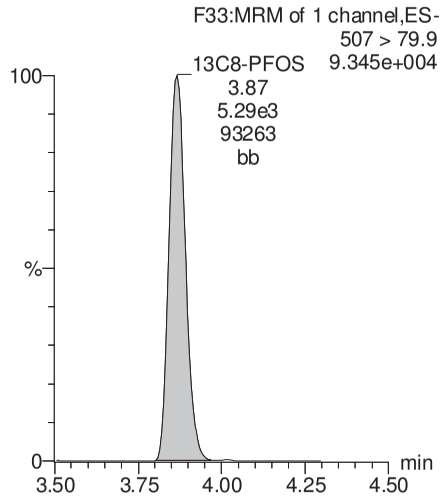

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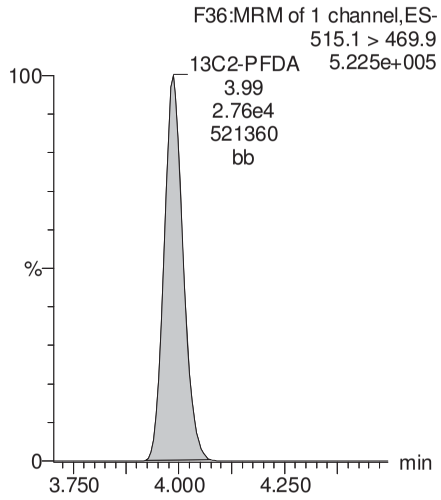


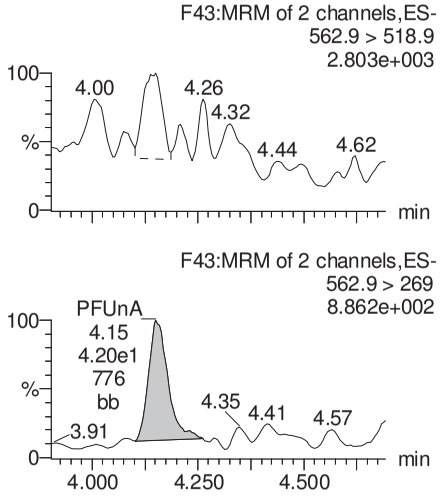
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-62.qld

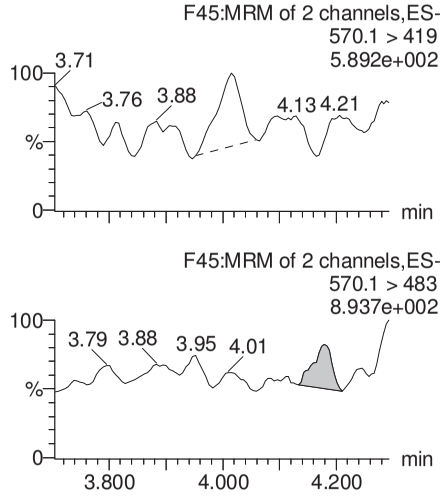
Last Altered: Thursday, August 17, 2017 10:26:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:27:21 Pacific Daylight Time

Name: 170731M1_62, Date: 31-Jul-2017, Time: 23:13:55, ID: 1700920-14 RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

PFUnA



N-MeFOSAA



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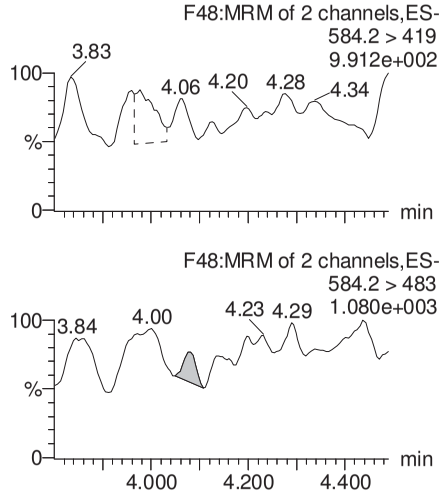
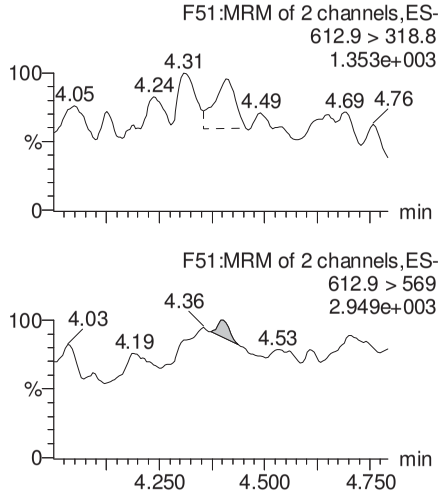


PFDoA



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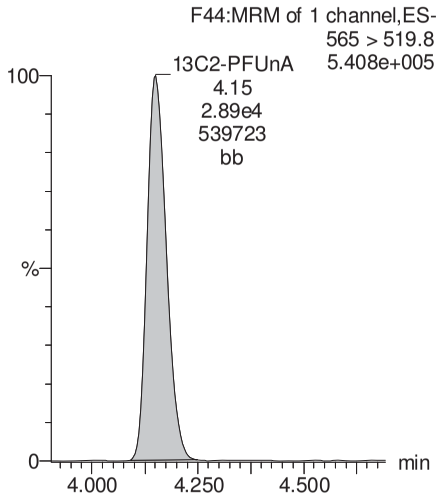

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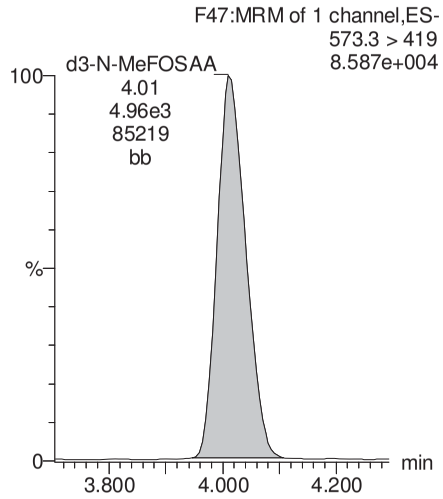

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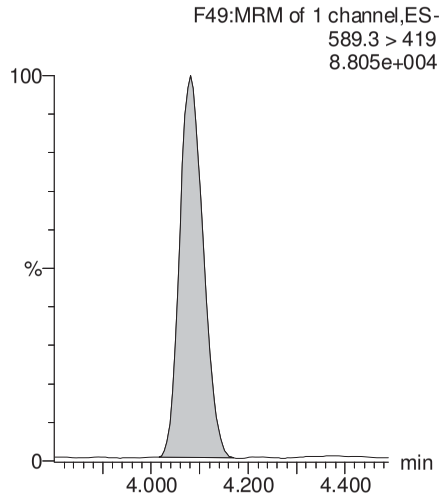

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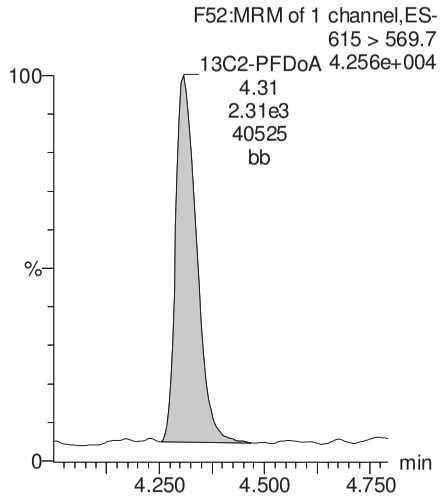

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Vista Analytical Laboratory

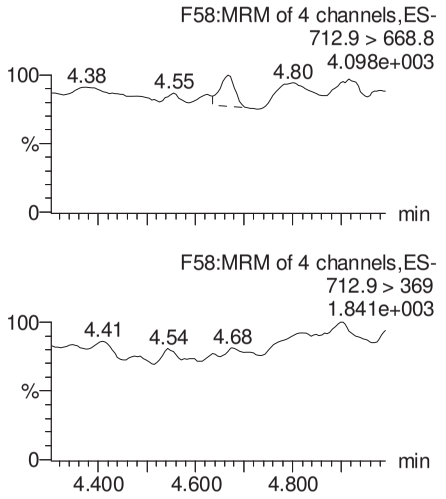
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-62.qld

Last Altered: Thursday, August 17, 2017 10:26:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:27:21 Pacific Daylight Time

Name: 170731M1_62, Date: 31-Jul-2017, Time: 23:13:55, ID: 1700920-14 RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

PFTeDA



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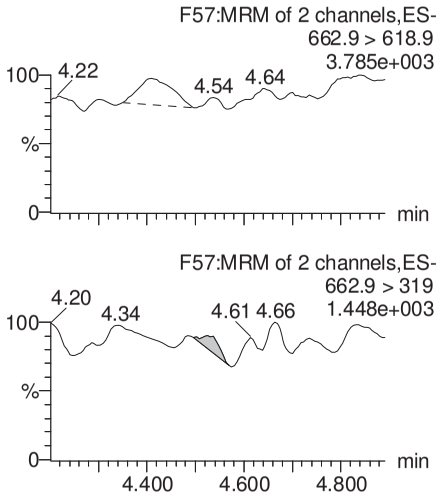

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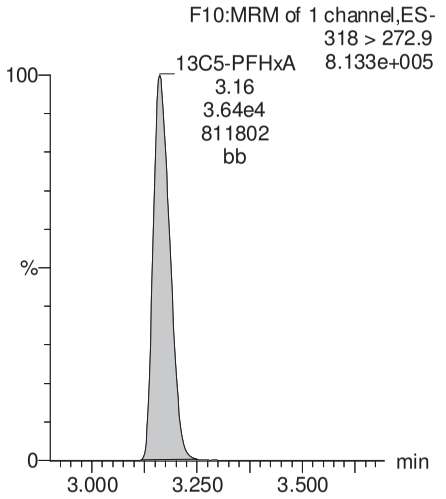

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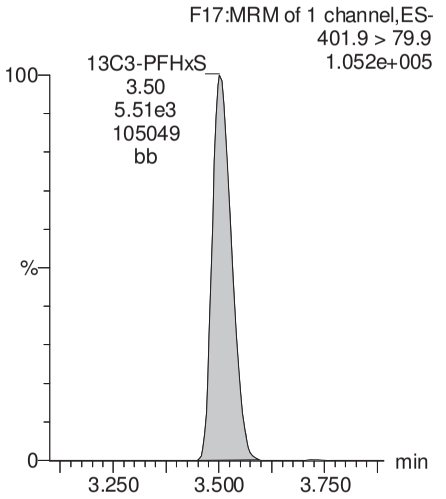

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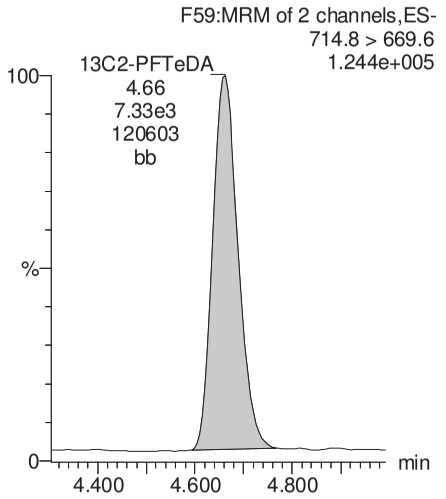

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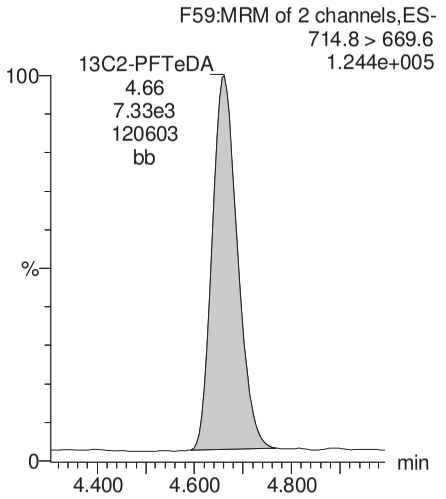
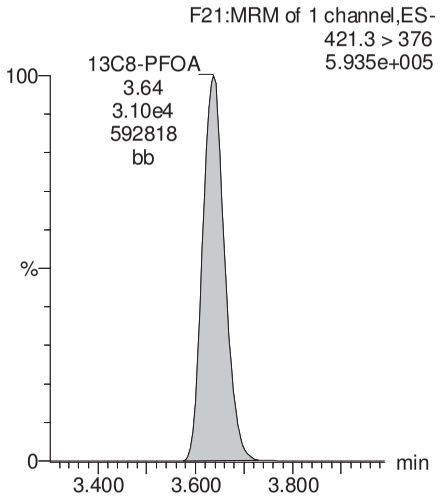
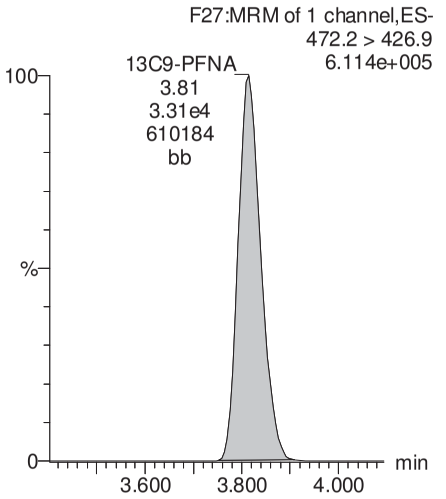


13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

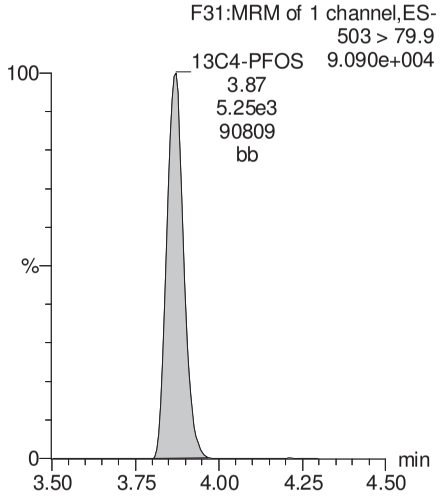
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-62.qld

Last Altered: Thursday, August 17, 2017 10:26:55 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:27:21 Pacific Daylight Time

Name: 170731M1_62, Date: 31-Jul-2017, Time: 23:13:55, ID: 1700920-14 RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

13C4-PFOS



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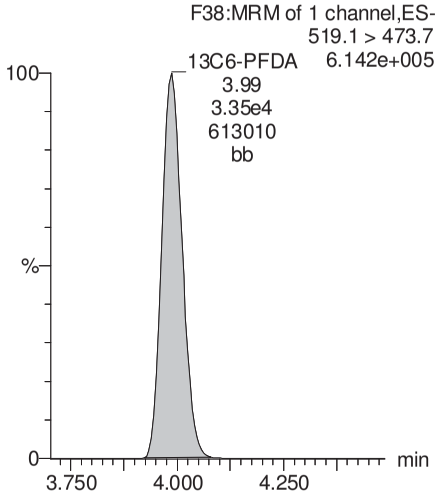
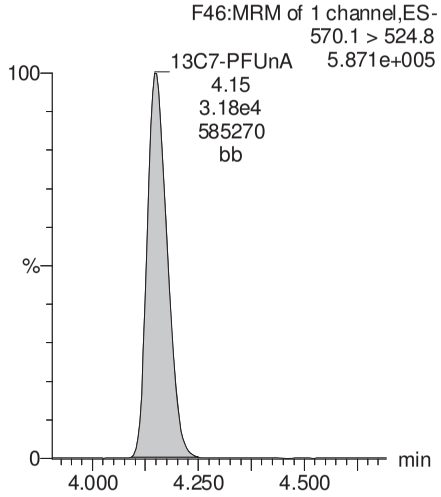


13C7-PFUnA



GM 8/17/17

Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-56.qld

Last Altered: Friday, August 11, 2017 13:43:43 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:43:49 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_56, Date: 01-Aug-2017, Time: 19:39:06, ID: 1700920-14@5X RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	6	PFHxS	398.9 > 79.6	1.76e4	5.09e2	0.1162		3.56	3.51	431	2210	
2	12	PFOS	499 > 79.9	2.69e4	9.56e2	0.1162		3.89	3.88	351	2710	
3	33	18O2-PFHxS	403 > 102.6	5.09e2	1.11e3	0.1162	0.475	3.56	3.51	5.73	104	96.5
4	38	13C8-PFOS	507 > 79.9	9.56e2	1.10e3	0.1162	1.153	3.89	3.88	10.8	80.9	75.2
5	53	13C3-PFHxS	401.9 > 79.9	1.11e3	1.11e3	0.1162	1.000	3.56	3.51	12.5	108	100.0
6	56	13C4-PFOS	503 > 79.9	1.10e3	1.10e3	0.1162	1.000	3.89	3.88	12.5	108	100.0
7	60	Total PFHxS	398.9 > 79.6	1.76e4	5.09e2	0.1162		3.52		431	2210	
8	62	Total PFOS	499 > 79.9	2.69e4	9.56e2	0.1162		3.89		351	2710	

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Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-56.qld

Last Altered: Friday, August 11, 2017 13:43:43 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:43:49 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_56, Date: 01-Aug-2017, Time: 19:39:06, ID: 1700920-14@5X RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.93	5967.713	602.038	123.906	bb	565.7
2	59	Total PFBS	299 > 79.7	2.80	104.842	602.038	2.177	bb	9.6

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.51	17566.195	509.491	430.974	MM	2206.9

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.65	26277.164	6365.351	51.602	db	464.3
2	61	Total PFOA	413 > 368.7	3.59	626.147	6365.351	1.230	bd	9.8
3	61	Total PFOA	413 > 368.7	3.85	155.360	6365.351	0.305	bb	1.4

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.88	26882.957	956.479	351.327	MM	2714.1

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									

AP 8/11/2017

Vista Analytical Laboratory

Rev'd: MM 8/12/17

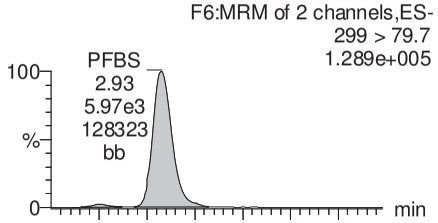
Dataset: U:\Q4.PRO\results\170801M1\170801M1-56.qld

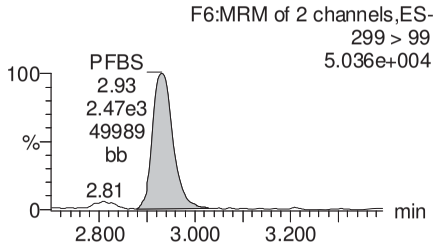
Last Altered: Friday, August 11, 2017 13:43:43 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:43:49 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

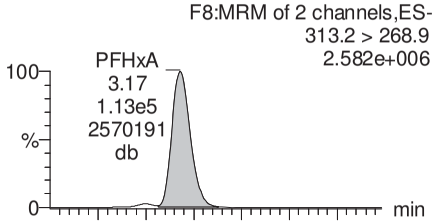
Name: 170801M1_56, Date: 01-Aug-2017, Time: 19:39:06, ID: 1700920-14@5X RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

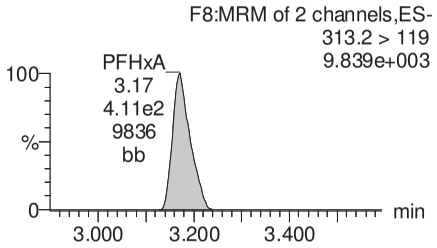
Total PFBS



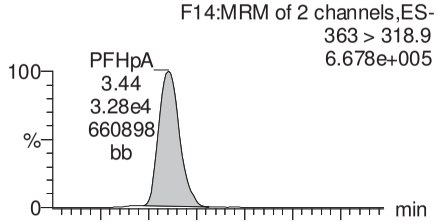


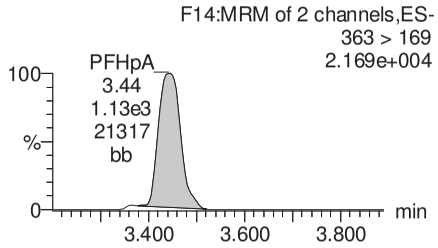
PFHxA



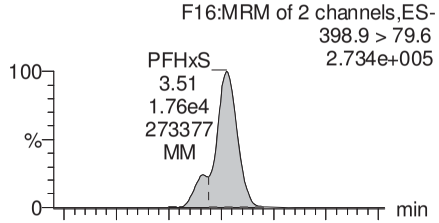


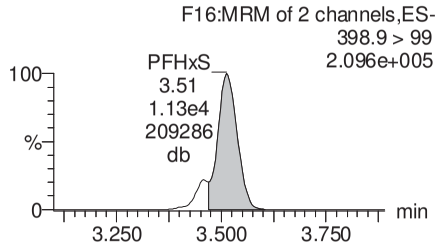
PFHpA



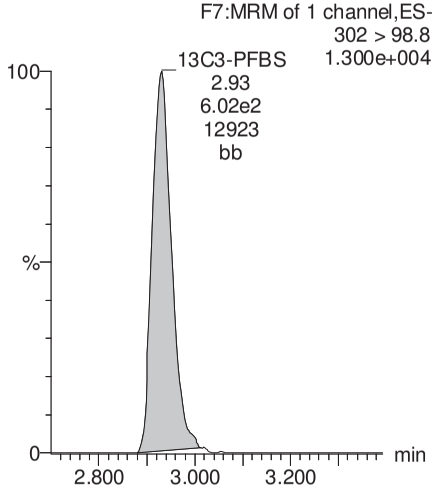


Total PFHxS

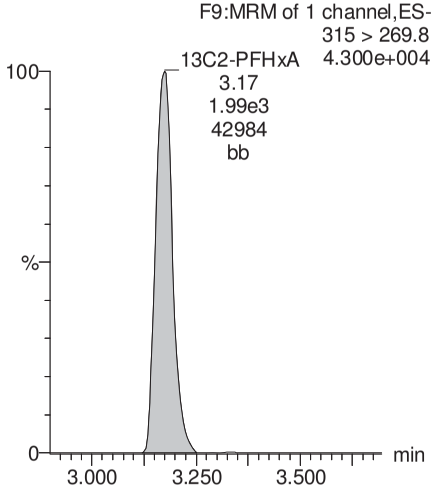




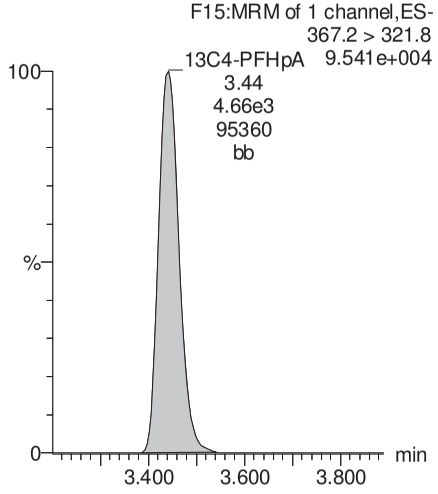
13C3-PFBS



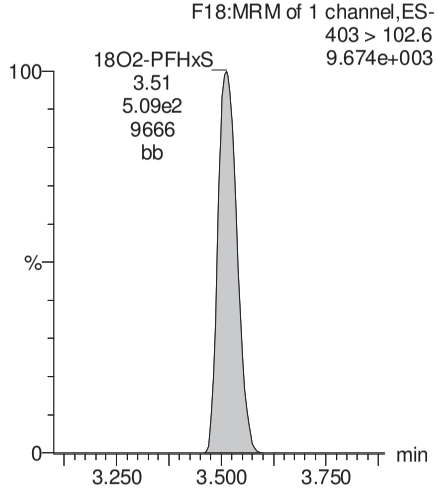
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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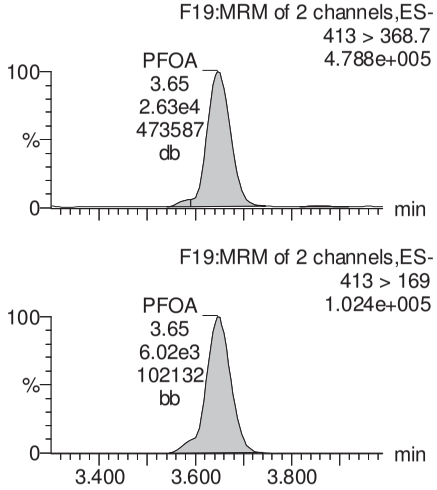
Dataset: U:\Q4.PRO\results\170801M1\170801M1-56.qld

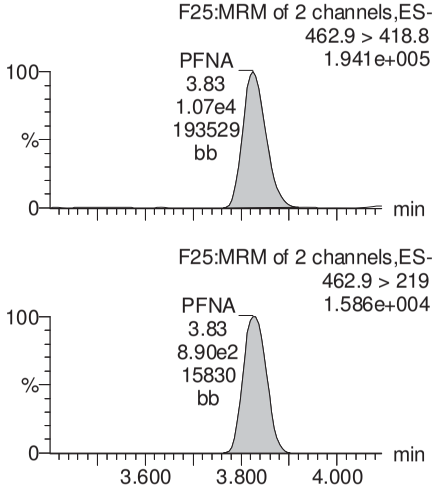
Last Altered: Friday, August 11, 2017 13:43:43 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:43:49 Pacific Daylight Time

Name: 170801M1_56, Date: 01-Aug-2017, Time: 19:39:06, ID: 1700920-14@5X RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

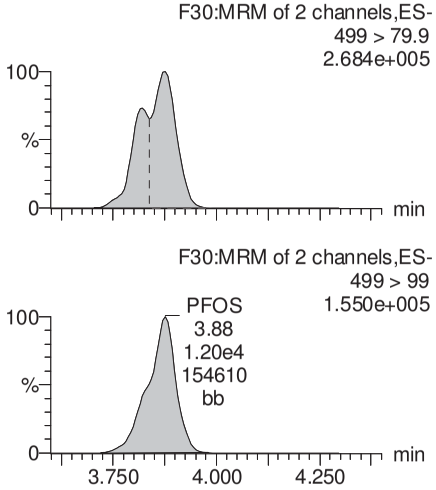
Total PFOA



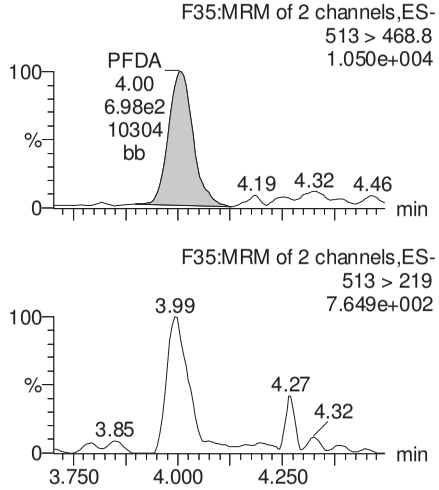
PFNA



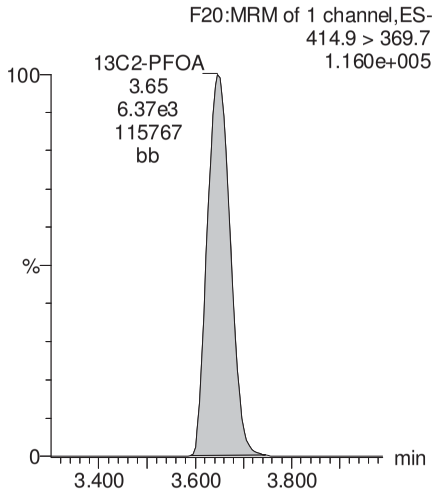
Total PFOS



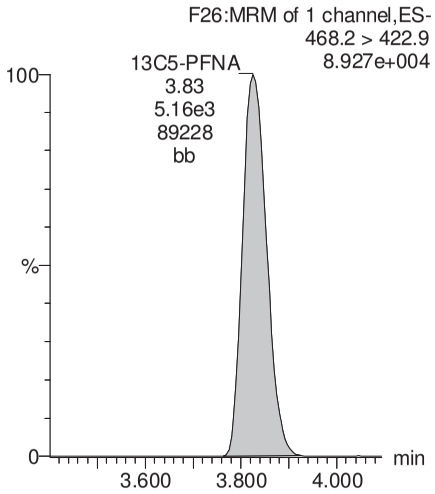
PFDA



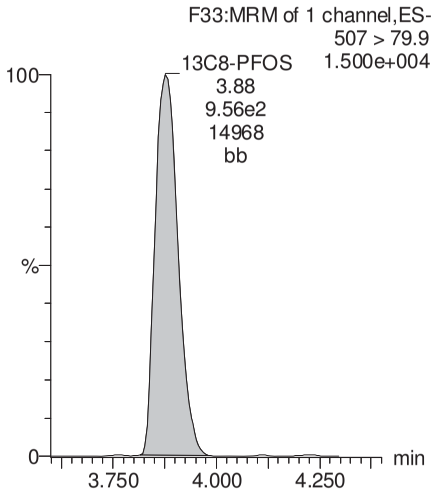
13C2-PFOA



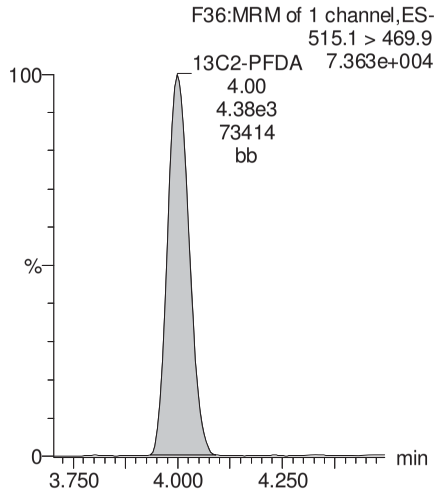
13C5-PFNA



13C8-PFOS



13C2-PFDA



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Vista Analytical Laboratory

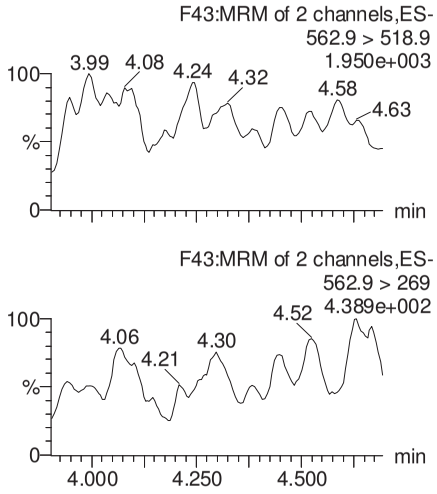
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-56.qld

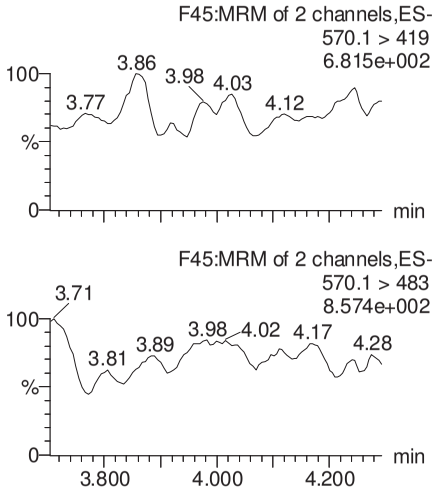
Last Altered: Friday, August 11, 2017 13:43:43 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:43:49 Pacific Daylight Time

Name: 170801M1_56, Date: 01-Aug-2017, Time: 19:39:06, ID: 1700920-14@5X RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

PFUnA



N-MeFOSAA



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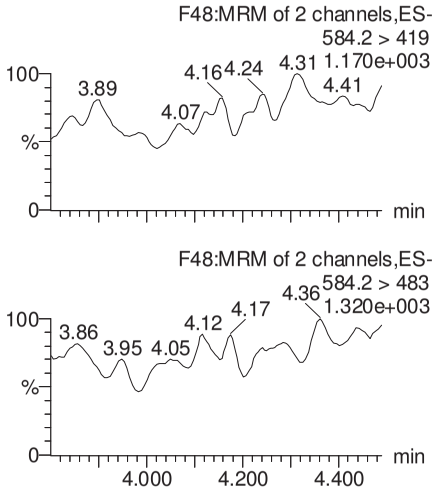
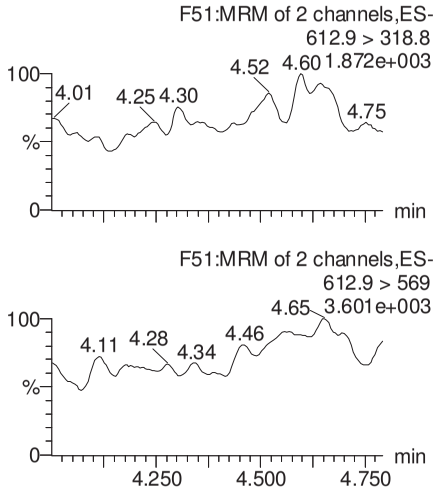


PFDoA



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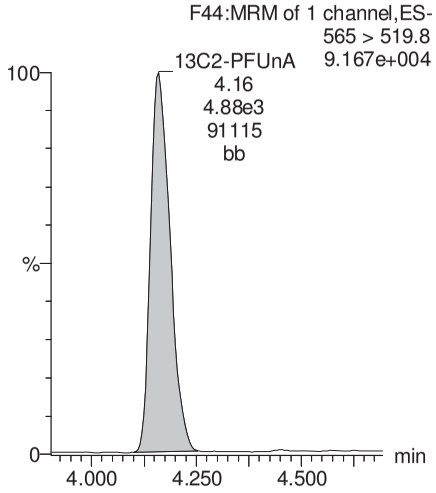
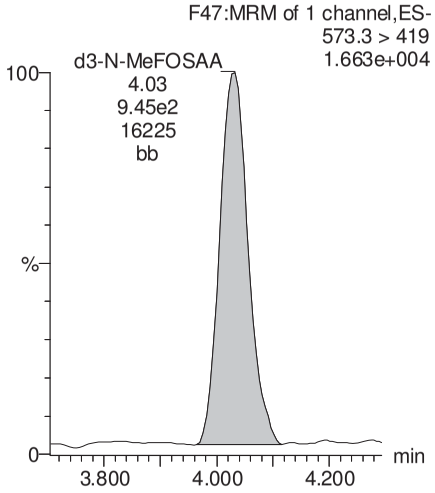
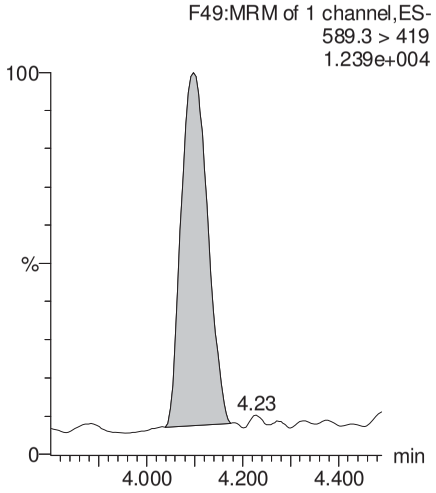


d3-N-MeFOSAA



d5-N-EtFOSAA



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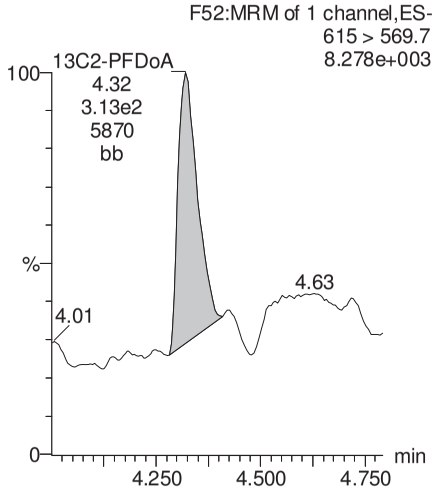


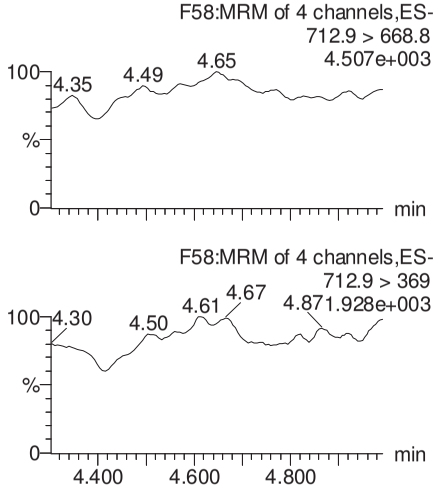
AP 8/11/2017

Dataset: U:\Q4.PRO\results\170801M1\170801M1-56.qld

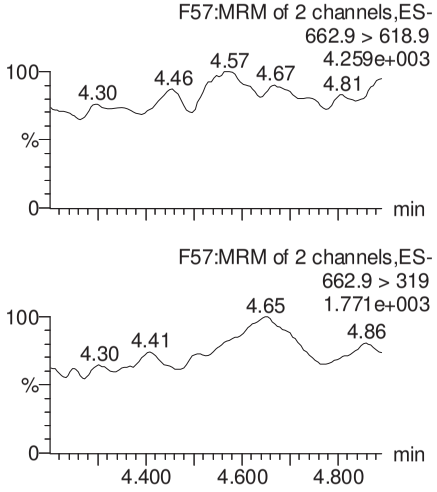
Last Altered: Friday, August 11, 2017 13:43:43 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:43:49 Pacific Daylight Time

Name: 170801M1_56, Date: 01-Aug-2017, Time: 19:39:06, ID: 1700920-14@5X RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

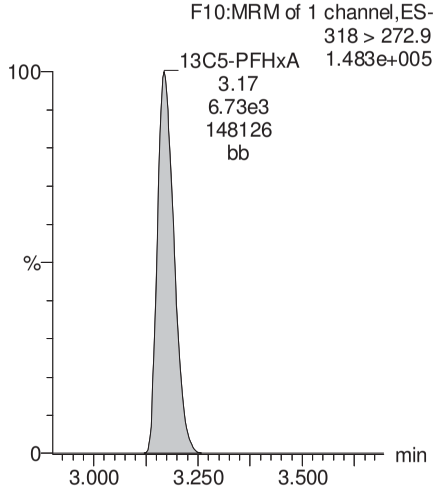
PFTeDA



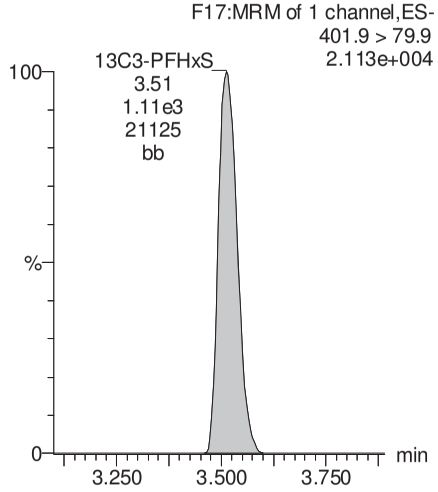
PFTrDA



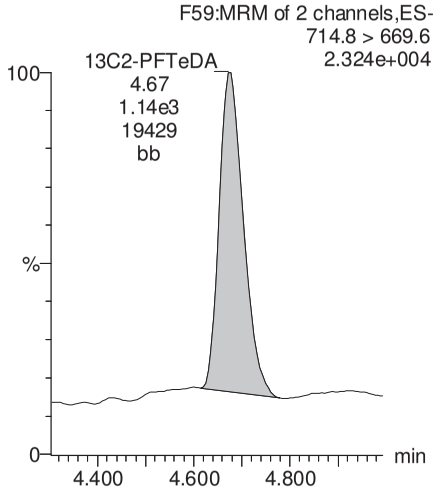
13C5-PFHxA



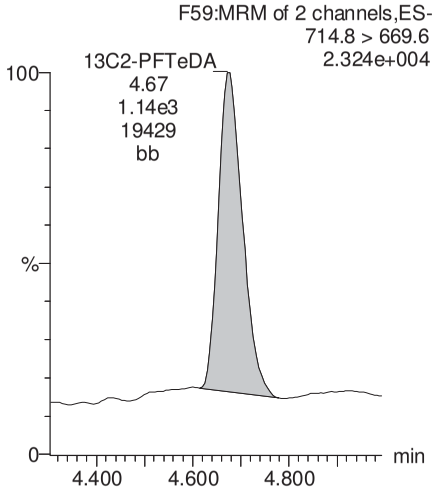
13C3-PFHxS



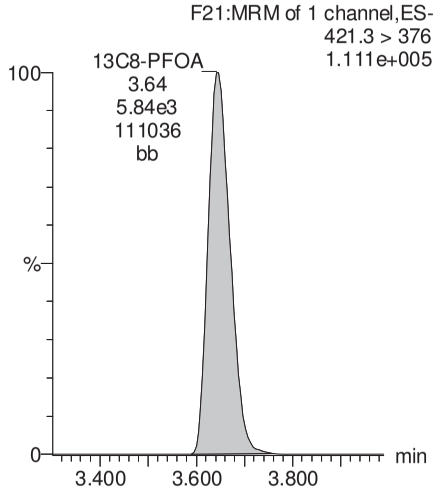
13C2-PFTeDA



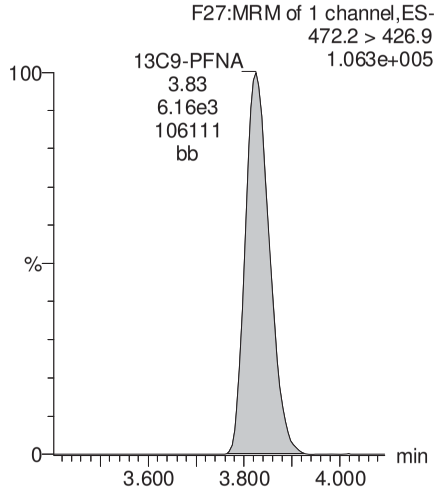
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

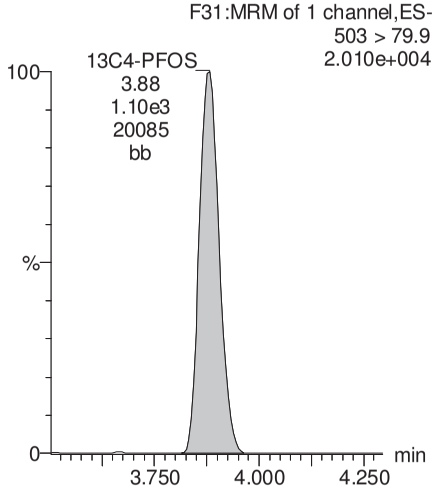
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-56.qld

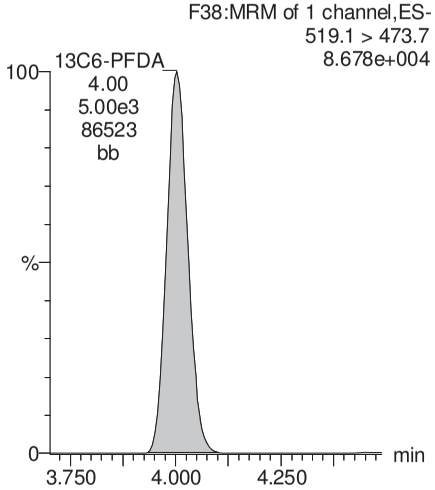
Last Altered: Friday, August 11, 2017 13:43:43 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:43:49 Pacific Daylight Time

Name: 170801M1_56, Date: 01-Aug-2017, Time: 19:39:06, ID: 1700920-14@5X RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

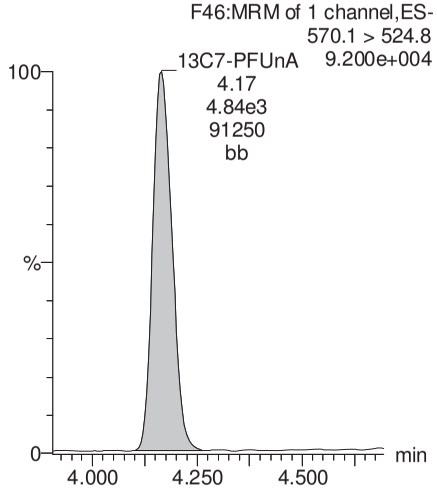
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-63.qld

Last Altered: Thursday, August 17, 2017 10:31:05 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:31:15 Pacific Daylight Time

*See dilution.

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: 170731M1_63, Date: 31-Jul-2017, Time: 23:24:34, ID: 1700920-15 LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	1.66e4	4.07e3	0.116		2.96	2.92	50.9	237	
2	4	PFHxA	313.2 > 268.9	3.33e5	1.17e4	0.116		3.19	3.17	143	884	
3	5	PFHpA	363 > 318.9	9.38e4	2.76e4	0.116		3.45	3.43	42.5	311	
4	6	PFHxS	398.9 > 79.6	6.44e4	2.50e3	0.116		3.56	3.51	322	1670	
5	7	PFOA	413 > 368.7	6.13e4	3.23e4	0.116		3.65	3.64	23.8	210	
6	9	PFNA	462.9 > 418.8	1.50e4	2.72e4	0.116		3.83	3.82	6.90	55.1	
7	11	PFOS	499 > 79.9	1.17e5	5.30e3	0.116		3.89	3.87	275	2460 E*	
8	12	PFDA	513 > 468.8	3.26e3	2.71e4	0.116		4.01	3.99	1.51	9.62	
9	13	N-MeFOSAA	570.1 > 419		4.92e3	0.116		4.03				
10	14	N-EtFOSAA	584.2 > 419		5.07e3	0.116		4.10				
11	15	PFUnA	562.9 > 518.9		2.54e4	0.116		4.11				
12	17	PFDoA	612.9 > 318.8		2.39e3	0.116		4.34				
13	18	PFTrDA	662.9 > 618.9		2.39e3	0.116		4.50				
14	19	PFTeDA	712.9 > 668.8		7.38e3	0.116		4.68				
15	22	13C3-PFBS	302 > 98.8	4.07e3	4.41e4	0.116	0.033	2.96	2.92	0.461	120	111.6
16	23	13C2-PFHxA	315 > 269.8	1.17e4	4.41e4	0.116	0.335	3.19	3.16	1.32	34.1	78.8
17	24	13C4-PFHpA	367.2 > 321.8	2.76e4	4.41e4	0.116	0.369	3.45	3.43	3.13	73.3	67.9
18	25	18O2-PFHxS	403 > 102.6	2.50e3	6.86e3	0.116	0.460	3.56	3.50	4.56	85.6	79.3
19	26	13C2-PFOA	414.9 > 369.7	3.23e4	3.65e4	0.116	1.293	3.65	3.64	11.1	73.9	68.4
20	27	13C5-PFNA	468.2 > 422.9	2.72e4	3.89e4	0.116	0.986	3.83	3.82	8.73	76.6	70.9

GM 8/17/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-63.qld

Last Altered: Thursday, August 17, 2017 10:31:05 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:31:25 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: 170731M1_63, Date: 31-Jul-2017, Time: 23:24:34, ID: 1700920-15 LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	29	13C8-PFOS	507 > 79.9	5.30e3	6.05e3	0.116	1.184	3.89	3.87	11.0	80.0	74.0	
2	30	13C2-PFDA	515.1 > 469.9	2.71e4	3.61e4	0.116	0.998	4.01	3.98	9.37	81.2	75.2	
3	31	d3-N-MeFOSAA	573.3 > 419	4.92e3	3.38e4	0.116	0.018	4.03	4.01	1.82	888	63.2	
4	32	d5-N-EtFOSAA	589.3 > 419	5.07e3	3.38e4	0.116	0.018	4.12	4.08	1.87	910	64.8	
5	33	13C2-PFUnA	565 > 519.8	2.54e4	3.38e4	0.116	1.129	4.17	4.15	9.37	71.7	66.4	
6	34	13C2-PFDoA	615 > 569.7	2.39e3	3.38e4	0.116	0.116	4.34	4.32	0.884	65.8	61.0	
7	35	13C2-PFTeDA	714.8 > 669.6	7.38e3	3.38e4	0.116	0.762	4.68	4.66	2.72	30.9	28.6	H
8	37	13C5-PFHxA	318 > 272.9	4.41e4	4.41e4	0.116	1.000	3.19	3.16	5.00	43.2	100.0	
9	38	13C3-PFHxS	401.9 > 79.9	6.86e3	6.86e3	0.116	1.000	3.56	3.51	12.5	108	100.0	
10	39	13C8-PFOA	421.3 > 376	3.65e4	3.65e4	0.116	1.000	3.65	3.64	12.5	108	100.0	
11	40	13C9-PFNA	472.2 > 426.9	3.89e4	3.89e4	0.116	1.000	3.83	3.82	12.5	108	100.0	
12	41	13C4-PFOS	503 > 79.9	6.05e3	6.05e3	0.116	1.000	3.89	3.87	12.5	108	100.0	
13	42	13C6-PFDA	519.1 > 473.7	3.61e4	3.61e4	0.116	1.000	4.01	3.99	12.5	108	100.0	
14	43	13C7-PFUnA	570.1 > 524.8	3.38e4	3.38e4	0.116	1.000	4.17	4.15	12.5	108	100.0	
15	44	Total PFBS	299 > 79.7	1.70e4	4.07e3	0.116		2.96		52.2	243		
16	45	Total PFHxS	398.9 > 79.6	6.44e4	2.50e3	0.116		3.52		322	1670		
17	46	Total PFOA	413 > 368.7	6.35e4	3.23e4	0.116		3.65		24.6	217		
18	47	Total PFOS	499 > 79.9	1.17e5	5.30e3	0.116		3.89		275	2460		
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	4.92e3	0.116		4.03		0.000			
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	5.07e3	0.116		4.17		0.000			

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-63.qld

Last Altered: Thursday, August 17, 2017 10:31:05 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:31:25 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: 170731M1_63, Date: 31-Jul-2017, Time: 23:24:34, ID: 1700920-15 LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.92	16569.332	4069.227	50.898	bb	236.8
2	44	Total PFBS	299 > 79.7	2.79	417.038	4069.227	1.281	bb	6.0

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.51	64419.379	2502.793	321.737	MM	1668.2

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7	PFOA	413 > 368.7	3.64	61300.383	32252.785	23.758	MM	210.0
2	46	Total PFOA	413 > 368.7	3.59	2226.165	32252.785	0.863	MM	6.6

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11	PFOS	499 > 79.9	3.87	116678.102	5301.254	275.119	MM	2455.9

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	13	N-MeFOSAA	570.1 > 419			4919.949		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 8/17/17

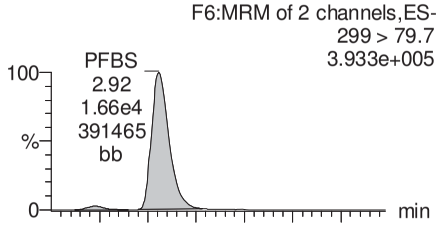
Dataset: U:\Q4.PRO\results\170731M1\170731M1-63.qld

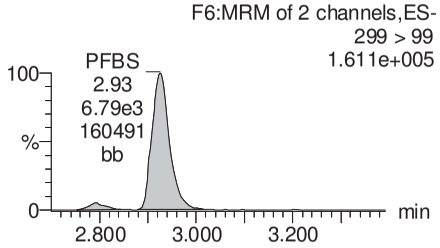
Last Altered: Thursday, August 17, 2017 10:31:05 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:31:25 Pacific Daylight Time

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

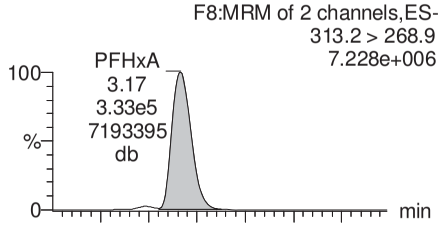
Name: 170731M1_63, Date: 31-Jul-2017, Time: 23:24:34, ID: 1700920-15 LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

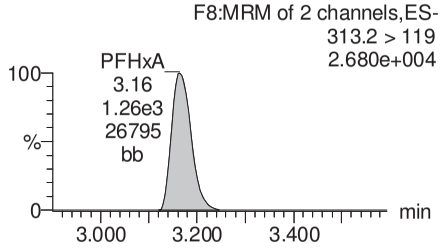
Total PFBS



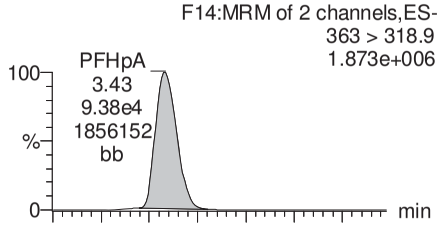


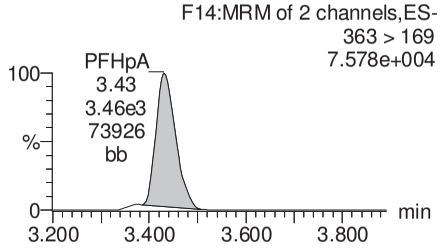
PFHxA



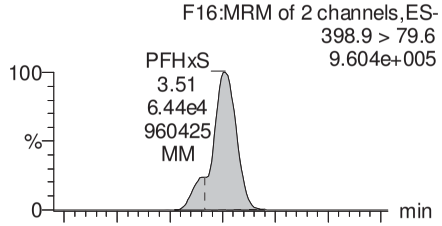


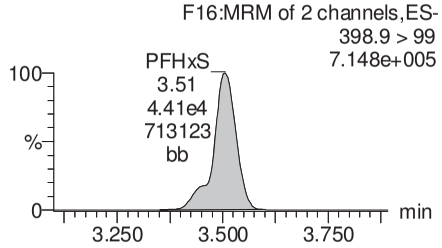
PFHpA



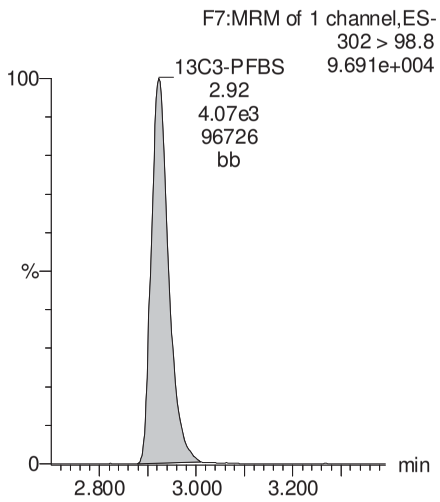


Total PFHxS

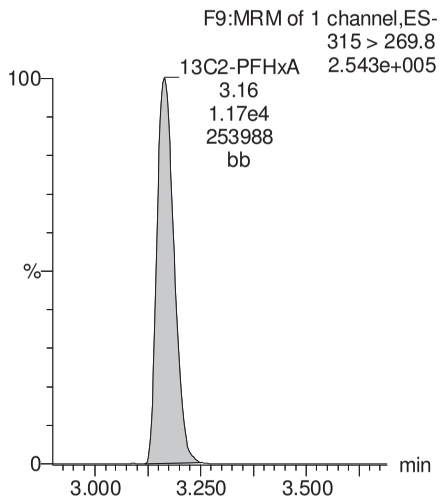




13C3-PFBS



13C2-PFHxA



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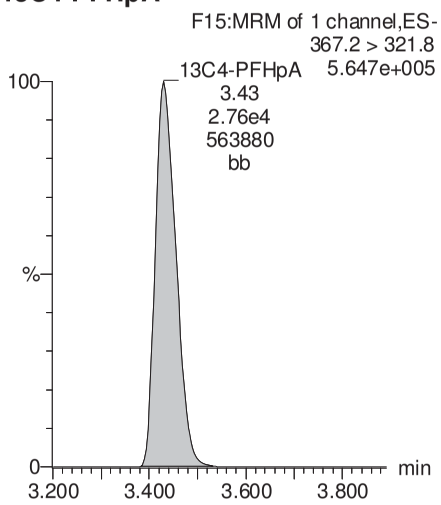
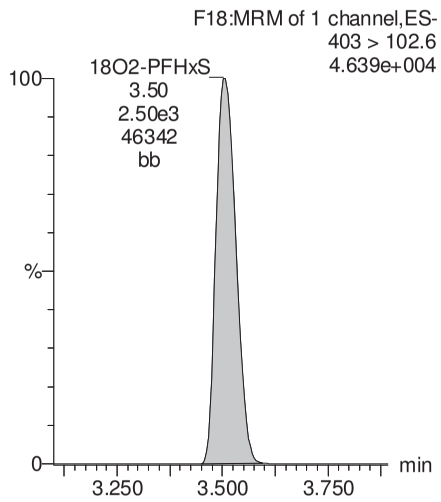


18O2-PFHxS



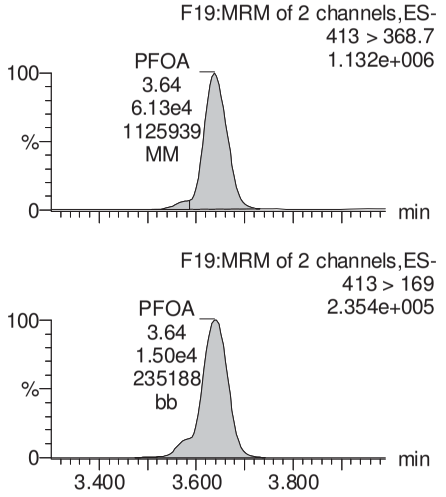
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-63.qld

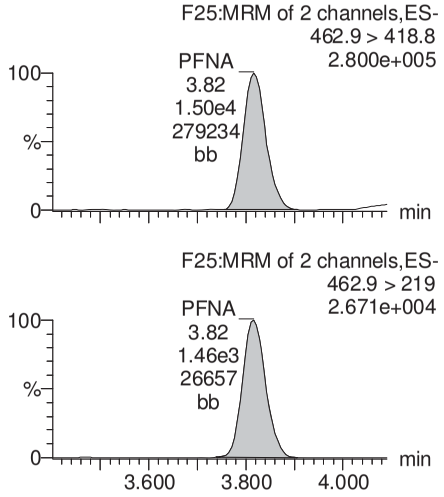
Last Altered: Thursday, August 17, 2017 10:31:05 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:31:25 Pacific Daylight Time

Name: 170731M1_63, Date: 31-Jul-2017, Time: 23:24:34, ID: 1700920-15 LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

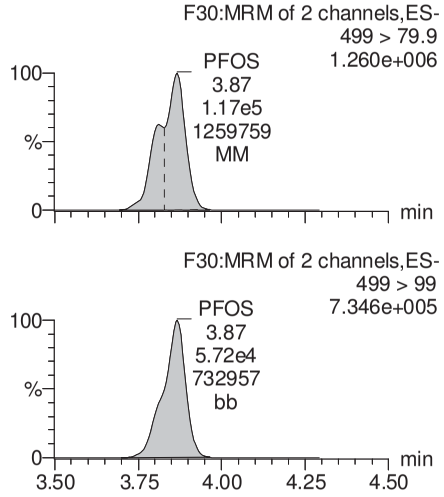
Total PFOA



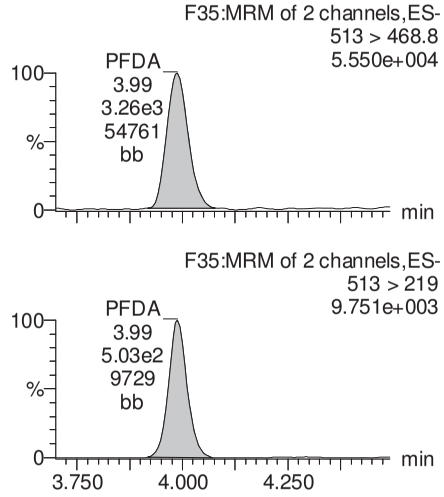
PFNA



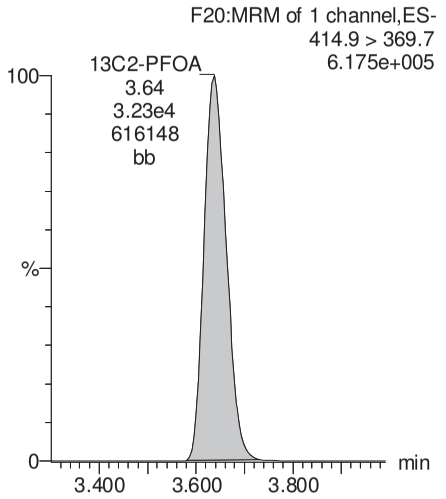
Total PFOS



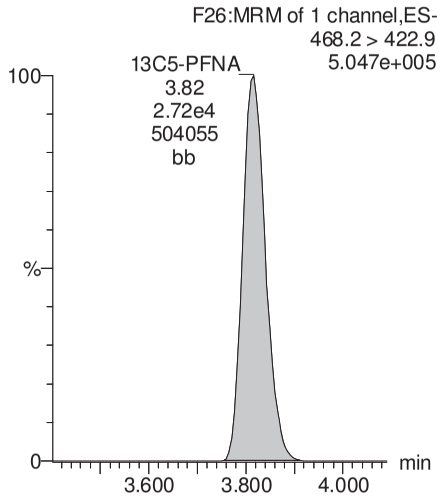
PFDA



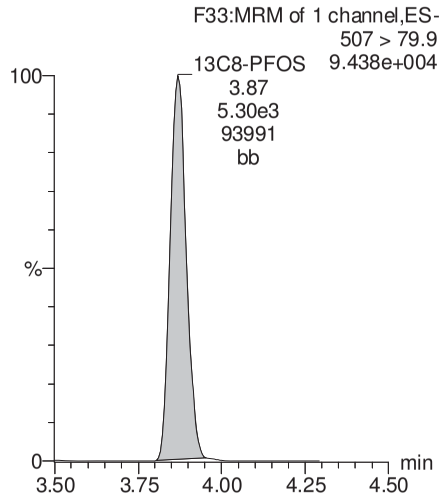
13C2-PFOA



13C5-PFNA



13C8-PFOS



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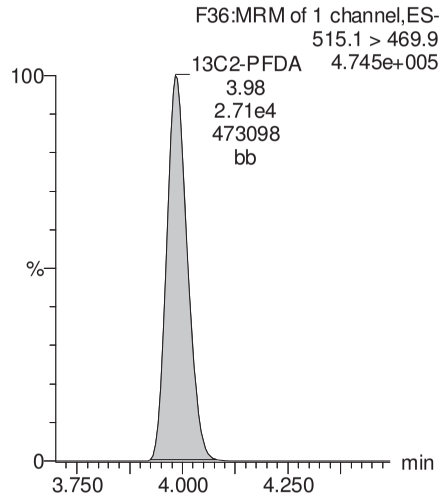

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Vista Analytical Laboratory

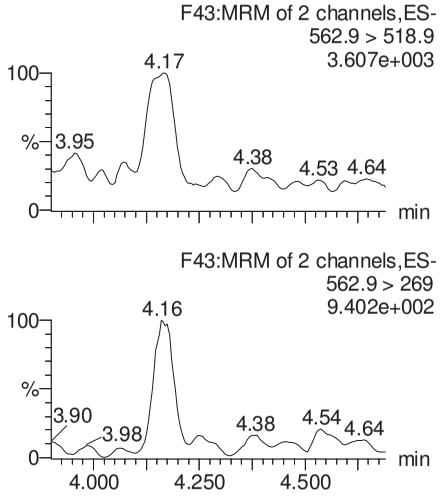
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-63.qld

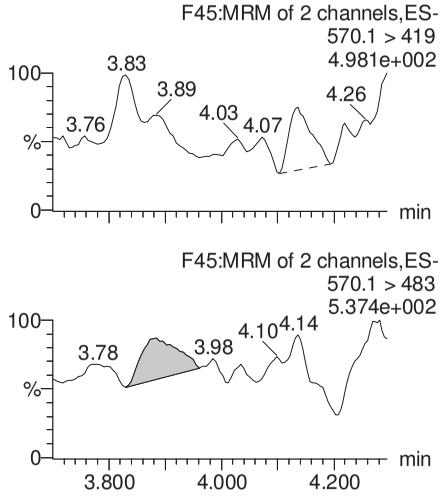
Last Altered: Thursday, August 17, 2017 10:31:05 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:31:25 Pacific Daylight Time

Name: 170731M1_63, Date: 31-Jul-2017, Time: 23:24:34, ID: 1700920-15 LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

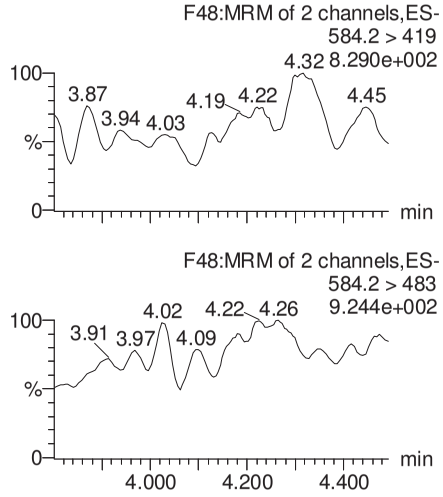
PFUnA



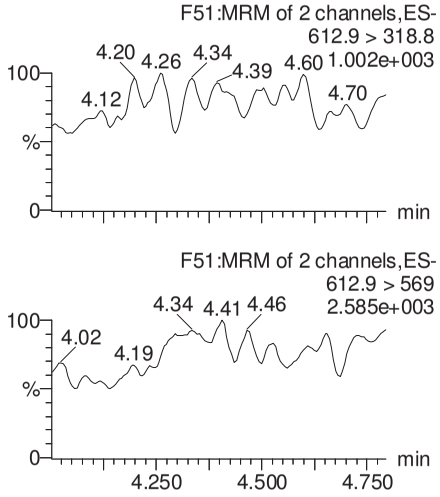
N-MeFOSAA



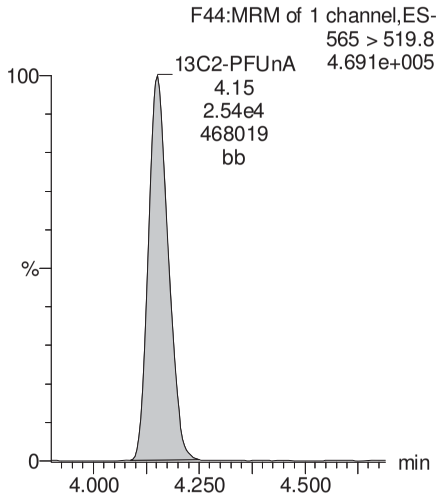
N-EtFOSAA



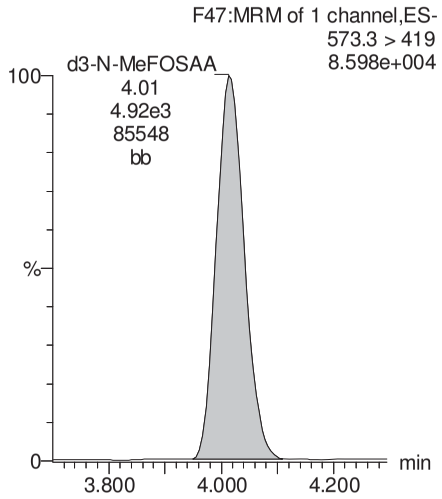
PFDoA



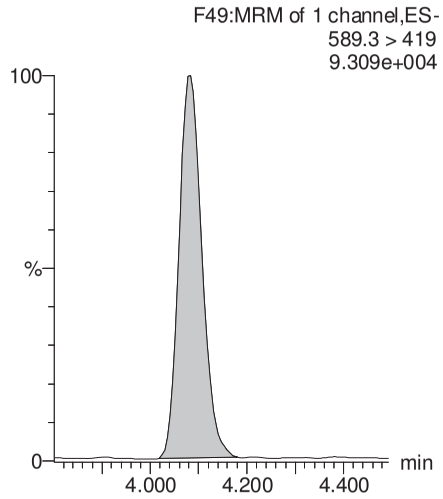
13C2-PFUnA



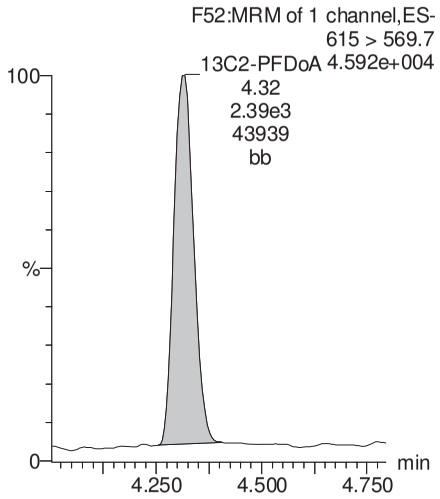
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



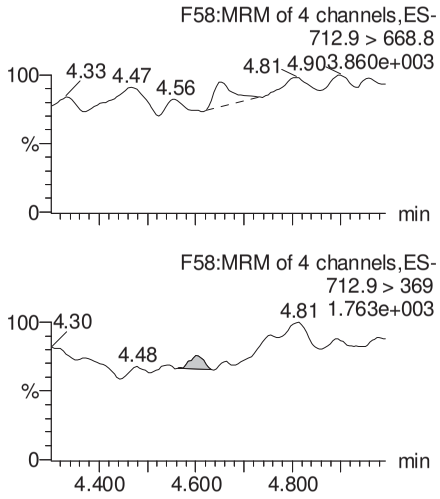
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-63.qld

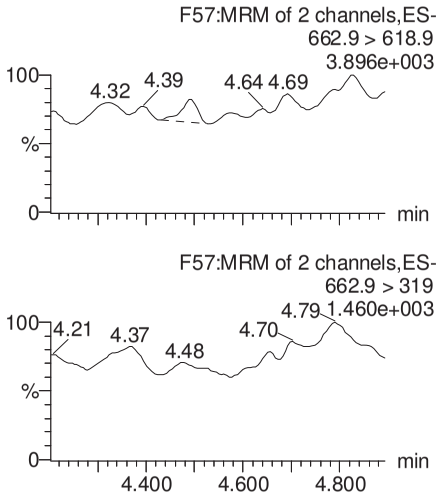
Last Altered: Thursday, August 17, 2017 10:31:05 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:31:25 Pacific Daylight Time

Name: 170731M1_63, Date: 31-Jul-2017, Time: 23:24:34, ID: 1700920-15 LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

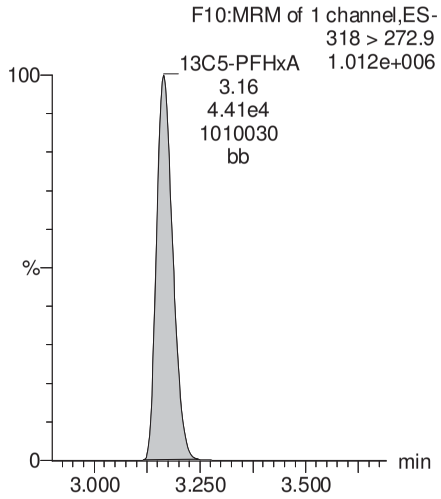
PFTeDA



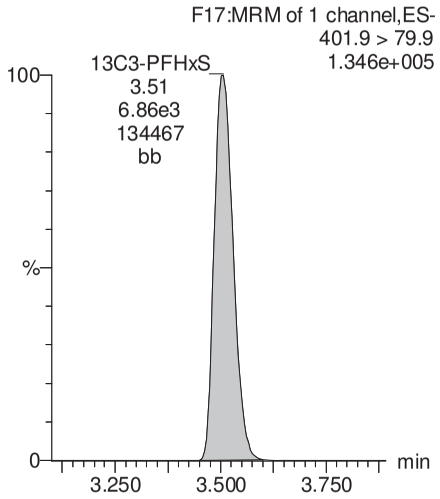
PFTrDA



13C5-PFHxA



13C3-PFHxS



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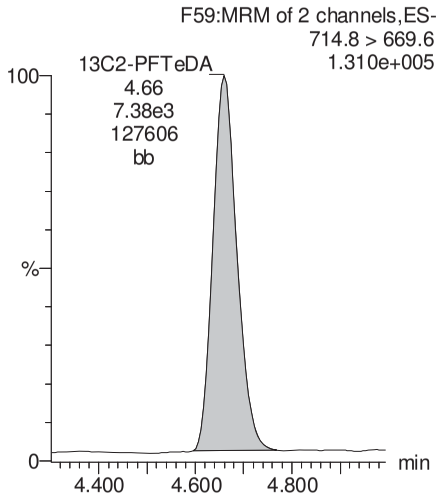

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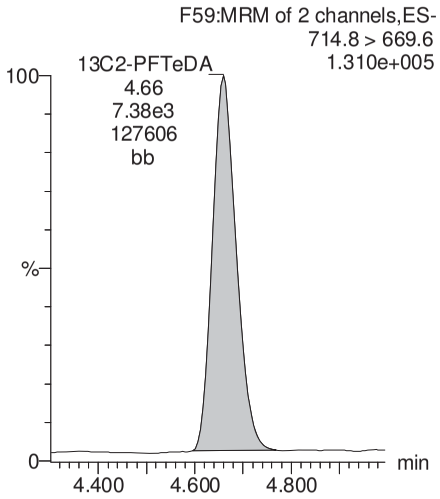
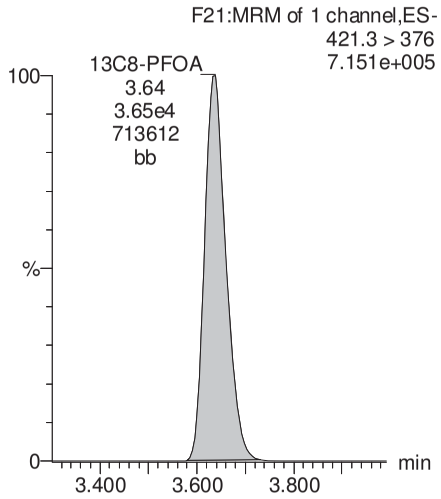
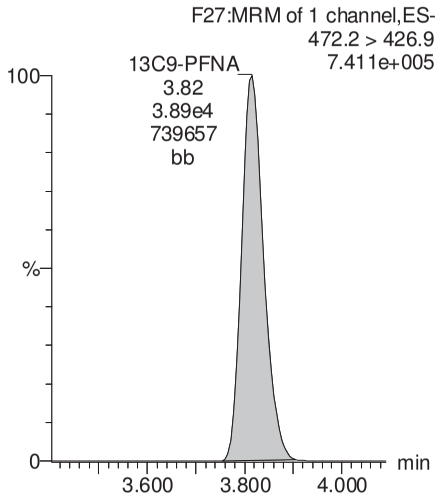


13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

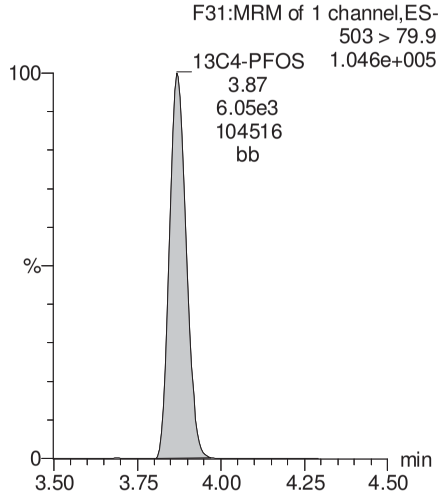
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-63.qld

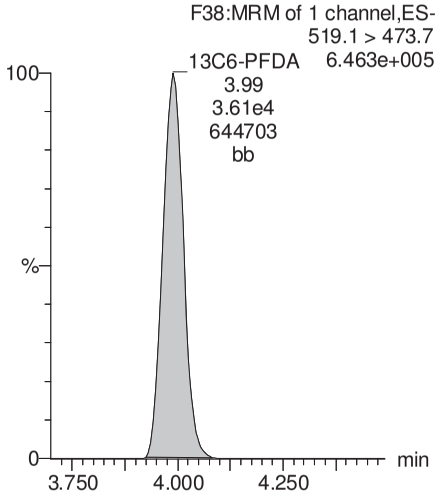
Last Altered: Thursday, August 17, 2017 10:31:05 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:31:25 Pacific Daylight Time

Name: 170731M1_63, Date: 31-Jul-2017, Time: 23:24:34, ID: 1700920-15 LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

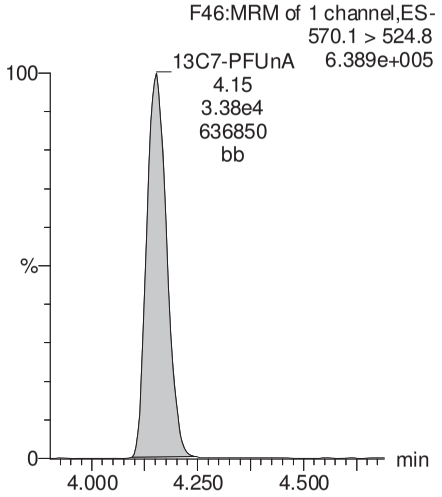
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-57.qld

Last Altered: Friday, August 11, 2017 13:44:53 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:45:17 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_57, Date: 01-Aug-2017, Time: 19:49:49, ID: 1700920-15@5X LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	12	PFOS	499 > 79.9	2.11e4	1.06e3	0.1157		3.89	3.88	249	1980	
2	38	13C8-PFOS	507 > 79.9	1.06e3	1.20e3	0.1157	1.153	3.89	3.88	11.0	82.4	76.3
3	56	13C4-PFOS	503 > 79.9	1.20e3	1.20e3	0.1157	1.000	3.89	3.88	12.5	108	100.0
4	62	Total PFOS	499 > 79.9	2.11e4	1.06e3	0.1157		3.89		249	1980	

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Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-57.qld

Last Altered: Friday, August 11, 2017 13:44:53 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:45:17 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_57, Date: 01-Aug-2017, Time: 19:49:49, ID: 1700920-15@5X LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.93	3102.603	640.016	60.596	bb	277.6

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.51	11110.279	425.115	326.685	db	1679.6

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.65	12504.719	6365.648	24.555	db	221.1
2	61	Total PFOA	413 > 368.7	3.58	348.069	6365.648	0.683	bd	4.9

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.88	21111.850	1058.671	249.273	MM	1981.4

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 8/12/17

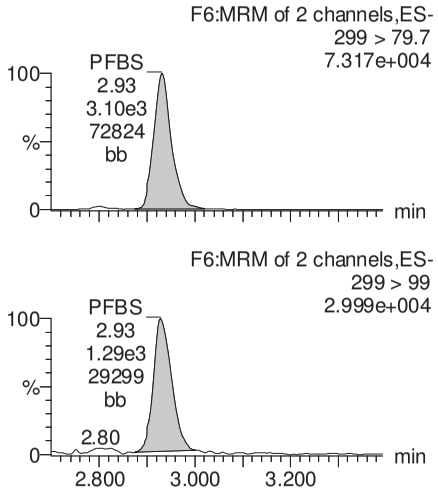
Dataset: U:\Q4.PRO\results\170801M1\170801M1-57.qld

Last Altered: Friday, August 11, 2017 13:44:53 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:45:17 Pacific Daylight Time

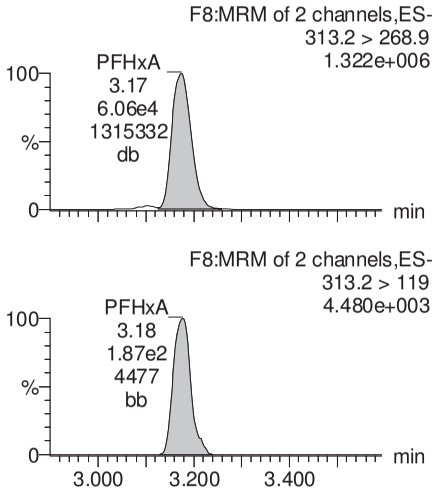
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_57, Date: 01-Aug-2017, Time: 19:49:49, ID: 1700920-15@5X LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

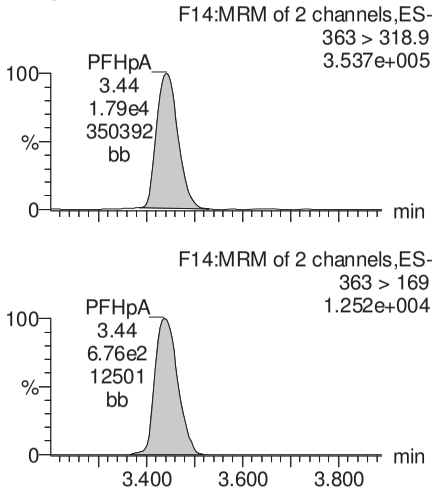
Total PFBS



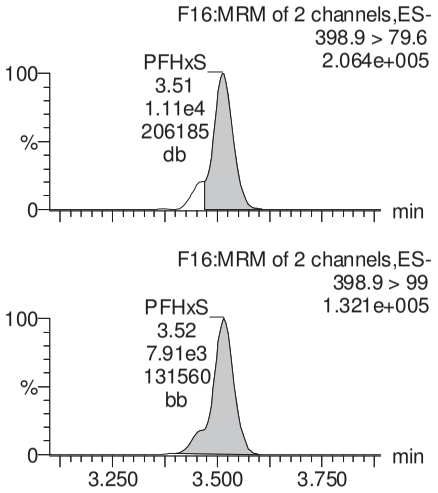
PFHxA



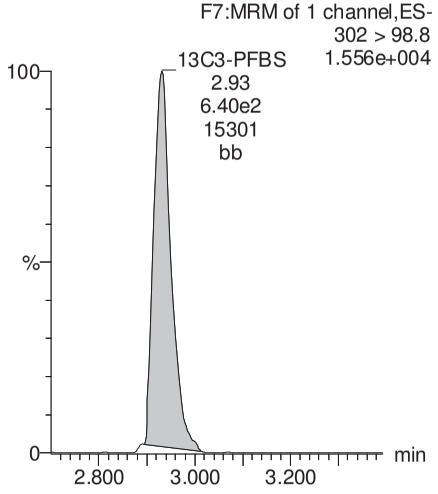
PFHpA



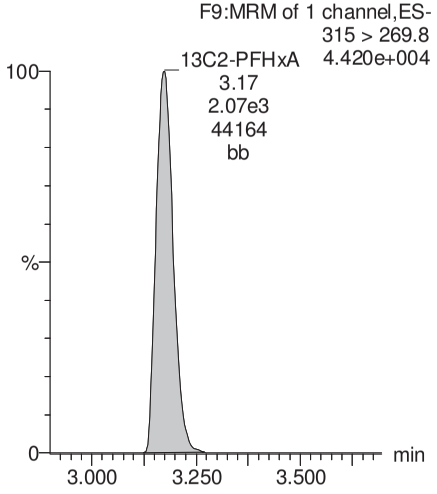
Total PFHxS



13C3-PFBS



13C2-PFHxA



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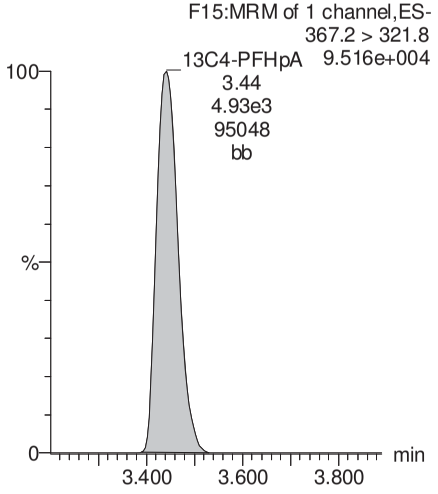
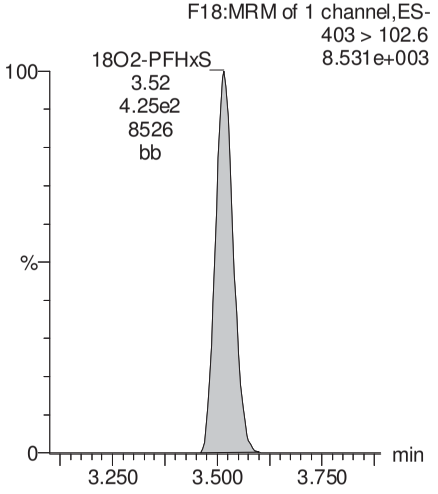


18O2-PFHxS



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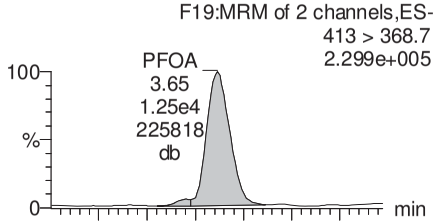
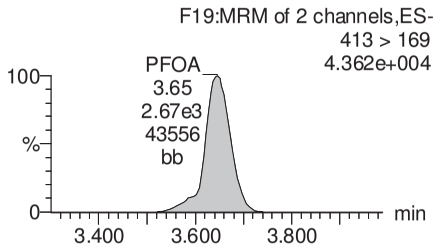
Dataset: U:\Q4.PRO\results\170801M1\170801M1-57.qld

Last Altered: Friday, August 11, 2017 13:44:53 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:45:17 Pacific Daylight Time

Name: 170801M1_57, Date: 01-Aug-2017, Time: 19:49:49, ID: 1700920-15@5X LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

Total PFOA





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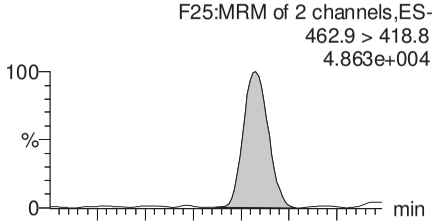
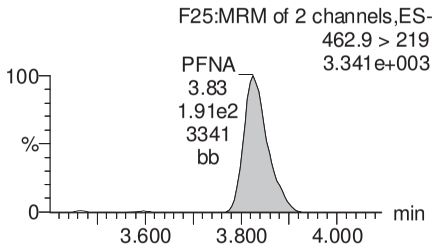
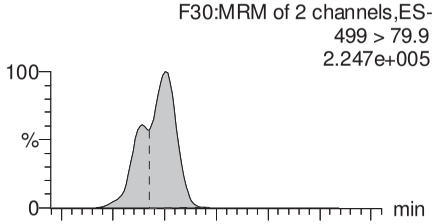
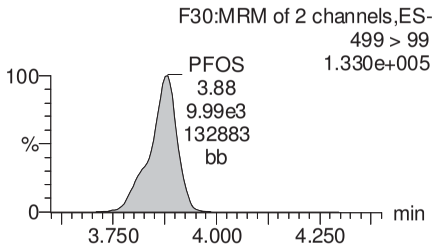


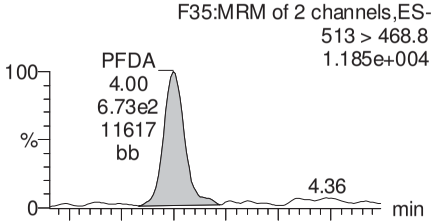


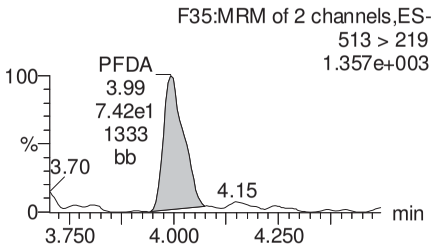
Total PFOS



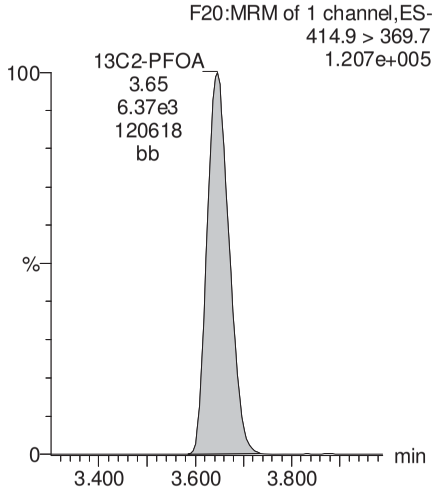


PFDA

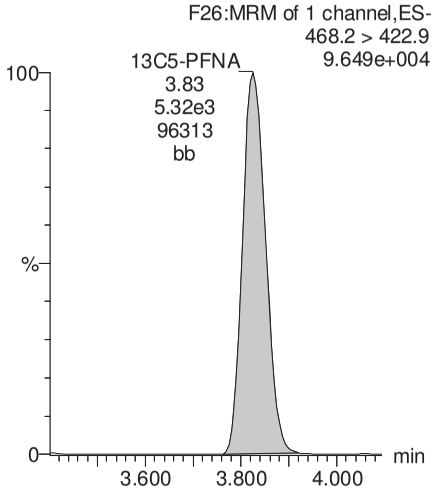




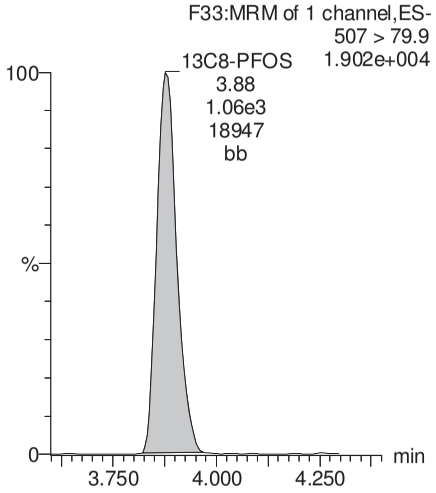
13C2-PFOA



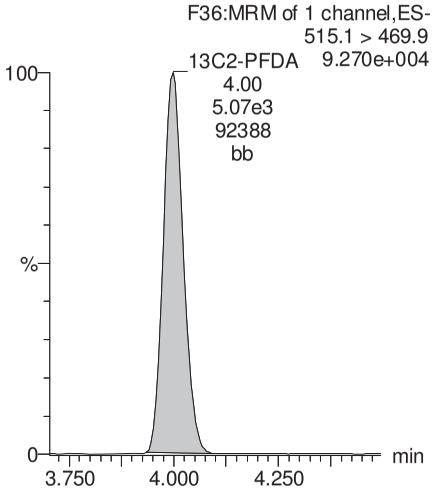
13C5-PFNA



13C8-PFOS



13C2-PFDA



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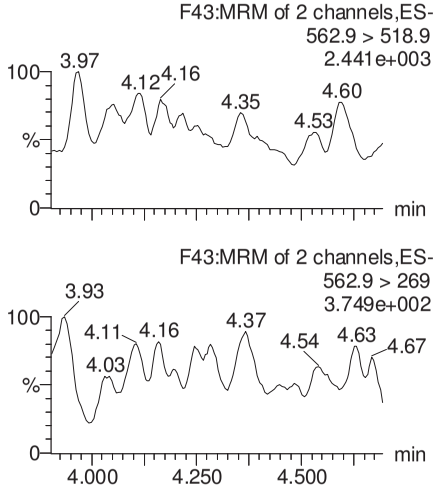
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-57.qld

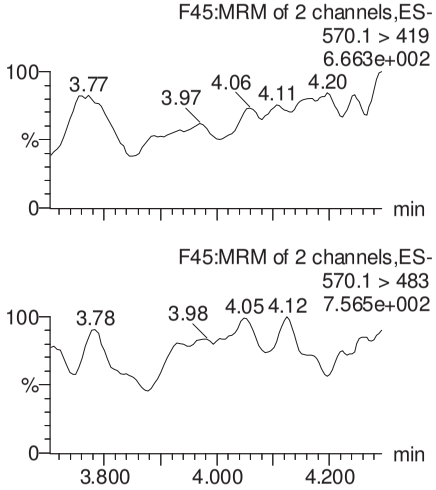
Last Altered: Friday, August 11, 2017 13:44:53 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:45:17 Pacific Daylight Time

Name: 170801M1_57, Date: 01-Aug-2017, Time: 19:49:49, ID: 1700920-15@5X LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

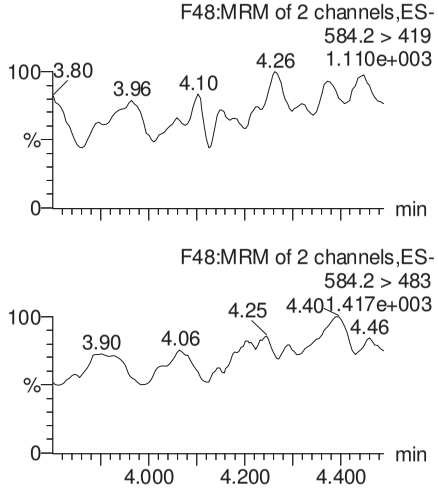
PFUnA



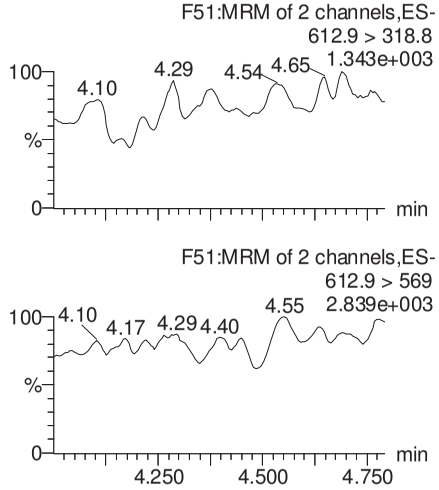
N-MeFOSAA



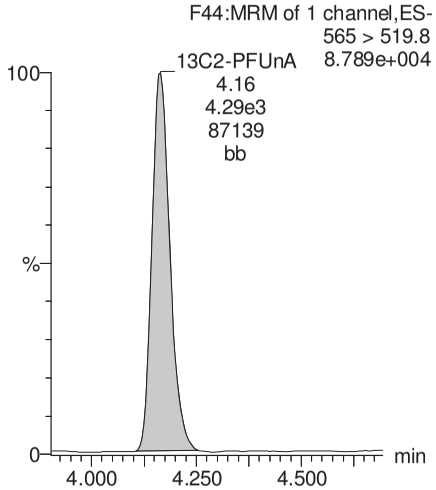
N-EtFOSAA



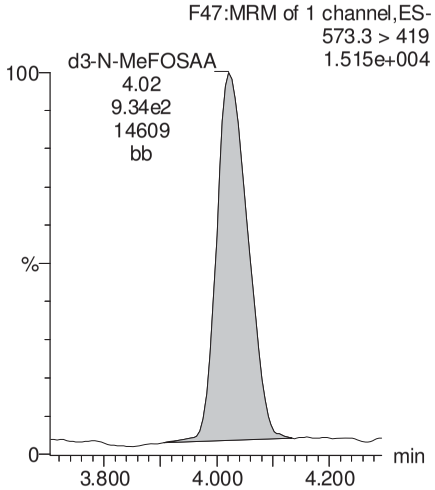
PFDoA



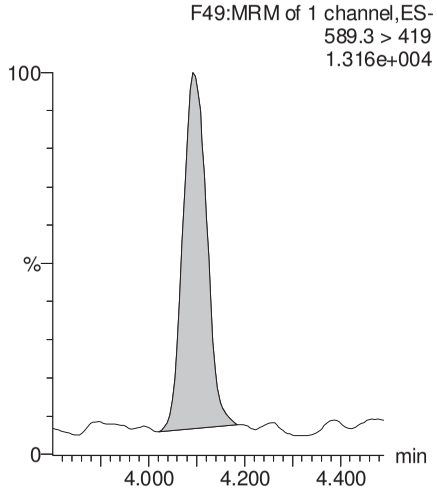
13C2-PFUnA



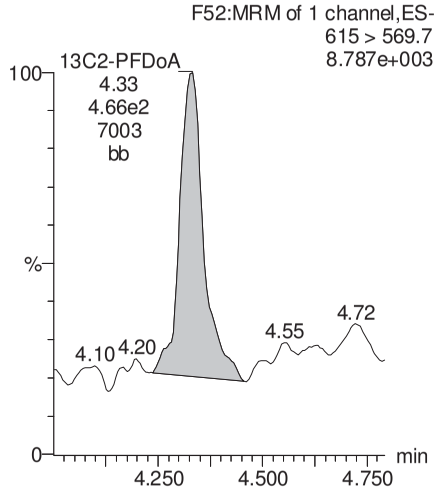
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



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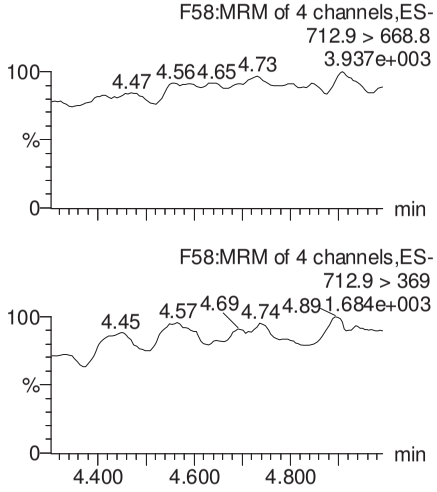
Dataset: U:\Q4.PRO\results\170801M1\170801M1-57.qld

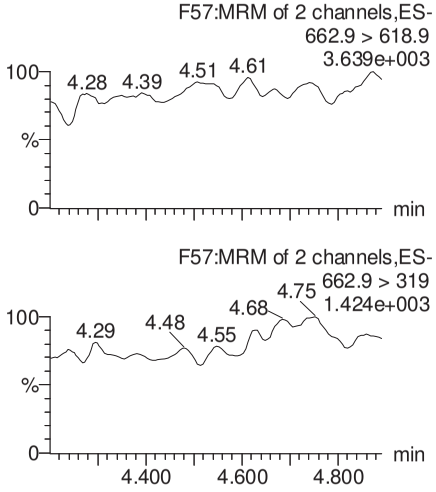
Last Altered: Friday, August 11, 2017 13:44:53 Pacific Daylight Time
Printed: Friday, August 11, 2017 13:45:17 Pacific Daylight Time

Name: 170801M1_57, Date: 01-Aug-2017, Time: 19:49:49, ID: 1700920-15@5X LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

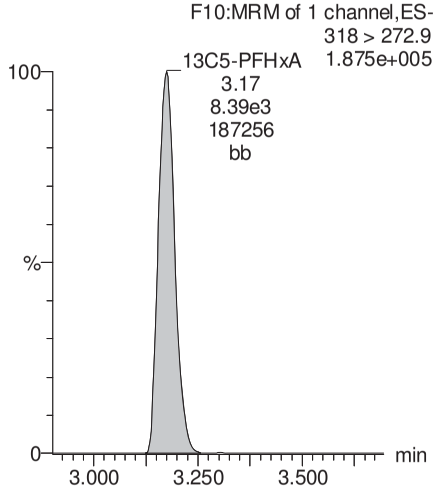
PFTeDA



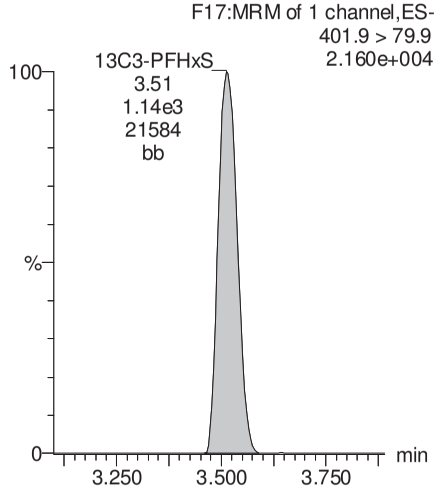
PFTrDA



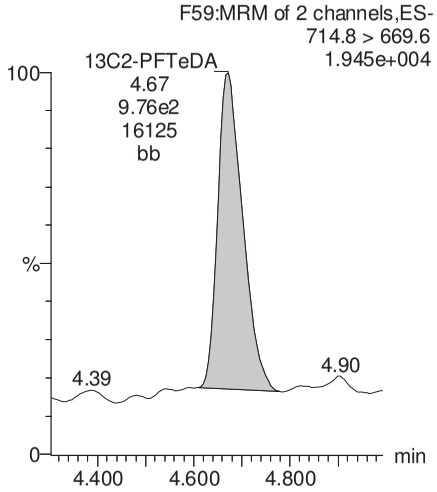
13C5-PFHxA



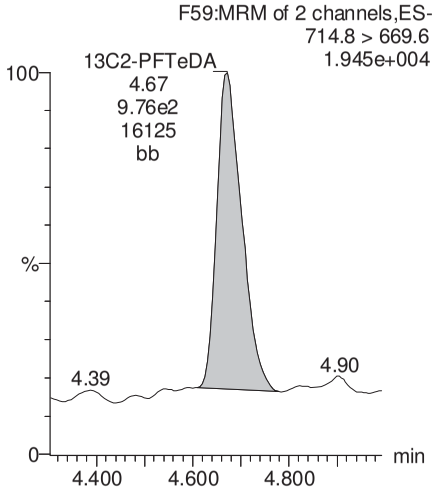
13C3-PFHxS



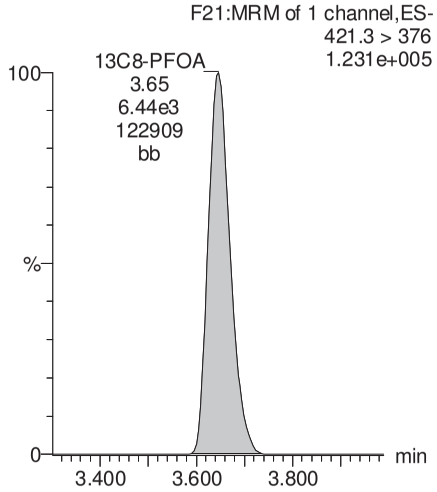
13C2-PFTeDA



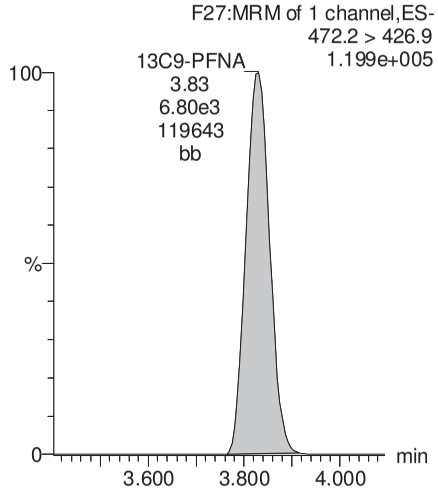
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-57.qld

Last Altered: Friday, August 11, 2017 13:44:53 Pacific Daylight Time
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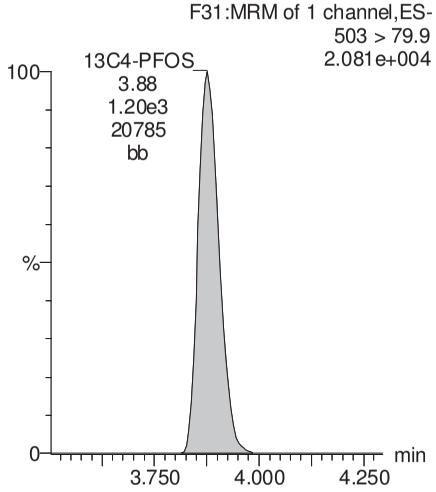
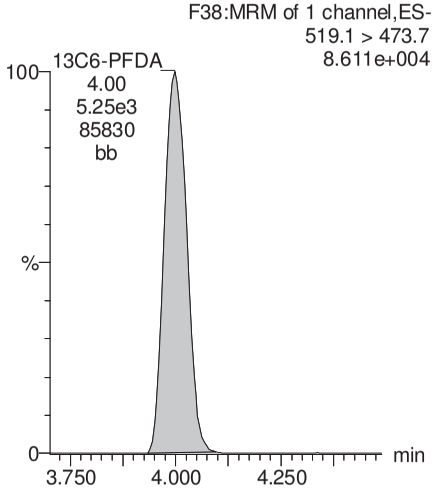
Name: 170801M1_57, Date: 01-Aug-2017, Time: 19:49:49, ID: 1700920-15@5X LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

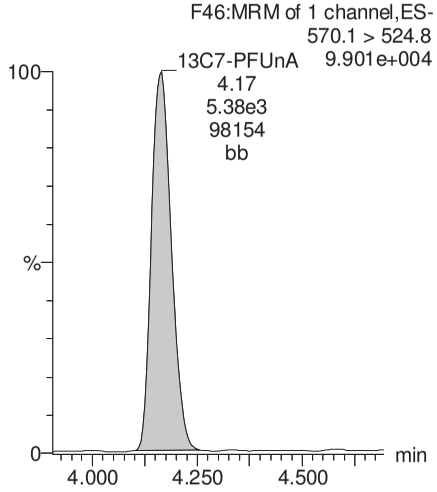
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-48.qld

Last Altered: Thursday, August 10, 2017 13:41:25 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:41:41 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_48, Date: 01-Aug-2017, Time: 18:11:59, ID: 1700920-16 DUP-07-20170719 0.12023, Description: DUP-07-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	4.68e3	4.26e3	0.1202		2.96	2.94	13.7	60.3	
2	4	PFHxA	313.2 > 268.9	1.01e5	1.17e4	0.1202		3.19	3.18	43.0	257	
3	5	PFHpA	363 > 318.9	1.95e4	2.54e4	0.1202		3.45	3.45	9.59	66.2	
4	6	PFHxS	398.9 > 79.6	2.85e4	2.55e3	0.1202		3.56	3.52	140	690	
5	8	PFOA	413 > 368.7	1.77e4	3.31e4	0.1202		3.65	3.65	6.70	57.1	
6	10	PFNA	462.9 > 418.8	2.55e3	2.56e4	0.1202		3.83	3.83	1.25	9.00	
7	12	PFOS	499 > 79.9	1.09e5	6.14e3	0.1202		3.89	3.88	222	1710E	
8	13	PFDA	513 > 468.8	1.30e3	2.82e4	0.1202		4.01	4.00	0.575	2.90	
9	15	N-MeFOSAA	570.1 > 419		5.56e3	0.1202		4.03				
10	16	N-EtFOSAA	584.2 > 419		5.16e3	0.1202		4.10				
11	17	PFUnA	562.9 > 518.9		2.49e4	0.1202		4.17				
12	19	PFDoA	612.9 > 318.8		2.71e3	0.1202		4.34				

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Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-48.qld

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Printed: Thursday, August 10, 2017 13:41:55 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_48, Date: 01-Aug-2017, Time: 18:11:59, ID: 1700920-16 DUP-07-20170719 0.12023, Description: DUP-07-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		2.71e3	0.1202		4.50				
2	22	PFTeDA	712.9 > 668.8		1.73e4	0.1202		4.68				
3	30	13C3-PFBS	302 > 98.8	4.26e3	4.27e4	0.1202	0.034	2.96	2.93	0.499	122	117.0
4	31	13C2-PFHxA	315 > 269.8	1.17e4	4.27e4	0.1202	0.334	3.19	3.18	1.37	34.2	82.2
5	32	13C4-PFHpA	367.2 > 321.8	2.54e4	4.27e4	0.1202	0.414	3.45	3.45	2.97	59.6	57.4
6	33	18O2-PFHxS	403 > 102.6	2.55e3	7.34e3	0.1202	0.475	3.56	3.52	4.35	76.1	73.2
7	35	13C2-PFOA	414.9 > 369.7	3.31e4	3.41e4	0.1202	1.298	3.65	3.65	12.1	77.7	74.8
8	36	13C5-PFNA	468.2 > 422.9	2.56e4	3.45e4	0.1202	1.094	3.83	3.83	9.27	70.5	67.8
9	38	13C8-PFOS	507 > 79.9	6.14e3	6.49e3	0.1202	1.153	3.89	3.88	11.8	85.3	82.0
10	39	13C2-PFDA	515.1 > 469.9	2.82e4	3.71e4	0.1202	1.059	4.01	4.00	9.51	74.7	71.8

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-48.qld

Last Altered: Thursday, August 10, 2017 13:41:25 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:42:05 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_48, Date: 01-Aug-2017, Time: 18:11:59, ID: 1700920-16 DUP-07-20170719 0.12023, Description: DUP-07-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	5.56e3	3.76e4	0.1202	0.019	4.03	4.03	1.85	797	58.9
2	42	d5-N-EtFOSAA	589.3 > 419	5.16e3	3.76e4	0.1202	0.019	4.12	4.10	1.72	755	55.8
3	43	13C2-PFUnA	565 > 519.8	2.49e4	3.76e4	0.1202	1.172	4.17	4.16	8.29	58.9	56.6
4	44	13C2-PFDoA	615 > 569.7	2.71e3	3.76e4	0.1202	0.118	4.34	4.33	0.902	63.3	60.9
5	46	13C2-PFTeDA	714.8 > 669.6	1.73e4	3.76e4	0.1202	0.801	4.68	4.68	5.77	59.9	57.6
6	52	13C5-PFHxA	318 > 272.9	4.27e4	4.27e4	0.1202	1.000	3.19	3.18	5.00	41.6	100.0
7	53	13C3-PFHxS	401.9 > 79.9	7.34e3	7.34e3	0.1202	1.000	3.56	3.52	12.5	104	100.0
8	54	13C8-PFOA	421.3 > 376	3.41e4	3.41e4	0.1202	1.000	3.65	3.65	12.5	104	100.0
9	55	13C9-PFNA	472.2 > 426.9	3.45e4	3.45e4	0.1202	1.000	3.83	3.83	12.5	104	100.0
10	56	13C4-PFOS	503 > 79.9	6.49e3	6.49e3	0.1202	1.000	3.89	3.88	12.5	104	100.0
11	57	13C6-PFDA	519.1 > 473.7	3.71e4	3.71e4	0.1202	1.000	4.01	4.00	12.5	104	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.76e4	3.76e4	0.1202	1.000	4.17	4.16	12.5	104	100.0
13	59	Total PFBS	299 > 79.7	4.68e3	4.26e3	0.1202		2.96		13.7	60.3	
14	60	Total PFHxS	398.9 > 79.6	2.85e4	2.55e3	0.1202		3.52		140	690	
15	61	Total PFOA	413 > 368.7	1.91e4	3.31e4	0.1202		3.65		7.23	60.5	
16	62	Total PFOS	499 > 79.9	1.09e5	6.14e3	0.1202		3.89		222	1710 E	
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	5.56e3	0.1202		4.03		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	5.16e3	0.1202		4.17		0.000		

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Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_48, Date: 01-Aug-2017, Time: 18:11:59, ID: 1700920-16 DUP-07-20170719 0.12023, Description: DUP-07-20170719

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.94	4678.423	4260.708	13.725	MM	60.3

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.52	28518.277	2554.793	139.533	MM	690.4

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.65	17720.805	33081.926	6.696	MM	57.1
2	61	Total PFOA	413 > 368.7	3.60	1400.669	33081.926	0.529	MM	3.3

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.88	109265.930	6139.478	222.466	MM	1713.4

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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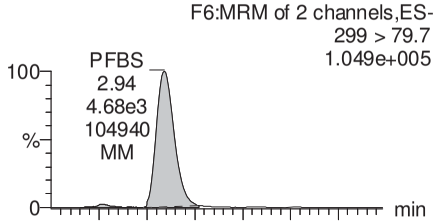
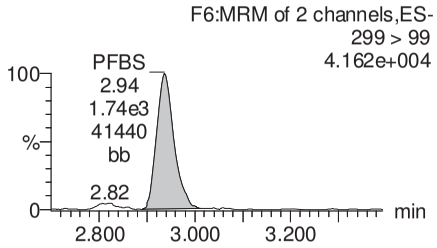
Name: 170801M1_48, Date: 01-Aug-2017, Time: 18:11:59, ID: 1700920-16 DUP-07-20170719 0.12023, Description: DUP-07-20170719

Total PFBS





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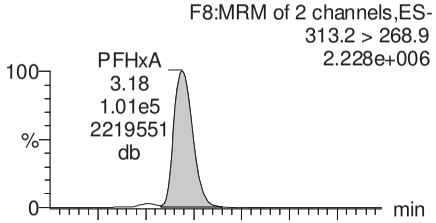

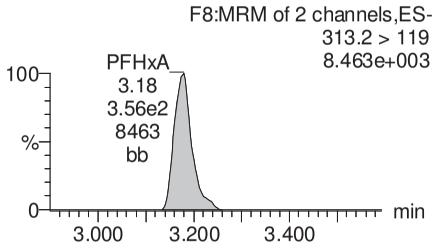

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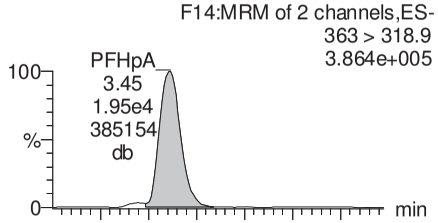

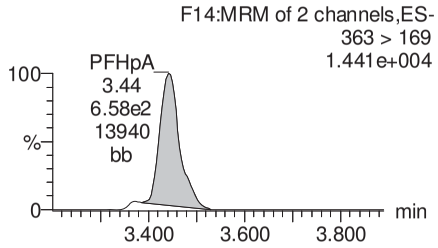

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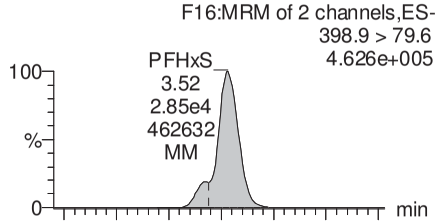

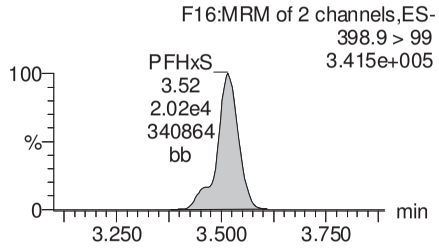

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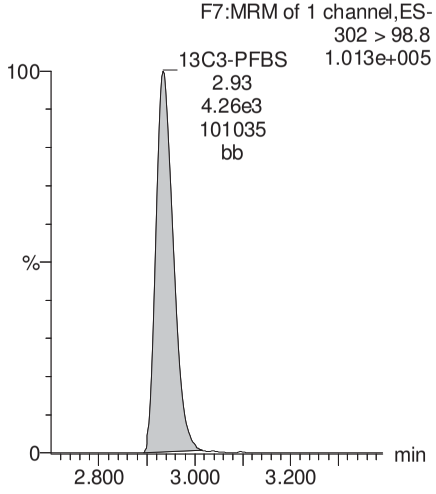

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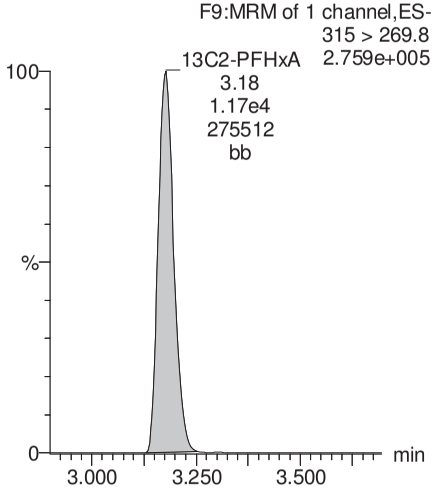

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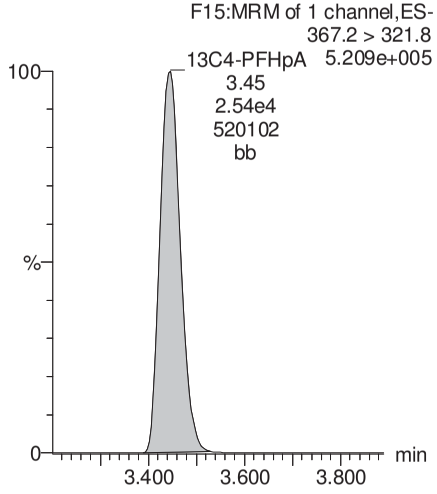

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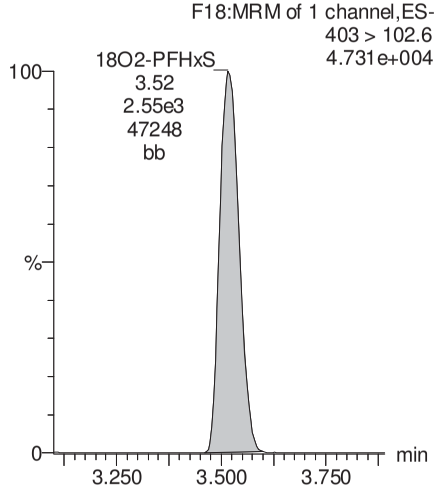

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Last Altered: Thursday, August 10, 2017 13:41:25 Pacific Daylight Time
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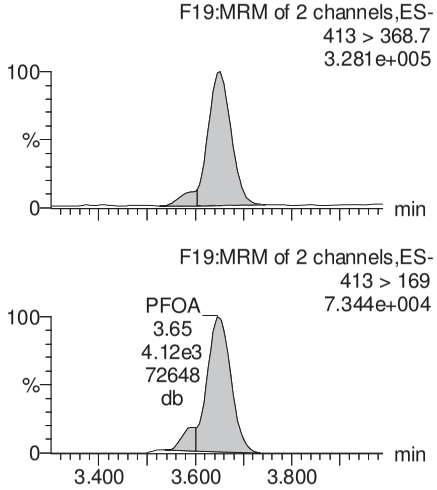
Name: 170801M1_48, Date: 01-Aug-2017, Time: 18:11:59, ID: 1700920-16 DUP-07-20170719 0.12023, Description: DUP-07-20170719

Total PFOA



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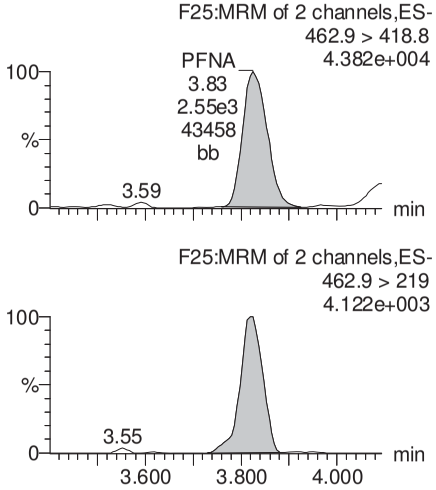
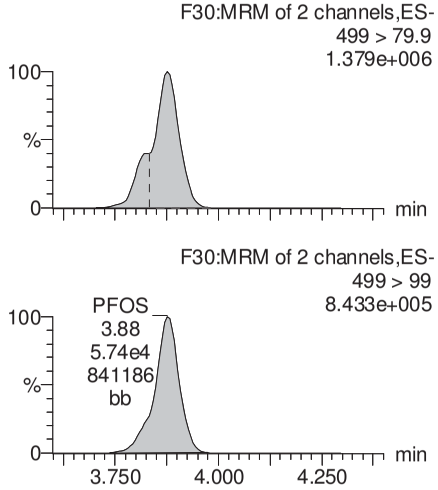


Total PFOS



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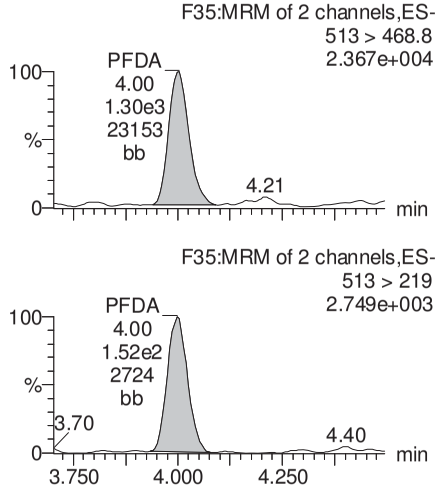

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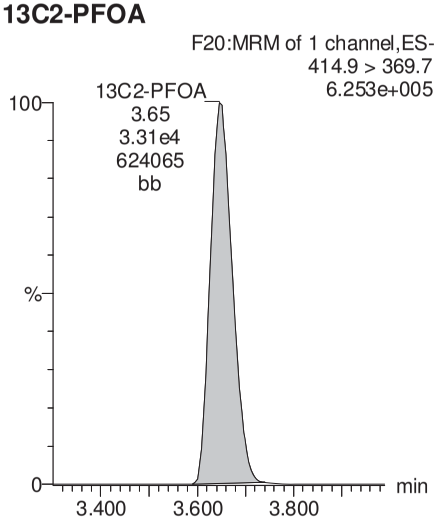

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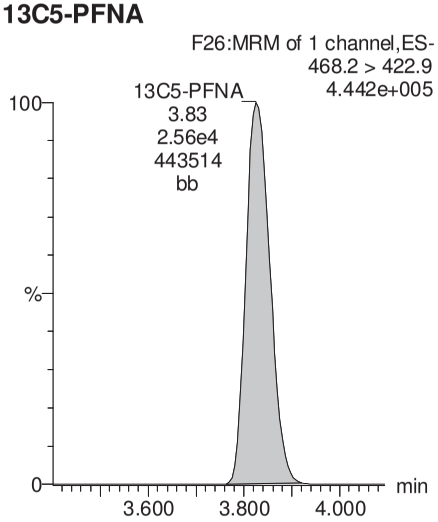
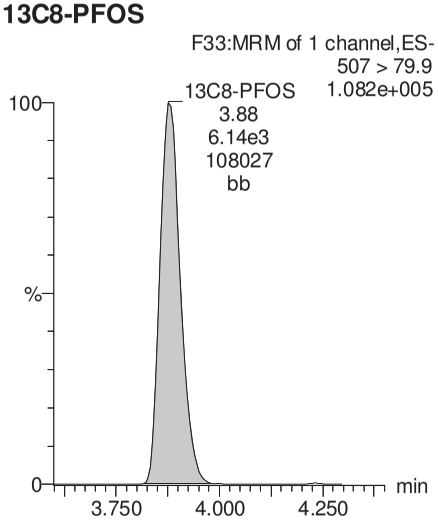


13C8-PFOS



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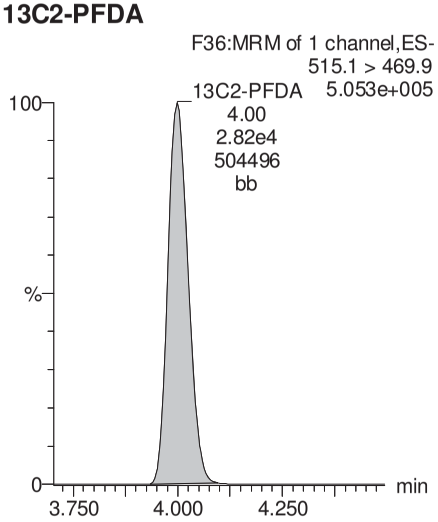

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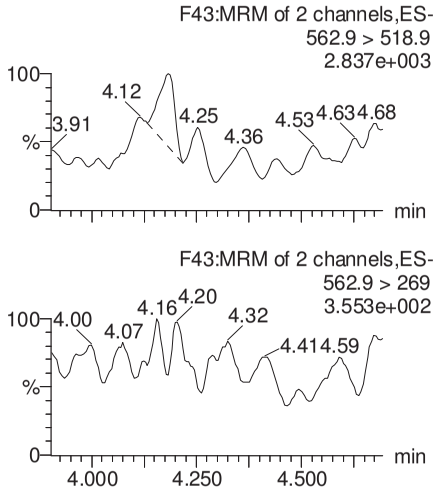
Name: 170801M1_48, Date: 01-Aug-2017, Time: 18:11:59, ID: 1700920-16 DUP-07-20170719 0.12023, Description: DUP-07-20170719

PFUnA



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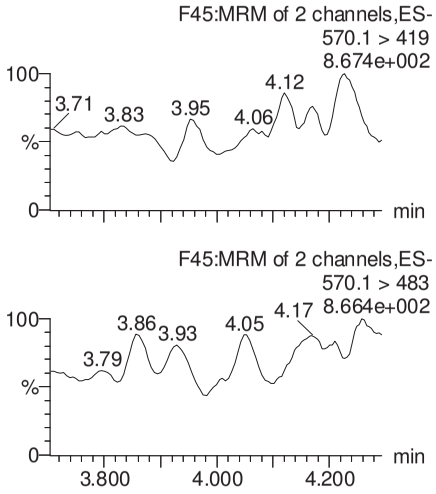

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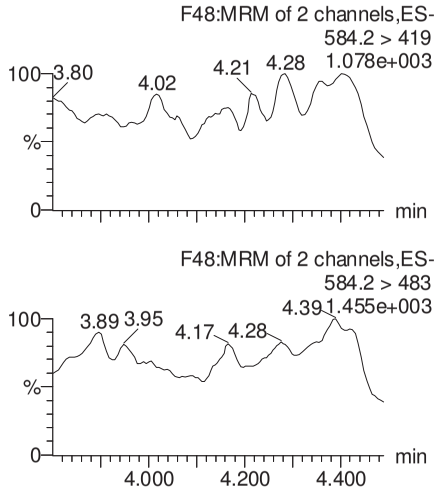

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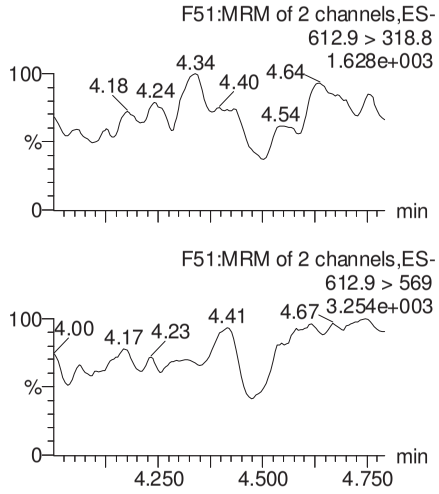

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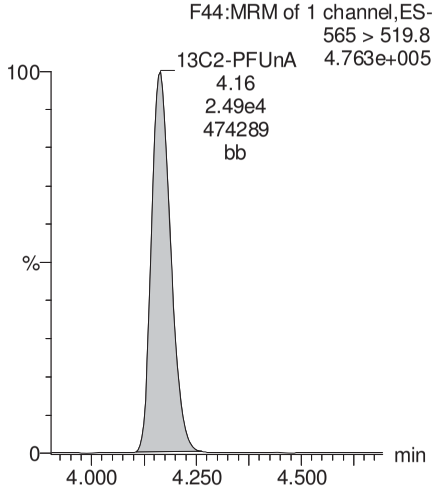

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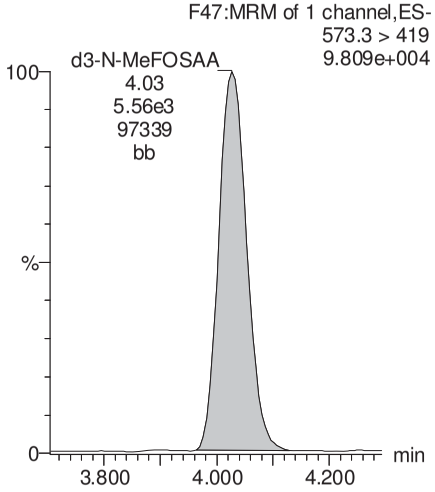

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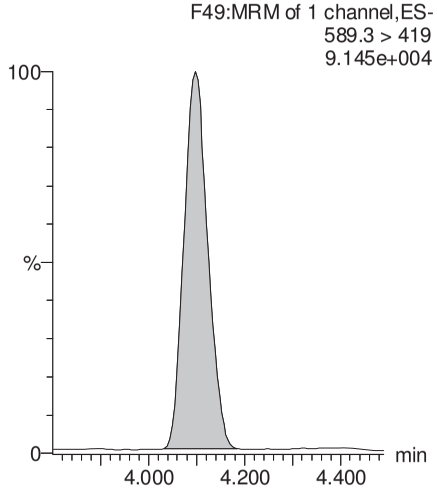

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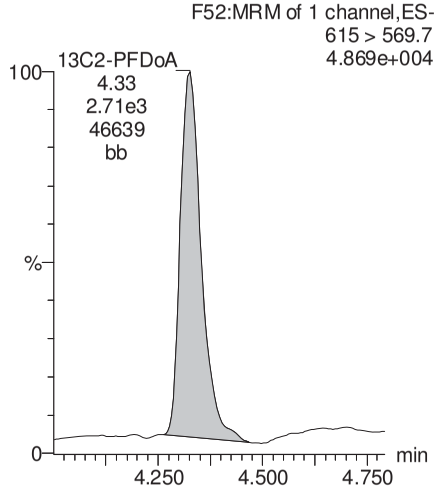

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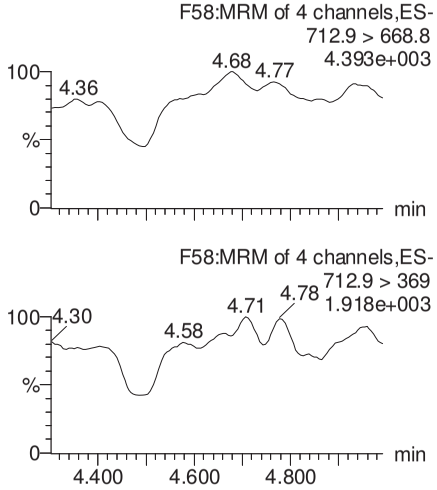
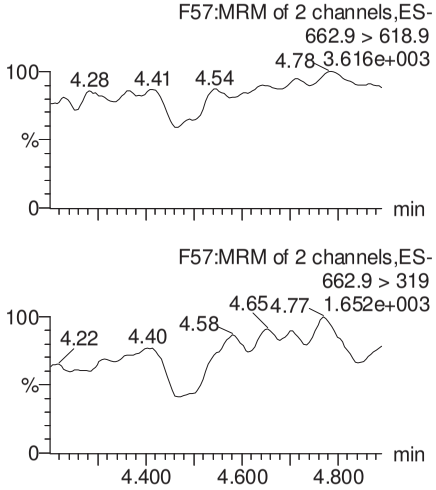
PFTeDA



PFTrDA



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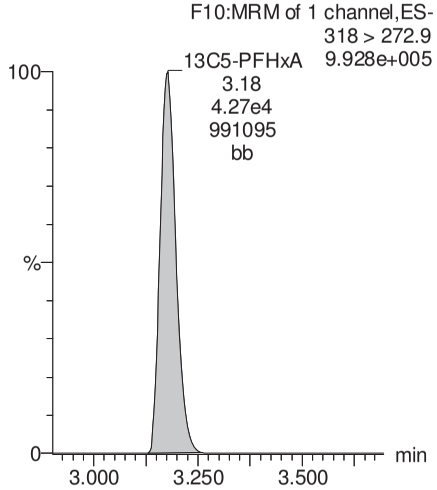

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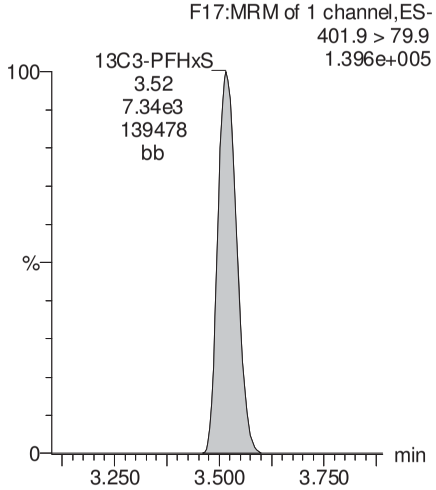

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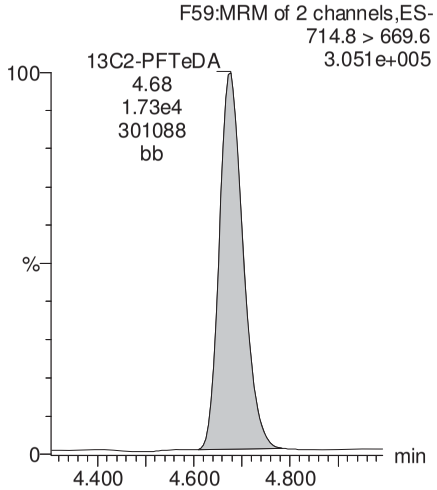

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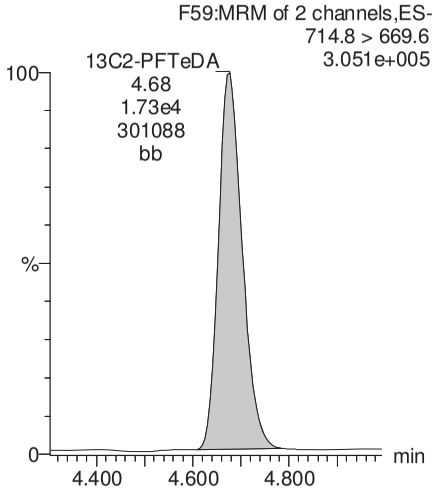
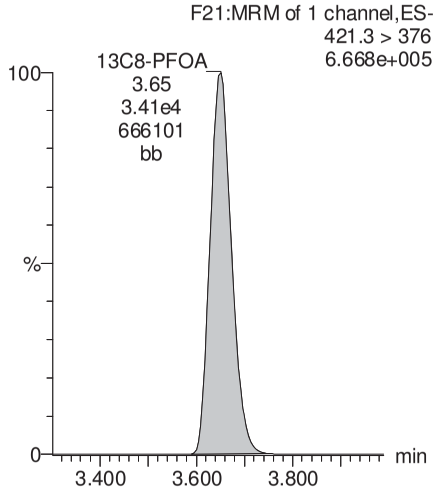
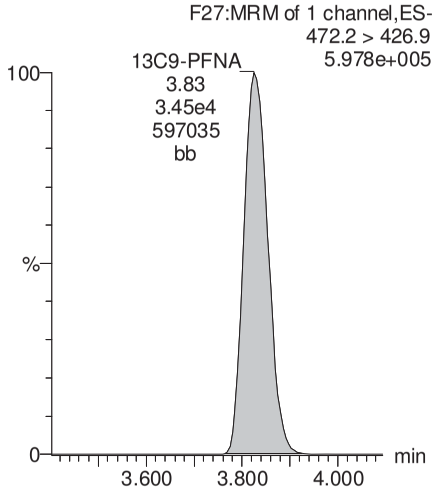


13C8-PFOA



13C9-PFNA



AP 8/10/2017

Vista Analytical Laboratory

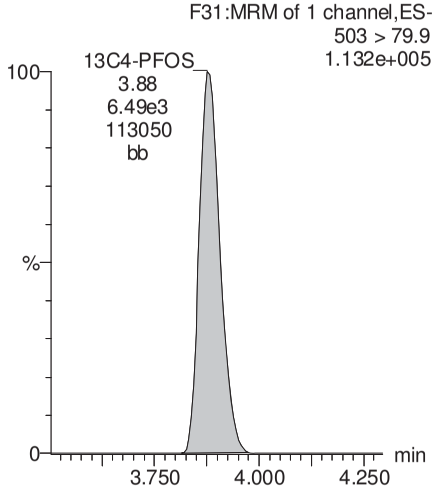
Rev'd: MM 8/12/17

Dataset: U:\Q4.PRO\results\170801M1\170801M1-48.qld

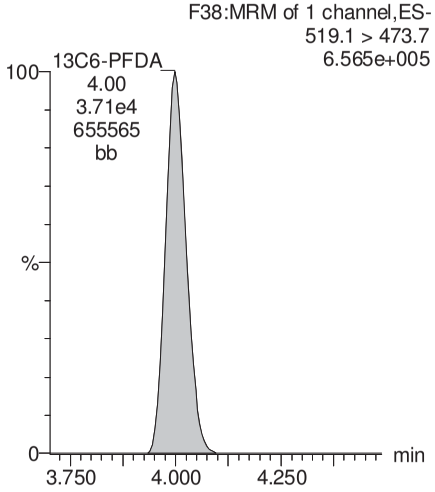
Last Altered: Thursday, August 10, 2017 13:41:25 Pacific Daylight Time
Printed: Thursday, August 10, 2017 13:42:05 Pacific Daylight Time

Name: 170801M1_48, Date: 01-Aug-2017, Time: 18:11:59, ID: 1700920-16 DUP-07-20170719 0.12023, Description: DUP-07-20170719

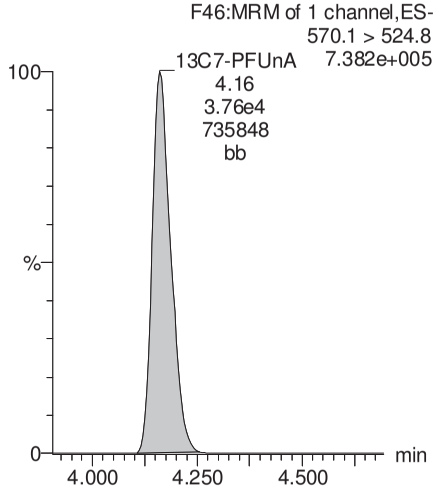
13C4-PFOS



13C6-PFDA



13C7-PFUnA



AP 8/10/2017

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-8.qld

Last Altered: Friday, August 11, 2017 14:49:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:50:02 Pacific Daylight Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

ID: 1700920-16@5X DUP-07-20170719 0.12023, Description: DUP-07-20170719, Name: 170811G2_8, Date: 11-Aug-2017, Time: 13:23:31

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	9	PFOS	499.0 >79.9	2.869e3	5.526e2		0.120	4.60	1210	
2	20	13C8-PFOS	507.0 > 79.9	5.526e2	6.014e2	1.109	0.120	4.60	86.1	82.8
3	26	13C4-PFOS	503.0 > 79.9	6.014e2	6.014e2	1.000	0.120	4.60	104	100
4	31	Total PFOS	499.0 >79.9		5.526e2		0.120		1210	

LA 8/11/2017

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-8.qld

Last Altered: Friday, August 11, 2017 14:49:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:50:02 Pacific Daylight Time

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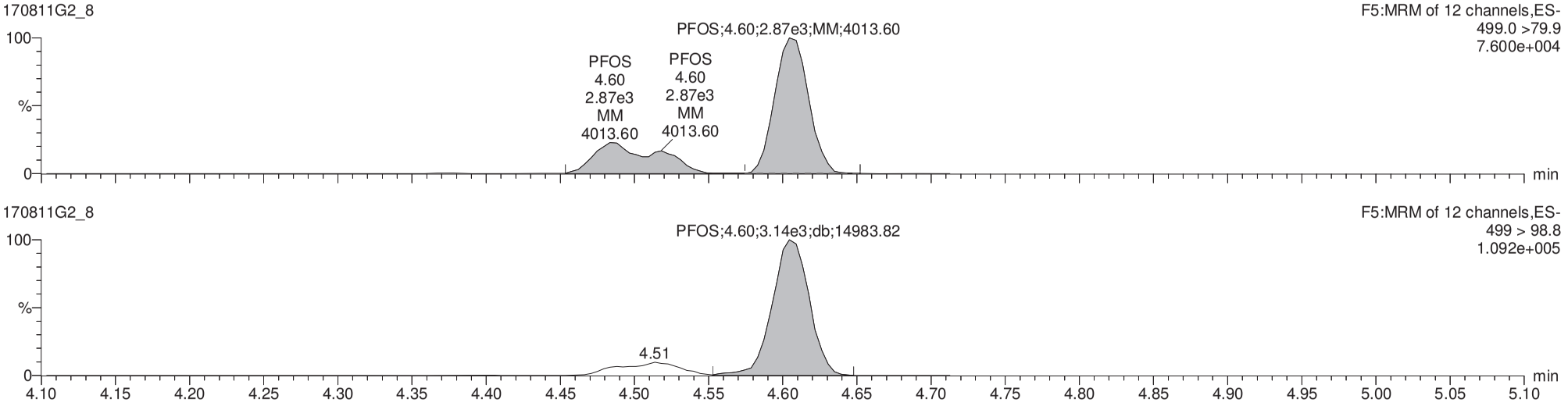
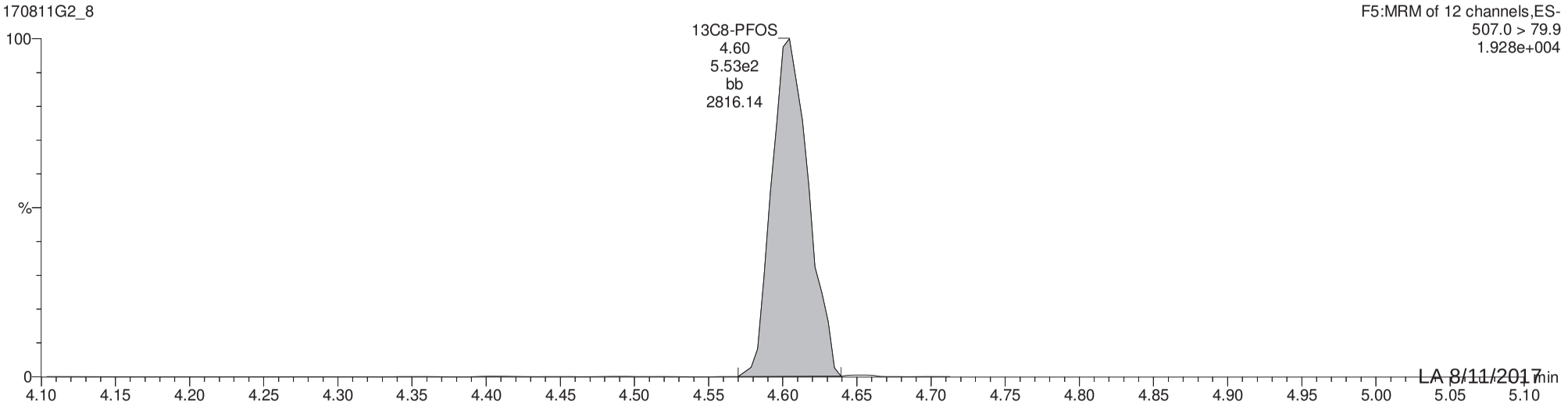
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

ID: 1700920-16@5X DUP-07-20170719 0.12023, Description: DUP-07-20170719, Name: 170811G2_8, Date: 11-Aug-2017, Time: 13:23:31, Instrument: , Lab: , User:

Total PFOS



13C8-PFOS



LA 8/11/2017

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-8.qld

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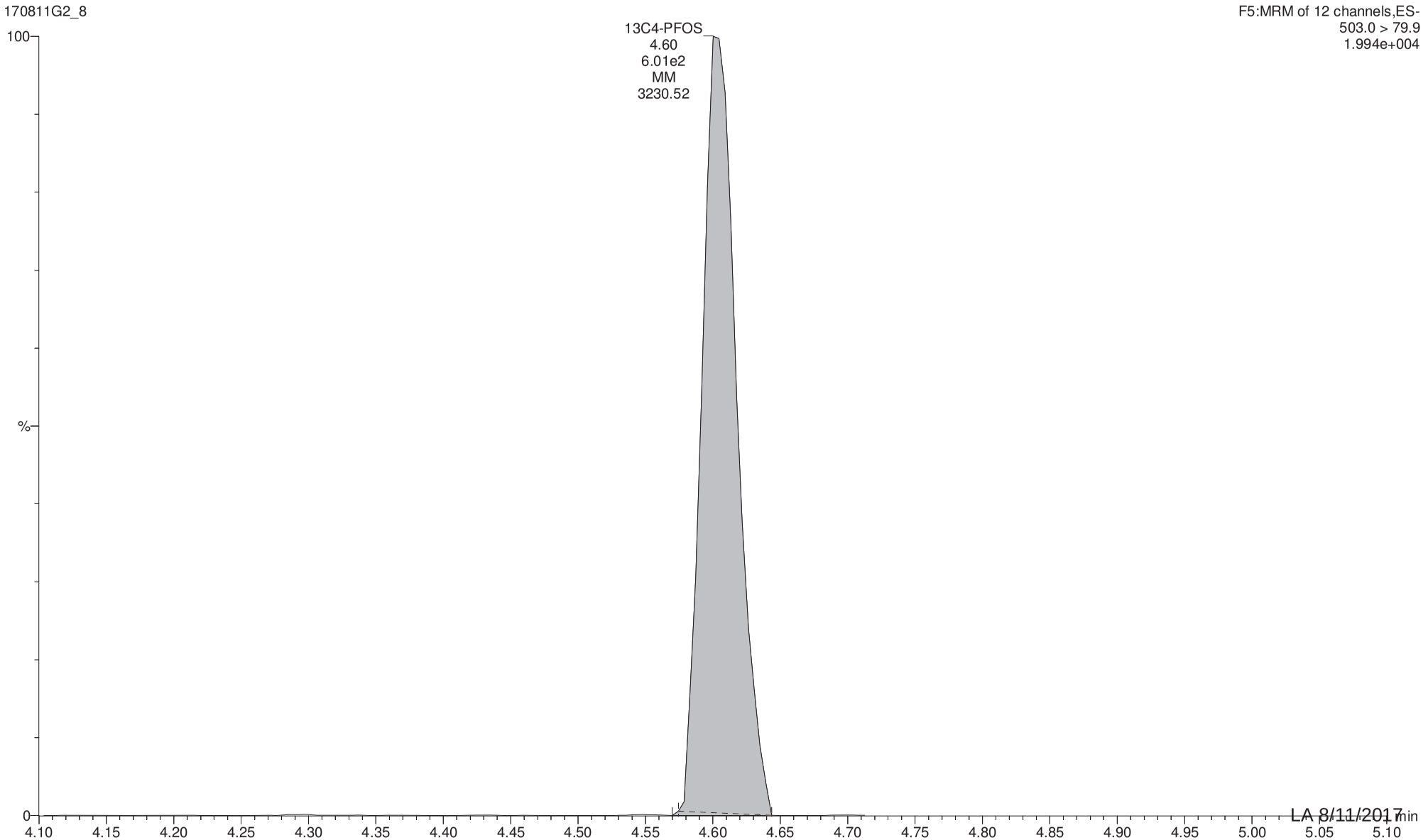
Printed: Friday, August 11, 2017 14:50:02 Pacific Daylight Time

ID: 1700920-16@5X DUP-07-20170719 0.12023, Description: DUP-07-20170719, Name: 170811G2_8, Date: 11-Aug-2017, Time: 13:23:31, Instrument: , Lab: , User:

13C4-PFOS



LA 8/11/2017

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-65.qld

Last Altered: Thursday, August 17, 2017 10:34:15 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:34:45 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: 170731M1_65, Date: 31-Jul-2017, Time: 23:45:51, ID: 1700920-17 FRB04-20170719 0.11007, Description: FRB04-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		5.19e3	0.110		2.96				
2	4	PFHxA	313.2 > 268.9		1.47e4	0.110		3.19				
3	5	PFHpA	363 > 318.9		3.30e4	0.110		3.45				
4	6	PFHxS	398.9 > 79.6	2.19e1	3.65e3	0.110		3.56	3.50	0.0750	0.121	
5	7	PFOA	413 > 368.7		4.45e4	0.110		3.65				
6	9	PFNA	462.9 > 418.8		3.84e4	0.110		3.83				
7	11	PFOS	499 > 79.9	7.97e0	9.04e3	0.110		3.89	3.80	0.0110		
8	12	PFDA	513 > 468.8		3.87e4	0.110		4.01				
9	13	N-MeFOSAA	570.1 > 419		6.21e3	0.110		4.03				
10	14	N-EtFOSAA	584.2 > 419		6.27e3	0.110		4.10				
11	15	PFUnA	562.9 > 518.9		3.22e4	0.110		4.11				
12	17	PFDoA	612.9 > 318.8		3.65e3	0.110		4.34				
13	18	PFTrDA	662.9 > 618.9		3.65e3	0.110		4.50				
14	19	PFTeDA	712.9 > 668.8		2.22e4	0.110		4.68				
15	22	13C3-PFBS	302 > 98.8	5.19e3	5.18e4	0.110	0.033	2.96	2.93	0.500	137	121.0
16	23	13C2-PFHxA	315 > 269.8	1.47e4	5.18e4	0.110	0.335	3.19	3.17	1.42	38.4	84.5
17	24	13C4-PFHpA	367.2 > 321.8	3.30e4	5.18e4	0.110	0.369	3.45	3.43	3.18	78.3	68.9
18	25	18O2-PFHxS	403 > 102.6	3.65e3	9.95e3	0.110	0.460	3.56	3.50	4.58	90.4	79.6
19	26	13C2-PFOA	414.9 > 369.7	4.45e4	4.53e4	0.110	1.293	3.65	3.64	12.3	86.2	75.9
20	27	13C5-PFNA	468.2 > 422.9	3.84e4	4.66e4	0.110	0.986	3.83	3.81	10.3	94.8	83.5

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-65.qld

Last Altered: Thursday, August 17, 2017 10:34:15 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:35:40 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: 170731M1_65, Date: 31-Jul-2017, Time: 23:45:51, ID: 1700920-17 FRB04-20170719 0.11007, Description: FRB04-20170719

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	29	13C8-PFOS	507 > 79.9	9.04e3	9.84e3	0.110	1.184	3.89	3.87	11.5	88.1	77.6	
2	30	13C2-PFDA	515.1 > 469.9	3.87e4	5.10e4	0.110	0.998	4.01	3.99	9.48	86.3	76.0	
3	31	d3-N-MeFOSAA	573.3 > 419	6.21e3	5.63e4	0.110	0.018	4.03	4.02	1.38	708	48.0	H
4	32	d5-N-EtFOSAA	589.3 > 419	6.27e3	5.63e4	0.110	0.018	4.12	4.08	1.39	712	48.2	H
5	33	13C2-PFUnA	565 > 519.8	3.22e4	5.63e4	0.110	1.129	4.17	4.15	7.15	57.5	50.7	
6	34	13C2-PFDoA	615 > 569.7	3.65e3	5.63e4	0.110	0.116	4.34	4.31	0.810	63.5	55.9	
7	35	13C2-PFTeDA	714.8 > 669.6	2.22e4	5.63e4	0.110	0.762	4.68	4.66	4.93	58.8	51.8	
8	37	13C5-PFHxA	318 > 272.9	5.18e4	5.18e4	0.110	1.000	3.19	3.17	5.00	45.4	100.0	
9	38	13C3-PFHxS	401.9 > 79.9	9.95e3	9.95e3	0.110	1.000	3.56	3.50	12.5	114	100.0	
10	39	13C8-PFOA	421.3 > 376	4.53e4	4.53e4	0.110	1.000	3.65	3.63	12.5	114	100.0	
11	40	13C9-PFNA	472.2 > 426.9	4.66e4	4.66e4	0.110	1.000	3.83	3.81	12.5	114	100.0	
12	41	13C4-PFOS	503 > 79.9	9.84e3	9.84e3	0.110	1.000	3.89	3.87	12.5	114	100.0	
13	42	13C6-PFDA	519.1 > 473.7	5.10e4	5.10e4	0.110	1.000	4.01	3.99	12.5	114	100.0	
14	43	13C7-PFUnA	570.1 > 524.8	5.63e4	5.63e4	0.110	1.000	4.17	4.15	12.5	114	100.0	
15	44	Total PFBS	299 > 79.7	0.00e0	5.19e3	0.110		2.96		0.000			
16	45	Total PFHxS	398.9 > 79.6	2.19e1	3.65e3	0.110		3.52		0.0750	0.121		
17	46	Total PFOA	413 > 368.7	0.00e0	4.45e4	0.110		3.65		0.000			
18	47	Total PFOS	499 > 79.9	7.97e0	9.04e3	0.110		3.89		0.000			
19	48	Total N-Me-FOSAA	570.1 > 419	0.00e0	6.21e3	0.110		4.03		0.000			
20	49	Total N-EtFOSAA	584.2 > 419	0.00e0	6.27e3	0.110		4.17		0.000			

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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-65.qld

Last Altered: Thursday, August 17, 2017 10:34:15 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:35:40 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: 170731M1_65, Date: 31-Jul-2017, Time: 23:45:51, ID: 1700920-17 FRB04-20170719 0.11007, Description: FRB04-20170719

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	3.50	21.871	3645.741	0.075	bb	0.1

Total PFOA

	# Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7 PFOA	413 > 368.7			44464.398		MM-I	

Total PFOS

	# Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	11 PFOS	499 > 79.9	3.80	7.969	9041.292	0.011	bbI	

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 8/17/17

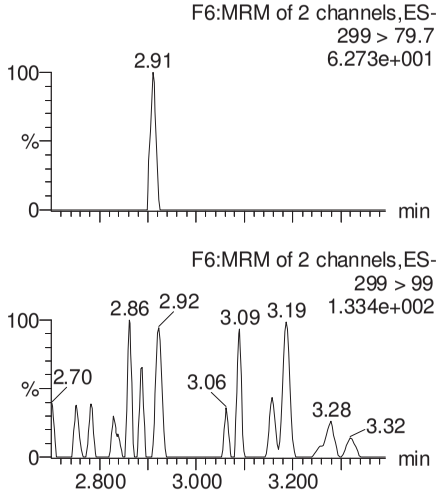
Dataset: U:\Q4.PRO\results\170731M1\170731M1-65.qld

Last Altered: Thursday, August 17, 2017 10:34:15 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:35:40 Pacific Daylight Time

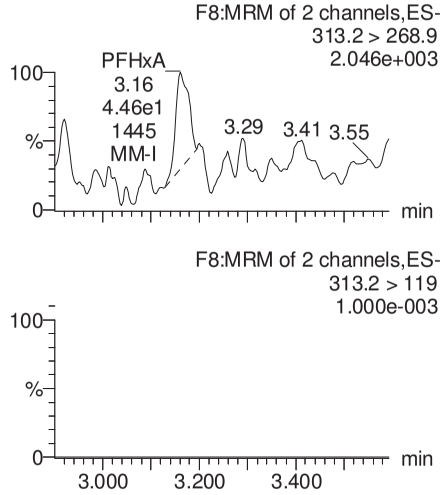
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170731M1_65, Date: 31-Jul-2017, Time: 23:45:51, ID: 1700920-17 FRB04-20170719 0.11007, Description: FRB04-20170719

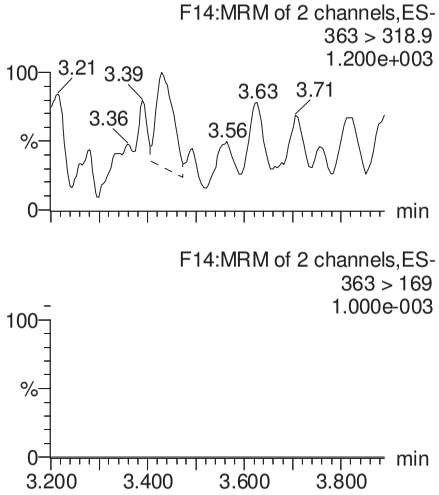
Total PFBS



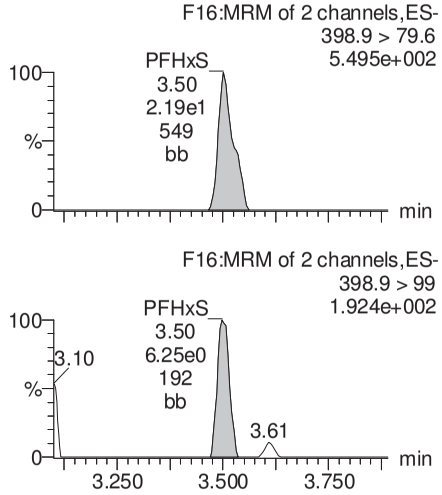
PFHxA



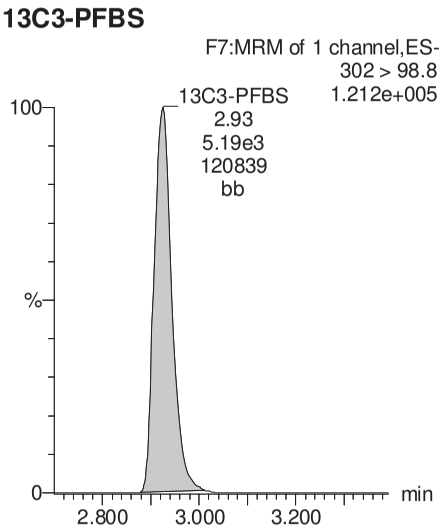
PFHpA



Total PFHxS



13C3-PFBS



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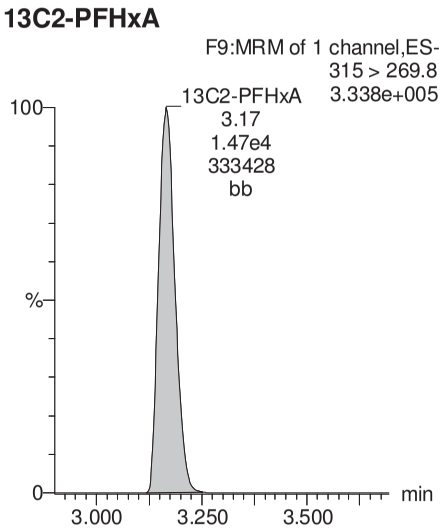

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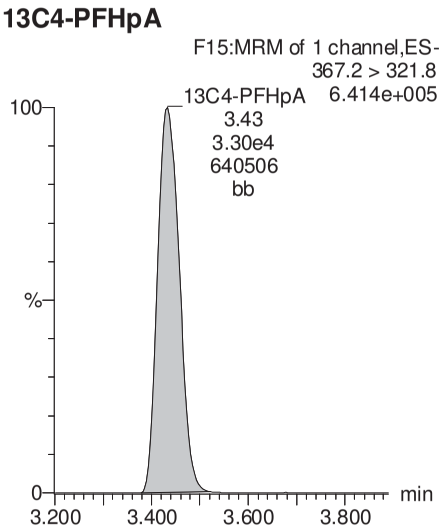
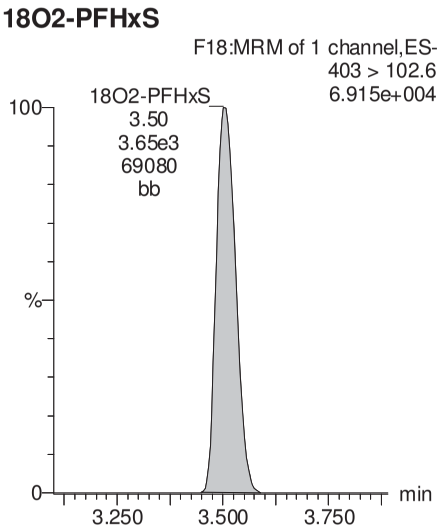


18O2-PFHxS



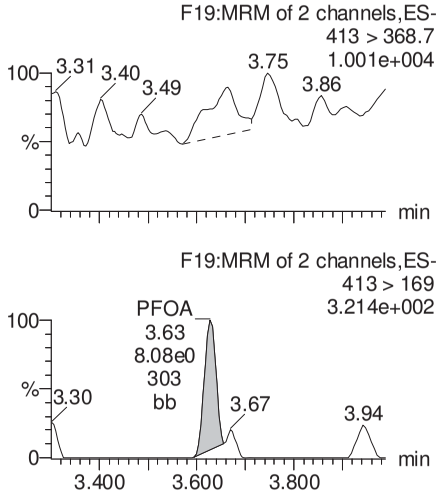
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-65.qld

Last Altered: Thursday, August 17, 2017 10:34:15 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:35:40 Pacific Daylight Time

Name: 170731M1_65, Date: 31-Jul-2017, Time: 23:45:51, ID: 1700920-17 FRB04-20170719 0.11007, Description: FRB04-20170719

Total PFOA



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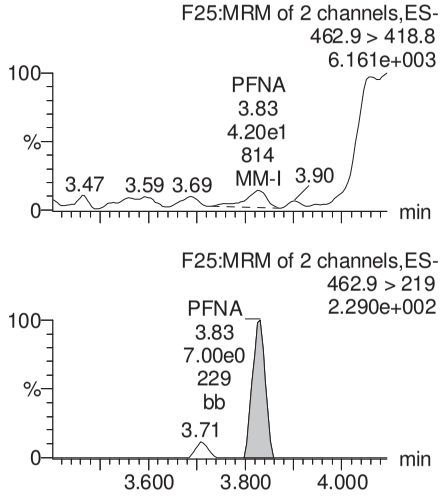
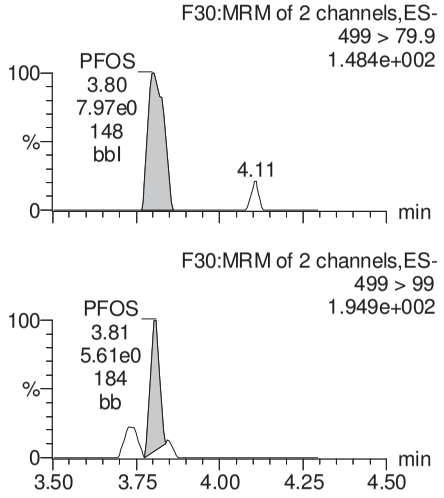
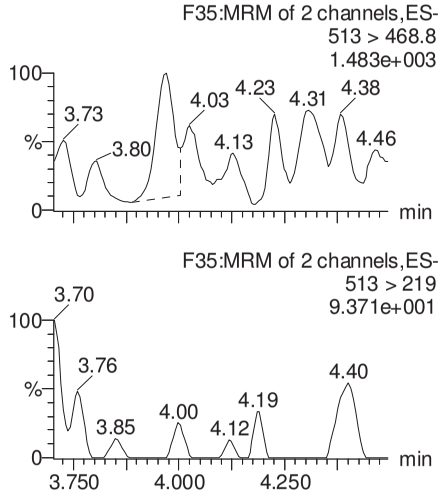


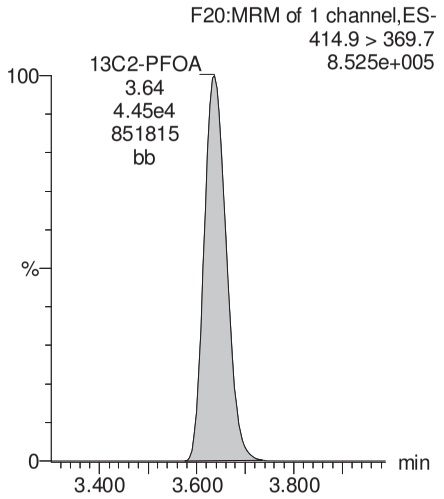
Total PFOS



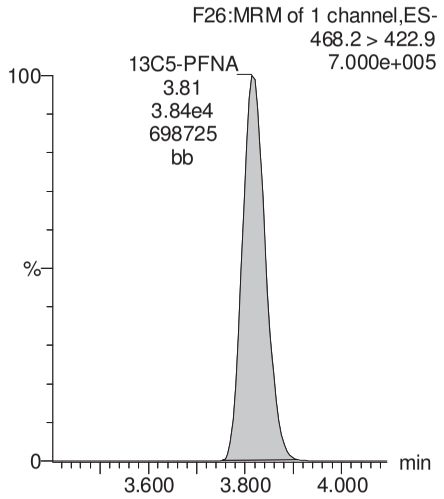
PFDA



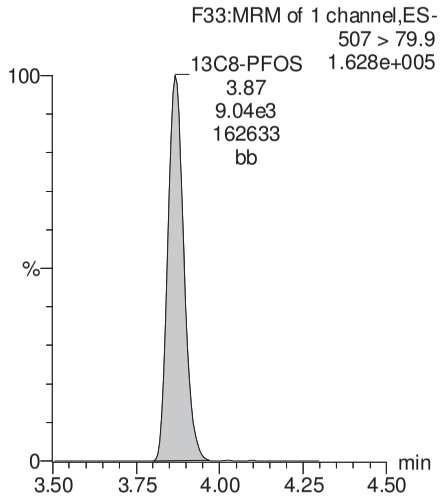
13C2-PFOA



13C5-PFNA



13C8-PFOS



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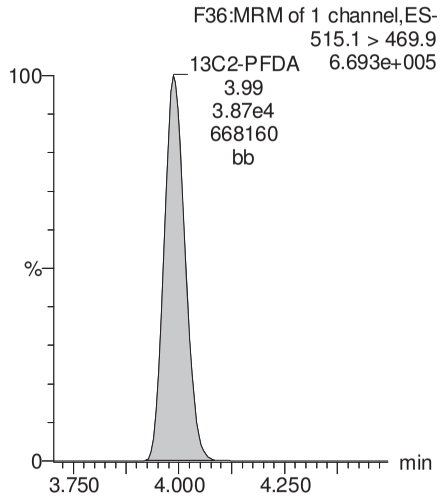

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Vista Analytical Laboratory

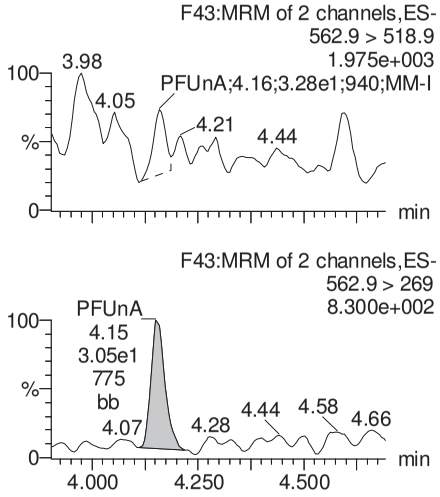
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-65.qld

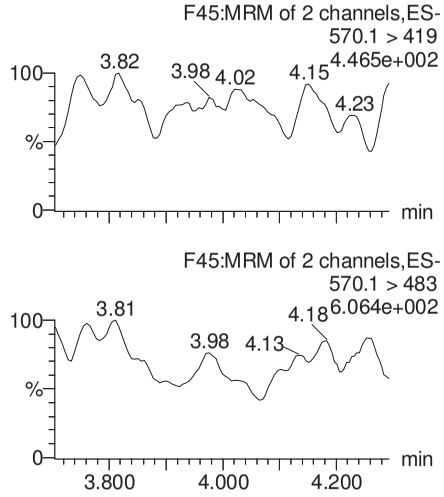
Last Altered: Thursday, August 17, 2017 10:34:15 Pacific Daylight Time
Printed: Thursday, August 17, 2017 10:35:40 Pacific Daylight Time

Name: 170731M1_65, Date: 31-Jul-2017, Time: 23:45:51, ID: 1700920-17 FRB04-20170719 0.11007, Description: FRB04-20170719

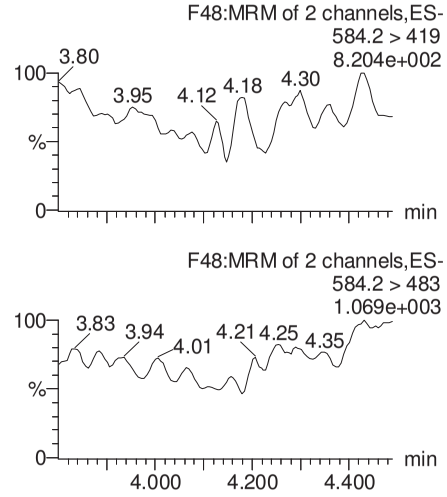
PFUnA



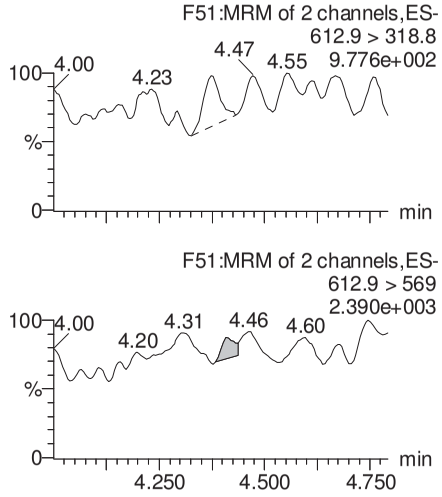
N-MeFOSAA



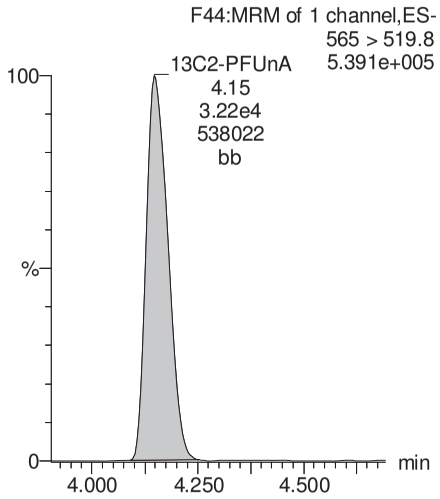
N-EtFOSAA



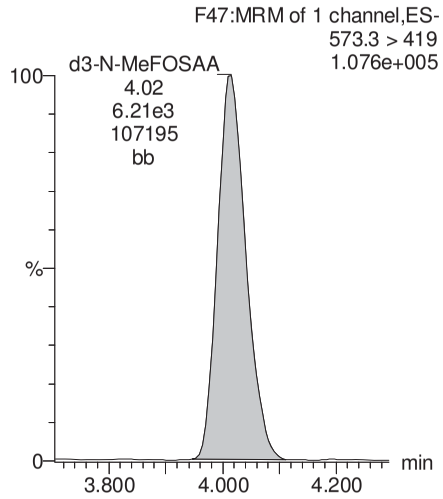
PFDoA



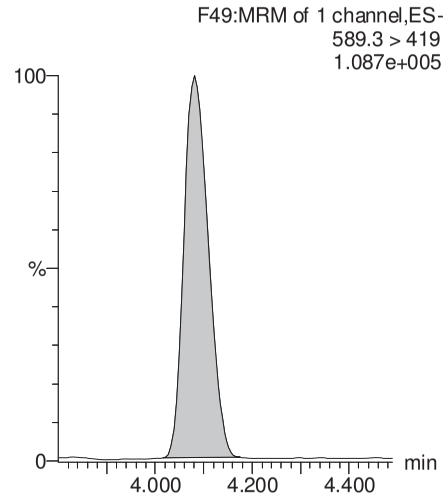
13C2-PFUnA



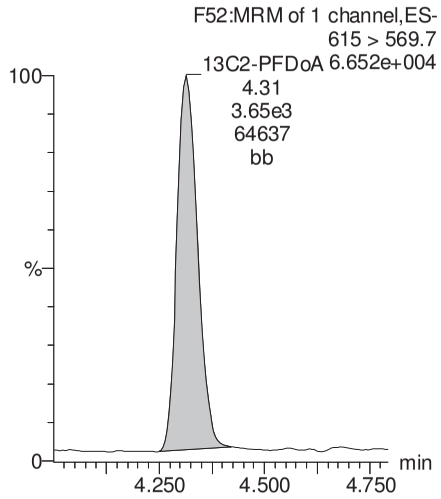
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



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Dataset: U:\Q4.PRO\results\170731M1\170731M1-65.qld

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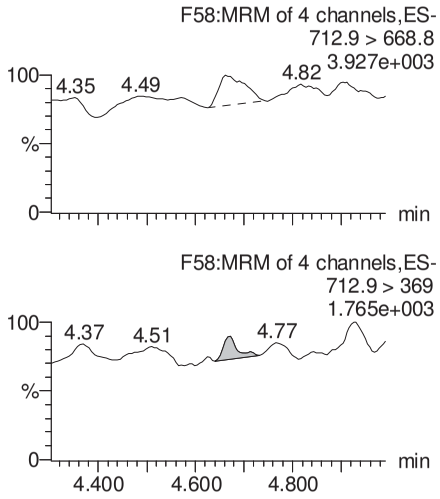
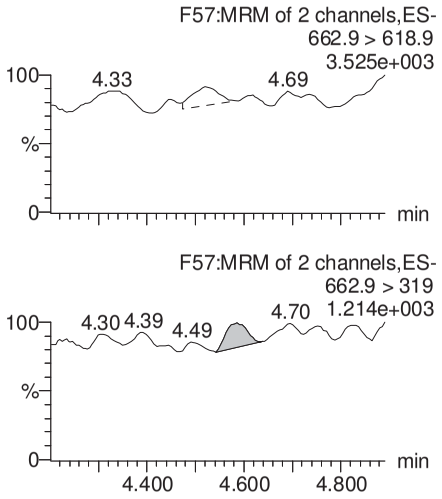
Name: 170731M1_65, Date: 31-Jul-2017, Time: 23:45:51, ID: 1700920-17 FRB04-20170719 0.11007, Description: FRB04-20170719

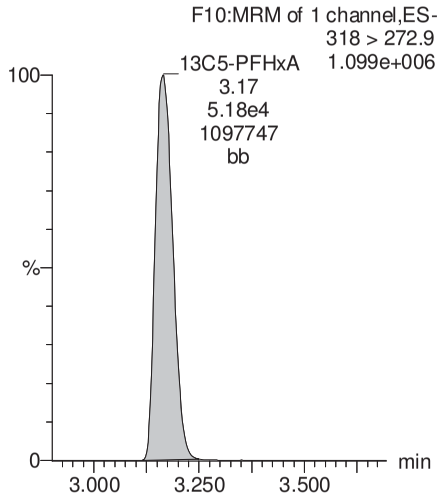
PFTeDA



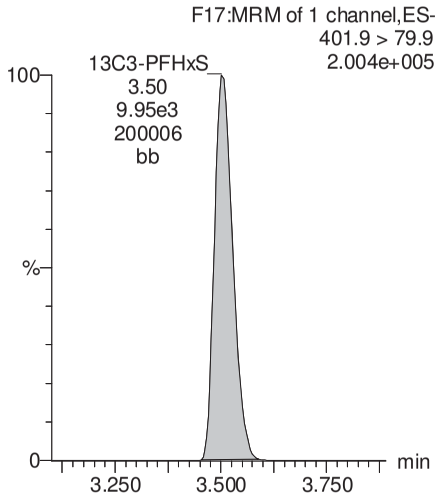
PFTrDA



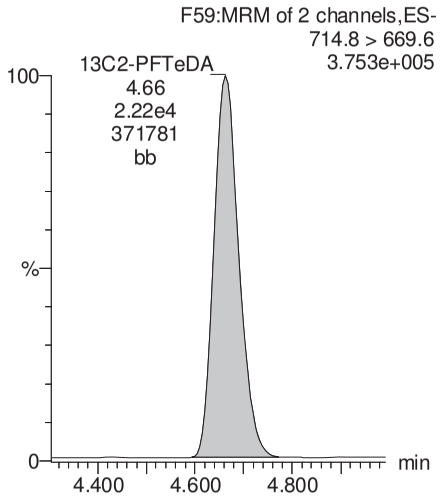
13C5-PFHxA



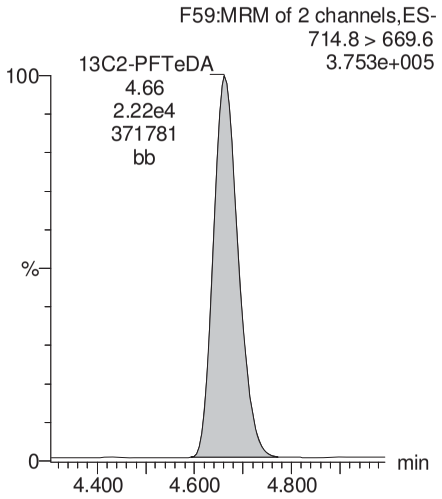
13C3-PFHxS



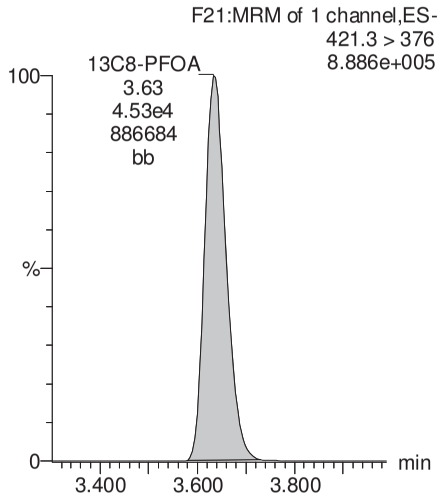
13C2-PFTeDA



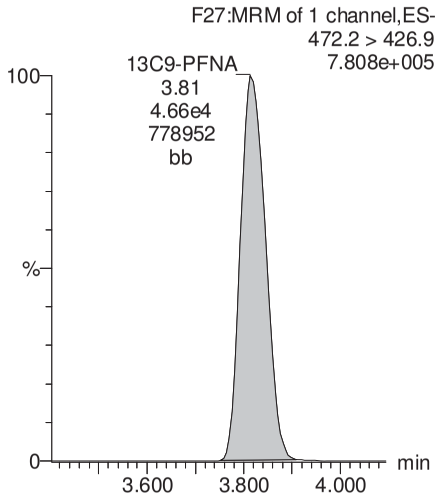
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



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Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-65.qld

Last Altered: Thursday, August 17, 2017 10:34:15 Pacific Daylight Time
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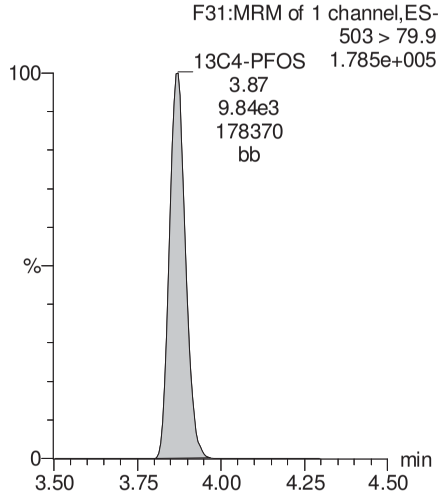
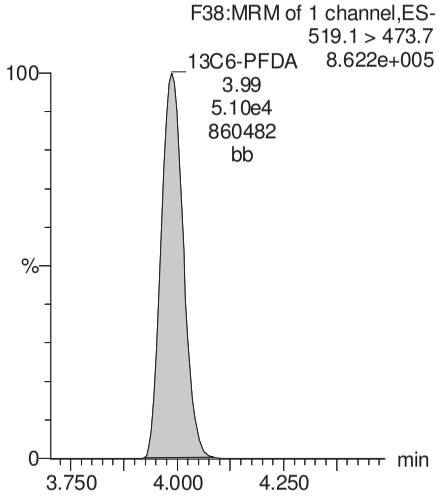
Name: 170731M1_65, Date: 31-Jul-2017, Time: 23:45:51, ID: 1700920-17 FRB04-20170719 0.11007, Description: FRB04-20170719

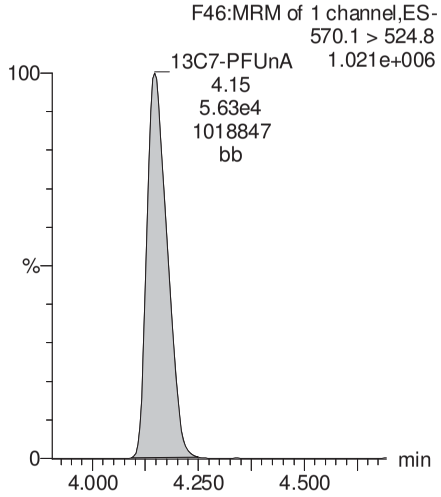
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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INJECTION INTERNAL STANDARD (IIS) AREAS,

INSTRUMENT BLANKS (IB)

AND

CONTINUTING CALIBRATION VERIFICATIONS CCV)

Dataset: Untitled

Last Altered: Tuesday, August 01, 2017 09:29:57 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 09:38:09 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_RS=only.mdb 28 Jul 2017 09:34:01
Calibration: 01 Aug 2017 09:29:57

Name: 170731M1_2, Date: 31-Jul-2017, Time: 12:09:51, ID: ST170731M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	9.55e4	100.0	NO
2	2 13C3-PFHxS	ST170...	1.47e4	100.0	NO
3	3 13C8-PFOA	ST170...	7.14e4	100.0	NO
4	4 13C9-PFNA	ST170...	8.16e4	100.0	NO
5	5 13C4-PFOS	ST170...	1.46e4	100.0	NO
6	6 13C6-PFDA	ST170...	7.68e4	100.0	NO
7	7 13C7-PFUnA	ST170...	8.61e4	100.0	NO

Name: 170731M1_3, Date: 31-Jul-2017, Time: 12:20:37, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA	1.06e1	0.0	NO

Name: 170731M1_4, Date: 31-Jul-2017, Time: 12:31:16, ID: B7G0067-BS1 OPR 0.125, Description: OPR

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G00...	2.88e4	30.1	YES
2	2 13C3-PFHxS	B7G00...	4.73e3	32.2	YES
3	3 13C8-PFOA	B7G00...	2.14e4	29.9	YES
4	4 13C9-PFNA	B7G00...	2.37e4	29.1	YES
5	5 13C4-PFOS	B7G00...	4.56e3	31.2	YES
6	6 13C6-PFDA	B7G00...	2.32e4	30.2	YES
7	7 13C7-PFUnA	B7G00...	2.34e4	27.1	YES

Name: 170731M1_5, Date: 31-Jul-2017, Time: 12:42:02, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA	1.93e1	0.0	NO

Dataset: Untitled

Last Altered: Tuesday, August 01, 2017 09:29:57 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 09:38:09 Pacific Daylight Time

Name: 170731M1_6, Date: 31-Jul-2017, Time: 12:52:41, ID: B7G0067-BLK1 Method Blank 0.125, Description: Method Blank

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G00...	2.64e4	27.6	YES
2	2 13C3-PFHxS	B7G00...	3.97e3	27.0	YES
3	3 13C8-PFOA	B7G00...	1.98e4	27.7	YES
4	4 13C9-PFNA	B7G00...	2.16e4	26.4	YES
5	5 13C4-PFOS	B7G00...	4.08e3	27.9	YES
6	6 13C6-PFDA	B7G00...	2.12e4	27.6	YES
7	7 13C7-PFUnA	B7G00...	2.29e4	26.6	YES

Name: 170731M1_7, Date: 31-Jul-2017, Time: 13:03:19, ID: 1700855-01 TF5-EB-02 0.27357, Description: TF5-EB-02

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	2.66e4	27.8	YES
2	2 13C3-PFHxS	17008...	4.26e3	29.0	YES
3	3 13C8-PFOA	17008...	2.00e4	28.1	YES
4	4 13C9-PFNA	17008...	2.42e4	29.6	YES
5	5 13C4-PFOS	17008...	3.94e3	27.0	YES
6	6 13C6-PFDA	17008...	2.47e4	32.2	YES
7	7 13C7-PFUnA	17008...	2.55e4	29.6	YES

Name: 170731M1_8, Date: 31-Jul-2017, Time: 13:13:57, ID: 1700855-02 TF5-MW-987 0.27423, Description: TF5-MW-987

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	3.35e4	35.1	YES
2	2 13C3-PFHxS	17008...	5.31e3	36.1	YES
3	3 13C8-PFOA	17008...	2.60e4	36.4	YES
4	4 13C9-PFNA	17008...	3.16e4	38.7	YES
5	5 13C4-PFOS	17008...	5.49e3	37.6	YES
6	6 13C6-PFDA	17008...	2.69e4	35.0	YES
7	7 13C7-PFUnA	17008...	2.56e4	29.7	YES

Name: 170731M1_9, Date: 31-Jul-2017, Time: 13:24:36, ID: 1700855-03 TF5-MW-987D 0.27164, Description: TF5-MW-987D

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	2.72e4	28.5	YES
2	2 13C3-PFHxS	17008...	4.44e3	30.2	YES
3	3 13C8-PFOA	17008...	2.12e4	29.6	YES
4	4 13C9-PFNA	17008...	2.29e4	28.0	YES
5	5 13C4-PFOS	17008...	3.84e3	26.3	YES
6	6 13C6-PFDA	17008...	2.27e4	29.5	YES
7	7 13C7-PFUnA	17008...	2.22e4	25.8	YES

Dataset: Untitled

Last Altered: Tuesday, August 01, 2017 09:29:57 Pacific Daylight Time
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Name: 170731M1_10, Date: 31-Jul-2017, Time: 13:35:14, ID: B7G0067-MS1 Matrix Spike 0.27298, Description: Matrix Spike

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G00...	2.06e4	21.5	YES
2	2 13C3-PFHxS	B7G00...	3.48e3	23.7	YES
3	3 13C8-PFOA	B7G00...	1.70e4	23.8	YES
4	4 13C9-PFNA	B7G00...	2.09e4	25.6	YES
5	5 13C4-PFOS	B7G00...	3.26e3	22.4	YES
6	6 13C6-PFDA	B7G00...	1.96e4	25.5	YES
7	7 13C7-PFUnA	B7G00...	1.79e4	20.8	YES

Name: 170731M1_11, Date: 31-Jul-2017, Time: 13:45:53, ID: B7G0067-MSD1 Matrix Spike Dup 0.2776, Description: Matrix Spike Dup

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G00...	2.56e4	26.9	YES
2	2 13C3-PFHxS	B7G00...	3.89e3	26.5	YES
3	3 13C8-PFOA	B7G00...	2.07e4	29.0	YES
4	4 13C9-PFNA	B7G00...	2.09e4	25.7	YES
5	5 13C4-PFOS	B7G00...	3.68e3	25.3	YES
6	6 13C6-PFDA	B7G00...	1.92e4	24.9	YES
7	7 13C7-PFUnA	B7G00...	1.93e4	22.4	YES

Name: 170731M1_12, Date: 31-Jul-2017, Time: 13:56:31, ID: 1700855-04 TF5-MW-987-D 0.26865, Description: TF5-MW-987-D

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	2.76e4	28.9	YES
2	2 13C3-PFHxS	17008...	3.99e3	27.2	YES
3	3 13C8-PFOA	17008...	2.16e4	30.2	YES
4	4 13C9-PFNA	17008...	2.39e4	29.3	YES
5	5 13C4-PFOS	17008...	4.26e3	29.2	YES
6	6 13C6-PFDA	17008...	2.20e4	28.7	YES
7	7 13C7-PFUnA	17008...	2.55e4	29.7	YES

Name: 170731M1_13, Date: 31-Jul-2017, Time: 14:28:15, ID: 1700855-05 TF5-MW-991 0.2726, Description: TF5-MW-991

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	3.42e4	35.9	YES
2	2 13C3-PFHxS	17008...	5.18e3	35.3	YES
3	3 13C8-PFOA	17008...	2.59e4	36.2	YES
4	4 13C9-PFNA	17008...	2.85e4	34.9	YES
5	5 13C4-PFOS	17008...	4.99e3	34.2	YES
6	6 13C6-PFDA	17008...	2.72e4	35.4	YES
7	7 13C7-PFUnA	17008...	2.19e4	25.4	YES

Dataset: Untitled

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Name: 170731M1_14, Date: 31-Jul-2017, Time: 14:38:59, ID: 1700855-06 TF5-MW-991D 0.27278, Description: TF5-MW-991D

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17008...	2.90e4	30.3	YES
2	2	13C3-PFHxS	17008...	4.71e3	32.1	YES
3	3	13C8-PFOA	17008...	2.20e4	30.9	YES
4	4	13C9-PFNA	17008...	2.30e4	28.2	YES
5	5	13C4-PFOS	17008...	4.21e3	28.8	YES
6	6	13C6-PFDA	17008...	2.26e4	29.5	YES
7	7	13C7-PFUnA	17008...	1.51e4	17.6	YES

Name: 170731M1_15, Date: 31-Jul-2017, Time: 14:49:37, ID: 1700855-07 TF5-MW-993 0.26881, Description: TF5-MW-993

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17008...	3.23e4	33.8	YES
2	2	13C3-PFHxS	17008...	5.01e3	34.1	YES
3	3	13C8-PFOA	17008...	2.54e4	35.5	YES
4	4	13C9-PFNA	17008...	2.60e4	31.8	YES
5	5	13C4-PFOS	17008...	5.11e3	35.0	YES
6	6	13C6-PFDA	17008...	2.59e4	33.8	YES
7	7	13C7-PFUnA	17008...	2.19e4	25.5	YES

Name: 170731M1_16, Date: 31-Jul-2017, Time: 15:00:15, ID: 1700855-08 TF5-MW-993D 0.2612, Description: TF5-MW-993D

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17008...	2.37e4	24.8	YES
2	2	13C3-PFHxS	17008...	3.51e3	23.9	YES
3	3	13C8-PFOA	17008...	1.75e4	24.5	YES
4	4	13C9-PFNA	17008...	1.92e4	23.6	YES
5	5	13C4-PFOS	17008...	3.10e3	21.3	YES
6	6	13C6-PFDA	17008...	1.66e4	21.6	YES
7	7	13C7-PFUnA	17008...	1.63e4	18.9	YES

Name: 170731M1_17, Date: 31-Jul-2017, Time: 15:10:54, ID: 1700855-09 TF5-MW-994 0.25188, Description: TF5-MW-994

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17008...	3.16e4	33.1	YES
2	2	13C3-PFHxS	17008...	4.76e3	32.4	YES
3	3	13C8-PFOA	17008...	2.79e4	39.0	YES
4	4	13C9-PFNA	17008...	2.87e4	35.2	YES
5	5	13C4-PFOS	17008...	4.88e3	33.5	YES
6	6	13C6-PFDA	17008...	2.46e4	32.1	YES
7	7	13C7-PFUnA	17008...	1.99e4	23.1	YES

Dataset: Untitled

Last Altered: Tuesday, August 01, 2017 09:29:57 Pacific Daylight Time
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Name: 170731M1_18, Date: 31-Jul-2017, Time: 15:21:32, ID: 1700845-03@40X MW-27S-20170707 0.11824, Description: MW-27S-20170707

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	7.69e2	0.8	YES
2	2 13C3-PFHxS	17008...	1.75e2	1.2	YES
3	3 13C8-PFOA	17008...	1.05e3	1.5	YES
4	4 13C9-PFNA	17008...	1.10e3	1.4	YES
5	5 13C4-PFOS	17008...	1.26e2	0.9	YES
6	6 13C6-PFDA	17008...	9.04e2	1.2	YES
7	7 13C7-PFUnA	17008...	6.58e2	0.8	YES

Name: 170731M1_19, Date: 31-Jul-2017, Time: 15:32:11, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA	2.66e1	0.0	NO

Name: 170731M1_20, Date: 31-Jul-2017, Time: 15:42:57, ID: ST170731M1-2 PFC CS3 17G2729, Description: PFC CS3 17G2729

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	9.37e4	98.2	NO
2	2 13C3-PFHxS	ST170...	1.36e4	92.9	NO
3	3 13C8-PFOA	ST170...	7.52e4	105.3	NO
4	4 13C9-PFNA	ST170...	7.07e4	86.6	NO
5	5 13C4-PFOS	ST170...	1.25e4	85.9	NO
6	6 13C6-PFDA	ST170...	8.05e4	104.8	NO
7	7 13C7-PFUnA	ST170...	8.98e4	104.3	NO

Name: 170731M1_21, Date: 31-Jul-2017, Time: 15:53:44, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA	6.67e0	0.0	NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA	5.31e0	0.0	NO
7	7 13C7-PFUnA	IPA	1.29e1	0.0	NO

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Name: 170731M1_22, Date: 31-Jul-2017, Time: 16:04:30, ID: 1700871-01 EB03-20170712 0.12146, Description: EB03-20170712

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	2.69e4	28.1	YES
2	2 13C3-PFHxS	17008...	4.35e3	29.6	YES
3	3 13C8-PFOA	17008...	2.17e4	30.4	YES
4	4 13C9-PFNA	17008...	2.41e4	29.5	YES
5	5 13C4-PFOS	17008...	3.82e3	26.2	YES
6	6 13C6-PFDA	17008...	2.42e4	31.5	YES
7	7 13C7-PFUnA	17008...	2.30e4	26.7	YES

Name: 170731M1_23, Date: 31-Jul-2017, Time: 16:15:16, ID: 1700871-02 5-GW-05_DGMW41B-20170712 0.11547, Description: 5-GW-05_DGMW41B-20170712

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	2.56e4	26.8	YES
2	2 13C3-PFHxS	17008...	3.95e3	26.9	YES
3	3 13C8-PFOA	17008...	1.97e4	27.6	YES
4	4 13C9-PFNA	17008...	2.25e4	27.6	YES
5	5 13C4-PFOS	17008...	3.73e3	25.6	YES
6	6 13C6-PFDA	17008...	2.32e4	30.2	YES
7	7 13C7-PFUnA	17008...	2.20e4	25.5	YES

Name: 170731M1_24, Date: 31-Jul-2017, Time: 16:25:55, ID: 1700871-03 18-GW-18BGM03E-20170712 0.11765, Description: 18-GW-18BGM03E-20170712

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	2.35e4	24.6	YES
2	2 13C3-PFHxS	17008...	3.55e3	24.2	YES
3	3 13C8-PFOA	17008...	1.92e4	26.8	YES
4	4 13C9-PFNA	17008...	1.93e4	23.6	YES
5	5 13C4-PFOS	17008...	3.19e3	21.8	YES
6	6 13C6-PFDA	17008...	2.18e4	28.4	YES
7	7 13C7-PFUnA	17008...	2.09e4	24.3	YES

Name: 170731M1_25, Date: 31-Jul-2017, Time: 16:36:59, ID: 1700871-04 24-GW-24IN03-20170712 0.11741, Description: 24-GW-24IN03-20170712

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	3.68e4	38.6	YES
2	2 13C3-PFHxS	17008...	5.51e3	37.5	YES
3	3 13C8-PFOA	17008...	2.95e4	41.3	YES
4	4 13C9-PFNA	17008...	2.91e4	35.7	YES
5	5 13C4-PFOS	17008...	4.78e3	32.7	YES
6	6 13C6-PFDA	17008...	2.74e4	35.6	YES
7	7 13C7-PFUnA	17008...	1.77e4	20.6	YES

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Name: 170731M1_26, Date: 31-Jul-2017, Time: 16:48:01, ID: 1700871-05 DUP02-20170712 0.11807, Description: DUP02-20170712

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17008...	3.34e4	35.0	YES
2	2	13C3-PFHxS	17008...	4.69e3	32.0	YES
3	3	13C8-PFOA	17008...	2.34e4	32.7	YES
4	4	13C9-PFNA	17008...	2.39e4	29.3	YES
5	5	13C4-PFOS	17008...	4.17e3	28.6	YES
6	6	13C6-PFDA	17008...	2.18e4	28.3	YES
7	7	13C7-PFUnA	17008...	1.77e4	20.6	YES

Name: 170731M1_27, Date: 31-Jul-2017, Time: 16:58:39, ID: 1700871-06 24-GW-24EX13A-20170712 0.11851, Description: 24-GW-24EX13A-20170712

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17008...	3.14e4	32.9	YES
2	2	13C3-PFHxS	17008...	5.28e3	36.0	YES
3	3	13C8-PFOA	17008...	2.54e4	35.6	YES
4	4	13C9-PFNA	17008...	2.66e4	32.5	YES
5	5	13C4-PFOS	17008...	4.48e3	30.7	YES
6	6	13C6-PFDA	17008...	2.46e4	32.0	YES
7	7	13C7-PFUnA	17008...	2.36e4	27.5	YES

Name: 170731M1_28, Date: 31-Jul-2017, Time: 17:09:26, ID: 1700871-07 24-GW-24MW15D-20170712 0.1193, Description: 24-GW-24MW15D-20170712

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17008...	2.45e4	25.7	YES
2	2	13C3-PFHxS	17008...	3.86e3	26.3	YES
3	3	13C8-PFOA	17008...	2.06e4	28.8	YES
4	4	13C9-PFNA	17008...	2.25e4	27.6	YES
5	5	13C4-PFOS	17008...	3.53e3	24.2	YES
6	6	13C6-PFDA	17008...	2.53e4	32.9	YES
7	7	13C7-PFUnA	17008...	2.20e4	25.5	YES

Name: 170731M1_29, Date: 31-Jul-2017, Time: 17:20:04, ID: 1700871-08 16-GW-16_MW28-20170712 0.11899, Description: 16-GW-16_MW28-20170712

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17008...	2.49e4	26.1	YES
2	2	13C3-PFHxS	17008...	3.79e3	25.8	YES
3	3	13C8-PFOA	17008...	2.08e4	29.1	YES
4	4	13C9-PFNA	17008...	2.24e4	27.4	YES
5	5	13C4-PFOS	17008...	3.90e3	26.7	YES
6	6	13C6-PFDA	17008...	2.08e4	27.1	YES
7	7	13C7-PFUnA	17008...	2.00e4	23.2	YES

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Name: 170731M1_30, Date: 31-Jul-2017, Time: 17:30:50, ID: 1700871-09 16-GW-16_MW19-20170712 0.11913, Description: 16-GW-16_MW19-20170712

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	2.29e4	23.9	YES
2	2 13C3-PFHxS	17008...	3.59e3	24.5	YES
3	3 13C8-PFOA	17008...	1.74e4	24.4	YES
4	4 13C9-PFNA	17008...	1.79e4	21.9	YES
5	5 13C4-PFOS	17008...	3.47e3	23.8	YES
6	6 13C6-PFDA	17008...	2.09e4	27.2	YES
7	7 13C7-PFUnA	17008...	2.27e4	26.4	YES

Name: 170731M1_31, Date: 31-Jul-2017, Time: 17:41:29, ID: 1700871-10 EB04-20170713 0.11646, Description: EB04-20170713

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	4.29e4	44.9	YES
2	2 13C3-PFHxS	17008...	6.25e3	42.6	YES
3	3 13C8-PFOA	17008...	3.08e4	43.2	YES
4	4 13C9-PFNA	17008...	3.15e4	38.6	YES
5	5 13C4-PFOS	17008...	5.04e3	34.5	YES
6	6 13C6-PFDA	17008...	2.76e4	36.0	YES
7	7 13C7-PFUnA	17008...	2.38e4	27.7	YES

Name: 170731M1_32, Date: 31-Jul-2017, Time: 17:52:08, ID: 1700871-11 16-GW-16_MW04-20170713 0.12043, Description: 16-GW-16_MW04-20170713

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	2.88e4	30.1	YES
2	2 13C3-PFHxS	17008...	4.93e3	33.6	YES
3	3 13C8-PFOA	17008...	2.35e4	32.8	YES
4	4 13C9-PFNA	17008...	2.30e4	28.2	YES
5	5 13C4-PFOS	17008...	4.07e3	27.9	YES
6	6 13C6-PFDA	17008...	2.30e4	29.9	YES
7	7 13C7-PFUnA	17008...	2.17e4	25.2	YES

Name: 170731M1_33, Date: 31-Jul-2017, Time: 18:02:46, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA			NO

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Name: 170731M1_34, Date: 31-Jul-2017, Time: 18:13:24, ID: ST170731M1-3 PFC CS3 17G2729, Description: PFC CS3 17G2729

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	9.98e4	104.5	NO
2	2 13C3-PFHxS	ST170...	1.42e4	96.7	NO
3	3 13C8-PFOA	ST170...	7.70e4	107.7	NO
4	4 13C9-PFNA	ST170...	8.64e4	105.9	NO
5	5 13C4-PFOS	ST170...	1.46e4	100.0	NO
6	6 13C6-PFDA	ST170...	8.99e4	117.1	NO
7	7 13C7-PFUnA	ST170...	9.51e4	110.5	NO

Name: 170731M1_35, Date: 31-Jul-2017, Time: 18:24:04, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA	6.03e0	0.0	NO
7	7 13C7-PFUnA	IPA	2.05e1	0.0	NO

Name: 170731M1_36, Date: 31-Jul-2017, Time: 18:34:49, ID: 1700856-12RE1@5X MW-31S-20170711 0.11732, Description: MW-31S-20170711

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	7.12e3	7.5	YES
2	2 13C3-PFHxS	17008...	1.15e3	7.8	YES
3	3 13C8-PFOA	17008...	5.76e3	8.1	YES
4	4 13C9-PFNA	17008...	6.21e3	7.6	YES
5	5 13C4-PFOS	17008...	1.07e3	7.3	YES
6	6 13C6-PFDA	17008...	6.64e3	8.6	YES
7	7 13C7-PFUnA	17008...	6.29e3	7.3	YES

Name: 170731M1_37, Date: 31-Jul-2017, Time: 18:45:27, ID: 1700935-01 RES29-BLK_20170726 0.11182, Description: RES29-BLK_20170726

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.61e4	58.7	NO
2	2 13C3-PFHxS	17009...	8.98e3	61.1	NO
3	3 13C8-PFOA	17009...	4.16e4	58.2	NO
4	4 13C9-PFNA	17009...	4.39e4	53.8	NO
5	5 13C4-PFOS	17009...	5.86e3	40.2	YES
6	6 13C6-PFDA	17009...	3.60e4	46.8	YES
7	7 13C7-PFUnA	17009...	1.48e4	17.2	YES

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Name: 170731M1_38, Date: 31-Jul-2017, Time: 18:56:06, ID: 1700935-04 RES29-GAC2_20170726 0.12639, Description: RES29-GAC2_20170726

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.54e4	58.0	NO
2	2 13C3-PFHxS	17009...	8.28e3	56.4	NO
3	3 13C8-PFOA	17009...	4.55e4	63.8	NO
4	4 13C9-PFNA	17009...	4.31e4	52.9	NO
5	5 13C4-PFOS	17009...	5.75e3	39.4	YES
6	6 13C6-PFDA	17009...	2.75e4	35.8	YES
7	7 13C7-PFUnA	17009...	1.11e4	12.9	YES

Name: 170731M1_39, Date: 31-Jul-2017, Time: 19:06:52, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA	8.03e0	0.0	NO

Name: 170731M1_40, Date: 31-Jul-2017, Time: 19:17:39, ID: ST170731M1-4 PFC CS3 17G2729, Description: PFC CS3 17G2729

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	9.67e4	101.3	NO
2	2 13C3-PFHxS	ST170...	1.39e4	94.8	NO
3	3 13C8-PFOA	ST170...	8.09e4	113.2	NO
4	4 13C9-PFNA	ST170...	8.92e4	109.2	NO
5	5 13C4-PFOS	ST170...	1.50e4	103.1	NO
6	6 13C6-PFDA	ST170...	8.94e4	116.4	NO
7	7 13C7-PFUnA	ST170...	8.45e4	98.2	NO

Name: 170731M1_41, Date: 31-Jul-2017, Time: 19:28:45, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA	1.87e1	0.0	NO

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Name: 170731M1_42, Date: 31-Jul-2017, Time: 19:39:23, ID: B7G0122-BS1 OPR 0.25, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7G01...	3.31e4	34.7	YES
2	2	13C3-PFHxS	B7G01...	5.16e3	35.1	YES
3	3	13C8-PFOA	B7G01...	2.88e4	40.3	YES
4	4	13C9-PFNA	B7G01...	2.66e4	32.6	YES
5	5	13C4-PFOS	B7G01...	5.13e3	35.1	YES
6	6	13C6-PFDA	B7G01...	3.17e4	41.2	YES
7	7	13C7-PFUnA	B7G01...	2.57e4	29.9	YES

Name: 170731M1_43, Date: 31-Jul-2017, Time: 19:50:09, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	IPA	5.69e0	0.0	NO
2	2	13C3-PFHxS	IPA			NO
3	3	13C8-PFOA	IPA			NO
4	4	13C9-PFNA	IPA			NO
5	5	13C4-PFOS	IPA			NO
6	6	13C6-PFDA	IPA	7.96e0	0.0	NO
7	7	13C7-PFUnA	IPA			NO

Name: 170731M1_44, Date: 31-Jul-2017, Time: 20:00:48, ID: B7G0122-BLK1 Method Blank 0.25, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7G01...	3.08e4	32.3	YES
2	2	13C3-PFHxS	B7G01...	5.68e3	38.6	YES
3	3	13C8-PFOA	B7G01...	2.54e4	35.5	YES
4	4	13C9-PFNA	B7G01...	2.76e4	33.8	YES
5	5	13C4-PFOS	B7G01...	5.32e3	36.4	YES
6	6	13C6-PFDA	B7G01...	2.68e4	34.9	YES
7	7	13C7-PFUnA	B7G01...	2.94e4	34.2	YES

Name: 170731M1_45, Date: 31-Jul-2017, Time: 20:11:26, ID: 1700891-06RE1 VEL FOAM 0.17113, Description: VEL FOAM

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17008...	5.22e4	54.7	NO
2	2	13C3-PFHxS	17008...	7.20e3	49.0	YES
3	3	13C8-PFOA	17008...	3.12e4	43.7	YES
4	4	13C9-PFNA	17008...	1.98e4	24.3	YES
5	5	13C4-PFOS	17008...	2.59e3	17.8	YES
6	6	13C6-PFDA	17008...	1.32e4	17.2	YES
7	7	13C7-PFUnA	17008...	9.49e3	11.0	YES

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Name: 170731M1_46, Date: 31-Jul-2017, Time: 20:22:05, ID: 1700920-01 RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.98e4	52.2	NO
2	2 13C3-PFHxS	17009...	7.70e3	52.4	NO
3	3 13C8-PFOA	17009...	3.94e4	55.1	NO
4	4 13C9-PFNA	17009...	4.48e4	54.9	NO
5	5 13C4-PFOS	17009...	6.62e3	45.4	YES
6	6 13C6-PFDA	17009...	3.83e4	49.9	YES
7	7 13C7-PFUnA	17009...	3.48e4	40.4	YES

Name: 170731M1_47, Date: 31-Jul-2017, Time: 20:32:43, ID: 1700920-02 LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.23e4	44.3	YES
2	2 13C3-PFHxS	17009...	5.68e3	38.7	YES
3	3 13C8-PFOA	17009...	3.35e4	46.9	YES
4	4 13C9-PFNA	17009...	3.63e4	44.4	YES
5	5 13C4-PFOS	17009...	6.17e3	42.3	YES
6	6 13C6-PFDA	17009...	3.42e4	44.5	YES
7	7 13C7-PFUnA	17009...	2.98e4	34.6	YES

Name: 170731M1_48, Date: 31-Jul-2017, Time: 20:43:21, ID: 1700920-03 RCDM-MW-14S-20170720 0.11405, Description: RCDM-MW-14S-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.27e4	34.3	YES
2	2 13C3-PFHxS	17009...	6.11e3	41.6	YES
3	3 13C8-PFOA	17009...	2.43e4	34.0	YES
4	4 13C9-PFNA	17009...	2.78e4	34.1	YES
5	5 13C4-PFOS	17009...	5.26e3	36.1	YES
6	6 13C6-PFDA	17009...	3.01e4	39.2	YES
7	7 13C7-PFUnA	17009...	2.63e4	30.6	YES

Name: 170731M1_49, Date: 31-Jul-2017, Time: 20:54:00, ID: 1700920-04 MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.11e4	43.1	YES
2	2 13C3-PFHxS	17009...	6.18e3	42.1	YES
3	3 13C8-PFOA	17009...	3.28e4	45.9	YES
4	4 13C9-PFNA	17009...	3.56e4	43.6	YES
5	5 13C4-PFOS	17009...	5.59e3	38.3	YES
6	6 13C6-PFDA	17009...	3.11e4	40.5	YES
7	7 13C7-PFUnA	17009...	3.34e4	38.8	YES

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Name: 170731M1_50, Date: 31-Jul-2017, Time: 21:04:38, ID: 1700920-05 MH-A97-20170720 0.12086, Description: MH-A97-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.35e4	35.1	YES
2	2 13C3-PFHxS	17009...	5.85e3	39.8	YES
3	3 13C8-PFOA	17009...	2.76e4	38.6	YES
4	4 13C9-PFNA	17009...	3.17e4	38.8	YES
5	5 13C4-PFOS	17009...	5.57e3	38.2	YES
6	6 13C6-PFDA	17009...	3.58e4	46.6	YES
7	7 13C7-PFUnA	17009...	3.01e4	35.0	YES

Name: 170731M1_51, Date: 31-Jul-2017, Time: 21:15:17, ID: 1700920-06 MH-H93-20170720 0.11357, Description: MH-H93-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.42e4	46.3	YES
2	2 13C3-PFHxS	17009...	6.66e3	45.3	YES
3	3 13C8-PFOA	17009...	3.33e4	46.6	YES
4	4 13C9-PFNA	17009...	2.73e4	33.4	YES
5	5 13C4-PFOS	17009...	4.98e3	34.2	YES
6	6 13C6-PFDA	17009...	2.42e4	31.5	YES
7	7 13C7-PFUnA	17009...	1.95e4	22.7	YES

Name: 170731M1_52, Date: 31-Jul-2017, Time: 21:25:55, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA	9.19e0	0.0	NO
7	7 13C7-PFUnA	IPA	8.94e0	0.0	NO

Name: 170731M1_53, Date: 31-Jul-2017, Time: 21:36:33, ID: ST170731M1-5 PFC CS3 17G2729, Description: PFC CS3 17G2729

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	1.04e5	109.2	NO
2	2 13C3-PFHxS	ST170...	1.60e4	108.9	NO
3	3 13C8-PFOA	ST170...	8.76e4	122.7	NO
4	4 13C9-PFNA	ST170...	9.05e4	110.8	NO
5	5 13C4-PFOS	ST170...	1.56e4	107.1	NO
6	6 13C6-PFDA	ST170...	1.04e5	135.4	NO
7	7 13C7-PFUnA	ST170...	9.19e4	106.8	NO

Dataset: Untitled

Last Altered: Tuesday, August 01, 2017 09:29:57 Pacific Daylight Time
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Name: 170731M1_54, Date: 31-Jul-2017, Time: 21:47:20, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA	1.35e1	0.0	NO
7	7 13C7-PFUnA	IPA	1.66e1	0.0	NO

Name: 170731M1_55, Date: 31-Jul-2017, Time: 21:57:58, ID: 1700920-07 RCDM-BLANK-20170720 0.11872, Description: RCDM-BLANK-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.16e4	43.6	YES
2	2 13C3-PFHxS	17009...	6.31e3	43.0	YES
3	3 13C8-PFOA	17009...	3.05e4	42.7	YES
4	4 13C9-PFNA	17009...	3.72e4	45.6	YES
5	5 13C4-PFOS	17009...	5.98e3	41.0	YES
6	6 13C6-PFDA	17009...	3.40e4	44.2	YES
7	7 13C7-PFUnA	17009...	3.04e4	35.4	YES

Name: 170731M1_56, Date: 31-Jul-2017, Time: 22:08:37, ID: 1700920-08 MH-C94-20170720 0.11568, Description: MH-C94-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.43e4	35.9	YES
2	2 13C3-PFHxS	17009...	5.95e3	40.5	YES
3	3 13C8-PFOA	17009...	3.00e4	42.0	YES
4	4 13C9-PFNA	17009...	2.95e4	36.2	YES
5	5 13C4-PFOS	17009...	4.26e3	29.2	YES
6	6 13C6-PFDA	17009...	2.71e4	35.2	YES
7	7 13C7-PFUnA	17009...	2.38e4	27.6	YES

Name: 170731M1_57, Date: 31-Jul-2017, Time: 22:19:21, ID: 1700920-09 RCDM-MW-13S-20170719 0.11866, Description: RCDM-MW-13S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.40e4	35.6	YES
2	2 13C3-PFHxS	17009...	5.53e3	37.6	YES
3	3 13C8-PFOA	17009...	2.59e4	36.2	YES
4	4 13C9-PFNA	17009...	2.89e4	35.4	YES
5	5 13C4-PFOS	17009...	4.55e3	31.2	YES
6	6 13C6-PFDA	17009...	2.60e4	33.9	YES
7	7 13C7-PFUnA	17009...	2.45e4	28.5	YES

Dataset: Untitled

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Name: 170731M1_58, Date: 31-Jul-2017, Time: 22:30:56, ID: 1700920-10 LF-MW-14S-20170720 0.11481, Description: LF-MW-14S-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.80e4	39.8	YES
2	2 13C3-PFHxS	17009...	6.43e3	43.7	YES
3	3 13C8-PFOA	17009...	3.27e4	45.7	YES
4	4 13C9-PFNA	17009...	3.54e4	43.4	YES
5	5 13C4-PFOS	17009...	6.24e3	42.8	YES
6	6 13C6-PFDA	17009...	3.65e4	47.6	YES
7	7 13C7-PFUnA	17009...	3.16e4	36.7	YES

Name: 170731M1_59, Date: 31-Jul-2017, Time: 22:41:52, ID: 1700920-11 LF-MW-11BR-20170720 0.11664, Description: LF-MW-11BR-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.76e4	49.9	YES
2	2 13C3-PFHxS	17009...	8.08e3	55.0	NO
3	3 13C8-PFOA	17009...	3.72e4	52.1	NO
4	4 13C9-PFNA	17009...	3.68e4	45.1	YES
5	5 13C4-PFOS	17009...	7.04e3	48.2	YES
6	6 13C6-PFDA	17009...	3.53e4	46.0	YES
7	7 13C7-PFUnA	17009...	3.35e4	38.9	YES

Name: 170731M1_60, Date: 31-Jul-2017, Time: 22:52:39, ID: 1700920-12 LF-MW-13S-20170719 0.11667, Description: LF-MW-13S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	1.94e4	20.4	YES
2	2 13C3-PFHxS	17009...	3.56e3	24.2	YES
3	3 13C8-PFOA	17009...	1.50e4	21.0	YES
4	4 13C9-PFNA	17009...	1.52e4	18.7	YES
5	5 13C4-PFOS	17009...	3.31e3	22.7	YES
6	6 13C6-PFDA	17009...	1.79e4	23.3	YES
7	7 13C7-PFUnA	17009...	1.49e4	17.4	YES

Name: 170731M1_61, Date: 31-Jul-2017, Time: 23:03:17, ID: 1700920-13 RCDM-MW-11BR-20170720 0.11813, Description: RCDM-MW-11BR-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.07e4	42.6	YES
2	2 13C3-PFHxS	17009...	7.15e3	48.7	YES
3	3 13C8-PFOA	17009...	3.44e4	48.2	YES
4	4 13C9-PFNA	17009...	3.60e4	44.1	YES
5	5 13C4-PFOS	17009...	6.26e3	42.9	YES
6	6 13C6-PFDA	17009...	3.40e4	44.2	YES
7	7 13C7-PFUnA	17009...	3.00e4	34.9	YES

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Name: 170731M1_62, Date: 31-Jul-2017, Time: 23:13:55, ID: 1700920-14 RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.64e4	38.2	YES
2	2 13C3-PFHxS	17009...	5.51e3	37.5	YES
3	3 13C8-PFOA	17009...	3.10e4	43.4	YES
4	4 13C9-PFNA	17009...	3.31e4	40.6	YES
5	5 13C4-PFOS	17009...	5.25e3	36.0	YES
6	6 13C6-PFDA	17009...	3.35e4	43.6	YES
7	7 13C7-PFUnA	17009...	3.18e4	37.0	YES

Name: 170731M1_63, Date: 31-Jul-2017, Time: 23:24:34, ID: 1700920-15 LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.41e4	46.2	YES
2	2 13C3-PFHxS	17009...	6.86e3	46.7	YES
3	3 13C8-PFOA	17009...	3.65e4	51.0	NO
4	4 13C9-PFNA	17009...	3.89e4	47.7	YES
5	5 13C4-PFOS	17009...	6.05e3	41.4	YES
6	6 13C6-PFDA	17009...	3.61e4	47.0	YES
7	7 13C7-PFUnA	17009...	3.40e4	39.5	YES

Name: 170731M1_64, Date: 31-Jul-2017, Time: 23:35:12, ID: 1700920-16 DUP-07-20170719 0.12023, Description: DUP-07-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.31e4	45.1	YES
2	2 13C3-PFHxS	17009...	7.92e3	53.9	NO
3	3 13C8-PFOA	17009...	3.48e4	48.7	YES
4	4 13C9-PFNA	17009...	3.66e4	44.8	YES
5	5 13C4-PFOS	17009...	6.97e3	47.8	YES
6	6 13C6-PFDA	17009...	4.09e4	53.3	NO
7	7 13C7-PFUnA	17009...	3.48e4	40.4	YES

Name: 170731M1_65, Date: 31-Jul-2017, Time: 23:45:51, ID: 1700920-17 FRB04-20170719 0.11007, Description: FRB04-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.18e4	54.3	NO
2	2 13C3-PFHxS	17009...	9.95e3	67.7	NO
3	3 13C8-PFOA	17009...	4.53e4	63.4	NO
4	4 13C9-PFNA	17009...	4.66e4	57.1	NO
5	5 13C4-PFOS	17009...	9.84e3	67.5	NO
6	6 13C6-PFDA	17009...	5.10e4	66.4	NO
7	7 13C7-PFUnA	17009...	5.63e4	65.4	NO

Dataset: Untitled

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Name: 170731M1_66, Date: 31-Jul-2017, Time: 23:56:29, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	IPA			NO
2	2	13C3-PFHxS	IPA			NO
3	3	13C8-PFOA	IPA			NO
4	4	13C9-PFNA	IPA			NO
5	5	13C4-PFOS	IPA			NO
6	6	13C6-PFDA	IPA			NO
7	7	13C7-PFUnA	IPA	7.98e0	0.0	NO

Name: 170731M1_67, Date: 01-Aug-2017, Time: 00:07:36, ID: ST170731M1-6 PFC CS3 17G2729, Description: PFC CS3 17G2729

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	1.11e5	116.7	NO
2	2	13C3-PFHxS	ST170...	1.66e4	113.3	NO
3	3	13C8-PFOA	ST170...	9.07e4	126.9	NO
4	4	13C9-PFNA	ST170...	1.03e5	126.4	NO
5	5	13C4-PFOS	ST170...	1.64e4	112.5	NO
6	6	13C6-PFDA	ST170...	9.76e4	127.0	NO
7	7	13C7-PFUnA	ST170...	9.85e4	114.5	NO

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Dataset: U:\Q4.PRO\results\170731M1\170731M1-3.qld

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Printed: Thursday, August 17, 2017 13:26:05 Pacific Daylight Time

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Name: 170731M1_3, Date: 31-Jul-2017, Time: 12:20:37, ID: IPA, Description: IPA

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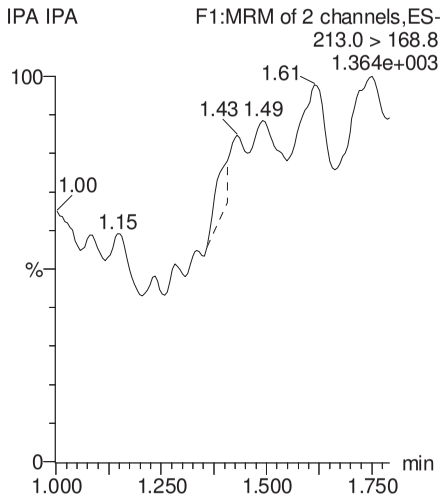
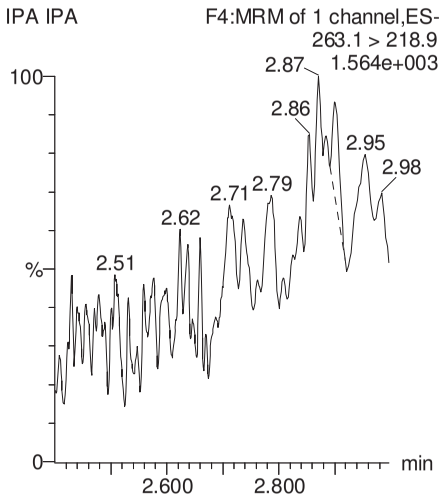


PFPeA



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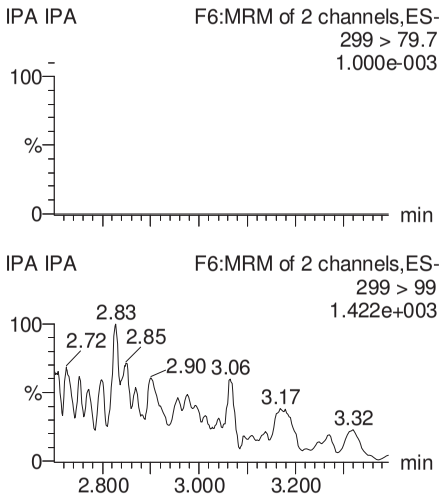
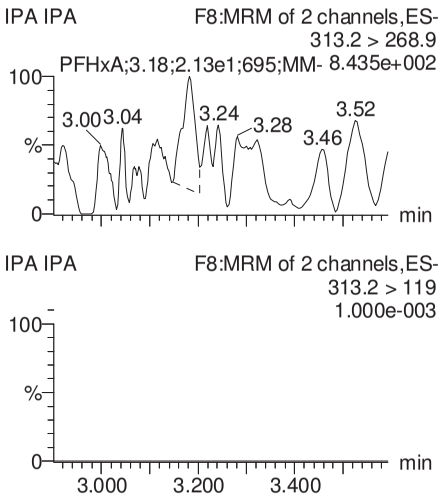


PFHxA



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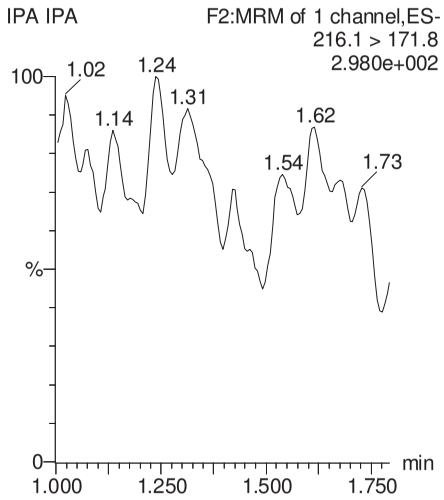

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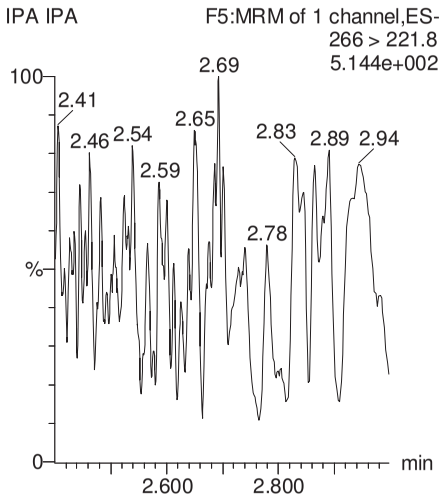

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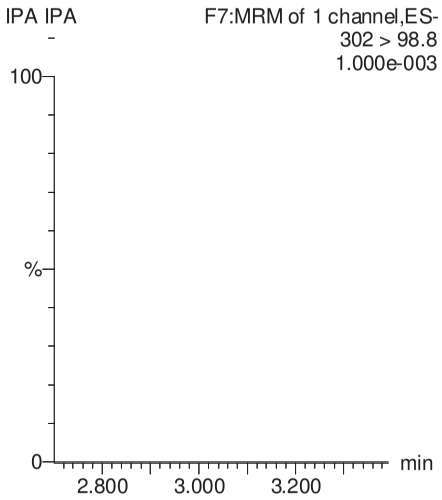

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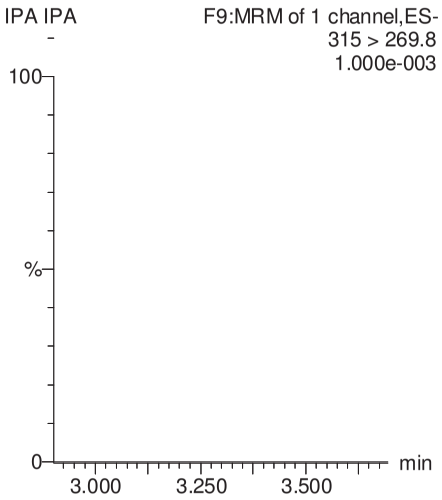

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Dataset: U:\Q4.PRO\results\170731M1\170731M1-3.qld

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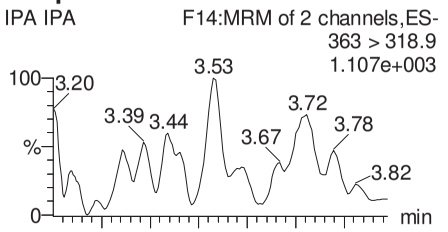
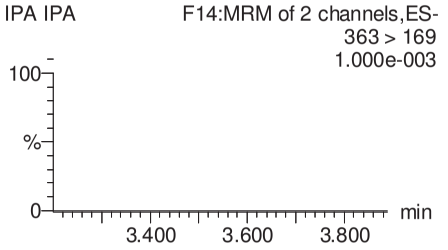
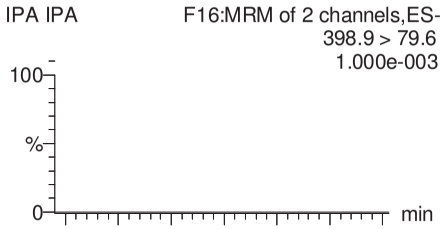
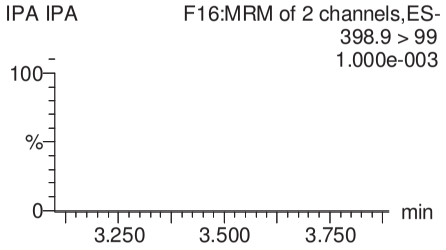
PFHpA



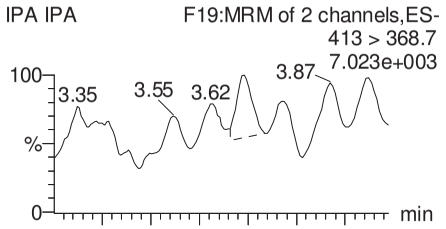


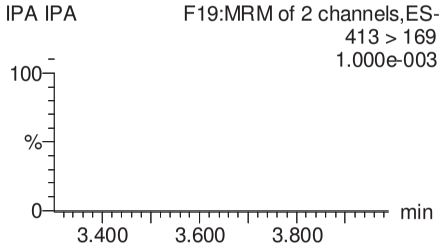
Total PFHxS





Total PFOA





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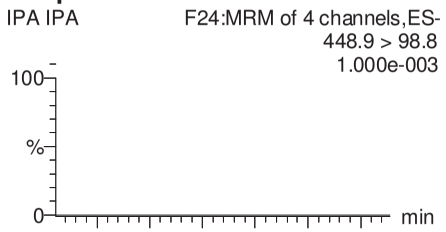

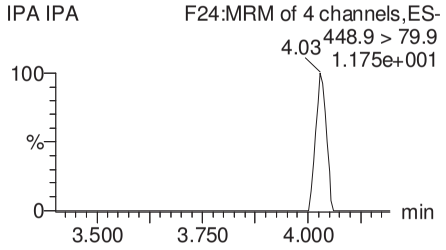

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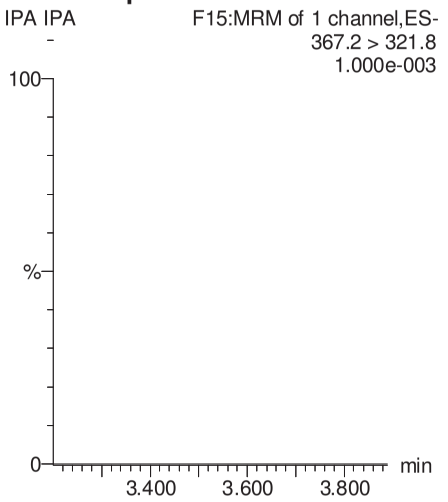

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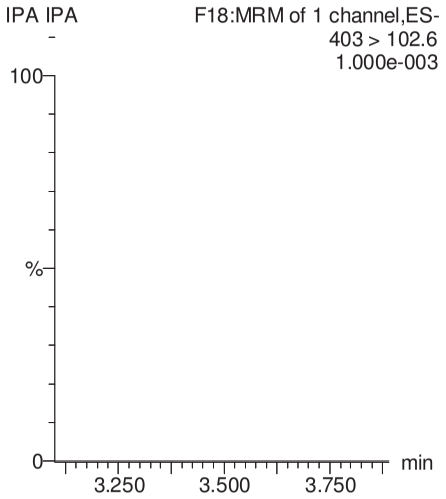

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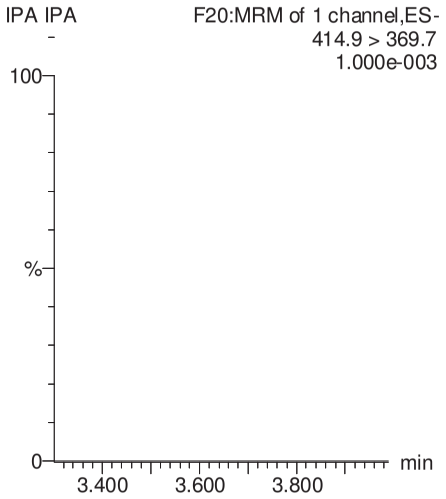
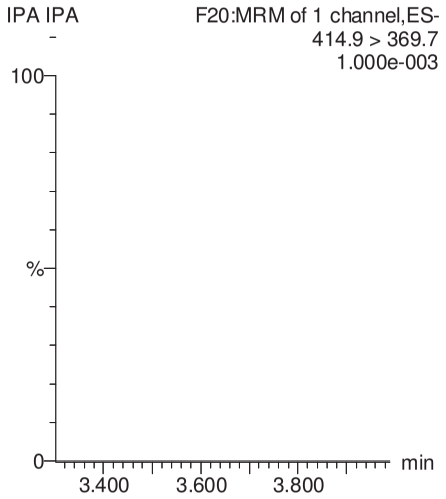


13C2-PFOA



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Dataset: U:\Q4.PRO\results\170731M1\170731M1-3.qld

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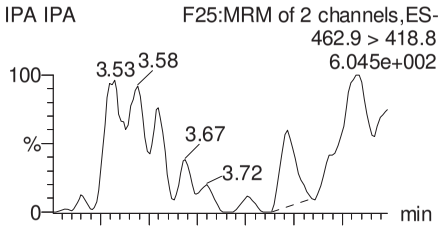
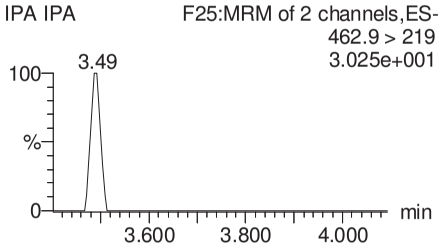
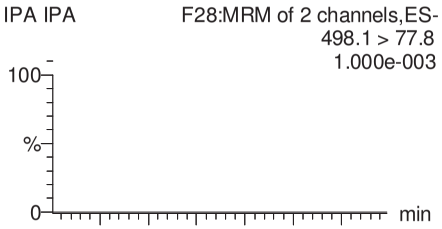
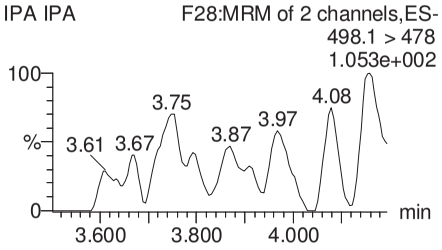
PFNA



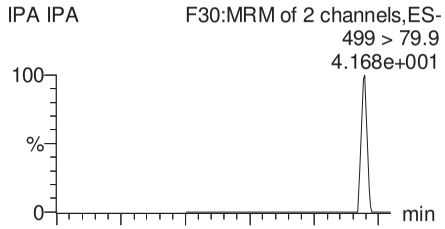


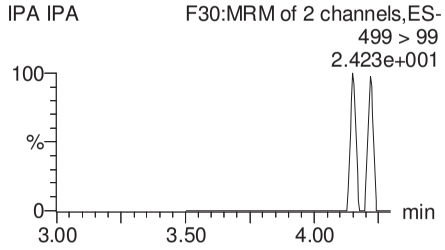
PFOSA



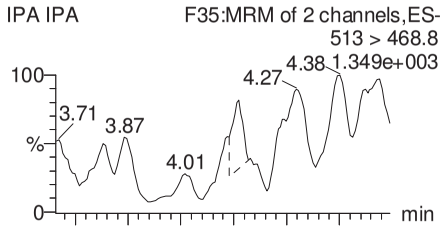


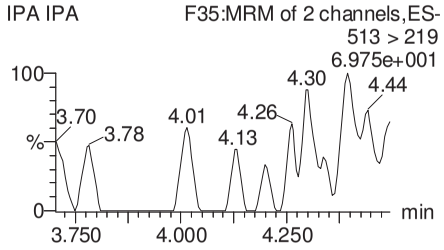
Total PFOS



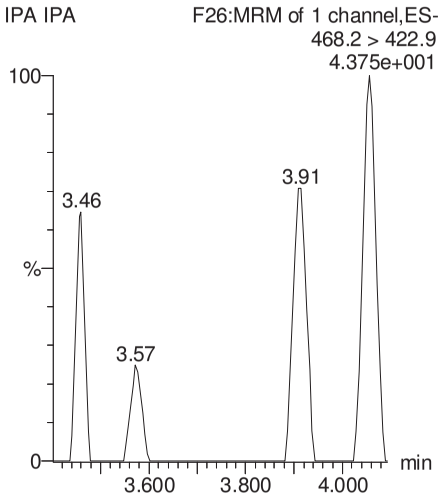


PFDA

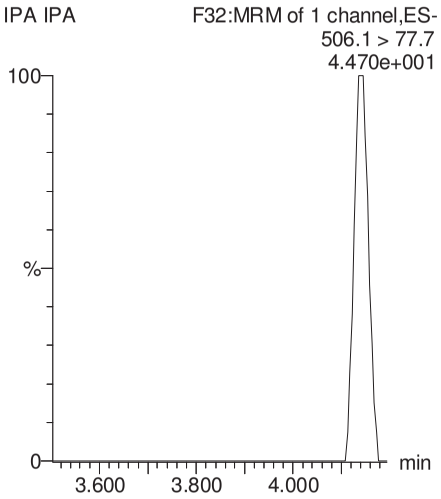




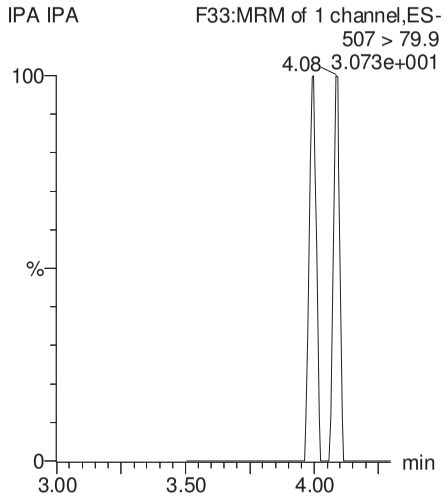
13C5-PFNA



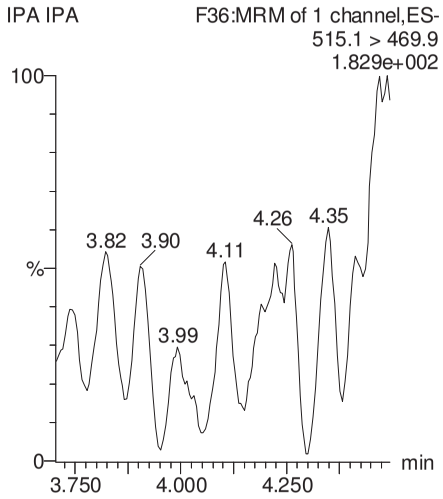
13C8-PFOSA



13C8-PFOS



13C2-PFDA



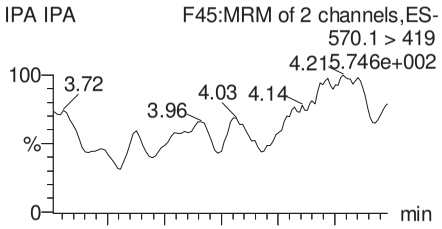
GM 8/17/17

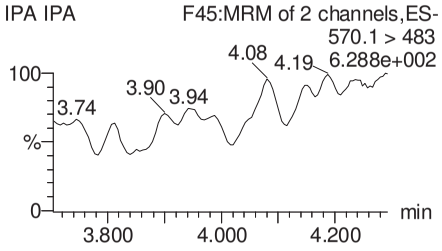
Dataset: U:\Q4.PRO\results\170731M1\170731M1-3.qld

Last Altered: Thursday, August 17, 2017 13:26:01 Pacific Daylight Time
Printed: Thursday, August 17, 2017 13:26:05 Pacific Daylight Time

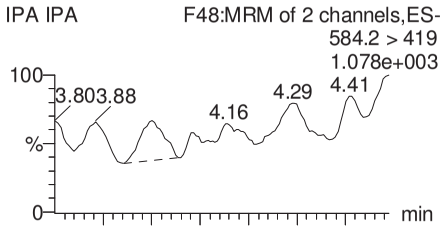
Name: 170731M1_3, Date: 31-Jul-2017, Time: 12:20:37, ID: IPA, Description: IPA

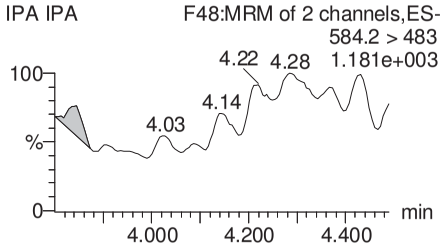
N-MeFOSAA



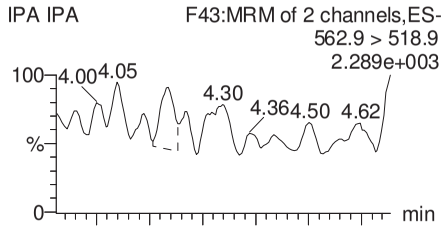


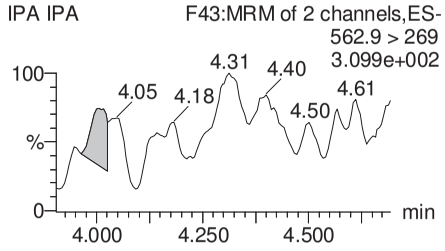
N-EtFOSAA



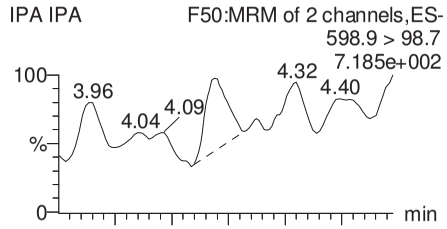


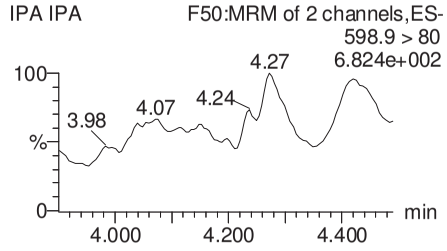
PFUnA



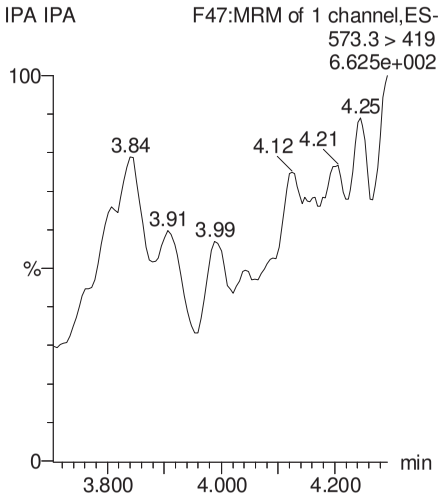


PFDS

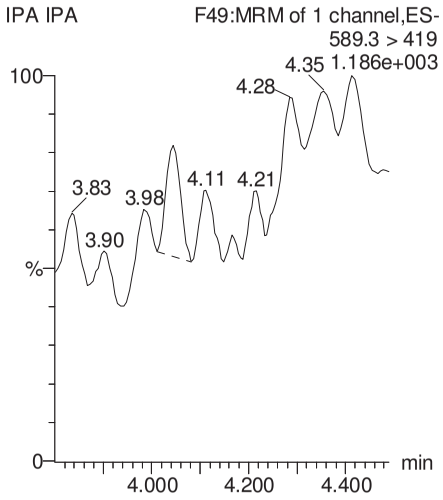




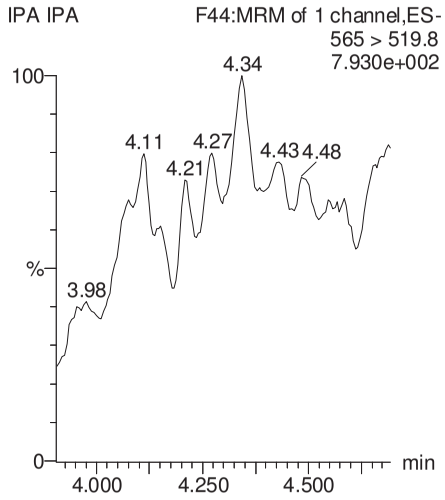
d3-N-MeFOSAA



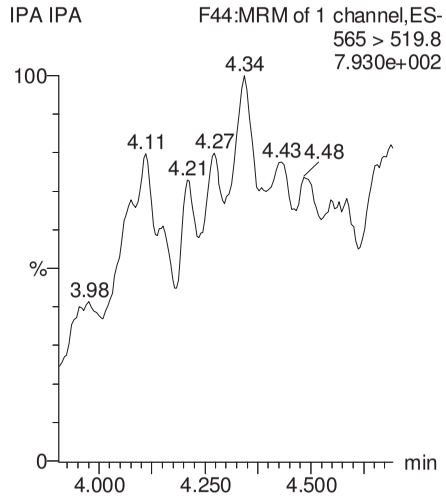
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



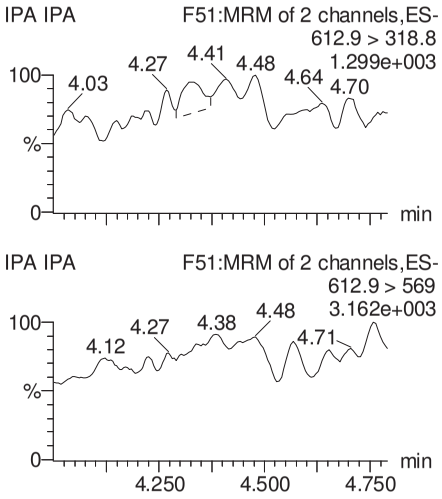
GM 8/17/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-3.qld

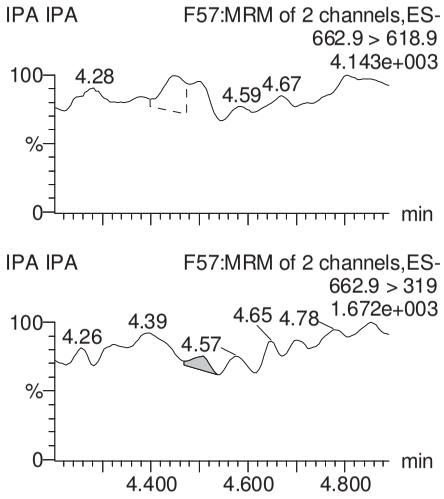
Last Altered: Thursday, August 17, 2017 13:26:01 Pacific Daylight Time
Printed: Thursday, August 17, 2017 13:26:05 Pacific Daylight Time

Name: 170731M1_3, Date: 31-Jul-2017, Time: 12:20:37, ID: IPA, Description: IPA

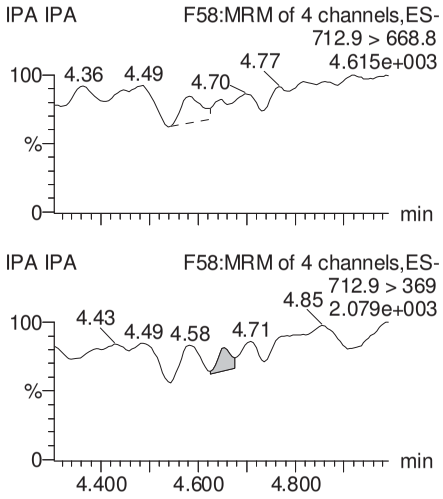
PFDoA



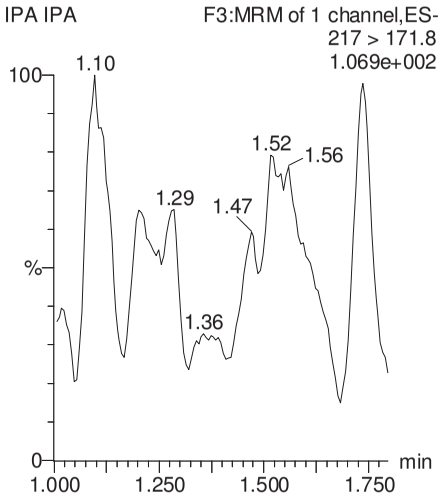
PFTrDA



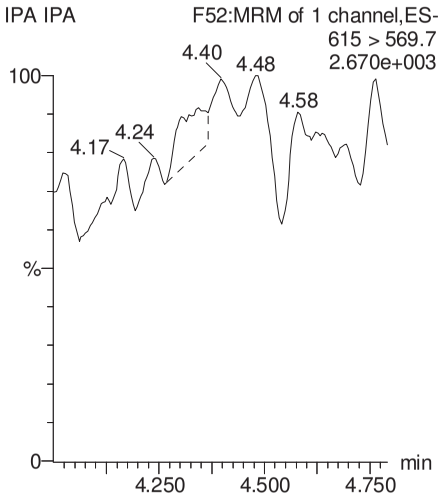
PFTeDA



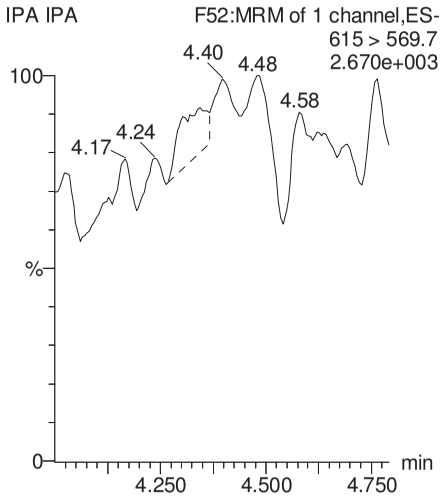
13C4-PFBA



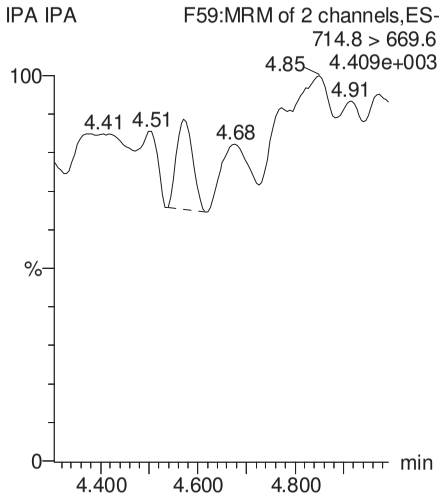
13C2-PFDoA



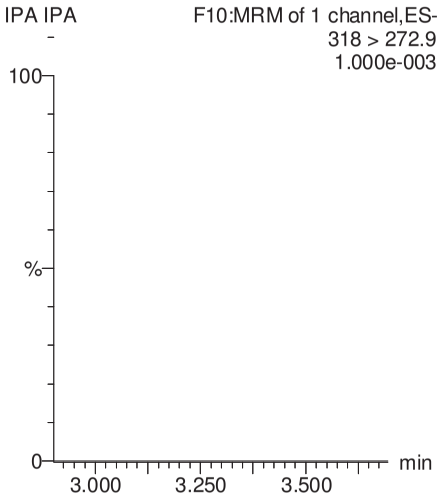
13C2-PFDoA



13C2-PFTeDA



13C5-PFHxA



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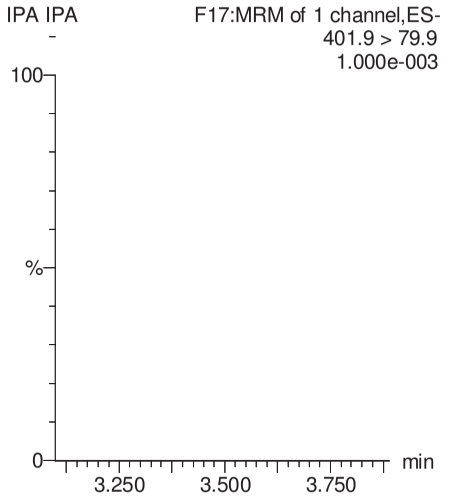
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M1\170731M1-3.qld

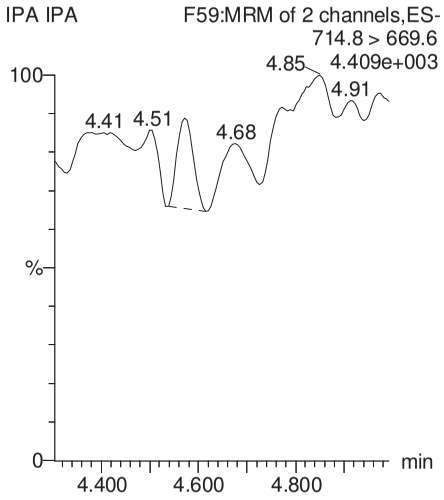
Last Altered: Thursday, August 17, 2017 13:26:01 Pacific Daylight Time
Printed: Thursday, August 17, 2017 13:26:05 Pacific Daylight Time

Name: 170731M1_3, Date: 31-Jul-2017, Time: 12:20:37, ID: IPA, Description: IPA

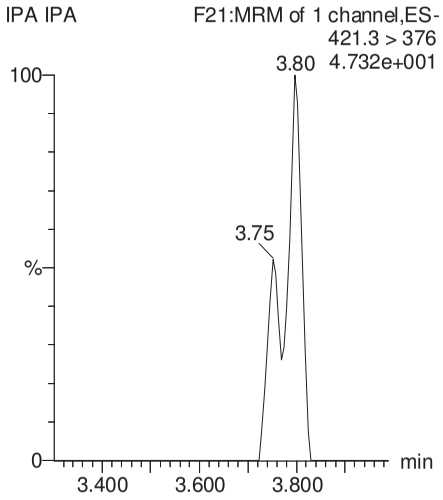
13C3-PFHxS



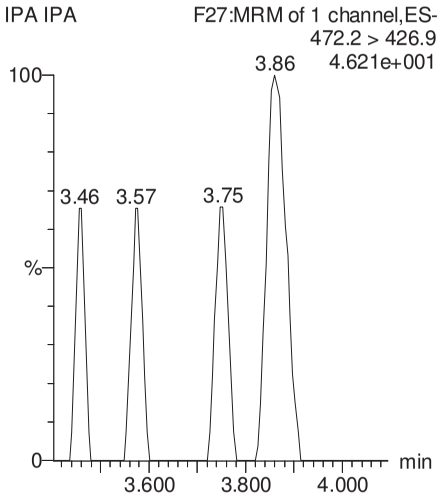
13C2-PFTeDA



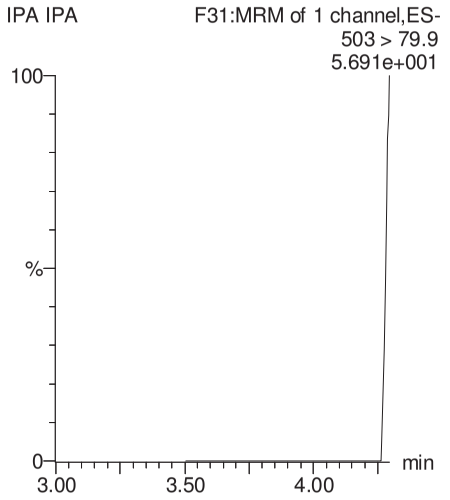
13C8-PFOA



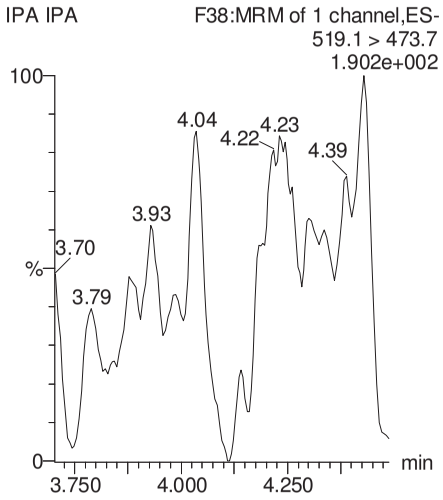
13C9-PFNA



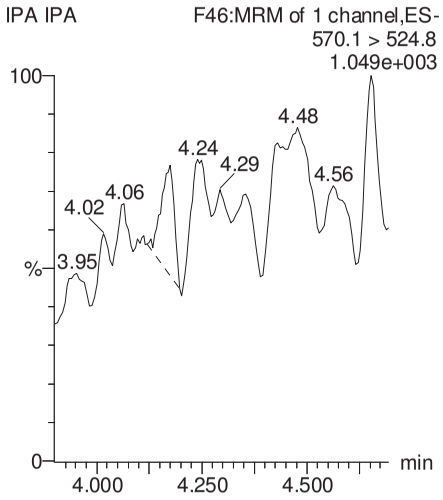
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M1\170731M1-2.qld

Last Altered: Monday, July 31, 2017 13:00:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:18:58 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

(A) out of limit criteria.

Name: 170731M1_2, Date: 31-Jul-2017, Time: 12:09:51, ID: ST170731M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

	#	Name	Trace	Area	IS Area	Wt/Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	2.41e3	2.53e4	1.000		1.32	1.35	1.19	1.00	100.1
2	2	PFPeA	263.1 > 218.9	4.67e3	5.57e4	1.000		2.77	2.65	1.05	1.04	103.5
3	3	PFBS	299 > 79.7	1.23e3	7.54e3	1.000		2.96	2.90	2.04	1.10	110.3
4	4	PFHxA	313.2 > 268.9	1.07e4	3.27e4	1.000		3.19	3.14	1.64	1.08	107.9
5	5	PFHpA	363 > 318.9	8.09e3	7.82e4	1.000		3.45	3.41	1.29	1.04	103.9
6	6	PFHxS	398.9 > 79.6	9.84e2	7.52e3	1.000		3.56	3.49	1.64	0.951	95.1
7	7	PFOA	413 > 368.7	9.07e3	1.01e5	1.000		3.65	3.62	1.12	1.03	102.6
8	8	PFHpS	448.9 > 98.8	8.37e2	1.01e5	1.000		3.65	3.68	0.103	1.23	123.1
9	9	PFNA	462.9 > 418.8	8.47e3	8.59e4	1.000		3.83	3.79	1.23	1.07	107.4
10	10	PFOSA	498.1 > 77.8	8.82e2	1.02e4	1.000		3.84	3.80	1.08	0.949	94.9
11	11	PFOS	499 > 79.9	1.40e3	1.89e4	1.000		3.89	3.85	0.924	0.893	89.3
12	12	PFDA	513 > 468.8	7.86e3	7.94e4	1.000		4.01	3.97	1.24	0.891	89.1
13	13	N-MeFOSAA	570.1 > 419	2.21e3	1.87e4	1.000		4.03	3.99	19.2	0.980	98.0
14	14	N-EtFOSAA	584.2 > 419	1.83e3	1.93e4	1.000		4.10	4.06	15.3	0.954	95.4
15	15	PFUnA	562.9 > 518.9	6.68e3	9.51e4	1.000		4.11	4.13	0.878	1.06	106.4
16	16	PFDS	598.9 > 98.7	7.44e2	9.51e4	1.000		4.22	4.17	0.0977	1.38 (A)	138.3
17	17	PFDoA	612.9 > 318.8	8.77e2	1.02e4	1.000		4.34	4.29	1.08	0.954	95.4
18	18	PFTrDA	662.9 > 618.9	1.00e4	1.02e4	1.000		4.50	4.46	12.3	1.15	114.5
19	19	PFTeDA	712.9 > 668.8	6.90e3	7.13e4	1.000		4.68	4.63	1.21	1.02	102.4
20	20	13C3-PFBA	216.1 > 171.8	2.53e4	2.43e4	1.000	1.068	1.32	1.35	13.0	12.1	97.1
21	21	13C3-PFPeA	266 > 221.8	5.57e4	9.54e4	1.000	0.271	2.77	2.65	2.92	10.8	86.0
22	22	13C3-PFBS	302 > 98.8	7.54e3	9.54e4	1.000	0.033	2.96	2.90	0.395	12.0	95.6
23	23	13C2-PFHxA	315 > 269.8	3.27e4	9.54e4	1.000	0.335	3.19	3.14	1.71	5.11	102.2
24	24	13C4-PFHpA	367.2 > 321.8	7.82e4	9.54e4	1.000	0.369	3.45	3.41	4.10	11.1	88.9
25	25	18O2-PFHxS	403 > 102.6	7.52e3	1.47e4	1.000	0.460	3.56	3.49	6.39	13.9	111.1
26	26	13C2-PFOA	414.9 > 369.7	1.01e5	7.14e4	1.000	1.293	3.65	3.62	17.7	13.7	109.8
27	27	13C5-PFNA	468.2 > 422.9	8.59e4	8.16e4	1.000	0.986	3.83	3.79	13.2	13.4	106.8
28	28	13C8-PFOSA	506.1 > 77.7	1.02e4	8.61e4	1.000	0.132	3.84	3.80	1.48	11.2	89.4
29	29	13C8-PFOS	507 > 79.9	1.89e4	1.46e4	1.000	1.184	3.89	3.84	16.2	13.7	109.5
30	30	13C2-PFDA	515.1 > 469.9	7.94e4	7.68e4	1.000	0.998	4.01	3.96	12.9	12.9	103.5
31	31	d3-N-MeFOSAA	573.3 > 419	1.87e4	8.61e4	1.000	0.018	4.03	3.99	2.72	154	94.6
32	32	d5-N-EtFOSAA	589.3 > 419	1.93e4	8.61e4	1.000	0.018	4.12	4.06	2.81	158	97.2

70-130

SD-150

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Dataset: U:\Q4.PRO\results\170731M1\170731M1-2.qld

Last Altered: Monday, July 31, 2017 13:00:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:18:58 Pacific Daylight Time

Name: 170731M1_2, Date: 31-Jul-2017, Time: 12:09:51, ID: ST170731M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

	# Name	Trace	Area	IS Area	Wt/Vol	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	33 13C2-PFUnA	565 > 519.8	9.51e4	8.61e4	1.000	1.129	4.17	4.13	13.8	12.2	97.9
34	34 13C2-PFDoA	615 > 569.7	1.02e4	8.61e4	1.000	0.116	4.34	4.29	1.48	12.7	102.0
35	35 13C2-PFTeDA	714.8 > 669.6	7.13e4	8.61e4	1.000	0.762	4.68	4.63	10.4	13.6	108.7
36	36 13C4-PFBA	217 > 171.8	2.43e4	2.43e4	1.000	1.000	1.32	1.36	12.5	12.5	100.0
37	37 13C5-PFHxA	318 > 272.9	9.54e4	9.54e4	1.000	1.000	3.19	3.14	5.00	5.00	100.0
38	38 13C3-PFHxS	401.9 > 79.9	1.47e4	1.47e4	1.000	1.000	3.56	3.49	12.5	12.5	100.0
39	39 13C8-PFOA	421.3 > 376	7.14e4	7.14e4	1.000	1.000	3.65	3.62	12.5	12.5	100.0
40	40 13C9-PFNA	472.2 > 426.9	8.16e4	8.16e4	1.000	1.000	3.83	3.79	12.5	12.5	100.0
41	41 13C4-PFOS	503 > 79.9	1.46e4	1.46e4	1.000	1.000	3.89	3.85	12.5	12.5	100.0
42	42 13C6-PFDA	519.1 > 473.7	7.68e4	7.68e4	1.000	1.000	4.01	3.96	12.5	12.5	100.0
43	43 13C7-PFUnA	570.1 > 524.8	8.61e4	8.61e4	1.000	1.000	4.17	4.13	12.5	12.5	100.0

SD-ISD

Sample List Report **MassLynx MassLynx V4.1 SCN945 SCN960**

Sample List: U:\Q4.PRO\SampleDB\170731M1.SPL
Last Modified: Monday, July 31, 2017 14:34:49 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:57:00 Pacific Daylight Time

Page Position (1, 1)

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
1	170731M1_1	—	IPA	IPA	1.0000	1:48	Blank
2	170731M1_2	—	ST170731M1-1 PFC CS0 17G2826	PFC CS0 17G2826	1.0000	1:1	Analyte
3	170731M1_3	—	IPA	IPA	1.0000	1:48	Blank
4	170731M1_4	—	B7G0067-BS1 OPR 0.125	OPR	0.1250	1:3	Analyte
5	170731M1_5	—	IPA	IPA	1.0000	1:48	Blank
6	170731M1_6	—	B7G0067-BLK1 Method Blank 0.125	Method Blank	0.1250	1:4	Analyte
7	170731M1_7	—	1700855-01 TF5-EB-02 0.27357	TF5-EB-02	0.2736	1:5	Analyte
8	170731M1_8	—	1700855-02 TF5-MW-987 0.27423	TF5-MW-987	0.2742	1:6	Analyte
9	170731M1_9	—	1700855-03 TF5-MW-987D 0.27164	TF5-MW-987D	0.2716	1:7	Analyte
10	170731M1_10	—	B7G0067-MS1 Matrix Spike 0.27298	Matrix Spike	0.2730	1:8	Analyte
11	170731M1_11	—	B7G0067-MSD1 Matrix Spike Dup 0.2776	Matrix Spike Dup	0.2776	1:9	Analyte
12	170731M1_12	—	1700855-04 TF5-MW-987-D 0.26865	TF5-MW-987-D	0.2687	1:10	Analyte
13	170731M1_13	—	1700855-05 TF5-MW-991 0.2726	TF5-MW-991	0.2726	1:11	Analyte
14	170731M1_14	—	1700855-06 TF5-MW-991D 0.27278	TF5-MW-991D	0.2728	1:12	Analyte
15	170731M1_15	—	1700855-07 TF5-MW-993 0.26881	TF5-MW-993	0.2688	1:13	Analyte
16	170731M1_16	—	1700855-08 TF5-MW-993D 0.2612	TF5-MW-993D	0.2612	1:14	Analyte
17	170731M1_17	—	1700855-09 TF5-MW-994 0.25188	TF5-MW-994	0.2519	1:15	Analyte
18	170731M1_18	—	1700845-03@40X MW-27S-20170707 0.11824	MW-27S-20170707	0.1182	1:16	Analyte
19	170731M1_19	—	IPA	IPA	1.0000	1:48	Blank
20	170731M1_20	—	ST170731M1-2 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
21	170731M1_21	—	IPA	IPA	1.0000	1:48	Blank
22	170731M1_22	—	1700871-01 EB03-20170712 0.12146	EB03-20170712	0.1215	1:17	Analyte
23	170731M1_23	—	1700871-02 5-GW-05_DGMW41B-20170712 0.11547	5-GW-05_DGMW41B-20170712	0.1155	1:18	Analyte
24	170731M1_24	—	1700871-03 18-GW-18BGM03E-20170712 0.11765	18-GW-18BGM03E-20170712	0.1177	1:19	Analyte
25	170731M1_25	—	1700871-04 24-GW-24IN03-20170712 0.11741	24-GW-24IN03-20170712	0.1174	1:20	Analyte
26	170731M1_26	—	1700871-05 DUP02-20170712 0.11807	DUP02-20170712	0.1181	1:21	Analyte
27	170731M1_27	—	1700871-06 24-GW-24EX13A-20170712 0.11851	24-GW-24EX13A-20170712	0.1185	1:22	Analyte
28	170731M1_28	—	1700871-07 24-GW-24MW15D-20170712 0.1193	24-GW-24MW15D-20170712	0.1193	1:23	Analyte
29	170731M1_29	—	1700871-08 16-GW-16_MW28-20170712 0.11899	16-GW-16_MW28-20170712	0.1190	1:24	Analyte
30	170731M1_30	—	1700871-09 16-GW-16_MW19-20170712 0.11913	16-GW-16_MW19-20170712	0.1191	1:25	Analyte
31	170731M1_31	—	1700871-10 EB04-20170713 0.11646	EB04-20170713	0.1165	1:26	Analyte
32	170731M1_32	—	1700871-11 16-GW-16_MW04-20170713 0.12043	16-GW-16_MW04-20170713	0.1204	1:27	Analyte
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34	170731M1_34	—	ST170731M1-3 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
35	170731M1_35	—	IPA	IPA	1.0000	1:48	Blank
36	170731M1_36	—	1700856-12RE1@5X MW-31S-20170711 0.11732	MW-31S-20170711	0.1173	1:28	Analyte
37	170731M1_37	—	1700935-01 RES29-BLK_20170726 0.11182	RES29-BLK_20170726	0.1118	1:29	Analyte
38	170731M1_38	—	1700935-04 RES29-GAC2_20170726 0.12639	RES29-GAC2_20170726	0.1264	1:30	Analyte
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40	170731M1_40	—	ST170731M1-4 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte

✓ AC 7/31/17 AC 7/31/17

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41	170731M1_41	—	IPA	IPA	1.0000	1:48	Blank
42	170731M1_42	—	B7G0122-BS1 OPR 0.25	OPR	0.2500	1:31	Analyte
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44	170731M1_44	—	B7G0122-BLK1 Method Blank 0.25	Method Blank	0.2500	1:32	Analyte
45	170731M1_45	—	1700891-06RE1 VEL FOAM 0.17113	VEL FOAM	0.1711	1:33	Analyte
46	170731M1_46	—	1700920-01 RCDM-MW-28S-20170719 0.1113	RCDM-MW-28S-20170719	0.1113	1:34	Analyte
47	170731M1_47	—	1700920-02 LF-MW-12S-20170719 0.11113	LF-MW-12S-20170719	0.1111	1:35	Analyte
48	170731M1_48	—	1700920-03 RCDM-MW-14S-20170720 0.11405	RCDM-MW-14S-20170720	0.1141	1:36	Analyte
49	170731M1_49	—	1700920-04 MH-DUP01-20170720 0.12177	MH-DUP01-20170720	0.1218	1:37	Analyte
50	170731M1_50	—	1700920-05 MH-A97-20170720 0.12086	MH-A97-20170720	0.1209	1:38	Analyte
51	170731M1_51	—	1700920-06 MH-H93-20170720 0.11357	MH-H93-20170720	0.1136	1:39	Analyte
52	170731M1_52	—	IPA	IPA	1.0000	1:48	Blank
53	170731M1_53	—	ST170731M1-5 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
54	170731M1_54	—	IPA	IPA	1.0000	1:48	Blank
55	170731M1_55	—	1700920-07 RCDM-BLANK-20170720 0.11872	RCDM-BLANK-20170720	0.1187	1:40	Analyte
56	170731M1_56	—	1700920-08 MH-C94-20170720 0.11568	MH-C94-20170720	0.1157	1:41	Analyte
57	170731M1_57	—	1700920-09 RCDM-MW-13S-20170719 0.11866	RCDM-MW-13S-20170719	0.1187	1:42	Analyte
58	170731M1_58	—	1700920-10 LF-MW-14S-20170720 0.11481	LF-MW-14S-20170720	0.1148	1:43	Analyte
59	170731M1_59	—	1700920-11 LF-MW-11BR-20170720 0.11664	LF-MW-11BR-20170720	0.1166	1:44	Analyte
60	170731M1_60	—	1700920-12 LF-MW-13S-20170719 0.11667	LF-MW-13S-20170719	0.1167	1:45	Analyte
61	170731M1_61	—	1700920-13 RCDM-MW-11BR-20170720 0.11813	RCDM-MW-11BR-20170720	0.1181	1:46	Analyte
62	170731M1_62	—	1700920-14 RCDM-MW-12S-20170719 0.11619	RCDM-MW-12S-20170719	0.1162	1:47	Analyte
63	170731M1_63	—	1700920-15 LF-MW-28S-20170719 0.11572	LF-MW-28S-20170719	0.1157	2:1	Analyte
64	170731M1_64	—	1700920-16 DUP-07-20170719 0.12023	DUP-07-20170719	0.1202	2:2	Analyte
65	170731M1_65	—	1700920-17 FRB04-20170719 0.11007	FRB04-20170719	0.1101	2:3	Analyte
66	170731M1_66	—	IPA	IPA	1.0000	1:48	Blank
67	170731M1_67	—	ST170731M1-6 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
68	170731M1_68	—	IPA	IPA	1.0000	1:48	Blank

LC Calibration Standards Review Checklist Q4

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	NA
Calibration ID:	ST170731M1-1	L M H	~~NA~~	☑ (4)	☑	☑	☑	☑	☐
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: [signature] 8/1/17
Initials/Date

Comments:
(4) PFDS out of limit criteria.
[signature] 8/1/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-2.qld

Last Altered: Monday, July 31, 2017 13:00:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:18:58 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
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Name: 170731M1_2, Date: 31-Jul-2017, Time: 12:09:51, ID: ST170731M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

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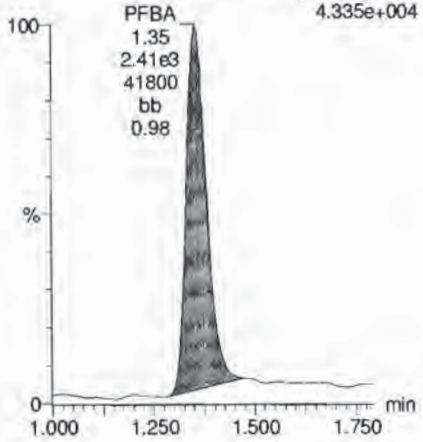

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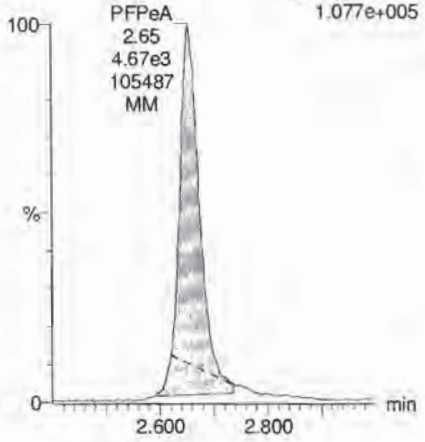

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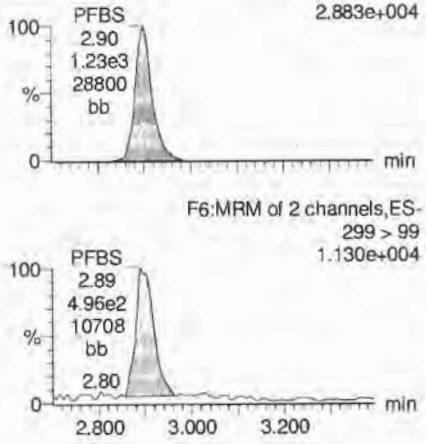

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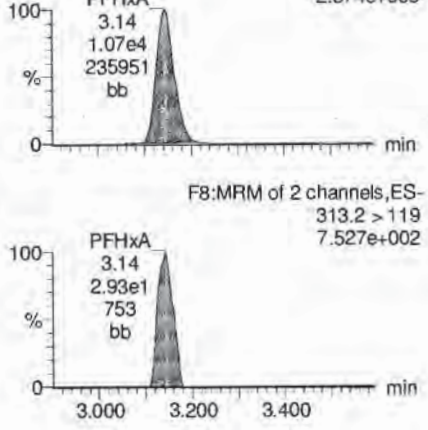

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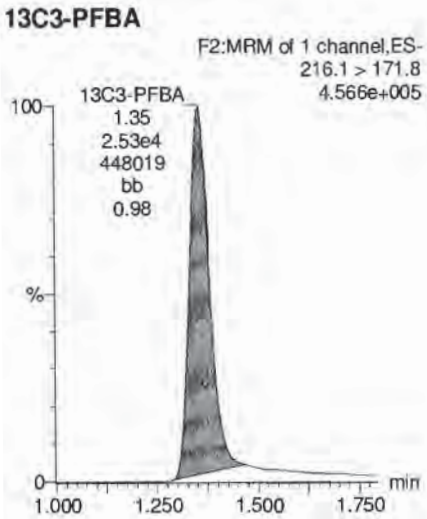

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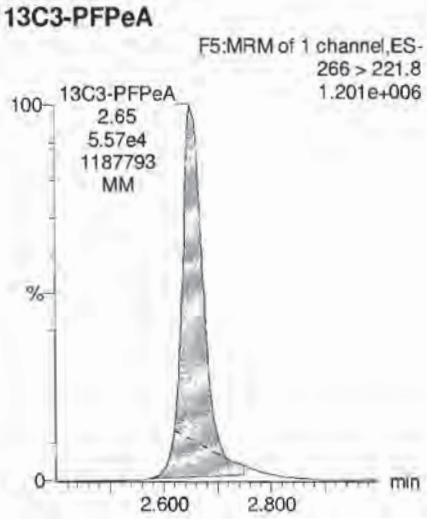

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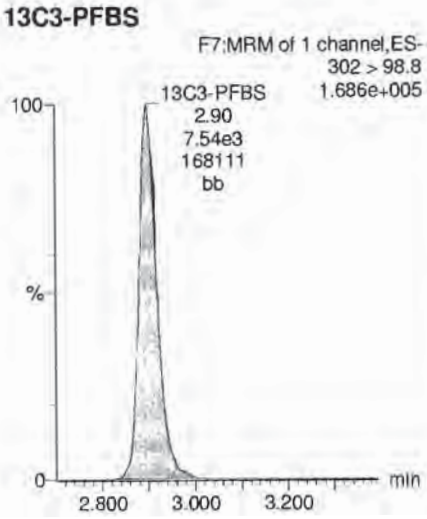

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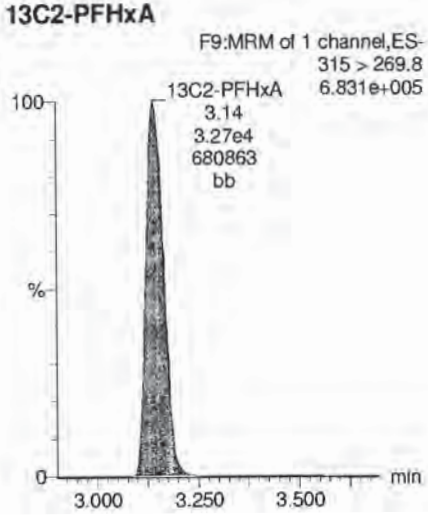

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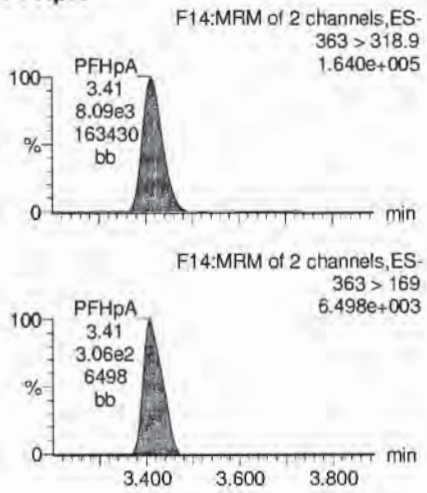
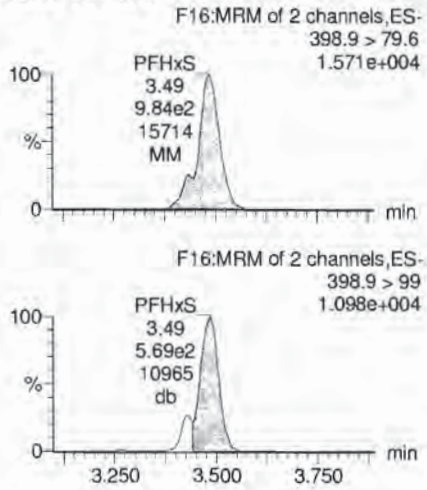
Last Altered: Monday, July 31, 2017 13:00:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:18:58 Pacific Daylight Time

Name: 170731M1_2, Date: 31-Jul-2017, Time: 12:09:51, ID: ST170731M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

PFHpA



Total PFHxS



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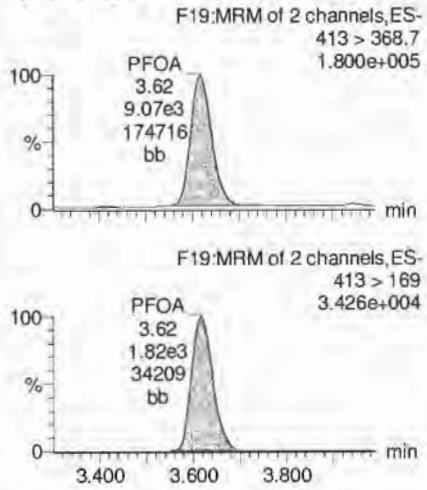

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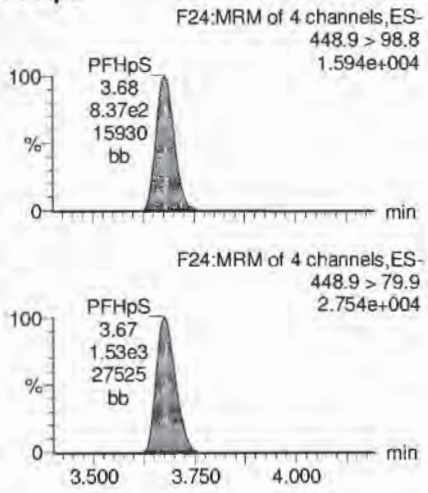

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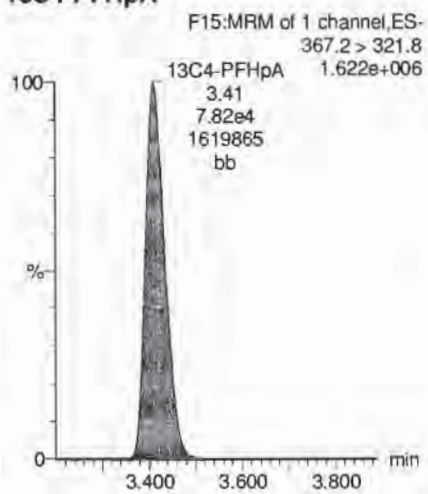

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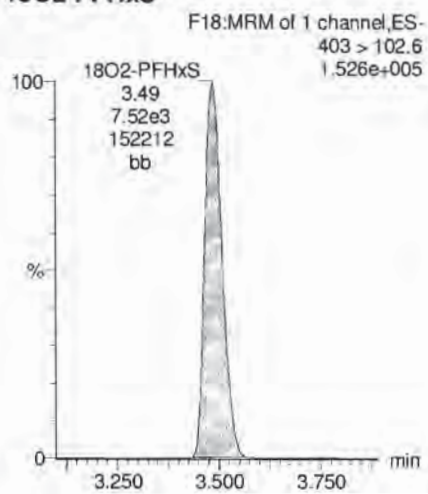

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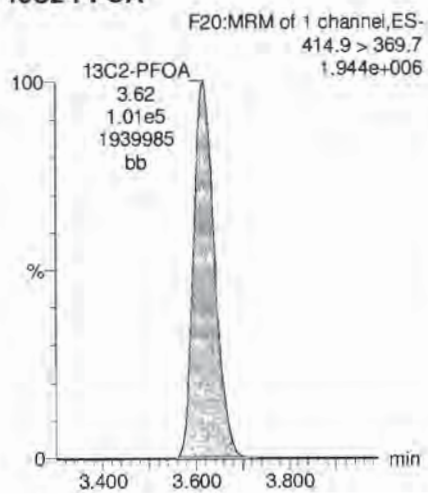

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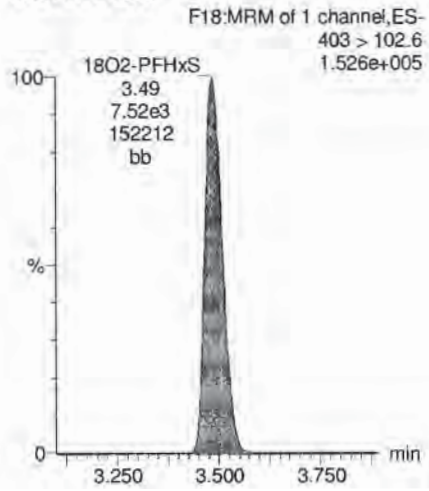

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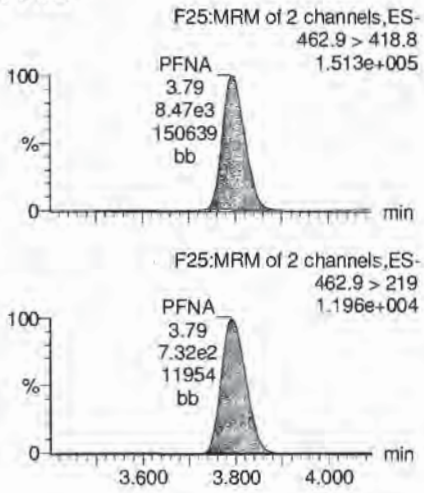
Last Altered: Monday, July 31, 2017 13:00:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:18:58 Pacific Daylight Time

Name: 170731M1_2, Date: 31-Jul-2017, Time: 12:09:51, ID: ST170731M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

PFNA



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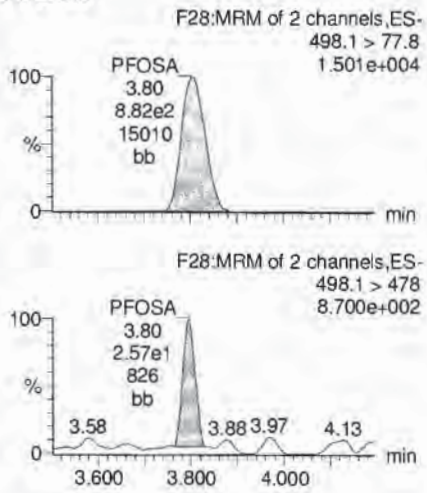

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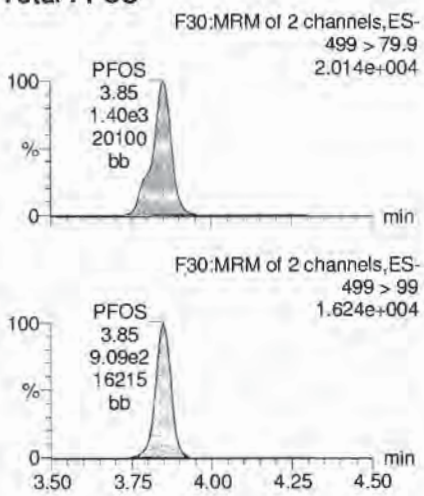

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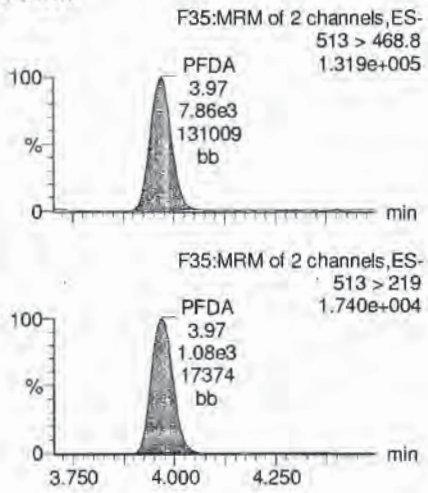
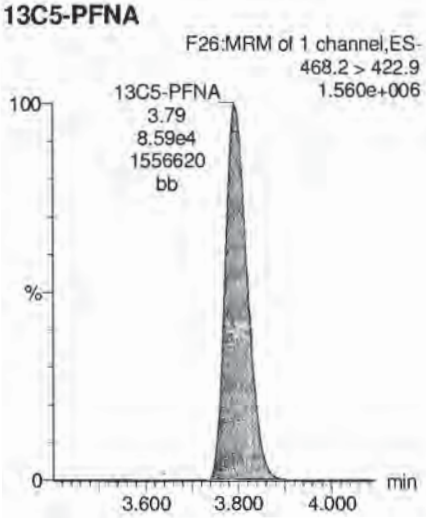
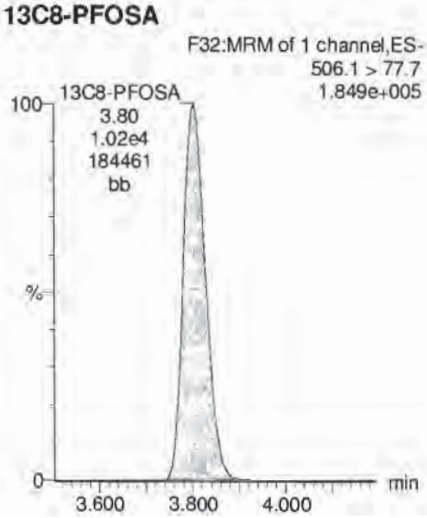


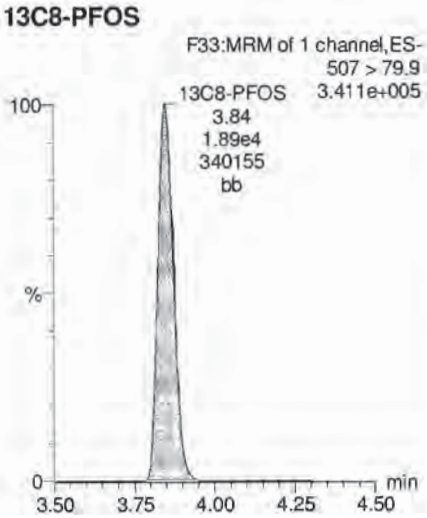
13C5-PFNA



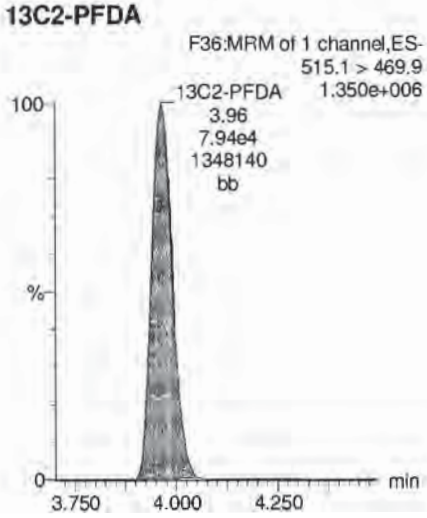
13C8-PFOSA



13C8-PFOS



13C2-PFDA



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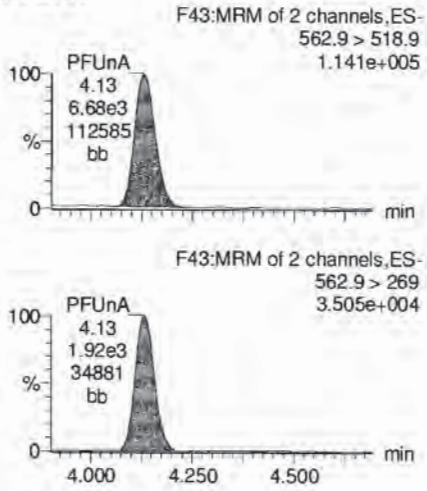
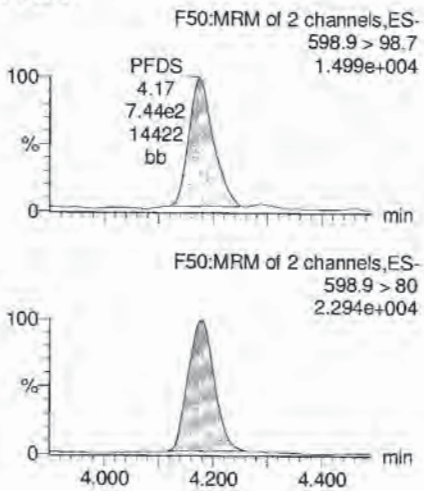
Last Altered: Monday, July 31, 2017 13:00:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:18:58 Pacific Daylight Time

Name: 170731M1_2, Date: 31-Jul-2017, Time: 12:09:51, ID: ST170731M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

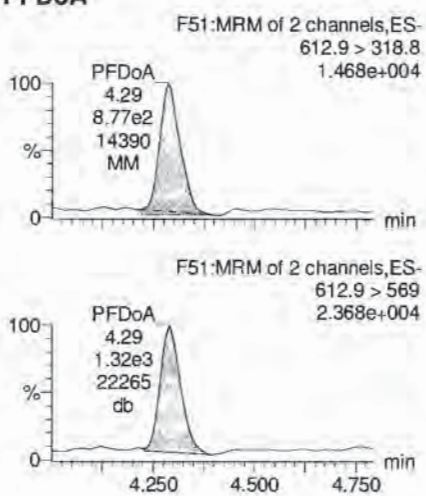
PFUnA



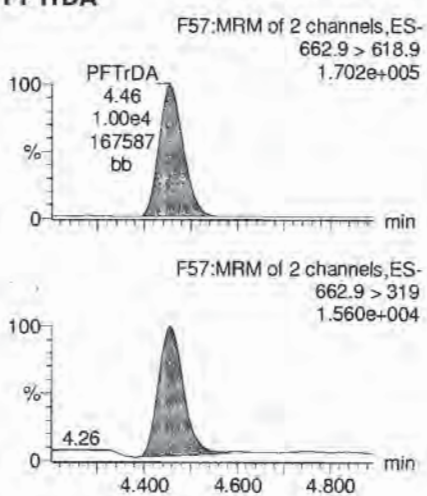
PFDS



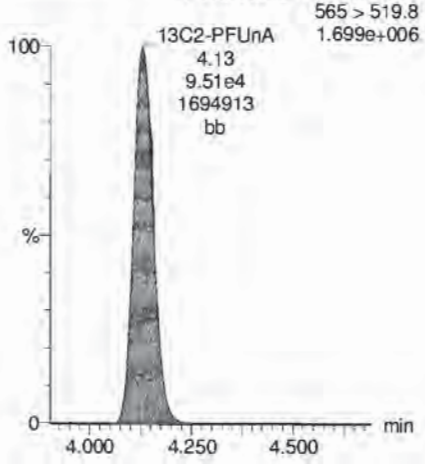
PFDoA



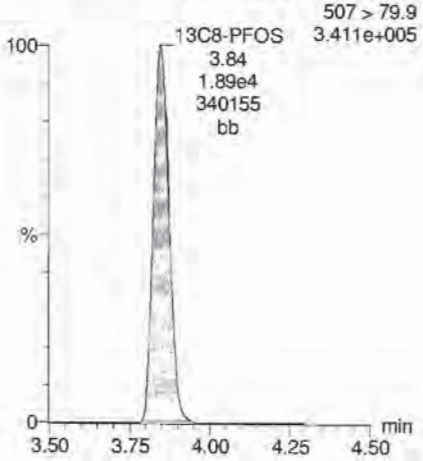
PFTrDA



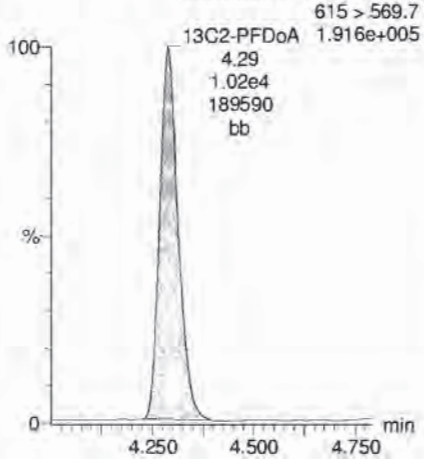
13C2-PFUnA



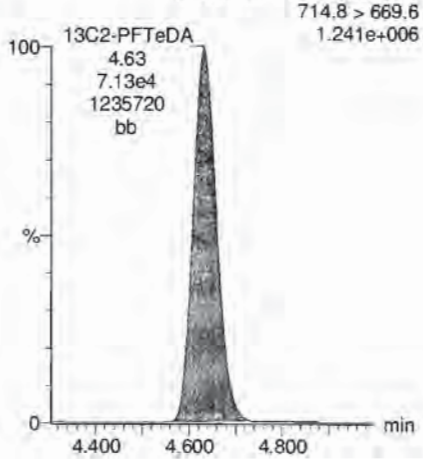
13C8-PFOS



13C2-PFDoA



13C2-PFTeDA

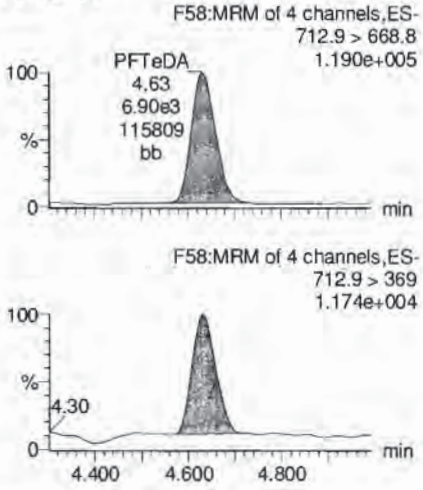


Dataset: U:\Q4.PRO\results\170731M1\170731M1-2.qld

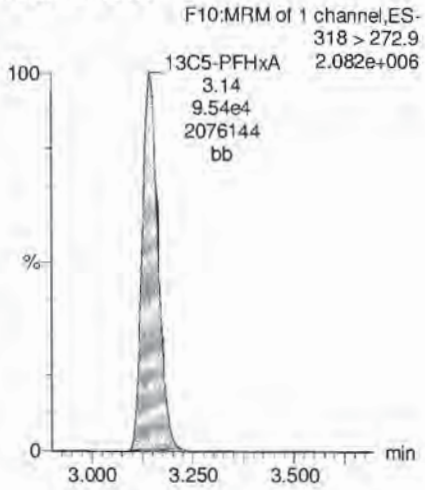
Last Altered: Monday, July 31, 2017 13:00:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:18:58 Pacific Daylight Time

Name: 170731M1_2, Date: 31-Jul-2017, Time: 12:09:51, ID: ST170731M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

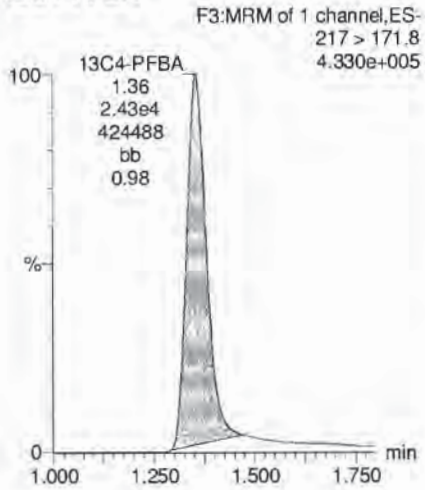
PFTeDA



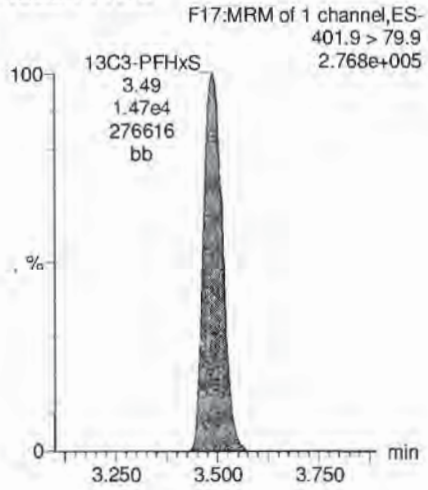
13C5-PFHxA



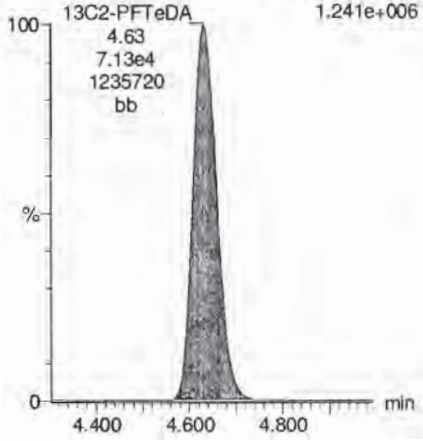
13C4-PFBA



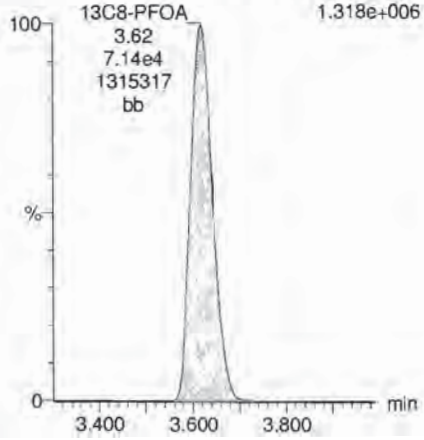
13C3-PFHxS



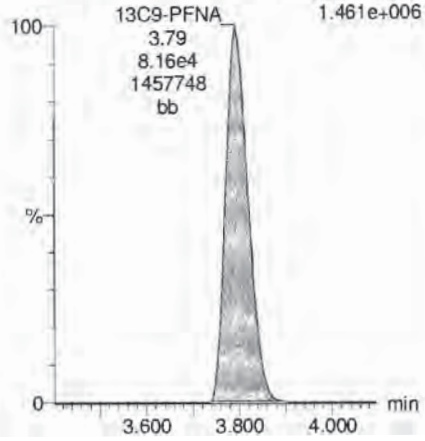
13C2-PFTeDA



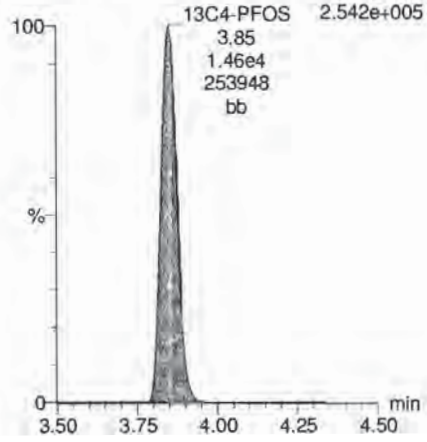
13C8-PFOA



13C9-PFNA



13C4-PFOS

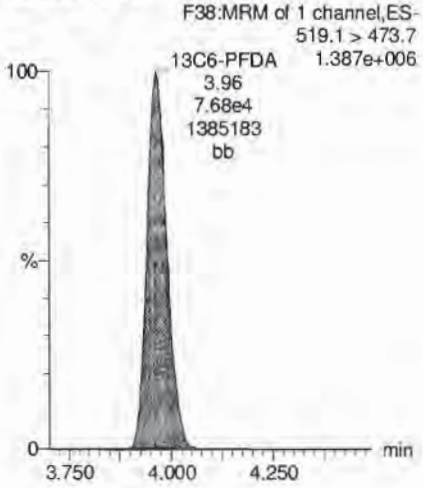


Dataset: U:\Q4.PRO\results\170731M1\170731M1-2.qld

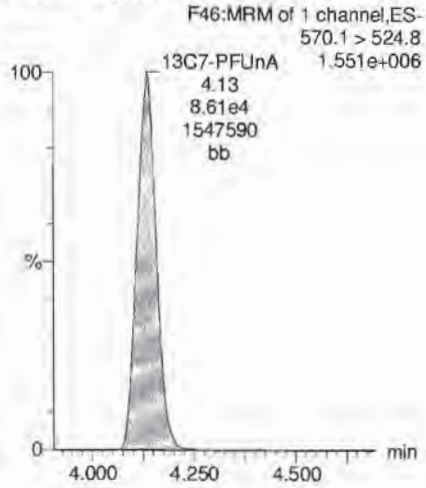
Last Altered: Monday, July 31, 2017 13:00:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:18:58 Pacific Daylight Time

Name: 170731M1_2, Date: 31-Jul-2017, Time: 12:09:51, ID: ST170731M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M1\170731M1-40.qld

Last Altered: Tuesday, August 01, 2017 10:35:04 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:35:10 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: 170731M1_40, Date: 31-Jul-2017, Time: 19:17:39, ID: ST170731M1-4 PFC CS3 17G2729, Description: PFC CS3 17G2729

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	2.37e4	2.80e4	1.000		1.32	1.39	10.6	9.66	96.6
2	2	PFPeA	263.1 > 218.9	5.31e4	6.80e4	1.000		2.77	2.69	9.76	10.1	101.3
3	3	PFBS	299 > 79.7	1.32e4	9.40e3	1.000		2.96	2.92	17.6	9.48	94.8
4	4	PFHxA	313.2 > 268.9	1.00e5	3.52e4	1.000		3.19	3.16	14.3	10.1	101.3
5	5	PFHpA	363 > 318.9	7.17e4	7.78e4	1.000		3.45	3.43	11.5	9.72	97.2
6	6	PFHxS	398.9 > 79.6	8.97e3	6.97e3	1.000		3.56	3.50	16.1	9.63	96.3
7	7	PFOA	413 > 368.7	8.54e4	1.12e5	1.000		3.65	3.63	9.56	9.70	97.0
8	8	PFHpS	448.9 > 98.8	7.99e3	1.12e5	1.000		3.65	3.69	0.893	10.7	106.9
9	9	PFNA	462.9 > 418.8	8.05e4	9.84e4	1.000		3.83	3.81	10.2	9.49	94.9
10	10	PFOSA	498.1 > 77.8	8.92e3	1.06e4	1.000		3.84	3.82	10.5	9.51	95.1
11	11	PFOS	499 > 79.9	1.46e4	1.84e4	1.000		3.89	3.86	9.95	10.0	100.1
12	12	PFDA	513 > 468.8	8.50e4	8.50e4	1.000		4.01	3.98	12.5	10.2	102.3
13	13	N-MeFOSAA	570.1 > 419	2.45e4	2.05e4	1.000		4.03	4.01	195	9.86	98.6
14	14	N-EtFOSAA	584.2 > 419	1.94e4	2.00e4	1.000		4.10	4.08	158	10.3	102.9
15	15	PFUnA	562.9 > 518.9	6.09e4	1.01e5	1.000		4.11	4.15	7.50	10.1	100.8
16	16	PFDS	598.9 > 98.7	6.30e3	1.01e5	1.000		4.22	4.19	0.776	11.0	109.5
17	17	PFDoA	612.9 > 318.8	7.73e3	9.84e3	1.000		4.34	4.30	9.82	12.2	122.1
18	18	PFTrDA	662.9 > 618.9	8.56e4	9.84e3	1.000		4.50	4.47	109	11.0	110.4
19	19	PFTeDA	712.9 > 668.8	5.77e4	6.80e4	1.000		4.68	4.66	10.6	10.1	101.1
20	20	13C3-PFBA	216.1 > 171.8	2.80e4	2.73e4	1.000	1.068	1.32	1.40	12.8	12.0	95.9
21	21	13C3-PFPeA	266 > 221.8	6.80e4	9.67e4	1.000	0.271	2.77	2.69	3.51	13.0	103.6
22	22	13C3-PFBS	302 > 98.8	9.40e3	9.67e4	1.000	0.033	2.96	2.92	0.486	14.7	117.5
23	23	13C2-PFHxA	315 > 269.8	3.52e4	9.67e4	1.000	0.335	3.19	3.16	1.82	5.42	108.4
24	24	13C4-PFHpA	367.2 > 321.8	7.78e4	9.67e4	1.000	0.369	3.45	3.43	4.02	10.9	87.2
25	25	18O2-PFHxS	403 > 102.6	6.97e3	1.39e4	1.000	0.460	3.56	3.50	6.25	13.6	108.6
26	26	13C2-PFOA	414.9 > 369.7	1.12e5	8.09e4	1.000	1.293	3.65	3.63	17.3	13.4	106.8
27	27	13C5-PFNA	468.2 > 422.9	9.84e4	8.92e4	1.000	0.986	3.83	3.81	13.8	14.0	112.0
28	28	13C8-PFOSA	506.1 > 77.7	1.06e4	8.45e4	1.000	0.132	3.84	3.82	1.57	11.9	94.9
29	29	13C8-PFOS	507 > 79.9	1.84e4	1.50e4	1.000	1.184	3.89	3.87	15.3	12.9	103.2
30	30	13C2-PFDA	515.1 > 469.9	8.50e4	8.94e4	1.000	0.998	4.01	3.99	11.9	11.9	95.2
31	31	d3-N-MeFOSAA	573.3 > 419	2.05e4	8.45e4	1.000	0.018	4.03	4.01	3.02	171	105.2
32	32	d5-N-EtFOSAA	589.3 > 419	2.00e4	8.45e4	1.000	0.018	4.12	4.08	2.96	166	102.4

70-130 50-150 DM 8/1/17

DM 8/1/17

50-150

Dataset: U:\Q4.PRO\results\170731M1\170731M1-40.qld

Last Altered: Tuesday, August 01, 2017 10:35:04 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:35:10 Pacific Daylight Time

Name: 170731M1_40, Date: 31-Jul-2017, Time: 19:17:39, ID: ST170731M1-4 PFC CS3 17G2729, Description: PFC CS3 17G2729

	# Name	Trace	Area	IS Area	Wt/Vol	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	33 13C2-PFUnA	565 > 519.8	1.01e5	8.45e4	1.000	1.129	4.17	4.15	15.0	13.3	106.3
34	34 13C2-PFDoA	615 > 569.7	9.84e3	8.45e4	1.000	0.116	4.34	4.30	1.46	12.5	100.4
35	35 13C2-PFTeDA	714.8 > 669.6	6.80e4	8.45e4	1.000	0.762	4.68	4.66	10.1	13.2	105.5
36	36 13C4-PFBA	217 > 171.8	2.73e4	2.73e4	1.000	1.000	1.32	1.40	12.5	12.5	100.0
37	37 13C5-PFHxA	318 > 272.9	9.67e4	9.67e4	1.000	1.000	3.19	3.16	5.00	5.00	100.0
38	38 13C3-PFHxS	401.9 > 79.9	1.39e4	1.39e4	1.000	1.000	3.56	3.50	12.5	12.5	100.0
39	39 13C8-PFOA	421.3 > 376	8.09e4	8.09e4	1.000	1.000	3.65	3.63	12.5	12.5	100.0
40	40 13C9-PFNA	472.2 > 426.9	8.92e4	8.92e4	1.000	1.000	3.83	3.81	12.5	12.5	100.0
41	41 13C4-PFOS	503 > 79.9	1.50e4	1.50e4	1.000	1.000	3.89	3.87	12.5	12.5	100.0
42	42 13C6-PFDA	519.1 > 473.7	8.94e4	8.94e4	1.000	1.000	4.01	3.98	12.5	12.5	100.0
43	43 13C7-PFUnA	570.1 > 524.8	8.45e4	8.45e4	1.000	1.000	4.17	4.14	12.5	12.5	100.0

50-150

Sample List Report **MassLynx MassLynx V4.1 SCN945 SCN960**

Sample List: U:\Q4.PRO\SampleDB\170731M1.SPL
Last Modified: Monday, July 31, 2017 14:34:49 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:57:00 Pacific Daylight Time

Page Position (1, 1)

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
1	170731M1_1	—	IPA	IPA	1.0000	1:48	Blank
2	170731M1_2	—	ST170731M1-1 PFC CS0 17G2826	PFC CS0 17G2826	1.0000	1:1	Analyte
3	170731M1_3	—	IPA	IPA	1.0000	1:48	Blank
4	170731M1_4	—	B7G0067-BS1 OPR 0.125	OPR	0.1250	1:3	Analyte
5	170731M1_5	—	IPA	IPA	1.0000	1:48	Blank
6	170731M1_6	—	B7G0067-BLK1 Method Blank 0.125	Method Blank	0.1250	1:4	Analyte
7	170731M1_7	—	1700855-01 TF5-EB-02 0.27357	TF5-EB-02	0.2736	1:5	Analyte
8	170731M1_8	—	1700855-02 TF5-MW-987 0.27423	TF5-MW-987	0.2742	1:6	Analyte
9	170731M1_9	—	1700855-03 TF5-MW-987D 0.27164	TF5-MW-987D	0.2716	1:7	Analyte
10	170731M1_10	—	B7G0067-MS1 Matrix Spike 0.27298	Matrix Spike	0.2730	1:8	Analyte
11	170731M1_11	—	B7G0067-MSD1 Matrix Spike Dup 0.2776	Matrix Spike Dup	0.2776	1:9	Analyte
12	170731M1_12	—	1700855-04 TF5-MW-987-D 0.26865	TF5-MW-987-D	0.2687	1:10	Analyte
13	170731M1_13	—	1700855-05 TF5-MW-991 0.2726	TF5-MW-991	0.2726	1:11	Analyte
14	170731M1_14	—	1700855-06 TF5-MW-991D 0.27278	TF5-MW-991D	0.2728	1:12	Analyte
15	170731M1_15	—	1700855-07 TF5-MW-993 0.26881	TF5-MW-993	0.2688	1:13	Analyte
16	170731M1_16	—	1700855-08 TF5-MW-993D 0.2612	TF5-MW-993D	0.2612	1:14	Analyte
17	170731M1_17	—	1700855-09 TF5-MW-994 0.25188	TF5-MW-994	0.2519	1:15	Analyte
18	170731M1_18	—	1700845-03@40X MW-27S-20170707 0.11824	MW-27S-20170707	0.1182	1:16	Analyte
19	170731M1_19	—	IPA	IPA	1.0000	1:48	Blank
20	170731M1_20	—	ST170731M1-2 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
21	170731M1_21	—	IPA	IPA	1.0000	1:48	Blank
22	170731M1_22	—	1700871-01 EB03-20170712 0.12146	EB03-20170712	0.1215	1:17	Analyte
23	170731M1_23	—	1700871-02 5-GW-05_DGMW41B-20170712 0.11547	5-GW-05_DGMW41B-20170712	0.1155	1:18	Analyte
24	170731M1_24	—	1700871-03 18-GW-18BGM03E-20170712 0.11765	18-GW-18BGM03E-20170712	0.1177	1:19	Analyte
25	170731M1_25	—	1700871-04 24-GW-24IN03-20170712 0.11741	24-GW-24IN03-20170712	0.1174	1:20	Analyte
26	170731M1_26	—	1700871-05 DUP02-20170712 0.11807	DUP02-20170712	0.1181	1:21	Analyte
27	170731M1_27	—	1700871-06 24-GW-24EX13A-20170712 0.11851	24-GW-24EX13A-20170712	0.1185	1:22	Analyte
28	170731M1_28	—	1700871-07 24-GW-24MW15D-20170712 0.1193	24-GW-24MW15D-20170712	0.1193	1:23	Analyte
29	170731M1_29	—	1700871-08 16-GW-16_MW28-20170712 0.11899	16-GW-16_MW28-20170712	0.1190	1:24	Analyte
30	170731M1_30	—	1700871-09 16-GW-16_MW19-20170712 0.11913	16-GW-16_MW19-20170712	0.1191	1:25	Analyte
31	170731M1_31	—	1700871-10 EB04-20170713 0.11646	EB04-20170713	0.1165	1:26	Analyte
32	170731M1_32	—	1700871-11 16-GW-16_MW04-20170713 0.12043	16-GW-16_MW04-20170713	0.1204	1:27	Analyte
33	170731M1_33	—	IPA	IPA	1.0000	1:48	Blank
34	170731M1_34	—	ST170731M1-3 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
35	170731M1_35	—	IPA	IPA	1.0000	1:48	Blank
36	170731M1_36	—	1700856-12RE1@5X MW-31S-20170711 0.11732	MW-31S-20170711	0.1173	1:28	Analyte
37	170731M1_37	—	1700935-01 RES29-BLK_20170726 0.11182	RES29-BLK_20170726	0.1118	1:29	Analyte
38	170731M1_38	—	1700935-04 RES29-GAC2_20170726 0.12639	RES29-GAC2_20170726	0.1264	1:30	Analyte
39	170731M1_39	—	IPA	IPA	1.0000	1:48	Blank
40	170731M1_40	—	ST170731M1-4 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
41	170731M1_41	—	IPA	IPA	1.0000	1:48	Blank
42	170731M1_42	—	B7G0122-BS1 OPR 0.25	OPR	0.2500	1:31	Analyte
43	170731M1_43	—	IPA	IPA	1.0000	1:48	Blank
44	170731M1_44	—	B7G0122-BLK1 Method Blank 0.25	Method Blank	0.2500	1:32	Analyte
45	170731M1_45	—	1700891-06RE1 VEL FOAM 0.17113	VEL FOAM	0.1711	1:33	Analyte
46	170731M1_46	—	1700920-01 RCDM-MW-28S-20170719 0.1113	RCDM-MW-28S-20170719	0.1113	1:34	Analyte
47	170731M1_47	—	1700920-02 LF-MW-12S-20170719 0.11113	LF-MW-12S-20170719	0.1111	1:35	Analyte
48	170731M1_48	—	1700920-03 RCDM-MW-14S-20170720 0.11405	RCDM-MW-14S-20170720	0.1141	1:36	Analyte
49	170731M1_49	—	1700920-04 MH-DUP01-20170720 0.12177	MH-DUP01-20170720	0.1218	1:37	Analyte
50	170731M1_50	—	1700920-05 MH-A97-20170720 0.12086	MH-A97-20170720	0.1209	1:38	Analyte
51	170731M1_51	—	1700920-06 MH-H93-20170720 0.11357	MH-H93-20170720	0.1136	1:39	Analyte
52	170731M1_52	—	IPA	IPA	1.0000	1:48	Blank
53	170731M1_53	—	ST170731M1-5 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
54	170731M1_54	—	IPA	IPA	1.0000	1:48	Blank
55	170731M1_55	—	1700920-07 RCDM-BLANK-20170720 0.11872	RCDM-BLANK-20170720	0.1187	1:40	Analyte
56	170731M1_56	—	1700920-08 MH-C94-20170720 0.11568	MH-C94-20170720	0.1157	1:41	Analyte
57	170731M1_57	—	1700920-09 RCDM-MW-13S-20170719 0.11866	RCDM-MW-13S-20170719	0.1187	1:42	Analyte
58	170731M1_58	—	1700920-10 LF-MW-14S-20170720 0.11481	LF-MW-14S-20170720	0.1148	1:43	Analyte
59	170731M1_59	—	1700920-11 LF-MW-11BR-20170720 0.11664	LF-MW-11BR-20170720	0.1166	1:44	Analyte
60	170731M1_60	—	1700920-12 LF-MW-13S-20170719 0.11667	LF-MW-13S-20170719	0.1167	1:45	Analyte
61	170731M1_61	—	1700920-13 RCDM-MW-11BR-20170720 0.11813	RCDM-MW-11BR-20170720	0.1181	1:46	Analyte
62	170731M1_62	—	1700920-14 RCDM-MW-12S-20170719 0.11619	RCDM-MW-12S-20170719	0.1162	1:47	Analyte
63	170731M1_63	—	1700920-15 LF-MW-28S-20170719 0.11572	LF-MW-28S-20170719	0.1157	2:1	Analyte
64	170731M1_64	—	1700920-16 DUP-07-20170719 0.12023	DUP-07-20170719	0.1202	2:2	Analyte
65	170731M1_65	—	1700920-17 FRB04-20170719 0.11007	FRB04-20170719	0.1101	2:3	Analyte
66	170731M1_66	—	IPA	IPA	1.0000	1:48	Blank
67	170731M1_67	—	ST170731M1-6 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
68	170731M1_68	—	IPA	IPA	1.0000	1:48	Blank

Dataset: U:\Q4.PRO\results\170731M1\170731M1-40.qld

Last Altered: Tuesday, August 01, 2017 10:35:04 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:35:10 Pacific Daylight Time

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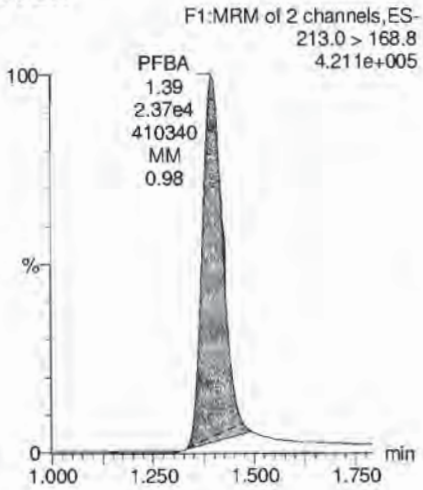
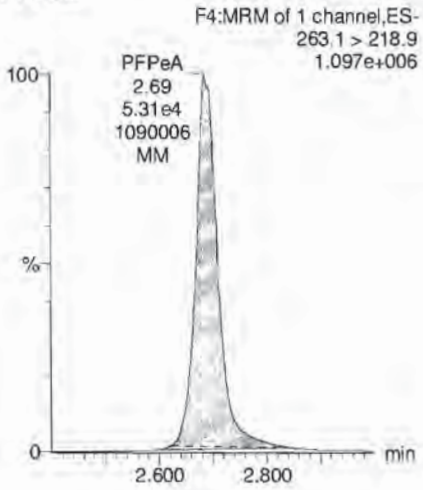
Name: 170731M1_40, Date: 31-Jul-2017, Time: 19:17:39, ID: ST170731M1-4 PFC CS3 17G2729, Description: PFC CS3 17G2729

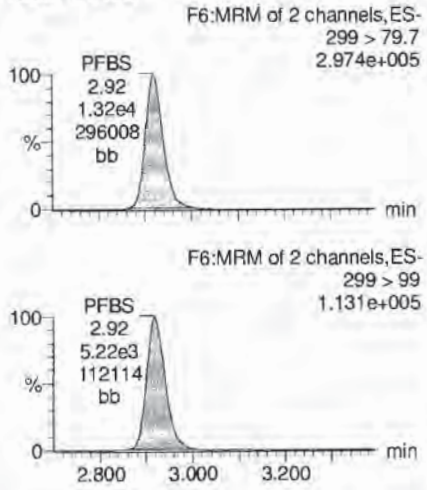
PFBA



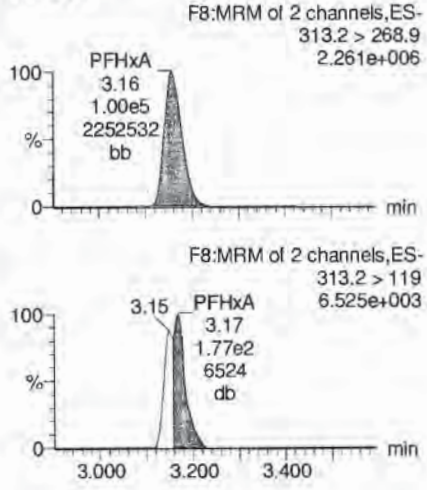
PFPeA



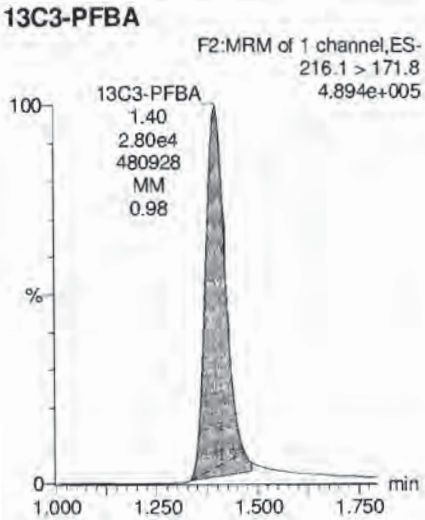
Total PFBS



PFHxA



13C3-PFBA



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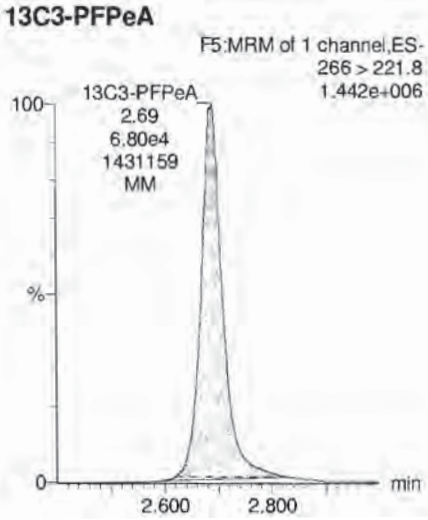

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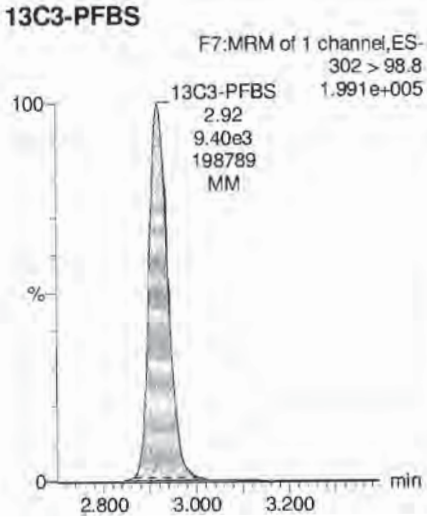
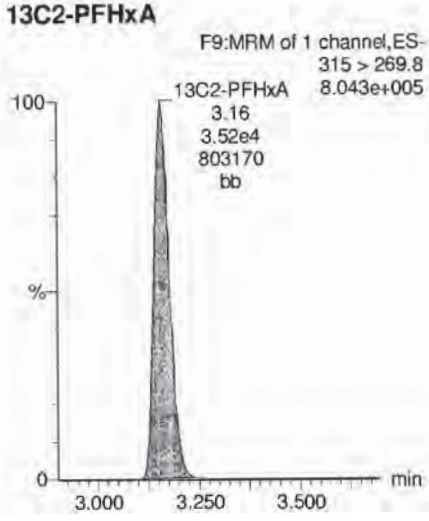


13C2-PFHxA



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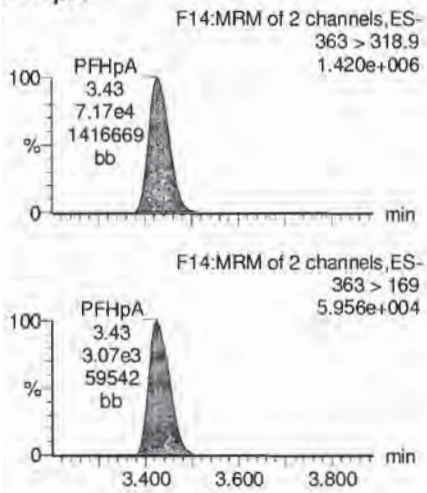
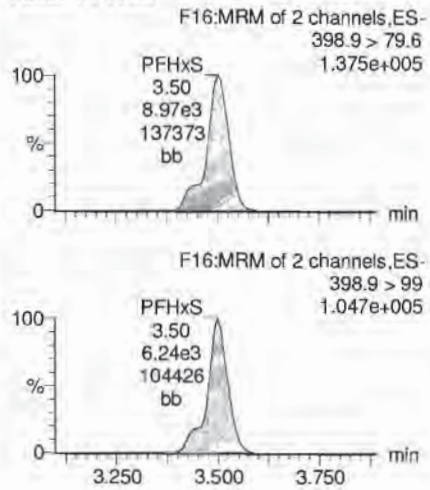
Last Altered: Tuesday, August 01, 2017 10:23:16 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:23:31 Pacific Daylight Time

Name: 170731M1_40, Date: 31-Jul-2017, Time: 19:17:39, ID: ST170731M1-4 PFC CS3 17G2729, Description: PFC CS3 17G2729

PFHpA



Total PFHxS



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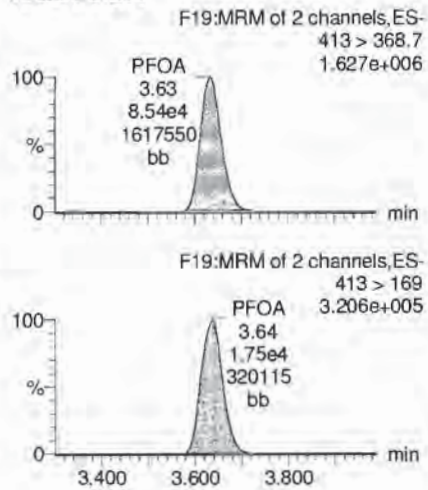
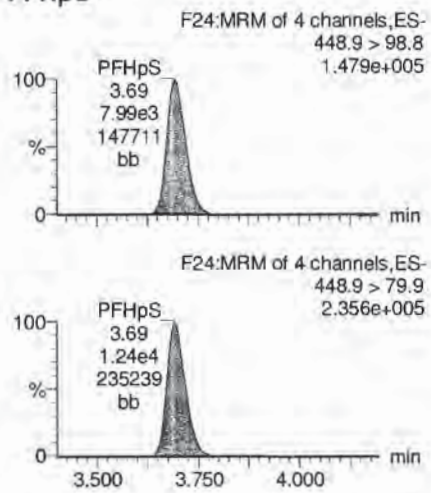


PFHpS



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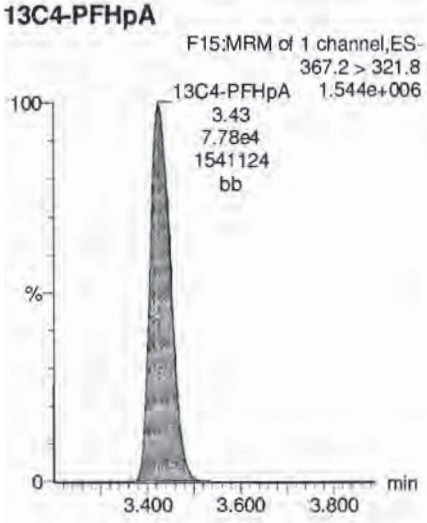
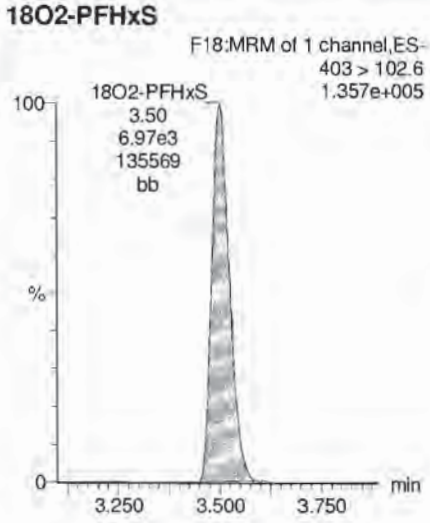


18O2-PFHxS



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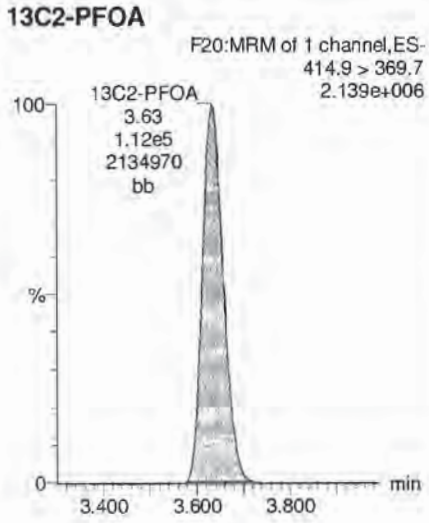
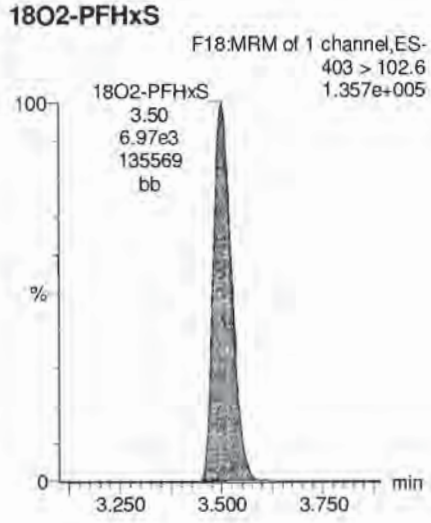


18O2-PFHxS



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Last Altered: Tuesday, August 01, 2017 10:23:16 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:23:31 Pacific Daylight Time

Name: 170731M1_40, Date: 31-Jul-2017, Time: 19:17:39, ID: ST170731M1-4 PFC CS3 17G2729, Description: PFC CS3 17G2729

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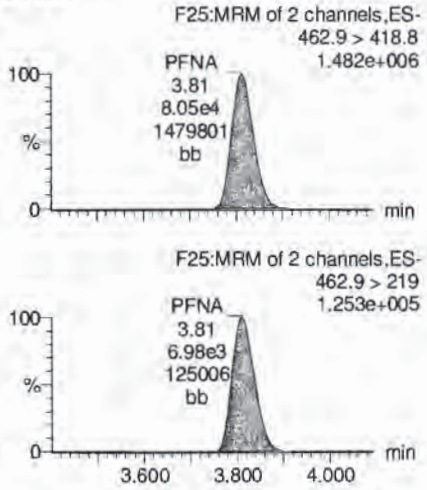
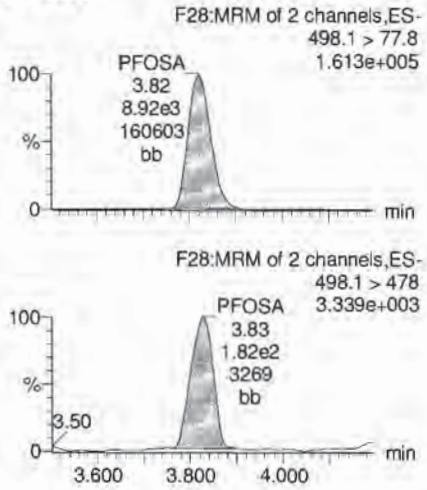
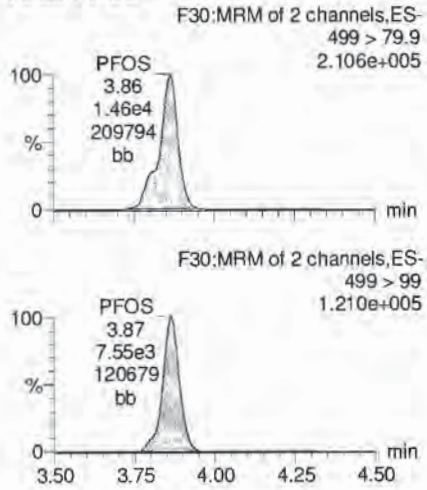


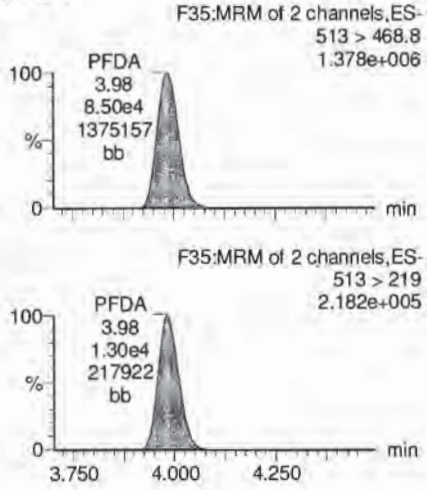
PFOSA



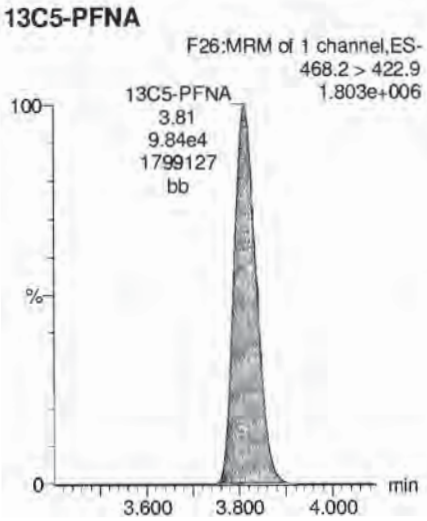
Total PFOS



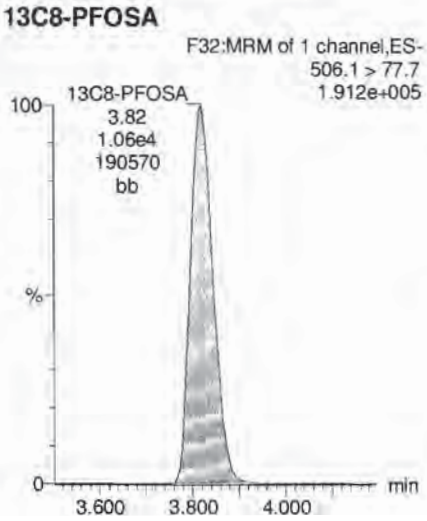
PFDA



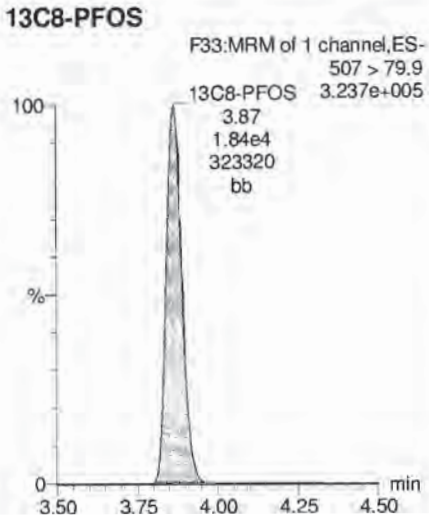
13C5-PFNA



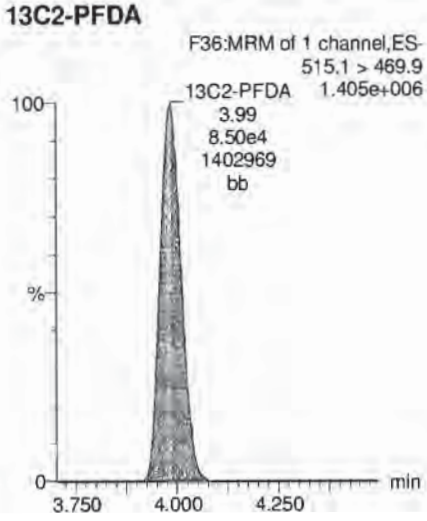
13C8-PFOSA



13C8-PFOS



13C2-PFDA



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Last Altered: Tuesday, August 01, 2017 10:23:16 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:23:31 Pacific Daylight Time

Name: 170731M1_40, Date: 31-Jul-2017, Time: 19:17:39, ID: ST170731M1-4 PFC CS3 17G2729, Description: PFC CS3 17G2729

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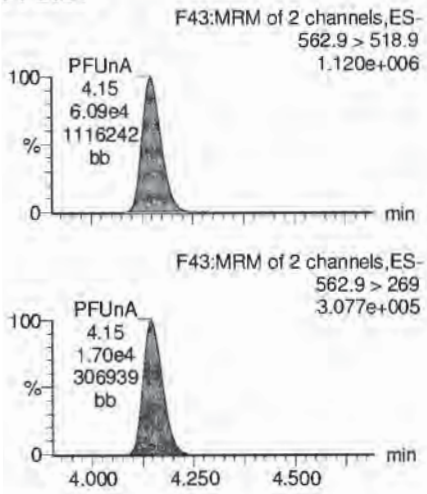
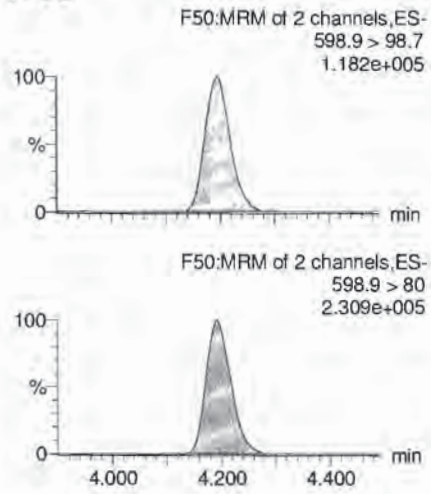
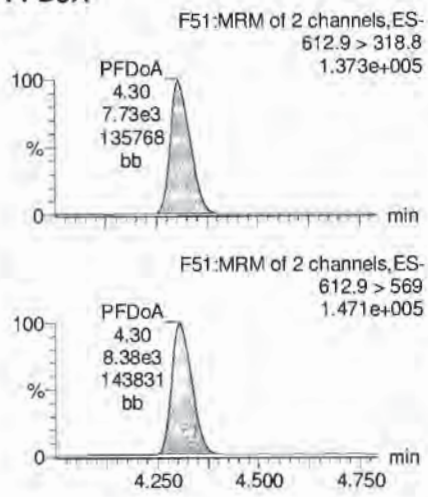


PFDS



PFDoA



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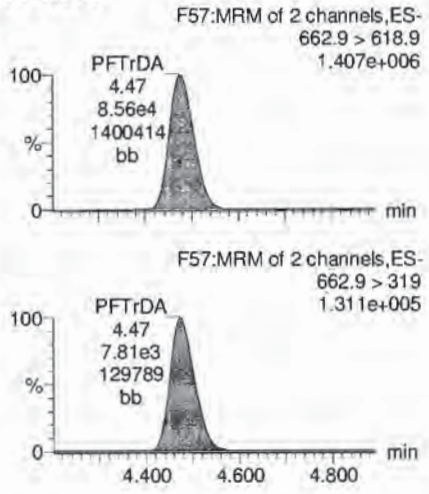

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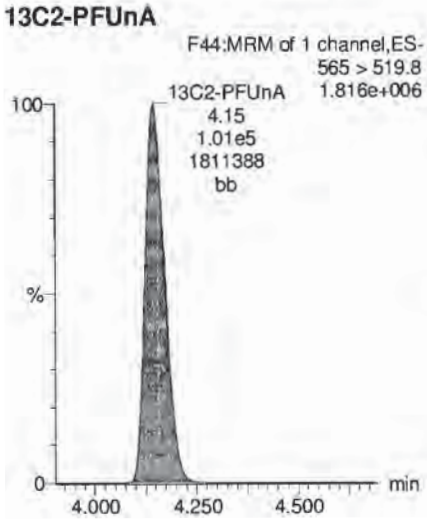

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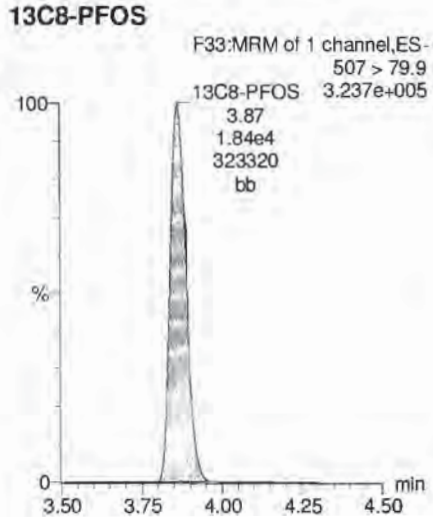

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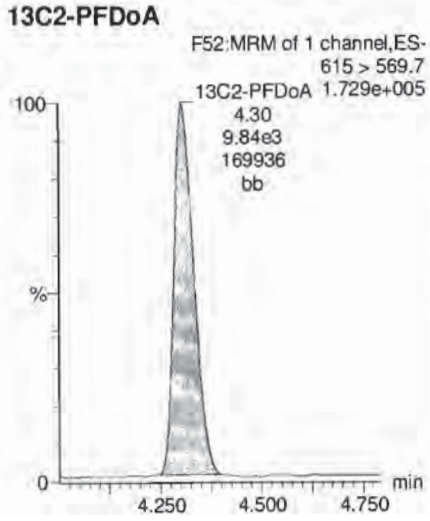

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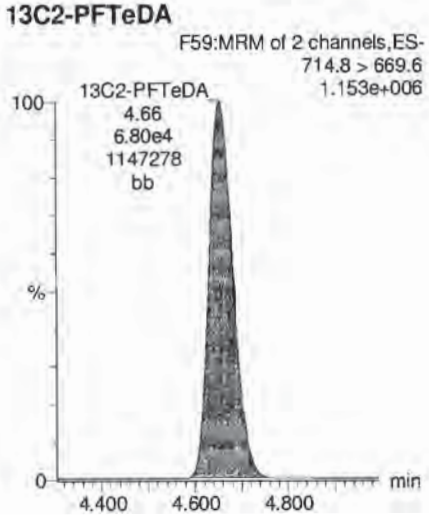

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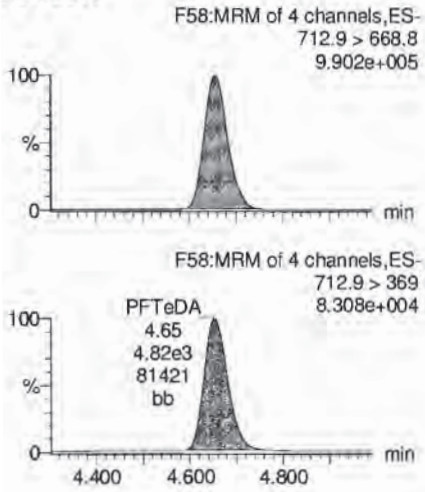
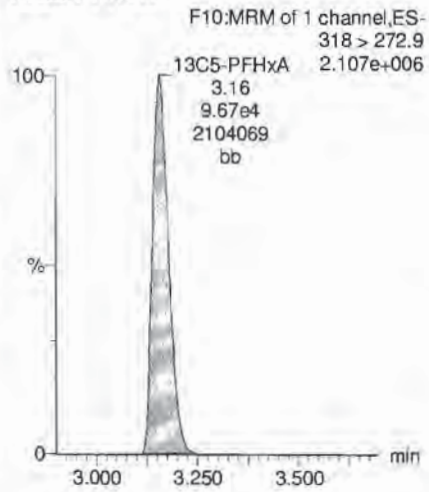
Last Altered: Tuesday, August 01, 2017 10:23:16 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:23:31 Pacific Daylight Time

Name: 170731M1_40, Date: 31-Jul-2017, Time: 19:17:39, ID: ST170731M1-4 PFC CS3 17G2729, Description: PFC CS3 17G2729

PFTeDA



13C5-PFHxA



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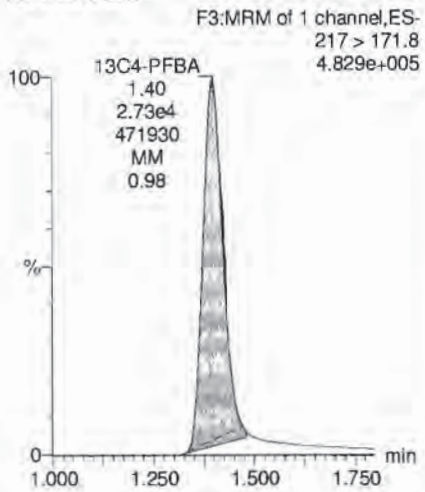

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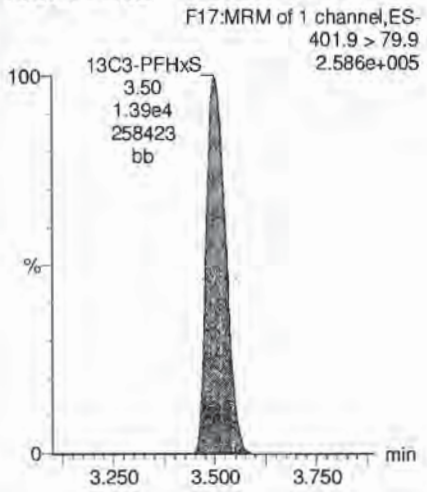

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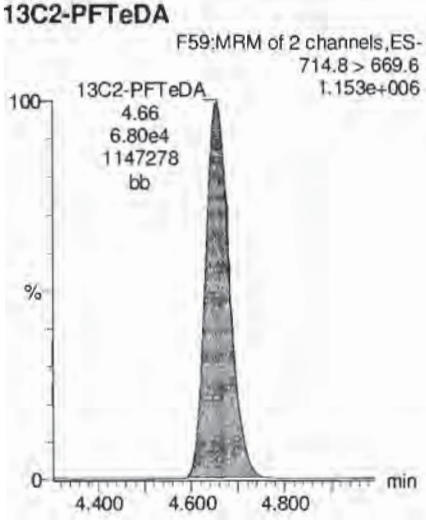
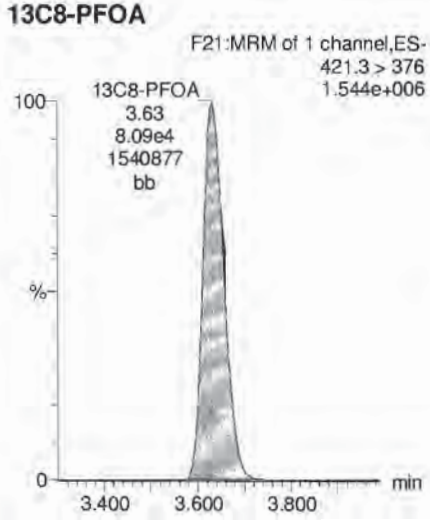
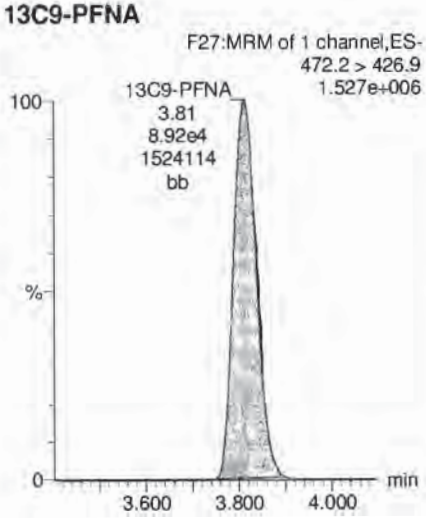


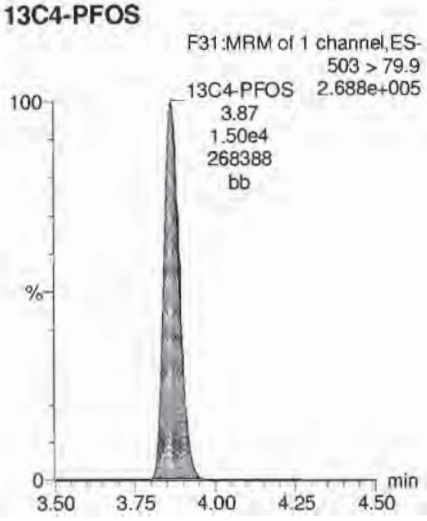
13C8-PFOA



13C9-PFNA



13C4-PFOS



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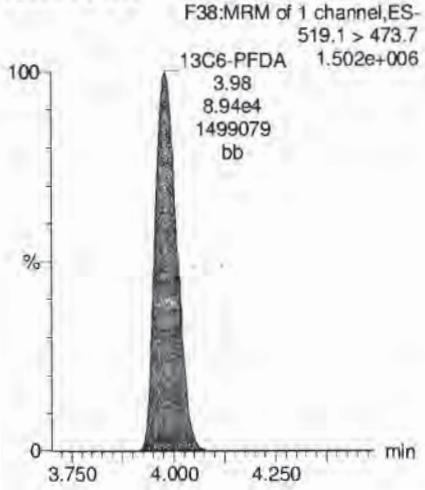
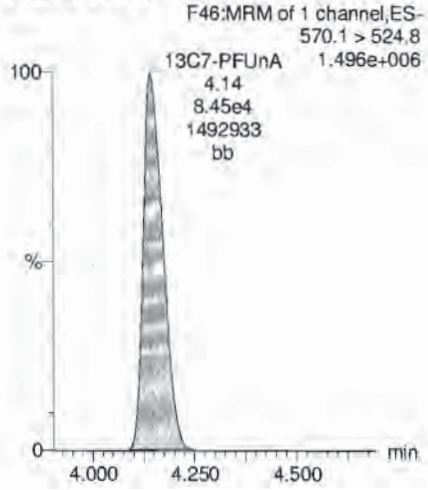
Last Altered: Tuesday, August 01, 2017 10:23:16 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:23:31 Pacific Daylight Time

Name: 170731M1_40, Date: 31-Jul-2017, Time: 19:17:39, ID: ST170731M1-4 PFC CS3 17G2729, Description: PFC CS3 17G2729

13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M1\170731M1-53.qld

Last Altered: Tuesday, August 01, 2017 10:36:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:36:54 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: 170731M1_53, Date: 31-Jul-2017, Time: 21:36:33, ID: ST170731M1-5 PFC CS3 17G2729, Description: PFC CS3 17G2729

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	2.57e4	3.02e4	1.000		1.32	1.39	10.7	9.75	97.5
2	2	PFPeA	263.1 > 218.9	5.84e4	7.69e4	1.000		2.77	2.69	9.50	9.85	98.5
3	3	PFBS	299 > 79.7	1.40e4	1.00e4	1.000		2.96	2.92	17.4	9.38	93.8
4	4	PFHxA	313.2 > 268.9	1.04e5	3.60e4	1.000		3.19	3.16	14.4	10.2	102.2
5	5	PFHpA	363 > 318.9	8.00e4	8.27e4	1.000		3.45	3.43	12.1	10.2	102.1
6	6	PFHxS	398.9 > 79.6	9.97e3	8.04e3	1.000		3.56	3.50	15.5	9.27	92.7
7	7	PFOA	413 > 368.7	8.54e4	1.15e5	1.000		3.65	3.63	9.31	9.45	94.5
8	8	PFHpS	448.9 > 98.8	8.65e3	1.15e5	1.000		3.65	3.69	0.943	11.3	112.9
9	9	PFNA	462.9 > 418.8	8.13e4	9.55e4	1.000		3.83	3.81	10.6	9.88	98.8
10	10	PFOSA	498.1 > 77.8	9.34e3	1.10e4	1.000		3.84	3.82	10.6	9.61	96.1
11	11	PFOS	499 > 79.9	1.47e4	1.92e4	1.000		3.89	3.87	9.60	9.66	96.6
12	12	PFDA	513 > 468.8	1.02e5	1.04e5	1.000		4.01	3.98	12.4	10.1	101.0
13	13	N-MeFOSAA	570.1 > 419	2.60e4	2.13e4	1.000		4.03	4.02	198	10.0	100.4
14	14	N-EtFOSAA	584.2 > 419	1.99e4	2.06e4	1.000		4.10	4.08	156	10.2	102.1
15	15	PFUnA	562.9 > 518.9	6.28e4	1.04e5	1.000		4.11	4.15	7.56	10.2	101.5
16	16	PFDS	598.9 > 98.7	6.91e3	1.04e5	1.000		4.22	4.20	0.832	11.8	117.5
17	17	PFDoA	612.9 > 318.8	7.83e3	1.01e4	1.000		4.34	4.31	9.65	12.0	119.9
18	18	PFTrDA	662.9 > 618.9	9.07e4	1.01e4	1.000		4.50	4.48	112	11.4	113.5
19	19	PFTeDA	712.9 > 668.8	6.05e4	7.04e4	1.000		4.68	4.66	10.7	10.2	102.2
20	20	13C3-PFBA	216.1 > 171.8	3.02e4	2.91e4	1.000	1.068	1.32	1.39	13.0	12.1	97.1
21	21	13C3-PFPeA	266 > 221.8	7.69e4	1.04e5	1.000	0.271	2.77	2.68	3.69	13.6	108.7
22	22	13C3-PFBS	302 > 98.8	1.00e4	1.04e5	1.000	0.033	2.96	2.92	0.482	14.6	116.5
23	23	13C2-PFHxA	315 > 269.8	3.60e4	1.04e5	1.000	0.335	3.19	3.16	1.73	5.15	103.0
24	24	13C4-PFHpA	367.2 > 321.8	8.27e4	1.04e5	1.000	0.369	3.45	3.43	3.96	10.7	86.0
25	25	18O2-PFHxS	403 > 102.6	8.04e3	1.60e4	1.000	0.460	3.56	3.50	6.28	13.6	109.1
26	26	13C2-PFOA	414.9 > 369.7	1.15e5	8.76e4	1.000	1.293	3.65	3.64	16.4	12.6	101.1
27	27	13C5-PFNA	468.2 > 422.9	9.55e4	9.05e4	1.000	0.986	3.83	3.81	13.2	13.4	107.0
28	28	13C8-PFOSA	506.1 > 77.7	1.10e4	9.19e4	1.000	0.132	3.84	3.82	1.50	11.3	90.4
29	29	13C8-PFOS	507 > 79.9	1.92e4	1.56e4	1.000	1.184	3.89	3.87	15.3	13.0	103.6
30	30	13C2-PFDA	515.1 > 469.9	1.04e5	1.04e5	1.000	0.998	4.01	3.98	12.4	12.5	99.8
31	31	d3-N-MeFOSAA	573.3 > 419	2.13e4	9.19e4	1.000	0.018	4.03	4.01	2.90	164	101.0
32	32	d5-N-EtFOSAA	589.3 > 419	2.06e4	9.19e4	1.000	0.018	4.12	4.08	2.81	158	97.2

70-130

50-150

CM 8/1/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-53.qld

Last Altered: Tuesday, August 01, 2017 10:36:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:36:54 Pacific Daylight Time

Name: 170731M1_53, Date: 31-Jul-2017, Time: 21:36:33, ID: ST170731M1-5 PFC CS3 17G2729, Description: PFC CS3 17G2729

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	33 13C2-PFUnA	565 > 519.8	1.04e5	9.19e4	1.000	1.129	4.17	4.15	14.1	12.5	100.1
34	34 13C2-PFDoA	615 > 569.7	1.01e4	9.19e4	1.000	0.116	4.34	4.31	1.38	11.9	95.1
35	35 13C2-PFTeDA	714.8 > 669.6	7.04e4	9.19e4	1.000	0.762	4.68	4.66	9.58	12.6	100.5
36	36 13C4-PFBA	217 > 171.8	2.91e4	2.91e4	1.000	1.000	1.32	1.39	12.5	12.5	100.0
37	37 13C5-PFHxA	318 > 272.9	1.04e5	1.04e5	1.000	1.000	3.19	3.16	5.00	5.00	100.0
38	38 13C3-PFHxS	401.9 > 79.9	1.60e4	1.60e4	1.000	1.000	3.56	3.50	12.5	12.5	100.0
39	39 13C8-PFOA	421.3 > 376	8.76e4	8.76e4	1.000	1.000	3.65	3.63	12.5	12.5	100.0
40	40 13C9-PFNA	472.2 > 426.9	9.05e4	9.05e4	1.000	1.000	3.83	3.81	12.5	12.5	100.0
41	41 13C4-PFOS	503 > 79.9	1.56e4	1.56e4	1.000	1.000	3.89	3.87	12.5	12.5	100.0
42	42 13C6-PFDA	519.1 > 473.7	1.04e5	1.04e5	1.000	1.000	4.01	3.98	12.5	12.5	100.0
43	43 13C7-PFUnA	570.1 > 524.8	9.19e4	9.19e4	1.000	1.000	4.17	4.15	12.5	12.5	100.0

50-150

Sample List Report — **MassLynx MassLynx V4.1 SCN945 SCN960**

Sample List: U:\Q4.PRO\SampleDB\170731M1.SPL
Last Modified: Monday, July 31, 2017 14:34:49 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:57:00 Pacific Daylight Time

Page Position (1, 1)

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2	170731M1_2	—	ST170731M1-1 PFC CS0 17G2826	PFC CS0 17G2826	1.0000	1:1	Analyte
3	170731M1_3	—	IPA	IPA	1.0000	1:48	Blank
4	170731M1_4	—	B7G0067-BS1 OPR 0.125	OPR	0.1250	1:3	Analyte
5	170731M1_5	—	IPA	IPA	1.0000	1:48	Blank
6	170731M1_6	—	B7G0067-BLK1 Method Blank 0.125	Method Blank	0.1250	1:4	Analyte
7	170731M1_7	—	1700855-01 TF5-EB-02 0.27357	TF5-EB-02	0.2736	1:5	Analyte
8	170731M1_8	—	1700855-02 TF5-MW-987 0.27423	TF5-MW-987	0.2742	1:6	Analyte
9	170731M1_9	—	1700855-03 TF5-MW-987D 0.27164	TF5-MW-987D	0.2716	1:7	Analyte
10	170731M1_10	—	B7G0067-MS1 Matrix Spike 0.27298	Matrix Spike	0.2730	1:8	Analyte
11	170731M1_11	—	B7G0067-MSD1 Matrix Spike Dup 0.2776	Matrix Spike Dup	0.2776	1:9	Analyte
12	170731M1_12	—	1700855-04 TF5-MW-987-D 0.26865	TF5-MW-987-D	0.2687	1:10	Analyte
13	170731M1_13	—	1700855-05 TF5-MW-991 0.2726	TF5-MW-991	0.2726	1:11	Analyte
14	170731M1_14	—	1700855-06 TF5-MW-991D 0.27278	TF5-MW-991D	0.2728	1:12	Analyte
15	170731M1_15	—	1700855-07 TF5-MW-993 0.26881	TF5-MW-993	0.2688	1:13	Analyte
16	170731M1_16	—	1700855-08 TF5-MW-993D 0.2612	TF5-MW-993D	0.2612	1:14	Analyte
17	170731M1_17	—	1700855-09 TF5-MW-994 0.25188	TF5-MW-994	0.2519	1:15	Analyte
18	170731M1_18	—	1700845-03@40X MW-27S-20170707 0.11824	MW-27S-20170707	0.1182	1:16	Analyte
19	170731M1_19	—	IPA	IPA	1.0000	1:48	Blank
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21	170731M1_21	—	IPA	IPA	1.0000	1:48	Blank
22	170731M1_22	—	1700871-01 EB03-20170712 0.12146	EB03-20170712	0.1215	1:17	Analyte
23	170731M1_23	—	1700871-02 5-GW-05_DGMW41B-20170712 0.11547	5-GW-05_DGMW41B-20170712	0.1155	1:18	Analyte
24	170731M1_24	—	1700871-03 18-GW-18BGM03E-20170712 0.11765	18-GW-18BGM03E-20170712	0.1177	1:19	Analyte
25	170731M1_25	—	1700871-04 24-GW-24IN03-20170712 0.11741	24-GW-24IN03-20170712	0.1174	1:20	Analyte
26	170731M1_26	—	1700871-05 DUP02-20170712 0.11807	DUP02-20170712	0.1181	1:21	Analyte
27	170731M1_27	—	1700871-06 24-GW-24EX13A-20170712 0.11851	24-GW-24EX13A-20170712	0.1185	1:22	Analyte
28	170731M1_28	—	1700871-07 24-GW-24MW15D-20170712 0.1193	24-GW-24MW15D-20170712	0.1193	1:23	Analyte
29	170731M1_29	—	1700871-08 16-GW-16_MW28-20170712 0.11899	16-GW-16_MW28-20170712	0.1190	1:24	Analyte
30	170731M1_30	—	1700871-09 16-GW-16_MW19-20170712 0.11913	16-GW-16_MW19-20170712	0.1191	1:25	Analyte
31	170731M1_31	—	1700871-10 EB04-20170713 0.11646	EB04-20170713	0.1165	1:26	Analyte
32	170731M1_32	—	1700871-11 16-GW-16_MW04-20170713 0.12043	16-GW-16_MW04-20170713	0.1204	1:27	Analyte
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35	170731M1_35	—	IPA	IPA	1.0000	1:48	Blank
36	170731M1_36	—	1700856-12RE1@5X MW-31S-20170711 0.11732	MW-31S-20170711	0.1173	1:28	Analyte
37	170731M1_37	—	1700935-01 RES29-BLK_20170726 0.11182	RES29-BLK_20170726	0.1118	1:29	Analyte
38	170731M1_38	—	1700935-04 RES29-GAC2_20170726 0.12639	RES29-GAC2_20170726	0.1264	1:30	Analyte
39	170731M1_39	—	IPA	IPA	1.0000	1:48	Blank
40	170731M1_40	—	ST170731M1-4 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte

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43	170731M1_43	—	IPA	IPA	1.0000	1:48	Blank
44	170731M1_44	—	B7G0122-BLK1 Method Blank 0.25	Method Blank	0.2500	1:32	Analyte
45	170731M1_45	—	1700891-06RE1 VEL FOAM 0.17113	VEL FOAM	0.1711	1:33	Analyte
46	170731M1_46	—	1700920-01 RCDM-MW-28S-20170719 0.1113	RCDM-MW-28S-20170719	0.1113	1:34	Analyte
47	170731M1_47	—	1700920-02 LF-MW-12S-20170719 0.11113	LF-MW-12S-20170719	0.1111	1:35	Analyte
48	170731M1_48	—	1700920-03 RCDM-MW-14S-20170720 0.11405	RCDM-MW-14S-20170720	0.1141	1:36	Analyte
49	170731M1_49	—	1700920-04 MH-DUP01-20170720 0.12177	MH-DUP01-20170720	0.1218	1:37	Analyte
50	170731M1_50	—	1700920-05 MH-A97-20170720 0.12086	MH-A97-20170720	0.1209	1:38	Analyte
51	170731M1_51	—	1700920-06 MH-H93-20170720 0.11357	MH-H93-20170720	0.1136	1:39	Analyte
52	170731M1_52	—	IPA	IPA	1.0000	1:48	Blank
53	170731M1_53	—	ST170731M1-5 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
54	170731M1_54	—	IPA	IPA	1.0000	1:48	Blank
55	170731M1_55	—	1700920-07 RCDM-BLANK-20170720 0.11872	RCDM-BLANK-20170720	0.1187	1:40	Analyte
56	170731M1_56	—	1700920-08 MH-C94-20170720 0.11568	MH-C94-20170720	0.1157	1:41	Analyte
57	170731M1_57	—	1700920-09 RCDM-MW-13S-20170719 0.11866	RCDM-MW-13S-20170719	0.1187	1:42	Analyte
58	170731M1_58	—	1700920-10 LF-MW-14S-20170720 0.11481	LF-MW-14S-20170720	0.1148	1:43	Analyte
59	170731M1_59	—	1700920-11 LF-MW-11BR-20170720 0.11664	LF-MW-11BR-20170720	0.1166	1:44	Analyte
60	170731M1_60	—	1700920-12 LF-MW-13S-20170719 0.11667	LF-MW-13S-20170719	0.1167	1:45	Analyte
61	170731M1_61	—	1700920-13 RCDM-MW-11BR-20170720 0.11813	RCDM-MW-11BR-20170720	0.1181	1:46	Analyte
62	170731M1_62	—	1700920-14 RCDM-MW-12S-20170719 0.11619	RCDM-MW-12S-20170719	0.1162	1:47	Analyte
63	170731M1_63	—	1700920-15 LF-MW-28S-20170719 0.11572	LF-MW-28S-20170719	0.1157	2:1	Analyte
64	170731M1_64	—	1700920-16 DUP-07-20170719 0.12023	DUP-07-20170719	0.1202	2:2	Analyte
65	170731M1_65	—	1700920-17 FRB04-20170719 0.11007	FRB04-20170719	0.1101	2:3	Analyte
66	170731M1_66	—	IPA	IPA	1.0000	1:48	Blank
67	170731M1_67	—	ST170731M1-6 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
68	170731M1_68	—	IPA	IPA	1.0000	1:48	Blank

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Dataset: U:\Q4.PRO\results\170731M1\170731M1-53.qld

Last Altered: Tuesday, August 01, 2017 10:36:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:36:54 Pacific Daylight Time

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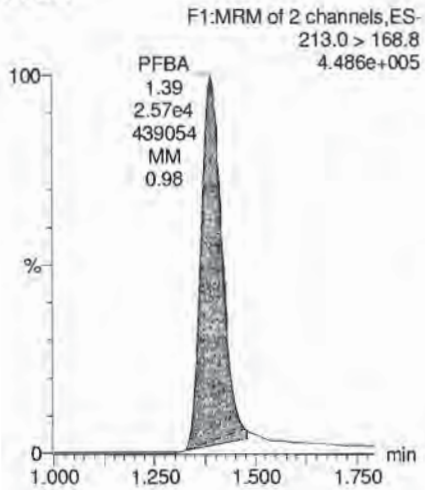
Name: 170731M1_53, Date: 31-Jul-2017, Time: 21:36:33, ID: ST170731M1-5 PFC CS3 17G2729, Description: PFC CS3 17G2729

PFBA



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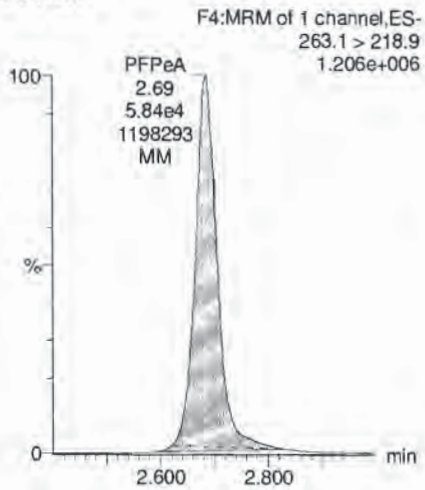

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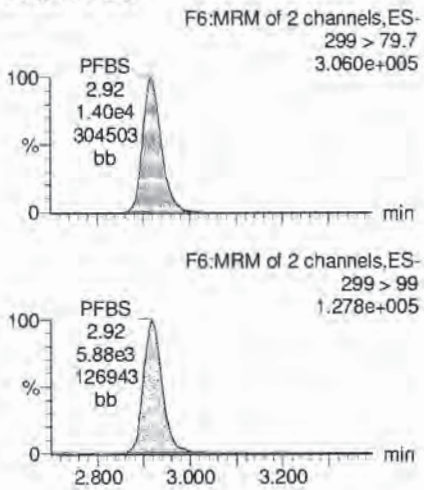
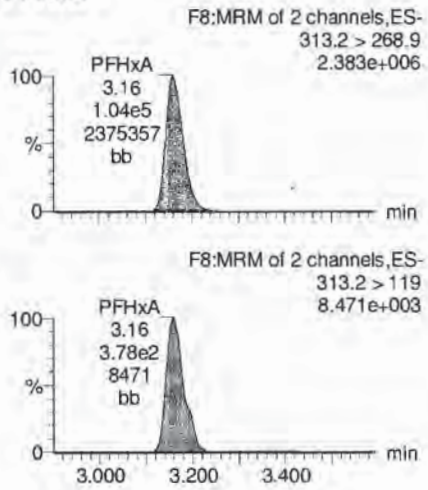
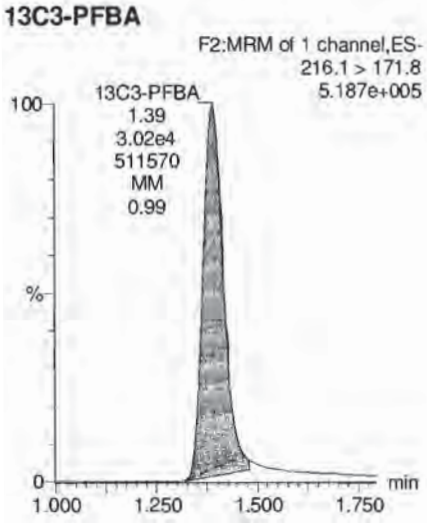


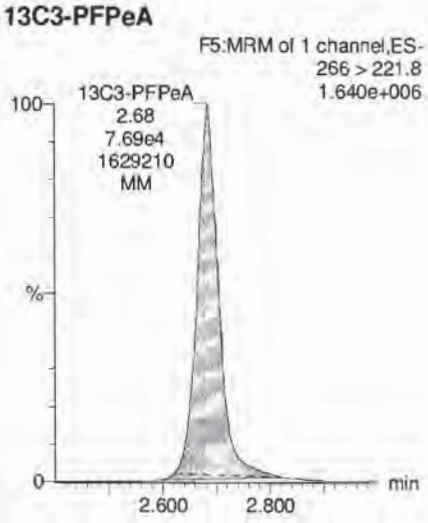
PFHxA



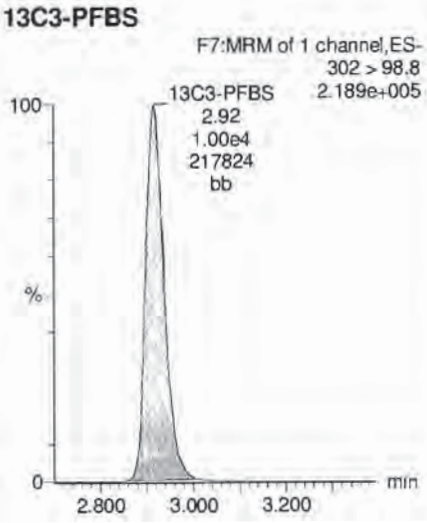
13C3-PFBA



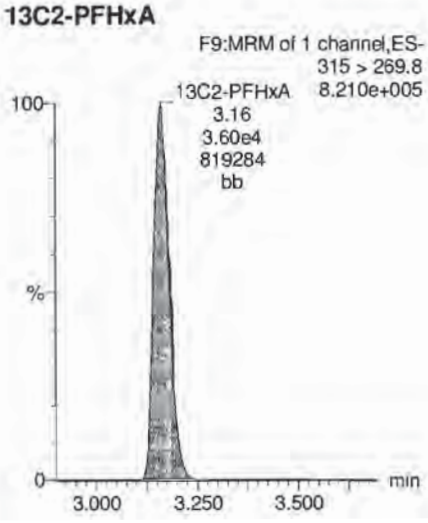
13C3-PFPeA



13C3-PFBS



13C2-PFHxA



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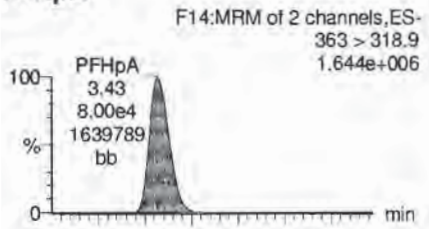
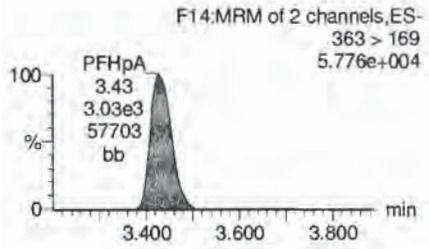
Printed: Tuesday, August 01, 2017 10:24:35 Pacific Daylight Time

Name: 170731M1_53, Date: 31-Jul-2017, Time: 21:36:33, ID: ST170731M1-5 PFC CS3 17G2729, Description: PFC CS3 17G2729

PFHpA





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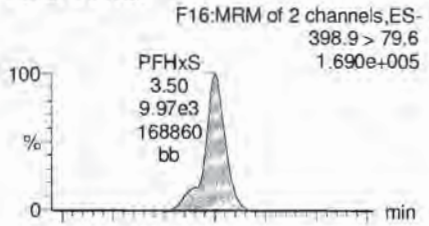
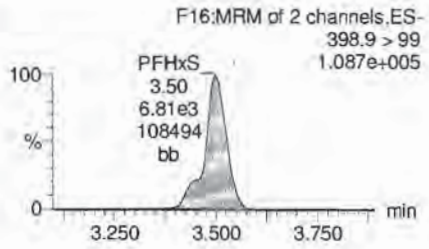
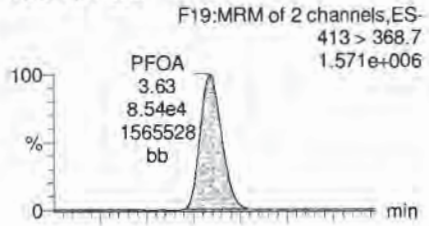
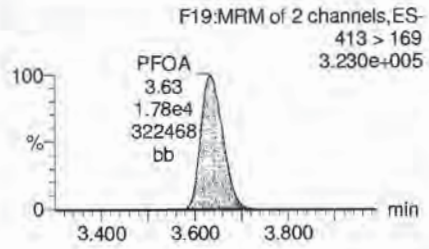


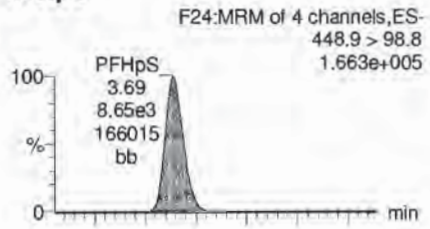


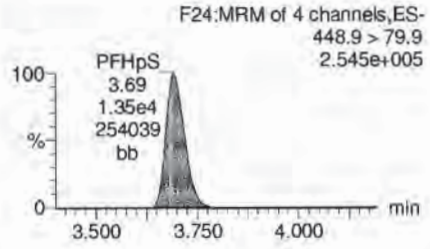
Total PFOA



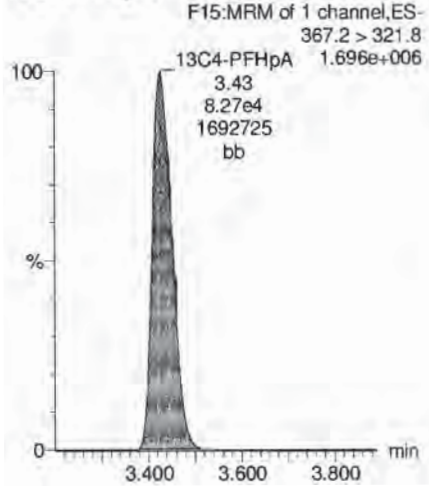


PFHpS

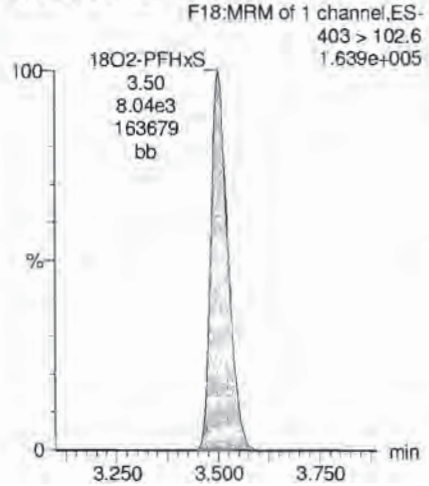




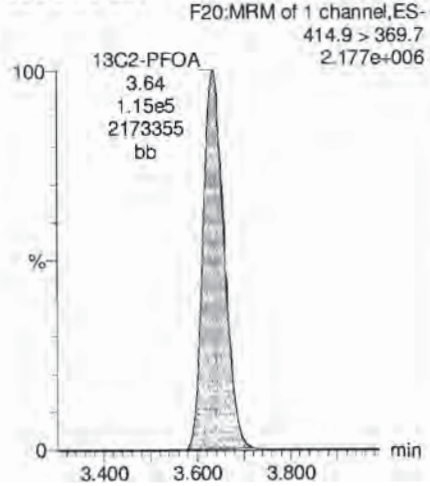
13C4-PFHpA



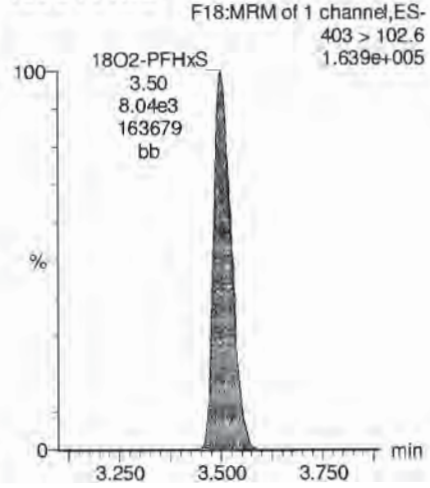
18O2-PFHxS



13C2-PFOA



18O2-PFHxS



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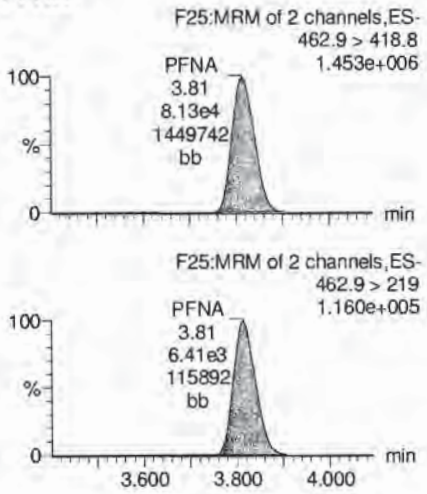
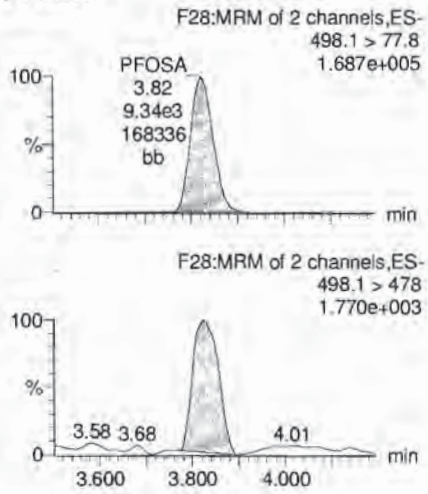
Printed: Tuesday, August 01, 2017 10:24:35 Pacific Daylight Time

Name: 170731M1_53, Date: 31-Jul-2017, Time: 21:36:33, ID: ST170731M1-5 PFC CS3 17G2729, Description: PFC CS3 17G2729

PFNA



PFOSA



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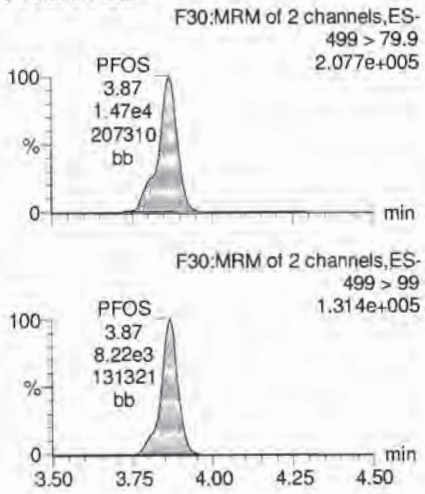

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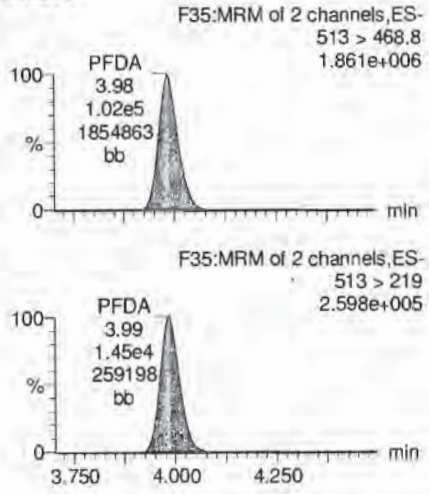
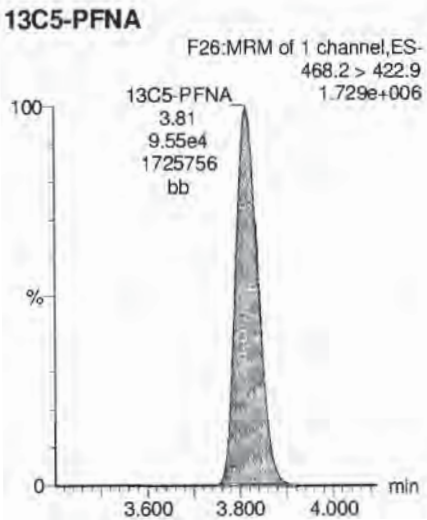
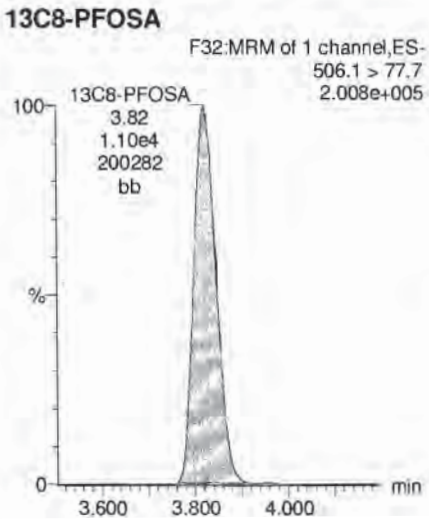


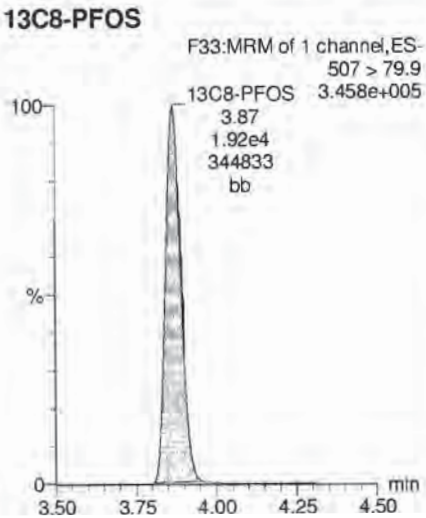
13C5-PFNA



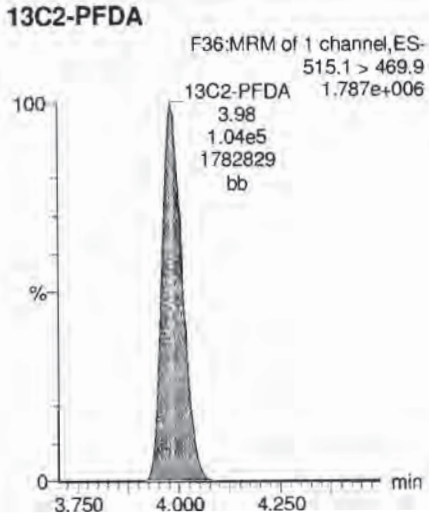
13C8-PFOSA



13C8-PFOS



13C2-PFDA



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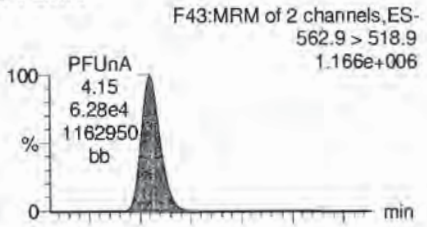
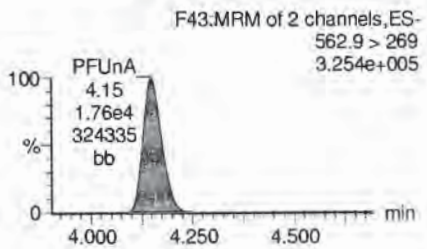
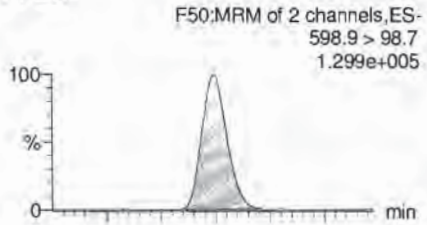
Name: 170731M1_53, Date: 31-Jul-2017, Time: 21:36:33, ID: ST170731M1-5 PFC CS3 17G2729, Description: PFC CS3 17G2729

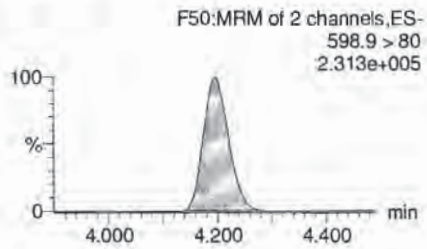
PFUnA



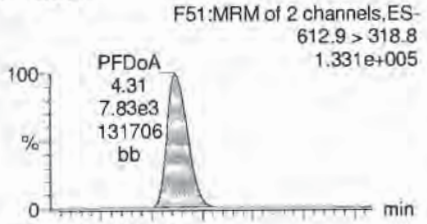


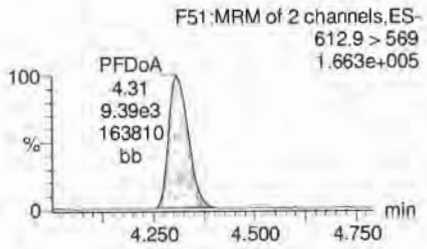
PFDS



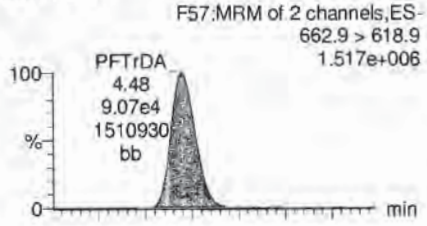


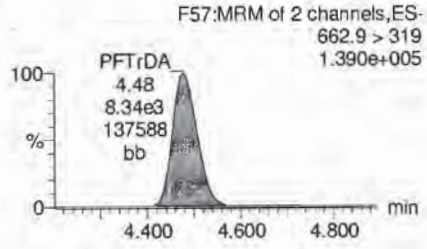
PFDoA



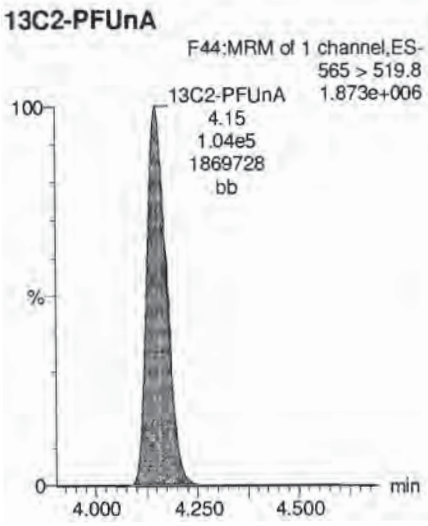


PFTrDA

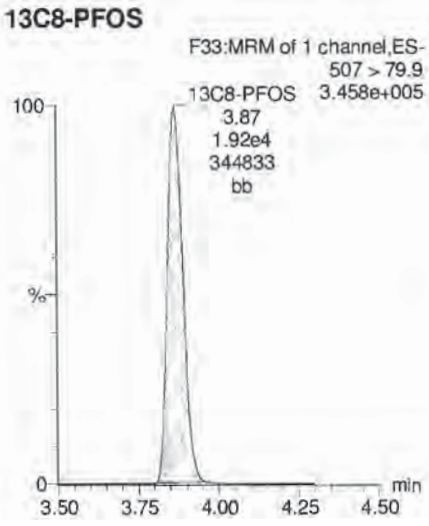




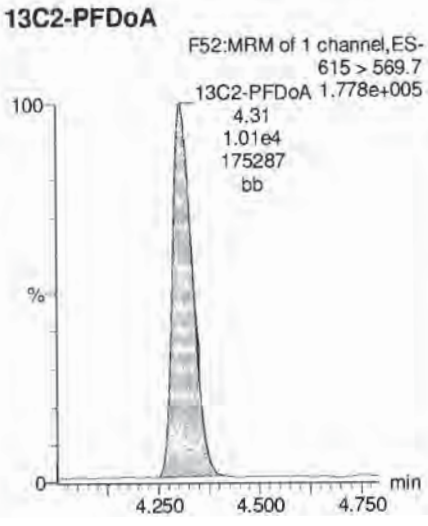
13C2-PFUnA



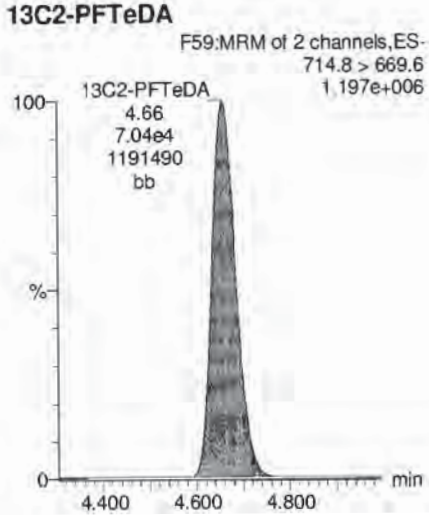
13C8-PFOS



13C2-PFDoA



13C2-PFTeDA



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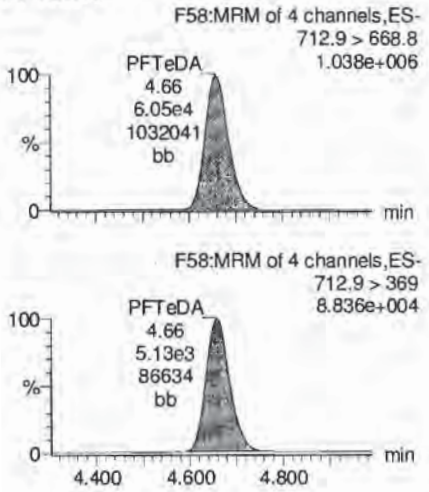
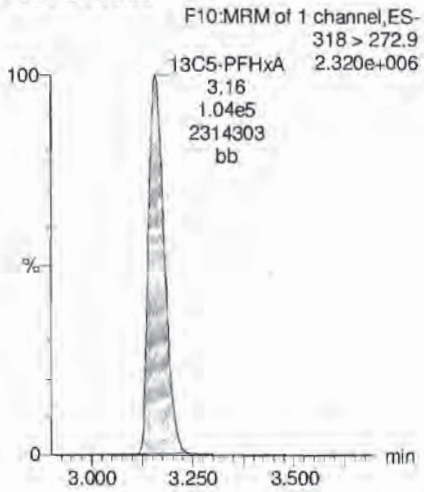
Printed: Tuesday, August 01, 2017 10:24:35 Pacific Daylight Time

Name: 170731M1_53, Date: 31-Jul-2017, Time: 21:36:33, ID: ST170731M1-5 PFC CS3 17G2729, Description: PFC CS3 17G2729

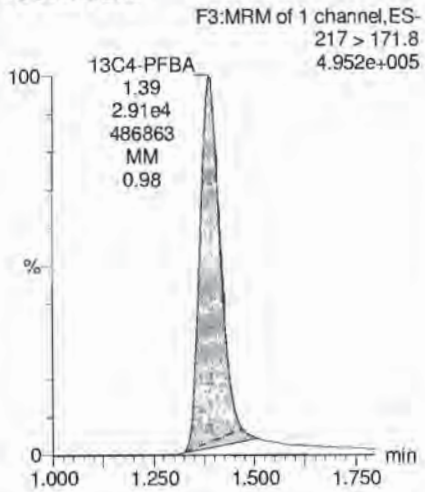
PFTeDA



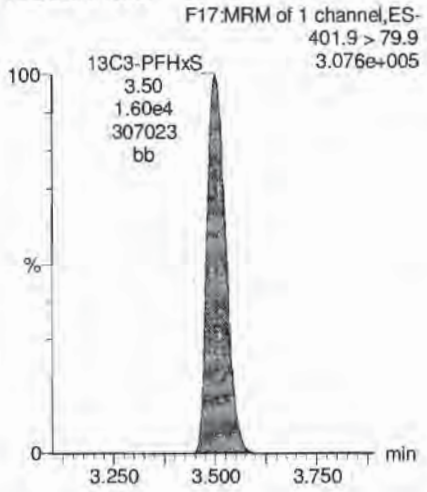
13C5-PFHxA



13C4-PFBA



13C3-PFHxS



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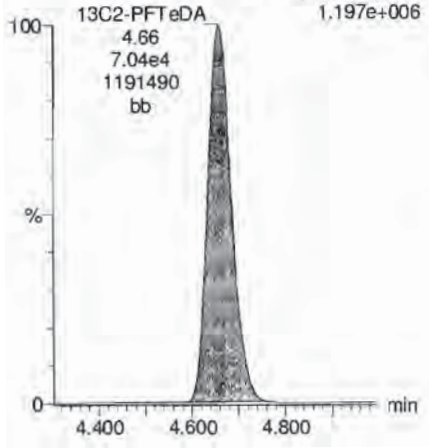
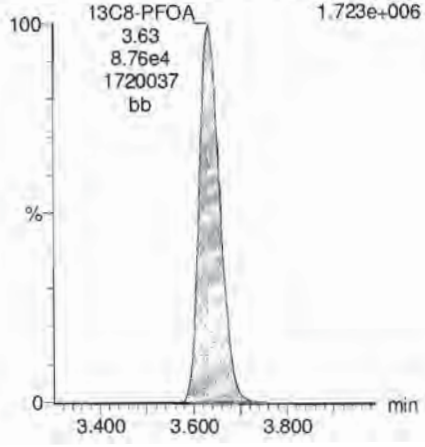
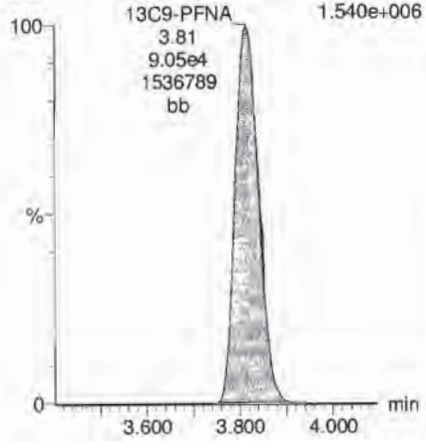


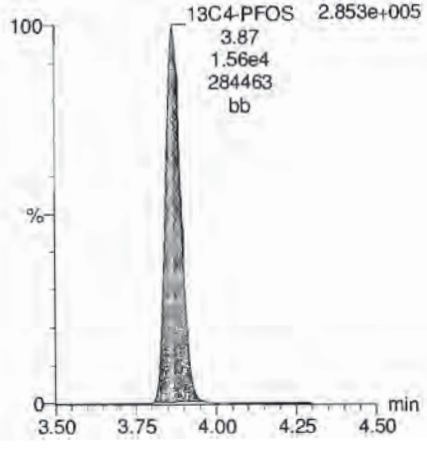
13C8-PFOA



13C9-PFNA



13C4-PFOS



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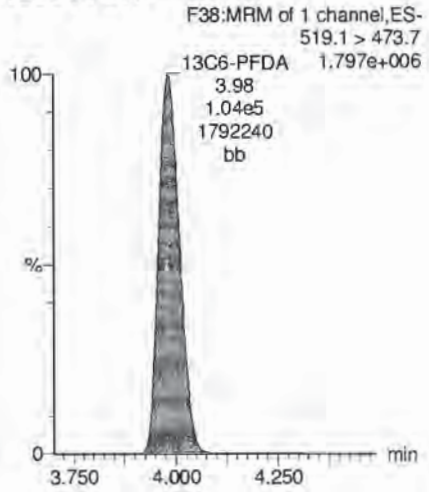
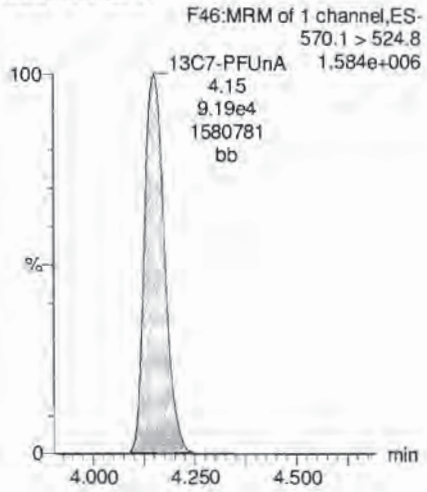
Name: 170731M1_53, Date: 31-Jul-2017, Time: 21:36:33, ID: ST170731M1-5 PFC CS3 17G2729, Description: PFC CS3 17G2729

13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M1\170731M1-67.qld

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Name: 170731M1_67, Date: 01-Aug-2017, Time: 00:07:36, ID: ST170731M1-6 PFC CS3 17G2729, Description: PFC CS3 17G2729

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBA	213.0 > 168.8	2.73e4	3.11e4	1.000		1.32	1.41	11.0	10.0	100.3
2	2 PFPeA	263.1 > 218.9	6.52e4	8.55e4	1.000		2.77	2.70	9.53	9.89	98.9
3	3 PFBS	299 > 79.7	1.60e4	1.13e4	1.000		2.96	2.93	17.8	9.56	95.6
4	4 PFHxA	313.2 > 268.9	1.09e5	3.88e4	1.000		3.19	3.16	14.1	9.97	99.7
5	5 PFHpA	363 > 318.9	8.66e4	8.57e4	1.000		3.45	3.43	12.6	10.7	106.6
6	6 PFHxS	398.9 > 79.6	1.05e4	7.99e3	1.000		3.56	3.50	16.5	9.86	98.6
7	7 PFOA	413 > 368.7	9.59e4	1.19e5	1.000		3.65	3.63	10.1	10.3	102.5
8	8 PFHpS	448.9 > 98.8	9.83e3	1.19e5	1.000		3.65	3.70	1.03	12.4	123.9
9	9 PFNA	462.9 > 418.8	9.19e4	1.06e5	1.000		3.83	3.82	10.8	10.1	100.6
10	10 PFOSA	498.1 > 77.8	9.96e3	1.18e4	1.000		3.84	3.83	10.5	9.54	95.4
11	11 PFOS	499 > 79.9	1.56e4	1.97e4	1.000		3.89	3.87	9.87	9.93	99.3
12	12 PFDA	513 > 468.8	1.09e5	9.71e4	1.000		4.01	3.99	14.0	11.5	114.9
13	13 N-MeFOSAA	570.1 > 419	2.67e4	2.32e4	1.000		4.03	4.02	187	9.48	94.8
14	14 N-EtFOSAA	584.2 > 419	2.17e4	2.37e4	1.000		4.10	4.09	149	9.71	97.1
15	15 PFUnA	562.9 > 518.9	6.70e4	1.09e5	1.000		4.11	4.15	7.66	10.3	102.9
16	16 PFDS	598.9 > 98.7	6.82e3	1.09e5	1.000		4.22	4.20	0.781	11.0	110.2
17	17 PFDoA	612.9 > 318.8	8.23e3	1.13e4	1.000		4.34	4.31	9.09	11.3	112.8
18	18 PFTrDA	662.9 > 618.9	9.40e4	1.13e4	1.000		4.50	4.48	104	10.5	105.3
19	19 PFTeDA	712.9 > 668.8	6.16e4	6.95e4	1.000		4.68	4.66	11.1	10.6	105.5
20	20 13C3-PFBA	216.1 > 171.8	3.11e4	3.11e4	1.000	1.068	1.32	1.41	12.5	11.7	93.9
21	21 13C3-PFPeA	266 > 221.8	8.55e4	1.11e5	1.000	0.271	2.77	2.70	3.84	14.1	113.1
22	22 13C3-PFBS	302 > 98.8	1.13e4	1.11e5	1.000	0.033	2.96	2.92	0.505	15.3	122.2
23	23 13C2-PFHxA	315 > 269.8	3.88e4	1.11e5	1.000	0.335	3.19	3.16	1.74	5.19	103.8
24	24 13C4-PFHpA	367.2 > 321.8	8.57e4	1.11e5	1.000	0.369	3.45	3.43	3.85	10.4	83.4
25	25 18O2-PFHxS	403 > 102.6	7.99e3	1.66e4	1.000	0.460	3.56	3.50	6.00	13.0	104.3
26	26 13C2-PFOA	414.9 > 369.7	1.19e5	9.07e4	1.000	1.293	3.65	3.64	16.4	12.7	101.3
27	27 13C5-PFNA	468.2 > 422.9	1.06e5	1.03e5	1.000	0.986	3.83	3.82	12.9	13.0	104.3
28	28 13C8-PFOSA	506.1 > 77.7	1.18e4	9.85e4	1.000	0.132	3.84	3.82	1.50	11.3	90.7
29	29 13C8-PFOS	507 > 79.9	1.97e4	1.64e4	1.000	1.184	3.89	3.87	15.0	12.7	101.6
30	30 13C2-PFDA	515.1 > 469.9	9.71e4	9.76e4	1.000	0.998	4.01	3.99	12.4	12.5	99.7
31	31 d3-N-MeFOSAA	573.3 > 419	2.32e4	9.85e4	1.000	0.018	4.03	4.02	2.94	166	102.3
32	32 d5-N-EtFOSAA	589.3 > 419	2.37e4	9.85e4	1.000	0.018	4.12	4.08	3.00	169	103.9

70-130

50-150

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Dataset: U:\Q4.PRO\results\170731M1\170731M1-67.qld

Last Altered: Tuesday, August 01, 2017 10:37:28 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:37:35 Pacific Daylight Time

Name: 170731M1_67, Date: 01-Aug-2017, Time: 00:07:36, ID: ST170731M1-6 PFC CS3 17G2729, Description: PFC CS3 17G2729

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	33 13C2-PFUnA	565 > 519.8	1.09e5	9.85e4	1.000	1.129	4.17	4.15	13.9	12.3	98.2
34	34 13C2-PFDoA	615 > 569.7	1.13e4	9.85e4	1.000	0.116	4.34	4.31	1.44	12.4	99.0
35	35 13C2-PFTeDA	714.8 > 669.6	6.95e4	9.85e4	1.000	0.762	4.68	4.66	8.82	11.6	92.6
36	36 13C4-PFBA	217 > 171.8	3.11e4	3.11e4	1.000	1.000	1.32	1.40	12.5	12.5	100.0
37	37 13C5-PFHxA	318 > 272.9	1.11e5	1.11e5	1.000	1.000	3.19	3.16	5.00	5.00	100.0
38	38 13C3-PFHxS	401.9 > 79.9	1.66e4	1.66e4	1.000	1.000	3.56	3.50	12.5	12.5	100.0
39	39 13C8-PFOA	421.3 > 376	9.07e4	9.07e4	1.000	1.000	3.65	3.64	12.5	12.5	100.0
40	40 13C9-PFNA	472.2 > 426.9	1.03e5	1.03e5	1.000	1.000	3.83	3.82	12.5	12.5	100.0
41	41 13C4-PFOS	503 > 79.9	1.64e4	1.64e4	1.000	1.000	3.89	3.87	12.5	12.5	100.0
42	42 13C6-PFDA	519.1 > 473.7	9.76e4	9.76e4	1.000	1.000	4.01	3.99	12.5	12.5	100.0
43	43 13C7-PFUnA	570.1 > 524.8	9.85e4	9.85e4	1.000	1.000	4.17	4.15	12.5	12.5	100.0

50-150

Sample List Report — **MassLynx MassLynx V4.1 SCN945 SCN960**

Sample List: U:\Q4.PRO\SampleDB\170731M1.SPL
Last Modified: Monday, July 31, 2017 14:34:49 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:57:00 Pacific Daylight Time

Page Position (1, 1)

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2	170731M1_2	—	ST170731M1-1 PFC CS0 17G2826	PFC CS0 17G2826	1.0000	1:1	Analyte
3	170731M1_3	—	IPA	IPA	1.0000	1:48	Blank
4	170731M1_4	—	B7G0067-BS1 OPR 0.125	OPR	0.1250	1:3	Analyte
5	170731M1_5	—	IPA	IPA	1.0000	1:48	Blank
6	170731M1_6	—	B7G0067-BLK1 Method Blank 0.125	Method Blank	0.1250	1:4	Analyte
7	170731M1_7	—	1700855-01 TF5-EB-02 0.27357	TF5-EB-02	0.2736	1:5	Analyte
8	170731M1_8	—	1700855-02 TF5-MW-987 0.27423	TF5-MW-987	0.2742	1:6	Analyte
9	170731M1_9	—	1700855-03 TF5-MW-987D 0.27164	TF5-MW-987D	0.2716	1:7	Analyte
10	170731M1_10	—	B7G0067-MS1 Matrix Spike 0.27298	Matrix Spike	0.2730	1:8	Analyte
11	170731M1_11	—	B7G0067-MSD1 Matrix Spike Dup 0.2776	Matrix Spike Dup	0.2776	1:9	Analyte
12	170731M1_12	—	1700855-04 TF5-MW-987-D 0.26865	TF5-MW-987-D	0.2687	1:10	Analyte
13	170731M1_13	—	1700855-05 TF5-MW-991 0.2726	TF5-MW-991	0.2726	1:11	Analyte
14	170731M1_14	—	1700855-06 TF5-MW-991D 0.27278	TF5-MW-991D	0.2728	1:12	Analyte
15	170731M1_15	—	1700855-07 TF5-MW-993 0.26881	TF5-MW-993	0.2688	1:13	Analyte
16	170731M1_16	—	1700855-08 TF5-MW-993D 0.2612	TF5-MW-993D	0.2612	1:14	Analyte
17	170731M1_17	—	1700855-09 TF5-MW-994 0.25188	TF5-MW-994	0.2519	1:15	Analyte
18	170731M1_18	—	1700845-03@40X MW-27S-20170707 0.11824	MW-27S-20170707	0.1182	1:16	Analyte
19	170731M1_19	—	IPA	IPA	1.0000	1:48	Blank
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22	170731M1_22	—	1700871-01 EB03-20170712 0.12146	EB03-20170712	0.1215	1:17	Analyte
23	170731M1_23	—	1700871-02 5-GW-05_DGMW41B-20170712 0.11547	5-GW-05_DGMW41B-20170712	0.1155	1:18	Analyte
24	170731M1_24	—	1700871-03 18-GW-18BGM03E-20170712 0.11765	18-GW-18BGM03E-20170712	0.1177	1:19	Analyte
25	170731M1_25	—	1700871-04 24-GW-24IN03-20170712 0.11741	24-GW-24IN03-20170712	0.1174	1:20	Analyte
26	170731M1_26	—	1700871-05 DUP02-20170712 0.11807	DUP02-20170712	0.1181	1:21	Analyte
27	170731M1_27	—	1700871-06 24-GW-24EX13A-20170712 0.11851	24-GW-24EX13A-20170712	0.1185	1:22	Analyte
28	170731M1_28	—	1700871-07 24-GW-24MW15D-20170712 0.1193	24-GW-24MW15D-20170712	0.1193	1:23	Analyte
29	170731M1_29	—	1700871-08 16-GW-16_MW28-20170712 0.11899	16-GW-16_MW28-20170712	0.1190	1:24	Analyte
30	170731M1_30	—	1700871-09 16-GW-16_MW19-20170712 0.11913	16-GW-16_MW19-20170712	0.1191	1:25	Analyte
31	170731M1_31	—	1700871-10 EB04-20170713 0.11646	EB04-20170713	0.1165	1:26	Analyte
32	170731M1_32	—	1700871-11 16-GW-16_MW04-20170713 0.12043	16-GW-16_MW04-20170713	0.1204	1:27	Analyte
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35	170731M1_35	—	IPA	IPA	1.0000	1:48	Blank
36	170731M1_36	—	1700856-12RE1@5X MW-31S-20170711 0.11732	MW-31S-20170711	0.1173	1:28	Analyte
37	170731M1_37	—	1700935-01 RES29-BLK_20170726 0.11182	RES29-BLK_20170726	0.1118	1:29	Analyte
38	170731M1_38	—	1700935-04 RES29-GAC2_20170726 0.12639	RES29-GAC2_20170726	0.1264	1:30	Analyte
39	170731M1_39	—	IPA	IPA	1.0000	1:48	Blank
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43	170731M1_43	—	IPA	IPA	1.0000	1:48	Blank
44	170731M1_44	—	B7G0122-BLK1 Method Blank 0.25	Method Blank	0.2500	1:32	Analyte
45	170731M1_45	—	1700891-06RE1 VEL FOAM 0.17113	VEL FOAM	0.1711	1:33	Analyte
46	170731M1_46	—	1700920-01 RCDM-MW-28S-20170719 0.1113	RCDM-MW-28S-20170719	0.1113	1:34	Analyte
47	170731M1_47	—	1700920-02 LF-MW-12S-20170719 0.11113	LF-MW-12S-20170719	0.1111	1:35	Analyte
48	170731M1_48	—	1700920-03 RCDM-MW-14S-20170720 0.11405	RCDM-MW-14S-20170720	0.1141	1:36	Analyte
49	170731M1_49	—	1700920-04 MH-DUP01-20170720 0.12177	MH-DUP01-20170720	0.1218	1:37	Analyte
50	170731M1_50	—	1700920-05 MH-A97-20170720 0.12086	MH-A97-20170720	0.1209	1:38	Analyte
51	170731M1_51	—	1700920-06 MH-H93-20170720 0.11357	MH-H93-20170720	0.1136	1:39	Analyte
52	170731M1_52	—	IPA	IPA	1.0000	1:48	Blank
53	170731M1_53	—	ST170731M1-5 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
54	170731M1_54	—	IPA	IPA	1.0000	1:48	Blank
55	170731M1_55	—	1700920-07 RCDM-BLANK-20170720 0.11872	RCDM-BLANK-20170720	0.1187	1:40	Analyte
56	170731M1_56	—	1700920-08 MH-C94-20170720 0.11568	MH-C94-20170720	0.1157	1:41	Analyte
57	170731M1_57	—	1700920-09 RCDM-MW-13S-20170719 0.11866	RCDM-MW-13S-20170719	0.1187	1:42	Analyte
58	170731M1_58	—	1700920-10 LF-MW-14S-20170720 0.11481	LF-MW-14S-20170720	0.1148	1:43	Analyte
59	170731M1_59	—	1700920-11 LF-MW-11BR-20170720 0.11664	LF-MW-11BR-20170720	0.1166	1:44	Analyte
60	170731M1_60	—	1700920-12 LF-MW-13S-20170719 0.11667	LF-MW-13S-20170719	0.1167	1:45	Analyte
61	170731M1_61	—	1700920-13 RCDM-MW-11BR-20170720 0.11813	RCDM-MW-11BR-20170720	0.1181	1:46	Analyte
62	170731M1_62	—	1700920-14 RCDM-MW-12S-20170719 0.11619	RCDM-MW-12S-20170719	0.1162	1:47	Analyte
63	170731M1_63	—	1700920-15 LF-MW-28S-20170719 0.11572	LF-MW-28S-20170719	0.1157	2:1	Analyte
64	170731M1_64	—	1700920-16 DUP-07-20170719 0.12023	DUP-07-20170719	0.1202	2:2	Analyte
65	170731M1_65	—	1700920-17 FRB04-20170719 0.11007	FRB04-20170719	0.1101	2:3	Analyte
66	170731M1_66	—	IPA	IPA	1.0000	1:48	Blank
67	170731M1_67	—	ST170731M1-6 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
68	170731M1_68	—	IPA	IPA	1.0000	1:48	Blank

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M1\170731M1-67.qld

Last Altered: Tuesday, August 01, 2017 10:37:28 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:37:35 Pacific Daylight Time

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Name: 170731M1_67, Date: 01-Aug-2017, Time: 00:07:36, ID: ST170731M1-6 PFC CS3 17G2729, Description: PFC CS3 17G2729

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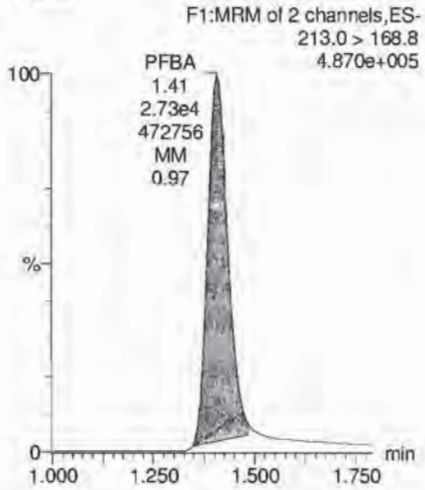

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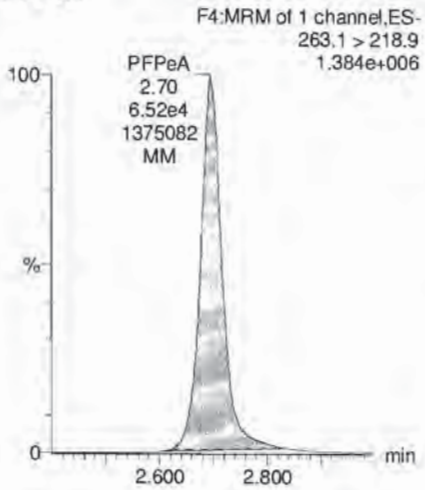

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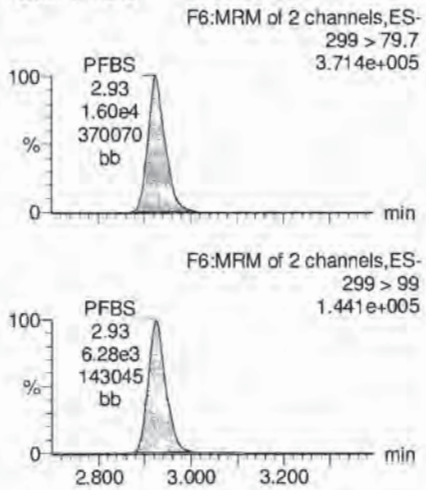

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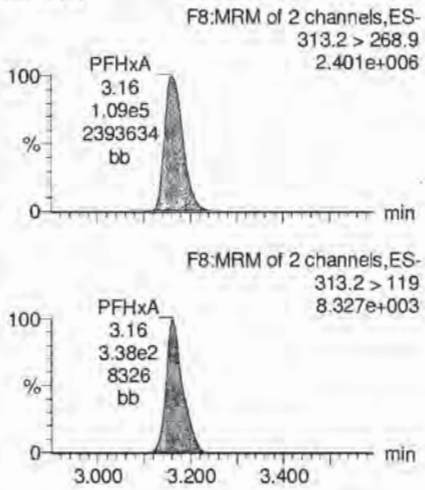

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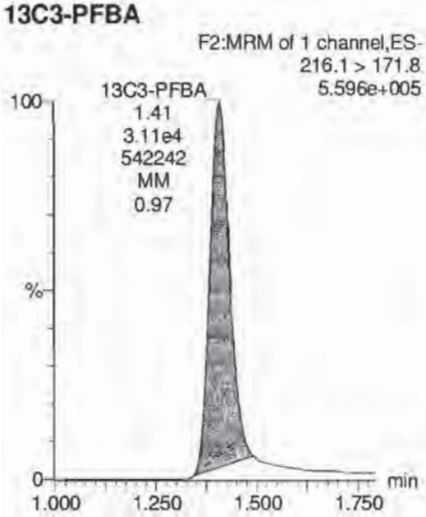

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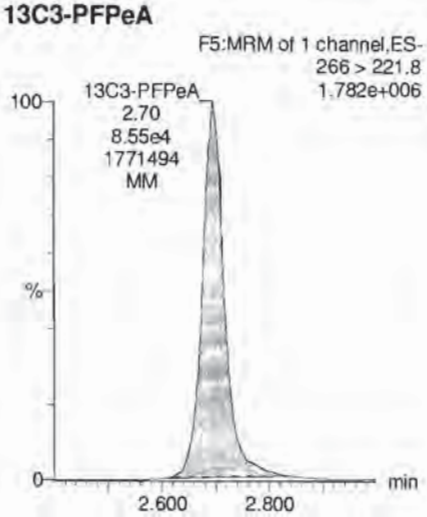

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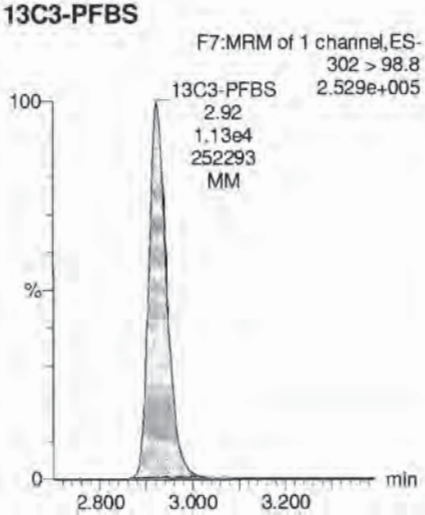

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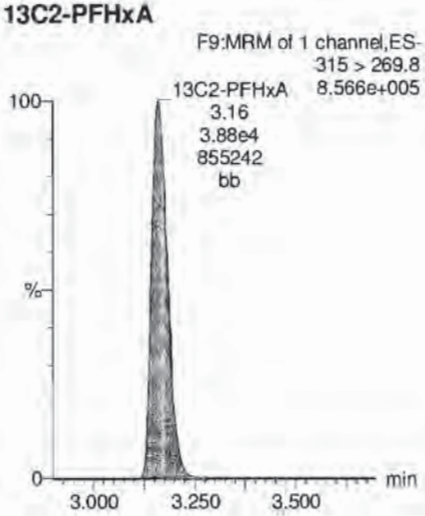

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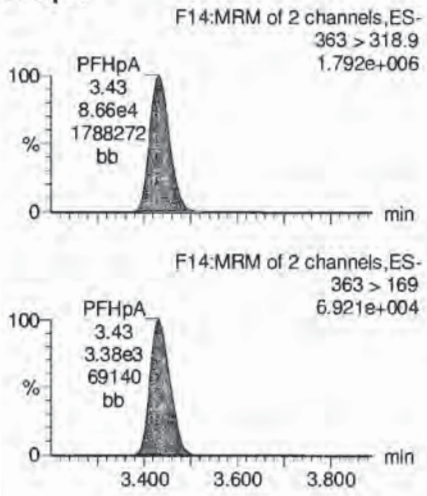
Last Altered: Tuesday, August 01, 2017 10:25:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:37 Pacific Daylight Time

Name: 170731M1_67, Date: 01-Aug-2017, Time: 00:07:36, ID: ST170731M1-6 PFC CS3 17G2729, Description: PFC CS3 17G2729

PFHpA



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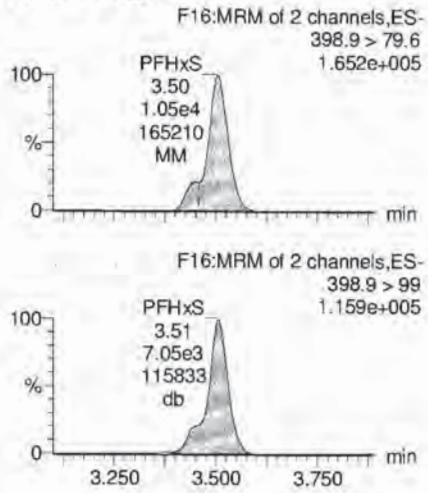

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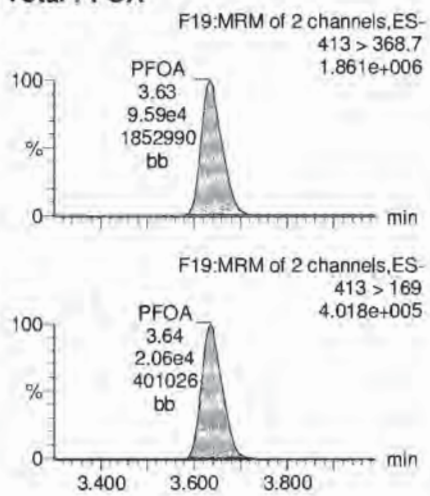

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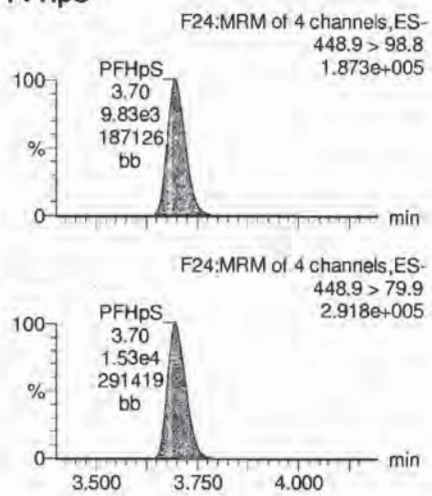

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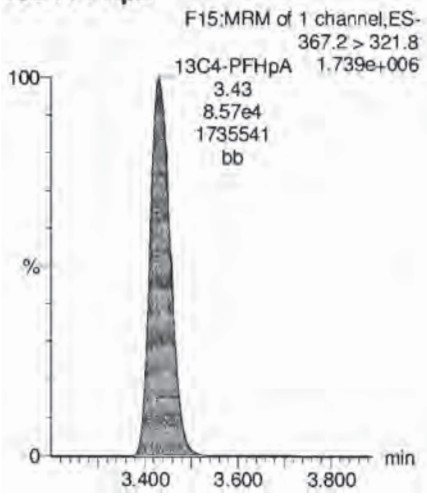

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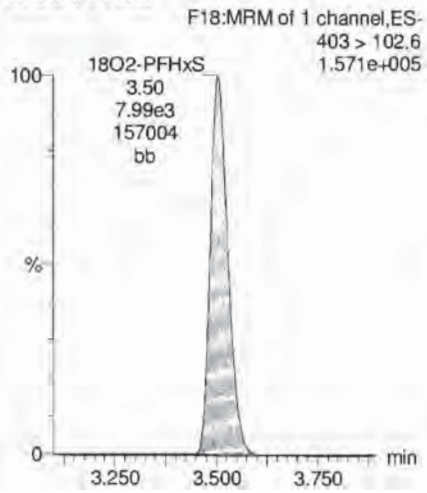
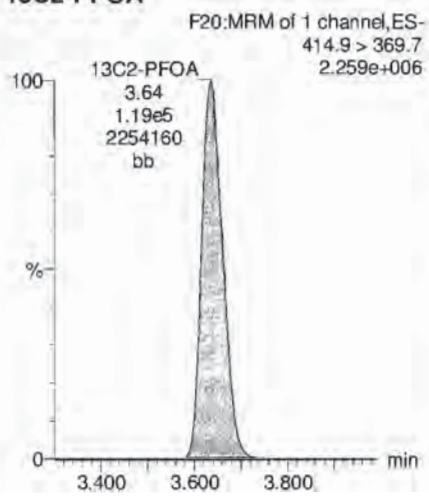
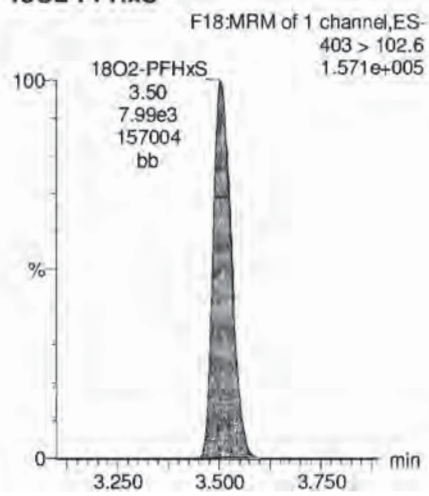


13C2-PFOA



18O2-PFHxS

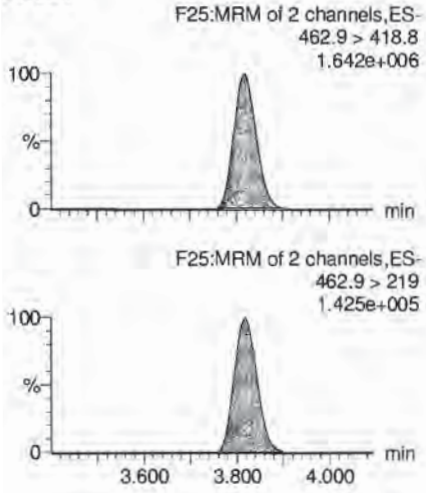


Dataset: U:\Q4.PRO\results\170731M1\170731M1-67.qld

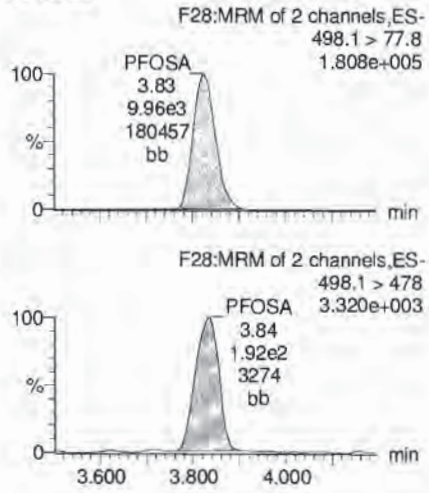
Last Altered: Tuesday, August 01, 2017 10:25:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:37 Pacific Daylight Time

Name: 170731M1_67, Date: 01-Aug-2017, Time: 00:07:36, ID: ST170731M1-6 PFC CS3 17G2729, Description: PFC CS3 17G2729

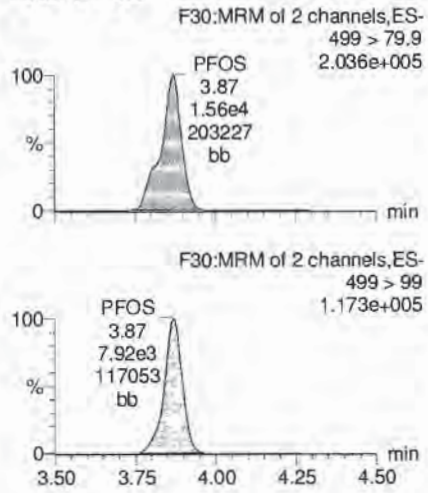
PFNA



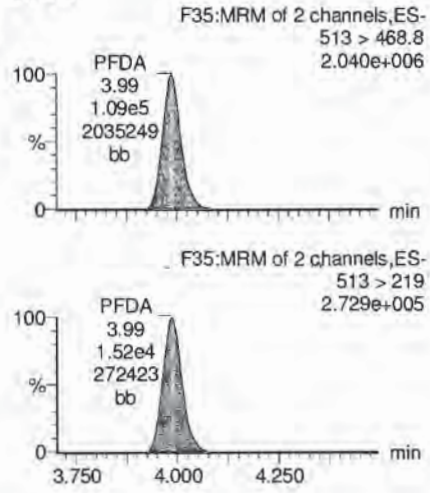
PFOSA



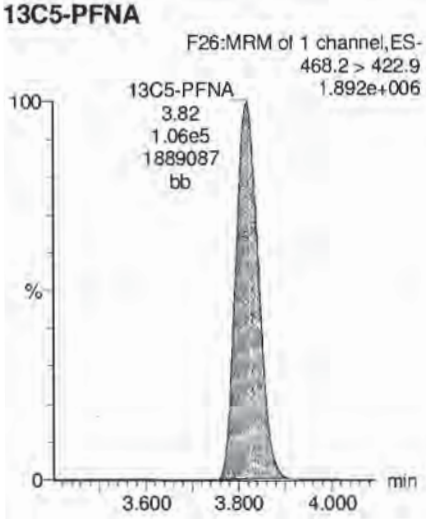
Total PFOS



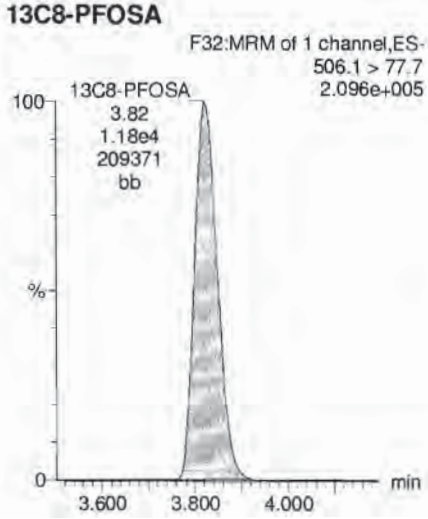
PFDA



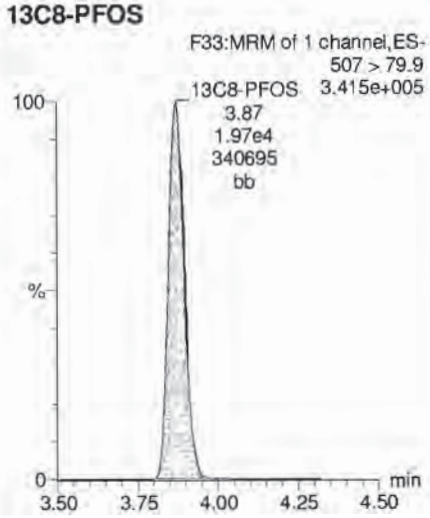
13C5-PFNA



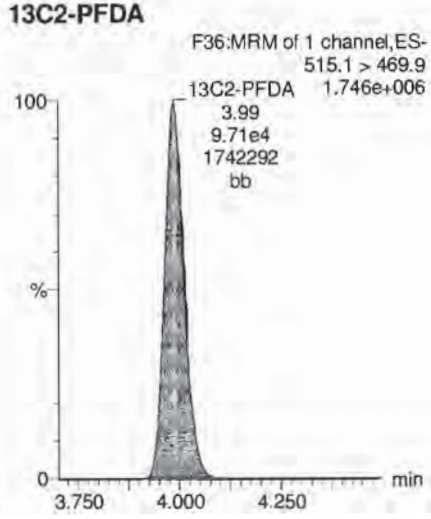
13C8-PFOSA



13C8-PFOS



13C2-PFDA



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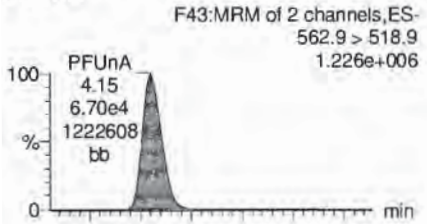
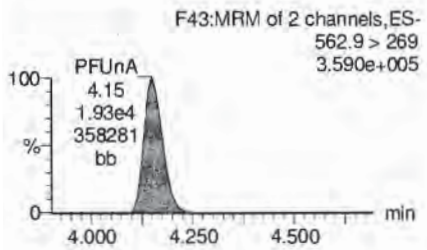
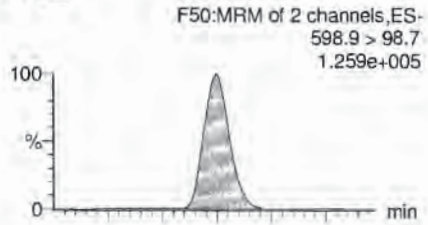
Name: 170731M1_67, Date: 01-Aug-2017, Time: 00:07:36, ID: ST170731M1-6 PFC CS3 17G2729, Description: PFC CS3 17G2729

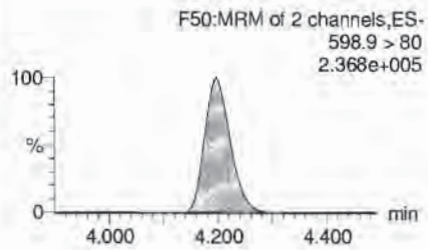
PFUnA



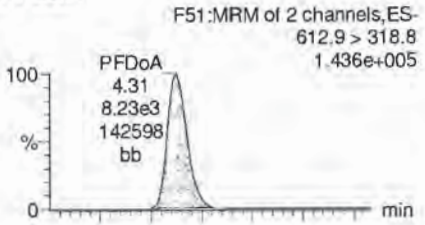


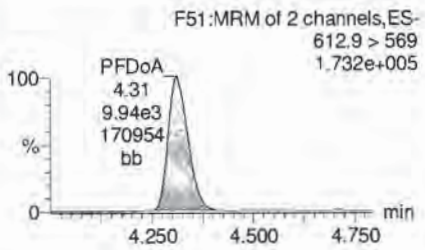
PFDS



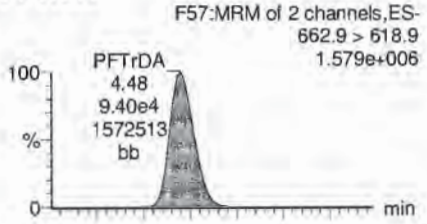


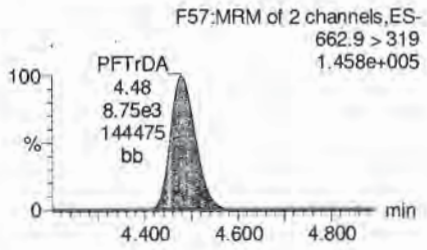
PFDoA



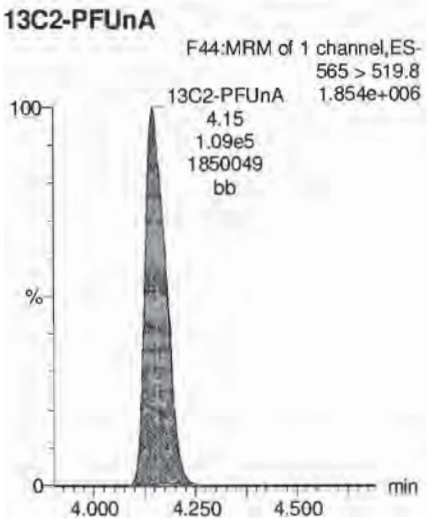


PFTrDA

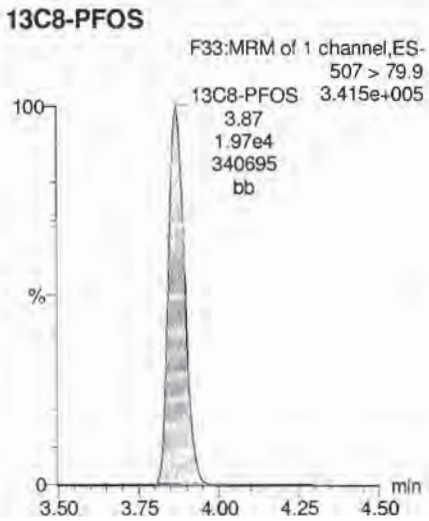




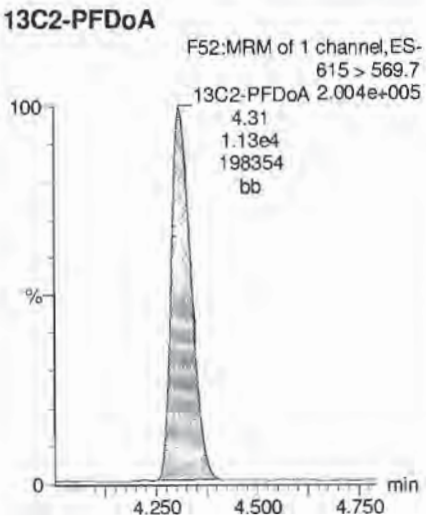
13C2-PFUnA



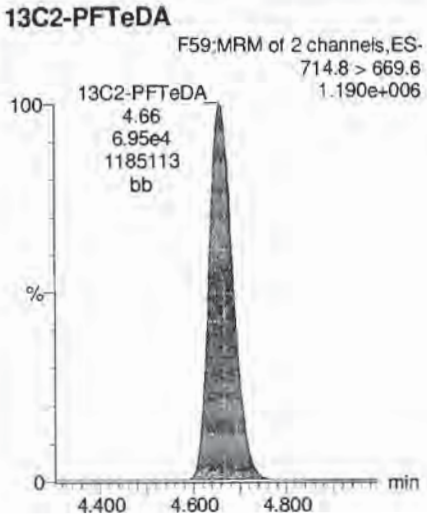
13C8-PFOS



13C2-PFDoA



13C2-PFTeDA



Dataset: U:\Q4.PRO\results\170731M1\170731M1-67.qld

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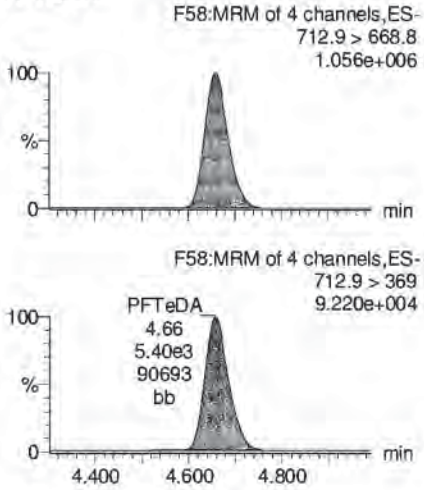
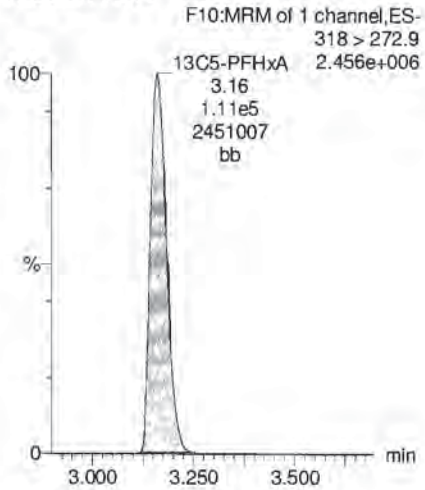
Name: 170731M1_67, Date: 01-Aug-2017, Time: 00:07:36, ID: ST170731M1-6 PFC CS3 17G2729, Description: PFC CS3 17G2729

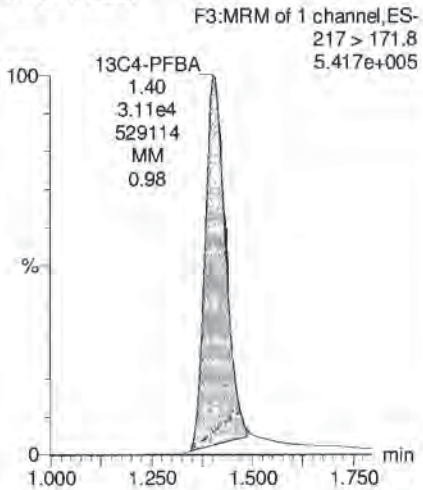
PFTeDA



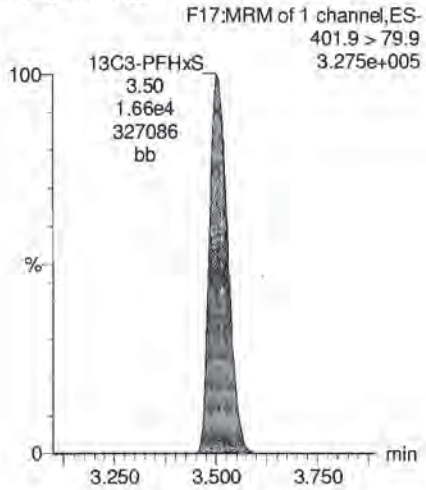
13C5-PFHxA



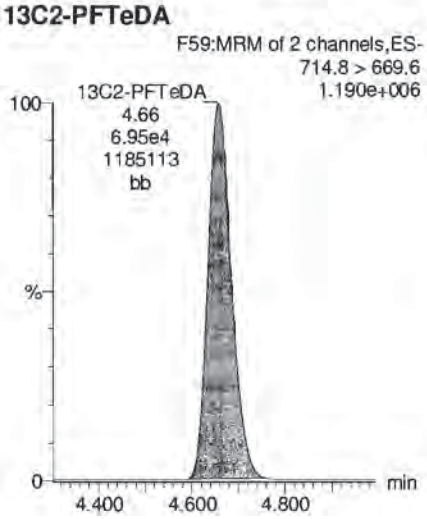
13C4-PFBA



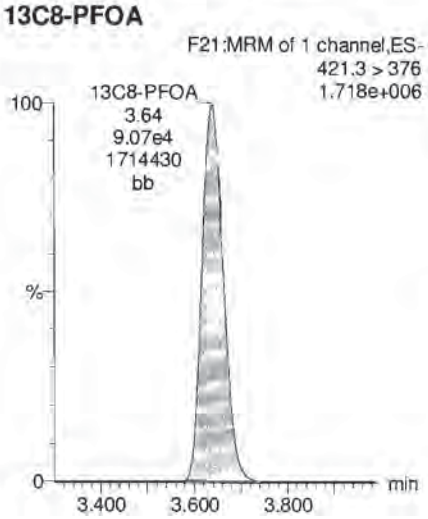
13C3-PFHxS



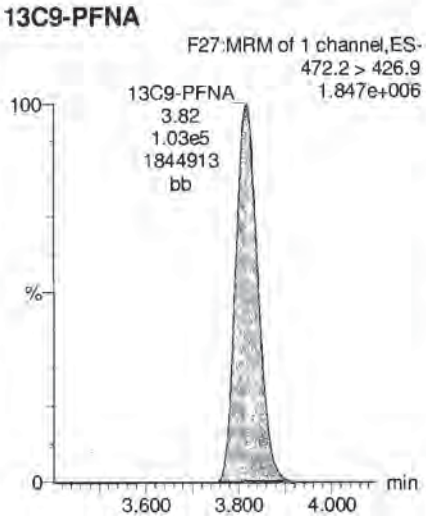
13C2-PFTeDA



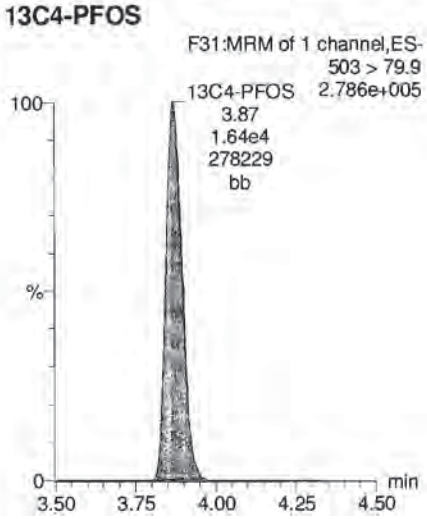
13C8-PFOA



13C9-PFNA



13C4-PFOS

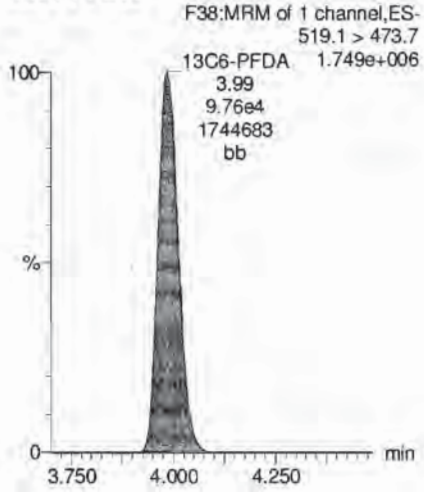


Dataset: U:\Q4.PRO\results\170731M1\170731M1-67.qld

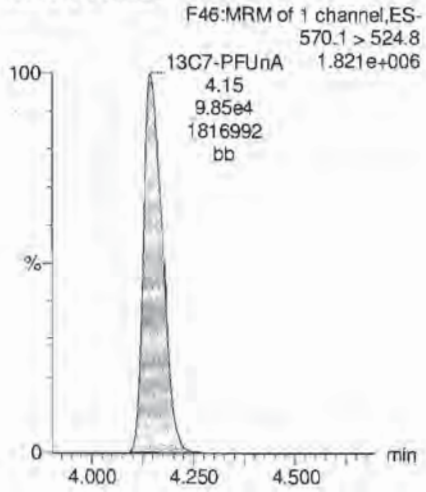
Last Altered: Tuesday, August 01, 2017 10:25:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:37 Pacific Daylight Time

Name: 170731M1_67, Date: 01-Aug-2017, Time: 00:07:36, ID: ST170731M1-6 PFC CS3 17G2729, Description: PFC CS3 17G2729

13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, August 02, 2017 08:33:03 Pacific Daylight Time
Printed: Wednesday, August 02, 2017 08:46:26 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_RS=only.mdb 28 Jul 2017 09:34:01
Calibration: 02 Aug 2017 08:33:03

Name: 170801M1_23, Date: 01-Aug-2017, Time: 13:42:24, ID: ST170801M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	4.00e4	100.0	NO
2	2	13C3-PFHxS	ST170...	7.59e3	100.0	NO
3	3	13C8-PFOA	ST170...	5.57e4	100.0	NO
4	4	13C9-PFNA	ST170...	5.57e4	100.0	NO
5	5	13C4-PFOS	ST170...	9.57e3	100.0	NO
6	6	13C6-PFDA	ST170...	6.06e4	100.0	NO
7	7	13C7-PFUnA	ST170...	5.76e4	100.0	NO

Name: 170801M1_24, Date: 01-Aug-2017, Time: 13:53:02, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	IPA			NO
2	2	13C3-PFHxS	IPA			NO
3	3	13C8-PFOA	IPA			NO
4	4	13C9-PFNA	IPA			NO
5	5	13C4-PFOS	IPA			NO
6	6	13C6-PFDA	IPA	9.70e0	0.0	NO
7	7	13C7-PFUnA	IPA	1.54e1	0.0	NO

Name: 170801M1_25, Date: 01-Aug-2017, Time: 14:03:43, ID: B7G0122-BS1 OPR 0.25, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7G01...	3.27e4	81.7	NO
2	2	13C3-PFHxS	B7G01...	5.49e3	72.4	NO
3	3	13C8-PFOA	B7G01...	2.61e4	47.0	YES
4	4	13C9-PFNA	B7G01...	3.24e4	58.3	NO
5	5	13C4-PFOS	B7G01...	5.32e3	55.6	NO
6	6	13C6-PFDA	B7G01...	2.97e4	49.1	YES
7	7	13C7-PFUnA	B7G01...	3.05e4	53.0	NO

Name: 170801M1_26, Date: 01-Aug-2017, Time: 14:14:27, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	IPA			NO
2	2	13C3-PFHxS	IPA			NO
3	3	13C8-PFOA	IPA			NO
4	4	13C9-PFNA	IPA			NO
5	5	13C4-PFOS	IPA			NO
6	6	13C6-PFDA	IPA			NO
7	7	13C7-PFUnA	IPA	2.48e1	0.0	NO

Dataset: Untitled

Last Altered: Wednesday, August 02, 2017 08:33:03 Pacific Daylight Time
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Name: 170801M1_27, Date: 01-Aug-2017, Time: 14:25:05, ID: B7G0122-BLK1 Method Blank 0.25, Description: Method Blank

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G01...	3.22e4	80.4	NO
2	2 13C3-PFHxS	B7G01...	5.76e3	75.9	NO
3	3 13C8-PFOA	B7G01...	2.67e4	47.9	YES
4	4 13C9-PFNA	B7G01...	2.87e4	51.5	NO
5	5 13C4-PFOS	B7G01...	5.48e3	57.3	NO
6	6 13C6-PFDA	B7G01...	2.47e4	40.7	YES
7	7 13C7-PFUnA	B7G01...	3.20e4	55.6	NO

Name: 170801M1_28, Date: 01-Aug-2017, Time: 14:35:50, ID: 1700891-06RE1 VEL FOAM 0.17113, Description: VEL FOAM

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.41e4	135.2	NO
2	2 13C3-PFHxS	17008...	7.37e3	97.1	NO
3	3 13C8-PFOA	17008...	3.11e4	55.9	NO
4	4 13C9-PFNA	17008...	1.93e4	34.6	YES
5	5 13C4-PFOS	17008...	2.10e3	21.9	YES
6	6 13C6-PFDA	17008...	8.57e3	14.2	YES
7	7 13C7-PFUnA	17008...	6.54e3	11.4	YES

Name: 170801M1_29, Date: 01-Aug-2017, Time: 14:47:19, ID: 1700920-01 RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.98e4	124.6	NO
2	2 13C3-PFHxS	17009...	7.94e3	104.6	NO
3	3 13C8-PFOA	17009...	3.97e4	71.3	NO
4	4 13C9-PFNA	17009...	4.35e4	78.1	NO
5	5 13C4-PFOS	17009...	7.38e3	77.2	NO
6	6 13C6-PFDA	17009...	4.61e4	76.1	NO
7	7 13C7-PFUnA	17009...	3.08e4	53.6	NO

Name: 170801M1_30, Date: 01-Aug-2017, Time: 14:58:06, ID: 1700920-02 LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.14e4	103.5	NO
2	2 13C3-PFHxS	17009...	6.19e3	81.6	NO
3	3 13C8-PFOA	17009...	3.22e4	57.8	NO
4	4 13C9-PFNA	17009...	3.93e4	70.6	NO
5	5 13C4-PFOS	17009...	5.72e3	59.8	NO
6	6 13C6-PFDA	17009...	3.67e4	60.6	NO
7	7 13C7-PFUnA	17009...	3.07e4	53.4	NO

Dataset: Untitled

Last Altered: Wednesday, August 02, 2017 08:33:03 Pacific Daylight Time
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Name: 170801M1_31, Date: 01-Aug-2017, Time: 15:09:41, ID: 1700920-03 RCDM-MW-14S-20170720 0.11405, Description: RCDM-MW-14S-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.49e4	87.2	NO
2	2 13C3-PFHxS	17009...	6.00e3	79.1	NO
3	3 13C8-PFOA	17009...	2.95e4	53.1	NO
4	4 13C9-PFNA	17009...	3.11e4	55.9	NO
5	5 13C4-PFOS	17009...	5.65e3	59.1	NO
6	6 13C6-PFDA	17009...	3.26e4	53.8	NO
7	7 13C7-PFUnA	17009...	2.80e4	48.7	YES

Name: 170801M1_32, Date: 01-Aug-2017, Time: 15:20:50, ID: 1700920-04 MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.13e4	103.2	NO
2	2 13C3-PFHxS	17009...	6.61e3	87.0	NO
3	3 13C8-PFOA	17009...	3.28e4	59.0	NO
4	4 13C9-PFNA	17009...	3.12e4	56.0	NO
5	5 13C4-PFOS	17009...	5.78e3	60.5	NO
6	6 13C6-PFDA	17009...	3.44e4	56.8	NO
7	7 13C7-PFUnA	17009...	2.67e4	46.3	YES

Name: 170801M1_33, Date: 01-Aug-2017, Time: 15:31:28, ID: 1700920-05 MH-A97-20170720 0.12086, Description: MH-A97-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.17e4	79.4	NO
2	2 13C3-PFHxS	17009...	5.00e3	65.9	NO
3	3 13C8-PFOA	17009...	2.41e4	43.2	YES
4	4 13C9-PFNA	17009...	2.72e4	48.8	YES
5	5 13C4-PFOS	17009...	5.01e3	52.3	NO
6	6 13C6-PFDA	17009...	2.79e4	46.0	YES
7	7 13C7-PFUnA	17009...	2.99e4	52.0	NO

Name: 170801M1_34, Date: 01-Aug-2017, Time: 15:42:06, ID: 1700920-06 MH-H93-20170720 0.11357, Description: MH-H93-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.71e4	117.8	NO
2	2 13C3-PFHxS	17009...	7.37e3	97.1	NO
3	3 13C8-PFOA	17009...	3.40e4	61.1	NO
4	4 13C9-PFNA	17009...	3.01e4	54.1	NO
5	5 13C4-PFOS	17009...	5.08e3	53.1	NO
6	6 13C6-PFDA	17009...	2.15e4	35.5	YES
7	7 13C7-PFUnA	17009...	1.56e4	27.1	YES

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Name: 170801M1_35, Date: 01-Aug-2017, Time: 15:52:53, ID: 1700920-07 RCDM-BLANK-20170720 0.11872, Description: RCDM-BLANK-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.85e4	96.2	NO
2	2 13C3-PFHxS	17009...	6.25e3	82.3	NO
3	3 13C8-PFOA	17009...	3.20e4	57.5	NO
4	4 13C9-PFNA	17009...	3.17e4	56.9	NO
5	5 13C4-PFOS	17009...	5.65e3	59.1	NO
6	6 13C6-PFDA	17009...	3.16e4	52.1	NO
7	7 13C7-PFUnA	17009...	2.49e4	43.3	YES

Name: 170801M1_36, Date: 01-Aug-2017, Time: 16:03:31, ID: 1700920-08 MH-C94-20170720 0.11568, Description: MH-C94-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.58e4	89.6	NO
2	2 13C3-PFHxS	17009...	5.98e3	78.8	NO
3	3 13C8-PFOA	17009...	3.07e4	55.2	NO
4	4 13C9-PFNA	17009...	2.76e4	49.7	YES
5	5 13C4-PFOS	17009...	4.66e3	48.7	YES
6	6 13C6-PFDA	17009...	2.59e4	42.7	YES
7	7 13C7-PFUnA	17009...	2.55e4	44.3	YES

Name: 170801M1_37, Date: 01-Aug-2017, Time: 16:14:18, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA	5.31e0	0.0	NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA			NO

Name: 170801M1_38, Date: 01-Aug-2017, Time: 16:24:56, ID: 1700920-09 RCDM-MW-13S-20170719 0.11866, Description: RCDM-MW-13S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.16e4	78.9	NO
2	2 13C3-PFHxS	17009...	5.30e3	69.8	NO
3	3 13C8-PFOA	17009...	2.62e4	47.1	YES
4	4 13C9-PFNA	17009...	2.47e4	44.3	YES
5	5 13C4-PFOS	17009...	4.79e3	50.1	NO
6	6 13C6-PFDA	17009...	2.70e4	44.5	YES
7	7 13C7-PFUnA	17009...	2.24e4	38.9	YES

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Name: 170801M1_39, Date: 01-Aug-2017, Time: 16:35:34, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA	8.06e0	0.0	NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA			NO

Name: 170801M1_40, Date: 01-Aug-2017, Time: 16:46:13, ID: ST170801M1-3 PFC CS3 17G3105, Description: PFC CS3 17G3105

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	4.34e4	108.5	NO
2	2 13C3-PFHxS	ST170...	8.58e3	113.0	NO
3	3 13C8-PFOA	ST170...	5.63e4	101.1	NO
4	4 13C9-PFNA	ST170...	6.12e4	110.0	NO
5	5 13C4-PFOS	ST170...	9.47e3	99.0	NO
6	6 13C6-PFDA	ST170...	5.90e4	97.4	NO
7	7 13C7-PFUnA	ST170...	6.03e4	104.8	NO

Name: 170801M1_41, Date: 01-Aug-2017, Time: 16:56:59, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA	5.10e0	0.0	NO
7	7 13C7-PFUnA	IPA	1.78e1	0.0	NO

Name: 170801M1_42, Date: 01-Aug-2017, Time: 17:08:05, ID: 1700920-10 LF-MW-14S-20170720 0.11481, Description: LF-MW-14S-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.12e4	103.1	NO
2	2 13C3-PFHxS	17009...	6.58e3	86.7	NO
3	3 13C8-PFOA	17009...	3.21e4	57.6	NO
4	4 13C9-PFNA	17009...	3.43e4	61.6	NO
5	5 13C4-PFOS	17009...	5.87e3	61.4	NO
6	6 13C6-PFDA	17009...	3.05e4	50.4	NO
7	7 13C7-PFUnA	17009...	2.63e4	45.7	YES

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Name: 170801M1_43, Date: 01-Aug-2017, Time: 17:18:47, ID: 1700920-11 LF-MW-11BR-20170720 0.11664, Description: LF-MW-11BR-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.60e4	115.0	NO
2	2 13C3-PFHxS	17009...	7.71e3	101.6	NO
3	3 13C8-PFOA	17009...	3.83e4	68.9	NO
4	4 13C9-PFNA	17009...	4.25e4	76.3	NO
5	5 13C4-PFOS	17009...	6.99e3	73.0	NO
6	6 13C6-PFDA	17009...	3.44e4	56.8	NO
7	7 13C7-PFUnA	17009...	3.26e4	56.6	NO

Name: 170801M1_44, Date: 01-Aug-2017, Time: 17:29:25, ID: 1700920-12 LF-MW-13S-20170719 0.11667, Description: LF-MW-13S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.42e4	85.6	NO
2	2 13C3-PFHxS	17009...	5.80e3	76.5	NO
3	3 13C8-PFOA	17009...	2.70e4	48.5	YES
4	4 13C9-PFNA	17009...	3.03e4	54.4	NO
5	5 13C4-PFOS	17009...	5.17e3	54.0	NO
6	6 13C6-PFDA	17009...	3.03e4	50.1	NO
7	7 13C7-PFUnA	17009...	2.44e4	42.4	YES

Name: 170801M1_45, Date: 01-Aug-2017, Time: 17:40:03, ID: 1700920-13 RCDM-MW-11BR-20170720 0.11813, Description: RCDM-MW-11BR-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.32e4	83.1	NO
2	2 13C3-PFHxS	17009...	5.83e3	76.8	NO
3	3 13C8-PFOA	17009...	2.80e4	50.3	NO
4	4 13C9-PFNA	17009...	3.10e4	55.7	NO
5	5 13C4-PFOS	17009...	5.58e3	58.3	NO
6	6 13C6-PFDA	17009...	2.95e4	48.7	YES
7	7 13C7-PFUnA	17009...	3.06e4	53.2	NO

Name: 170801M1_46, Date: 01-Aug-2017, Time: 17:50:42, ID: 1700920-14 RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.15e4	78.8	NO
2	2 13C3-PFHxS	17009...	4.68e3	61.6	NO
3	3 13C8-PFOA	17009...	2.65e4	47.5	YES
4	4 13C9-PFNA	17009...	2.56e4	45.9	YES
5	5 13C4-PFOS	17009...	4.51e3	47.1	YES
6	6 13C6-PFDA	17009...	2.58e4	42.7	YES
7	7 13C7-PFUnA	17009...	2.38e4	41.4	YES

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Name: 170801M1_47, Date: 01-Aug-2017, Time: 18:01:20, ID: 1700920-15 LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.72e4	93.0	NO
2	2 13C3-PFHxS	17009...	5.69e3	75.0	NO
3	3 13C8-PFOA	17009...	3.24e4	58.3	NO
4	4 13C9-PFNA	17009...	3.08e4	55.4	NO
5	5 13C4-PFOS	17009...	5.43e3	56.8	NO
6	6 13C6-PFDA	17009...	3.02e4	49.9	YES
7	7 13C7-PFUnA	17009...	2.95e4	51.2	NO

Name: 170801M1_48, Date: 01-Aug-2017, Time: 18:11:59, ID: 1700920-16 DUP-07-20170719 0.12023, Description: DUP-07-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.27e4	106.7	NO
2	2 13C3-PFHxS	17009...	7.34e3	96.7	NO
3	3 13C8-PFOA	17009...	3.41e4	61.2	NO
4	4 13C9-PFNA	17009...	3.45e4	62.0	NO
5	5 13C4-PFOS	17009...	6.49e3	67.9	NO
6	6 13C6-PFDA	17009...	3.71e4	61.3	NO
7	7 13C7-PFUnA	17009...	3.76e4	65.3	NO

Name: 170801M1_49, Date: 01-Aug-2017, Time: 18:22:37, ID: 1700920-17 FRB04-20170719 0.11007, Description: FRB04-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.30e4	107.4	NO
2	2 13C3-PFHxS	17009...	8.51e3	112.1	NO
3	3 13C8-PFOA	17009...	3.94e4	70.8	NO
4	4 13C9-PFNA	17009...	4.78e4	85.9	NO
5	5 13C4-PFOS	17009...	8.11e3	84.8	NO
6	6 13C6-PFDA	17009...	4.55e4	75.2	NO
7	7 13C7-PFUnA	17009...	4.02e4	69.9	NO

Name: 170801M1_50, Date: 01-Aug-2017, Time: 18:33:15, ID: 1700920-01@5X RCDM-MW-28S-20170719 0.1113, Description: RCDM-MW-28S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	1.05e4	26.4	YES
2	2 13C3-PFHxS	17009...	1.78e3	23.4	YES
3	3 13C8-PFOA	17009...	7.80e3	14.0	YES
4	4 13C9-PFNA	17009...	9.64e3	17.3	YES
5	5 13C4-PFOS	17009...	1.29e3	13.5	YES
6	6 13C6-PFDA	17009...	8.40e3	13.9	YES
7	7 13C7-PFUnA	17009...	6.32e3	11.0	YES

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Name: 170801M1_51, Date: 01-Aug-2017, Time: 18:43:54, ID: 1700920-02@5X LF-MW-12S-20170719 0.11113, Description: LF-MW-12S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	9.19e3	23.0	YES
2	2 13C3-PFHxS	17009...	1.45e3	19.1	YES
3	3 13C8-PFOA	17009...	7.16e3	12.9	YES
4	4 13C9-PFNA	17009...	7.99e3	14.4	YES
5	5 13C4-PFOS	17009...	1.28e3	13.4	YES
6	6 13C6-PFDA	17009...	7.12e3	11.8	YES
7	7 13C7-PFUnA	17009...	6.41e3	11.1	YES

Name: 170801M1_52, Date: 01-Aug-2017, Time: 18:54:40, ID: 1700920-08@5X MH-C94-20170720 0.11568, Description: MH-C94-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	8.38e3	21.0	YES
2	2 13C3-PFHxS	17009...	1.33e3	17.5	YES
3	3 13C8-PFOA	17009...	7.04e3	12.6	YES
4	4 13C9-PFNA	17009...	6.70e3	12.0	YES
5	5 13C4-PFOS	17009...	1.26e3	13.1	YES
6	6 13C6-PFDA	17009...	6.63e3	10.9	YES
7	7 13C7-PFUnA	17009...	5.53e3	9.6	YES

Name: 170801M1_53, Date: 01-Aug-2017, Time: 19:05:27, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA	7.06e0	0.0	NO
7	7 13C7-PFUnA	IPA	2.51e1	0.0	NO

Name: 170801M1_54, Date: 01-Aug-2017, Time: 19:16:05, ID: ST170801M1-4 PFC CS3 17G3105, Description: PFC CS3 17G3105

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	4.63e4	115.9	NO
2	2 13C3-PFHxS	ST170...	8.82e3	116.2	NO
3	3 13C8-PFOA	ST170...	5.47e4	98.3	NO
4	4 13C9-PFNA	ST170...	6.70e4	120.4	NO
5	5 13C4-PFOS	ST170...	1.02e4	106.7	NO
6	6 13C6-PFDA	ST170...	6.39e4	105.5	NO
7	7 13C7-PFUnA	ST170...	5.92e4	102.8	NO

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Name: 170801M1_55, Date: 01-Aug-2017, Time: 19:27:09, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA	6.70e0	0.0	NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA	8.67e0	0.0	NO

Name: 170801M1_56, Date: 01-Aug-2017, Time: 19:39:06, ID: 1700920-14@5X RCDM-MW-12S-20170719 0.11619, Description: RCDM-MW-12S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	6.73e3	16.8	YES
2	2 13C3-PFHxS	17009...	1.11e3	14.6	YES
3	3 13C8-PFOA	17009...	5.84e3	10.5	YES
4	4 13C9-PFNA	17009...	6.16e3	11.1	YES
5	5 13C4-PFOS	17009...	1.10e3	11.5	YES
6	6 13C6-PFDA	17009...	5.00e3	8.3	YES
7	7 13C7-PFUnA	17009...	4.84e3	8.4	YES

Name: 170801M1_57, Date: 01-Aug-2017, Time: 19:49:49, ID: 1700920-15@5X LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	8.39e3	21.0	YES
2	2 13C3-PFHxS	17009...	1.14e3	15.0	YES
3	3 13C8-PFOA	17009...	6.44e3	11.6	YES
4	4 13C9-PFNA	17009...	6.80e3	12.2	YES
5	5 13C4-PFOS	17009...	1.20e3	12.6	YES
6	6 13C6-PFDA	17009...	5.25e3	8.7	YES
7	7 13C7-PFUnA	17009...	5.38e3	9.3	YES

Name: 170801M1_58, Date: 01-Aug-2017, Time: 20:00:27, ID: B7G0086-BS1 OPR 1, Description: OPR

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G00...	5.96e4	149.0	NO
2	2 13C3-PFHxS	B7G00...	8.79e3	115.8	NO
3	3 13C8-PFOA	B7G00...	4.97e4	89.4	NO
4	4 13C9-PFNA	B7G00...	5.46e4	98.1	NO
5	5 13C4-PFOS	B7G00...	7.42e3	77.6	NO
6	6 13C6-PFDA	B7G00...	4.25e4	70.1	NO
7	7 13C7-PFUnA	B7G00...	2.09e4	36.3	YES

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Name: 170801M1_59, Date: 01-Aug-2017, Time: 20:11:13, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA	1.09e1	0.0	NO

Name: 170801M1_60, Date: 01-Aug-2017, Time: 20:21:52, ID: B7G0086-BLK1 Method Blank 1, Description: Method Blank

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G00...	6.07e4	151.7	YES
2	2 13C3-PFHxS	B7G00...	8.66e3	114.0	NO
3	3 13C8-PFOA	B7G00...	4.90e4	88.1	NO
4	4 13C9-PFNA	B7G00...	4.81e4	86.4	NO
5	5 13C4-PFOS	B7G00...	6.95e3	72.6	NO
6	6 13C6-PFDA	B7G00...	3.59e4	59.2	NO
7	7 13C7-PFUnA	B7G00...	1.43e4	24.9	YES

Name: 170801M1_61, Date: 01-Aug-2017, Time: 20:32:30, ID: 1700886-11 AT028-SD17-01-071217-1430 1.84, Description: AT028-SD17-01-071217-1430

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.23e4	130.8	NO
2	2 13C3-PFHxS	17008...	8.57e3	112.9	NO
3	3 13C8-PFOA	17008...	4.49e4	80.7	NO
4	4 13C9-PFNA	17008...	5.09e4	91.5	NO
5	5 13C4-PFOS	17008...	8.56e3	89.4	NO
6	6 13C6-PFDA	17008...	5.10e4	84.2	NO
7	7 13C7-PFUnA	17008...	4.71e4	81.8	NO

Name: 170801M1_62, Date: 01-Aug-2017, Time: 20:43:09, ID: 1700886-12 AT028-SD17-02-071317-0845 1.44, Description: AT028-SD17-02-071317-0845

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	8.88e3	22.2	YES
2	2 13C3-PFHxS	17008...	1.66e3	21.9	YES
3	3 13C8-PFOA	17008...	7.78e3	14.0	YES
4	4 13C9-PFNA	17008...	8.91e3	16.0	YES
5	5 13C4-PFOS	17008...	1.84e3	19.3	YES
6	6 13C6-PFDA	17008...	1.16e4	19.1	YES
7	7 13C7-PFUnA	17008...	1.13e4	19.7	YES

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Name: 170801M1_63, Date: 01-Aug-2017, Time: 20:53:47, ID: 1700888-01 HARRI-01-SB01-0-2 1.52, Description: HARRI-01-SB01-0-2

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.47e4	136.8	NO
2	2 13C3-PFHxS	17008...	7.58e3	99.9	NO
3	3 13C8-PFOA	17008...	4.40e4	79.0	NO
4	4 13C9-PFNA	17008...	4.70e4	84.4	NO
5	5 13C4-PFOS	17008...	5.22e3	54.6	NO
6	6 13C6-PFDA	17008...	2.73e4	45.0	YES
7	7 13C7-PFUnA	17008...	8.57e3	14.9	YES

Name: 170801M1_64, Date: 01-Aug-2017, Time: 21:04:25, ID: 1700888-02 HARRI-01-SB01-6-8 1.32, Description: HARRI-01-SB01-6-8

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.76e4	144.1	NO
2	2 13C3-PFHxS	17008...	8.85e3	116.5	NO
3	3 13C8-PFOA	17008...	4.65e4	83.5	NO
4	4 13C9-PFNA	17008...	4.56e4	81.9	NO
5	5 13C4-PFOS	17008...	5.80e3	60.6	NO
6	6 13C6-PFDA	17008...	2.96e4	48.9	YES
7	7 13C7-PFUnA	17008...	9.10e3	15.8	YES

Name: 170801M1_65, Date: 01-Aug-2017, Time: 21:15:04, ID: 1700888-03 HARRI-01-SB02-0-2 2.04, Description: HARRI-01-SB02-0-2

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.62e4	140.6	NO
2	2 13C3-PFHxS	17008...	8.42e3	110.9	NO
3	3 13C8-PFOA	17008...	4.64e4	83.4	NO
4	4 13C9-PFNA	17008...	4.08e4	73.3	NO
5	5 13C4-PFOS	17008...	3.45e3	36.1	YES
6	6 13C6-PFDA	17008...	2.25e4	37.1	YES
7	7 13C7-PFUnA	17008...	9.61e3	16.7	YES

Name: 170801M1_66, Date: 01-Aug-2017, Time: 21:25:42, ID: 1700888-04 HARRI-01-SO-DUP01-071117 1.06, Description: HARRI-01-SO-DUP01-071117

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.13e4	128.2	NO
2	2 13C3-PFHxS	17008...	8.01e3	105.6	NO
3	3 13C8-PFOA	17008...	4.66e4	83.7	NO
4	4 13C9-PFNA	17008...	4.38e4	78.6	NO
5	5 13C4-PFOS	17008...	4.83e3	50.5	NO
6	6 13C6-PFDA	17008...	2.65e4	43.8	YES
7	7 13C7-PFUnA	17008...	8.30e3	14.4	YES

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Name: 170801M1_67, Date: 01-Aug-2017, Time: 21:36:29, ID: 1700888-05 HARRI-01-SB02-8-10 1.35, Description: HARRI-01-SB02-8-10

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.78e4	144.5	NO
2	2 13C3-PFHxS	17008...	9.20e3	121.1	NO
3	3 13C8-PFOA	17008...	4.90e4	88.1	NO
4	4 13C9-PFNA	17008...	4.80e4	86.2	NO
5	5 13C4-PFOS	17008...	4.93e3	51.5	NO
6	6 13C6-PFDA	17008...	2.66e4	43.9	YES
7	7 13C7-PFUnA	17008...	8.94e3	15.5	YES

Name: 170801M1_68, Date: 01-Aug-2017, Time: 21:47:15, ID: 1700888-06 HARRI-01-SB03-0-2 1.33, Description: HARRI-01-SB03-0-2

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	6.00e4	149.9	NO
2	2 13C3-PFHxS	17008...	8.91e3	117.4	NO
3	3 13C8-PFOA	17008...	4.84e4	87.0	NO
4	4 13C9-PFNA	17008...	5.16e4	92.6	NO
5	5 13C4-PFOS	17008...	7.53e3	78.7	NO
6	6 13C6-PFDA	17008...	4.07e4	67.3	NO
7	7 13C7-PFUnA	17008...	2.79e4	48.4	YES

Name: 170801M1_69, Date: 01-Aug-2017, Time: 21:58:02, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA	6.48e0	0.0	NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA	6.66e0	0.0	NO
7	7 13C7-PFUnA	IPA	1.65e1	0.0	NO

Name: 170801M1_70, Date: 01-Aug-2017, Time: 22:08:40, ID: ST170801M1-5 PFC CS3 17G3105, Description: PFC CS3 17G3105

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	4.29e4	107.3	NO
2	2 13C3-PFHxS	ST170...	9.74e3	128.3	NO
3	3 13C8-PFOA	ST170...	5.79e4	104.0	NO
4	4 13C9-PFNA	ST170...	6.23e4	111.9	NO
5	5 13C4-PFOS	ST170...	1.05e4	110.0	NO
6	6 13C6-PFDA	ST170...	6.36e4	105.0	NO
7	7 13C7-PFUnA	ST170...	6.18e4	107.5	NO

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Name: 170801M1_71, Date: 01-Aug-2017, Time: 22:19:26, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA	5.85e0	0.0	NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA	1.65e1	0.0	NO

Name: 170801M1_72, Date: 01-Aug-2017, Time: 22:31:08, ID: 1700888-07 HARRI-01-SB03-8-10 1.37, Description: HARRI-01-SB03-8-10

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.15e4	128.8	NO
2	2 13C3-PFHxS	17008...	6.99e3	92.0	NO
3	3 13C8-PFOA	17008...	4.17e4	74.9	NO
4	4 13C9-PFNA	17008...	3.79e4	68.1	NO
5	5 13C4-PFOS	17008...	6.06e3	63.3	NO
6	6 13C6-PFDA	17008...	2.64e4	43.6	YES
7	7 13C7-PFUnA	17008...	6.79e3	11.8	YES

Name: 170801M1_73, Date: 01-Aug-2017, Time: 22:42:08, ID: 1700888-08 HARRI-02-SB01-0-2 1.21, Description: HARRI-02-SB01-0-2

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.24e4	130.9	NO
2	2 13C3-PFHxS	17008...	9.00e3	118.6	NO
3	3 13C8-PFOA	17008...	4.40e4	79.1	NO
4	4 13C9-PFNA	17008...	4.22e4	75.7	NO
5	5 13C4-PFOS	17008...	5.54e3	57.9	NO
6	6 13C6-PFDA	17008...	2.33e4	38.5	YES
7	7 13C7-PFUnA	17008...	5.88e3	10.2	YES

Name: 170801M1_74, Date: 01-Aug-2017, Time: 22:52:47, ID: 1700888-09 HARRI-02-SB01-6-8 1.47, Description: HARRI-02-SB01-6-8

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.29e4	132.2	NO
2	2 13C3-PFHxS	17008...	9.18e3	120.9	NO
3	3 13C8-PFOA	17008...	4.21e4	75.7	NO
4	4 13C9-PFNA	17008...	4.01e4	72.0	NO
5	5 13C4-PFOS	17008...	4.69e3	49.0	YES
6	6 13C6-PFDA	17008...	1.60e4	26.4	YES
7	7 13C7-PFUnA	17008...	4.53e3	7.9	YES

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Name: 170801M1_75, Date: 01-Aug-2017, Time: 23:03:25, ID: 1700888-10 HARRI-02-SB02-0-2 1.3, Description: HARRI-02-SB02-0-2

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.24e4	131.0	NO
2	2 13C3-PFHxS	17008...	8.61e3	113.4	NO
3	3 13C8-PFOA	17008...	4.36e4	78.3	NO
4	4 13C9-PFNA	17008...	4.52e4	81.1	NO
5	5 13C4-PFOS	17008...	5.50e3	57.5	NO
6	6 13C6-PFDA	17008...	2.50e4	41.2	YES
7	7 13C7-PFUnA	17008...	8.70e3	15.1	YES

Name: 170801M1_76, Date: 01-Aug-2017, Time: 23:14:04, ID: 1700888-11 HARRI-02-SB02-6-8 1.38, Description: HARRI-02-SB02-6-8

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	4.93e4	123.3	NO
2	2 13C3-PFHxS	17008...	8.88e3	116.9	NO
3	3 13C8-PFOA	17008...	4.44e4	79.8	NO
4	4 13C9-PFNA	17008...	4.34e4	78.0	NO
5	5 13C4-PFOS	17008...	5.53e3	57.8	NO
6	6 13C6-PFDA	17008...	2.38e4	39.2	YES
7	7 13C7-PFUnA	17008...	6.32e3	11.0	YES

Name: 170801M1_77, Date: 01-Aug-2017, Time: 23:24:50, ID: 1700889-01 HARRI-03-SB01-0-2 1.36, Description: HARRI-03-SB01-0-2

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.35e4	133.8	NO
2	2 13C3-PFHxS	17008...	8.19e3	107.9	NO
3	3 13C8-PFOA	17008...	4.69e4	84.3	NO
4	4 13C9-PFNA	17008...	5.34e4	96.0	NO
5	5 13C4-PFOS	17008...	6.95e3	72.7	NO
6	6 13C6-PFDA	17008...	3.74e4	61.8	NO
7	7 13C7-PFUnA	17008...	1.57e4	27.4	YES

Name: 170801M1_78, Date: 01-Aug-2017, Time: 23:35:28, ID: 1700889-02 HARRI-03-SB01-WT-WT 1.33, Description: HARRI-03-SB01-WT-WT

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.77e4	144.4	NO
2	2 13C3-PFHxS	17008...	8.93e3	117.7	NO
3	3 13C8-PFOA	17008...	4.34e4	78.0	NO
4	4 13C9-PFNA	17008...	4.15e4	74.6	NO
5	5 13C4-PFOS	17008...	6.24e3	65.2	NO
6	6 13C6-PFDA	17008...	2.48e4	41.0	YES
7	7 13C7-PFUnA	17008...	7.05e3	12.2	YES

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Name: 170801M1_79, Date: 01-Aug-2017, Time: 23:46:15, ID: 1700889-03 HARRI-03-SO-Dup02-01000 1.37, Description: HARRI-03-SO-Dup02-01000

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.91e4	147.7	NO
2	2 13C3-PFHxS	17008...	9.08e3	119.6	NO
3	3 13C8-PFOA	17008...	4.64e4	83.4	NO
4	4 13C9-PFNA	17008...	4.42e4	79.5	NO
5	5 13C4-PFOS	17008...	5.98e3	62.5	NO
6	6 13C6-PFDA	17008...	2.88e4	47.5	YES
7	7 13C7-PFUnA	17008...	8.69e3	15.1	YES

Name: 170801M1_80, Date: 01-Aug-2017, Time: 23:57:01, ID: 1700889-04 HARRI-03-SB02-0-2 1.34, Description: HARRI-03-SB02-0-2

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.21e4	130.2	NO
2	2 13C3-PFHxS	17008...	9.01e3	118.7	NO
3	3 13C8-PFOA	17008...	4.58e4	82.4	NO
4	4 13C9-PFNA	17008...	4.73e4	85.0	NO
5	5 13C4-PFOS	17008...	6.67e3	69.8	NO
6	6 13C6-PFDA	17008...	3.57e4	58.9	NO
7	7 13C7-PFUnA	17008...	1.20e4	20.8	YES

Name: 170801M1_81, Date: 02-Aug-2017, Time: 00:07:48, ID: 1700889-05 HARRI-03-SB02-WT-WT 1.17, Description: HARRI-03-SB02-WT-WT

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.23e4	130.8	NO
2	2 13C3-PFHxS	17008...	8.82e3	116.2	NO
3	3 13C8-PFOA	17008...	4.78e4	85.8	NO
4	4 13C9-PFNA	17008...	5.00e4	89.9	NO
5	5 13C4-PFOS	17008...	7.43e3	77.6	NO
6	6 13C6-PFDA	17008...	4.16e4	68.7	NO
7	7 13C7-PFUnA	17008...	3.59e4	62.4	NO

Name: 170801M1_82, Date: 02-Aug-2017, Time: 00:18:27, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA	1.12e1	0.0	NO
7	7 13C7-PFUnA	IPA	1.76e1	0.0	NO

Dataset: Untitled

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Name: 170801M1_83, Date: 02-Aug-2017, Time: 00:29:13, ID: ST170801M1-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	4.31e4	107.8	NO
2	2 13C3-PFHxS	ST170...	9.50e3	125.1	NO
3	3 13C8-PFOA	ST170...	6.32e4	113.5	NO
4	4 13C9-PFNA	ST170...	6.28e4	112.9	NO
5	5 13C4-PFOS	ST170...	1.07e4	111.5	NO
6	6 13C6-PFDA	ST170...	6.96e4	114.9	NO
7	7 13C7-PFUnA	ST170...	5.64e4	98.0	NO

Name: 170801M1_84, Date: 02-Aug-2017, Time: 00:40:01, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA			NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA	2.07e1	0.0	NO

Name: 170801M1_85, Date: 02-Aug-2017, Time: 00:50:50, ID: 1700889-06 HARRI-03-SB03-0-2 1.33, Description: HARRI-03-SB03-0-2

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	6.19e4	154.8	YES
2	2 13C3-PFHxS	17008...	9.38e3	123.6	NO
3	3 13C8-PFOA	17008...	4.96e4	89.2	NO
4	4 13C9-PFNA	17008...	5.06e4	90.9	NO
5	5 13C4-PFOS	17008...	7.36e3	77.0	NO
6	6 13C6-PFDA	17008...	2.97e4	49.0	YES
7	7 13C7-PFUnA	17008...	1.57e4	27.3	YES

Name: 170801M1_86, Date: 02-Aug-2017, Time: 01:01:34, ID: 1700889-07 HARRI-03-SB03-WT-WT 1.34, Description: HARRI-03-SB03-WT-WT

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	5.61e4	140.4	NO
2	2 13C3-PFHxS	17008...	8.80e3	116.0	NO
3	3 13C8-PFOA	17008...	5.04e4	90.6	NO
4	4 13C9-PFNA	17008...	4.91e4	88.2	NO
5	5 13C4-PFOS	17008...	6.51e3	68.1	NO
6	6 13C6-PFDA	17008...	2.68e4	44.2	YES
7	7 13C7-PFUnA	17008...	9.15e3	15.9	YES

Dataset: Untitled

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Name: 170801M1_87, Date: 02-Aug-2017, Time: 01:12:13, ID: B7G0086-MS1 Matrix Spike 1.35, Description: Matrix Spike

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G00...	6.16e4	154.0	YES
2	2 13C3-PFHxS	B7G00...	9.63e3	126.9	NO
3	3 13C8-PFOA	B7G00...	4.79e4	86.1	NO
4	4 13C9-PFNA	B7G00...	4.85e4	87.1	NO
5	5 13C4-PFOS	B7G00...	6.86e3	71.7	NO
6	6 13C6-PFDA	B7G00...	2.43e4	40.2	YES
7	7 13C7-PFUnA	B7G00...	6.62e3	11.5	YES

Name: 170801M1_88, Date: 02-Aug-2017, Time: 01:22:51, ID: B7G0086-MSD1 Matrix Spike Dup 1.4, Description: Matrix Spike Dup

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G00...	5.60e4	140.1	NO
2	2 13C3-PFHxS	B7G00...	8.82e3	116.2	NO
3	3 13C8-PFOA	B7G00...	4.34e4	78.0	NO
4	4 13C9-PFNA	B7G00...	5.32e4	95.6	NO
5	5 13C4-PFOS	B7G00...	6.16e3	64.4	NO
6	6 13C6-PFDA	B7G00...	3.51e4	58.0	NO
7	7 13C7-PFUnA	B7G00...	2.80e4	48.6	YES

Name: 170801M1_89, Date: 02-Aug-2017, Time: 01:33:37, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA	7.16e0	0.0	NO
2	2 13C3-PFHxS	IPA			NO
3	3 13C8-PFOA	IPA			NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA	5.04e0	0.0	NO
7	7 13C7-PFUnA	IPA	2.00e1	0.0	NO

Name: 170801M1_90, Date: 02-Aug-2017, Time: 01:44:16, ID: ST170801M1-7 PFC CS3 17G3105, Description: PFC CS3 17G3105

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	4.67e4	116.8	NO
2	2 13C3-PFHxS	ST170...	9.32e3	122.7	NO
3	3 13C8-PFOA	ST170...	6.31e4	113.3	NO
4	4 13C9-PFNA	ST170...	6.31e4	113.3	NO
5	5 13C4-PFOS	ST170...	1.11e4	116.0	NO
6	6 13C6-PFDA	ST170...	6.22e4	102.7	NO
7	7 13C7-PFUnA	ST170...	6.56e4	113.9	NO

Dataset: Untitled

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Name: 170801M1_91, Date: 02-Aug-2017, Time: 01:55:02, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	IPA			NO
2	2	13C3-PFHxS	IPA			NO
3	3	13C8-PFOA	IPA			NO
4	4	13C9-PFNA	IPA			NO
5	5	13C4-PFOS	IPA			NO
6	6	13C6-PFDA	IPA			NO
7	7	13C7-PFUnA	IPA	2.67e1	0.0	NO

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-3.qld

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Name: 170801M1_3, Date: 01-Aug-2017, Time: 10:06:45, ID: IPA, Description: IPA

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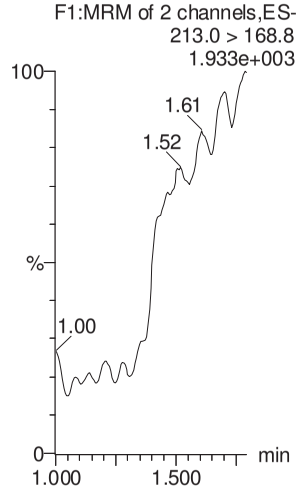

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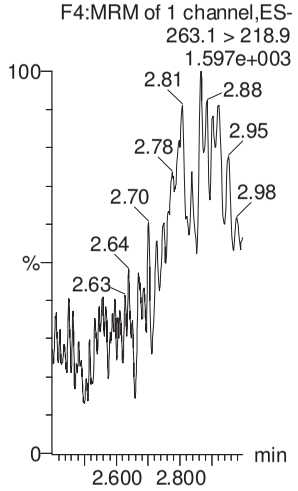

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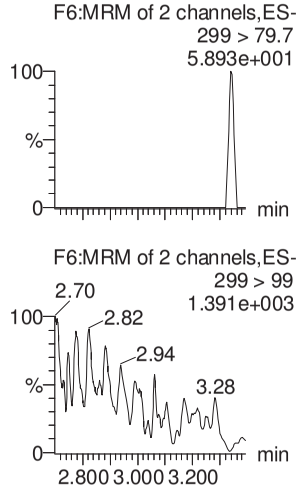
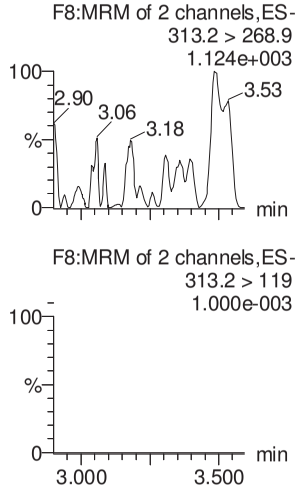


PFHxA



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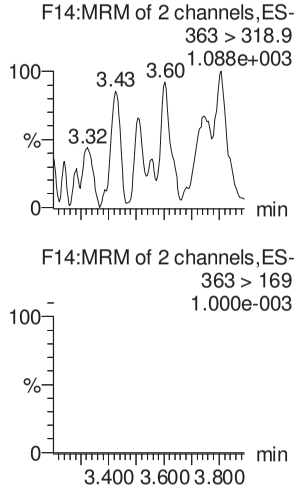

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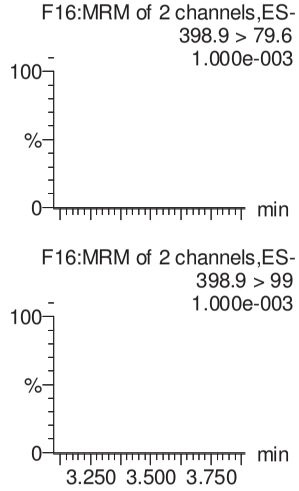
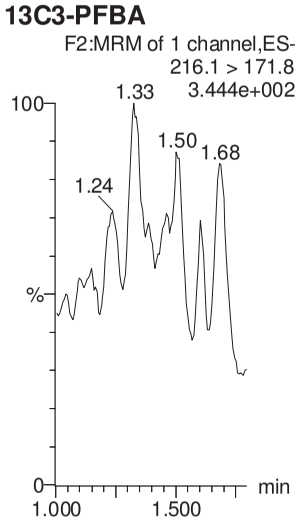


13C3-PFBA



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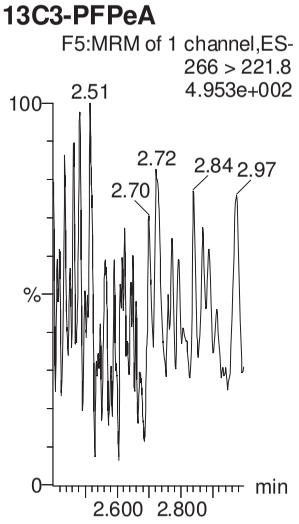

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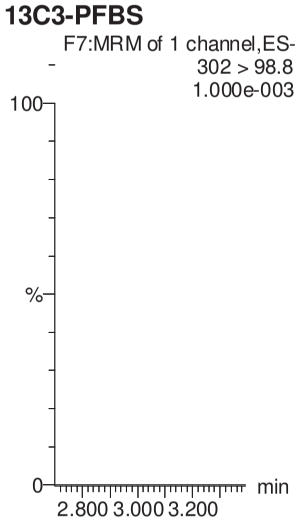

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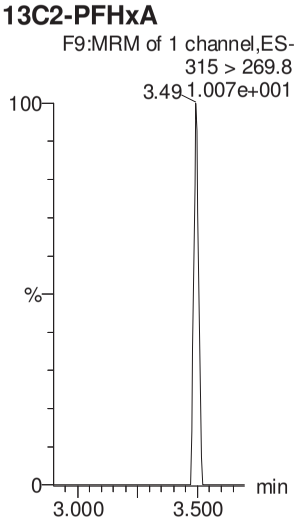

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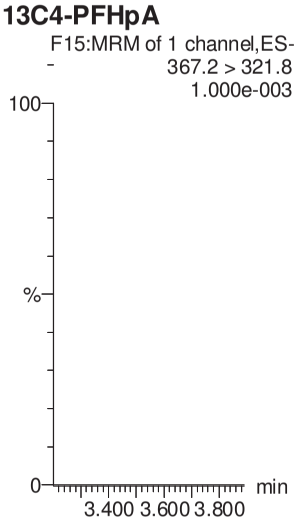

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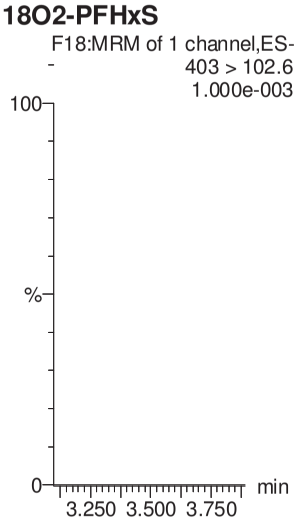

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-3.qld

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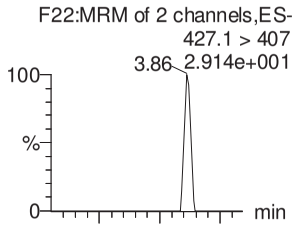
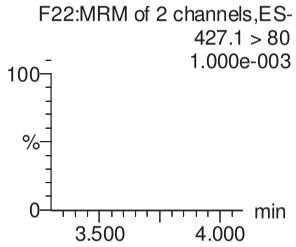
Printed: Saturday, August 12, 2017 22:26:26 Pacific Daylight Time

Name: 170801M1_3, Date: 01-Aug-2017, Time: 10:06:45, ID: IPA, Description: IPA

6:2 FTS





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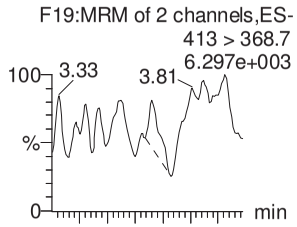

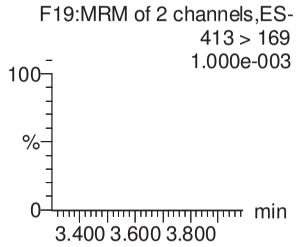

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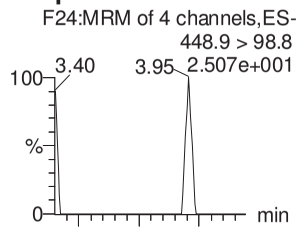

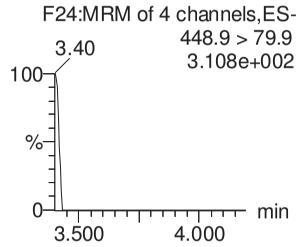

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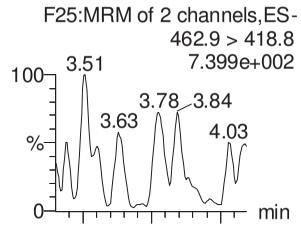

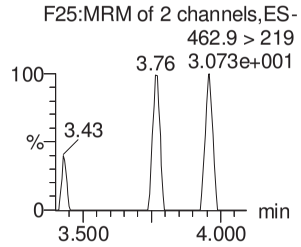

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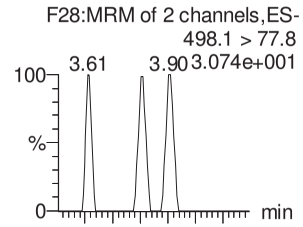

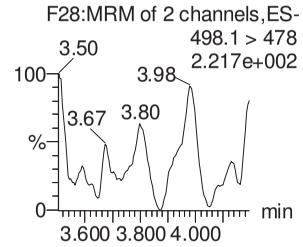

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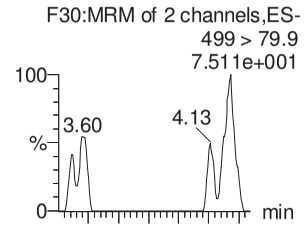
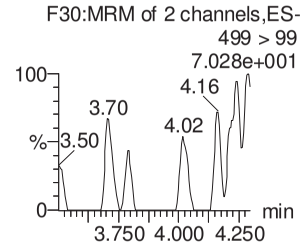
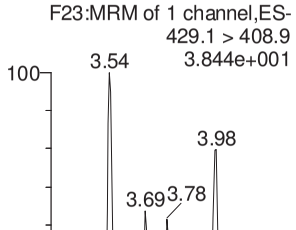
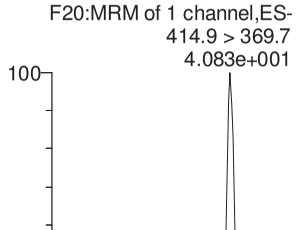




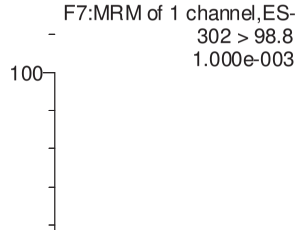
13C2-6:2 FTS



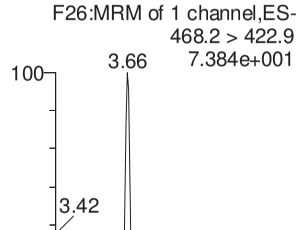
13C2-PFOA



13C3-PFBS



13C5-PFNA



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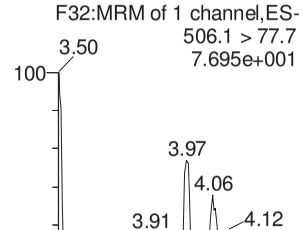

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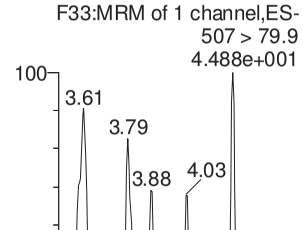

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Vista Analytical Laboratory

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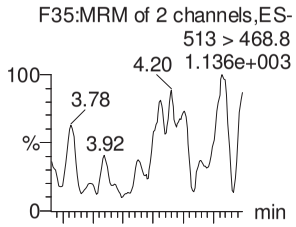
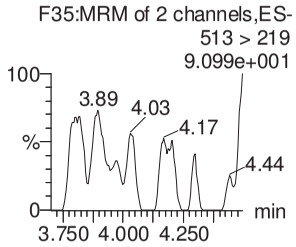
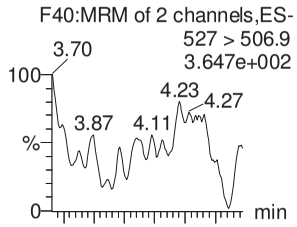
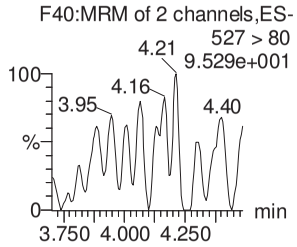




8:2 FTS





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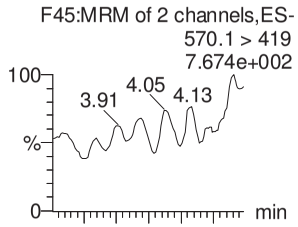

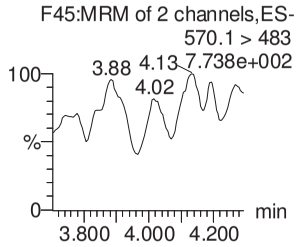

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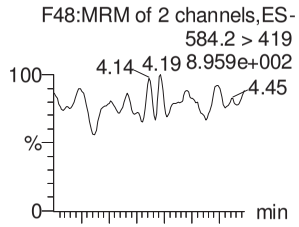

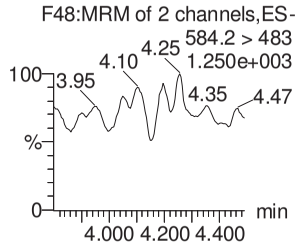

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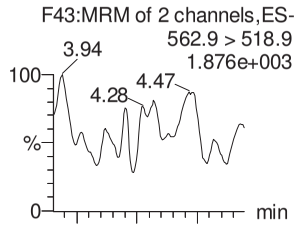

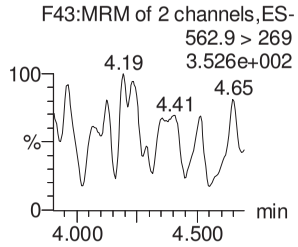

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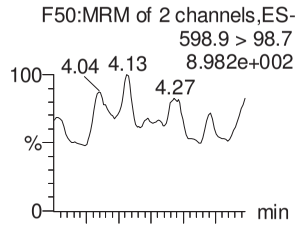

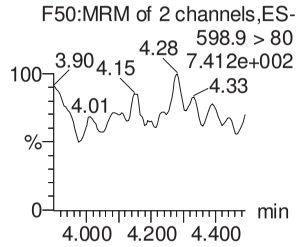

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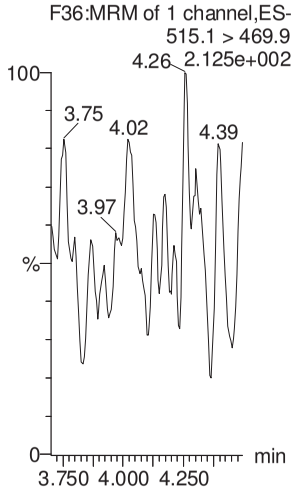
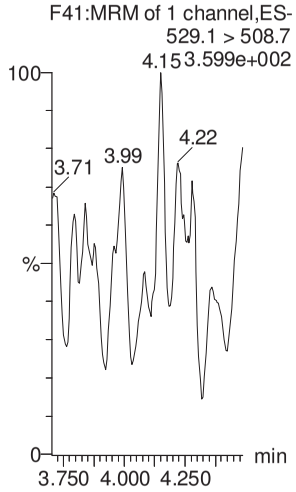
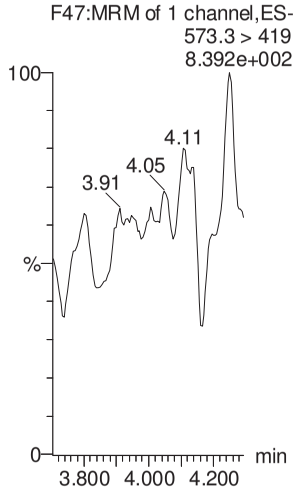


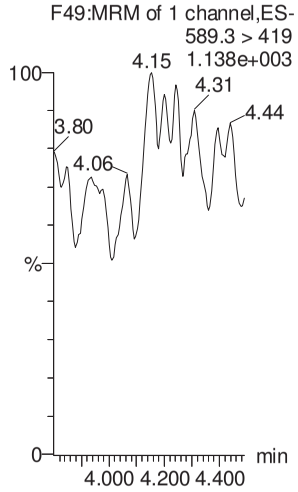
13C2-8:2 FTS



d3-N-MeFOSAA



d5-N-EtFOSAA



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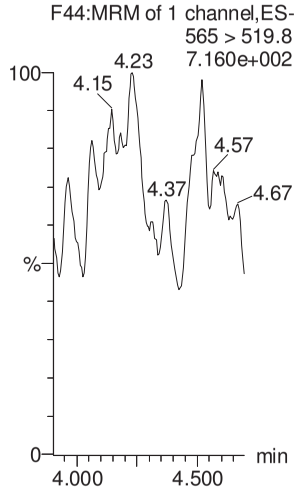

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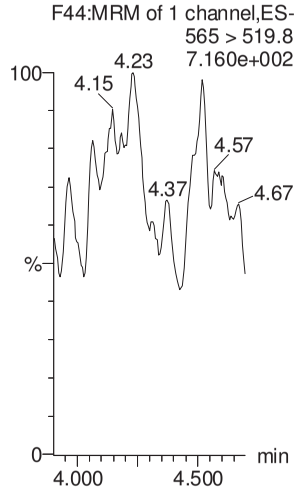

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Vista Analytical Laboratory

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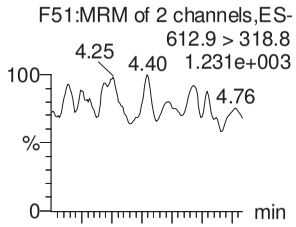

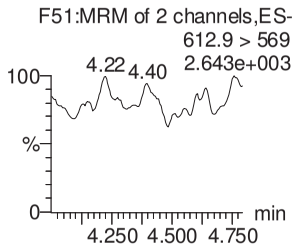

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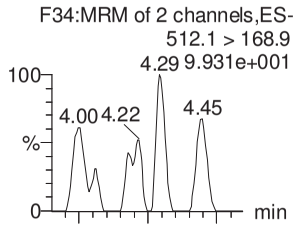

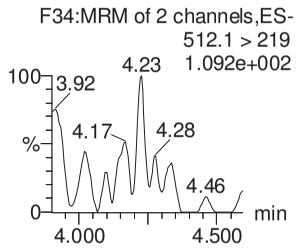

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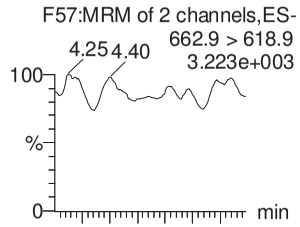

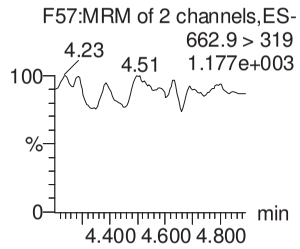

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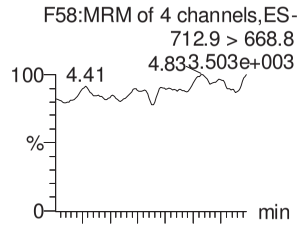
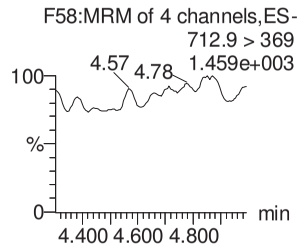
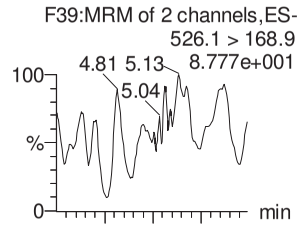
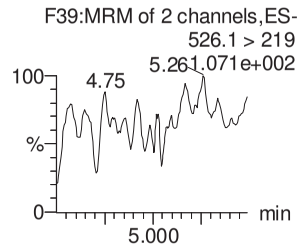


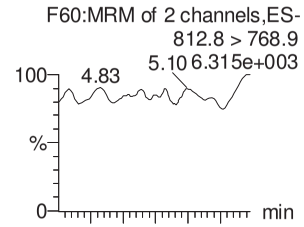


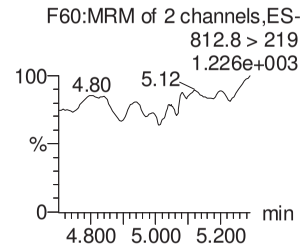
N-EtFOSA



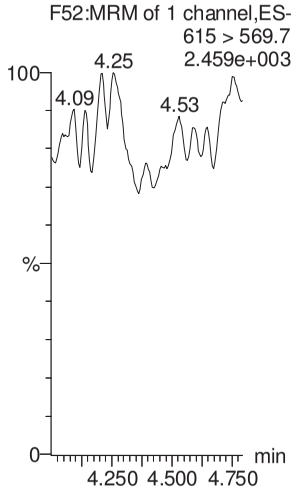


PFHxDA

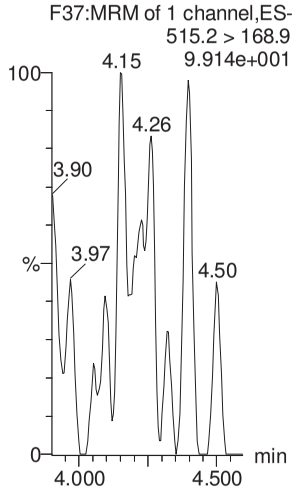




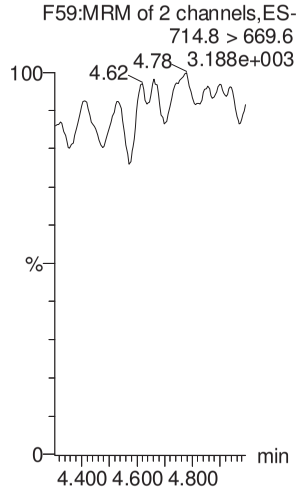
13C2-PFDoA



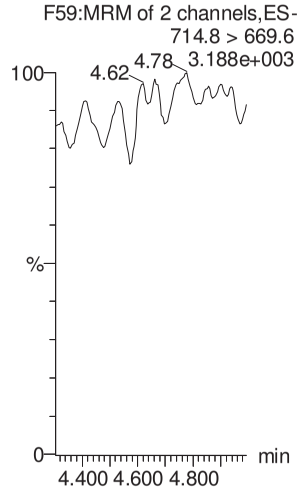
d3-N-MeFOSA



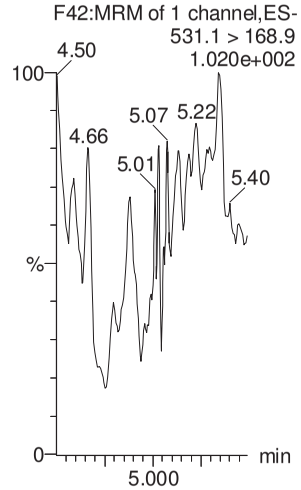
13C2-PFTeDA



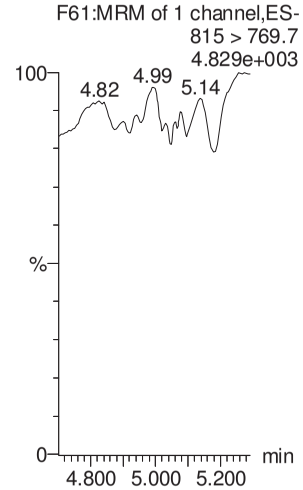
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



GM 8/12/17

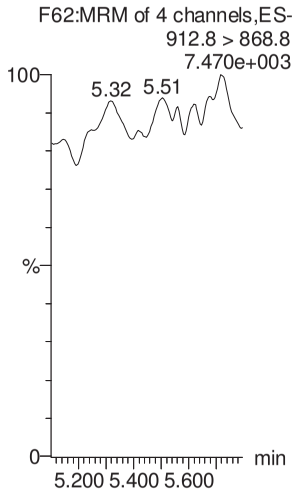
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-3.qld

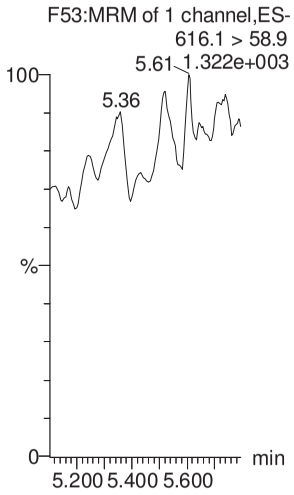
Last Altered: Saturday, August 12, 2017 22:26:03 Pacific Daylight Time
Printed: Saturday, August 12, 2017 22:26:26 Pacific Daylight Time

Name: 170801M1_3, Date: 01-Aug-2017, Time: 10:06:45, ID: IPA, Description: IPA

PFODA



N-MeFOSE



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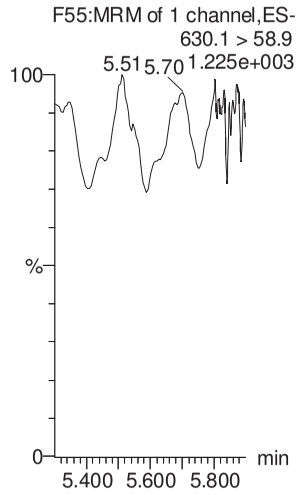
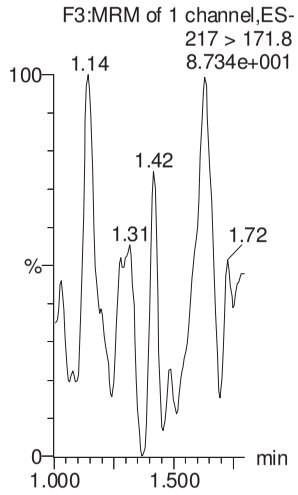
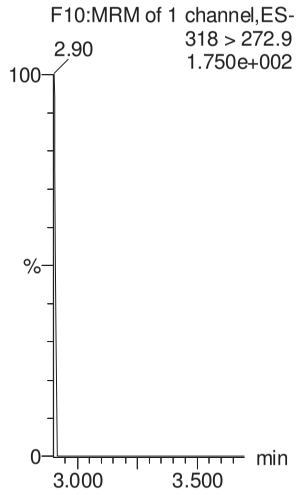


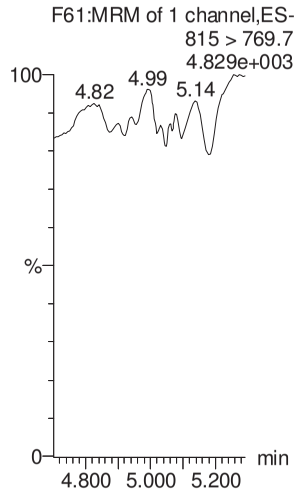
13C4-PFBA



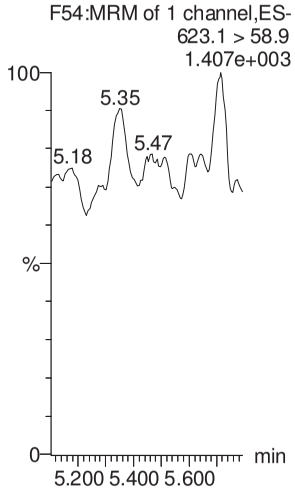
13C5-PFHxA



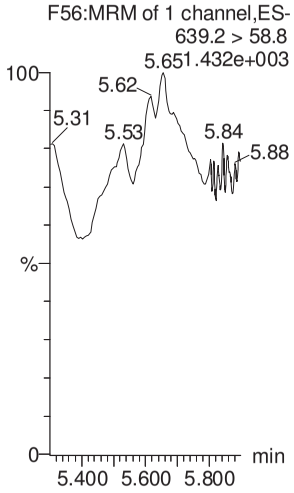
13C2-PFHxDA



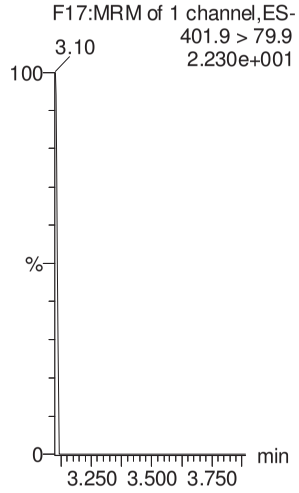
d7-N-MeFOSE



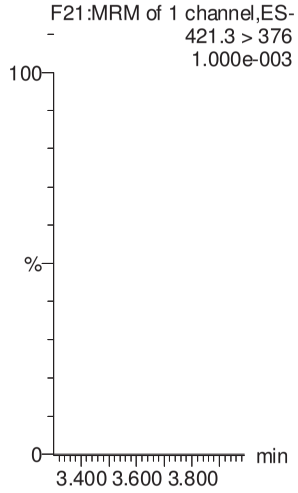
d9-N-EtFOSE



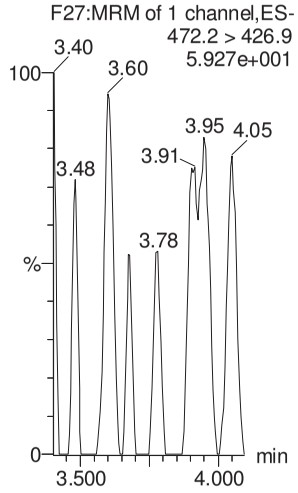
13C3-PFHxS



13C8-PFOA



13C9-PFNA



GM 8/12/17

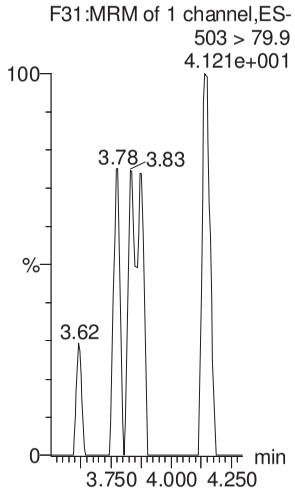
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-3.qld

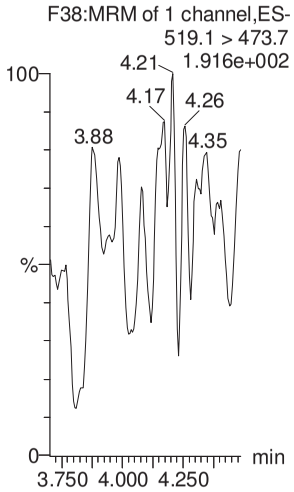
Last Altered: Saturday, August 12, 2017 22:26:03 Pacific Daylight Time
Printed: Saturday, August 12, 2017 22:26:26 Pacific Daylight Time

Name: 170801M1_3, Date: 01-Aug-2017, Time: 10:06:45, ID: IPA, Description: IPA

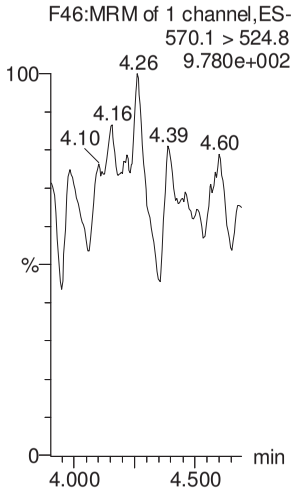
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/12/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-2.qld

Last Altered: Thursday, August 03, 2017 13:50:07 Pacific Daylight Time
Printed: Thursday, August 03, 2017 13:51:38 Pacific Daylight Time

AC 8/3/17
(A) Not used

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_2, Date: 01-Aug-2017, Time: 09:55:58, ID: ST170801M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	3.50e3	3.47e4	1.0000		1.32	1.39	1.26	1.10	110.2
2	2	PFPeA	263.1 > 218.9	7.35e3	8.65e4	1.0000		2.77	2.68	1.06	1.08	107.9
3	3	PFBS	299 > 79.7	1.86e3	1.16e4	1.0000		2.96	2.91	1.99	1.02	102.2
4	4	PFHxA	313.2 > 268.9	1.33e4	4.09e4	1.0000		3.19	3.16	1.62	1.06	106.1
5	5	PFHpA	363 > 318.9	1.04e4	9.32e4	1.0000		3.45	3.43	1.40	1.11	110.8
6	6	PFHxS	398.9 > 79.6	1.19e3	8.26e3	1.0000		3.56	3.50	1.80	1.05	105.2
7	7	6:2 FTS	427.1 > 407	1.92e3	2.01e4	1.0000		3.64	3.63	1.19	1.08	107.5
8	8	PFOA	413 > 368.7	1.07e4	1.24e5	1.0000		3.65	3.64	1.08	0.978	97.8
9	9	PFHpS	448.9 > 98.8	1.06e3	1.24e5	1.0000		3.65	3.68	0.107	1.16	115.6
10	10	PFNA	462.9 > 418.8	1.06e4	1.14e5	1.0000		3.83	3.81	1.16	0.999	99.9
11	11	PFOSA	498.1 > 77.8	1.02e3	1.18e4	1.0000		3.84	3.82	1.08	1.04	103.5
12	12	PFOS	499 > 79.9	1.92e3	1.91e4	1.0000		3.89	3.86	1.25	1.18	118.5
13	13	PFDA	513 > 468.8	1.07e4	1.08e5	1.0000		4.01	3.98	1.24	0.905	90.5
14	14	8:2 FTS	527 > 506.9	1.77e3	1.37e4	1.0000		4.00	3.98	1.61	1.10	109.6
15	15	N-MeFOSAA	570.1 > 419	3.11e3	2.49e4	1.0000		4.03	4.01	20.4	1.09	109.4
16	16	N-EtFOSAA	584.2 > 419	2.30e3	2.44e4	1.0000		4.10	4.08	15.3	1.01	101.1
17	17	PFUnA	562.9 > 518.9	8.16e3	1.01e5	1.0000		4.17	4.14	1.01	1.22	122.2
18	18	PFDS	598.9 > 98.7	7.79e2	1.01e5	1.0000		4.22	4.19	0.0968	1.23	123.4
19	19	PFDoA	612.9 > 318.8	9.32e2	1.19e4	1.0000		4.34	4.30	0.979	1.03	103.3
20	20	N-MeFOSA	512.1 > 168.9	1.50e3	3.96e4	1.0000		4.29	4.34	5.68	5.42	108.3
21	21	PFTrDA	662.9 > 618.9	1.13e4	1.19e4	1.0000		4.50	4.47	11.9	1.03	103.3
22	22	PFTeDA	712.9 > 668.8	7.18e3	7.49e4	1.0000		4.68	4.65	1.20	1.01	101.0
23	23	N-EtFOSA	526.1 > 168.9	1.82e3	5.13e4	1.0000		4.79	4.93	5.32	5.36	107.2
24	24	PFHxDA	812.8 > 768.9	6.50e3	2.18e4	1.0000		5.06	5.02	1.49	0.992	99.2
25	25	PFODA	912.8 > 868.8	1.64e3	2.18e4	1.0000		5.43	5.38	0.377	0.198	(A) 19.8
26	26	N-MeFOSE	616.1 > 58.9	2.70e3	6.99e4	1.0000		5.42	5.44	5.80	5.24	104.8
27	27	N-EtFOSE	630.1 > 58.9	3.11e3	6.68e4	1.0000		5.59	5.62	6.99	5.00	99.9
28	28	13C3-PFBA	216.1 > 171.8	3.47e4	3.49e4	1.0000	1.006	1.32	1.38	12.4	12.3	98.8
29	29	13C3-PFPeA	266 > 221.8	8.65e4	1.14e5	1.0000	0.275	2.77	2.68	3.78	13.7	109.8
30	30	13C3-PFBS	302 > 98.8	1.16e4	1.14e5	1.0000	0.034	2.96	2.91	0.509	14.9	119.2
31	31	13C2-PFHxA	315 > 269.8	4.09e4	1.14e5	1.0000	0.334	3.19	3.16	1.79	5.35	107.0

70-130

50-150

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-2.qld

Last Altered: Thursday, August 03, 2017 13:50:07 Pacific Daylight Time
Printed: Thursday, August 03, 2017 13:51:38 Pacific Daylight Time

Name: 170801M1_2, Date: 01-Aug-2017, Time: 09:55:58, ID: ST170801M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	9.32e4	1.14e5	1.0000	0.414	3.45	3.43	4.07	9.82	78.6
33	33	18O2-PFHxS	403 > 102.6	8.26e3	1.62e4	1.0000	0.475	3.56	3.50	6.37	13.4	107.2
34	34	13C2-6:2 FTS	429.1 > 408.9	2.01e4	9.52e4	1.0000	0.214	3.64	3.62	2.64	12.3	98.7
35	35	13C2-PFOA	414.9 > 369.7	1.24e5	9.52e4	1.0000	1.298	3.65	3.63	16.3	12.6	100.5
36	36	13C5-PFNA	468.2 > 422.9	1.14e5	1.09e5	1.0000	1.094	3.83	3.81	13.1	12.0	95.9
37	37	13C8-PFOSA	506.1 > 77.7	1.18e4	1.03e5	1.0000	0.124	3.84	3.82	1.43	11.5	92.0
38	38	13C8-PFOS	507 > 79.9	1.91e4	1.75e4	1.0000	1.153	3.89	3.86	13.7	11.9	94.9
39	39	13C2-PFDA	515.1 > 469.9	1.08e5	1.09e5	1.0000	1.059	4.01	3.98	12.4	11.7	93.7
40	40	13C2-8:2 FTS	529.1 > 508.7	1.37e4	1.09e5	1.0000	0.129	4.00	3.98	1.57	12.2	97.8
41	41	d3-N-MeFOSAA	573.3 > 419	2.49e4	1.03e5	1.0000	0.019	4.03	4.01	3.03	157	96.5
42	42	d5-N-EtFOSAA	589.3 > 419	2.44e4	1.03e5	1.0000	0.019	4.12	4.08	2.97	157	96.5
43	43	13C2-PFUnA	565 > 519.8	1.01e5	1.03e5	1.0000	1.172	4.17	4.14	12.3	10.5	83.6
44	44	13C2-PFDoA	615 > 569.7	1.19e4	1.03e5	1.0000	0.118	4.34	4.30	1.45	12.2	97.9
45	45	d3-N-MeFOSA	515.2 > 168.9	3.96e4	1.03e5	1.0000	0.040	4.29	4.38	4.82	119	79.4
46	46	13C2-PFTeDA	714.8 > 669.6	7.49e4	1.03e5	1.0000	0.801	4.68	4.65	9.12	11.4	91.1
47	47	d5-N-ETFOSA	531.1 > 168.9	5.13e4	1.03e5	1.0000	0.055	4.85	4.97	6.25	114	75.7
48	48	13C2-PFHxDA	815 > 769.7	2.18e4	1.03e5	1.0000	0.991	5.06	5.02	2.65	2.68	53.6
49	49	d7-N-MeFOSE	623.1 > 58.9	6.99e4	1.03e5	1.0000	0.065	5.42	5.43	8.52	131	87.2
50	50	d9-N-EtFOSE	639.2 > 58.8	6.68e4	1.03e5	1.0000	0.065	5.59	5.61	8.14	126	83.8
51	51	13C4-PFBA	217 > 171.8	3.49e4	3.49e4	1.0000	1.000	1.32	1.39	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	1.14e5	1.14e5	1.0000	1.000	3.19	3.15	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	1.62e4	1.62e4	1.0000	1.000	3.56	3.50	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	9.52e4	9.52e4	1.0000	1.000	3.65	3.63	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	1.09e5	1.09e5	1.0000	1.000	3.83	3.81	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.75e4	1.75e4	1.0000	1.000	3.89	3.86	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	1.09e5	1.09e5	1.0000	1.000	4.01	3.98	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	1.03e5	1.03e5	1.0000	1.000	4.17	4.14	12.5	12.5	100.0

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Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Compound name: PFBA

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2	170801M1_2	ST170801M1-1 PFC CS0 17G2826	01-Aug-17	09:55:58
3	170801M1_3	IPA	01-Aug-17	10:06:45
4	170801M1_4	B7G0124-BLK1 Method Blank 5	01-Aug-17	10:17:40
5	170801M1_5	B7G0125-BLK1 Method Blank 5	01-Aug-17	10:30:10
6	170801M1_6	B7G0126-BLK1 Method Blank 5	01-Aug-17	10:40:49
7	170801M1_7	B7G0125-BS1 OPR 5	01-Aug-17	10:51:27
8	170801M1_8	B7G0125-BS2 OPR 5	01-Aug-17	11:02:05
9	170801M1_9	B7G0125-BS3 OPR 5	01-Aug-17	11:12:44
10	170801M1_10	B7G0125-BS4 OPR 5	01-Aug-17	11:23:22
11	170801M1_11	B7G0125-BS5 OPR 5	01-Aug-17	11:34:09
12	170801M1_12	B7G0125-BS6 OPR 5	01-Aug-17	11:44:47
13	170801M1_13	B7G0125-BS7 OPR 5	01-Aug-17	11:55:25
14	170801M1_14	B7G0126-BS2 OPR 5	01-Aug-17	12:06:12
15	170801M1_15	B7G0126-BS3 OPR 5	01-Aug-17	12:16:52
16	170801M1_16	B7G0126-BS4 OPR 5	01-Aug-17	12:27:41
17	170801M1_17	B7G0126-BS5 OPR 5	01-Aug-17	12:38:25
18	170801M1_18	B7G0124-BS1 OPR 5	01-Aug-17	12:49:04
19	170801M1_19	B7G0124-BS2 OPR 5	01-Aug-17	12:59:42
20	170801M1_20	B7G0124-BS3 OPR 5	01-Aug-17	13:10:20
21	170801M1_21	B7G0124-BS4 OPR 5	01-Aug-17	13:20:59
22	170801M1_22	IPA	01-Aug-17	13:31:45
23	170801M1_23	ST170801M1-2 PFC CS3 17G3105	01-Aug-17	13:42:24
24	170801M1_24	IPA	01-Aug-17	13:53:02
25	170801M1_25	B7G0122-BS1 OPR 0.25	01-Aug-17	14:03:43
26	170801M1_26	IPA	01-Aug-17	14:14:27
27	170801M1_27	B7G0122-BLK1 Method Blank 0.25	01-Aug-17	14:25:05
28	170801M1_28	1700891-06RE1 VEL FOAM 0.17113	01-Aug-17	14:35:50
29	170801M1_29	1700920-01 RCDM-MW-28S-20170719 0.1113	01-Aug-17	14:47:19
30	170801M1_30	1700920-02 LF-MW-12S-20170719 0.11113	01-Aug-17	14:58:06
31	170801M1_31	1700920-03 RCDM-MW-14S-20170720 0.11405	01-Aug-17	15:09:41

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Compound name: PFBA

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33	170801M1_33	1700920-05 MH-A97-20170720 0.12086	01-Aug-17	15:31:28
34	170801M1_34	1700920-06 MH-H93-20170720 0.11357	01-Aug-17	15:42:06
35	170801M1_35	1700920-07 RCDM-BLANK-20170720 0.11872	01-Aug-17	15:52:53
36	170801M1_36	1700920-08 MH-C94-20170720 0.11568	01-Aug-17	16:03:31
37	170801M1_37	IPA	01-Aug-17	16:14:18
38	170801M1_38	1700920-09 RCDM-MW-13S-20170719 0.11866	01-Aug-17	16:24:56
39	170801M1_39	IPA	01-Aug-17	16:35:34
40	170801M1_40	ST170801M1-3 PFC CS3 17G3105	01-Aug-17	16:46:13
41	170801M1_41	IPA	01-Aug-17	16:56:59
42	170801M1_42	1700920-10 LF-MW-14S-20170720 0.11481	01-Aug-17	17:08:05
43	170801M1_43	1700920-11 LF-MW-11BR-20170720 0.11664	01-Aug-17	17:18:47
44	170801M1_44	1700920-12 LF-MW-13S-20170719 0.11667	01-Aug-17	17:29:25
45	170801M1_45	1700920-13 RCDM-MW-11BR-20170720 0.11...	01-Aug-17	17:40:03
46	170801M1_46	1700920-14 RCDM-MW-12S-20170719 0.11619	01-Aug-17	17:50:42
47	170801M1_47	1700920-15 LF-MW-28S-20170719 0.11572	01-Aug-17	18:01:20
48	170801M1_48	1700920-16 DUP-07-20170719 0.12023	01-Aug-17	18:11:59
49	170801M1_49	1700920-17 FRB04-20170719 0.11007	01-Aug-17	18:22:37
50	170801M1_50	1700920-01@5X RCDM-MW-28S-20170719 ...	01-Aug-17	18:33:15
51	170801M1_51	1700920-02@5X LF-MW-12S-20170719 0.11...	01-Aug-17	18:43:54
52	170801M1_52	1700920-08@5X MH-C94-20170720 0.11568	01-Aug-17	18:54:40
53	170801M1_53	IPA	01-Aug-17	19:05:27
54	170801M1_54	ST170801M1-4 PFC CS3 17G3105	01-Aug-17	19:16:05
55	170801M1_55	IPA	01-Aug-17	19:27:09
56	170801M1_56	1700920-14@5X RCDM-MW-12S-20170719 ...	01-Aug-17	19:39:06
57	170801M1_57	1700920-15@5X LF-MW-28S-20170719 0.11...	01-Aug-17	19:49:49
58	170801M1_58	B7G0086-BS1 OPR 1	01-Aug-17	20:00:27
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60	170801M1_60	B7G0086-BLK1 Method Blank 1	01-Aug-17	20:21:52
61	170801M1_61	1700886-11 AT028-SD17-01-071217-1430 1.84	01-Aug-17	20:32:30
62	170801M1_62	1700886-12 AT028-SD17-02-071317-0845 1.44	01-Aug-17	20:43:09
63	170801M1_63	1700888-01 HARRI-01-SB01-0-2 1.52	01-Aug-17	20:53:47
64	170801M1_64	1700888-02 HARRI-01-SB01-6-8 1.32	01-Aug-17	21:04:25
65	170801M1_65	1700888-03 HARRI-01-SB02-0-2 2.04	01-Aug-17	21:15:04

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Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Compound name: PFBA

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67	170801M1_67	1700888-05 HARRI-01-SB02-8-10 1.35	01-Aug-17	21:36:29
68	170801M1_68	1700888-06 HARRI-01-SB03-0-2 1.33	01-Aug-17	21:47:15
69	170801M1_69	IPA	01-Aug-17	21:58:02
70	170801M1_70	ST170801M1-5 PFC CS3 17G3105	01-Aug-17	22:08:40
71	170801M1_71	IPA	01-Aug-17	22:19:26
72	170801M1_72	1700888-07 HARRI-01-SB03-8-10 1.37	01-Aug-17	22:31:08
73	170801M1_73	1700888-08 HARRI-02-SB01-0-2 1.21	01-Aug-17	22:42:08
74	170801M1_74	1700888-09 HARRI-02-SB01-6-8 1.47	01-Aug-17	22:52:47
75	170801M1_75	1700888-10 HARRI-02-SB02-0-2 1.3	01-Aug-17	23:03:25
76	170801M1_76	1700888-11 HARRI-02-SB02-6-8 1.38	01-Aug-17	23:14:04
77	170801M1_77	1700889-01 HARRI-03-SB01-0-2 1.36	01-Aug-17	23:24:50
78	170801M1_78	1700889-02 HARRI-03-SB01-WT-WT 1.33	01-Aug-17	23:35:28
79	170801M1_79	1700889-03 HARRI-03-SO-Dup02-01000 1.37	01-Aug-17	23:46:15
80	170801M1_80	1700889-04 HARRI-03-SB02-0-2 1.34	01-Aug-17	23:57:01
81	170801M1_81	1700889-05 HARRI-03-SB02-WT-WT 1.17	02-Aug-17	00:07:48
82	170801M1_82	IPA	02-Aug-17	00:18:27
83	170801M1_83	ST170801M1-6 PFC CS3 17G3105	02-Aug-17	00:29:13
84	170801M1_84	IPA	02-Aug-17	00:40:01
85	170801M1_85	1700889-06 HARRI-03-SB03-0-2 1.33	02-Aug-17	00:50:50
86	170801M1_86	1700889-07 HARRI-03-SB03-WT-WT 1.34	02-Aug-17	01:01:34
87	170801M1_87	B7G0086-MS1 Matrix Spike 1.35	02-Aug-17	01:12:13
88	170801M1_88	B7G0086-MSD1 Matrix Spike Dup 1.4	02-Aug-17	01:22:51
89	170801M1_89	IPA	02-Aug-17	01:33:37
90	170801M1_90	ST170801M1-7 PFC CS3 17G3105	02-Aug-17	01:44:16
91	170801M1_91	IPA	02-Aug-17	01:55:02

LC Calibration Standards Review Checklist Q4

		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
Calibration ID: ST170801M1-1	(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: -7	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: AM 8/3/17
Initials/Date

Comments:
Full List.
(A) Not used for PFODA.
AC 8/3/17

Vista Analytical Laboratory

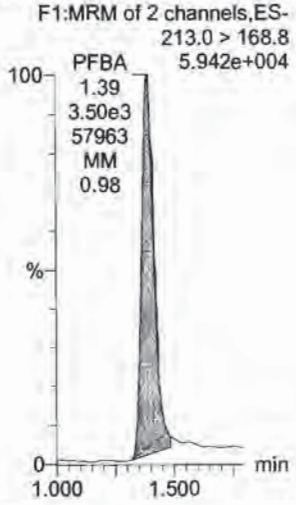
Dataset: U:\Q4.PRO\results\170801M1\170801M1-2.qld

Last Altered: Thursday, August 03, 2017 13:50:07 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:49:48 Pacific Daylight Time

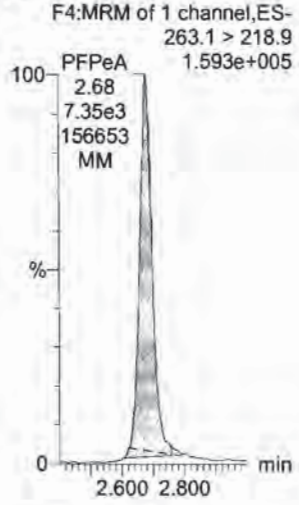
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_2, Date: 01-Aug-2017, Time: 09:55:58, ID: ST170801M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

PFBA



PFPeA



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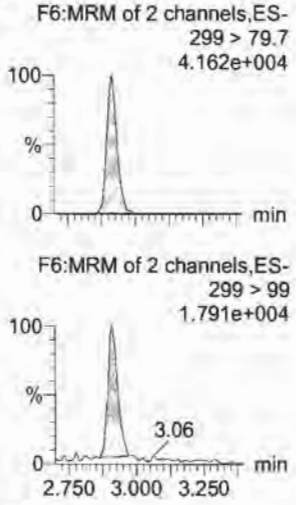

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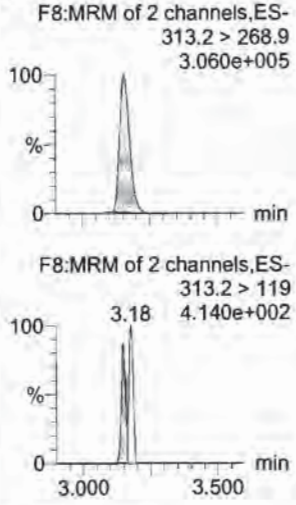

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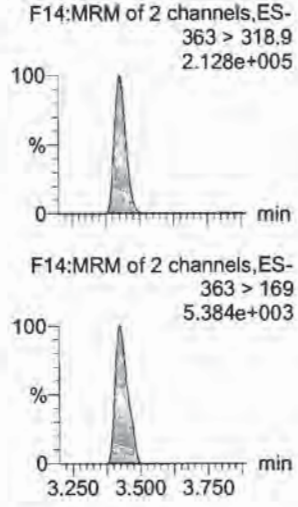

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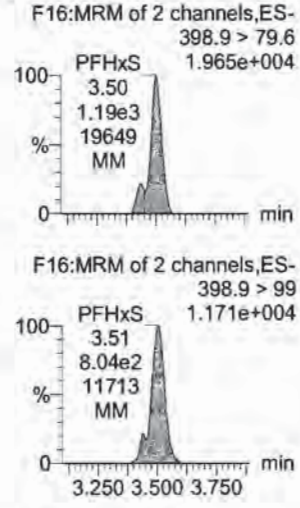
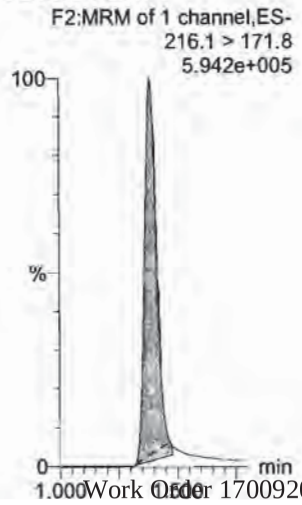


13C3-PFBA



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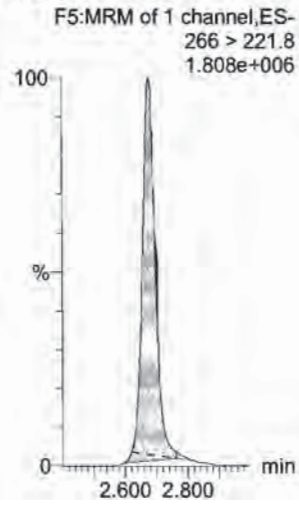

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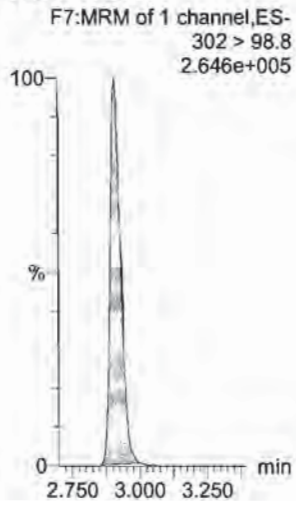

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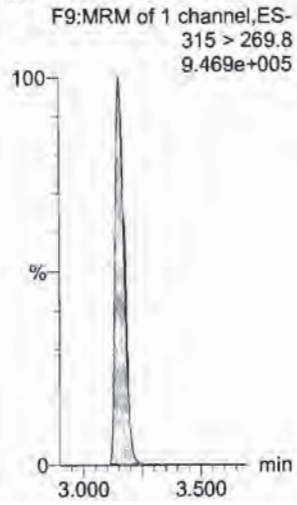
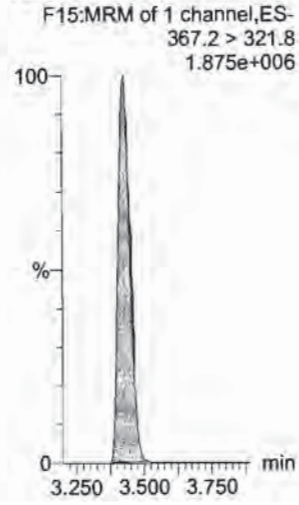
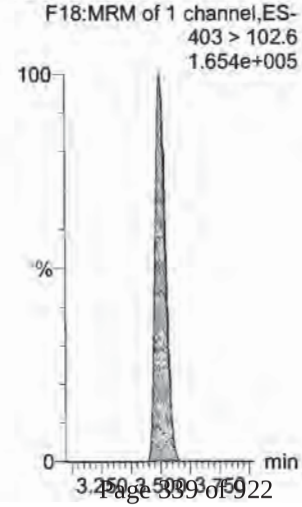


13C4-PFHpA



18O2-PFHxS



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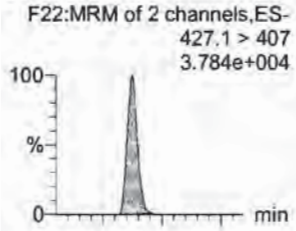
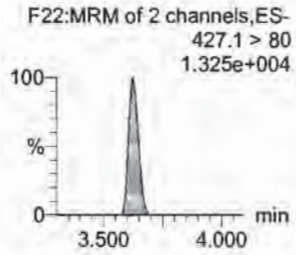
Last Altered: Thursday, August 03, 2017 13:50:07 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:49:48 Pacific Daylight Time

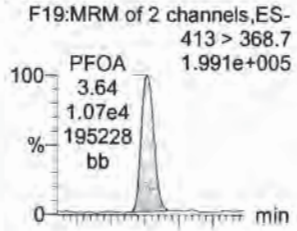
Name: 170801M1_2, Date: 01-Aug-2017, Time: 09:55:58, ID: ST170801M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

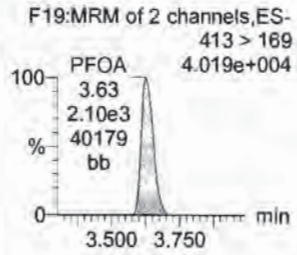
6:2 FTS





PFOA





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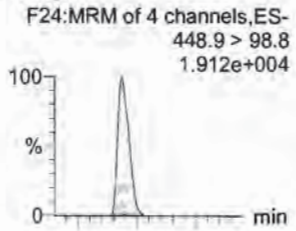

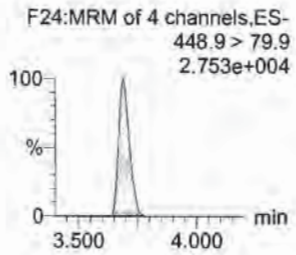

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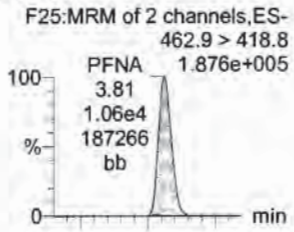

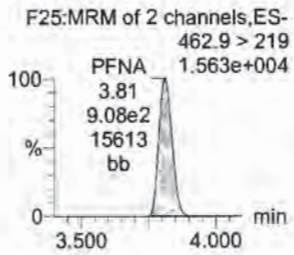

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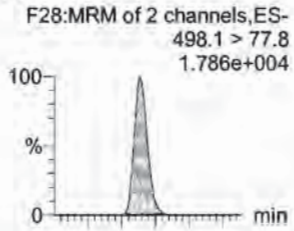

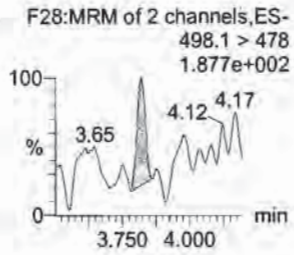

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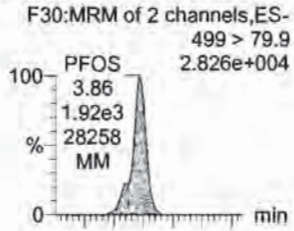

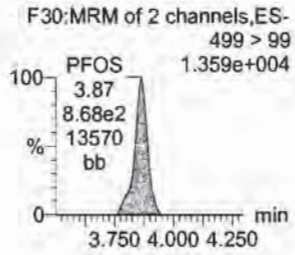

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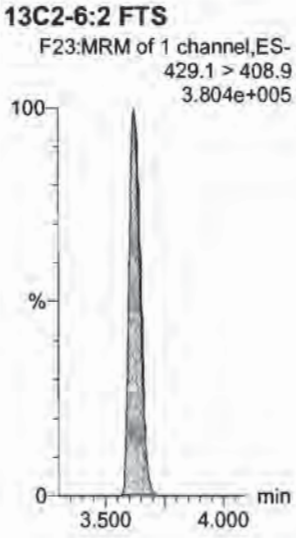

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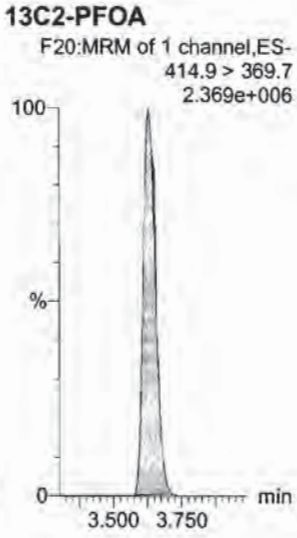

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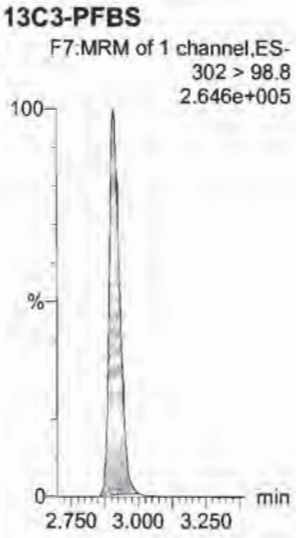

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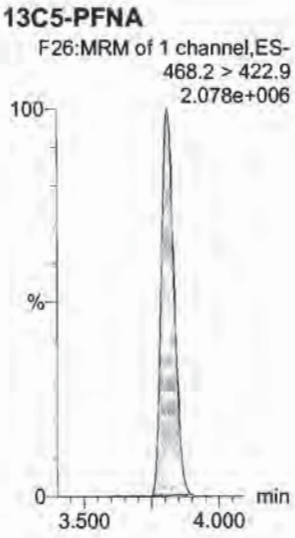
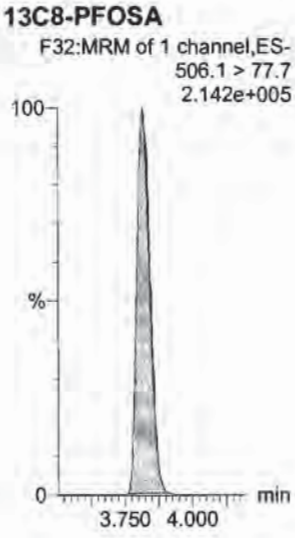


13C8-PFOSA



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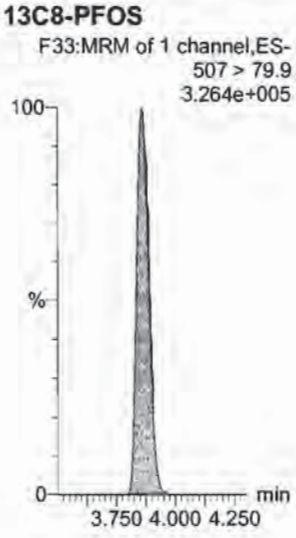

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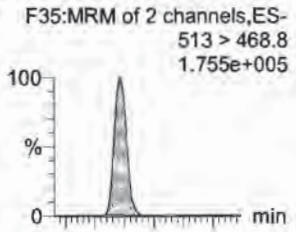
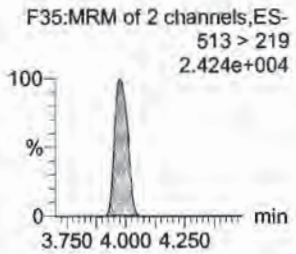
Printed: Thursday, August 03, 2017 15:49:48 Pacific Daylight Time

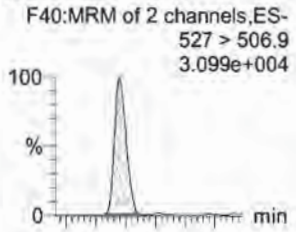
Name: 170801M1_2, Date: 01-Aug-2017, Time: 09:55:58, ID: ST170801M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

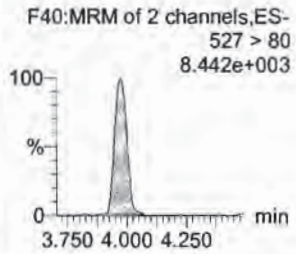
PFDA



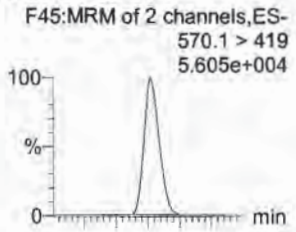


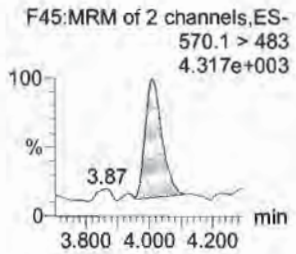
8:2 FTS





N-MeFOSAA





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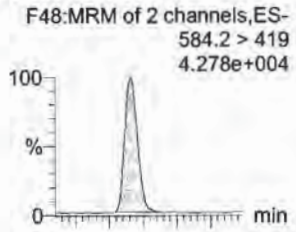
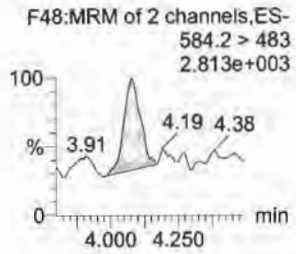
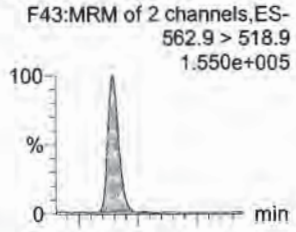
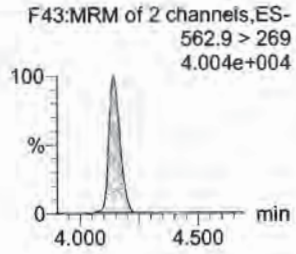




PFUnA





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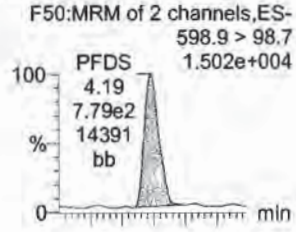
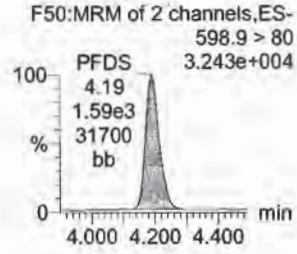
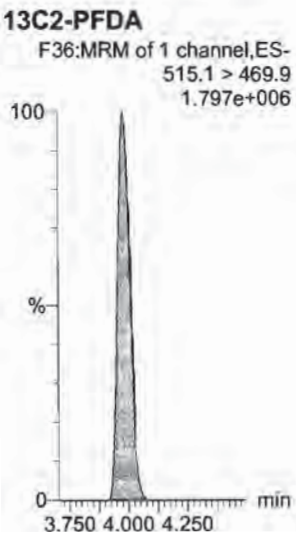
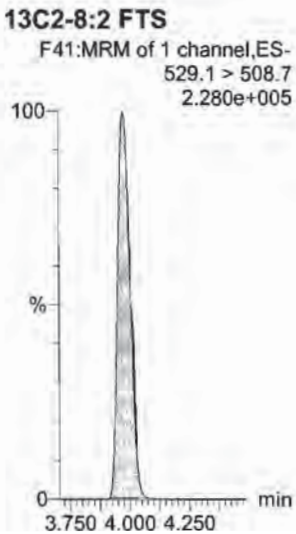




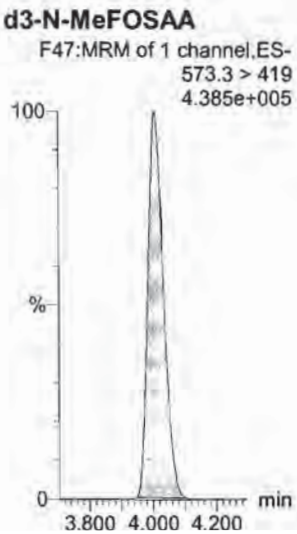
13C2-PFDA



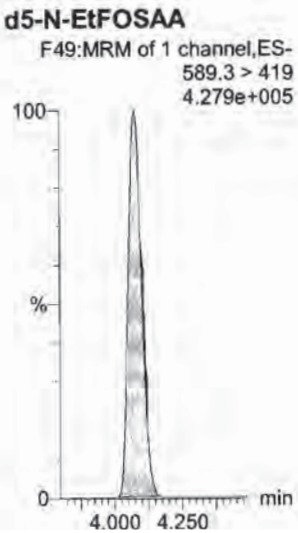
13C2-8:2 FTS



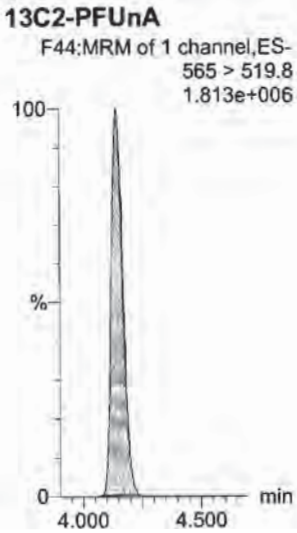
d3-N-MeFOSAA



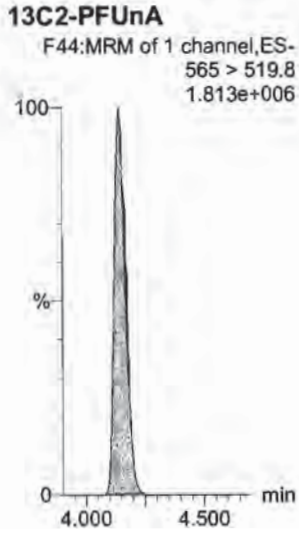
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



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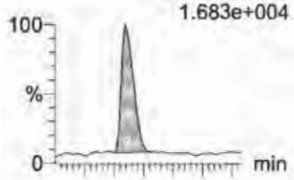
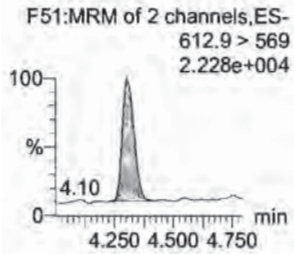
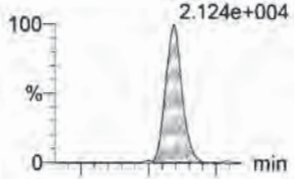
Name: 170801M1_2, Date: 01-Aug-2017, Time: 09:55:58, ID: ST170801M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

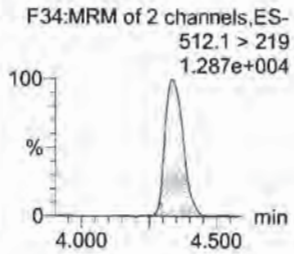
PFDoA





N-MeFOSA





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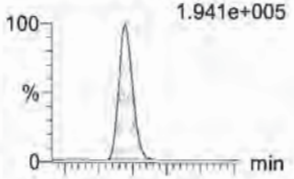
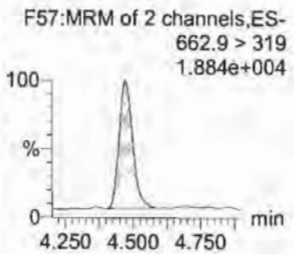
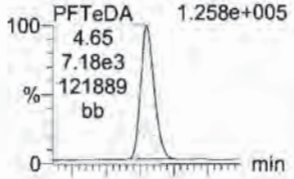
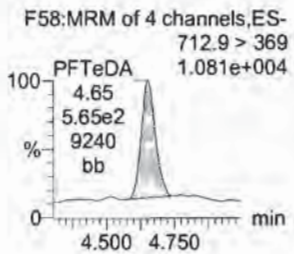




PFTeDA





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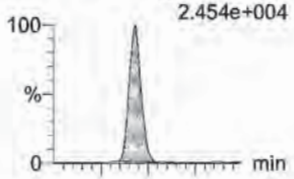
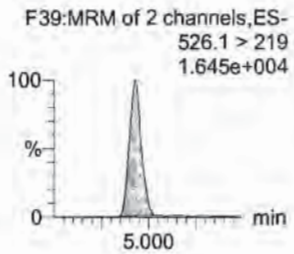
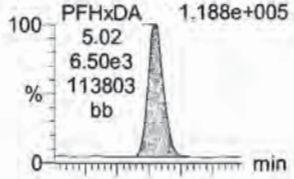
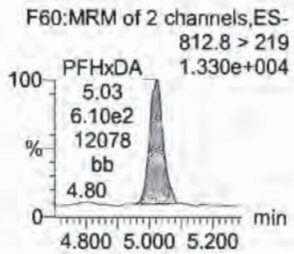




PFHxDA





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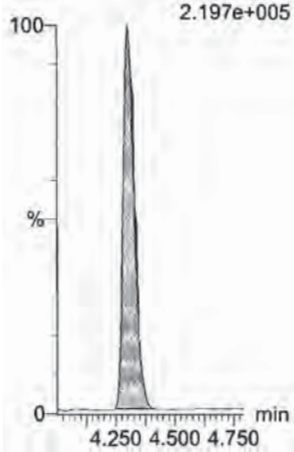
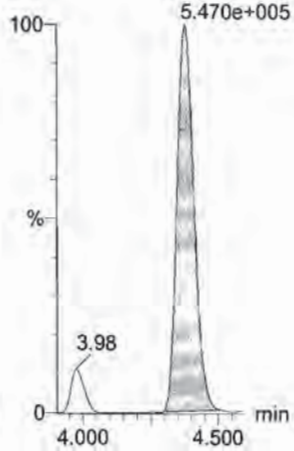
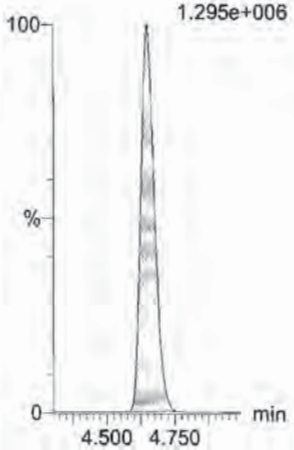


d3-N-MeFOSA



13C2-PFTeDA



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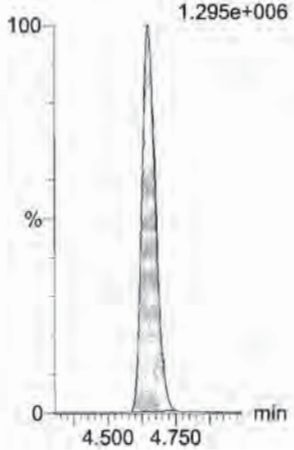
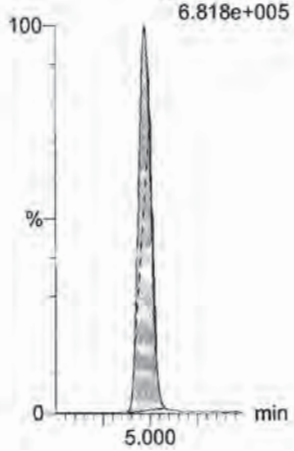
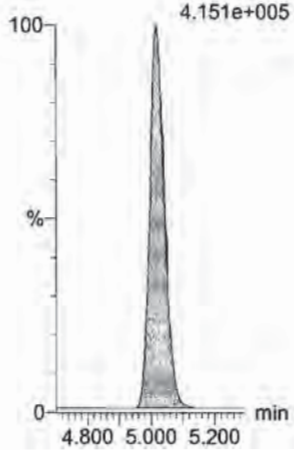


d5-N-ETFOSA



13C2-PFHxDA



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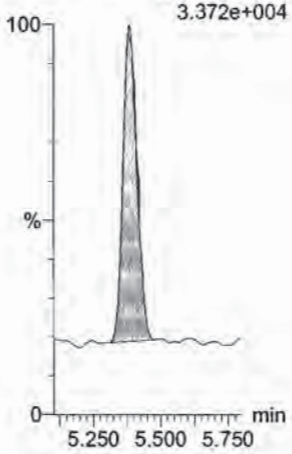
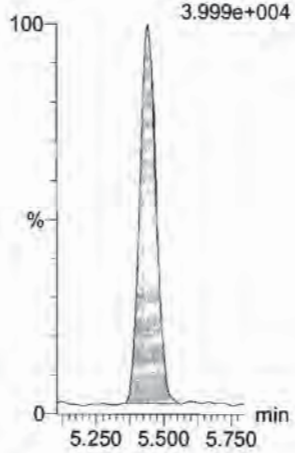
Name: 170801M1_2, Date: 01-Aug-2017, Time: 09:55:58, ID: ST170801M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

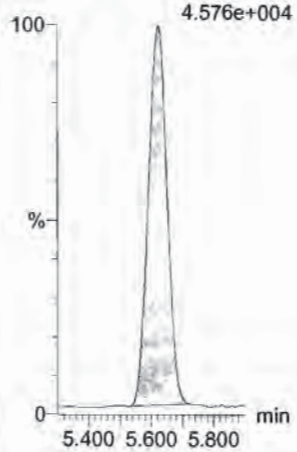
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
3.372e+004



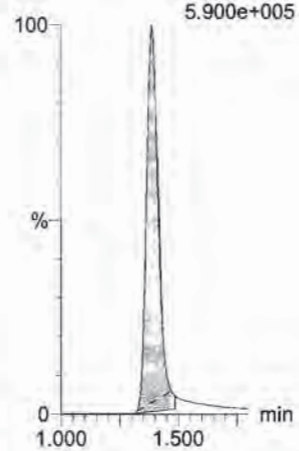
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
3.999e+004



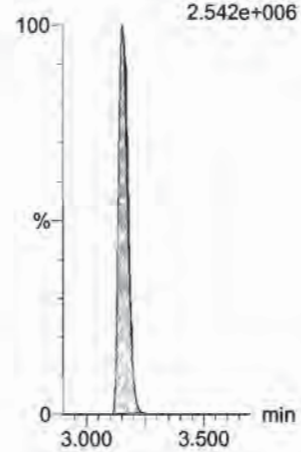
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
4.576e+004



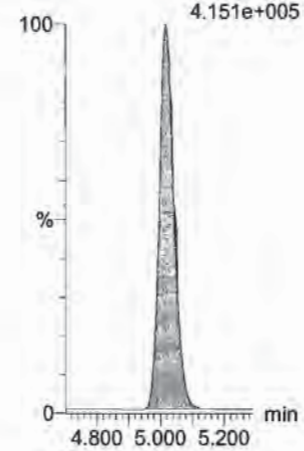
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
5.900e+005



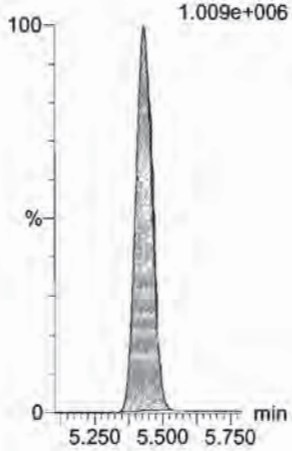
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
2.542e+006



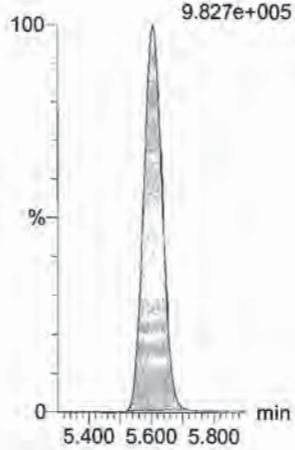
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.151e+005



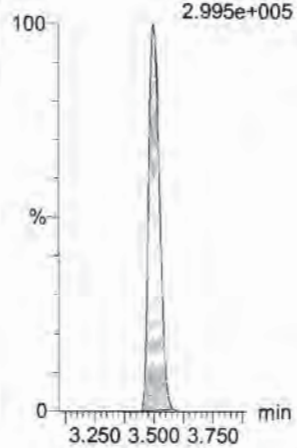
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
1.009e+006



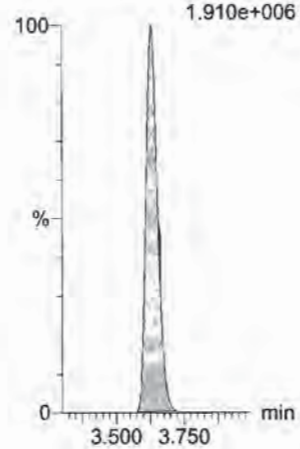
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
9.827e+005



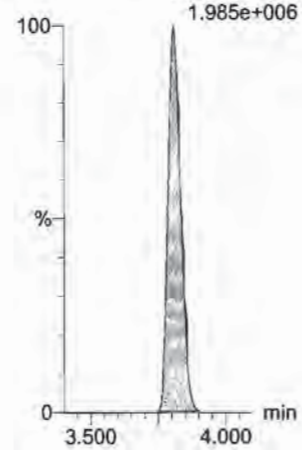
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
2.995e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.910e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.985e+006



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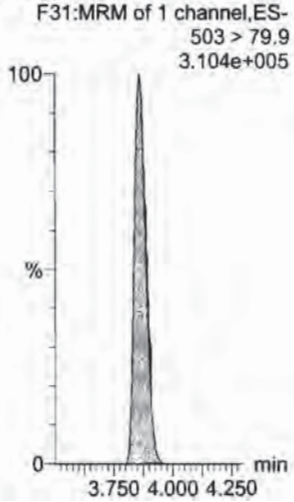
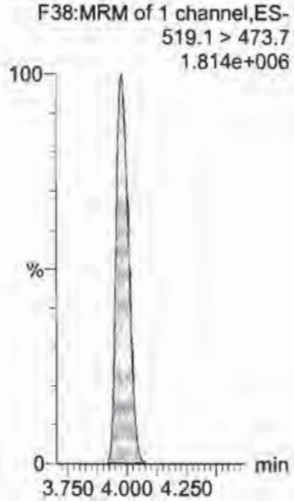
Name: 170801M1_2, Date: 01-Aug-2017, Time: 09:55:58, ID: ST170801M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

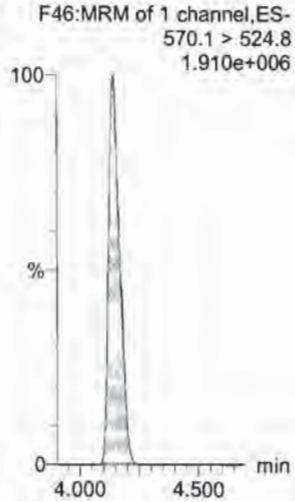
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-23.qld

Last Altered: Thursday, August 03, 2017 13:58:13 Pacific Daylight Time
Printed: Thursday, August 03, 2017 13:58:44 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

AC 8/3/17

Name: 170801M1_23, Date: 01-Aug-2017, Time: 13:42:24, ID: ST170801M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.18e4	1.40e4	1.0000		1.32	1.41	10.5	9.68	96.8
2	2	PFPeA	263.1 > 218.9	2.15e4	2.83e4	1.0000		2.77	2.70	9.50	9.94	99.4
3	3	PFBS	299 > 79.7	5.23e3	3.70e3	1.0000		2.96	2.93	17.7	9.35	93.5
4	4	PFHxA	313.2 > 268.9	3.86e4	1.37e4	1.0000		3.19	3.17	14.1	10.0	100.4
5	5	PFHpA	363 > 318.9	4.03e4	4.30e4	1.0000		3.45	3.44	11.7	9.75	97.5
6	6	PFHxS	398.9 > 79.6	5.24e3	3.74e3	1.0000		3.56	3.51	17.5	10.4	104.2
7	7	6:2 FTS	427.1 > 407	8.98e3	1.01e4	1.0000		3.64	3.63	11.1	9.86	98.6
8	8	PFOA	413 > 368.7	5.58e4	6.84e4	1.0000		3.65	3.64	10.2	10.5	105.2
9	9	PFHpS	448.9 > 98.8	4.76e3	6.84e4	1.0000		3.65	3.70	0.869	10.0	100.0
10	10	PFNA	462.9 > 418.8	5.20e4	6.22e4	1.0000		3.83	3.82	10.4	9.55	95.5
11	11	PFOSA	498.1 > 77.8	4.98e3	6.35e3	1.0000		3.84	3.83	9.80	9.15	91.5
12	12	PFOS	499 > 79.9	9.24e3	1.16e4	1.0000		3.89	3.87	9.92	9.70	97.0
13	13	PFDA	513 > 468.8	5.92e4	5.45e4	1.0000		4.01	3.99	13.6	11.2	111.8
14	14	8:2 FTS	527 > 506.9	7.38e3	6.24e3	1.0000		4.00	3.99	14.8	10.5	105.2
15	15	N-MeFOSAA	570.1 > 419	1.59e4	1.32e4	1.0000		4.03	4.02	196	11.0	109.9
16	16	N-EtFOSAA	584.2 > 419	1.22e4	1.36e4	1.0000		4.10	4.09	146	9.45	94.5
17	17	PFUnA	562.9 > 518.9	4.11e4	6.38e4	1.0000		4.17	4.16	8.05	10.5	105.1
18	18	PFDS	598.9 > 98.7	3.88e3	6.38e4	1.0000		4.22	4.21	0.760	9.45	94.5
19	19	PFDoA	612.9 > 318.8	4.70e3	6.37e3	1.0000		4.34	4.32	9.23	9.80	98.0
20	20	N-MeFOSA	512.1 > 168.9	9.00e3	2.43e4	1.0000		4.29	4.36	55.6	55.0	110.0
21	21	PFTrDA	662.9 > 618.9	5.79e4	6.37e3	1.0000		4.50	4.49	114	10.8	108.4
22	22	PFTeDA	712.9 > 668.8	3.95e4	4.67e4	1.0000		4.68	4.67	10.6	9.77	97.7
23	23	N-EtFOSA	526.1 > 168.9	1.07e4	3.34e4	1.0000		4.79	4.95	48.0	51.7	103.3
24	24	PFHxDA	812.8 > 768.9	5.92e4	2.24e4	1.0000		5.06	5.04	13.2	10.3	103.2
25	25	PFODA	912.8 > 868.8	5.53e4	2.24e4	1.0000		5.43	5.41	12.3	10.8	108.1
26	26	N-MeFOSE	616.1 > 58.9	1.37e4	3.87e4	1.0000		5.42	5.45	53.3	51.5	103.0
27	27	N-EtFOSE	630.1 > 58.9	1.56e4	3.82e4	1.0000		5.59	5.63	61.3	52.2	104.5
28	28	13C3-PFBA	216.1 > 171.8	1.40e4	1.36e4	1.0000	1.006	1.32	1.41	12.8	12.7	101.8
29	29	13C3-PFPeA	266 > 221.8	2.83e4	4.00e4	1.0000	0.275	2.77	2.70	3.54	12.9	102.8
30	30	13C3-PFBS	302 > 98.8	3.70e3	4.00e4	1.0000	0.034	2.96	2.93	0.462	13.5	108.3
31	31	13C2-PFHxA	315 > 269.8	1.37e4	4.00e4	1.0000	0.334	3.19	3.17	1.71	5.12	102.5

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-23.qld

Last Altered: Thursday, August 03, 2017 13:58:13 Pacific Daylight Time
Printed: Thursday, August 03, 2017 13:58:44 Pacific Daylight Time

Name: 170801M1_23, Date: 01-Aug-2017, Time: 13:42:24, ID: ST170801M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.30e4	4.00e4	1.0000	0.414	3.45	3.44	5.37	13.0	103.7
33	33	18O2-PFHxS	403 > 102.6	3.74e3	7.59e3	1.0000	0.475	3.56	3.51	6.15	12.9	103.5
34	34	13C2-6:2 FTS	429.1 > 408.9	1.01e4	5.57e4	1.0000	0.214	3.64	3.63	2.27	10.6	85.1
35	35	13C2-PFOA	414.9 > 369.7	6.84e4	5.57e4	1.0000	1.298	3.65	3.65	15.4	11.8	94.7
36	36	13C5-PFNA	468.2 > 422.9	6.22e4	5.57e4	1.0000	1.094	3.83	3.82	14.0	12.8	102.1
37	37	13C8-PFOSA	506.1 > 77.7	6.35e3	5.76e4	1.0000	0.124	3.84	3.83	1.38	11.1	88.7
38	38	13C8-PFOS	507 > 79.9	1.16e4	9.57e3	1.0000	1.153	3.89	3.87	15.2	13.2	105.5
39	39	13C2-PFDA	515.1 > 469.9	5.45e4	6.06e4	1.0000	1.059	4.01	3.99	11.2	10.6	85.0
40	40	13C2-8:2 FTS	529.1 > 508.7	6.24e3	6.06e4	1.0000	0.129	4.00	3.99	1.29	10.0	80.1
41	41	d3-N-MeFOSAA	573.3 > 419	1.32e4	5.76e4	1.0000	0.019	4.03	4.02	2.87	148	91.3
42	42	d5-N-EtFOSAA	589.3 > 419	1.36e4	5.76e4	1.0000	0.019	4.12	4.09	2.95	156	96.0
43	43	13C2-PFUnA	565 > 519.8	6.38e4	5.76e4	1.0000	1.172	4.17	4.16	13.9	11.8	94.6
44	44	13C2-PFDoA	615 > 569.7	6.37e3	5.76e4	1.0000	0.118	4.34	4.32	1.38	11.7	93.5
45	45	d3-N-MeFOSA	515.2 > 168.9	2.43e4	5.76e4	1.0000	0.040	4.29	4.40	5.27	130	86.9
46	46	13C2-PFTeDA	714.8 > 669.6	4.67e4	5.76e4	1.0000	0.801	4.68	4.67	10.1	12.7	101.2
47	47	d5-N-ETFOSA	531.1 > 168.9	3.34e4	5.76e4	1.0000	0.055	4.85	4.99	7.25	132	87.8
48	48	13C2-PFHxDA	815 > 769.7	2.24e4	5.76e4	1.0000	0.991	5.06	5.04	4.88	4.92	98.4
49	49	d7-N-MeFOSE	623.1 > 58.9	3.87e4	5.76e4	1.0000	0.065	5.42	5.44	8.40	129	86.0
50	50	d9-N-EtFOSE	639.2 > 58.8	3.82e4	5.76e4	1.0000	0.065	5.59	5.61	8.30	128	85.4
51	51	13C4-PFBA	217 > 171.8	1.36e4	1.36e4	1.0000	1.000	1.32	1.41	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	4.00e4	4.00e4	1.0000	1.000	3.19	3.17	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	7.59e3	7.59e3	1.0000	1.000	3.56	3.51	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	5.57e4	5.57e4	1.0000	1.000	3.65	3.65	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	5.57e4	5.57e4	1.0000	1.000	3.83	3.82	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	9.57e3	9.57e3	1.0000	1.000	3.89	3.87	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	6.06e4	6.06e4	1.0000	1.000	4.01	3.99	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	5.76e4	5.76e4	1.0000	1.000	4.17	4.16	12.5	12.5	100.0

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Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170801M1_1	IPA	01-Aug-17	09:45:15
2	170801M1_2	ST170801M1-1 PFC CS0 17G2826	01-Aug-17	09:55:58
3	170801M1_3	IPA	01-Aug-17	10:06:45
4	170801M1_4	B7G0124-BLK1 Method Blank 5	01-Aug-17	10:17:40
5	170801M1_5	B7G0125-BLK1 Method Blank 5	01-Aug-17	10:30:10
6	170801M1_6	B7G0126-BLK1 Method Blank 5	01-Aug-17	10:40:49
7	170801M1_7	B7G0125-BS1 OPR 5	01-Aug-17	10:51:27
8	170801M1_8	B7G0125-BS2 OPR 5	01-Aug-17	11:02:05
9	170801M1_9	B7G0125-BS3 OPR 5	01-Aug-17	11:12:44
10	170801M1_10	B7G0125-BS4 OPR 5	01-Aug-17	11:23:22
11	170801M1_11	B7G0125-BS5 OPR 5	01-Aug-17	11:34:09
12	170801M1_12	B7G0125-BS6 OPR 5	01-Aug-17	11:44:47
13	170801M1_13	B7G0125-BS7 OPR 5	01-Aug-17	11:55:25
14	170801M1_14	B7G0126-BS2 OPR 5	01-Aug-17	12:06:12
15	170801M1_15	B7G0126-BS3 OPR 5	01-Aug-17	12:16:52
16	170801M1_16	B7G0126-BS4 OPR 5	01-Aug-17	12:27:41
17	170801M1_17	B7G0126-BS5 OPR 5	01-Aug-17	12:38:25
18	170801M1_18	B7G0124-BS1 OPR 5	01-Aug-17	12:49:04
19	170801M1_19	B7G0124-BS2 OPR 5	01-Aug-17	12:59:42
20	170801M1_20	B7G0124-BS3 OPR 5	01-Aug-17	13:10:20
21	170801M1_21	B7G0124-BS4 OPR 5	01-Aug-17	13:20:59
22	170801M1_22	IPA	01-Aug-17	13:31:45
23	170801M1_23	ST170801M1-2 PFC CS3 17G3105	01-Aug-17	13:42:24
24	170801M1_24	IPA	01-Aug-17	13:53:02
25	170801M1_25	B7G0122-BS1 OPR 0.25	01-Aug-17	14:03:43
26	170801M1_26	IPA	01-Aug-17	14:14:27
27	170801M1_27	B7G0122-BLK1 Method Blank 0.25	01-Aug-17	14:25:05
28	170801M1_28	1700891-06RE1 VEL FOAM 0.17113	01-Aug-17	14:35:50
29	170801M1_29	1700920-01 RCDM-MW-28S-20170719 0.1113	01-Aug-17	14:47:19
30	170801M1_30	1700920-02 LF-MW-12S-20170719 0.11113	01-Aug-17	14:58:06
31	170801M1_31	1700920-03 RCDM-MW-14S-20170720 0.11405	01-Aug-17	15:09:41

Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
32	170801M1_32	1700920-04 MH-DUP01-20170720 0.12177	01-Aug-17	15:20:50
33	170801M1_33	1700920-05 MH-A97-20170720 0.12086	01-Aug-17	15:31:28
34	170801M1_34	1700920-06 MH-H93-20170720 0.11357	01-Aug-17	15:42:06
35	170801M1_35	1700920-07 RCDM-BLANK-20170720 0.11872	01-Aug-17	15:52:53
36	170801M1_36	1700920-08 MH-C94-20170720 0.11568	01-Aug-17	16:03:31
37	170801M1_37	IPA	01-Aug-17	16:14:18
38	170801M1_38	1700920-09 RCDM-MW-13S-20170719 0.11866	01-Aug-17	16:24:56
39	170801M1_39	IPA	01-Aug-17	16:35:34
40	170801M1_40	ST170801M1-3 PFC CS3 17G3105	01-Aug-17	16:46:13
41	170801M1_41	IPA	01-Aug-17	16:56:59
42	170801M1_42	1700920-10 LF-MW-14S-20170720 0.11481	01-Aug-17	17:08:05
43	170801M1_43	1700920-11 LF-MW-11BR-20170720 0.11664	01-Aug-17	17:18:47
44	170801M1_44	1700920-12 LF-MW-13S-20170719 0.11667	01-Aug-17	17:29:25
45	170801M1_45	1700920-13 RCDM-MW-11BR-20170720 0.11...	01-Aug-17	17:40:03
46	170801M1_46	1700920-14 RCDM-MW-12S-20170719 0.11619	01-Aug-17	17:50:42
47	170801M1_47	1700920-15 LF-MW-28S-20170719 0.11572	01-Aug-17	18:01:20
48	170801M1_48	1700920-16 DUP-07-20170719 0.12023	01-Aug-17	18:11:59
49	170801M1_49	1700920-17 FRB04-20170719 0.11007	01-Aug-17	18:22:37
50	170801M1_50	1700920-01@5X RCDM-MW-28S-20170719 ...	01-Aug-17	18:33:15
51	170801M1_51	1700920-02@5X LF-MW-12S-20170719 0.11...	01-Aug-17	18:43:54
52	170801M1_52	1700920-08@5X MH-C94-20170720 0.11568	01-Aug-17	18:54:40
53	170801M1_53	IPA	01-Aug-17	19:05:27
54	170801M1_54	ST170801M1-4 PFC CS3 17G3105	01-Aug-17	19:16:05
55	170801M1_55	IPA	01-Aug-17	19:27:09
56	170801M1_56	1700920-14@5X RCDM-MW-12S-20170719 ...	01-Aug-17	19:39:06
57	170801M1_57	1700920-15@5X LF-MW-28S-20170719 0.11...	01-Aug-17	19:49:49
58	170801M1_58	B7G0086-BS1 OPR 1	01-Aug-17	20:00:27
59	170801M1_59	IPA	01-Aug-17	20:11:13
60	170801M1_60	B7G0086-BLK1 Method Blank 1	01-Aug-17	20:21:52
61	170801M1_61	1700886-11 AT028-SD17-01-071217-1430 1.84	01-Aug-17	20:32:30
62	170801M1_62	1700886-12 AT028-SD17-02-071317-0845 1.44	01-Aug-17	20:43:09
63	170801M1_63	1700888-01 HARRI-01-SB01-0-2 1.52	01-Aug-17	20:53:47
64	170801M1_64	1700888-02 HARRI-01-SB01-6-8 1.32	01-Aug-17	21:04:25
65	170801M1_65	1700888-03 HARRI-01-SB02-0-2 2.04	01-Aug-17	21:15:04

Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
66	170801M1_66	1700888-04 HARRI-01-SO-DUP01-071117 1.06	01-Aug-17	21:25:42
67	170801M1_67	1700888-05 HARRI-01-SB02-8-10 1.35	01-Aug-17	21:36:29
68	170801M1_68	1700888-06 HARRI-01-SB03-0-2 1.33	01-Aug-17	21:47:15
69	170801M1_69	IPA	01-Aug-17	21:58:02
70	170801M1_70	ST170801M1-5 PFC CS3 17G3105	01-Aug-17	22:08:40
71	170801M1_71	IPA	01-Aug-17	22:19:26
72	170801M1_72	1700888-07 HARRI-01-SB03-8-10 1.37	01-Aug-17	22:31:08
73	170801M1_73	1700888-08 HARRI-02-SB01-0-2 1.21	01-Aug-17	22:42:08
74	170801M1_74	1700888-09 HARRI-02-SB01-6-8 1.47	01-Aug-17	22:52:47
75	170801M1_75	1700888-10 HARRI-02-SB02-0-2 1.3	01-Aug-17	23:03:25
76	170801M1_76	1700888-11 HARRI-02-SB02-6-8 1.38	01-Aug-17	23:14:04
77	170801M1_77	1700889-01 HARRI-03-SB01-0-2 1.36	01-Aug-17	23:24:50
78	170801M1_78	1700889-02 HARRI-03-SB01-WT-WT 1.33	01-Aug-17	23:35:28
79	170801M1_79	1700889-03 HARRI-03-SO-Dup02-01000 1.37	01-Aug-17	23:46:15
80	170801M1_80	1700889-04 HARRI-03-SB02-0-2 1.34	01-Aug-17	23:57:01
81	170801M1_81	1700889-05 HARRI-03-SB02-WT-WT 1.17	02-Aug-17	00:07:48
82	170801M1_82	IPA	02-Aug-17	00:18:27
83	170801M1_83	ST170801M1-6 PFC CS3 17G3105	02-Aug-17	00:29:13
84	170801M1_84	IPA	02-Aug-17	00:40:01
85	170801M1_85	1700889-06 HARRI-03-SB03-0-2 1.33	02-Aug-17	00:50:50
86	170801M1_86	1700889-07 HARRI-03-SB03-WT-WT 1.34	02-Aug-17	01:01:34
87	170801M1_87	B7G0086-MS1 Matrix Spike 1.35	02-Aug-17	01:12:13
88	170801M1_88	B7G0086-MSD1 Matrix Spike Dup 1.4	02-Aug-17	01:22:51
89	170801M1_89	IPA	02-Aug-17	01:33:37
90	170801M1_90	ST170801M1-7 PFC CS3 17G3105	02-Aug-17	01:44:16
91	170801M1_91	IPA	02-Aug-17	01:55:02

Vista Analytical Laboratory

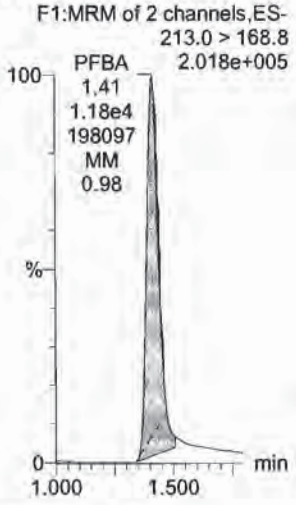
Dataset: U:\Q4.PRO\results\170801M1\170801M1-23.qld

Last Altered: Thursday, August 03, 2017 13:58:13 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:07 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_23, Date: 01-Aug-2017, Time: 13:42:24, ID: ST170801M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

PFBA



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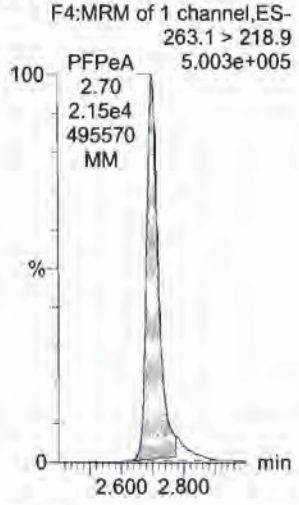

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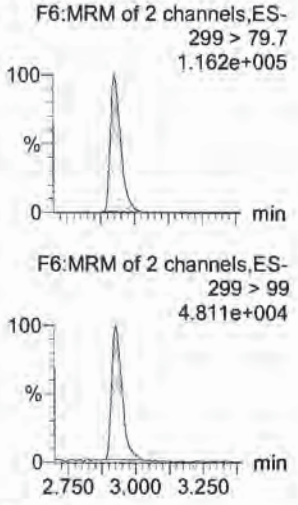

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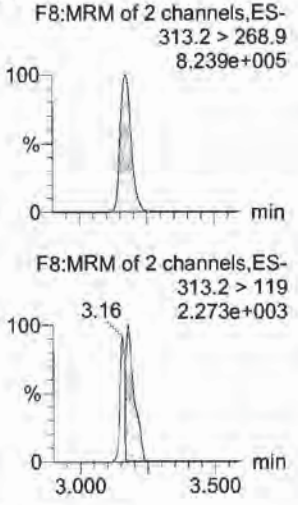

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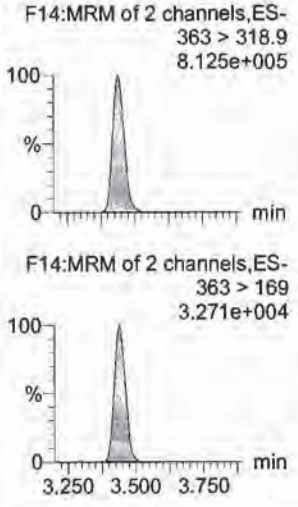

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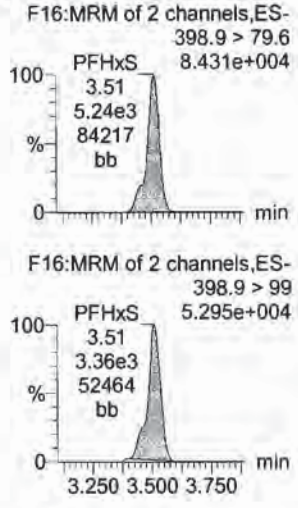
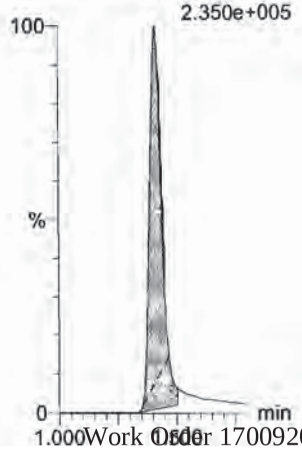


13C3-PFBA



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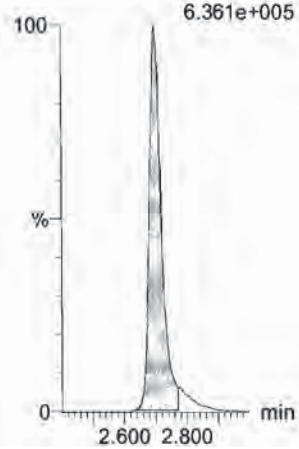

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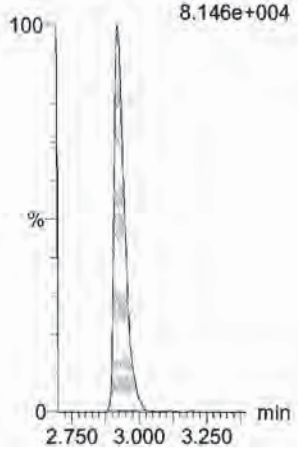
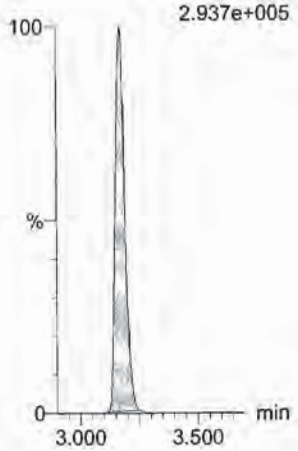


13C2-PFHxA



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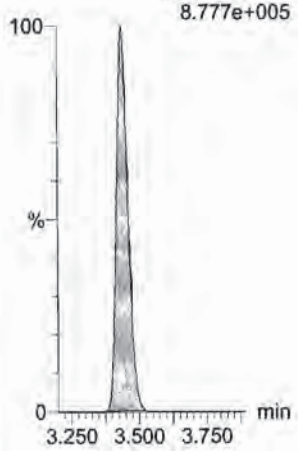

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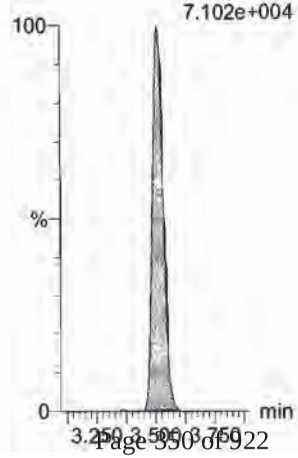

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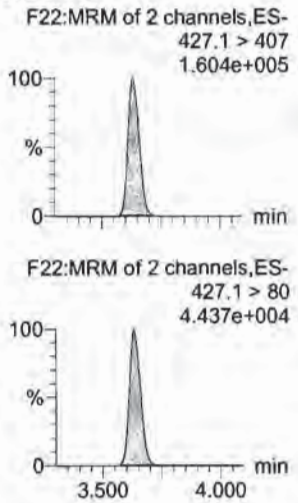
Name: 170801M1_23, Date: 01-Aug-2017, Time: 13:42:24, ID: ST170801M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

6:2 FTS



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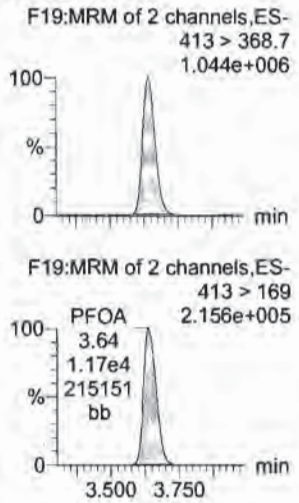

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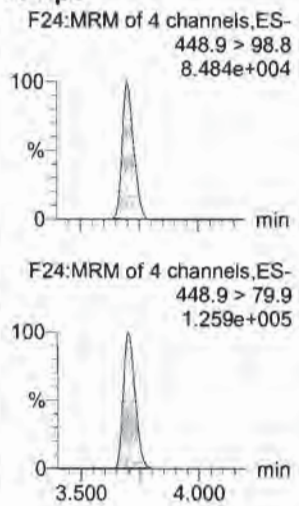

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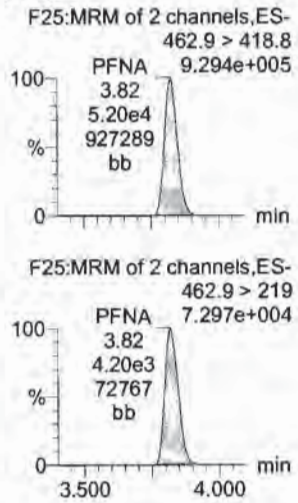
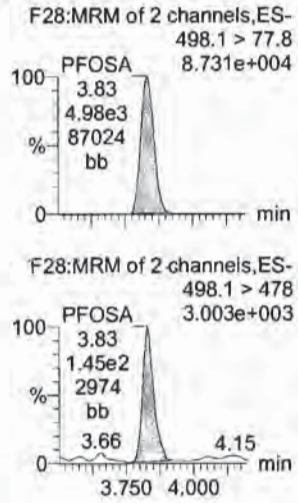


PFOSA



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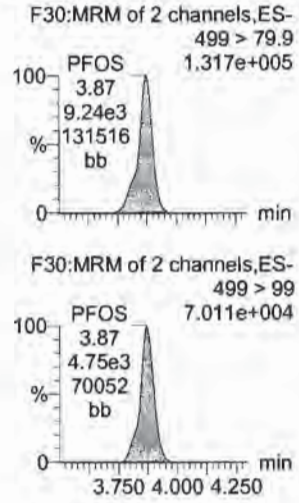
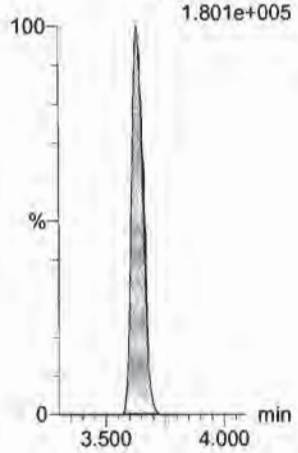


13C2-6:2 FTS



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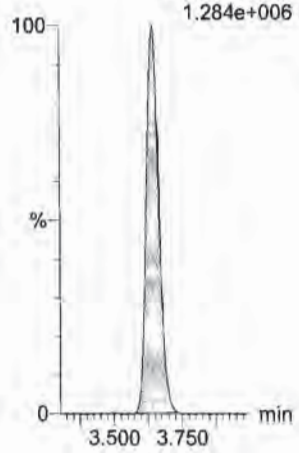
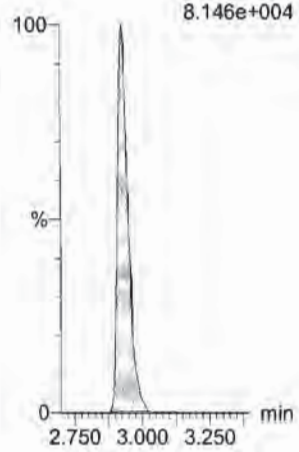


13C3-PFBS



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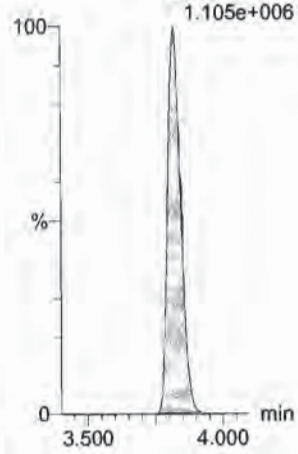

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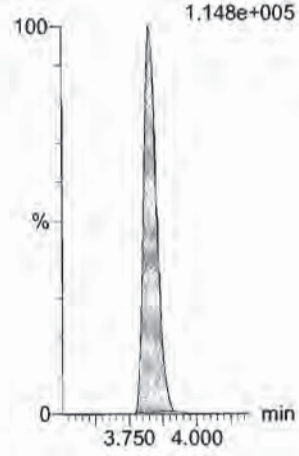

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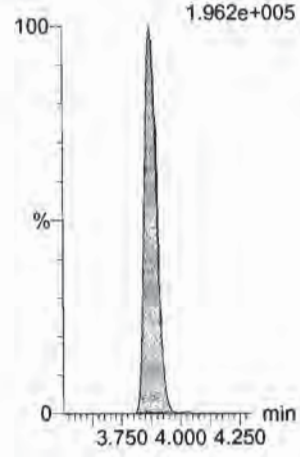

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Name: 170801M1_23, Date: 01-Aug-2017, Time: 13:42:24, ID: ST170801M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

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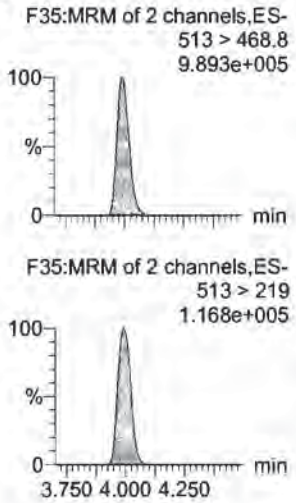
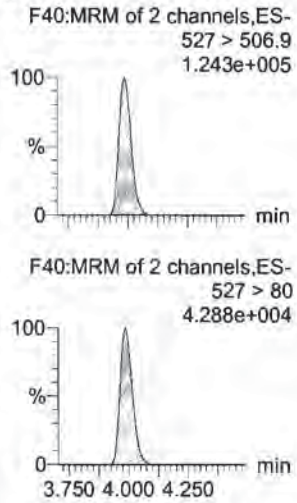


8:2 FTS



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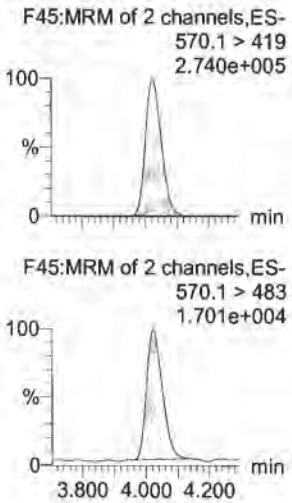

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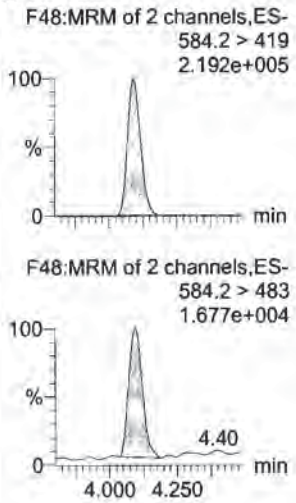

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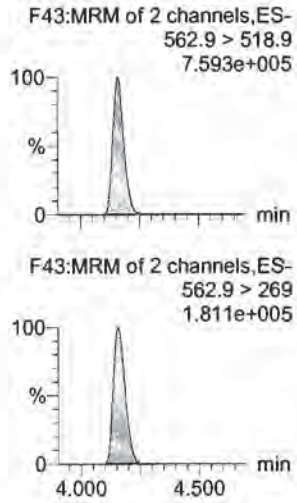

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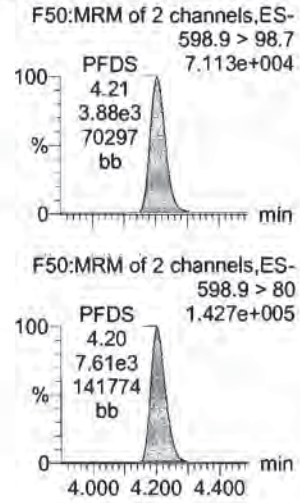

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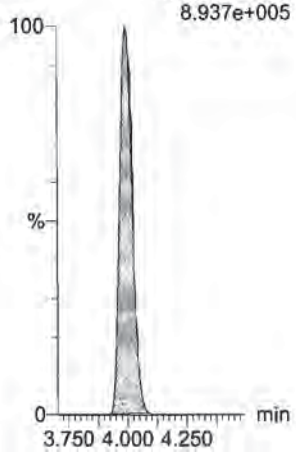
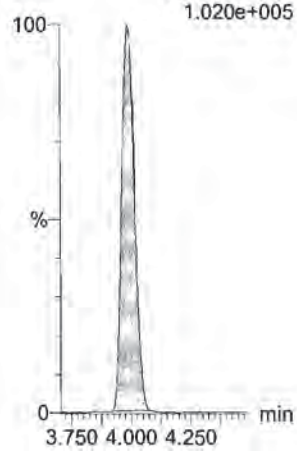


13C2-8:2 FTS



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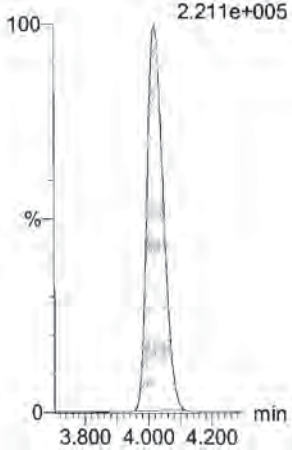

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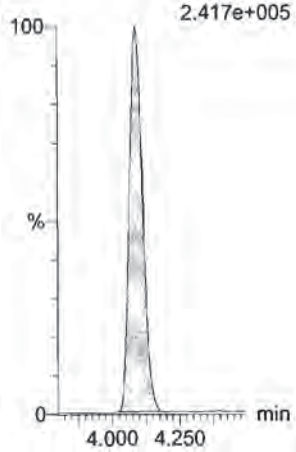

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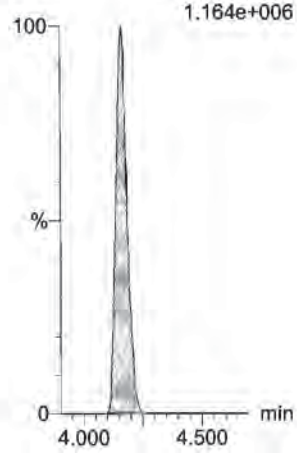

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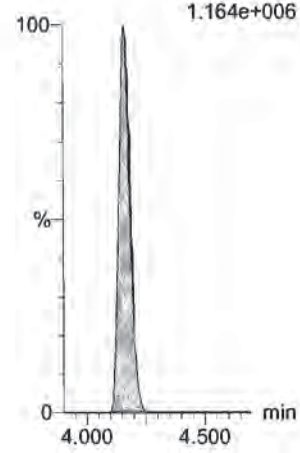

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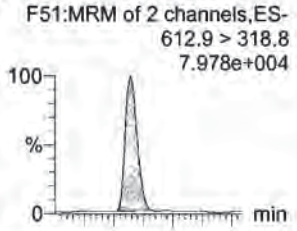
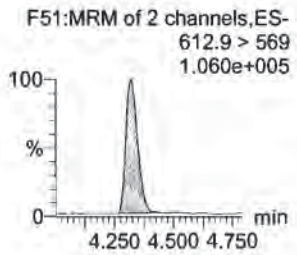
Name: 170801M1_23, Date: 01-Aug-2017, Time: 13:42:24, ID: ST170801M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

PFDoA





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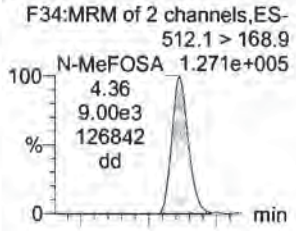

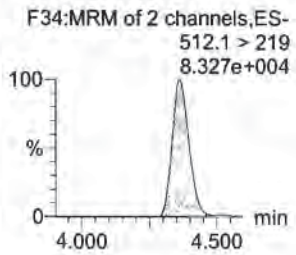

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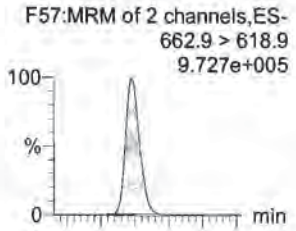

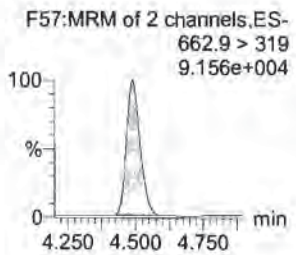

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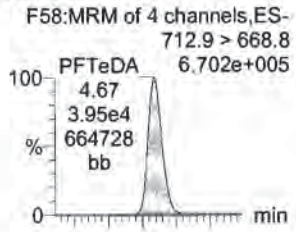

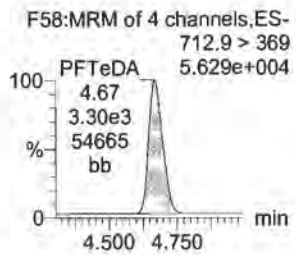

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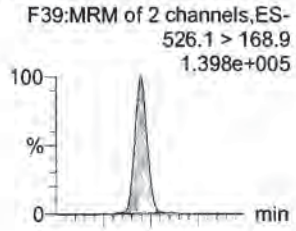

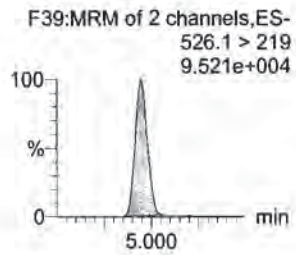

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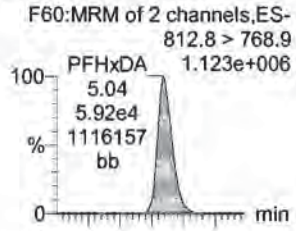

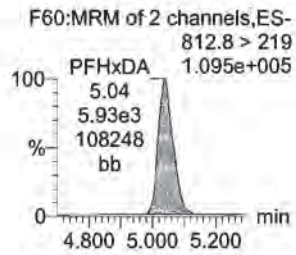

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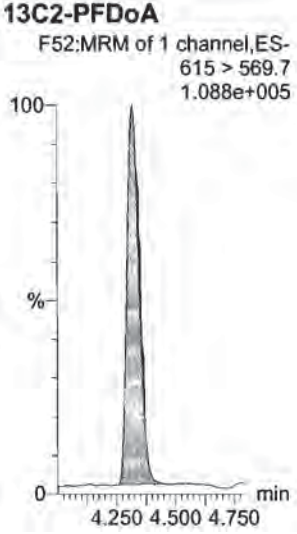
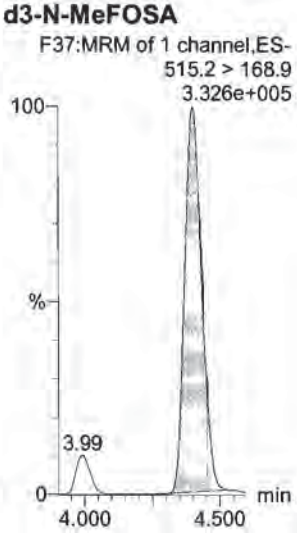


d3-N-MeFOSA



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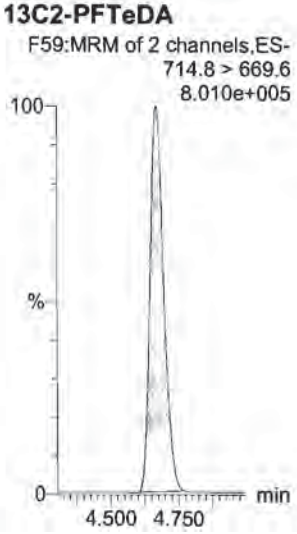

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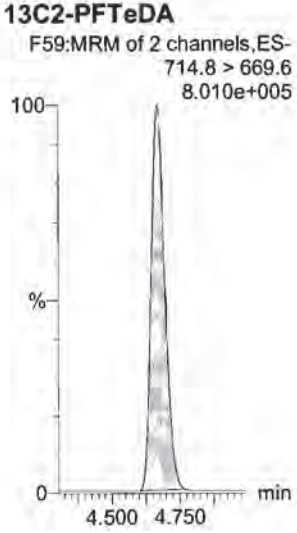

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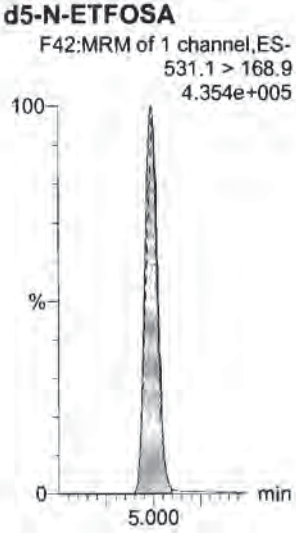
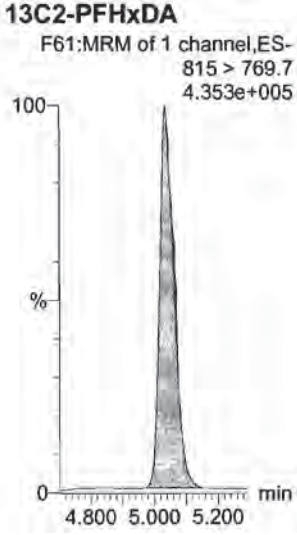


13C2-PFHxDA

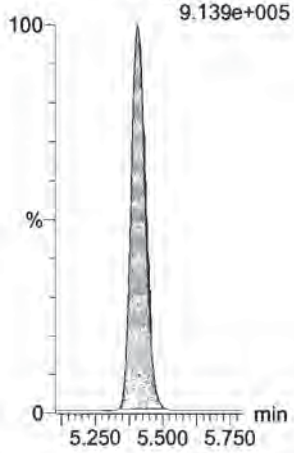


Dataset: U:\Q4.PRO\results\170801M1\170801M1-23.qld

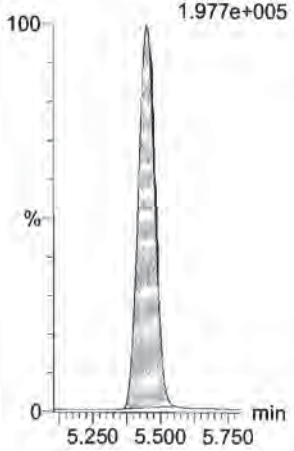
Last Altered: Thursday, August 03, 2017 13:58:13 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:07 Pacific Daylight Time

Name: 170801M1_23, Date: 01-Aug-2017, Time: 13:42:24, ID: ST170801M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

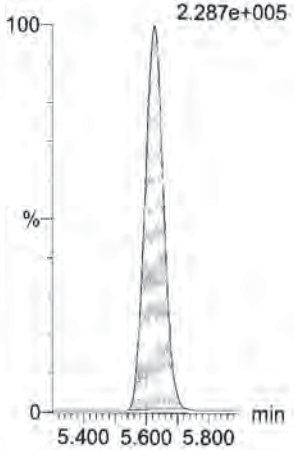
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
9.139e+005



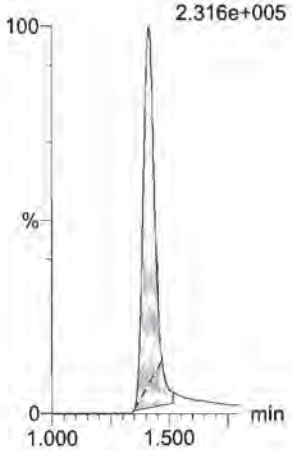
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.977e+005



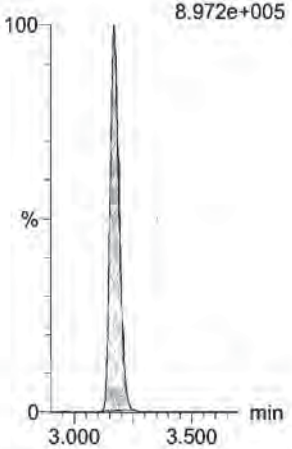
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.287e+005



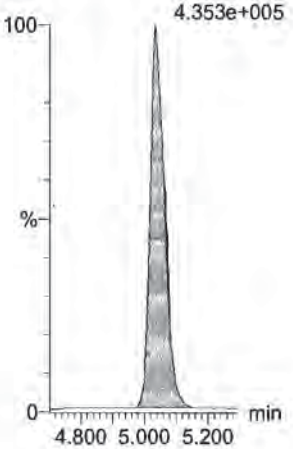
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.316e+005



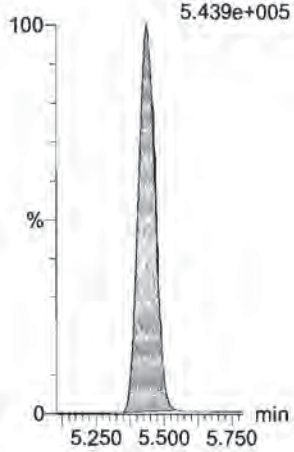
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.972e+005



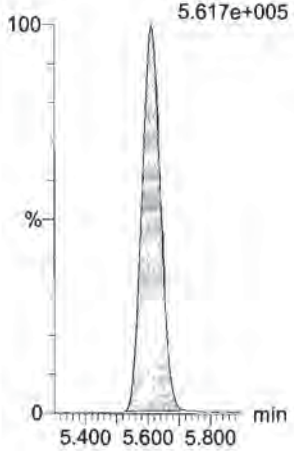
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.353e+005



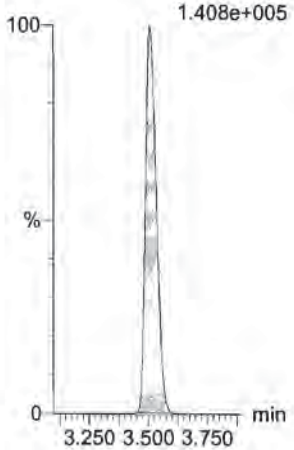
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.439e+005



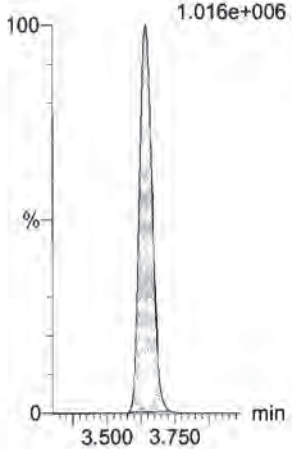
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.617e+005



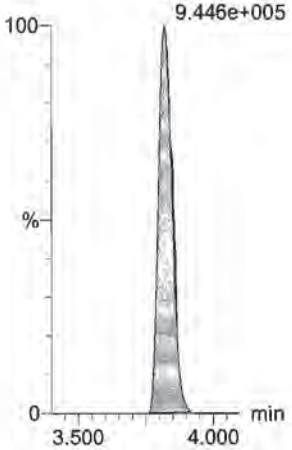
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.408e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.016e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
9.446e+005

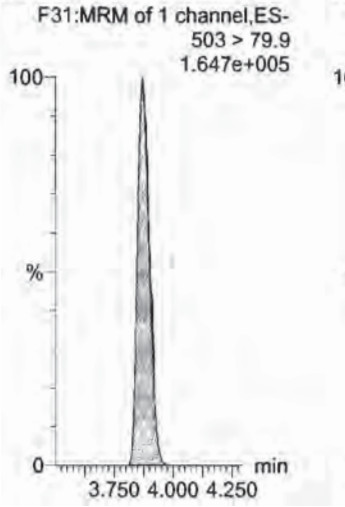


Dataset: U:\Q4.PRO\results\170801M1\170801M1-23.qld

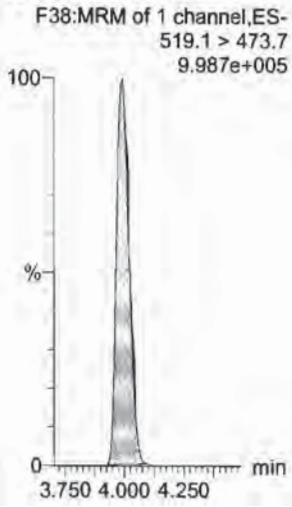
Last Altered: Thursday, August 03, 2017 13:58:13 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:07 Pacific Daylight Time

Name: 170801M1_23, Date: 01-Aug-2017, Time: 13:42:24, ID: ST170801M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

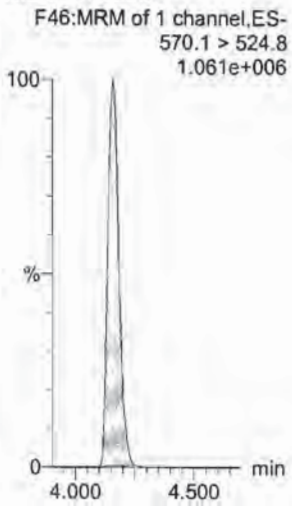
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Dataset: U:\Q4.PRO\results\170801M1\170801M1-40.qld

Last Altered: Thursday, August 03, 2017 14:08:49 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:10:03 Pacific Daylight Time

AC 8/3/17

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_40, Date: 01-Aug-2017, Time: 16:46:13, ID: ST170801M1-3 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.27e4	1.47e4	1.0000		1.32	1.42	10.8	9.97	99.7
2	2	PFPeA	263.1 > 218.9	2.17e4	2.90e4	1.0000		2.77	2.71	9.35	9.78	97.8
3	3	PFBS	299 > 79.7	5.05e3	3.71e3	1.0000		2.96	2.93	17.0	8.98	89.8
4	4	PFHxA	313.2 > 268.9	4.00e4	1.45e4	1.0000		3.19	3.17	13.8	9.83	98.3
5	5	PFHpA	363 > 318.9	4.35e4	4.77e4	1.0000		3.45	3.44	11.4	9.47	94.7
6	6	PFHxS	398.9 > 79.6	5.23e3	4.01e3	1.0000		3.56	3.52	16.3	9.68	96.8
7	7	6:2 FTS	427.1 > 407	8.62e3	9.99e3	1.0000		3.64	3.64	10.8	9.58	95.8
8	8	PFOA	413 > 368.7	5.33e4	7.17e4	1.0000		3.65	3.65	9.28	9.58	95.8
9	9	PFHpS	448.9 > 98.8	5.42e3	7.17e4	1.0000		3.65	3.70	0.945	10.9	108.8
10	10	PFNA	462.9 > 418.8	5.51e4	6.33e4	1.0000		3.83	3.83	10.9	9.94	99.4
11	11	PFOSA	498.1 > 77.8	5.39e3	6.27e3	1.0000		3.84	3.83	10.8	10.0	100.4
12	12	PFOS	499 > 79.9	8.96e3	1.18e4	1.0000		3.89	3.88	9.49	9.27	92.7
13	13	PFDA	513 > 468.8	5.88e4	6.41e4	1.0000		4.01	3.99	11.5	9.42	94.2
14	14	8:2 FTS	527 > 506.9	7.01e3	6.81e3	1.0000		4.00	3.99	12.9	9.10	91.0
15	15	N-MeFOSAA	570.1 > 419	1.58e4	1.40e4	1.0000		4.03	4.02	183	10.3	102.7
16	16	N-EtFOSAA	584.2 > 419	1.21e4	1.35e4	1.0000		4.10	4.10	146	9.46	94.6
17	17	PFUnA	562.9 > 518.9	4.20e4	7.47e4	1.0000		4.17	4.16	7.04	9.18	91.8
18	18	PFDS	598.9 > 98.7	4.24e3	7.47e4	1.0000		4.22	4.21	0.710	8.82	88.2
19	19	PFDoA	612.9 > 318.8	5.28e3	7.00e3	1.0000		4.34	4.32	9.43	10.0	100.2
20	20	N-MeFOSA	512.1 > 168.9	9.12e3	2.47e4	1.0000		4.29	4.37	55.4	54.8	109.6
21	21	PFTrDA	662.9 > 618.9	5.94e4	7.00e3	1.0000		4.50	4.49	106	10.1	101.1
22	22	PFTeDA	712.9 > 668.8	4.07e4	4.79e4	1.0000		4.68	4.67	10.6	9.80	98.0
23	23	N-EtFOSA	526.1 > 168.9	1.09e4	3.47e4	1.0000		4.79	4.95	47.2	50.8	101.5
24	24	PFHxDA	812.8 > 768.9	5.97e4	2.24e4	1.0000		5.06	5.04	13.4	10.5	104.5
25	25	PFODA	912.8 > 868.8	5.63e4	2.24e4	1.0000		5.43	5.41	12.6	11.1	110.6
26	26	N-MeFOSE	616.1 > 58.9	1.42e4	3.98e4	1.0000		5.42	5.45	53.4	51.6	103.3
27	27	N-EtFOSE	630.1 > 58.9	1.61e4	3.99e4	1.0000		5.59	5.63	60.6	51.7	103.3
28	28	13C3-PFBA	216.1 > 171.8	1.47e4	1.39e4	1.0000	1.006	1.32	1.41	13.2	13.1	104.9
29	29	13C3-PFPeA	266 > 221.8	2.90e4	4.34e4	1.0000	0.275	2.77	2.71	3.34	12.1	97.2
30	30	13C3-PFBS	302 > 98.8	3.71e3	4.34e4	1.0000	0.034	2.96	2.93	0.428	12.5	100.3
31	31	13C2-PFHxA	315 > 269.8	1.45e4	4.34e4	1.0000	0.334	3.19	3.17	1.67	5.01	100.8

70-130

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-40.qld

Last Altered: Thursday, August 03, 2017 14:08:49 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:10:03 Pacific Daylight Time

Name: 170801M1_40, Date: 01-Aug-2017, Time: 16:46:13, ID: ST170801M1-3 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.77e4	4.34e4	1.0000	0.414	3.45	3.44	5.49	13.3	106.1
33	33	18O2-PFHxS	403 > 102.6	4.01e3	8.58e3	1.0000	0.475	3.56	3.51	5.84	12.3	98.3
34	34	13C2-6:2 FTS	429.1 > 408.9	9.99e3	5.63e4	1.0000	0.214	3.64	3.64	2.22	10.4	83.0
35	35	13C2-PFOA	414.9 > 369.7	7.17e4	5.63e4	1.0000	1.298	3.65	3.65	15.9	12.3	98.2
36	36	13C5-PFNA	468.2 > 422.9	6.33e4	6.12e4	1.0000	1.094	3.83	3.83	12.9	11.8	94.6
37	37	13C8-PFOSA	506.1 > 77.7	6.27e3	6.03e4	1.0000	0.124	3.84	3.83	1.30	10.4	83.4
38	38	13C8-PFOS	507 > 79.9	1.18e4	9.47e3	1.0000	1.153	3.89	3.88	15.6	13.5	108.1
39	39	13C2-PFDA	515.1 > 469.9	6.41e4	5.90e4	1.0000	1.059	4.01	3.99	13.6	12.8	102.7
40	40	13C2-8:2 FTS	529.1 > 508.7	6.81e3	5.90e4	1.0000	0.129	4.00	3.99	1.44	11.2	89.8
41	41	d3-N-MeFOSAA	573.3 > 419	1.40e4	6.03e4	1.0000	0.019	4.03	4.03	2.91	150	92.5
42	42	d5-N-EtFOSAA	589.3 > 419	1.35e4	6.03e4	1.0000	0.019	4.12	4.09	2.80	148	90.8
43	43	13C2-PFUnA	565 > 519.8	7.47e4	6.03e4	1.0000	1.172	4.17	4.16	15.5	13.2	105.6
44	44	13C2-PFDoA	615 > 569.7	7.00e3	6.03e4	1.0000	0.118	4.34	4.32	1.45	12.2	97.9
45	45	d3-N-MeFOSA	515.2 > 168.9	2.47e4	6.03e4	1.0000	0.040	4.29	4.41	5.12	127	84.4
46	46	13C2-PFTeDA	714.8 > 669.6	4.79e4	6.03e4	1.0000	0.801	4.68	4.67	9.93	12.4	99.1
47	47	d5-N-ETFOSA	531.1 > 168.9	3.47e4	6.03e4	1.0000	0.055	4.85	4.99	7.18	130	86.9
48	48	13C2-PFHxDA	815 > 769.7	2.24e4	6.03e4	1.0000	0.991	5.06	5.04	4.63	4.67	93.4
49	49	d7-N-MeFOSE	623.1 > 58.9	3.98e4	6.03e4	1.0000	0.065	5.42	5.44	8.25	127	84.5
50	50	d9-N-EtFOSE	639.2 > 58.8	3.99e4	6.03e4	1.0000	0.065	5.59	5.61	8.27	128	85.1
51	51	13C4-PFBA	217 > 171.8	1.39e4	1.39e4	1.0000	1.000	1.32	1.42	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	4.34e4	4.34e4	1.0000	1.000	3.19	3.17	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	8.58e3	8.58e3	1.0000	1.000	3.56	3.52	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	5.63e4	5.63e4	1.0000	1.000	3.65	3.64	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	6.12e4	6.12e4	1.0000	1.000	3.83	3.83	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	9.47e3	9.47e3	1.0000	1.000	3.89	3.88	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	5.90e4	5.90e4	1.0000	1.000	4.01	4.00	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	6.03e4	6.03e4	1.0000	1.000	4.17	4.16	12.5	12.5	100.0

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Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Compound name: PFBA

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1	170801M1_1	IPA	01-Aug-17	09:45:15
2	170801M1_2	ST170801M1-1 PFC CS0 17G2826	01-Aug-17	09:55:58
3	170801M1_3	IPA	01-Aug-17	10:06:45
4	170801M1_4	B7G0124-BLK1 Method Blank 5	01-Aug-17	10:17:40
5	170801M1_5	B7G0125-BLK1 Method Blank 5	01-Aug-17	10:30:10
6	170801M1_6	B7G0126-BLK1 Method Blank 5	01-Aug-17	10:40:49
7	170801M1_7	B7G0125-BS1 OPR 5	01-Aug-17	10:51:27
8	170801M1_8	B7G0125-BS2 OPR 5	01-Aug-17	11:02:05
9	170801M1_9	B7G0125-BS3 OPR 5	01-Aug-17	11:12:44
10	170801M1_10	B7G0125-BS4 OPR 5	01-Aug-17	11:23:22
11	170801M1_11	B7G0125-BS5 OPR 5	01-Aug-17	11:34:09
12	170801M1_12	B7G0125-BS6 OPR 5	01-Aug-17	11:44:47
13	170801M1_13	B7G0125-BS7 OPR 5	01-Aug-17	11:55:25
14	170801M1_14	B7G0126-BS2 OPR 5	01-Aug-17	12:06:12
15	170801M1_15	B7G0126-BS3 OPR 5	01-Aug-17	12:16:52
16	170801M1_16	B7G0126-BS4 OPR 5	01-Aug-17	12:27:41
17	170801M1_17	B7G0126-BS5 OPR 5	01-Aug-17	12:38:25
18	170801M1_18	B7G0124-BS1 OPR 5	01-Aug-17	12:49:04
19	170801M1_19	B7G0124-BS2 OPR 5	01-Aug-17	12:59:42
20	170801M1_20	B7G0124-BS3 OPR 5	01-Aug-17	13:10:20
21	170801M1_21	B7G0124-BS4 OPR 5	01-Aug-17	13:20:59
22	170801M1_22	IPA	01-Aug-17	13:31:45
23	170801M1_23	ST170801M1-2 PFC CS3 17G3105	01-Aug-17	13:42:24
24	170801M1_24	IPA	01-Aug-17	13:53:02
25	170801M1_25	B7G0122-BS1 OPR 0.25	01-Aug-17	14:03:43
26	170801M1_26	IPA	01-Aug-17	14:14:27
27	170801M1_27	B7G0122-BLK1 Method Blank 0.25	01-Aug-17	14:25:05
28	170801M1_28	1700891-06RE1 VEL FOAM 0.17113	01-Aug-17	14:35:50
29	170801M1_29	1700920-01 RCDM-MW-28S-20170719 0.1113	01-Aug-17	14:47:19
30	170801M1_30	1700920-02 LF-MW-12S-20170719 0.11113	01-Aug-17	14:58:06
31	170801M1_31	1700920-03 RCDM-MW-14S-20170720 0.11405	01-Aug-17	15:09:41

Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
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33	170801M1_33	1700920-05 MH-A97-20170720 0.12086	01-Aug-17	15:31:28
34	170801M1_34	1700920-06 MH-H93-20170720 0.11357	01-Aug-17	15:42:06
35	170801M1_35	1700920-07 RCDM-BLANK-20170720 0.11872	01-Aug-17	15:52:53
36	170801M1_36	1700920-08 MH-C94-20170720 0.11568	01-Aug-17	16:03:31
37	170801M1_37	IPA	01-Aug-17	16:14:18
38	170801M1_38	1700920-09 RCDM-MW-13S-20170719 0.11866	01-Aug-17	16:24:56
39	170801M1_39	IPA	01-Aug-17	16:35:34
40	170801M1_40	ST170801M1-3 PFC CS3 17G3105	01-Aug-17	16:46:13
41	170801M1_41	IPA	01-Aug-17	16:56:59
42	170801M1_42	1700920-10 LF-MW-14S-20170720 0.11481	01-Aug-17	17:08:05
43	170801M1_43	1700920-11 LF-MW-11BR-20170720 0.11664	01-Aug-17	17:18:47
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45	170801M1_45	1700920-13 RCDM-MW-11BR-20170720 0.11...	01-Aug-17	17:40:03
46	170801M1_46	1700920-14 RCDM-MW-12S-20170719 0.11619	01-Aug-17	17:50:42
47	170801M1_47	1700920-15 LF-MW-28S-20170719 0.11572	01-Aug-17	18:01:20
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49	170801M1_49	1700920-17 FRB04-20170719 0.11007	01-Aug-17	18:22:37
50	170801M1_50	1700920-01@5X RCDM-MW-28S-20170719 ...	01-Aug-17	18:33:15
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59	170801M1_59	IPA	01-Aug-17	20:11:13
60	170801M1_60	B7G0086-BLK1 Method Blank 1	01-Aug-17	20:21:52
61	170801M1_61	1700886-11 AT028-SD17-01-071217-1430 1.84	01-Aug-17	20:32:30
62	170801M1_62	1700886-12 AT028-SD17-02-071317-0845 1.44	01-Aug-17	20:43:09
63	170801M1_63	1700888-01 HARRI-01-SB01-0-2 1.52	01-Aug-17	20:53:47
64	170801M1_64	1700888-02 HARRI-01-SB01-6-8 1.32	01-Aug-17	21:04:25
65	170801M1_65	1700888-03 HARRI-01-SB02-0-2 2.04	01-Aug-17	21:15:04

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Dataset: Untitled

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68	170801M1_68	1700888-06 HARRI-01-SB03-0-2 1.33	01-Aug-17	21:47:15
69	170801M1_69	IPA	01-Aug-17	21:58:02
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72	170801M1_72	1700888-07 HARRI-01-SB03-8-10 1.37	01-Aug-17	22:31:08
73	170801M1_73	1700888-08 HARRI-02-SB01-0-2 1.21	01-Aug-17	22:42:08
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79	170801M1_79	1700889-03 HARRI-03-SO-Dup02-01000 1.37	01-Aug-17	23:46:15
80	170801M1_80	1700889-04 HARRI-03-SB02-0-2 1.34	01-Aug-17	23:57:01
81	170801M1_81	1700889-05 HARRI-03-SB02-WT-WT 1.17	02-Aug-17	00:07:48
82	170801M1_82	IPA	02-Aug-17	00:18:27
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84	170801M1_84	IPA	02-Aug-17	00:40:01
85	170801M1_85	1700889-06 HARRI-03-SB03-0-2 1.33	02-Aug-17	00:50:50
86	170801M1_86	1700889-07 HARRI-03-SB03-WT-WT 1.34	02-Aug-17	01:01:34
87	170801M1_87	B7G0086-MS1 Matrix Spike 1.35	02-Aug-17	01:12:13
88	170801M1_88	B7G0086-MSD1 Matrix Spike Dup 1.4	02-Aug-17	01:22:51
89	170801M1_89	IPA	02-Aug-17	01:33:37
90	170801M1_90	ST170801M1-7 PFC CS3 17G3105	02-Aug-17	01:44:16
91	170801M1_91	IPA	02-Aug-17	01:55:02

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-40.qld

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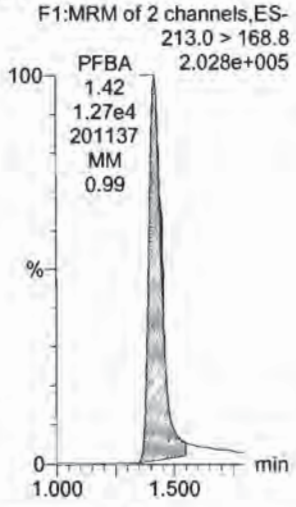

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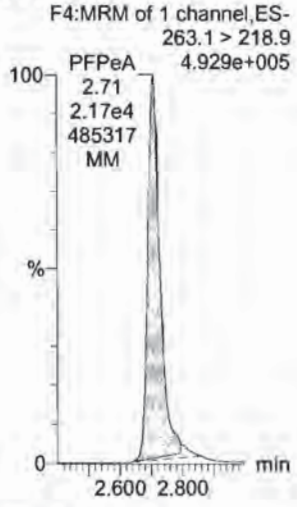

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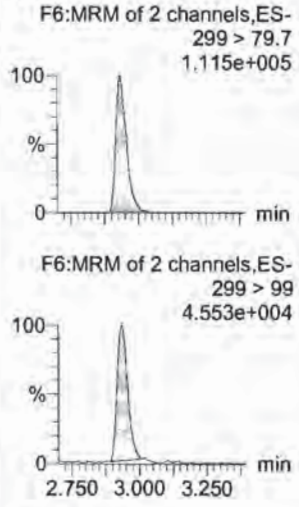

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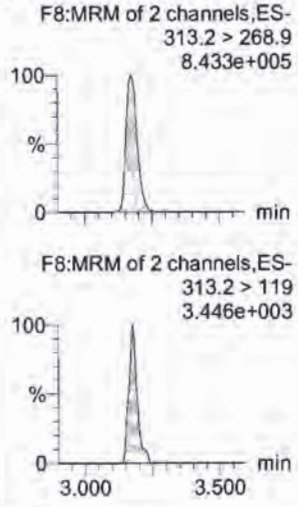

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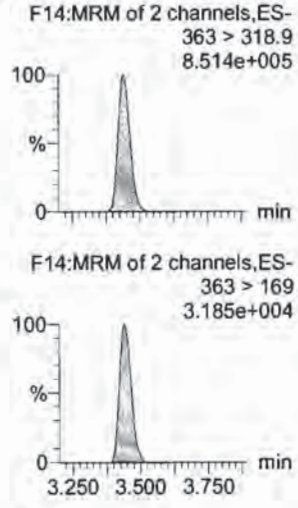

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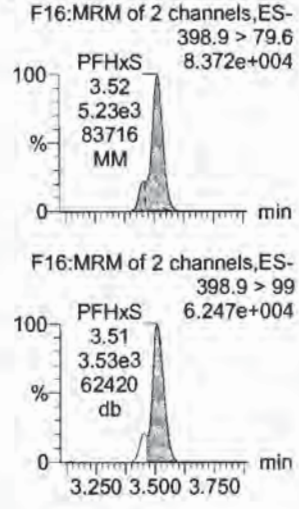

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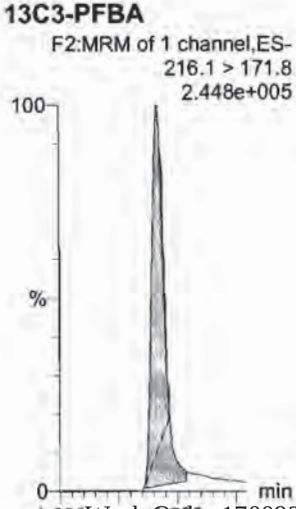

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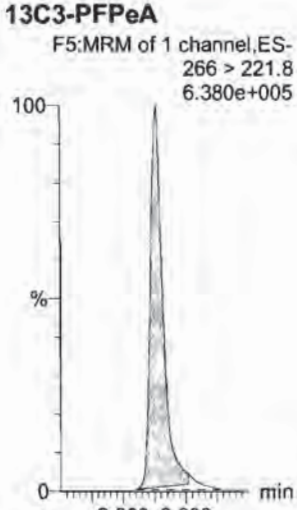

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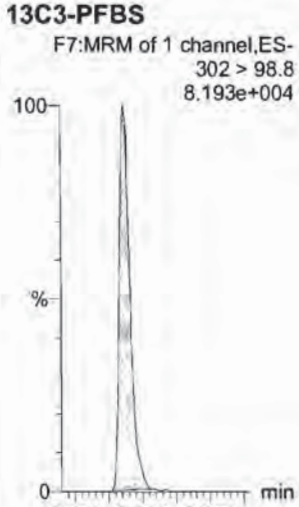

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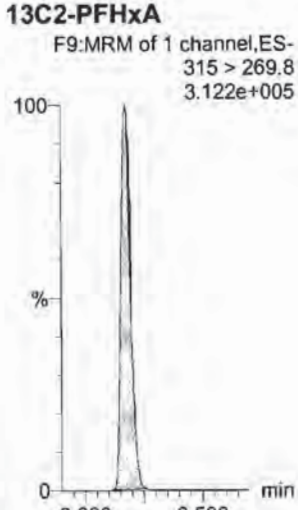

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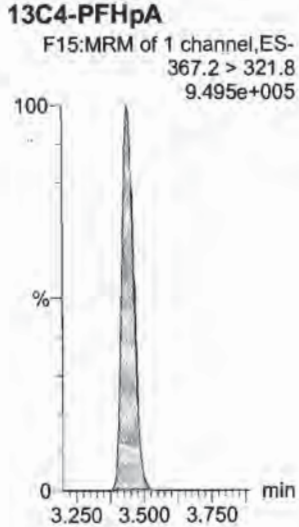

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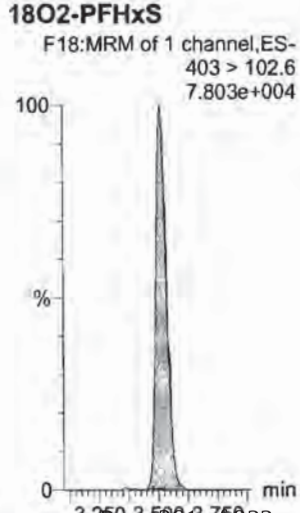

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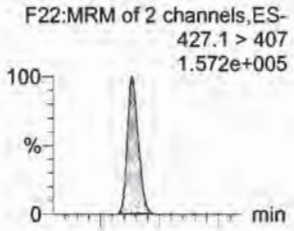
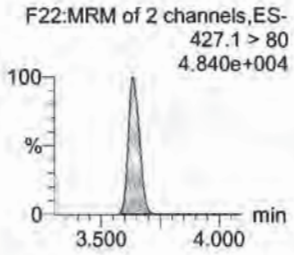
Name: 170801M1_40, Date: 01-Aug-2017, Time: 16:46:13, ID: ST170801M1-3 PFC CS3 17G3105, Description: PFC CS3 17G3105

6:2 FTS





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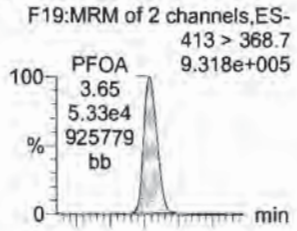

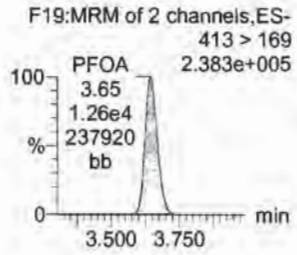

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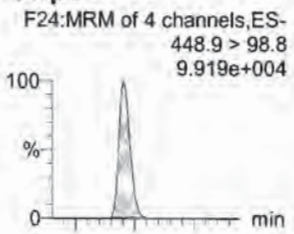

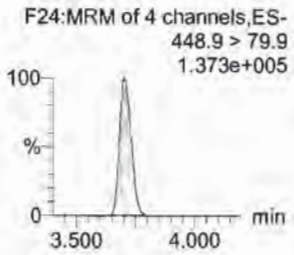

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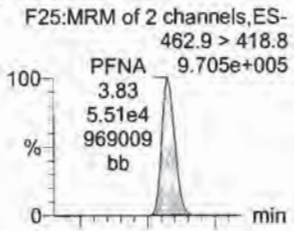

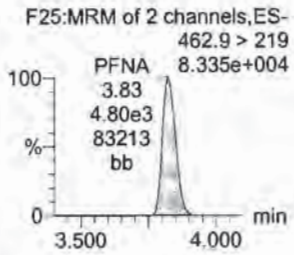

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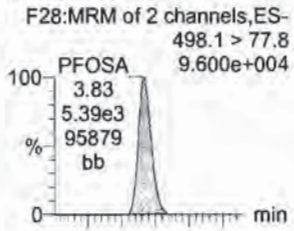

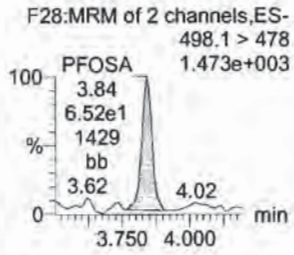

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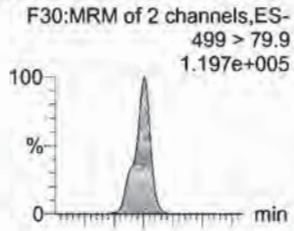

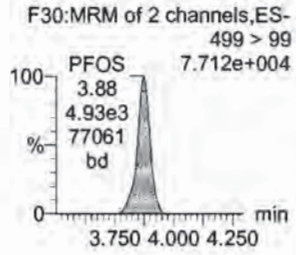

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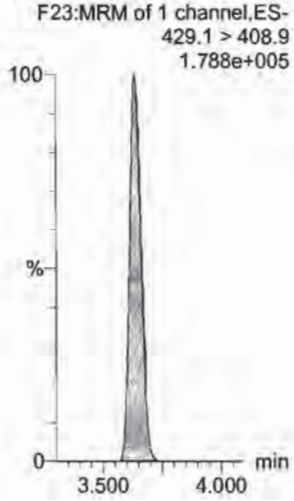

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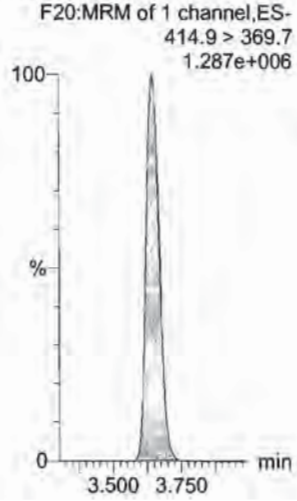

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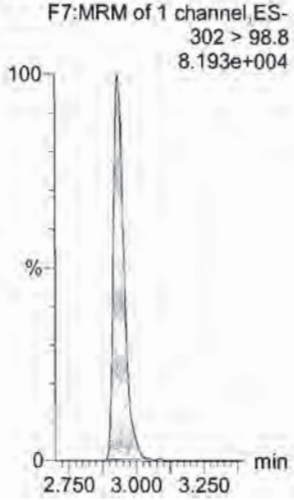

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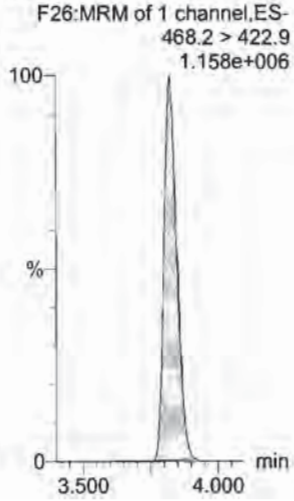

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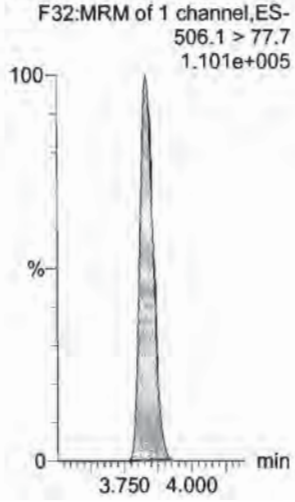

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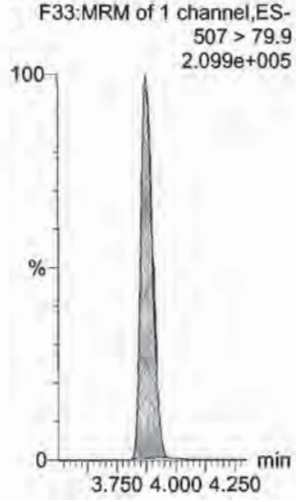

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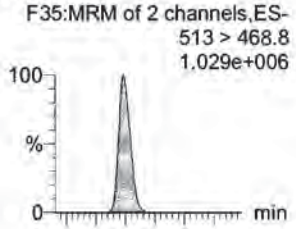

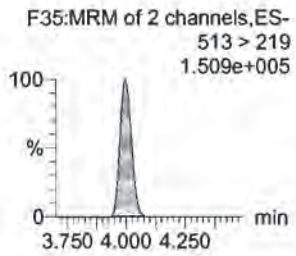

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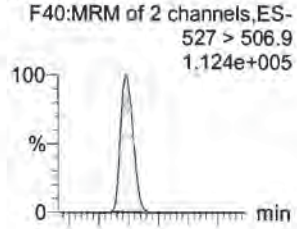

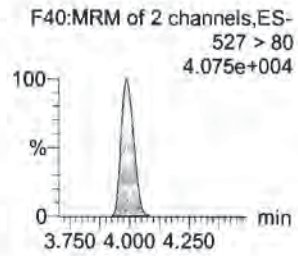

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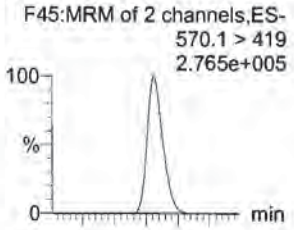
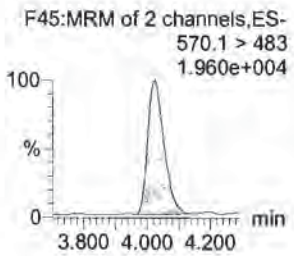
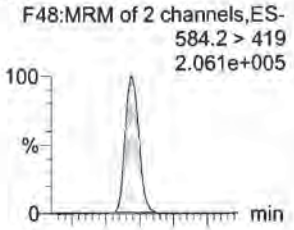
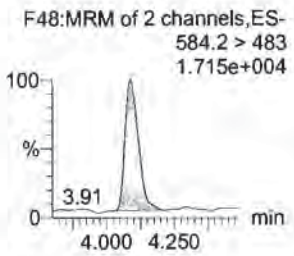


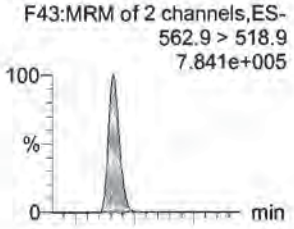


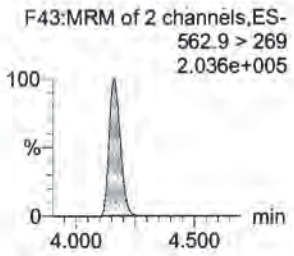
N-EtFOSAA



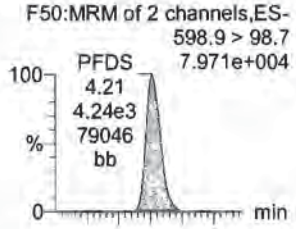


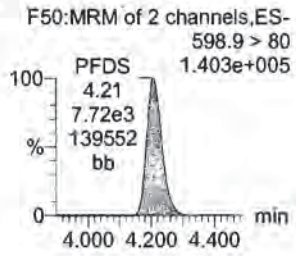
PFUnA



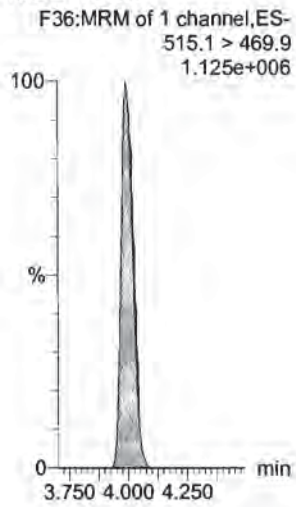


PFDS

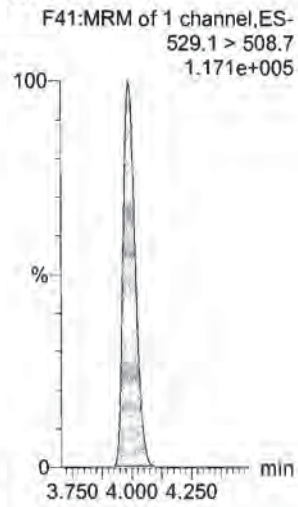




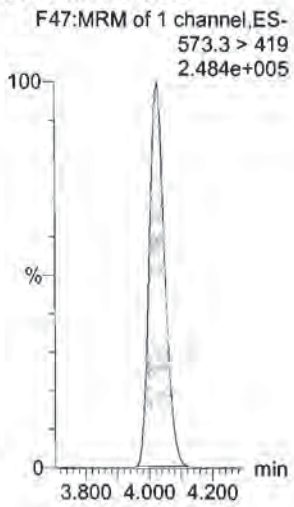
13C2-PFDA



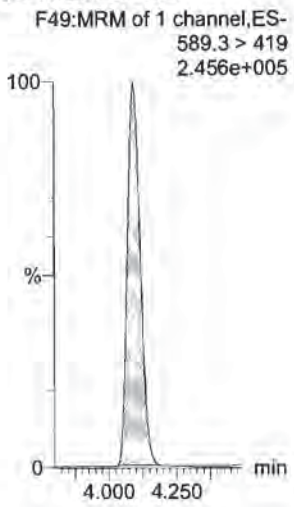
13C2-8:2 FTS



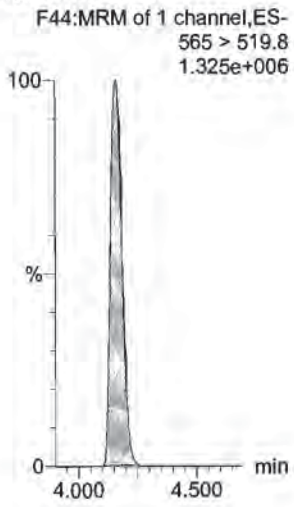
d3-N-MeFOSAA



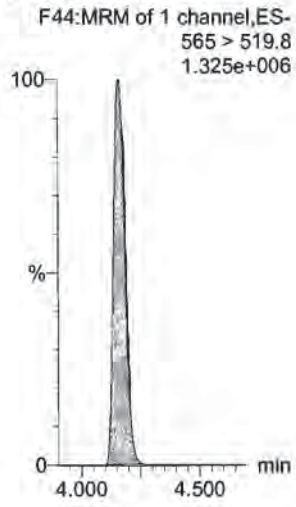
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



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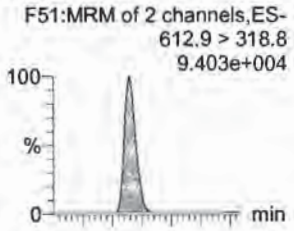
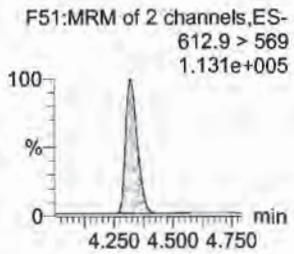
Last Altered: Thursday, August 03, 2017 14:08:49 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:14 Pacific Daylight Time

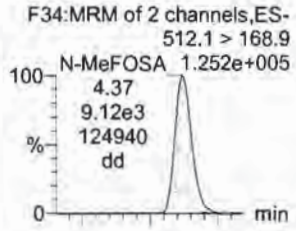
Name: 170801M1_40, Date: 01-Aug-2017, Time: 16:46:13, ID: ST170801M1-3 PFC CS3 17G3105, Description: PFC CS3 17G3105

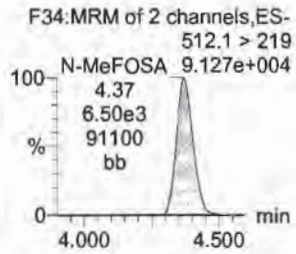
PFDoA



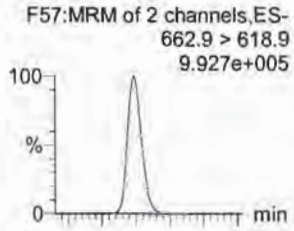


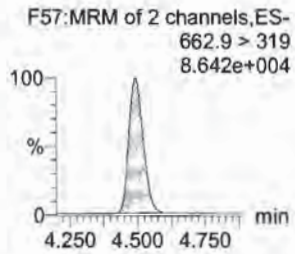
N-MeFOSA



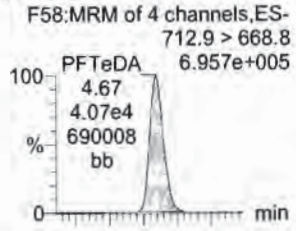


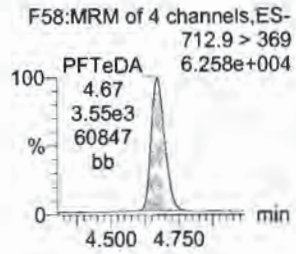
PFTrDA



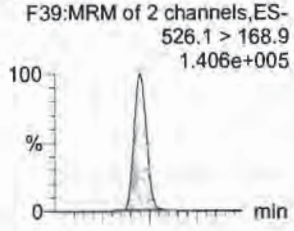


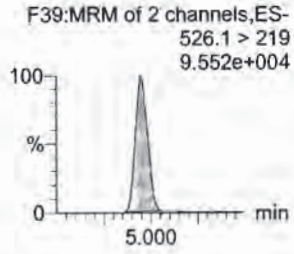
PFTeDA



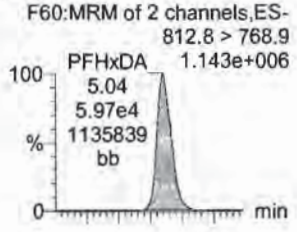


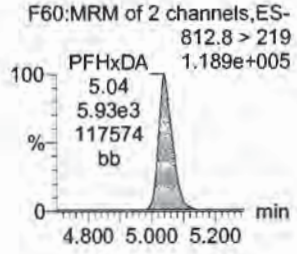
N-EtFOSA



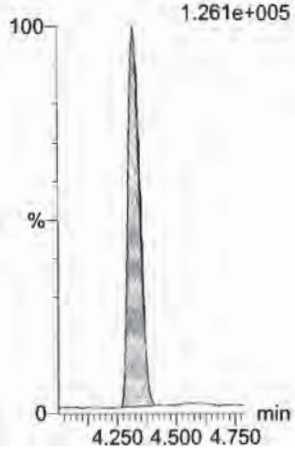


PFHxDA

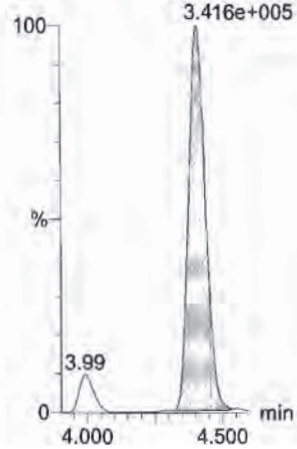




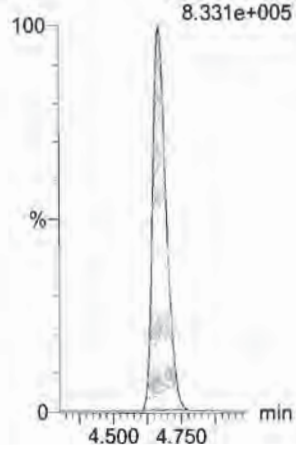
13C2-PFDoA



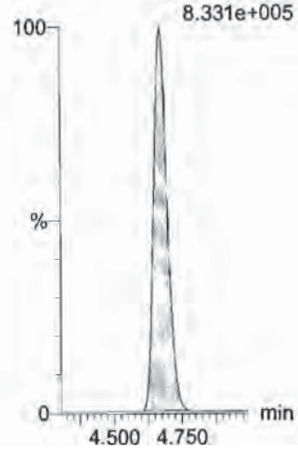
d3-N-MeFOSA



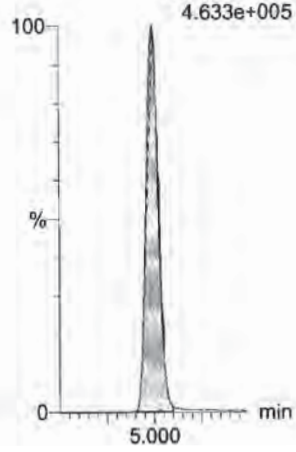
13C2-PFTeDA



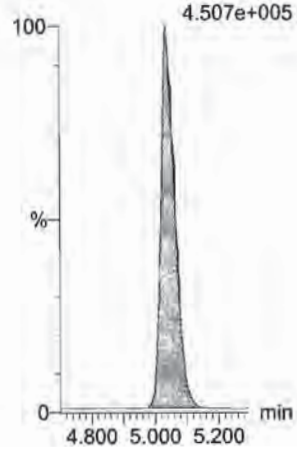
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



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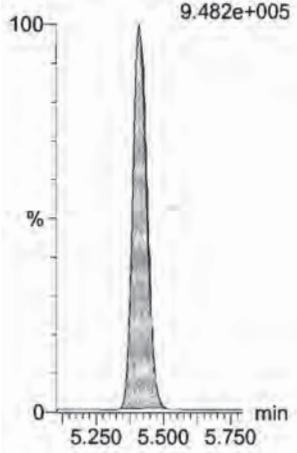
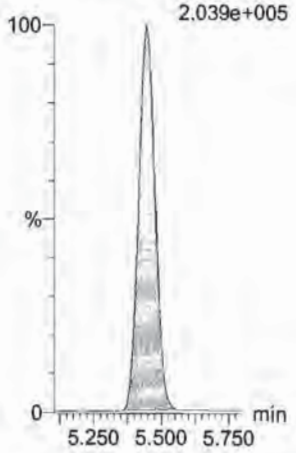
Last Altered: Thursday, August 03, 2017 14:08:49 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:14 Pacific Daylight Time

Name: 170801M1_40, Date: 01-Aug-2017, Time: 16:46:13, ID: ST170801M1-3 PFC CS3 17G3105, Description: PFC CS3 17G3105

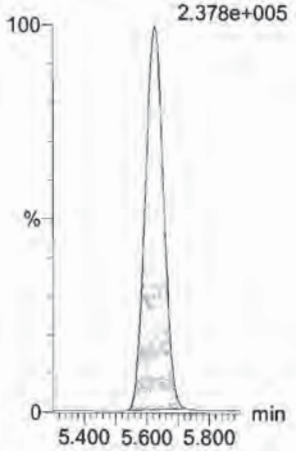
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
9.482e+005



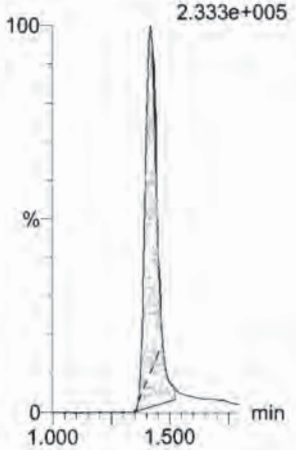
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.039e+005



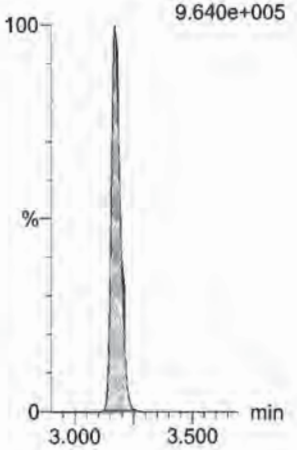
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.378e+005



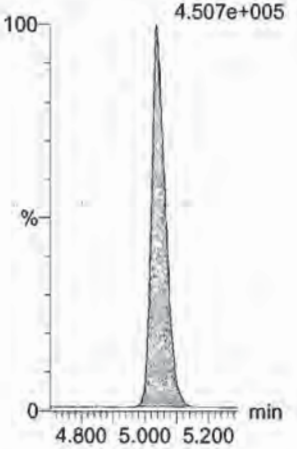
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.333e+005



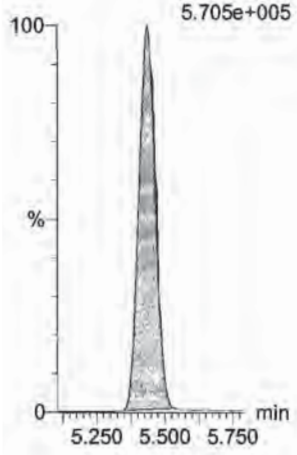
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
9.640e+005



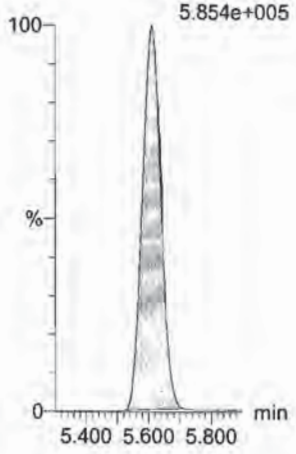
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.507e+005



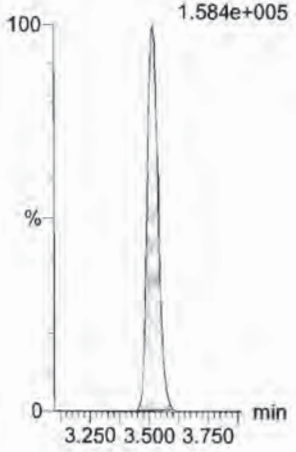
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.705e+005



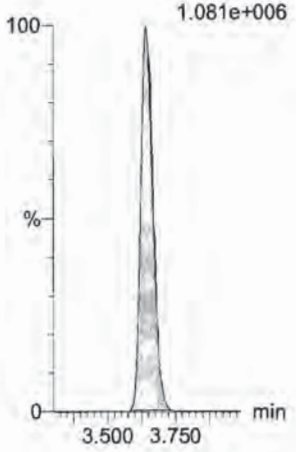
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.854e+005



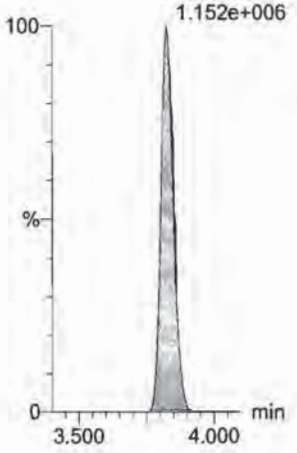
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.584e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.081e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.152e+006



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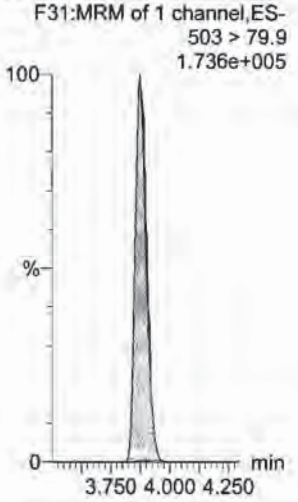
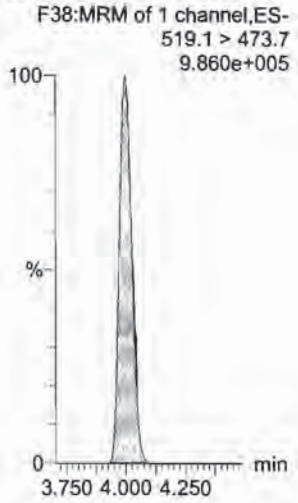
Last Altered: Thursday, August 03, 2017 14:08:49 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:14 Pacific Daylight Time

Name: 170801M1_40, Date: 01-Aug-2017, Time: 16:46:13, ID: ST170801M1-3 PFC CS3 17G3105, Description: PFC CS3 17G3105

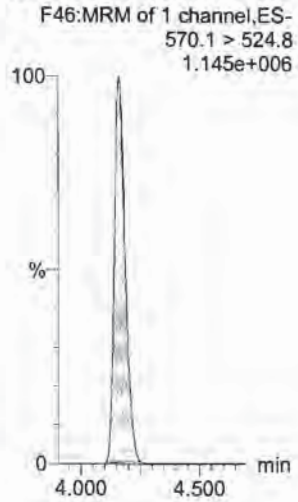
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-54.qld

Last Altered: Thursday, August 03, 2017 14:22:27 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:23:24 Pacific Daylight Time

AC 8/3/17

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_54, Date: 01-Aug-2017, Time: 19:16:05, ID: ST170801M1-4 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.26e4	1.50e4	1.0000		1.32	1.42	10.5	9.65	96.5
2	2	PFPeA	263.1 > 218.9	2.30e4	2.98e4	1.0000		2.77	2.71	9.66	10.1	101.1
3	3	PFBS	299 > 79.7	5.52e3	3.96e3	1.0000		2.96	2.94	17.4	9.21	92.1
4	4	PFHxA	313.2 > 268.9	4.32e4	1.53e4	1.0000		3.19	3.18	14.2	10.1	100.9
5	5	PFHpA	363 > 318.9	4.60e4	4.67e4	1.0000		3.45	3.44	12.3	10.2	102.5
6	6	PFHxS	398.9 > 79.6	5.43e3	4.09e3	1.0000		3.56	3.52	16.6	9.85	98.5
7	7	6:2 FTS	427.1 > 407	9.52e3	1.06e4	1.0000		3.64	3.64	11.2	9.95	99.5
8	8	PFOA	413 > 368.7	6.06e4	7.39e4	1.0000		3.65	3.65	10.3	10.6	106.0
9	9	PFHpS	448.9 > 98.8	5.90e3	7.39e4	1.0000		3.65	3.70	0.998	11.5	115.0
10	10	PFNA	462.9 > 418.8	5.63e4	6.40e4	1.0000		3.83	3.83	11.0	10.1	100.5
11	11	PFOSA	498.1 > 77.8	5.60e3	6.92e3	1.0000		3.84	3.84	10.1	9.44	94.4
12	12	PFOS	499 > 79.9	9.74e3	1.19e4	1.0000		3.89	3.88	10.2	10.0	100.1
13	13	PFDA	513 > 468.8	6.76e4	7.26e4	1.0000		4.01	4.00	11.6	9.58	95.8
14	14	8:2 FTS	527 > 506.9	8.24e3	7.54e3	1.0000		4.00	3.99	13.7	9.69	96.9
15	15	N-MeFOSAA	570.1 > 419	1.71e4	1.47e4	1.0000		4.03	4.03	188	10.6	105.7
16	16	N-EtFOSAA	584.2 > 419	1.34e4	1.41e4	1.0000		4.10	4.10	154	9.98	99.8
17	17	PFUnA	562.9 > 518.9	4.28e4	7.21e4	1.0000		4.17	4.16	7.42	9.68	96.8
18	18	PFDS	598.9 > 98.7	4.27e3	7.21e4	1.0000		4.22	4.21	0.740	9.20	92.0
19	19	PFDoA	612.9 > 318.8	5.30e3	7.67e3	1.0000		4.34	4.33	8.64	9.17	91.7
20	20	N-MeFOSA	512.1 > 168.9	1.00e4	2.55e4	1.0000		4.29	4.38	58.9	58.3	116.7
21	21	PFTrDA	662.9 > 618.9	6.24e4	7.67e3	1.0000		4.50	4.50	102	9.68	96.8
22	22	PFTeDA	712.9 > 668.8	4.16e4	4.99e4	1.0000		4.68	4.68	10.4	9.63	96.3
23	23	N-EtFOSA	526.1 > 168.9	1.12e4	3.55e4	1.0000		4.79	4.96	47.4	51.0	102.0
24	24	PFHxDA	812.8 > 768.9	6.20e4	2.32e4	1.0000		5.06	5.04	13.4	10.5	104.5
25	25	PFODA	912.8 > 868.8	5.75e4	2.32e4	1.0000		5.43	5.42	12.4	10.9	108.8
26	26	N-MeFOSE	616.1 > 58.9	1.48e4	4.12e4	1.0000		5.42	5.45	53.8	52.0	103.9
27	27	N-EtFOSE	630.1 > 58.9	1.64e4	4.06e4	1.0000		5.59	5.63	60.5	51.6	103.2
28	28	13C3-PFBA	216.1 > 171.8	1.50e4	1.45e4	1.0000	1.006	1.32	1.42	13.0	12.9	103.2
29	29	13C3-PFPeA	266 > 221.8	2.98e4	4.63e4	1.0000	0.275	2.77	2.71	3.21	11.7	93.4
30	30	13C3-PFBS	302 > 98.8	3.96e3	4.63e4	1.0000	0.034	2.96	2.94	0.427	12.5	100.2
31	31	13C2-PFHxA	315 > 269.8	1.53e4	4.63e4	1.0000	0.334	3.19	3.18	1.65	4.93	98.6

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-54.qld

Last Altered: Thursday, August 03, 2017 14:22:27 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:23:24 Pacific Daylight Time

Name: 170801M1_54, Date: 01-Aug-2017, Time: 19:16:05, ID: ST170801M1-4 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.67e4	4.63e4	1.0000	0.414	3.45	3.45	5.03	12.2	97.2
33	33	18O2-PFHxS	403 > 102.6	4.09e3	8.82e3	1.0000	0.475	3.56	3.52	5.79	12.2	97.5
34	34	13C2-6:2 FTS	429.1 > 408.9	1.06e4	5.47e4	1.0000	0.214	3.64	3.64	2.43	11.4	90.9
35	35	13C2-PFOA	414.9 > 369.7	7.39e4	5.47e4	1.0000	1.298	3.65	3.65	16.9	13.0	104.0
36	36	13C5-PFNA	468.2 > 422.9	6.40e4	6.70e4	1.0000	1.094	3.83	3.83	11.9	10.9	87.3
37	37	13C8-PFOSA	506.1 > 77.7	6.92e3	5.92e4	1.0000	0.124	3.84	3.84	1.46	11.7	93.9
38	38	13C8-PFOS	507 > 79.9	1.19e4	1.02e4	1.0000	1.153	3.89	3.88	14.6	12.6	101.0
39	39	13C2-PFDA	515.1 > 469.9	7.26e4	6.39e4	1.0000	1.059	4.01	4.00	14.2	13.4	107.2
40	40	13C2-8:2 FTS	529.1 > 508.7	7.54e3	6.39e4	1.0000	0.129	4.00	3.99	1.48	11.5	91.8
41	41	d3-N-MeFOSAA	573.3 > 419	1.47e4	5.92e4	1.0000	0.019	4.03	4.03	3.11	161	99.0
42	42	d5-N-EtFOSAA	589.3 > 419	1.41e4	5.92e4	1.0000	0.019	4.12	4.09	2.99	158	97.1
43	43	13C2-PFUnA	565 > 519.8	7.21e4	5.92e4	1.0000	1.172	4.17	4.16	15.2	13.0	104.0
44	44	13C2-PFDoA	615 > 569.7	7.67e3	5.92e4	1.0000	0.118	4.34	4.33	1.62	13.7	109.4
45	45	d3-N-MeFOSA	515.2 > 168.9	2.55e4	5.92e4	1.0000	0.040	4.29	4.42	5.38	133	88.7
46	46	13C2-PFTeDA	714.8 > 669.6	4.99e4	5.92e4	1.0000	0.801	4.68	4.68	10.5	13.1	105.2
47	47	d5-N-ETFOSA	531.1 > 168.9	3.55e4	5.92e4	1.0000	0.055	4.85	5.00	7.49	136	90.6
48	48	13C2-PFHxDA	815 > 769.7	2.32e4	5.92e4	1.0000	0.991	5.06	5.05	4.90	4.95	98.9
49	49	d7-N-MeFOSE	623.1 > 58.9	4.12e4	5.92e4	1.0000	0.065	5.42	5.44	8.71	134	89.1
50	50	d9-N-EtFOSE	639.2 > 58.8	4.06e4	5.92e4	1.0000	0.065	5.59	5.62	8.58	132	88.3
51	51	13C4-PFBA	217 > 171.8	1.45e4	1.45e4	1.0000	1.000	1.32	1.42	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	4.63e4	4.63e4	1.0000	1.000	3.19	3.17	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	8.82e3	8.82e3	1.0000	1.000	3.56	3.52	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	5.47e4	5.47e4	1.0000	1.000	3.65	3.65	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	6.70e4	6.70e4	1.0000	1.000	3.83	3.83	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.02e4	1.02e4	1.0000	1.000	3.89	3.88	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	6.39e4	6.39e4	1.0000	1.000	4.01	4.00	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	5.92e4	5.92e4	1.0000	1.000	4.17	4.17	12.5	12.5	100.0

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Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Compound name: PFBA

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1	170801M1_1	IPA	01-Aug-17	09:45:15
2	170801M1_2	ST170801M1-1 PFC CS0 17G2826	01-Aug-17	09:55:58
3	170801M1_3	IPA	01-Aug-17	10:06:45
4	170801M1_4	B7G0124-BLK1 Method Blank 5	01-Aug-17	10:17:40
5	170801M1_5	B7G0125-BLK1 Method Blank 5	01-Aug-17	10:30:10
6	170801M1_6	B7G0126-BLK1 Method Blank 5	01-Aug-17	10:40:49
7	170801M1_7	B7G0125-BS1 OPR 5	01-Aug-17	10:51:27
8	170801M1_8	B7G0125-BS2 OPR 5	01-Aug-17	11:02:05
9	170801M1_9	B7G0125-BS3 OPR 5	01-Aug-17	11:12:44
10	170801M1_10	B7G0125-BS4 OPR 5	01-Aug-17	11:23:22
11	170801M1_11	B7G0125-BS5 OPR 5	01-Aug-17	11:34:09
12	170801M1_12	B7G0125-BS6 OPR 5	01-Aug-17	11:44:47
13	170801M1_13	B7G0125-BS7 OPR 5	01-Aug-17	11:55:25
14	170801M1_14	B7G0126-BS2 OPR 5	01-Aug-17	12:06:12
15	170801M1_15	B7G0126-BS3 OPR 5	01-Aug-17	12:16:52
16	170801M1_16	B7G0126-BS4 OPR 5	01-Aug-17	12:27:41
17	170801M1_17	B7G0126-BS5 OPR 5	01-Aug-17	12:38:25
18	170801M1_18	B7G0124-BS1 OPR 5	01-Aug-17	12:49:04
19	170801M1_19	B7G0124-BS2 OPR 5	01-Aug-17	12:59:42
20	170801M1_20	B7G0124-BS3 OPR 5	01-Aug-17	13:10:20
21	170801M1_21	B7G0124-BS4 OPR 5	01-Aug-17	13:20:59
22	170801M1_22	IPA	01-Aug-17	13:31:45
23	170801M1_23	ST170801M1-2 PFC CS3 17G3105	01-Aug-17	13:42:24
24	170801M1_24	IPA	01-Aug-17	13:53:02
25	170801M1_25	B7G0122-BS1 OPR 0.25	01-Aug-17	14:03:43
26	170801M1_26	IPA	01-Aug-17	14:14:27
27	170801M1_27	B7G0122-BLK1 Method Blank 0.25	01-Aug-17	14:25:05
28	170801M1_28	1700891-06RE1 VEL FOAM 0.17113	01-Aug-17	14:35:50
29	170801M1_29	1700920-01 RCDM-MW-28S-20170719 0.1113	01-Aug-17	14:47:19
30	170801M1_30	1700920-02 LF-MW-12S-20170719 0.11113	01-Aug-17	14:58:06
31	170801M1_31	1700920-03 RCDM-MW-14S-20170720 0.11405	01-Aug-17	15:09:41

Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
32	170801M1_32	1700920-04 MH-DUP01-20170720 0.12177	01-Aug-17	15:20:50
33	170801M1_33	1700920-05 MH-A97-20170720 0.12086	01-Aug-17	15:31:28
34	170801M1_34	1700920-06 MH-H93-20170720 0.11357	01-Aug-17	15:42:06
35	170801M1_35	1700920-07 RCDM-BLANK-20170720 0.11872	01-Aug-17	15:52:53
36	170801M1_36	1700920-08 MH-C94-20170720 0.11568	01-Aug-17	16:03:31
37	170801M1_37	IPA	01-Aug-17	16:14:18
38	170801M1_38	1700920-09 RCDM-MW-13S-20170719 0.11866	01-Aug-17	16:24:56
39	170801M1_39	IPA	01-Aug-17	16:35:34
40	170801M1_40	ST170801M1-3 PFC CS3 17G3105	01-Aug-17	16:46:13
41	170801M1_41	IPA	01-Aug-17	16:56:59
42	170801M1_42	1700920-10 LF-MW-14S-20170720 0.11481	01-Aug-17	17:08:05
43	170801M1_43	1700920-11 LF-MW-11BR-20170720 0.11664	01-Aug-17	17:18:47
44	170801M1_44	1700920-12 LF-MW-13S-20170719 0.11667	01-Aug-17	17:29:25
45	170801M1_45	1700920-13 RCDM-MW-11BR-20170720 0.11...	01-Aug-17	17:40:03
46	170801M1_46	1700920-14 RCDM-MW-12S-20170719 0.11619	01-Aug-17	17:50:42
47	170801M1_47	1700920-15 LF-MW-28S-20170719 0.11572	01-Aug-17	18:01:20
48	170801M1_48	1700920-16 DUP-07-20170719 0.12023	01-Aug-17	18:11:59
49	170801M1_49	1700920-17 FRB04-20170719 0.11007	01-Aug-17	18:22:37
50	170801M1_50	1700920-01@5X RCDM-MW-28S-20170719 ...	01-Aug-17	18:33:15
51	170801M1_51	1700920-02@5X LF-MW-12S-20170719 0.11...	01-Aug-17	18:43:54
52	170801M1_52	1700920-08@5X MH-C94-20170720 0.11568	01-Aug-17	18:54:40
53	170801M1_53	IPA	01-Aug-17	19:05:27
54	170801M1_54	ST170801M1-4 PFC CS3 17G3105	01-Aug-17	19:16:05
55	170801M1_55	IPA	01-Aug-17	19:27:09
56	170801M1_56	1700920-14@5X RCDM-MW-12S-20170719 ...	01-Aug-17	19:39:06
57	170801M1_57	1700920-15@5X LF-MW-28S-20170719 0.11...	01-Aug-17	19:49:49
58	170801M1_58	B7G0086-BS1 OPR 1	01-Aug-17	20:00:27
59	170801M1_59	IPA	01-Aug-17	20:11:13
60	170801M1_60	B7G0086-BLK1 Method Blank 1	01-Aug-17	20:21:52
61	170801M1_61	1700886-11 AT028-SD17-01-071217-1430 1.84	01-Aug-17	20:32:30
62	170801M1_62	1700886-12 AT028-SD17-02-071317-0845 1.44	01-Aug-17	20:43:09
63	170801M1_63	1700888-01 HARRI-01-SB01-0-2 1.52	01-Aug-17	20:53:47
64	170801M1_64	1700888-02 HARRI-01-SB01-6-8 1.32	01-Aug-17	21:04:25
65	170801M1_65	1700888-03 HARRI-01-SB02-0-2 2.04	01-Aug-17	21:15:04

Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
66	170801M1_66	1700888-04 HARRI-01-SO-DUP01-071117 1.06	01-Aug-17	21:25:42
67	170801M1_67	1700888-05 HARRI-01-SB02-8-10 1.35	01-Aug-17	21:36:29
68	170801M1_68	1700888-06 HARRI-01-SB03-0-2 1.33	01-Aug-17	21:47:15
69	170801M1_69	IPA	01-Aug-17	21:58:02
70	170801M1_70	ST170801M1-5 PFC CS3 17G3105	01-Aug-17	22:08:40
71	170801M1_71	IPA	01-Aug-17	22:19:26
72	170801M1_72	1700888-07 HARRI-01-SB03-8-10 1.37	01-Aug-17	22:31:08
73	170801M1_73	1700888-08 HARRI-02-SB01-0-2 1.21	01-Aug-17	22:42:08
74	170801M1_74	1700888-09 HARRI-02-SB01-6-8 1.47	01-Aug-17	22:52:47
75	170801M1_75	1700888-10 HARRI-02-SB02-0-2 1.3	01-Aug-17	23:03:25
76	170801M1_76	1700888-11 HARRI-02-SB02-6-8 1.38	01-Aug-17	23:14:04
77	170801M1_77	1700889-01 HARRI-03-SB01-0-2 1.36	01-Aug-17	23:24:50
78	170801M1_78	1700889-02 HARRI-03-SB01-WT-WT 1.33	01-Aug-17	23:35:28
79	170801M1_79	1700889-03 HARRI-03-SO-Dup02-01000 1.37	01-Aug-17	23:46:15
80	170801M1_80	1700889-04 HARRI-03-SB02-0-2 1.34	01-Aug-17	23:57:01
81	170801M1_81	1700889-05 HARRI-03-SB02-WT-WT 1.17	02-Aug-17	00:07:48
82	170801M1_82	IPA	02-Aug-17	00:18:27
83	170801M1_83	ST170801M1-6 PFC CS3 17G3105	02-Aug-17	00:29:13
84	170801M1_84	IPA	02-Aug-17	00:40:01
85	170801M1_85	1700889-06 HARRI-03-SB03-0-2 1.33	02-Aug-17	00:50:50
86	170801M1_86	1700889-07 HARRI-03-SB03-WT-WT 1.34	02-Aug-17	01:01:34
87	170801M1_87	B7G0086-MS1 Matrix Spike 1.35	02-Aug-17	01:12:13
88	170801M1_88	B7G0086-MSD1 Matrix Spike Dup 1.4	02-Aug-17	01:22:51
89	170801M1_89	IPA	02-Aug-17	01:33:37
90	170801M1_90	ST170801M1-7 PFC CS3 17G3105	02-Aug-17	01:44:16
91	170801M1_91	IPA	02-Aug-17	01:55:02

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-54.qld

Last Altered: Thursday, August 03, 2017 14:22:27 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:30 Pacific Daylight Time

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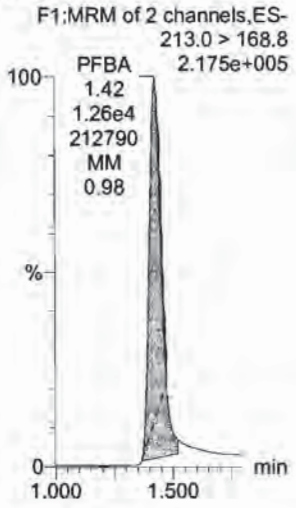
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_54, Date: 01-Aug-2017, Time: 19:16:05, ID: ST170801M1-4 PFC CS3 17G3105, Description: PFC CS3 17G3105

PFBA



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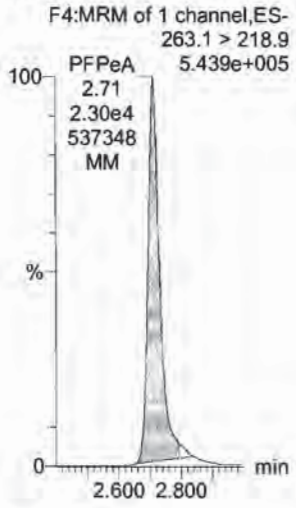

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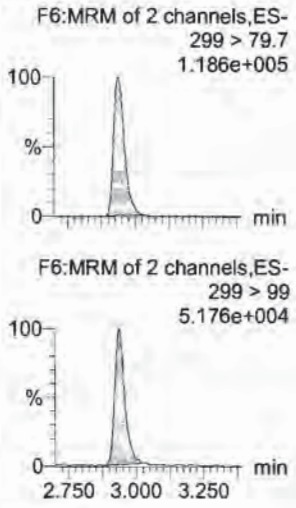

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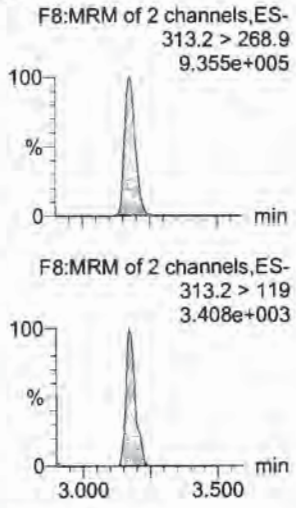
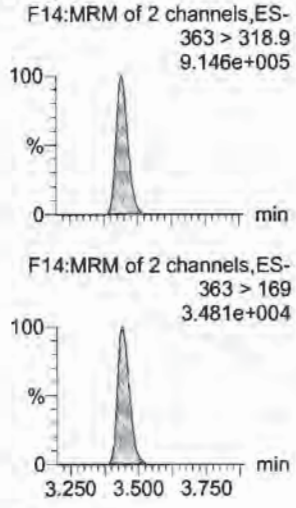
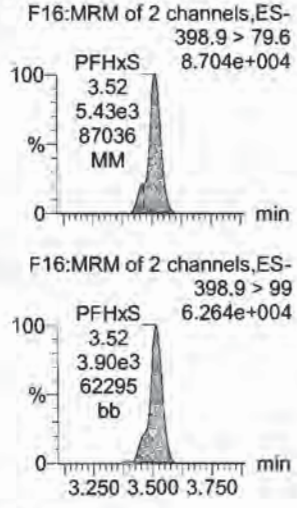


PFHpA



PFHxS



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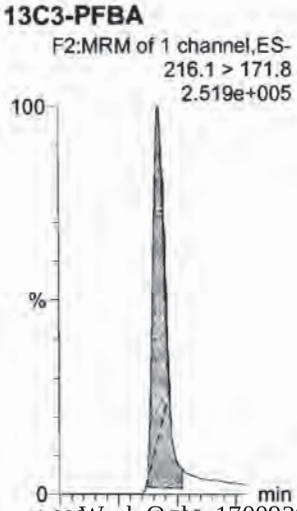

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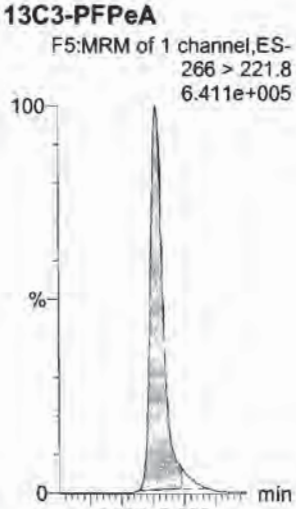

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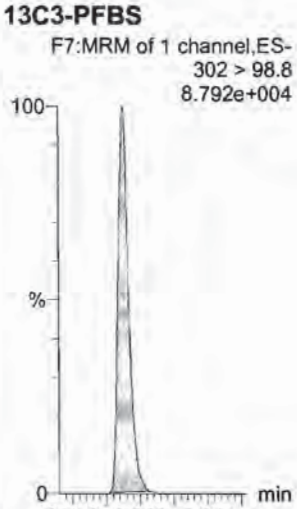

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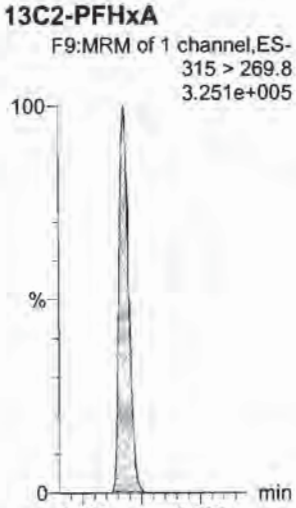

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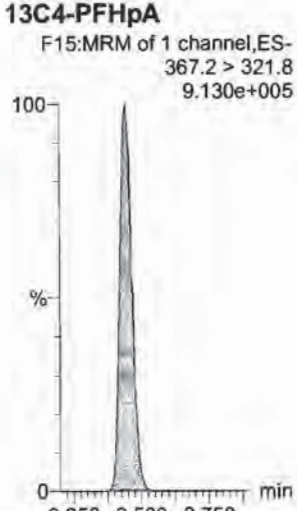

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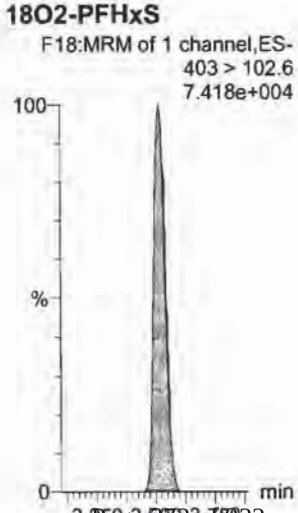

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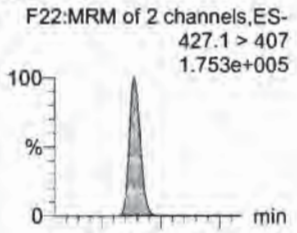
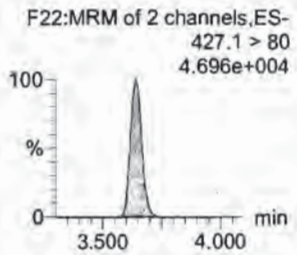
Name: 170801M1_54, Date: 01-Aug-2017, Time: 19:16:05, ID: ST170801M1-4 PFC CS3 17G3105, Description: PFC CS3 17G3105

6:2 FTS





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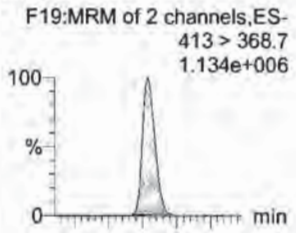

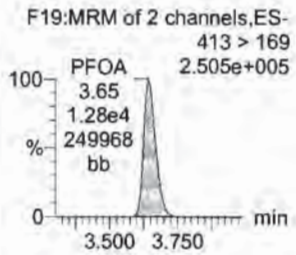

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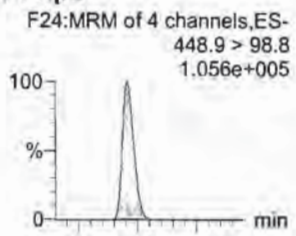

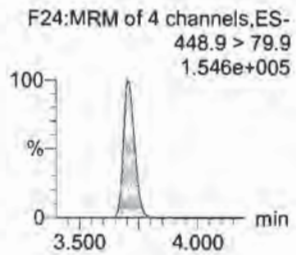

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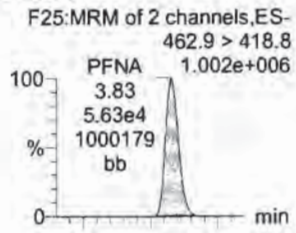

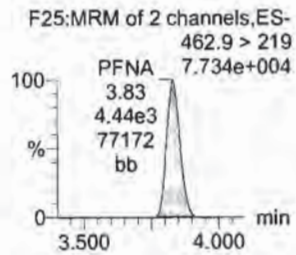

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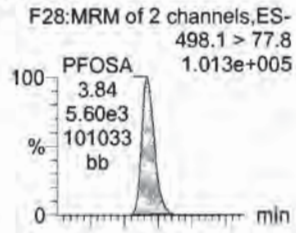

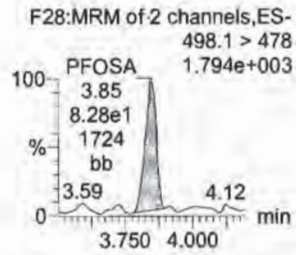

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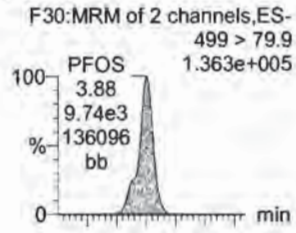
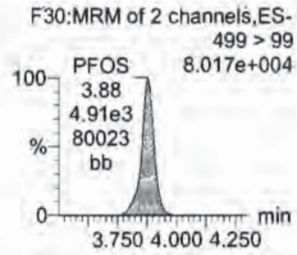
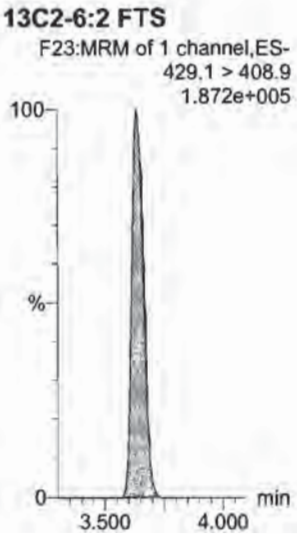




13C2-6:2 FTS



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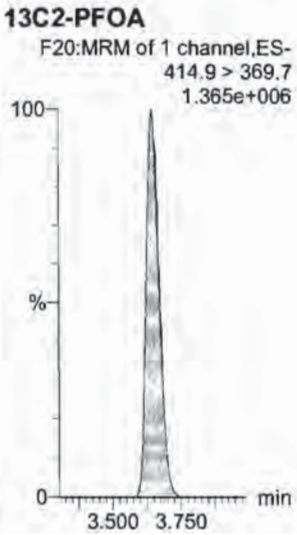

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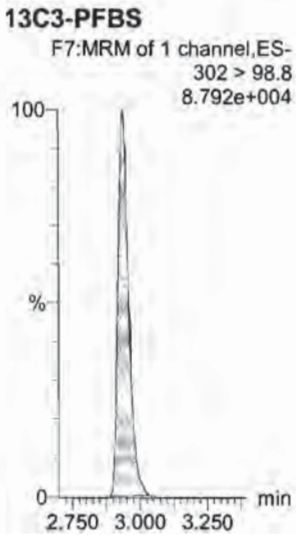

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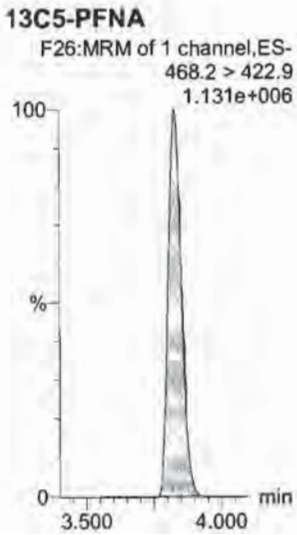

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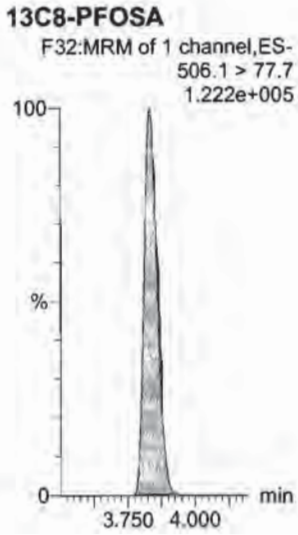

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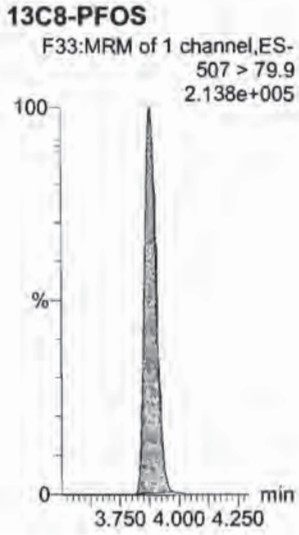

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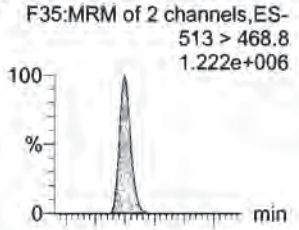
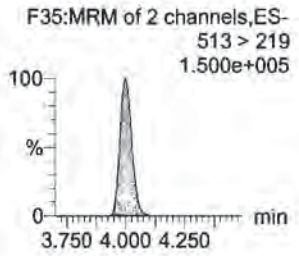
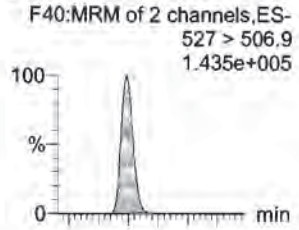
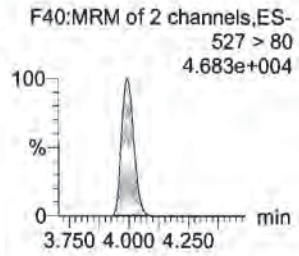




8:2 FTS





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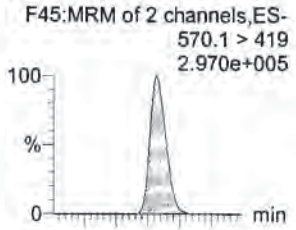

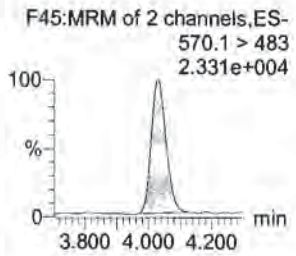

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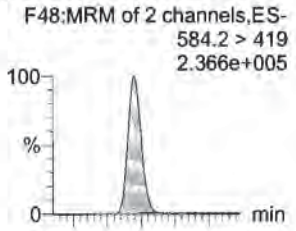

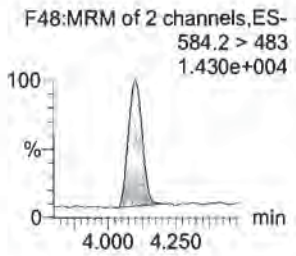

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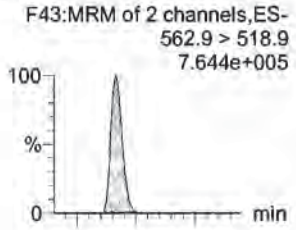

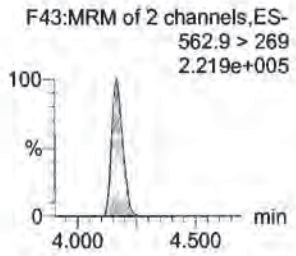

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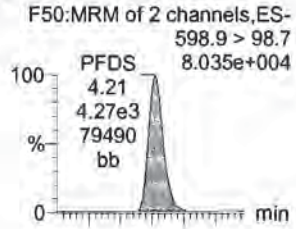

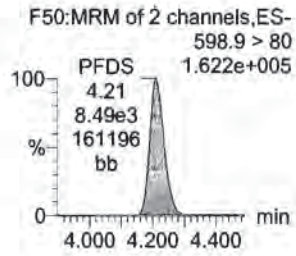

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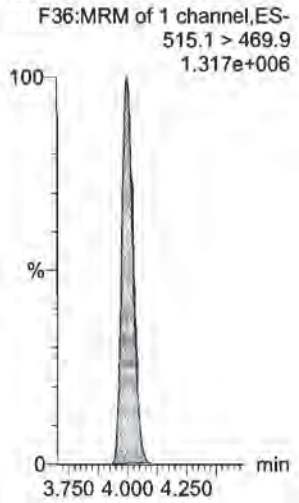
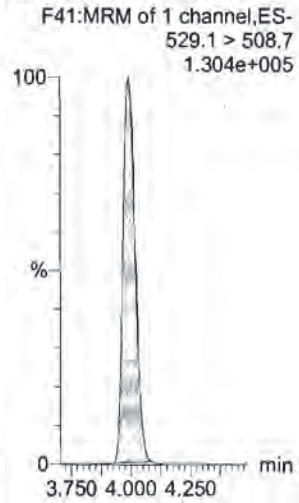


13C2-8:2 FTS



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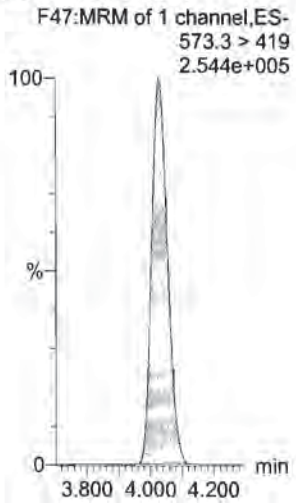

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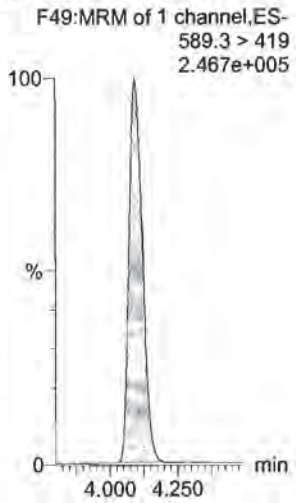

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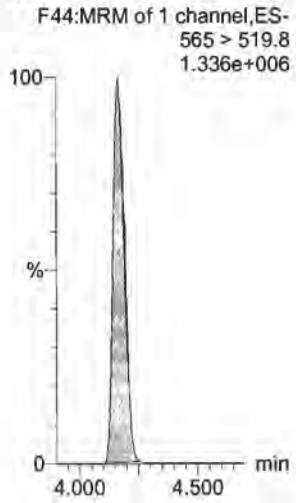

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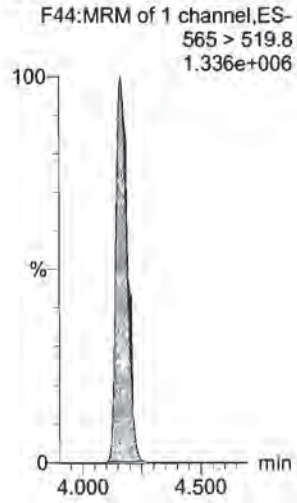

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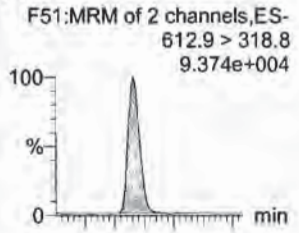

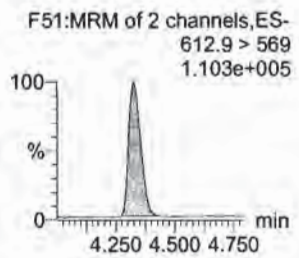

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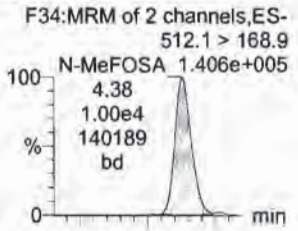

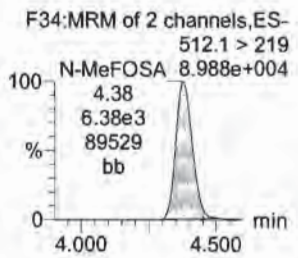

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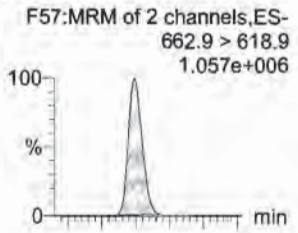

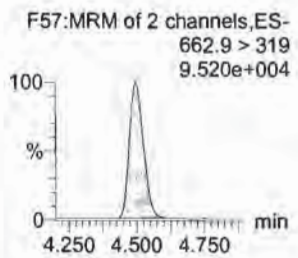

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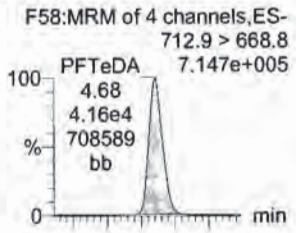

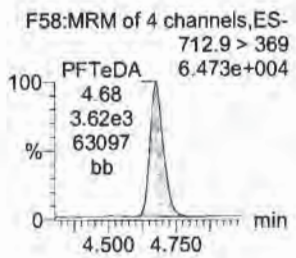

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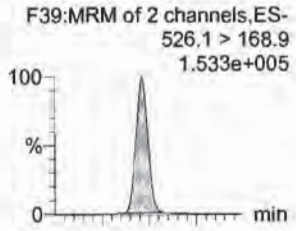

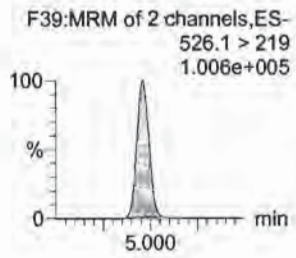

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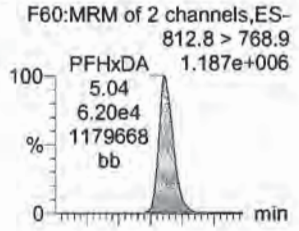

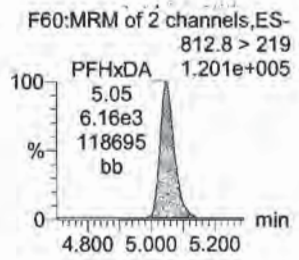

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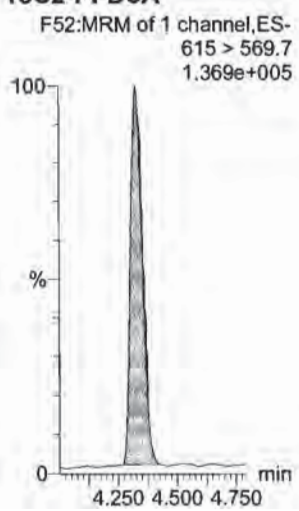
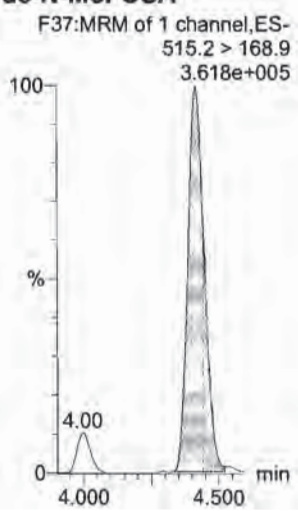


d3-N-MeFOSA



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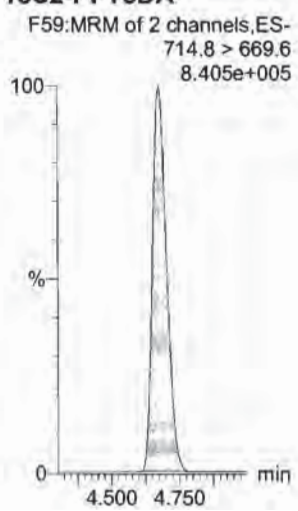
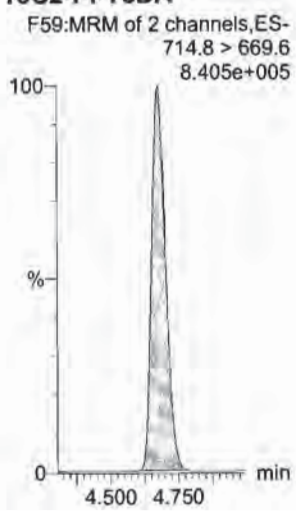
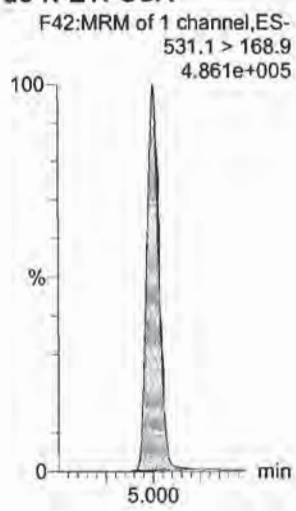


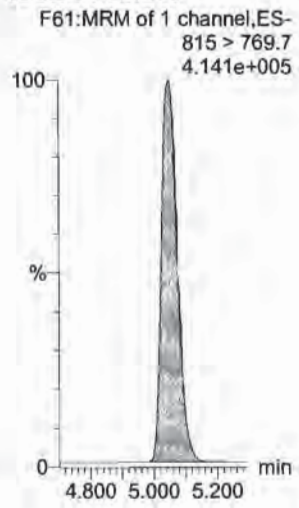
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA

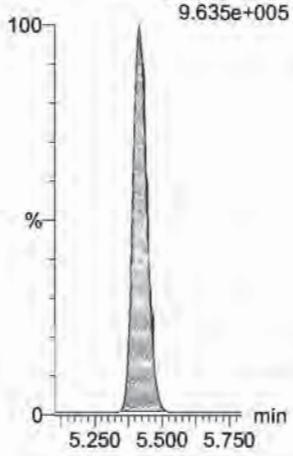


Dataset: U:\Q4.PRO\results\170801M1\170801M1-54.qld

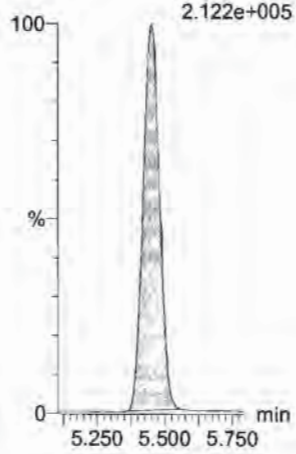
Last Altered: Thursday, August 03, 2017 14:22:27 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:30 Pacific Daylight Time

Name: 170801M1_54, Date: 01-Aug-2017, Time: 19:16:05, ID: ST170801M1-4 PFC CS3 17G3105, Description: PFC CS3 17G3105

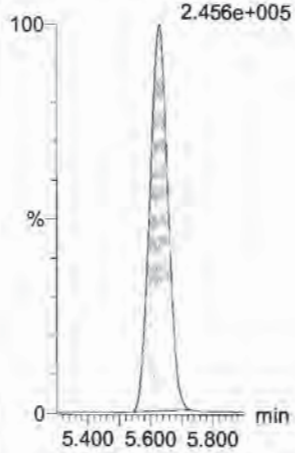
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
9.635e+005



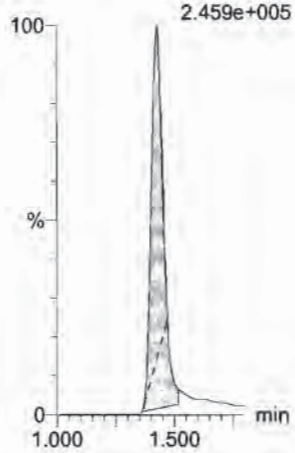
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.122e+005



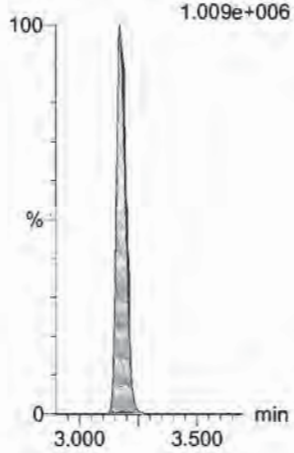
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.456e+005



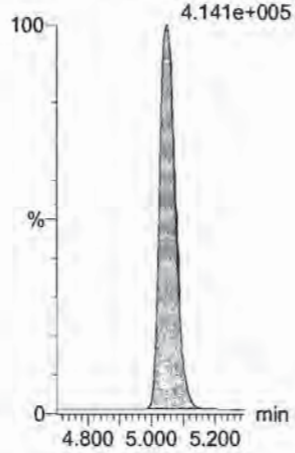
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.459e+005



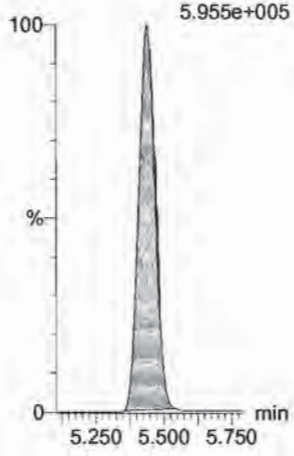
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.009e+006



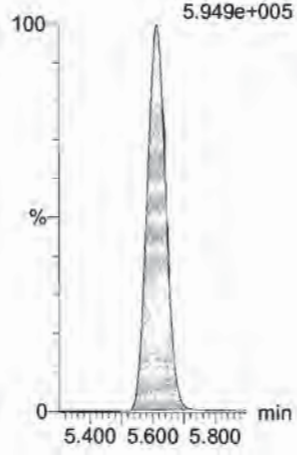
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.141e+005



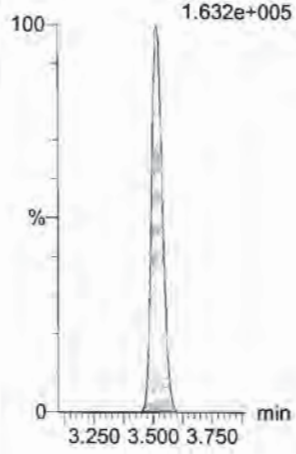
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.955e+005



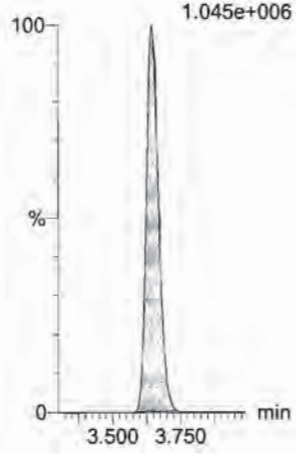
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.949e+005



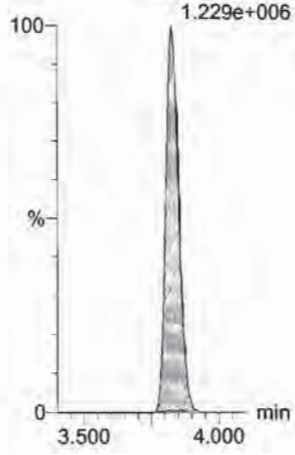
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.632e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.045e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.229e+006

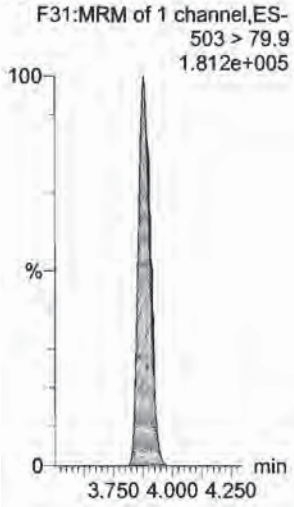


Dataset: U:\Q4.PRO\results\170801M1\170801M1-54.qld

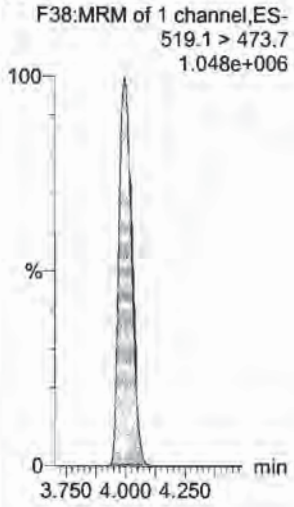
Last Altered: Thursday, August 03, 2017 14:22:27 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:30 Pacific Daylight Time

Name: 170801M1_54, Date: 01-Aug-2017, Time: 19:16:05, ID: ST170801M1-4 PFC CS3 17G3105, Description: PFC CS3 17G3105

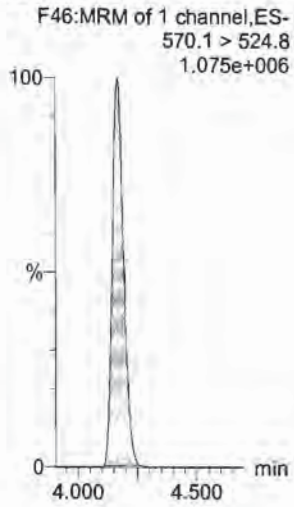
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Dataset: U:\Q4.PRO\results\170801M1\170801M1-70.qld

Last Altered: Thursday, August 03, 2017 14:25:34 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:32:20 Pacific Daylight Time

AC 8/3/17

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_70, Date: 01-Aug-2017, Time: 22:08:40, ID: ST170801M1-5 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	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	1.57e4	1.0000		1.32	1.42	10.4	9.57	95.7
2	2	PFPeA	263.1 > 218.9	2.40e4	3.25e4	1.0000		2.77	2.71	9.23	9.66	96.6
3	3	PFBS	299 > 79.7	5.38e3	3.83e3	1.0000		2.96	2.94	17.6	9.28	92.8
4	4	PFHxA	313.2 > 268.9	4.29e4	1.50e4	1.0000		3.19	3.18	14.3	10.2	102.0
5	5	PFHpA	363 > 318.9	4.68e4	4.78e4	1.0000		3.45	3.45	12.2	10.2	101.8
6	6	PFHxS	398.9 > 79.6	5.66e3	4.71e3	1.0000		3.56	3.52	15.0	8.92	89.2
7	7	6:2 FTS	427.1 > 407	9.05e3	1.08e4	1.0000		3.64	3.64	10.4	9.26	92.6
8	8	PFOA	413 > 368.7	5.93e4	7.52e4	1.0000		3.65	3.65	9.86	10.2	101.8
9	9	PFHpS	448.9 > 98.8	5.28e3	7.52e4	1.0000		3.65	3.71	0.878	10.1	101.1
10	10	PFNA	462.9 > 418.8	6.01e4	6.48e4	1.0000		3.83	3.83	11.6	10.6	106.1
11	11	PFOSA	498.1 > 77.8	5.62e3	7.20e3	1.0000		3.84	3.84	9.76	9.12	91.2
12	12	PFOS	499 > 79.9	1.08e4	1.24e4	1.0000		3.89	3.88	10.9	10.7	106.5
13	13	PFDA	513 > 468.8	6.12e4	6.50e4	1.0000		4.01	4.00	11.8	9.68	96.8
14	14	8:2 FTS	527 > 506.9	7.72e3	6.54e3	1.0000		4.00	4.00	14.8	10.5	105.0
15	15	N-MeFOSAA	570.1 > 419	1.68e4	1.43e4	1.0000		4.03	4.03	191	10.7	107.2
16	16	N-EtFOSAA	584.2 > 419	1.31e4	1.40e4	1.0000		4.10	4.10	152	9.85	98.5
17	17	PFUnA	562.9 > 518.9	4.37e4	7.05e4	1.0000		4.17	4.16	7.76	10.1	101.3
18	18	PFDS	598.9 > 98.7	4.54e3	7.05e4	1.0000		4.22	4.21	0.805	10.0	100.1
19	19	PFDoA	612.9 > 318.8	4.87e3	6.51e3	1.0000		4.34	4.33	9.35	9.94	99.4
20	20	N-MeFOSA	512.1 > 168.9	9.46e3	2.55e4	1.0000		4.29	4.39	55.6	55.1	110.1
21	21	PFTrDA	662.9 > 618.9	6.22e4	6.51e3	1.0000		4.50	4.50	119	11.4	113.8
22	22	PFTeDA	712.9 > 668.8	4.24e4	5.03e4	1.0000		4.68	4.68	10.5	9.73	97.3
23	23	N-EtFOSA	526.1 > 168.9	1.12e4	3.54e4	1.0000		4.79	4.97	47.5	51.2	102.3
24	24	PFHxDA	812.8 > 768.9	6.21e4	2.35e4	1.0000		5.06	5.05	13.2	10.3	103.4
25	25	PFODA	912.8 > 868.8	5.64e4	2.35e4	1.0000		5.43	5.42	12.0	10.5	105.4
26	26	N-MeFOSE	616.1 > 58.9	1.44e4	4.08e4	1.0000		5.42	5.45	53.1	51.3	102.6
27	27	N-EtFOSE	630.1 > 58.9	1.65e4	4.00e4	1.0000		5.59	5.63	61.8	52.7	105.4
28	28	13C3-PFBA	216.1 > 171.8	1.57e4	1.49e4	1.0000	1.006	1.32	1.43	13.2	13.1	104.8
29	29	13C3-PFPeA	266 > 221.8	3.25e4	4.29e4	1.0000	0.275	2.77	2.71	3.79	13.8	110.2
30	30	13C3-PFBS	302 > 98.8	3.83e3	4.29e4	1.0000	0.034	2.96	2.94	0.447	13.1	104.8
31	31	13C2-PFHxA	315 > 269.8	1.50e4	4.29e4	1.0000	0.334	3.19	3.18	1.75	5.23	104.6

70-130

50-150

Dataset: U:\Q4.PRO\results\170801M1\170801M1-70.qld

Last Altered: Thursday, August 03, 2017 14:25:34 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:32:20 Pacific Daylight Time

Name: 170801M1_70, Date: 01-Aug-2017, Time: 22:08:40, ID: ST170801M1-5 PFC CS3 17G3105, Description: PFC CS3 17G3105

AC 8/3/17
70-130 50-150

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.78e4	4.29e4	1.0000	0.414	3.45	3.45	5.57	13.4	107.5
33	33	18O2-PFHxS	403 > 102.6	4.71e3	9.74e3	1.0000	0.475	3.56	3.52	6.04	12.7	101.7
34	34	13C2-6:2 FTS	429.1 > 408.9	1.08e4	5.79e4	1.0000	0.214	3.64	3.64	2.34	11.0	87.6
35	35	13C2-PFOA	414.9 > 369.7	7.52e4	5.79e4	1.0000	1.298	3.65	3.65	16.2	12.5	100.1
36	36	13C5-PFNA	468.2 > 422.9	6.48e4	6.23e4	1.0000	1.094	3.83	3.83	13.0	11.9	95.1
37	37	13C8-PFOSA	506.1 > 77.7	7.20e3	6.18e4	1.0000	0.124	3.84	3.84	1.46	11.7	93.5
38	38	13C8-PFOS	507 > 79.9	1.24e4	1.05e4	1.0000	1.153	3.89	3.88	14.7	12.8	102.1
39	39	13C2-PFDA	515.1 > 469.9	6.50e4	6.36e4	1.0000	1.059	4.01	4.00	12.8	12.1	96.5
40	40	13C2-8:2 FTS	529.1 > 508.7	6.54e3	6.36e4	1.0000	0.129	4.00	4.00	1.28	9.99	79.9
41	41	d3-N-MeFOSAA	573.3 > 419	1.43e4	6.18e4	1.0000	0.019	4.03	4.03	2.90	150	92.2
42	42	d5-N-EtFOSAA	589.3 > 419	1.40e4	6.18e4	1.0000	0.019	4.12	4.10	2.84	150	92.1
43	43	13C2-PFUnA	565 > 519.8	7.05e4	6.18e4	1.0000	1.172	4.17	4.16	14.2	12.2	97.2
44	44	13C2-PFDoA	615 > 569.7	6.51e3	6.18e4	1.0000	0.118	4.34	4.33	1.32	11.1	88.9
45	45	d3-N-MeFOSA	515.2 > 168.9	2.55e4	6.18e4	1.0000	0.040	4.29	4.42	5.15	127	84.9
46	46	13C2-PFTeDA	714.8 > 669.6	5.03e4	6.18e4	1.0000	0.801	4.68	4.68	10.2	12.7	101.5
47	47	d5-N-ETFOSA	531.1 > 168.9	3.54e4	6.18e4	1.0000	0.055	4.85	5.01	7.15	130	86.6
48	48	13C2-PFHxDA	815 > 769.7	2.35e4	6.18e4	1.0000	0.991	5.06	5.05	4.75	4.79	95.8
49	49	d7-N-MeFOSE	623.1 > 58.9	4.08e4	6.18e4	1.0000	0.065	5.42	5.44	8.24	126	84.3
50	50	d9-N-EtFOSE	639.2 > 58.8	4.00e4	6.18e4	1.0000	0.065	5.59	5.62	8.08	125	83.2
51	51	13C4-PFBA	217 > 171.8	1.49e4	1.49e4	1.0000	1.000	1.32	1.43	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	4.29e4	4.29e4	1.0000	1.000	3.19	3.18	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	9.74e3	9.74e3	1.0000	1.000	3.56	3.52	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	5.79e4	5.79e4	1.0000	1.000	3.65	3.65	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	6.23e4	6.23e4	1.0000	1.000	3.83	3.83	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.05e4	1.05e4	1.0000	1.000	3.89	3.88	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	6.36e4	6.36e4	1.0000	1.000	4.01	4.00	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	6.18e4	6.18e4	1.0000	1.000	4.17	4.17	12.5	12.5	100.0

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Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170801M1_1	IPA	01-Aug-17	09:45:15
2	170801M1_2	ST170801M1-1 PFC CS0 17G2826	01-Aug-17	09:55:58
3	170801M1_3	IPA	01-Aug-17	10:06:45
4	170801M1_4	B7G0124-BLK1 Method Blank 5	01-Aug-17	10:17:40
5	170801M1_5	B7G0125-BLK1 Method Blank 5	01-Aug-17	10:30:10
6	170801M1_6	B7G0126-BLK1 Method Blank 5	01-Aug-17	10:40:49
7	170801M1_7	B7G0125-BS1 OPR 5	01-Aug-17	10:51:27
8	170801M1_8	B7G0125-BS2 OPR 5	01-Aug-17	11:02:05
9	170801M1_9	B7G0125-BS3 OPR 5	01-Aug-17	11:12:44
10	170801M1_10	B7G0125-BS4 OPR 5	01-Aug-17	11:23:22
11	170801M1_11	B7G0125-BS5 OPR 5	01-Aug-17	11:34:09
12	170801M1_12	B7G0125-BS6 OPR 5	01-Aug-17	11:44:47
13	170801M1_13	B7G0125-BS7 OPR 5	01-Aug-17	11:55:25
14	170801M1_14	B7G0126-BS2 OPR 5	01-Aug-17	12:06:12
15	170801M1_15	B7G0126-BS3 OPR 5	01-Aug-17	12:16:52
16	170801M1_16	B7G0126-BS4 OPR 5	01-Aug-17	12:27:41
17	170801M1_17	B7G0126-BS5 OPR 5	01-Aug-17	12:38:25
18	170801M1_18	B7G0124-BS1 OPR 5	01-Aug-17	12:49:04
19	170801M1_19	B7G0124-BS2 OPR 5	01-Aug-17	12:59:42
20	170801M1_20	B7G0124-BS3 OPR 5	01-Aug-17	13:10:20
21	170801M1_21	B7G0124-BS4 OPR 5	01-Aug-17	13:20:59
22	170801M1_22	IPA	01-Aug-17	13:31:45
23	170801M1_23	ST170801M1-2 PFC CS3 17G3105	01-Aug-17	13:42:24
24	170801M1_24	IPA	01-Aug-17	13:53:02
25	170801M1_25	B7G0122-BS1 OPR 0.25	01-Aug-17	14:03:43
26	170801M1_26	IPA	01-Aug-17	14:14:27
27	170801M1_27	B7G0122-BLK1 Method Blank 0.25	01-Aug-17	14:25:05
28	170801M1_28	1700891-06RE1 VEL FOAM 0.17113	01-Aug-17	14:35:50
29	170801M1_29	1700920-01 RCDM-MW-28S-20170719 0.1113	01-Aug-17	14:47:19
30	170801M1_30	1700920-02 LF-MW-12S-20170719 0.11113	01-Aug-17	14:58:06
31	170801M1_31	1700920-03 RCDM-MW-14S-20170720 0.11405	01-Aug-17	15:09:41

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Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Compound name: PFBA

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33	170801M1_33	1700920-05 MH-A97-20170720 0.12086	01-Aug-17	15:31:28
34	170801M1_34	1700920-06 MH-H93-20170720 0.11357	01-Aug-17	15:42:06
35	170801M1_35	1700920-07 RCDM-BLANK-20170720 0.11872	01-Aug-17	15:52:53
36	170801M1_36	1700920-08 MH-C94-20170720 0.11568	01-Aug-17	16:03:31
37	170801M1_37	IPA	01-Aug-17	16:14:18
38	170801M1_38	1700920-09 RCDM-MW-13S-20170719 0.11866	01-Aug-17	16:24:56
39	170801M1_39	IPA	01-Aug-17	16:35:34
40	170801M1_40	ST170801M1-3 PFC CS3 17G3105	01-Aug-17	16:46:13
41	170801M1_41	IPA	01-Aug-17	16:56:59
42	170801M1_42	1700920-10 LF-MW-14S-20170720 0.11481	01-Aug-17	17:08:05
43	170801M1_43	1700920-11 LF-MW-11BR-20170720 0.11664	01-Aug-17	17:18:47
44	170801M1_44	1700920-12 LF-MW-13S-20170719 0.11667	01-Aug-17	17:29:25
45	170801M1_45	1700920-13 RCDM-MW-11BR-20170720 0.11...	01-Aug-17	17:40:03
46	170801M1_46	1700920-14 RCDM-MW-12S-20170719 0.11619	01-Aug-17	17:50:42
47	170801M1_47	1700920-15 LF-MW-28S-20170719 0.11572	01-Aug-17	18:01:20
48	170801M1_48	1700920-16 DUP-07-20170719 0.12023	01-Aug-17	18:11:59
49	170801M1_49	1700920-17 FRB04-20170719 0.11007	01-Aug-17	18:22:37
50	170801M1_50	1700920-01@5X RCDM-MW-28S-20170719 ...	01-Aug-17	18:33:15
51	170801M1_51	1700920-02@5X LF-MW-12S-20170719 0.11...	01-Aug-17	18:43:54
52	170801M1_52	1700920-08@5X MH-C94-20170720 0.11568	01-Aug-17	18:54:40
53	170801M1_53	IPA	01-Aug-17	19:05:27
54	170801M1_54	ST170801M1-4 PFC CS3 17G3105	01-Aug-17	19:16:05
55	170801M1_55	IPA	01-Aug-17	19:27:09
56	170801M1_56	1700920-14@5X RCDM-MW-12S-20170719 ...	01-Aug-17	19:39:06
57	170801M1_57	1700920-15@5X LF-MW-28S-20170719 0.11...	01-Aug-17	19:49:49
58	170801M1_58	B7G0086-BS1 OPR 1	01-Aug-17	20:00:27
59	170801M1_59	IPA	01-Aug-17	20:11:13
60	170801M1_60	B7G0086-BLK1 Method Blank 1	01-Aug-17	20:21:52
61	170801M1_61	1700886-11 AT028-SD17-01-071217-1430 1.84	01-Aug-17	20:32:30
62	170801M1_62	1700886-12 AT028-SD17-02-071317-0845 1.44	01-Aug-17	20:43:09
63	170801M1_63	1700888-01 HARRI-01-SB01-0-2 1.52	01-Aug-17	20:53:47
64	170801M1_64	1700888-02 HARRI-01-SB01-6-8 1.32	01-Aug-17	21:04:25
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Compound name: PFBA

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68	170801M1_68	1700888-06 HARRI-01-SB03-0-2 1.33	01-Aug-17	21:47:15
69	170801M1_69	IPA	01-Aug-17	21:58:02
70	170801M1_70	ST170801M1-5 PFC CS3 17G3105	01-Aug-17	22:08:40
71	170801M1_71	IPA	01-Aug-17	22:19:26
72	170801M1_72	1700888-07 HARRI-01-SB03-8-10 1.37	01-Aug-17	22:31:08
73	170801M1_73	1700888-08 HARRI-02-SB01-0-2 1.21	01-Aug-17	22:42:08
74	170801M1_74	1700888-09 HARRI-02-SB01-6-8 1.47	01-Aug-17	22:52:47
75	170801M1_75	1700888-10 HARRI-02-SB02-0-2 1.3	01-Aug-17	23:03:25
76	170801M1_76	1700888-11 HARRI-02-SB02-6-8 1.38	01-Aug-17	23:14:04
77	170801M1_77	1700889-01 HARRI-03-SB01-0-2 1.36	01-Aug-17	23:24:50
78	170801M1_78	1700889-02 HARRI-03-SB01-WT-WT 1.33	01-Aug-17	23:35:28
79	170801M1_79	1700889-03 HARRI-03-SO-Dup02-01000 1.37	01-Aug-17	23:46:15
80	170801M1_80	1700889-04 HARRI-03-SB02-0-2 1.34	01-Aug-17	23:57:01
81	170801M1_81	1700889-05 HARRI-03-SB02-WT-WT 1.17	02-Aug-17	00:07:48
82	170801M1_82	IPA	02-Aug-17	00:18:27
83	170801M1_83	ST170801M1-6 PFC CS3 17G3105	02-Aug-17	00:29:13
84	170801M1_84	IPA	02-Aug-17	00:40:01
85	170801M1_85	1700889-06 HARRI-03-SB03-0-2 1.33	02-Aug-17	00:50:50
86	170801M1_86	1700889-07 HARRI-03-SB03-WT-WT 1.34	02-Aug-17	01:01:34
87	170801M1_87	B7G0086-MS1 Matrix Spike 1.35	02-Aug-17	01:12:13
88	170801M1_88	B7G0086-MSD1 Matrix Spike Dup 1.4	02-Aug-17	01:22:51
89	170801M1_89	IPA	02-Aug-17	01:33:37
90	170801M1_90	ST170801M1-7 PFC CS3 17G3105	02-Aug-17	01:44:16
91	170801M1_91	IPA	02-Aug-17	01:55:02

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-70.qld

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Name: 170801M1_70, Date: 01-Aug-2017, Time: 22:08:40, ID: ST170801M1-5 PFC CS3 17G3105, Description: PFC CS3 17G3105

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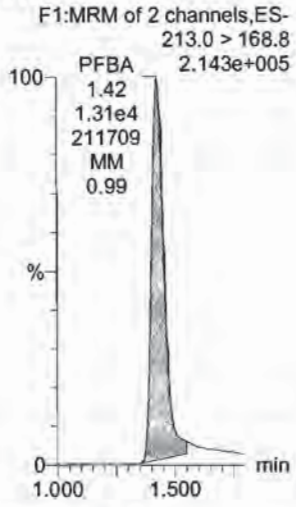

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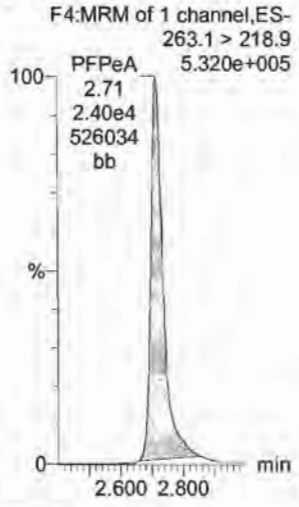

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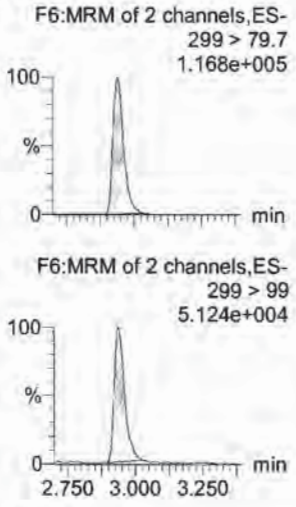

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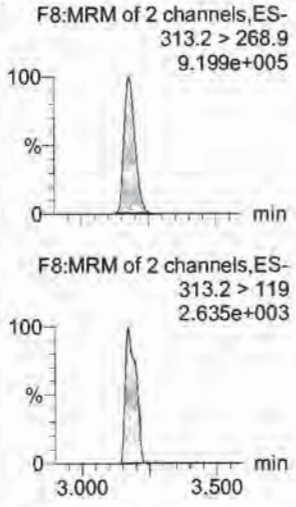

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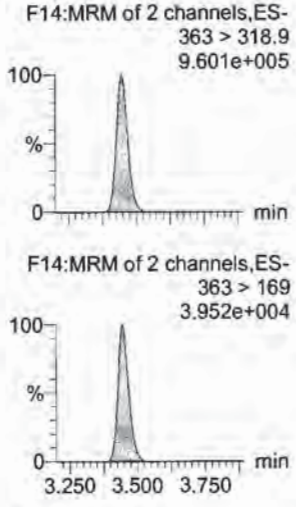

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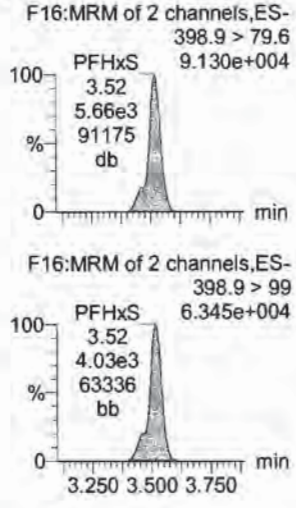

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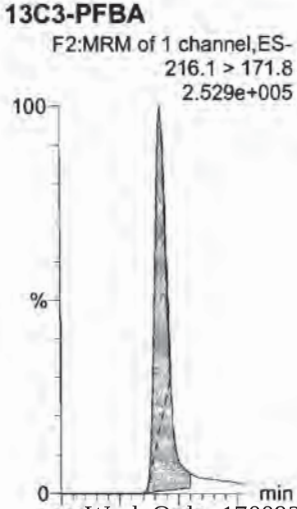

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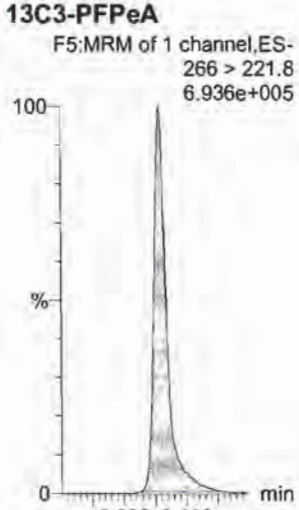

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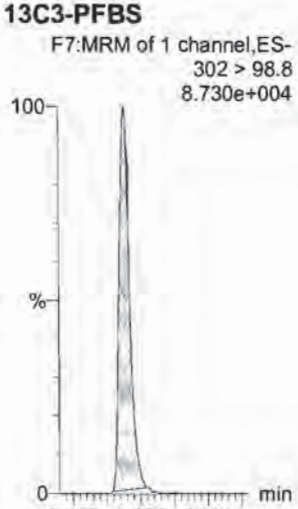

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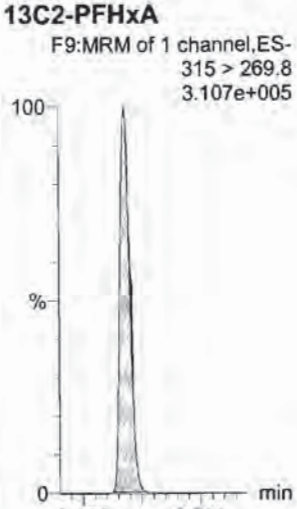

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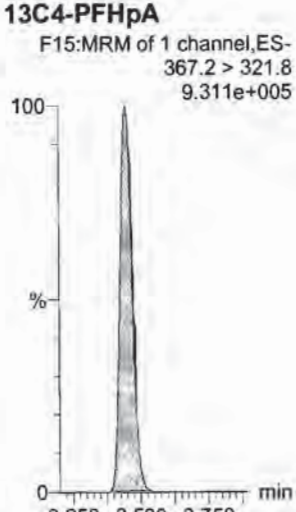

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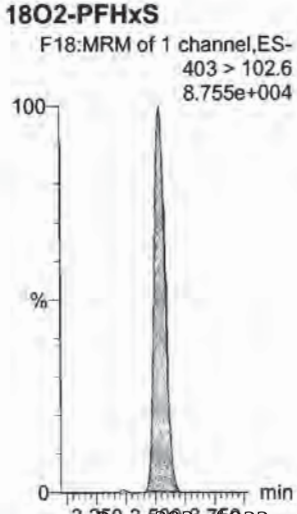

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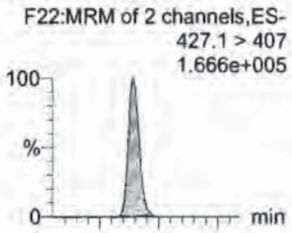
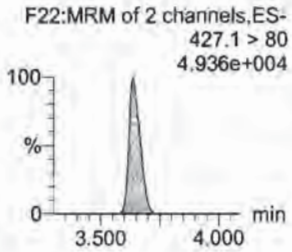
Name: 170801M1_70, Date: 01-Aug-2017, Time: 22:08:40, ID: ST170801M1-5 PFC CS3 17G3105, Description: PFC CS3 17G3105

6:2 FTS





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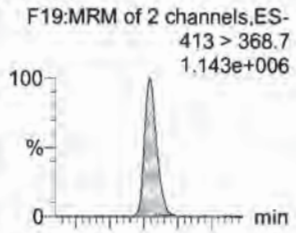

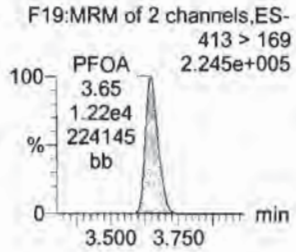

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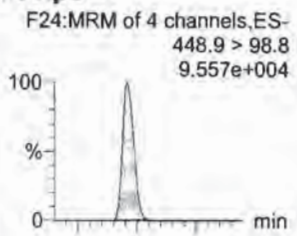

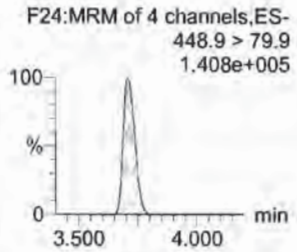

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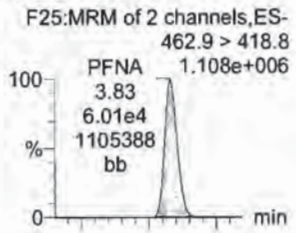

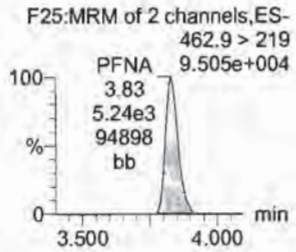

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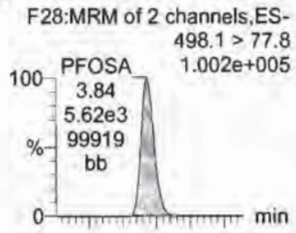

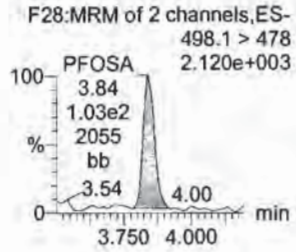

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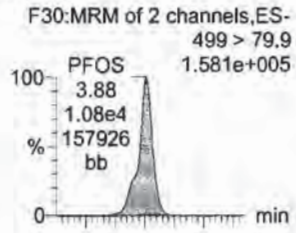

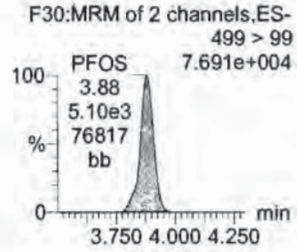

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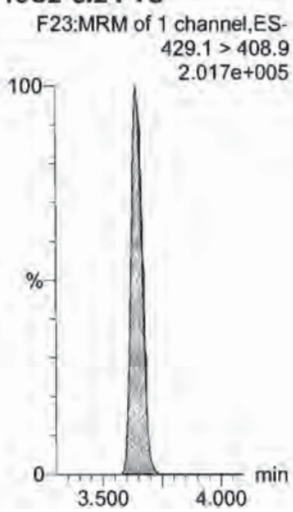

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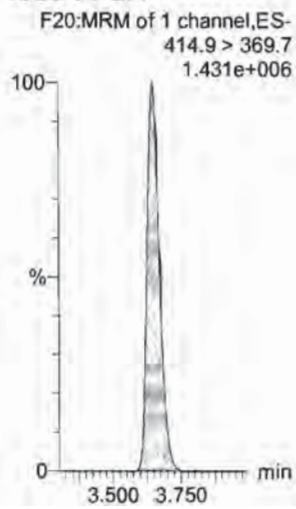

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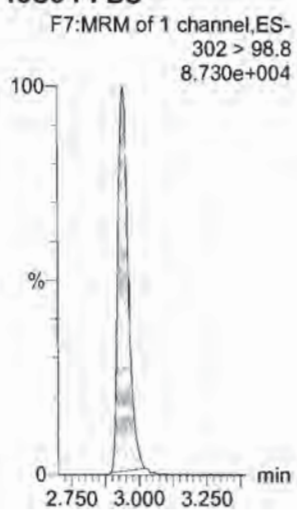

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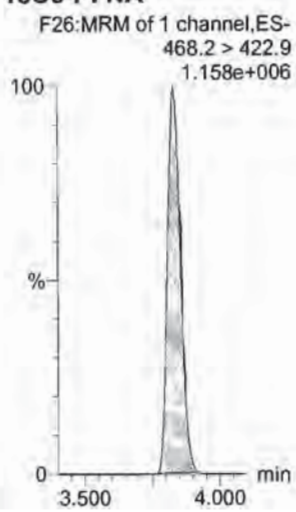

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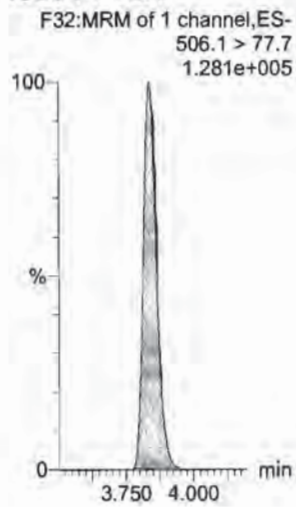

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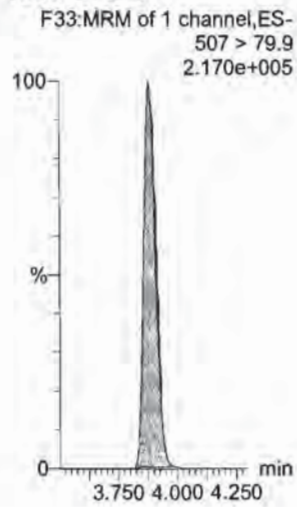

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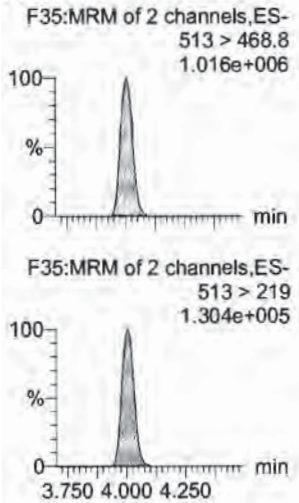

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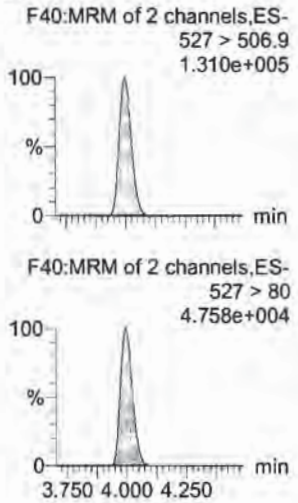

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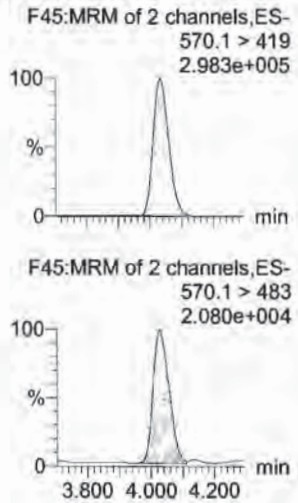

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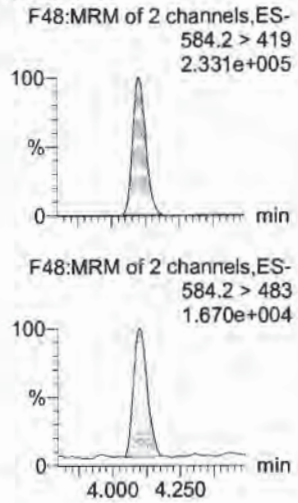

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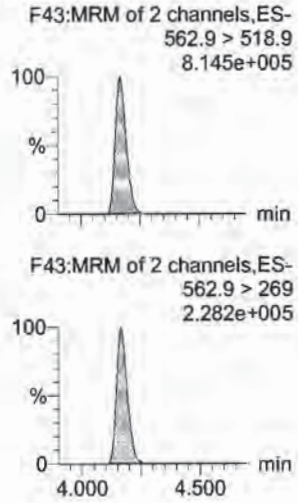
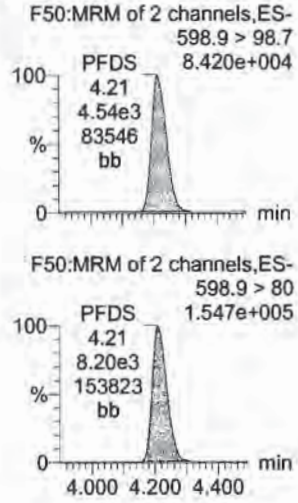
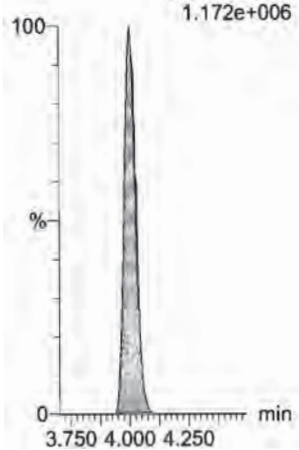


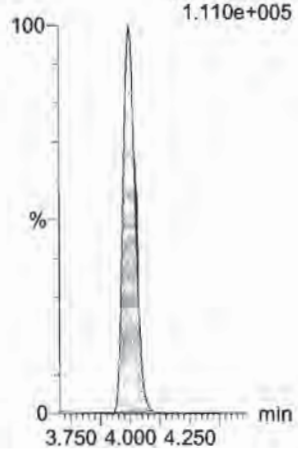
PFDS



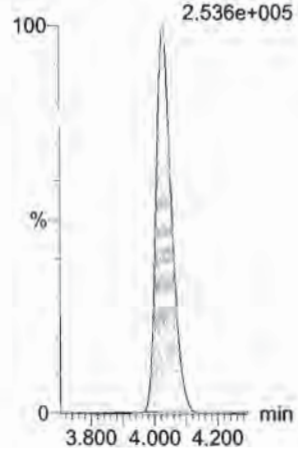
13C2-PFDA



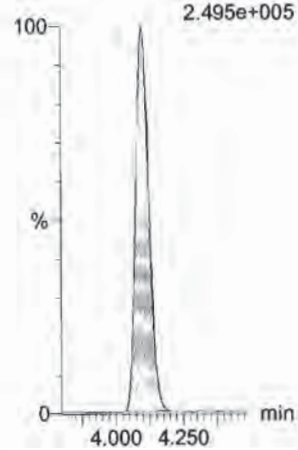
13C2-8:2 FTS



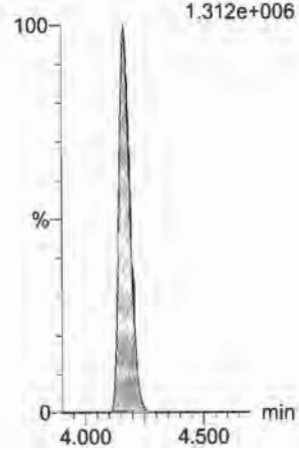
d3-N-MeFOSAA



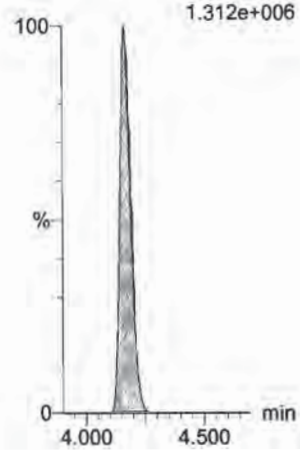
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA

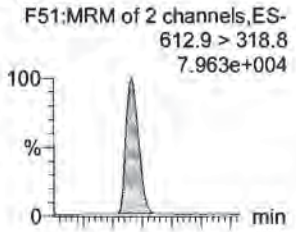


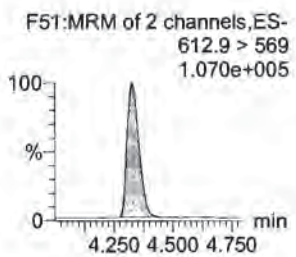
Dataset: U:\Q4.PRO\results\170801M1\170801M1-70.qld

Last Altered: Thursday, August 03, 2017 14:25:34 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:37 Pacific Daylight Time

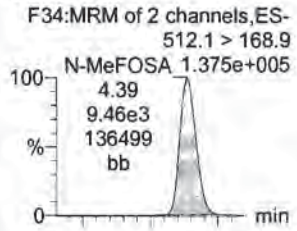
Name: 170801M1_70, Date: 01-Aug-2017, Time: 22:08:40, ID: ST170801M1-5 PFC CS3 17G3105, Description: PFC CS3 17G3105

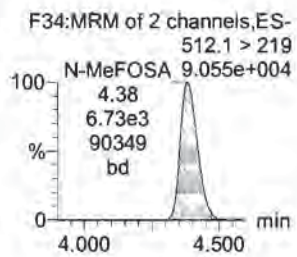
PFDoA



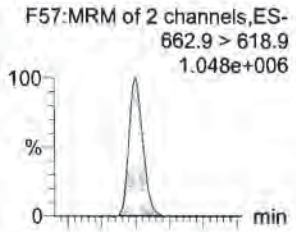


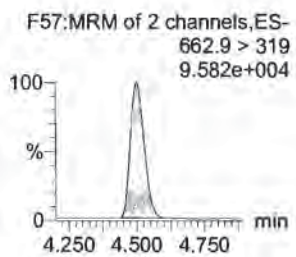
N-MeFOSA



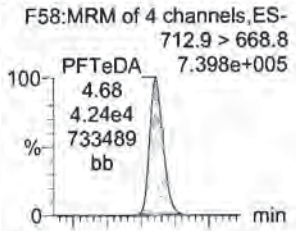


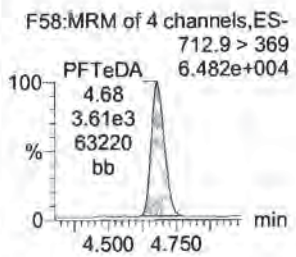
PFTrDA



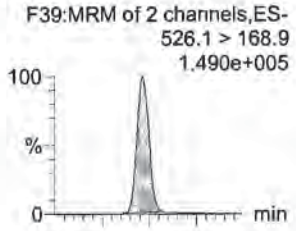


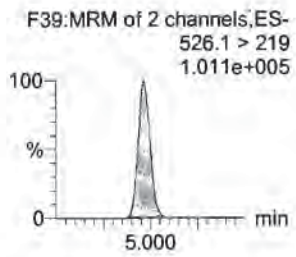
PFTeDA



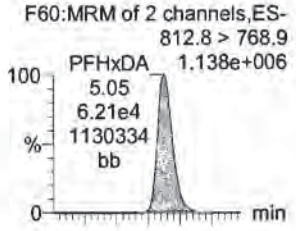


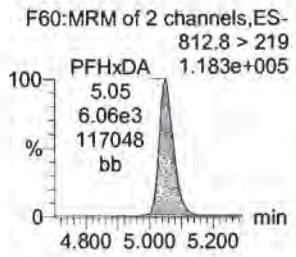
N-EtFOSA



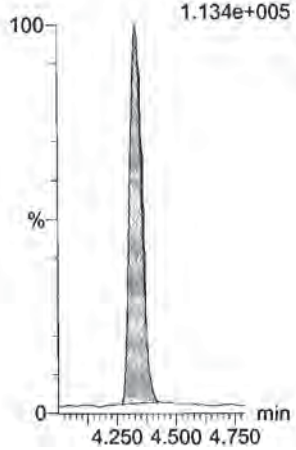


PFHxDA

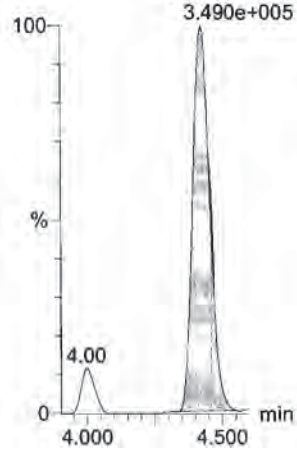




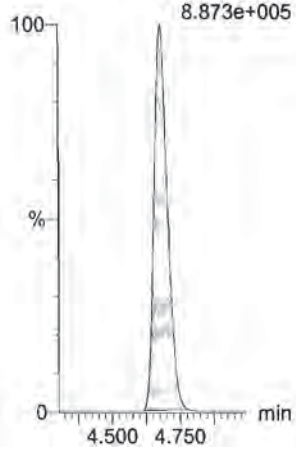
13C2-PFDoA



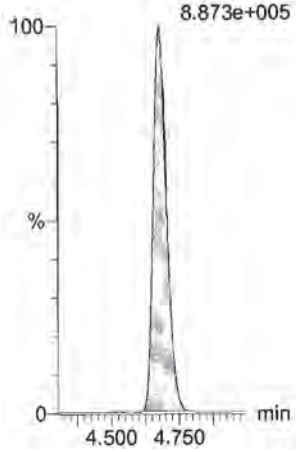
d3-N-MeFOSA



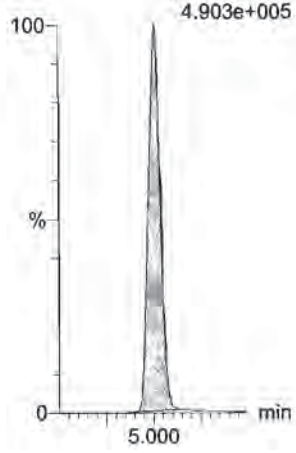
13C2-PFTeDA



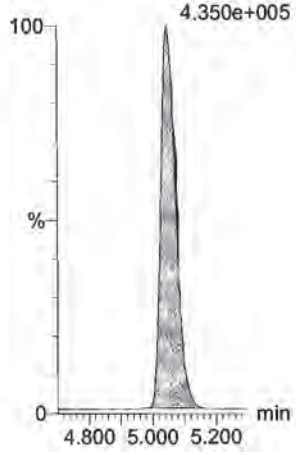
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA

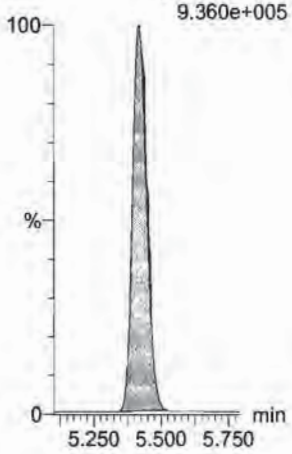


Dataset: U:\Q4.PRO\results\170801M1\170801M1-70.qld

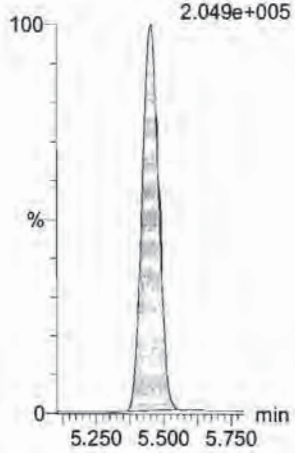
Last Altered: Thursday, August 03, 2017 14:25:34 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:37 Pacific Daylight Time

Name: 170801M1_70, Date: 01-Aug-2017, Time: 22:08:40, ID: ST170801M1-5 PFC CS3 17G3105, Description: PFC CS3 17G3105

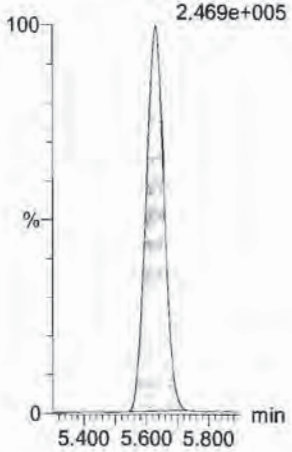
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
9.360e+005



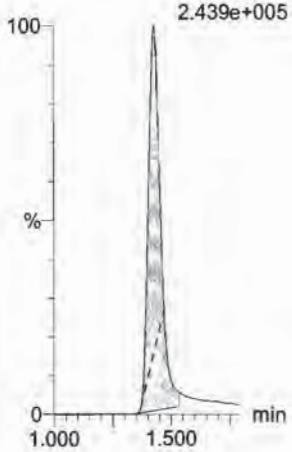
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.049e+005



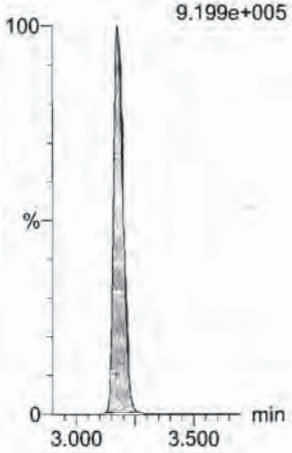
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.469e+005



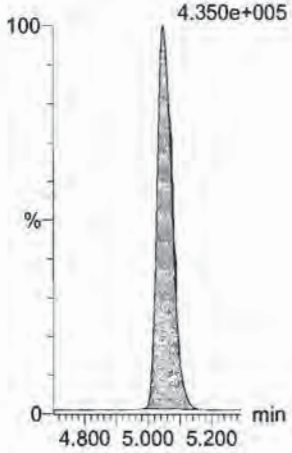
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.439e+005



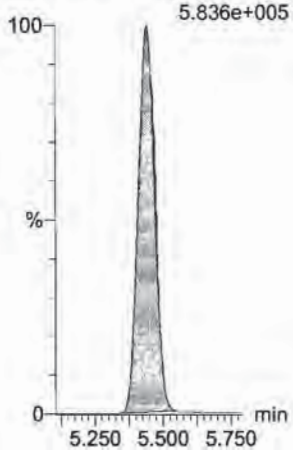
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
9.199e+005



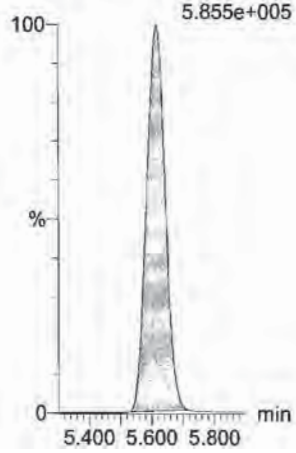
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.350e+005



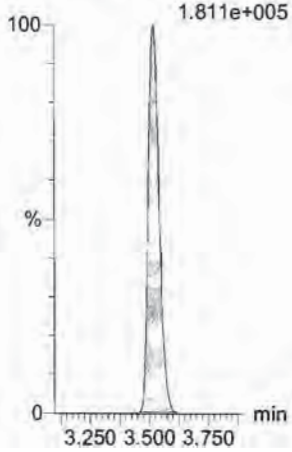
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.836e+005



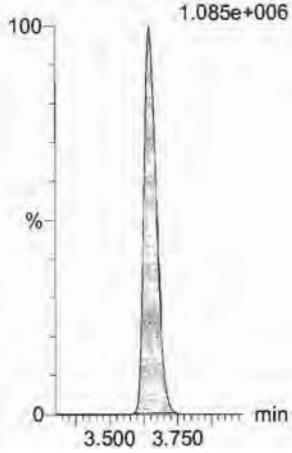
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.855e+005



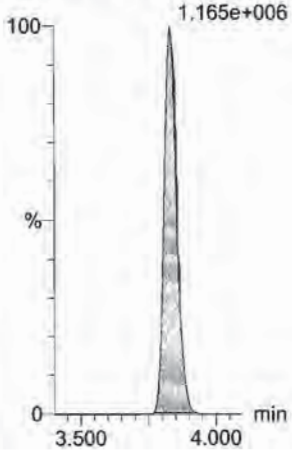
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.811e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.085e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.165e+006



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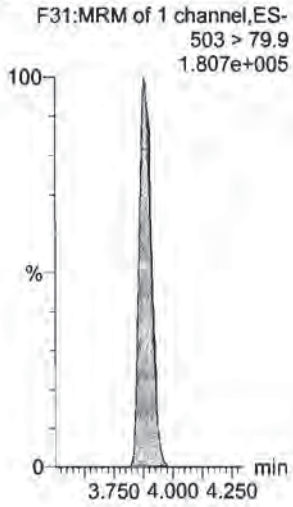
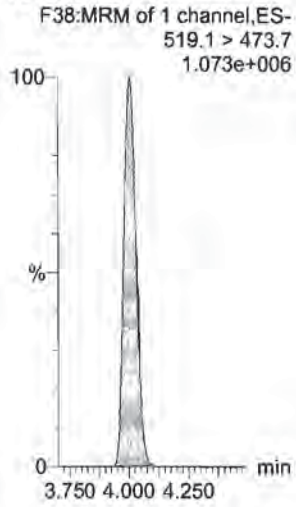
Last Altered: Thursday, August 03, 2017 14:25:34 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:50:37 Pacific Daylight Time

Name: 170801M1_70, Date: 01-Aug-2017, Time: 22:08:40, ID: ST170801M1-5 PFC CS3 17G3105, Description: PFC CS3 17G3105

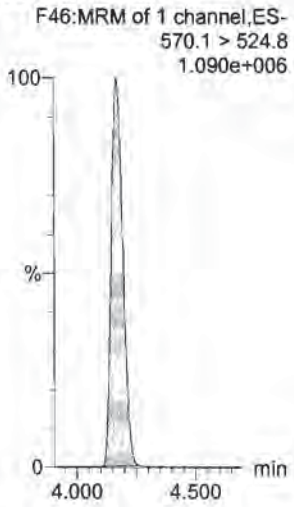
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Saturday, August 12, 2017 22:31:28 Pacific Daylight Time
Printed: Saturday, August 12, 2017 22:31:55 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_RS AREAS_0809.mdb 12 Aug 2017 22:31:21
Calibration: 12 Aug 2017 22:31:28

ID: ST170811G2-1 PFC CS0 17H1010, Description: PFC CS0 17H1010 A, Name: 170811G2_2, Date: 11-Aug-2017, Time: 11:12:24, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8	6727.104	538.168	1.000	2.85	12.5	100	NO
2	13C4-PFBA	216.9 > 17...	17585.633	1406.8...	1.000	1.57	12.5	100	NO
3	13C5-PFHxA	318.0 > 27...	19671.086	1573.6...	1.000	3.24	12.5	100	NO
4	13C3-PFHxS	401.9 > 79.9	10929.292	874.343	1.000	3.88	12.5	100	NO
5	13C8-PFOA	421.3 > 376	6422.460	513.797	1.000	4.18	12.5	100	NO
6	13C4-PFOS	503.0 > 79.9	3447.879	275.830	1.000	4.60	12.5	100	NO
7	13C9-PFNA	472.2 > 42...	6008.011	480.641	1.000	4.53	12.5	100	NO
8	13C6-PFDA	519.1 > 47...	2364.199	189.136	1.000	4.84	12.5	100	NO

ID: IPA, Description: IPA, Name: 170811G2_3, Date: 11-Aug-2017, Time: 11:24:56, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8			1.000				NO
2	13C4-PFBA	216.9 > 17...			1.000				NO
3	13C5-PFHxA	318.0 > 27...			1.000				NO
4	13C3-PFHxS	401.9 > 79.9			1.000				NO
5	13C8-PFOA	421.3 > 376			1.000				NO
6	13C4-PFOS	503.0 > 79.9			1.000				NO
7	13C9-PFNA	472.2 > 42...			1.000				NO
8	13C6-PFDA	519.1 > 47...			1.000				NO

ID: ST170811G2-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170811G2_4, Date: 11-Aug-2017, Time: 12:23:36, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8	7613.500	609.080	1.000	2.86	14.1	113	NO
2	13C4-PFBA	216.9 > 17...	22534.377	1802.7...	1.000	1.68	16.0	128	NO
3	13C5-PFHxA	318.0 > 27...	21929.063	1754.3...	1.000	3.24	13.9	111	NO
4	13C3-PFHxS	401.9 > 79.9	14431.768	1154.5...	1.000	3.89	16.5	132	NO
5	13C8-PFOA	421.3 > 376	9240.195	739.216	1.000	4.18	18.0	144	NO
6	13C4-PFOS	503.0 > 79.9	11522.869	921.830	1.000	4.61	41.8	334	YES
7	13C9-PFNA	472.2 > 42...	13496.108	1079.6...	1.000	4.54	28.1	225	YES
8	13C6-PFDA	519.1 > 47...	11146.874	891.750	1.000	4.84	58.9	471	YES

ID: IPA, Description: IPA, Name: 170811G2_5, Date: 11-Aug-2017, Time: 12:35:47, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8			1.000				NO
2	13C4-PFBA	216.9 > 17...			1.000				NO
3	13C5-PFHxA	318.0 > 27...			1.000				NO
4	13C3-PFHxS	401.9 > 79.9			1.000				NO
5	13C8-PFOA	421.3 > 376			1.000				NO
6	13C4-PFOS	503.0 > 79.9			1.000				NO
7	13C9-PFNA	472.2 > 42...			1.000				NO

GM 8/12/17

Dataset: Untitled

Last Altered: Saturday, August 12, 2017 22:31:28 Pacific Daylight Time
Printed: Saturday, August 12, 2017 22:31:55 Pacific Daylight Time

ID: IPA, Description: IPA, Name: 170811G2_5, Date: 11-Aug-2017, Time: 12:35:47, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
8	13C6-PFDA	519.1 > 47...			1.000				NO

ID: 1700920-04@5X MH-DUP01-20170720 0.12177, Description: MH-DUP01-20170720, Name: 170811G2_6, Date: 11-Aug-2017, Time: 12:58:42, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8	386.587	30.927	0.1218	2.85	5.90	5.75	YES
2	13C4-PFBA	216.9 > 17...	925.274	74.022	0.1218	1.69	5.40	5.26	YES
3	13C5-PFHxA	318.0 > 27...	1604.472	128.358	0.1218	3.23	8.37	8.16	YES
4	13C3-PFHxS	401.9 > 79.9	1857.848	148.628	0.1218	3.88	17.4	17.0	YES
5	13C8-PFOA	421.3 > 376	1297.415	103.793	0.1218	4.18	20.7	20.2	YES
6	13C4-PFOS	503.0 > 79.9	2084.230	166.738	0.1218	4.61	62.1	60.4	NO
7	13C9-PFNA	472.2 > 42...	1945.472	155.638	0.1218	4.54	33.2	32.4	YES
8	13C6-PFDA	519.1 > 47...	2443.293	195.463	0.1218	4.84	106	103	NO

ID: 1700920-15 LF-MW-28S-20170719 0.11572, Description: LF-MW-28S-20170719, Name: 170811G2_7, Date: 11-Aug-2017, Time: 13:10:54, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8	4264.112	341.129	0.1157	2.85	68.5	63.4	NO
2	13C4-PFBA	216.9 > 17...	11212.297	896.984	0.1157	1.53	68.9	63.8	NO
3	13C5-PFHxA	318.0 > 27...	12103.579	968.286	0.1157	3.24	66.5	61.5	NO
4	13C3-PFHxS	401.9 > 79.9	7018.255	561.460	0.1157	3.88	69.4	64.2	NO
5	13C8-PFOA	421.3 > 376	5575.539	446.043	0.1157	4.18	93.8	86.8	NO
6	13C4-PFOS	503.0 > 79.9	4213.996	337.120	0.1157	4.60	132	122	NO
7	13C9-PFNA	472.2 > 42...	5717.877	457.430	0.1157	4.54	103	95.2	NO
8	13C6-PFDA	519.1 > 47...	4029.256	322.340	0.1157	4.84	184	170	YES

ID: 1700920-16@5X DUP-07-20170719 0.12023, Description: DUP-07-20170719, Name: 170811G2_8, Date: 11-Aug-2017, Time: 13:23:31, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8	869.733	69.579	0.1202	2.85	13.4	12.9	YES
2	13C4-PFBA	216.9 > 17...	2844.291	227.543	0.1202	1.57	16.8	16.2	YES
3	13C5-PFHxA	318.0 > 27...	3052.854	244.228	0.1202	3.24	16.1	15.5	YES
4	13C3-PFHxS	401.9 > 79.9	1667.408	133.393	0.1202	3.88	15.9	15.3	YES
5	13C8-PFOA	421.3 > 376	928.747	74.300	0.1202	4.18	15.0	14.5	YES
6	13C4-PFOS	503.0 > 79.9	596.672	47.734	0.1202	4.60	18.0	17.3	YES
7	13C9-PFNA	472.2 > 42...	705.417	56.433	0.1202	4.53	12.2	11.7	YES
8	13C6-PFDA	519.1 > 47...	349.590	27.967	0.1202	4.84	15.4	14.8	YES

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ID: 1700920-17 FRB04-20170719 0.11007, Description: FRB04-20170719, Name: 170811G2_9, Date: 11-Aug-2017, Time: 13:36:03, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8	4735.485	378.839	0.1101	2.85	79.9	70.4	NO
2	13C4-PFBA	216.9 > 17...	11753.563	940.285	0.1101	1.53	75.9	66.8	NO
3	13C5-PFHxA	318.0 > 27...	12967.963	1037.4...	0.1101	3.24	74.9	65.9	NO
4	13C3-PFHxS	401.9 > 79.9	9172.138	733.771	0.1101	3.88	95.3	83.9	NO
5	13C8-PFOA	421.3 > 376	4780.036	382.403	0.1101	4.18	84.5	74.4	NO
6	13C4-PFOS	503.0 > 79.9	6384.161	510.733	0.1101	4.60	210	185	YES
7	13C9-PFNA	472.2 > 42...	6294.511	503.561	0.1101	4.53	119	105	NO
8	13C6-PFDA	519.1 > 47...	6001.295	480.104	0.1101	4.84	288	254	YES

ID: 1700907-04@5X AT028-MW17-06-071717-1300 0.125, Description: AT028-MW17-06-071717-1300, Name: 170811G2_10, Date: 11-Aug-2017, Time: 13:48:39, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8	516.526	41.322	0.1250	2.85	7.68	7.68	YES
2	13C4-PFBA	216.9 > 17...	1377.841	110.227	0.1250	1.58	7.84	7.84	YES
3	13C5-PFHxA	318.0 > 27...	1548.844	123.908	0.1250	3.24	7.87	7.87	YES
4	13C3-PFHxS	401.9 > 79.9	721.491	57.719	0.1250	3.88	6.60	6.60	YES
5	13C8-PFOA	421.3 > 376	642.396	51.392	0.1250	4.18	10.0	10.0	YES
6	13C4-PFOS	503.0 > 79.9	286.221	22.898	0.1250	4.60	8.30	8.30	YES
7	13C9-PFNA	472.2 > 42...	564.301	45.144	0.1250	4.54	9.39	9.39	YES
8	13C6-PFDA	519.1 > 47...	255.087	20.407	0.1250	4.84	10.8	10.8	YES

ID: 1700962-01@20X East Tank 0.125, Description: East Tank, Name: 170811G2_11, Date: 11-Aug-2017, Time: 14:01:11, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8	389.172	31.134	0.1250	2.84	5.79	5.79	YES
2	13C4-PFBA	216.9 > 17...	1664.387	133.151	0.1250	1.57	9.46	9.46	YES
3	13C5-PFHxA	318.0 > 27...	1414.916	113.193	0.1250	3.24	7.19	7.19	YES
4	13C3-PFHxS	401.9 > 79.9	971.030	77.682	0.1250	3.86	8.88	8.88	YES
5	13C8-PFOA	421.3 > 376	337.204	26.976	0.1250	4.08	5.25	5.25	YES
6	13C4-PFOS	503.0 > 79.9	568.790	45.503	0.1250	4.56	16.5	16.5	YES
7	13C9-PFNA	472.2 > 42...	1105.769	88.462	0.1250	4.51	18.4	18.4	YES
8	13C6-PFDA	519.1 > 47...	627.831	50.226	0.1250	4.83	26.6	26.6	YES

ID: 1700962-02@20X West Tank 0.125, Description: West Tank, Name: 170811G2_12, Date: 11-Aug-2017, Time: 14:13:40, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8	438.187	35.055	0.1250	2.85	6.51	6.51	YES
2	13C4-PFBA	216.9 > 17...	1800.416	144.033	0.1250	1.58	10.2	10.2	YES
3	13C5-PFHxA	318.0 > 27...	1295.268	103.621	0.1250	3.24	6.58	6.58	YES
4	13C3-PFHxS	401.9 > 79.9	1093.834	87.507	0.1250	3.85	10.0	10.0	YES
5	13C8-PFOA	421.3 > 376	529.410	42.353	0.1250	4.06	8.24	8.24	YES
6	13C4-PFOS	503.0 > 79.9	716.155	57.292	0.1250	4.56	20.8	20.8	YES
7	13C9-PFNA	472.2 > 42...	945.746	75.660	0.1250	4.51	15.7	15.7	YES
8	13C6-PFDA	519.1 > 47...	645.797	51.664	0.1250	4.83	27.3	27.3	YES

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ID: 1700962-03@20X MiddleTank 0.125, Description: MiddleTank, Name: 170811G2_13, Date: 11-Aug-2017, Time: 14:26:14, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8	357.974	28.638	0.1250	2.84	5.32	5.32	YES
2	13C4-PFBA	216.9 > 17...	1844.501	147.560	0.1250	1.58	10.5	10.5	YES
3	13C5-PFHxA	318.0 > 27...	1610.628	128.850	0.1250	3.24	8.19	8.19	YES
4	13C3-PFHxS	401.9 > 79.9	1507.529	120.602	0.1250	3.87	13.8	13.8	YES
5	13C8-PFOA	421.3 > 376	627.015	50.161	0.1250	4.10	9.76	9.76	YES
6	13C4-PFOS	503.0 > 79.9	967.482	77.399	0.1250	4.57	28.1	28.1	YES
7	13C9-PFNA	472.2 > 42...	912.548	73.004	0.1250	4.51	15.2	15.2	YES
8	13C6-PFDA	519.1 > 47...	583.017	46.641	0.1250	4.83	24.7	24.7	YES

ID: IPA, Description: IPA, Name: 170811G2_14, Date: 11-Aug-2017, Time: 14:38:51, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8			1.000				NO
2	13C4-PFBA	216.9 > 17...			1.000				NO
3	13C5-PFHxA	318.0 > 27...			1.000				NO
4	13C3-PFHxS	401.9 > 79.9			1.000				NO
5	13C8-PFOA	421.3 > 376			1.000				NO
6	13C4-PFOS	503.0 > 79.9			1.000				NO
7	13C9-PFNA	472.2 > 42...			1.000				NO
8	13C6-PFDA	519.1 > 47...			1.000				NO

ID: ST170811G2-3 PFC CS3 17H1009, Description: PFC CS3 17H1009 A, Name: 170811G2_15, Date: 11-Aug-2017, Time: 14:51:29, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8	6468.283	517.463	1.000	2.85	12.0	96.2	NO
2	13C4-PFBA	216.9 > 17...	21042.365	1683.3...	1.000	1.58	15.0	120	NO
3	13C5-PFHxA	318.0 > 27...	20886.668	1670.9...	1.000	3.24	13.3	106	NO
4	13C3-PFHxS	401.9 > 79.9	13163.329	1053.0...	1.000	3.88	15.1	120	NO
5	13C8-PFOA	421.3 > 376	8343.603	667.488	1.000	4.18	16.2	130	NO
6	13C4-PFOS	503.0 > 79.9	5125.739	410.059	1.000	4.60	18.6	149	NO
7	13C9-PFNA	472.2 > 42...	8544.422	683.554	1.000	4.54	17.8	142	NO
8	13C6-PFDA	519.1 > 47...	3412.349	272.988	1.000	4.84	18.0	144	NO

ID: IPA, Description: IPA, Name: 170811G2_16, Date: 11-Aug-2017, Time: 15:04:00, Instrument:

	Name	Quan Trace	Area	RRF	wt/vol	RT	Conc.	%Rec	Recovery ...
1	13C3-PFBS	302.0 > 98.8			1.000				NO
2	13C4-PFBA	216.9 > 17...			1.000				NO
3	13C5-PFHxA	318.0 > 27...			1.000				NO
4	13C3-PFHxS	401.9 > 79.9			1.000				NO
5	13C8-PFOA	421.3 > 376			1.000				NO
6	13C4-PFOS	503.0 > 79.9			1.000				NO
7	13C9-PFNA	472.2 > 42...			1.000				NO
8	13C6-PFDA	519.1 > 47...			1.000				NO

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Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-3.qld

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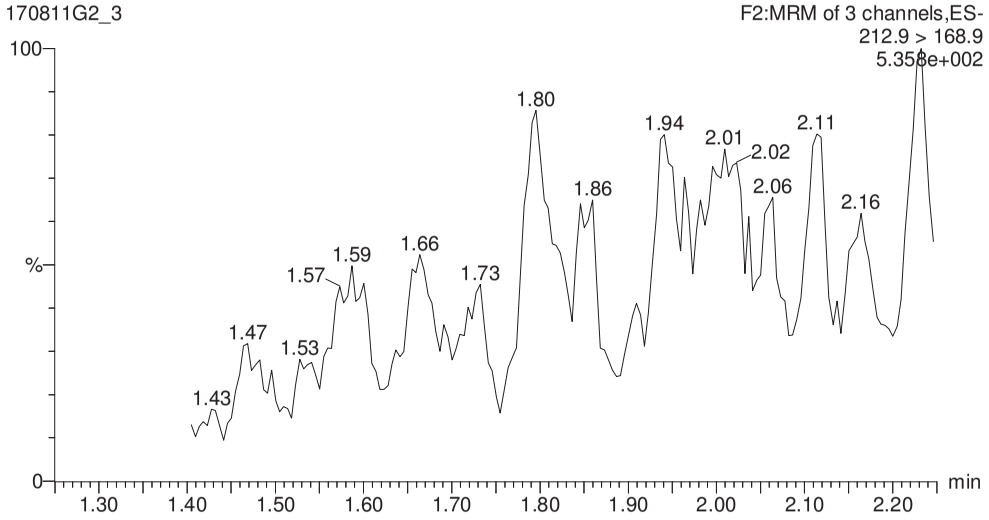

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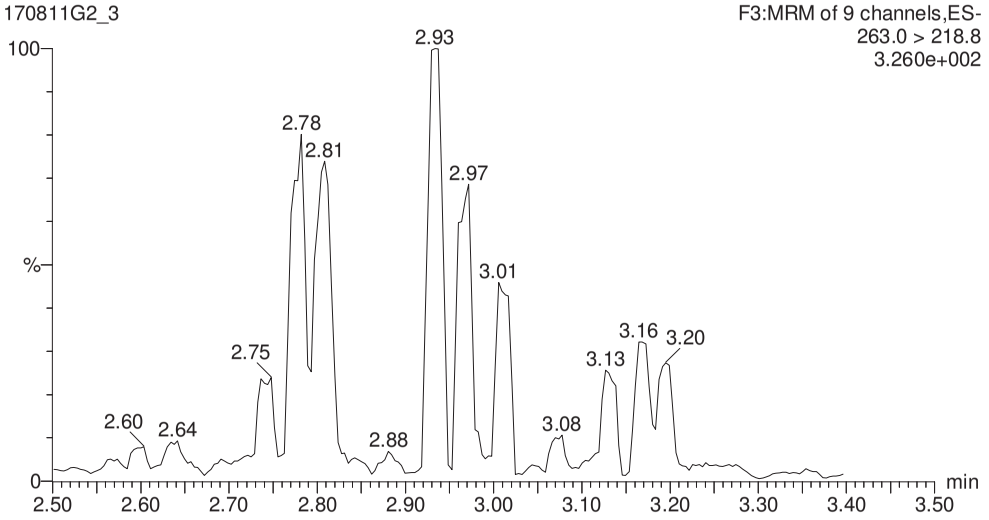

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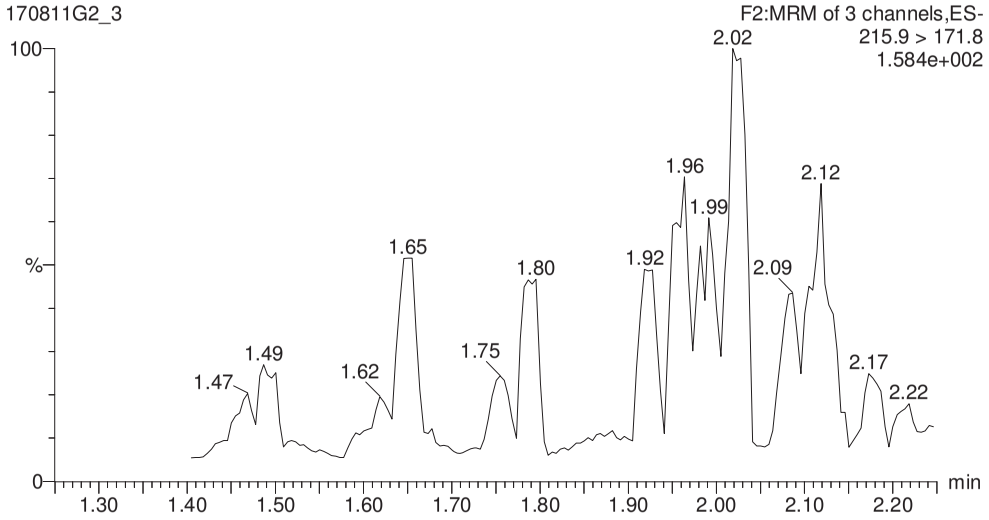

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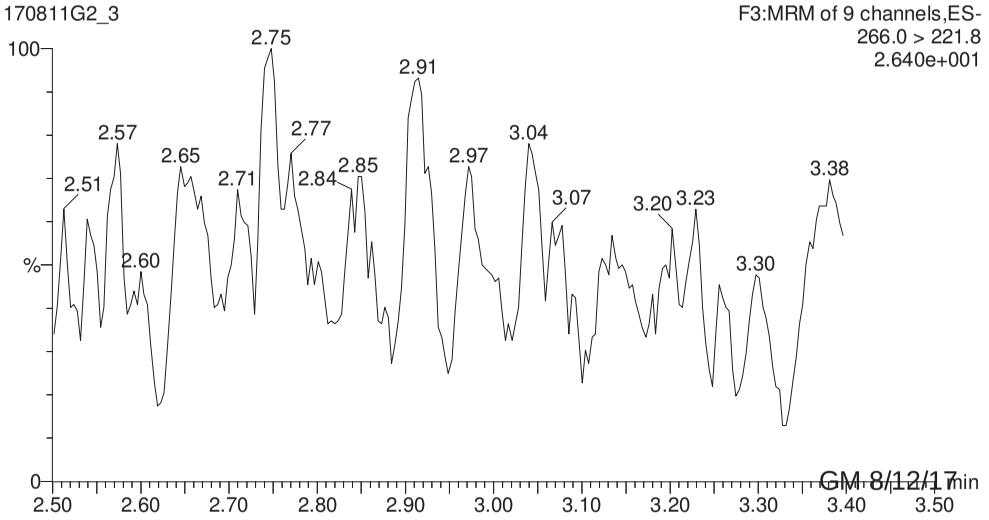

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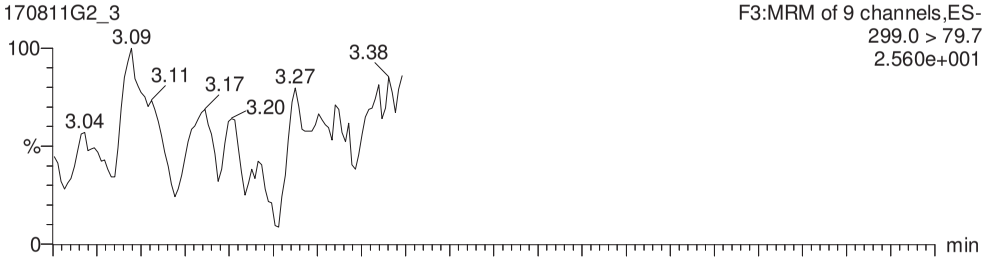

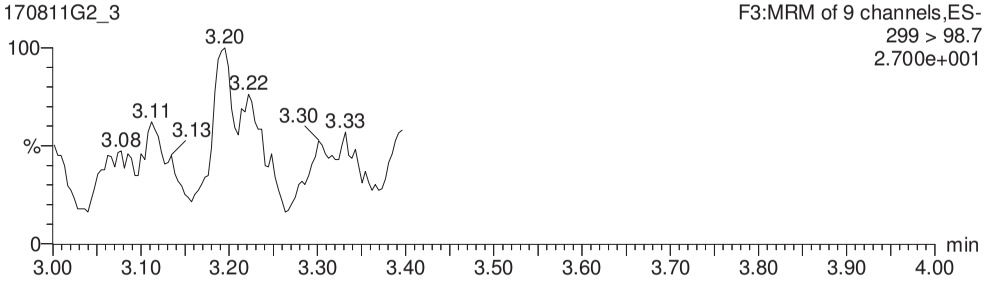

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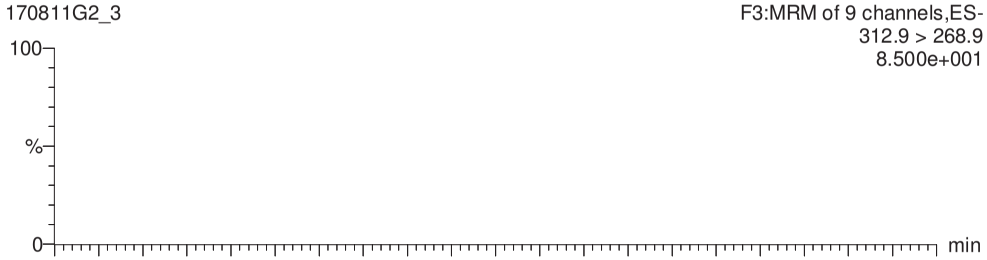

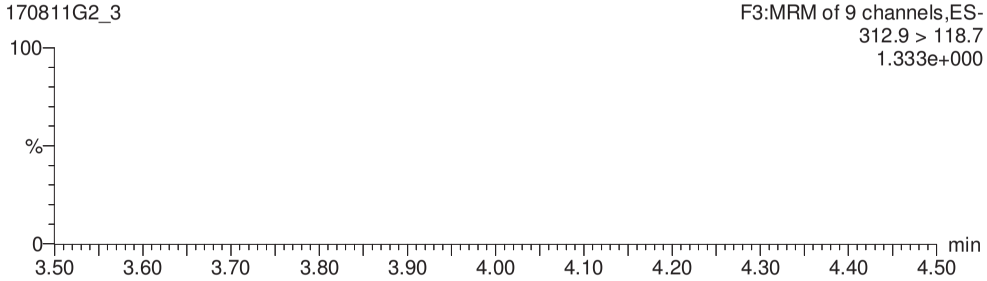

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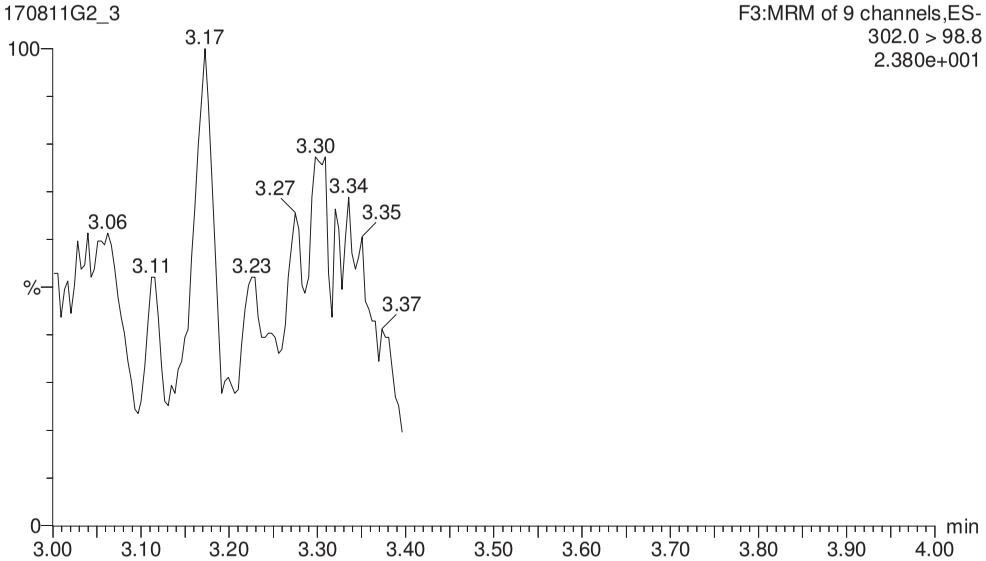

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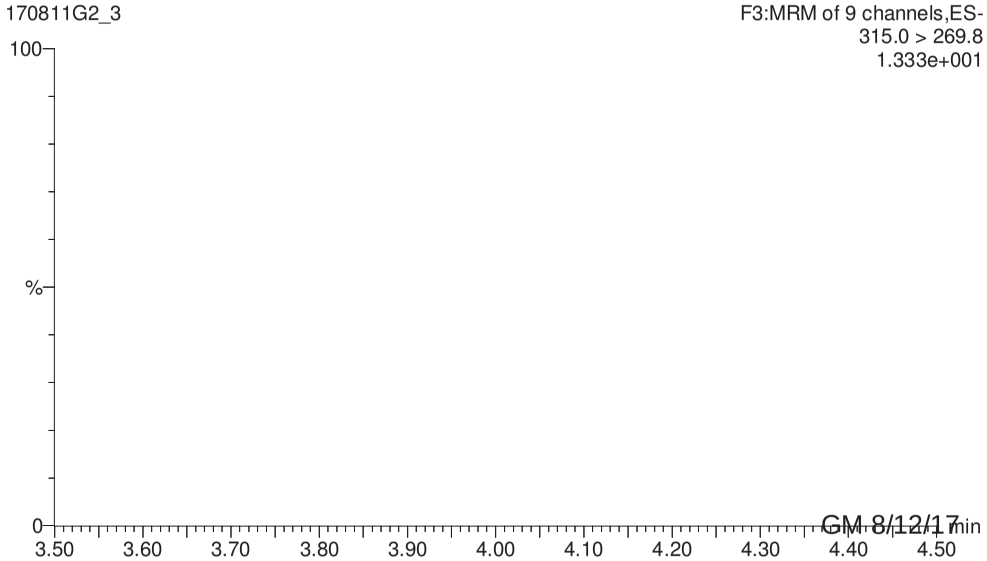

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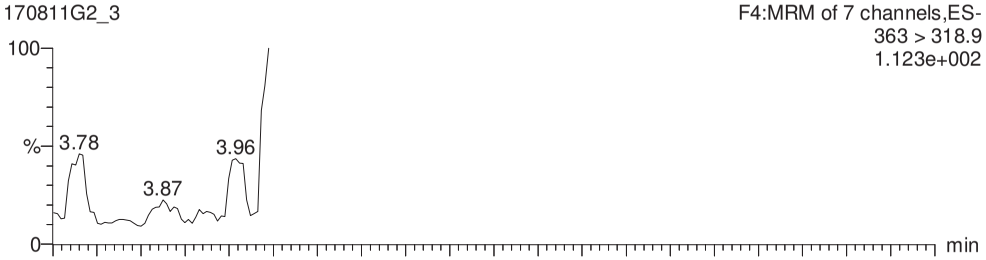
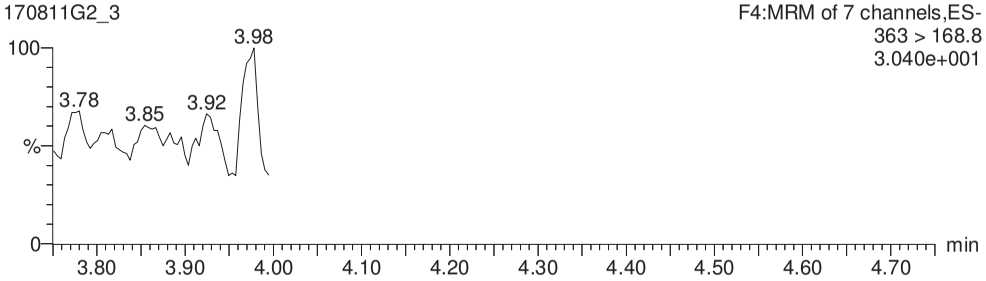
PFHpA





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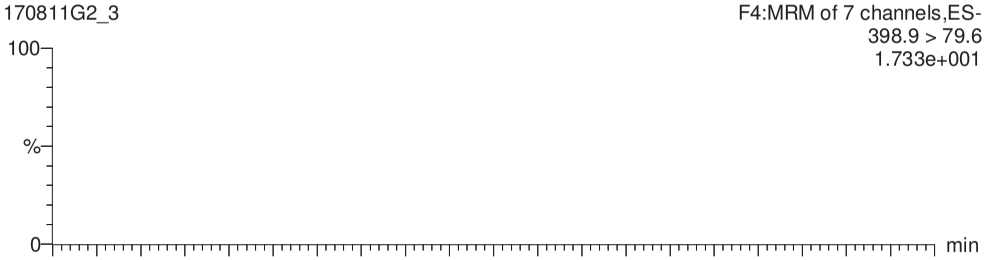

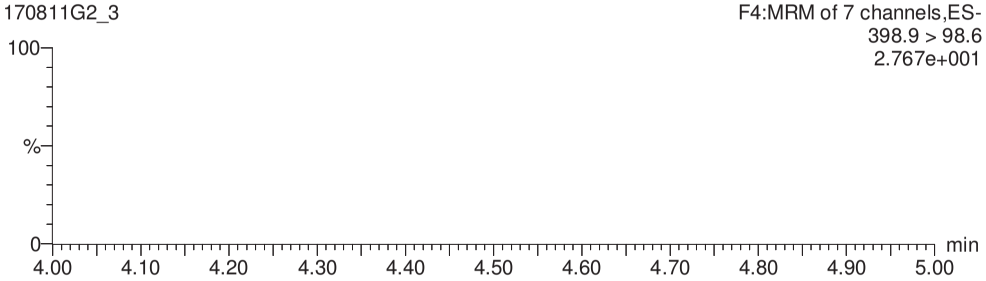

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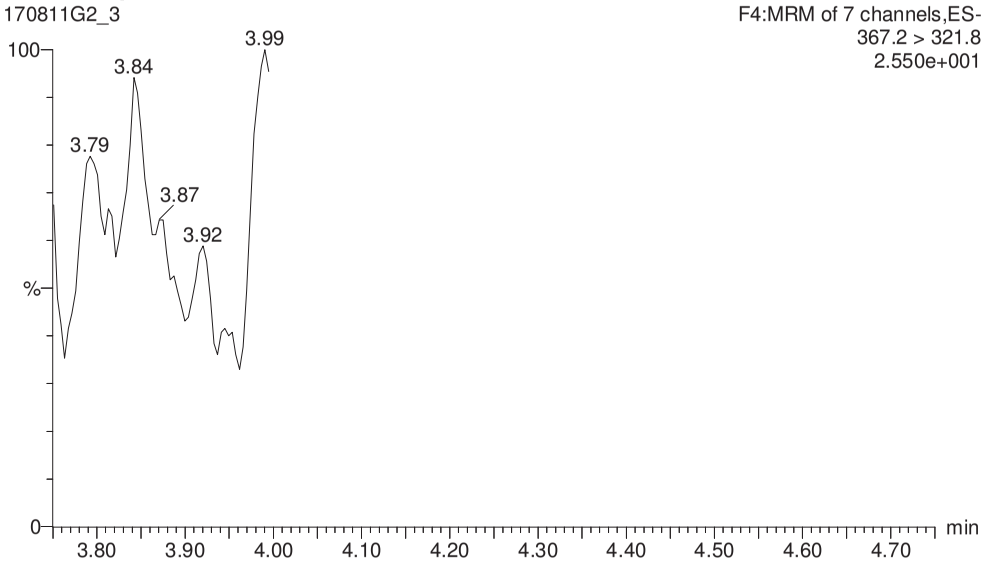

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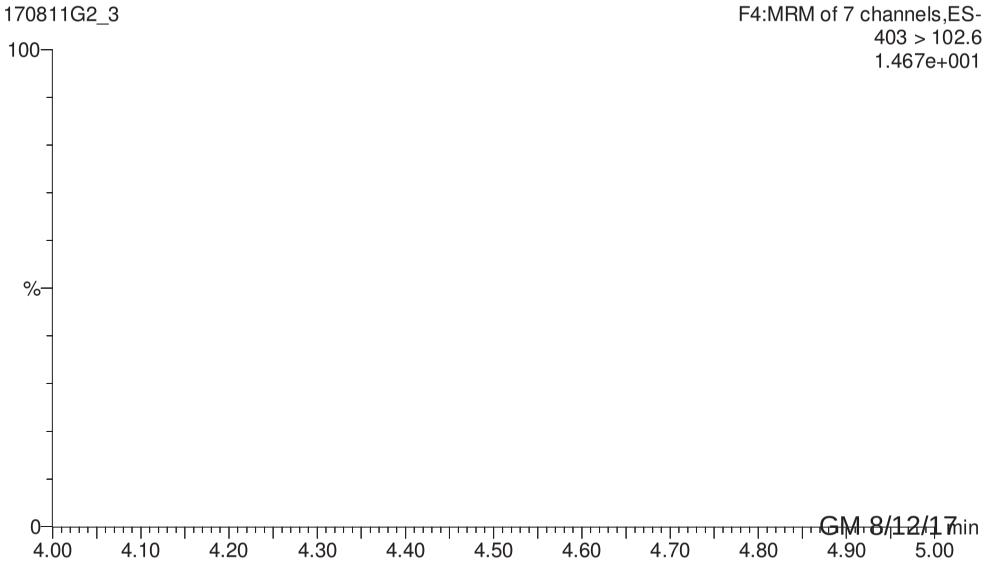

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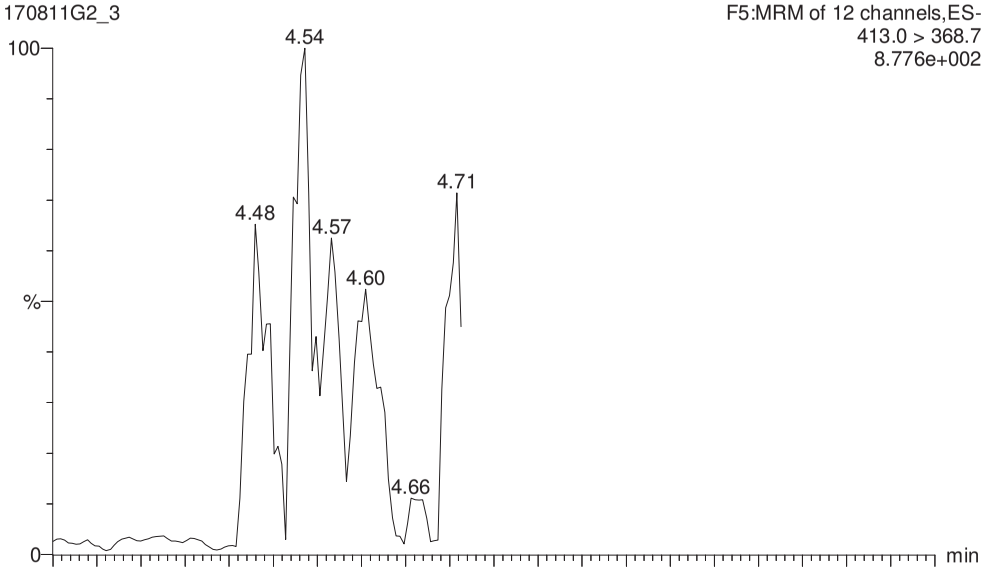
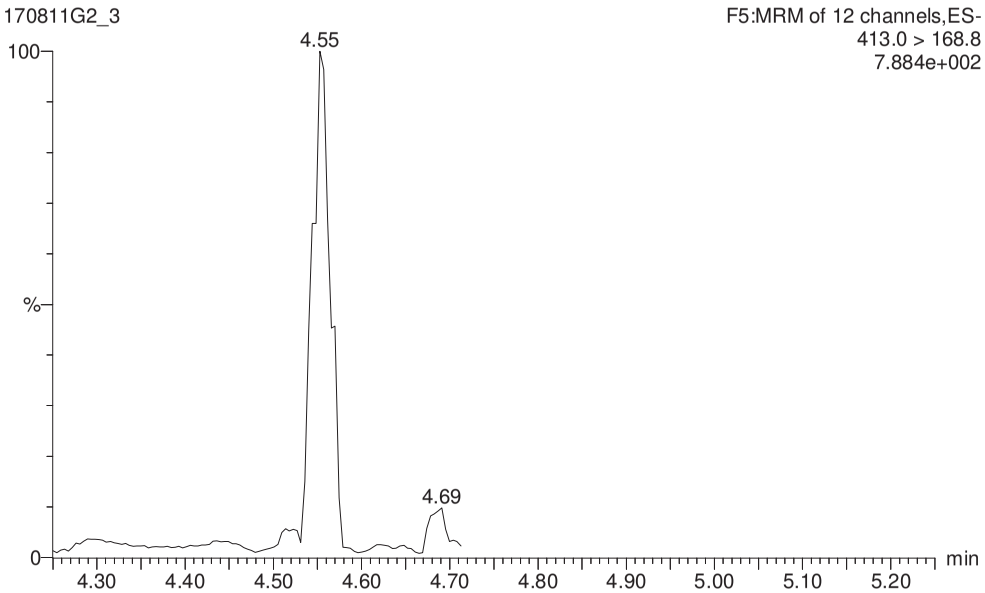
Total PFOA





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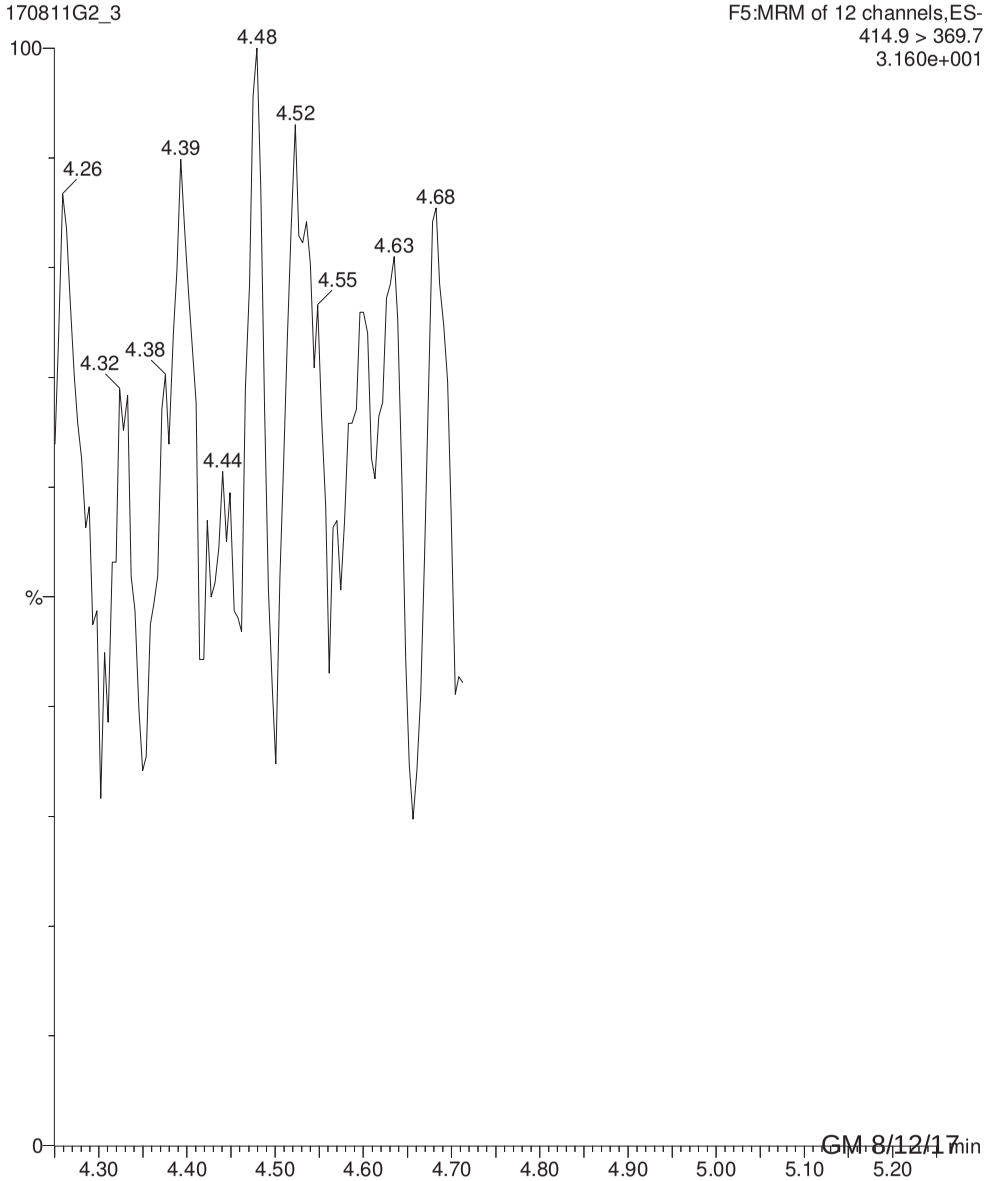

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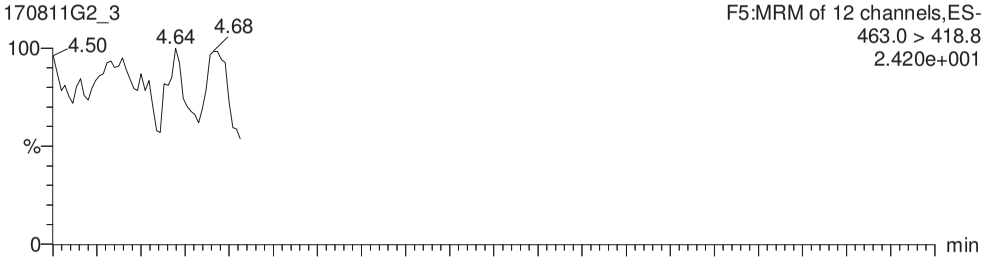
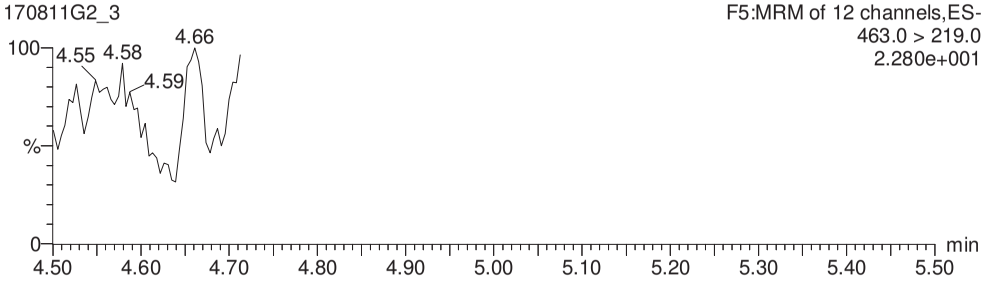
Printed: Saturday, August 12, 2017 22:35:31 Pacific Daylight Time

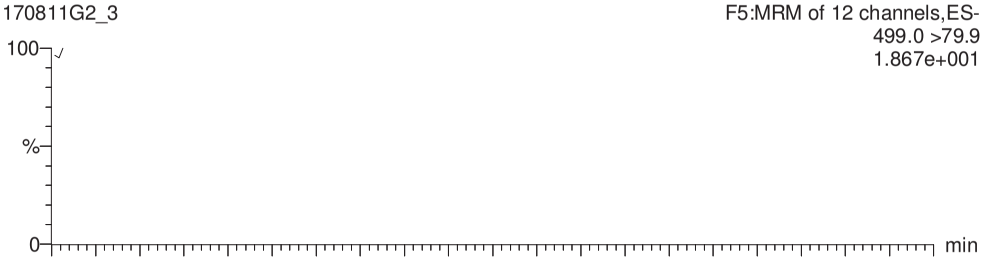
ID: IPA, Description: IPA, Name: 170811G2_3, Date: 11-Aug-2017, Time: 11:24:56, Instrument: , Lab: , User:

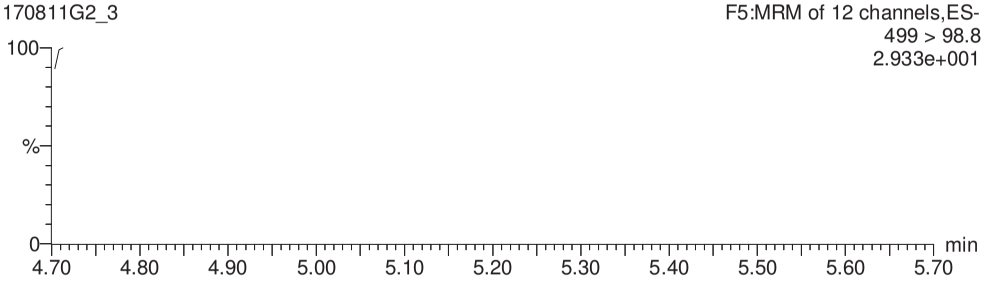
PFNA



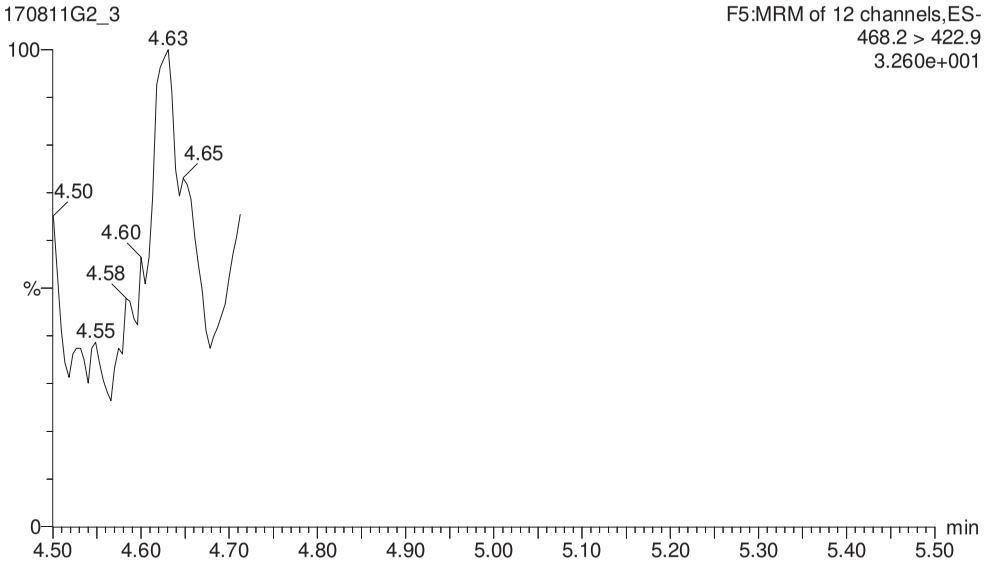


Total PFOS

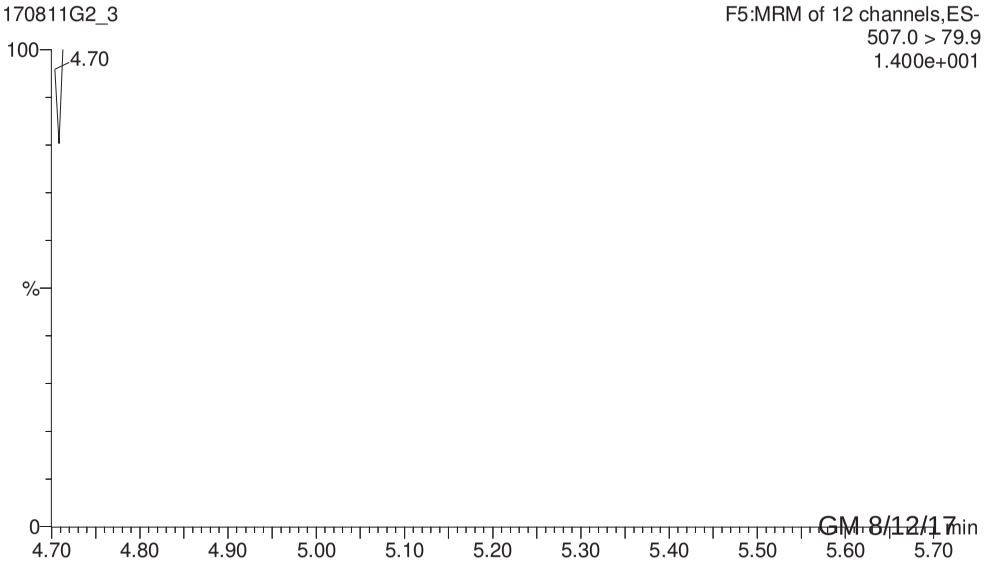




13C5-PFNA



13C8-PFOS



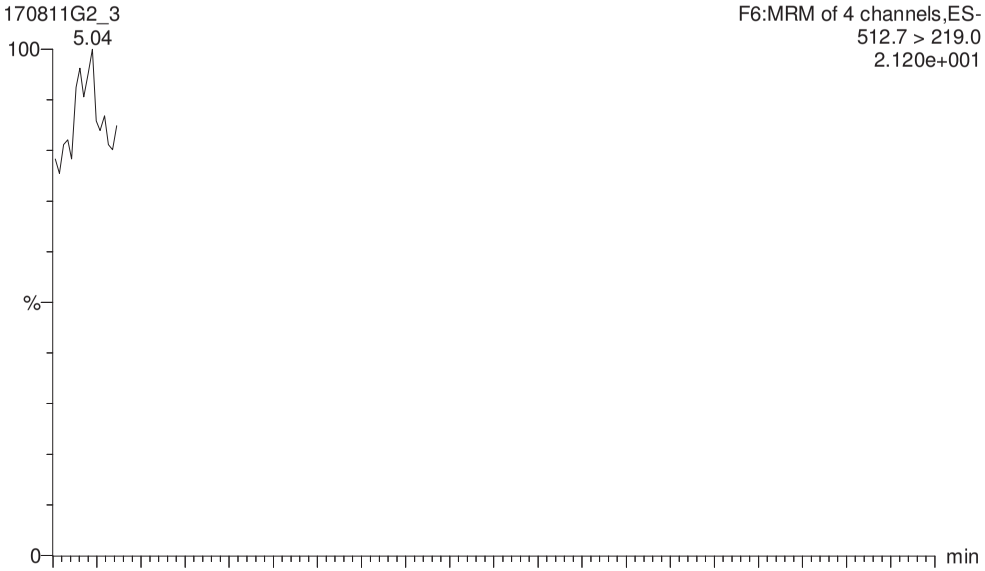
GM 8/12/17

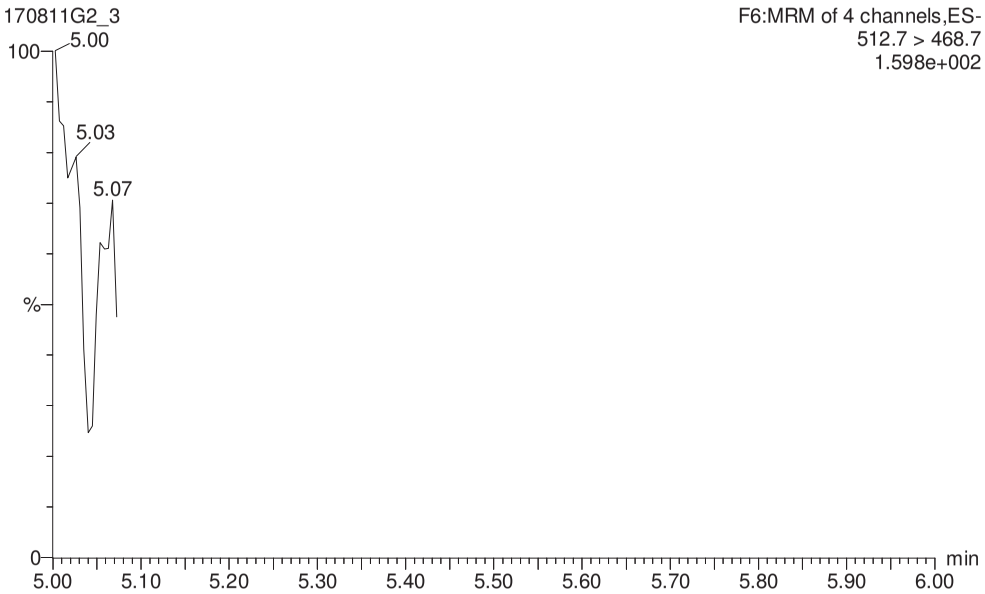
Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-3.qld

Last Altered: Saturday, August 12, 2017 22:35:27 Pacific Daylight Time
Printed: Saturday, August 12, 2017 22:35:31 Pacific Daylight Time

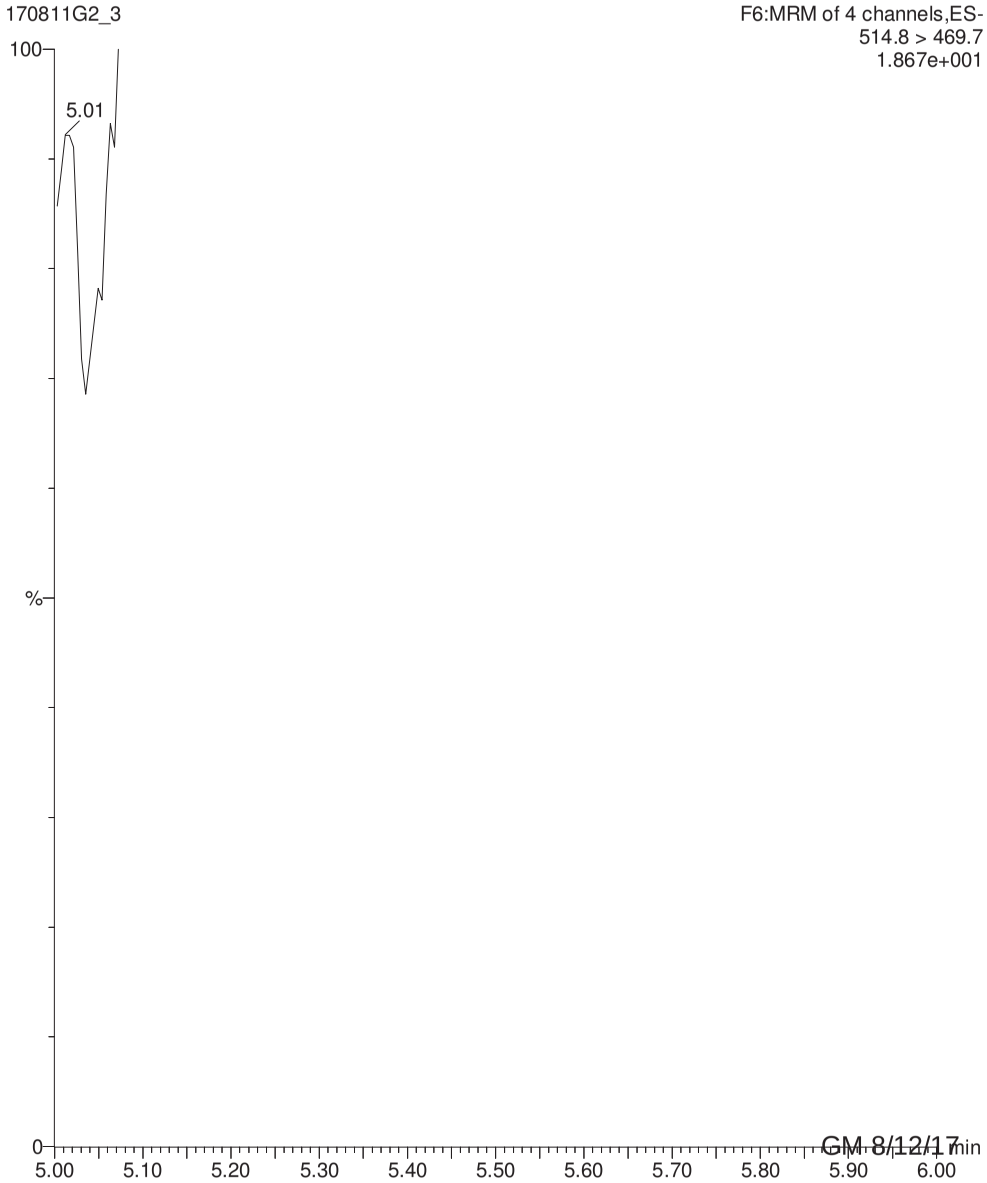
ID: IPA, Description: IPA, Name: 170811G2_3, Date: 11-Aug-2017, Time: 11:24:56, Instrument: , Lab: , User:

PFDA





13C2-PFDA



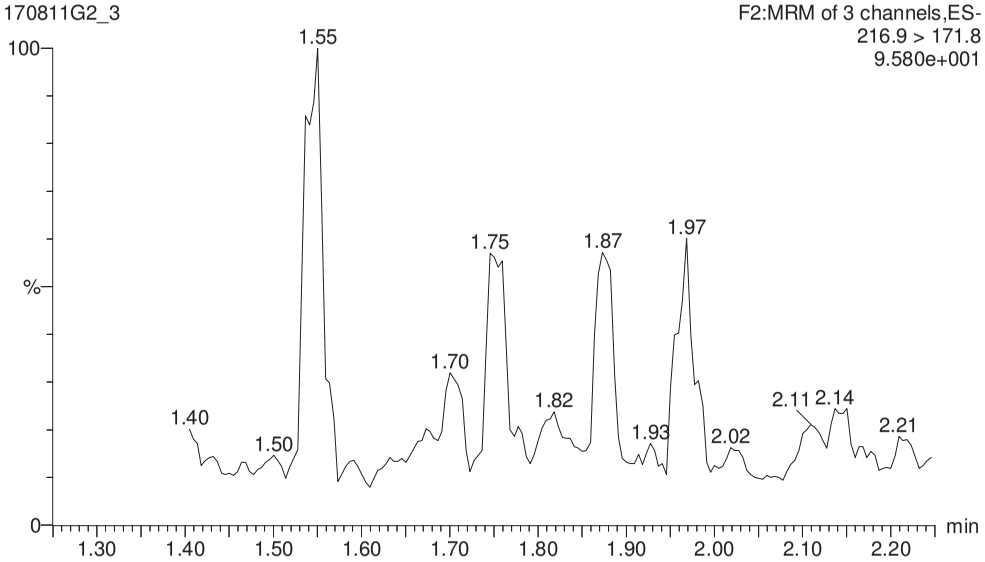
GM 8/12/17

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-3.qld

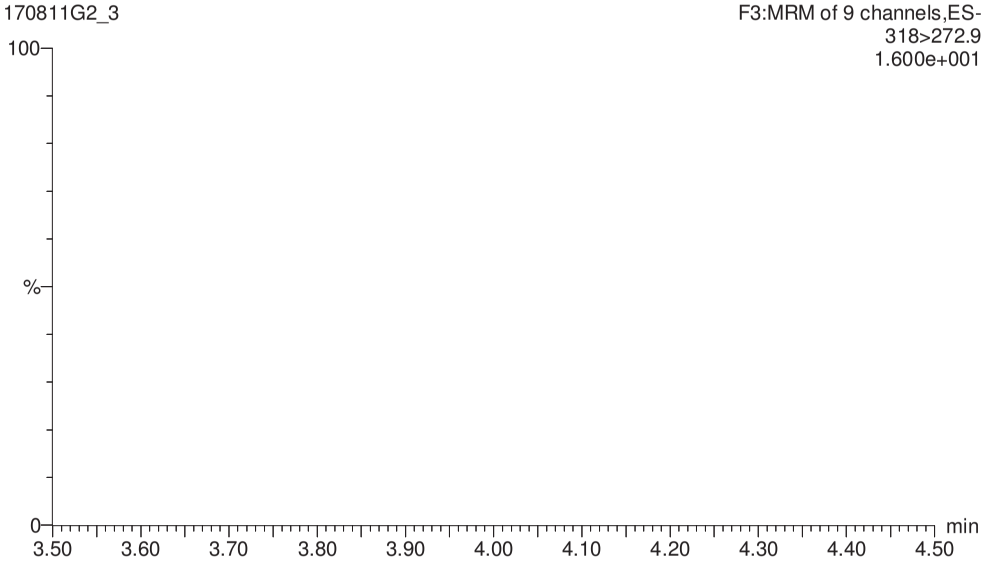
Last Altered: Saturday, August 12, 2017 22:35:27 Pacific Daylight Time
Printed: Saturday, August 12, 2017 22:35:31 Pacific Daylight Time

ID: IPA, Description: IPA, Name: 170811G2_3, Date: 11-Aug-2017, Time: 11:24:56, Instrument: , Lab: , User:

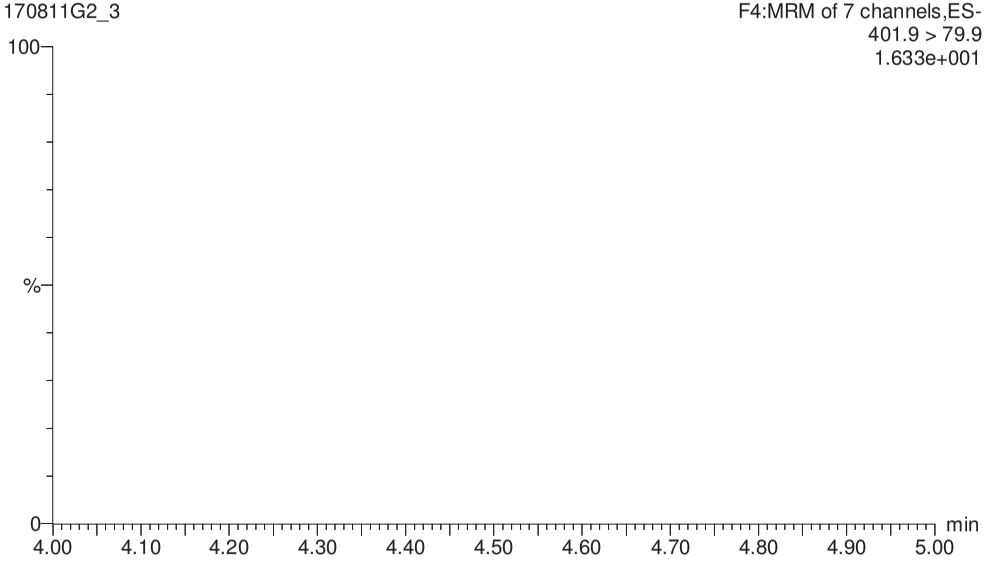
13C4-PFBA



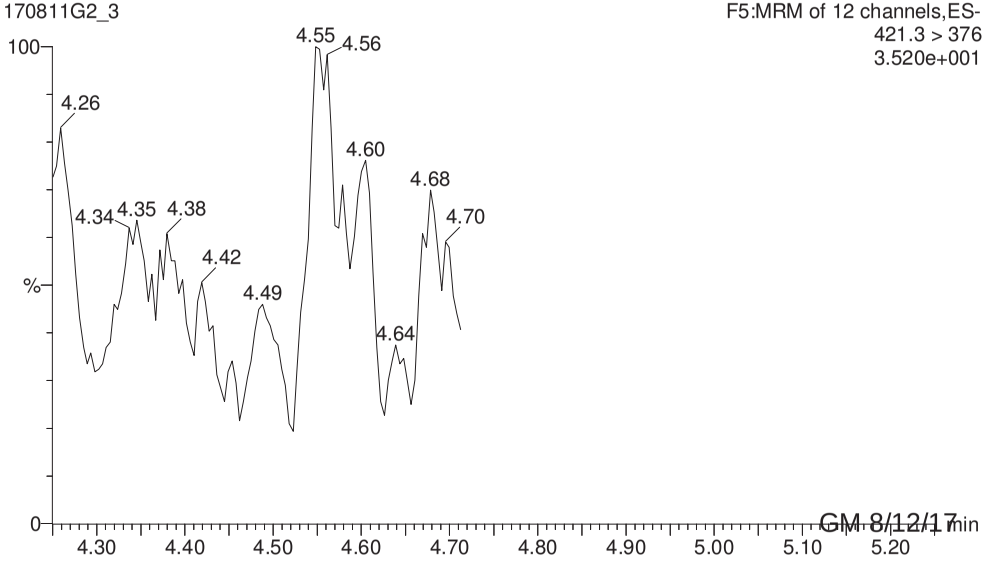
13C5-PFHxA



13C3-PFHxS



13C8-PFOA



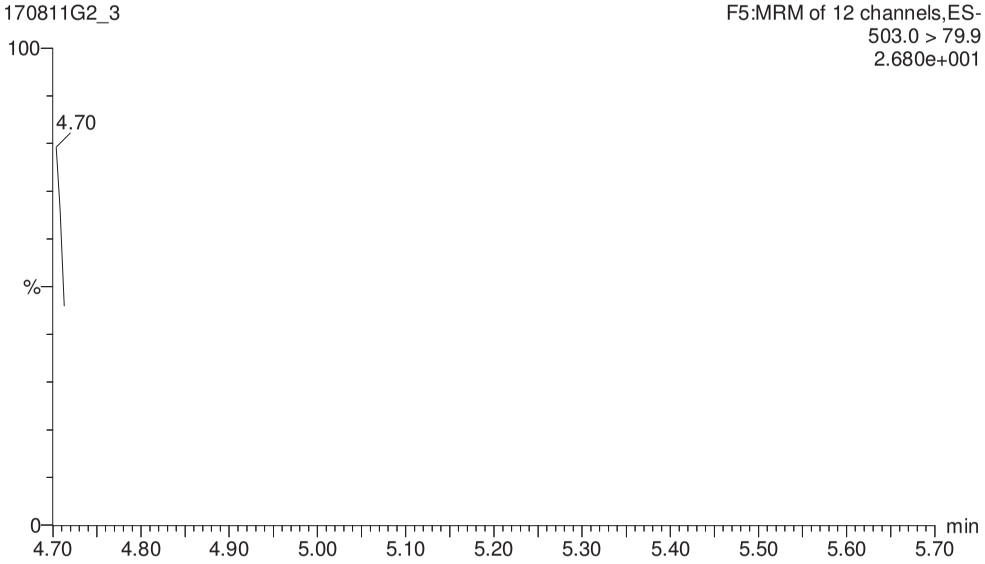
GM 8/12/17

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-3.qld

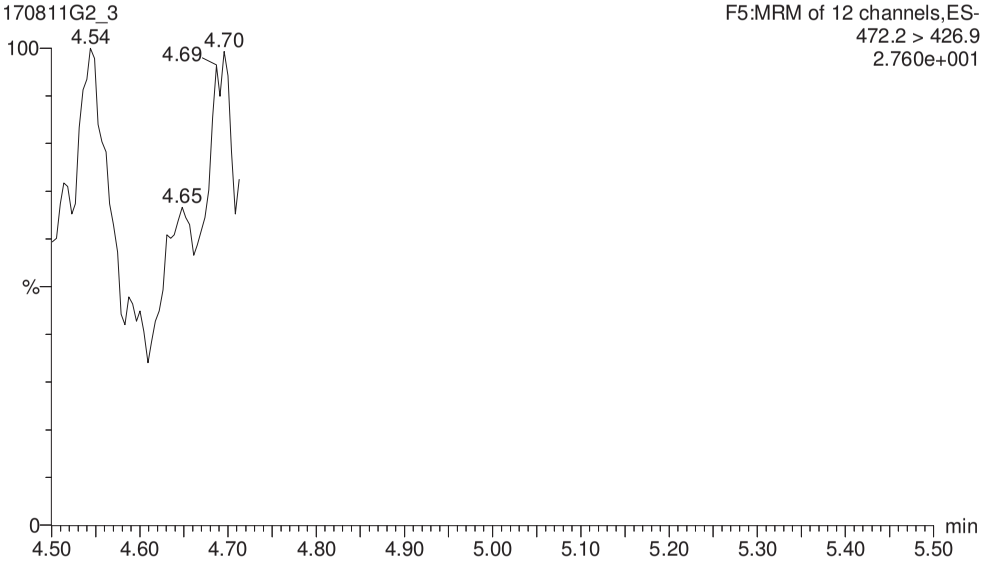
Last Altered: Saturday, August 12, 2017 22:35:27 Pacific Daylight Time
Printed: Saturday, August 12, 2017 22:35:31 Pacific Daylight Time

ID: IPA, Description: IPA, Name: 170811G2_3, Date: 11-Aug-2017, Time: 11:24:56, Instrument: , Lab: , User:

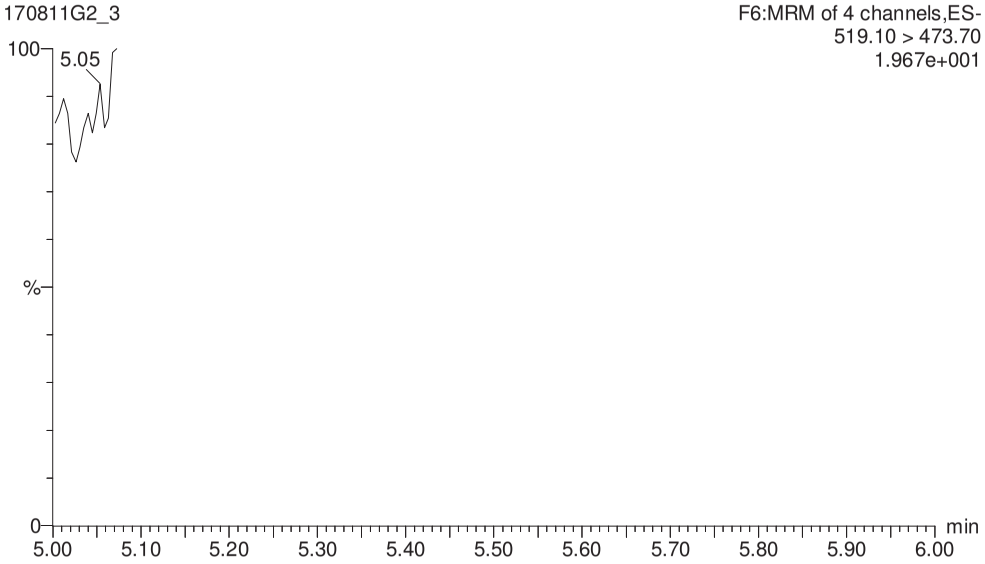
13C4-PFOS



13C9-PFNA



13C6-PFDA



GM 8/12/17

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-4.qld

Last Altered: Friday, August 11, 2017 14:41:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:43:38 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

Name: 170811G2_4, Date: 11-Aug-2017, Time: 12:23:36, ID: ST170811G2-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	3	PFBS	299.0 > 79.7	3.42e2	7.61e3		1.000	2.86	0.566	113.1
2	4	PFHxA	312.9 > 268.9	7.98e2	8.67e3		1.000	3.24	0.481	96.2
3	5	PFHpA	363 > 318.9	1.11e3	1.28e4		1.000	3.76	0.542	108.3
4	6	PFHxS	398.9 > 79.6	5.26e2	7.51e3		1.000	3.89	0.551	110.2
5	7	PFOA	413.0 > 368.7	1.13e3	2.88e4		1.000	4.18	0.466	93.2
6	8	PFNA	463.0 > 418.8	1.09e3	1.40e4		1.000	4.54	0.499	99.8
7	9	PFOS	499.0 >79.9	2.14e2	1.32e4		1.000	4.61	0.506	101.2
8	10	PFDA	512.7 > 219.0	1.82e2	1.82e4		1.000	4.85	0.576	115.2
9	12	13C3-PFBS	302.0 > 98.8	7.61e3	2.19e4	0.351	1.000	2.86	12.4	99.0
10	14	13C2-PFHxA	315.0 > 269.8	8.67e3	2.19e4	0.443	1.000	3.24	11.2	89.4
11	15	13C4-PFHpA	367.2 > 321.8	1.28e4	2.19e4	0.496	1.000	3.76	14.7	117.3
12	16	18O2-PFHxS	403 > 102.6	7.51e3	1.44e4	0.528	1.000	3.89	12.3	98.6
13	17	13C2-PFOA	414.9 > 369.7	2.88e4	9.24e3	3.356	1.000	4.18	11.6	92.8
14	18	13C5-PFNA	468.2 > 422.9	1.40e4	1.35e4	0.991	1.000	4.54	13.1	105.0
15	19	13C2-PFDA	514.8 > 469.7	1.82e4	1.11e4	1.458	1.000	4.85	14.0	112.2
16	20	13C8-PFOS	507.0 > 79.9	1.32e4	1.15e4	1.109	1.000	4.61	12.9	102.9
17	22	13C5-PFHxA	318>272.9	2.19e4	2.19e4	1.000	1.000	3.24	12.5	100.0
18	23	13C3-PFHxS	401.9 > 79.9	1.44e4	1.44e4	1.000	1.000	3.89	12.5	100.0
19	24	13C8-PFOA	421.3 > 376	9.24e3	9.24e3	1.000	1.000	4.18	12.5	100.0
20	25	13C9-PFNA	472.2 > 426.9	1.35e4	1.35e4	1.000	1.000	4.54	12.5	100.0
21	26	13C4-PFOS	503.0 > 79.9	1.15e4	1.15e4	1.000	1.000	4.61	12.5	100.0
22	27	13C6-PFDA	519.10 > 47...	1.11e4	1.11e4	1.000	1.000	4.84	12.5	100.0
23	28	Total PFBS	299.0 > 79.7		7.61e3		1.000		0.566	
24	29	Total PFHxS	398.9 > 79.6		7.51e3		1.000		0.551	
25	30	Total PFOA	413.0 > 368.7		2.88e4		1.000		0.466	
26	31	Total PFOS	499.0 >79.9		1.32e4		1.000		0.506	

70-130

50-150

8/11/17

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Friday, August 11, 2017 15:12:59 Pacific Daylight Time
Printed: Friday, August 11, 2017 15:13:33 Pacific Daylight Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170811G2_1	IPA	11-Aug-17	11:00:11
2	170811G2_2 Ⓐ	ST170811G2-1 PFC CS0 17H1010	11-Aug-17	11:12:24
3	170811G2_3	IPA	11-Aug-17	11:24:56
4	170811G2_4	ST170811G2-2 PFC CS-1 17H0708	11-Aug-17	12:23:36
5	170811G2_5	IPA	11-Aug-17	12:35:47
6	170811G2_6	1700920-04@5X MH-DUP01-20170720 0.121...	11-Aug-17	12:58:42
7	170811G2_7	1700920-15 LF-MW-28S-20170719 0.11572	11-Aug-17	13:10:54
8	170811G2_8	1700920-16@5X DUP-07-20170719 0.12023	11-Aug-17	13:23:31
9	170811G2_9	1700920-17 FRB04-20170719 0.11007	11-Aug-17	13:36:03
10	170811G2_10	1700907-04@5X AT028-MW17-06-071717-13...	11-Aug-17	13:48:39
11	170811G2_11	1700962-01@20X East Tank 0.125	11-Aug-17	14:01:11
12	170811G2_12	1700962-02@20X West Tank 0.125	11-Aug-17	14:13:40
13	170811G2_13	1700962-03@20X MiddleTank 0.125	11-Aug-17	14:26:14
14	170811G2_14	IPA	11-Aug-17	14:38:51
15	170811G2_15	ST170811G2-3 PFC CS3 17H1009	11-Aug-17	14:51:29
16	170811G2_16			

Ⓐ INJECTION NOT USED. VRA 8/11/17

LC Calibration Standards Review Checklist Q1

		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	NA
Calibration ID: ST170811GZ-2	(L) M H	NA ☐	☑	☑	☑	☑	☑	☐
Calibration ID: -3	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	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 4/5/17

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Reviewed By: 8/11/17
Initials/Date

Comments:

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-4.qld

Last Altered: Friday, August 11, 2017 14:41:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:43:11 Pacific Daylight Time

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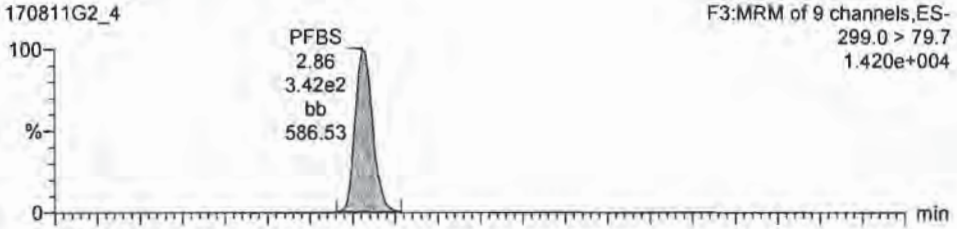
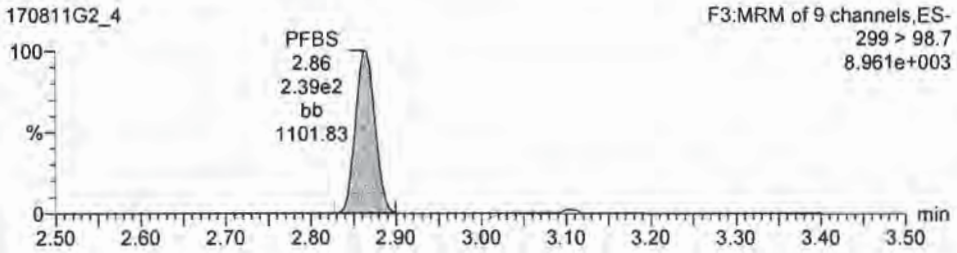
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

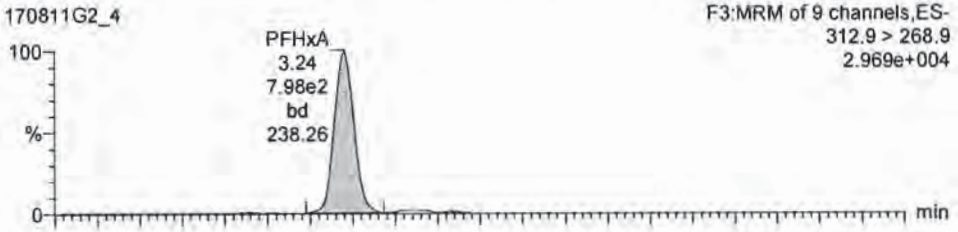
ID: ST170811G2-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170811G2_4, Date: 11-Aug-2017, Time: 12:23:36, Instrument: , Lab: , User:

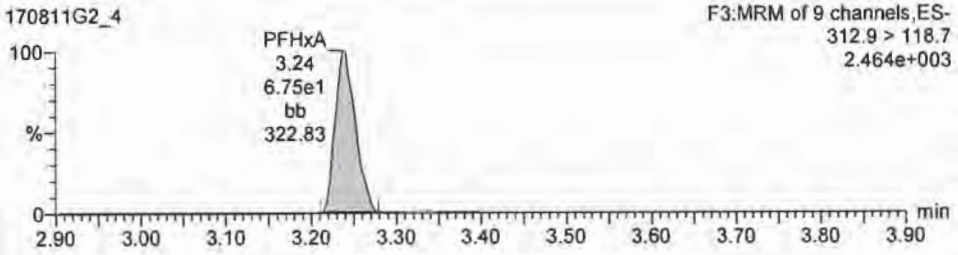
Total PFBS





PFHxA





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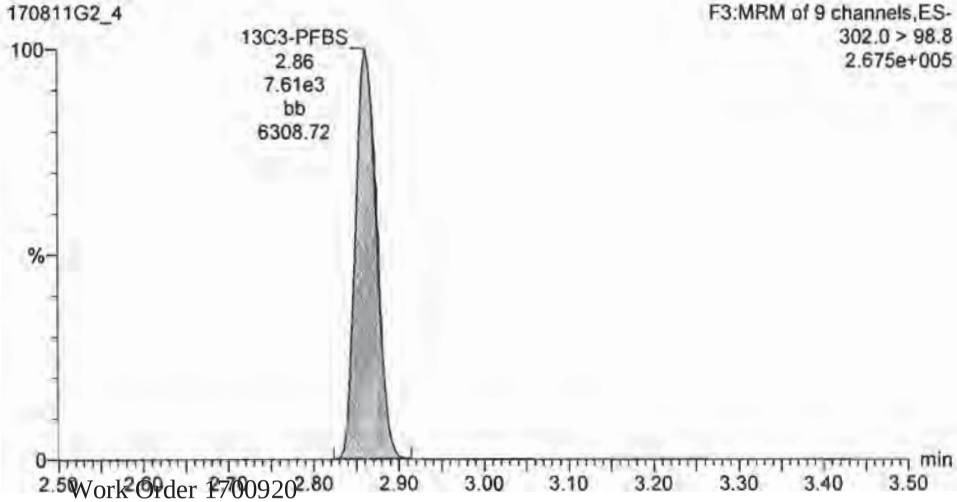
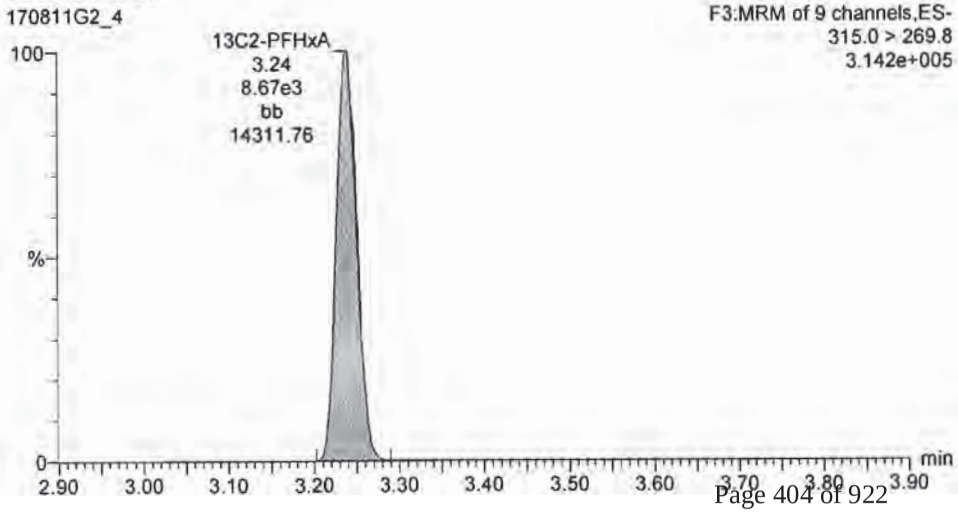


13C2-PFHxA

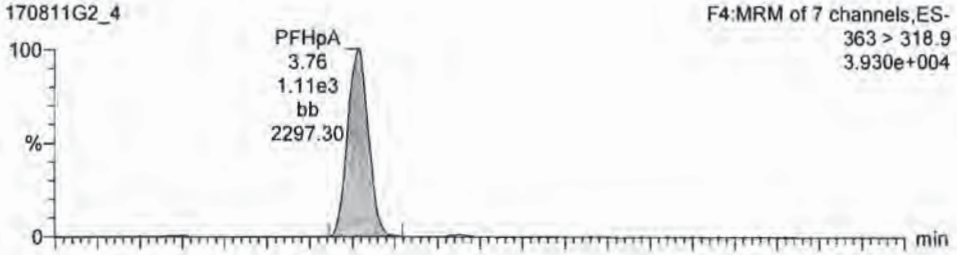


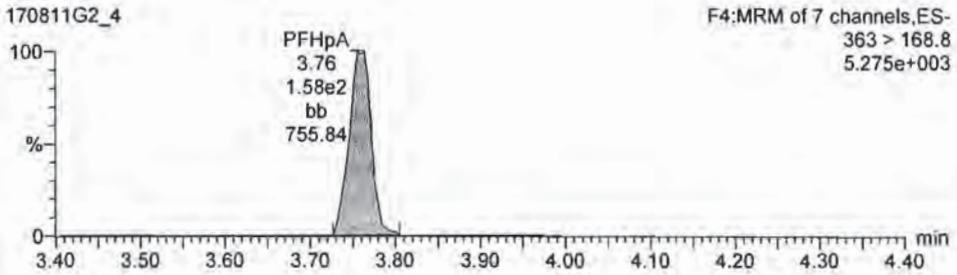
Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-4.qld

Last Altered: Friday, August 11, 2017 14:41:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:43:11 Pacific Daylight Time

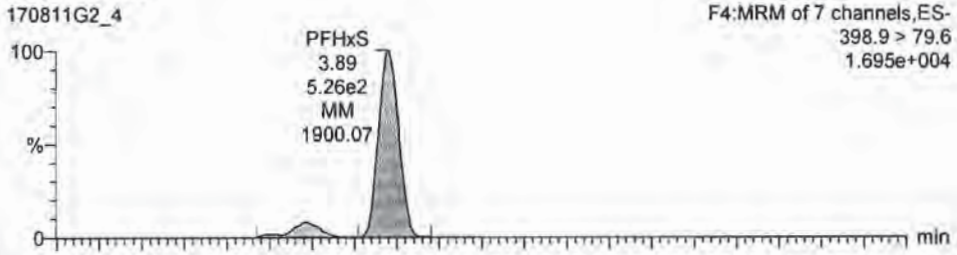
ID: ST170811G2-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170811G2_4, Date: 11-Aug-2017, Time: 12:23:36, Instrument: , Lab: , User:

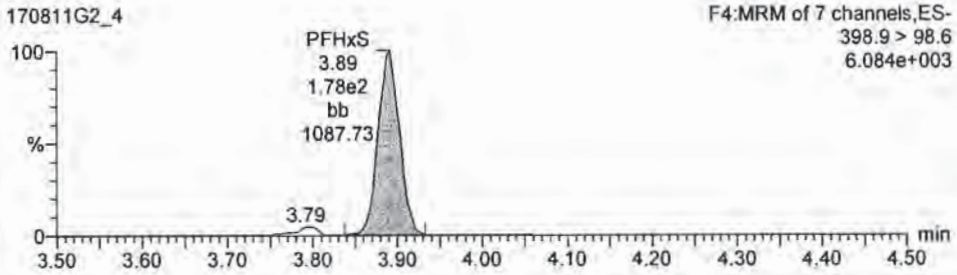
PFHpA



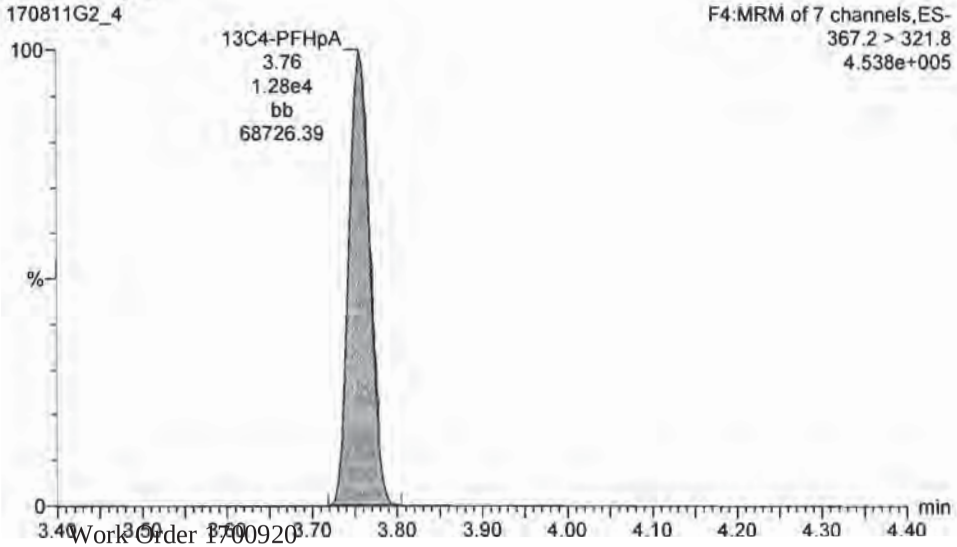


Total PFHxS

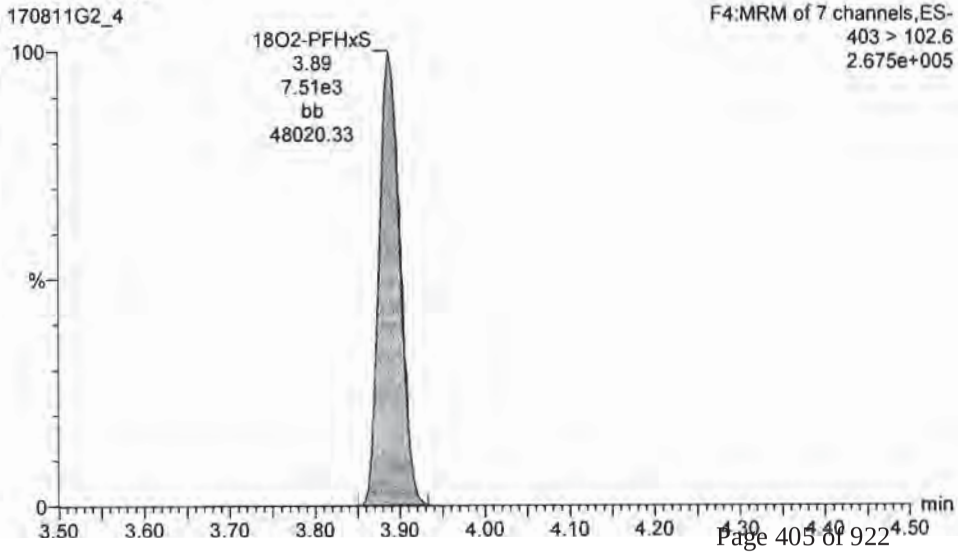




13C4-PFHpA



18O2-PFHxS

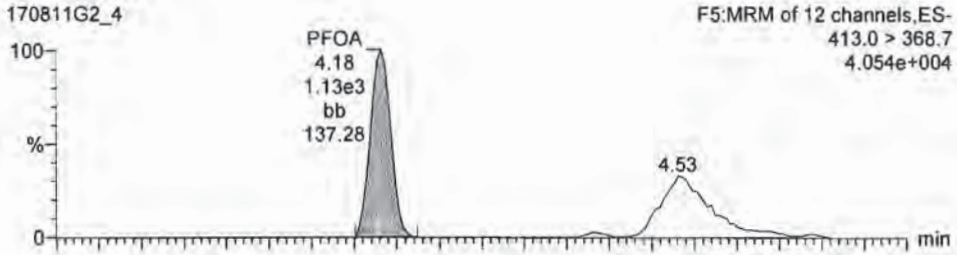


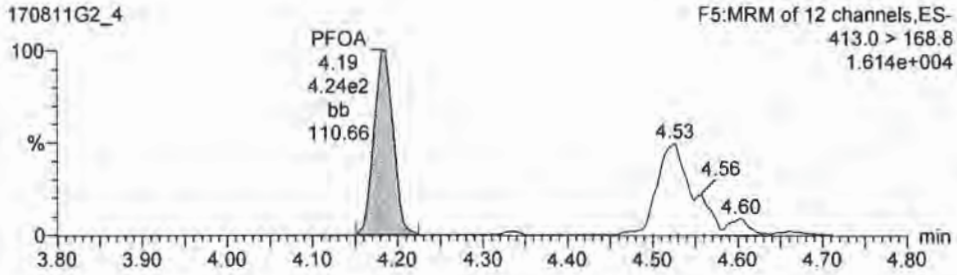
Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-4.qld

Last Altered: Friday, August 11, 2017 14:41:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:43:11 Pacific Daylight Time

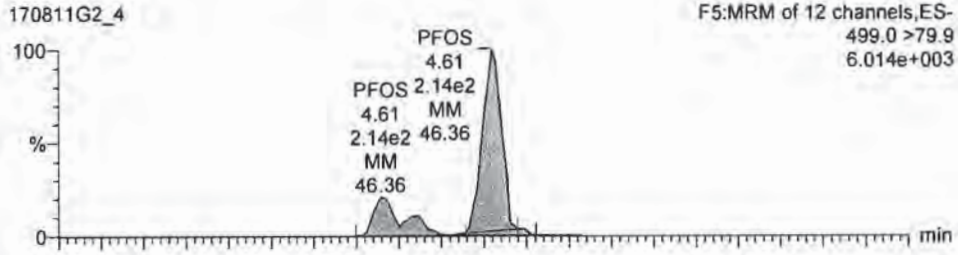
ID: ST170811G2-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170811G2_4, Date: 11-Aug-2017, Time: 12:23:36, Instrument: , Lab: , User:

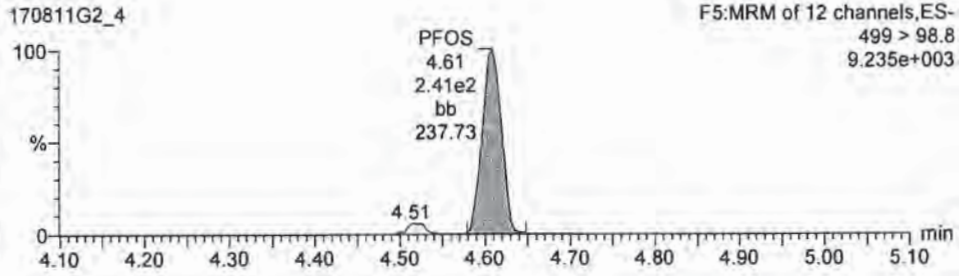
Total PFOA



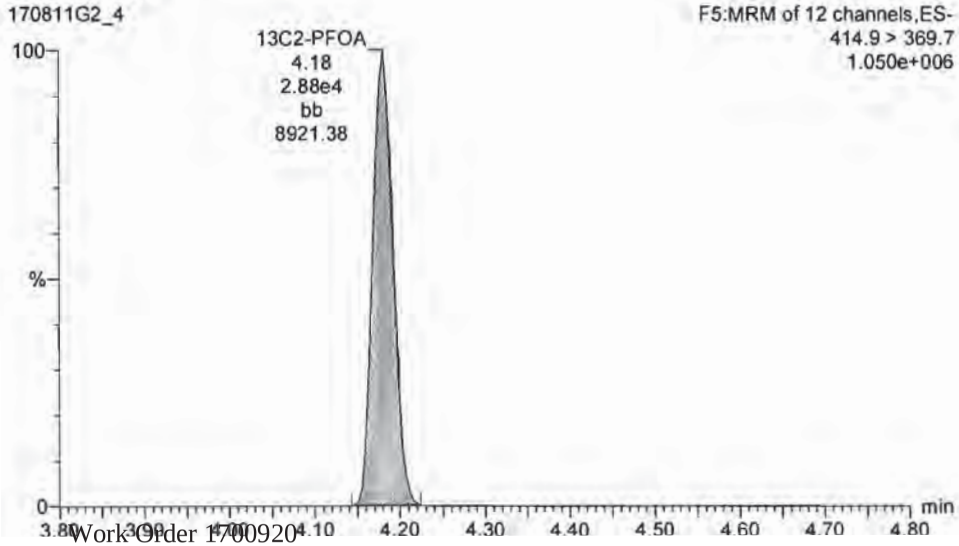


Total PFOS

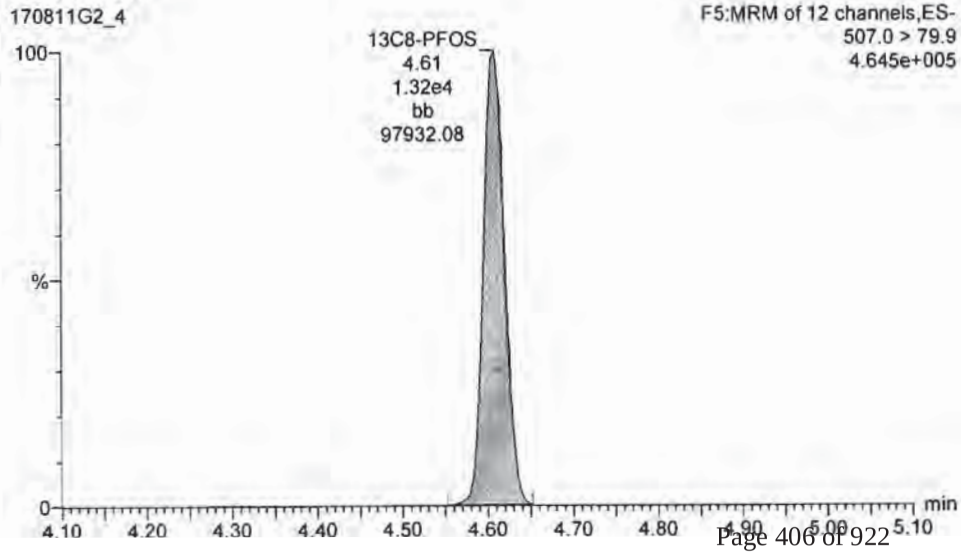




13C2-PFOA



13C8-PFOS

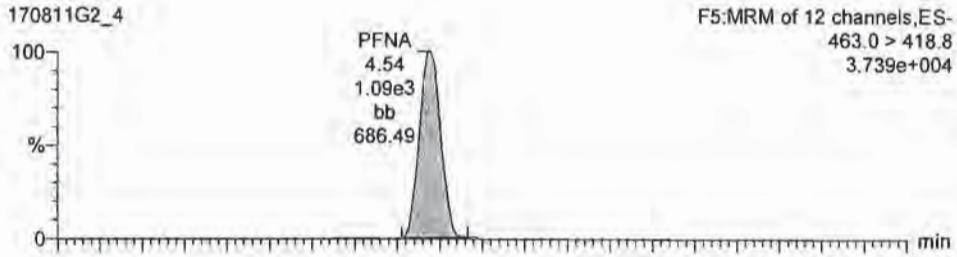


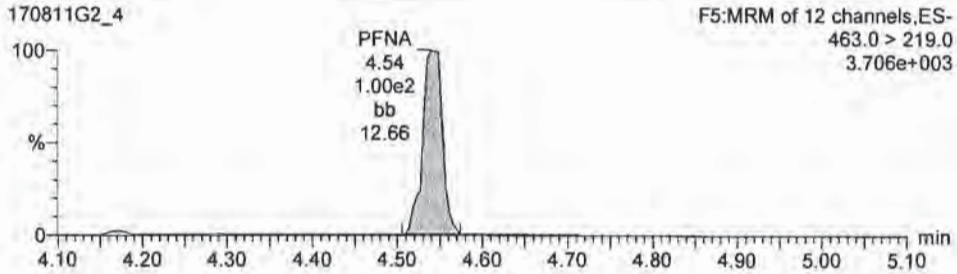
Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-4.qld

Last Altered: Friday, August 11, 2017 14:41:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:43:11 Pacific Daylight Time

ID: ST170811G2-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170811G2_4, Date: 11-Aug-2017, Time: 12:23:36, Instrument: , Lab: , User:

PFNA





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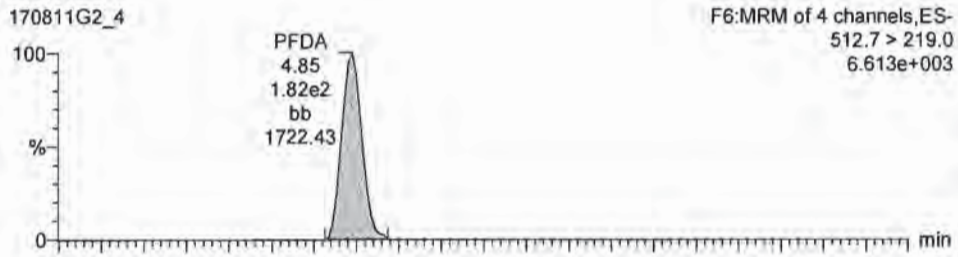
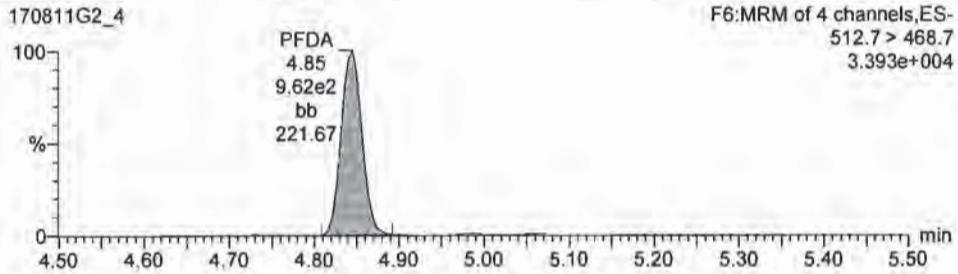
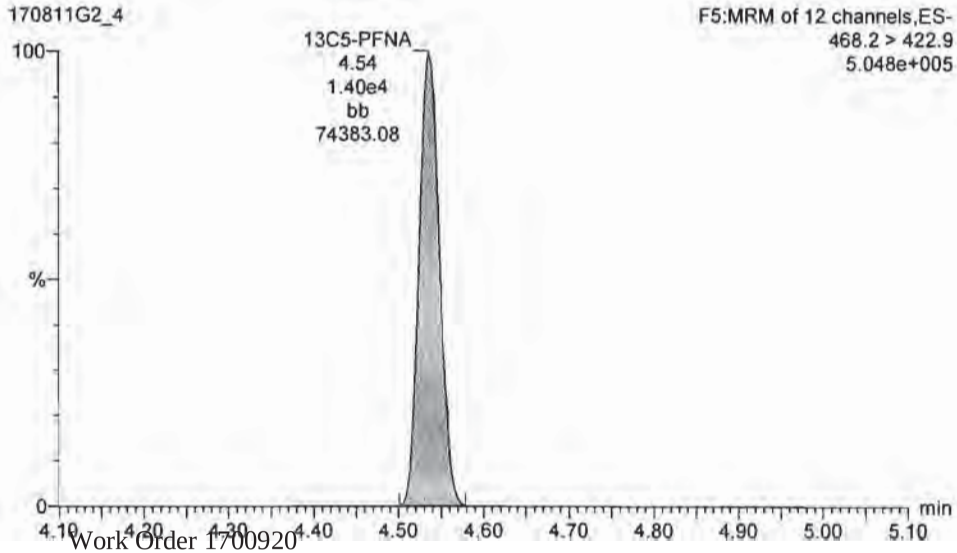
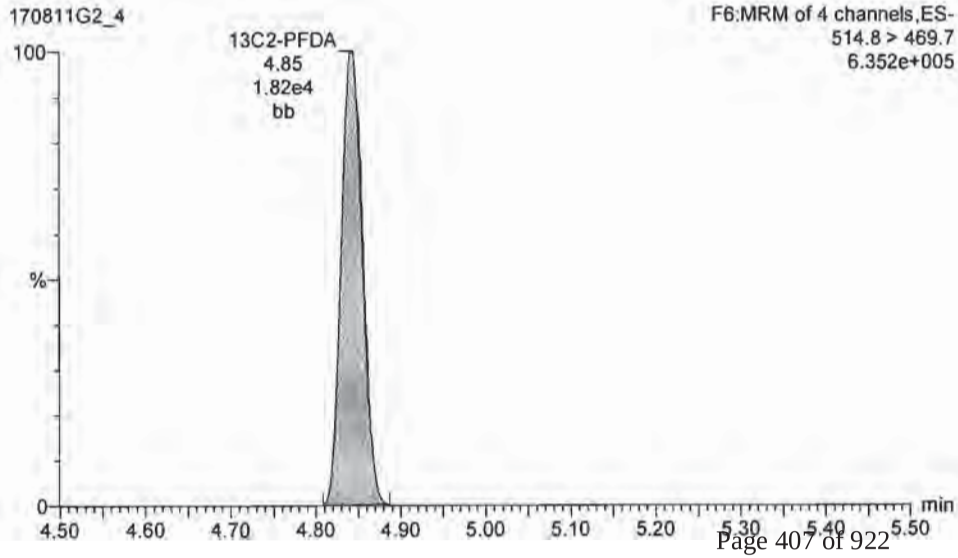




13C5-PFNA



13C2-PFDA

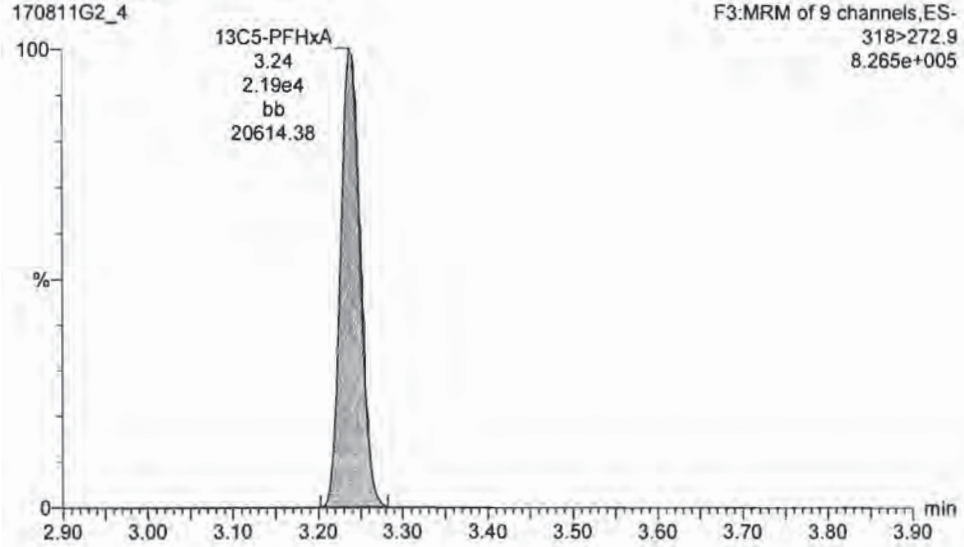


Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-4.qld

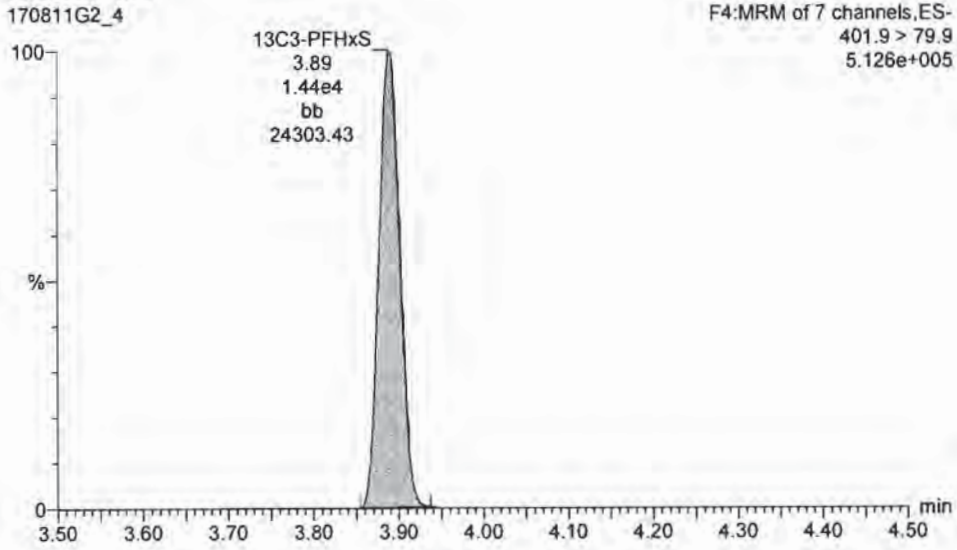
Last Altered: Friday, August 11, 2017 14:41:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:43:11 Pacific Daylight Time

ID: ST170811G2-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170811G2_4, Date: 11-Aug-2017, Time: 12:23:36, Instrument: , Lab: , User:

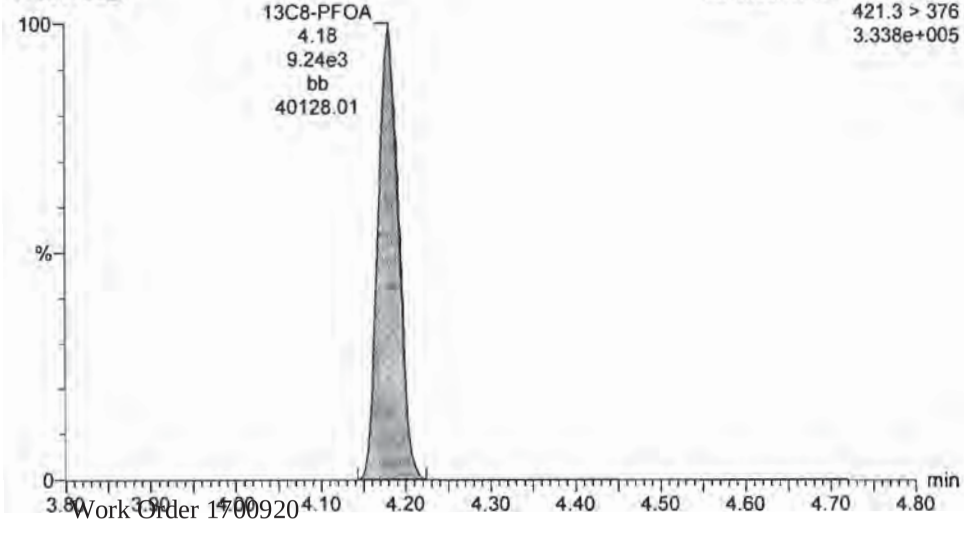
13C5-PFHxA



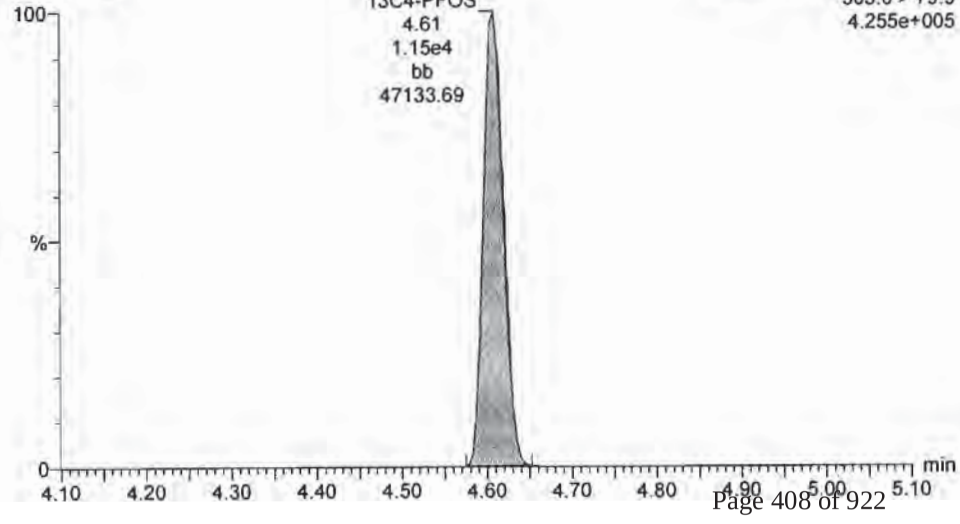
13C3-PFHxS



13C8-PFOA



13C4-PFOS



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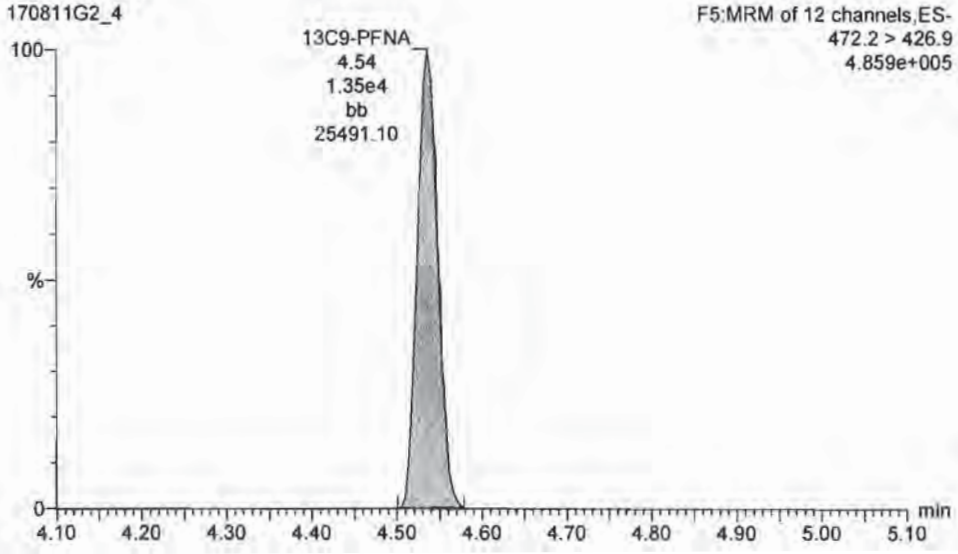
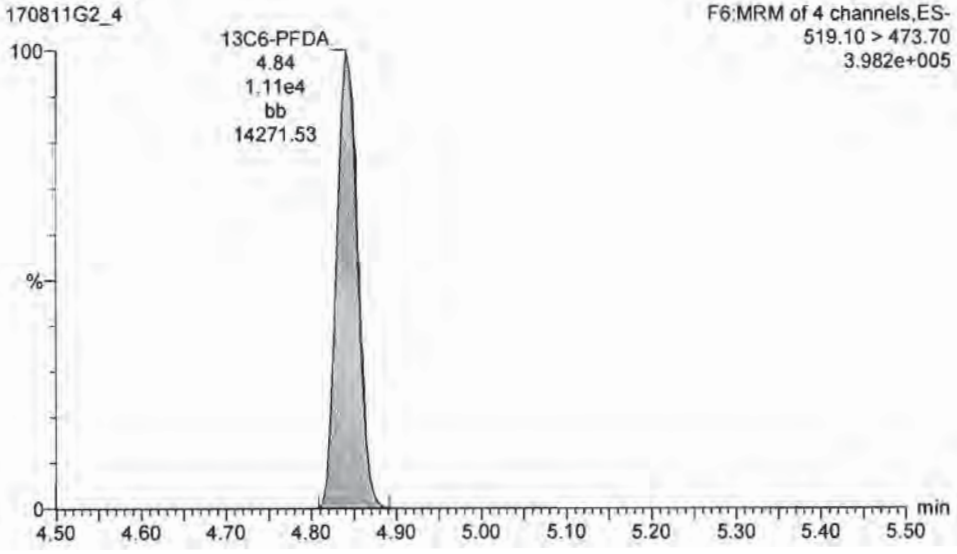
Last Altered: Friday, August 11, 2017 14:41:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:43:11 Pacific Daylight Time

ID: ST170811G2-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170811G2_4, Date: 11-Aug-2017, Time: 12:23:36, Instrument: , Lab: , User:

13C9-PFNA



13C6-PFDA



Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-15.qld

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Printed: Friday, August 11, 2017 15:10:41 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

Name: 170811G2_15, Date: 11-Aug-2017, Time: 14:51:29, ID: ST170811G2-3 PFC CS3 17H1009, Description: PFC CS3 17H1009 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	3	PFBS	299.0 > 79.7	7.44e3	6.47e3		1.000	2.85	12.2	121.7
2	4	PFHxA	312.9 > 268.9	1.39e4	8.01e3		1.000	3.25	11.2	112.2
3	5	PFHpA	363 > 318.9	2.09e4	1.10e4		1.000	3.75	11.8	118.1
4	6	PFHxS	398.9 > 79.6	7.49e3	6.11e3		1.000	3.88	10.2	102.2
5	7	PFOA	413.0 > 368.7	1.67e4	2.16e4		1.000	4.18	11.5	114.6
6	8	PFNA	463.0 > 418.8	1.39e4	8.18e3		1.000	4.54	12.0	119.9
7	9	PFOS	499.0 >79.9	1.66e3	5.36e3		1.000	4.60	10.6	106.0
8	10	PFDA	512.7 > 219.0	1.02e3	5.64e3		1.000	4.84	11.9	118.5
9	12	13C3-PFBS	302.0 > 98.8	6.47e3	2.09e4	0.351	1.000	2.85	11.0	88.3
10	14	13C2-PFHxA	315.0 > 269.8	8.01e3	2.09e4	0.443	1.000	3.24	10.8	86.6
11	15	13C4-PFHpA	367.2 > 321.8	1.10e4	2.09e4	0.496	1.000	3.75	13.2	105.9
12	16	18O2-PFHxS	403 > 102.6	6.11e3	1.32e4	0.528	1.000	3.88	11.0	87.9
13	17	13C2-PFOA	414.9 > 369.7	2.16e4	8.34e3	3.356	1.000	4.18	9.64	77.1
14	18	13C5-PFNA	468.2 > 422.9	8.18e3	8.54e3	0.991	1.000	4.54	12.1	96.6
15	19	13C2-PFDA	514.8 > 469.7	5.64e3	3.41e3	1.458	1.000	4.84	14.2	113.5
16	20	13C8-PFOS	507.0 > 79.9	5.36e3	5.13e3	1.109	1.000	4.60	11.8	94.3
17	22	13C5-PFHxA	318>272.9	2.09e4	2.09e4	1.000	1.000	3.24	12.5	100.0
18	23	13C3-PFHxS	401.9 > 79.9	1.32e4	1.32e4	1.000	1.000	3.88	12.5	100.0
19	24	13C8-PFOA	421.3 > 376	8.34e3	8.34e3	1.000	1.000	4.18	12.5	100.0
20	25	13C9-PFNA	472.2 > 426.9	8.54e3	8.54e3	1.000	1.000	4.54	12.5	100.0
21	26	13C4-PFOS	503.0 > 79.9	5.13e3	5.13e3	1.000	1.000	4.60	12.5	100.0
22	27	13C6-PFDA	519.10 > 47...	3.41e3	3.41e3	1.000	1.000	4.84	12.5	100.0
23	28	Total PFBS	299.0 > 79.7		6.47e3		1.000		12.2	
24	29	Total PFHxS	398.9 > 79.6		6.11e3		1.000		10.2	
25	30	Total PFOA	413.0 > 368.7		2.16e4		1.000		11.5	
26	31	Total PFOS	499.0 >79.9		5.36e3		1.000		10.6	

70-130

50-130 150

8/11/17

8/11/17

Vista Analytical Laboratory VG-11

Dataset: Untitled

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

Compound name: PFBA

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1	170811G2_1		IPA	11-Aug-17	11:00:11
2	170811G2_2	Ⓐ	ST170811G2-1 PFC CS0 17H1010	11-Aug-17	11:12:24
3	170811G2_3		IPA	11-Aug-17	11:24:56
4	170811G2_4		ST170811G2-2 PFC CS-1 17H0708	11-Aug-17	12:23:36
5	170811G2_5		IPA	11-Aug-17	12:35:47
6	170811G2_6		1700920-04@5X MH-DUP01-20170720 0.121...	11-Aug-17	12:58:42
7	170811G2_7		1700920-15 LF-MW-28S-20170719 0.11572	11-Aug-17	13:10:54
8	170811G2_8		1700920-16@5X DUP-07-20170719 0.12023	11-Aug-17	13:23:31
9	170811G2_9		1700920-17 FRB04-20170719 0.11007	11-Aug-17	13:36:03
10	170811G2_10		1700907-04@5X AT028-MW17-06-071717-13...	11-Aug-17	13:48:39
11	170811G2_11		1700962-01@20X East Tank 0.125	11-Aug-17	14:01:11
12	170811G2_12		1700962-02@20X West Tank 0.125	11-Aug-17	14:13:40
13	170811G2_13		1700962-03@20X MiddleTank 0.125	11-Aug-17	14:26:14
14	170811G2_14		IPA	11-Aug-17	14:38:51
15	170811G2_15		ST170811G2-3 PFC CS3 17H1009	11-Aug-17	14:51:29
16	170811G2_16				

Ⓐ INJECTION NOT USED. [illegible] 8/11/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-15.qld

Last Altered: Friday, August 11, 2017 15:09:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 15:10:25 Pacific Daylight Time

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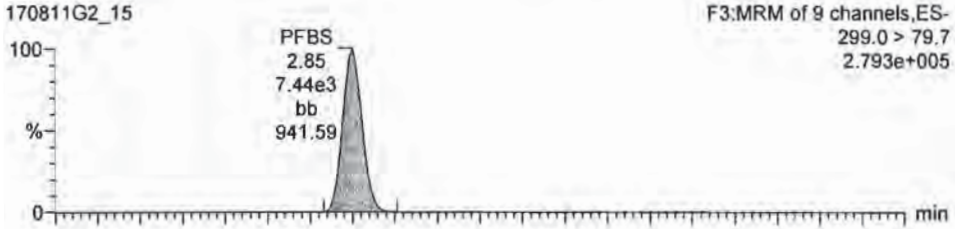
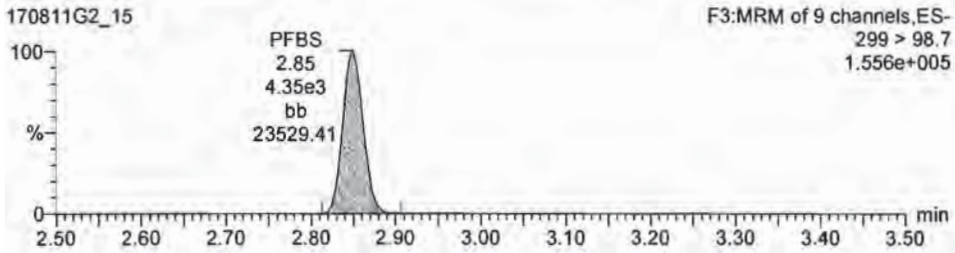
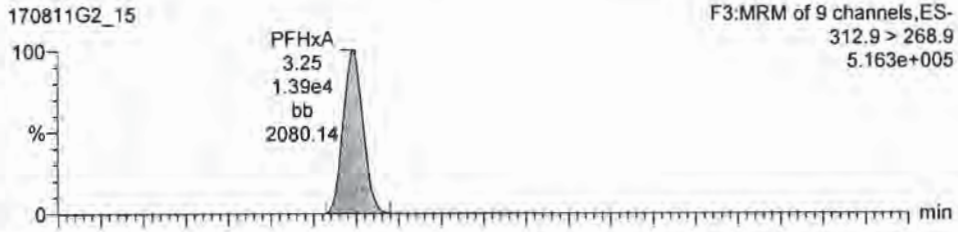
ID: ST170811G2-3 PFC CS3 17H1009, Description: PFC CS3 17H1009 A, Name: 170811G2_15, Date: 11-Aug-2017, Time: 14:51:29, Instrument: , Lab: , User:

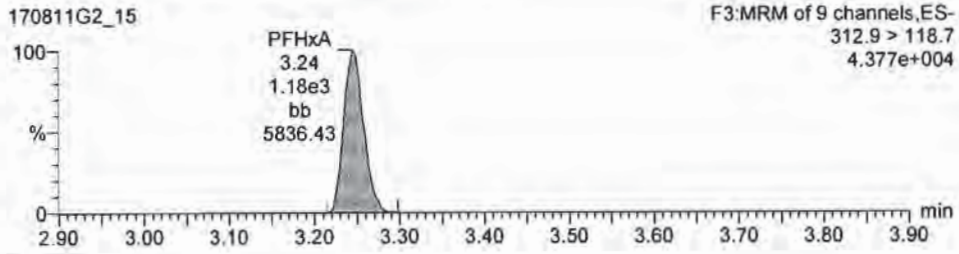
Total PFBS



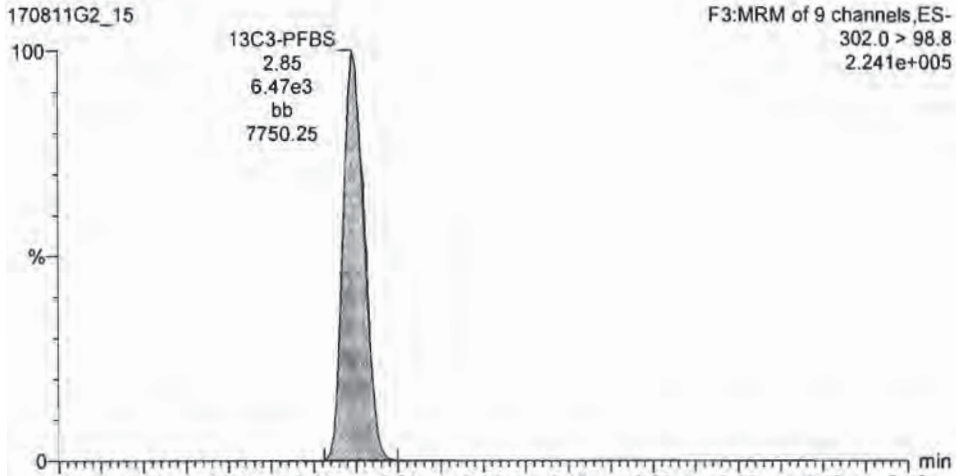


PFHxA

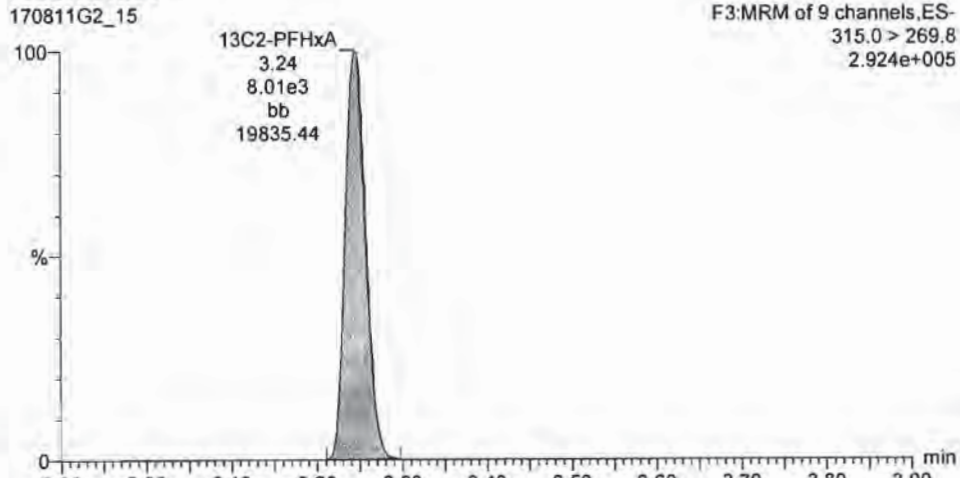




13C3-PFBS



13C2-PFHxA



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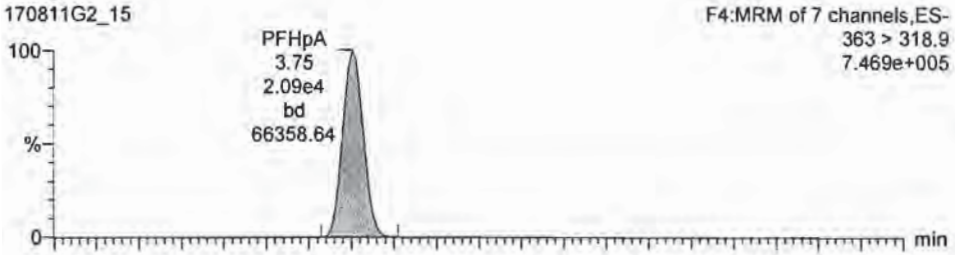
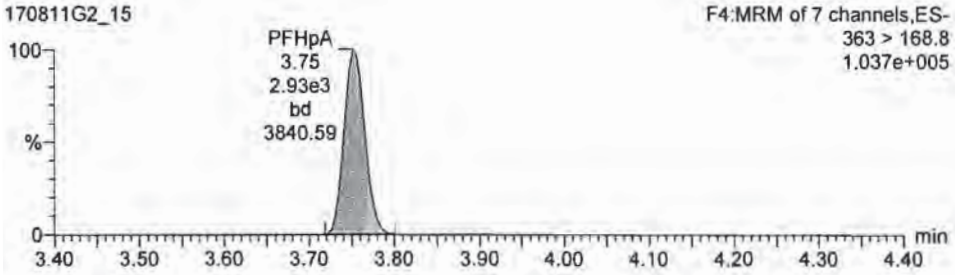
Printed: Friday, August 11, 2017 15:10:25 Pacific Daylight Time

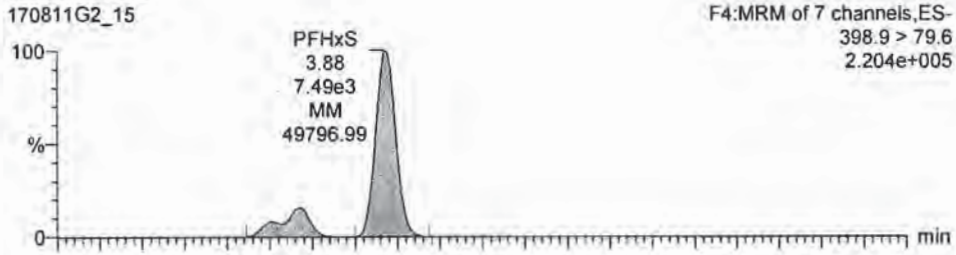
ID: ST170811G2-3 PFC CS3 17H1009, Description: PFC CS3 17H1009 A, Name: 170811G2_15, Date: 11-Aug-2017, Time: 14:51:29, Instrument: , Lab: , User:

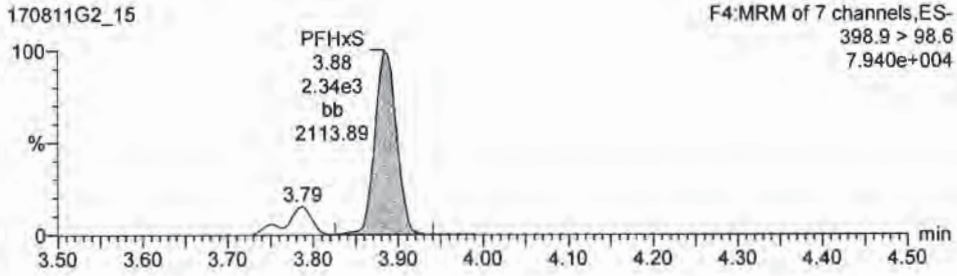
PFHpA



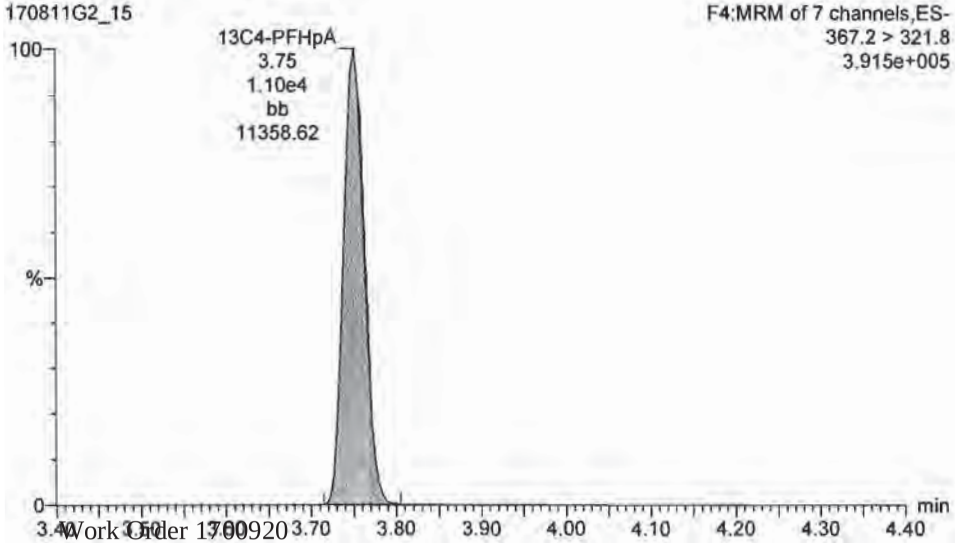


Total PFHxS

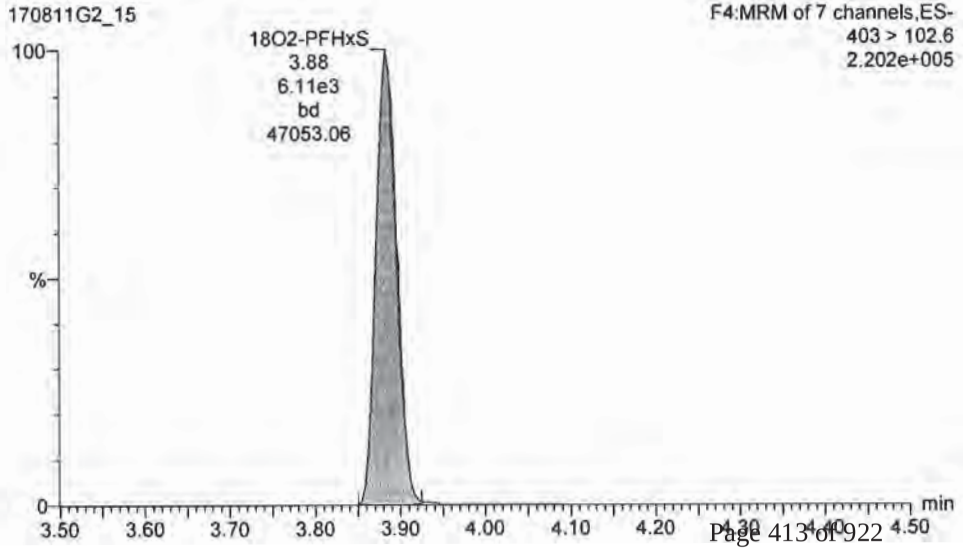




13C4-PFHpA



18O2-PFHxS



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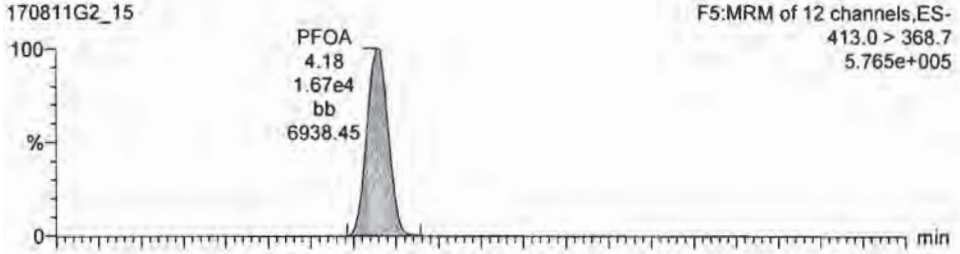
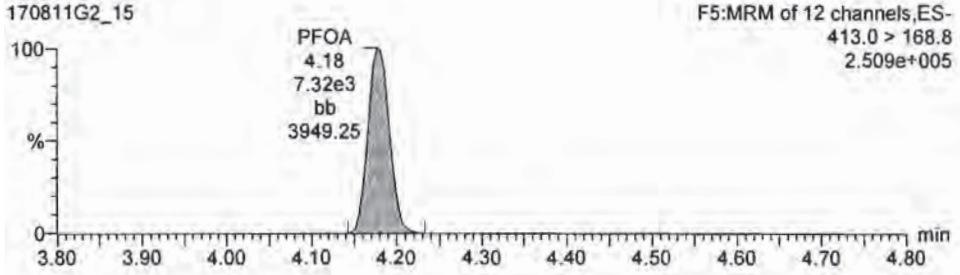
Printed: Friday, August 11, 2017 15:10:25 Pacific Daylight Time

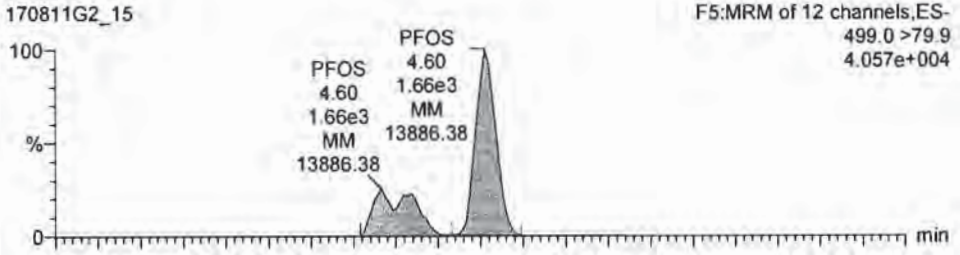
ID: ST170811G2-3 PFC CS3 17H1009, Description: PFC CS3 17H1009 A, Name: 170811G2_15, Date: 11-Aug-2017, Time: 14:51:29, Instrument: , Lab: , User:

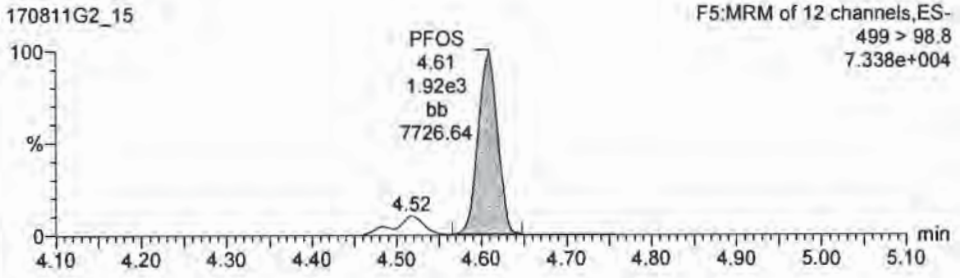
Total PFOA





Total PFOS





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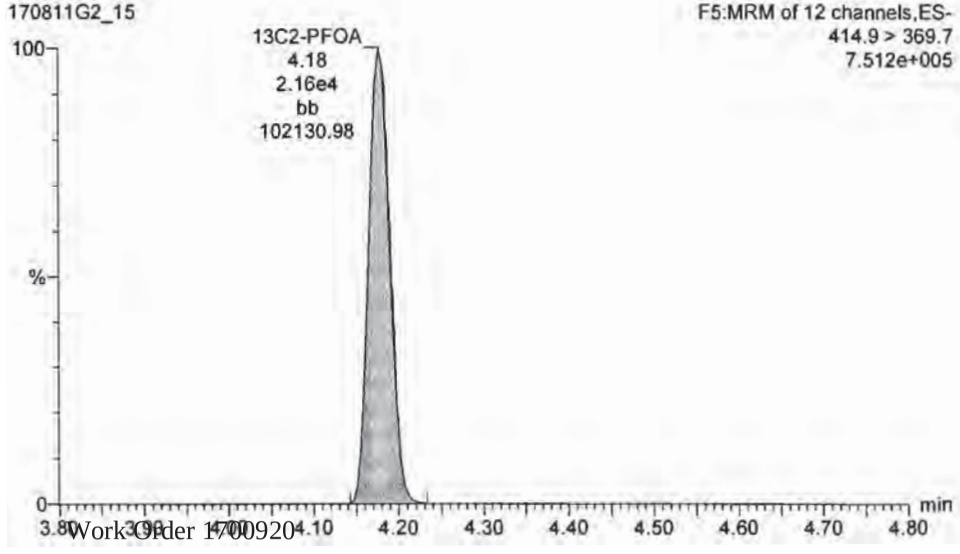
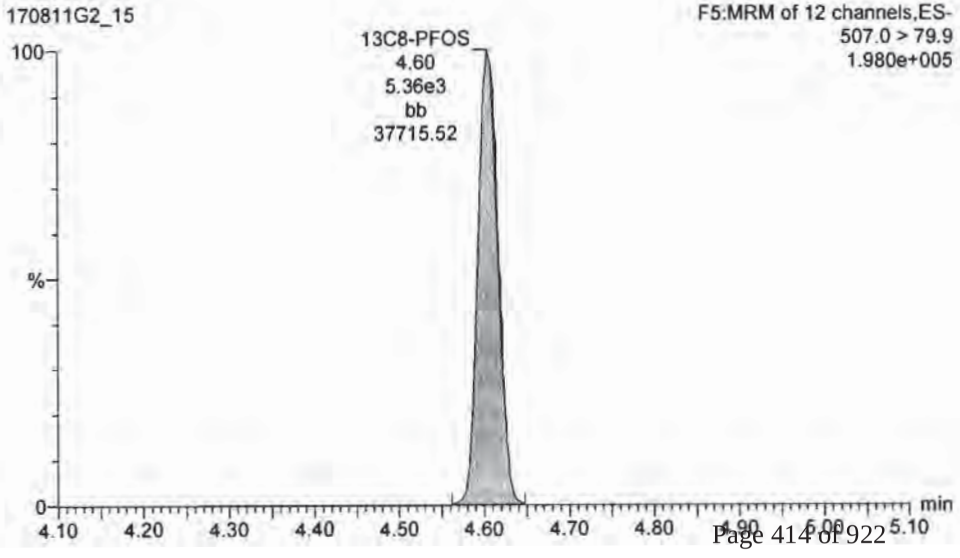


13C8-PFOS



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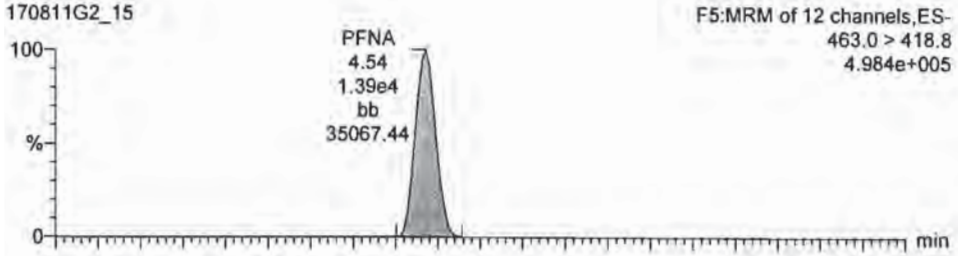
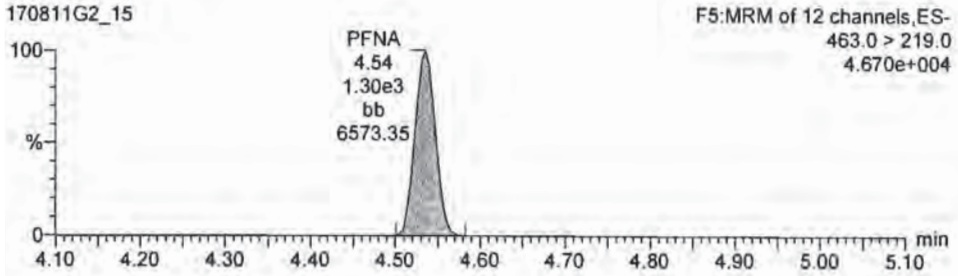
Last Altered: Friday, August 11, 2017 15:09:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 15:10:25 Pacific Daylight Time

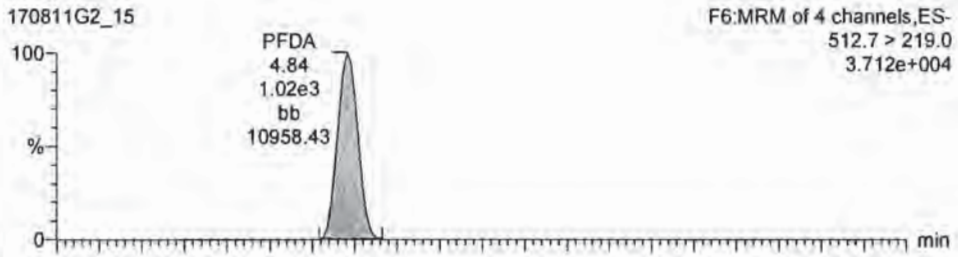
ID: ST170811G2-3 PFC CS3 17H1009, Description: PFC CS3 17H1009 A, Name: 170811G2_15, Date: 11-Aug-2017, Time: 14:51:29, Instrument: , Lab: , User:

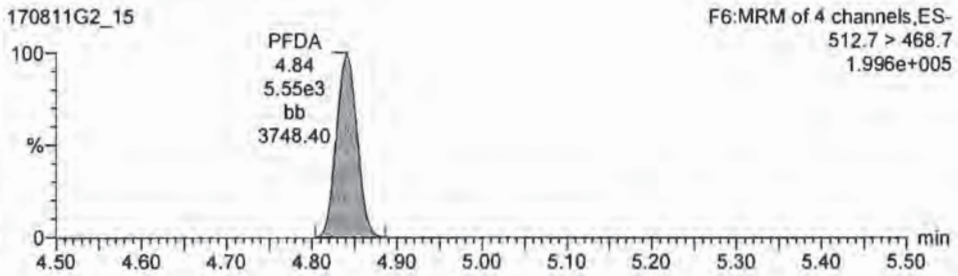
PFNA



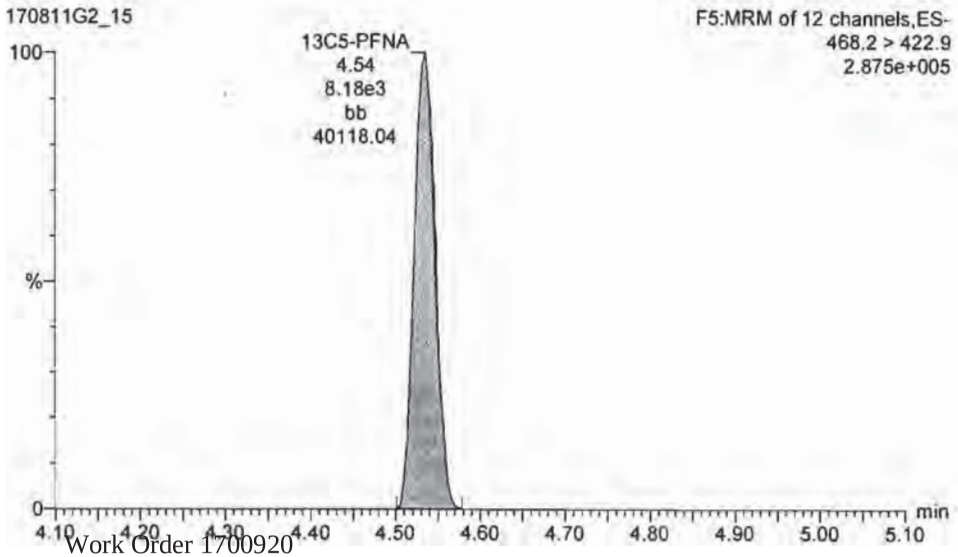


PFDA

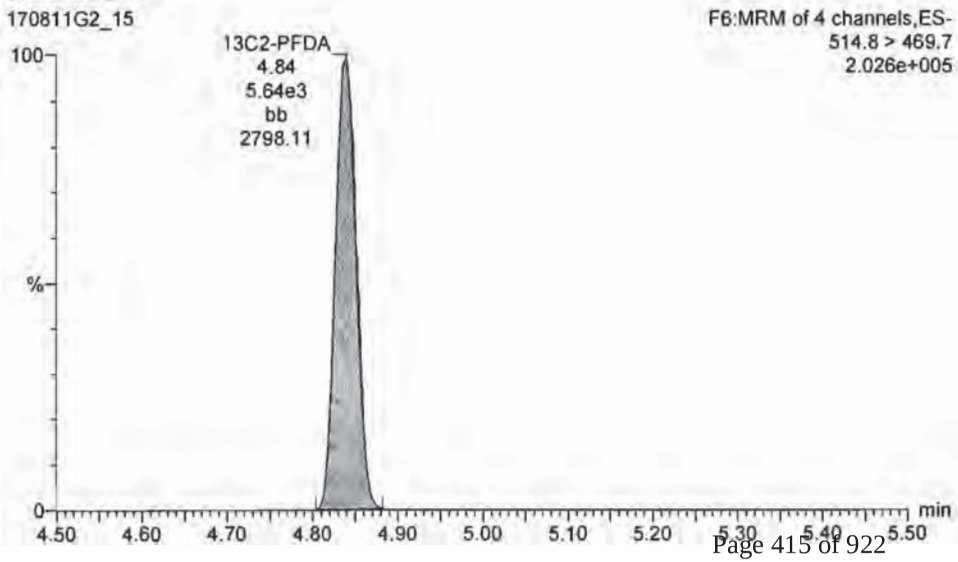




13C5-PFNA



13C2-PFDA

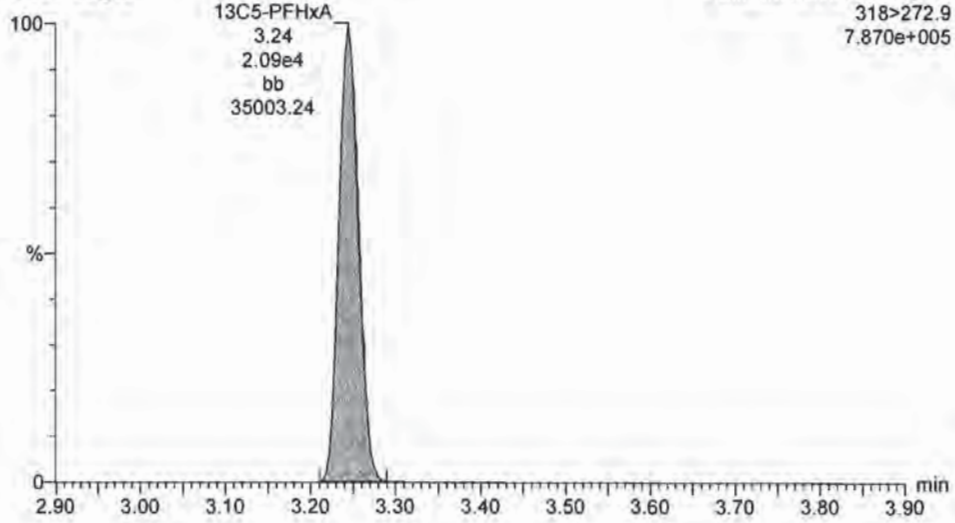


Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-15.qld

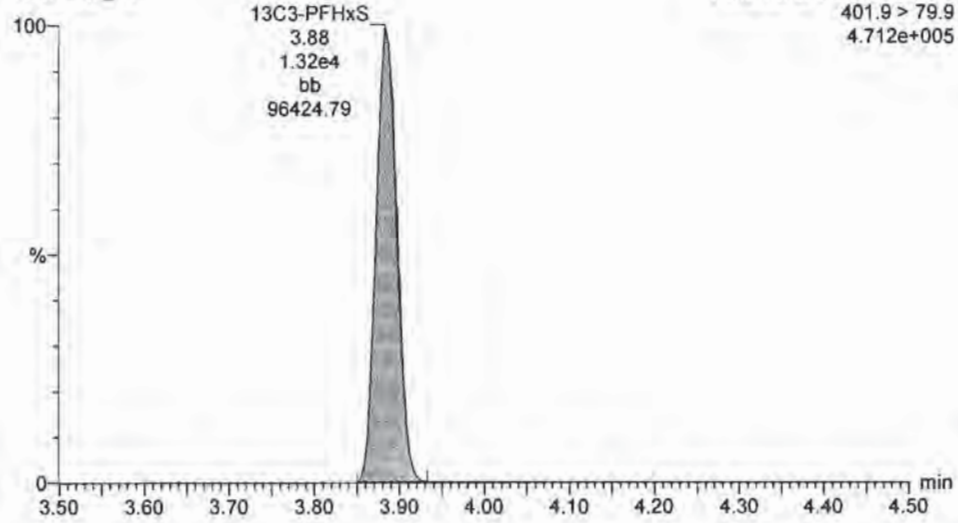
Last Altered: Friday, August 11, 2017 15:09:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 15:10:25 Pacific Daylight Time

ID: ST170811G2-3 PFC CS3 17H1009, Description: PFC CS3 17H1009 A, Name: 170811G2_15, Date: 11-Aug-2017, Time: 14:51:29, Instrument: , Lab: , User:

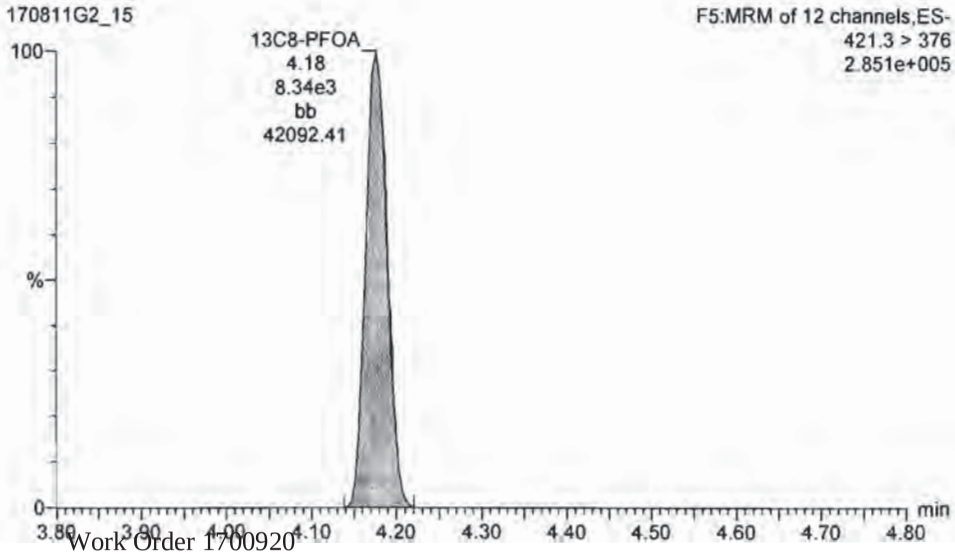
13C5-PFHxA



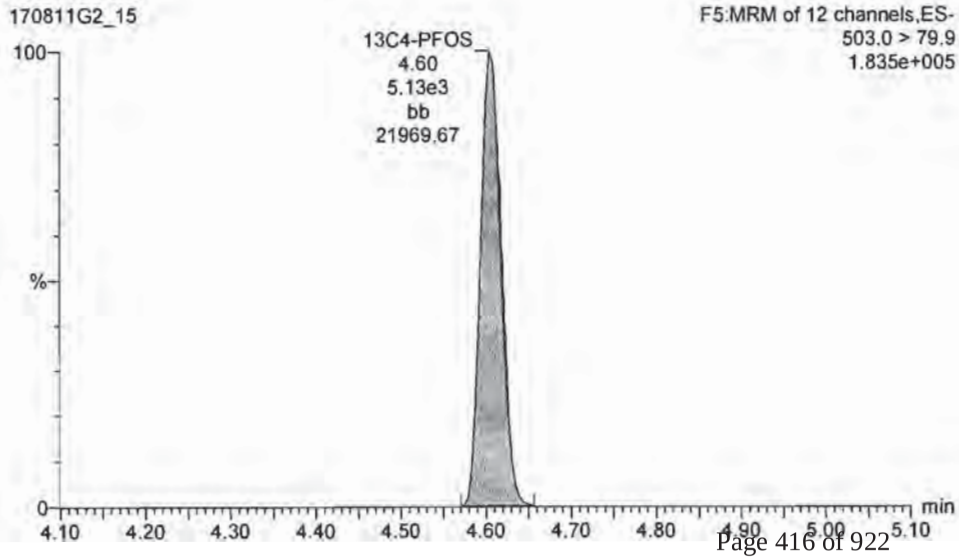
13C3-PFHxS



13C8-PFOA



13C4-PFOS

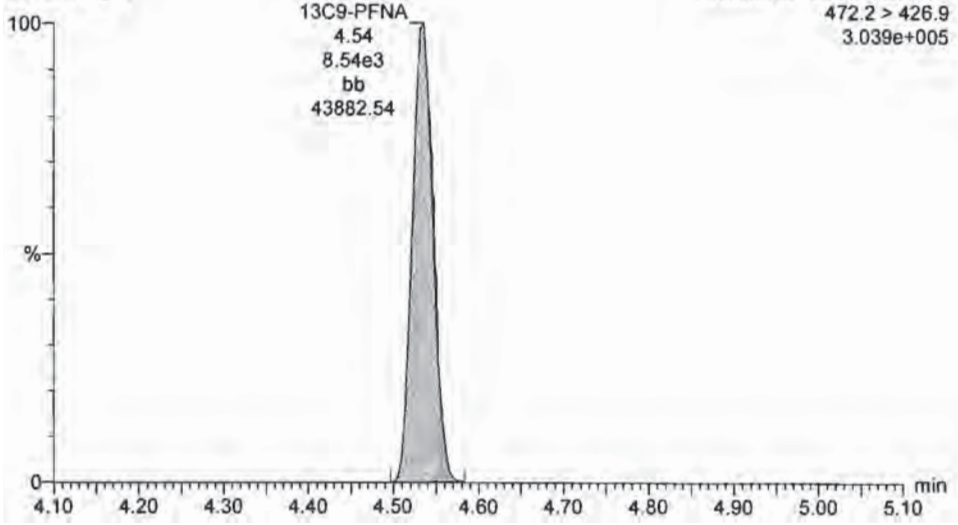


Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-15.qld

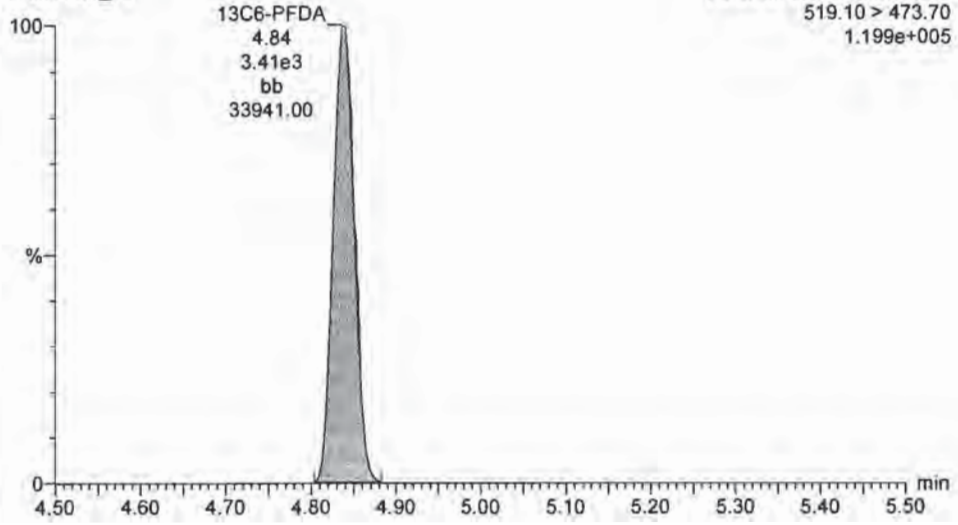
Last Altered: Friday, August 11, 2017 15:09:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 15:10:25 Pacific Daylight Time

ID: ST170811G2-3 PFC CS3 17H1009, Description: PFC CS3 17H1009 A, Name: 170811G2_15, Date: 11-Aug-2017, Time: 14:51:29, Instrument: , Lab: , User:

13C9-PFNA



13C6-PFDA



INITIAL CALIBRATION (ICAL)

INCLUDING ASSOCIATED

INITIAL CALIBRATION VERIFICATION (ICV) AND INSTRUMENT BLANK (IB)

Vista Analytical Laboratory

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

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 YQ 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

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: 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

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: 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

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: 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

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: 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	bbXl
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

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: 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

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

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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

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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

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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

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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

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
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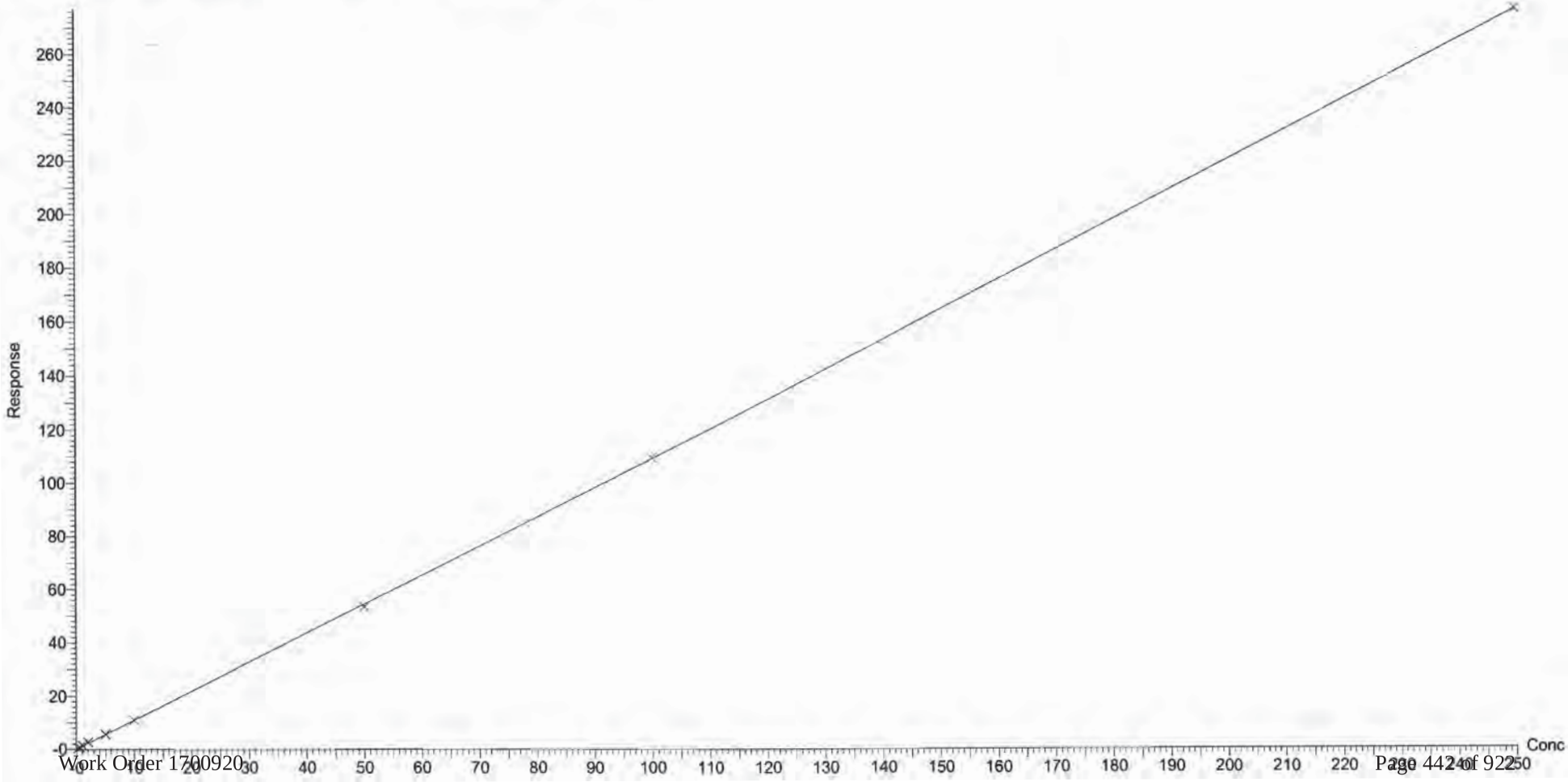
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 28 Jul 2017 08:40:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:05:03

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



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

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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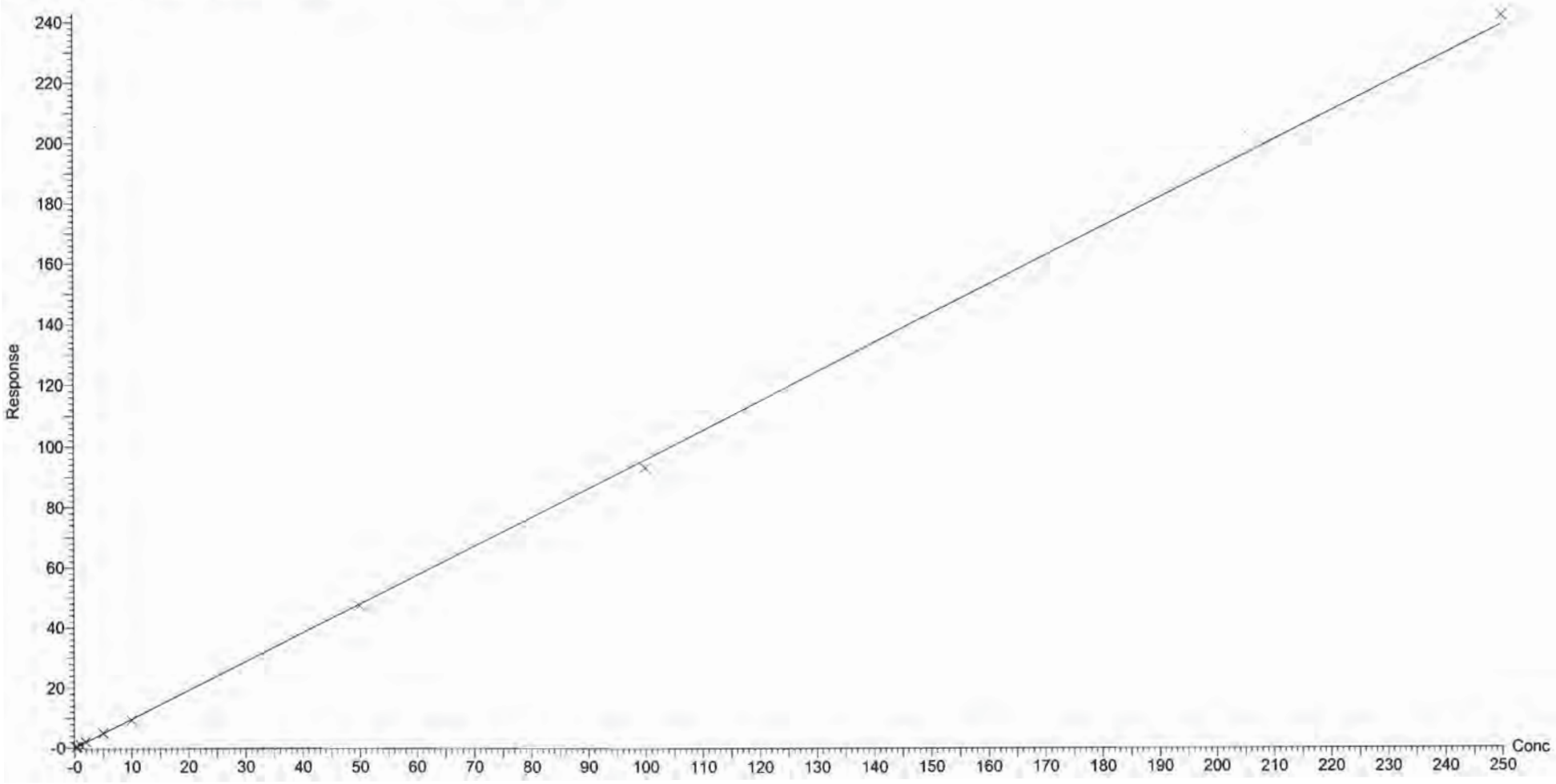
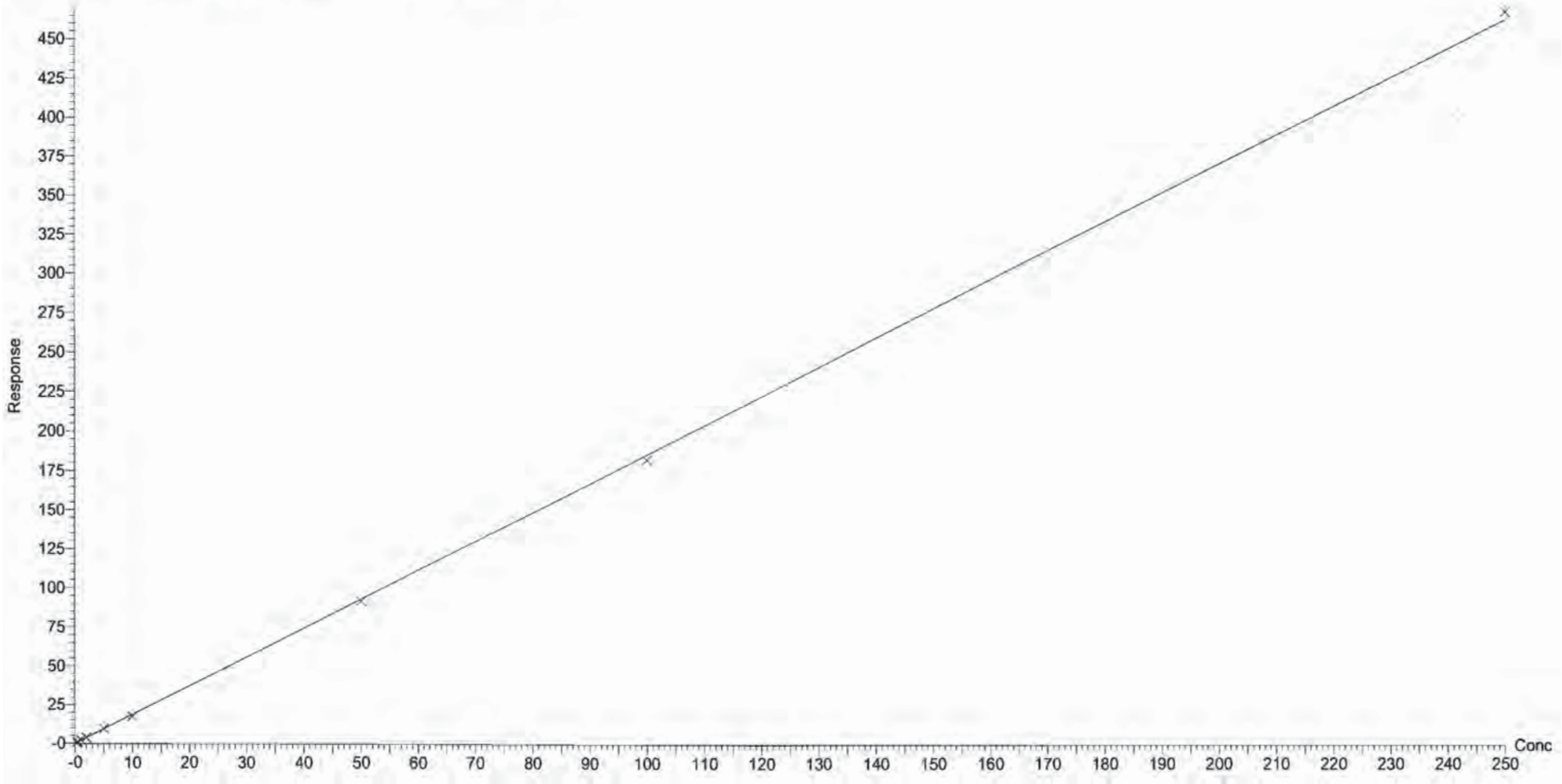
Compound name: PFPeA
Correlation coefficient: r = 0.999801, r^2 = 0.999602
Calibration curve: 0.958373 * x + 0.0576289
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

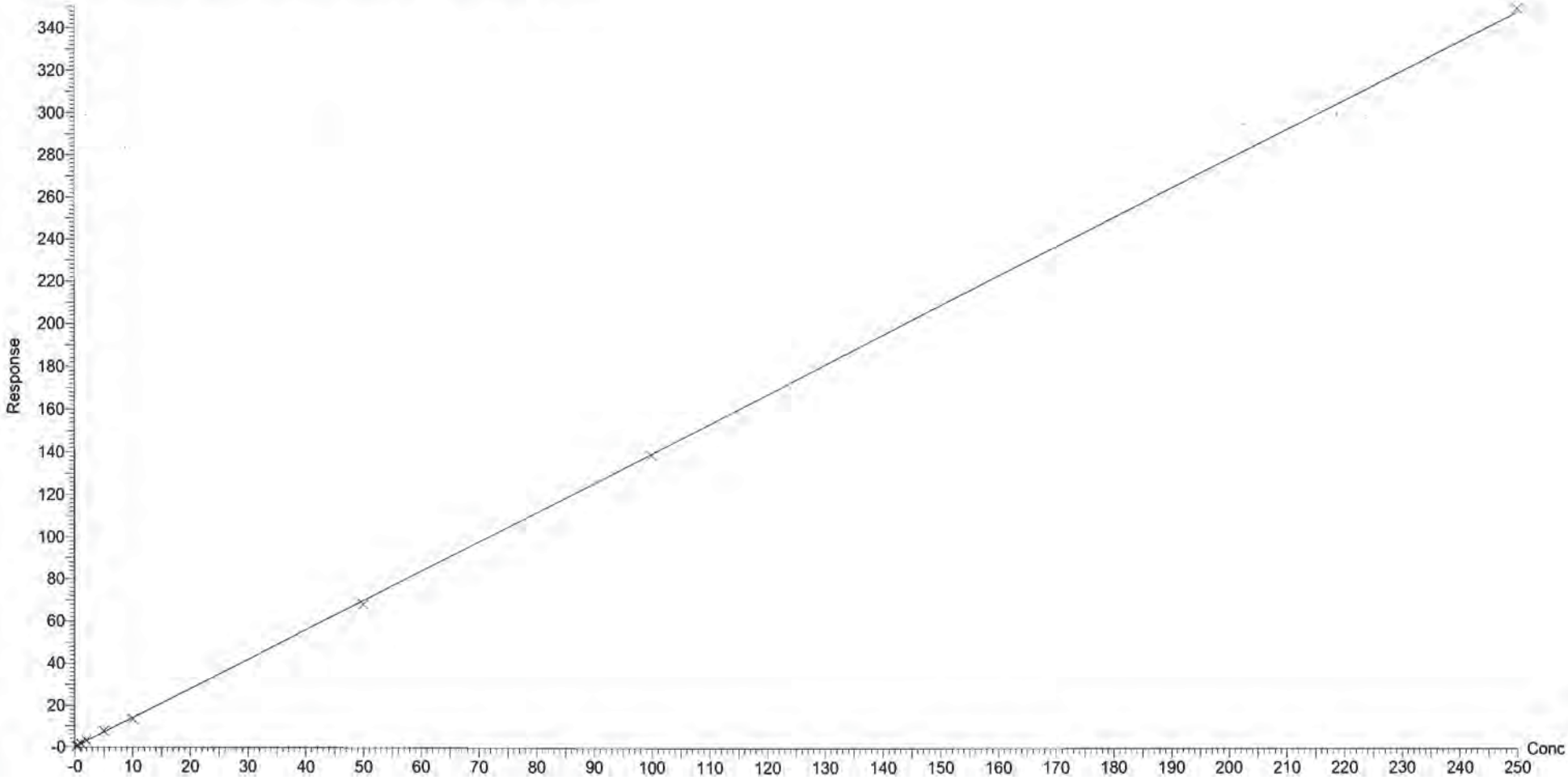
Compound name: PFBS
Correlation coefficient: r = 0.999861, r^2 = 0.999721
Calibration curve: 1.85784 * x + -0.00404936
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

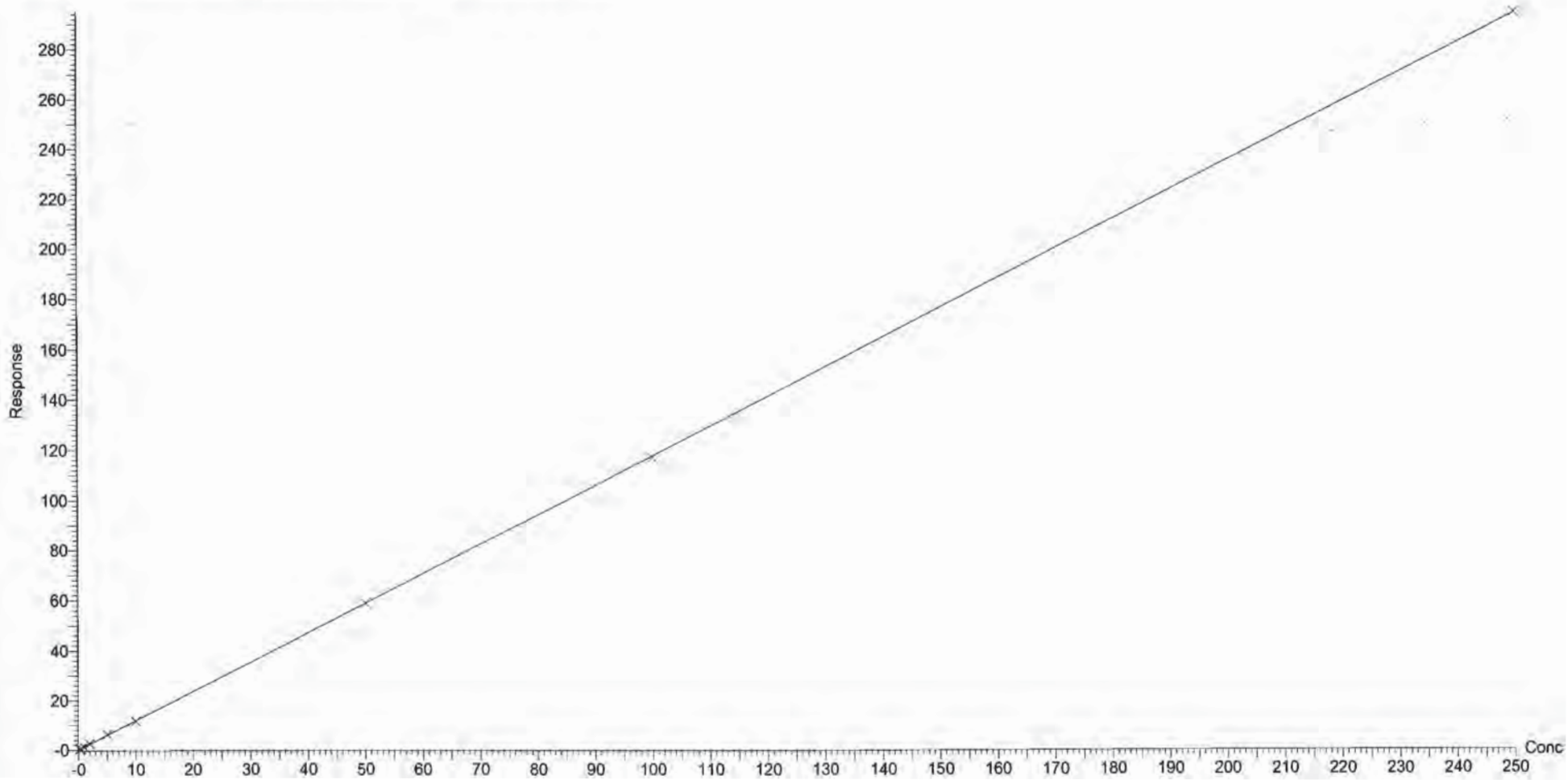
Compound name: PFHxA
Correlation coefficient: r = 0.999860, r^2 = 0.999719
Calibration curve: 1.39516 * x + 0.138496
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

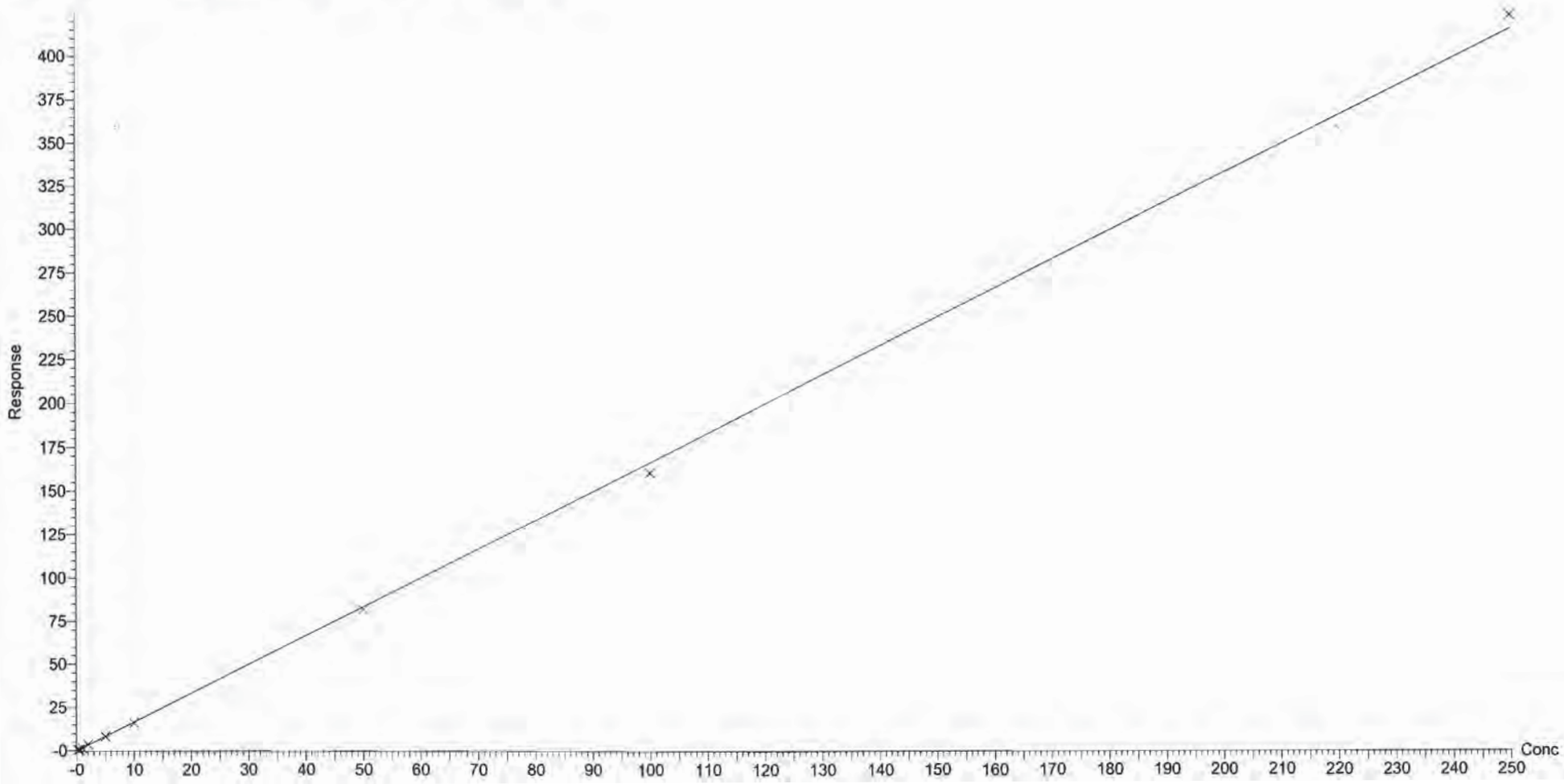
Compound name: PFHpA
Correlation coefficient: r = 0.999957, r^2 = 0.999914
Calibration curve: 1.17847 * x + 0.0681471
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

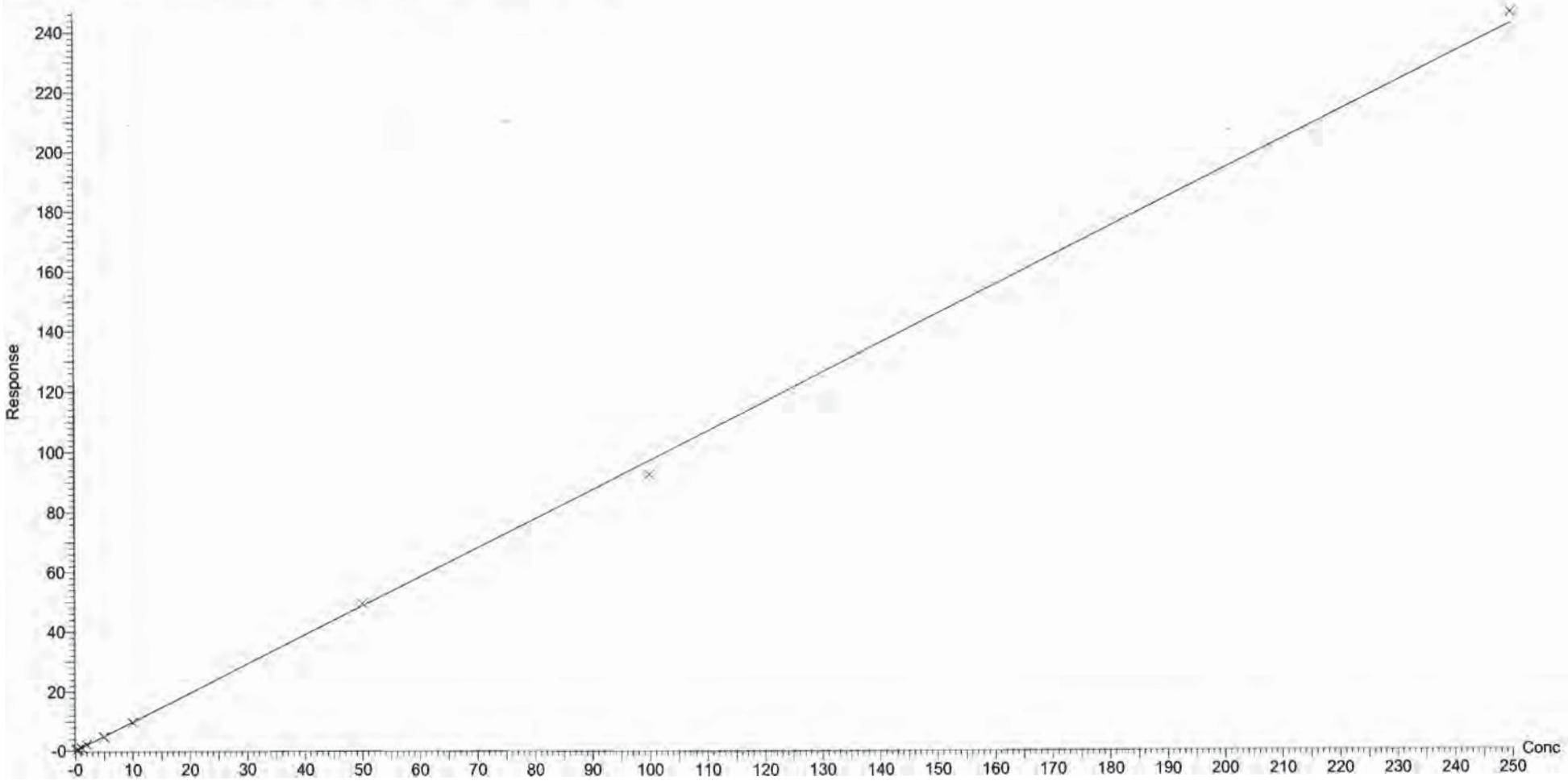
Compound name: PFHxS
Correlation coefficient: r = 0.999604, r^2 = 0.999209
Calibration curve: 1.66642 * x + 0.0527668
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

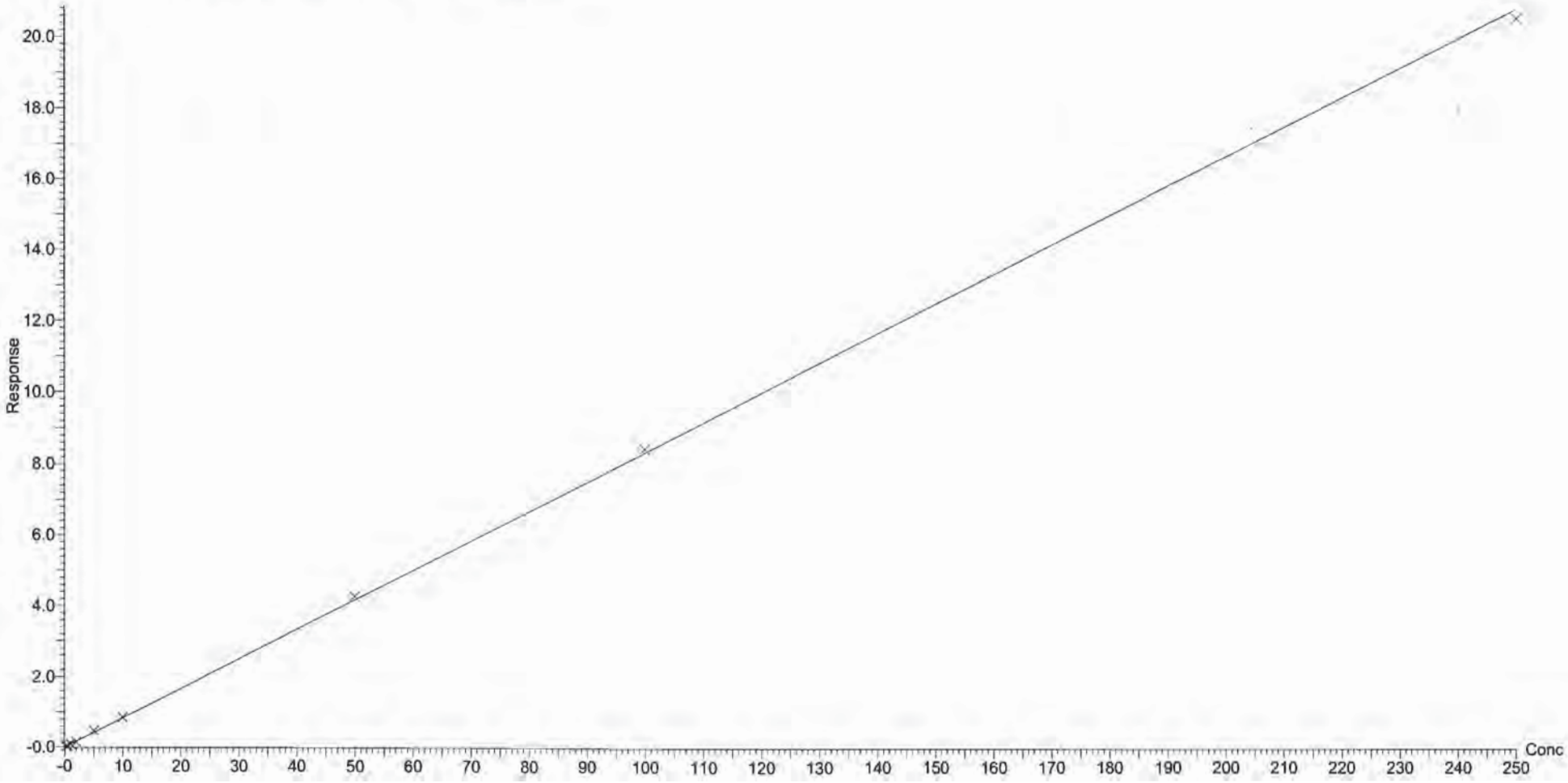
Compound name: PFOA
Correlation coefficient: r = 0.999602, r^2 = 0.999203
Calibration curve: 0.972567 * x + 0.119743
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

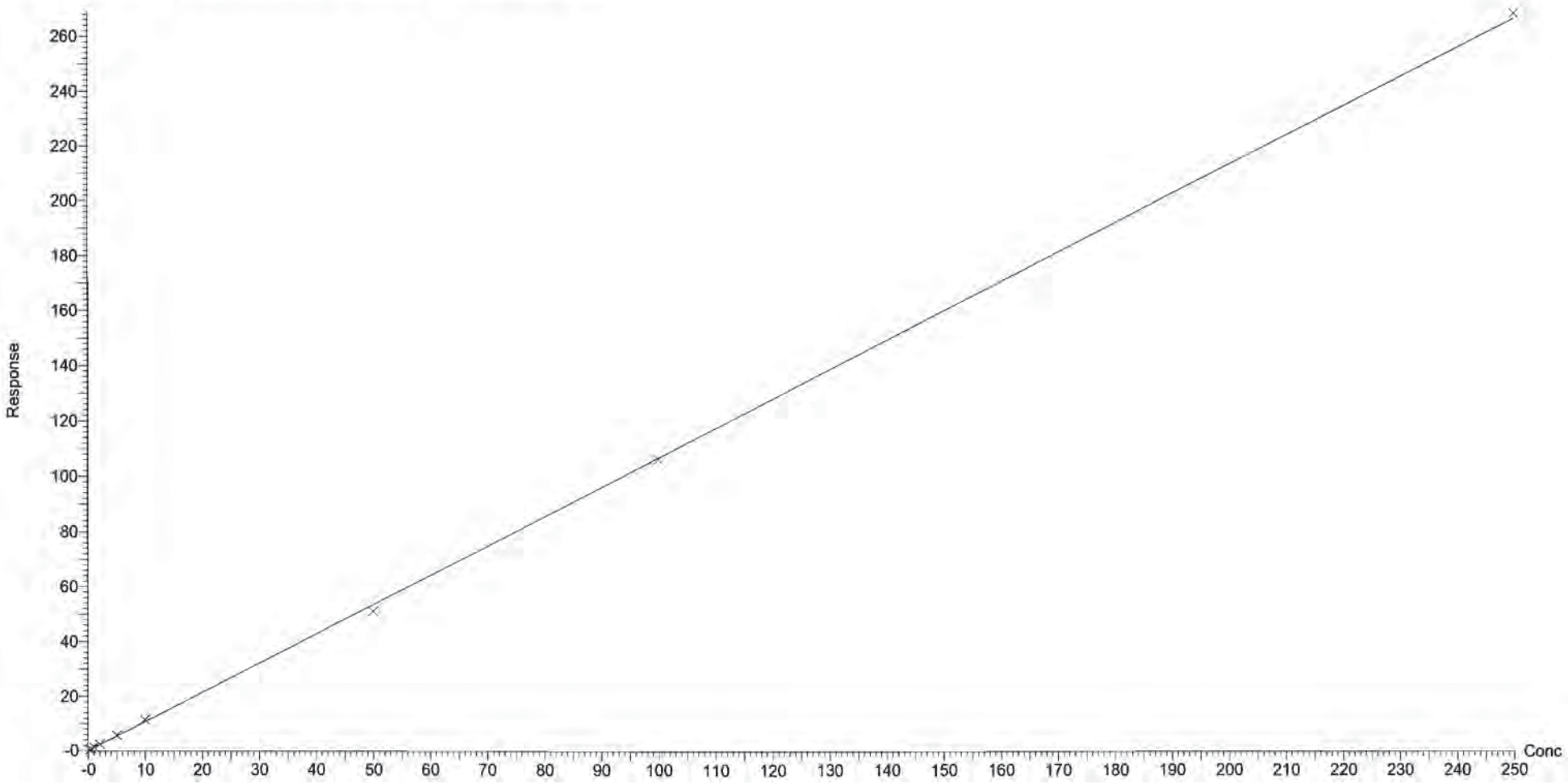


Vista Analytical Laboratory Q1

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

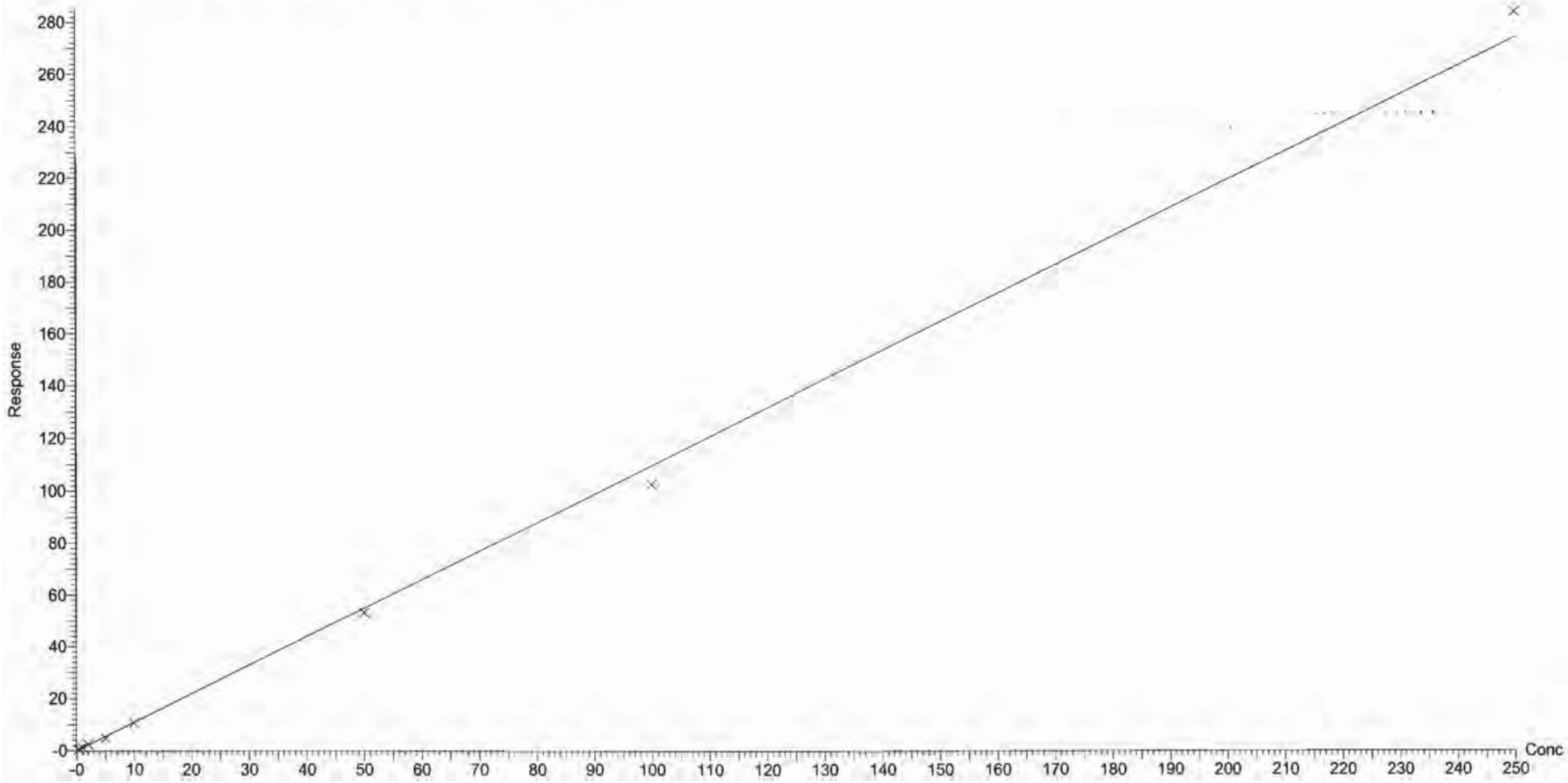
Compound name: PFNA
Correlation coefficient: r = 0.999774, r^2 = 0.999549
Calibration curve: 1.0688 * x + 0.0838738
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

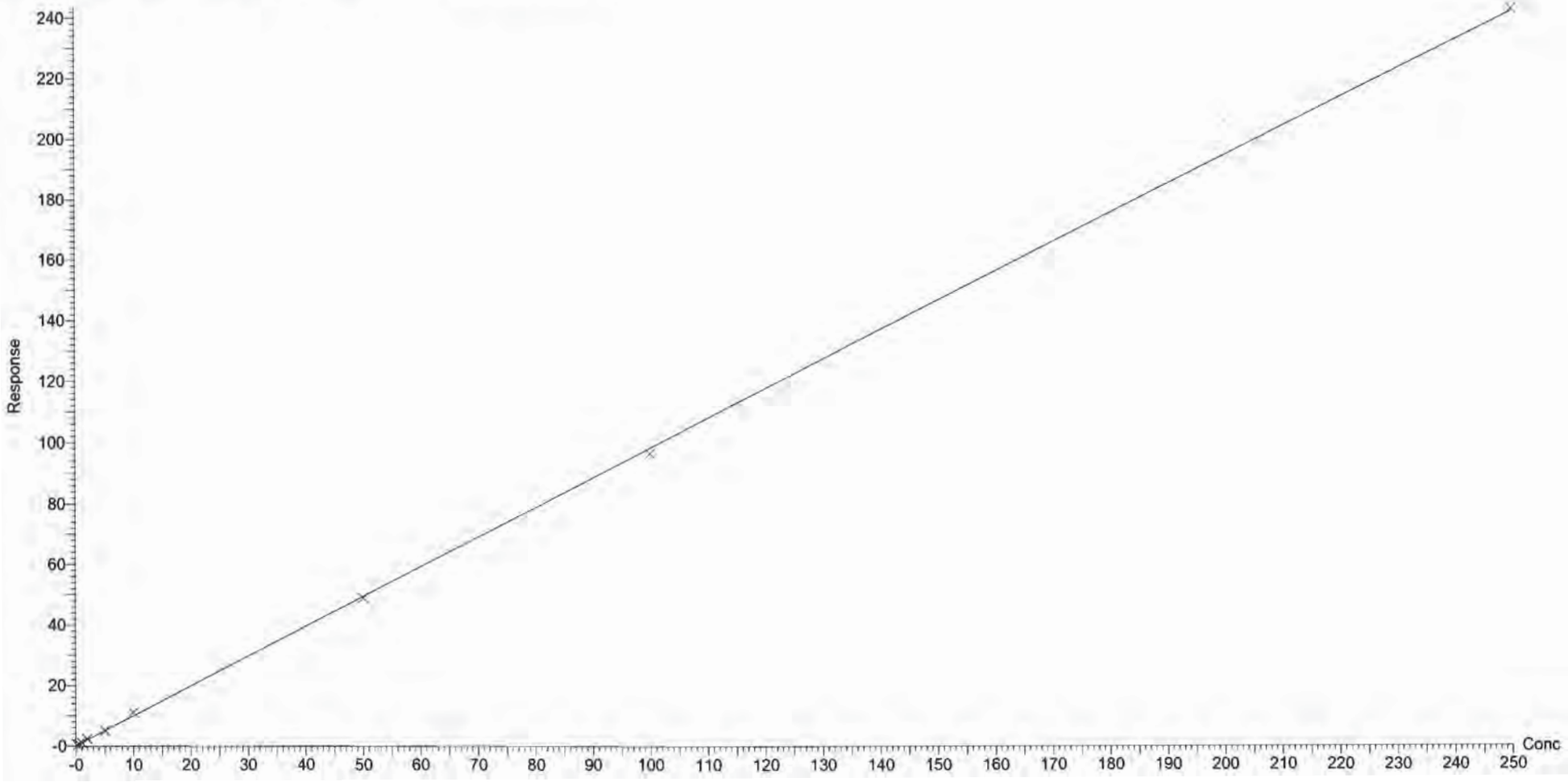
Compound name: PFOSA
Correlation coefficient: r = 0.998852, r^2 = 0.997705
Calibration curve: 1.09922 * x + 0.0380461
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

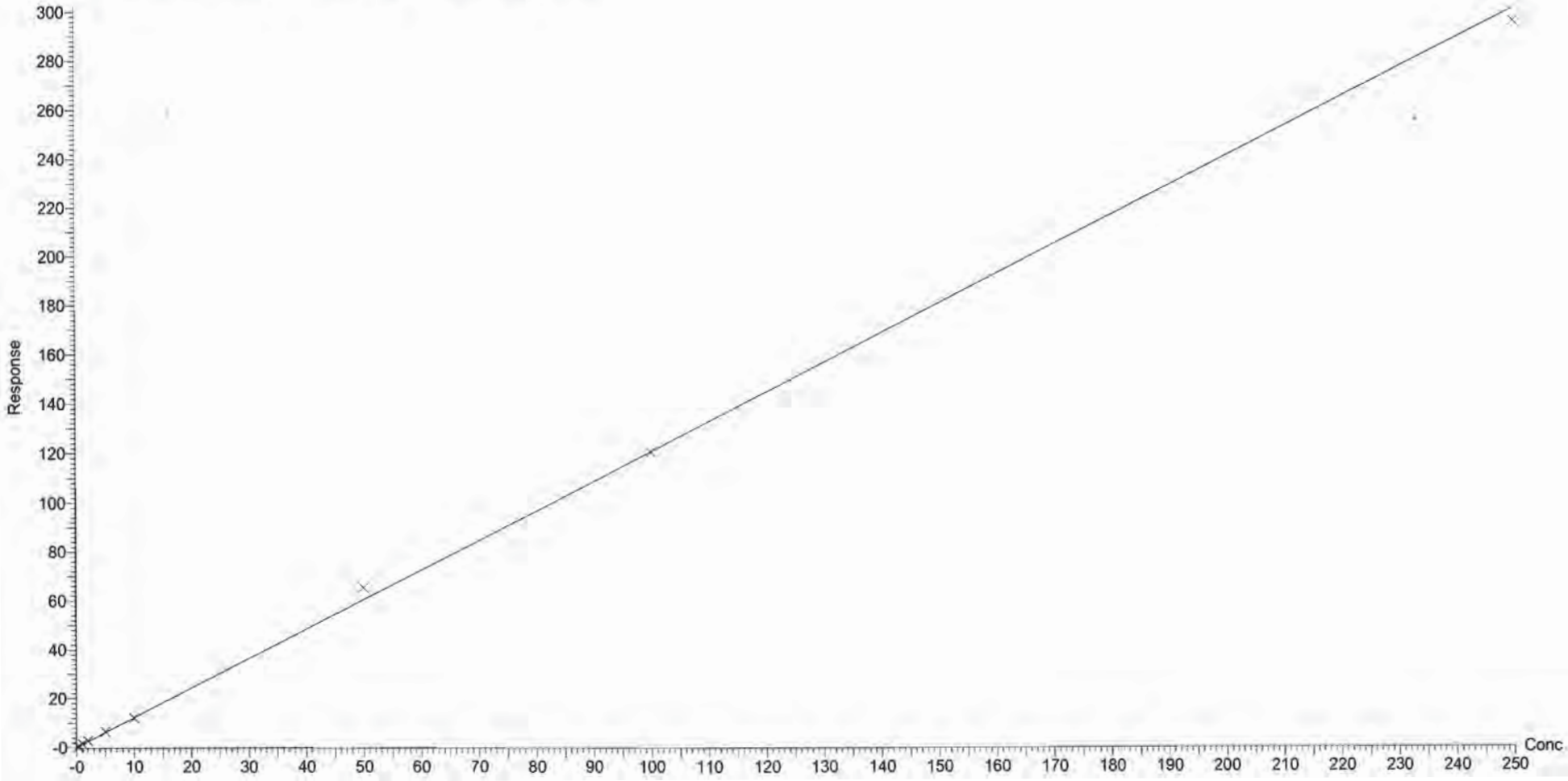


Vista Analytical Laboratory Q1

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

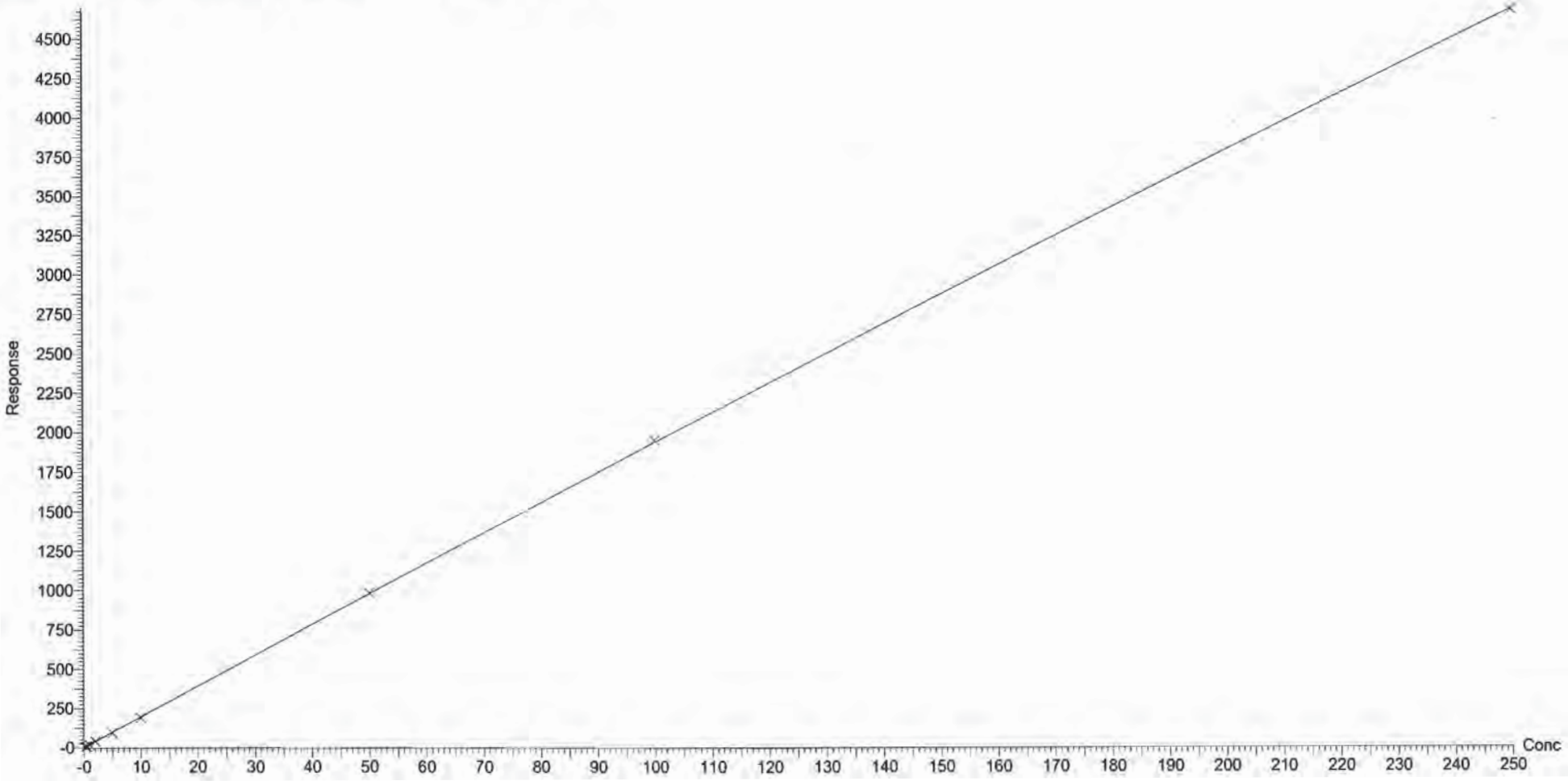
Compound name: PFDA
Correlation coefficient: r = 0.999404, r^2 = 0.998807
Calibration curve: 1.20688 * x + 0.163006
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

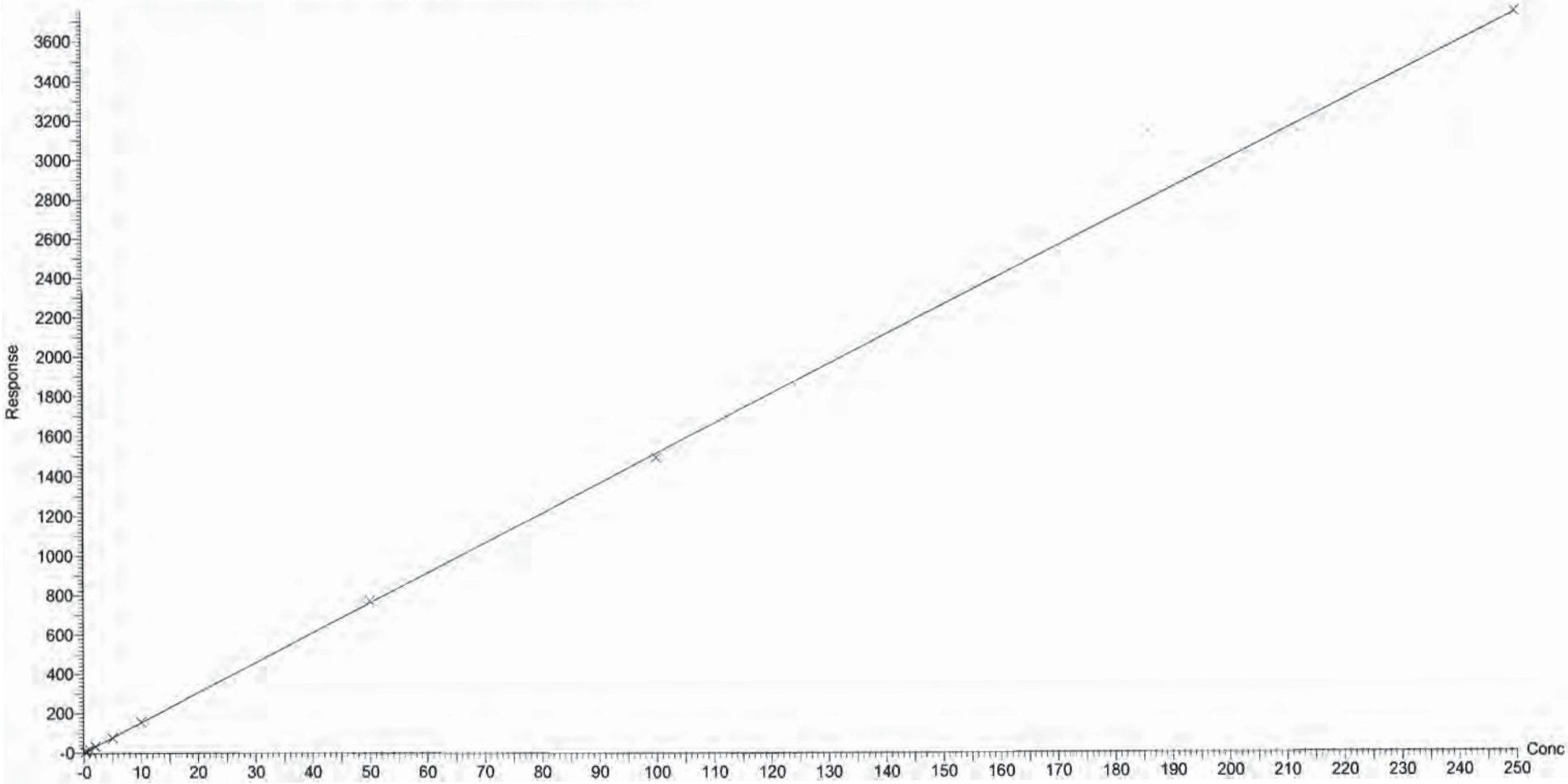


Vista Analytical Laboratory Q1

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

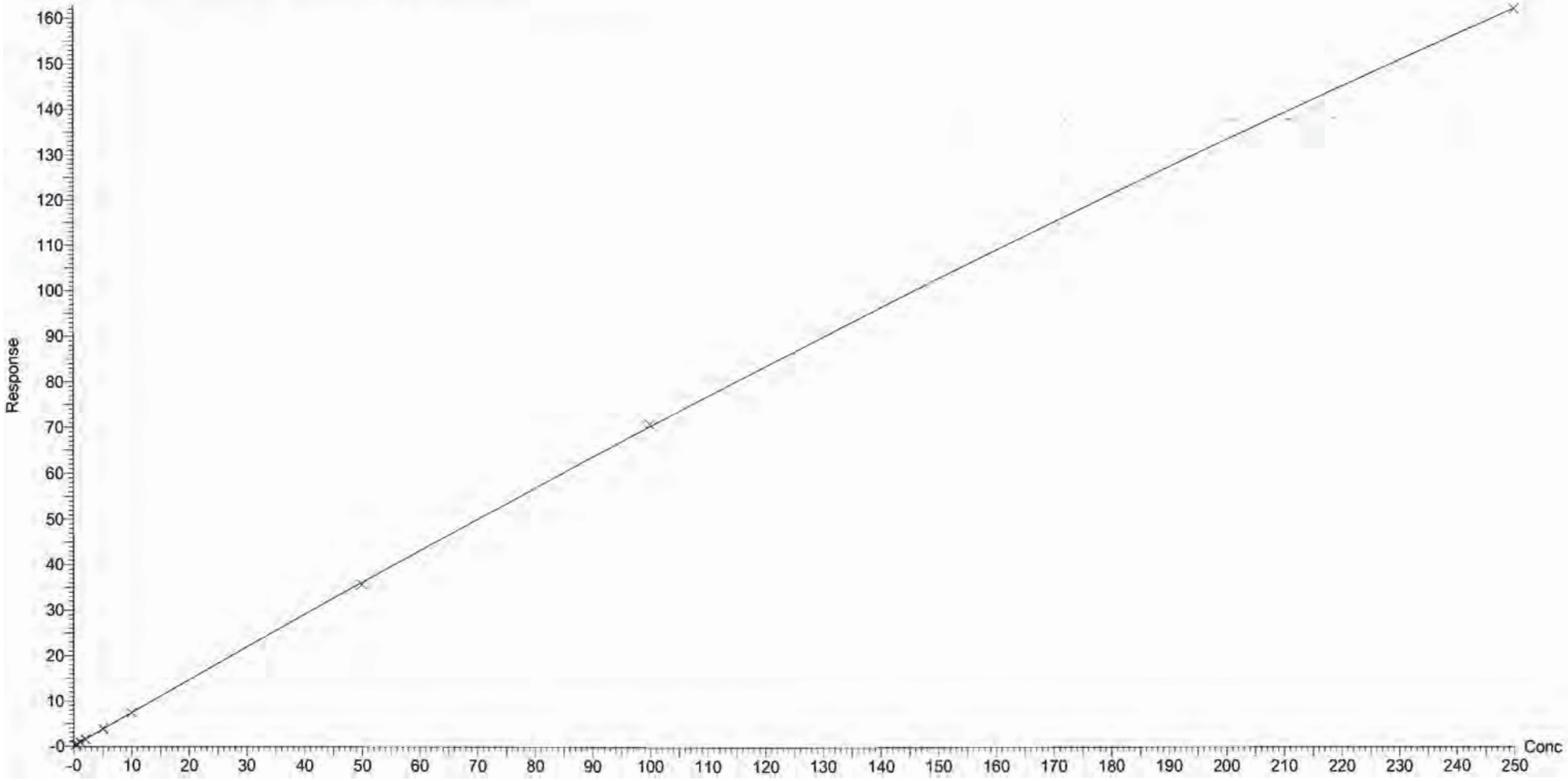
Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999787
Calibration curve: -0.00107779 * x^2 + 15.2465 * x + 0.807358
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



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

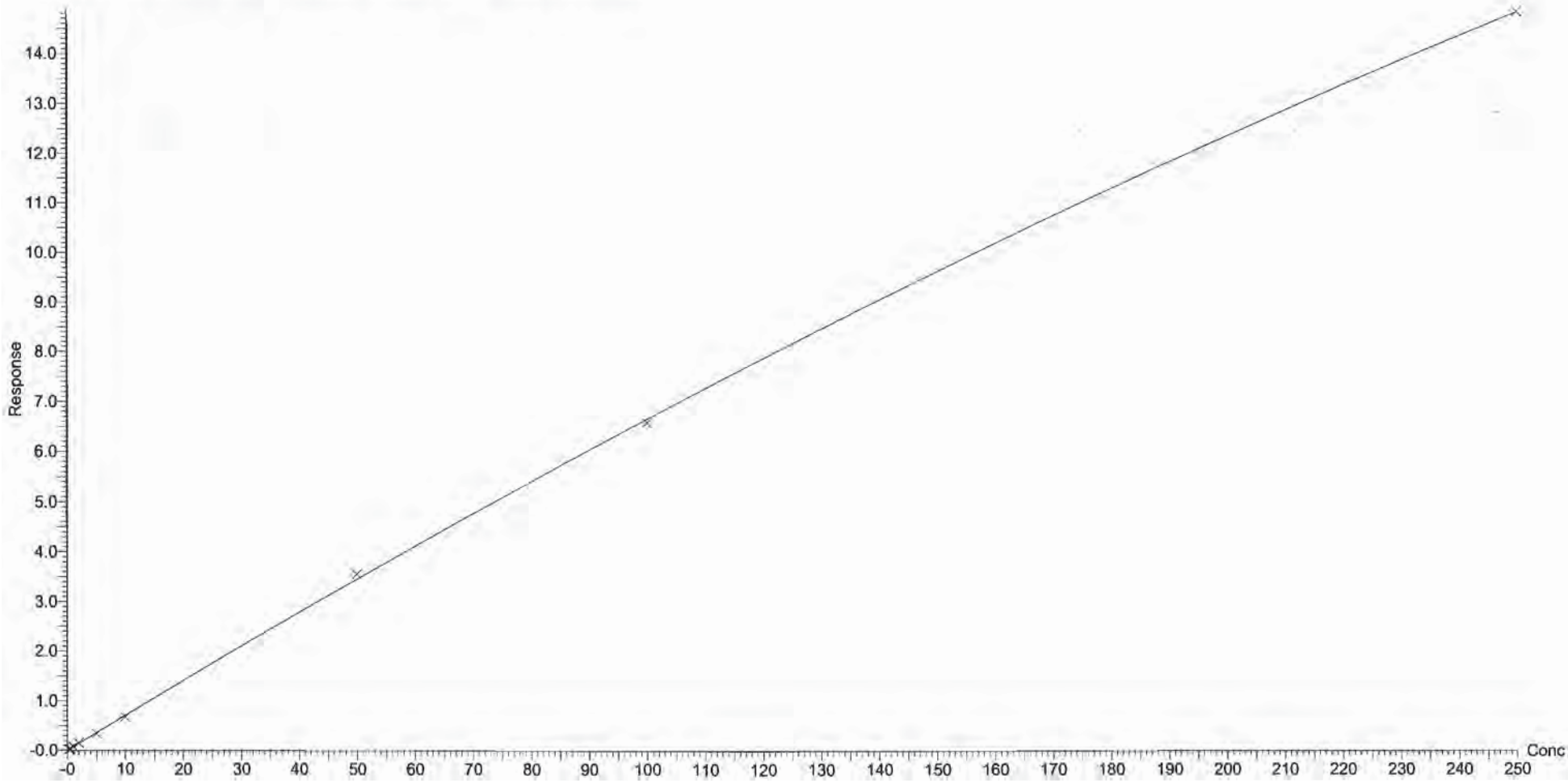


Vista Analytical Laboratory Q1

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

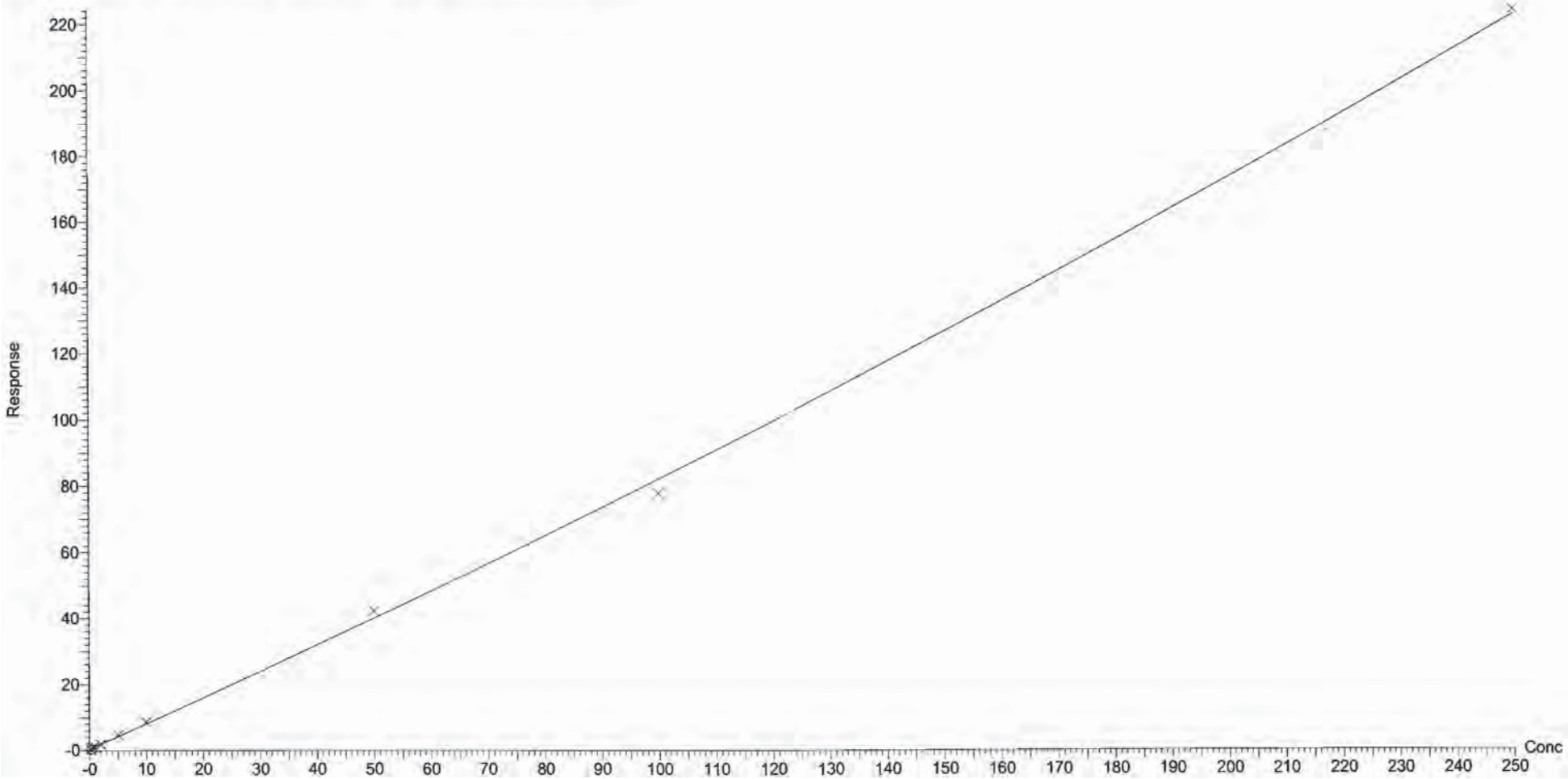
Compound name: PFDS
Coefficient of Determination: R^2 = 0.999598
Calibration curve: -4.79281e-005 * x^2 + 0.0714733 * x + -0.00107069
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

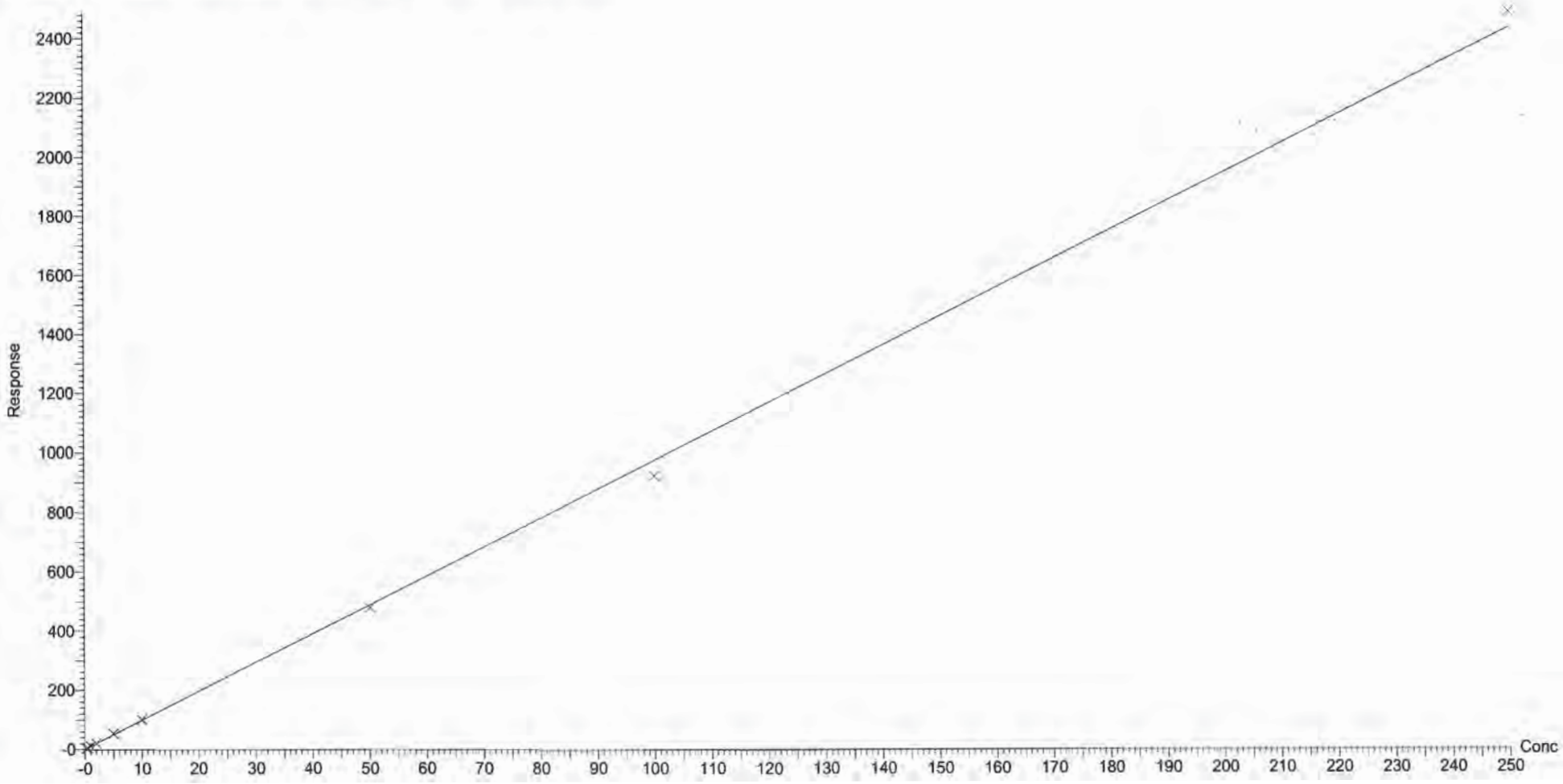
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.998624
Calibration curve: 0.000483062 * x^2 + 0.770384 * x + 0.341437
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

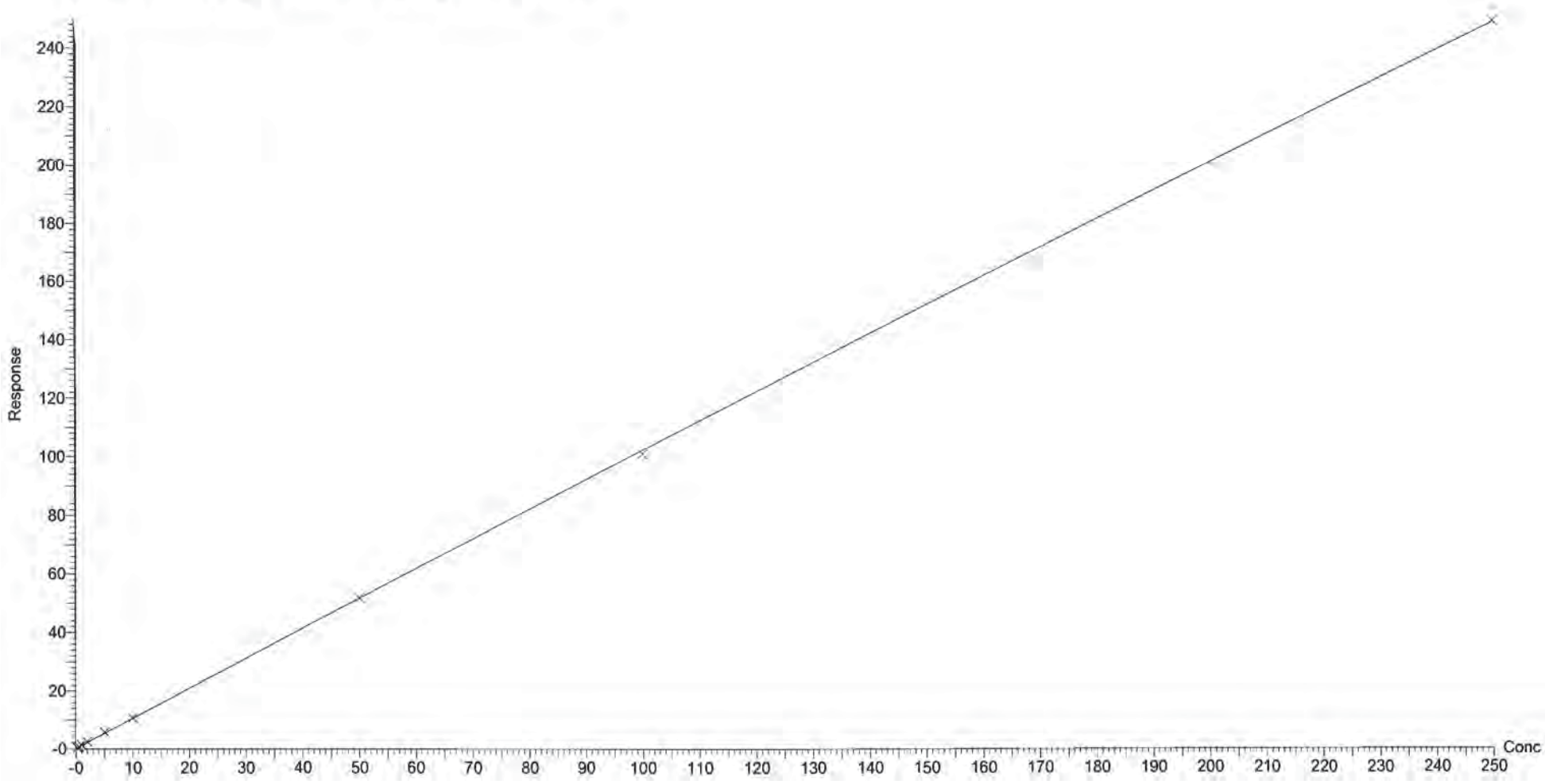
Compound name: PFTrDA
Correlation coefficient: r = 0.999451, r^2 = 0.998903
Calibration curve: 9.7472 * x + 1.17215
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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



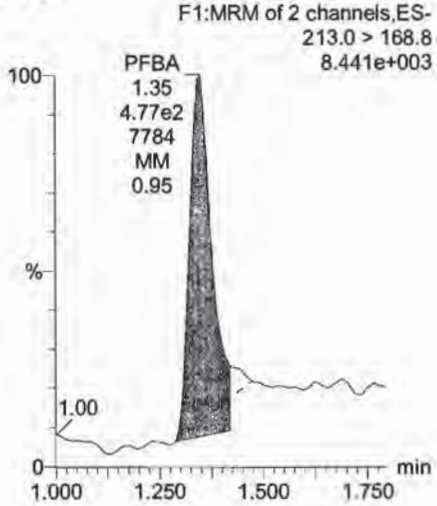
Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

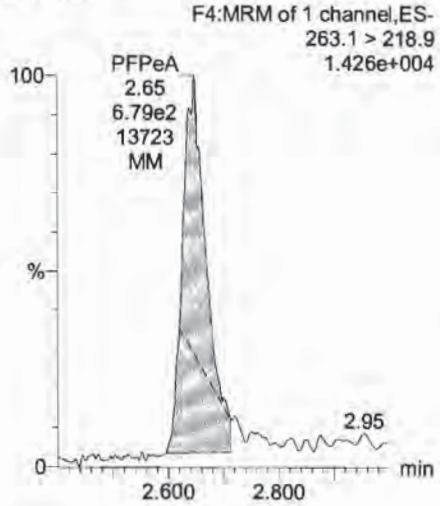
Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 28 Jul 2017 08:40:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:05:03

Name: 170728M2_2, Date: 28-Jul-2017, Time: 16:20:47, ID: ST170728M2-1 PFC CS-2 17G2824, Description: PFC CS-2 17G2824

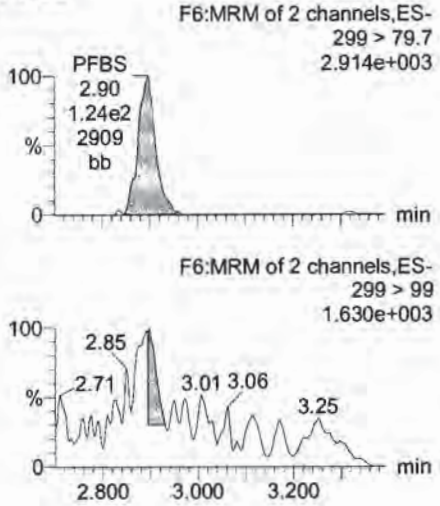
PFBA



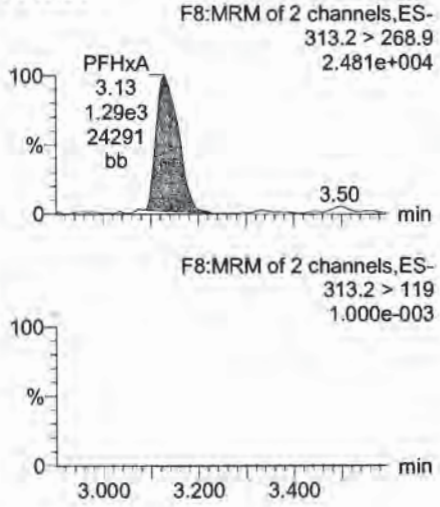
PFPeA



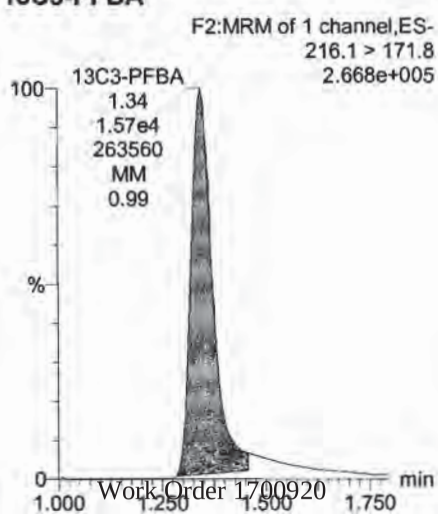
PFBS



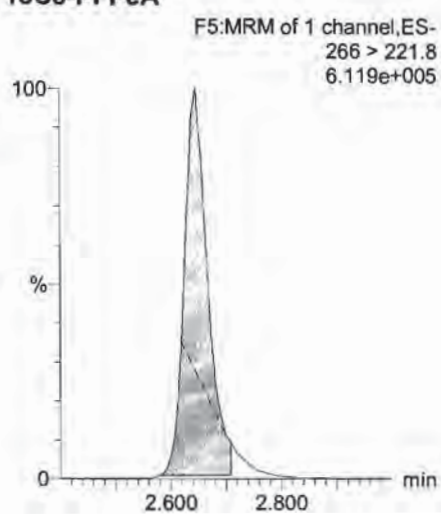
PFHxA



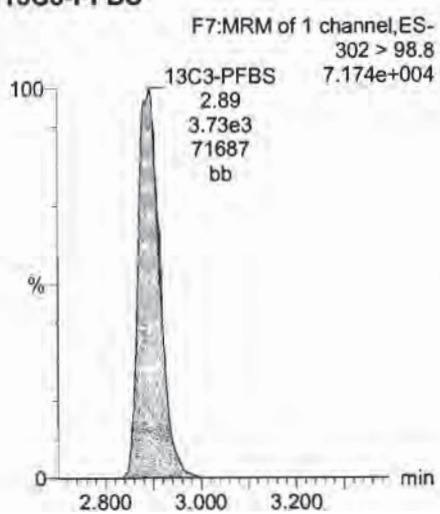
13C3-PFBA



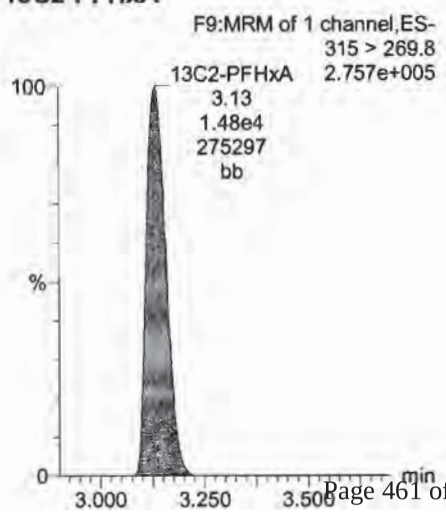
13C3-PFPeA



13C3-PFBS



13C2-PFHxA

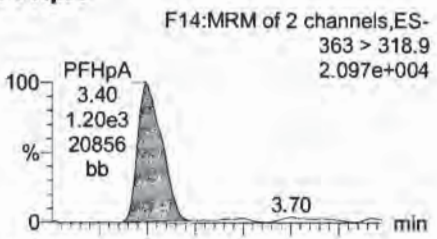


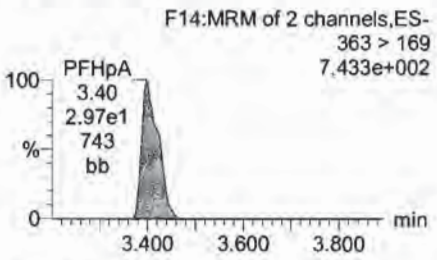
Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

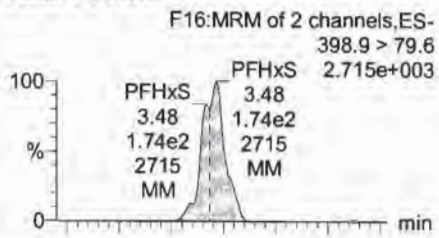
Name: 170728M2_2, Date: 28-Jul-2017, Time: 16:20:47, ID: ST170728M2-1 PFC CS-2 17G2824, Description: PFC CS-2 17G2824

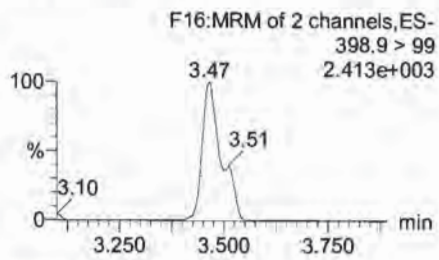
PFHpA



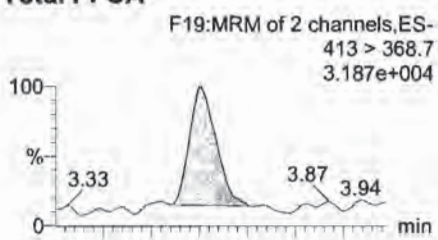


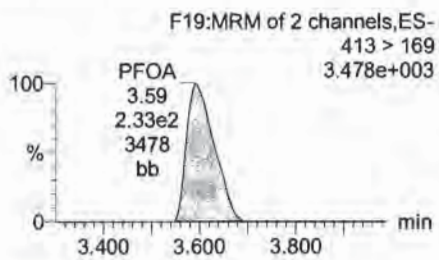
Total PFHxS



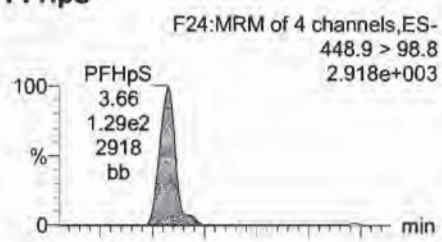


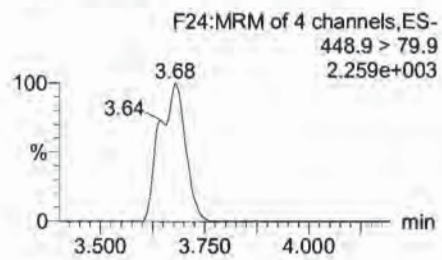
Total PFOA



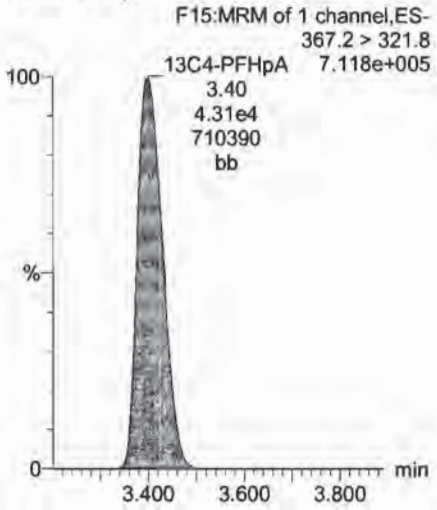


PFHpS

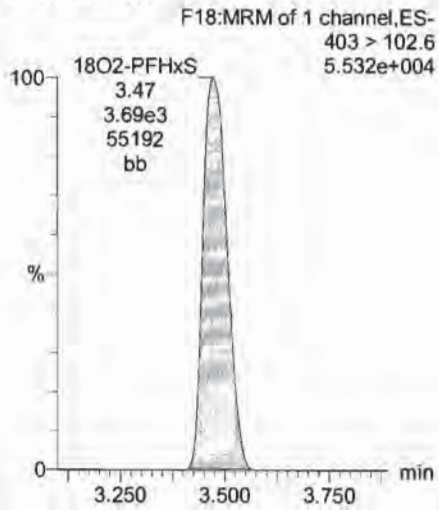




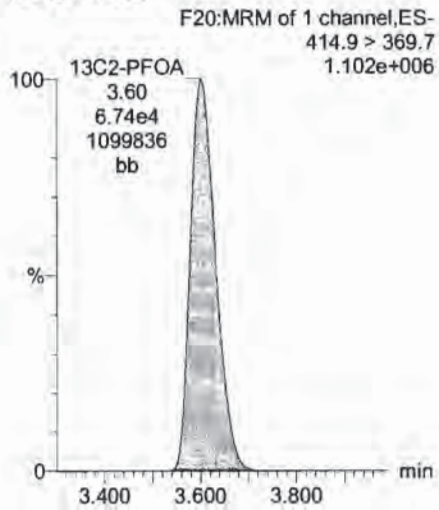
13C4-PFHpA



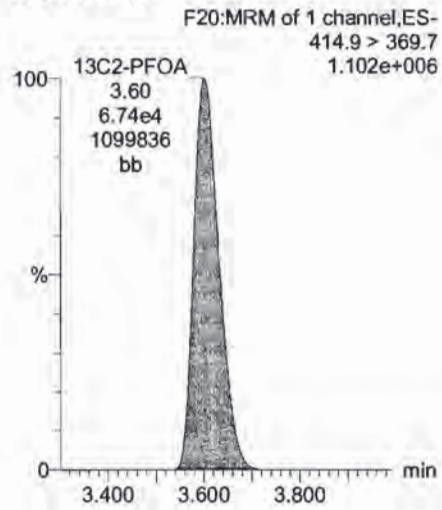
18O2-PFHxS



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

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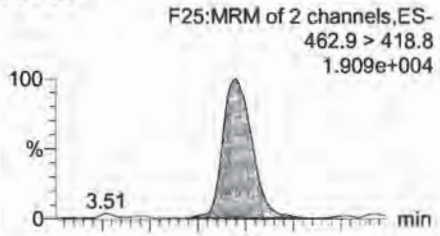

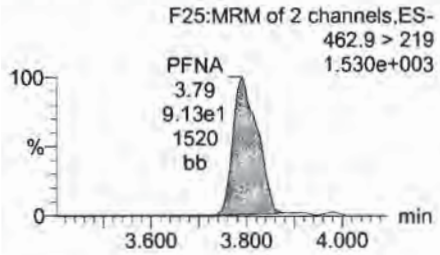

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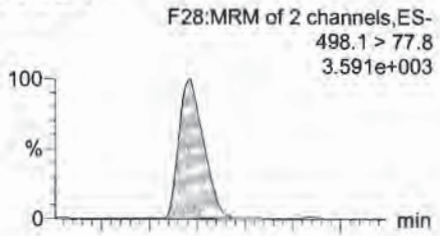

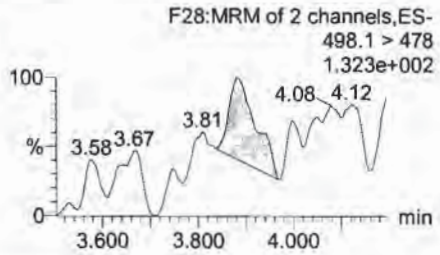

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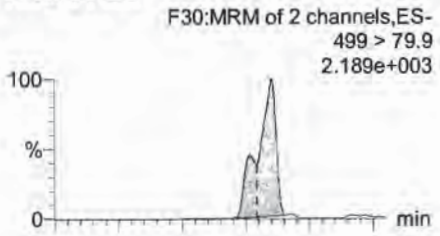

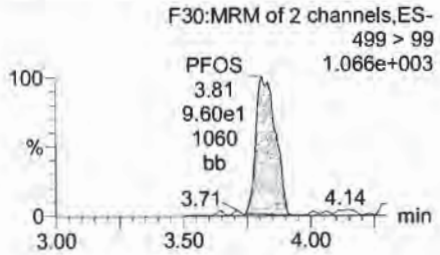

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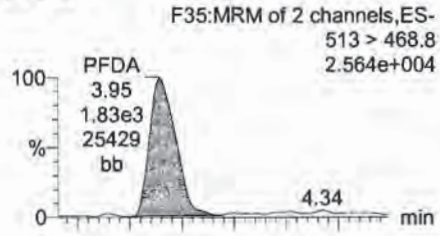
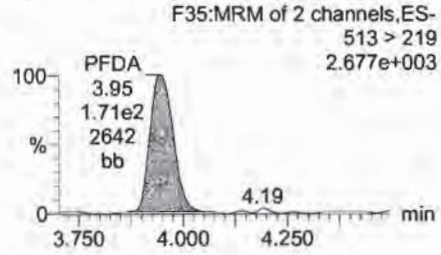
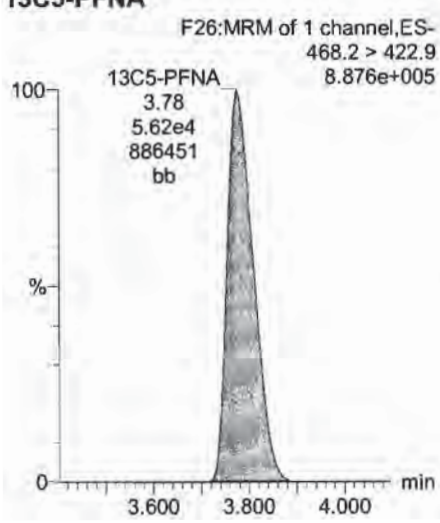
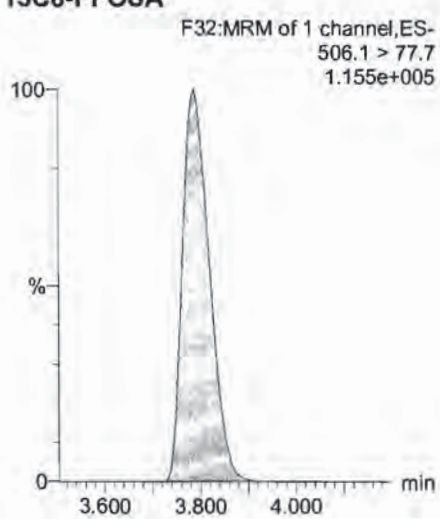




13C5-PFNA



13C8-PFOSA



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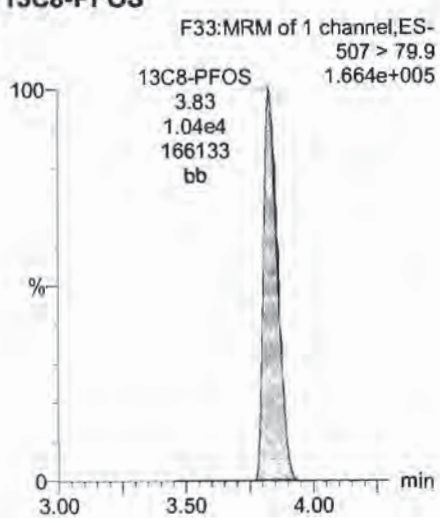
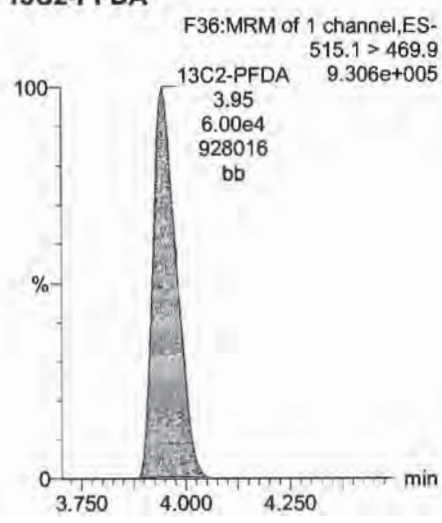


13C2-PFDA



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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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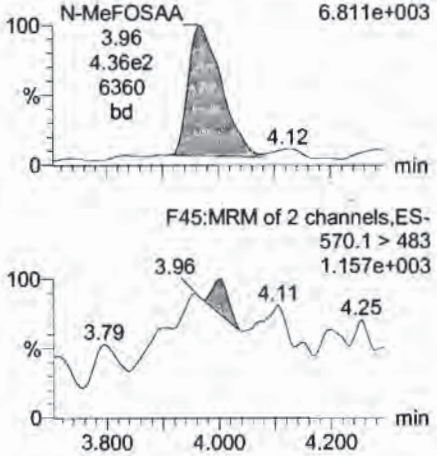

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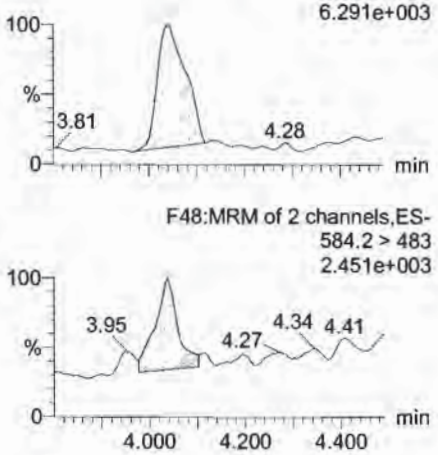

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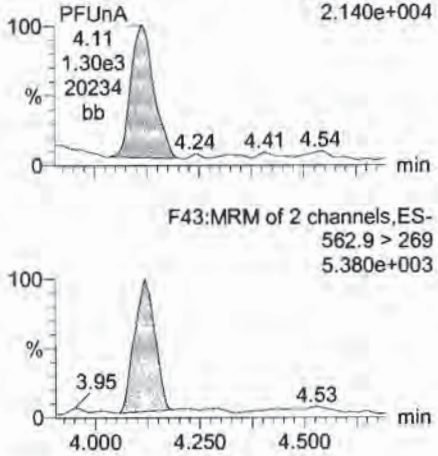

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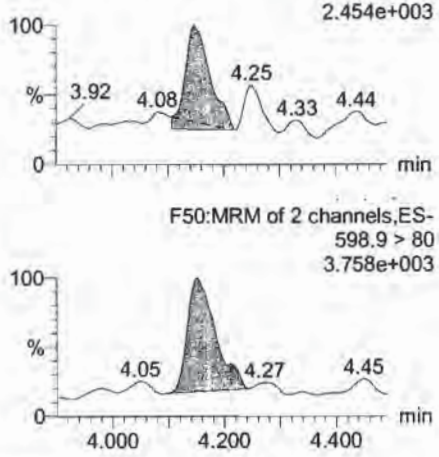
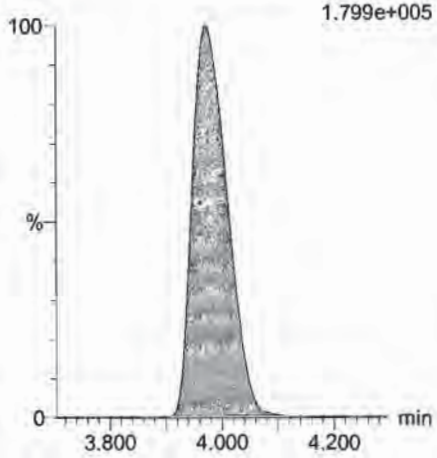


d3-N-MeFOSAA



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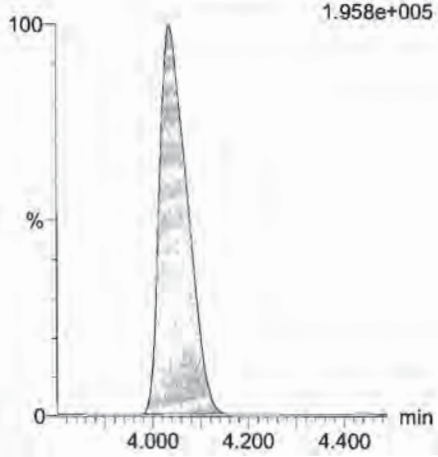

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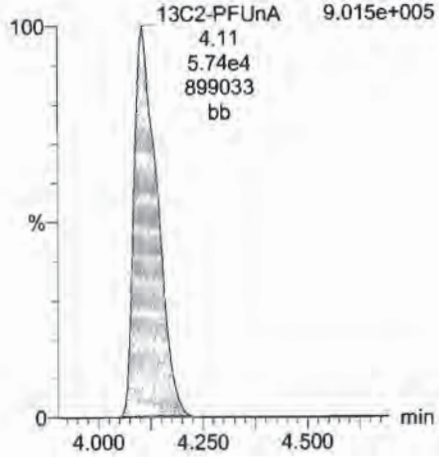

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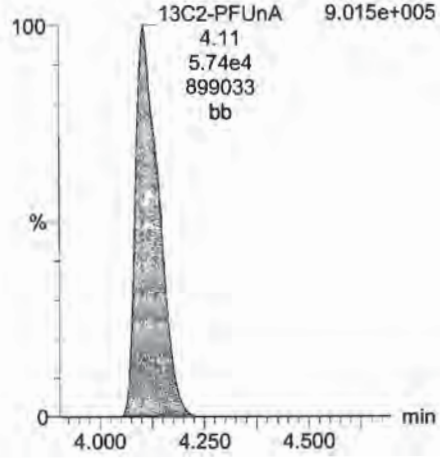

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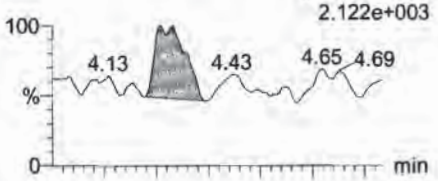
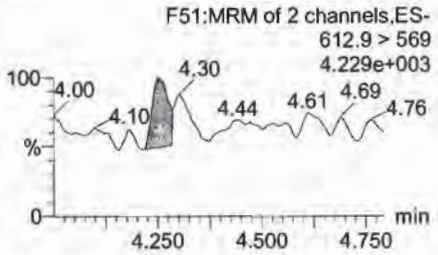
Name: 170728M2_2, Date: 28-Jul-2017, Time: 16:20:47, ID: ST170728M2-1 PFC CS-2 17G2824, Description: PFC CS-2 17G2824

PFDoA





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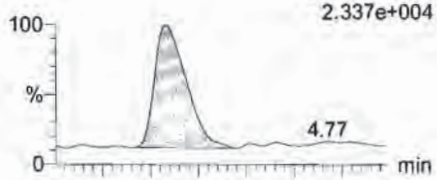

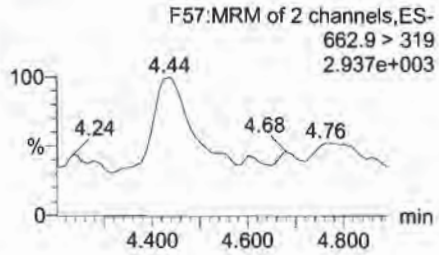

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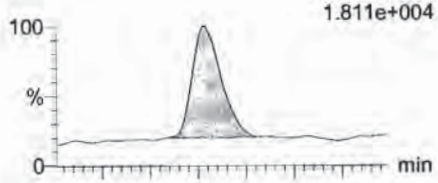

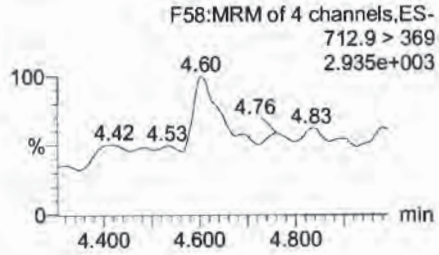

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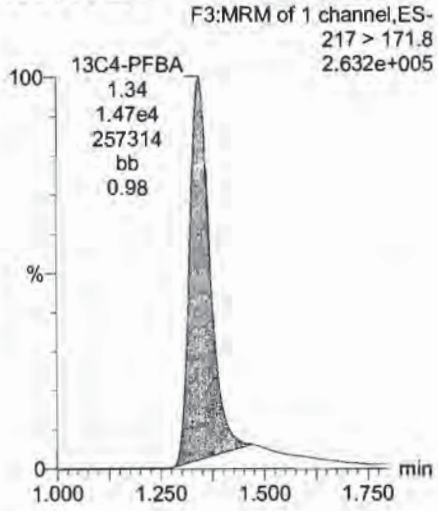
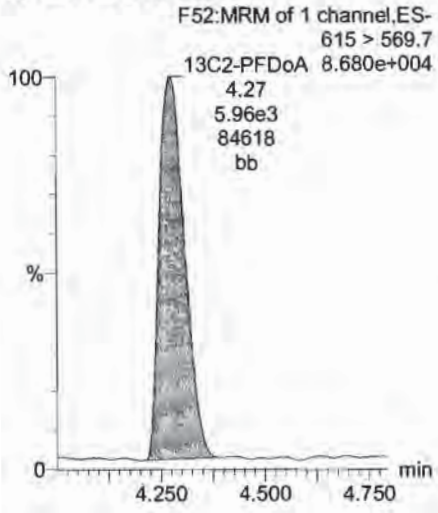


13C2-PFDoA



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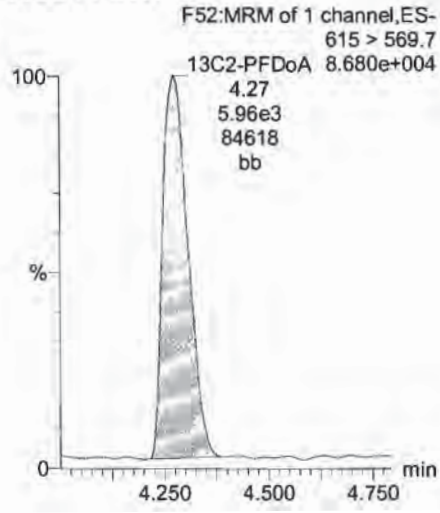

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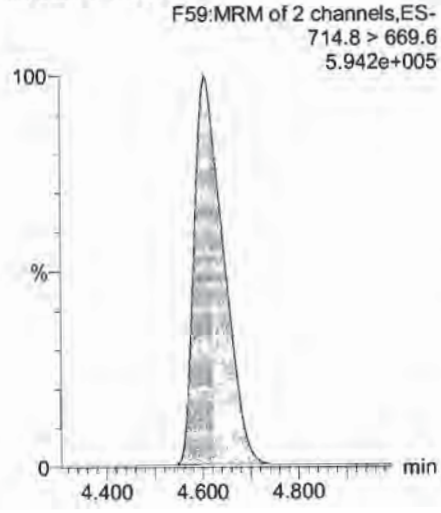

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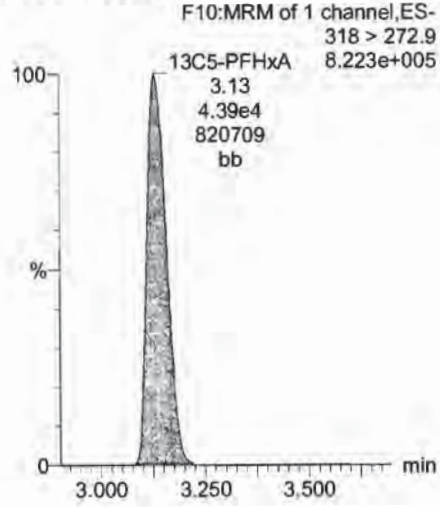

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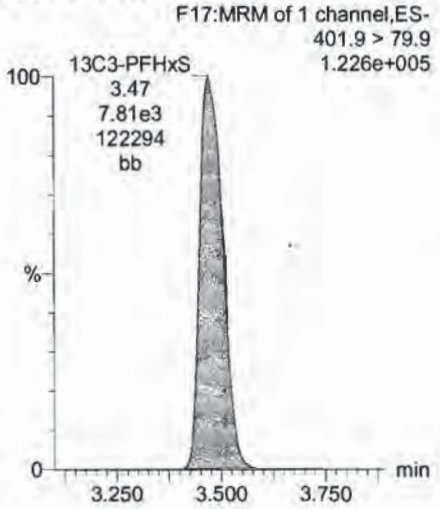
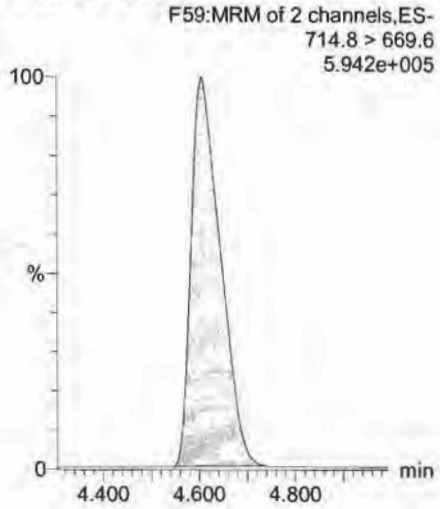
Name: 170728M2_2, Date: 28-Jul-2017, Time: 16:20:47, ID: ST170728M2-1 PFC CS-2 17G2824, Description: PFC CS-2 17G2824

13C3-PFHxS



13C2-PFTeDA



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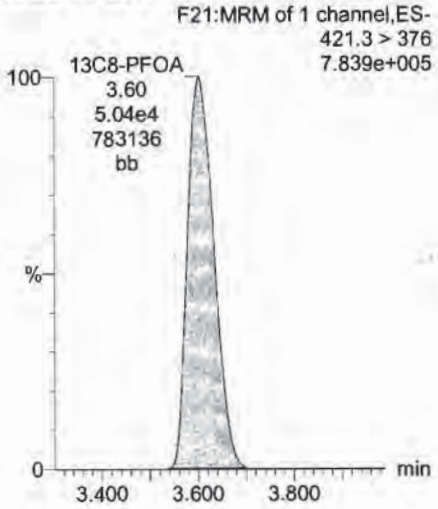

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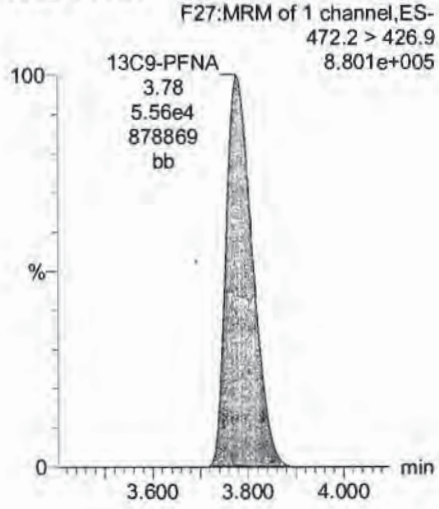

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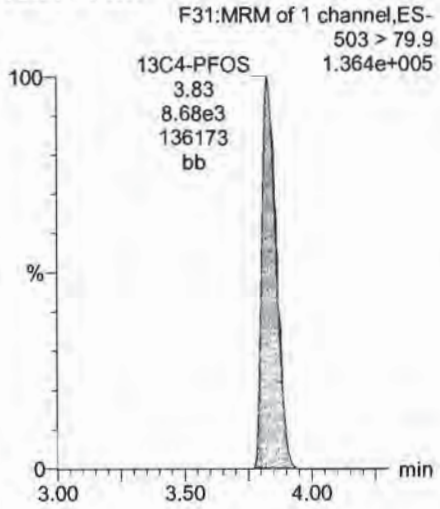

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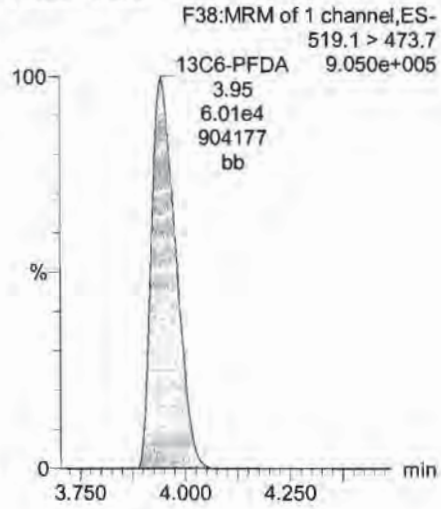

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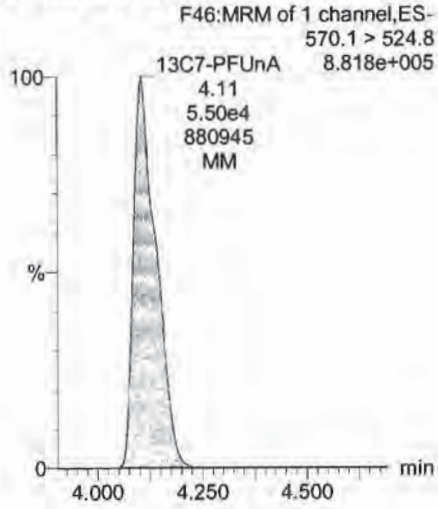

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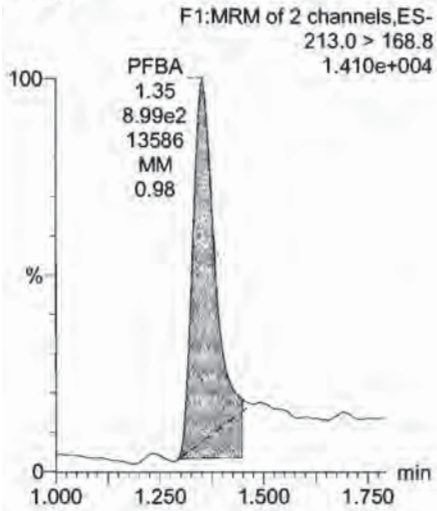
Name: 170728M2_3, Date: 28-Jul-2017, Time: 16:31:32, ID: ST170728M2-2 PFC CS-1 17G2825, Description: PFC CS-1 17G2825

PFBA



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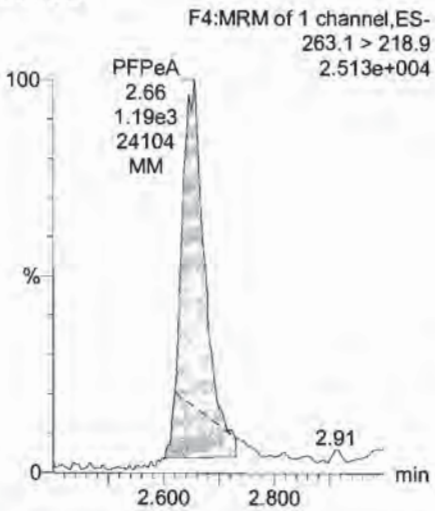
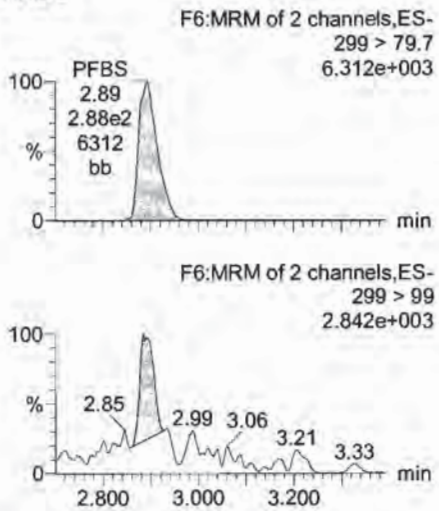


PFBS



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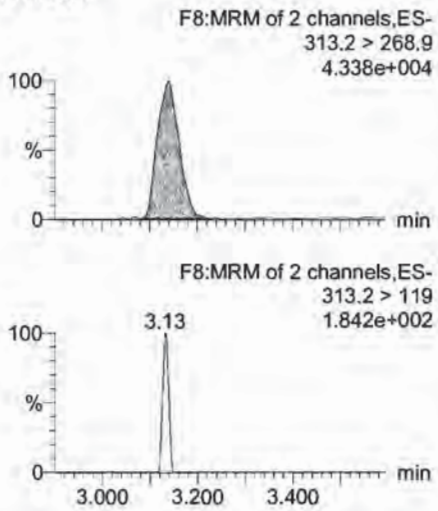

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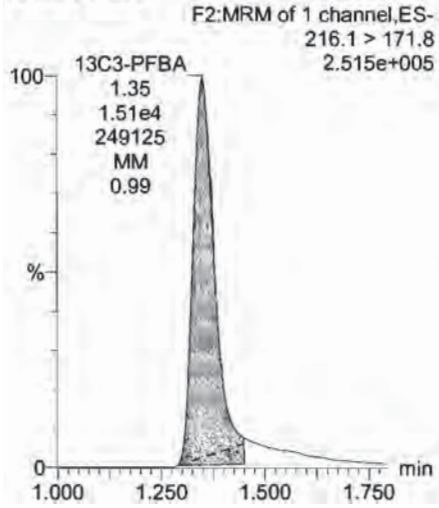

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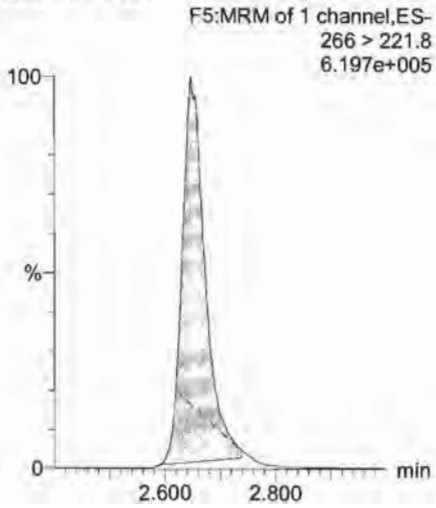

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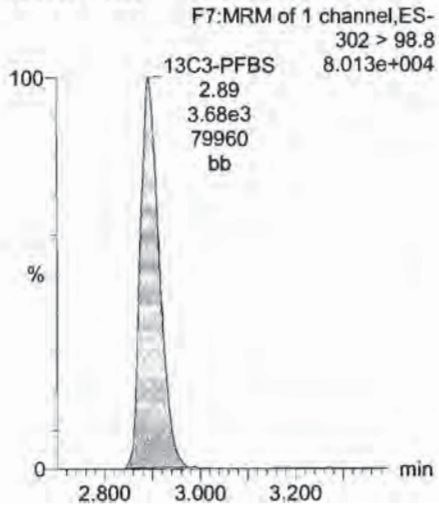
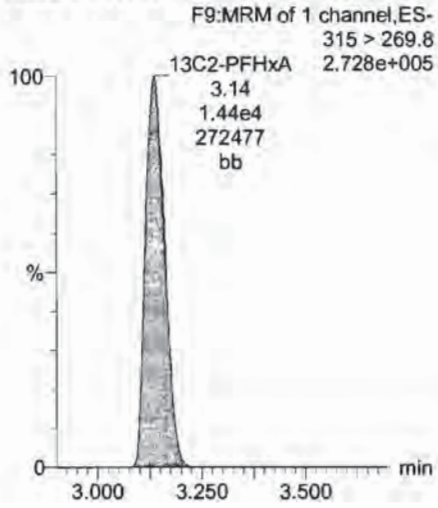


13C2-PFHxA



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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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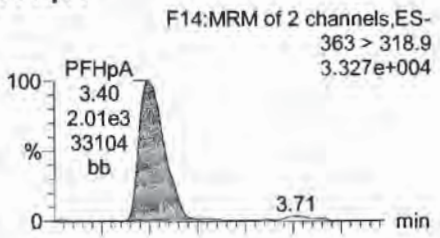
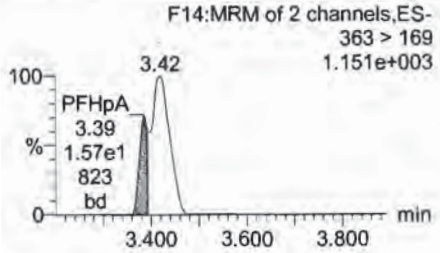
Name: 170728M2_3, Date: 28-Jul-2017, Time: 16:31:32, ID: ST170728M2-2 PFC CS-1 17G2825, Description: PFC CS-1 17G2825

PFHpA





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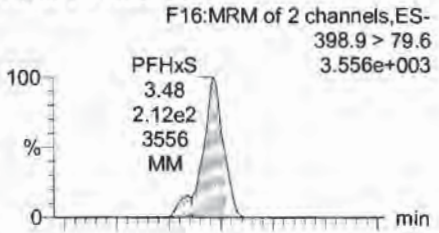
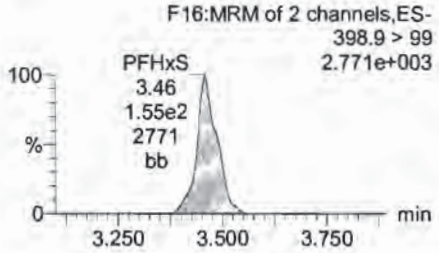
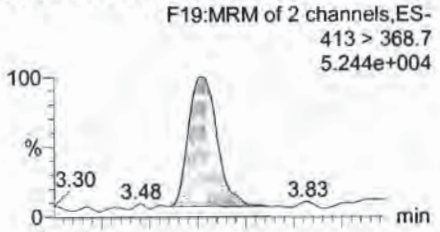
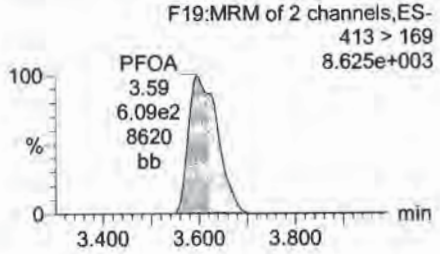


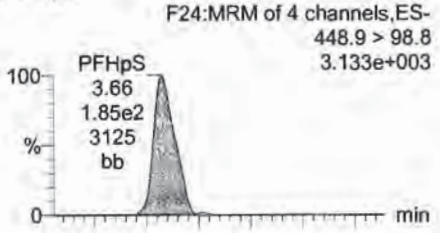


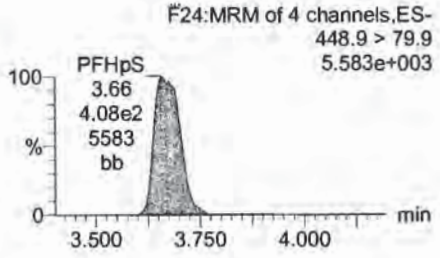
Total PFOA



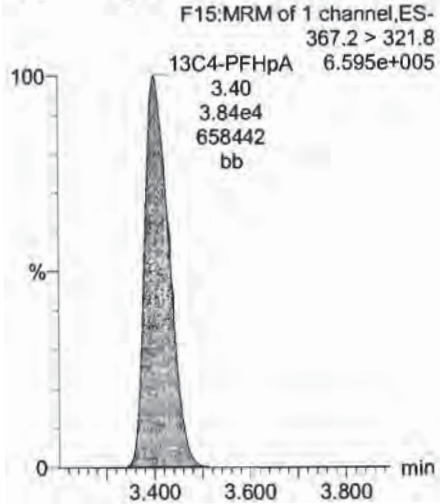


PFHpS

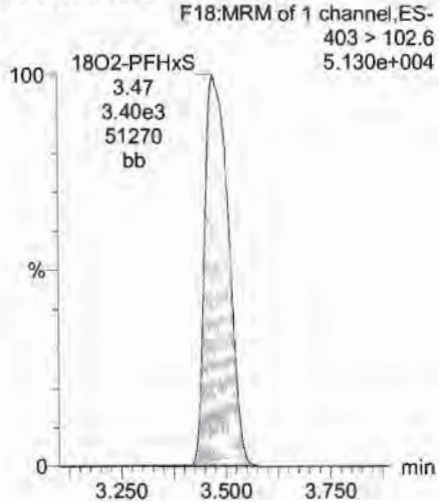




13C4-PFHpA



18O2-PFHxS



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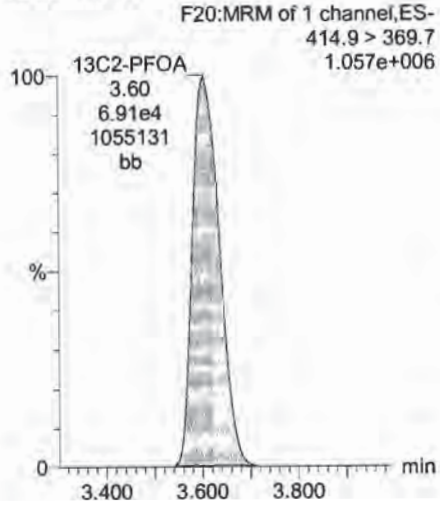

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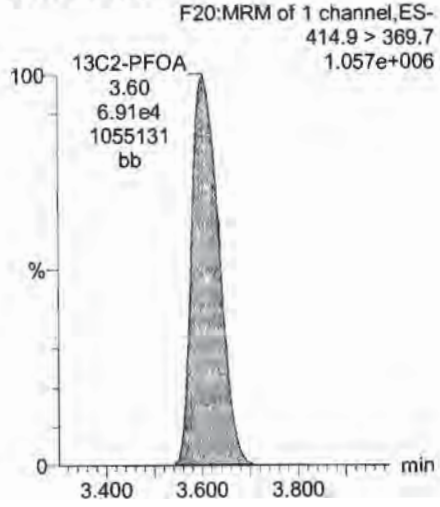

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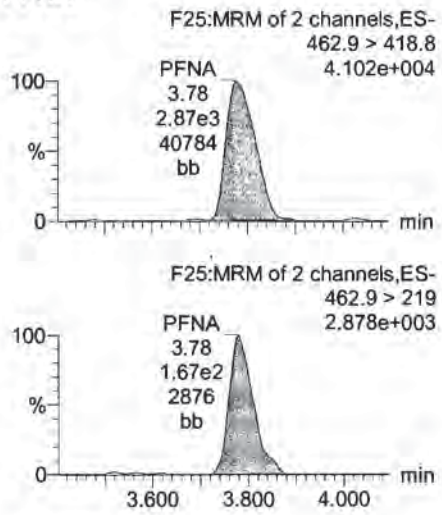
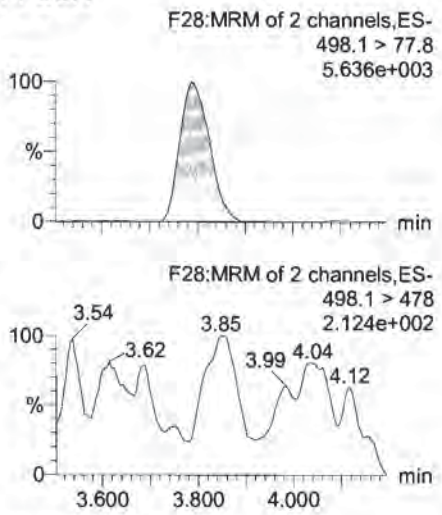
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_3, Date: 28-Jul-2017, Time: 16:31:32, ID: ST170728M2-2 PFC CS-1 17G2825, Description: PFC CS-1 17G2825

PFNA



PFOSA



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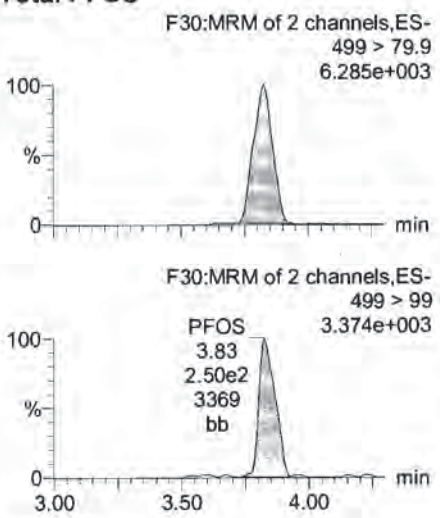
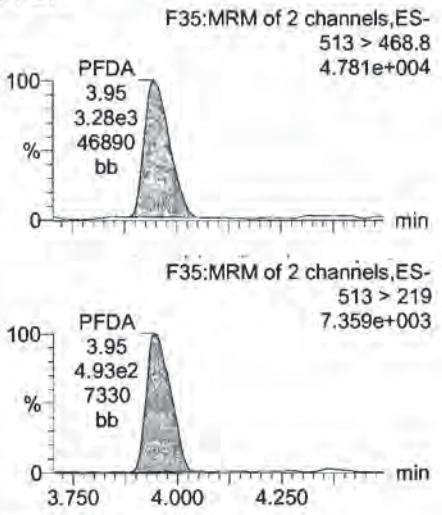
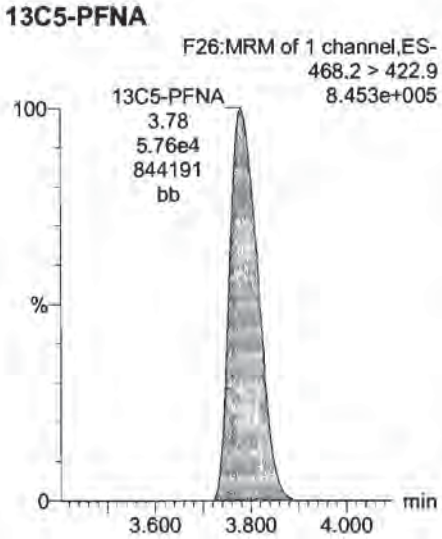


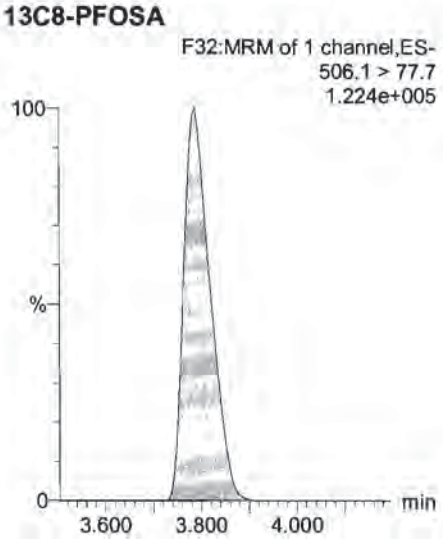
PFDA



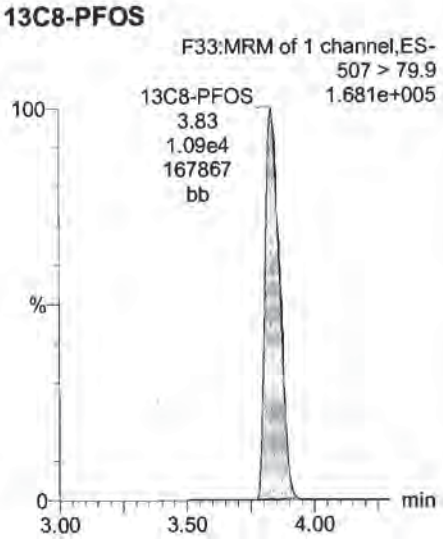
13C5-PFNA



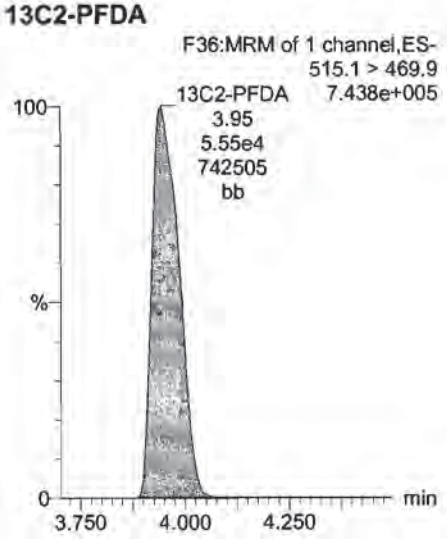
13C8-PFOSA



13C8-PFOS



13C2-PFDA



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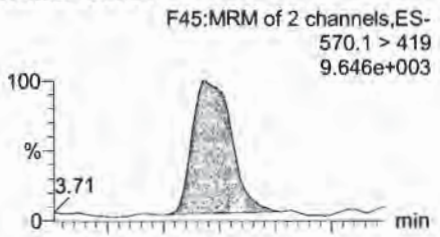
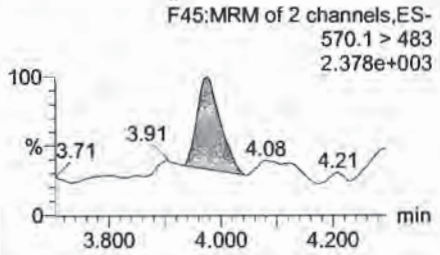
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

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





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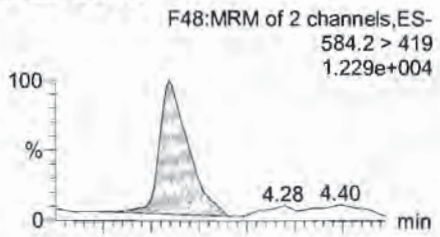

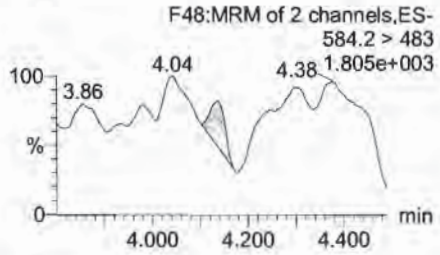

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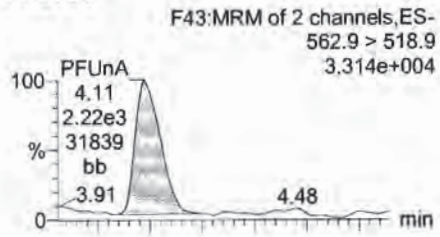

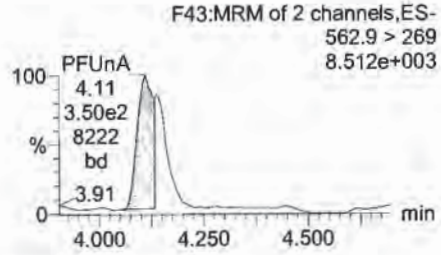

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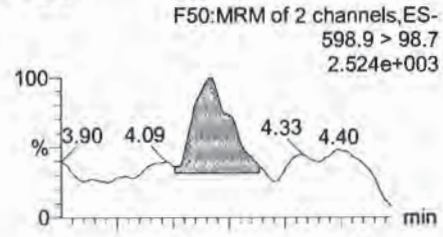
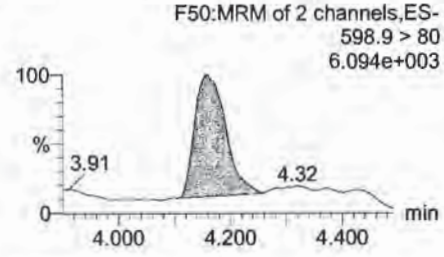
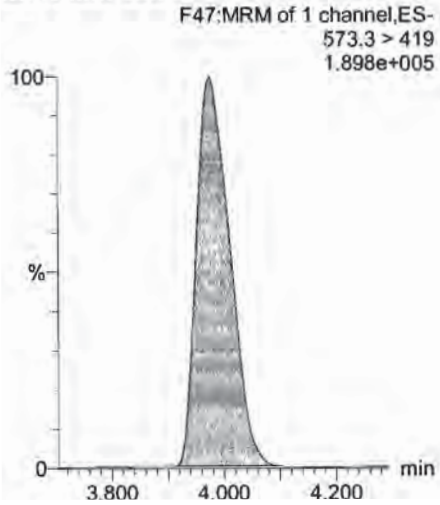
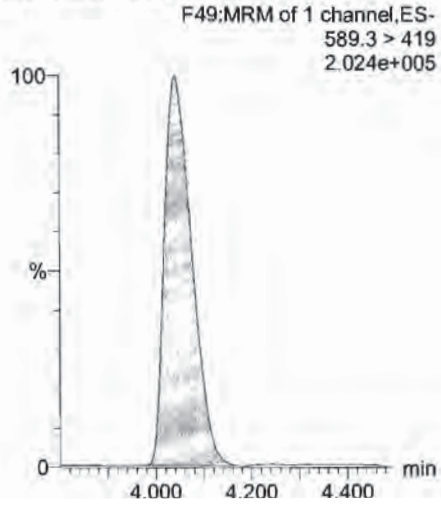




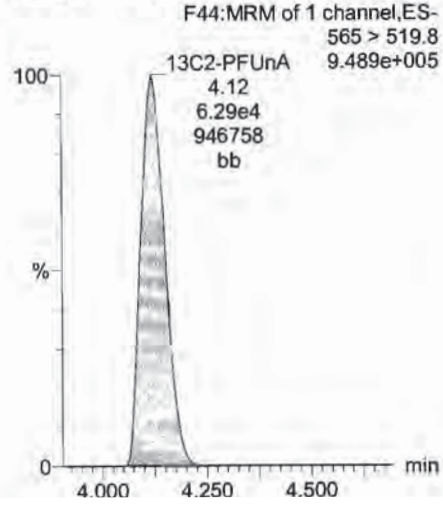
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFUnA



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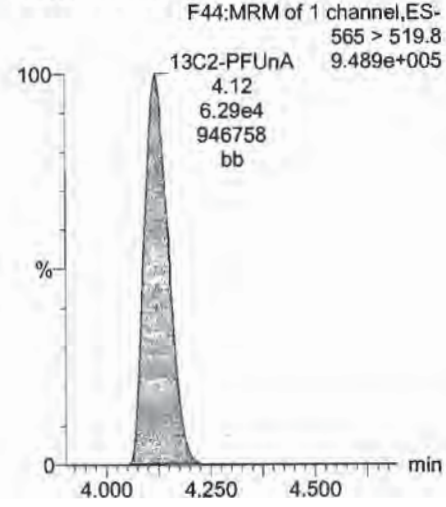

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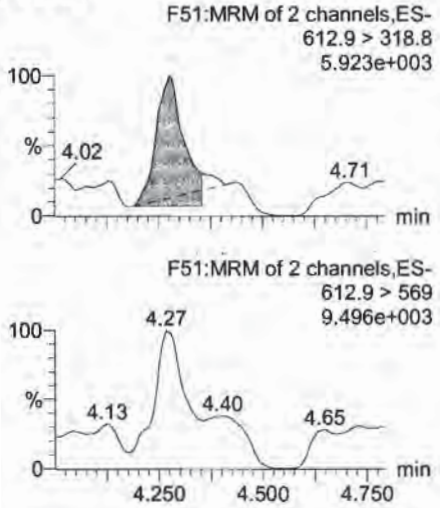
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_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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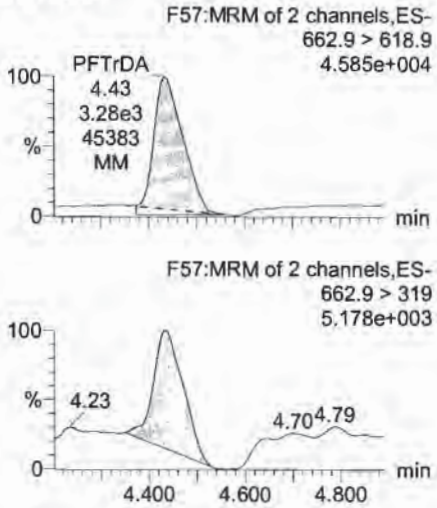
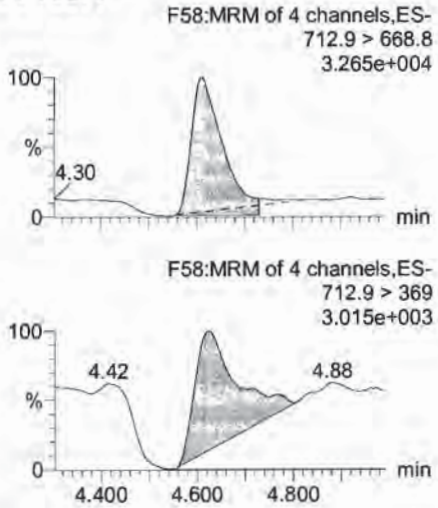


PFTeDA



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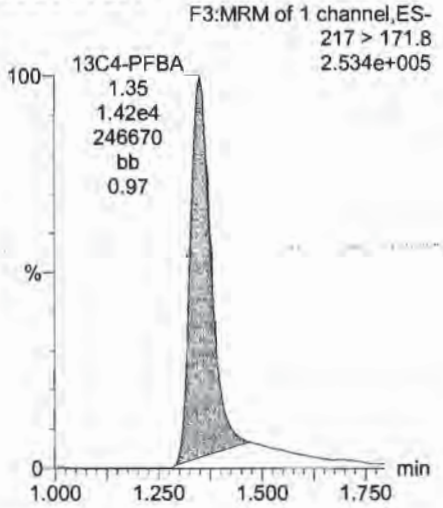
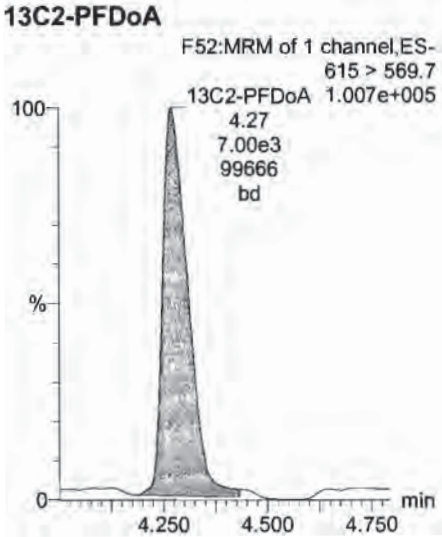


13C2-PFDoA



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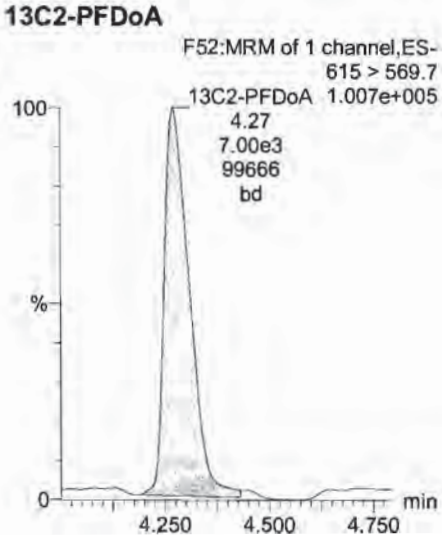

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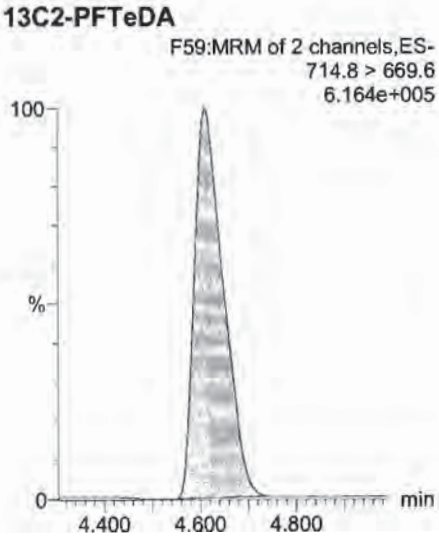
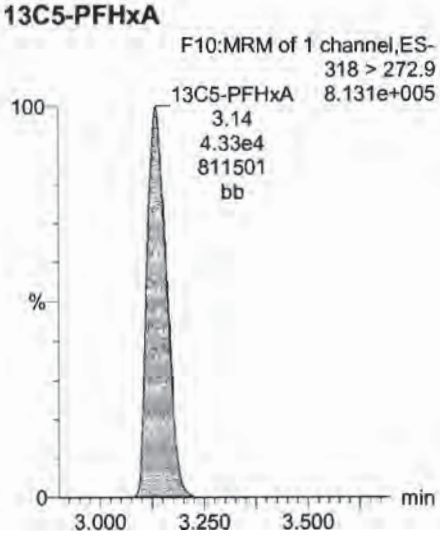


13C5-PFHxA



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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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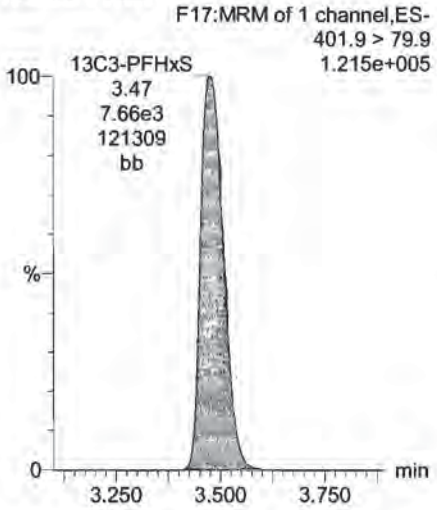
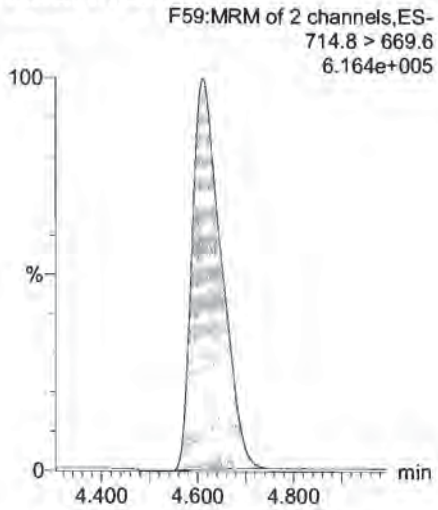
Name: 170728M2_3, Date: 28-Jul-2017, Time: 16:31:32, ID: ST170728M2-2 PFC CS-1 17G2825, Description: PFC CS-1 17G2825

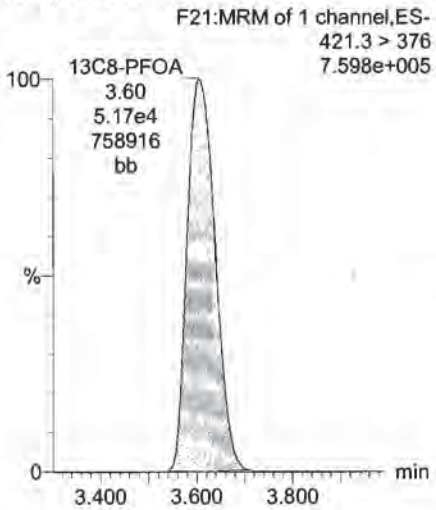
13C3-PFHxS



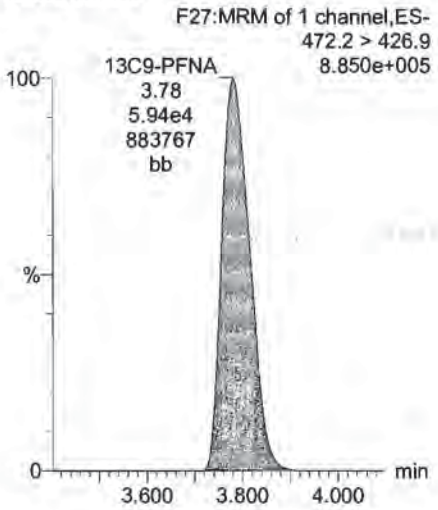
13C2-PFTeDA



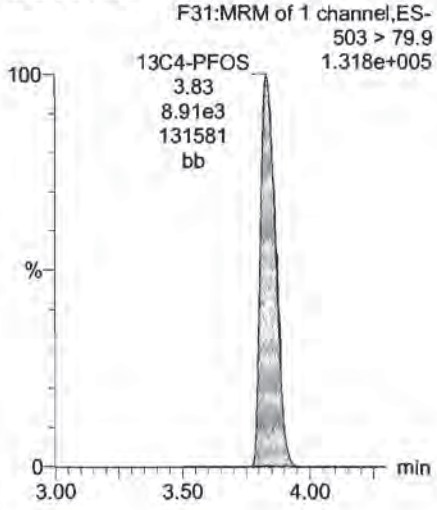
13C8-PFOA



13C9-PFNA



13C4-PFOS



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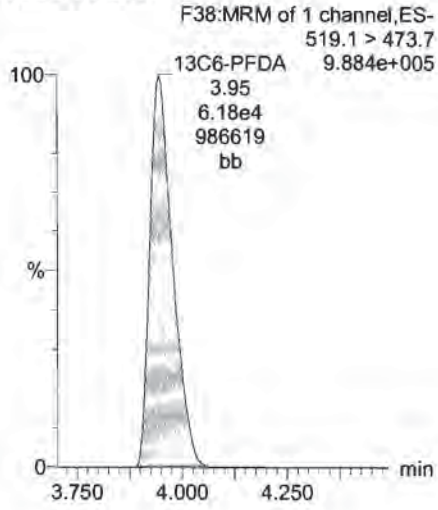
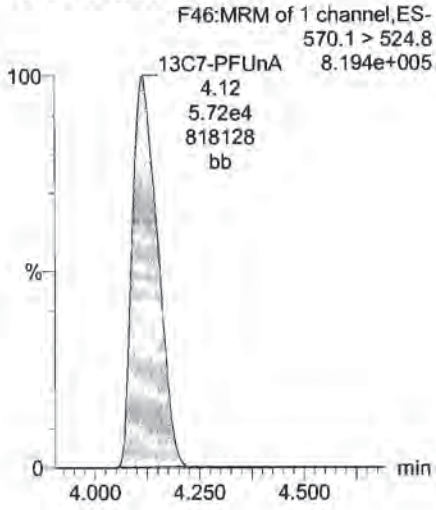


13C7-PFUnA



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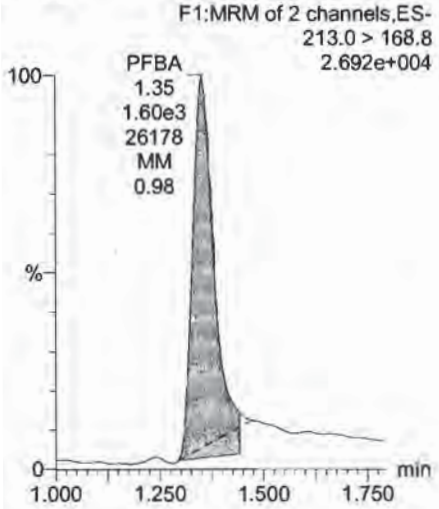
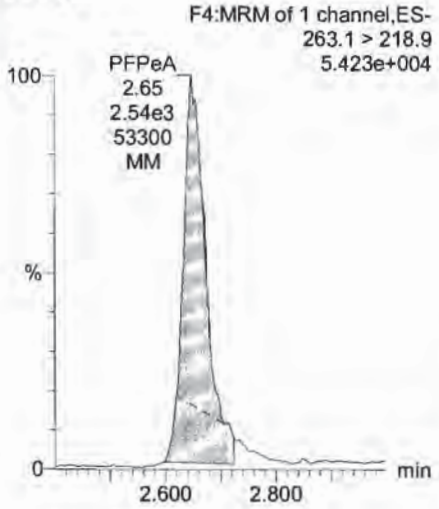
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_4, Date: 28-Jul-2017, Time: 16:42:11, ID: ST170728M2-3 PFC CS0 17G2826, Description: PFC CS0 17G2826

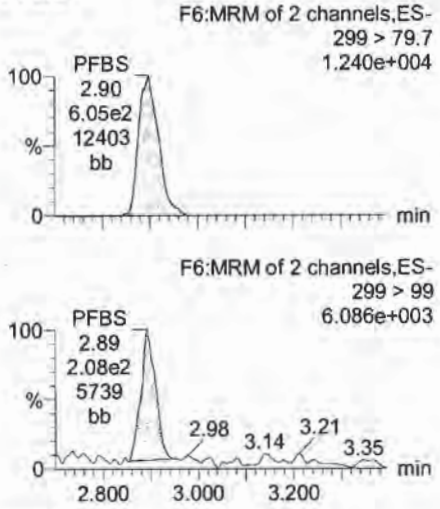
PFBA



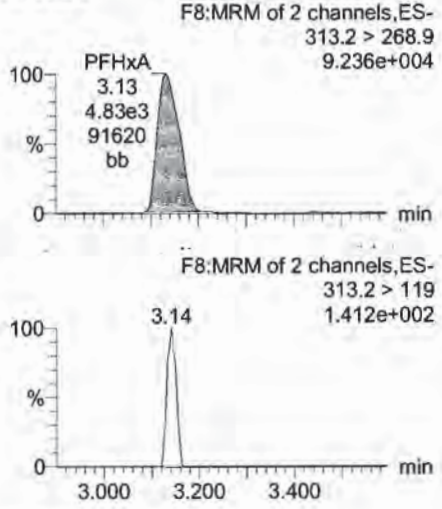
PFPeA



PFBS



PFHxA



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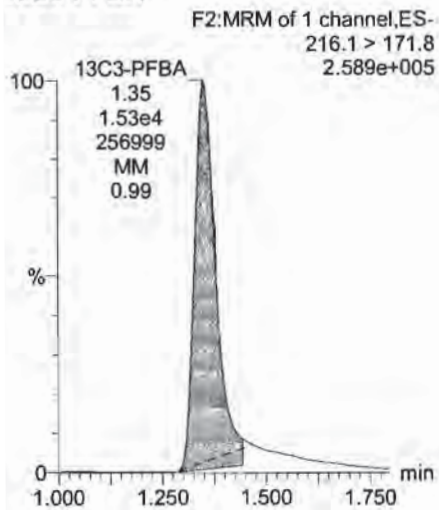

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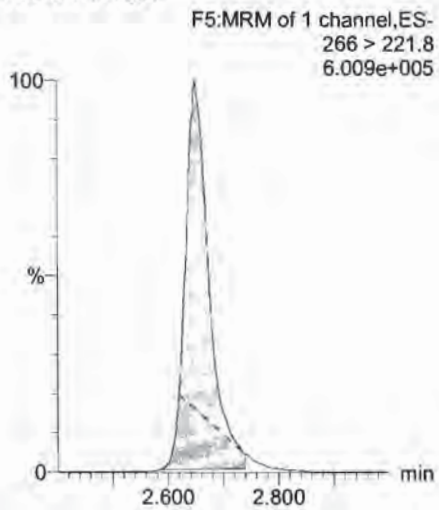
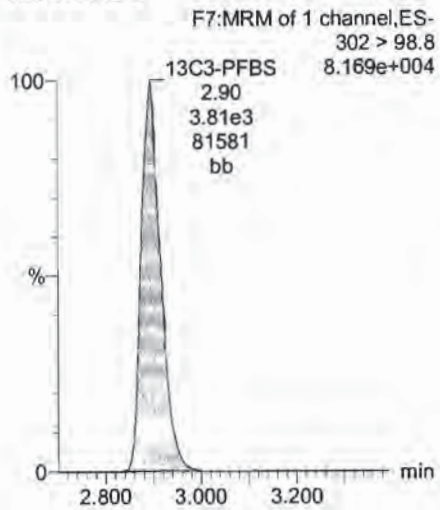
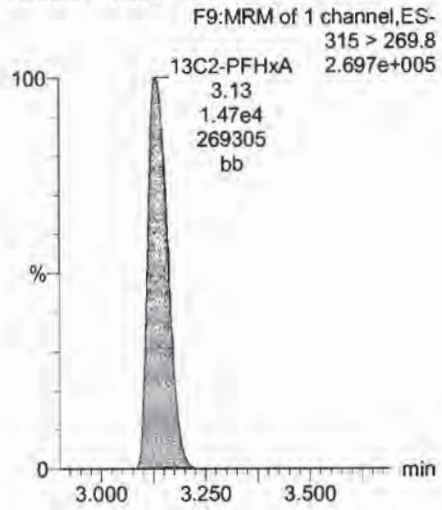


13C3-PFBS



13C2-PFHxA



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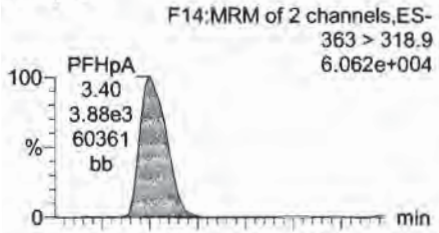
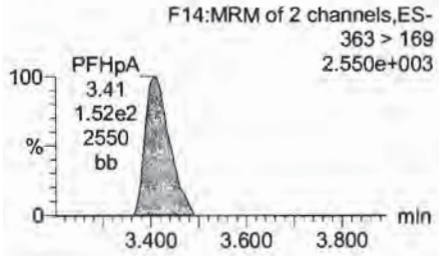
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_4, Date: 28-Jul-2017, Time: 16:42:11, ID: ST170728M2-3 PFC CS0 17G2826, Description: PFC CS0 17G2826

PFHpA





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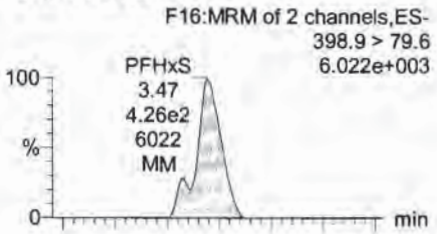

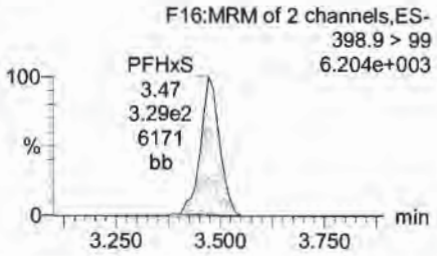

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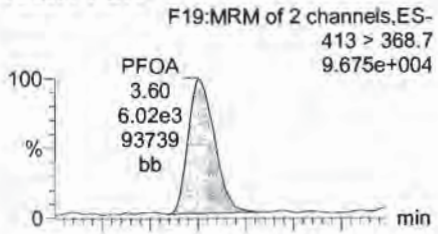

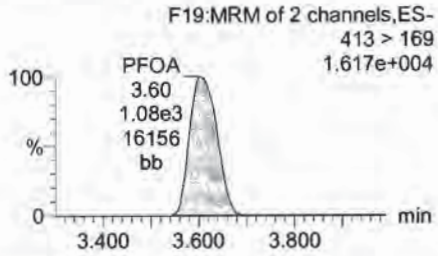

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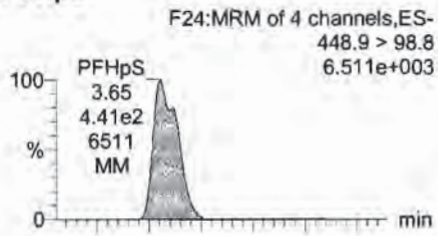
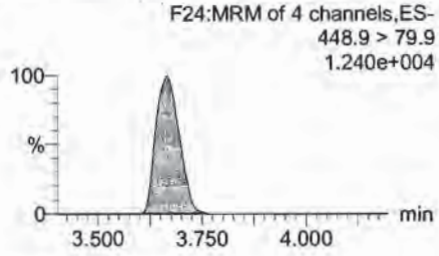
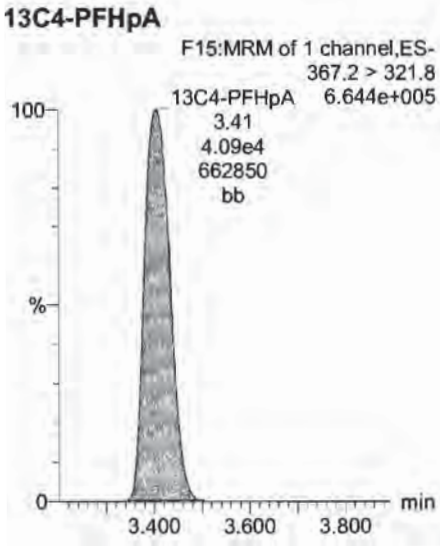
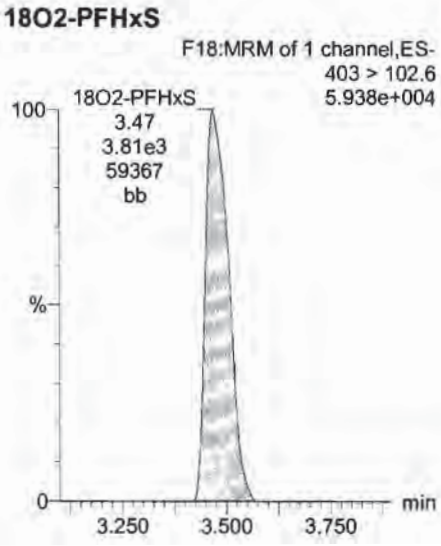




13C4-PFHpA



18O2-PFHxS



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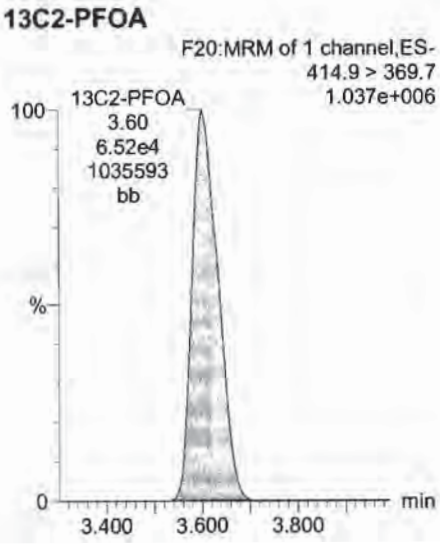

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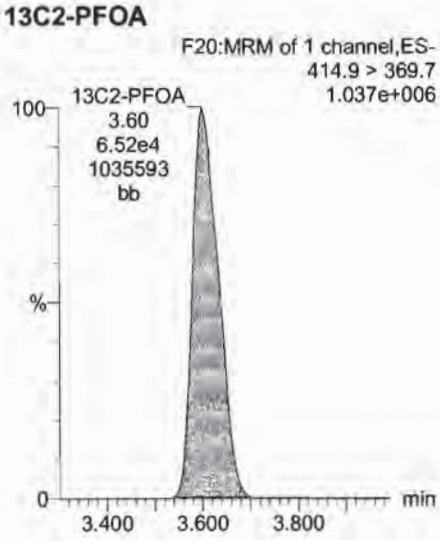

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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_4, Date: 28-Jul-2017, Time: 16:42:11, ID: ST170728M2-3 PFC CS0 17G2826, Description: PFC CS0 17G2826

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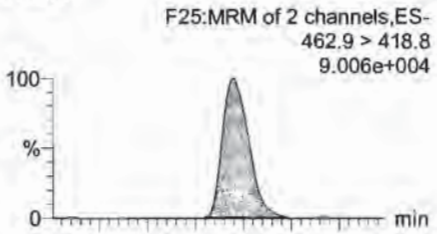
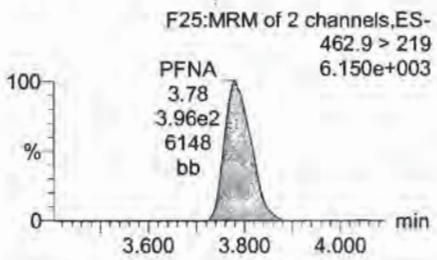
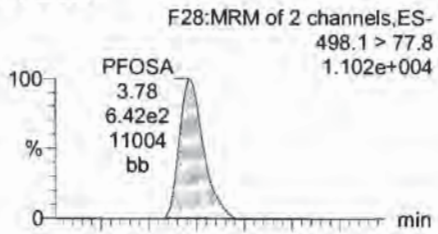
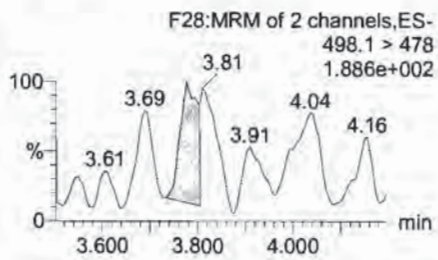




PFOSA





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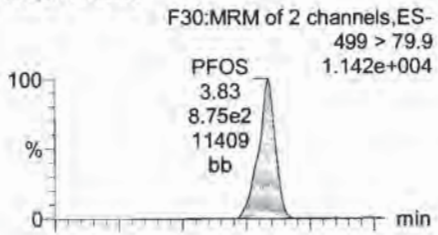

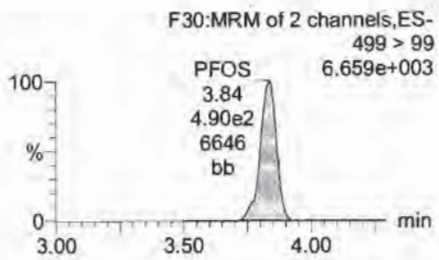

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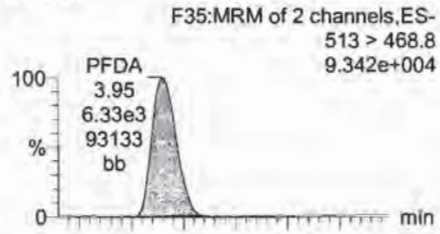

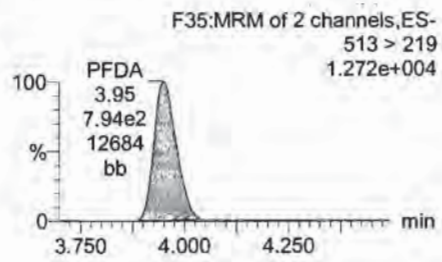

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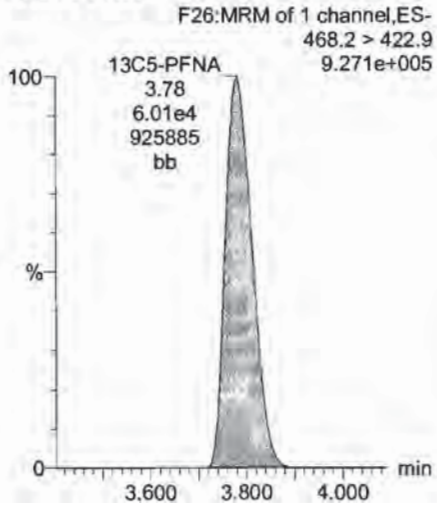
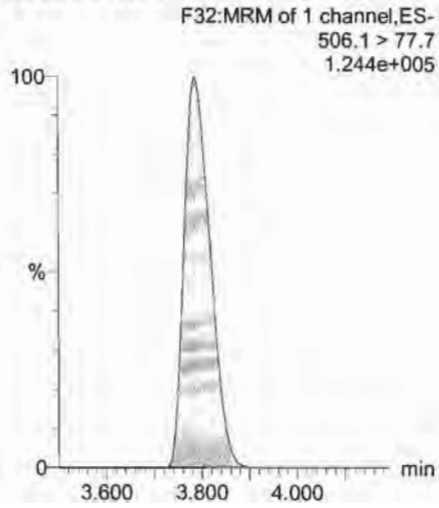
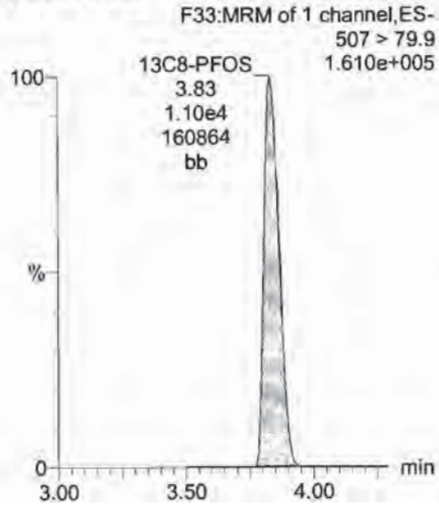


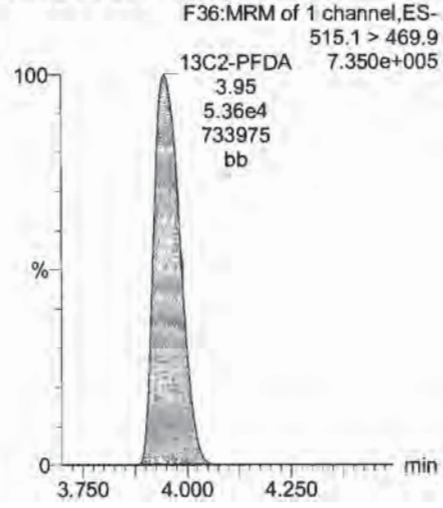
13C8-PFOSA



13C8-PFOS



13C2-PFDA



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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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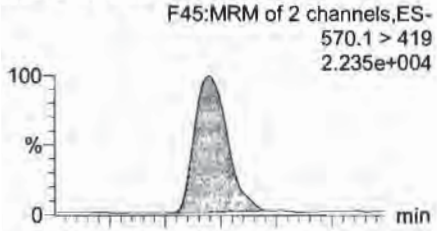

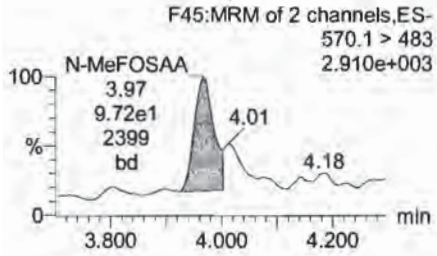

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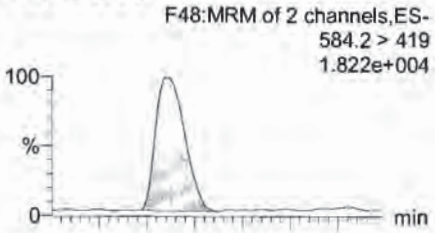
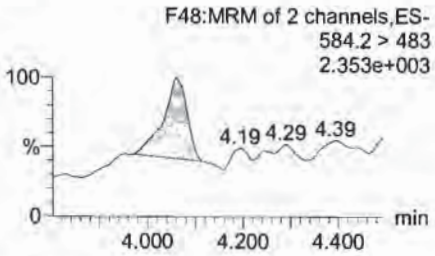
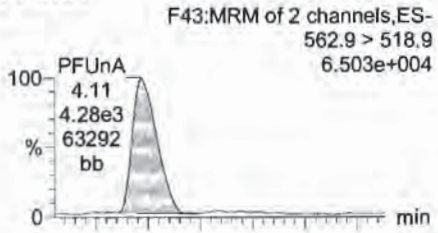
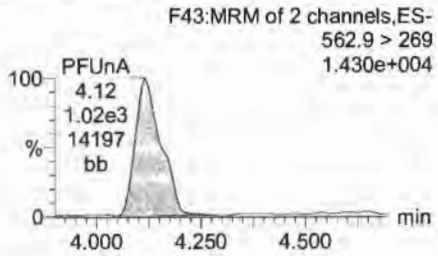




PFUnA





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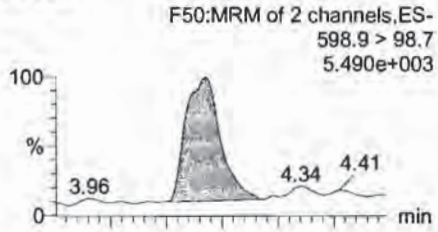

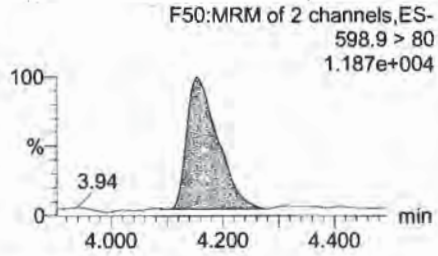

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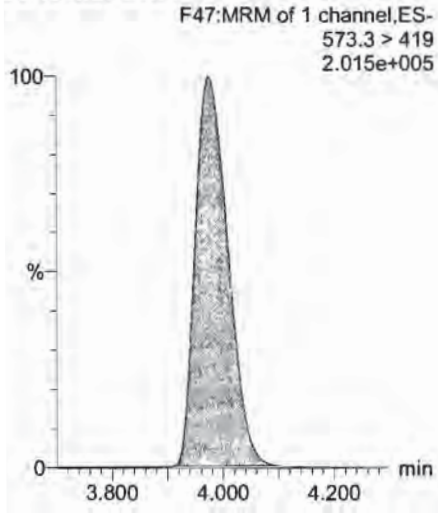

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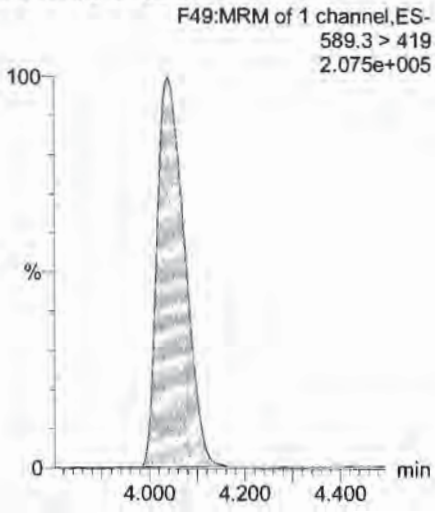
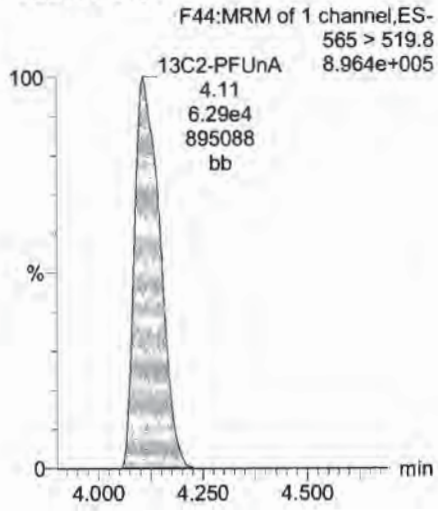


13C2-PFUnA



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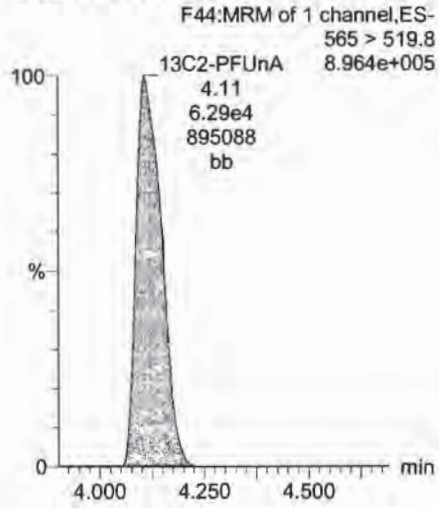

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Name: 170728M2_4, Date: 28-Jul-2017, Time: 16:42:11, ID: ST170728M2-3 PFC CS0 17G2826, Description: PFC CS0 17G2826

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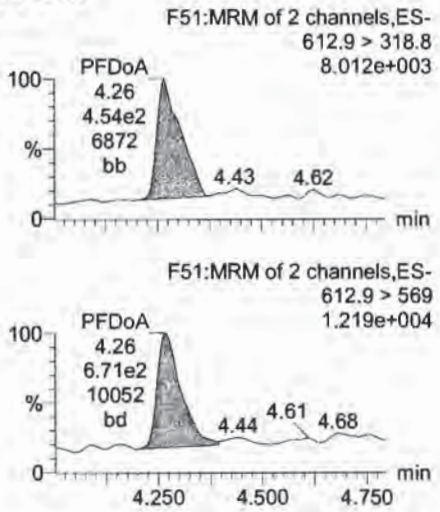

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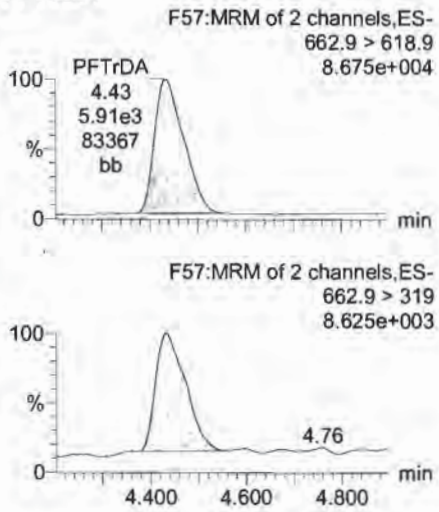
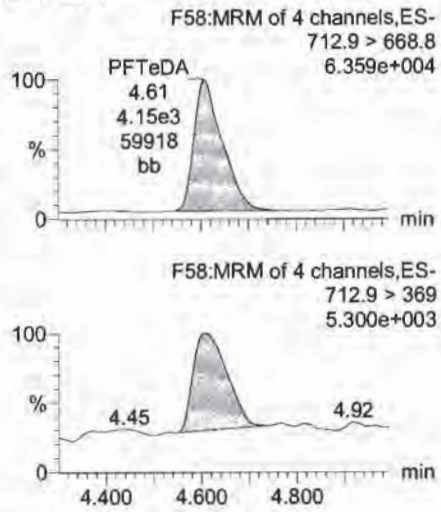


PFTeDA



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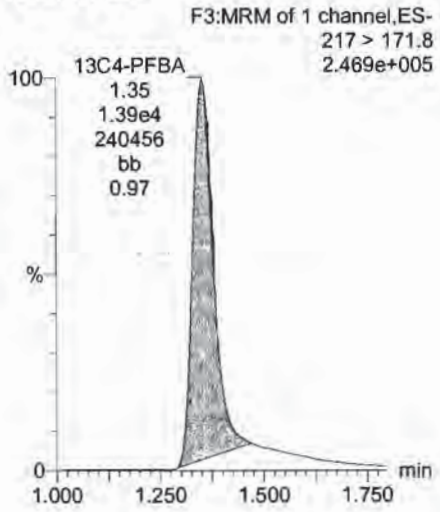

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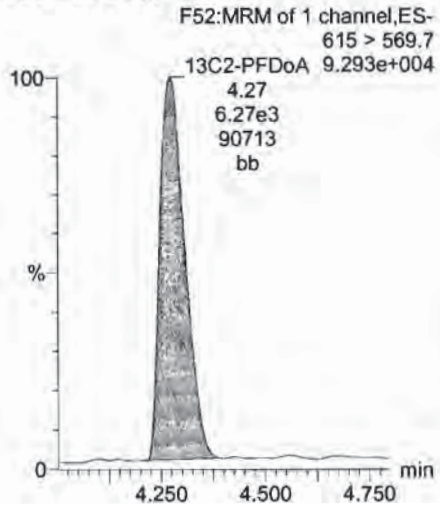

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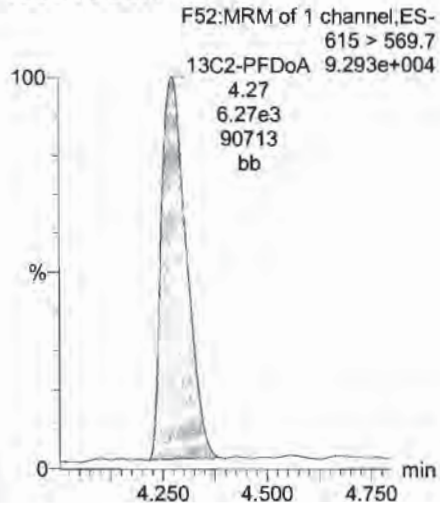

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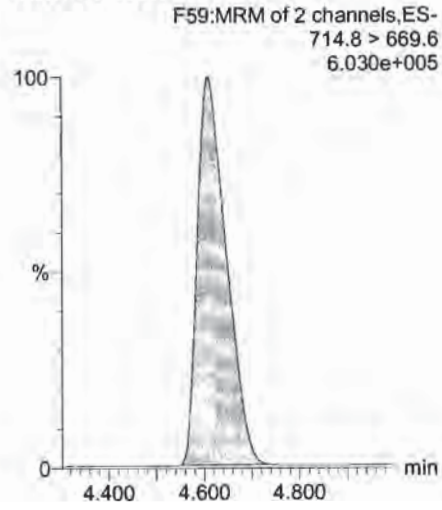
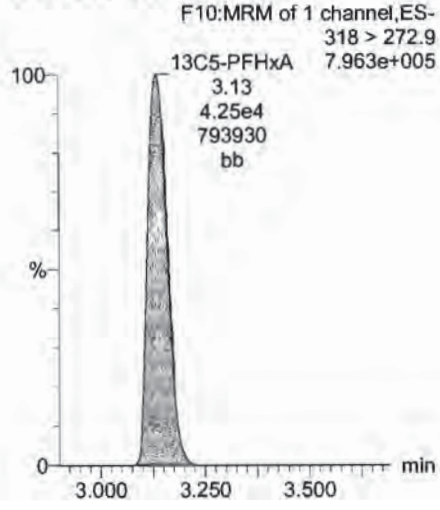


13C5-PFHxA



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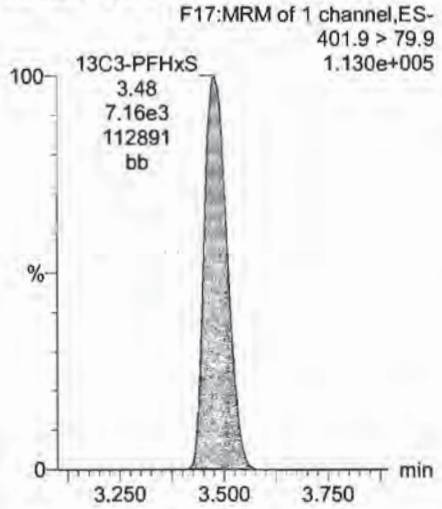
Name: 170728M2_4, Date: 28-Jul-2017, Time: 16:42:11, ID: ST170728M2-3 PFC CS0 17G2826, Description: PFC CS0 17G2826

13C3-PFHxS



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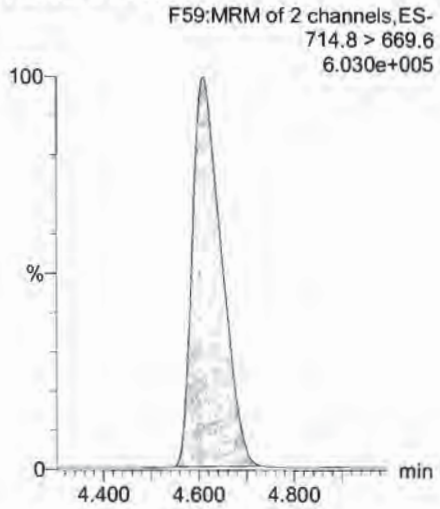
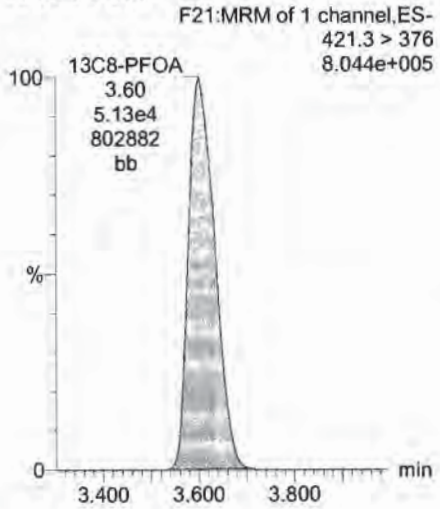


13C8-PFOA



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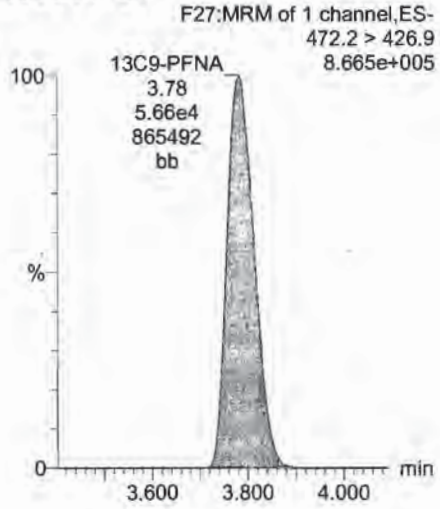
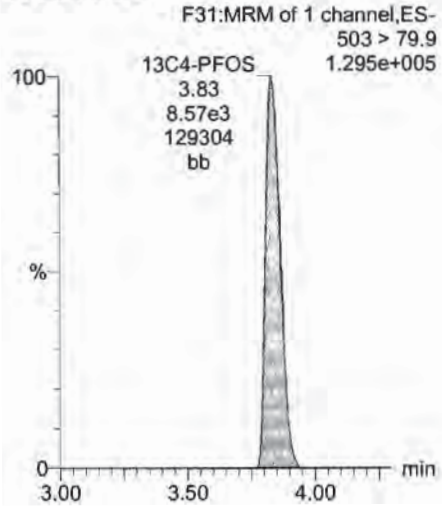


13C4-PFOS



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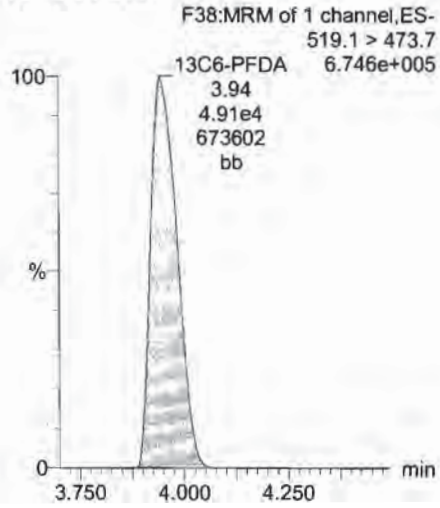

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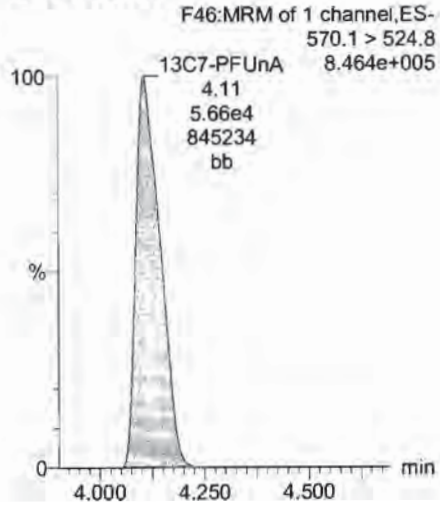

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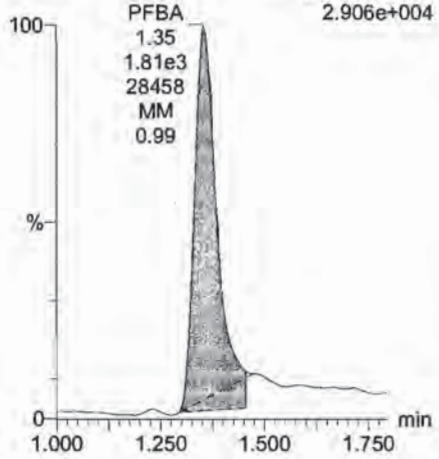
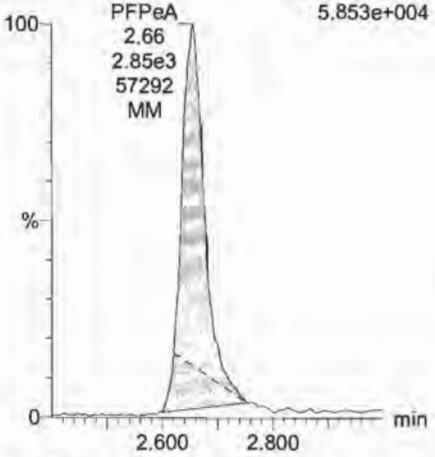
PFBA



PFPeA



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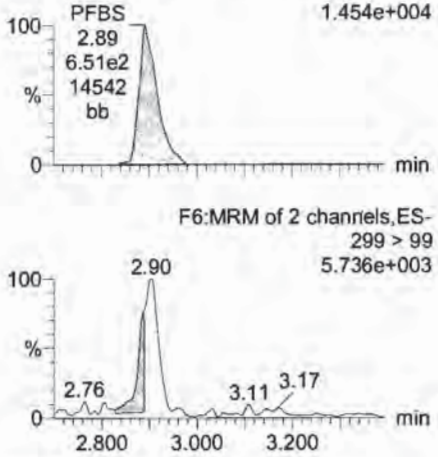

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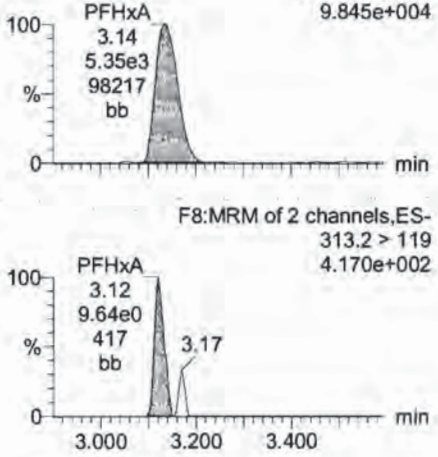

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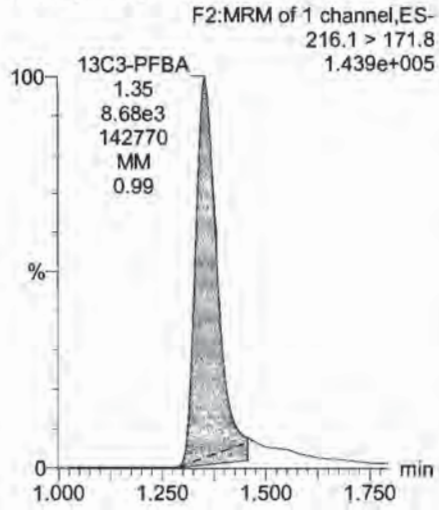

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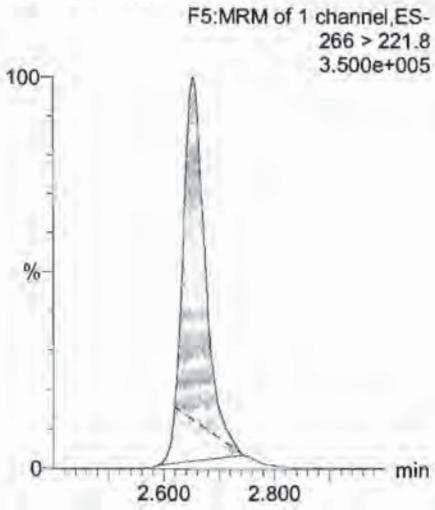

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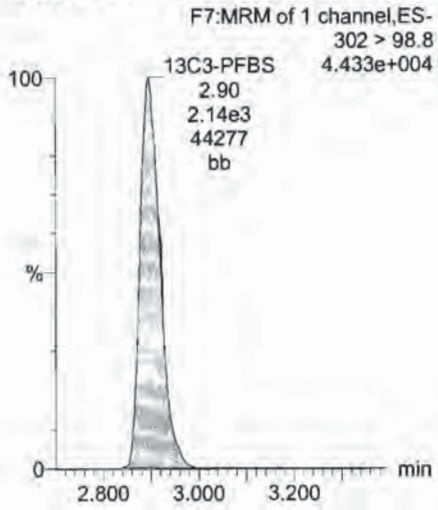

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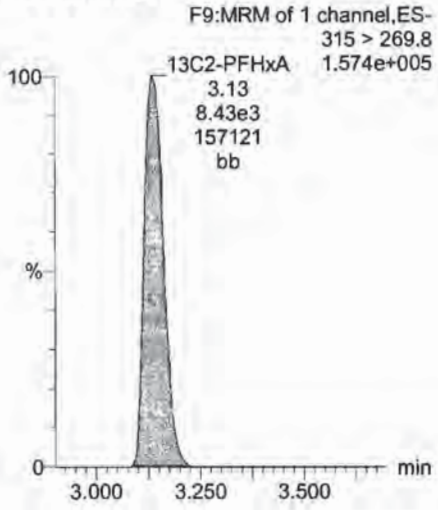

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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_5, Date: 28-Jul-2017, Time: 16:52:57, ID: ST170728M2-4 PFC CS1 17G2827, Description: PFC CS1 17G2827

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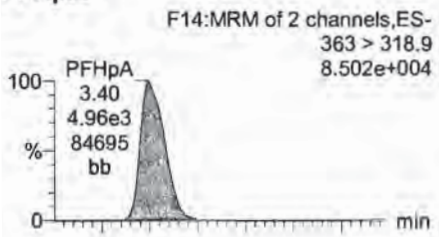

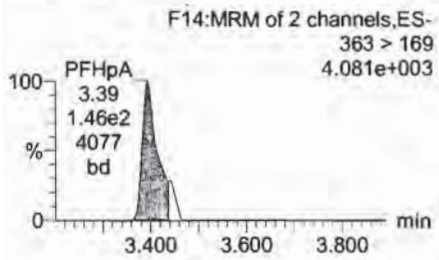

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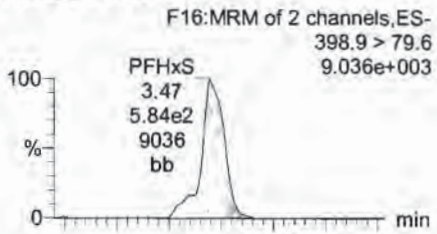

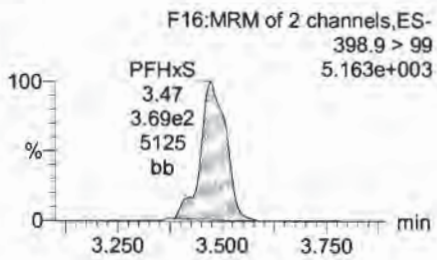

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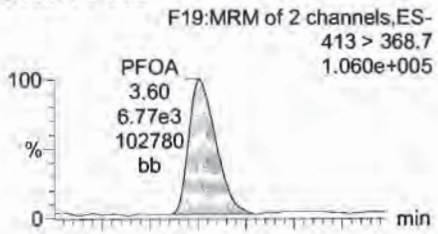

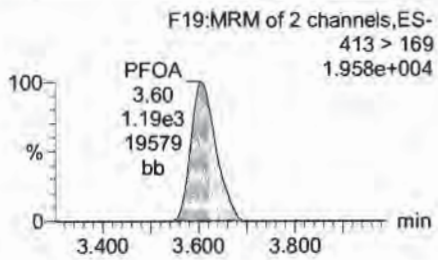

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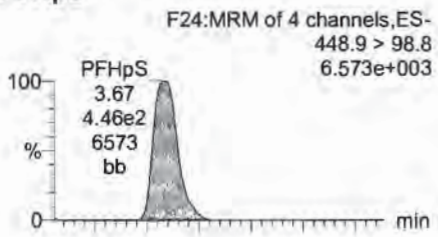
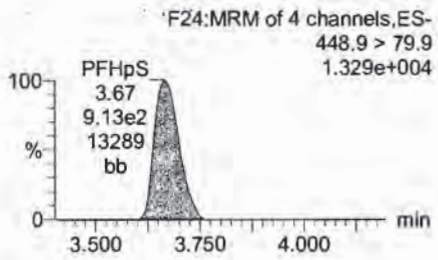
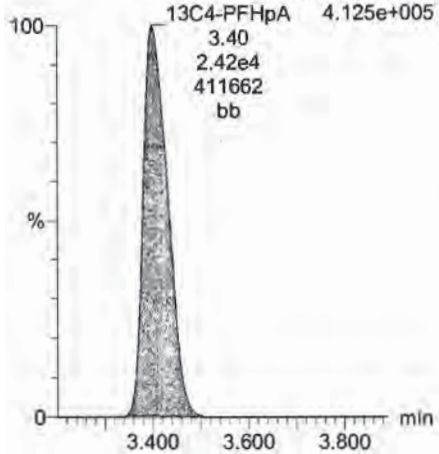
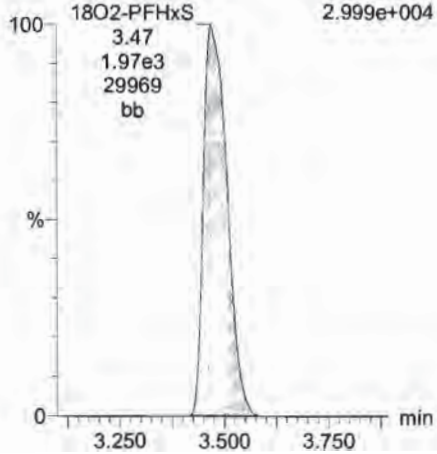




13C4-PFHpA



18O2-PFHxS



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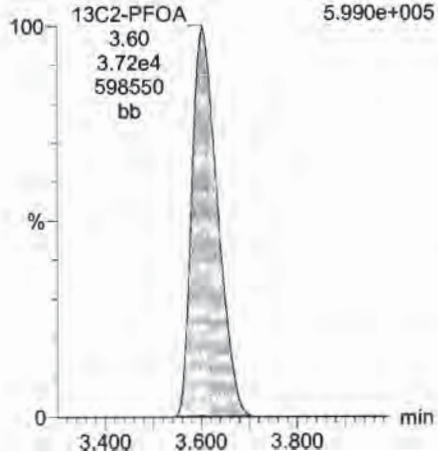

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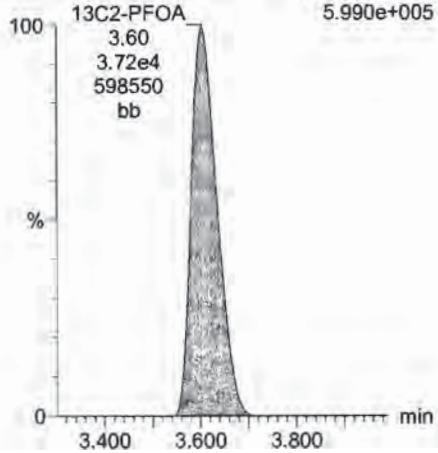

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Name: 170728M2_5, Date: 28-Jul-2017, Time: 16:52:57, ID: ST170728M2-4 PFC CS1 17G2827, Description: PFC CS1 17G2827

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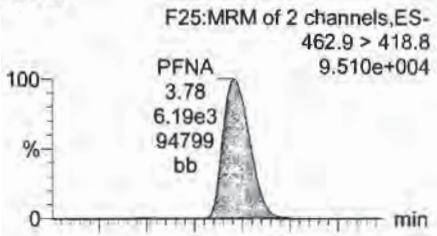
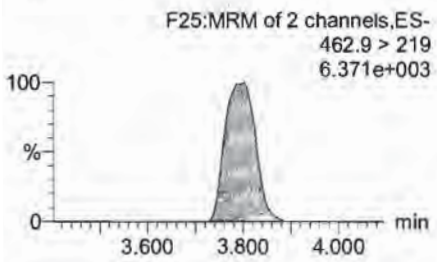
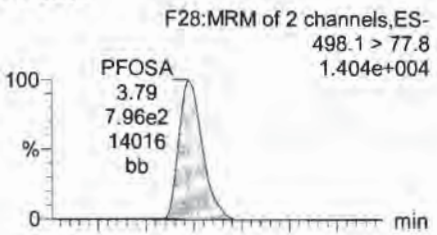
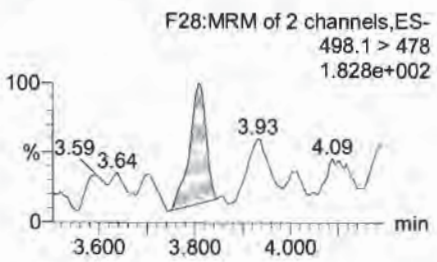




PFOSA





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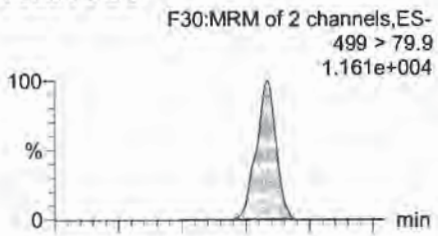

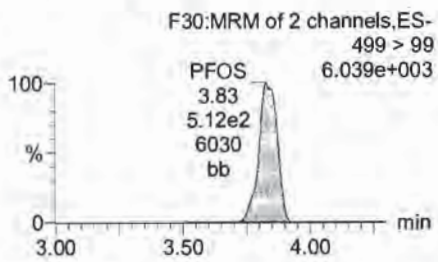

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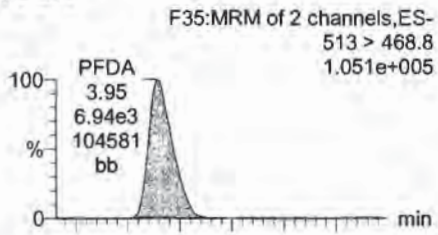

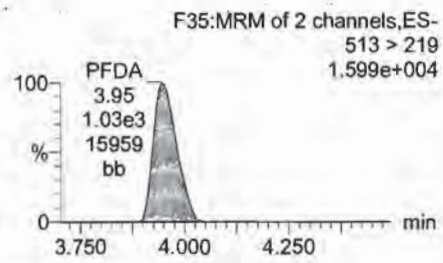

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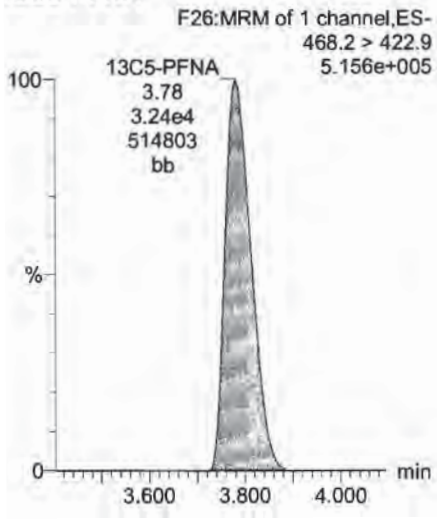
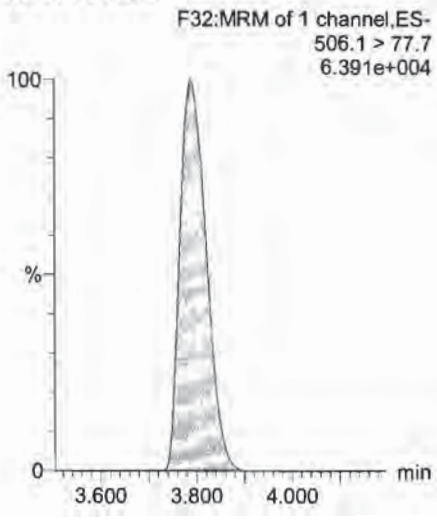


13C8-PFOSA



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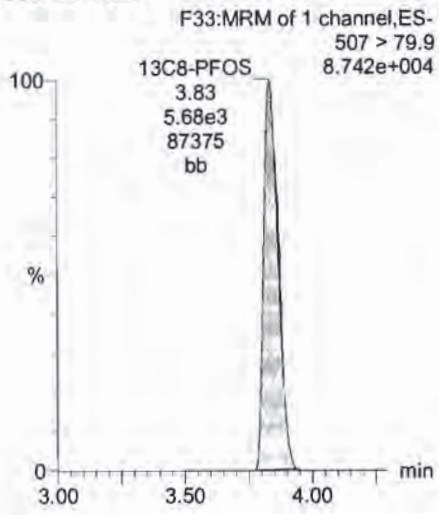

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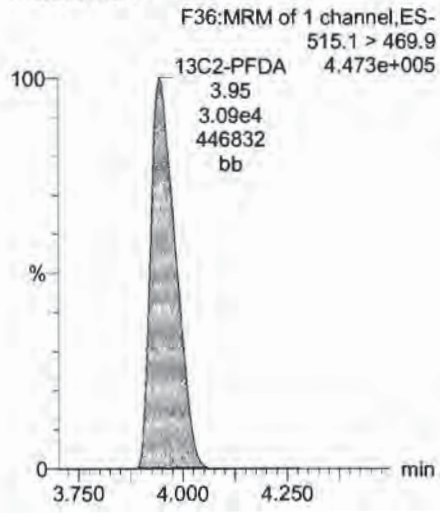

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Name: 170728M2_5, Date: 28-Jul-2017, Time: 16:52:57, ID: ST170728M2-4 PFC CS1 17G2827, Description: PFC CS1 17G2827

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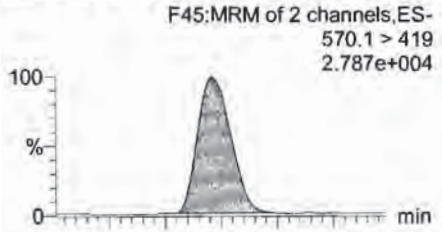

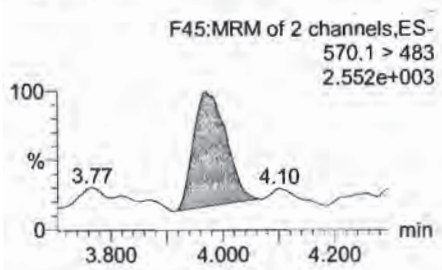

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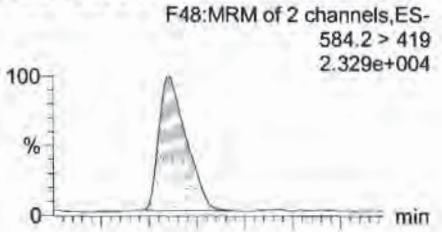

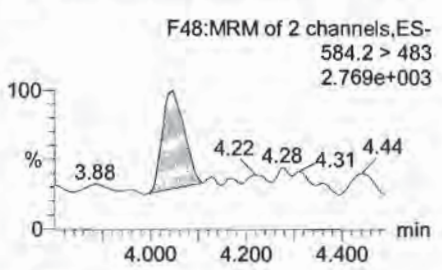

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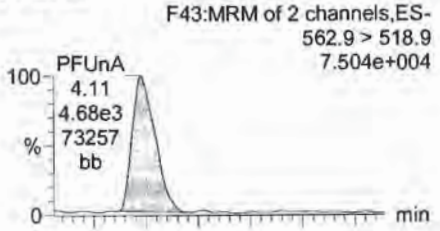

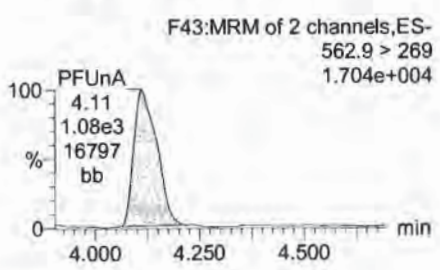

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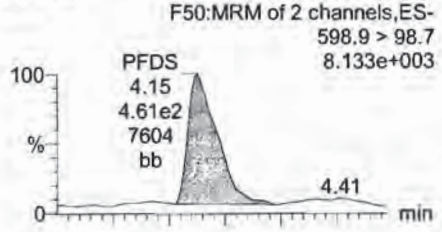

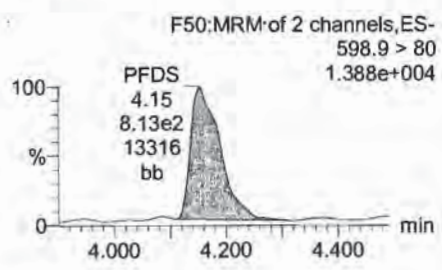

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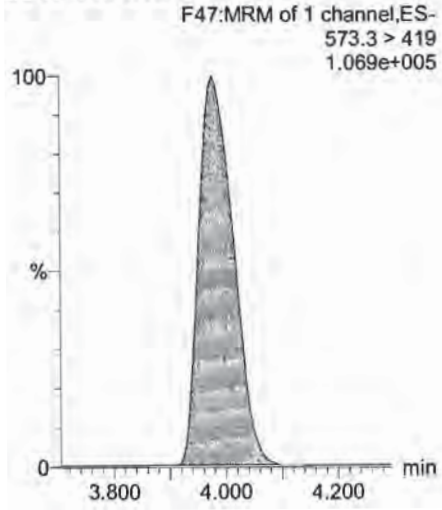

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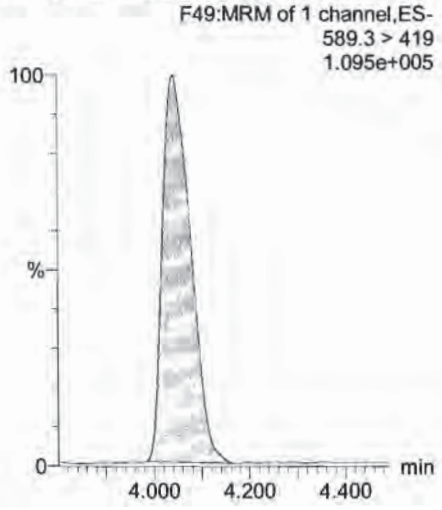

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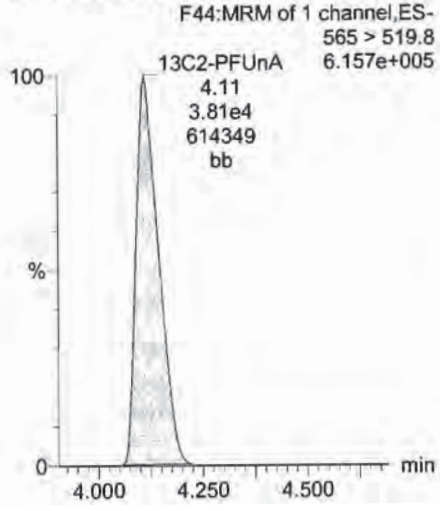

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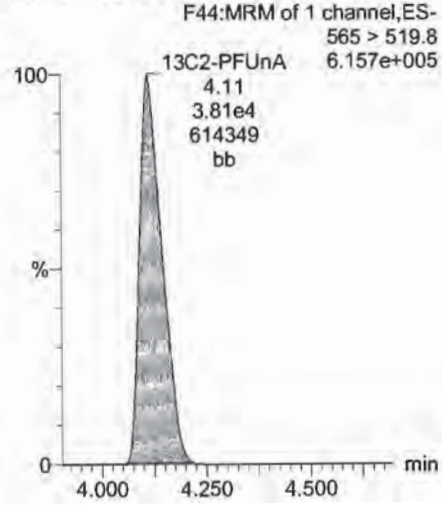

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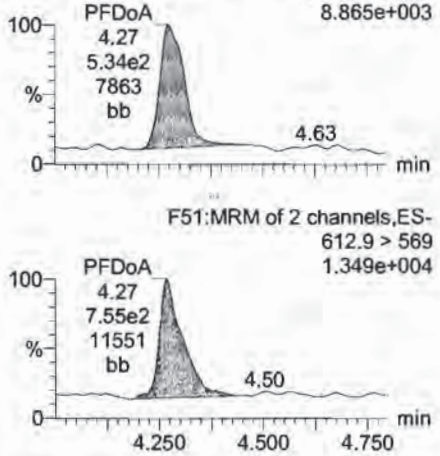
Name: 170728M2_5, Date: 28-Jul-2017, Time: 16:52:57, ID: ST170728M2-4 PFC CS1 17G2827, Description: PFC CS1 17G2827

PFDoA



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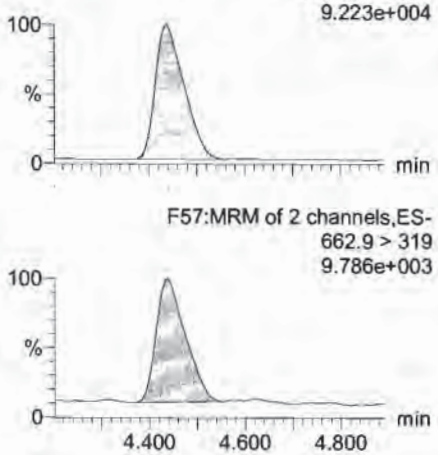

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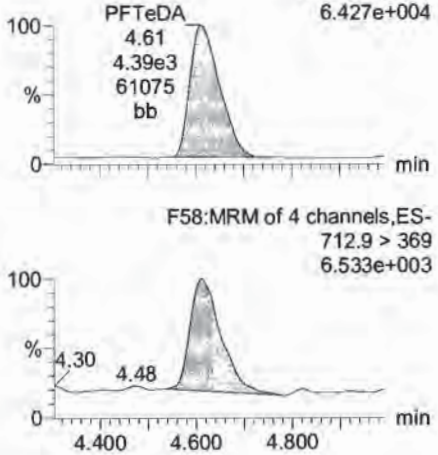

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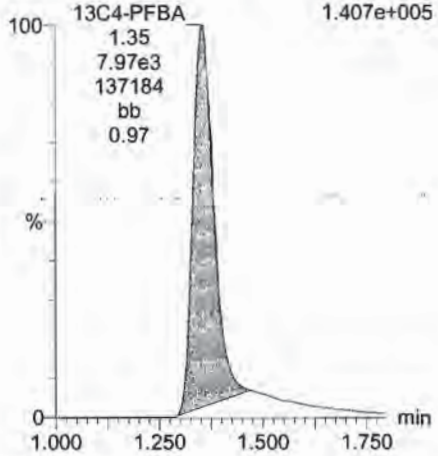

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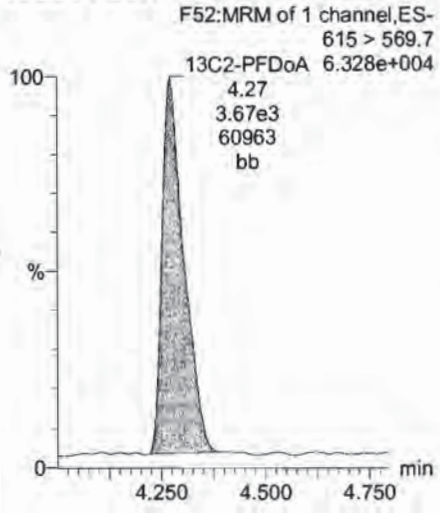

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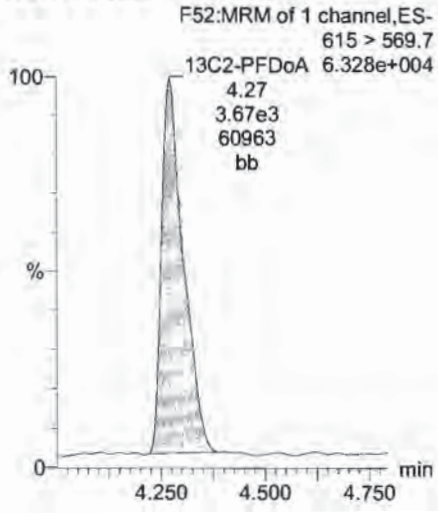

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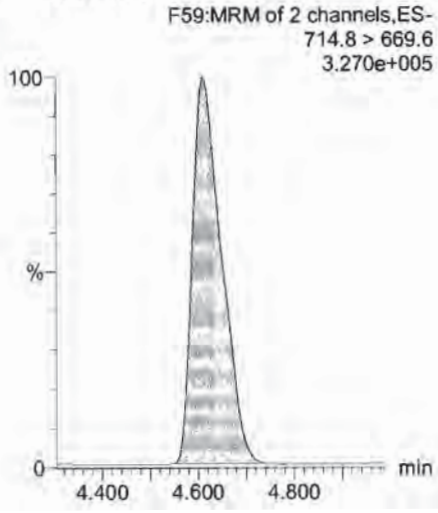

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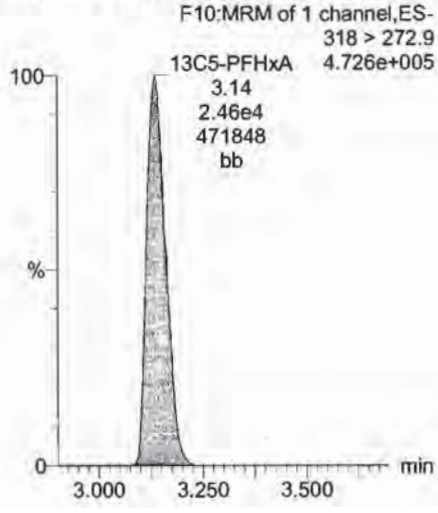

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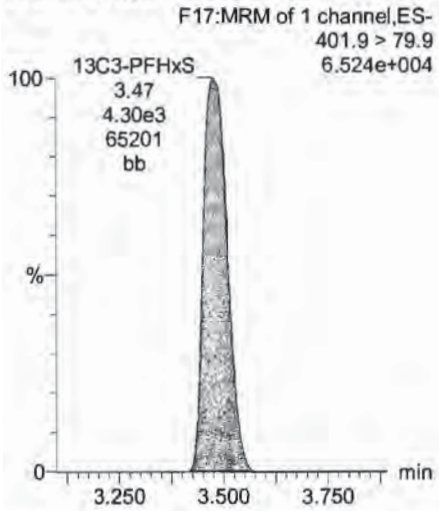
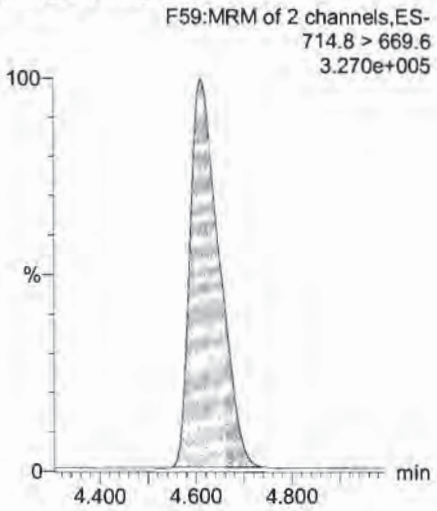
Name: 170728M2_5, Date: 28-Jul-2017, Time: 16:52:57, ID: ST170728M2-4 PFC CS1 17G2827, Description: PFC CS1 17G2827

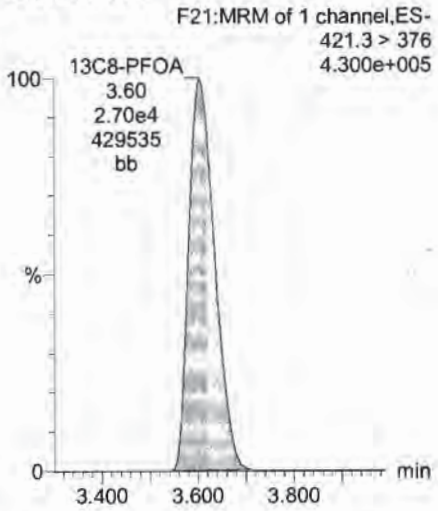
13C3-PFHxS



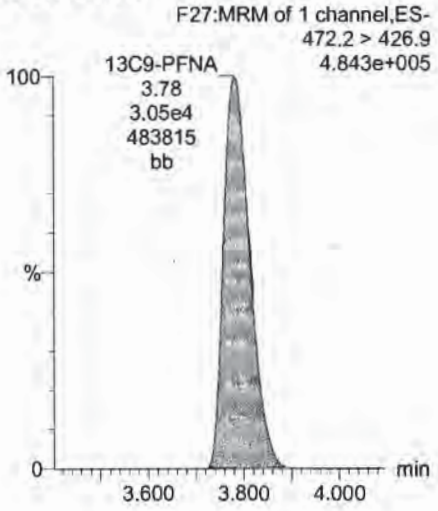
13C2-PFTeDA



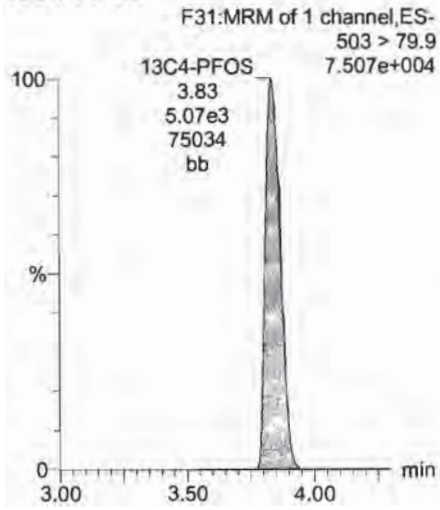
13C8-PFOA



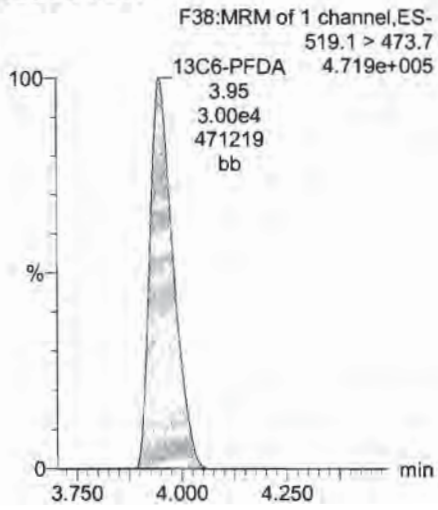
13C9-PFNA



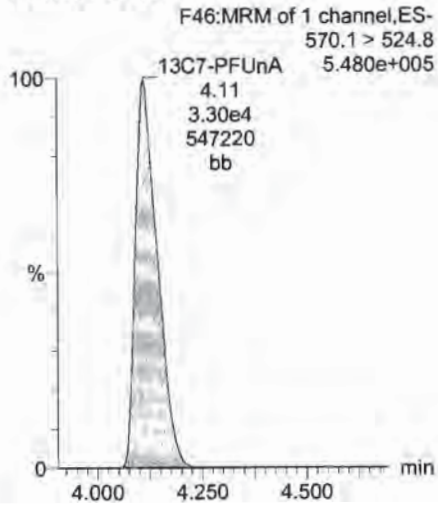
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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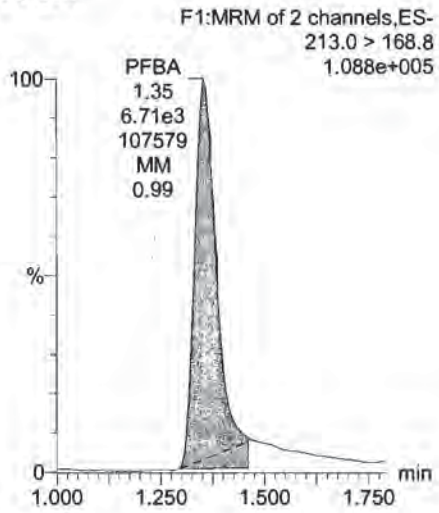
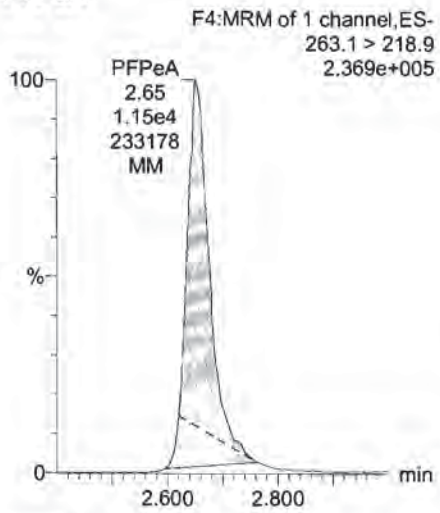
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

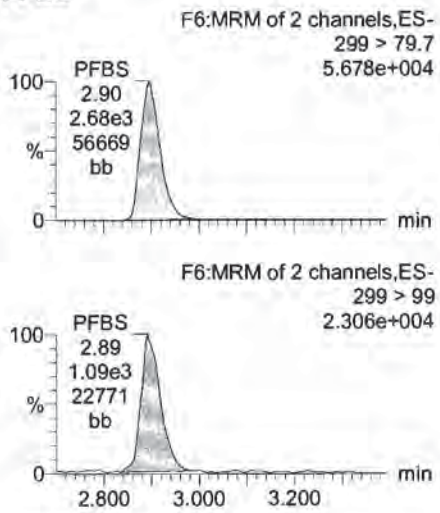
PFBA



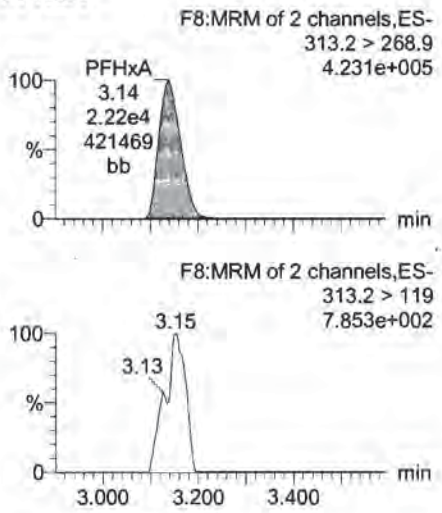
PFPeA



PFBS



PFHxA



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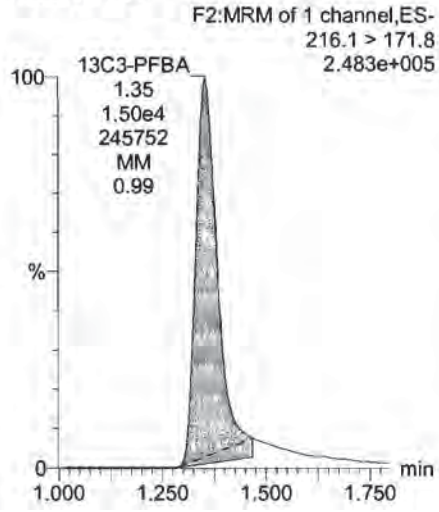
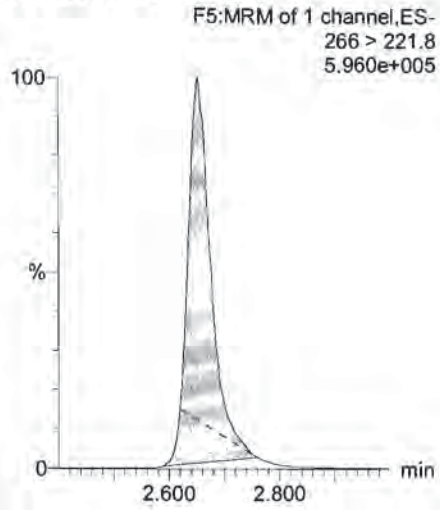
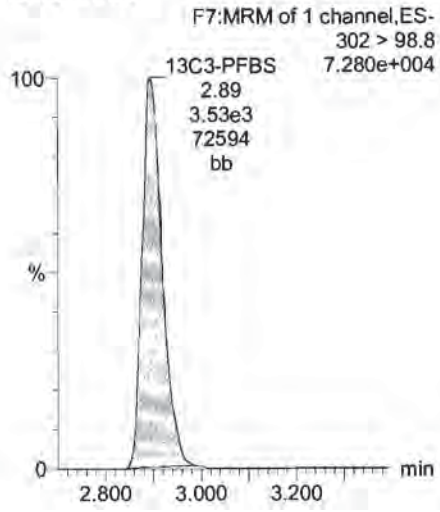


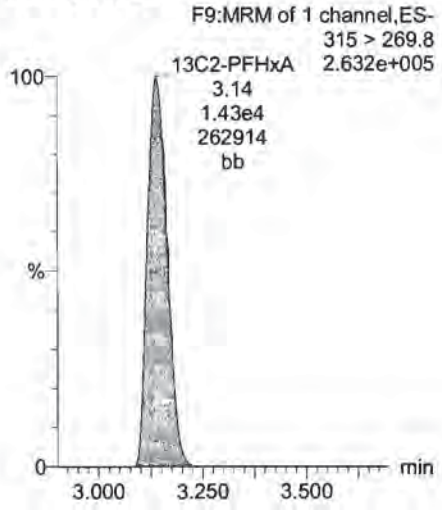
13C3-PFPeA



13C3-PFBS



13C2-PFHxA



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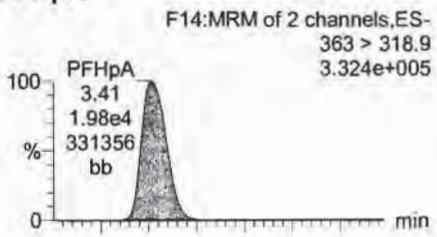
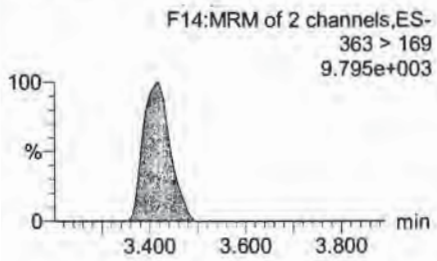
Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

PFHpA





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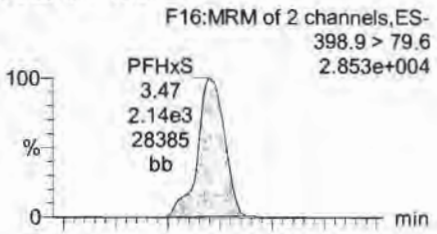

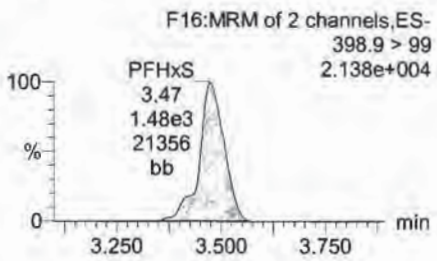

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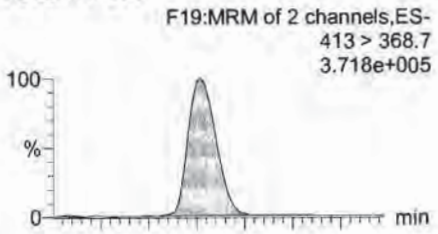

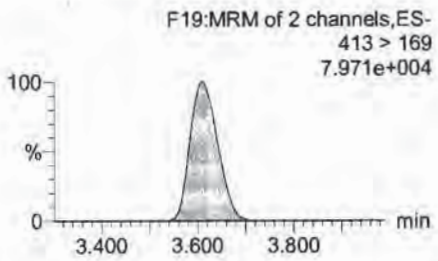

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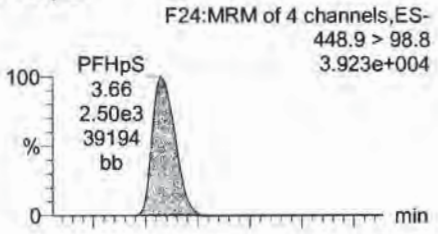
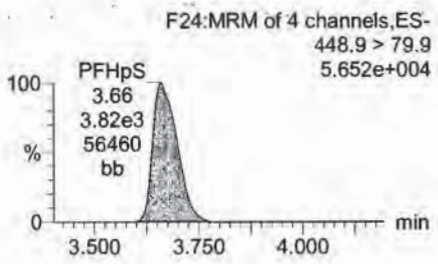
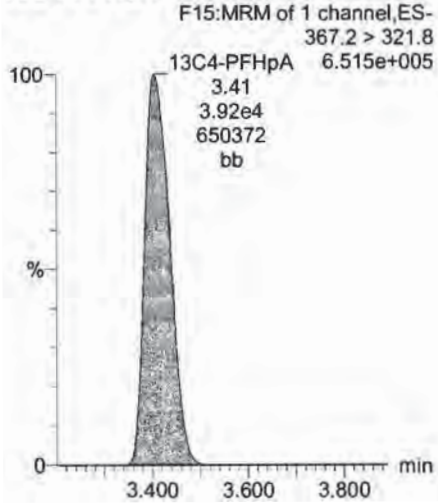
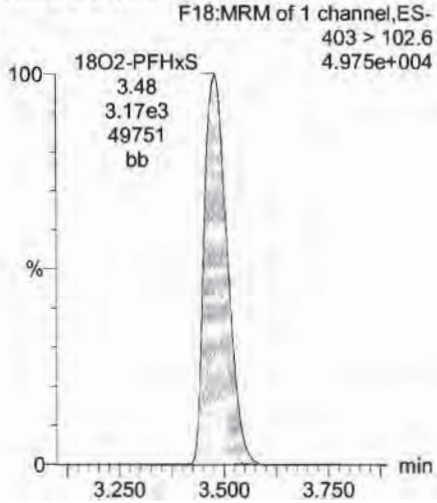




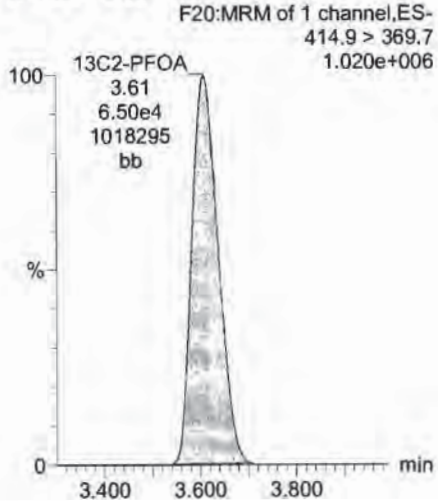
13C4-PFHpA



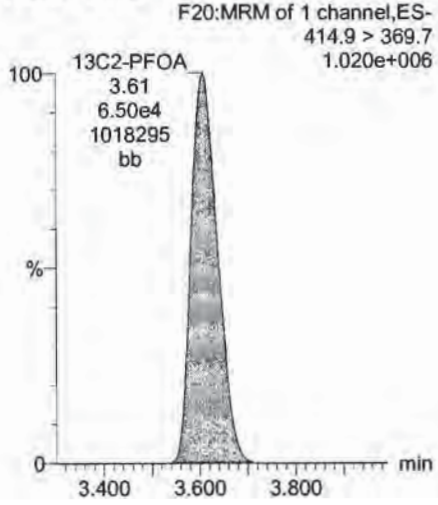
18O2-PFHxS



13C2-PFOA



13C2-PFOA



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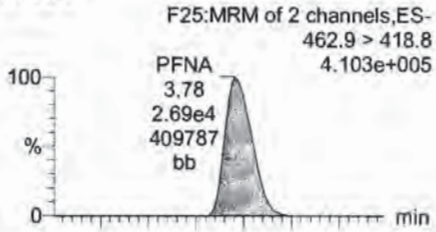
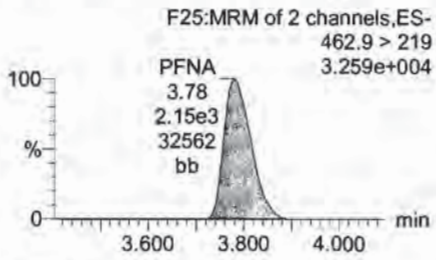
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

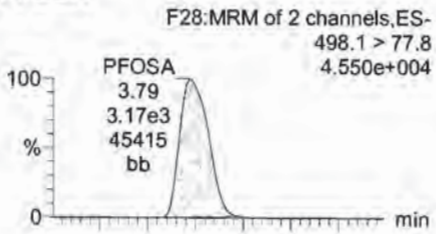
Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

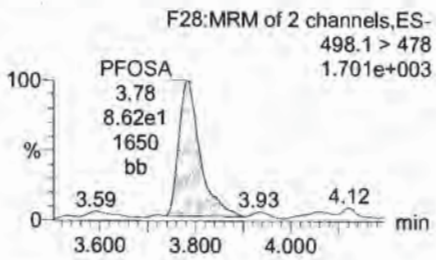
PFNA





PFOSA





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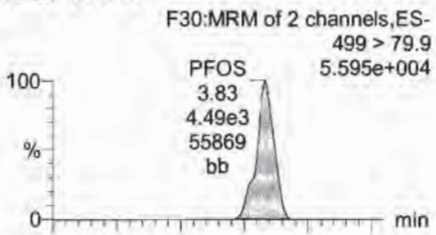
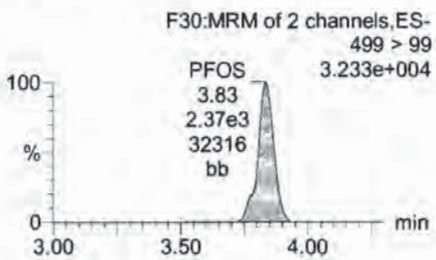
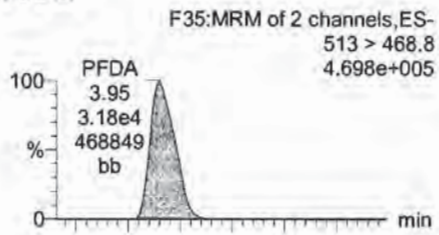
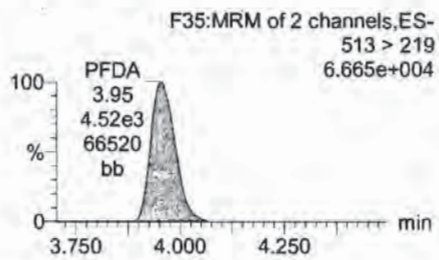


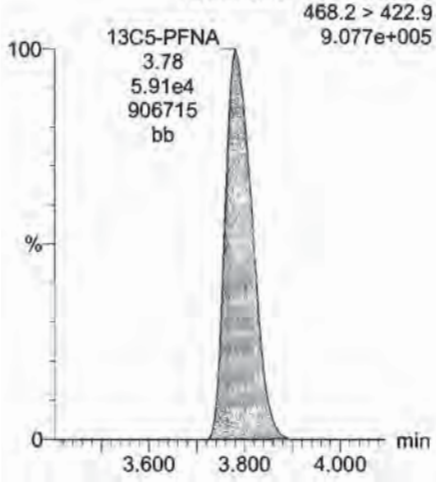


PFDA

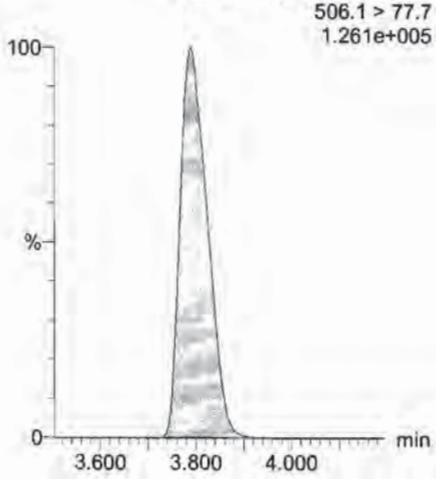




13C5-PFNA



13C8-PFOSA



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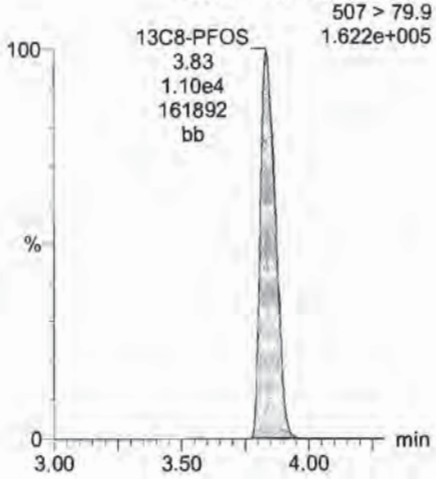
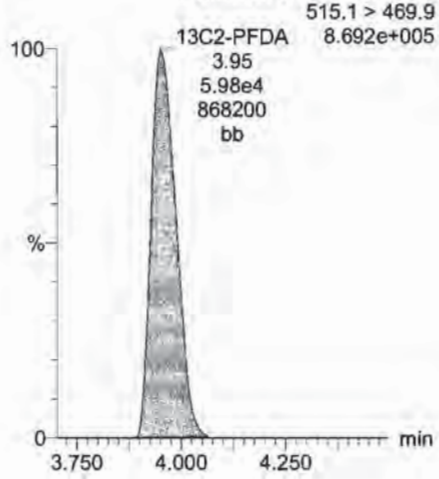


13C2-PFDA



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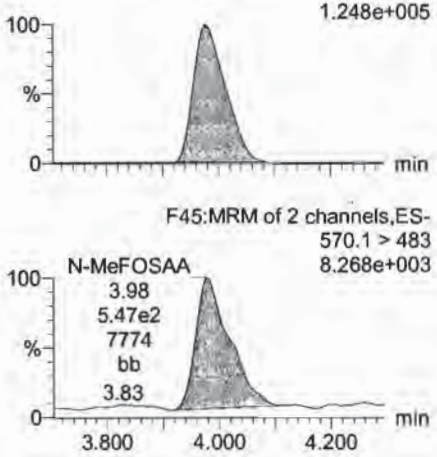
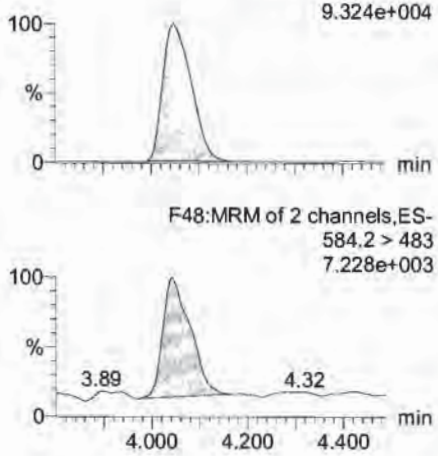
Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

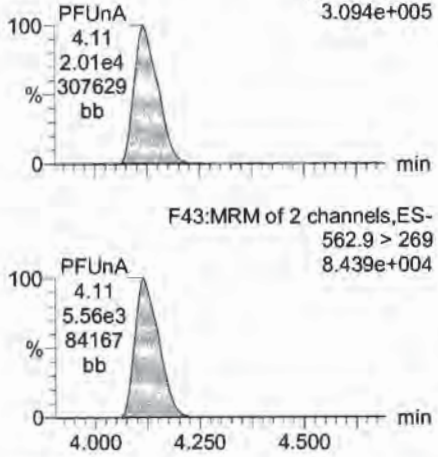
N-MeFOSAA



N-EtFOSAA



PFUnA



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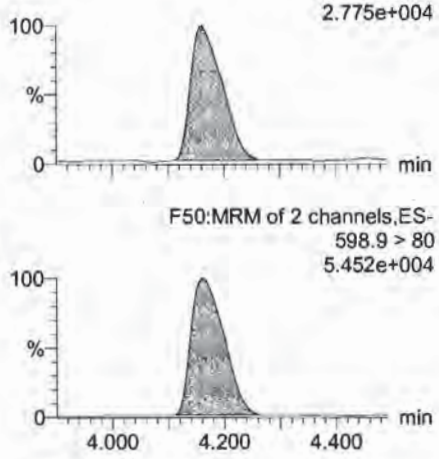
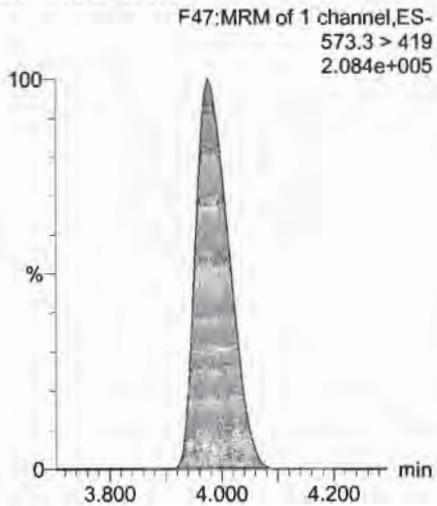
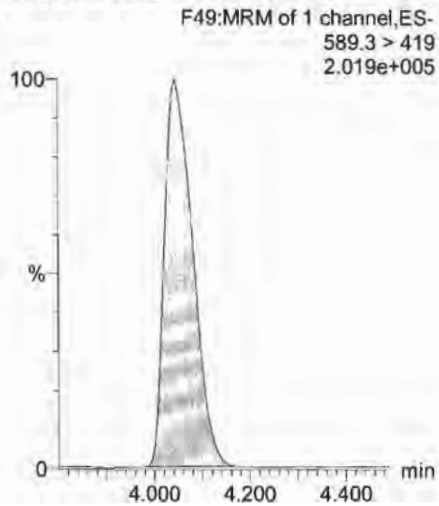


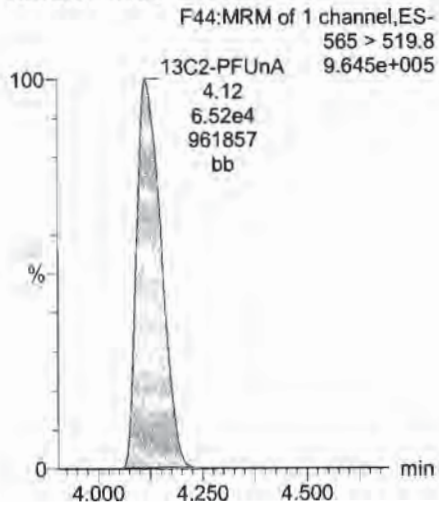
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFUnA



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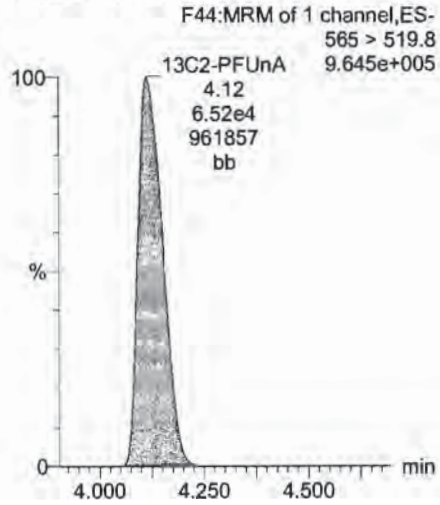

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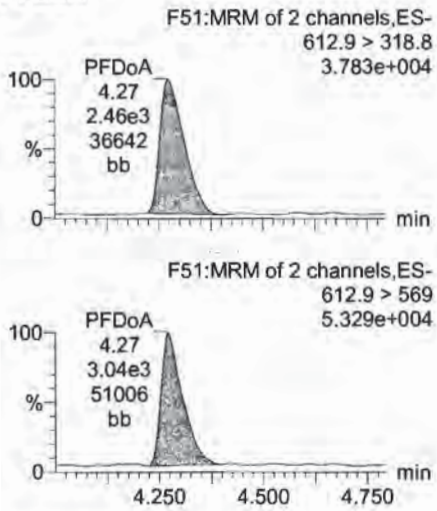
Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

PFDoA



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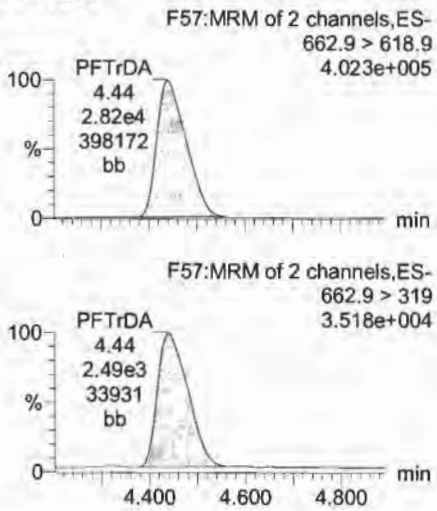

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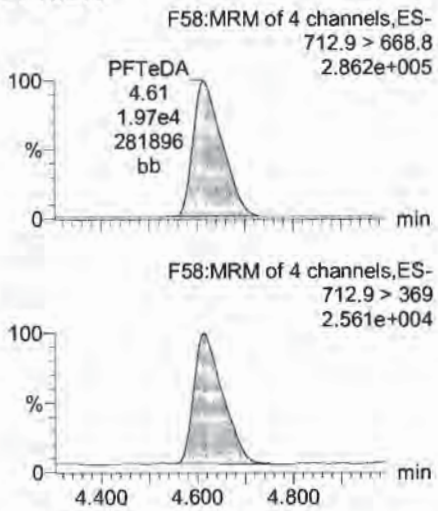
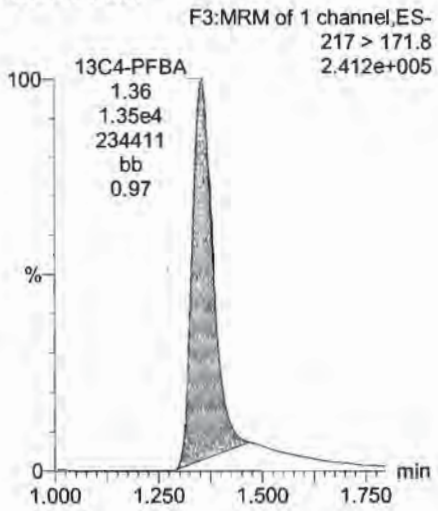
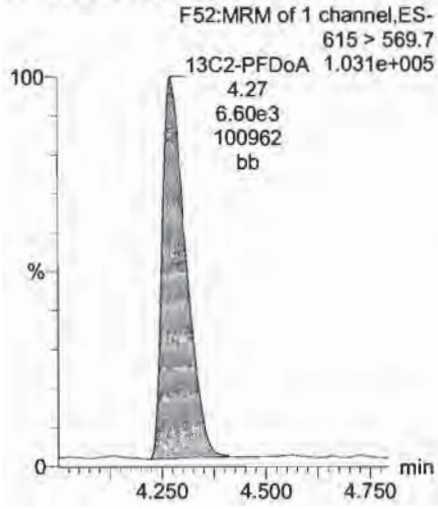


13C4-PFBA



13C2-PFDoA



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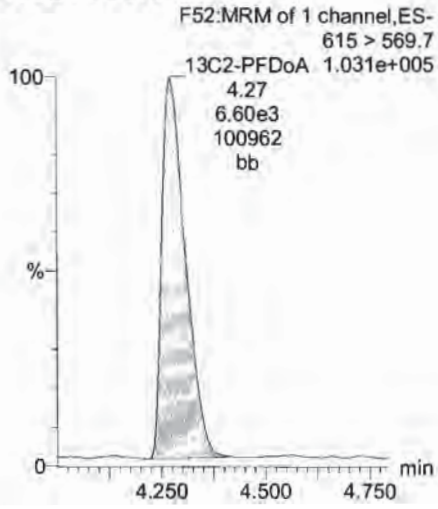
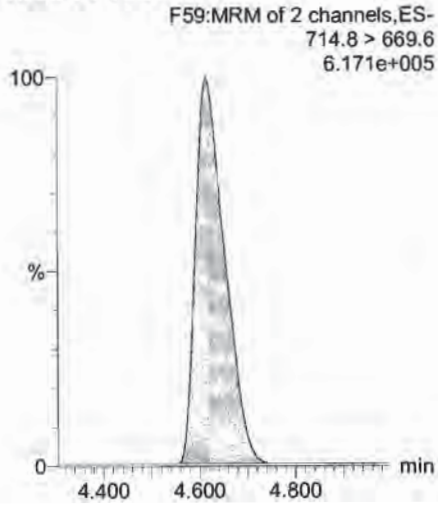
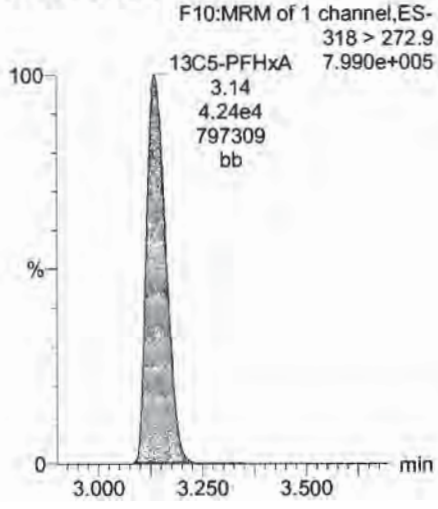


13C2-PFTeDA



13C5-PFHxA



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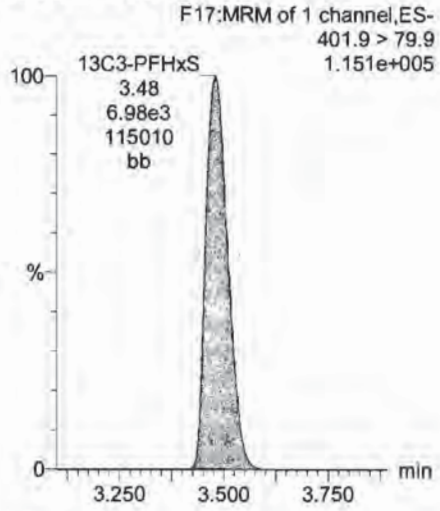
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_6, Date: 28-Jul-2017, Time: 17:03:36, ID: ST170728M2-5 PFC CS2 17G2828, Description: PFC CS2 17G2828

13C3-PFHxS



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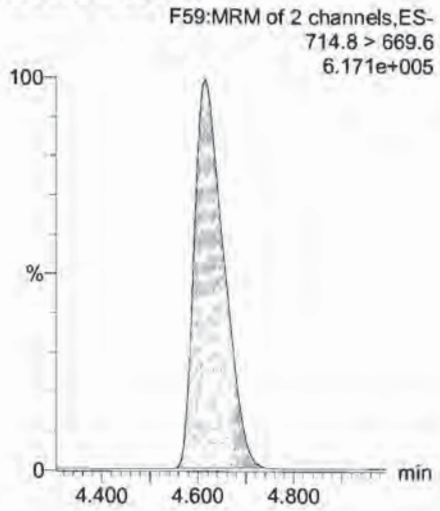
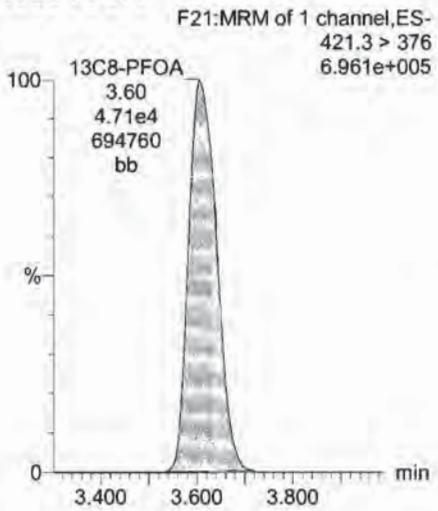
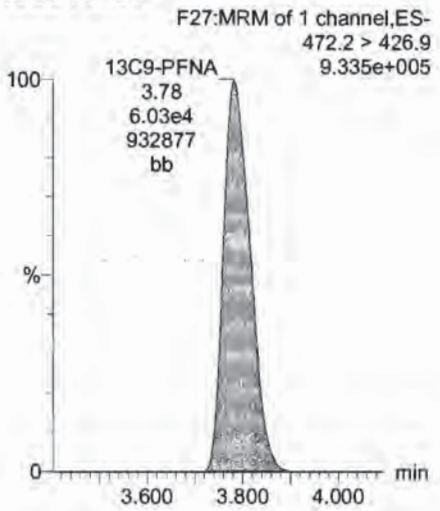


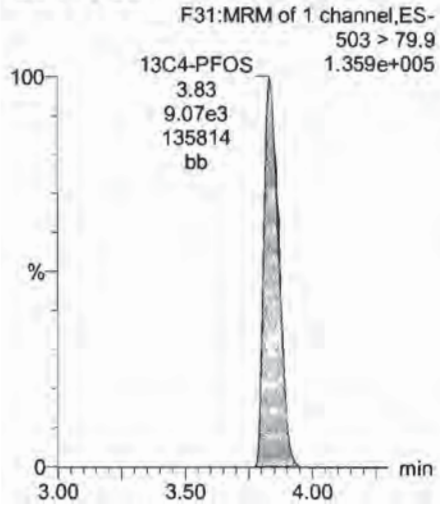
13C8-PFOA



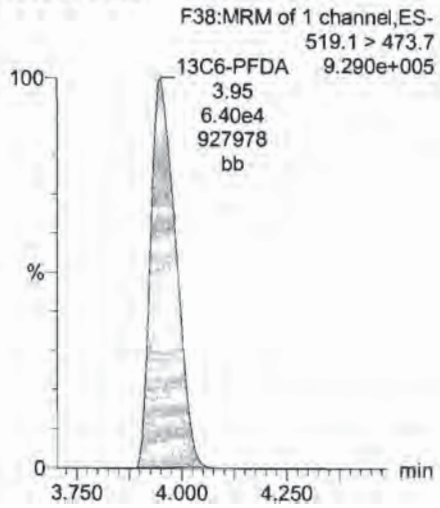
13C9-PFNA



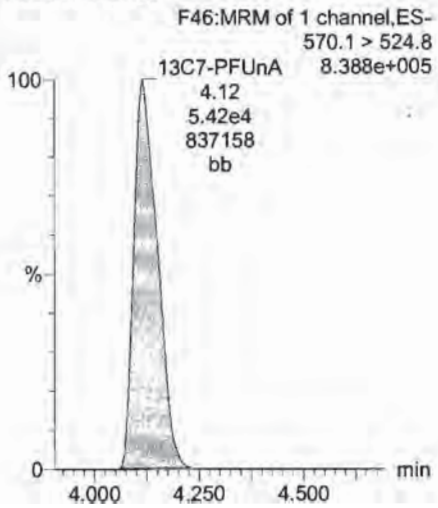
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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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_7, Date: 28-Jul-2017, Time: 17:14:14, ID: ST170728M2-6 PFC CS3 17G2829, Description: PFC CS3 17G2829

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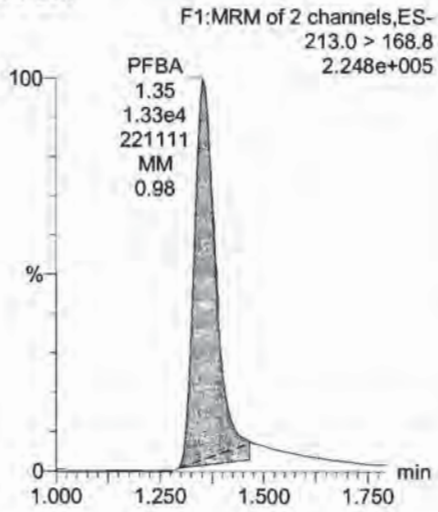
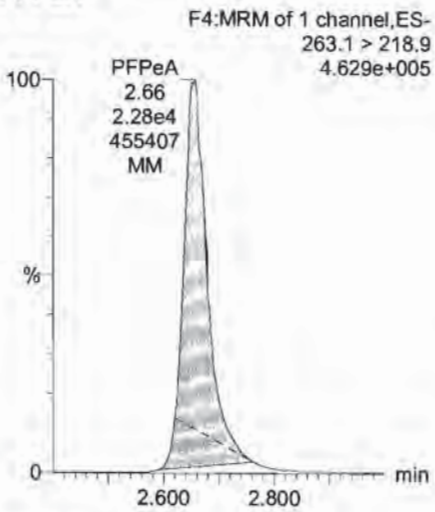
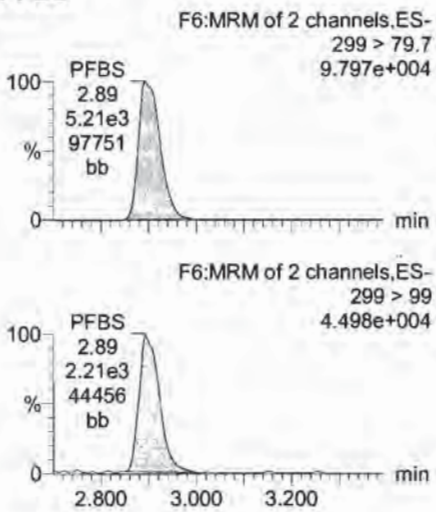


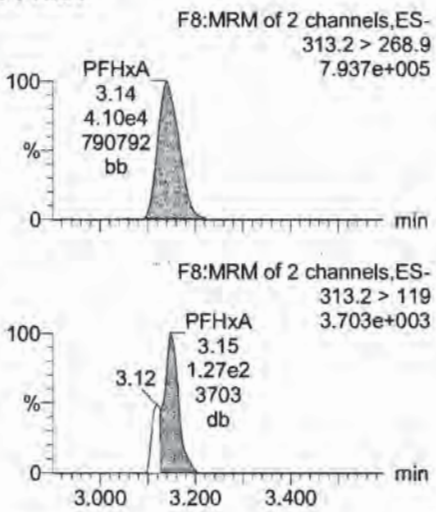
PFPeA



PFBS



PFHxA



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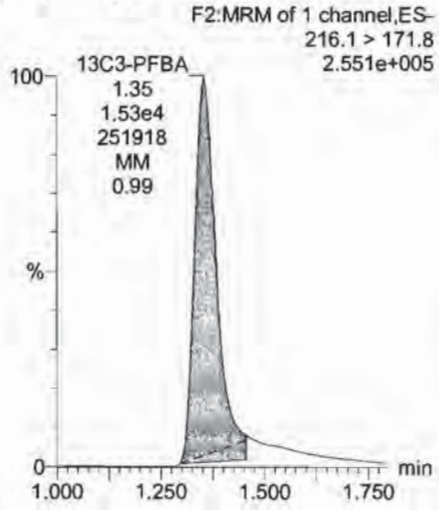

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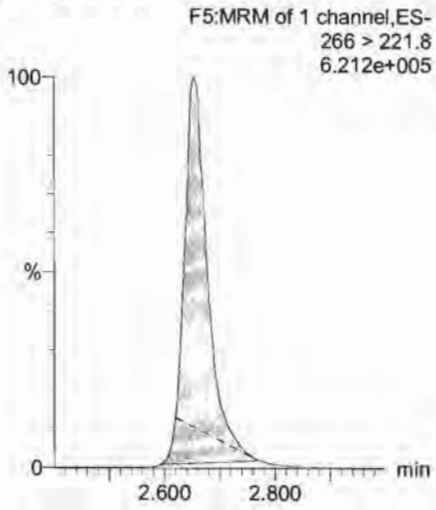
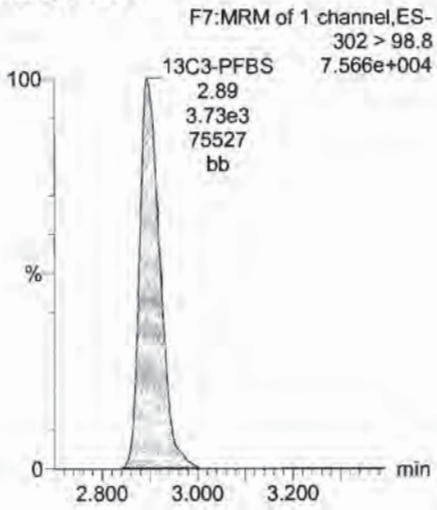
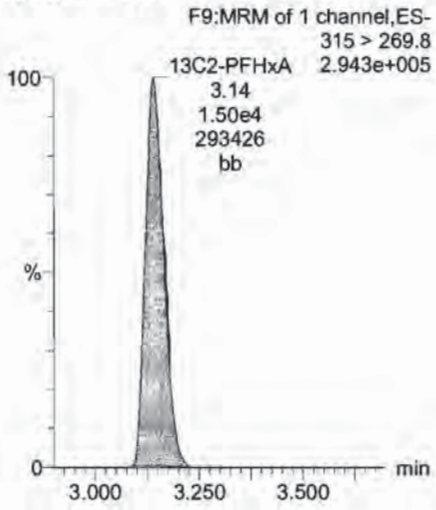


13C3-PFBS



13C2-PFHxA



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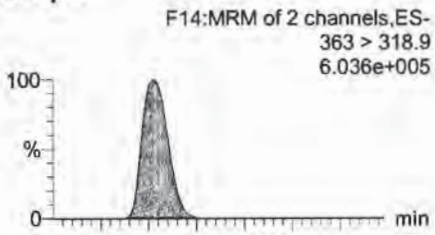
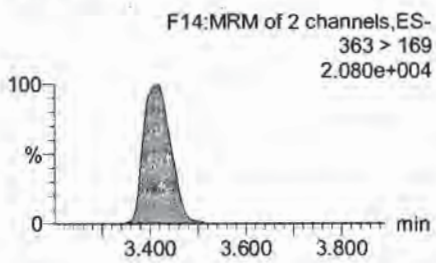
Name: 170728M2_7, Date: 28-Jul-2017, Time: 17:14:14, ID: ST170728M2-6 PFC CS3 17G2829, Description: PFC CS3 17G2829

PFHpA





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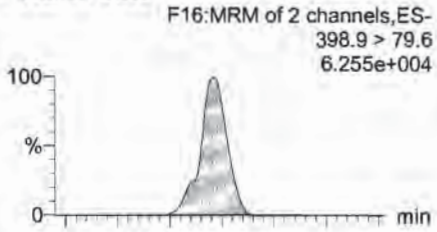
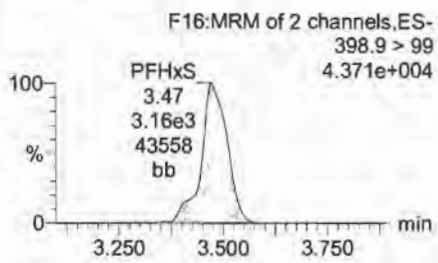
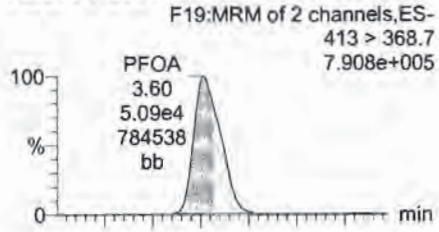
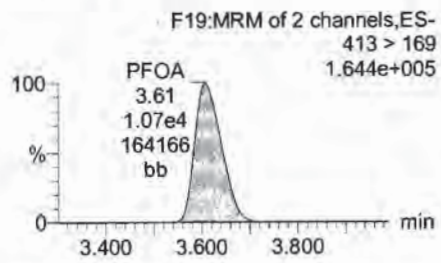


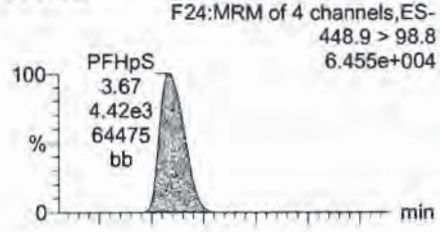


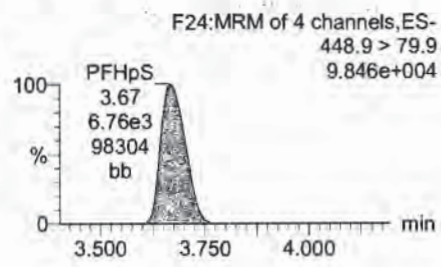
Total PFOA



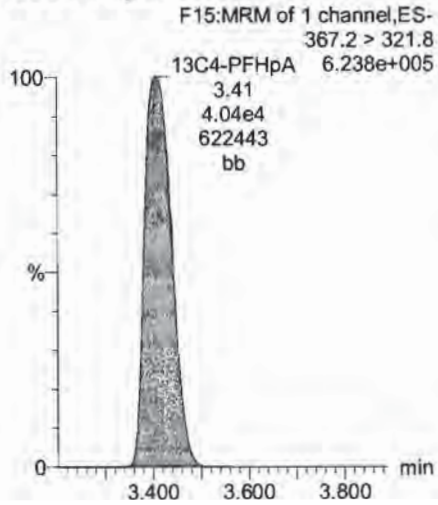


PFHpS

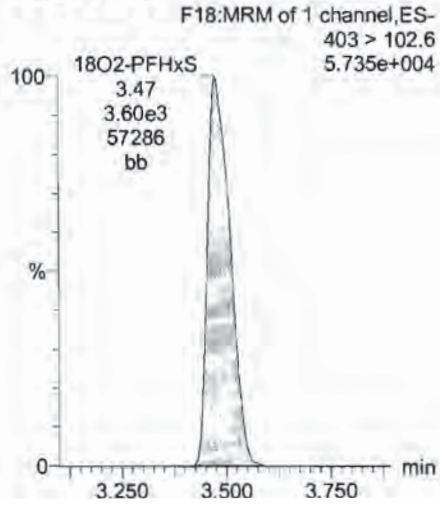




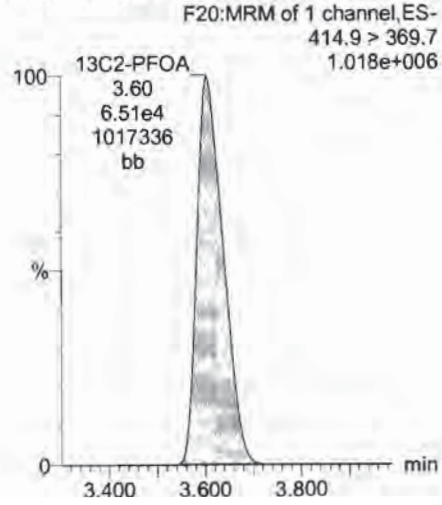
13C4-PFHpA



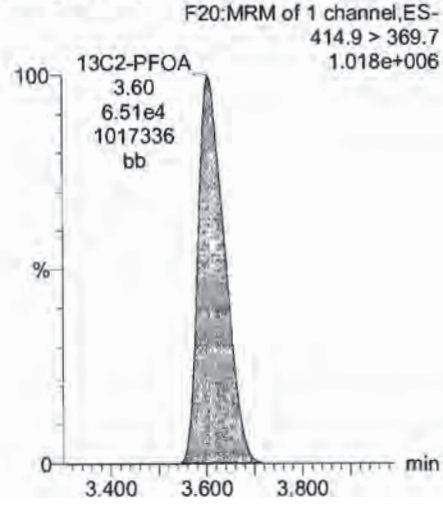
18O2-PFHxS



13C2-PFOA



13C2-PFOA



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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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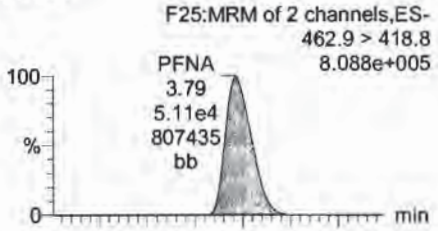
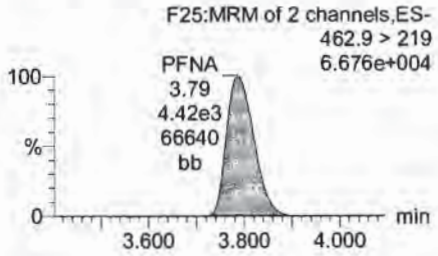
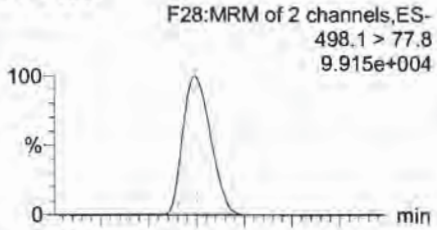
Name: 170728M2_7, Date: 28-Jul-2017, Time: 17:14:14, ID: ST170728M2-6 PFC CS3 17G2829, Description: PFC CS3 17G2829

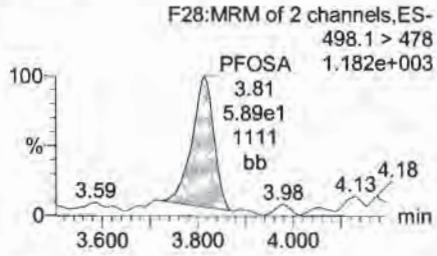
PFNA



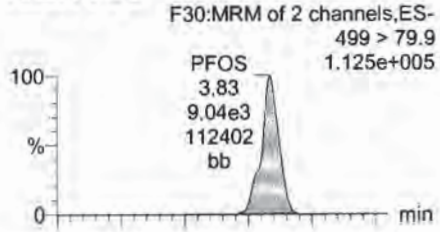


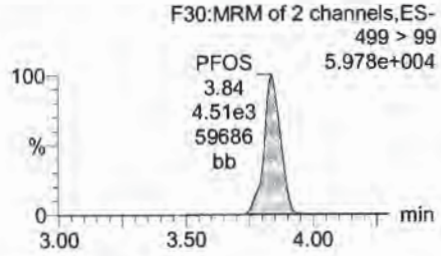
PFOSA





Total PFOS





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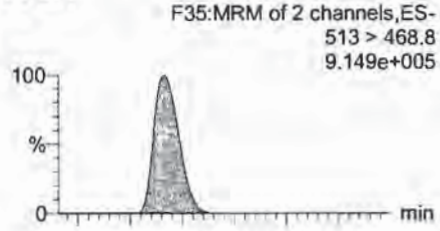
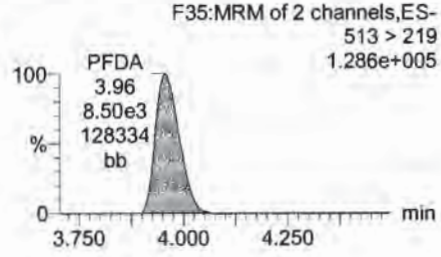
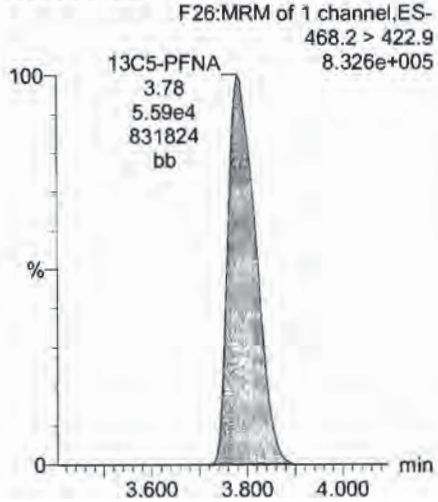
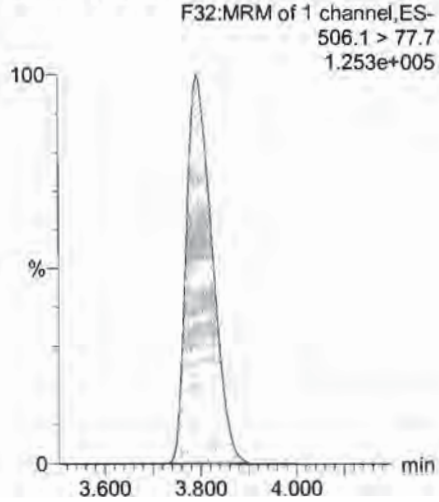




13C5-PFNA



13C8-PFOSA



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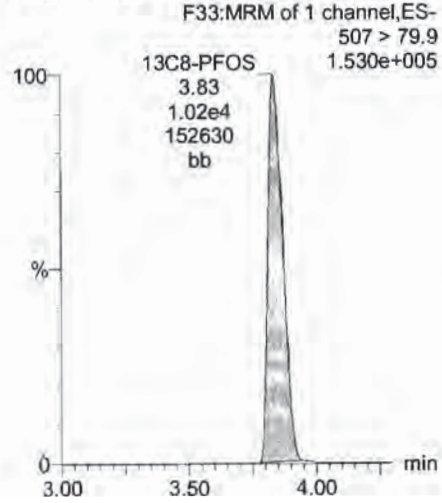
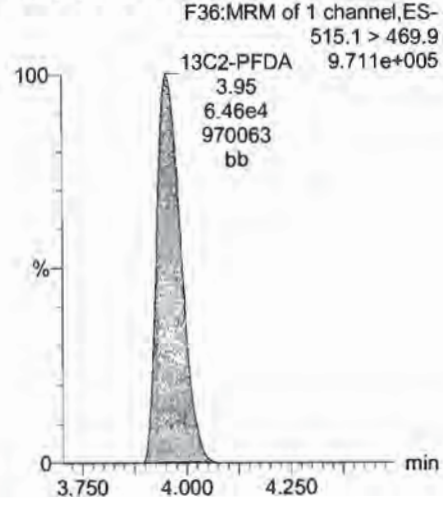


13C2-PFDA



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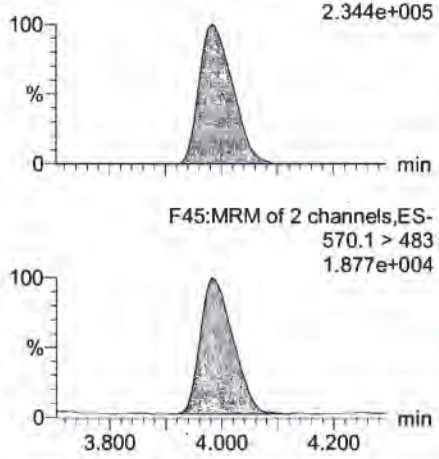
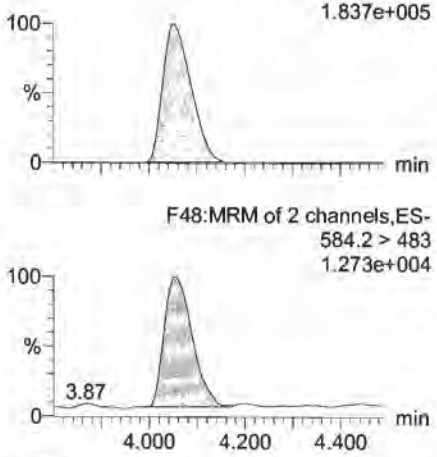
Name: 170728M2_7, Date: 28-Jul-2017, Time: 17:14:14, ID: ST170728M2-6 PFC CS3 17G2829, Description: PFC CS3 17G2829

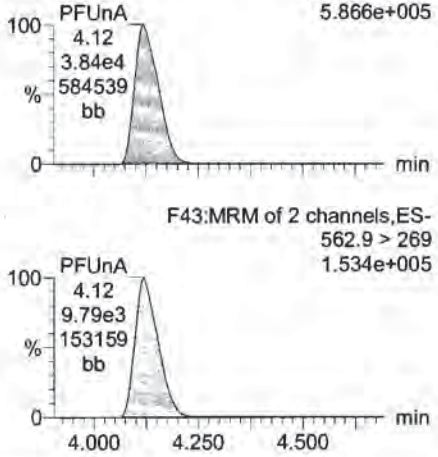
N-MeFOSAA



N-EtFOSAA



PFUnA



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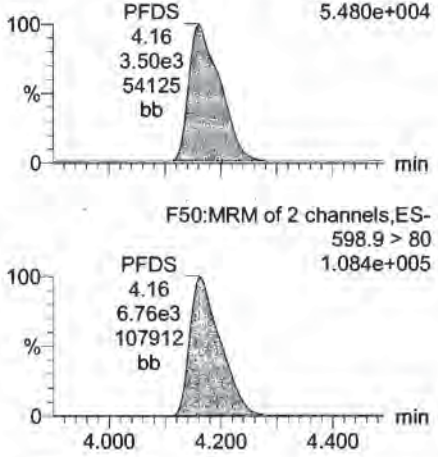

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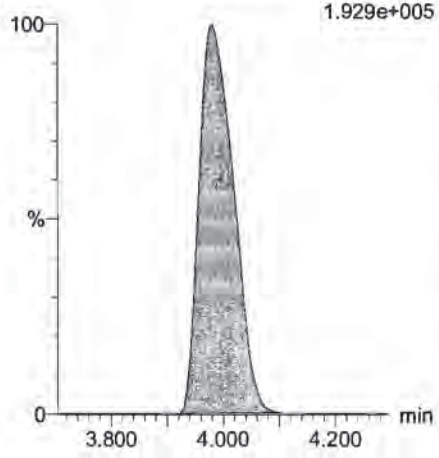
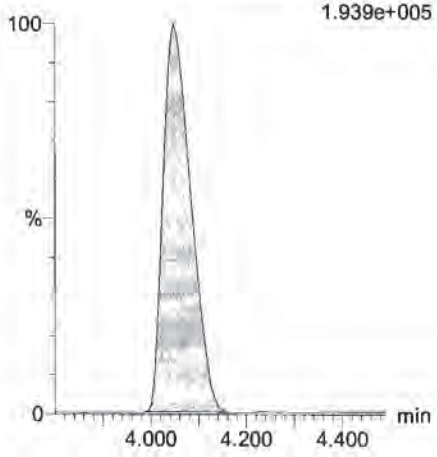
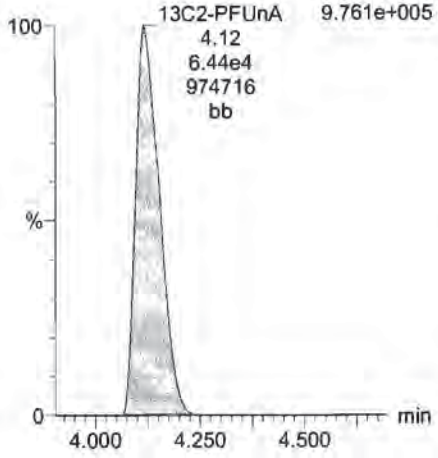


d5-N-EtFOSAA



13C2-PFUnA



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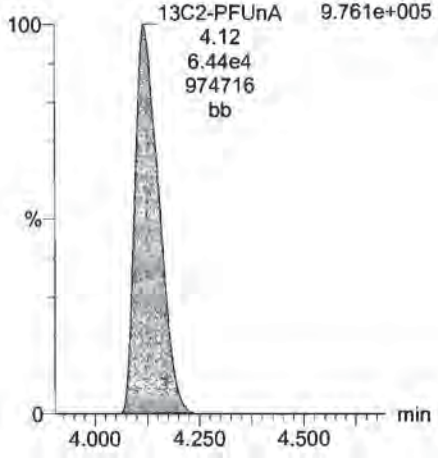
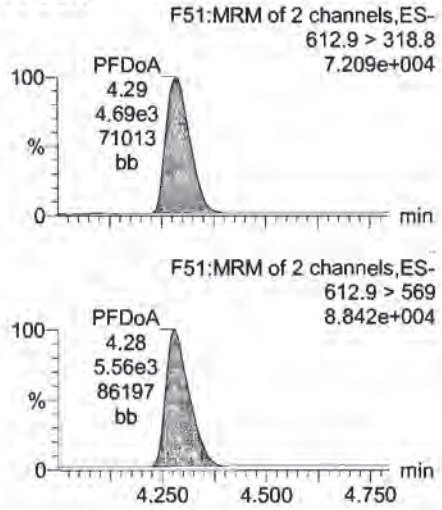


Dataset: U:\Q4.PRO\results\170728M2\170728M2-CRV.qld

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_7, Date: 28-Jul-2017, Time: 17:14:14, ID: ST170728M2-6 PFC CS3 17G2829, Description: PFC CS3 17G2829

PFDoA



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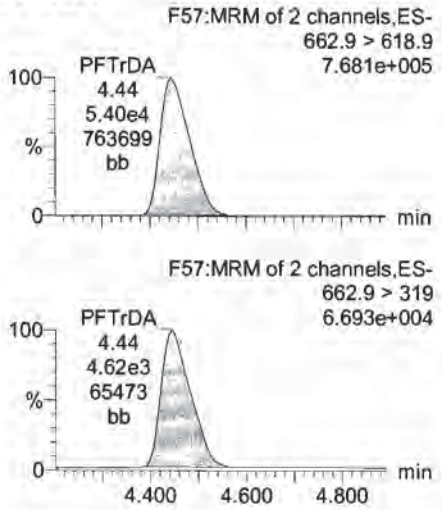

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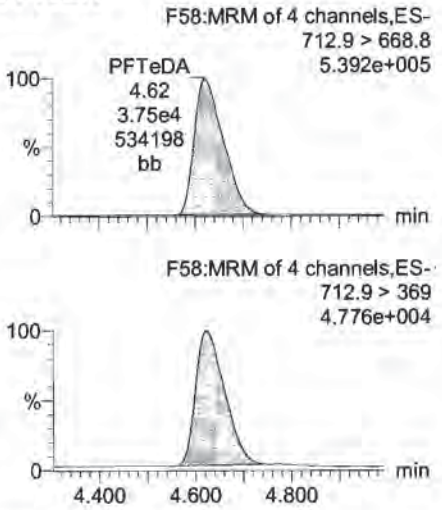
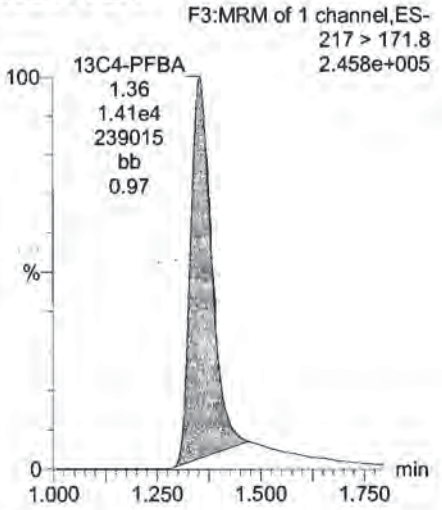


13C4-PFBA



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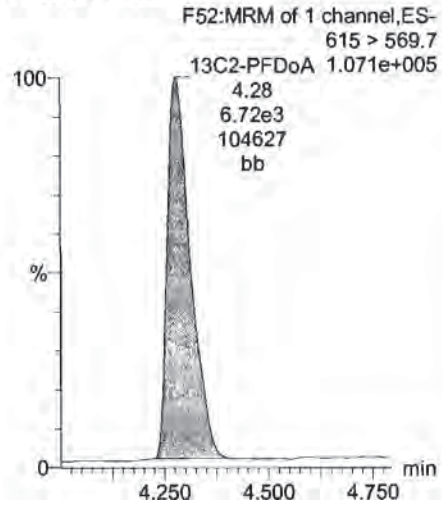

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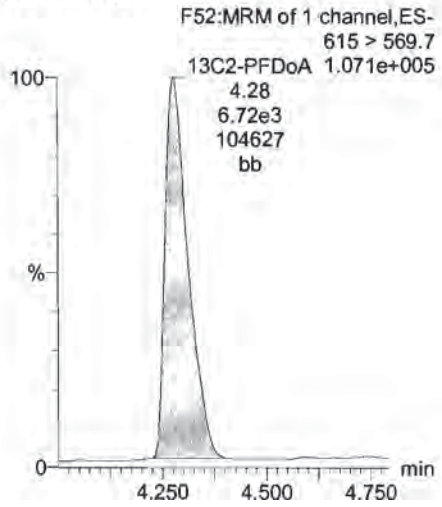

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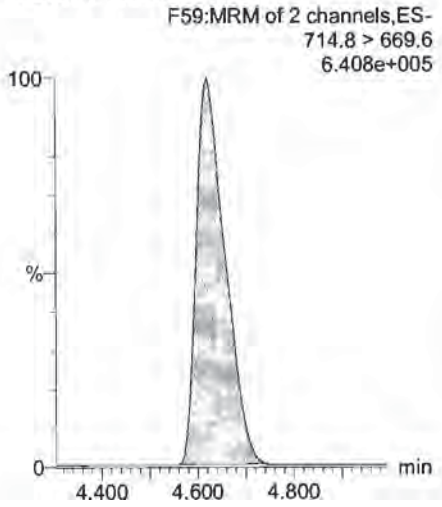
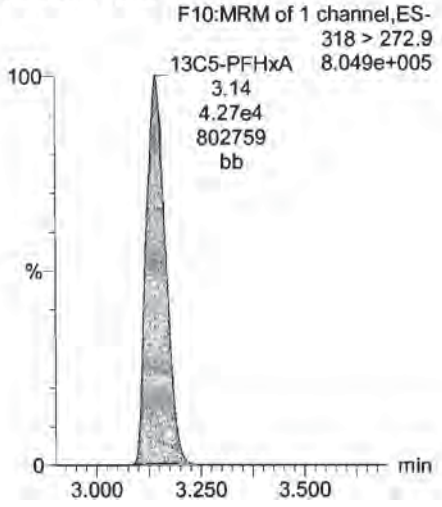


13C5-PFHxA



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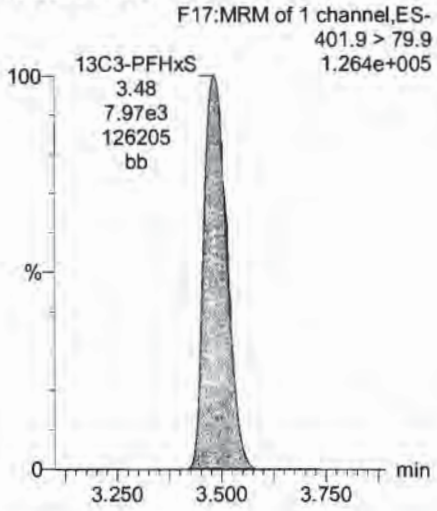
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_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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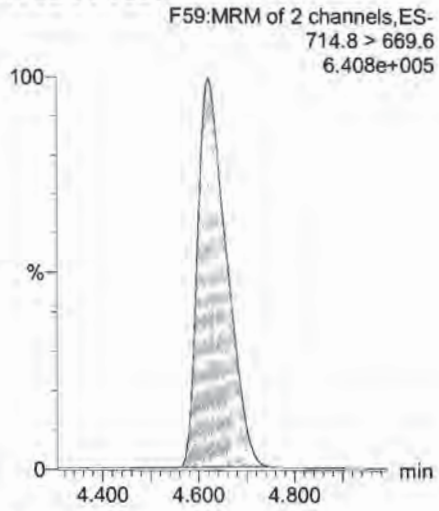

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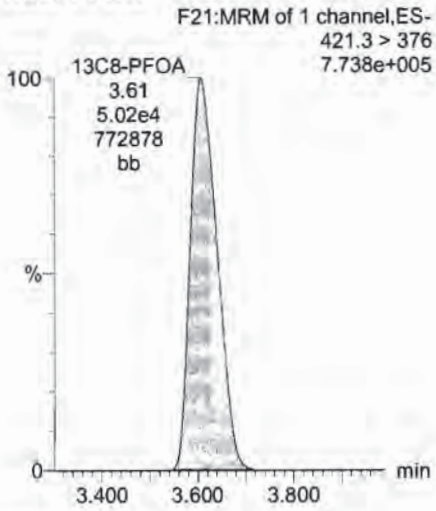
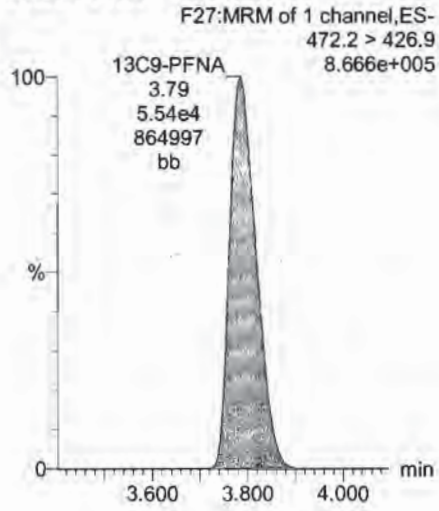
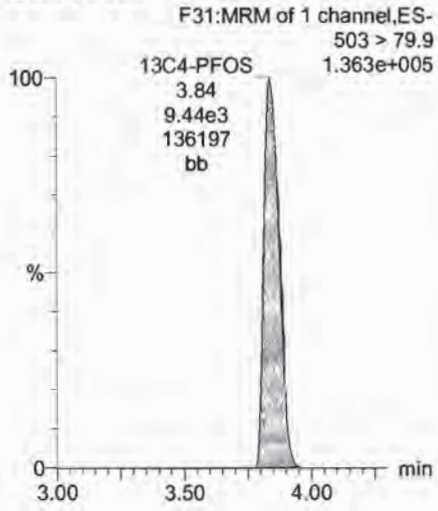


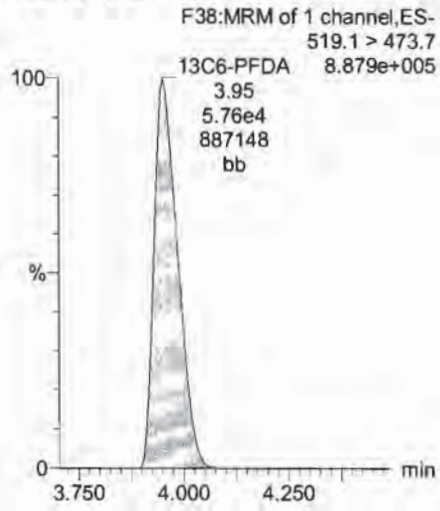
13C9-PFNA



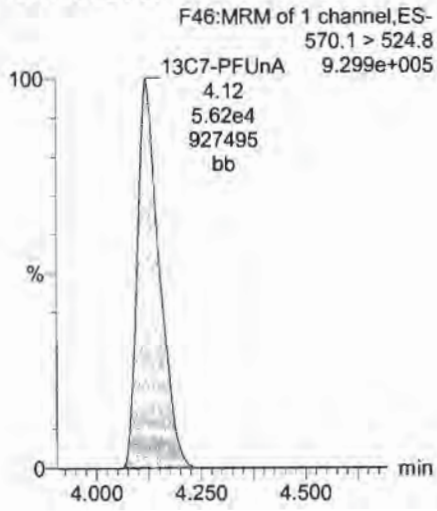
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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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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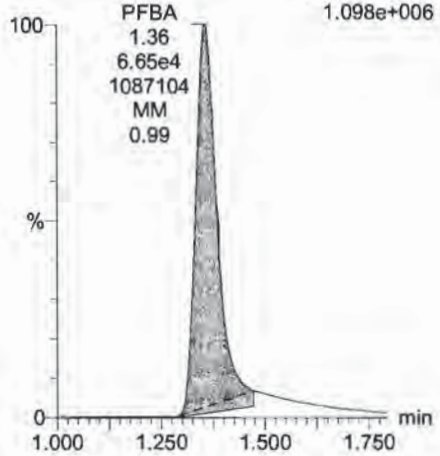

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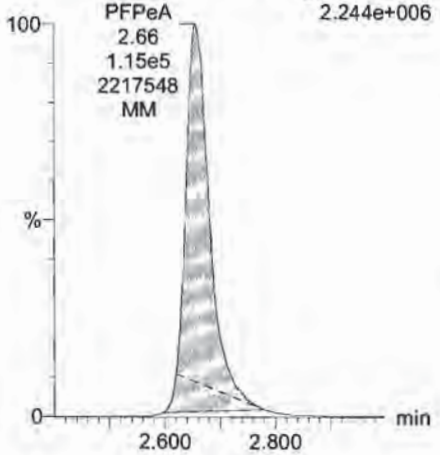

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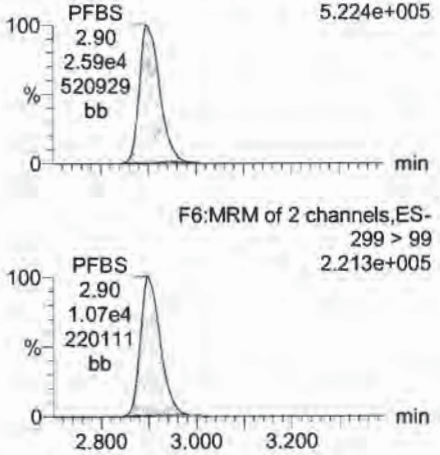

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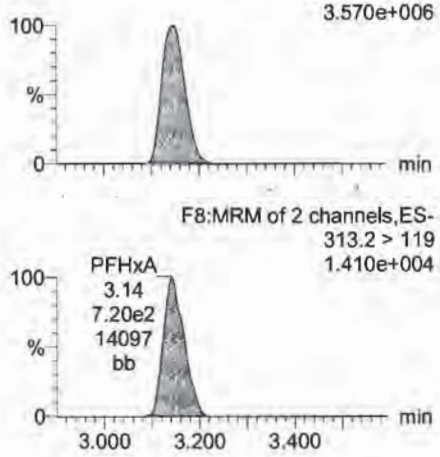

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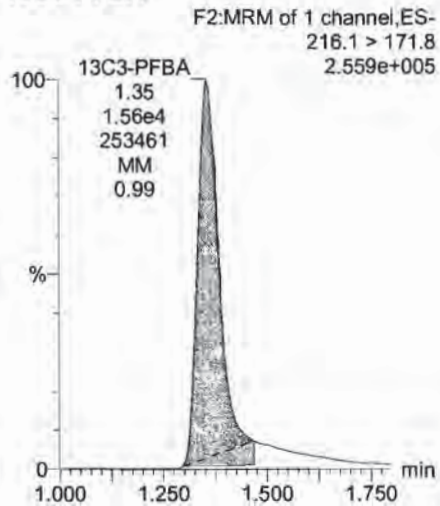

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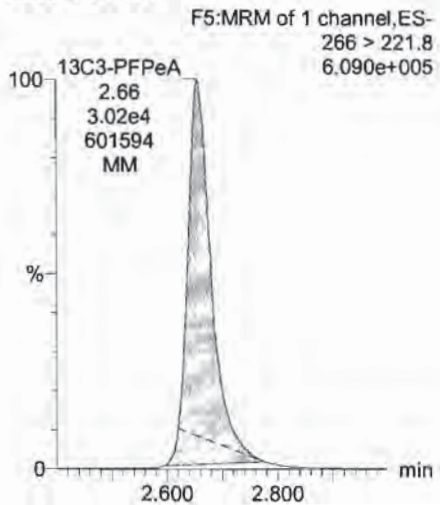

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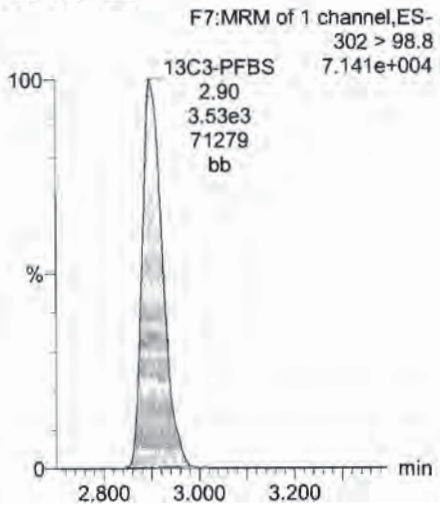

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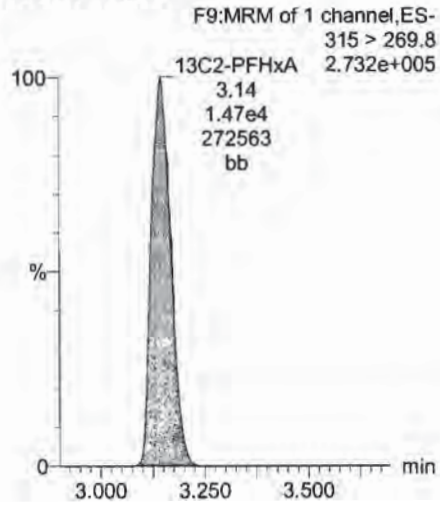

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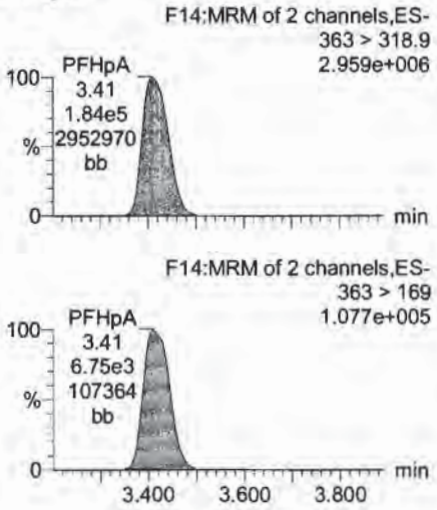
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_8, Date: 28-Jul-2017, Time: 17:24:53, ID: ST170728M2-7 PFC CS4 17G2830, Description: PFC CS4 17G2830

PFHpA



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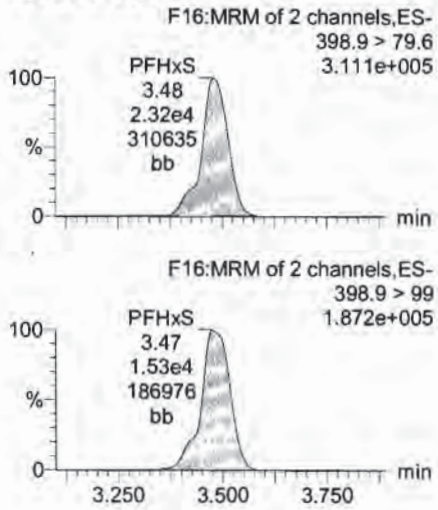

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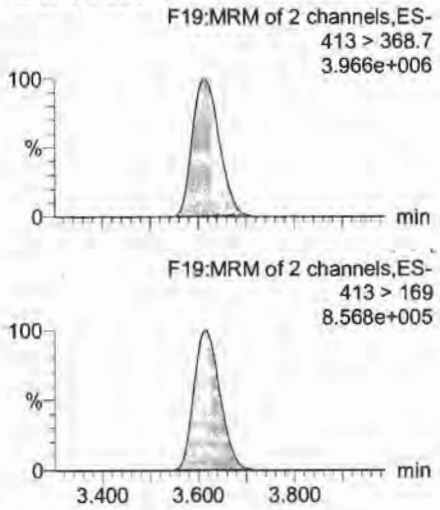
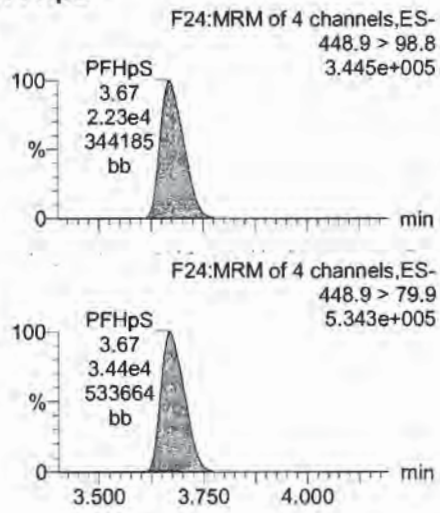
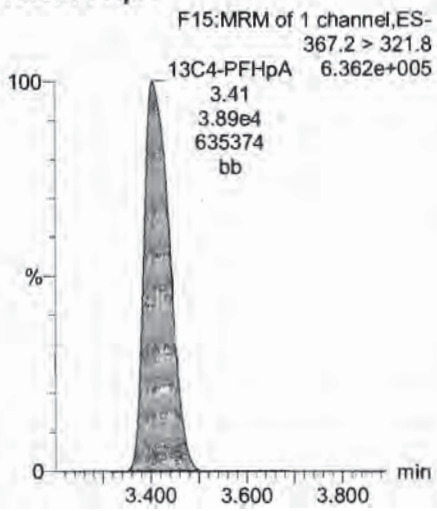


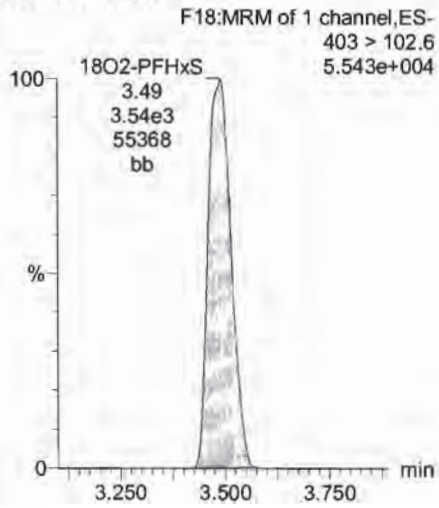
PFHpS



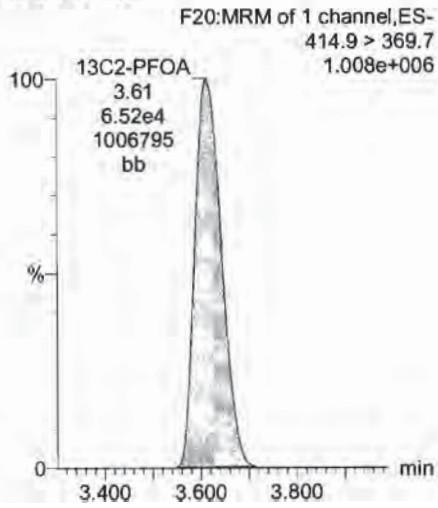
13C4-PFHpA



18O2-PFHxS



13C2-PFOA



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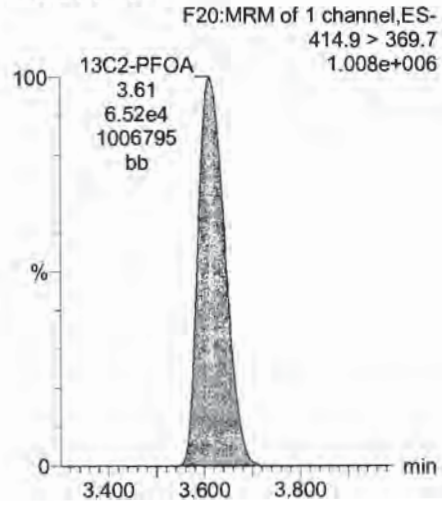

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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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Name: 170728M2_8, Date: 28-Jul-2017, Time: 17:24:53, ID: ST170728M2-7 PFC CS4 17G2830, Description: PFC CS4 17G2830

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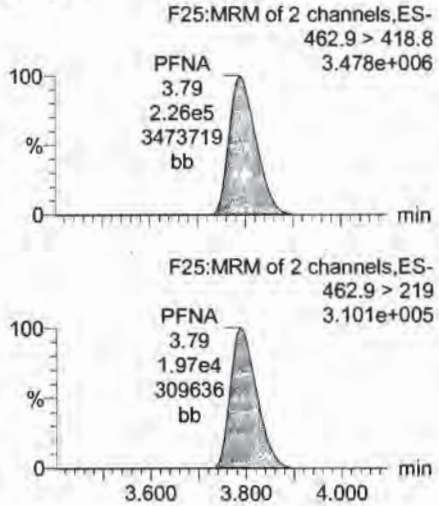
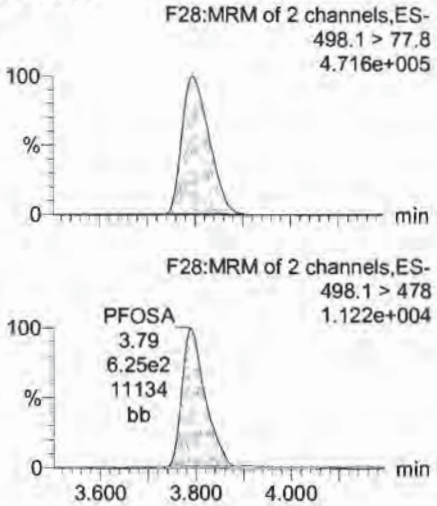


PFOSA



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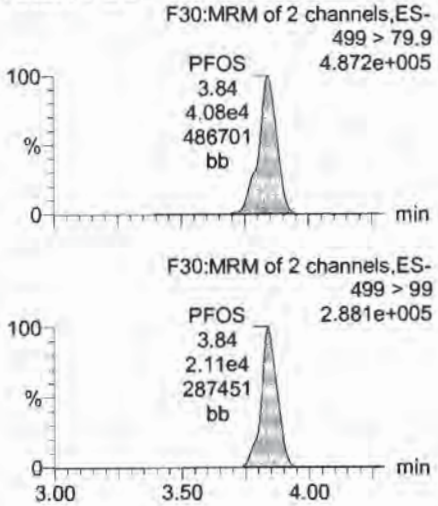
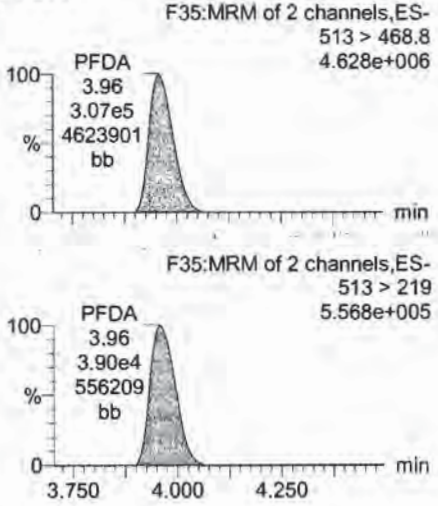


PFDA



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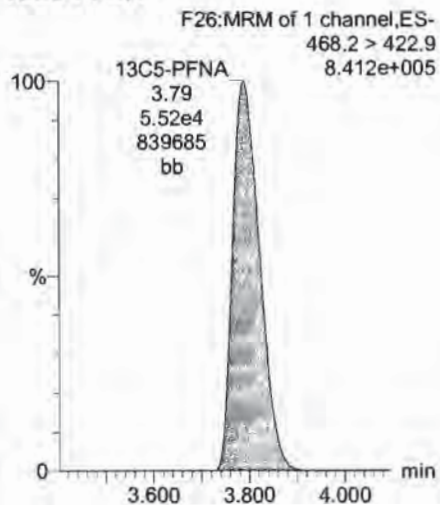
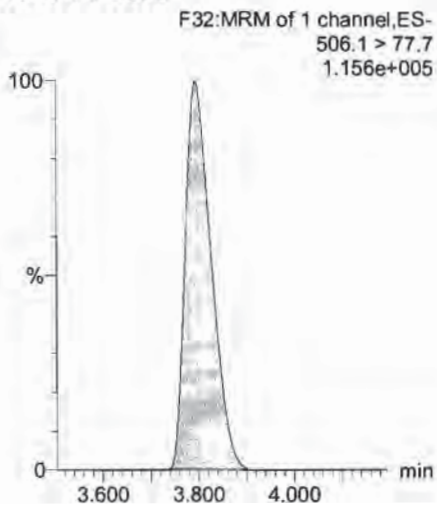


13C8-PFOSA



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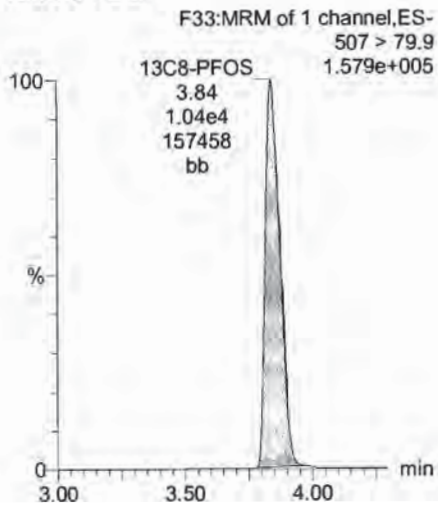
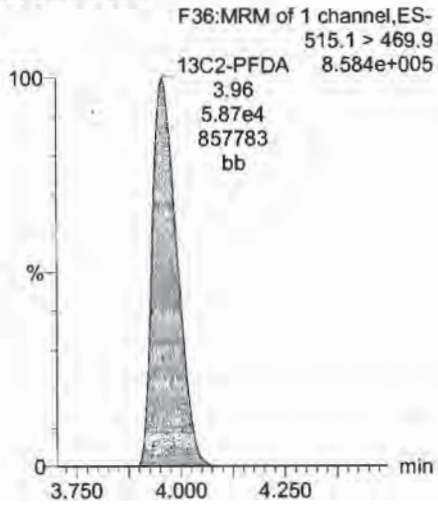


13C2-PFDA



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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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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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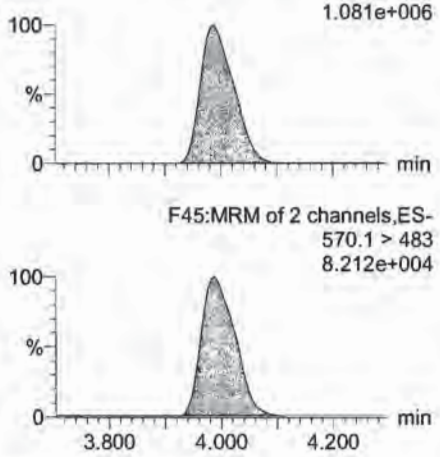

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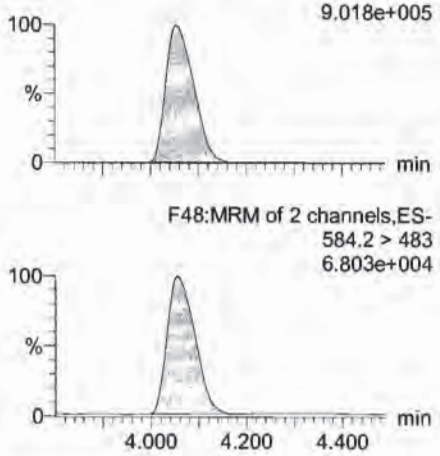
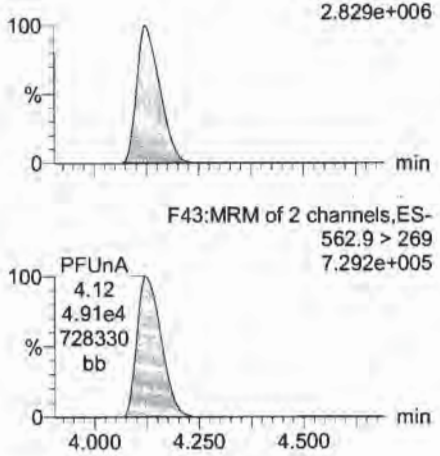


PFUnA



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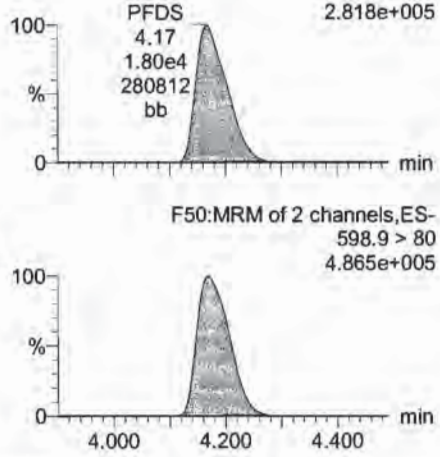

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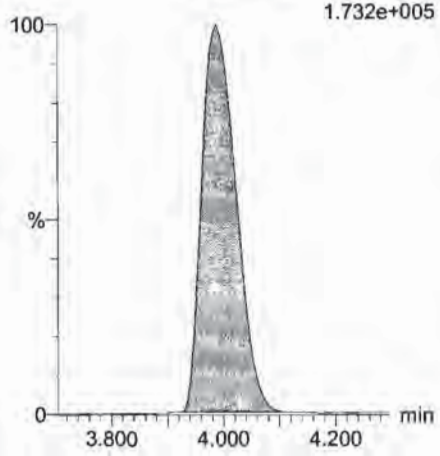
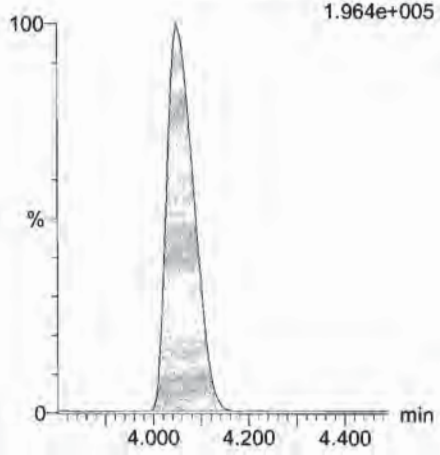
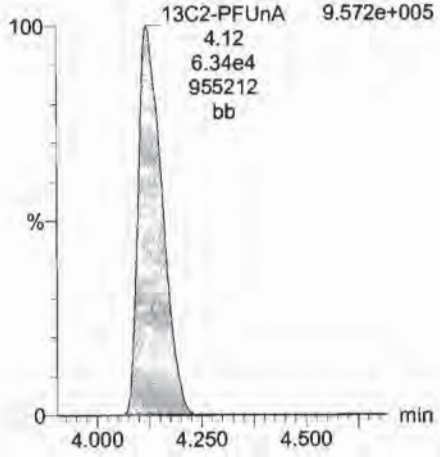


d5-N-EtFOSAA



13C2-PFUnA



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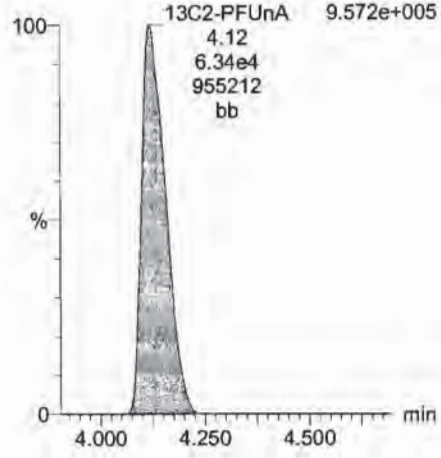

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Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
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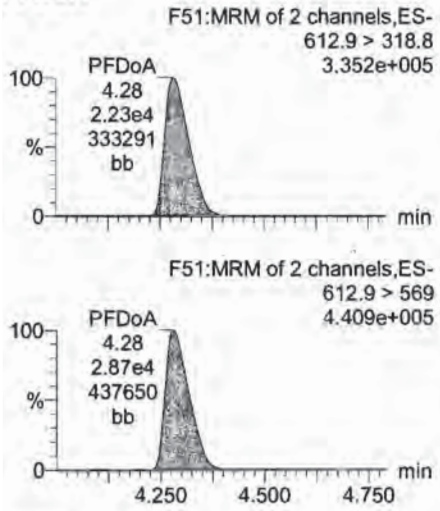
Name: 170728M2_8, Date: 28-Jul-2017, Time: 17:24:53, ID: ST170728M2-7 PFC CS4 17G2830, Description: PFC CS4 17G2830

PFDoA



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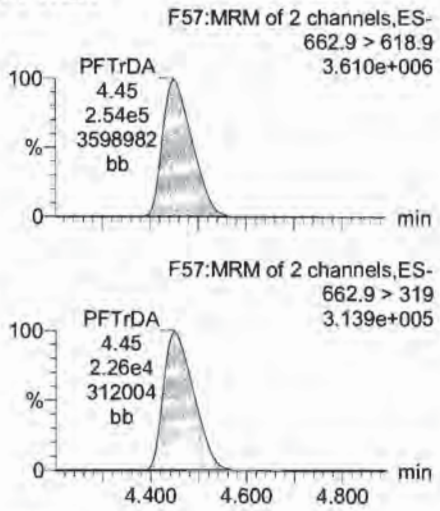
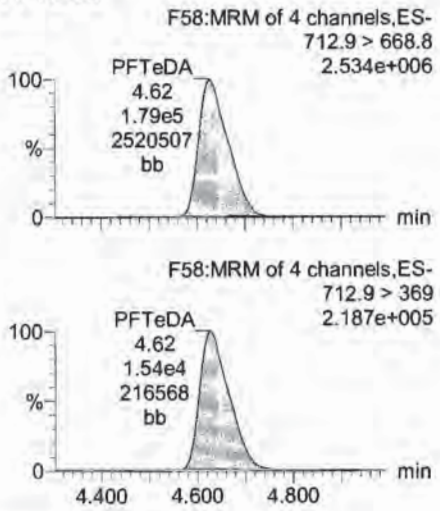
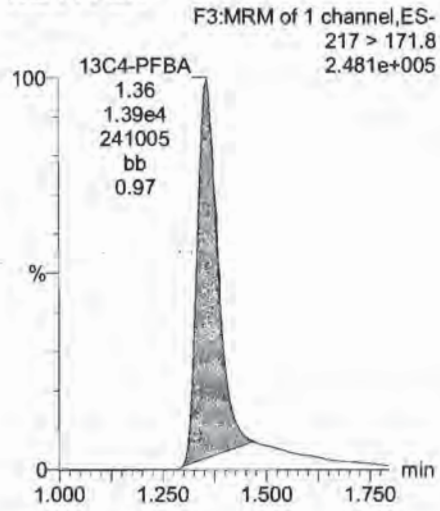


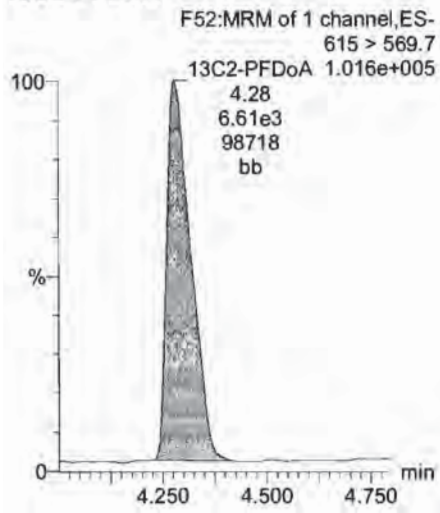
PFTeDA



13C4-PFBA



13C2-PFDoA



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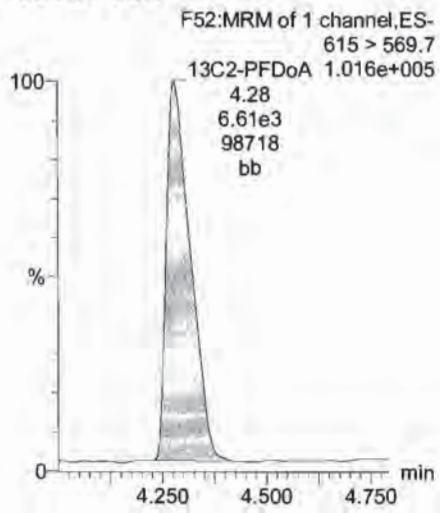

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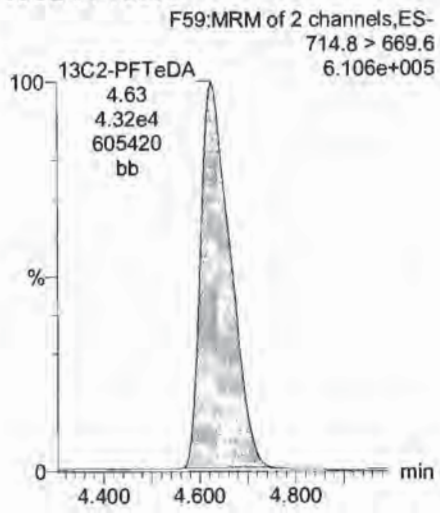
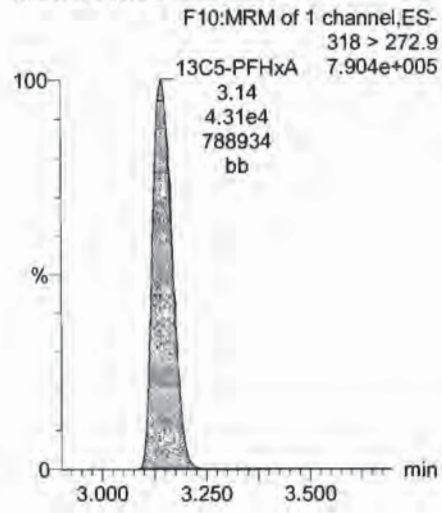


13C5-PFHxA



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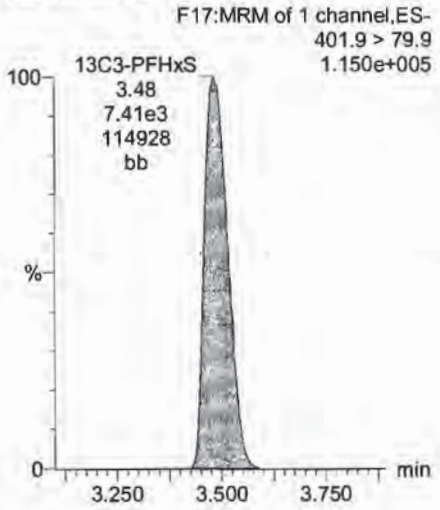
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_8, Date: 28-Jul-2017, Time: 17:24:53, ID: ST170728M2-7 PFC CS4 17G2830, Description: PFC CS4 17G2830

13C3-PFHxS



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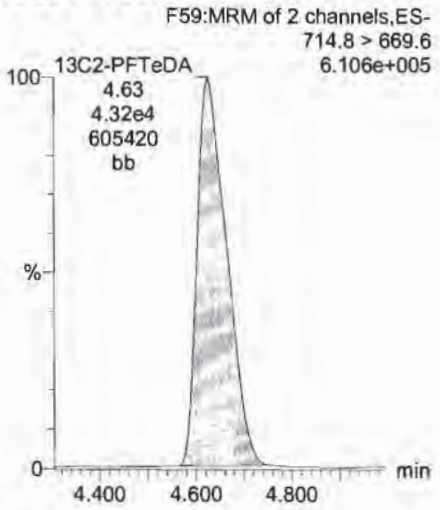
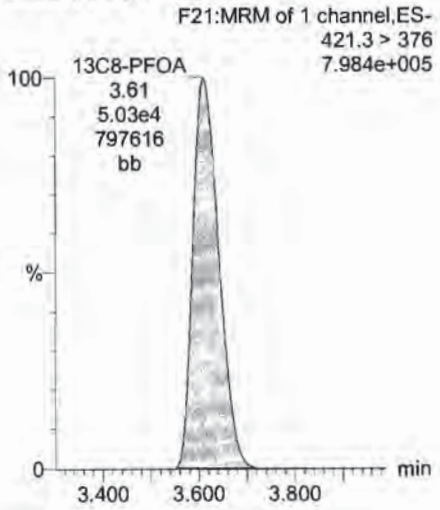
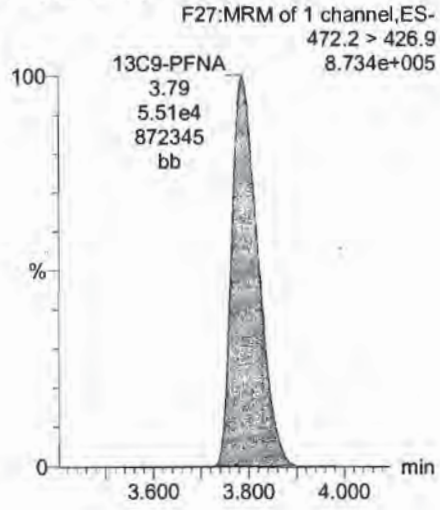


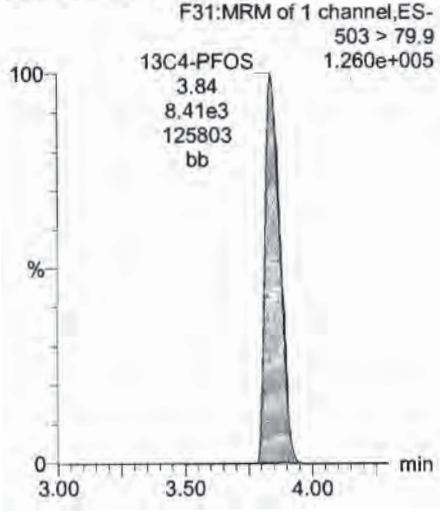
13C8-PFOA



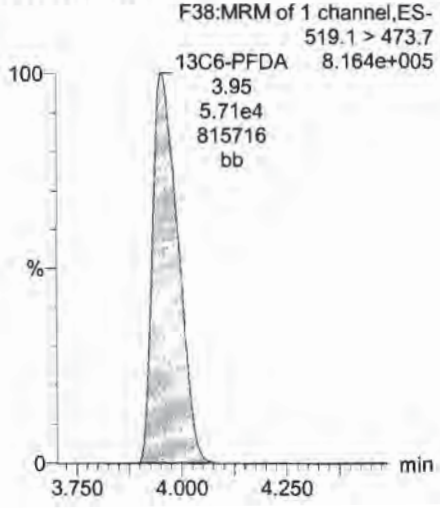
13C9-PFNA



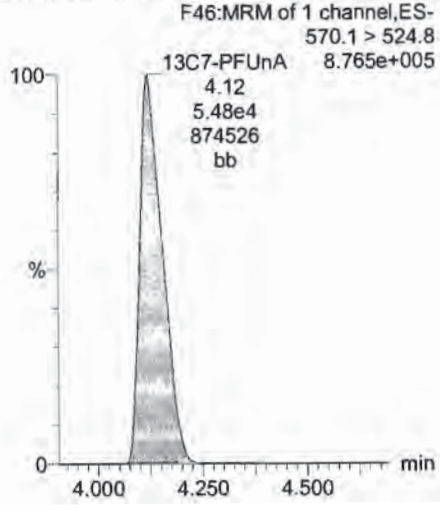
13C4-PFOS



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

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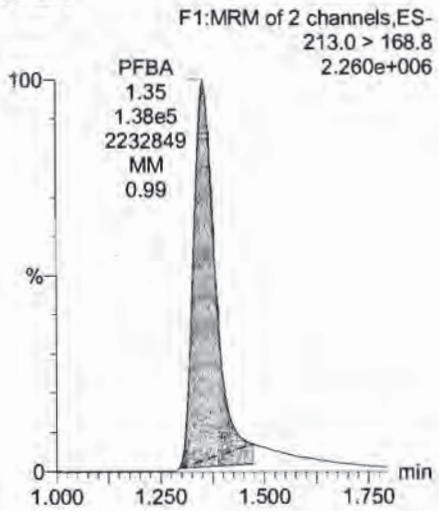
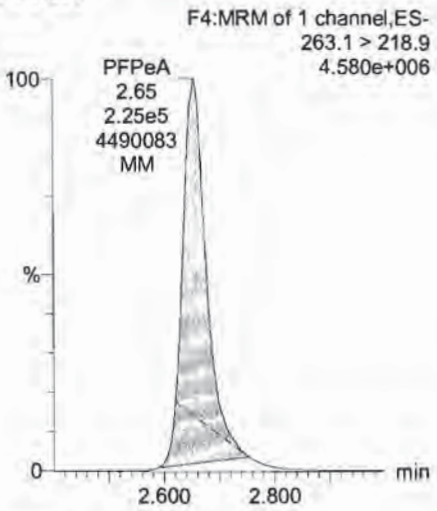


PFPeA



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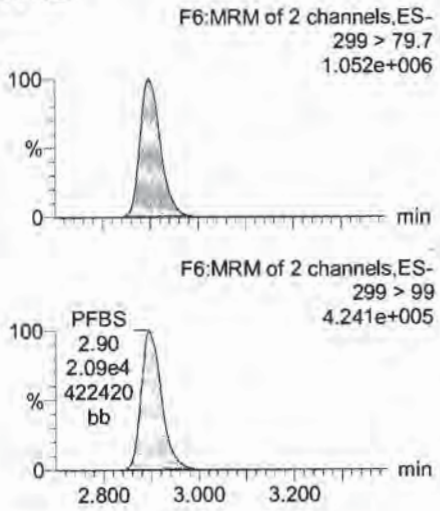
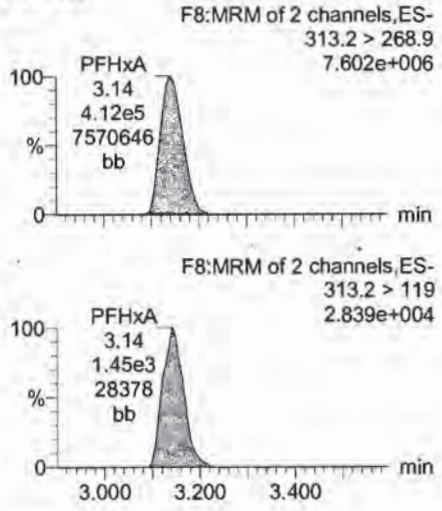


PFHxA



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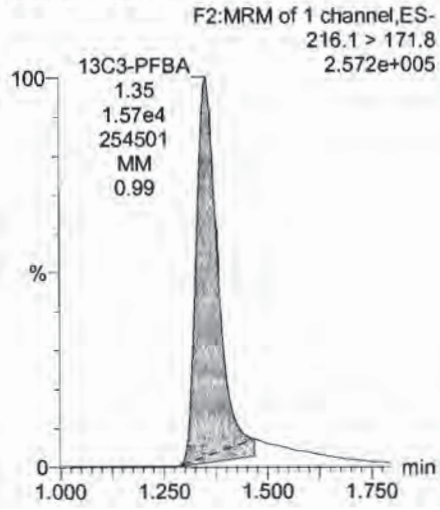

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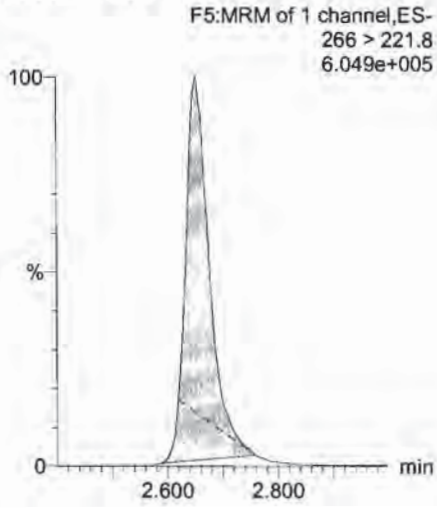

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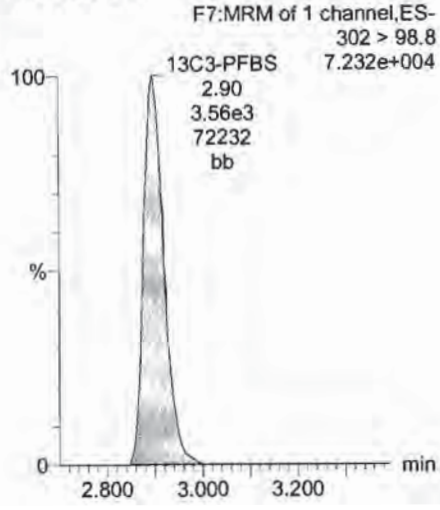
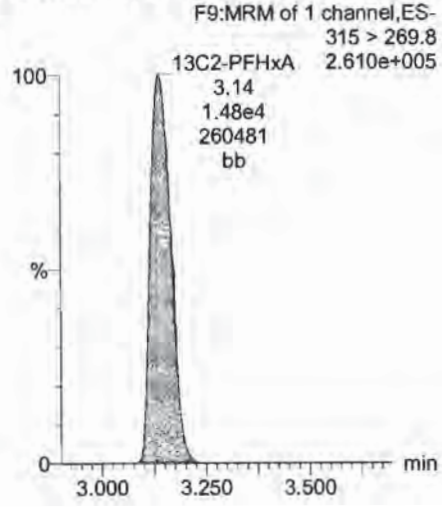


13C2-PFHxA



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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

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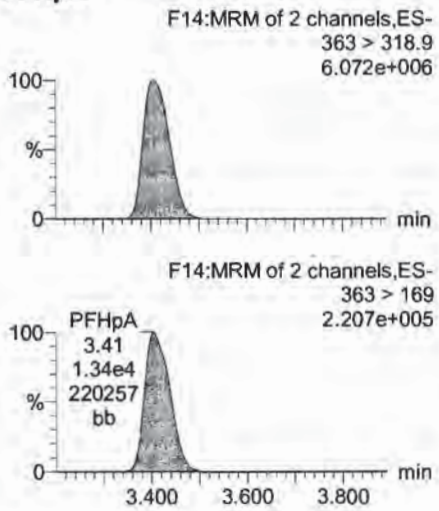

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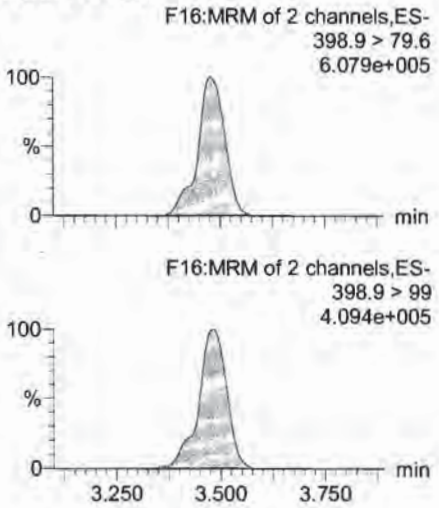

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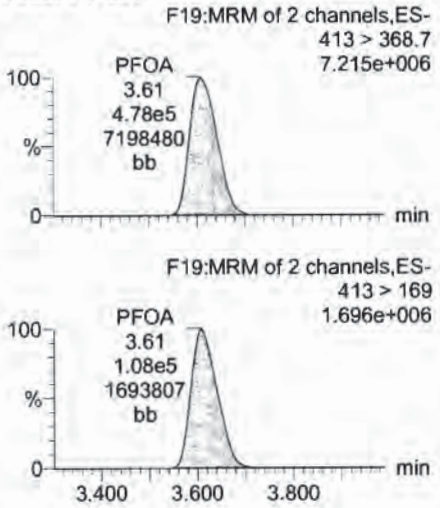
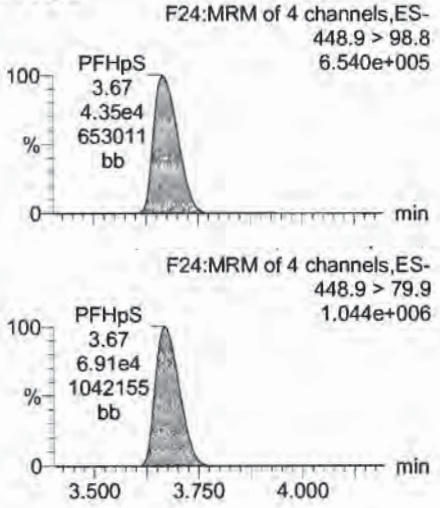


PFHpS



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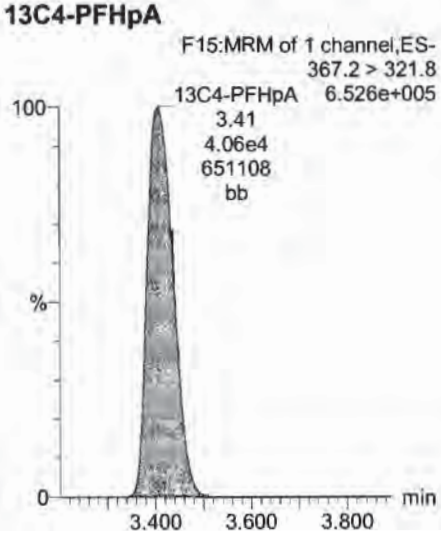
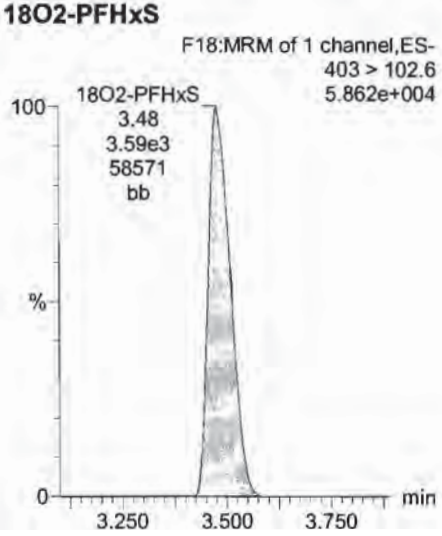
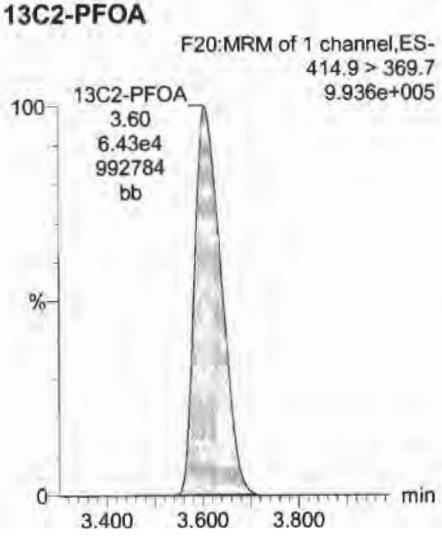


18O2-PFHxS



13C2-PFOA



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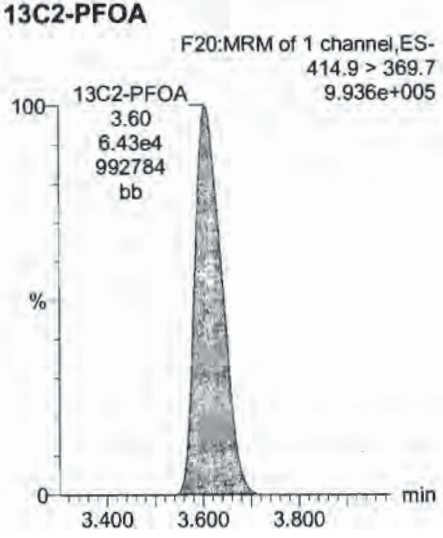

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Name: 170728M2_9, Date: 28-Jul-2017, Time: 17:35:31, ID: ST170728M2-8 PFC CS5 17G2831, Description: PFC CS5 17G2831

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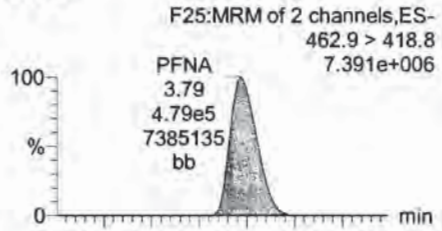
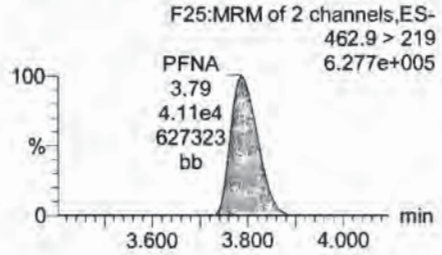
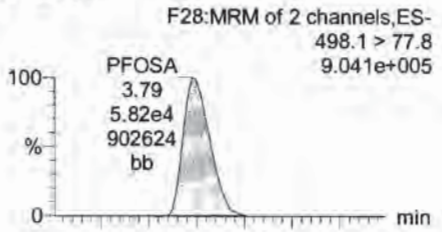
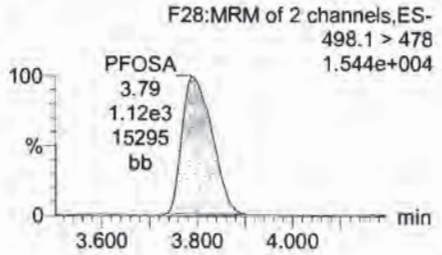


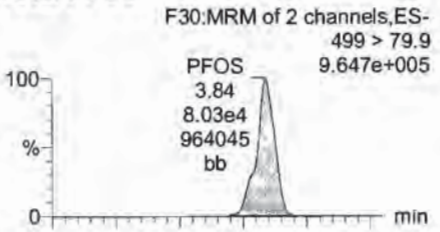


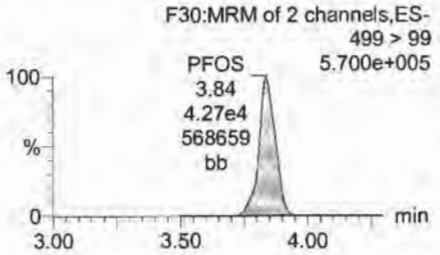
PFOSA



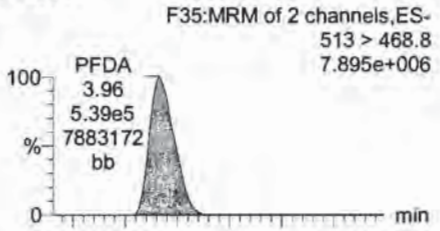


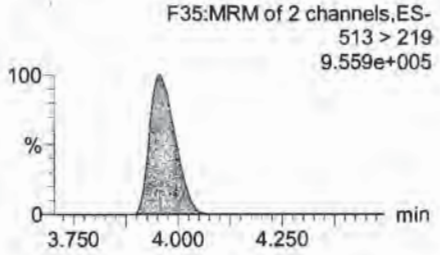
Total PFOS



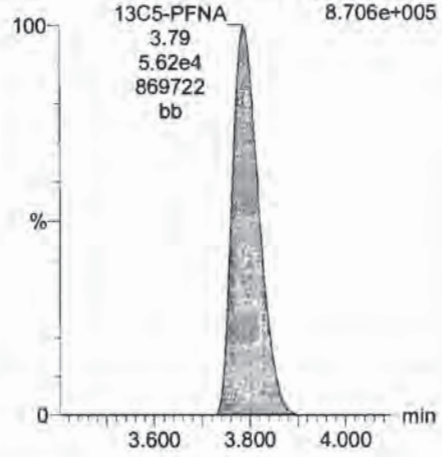


PFDA

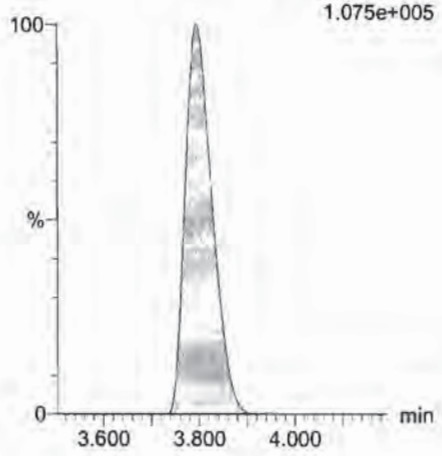




13C5-PFNA



13C8-PFOSA



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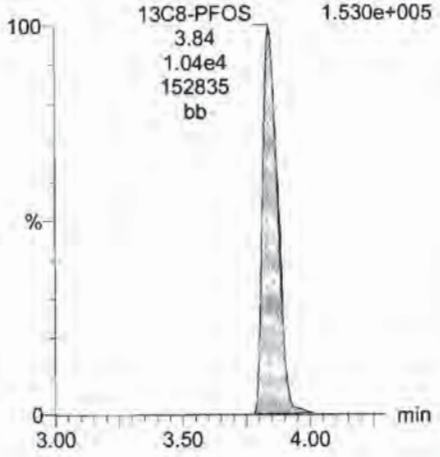
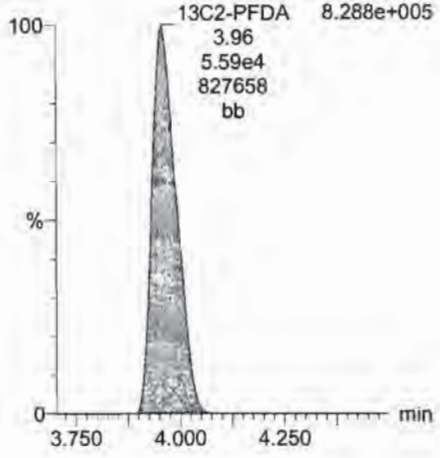


13C2-PFDA



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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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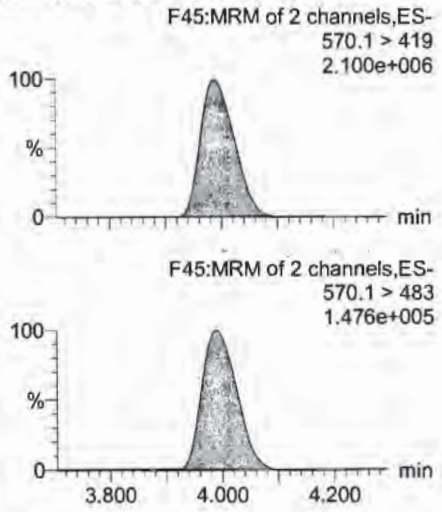

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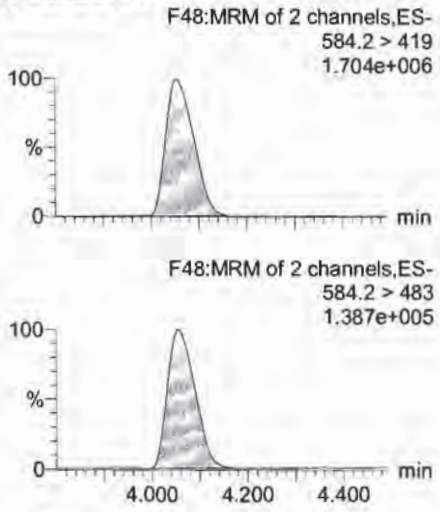
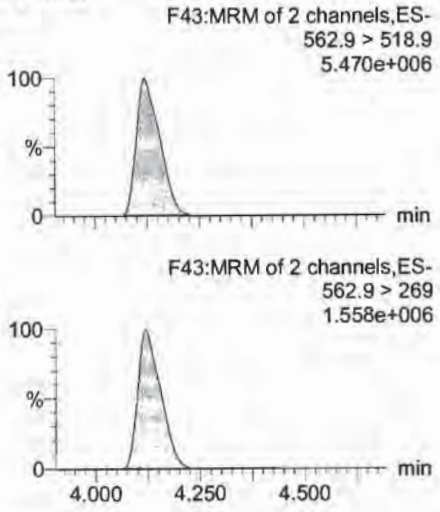


PFUnA



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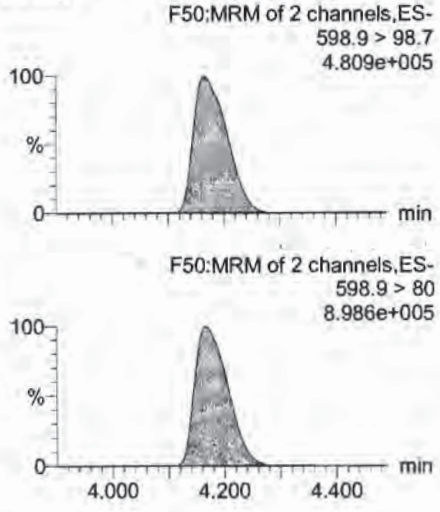
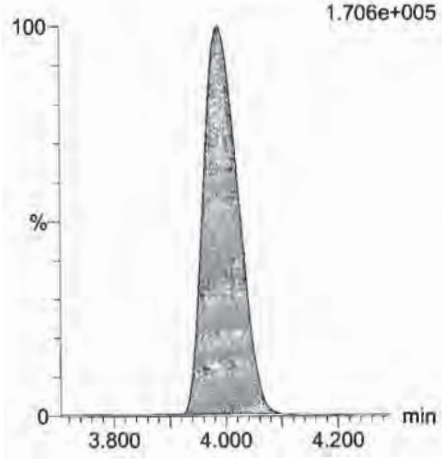
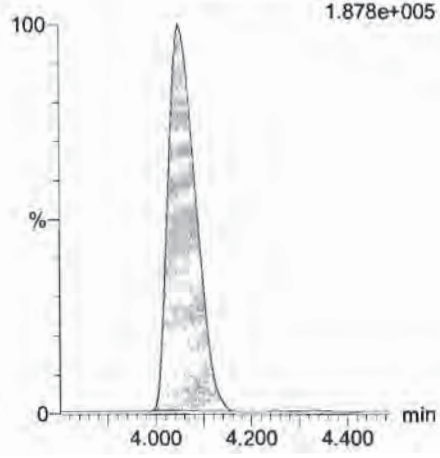


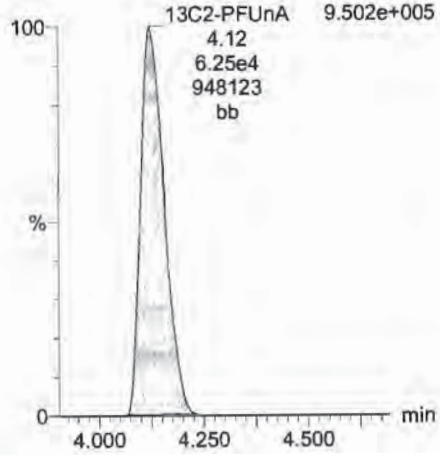
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFUnA



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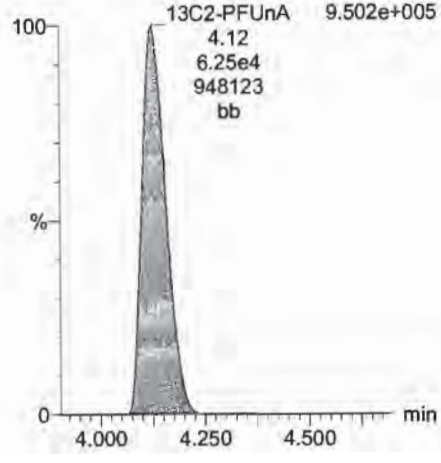

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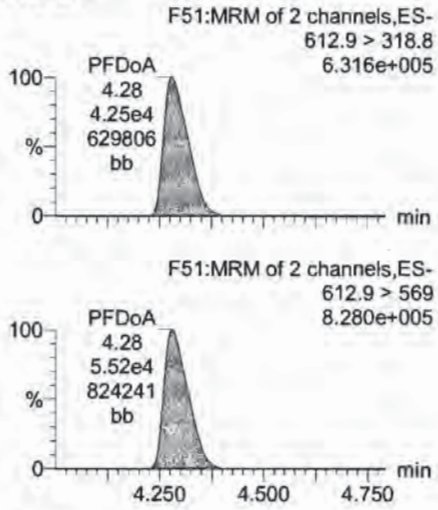
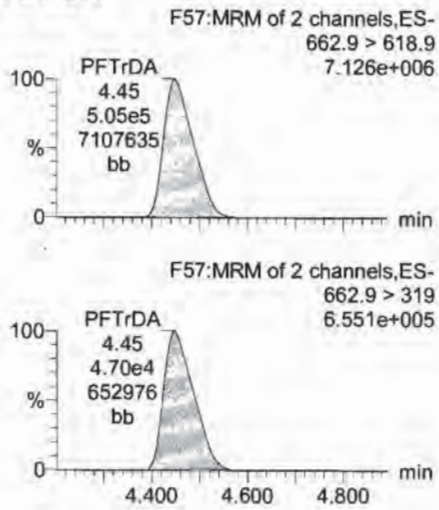
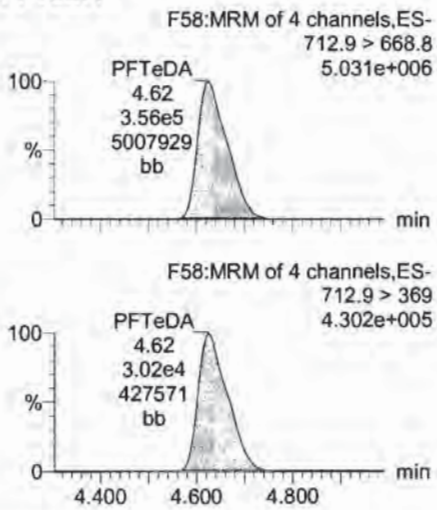


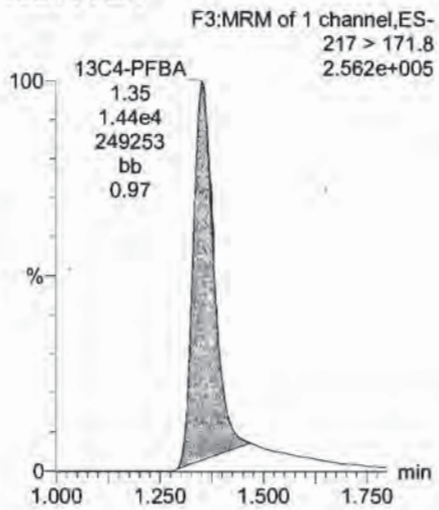
PFTrDA



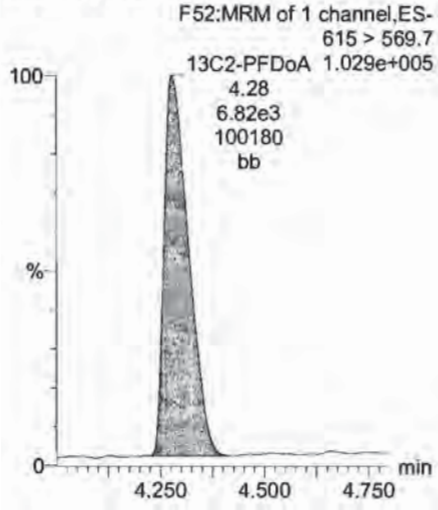
PFTeDA



13C4-PFBA



13C2-PFDoA



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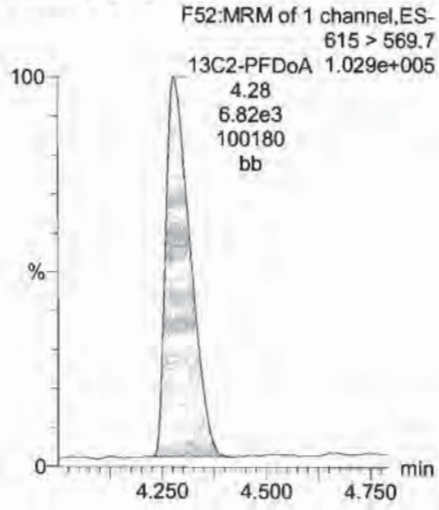

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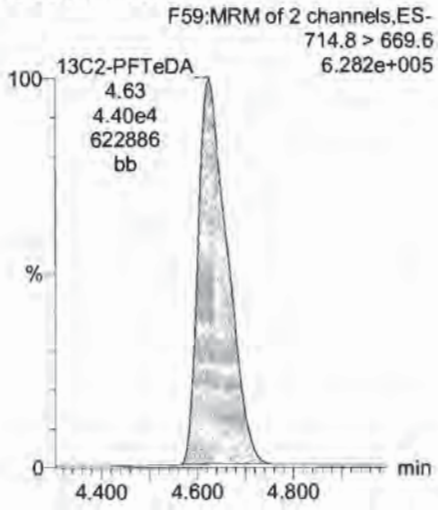
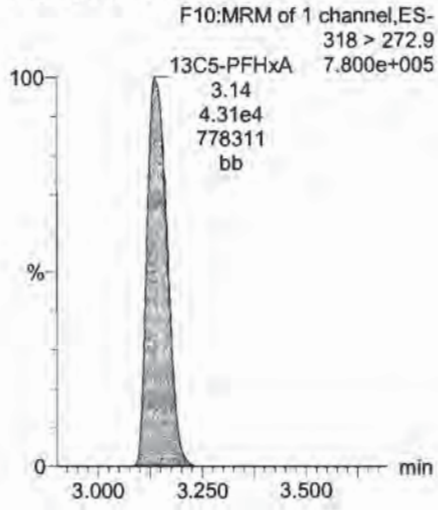


13C5-PFHxA



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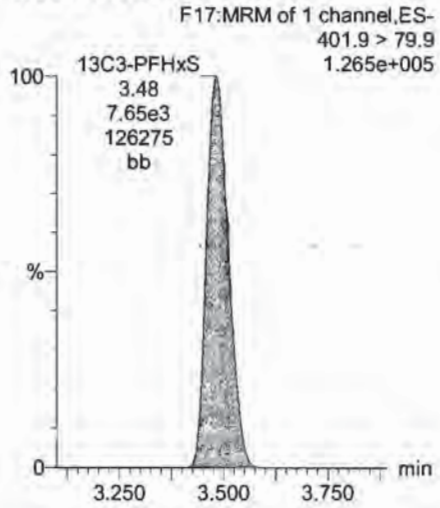
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_9, Date: 28-Jul-2017, Time: 17:35:31, ID: ST170728M2-8 PFC CS5 17G2831, Description: PFC CS5 17G2831

13C3-PFHxS



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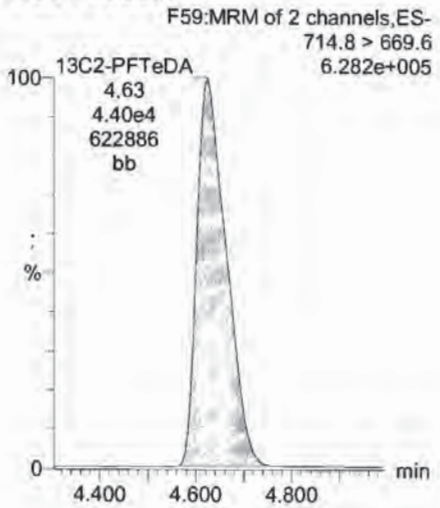
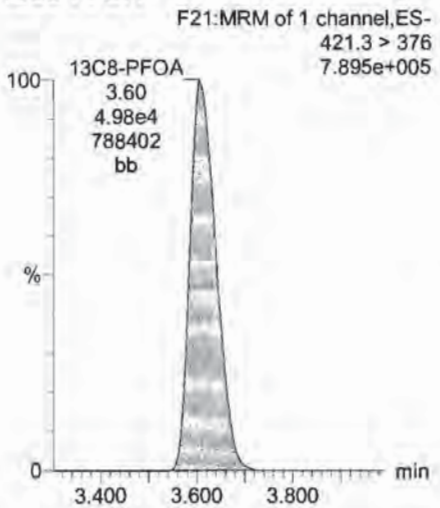
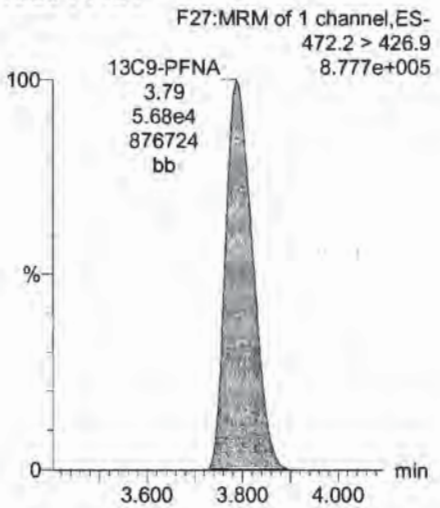


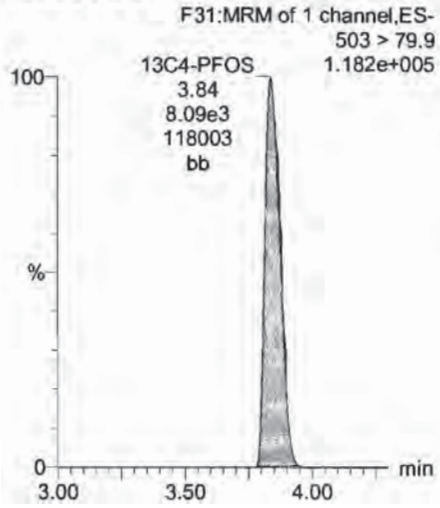
13C8-PFOA



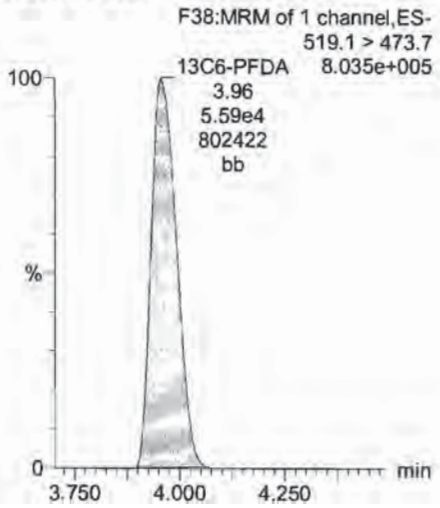
13C9-PFNA



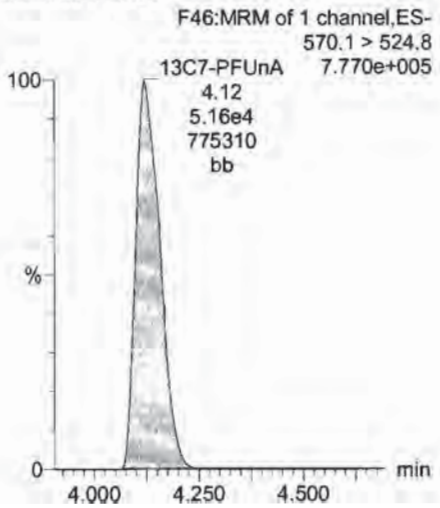
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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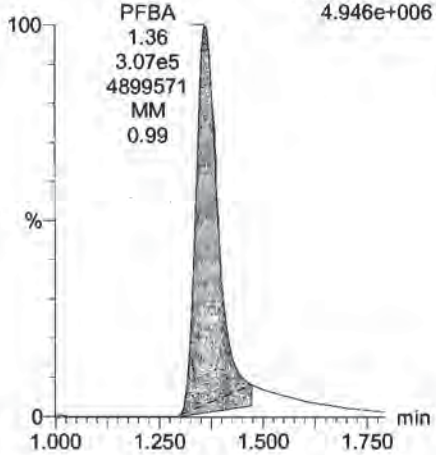
Last Altered: Sunday, July 30, 2017 08:05:03 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

PFBA



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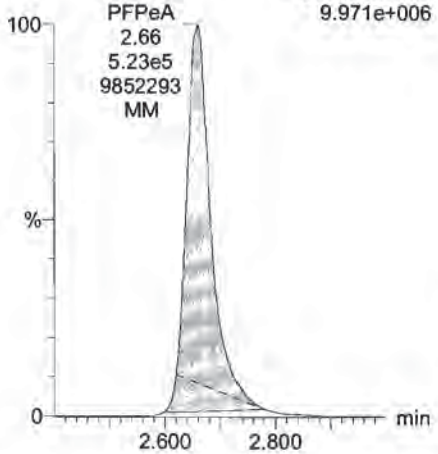
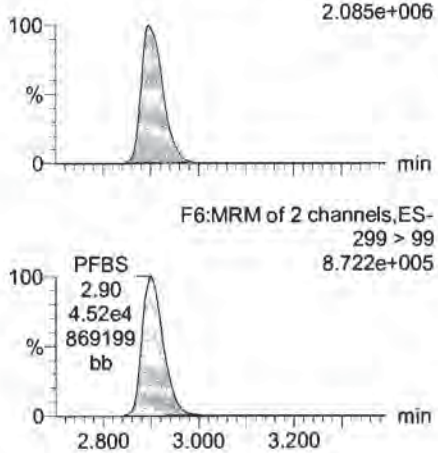


PFBS



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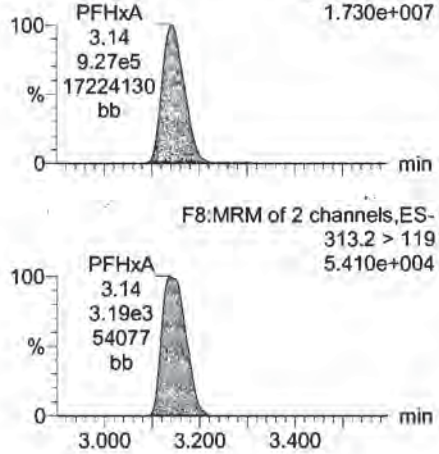

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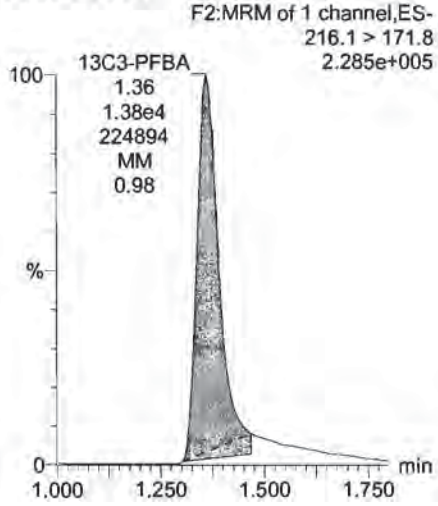

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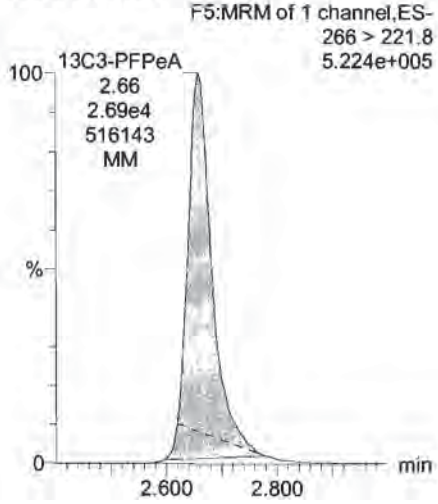
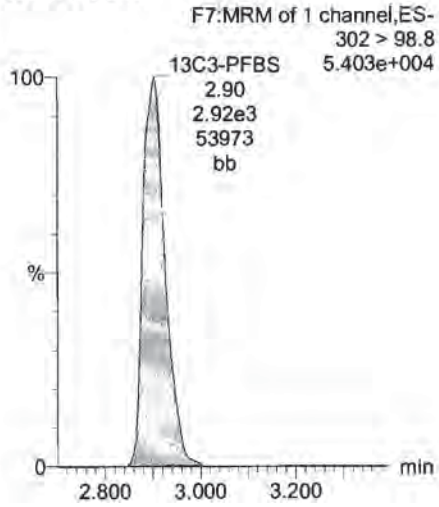


13C3-PFBS



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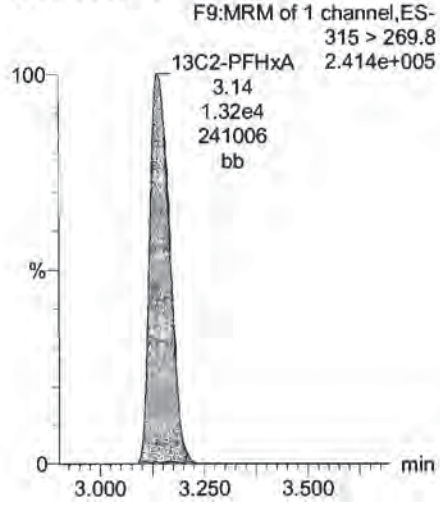

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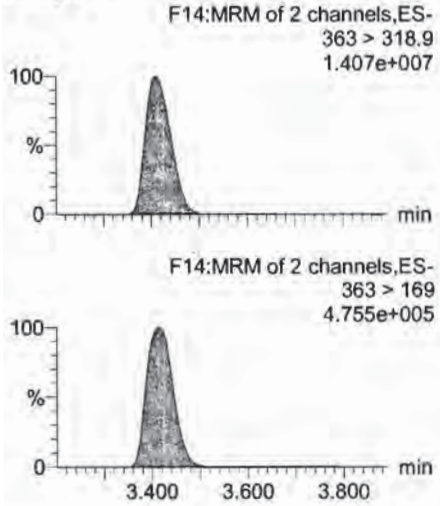
Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

PFHpA



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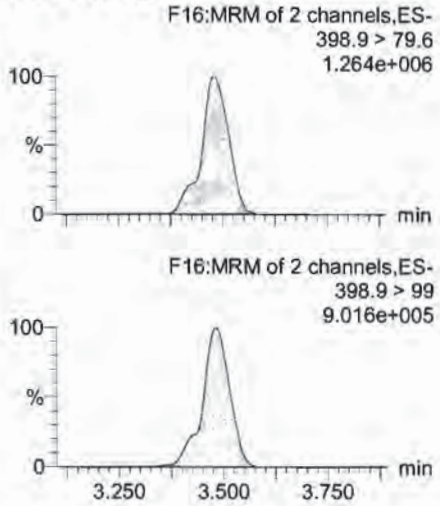
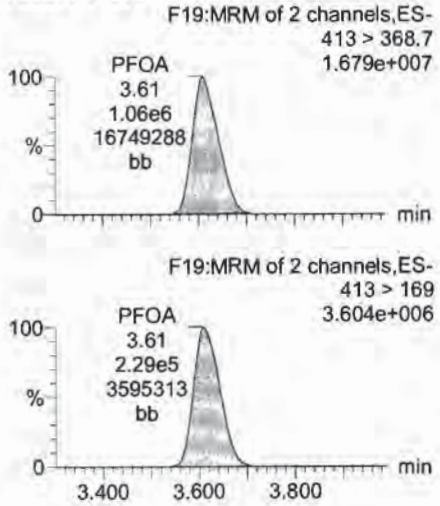
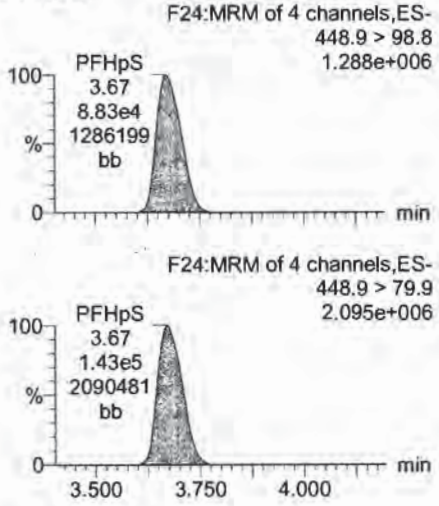


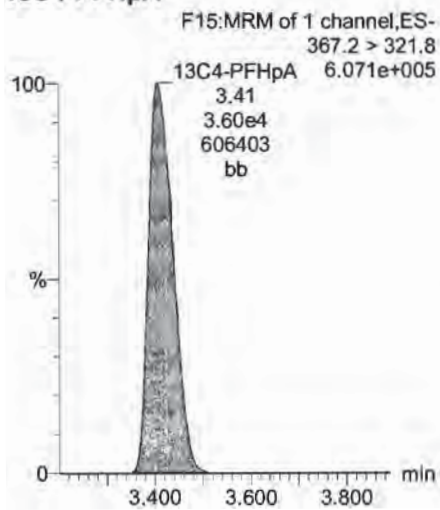
Total PFOA



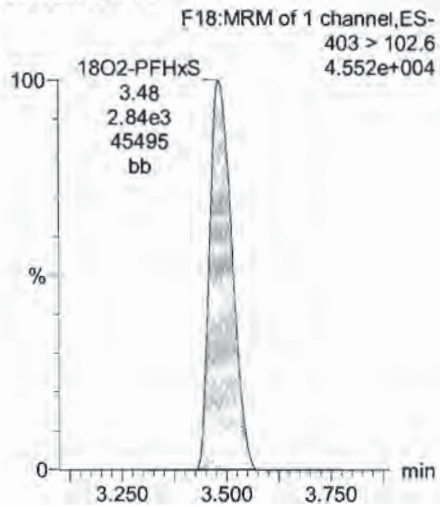
PFHpS



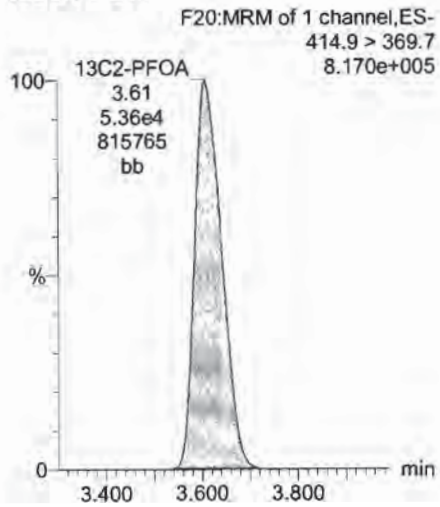
13C4-PFHpA



18O2-PFHxS



13C2-PFOA



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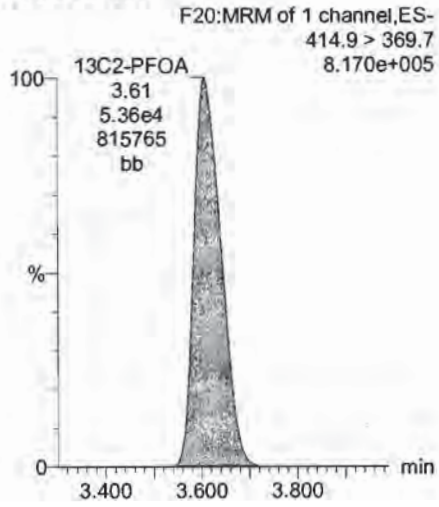

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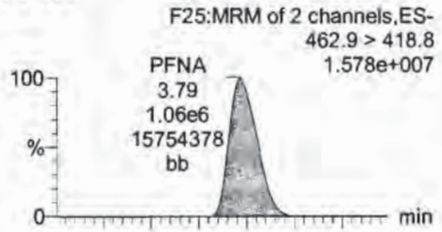
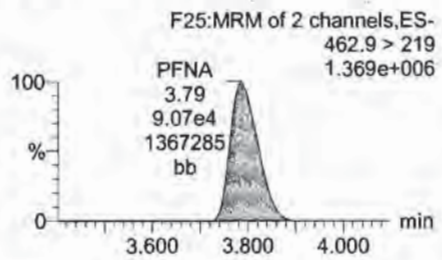
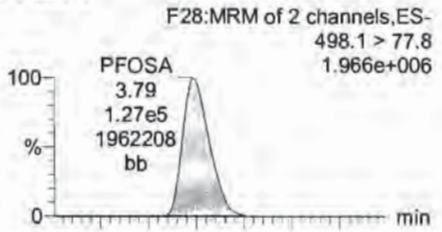
Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

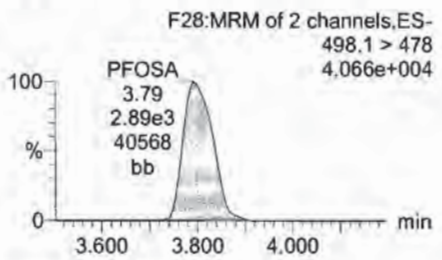
PFNA





PFOSA





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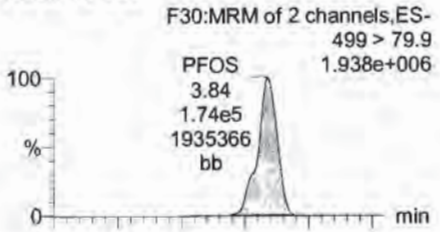

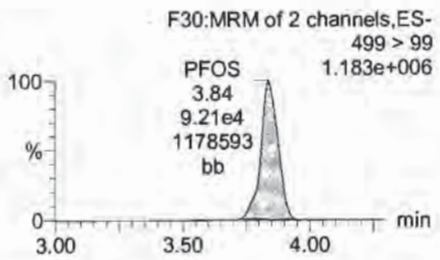

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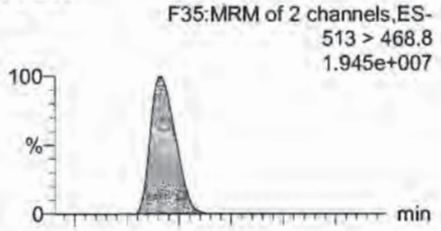
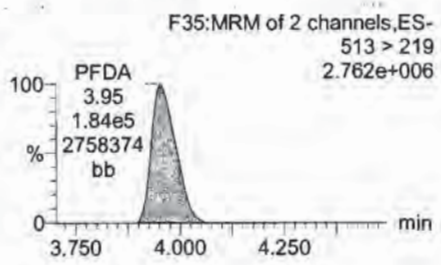
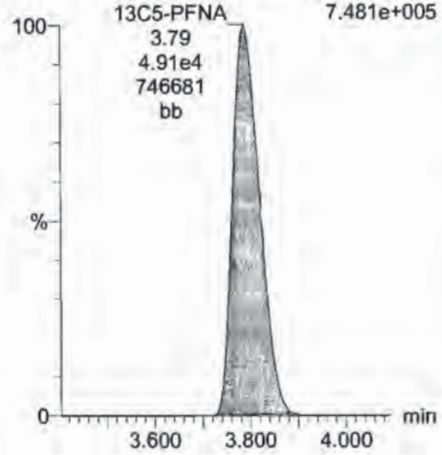
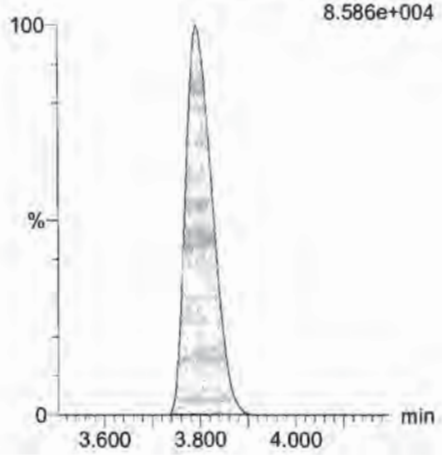




13C5-PFNA



13C8-PFOSA



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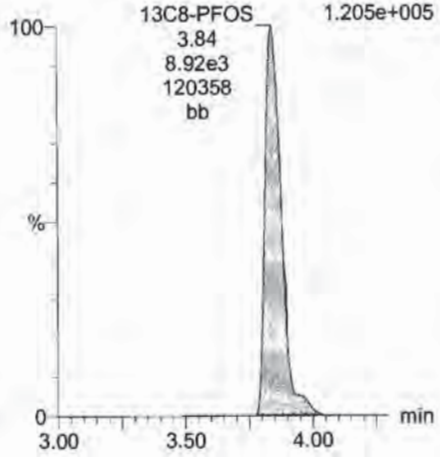
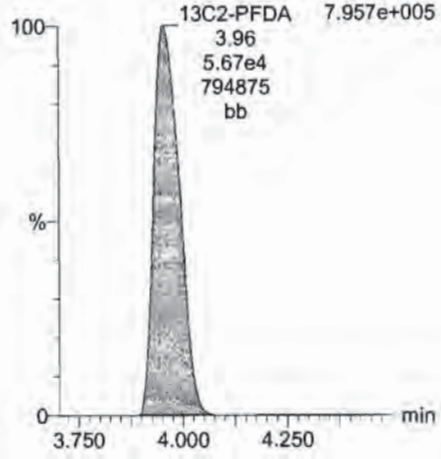


13C2-PFDA



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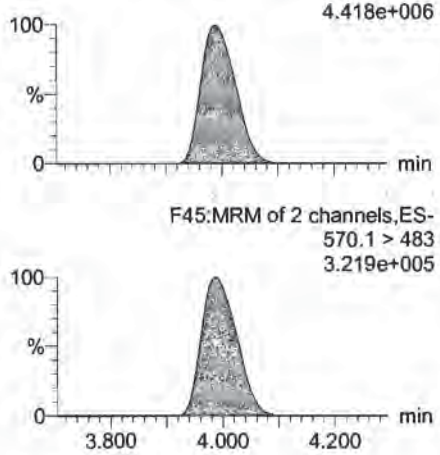
Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

N-MeFOSAA



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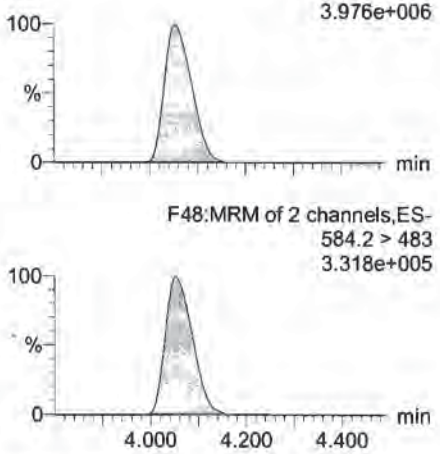
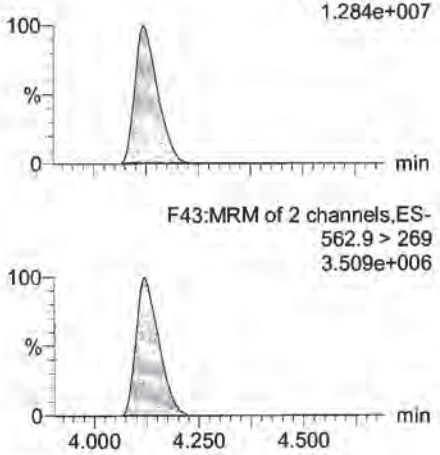


PFUnA



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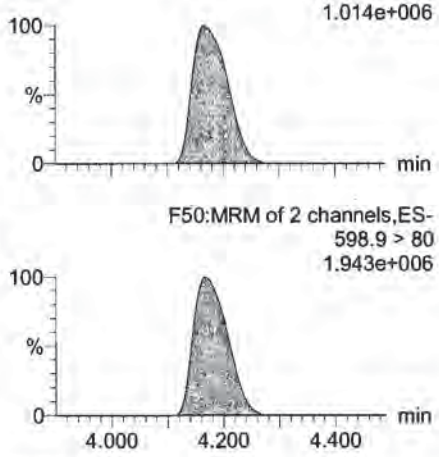

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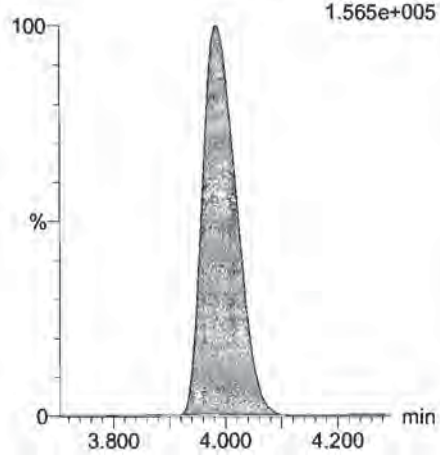

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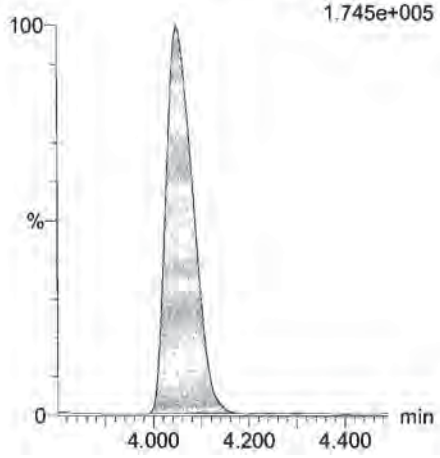

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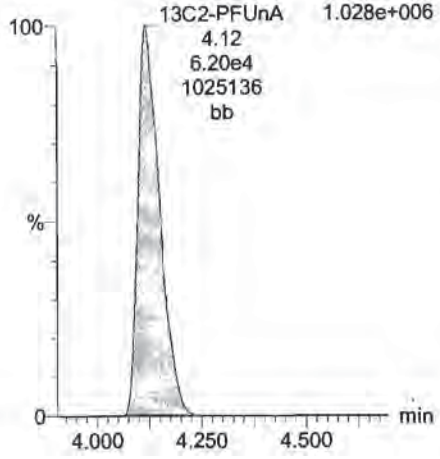

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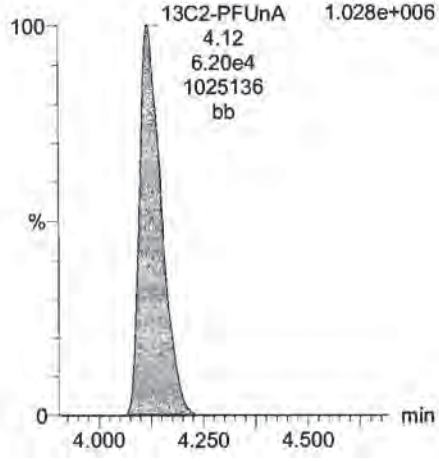

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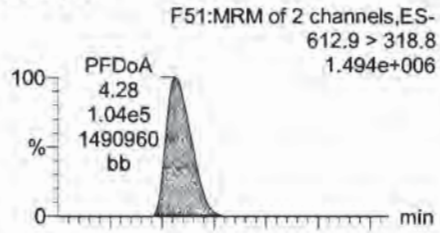
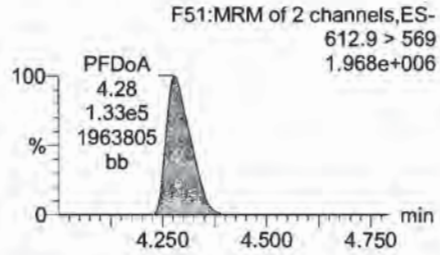
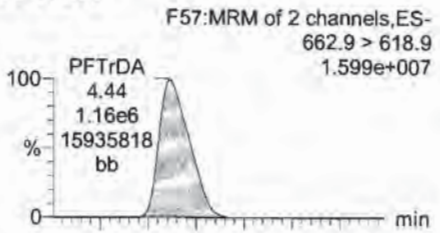
Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

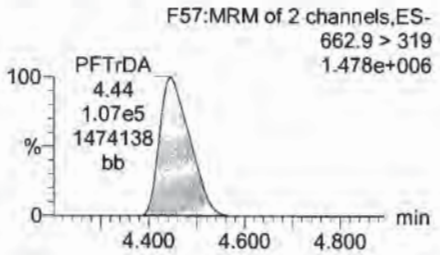
PFDoA



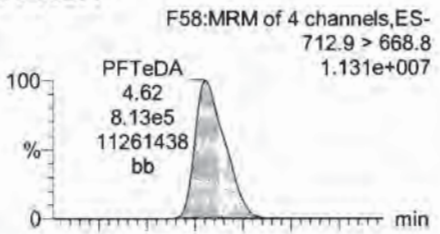


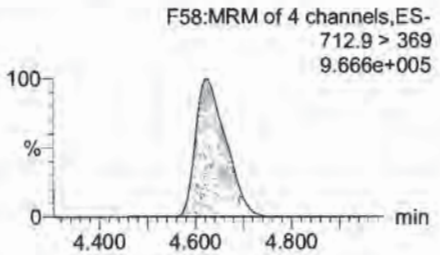
PFTrDA



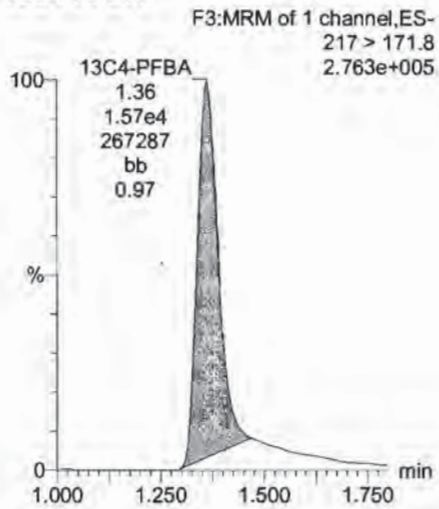


PFTeDA

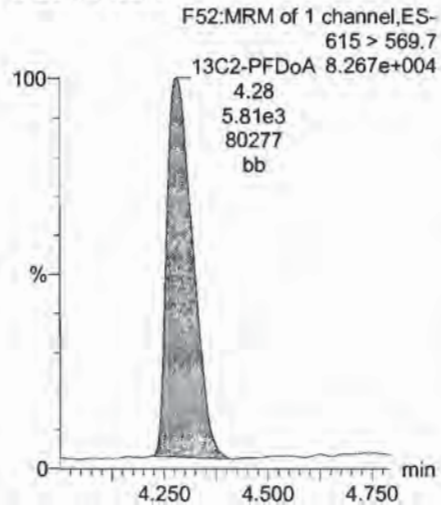




13C4-PFBA



13C2-PFDoA



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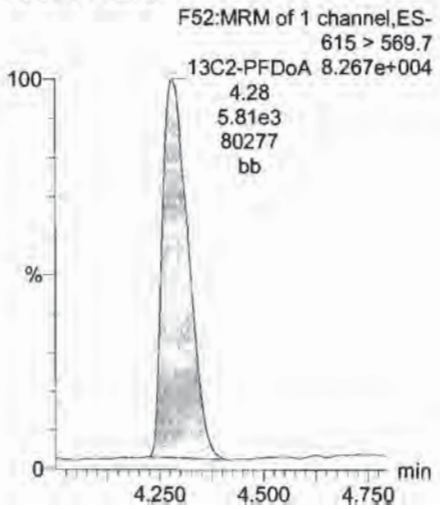
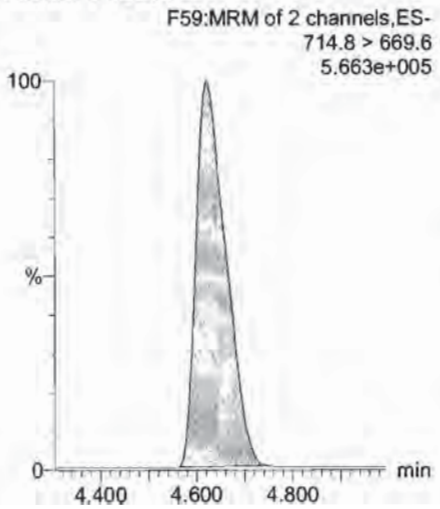
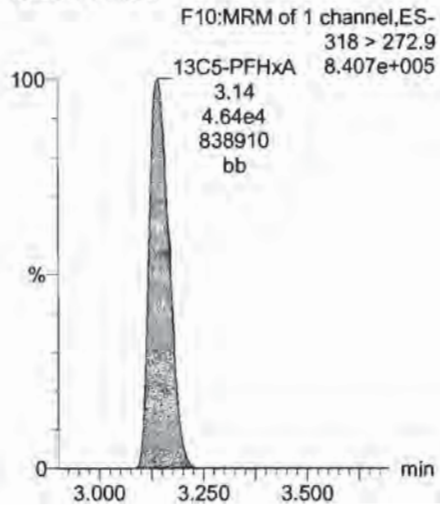


13C2-PFTeDA



13C5-PFHxA



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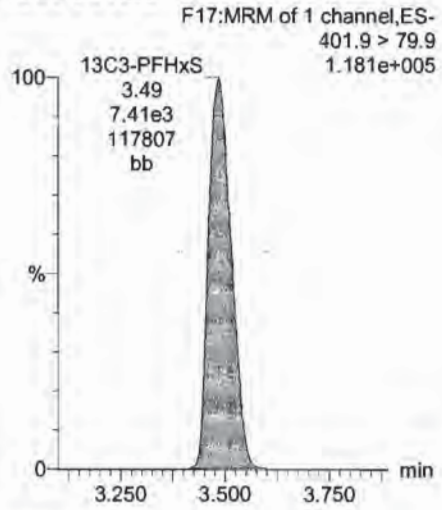
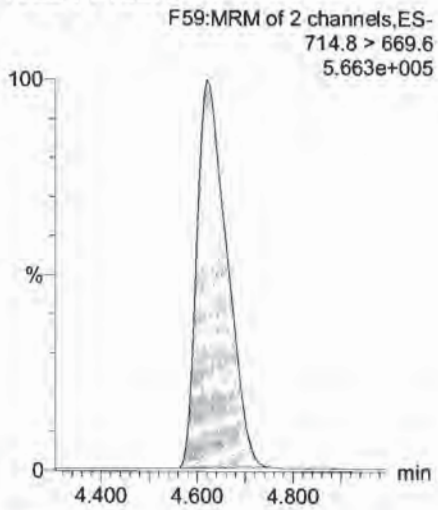
Printed: Sunday, July 30, 2017 08:05:49 Pacific Daylight Time

Name: 170728M2_10, Date: 28-Jul-2017, Time: 17:46:09, ID: ST170728M2-9 PFC CS6 17G2801, Description: PFC CS5 17G2801

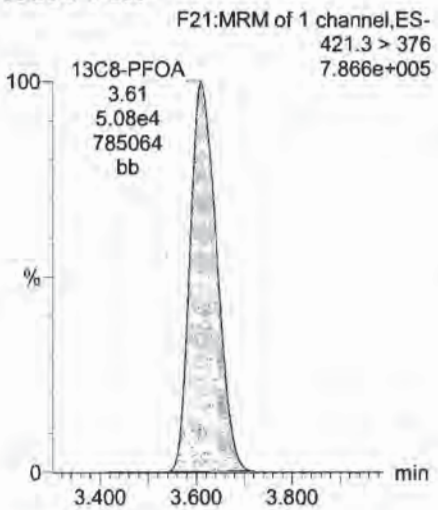
13C3-PFHxS



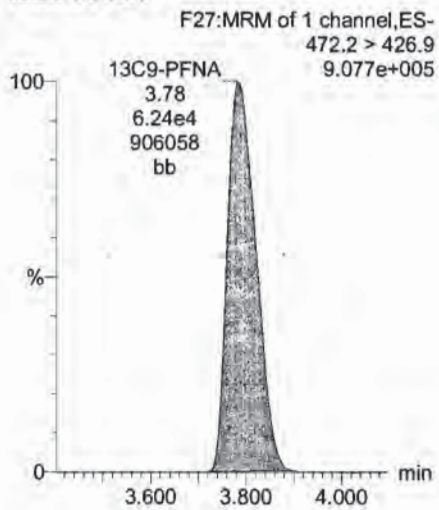
13C2-PFTeDA



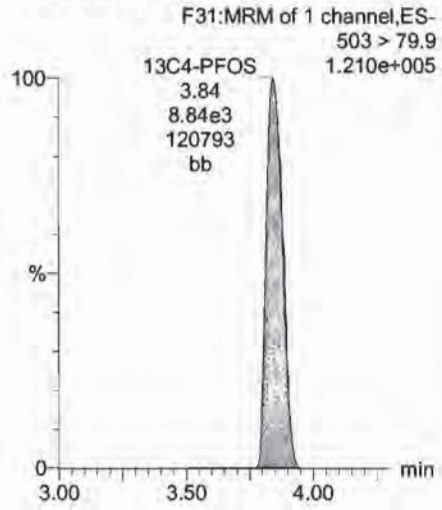
13C8-PFOA



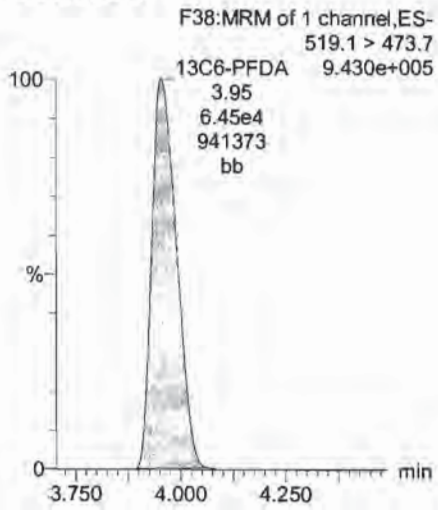
13C9-PFNA



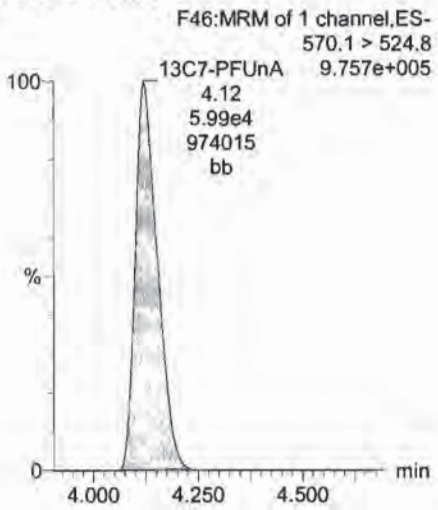
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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

	#	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	13C2-N-MeFOSAA	573.3 > 419	12875.874	56361.164	0.018	1.000	3.99	161.46	99.36

70-130

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

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

Last Altered: Sunday, July 30, 2017 08:15:10 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:15:41 Pacific Daylight Time

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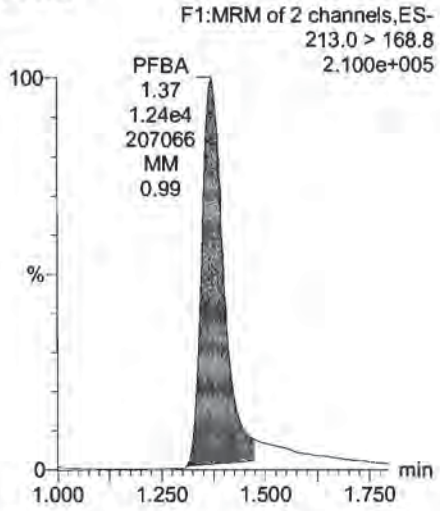
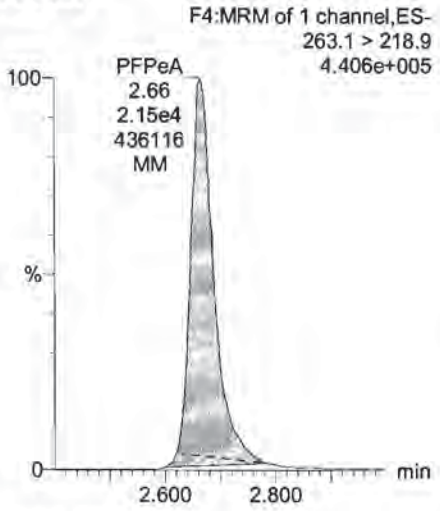
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-28-17-L14_L17.cdb 30 Jul 2017 08:10:19

Name: 170728M2_13, Date: 28-Jul-2017, Time: 18:18:40, ID: SS170728M2-1 PFC SSS 17G2823, Description: PFC SSS 17G2823

PFBA



PFPeA



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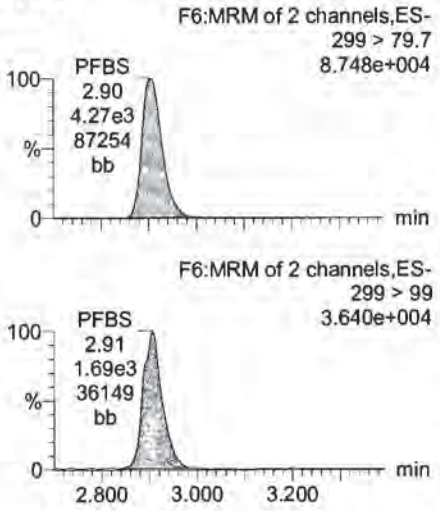
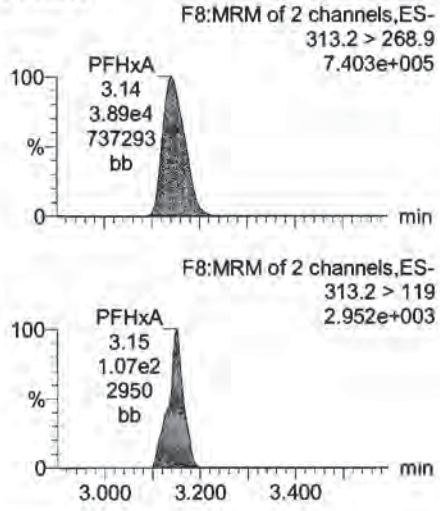
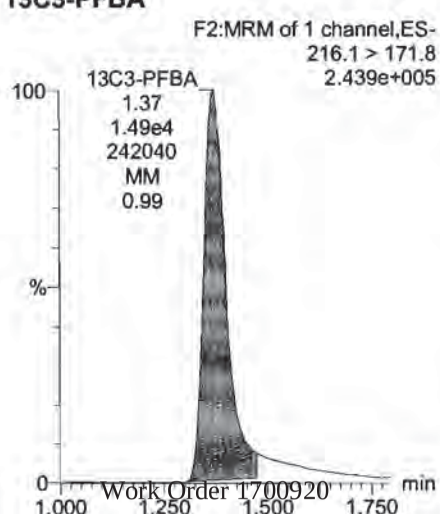


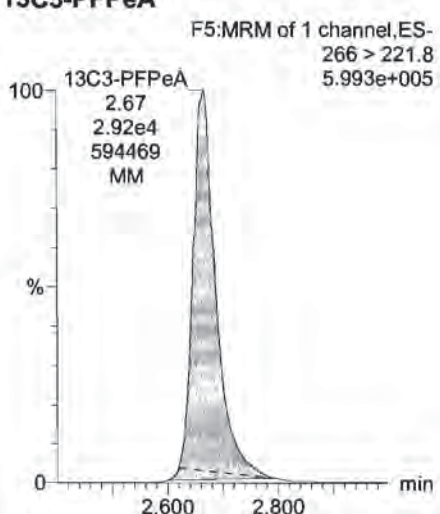
PFHxA



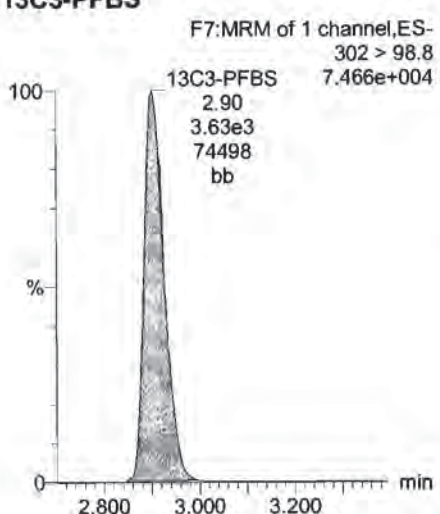
13C3-PFBA



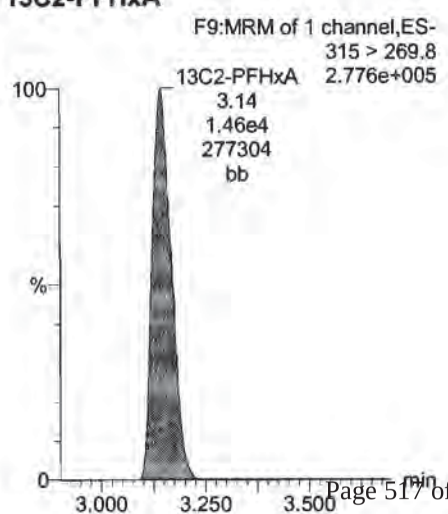
13C3-PFPeA



13C3-PFBS



13C2-PFHxA



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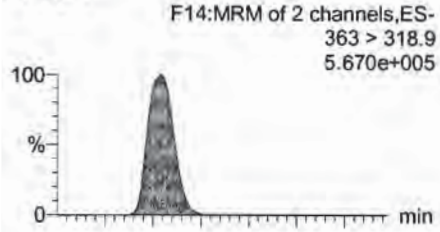
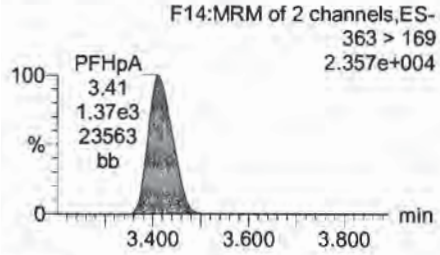
Printed: Sunday, July 30, 2017 08:15:41 Pacific Daylight Time

Name: 170728M2_13, Date: 28-Jul-2017, Time: 18:18:40, ID: SS170728M2-1 PFC SSS 17G2823, Description: PFC SSS 17G2823

PFHpA





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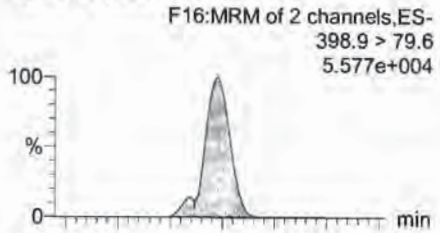
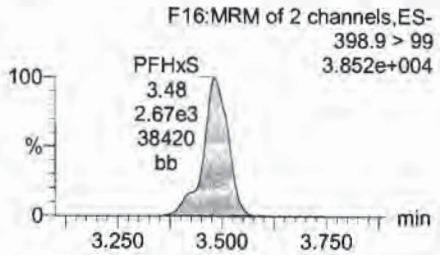
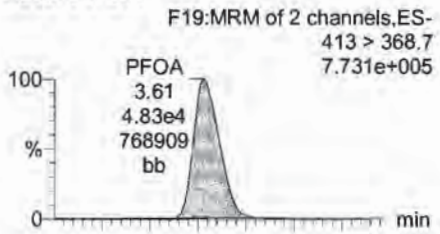
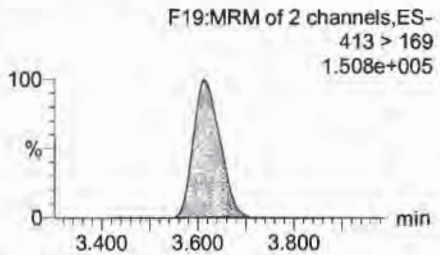


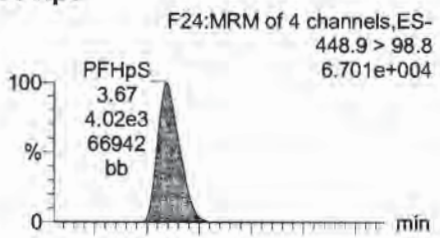


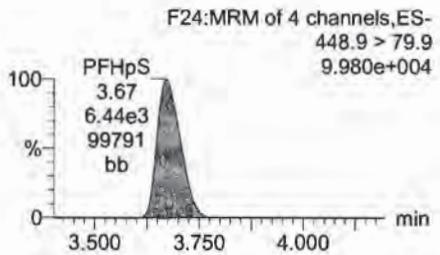
Total PFOA



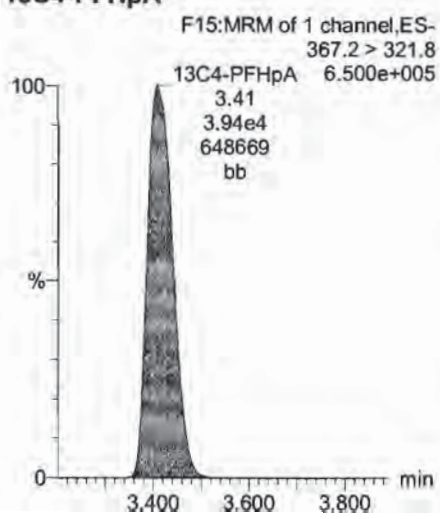


PFHpS

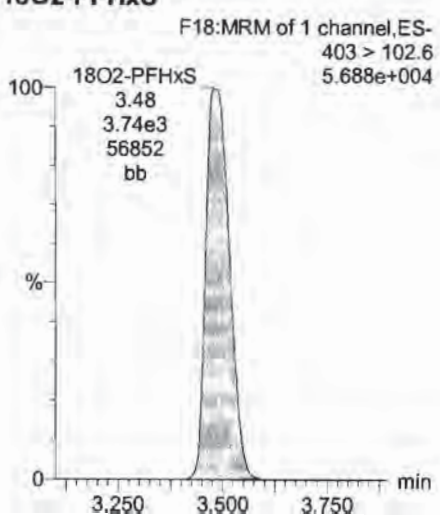




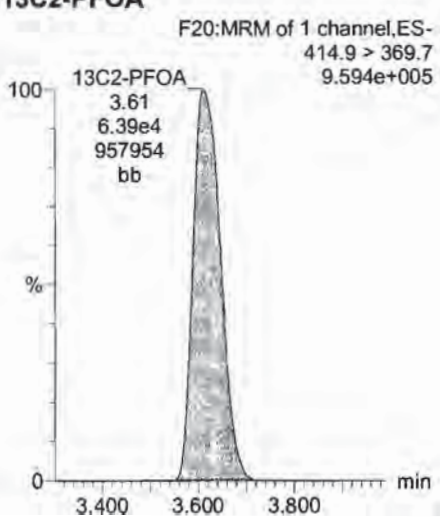
13C4-PFHpA



18O2-PFHxS



13C2-PFOA



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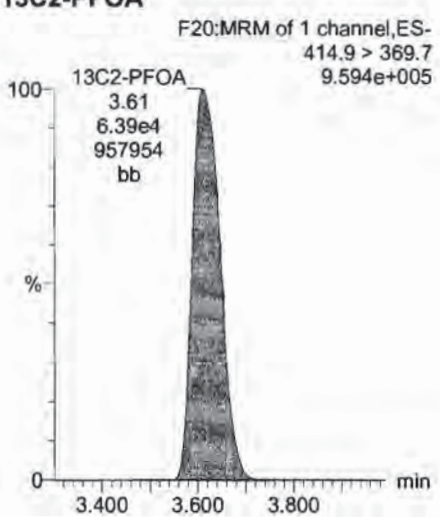

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Printed: Sunday, July 30, 2017 08:15:41 Pacific Daylight Time

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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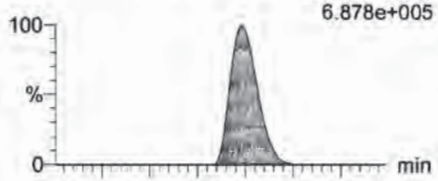

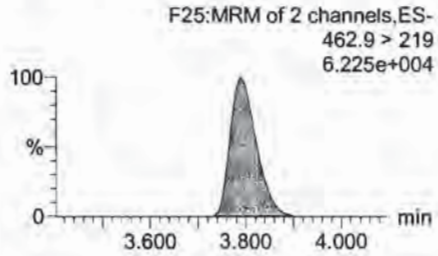

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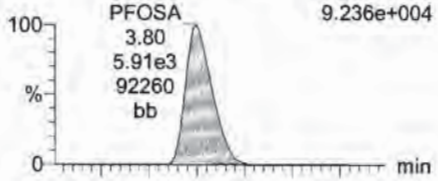

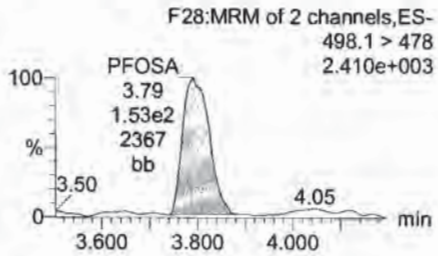

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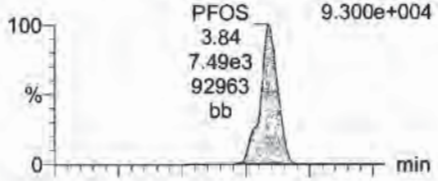

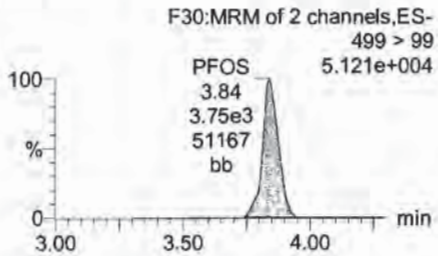

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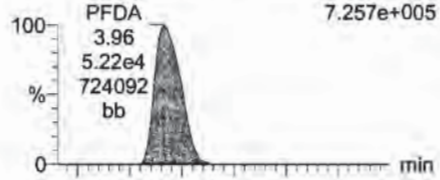

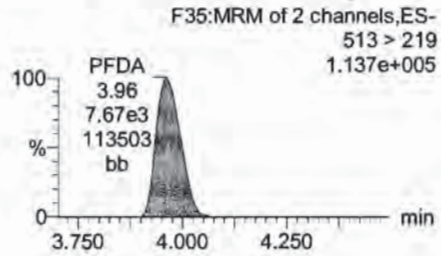

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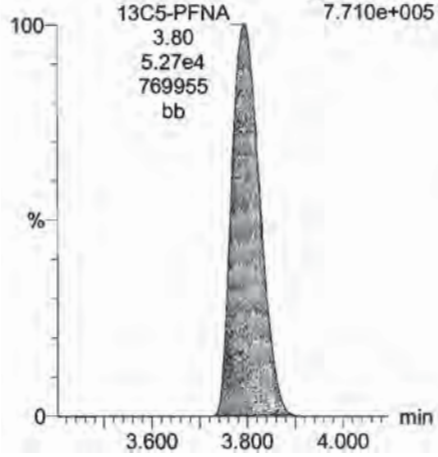
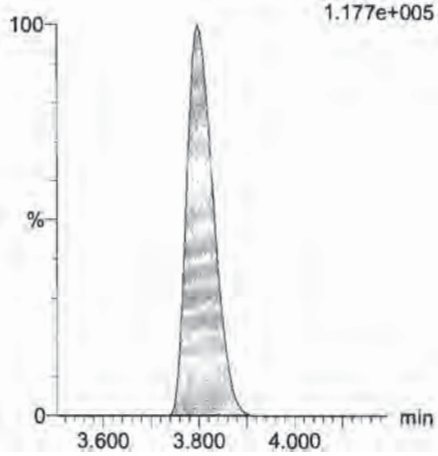
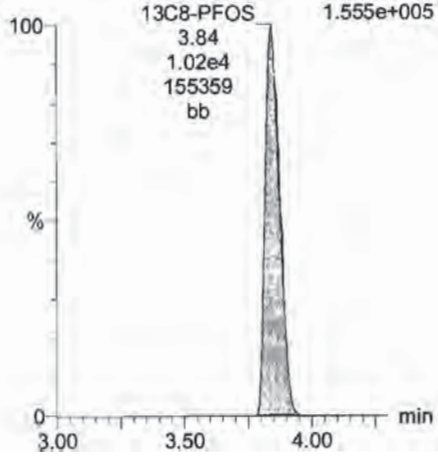


13C8-PFOSA



13C8-PFOS



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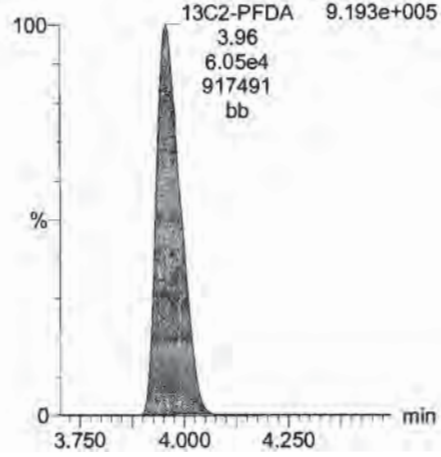

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Printed: Sunday, July 30, 2017 08:15:41 Pacific Daylight Time

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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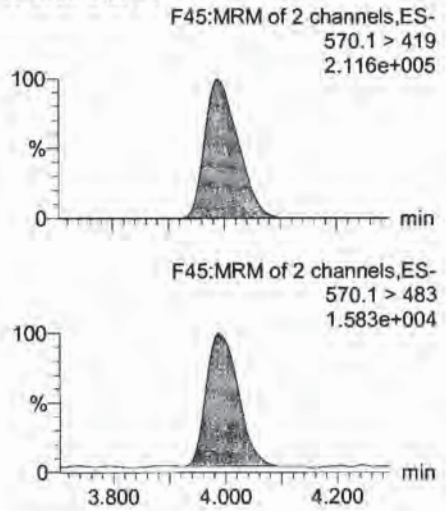

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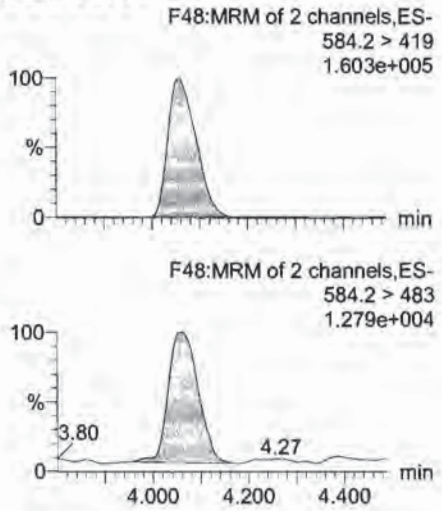

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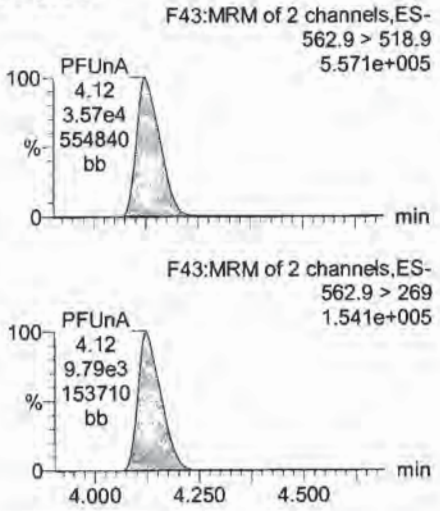

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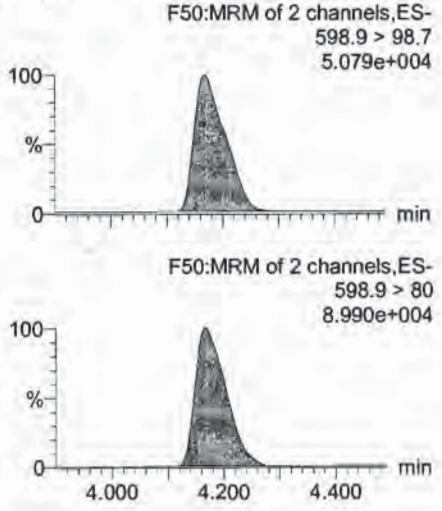

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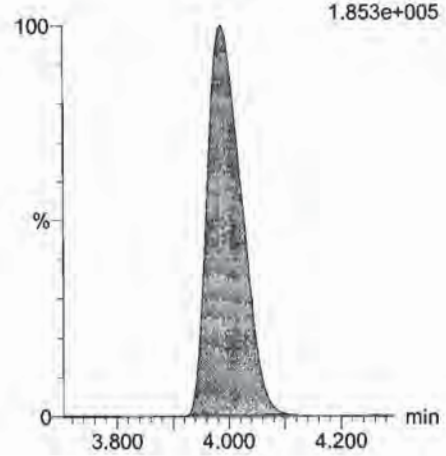

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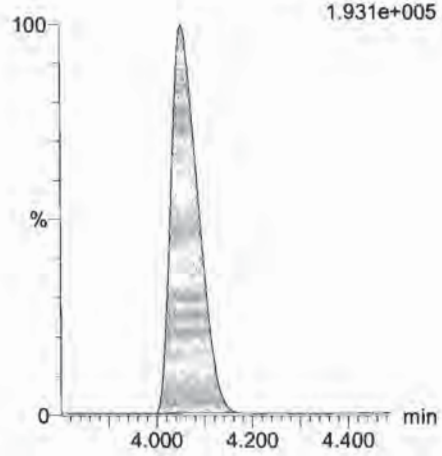

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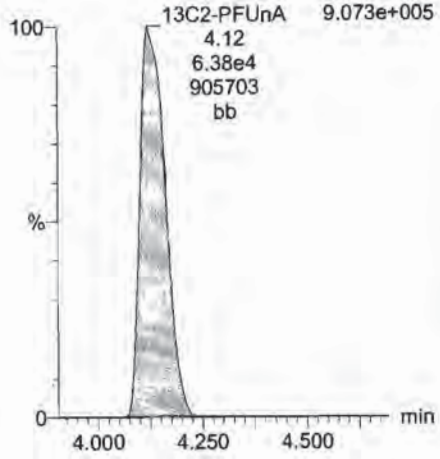

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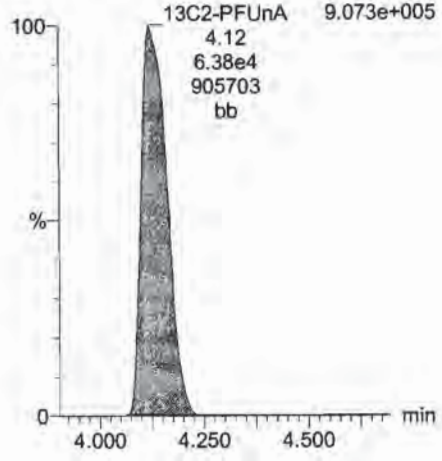

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Last Altered: Sunday, July 30, 2017 08:15:10 Pacific Daylight Time
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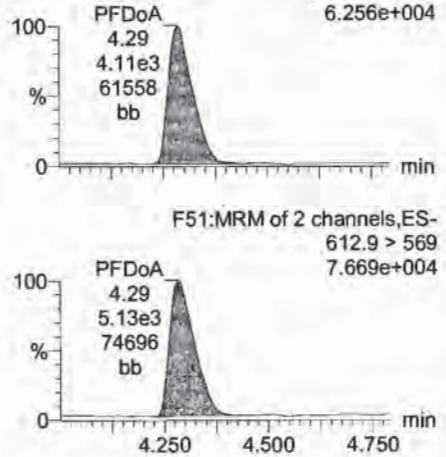
Name: 170728M2_13, Date: 28-Jul-2017, Time: 18:18:40, ID: SS170728M2-1 PFC SSS 17G2823, Description: PFC SSS 17G2823

PFDoA



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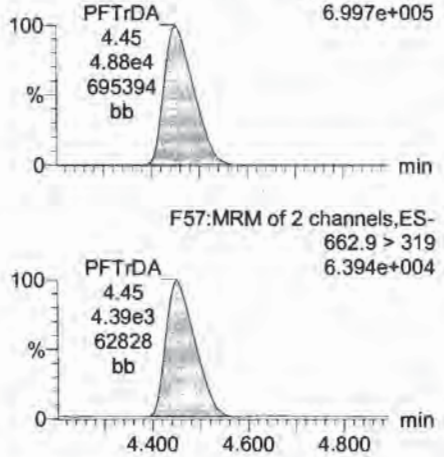

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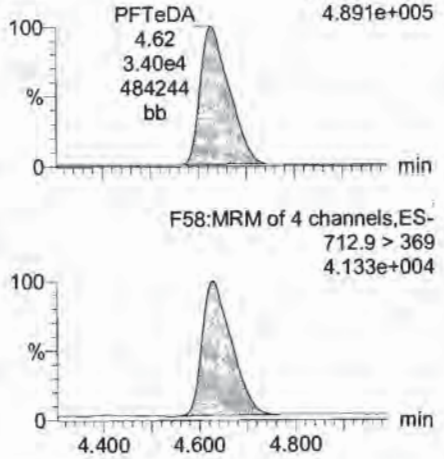

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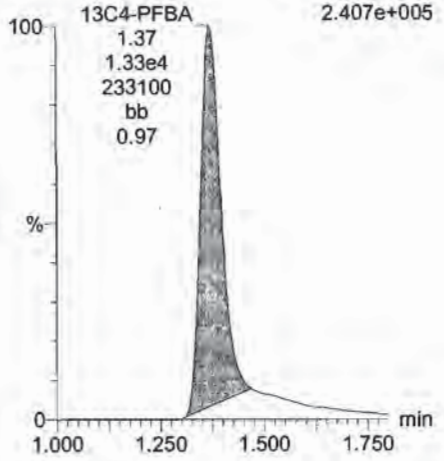

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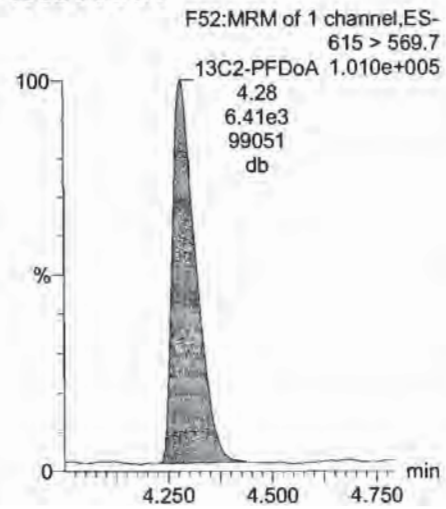

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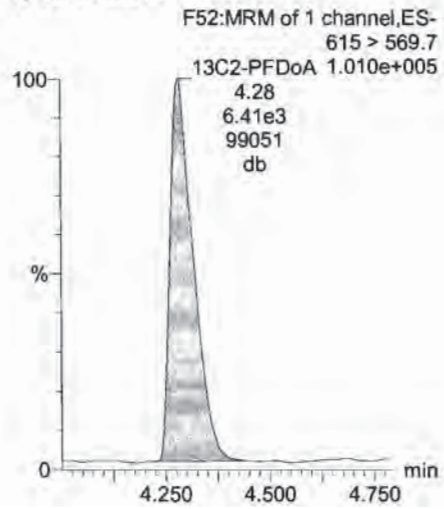

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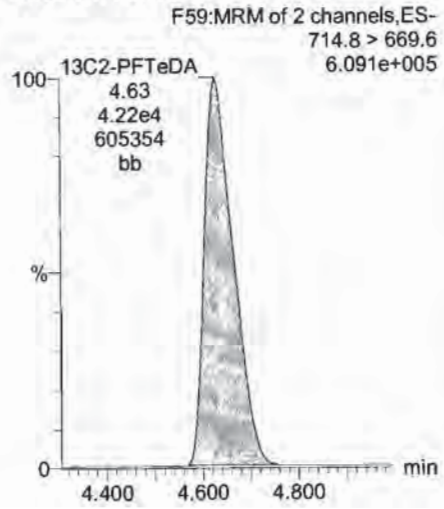

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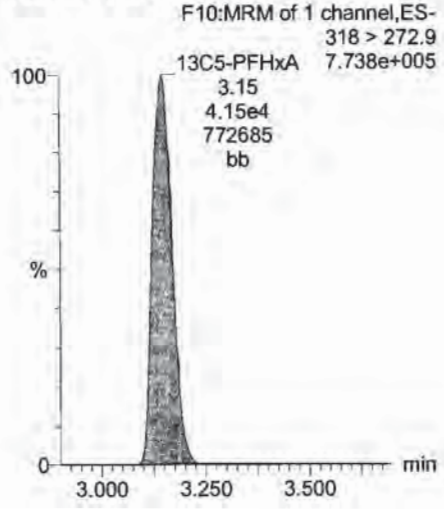

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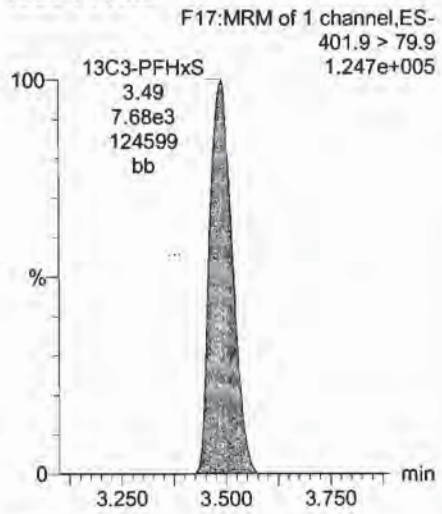
Name: 170728M2_13, Date: 28-Jul-2017, Time: 18:18:40, ID: SS170728M2-1 PFC SSS 17G2823, Description: PFC SSS 17G2823

13C3-PFHxS



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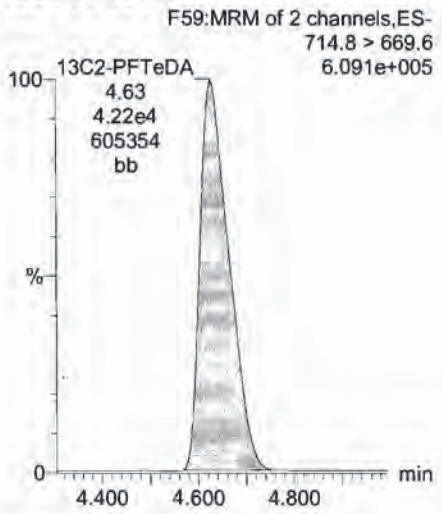

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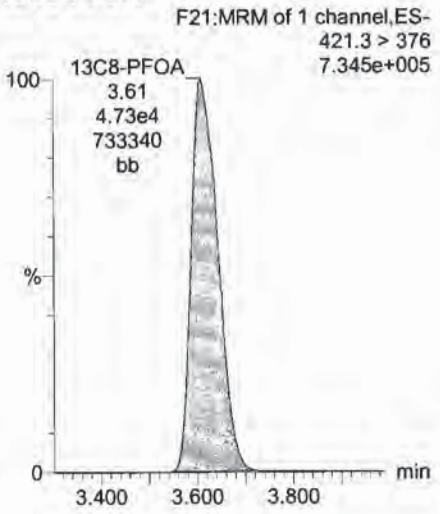

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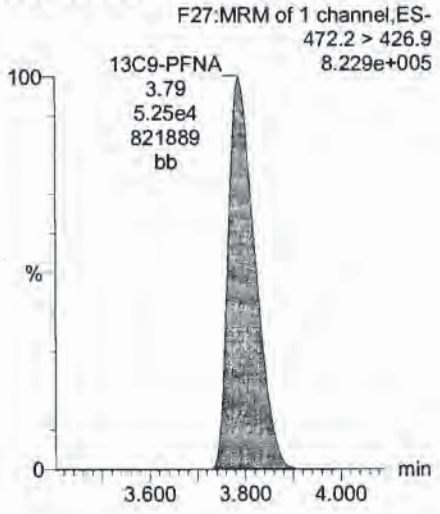

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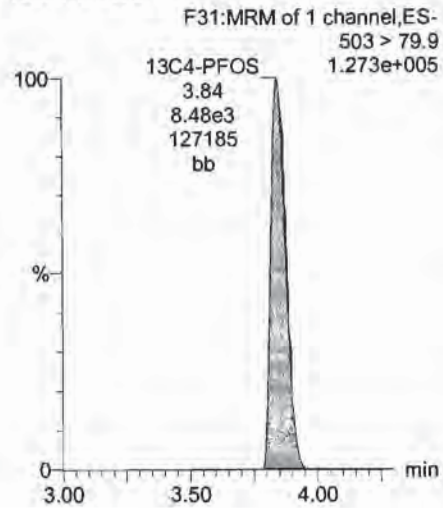

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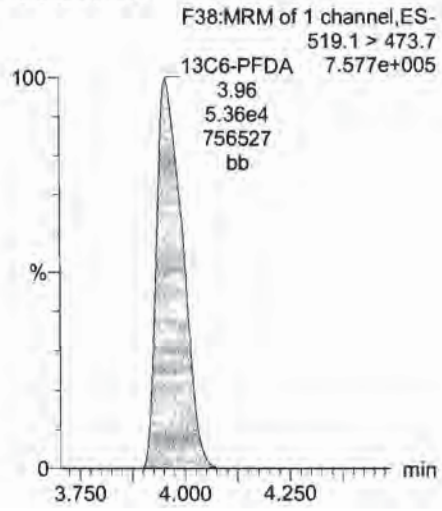

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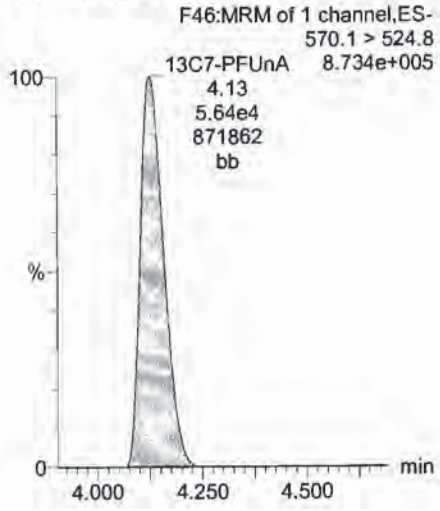

Vista Analytical Laboratory

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Last Altered: Sunday, July 30, 2017 08:12:48 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:13:11 Pacific Daylight Time

instrument blank

AC 7/30/17

Method: U:\Q4.PRO\MethDB\PFAS_L17_L14_7-27-17.mdb 30 Jul 2017 07:47:21
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Name: 170728M2_12, Date: 28-Jul-2017, Time: 18:07:42, ID: IPA, Description: IPA

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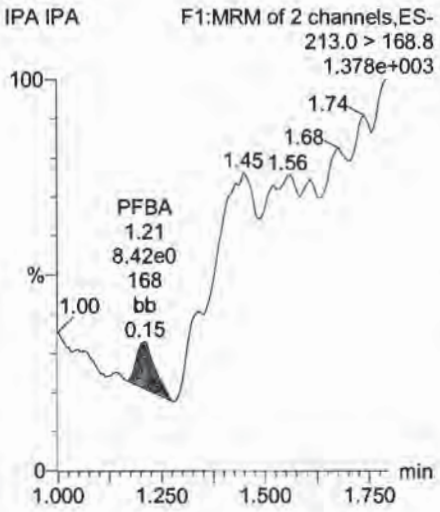

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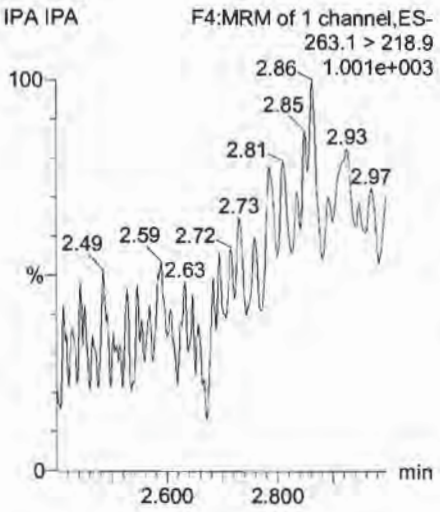

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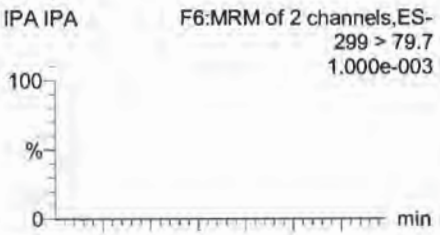
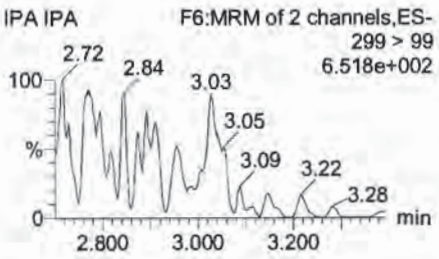
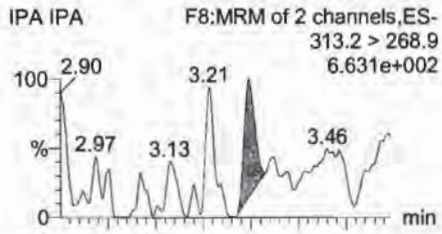
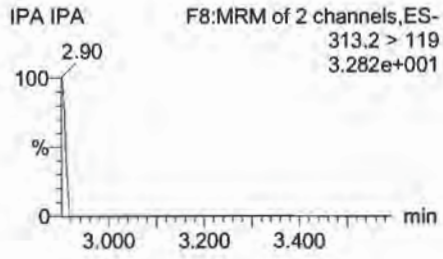




PFHxA





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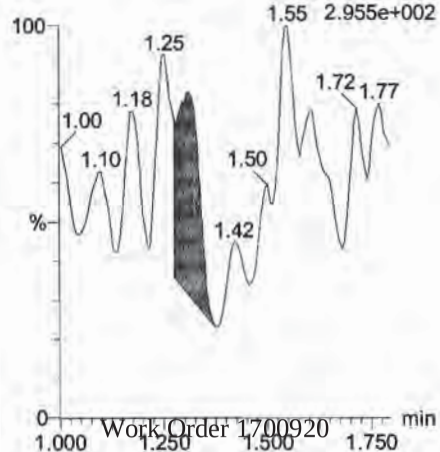

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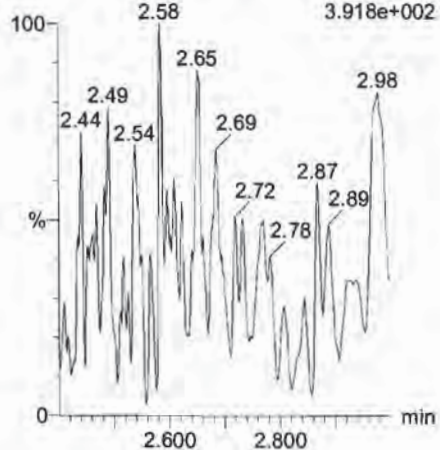

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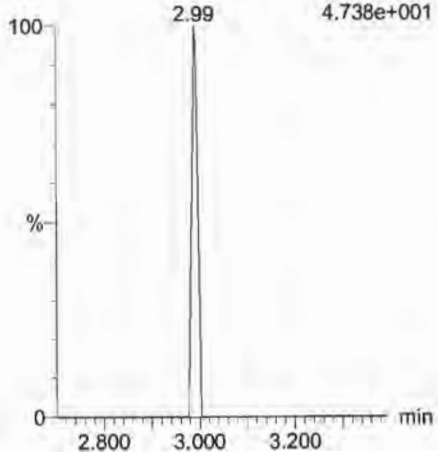

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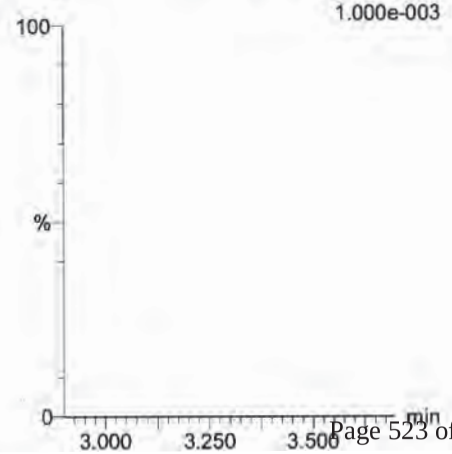

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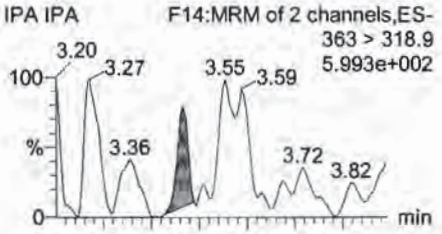
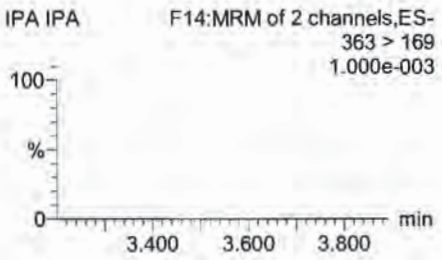
Last Altered: Sunday, July 30, 2017 08:12:48 Pacific Daylight Time
Printed: Sunday, July 30, 2017 08:13:11 Pacific Daylight Time

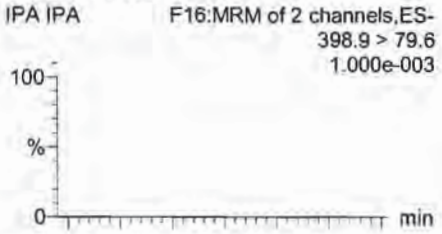
Name: 170728M2_12, Date: 28-Jul-2017, Time: 18:07:42, ID: IPA, Description: IPA

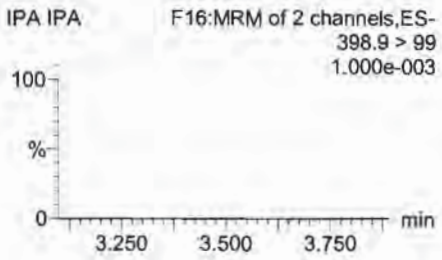
PFHpA





Total PFHxS





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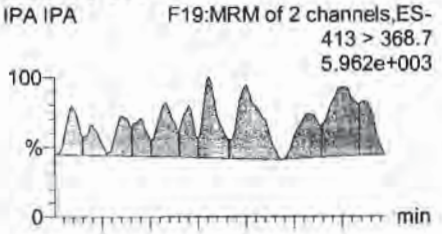

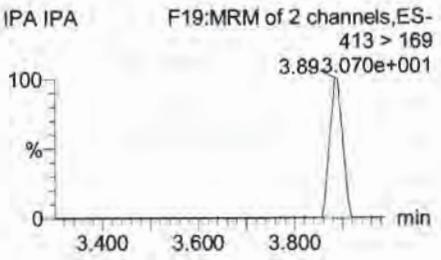

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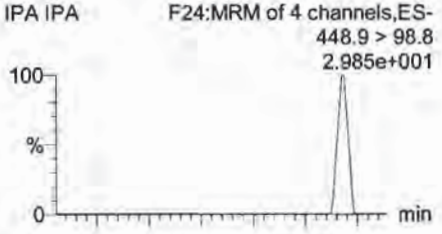

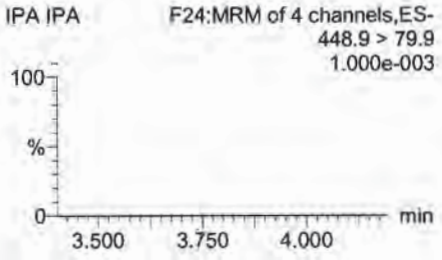

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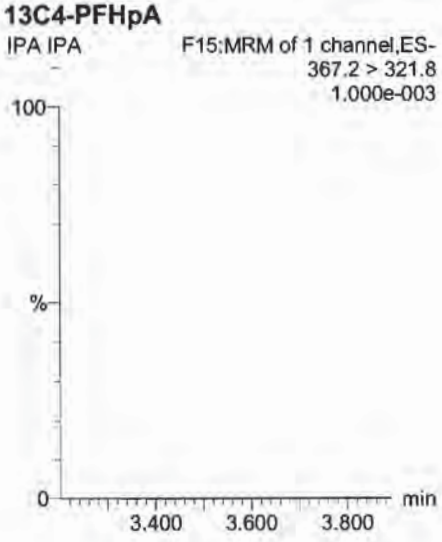

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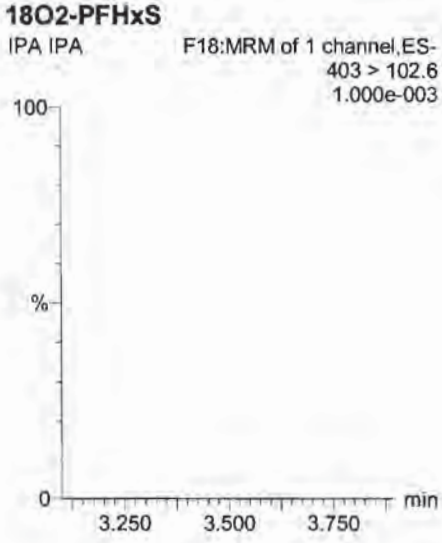

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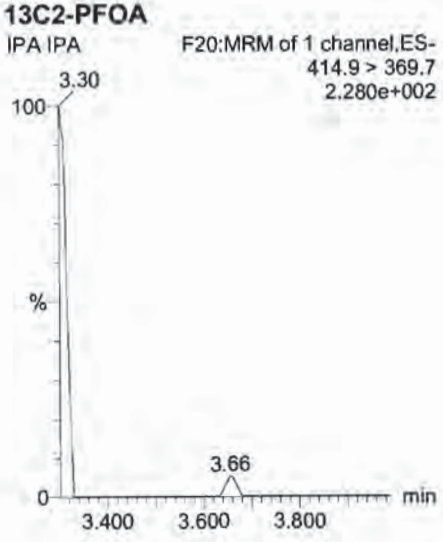

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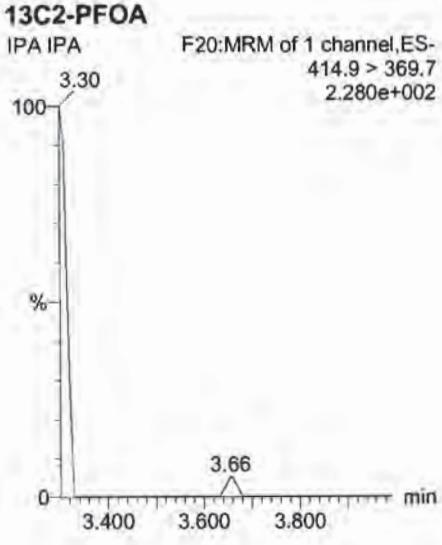

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Printed: Sunday, July 30, 2017 08:13:11 Pacific Daylight Time

Name: 170728M2_12, Date: 28-Jul-2017, Time: 18:07:42, ID: IPA, Description: IPA

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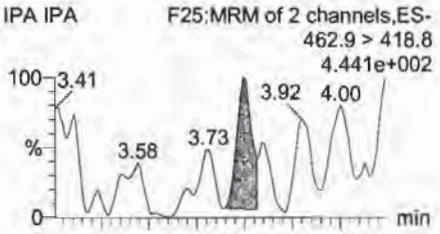

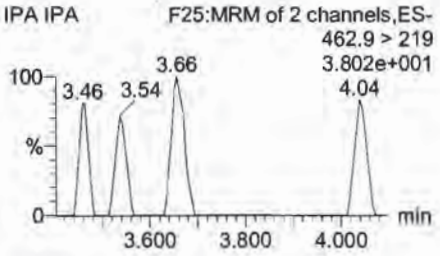

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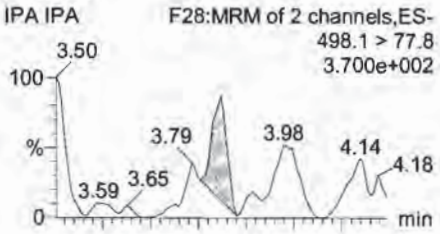

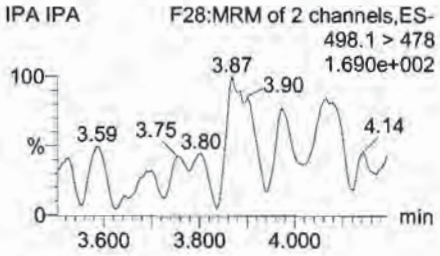

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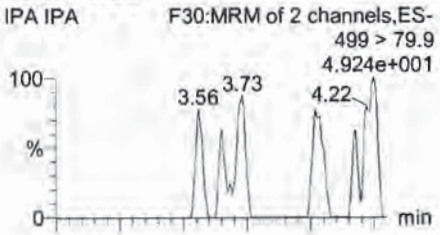

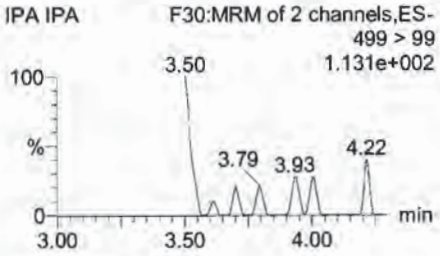

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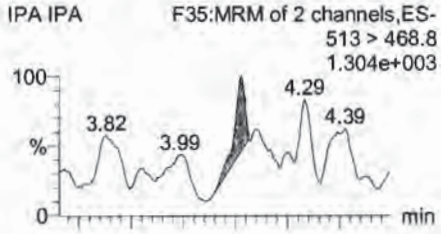
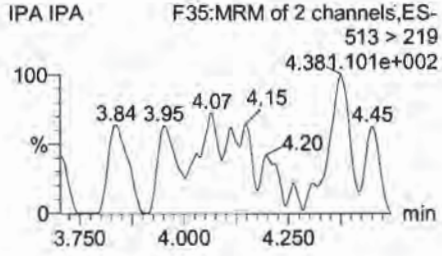
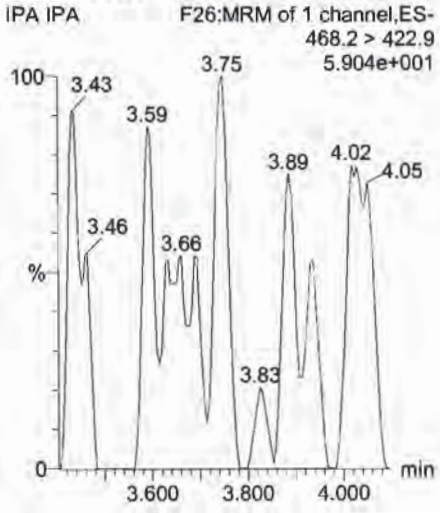




13C5-PFNA



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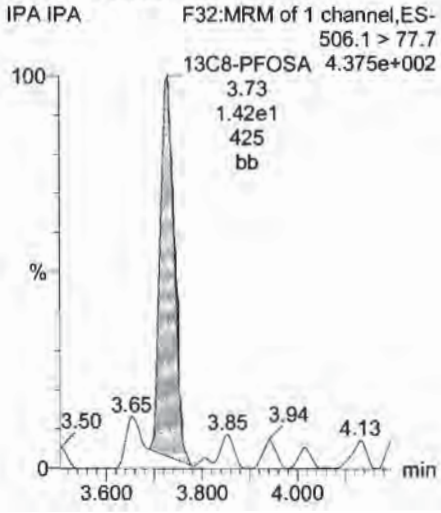

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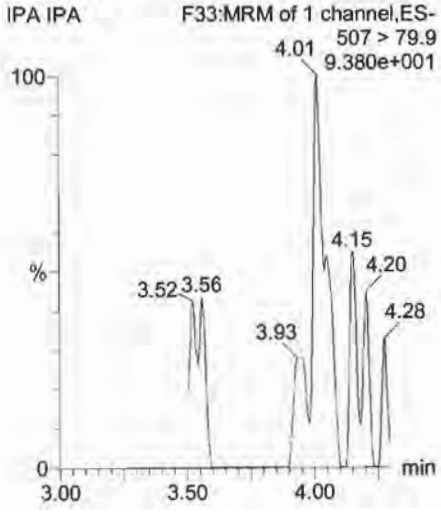

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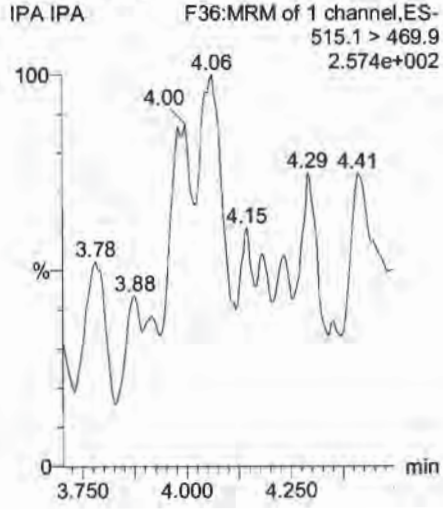

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Name: 170728M2_12, Date: 28-Jul-2017, Time: 18:07:42, ID: IPA, Description: IPA

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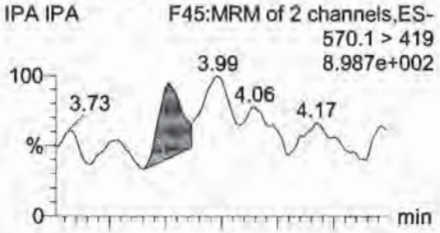

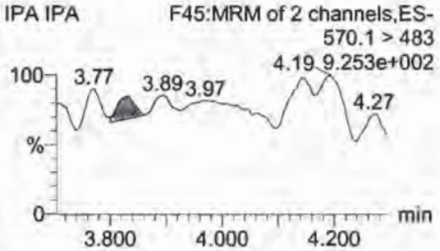

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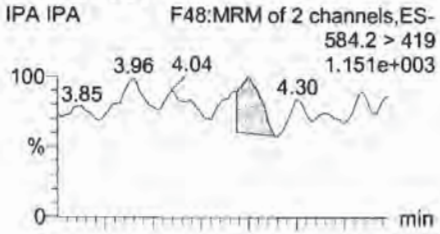

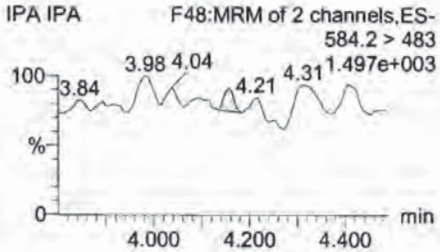

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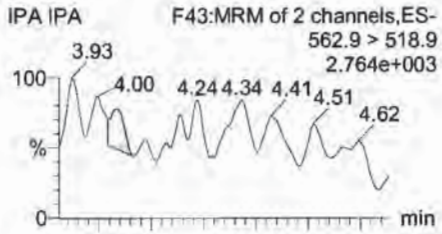

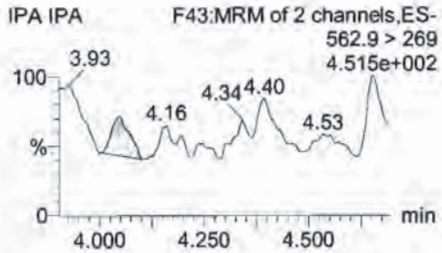

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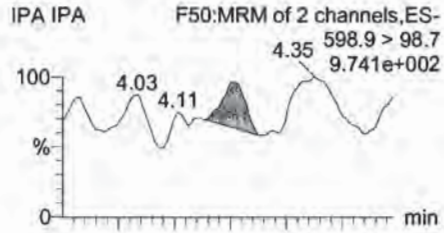

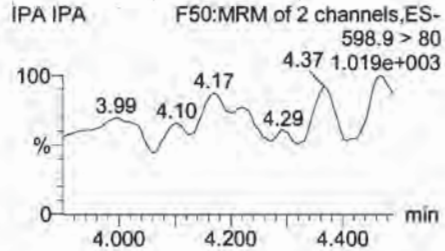

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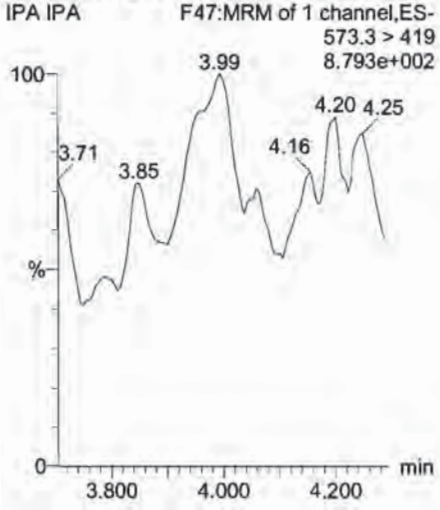

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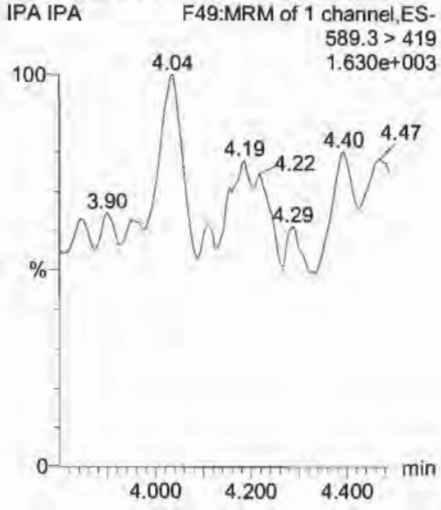

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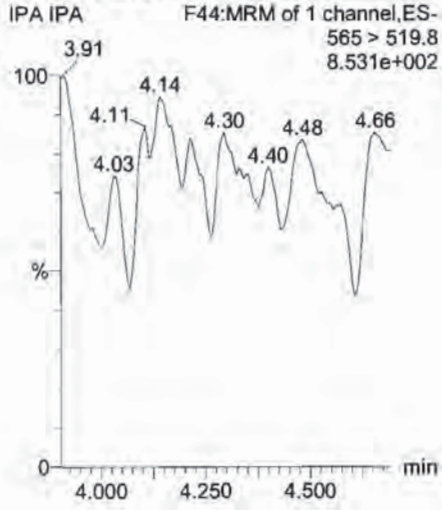

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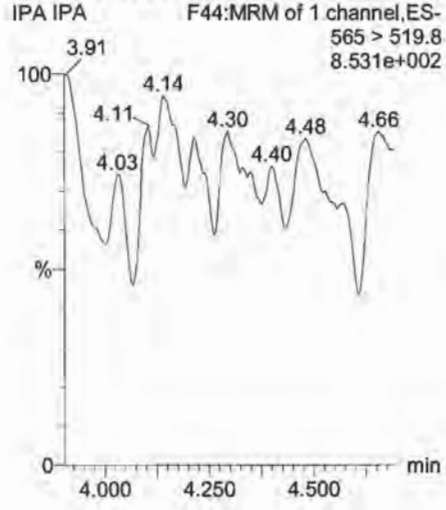

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Last Altered: Sunday, July 30, 2017 08:12:48 Pacific Daylight Time
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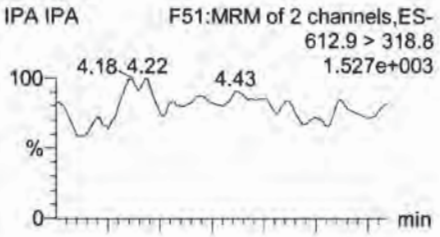
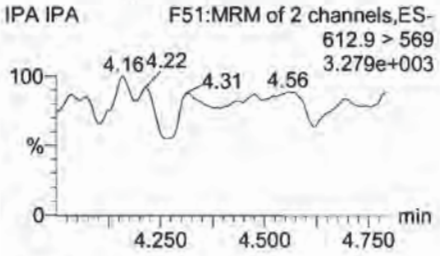
Name: 170728M2_12, Date: 28-Jul-2017, Time: 18:07:42, ID: IPA, Description: IPA

PFDoA





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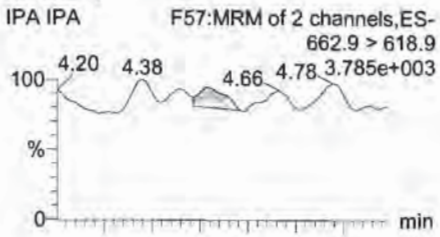

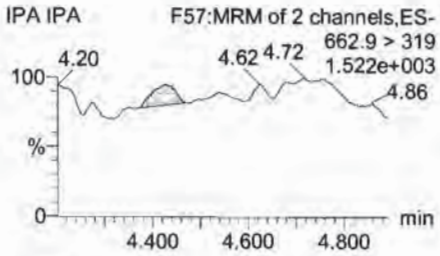

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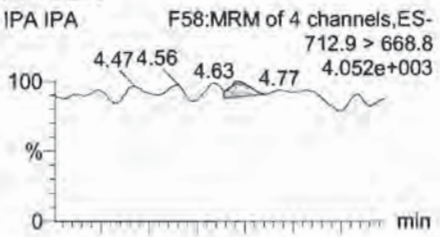

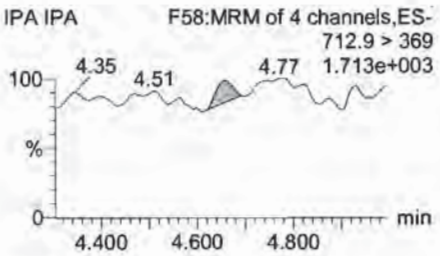

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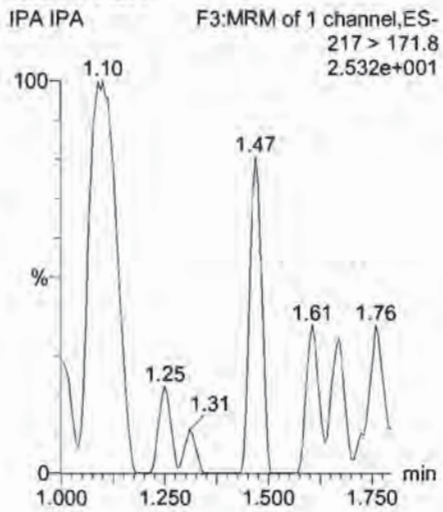

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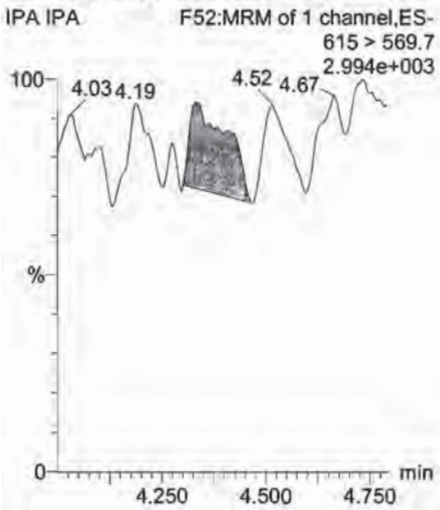

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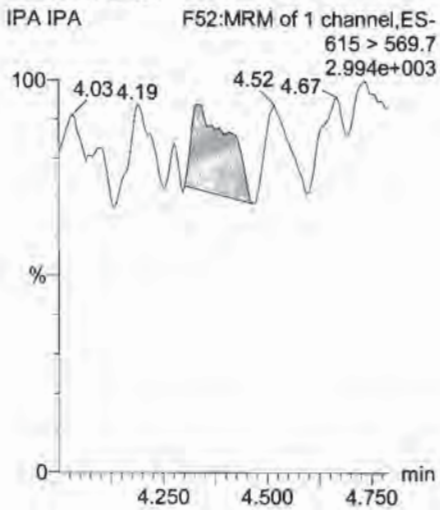

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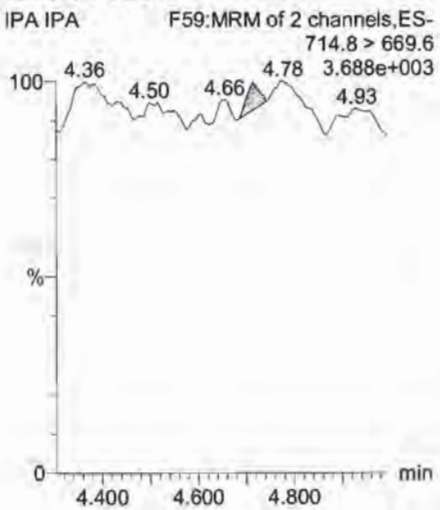

13C5-PFHxA



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Printed: Sunday, July 30, 2017 08:13:11 Pacific Daylight Time

Name: 170728M2_12, Date: 28-Jul-2017, Time: 18:07:42, ID: IPA, Description: IPA

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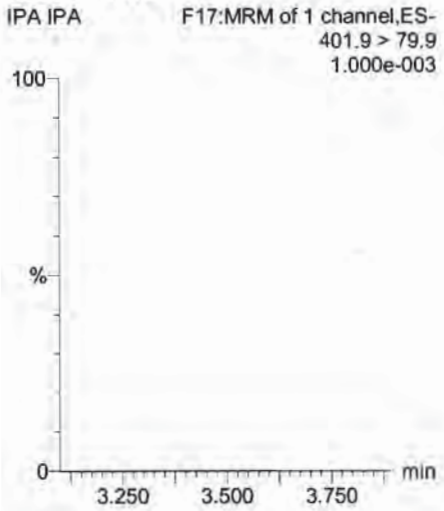

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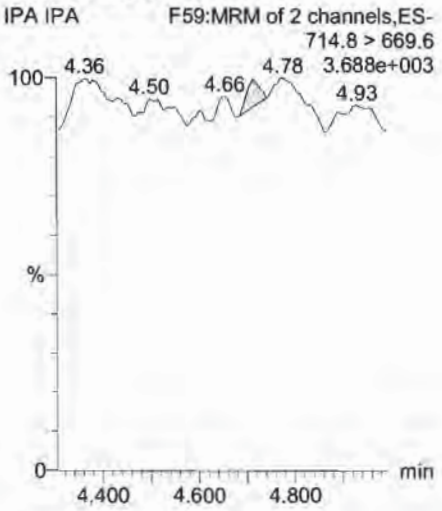

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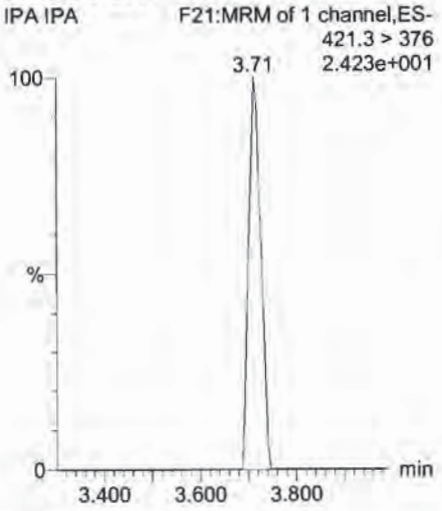

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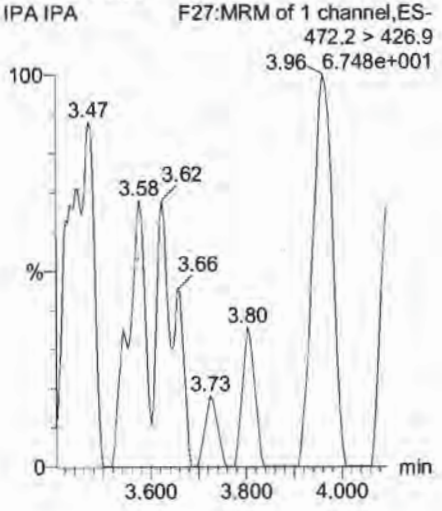

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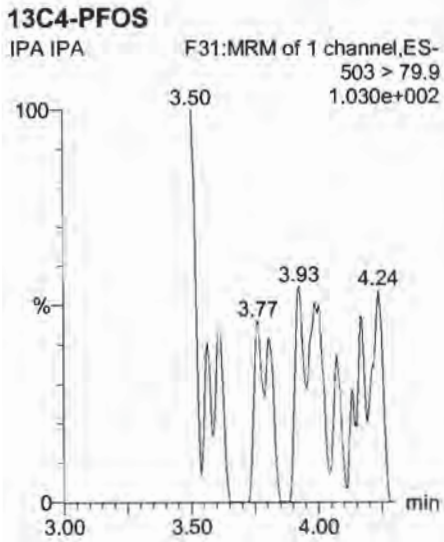

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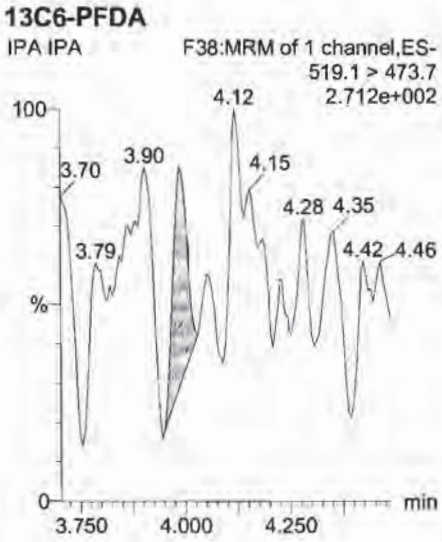

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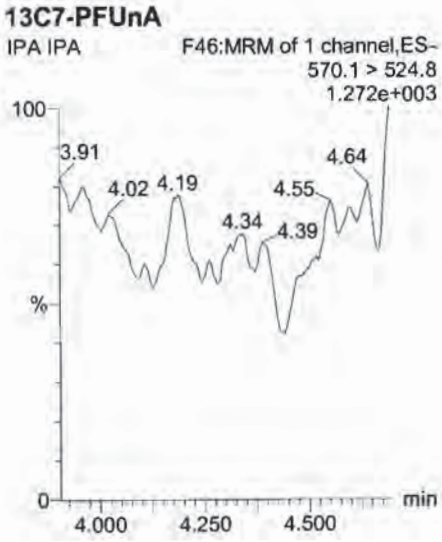

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:16:34 Pacific Daylight Time

KAC 8/1/17

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
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AC 8/1/17

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999898
Calibration curve: 6.26653e-005 * x^2 + 1.07835 * x + 0.0734459
Response type: Internal Std (Ref 28), 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	170731M2_2	Standard	0.250	1.41	411.114	13874.437	0.370	0.3	10.1	NO	1.000	NO	MM
2	2	170731M2_3	Standard	0.500	1.40	713.007	14032.984	0.635	0.5	4.2	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	1.39	1410.952	14534.191	1.213	1.1	5.7	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	1.41	2604.108	13825.355	2.354	2.1	5.8	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	1.40	6507.126	14375.643	5.658	5.2	3.5	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	1.40	12186.419	14275.662	10.671	9.8	-1.8	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	1.40	60399.383	13941.181	54.156	50.0	0.0	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	1.40	122688.352	14182.987	108.130	99.6	-0.4	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	1.41	444076.063	20278.131	273.741	250.1	0.1	NO	1.000	NO	bb

Compound name: PFPeA
Correlation coefficient: r = 0.999842, r^2 = 0.999685
Calibration curve: 0.95207 * x + 0.034134
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	170731M2_2	Standard	0.250	2.69	567.060	28315.961	0.250	0.2	-9.2	NO	1.000	NO	MM
2	2	170731M2_3	Standard	0.500	2.69	1149.332	28971.373	0.496	0.5	-3.0	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	2.69	2381.328	29344.844	1.014	1.0	3.0	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	2.70	4632.085	27224.277	2.127	2.2	9.9	NO	1.000	NO	MM
5	5	170731M2_6	Standard	5.000	2.69	11287.421	28900.883	4.882	5.1	1.8	NO	1.000	NO	MM
6	6	170731M2_7	Standard	10.000	2.69	22284.025	28928.092	9.629	10.1	0.8	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	2.69	101931.336	27958.209	45.573	47.8	-4.3	NO	1.000	NO	MM
8	8	170731M2_9	Standard	100.000	2.70	209969.516	27418.373	95.725	100.5	0.5	NO	1.000	NO	MM
9	9	170731M2_10	Standard	250.000	2.70	777214.313	40599.961	239.290	251.3	0.5	NO	1.000	NO	MM

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Compound name: PFBS
Correlation coefficient: r = 0.999700, r^2 = 0.999400
Calibration curve: 1.88408 * x + 0.0670139
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	170731M2_2	Standard	0.250	2.92	151.762	3567.166	0.532	0.2	-1.3	NO	0.999	NO	bb
2	2	170731M2_3	Standard	0.500	2.93	294.717	3674.875	1.002	0.5	-0.7	NO	0.999	NO	bb
3	3	170731M2_4	Standard	1.000	2.93	602.633	3756.884	2.005	1.0	2.9	NO	0.999	NO	bb
4	4	170731M2_5	Standard	2.000	2.93	1142.969	3453.801	4.137	2.2	8.0	NO	0.999	NO	bb
5	5	170731M2_6	Standard	5.000	2.92	2761.764	3669.754	9.407	5.0	-0.9	NO	0.999	NO	db
6	6	170731M2_7	Standard	10.000	2.93	5120.116	3495.072	18.312	9.7	-3.2	NO	0.999	NO	bb
7	7	170731M2_8	Standard	50.000	2.92	24305.621	3386.169	89.724	47.6	-4.8	NO	0.999	NO	bb
8	8	170731M2_9	Standard	100.000	2.93	49918.813	3369.060	185.210	98.3	-1.7	NO	0.999	NO	bb
9	9	170731M2_10	Standard	250.000	2.93	175245.609	4571.001	479.232	254.3	1.7	NO	0.999	NO	bb

Compound name: PFHxA
Correlation coefficient: r = 0.999770, r^2 = 0.999541
Calibration curve: 1.38743 * x + 0.151774
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	170731M2_2	Standard	0.250	3.17	1105.240	13289.316	0.416	0.2	-23.9	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	3.17	2259.732	13996.411	0.807	0.5	-5.5	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	3.16	4555.615	13471.391	1.691	1.1	10.9	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	3.16	8364.676	13180.728	3.173	2.2	8.9	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.16	21557.746	14300.003	7.538	5.3	6.5	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.16	38887.297	13464.359	14.441	10.3	3.0	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.17	186053.391	13579.439	68.506	49.3	-1.5	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.16	370981.719	13004.882	142.632	102.7	2.7	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.16	1637628.125	23861.670	343.150	247.2	-1.1	NO	1.000	NO	bb

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Compound name: PFHpA
Correlation coefficient: r = 0.999907, r^2 = 0.999814
Calibration curve: 1.19527 * x + 0.0770691
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	170731M2_2	Standard	0.250	3.43	1188.512	42267.941	0.351	0.2	-8.2	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	3.43	2346.575	44035.770	0.666	0.5	-1.4	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	3.43	4665.274	47111.973	1.238	1.0	-2.9	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	3.43	8684.659	40041.188	2.711	2.2	10.2	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.43	22188.094	43531.445	6.371	5.3	5.3	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.43	39873.324	41835.402	11.914	9.9	-1.0	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.43	198036.984	42486.371	58.265	48.7	-2.6	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.43	391289.031	40762.777	119.990	100.3	0.3	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.43	1450839.000	60510.934	299.706	250.7	0.3	NO	1.000	NO	bb

Compound name: PFHxS
Correlation coefficient: r = 0.998411, r^2 = 0.996824
Calibration curve: 1.6806 * x + 0.0313148
Response type: Internal Std (Ref 33), 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	170731M2_2	Standard	0.250	3.50	136.913	4105.498	0.417	0.2	-8.2	NO	0.997	NO	MM
2	2	170731M2_3	Standard	0.500	3.51	320.409	4057.192	0.987	0.6	13.8	NO	0.997	NO	MM
3	3	170731M2_4	Standard	1.000	3.51	503.736	4402.638	1.430	0.8	-16.8	NO	0.997	NO	MM
4	4	170731M2_5	Standard	2.000	3.50	1217.100	3891.568	3.909	2.3	15.4	NO	0.997	NO	bb
5	5	170731M2_6	Standard	5.000	3.51	2734.810	3878.935	8.813	5.2	4.5	NO	0.997	NO	MM
6	6	170731M2_7	Standard	10.000	3.50	5376.990	3978.140	16.895	10.0	0.3	NO	0.997	NO	bb
7	7	170731M2_8	Standard	50.000	3.50	25163.787	3932.861	79.979	47.6	-4.9	NO	0.997	NO	db
8	8	170731M2_9	Standard	100.000	3.51	51344.988	4159.138	154.314	91.8	-8.2	NO	0.997	NO	db
9	9	170731M2_10	Standard	250.000	3.51	172302.625	4925.332	437.287	260.2	4.1	NO	0.997	NO	bb

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Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.999797
Calibration curve: -0.00364043 * x^2 + 1.16681 * x + -0.0592153
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	170731M2_2	Standard	0.250	3.63	177.680	9927.280	0.224	0.2	-2.9	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	3.63	478.991	10315.116	0.580	0.5	9.8	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	3.63	943.278	11541.119	1.022	0.9	-7.1	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	3.63	1822.126	10131.339	2.248	2.0	-0.5	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.62	4473.807	9593.972	5.829	5.1	2.6	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.62	8896.104	10116.732	10.992	9.8	-2.3	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.63	38899.715	9833.309	49.449	50.3	0.7	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.63	74054.742	11556.366	80.102	99.7	-0.3	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.63	204101.719	18952.229	134.616			NO	1.000	NO	bbXI

Compound name: PFOA
Correlation coefficient: r = 0.999910, r^2 = 0.999821
Calibration curve: 0.953928 * x + 0.14566
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	170731M2_2	Standard	0.250	3.64	1648.688	63401.359	0.325	0.2	-24.8	NO	1.000	NO	MM
2	2	170731M2_3	Standard	0.500	3.64	3703.540	67191.539	0.689	0.6	13.9	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	3.63	6322.338	70281.578	1.124	1.0	2.6	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	3.63	11893.063	66790.375	2.226	2.2	9.0	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.64	25166.590	63977.652	4.917	5.0	0.0	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.64	51478.270	67944.383	9.471	9.8	-2.2	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.64	233790.078	59813.004	48.859	51.1	2.1	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.64	508100.156	66783.320	95.102	99.5	-0.5	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.64	1538457.125	80782.586	238.055	249.4	-0.2	NO	1.000	NO	bb

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Compound name: PFHpS
Correlation coefficient: r = 0.999006, r^2 = 0.998013
Calibration curve: 0.0861619 * x + 0.0071876
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	170731M2_2	Standard	0.250	3.70	130.645	63401.359	0.026	0.2	-13.8	NO	0.998	NO	bb
2	2	170731M2_3	Standard	0.500	3.70	294.334	67191.539	0.055	0.6	10.4	NO	0.998	NO	bb
3	3	170731M2_4	Standard	1.000	3.69	538.985	70281.578	0.096	1.0	2.9	NO	0.998	NO	bb
4	4	170731M2_5	Standard	2.000	3.69	1018.044	66790.375	0.191	2.1	6.4	NO	0.998	NO	bb
5	5	170731M2_6	Standard	5.000	3.70	2421.679	63977.652	0.473	5.4	8.2	NO	0.998	NO	bb
6	6	170731M2_7	Standard	10.000	3.70	5311.248	67944.383	0.977	11.3	12.6	NO	0.998	NO	bb
7	7	170731M2_8	Standard	50.000	3.69	22461.885	59813.004	4.694	54.4	8.8	NO	0.998	NO	bb
8	8	170731M2_9	Standard	100.000	3.70	46378.051	66783.320	8.681	100.7	0.7	NO	0.998	NO	bb
9	9	170731M2_10	Standard	250.000	3.70	135410.438	80782.586	20.953	243.1	-2.8	NO	0.998	NO	bb

Compound name: PFNA
Correlation coefficient: r = 0.999697, r^2 = 0.999394
Calibration curve: 1.08541 * x + 0.0735739
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	170731M2_2	Standard	0.250	3.81	1389.836	54018.730	0.322	0.2	-8.6	NO	0.999	NO	bb
2	2	170731M2_3	Standard	0.500	3.82	3272.709	62262.660	0.657	0.5	7.5	NO	0.999	NO	bb
3	3	170731M2_4	Standard	1.000	3.81	5627.537	61609.746	1.142	1.0	-1.6	NO	0.999	NO	bb
4	4	170731M2_5	Standard	2.000	3.81	10519.000	57196.430	2.299	2.1	2.5	NO	0.999	NO	bb
5	5	170731M2_6	Standard	5.000	3.82	23937.521	55674.484	5.374	4.9	-2.3	NO	0.999	NO	bb
6	6	170731M2_7	Standard	10.000	3.82	53188.000	59478.996	11.178	10.2	2.3	NO	0.999	NO	bb
7	7	170731M2_8	Standard	50.000	3.81	232756.781	51828.512	56.136	51.7	3.3	NO	0.999	NO	bb
8	8	170731M2_9	Standard	100.000	3.81	446148.219	53481.383	104.277	96.0	-4.0	NO	0.999	NO	bb
9	9	170731M2_10	Standard	250.000	3.82	1433063.500	65426.449	273.793	252.2	0.9	NO	0.999	NO	bb

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Compound name: PFOSA
Correlation coefficient: r = 0.999883, r^2 = 0.999766
Calibration curve: 1.0734 * x + -0.0271184
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	170731M2_2	Standard	0.250	3.83	130.593	6628.687	0.246	0.3	1.9	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	3.82	315.894	6757.332	0.584	0.6	13.9	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	3.83	559.472	7148.018	0.978	0.9	-6.3	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	3.83	1121.168	6732.580	2.082	2.0	-1.8	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.83	2778.576	6463.064	5.374	5.0	0.6	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.83	5384.216	6861.386	9.809	9.2	-8.4	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.83	24500.219	5762.874	53.142	49.5	-0.9	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.83	49243.563	5694.701	108.091	100.7	0.7	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.83	146323.297	6801.088	268.934	250.6	0.2	NO	1.000	NO	bb

Compound name: PFOS
Coefficient of Determination: R^2 = 0.999779
Calibration curve: 0.000313423 * x^2 + 1.01509 * x + 0.0486823
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	170731M2_2	Standard	0.250	3.86	262.377	9891.881	0.332	0.3	11.5	NO	1.000	NO	MM
2	2	170731M2_3	Standard	0.500	3.87	481.675	11460.590	0.525	0.5	-6.1	NO	1.000	NO	MM
3	3	170731M2_4	Standard	1.000	3.87	1088.575	11503.416	1.183	1.1	11.7	NO	1.000	NO	MM
4	4	170731M2_5	Standard	2.000	3.87	1856.085	10201.429	2.274	2.2	9.6	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.87	4259.738	10639.481	5.005	4.9	-2.5	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.87	9044.098	11768.862	9.606	9.4	-6.1	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.87	41100.910	9805.450	52.395	50.8	1.5	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.87	79111.719	9480.636	104.307	99.6	-0.4	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.87	250476.469	11450.712	273.429	250.0	0.0	NO	1.000	NO	bb

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Compound name: PFDA
Correlation coefficient: r = 0.999542, r^2 = 0.999084
Calibration curve: 1.19993 * x + 0.156566
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	170731M2_2	Standard	0.250	3.98	1774.405	59781.418	0.371	0.2	-28.5	NO	0.999	NO	bb
2	2	170731M2_3	Standard	0.500	3.99	3704.363	61812.703	0.749	0.5	-1.2	NO	0.999	NO	bb
3	3	170731M2_4	Standard	1.000	3.99	7125.412	54053.125	1.648	1.2	24.3	NO	0.999	NO	bb
4	4	170731M2_5	Standard	2.000	3.98	11131.300	56405.016	2.467	1.9	-3.7	NO	0.999	NO	bb
5	5	170731M2_6	Standard	5.000	3.99	27851.160	53527.699	6.504	5.3	5.8	NO	0.999	NO	bb
6	6	170731M2_7	Standard	10.000	3.99	58244.602	58740.922	12.394	10.2	2.0	NO	0.999	NO	bb
7	7	170731M2_8	Standard	50.000	3.99	232759.141	46095.934	63.118	52.5	4.9	NO	0.999	NO	bb
8	8	170731M2_9	Standard	100.000	3.99	492152.594	53241.500	115.547	96.2	-3.8	NO	0.999	NO	bb
9	9	170731M2_10	Standard	250.000	3.99	1764954.750	73276.133	301.079	250.8	0.3	NO	0.999	NO	bb

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.999107
Calibration curve: -0.00477278 * x^2 + 1.45357 * x + 0.0233651
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	170731M2_2	Standard	0.250	3.98	133.416	5442.396	0.306	0.2	-22.1	NO	0.999	NO	bb
2	2	170731M2_3	Standard	0.500	3.99	391.677	6198.728	0.790	0.5	5.6	NO	0.999	NO	bb
3	3	170731M2_4	Standard	1.000	3.98	911.492	7001.858	1.627	1.1	10.7	NO	0.999	NO	bb
4	4	170731M2_5	Standard	2.000	3.98	1614.354	5984.115	3.372	2.3	16.1	NO	0.999	NO	bb
5	5	170731M2_6	Standard	5.000	3.98	3426.112	6043.006	7.087	4.9	-1.2	NO	0.999	NO	bb
6	6	170731M2_7	Standard	10.000	3.98	7395.563	6710.449	13.776	9.8	-2.2	NO	0.999	NO	bb
7	7	170731M2_8	Standard	50.000	3.98	30902.635	6400.762	60.350	49.6	-0.9	NO	0.999	NO	bb
8	8	170731M2_9	Standard	100.000	3.98	58744.098	7501.545	97.887	100.5	0.5	NO	0.999	NO	bb
9	9	170731M2_10	Standard	250.000	3.98	165445.906	12670.185	163.224			NO	0.999	NO	bbXI

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Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.999795
Calibration curve: 0.00169243 * x^2 + 17.7214 * x + 0.975242
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	170731M2_2	Standard	0.250	4.02	367.535	12318.428	4.848	0.2	-12.6	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	4.02	784.251	14049.963	9.071	0.5	-8.6	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	4.02	1656.366	13356.303	20.152	1.1	8.2	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	4.02	3233.362	13264.592	39.611	2.2	9.0	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	4.02	7035.678	12616.413	90.620	5.1	1.1	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	4.02	15347.673	13566.270	183.838	10.3	3.1	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	4.02	69404.688	12476.236	903.980	50.7	1.4	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	4.02	135373.609	12518.632	1757.238	98.2	-1.8	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	4.02	419427.906	14988.046	4547.426	250.6	0.2	NO	1.000	NO	bb

Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999924
Calibration curve: -0.0019298 * x^2 + 15.4647 * x + -0.327453
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	170731M2_2	Standard	0.250	4.10	276.167	11737.404	3.823	0.3	7.4	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	4.09	591.342	13698.948	7.015	0.5	-5.0	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	4.08	1153.289	13688.059	13.691	0.9	-9.3	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	4.08	2299.673	12896.733	28.976	1.9	-5.2	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	4.09	5664.419	11500.281	80.039	5.2	4.0	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	4.09	12266.051	12932.044	154.131	10.0	0.0	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	4.09	56522.008	12029.896	763.500	49.7	-0.6	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	4.09	117651.883	12470.056	1533.147	100.4	0.4	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	4.09	380863.594	16532.346	3743.591	249.9	-0.0	NO	1.000	NO	bb

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Compound name: PFUnA
Coefficient of Determination: R^2 = 0.997941
Calibration curve: -3.28617e-005 * x^2 + 0.757566 * x + 0.0881327
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	170731M2_2	Standard	0.250	4.15	1143.224	54062.352	0.264	0.2	-7.0	NO	0.998	NO	MM
2	2	170731M2_3	Standard	0.500	4.16	2356.846	65699.883	0.448	0.5	-4.9	NO	0.998	NO	bb
3	3	170731M2_4	Standard	1.000	4.15	4520.437	60141.438	0.940	1.1	12.4	NO	0.998	NO	bb
4	4	170731M2_5	Standard	2.000	4.15	8631.595	62558.703	1.725	2.2	8.0	NO	0.998	NO	bb
5	5	170731M2_6	Standard	5.000	4.15	18829.459	63691.332	3.695	4.8	-4.7	NO	0.998	NO	bb
6	6	170731M2_7	Standard	10.000	4.16	38130.637	62353.184	7.644	10.0	-0.2	NO	0.998	NO	bb
7	7	170731M2_8	Standard	50.000	4.15	174377.125	63269.566	34.451	45.4	-9.1	NO	0.998	NO	bb
8	8	170731M2_9	Standard	100.000	4.15	337593.438	52677.117	80.109	106.1	6.1	NO	0.998	NO	bb
9	9	170731M2_10	Standard	250.000	4.16	1108908.375	74412.180	186.278	248.5	-0.6	NO	0.998	NO	bb

Compound name: PFDS
Coefficient of Determination: R^2 = 0.997578
Calibration curve: -4.11818e-005 * x^2 + 0.0811765 * x + -0.0032981
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	170731M2_2	Standard	0.250	4.20	86.193	54062.352	0.020	0.3	14.5	NO	0.998	NO	MMX
2	2	170731M2_3	Standard	0.500	4.21	180.557	65699.883	0.034	0.5	-7.2	NO	0.998	NO	MM
3	3	170731M2_4	Standard	1.000	4.19	431.861	60141.438	0.090	1.1	14.7	NO	0.998	NO	MM
4	4	170731M2_5	Standard	2.000	4.19	842.372	62558.703	0.168	2.1	5.8	NO	0.998	NO	bb
5	5	170731M2_6	Standard	5.000	4.20	1836.227	63691.332	0.360	4.5	-10.2	NO	0.998	NO	bb
6	6	170731M2_7	Standard	10.000	4.20	4003.412	62353.184	0.803	10.0	-0.2	NO	0.998	NO	bb
7	7	170731M2_8	Standard	50.000	4.20	18296.340	63269.566	3.615	45.6	-8.7	NO	0.998	NO	bb
8	8	170731M2_9	Standard	100.000	4.20	34524.848	52677.117	8.193	106.7	6.7	NO	0.998	NO	bb
9	9	170731M2_10	Standard	250.000	4.20	104708.711	74412.180	17.589	247.9	-0.8	NO	0.998	NO	bb

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Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999599
Calibration curve: -9.87083e-006 * x^2 + 0.940673 * x + 0.00742583
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	170731M2_2	Standard	0.250	4.31	97.386	6100.251	0.200	0.2	-18.3	NO	1.000	NO	MM
2	2	170731M2_3	Standard	0.500	4.31	297.108	6198.730	0.599	0.6	25.8	NO	1.000	NO	MM
3	3	170731M2_4	Standard	1.000	4.32	486.738	6089.570	0.999	1.1	5.4	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	4.31	821.016	5996.160	1.712	1.8	-9.4	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	4.31	2199.727	5858.786	4.693	5.0	-0.4	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	4.31	4813.721	6554.075	9.181	9.8	-2.5	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	4.31	20853.395	5701.481	45.719	48.6	-2.8	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	4.31	46647.582	6062.306	96.184	102.4	2.4	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	4.31	145761.844	7788.229	233.946	249.3	-0.3	NO	1.000	NO	bb

Compound name: N-MeFOSA
Correlation coefficient: r = 0.998345, r^2 = 0.996693
Calibration curve: 1.00604 * x + 0.235716
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	170731M2_2	Standard	1.250	4.35	171.072	22996.787	1.116	0.9	-30.0	NO	0.997	NO	MM
2	2	170731M2_3	Standard	2.500	4.34	482.139	25726.459	2.811	2.6	2.4	NO	0.997	NO	bb
3	3	170731M2_4	Standard	5.000	4.34	982.633	25550.789	5.769	5.5	10.0	NO	0.997	NO	bb
4	4	170731M2_5	Standard	10.000	4.34	1926.980	24786.727	11.661	11.4	13.6	NO	0.997	NO	bb
5	5	170731M2_6	Standard	25.000	4.34	4419.905	23582.914	28.113	27.7	10.8	NO	0.997	NO	bb
6	6	170731M2_7	Standard	50.000	4.35	8956.011	26155.398	51.362	50.8	1.6	NO	0.997	NO	db
7	7	170731M2_8	Standard	250.000	4.34	42345.395	23085.887	275.138	273.3	9.3	NO	0.997	NO	db
8	8	170731M2_9	Standard	500.000	4.35	84341.039	23835.992	530.759	527.3	5.5	NO	0.997	NO	bb
9	9	170731M2_10	Standard	1250.000	4.35	300837.125	37548.465	1201.795	1194.3	-4.5	NO	0.997	NO	bb

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Compound name: PFTrDA
Correlation coefficient: r = 0.999725, r^2 = 0.999450
Calibration curve: 10.3774 * x + 1.19316
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	170731M2_2	Standard	0.250	4.48	1546.429	6100.251	3.169	0.2	-23.8	NO	0.999	NO	bb
2	2	170731M2_3	Standard	0.500	4.49	3084.918	6198.730	6.221	0.5	-3.1	NO	0.999	NO	bb
3	3	170731M2_4	Standard	1.000	4.49	6341.854	6089.570	13.018	1.1	13.9	NO	0.999	NO	bb
4	4	170731M2_5	Standard	2.000	4.48	11501.922	5996.160	23.978	2.2	9.8	NO	0.999	NO	bb
5	5	170731M2_6	Standard	5.000	4.48	25400.311	5858.786	54.193	5.1	2.1	NO	0.999	NO	bb
6	6	170731M2_7	Standard	10.000	4.49	54547.922	6554.075	104.034	9.9	-0.9	NO	0.999	NO	bb
7	7	170731M2_8	Standard	50.000	4.48	247945.563	5701.481	543.599	52.3	4.5	NO	0.999	NO	bb
8	8	170731M2_9	Standard	100.000	4.48	490967.313	6062.306	1012.336	97.4	-2.6	NO	0.999	NO	bb
9	9	170731M2_10	Standard	250.000	4.49	1617289.125	7788.229	2595.727	250.0	0.0	NO	0.999	NO	bb

Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999821
Calibration curve: -0.000206845 * x^2 + 1.07301 * x + 0.115151
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	170731M2_2	Standard	0.250	4.66	1070.982	38964.742	0.344	0.2	-14.8	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	4.66	2242.796	43108.695	0.650	0.5	-0.2	NO	1.000	NO	db
3	3	170731M2_4	Standard	1.000	4.66	4228.840	43416.883	1.218	1.0	2.8	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	4.66	8124.685	42363.957	2.397	2.1	6.4	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	4.66	18184.229	38970.395	5.833	5.3	6.7	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	4.66	36936.945	42258.219	10.926	10.1	0.9	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	4.66	166736.000	40066.441	52.019	48.8	-2.3	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	4.66	335759.844	39581.660	106.034	100.7	0.7	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	4.67	1095646.375	53624.324	255.399	250.0	-0.0	NO	1.000	NO	bb

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Compound name: N-EtFOSA
Correlation coefficient: r = 0.999415, r^2 = 0.998831
Calibration curve: 0.921854 * x + 0.382781
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	170731M2_2	Standard	1.250	4.92	281.374	32355.941	1.304	1.0	-20.0	NO	0.999	NO	bb
2	2	170731M2_3	Standard	2.500	4.93	566.467	35601.133	2.387	2.2	-13.0	NO	0.999	NO	bb
3	3	170731M2_4	Standard	5.000	4.93	1233.600	34205.117	5.410	5.5	9.1	NO	0.999	NO	bb
4	4	170731M2_5	Standard	10.000	4.92	2359.483	33521.320	10.558	11.0	10.4	NO	0.999	NO	bb
5	5	170731M2_6	Standard	25.000	4.92	5411.886	32043.641	25.334	27.1	8.3	NO	0.999	NO	db
6	6	170731M2_7	Standard	50.000	4.93	10900.199	34405.922	47.522	51.1	2.3	NO	0.999	NO	bb
7	7	170731M2_8	Standard	250.000	4.92	50732.695	32776.059	232.179	251.4	0.6	NO	0.999	NO	db
8	8	170731M2_9	Standard	500.000	4.92	104693.227	32444.443	484.027	524.6	4.9	NO	0.999	NO	bb
9	9	170731M2_10	Standard	1250.000	4.93	373166.781	49761.906	1124.857	1219.8	-2.4	NO	0.999	NO	db

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999687
Calibration curve: -0.000332417 * x^2 + 1.25821 * x + 0.243616
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	170731M2_2	Standard	0.250	5.03	1832.064	18578.701	0.493	0.2	-20.7	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	5.03	3655.248	21305.383	0.858	0.5	-2.4	NO	1.000	NO	bd
3	3	170731M2_4	Standard	1.000	5.03	6457.158	21093.645	1.531	1.0	2.3	NO	1.000	NO	db
4	4	170731M2_5	Standard	2.000	5.03	12237.453	20624.443	2.967	2.2	8.3	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	5.03	27610.768	19494.348	7.082	5.4	8.9	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	5.03	55985.383	20781.805	13.470	10.5	5.4	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	5.03	245522.141	19811.059	61.966	49.7	-0.6	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	5.03	490538.219	20275.766	120.967	98.5	-1.5	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	5.04	1614512.375	27386.783	294.761	250.7	0.3	NO	1.000	NO	bb

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Compound name: PFODA
Correlation coefficient: r = 0.998537, r^2 = 0.997077
Calibration curve: 1.12504 * x + 0.153988
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 170731M2_2	Standard	0.250	5.40	1427.299	18578.701	0.384	0.2	-18.2	NO	0.997	NO	bb
2	2 170731M2_3	Standard	0.500	5.40	3408.691	21305.383	0.800	0.6	14.8	NO	0.997	NO	MM
3	3 170731M2_4	Standard	1.000	5.40	5937.597	21093.645	1.407	1.1	11.4	NO	0.997	NO	bb
4	4 170731M2_5	Standard	2.000	5.40	11189.688	20624.443	2.713	2.3	13.7	NO	0.997	NO	bb
5	5 170731M2_6	Standard	5.000	5.40	25545.443	19494.348	6.552	5.7	13.7	NO	0.997	NO	bb
6	6 170731M2_7	Standard	10.000	5.40	53019.988	20781.805	12.756	11.2	12.0	NO	0.997	NO	bb
7	7 170731M2_8	Standard	50.000	5.40	239072.719	19811.059	60.338	53.5	7.0	NO	0.997	NO	bb
8	8 170731M2_9	Standard	100.000	5.40	476093.531	20275.766	117.405	104.2	4.2	NO	0.997	NO	bb
9	9 170731M2_10	Standard	250.000	5.40	1479649.750	27386.783	270.139	240.0	-4.0	NO	0.997	NO	bb

Compound name: N-MeFOSE
Correlation coefficient: r = 0.999653, r^2 = 0.999306
Calibration curve: 1.02661 * x + 0.421311
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 170731M2_2	Standard	1.250	5.44	362.749	38065.852	1.429	1.0	-21.4	NO	0.999	NO	bb
2	2 170731M2_3	Standard	2.500	5.44	750.944	40818.066	2.760	2.3	-8.9	NO	0.999	NO	bb
3	3 170731M2_4	Standard	5.000	5.44	1644.402	40754.777	6.052	5.5	9.7	NO	0.999	NO	bb
4	4 170731M2_5	Standard	10.000	5.44	3091.344	39794.629	11.652	10.9	9.4	NO	0.999	NO	bb
5	5 170731M2_6	Standard	25.000	5.44	6838.694	38172.813	26.873	25.8	3.1	NO	0.999	NO	bb
6	6 170731M2_7	Standard	50.000	5.44	14673.296	40819.426	53.920	52.1	4.2	NO	0.999	NO	bb
7	7 170731M2_8	Standard	250.000	5.44	66914.719	37733.039	266.006	258.7	3.5	NO	0.999	NO	bb
8	8 170731M2_9	Standard	500.000	5.44	138132.109	39369.297	526.294	512.2	2.4	NO	0.999	NO	bb
9	9 170731M2_10	Standard	1250.000	5.45	499589.844	59556.500	1258.275	1225.2	-2.0	NO	0.999	NO	bb

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Compound name: N-EtFOSE
Correlation coefficient: r = 0.999481, r^2 = 0.998963
Calibration curve: 1.14913 * x + 1.24499
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	170731M2_2	Standard	1.250	5.62	424.316	37434.258	1.700	0.4	-68.3	NO	0.999	NO	MMX
2	2	170731M2_3	Standard	2.500	5.62	1021.850	40953.574	3.743	2.2	-13.1	NO	0.999	NO	MM
3	3	170731M2_4	Standard	5.000	5.62	1868.327	40593.066	6.904	4.9	-1.5	NO	0.999	NO	bb
4	4	170731M2_5	Standard	10.000	5.62	3452.958	39083.969	13.252	10.4	4.5	NO	0.999	NO	bb
5	5	170731M2_6	Standard	25.000	5.62	7821.364	37934.445	30.927	25.8	3.3	NO	0.999	NO	bb
6	6	170731M2_7	Standard	50.000	5.62	16071.865	40396.703	59.678	50.8	1.7	NO	0.999	NO	bb
7	7	170731M2_8	Standard	250.000	5.62	74830.914	37673.949	297.942	258.2	3.3	NO	0.999	NO	bb
8	8	170731M2_9	Standard	500.000	5.62	156146.688	39004.324	600.498	521.5	4.3	NO	0.999	NO	bb
9	9	170731M2_10	Standard	1250.000	5.62	563632.000	60321.027	1401.581	1218.6	-2.5	NO	0.999	NO	bb

Compound name: 13C3-PFBA
Response Factor: 1.00566
RRF SD: 0.070969, Relative SD: 7.05699
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	170731M2_2	Standard	12.500	1.41	13874.437	13370.174	12.971	12.9	3.2	NO		NO	MM
2	2	170731M2_3	Standard	12.500	1.40	14032.984	14138.808	12.406	12.3	-1.3	NO		NO	bb
3	3	170731M2_4	Standard	12.500	1.40	14534.191	13876.813	13.092	13.0	4.1	NO		NO	bb
4	4	170731M2_5	Standard	12.500	1.40	13825.355	13352.213	12.943	12.9	3.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	1.40	14375.643	13996.207	12.839	12.8	2.1	NO		NO	bb
6	6	170731M2_7	Standard	12.500	1.40	14275.662	13824.148	12.908	12.8	2.7	NO		NO	bb
7	7	170731M2_8	Standard	12.500	1.40	13941.181	13506.435	12.902	12.8	2.6	NO		NO	bb
8	8	170731M2_9	Standard	12.500	1.40	14182.987	13834.986	12.814	12.7	1.9	NO		NO	bb
9	9	170731M2_10	Standard	12.500	1.41	20278.131	24706.939	10.259	10.2	-18.4	NO		NO	bb

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Compound name: 13C3-PFPeA
Response Factor: 0.275215
RRF SD: 0.0314917, Relative SD: 11.4426
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 170731M2_2	Standard	12.500	2.69	28315.961	38888.445	3.641	13.2	5.8	NO		NO	bb
2	2 170731M2_3	Standard	12.500	2.69	28971.373	39697.934	3.649	13.3	6.1	NO		NO	MM
3	3 170731M2_4	Standard	12.500	2.69	29344.844	39547.027	3.710	13.5	7.8	NO		NO	MM
4	4 170731M2_5	Standard	12.500	2.69	27224.277	39438.602	3.451	12.5	0.3	NO		NO	MM
5	5 170731M2_6	Standard	12.500	2.69	28900.883	42060.418	3.436	12.5	-0.1	NO		NO	MM
6	6 170731M2_7	Standard	12.500	2.69	28928.092	40025.766	3.614	13.1	5.0	NO		NO	bb
7	7 170731M2_8	Standard	12.500	2.69	27958.209	39102.801	3.575	13.0	3.9	NO		NO	MM
8	8 170731M2_9	Standard	12.500	2.69	27418.373	39589.105	3.463	12.6	0.7	NO		NO	MM
9	9 170731M2_10	Standard	12.500	2.70	40599.961	83770.414	2.423	8.8	-29.6	NO		NO	MM

Compound name: 13C3-PFBS
Response Factor: 0.0341202
RRF SD: 0.00479083, Relative SD: 14.041
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 170731M2_2	Standard	12.500	2.93	3567.166	38888.445	0.459	13.4	7.5	NO		NO	bb
2	2 170731M2_3	Standard	12.500	2.92	3674.875	39697.934	0.463	13.6	8.5	NO		NO	bb
3	3 170731M2_4	Standard	12.500	2.92	3756.884	39547.027	0.475	13.9	11.4	NO		NO	bb
4	4 170731M2_5	Standard	12.500	2.92	3453.801	39438.602	0.438	12.8	2.7	NO		NO	bb
5	5 170731M2_6	Standard	12.500	2.93	3669.754	42060.418	0.436	12.8	2.3	NO		NO	bb
6	6 170731M2_7	Standard	12.500	2.93	3495.072	40025.766	0.437	12.8	2.4	NO		NO	bb
7	7 170731M2_8	Standard	12.500	2.92	3386.169	39102.801	0.433	12.7	1.5	NO		NO	bb
8	8 170731M2_9	Standard	12.500	2.92	3369.060	39589.105	0.426	12.5	-0.2	NO		NO	bb
9	9 170731M2_10	Standard	12.500	2.93	4571.001	83770.414	0.273	8.0	-36.0	NO		NO	bb

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Compound name: 13C2-PFHxA
Response Factor: 0.334017
RRF SD: 0.0197264, Relative SD: 5.90582
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 170731M2_2	Standard	5.000	3.16	13289.316	38888.445	1.709	5.1	2.3	NO		NO	bb
2	2 170731M2_3	Standard	5.000	3.17	13996.411	39697.934	1.763	5.3	5.6	NO		NO	bb
3	3 170731M2_4	Standard	5.000	3.16	13471.391	39547.027	1.703	5.1	2.0	NO		NO	bb
4	4 170731M2_5	Standard	5.000	3.16	13180.728	39438.602	1.671	5.0	0.1	NO		NO	bb
5	5 170731M2_6	Standard	5.000	3.16	14300.003	42060.418	1.700	5.1	1.8	NO		NO	bb
6	6 170731M2_7	Standard	5.000	3.17	13464.359	40025.766	1.682	5.0	0.7	NO		NO	bb
7	7 170731M2_8	Standard	5.000	3.16	13579.439	39102.801	1.736	5.2	4.0	NO		NO	bb
8	8 170731M2_9	Standard	5.000	3.17	13004.882	39589.105	1.642	4.9	-1.7	NO		NO	bb
9	9 170731M2_10	Standard	5.000	3.16	23861.670	83770.414	1.424	4.3	-14.7	NO		NO	bb

Compound name: 13C4-PFHpA
Response Factor: 0.414287
RRF SD: 0.0516844, Relative SD: 12.4755
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 170731M2_2	Standard	12.500	3.43	42267.941	38888.445	5.435	13.1	4.9	NO		NO	bb
2	2 170731M2_3	Standard	12.500	3.43	44035.770	39697.934	5.546	13.4	7.1	NO		NO	bb
3	3 170731M2_4	Standard	12.500	3.43	47111.973	39547.027	5.956	14.4	15.0	NO		NO	bb
4	4 170731M2_5	Standard	12.500	3.43	40041.188	39438.602	5.076	12.3	-2.0	NO		NO	bb
5	5 170731M2_6	Standard	12.500	3.43	43531.445	42060.418	5.175	12.5	-0.1	NO		NO	bb
6	6 170731M2_7	Standard	12.500	3.43	41835.402	40025.766	5.226	12.6	0.9	NO		NO	bb
7	7 170731M2_8	Standard	12.500	3.43	42486.371	39102.801	5.433	13.1	4.9	NO		NO	bb
8	8 170731M2_9	Standard	12.500	3.44	40762.777	39589.105	5.148	12.4	-0.6	NO		NO	bb
9	9 170731M2_10	Standard	12.500	3.43	60510.934	83770.414	3.612	8.7	-30.3	NO		NO	bb

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Compound name: 18O2-PFHxS
Response Factor: 0.475307
RRF SD: 0.0429846, Relative SD: 9.04355
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	170731M2_2	Standard	12.500	3.50	4105.498	8046.377	6.378	13.4	7.3	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.51	4057.192	8495.484	5.970	12.6	0.5	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.50	4402.638	8882.063	6.196	13.0	4.3	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.50	3891.568	8188.101	5.941	12.5	-0.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.50	3878.935	8591.091	5.644	11.9	-5.0	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.51	3978.140	8363.203	5.946	12.5	0.1	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.51	3932.861	7776.584	6.322	13.3	6.4	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.51	4159.138	8119.819	6.403	13.5	7.8	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.51	4925.332	13173.476	4.674	9.8	-21.3	NO		NO	bb

Compound name: 13C2-6:2 FTS
Response Factor: 0.213903
RRF SD: 0.0188493, Relative SD: 8.81207
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	170731M2_2	Standard	12.500	3.63	9927.280	45613.742	2.720	12.7	1.7	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.63	10315.116	51389.625	2.509	11.7	-6.2	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.62	11541.119	54967.332	2.625	12.3	-1.8	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.62	10131.339	48131.012	2.631	12.3	-1.6	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.63	9593.972	48854.391	2.455	11.5	-8.2	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.63	10116.732	49711.629	2.544	11.9	-4.9	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.63	9833.309	49752.918	2.471	11.5	-7.6	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.63	11556.366	48614.910	2.971	13.9	11.1	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.63	18952.229	75486.695	3.138	14.7	17.4	NO		NO	bb

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Compound name: 13C2-PFOA
Response Factor: 1.29846
RRF SD: 0.105268, Relative SD: 8.10711
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	170731M2_2	Standard	12.500	3.64	63401.359	45613.742	17.375	13.4	7.0	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.64	67191.539	51389.625	16.344	12.6	0.7	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.63	70281.578	54967.332	15.983	12.3	-1.5	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.63	66790.375	48131.012	17.346	13.4	6.9	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.64	63977.652	48854.391	16.369	12.6	0.9	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.64	67944.383	49711.629	17.085	13.2	5.3	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.64	59813.004	49752.918	15.028	11.6	-7.4	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.64	66783.320	48614.910	17.172	13.2	5.8	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.64	80782.586	75486.695	13.377	10.3	-17.6	NO		NO	bb

Compound name: 13C5-PFNA
Response Factor: 1.09418
RRF SD: 0.111771, Relative SD: 10.2151
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	170731M2_2	Standard	12.500	3.81	54018.730	48472.340	13.930	12.7	1.9	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.82	62262.660	53412.238	14.571	13.3	6.5	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.81	61609.746	53921.699	14.282	13.1	4.4	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.81	57196.430	54390.477	13.145	12.0	-3.9	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.82	55674.484	50780.711	13.705	12.5	0.2	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.81	59478.996	55837.012	13.315	12.2	-2.6	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.81	51828.512	44552.844	14.541	13.3	6.3	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.81	53481.383	43921.875	15.221	13.9	11.3	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.82	65426.449	78755.734	10.384	9.5	-24.1	NO		NO	bb

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Compound name: 13C8-PFOSA
Response Factor: 0.124457
RRF SD: 0.0171532, Relative SD: 13.7824
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	170731M2_2	Standard	12.500	3.82	6628.687	46687.762	1.775	14.3	14.1	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.83	6757.332	55126.090	1.532	12.3	-1.5	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.82	7148.018	52064.938	1.716	13.8	10.3	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.82	6732.580	55069.406	1.528	12.3	-1.8	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.83	6463.064	48450.305	1.667	13.4	7.2	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.83	6861.386	50457.156	1.700	13.7	9.3	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.82	5762.874	52556.180	1.371	11.0	-11.9	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.83	5694.701	43779.801	1.626	13.1	4.5	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.83	6801.088	78259.594	1.086	8.7	-30.2	NO		NO	bb

Compound name: 13C8-PFOS
Response Factor: 1.15331
RRF SD: 0.0926176, Relative SD: 8.03062
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	170731M2_2	Standard	12.500	3.87	9891.881	9416.050	13.132	11.4	-8.9	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.87	11460.590	9484.859	15.104	13.1	4.8	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.87	11503.416	9437.330	15.237	13.2	5.7	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.87	10201.429	8900.184	14.328	12.4	-0.6	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.87	10639.481	9014.546	14.753	12.8	2.3	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.87	11768.862	8997.038	16.351	14.2	13.4	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.87	9805.450	8503.210	14.414	12.5	-0.0	NO		NO	bd
8	8	170731M2_9	Standard	12.500	3.87	9480.636	8476.880	13.980	12.1	-3.0	NO		NO	bd
9	9	170731M2_10	Standard	12.500	3.87	11450.712	11498.018	12.449	10.8	-13.6	NO		NO	bd

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Compound name: 13C2-PFDA
Response Factor: 1.05862
RRF SD: 0.102606, Relative SD: 9.69247
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	170731M2_2	Standard	12.500	3.99	59781.418	48495.309	15.409	14.6	16.4	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.99	61812.703	59901.941	12.899	12.2	-2.5	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.99	54053.125	59169.184	11.419	10.8	-13.7	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.98	56405.016	50594.809	13.935	13.2	5.3	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.99	53527.699	46199.484	14.483	13.7	9.4	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.99	58740.922	55659.504	13.192	12.5	-0.3	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.99	46095.934	46843.121	12.301	11.6	-7.0	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.99	53241.500	48865.242	13.619	12.9	2.9	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.99	73276.133	77377.094	11.838	11.2	-10.5	NO		NO	bb

Compound name: 13C2-8:2 FTS
Response Factor: 0.128621
RRF SD: 0.0196887, Relative SD: 15.3075
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	170731M2_2	Standard	12.500	3.98	5442.396	48495.309	1.403	10.9	-12.7	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.98	6198.728	59901.941	1.294	10.1	-19.5	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.98	7001.858	59169.184	1.479	11.5	-8.0	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.98	5984.115	50594.809	1.478	11.5	-8.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.98	6043.006	46199.484	1.635	12.7	1.7	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.98	6710.449	55659.504	1.507	11.7	-6.3	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.98	6400.762	46843.121	1.708	13.3	6.2	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.98	7501.545	48865.242	1.919	14.9	19.4	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.98	12670.185	77377.094	2.047	15.9	27.3	NO		NO	bb

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Compound name: d3-N-MeFOSAA
Response Factor: 0.0193183
RRF SD: 0.00204703, Relative SD: 10.5963
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	170731M2_2	Standard	162.500	4.02	12318.428	46687.762	3.298	170.7	5.1	NO		NO	bb
2	2	170731M2_3	Standard	162.500	4.02	14049.963	55126.090	3.186	164.9	1.5	NO		NO	bb
3	3	170731M2_4	Standard	162.500	4.02	13356.303	52064.938	3.207	166.0	2.1	NO		NO	bb
4	4	170731M2_5	Standard	162.500	4.01	13264.592	55069.406	3.011	155.9	-4.1	NO		NO	bb
5	5	170731M2_6	Standard	162.500	4.02	12616.413	48450.305	3.255	168.5	3.7	NO		NO	bb
6	6	170731M2_7	Standard	162.500	4.02	13566.270	50457.156	3.361	174.0	7.1	NO		NO	bb
7	7	170731M2_8	Standard	162.500	4.01	12476.236	52556.180	2.967	153.6	-5.5	NO		NO	bb
8	8	170731M2_9	Standard	162.500	4.02	12518.632	43779.801	3.574	185.0	13.9	NO		NO	bb
9	9	170731M2_10	Standard	162.500	4.02	14988.046	78259.594	2.394	123.9	-23.7	NO		NO	bb

Compound name: d5-N-EtFOSAA
Response Factor: 0.0189371
RRF SD: 0.00164292, Relative SD: 8.67569
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	170731M2_2	Standard	162.500	4.08	11737.404	46687.762	3.143	165.9	2.1	NO		NO	bb
2	2	170731M2_3	Standard	162.500	4.08	13698.948	55126.090	3.106	164.0	0.9	NO		NO	bb
3	3	170731M2_4	Standard	162.500	4.08	13688.059	52064.938	3.286	173.5	6.8	NO		NO	bb
4	4	170731M2_5	Standard	162.500	4.08	12896.733	55069.406	2.927	154.6	-4.9	NO		NO	bb
5	5	170731M2_6	Standard	162.500	4.08	11500.281	48450.305	2.967	156.7	-3.6	NO		NO	bb
6	6	170731M2_7	Standard	162.500	4.08	12932.044	50457.156	3.204	169.2	4.1	NO		NO	bb
7	7	170731M2_8	Standard	162.500	4.08	12029.896	52556.180	2.861	151.1	-7.0	NO		NO	bb
8	8	170731M2_9	Standard	162.500	4.08	12470.056	43779.801	3.560	188.0	15.7	NO		NO	bb
9	9	170731M2_10	Standard	162.500	4.09	16532.346	78259.594	2.641	139.4	-14.2	NO		NO	bb

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Compound name: 13C2-PFUnA
Response Factor: 1.17213
RRF SD: 0.0984029, Relative SD: 8.39524
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 170731M2_2	Standard	12.500	4.15	54062.352	46687.762	14.474	12.3	-1.2	NO		NO	bb
2	2 170731M2_3	Standard	12.500	4.15	65699.883	55126.090	14.898	12.7	1.7	NO		NO	bb
3	3 170731M2_4	Standard	12.500	4.15	60141.438	52064.938	14.439	12.3	-1.5	NO		NO	bb
4	4 170731M2_5	Standard	12.500	4.15	62558.703	55069.406	14.200	12.1	-3.1	NO		NO	bb
5	5 170731M2_6	Standard	12.500	4.15	63691.332	48450.305	16.432	14.0	12.2	NO		NO	bb
6	6 170731M2_7	Standard	12.500	4.16	62353.184	50457.156	15.447	13.2	5.4	NO		NO	bb
7	7 170731M2_8	Standard	12.500	4.15	63269.566	52556.180	15.048	12.8	2.7	NO		NO	bb
8	8 170731M2_9	Standard	12.500	4.15	52677.117	43779.801	15.040	12.8	2.7	NO		NO	bb
9	9 170731M2_10	Standard	12.500	4.16	74412.180	78259.594	11.885	10.1	-18.9	NO		NO	bb

Compound name: 13C2-PFDoA
Response Factor: 0.118471
RRF SD: 0.0126225, Relative SD: 10.6544
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 170731M2_2	Standard	12.500	4.31	6100.251	46687.762	1.633	13.8	10.3	NO		NO	bb
2	2 170731M2_3	Standard	12.500	4.31	6198.730	55126.090	1.406	11.9	-5.1	NO		NO	bb
3	3 170731M2_4	Standard	12.500	4.31	6089.570	52064.938	1.462	12.3	-1.3	NO		NO	bb
4	4 170731M2_5	Standard	12.500	4.31	5996.160	55069.406	1.361	11.5	-8.1	NO		NO	bb
5	5 170731M2_6	Standard	12.500	4.31	5858.786	48450.305	1.512	12.8	2.1	NO		NO	bb
6	6 170731M2_7	Standard	12.500	4.31	6554.075	50457.156	1.624	13.7	9.6	NO		NO	bb
7	7 170731M2_8	Standard	12.500	4.31	5701.481	52556.180	1.356	11.4	-8.4	NO		NO	bb
8	8 170731M2_9	Standard	12.500	4.31	6062.306	43779.801	1.731	14.6	16.9	NO		NO	bb
9	9 170731M2_10	Standard	12.500	4.31	7788.229	78259.594	1.244	10.5	-16.0	NO		NO	bb

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Compound name: d3-N-MeFOSA
Response Factor: 0.0404511
RRF SD: 0.0027023, Relative SD: 6.68042
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	170731M2_2	Standard	150.000	4.38	22996.787	46687.762	6.157	152.2	1.5	NO		NO	MM
2	2	170731M2_3	Standard	150.000	4.38	25726.459	55126.090	5.834	144.2	-3.9	NO		NO	bb
3	3	170731M2_4	Standard	150.000	4.38	25550.789	52064.938	6.134	151.6	1.1	NO		NO	bb
4	4	170731M2_5	Standard	150.000	4.38	24786.727	55069.406	5.626	139.1	-7.3	NO		NO	db
5	5	170731M2_6	Standard	150.000	4.38	23582.914	48450.305	6.084	150.4	0.3	NO		NO	bb
6	6	170731M2_7	Standard	150.000	4.38	26155.398	50457.156	6.480	160.2	6.8	NO		NO	bb
7	7	170731M2_8	Standard	150.000	4.38	23085.887	52556.180	5.491	135.7	-9.5	NO		NO	bb
8	8	170731M2_9	Standard	150.000	4.38	23835.992	43779.801	6.806	168.2	12.2	NO		NO	bb
9	9	170731M2_10	Standard	150.000	4.38	37548.465	78259.594	5.997	148.3	-1.2	NO		NO	bb

Compound name: 13C2-PFTeDA
Response Factor: 0.801476
RRF SD: 0.0616954, Relative SD: 7.69773
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	170731M2_2	Standard	12.500	4.66	38964.742	46687.762	10.432	13.0	4.1	NO		NO	bb
2	2	170731M2_3	Standard	12.500	4.66	43108.695	55126.090	9.775	12.2	-2.4	NO		NO	bb
3	3	170731M2_4	Standard	12.500	4.66	43416.883	52064.938	10.424	13.0	4.0	NO		NO	bb
4	4	170731M2_5	Standard	12.500	4.66	42363.957	55069.406	9.616	12.0	-4.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	4.66	38970.395	48450.305	10.054	12.5	0.4	NO		NO	bb
6	6	170731M2_7	Standard	12.500	4.66	42258.219	50457.156	10.469	13.1	4.5	NO		NO	bb
7	7	170731M2_8	Standard	12.500	4.66	40066.441	52556.180	9.529	11.9	-4.9	NO		NO	bb
8	8	170731M2_9	Standard	12.500	4.66	39581.660	43779.801	11.301	14.1	12.8	NO		NO	bb
9	9	170731M2_10	Standard	12.500	4.66	53624.324	78259.594	8.565	10.7	-14.5	NO		NO	bb

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Compound name: d5-N-ETFOSA
Response Factor: 0.0550774
RRF SD: 0.0033443, Relative SD: 6.07201
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	170731M2_2	Standard	150.000	4.97	32355.941	46687.762	8.663	157.3	4.9	NO		NO	bb
2	2	170731M2_3	Standard	150.000	4.97	35601.133	55126.090	8.073	146.6	-2.3	NO		NO	bb
3	3	170731M2_4	Standard	150.000	4.97	34205.117	52064.938	8.212	149.1	-0.6	NO		NO	bb
4	4	170731M2_5	Standard	150.000	4.97	33521.320	55069.406	7.609	138.1	-7.9	NO		NO	bb
5	5	170731M2_6	Standard	150.000	4.97	32043.641	48450.305	8.267	150.1	0.1	NO		NO	bb
6	6	170731M2_7	Standard	150.000	4.97	34405.922	50457.156	8.524	154.8	3.2	NO		NO	bb
7	7	170731M2_8	Standard	150.000	4.97	32776.059	52556.180	7.795	141.5	-5.6	NO		NO	bd
8	8	170731M2_9	Standard	150.000	4.97	32444.443	43779.801	9.264	168.2	12.1	NO		NO	bb
9	9	170731M2_10	Standard	150.000	4.98	49761.906	78259.594	7.948	144.3	-3.8	NO		NO	bb

Compound name: 13C2-PFHxDA
Response Factor: 0.991204
RRF SD: 0.0786595, Relative SD: 7.93575
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	170731M2_2	Standard	5.000	5.03	18578.701	46687.762	4.974	5.0	0.4	NO		NO	bb
2	2	170731M2_3	Standard	5.000	5.03	21305.383	55126.090	4.831	4.9	-2.5	NO		NO	bb
3	3	170731M2_4	Standard	5.000	5.03	21093.645	52064.938	5.064	5.1	2.2	NO		NO	bb
4	4	170731M2_5	Standard	5.000	5.03	20624.443	55069.406	4.681	4.7	-5.5	NO		NO	bb
5	5	170731M2_6	Standard	5.000	5.03	19494.348	48450.305	5.029	5.1	1.5	NO		NO	bb
6	6	170731M2_7	Standard	5.000	5.03	20781.805	50457.156	5.148	5.2	3.9	NO		NO	bb
7	7	170731M2_8	Standard	5.000	5.03	19811.059	52556.180	4.712	4.8	-4.9	NO		NO	bb
8	8	170731M2_9	Standard	5.000	5.03	20275.766	43779.801	5.789	5.8	16.8	NO		NO	bb
9	9	170731M2_10	Standard	5.000	5.04	27386.783	78259.594	4.374	4.4	-11.7	NO		NO	bb

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Compound name: d7-N-MeFOSE
Response Factor: 0.0651506
RRF SD: 0.00469717, Relative SD: 7.20972
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	170731M2_2	Standard	150.000	5.43	38065.852	46687.762	10.192	156.4	4.3	NO		NO	bb
2	2	170731M2_3	Standard	150.000	5.43	40818.066	55126.090	9.256	142.1	-5.3	NO		NO	bb
3	3	170731M2_4	Standard	150.000	5.43	40754.777	52064.938	9.785	150.2	0.1	NO		NO	bb
4	4	170731M2_5	Standard	150.000	5.43	39794.629	55069.406	9.033	138.6	-7.6	NO		NO	bb
5	5	170731M2_6	Standard	150.000	5.43	38172.813	48450.305	9.848	151.2	0.8	NO		NO	bb
6	6	170731M2_7	Standard	150.000	5.43	40819.426	50457.156	10.112	155.2	3.5	NO		NO	bb
7	7	170731M2_8	Standard	150.000	5.43	37733.039	52556.180	8.974	137.7	-8.2	NO		NO	bb
8	8	170731M2_9	Standard	150.000	5.43	39369.297	43779.801	11.241	172.5	15.0	NO		NO	bb
9	9	170731M2_10	Standard	150.000	5.43	59556.500	78259.594	9.513	146.0	-2.7	NO		NO	bb

Compound name: d9-N-EtFOSE
Response Factor: 0.0647796
RRF SD: 0.00452035, Relative SD: 6.97805
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	170731M2_2	Standard	150.000	5.61	37434.258	46687.762	10.023	154.7	3.1	NO		NO	bb
2	2	170731M2_3	Standard	150.000	5.61	40953.574	55126.090	9.286	143.4	-4.4	NO		NO	bb
3	3	170731M2_4	Standard	150.000	5.61	40593.066	52064.938	9.746	150.4	0.3	NO		NO	bb
4	4	170731M2_5	Standard	150.000	5.61	39083.969	55069.406	8.872	136.9	-8.7	NO		NO	bb
5	5	170731M2_6	Standard	150.000	5.60	37934.445	48450.305	9.787	151.1	0.7	NO		NO	bb
6	6	170731M2_7	Standard	150.000	5.61	40396.703	50457.156	10.008	154.5	3.0	NO		NO	bb
7	7	170731M2_8	Standard	150.000	5.61	37673.949	52556.180	8.960	138.3	-7.8	NO		NO	bb
8	8	170731M2_9	Standard	150.000	5.60	39004.324	43779.801	11.137	171.9	14.6	NO		NO	bb
9	9	170731M2_10	Standard	150.000	5.61	60321.027	78259.594	9.635	148.7	-0.8	NO		NO	bb

Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 3.92523e-017, Relative SD: 3.92523e-015
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	170731M2_2	Standard	12.500	1.40	13370.174	13370.174	12.500	12.5	0.0	NO		NO	bb
2	2	170731M2_3	Standard	12.500	1.40	14138.808	14138.808	12.500	12.5	0.0	NO		NO	bb
3	3	170731M2_4	Standard	12.500	1.40	13876.813	13876.813	12.500	12.5	0.0	NO		NO	bb
4	4	170731M2_5	Standard	12.500	1.40	13352.213	13352.213	12.500	12.5	0.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	1.40	13996.207	13996.207	12.500	12.5	0.0	NO		NO	bb
6	6	170731M2_7	Standard	12.500	1.40	13824.148	13824.148	12.500	12.5	0.0	NO		NO	bb
7	7	170731M2_8	Standard	12.500	1.40	13506.435	13506.435	12.500	12.5	0.0	NO		NO	bb
8	8	170731M2_9	Standard	12.500	1.40	13834.986	13834.986	12.500	12.5	0.0	NO		NO	bb
9	9	170731M2_10	Standard	12.500	1.41	24706.939	24706.939	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	170731M2_2	Standard	5.000	3.16	38888.445	38888.445	5.000	5.0	0.0	NO		NO	bb
2	2	170731M2_3	Standard	5.000	3.17	39697.934	39697.934	5.000	5.0	0.0	NO		NO	bb
3	3	170731M2_4	Standard	5.000	3.16	39547.027	39547.027	5.000	5.0	0.0	NO		NO	bb
4	4	170731M2_5	Standard	5.000	3.16	39438.602	39438.602	5.000	5.0	0.0	NO		NO	bb
5	5	170731M2_6	Standard	5.000	3.17	42060.418	42060.418	5.000	5.0	0.0	NO		NO	bb
6	6	170731M2_7	Standard	5.000	3.17	40025.766	40025.766	5.000	5.0	0.0	NO		NO	bb
7	7	170731M2_8	Standard	5.000	3.16	39102.801	39102.801	5.000	5.0	0.0	NO		NO	bb
8	8	170731M2_9	Standard	5.000	3.16	39589.105	39589.105	5.000	5.0	0.0	NO		NO	bb
9	9	170731M2_10	Standard	5.000	3.16	83770.414	83770.414	5.000	5.0	0.0	NO		NO	bb

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Compound name: 13C3-PFHxS
Response Factor: 1
RRF SD: 1.30185e-016, Relative SD: 1.30185e-014
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	170731M2_2	Standard	12.500	3.50	8046.377	8046.377	12.500	12.5	0.0	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.51	8495.484	8495.484	12.500	12.5	0.0	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.50	8882.063	8882.063	12.500	12.5	0.0	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.50	8188.101	8188.101	12.500	12.5	0.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.51	8591.091	8591.091	12.500	12.5	0.0	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.51	8363.203	8363.203	12.500	12.5	0.0	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.50	7776.584	7776.584	12.500	12.5	0.0	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.51	8119.819	8119.819	12.500	12.5	0.0	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.51	13173.476	13173.476	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 0, Relative SD: 0
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	170731M2_2	Standard	12.500	3.64	45613.742	45613.742	12.500	12.5	0.0	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.64	51389.625	51389.625	12.500	12.5	0.0	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.63	54967.332	54967.332	12.500	12.5	0.0	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.63	48131.012	48131.012	12.500	12.5	0.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.64	48854.391	48854.391	12.500	12.5	0.0	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.64	49711.629	49711.629	12.500	12.5	0.0	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.64	49752.918	49752.918	12.500	12.5	0.0	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.64	48614.910	48614.910	12.500	12.5	0.0	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.64	75486.695	75486.695	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 3.92523e-017, Relative SD: 3.92523e-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	170731M2_2	Standard	12.500	3.81	48472.340	48472.340	12.500	12.5	0.0	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.82	53412.238	53412.238	12.500	12.5	0.0	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.81	53921.699	53921.699	12.500	12.5	0.0	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.81	54390.477	54390.477	12.500	12.5	0.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.82	50780.711	50780.711	12.500	12.5	0.0	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.82	55837.012	55837.012	12.500	12.5	0.0	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.82	44552.844	44552.844	12.500	12.5	0.0	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.81	43921.875	43921.875	12.500	12.5	0.0	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.82	78755.734	78755.734	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 3.92523e-017, Relative SD: 3.92523e-015
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	170731M2_2	Standard	12.500	3.87	9416.050	9416.050	12.500	12.5	0.0	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.87	9484.859	9484.859	12.500	12.5	0.0	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.87	9437.330	9437.330	12.500	12.5	0.0	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.87	8900.184	8900.184	12.500	12.5	0.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.87	9014.546	9014.546	12.500	12.5	0.0	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.87	8997.038	8997.038	12.500	12.5	0.0	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.87	8503.210	8503.210	12.500	12.5	0.0	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.87	8476.880	8476.880	12.500	12.5	0.0	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.87	11498.018	11498.018	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C6-PFDA
Response Factor: 1
RRF SD: 7.85046e-017, Relative SD: 7.85046e-015
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	170731M2_2	Standard	12.500	3.99	48495.309	48495.309	12.500	12.5	0.0	NO		NO	bb
2	2	170731M2_3	Standard	12.500	3.99	59901.941	59901.941	12.500	12.5	0.0	NO		NO	bb
3	3	170731M2_4	Standard	12.500	3.99	59169.184	59169.184	12.500	12.5	0.0	NO		NO	bb
4	4	170731M2_5	Standard	12.500	3.98	50594.809	50594.809	12.500	12.5	0.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	3.99	46199.484	46199.484	12.500	12.5	0.0	NO		NO	bb
6	6	170731M2_7	Standard	12.500	3.99	55659.504	55659.504	12.500	12.5	0.0	NO		NO	bb
7	7	170731M2_8	Standard	12.500	3.99	46843.121	46843.121	12.500	12.5	0.0	NO		NO	bb
8	8	170731M2_9	Standard	12.500	3.99	48865.242	48865.242	12.500	12.5	0.0	NO		NO	bb
9	9	170731M2_10	Standard	12.500	3.99	77377.094	77377.094	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C7-PFUnA
Response Factor: 1
RRF SD: 8.77708e-017, Relative SD: 8.77708e-015
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	170731M2_2	Standard	12.500	4.15	46687.762	46687.762	12.500	12.5	0.0	NO		NO	bb
2	2	170731M2_3	Standard	12.500	4.16	55126.090	55126.090	12.500	12.5	0.0	NO		NO	bb
3	3	170731M2_4	Standard	12.500	4.15	52064.938	52064.938	12.500	12.5	0.0	NO		NO	bb
4	4	170731M2_5	Standard	12.500	4.15	55069.406	55069.406	12.500	12.5	0.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	4.15	48450.305	48450.305	12.500	12.5	0.0	NO		NO	bb
6	6	170731M2_7	Standard	12.500	4.15	50457.156	50457.156	12.500	12.5	0.0	NO		NO	bb
7	7	170731M2_8	Standard	12.500	4.15	52556.180	52556.180	12.500	12.5	0.0	NO		NO	bb
8	8	170731M2_9	Standard	12.500	4.15	43779.801	43779.801	12.500	12.5	0.0	NO		NO	bb
9	9	170731M2_10	Standard	12.500	4.16	78259.594	78259.594	12.500	12.5	0.0	NO		NO	bb

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Dataset: Untitled

Last Altered: Tuesday, August 01, 2017 10:20:34 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:21:31 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170731M2_1	IPA	01-Aug-17	00:29:09
2	170731M2_2	ST170731M2-1 PFC CS-2 17G3107	01-Aug-17	00:39:54
3	170731M2_3	ST170731M2-2 PFC CS-1 17G3108	01-Aug-17	00:50:40
4	170731M2_4	ST170731M2-3 PFC CS0 17G3109	01-Aug-17	01:01:18
5	170731M2_5	ST170731M2-4 PFC CS1 17G3110	01-Aug-17	01:12:05
6	170731M2_6	ST170731M2-5 PFC CS2 17G3111	01-Aug-17	01:22:43
7	170731M2_7	ST170731M2-6 PFC CS3 17G3105	01-Aug-17	01:33:30
8	170731M2_8	ST170731M2-7 PFC CS4 17G3112	01-Aug-17	01:44:08
9	170731M2_9	ST170731M2-8 PFC CS5 17G3113	01-Aug-17	01:54:46
10	170731M2_10	ST170731M2-9 PFC CS6 17G2801	01-Aug-17	02:05:40
11	170731M2_11	ST170731M2-10 PFC CS7 17G2802	01-Aug-17	02:16:49
12	170731M2_12	IPA	01-Aug-17	02:27:32
13	170731M2_13	SS170731M2-1 PFC SSS 17G3106	01-Aug-17	02:38:37
14	170731M2_14	IPA	01-Aug-17	02:49:24

Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

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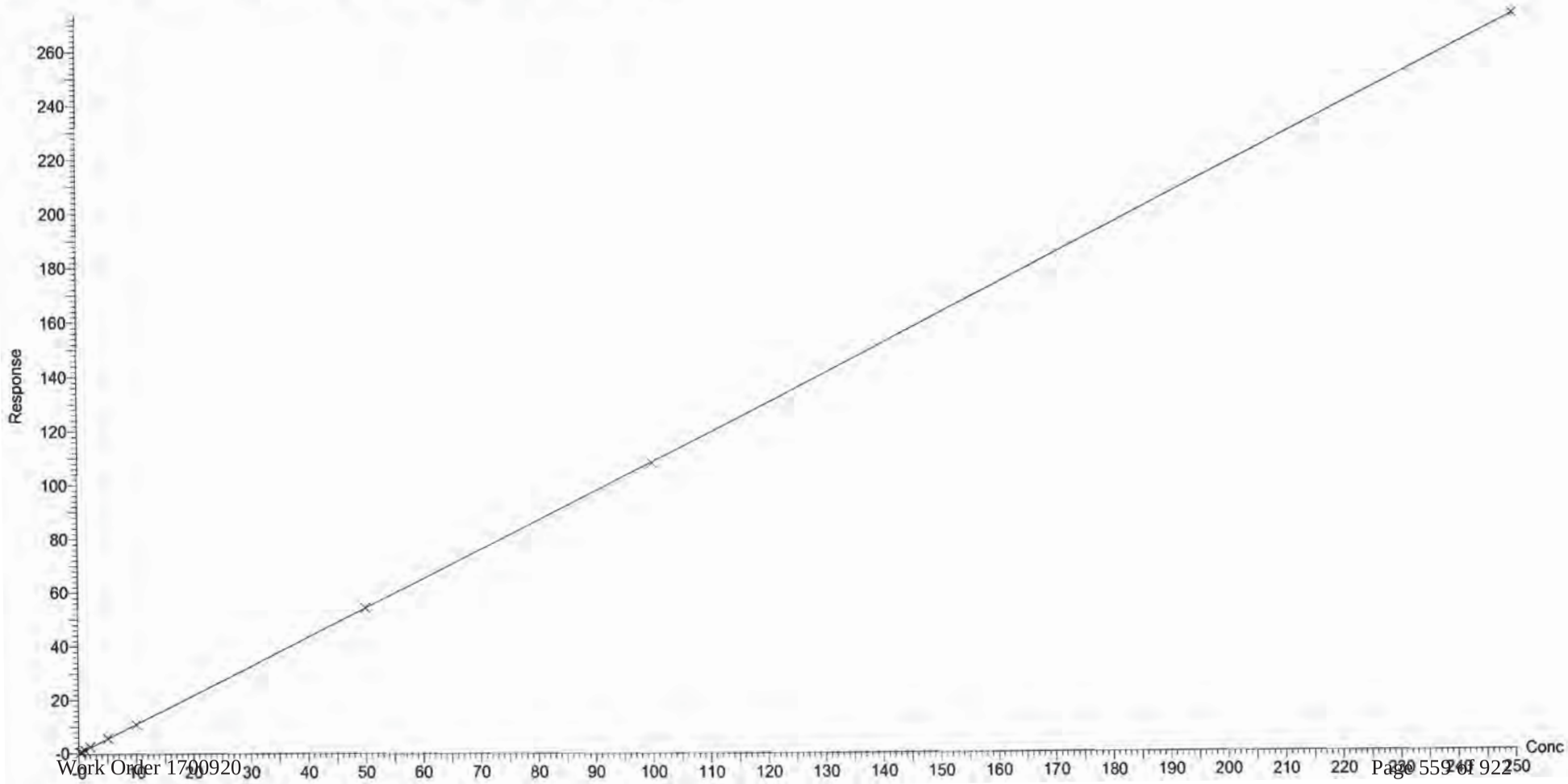
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999898
Calibration curve: 6.26653e-005 * x^2 + 1.07835 * x + 0.0734459
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

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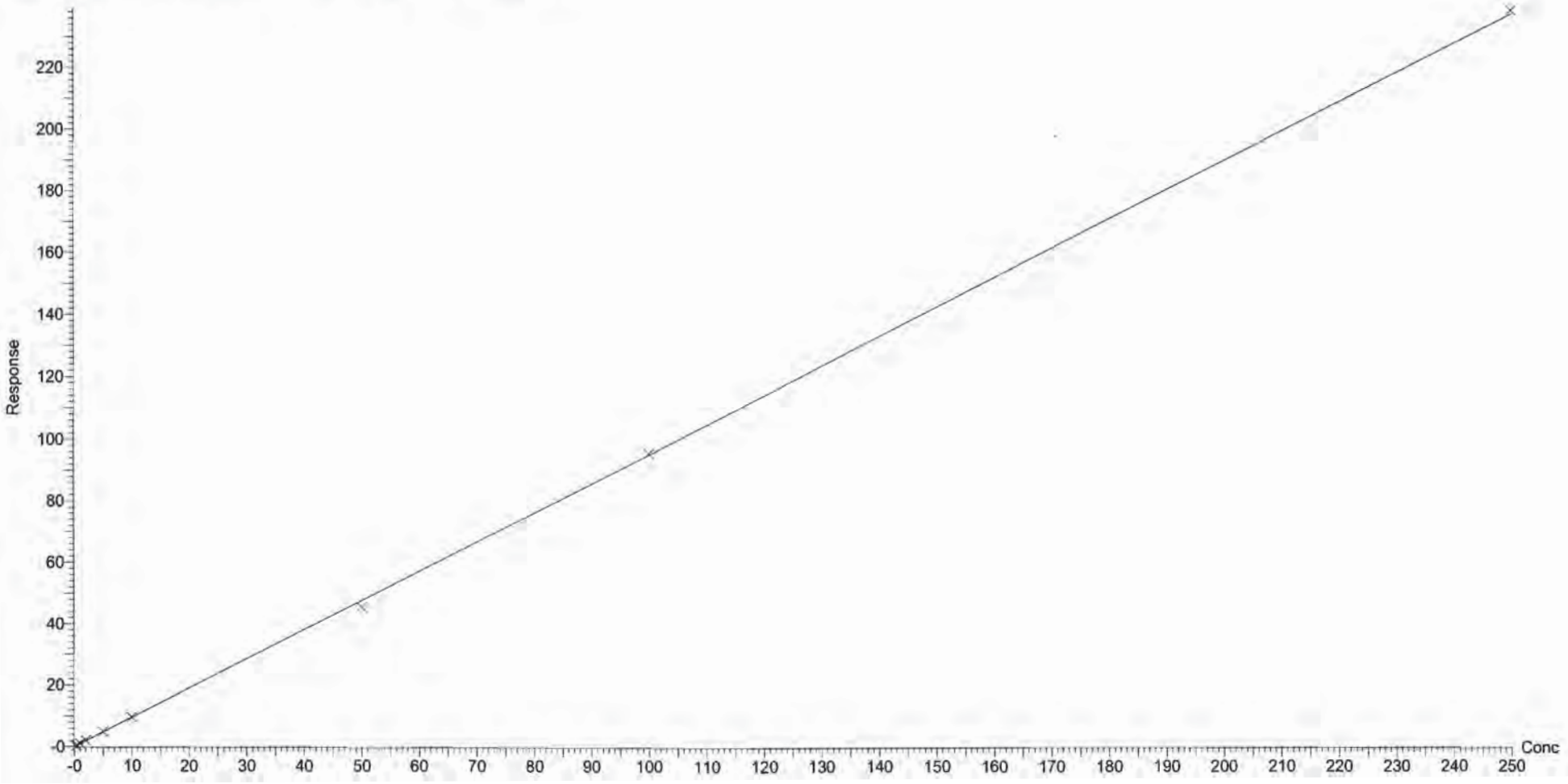
Compound name: PFPeA
Correlation coefficient: r = 0.999842, r^2 = 0.999685
Calibration curve: 0.95207 * x + 0.034134
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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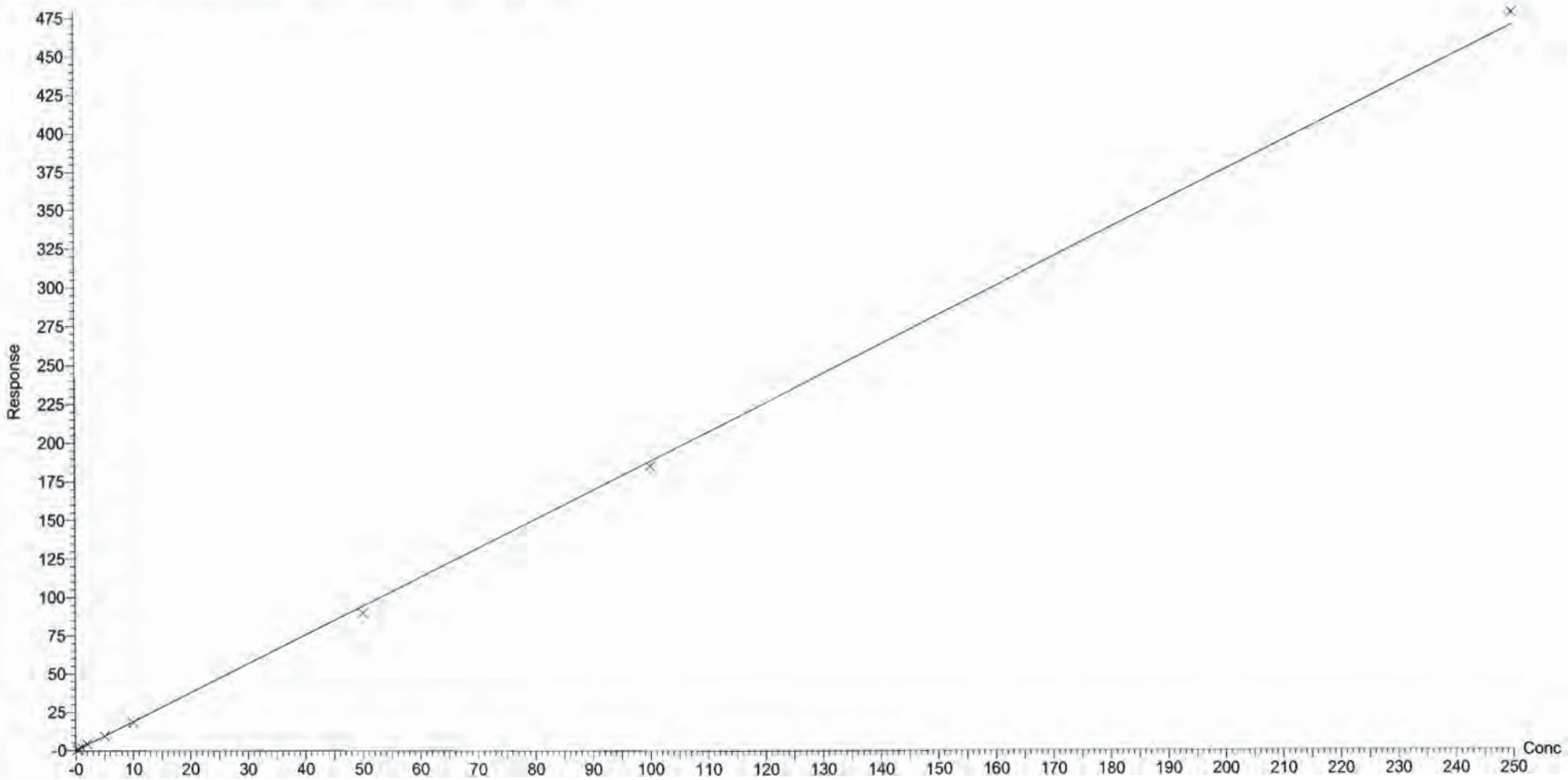
Compound name: PFBS
Correlation coefficient: r = 0.999700, r^2 = 0.999400
Calibration curve: 1.88408 * x + 0.0670139
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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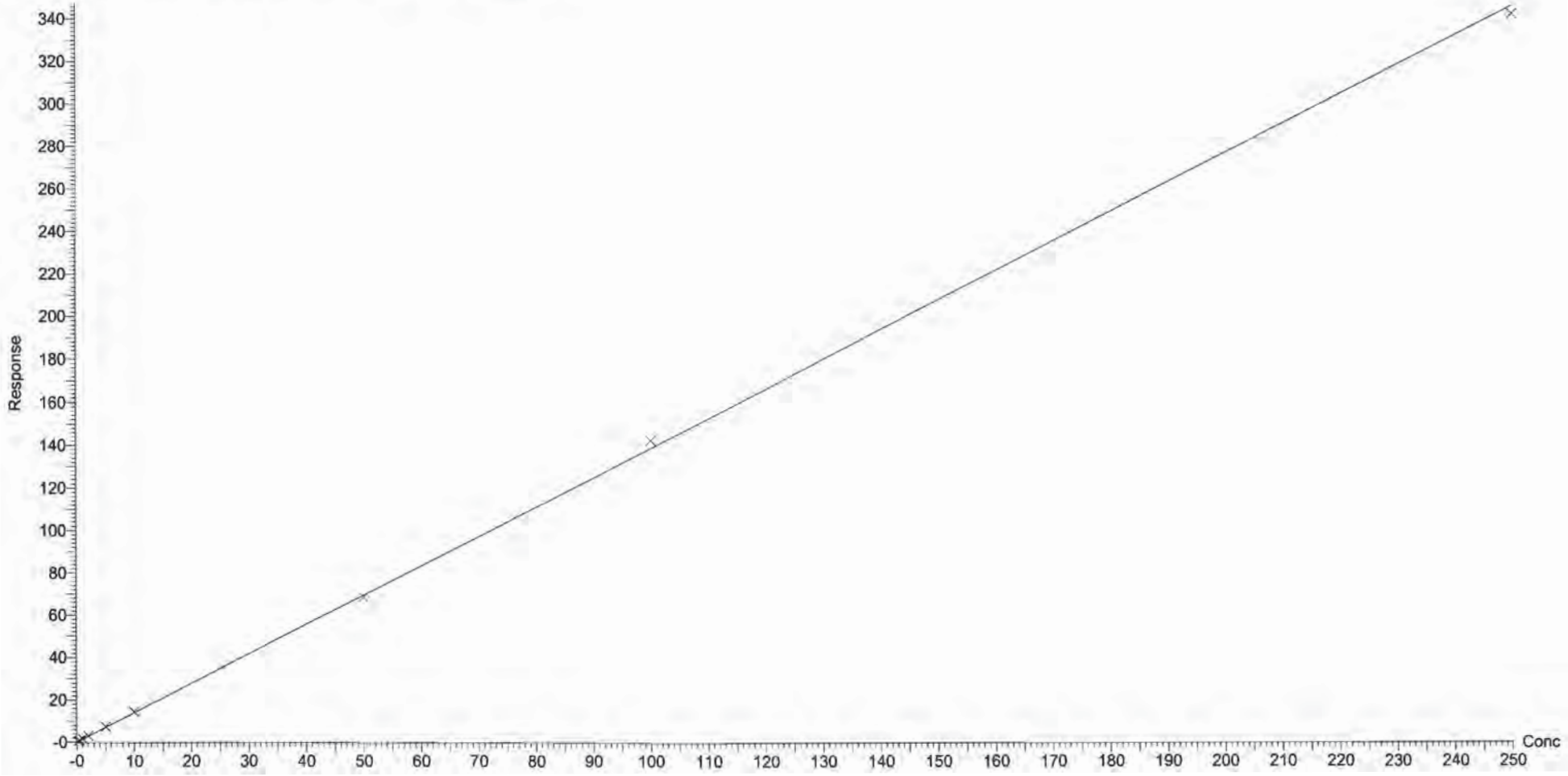
Compound name: PFHxA
Correlation coefficient: r = 0.999770, r^2 = 0.999541
Calibration curve: 1.38743 * x + 0.151774
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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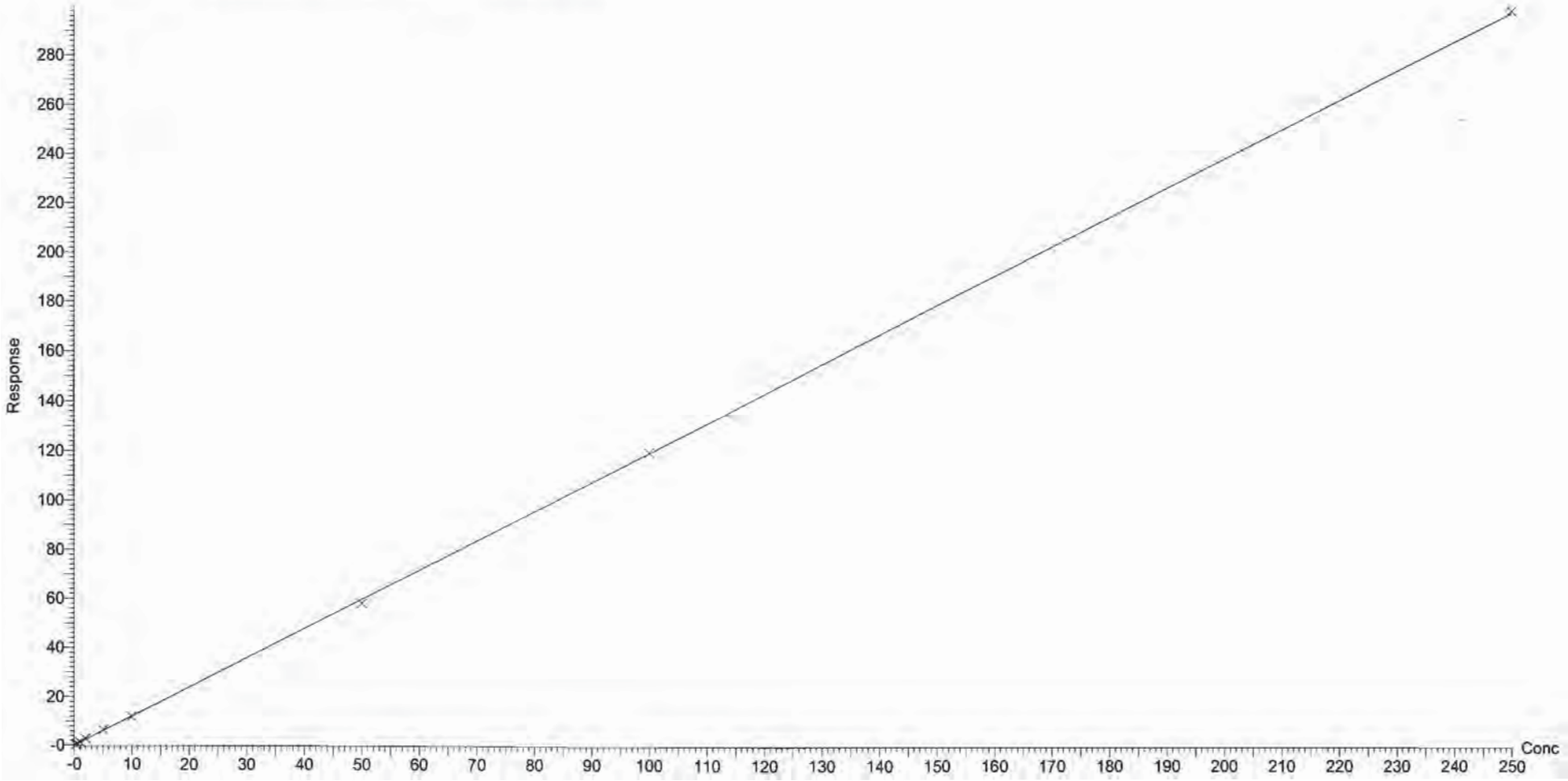
Compound name: PFHpA
Correlation coefficient: r = 0.999907, r^2 = 0.999814
Calibration curve: 1.19527 * x + 0.0770691
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

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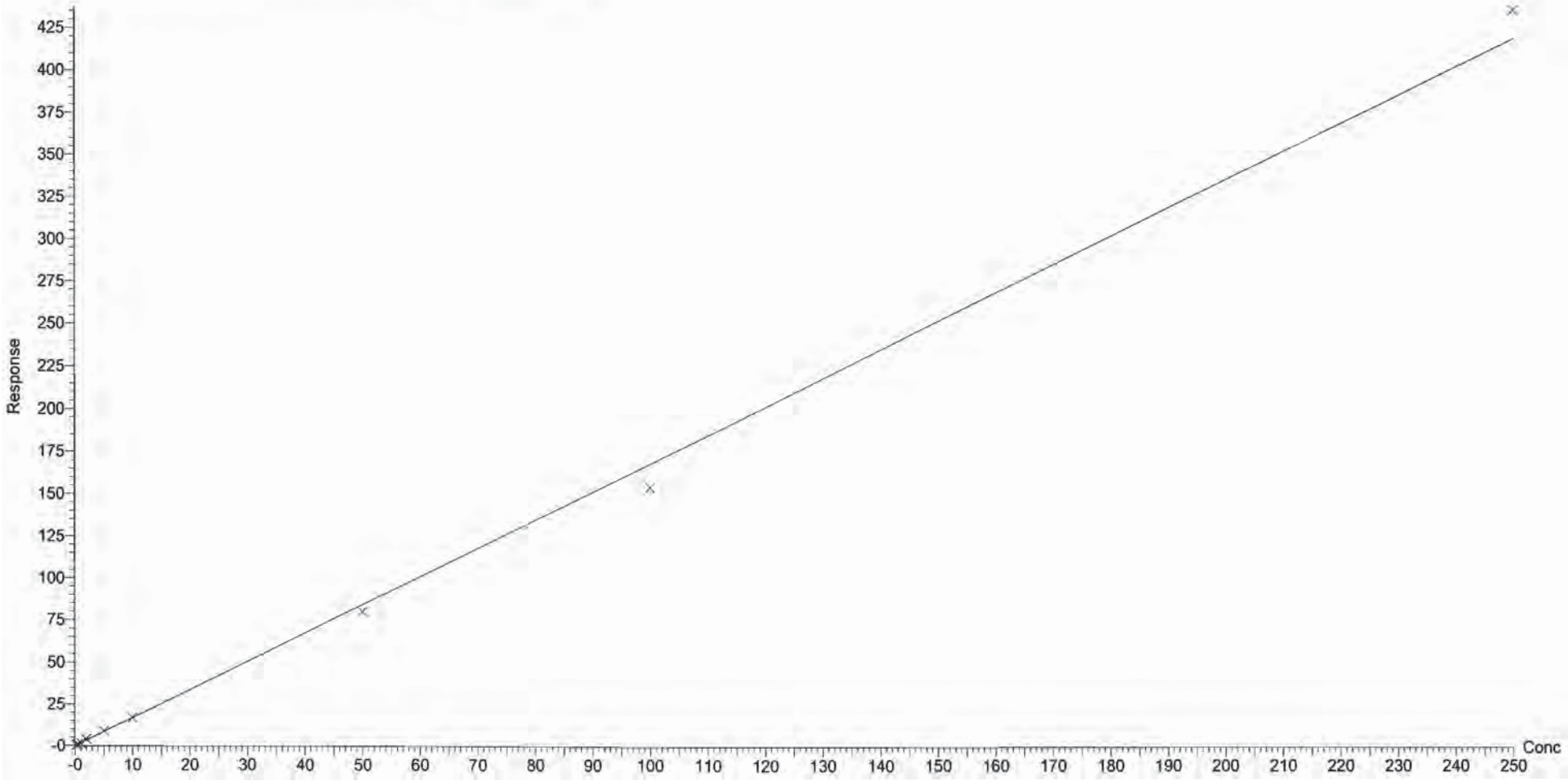
Compound name: PFHxS
Correlation coefficient: r = 0.998411, r^2 = 0.996824
Calibration curve: 1.6806 * x + 0.0313148
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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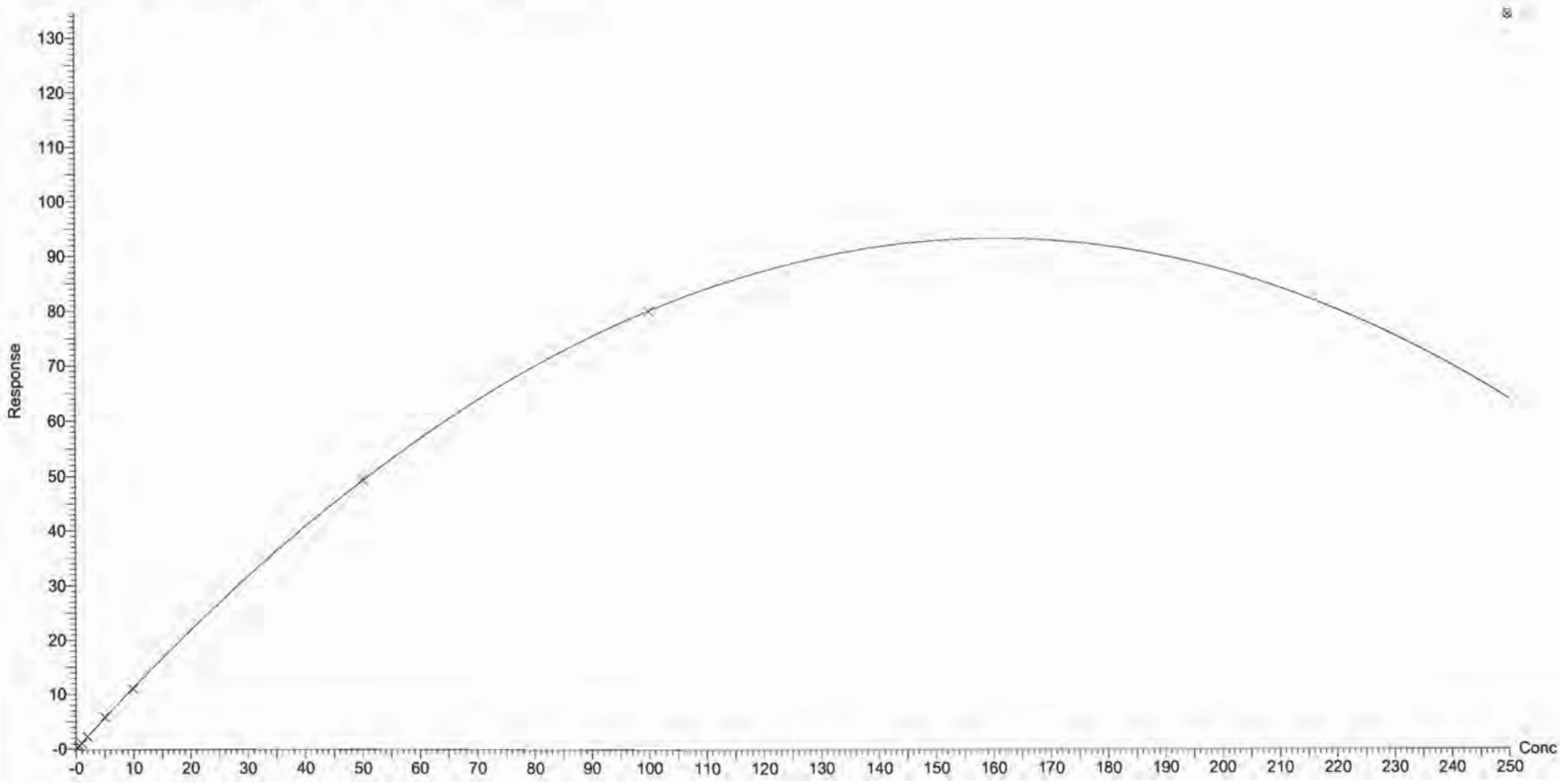
Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.999797
Calibration curve: -0.00364043 * x^2 + 1.16681 * x + -0.0592153
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

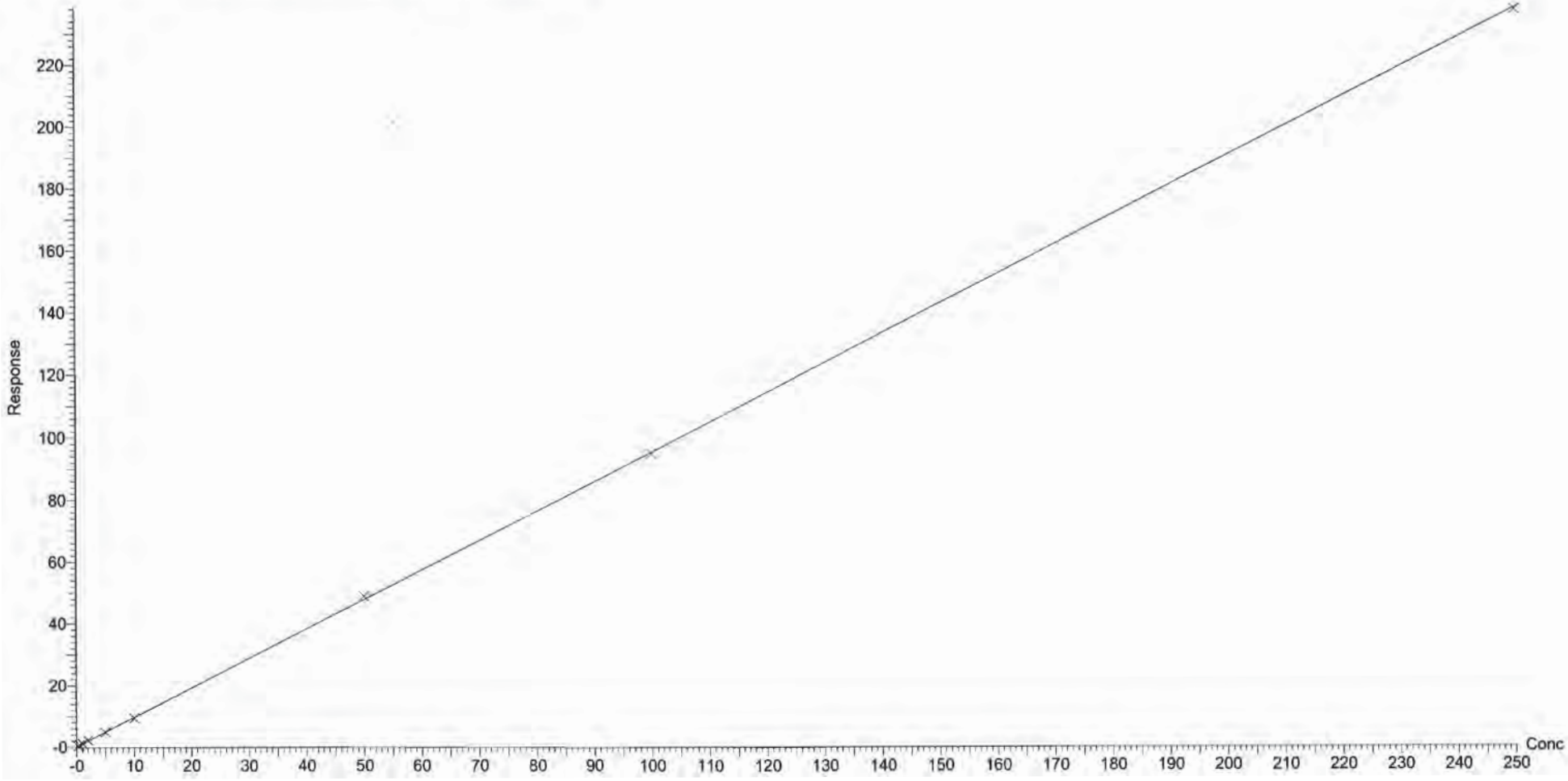


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

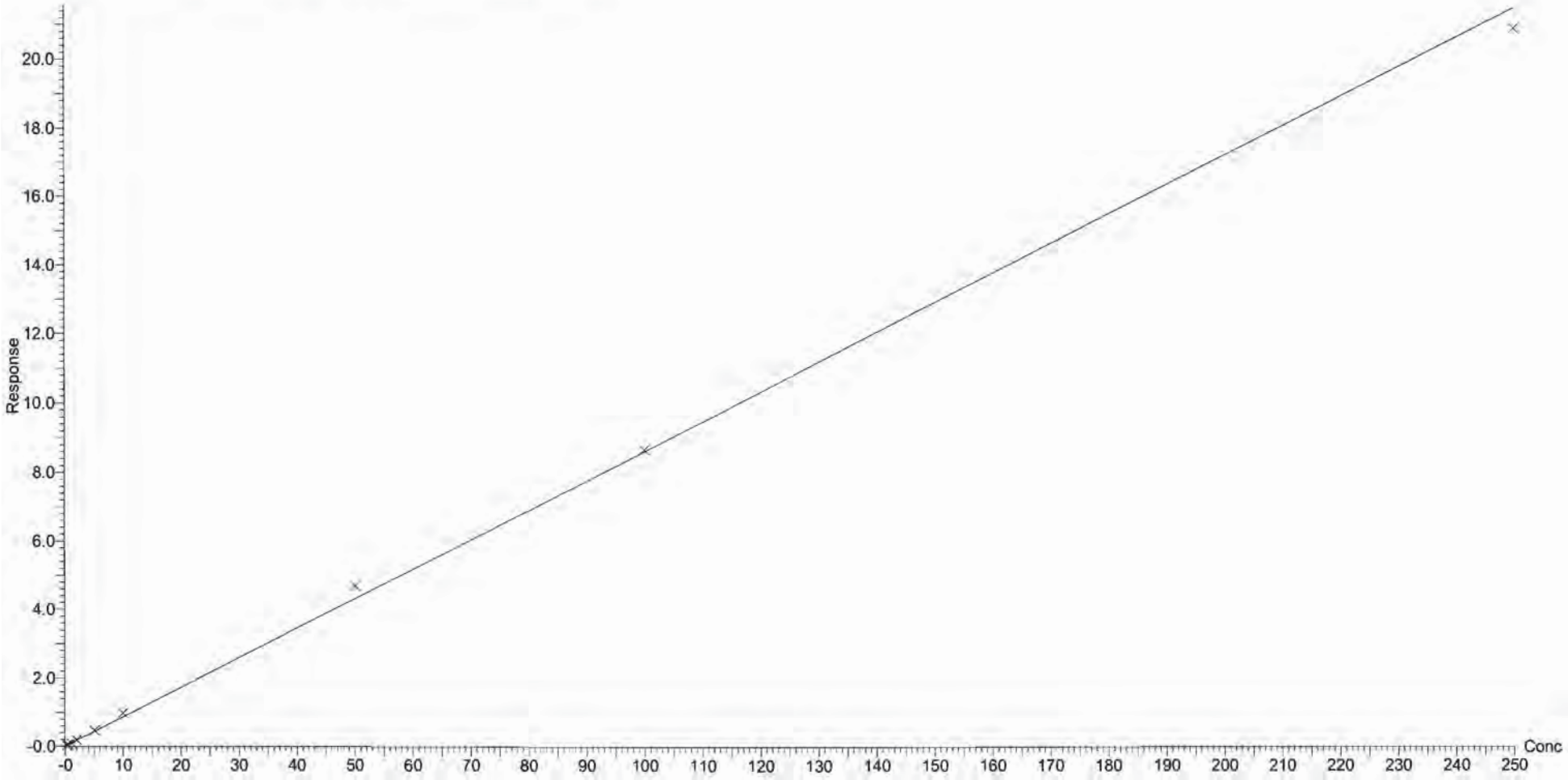
Compound name: PFOA
Correlation coefficient: r = 0.999910, r^2 = 0.999821
Calibration curve: 0.953928 * x + 0.14566
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

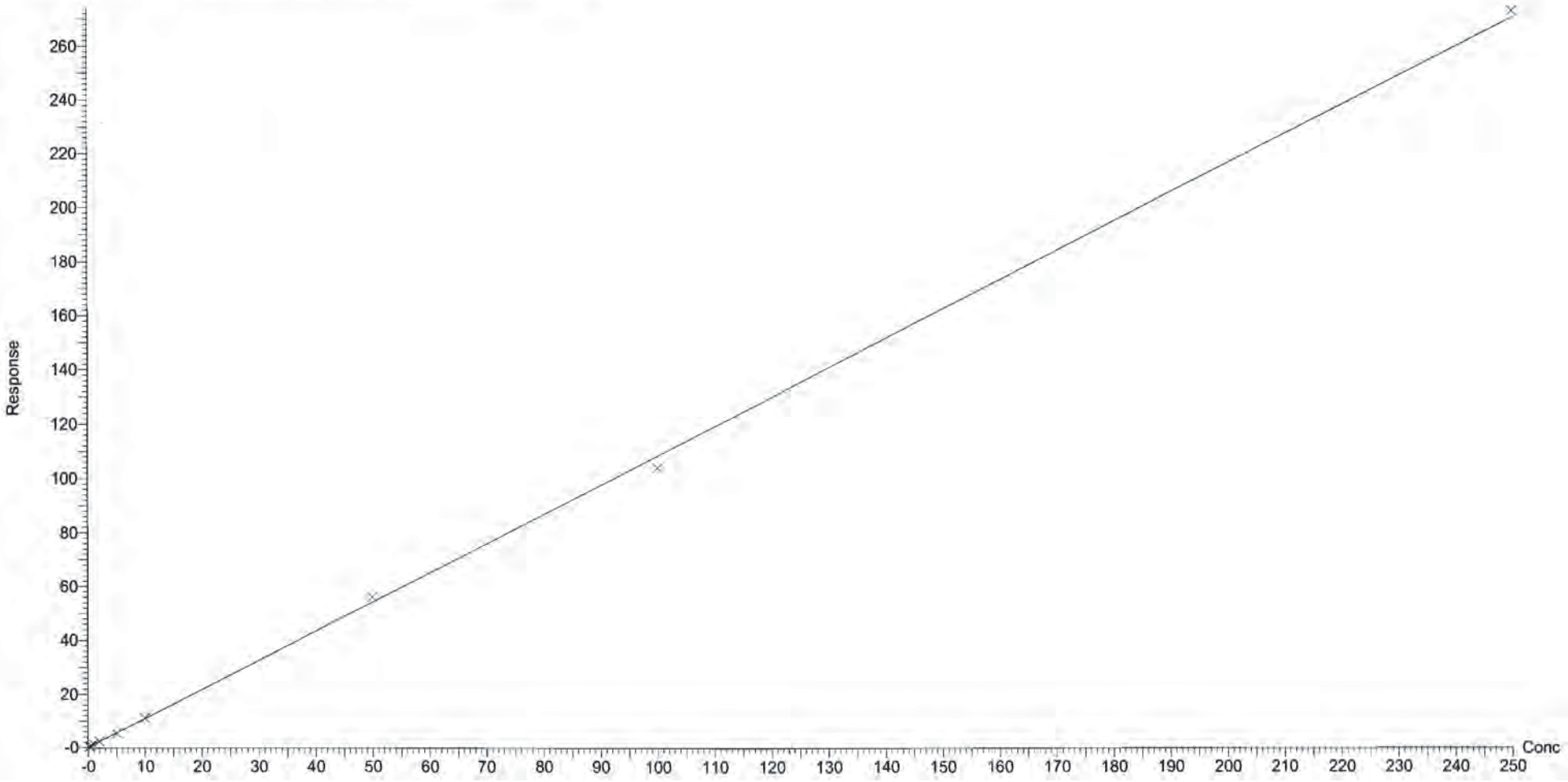
Compound name: PFHpS
Correlation coefficient: r = 0.999006, r^2 = 0.998013
Calibration curve: 0.0861619 * x + 0.0071876
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

Compound name: PFNA
Correlation coefficient: r = 0.999697, r^2 = 0.999394
Calibration curve: 1.08541 * x + 0.0735739
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

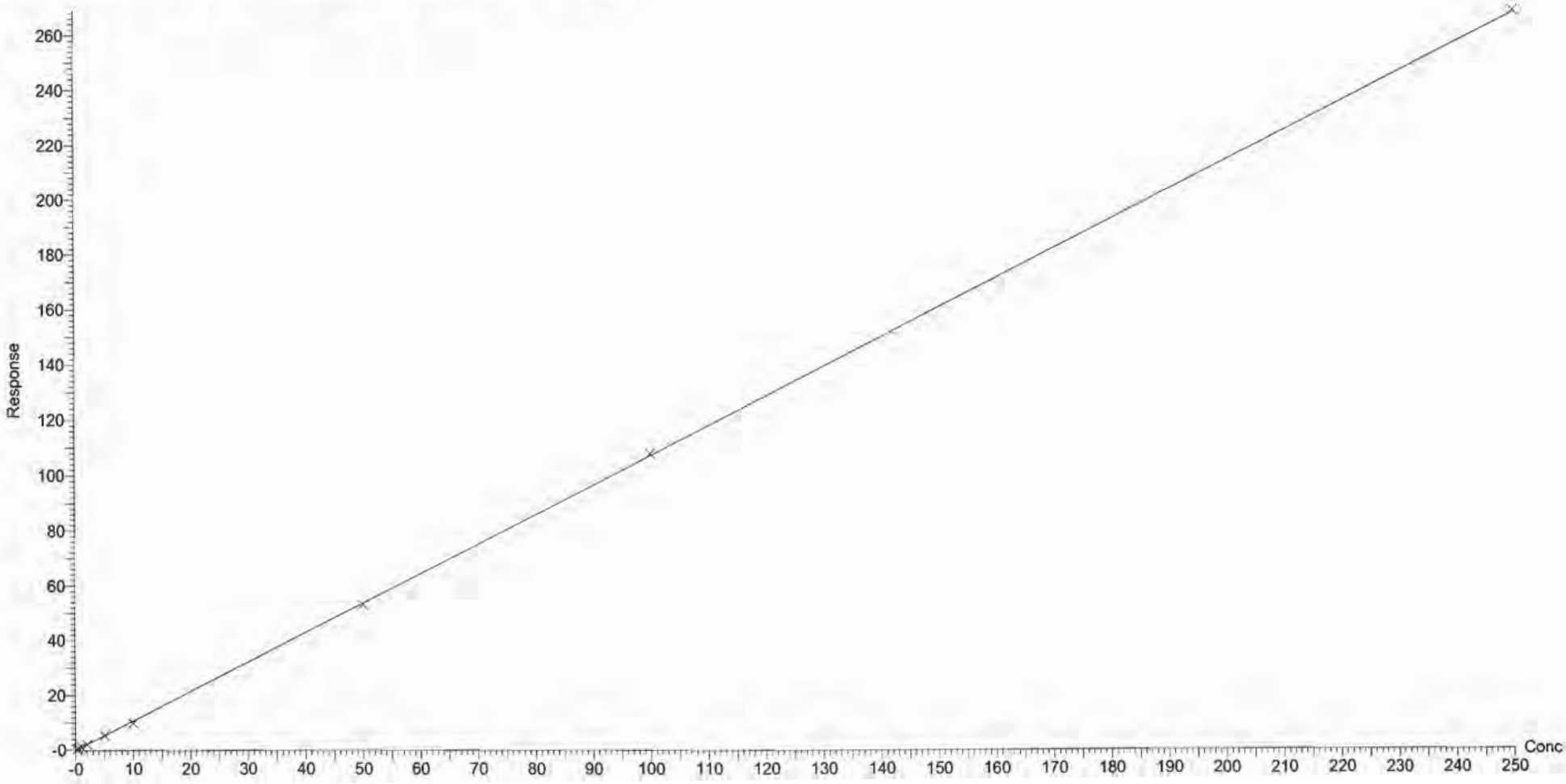


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

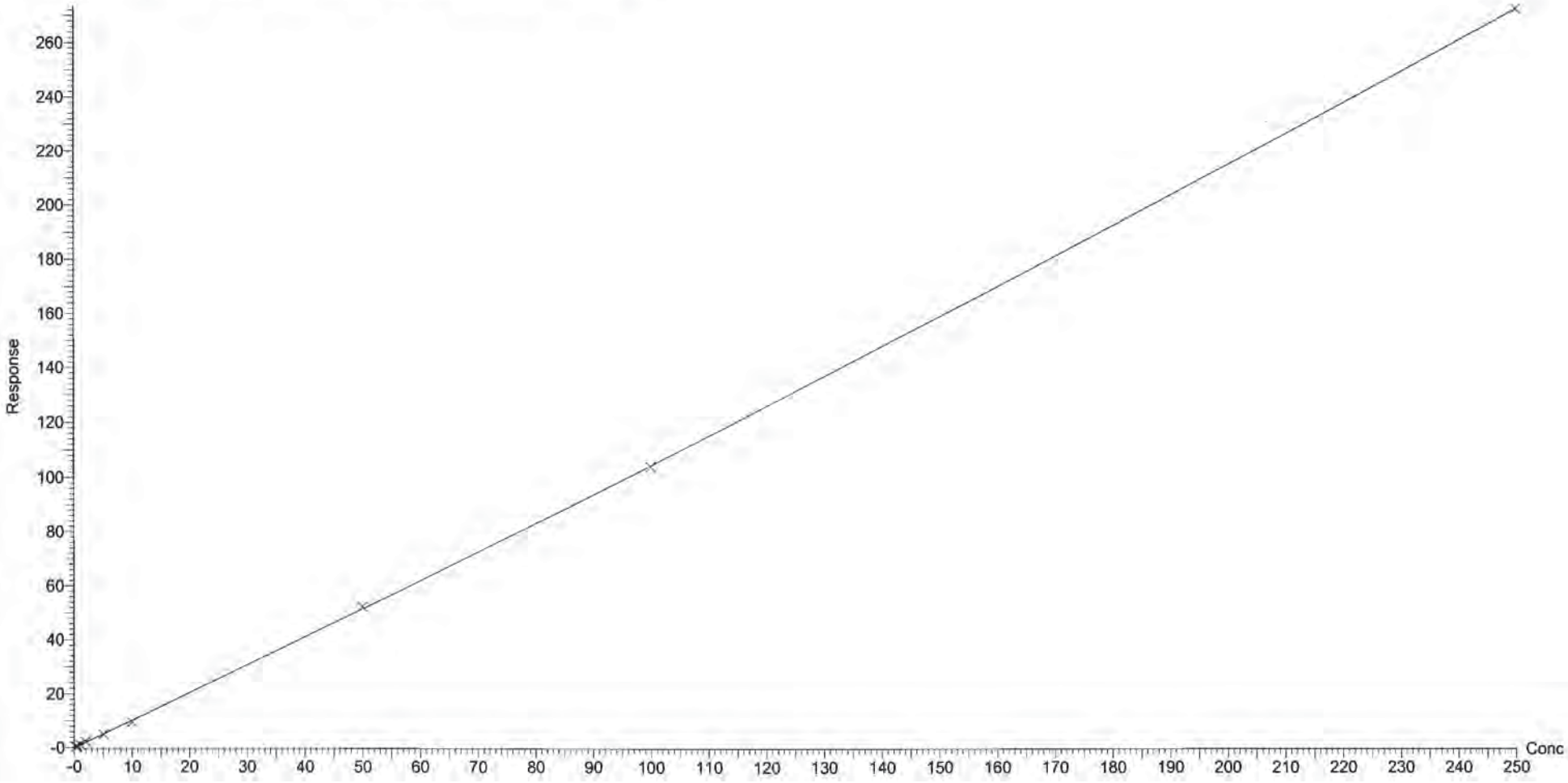
Compound name: PFOSA
Correlation coefficient: r = 0.999883, r^2 = 0.999766
Calibration curve: 1.0734 * x + -0.0271184
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

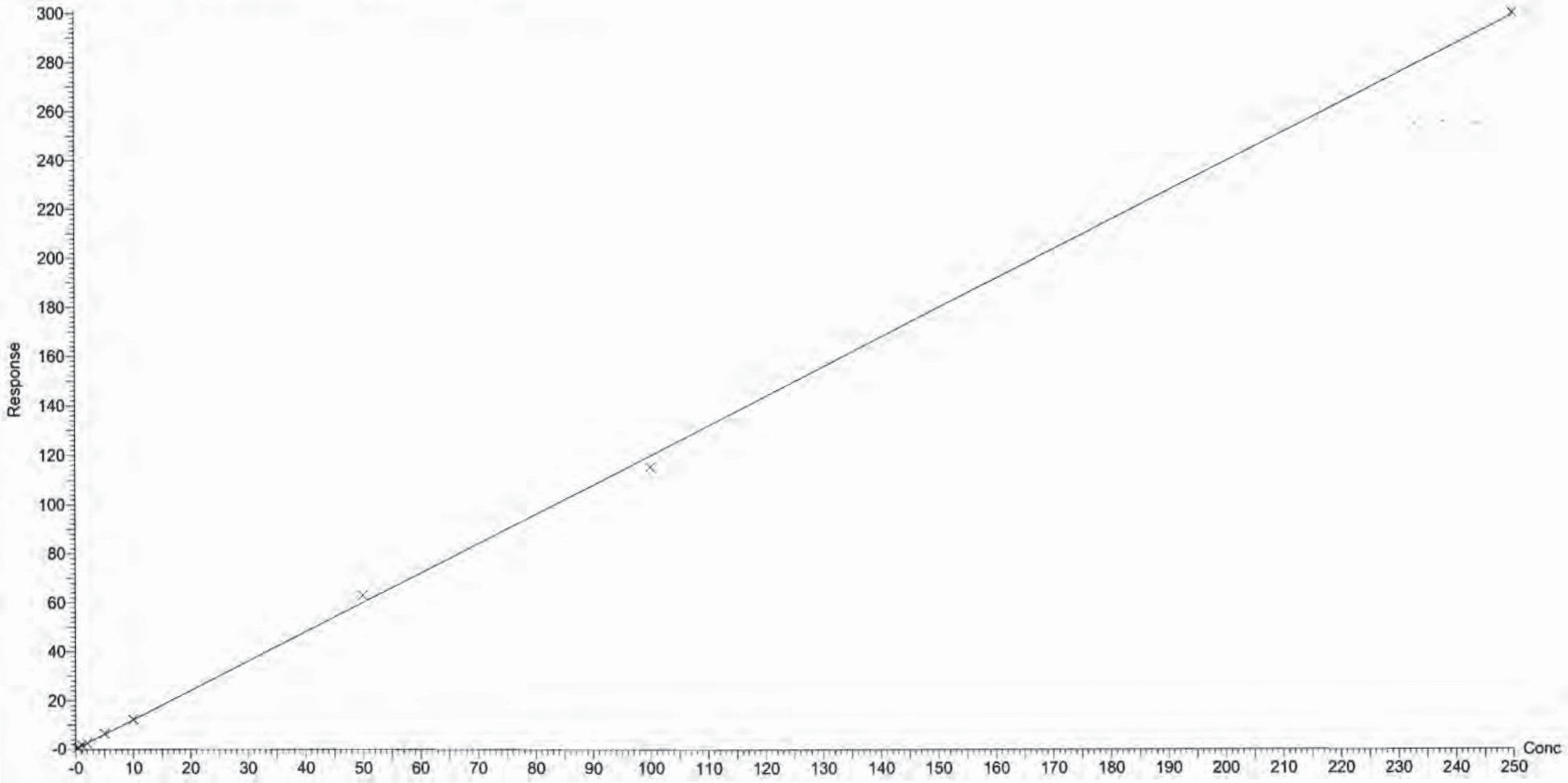
Compound name: PFOS
Coefficient of Determination: R^2 = 0.999779
Calibration curve: 0.000313423 * x^2 + 1.01509 * x + 0.0486823
Response type: Internal Std (Ref 38), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

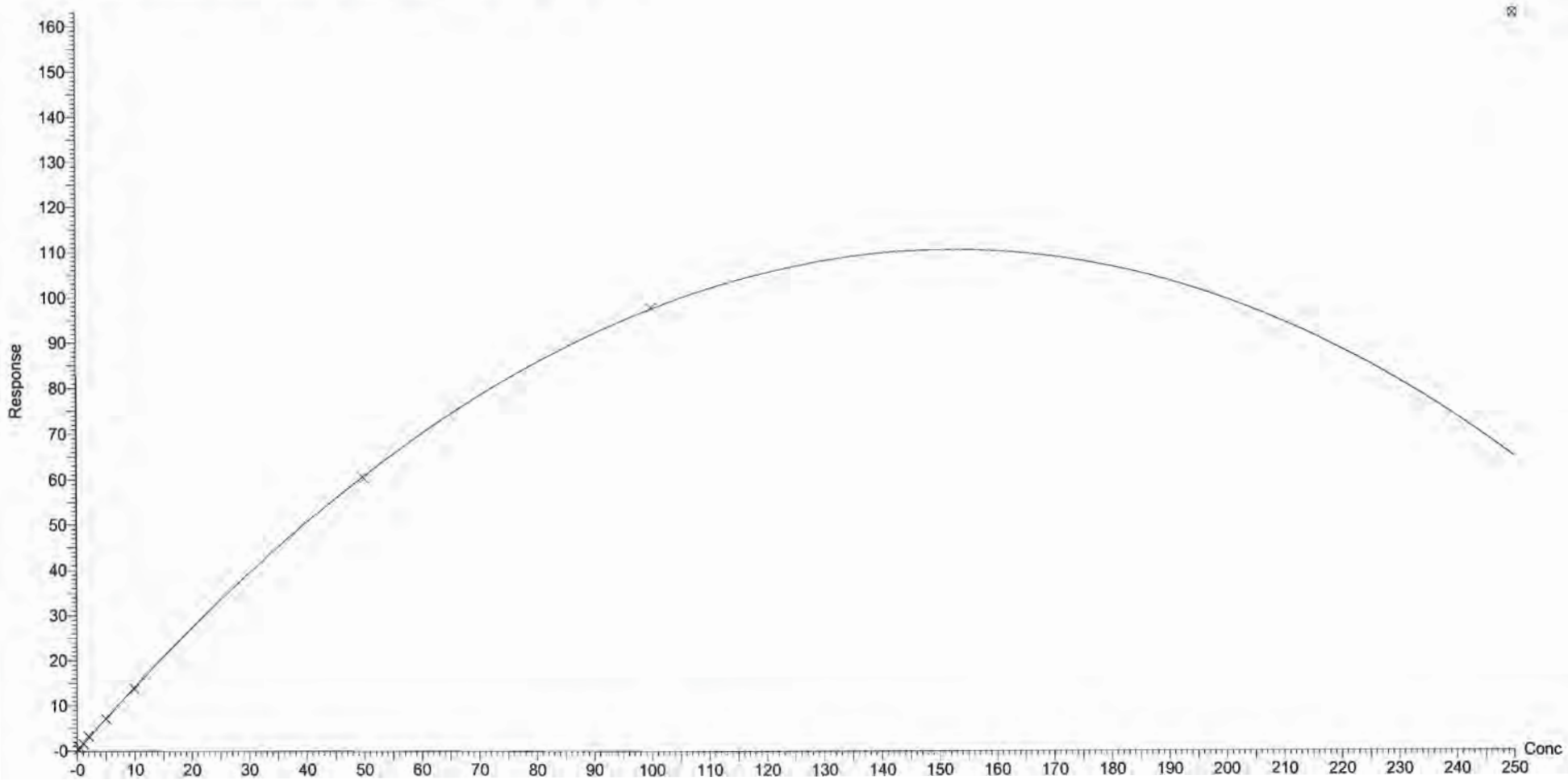
Compound name: PFDA
Correlation coefficient: r = 0.999542, r^2 = 0.999084
Calibration curve: 1.19993 * x + 0.156566
Response type: Internal Std (Ref 39), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

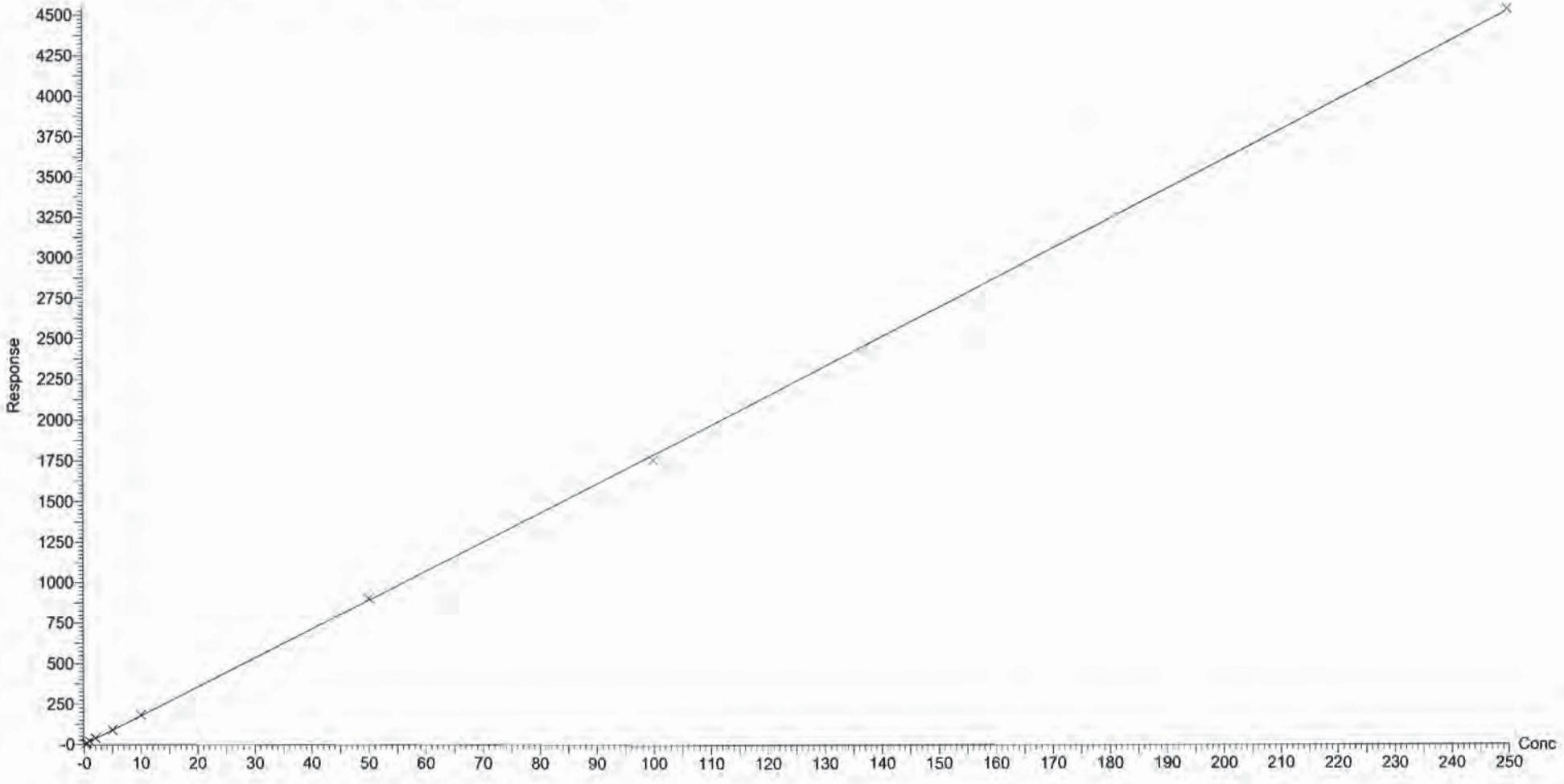
Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.999107
Calibration curve: -0.00477278 * x^2 + 1.45357 * x + 0.0233651
Response type: Internal Std (Ref 40), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

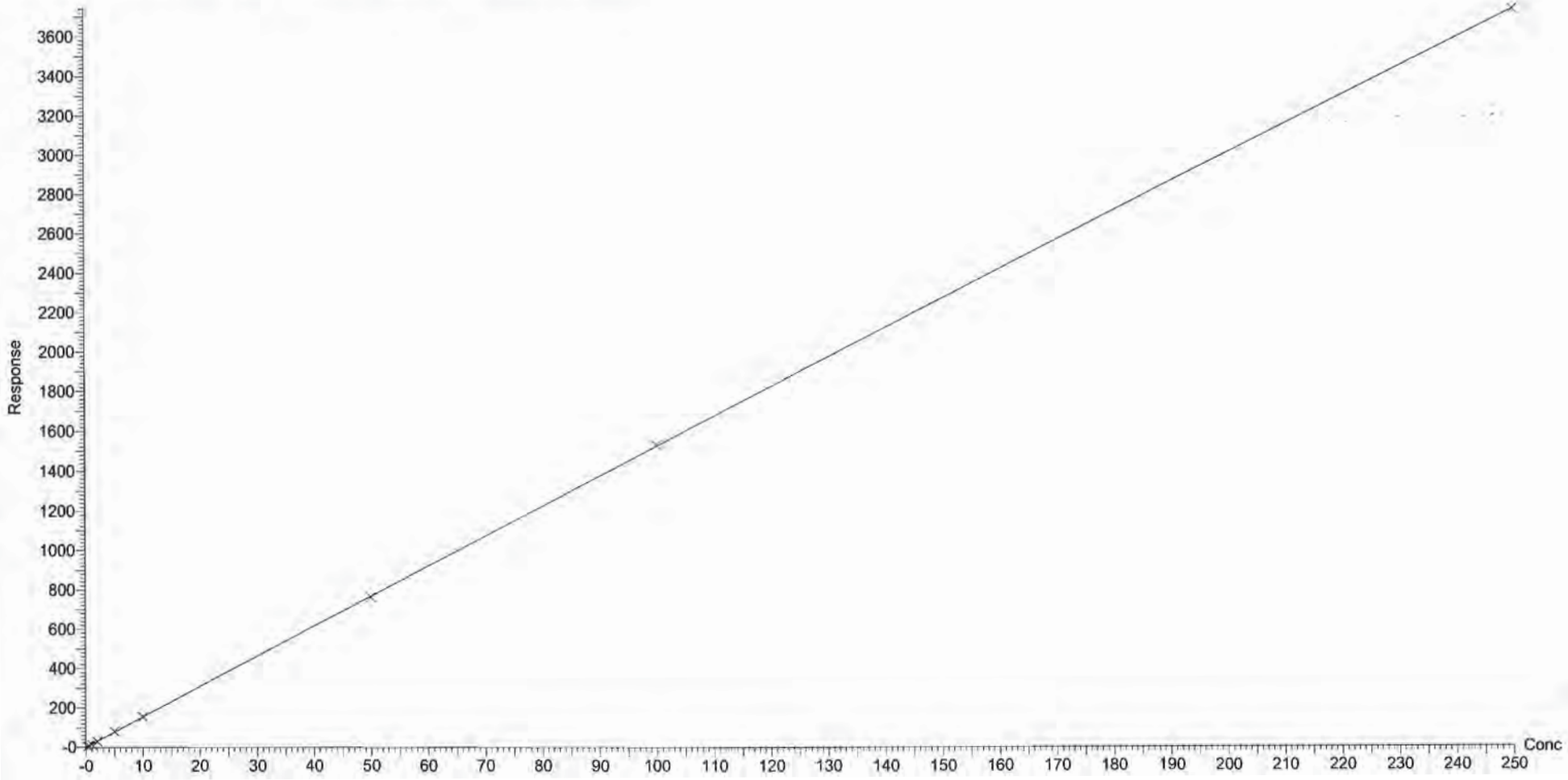
Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.999795
Calibration curve: 0.00169243 * x^2 + 17.7214 * x + 0.975242
Response type: Internal Std (Ref 41), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

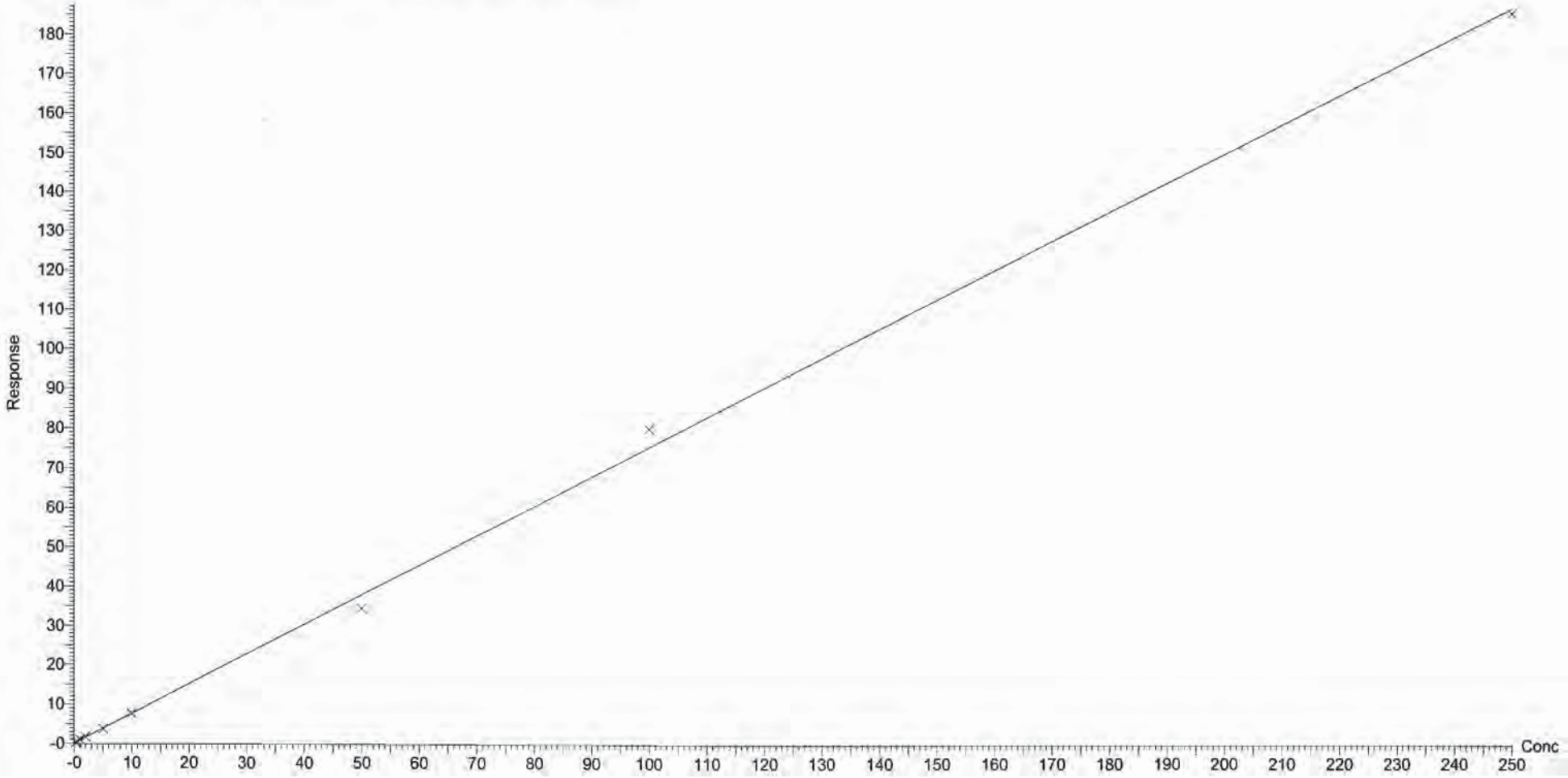
Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999924
Calibration curve: -0.0019298 * x^2 + 15.4647 * x + -0.327453
Response type: Internal Std (Ref 42), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

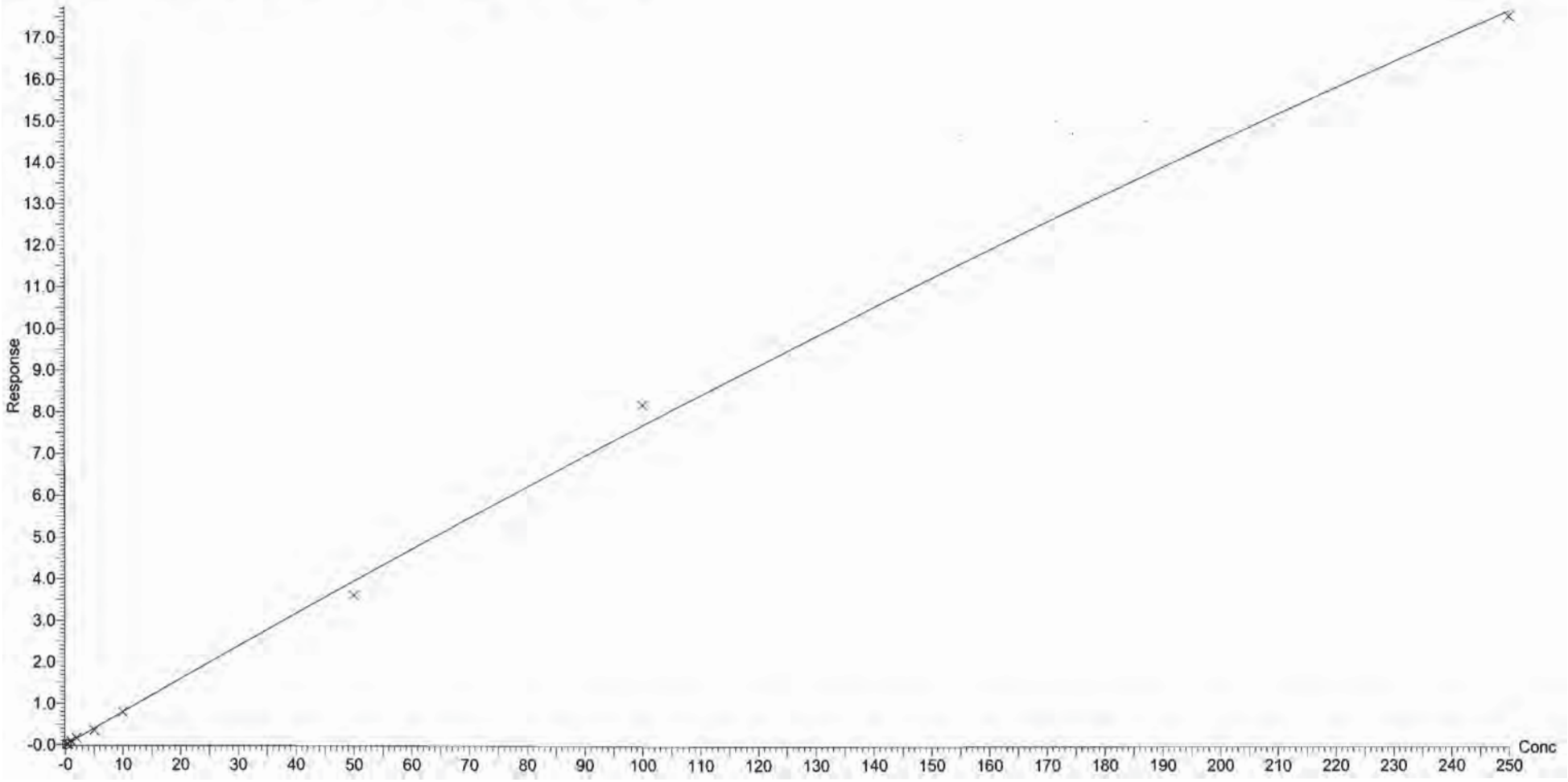
Compound name: PFUnA
Coefficient of Determination: R^2 = 0.997941
Calibration curve: -3.28617e-005 * x^2 + 0.757566 * x + 0.0881327
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

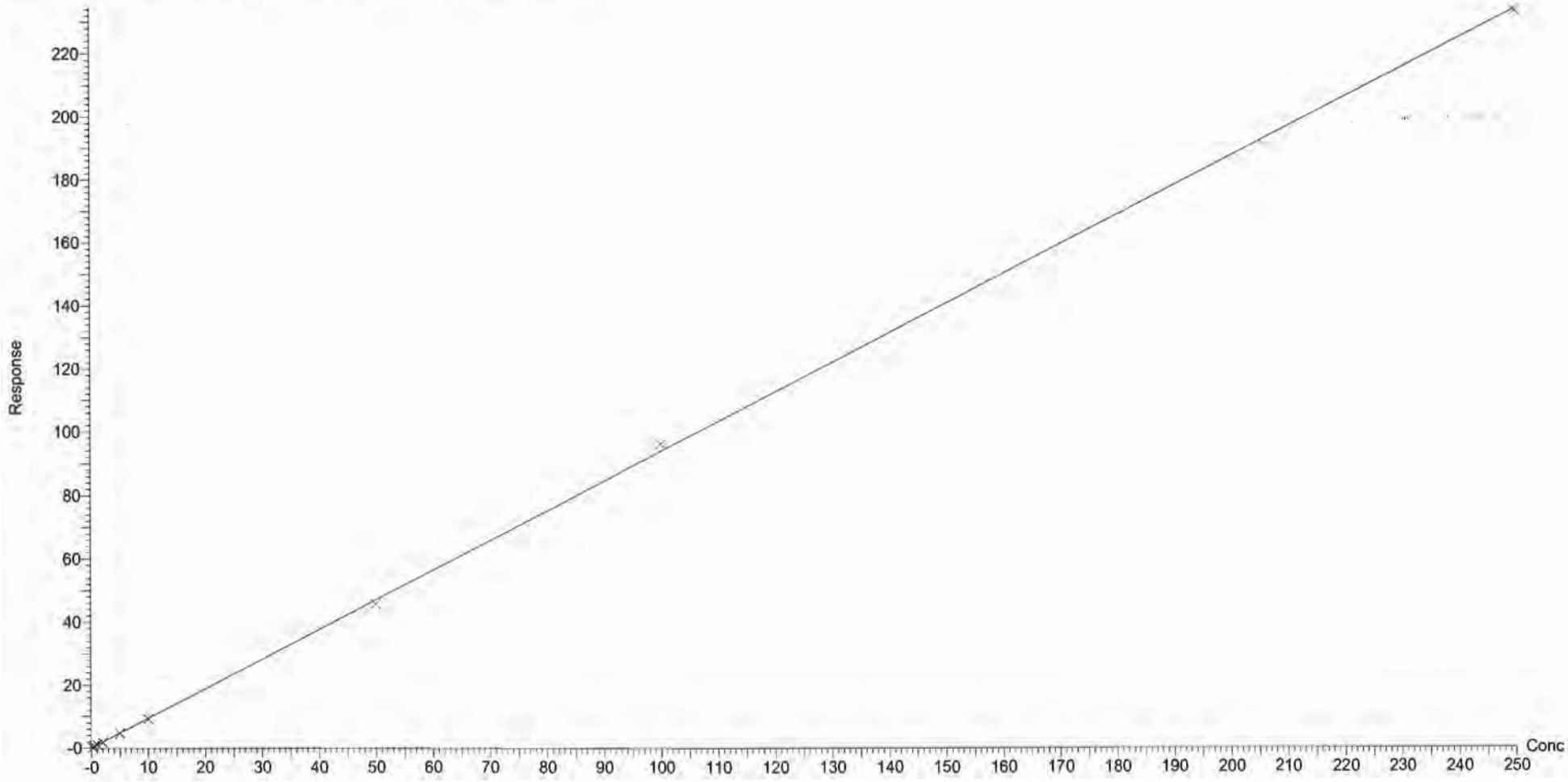
Compound name: PFDS
Coefficient of Determination: R^2 = 0.997578
Calibration curve: -4.11818e-005 * x^2 + 0.0811765 * x + -0.0032981
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

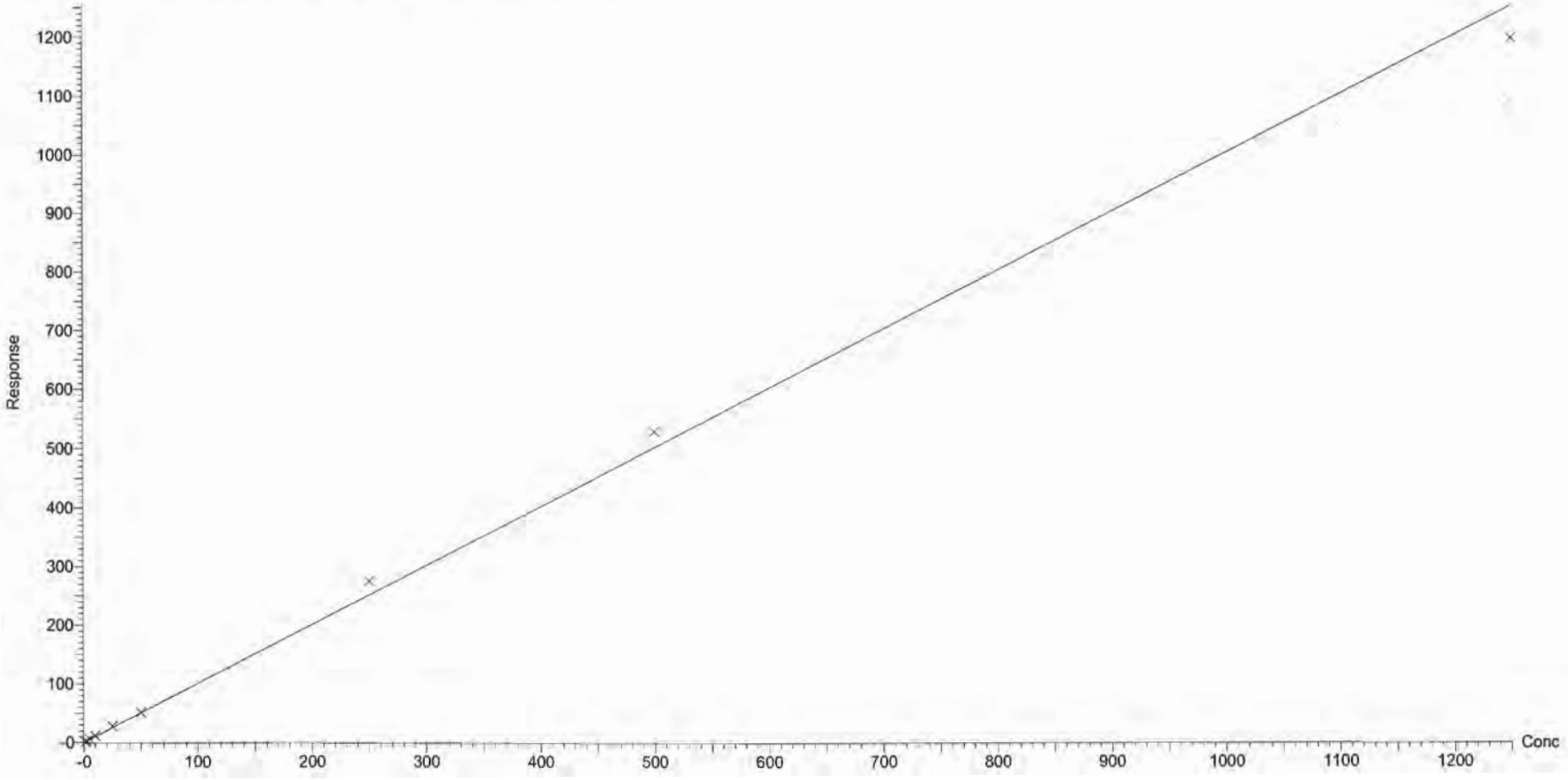
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999599
Calibration curve: -9.87083e-006 * x^2 + 0.940673 * x + 0.00742583
Response type: Internal Std (Ref 44), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

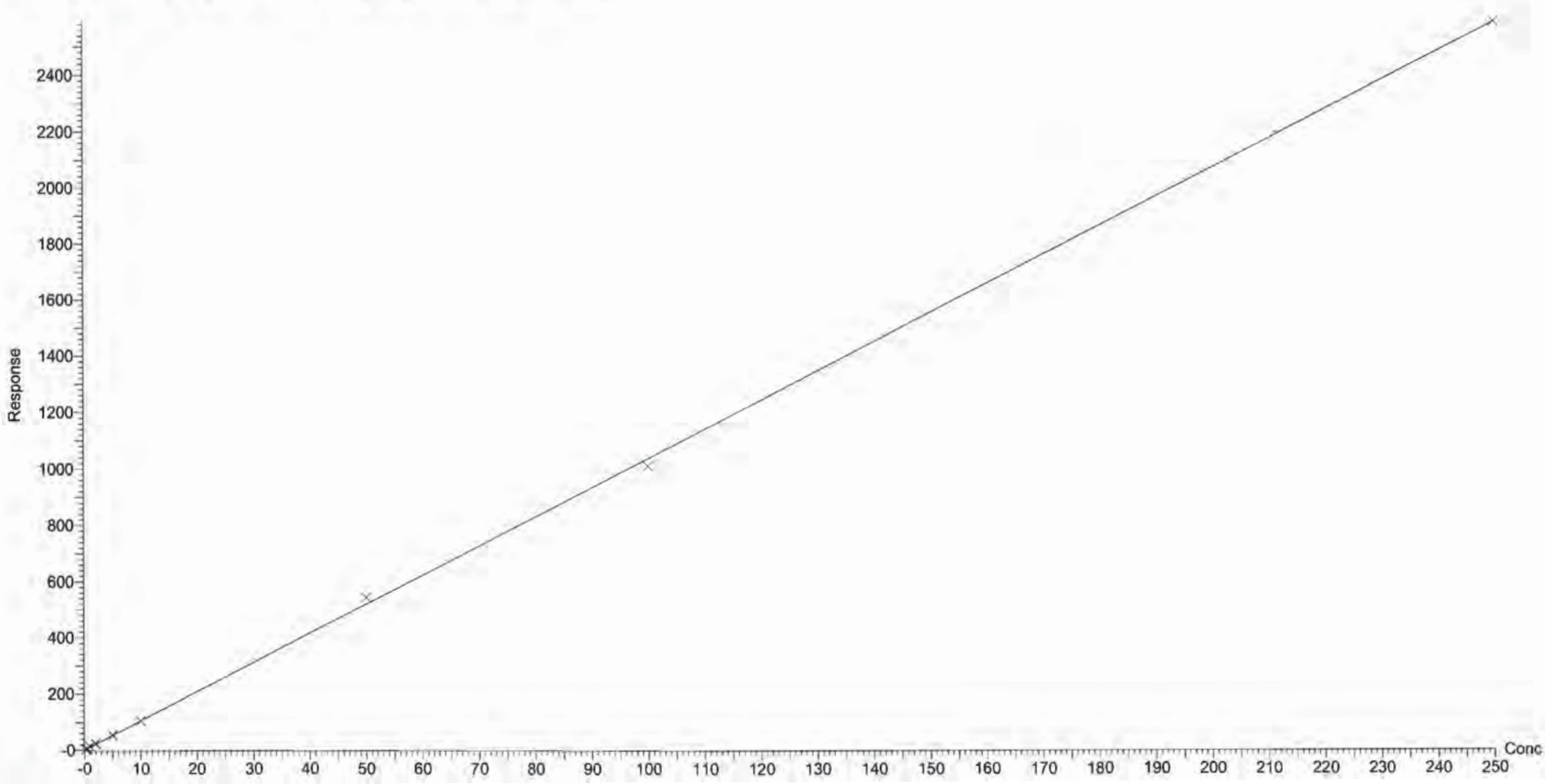
Compound name: N-MeFOSA
Correlation coefficient: r = 0.998345, r^2 = 0.996693
Calibration curve: 1.00604 * x + 0.235716
Response type: Internal Std (Ref 45), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

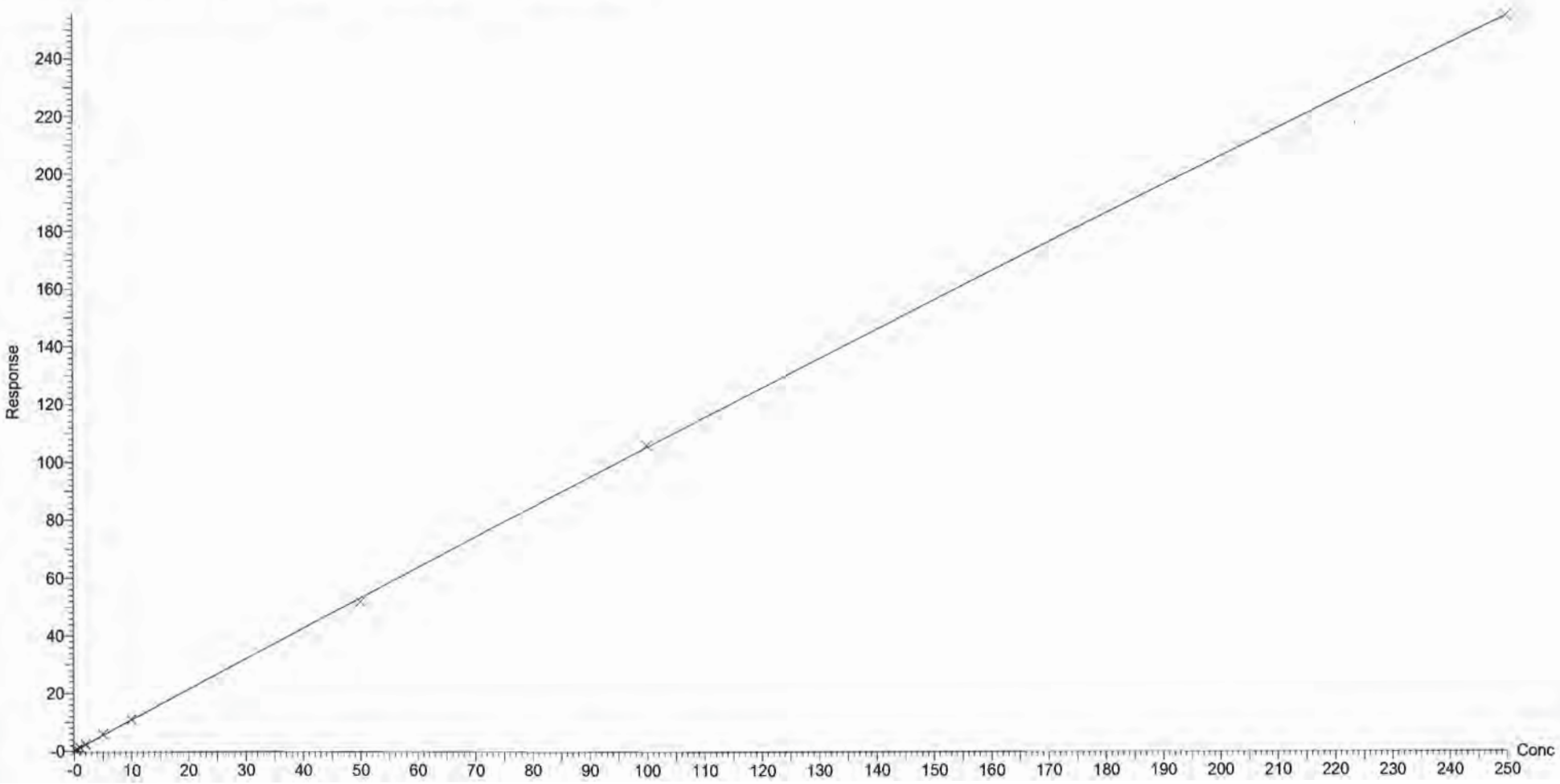
Compound name: PFTrDA
Correlation coefficient: r = 0.999725, r^2 = 0.999450
Calibration curve: 10.3774 * x + 1.19316
Response type: Internal Std (Ref 44), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

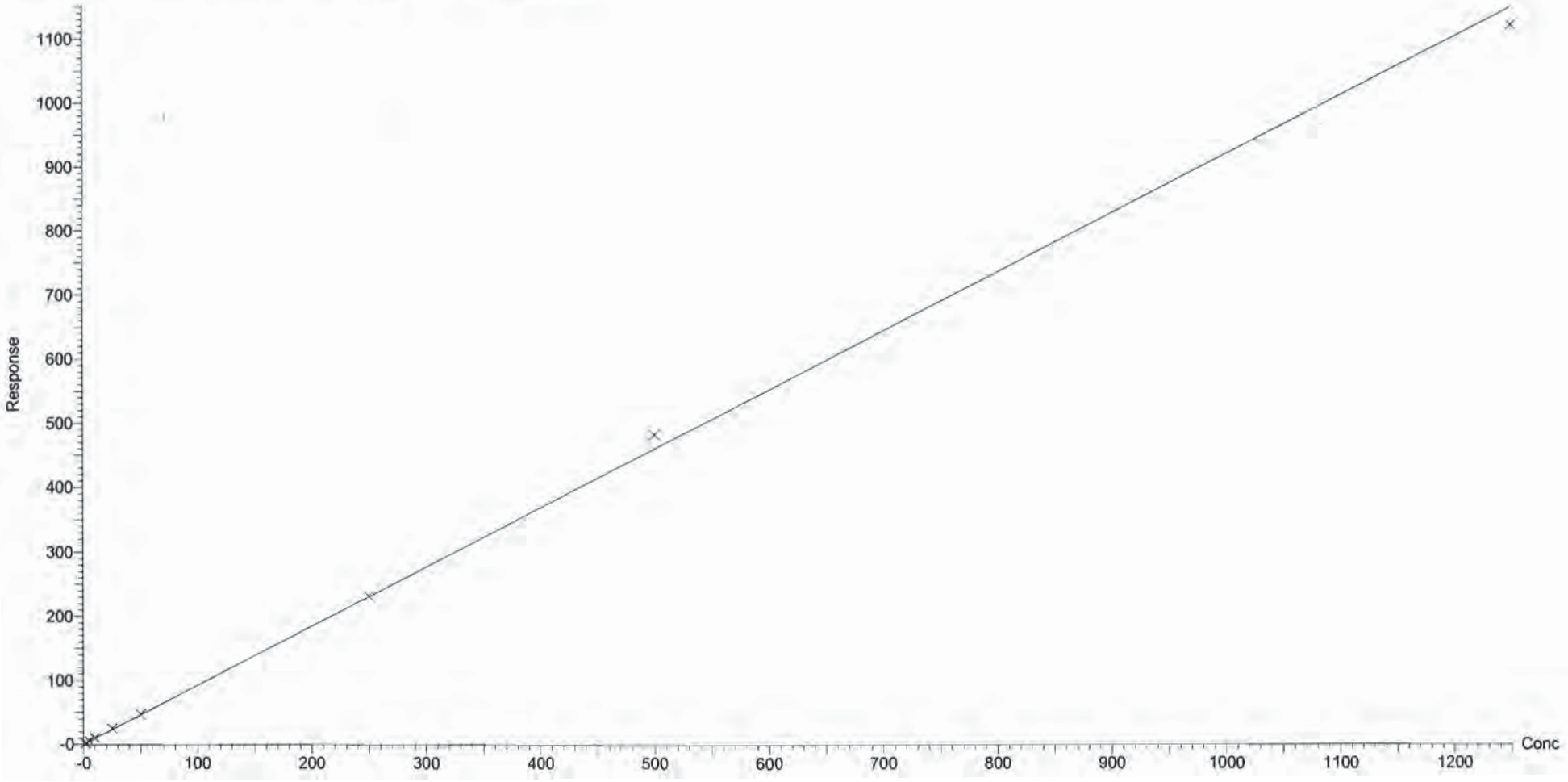
Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999821
Calibration curve: -0.000206845 * x^2 + 1.07301 * x + 0.115151
Response type: Internal Std (Ref 46), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

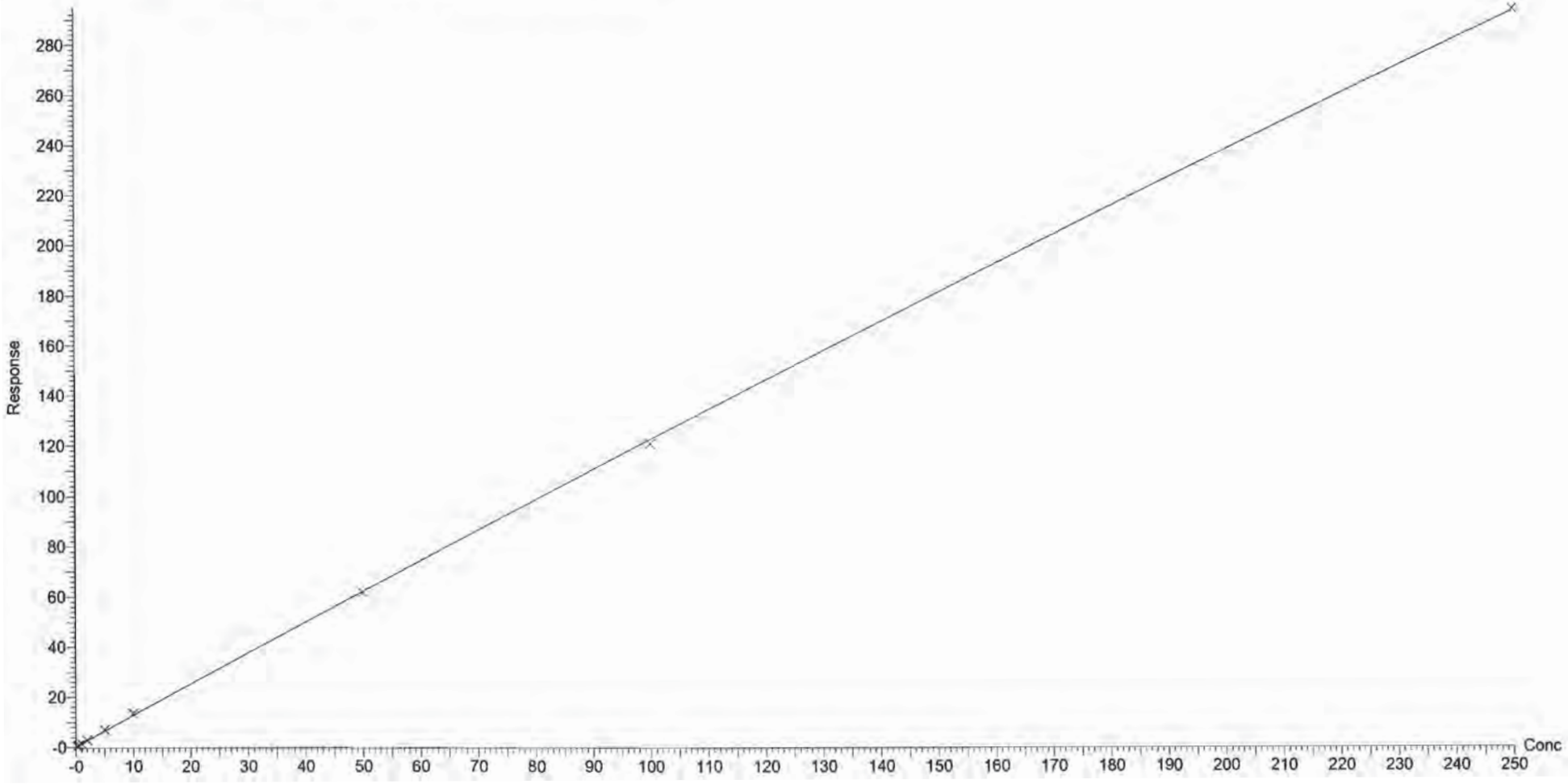
Compound name: N-EtFOSA
Correlation coefficient: r = 0.999415, r^2 = 0.998831
Calibration curve: 0.921854 * x + 0.382781
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

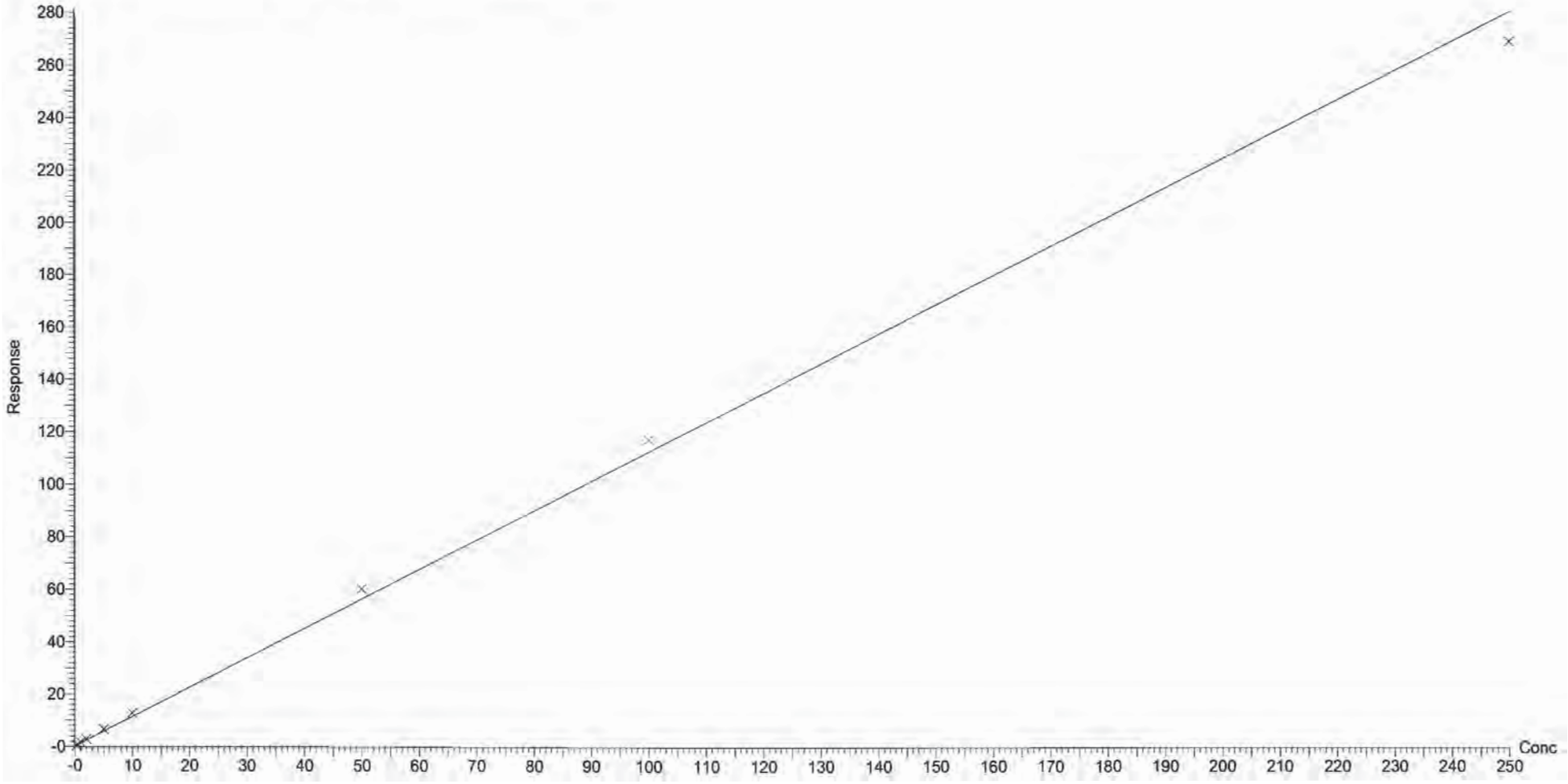
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999687
Calibration curve: -0.000332417 * x^2 + 1.25821 * x + 0.243616
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

Compound name: PFODA
Correlation coefficient: r = 0.998537, r^2 = 0.997077
Calibration curve: 1.12504 * x + 0.153988
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

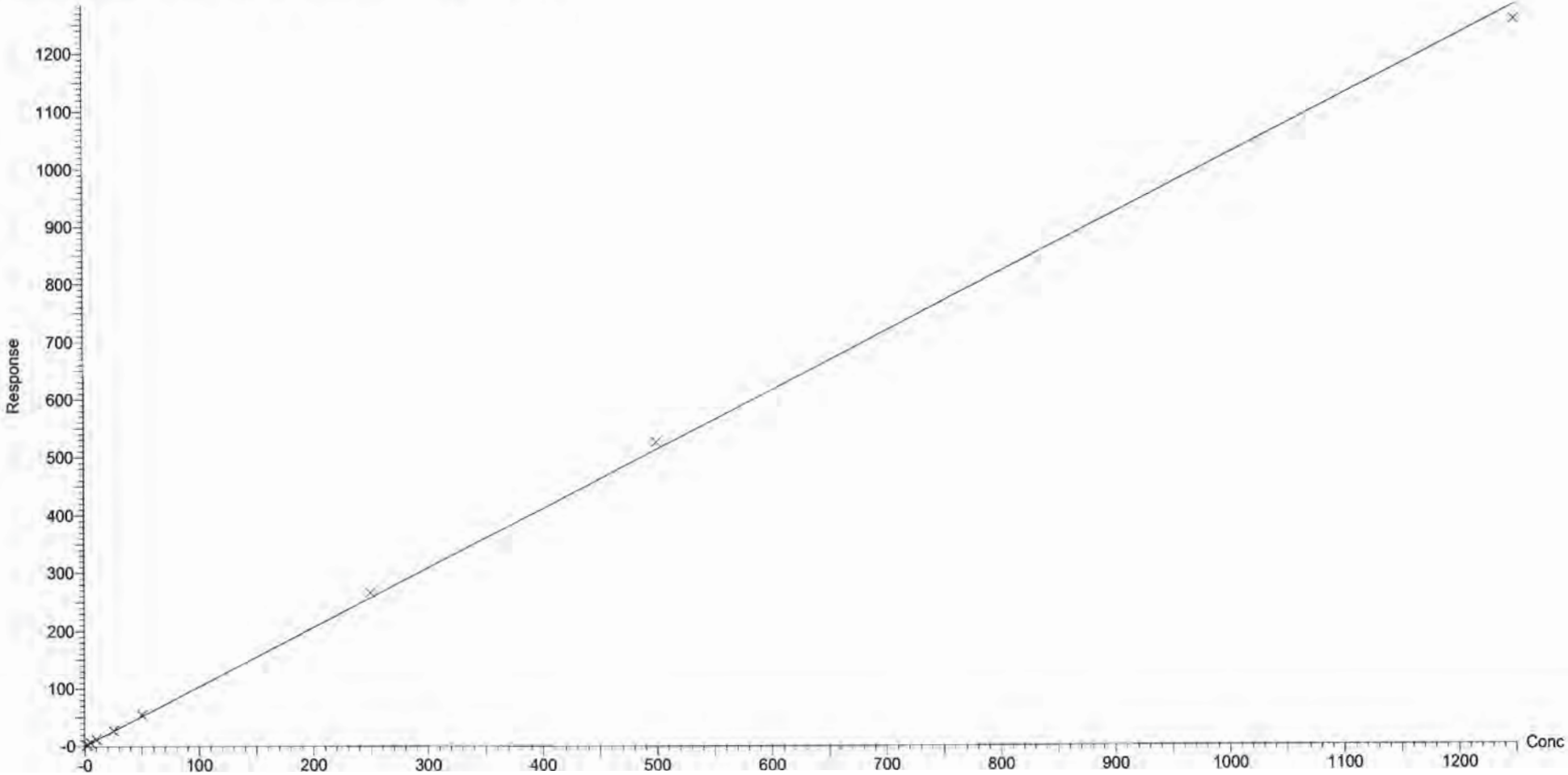


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

Compound name: N-MeFOSE
Correlation coefficient: r = 0.999653, r^2 = 0.999306
Calibration curve: 1.02661 * x + 0.421311
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

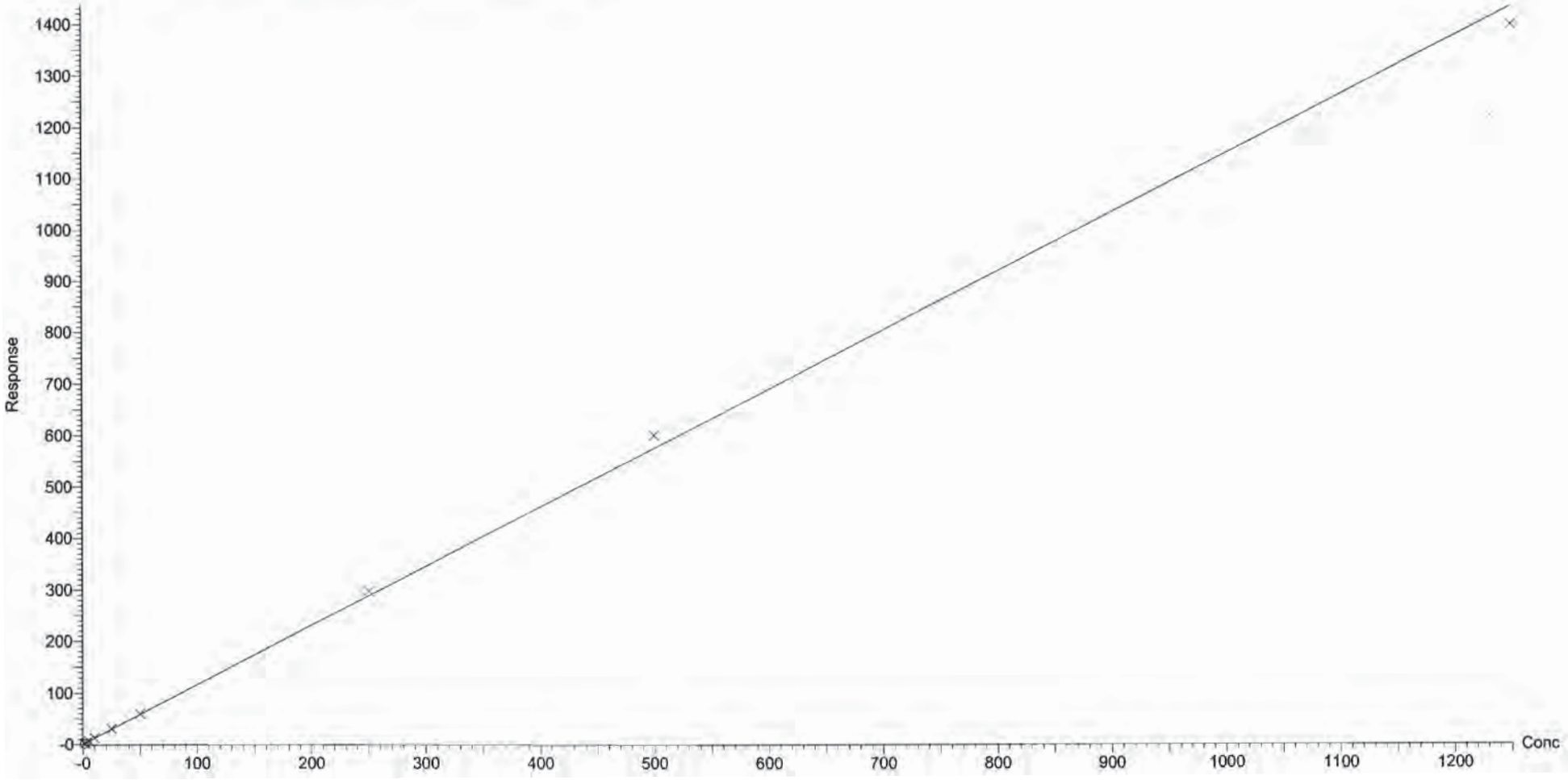


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

Compound name: N-EtFOSE
Correlation coefficient: r = 0.999481, r^2 = 0.998963
Calibration curve: 1.14913 * x + 1.24499
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

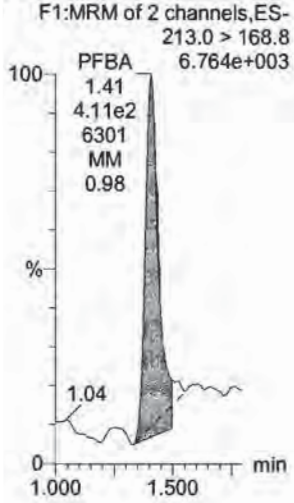
Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

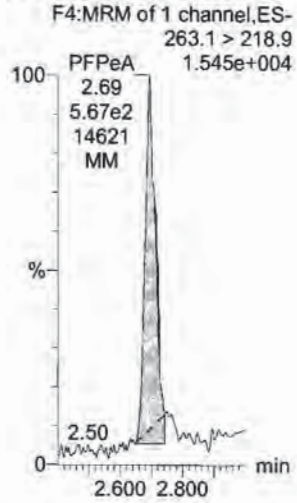
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
Calibration: 01 Aug 2017 10:11:08

Name: 170731M2_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107

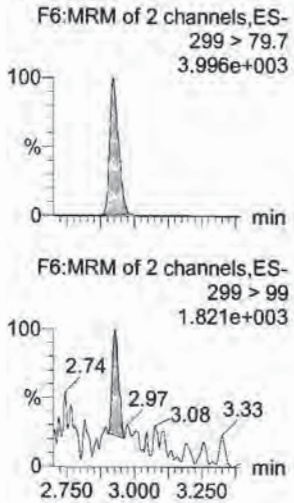
PFBA



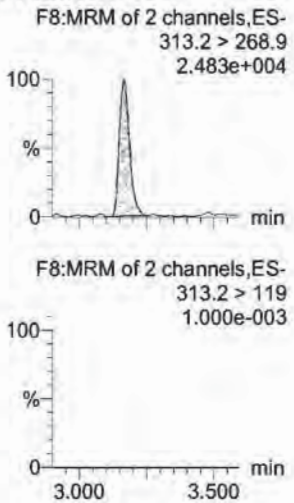
PFPeA



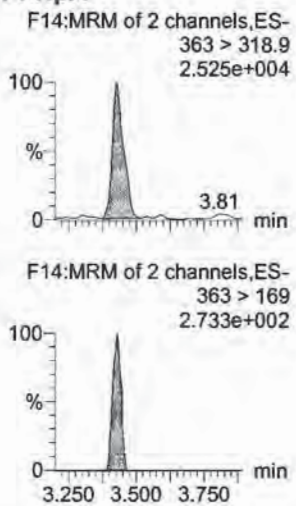
PFBS



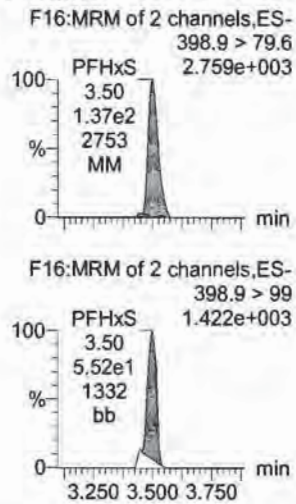
PFHxA



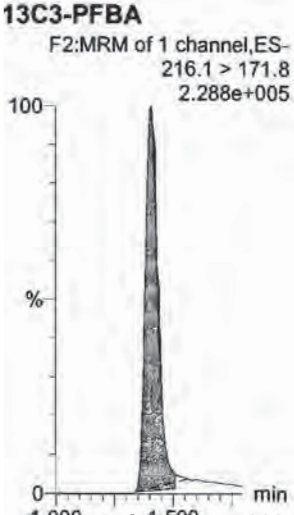
PFHpA



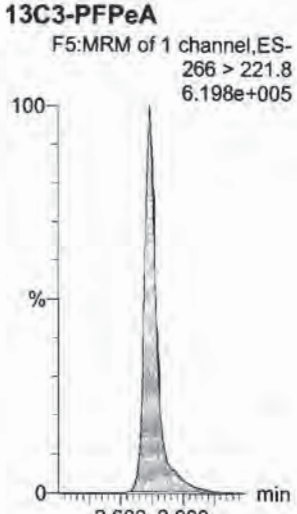
PFHxS



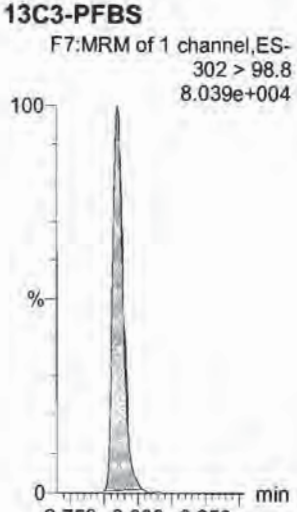
13C3-PFBA



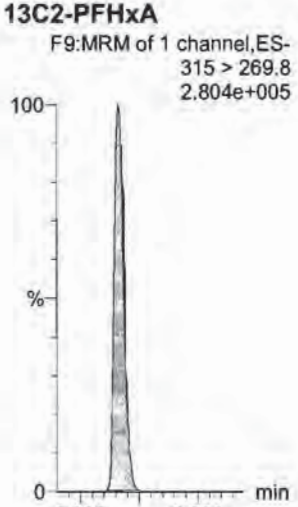
13C3-PFPeA



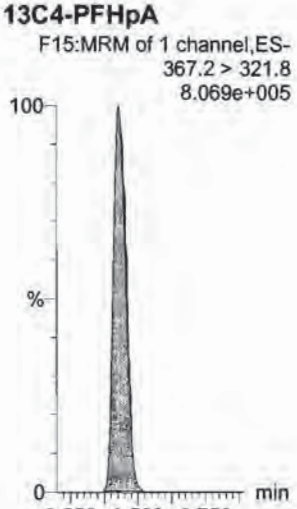
13C3-PFBS



13C2-PFHxA



13C4-PFHpA



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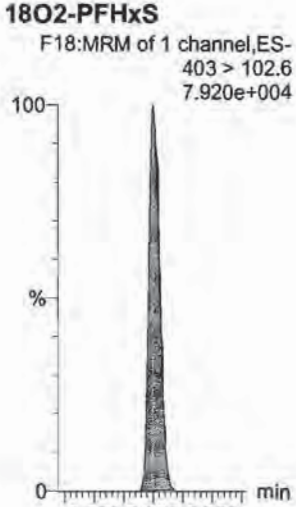

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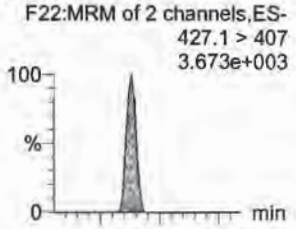
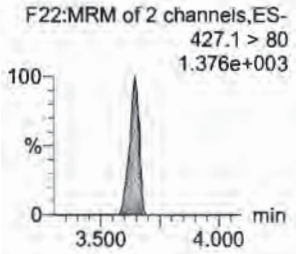
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107

6:2 FTS





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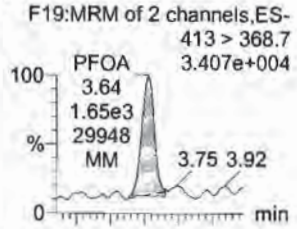

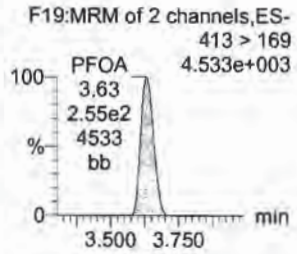

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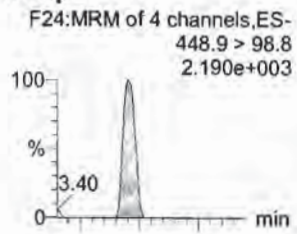

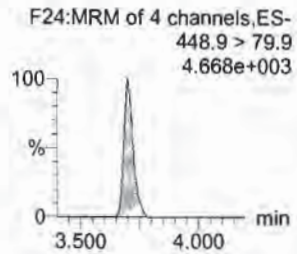

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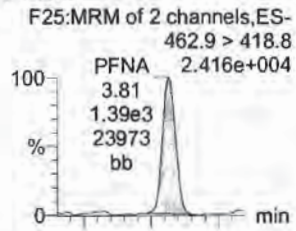

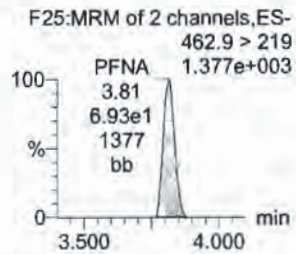

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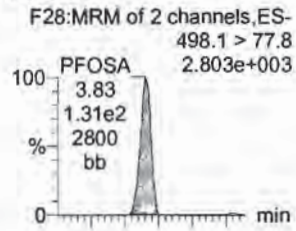

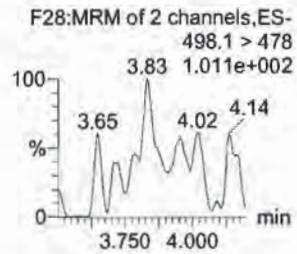

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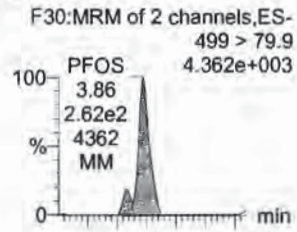
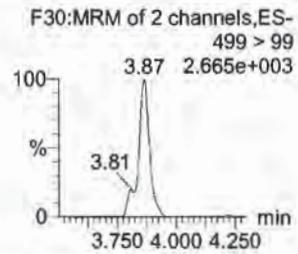
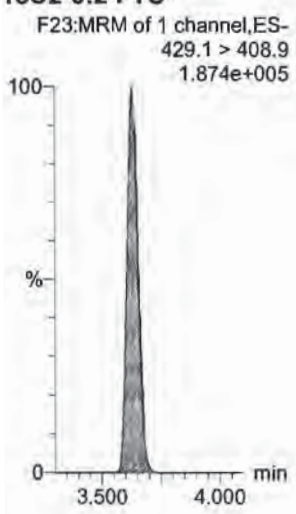




13C2-6:2 FTS



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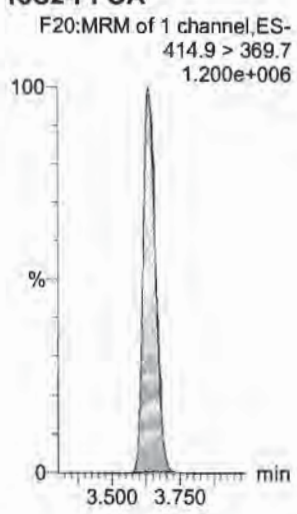

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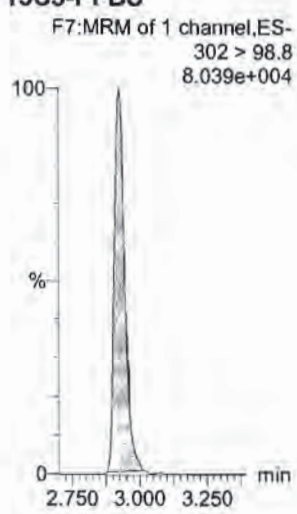

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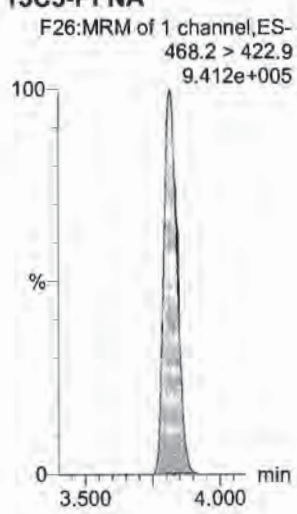

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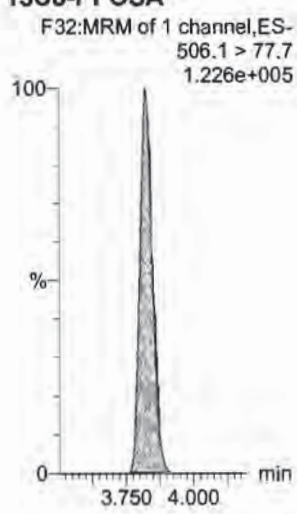

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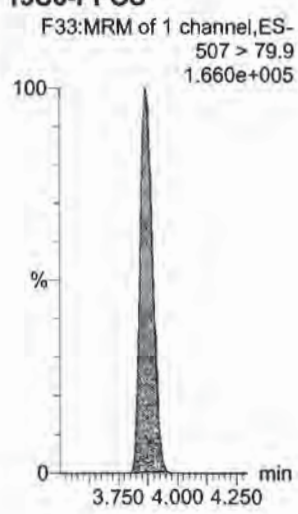

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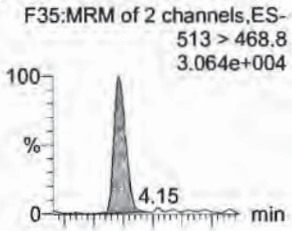
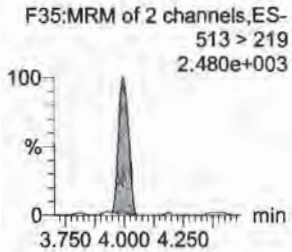
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

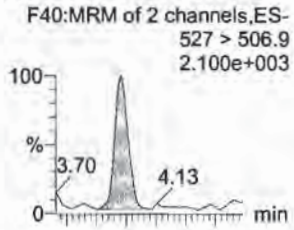
Name: 170731M2_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107

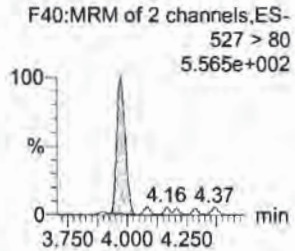
PFDA





8:2 FTS





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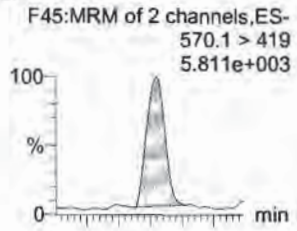

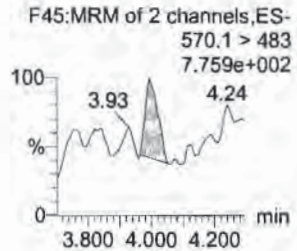

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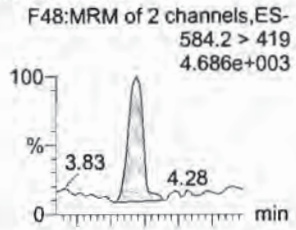

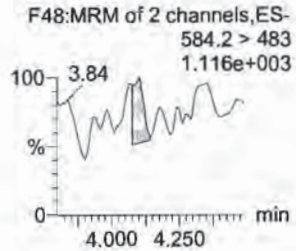

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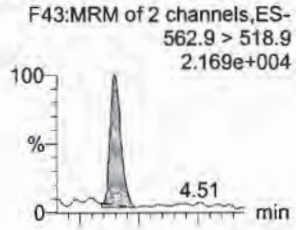

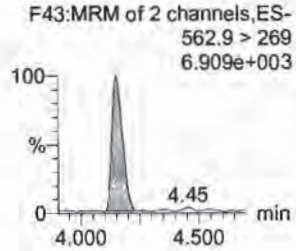

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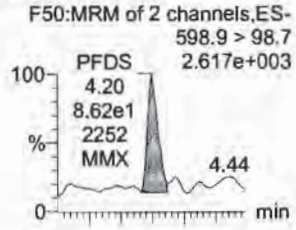

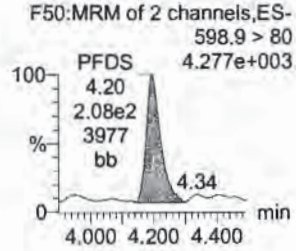

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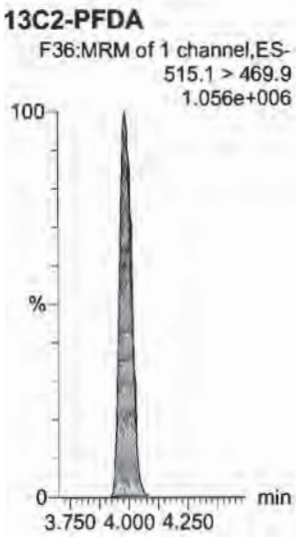
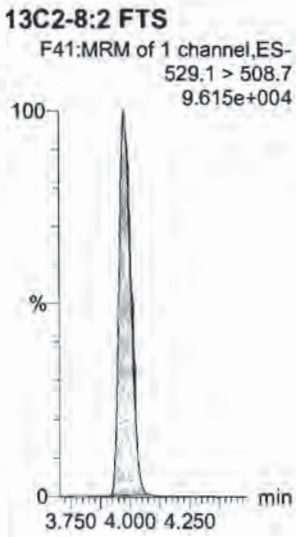


13C2-8:2 FTS



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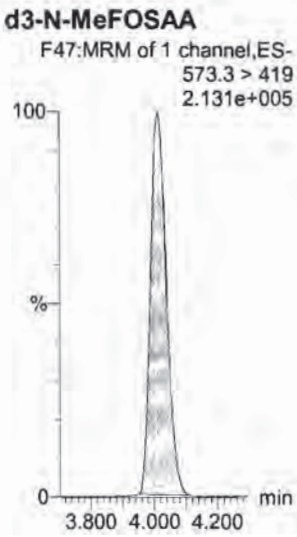

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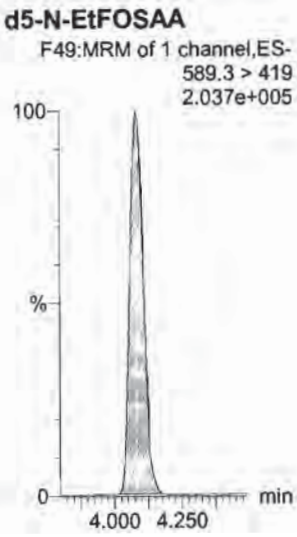

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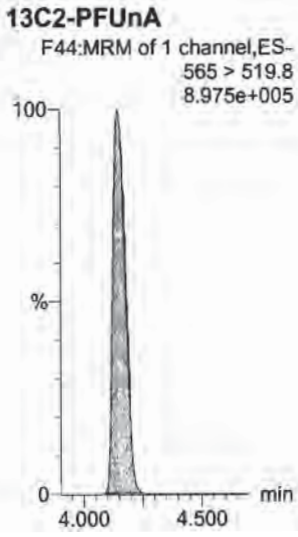

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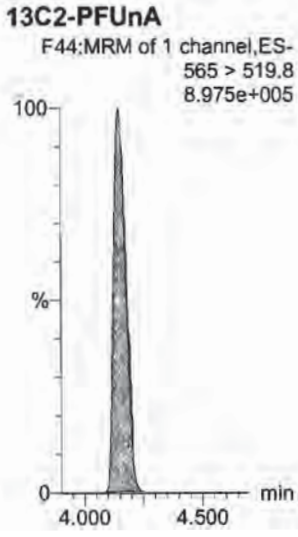

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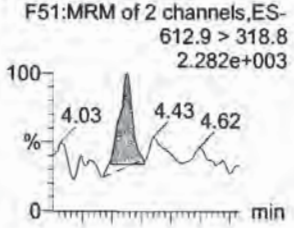
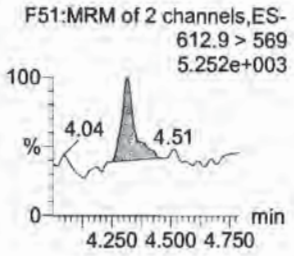
Name: 170731M2_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107

PFDoA





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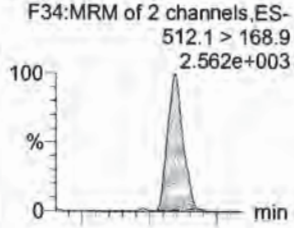

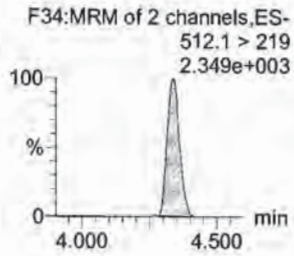

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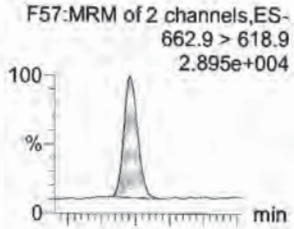

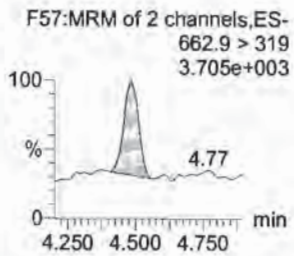

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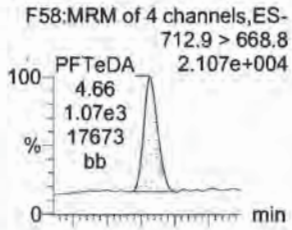

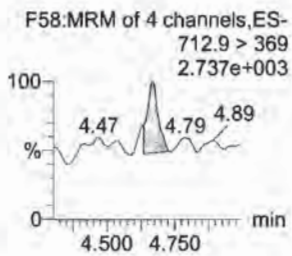

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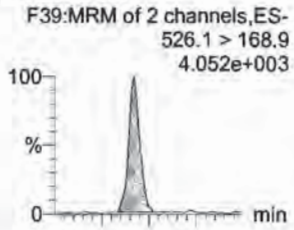

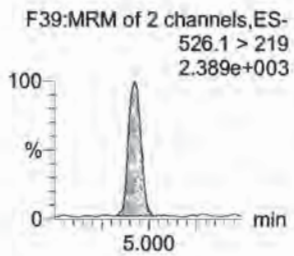

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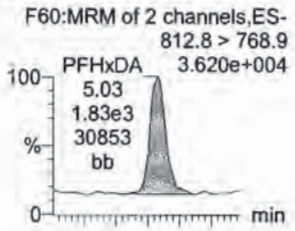

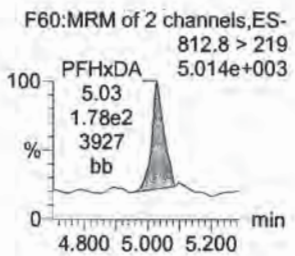

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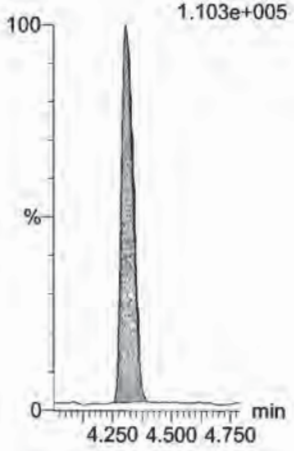

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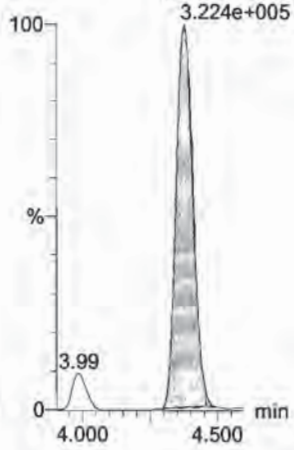

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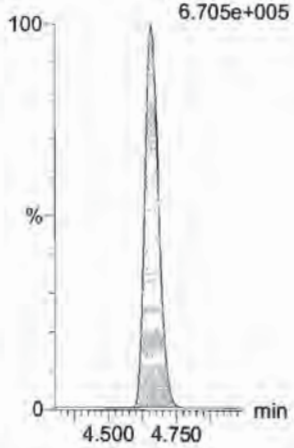
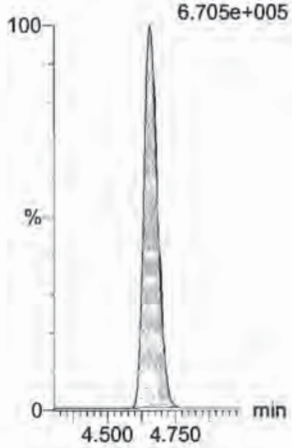
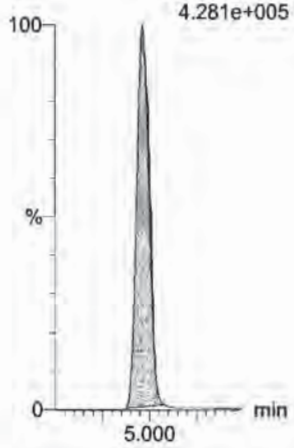


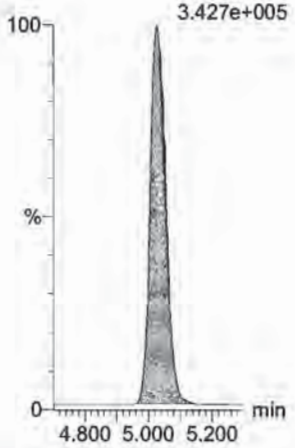
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



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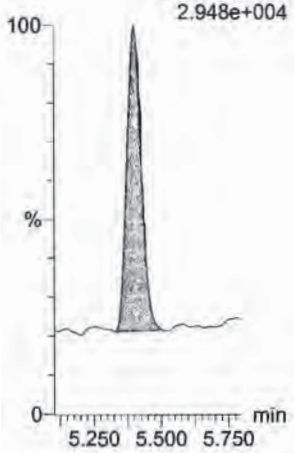
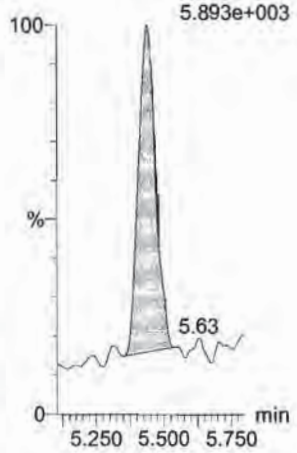
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107

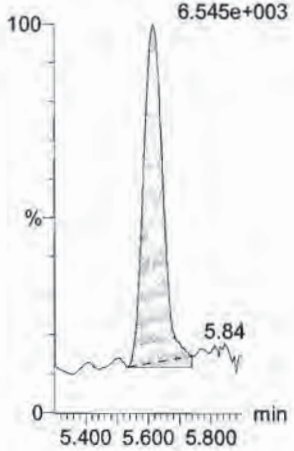
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
2.948e+004



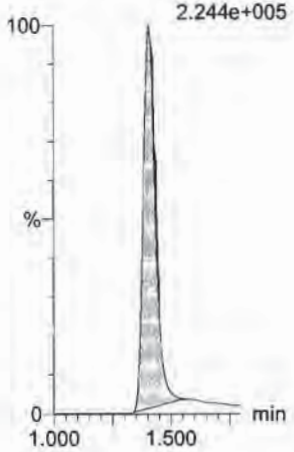
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
5.893e+003



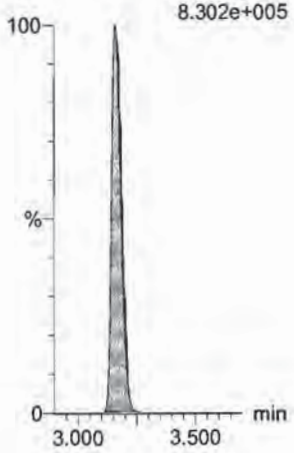
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
6.545e+003



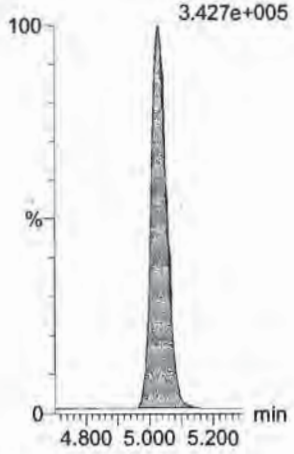
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.244e+005



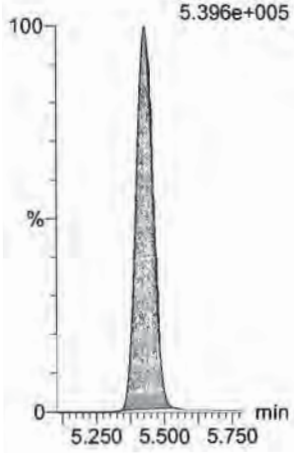
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.302e+005



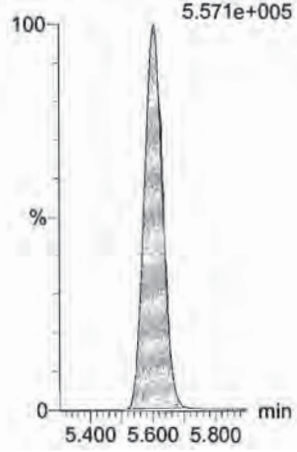
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.427e+005



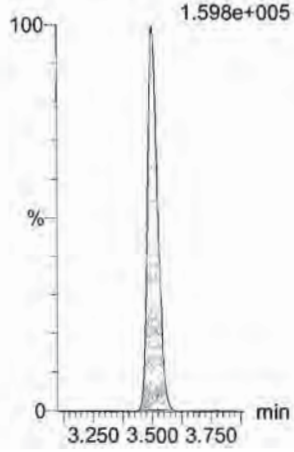
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.396e+005



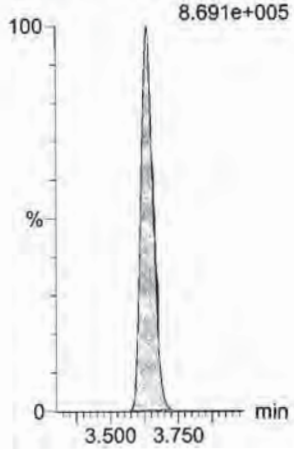
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.571e+005



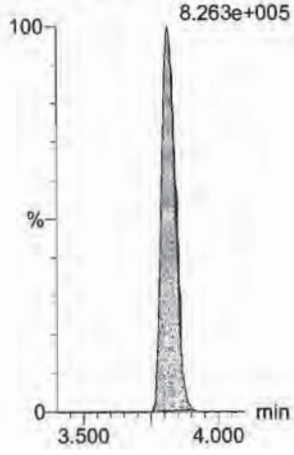
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.598e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
8.691e+005



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
8.263e+005



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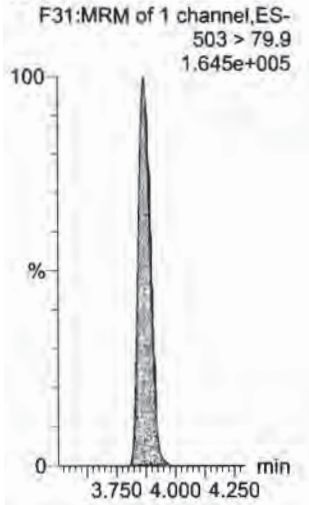
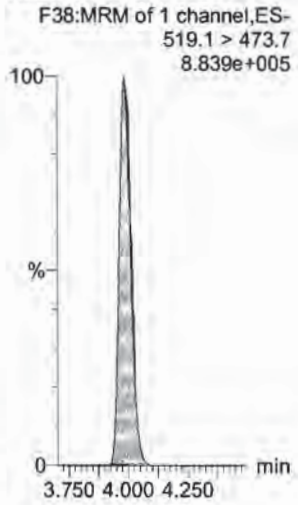
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107

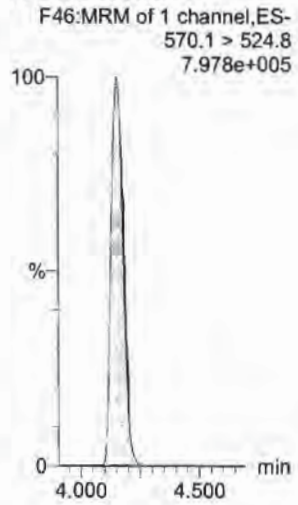
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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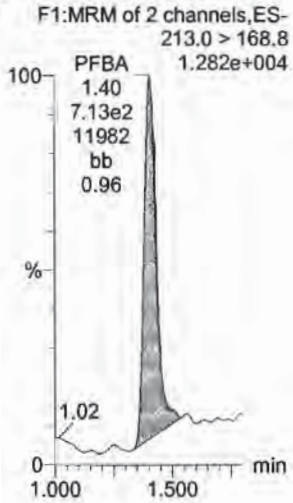
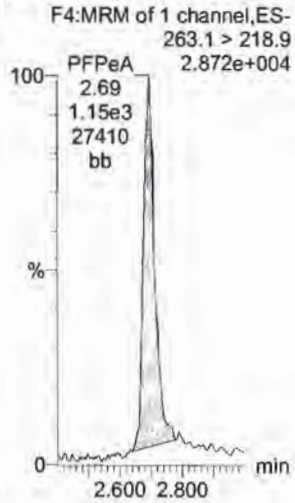
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_3, Date: 01-Aug-2017, Time: 00:50:40, ID: ST170731M2-2 PFC CS-1 17G3108, Description: PFC CS-1 17G3108

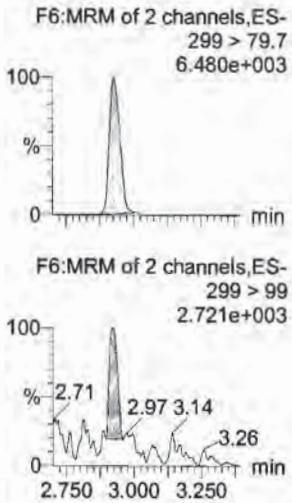
PFBA



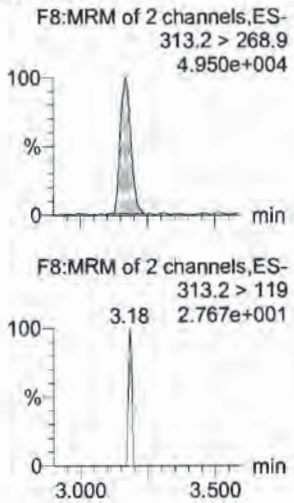
PFPeA



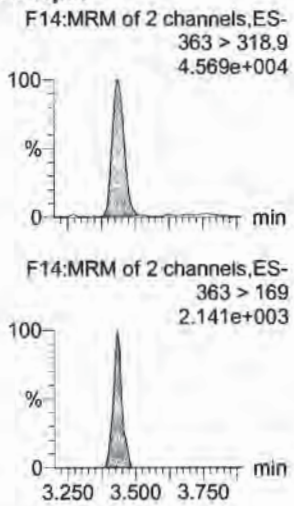
PFBS



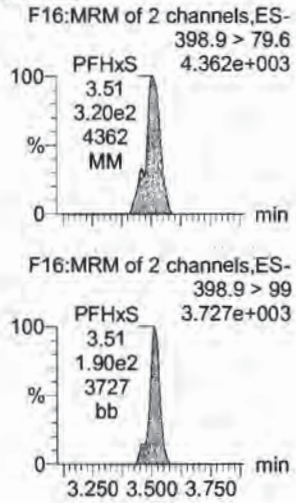
PFHxA



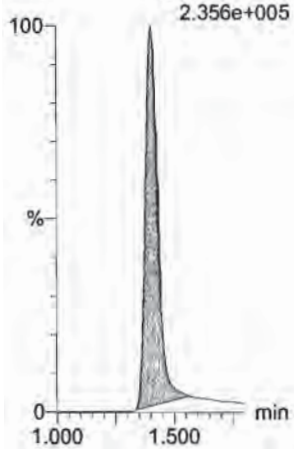
PFHpA



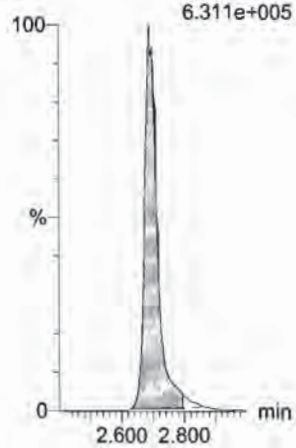
PFHxS



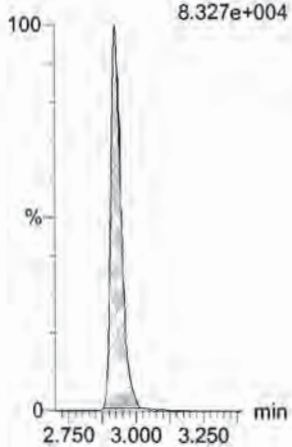
13C3-PFBA



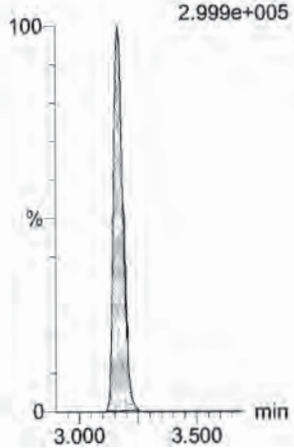
13C3-PFPeA



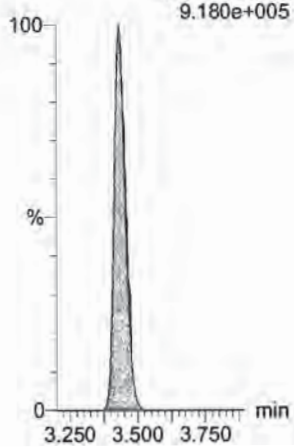
13C3-PFBS



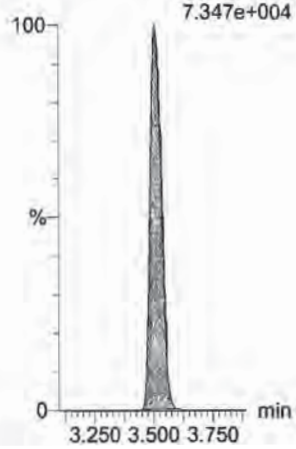
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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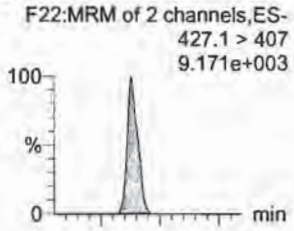
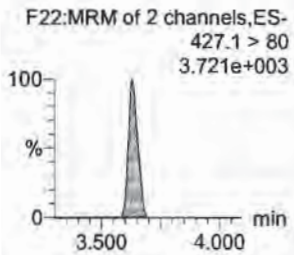
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

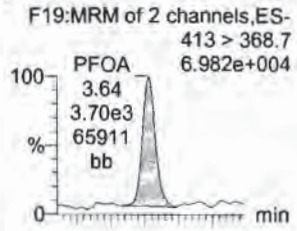
Name: 170731M2_3, Date: 01-Aug-2017, Time: 00:50:40, ID: ST170731M2-2 PFC CS-1 17G3108, Description: PFC CS-1 17G3108

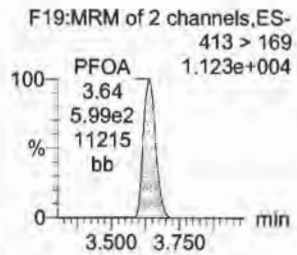
6:2 FTS



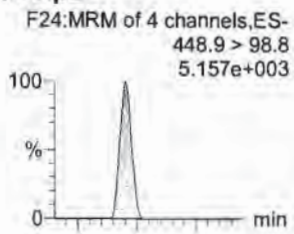


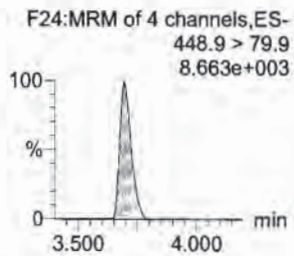
PFOA



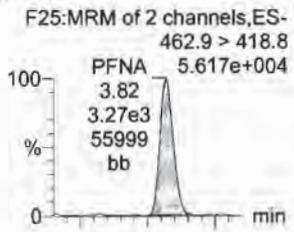


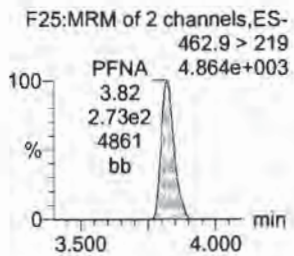
PFHpS



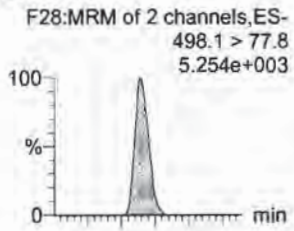


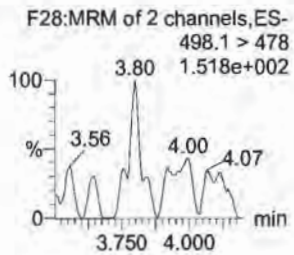
PFNA



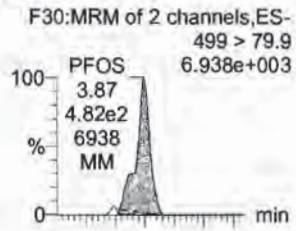


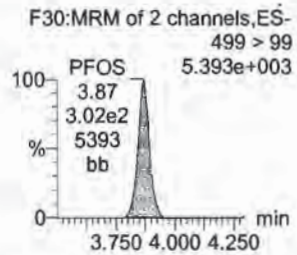
PFOSA



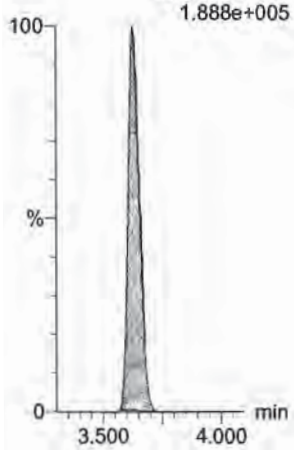


PFOS

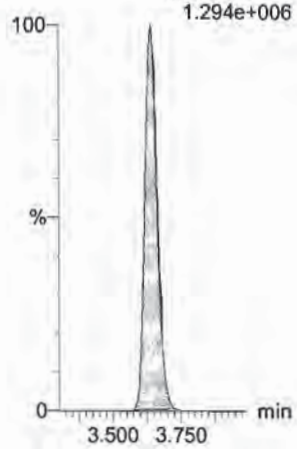




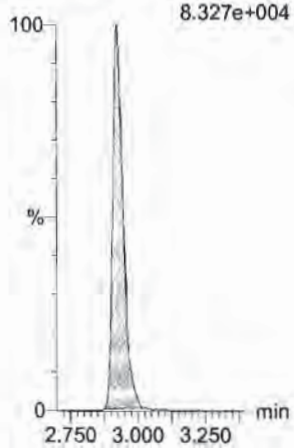
13C2-6:2 FTS



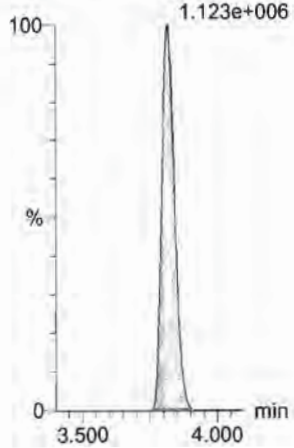
13C2-PFOA



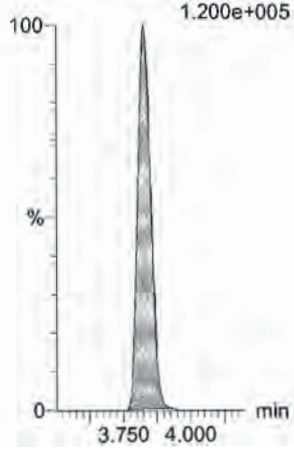
13C3-PFBS



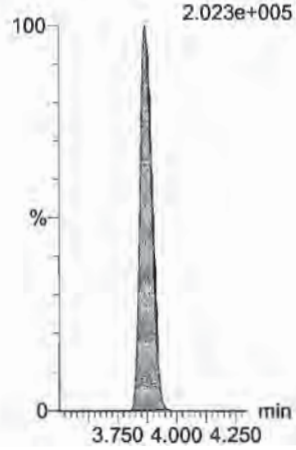
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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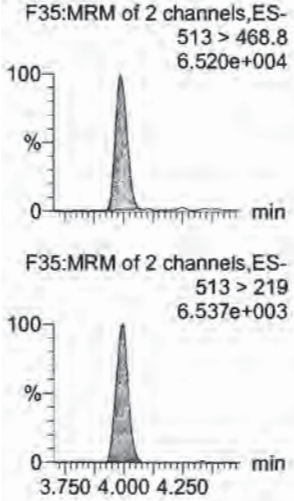
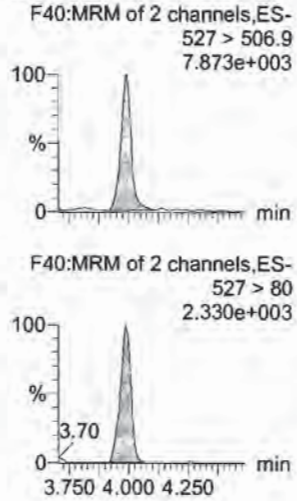
Name: 170731M2_3, Date: 01-Aug-2017, Time: 00:50:40, ID: ST170731M2-2 PFC CS-1 17G3108, Description: PFC CS-1 17G3108

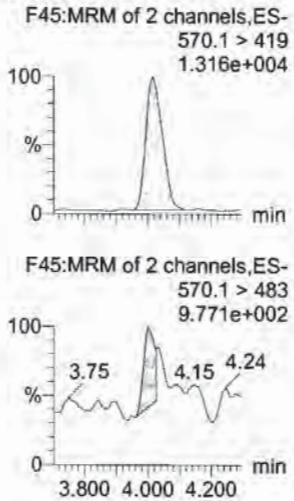
PFDA



8:2 FTS



N-MeFOSAA



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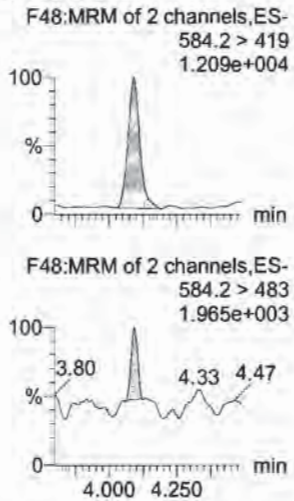
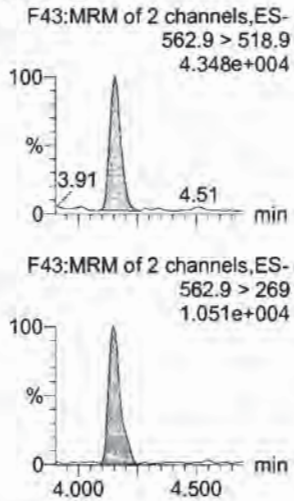
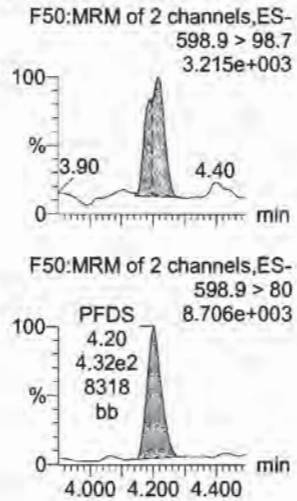


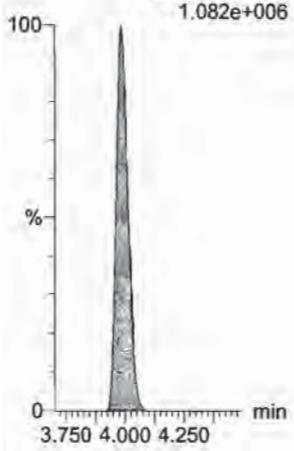
PFUnA



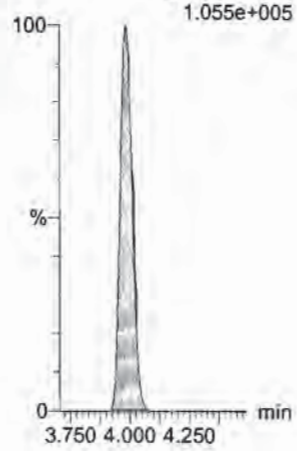
PFDS



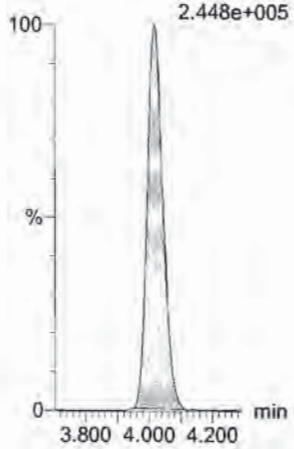
13C2-PFDA



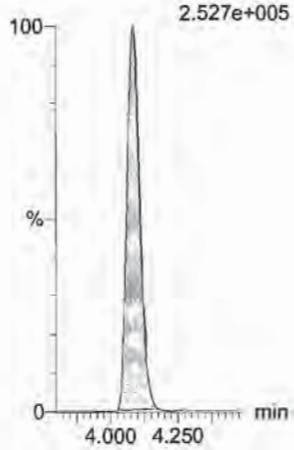
13C2-8:2 FTS



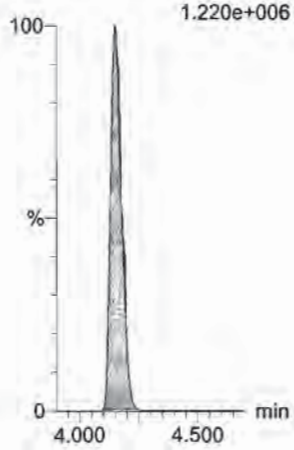
d3-N-MeFOSAA



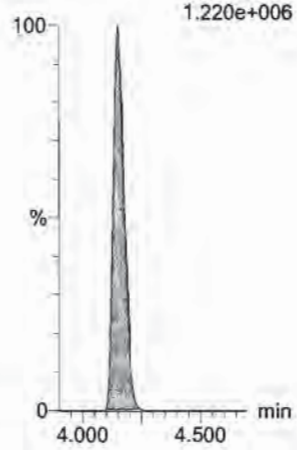
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA

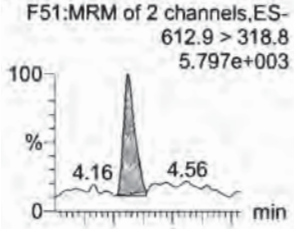


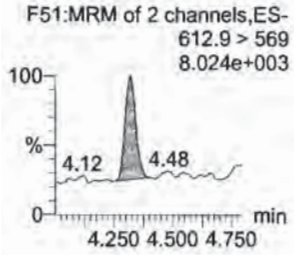
Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

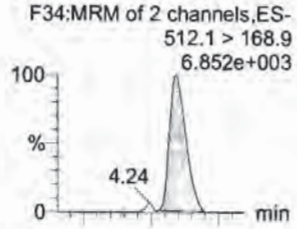
Name: 170731M2_3, Date: 01-Aug-2017, Time: 00:50:40, ID: ST170731M2-2 PFC CS-1 17G3108, Description: PFC CS-1 17G3108

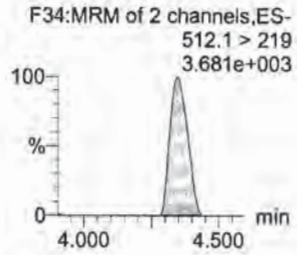
PFDoA



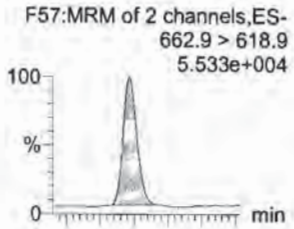


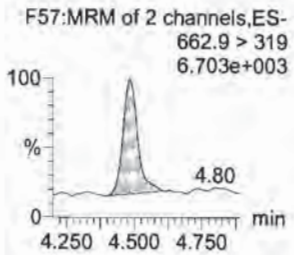
N-MeFOSA



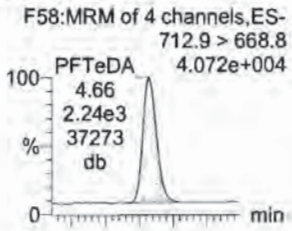


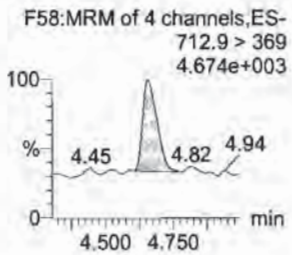
PFTrDA



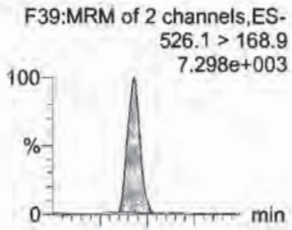


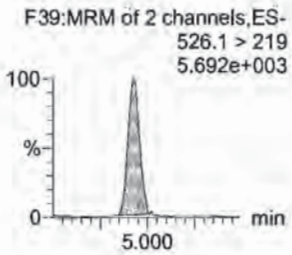
PFTeDA



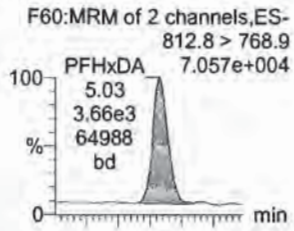


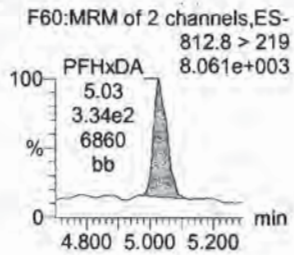
N-EtFOSA



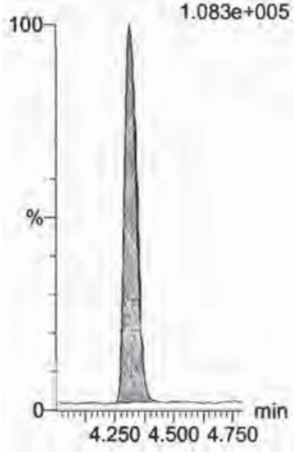


PFHxDA

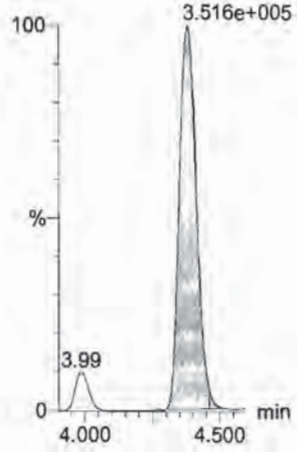




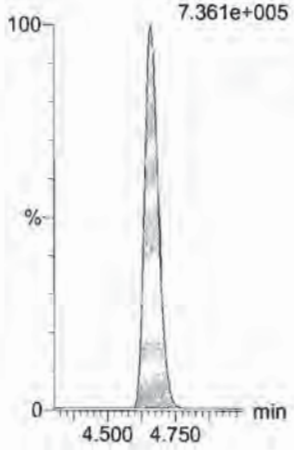
13C2-PFDoA



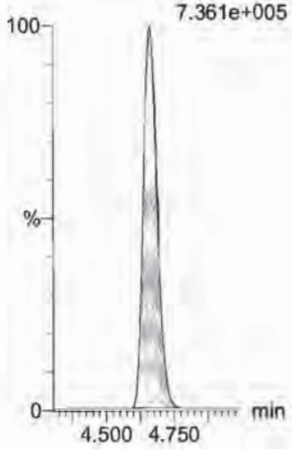
d3-N-MeFOSA



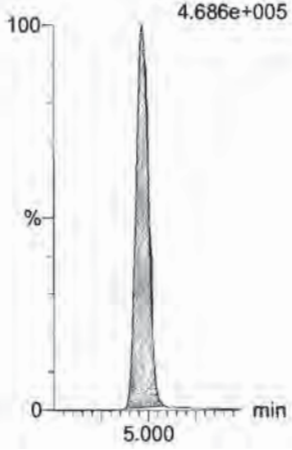
13C2-PFTeDA



13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA

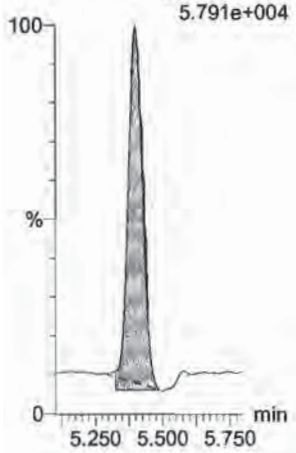


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

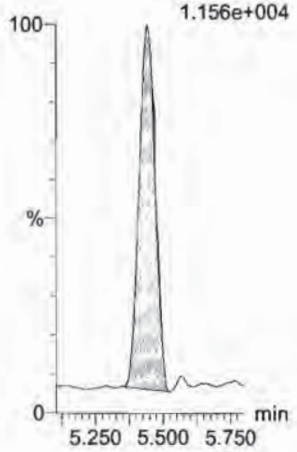
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_3, Date: 01-Aug-2017, Time: 00:50:40, ID: ST170731M2-2 PFC CS-1 17G3108, Description: PFC CS-1 17G3108

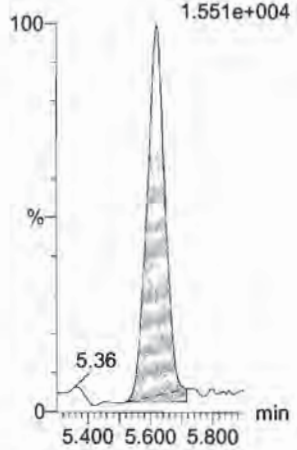
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
5.791e+004



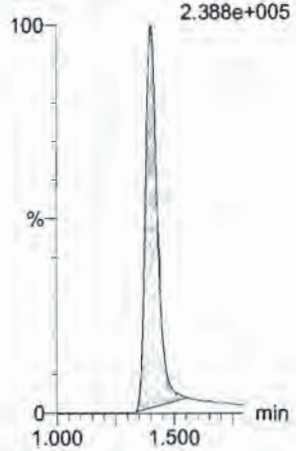
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.156e+004



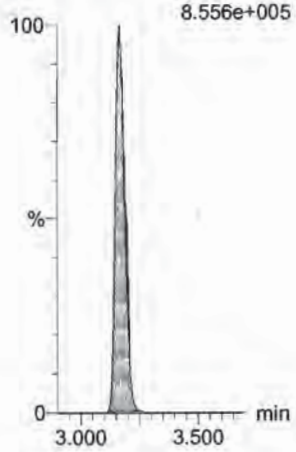
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.551e+004



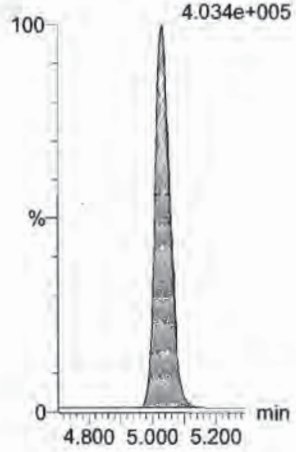
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.388e+005



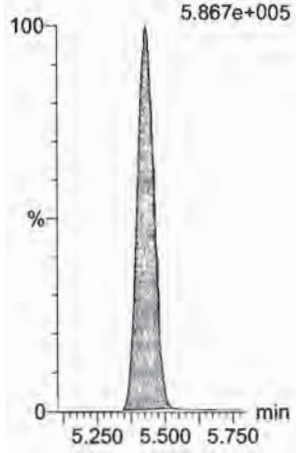
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.556e+005



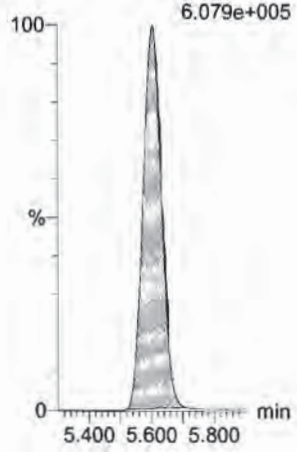
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.034e+005



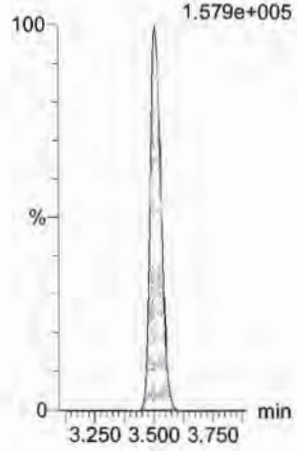
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.867e+005



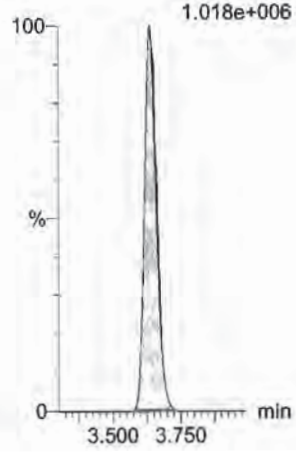
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
6.079e+005



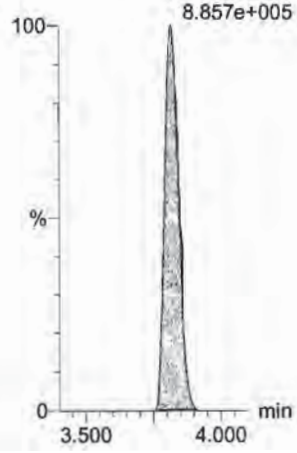
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.579e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.018e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
8.857e+005

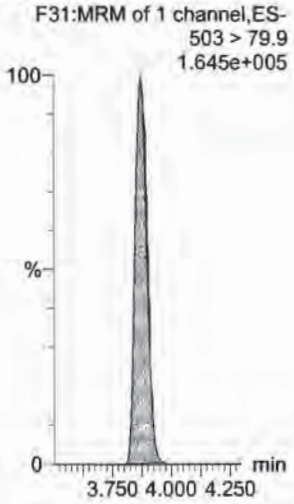


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

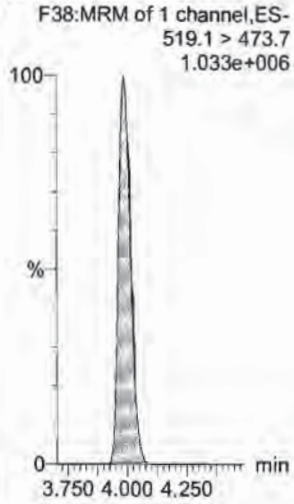
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_3, Date: 01-Aug-2017, Time: 00:50:40, ID: ST170731M2-2 PFC CS-1 17G3108, Description: PFC CS-1 17G3108

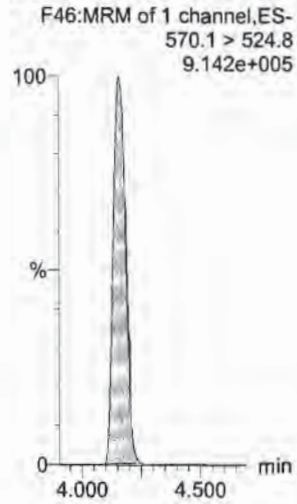
13C4-PFOS



13C6-PFDA



13C7-PFUnA

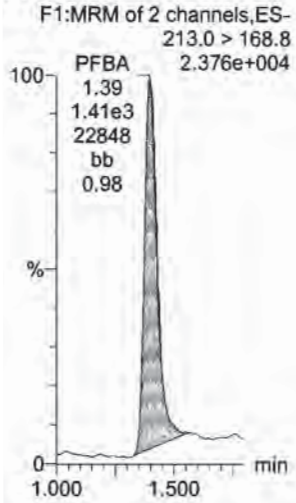


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

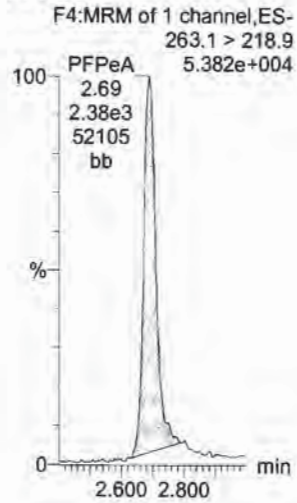
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_4, Date: 01-Aug-2017, Time: 01:01:18, ID: ST170731M2-3 PFC CS0 17G3109, Description: PFC CS0 17G3109

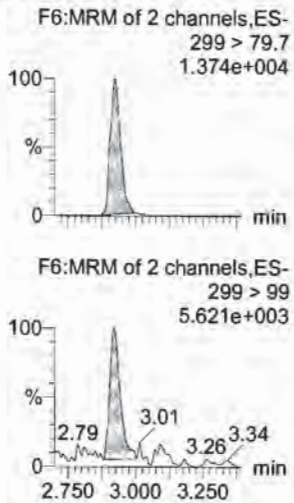
PFBA



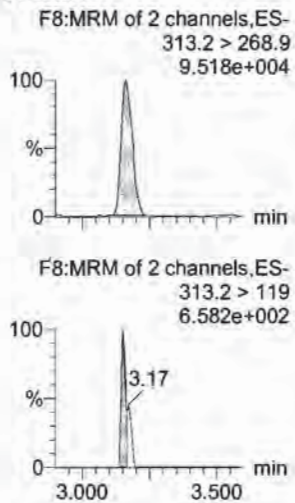
PFPeA



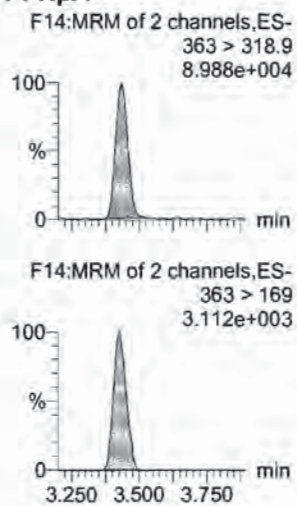
PFBS



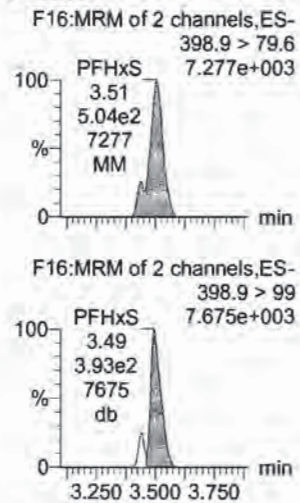
PFHxA



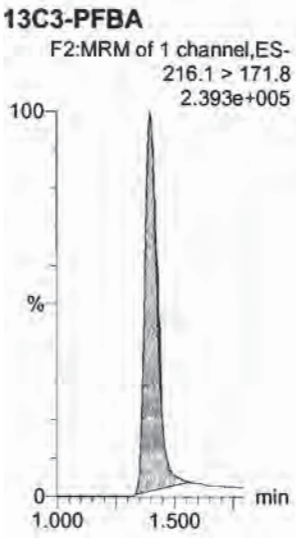
PFHpA



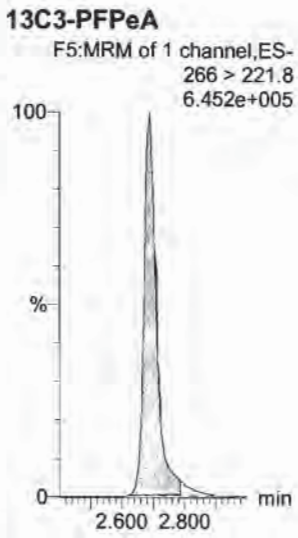
PFHxS



13C3-PFBA



13C3-PFPeA



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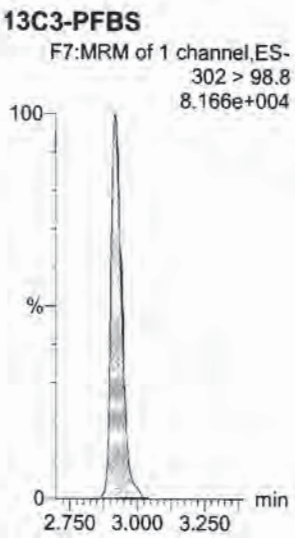

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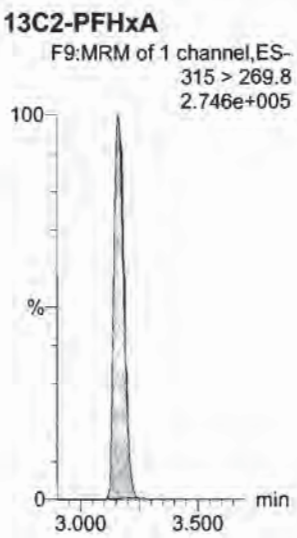

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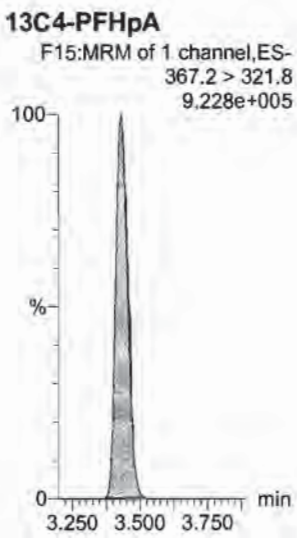
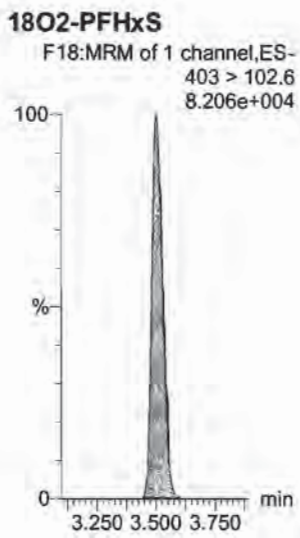


18O2-PFHxS



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Name: 170731M2_4, Date: 01-Aug-2017, Time: 01:01:18, ID: ST170731M2-3 PFC CS0 17G3109, Description: PFC CS0 17G3109

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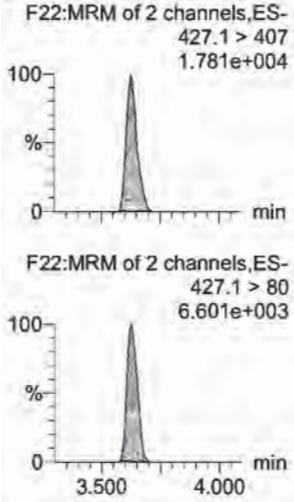

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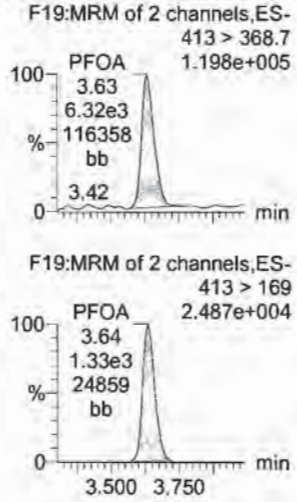

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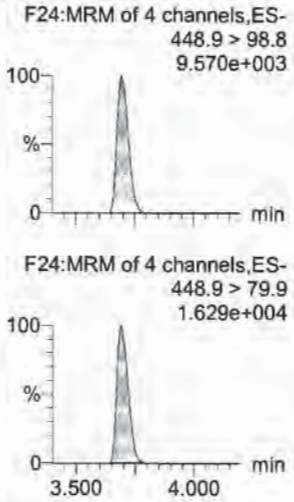

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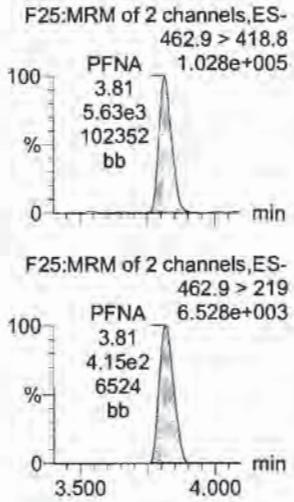

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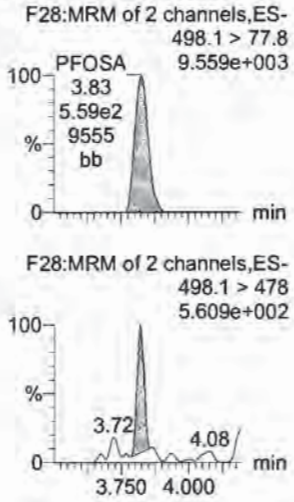

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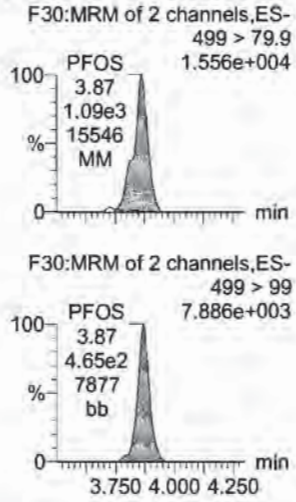
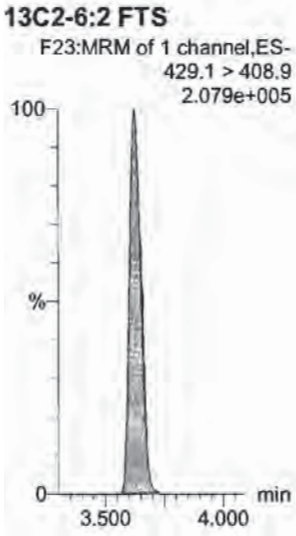


13C2-6:2 FTS



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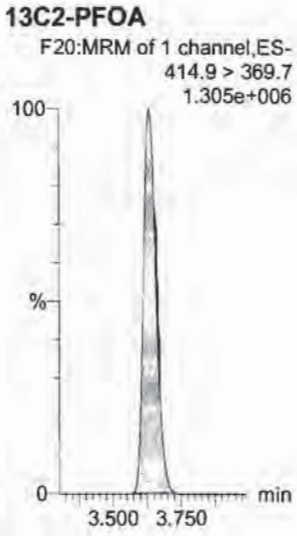

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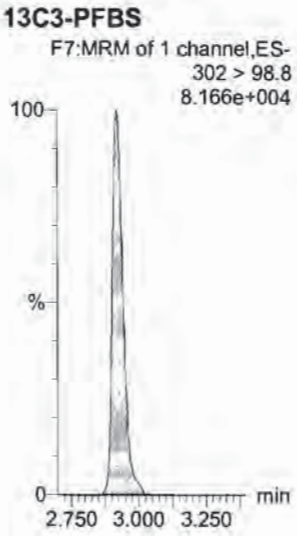

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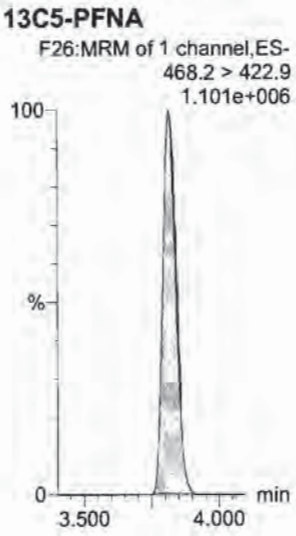

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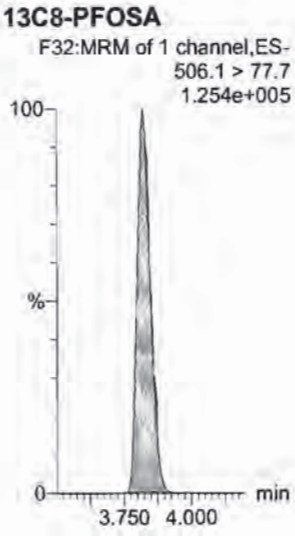

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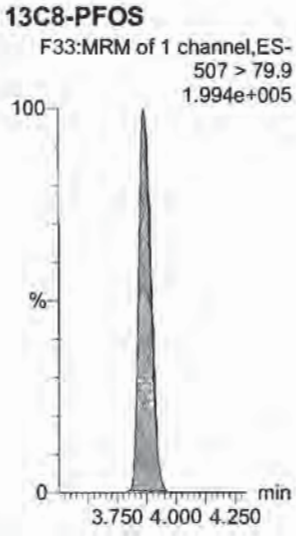

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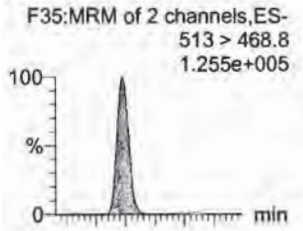
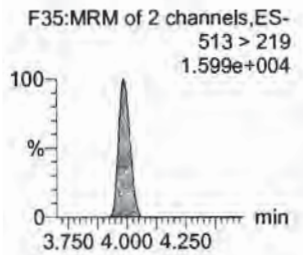
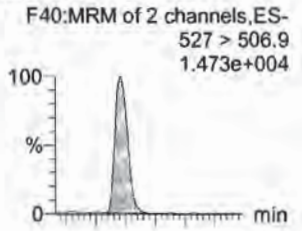
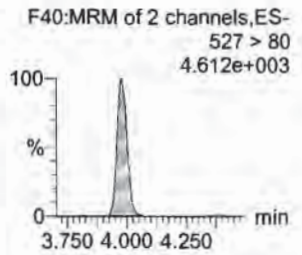
PFDA





8:2 FTS





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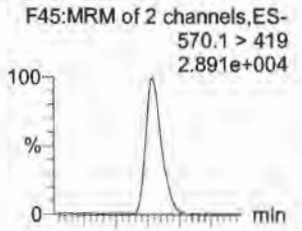

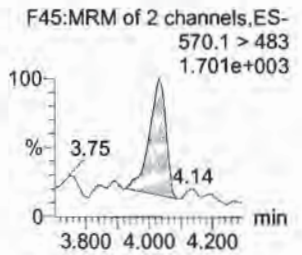

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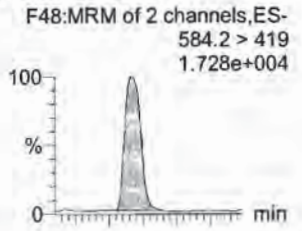

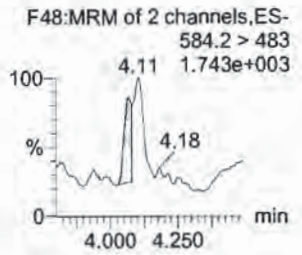

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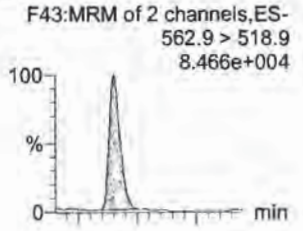

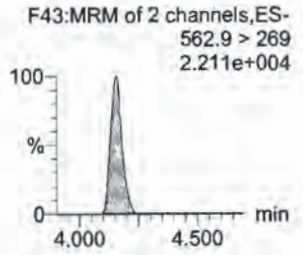

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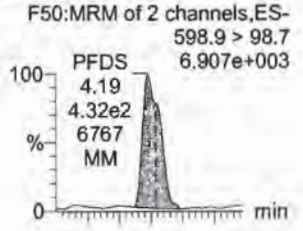

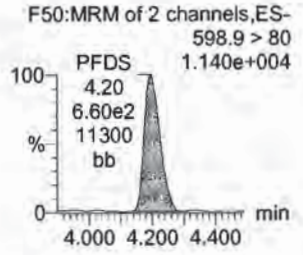

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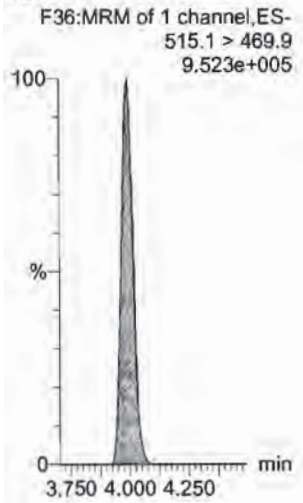
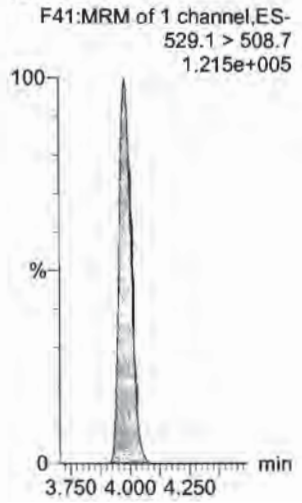


13C2-8:2 FTS



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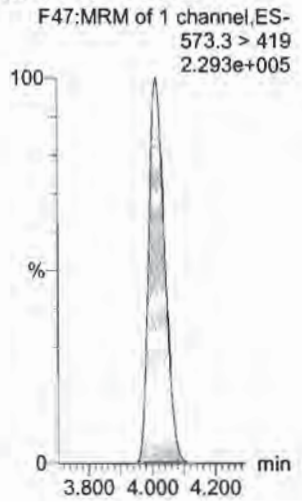
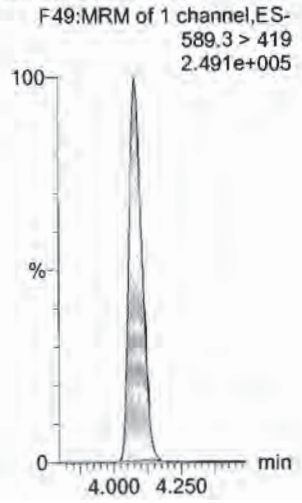


d5-N-EtFOSAA



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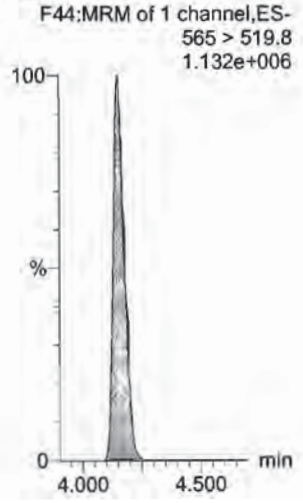

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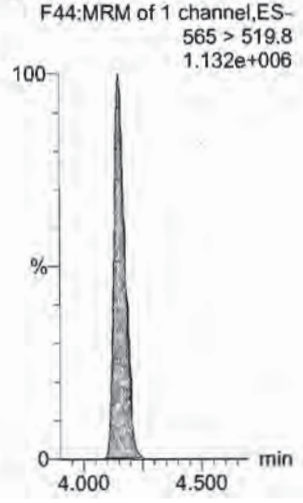

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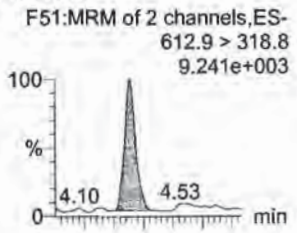

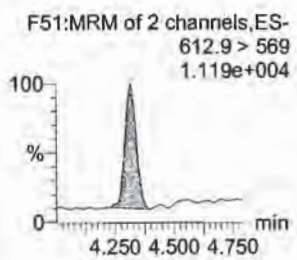

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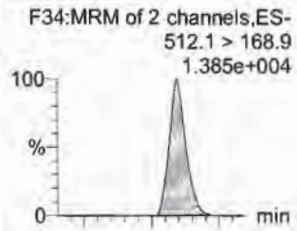

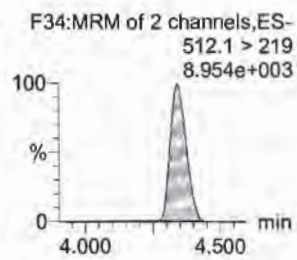

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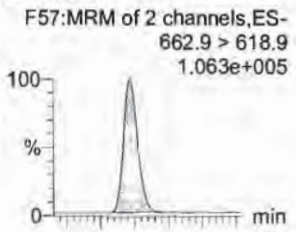

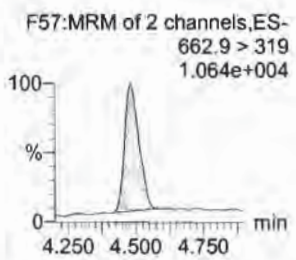

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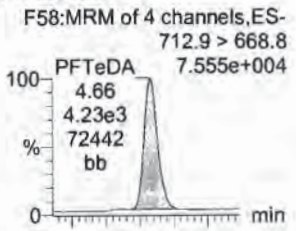

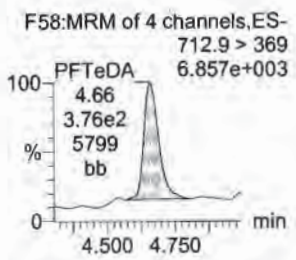

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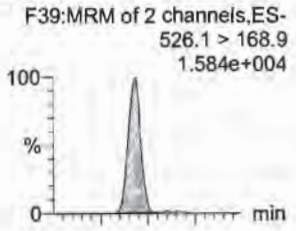

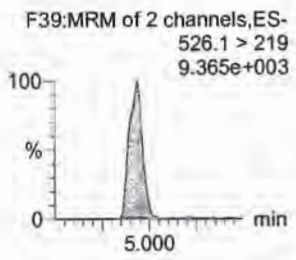

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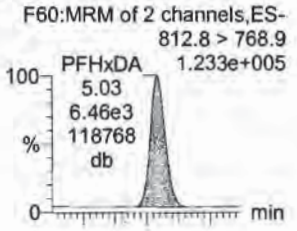

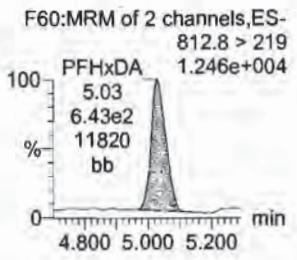

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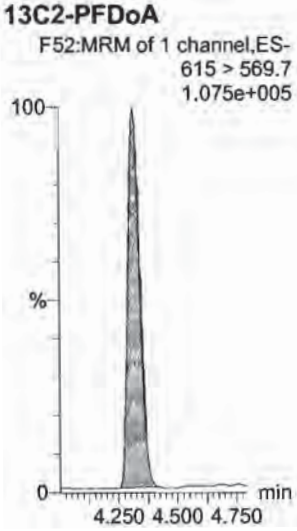
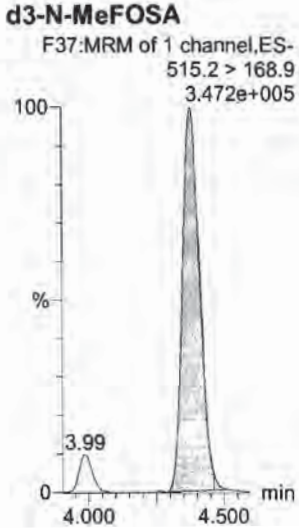


d3-N-MeFOSA



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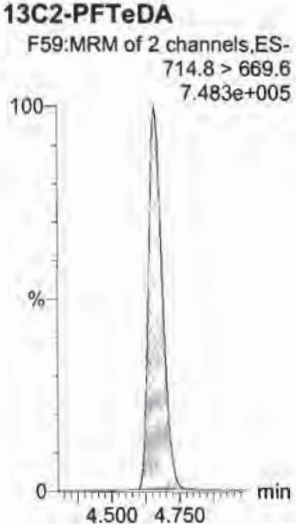

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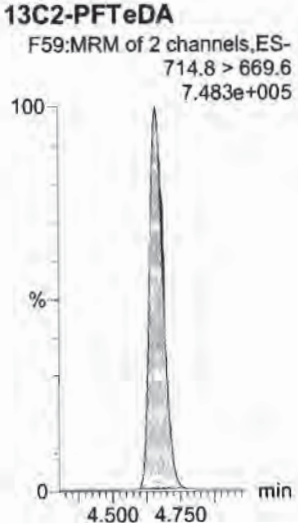

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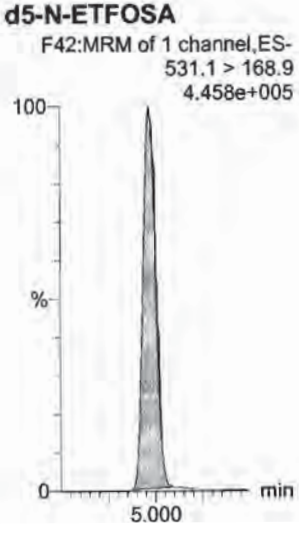

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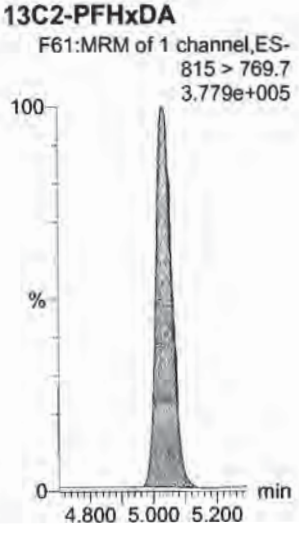

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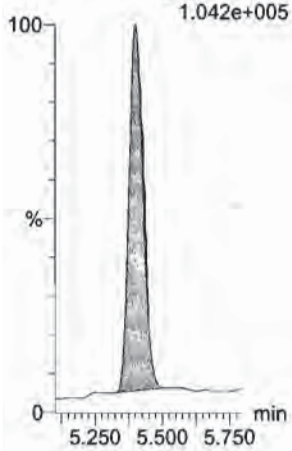
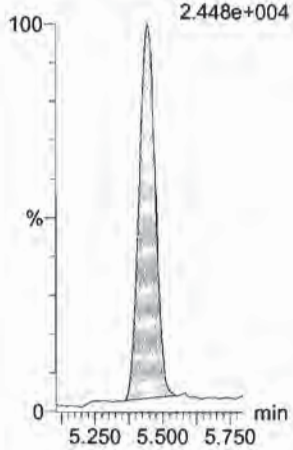
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_4, Date: 01-Aug-2017, Time: 01:01:18, ID: ST170731M2-3 PFC CS0 17G3109, Description: PFC CS0 17G3109

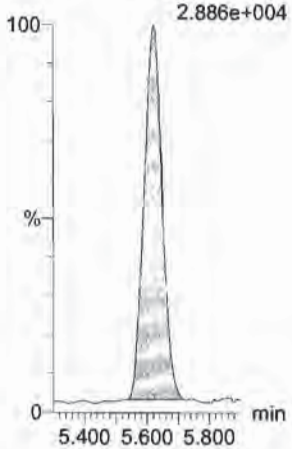
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.042e+005



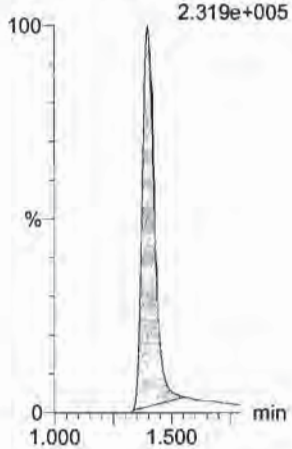
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.448e+004



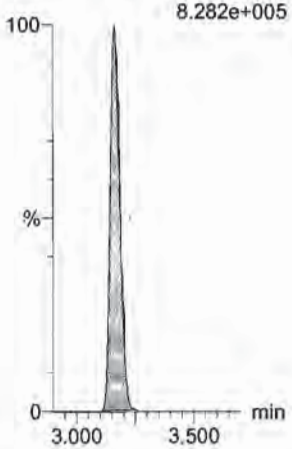
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.886e+004



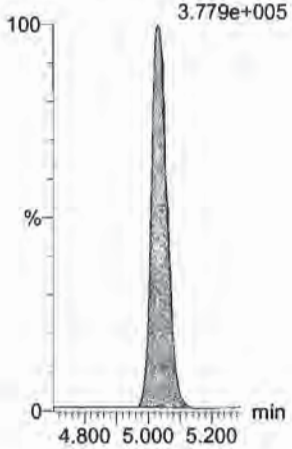
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.319e+005



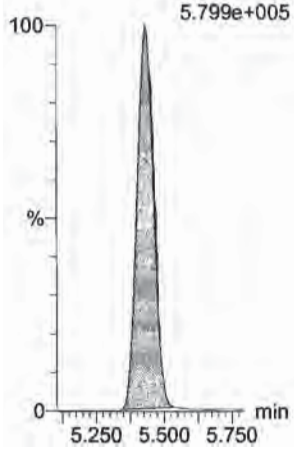
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.282e+005



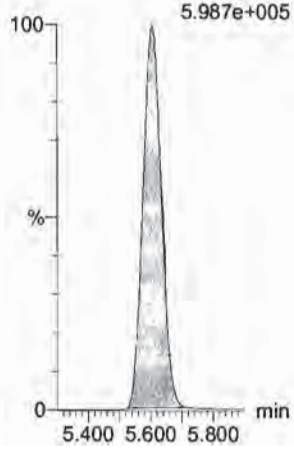
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.779e+005



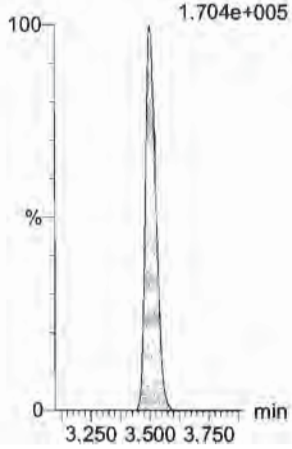
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.799e+005



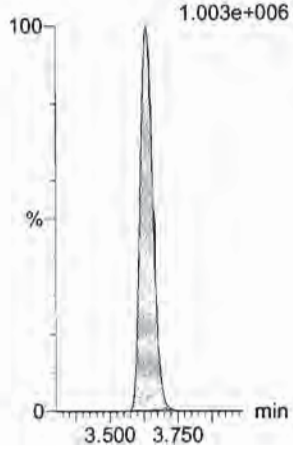
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.987e+005



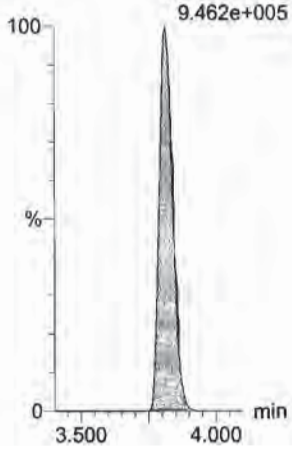
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.704e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.003e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
9.462e+005



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Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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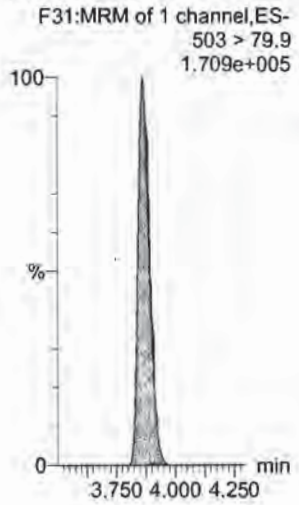
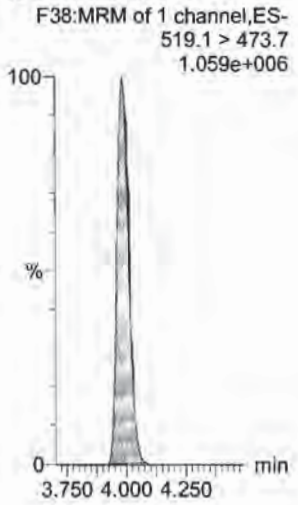
Name: 170731M2_4, Date: 01-Aug-2017, Time: 01:01:18, ID: ST170731M2-3 PFC CS0 17G3109, Description: PFC CS0 17G3109

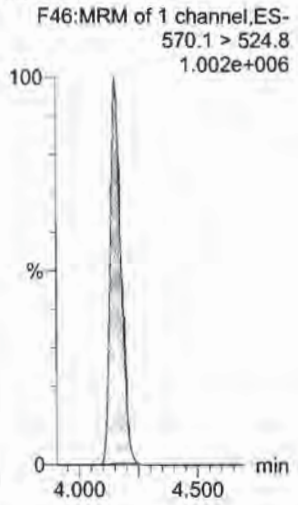
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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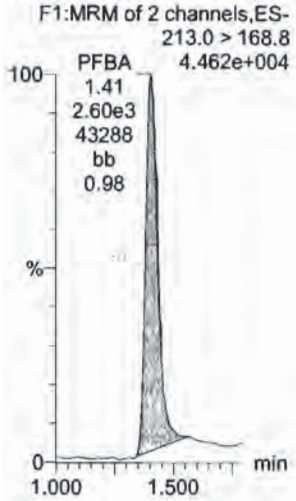
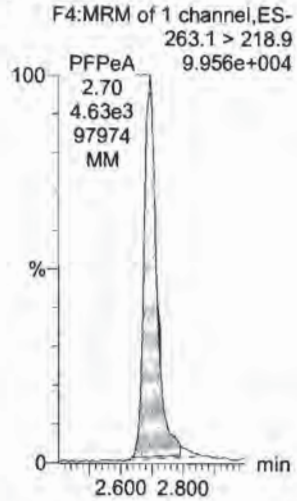
Name: 170731M2_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

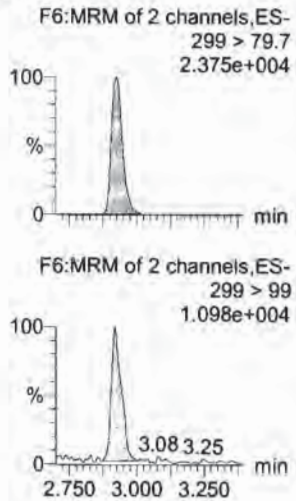
PFBA



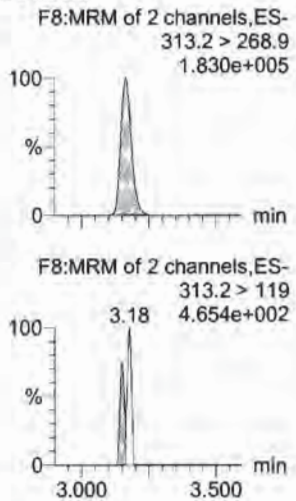
PFPeA



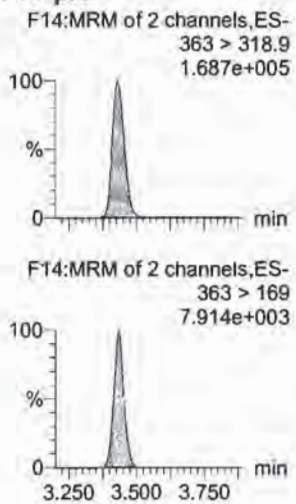
PFBS



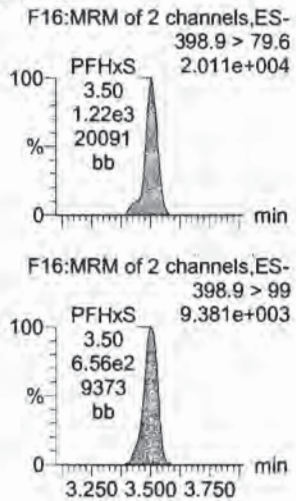
PFHxA



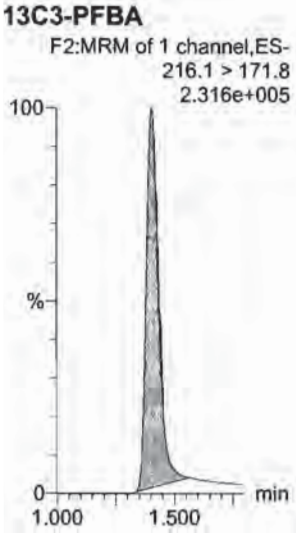
PFHpA



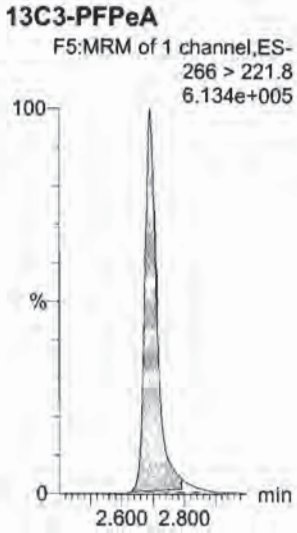
PFHxS



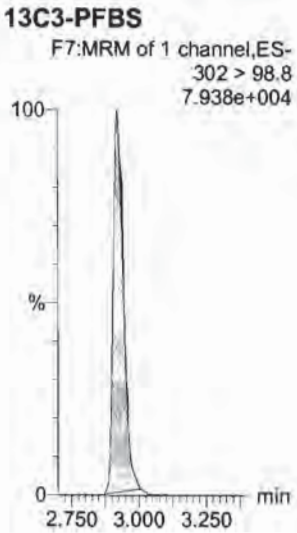
13C3-PFBA



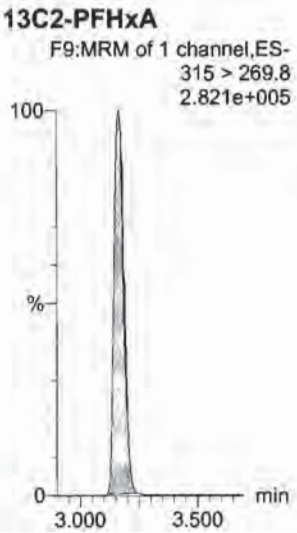
13C3-PFPeA



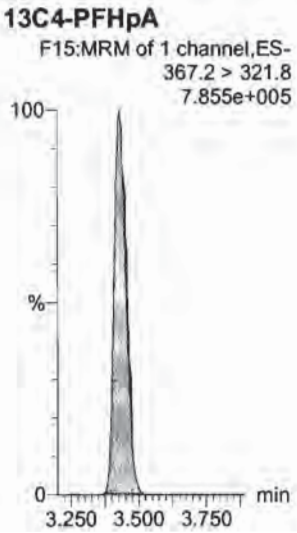
13C3-PFBS



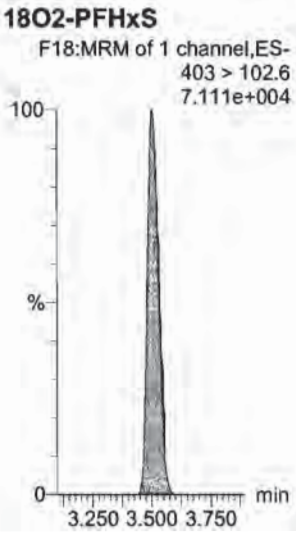
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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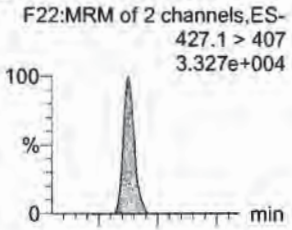
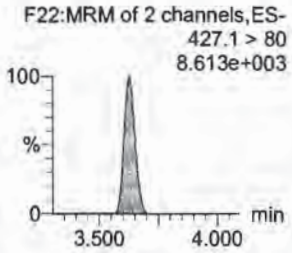
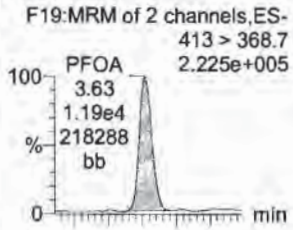
Name: 170731M2_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

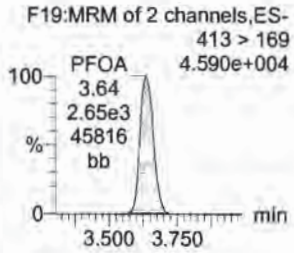
6:2 FTS



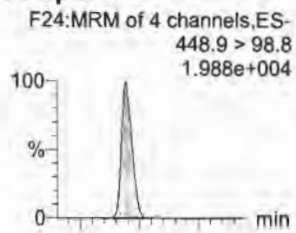


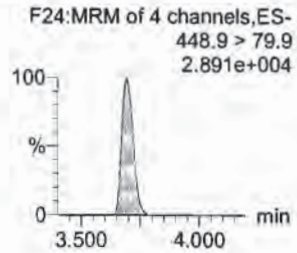
PFOA





PFHpS





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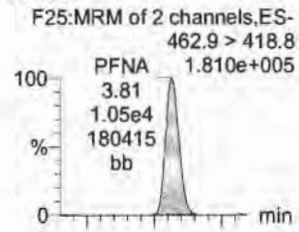
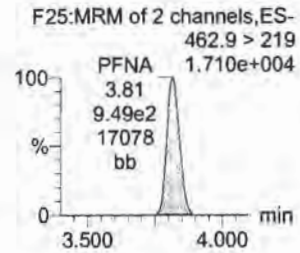
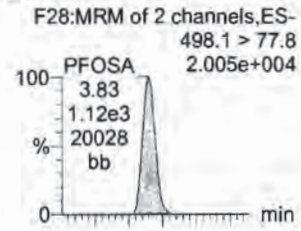
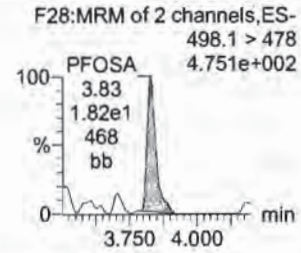


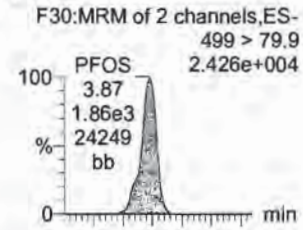


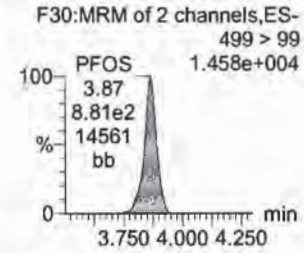
PFOSA



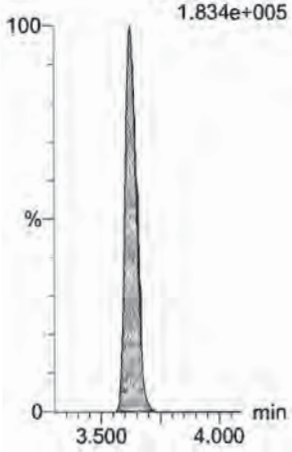


PFOS

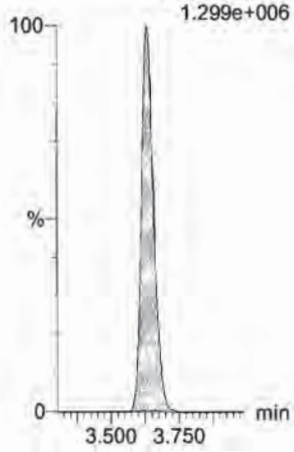




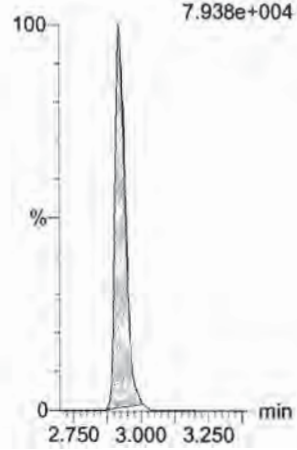
13C2-6:2 FTS



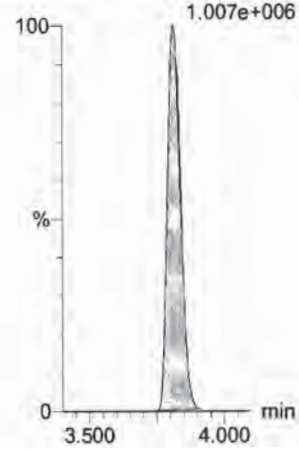
13C2-PFOA



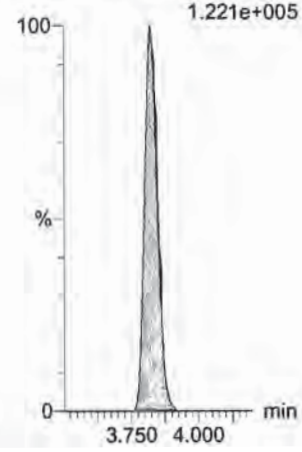
13C3-PFBS



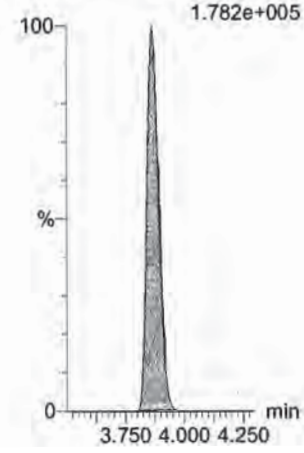
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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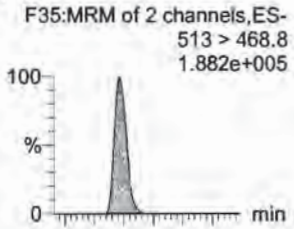
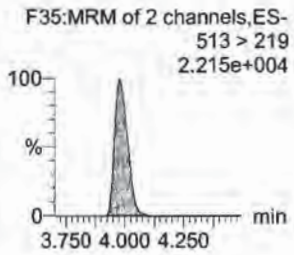
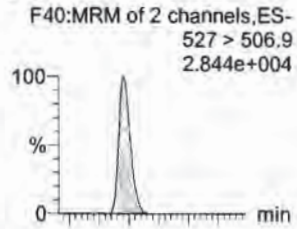
Name: 170731M2_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

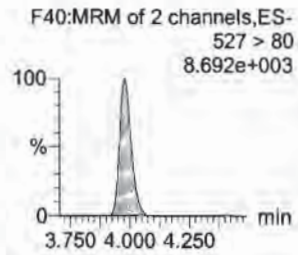
PFDA



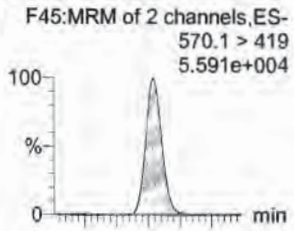


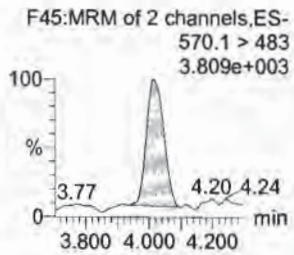
8:2 FTS



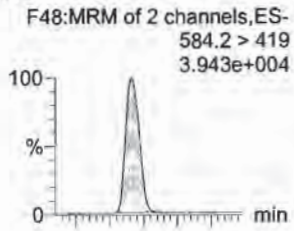


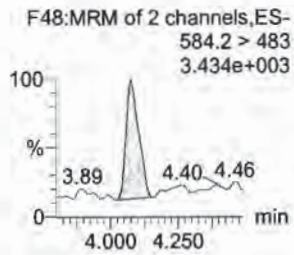
N-MeFOSAA





N-EtFOSAA





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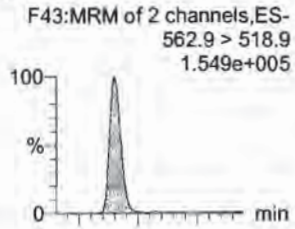

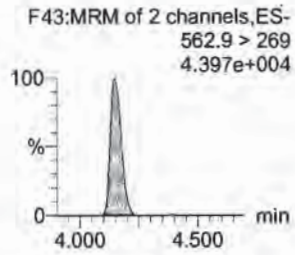

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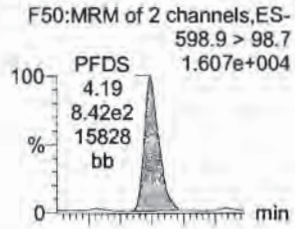
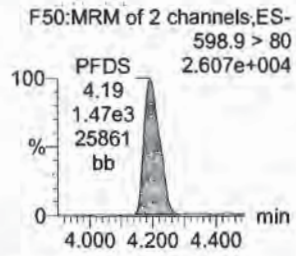
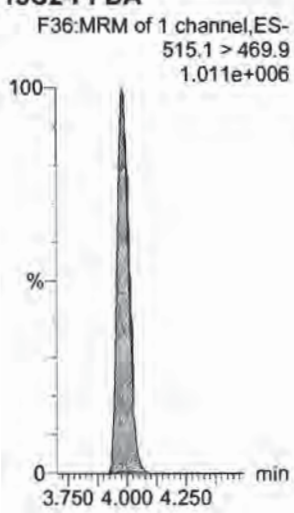
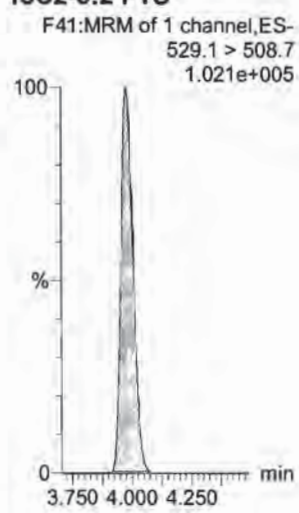




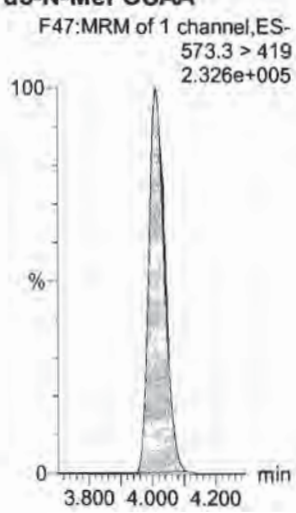
13C2-PFDA



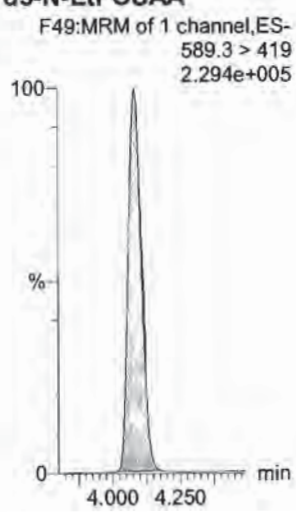
13C2-8:2 FTS



d3-N-MeFOSAA



d5-N-EtFOSAA



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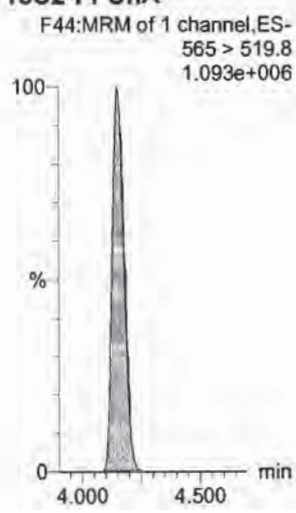
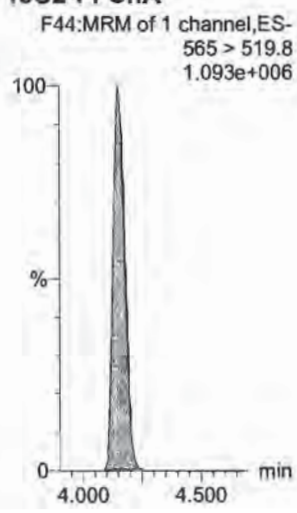


13C2-PFUnA



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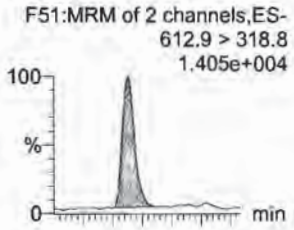
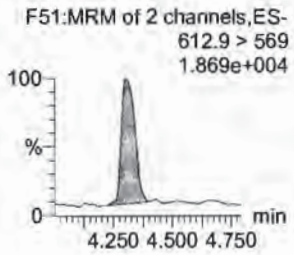
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

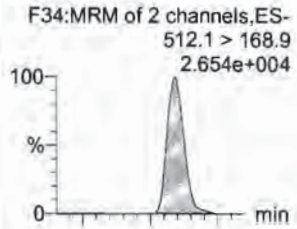
Name: 170731M2_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

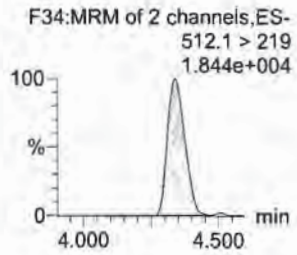
PFDoA



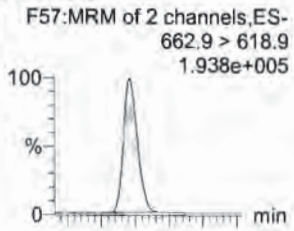


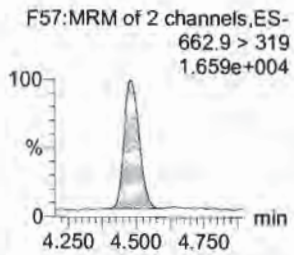
N-MeFOSA



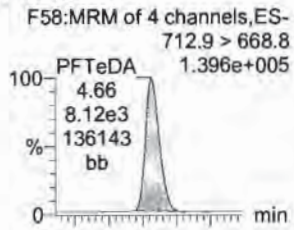


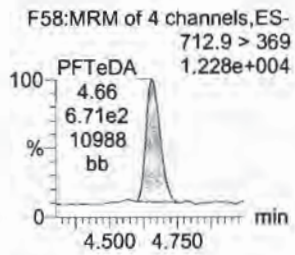
PFTrDA



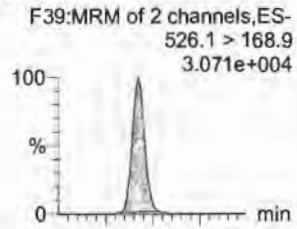


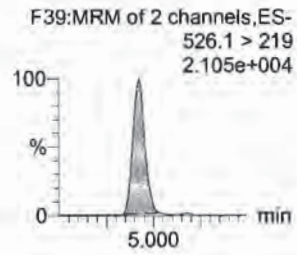
PFTeDA



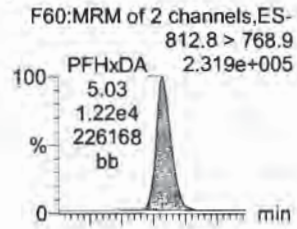


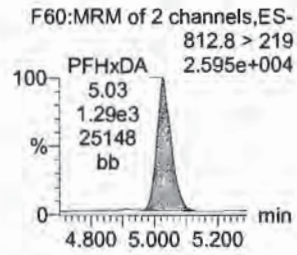
N-EtFOSA



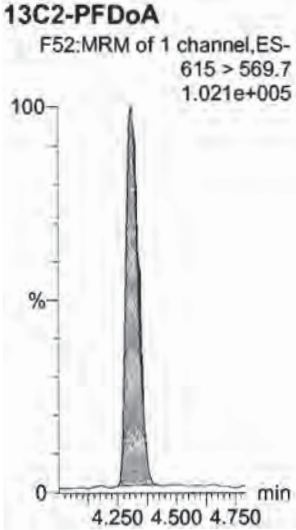


PFHxDA

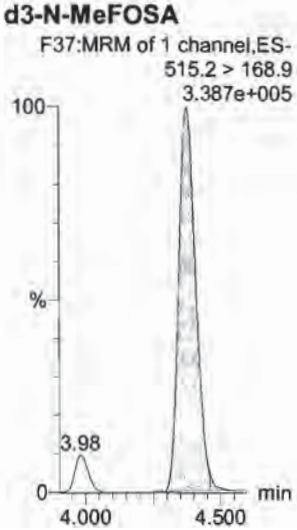




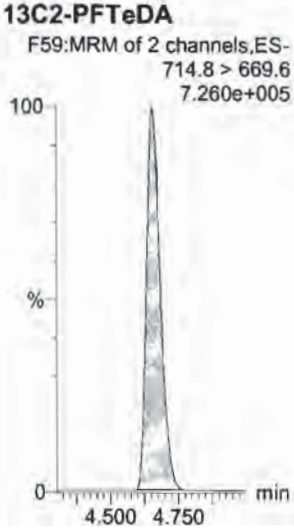
13C2-PFDoA



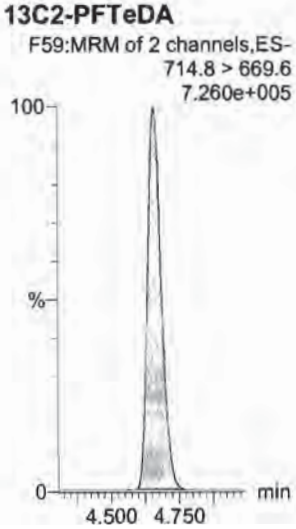
d3-N-MeFOSA



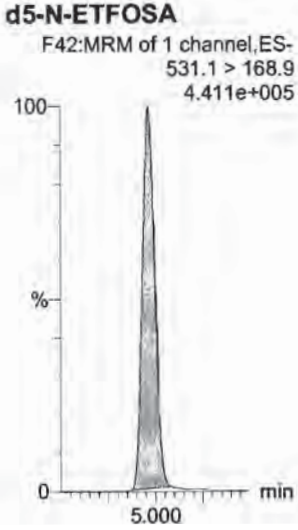
13C2-PFTeDA



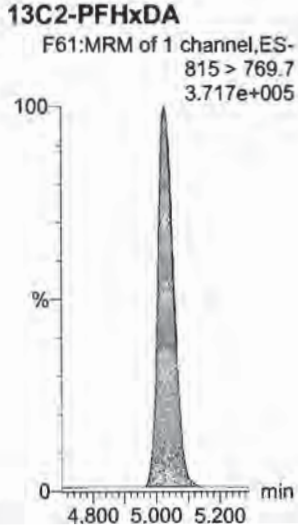
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



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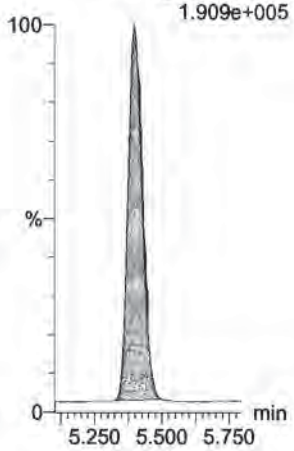
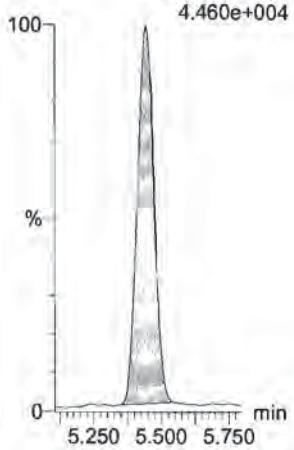
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

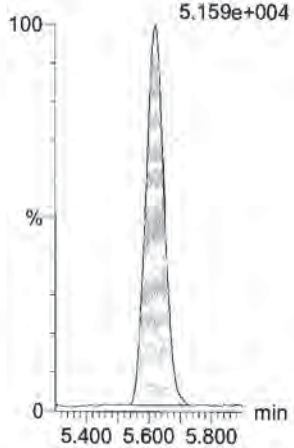
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.909e+005



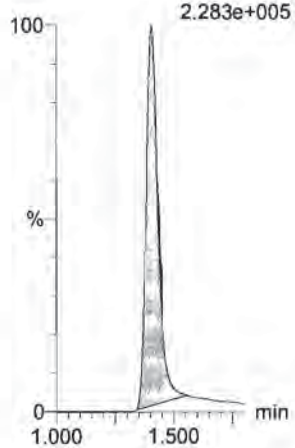
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
4.460e+004



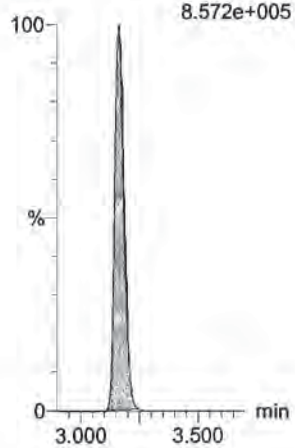
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
5.159e+004



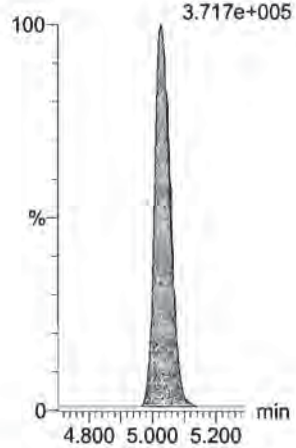
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.283e+005



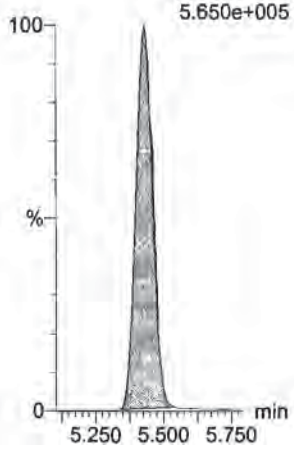
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.572e+005



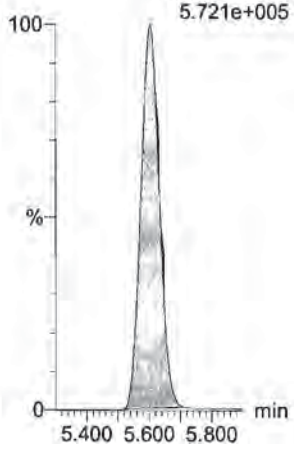
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.717e+005



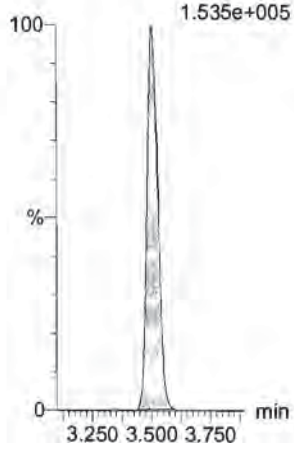
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.650e+005



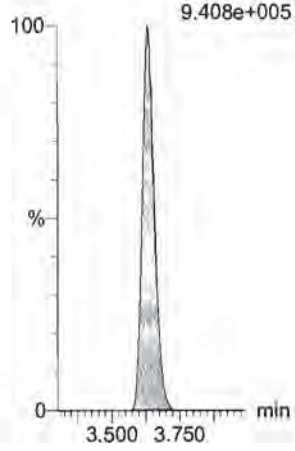
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.721e+005



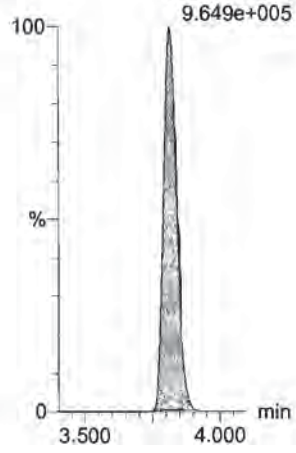
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.535e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
9.408e+005



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
9.649e+005



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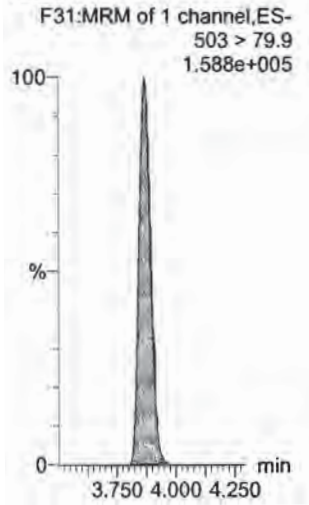
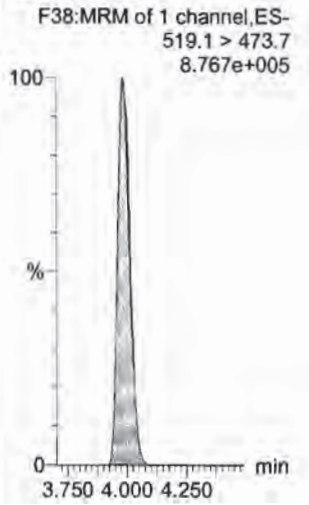
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

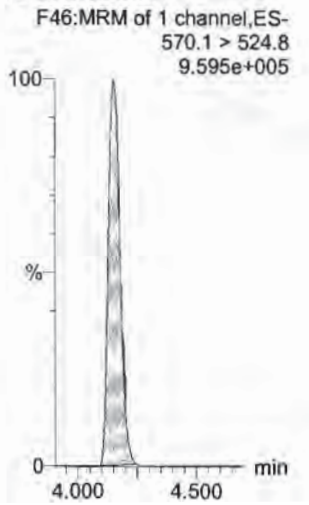
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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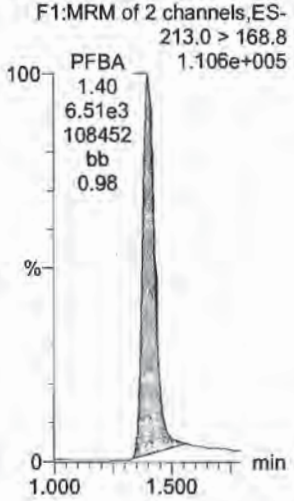
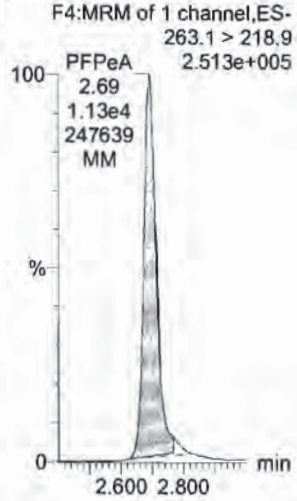
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111

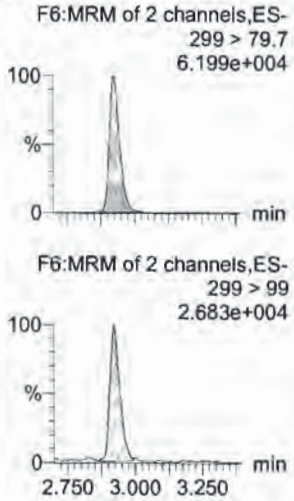
PFBA



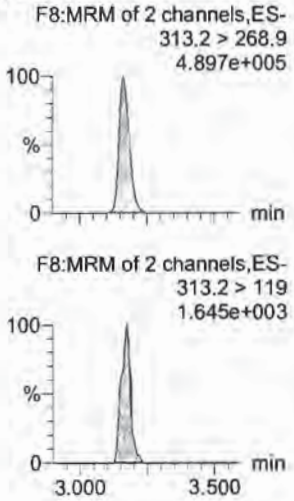
PFPeA



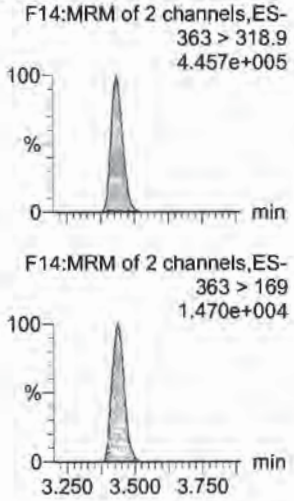
PFBS



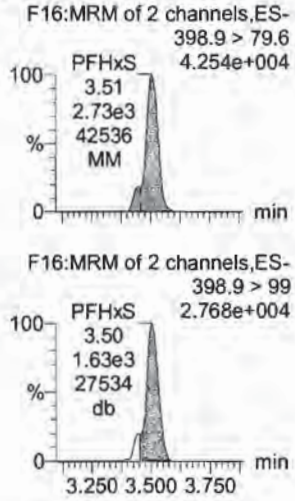
PFHxA



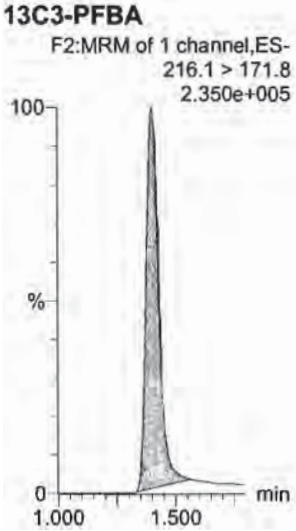
PFHpA



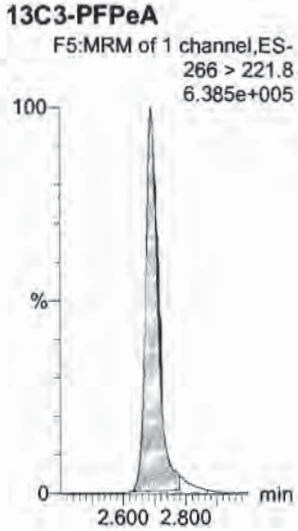
PFHxS



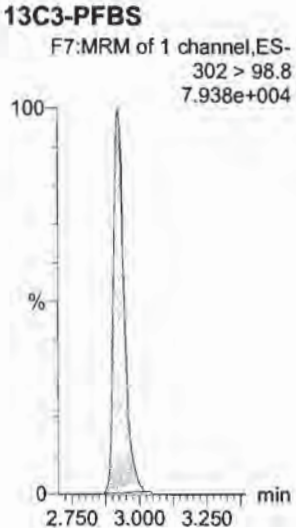
13C3-PFBA



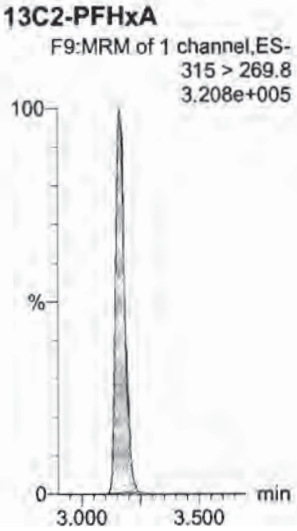
13C3-PFPeA



13C3-PFBS



13C2-PFHxA



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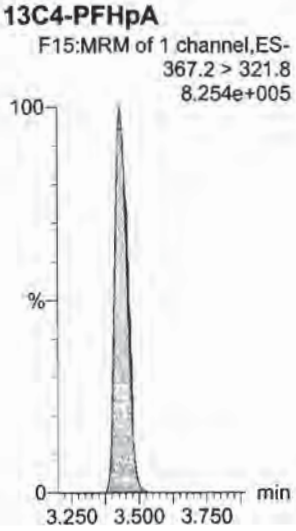
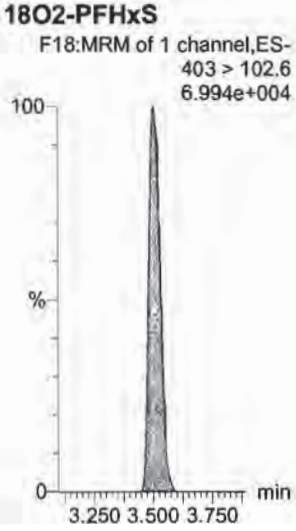


18O2-PFHxS



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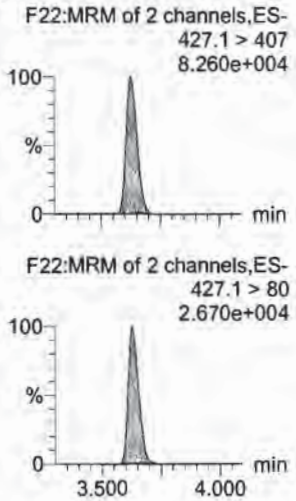
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111

6:2 FTS



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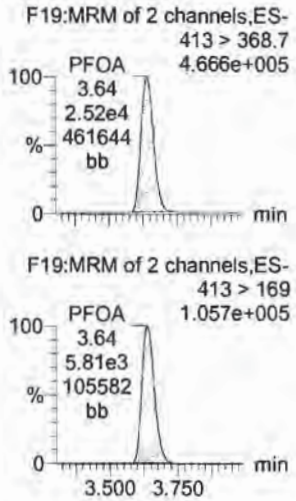
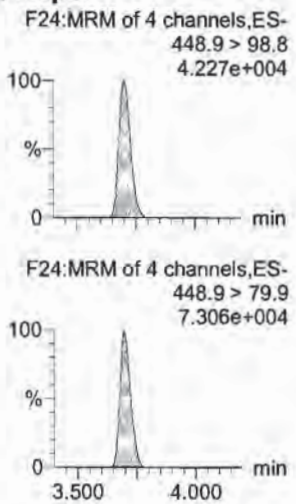
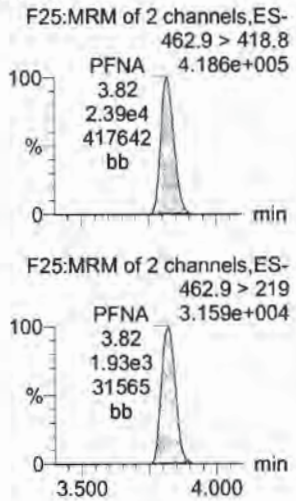


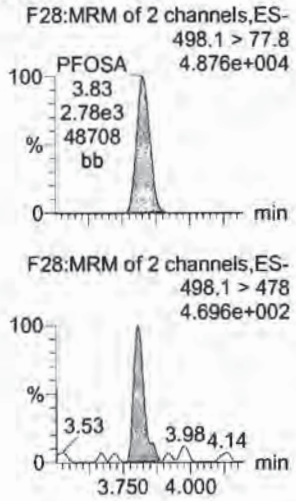
PFHpS



PFNA



PFOSA



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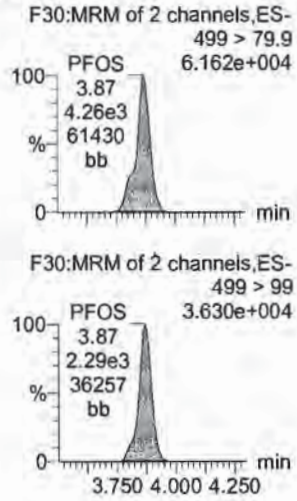
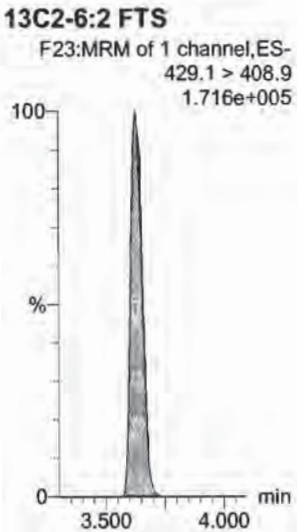
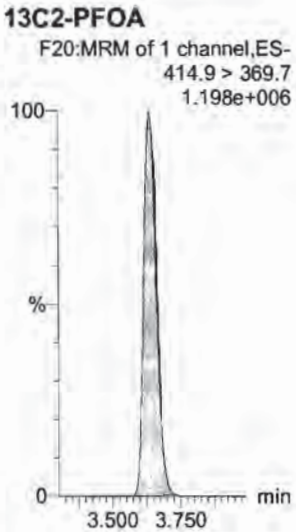


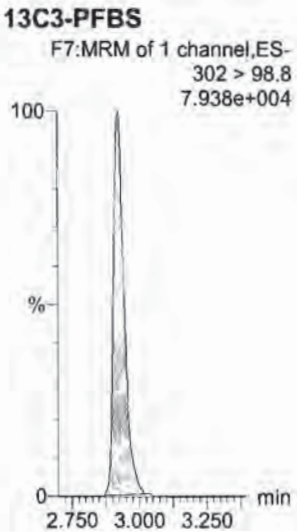
13C2-6:2 FTS



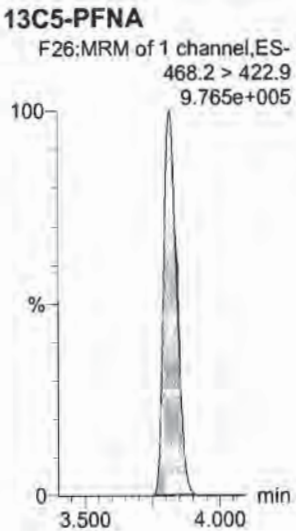
13C2-PFOA



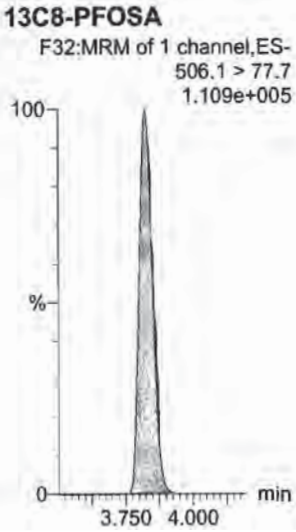
13C3-PFBS



13C5-PFNA



13C8-PFOSA



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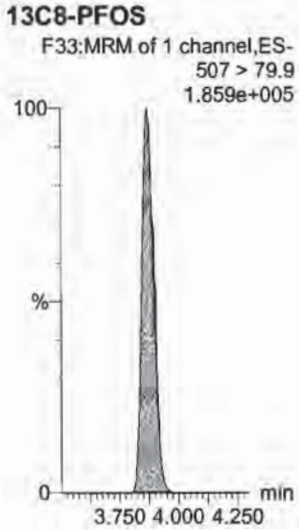

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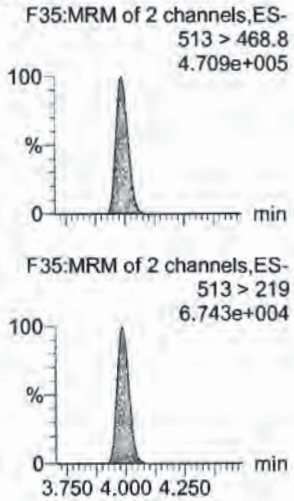
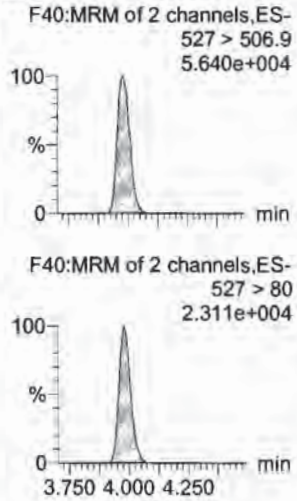
Name: 170731M2_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111

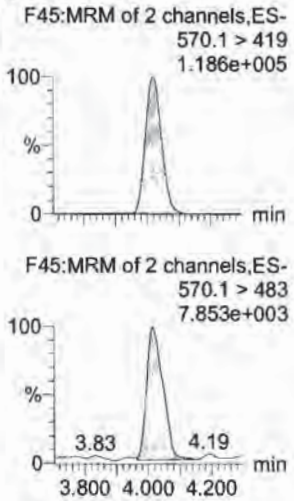
PFDA



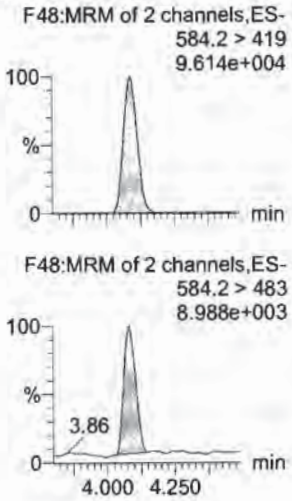
8:2 FTS



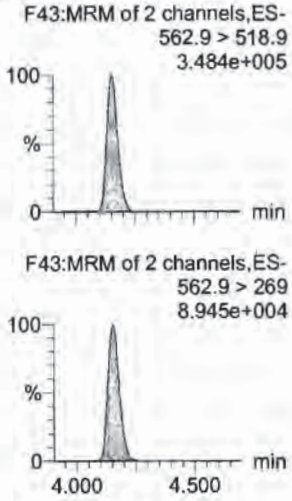
N-MeFOSAA



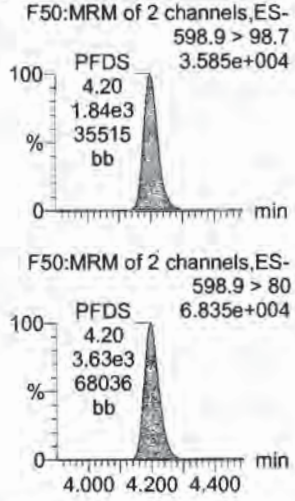
N-EtFOSAA



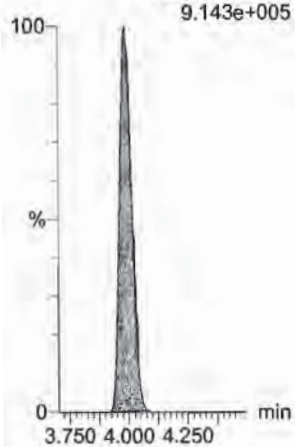
PFUnA



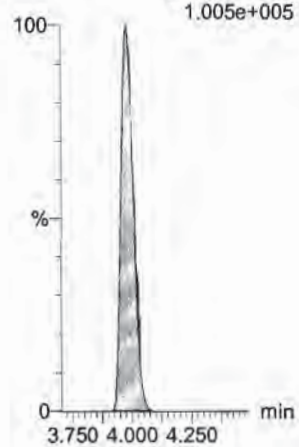
PFDS



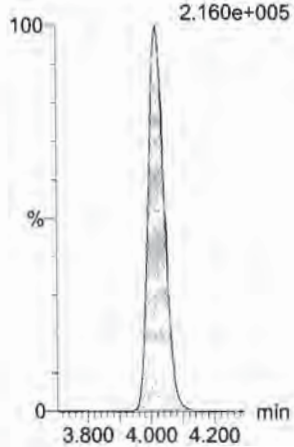
13C2-PFDA



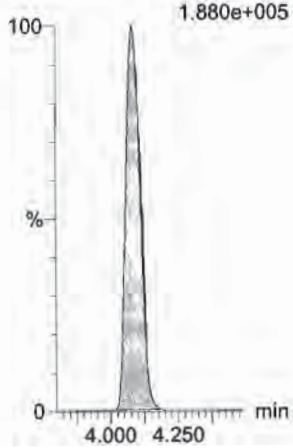
13C2-8:2 FTS



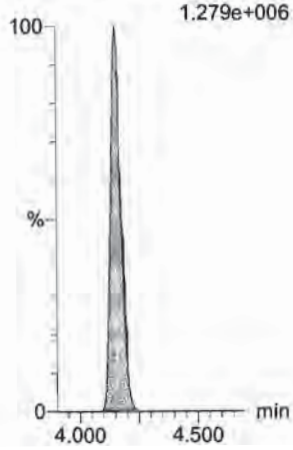
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFUnA



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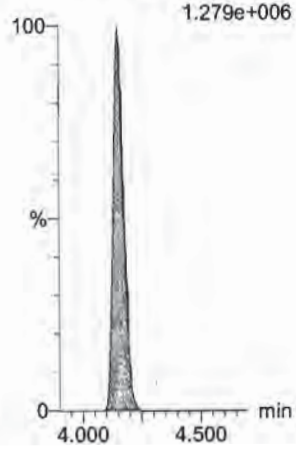

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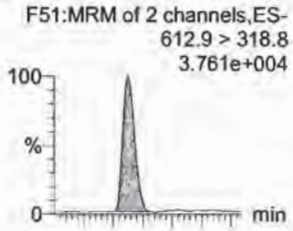
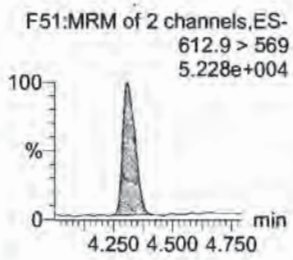
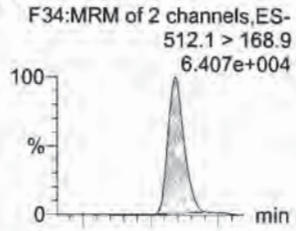
Name: 170731M2_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111

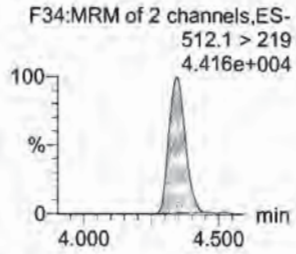
PFDoA



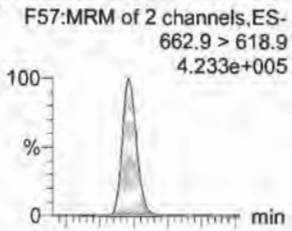


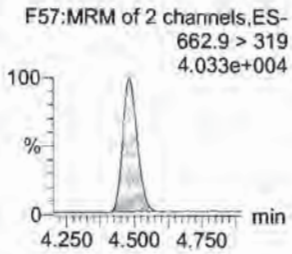
N-MeFOSA



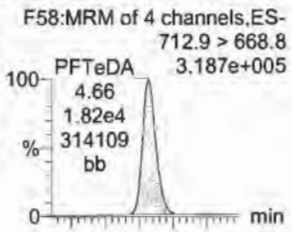


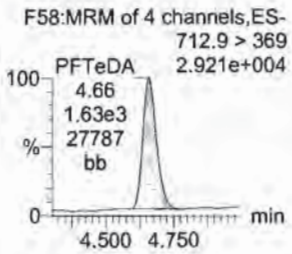
PFTrDA





PFTeDA





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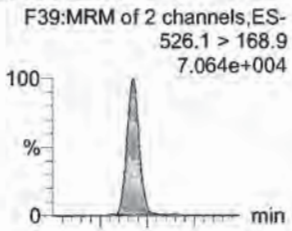
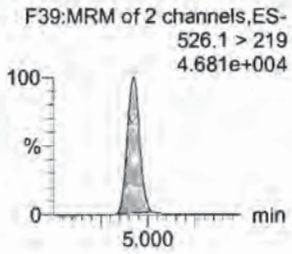
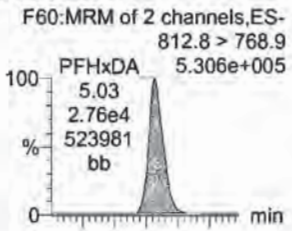
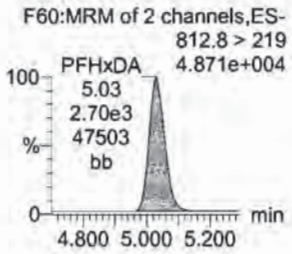


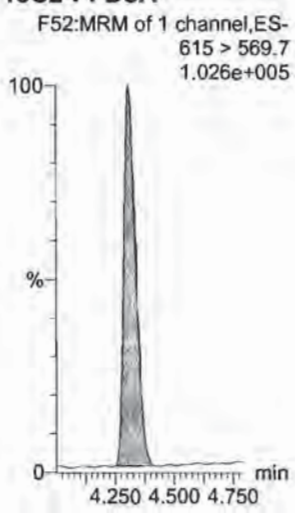


PFHxDA

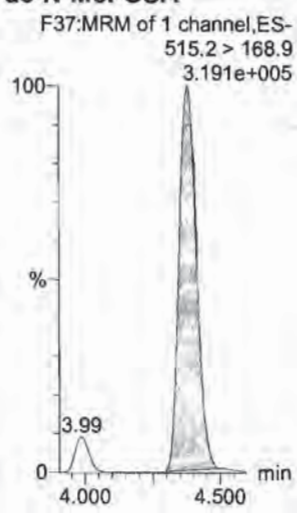




13C2-PFDoA



d3-N-MeFOSA



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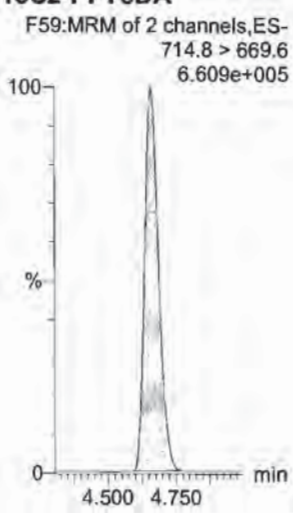

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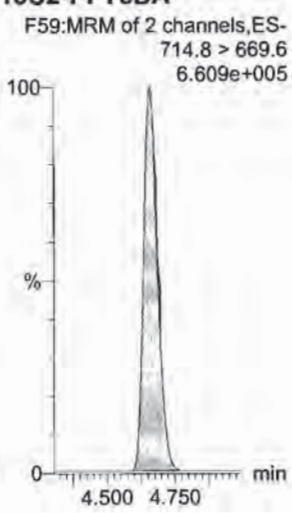
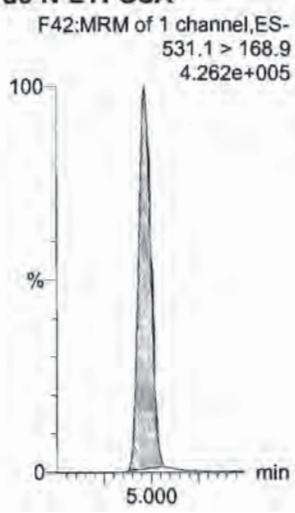
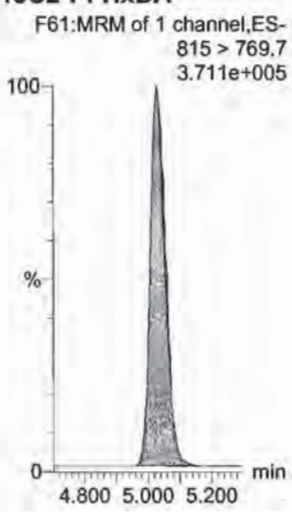


d5-N-ETFOSA



13C2-PFHxDA



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Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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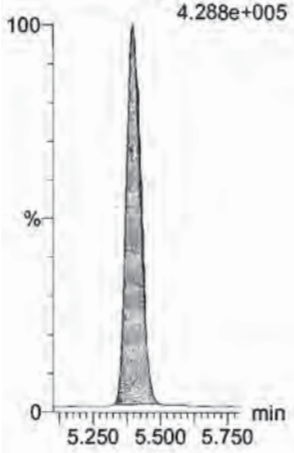
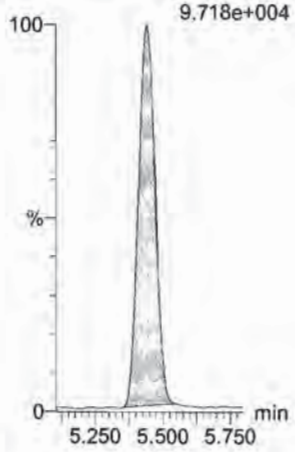
Name: 170731M2_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111

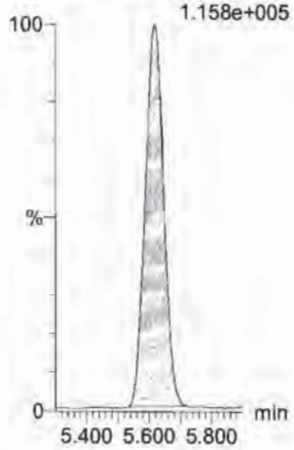
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
4.288e+005



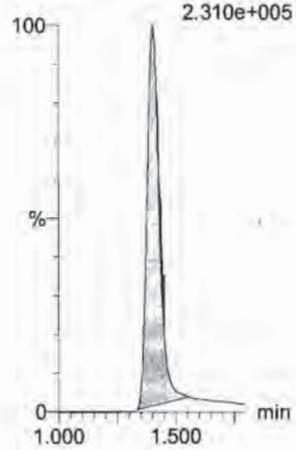
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
9.718e+004



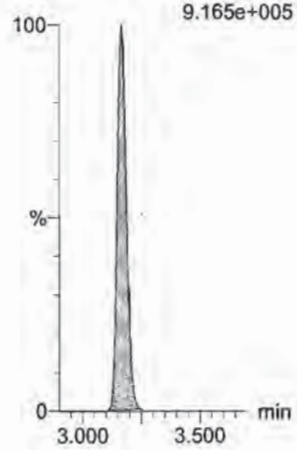
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.158e+005



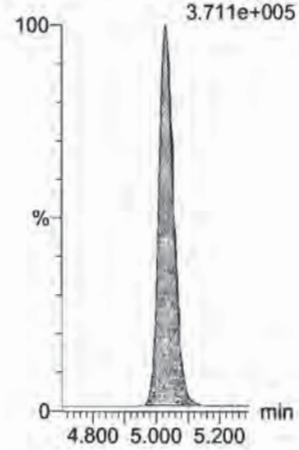
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.310e+005



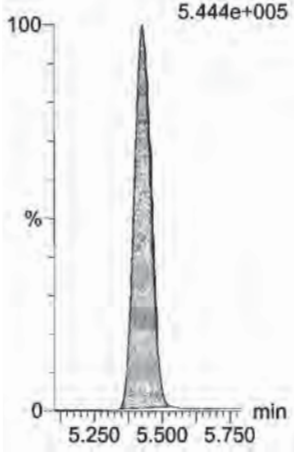
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
9.165e+005



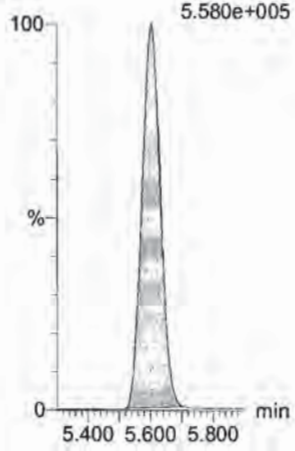
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.711e+005



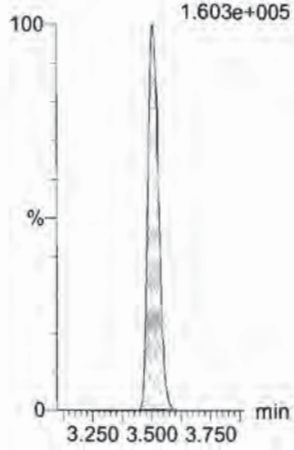
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.444e+005



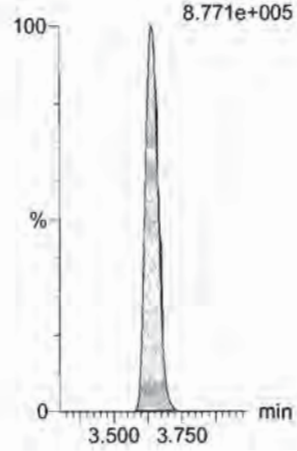
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.580e+005



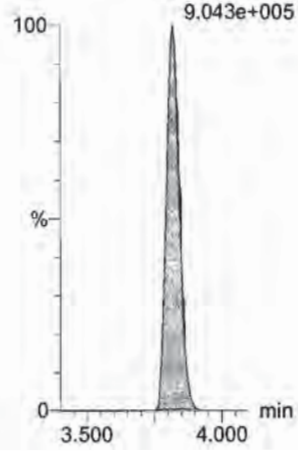
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.603e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
8.771e+005



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
9.043e+005



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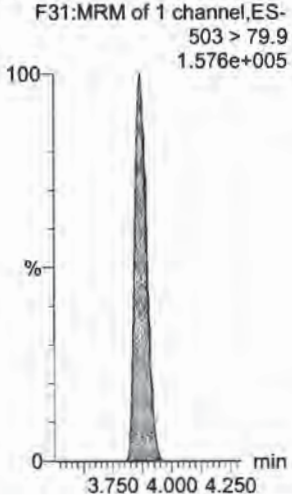
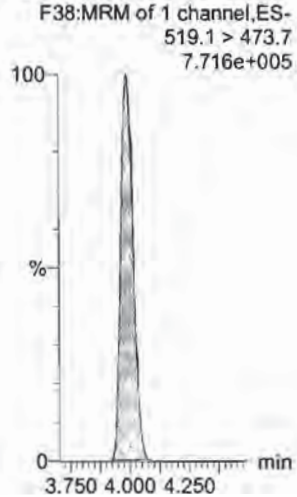
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111

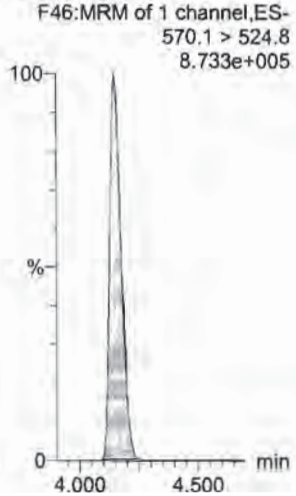
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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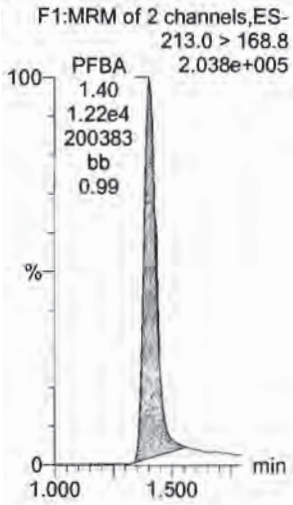
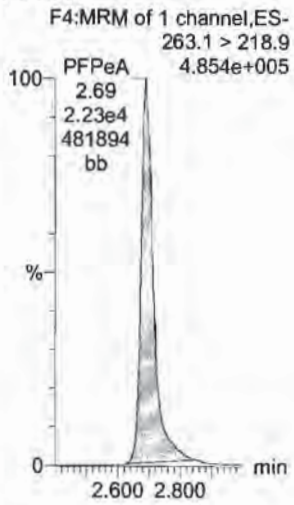
Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

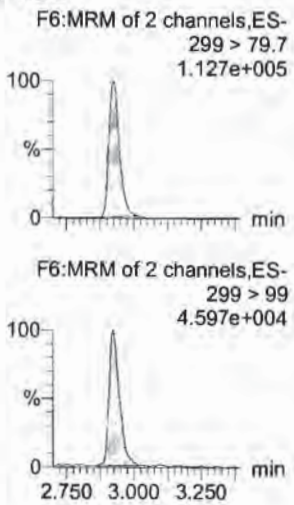
PFBA



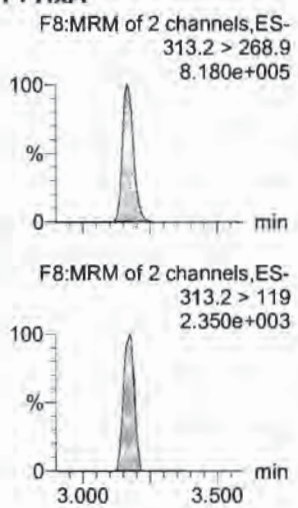
PFPeA



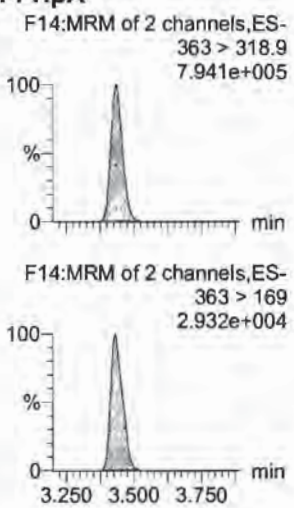
PFBS



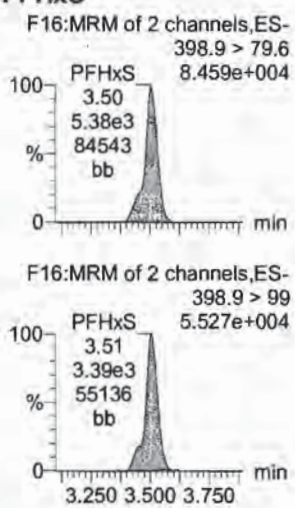
PFHxA



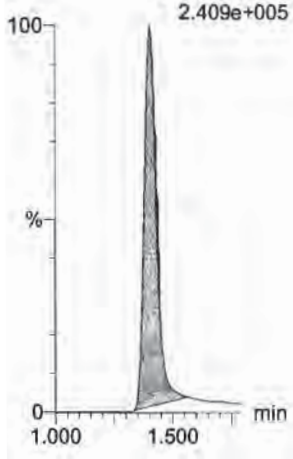
PFHpA



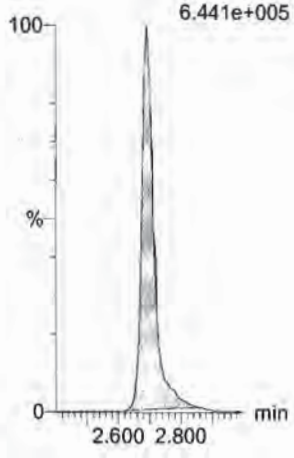
PFHxS



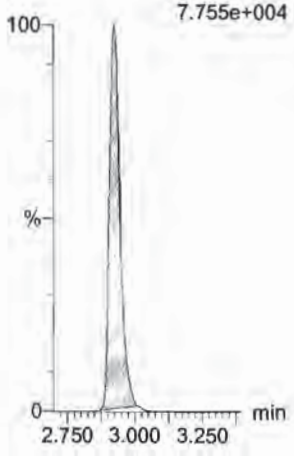
13C3-PFBA



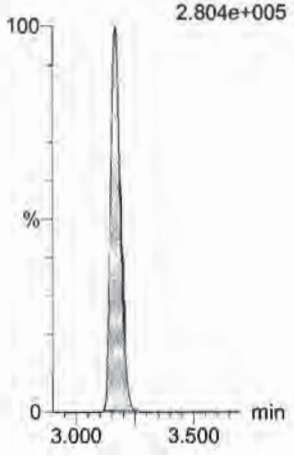
13C3-PFPeA



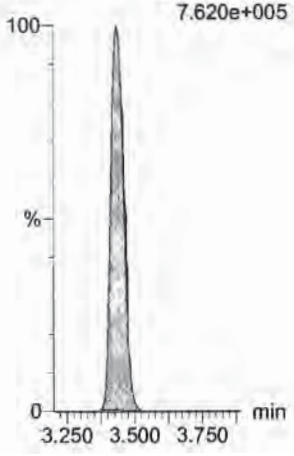
13C3-PFBS



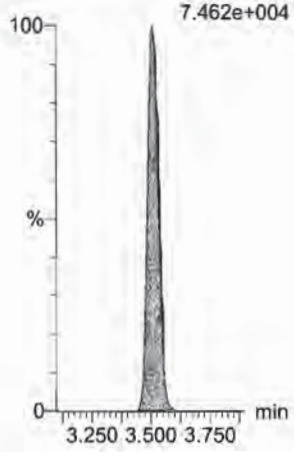
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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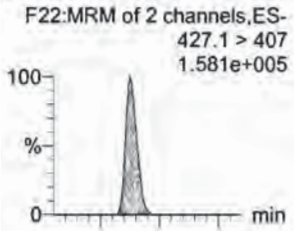
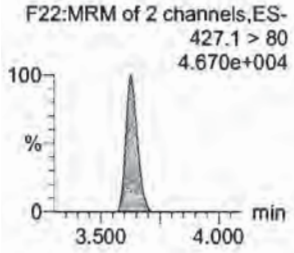
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

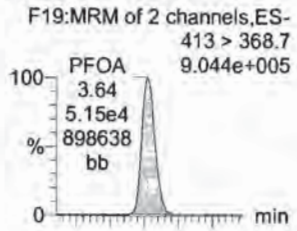
Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

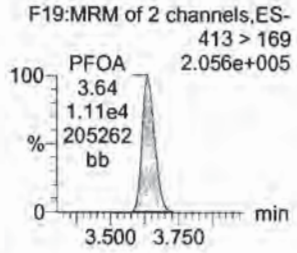
6:2 FTS



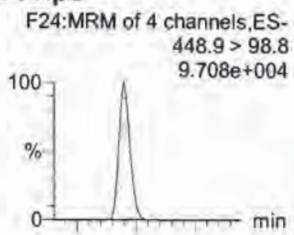


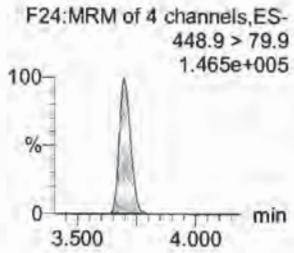
PFOA



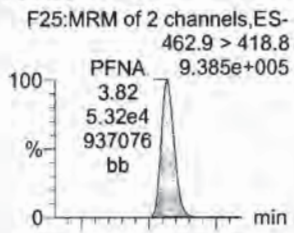


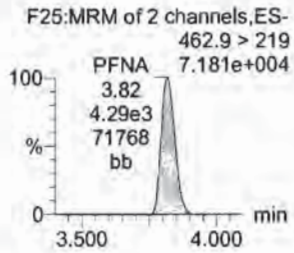
PFHpS



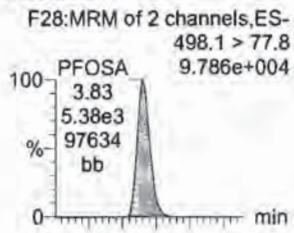


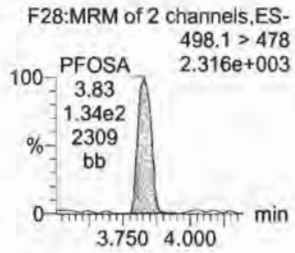
PFNA



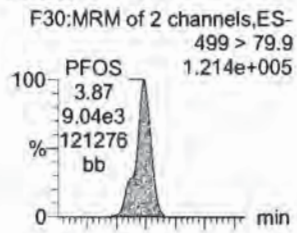


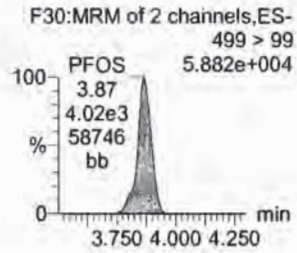
PFOSA



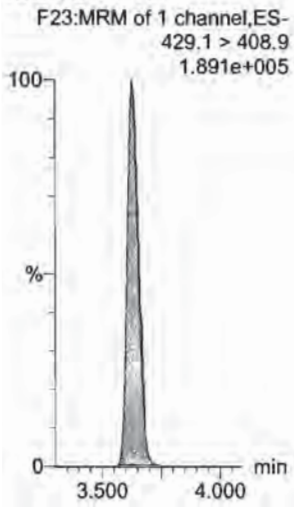


PFOS

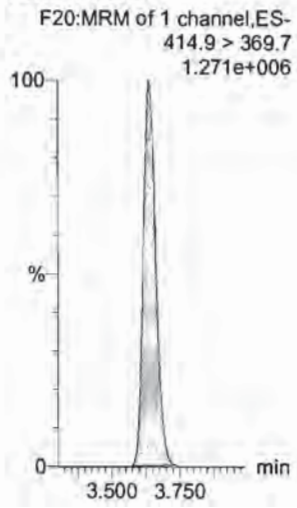




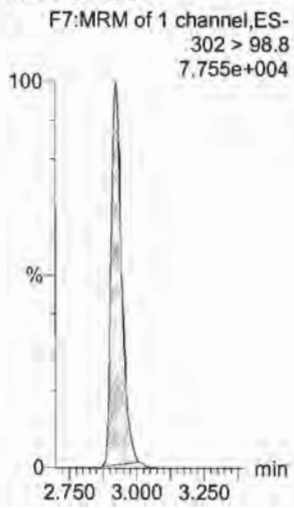
13C2-6:2 FTS



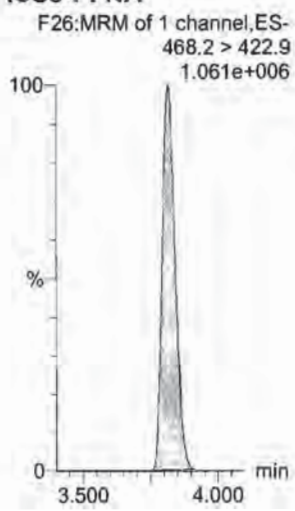
13C2-PFOA



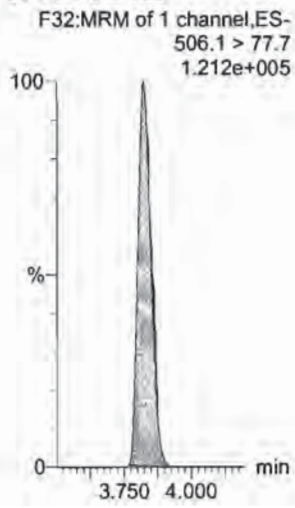
13C3-PFBS



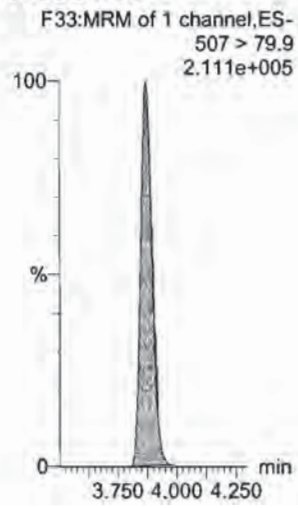
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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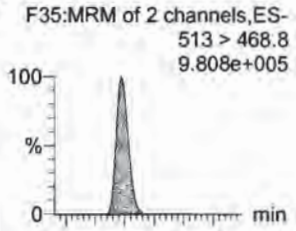
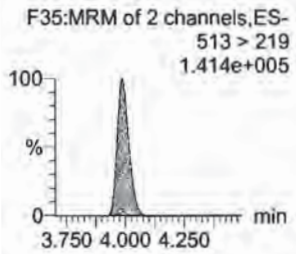
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

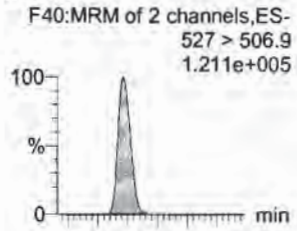
Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

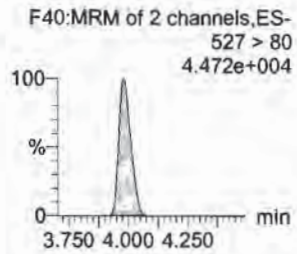
PFDA



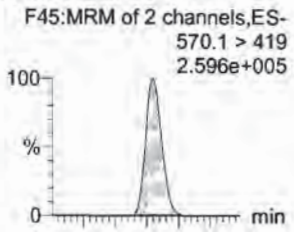


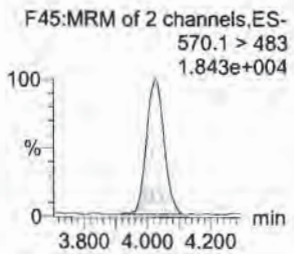
8:2 FTS



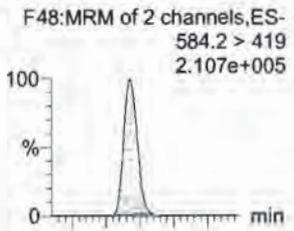


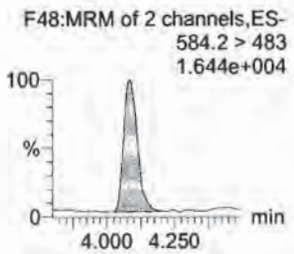
N-MeFOSAA



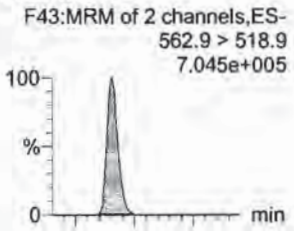


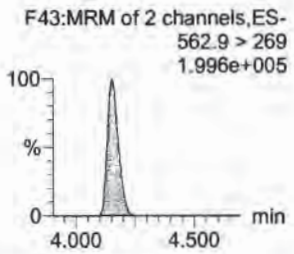
N-EtFOSAA



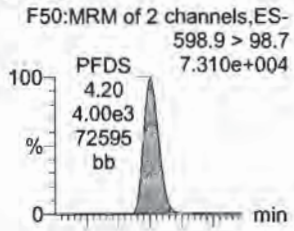


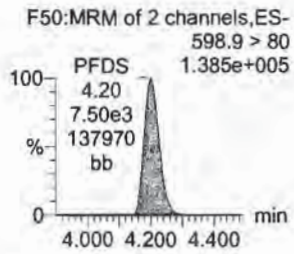
PFUnA



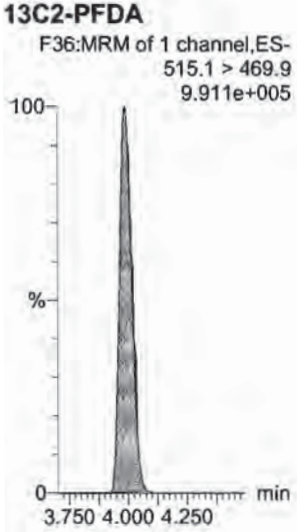


PFDS

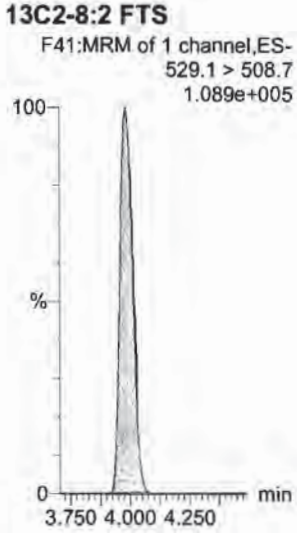




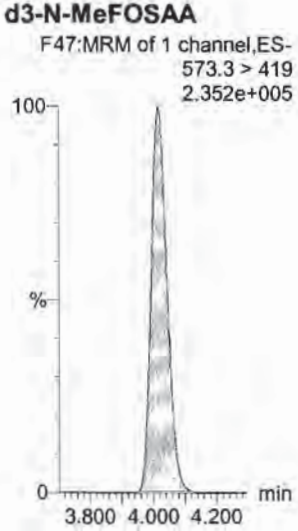
13C2-PFDA



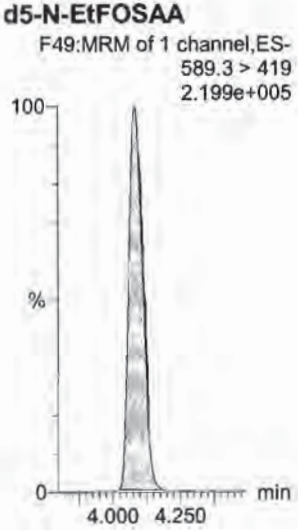
13C2-8:2 FTS



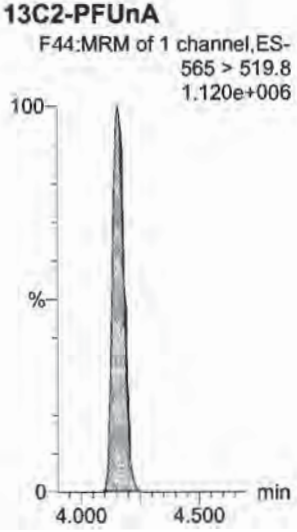
d3-N-MeFOSAA



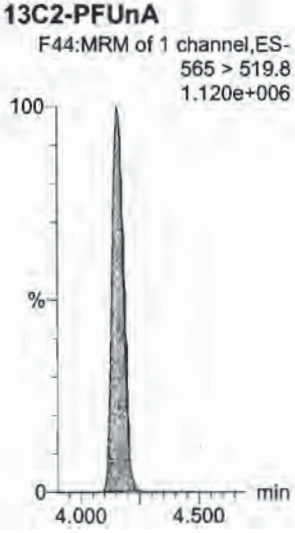
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



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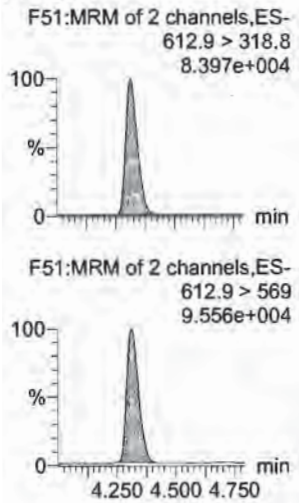
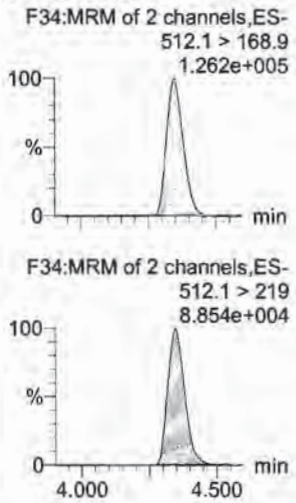
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

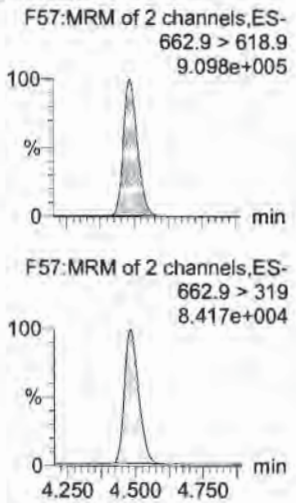
PFDoA



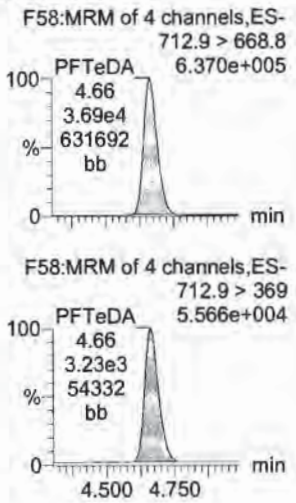
N-MeFOSA



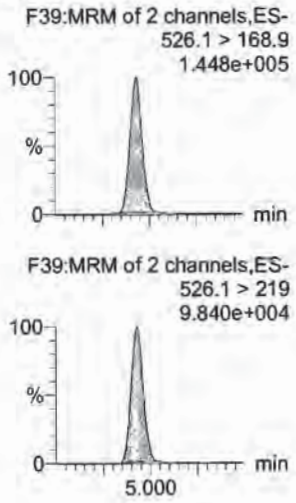
PFTrDA



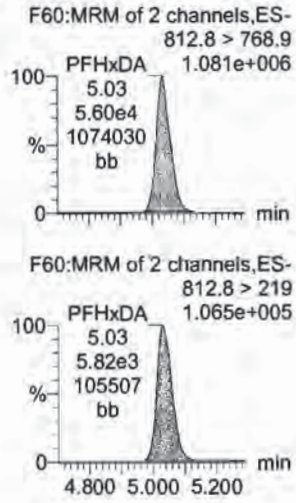
PFTeDA



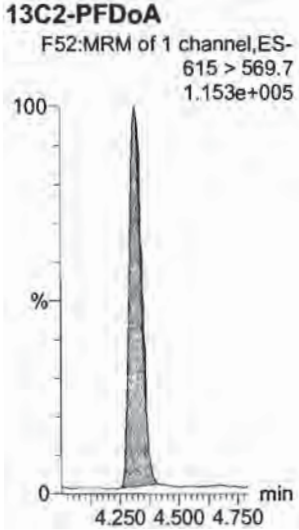
N-EtFOSA



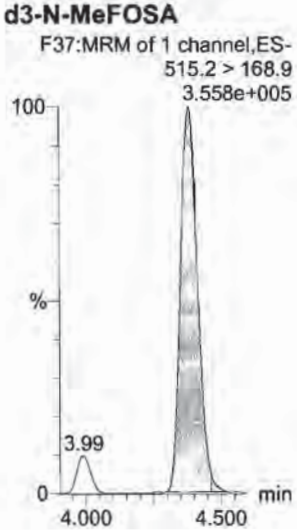
PFHxDA



13C2-PFDoA



d3-N-MeFOSA



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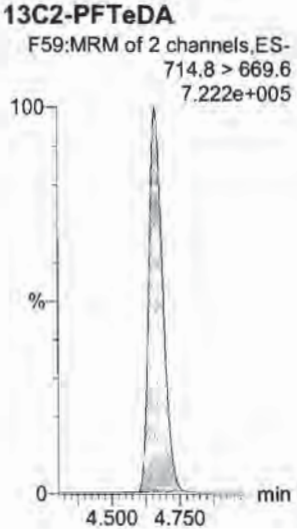

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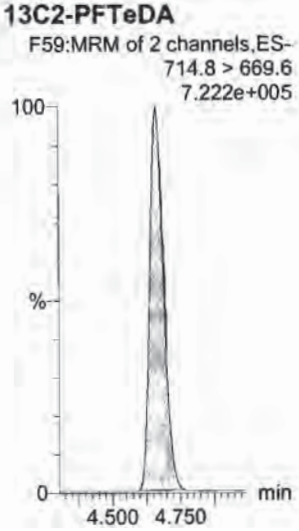
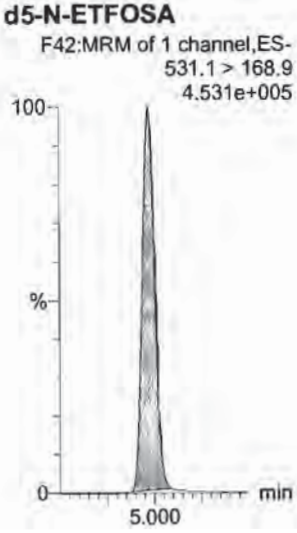
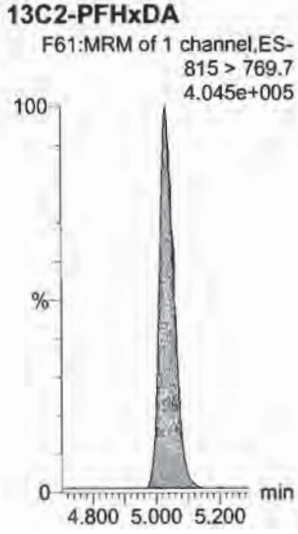


d5-N-ETFOSA



13C2-PFHxDA



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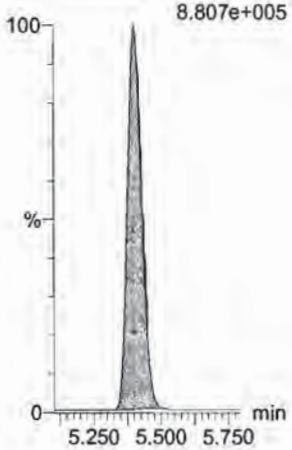
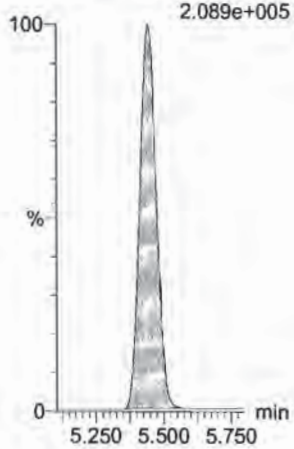
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

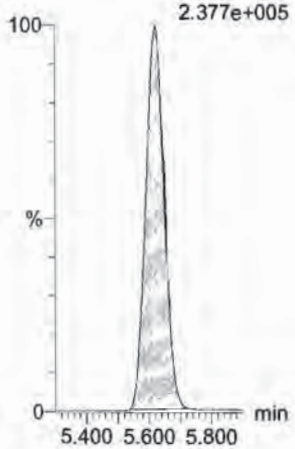
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
8.807e+005



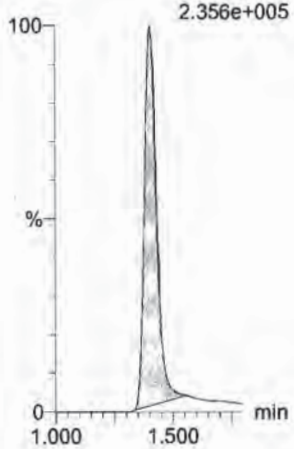
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.089e+005



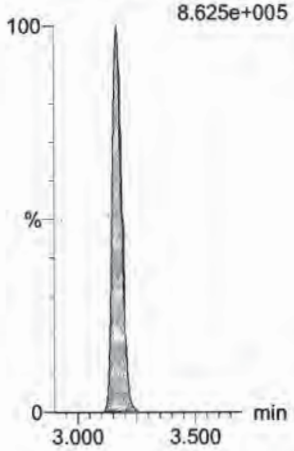
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.377e+005



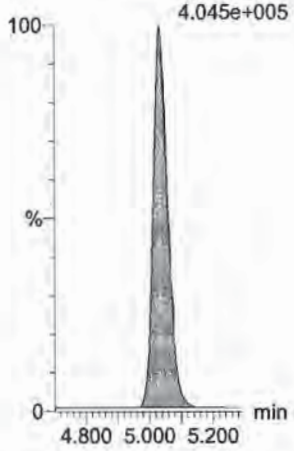
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.356e+005



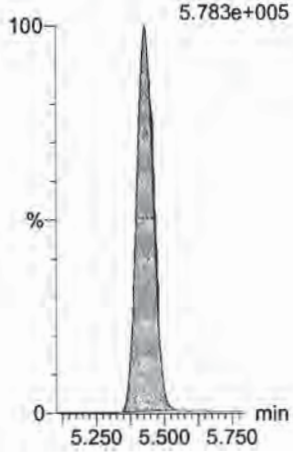
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.625e+005



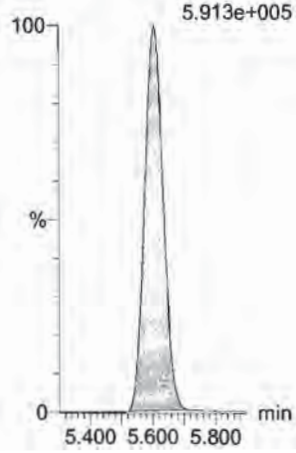
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.045e+005



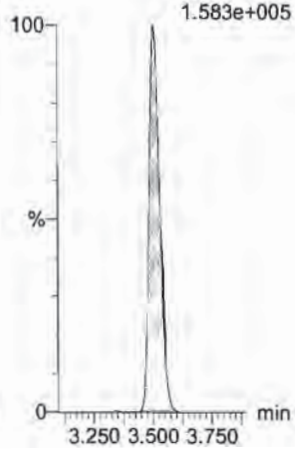
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.783e+005



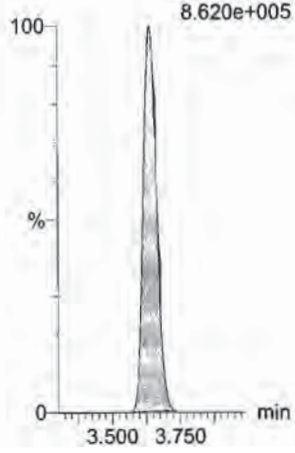
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.913e+005



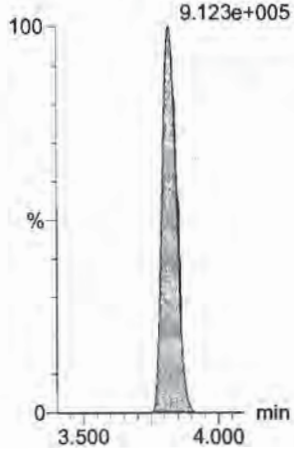
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.583e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
8.620e+005



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
9.123e+005



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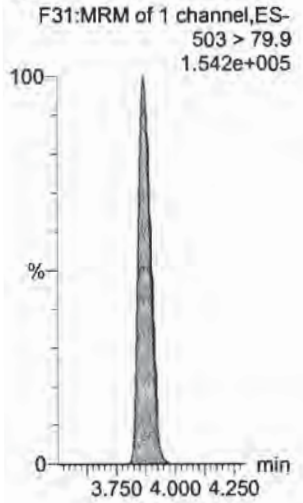
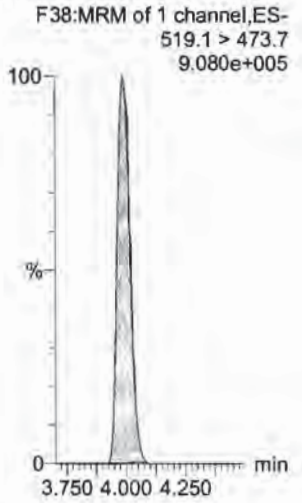
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

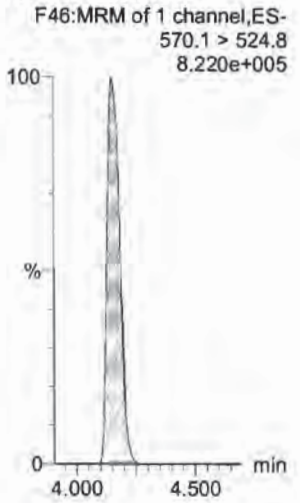
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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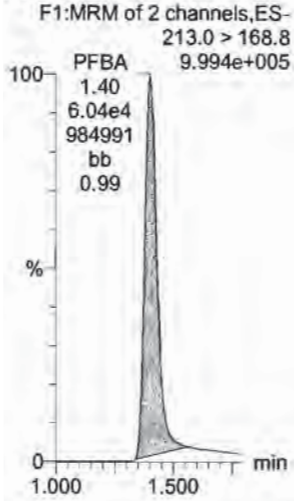
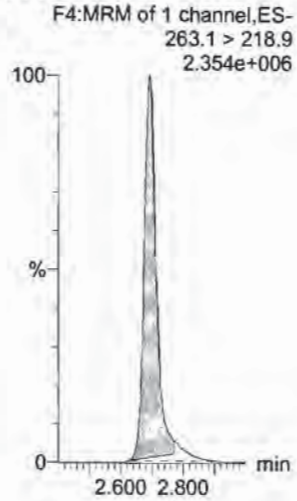
Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

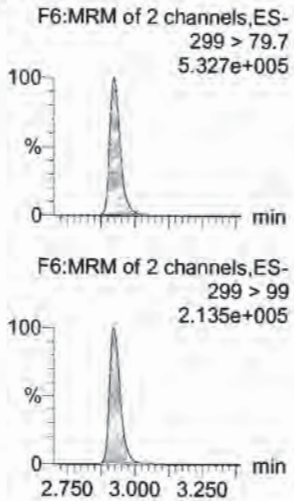
PFBA



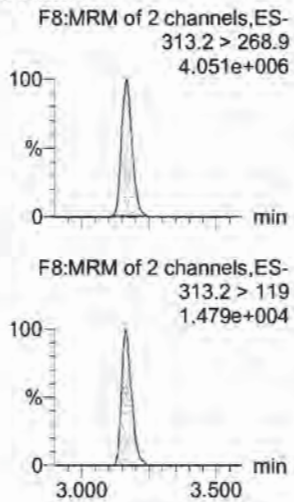
PFPeA



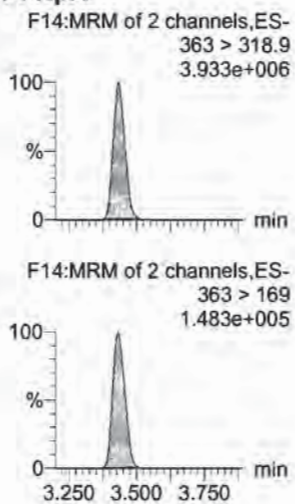
PFBS



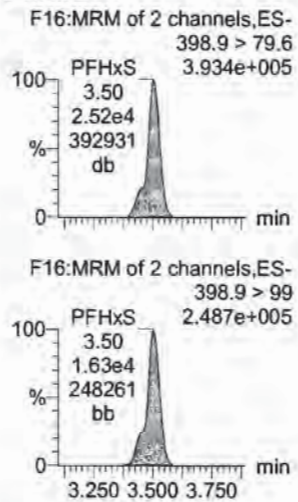
PFHxA



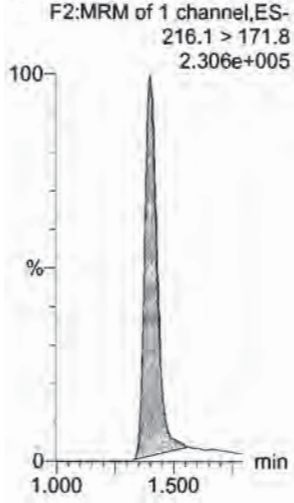
PFHpA



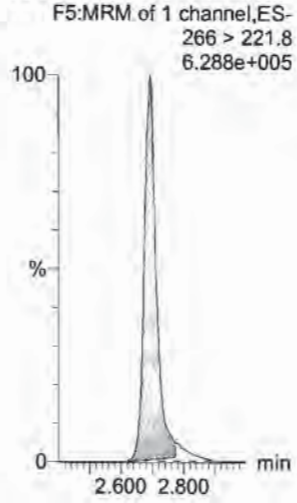
PFHxS



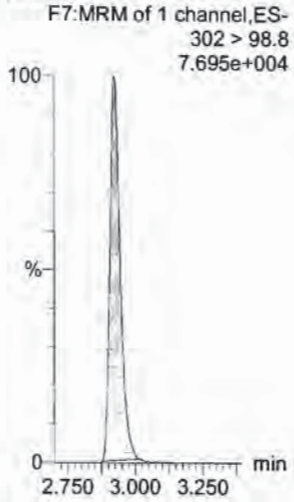
13C3-PFBA



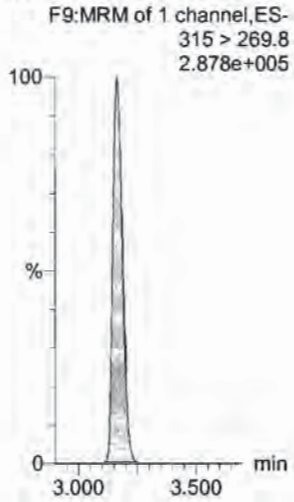
13C3-PFPeA



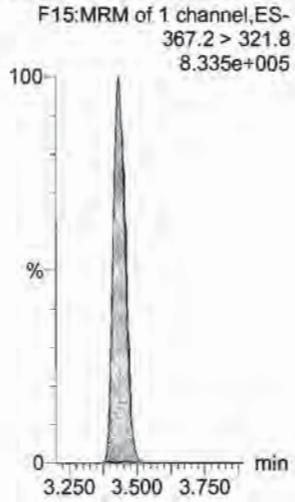
13C3-PFBS



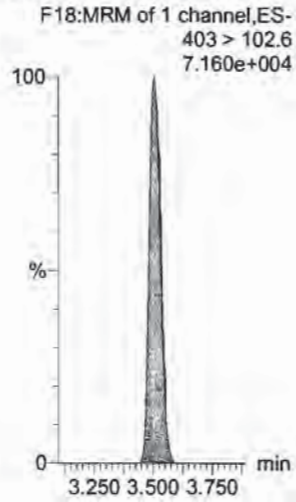
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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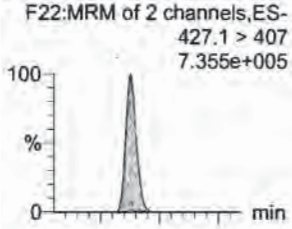
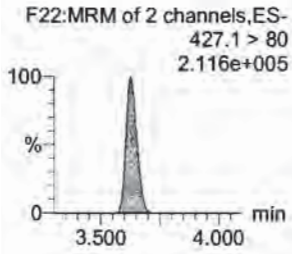
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

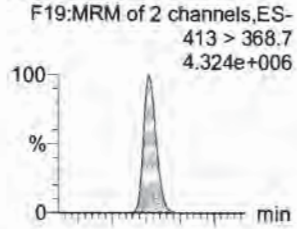
Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

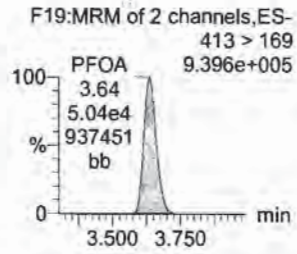
6:2 FTS





PFOA





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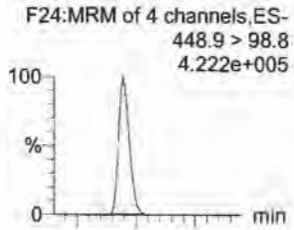
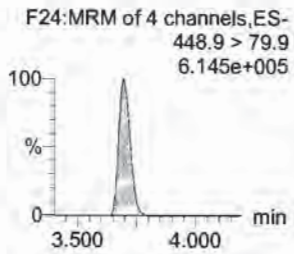
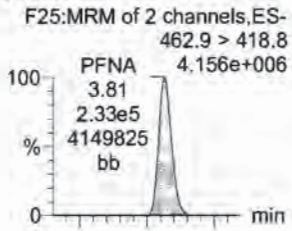
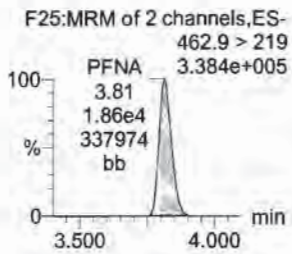




PFNA





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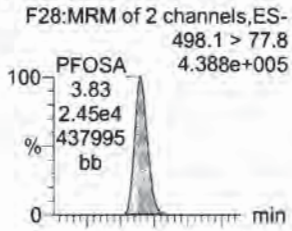

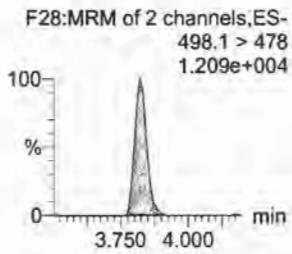

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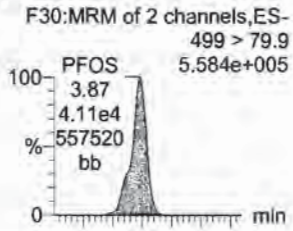
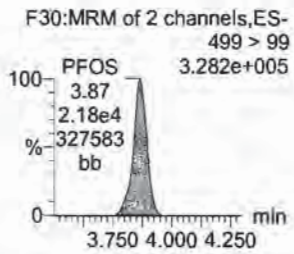
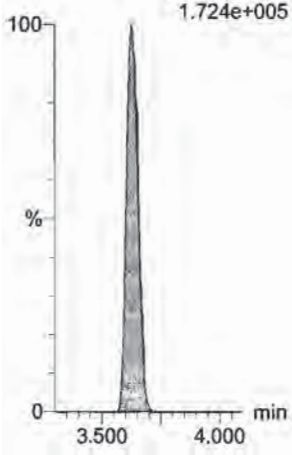
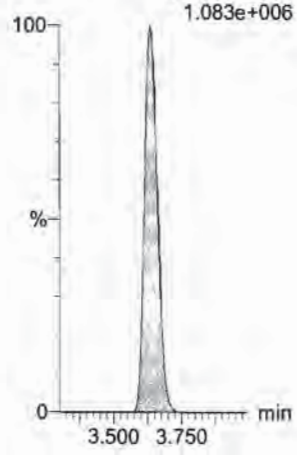




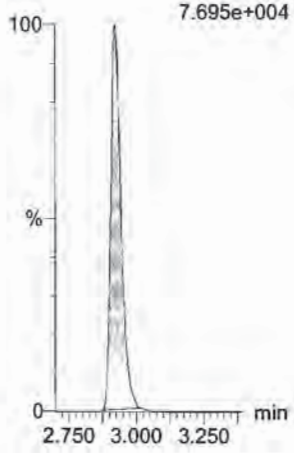
13C2-6:2 FTS



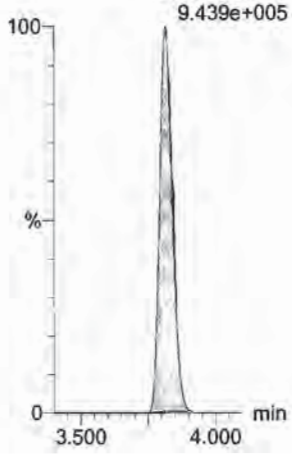
13C2-PFOA



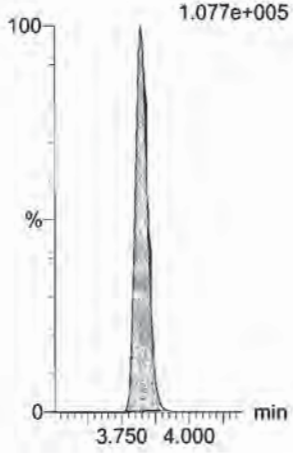
13C3-PFBS



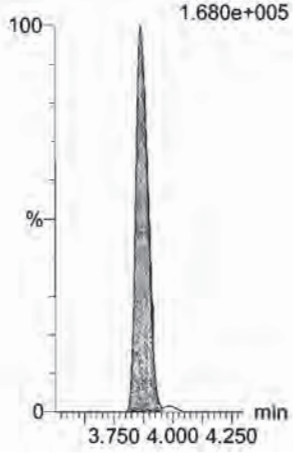
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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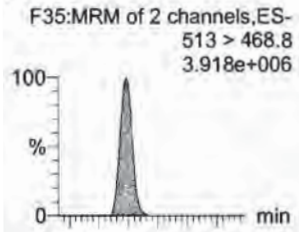
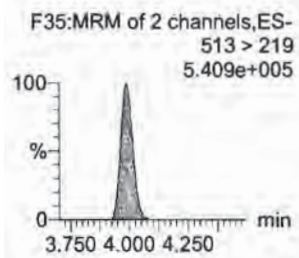
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

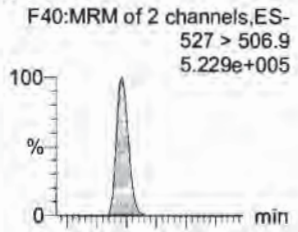
Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

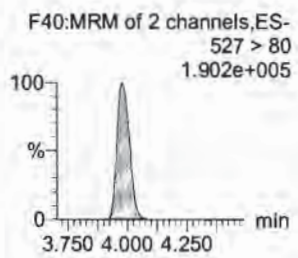
PFDA





8:2 FTS





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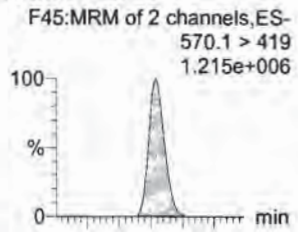

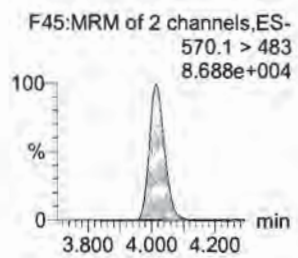

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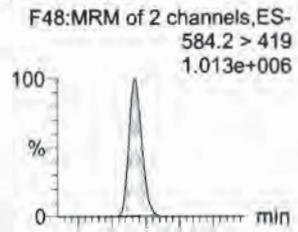
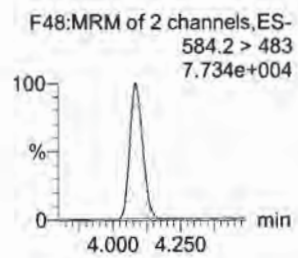
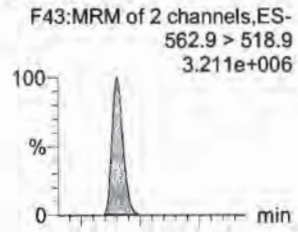
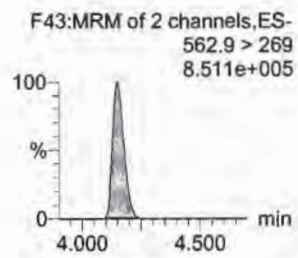


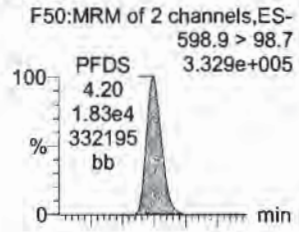


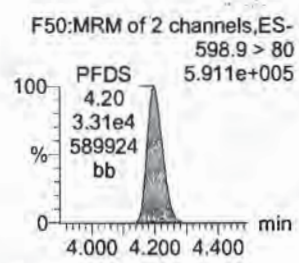
PFUnA



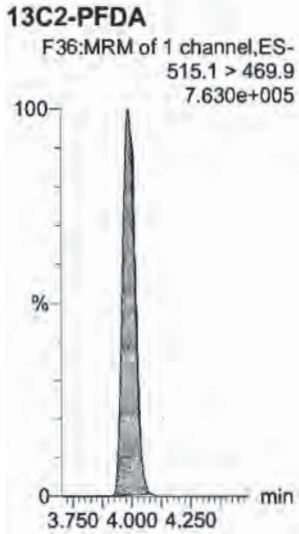


PFDS

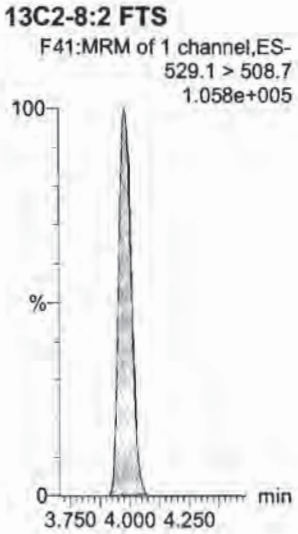




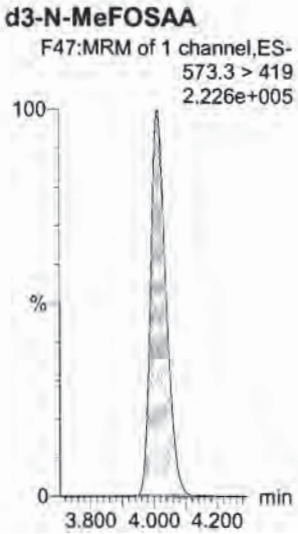
13C2-PFDA



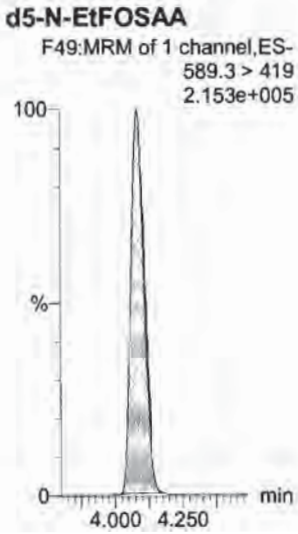
13C2-8:2 FTS



d3-N-MeFOSAA



d5-N-EtFOSAA



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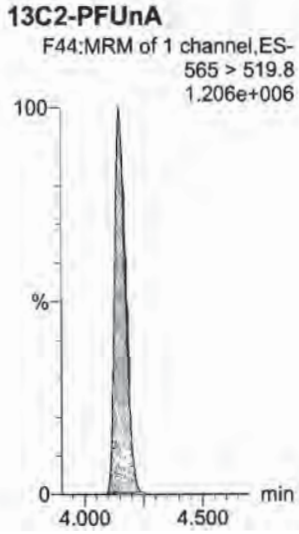

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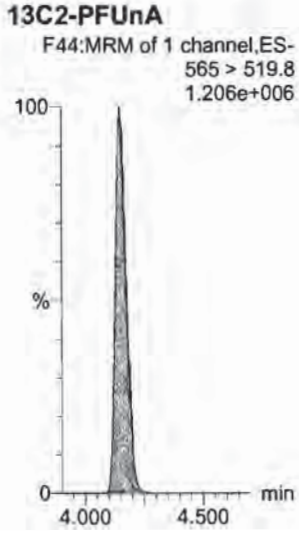

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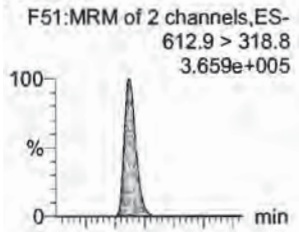
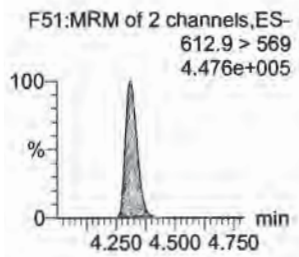
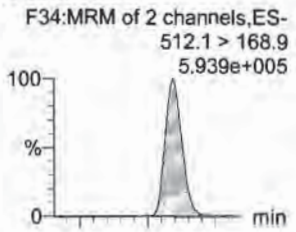
Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

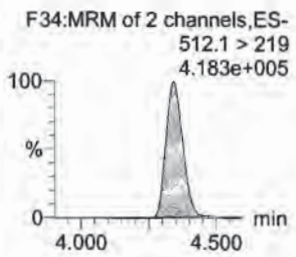
PFDoA





N-MeFOSA





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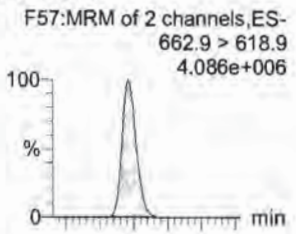

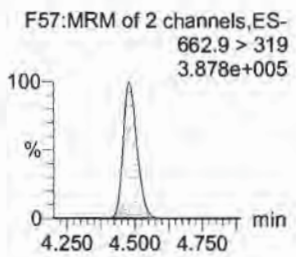

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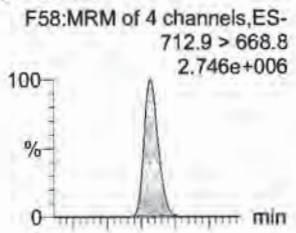

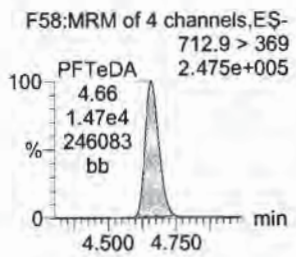

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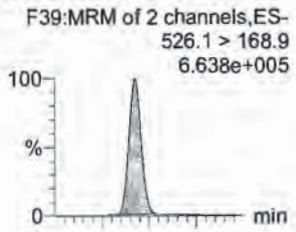

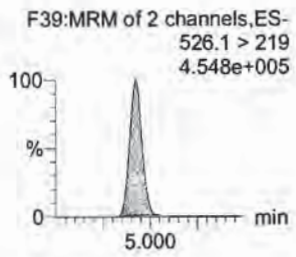

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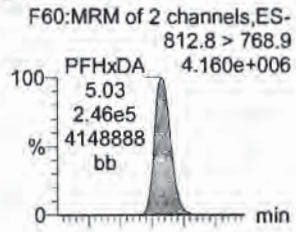

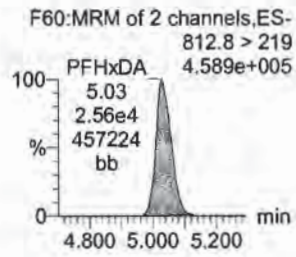

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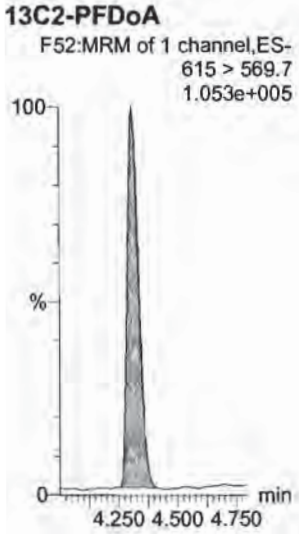
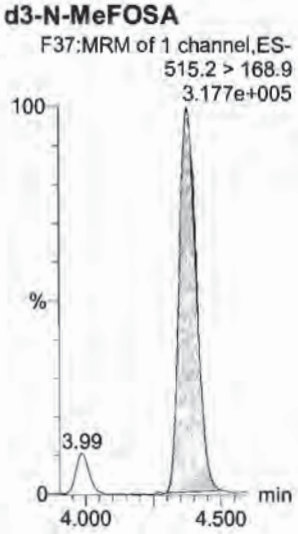


d3-N-MeFOSA



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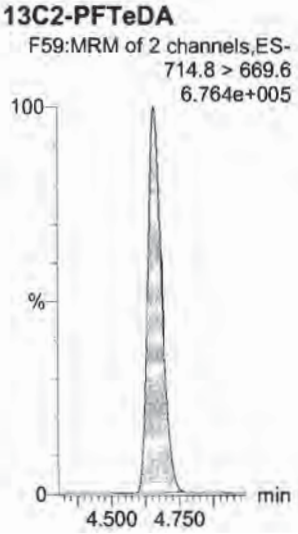

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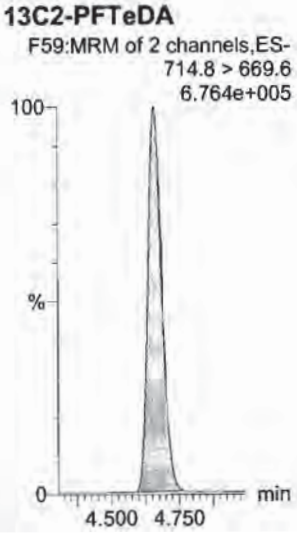

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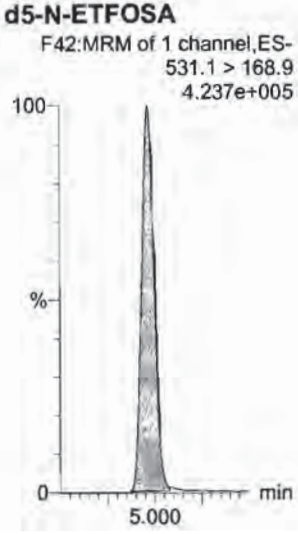

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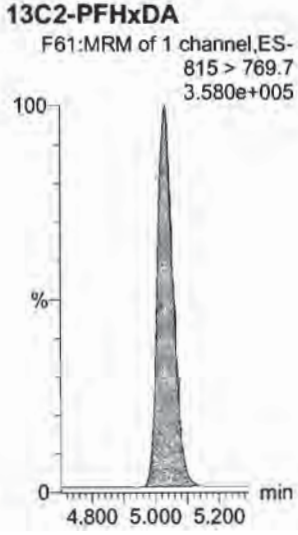

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Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

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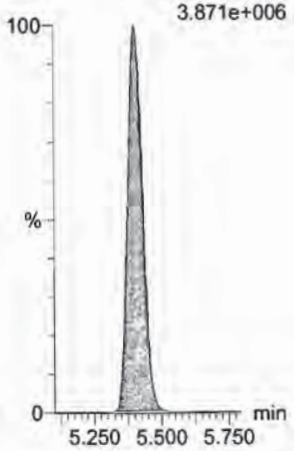
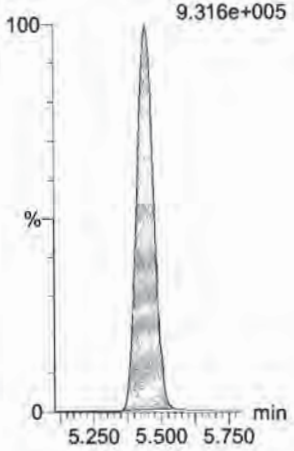
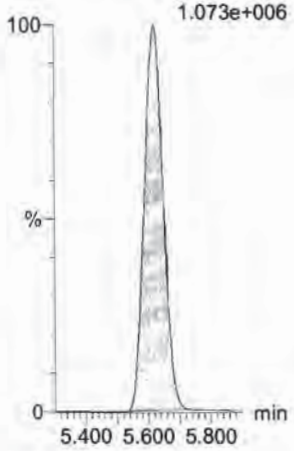
F62:MRM of 4 channels,ES-
912.8 > 868.8
3.871e+006



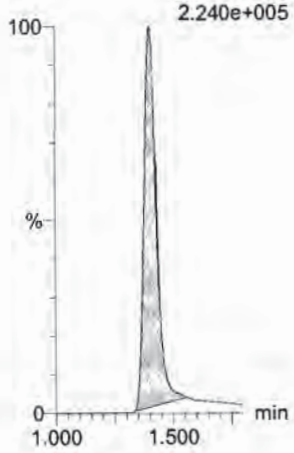
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
9.316e+005



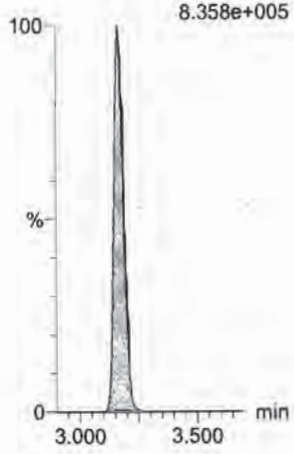
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.073e+006



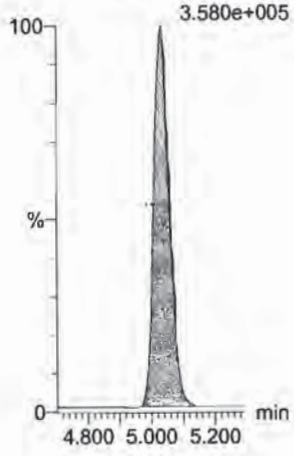
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.240e+005



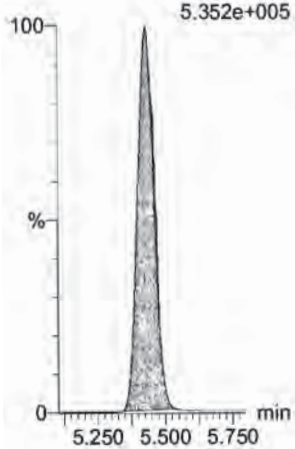
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.358e+005



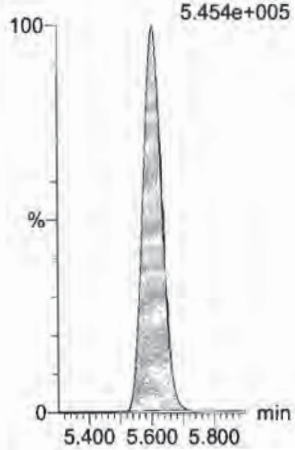
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.580e+005



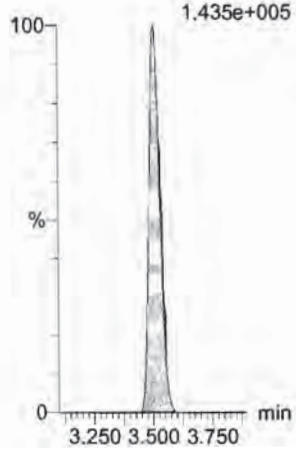
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.352e+005



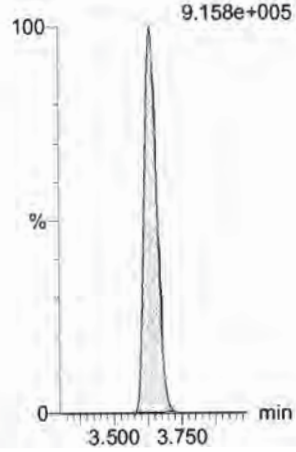
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.454e+005



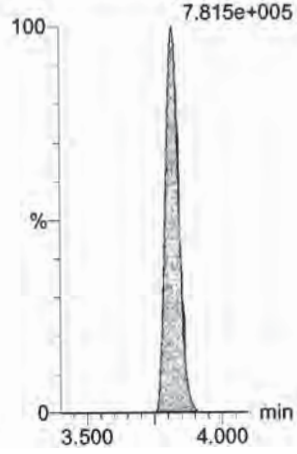
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.435e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
9.158e+005



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
7.815e+005



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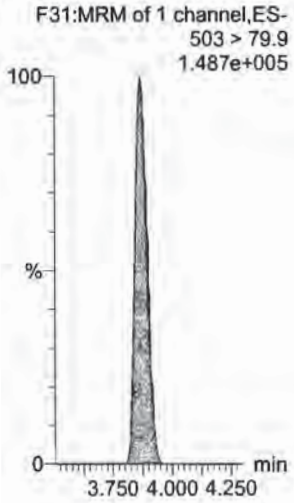
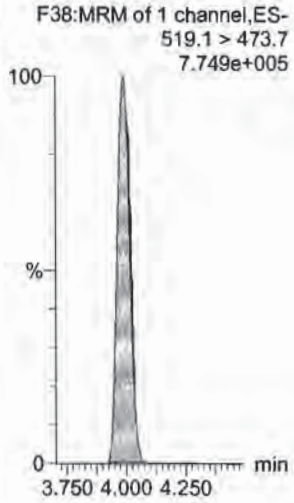
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

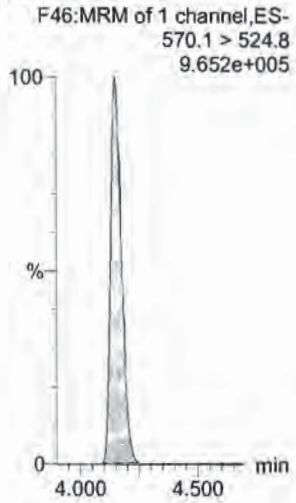
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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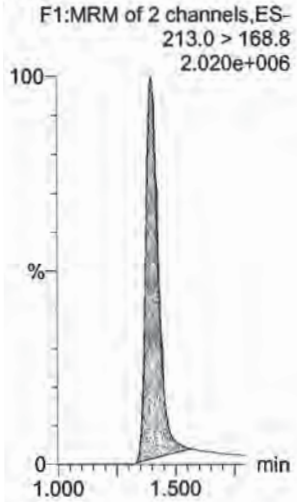
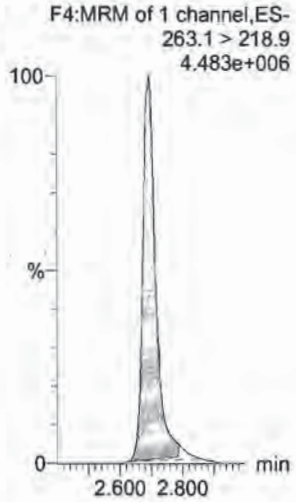
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_9, Date: 01-Aug-2017, Time: 01:54:46, ID: ST170731M2-8 PFC CS5 17G3113, Description: PFC CS5 17G3113

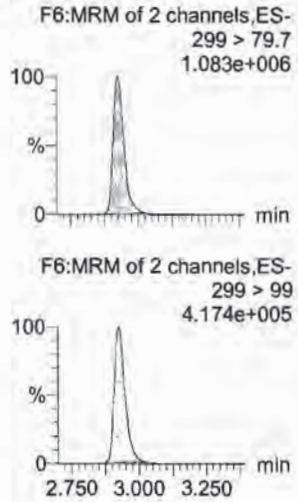
PFBA



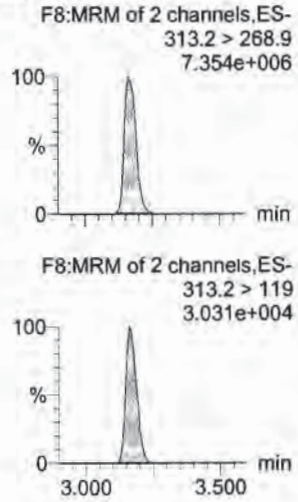
PFPeA



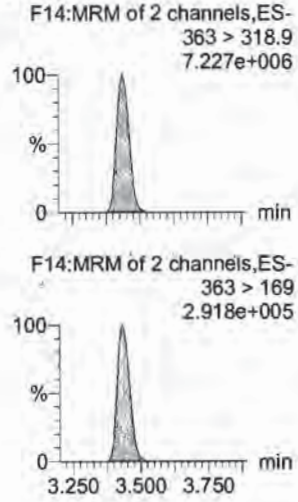
PFBS



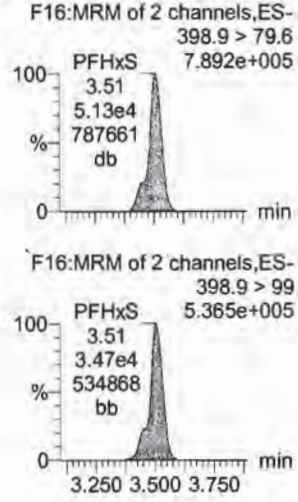
PFHxA



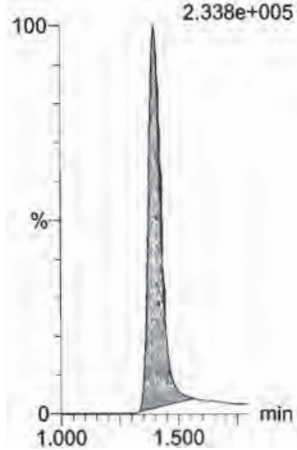
PFHpA



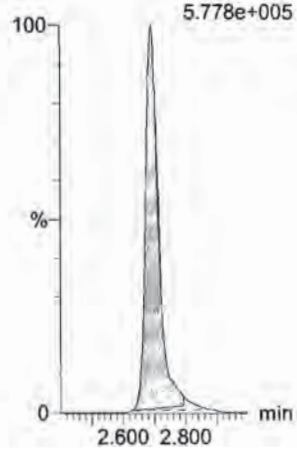
PFHxS



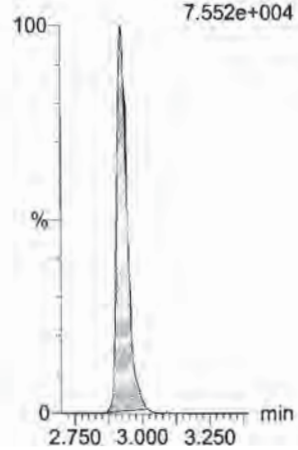
13C3-PFBA



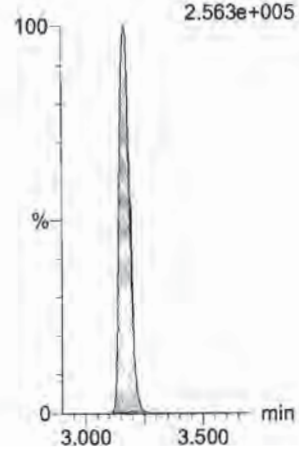
13C3-PFPeA



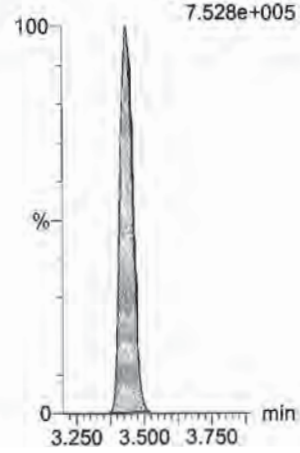
13C3-PFBS



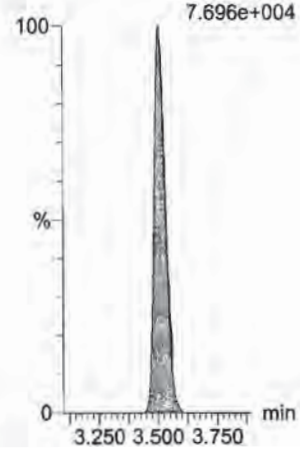
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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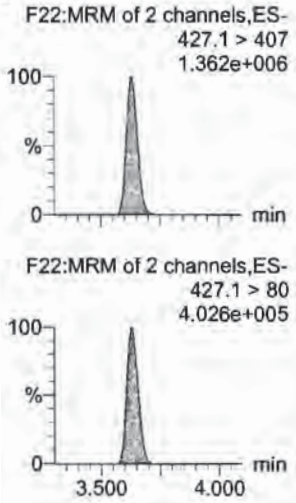
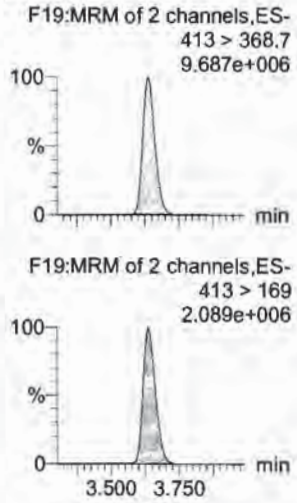
Name: 170731M2_9, Date: 01-Aug-2017, Time: 01:54:46, ID: ST170731M2-8 PFC CS5 17G3113, Description: PFC CS5 17G3113

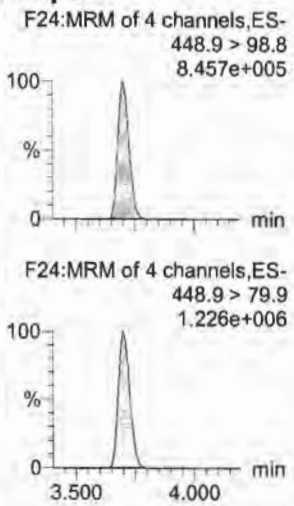
6:2 FTS



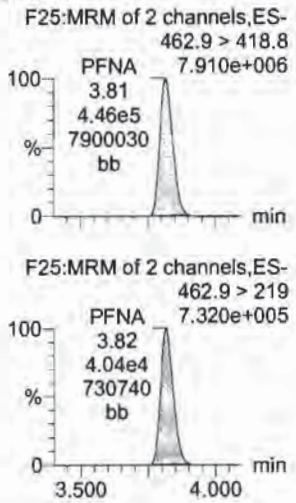
PFOA



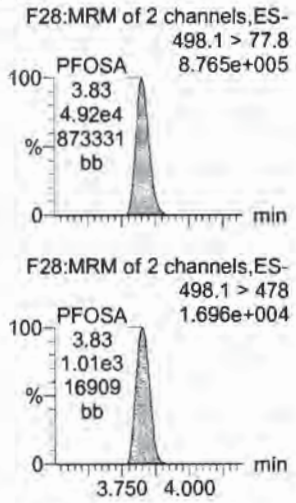
PFHpS



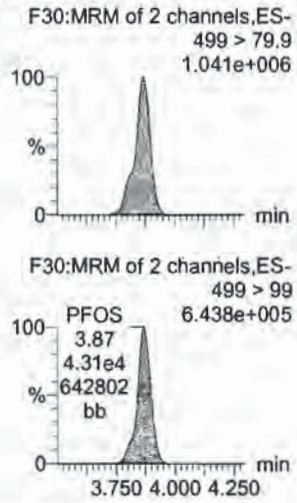
PFNA



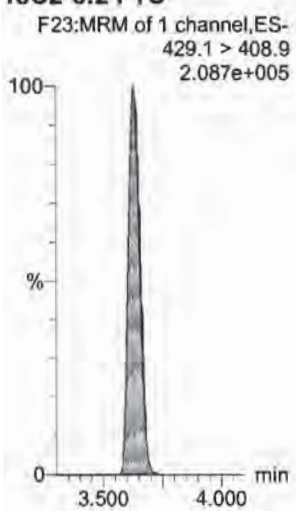
PFOSA



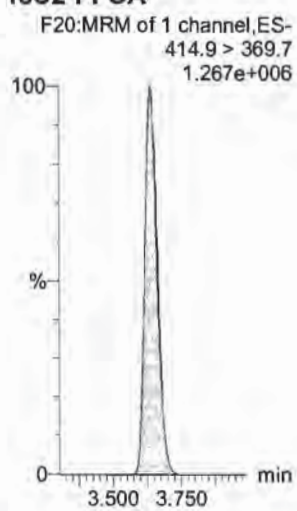
PFOS



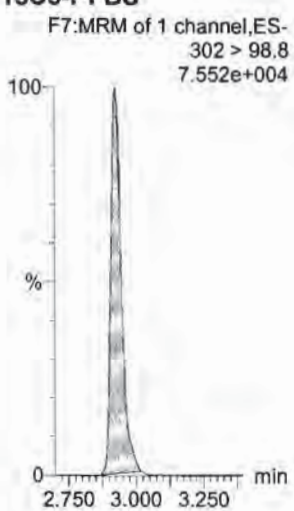
13C2-6:2 FTS



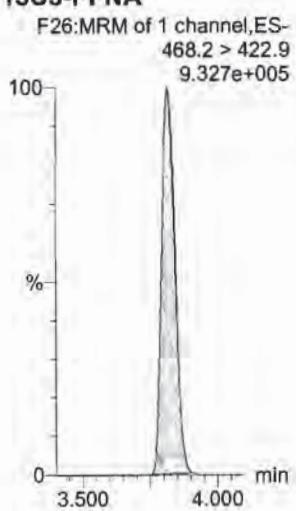
13C2-PFOA



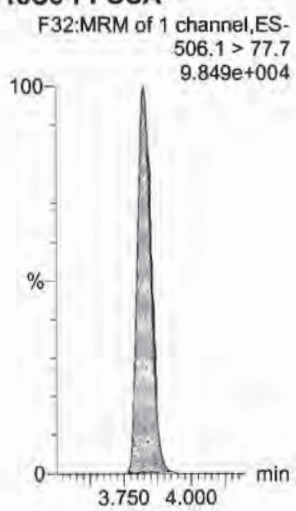
13C3-PFBS



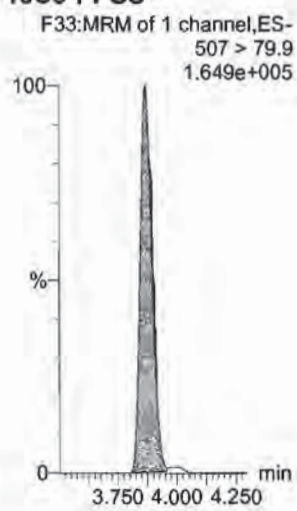
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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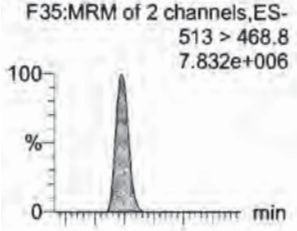
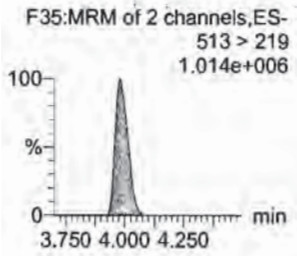
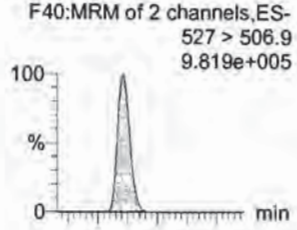
Name: 170731M2_9, Date: 01-Aug-2017, Time: 01:54:46, ID: ST170731M2-8 PFC CS5 17G3113, Description: PFC CS5 17G3113

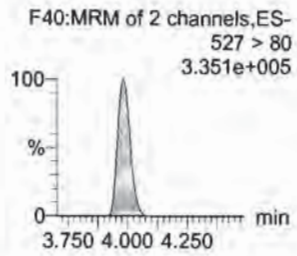
PFDA



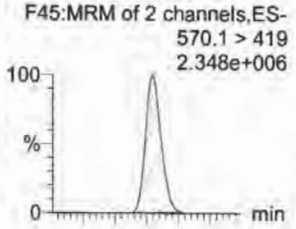


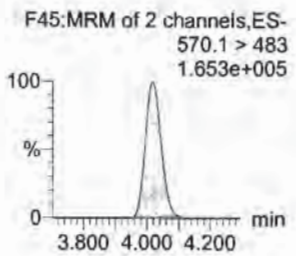
8:2 FTS



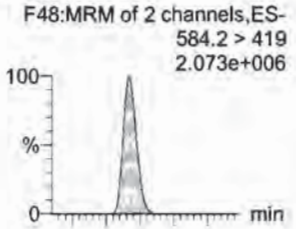


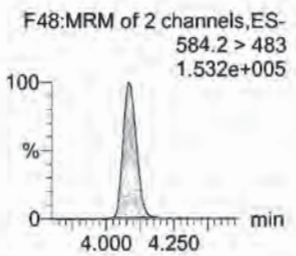
N-MeFOSAA



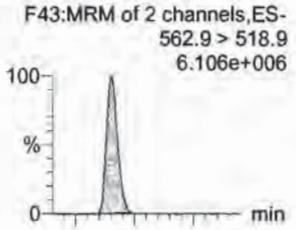


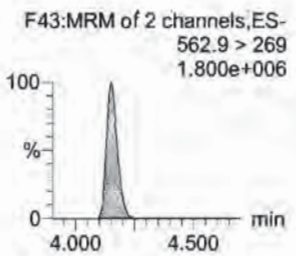
N-EtFOSAA





PFUnA





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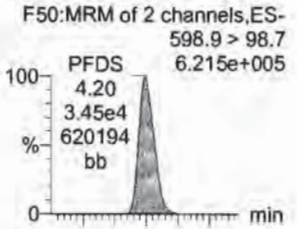
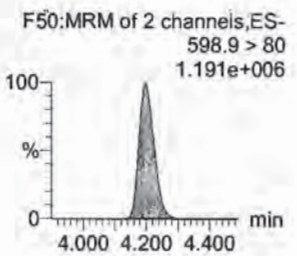
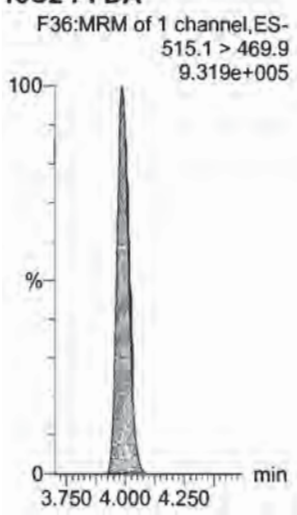
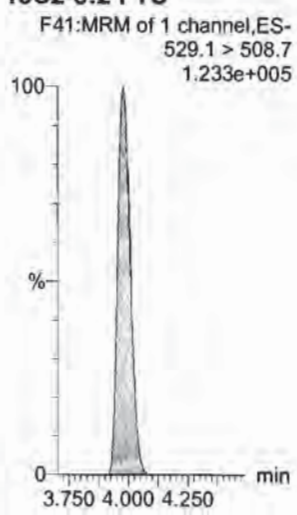




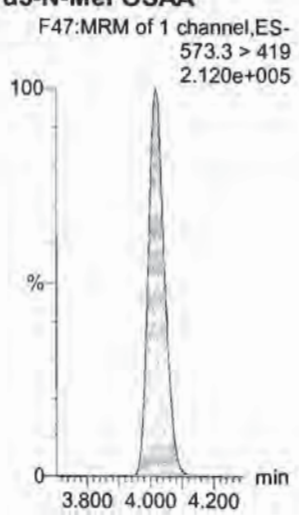
13C2-PFDA



13C2-8:2 FTS



d3-N-MeFOSAA



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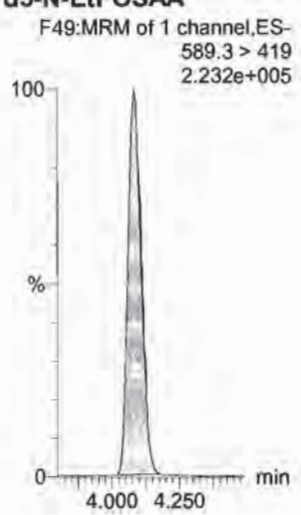
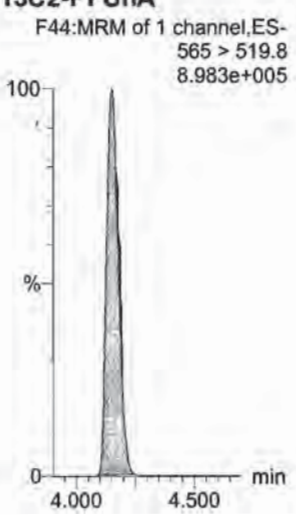
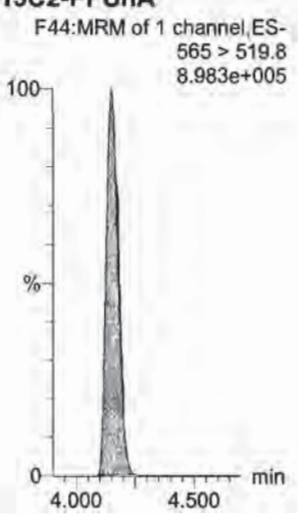


13C2-PFUnA



13C2-PFUnA



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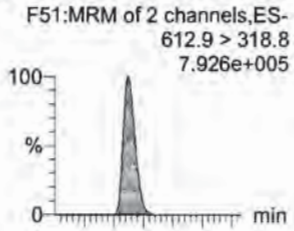
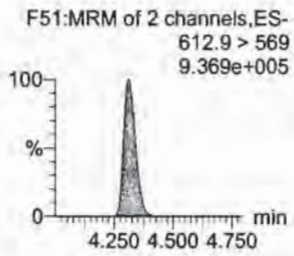
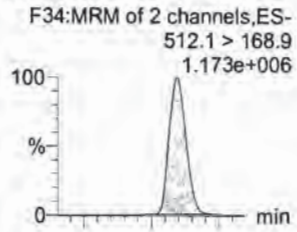
Name: 170731M2_9, Date: 01-Aug-2017, Time: 01:54:46, ID: ST170731M2-8 PFC CS5 17G3113, Description: PFC CS5 17G3113

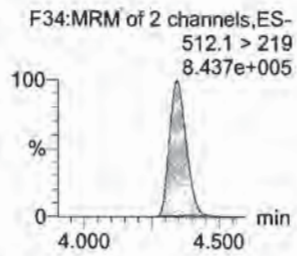
PFDoA



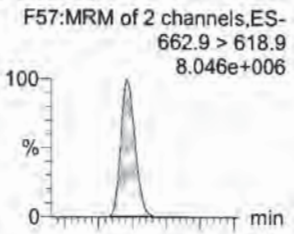


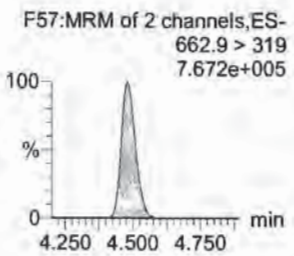
N-MeFOSA



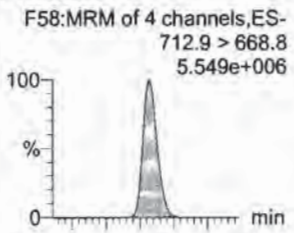


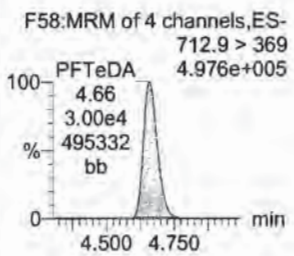
PFTrDA



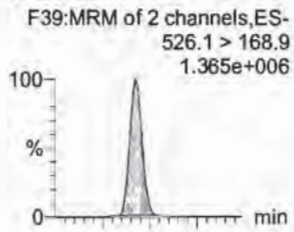


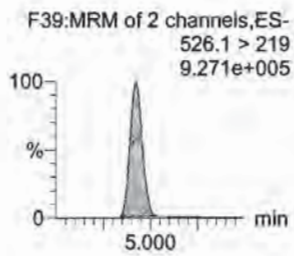
PFTeDA



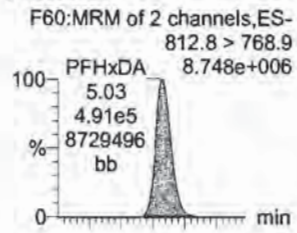


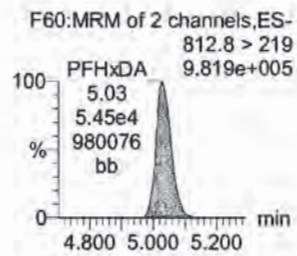
N-EtFOSA



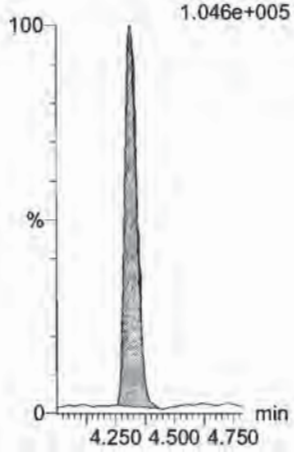


PFHxDA

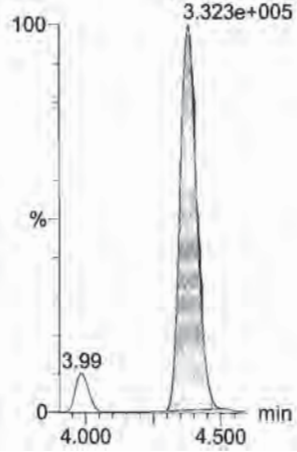




13C2-PFDoA



d3-N-MeFOSA



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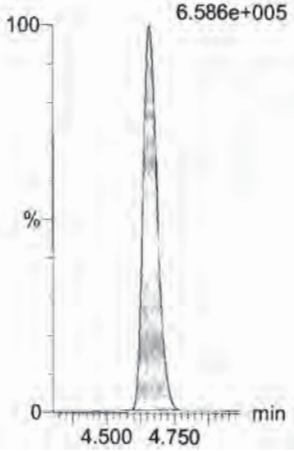

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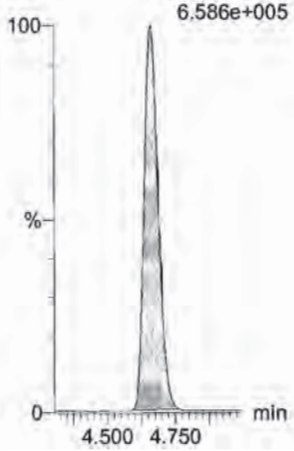
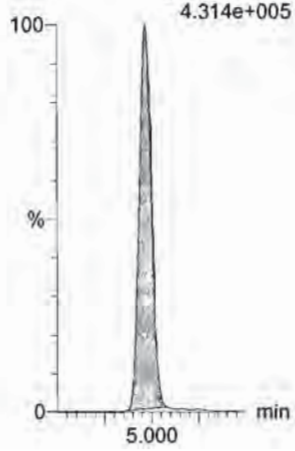
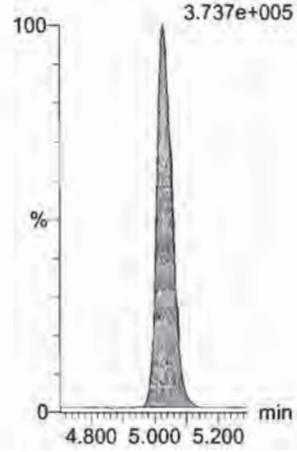


d5-N-ETFOSA



13C2-PFHxDA



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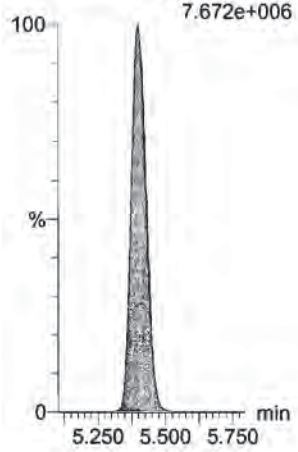
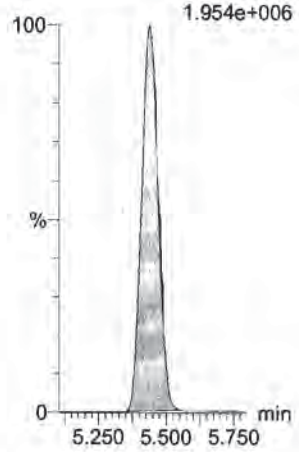
Name: 170731M2_9, Date: 01-Aug-2017, Time: 01:54:46, ID: ST170731M2-8 PFC CS5 17G3113, Description: PFC CS5 17G3113

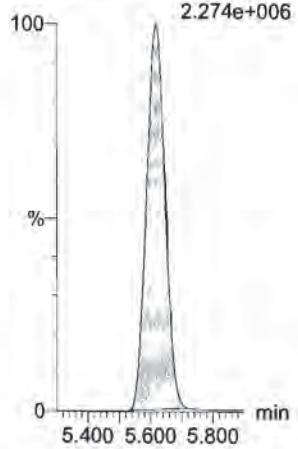
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
7.672e+006



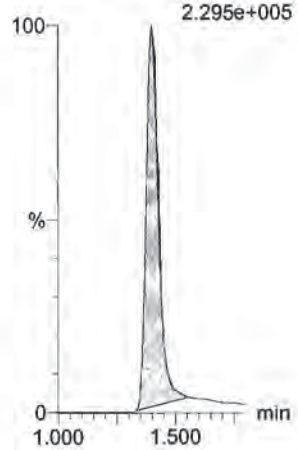
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.954e+006



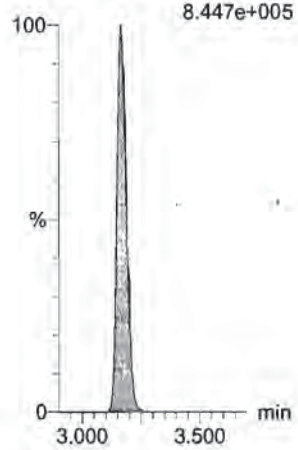
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.274e+006



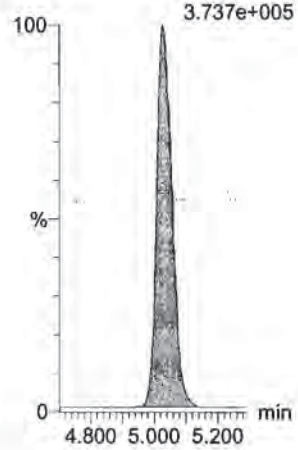
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.295e+005



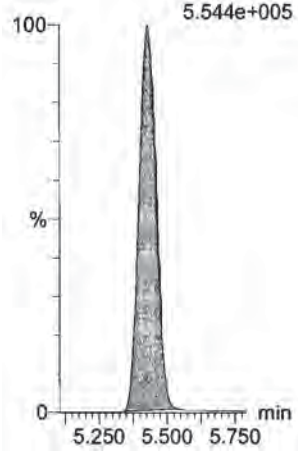
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.447e+005



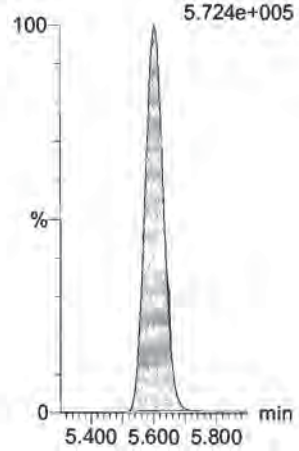
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.737e+005



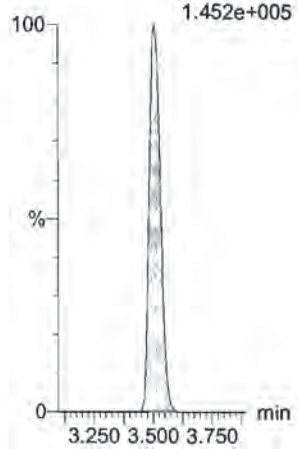
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.544e+005



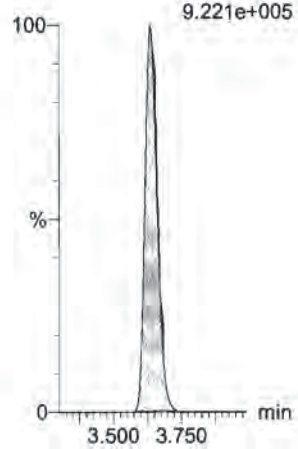
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.724e+005



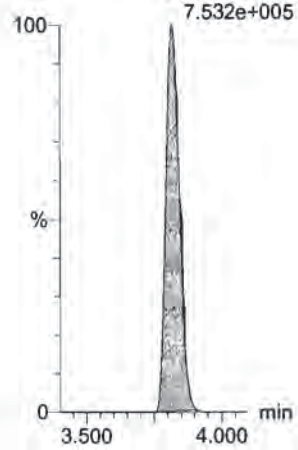
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.452e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
9.221e+005



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
7.532e+005



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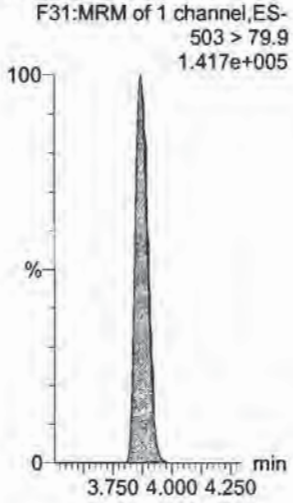
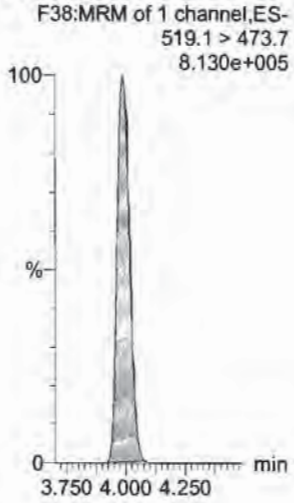
Name: 170731M2_9, Date: 01-Aug-2017, Time: 01:54:46, ID: ST170731M2-8 PFC CS5 17G3113, Description: PFC CS5 17G3113

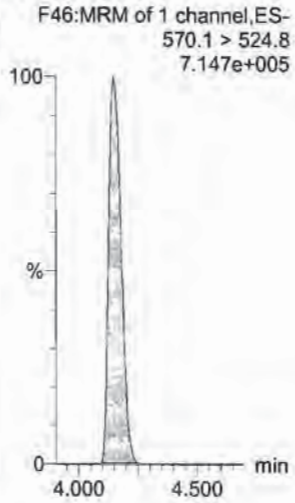
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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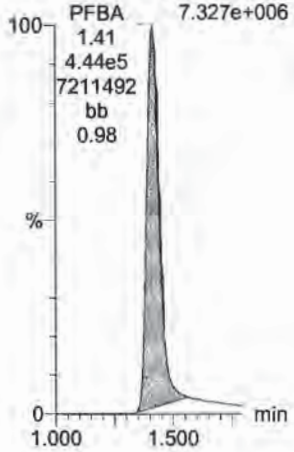
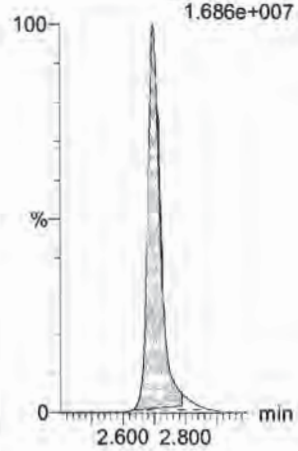
Name: 170731M2_10, Date: 01-Aug-2017, Time: 02:05:40, ID: ST170731M2-9 PFC CS6 17G2801, Description: PFC CS6 17G2801

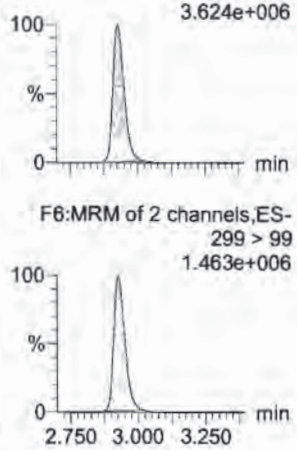
PFBA



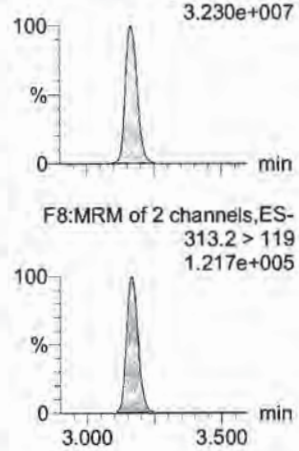
PFPeA



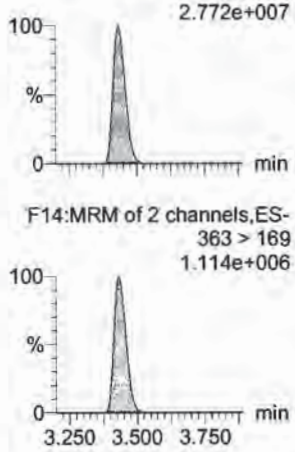
PFBS



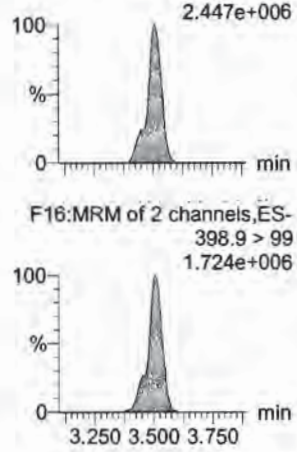
PFHxA



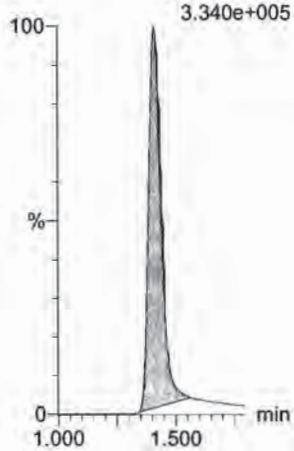
PFHpA



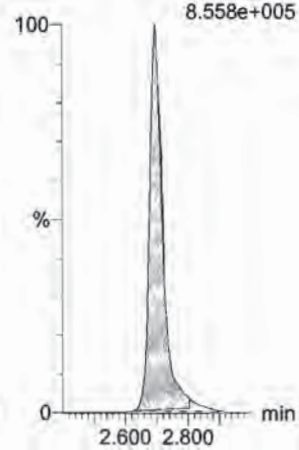
PFHxS



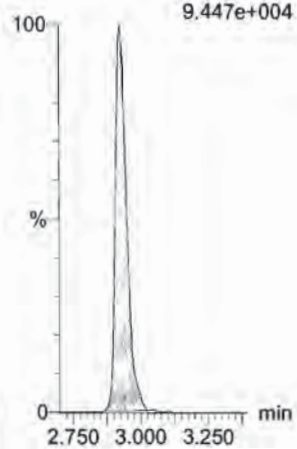
13C3-PFBA



13C3-PFPeA



13C3-PFBS



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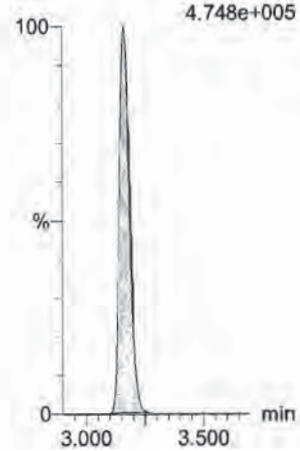
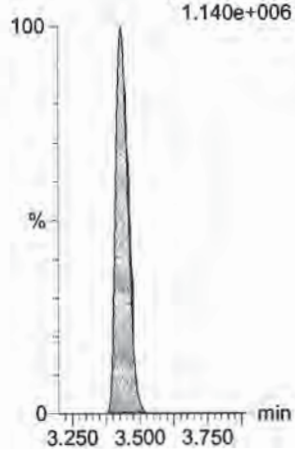
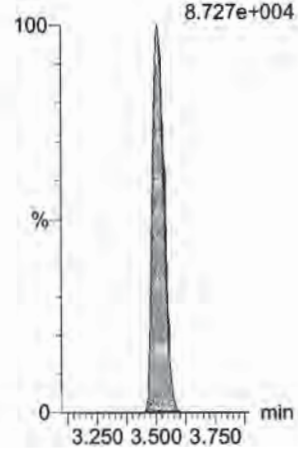


13C4-PFHpA



18O2-PFHxS



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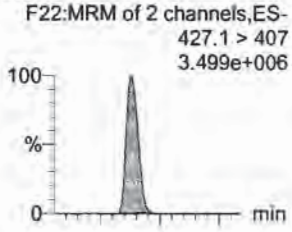
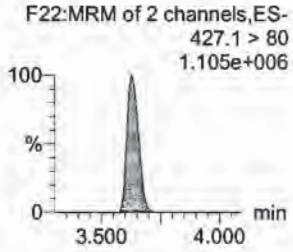
Name: 170731M2_10, Date: 01-Aug-2017, Time: 02:05:40, ID: ST170731M2-9 PFC CS6 17G2801, Description: PFC CS6 17G2801

6:2 FTS





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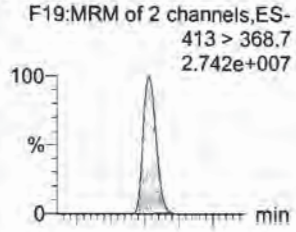

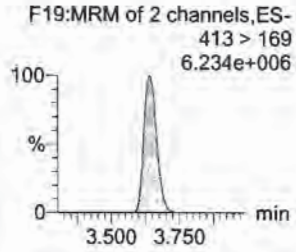

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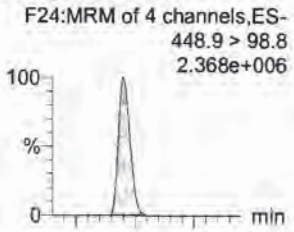

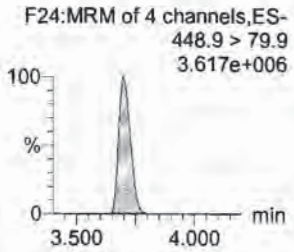

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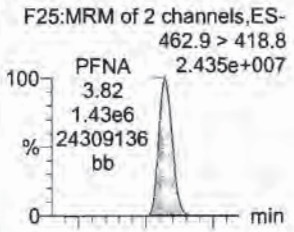

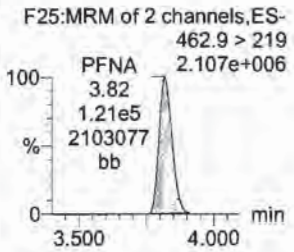

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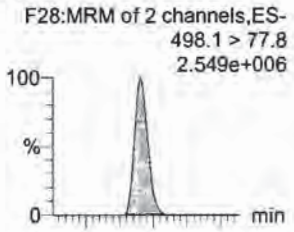

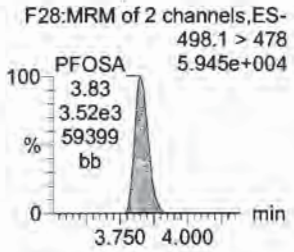

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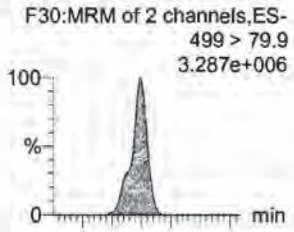
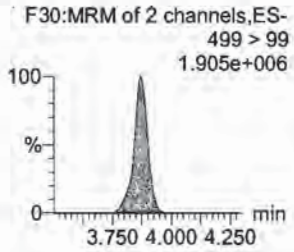
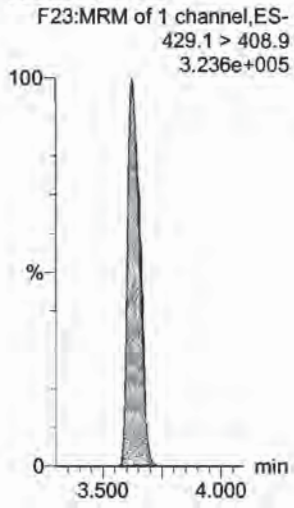
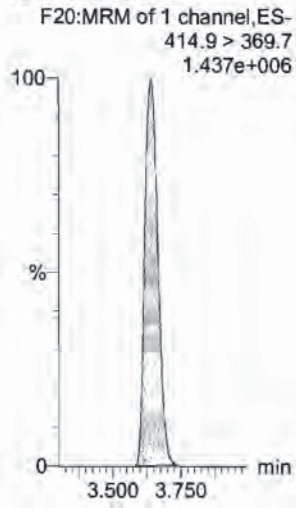




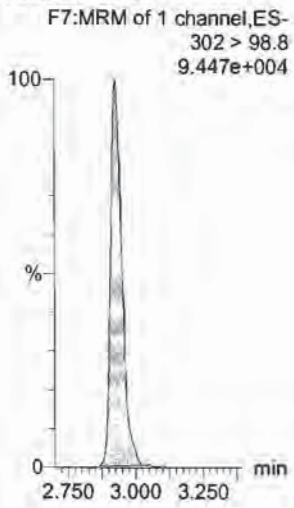
13C2-6:2 FTS



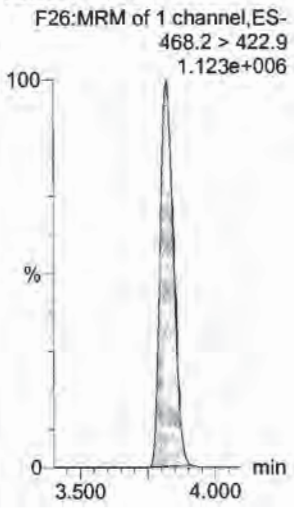
13C2-PFOA



13C3-PFBS



13C5-PFNA



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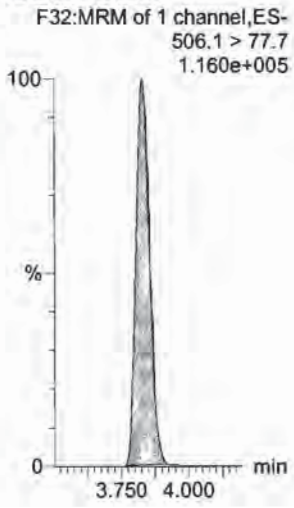

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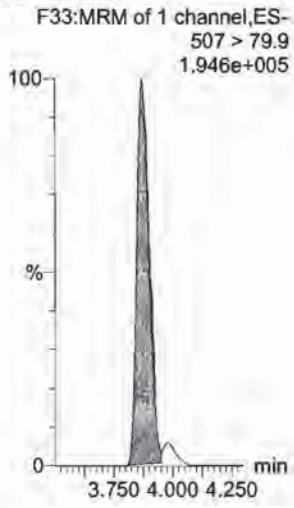

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Name: 170731M2_10, Date: 01-Aug-2017, Time: 02:05:40, ID: ST170731M2-9 PFC CS6 17G2801, Description: PFC CS6 17G2801

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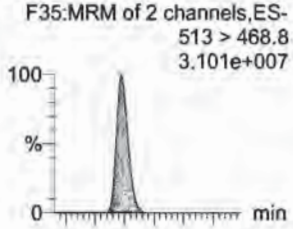
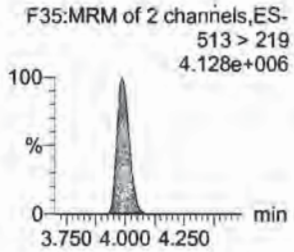
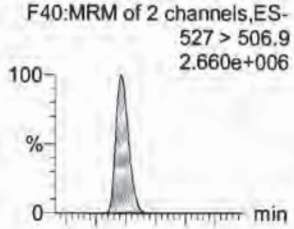
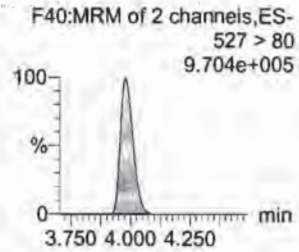




8:2 FTS





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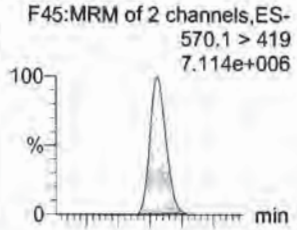

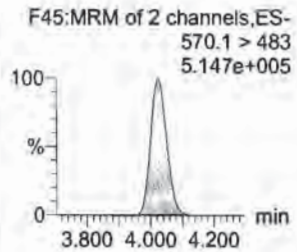

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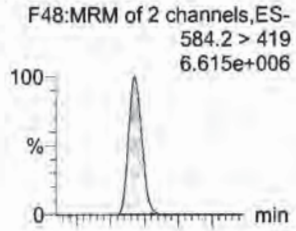

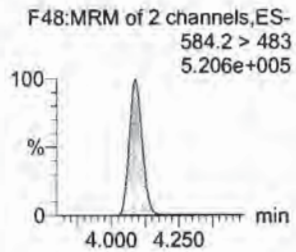

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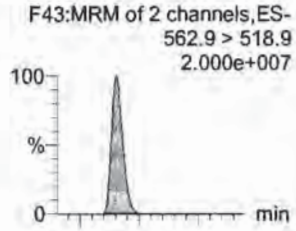

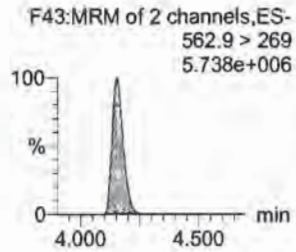

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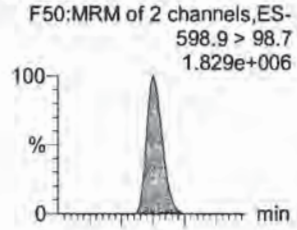

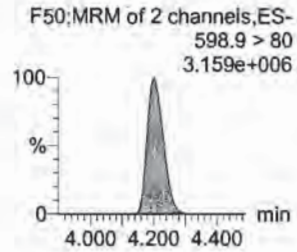

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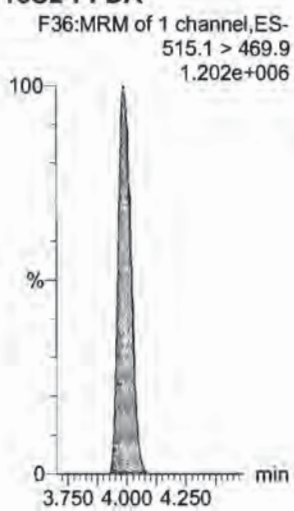
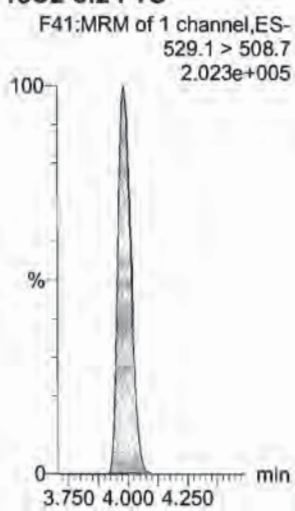


13C2-8:2 FTS



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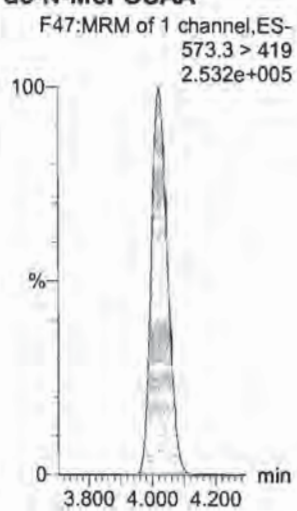

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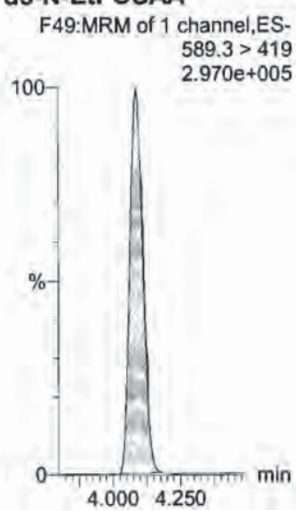

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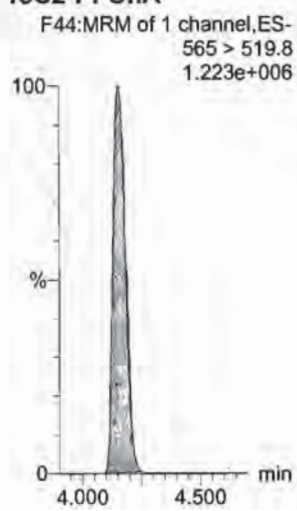

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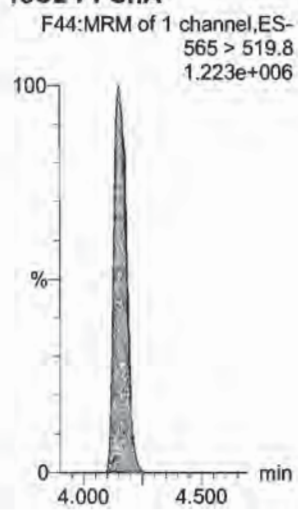

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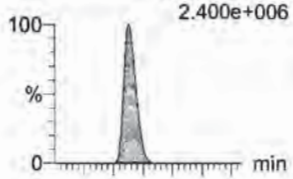

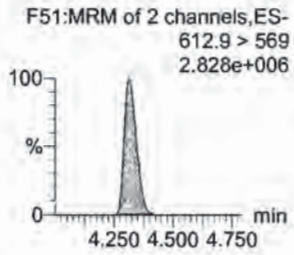

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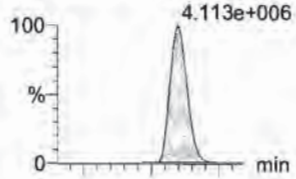

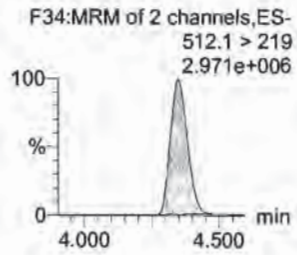

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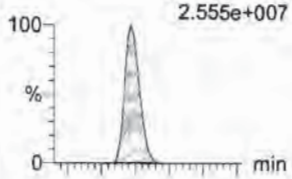

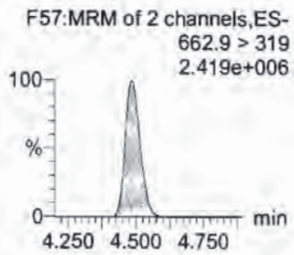

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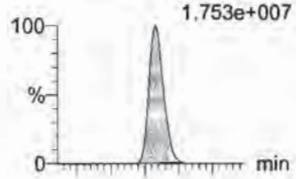

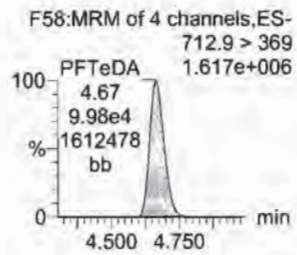

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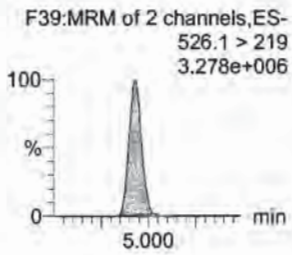

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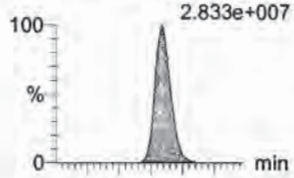

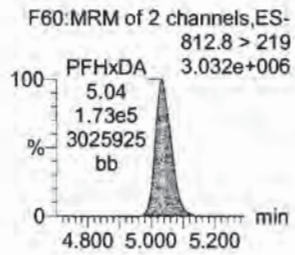

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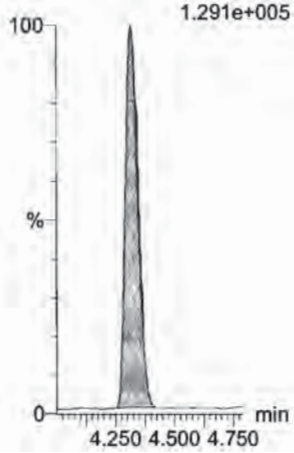

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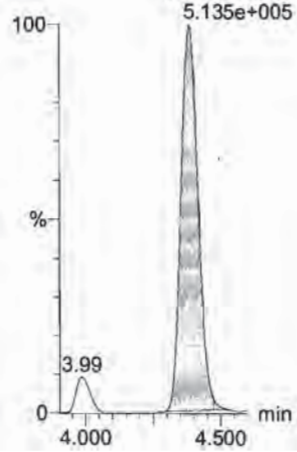

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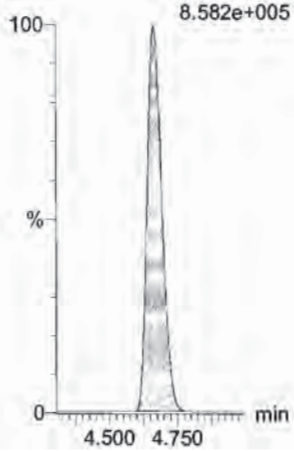

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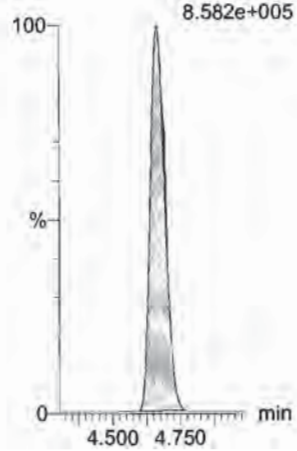

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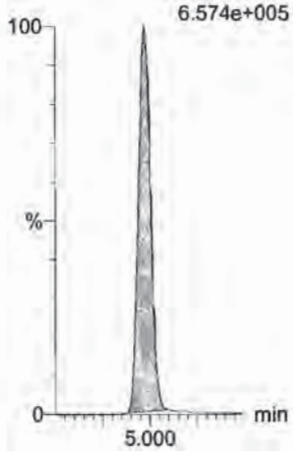

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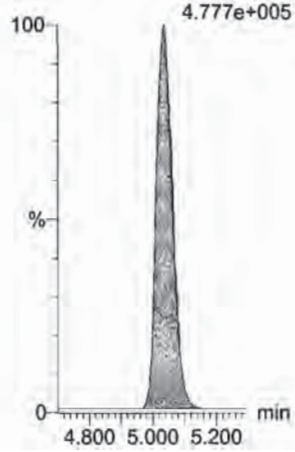

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Name: 170731M2_10, Date: 01-Aug-2017, Time: 02:05:40, ID: ST170731M2-9 PFC CS6 17G2801, Description: PFC CS6 17G2801

PFODA
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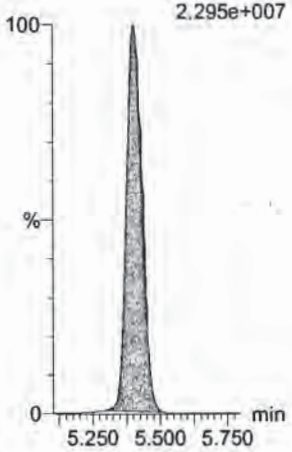
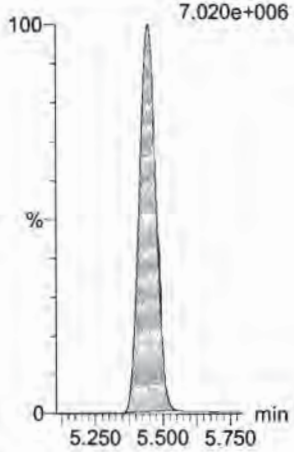
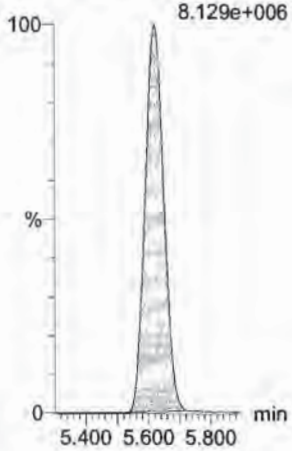
912.8 > 868.8
2.295e+007



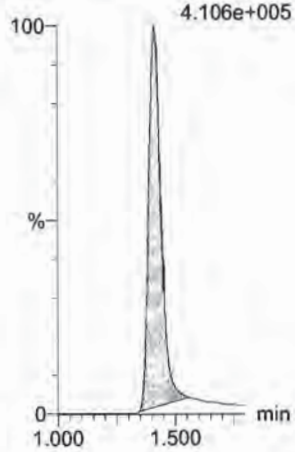
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
7.020e+006



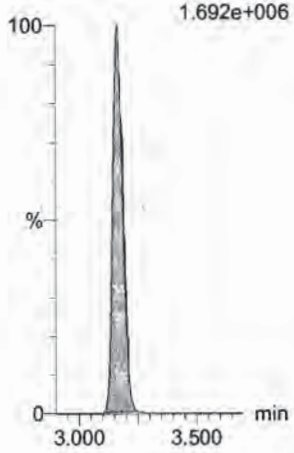
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
8.129e+006



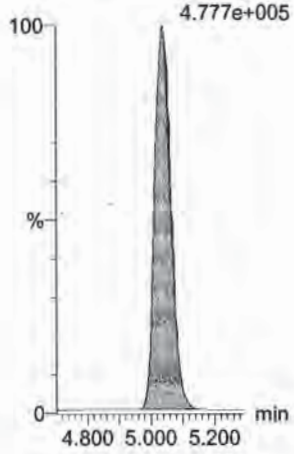
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
4.106e+005



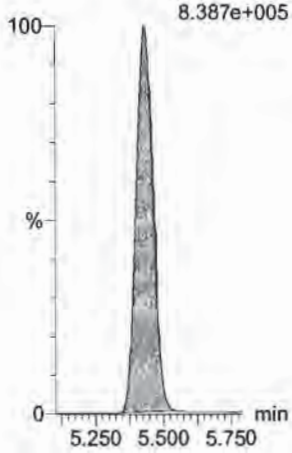
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.692e+006



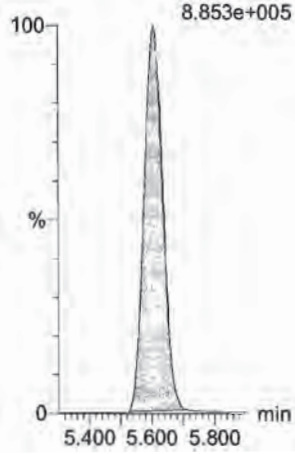
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.777e+005



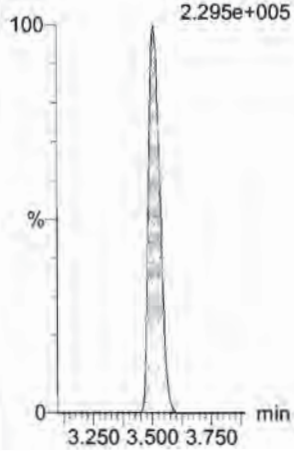
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
8.387e+005



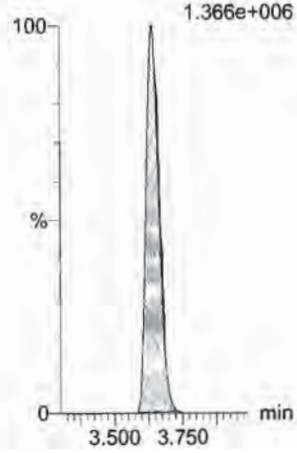
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
8.853e+005



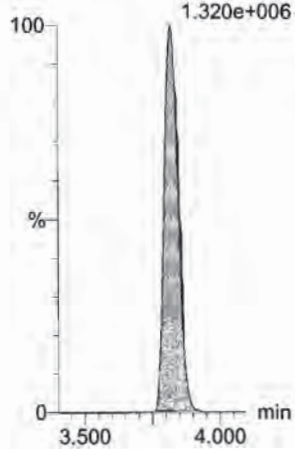
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
2.295e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.366e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.320e+006



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

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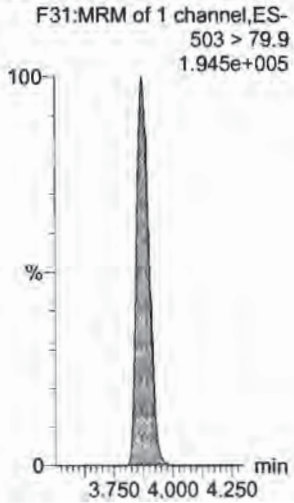
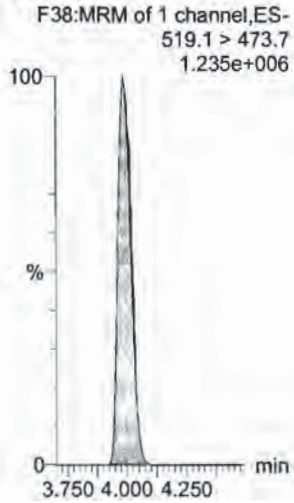
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_10, Date: 01-Aug-2017, Time: 02:05:40, ID: ST170731M2-9 PFC CS6 17G2801, Description: PFC CS6 17G2801

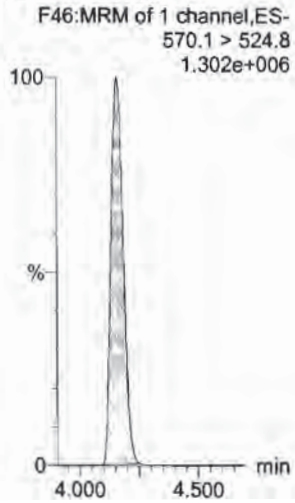
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M2\170731M2-13.qld

Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:30 Pacific Daylight Time

(A) Not included in SS.

AC 8/1/17

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.17e4	1.36e4		1.41	1.40	10.7	9.89	98.9
2	2	PFPeA	263.1 > 218.9	2.16e4	2.96e4		2.77	2.70	9.11	9.54	95.4
3	3	PFBS	299 > 79.7	4.36e3	3.41e3		2.96	2.93	16.0	8.45	84.5
4	4	PFHxA	313.2 > 268.9	3.76e4	1.39e4		3.19	3.17	13.6	9.67	96.7
5	5	PFHpA	363 > 318.9	4.01e4	4.36e4		3.45	3.43	11.5	9.55	95.5
6	6	PFHxS	398.9 > 79.6	4.17e3	3.75e3		3.56	3.51	13.9	8.26	82.6
7	7	6:2 FTS	427.1 > 407	8.12e3	1.03e4		3.64	3.63	9.86	8.74	87.4
8	8	PFOA	413 > 368.7	5.00e4	6.49e4		3.65	3.64	9.63	9.94	99.4
9	9	PFHpS	448.9 > 98.8	4.25e3	6.49e4		3.71	3.70	0.818	9.42	94.2
10	10	PFNA	462.9 > 418.8	4.76e4	5.50e4		3.83	3.82	10.8	9.89	98.9
11	11	PFOSA	498.1 > 77.8	5.22e3	6.35e3		3.84	3.83	10.3	9.60	96.0
12	12	PFOS	499 > 79.9	7.20e3	1.06e4		3.89	3.87	8.48	8.29	82.9
13	13	PFDA	513 > 468.8	4.82e4	5.65e4		4.01	3.99	10.6	8.74	87.4
14	14	8:2 FTS	527 > 506.9	6.54e3	6.05e3		4.00	3.98	13.5	9.58	95.8
15	15	N-MeFOSAA	570.1 > 419	1.39e4	1.35e4		4.03	4.02	167	9.37	93.7
16	16	N-EtFOSAA	584.2 > 419	1.18e4	1.25e4		4.10	4.09	153	9.93	99.3
17	17	PFUnA	562.9 > 518.9	3.73e4	6.16e4		4.17	4.16	7.57	9.88	98.8
18	18	PFDS	598.9 > 98.7	3.30e3	6.16e4		4.22	4.20	0.669	8.31	83.1
19	19	PFDoA	612.9 > 318.8	4.17e3	6.21e3		4.34	4.31	8.40	8.92	89.2
20	20	N-MeFOSA	512.1 > 168.9		2.44e4		4.29				(A)
21	21	PFTrDA	662.9 > 618.9	4.94e4	6.21e3		4.50	4.49	99.5	9.48	94.8
22	22	PFTeDA	712.9 > 668.8	3.40e4	4.04e4		4.68	4.66	10.5	9.73	97.3
23	23	N-EtFOSA	526.1 > 168.9	5.15e0	3.29e4		4.87	4.93	0.0235		(A)
24	24	PFHxDA	812.8 > 768.9	5.23e2	1.96e4		5.06	5.03	0.133		
25	25	PFODA	912.8 > 868.8	3.08e2	1.96e4		5.43	5.40	0.0785		
26	26	N-MeFOSE	616.1 > 58.9	2.97e1	3.90e4		5.42	5.44	0.114		
27	27	N-EtFOSE	630.1 > 58.9		3.88e4		5.59				
28	28	13C3-PFBA	216.1 > 171.8	1.36e4	1.36e4	1.006	1.41	1.40	12.5	12.4	99.5
29	29	13C3-PFPeA	266 > 221.8	2.96e4	3.98e4	0.275	2.77	2.69	3.73	13.5	108.4
30	30	13C3-PFBS	302 > 98.8	3.41e3	3.98e4	0.034	2.96	2.92	0.428	12.6	100.4
31	31	13C2-PFHxA	315 > 269.8	1.39e4	3.98e4	0.334	3.19	3.17	1.74	5.22	104.3

70-130

Dataset: U:\Q4.PRO\results\170731M2\170731M2-13.qld

Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:30 Pacific Daylight Time

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.36e4	3.98e4	0.414	3.45	3.43	5.48	13.2	105.9
33	33	18O2-PFHxS	403 > 102.6	3.75e3	7.57e3	0.475	3.56	3.51	6.19	13.0	104.2
34	34	13C2-6:2 FTS	429.1 > 408.9	1.03e4	4.79e4	0.214	3.64	3.63	2.68	12.5	100.3
35	35	13C2-PFOA	414.9 > 369.7	6.49e4	4.79e4	1.298	3.65	3.64	16.9	13.0	104.2
36	36	13C5-PFNA	468.2 > 422.9	5.50e4	4.99e4	1.094	3.83	3.82	13.8	12.6	100.7
37	37	13C8-PFOSA	506.1 > 77.7	6.35e3	5.45e4	0.124	3.84	3.83	1.46	11.7	93.5
38	38	13C8-PFOS	507 > 79.9	1.06e4	8.57e3	1.153	3.89	3.87	15.5	13.4	107.4
39	39	13C2-PFDA	515.1 > 469.9	5.65e4	5.31e4	1.059	4.01	3.99	13.3	12.6	100.6
40	40	13C2-8:2 FTS	529.1 > 508.7	6.05e3	5.31e4	0.129	4.00	3.98	1.43	11.1	88.7
41	41	d3-N-MeFOSAA	573.3 > 419	1.35e4	5.45e4	0.019	4.03	4.02	3.09	160	98.5
42	42	d5-N-EtFOSAA	589.3 > 419	1.25e4	5.45e4	0.019	4.12	4.09	2.87	151	93.2
43	43	13C2-PFUnA	565 > 519.8	6.16e4	5.45e4	1.172	4.17	4.16	14.1	12.1	96.4
44	44	13C2-PFDoA	615 > 569.7	6.21e3	5.45e4	0.118	4.34	4.31	1.42	12.0	96.1
45	45	d3-N-MeFOSA	515.2 > 168.9	2.44e4	5.45e4	0.040	4.29	4.38	5.60	138	92.3
46	46	13C2-PFTeDA	714.8 > 669.6	4.04e4	5.45e4	0.801	4.68	4.66	9.26	11.6	92.5
47	47	d5-N-ETFOSA	531.1 > 168.9	3.29e4	5.45e4	0.055	5.01	4.97	7.55	137	91.4
48	48	13C2-PFHxDA	815 > 769.7	1.96e4	5.45e4	0.991	5.06	5.03	4.50	4.54	90.7
49	49	d7-N-MeFOSE	623.1 > 58.9	3.90e4	5.45e4	0.065	5.42	5.43	8.94	137	91.4
50	50	d9-N-EtFOSE	639.2 > 58.8	3.88e4	5.45e4	0.065	5.59	5.61	8.89	137	91.5
51	51	13C4-PFBA	217 > 171.8	1.36e4	1.36e4	1.000	1.41	1.40	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	3.98e4	3.98e4	1.000	3.19	3.17	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	7.57e3	7.57e3	1.000	3.56	3.51	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	4.79e4	4.79e4	1.000	3.65	3.64	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	4.99e4	4.99e4	1.000	3.83	3.82	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	8.57e3	8.57e3	1.000	3.89	3.87	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	5.31e4	5.31e4	1.000	4.01	3.99	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	5.45e4	5.45e4	1.000	4.17	4.16	12.5	12.5	100.0

Dataset: U:\Q4.PRO\results\170731M2\170731M2-13.qld

Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:30 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.93	4357.564	3405.490	15.995	bb	8.45

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.51	4174.485	3749.125	13.918	MM	8.26

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.64	49957.527	64869.781	9.627	bb	9.94

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.87	7204.411	10619.089	8.480	bb	8.29

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419	4.02	13886.400	13491.591	167.255	bb	9.37
2	63	Total N-Me-FOSAA	570.1 > 419	3.87	6.033	13491.591	0.073	bbl	
3	63	Total N-Me-FOSAA	570.1 > 419	3.76	12.109	13491.591	0.146	bbl	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419	4.09	11783.439	12511.836	153.040	bb	9.93
2	64	Total N-EtFOSAA	584.2 > 419	4.33	9.825	12511.836	0.128	bb	0.0294

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Dataset: U:\Q4.PRO\results\170731M2\170731M2-13.qld

Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:30 Pacific Daylight Time

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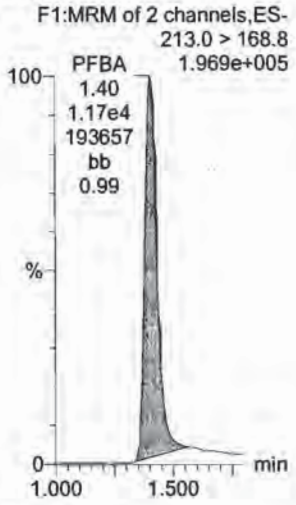
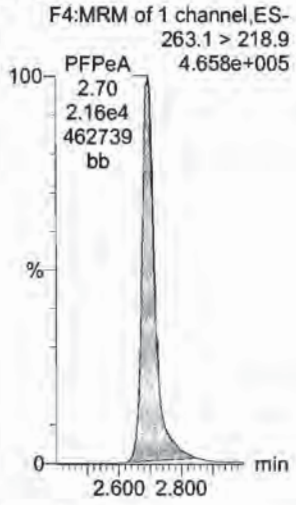
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

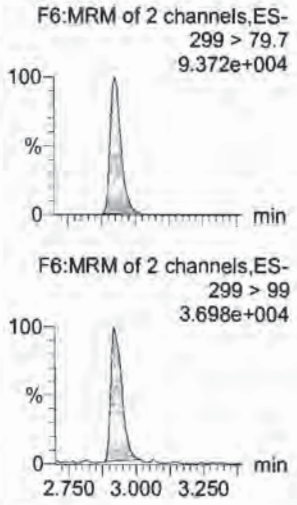
PFBA



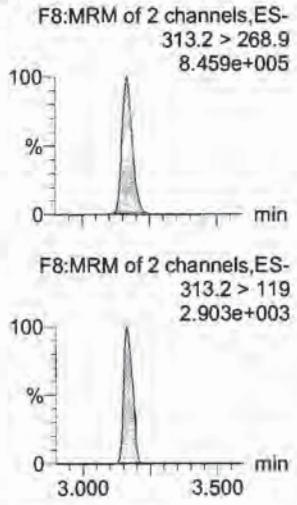
PFPeA



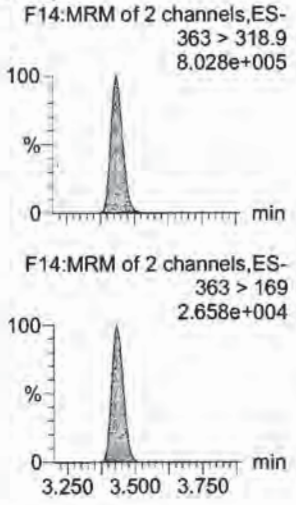
PFBS



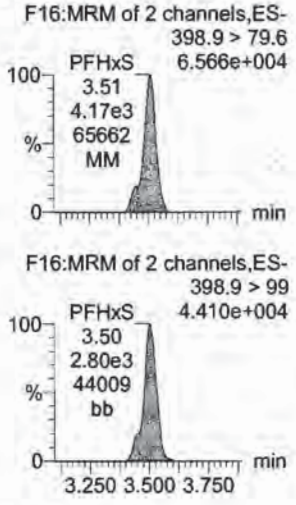
PFHxA



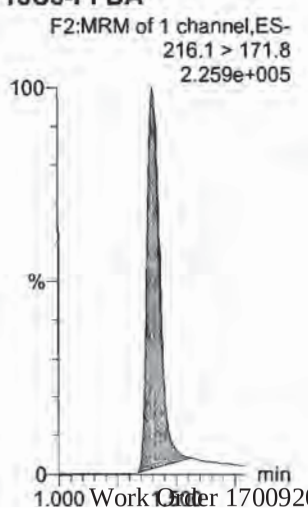
PFHpA



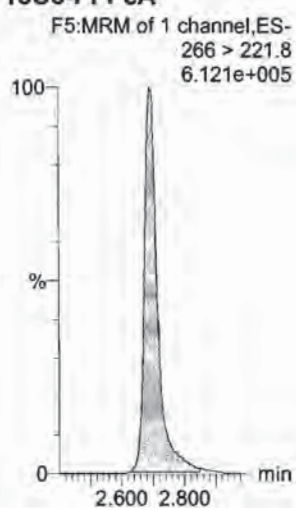
PFHxS



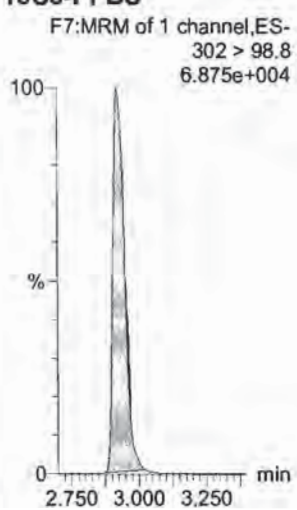
13C3-PFBA



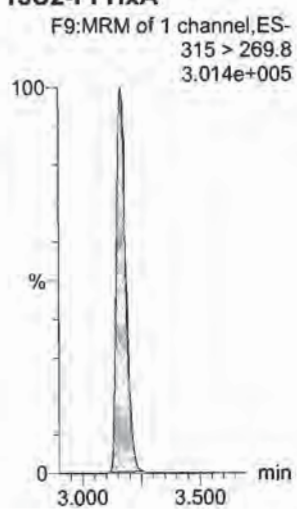
13C3-PFPeA



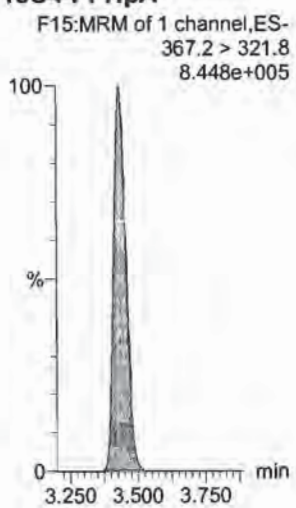
13C3-PFBS



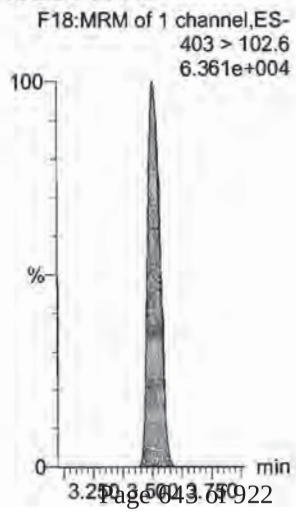
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
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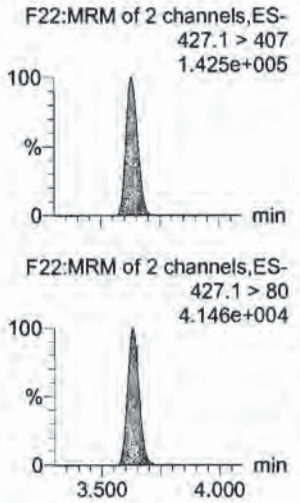
Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

6:2 FTS



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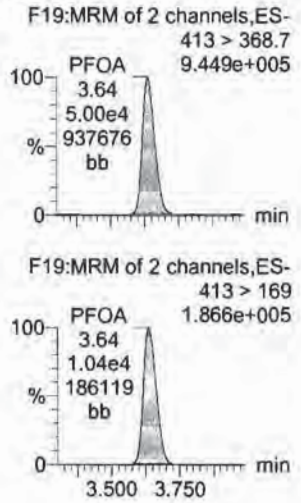
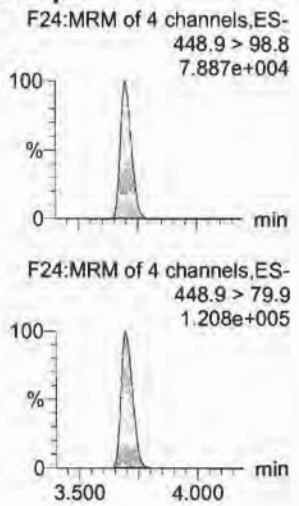
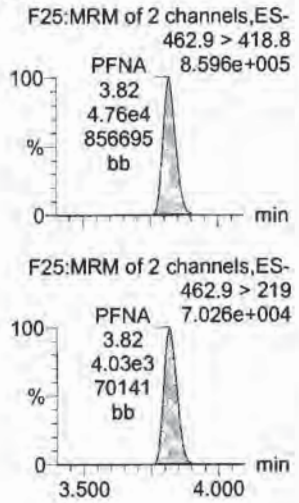


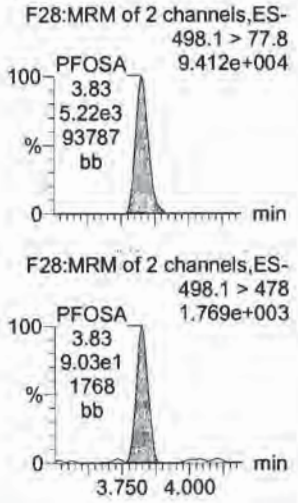
PFHpS



PFNA



PFOSA



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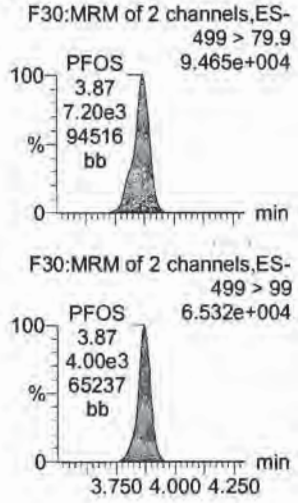
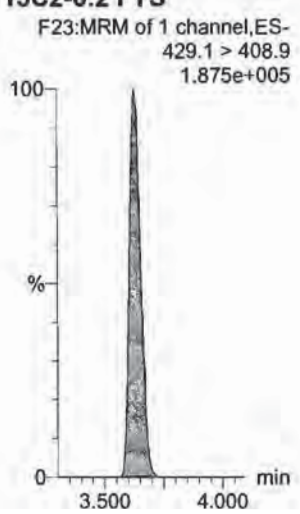
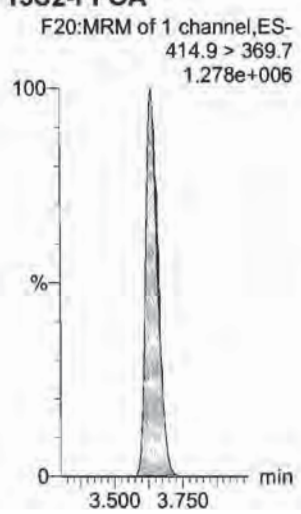


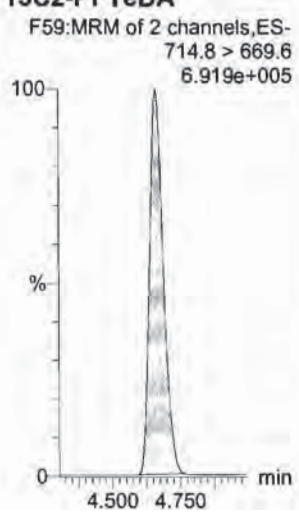
13C2-6:2 FTS



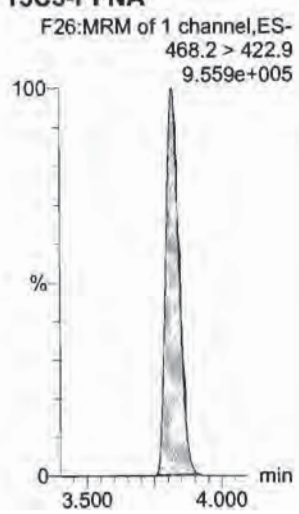
13C2-PFOA



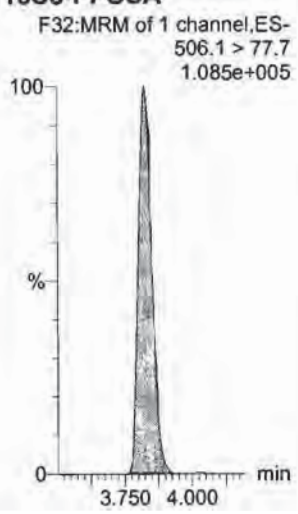
13C2-PFTeDA



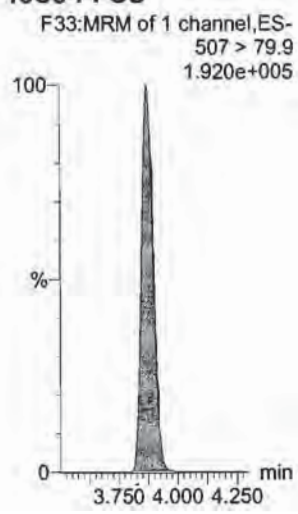
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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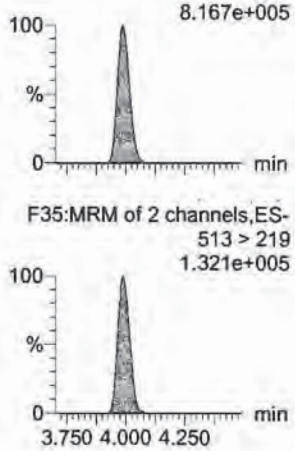
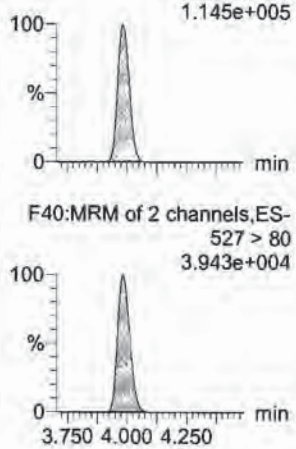
Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

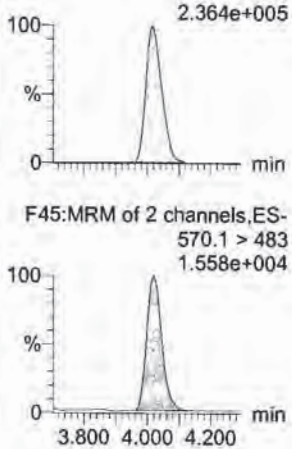
PFDA



8:2 FTS



N-MeFOSAA



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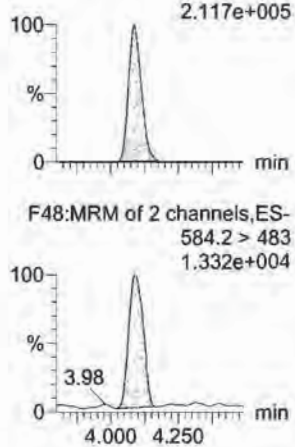
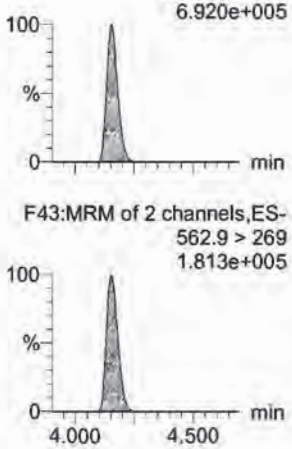
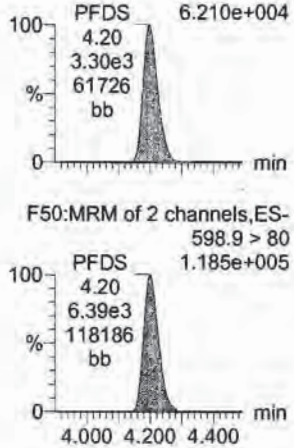


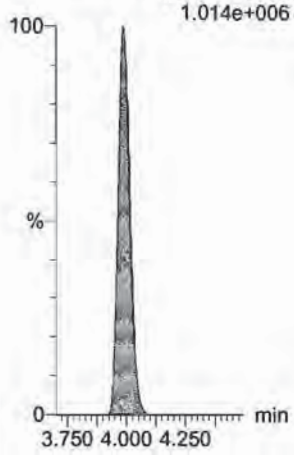
PFUnA



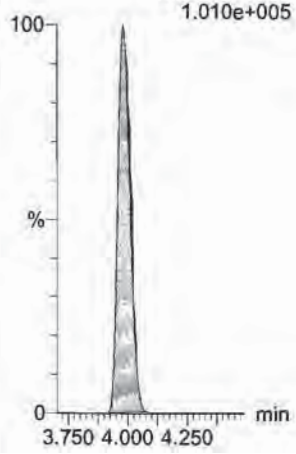
PFDS



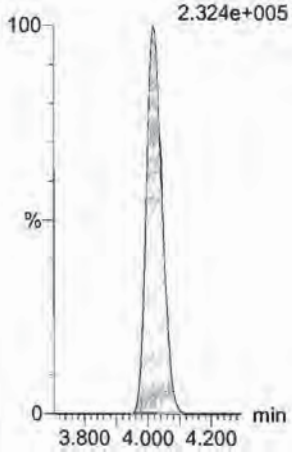
13C2-PFDA



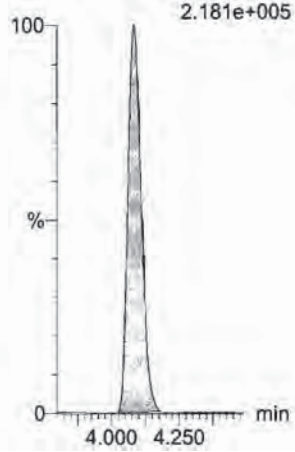
13C2-8:2 FTS



d3-N-MeFOSAA



d5-N-EtFOSAA



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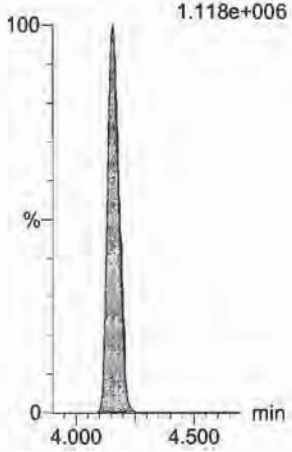
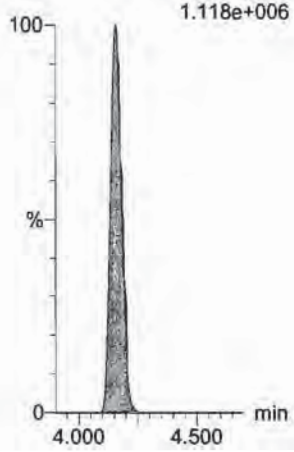


13C2-PFUnA



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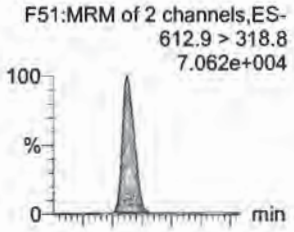
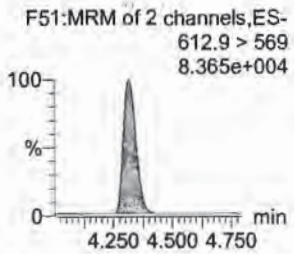
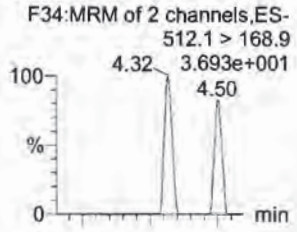
Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

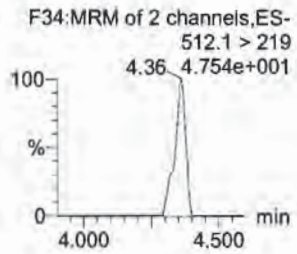
PFDoA



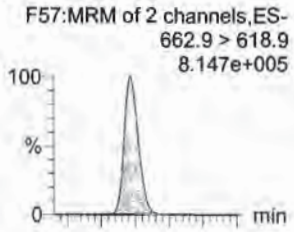


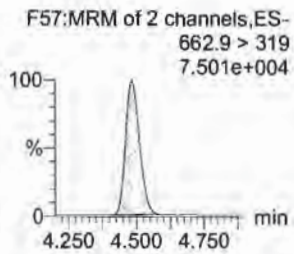
N-MeFOSA



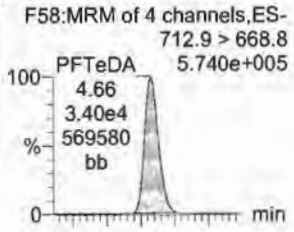


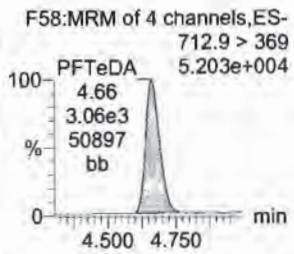
PFTrDA



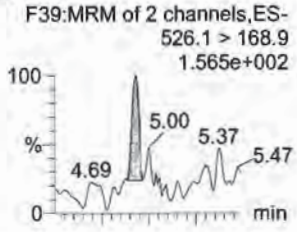


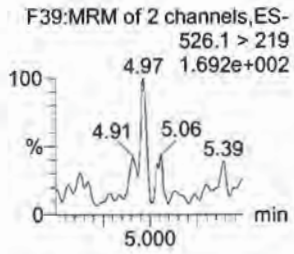
PFTeDA



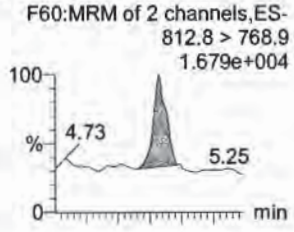


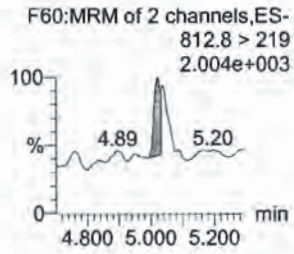
N-EtFOSA



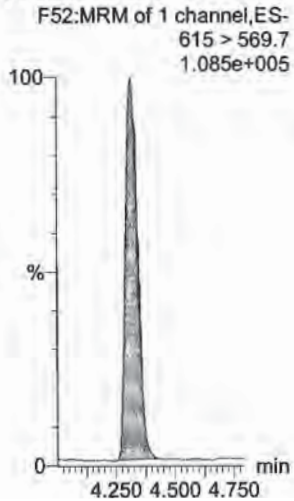


PFHxDA

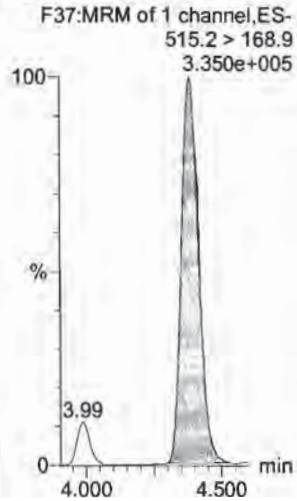




13C2-PFDoA



d3-N-MeFOSA



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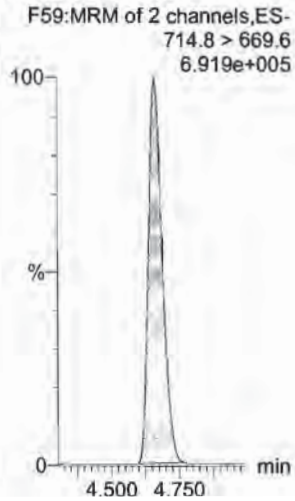

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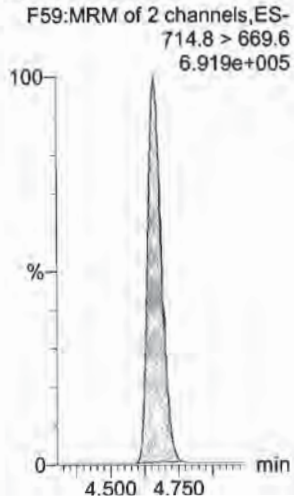
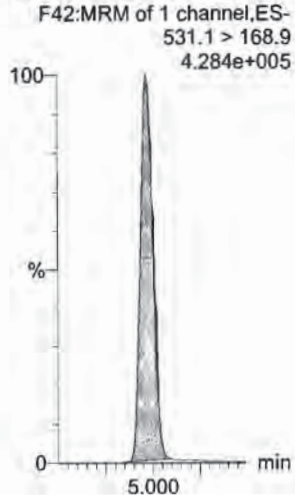
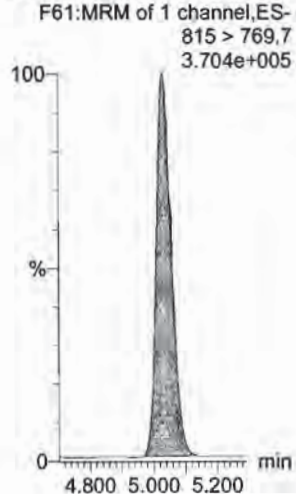


d5-N-ETFOSA



13C2-PFHxDA



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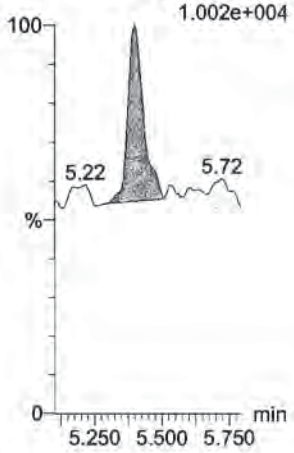
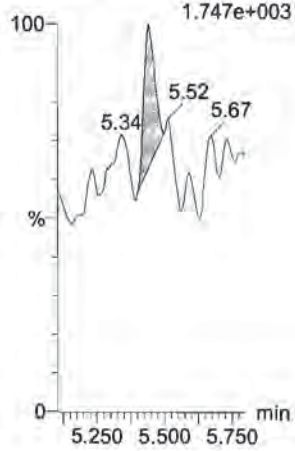
Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

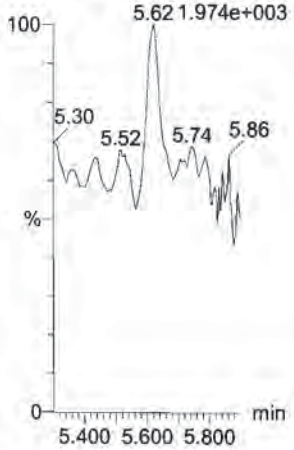
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.002e+004



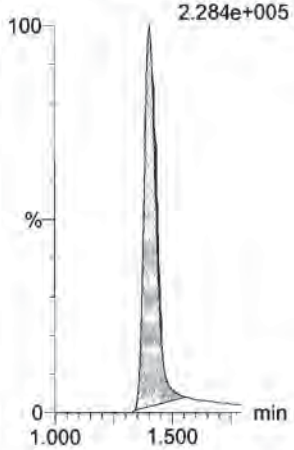
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.747e+003



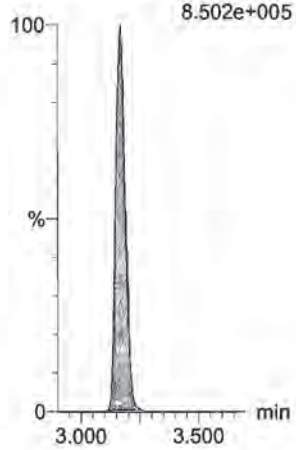
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
5.62 1.974e+003



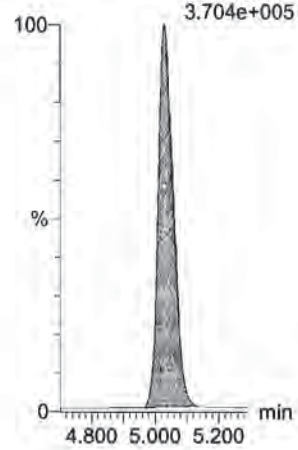
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.284e+005



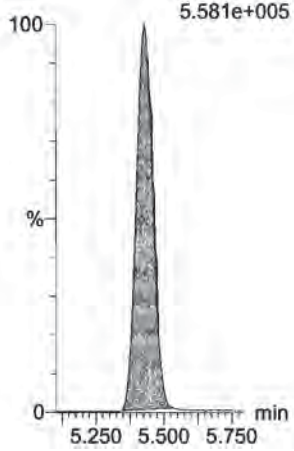
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.502e+005



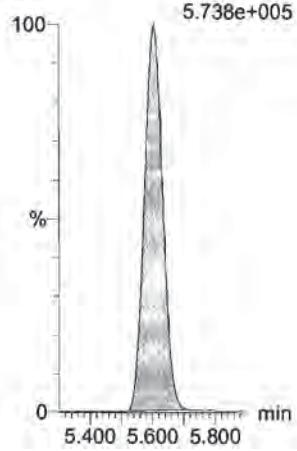
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.704e+005



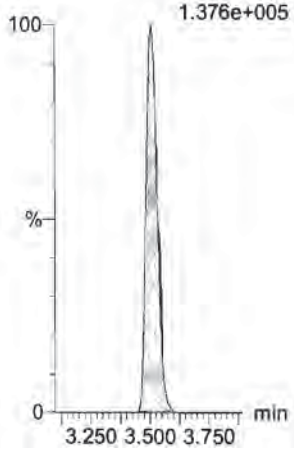
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.581e+005



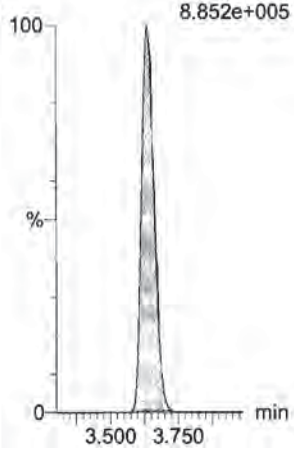
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.738e+005



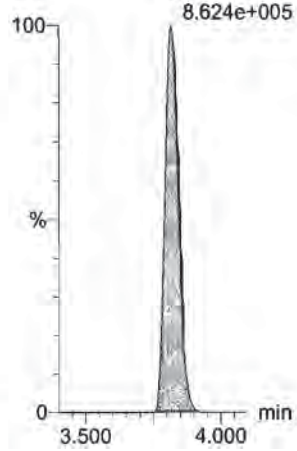
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.376e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
8.852e+005



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
8.624e+005



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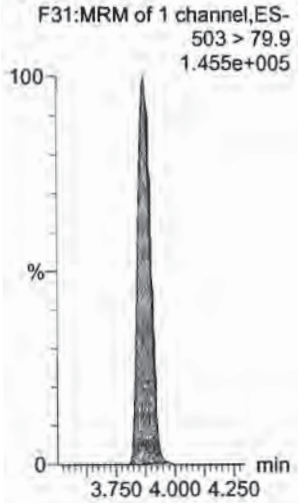
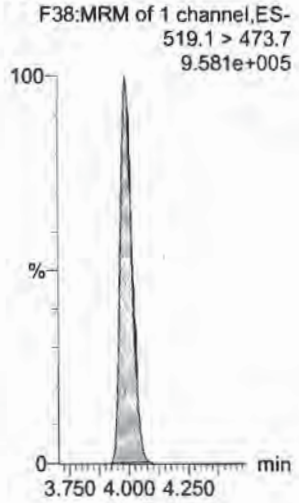
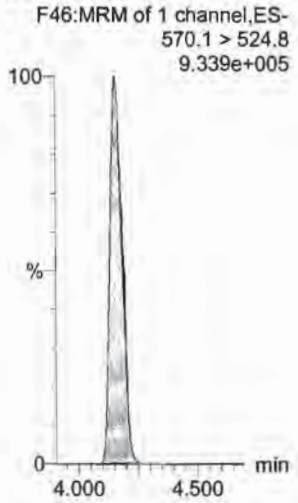
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

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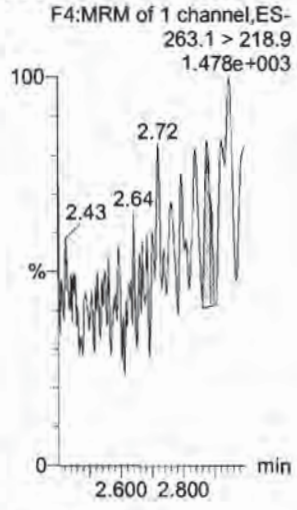
Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

PFBA



PFPeA



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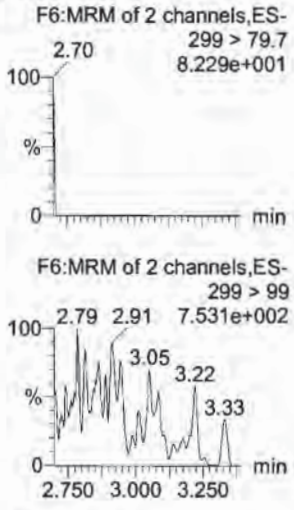

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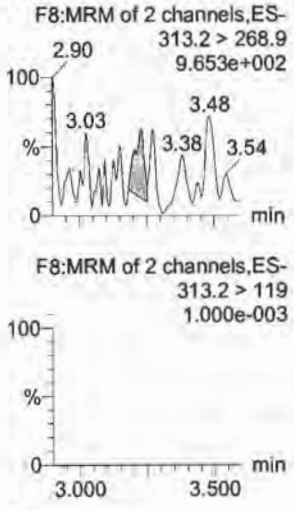
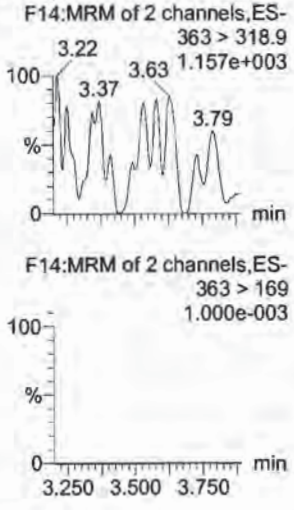
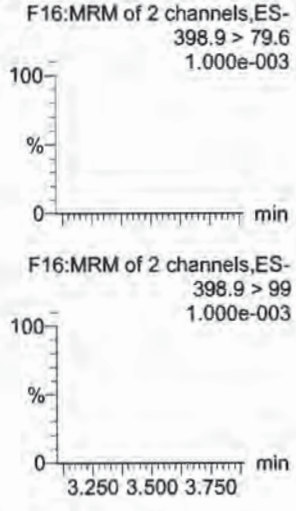


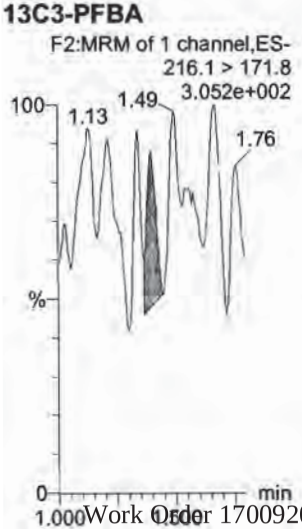
PFHpA



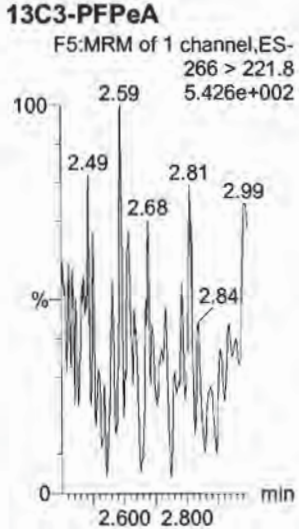
PFHxS



13C3-PFBA



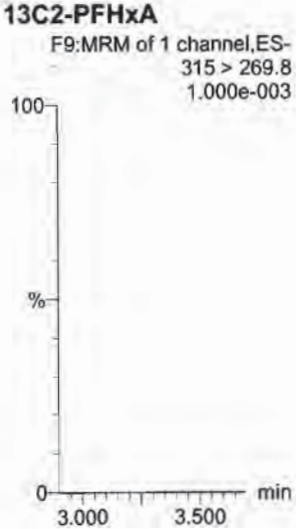
13C3-PFPeA



13C3-PFBS



13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



Vista Analytical Laboratory

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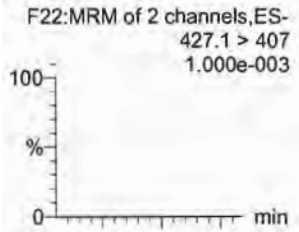
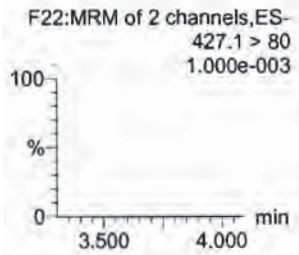
6:2 FTS





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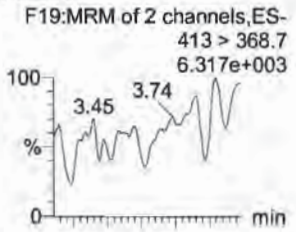

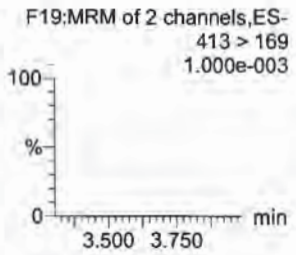

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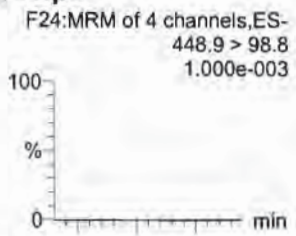

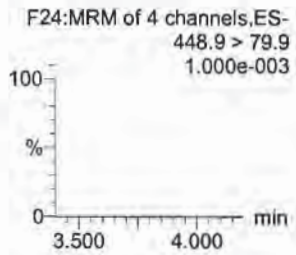

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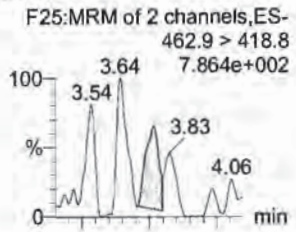
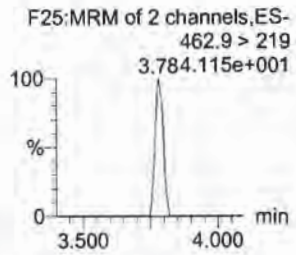
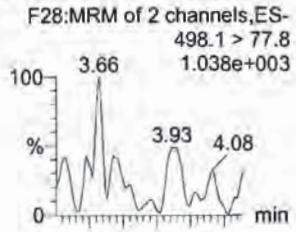
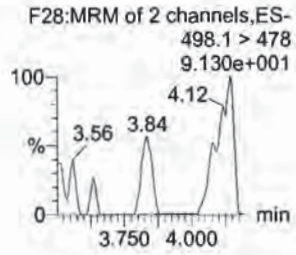


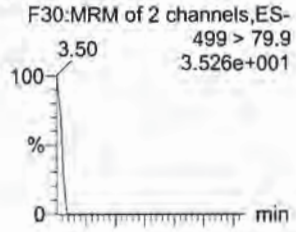


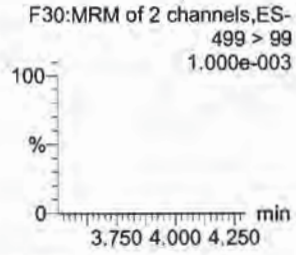
PFOSA





PFOS





13C2-6:2 FTS



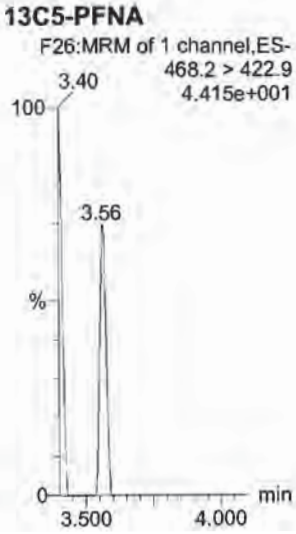
13C2-PFOA



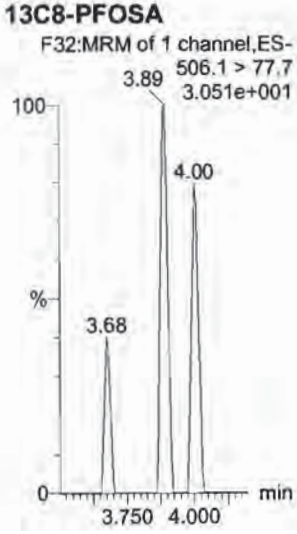
13C3-PFBS



13C5-PFNA



13C8-PFOSA



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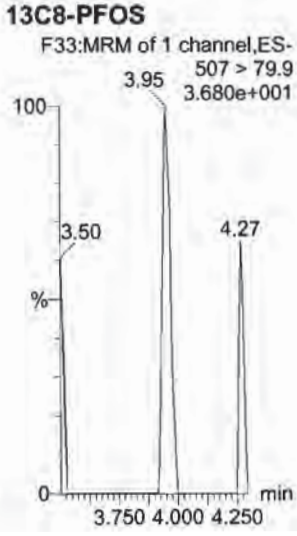

Vista Analytical Laboratory

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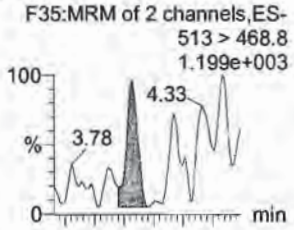
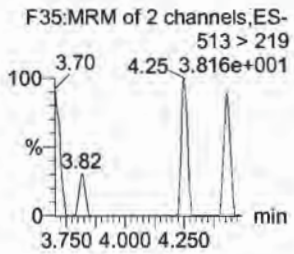
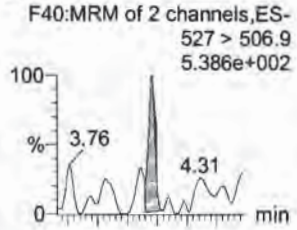
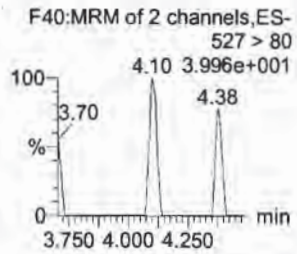
PFDA





8:2 FTS





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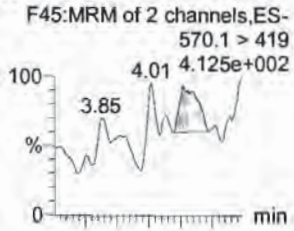
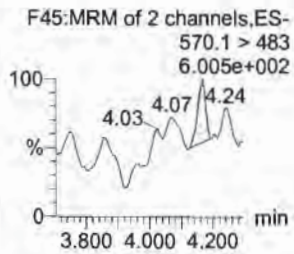
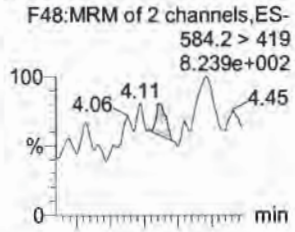
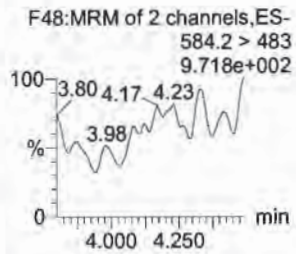




N-EtFOSAA





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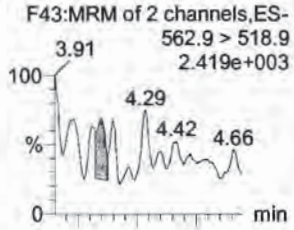

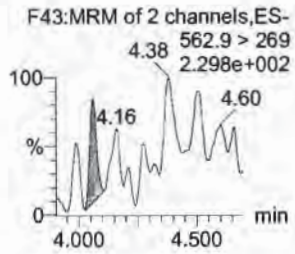

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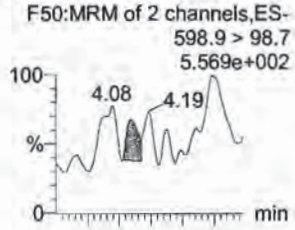

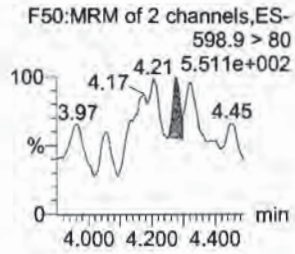

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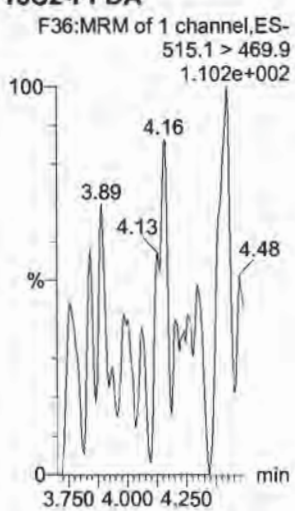
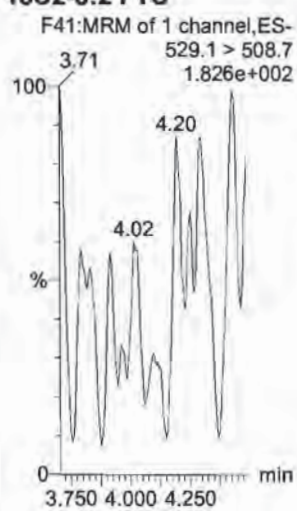
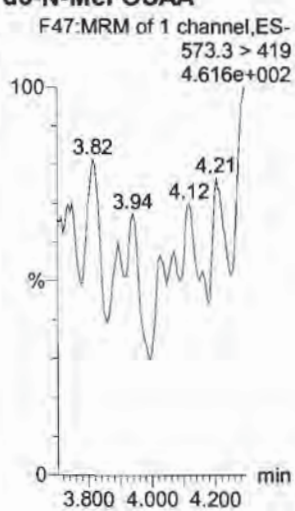


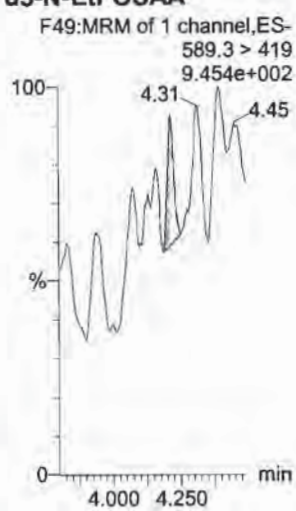
13C2-8:2 FTS



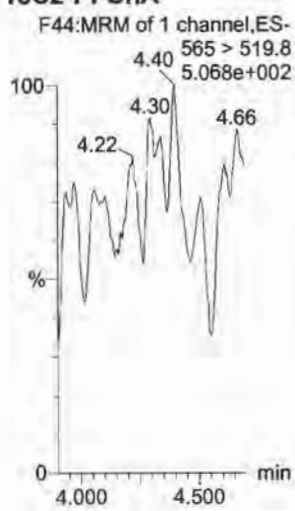
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFUnA



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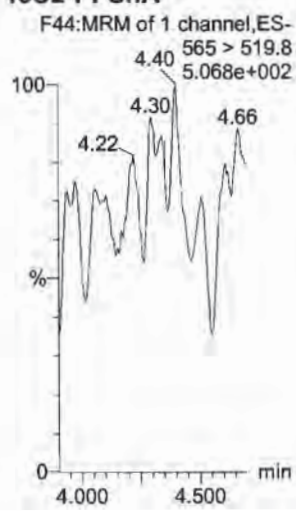

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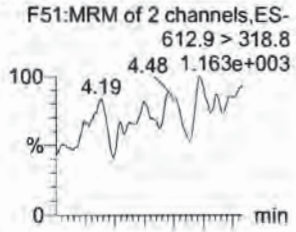
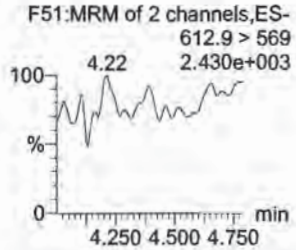
PFDoA





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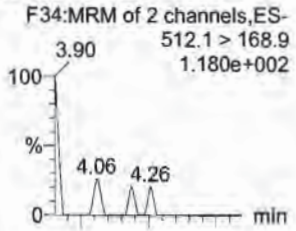

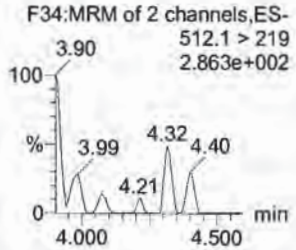

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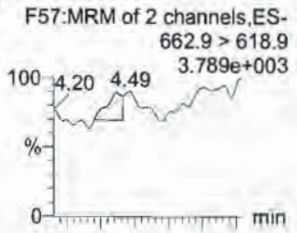

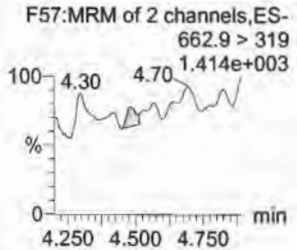

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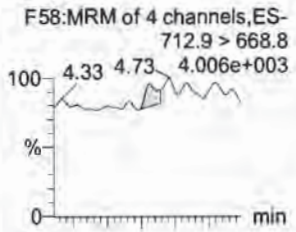

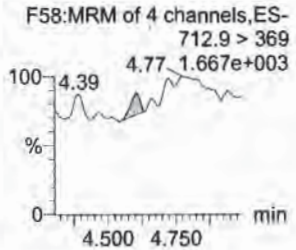

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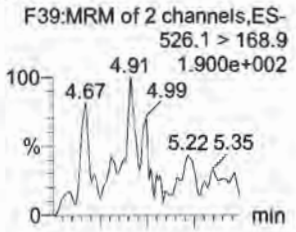

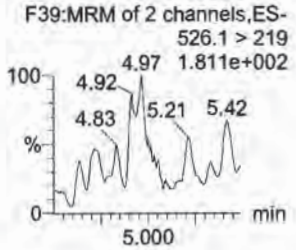

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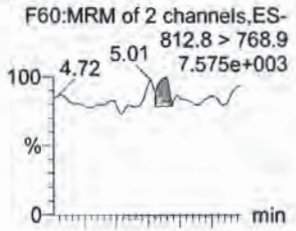

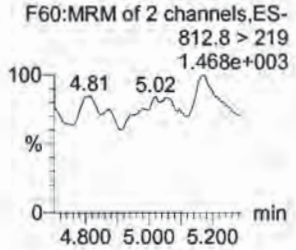

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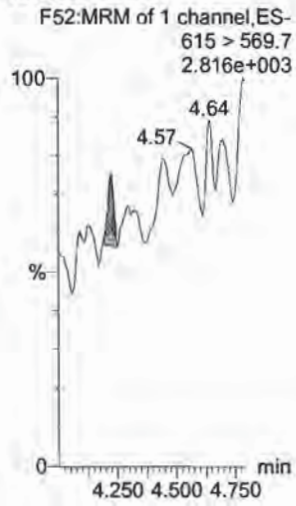

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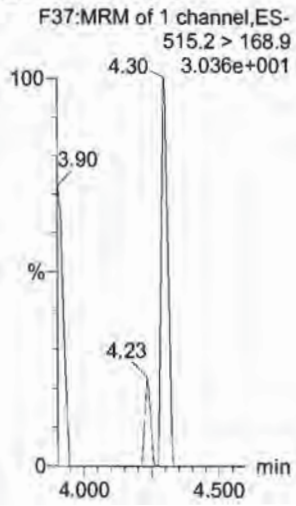

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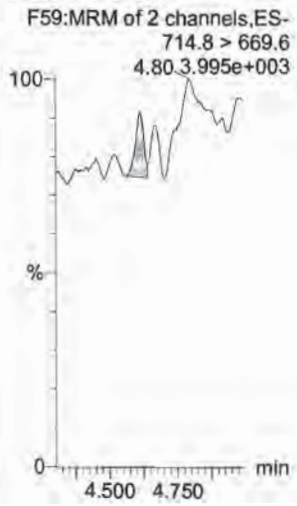

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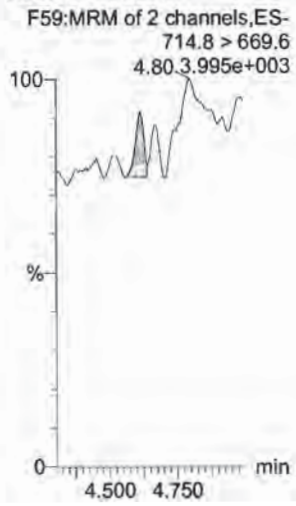

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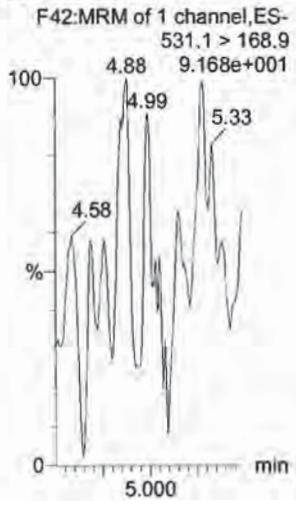

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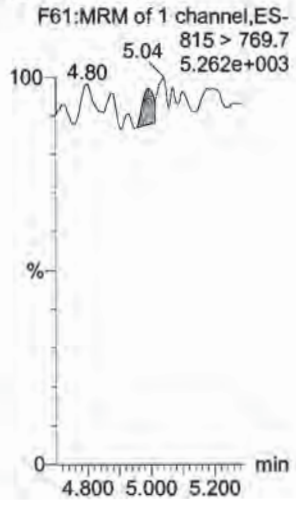

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Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

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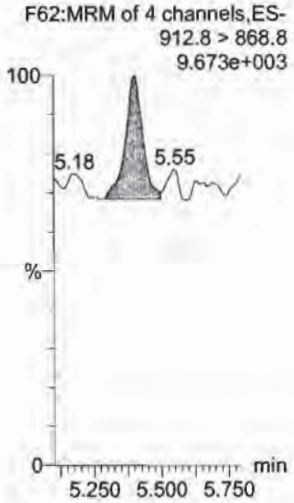

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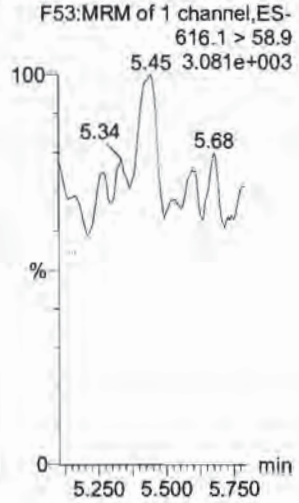

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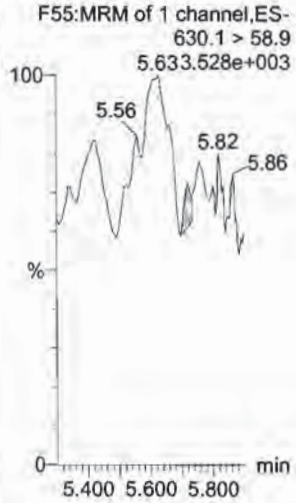

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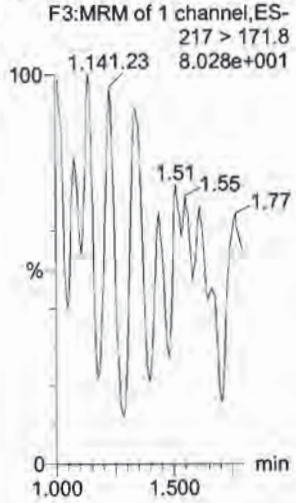

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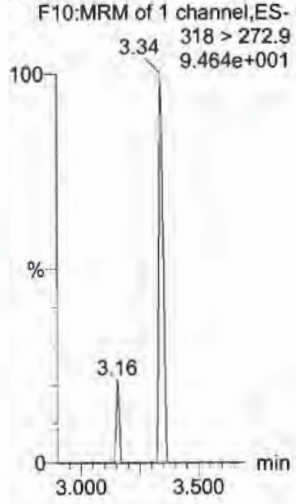

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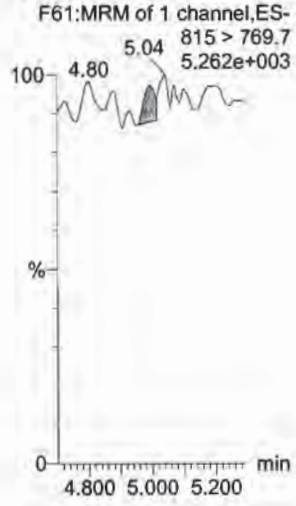

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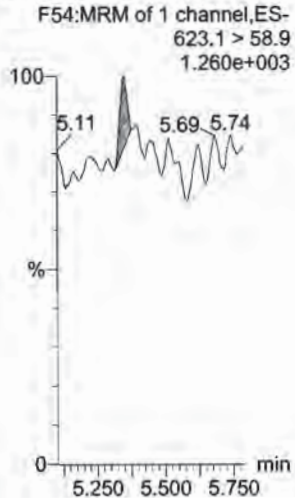
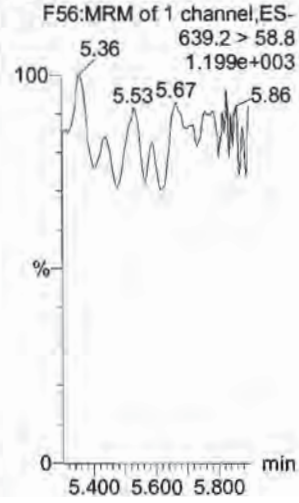


d9-N-EtFOSE



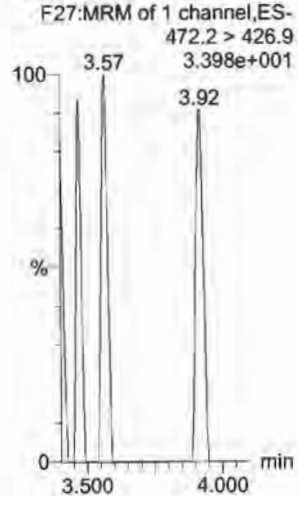
13C3-PFHxS



13C8-PFOA



13C9-PFNA



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Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

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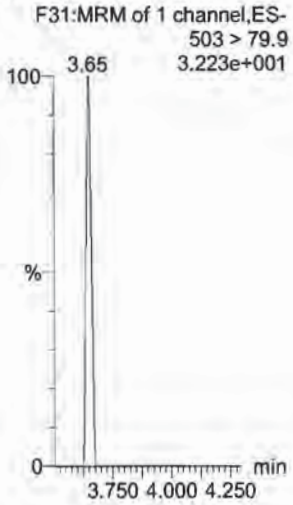

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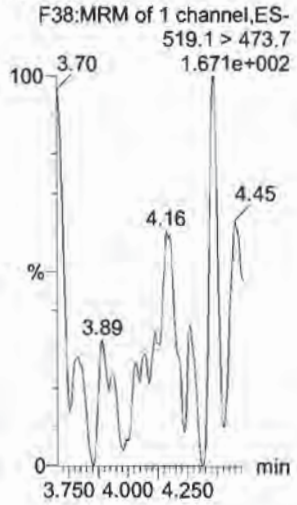

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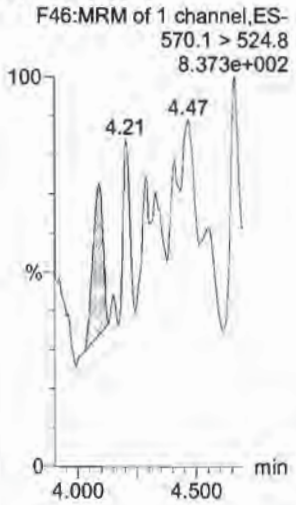

Vista Analytical Laboratory

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AC 8/1/17

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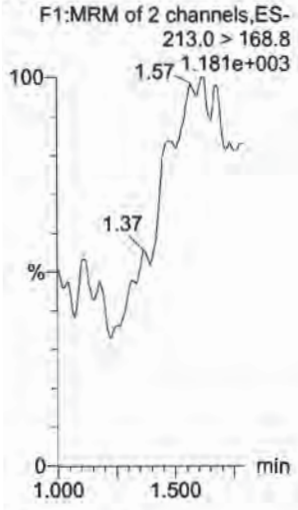

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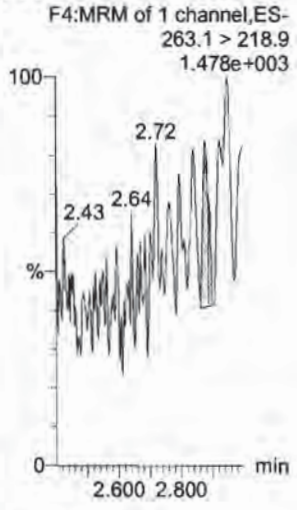

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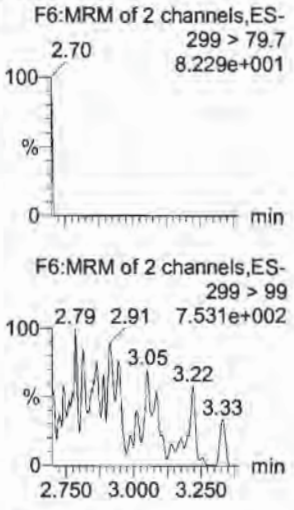

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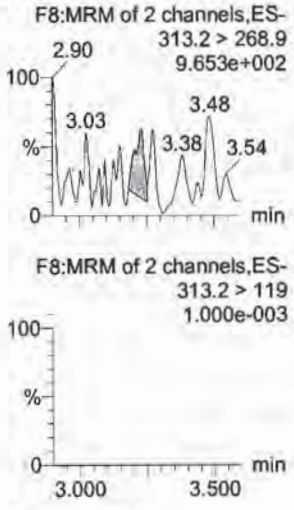

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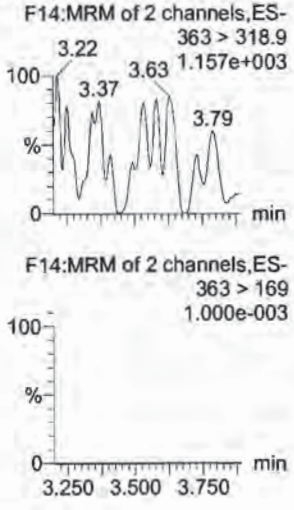

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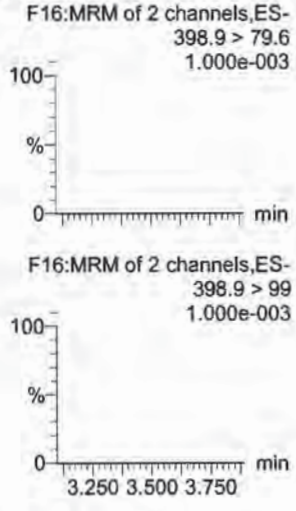

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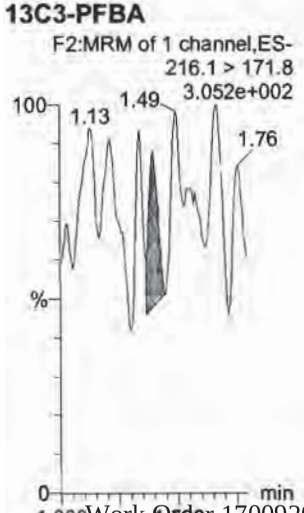

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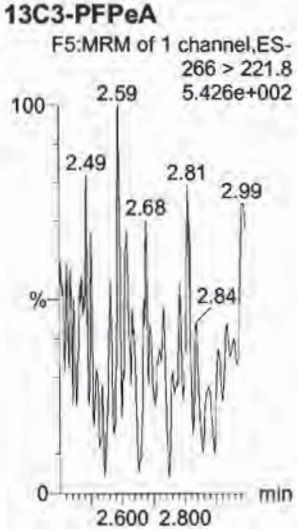
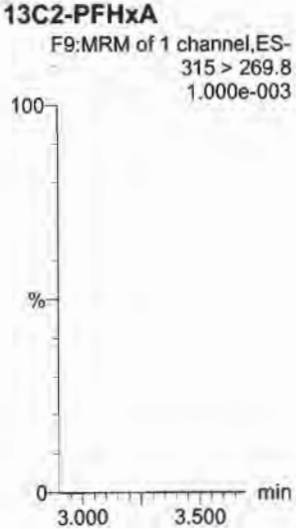


13C3-PFBS



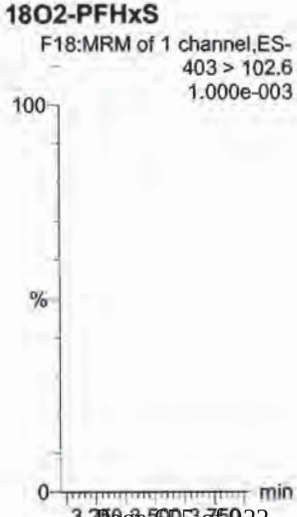
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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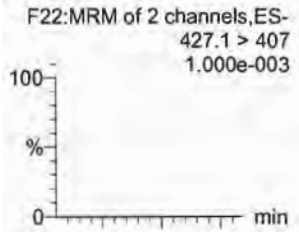
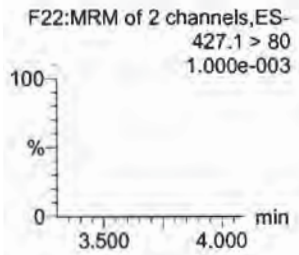
Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

6:2 FTS





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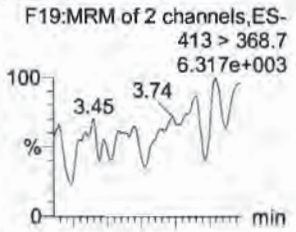

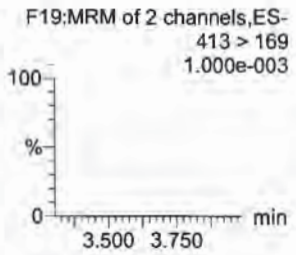

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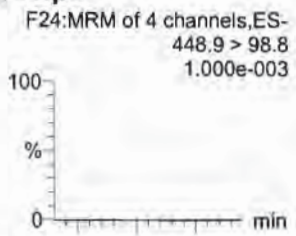

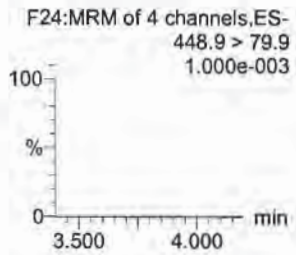

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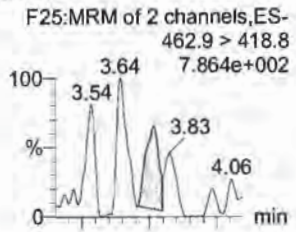

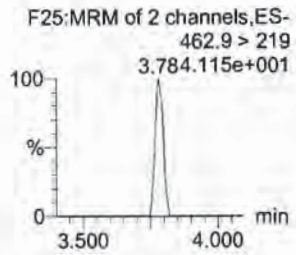

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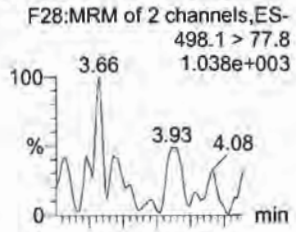

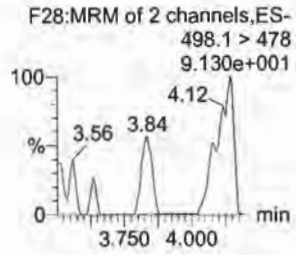

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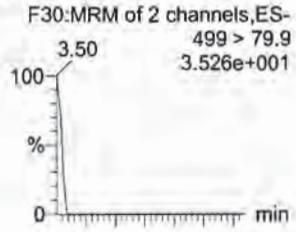

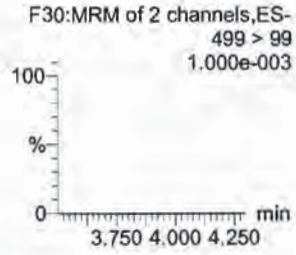

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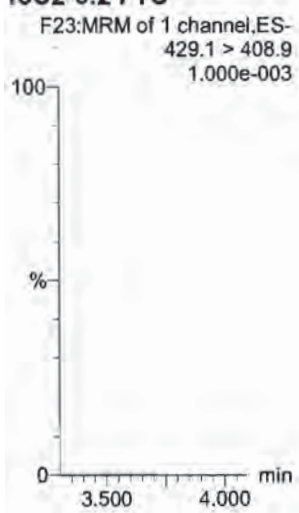


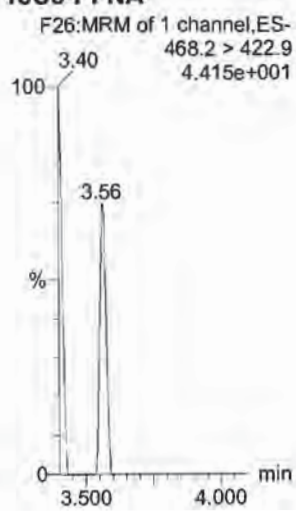
13C2-PFOA



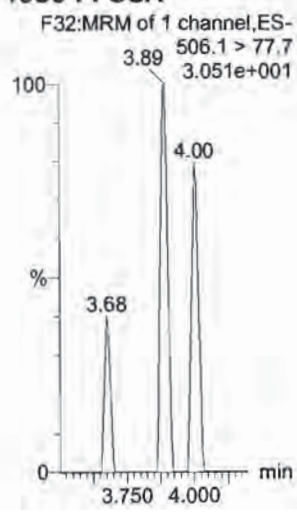
13C3-PFBS



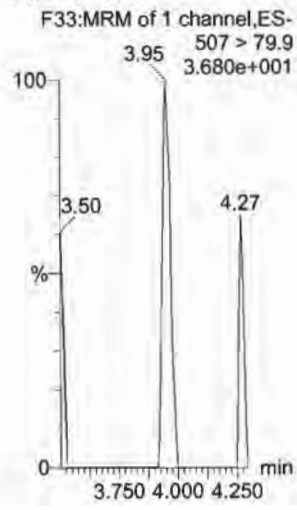
13C5-PFNA



13C8-PFOSA



13C8-PFOS



Vista Analytical Laboratory

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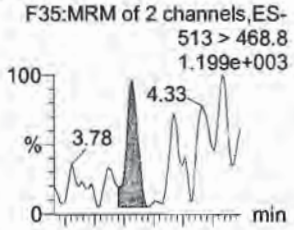
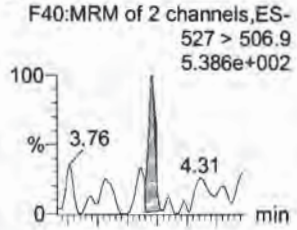
Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

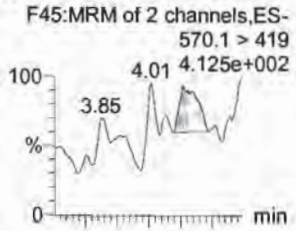
PFDA



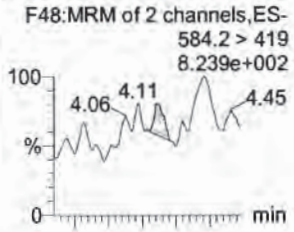
8:2 FTS



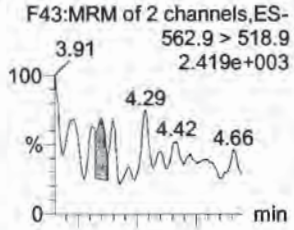
N-MeFOSAA



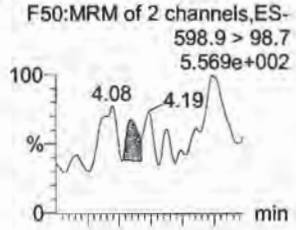
N-EtFOSAA



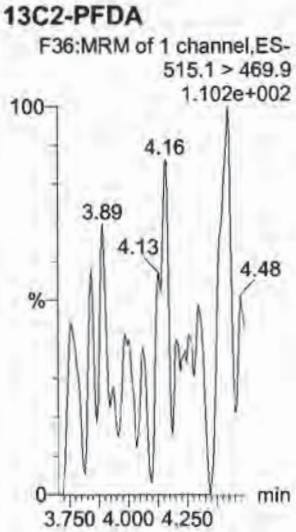
PFUnA



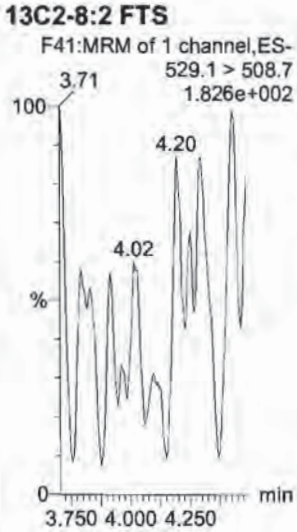
PFDS



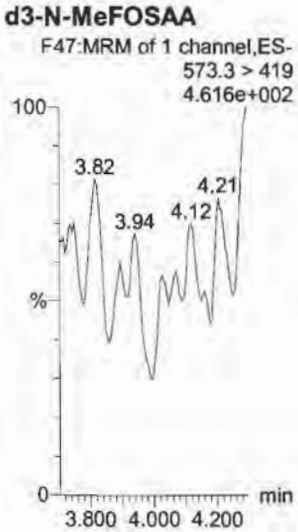
13C2-PFDA



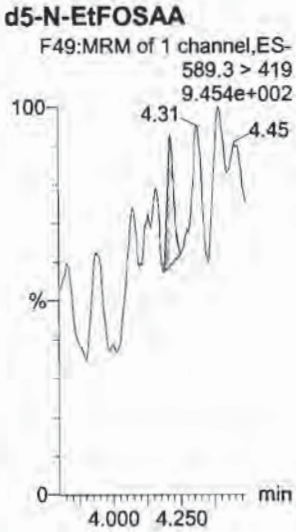
13C2-8:2 FTS



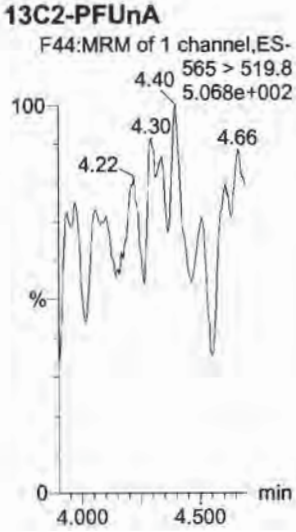
d3-N-MeFOSAA



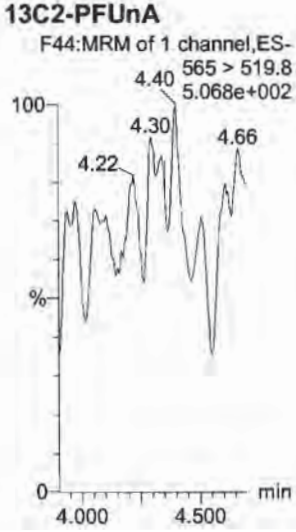
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



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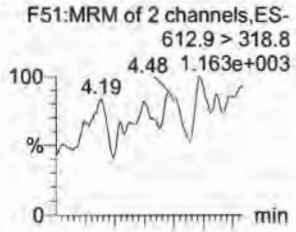
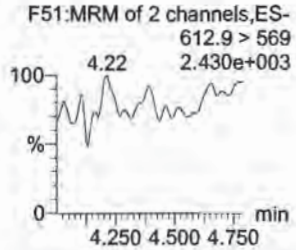
Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

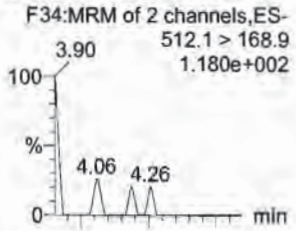
Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

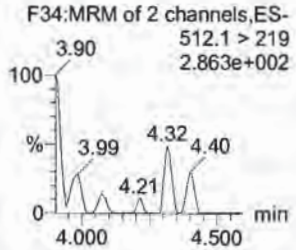
PFDoA



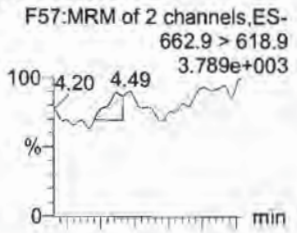


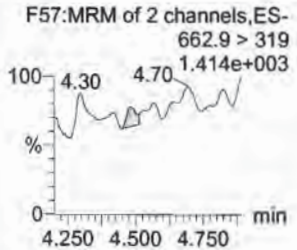
N-MeFOSA



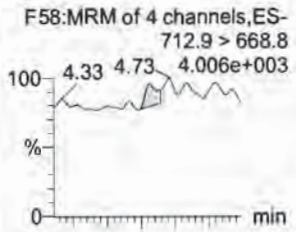


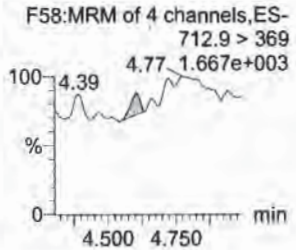
PFTrDA



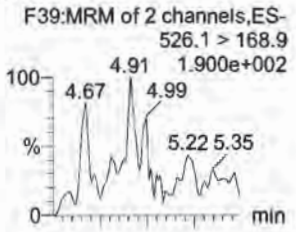


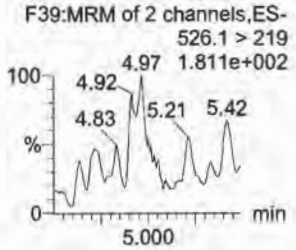
PFTeDA



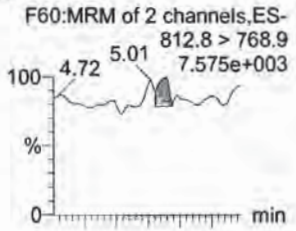


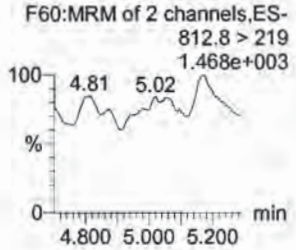
N-EtFOSA



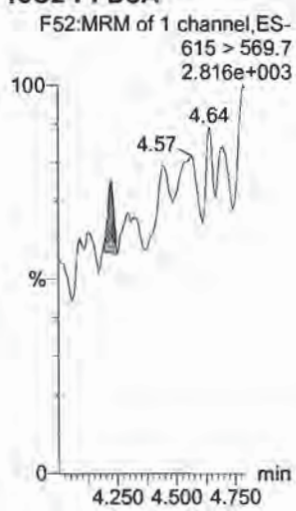


PFHxDA

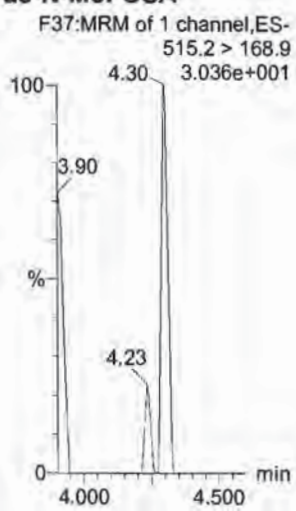




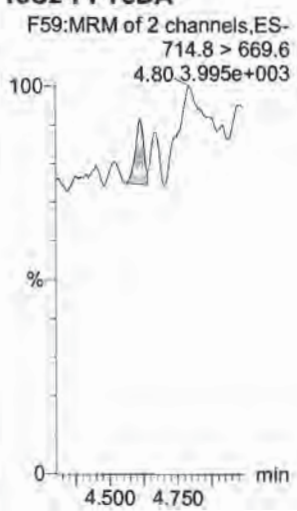
13C2-PFDoA



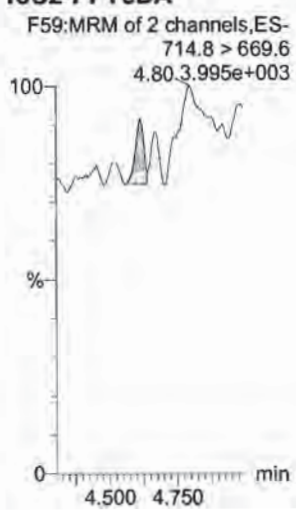
d3-N-MeFOSA



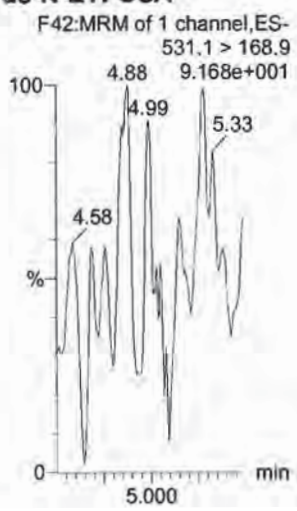
13C2-PFTeDA



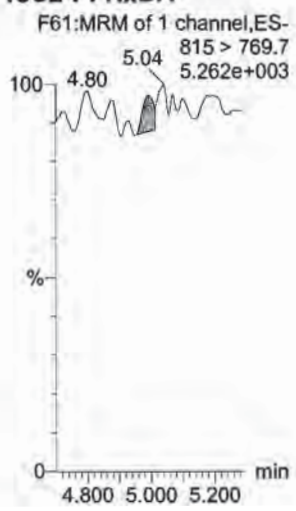
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



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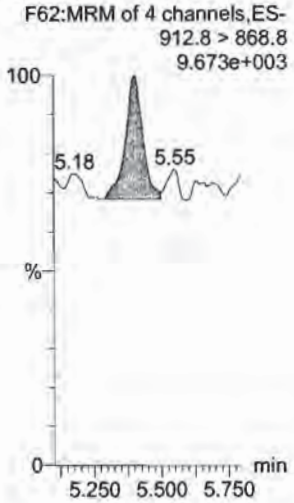
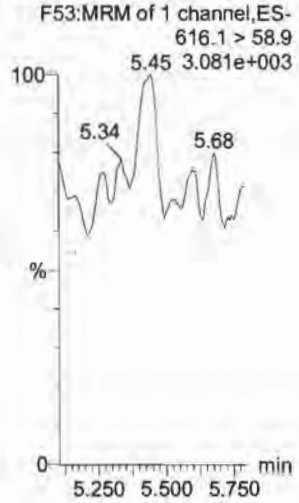
Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

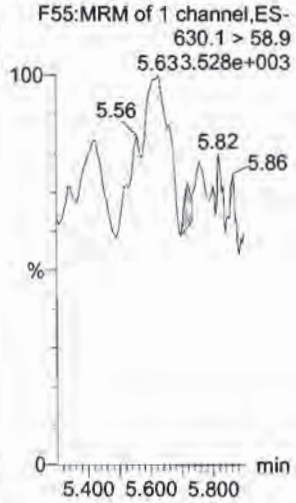
PFODA



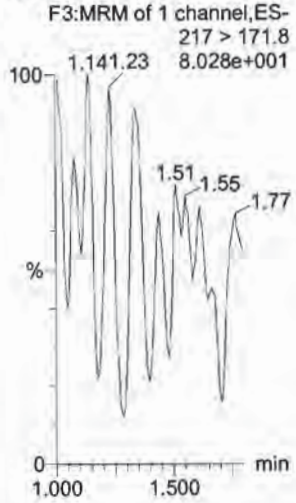
N-MeFOSE



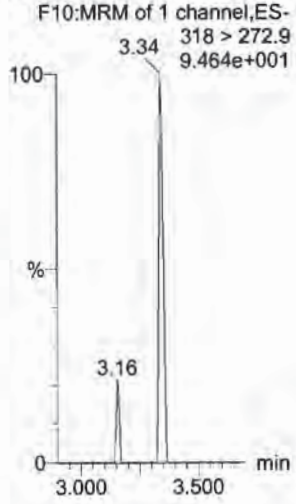
N-EtFOSE



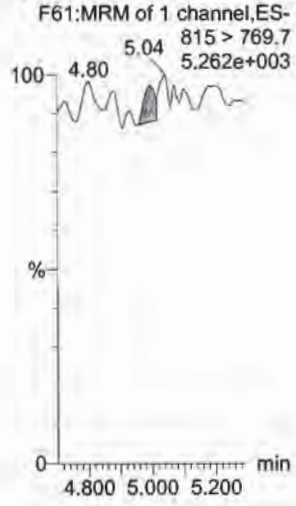
13C4-PFBA



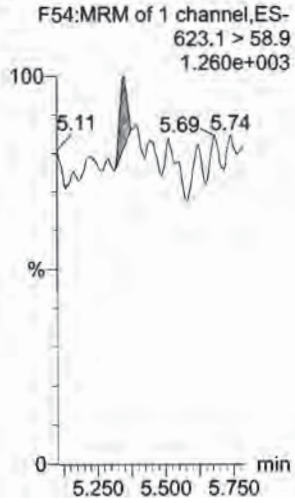
13C5-PFHxA



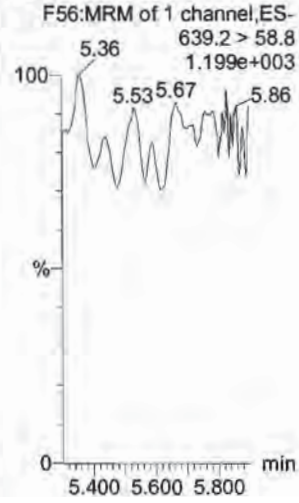
13C2-PFHxDA



d7-N-MeFOSE



d9-N-EtFOSE



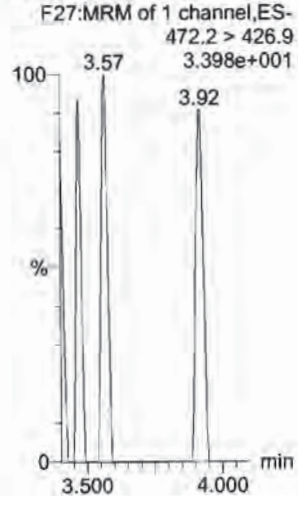
13C3-PFHxS



13C8-PFOA



13C9-PFNA



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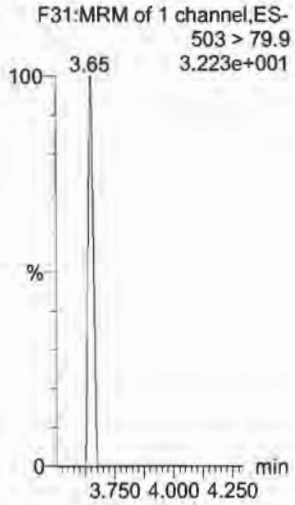
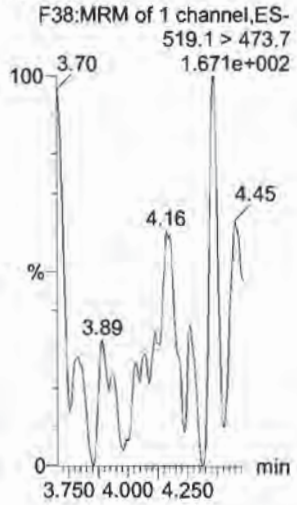
Last Altered: Tuesday, August 01, 2017 10:23:10 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

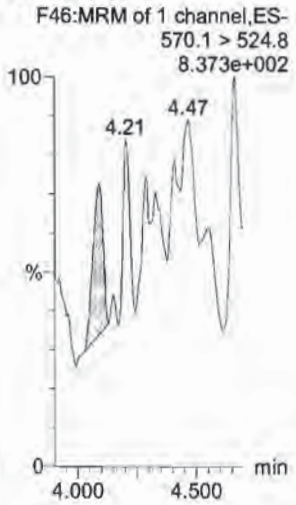
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:36:59 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999660
Calibration curve: -0.000838043 * x^2 + 0.778045 * x + 0.0580166
Response type: Internal Std (Ref 11), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170807G3_2	0.250	1.73	3.78e2	2.15e4	0.208	-16.8	0.879
2	2 170807G3_3	0.500	1.73	7.73e2	2.20e4	0.490	-1.9	0.879
3	3 170807G3_4	1.00	1.73	1.53e3	2.05e4	1.12	12.3	0.931
4	4 170807G3_5	2.00	1.73	2.72e3	2.02e4	2.09	4.6	0.841
5	5 170807G3_6	5.00	1.73	6.61e3	2.01e4	5.24	4.8	0.822
6	6 170807G3_7	10.0	1.79	1.56e4	2.57e4	9.76	-2.4	0.757
7	7 170807G3_8	50.0	1.74	6.00e4	2.05e4	49.6	-0.8	0.732
8	8 170807G3_9	100	1.73	1.27e5	2.27e4	100	0.2	0.696

Compound name: PFPeA
Correlation coefficient: r = 0.999705, r^2 = 0.999410
Calibration curve: 1.07143 * x + 0.0515195
Response type: Internal Std (Ref 13), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170807G3_2	0.250	2.66	1.54e2	7.97e3	0.178	-28.9	0.968
2	2 170807G3_3	0.500	2.67	4.17e2	8.14e3	0.550	10.0	1.28
3	3 170807G3_4	1.00	2.70	7.41e2	7.68e3	1.08	7.7	1.21
4	4 170807G3_5	2.00	2.66	1.46e3	7.56e3	2.21	10.4	1.21
5	5 170807G3_6	5.00	2.67	3.27e3	7.17e3	5.28	5.6	1.14
6	6 170807G3_7	10.0	2.67	7.60e3	9.29e3	9.50	-5.0	1.02
7	7 170807G3_8	50.0	2.67	2.84e4	6.61e3	50.1	0.2	1.07
8	8 170807G3_9	100	2.67	5.81e4	6.79e3	99.8	-0.2	1.07

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:36:59 Pacific Daylight Time

Compound name: PFBS
Correlation coefficient: r = 0.999608, r^2 = 0.999217
Calibration curve: 1.18972 * x + -0.111193
Response type: Internal Std (Ref 12), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	2.94	6.97e1	5.09e3	0.237	-5.1	0.685
2	2	170807G3_3	0.500	2.94	2.32e2	5.33e3	0.550	10.0	1.09
3	3	170807G3_4	1.00	2.97	4.36e2	4.81e3	1.04	4.5	1.13
4	4	170807G3_5	2.00	2.94	8.42e2	4.45e3	2.08	3.9	1.18
5	5	170807G3_6	5.00	2.94	2.00e3	4.80e3	4.48	-10.4	1.04
6	6	170807G3_7	10.0	2.94	4.77e3	5.19e3	9.76	-2.4	1.15
7	7	170807G3_8	50.0	2.94	1.74e4	3.75e3	48.9	-2.2	1.16
8	8	170807G3_9	100	2.94	3.71e4	3.84e3	102	1.7	1.21

Compound name: PFHxA
Correlation coefficient: r = 0.999708, r^2 = 0.999416
Calibration curve: 1.91046 * x + 0.230955
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	3.31	2.84e2	5.68e3	0.206	-17.5	2.50
2	2	170807G3_3	0.500	3.31	5.71e2	6.05e3	0.496	-0.7	2.36
3	3	170807G3_4	1.00	3.23	1.20e3	7.23e3	0.967	-3.3	2.08
4	4	170807G3_5	2.00	3.31	1.99e3	5.55e3	2.23	11.4	2.24
5	5	170807G3_6	5.00	3.31	4.53e3	5.32e3	5.45	9.0	2.13
6	6	170807G3_7	10.0	3.32	1.07e4	6.86e3	10.1	1.3	1.96
7	7	170807G3_8	50.0	3.31	3.92e4	5.07e3	50.4	0.8	1.93
8	8	170807G3_9	100	3.31	8.10e4	5.35e3	98.8	-1.2	1.89

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Compound name: PFHpA
Correlation coefficient: r = 0.999829, r^2 = 0.999658
Calibration curve: 2.02015 * x + -0.00519606
Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	3.84	2.41e2	6.88e3	0.219	-12.4	1.75
2	2	170807G3_3	0.500	3.83	6.01e2	6.90e3	0.542	8.4	2.18
3	3	170807G3_4	1.00	3.73	1.13e3	6.43e3	1.09	9.3	2.20
4	4	170807G3_5	2.00	3.83	2.06e3	6.22e3	2.05	2.4	2.07
5	5	170807G3_6	5.00	3.83	5.03e3	6.55e3	4.75	-5.0	1.92
6	6	170807G3_7	10.0	3.83	1.23e4	7.82e3	9.77	-2.3	1.97
7	7	170807G3_8	50.0	3.83	4.81e4	6.04e3	49.3	-1.4	1.99
8	8	170807G3_9	100	3.83	9.32e4	5.71e3	101	1.0	2.04

Compound name: PFHxS
Correlation coefficient: r = 0.999295, r^2 = 0.998591
Calibration curve: 1.49643 * x + 0.0513693
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	3.96	1.27e2	4.40e3	0.206	-17.5	1.44
2	2	170807G3_3	0.500	3.96	3.16e2	4.47e3	0.557	11.4	1.77
3	3	170807G3_4	1.00	3.89	5.17e2	3.83e3	1.09	9.3	1.69
4	4	170807G3_5	2.00	3.96	9.70e2	3.91e3	2.04	1.8	1.55
5	5	170807G3_6	5.00	3.96	2.35e3	3.83e3	5.09	1.9	1.53
6	6	170807G3_7	10.0	3.97	5.58e3	4.88e3	9.52	-4.8	1.43
7	7	170807G3_8	50.0	3.97	2.15e4	3.77e3	47.6	-4.7	1.43
8	8	170807G3_9	100	3.96	4.55e4	3.71e3	103	2.6	1.54

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Compound name: PFOA
Coefficient of Determination: R^2 = 0.999319
Calibration curve: -0.00115809 * x^2 + 0.846733 * x + 0.0978197
Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	4.26	4.34e2	1.57e4	0.293	17.2	1.38
2	2	170807G3_3	0.500	4.25	5.21e2	1.59e4	0.368	-26.3	0.819
3	3	170807G3_4	1.00	4.21	1.22e3	1.40e4	1.17	17.0	1.09
4	4	170807G3_5	2.00	4.25	1.90e3	1.39e4	1.91	-4.5	0.855
5	5	170807G3_6	5.00	4.26	4.94e3	1.50e4	4.77	-4.6	0.822
6	6	170807G3_7	10.0	4.26	1.23e4	1.81e4	10.1	0.7	0.851
7	7	170807G3_8	50.0	4.26	4.57e4	1.43e4	50.4	0.7	0.796
8	8	170807G3_9	100	4.26	9.45e4	1.62e4	99.8	-0.2	0.731

Compound name: PFNA
Coefficient of Determination: R^2 = 0.998786
Calibration curve: 0.00124304 * x^2 + 1.75438 * x + 0.095479
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	4.60	3.08e2	6.83e3	0.267	6.7	2.25
2	2	170807G3_3	0.500	4.60	4.56e2	6.70e3	0.430	-14.0	1.70
3	3	170807G3_4	1.00	4.58	9.43e2	7.14e3	0.886	-11.4	1.65
4	4	170807G3_5	2.00	4.60	2.05e3	6.74e3	2.11	5.6	1.90
5	5	170807G3_6	5.00	4.60	5.27e3	6.81e3	5.44	8.8	1.94
6	6	170807G3_7	10.0	4.60	1.16e4	7.64e3	10.7	7.3	1.91
7	7	170807G3_8	50.0	4.60	4.88e4	6.98e3	48.1	-3.8	1.75
8	8	170807G3_9	100	4.60	1.03e5	6.78e3	101	0.8	1.90

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Compound name: PFOS
Coefficient of Determination: R^2 = 0.999151
Calibration curve: 0.000618235 * x^2 + 0.356557 * x + 0.0224255
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	4.67	7.91e1	8.29e3	0.271	8.5	0.477
2	2	170807G3_3	0.500	4.67	8.90e1	7.00e3	0.382	-23.5	0.318
3	3	170807G3_4	1.00	4.65	1.89e2	5.91e3	1.06	5.7	0.400
4	4	170807G3_5	2.00	4.66	3.61e2	5.97e3	2.05	2.5	0.378
5	5	170807G3_6	5.00	4.67	1.28e3	7.73e3	5.68	13.5	0.413
6	6	170807G3_7	10.0	4.67	1.93e3	7.10e3	9.34	-6.6	0.340
7	7	170807G3_8	50.0	4.67	1.21e4	7.79e3	49.9	-0.2	0.387
8	8	170807G3_9	100	4.67	2.73e4	8.15e3	100	0.1	0.419

Compound name: PFDA
Coefficient of Determination: R^2 = 0.999960
Calibration curve: -5.7047e-005 * x^2 + 0.190696 * x + 0.015188
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	4.89	4.81e1	9.15e3	0.265	6.0	0.263
2	2	170807G3_3	0.500	4.89	7.13e1	8.46e3	0.473	-5.4	0.211
3	3	170807G3_4	1.00	4.89	1.18e2	7.02e3	1.02	1.9	0.210
4	4	170807G3_5	2.00	4.89	2.53e2	8.04e3	1.98	-0.8	0.197
5	5	170807G3_6	5.00	4.89	7.59e2	9.97e3	4.92	-1.7	0.190
6	6	170807G3_7	10.0	4.90	1.11e3	7.25e3	9.95	-0.5	0.191
7	7	170807G3_8	50.0	4.89	7.79e3	1.03e4	50.3	0.6	0.189
8	8	170807G3_9	100	4.89	1.73e4	1.17e4	99.9	-0.1	0.185

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Compound name: 13C3-PFBA
Response Factor: 1.39064
RRF SD: 0.0597279, Relative SD: 4.295
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	1.72	2.15e4	1.61e4	12.0	-4.2	1.33
2	2	170807G3_3	12.5	1.74	2.20e4	1.62e4	12.2	-2.5	1.36
3	3	170807G3_4	12.5	1.73	2.05e4	1.53e4	12.0	-3.6	1.34
4	4	170807G3_5	12.5	1.73	2.02e4	1.47e4	12.4	-1.1	1.37
5	5	170807G3_6	12.5	1.73	2.01e4	1.45e4	12.5	-0.4	1.39
6	6	170807G3_7	12.5	1.79	2.57e4	1.83e4	12.6	0.9	1.40
7	7	170807G3_8	12.5	1.74	2.05e4	1.45e4	12.7	1.5	1.41
8	8	170807G3_9	12.5	1.73	2.27e4	1.49e4	13.7	9.4	1.52

Compound name: 13C3-PFBS
Response Factor: 0.350719
RRF SD: 0.0309274, Relative SD: 8.81829
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	2.94	5.09e3	1.30e4	13.9	11.2	0.390
2	2	170807G3_3	12.5	2.94	5.33e3	1.38e4	13.8	10.2	0.387
3	3	170807G3_4	12.5	2.97	4.81e3	1.54e4	11.1	-10.8	0.313
4	4	170807G3_5	12.5	2.94	4.45e3	1.24e4	12.8	2.5	0.360
5	5	170807G3_6	12.5	2.94	4.80e3	1.29e4	13.2	6.0	0.372
6	6	170807G3_7	12.5	2.94	5.19e3	1.51e4	12.2	-2.3	0.343
7	7	170807G3_8	12.5	2.94	3.75e3	1.14e4	11.7	-6.2	0.329
8	8	170807G3_9	12.5	2.94	3.84e3	1.22e4	11.2	-10.6	0.314

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Compound name: 13C3-PFPeA
Response Factor: 0.576774
RRF SD: 0.039059, Relative SD: 6.77198
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	2.66	7.97e3	1.30e4	13.2	5.9	0.611
2	2	170807G3_3	12.5	2.66	8.14e3	1.38e4	12.8	2.3	0.590
3	3	170807G3_4	12.5	2.70	7.68e3	1.54e4	10.8	-13.4	0.499
4	4	170807G3_5	12.5	2.66	7.56e3	1.24e4	13.2	5.7	0.610
5	5	170807G3_6	12.5	2.67	7.17e3	1.29e4	12.0	-3.8	0.555
6	6	170807G3_7	12.5	2.67	9.29e3	1.51e4	13.3	6.3	0.613
7	7	170807G3_8	12.5	2.67	6.61e3	1.14e4	12.6	0.6	0.580
8	8	170807G3_9	12.5	2.67	6.79e3	1.22e4	12.0	-3.7	0.555

Compound name: 13C2-PFHxA
Response Factor: 0.44254
RRF SD: 0.0166096, Relative SD: 3.75324
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	3.31	5.68e3	1.30e4	12.3	-1.6	0.436
2	2	170807G3_3	12.5	3.31	6.05e3	1.38e4	12.4	-0.8	0.439
3	3	170807G3_4	12.5	3.23	7.23e3	1.54e4	13.3	6.2	0.470
4	4	170807G3_5	12.5	3.31	5.55e3	1.24e4	12.7	1.2	0.448
5	5	170807G3_6	12.5	3.31	5.32e3	1.29e4	11.6	-6.9	0.412
6	6	170807G3_7	12.5	3.31	6.86e3	1.51e4	12.8	2.3	0.453
7	7	170807G3_8	12.5	3.32	5.07e3	1.14e4	12.6	0.6	0.445
8	8	170807G3_9	12.5	3.31	5.35e3	1.22e4	12.4	-1.1	0.438

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Compound name: 13C4-PFHpA
Response Factor: 0.496086
RRF SD: 0.0371867, Relative SD: 7.49603
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	3.83	6.88e3	1.30e4	13.3	6.3	0.527
2	2	170807G3_3	12.5	3.83	6.90e3	1.38e4	12.6	0.8	0.500
3	3	170807G3_4	12.5	3.73	6.43e3	1.54e4	10.5	-15.7	0.418
4	4	170807G3_5	12.5	3.83	6.22e3	1.24e4	12.6	1.2	0.502
5	5	170807G3_6	12.5	3.83	6.55e3	1.29e4	12.8	2.3	0.508
6	6	170807G3_7	12.5	3.83	7.82e3	1.51e4	13.0	4.1	0.516
7	7	170807G3_8	12.5	3.83	6.04e3	1.14e4	13.4	6.9	0.530
8	8	170807G3_9	12.5	3.83	5.71e3	1.22e4	11.8	-5.9	0.467

Compound name: 18O2-PFHxS
Response Factor: 0.527853
RRF SD: 0.026225, Relative SD: 4.96824
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	3.96	4.40e3	8.32e3	12.5	0.1	0.528
2	2	170807G3_3	12.5	3.96	4.47e3	8.75e3	12.1	-3.4	0.510
3	3	170807G3_4	12.5	3.88	3.83e3	7.52e3	12.1	-3.6	0.509
4	4	170807G3_5	12.5	3.96	3.91e3	7.27e3	12.7	1.9	0.538
5	5	170807G3_6	12.5	3.96	3.83e3	7.70e3	11.8	-5.7	0.498
6	6	170807G3_7	12.5	3.96	4.88e3	9.24e3	12.5	0.1	0.528
7	7	170807G3_8	12.5	3.96	3.77e3	6.46e3	13.8	10.6	0.584
8	8	170807G3_9	12.5	3.96	3.71e3	7.02e3	12.5	-0.0	0.528

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Compound name: 13C2-PFOA
Response Factor: 3.35627
RRF SD: 0.424631, Relative SD: 12.6519
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	4.25	1.57e4	4.70e3	12.4	-0.4	3.34
2	2	170807G3_3	12.5	4.25	1.59e4	5.30e3	11.2	-10.5	3.00
3	3	170807G3_4	12.5	4.21	1.40e4	4.59e3	11.4	-8.9	3.06
4	4	170807G3_5	12.5	4.25	1.39e4	4.34e3	11.9	-4.8	3.19
5	5	170807G3_6	12.5	4.25	1.50e4	4.60e3	12.2	-2.8	3.26
6	6	170807G3_7	12.5	4.26	1.81e4	5.61e3	12.0	-3.9	3.23
7	7	170807G3_8	12.5	4.26	1.43e4	4.20e3	12.7	1.6	3.41
8	8	170807G3_9	12.5	4.25	1.62e4	3.71e3	16.2	29.7	4.35

Compound name: 13C5-PFNA
Response Factor: 0.990677
RRF SD: 0.0794381, Relative SD: 8.01857
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	4.60	6.83e3	7.26e3	11.9	-5.1	0.940
2	2	170807G3_3	12.5	4.60	6.70e3	7.18e3	11.8	-5.9	0.932
3	3	170807G3_4	12.5	4.58	7.14e3	6.27e3	14.4	15.0	1.14
4	4	170807G3_5	12.5	4.60	6.74e3	6.45e3	13.2	5.4	1.04
5	5	170807G3_6	12.5	4.60	6.81e3	7.27e3	11.8	-5.5	0.936
6	6	170807G3_7	12.5	4.60	7.64e3	8.48e3	11.4	-9.1	0.901
7	7	170807G3_8	12.5	4.60	6.98e3	6.74e3	13.1	4.6	1.04
8	8	170807G3_9	12.5	4.60	6.78e3	6.80e3	12.6	0.6	0.996

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Compound name: 13C2-PFDA
Response Factor: 1.45805
RRF SD: 0.0806822, Relative SD: 5.53358
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	4.89	9.15e3	6.86e3	11.4	-8.5	1.33
2	2	170807G3_3	12.5	4.89	8.46e3	5.83e3	12.5	-0.4	1.45
3	3	170807G3_4	12.5	4.88	7.02e3	4.64e3	13.0	3.6	1.51
4	4	170807G3_5	12.5	4.89	8.04e3	5.59e3	12.3	-1.3	1.44
5	5	170807G3_6	12.5	4.89	9.97e3	6.81e3	12.6	0.5	1.46
6	6	170807G3_7	12.5	4.89	7.25e3	5.19e3	12.0	-4.2	1.40
7	7	170807G3_8	12.5	4.89	1.03e4	7.06e3	12.5	-0.0	1.46
8	8	170807G3_9	12.5	4.89	1.17e4	7.28e3	13.8	10.4	1.61

Compound name: 13C8-PFOS
Response Factor: 1.10923
RRF SD: 0.0725463, Relative SD: 6.54024
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	4.66	8.29e3	6.99e3	13.4	6.9	1.19
2	2	170807G3_3	12.5	4.66	7.00e3	6.66e3	11.8	-5.3	1.05
3	3	170807G3_4	12.5	4.65	5.91e3	5.77e3	11.5	-7.7	1.02
4	4	170807G3_5	12.5	4.66	5.97e3	5.68e3	11.9	-5.2	1.05
5	5	170807G3_6	12.5	4.66	7.73e3	6.96e3	12.5	0.1	1.11
6	6	170807G3_7	12.5	4.67	7.10e3	6.10e3	13.1	4.9	1.16
7	7	170807G3_8	12.5	4.67	7.79e3	6.38e3	13.7	10.0	1.22
8	8	170807G3_9	12.5	4.67	8.15e3	7.63e3	12.0	-3.7	1.07

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

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Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	1.73	1.61e4	1.61e4	12.5	0.0	1.00
2	2	170807G3_3	12.5	1.73	1.62e4	1.62e4	12.5	0.0	1.00
3	3	170807G3_4	12.5	1.73	1.53e4	1.53e4	12.5	0.0	1.00
4	4	170807G3_5	12.5	1.73	1.47e4	1.47e4	12.5	0.0	1.00
5	5	170807G3_6	12.5	1.73	1.45e4	1.45e4	12.5	0.0	1.00
6	6	170807G3_7	12.5	1.79	1.83e4	1.83e4	12.5	0.0	1.00
7	7	170807G3_8	12.5	1.74	1.45e4	1.45e4	12.5	0.0	1.00
8	8	170807G3_9	12.5	1.73	1.49e4	1.49e4	12.5	0.0	1.00

Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 4.19625e-017, Relative SD: 4.19625e-015
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	3.31	1.30e4	1.30e4	12.5	-0.0	1.00
2	2	170807G3_3	12.5	3.31	1.38e4	1.38e4	12.5	0.0	1.00
3	3	170807G3_4	12.5	3.23	1.54e4	1.54e4	12.5	0.0	1.00
4	4	170807G3_5	12.5	3.31	1.24e4	1.24e4	12.5	0.0	1.00
5	5	170807G3_6	12.5	3.31	1.29e4	1.29e4	12.5	0.0	1.00
6	6	170807G3_7	12.5	3.31	1.51e4	1.51e4	12.5	0.0	1.00
7	7	170807G3_8	12.5	3.31	1.14e4	1.14e4	12.5	0.0	1.00
8	8	170807G3_9	12.5	3.31	1.22e4	1.22e4	12.5	0.0	1.00

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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Compound name: 13C3-PFHxS
Response Factor: 1
RRF SD: 4.19625e-017, Relative SD: 4.19625e-015
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	3.96	8.32e3	8.32e3	12.5	0.0	1.00
2	2	170807G3_3	12.5	3.96	8.75e3	8.75e3	12.5	0.0	1.00
3	3	170807G3_4	12.5	3.88	7.52e3	7.52e3	12.5	0.0	1.00
4	4	170807G3_5	12.5	3.96	7.27e3	7.27e3	12.5	0.0	1.00
5	5	170807G3_6	12.5	3.96	7.70e3	7.70e3	12.5	0.0	1.00
6	6	170807G3_7	12.5	3.96	9.24e3	9.24e3	12.5	0.0	1.00
7	7	170807G3_8	12.5	3.97	6.46e3	6.46e3	12.5	0.0	1.00
8	8	170807G3_9	12.5	3.96	7.02e3	7.02e3	12.5	-0.0	1.00

Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 8.3925e-017, Relative SD: 8.3925e-015
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	12.5	4.25	4.70e3	4.70e3	12.5	0.0	1.00
2	2	170807G3_3	12.5	4.25	5.30e3	5.30e3	12.5	0.0	1.00
3	3	170807G3_4	12.5	4.21	4.59e3	4.59e3	12.5	0.0	1.00
4	4	170807G3_5	12.5	4.25	4.34e3	4.34e3	12.5	0.0	1.00
5	5	170807G3_6	12.5	4.26	4.60e3	4.60e3	12.5	0.0	1.00
6	6	170807G3_7	12.5	4.26	5.61e3	5.61e3	12.5	0.0	1.00
7	7	170807G3_8	12.5	4.26	4.20e3	4.20e3	12.5	0.0	1.00
8	8	170807G3_9	12.5	4.26	3.71e3	3.71e3	12.5	0.0	1.00

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 5.93439e-017, Relative SD: 5.93439e-015
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170807G3_2	12.5	4.60	7.26e3	7.26e3	12.5	0.0	1.00
2	2 170807G3_3	12.5	4.59	7.18e3	7.18e3	12.5	0.0	1.00
3	3 170807G3_4	12.5	4.58	6.27e3	6.27e3	12.5	0.0	1.00
4	4 170807G3_5	12.5	4.60	6.45e3	6.45e3	12.5	-0.0	1.00
5	5 170807G3_6	12.5	4.60	7.27e3	7.27e3	12.5	0.0	1.00
6	6 170807G3_7	12.5	4.60	8.48e3	8.48e3	12.5	0.0	1.00
7	7 170807G3_8	12.5	4.60	6.74e3	6.74e3	12.5	-0.0	1.00
8	8 170807G3_9	12.5	4.60	6.80e3	6.80e3	12.5	0.0	1.00

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170807G3_2	12.5	4.66	6.99e3	6.99e3	12.5	0.0	1.00
2	2 170807G3_3	12.5	4.66	6.66e3	6.66e3	12.5	0.0	1.00
3	3 170807G3_4	12.5	4.65	5.77e3	5.77e3	12.5	0.0	1.00
4	4 170807G3_5	12.5	4.66	5.68e3	5.68e3	12.5	0.0	1.00
5	5 170807G3_6	12.5	4.67	6.96e3	6.96e3	12.5	0.0	1.00
6	6 170807G3_7	12.5	4.67	6.10e3	6.10e3	12.5	0.0	1.00
7	7 170807G3_8	12.5	4.67	6.38e3	6.38e3	12.5	0.0	1.00
8	8 170807G3_9	12.5	4.67	7.63e3	7.63e3	12.5	0.0	1.00

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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Compound name: 13C6-PFDA
Response Factor: 1
RRF SD: 8.3925e-017, Relative SD: 8.3925e-015
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc	%Dev	RRF
1	1	170807G3_2	12.5	4.89	6.86e3	6.86e3	12.5	0.0	1.00
2	2	170807G3_3	12.5	4.89	5.83e3	5.83e3	12.5	0.0	1.00
3	3	170807G3_4	12.5	4.88	4.64e3	4.64e3	12.5	0.0	1.00
4	4	170807G3_5	12.5	4.89	5.59e3	5.59e3	12.5	0.0	1.00
5	5	170807G3_6	12.5	4.89	6.81e3	6.81e3	12.5	0.0	1.00
6	6	170807G3_7	12.5	4.89	5.19e3	5.19e3	12.5	0.0	1.00
7	7	170807G3_8	12.5	4.89	7.06e3	7.06e3	12.5	0.0	1.00
8	8	170807G3_9	12.5	4.89	7.28e3	7.28e3	12.5	0.0	1.00

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Tuesday, August 08, 2017 08:47:18 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 08:47:33 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 08:36:32

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170807G3_1	IPA	07-Aug-17	15:51:37
2	170807G3_2	ST170807G3-1 PFC CS-2 17H0707	07-Aug-17	16:03:49
3	170807G3_3	ST170807G3-2 PFC CS-1 17H0708	07-Aug-17	16:16:27
4	170807G3_4	ST170807G3-3 PFC CS0 17H0709	07-Aug-17	16:28:53
5	170807G3_5	ST170807G3-4 PFC CS1 17H0710	07-Aug-17	16:41:23
6	170807G3_6	ST170807G3-5 PFC CS2 17H0711	07-Aug-17	16:53:57
7	170807G3_7	ST170807G3-6 PFC CS3 17H0712	07-Aug-17	17:10:43
8	170807G3_8	ST170807G3-7 PFC CS4 17H0713	07-Aug-17	17:22:55
9	170807G3_9	ST170807G3-8 PFC CS5 17H0714	07-Aug-17	17:35:31
10	170807G3_10	IPA	07-Aug-17	17:48:05
11	170807G3_11	SS170807G3-1 PFC SSS 17H0715	07-Aug-17	18:00:37
12	170807G3_12	IPA	07-Aug-17	18:13:06
13	170807G3_13	B7H0005-BS1 OPR 0.125	07-Aug-17	18:25:45
14	170807G3_14	IPA	07-Aug-17	18:38:13
15	170807G3_15	B7H0005-BLK1 Method Blank 0.125	07-Aug-17	18:50:47
16	170807G3_16	1700925-04RE1@10X I001MW52S-170724 0....	07-Aug-17	19:03:18
17	170807G3_17	B7H0018-MS1@10X Matrix Spike 0.125	07-Aug-17	19:15:50
18	170807G3_18	B7H0018-MSD1@10X Matrix Spike Dup 0.125	07-Aug-17	19:28:25
19	170807G3_19	1700925-05RE1@10X I001MW52X-170724 0....	07-Aug-17	19:40:59
20	170807G3_20	1700947-01 7-EFF-GAC-0727-NS 0.125	07-Aug-17	19:53:31
21	170807G3_21	1700947-02 7-MID-GAC-0727-NS 0.125	07-Aug-17	20:06:18
22	170807G3_22	1700947-03 7-IN-GAC-0727-NS 0.125	07-Aug-17	20:18:39
23	170807G3_23	IPA	07-Aug-17	20:31:10
24	170807G3_24	ST170807G3-9 PFC CS3 17H0712	07-Aug-17	20:43:44
25	170807G3_25	IPA	07-Aug-17	20:56:16

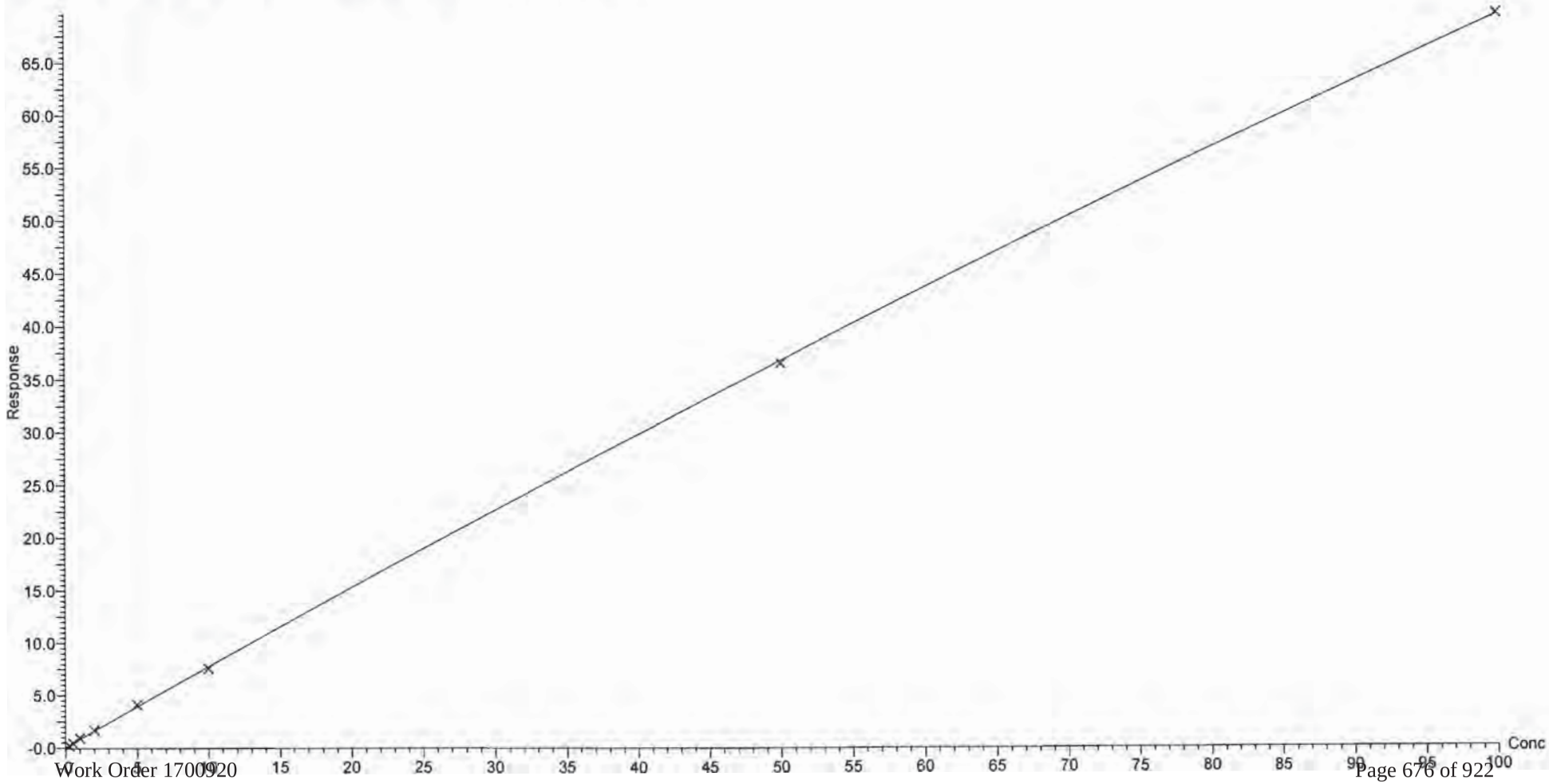
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:36:39 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

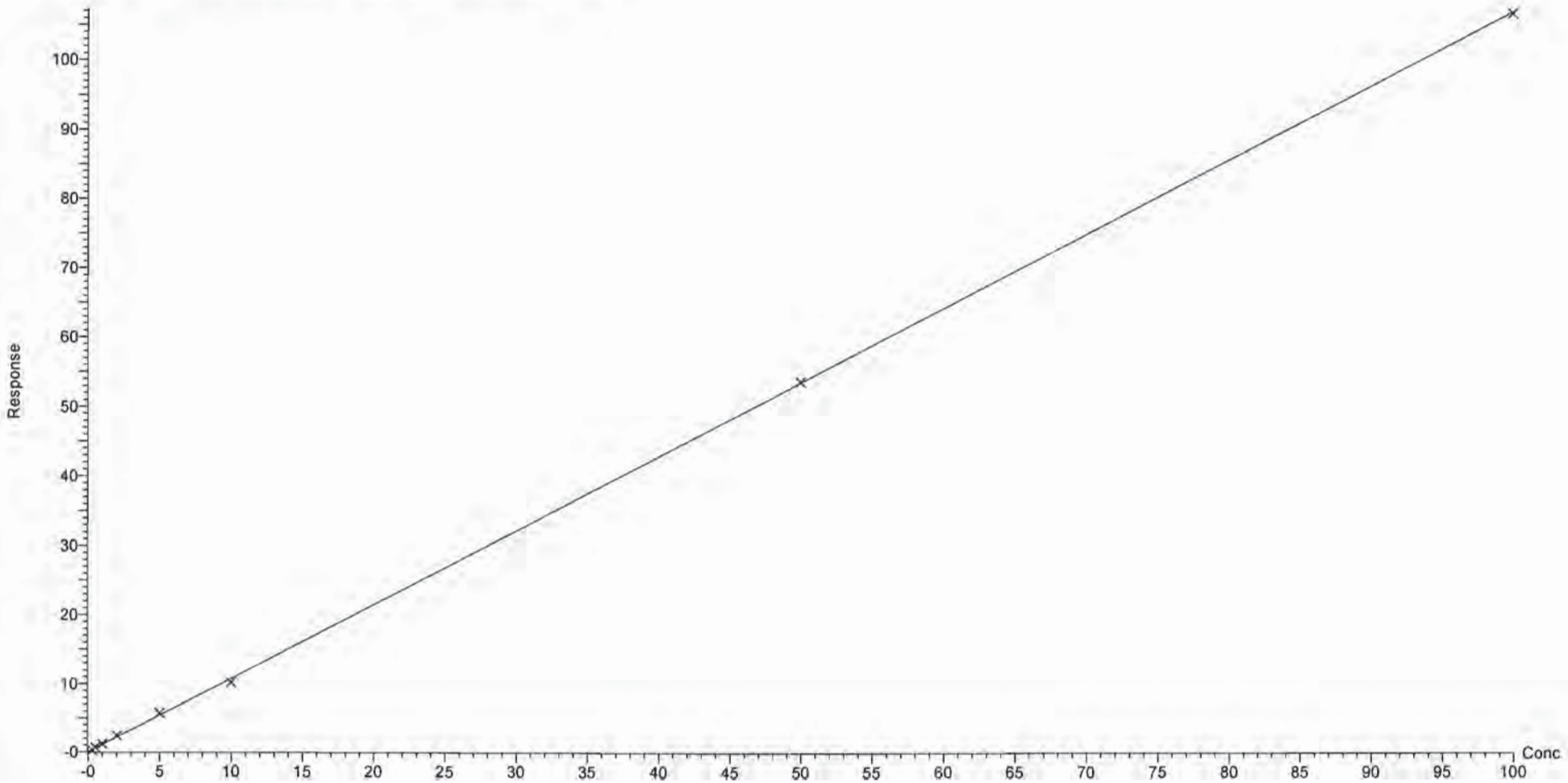
Compound name: PFBA
Coefficient of Determination: R^2 = 0.999660
Calibration curve: -0.000838043 * x^2 + 0.778045 * x + 0.0580166
Response type: Internal Std (Ref 11), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:36:39 Pacific Daylight Time

Compound name: PFPeA
Correlation coefficient: r = 0.999705, r^2 = 0.999410
Calibration curve: 1.07143 * x + 0.0515195
Response type: Internal Std (Ref 13), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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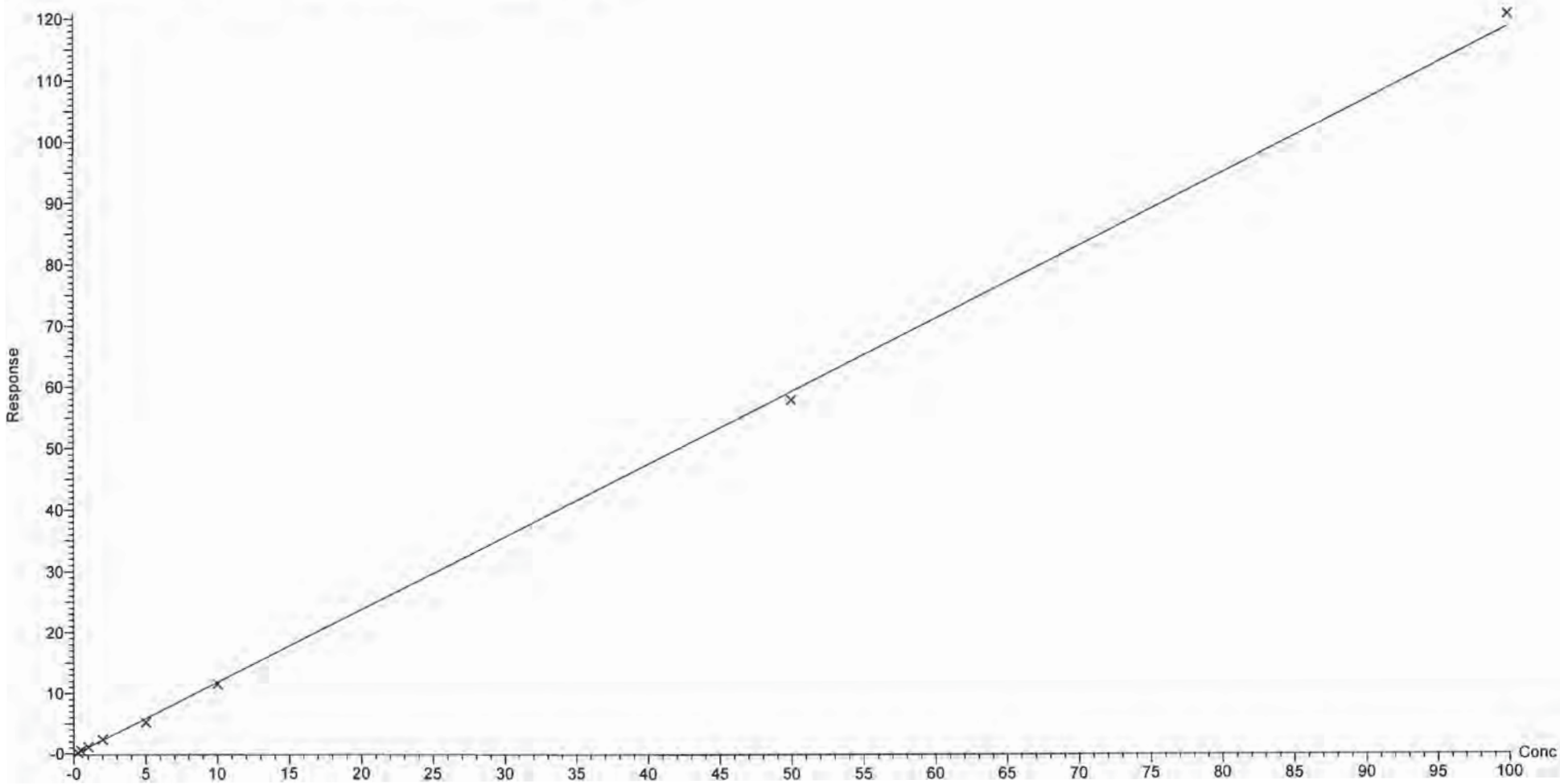
Compound name: PFBS
Correlation coefficient: r = 0.999608, r^2 = 0.999217
Calibration curve: 1.18972 * x + -0.111193
Response type: Internal Std (Ref 12), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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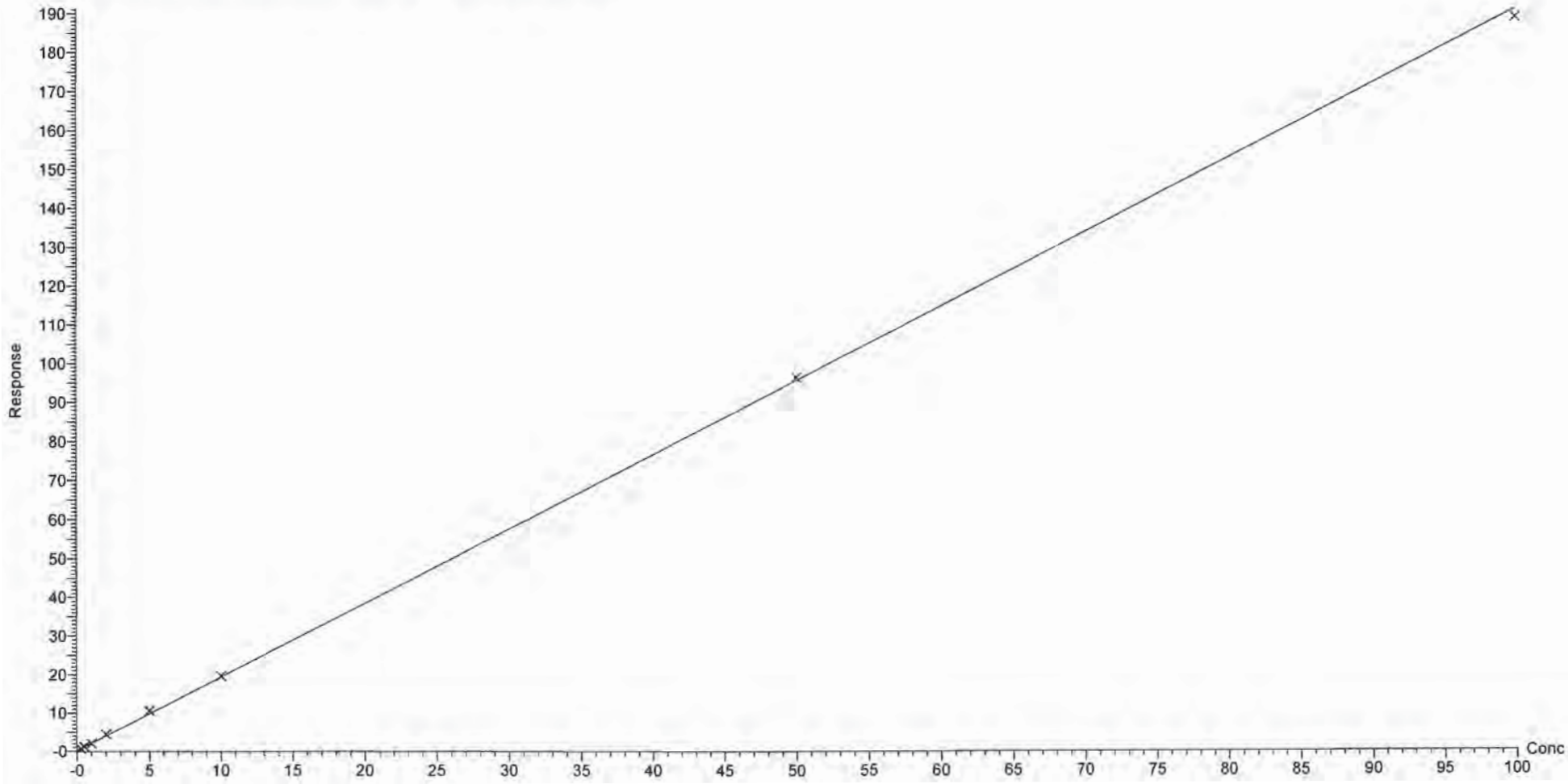
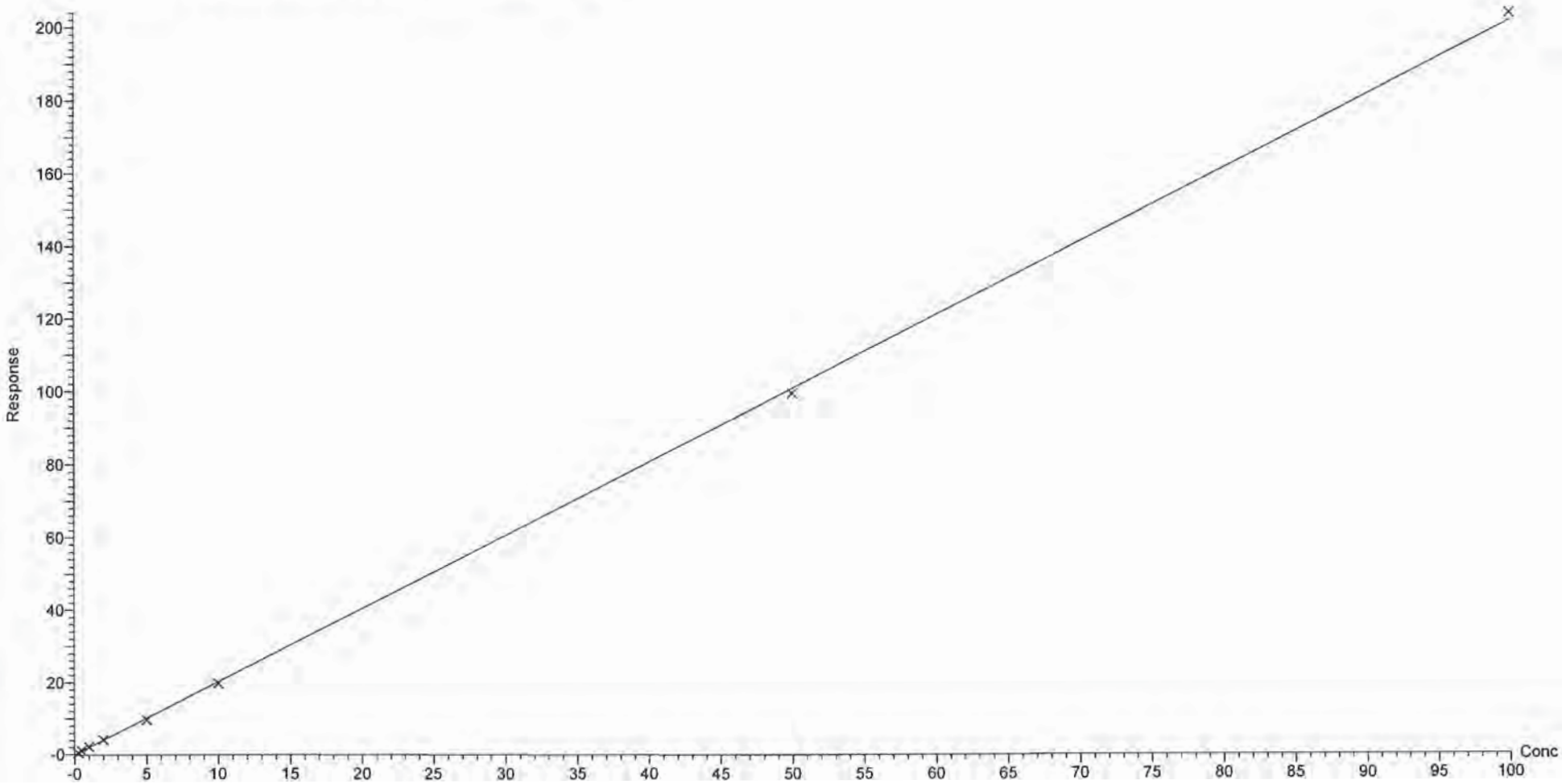
Compound name: PFHxA
Correlation coefficient: r = 0.999708, r^2 = 0.999416
Calibration curve: 1.91046 * x + 0.230955
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:36:39 Pacific Daylight Time

Compound name: PFHpA
Correlation coefficient: r = 0.999829, r^2 = 0.999658
Calibration curve: 2.02015 * x + -0.00519606
Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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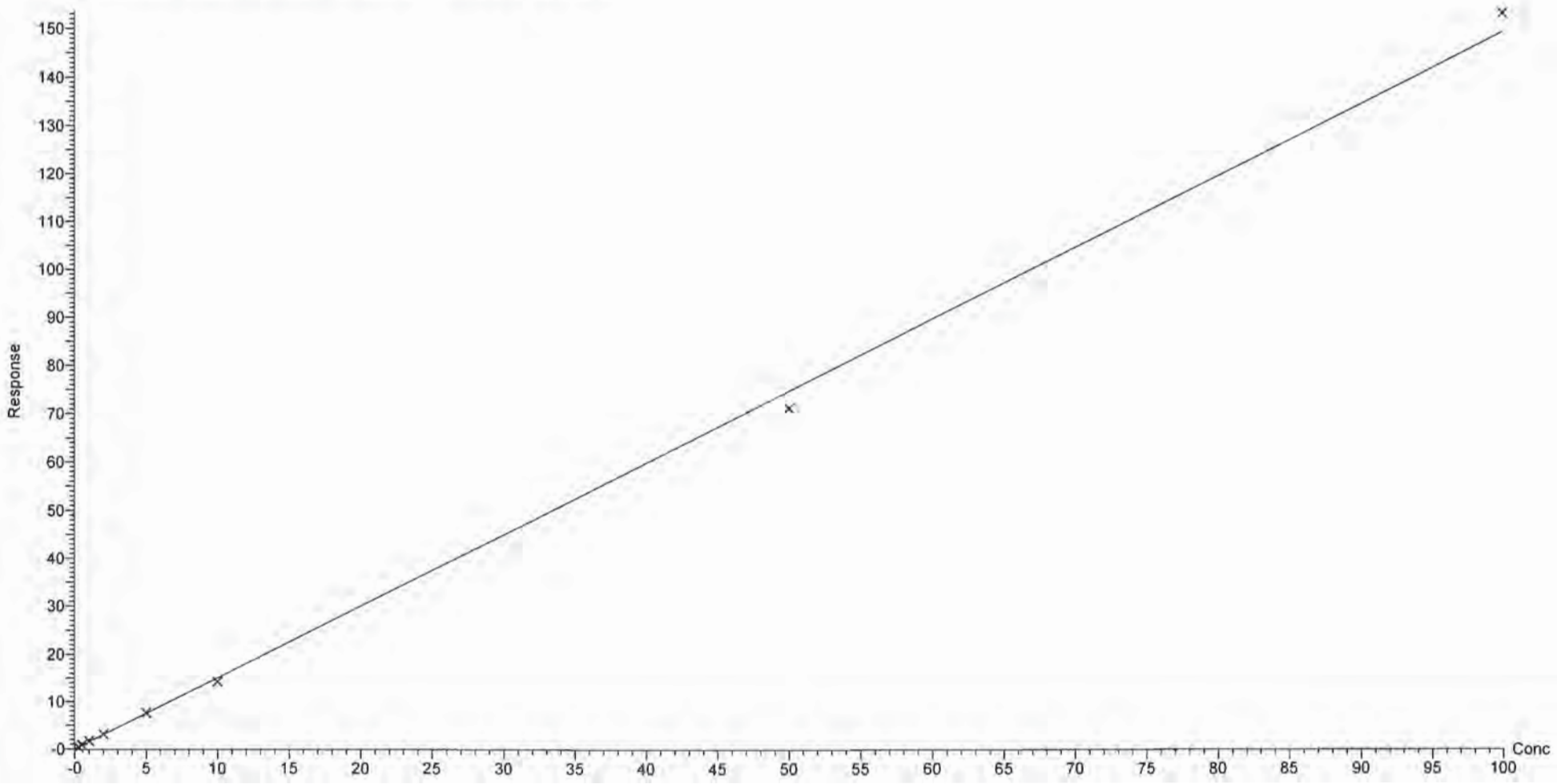
Compound name: PFHxS
Correlation coefficient: r = 0.999295, r^2 = 0.998591
Calibration curve: 1.49643 * x + 0.0513693
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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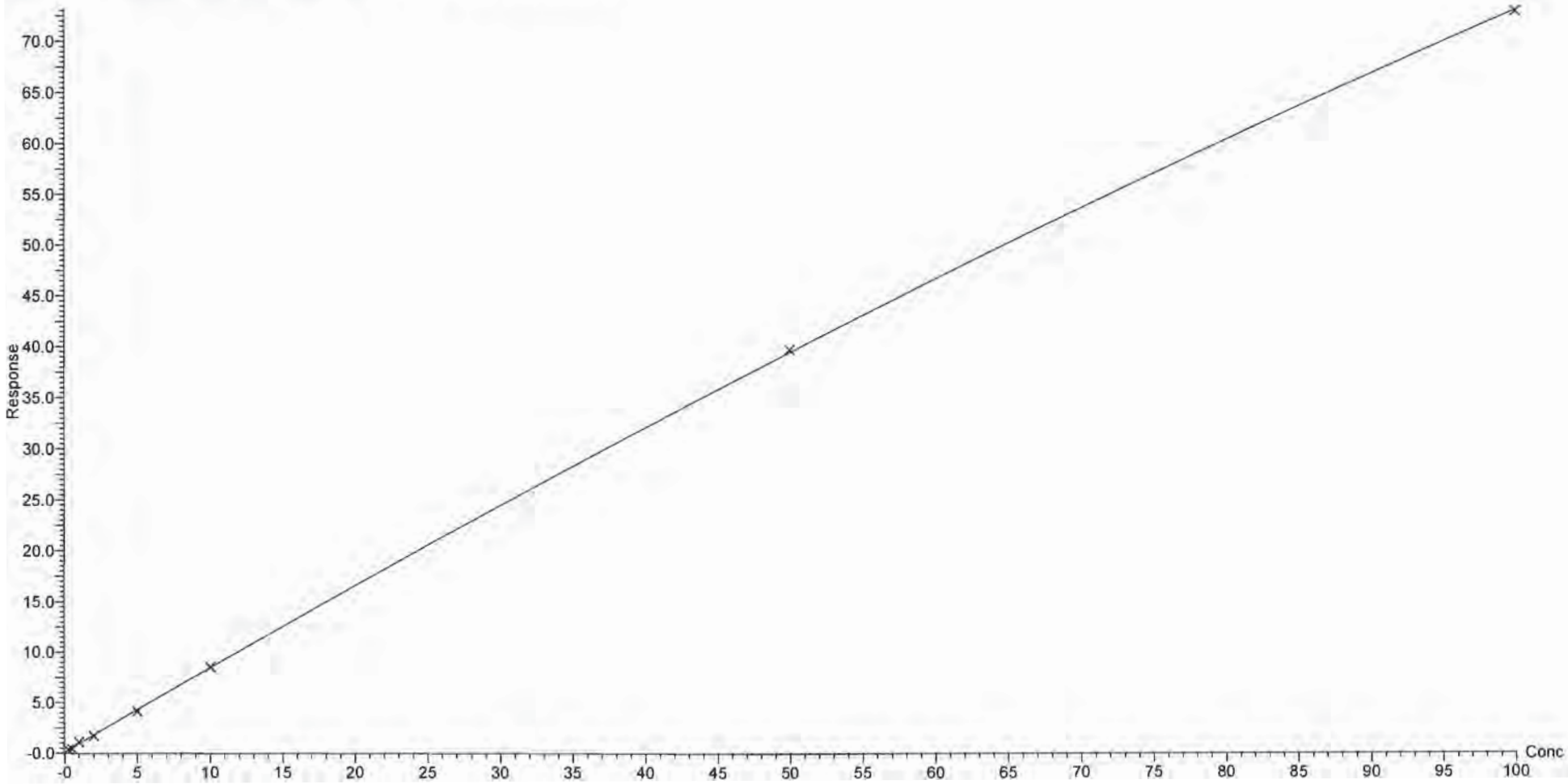
Compound name: PFOA
Coefficient of Determination: R^2 = 0.999319
Calibration curve: -0.00115809 * x^2 + 0.846733 * x + 0.0978197
Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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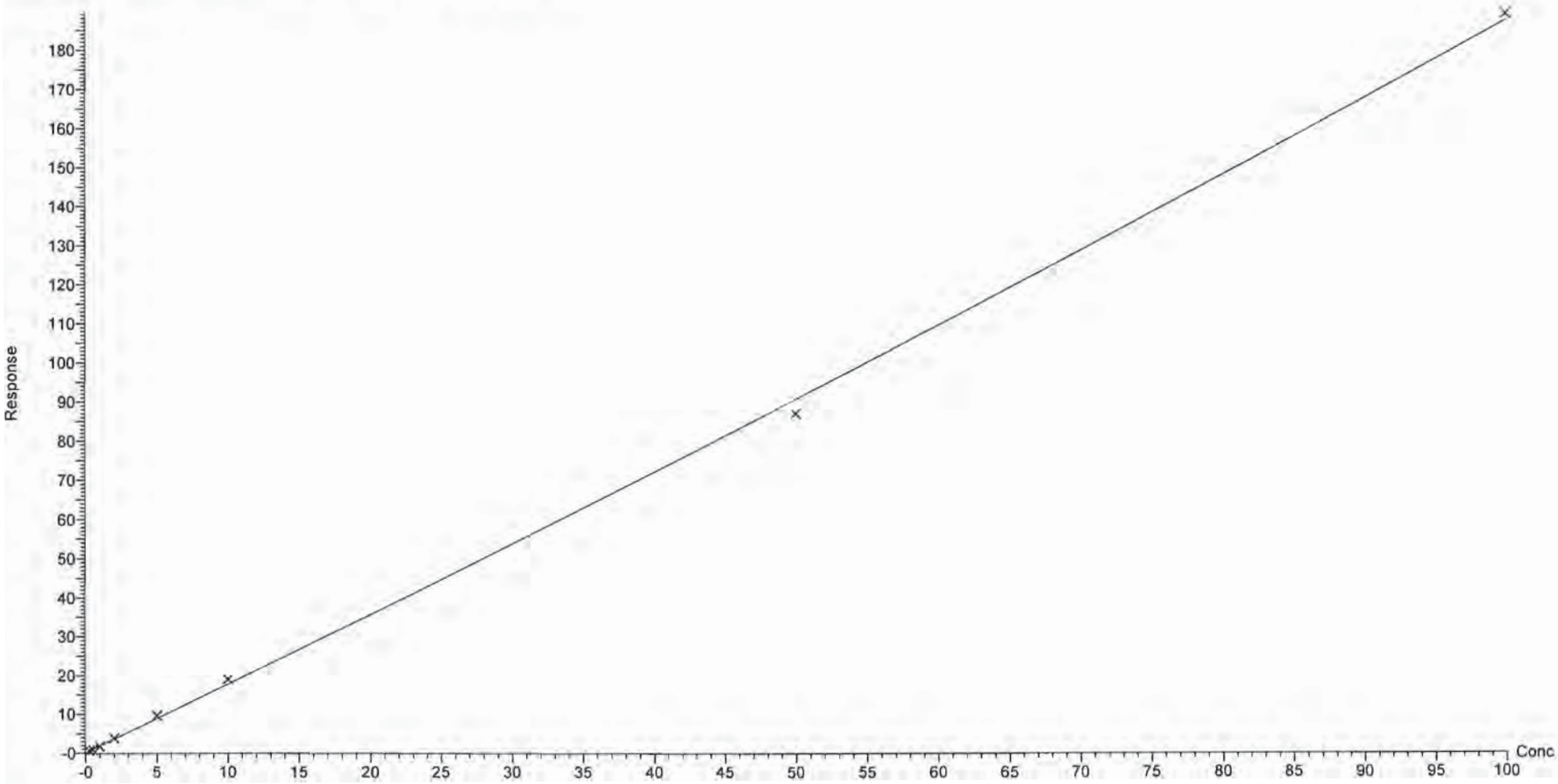
Compound name: PFNA
Coefficient of Determination: R^2 = 0.998786
Calibration curve: 0.00124304 * x^2 + 1.75438 * x + 0.095479
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

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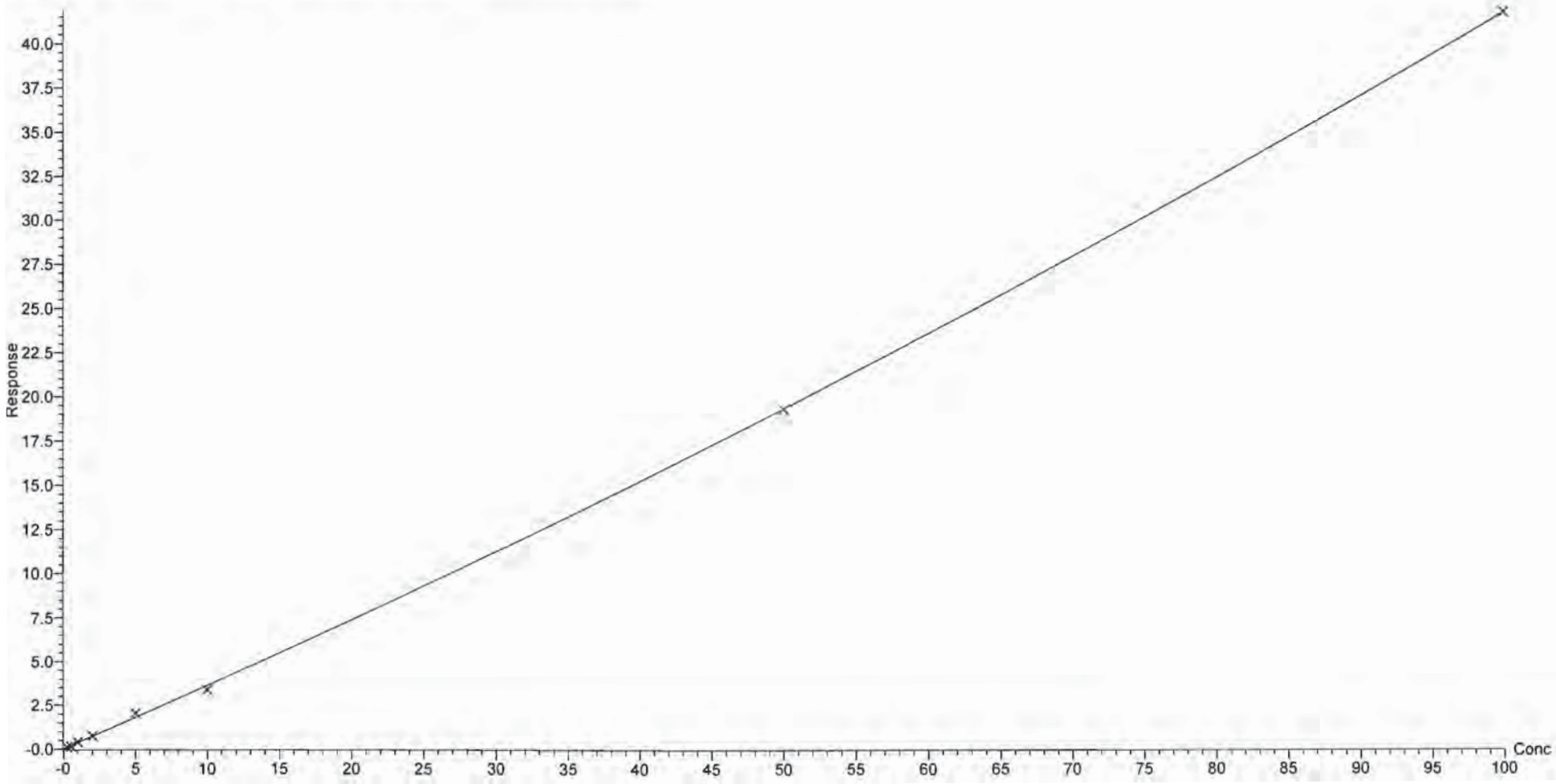
Compound name: PFOS
Coefficient of Determination: R^2 = 0.999151
Calibration curve: 0.000618235 * x^2 + 0.356557 * x + 0.0224255
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:36:39 Pacific Daylight Time

Compound name: PFDA
Coefficient of Determination: R^2 = 0.999960
Calibration curve: -5.7047e-005 * x^2 + 0.190696 * x + 0.015188
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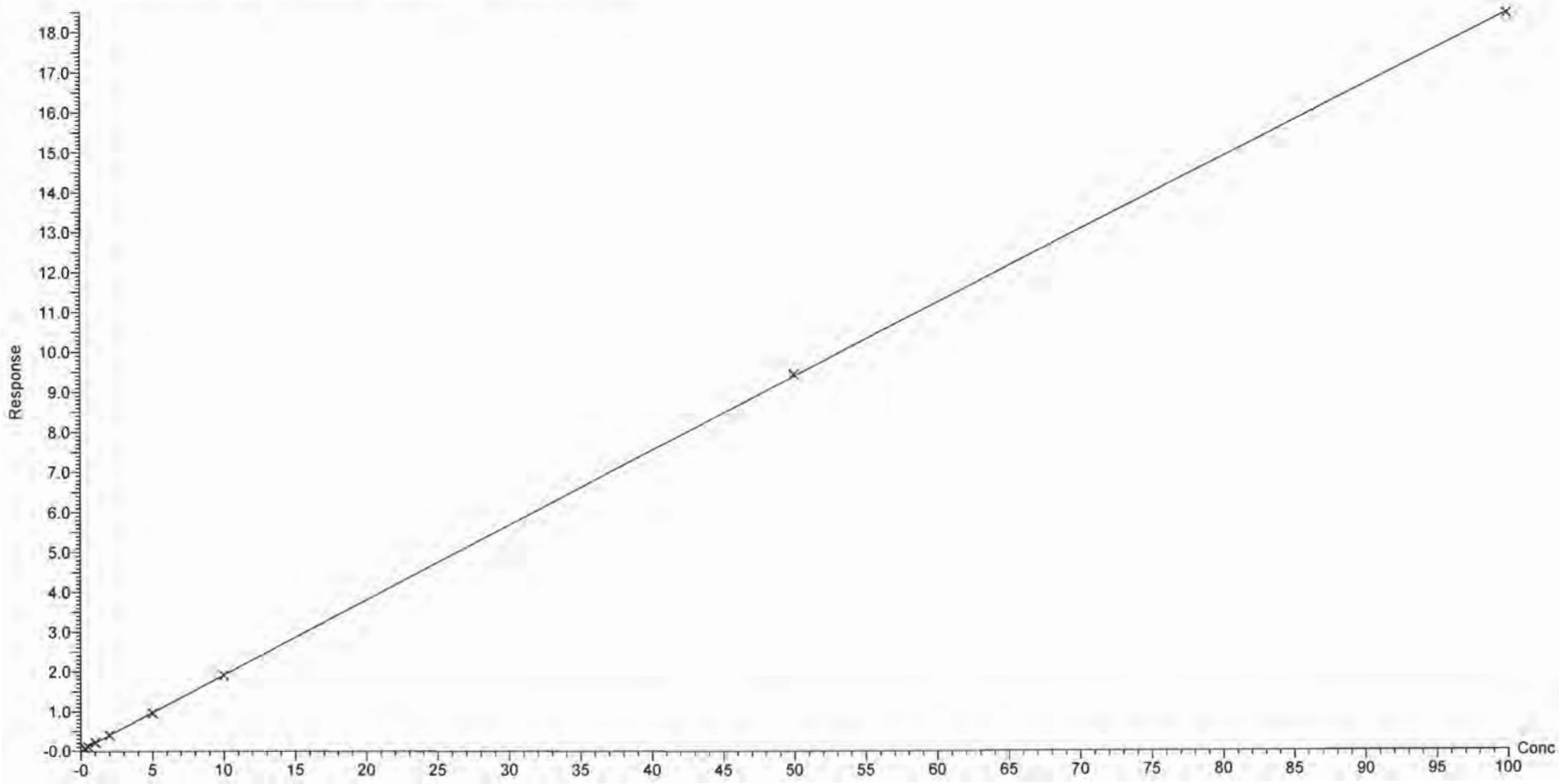

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Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

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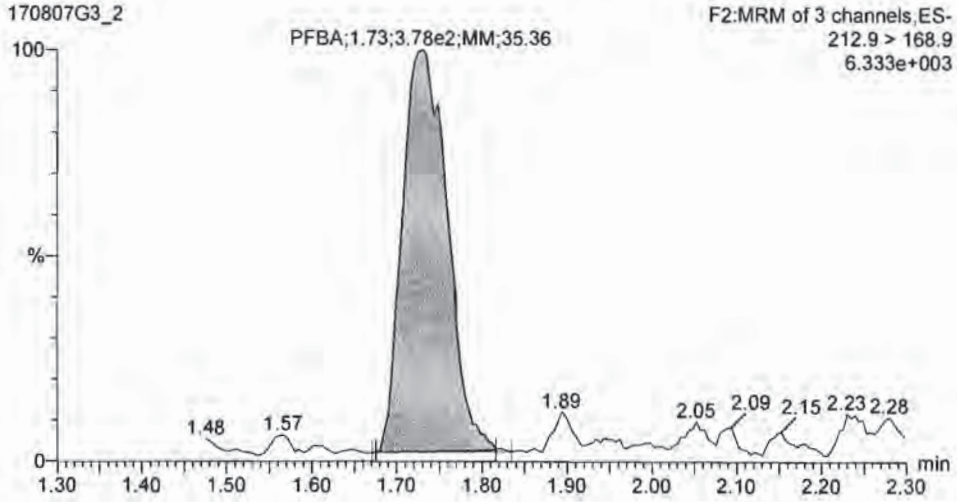
ID: ST170807G3-1 PFC CS-2 17H0707, Description: PFC CS-2 17H0707 A, Name: 170807G3_2, Date: 07-Aug-2017, Time: 16:03:49, Instrument: , Lab: , User:

PFBA



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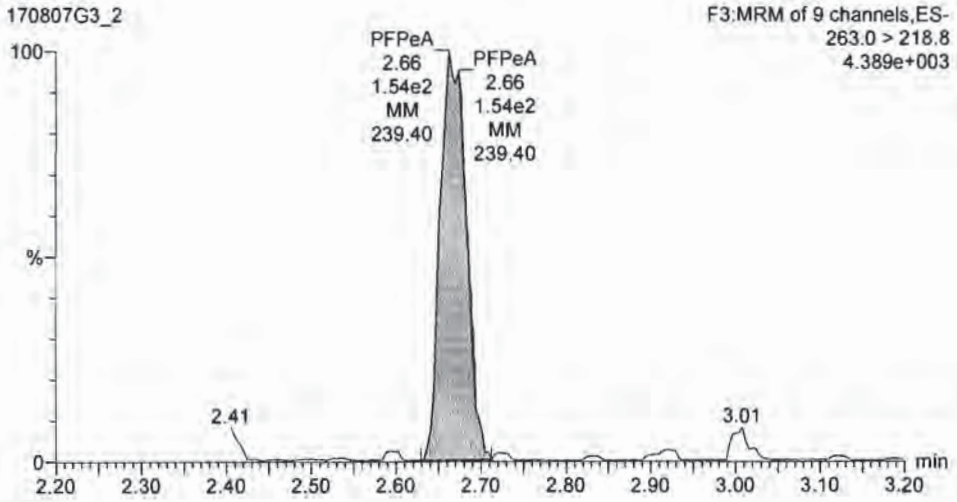
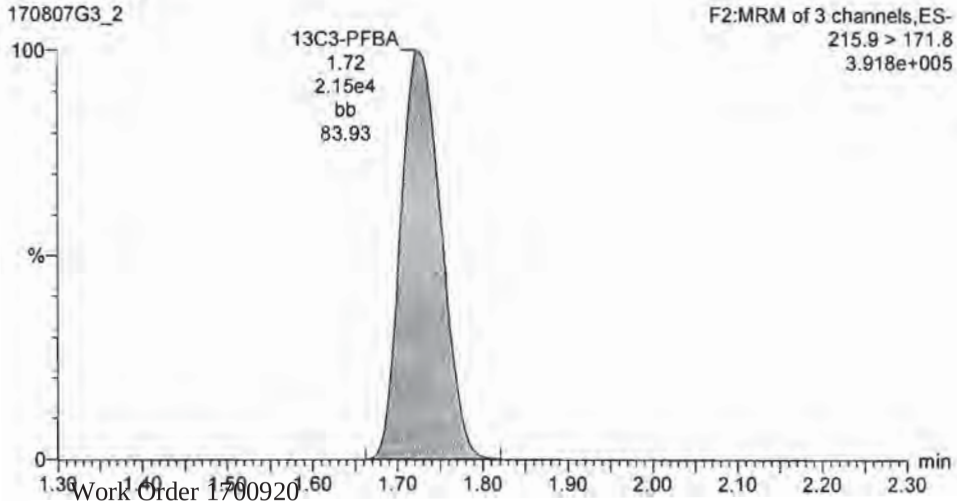


13C3-PFBA



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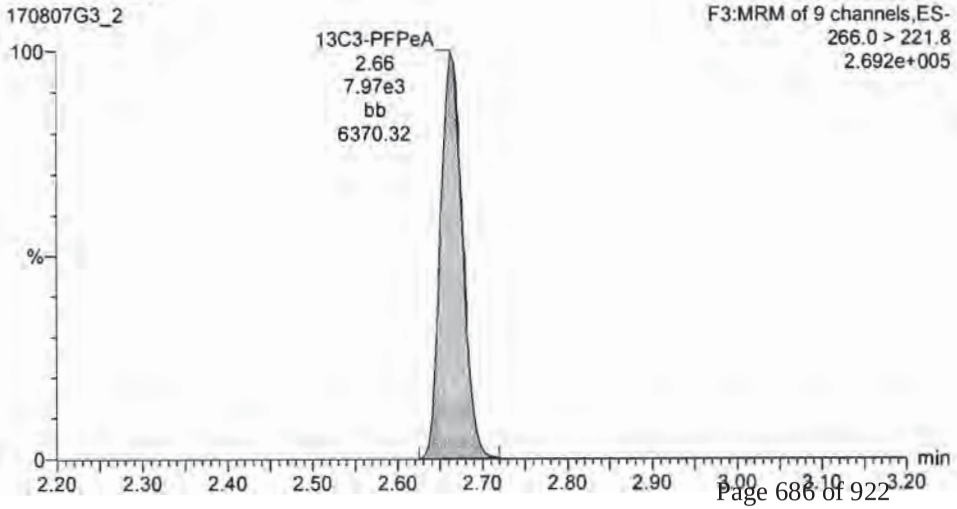

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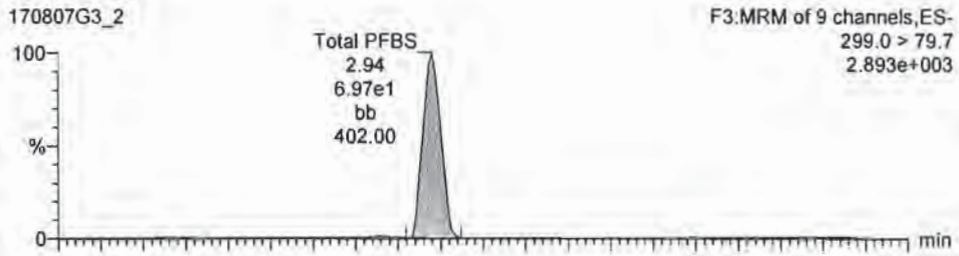
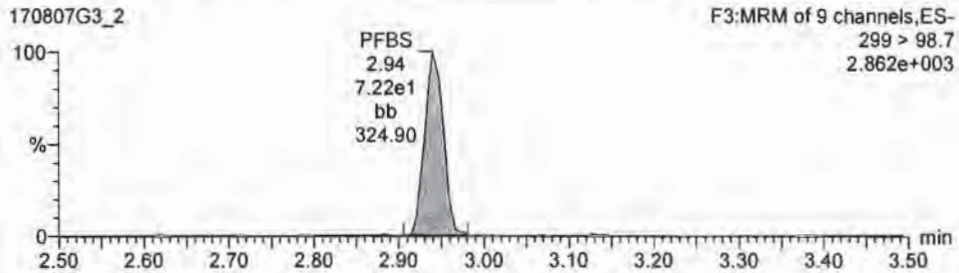
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

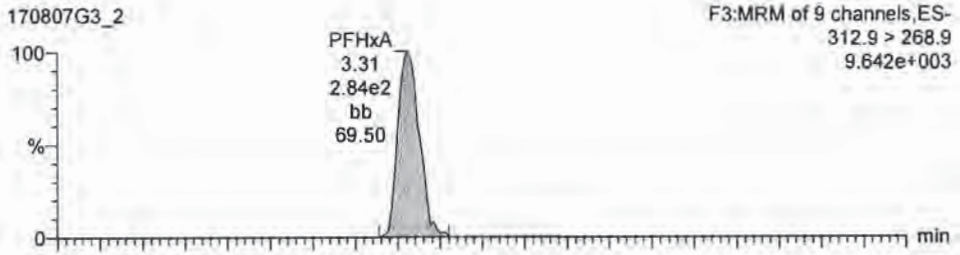
ID: ST170807G3-1 PFC CS-2 17H0707, Description: PFC CS-2 17H0707 A, Name: 170807G3_2, Date: 07-Aug-2017, Time: 16:03:49, Instrument: , Lab: , User:

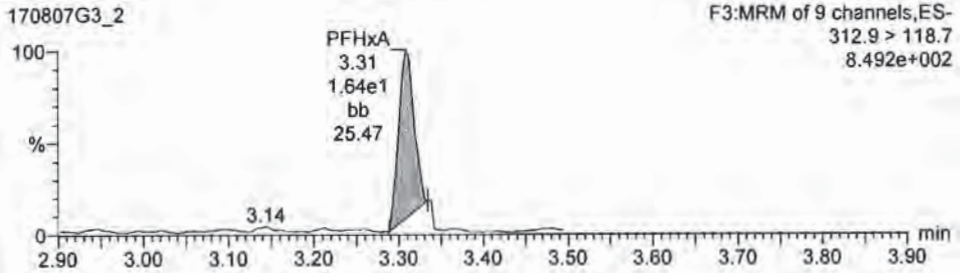
Total PFBS





PFHxA





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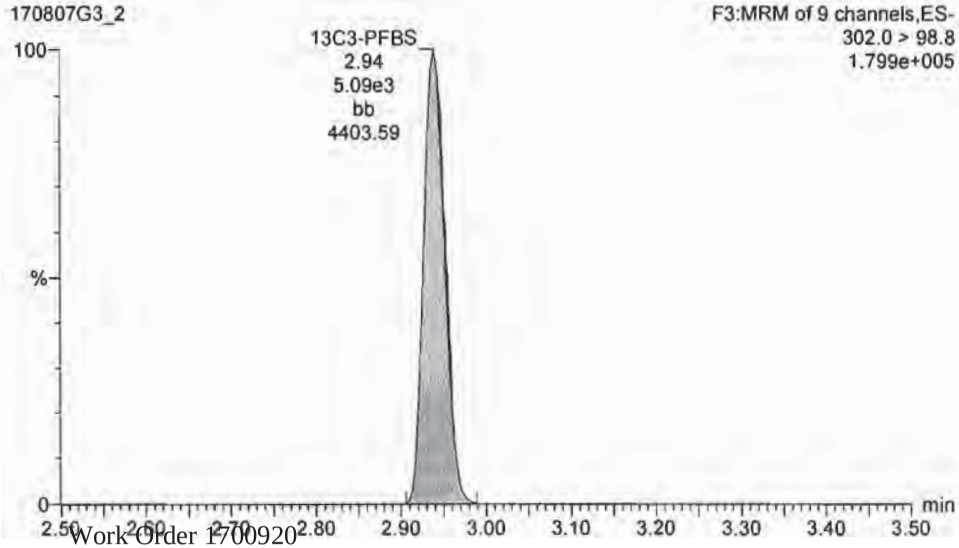

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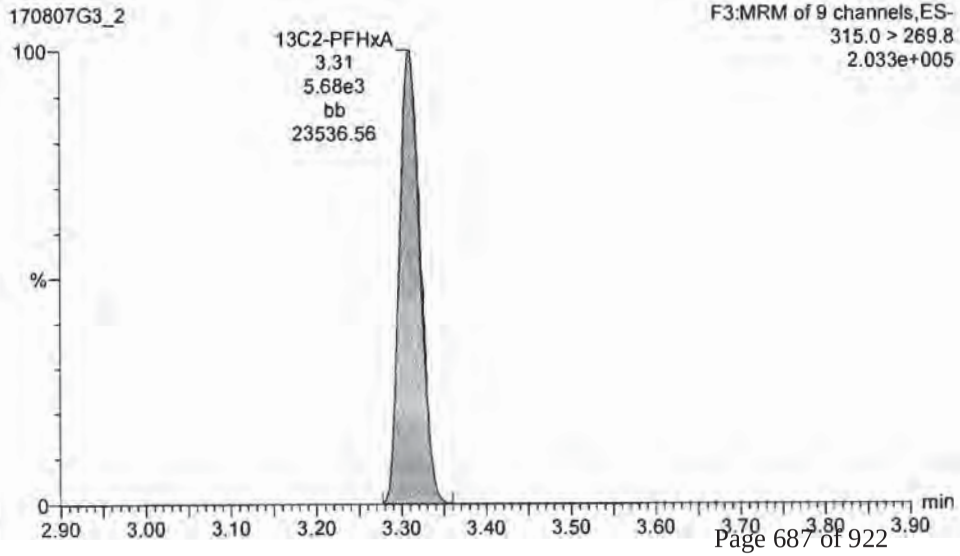

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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-1 PFC CS-2 17H0707, Description: PFC CS-2 17H0707 A, Name: 170807G3_2, Date: 07-Aug-2017, Time: 16:03:49, Instrument: , Lab: , User:

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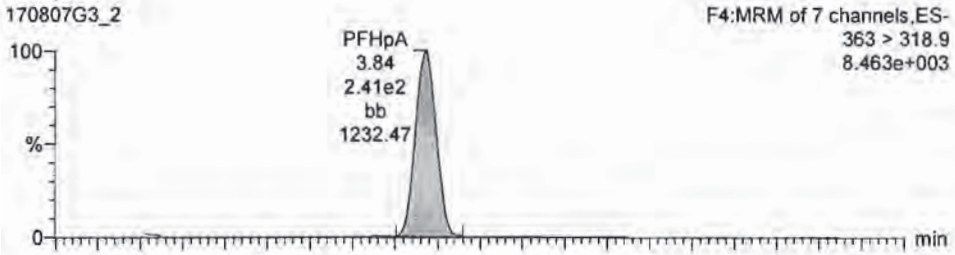

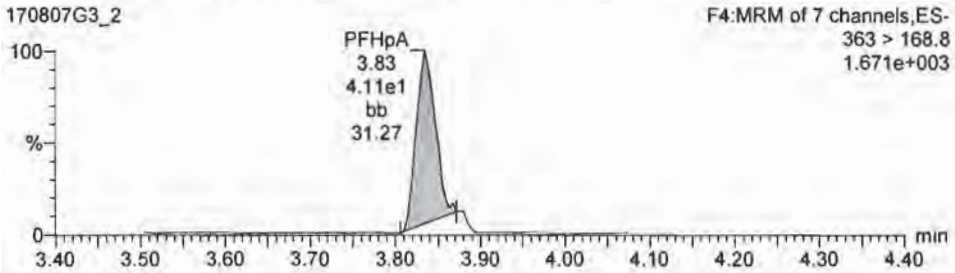

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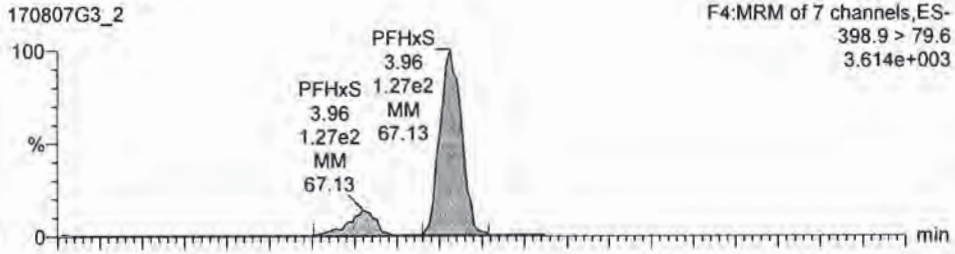

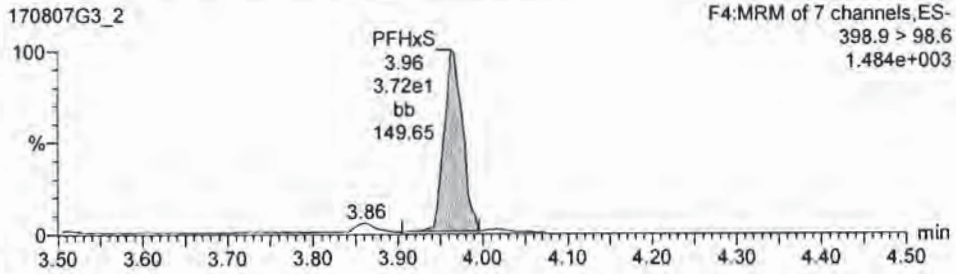

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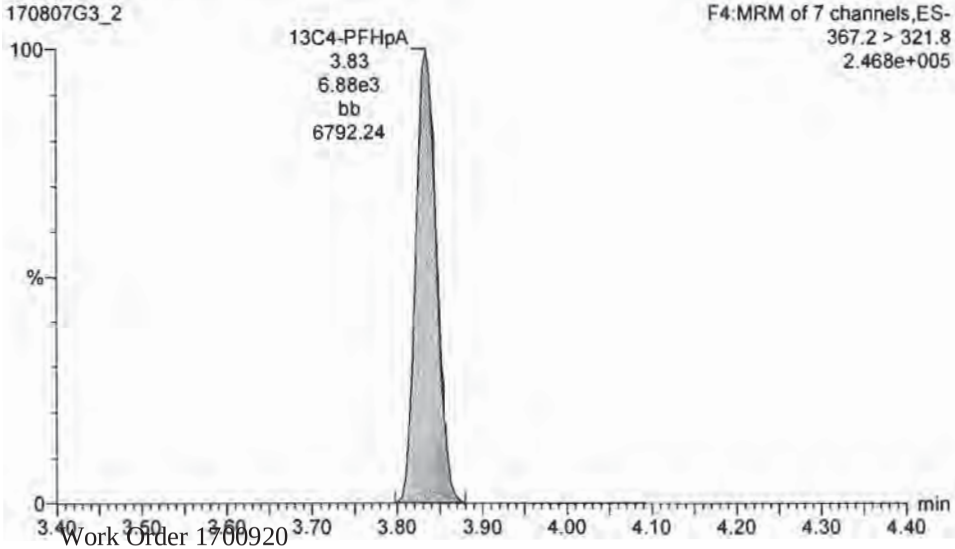
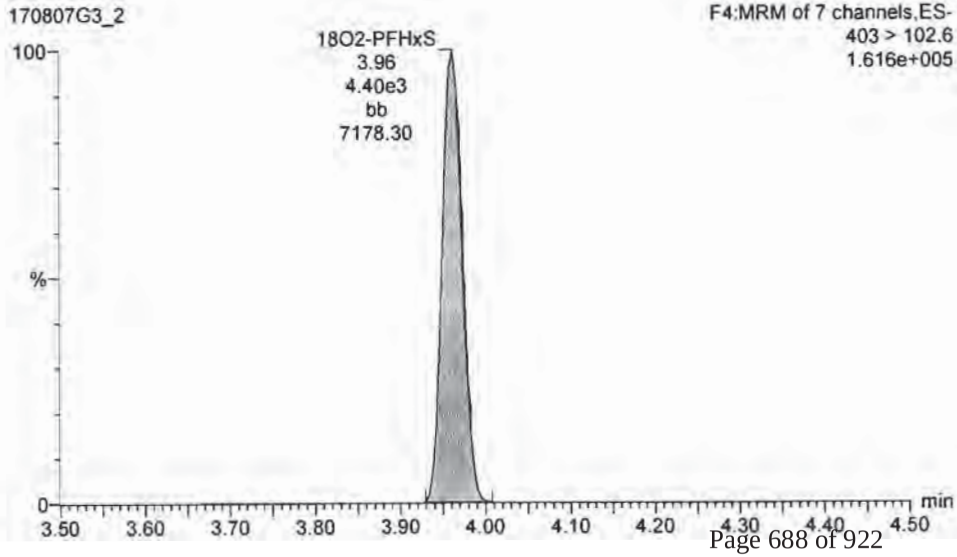


18O2-PFHxS



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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-1 PFC CS-2 17H0707, Description: PFC CS-2 17H0707 A, Name: 170807G3_2, Date: 07-Aug-2017, Time: 16:03:49, Instrument: , Lab: , User:

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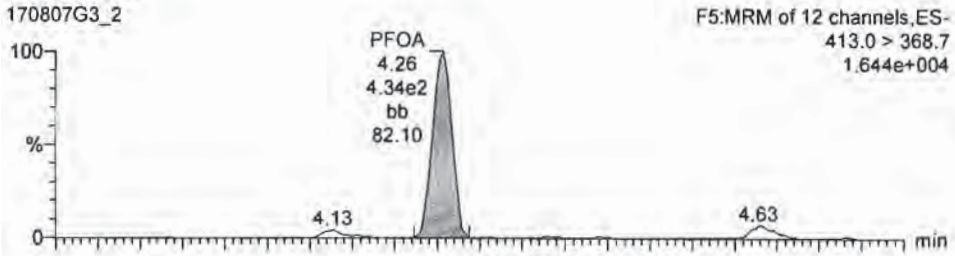

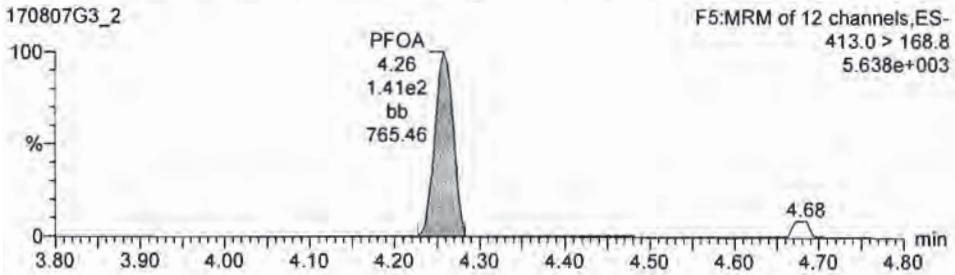

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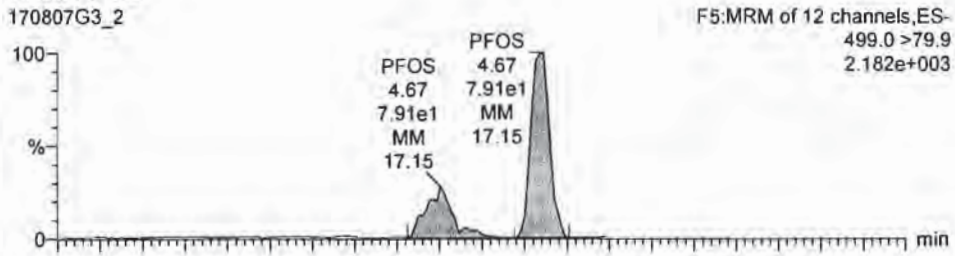
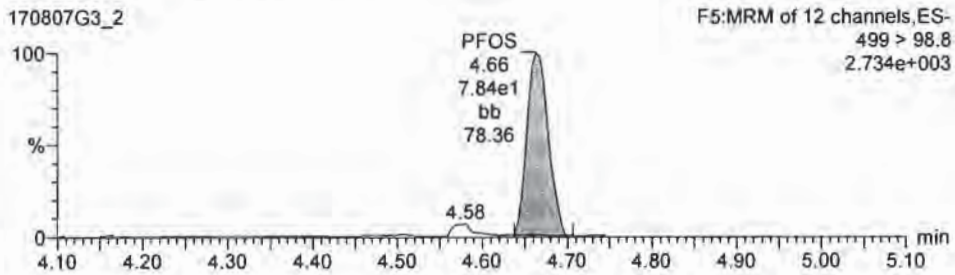
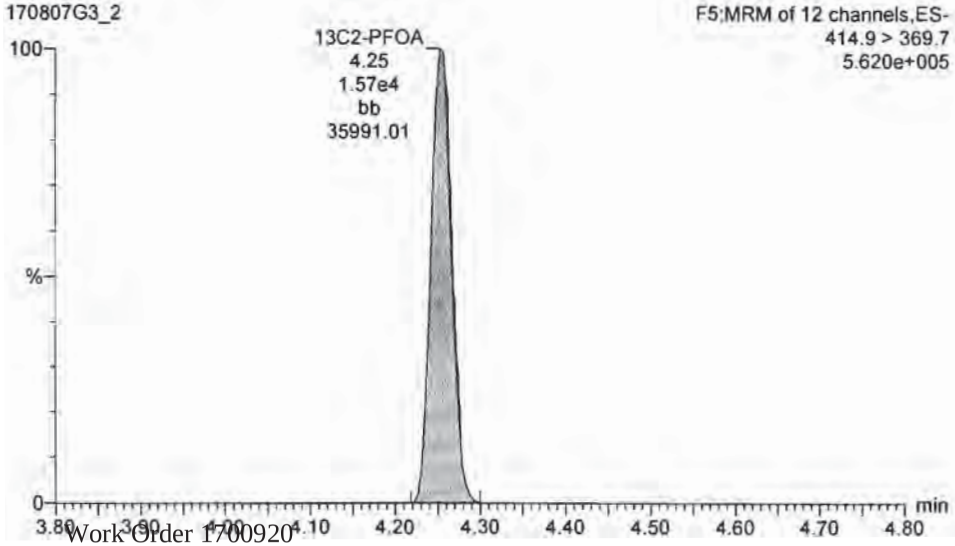
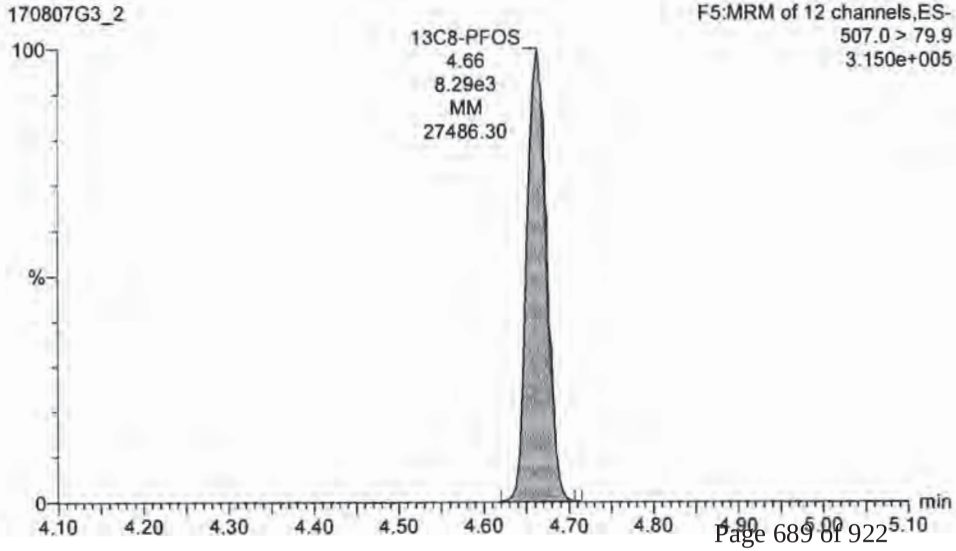




13C2-PFOA



13C8-PFOS



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Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-1 PFC CS-2 17H0707, Description: PFC CS-2 17H0707 A, Name: 170807G3_2, Date: 07-Aug-2017, Time: 16:03:49, Instrument: , Lab: , User:

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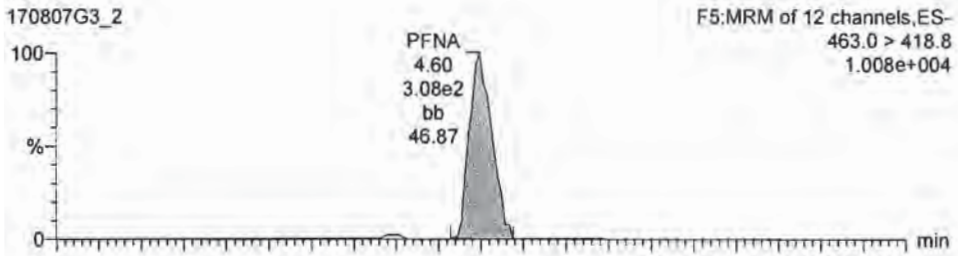

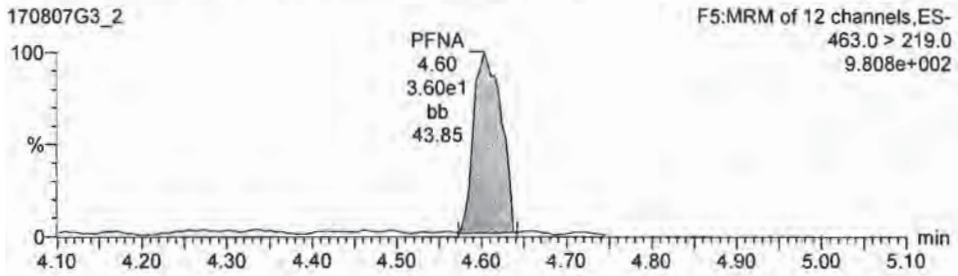

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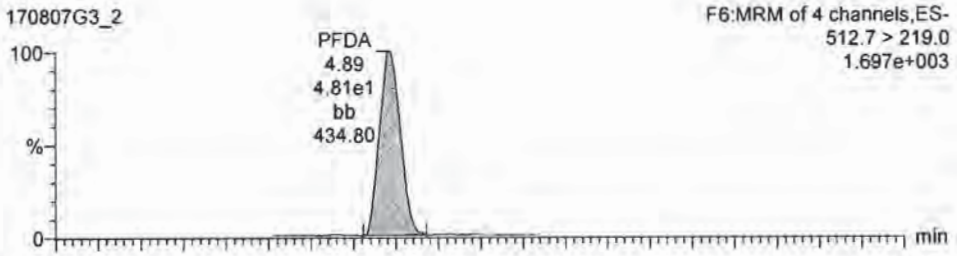

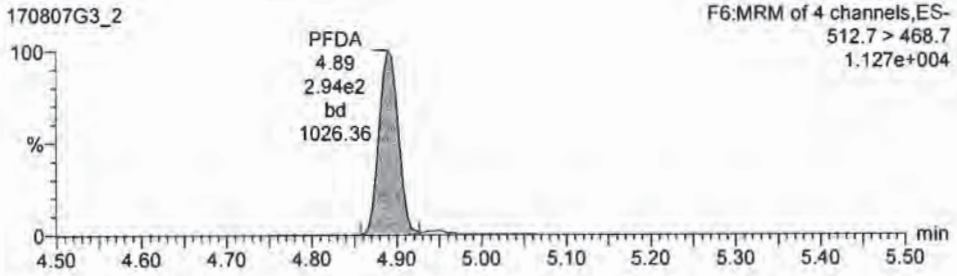

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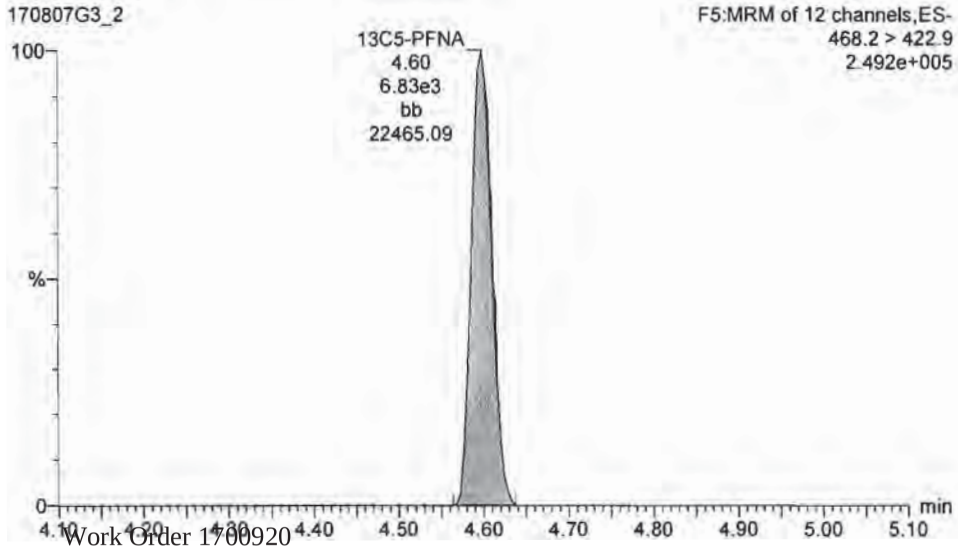

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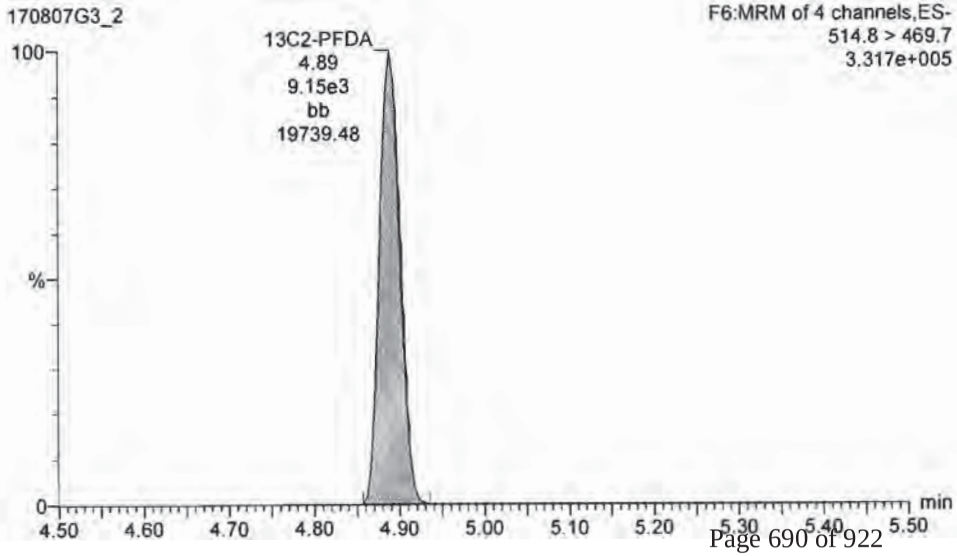

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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-1 PFC CS-2 17H0707, Description: PFC CS-2 17H0707 A, Name: 170807G3_2, Date: 07-Aug-2017, Time: 16:03:49, Instrument: , Lab: , User:

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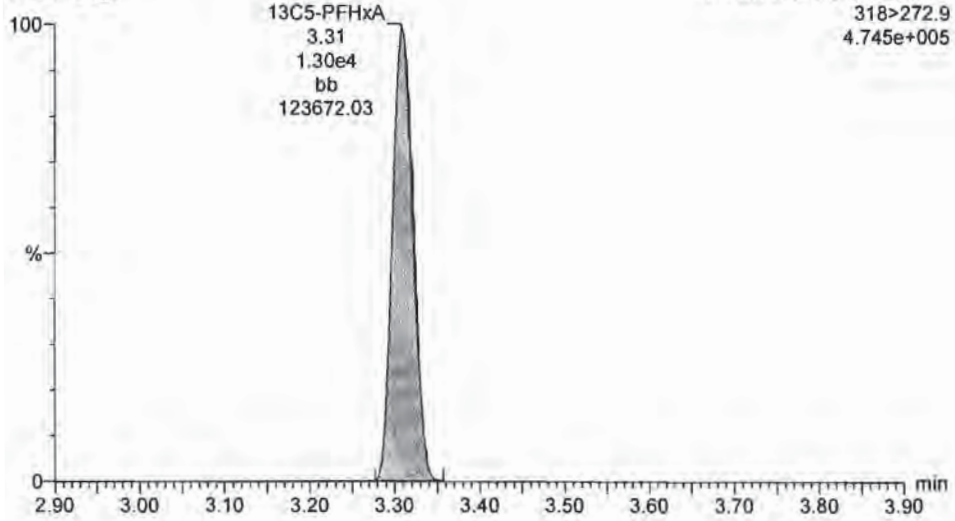

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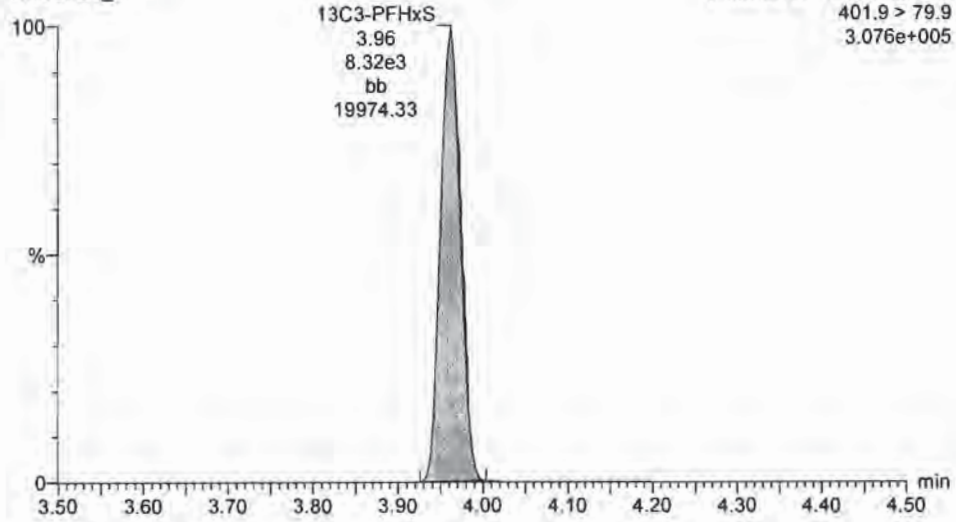

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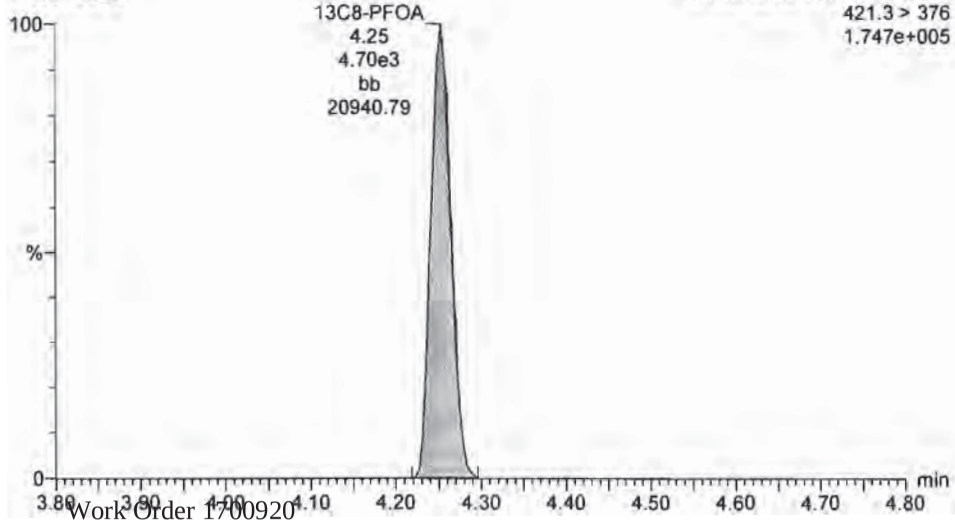

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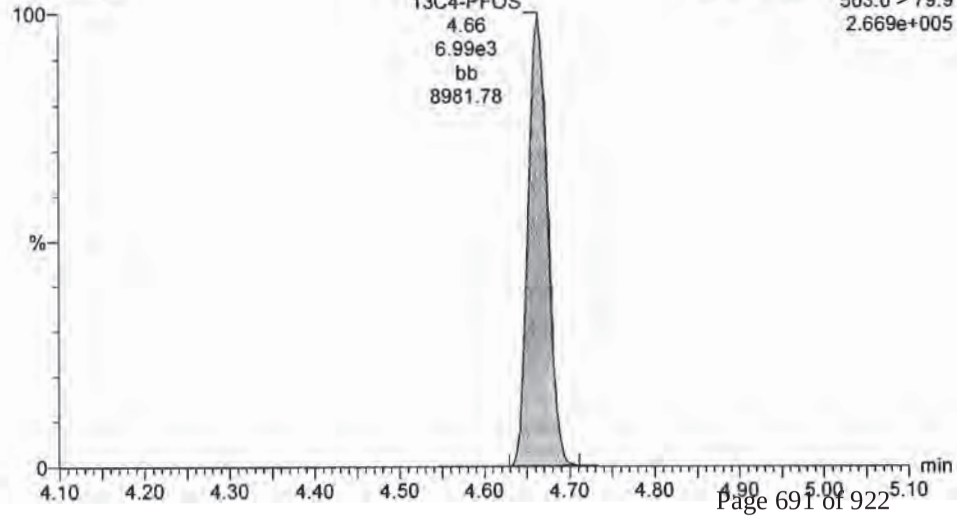

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ID: ST170807G3-1 PFC CS-2 17H0707, Description: PFC CS-2 17H0707 A, Name: 170807G3_2, Date: 07-Aug-2017, Time: 16:03:49, Instrument: , Lab: , User:

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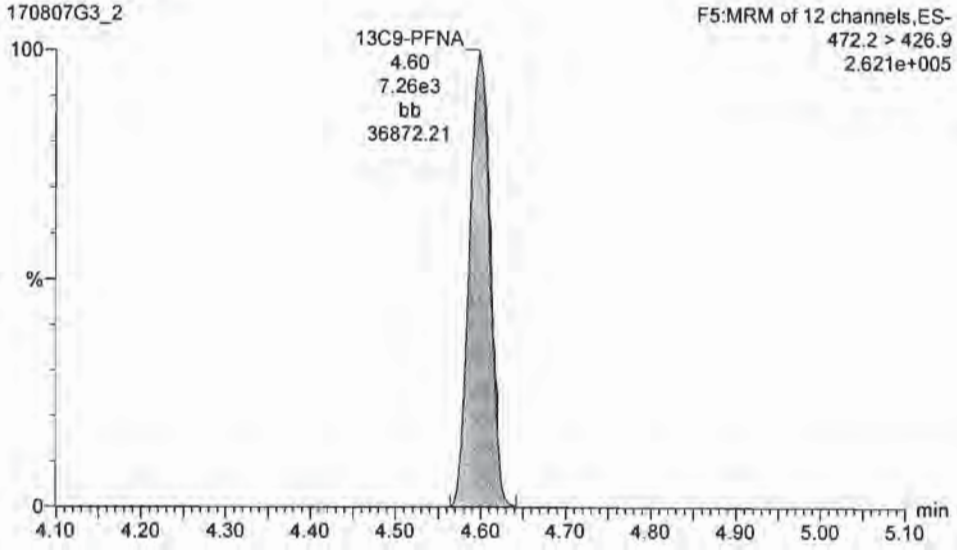

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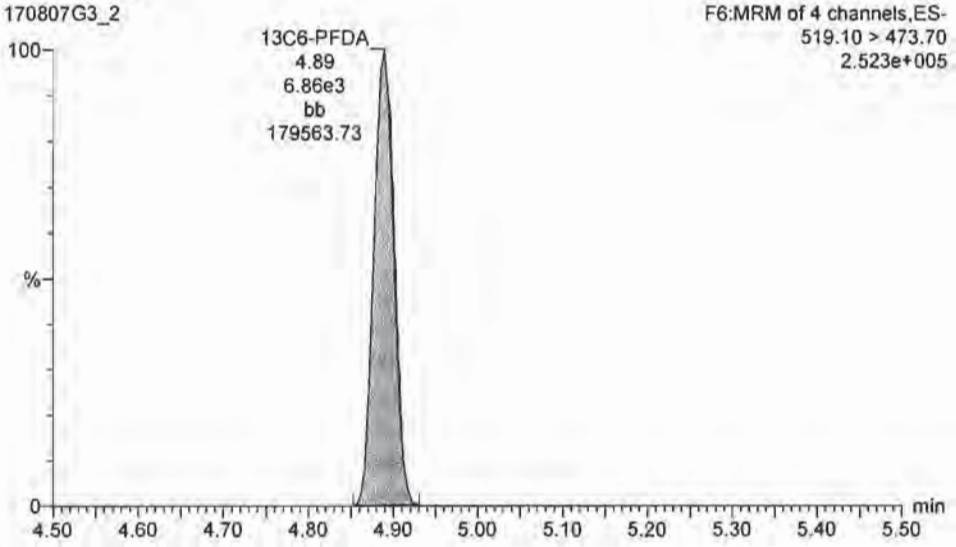

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Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170807G3_3, Date: 07-Aug-2017, Time: 16:16:27, Instrument: , Lab: , User:

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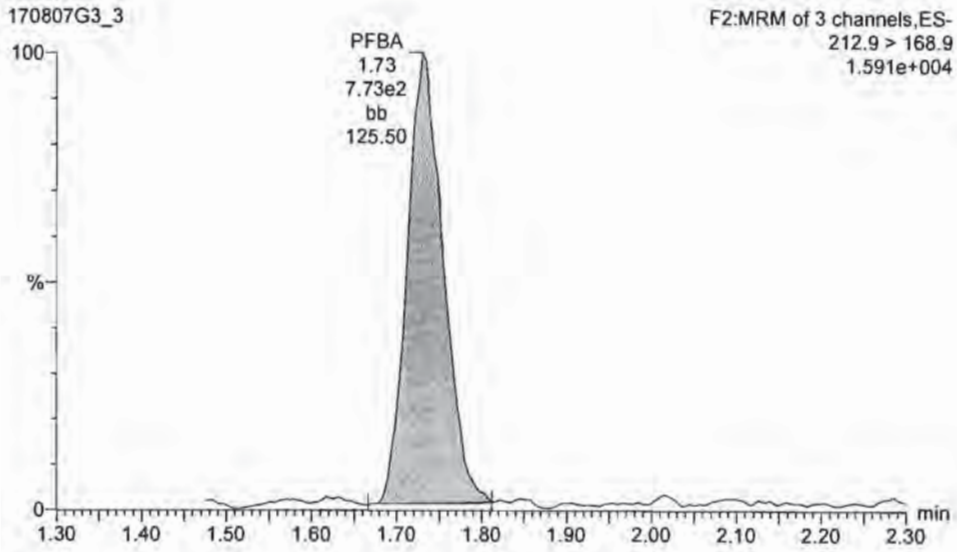

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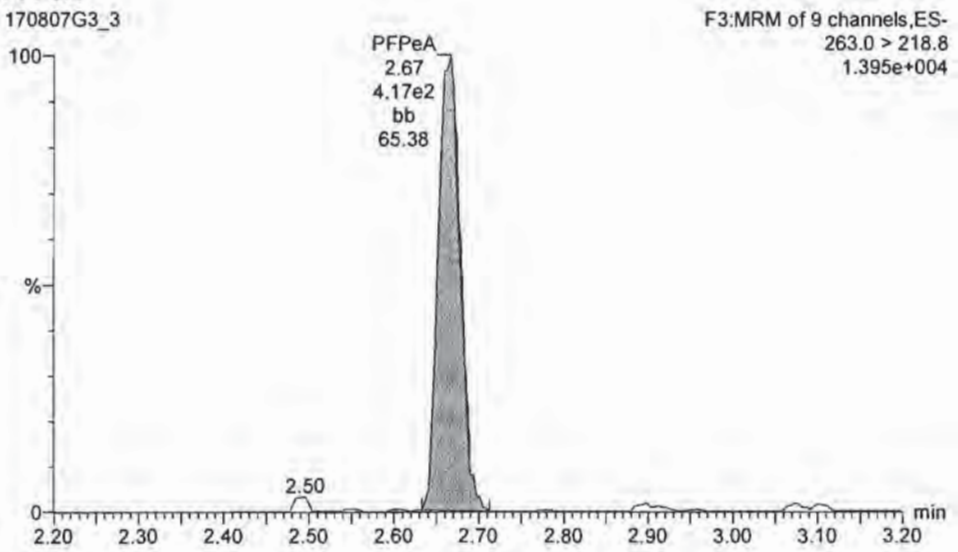

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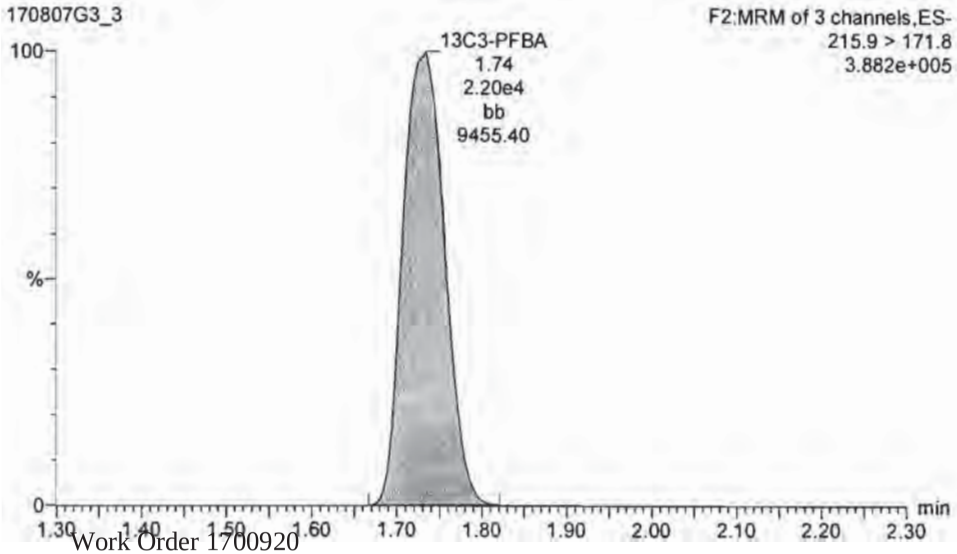
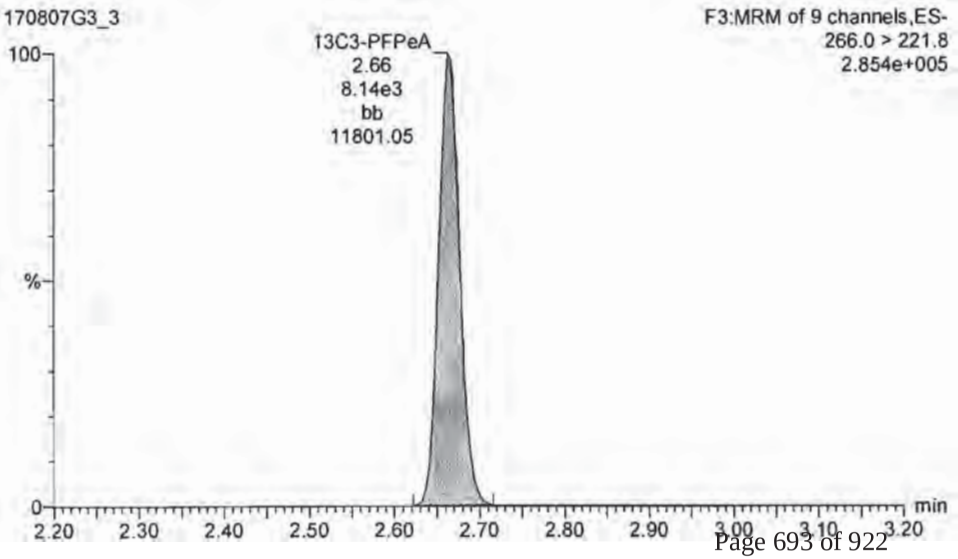


13C3-PFPeA



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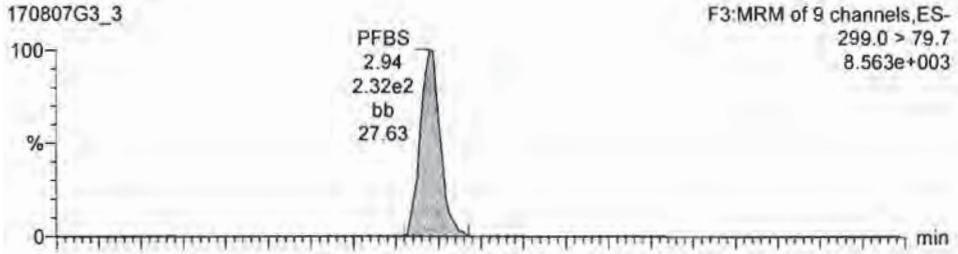
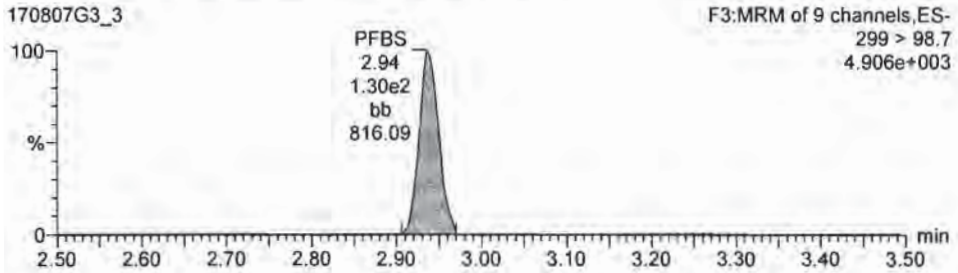
ID: ST170807G3-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170807G3_3, Date: 07-Aug-2017, Time: 16:16:27, Instrument: , Lab: , User:

Total PFBS





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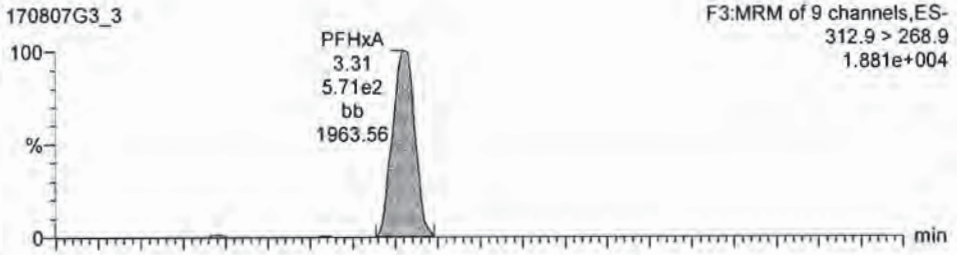

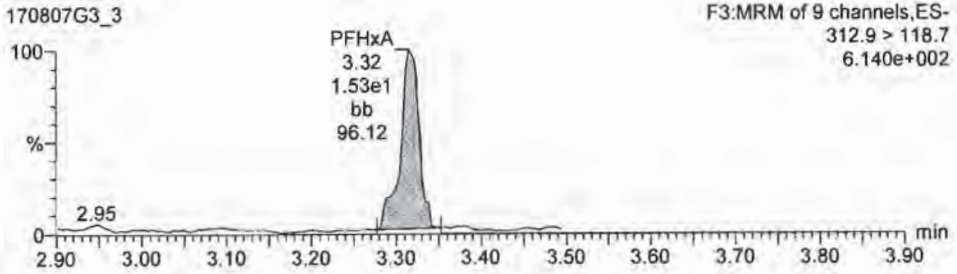

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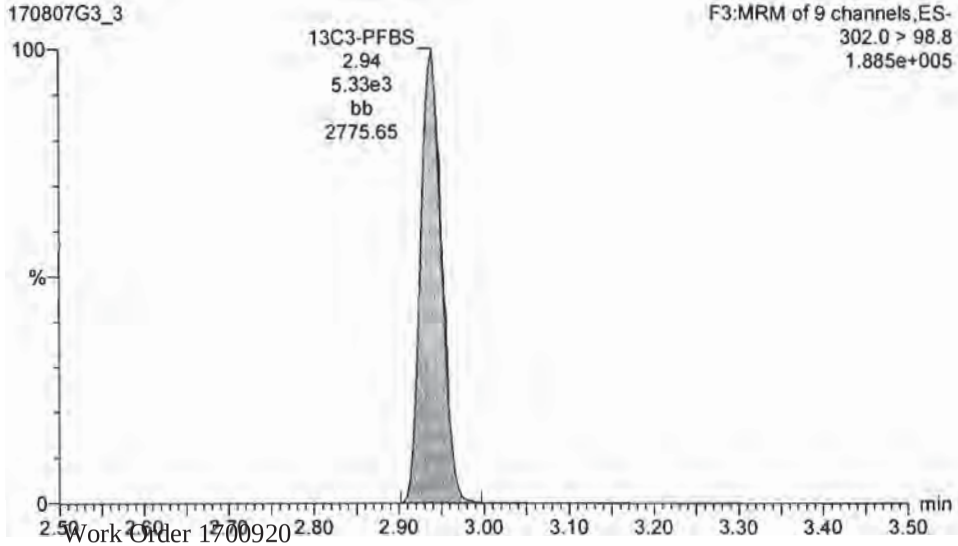

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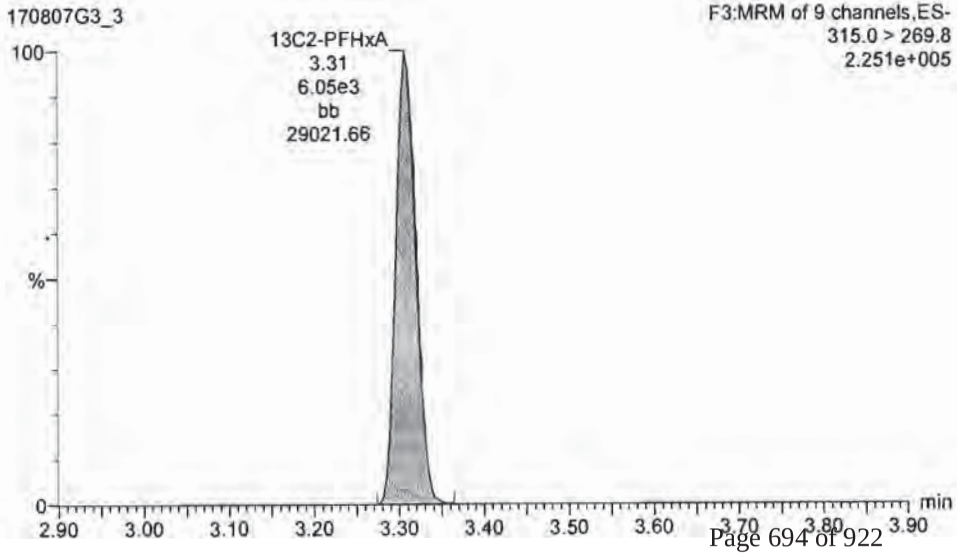

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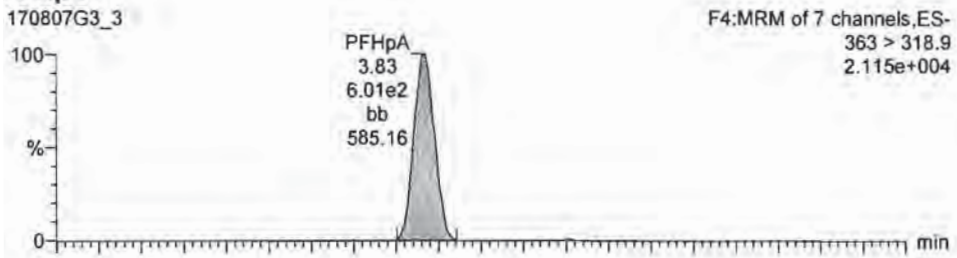
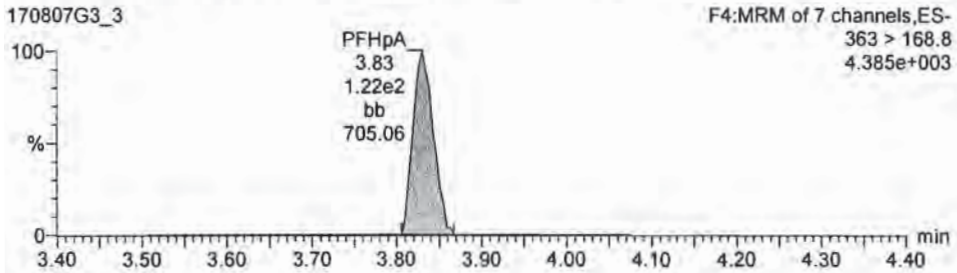
Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170807G3_3, Date: 07-Aug-2017, Time: 16:16:27, Instrument: , Lab: , User:

PFHpA





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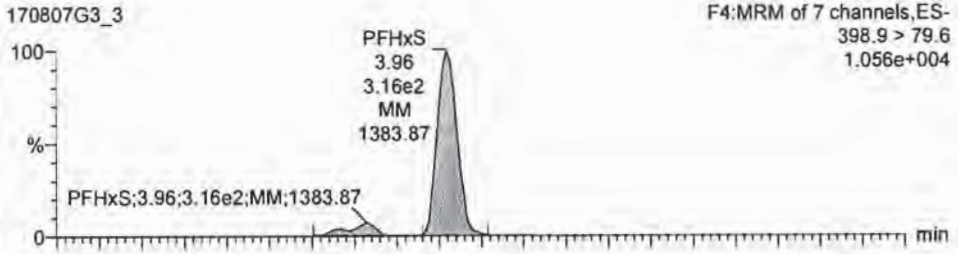

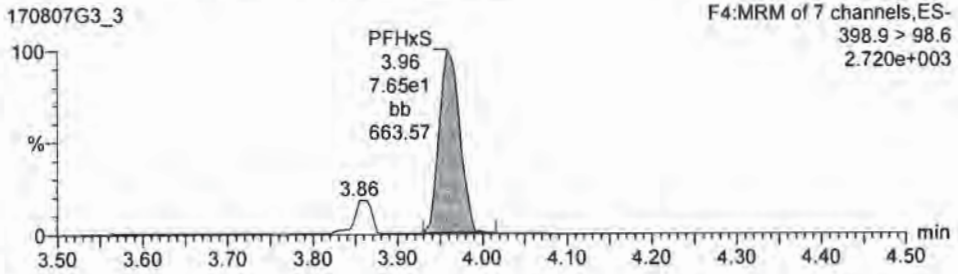

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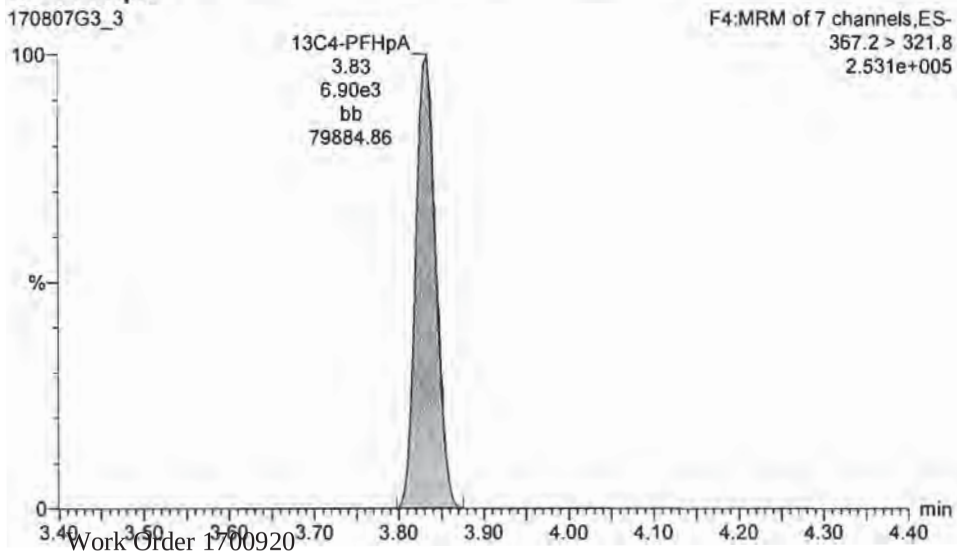

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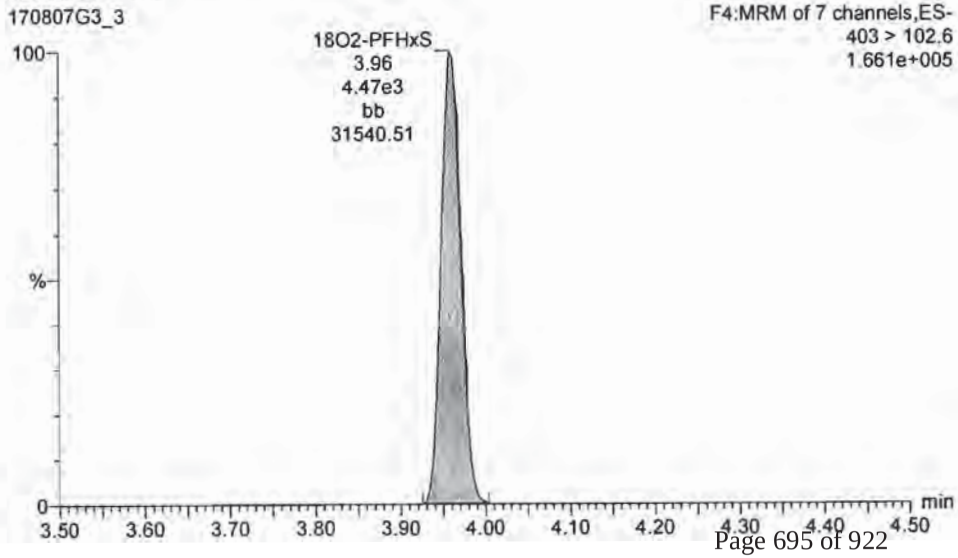

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ID: ST170807G3-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170807G3_3, Date: 07-Aug-2017, Time: 16:16:27, Instrument: , Lab: , User:

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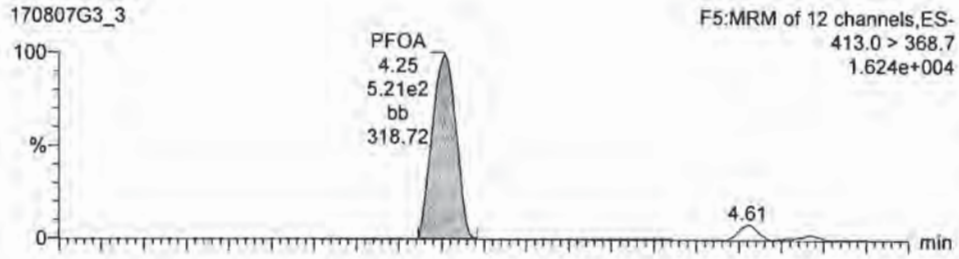

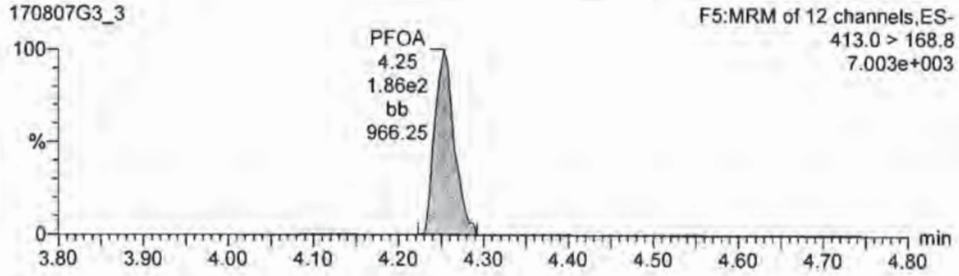

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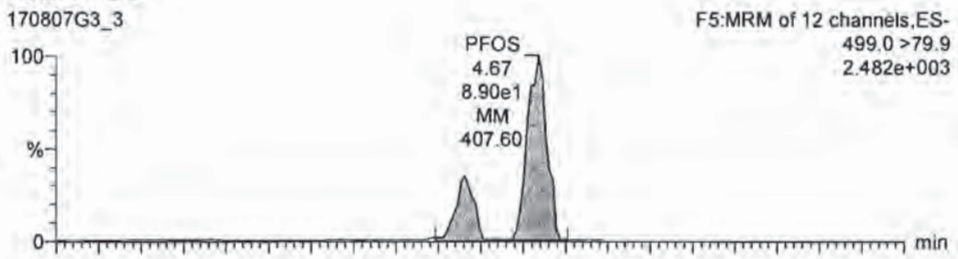

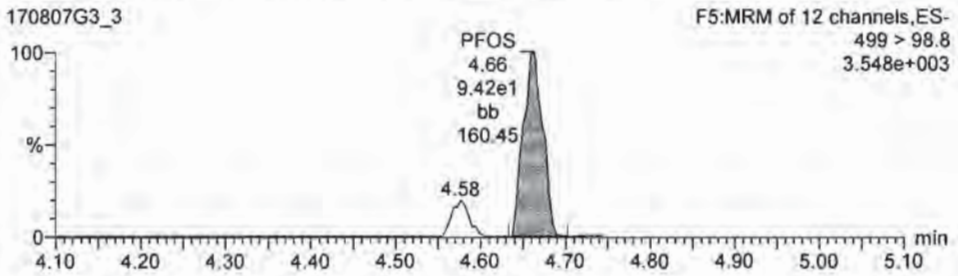

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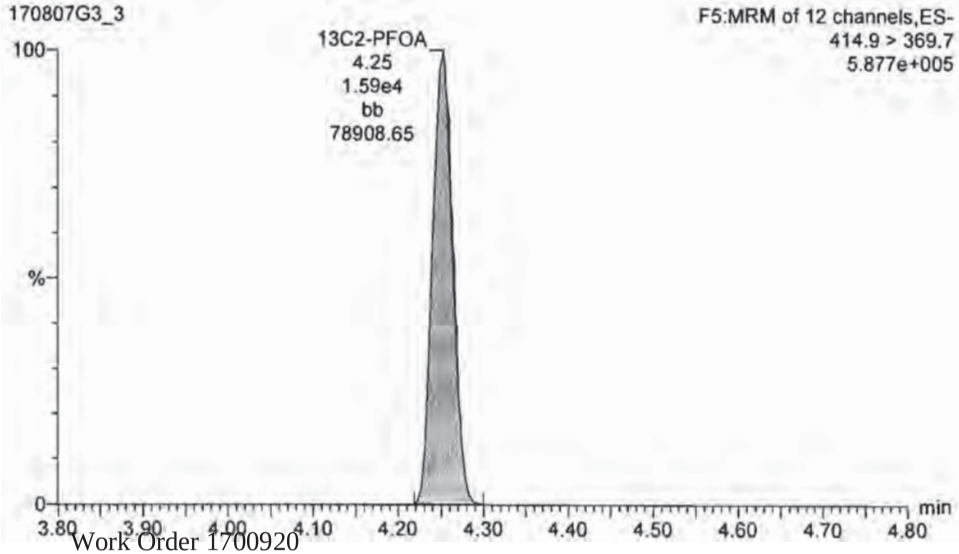

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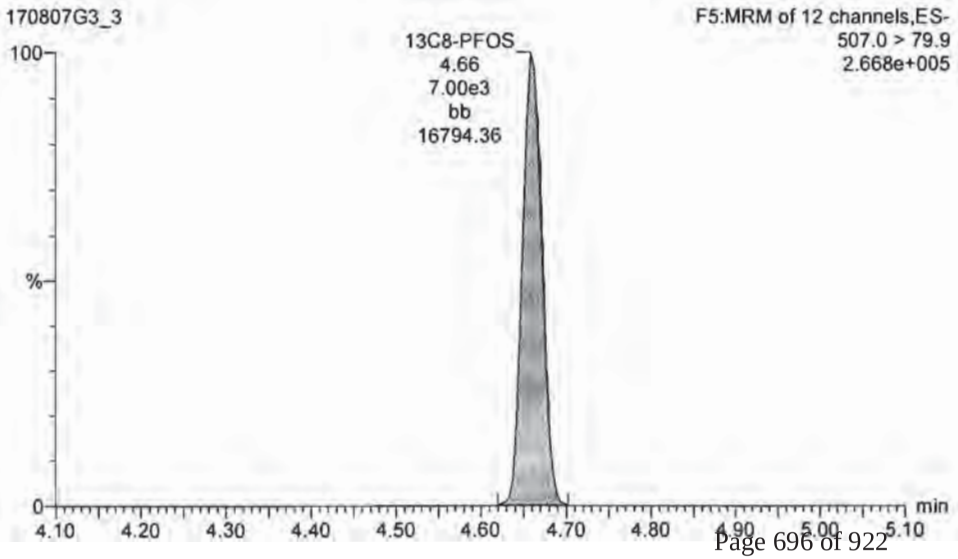

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ID: ST170807G3-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170807G3_3, Date: 07-Aug-2017, Time: 16:16:27, Instrument: , Lab: , User:

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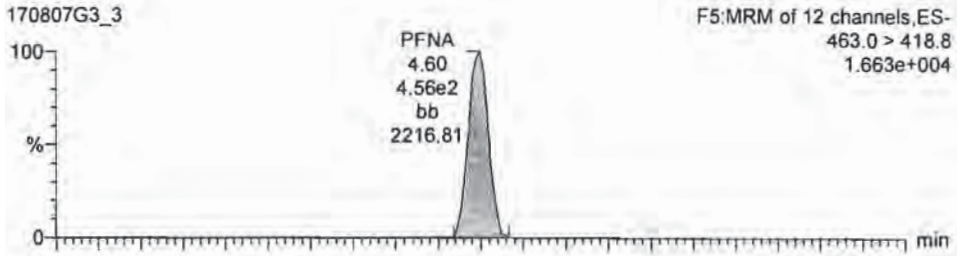

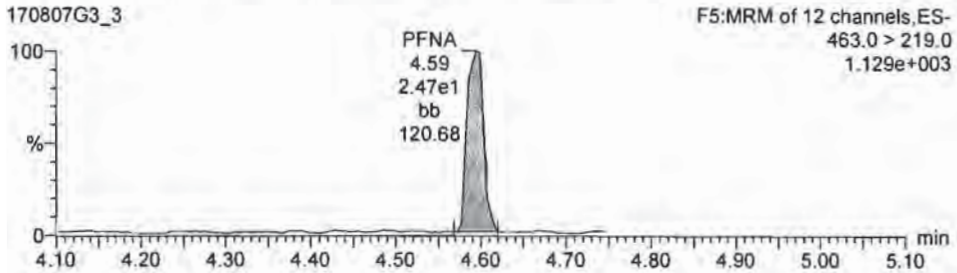

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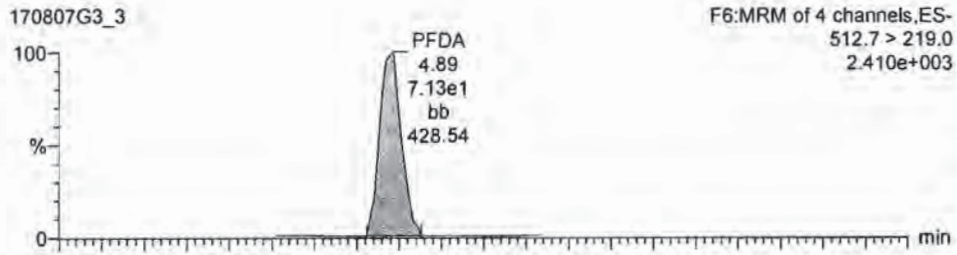

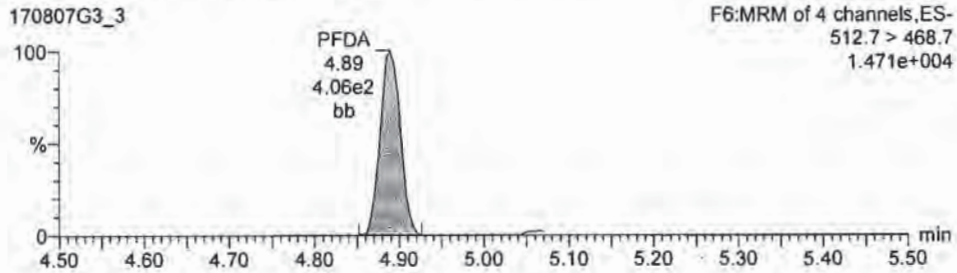

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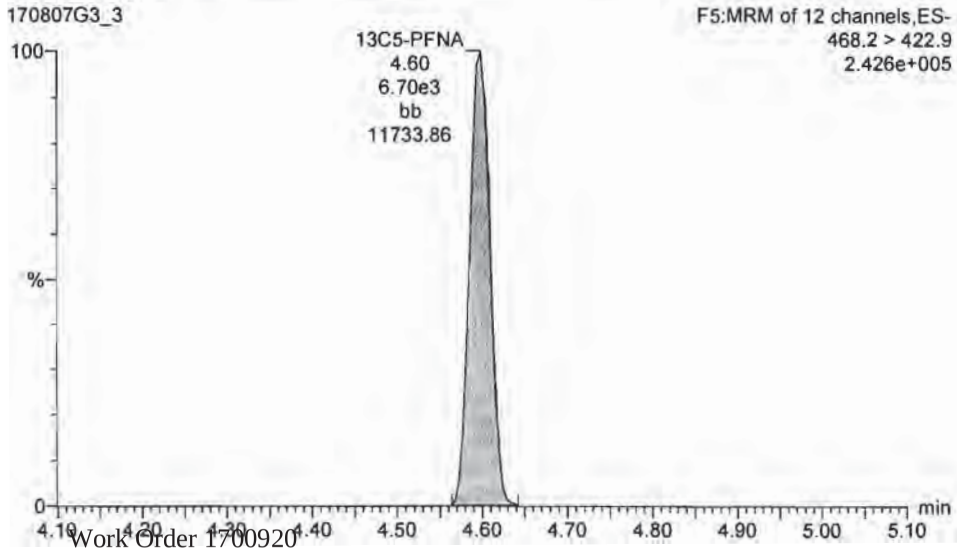

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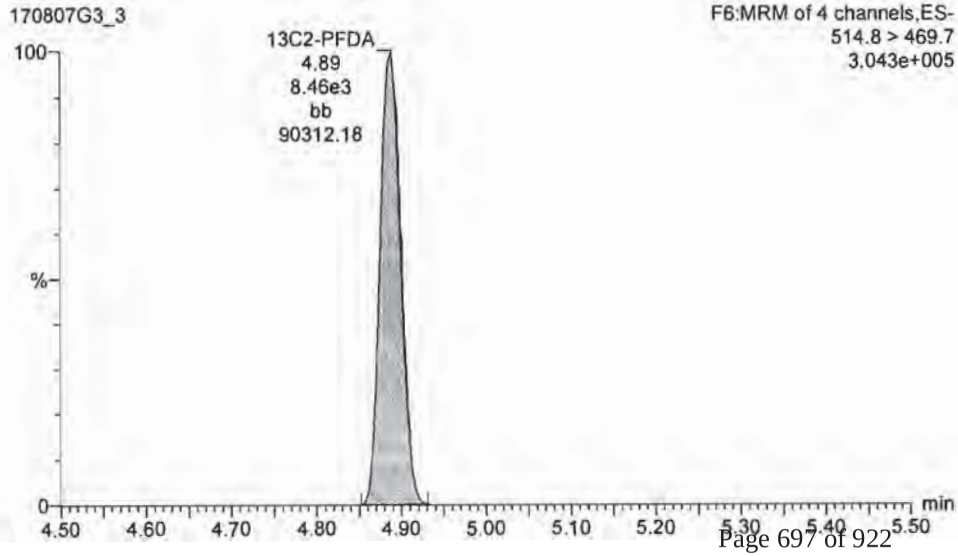

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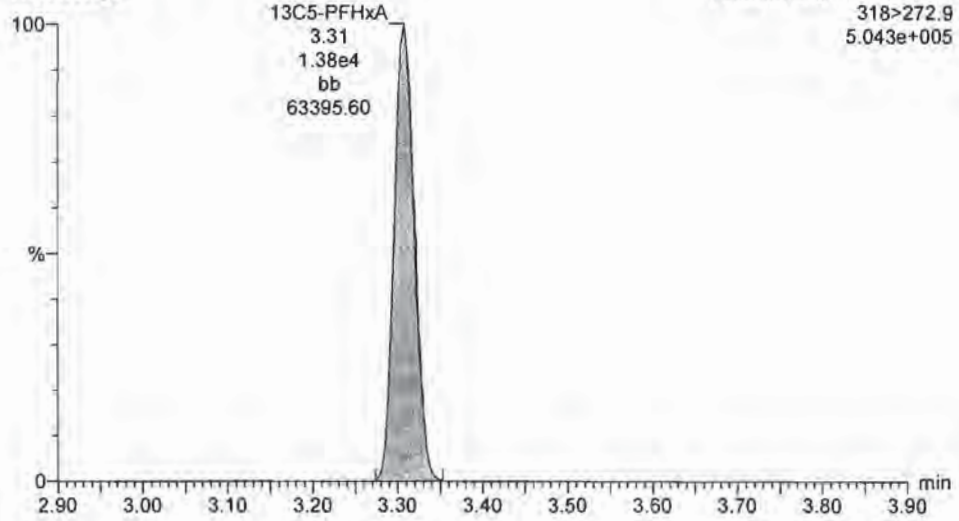
ID: ST170807G3-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170807G3_3, Date: 07-Aug-2017, Time: 16:16:27, Instrument: , Lab: , User:

13C5-PFHxA



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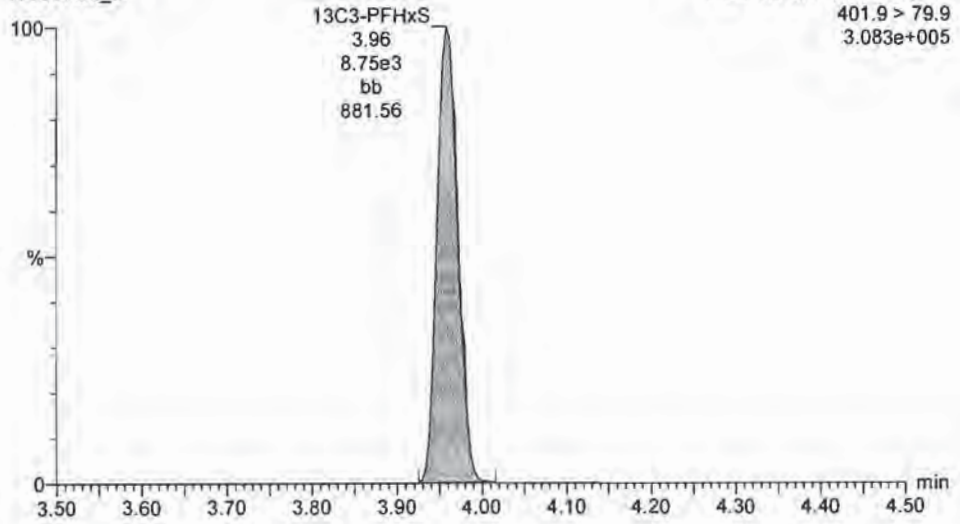

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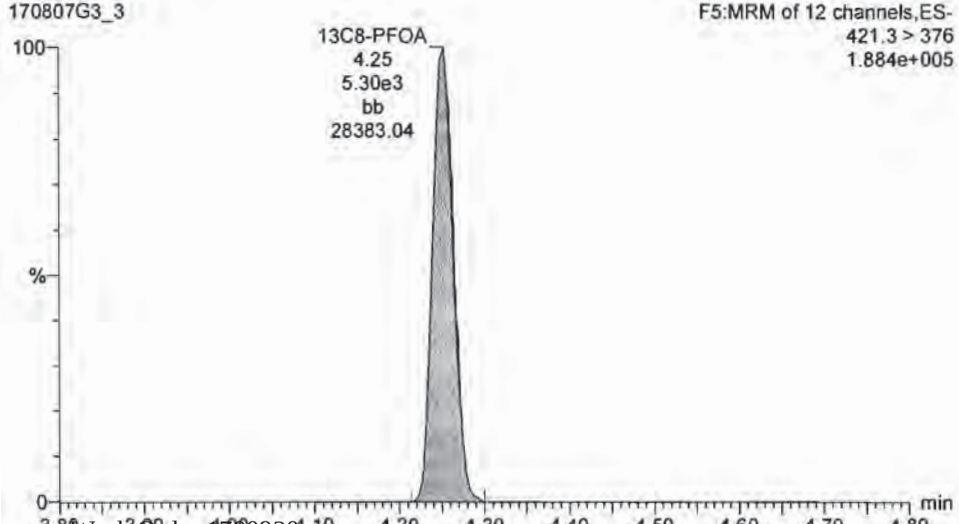

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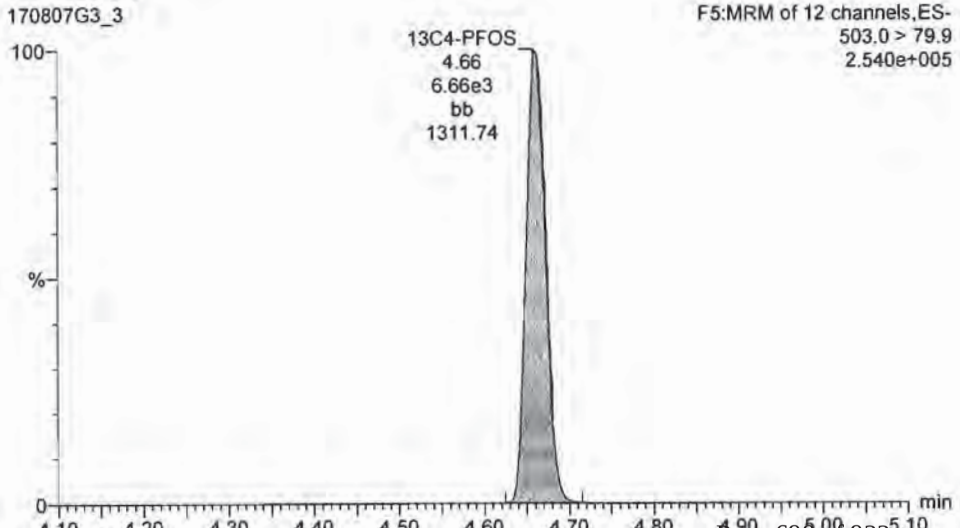

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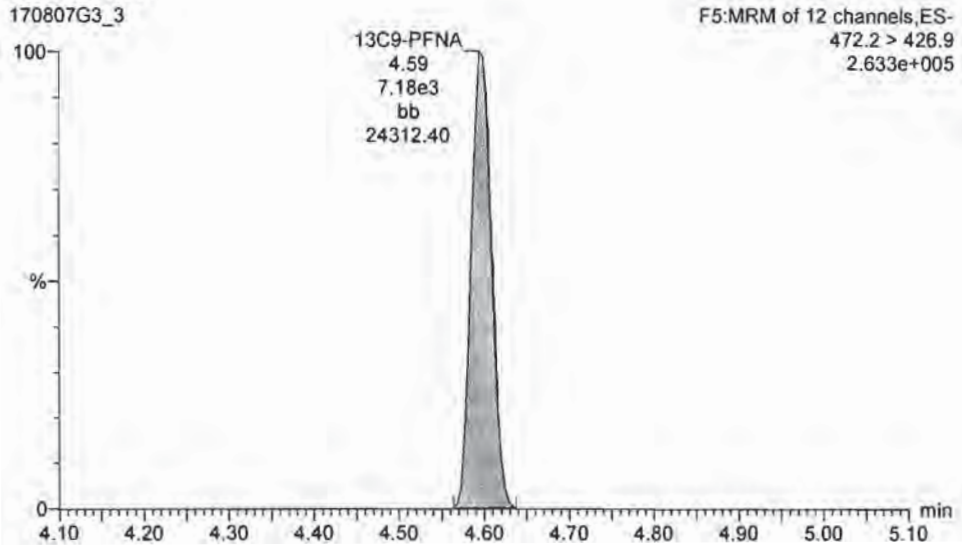
ID: ST170807G3-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A, Name: 170807G3_3, Date: 07-Aug-2017, Time: 16:16:27, Instrument: , Lab: , User:

13C9-PFNA



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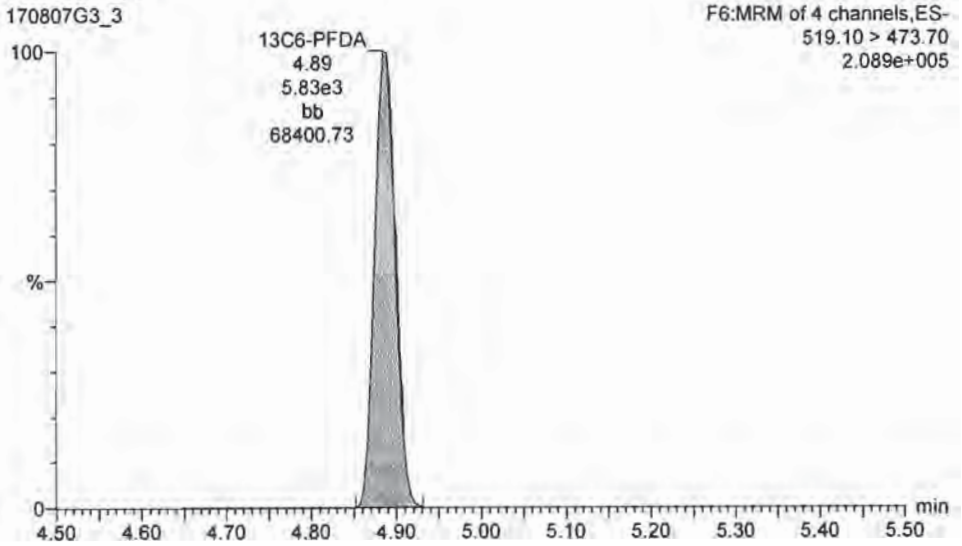

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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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ID: ST170807G3-3 PFC CS0 17H0709, Description: PFC CS0 17H0709 A, Name: 170807G3_4, Date: 07-Aug-2017, Time: 16:28:53, Instrument: , Lab: , User:

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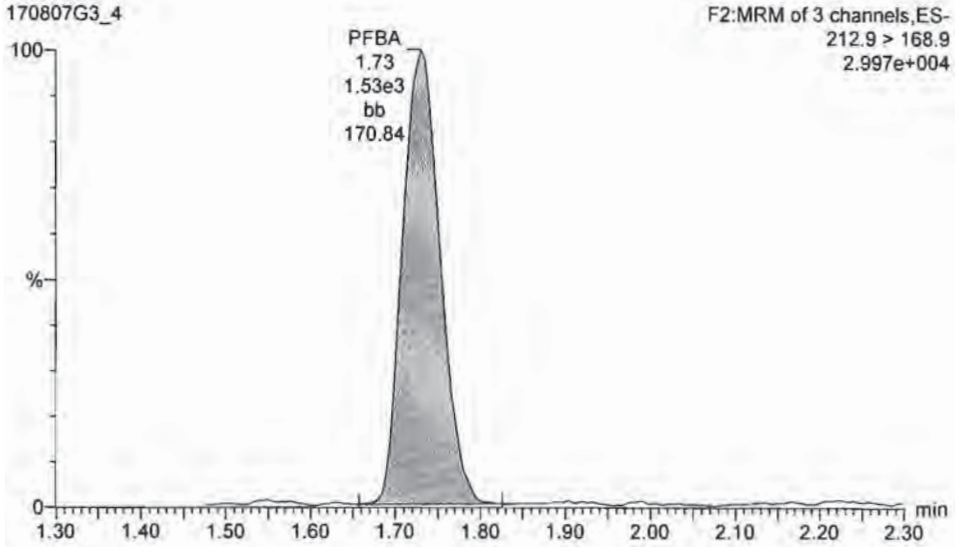

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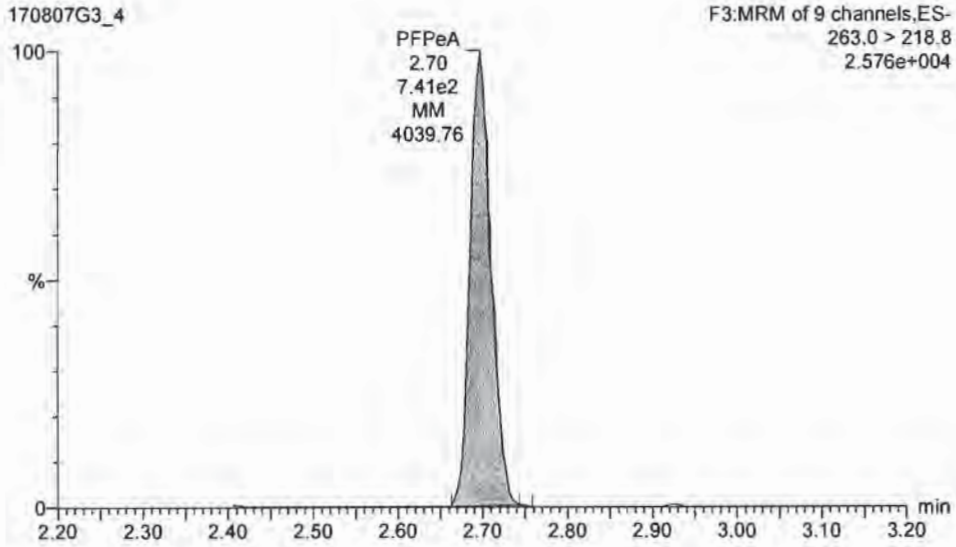

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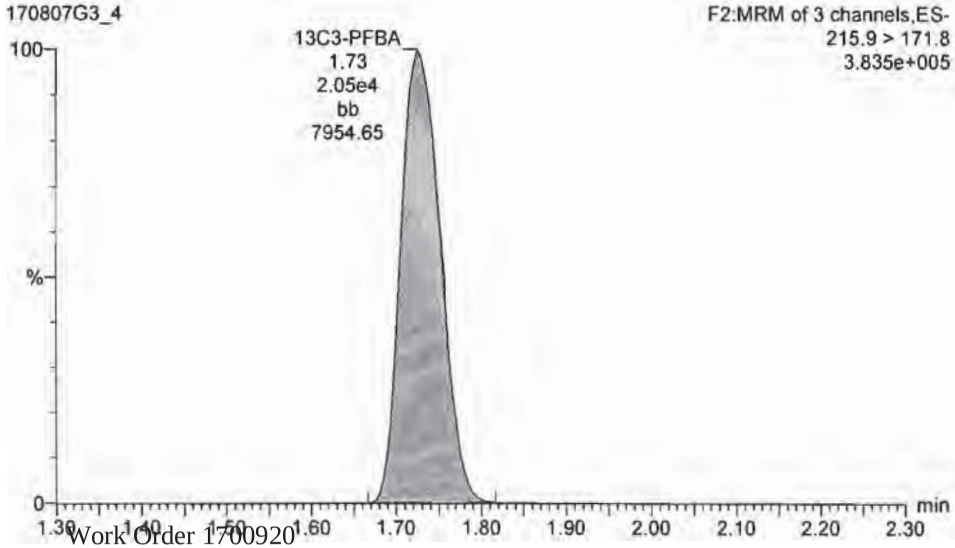

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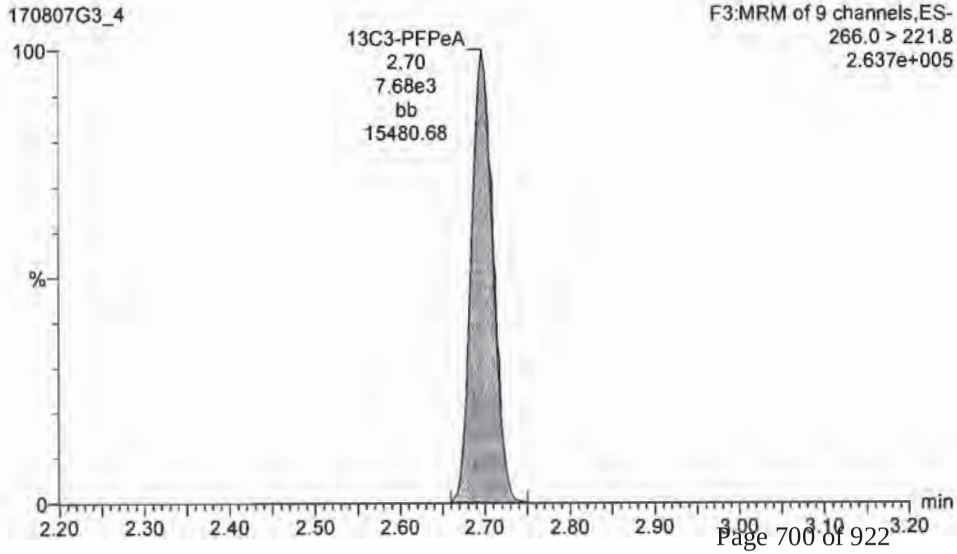

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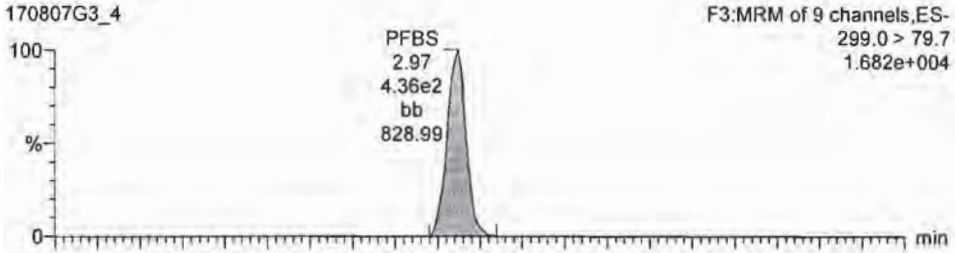

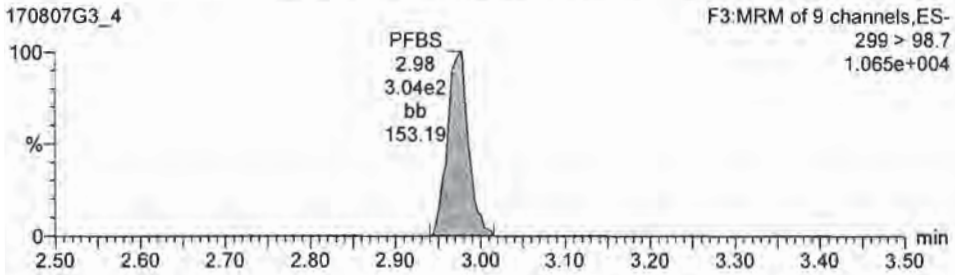

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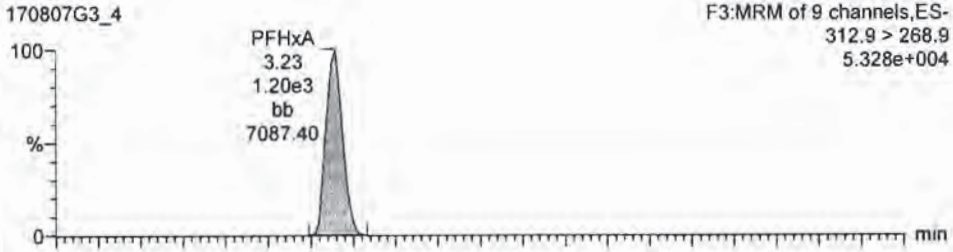

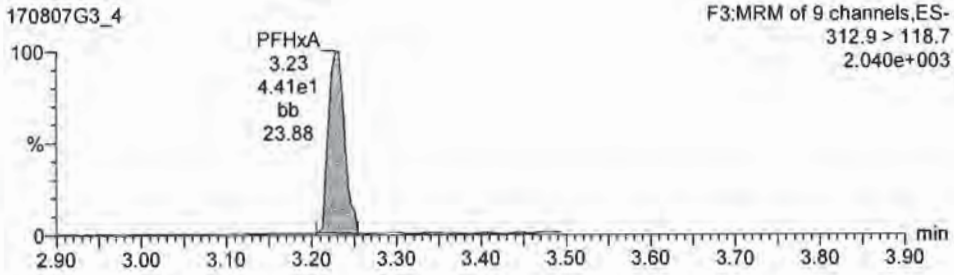

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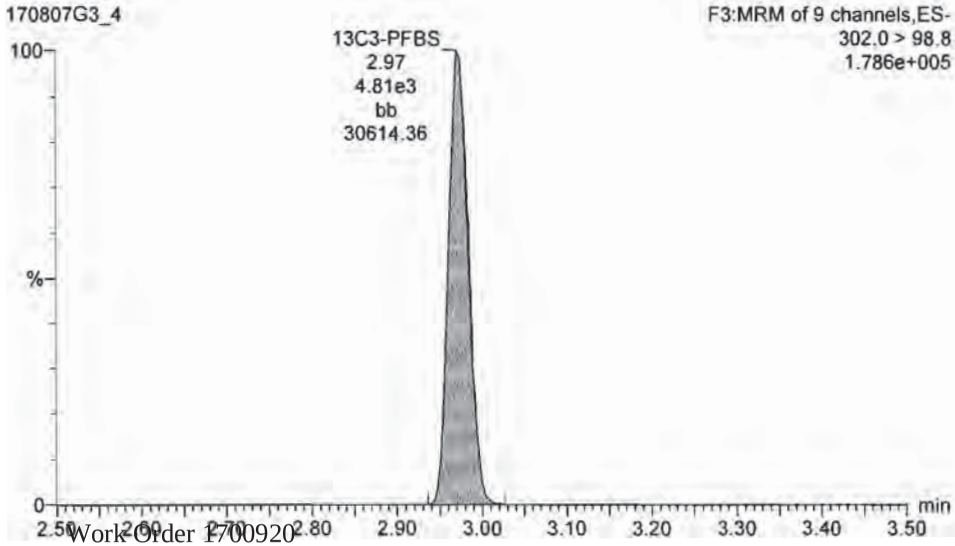

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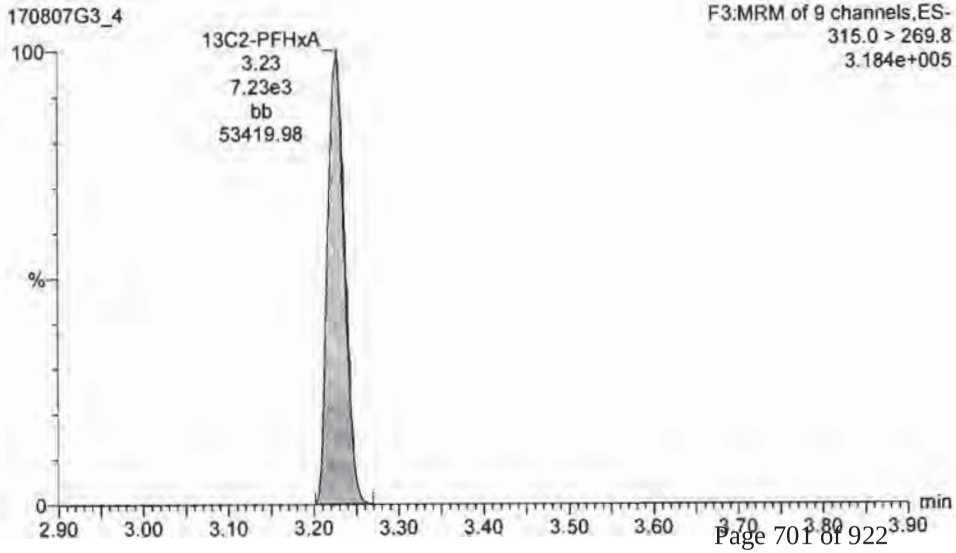

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ID: ST170807G3-3 PFC CS0 17H0709, Description: PFC CS0 17H0709 A, Name: 170807G3_4, Date: 07-Aug-2017, Time: 16:28:53, Instrument: , Lab: , User:

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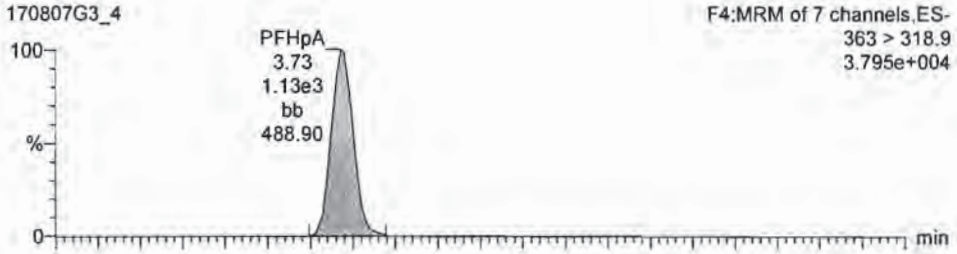
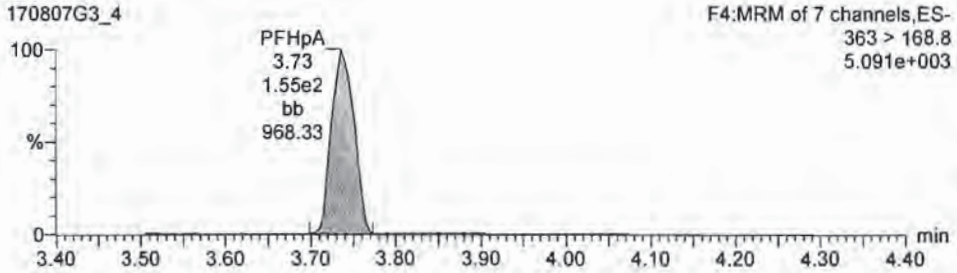
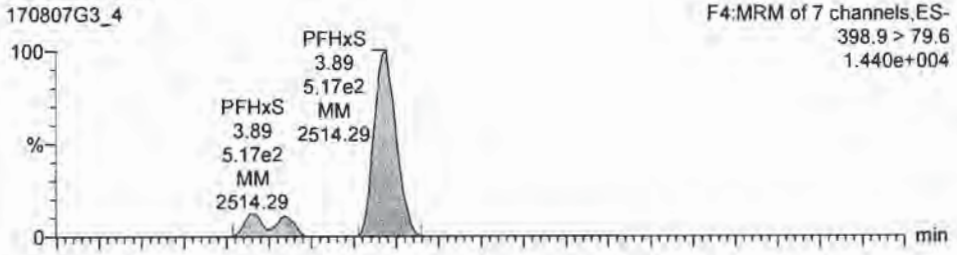
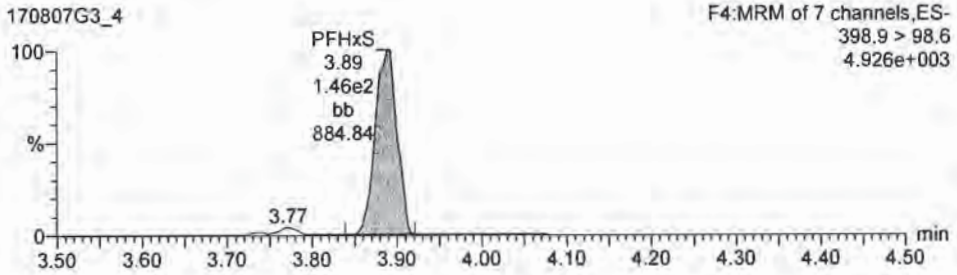




Total PFHxS





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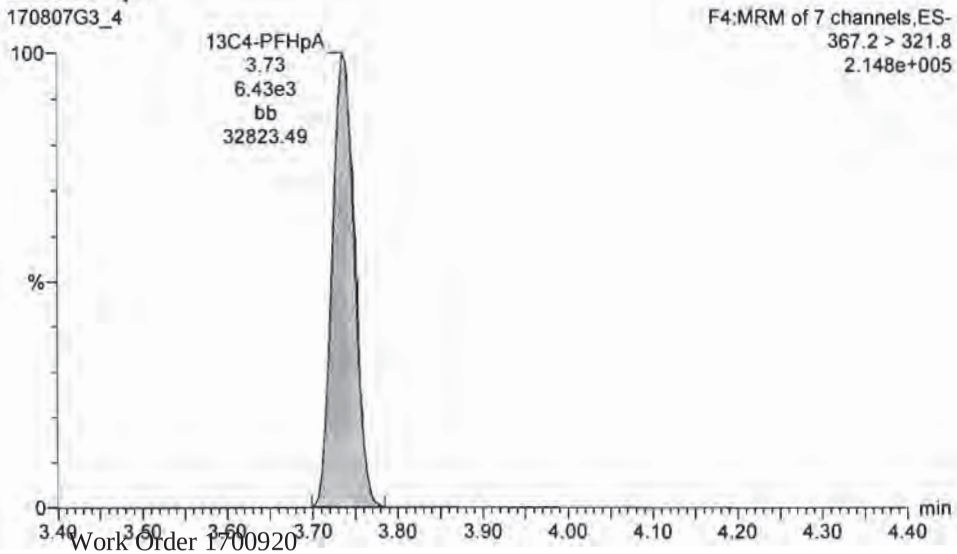

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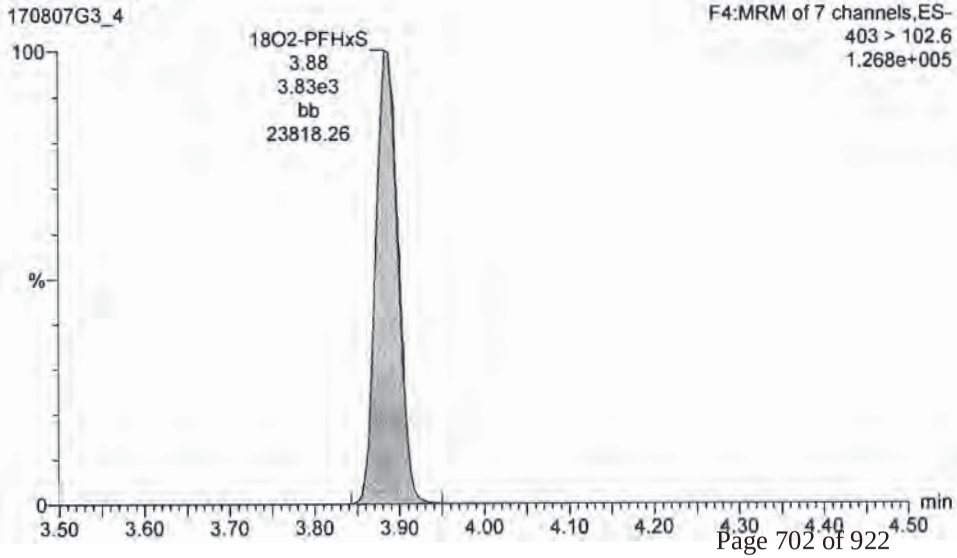

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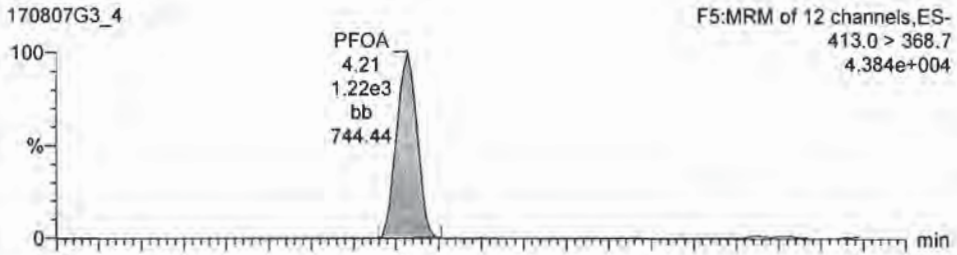
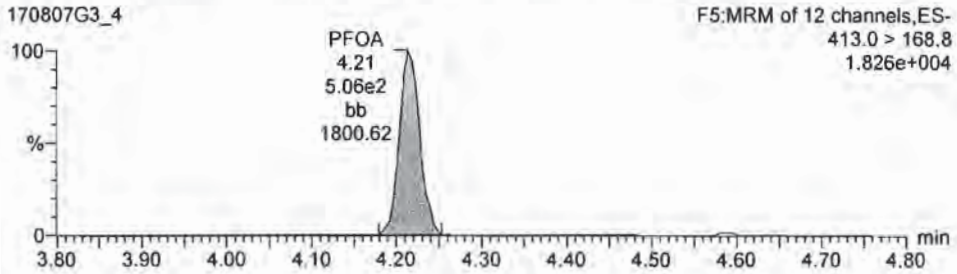
Total PFOA





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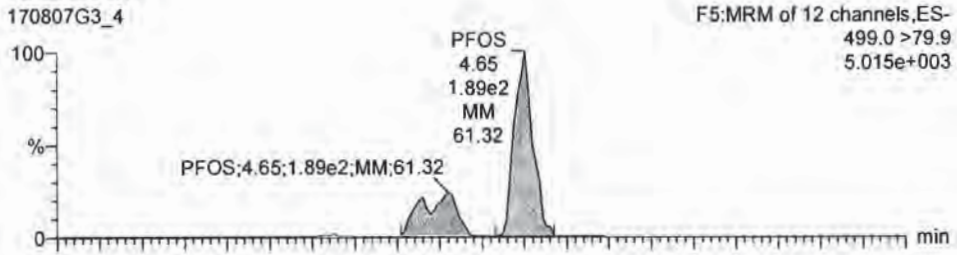

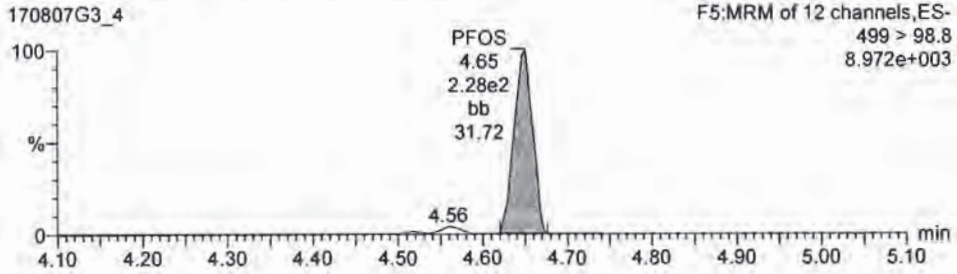

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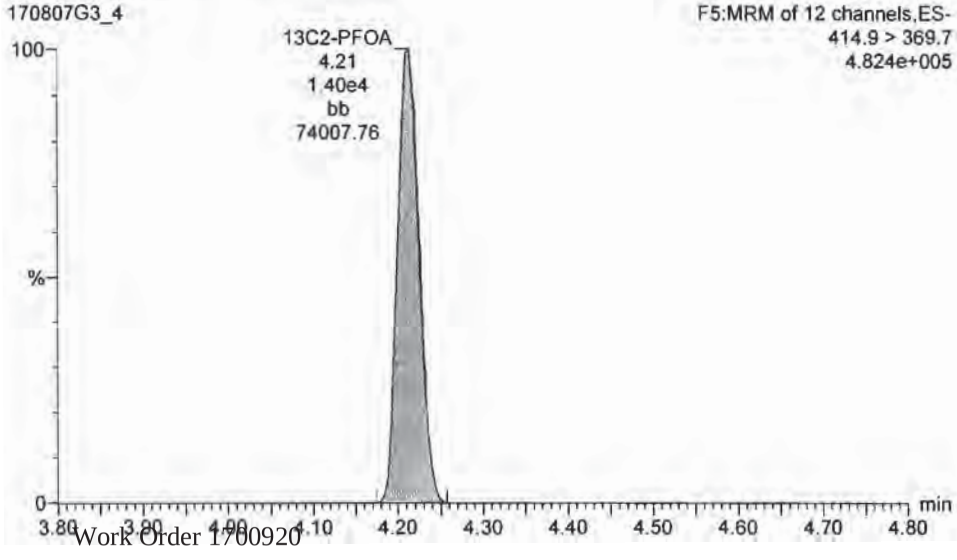

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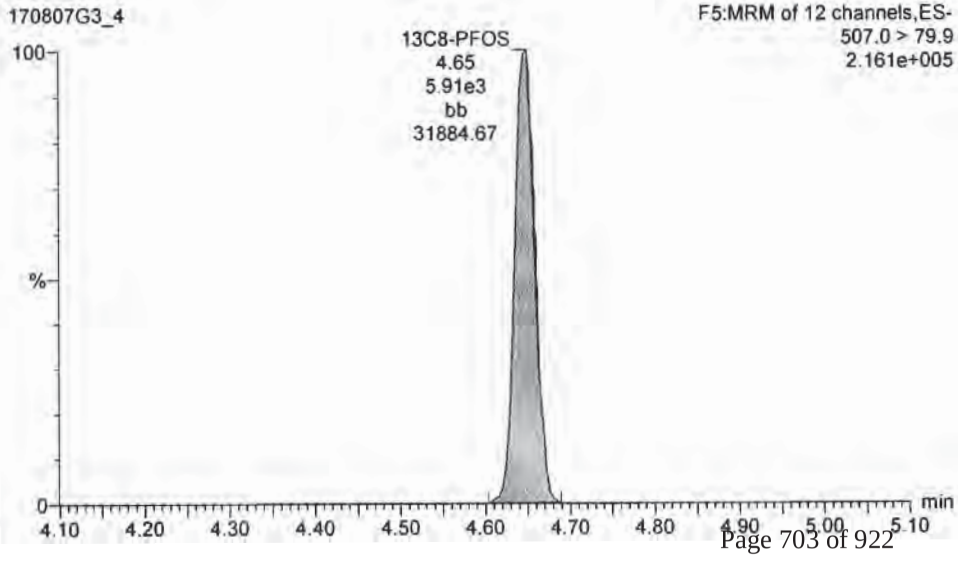

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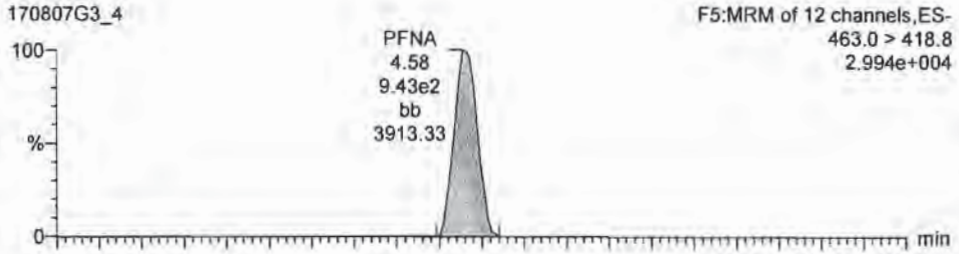

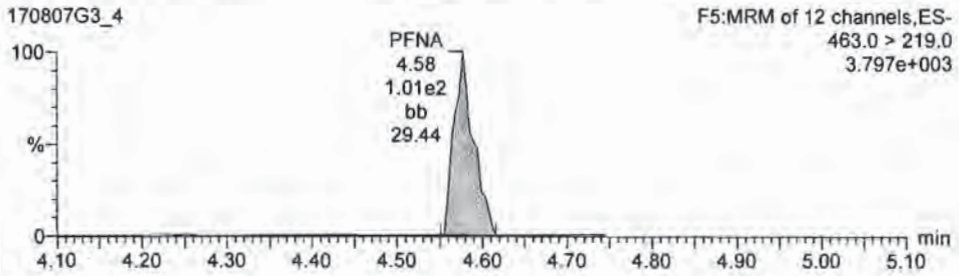

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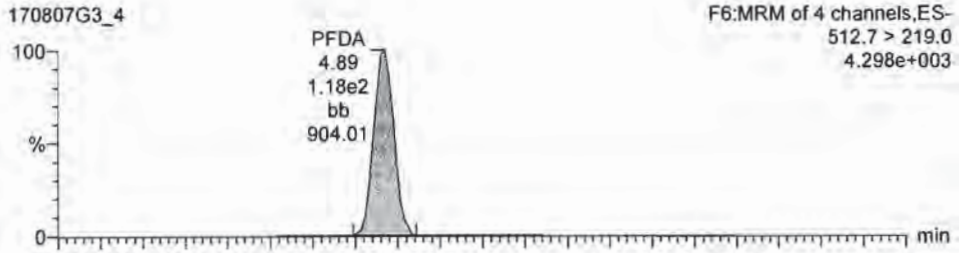
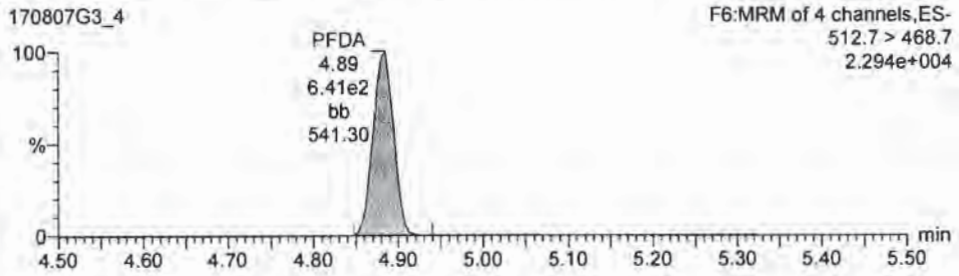
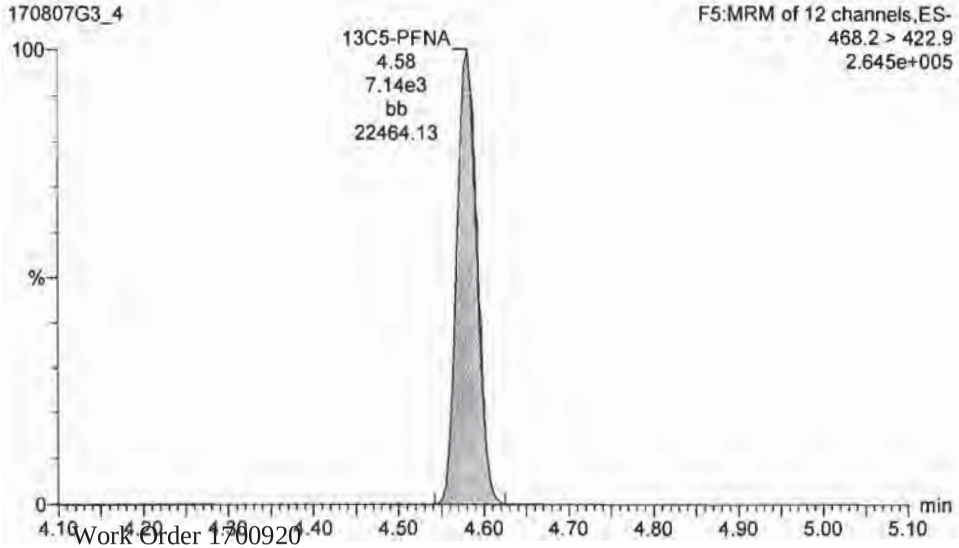




13C5-PFNA



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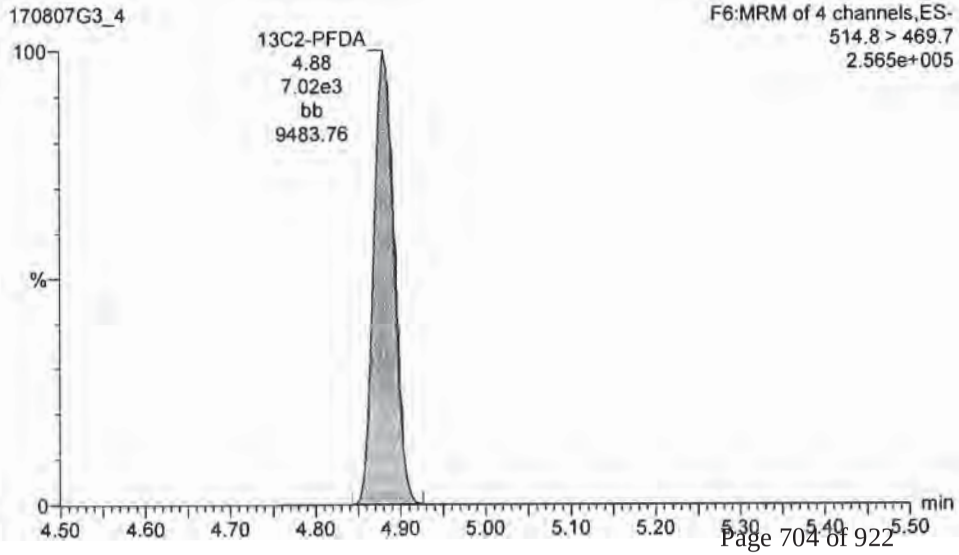

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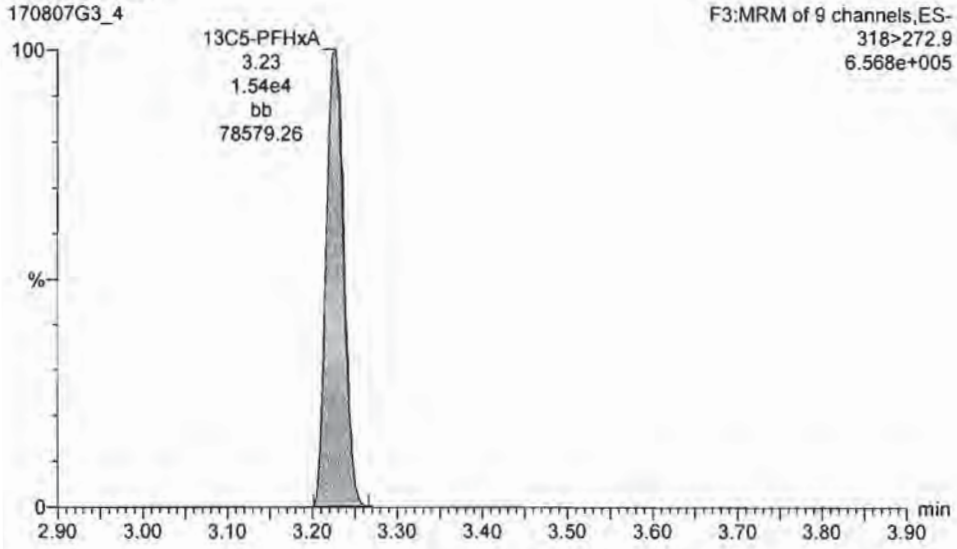
Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-3 PFC CS0 17H0709, Description: PFC CS0 17H0709 A, Name: 170807G3_4, Date: 07-Aug-2017, Time: 16:28:53, Instrument: , Lab: , User:

13C5-PFHxA



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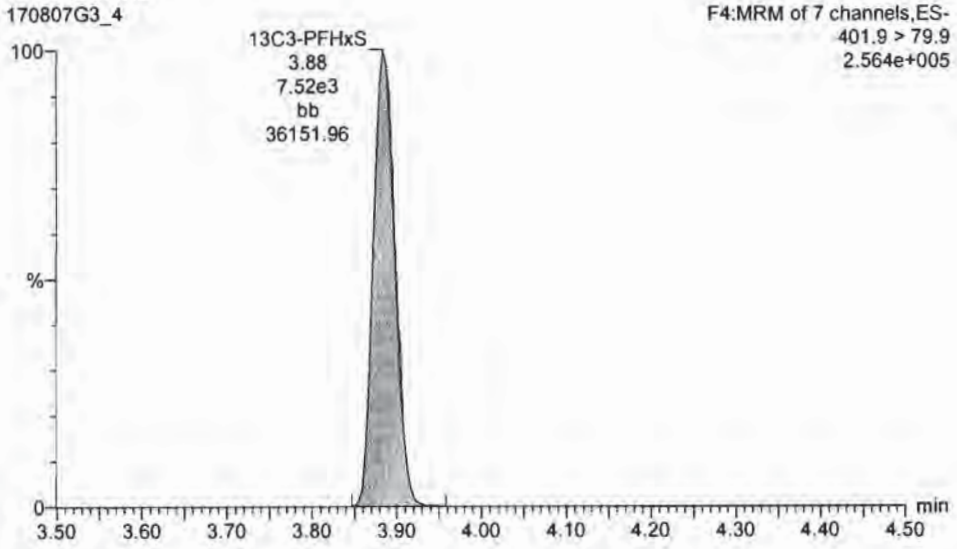

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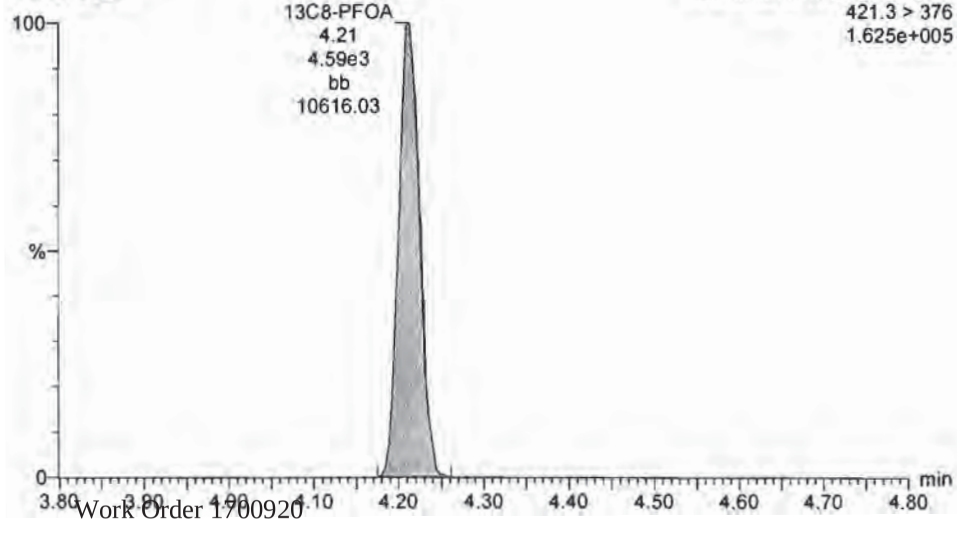

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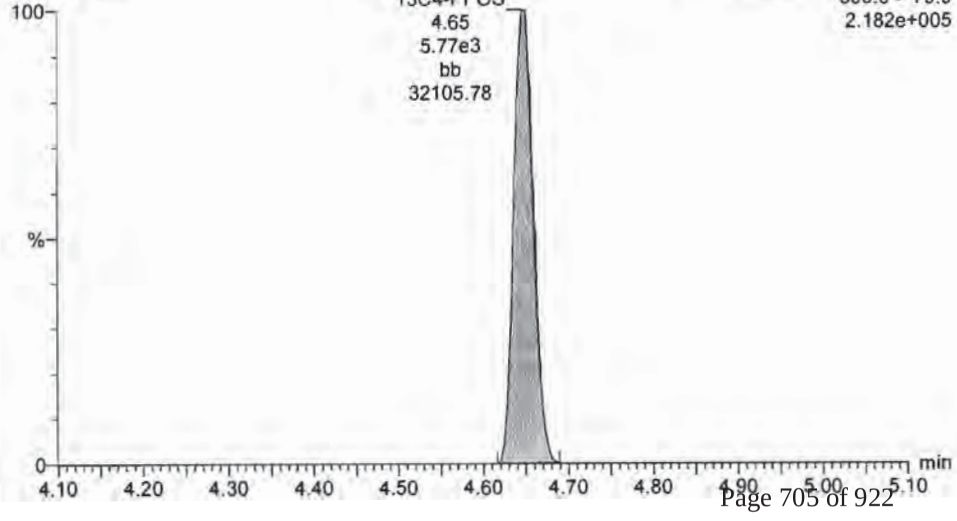

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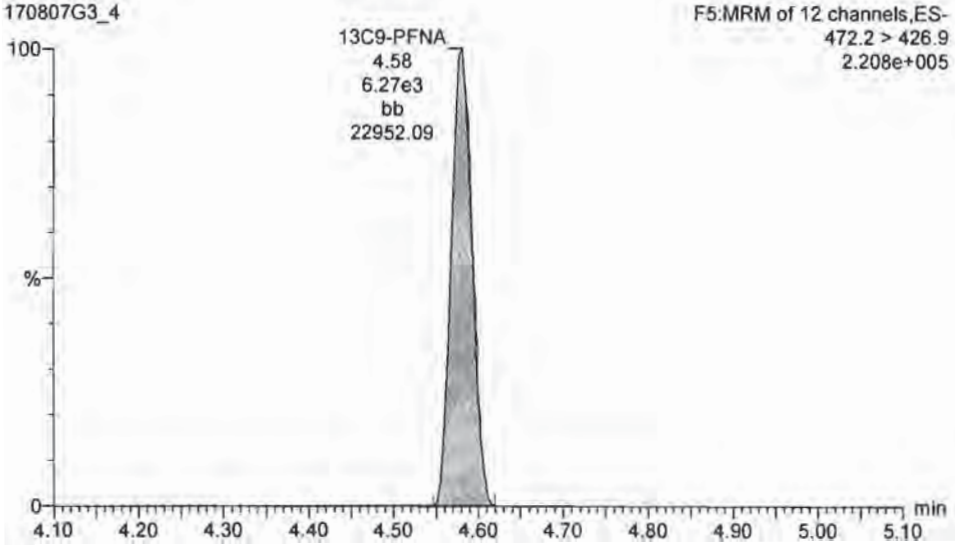
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-3 PFC CS0 17H0709, Description: PFC CS0 17H0709 A, Name: 170807G3_4, Date: 07-Aug-2017, Time: 16:28:53, Instrument: , Lab: , User:

13C9-PFNA



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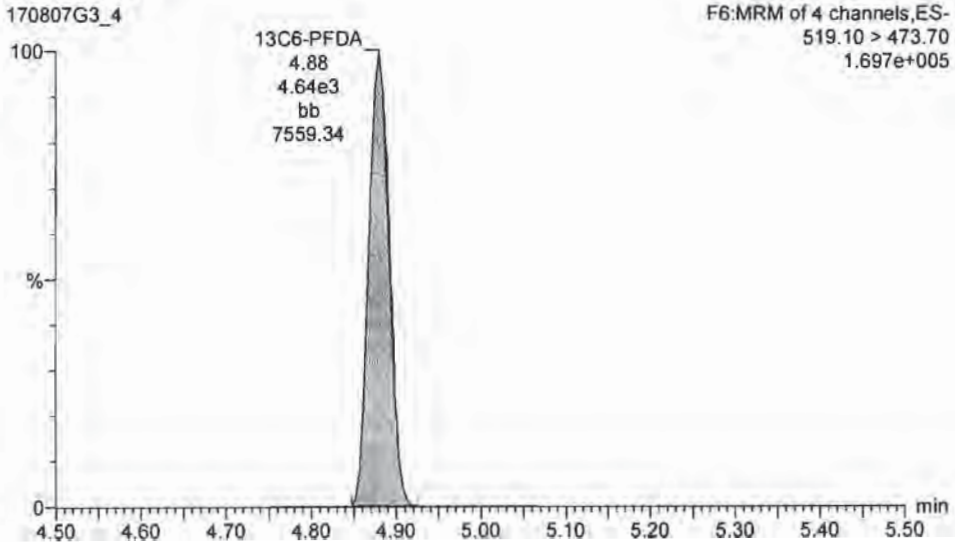

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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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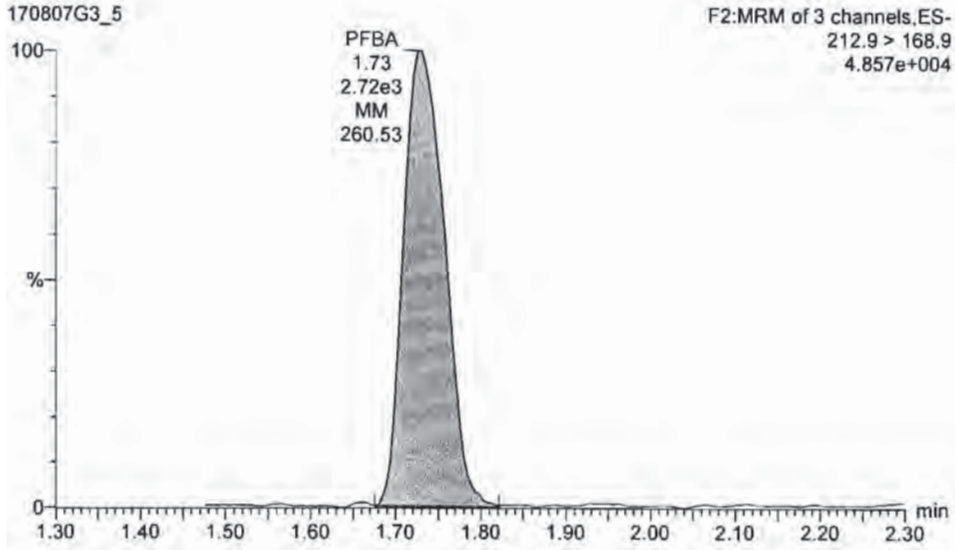
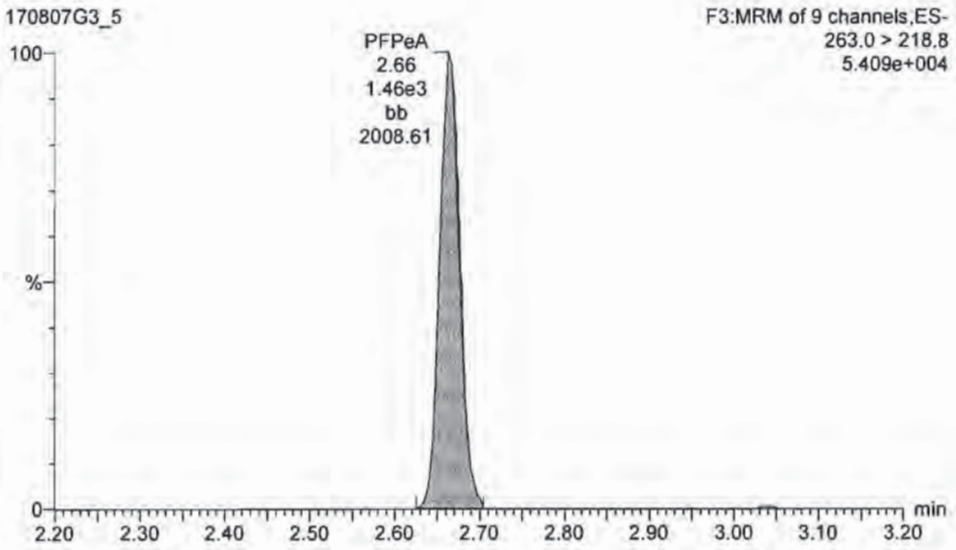
ID: ST170807G3-4 PFC CS1 17H0710, Description: PFC CS1 17H0710 A, Name: 170807G3_5, Date: 07-Aug-2017, Time: 16:41:23, Instrument: , Lab: , User:

PFBA



PFPeA



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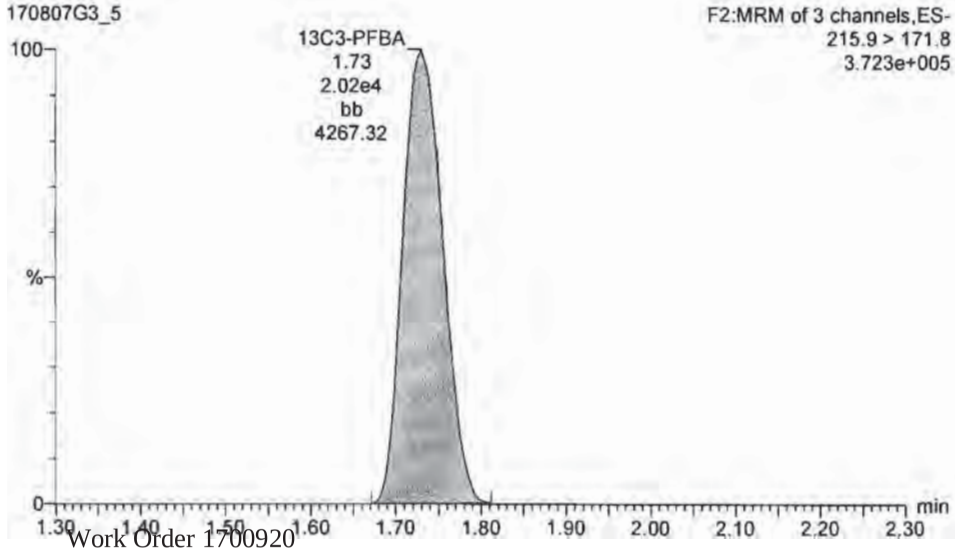

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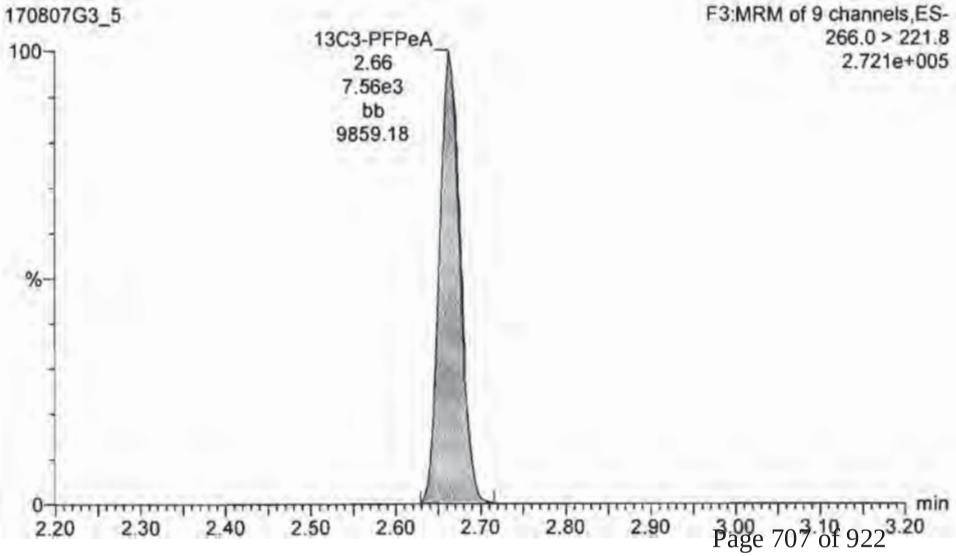

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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-4 PFC CS1 17H0710, Description: PFC CS1 17H0710 A, Name: 170807G3_5, Date: 07-Aug-2017, Time: 16:41:23, Instrument: , Lab: , User:

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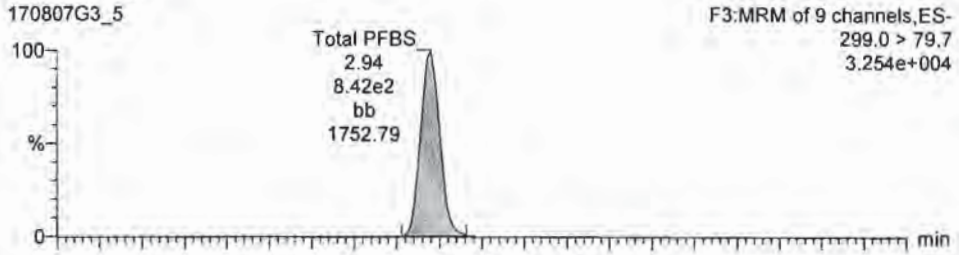
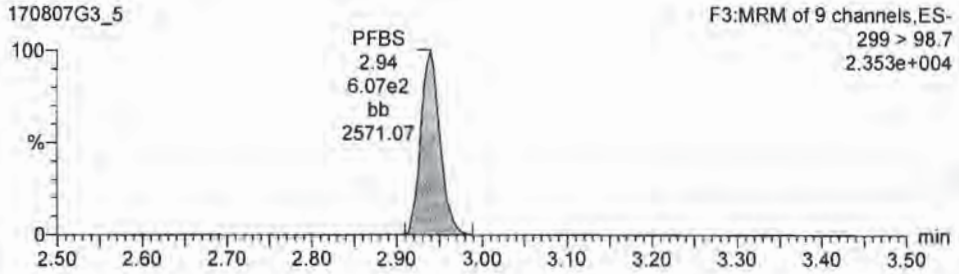
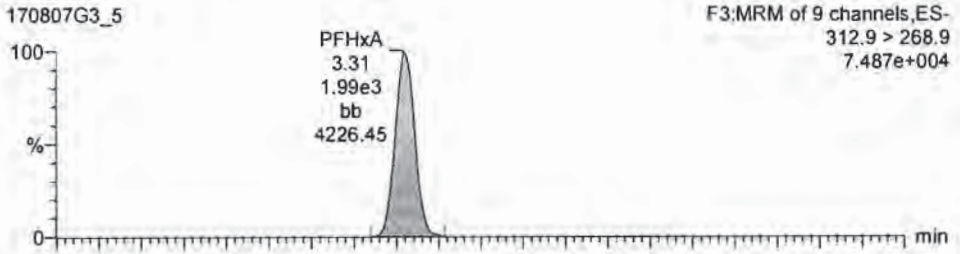
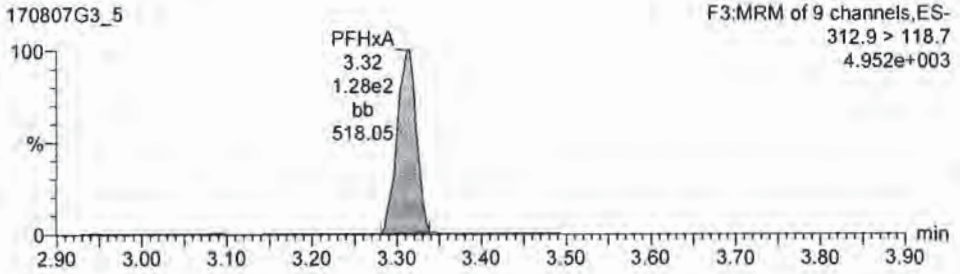




PFHxA





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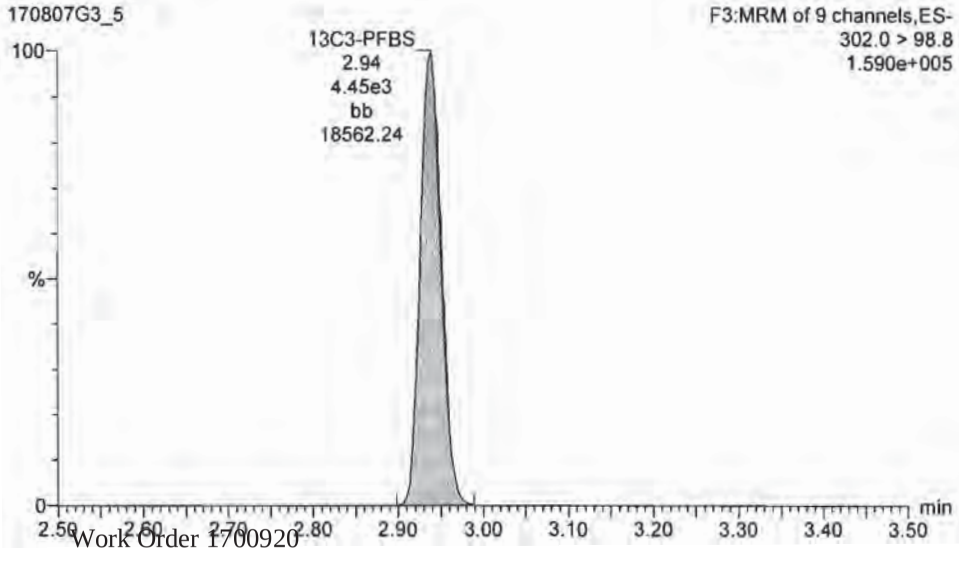

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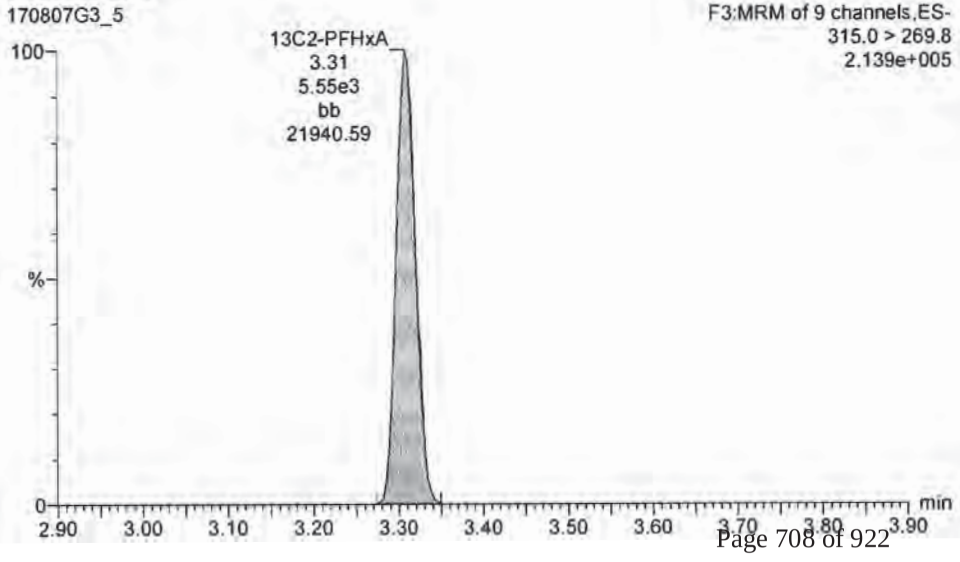

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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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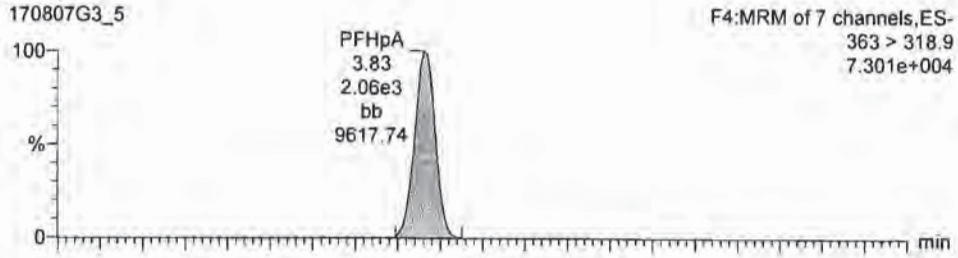
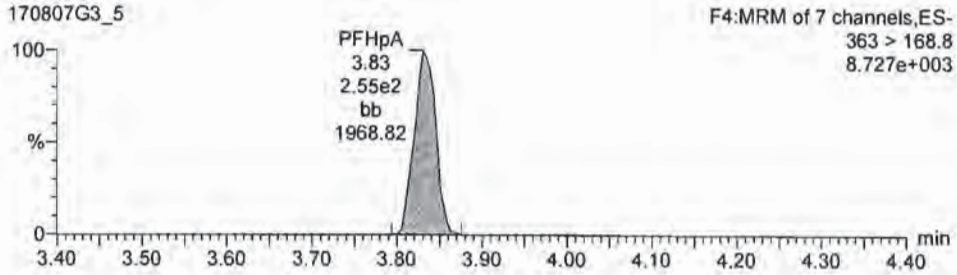
ID: ST170807G3-4 PFC CS1 17H0710, Description: PFC CS1 17H0710 A, Name: 170807G3_5, Date: 07-Aug-2017, Time: 16:41:23, Instrument: , Lab: , User:

PFHpA





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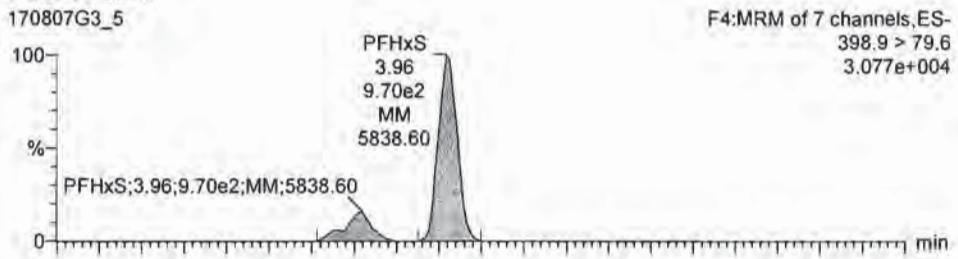

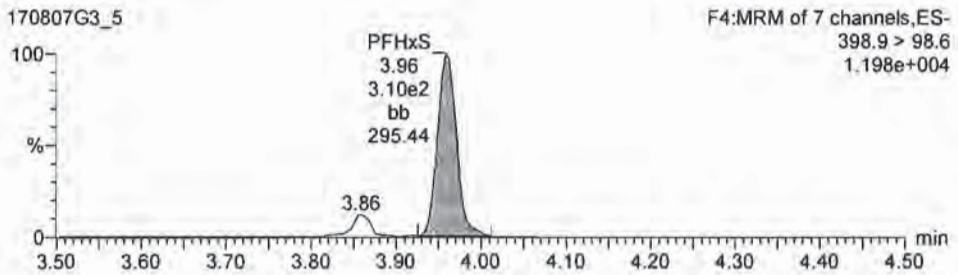

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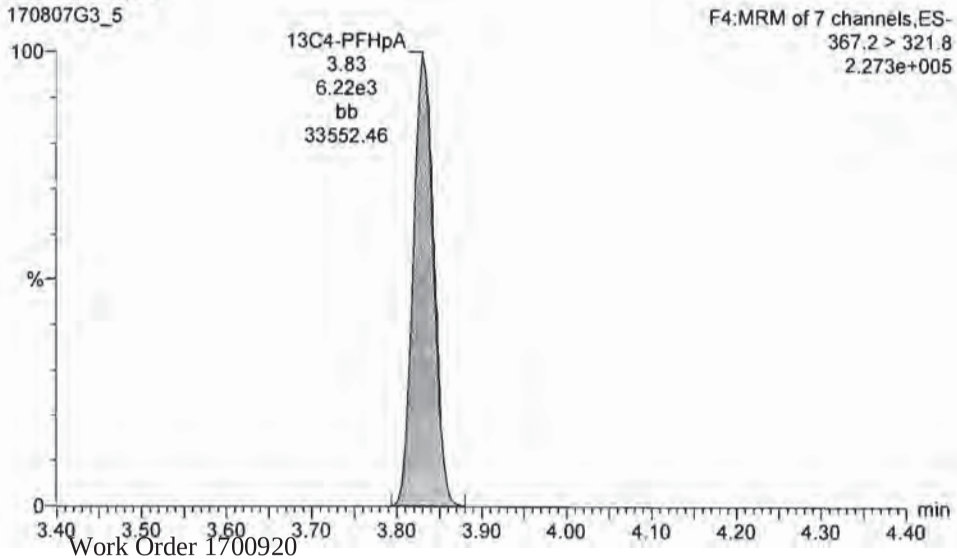

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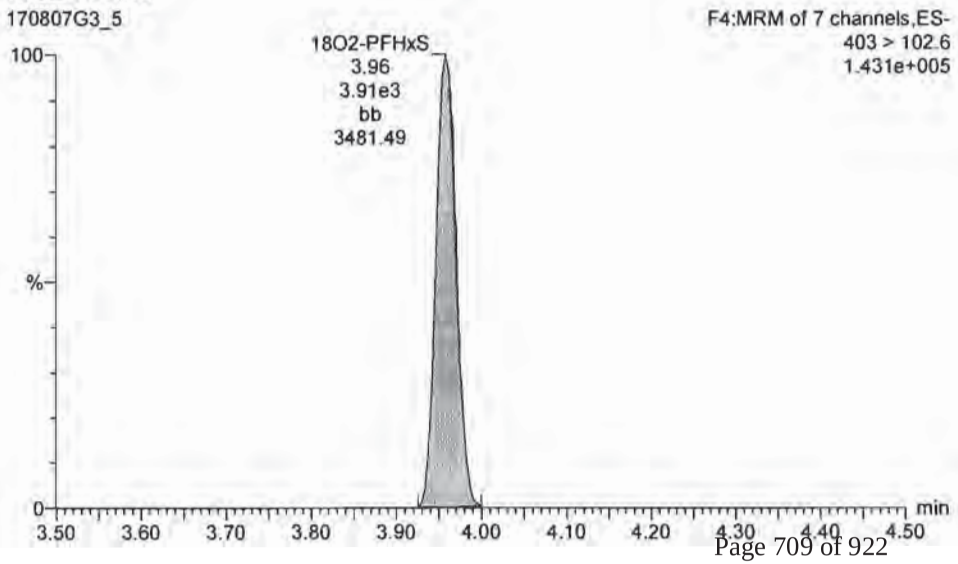

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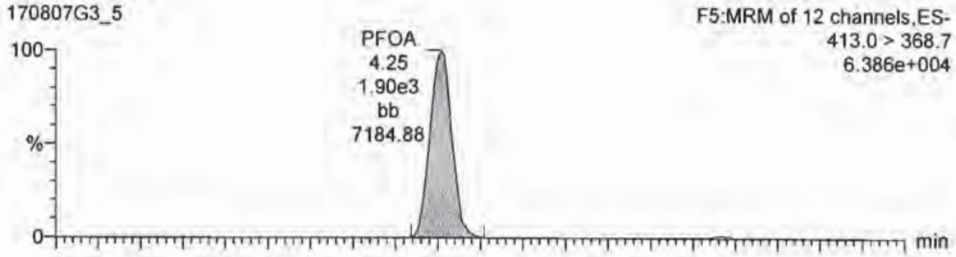
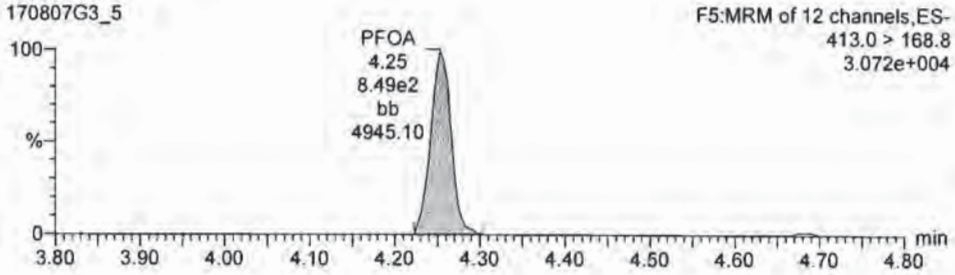
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-4 PFC CS1 17H0710, Description: PFC CS1 17H0710 A, Name: 170807G3_5, Date: 07-Aug-2017, Time: 16:41:23, Instrument: , Lab: , User:

Total PFOA





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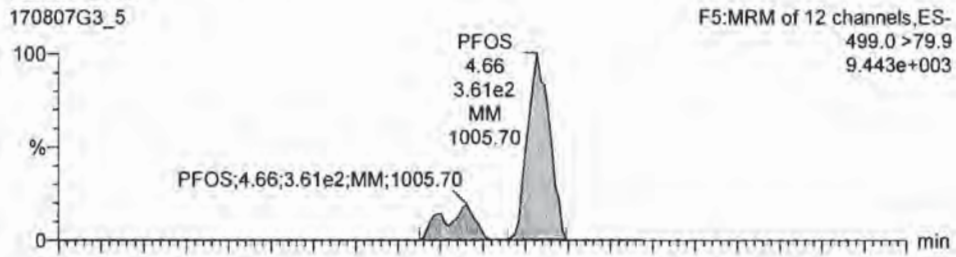
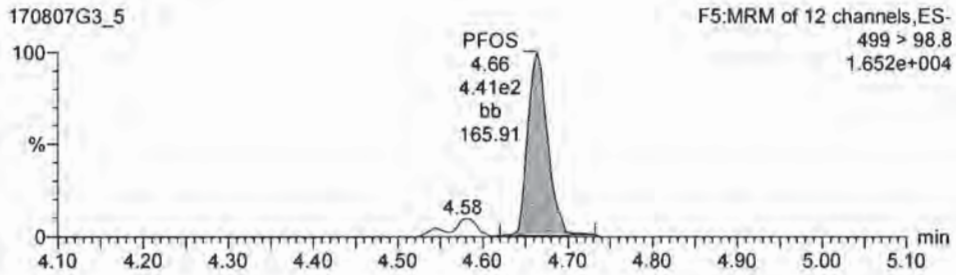
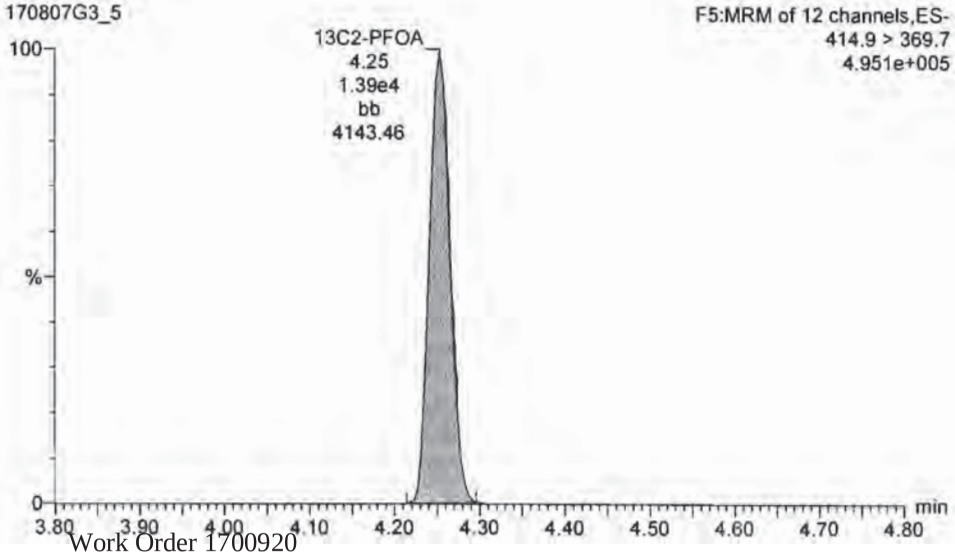
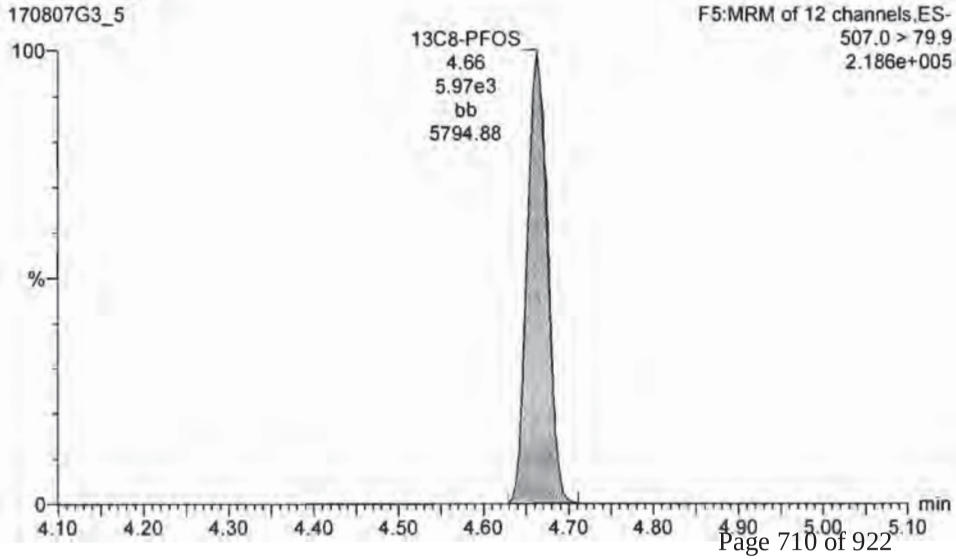




13C2-PFOA



13C8-PFOS



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ID: ST170807G3-4 PFC CS1 17H0710, Description: PFC CS1 17H0710 A, Name: 170807G3_5, Date: 07-Aug-2017, Time: 16:41:23, Instrument: , Lab: , User:

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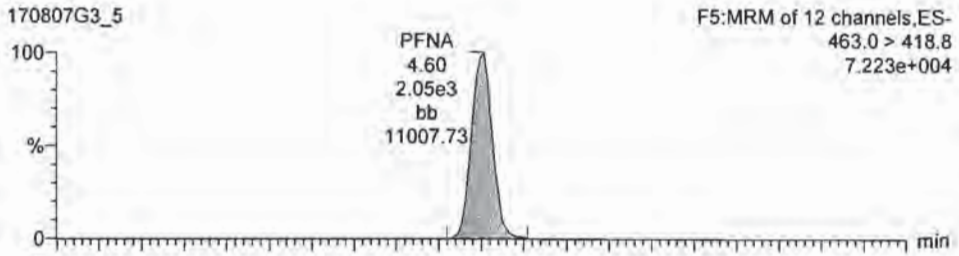

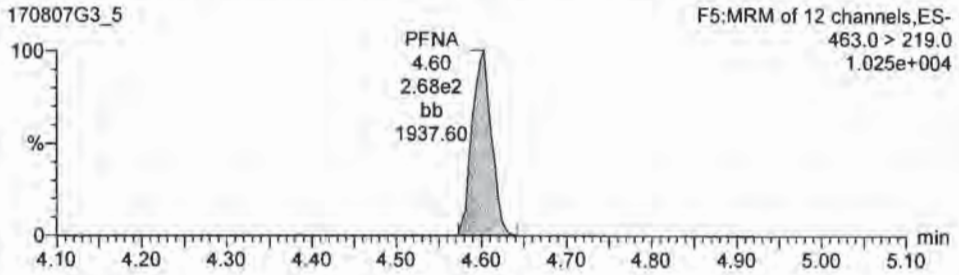

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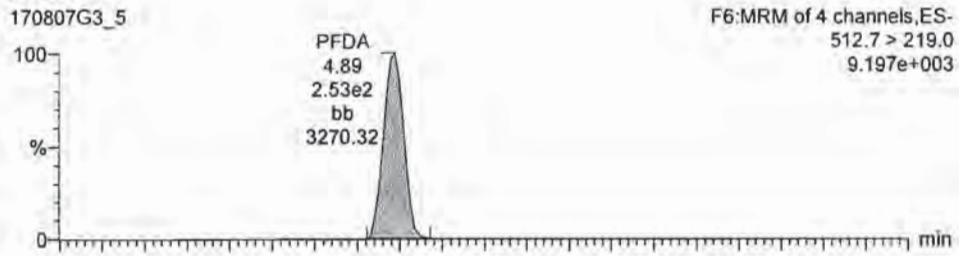

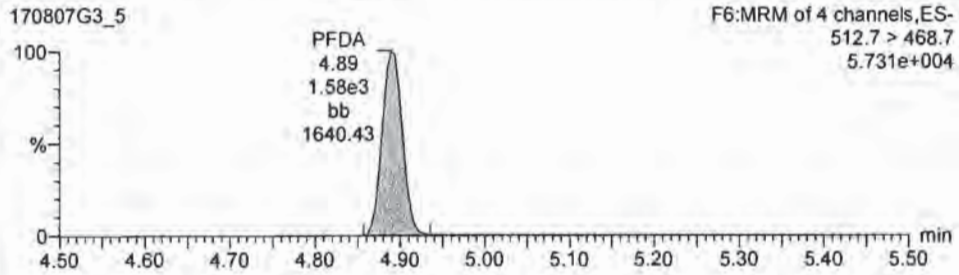

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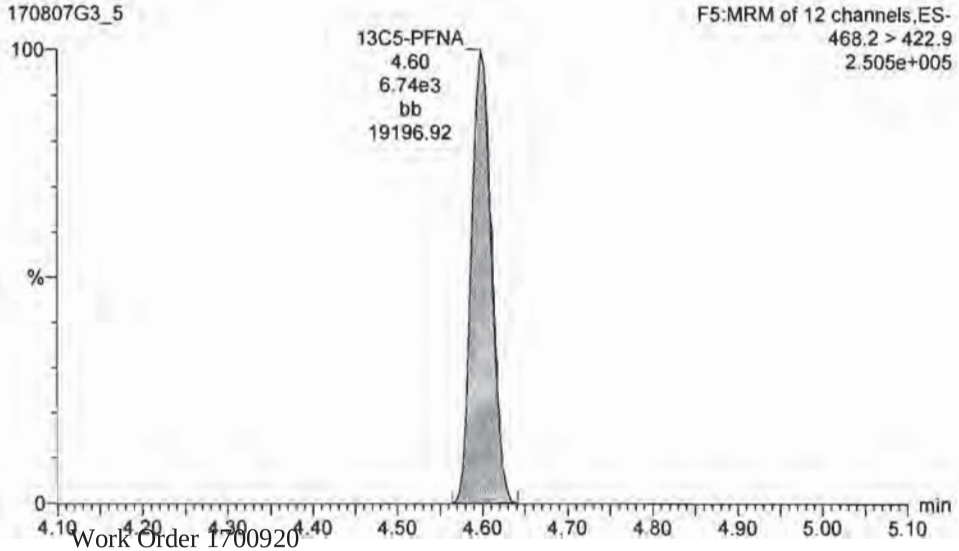

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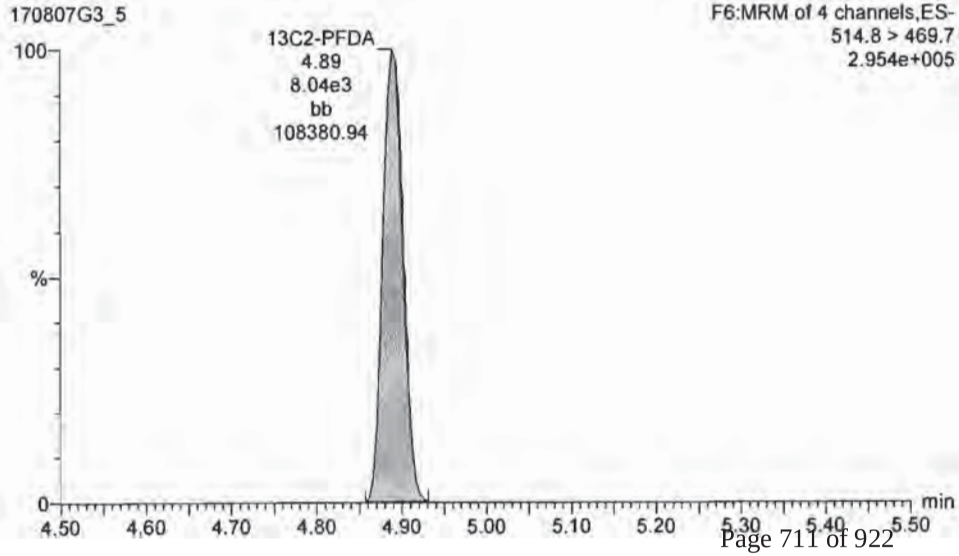

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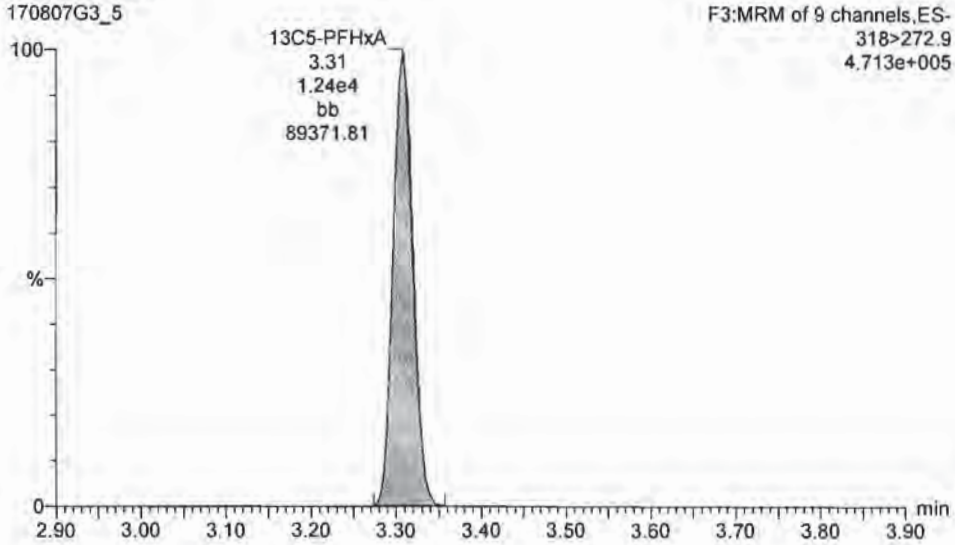
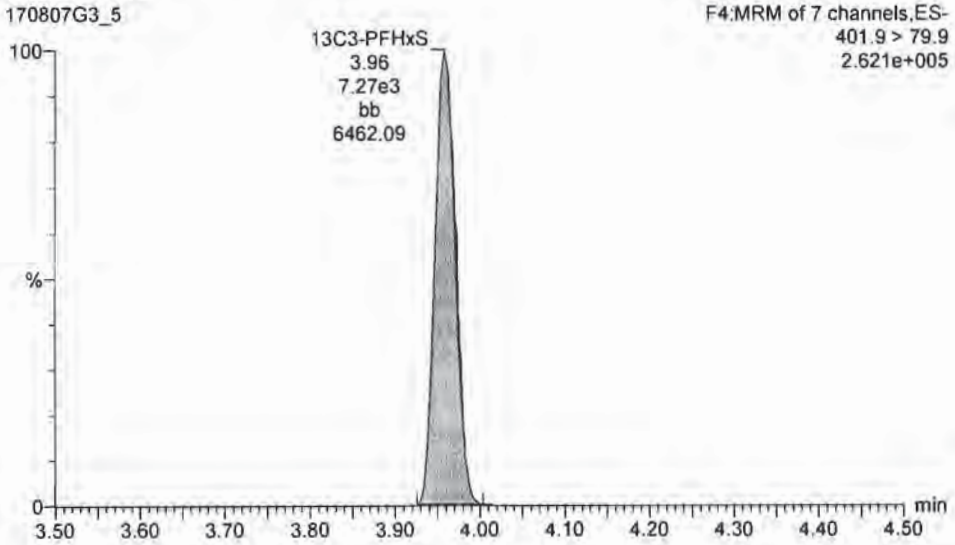
ID: ST170807G3-4 PFC CS1 17H0710, Description: PFC CS1 17H0710 A, Name: 170807G3_5, Date: 07-Aug-2017, Time: 16:41:23, Instrument: , Lab: , User:

13C5-PFHxA



13C3-PFHxS



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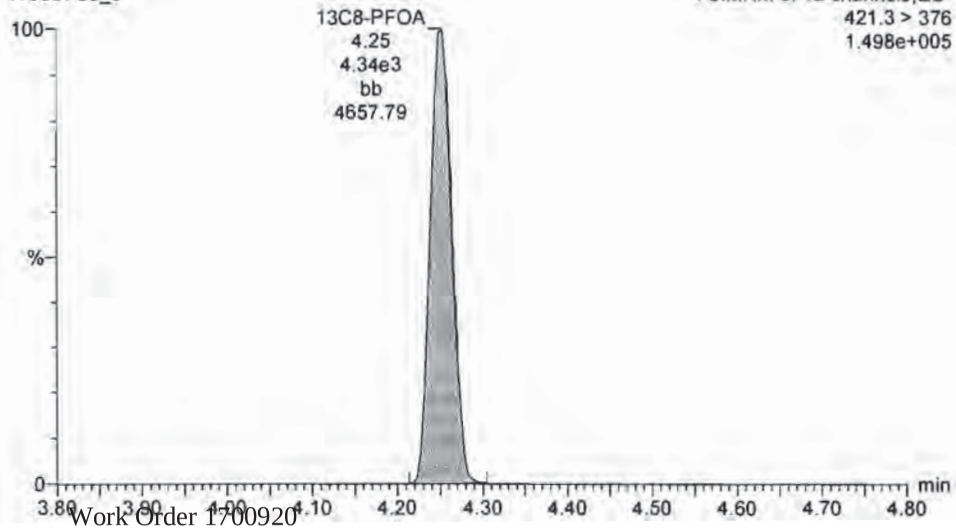
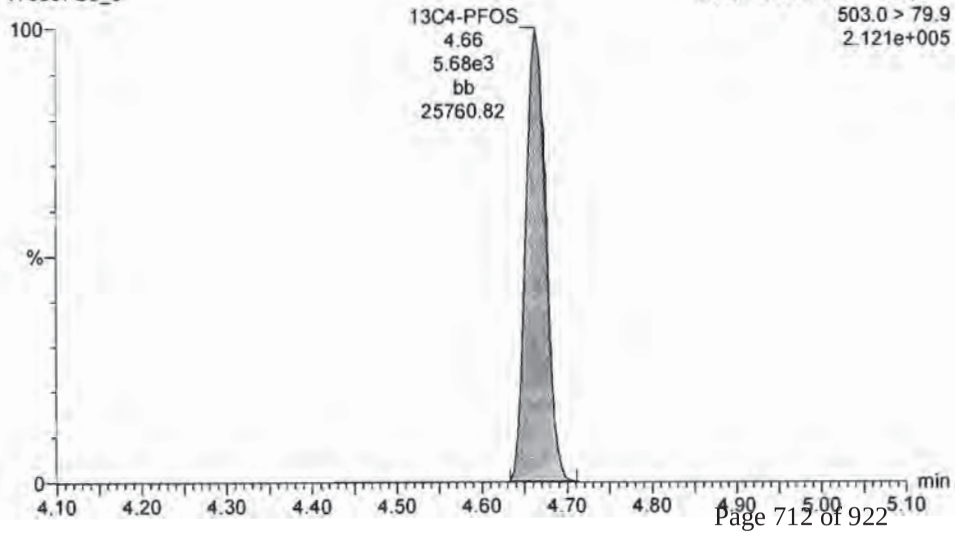


13C4-PFOS



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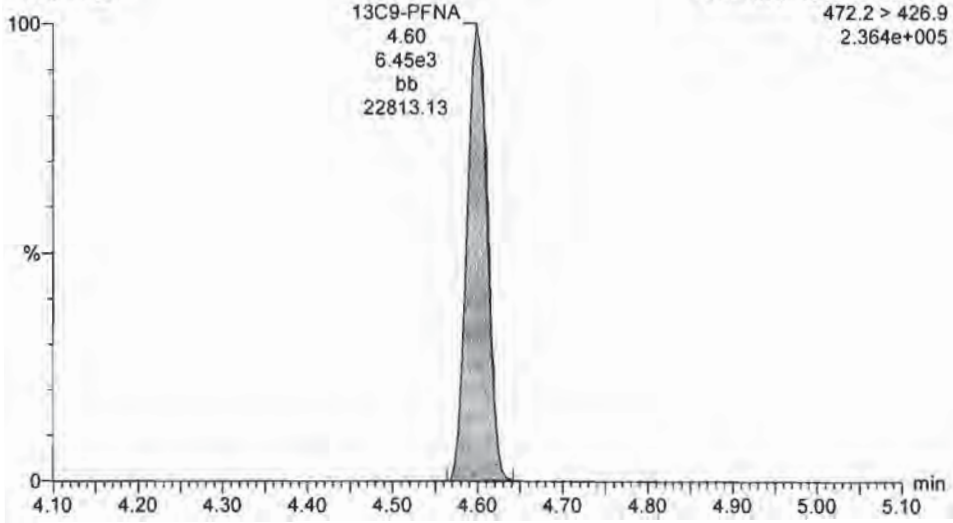
ID: ST170807G3-4 PFC CS1 17H0710, Description: PFC CS1 17H0710 A, Name: 170807G3_5, Date: 07-Aug-2017, Time: 16:41:23, Instrument: , Lab: , User:

13C9-PFNA



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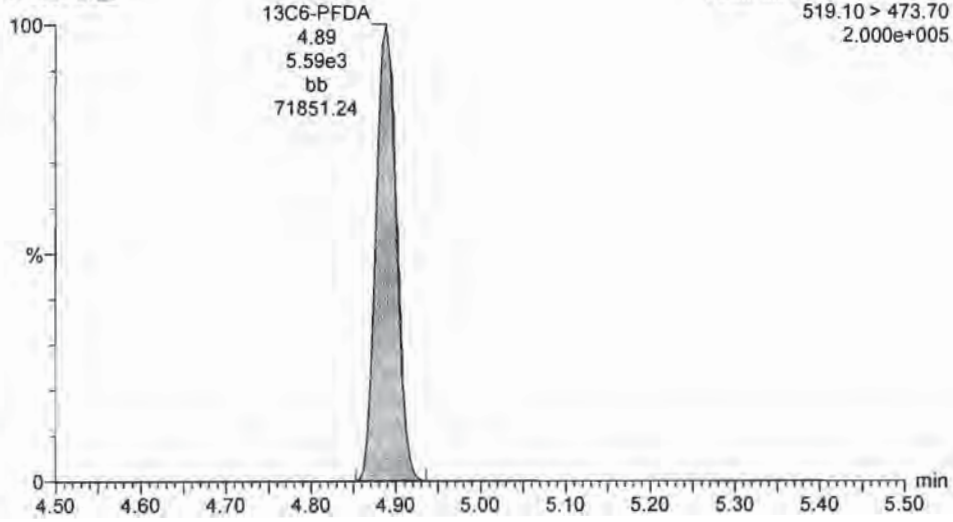

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Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

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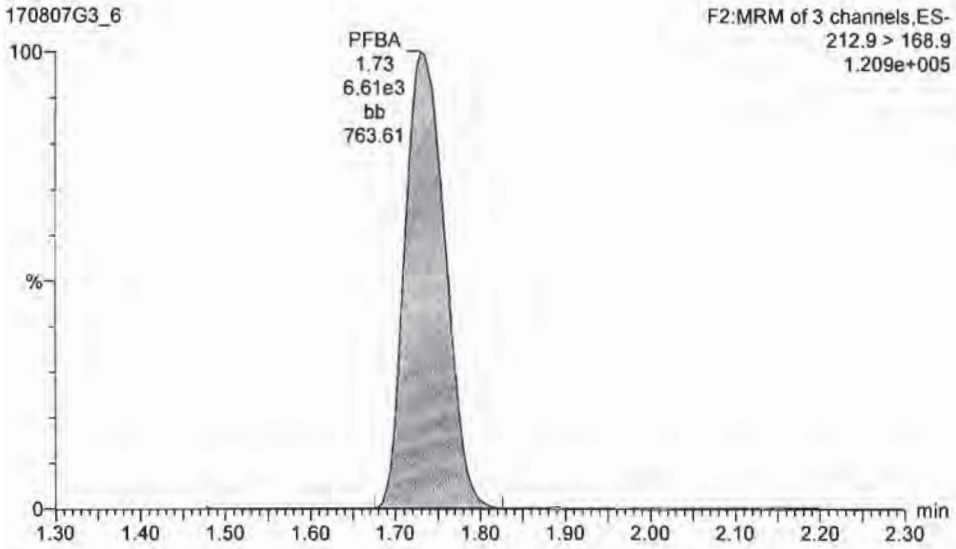
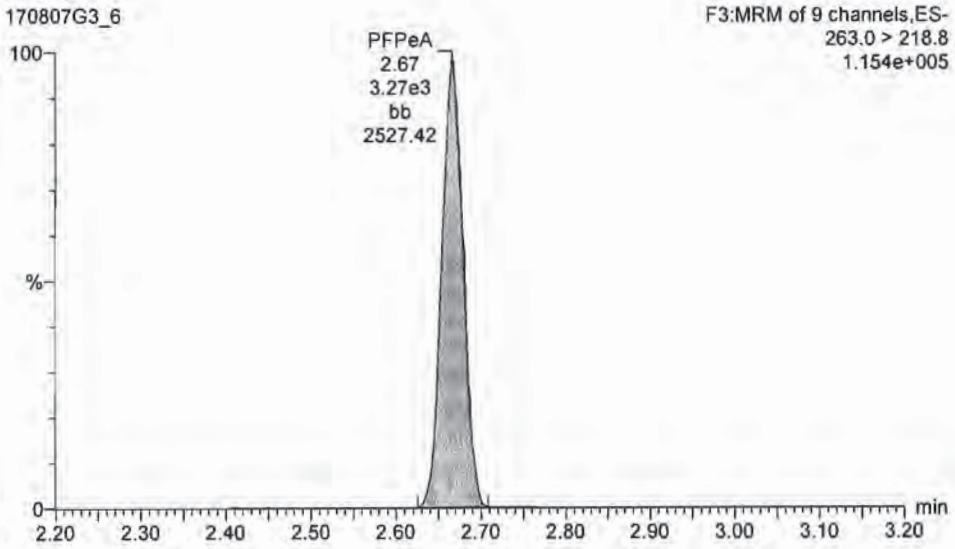
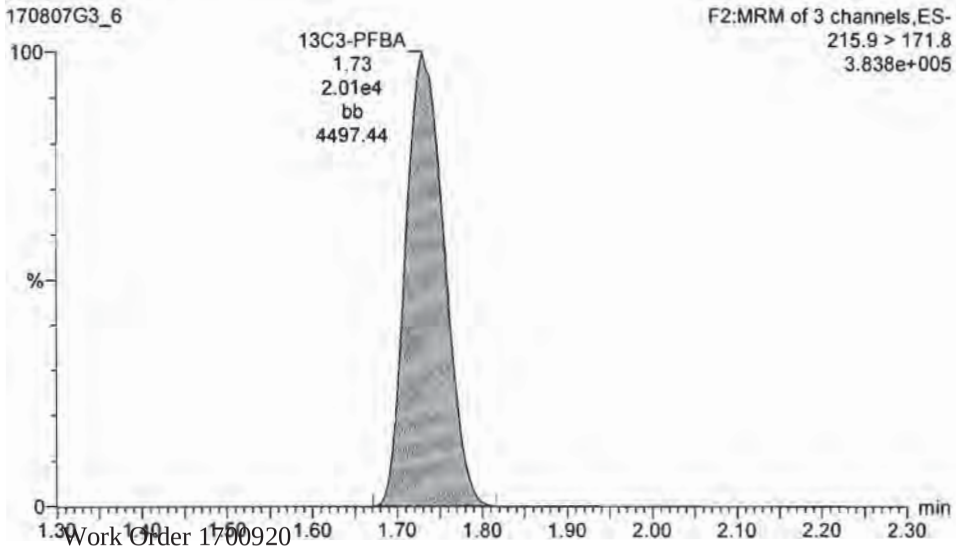


PFPeA



13C3-PFBA



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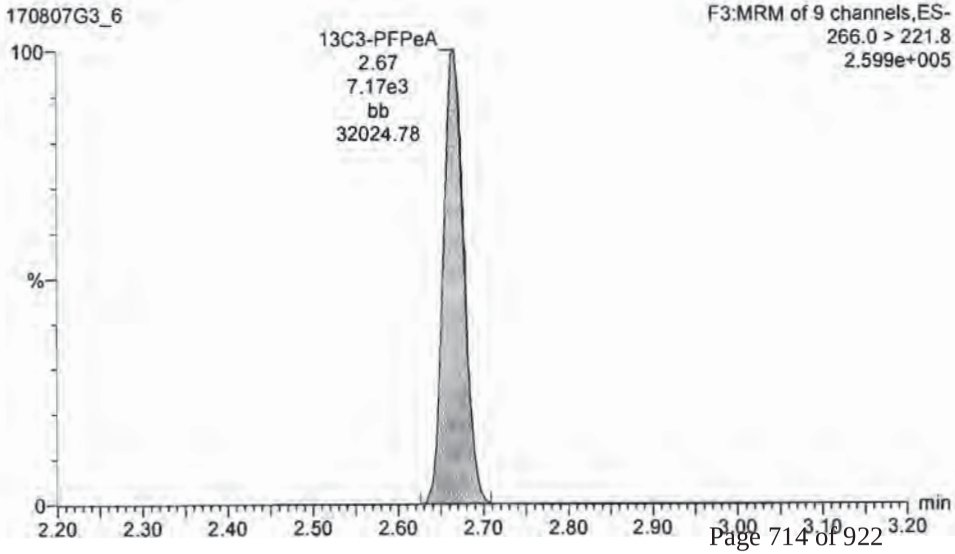

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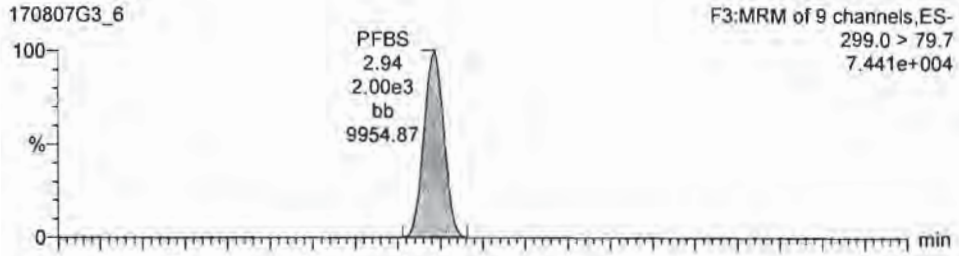
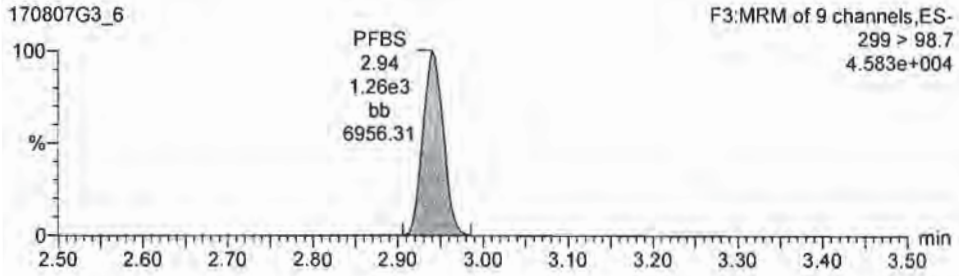
Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-5 PFC CS2 17H0711, Description: PFC CS2 17H0711 A, Name: 170807G3_6, Date: 07-Aug-2017, Time: 16:53:57, Instrument: , Lab: , User:

Total PFBS





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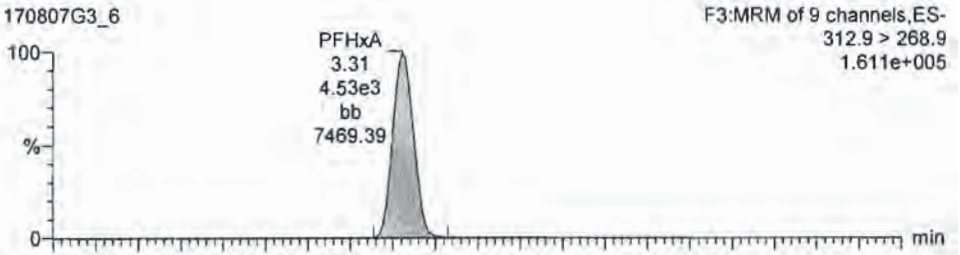

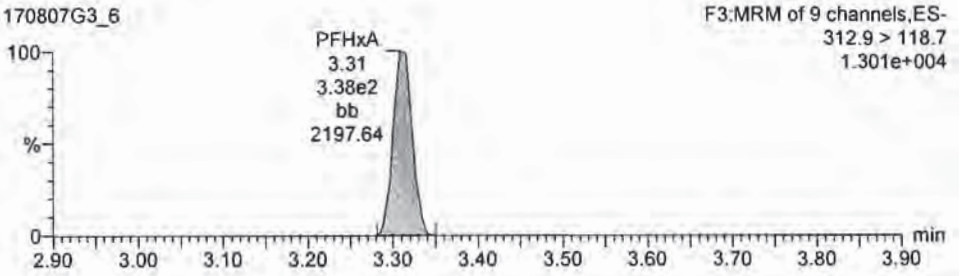

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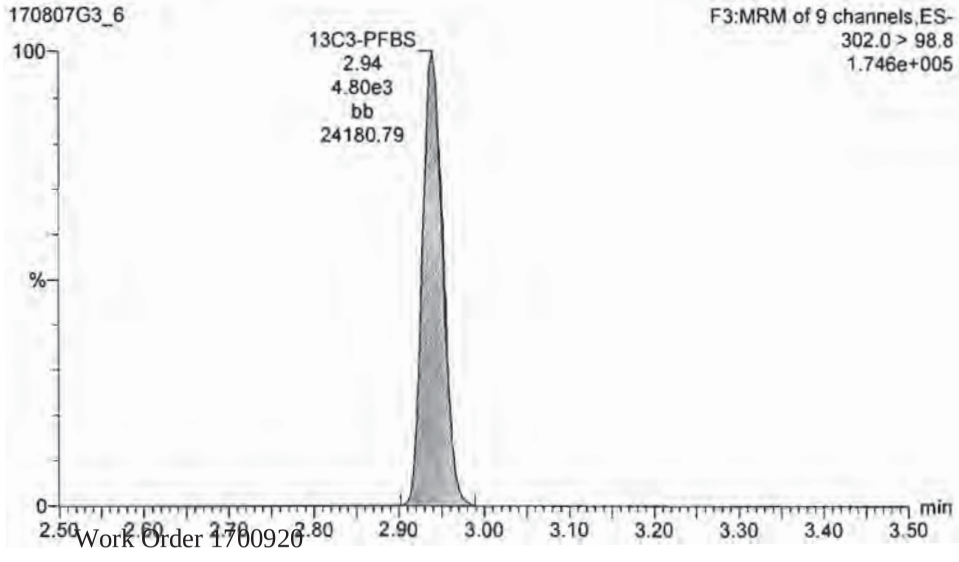

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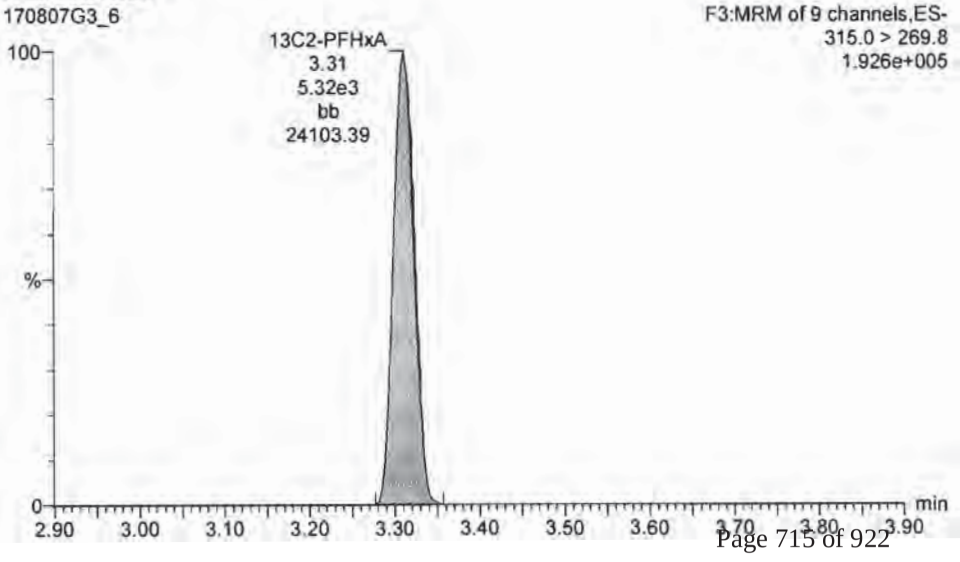

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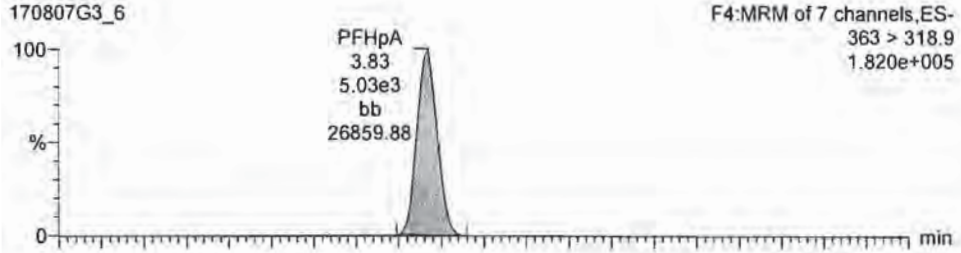
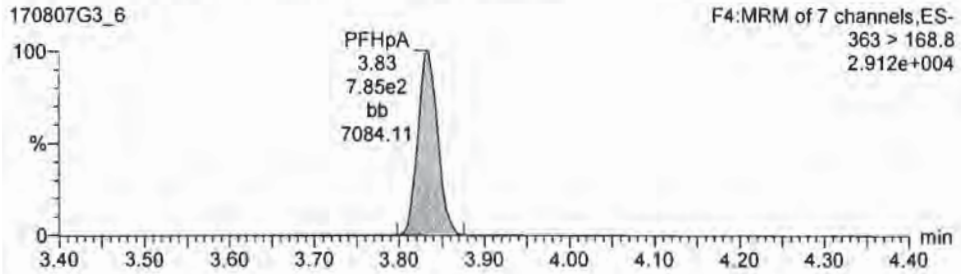
Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-5 PFC CS2 17H0711, Description: PFC CS2 17H0711 A, Name: 170807G3_6, Date: 07-Aug-2017, Time: 16:53:57, Instrument: , Lab: , User:

PFHpA





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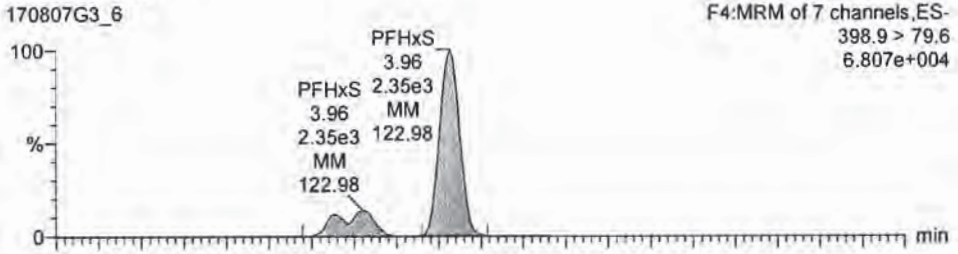

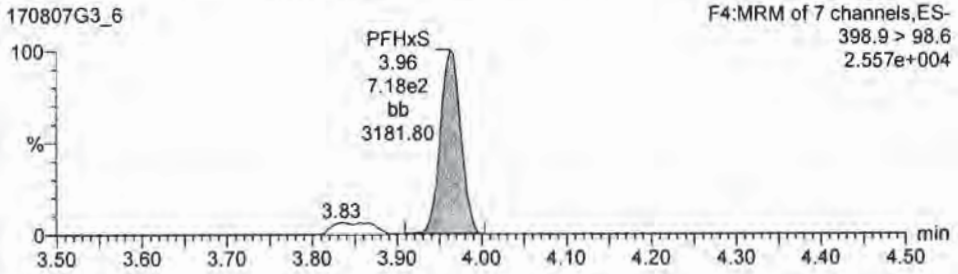

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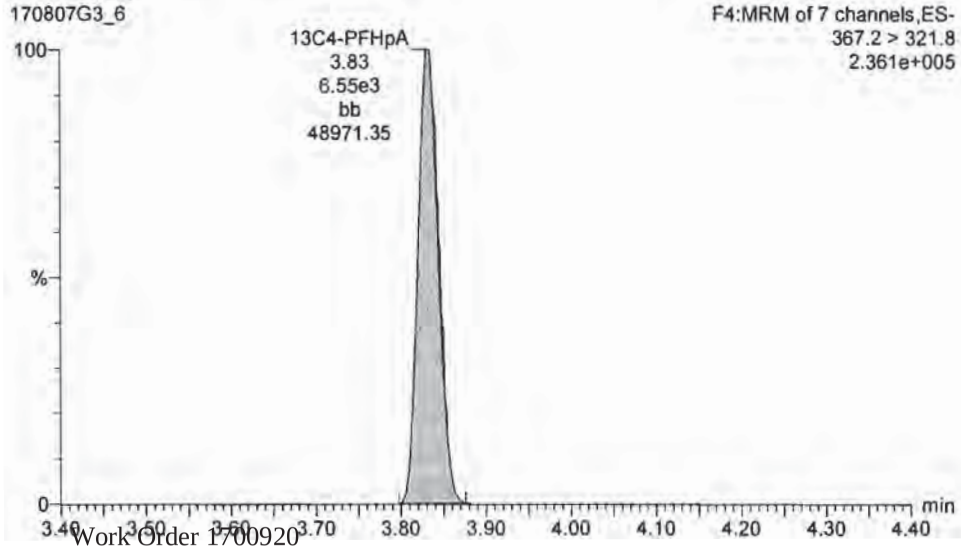
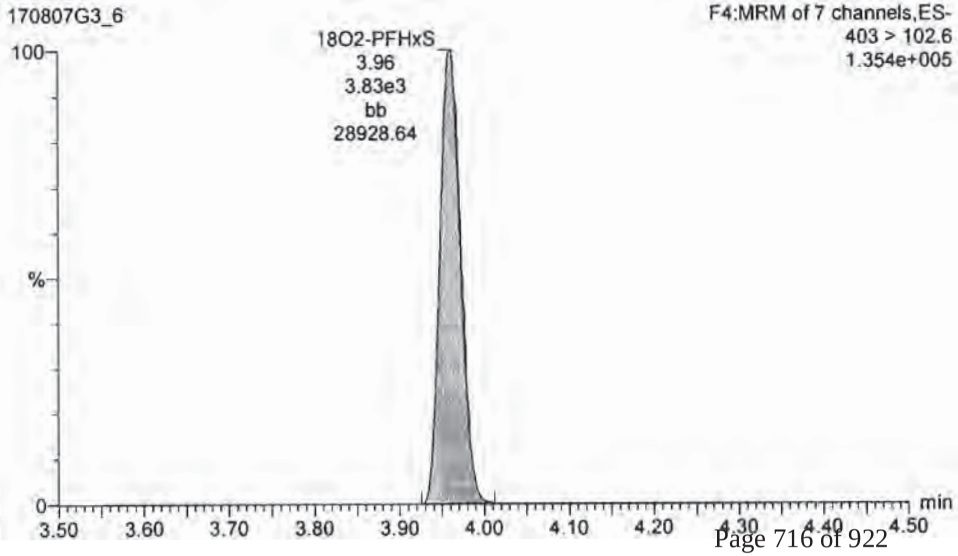


18O2-PFHxS



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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-5 PFC CS2 17H0711, Description: PFC CS2 17H0711 A, Name: 170807G3_6, Date: 07-Aug-2017, Time: 16:53:57, Instrument: , Lab: , User:

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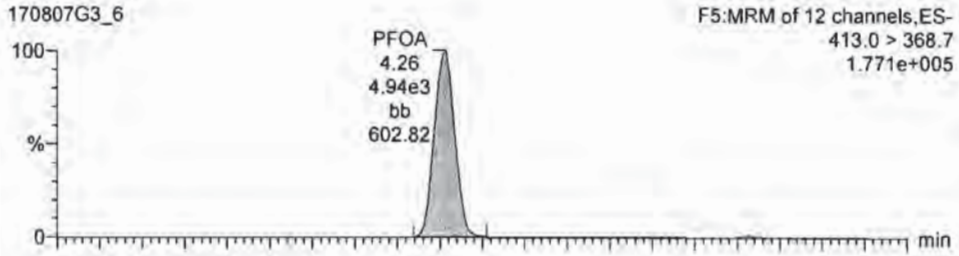

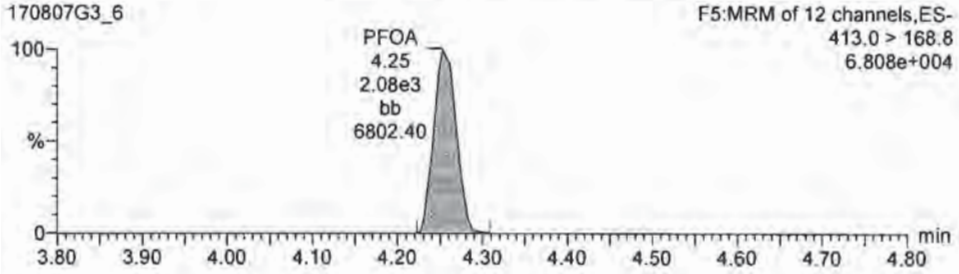

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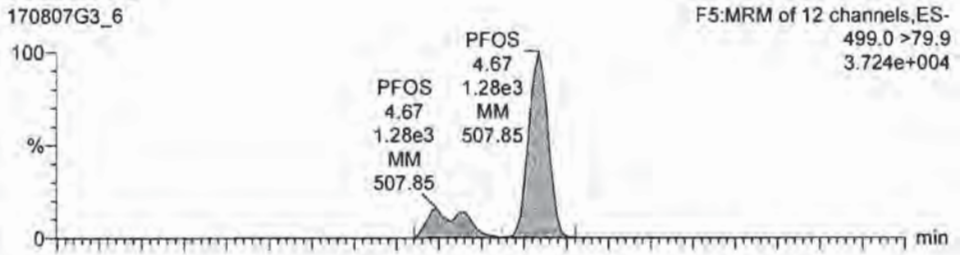

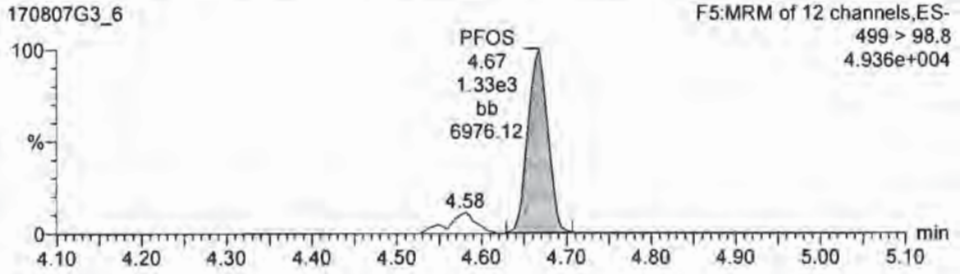

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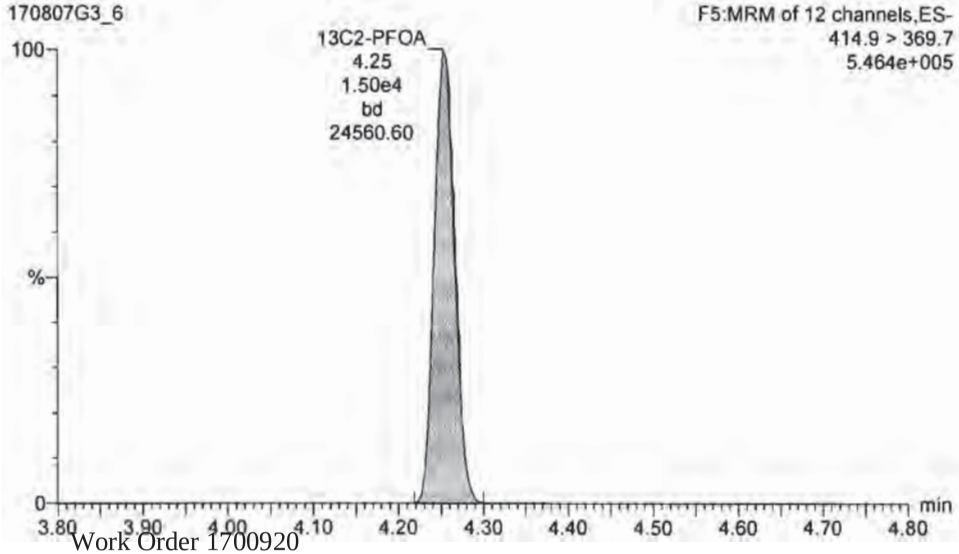
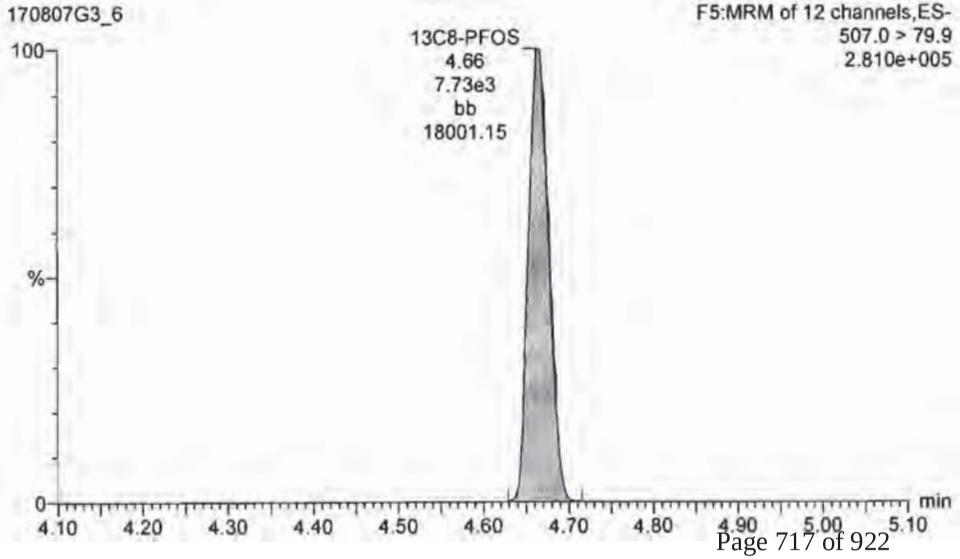


13C8-PFOS



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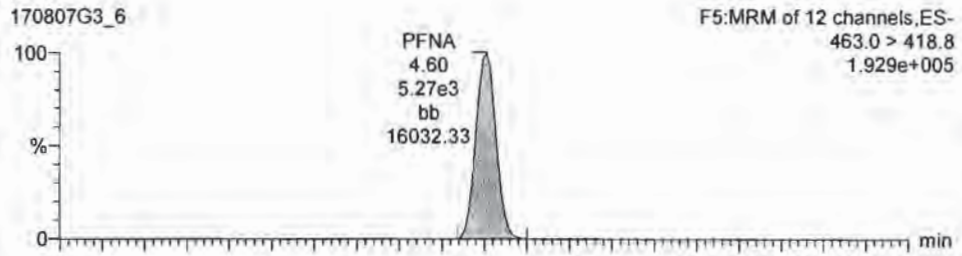
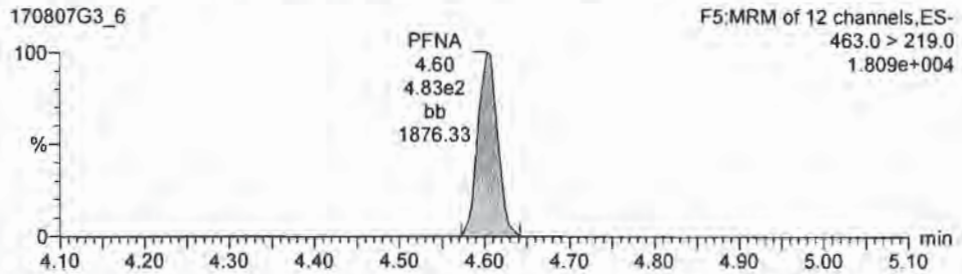
Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

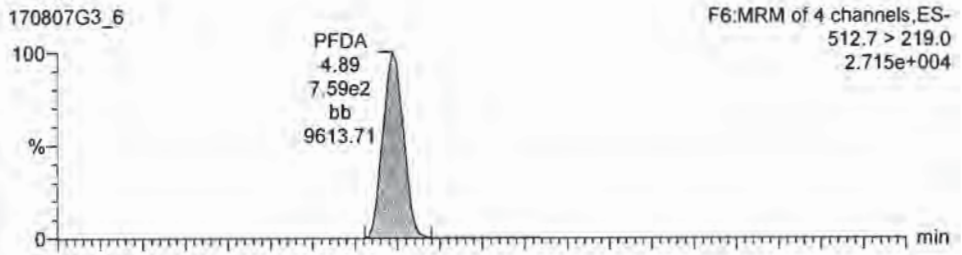
ID: ST170807G3-5 PFC CS2 17H0711, Description: PFC CS2 17H0711 A, Name: 170807G3_6, Date: 07-Aug-2017, Time: 16:53:57, Instrument: , Lab: , User:

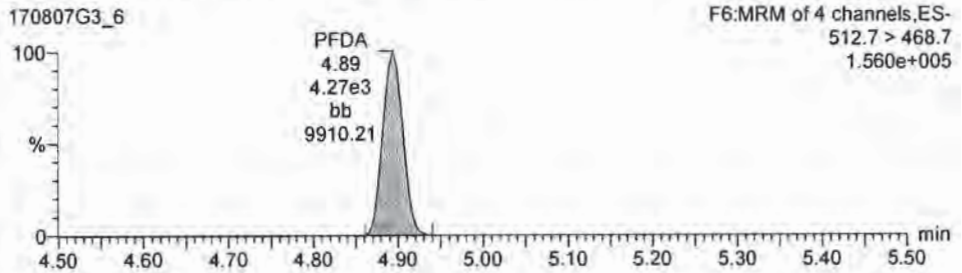
PFNA





PFDA





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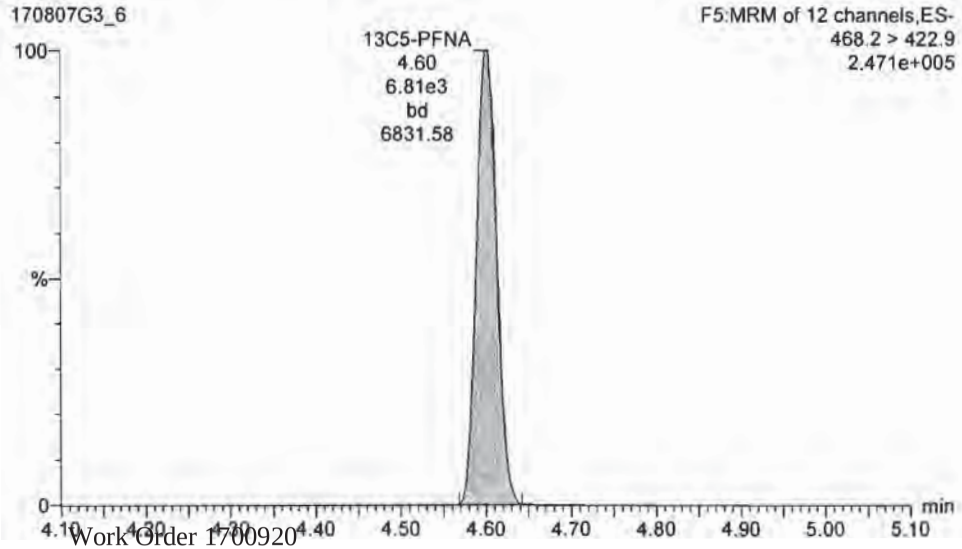

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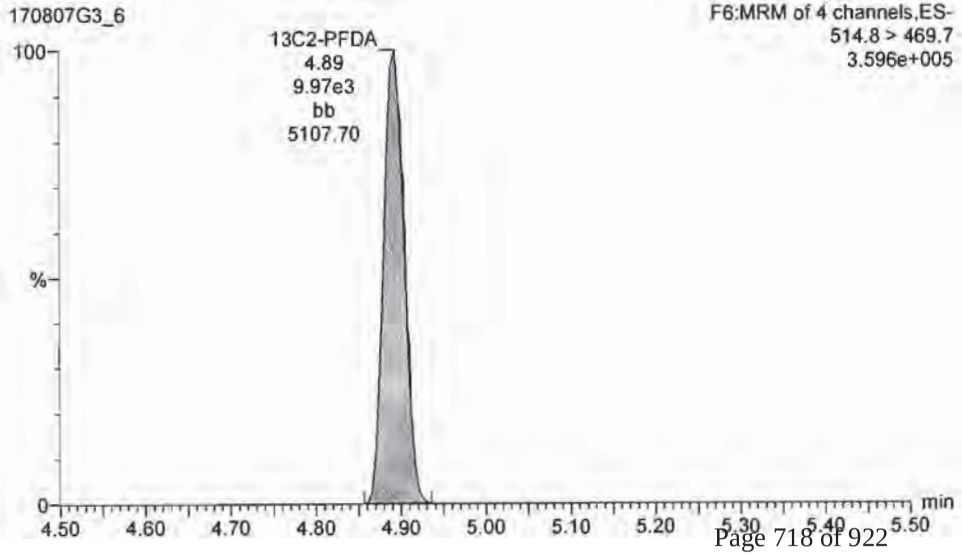

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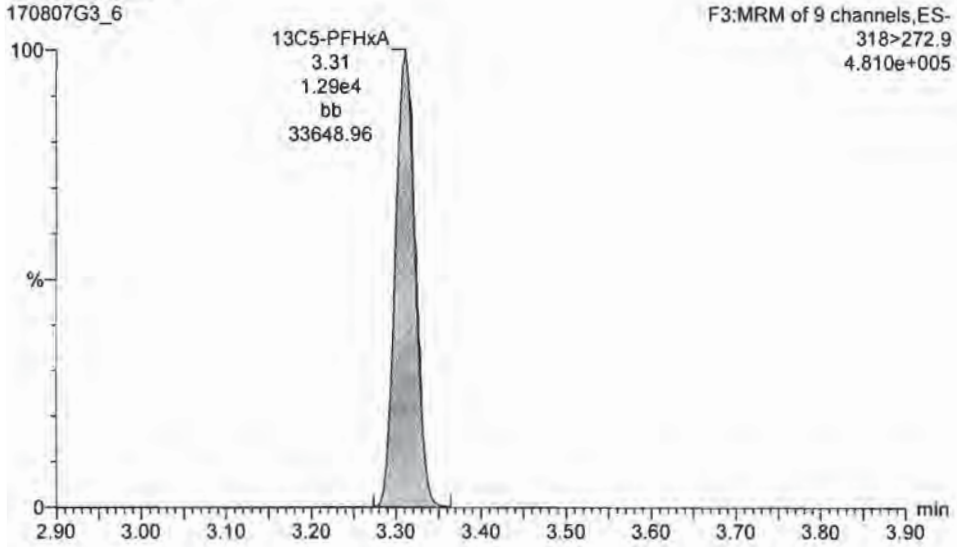
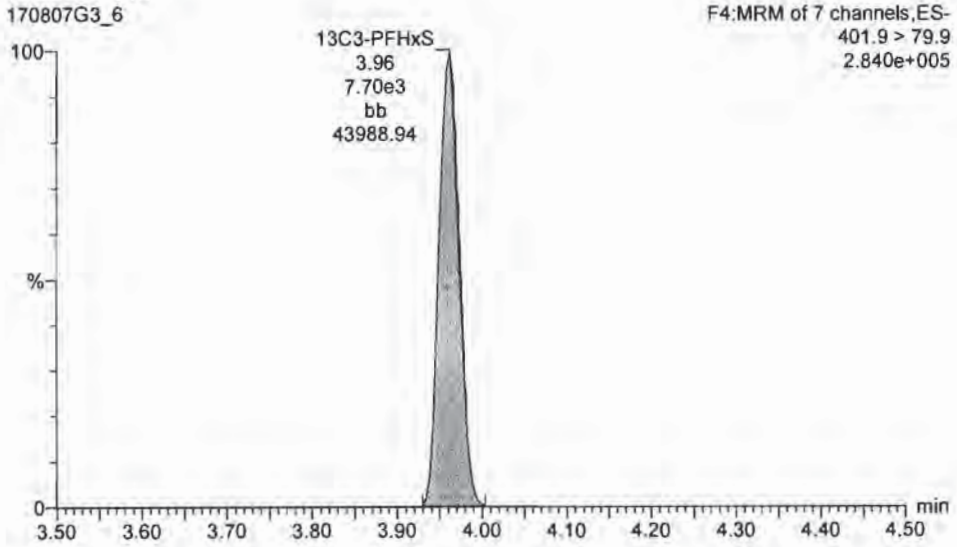
Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-5 PFC CS2 17H0711, Description: PFC CS2 17H0711 A, Name: 170807G3_6, Date: 07-Aug-2017, Time: 16:53:57, Instrument: , Lab: , User:

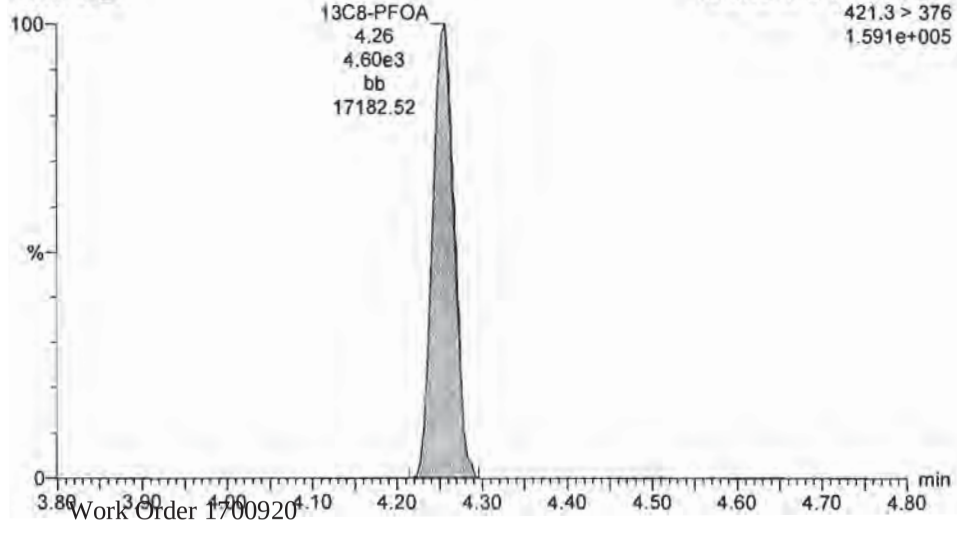
13C5-PFHxA



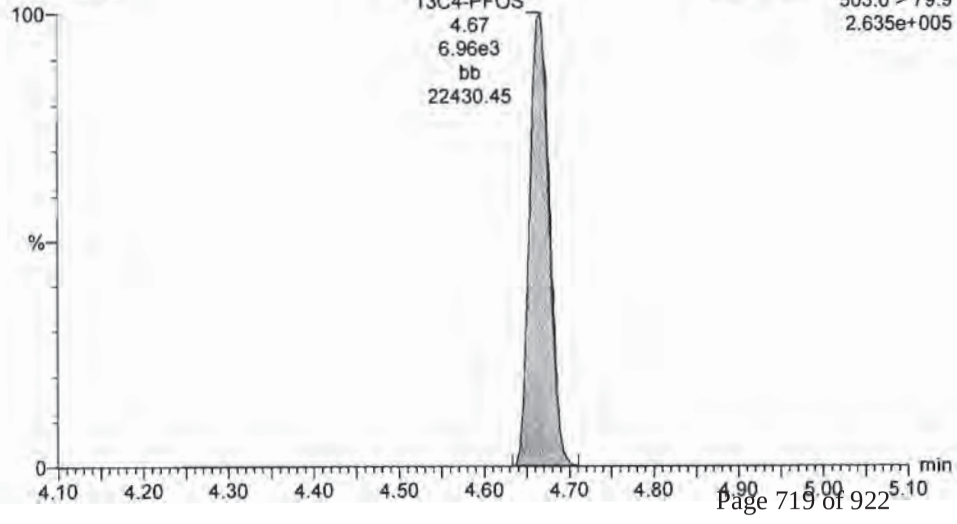
13C3-PFHxS



13C8-PFOA



13C4-PFOS



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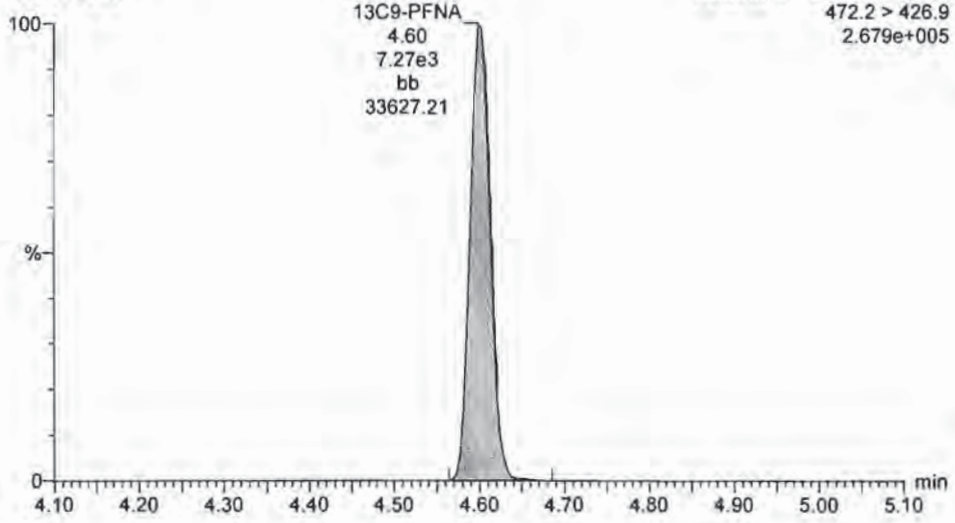
ID: ST170807G3-5 PFC CS2 17H0711, Description: PFC CS2 17H0711 A, Name: 170807G3_6, Date: 07-Aug-2017, Time: 16:53:57, Instrument: , Lab: , User:

13C9-PFNA



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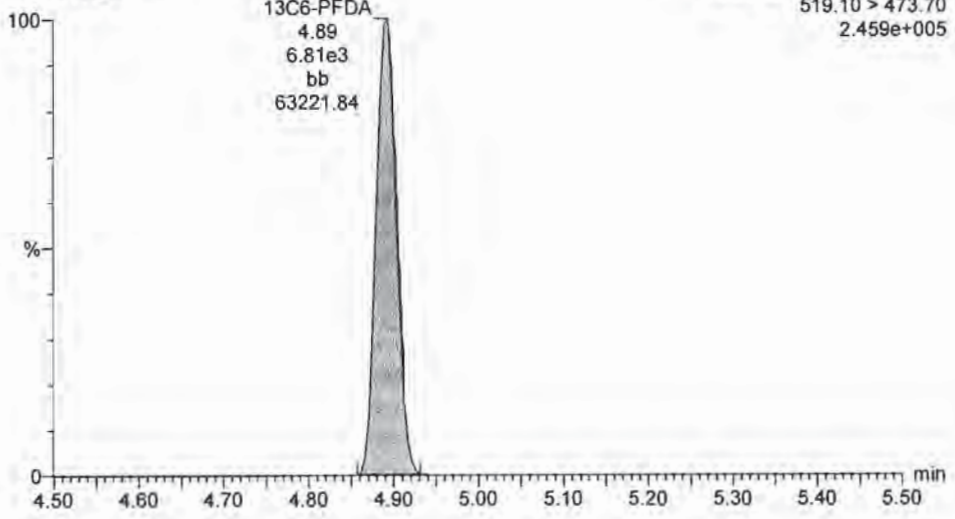

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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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ID: ST170807G3-6 PFC CS3 17H0712, Description: PFC CS3 17H0712 A, Name: 170807G3_7, Date: 07-Aug-2017, Time: 17:10:43, Instrument: , Lab: , User:

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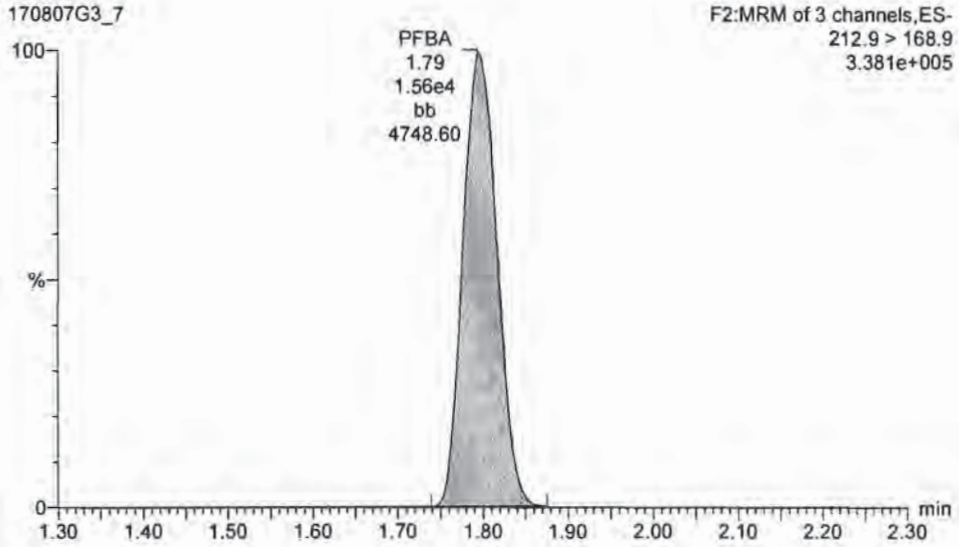

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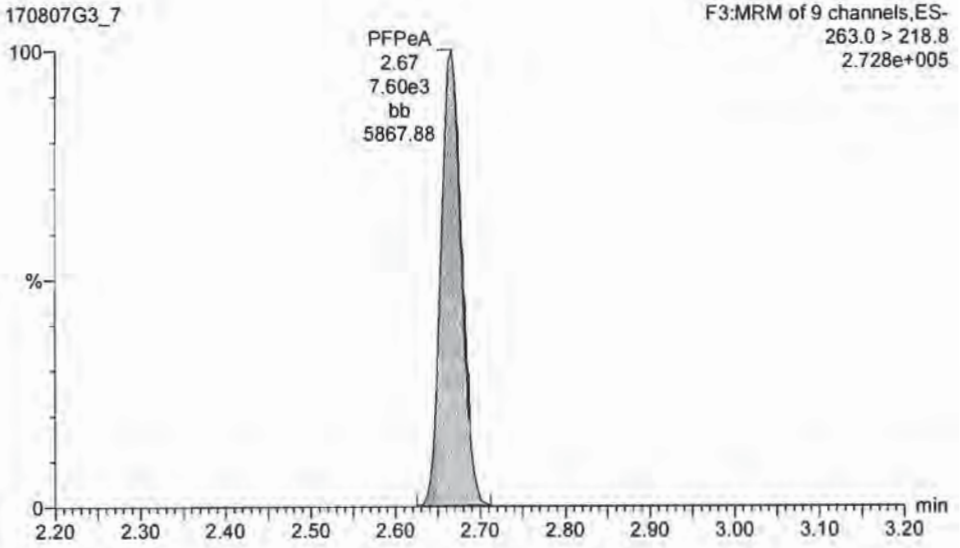

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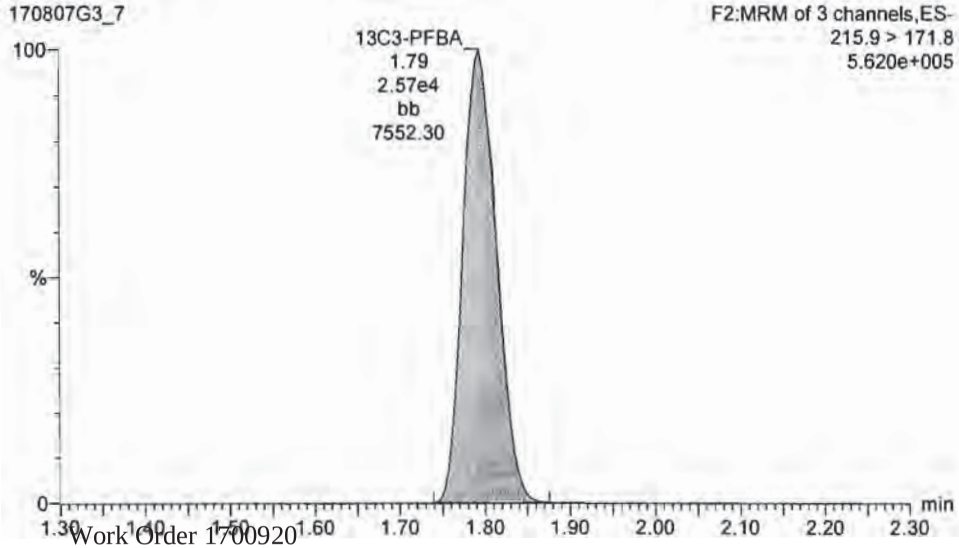
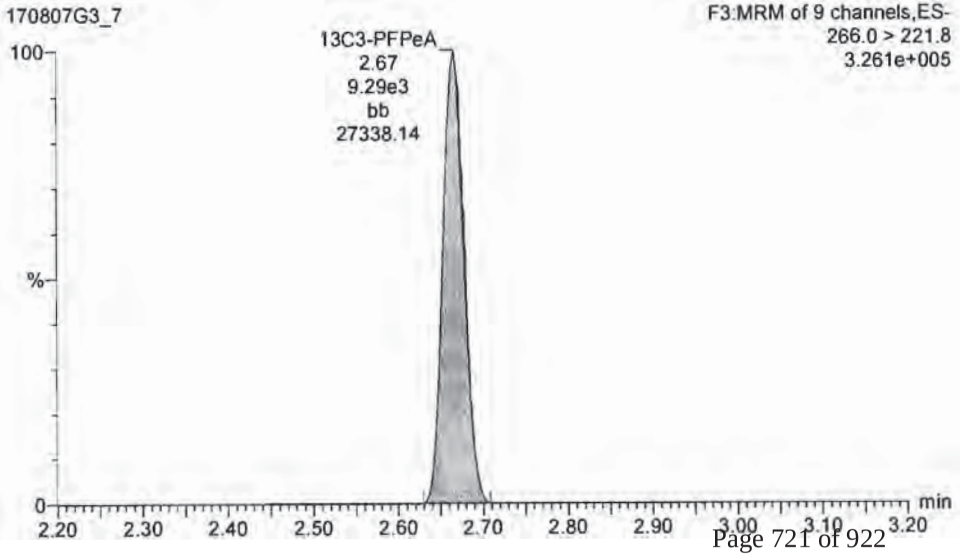


13C3-PFPeA



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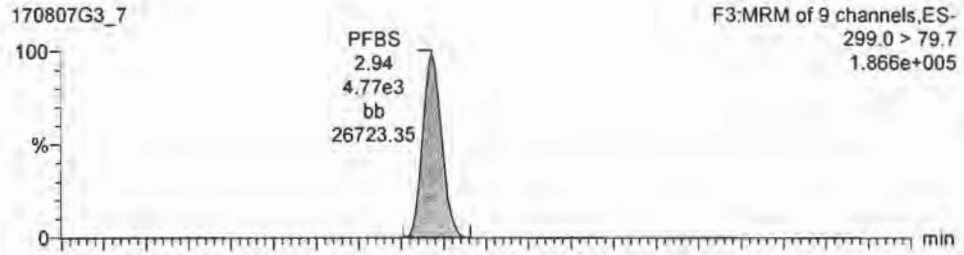
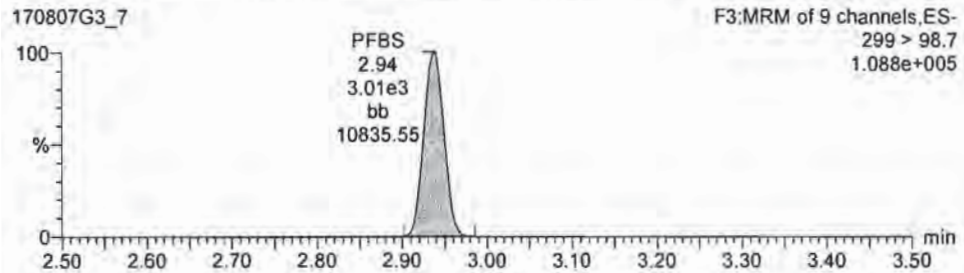
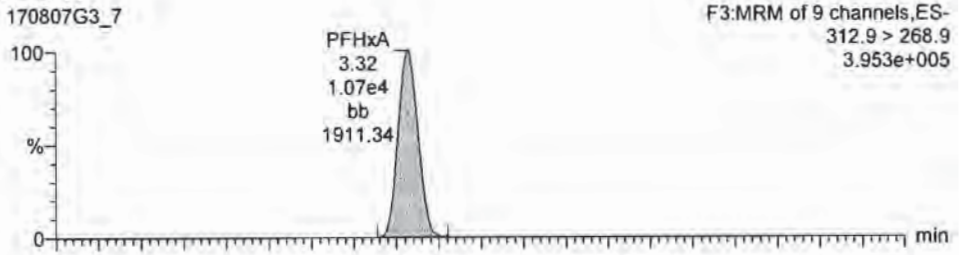
ID: ST170807G3-6 PFC CS3 17H0712, Description: PFC CS3 17H0712 A, Name: 170807G3_7, Date: 07-Aug-2017, Time: 17:10:43, Instrument: , Lab: , User:

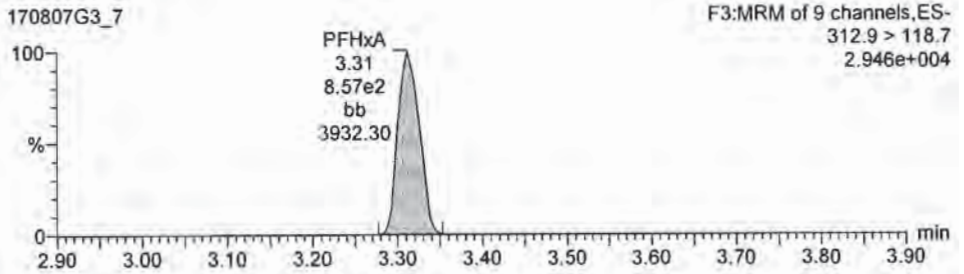
Total PFBS





PFHxA





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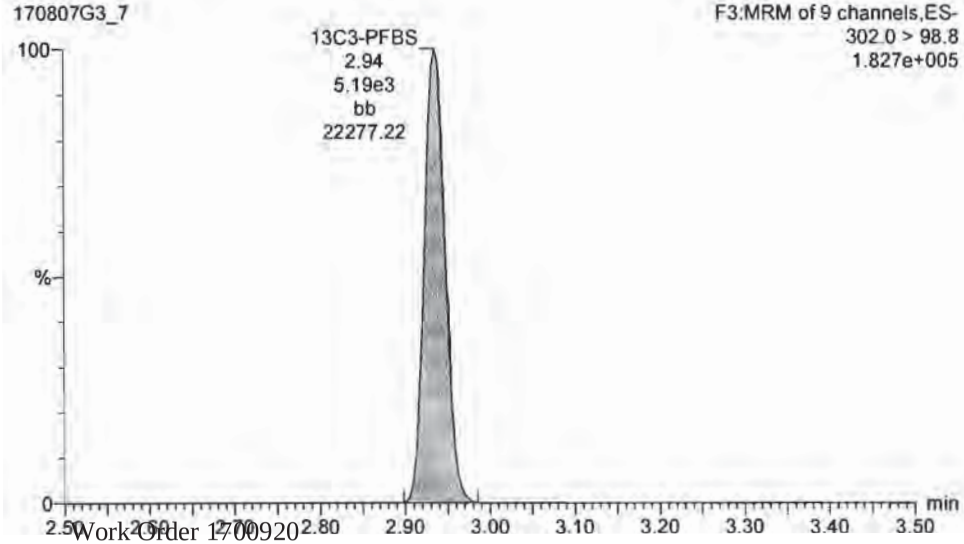
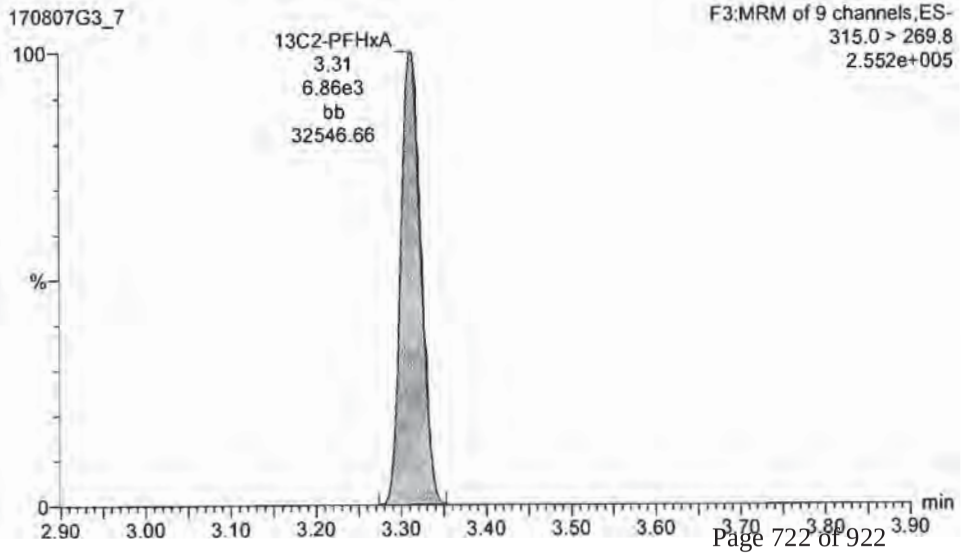


13C2-PFHxA



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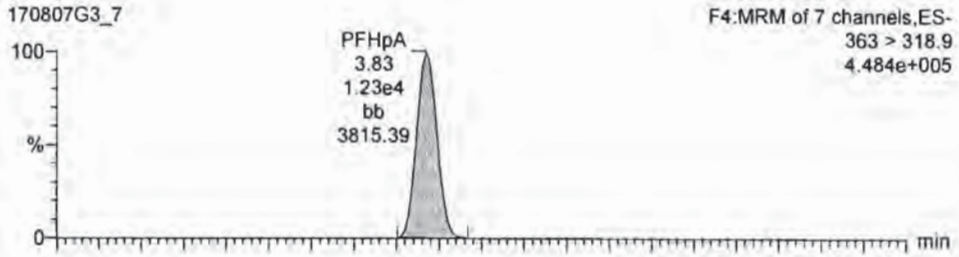
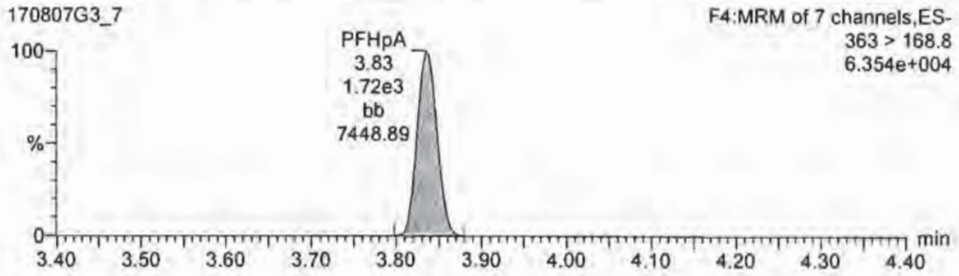
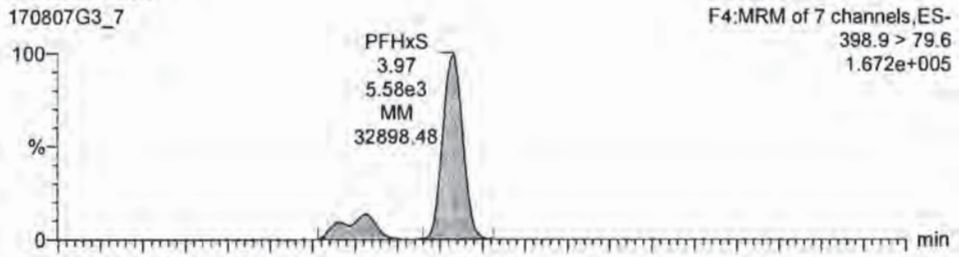
ID: ST170807G3-6 PFC CS3 17H0712, Description: PFC CS3 17H0712 A, Name: 170807G3_7, Date: 07-Aug-2017, Time: 17:10:43, Instrument: , Lab: , User:

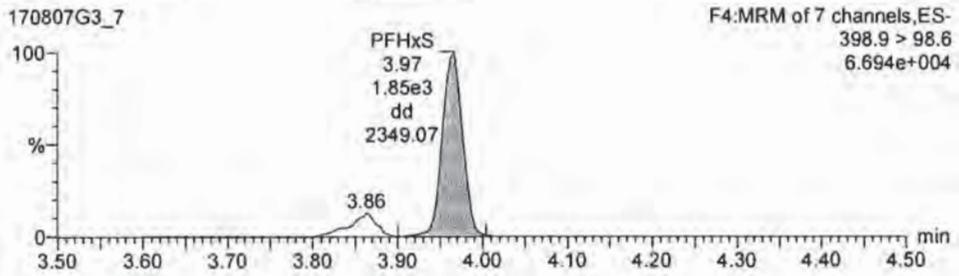
PFHpA



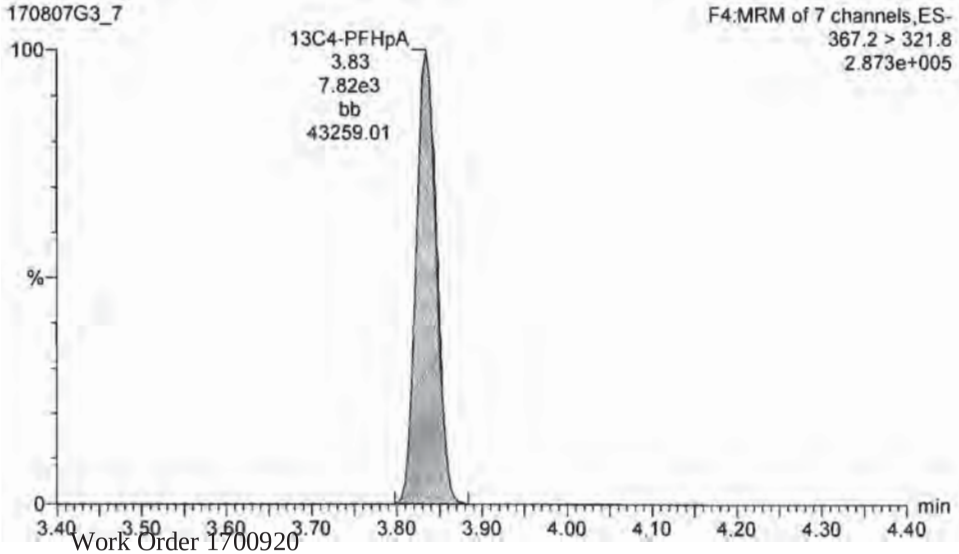


Total PFHxS

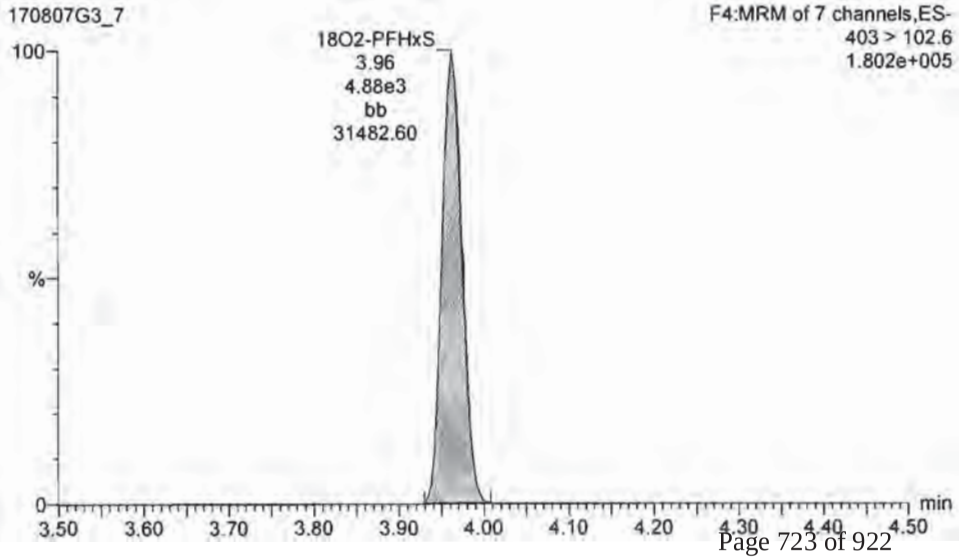




13C4-PFHpA



18O2-PFHxS



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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-6 PFC CS3 17H0712, Description: PFC CS3 17H0712 A, Name: 170807G3_7, Date: 07-Aug-2017, Time: 17:10:43, Instrument: , Lab: , User:

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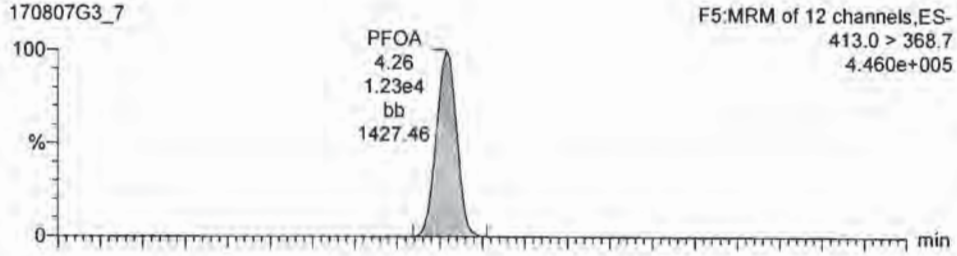

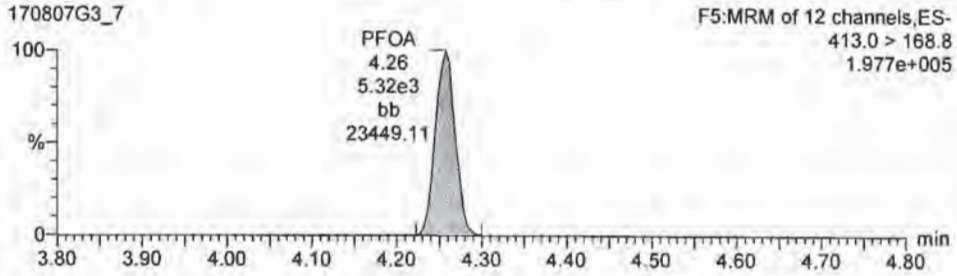

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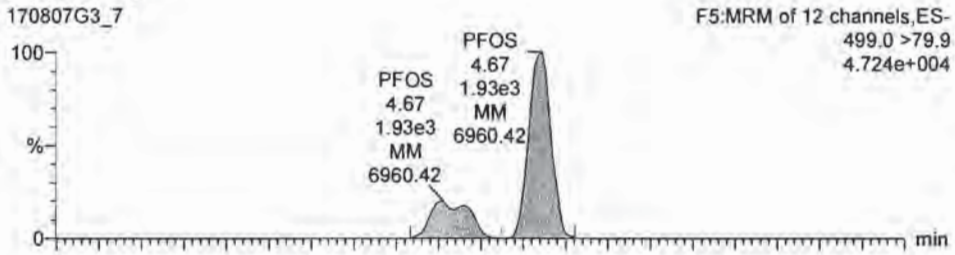
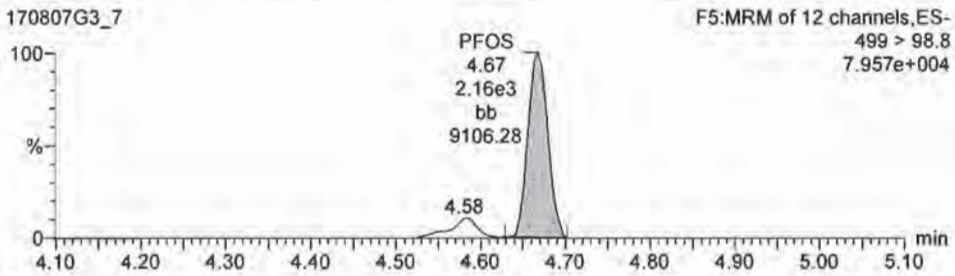
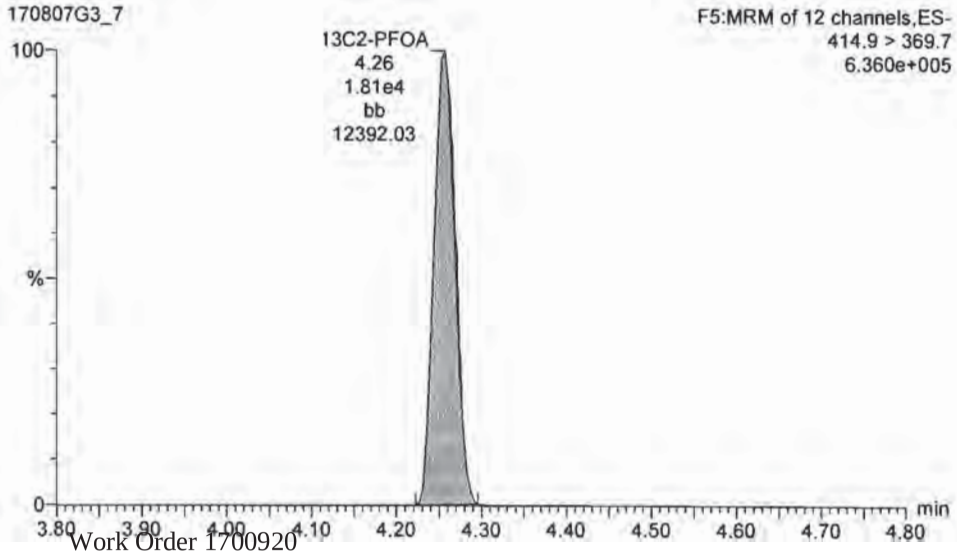
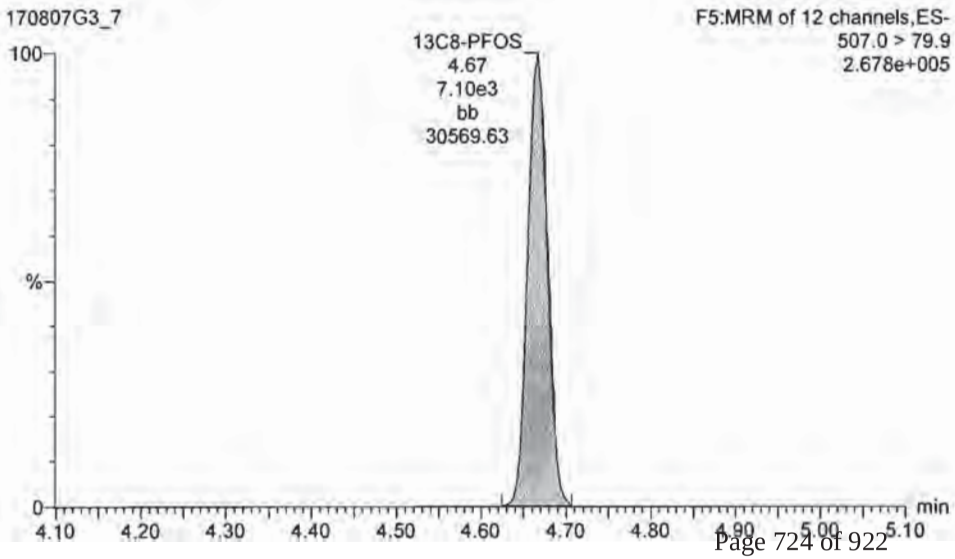




13C2-PFOA



13C8-PFOS



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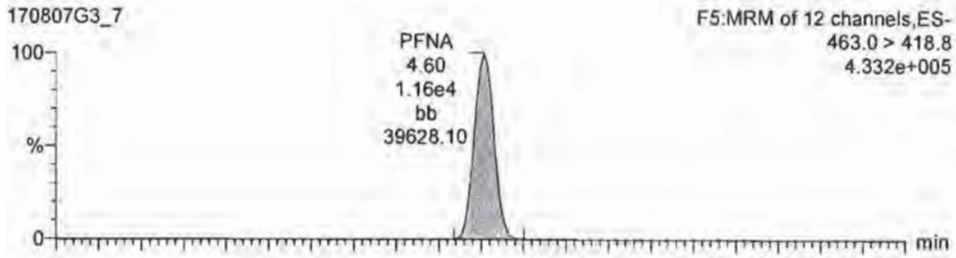
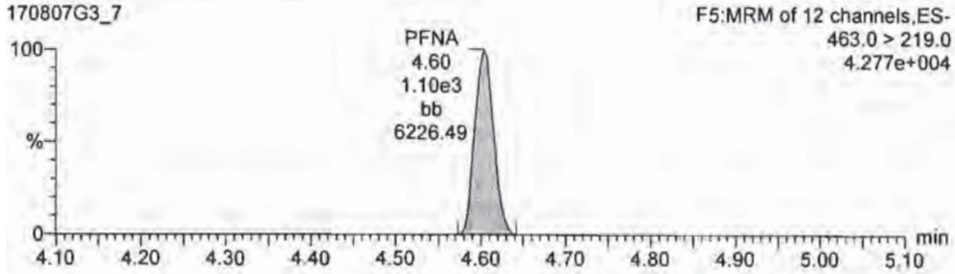
Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-6 PFC CS3 17H0712, Description: PFC CS3 17H0712 A, Name: 170807G3_7, Date: 07-Aug-2017, Time: 17:10:43, Instrument: , Lab: , User:

PFNA





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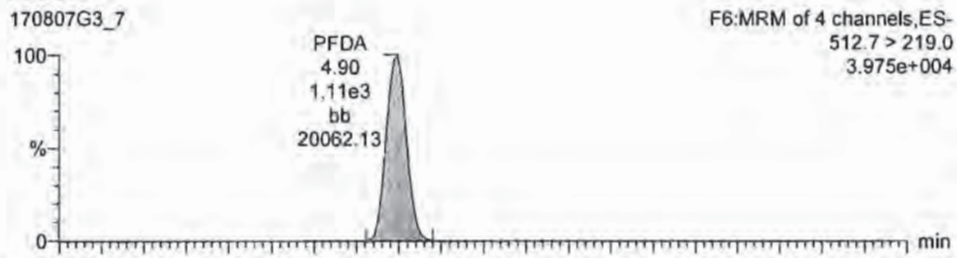

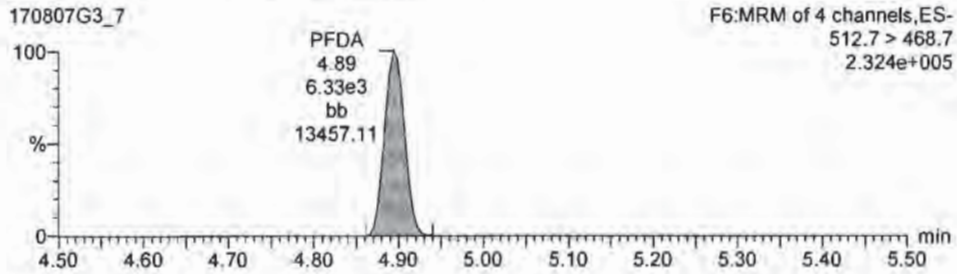

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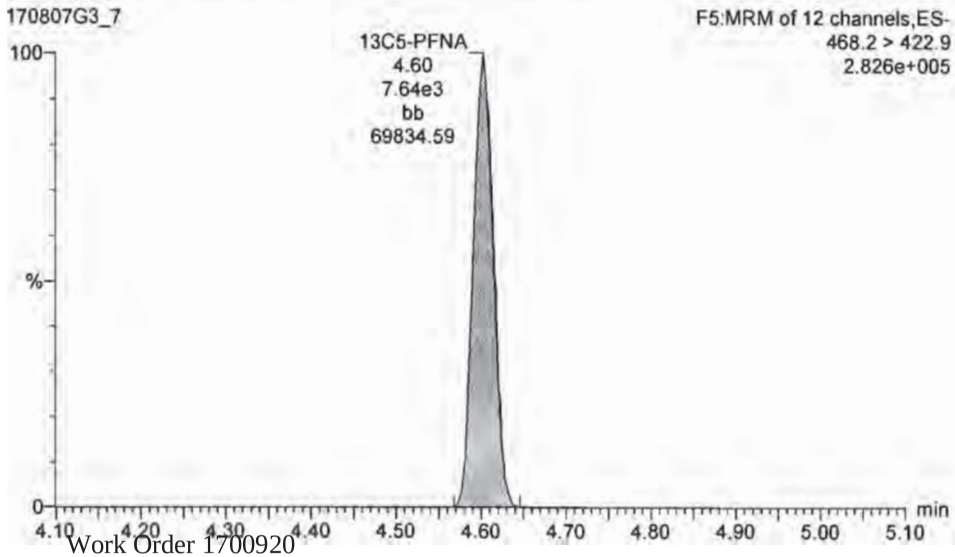

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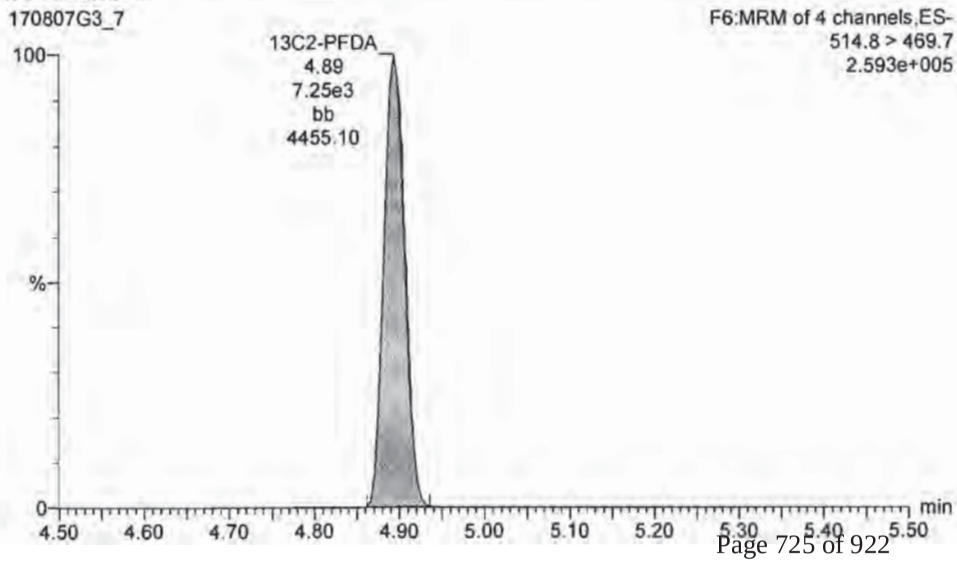

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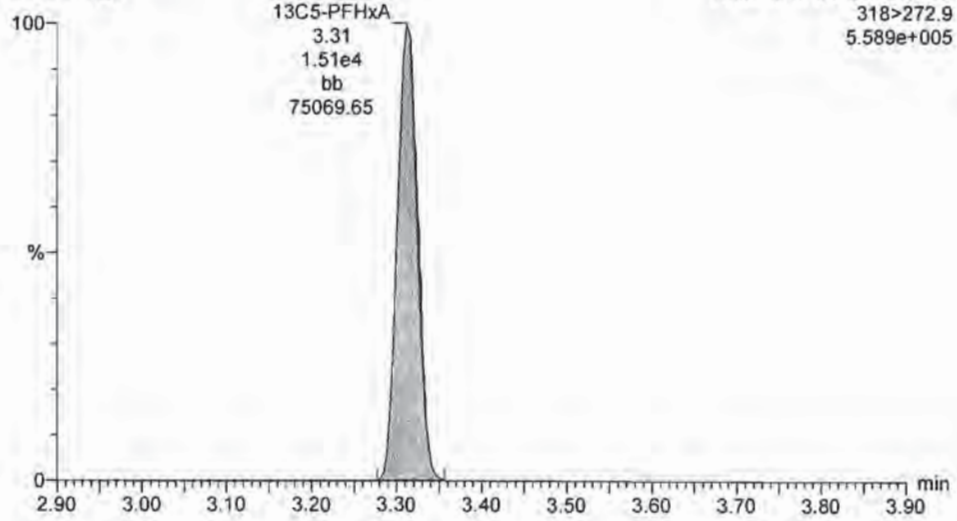
Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-6 PFC CS3 17H0712, Description: PFC CS3 17H0712 A, Name: 170807G3_7, Date: 07-Aug-2017, Time: 17:10:43, Instrument: , Lab: , User:

13C5-PFHxA



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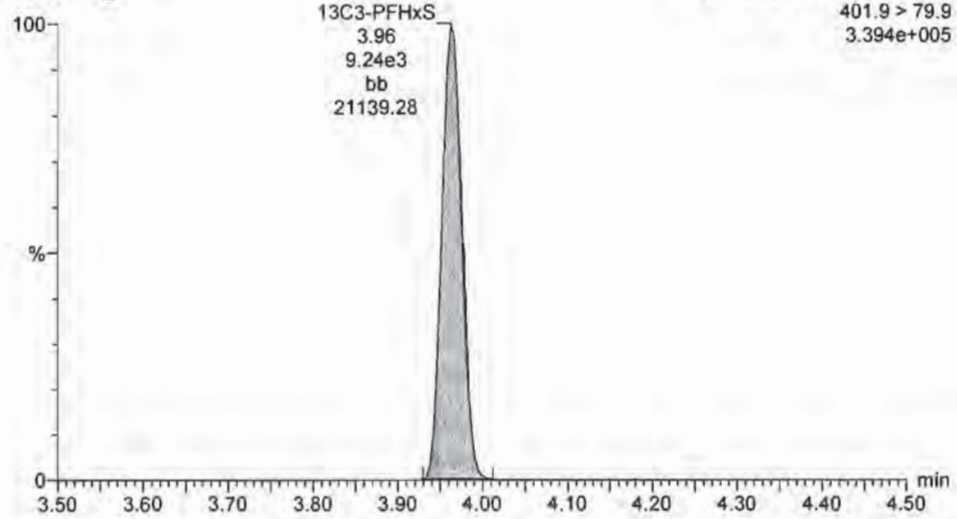

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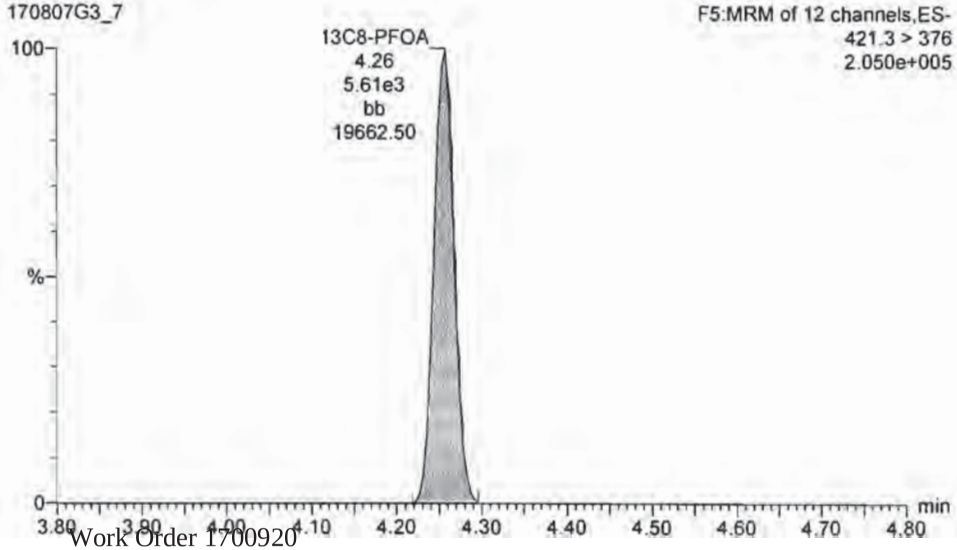

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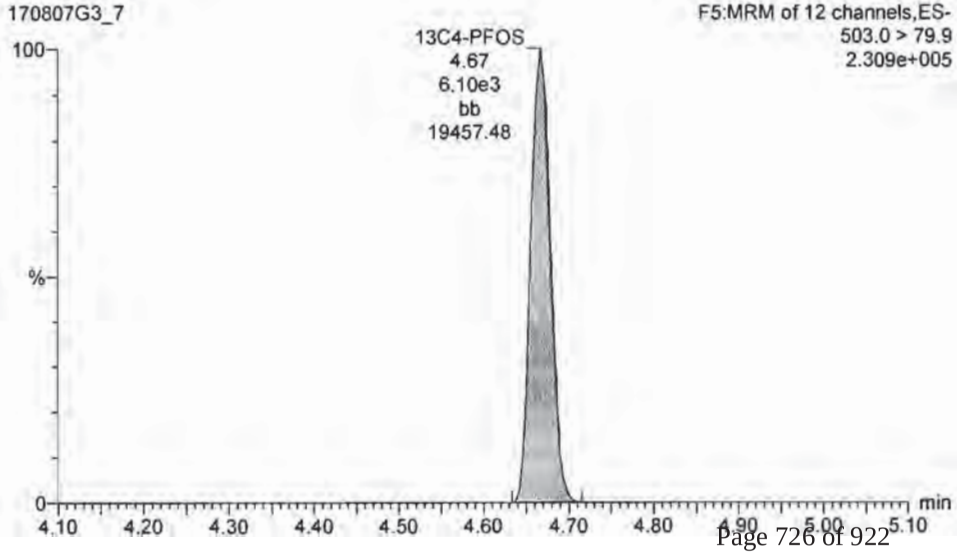

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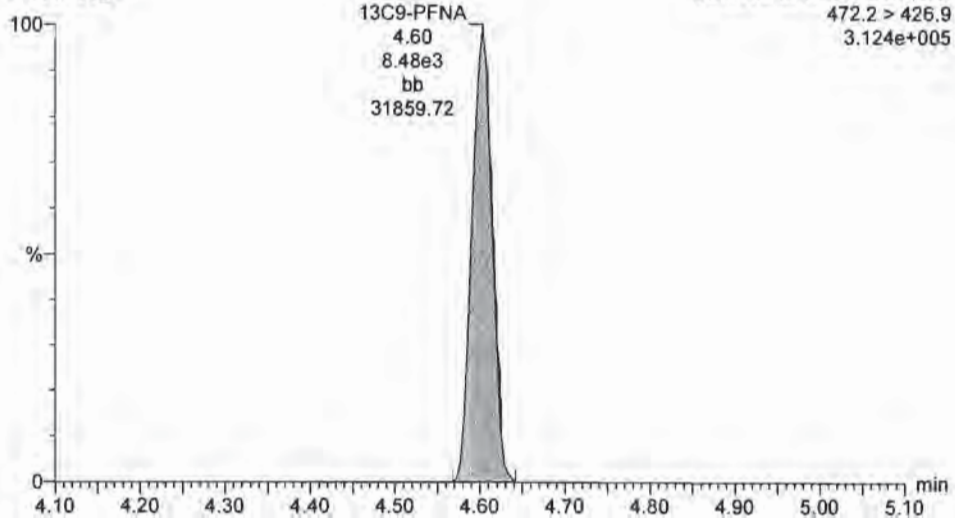
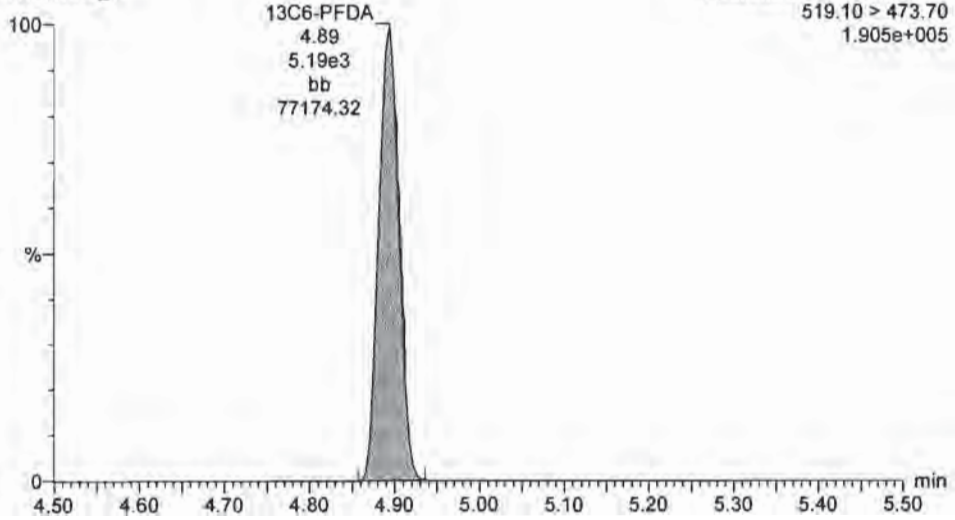
Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-6 PFC CS3 17H0712, Description: PFC CS3 17H0712 A, Name: 170807G3_7, Date: 07-Aug-2017, Time: 17:10:43, Instrument: , Lab: , User:

13C9-PFNA



13C6-PFDA



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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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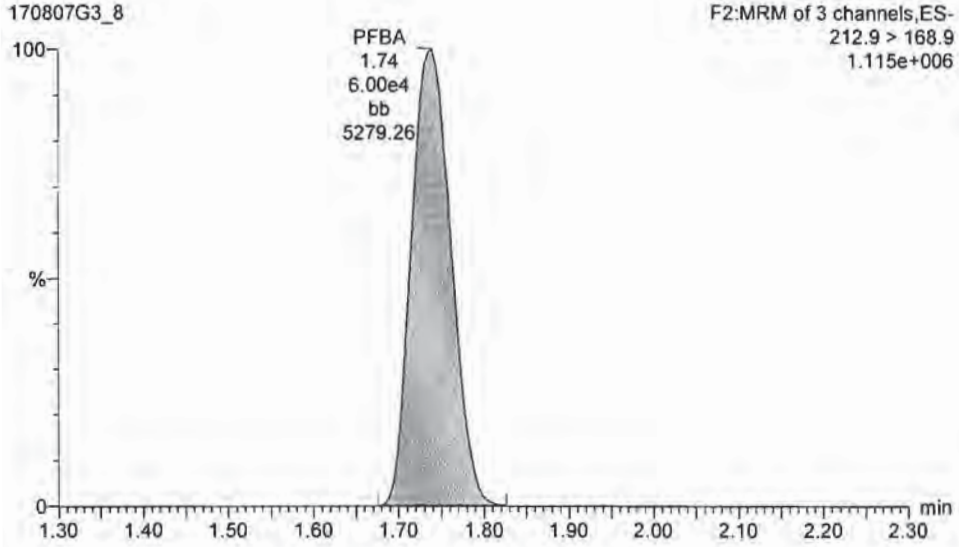
ID: ST170807G3-7 PFC CS4 17H0713, Description: PFC CS4 17H0713 A, Name: 170807G3_8, Date: 07-Aug-2017, Time: 17:22:55, Instrument: , Lab: , User:

PFBA



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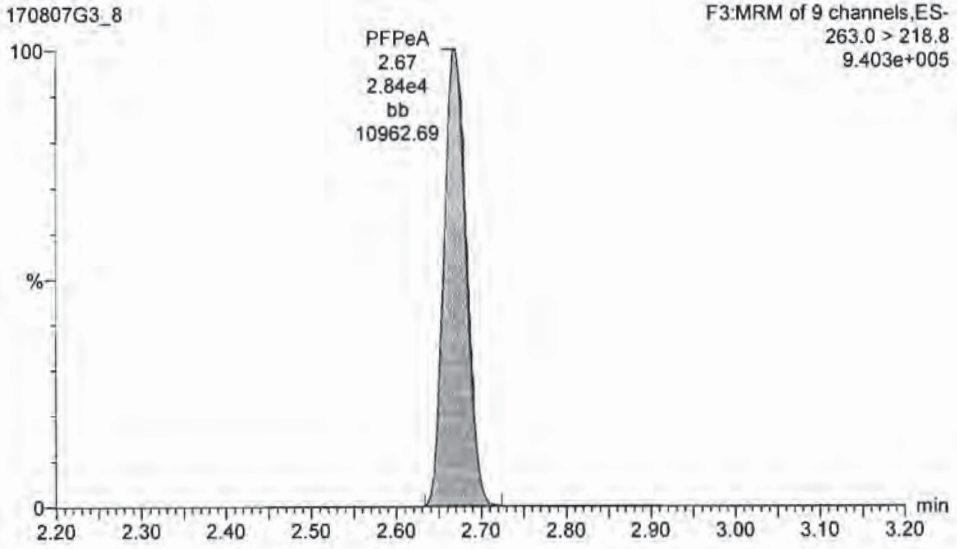

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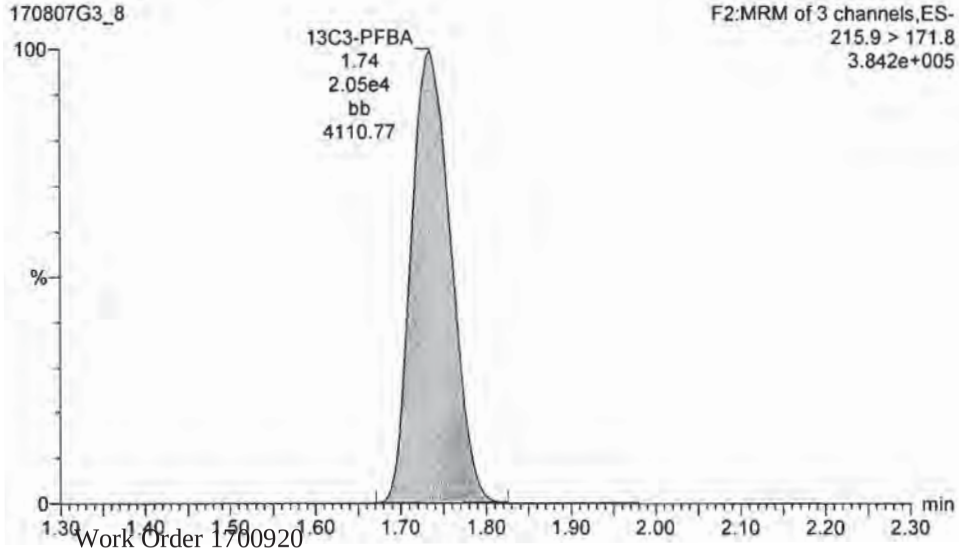

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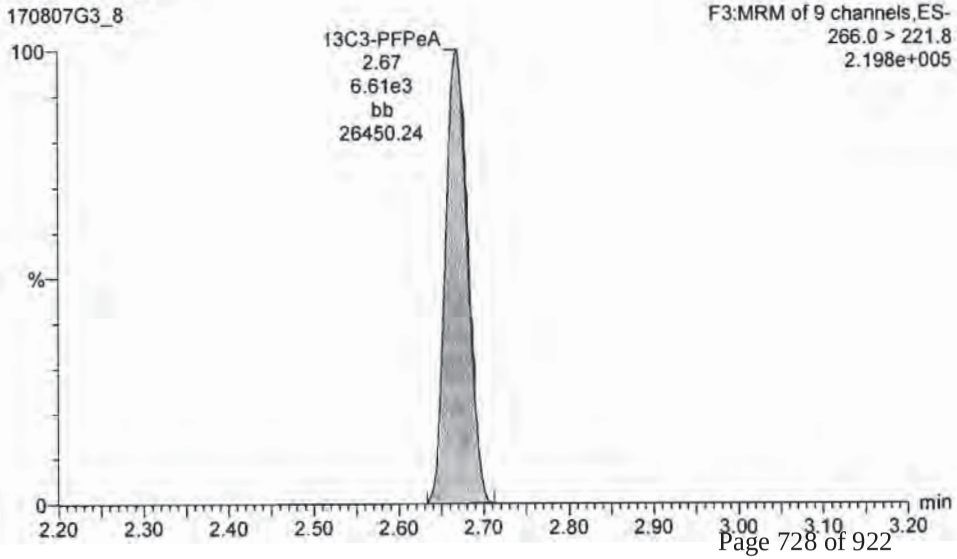

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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-7 PFC CS4 17H0713, Description: PFC CS4 17H0713 A, Name: 170807G3_8, Date: 07-Aug-2017, Time: 17:22:55, Instrument: , Lab: , User:

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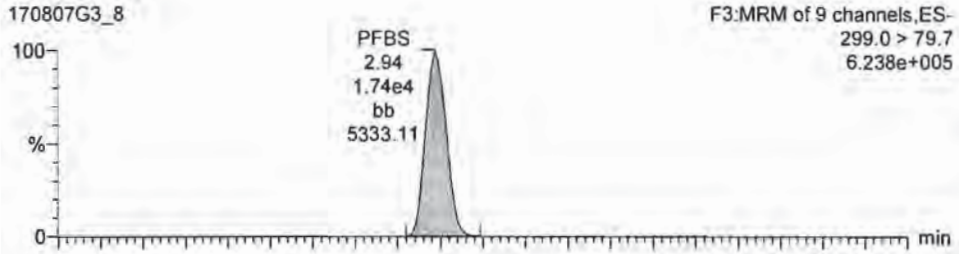

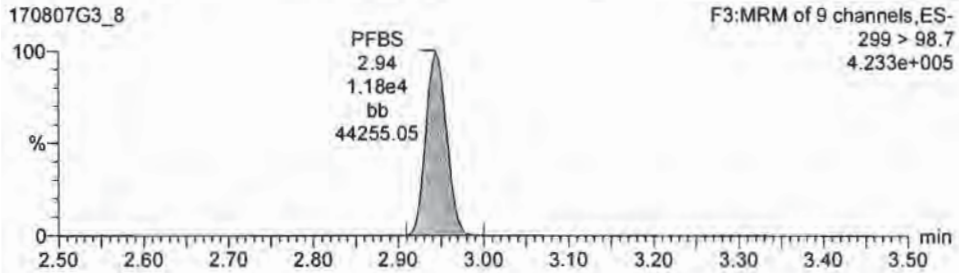

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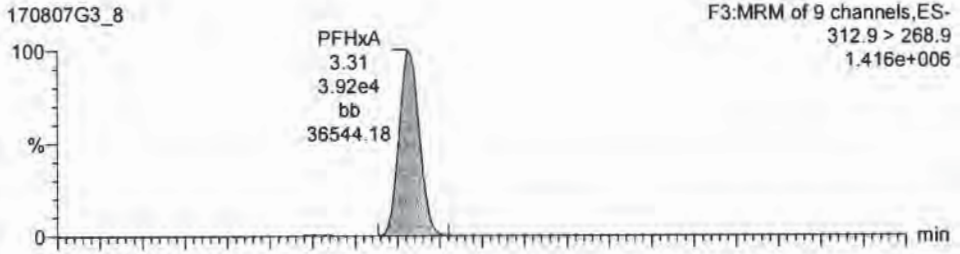

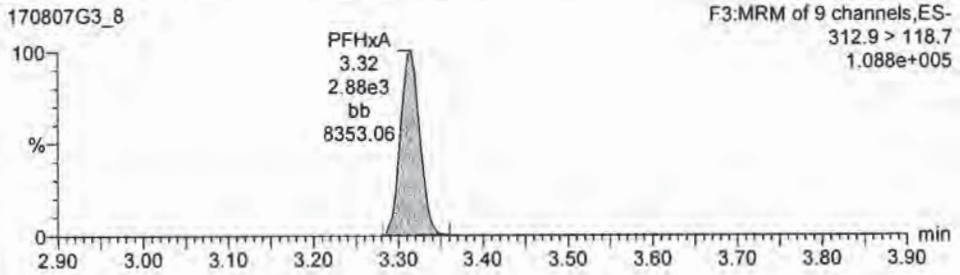

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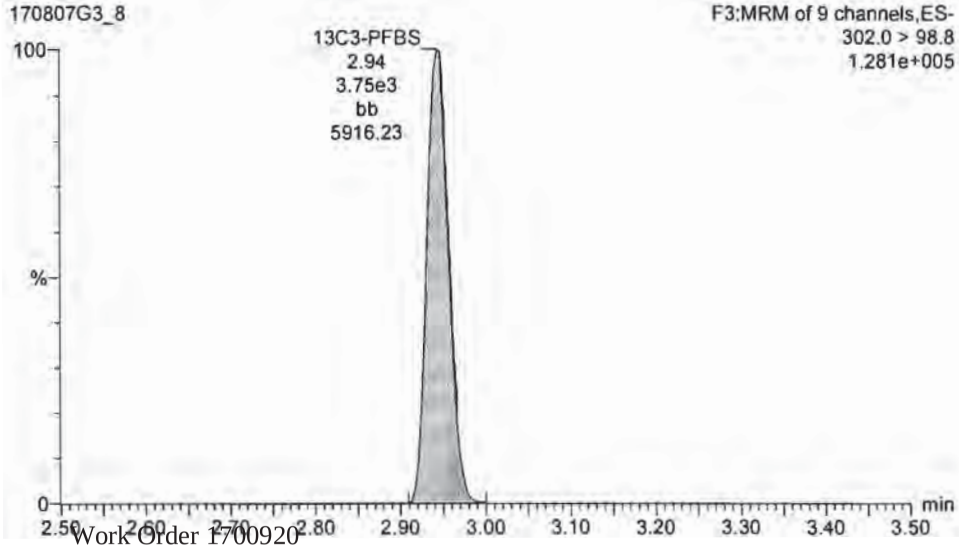

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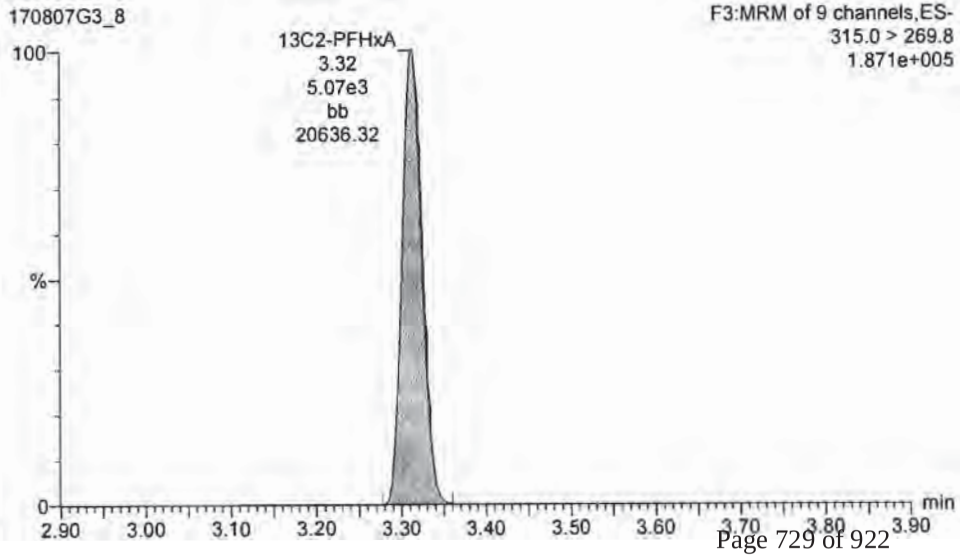

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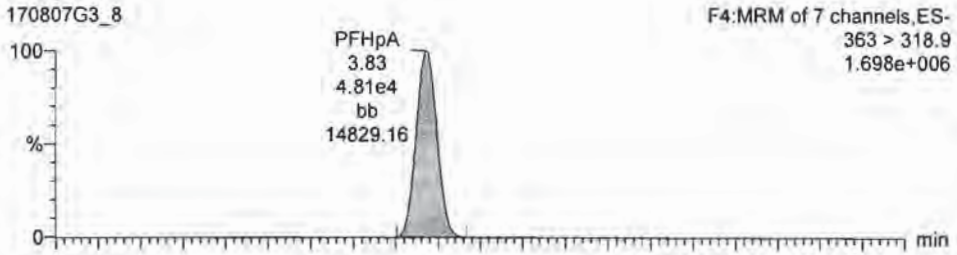
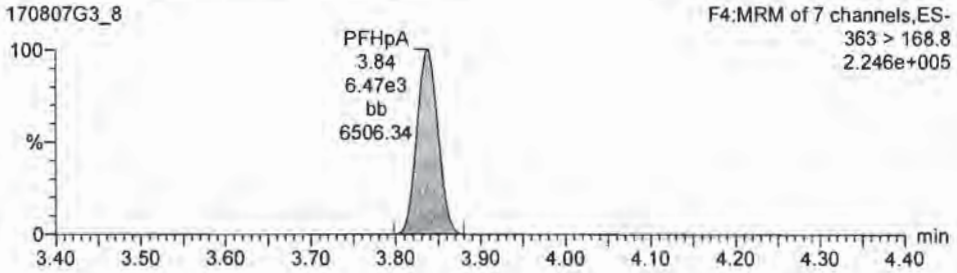
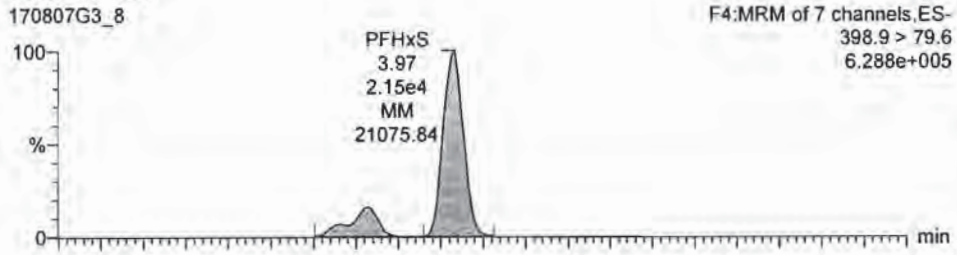
ID: ST170807G3-7 PFC CS4 17H0713, Description: PFC CS4 17H0713 A, Name: 170807G3_8, Date: 07-Aug-2017, Time: 17:22:55, Instrument: , Lab: , User:

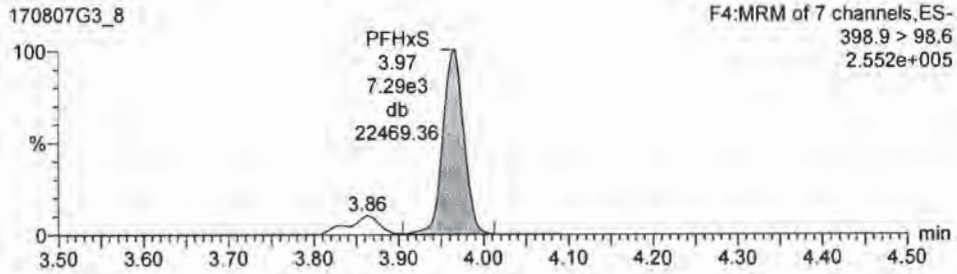
PFHpA





Total PFHxS





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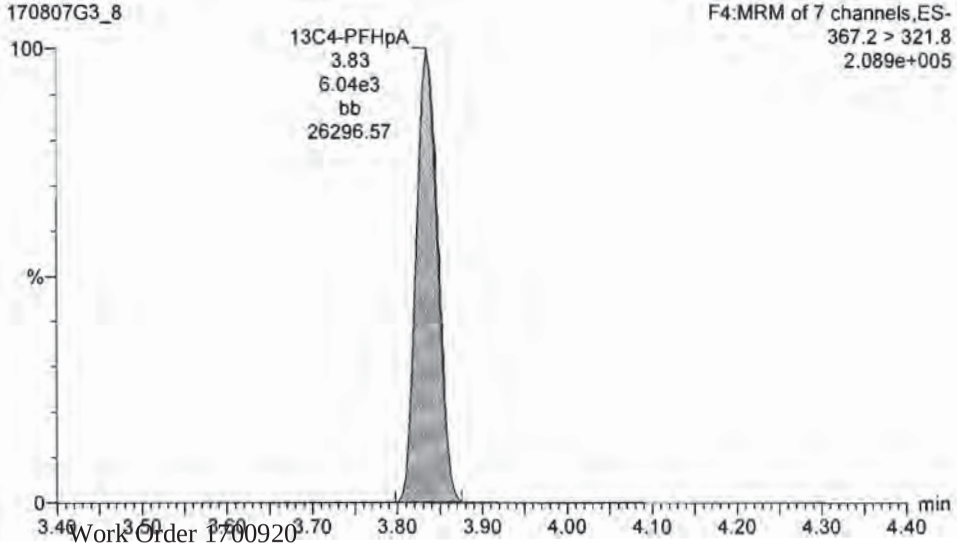
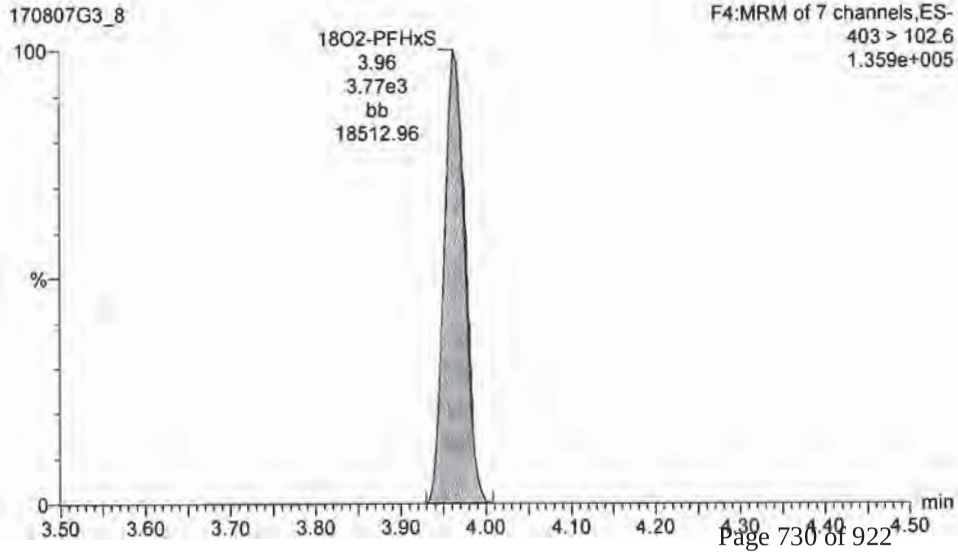


18O2-PFHxS



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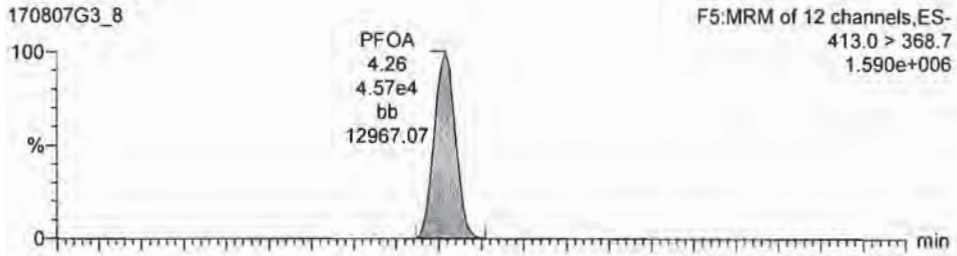
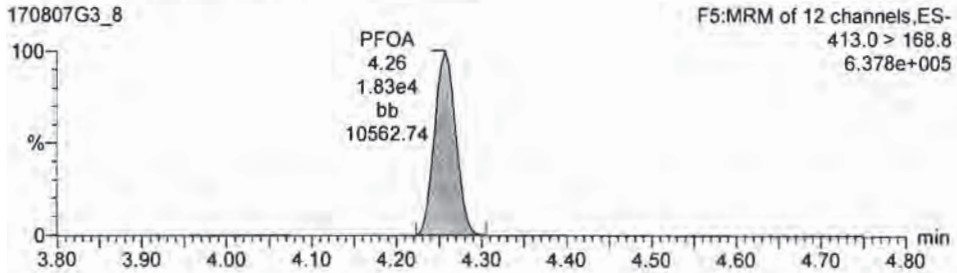
ID: ST170807G3-7 PFC CS4 17H0713, Description: PFC CS4 17H0713 A, Name: 170807G3_8, Date: 07-Aug-2017, Time: 17:22:55, Instrument: , Lab: , User:

Total PFOA





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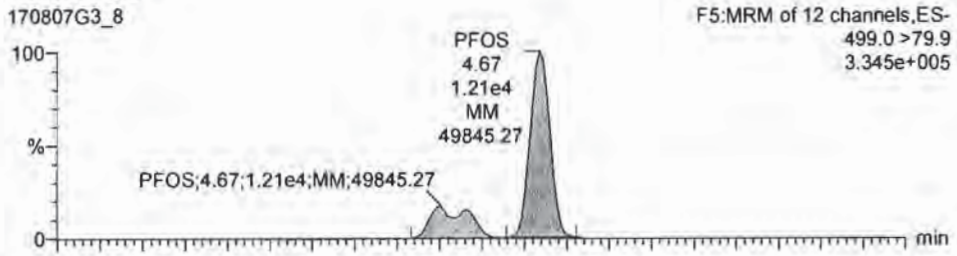

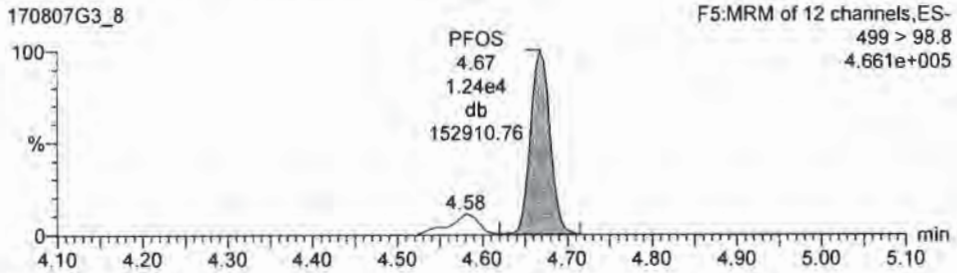

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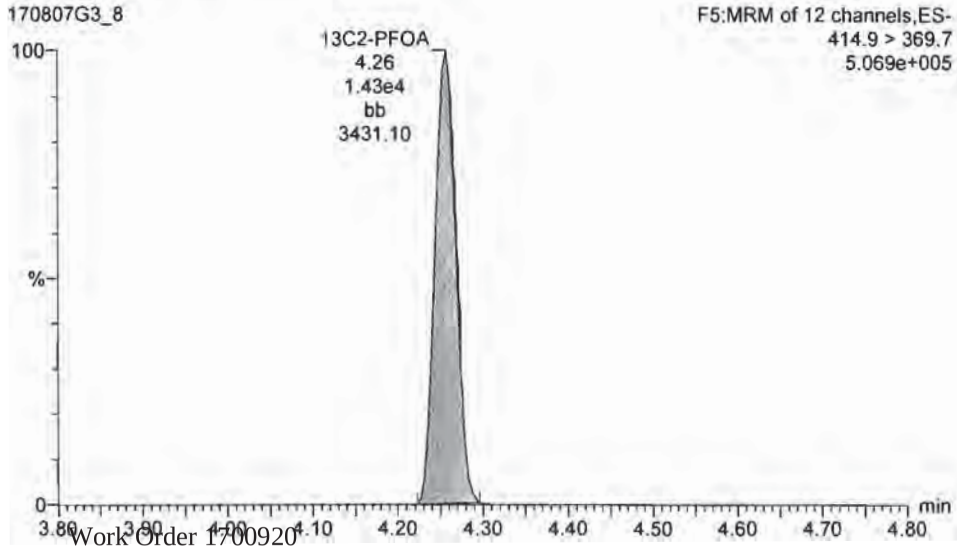
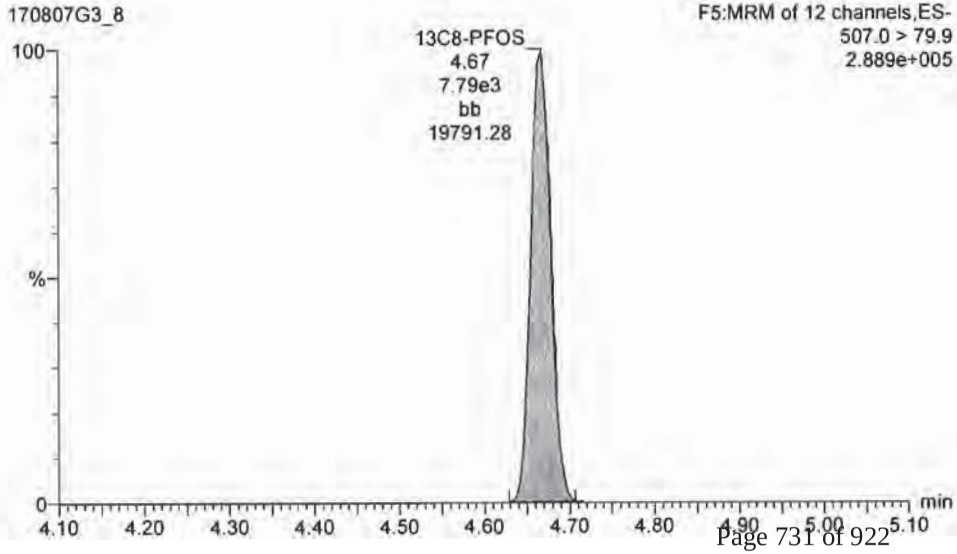


13C8-PFOS



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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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ID: ST170807G3-7 PFC CS4 17H0713, Description: PFC CS4 17H0713 A, Name: 170807G3_8, Date: 07-Aug-2017, Time: 17:22:55, Instrument: , Lab: , User:

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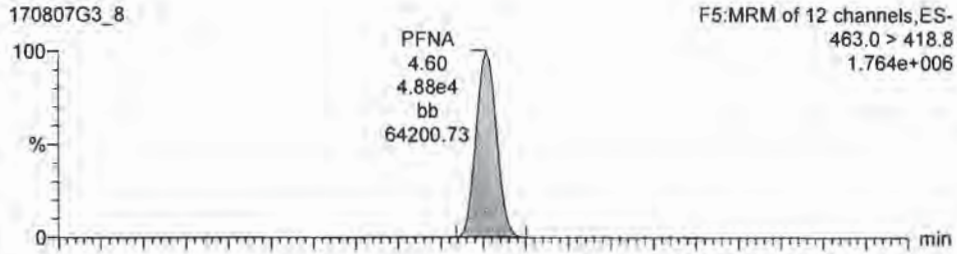

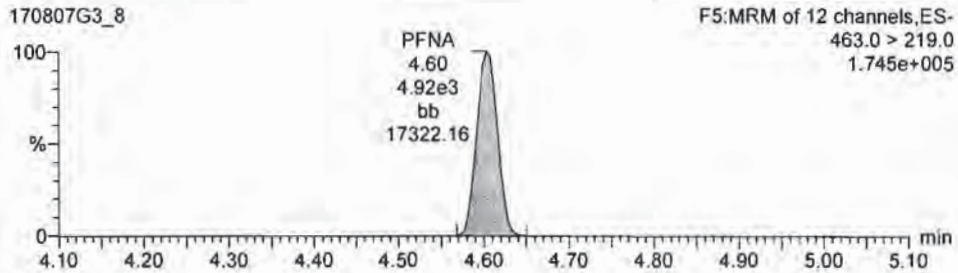

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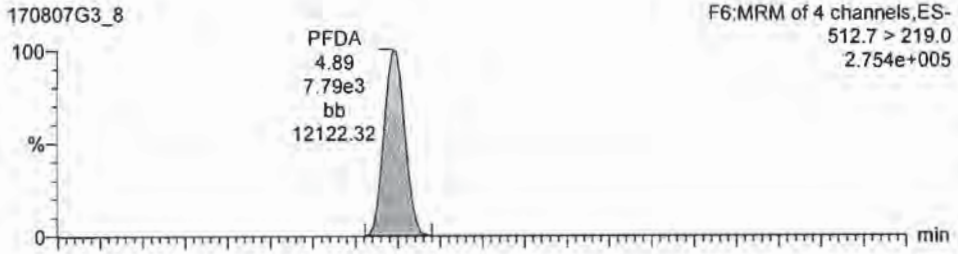

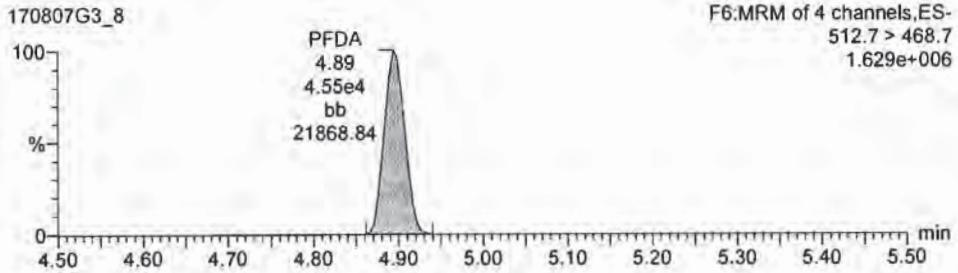

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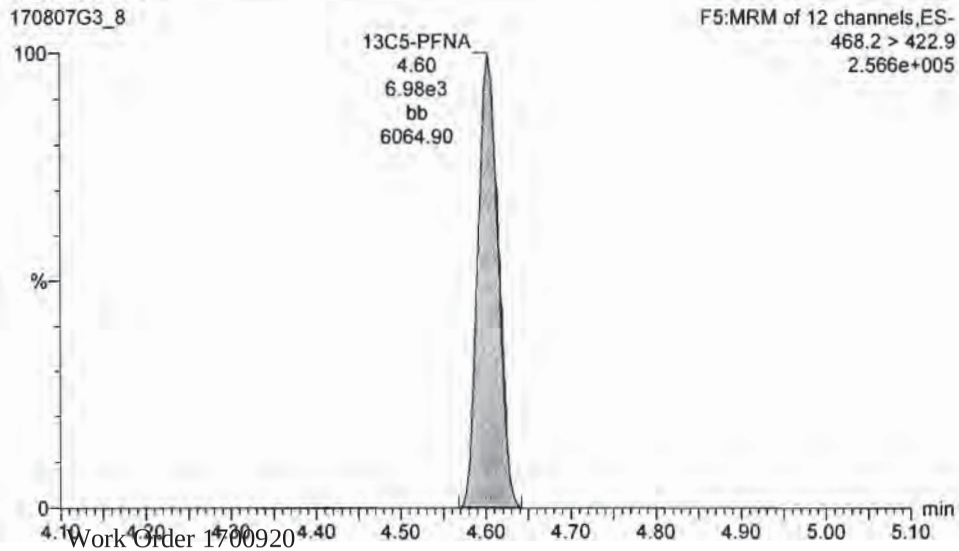
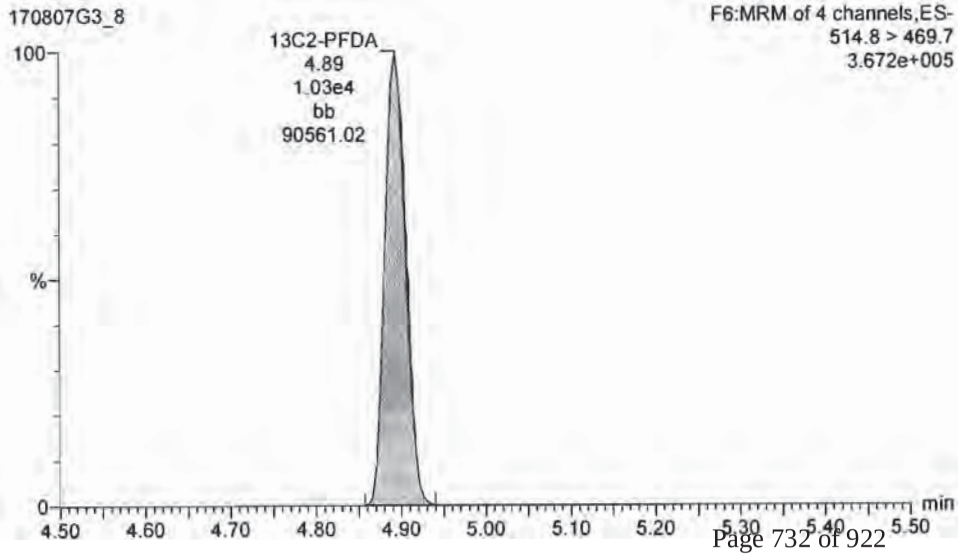


13C2-PFDA



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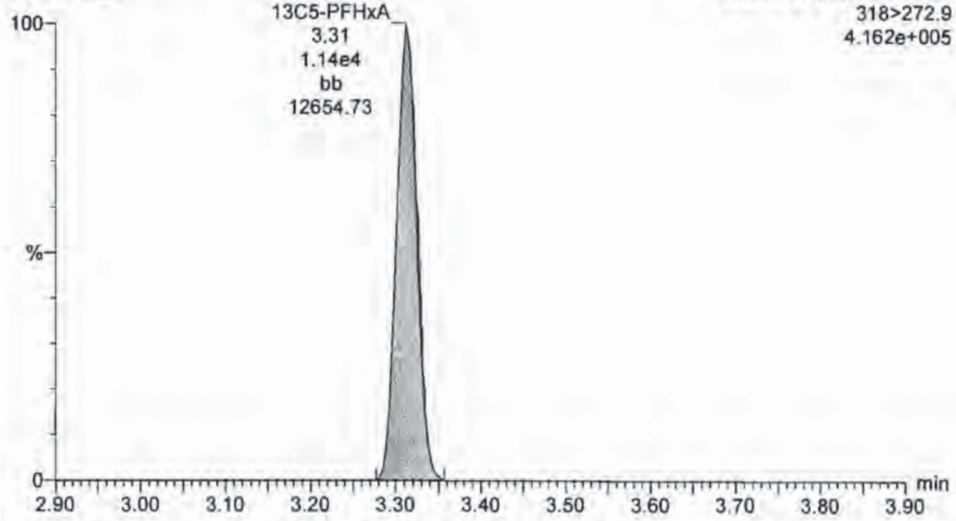
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-7 PFC CS4 17H0713, Description: PFC CS4 17H0713 A, Name: 170807G3_8, Date: 07-Aug-2017, Time: 17:22:55, Instrument: , Lab: , User:

13C5-PFHxA



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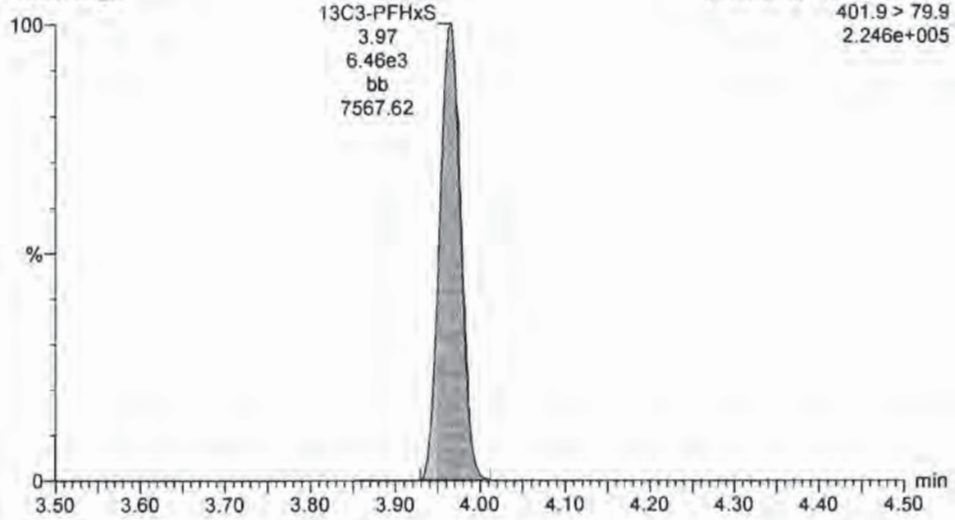

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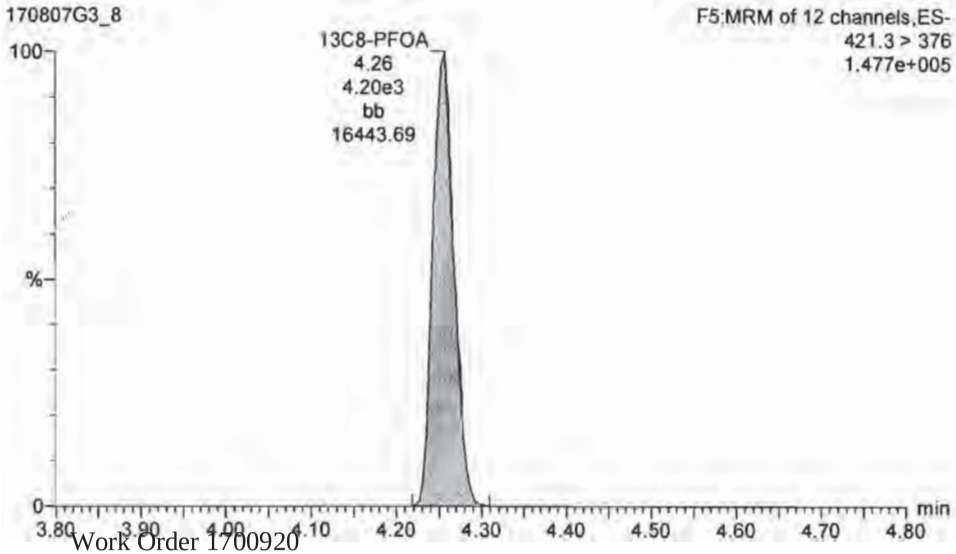

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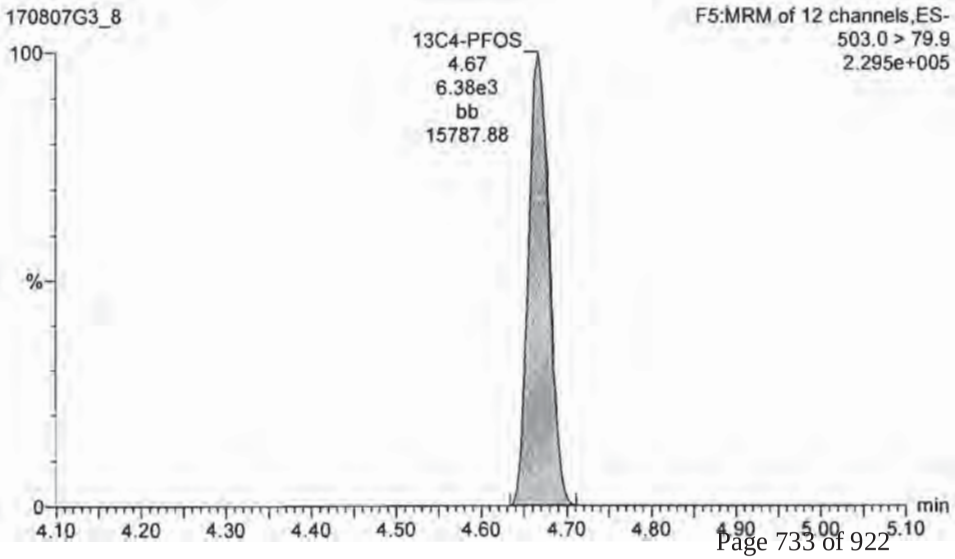

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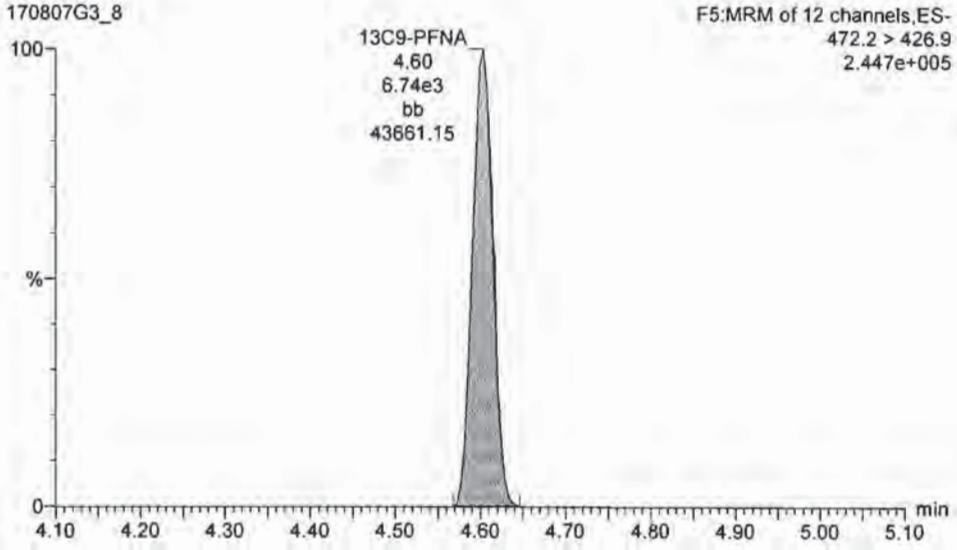
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-7 PFC CS4 17H0713, Description: PFC CS4 17H0713 A, Name: 170807G3_8, Date: 07-Aug-2017, Time: 17:22:55, Instrument: , Lab: , User:

13C9-PFNA



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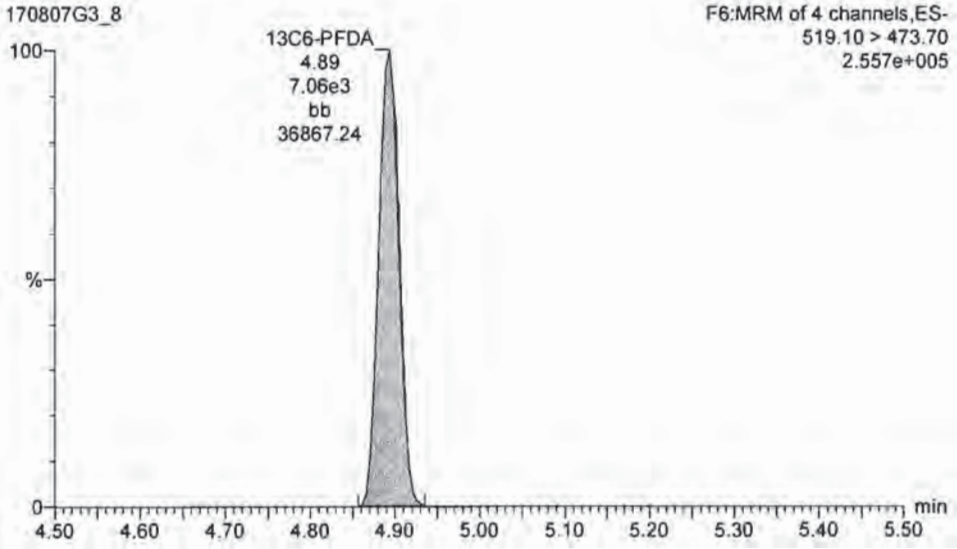

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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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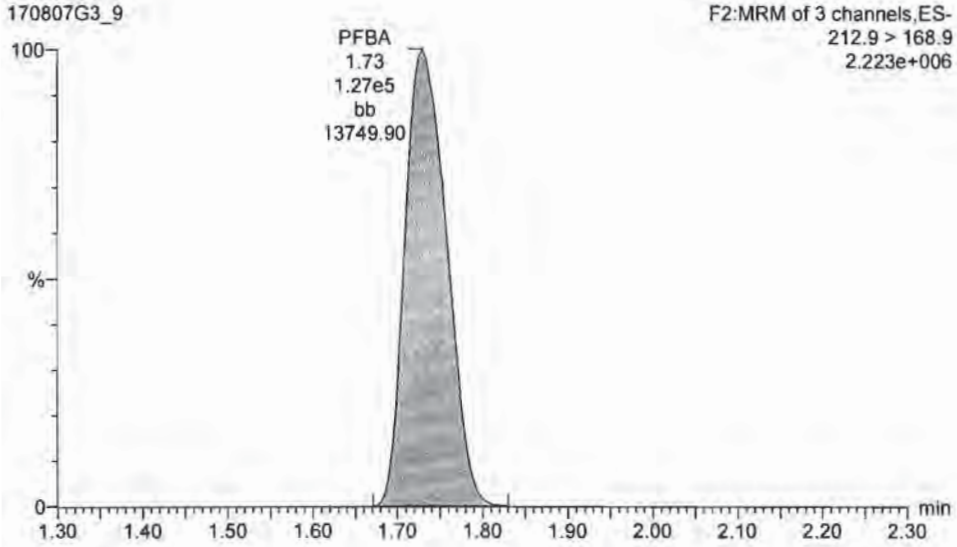
ID: ST170807G3-8 PFC CS5 17H0714, Description: PFC CS5 17H0714 A, Name: 170807G3_9, Date: 07-Aug-2017, Time: 17:35:31, Instrument: , Lab: , User:

PFBA



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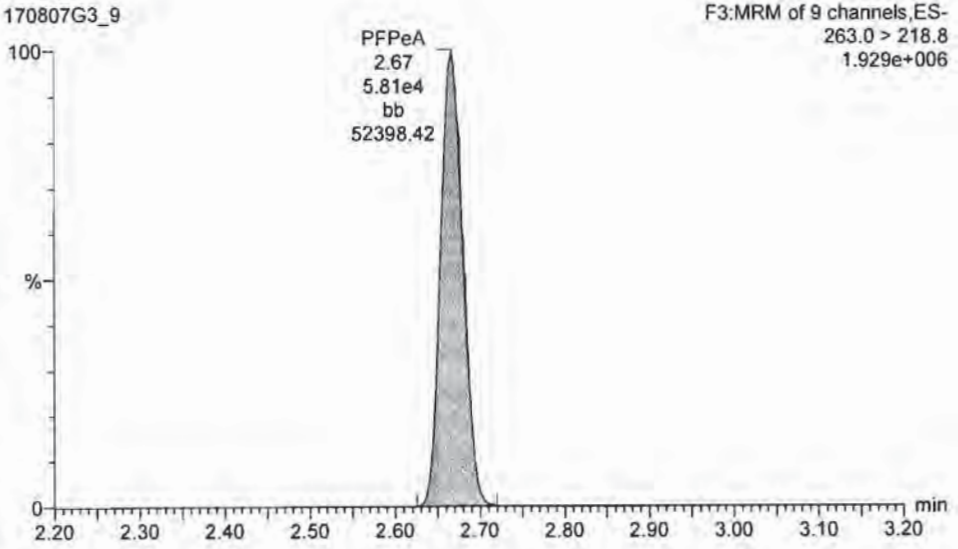

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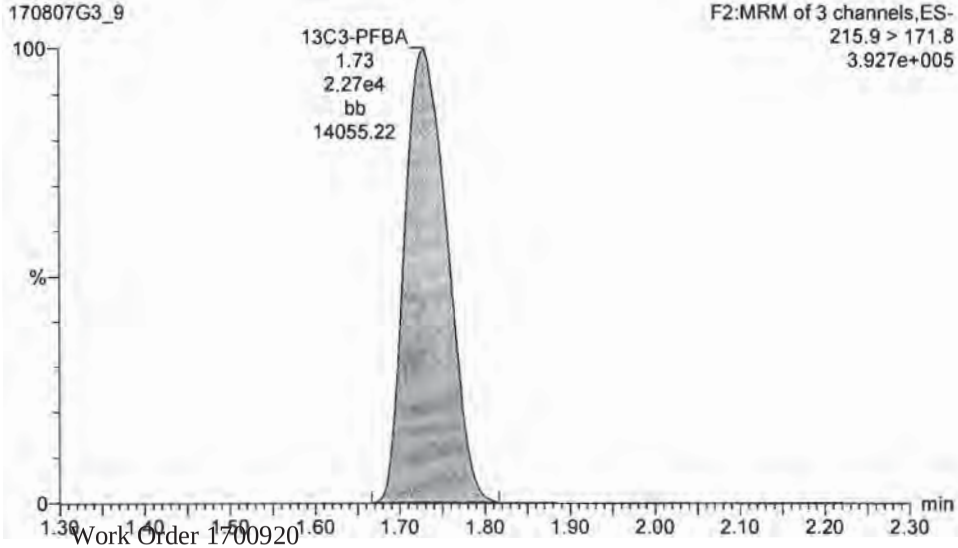

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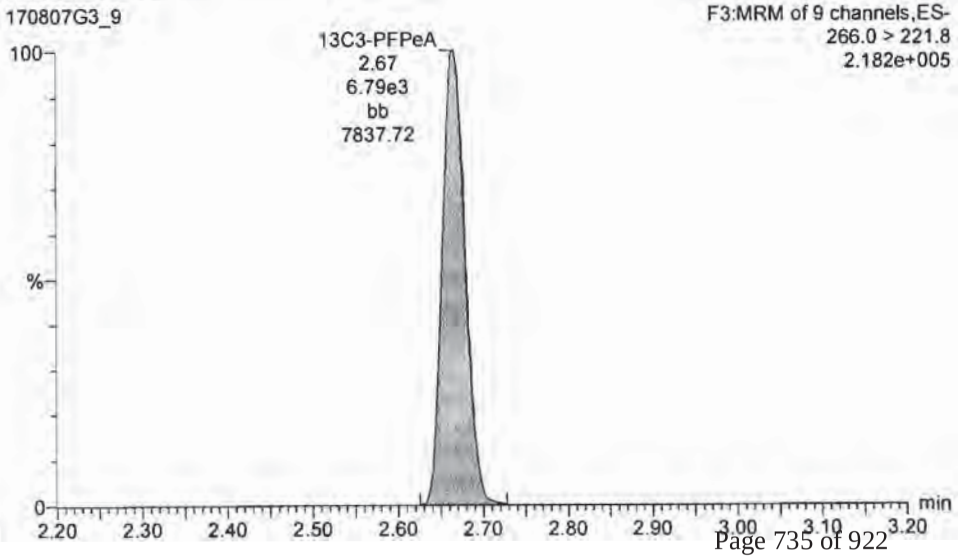

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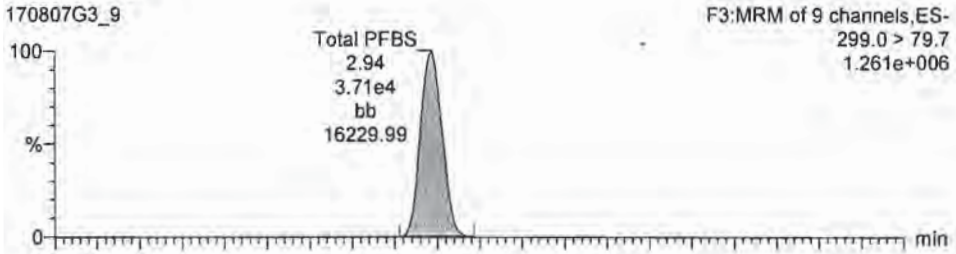
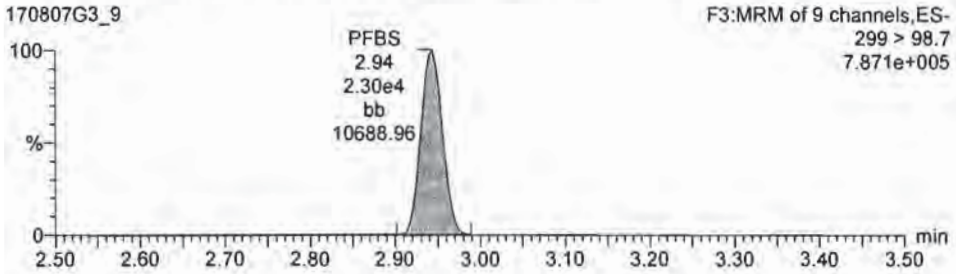
Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-8 PFC CS5 17H0714, Description: PFC CS5 17H0714 A, Name: 170807G3_9, Date: 07-Aug-2017, Time: 17:35:31, Instrument: , Lab: , User:

Total PFBS





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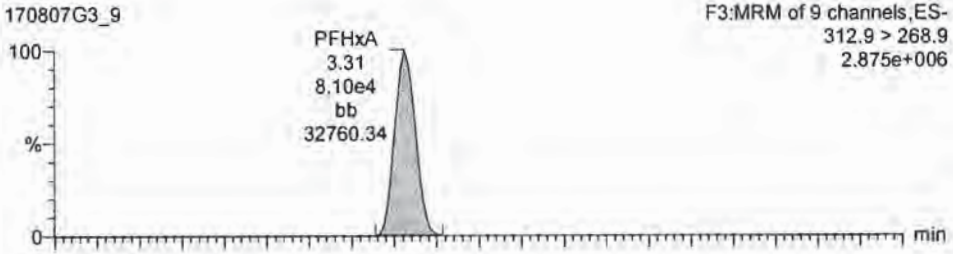

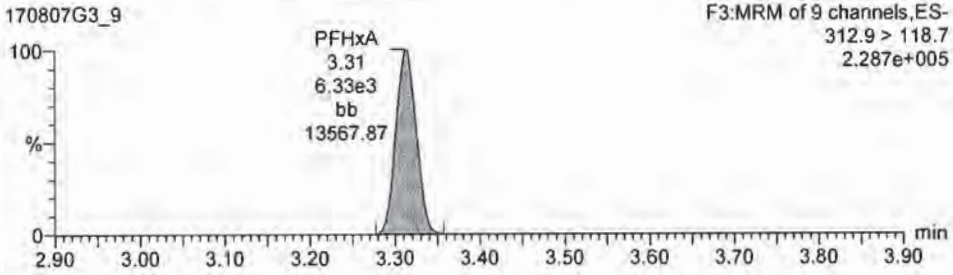

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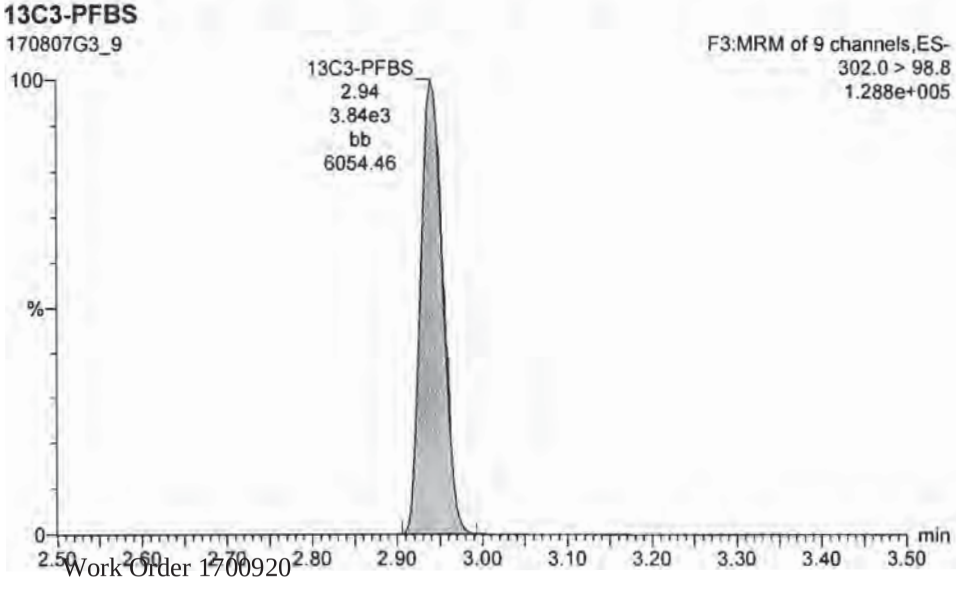

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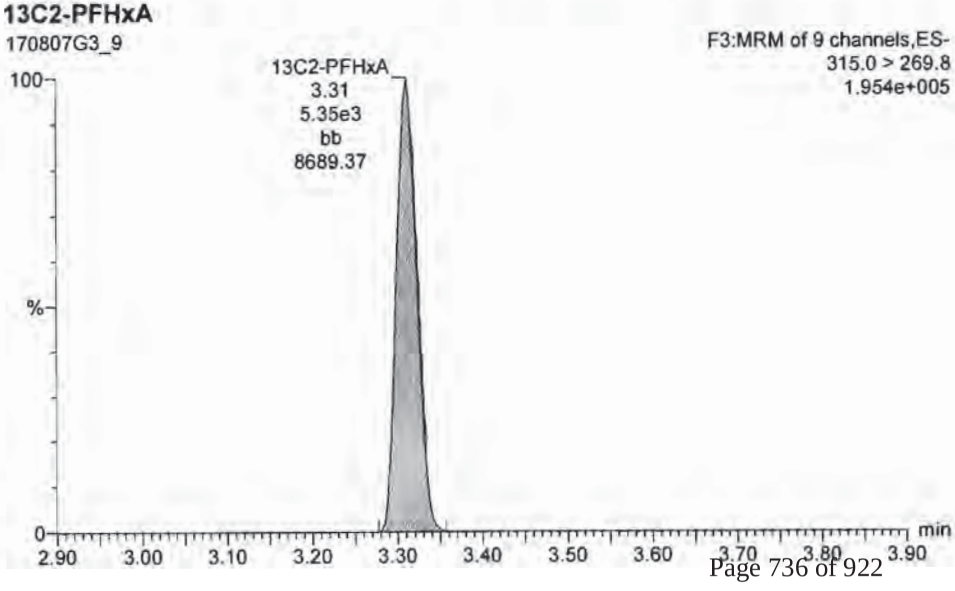

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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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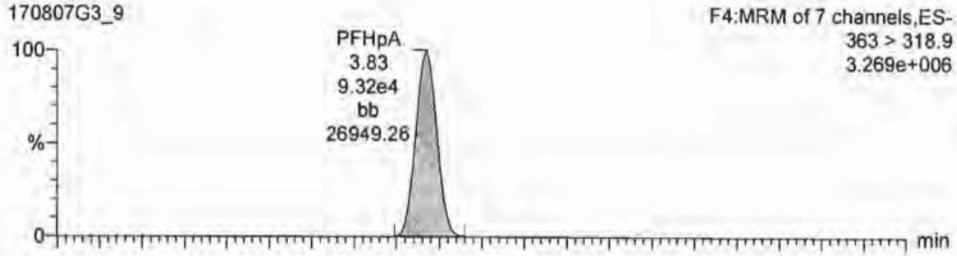
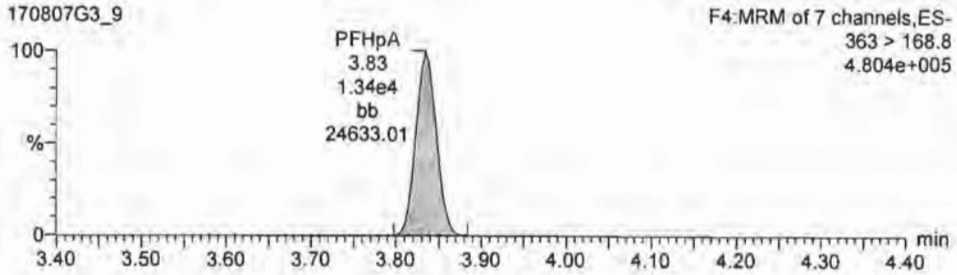
ID: ST170807G3-8 PFC CS5 17H0714, Description: PFC CS5 17H0714 A, Name: 170807G3_9, Date: 07-Aug-2017, Time: 17:35:31, Instrument: , Lab: , User:

PFHpA





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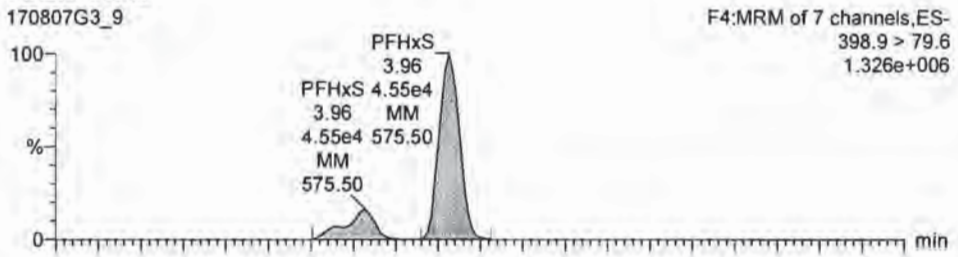

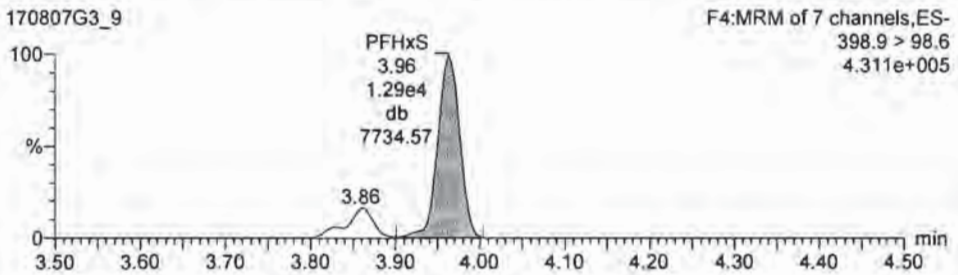

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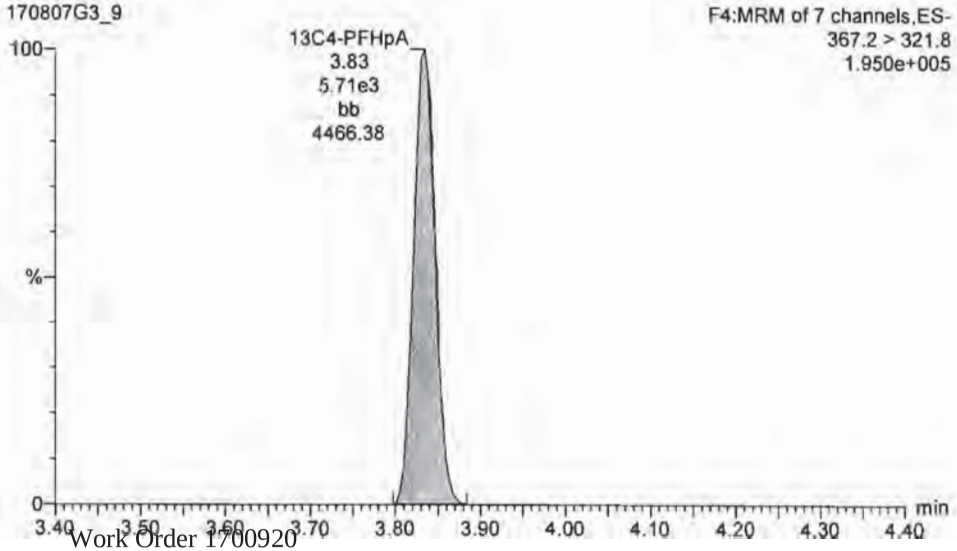

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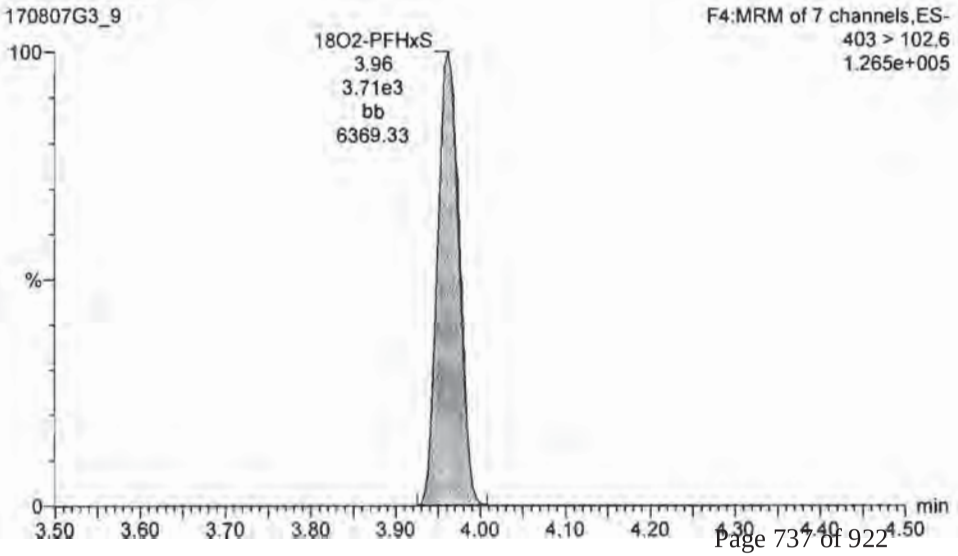

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Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
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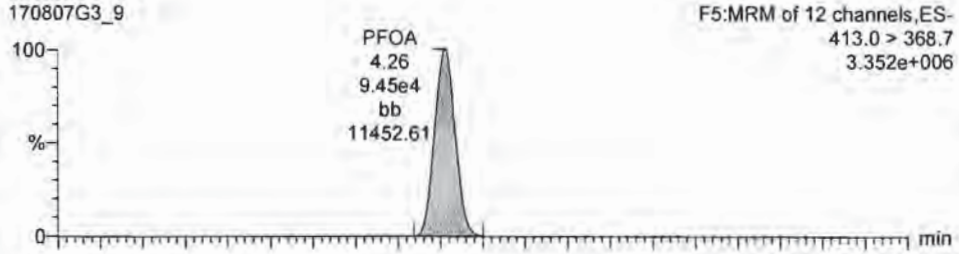
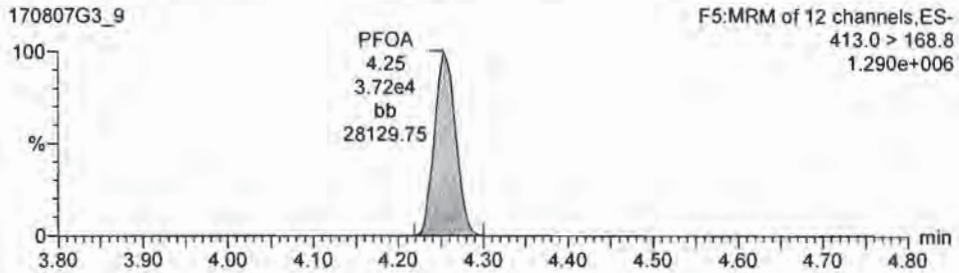
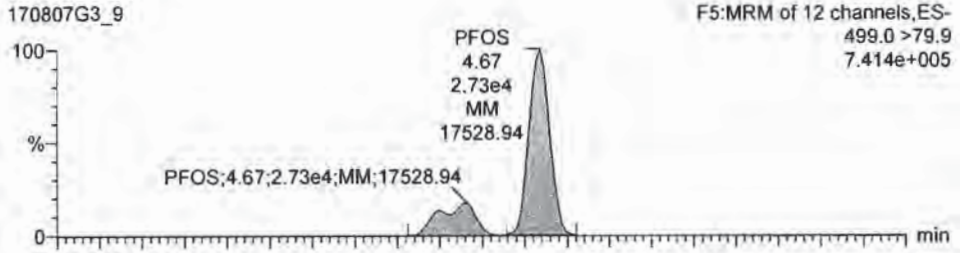
ID: ST170807G3-8 PFC CS5 17H0714, Description: PFC CS5 17H0714 A, Name: 170807G3_9, Date: 07-Aug-2017, Time: 17:35:31, Instrument: , Lab: , User:

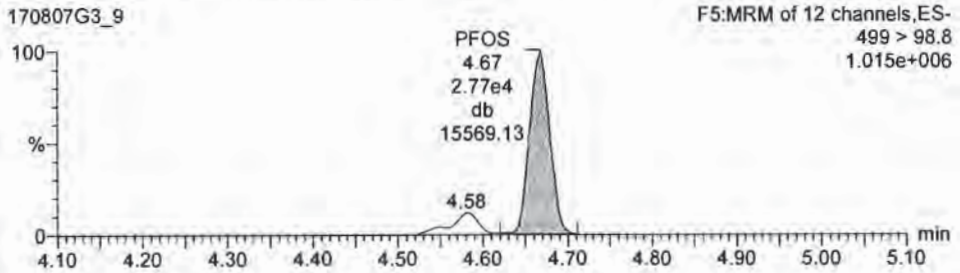
Total PFOA



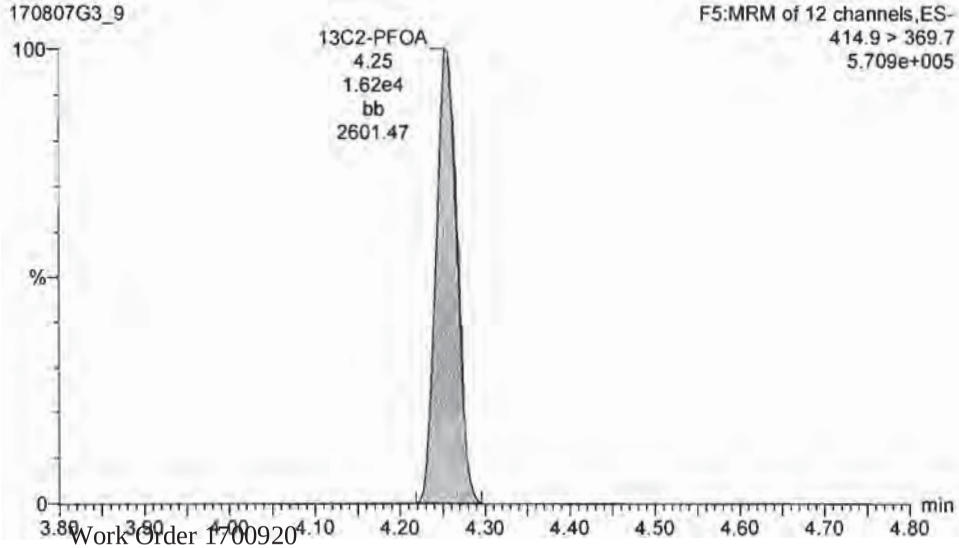


Total PFOS

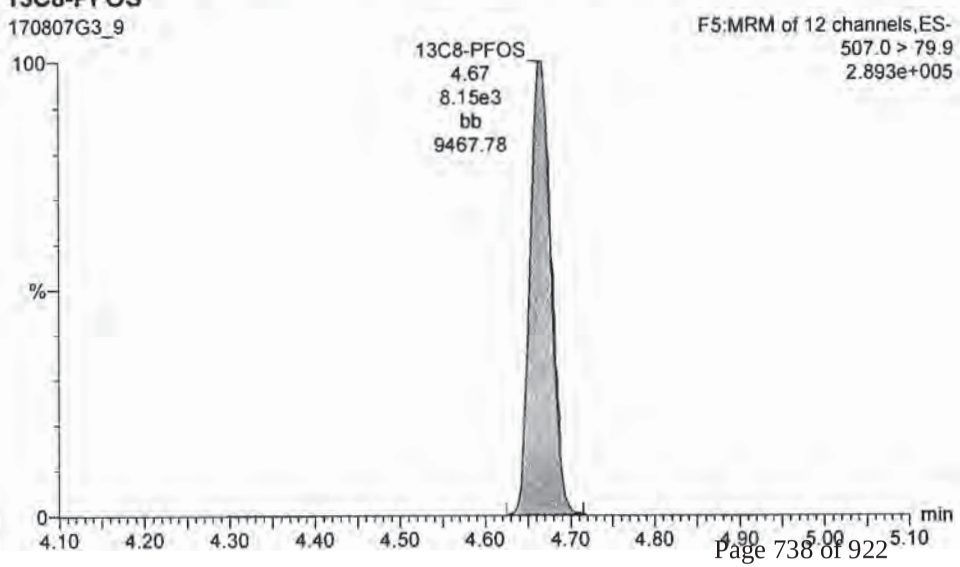




13C2-PFOA



13C8-PFOS



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ID: ST170807G3-8 PFC CS5 17H0714, Description: PFC CS5 17H0714 A, Name: 170807G3_9, Date: 07-Aug-2017, Time: 17:35:31, Instrument: , Lab: , User:

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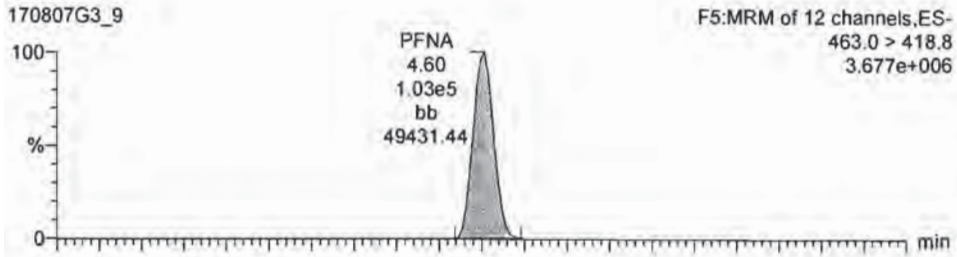
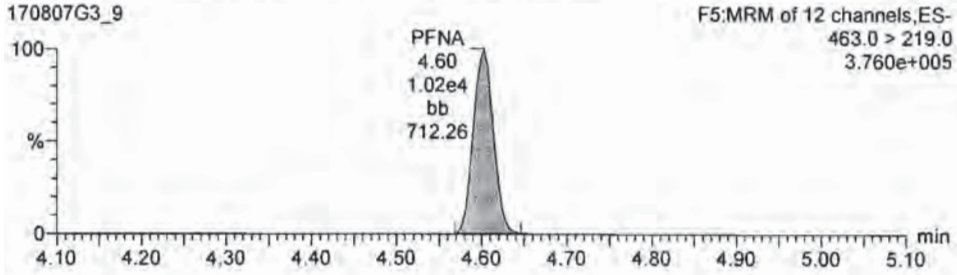
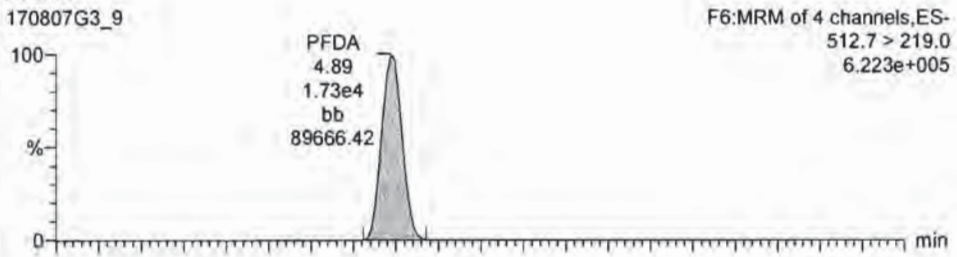
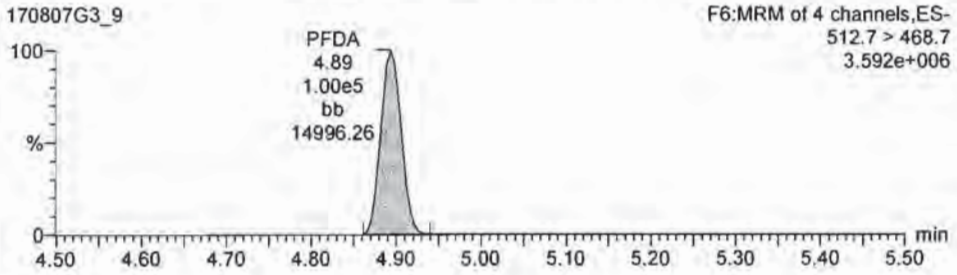




PFDA





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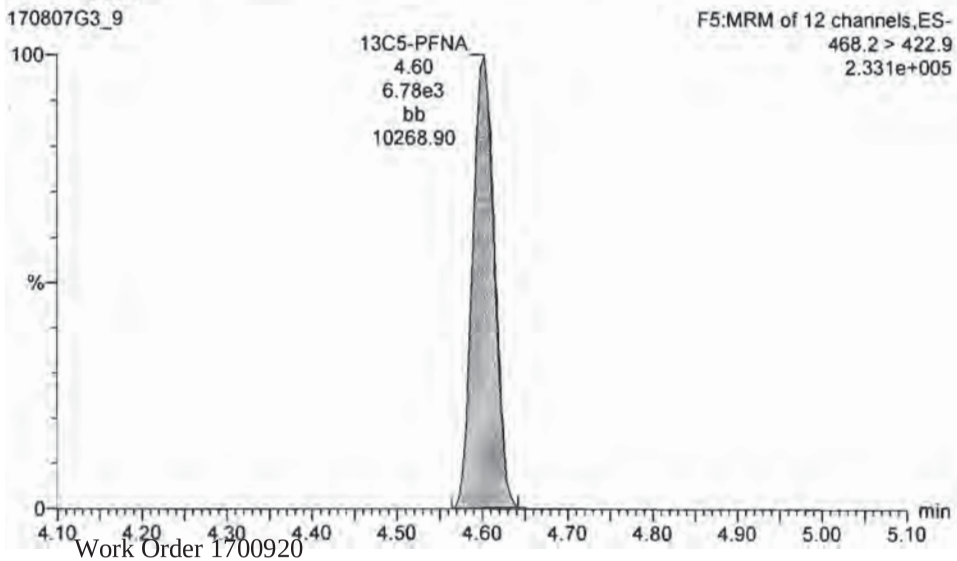

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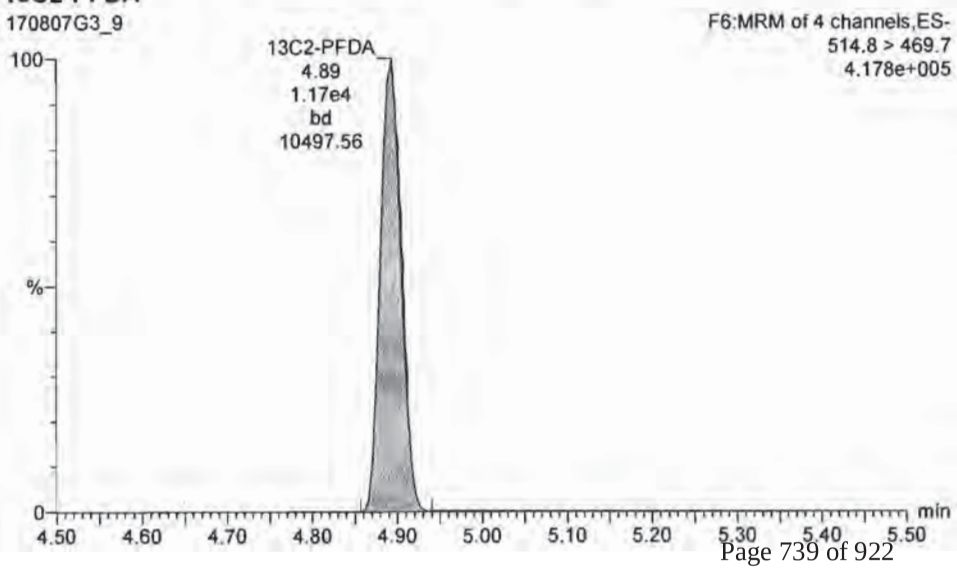

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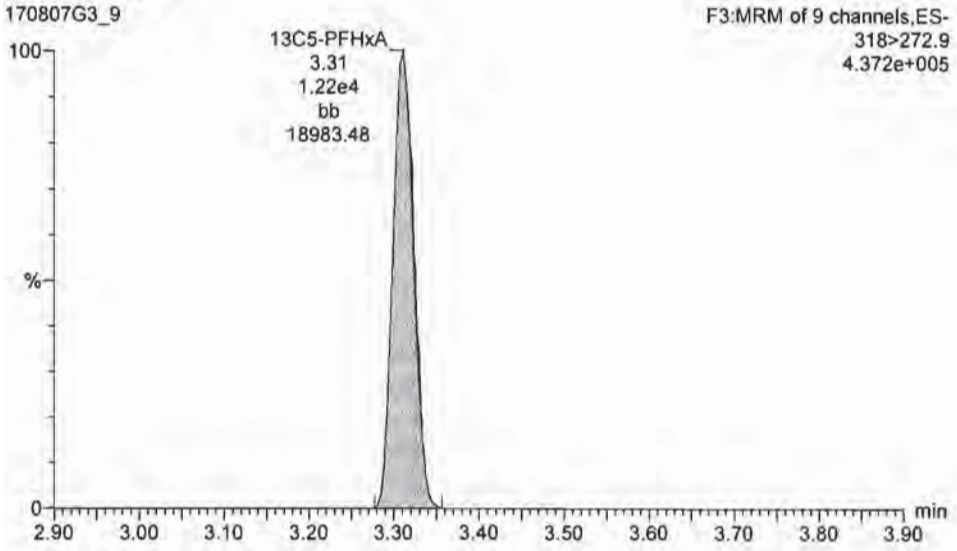
Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-8 PFC CS5 17H0714, Description: PFC CS5 17H0714 A, Name: 170807G3_9, Date: 07-Aug-2017, Time: 17:35:31, Instrument: , Lab: , User:

13C5-PFHxA



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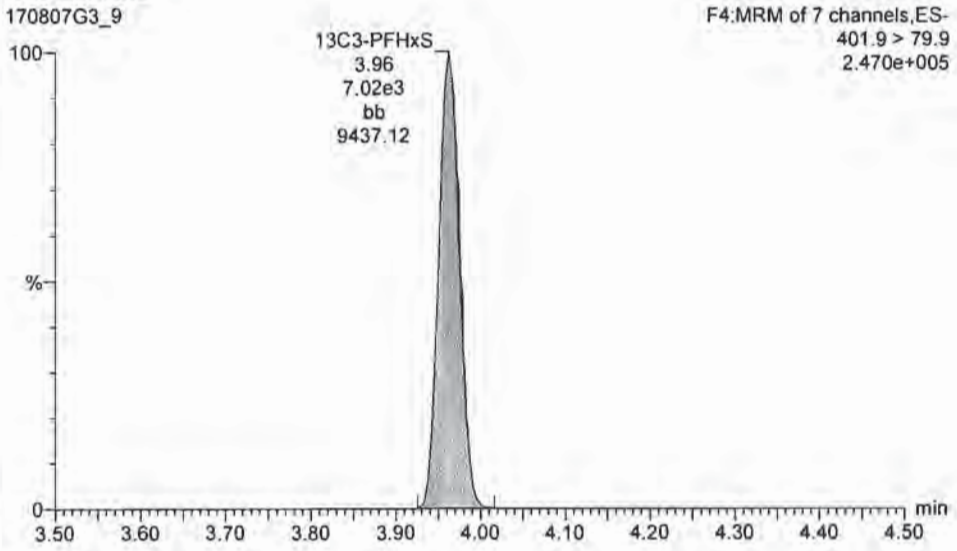

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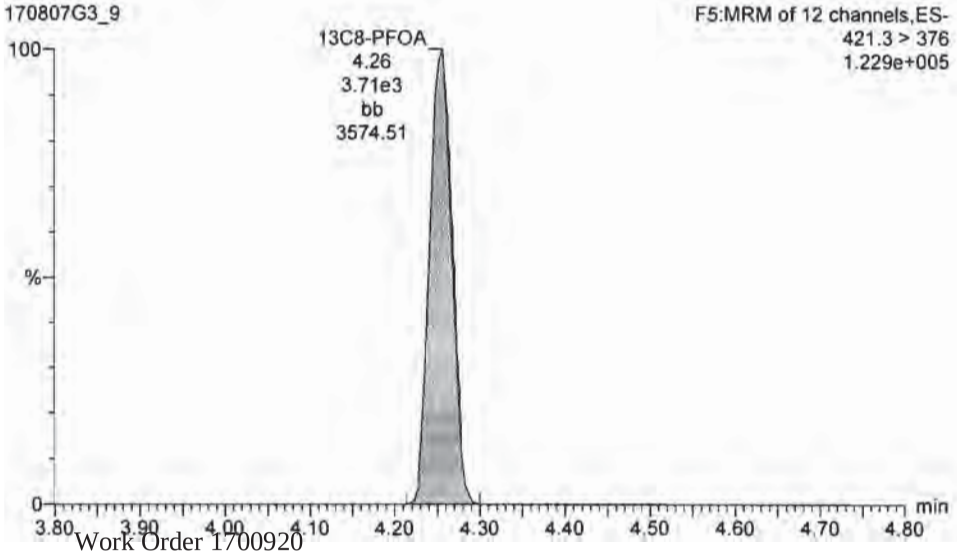

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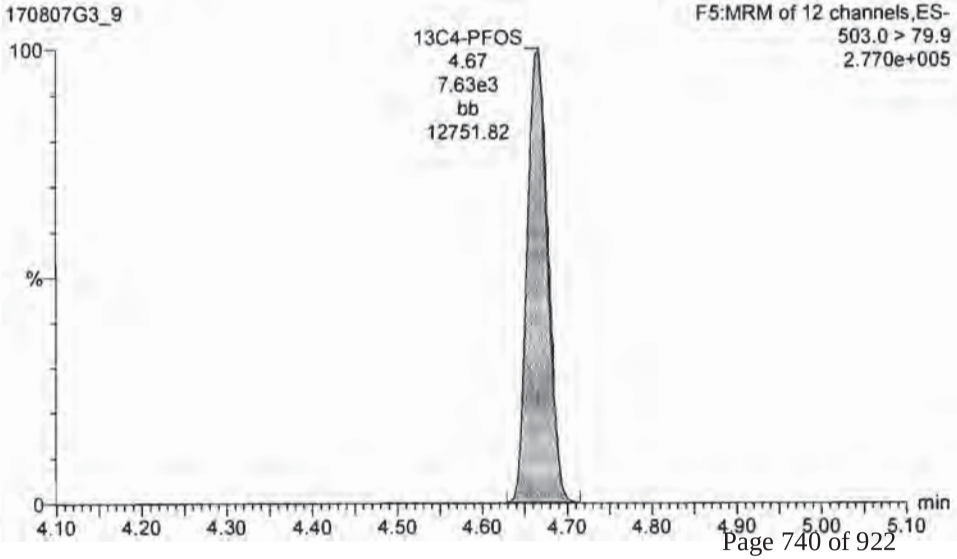

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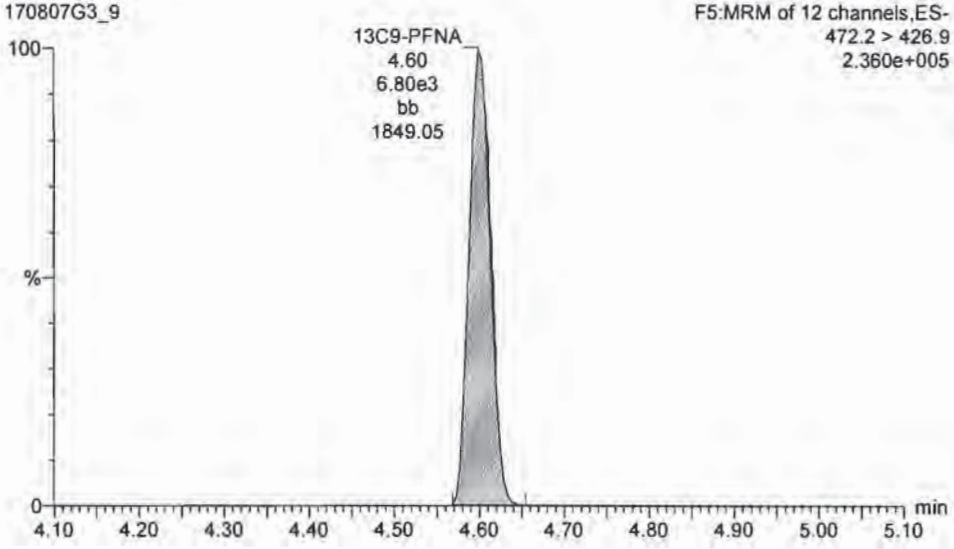
Printed: Tuesday, August 08, 2017 09:35:37 Pacific Daylight Time

ID: ST170807G3-8 PFC CS5 17H0714, Description: PFC CS5 17H0714 A, Name: 170807G3_9, Date: 07-Aug-2017, Time: 17:35:31, Instrument: , Lab: , User:

13C9-PFNA



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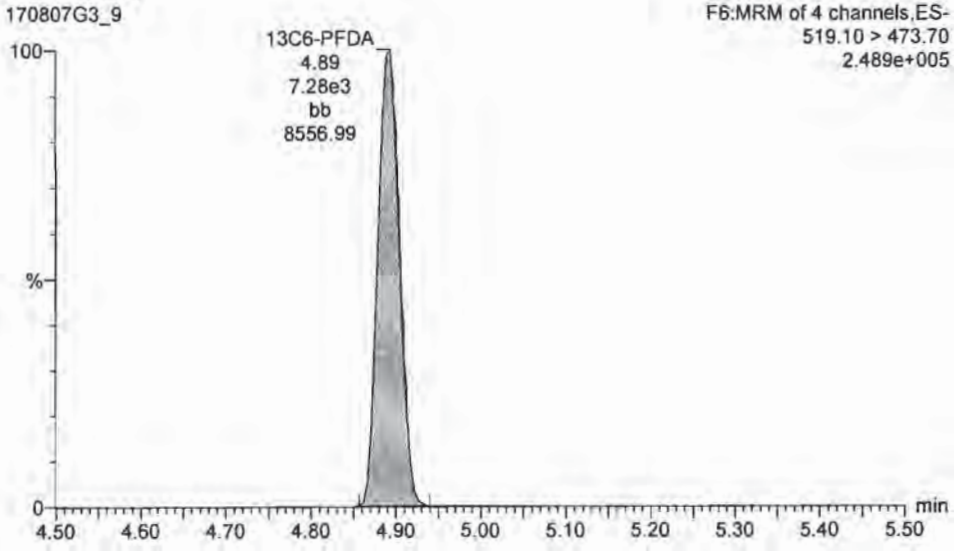

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-11.qld

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Printed: Tuesday, August 08, 2017 09:40:43 Pacific Daylight Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

Name: 170807G3_11, Date: 07-Aug-2017, Time: 18:00:37, ID: SS170807G3-1 PFC SSS 17H0715, Description: PFC SSS 17H0715 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1	PFBA	212.9 > 168.9	1.12e4	2.24e4		1.000	1.73	8.02	80.2
2	2	PFPeA	263.0 > 218.8	6.04e3	7.15e3		1.000	2.67	9.81	98.1
3	3	PFBS	299.0 > 79.7	3.46e3	4.54e3		1.000	2.94	8.09	80.9
4	4	PFHxA	312.9 > 268.9	8.33e3	5.69e3		1.000	3.32	9.45	94.5
5	5	PFHpA	363 > 318.9	9.13e3	5.56e3		1.000	3.83	10.2	101.7
6	6	PFHxS	398.9 > 79.6	3.80e3	3.94e3		1.000	3.96	8.01	80.1
7	7	PFOA	413.0 > 368.7	9.15e3	1.41e4		1.000	4.26	9.61	96.1
8	8	PFNA	463.0 > 418.8	8.10e3	5.58e3		1.000	4.60	10.2	102.1
9	9	PFOS	499.0 >79.9	1.46e3	5.44e3		1.000	4.67	9.19	91.9
10	10	PFDA	512.7 > 219.0	9.39e2	6.74e3		1.000	4.89	9.08	90.8
11	11	13C3-PFBA	215.9 > 171.8	2.24e4	1.43e4	1.391	1.000	1.73	14.0	112.4
12	12	13C3-PFBS	302.0 > 98.8	4.54e3	1.26e4	0.351	1.000	2.94	12.9	103.2
13	13	13C3-PFPeA	266.0 > 221.8	7.15e3	1.26e4	0.577	1.000	2.67	12.3	98.7
14	14	13C2-PFHxA	315.0 > 269.8	5.69e3	1.26e4	0.443	1.000	3.31	12.8	102.5
15	15	13C4-PFHpA	367.2 > 321.8	5.56e3	1.26e4	0.496	1.000	3.83	11.2	89.2
16	16	18O2-PFHxS	403 > 102.6	3.94e3	7.78e3	0.528	1.000	3.96	12.0	96.0
17	17	13C2-PFOA	414.9 > 369.7	1.41e4	3.80e3	3.356	1.000	4.26	13.8	110.4
18	18	13C5-PFNA	468.2 > 422.9	5.58e3	5.97e3	0.991	1.000	4.60	11.8	94.3
19	19	13C2-PFDA	514.8 > 469.7	6.74e3	4.77e3	1.458	1.000	4.89	12.1	96.8
20	20	13C8-PFOS	507.0 > 79.9	5.44e3	4.65e3	1.109	1.000	4.67	13.2	105.6
21	21	13C4-PFBA	216.9 > 171.8	1.43e4	1.43e4	1.000	1.000	1.73	12.5	100.0
22	22	13C5-PFHxA	318>272.9	1.26e4	1.26e4	1.000	1.000	3.31	12.5	100.0
23	23	13C3-PFHxS	401.9 > 79.9	7.78e3	7.78e3	1.000	1.000	3.96	12.5	100.0
24	24	13C8-PFOA	421.3 > 376	3.80e3	3.80e3	1.000	1.000	4.26	12.5	100.0
25	25	13C9-PFNA	472.2 > 426.9	5.97e3	5.97e3	1.000	1.000	4.60	12.5	100.0
26	26	13C4-PFOS	503.0 > 79.9	4.65e3	4.65e3	1.000	1.000	4.67	12.5	100.0
27	27	13C6-PFDA	519.10 > 47...	4.77e3	4.77e3	1.000	1.000	4.89	12.5	100.0

70-130

8/8/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-11.qld

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Printed: Tuesday, August 08, 2017 09:40:52 Pacific Daylight Time

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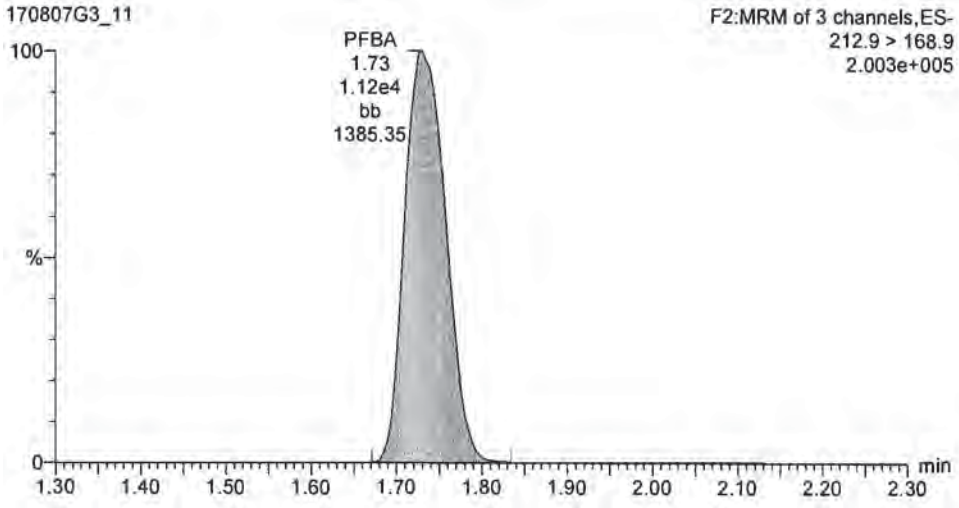
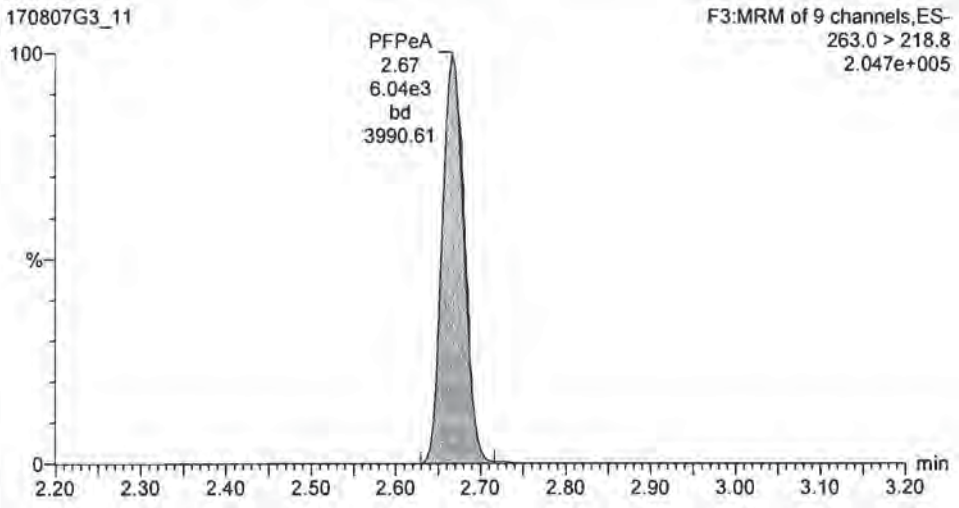
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

ID: SS170807G3-1 PFC SSS 17H0715, Description: PFC SSS 17H0715 A, Name: 170807G3_11, Date: 07-Aug-2017, Time: 18:00:37, Instrument: , Lab: , User:

PFBA



PFPeA



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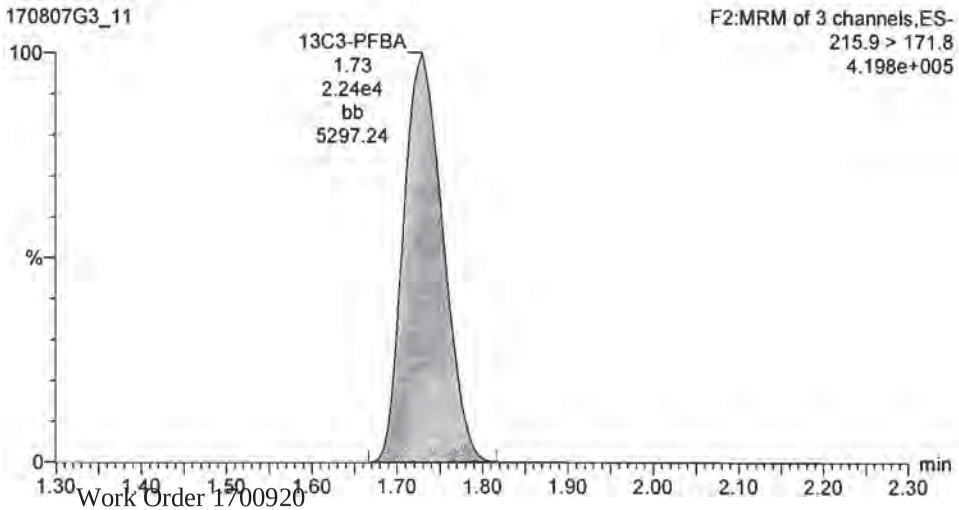

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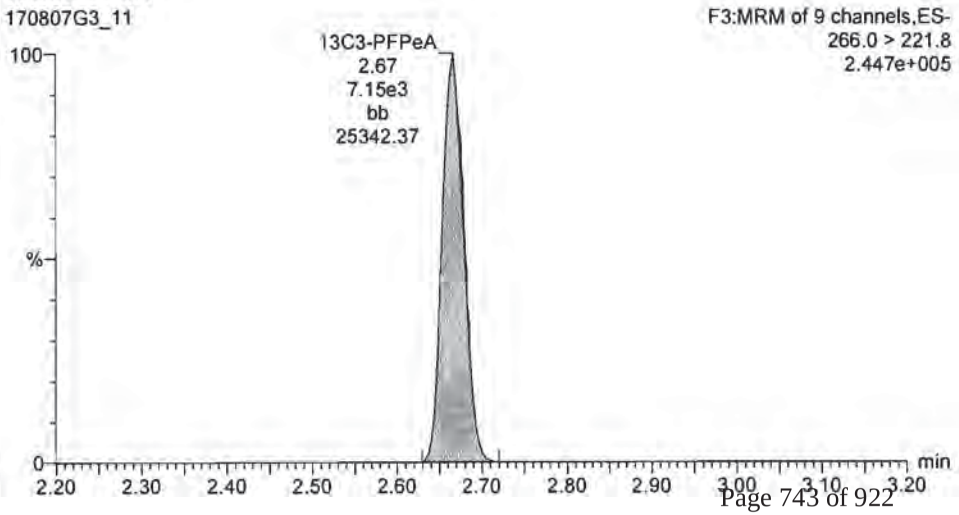

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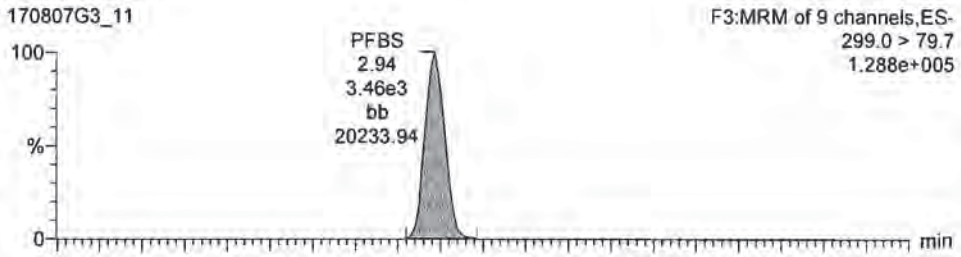
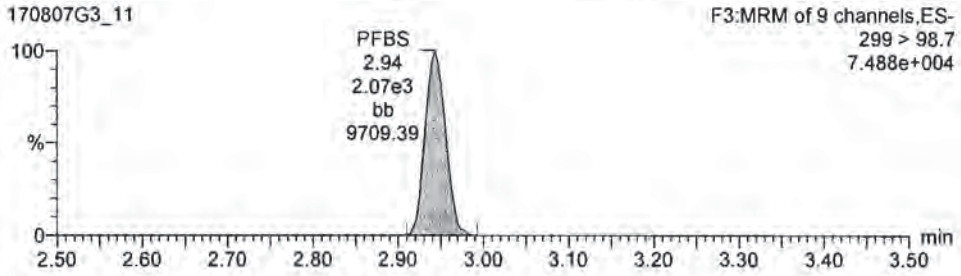
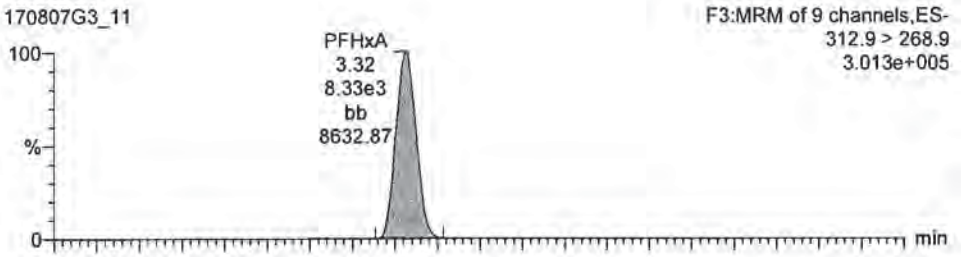
ID: SS170807G3-1 PFC SSS 17H0715, Description: PFC SSS 17H0715 A, Name: 170807G3_11, Date: 07-Aug-2017, Time: 18:00:37, Instrument: , Lab: , User:

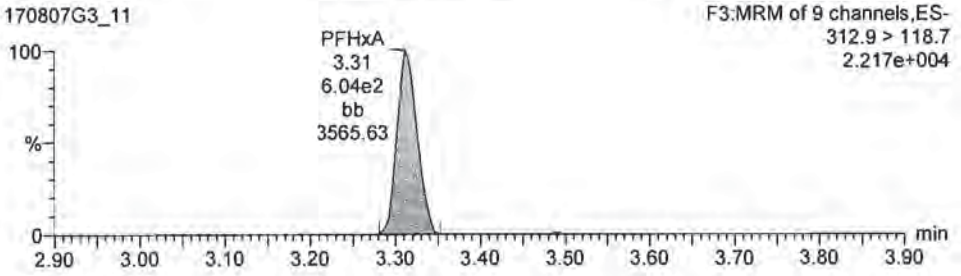
Total PFBS





PFHxA





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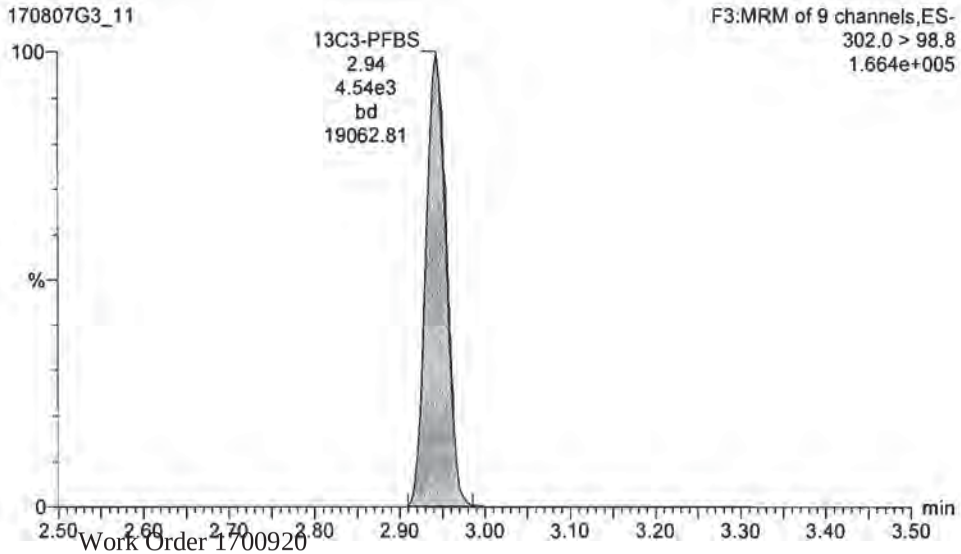

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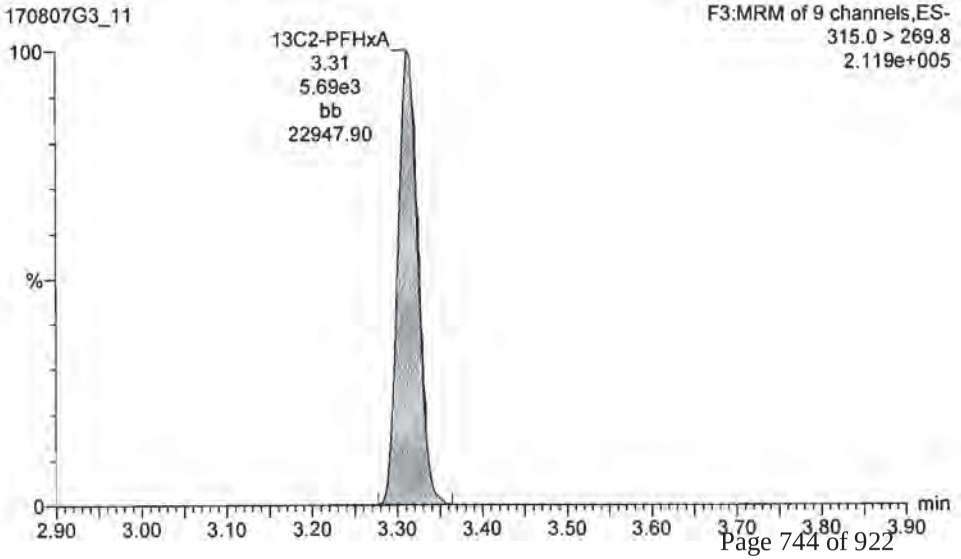

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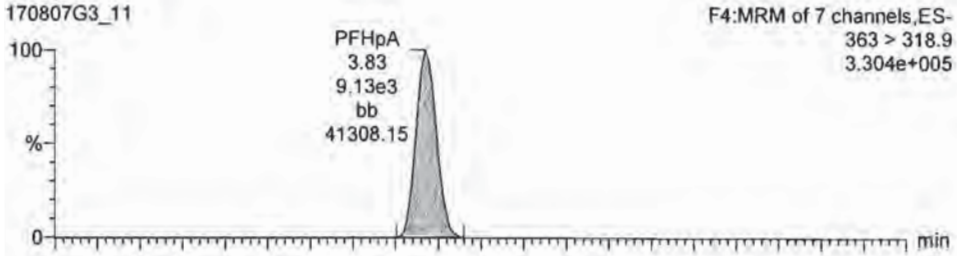
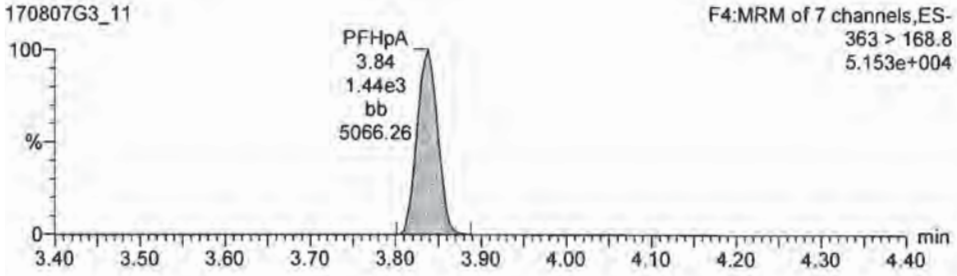
ID: SS170807G3-1 PFC SSS 17H0715, Description: PFC SSS 17H0715 A, Name: 170807G3_11, Date: 07-Aug-2017, Time: 18:00:37, Instrument: , Lab: , User:

PFHpA





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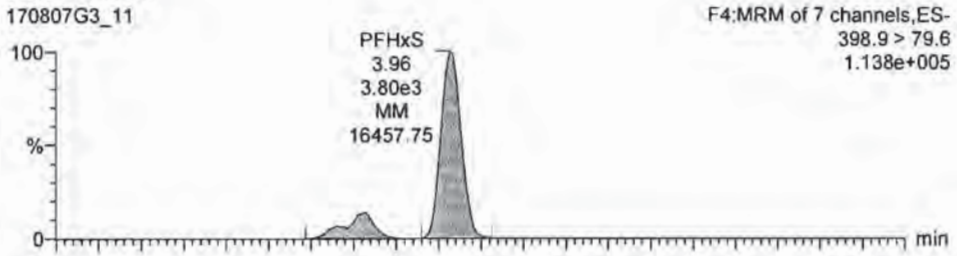

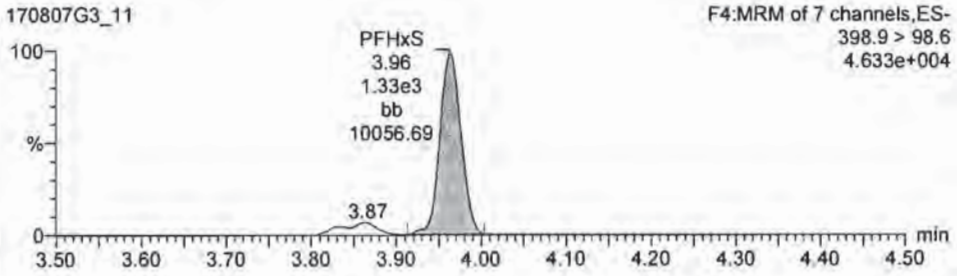

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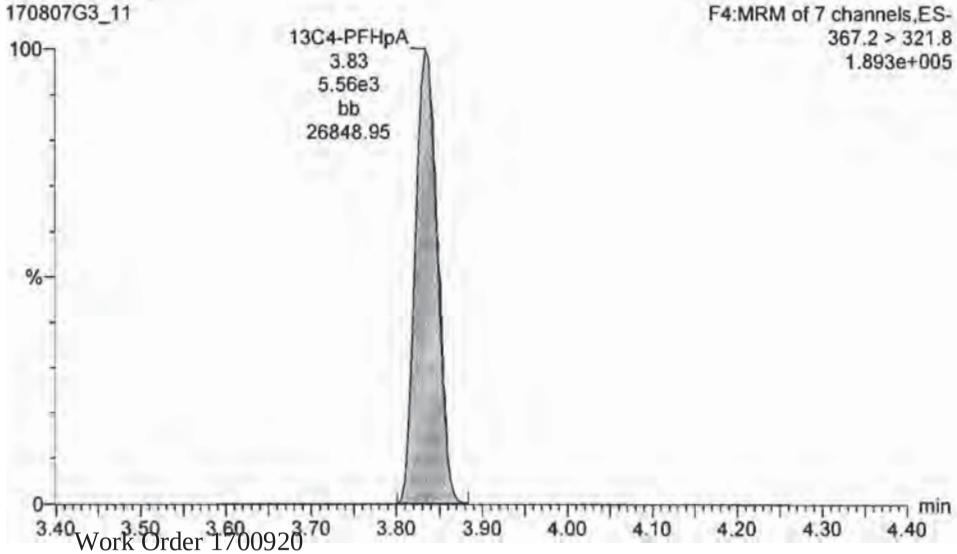

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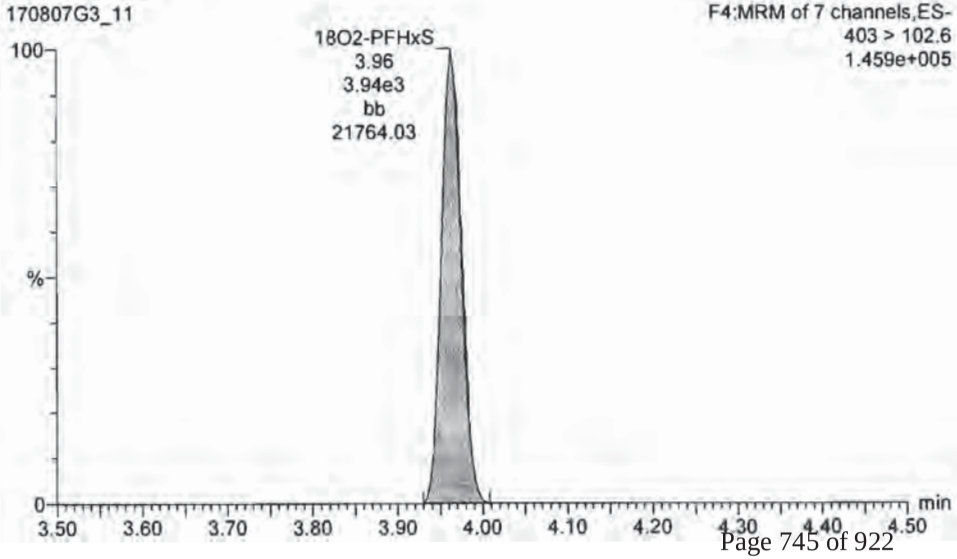

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ID: SS170807G3-1 PFC SSS 17H0715, Description: PFC SSS 17H0715 A, Name: 170807G3_11, Date: 07-Aug-2017, Time: 18:00:37, Instrument: , Lab: , User:

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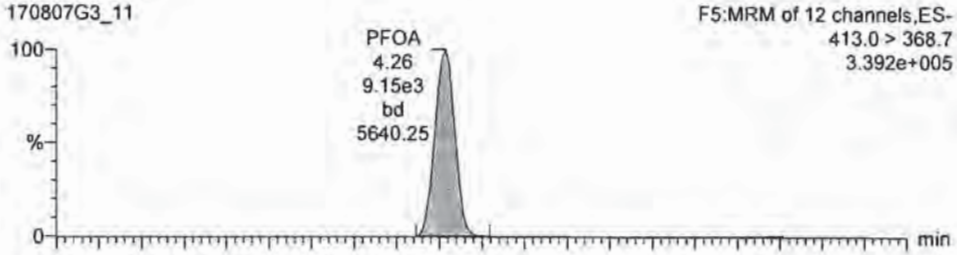

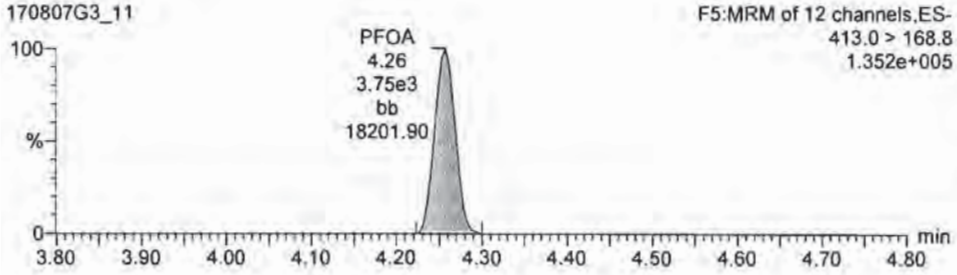

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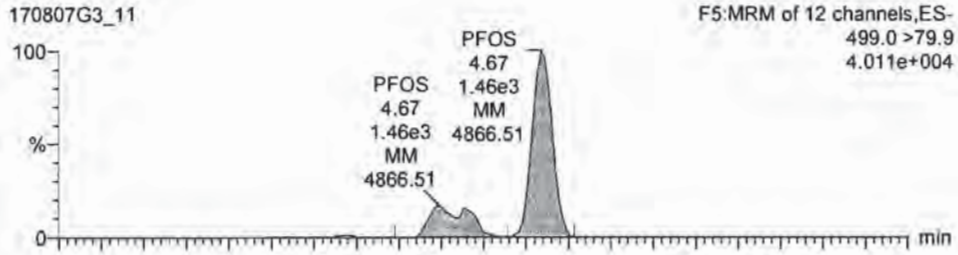

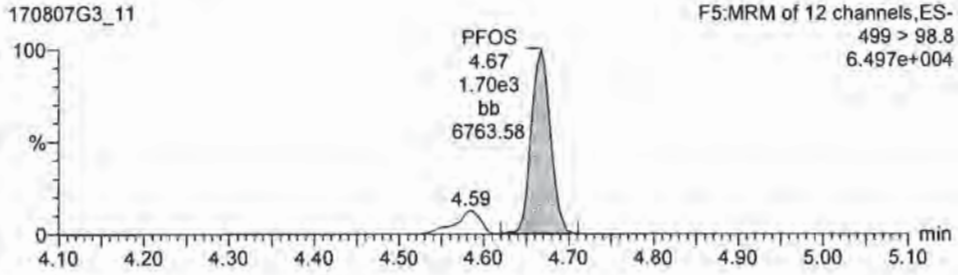

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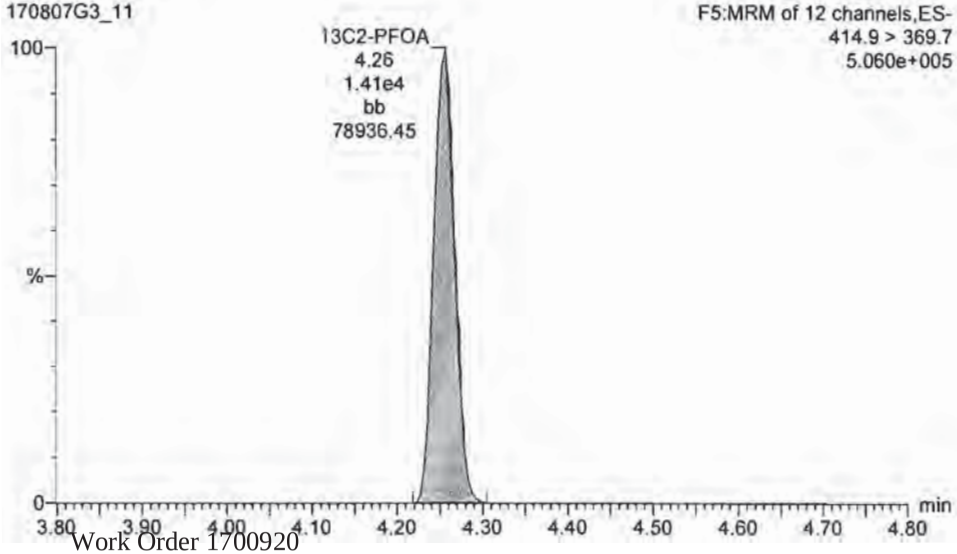

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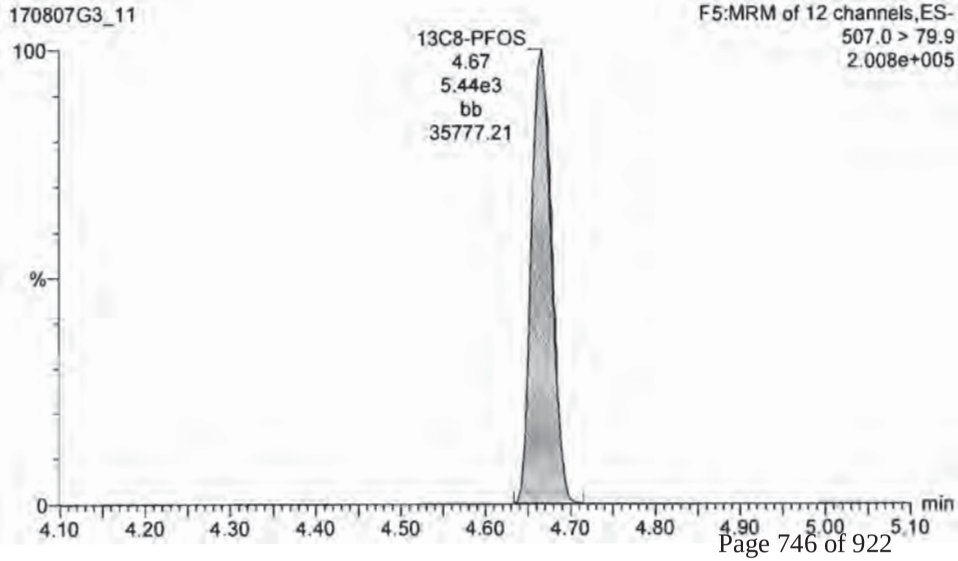

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ID: SS170807G3-1 PFC SSS 17H0715, Description: PFC SSS 17H0715 A, Name: 170807G3_11, Date: 07-Aug-2017, Time: 18:00:37, Instrument: , Lab: , User:

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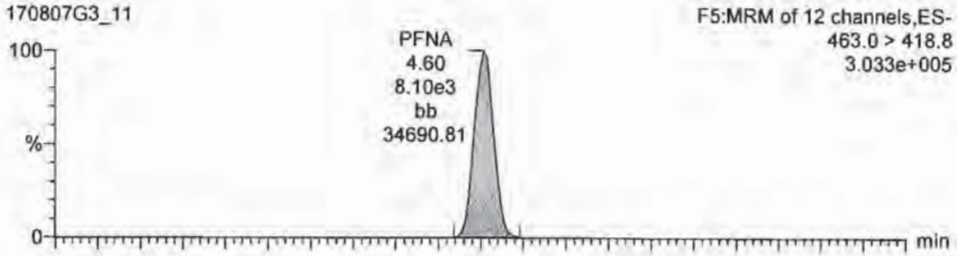

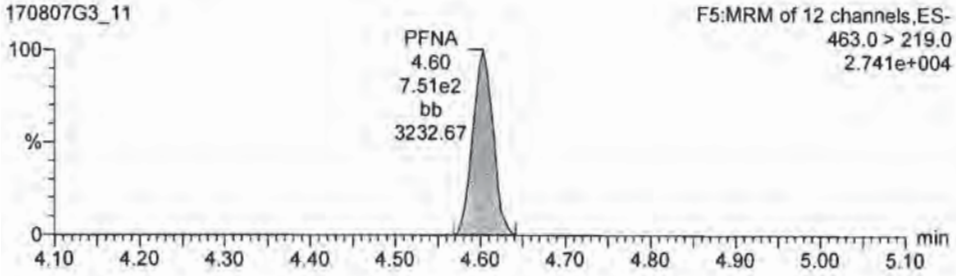

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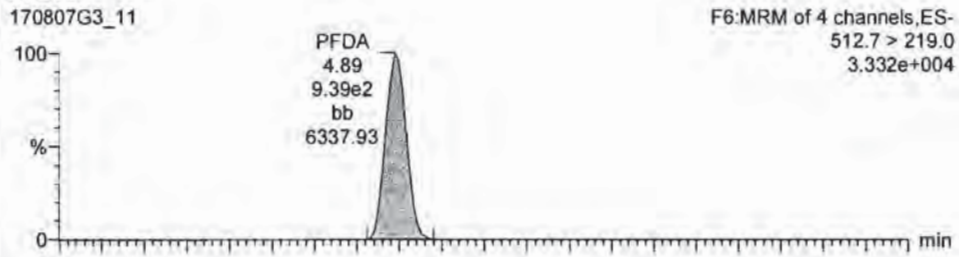

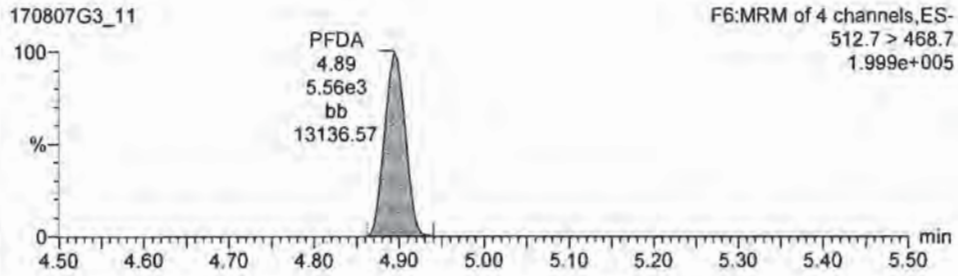

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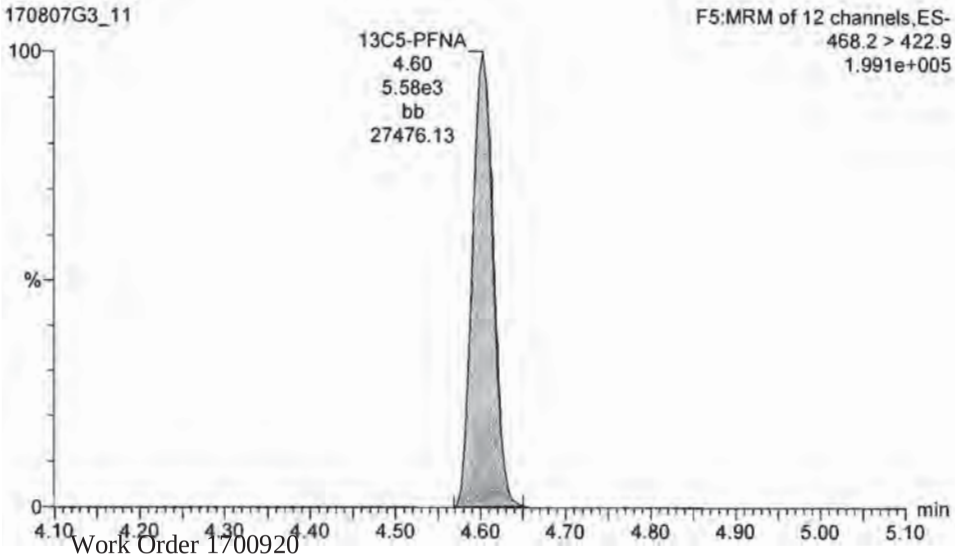

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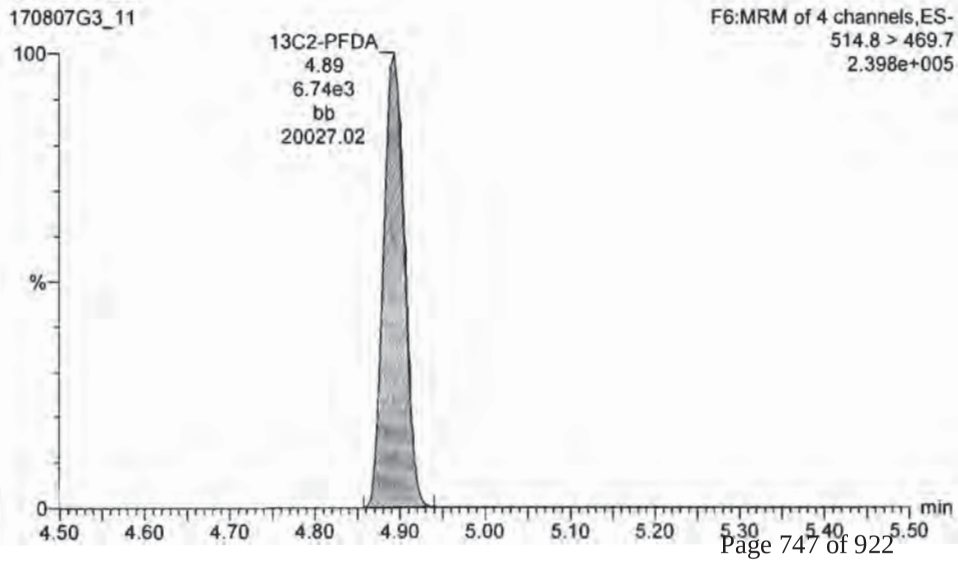

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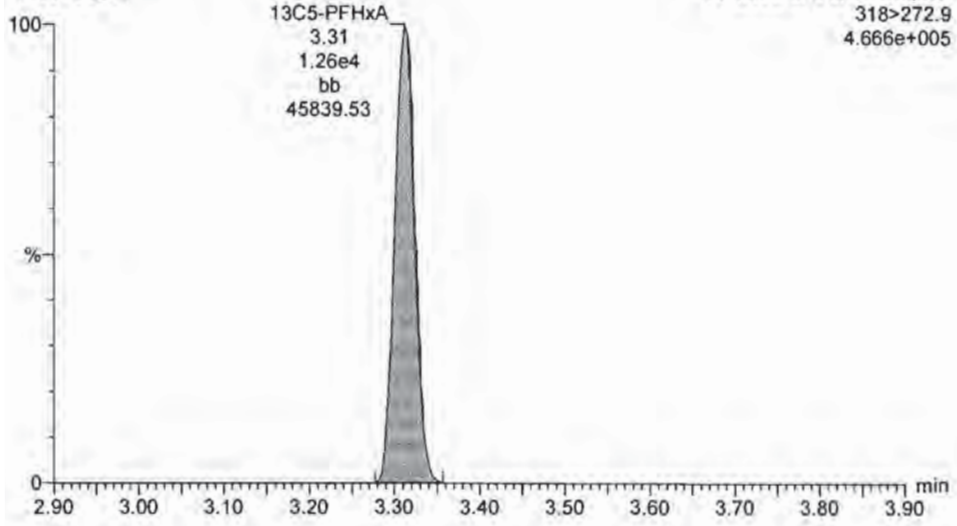
ID: SS170807G3-1 PFC SSS 17H0715, Description: PFC SSS 17H0715 A, Name: 170807G3_11, Date: 07-Aug-2017, Time: 18:00:37, Instrument: , Lab: , User:

13C5-PFHxA



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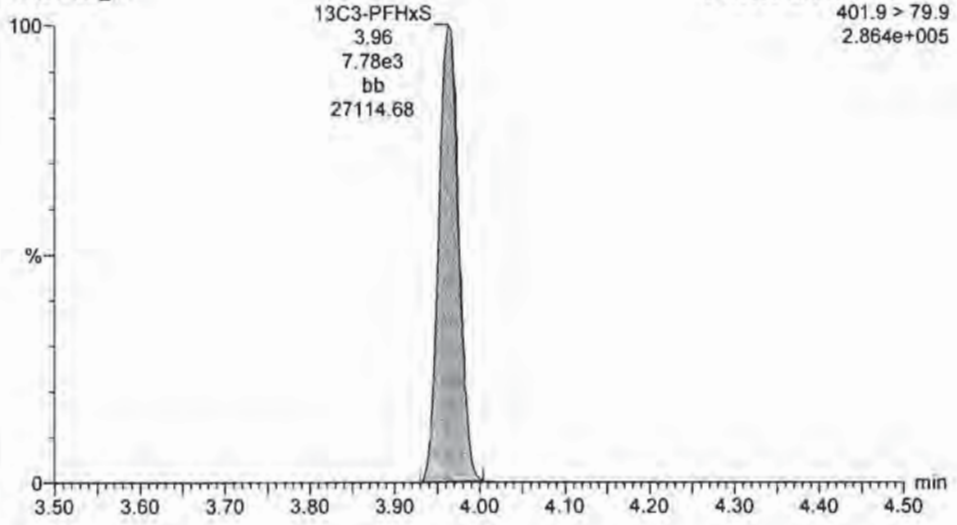

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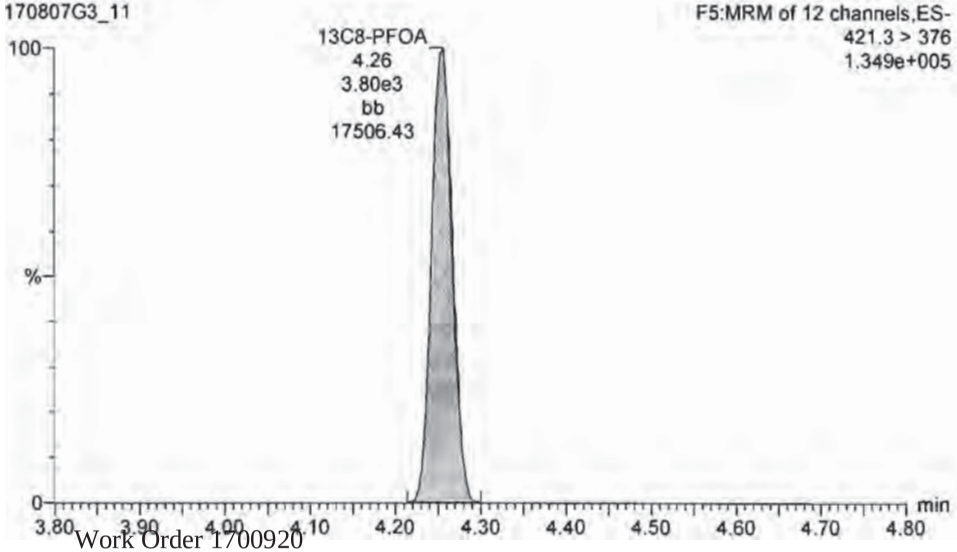

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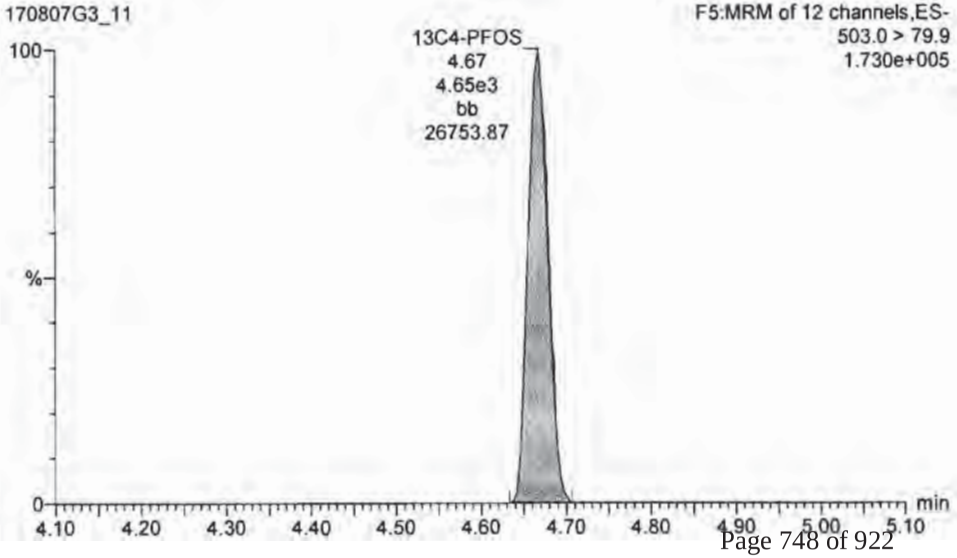

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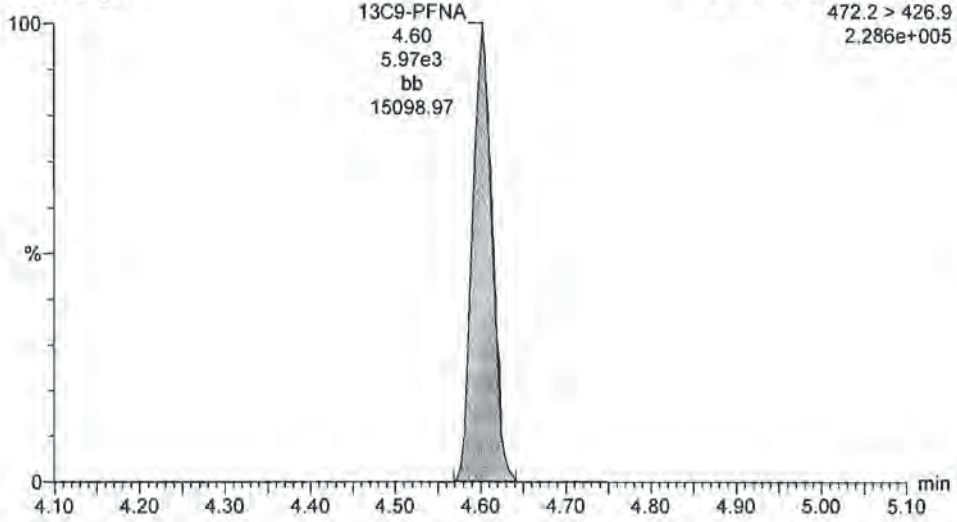
ID: SS170807G3-1 PFC SSS 17H0715, Description: PFC SSS 17H0715 A, Name: 170807G3_11, Date: 07-Aug-2017, Time: 18:00:37, Instrument: , Lab: , User:

13C9-PFNA



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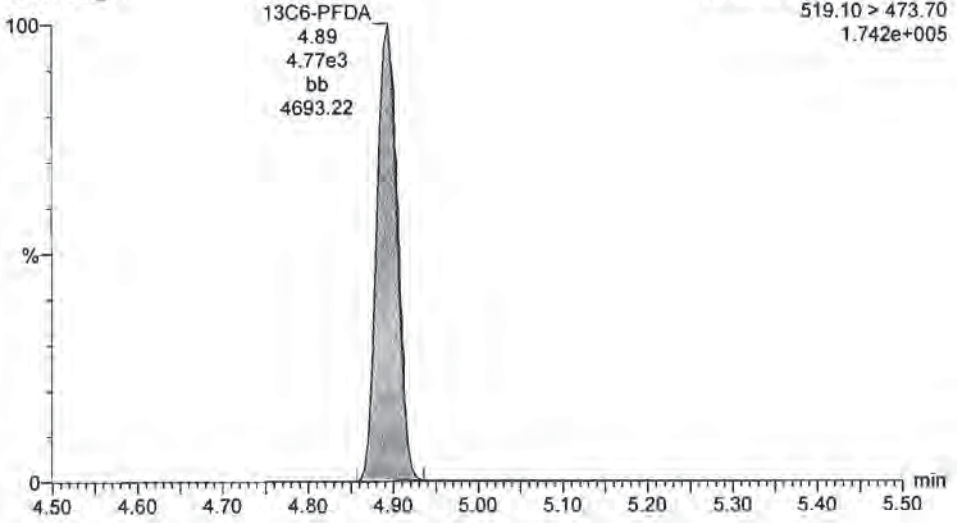

Vista Analytical Laboratory Q1

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Instrument Blank YQ 8/8/17

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 08:36:32

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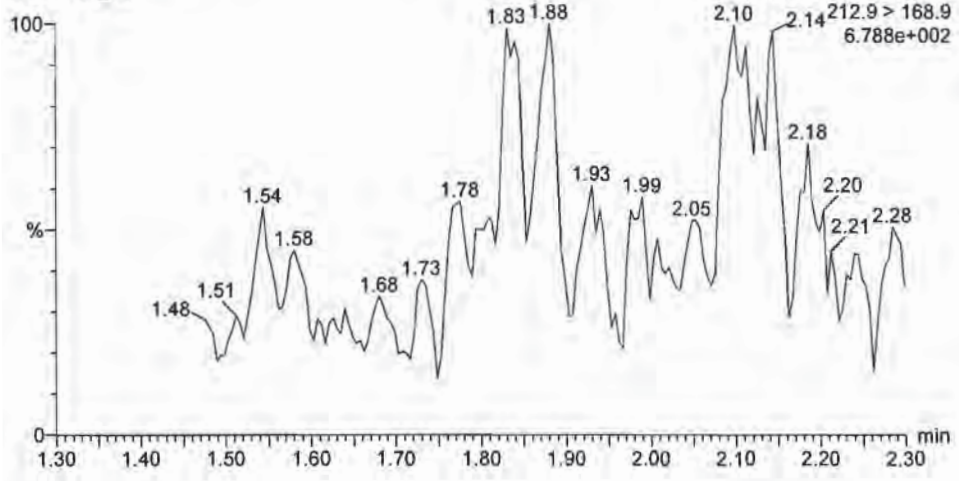
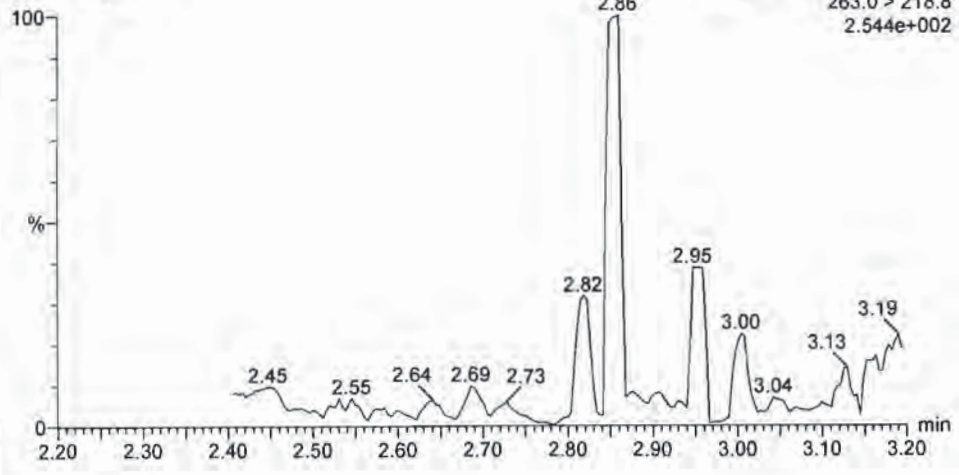
PFBA



PFPeA



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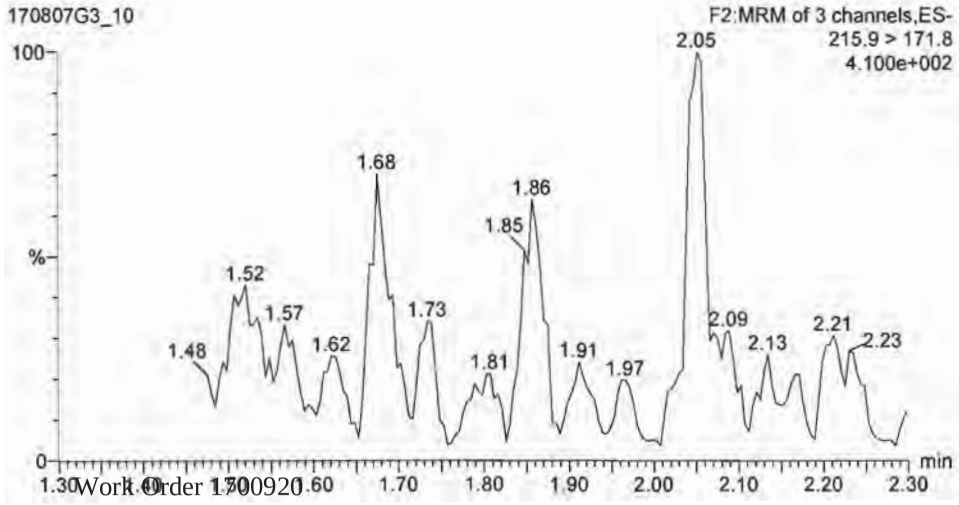
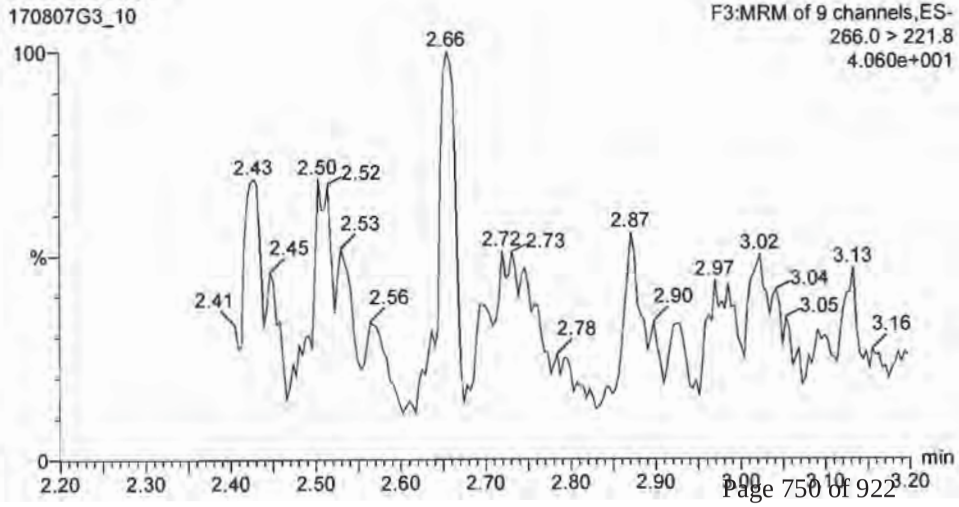


13C3-PFPeA



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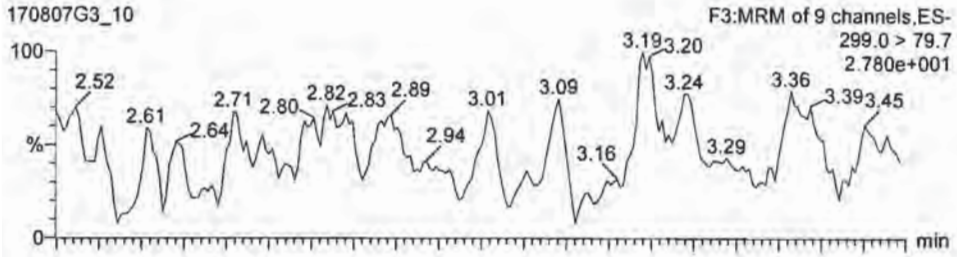
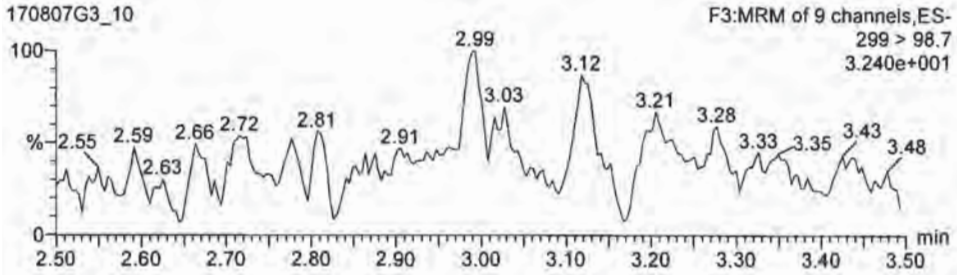
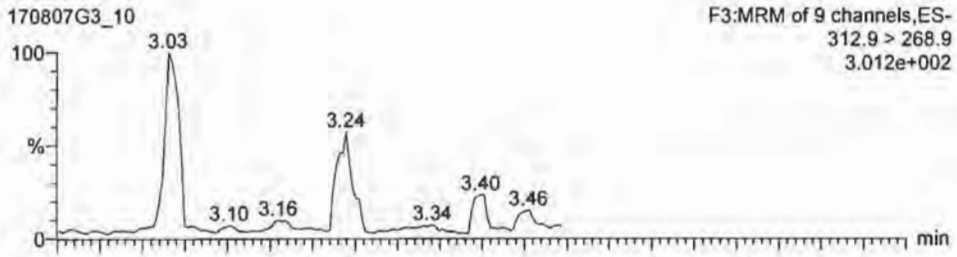
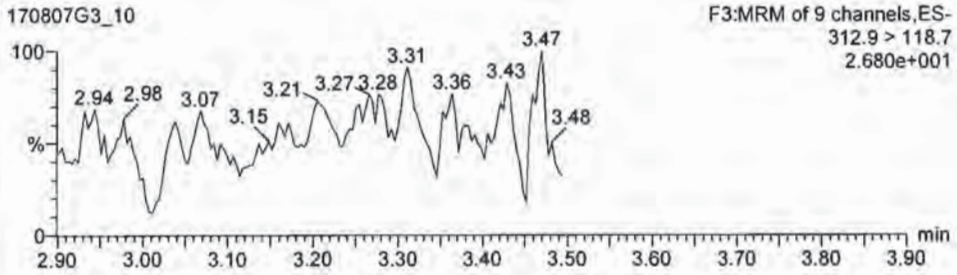
Total PFBS



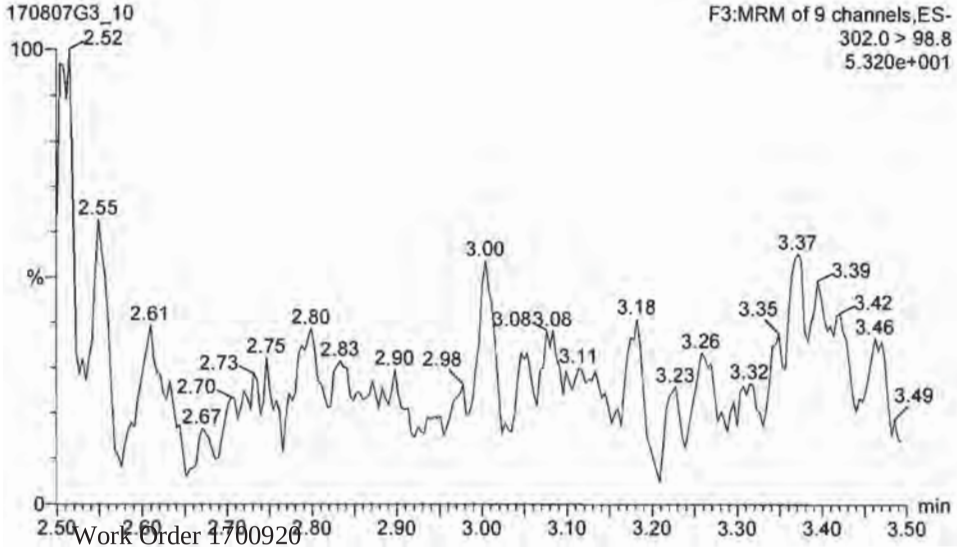


PFHxA

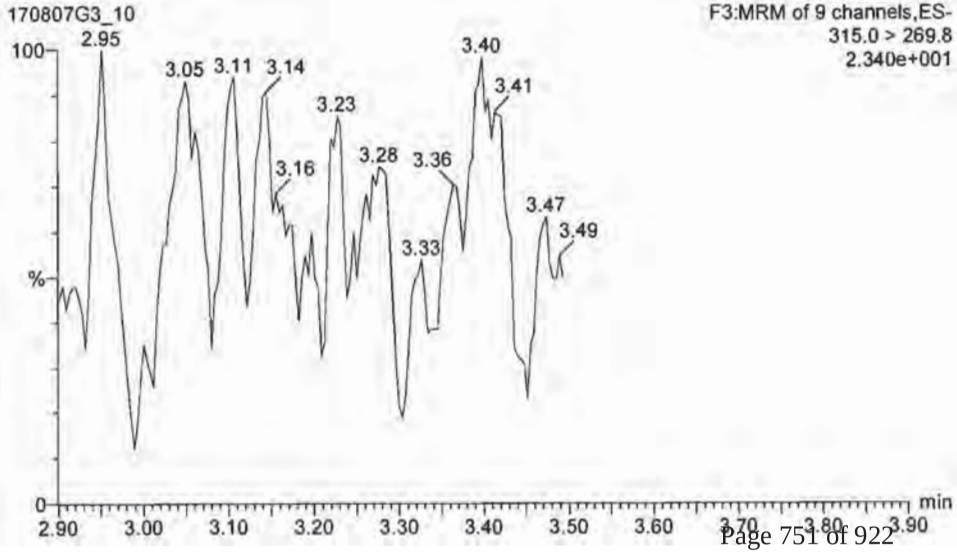




13C3-PFBS



13C2-PFHxA



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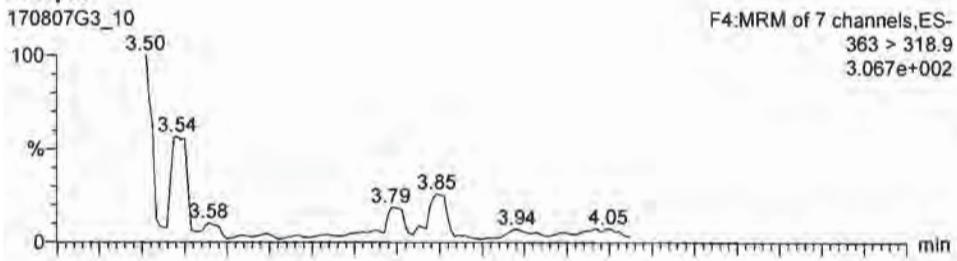
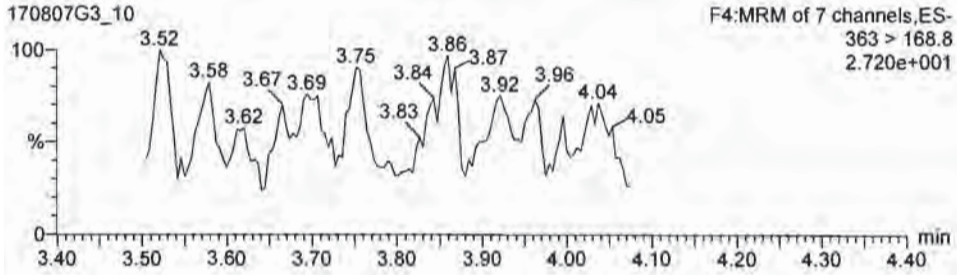
Last Altered: Tuesday, August 08, 2017 08:48:20 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 08:48:32 Pacific Daylight Time

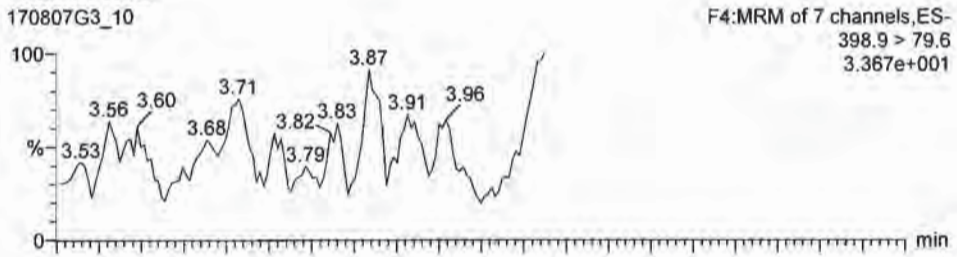
ID: IPA, Description: IPA, Name: 170807G3_10, Date: 07-Aug-2017, Time: 17:48:05, Instrument: , Lab: , User:

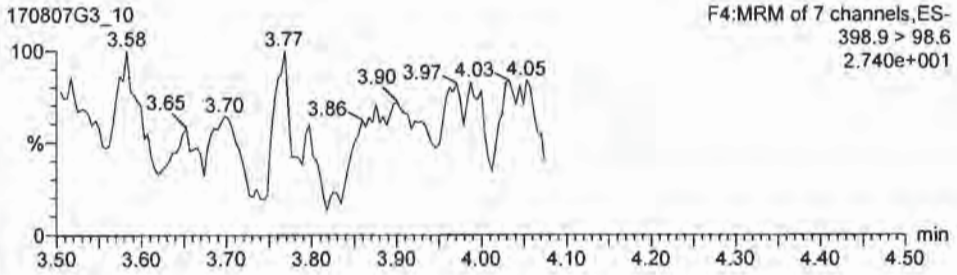
PFHpA



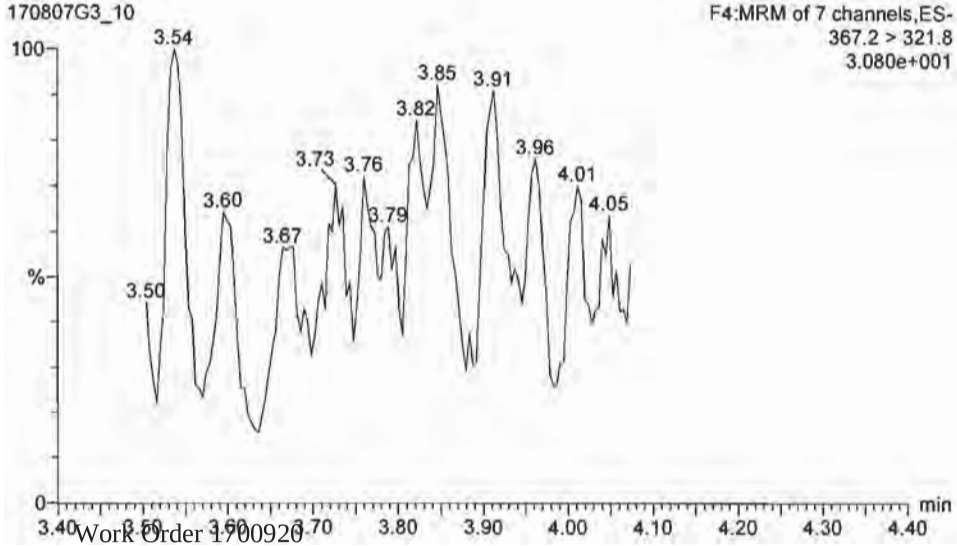


Total PFHxS

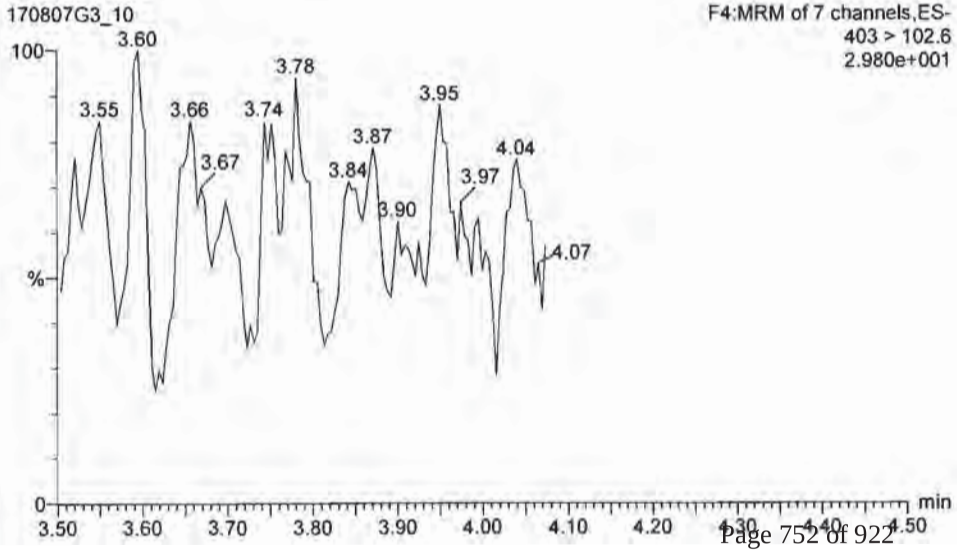




13C4-PFHpA



18O2-PFHxS



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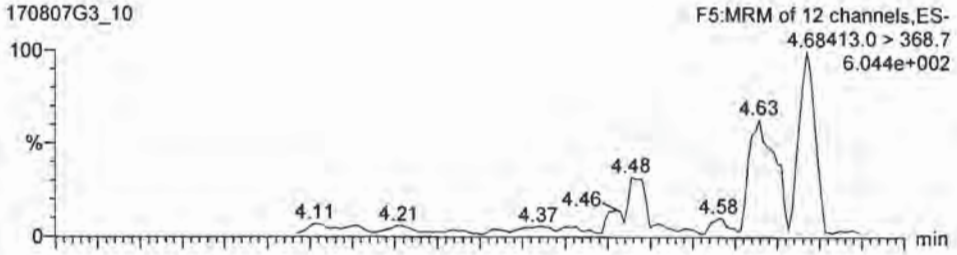
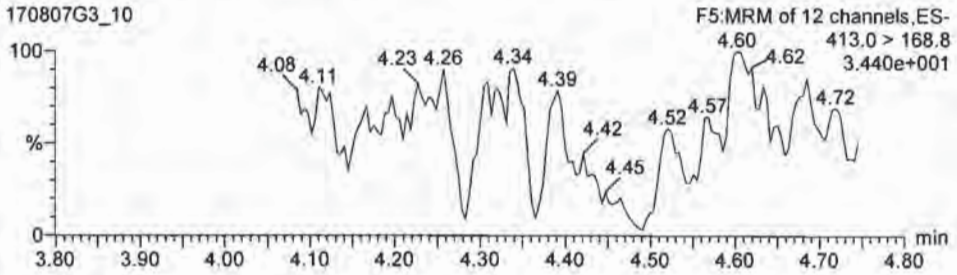
Last Altered: Tuesday, August 08, 2017 08:48:20 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 08:48:32 Pacific Daylight Time

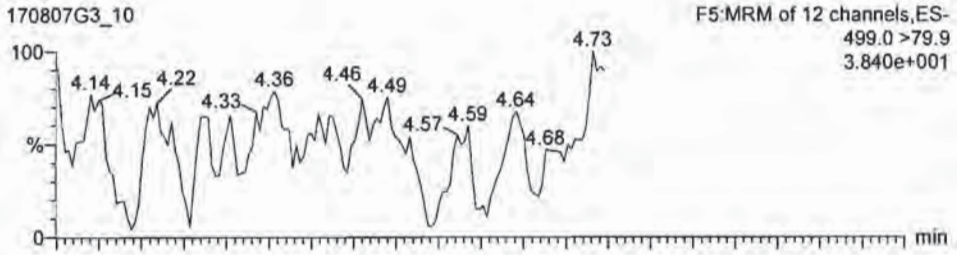
ID: IPA, Description: IPA, Name: 170807G3_10, Date: 07-Aug-2017, Time: 17:48:05, Instrument: , Lab: , User:

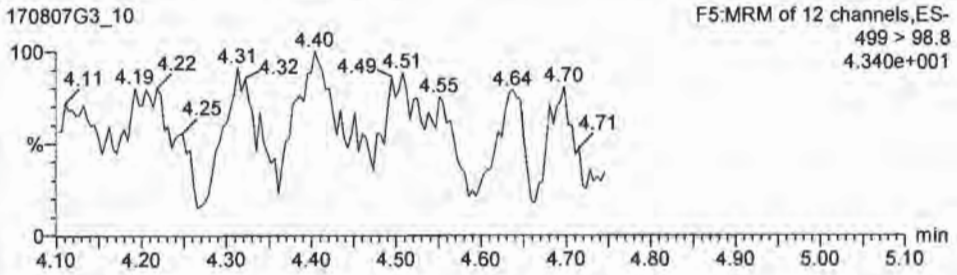
Total PFOA



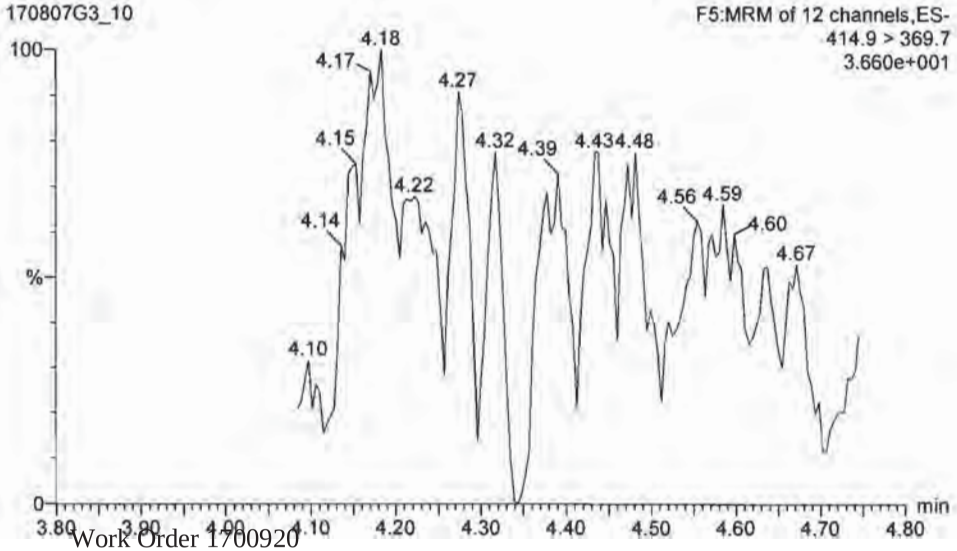


Total PFOS

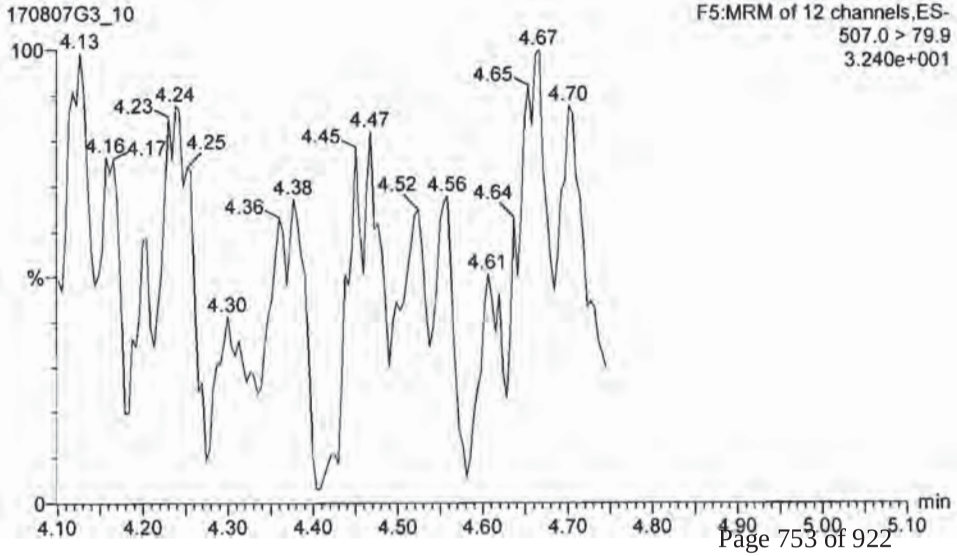




13C2-PFOA



13C8-PFOS



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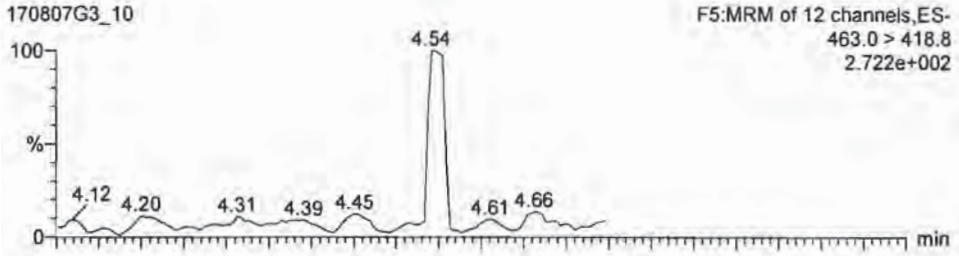
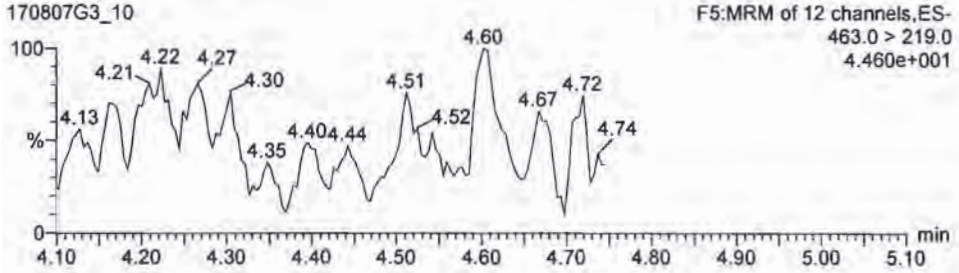
Printed: Tuesday, August 08, 2017 08:48:32 Pacific Daylight Time

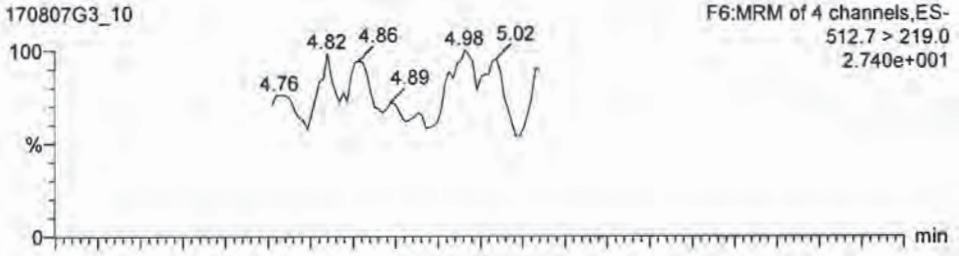
ID: IPA, Description: IPA, Name: 170807G3_10, Date: 07-Aug-2017, Time: 17:48:05, Instrument: , Lab: , User:

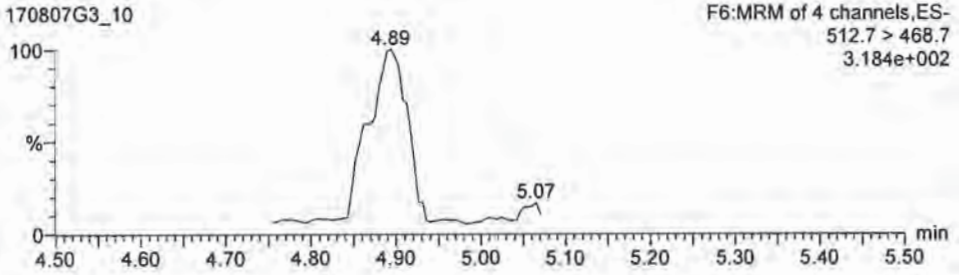
PFNA



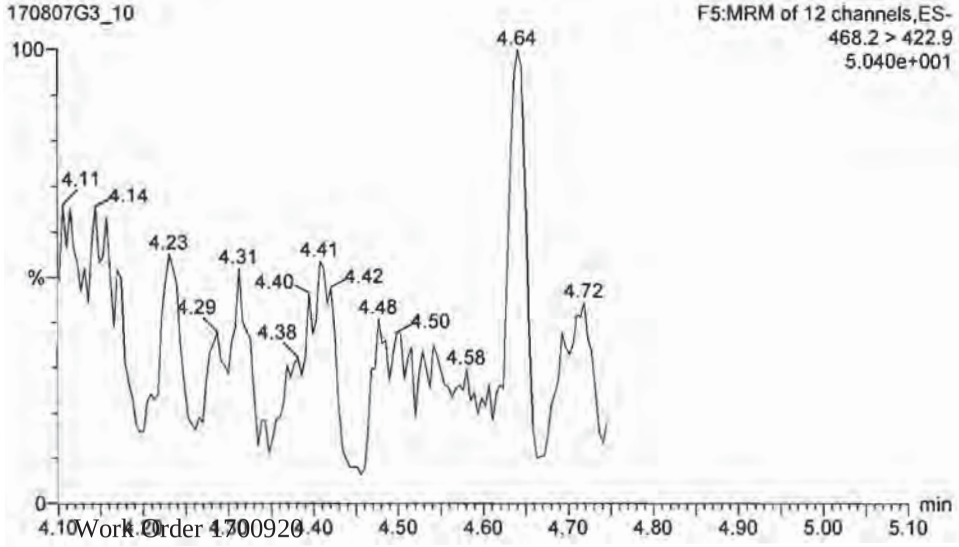


PFDA

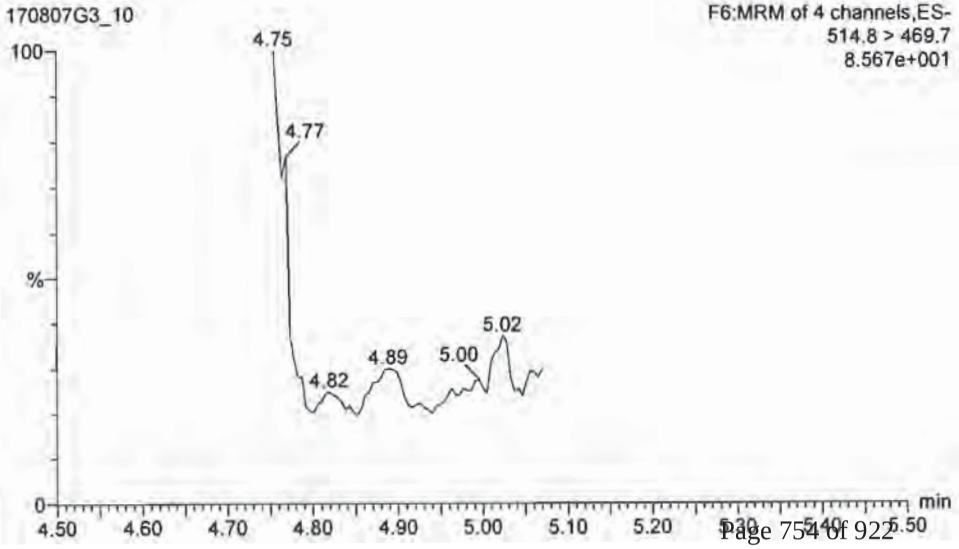




13C5-PFNA



13C2-PFDA



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Last Altered: Tuesday, August 08, 2017 08:48:20 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 08:48:32 Pacific Daylight Time

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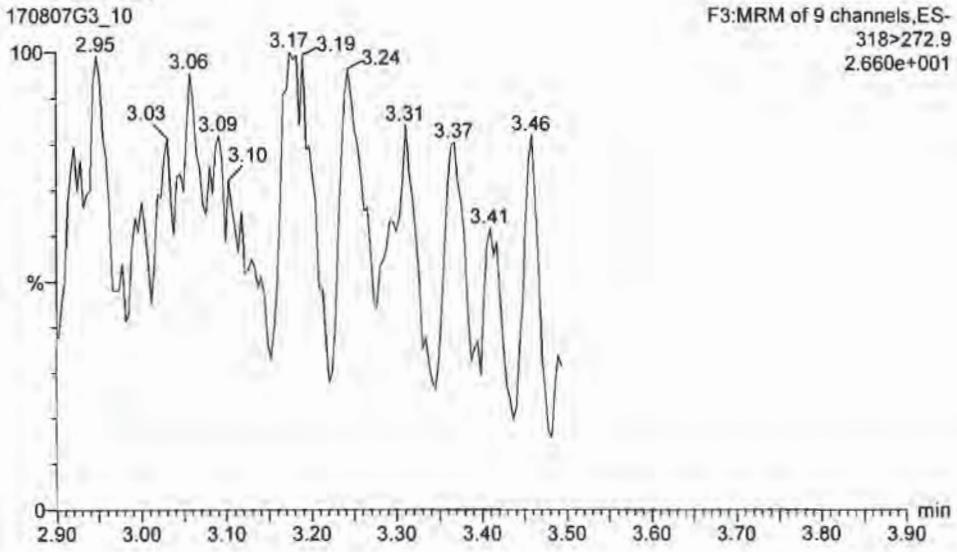
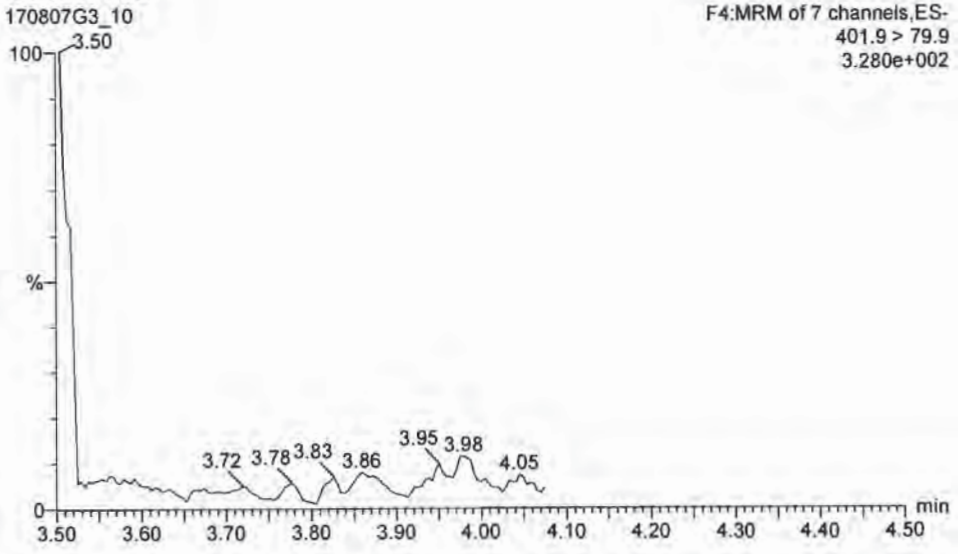
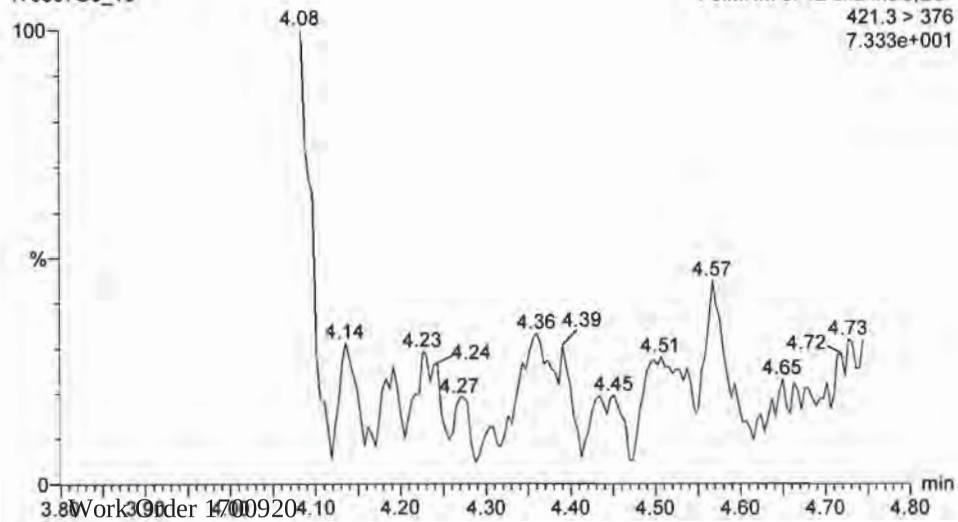
13C5-PFHxA



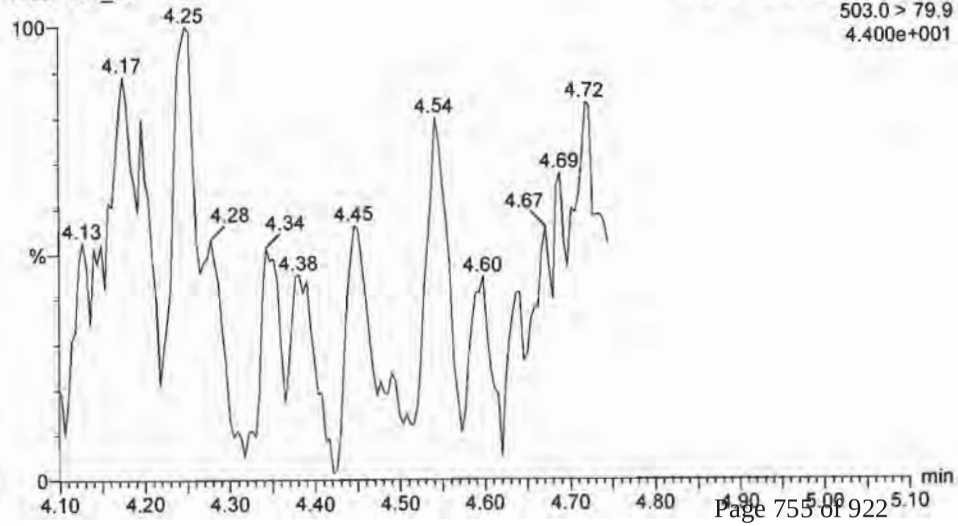
13C3-PFHxS



13C8-PFOA



13C4-PFOS



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Printed: Tuesday, August 08, 2017 08:48:32 Pacific Daylight Time

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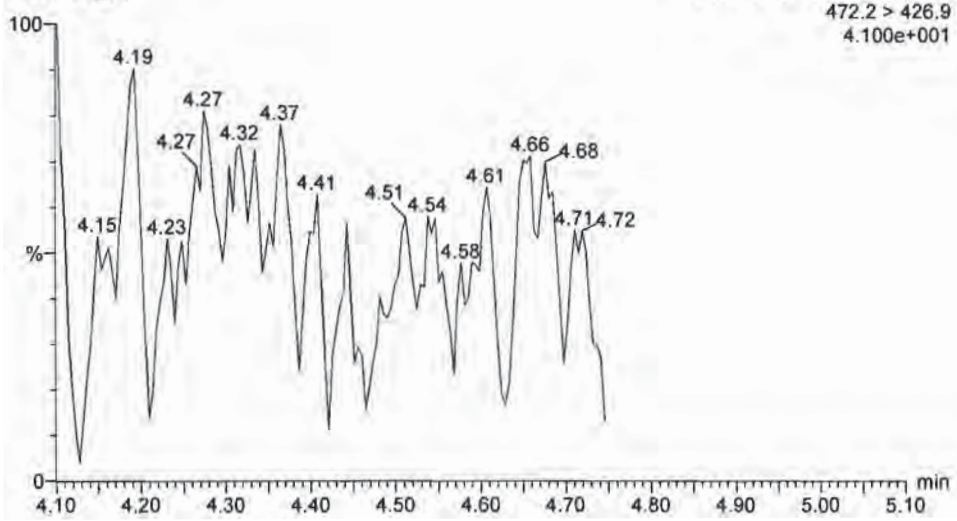
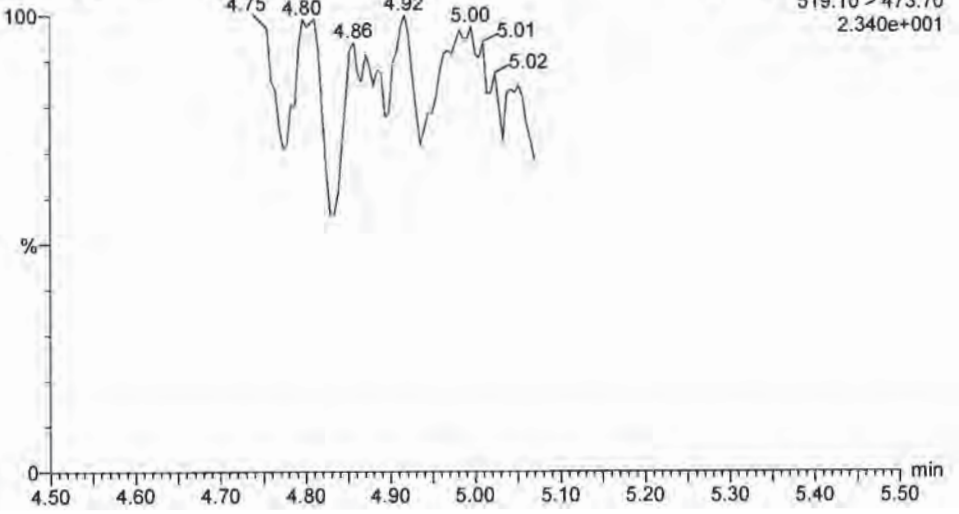
13C9-PFNA
170807G3_10
F5:MRM of 12 channels,ES-
472.2 > 426.9
4.100e+001



13C6-PFDA
170807G3_10
F6:MRM of 4 channels,ES-
519.10 > 473.70
2.340e+001



Analytical Standard Record

Vista Analytical Laboratory

17G1307

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16I1432	13C2-PFHxDA	14-Sep-16	** Vendor **	07-Jan-21	14-Sep-16 14:19 by TLD	0.2
16I1433	13C2-PFHxA	14-Sep-16	** Vendor **	08-Apr-21	14-Sep-16 14:22 by TLD	0.2
17B2809	d3-N-Me-FOSAA	28-Feb-17	** Vendor **	28-Feb-18	28-Feb-17 13:24 by EMS	0.5
17B2811	d5-N-EtFOSAA	28-Feb-17	** Vendor **	22-Nov-21	28-Feb-17 13:33 by EMS	0.5
17E1718	18O2-PFHxS	17-May-17	** Vendor **	17-Feb-22	17-May-17 12:46 by INJ	0.529
17E2412	13C8-PFOS	24-May-17	** Vendor **	30-Sep-21	24-May-17 11:19 by INJ	0.539
17E2413	13C3-PFBS	24-May-17	** Vendor **	02-Aug-21	24-May-17 11:20 by INJ	0.538
17E2414	13C3-PFBA	24-May-17	** Vendor **	27-May-21	24-May-17 11:20 by INJ	0.5
17E2415	13C2-8:2 FTS	24-May-17	** Vendor **	22-Aug-21	24-May-17 11:21 by INJ	0.522
17E2416	13C2-6:2 FTS	24-May-17	** Vendor **	17-Feb-22	24-May-17 11:21 by INJ	0.526
17E2417	13C5-PFNA	24-May-17	** Vendor **	30-Sep-21	24-May-17 11:22 by INJ	0.5
17E2418	13C2-PFTeDA	24-May-17	** Vendor **	01-Mar-22	24-May-17 11:22 by INJ	0.5
17E2419	13C2-PFUdA	24-May-17	** Vendor **	22-Nov-21	24-May-17 11:23 by INJ	0.5
17E2420	13C4-PFHpA	24-May-17	** Vendor **	27-May-21	24-May-17 11:23 by INJ	0.5
17E2421	13C2-PFDoA	24-May-17	** Vendor **	08-Apr-21	24-May-17 11:24 by INJ	0.5
17G1303	13C3-PFPeA	13-Jul-17	** Vendor **	20-Apr-22	13-Jul-17 09:18 by INJ	0.5
17G1304	13C2-PFOA	13-Jul-17	** Vendor **	12-Feb-21	13-Jul-17 09:25 by INJ	0.5
17G1305	13C8-FOSA-I	13-Jul-17	** Vendor **	20-Apr-22	13-Jul-17 09:33 by INJ	0.5
17G1306	13C2-PFDA	13-Jul-17	** Vendor **	30-Sep-21	13-Jul-17 09:36 by INJ	0.5

Description:	PFC - IS	Expires:	28-Feb-18
Standard Type:	Reagent	Prepared:	13-Jul-17
Solvent:	MEOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	13-Jul-17 09:58 by INJ

Analyte	CAS Number	Concentration	Units
13C3-PFBS		1.25	ug/mL
13C2-8:2 FTS		1.25	ug/mL
13C2-PFDA		1.25	ug/mL
13C2-PFDoA		1.25	ug/mL
13C2-PFHxA		0.5	ug/mL
13C2-PFHxDA		0.5	ug/mL
13C2-PFOA		1.25	ug/mL
13C2-PFTeDA		1.25	ug/mL
13C2-6:2 FTS		1.25	ug/mL
13C3-PFBA		1.25	ug/mL
d5-EtFOSAA		1.25	ug/mL
13C3-PFPeA		1.25	ug/mL
13C4-PFHpA		1.25	ug/mL
13C5-PFNA		1.25	ug/mL
13C8-PFOS		1.25	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

17G1307

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16I1432	13C2-PFHxDA	14-Sep-16	** Vendor **	07-Jan-21	14-Sep-16 14:19 by TLD	0.2
16I1433	13C2-PFHxA	14-Sep-16	** Vendor **	08-Apr-21	14-Sep-16 14:22 by TLD	0.2
17B2809	d3-N-Me-FOSAA	28-Feb-17	** Vendor **	28-Feb-18	28-Feb-17 13:24 by EMS	0.5
17B2811	d5-N-EtFOSAA	28-Feb-17	** Vendor **	22-Nov-21	28-Feb-17 13:33 by EMS	0.5
17E1718	18O2-PFHxS	17-May-17	** Vendor **	17-Feb-22	17-May-17 12:46 by INJ	0.529
17E2412	13C8-PFOS	24-May-17	** Vendor **	30-Sep-21	24-May-17 11:19 by INJ	0.539
17E2413	13C3-PFBS	24-May-17	** Vendor **	02-Aug-21	24-May-17 11:20 by INJ	0.538
17E2414	13C3-PFBA	24-May-17	** Vendor **	27-May-21	24-May-17 11:20 by INJ	0.5
17E2415	13C2-8:2 FTS	24-May-17	** Vendor **	22-Aug-21	24-May-17 11:21 by INJ	0.522
17E2416	13C2-6:2 FTS	24-May-17	** Vendor **	17-Feb-22	24-May-17 11:21 by INJ	0.526
17E2417	13C5-PFNA	24-May-17	** Vendor **	30-Sep-21	24-May-17 11:22 by INJ	0.5
17E2418	13C2-PFTeDA	24-May-17	** Vendor **	01-Mar-22	24-May-17 11:22 by INJ	0.5
17E2419	13C2-PFUdA	24-May-17	** Vendor **	22-Nov-21	24-May-17 11:23 by INJ	0.5
17E2420	13C4-PFHpA	24-May-17	** Vendor **	27-May-21	24-May-17 11:23 by INJ	0.5
17E2421	13C2-PFDoA	24-May-17	** Vendor **	08-Apr-21	24-May-17 11:24 by INJ	0.5
17G1303	13C3-PFPeA	13-Jul-17	** Vendor **	20-Apr-22	13-Jul-17 09:18 by INJ	0.5
17G1304	13C2-PFOA	13-Jul-17	** Vendor **	12-Feb-21	13-Jul-17 09:25 by INJ	0.5
17G1305	13C8-FOSA-I	13-Jul-17	** Vendor **	20-Apr-22	13-Jul-17 09:33 by INJ	0.5
17G1306	13C2-PFDA	13-Jul-17	** Vendor **	30-Sep-21	13-Jul-17 09:36 by INJ	0.5

Description:	PFC - IS	Expires:	28-Feb-18
Standard Type:	Reagent	Prepared:	13-Jul-17
Solvent:	MEOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	13-Jul-17 09:58 by INJ

Analyte	CAS Number	Concentration	Units
13C8-PFOSA		1.25	ug/mL
18O2-PFHxS		1.25	ug/mL
d3-MeFOSAA		1.25	ug/mL
13C2-PFUnA		1.25	ug/mL

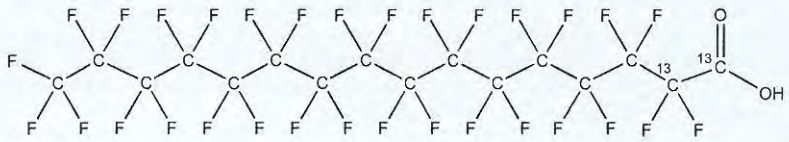
16I1432

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

$^{13}C_2$-PFHxDA

PRODUCT CODE:	M2PFHxDA	**LOT NUMBER:**	M2PFHxDA1112
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]hexadecanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_{14}HF_{31}O_2$	**MOLECULAR WEIGHT:**	816.11
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	01/07/2016		
EXPIRY DATE: (mm/dd/yyyy)	01/07/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.3% of native perfluoro-n-hexadecanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ B.G. Chittim **Date:** 01/11/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ..., x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

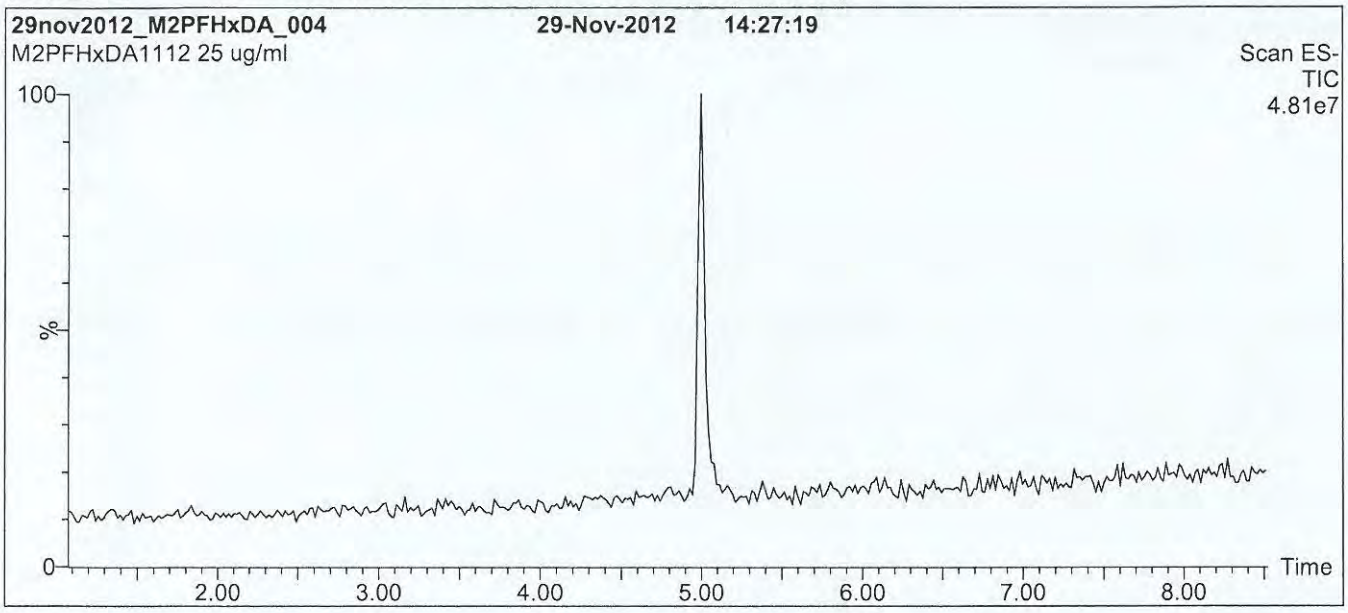
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

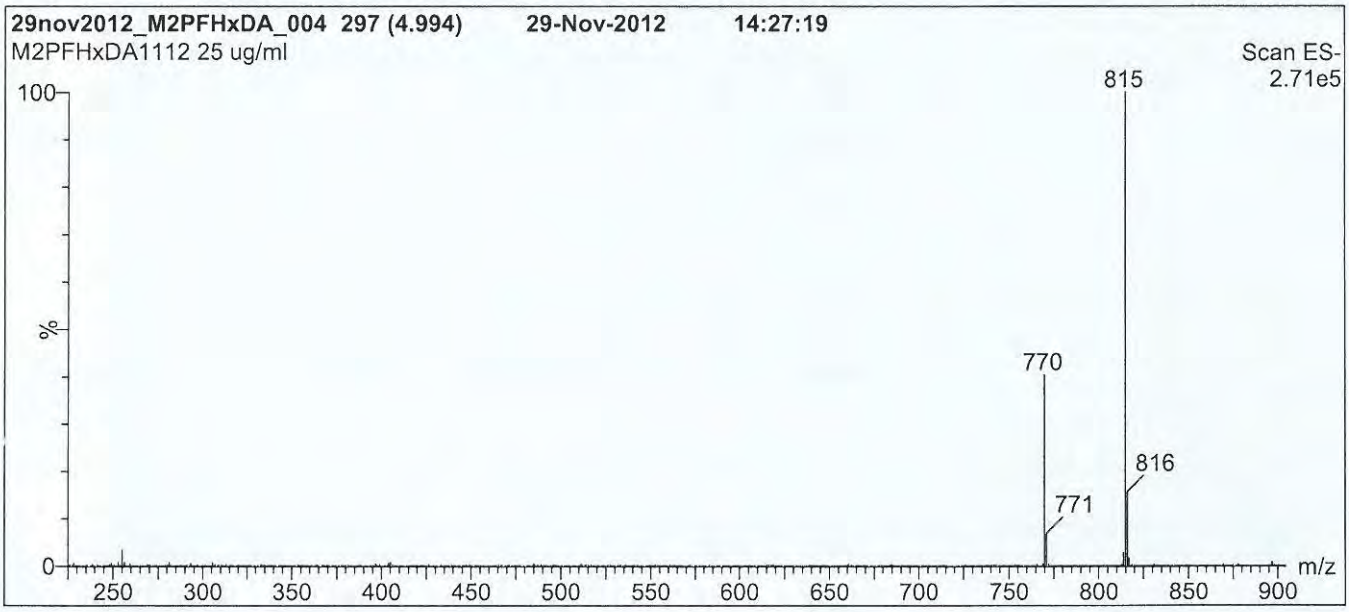
CALA

ANAB ACCREDITED

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **M2PFHxDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 100% organic over 7 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

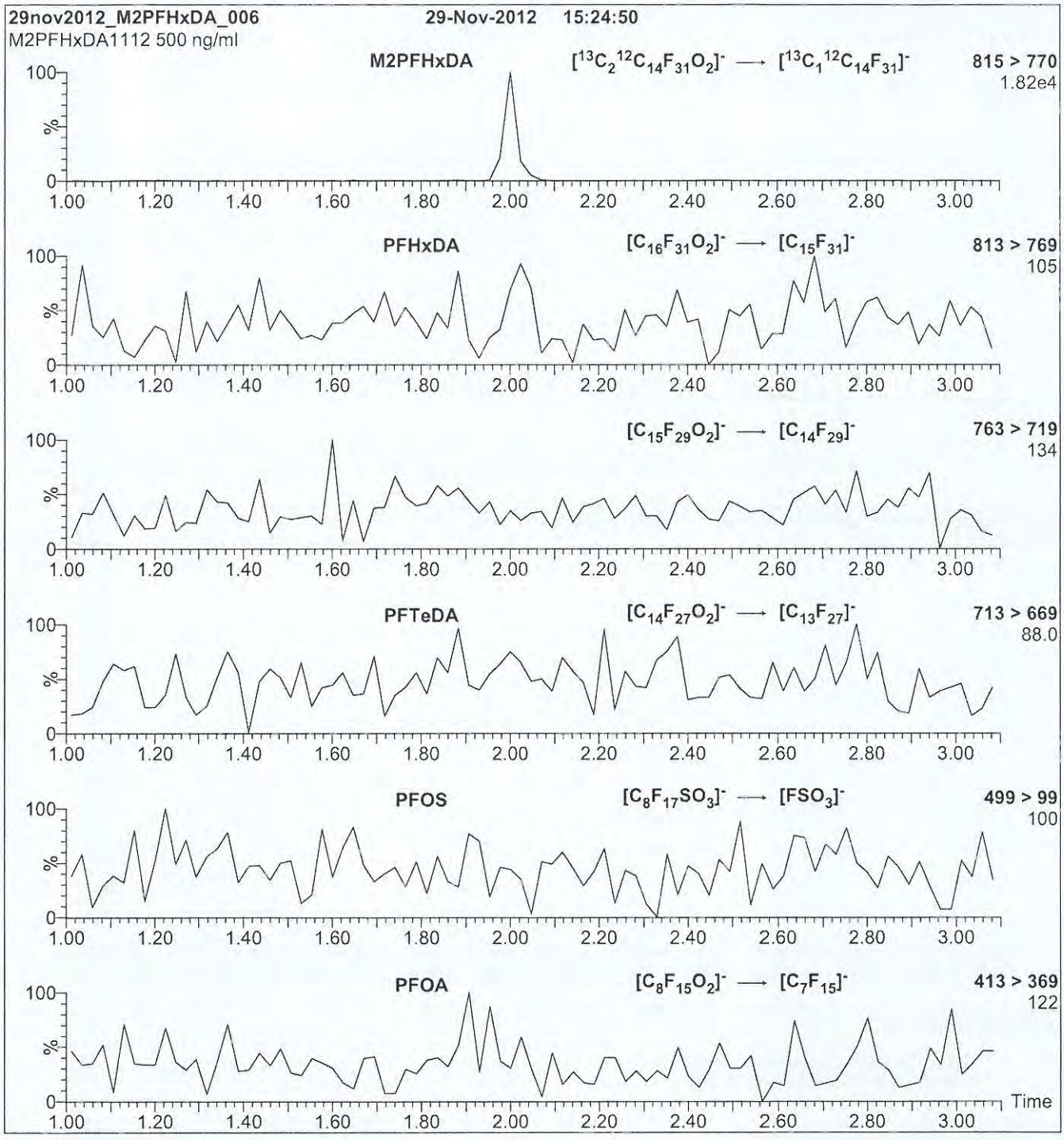
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 1200 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M2PFHxDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M2PFHxDA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 15

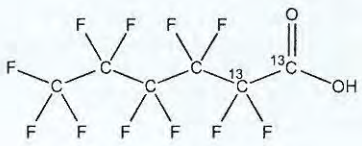
16I1433

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

13C2-PFHxA

PRODUCT CODE:	MPFHxA	**LOT NUMBER:**	MPFHxA0416
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]hexanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_4HF_{11}O_2$	**MOLECULAR WEIGHT:**	316.04
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	04/08/2016		
EXPIRY DATE: (mm/dd/yyyy)	04/08/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of perfluoro-n-hexanoic acid and ~ 0.3% of perfluoro-n-octanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 04/29/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

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CALA

ANAB ACCREDITED

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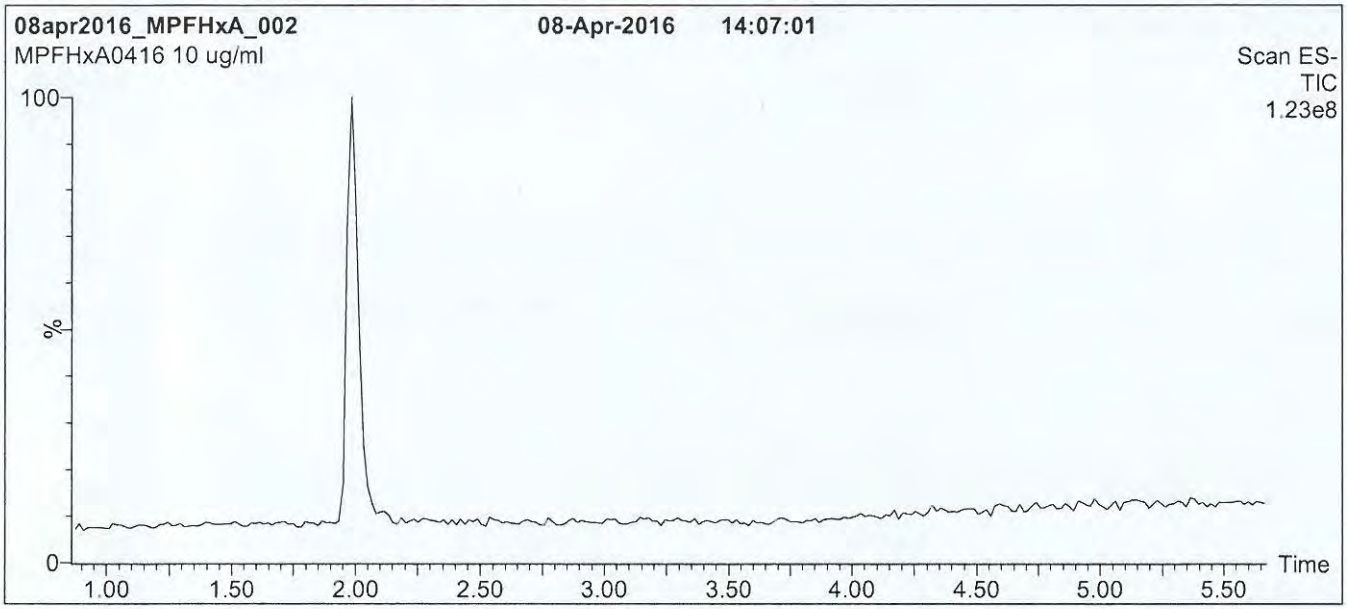
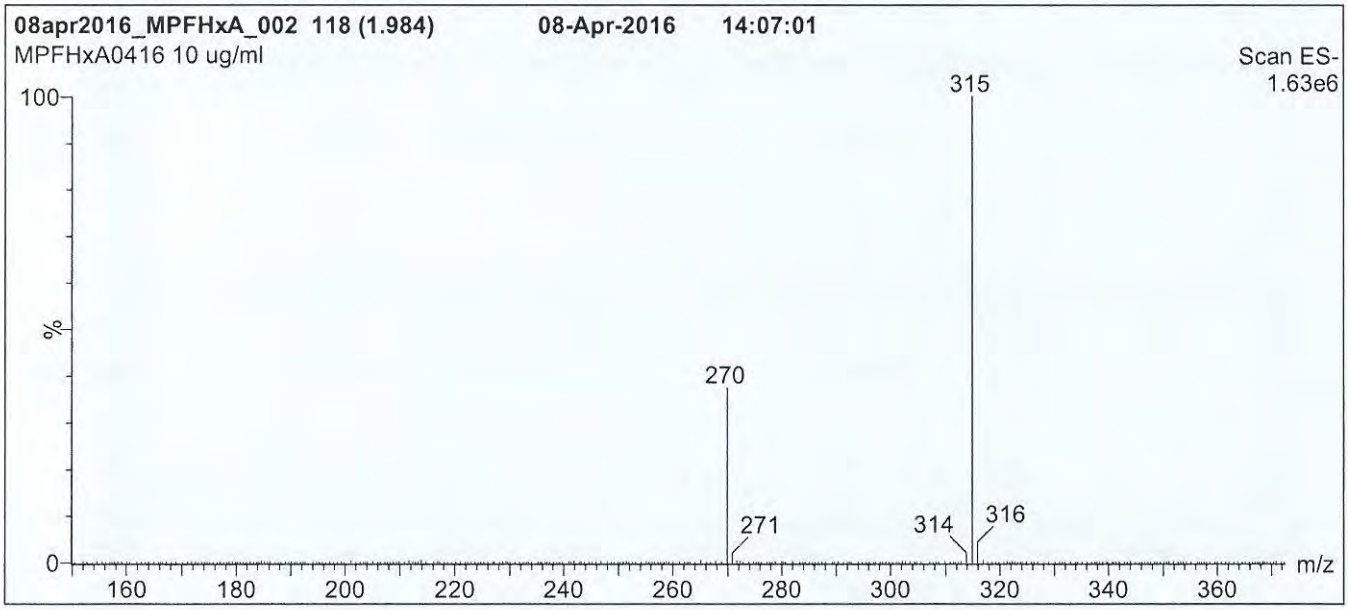
Figure 1: **MPFHxA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1.5 min before returning to initial conditions over 0.5 min.
Time: 10 min

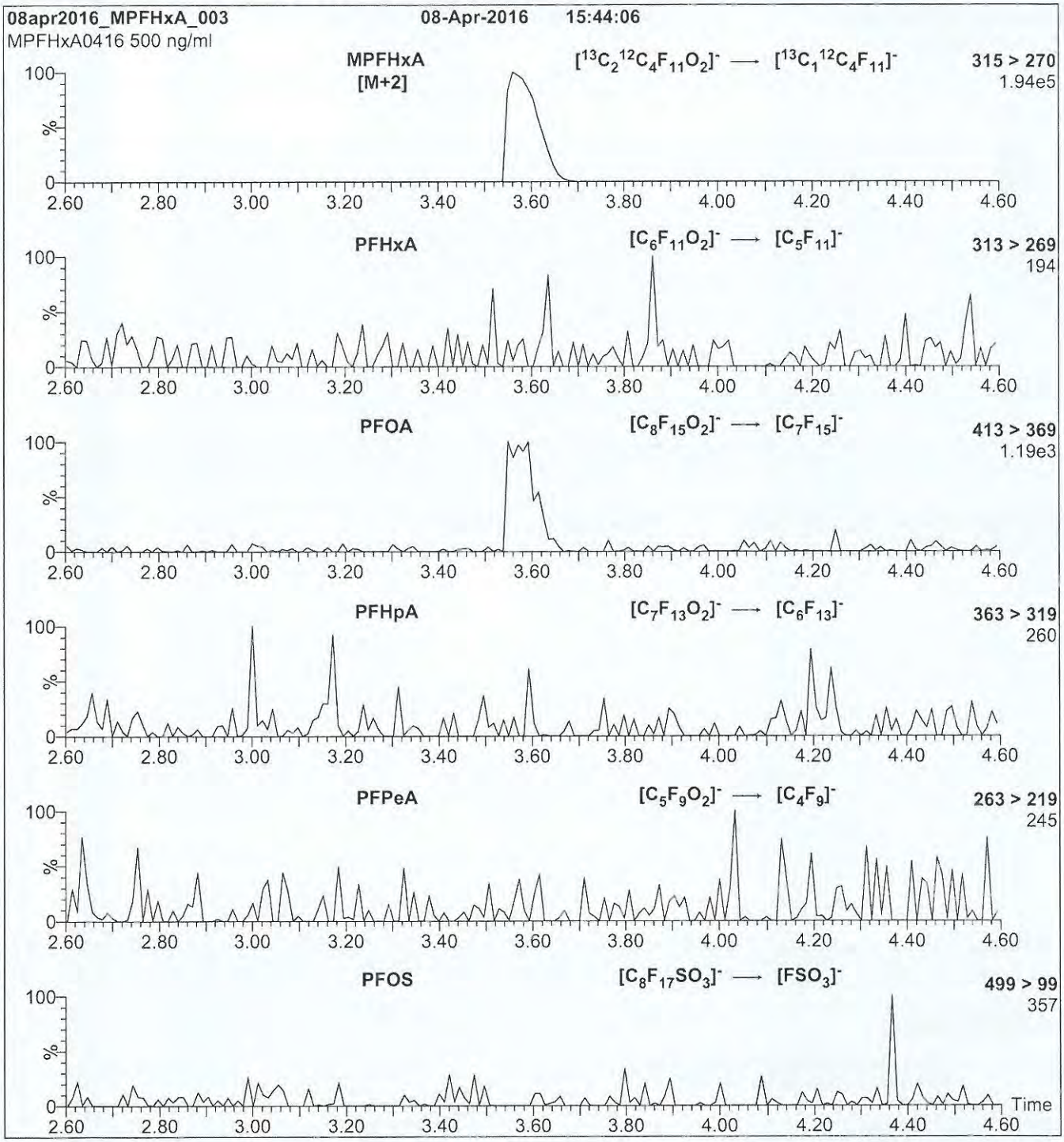
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFHxA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 10

17B 2809

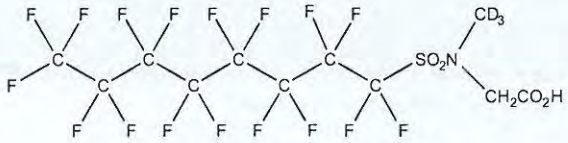
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: d3-N-MeFOSAA **LOT NUMBER:** d3NMeFOSAA1116

COMPOUND: N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$C_{11}D_3H_3F_{17}NO_4S$	**MOLECULAR WEIGHT:**	574.23
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% $^2H_3$
LAST TESTED: (mm/dd/yyyy)	11/22/2016		
EXPIRY DATE: (mm/dd/yyyy)	11/22/2021		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 12/07/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

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HAZARDS:

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ANAB ACCREDITED

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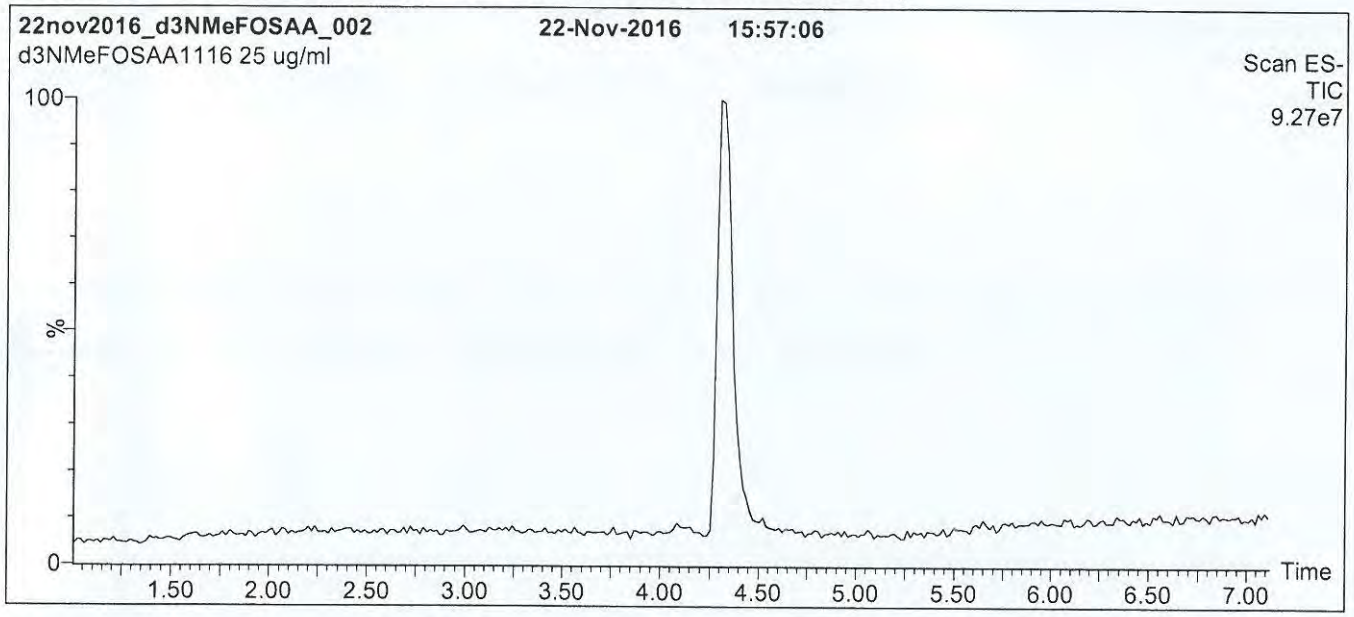
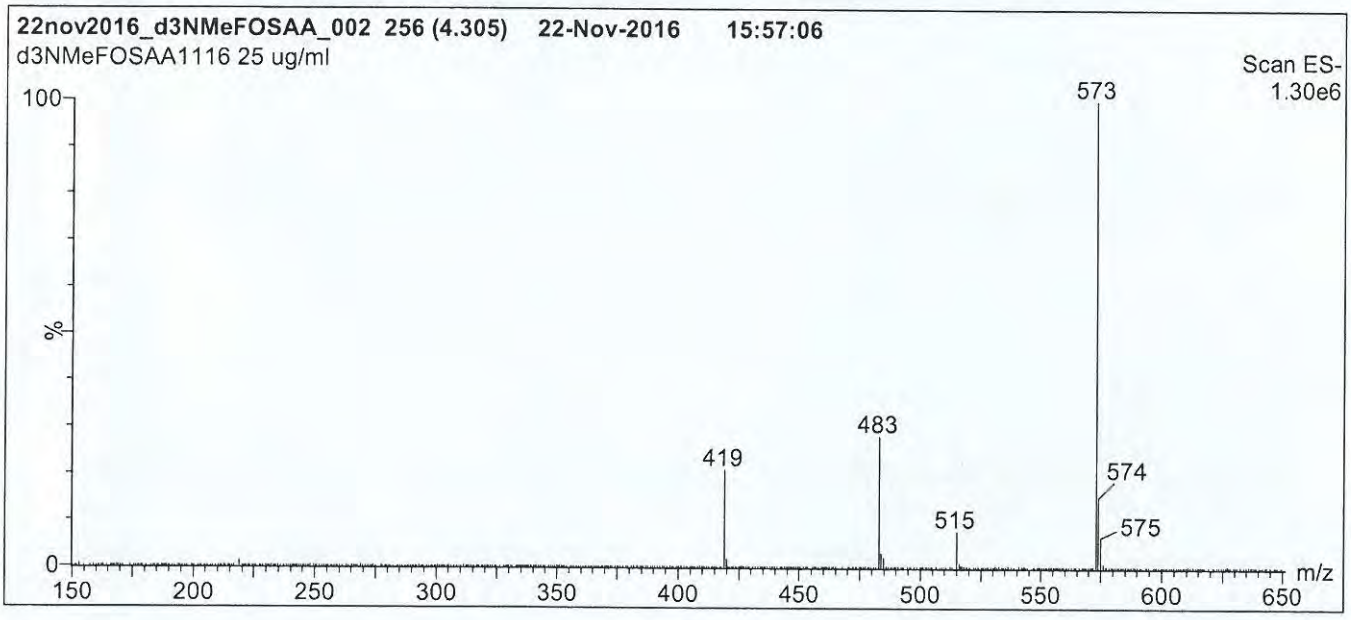
Figure 1: **d3-N-MeFOSAA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

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MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

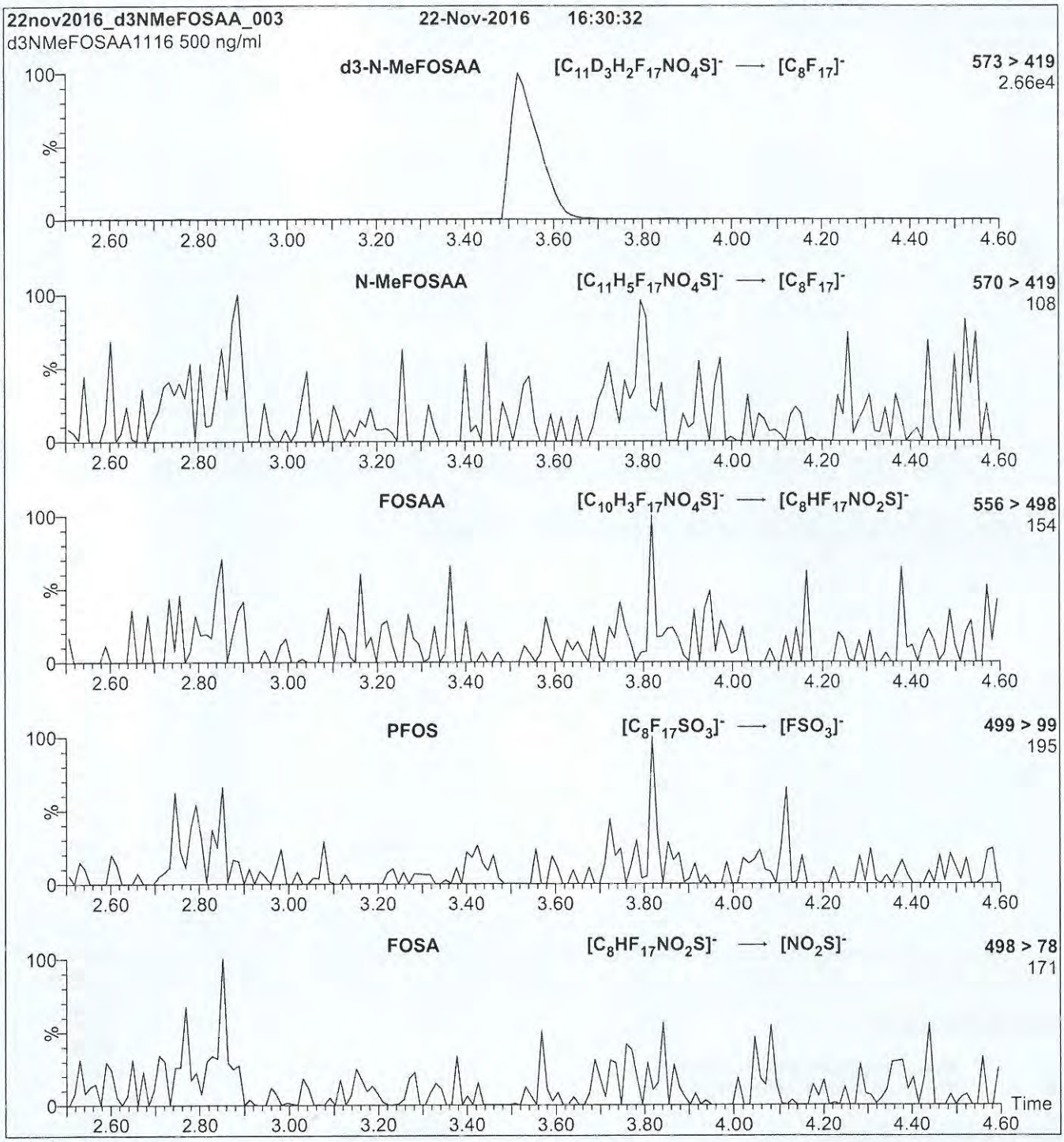
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **d3-N-MeFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml d3-N-MeFOSAA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 20

17B2911

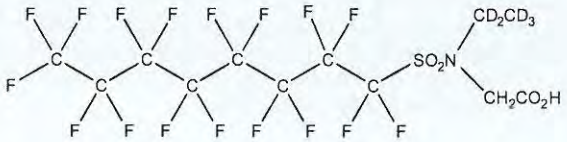
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: d5-N-EtFOSAA **LOT NUMBER:** d5NEtFOSAA1116

COMPOUND: N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$C_{12}D_5H_3F_{17}NO_4S$	**MOLECULAR WEIGHT:**	590.26
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% $^2H_5$
LAST TESTED: (mm/dd/yyyy)	11/22/2016		
EXPIRY DATE: (mm/dd/yyyy)	11/22/2021		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 12/01/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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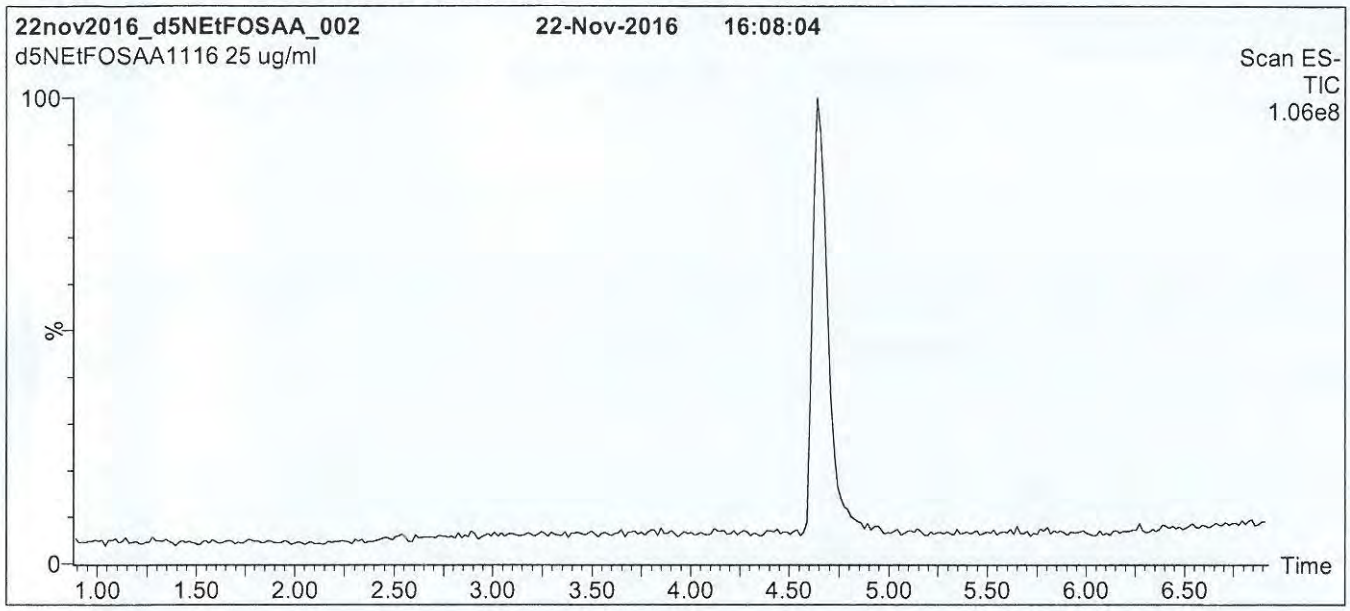

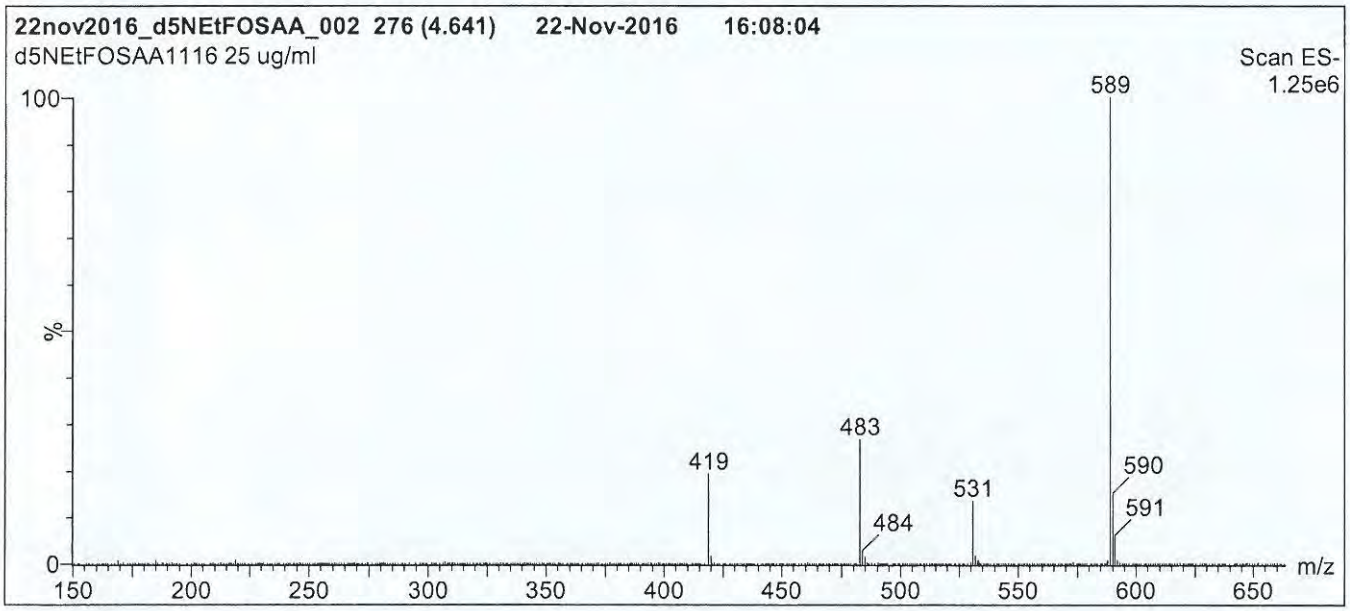

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MS: **Micromass Quattro *micro* API MS**

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1.7 µm, 2.1 x 100 mm

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Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

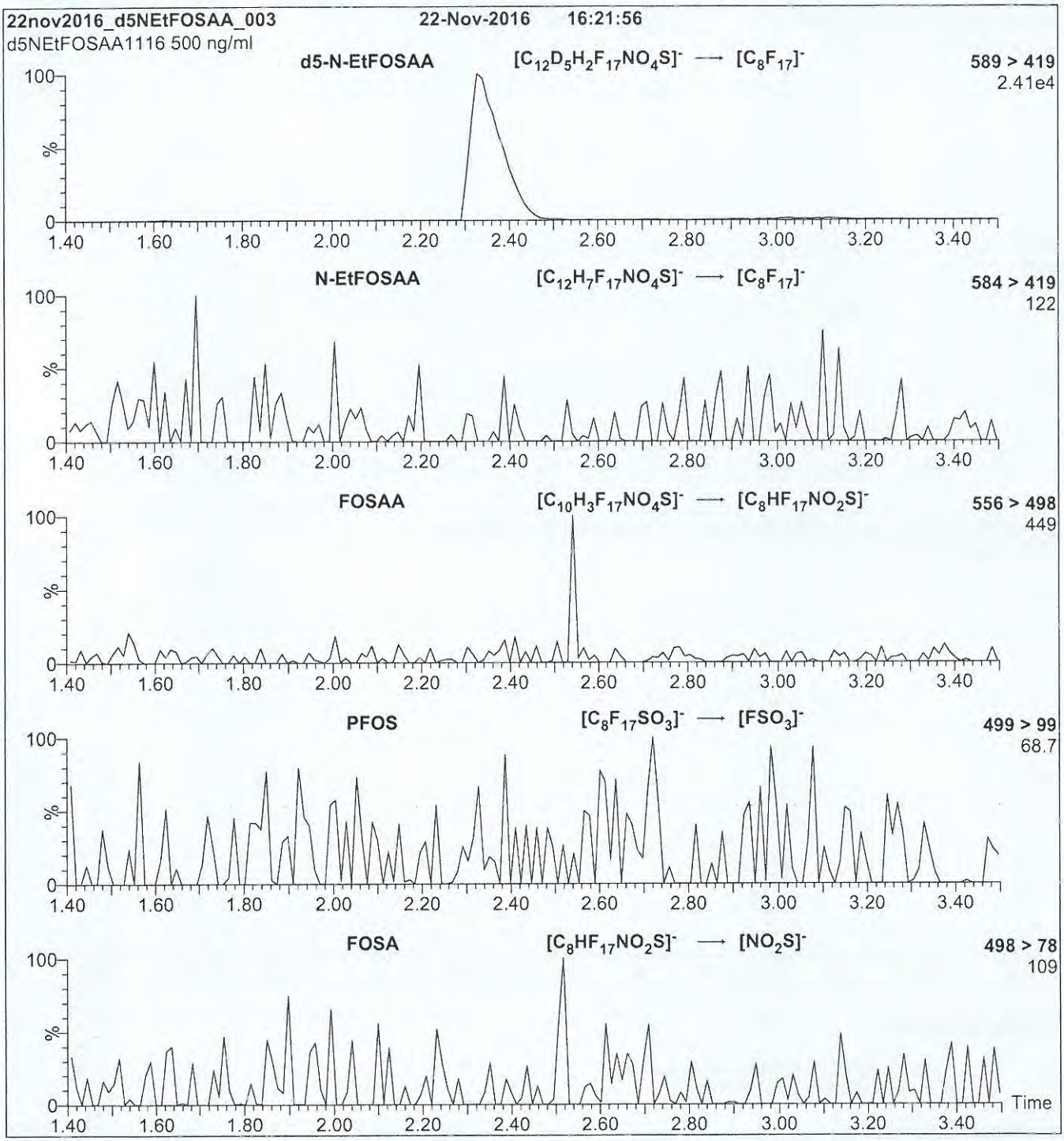
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **d5-N-EtFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml d5-N-EtFOSAA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 20

17E1718

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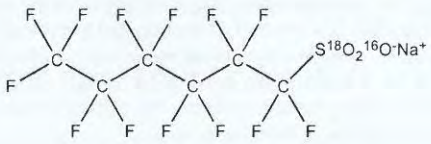
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	MPFHxS	**LOT NUMBER:**	MPFHxS0217
COMPOUND:	Sodium perfluoro-1-hexane[$^{18}O_2$]sulfonate		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$C_6F_{13}S^{18}O_2{}^{16}ONa$	**MOLECULAR WEIGHT:**	426.10
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.3 ± 2.4 µg/ml (MPFHxS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	>94% ($^{18}O_2$)
LAST TESTED: (mm/dd/yyyy)	02/17/2017		
EXPIRY DATE: (mm/dd/yyyy)	02/17/2022		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~ 1.0% of sodium perfluoro-1-octane[$^{18}O_2$]sulfonate ($^{18}O_2$-PFOS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~ 0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

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17E2412

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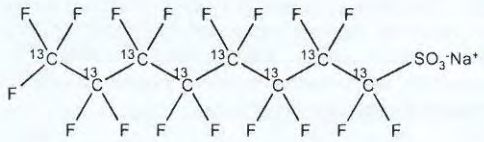
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	M8PFOS	**LOT NUMBER:**	M8PFOS0916
COMPOUND:	Sodium perfluoro-1-[$^{13}C_8$]octanesulfonate		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_8F_{17}SO_3Na$	**MOLECULAR WEIGHT:**	530.05
CONCENTRATION:	48.5 ± 2.4 µg/ml (Na salt) 46.4 ± 2.3 µg/ml (M8PFOS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>97%	**ISOTOPIC PURITY:**	>99% ^{13}C ($^{13}C_8$)
LAST TESTED: (mm/dd/yyyy)	09/30/2016		
EXPIRY DATE: (mm/dd/yyyy)	09/30/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.6% of sodium perfluoro-1-[$^{13}C_7$]heptanesulfonate ($^{13}C_7$-PFHpS), ~ 1.0% of chlorohexadecafluoro-1-[$^{13}C_8$]octanesulfonate, and ~ 1.5% of sodium perfluoro-1-[$^{13}C_4$]octanesulfonate (MPFOS).

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17E2413

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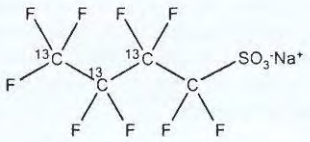
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M3PFBS **LOT NUMBER:** M3PFBS0815

COMPOUND: Sodium perfluoro-1-[2,3,4-$^{13}C_3$]butanesulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_3{}^{12}CF_9SO_3Na$	**MOLECULAR WEIGHT:**	325.06
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 46.5 ± 2.3 µg/ml (M3PFBS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($2,3,4\text{-}^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	08/02/2016		
EXPIRY DATE: (mm/dd/yyyy)	08/02/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

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17E24-14

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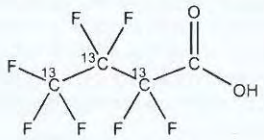
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M3PFBA	**LOT NUMBER:**	M3PFBA0516
COMPOUND:	Perfluoro-n-[2,3,4-$^{13}C_3$]butanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_3{}^{12}CHF_7O_2$	**MOLECULAR WEIGHT:**	217.02
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (2,3,4-$^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	05/27/2016		
EXPIRY DATE: (mm/dd/yyyy)	05/27/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of perfluoro-n-[$^{13}C_3$]propanoic acid and also contains ~ 1.0% of perfluoro-n-[1,2,3,4-$^{13}C_4$]butanoic acid due to the naturally occurring isotopic abundance of ^{13}C in the unlabelled carbon atom.

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17E2415

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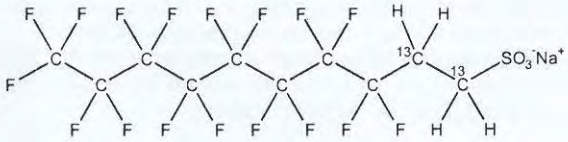
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2-8:2FTS **LOT NUMBER:** M282FTS0816

COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-[1,2-$^{13}C_2$]decane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_8H_4F_{17}SO_3Na$	**MOLECULAR WEIGHT:**	552.15
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt)	**SOLVENT(S):**	Methanol
	47.9 ± 2.4 µg/ml (M2-8:2FTS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	08/22/2016		
EXPIRY DATE: (mm/dd/yyyy)	08/22/2021		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The native 8:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 8:2FTS and M2-8:2FTS will produce signals in the m/z 529 to m/z 509 channel during SRM analysis. We recommend using the m/z 529 to m/z 81 transition to monitor for M2-8:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

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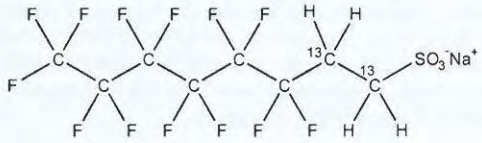
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2-6:2FTS **LOT NUMBER:** M262FTS0217

COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-[1,2-$^{13}C_2$]octane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_6H_4F_{13}SO_3Na$	**MOLECULAR WEIGHT:**	452.13
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.5 ± 2.4 µg/ml (M2-6:2FTS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	02/17/2017		
EXPIRY DATE: (mm/dd/yyyy)	02/17/2022		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The native 6:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 6:2FTS and M2-6:2FTS will produce signals in the m/z 429 to m/z 409 channel during SRM analysis. We recommend using the m/z 429 to m/z 81 transition to monitor for M2-6:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

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Certified By: B.G. Chittim **Date:** 02/24/2017 (mm/dd/yyyy)

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17E2417

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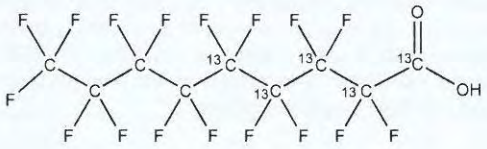
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	MPFNA	**LOT NUMBER:**	MPFNA0916
COMPOUND:	Perfluoro-n-[1,2,3,4,5-$^{13}C_5$]nonanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_5{}^{12}C_4HF_{17}O_2$	**MOLECULAR WEIGHT:**	469.04
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (1,2,3,4,5-$^{13}C_5$)
LAST TESTED: (mm/dd/yyyy)	09/30/2016		
EXPIRY DATE: (mm/dd/yyyy)	09/30/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: _____ **Date:** 10/11/2016 (mm/dd/yyyy)
B.G. Chittim

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17E2418

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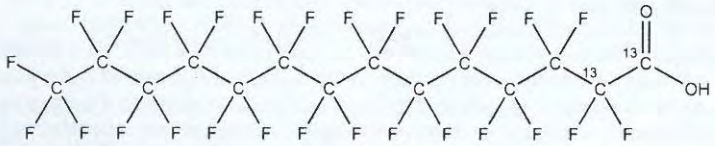
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2PFTeDA
LOT NUMBER: M2PFTeDA0217
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]tetradecanoic acid

STRUCTURE:
CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_{12}HF_{27}O_2$	**MOLECULAR WEIGHT:**	716.10
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	03/01/2017		
EXPIRY DATE: (mm/dd/yyyy)	03/01/2022		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: _____ **Date:** 03/07/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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17E2419

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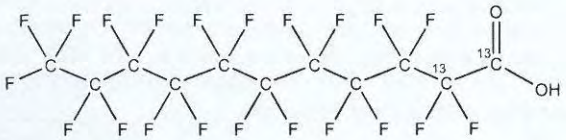
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFUdA
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]undecanoic acid

LOT NUMBER: MPFUdA1116

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_2{}^{12}C_9HF_{21}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 566.08
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
ISOTOPIC PURITY: ≥99% ^{13}C ($1,2\text{-}^{13}C_2$)

LAST TESTED: (mm/dd/yyyy) 11/22/2016
EXPIRY DATE: (mm/dd/yyyy) 11/22/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Presence of 1-$^{13}C_1$-PFUdA (~1%; see Figure 2), 2-$^{13}C_1$-PFUdA (~1%), and PFUdA (~0.2%; see Figure 2) are due to the isotopic purity of the ^{13}C-precursor.

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Certified By: B.G. Chittim **Date:** 12/07/2016 (mm/dd/yyyy)

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17E2420

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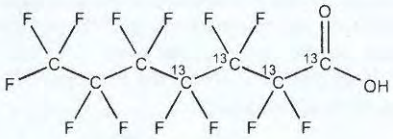
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M4PFHpA
COMPOUND: Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid

LOT NUMBER: M4PFHpA0516

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_4{}^{12}C_3HF_{13}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 368.03
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/27/2016
EXPIRY DATE: (mm/dd/yyyy) 05/27/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99% ^{13}C ($1,2,3,4$-$^{13}C_4$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: B.G. Chittim **Date:** 07/05/2016 (mm/dd/yyyy)

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17E2421

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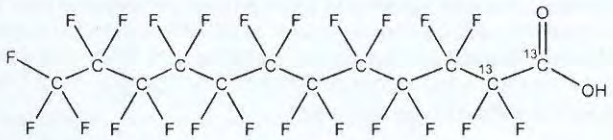
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	MPFDoA	**LOT NUMBER:**	MPFDoA0416
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]dodecanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_{10}HF_{23}O_2$	**MOLECULAR WEIGHT:**	616.08
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	04/08/2016		
EXPIRY DATE: (mm/dd/yyyy)	04/08/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: _____ **Date:** 04/15/2016 (mm/dd/yyyy)
B.G. Chittim

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17G1303

WELLINGTON LABORATORIES

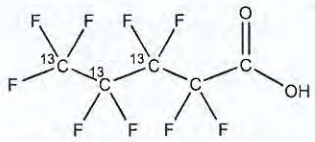
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M3PFPeA
COMPOUND: Perfluoro-n-[3,4,5-$^{13}C_3$]pentanoic acid

LOT NUMBER: M3PFPeA0417

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_3{}^{12}C_2HF_9O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 267.02
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 04/20/2017
EXPIRY DATE: (mm/dd/yyyy) 04/20/2022
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99% ^{13}C ($3,4,5$-$^{13}C_3$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.95% of perfluoro-n-[$^{13}C_3$]butanoic acid and 0.05% of perfluoro-1-pentanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 04/24/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

17G1303

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

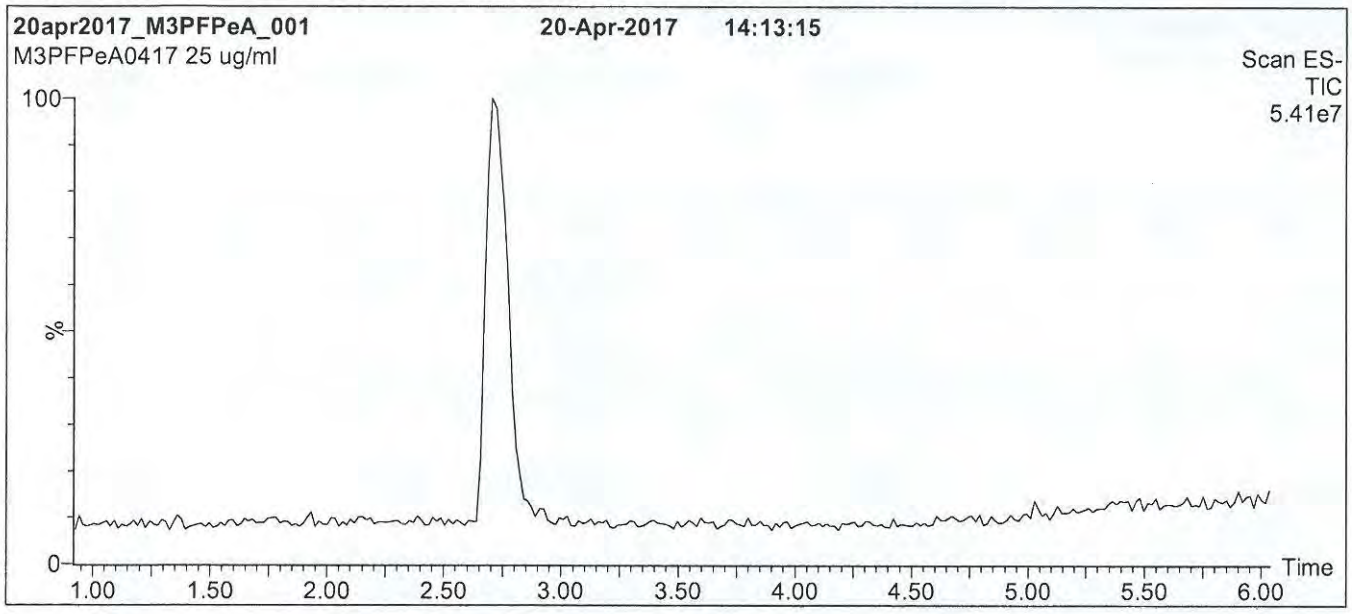
CALA

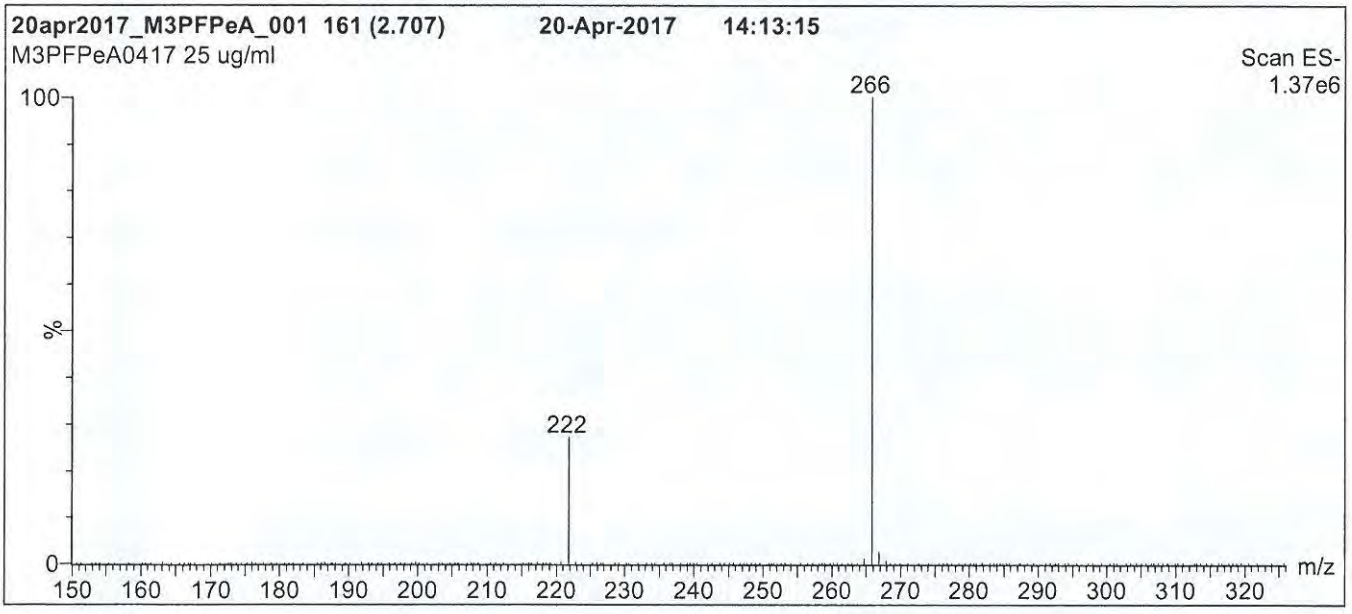
ANAB ACCREDITED

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

17G1303

Figure 1: **M3PFPeA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% (80:20 MeOH:ACN) / 60% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

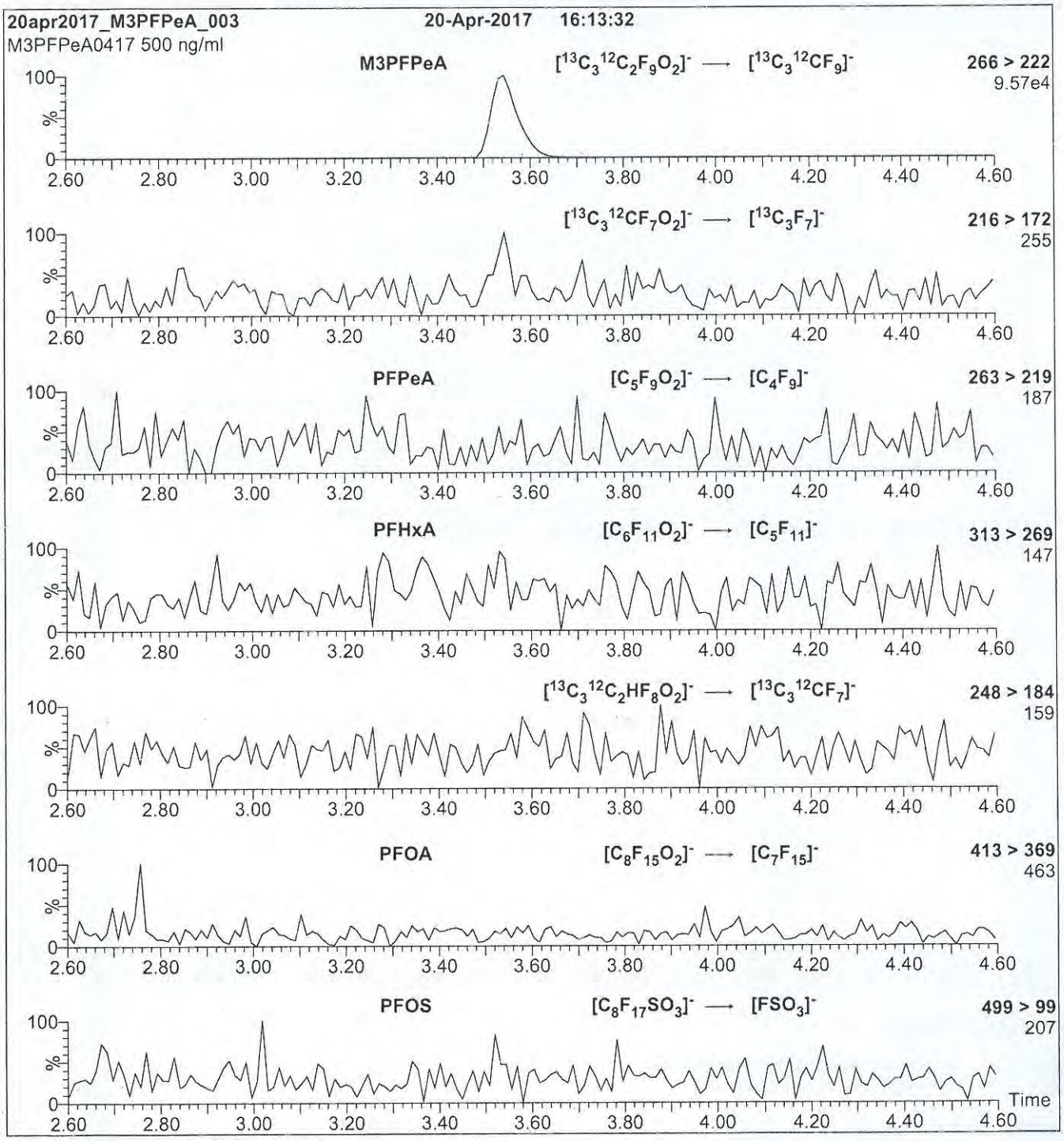
MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

17G1303

Figure 2: **M3PFPeA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M3PFPeA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.31e-3
Collision Energy (eV) = 9

17G1304

WELLINGTON LABORATORIES

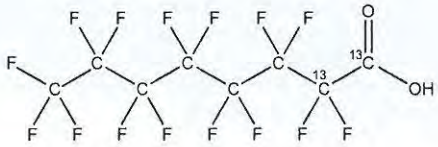
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2PFOA
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]octanoic acid

LOT NUMBER: M2PFOA0216

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_6HF_{15}O_2$	**MOLECULAR WEIGHT:**	416.05
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	02/12/2016		
EXPIRY DATE: (mm/dd/yyyy)	02/12/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 02/24/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

17G1304

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED

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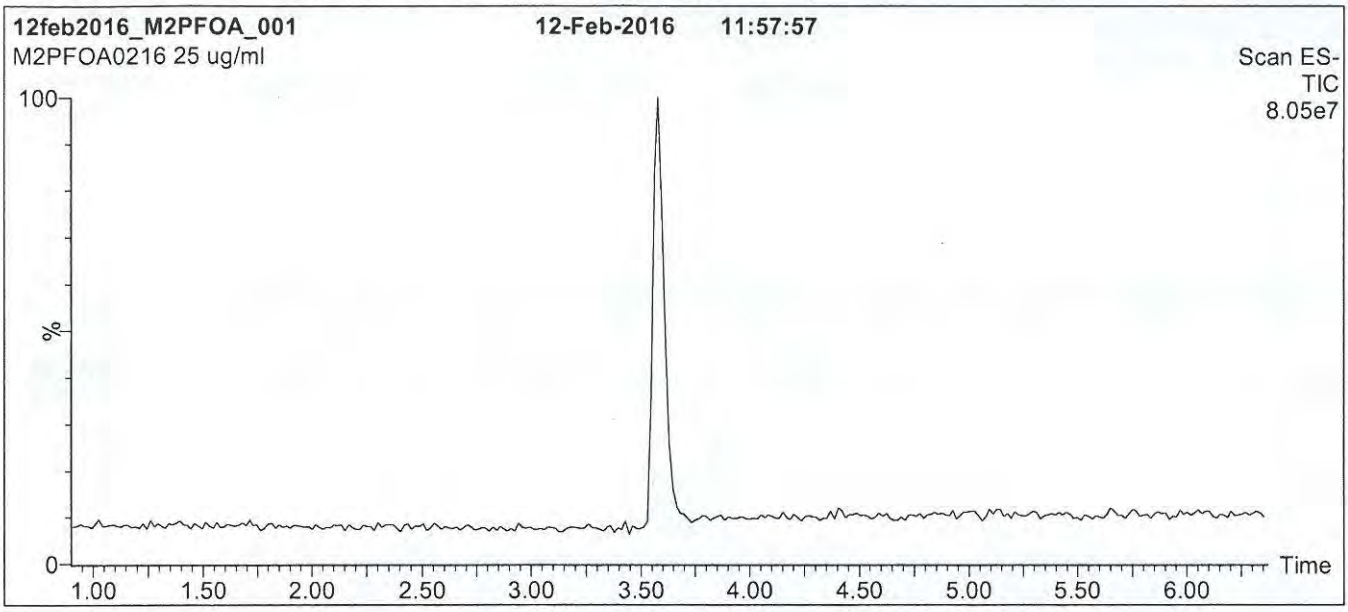
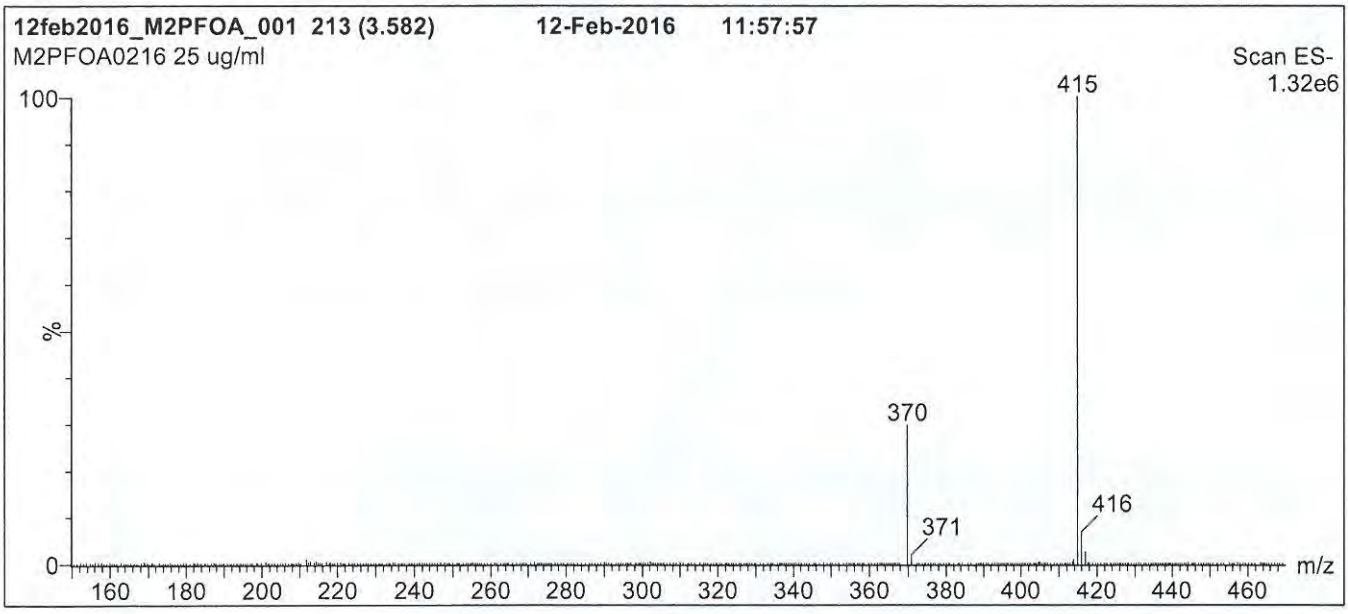
17G1304

Figure 1: **M2PFOA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

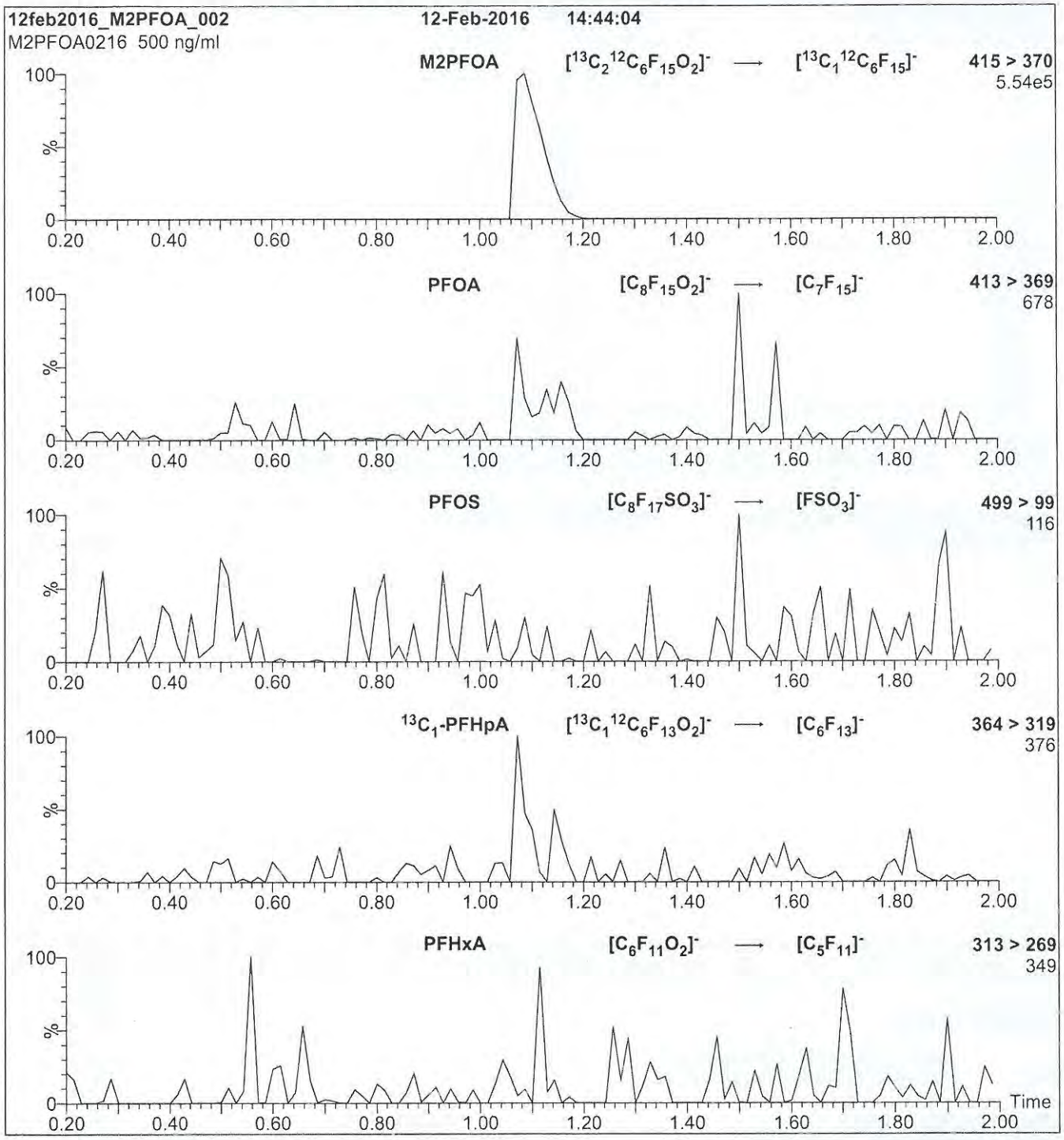
MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

17G1304

Figure 2: **M2PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M2PFOA)

Mobile phase: Isocratic 80% MeOH / 20% H_2O

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 10

17G1305

WELLINGTON LABORATORIES

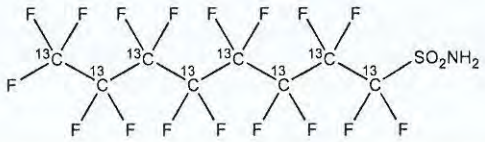
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M8FOSA-I
COMPOUND: Perfluoro-1-[$^{13}C_8$]octanesulfonamide

LOT NUMBER: M8FOSA0417I

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_8H_2F_{17}NO_2S$	**MOLECULAR WEIGHT:**	507.09
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Isopropanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_8$)
LAST TESTED: (mm/dd/yyyy)	04/20/2017		
EXPIRY DATE: (mm/dd/yyyy)	04/20/2022		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 1.1% of perfluoro-1-[$^{13}C_4$]octanesulfonamide and ~ 0.01% of perfluoro-1-[$^{13}C_7$]heptanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/04/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

17G1305

INTENDED USE:

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HAZARDS:

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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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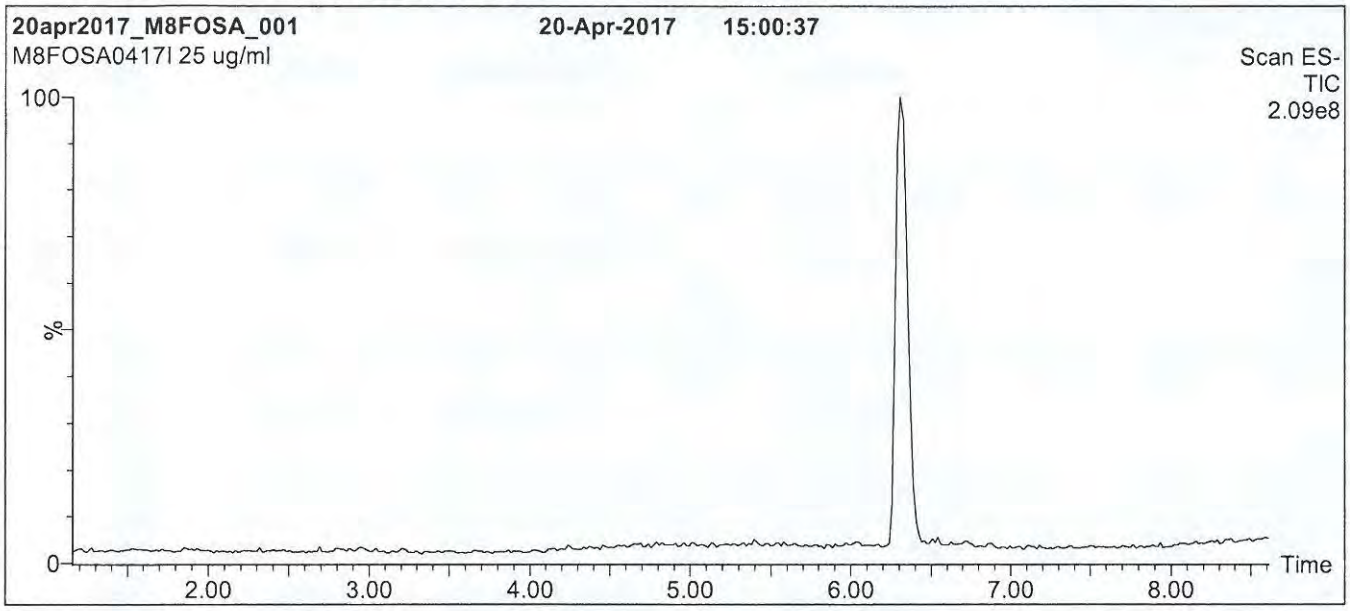
CALA

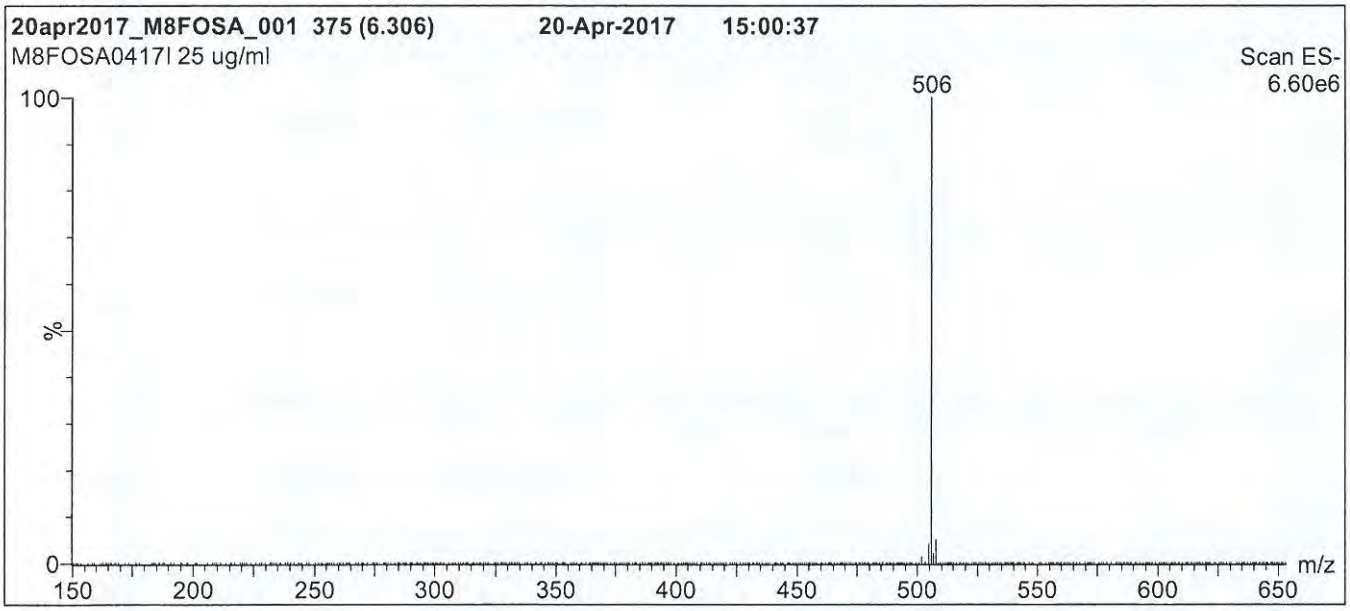
ANAB ACCREDITED

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

+2 17G1305

Figure 1: **M8FOSA-I; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 85% organic over 7.5 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

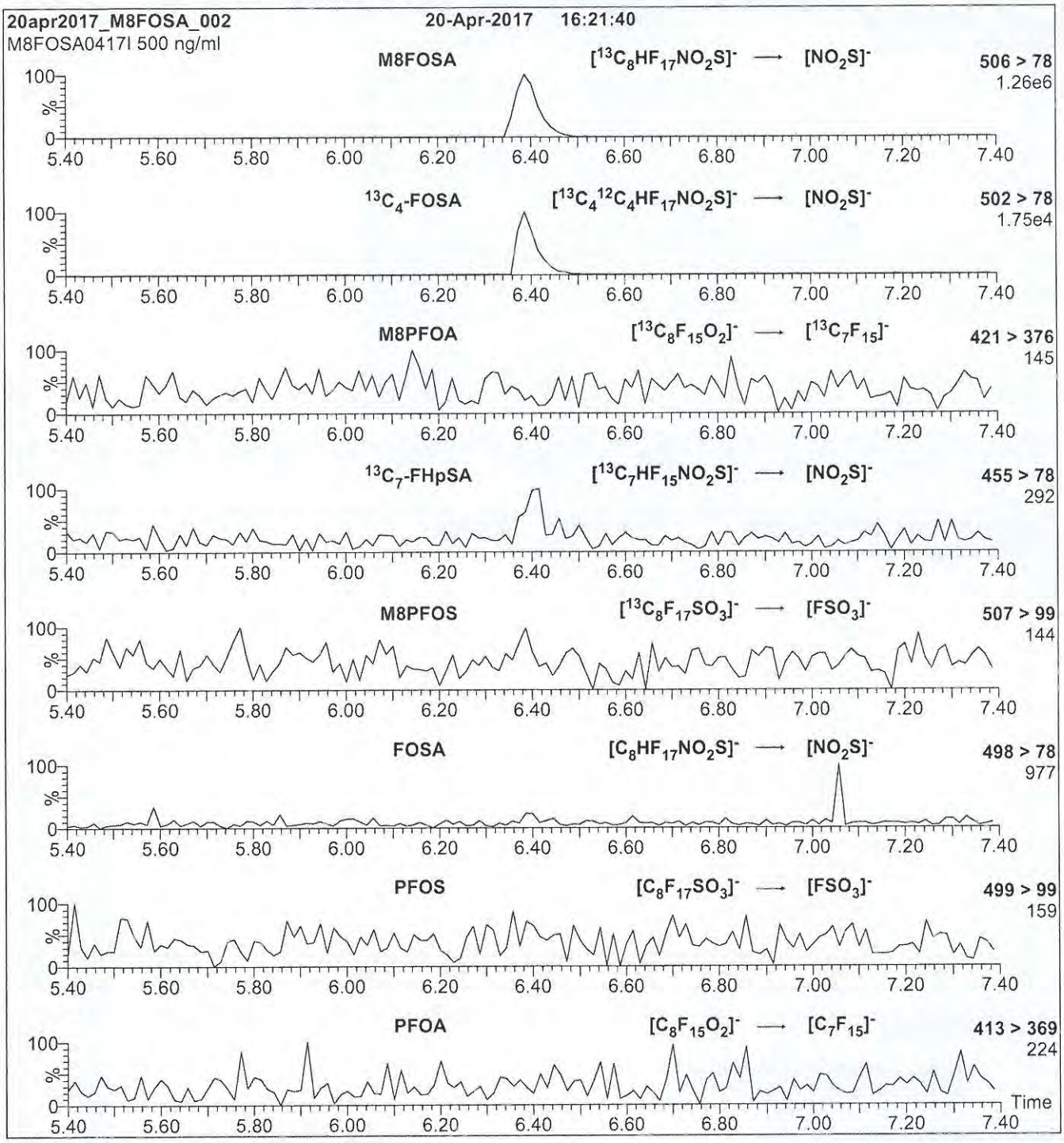
MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 40.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

17G1305

Figure 2: **M8FOSA-I; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M8FOSA-I)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.17e-3
Collision Energy (eV) = 30

17G1306

WELLINGTON LABORATORIES

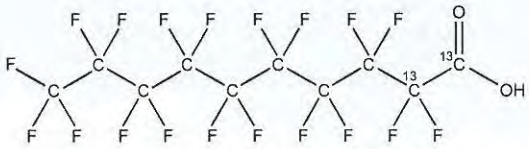
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFDA
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]decanoic acid

LOT NUMBER: MPFDA0916

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_8HF_{19}O_2$	**MOLECULAR WEIGHT:**	516.07
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	09/30/2016		
EXPIRY DATE: (mm/dd/yyyy)	09/30/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of $^{13}C_1$-PFNA.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 10/07/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

17G1306

INTENDED USE:

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HAZARDS:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

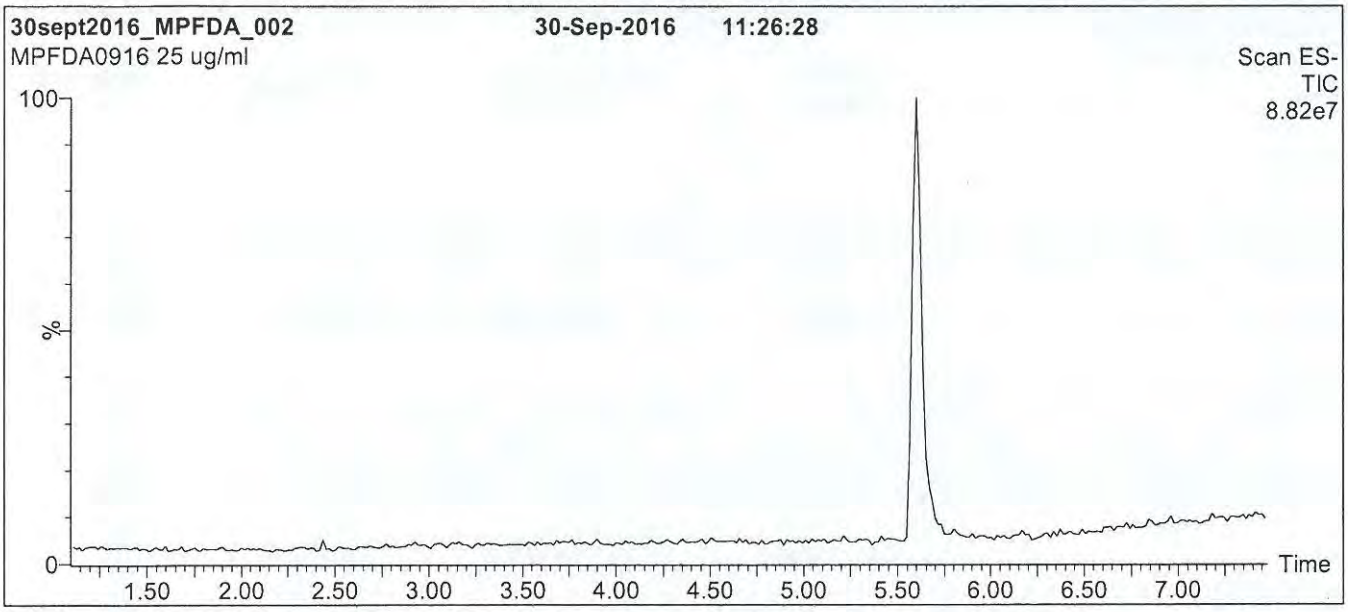
CALA Testing

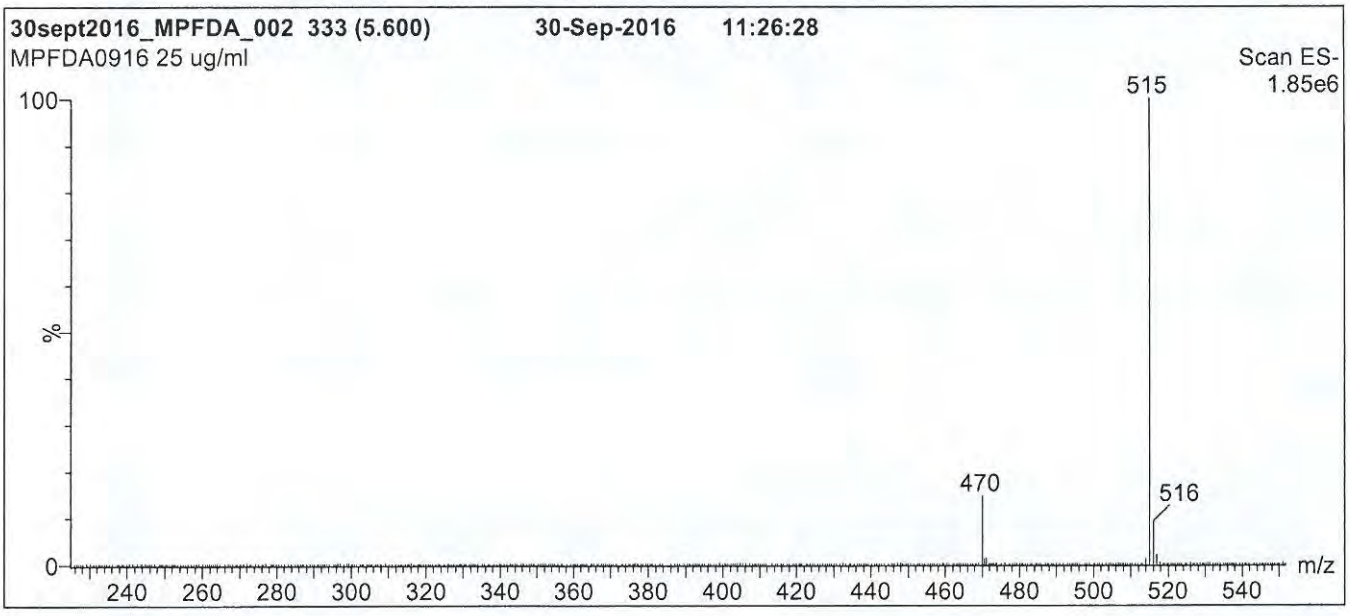
ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

17G1306

Figure 1: **MPFDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

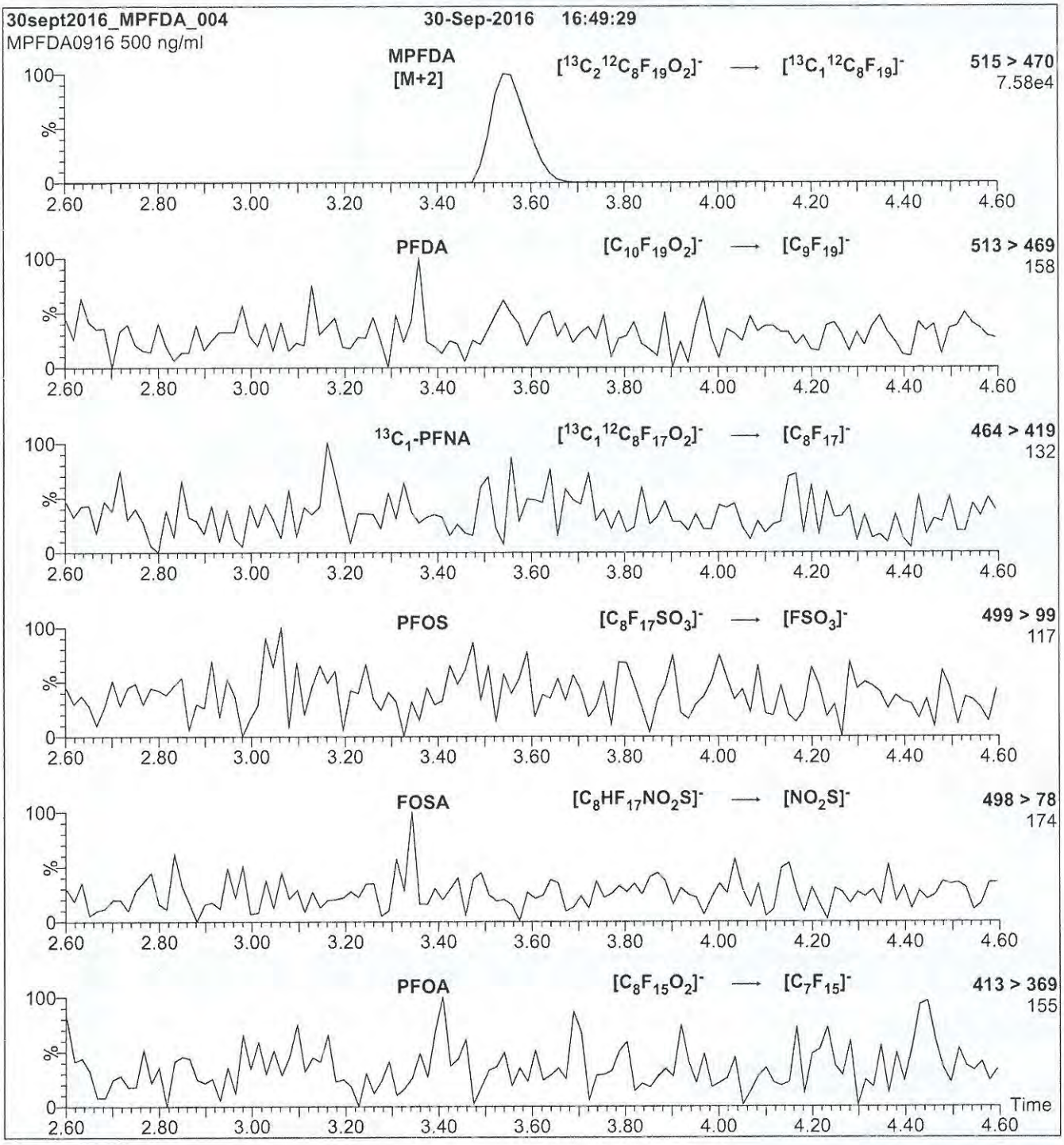
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

17G1306

Figure 2: **MPFDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFDA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.31e-3
Collision Energy (eV) = 13

Analytical Standard Record

Vista Analytical Laboratory

17D2705

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16I1414	PFDA	14-Sep-16	** Vendor **	31-May-21	15-Dec-16 08:38 by AEW	0.4
16I1415	PFHxA	14-Sep-16	** Vendor **	22-Dec-20	15-Dec-16 08:41 by AEW	0.4
16I1416	MeFOSAA	14-Sep-16	** Vendor **	20-Jan-21	04-Oct-16 08:25 by EMS	0.4
16I1417	EtFOSAA	14-Sep-16	** Vendor **	20-Jan-21	14-Sep-16 14:10 by TLD	0.4
16I1418	PFTeDA	14-Sep-16	** Vendor **	09-Dec-20	15-Dec-16 08:46 by AEW	0.4
16I3001	PFTrDA	30-Sep-16	** Vendor **	12-Feb-21	23-Jan-17 17:44 by AEW	0.4
16J0422	PFDoA	04-Oct-16	** Vendor **	31-May-21	23-Jan-17 17:22 by AEW	0.4
16J0423	FOSA-I	04-Oct-16	** Vendor **	02-Sep-17	23-Jan-17 17:49 by AEW	0.4
16J0424	PFNA	04-Oct-16	** Vendor **	23-Oct-20	23-Jan-17 17:40 by AEW	0.4
16J0425	PFPeA	04-Oct-16	** Vendor **	31-May-21	23-Jan-17 17:38 by AEW	0.4
16J0426	PFBA	04-Oct-16	** Vendor **	27-May-21	23-Jan-17 17:18 by AEW	0.4
16L0512	PFODA	05-Dec-16	** Vendor **	29-Apr-21	23-Jan-17 17:35 by AEW	0.4
17C1026	PFOA	10-Mar-17	Jamie C. Stockman	02-Feb-21	10-Mar-17 15:25 by JCS	0.4
17D2612	N-MeFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:56 by INJ	2
17D2613	N-EtFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:54 by INJ	2
17D2614	N-EtFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:54 by INJ	2
17D2616	PFUdA	26-Apr-17	** Vendor **	18-Oct-21	12-Jun-17 09:32 by AEW	0.4
17D2617	PFHxDA	26-Apr-17	** Vendor **	25-May-21	12-Jun-17 16:08 by AEW	0.4
17D2618	PFHpA	26-Apr-17	** Vendor **	02-Dec-21	09-Jun-17 14:56 by AEW	0.4
17D2621	N-MeFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:47 by INJ	2
17D2706	L-PFBS anion DIL	27-Apr-17	Emilie Schneider	27-Apr-18	27-Apr-17 13:48 by EMS	0.8
17D2709	8:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:28 by INJ	0.8
17D2715	6:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:01 by AEW	0.8
17D2716	L-PFDS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:34 by AEW	0.8
17D2717	Br-PFOSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:46 by INJ	0.8
17D2718	Br-PFHxSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 08:51 by AEW	0.8
17D2813	L-PFHpS anion DIL	28-Apr-17	Isaac N. Johnson	28-Apr-18	12-Jun-17 09:07 by AEW	0.8

Description:	PFC NS Stock	Expires:	27-Apr-18
Standard Type:	Analyte Spike	Prepared:	27-Apr-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	12-Jun-17 16:08 by AEW

PFOS and PFHxS branched components

Analyte	CAS Number	Concentration	Units
L-PFDS		1	ug/mL
6:2 FTS	27619-97-2	1	ug/mL
L-PFTeDA		1	ug/mL
L-PFPeA		1	ug/mL
L-PFOSA		1	ug/mL
L-PFOS		0.788	ug/mL
L-PFODA		1	ug/mL
L-PFOA		1	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

17D2705

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Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16I1414	PFDA	14-Sep-16	** Vendor **	31-May-21	15-Dec-16 08:38 by AEW	0.4
16I1415	PFHxA	14-Sep-16	** Vendor **	22-Dec-20	15-Dec-16 08:41 by AEW	0.4
16I1416	MeFOSAA	14-Sep-16	** Vendor **	20-Jan-21	04-Oct-16 08:25 by EMS	0.4
16I1417	EtFOSAA	14-Sep-16	** Vendor **	20-Jan-21	14-Sep-16 14:10 by TLD	0.4
16I1418	PFTeDA	14-Sep-16	** Vendor **	09-Dec-20	15-Dec-16 08:46 by AEW	0.4
16I3001	PFTrDA	30-Sep-16	** Vendor **	12-Feb-21	23-Jan-17 17:44 by AEW	0.4
16J0422	PFDoA	04-Oct-16	** Vendor **	31-May-21	23-Jan-17 17:22 by AEW	0.4
16J0423	FOSA-I	04-Oct-16	** Vendor **	02-Sep-17	23-Jan-17 17:49 by AEW	0.4
16J0424	PFNA	04-Oct-16	** Vendor **	23-Oct-20	23-Jan-17 17:40 by AEW	0.4
16J0425	PFPeA	04-Oct-16	** Vendor **	31-May-21	23-Jan-17 17:38 by AEW	0.4
16J0426	PFBA	04-Oct-16	** Vendor **	27-May-21	23-Jan-17 17:18 by AEW	0.4
16L0512	PFODA	05-Dec-16	** Vendor **	29-Apr-21	23-Jan-17 17:35 by AEW	0.4
17C1026	PFOA	10-Mar-17	Jamie C. Stockman	02-Feb-21	10-Mar-17 15:25 by JCS	0.4
17D2612	N-MeFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:56 by INJ	2
17D2613	N-EtFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:54 by INJ	2
17D2614	N-EtFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:54 by INJ	2
17D2616	PFUdA	26-Apr-17	** Vendor **	18-Oct-21	12-Jun-17 09:32 by AEW	0.4
17D2617	PFHxDA	26-Apr-17	** Vendor **	25-May-21	12-Jun-17 16:08 by AEW	0.4
17D2618	PFHpA	26-Apr-17	** Vendor **	02-Dec-21	09-Jun-17 14:56 by AEW	0.4
17D2621	N-MeFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:47 by INJ	2
17D2706	L-PFBS anion DIL	27-Apr-17	Emilie Schneider	27-Apr-18	27-Apr-17 13:48 by EMS	0.8
17D2709	8:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:28 by INJ	0.8
17D2715	6:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:01 by AEW	0.8
17D2716	L-PFDS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:34 by AEW	0.8
17D2717	Br-PFOSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:46 by INJ	0.8
17D2718	Br-PFHxSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 08:51 by AEW	0.8
17D2813	L-PFHpS anion DIL	28-Apr-17	Isaac N. Johnson	28-Apr-18	12-Jun-17 09:07 by AEW	0.8

Description:	PFC NS Stock	Expires:	27-Apr-18
Standard Type:	Analyte Spike	Prepared:	27-Apr-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	12-Jun-17 16:08 by AEW

PFOS and PFHxS branched components

Analyte	CAS Number	Concentration	Units
L-PFNA		1	ug/mL
L-PFHxS		0.812	ug/mL
L-PFHxDA		1	ug/mL
L-PFHxA		1	ug/mL
L-PFUnA		1	ug/mL
L-PFHpA		1	ug/mL
MeFOSA	31506-32-8	5	ug/mL
L-PFDoA		1	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

17D2705

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16I1414	PFDA	14-Sep-16	** Vendor **	31-May-21	15-Dec-16 08:38 by AEW	0.4
16I1415	PFHxA	14-Sep-16	** Vendor **	22-Dec-20	15-Dec-16 08:41 by AEW	0.4
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16J0423	FOSA-I	04-Oct-16	** Vendor **	02-Sep-17	23-Jan-17 17:49 by AEW	0.4
16J0424	PFNA	04-Oct-16	** Vendor **	23-Oct-20	23-Jan-17 17:40 by AEW	0.4
16J0425	PFPeA	04-Oct-16	** Vendor **	31-May-21	23-Jan-17 17:38 by AEW	0.4
16J0426	PFBA	04-Oct-16	** Vendor **	27-May-21	23-Jan-17 17:18 by AEW	0.4
16L0512	PFODA	05-Dec-16	** Vendor **	29-Apr-21	23-Jan-17 17:35 by AEW	0.4
17C1026	PFOA	10-Mar-17	Jamie C. Stockman	02-Feb-21	10-Mar-17 15:25 by JCS	0.4
17D2612	N-MeFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:56 by INJ	2
17D2613	N-EtFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:54 by INJ	2
17D2614	N-EtFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:54 by INJ	2
17D2616	PFUdA	26-Apr-17	** Vendor **	18-Oct-21	12-Jun-17 09:32 by AEW	0.4
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17D2618	PFHpA	26-Apr-17	** Vendor **	02-Dec-21	09-Jun-17 14:56 by AEW	0.4
17D2621	N-MeFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:47 by INJ	2
17D2706	L-PFBS anion DIL	27-Apr-17	Emilie Schneider	27-Apr-18	27-Apr-17 13:48 by EMS	0.8
17D2709	8:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:28 by INJ	0.8
17D2715	6:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:01 by AEW	0.8
17D2716	L-PFDS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:34 by AEW	0.8
17D2717	Br-PFOSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:46 by INJ	0.8
17D2718	Br-PFHxSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 08:51 by AEW	0.8
17D2813	L-PFHpS anion DIL	28-Apr-17	Isaac N. Johnson	28-Apr-18	12-Jun-17 09:07 by AEW	0.8

Description:	PFC NS Stock	Expires:	27-Apr-18
Standard Type:	Analyte Spike	Prepared:	27-Apr-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	12-Jun-17 16:08 by AEW

PFOS and PFHxS branched components

Analyte	CAS Number	Concentration	Units
L-PFDA		1	ug/mL
L-PFBS		1	ug/mL
L-PFBA		1	ug/mL
L-8:2FTS		1	ug/mL
L-6:2 FTS		1	ug/mL
EtFOSE	1691-99-2	5	ug/mL
EtFOSAA	2991-50-6	1	ug/mL
EtFOSA	4151-50-2	5	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

17D2705

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16I1414	PFDA	14-Sep-16	** Vendor **	31-May-21	15-Dec-16 08:38 by AEW	0.4
16I1415	PFHxA	14-Sep-16	** Vendor **	22-Dec-20	15-Dec-16 08:41 by AEW	0.4
16I1416	MeFOSAA	14-Sep-16	** Vendor **	20-Jan-21	04-Oct-16 08:25 by EMS	0.4
16I1417	EtFOSAA	14-Sep-16	** Vendor **	20-Jan-21	14-Sep-16 14:10 by TLD	0.4
16I1418	PFTeDA	14-Sep-16	** Vendor **	09-Dec-20	15-Dec-16 08:46 by AEW	0.4
16I3001	PFTrDA	30-Sep-16	** Vendor **	12-Feb-21	23-Jan-17 17:44 by AEW	0.4
16J0422	PFDoA	04-Oct-16	** Vendor **	31-May-21	23-Jan-17 17:22 by AEW	0.4
16J0423	FOSA-I	04-Oct-16	** Vendor **	02-Sep-17	23-Jan-17 17:49 by AEW	0.4
16J0424	PFNA	04-Oct-16	** Vendor **	23-Oct-20	23-Jan-17 17:40 by AEW	0.4
16J0425	PFPeA	04-Oct-16	** Vendor **	31-May-21	23-Jan-17 17:38 by AEW	0.4
16J0426	PFBA	04-Oct-16	** Vendor **	27-May-21	23-Jan-17 17:18 by AEW	0.4
16L0512	PFODA	05-Dec-16	** Vendor **	29-Apr-21	23-Jan-17 17:35 by AEW	0.4
17C1026	PFOA	10-Mar-17	Jamie C. Stockman	02-Feb-21	10-Mar-17 15:25 by JCS	0.4
17D2612	N-MeFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:56 by INJ	2
17D2613	N-EtFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:54 by INJ	2
17D2614	N-EtFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:54 by INJ	2
17D2616	PFUdA	26-Apr-17	** Vendor **	18-Oct-21	12-Jun-17 09:32 by AEW	0.4
17D2617	PFHxDA	26-Apr-17	** Vendor **	25-May-21	12-Jun-17 16:08 by AEW	0.4
17D2618	PFHpA	26-Apr-17	** Vendor **	02-Dec-21	09-Jun-17 14:56 by AEW	0.4
17D2621	N-MeFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:47 by INJ	2
17D2706	L-PFBS anion DIL	27-Apr-17	Emilie Schneider	27-Apr-18	27-Apr-17 13:48 by EMS	0.8
17D2709	8:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:28 by INJ	0.8
17D2715	6:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:01 by AEW	0.8
17D2716	L-PFDS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:34 by AEW	0.8
17D2717	Br-PFOSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:46 by INJ	0.8
17D2718	Br-PFHxSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 08:51 by AEW	0.8
17D2813	L-PFHpS anion DIL	28-Apr-17	Isaac N. Johnson	28-Apr-18	12-Jun-17 09:07 by AEW	0.8

Description:	PFC NS Stock	Expires:	27-Apr-18
Standard Type:	Analyte Spike	Prepared:	27-Apr-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	12-Jun-17 16:08 by AEW

PFOS and PFHxS branched components

Analyte	CAS Number	Concentration	Units
Br-PFHxS	3871-99-6	0.189	ug/mL
8:2 FTS	70887-84-2	1	ug/mL
L-PFHpS		1	ug/mL
PFHxS	355-46-4	1	ug/mL
Total PFHxS		1	ug/mL
Total PFHpS		1	ug/mL
Total PFDS		1	ug/mL
Total 6:2 FTS		1	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

17D2705

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16I1414	PFDA	14-Sep-16	** Vendor **	31-May-21	15-Dec-16 08:38 by AEW	0.4
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17D2612	N-MeFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:56 by INJ	2
17D2613	N-EtFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:54 by INJ	2
17D2614	N-EtFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:54 by INJ	2
17D2616	PFUdA	26-Apr-17	** Vendor **	18-Oct-21	12-Jun-17 09:32 by AEW	0.4
17D2617	PFHxDA	26-Apr-17	** Vendor **	25-May-21	12-Jun-17 16:08 by AEW	0.4
17D2618	PFHpA	26-Apr-17	** Vendor **	02-Dec-21	09-Jun-17 14:56 by AEW	0.4
17D2621	N-MeFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:47 by INJ	2
17D2706	L-PFBS anion DIL	27-Apr-17	Emilie Schneider	27-Apr-18	27-Apr-17 13:48 by EMS	0.8
17D2709	8:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:28 by INJ	0.8
17D2715	6:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:01 by AEW	0.8
17D2716	L-PFDS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:34 by AEW	0.8
17D2717	Br-PFOSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:46 by INJ	0.8
17D2718	Br-PFHxSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 08:51 by AEW	0.8
17D2813	L-PFHpS anion DIL	28-Apr-17	Isaac N. Johnson	28-Apr-18	12-Jun-17 09:07 by AEW	0.8

Description:	PFC NS Stock	Expires:	27-Apr-18
Standard Type:	Analyte Spike	Prepared:	27-Apr-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	12-Jun-17 16:08 by AEW

PFOS and PFHxS branched components

Analyte	CAS Number	Concentration	Units
PFUnA	2058-94-8	1	ug/mL
PFTrDA	72629-94-8	1	ug/mL
PFTeDA	376-06-7	1	ug/mL
PFPeA	2706-90-3	1	ug/mL
PFOSA	754-91-6	1	ug/mL
PFOS	1763-23-1	1	ug/mL
PFODA	16517-11-6	1	ug/mL
L-PFTrDA		1	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

17D2705

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16I1414	PFDA	14-Sep-16	** Vendor **	31-May-21	15-Dec-16 08:38 by AEW	0.4
16I1415	PFHxA	14-Sep-16	** Vendor **	22-Dec-20	15-Dec-16 08:41 by AEW	0.4
16I1416	MeFOSAA	14-Sep-16	** Vendor **	20-Jan-21	04-Oct-16 08:25 by EMS	0.4
16I1417	EtFOSAA	14-Sep-16	** Vendor **	20-Jan-21	14-Sep-16 14:10 by TLD	0.4
16I1418	PFTeDA	14-Sep-16	** Vendor **	09-Dec-20	15-Dec-16 08:46 by AEW	0.4
16I3001	PFTrDA	30-Sep-16	** Vendor **	12-Feb-21	23-Jan-17 17:44 by AEW	0.4
16J0422	PFDoA	04-Oct-16	** Vendor **	31-May-21	23-Jan-17 17:22 by AEW	0.4
16J0423	FOSA-I	04-Oct-16	** Vendor **	02-Sep-17	23-Jan-17 17:49 by AEW	0.4
16J0424	PFNA	04-Oct-16	** Vendor **	23-Oct-20	23-Jan-17 17:40 by AEW	0.4
16J0425	PFPeA	04-Oct-16	** Vendor **	31-May-21	23-Jan-17 17:38 by AEW	0.4
16J0426	PFBA	04-Oct-16	** Vendor **	27-May-21	23-Jan-17 17:18 by AEW	0.4
16L0512	PFODA	05-Dec-16	** Vendor **	29-Apr-21	23-Jan-17 17:35 by AEW	0.4
17C1026	PFOA	10-Mar-17	Jamie C. Stockman	02-Feb-21	10-Mar-17 15:25 by JCS	0.4
17D2612	N-MeFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:56 by INJ	2
17D2613	N-EtFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:54 by INJ	2
17D2614	N-EtFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:54 by INJ	2
17D2616	PFUdA	26-Apr-17	** Vendor **	18-Oct-21	12-Jun-17 09:32 by AEW	0.4
17D2617	PFHxDA	26-Apr-17	** Vendor **	25-May-21	12-Jun-17 16:08 by AEW	0.4
17D2618	PFHpA	26-Apr-17	** Vendor **	02-Dec-21	09-Jun-17 14:56 by AEW	0.4
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17D2706	L-PFBS anion DIL	27-Apr-17	Emilie Schneider	27-Apr-18	27-Apr-17 13:48 by EMS	0.8
17D2709	8:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:28 by INJ	0.8
17D2715	6:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:01 by AEW	0.8
17D2716	L-PFDS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:34 by AEW	0.8
17D2717	Br-PFOSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:46 by INJ	0.8
17D2718	Br-PFHxSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 08:51 by AEW	0.8
17D2813	L-PFHpS anion DIL	28-Apr-17	Isaac N. Johnson	28-Apr-18	12-Jun-17 09:07 by AEW	0.8

Description:	PFC NS Stock	Expires:	27-Apr-18
Standard Type:	Analyte Spike	Prepared:	27-Apr-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	12-Jun-17 16:08 by AEW

PFOS and PFHxS branched components

Analyte	CAS Number	Concentration	Units
PFNA	375-95-1	1	ug/mL
Total PFUnA		1	ug/mL
PFHxDA	67905-19-5	1	ug/mL
PFHxA	307-24-4	1	ug/mL
PFHpS	375-92-8	1	ug/mL
PFHpA	375-85-9	1	ug/mL
PFDS	335-77-3	1	ug/mL
PFDoA	307-55-1	1	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

17D2705

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16I1414	PFDA	14-Sep-16	** Vendor **	31-May-21	15-Dec-16 08:38 by AEW	0.4
16I1415	PFHxA	14-Sep-16	** Vendor **	22-Dec-20	15-Dec-16 08:41 by AEW	0.4
16I1416	MeFOSAA	14-Sep-16	** Vendor **	20-Jan-21	04-Oct-16 08:25 by EMS	0.4
16I1417	EtFOSAA	14-Sep-16	** Vendor **	20-Jan-21	14-Sep-16 14:10 by TLD	0.4
16I1418	PFTeDA	14-Sep-16	** Vendor **	09-Dec-20	15-Dec-16 08:46 by AEW	0.4
16I3001	PFTrDA	30-Sep-16	** Vendor **	12-Feb-21	23-Jan-17 17:44 by AEW	0.4
16J0422	PFDoA	04-Oct-16	** Vendor **	31-May-21	23-Jan-17 17:22 by AEW	0.4
16J0423	FOSA-I	04-Oct-16	** Vendor **	02-Sep-17	23-Jan-17 17:49 by AEW	0.4
16J0424	PFNA	04-Oct-16	** Vendor **	23-Oct-20	23-Jan-17 17:40 by AEW	0.4
16J0425	PFPeA	04-Oct-16	** Vendor **	31-May-21	23-Jan-17 17:38 by AEW	0.4
16J0426	PFBA	04-Oct-16	** Vendor **	27-May-21	23-Jan-17 17:18 by AEW	0.4
16L0512	PFODA	05-Dec-16	** Vendor **	29-Apr-21	23-Jan-17 17:35 by AEW	0.4
17C1026	PFOA	10-Mar-17	Jamie C. Stockman	02-Feb-21	10-Mar-17 15:25 by JCS	0.4
17D2612	N-MeFOSA-M	26-Apr-17	** Vendor **	24-May-21	27-Apr-17 10:56 by INJ	2
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17D2614	N-EtFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:54 by INJ	2
17D2616	PFUdA	26-Apr-17	** Vendor **	18-Oct-21	12-Jun-17 09:32 by AEW	0.4
17D2617	PFHxDA	26-Apr-17	** Vendor **	25-May-21	12-Jun-17 16:08 by AEW	0.4
17D2618	PFHpA	26-Apr-17	** Vendor **	02-Dec-21	09-Jun-17 14:56 by AEW	0.4
17D2621	N-MeFOSE-M	26-Apr-17	** Vendor **	10-Nov-20	27-Apr-17 10:47 by INJ	2
17D2706	L-PFBS anion DIL	27-Apr-17	Emilie Schneider	27-Apr-18	27-Apr-17 13:48 by EMS	0.8
17D2709	8:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:28 by INJ	0.8
17D2715	6:2 FTS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:01 by AEW	0.8
17D2716	L-PFDS anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 09:34 by AEW	0.8
17D2717	Br-PFOSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	27-Apr-17 14:46 by INJ	0.8
17D2718	Br-PFHxSK anion DIL	27-Apr-17	Isaac N. Johnson	27-Apr-18	12-Jun-17 08:51 by AEW	0.8
17D2813	L-PFHpS anion DIL	28-Apr-17	Isaac N. Johnson	28-Apr-18	12-Jun-17 09:07 by AEW	0.8

Description:	PFC NS Stock	Expires:	27-Apr-18
Standard Type:	Analyte Spike	Prepared:	27-Apr-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	12-Jun-17 16:08 by AEW

PFOS and PFHxS branched components

Analyte	CAS Number	Concentration	Units
PFDA	335-76-2	1	ug/mL
PFBS	375-73-5	1	ug/mL
PFBA	375-22-4	1	ug/mL
MeFOSE	24448-09-7	5	ug/mL
MeFOSAA	2355-31-9	1	ug/mL
PFOA	335-67-1	1	ug/mL

16I1414

WELLINGTON LABORATORIES

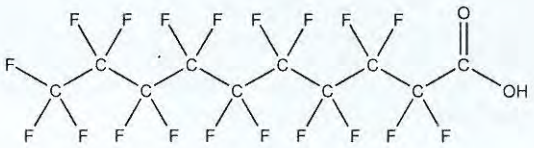
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFDA ✓
COMPOUND: Perfluoro-n-decanoic acid

LOT NUMBER: PFDA0516 ✓

STRUCTURE:

CAS #: 335-76-2



MOLECULAR FORMULA: $C_{10}HF_{19}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml ✓

MOLECULAR WEIGHT: 514.08
SOLVENT(S): Methanol ✓
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/31/2016
EXPIRY DATE: (mm/dd/yyyy) 05/31/2021 ✓
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of Perfluoro-n-nonanoic acid (PFNA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/13/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

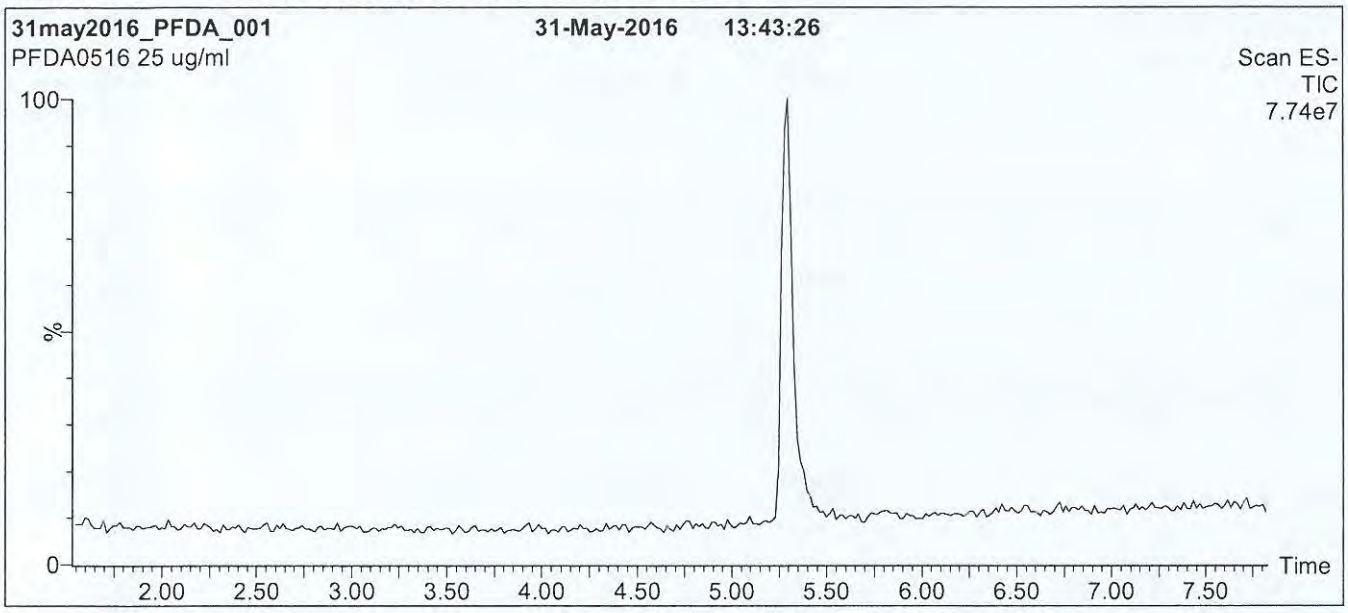
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

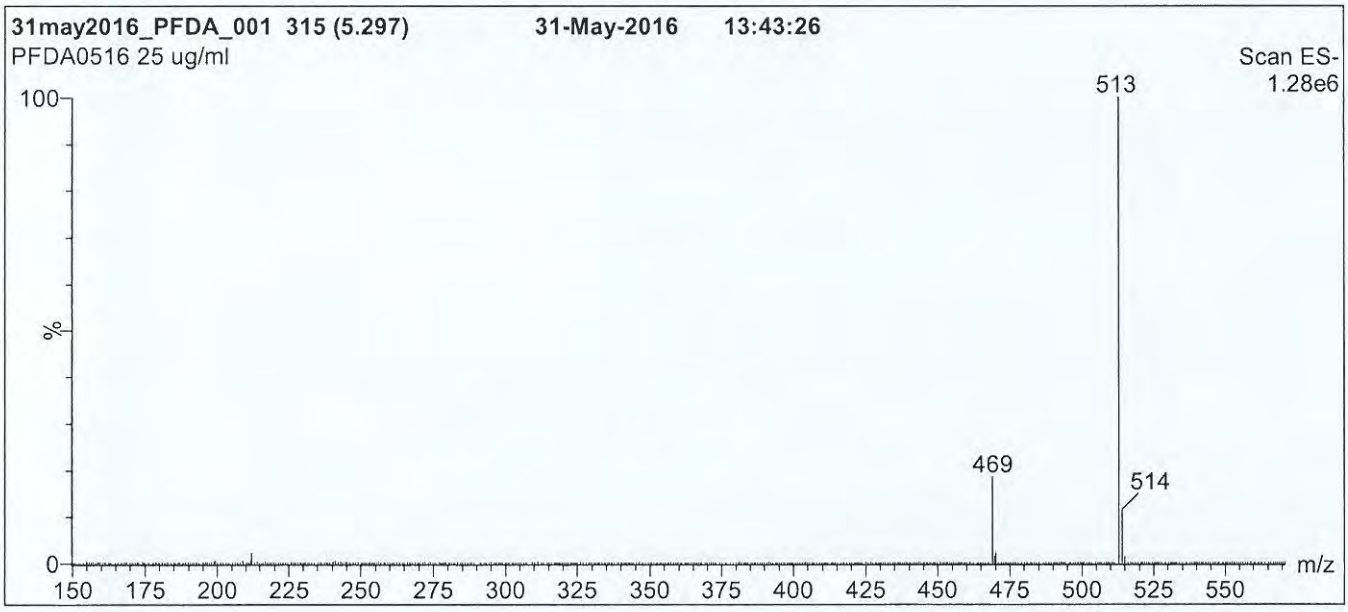
CALA Testing

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **PFDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

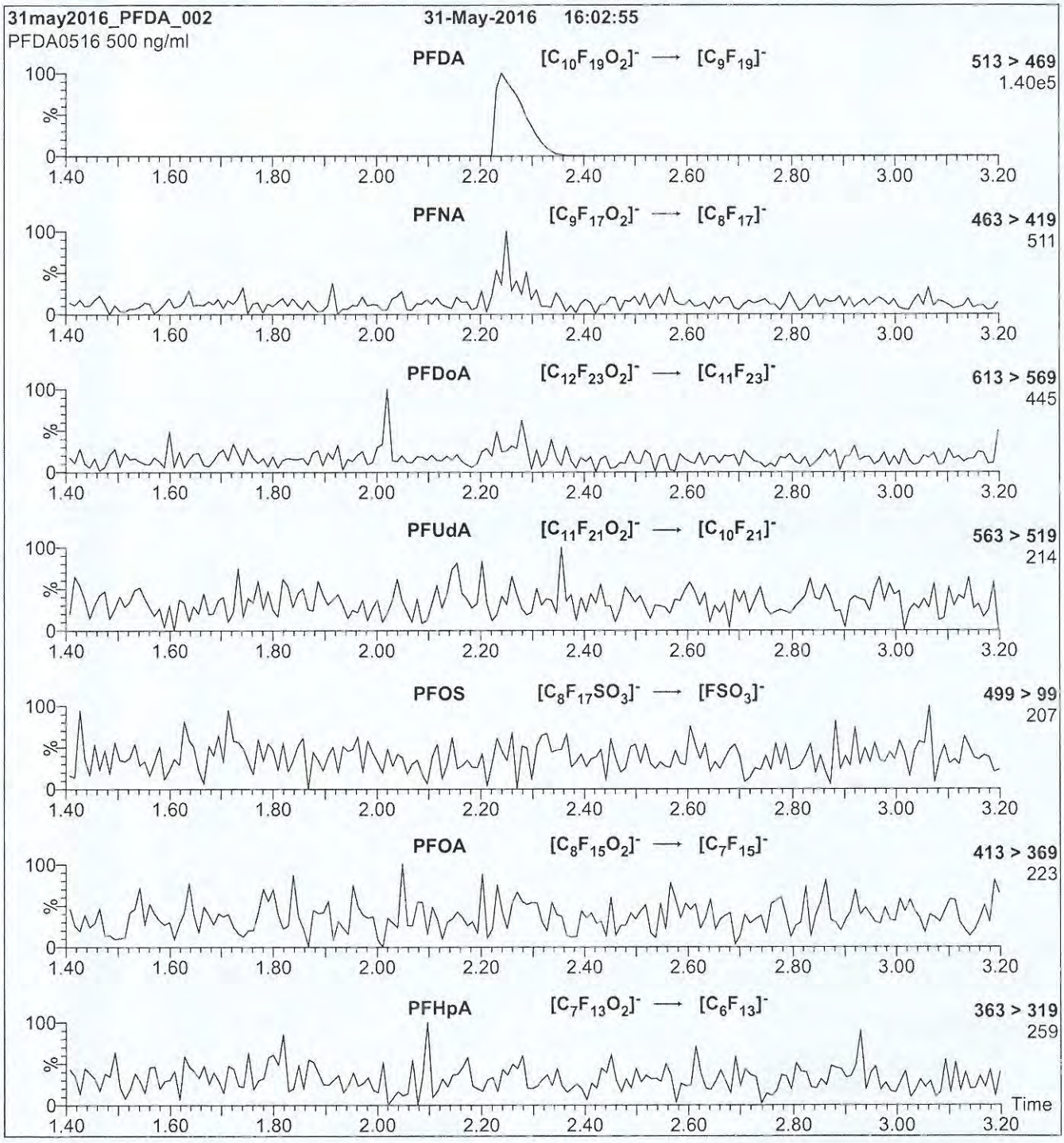
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFDA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 13

16I1415

WELLINGTON LABORATORIES

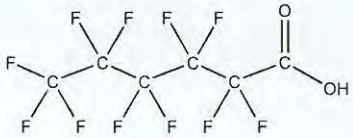
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFHxA ✓
COMPOUND: Perfluoro-n-hexanoic acid

LOT NUMBER: PFHxA1215 ✓

STRUCTURE:

CAS #: 307-24-4



MOLECULAR FORMULA: $C_6HF_{11}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml ✓

MOLECULAR WEIGHT: 314.05
SOLVENT(S): Methanol ✓
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 12/22/2015
EXPIRY DATE: (mm/dd/yyyy) 12/22/2020 ✓
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of Perfluoro-n-pentanoic acid (PFPeA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 12/23/2015 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

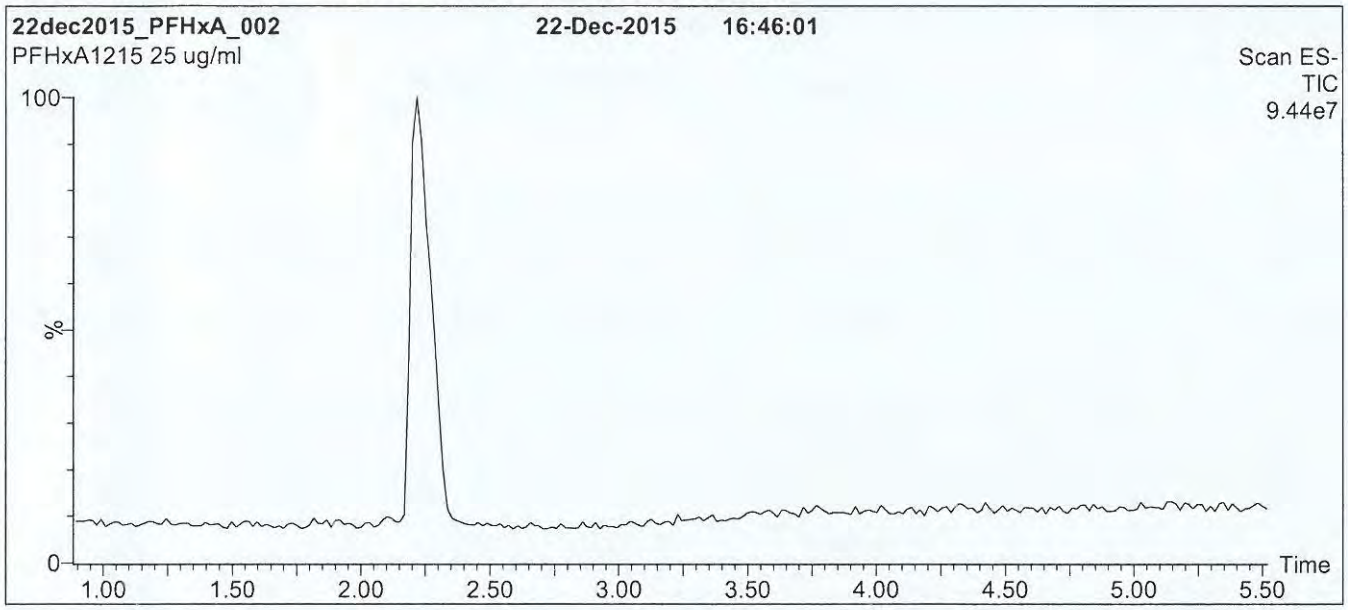
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

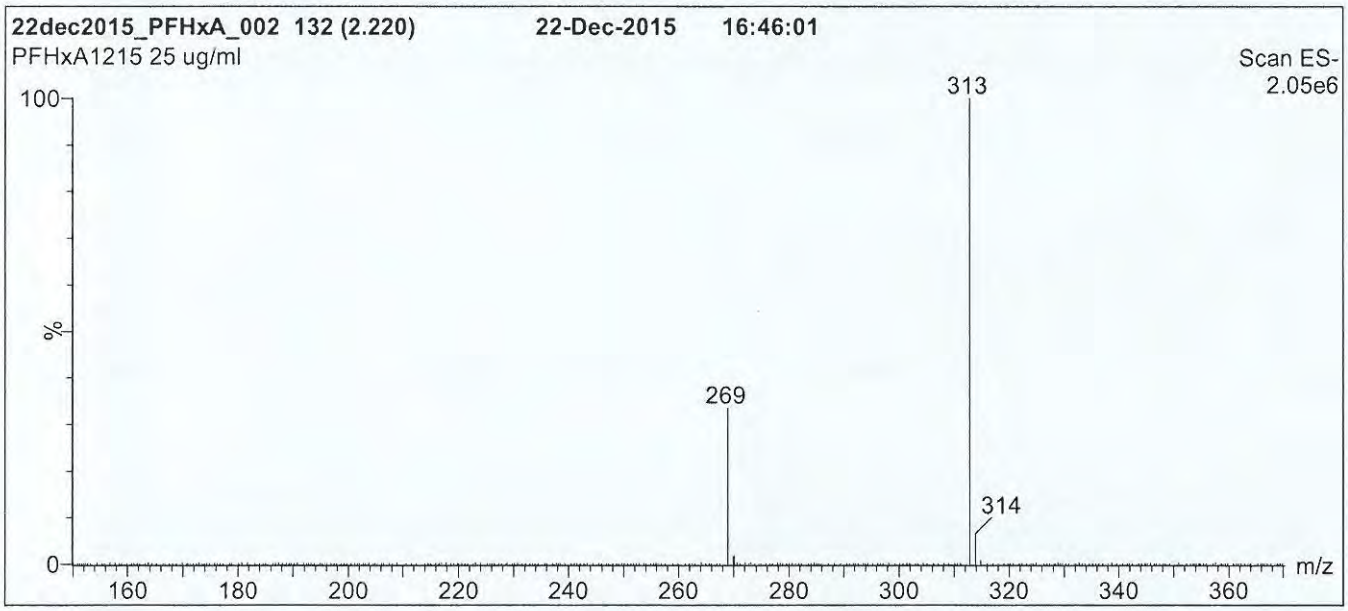
CALA Testing

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **PFHxA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min before returning to initial conditions in 0.5 min.
Time: 10 min

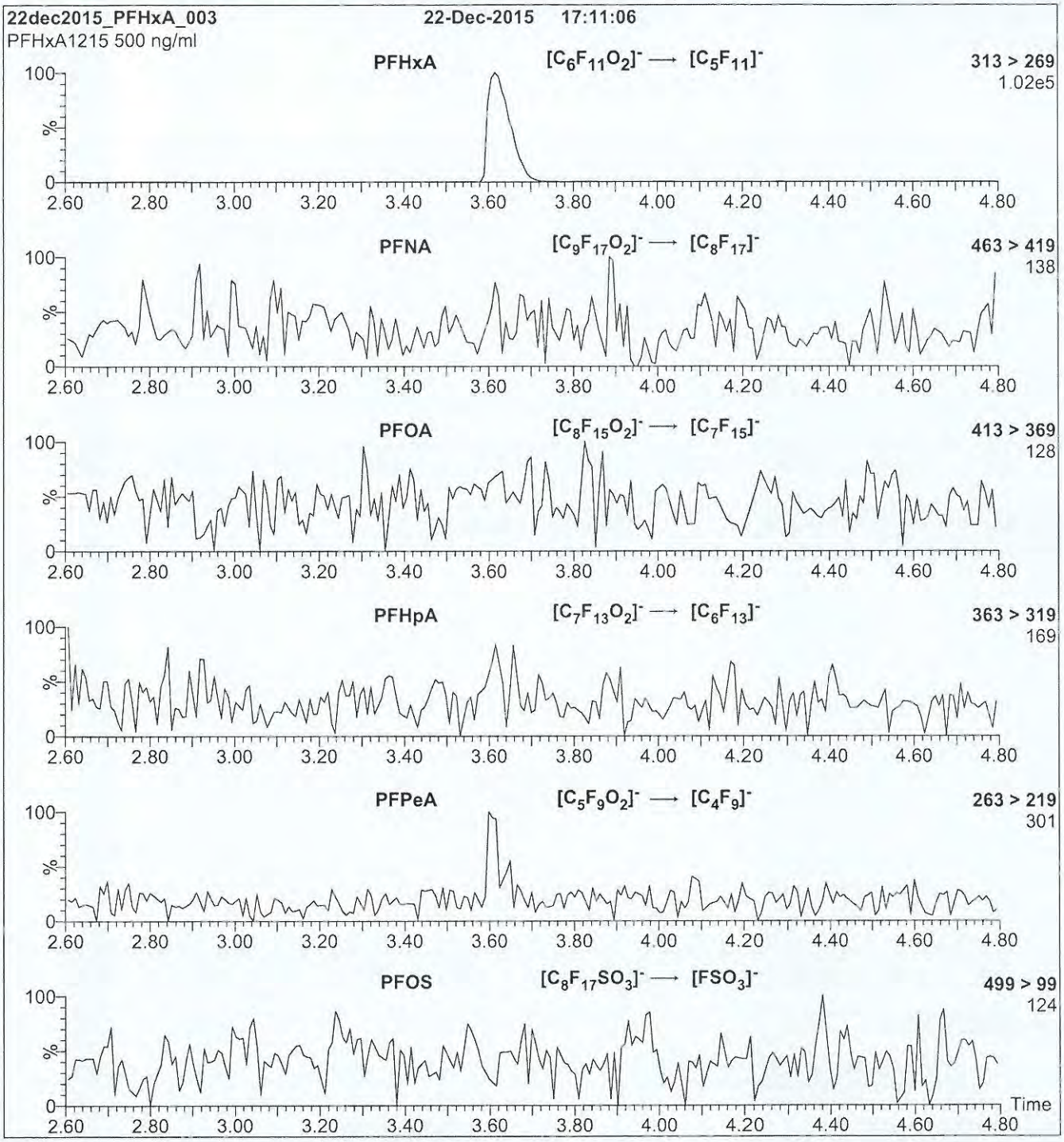
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFHxA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 10

16I 1416

WELLINGTON LABORATORIES

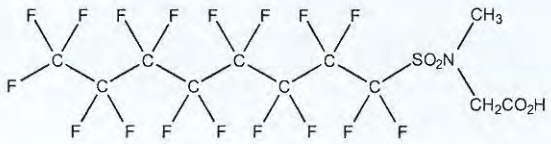
CERTIFICATE OF ANALYSIS DOCUMENTATION

MeFOSAA

PRODUCT CODE: N-MeFOSAA **LOT NUMBER:** NMeFOSAA0116

COMPOUND: N-methylperfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** 2355-31-9



MOLECULAR FORMULA: $C_{11}H_6F_{17}NO_4S$ **MOLECULAR WEIGHT:** 571.21

CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol, Water (<1%)

CHEMICAL PURITY: >98%

LAST TESTED: (mm/dd/yyyy) 01/20/2016

EXPIRY DATE: (mm/dd/yyyy) 01/20/2021

RECOMMENDED STORAGE: Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 01/21/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

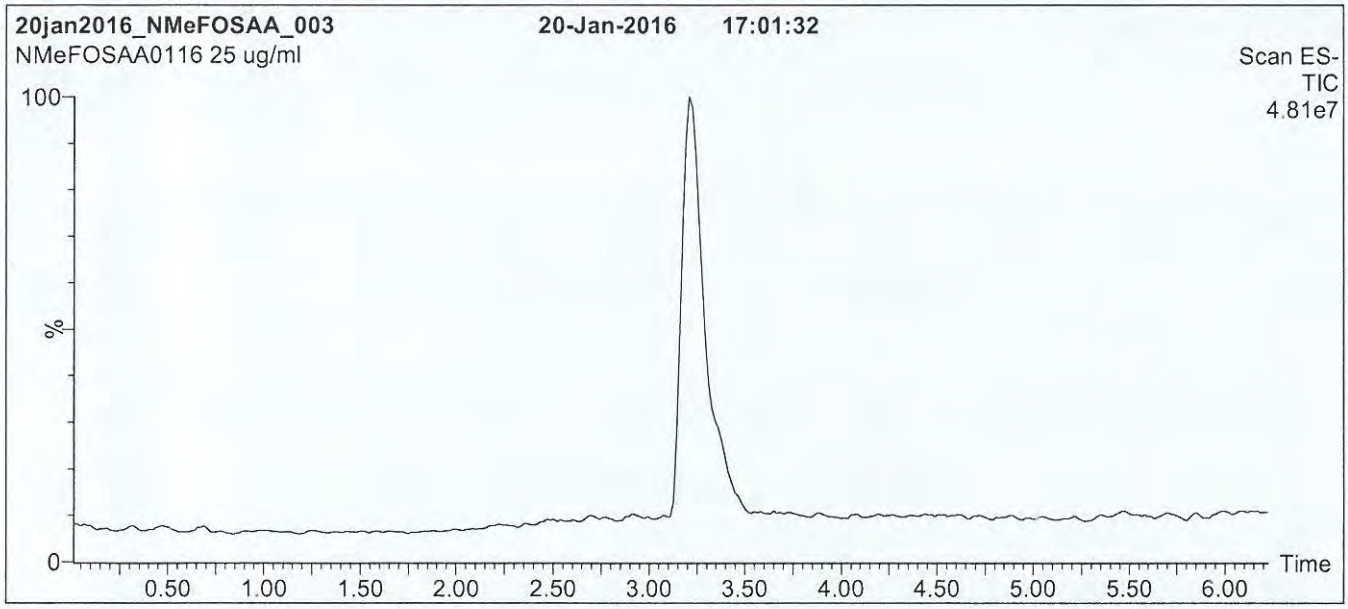
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

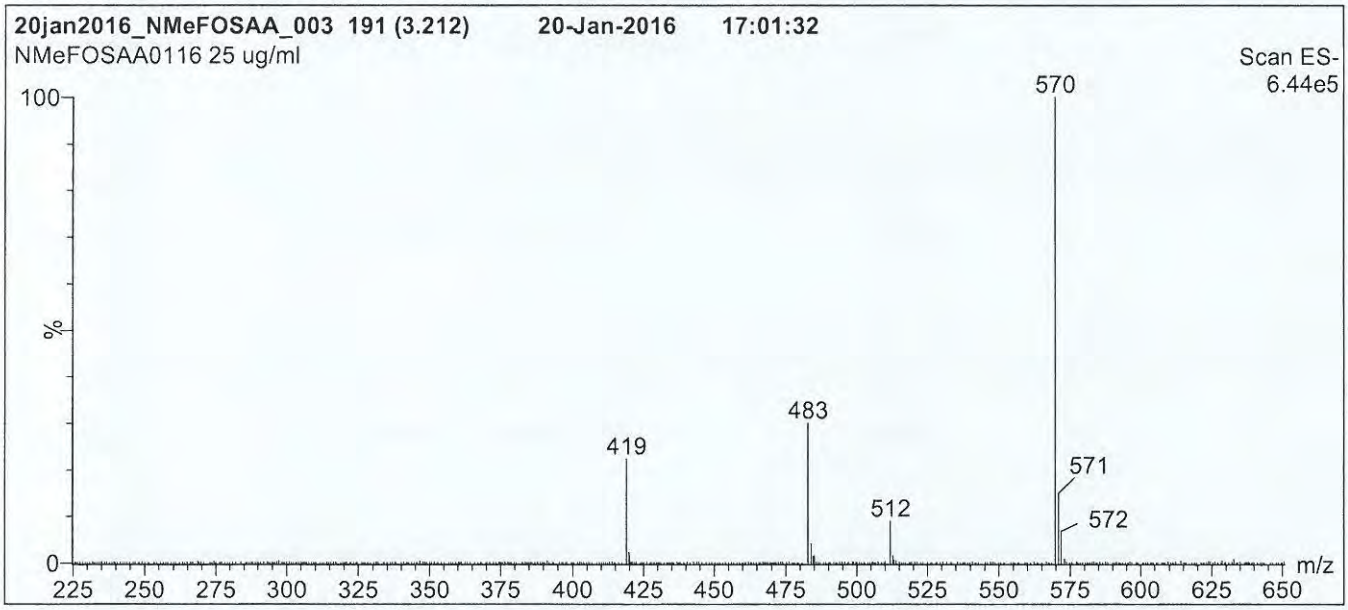
CALA Testing Accreditation No. A 1226

ANAB ACCREDITED Accreditation No. AR-1523 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **N-MeFOSAA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

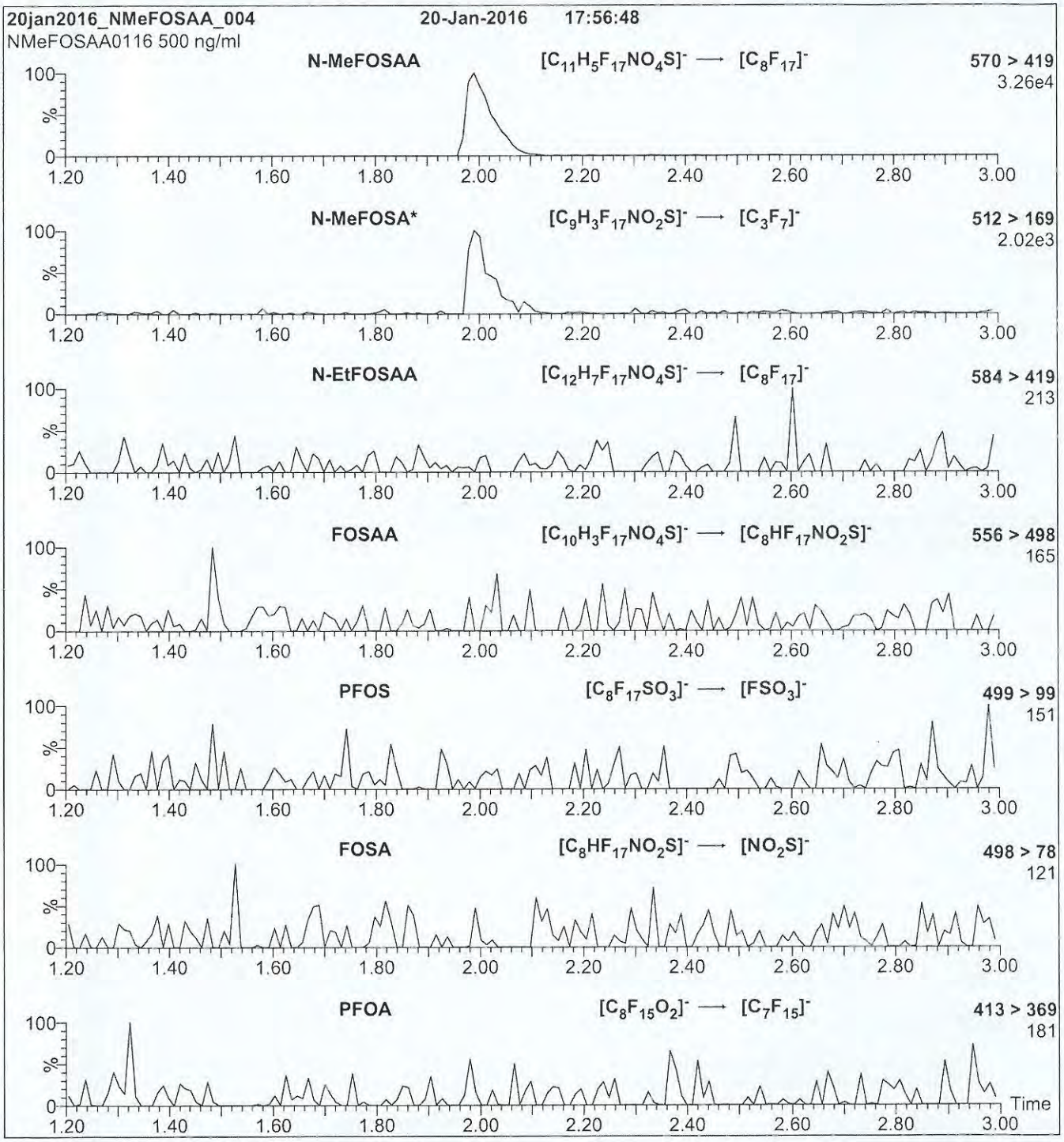
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **N-MeFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



***Note**: N-MeFOSA is formed by in-source fragmentation.

Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml N-MeFOSAA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.66e-3
Collision Energy (eV) = 25

16I1417

WELLINGTON LABORATORIES

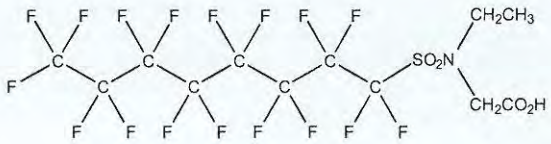
CERTIFICATE OF ANALYSIS DOCUMENTATION

EtFOSAA

PRODUCT CODE: N-EtFOSAA **LOT NUMBER:** NEtFOSAA0116

COMPOUND: N-ethylperfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** 2991-50-6



MOLECULAR FORMULA: $C_{12}H_8F_{17}NO_4S$ **MOLECULAR WEIGHT:** 585.23

CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol, Water (<1%)

CHEMICAL PURITY: >98%

LAST TESTED: (mm/dd/yyyy) 01/20/2016

EXPIRY DATE: (mm/dd/yyyy) 01/20/2021

RECOMMENDED STORAGE: Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 01/21/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED

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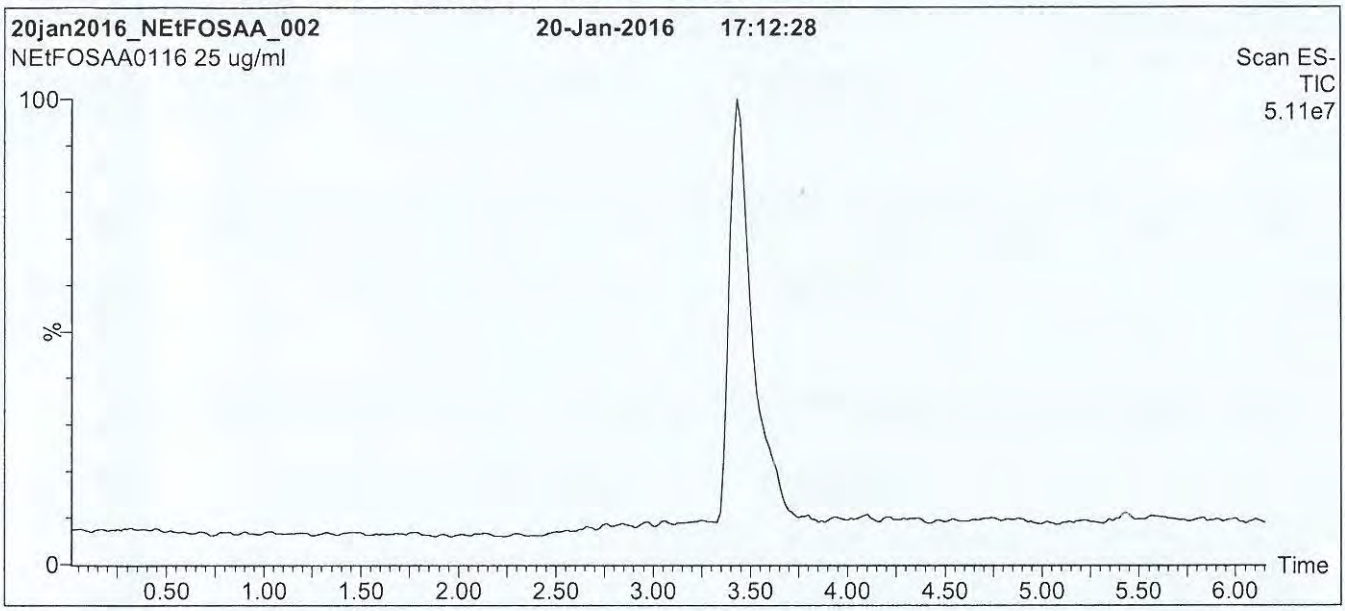
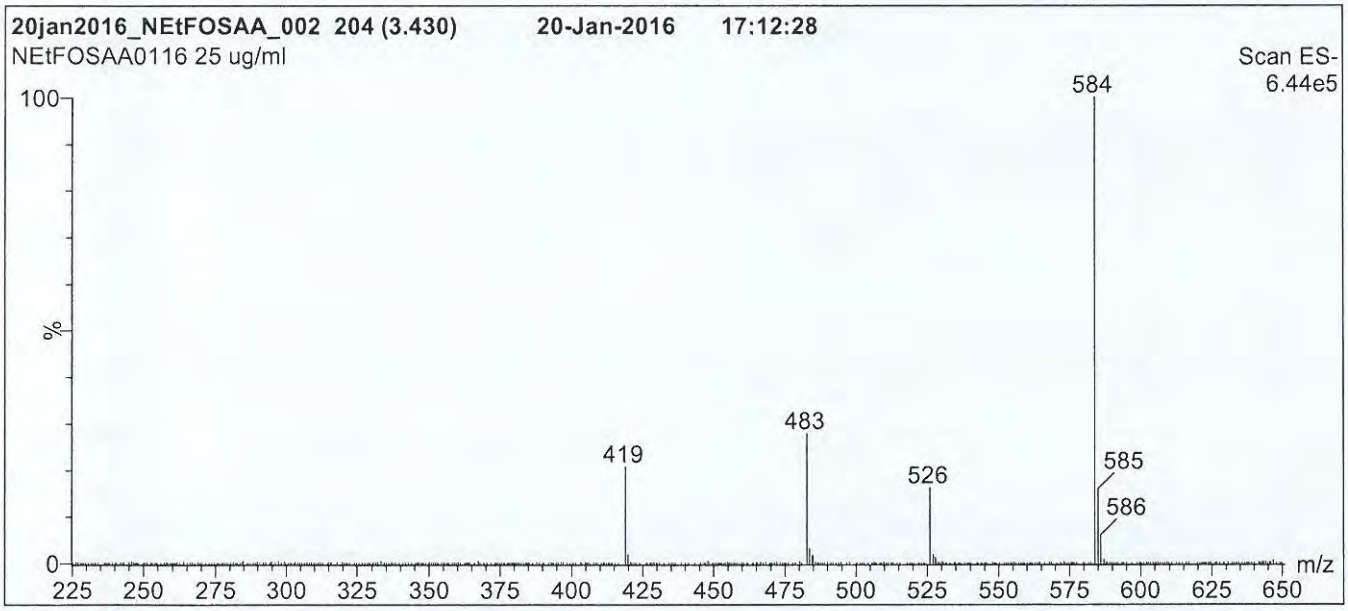
Figure 1: **N-EtFOSAA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

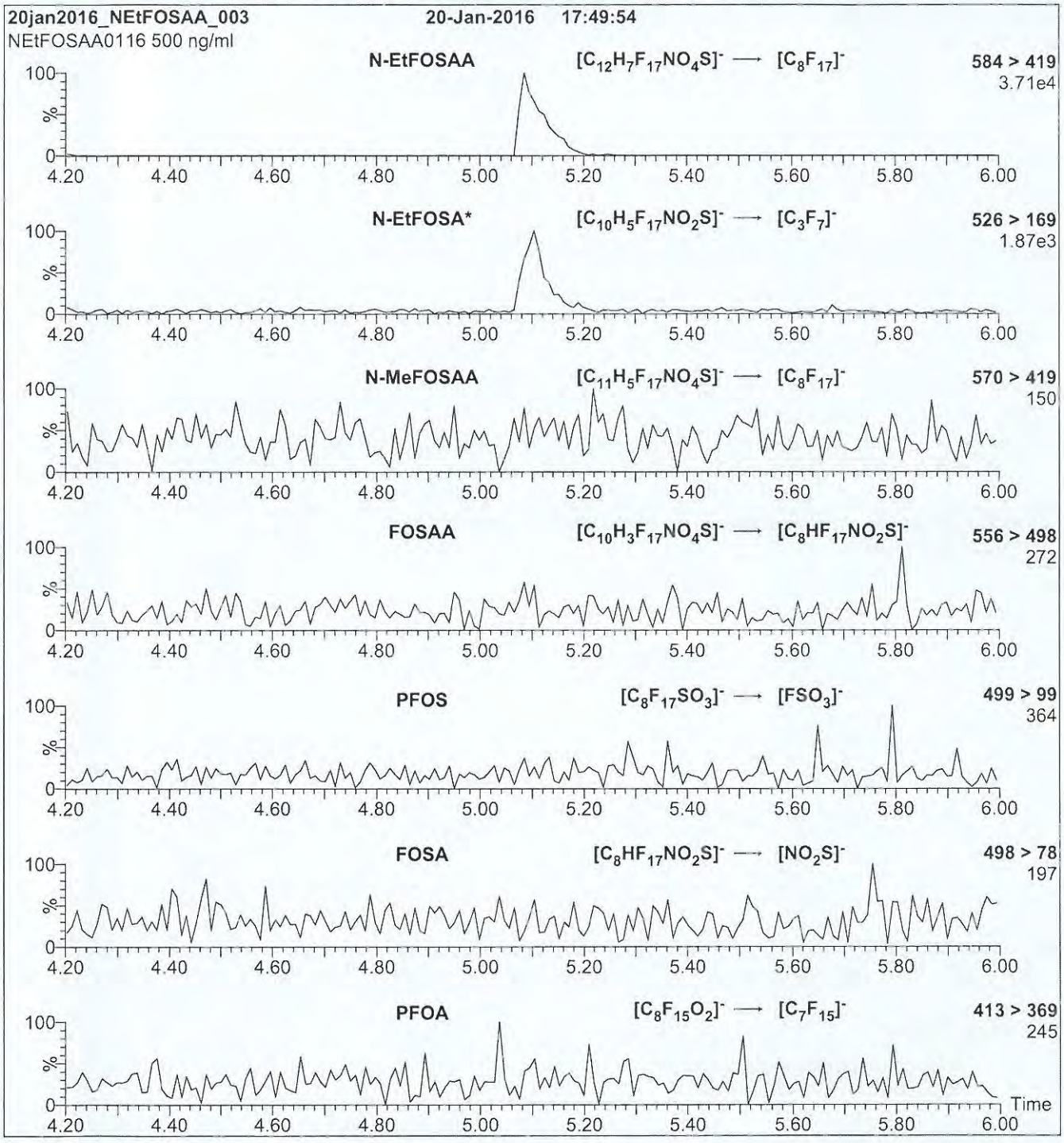
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **N-EtFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



Note: N-EtFOSA is formed by fragmentation of N-EtFOSAA.

Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml N-EtFOSAA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.66e-3
Collision Energy (eV) = 25

16I1418

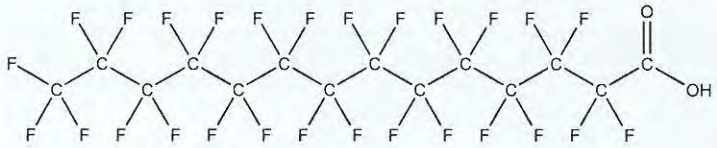
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFTeDA

PRODUCT CODE: PFTeDA
COMPOUND: Perfluoro-n-tetradecanoic acid
LOT NUMBER: PFTeDA1215

STRUCTURE:



CAS #: 376-06-7

MOLECULAR FORMULA: $C_{14}HF_{27}O_2$
MOLECULAR WEIGHT: 714.11
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 12/09/2015
EXPIRY DATE: (mm/dd/yyyy) 12/09/2020
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of PFDoA ($C_{12}HF_{23}O_2$) and ~ 0.2% of PFPeDA ($C_{15}HF_{29}O_2$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 12/09/2015 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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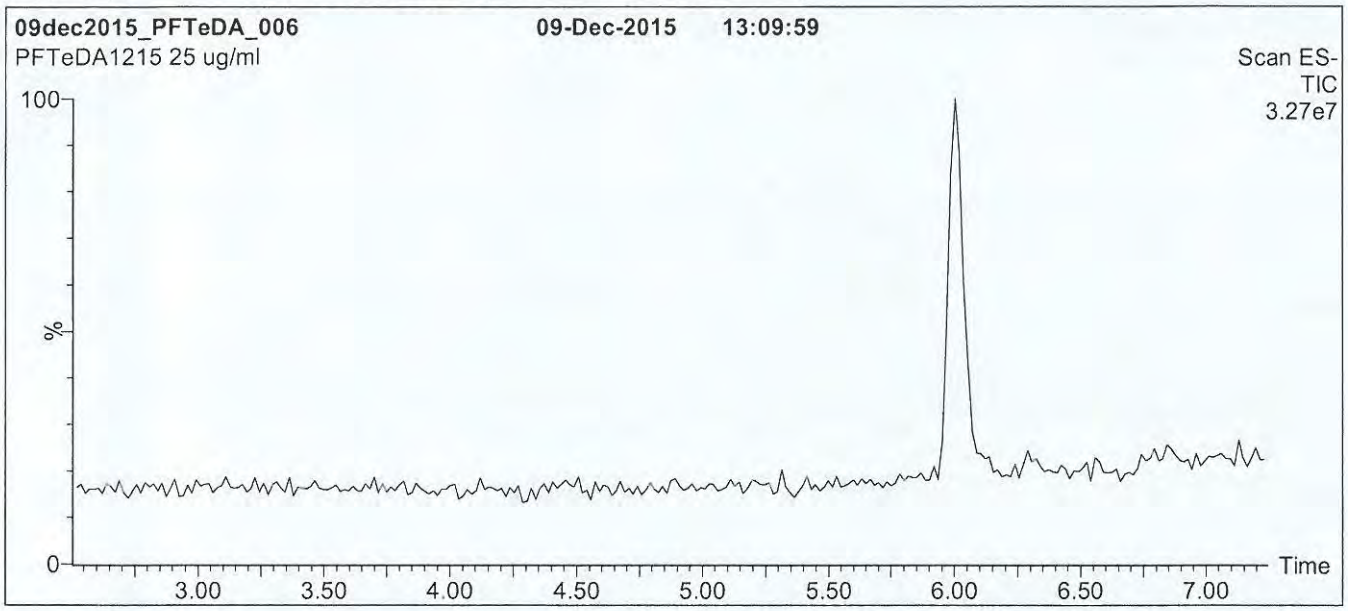
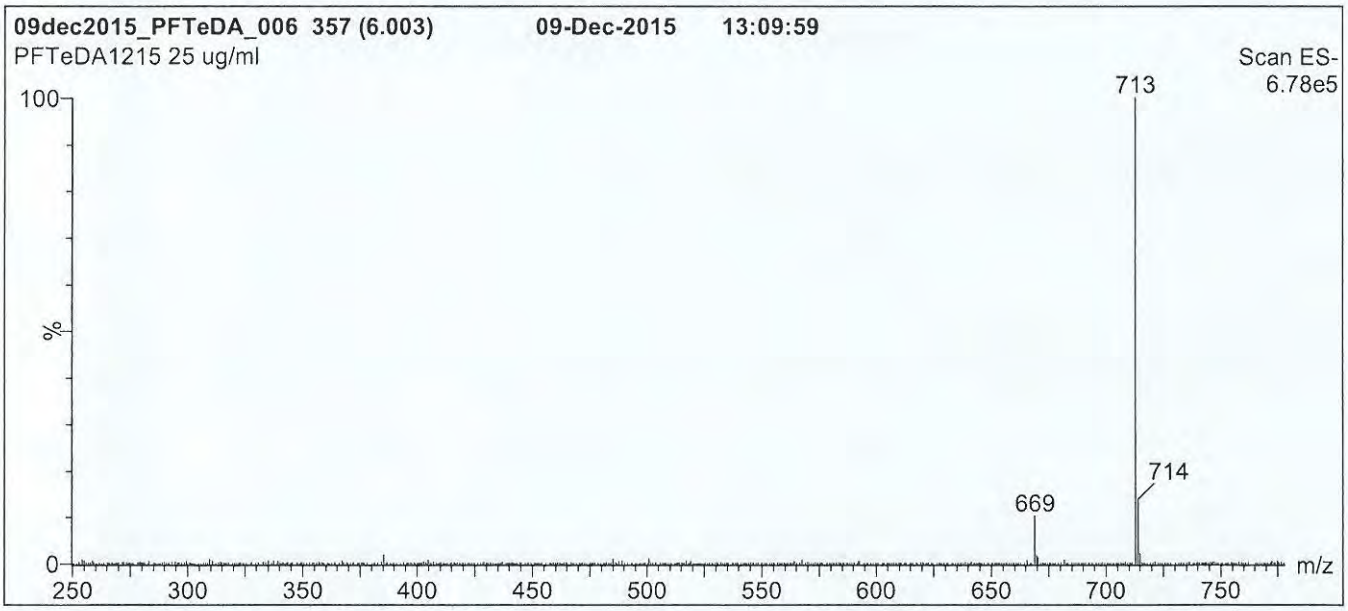
CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **PFTeDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 65% (80:20 MeOH:ACN) / 35% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

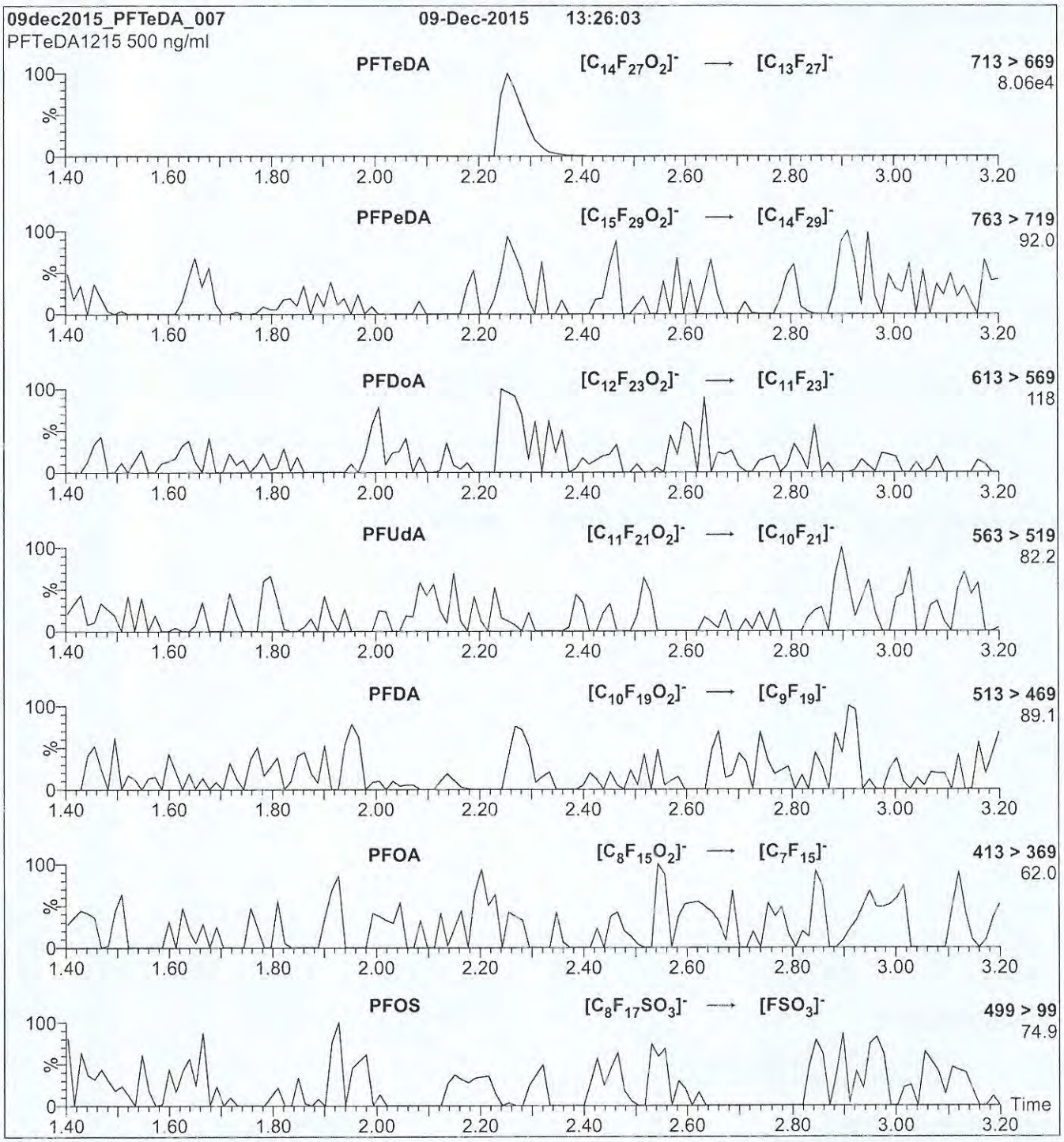
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 1250 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFTeDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFTeDA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 14

16I3001

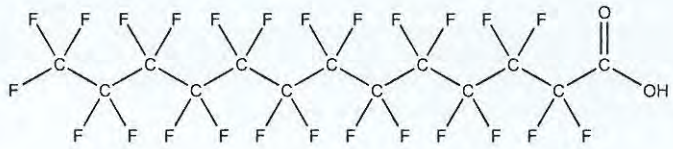
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTrDA
COMPOUND: Perfluoro-n-tridecanoic acid
LOT NUMBER: PFTrDA0216

STRUCTURE:

CAS #: 72629-94-8



MOLECULAR FORMULA: $C_{13}HF_{25}O_2$
MOLECULAR WEIGHT: 664.11
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 02/12/2016
EXPIRY DATE: (mm/dd/yyyy) 02/12/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of PFUdA ($C_{11}HF_{21}O_2$), ~ 0.4% of PFDoA ($C_{12}HF_{23}O_2$), and ~ 0.1% of PFTeDA ($C_{14}HF_{27}O_2$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 02/16/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

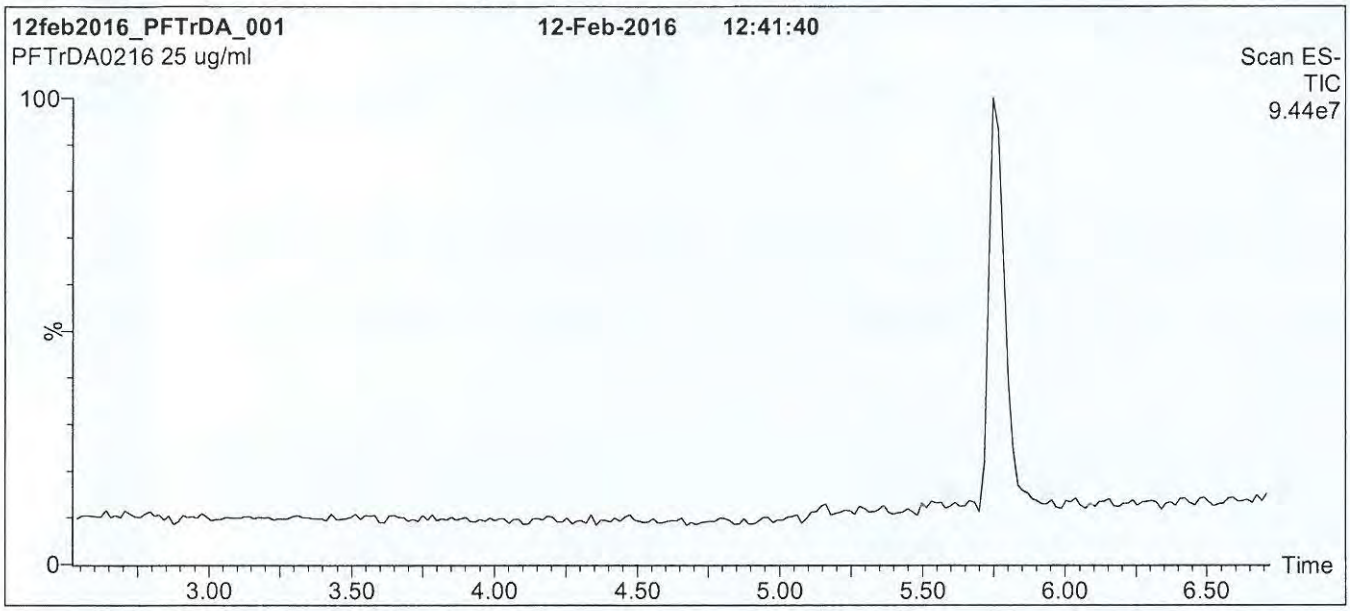
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

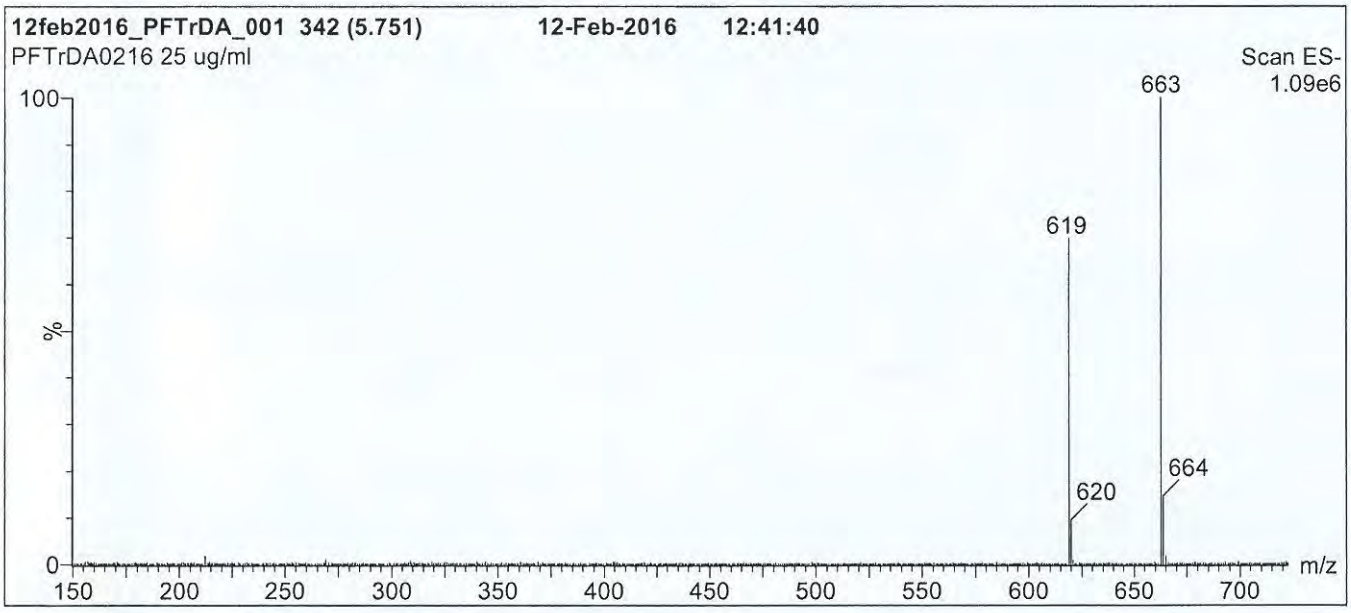
CALA Testing

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **PFTrDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

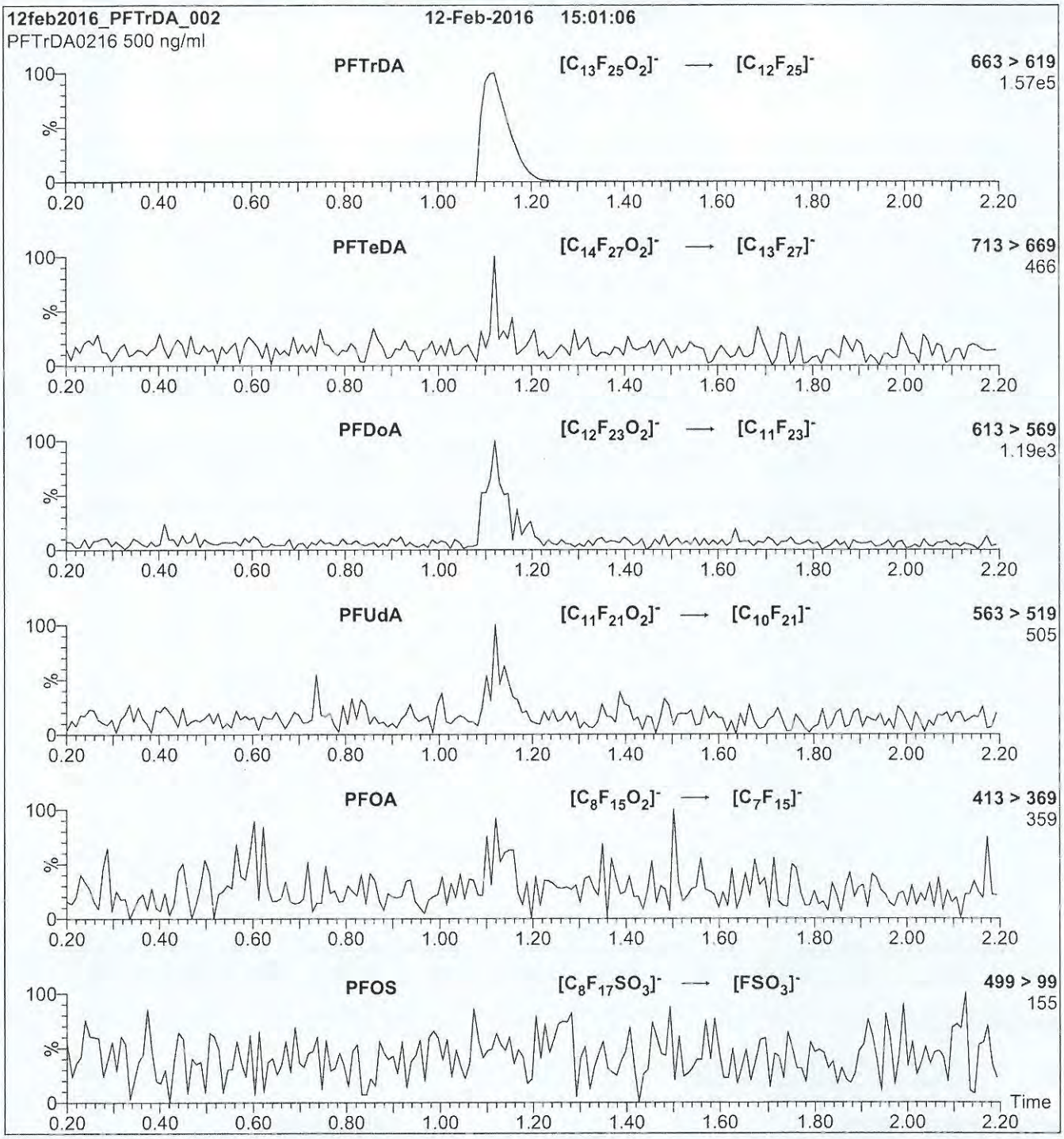
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 22.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 650

Figure 2: **PFTrDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFTrDA)

Mobile phase: Isocratic 80% MeOH / 20% H_2O

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 15

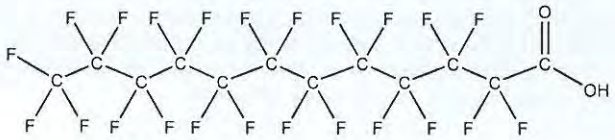
16J0422

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFDoA
COMPOUND: Perfluoro-n-dodecanoic acid
LOT NUMBER: PFDoA0516

STRUCTURE:
CAS #: 307-55-1



MOLECULAR FORMULA: $C_{12}HF_{23}O_2$
MOLECULAR WEIGHT: 614.10
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/31/2016
EXPIRY DATE: (mm/dd/yyyy) 05/31/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/02/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED Reference Material Producer

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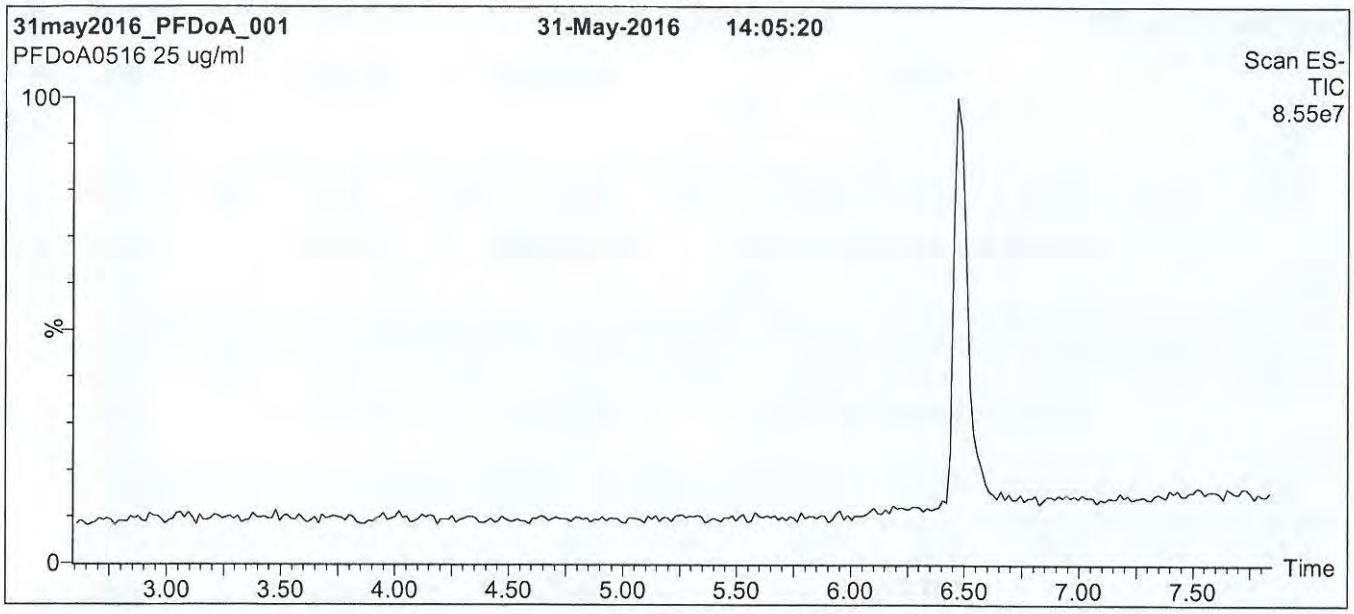
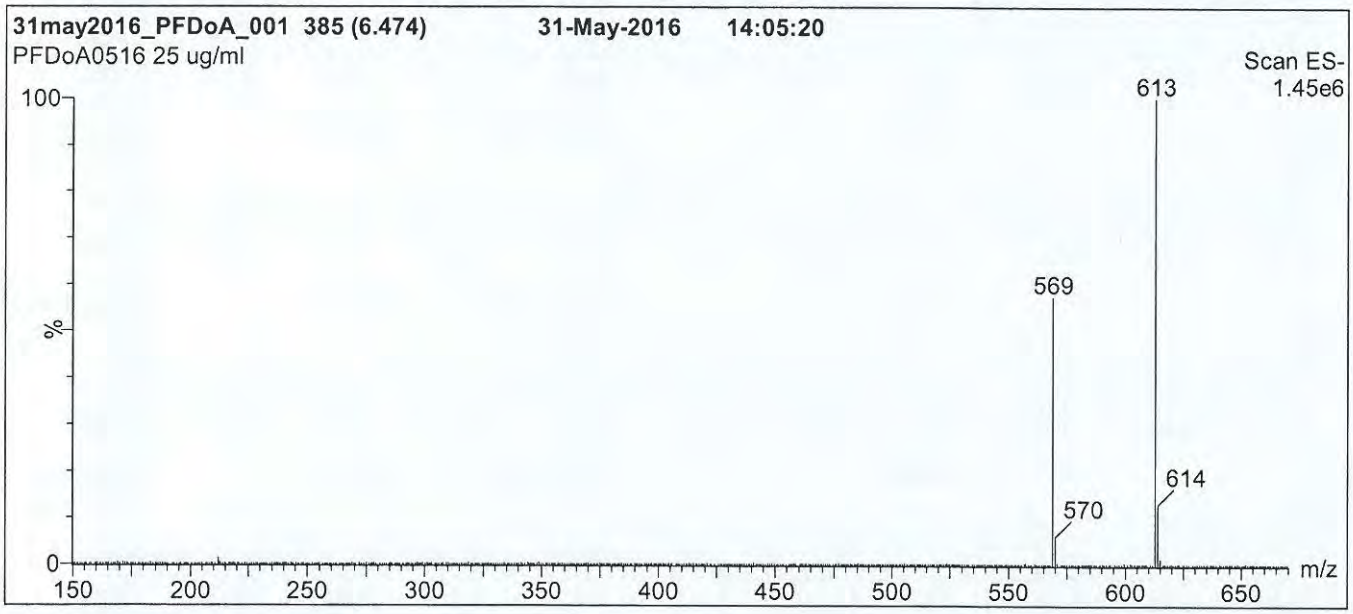
Figure 1: **PFDoA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for
1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

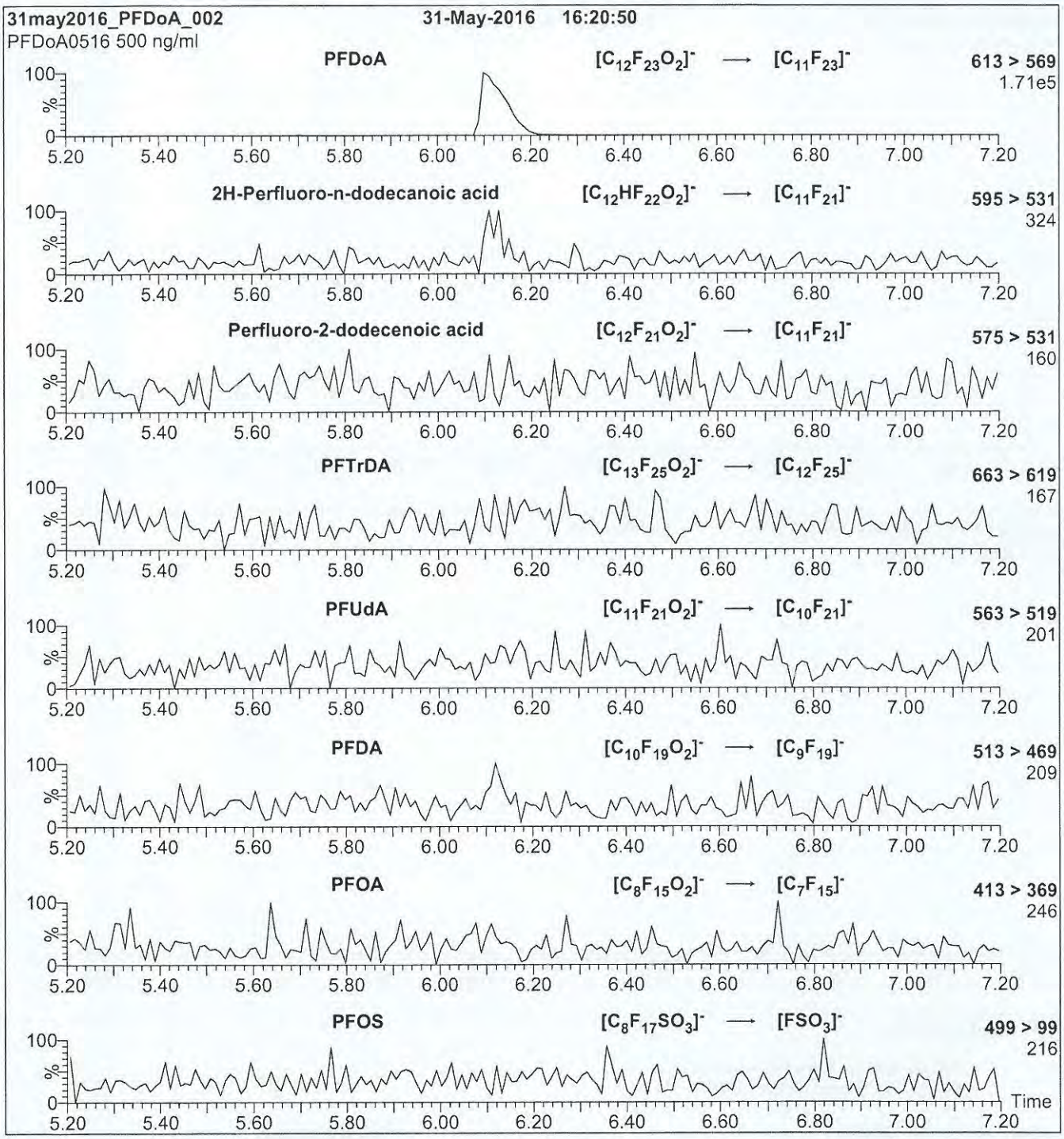
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFDoA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFDoA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

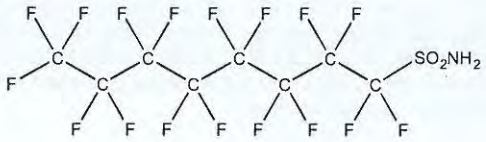
Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 13

16J0423

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	FOSA-I	**LOT NUMBER:**	FOSA0815I
COMPOUND:	Perfluoro-1-octanesulfonamide		
STRUCTURE:		**CAS #:**	754-91-6



MOLECULAR FORMULA:	$C_8H_2F_{17}NO_2S$	**MOLECULAR WEIGHT:**	499.14
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Isopropanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	09/02/2015		
EXPIRY DATE: (mm/dd/yyyy)	09/02/2017		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 09/11/2015 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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HOMOGENEITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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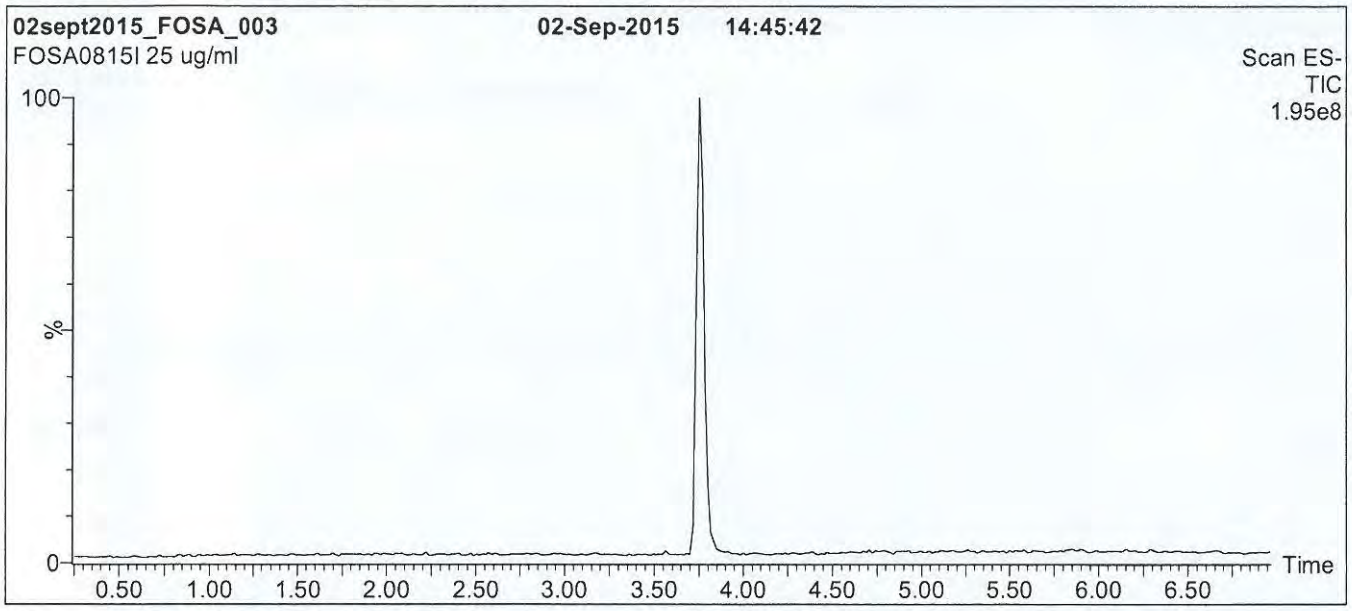
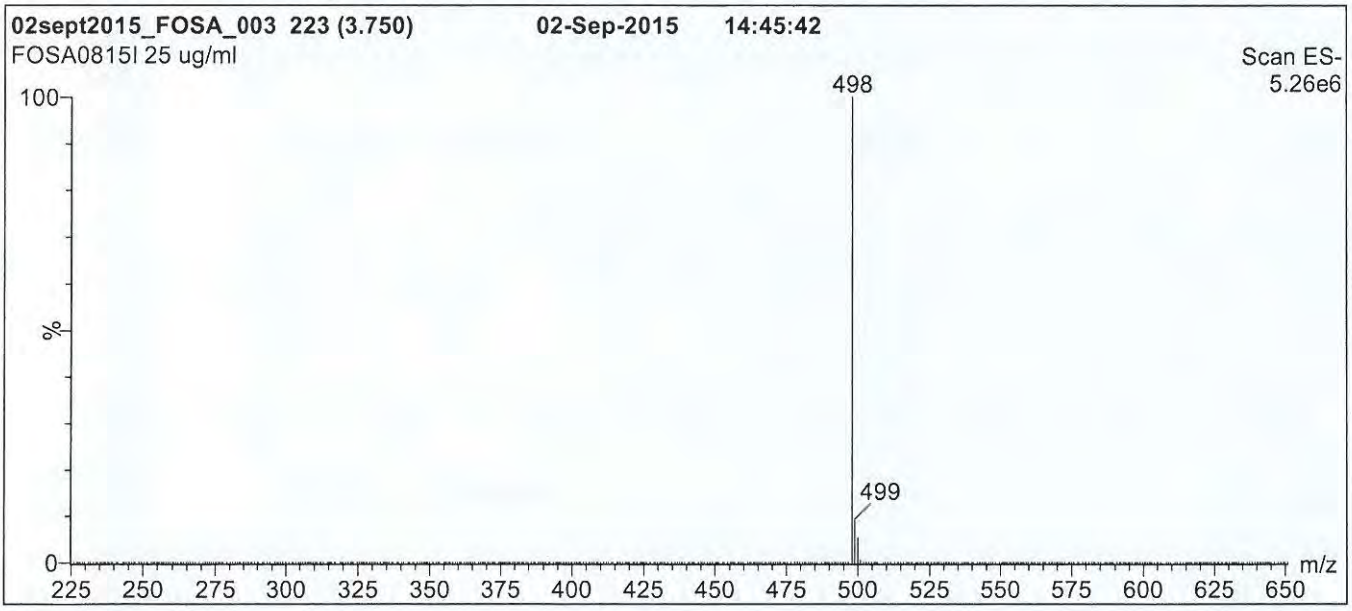
Figure 1: **FOSA-I; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

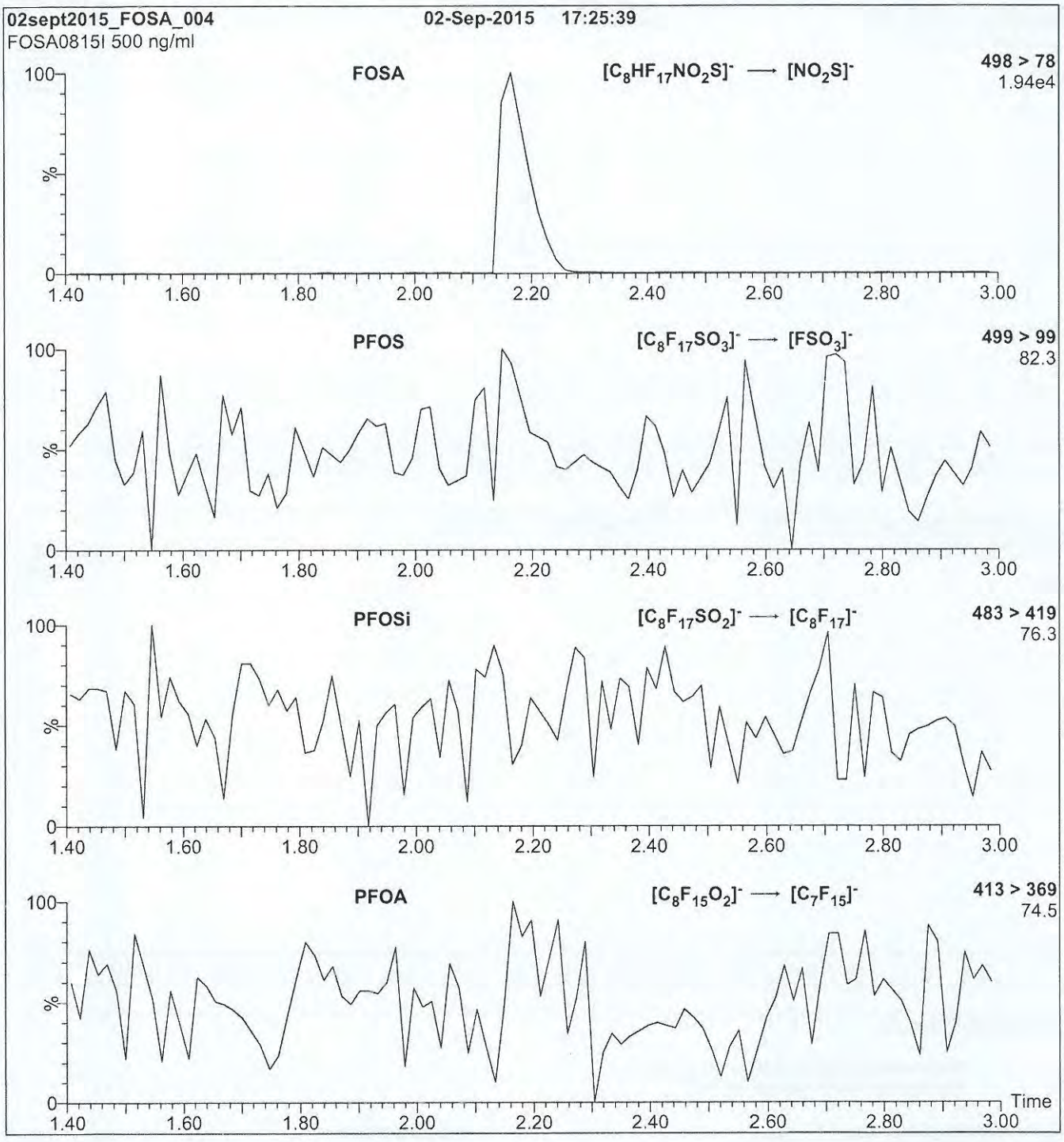
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 40.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **FOSA-I; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml FOSA-I)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.54e-3
Collision Energy (eV) = 30

16J0424

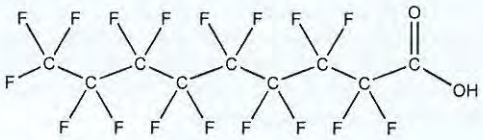
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFNA
COMPOUND: Perfluoro-n-nonanoic acid
LOT NUMBER: PFNA1015

STRUCTURE:

CAS #: 375-95-1



MOLECULAR FORMULA: $C_9HF_{17}O_2$
MOLECULAR WEIGHT: 464.08
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/23/2015
EXPIRY DATE: (mm/dd/yyyy) 10/23/2020
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of perfluoro-n-octanoic acid (PFOA) and < 0.1% of perfluoro-n-heptanoic acid (PFHpA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 10/30/2015 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2,...x_n$ on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

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CALA Testing

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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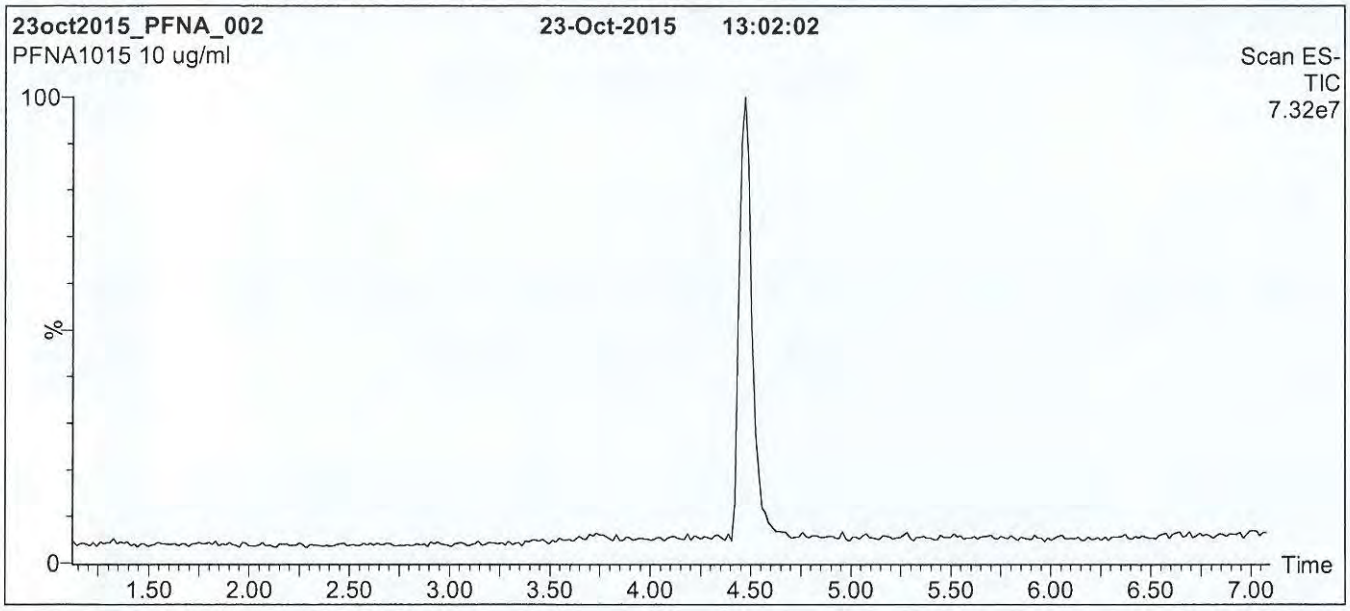
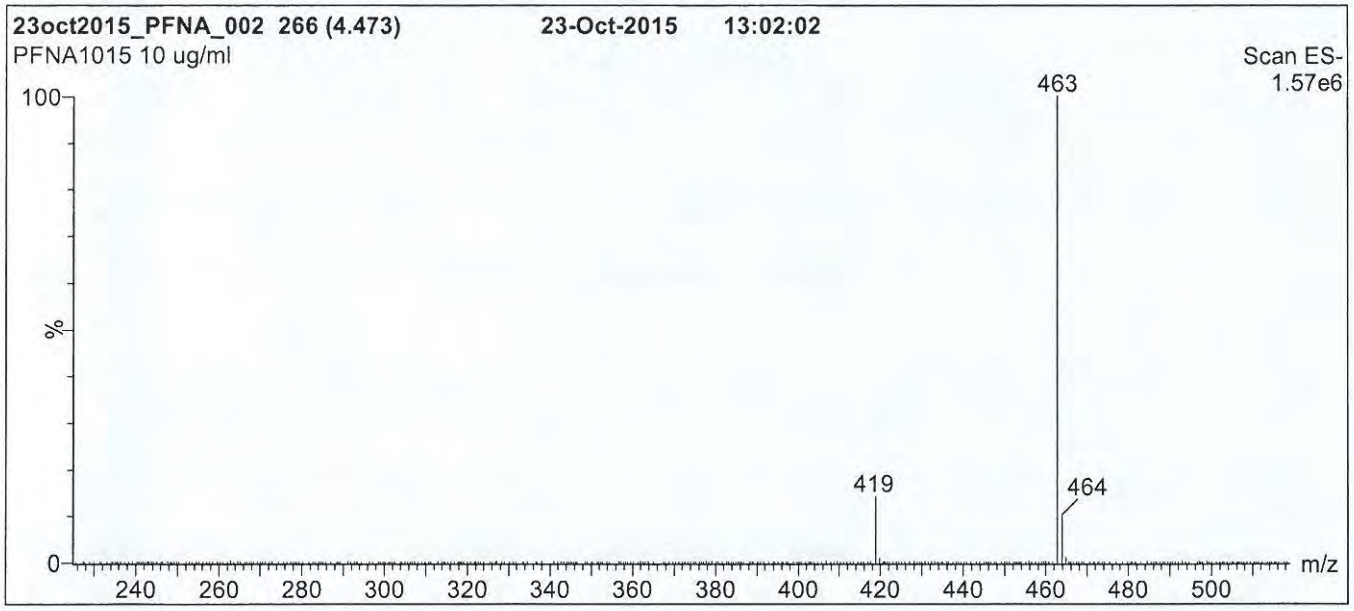
Figure 1: **PFNA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 10 min

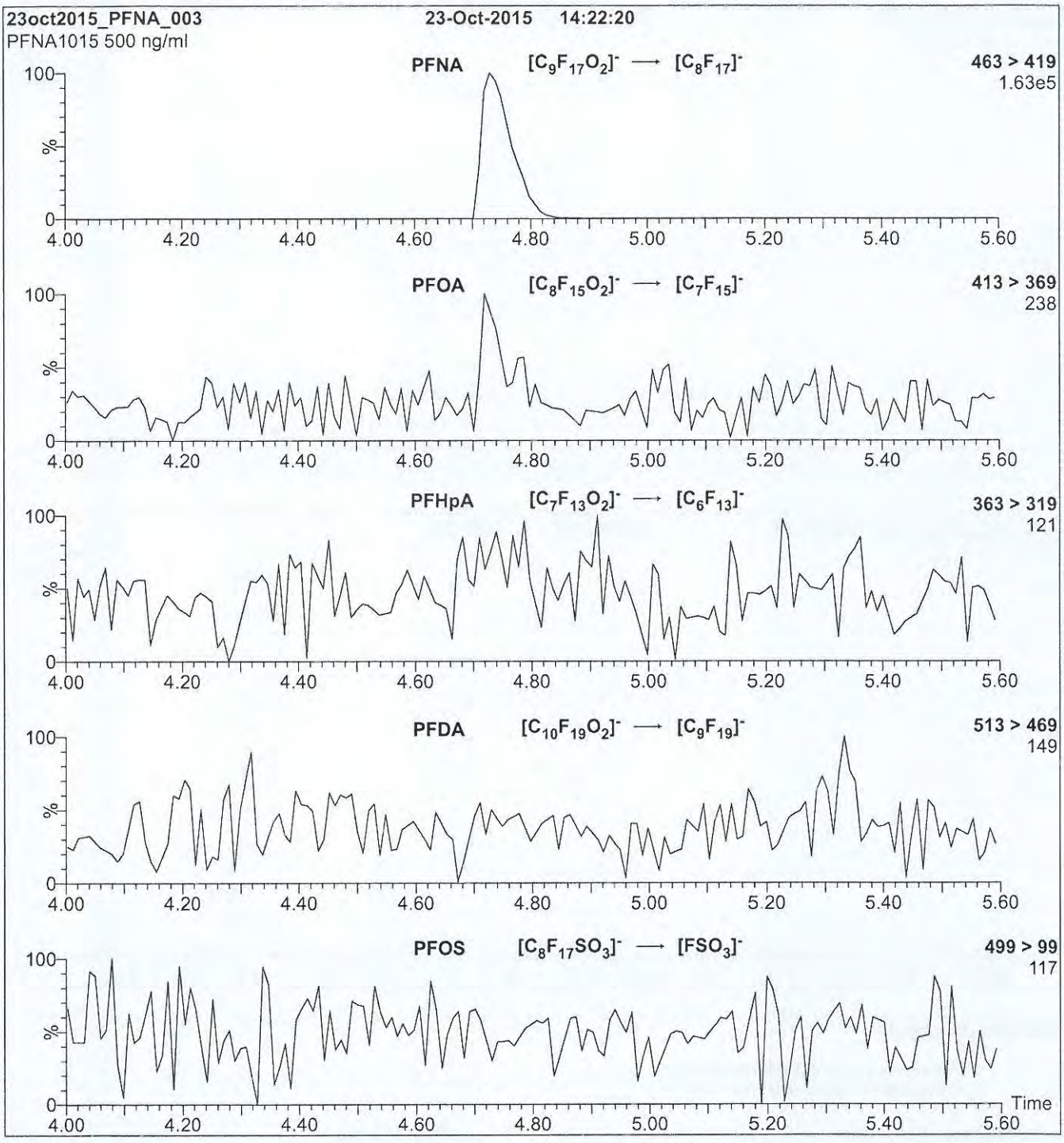
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFNA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

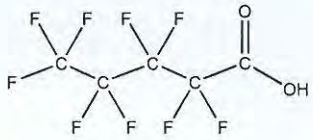
Collision Gas (mbar) = 3.28e-3
Collision Energy (eV) = 11

16 JUN 25

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFPeA	**LOT NUMBER:**	PFPeA0516
COMPOUND:	Perfluoro-n-pentanoic acid		
STRUCTURE:		**CAS #:**	2706-90-3



MOLECULAR FORMULA:	$C_5HF_9O_2$	**MOLECULAR WEIGHT:**	264.05
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	05/31/2016		
EXPIRY DATE: (mm/dd/yyyy)	05/31/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.3% of Perfluoro-n-heptanoic acid (PFHpA) and ~ 0.2% of $C_5H_2F_8O_2$ (hydrido - derivative) as measured by ^{19}F NMR.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/02/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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CALA

ANAB ACCREDITED

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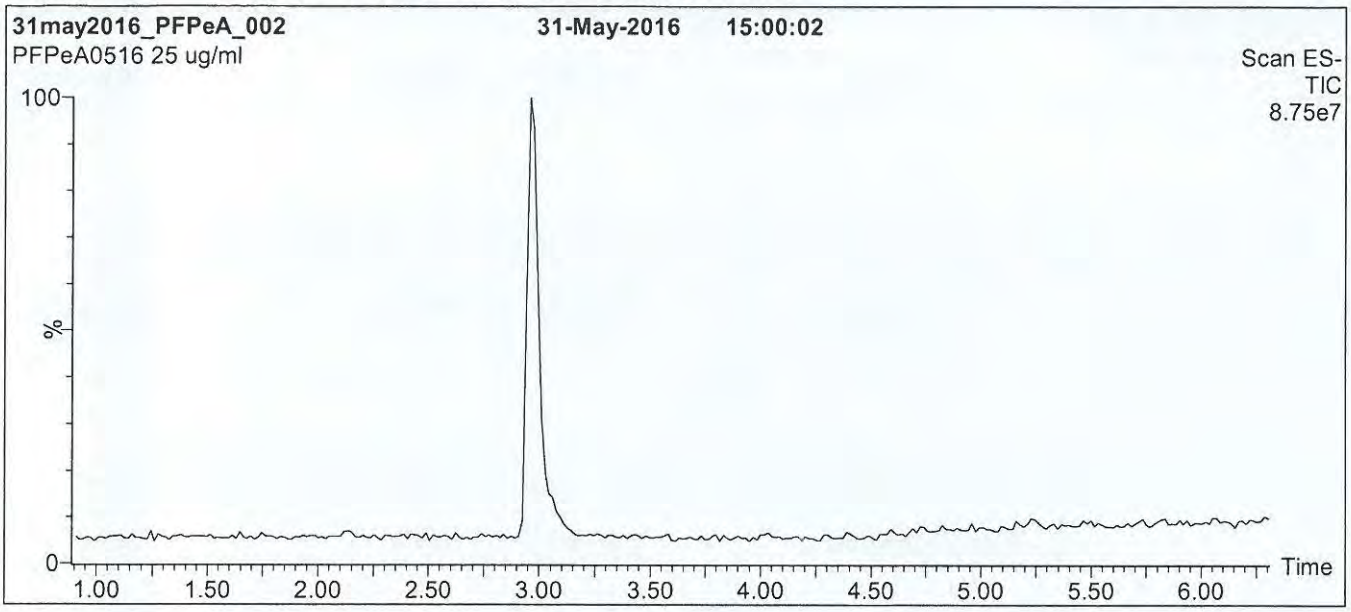

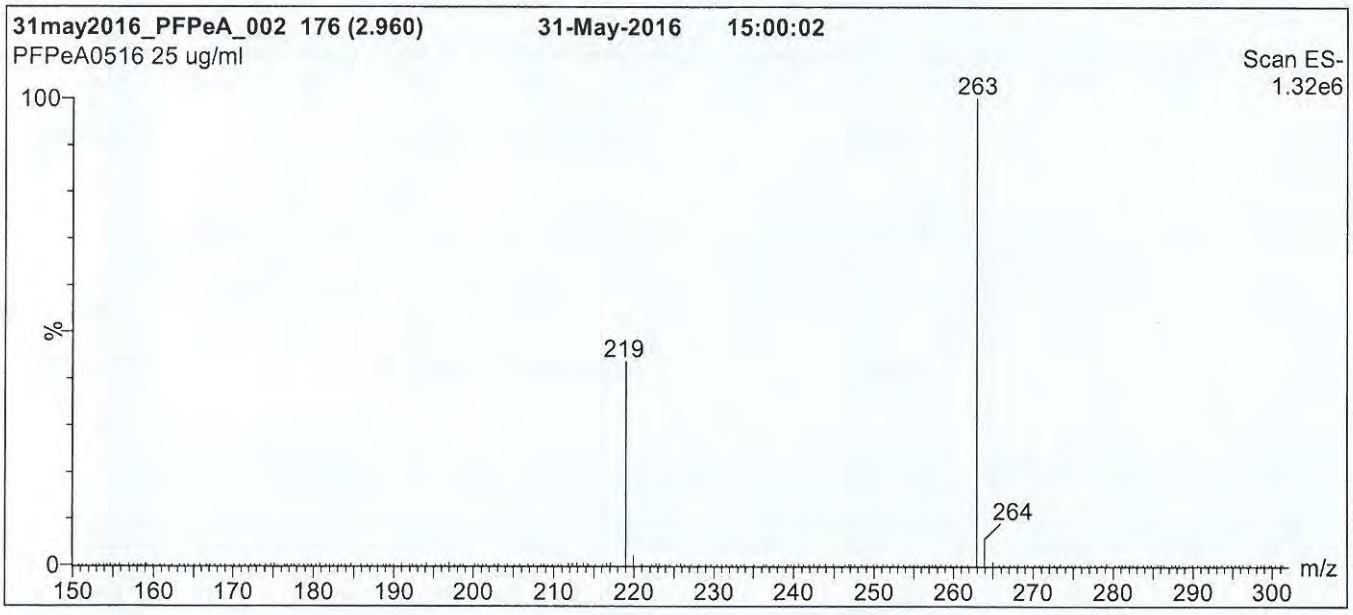

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Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 30% (80:20 MeOH:ACN) / 70% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

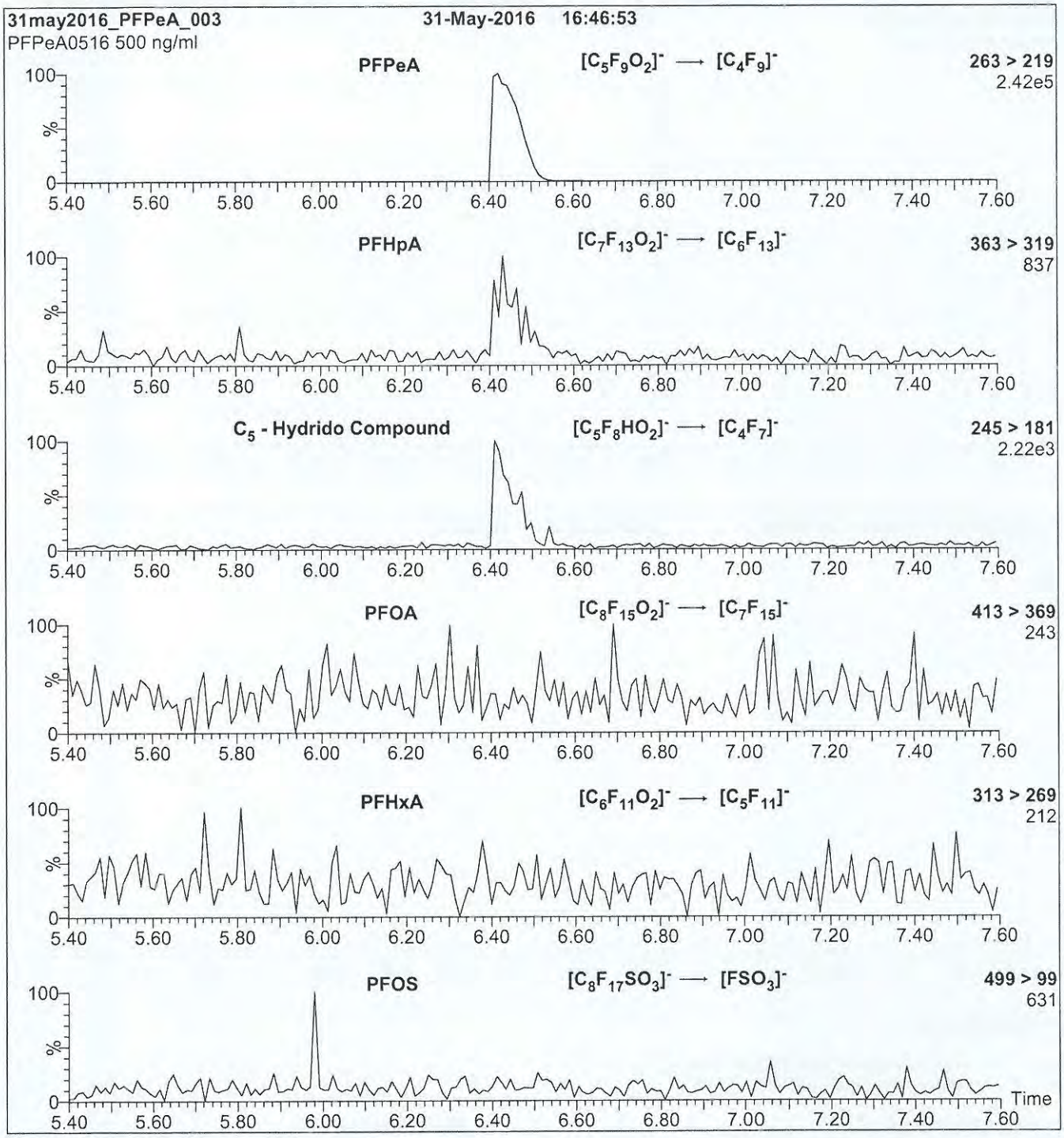
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFPeA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFPeA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.20e-3
Collision Energy (eV) = 9

16J0426

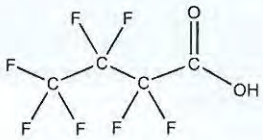
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFBA
COMPOUND: Perfluoro-n-butanoic acid
LOT NUMBER: PFBA0516

STRUCTURE:

CAS #: 375-22-4



MOLECULAR FORMULA: $C_4HF_7O_2$
MOLECULAR WEIGHT: 214.04
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/27/2016
EXPIRY DATE: (mm/dd/yyyy) 05/27/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 05/31/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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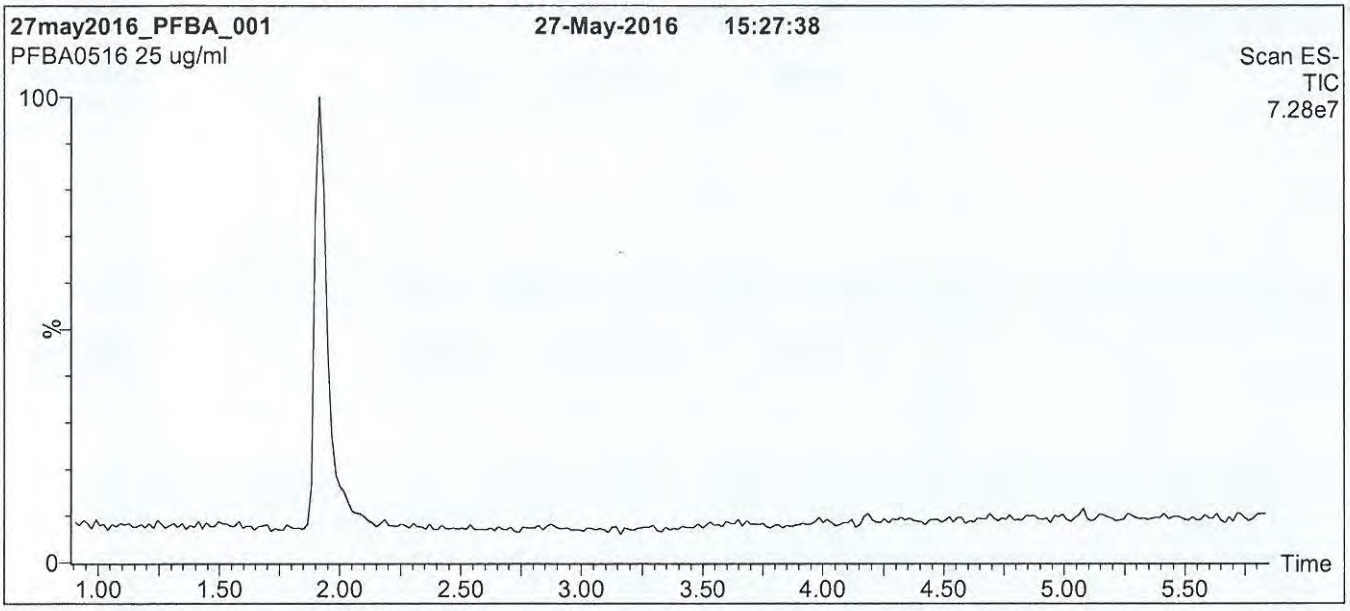

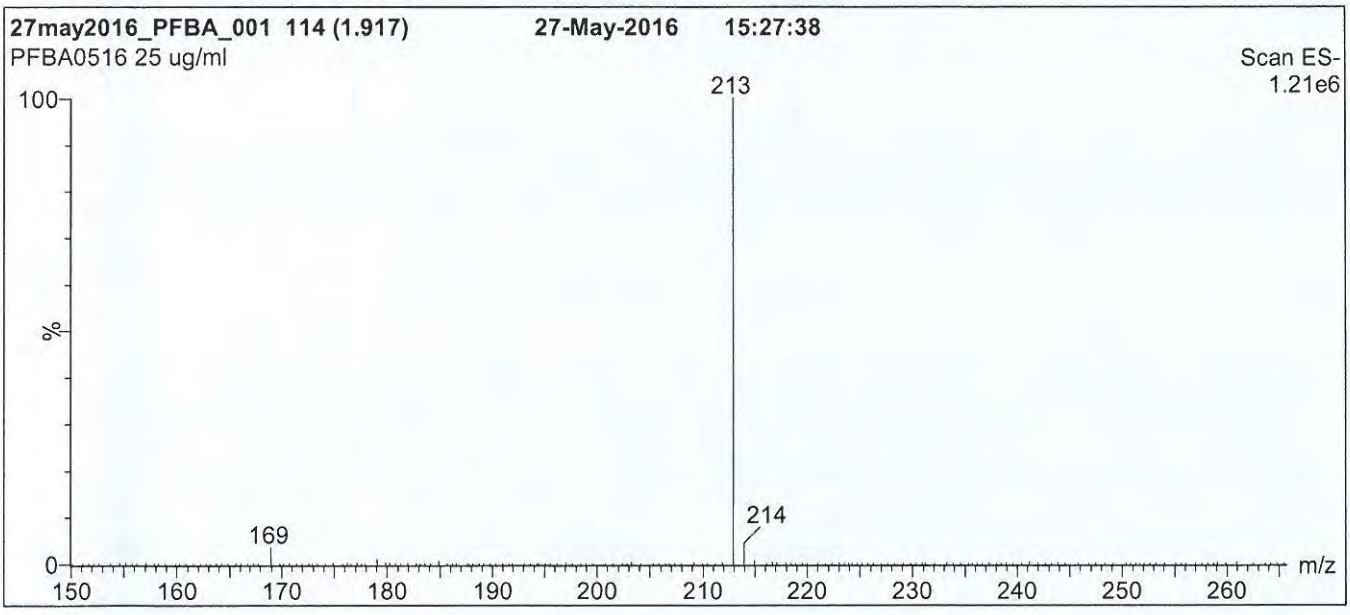

Conditions for Figure 1:

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MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 30% (80:20 MeOH:ACN) / 70% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

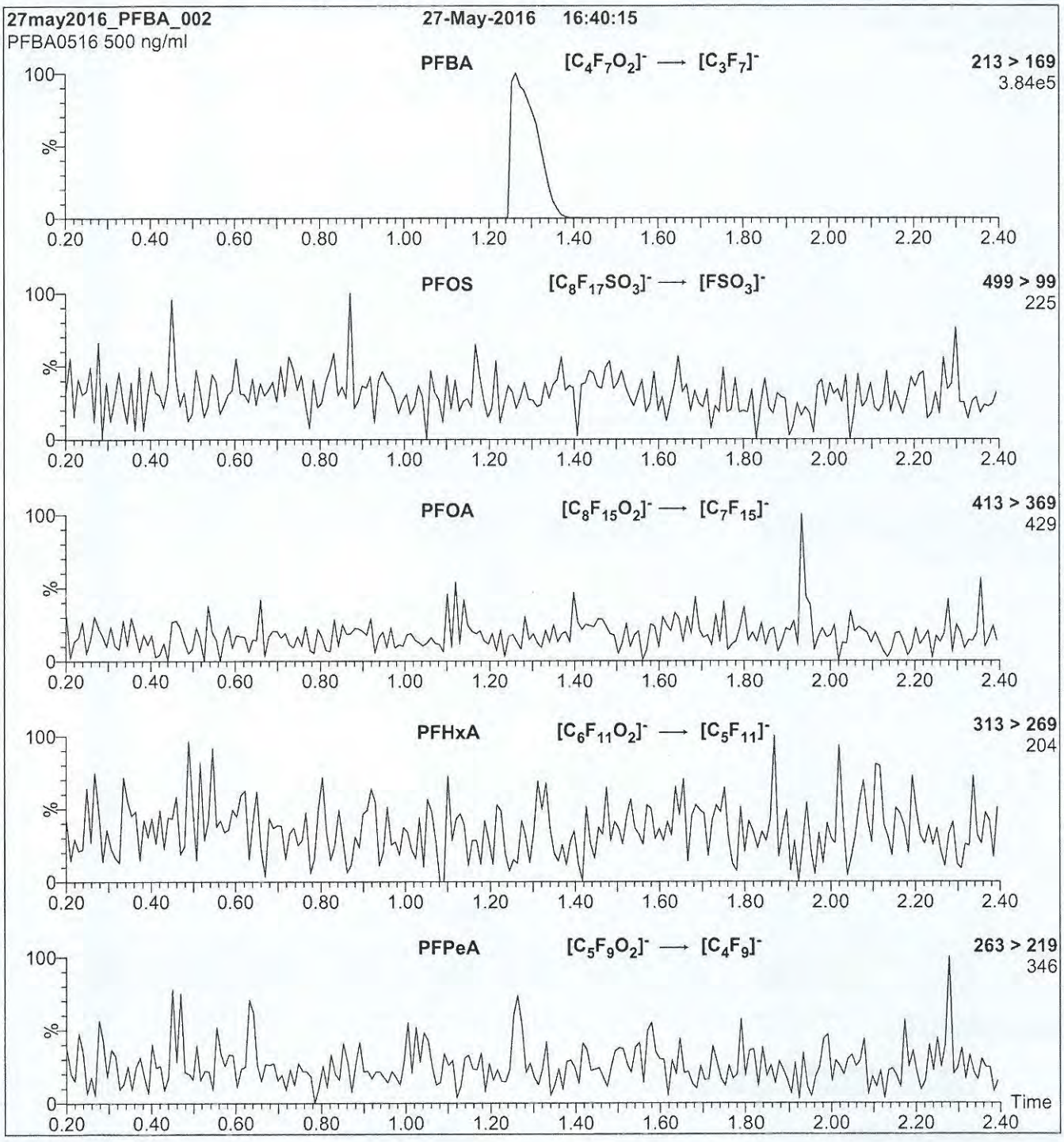
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 10.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFBA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.62e-3
Collision Energy (eV) = 10

16L0512

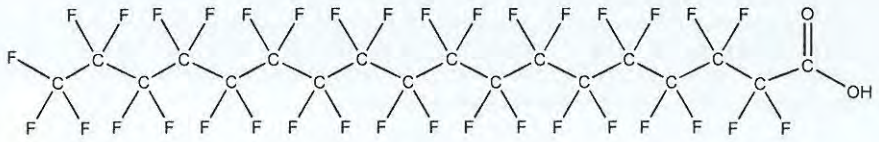
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFODA
COMPOUND: Perfluoro-n-octadecanoic acid
LOT NUMBER: PFODA0416

STRUCTURE:

CAS #: 16517-11-6



MOLECULAR FORMULA: $C_{18}HF_{35}O_2$
MOLECULAR WEIGHT: 914.14
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 04/29/2016
EXPIRY DATE: (mm/dd/yyyy) 04/29/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

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Figure 1: LC/MS Data (TIC and Mass Spectrum)
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CALA

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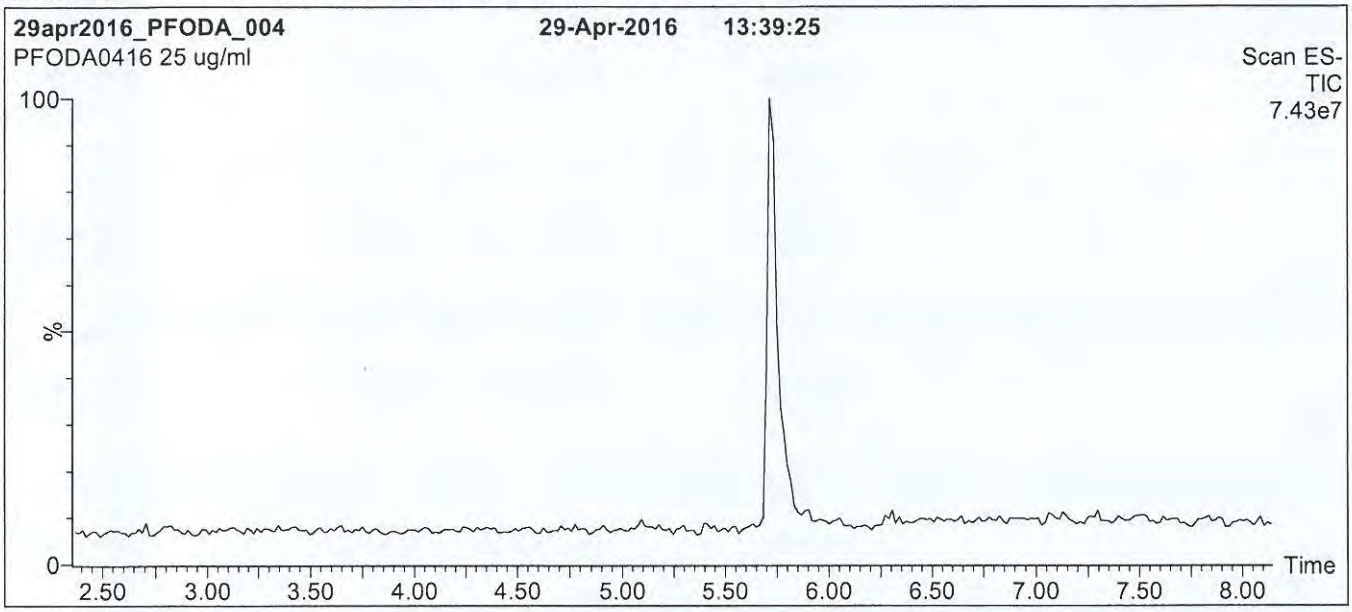

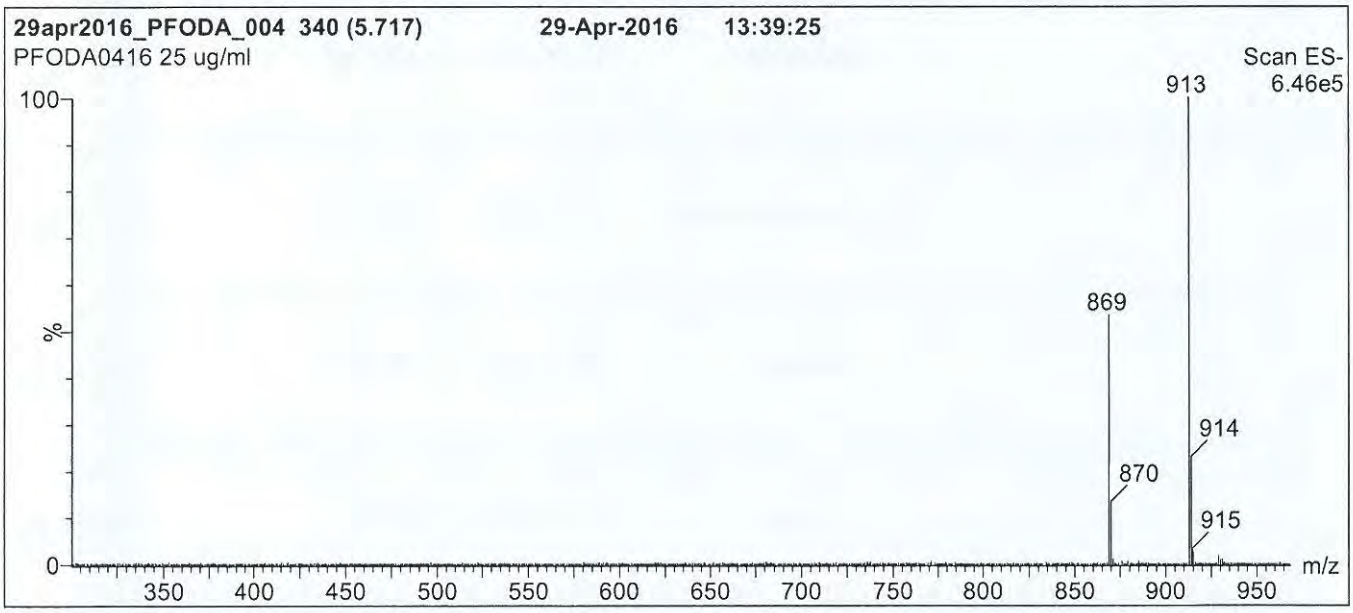

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1.7 µm, 2.1 x 100 mm

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2.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

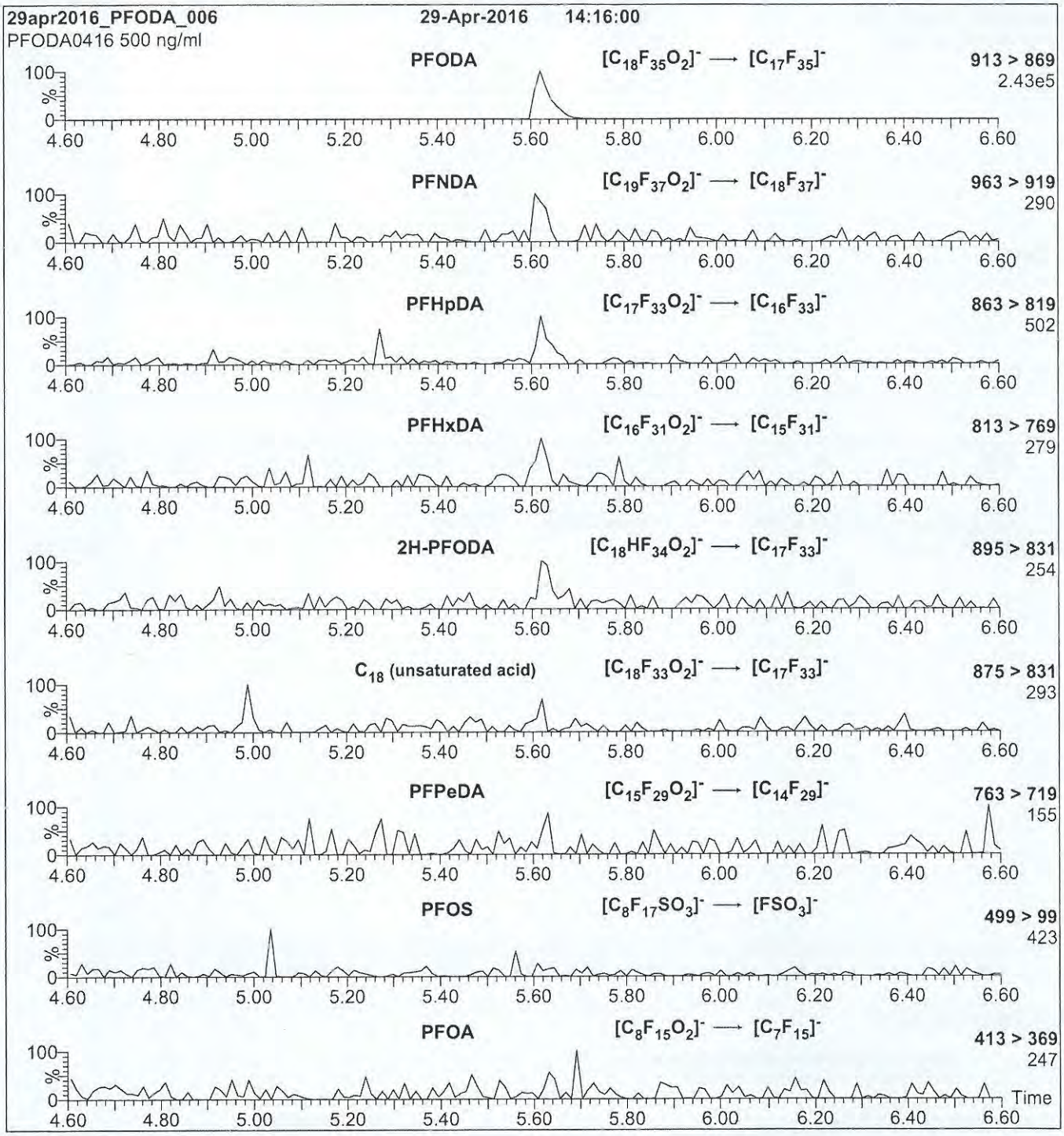
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 1000 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 25.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFODA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFODA)

Mobile phase: Isocratic 90% (80:20 MeOH:ACN) / 10% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 15

17C1026

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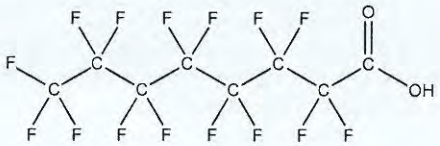
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFOA
COMPOUND: Perfluoro-n-octanoic acid

LOT NUMBER: PFOA0716

STRUCTURE:

CAS #: 335-67-1



MOLECULAR FORMULA: $C_8HF_{15}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 414.07
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/02/2016
EXPIRY DATE: (mm/dd/yyyy) 08/02/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/05/2016 (mm/dd/yyyy)
B.G. Chittim

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

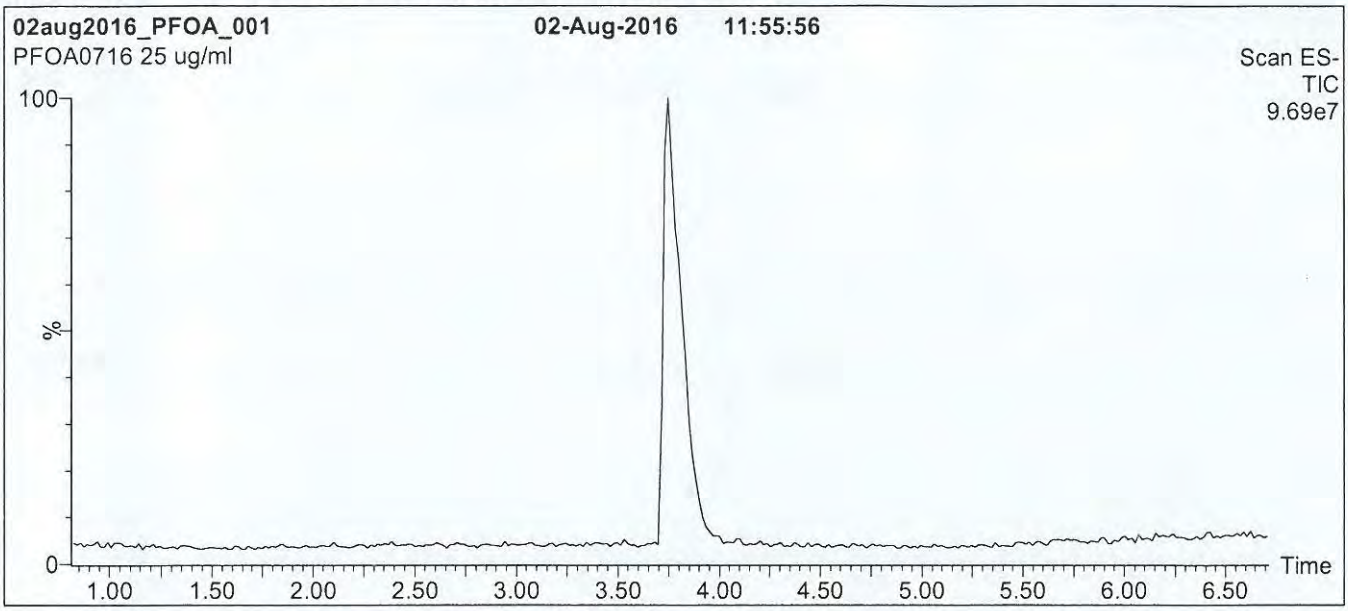
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

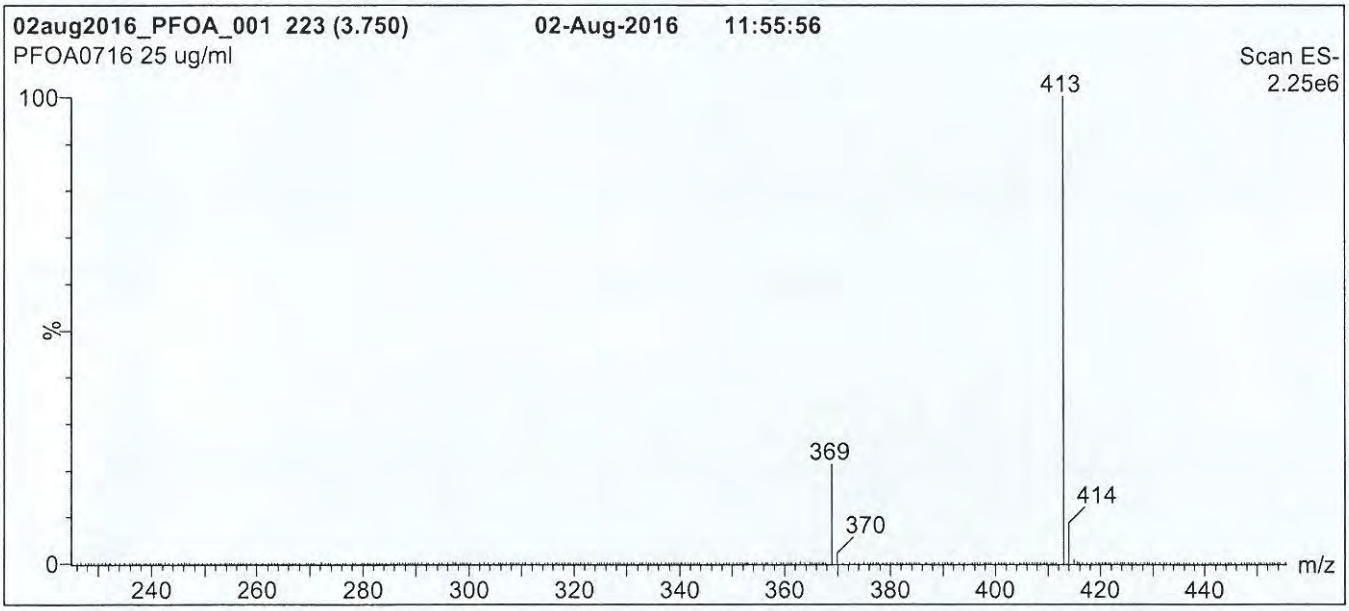
CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **PFOA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

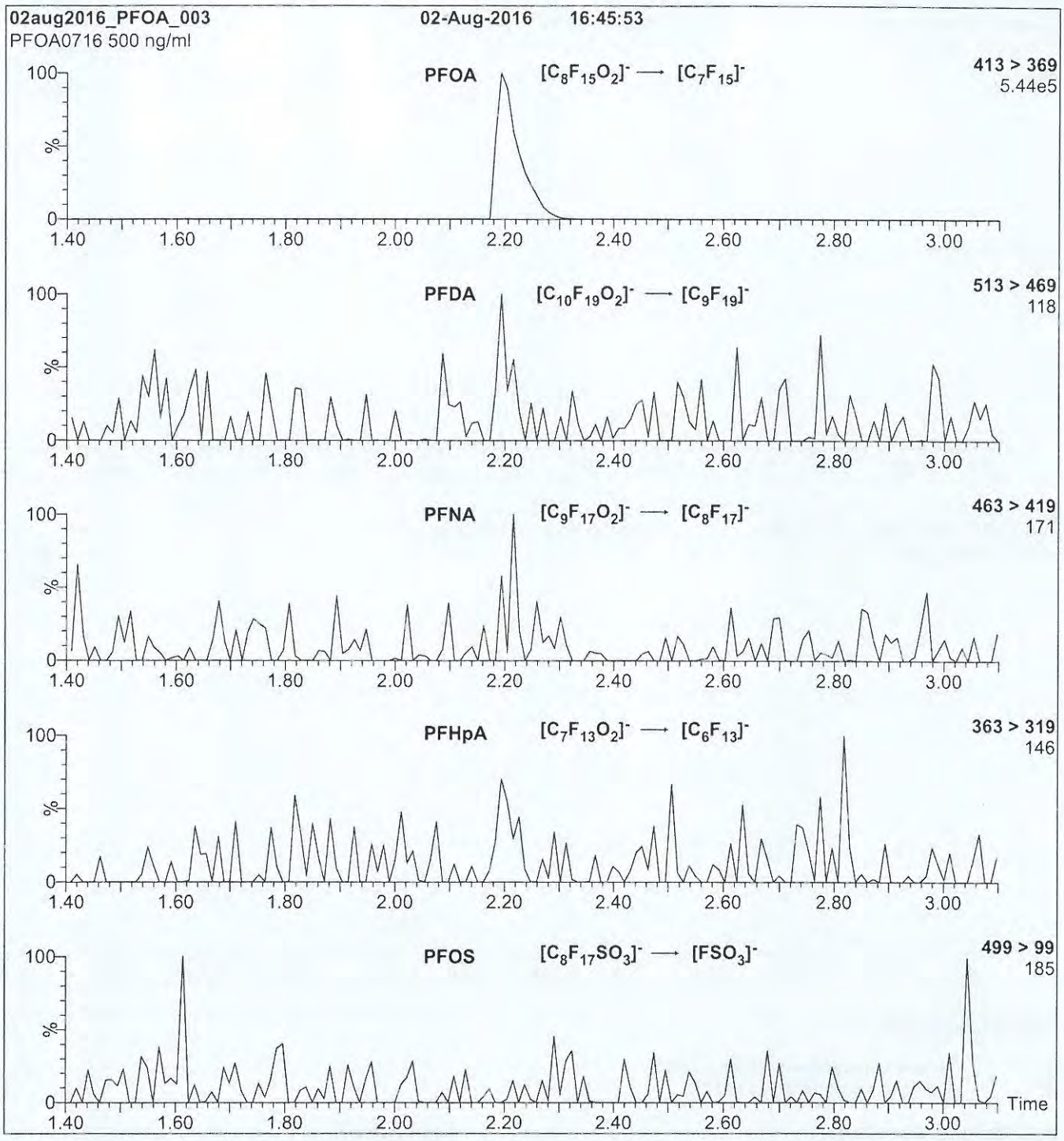
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFOA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 10

1702612

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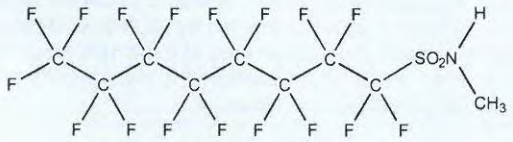
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-MeFOSA-M
LOT NUMBER: NMeFOSA0516M
COMPOUND: N-methylperfluoro-1-octanesulfonamide

STRUCTURE:
CAS #: 31506-32-8



MOLECULAR FORMULA:	$C_9H_4F_{17}NO_2S$	**MOLECULAR WEIGHT:**	513.17
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	05/24/2016		
EXPIRY DATE: (mm/dd/yyyy)	05/24/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 05/26/2016 (mm/dd/yyyy)

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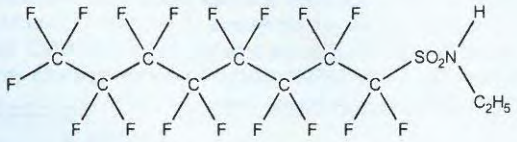
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	N-EtFOSA-M	**LOT NUMBER:**	NEtFOSA0516M
COMPOUND:	N-ethylperfluoro-1-octanesulfonamide		
STRUCTURE:		**CAS #:**	4151-50-2



MOLECULAR FORMULA:	$C_{10}H_6F_{17}NO_2S$	**MOLECULAR WEIGHT:**	527.20
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	05/24/2016		
EXPIRY DATE: (mm/dd/yyyy)	05/24/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/27/2016 (mm/dd/yyyy)
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17D2614

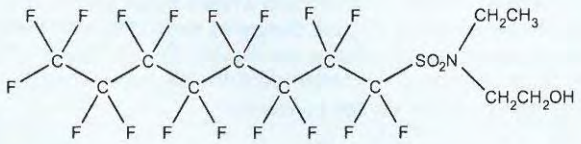
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSE-M **LOT NUMBER:** NEtFOSE1115M

COMPOUND: 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol

STRUCTURE: **CAS #:** 1691-99-2



MOLECULAR FORMULA:	$C_{12}H_{10}F_{17}NO_3S$	**MOLECULAR WEIGHT:**	571.25
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	11/10/2015 (HRGC/LRMS) 11/09/2015 (LC/MS)		
EXPIRY DATE: (mm/dd/yyyy)	11/10/2020		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

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Certified By: B.G. Chittim **Date:** 11/11/2015 (mm/dd/yyyy)

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1702616

WELLINGTON LABORATORIES

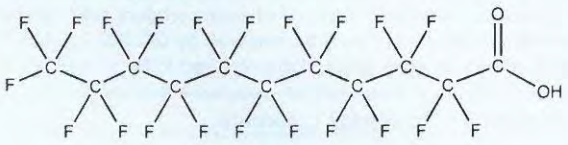
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFUdA
COMPOUND: Perfluoro-n-undecanoic acid

LOT NUMBER: PFUdA1016

STRUCTURE:

CAS #: 2058-94-8



MOLECULAR FORMULA: $C_{11}HF_{21}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 564.09
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/18/2016
EXPIRY DATE: (mm/dd/yyyy) 10/18/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 10/19/2016 (mm/dd/yyyy)

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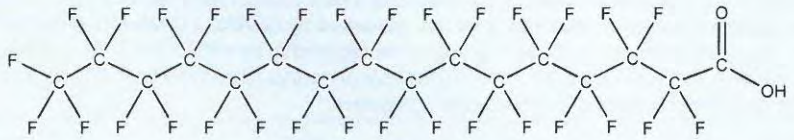
1702617

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFHxDA
LOT NUMBER: PFHxDA0516
COMPOUND: Perfluoro-n-hexadecanoic acid

STRUCTURE:
CAS #: 67905-19-5



MOLECULAR FORMULA: $C_{16}HF_{31}O_2$
MOLECULAR WEIGHT: 814.13
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/25/2016
EXPIRY DATE: (mm/dd/yyyy) 05/25/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.4% of PFODA.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 05/27/2016 (mm/dd/yyyy)

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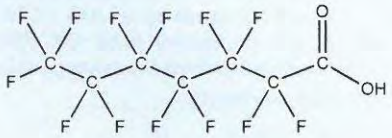
1702618

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFHpA
COMPOUND: Perfluoro-n-heptanoic acid
LOT NUMBER: PFHpA1216

STRUCTURE:
CAS #: 375-85-9



MOLECULAR FORMULA: $C_7HF_{13}O_2$
MOLECULAR WEIGHT: 364.06
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 12/02/2016
EXPIRY DATE: (mm/dd/yyyy) 12/02/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 12/12/2016 (mm/dd/yyyy)

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1702621

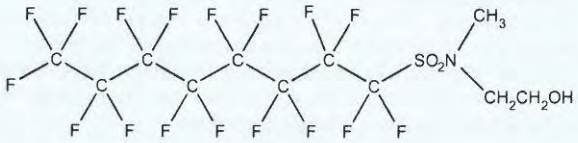
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-MeFOSE-M **LOT NUMBER:** NMeFOSE1115M

COMPOUND: 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol

STRUCTURE: **CAS #:** 24448-09-7



MOLECULAR FORMULA:	$C_{11}H_8F_{17}NO_3S$	**MOLECULAR WEIGHT:**	557.22
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	11/10/2015 (HRGC/LRMS) 11/09/2015 (LC/MS)		
EXPIRY DATE: (mm/dd/yyyy)	11/10/2020		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 11/16/2015 (mm/dd/yyyy)

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Analytical Standard Record

Vista Analytical Laboratory

17D2706

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
17C1027	PFBS anion	10-Mar-17	Jamie C. Stockman	02-Dec-21	10-Mar-17 15:27 by JCS	0.75

Description:	L-PFBS anion DIL	Expires:	27-Apr-18
Standard Type:	Other	Prepared:	27-Apr-17
Solvent:	Methanol	Prepared By:	Emilie Schneider
Final Volume (mls):	1.326	Department:	LCMS
Vials:	1	Last Edit:	27-Apr-17 13:48 by EMS

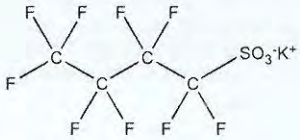
Analyte	CAS Number	Concentration	Units
PFBS	375-73-5	25	ug/mL
L-PFBS		25	ug/mL

17C1027

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	L-PFBS	**LOT NUMBER:**	LPFBS1116
COMPOUND:	Potassium perfluoro-1-butanesulfonate		
STRUCTURE:		**CAS #:**	29420-49-3



MOLECULAR FORMULA:	$C_4F_9SO_3K$	**MOLECULAR WEIGHT:**	338.19
CONCENTRATION:	50.0 ± 2.5 µg/ml (K salt) 44.2 ± 2.2 µg/ml (PFBS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	12/02/2016		
EXPIRY DATE: (mm/dd/yyyy)	12/02/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 12/05/2016 (mm/dd/yyyy)

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INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c\left(y(x_1, x_2, \ldots, x_n)\right) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

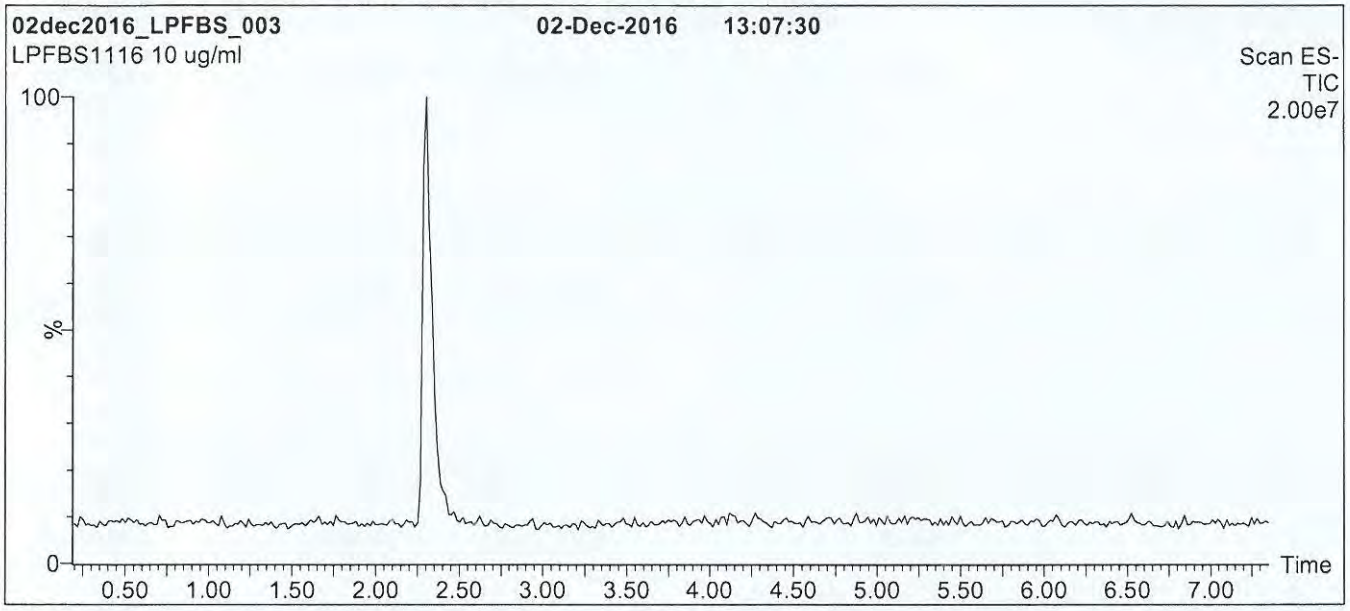
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

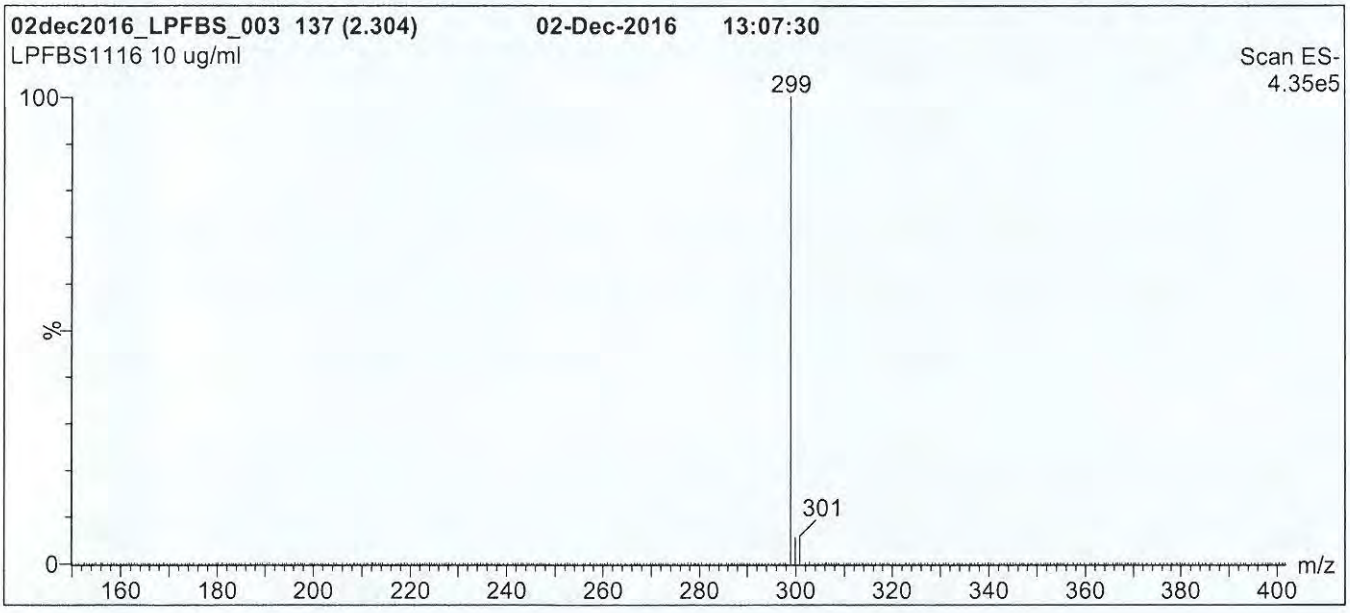
CALA

ANAB ACCREDITED

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **L-PFBS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% (80:20 MeOH:ACN) / 60% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 10 min

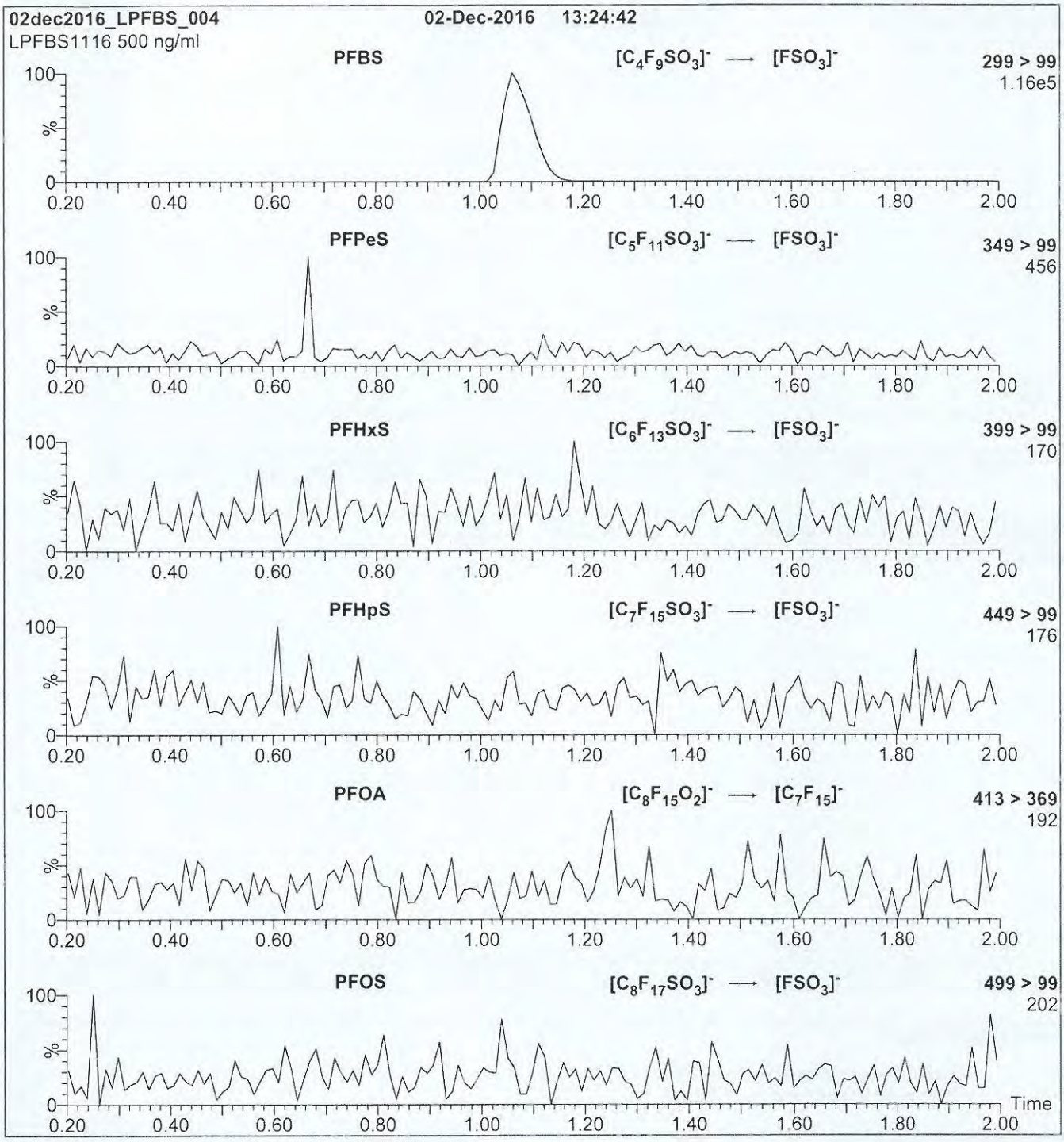
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 40.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **L-PFBS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml L-PFBS)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.28e-3
Collision Energy (eV) = 25

Analytical Standard Record

Vista Analytical Laboratory

17D2709

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16I1427	8:2 FTS anion	14-Sep-16	** Vendor **	22-Aug-21	15-Dec-16 08:53 by AEW	0.5

Description:	8:2 FTS anion DIL	Expires:	27-Apr-18
Standard Type:	Other	Prepared:	27-Apr-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	0.958	Department:	LCMS
Vials:	1	Last Edit:	27-Apr-17 14:28 by INJ

Analyte	CAS Number	Concentration	Units
L-8:2FTS		25	ug/mL
8:2 FTS	70887-84-2	25	ug/mL

16I1427

WELLINGTON LABORATORIES

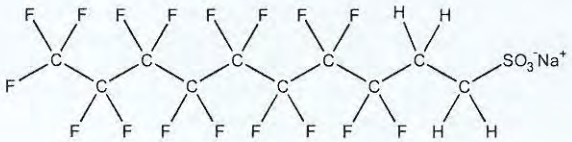
CERTIFICATE OF ANALYSIS DOCUMENTATION

8:2FTS

PRODUCT CODE: 8:2FTS **LOT NUMBER:** 82FTS0816

COMPOUND: Sodium 1H,1H,2H,2H-perfluorodecane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$C_{10}H_4F_{17}SO_3Na$		**MOLECULAR WEIGHT:**	550.16
CONCENTRATION:	50.0 ± 2.5 µg/ml	(Na salt)	**SOLVENT(S):**	Methanol
	47.9 ± 2.4 µg/ml	(8:2FTS anion)		
CHEMICAL PURITY:	>98%			
LAST TESTED: (mm/dd/yyyy)	08/22/2016			
EXPIRY DATE: (mm/dd/yyyy)	08/22/2021			
RECOMMENDED STORAGE:	Refrigerate ampoule			

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 08/25/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

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QUALITY MANAGEMENT:

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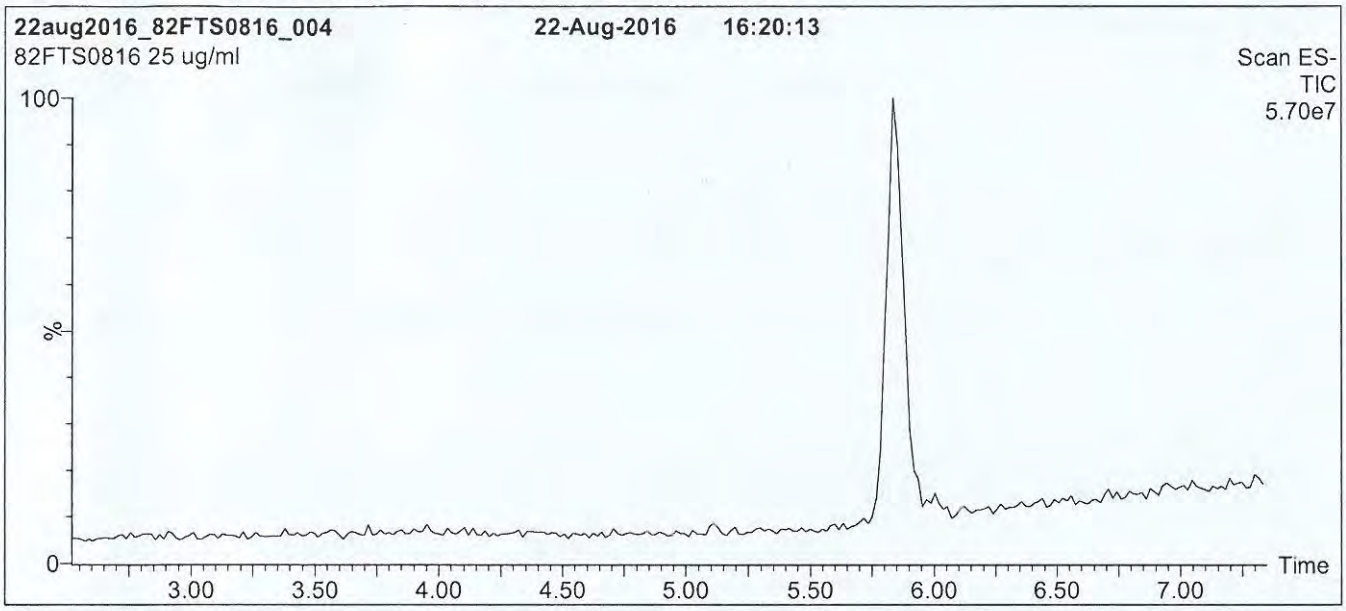
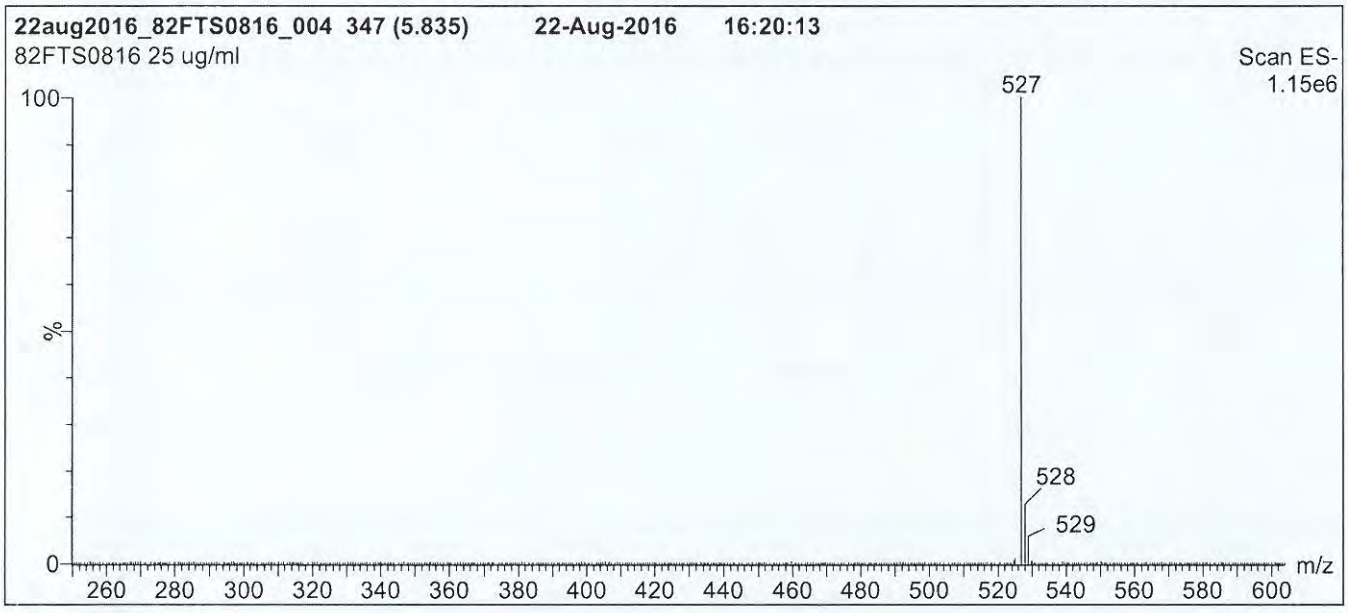
CALA Testing

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **8:2FTS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Agilent Zorbax Bonus-RP
1.8 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH/ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

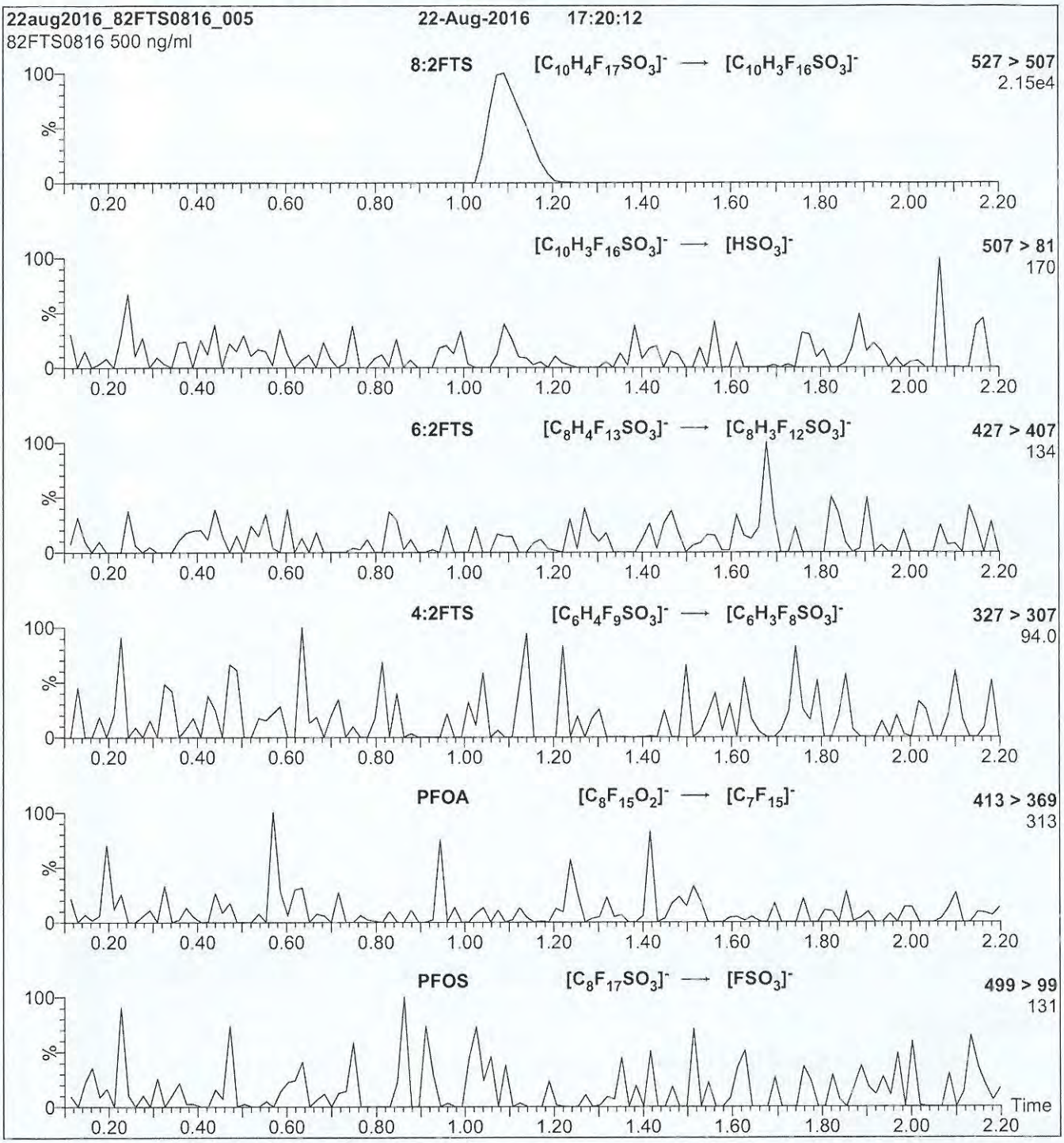
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250- 850 amu)

Source:Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 30.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **8:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml 8:2FTS)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.31e-3
Collision Energy (eV) = 30

Analytical Standard Record

Vista Analytical Laboratory

17D2715

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
17D2622	6:2FTS	26-Apr-17	** Vendor **	25-Jun-21	12-Jun-17 09:01 by AEW	0.5

Description:	6:2 FTS anion DIL	Expires:	27-Apr-18
Standard Type:	Other	Prepared:	27-Apr-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	0.948	Department:	LCMS
Vials:	1	Last Edit:	12-Jun-17 09:01 by AEW

Analyte	CAS Number	Concentration	Units
Total 6:2 FTS		25	ug/mL
L-6:2 FTS		25	ug/mL
6:2 FTS	27619-97-2	25	ug/mL

1702622

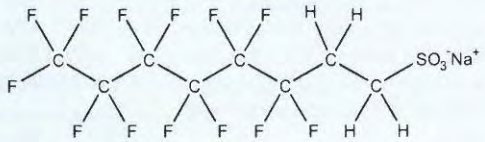
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 6:2FTS **LOT NUMBER:** 62FTS0616

COMPOUND: Sodium 1H,1H,2H,2H-perfluorooctane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$C_8H_4F_{13}SO_3Na$	**MOLECULAR WEIGHT:**	450.15
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt)	**SOLVENT(S):**	Methanol
	47.4 ± 2.4 µg/ml (6:2FTS anion)		
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	06/25/2016		
EXPIRY DATE: (mm/dd/yyyy)	06/25/2021		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/29/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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Analytical Standard Record

Vista Analytical Laboratory

17D2716

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16DI 4I 2	L.P5DS	I 4. Apr. 16	88 : endor 88	16. 5eb. I I	1I . FTn. 16 2*V 3 by AEW	27 0

DescriptionV	L.P5DS anion DvL	ExpiresV	I 6. Apr. 1N
Standard OypeV	u tger	PreparedV	I 6. Apr. 16
SolhentV	Meu H	Prepared ByV	vsaac 9 7Fognson
5inal : olTme (mls)V	27*43	DepartmentV	LCMS
: ialsV	1	Last EditV	1I . FTn. 16 2*V 3 by AEW

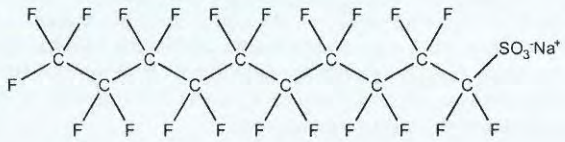
Analyte	CAS Number	Concentration	Units
Cotal P5DS		I 0	TJ /mL
P5DS	- - 0. 66. -	I 0	TJ /mL
L. P5DS		I 0	TJ /mL

17D2620

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	L-PFDS	**LOT NUMBER:**	LPFDS0217
COMPOUND:	Sodium perfluoro-1-decanesulfonate		
STRUCTURE:		**CAS #:**	2806-15-7



MOLECULAR FORMULA:	$C_{10}F_{21}SO_3Na$	**MOLECULAR WEIGHT:**	622.13
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 48.2 ± 2.4 µg/ml (PFDS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	02/17/2017		
EXPIRY DATE: (mm/dd/yyyy)	02/17/2022		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.9% of sodium perfluoro-1-dodecanesulfonate (L-PFDoS).

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Certified By: B.G. Chittim **Date:** 02/22/2017 (mm/dd/yyyy)

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Analytical Standard Record

Vista Analytical Laboratory

17D2717

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16J0431	br-PFOSK	04-Oct-16	** Vendor **	14-Oct-20	03-Feb-17 13:33 by AEW	0.5

Description:	Br-PFOSK anion DIL	Expires:	27-Apr-18
Standard Type:	Other	Prepared:	27-Apr-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	0.928	Department:	LCMS
Vials:	1	Last Edit:	27-Apr-17 14:46 by INJ

Analyte	CAS Number	Concentration	Units
PFOS	1763-23-1	25	ug/mL
L-PFOS		19.7	ug/mL

16J0431

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-PFOSK

Potassium Perfluorooctanesulfonate
Solution/Mixture of Linear and
Branched Isomers

PRODUCT CODE:	br-PFOSK
LOT NUMBER:	brPFOSK1015
CONCENTRATION:	50 ± 2.5 µg/ml (total potassium salt)
	46.4 ± 2.3 µg/ml (total PFOS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	10/13/2015
LAST TESTED: (mm/dd/yyyy)	10/14/2015
EXPIRY DATE: (mm/dd/yyyy)	10/14/2020
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- A 5-point calibration curve was generated using linear PFOS (potassium salt) and mass-labelled PFOS as an internal standard to enable quantitation of br-PFOSK using isotopic dilution.
- CAS#: 2795-39-3 (for linear isomer; potassium salt).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

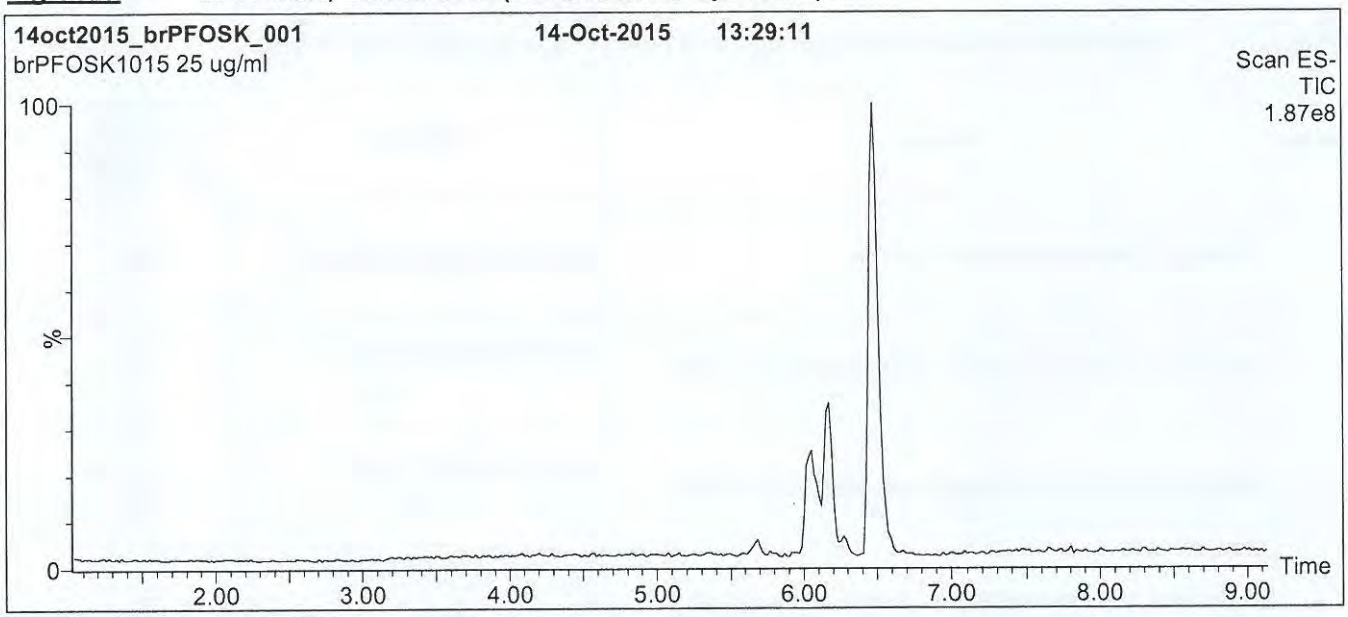
Table A: **br-PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

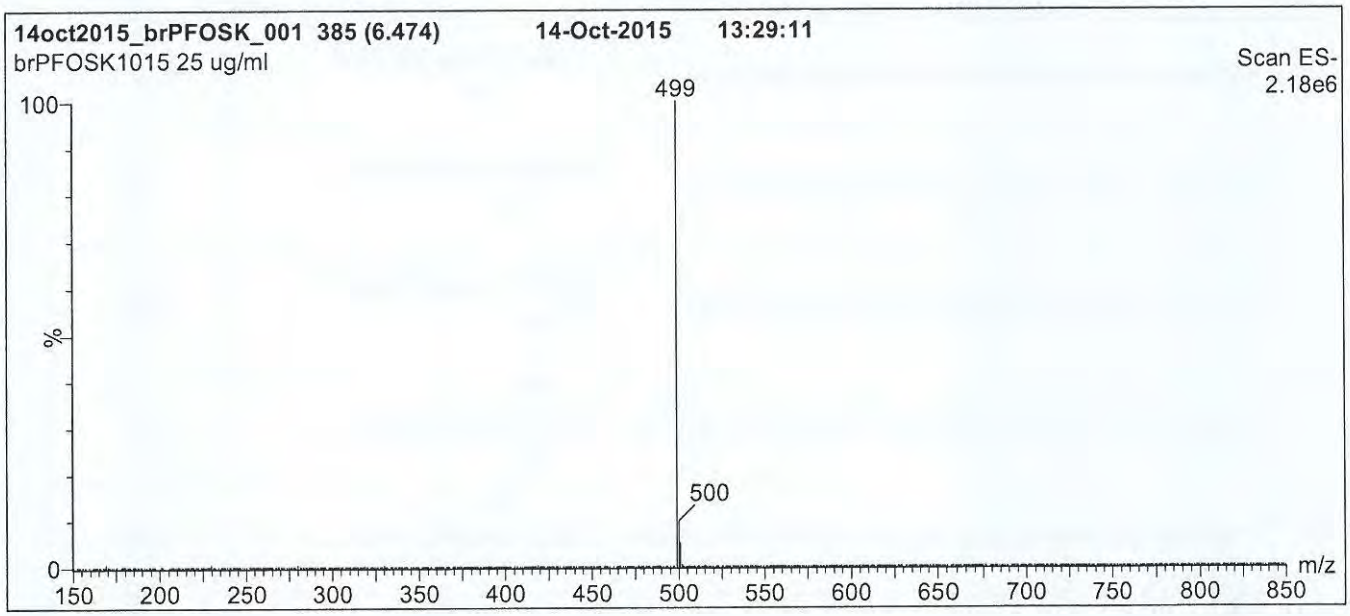
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8
2	Potassium 1-trifluoromethylperfluoroheptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	1.2
3	Potassium 2-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	0.6
4	Potassium 3-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	1.9
5	Potassium 4-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	2.2
6	Potassium 5-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF(CF_3)CF_2CF_2CF_2CF_2SO_3^-K^+$	4.5
7	Potassium 6-trifluoromethylperfluoroheptanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	10.0
8	Potassium 5,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3-C(CF_3)(CF_3)CF_2CF_2CF_2CF_2SO_3^-K^+$	0.2
9	Potassium 4,4-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF_2-C(CF_3)(CF_3)-CF_2CF_2CF_2SO_3^-K^+$	0.03
10	Potassium 4,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3-CF(CF_3)-CF(CF_3)-CF_2CF_2CF_2SO_3^-K^+$	0.4
11	Potassium 3,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3-CF(CF_3)-CF_2-CF(CF_3)-CF_2CF_2SO_3^-K^+$	0.07

* Percent of total perfluorooctanesulfonate isomers only. Isomers are labelled in Figure 2.
** Systematic Name: Potassium perfluorooctane-2-sulfonate.

Certified By: _____ **Date:** 10/15/2015
B.G. Chittim (mm/dd/yyyy)

Figure 1: **br-PFOSK; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 45% (80:20 MeOH:ACN) / 55% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 12 min and hold for 2 min.
Return to initial conditions over 0.5 min.
Time: 16 min

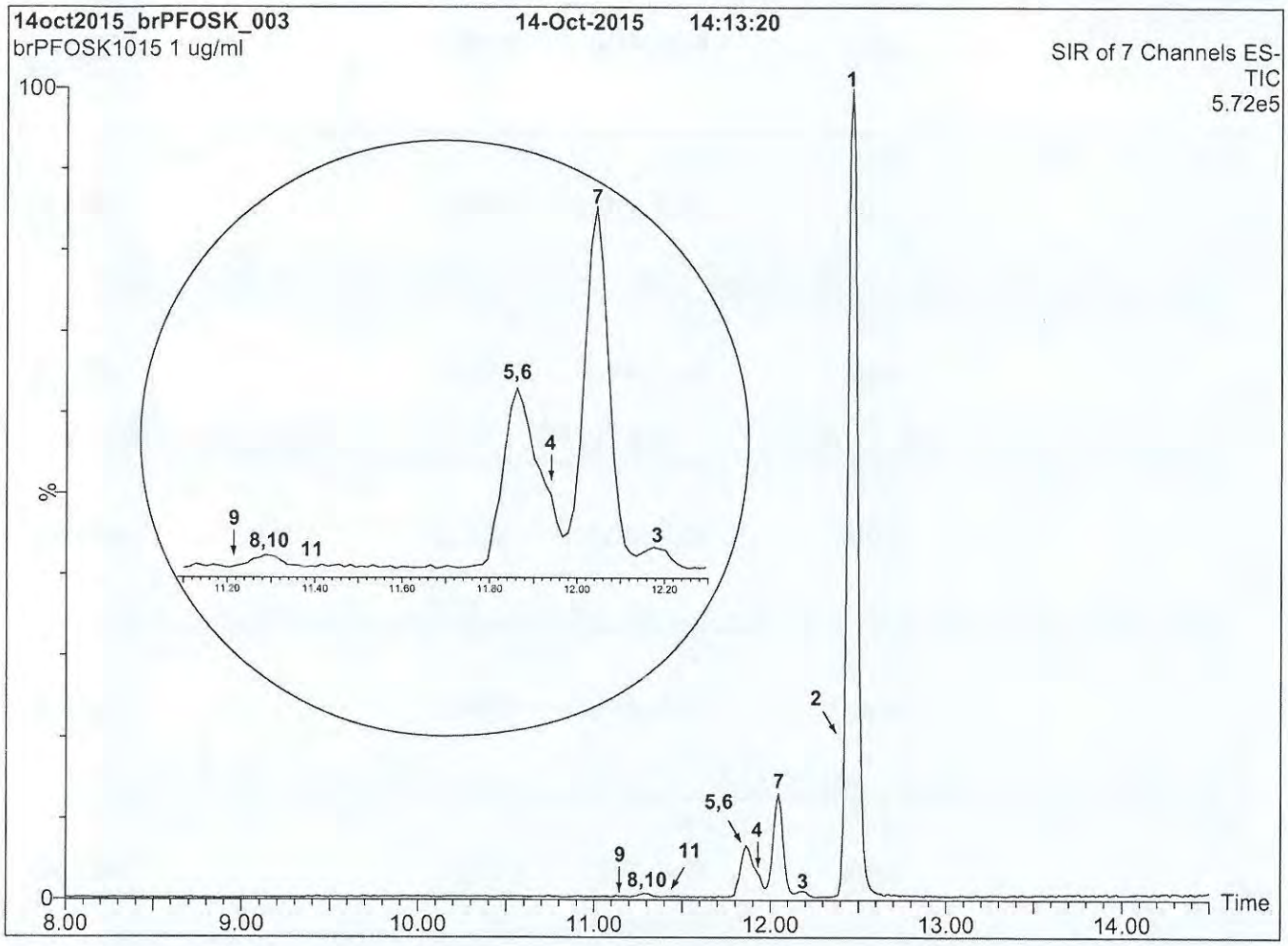
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 60.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **br-PFOSK; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18} (1.7 µm, 2.1 x 100 mm)

Injection: 1.0 µg/ml of br-PFOSK

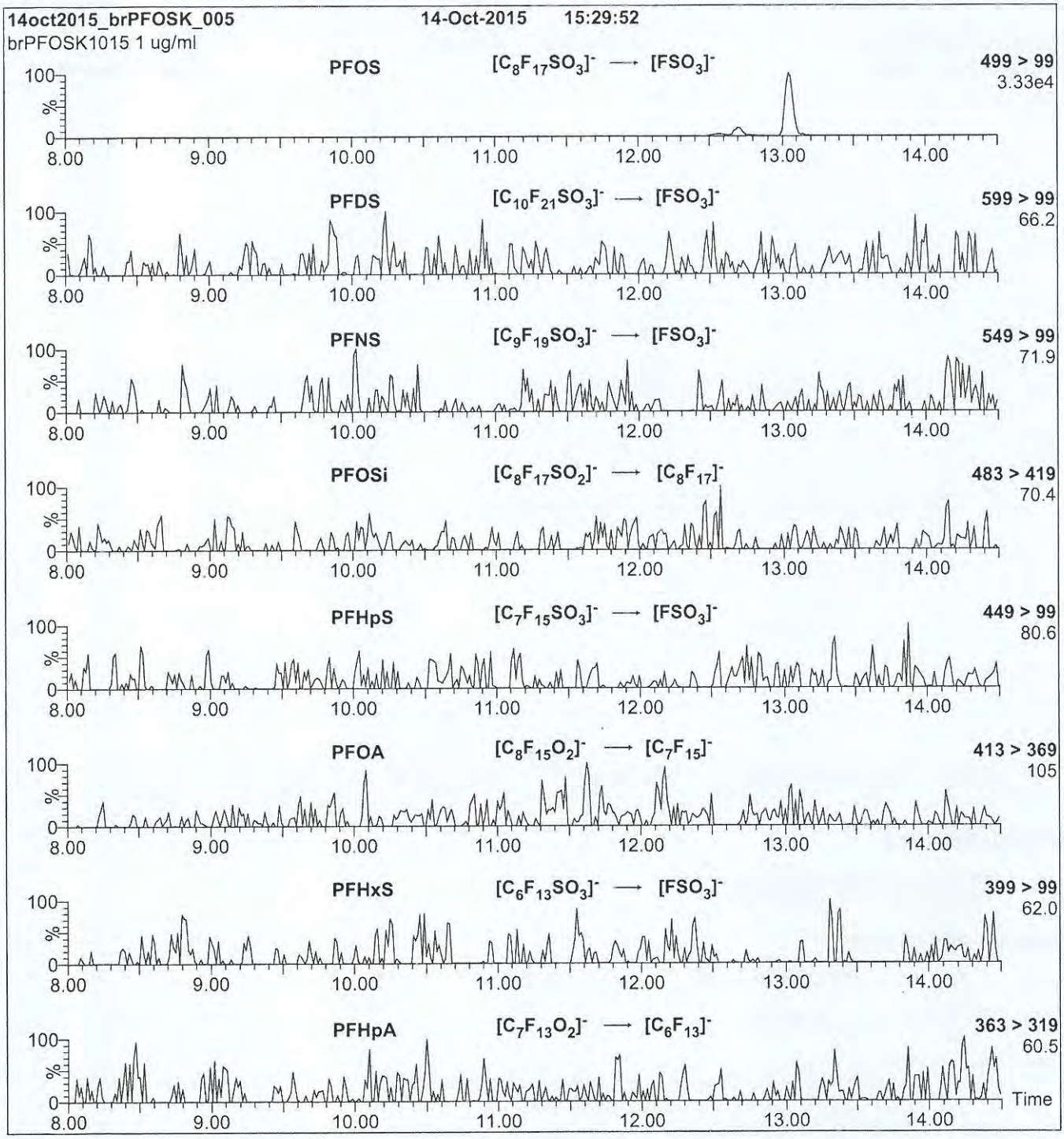
Mobile Phase: Gradient
45% (80:20 MeOH:ACN) / 55% H_2O (both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 15 min and hold for 3 min.
Return to initial conditions over 1 min.
Time: 20 min

Flow: 300 µl/min

MS Conditions:

SIR (ES^-)
Source = 110 °C
Desolvation = 325 °C
Cone Voltage = 60V

Figure 3: **br-PFOSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column

Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.06e-3
Collision Energy (eV) = 11-50 (variable)

Analytical Standard Record

Vista Analytical Laboratory

17D2718

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16DJ014	5rbP- F xSO	J0bWprbl6	KK* endor KK	3hbVanbJJ	1JbV7nbl6 3: A41 5y WE2	3.4

DescriptionA	BrbP- F xSO anion DCL	ExpiresA	J6bWprbl:
Standard uypeA	Ttver	PreparedA	J6bWprbl6
SolI entA	H eTF	Prepared ByA	Gsaac 8 . Vovnson
- inal *ol7me (mls)A	3.91	DepartmentA	LMHS
* ialsA	1	Last EditA	1JbV7nbl6 3: A41 5y WE2

Analyte	CAS Number	Concentration	Units
uotal P- F xS		J4	7NgmL
P- F xS	/ 44bh0bh	J4	7NgmL
LbP- F xS		J3./	7NgmL
BrbP- F xS	/ : 61b99b0	h.6J	7NgmL

1702615

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-PFHxSK

Potassium Perfluorohexanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFHxSK
LOT NUMBER:	brPFHxSK0117
CONCENTRATION:	50.0 ± 2.5 µg/ml (total potassium salt)
	45.5 ± 2.3 µg/ml (total PFHxS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	01/03/2017
LAST TESTED: (mm/dd/yyyy)	01/04/2017
EXPIRY DATE: (mm/dd/yyyy)	01/04/2022
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorohexanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.5% of perfluoro-1-pentanesulfonate and ~ 0.2% of perfluoro-1-octanesulfonate.
- CAS#: 3871-99-6 (for linear isomer; potassium salt).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

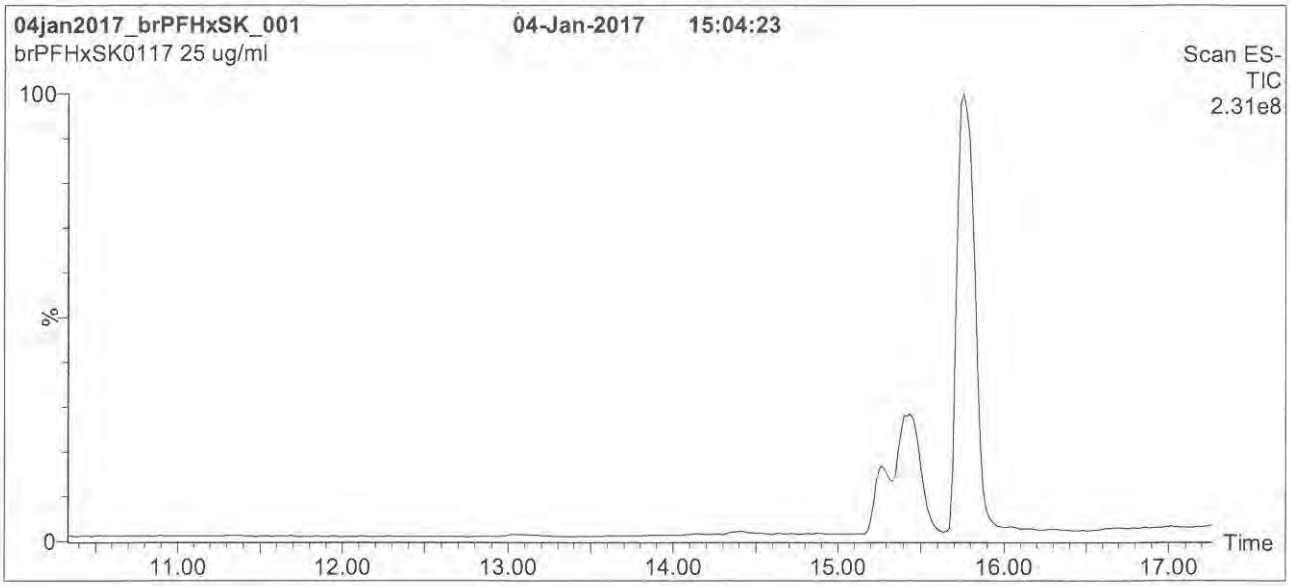
Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

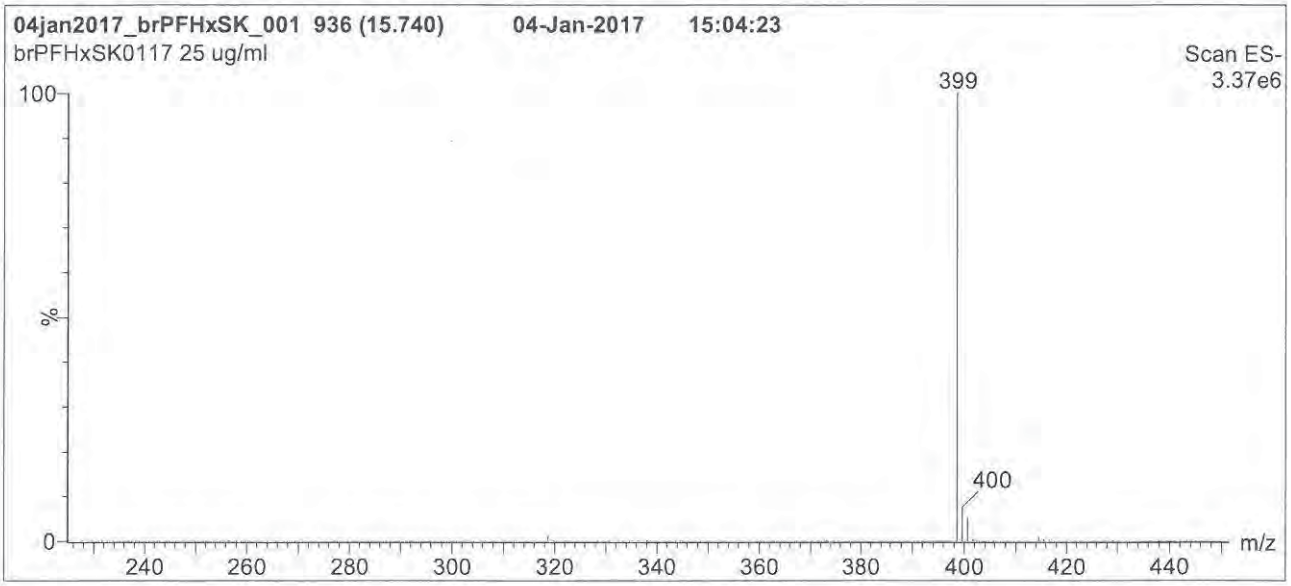
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium 1-trifluoromethylperfluoropentanesulfonate**	$CF_3CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	2.9
3	Potassium 2-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	1.4
4	Potassium 3-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	5.0
5	Potassium 4-trifluoromethylperfluoropentanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	8.9
6	Potassium 3,3-di(trifluoromethyl)perfluorobutanesulfonate	$CF_3C(CF_3)CF_2CF_2SO_3^-K^+$	0.2
7	Other Unidentified Isomers		0.5

* Percent of total perfluorohexanesulfonate isomers only.
** Systematic Name: Potassium perfluorohexane-2-sulfonate.

Certified By: B.G. Chittim **Date:** 01/20/2017 (mm/dd/yyyy)

Figure 1: **br-PFHxSK; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 20% (80:20 MeOH:ACN) / 80% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 50% organic over 14 min. Ramp to 90% organic over 3 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 20 min

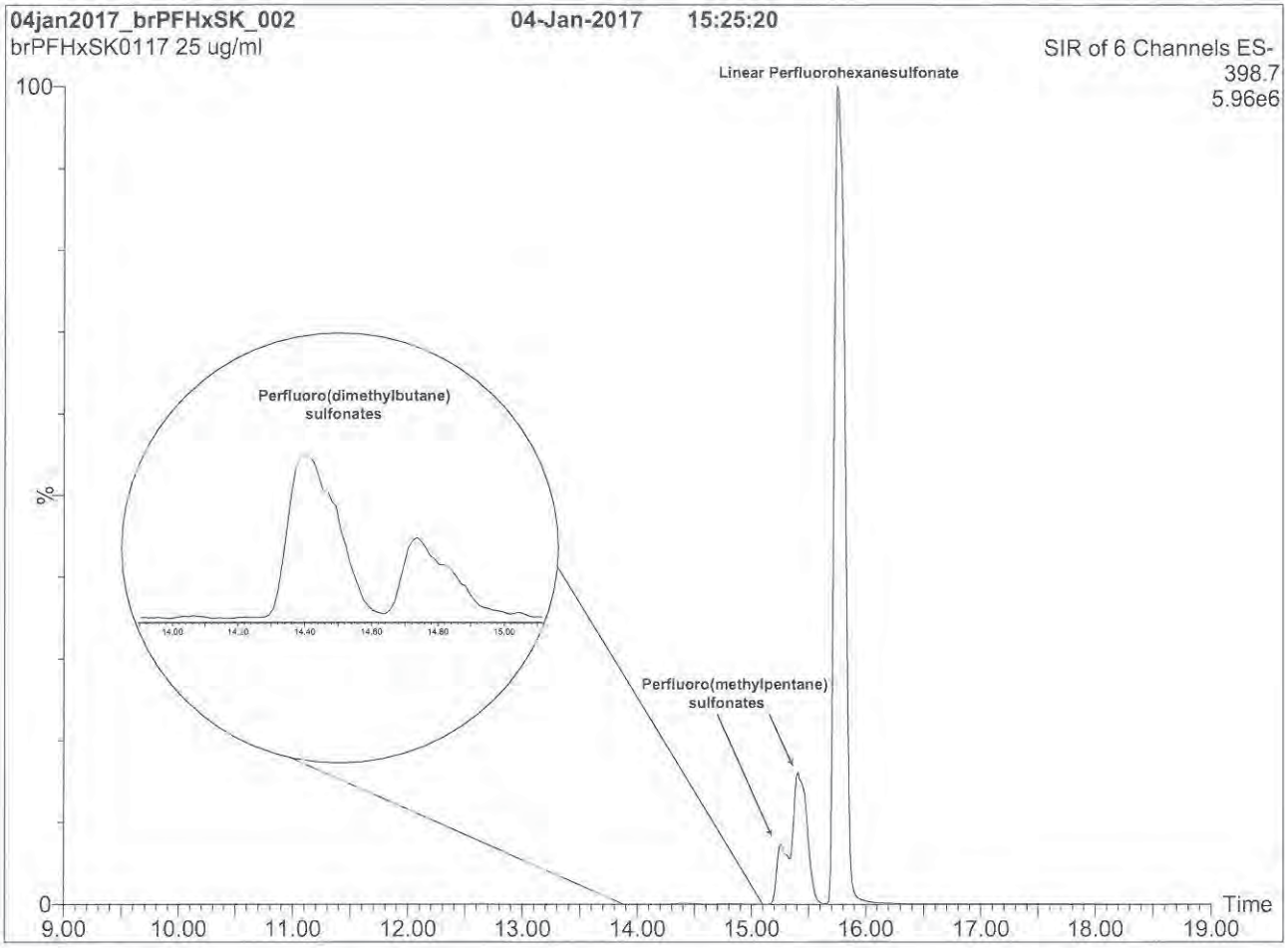
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 50.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **br-PFHxSK; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 20% (80:20 MeOH:ACN) / 80% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 50% organic over 14 min. Ramp to 90% organic over 3 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 20 min

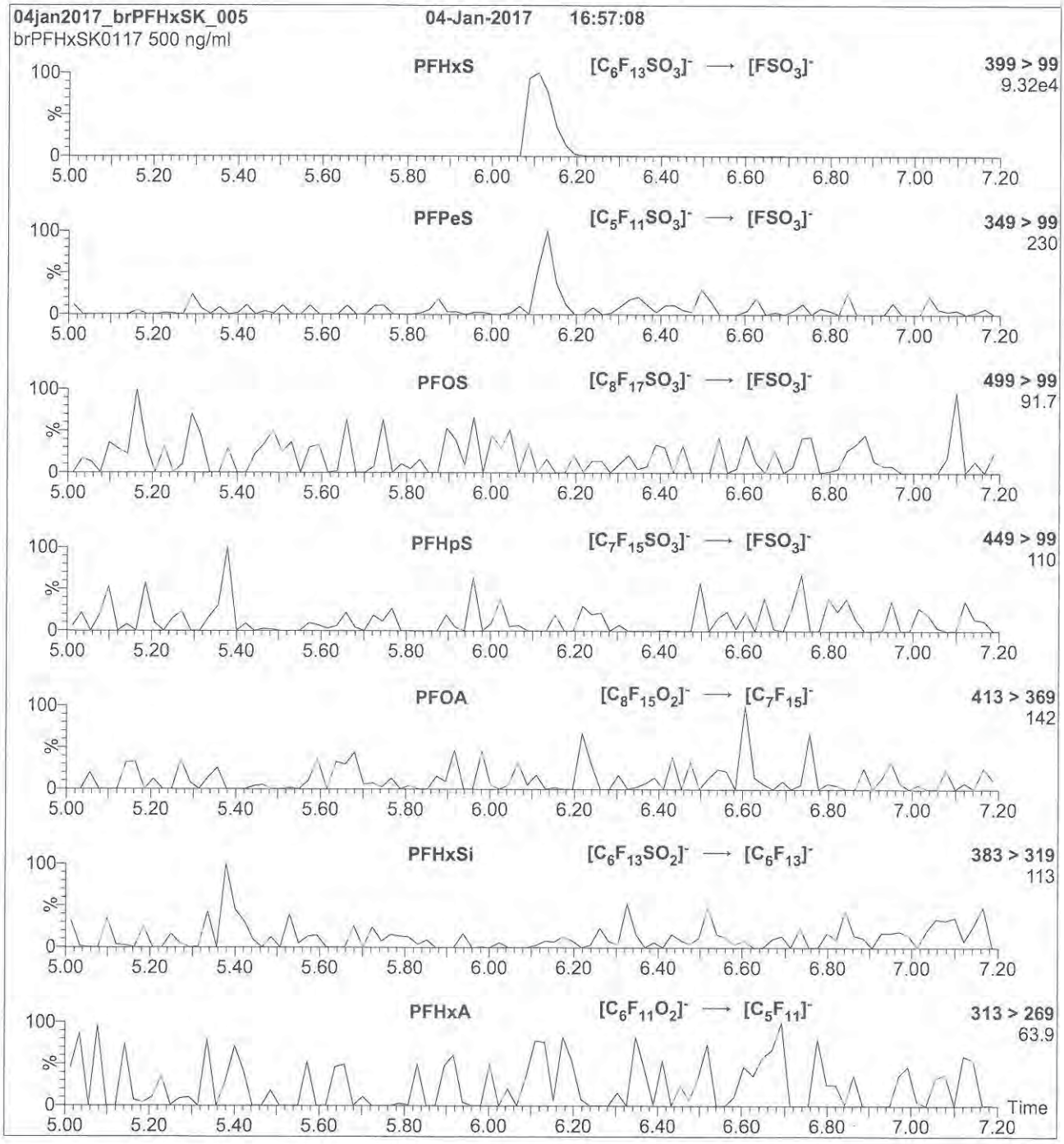
Flow: 300 µl/min

MS Parameters

Experiment: SIR (6 channels)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = variable (15-62)
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 3: **br-PFHxSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: Direct loop injection
10 µl (500 ng/ml br-PFHxSK)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 30

Analytical Standard Record

Vista Analytical Laboratory

17D2813

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
17D2619	L-PFHpS	26-Apr-17	** Vendor **	18-Oct-21	12-Jun-17 09:07 by AEW	0.5

Description:	L-PFHpS anion DIL	Expires:	28-Apr-18
Standard Type:	Other	Prepared:	28-Apr-17
Solvent:	Methanol/	Prepared By:	Isaac N. Johnson
Final Volume (mls):	0.952	Department:	LCMS
Vials:	1	Last Edit:	12-Jun-17 09:07 by AEW

Analyte	CAS Number	Concentration	Units
Total PFHpS		25	ug/mL
PFHpS	375-92-8	25	ug/mL
L-PFHpS		25	ug/mL

1702619

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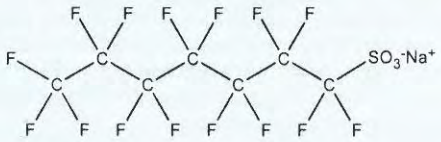
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	L-PFHpS	**LOT NUMBER:**	LPFHpS1016
COMPOUND:	Sodium perfluoro-1-heptanesulfonate		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$C_7F_{15}SO_3Na$	**MOLECULAR WEIGHT:**	472.10
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.6 ± 2.4 µg/ml (PFHpS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	10/18/2016		
EXPIRY DATE: (mm/dd/yyyy)	10/18/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.2% of L-PFHxS ($C_6F_{13}SO_3Na$) and ~ 0.1% of L-PFOS ($C_8F_{17}SO_3Na$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 10/20/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Analytical Standard Record

Vista Analytical Laboratory

17F3038

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
17D0605	13C6-PFDA	06-Apr-17	Jamie C. Stockman	06-May-21	06-Apr-17 09:43 by JCS	0.375
17E1717	13C2-FOUEA	17-May-17	** Vendor **	02-Aug-18	17-May-17 12:46 by INJ	0.375
17E2411	13C5-PFHxA	24-May-17	** Vendor **	27-Aug-19	24-May-17 11:19 by INJ	0.375
17F3031	13C4-PFOS dil.	30-Jun-17	Isaac N. Johnson	30-Jun-18	30-Jun-17 13:31 by INJ	0.468
17F3032	13C3-PFHxS DIL.	30-Jun-17	Isaac N. Johnson	30-Jun-18	30-Jun-17 13:35 by INJ	0.416
17F3034	13C8-PFOA dil.	30-Jun-17	Isaac N. Johnson	30-Jun-18	30-Jun-17 13:40 by INJ	0.468
17F3035	13C9-PFNA	30-Jun-17	** Vendor **	27-Aug-19	03-Jul-17 13:07 by INJ	0.375
17F3036	13C4-PFBA	30-Jun-17	** Vendor **	12-Apr-22	03-Jul-17 13:08 by INJ	0.375
17F3037	13C7-PFUdA	30-Jun-17	** Vendor **	22-Jan-21	03-Jul-17 13:09 by INJ	0.375

Description:	PFC-RS	Expires:	19-May-18
Standard Type:	Reagent	Prepared:	30-Jun-17
Solvent:	MEOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	15	Department:	LCMS
Vials:	1	Last Edit:	03-Jul-17 13:09 by INJ

Analyte	CAS Number	Concentration	Units
13C9-PFNA		1.25	ug/mL
13C8-PFOA		1.25	ug/mL
13C7-PFUnA		1.25	ug/mL
13C6-PFDA		1.25	ug/mL
13C5-PFHxA		1.25	ug/mL
13C4-PFOS		1.25	ug/mL
13C4-PFBA		1.25	ug/mL
13C3-PFHxS		1.25	ug/mL
13C2-FOUEA		1.25	ug/mL

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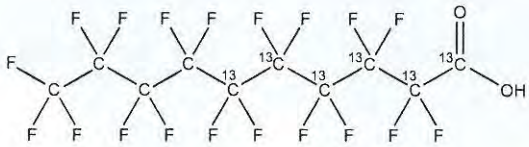
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M6PFDA
LOT NUMBER: M6PFDA0516
COMPOUND: Perfluoro-n-[1,2,3,4,5,6-$^{13}C_6$]decanoic acid

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_6{}^{12}C_4HF_{19}O_2$	**MOLECULAR WEIGHT:**	520.04
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3,4,5,6$-$^{13}C_6$)
LAST TESTED: (mm/dd/yyyy)	05/31/2016		
EXPIRY DATE: (mm/dd/yyyy)	05/31/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/13/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

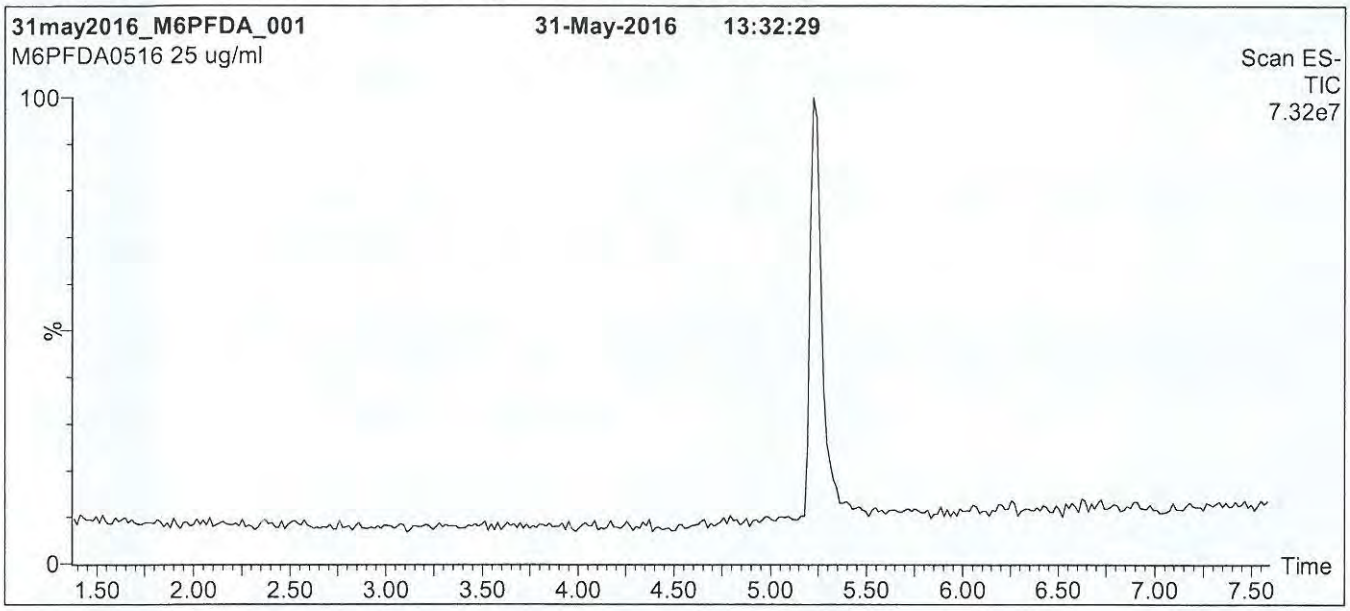
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

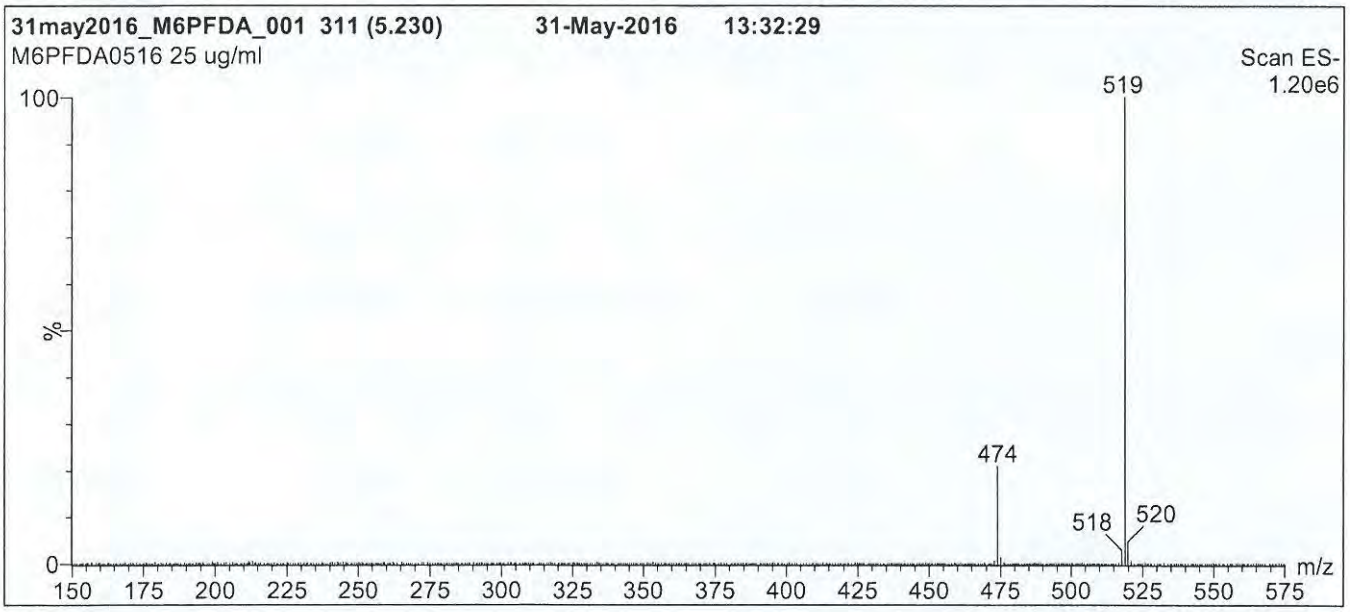
CALA

ANAB ACCREDITED

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **M6PFDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

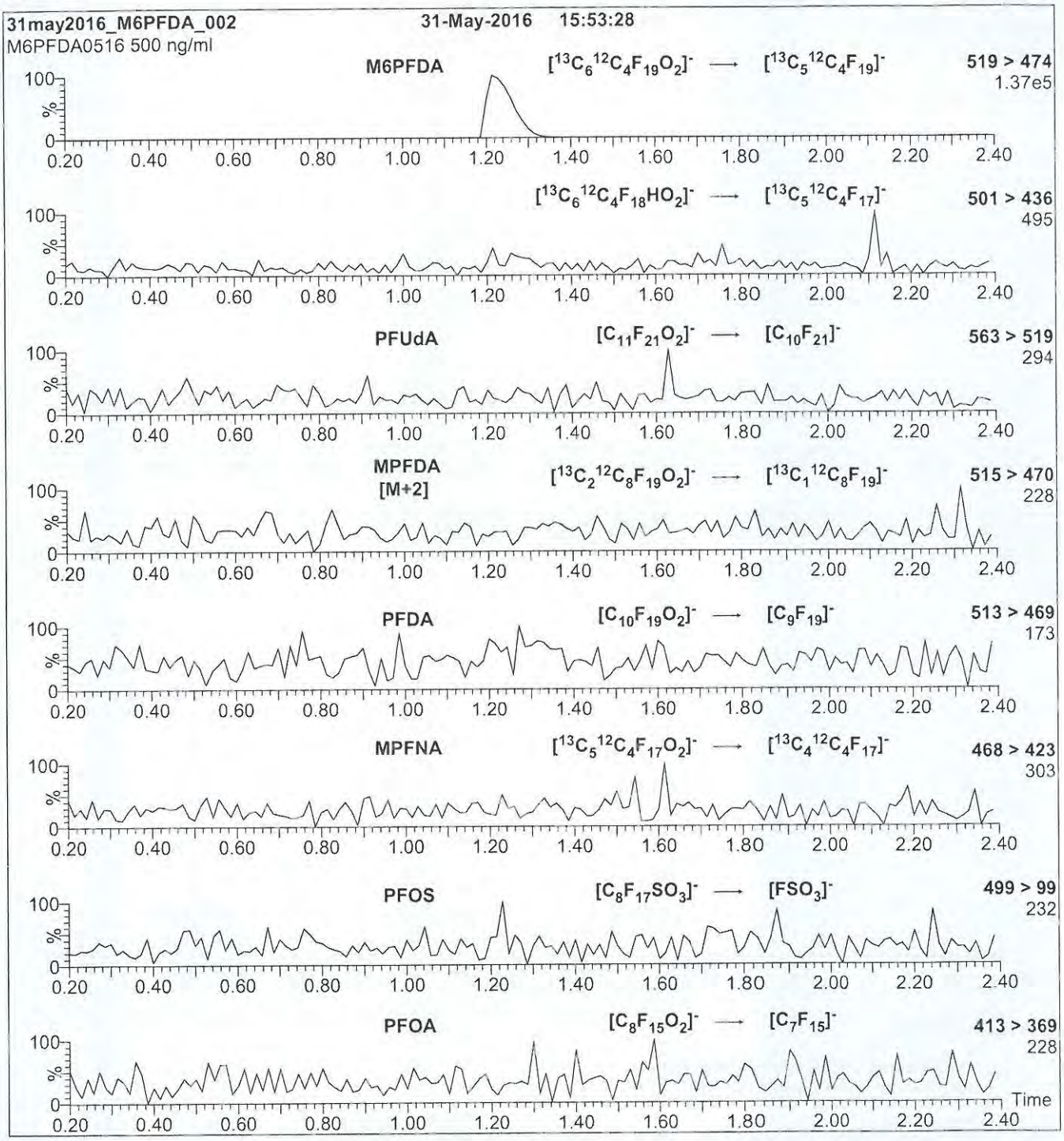
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M6PFDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M6PFDA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 13

17E1717

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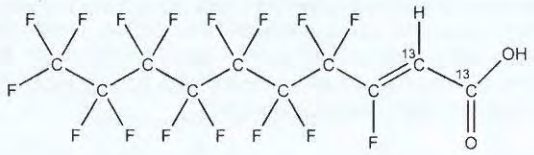
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MFOUEA
COMPOUND: 2H-Perfluoro-[1,2-$^{13}C_2$]-2-decenoic acid

LOT NUMBER: MFOUEA0716

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_8H_2F_{16}O_2$	**MOLECULAR WEIGHT:**	460.08
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Anhydrous Isopropanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	08/02/2016		
EXPIRY DATE: (mm/dd/yyyy)	08/02/2018		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-[1,2-$^{13}C_2$]-2-decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

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Certified By: B.G. Chittim **Date:** 08/19/2016 (mm/dd/yyyy)

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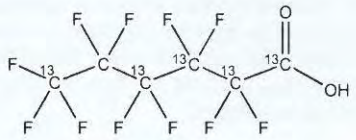
17E2411

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M5PFHxA	**LOT NUMBER:**	M5PFHxA0814
COMPOUND:	Perfluoro-n-[1,2,3,4,6-$^{13}C_5$]hexanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_5{}^{12}C_1HF_{11}O_2$	**MOLECULAR WEIGHT:**	319.02
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (1,2,3,4,6-$^{13}C_5$)
LAST TESTED: (mm/dd/yyyy)	08/27/2014		
EXPIRY DATE: (mm/dd/yyyy)	08/27/2019		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 03/31/2015
B.G. Chittim (mm/dd/yyyy)

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Analytical Standard Record

Vista Analytical Laboratory

17F3031

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
17E1719	13C4-PFOS	17-May-17	** Vendor **	12-Dec-21	17-May-17 12:47 by INJ	0.6

Description:	13C4-PFOS dil.	Expires:	30-Jun-18
Standard Type:	Other	Prepared:	30-Jun-17
Solvent:	Methanol	Prepared By:	Isaac N. Johnson
Final Volume (mls):	0.717	Department:	LCMS
Vials:	1	Last Edit:	30-Jun-17 13:31 by INJ

Analyte	CAS Number	Concentration	Units
13C4-PFOS		40	ug/mL

17E1719

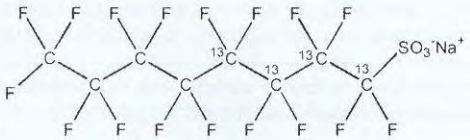
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFOS **LOT NUMBER:** MPFOS1216

COMPOUND: Sodium perfluoro-1-[1,2,3,4-$^{13}C_4$]octanesulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_4{}^{12}C_4F_{17}SO_3Na$	**MOLECULAR WEIGHT:**	526.08
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.8 ± 2.4 µg/ml (MPFOS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3,4\text{-}^{13}C_4$)
LAST TESTED: (mm/dd/yyyy)	12/12/2016		
EXPIRY DATE: (mm/dd/yyyy)	12/12/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.8% Sodium perfluoro-1-[1,2,3-$^{13}C_3$]heptanesulfonate.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 12/14/2016 (mm/dd/yyyy)

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Analytical Standard Record

Vista Analytical Laboratory

17F3032

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
17E2410	13C3-PFHxS	24-May-17	** Vendor **	31-May-21	24-May-17 11:18 by INJ	0.45

Description:	13C3-PFHxS DIL.	Expires:	30-Jun-18
Standard Type:	Reagent	Prepared:	30-Jun-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	0.473	Department:	LCMS
Vials:	1	Last Edit:	30-Jun-17 13:35 by INJ

Analyte	CAS Number	Concentration	Units
13C3-PFHxS		45	ug/mL

17E2410

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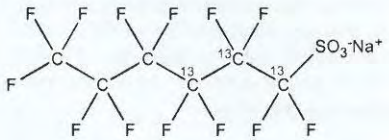
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M3PFHxS **LOT NUMBER:** M3PFHxS0516

COMPOUND: Sodium perfluoro-1-[1,2,3-$^{13}C_3$]hexanesulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_3{}^{12}C_3F_{13}SO_3Na$	**MOLECULAR WEIGHT:**	425.07
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.3 ± 2.4 µg/ml (M3PFHxS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3\text{-}^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	05/31/2016		
EXPIRY DATE: (mm/dd/yyyy)	05/31/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

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Certified By: B.G. Chittim **Date:** 07/05/2016 (mm/dd/yyyy)

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Analytical Standard Record

Vista Analytical Laboratory

17F3034

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
17E2406	13C8-PFOA	24-May-17	** Vendor **	12-Feb-21	24-May-17 11:16 by INJ	0.5

Description:	13C8-PFOA dil.	Expires:	30-Jun-18
Standard Type:	Other	Prepared:	30-Jun-17
Solvent:	Methanol	Prepared By:	Isaac N. Johnson
Final Volume (mls):	0.612	Department:	LCMS
Vials:	1	Last Edit:	30-Jun-17 13:40 by INJ

Analyte	CAS Number	Concentration	Units
13C8-PFOA		40	ug/mL

17E2406

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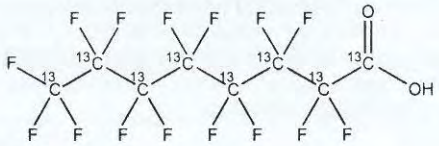
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	M8PFOA	**LOT NUMBER:**	M8PFOA0216
COMPOUND:	Perfluoro-n-[$^{13}C_8$]octanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_8HF_{15}O_2$	**MOLECULAR WEIGHT:**	422.01
CONCENTRATION:	49 ± 2.45 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	97.9% (M8PFOA) 2.1% (MPFOA [M+4])	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_8$)
LAST TESTED: (mm/dd/yyyy)	02/12/2016		
EXPIRY DATE: (mm/dd/yyyy)	02/12/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of native perfluoro-n-octanoic acid (PFOA) and ~ 2.1% of [M+4] perfluoro-n-octanoic acid.

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Certified By: _____ B.G. Chittim **Date:** 02/24/2016 (mm/dd/yyyy)

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17F3035

WELLINGTON LABORATORIES

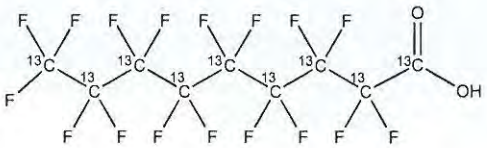
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M9PFNA
COMPOUND: Perfluoro-n-[$^{13}C_9$]nonanoic acid

LOT NUMBER: M9PFNA0814

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_9HF_{17}O_2$	**MOLECULAR WEIGHT:**	473.01
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_9$)
LAST TESTED: (mm/dd/yyyy)	08/27/2014		
EXPIRY DATE: (mm/dd/yyyy)	08/27/2019		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.9% of $^{13}C_5{}^{12}C_4HF_{17}O_2$ (MPFNA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 04/01/2015 (mm/dd/yyyy)

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17F3035

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

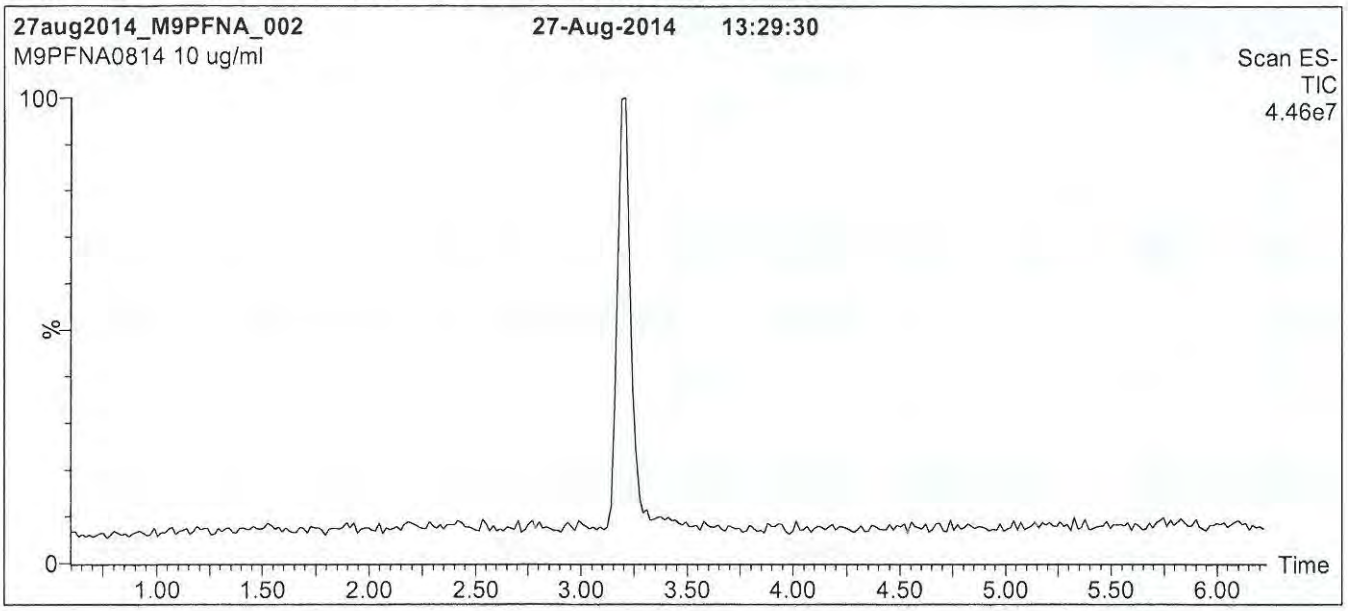
CALA

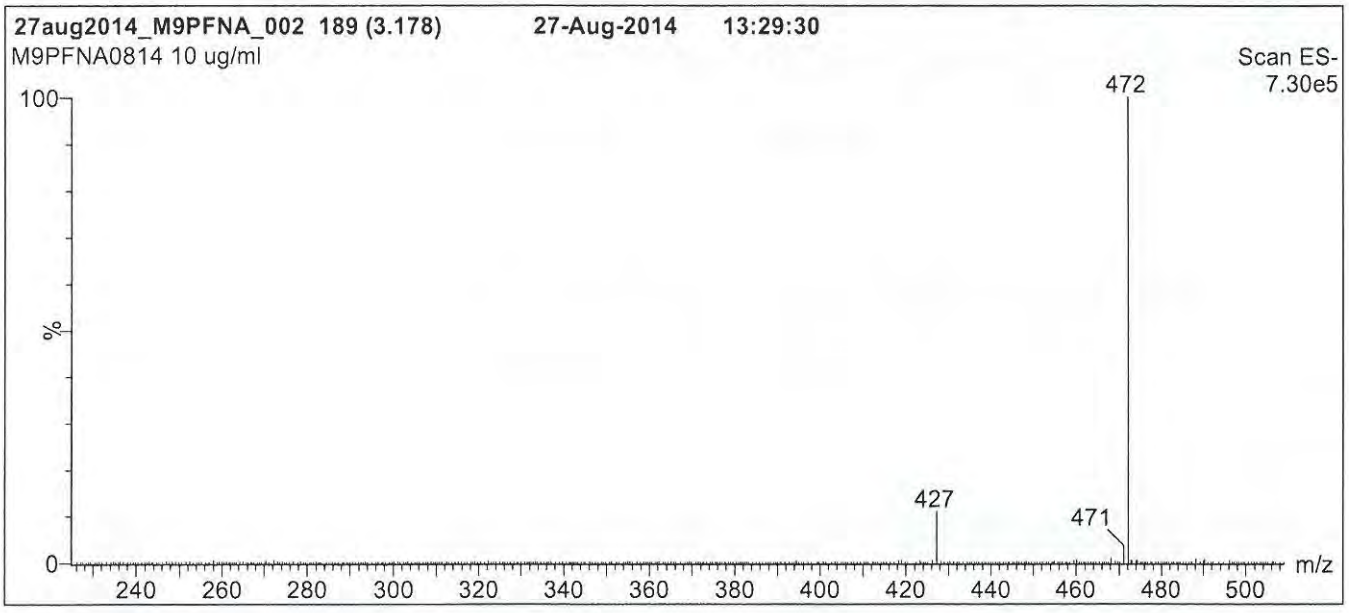
ANAB ACCREDITED

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

17F3035

Figure 1: **M9PFNA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

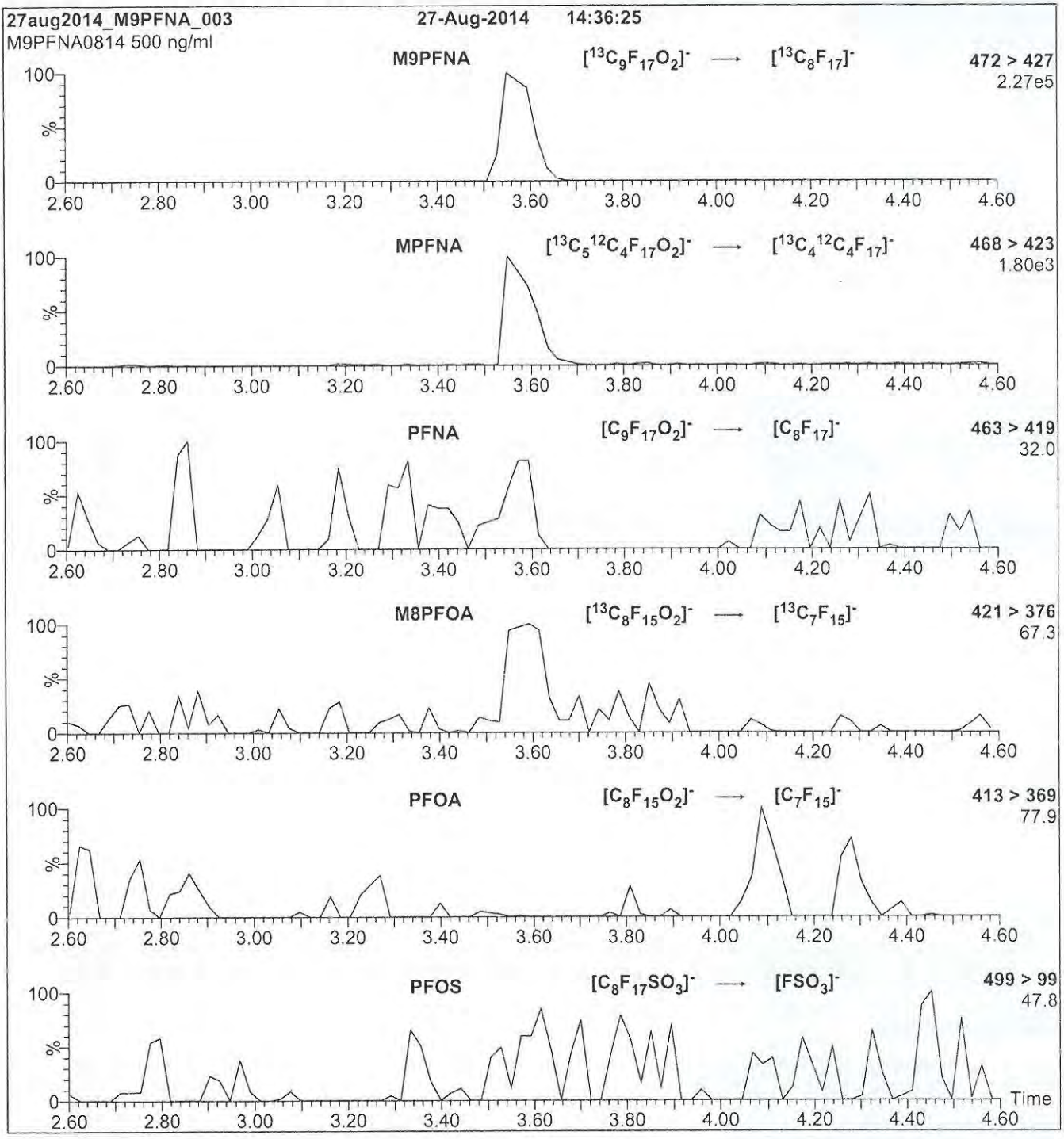
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

17F3035

Figure 2: **M9PFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M9PFNA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

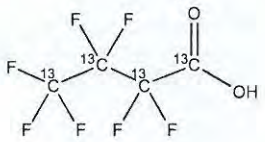
Collision Gas (mbar) = 3.74e-3
Collision Energy (eV) = 11

17F3036

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	MPFBA	**LOT NUMBER:**	MPFBA0417
COMPOUND:	Perfluoro-n-[1,2,3,4-$^{13}C_4$]butanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_4HF_7O_2$	**MOLECULAR WEIGHT:**	218.01
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3,4$-$^{13}C_4$)
LAST TESTED: (mm/dd/yyyy)	04/12/2017		
EXPIRY DATE: (mm/dd/yyyy)	04/12/2022		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 04/20/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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~~17F3037~~ SM 7/3/17
17F3036

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

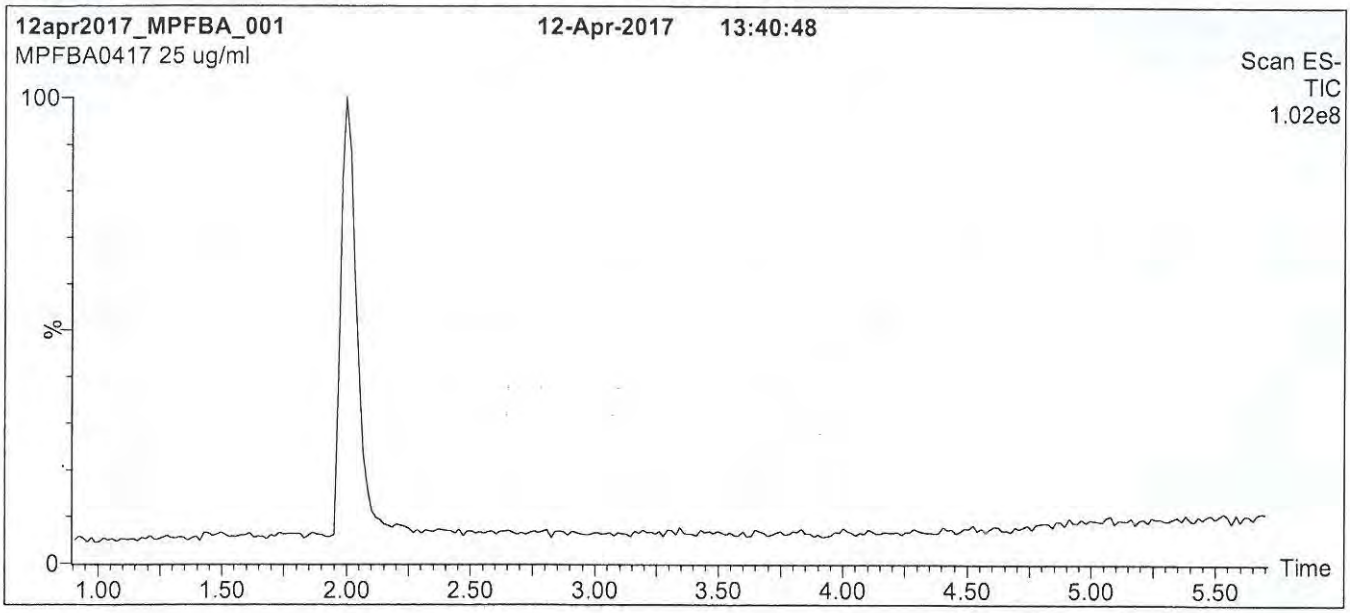
CALA

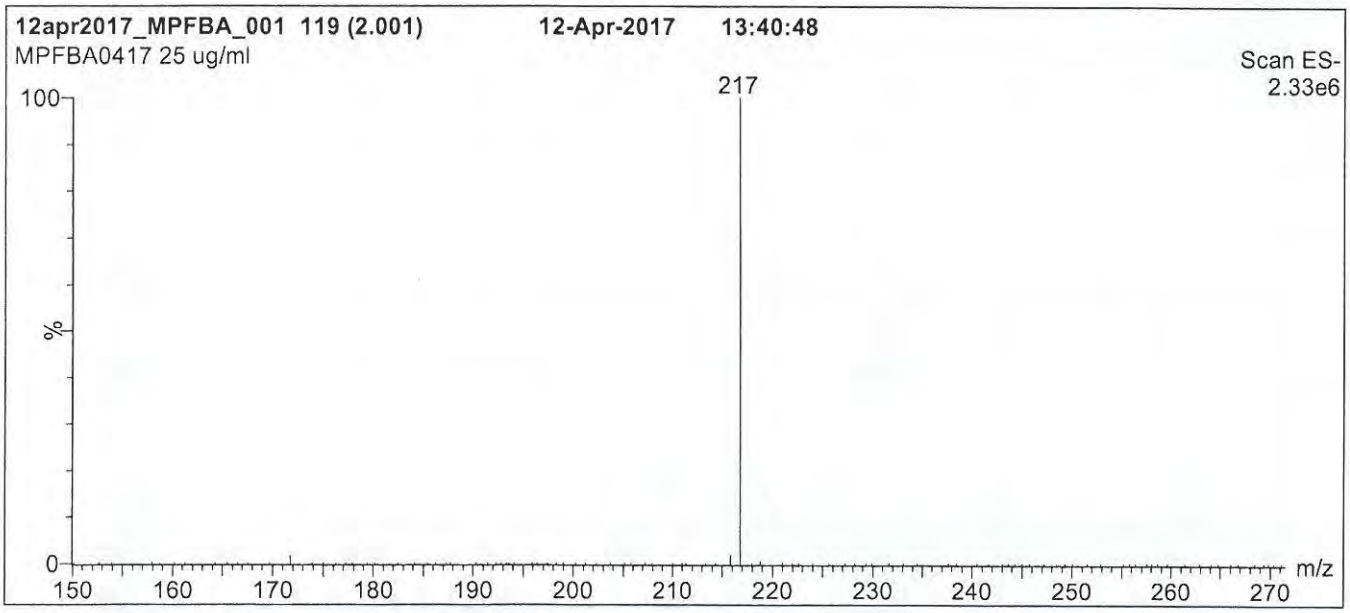
ANAB ACCREDITED

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

17F3036

Figure 1: **MPFBA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 30% (80:20 MeOH:ACN) / 70% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

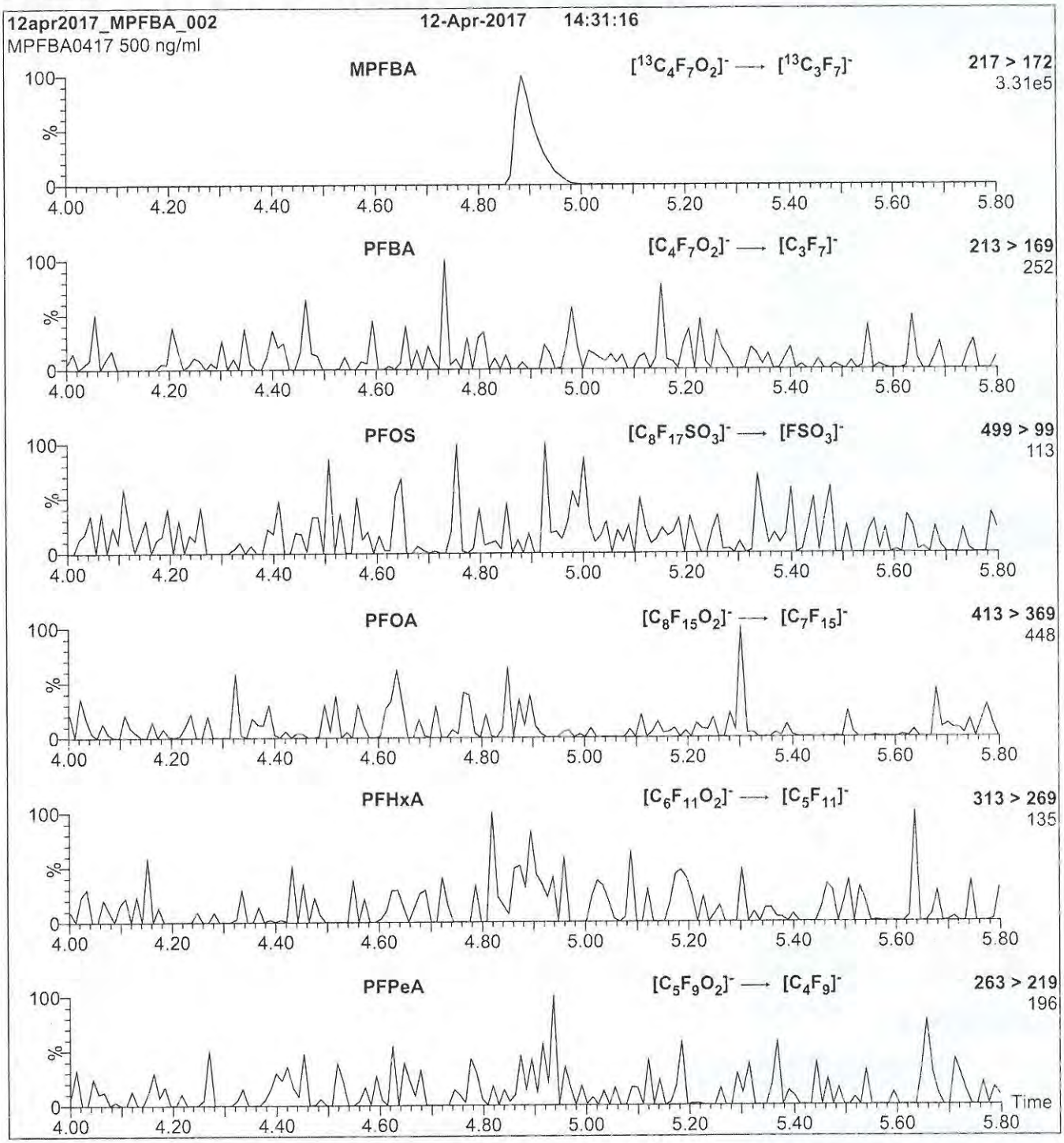
MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 10.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

17F3036

Figure 2: **MPFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFBA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

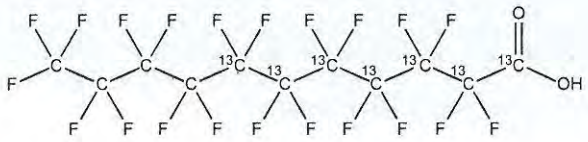
Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 10

17F3037

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M7PFUdA	**LOT NUMBER:**	M7PFUdA0116
COMPOUND:	Perfluoro-n-[1,2,3,4,5,6,7-$^{13}C_7$]undecanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_7{}^{12}C_4HF_{21}O_2$	**MOLECULAR WEIGHT:**	571.04
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy)	01/22/2016		(1,2,3,4,5,6,7-$^{13}C_7$)
EXPIRY DATE: (mm/dd/yyyy)	01/22/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ B.G. Chittim **Date:** 01/26/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

17F3037

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

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The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

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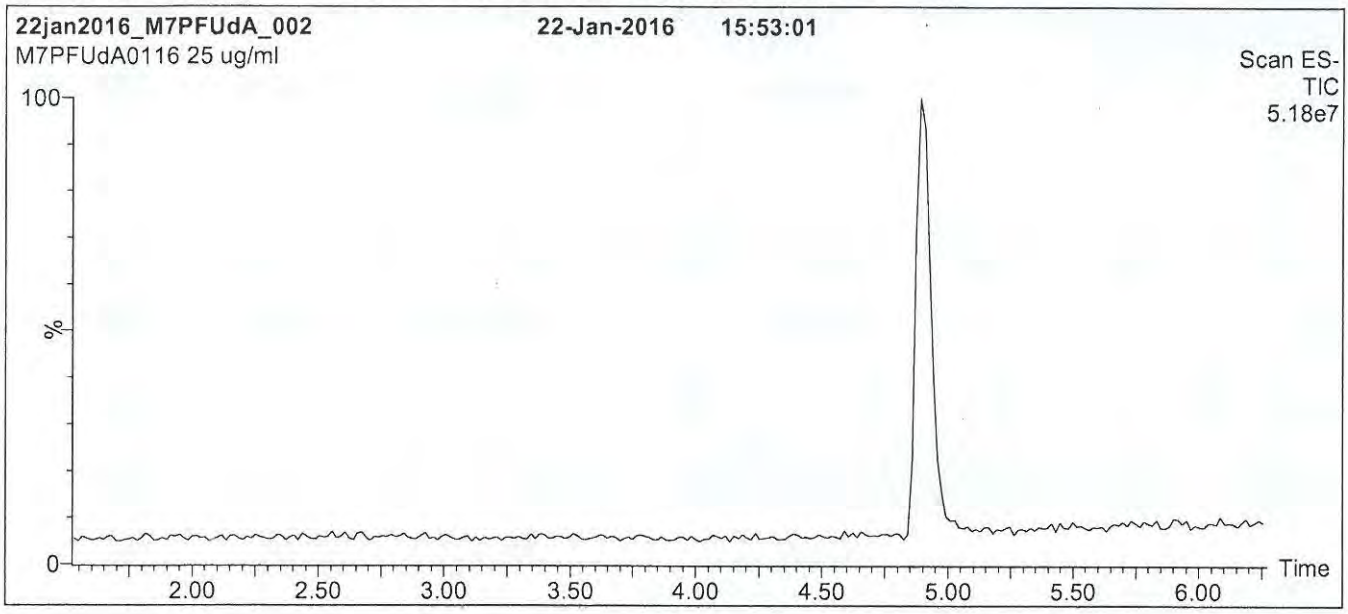
CALA

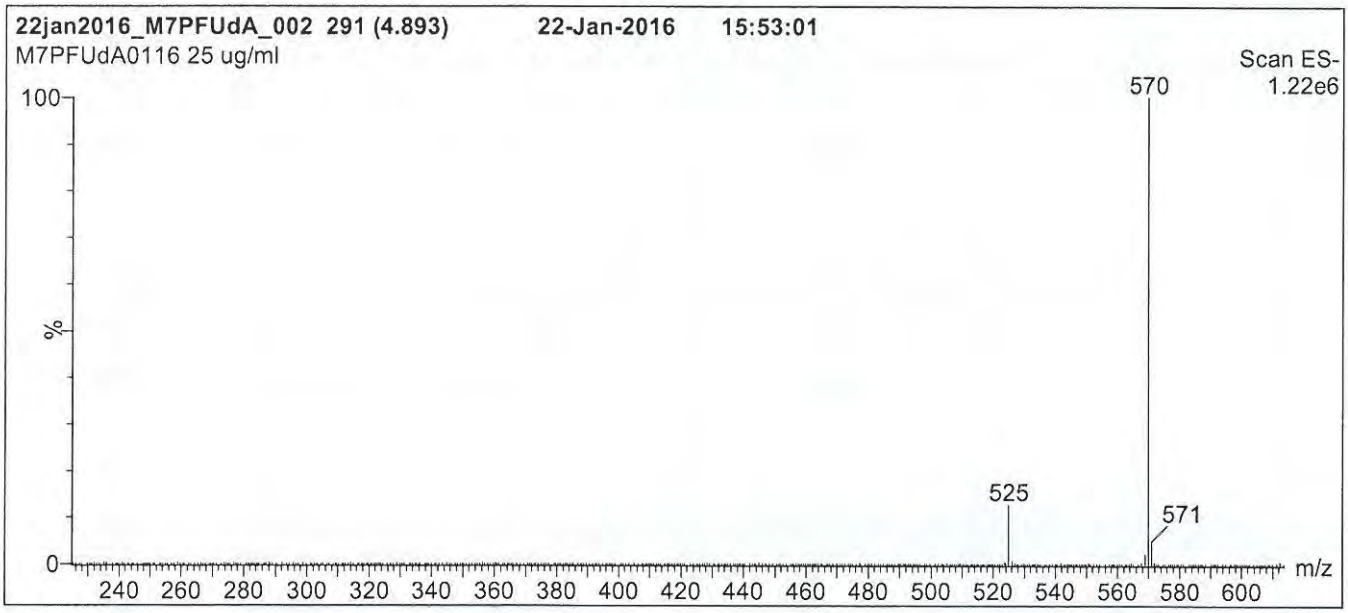
ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

17F3037

Figure 1: **M7PFUdA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

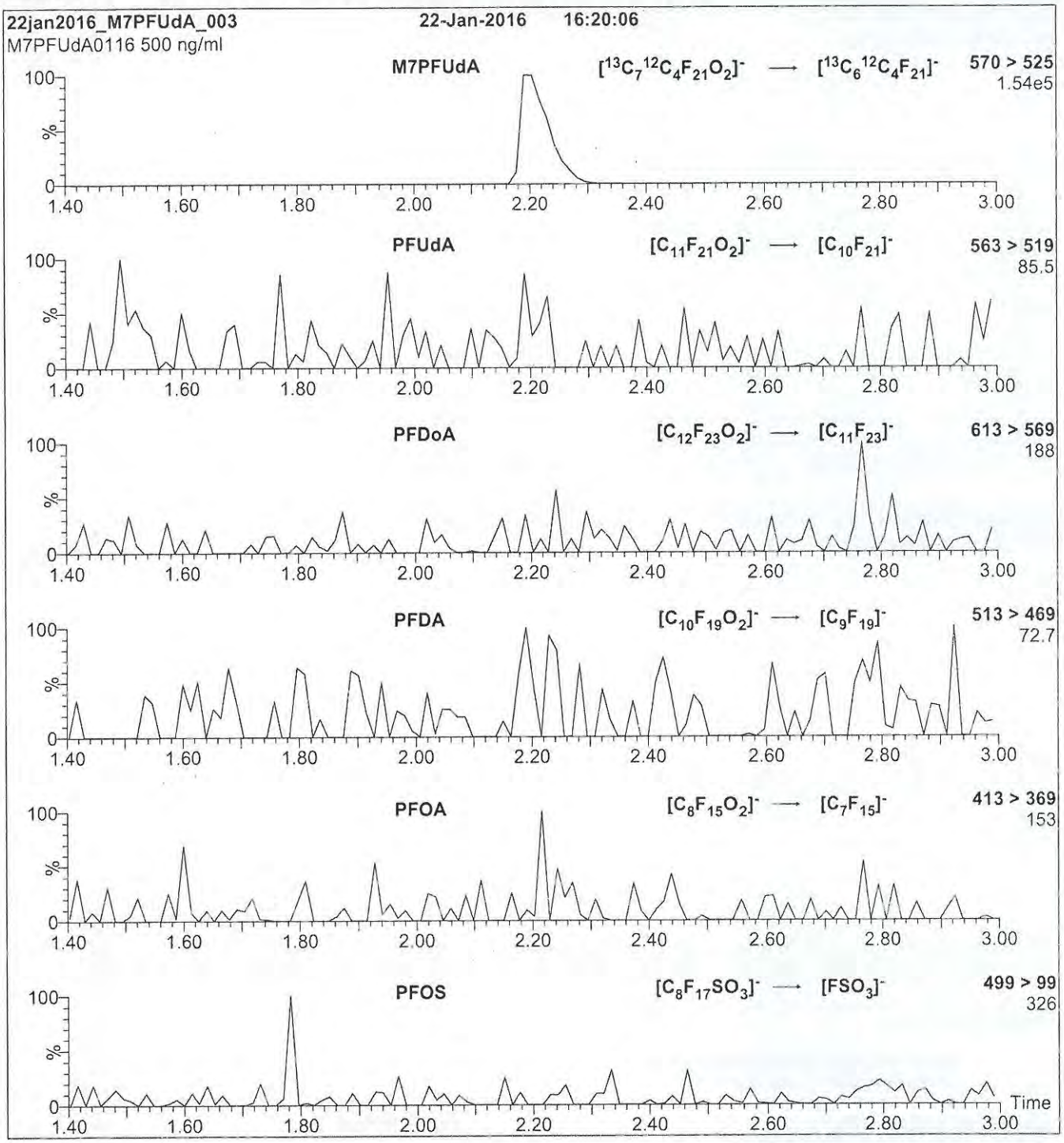
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 65
Desolvation Gas Flow (l/hr) = 750

17F3037

Figure 2: **M7PFUdA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M7PFUdA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.50e-3
Collision Energy (eV) = 11

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,""
"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","2058-94-
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"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","2991-50-
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"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","307-55-
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"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","72629-94-
8","PFTrDA","5.63","ng/L","U","0.556","LOD","","TRG","","","9.00","LOQ","YES","-99","","0.111","0.001","5.63","
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"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","376-06-
7","PFTeDA","5.63","ng/L","U","0.849","LOD","","TRG","","","9.00","LOQ","YES","-99","","0.111","0.001","5.63",
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"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","13C3-PFBS","13C3-
PFBS","99.3","%R","","-99","NA","","IS","99.3","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","13C2-PFHxA","13C2-
PFHxA","81.0","%R","","-99","NA","","IS","81.0","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","13C4-PFHpA","13C4-
PFHpA","58.8","%R","","-99","NA","","IS","58.8","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Dilution","1700920-02","Vista","18O2-PFHxS","18O2-
PFHxS","78.7","%R","D","-99","NA","","IS","78.7","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","13C2-PFOA","13C2-
PFOA","85.6","%R","","-99","NA","","IS","85.6","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Dilution","1700920-02","Vista","13C8-PFOS","13C8-
PFOS","86.0","%R","D","-99","NA","","IS","86.0","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","13C5-PFNA","13C5-
PFNA","68.3","%R","","-99","NA","","IS","68.3","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","13C2-PFDA","13C2-
PFDA","72.9","%R","","-99","NA","","IS","72.9","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","d3-MeFOSAA","d3-

MeFOSAA","71.8","%R","","-99","NA","","IS","71.8","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","13C2-PFUnA","13C2-PFUnA","65.5","%R","","-99","NA","","IS","65.5","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","d5-EtFOSAA","d5-EtFOSAA","66.7","%R","","-99","NA","","IS","66.7","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","13C2-PFDoA","13C2-PFDoA","73.5","%R","","-99","NA","","IS","73.5","","-99","NA","YES","100","","0.111","0.001","-99",""
"LF-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-02","Vista","13C2-PFTeDA","13C2-PFTeDA","46.8","%R","H","-99","NA","","IS","46.8","","-99","NA","YES","100","","0.111","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","375-73-5","PFBS","46.4","ng/L","","1.96","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","307-24-4","PFHxA","184","ng/L","","2.39","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","375-85-9","PFHpA","40.6","ng/L","","0.648","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","355-46-4","PFHxS","447","ng/L","","1.04","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","335-67-1","PFOA","41.4","ng/L","","0.714","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","1763-23-1","PFOS","1020","ng/L","","0.884","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","375-95-1","PFNA","5.61","ng/L","J","0.888","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","335-76-2","PFDA","5.48","ng/L","U","1.63","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","2355-31-9","MeFOSAA","5.48","ng/L","U","1.81","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48","",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","2058-94-8","PFUnA","5.48","ng/L","U","1.15","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","2991-50-6","EtFOSAA","5.48","ng/L","U","1.50","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","307-55-1","PFDoA","5.48","ng/L","U","0.868","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","72629-94-8","PFTrDA","5.48","ng/L","U","0.541","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","376-06-7","PFTeDA","5.48","ng/L","U","0.827","LOD","","TRG","","","8.77","LOQ","YES","-99","","0.114","0.001","5.48",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","13C3-PFBS","13C3-PFBS","112","%R","","-99","NA","","IS","112","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","13C2-PFHxA","13C2-PFHxA","78.2","%R","","-99","NA","","IS","78.2","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","13C4-PFHpA","13C4-PFHpA","67.5","%R","","-99","NA","","IS","67.5","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","18O2-PFHxS","18O2-PFHxS","70.5","%R","","-99","NA","","IS","70.5","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","13C2-PFOA","13C2-PFOA","78.3","%R","","-99","NA","","IS","78.3","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","13C8-PFOS","13C8-PFOS","77.3","%R","","-99","NA","","IS","77.3","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","13C5-PFNA","13C5-

PFNA","74.0","%R","","-99","NA","","IS","74.0","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","13C2-PFDA","13C2-
PFDA","61.2","%R","","-99","NA","","IS","61.2","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","d3-MeFOSAA","d3-
MeFOSAA","79.1","%R","","-99","NA","","IS","79.1","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","13C2-PFUnA","13C2-
PFUnA","59.4","%R","","-99","NA","","IS","59.4","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","d5-EtFOSAA","d5-
EtFOSAA","75.1","%R","","-99","NA","","IS","75.1","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","13C2-PFDoA","13C2-
PFDoA","59.3","%R","","-99","NA","","IS","59.3","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-03","Vista","13C2-PFTeDA","13C2-
PFTeDA","56.1","%R","","-99","NA","","IS","56.1","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","375-73-
5","PFBS","141","ng/L","","1.84","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","307-24-
4","PFHxA","602","ng/L","","2.24","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","375-85-
9","PFHpA","183","ng/L","","0.607","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","355-46-
4","PFHxS","1070","ng/L","","0.972","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","335-67-
1","PFOA","97.0","ng/L","","0.668","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12",""
"MH-DUP01-20170720","Modified EPA Method 537","Dilution","1700920-04","Vista","1763-23-
1","PFOS","1240","ng/L","D","4.14","LOD","","TRG","","","41.1","LOQ","YES","-99","","0.122","0.001","25.6",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","375-95-
1","PFNA","10.6","ng/L","","0.831","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","335-76-
2","PFDA","1.95","ng/L","J","1.53","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","2355-31-
9","MeFOSAA","5.12","ng/L","U","1.69","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12
","",
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","2058-94-
8","PFUnA","5.12","ng/L","U","1.08","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","2991-50-
6","EtFOSAA","5.12","ng/L","U","1.41","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12",
""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","307-55-
1","PFDoA","5.12","ng/L","U","0.813","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","72629-94-
8","PFTrDA","5.12","ng/L","U","0.507","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12","
"
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","376-06-
7","PFTeDA","5.12","ng/L","U","0.775","LOD","","TRG","","","8.21","LOQ","YES","-99","","0.122","0.001","5.12",
""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","13C3-PFBS","13C3-
PFBS","106","%R","","-99","NA","","IS","106","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","13C2-PFHxA","13C2-
PFHxA","80.4","%R","","-99","NA","","IS","80.4","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","13C4-PFHpA","13C4-
PFHpA","59.8","%R","","-99","NA","","IS","59.8","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","18O2-PFHxS","18O2-
PFHxS","82.0","%R","","-99","NA","","IS","82.0","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","13C2-PFOA","13C2-

PFOA","74.8","%R","","-99","NA","","IS","74.8","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Dilution","1700920-04","Vista","13C8-PFOS","13C8-
PFOS","82.5","%R","D","-99","NA","","IS","82.5","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","13C5-PFNA","13C5-
PFNA","74.2","%R","","-99","NA","","IS","74.2","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","13C2-PFDA","13C2-
PFDA","85.9","%R","","-99","NA","","IS","85.9","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","d3-MeFOSAA","d3-
MeFOSAA","70.3","%R","","-99","NA","","IS","70.3","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","13C2-PFUnA","13C2-
PFUnA","60.9","%R","","-99","NA","","IS","60.9","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","d5-EtFOSAA","d5-
EtFOSAA","66.8","%R","","-99","NA","","IS","66.8","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","13C2-PFDoA","13C2-
PFDoA","58.3","%R","","-99","NA","","IS","58.3","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-DUP01-20170720","Modified EPA Method 537","Initial","1700920-04","Vista","13C2-PFTeDA","13C2-
PFTeDA","43.8","%R","H","-99","NA","","IS","43.8","","-99","NA","YES","100","","0.122","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","375-73-
5","PFBS","140","ng/L","","1.85","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","307-24-
4","PFHxA","662","ng/L","","2.25","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","375-85-
9","PFHpA","174","ng/L","","0.611","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","355-46-
4","PFHxS","985","ng/L","","0.979","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","335-67-
1","PFOA","113","ng/L","","0.673","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","1763-23-
1","PFOS","1840","ng/L","","0.835","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","375-95-
1","PFNA","10.1","ng/L","","0.838","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","335-76-
2","PFDA","5.17","ng/L","U","1.54","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","2355-31-
9","MeFOSAA","5.17","ng/L","U","1.71","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17
","",
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","2058-94-
8","PFUnA","5.17","ng/L","U","1.09","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","2991-50-
6","EtFOSAA","5.17","ng/L","U","1.42","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",
""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","307-55-
1","PFDoA","5.17","ng/L","U","0.819","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","72629-94-
8","PFTrDA","5.17","ng/L","U","0.511","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17","
"
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","376-06-
7","PFTeDA","5.17","ng/L","U","0.781","LOD","","TRG","","","8.27","LOQ","YES","-99","","0.121","0.001","5.17",
""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","13C3-PFBS","13C3-
PFBS","113","%R","","-99","NA","","IS","113","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","13C2-PFHxA","13C2-
PFHxA","76.6","%R","","-99","NA","","IS","76.6","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","13C4-PFHpA","13C4-

PFHpA","70.0","%R","","-99","NA","","IS","70.0","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","18O2-PFHxS","18O2-
PFHxS","78.4","%R","","-99","NA","","IS","78.4","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","13C2-PFOA","13C2-
PFOA","73.6","%R","","-99","NA","","IS","73.6","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","13C8-PFOS","13C8-
PFOS","73.6","%R","","-99","NA","","IS","73.6","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","13C5-PFNA","13C5-
PFNA","71.8","%R","","-99","NA","","IS","71.8","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","13C2-PFDA","13C2-
PFDA","62.9","%R","","-99","NA","","IS","62.9","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","d3-MeFOSAA","d3-
MeFOSAA","71.0","%R","","-99","NA","","IS","71.0","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","13C2-PFUnA","13C2-
PFUnA","75.2","%R","","-99","NA","","IS","75.2","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","d5-EtFOSAA","d5-
EtFOSAA","65.6","%R","","-99","NA","","IS","65.6","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","13C2-PFDoA","13C2-
PFDoA","56.8","%R","","-99","NA","","IS","56.8","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-A97-20170720","Modified EPA Method 537","Initial","1700920-05","Vista","13C2-PFTeDA","13C2-
PFTeDA","58.5","%R","","-99","NA","","IS","58.5","","-99","NA","YES","100","","0.121","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","375-73-
5","PFBS","5.48","ng/L","U","1.97","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","307-24-
4","PFHxA","4.27","ng/L","J","2.40","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","375-85-
9","PFHpA","5.48","ng/L","U","0.650","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","355-46-
4","PFHxS","9.73","ng/L","","1.04","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","335-67-
1","PFOA","1.36","ng/L","J","0.717","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","1763-23-
1","PFOS","9.74","ng/L","","0.888","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","375-95-
1","PFNA","5.48","ng/L","U","0.892","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","335-76-
2","PFDA","5.48","ng/L","U","1.64","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","2355-31-
9","MeFOSAA","5.48","ng/L","U","1.82","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48
","",
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","2058-94-
8","PFUnA","5.48","ng/L","U","1.16","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","2991-50-
6","EtFOSAA","5.48","ng/L","U","1.51","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",
""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","307-55-
1","PFDoA","5.48","ng/L","U","0.872","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","72629-94-
8","PFTrDA","5.48","ng/L","U","0.544","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48","
"
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","376-06-
7","PFTeDA","5.48","ng/L","U","0.831","LOD","","TRG","","","8.81","LOQ","YES","-99","","0.114","0.001","5.48",
""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","13C3-PFBS","13C3-

PFBS","118","%R","","-99","NA","","IS","118","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","13C2-PFHxA","13C2-PFHxA","78.1","%R","","-99","NA","","IS","78.1","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","13C4-PFHpA","13C4-PFHpA","67.1","%R","","-99","NA","","IS","67.1","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","18O2-PFHxS","18O2-PFHxS","85.0","%R","","-99","NA","","IS","85.0","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","13C2-PFOA","13C2-PFOA","79.8","%R","","-99","NA","","IS","79.8","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","13C8-PFOS","13C8-PFOS","80.9","%R","","-99","NA","","IS","80.9","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","13C5-PFNA","13C5-PFNA","87.2","%R","","-99","NA","","IS","87.2","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","13C2-PFDA","13C2-PFDA","81.1","%R","","-99","NA","","IS","81.1","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","d3-MeFOSAA","d3-MeFOSAA","69.1","%R","","-99","NA","","IS","69.1","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","13C2-PFUnA","13C2-PFUnA","63.5","%R","","-99","NA","","IS","63.5","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","d5-EtFOSAA","d5-EtFOSAA","57.7","%R","","-99","NA","","IS","57.7","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","13C2-PFDoA","13C2-PFDoA","38.0","%R","H","-99","NA","","IS","38.0","","-99","NA","YES","100","","0.114","0.001","-99",""
"MH-H93-20170720","Modified EPA Method 537","Initial","1700920-06","Vista","13C2-PFTeDA","13C2-PFTeDA","8.20","%R","H","-99","NA","","IS","8.20","","-99","NA","YES","100","","0.114","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","375-73-5","PFBS","5.25","ng/L","U","1.88","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","307-24-4","PFHxA","5.25","ng/L","U","2.30","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","375-85-9","PFHpA","5.25","ng/L","U","0.622","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","355-46-4","PFHxS","5.25","ng/L","U","0.997","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","335-67-1","PFOA","5.25","ng/L","U","0.685","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","1763-23-1","PFOS","5.25","ng/L","U","0.850","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","375-95-1","PFNA","5.25","ng/L","U","0.853","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","335-76-2","PFDA","5.25","ng/L","U","1.57","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","2355-31-9","MeFOSAA","5.25","ng/L","U","1.74","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","2058-94-8","PFUnA","5.25","ng/L","U","1.11","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","2991-50-6","EtFOSAA","5.25","ng/L","U","1.44","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","307-55-1","PFDoA","5.25","ng/L","U","0.834","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","72629-94-8","PFTrDA","5.25","ng/L","U","0.520","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""

"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","376-06-7","PFTeDA","5.25","ng/L","U","0.795","LOD","","TRG","","","8.42","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","13C3-PFBS","13C3-PFBS","96.0","%R","","-99","NA","","IS","96.0","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","13C2-PFHxA","13C2-PFHxA","72.8","%R","","-99","NA","","IS","72.8","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","13C4-PFHpA","13C4-PFHpA","61.5","%R","","-99","NA","","IS","61.5","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","18O2-PFHxS","18O2-PFHxS","82.2","%R","","-99","NA","","IS","82.2","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","13C2-PFOA","13C2-PFOA","85.6","%R","","-99","NA","","IS","85.6","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","13C8-PFOS","13C8-PFOS","72.0","%R","","-99","NA","","IS","72.0","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","13C5-PFNA","13C5-PFNA","70.7","%R","","-99","NA","","IS","70.7","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","13C2-PFDA","13C2-PFDA","70.9","%R","","-99","NA","","IS","70.9","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","d3-MeFOSAA","d3-MeFOSAA","62.8","%R","","-99","NA","","IS","62.8","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","13C2-PFUnA","13C2-PFUnA","53.0","%R","","-99","NA","","IS","53.0","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","d5-EtFOSAA","d5-EtFOSAA","60.8","%R","","-99","NA","","IS","60.8","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","13C2-PFDoA","13C2-PFDoA","55.9","%R","","-99","NA","","IS","55.9","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-BLANK-20170720","Modified EPA Method 537","Initial","1700920-07","Vista","13C2-PFTeDA","13C2-PFTeDA","43.5","%R","H","-99","NA","","IS","43.5","","-99","NA","YES","100","","0.119","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","375-73-5","PFBS","217","ng/L","","1.93","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","307-24-4","PFHxA","904","ng/L","","2.36","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","375-85-9","PFHpA","283","ng/L","","0.639","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","355-46-4","PFHxS","1120","ng/L","","1.02","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","335-67-1","PFOA","148","ng/L","","0.703","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"MH-C94-20170720","Modified EPA Method 537","Dilution","1700920-08","Vista","1763-23-1","PFOS","4140","ng/L","D","4.36","LOD","","TRG","","","43.2","LOQ","YES","-99","","0.116","0.001","26.9",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","375-95-1","PFNA","13.4","ng/L","","0.875","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","335-76-2","PFDA","5.64","ng/L","J","1.61","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","2355-31-9","MeFOSAA","5.39","ng/L","U","1.78","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","2058-94-8","PFUnA","5.39","ng/L","U","1.13","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","2991-50-6","EtFOSAA","5.39","ng/L","U","1.48","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","307-55-

1","PFDoA","5.39","ng/L","U","0.856","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","72629-94-
8","PFTrDA","5.39","ng/L","U","0.534","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39","
"
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","376-06-
7","PFTeDA","5.39","ng/L","U","0.816","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",
""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","13C3-PFBS","13C3-
PFBS","110","%R","","-99","NA","","IS","110","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","13C2-PFHxA","13C2-
PFHxA","82.9","%R","","-99","NA","","IS","82.9","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","13C4-PFHpA","13C4-
PFHpA","67.8","%R","","-99","NA","","IS","67.8","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","18O2-PFHxS","18O2-
PFHxS","87.9","%R","","-99","NA","","IS","87.9","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","13C2-PFOA","13C2-
PFOA","77.6","%R","","-99","NA","","IS","77.6","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Dilution","1700920-08","Vista","13C8-PFOS","13C8-
PFOS","68.4","%R","D","-99","NA","","IS","68.4","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","13C5-PFNA","13C5-
PFNA","75.8","%R","","-99","NA","","IS","75.8","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","13C2-PFDA","13C2-
PFDA","74.6","%R","","-99","NA","","IS","74.6","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","d3-MeFOSAA","d3-
MeFOSAA","74.7","%R","","-99","NA","","IS","74.7","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","13C2-PFUnA","13C2-
PFUnA","68.5","%R","","-99","NA","","IS","68.5","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","d5-EtFOSAA","d5-
EtFOSAA","67.3","%R","","-99","NA","","IS","67.3","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","13C2-PFDoA","13C2-
PFDoA","59.4","%R","","-99","NA","","IS","59.4","","-99","NA","YES","100","","0.116","0.001","-99",""
"MH-C94-20170720","Modified EPA Method 537","Initial","1700920-08","Vista","13C2-PFTeDA","13C2-
PFTeDA","16.2","%R","H","-99","NA","","IS","16.2","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","375-73-
5","PFBS","57.2","ng/L","","1.89","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","307-24-
4","PFHxA","239","ng/L","","2.30","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","375-85-
9","PFHpA","62.6","ng/L","","0.623","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","355-46-
4","PFHxS","627","ng/L","","0.998","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","335-67-
1","PFOA","52.5","ng/L","","0.686","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","1763-23-
1","PFOS","1700","ng/L","","0.850","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","375-95-
1","PFNA","7.41","ng/L","J","0.853","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","335-76-
2","PFDA","2.67","ng/L","J","1.57","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","2355-31-
9","MeFOSAA","5.25","ng/L","U","1.74","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25
","",
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","2058-94-
8","PFUnA","5.25","ng/L","U","1.11","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""

"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","2991-50-6","EtFOSAA","5.25","ng/L","U","1.44","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","307-55-1","PFDoA","5.25","ng/L","U","0.834","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","72629-94-8","PFTrDA","5.25","ng/L","U","0.520","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","376-06-7","PFTeDA","5.25","ng/L","U","0.795","LOD","","TRG","","","8.43","LOQ","YES","-99","","0.119","0.001","5.25",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","13C3-PFBS","13C3-PFBS","112","%R","","-99","NA","","IS","112","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","13C2-PFHxA","13C2-PFHxA","79.7","%R","","-99","NA","","IS","79.7","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","13C4-PFHpA","13C4-PFHpA","66.4","%R","","-99","NA","","IS","66.4","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","18O2-PFHxS","18O2-PFHxS","76.5","%R","","-99","NA","","IS","76.5","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","13C2-PFOA","13C2-PFOA","74.2","%R","","-99","NA","","IS","74.2","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","13C8-PFOS","13C8-PFOS","73.9","%R","","-99","NA","","IS","73.9","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","13C5-PFNA","13C5-PFNA","69.2","%R","","-99","NA","","IS","69.2","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","13C2-PFDA","13C2-PFDA","67.8","%R","","-99","NA","","IS","67.8","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","d3-MeFOSAA","d3-MeFOSAA","74.4","%R","","-99","NA","","IS","74.4","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","13C2-PFUnA","13C2-PFUnA","61.0","%R","","-99","NA","","IS","61.0","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","d5-EtFOSAA","d5-EtFOSAA","74.8","%R","","-99","NA","","IS","74.8","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","13C2-PFDoA","13C2-PFDoA","67.0","%R","","-99","NA","","IS","67.0","","-99","NA","YES","100","","0.119","0.001","-99",""
"RCDM-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-09","Vista","13C2-PFTeDA","13C2-PFTeDA","44.2","%R","H","-99","NA","","IS","44.2","","-99","NA","YES","100","","0.119","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","375-73-5","PFBS","51.4","ng/L","","1.95","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","307-24-4","PFHxA","211","ng/L","","2.37","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","375-85-9","PFHpA","49.5","ng/L","","0.643","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","355-46-4","PFHxS","489","ng/L","","1.03","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","335-67-1","PFOA","40.9","ng/L","","0.709","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","1763-23-1","PFOS","1220","ng/L","","0.879","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","375-95-1","PFNA","6.59","ng/L","J","0.882","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","335-76-2","PFDA","5.43","ng/L","U","1.62","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","2355-31-

9","MeFOSAA","5.43","ng/L","U","1.80","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43"
,""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","2058-94-
8","PFUnA","5.43","ng/L","U","1.14","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","2991-50-
6","EtFOSAA","5.43","ng/L","U","1.49","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",
""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","307-55-
1","PFDoA","5.43","ng/L","U","0.862","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","72629-94-
8","PFTrDA","5.43","ng/L","U","0.538","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43","
"
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","376-06-
7","PFTeDA","5.43","ng/L","U","0.822","LOD","","TRG","","","8.71","LOQ","YES","-99","","0.115","0.001","5.43",
""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","13C3-PFBS","13C3-
PFBS","118","%R","","-99","NA","","IS","118","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","13C2-PFHxA","13C2-
PFHxA","81.9","%R","","-99","NA","","IS","81.9","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","13C4-PFHpA","13C4-
PFHpA","67.0","%R","","-99","NA","","IS","67.0","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","18O2-PFHxS","18O2-
PFHxS","87.0","%R","","-99","NA","","IS","87.0","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","13C2-PFOA","13C2-
PFOA","82.2","%R","","-99","NA","","IS","82.2","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","13C8-PFOS","13C8-
PFOS","82.1","%R","","-99","NA","","IS","82.1","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","13C5-PFNA","13C5-
PFNA","73.4","%R","","-99","NA","","IS","73.4","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","13C2-PFDA","13C2-
PFDA","64.9","%R","","-99","NA","","IS","64.9","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","d3-MeFOSAA","d3-
MeFOSAA","68.1","%R","","-99","NA","","IS","68.1","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","13C2-PFUnA","13C2-
PFUnA","58.8","%R","","-99","NA","","IS","58.8","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","d5-EtFOSAA","d5-
EtFOSAA","64.0","%R","","-99","NA","","IS","64.0","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","13C2-PFDoA","13C2-
PFDoA","59.0","%R","","-99","NA","","IS","59.0","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-14S-20170720","Modified EPA Method 537","Initial","1700920-10","Vista","13C2-PFTeDA","13C2-
PFTeDA","52.1","%R","","-99","NA","","IS","52.1","","-99","NA","YES","100","","0.115","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","375-73-
5","PFBS","54.2","ng/L","","1.92","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","307-24-
4","PFHxA","230","ng/L","","2.34","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","375-85-
9","PFHpA","50.2","ng/L","","0.633","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","355-46-
4","PFHxS","460","ng/L","","1.01","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","335-67-
1","PFOA","48.9","ng/L","","0.698","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","1763-23-
1","PFOS","1310","ng/L","","0.865","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","375-95-

1","PFNA","5.65","ng/L","J","0.868","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","335-76-
2","PFDA","1.69","ng/L","J","1.60","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","2355-31-
9","MeFOSAA","5.34","ng/L","U","1.77","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34"
,""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","2058-94-
8","PFUnA","5.34","ng/L","U","1.13","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","2991-50-
6","EtFOSAA","5.34","ng/L","U","1.47","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",
""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","307-55-
1","PFDoA","5.34","ng/L","U","0.849","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","72629-94-
8","PFTrDA","5.34","ng/L","U","0.529","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34","
"
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","376-06-
7","PFTeDA","5.34","ng/L","U","0.809","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",
""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","13C3-PFBS","13C3-
PFBS","111","%R","","-99","NA","","IS","111","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","13C2-PFHxA","13C2-
PFHxA","80.3","%R","","-99","NA","","IS","80.3","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","13C4-PFHpA","13C4-
PFHpA","59.5","%R","","-99","NA","","IS","59.5","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","18O2-PFHxS","18O2-
PFHxS","84.4","%R","","-99","NA","","IS","84.4","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","13C2-PFOA","13C2-
PFOA","71.0","%R","","-99","NA","","IS","71.0","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","13C8-PFOS","13C8-
PFOS","86.4","%R","","-99","NA","","IS","86.4","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","13C5-PFNA","13C5-
PFNA","65.1","%R","","-99","NA","","IS","65.1","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","13C2-PFDA","13C2-
PFDA","77.0","%R","","-99","NA","","IS","77.0","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","d3-MeFOSAA","d3-
MeFOSAA","60.8","%R","","-99","NA","","IS","60.8","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","13C2-PFUnA","13C2-
PFUnA","65.8","%R","","-99","NA","","IS","65.8","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","d5-EtFOSAA","d5-
EtFOSAA","69.5","%R","","-99","NA","","IS","69.5","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","13C2-PFDoA","13C2-
PFDoA","65.8","%R","","-99","NA","","IS","65.8","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-11","Vista","13C2-PFTeDA","13C2-
PFTeDA","57.4","%R","","-99","NA","","IS","57.4","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","375-73-
5","PFBS","68.3","ng/L","","1.92","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","307-24-
4","PFHxA","291","ng/L","","2.34","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","375-85-
9","PFHpA","68.0","ng/L","","0.633","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","355-46-
4","PFHxS","660","ng/L","","1.01","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","335-67-

1","PFOA","59.1","ng/L","","0.697","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","1763-23-
1","PFOS","1900","ng/L","","0.865","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","375-95-
1","PFNA","8.76","ng/L","","0.868","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","335-76-
2","PFDA","1.91","ng/L","J","1.60","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","2355-31-
9","MeFOSAA","5.34","ng/L","U","1.77","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34"
,""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","2058-94-
8","PFUnA","5.34","ng/L","U","1.12","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","2991-50-
6","EtFOSAA","5.34","ng/L","U","1.47","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",
""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","307-55-
1","PFDoA","5.34","ng/L","U","0.849","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","72629-94-
8","PFTrDA","5.34","ng/L","U","0.529","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34","
"
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","376-06-
7","PFTeDA","5.34","ng/L","U","0.809","LOD","","TRG","","","8.57","LOQ","YES","-99","","0.117","0.001","5.34",
""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","13C3-PFBS","13C3-
PFBS","112","%R","","-99","NA","","IS","112","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","13C2-PFHxA","13C2-
PFHxA","78.9","%R","","-99","NA","","IS","78.9","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","13C4-PFHpA","13C4-
PFHpA","67.9","%R","","-99","NA","","IS","67.9","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","18O2-PFHxS","18O2-
PFHxS","80.5","%R","","-99","NA","","IS","80.5","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","13C2-PFOA","13C2-
PFOA","80.4","%R","","-99","NA","","IS","80.4","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","13C8-PFOS","13C8-
PFOS","72.2","%R","","-99","NA","","IS","72.2","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","13C5-PFNA","13C5-
PFNA","79.7","%R","","-99","NA","","IS","79.7","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","13C2-PFDA","13C2-
PFDA","66.0","%R","","-99","NA","","IS","66.0","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","d3-MeFOSAA","d3-
MeFOSAA","74.6","%R","","-99","NA","","IS","74.6","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","13C2-PFUnA","13C2-
PFUnA","66.7","%R","","-99","NA","","IS","66.7","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","d5-EtFOSAA","d5-
EtFOSAA","66.7","%R","","-99","NA","","IS","66.7","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","13C2-PFDoA","13C2-
PFDoA","58.3","%R","","-99","NA","","IS","58.3","","-99","NA","YES","100","","0.117","0.001","-99",""
"LF-MW-13S-20170719","Modified EPA Method 537","Initial","1700920-12","Vista","13C2-PFTeDA","13C2-
PFTeDA","51.7","%R","","-99","NA","","IS","51.7","","-99","NA","YES","100","","0.117","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","375-73-
5","PFBS","62.9","ng/L","","1.89","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","307-24-
4","PFHxA","247","ng/L","","2.31","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","375-85-

9","PFHpA","56.2","ng/L","","0.625","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","355-46-
4","PFHxS","531","ng/L","","1.00","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","335-67-
1","PFOA","47.7","ng/L","","0.689","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","1763-23-
1","PFOS","1530","ng/L","","0.854","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","375-95-
1","PFNA","5.62","ng/L","J","0.857","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","335-76-
2","PFDA","1.84","ng/L","J","1.58","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","2355-31-
9","MeFOSAA","5.30","ng/L","U","1.75","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30"
,""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","2058-94-
8","PFUnA","5.30","ng/L","U","1.11","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","2991-50-
6","EtFOSAA","5.30","ng/L","U","1.45","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",
""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","307-55-
1","PFDoA","5.30","ng/L","U","0.838","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","72629-94-
8","PFTrDA","5.30","ng/L","U","0.523","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30","
"
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","376-06-
7","PFTeDA","5.30","ng/L","U","0.799","LOD","","TRG","","","8.47","LOQ","YES","-99","","0.118","0.001","5.30",
""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","13C3-PFBS","13C3-
PFBS","121","%R","","-99","NA","","IS","121","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","13C2-PFHxA","13C2-
PFHxA","85.4","%R","","-99","NA","","IS","85.4","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","13C4-PFHpA","13C4-
PFHpA","63.7","%R","","-99","NA","","IS","63.7","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","18O2-PFHxS","18O2-
PFHxS","85.2","%R","","-99","NA","","IS","85.2","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","13C2-PFOA","13C2-
PFOA","80.8","%R","","-99","NA","","IS","80.8","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","13C8-PFOS","13C8-
PFOS","84.4","%R","","-99","NA","","IS","84.4","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","13C5-PFNA","13C5-
PFNA","78.7","%R","","-99","NA","","IS","78.7","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","13C2-PFDA","13C2-
PFDA","75.9","%R","","-99","NA","","IS","75.9","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","d3-MeFOSAA","d3-
MeFOSAA","84.4","%R","","-99","NA","","IS","84.4","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","13C2-PFUnA","13C2-
PFUnA","74.6","%R","","-99","NA","","IS","74.6","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","d5-EtFOSAA","d5-
EtFOSAA","88.5","%R","","-99","NA","","IS","88.5","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","13C2-PFDoA","13C2-
PFDoA","74.7","%R","","-99","NA","","IS","74.7","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-11BR-20170720","Modified EPA Method 537","Initial","1700920-13","Vista","13C2-PFTeDA","13C2-
PFTeDA","62.0","%R","","-99","NA","","IS","62.0","","-99","NA","YES","100","","0.118","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","375-73-

5","PFBS","501","ng/L","","1.93","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","307-24-
4","PFHxA","1630","ng/L","","2.35","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","375-85-
9","PFHpA","681","ng/L","","0.636","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Dilution","1700920-14","Vista","355-46-
4","PFHxS","2210","ng/L","D","5.09","LOD","","TRG","","","43.0","LOQ","YES","-99","","0.116","0.001","26.9",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","335-67-
1","PFOA","423","ng/L","","0.700","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Dilution","1700920-14","Vista","1763-23-
1","PFOS","2710","ng/L","D","4.34","LOD","","TRG","","","43.0","LOQ","YES","-99","","0.116","0.001","26.9",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","375-95-
1","PFNA","206","ng/L","","0.871","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","335-76-
2","PFDA","9.82","ng/L","","1.60","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","2355-31-
9","MeFOSAA","5.39","ng/L","U","1.78","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39"
,""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","2058-94-
8","PFUnA","5.39","ng/L","U","1.13","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","2991-50-
6","EtFOSAA","5.39","ng/L","U","1.47","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39",
""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","307-55-
1","PFDoA","5.39","ng/L","U","0.852","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","72629-94-
8","PFTrDA","5.39","ng/L","U","0.531","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39","
"
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","376-06-
7","PFTeDA","5.39","ng/L","U","0.812","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39",
""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","13C3-PFBS","13C3-
PFBS","119","%R","","-99","NA","","IS","119","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","13C2-PFHxA","13C2-
PFHxA","87.7","%R","","-99","NA","","IS","87.7","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","13C4-PFHpA","13C4-
PFHpA","74.3","%R","","-99","NA","","IS","74.3","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Dilution","1700920-14","Vista","18O2-PFHxS","18O2-
PFHxS","96.5","%R","D","-99","NA","","IS","96.5","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","13C2-PFOA","13C2-
PFOA","85.5","%R","","-99","NA","","IS","85.5","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Dilution","1700920-14","Vista","13C8-PFOS","13C8-
PFOS","75.2","%R","D","-99","NA","","IS","75.2","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","13C5-PFNA","13C5-
PFNA","78.5","%R","","-99","NA","","IS","78.5","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","13C2-PFDA","13C2-
PFDA","82.5","%R","","-99","NA","","IS","82.5","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","d3-MeFOSAA","d3-
MeFOSAA","67.7","%R","","-99","NA","","IS","67.7","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","13C2-PFUnA","13C2-
PFUnA","80.3","%R","","-99","NA","","IS","80.3","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","d5-EtFOSAA","d5-
EtFOSAA","66.7","%R","","-99","NA","","IS","66.7","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","13C2-PFDoA","13C2-

PFDoA","62.6","%R","","-99","NA","","IS","62.6","","-99","NA","YES","100","","0.116","0.001","-99",""
"RCDM-MW-12S-20170719","Modified EPA Method 537","Initial","1700920-14","Vista","13C2-PFTeDA","13C2-PFTeDA","30.2","%R","H","-99","NA","","IS","30.2","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","375-73-5","PFBS","243","ng/L","","1.93","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","307-24-4","PFHxA","884","ng/L","","2.35","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","375-85-9","PFHpA","311","ng/L","","0.638","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","355-46-4","PFHxS","1670","ng/L","","1.02","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","335-67-1","PFOA","217","ng/L","","0.703","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Dilution","1700920-15","Vista","1763-23-1","PFOS","1980","ng/L","D","4.36","LOD","","TRG","","","43.2","LOQ","YES","-99","","0.116","0.001","26.9",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","375-95-1","PFNA","55.1","ng/L","","0.875","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","335-76-2","PFDA","9.62","ng/L","","1.61","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","2355-31-9","MeFOSAA","5.39","ng/L","U","1.78","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39","",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","2058-94-8","PFUnA","5.39","ng/L","U","1.13","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","2991-50-6","EtFOSAA","5.39","ng/L","U","1.48","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","307-55-1","PFDoA","5.39","ng/L","U","0.856","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","72629-94-8","PFTrDA","5.39","ng/L","U","0.534","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","376-06-7","PFTeDA","5.39","ng/L","U","0.816","LOD","","TRG","","","8.64","LOQ","YES","-99","","0.116","0.001","5.39",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","13C3-PFBS","13C3-PFBS","112","%R","","-99","NA","","IS","112","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","13C2-PFHxA","13C2-PFHxA","78.8","%R","","-99","NA","","IS","78.8","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","13C4-PFHpA","13C4-PFHpA","67.9","%R","","-99","NA","","IS","67.9","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","18O2-PFHxS","18O2-PFHxS","79.3","%R","","-99","NA","","IS","79.3","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","13C2-PFOA","13C2-PFOA","68.4","%R","","-99","NA","","IS","68.4","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Dilution","1700920-15","Vista","13C8-PFOS","13C8-PFOS","76.3","%R","D","-99","NA","","IS","76.3","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","13C5-PFNA","13C5-PFNA","70.9","%R","","-99","NA","","IS","70.9","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","13C2-PFDA","13C2-PFDA","75.2","%R","","-99","NA","","IS","75.2","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","d3-MeFOSAA","d3-MeFOSAA","63.2","%R","","-99","NA","","IS","63.2","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","13C2-PFUnA","13C2-

PFUnA","66.4","%R","","-99","NA","","IS","66.4","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","d5-EtFOSAA","d5-EtFOSAA","64.8","%R","","-99","NA","","IS","64.8","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","13C2-PFDoA","13C2-PFDoA","61.0","%R","","-99","NA","","IS","61.0","","-99","NA","YES","100","","0.116","0.001","-99",""
"LF-MW-28S-20170719","Modified EPA Method 537","Initial","1700920-15","Vista","13C2-PFTeDA","13C2-PFTeDA","28.6","%R","H","-99","NA","","IS","28.6","","-99","NA","YES","100","","0.116","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","375-73-5","PFBS","60.3","ng/L","","1.86","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","307-24-4","PFHxA","257","ng/L","","2.27","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","375-85-9","PFHpA","66.2","ng/L","","0.614","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","355-46-4","PFHxS","690","ng/L","","0.985","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","335-67-1","PFOA","60.5","ng/L","","0.677","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21",""
"DUP-07-20170719","Modified EPA Method 537","Dilution","1700920-16","Vista","1763-23-1","PFOS","1210","ng/L","D","4.20","LOD","","TRG","","","41.6","LOQ","YES","-99","","0.120","0.001","26.0",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","375-95-1","PFNA","9.00","ng/L","","0.842","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","335-76-2","PFDA","2.90","ng/L","J","1.55","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","2355-31-9","MeFOSAA","5.21","ng/L","U","1.72","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21","",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","2058-94-8","PFUnA","5.21","ng/L","U","1.09","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","2991-50-6","EtFOSAA","5.21","ng/L","U","1.42","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21","",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","307-55-1","PFDoA","5.21","ng/L","U","0.823","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","72629-94-8","PFTrDA","5.21","ng/L","U","0.514","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21","",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","376-06-7","PFTeDA","5.21","ng/L","U","0.785","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21","",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","13C3-PFBS","13C3-PFBS","117","%R","","-99","NA","","IS","117","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","13C2-PFHxA","13C2-PFHxA","82.2","%R","","-99","NA","","IS","82.2","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","13C4-PFHpA","13C4-PFHpA","57.4","%R","","-99","NA","","IS","57.4","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","18O2-PFHxS","18O2-PFHxS","73.2","%R","","-99","NA","","IS","73.2","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","13C2-PFOA","13C2-PFOA","74.8","%R","","-99","NA","","IS","74.8","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Dilution","1700920-16","Vista","13C8-PFOS","13C8-PFOS","82.8","%R","D","-99","NA","","IS","82.8","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","13C5-PFNA","13C5-PFNA","67.8","%R","","-99","NA","","IS","67.8","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","13C2-PFDA","13C2-

PFDA","71.8","%R","","-99","NA","","IS","71.8","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","d3-MeFOSAA","d3-
MeFOSAA","58.9","%R","","-99","NA","","IS","58.9","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","13C2-PFUnA","13C2-
PFUnA","56.6","%R","","-99","NA","","IS","56.6","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","d5-EtFOSAA","d5-
EtFOSAA","55.8","%R","","-99","NA","","IS","55.8","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","13C2-PFDoA","13C2-
PFDoA","60.9","%R","","-99","NA","","IS","60.9","","-99","NA","YES","100","","0.120","0.001","-99",""
"DUP-07-20170719","Modified EPA Method 537","Initial","1700920-16","Vista","13C2-PFTeDA","13C2-
PFTeDA","57.6","%R","","-99","NA","","IS","57.6","","-99","NA","YES","100","","0.120","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","375-73-
5","PFBS","5.68","ng/L","U","2.03","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","307-24-
4","PFHxA","5.68","ng/L","U","2.48","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","375-85-
9","PFHpA","5.68","ng/L","U","0.671","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","355-46-
4","PFHxS","5.68","ng/L","U","1.08","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","335-67-
1","PFOA","5.68","ng/L","U","0.739","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","1763-23-
1","PFOS","5.68","ng/L","U","0.916","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","375-95-
1","PFNA","5.68","ng/L","U","0.920","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","335-76-
2","PFDA","5.68","ng/L","U","1.69","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","2355-31-
9","MeFOSAA","5.68","ng/L","U","1.87","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68
",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","2058-94-
8","PFUnA","5.68","ng/L","U","1.19","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","2991-50-
6","EtFOSAA","5.68","ng/L","U","1.56","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",
""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","307-55-
1","PFDoA","5.68","ng/L","U","0.899","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","72629-94-
8","PFTrDA","5.68","ng/L","U","0.561","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68","
"
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","376-06-
7","PFTeDA","5.68","ng/L","U","0.857","LOD","","TRG","","","9.09","LOQ","YES","-99","","0.110","0.001","5.68",
""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","13C3-PFBS","13C3-
PFBS","121","%R","","-99","NA","","IS","121","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","13C2-PFHxA","13C2-
PFHxA","84.5","%R","","-99","NA","","IS","84.5","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","13C4-PFHpA","13C4-
PFHpA","68.9","%R","","-99","NA","","IS","68.9","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","18O2-PFHxS","18O2-
PFHxS","79.6","%R","","-99","NA","","IS","79.6","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","13C2-PFOA","13C2-
PFOA","75.9","%R","","-99","NA","","IS","75.9","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","13C8-PFOS","13C8-

PFOS","77.6","%R","","-99","NA","","IS","77.6","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","13C5-PFNA","13C5-
PFNA","83.5","%R","","-99","NA","","IS","83.5","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","13C2-PFDA","13C2-
PFDA","76.0","%R","","-99","NA","","IS","76.0","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","d3-MeFOSAA","d3-
MeFOSAA","48.0","%R","H","-99","NA","","IS","48.0","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","13C2-PFUnA","13C2-
PFUnA","50.7","%R","","-99","NA","","IS","50.7","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","d5-EtFOSAA","d5-
EtFOSAA","48.2","%R","H","-99","NA","","IS","48.2","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","13C2-PFDoA","13C2-
PFDoA","55.9","%R","","-99","NA","","IS","55.9","","-99","NA","YES","100","","0.110","0.001","-99",""
"FRB04-20170719","Modified EPA Method 537","Initial","1700920-17","Vista","13C2-PFTeDA","13C2-
PFTeDA","51.8","%R","","-99","NA","","IS","51.8","","-99","NA","YES","100","","0.110","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","375-73-
5","PFBS","2.50","ng/L","U","0.895","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","307-24-
4","PFHxA","2.50","ng/L","U","1.09","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","375-85-
9","PFHpA","2.50","ng/L","U","0.296","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","355-46-
4","PFHxS","2.50","ng/L","U","0.474","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","335-67-
1","PFOA","2.50","ng/L","U","0.326","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","1763-23-
1","PFOS","2.50","ng/L","U","0.404","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","375-95-
1","PFNA","2.50","ng/L","U","0.405","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","335-76-
2","PFDA","2.50","ng/L","U","0.745","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","2355-31-
9","MeFOSAA","2.50","ng/L","U","0.825","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50
","",
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","2058-94-
8","PFUnA","2.50","ng/L","U","0.525","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","2991-50-
6","EtFOSAA","2.50","ng/L","U","0.685","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50
","",
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","307-55-
1","PFDoA","2.50","ng/L","U","0.396","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","72629-94-
8","PFTrDA","2.50","ng/L","U","0.247","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50","
"
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","376-06-
7","PFTeDA","2.50","ng/L","U","0.378","LOD","","TRG","","","4.00","LOQ","YES","-99","","0.250","0.001","2.50",
""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","13C3-PFBS","13C3-
PFBS","107","%R","","-99","NA","","IS","107","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","13C2-PFHxA","13C2-
PFHxA","75.6","%R","","-99","NA","","IS","75.6","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","13C4-PFHpA","13C4-
PFHpA","66.4","%R","","-99","NA","","IS","66.4","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","18O2-PFHxS","18O2-

PFHxS","74.3","%R","","-99","NA","","IS","74.3","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","13C2-PFOA","13C2-
PFOA","72.6","%R","","-99","NA","","IS","72.6","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","13C8-PFOS","13C8-
PFOS","72.6","%R","","-99","NA","","IS","72.6","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","13C5-PFNA","13C5-
PFNA","78.5","%R","","-99","NA","","IS","78.5","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","13C2-PFDA","13C2-
PFDA","74.4","%R","","-99","NA","","IS","74.4","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","d3-MeFOSAA","d3-
MeFOSAA","51.9","%R","","-99","NA","","IS","51.9","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","13C2-PFUnA","13C2-
PFUnA","62.9","%R","","-99","NA","","IS","62.9","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","d5-EtFOSAA","d5-
EtFOSAA","51.7","%R","","-99","NA","","IS","51.7","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","13C2-PFDoA","13C2-
PFDoA","44.1","%R","H","-99","NA","","IS","44.1","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BLK1","Modified EPA Method 537","Initial","B7G0122-BLK1","Vista","13C2-PFTeDA","13C2-
PFTeDA","42.8","%R","H","-99","NA","","IS","42.8","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BS1","Modified EPA Method 537","Initial","B7G0122-BS1","Vista","375-73-
5","PFBS","39.4","ng/L","","0.895","LOD","","TRG","98.5","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50",
""
"B7G0122-BS1","Modified EPA Method 537","Initial","B7G0122-BS1","Vista","307-24-
4","PFHxA","44.1","ng/L","","1.09","LOD","","TRG","110","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50",
""
"B7G0122-BS1","Modified EPA Method 537","Initial","B7G0122-BS1","Vista","375-85-
9","PFHpA","41.6","ng/L","","0.296","LOD","","TRG","104","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"
,""
,
"B7G0122-BS1","Modified EPA Method 537","Initial","B7G0122-BS1","Vista","355-46-
4","PFHxS","44.5","ng/L","","0.474","LOD","","TRG","111","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"
,""
,
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1","PFOA","46.2","ng/L","","0.326","LOD","","TRG","115","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50",
""
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"
"B7G0122-BS1","Modified EPA Method 537","Initial","B7G0122-BS1","Vista","375-95-
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2","PFDA","44.5","ng/L","","0.745","LOD","","TRG","111","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50",
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9","MeFOSAA","46.7","ng/L","","0.825","LOD","","TRG","117","","4.00","LOQ","YES","40.0","","0.250","0.001","2
.50",""
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8","PFUnA","41.9","ng/L","","0.525","LOD","","TRG","105","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50"
,""
,
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6","EtFOSAA","38.7","ng/L","","0.685","LOD","","TRG","96.7","","4.00","LOQ","YES","40.0","","0.250","0.001","2.
50",""
"B7G0122-BS1","Modified EPA Method 537","Initial","B7G0122-BS1","Vista","307-55-
1","PFDoA","38.1","ng/L","","0.396","LOD","","TRG","95.2","","4.00","LOQ","YES","40.0","","0.250","0.001","2.50

","""
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"B7G0122-BS1","Modified EPA Method 537","Initial","B7G0122-BS1","Vista","13C2-PFDA","13C2-PFDA","63.3","%R","","-99","NA","","IS","63.3","","-99","NA","YES","100","","0.250","0.001","-99",""
"B7G0122-BS1","Modified EPA Method 537","Initial","B7G0122-BS1","Vista","d3-MeFOSAA","d3-MeFOSAA","36.3","%R","H","-99","NA","","IS","36.3","","-99","NA","YES","100","","0.250","0.001","-99",""
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"B7G0122-BS1","Modified EPA Method 537","Initial","B7G0122-BS1","Vista","d5-EtFOSAA","d5-EtFOSAA","33.9","%R","H","-99","NA","","IS","33.9","","-99","NA","YES","100","","0.250","0.001","-99",""
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"NAWC Trenton","NAWC Trenton","RCDM-MW-28S-20170719","07/19/2017 08:30","AQ","1700920-01","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","08/01/2017 14:47","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7G0122","B7G0122","NA","S7G0074","1700920","07/21/2017 09:12","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","LF-MW-12S-20170719","07/19/2017 11:15","AQ","1700920-02","NM","","1.90","Modified EPA Method 537","METHOD","Dilution","07/27/2017 07:52","08/01/2017 18:43","Vista","COA","WET","NA","5","NA","NA","01/01/1900 00:00","100","B7G0122","B7G0122","NA","S7G0074","1700920","07/21/2017 09:12","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","LF-MW-12S-20170719","07/19/2017 11:15","AQ","1700920-02","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","08/01/2017 14:58","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7G0122","B7G0122","NA","S7G0074","1700920","07/21/2017 09:12","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","RCDM-MW-14S-20170720","07/20/2017 09:30","AQ","1700920-03","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","07/31/2017 20:43","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7G0122","B7G0122","NA","S7G0074","1700920","07/21/2017 09:12","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","MH-DUP01-20170720","07/20/2017 07:00","AQ","1700920-

04","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","07/31/2017
20:54","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0122","B7G0122","NA","S7G0074","1700920","07/21/2017 09:12","01/01/1900 00:00",""
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00:00","100","B7G0122","B7G0122","NA","S7G0074","1700920","07/21/2017 09:12","01/01/1900 00:00",""
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06","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","07/31/2017
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00:00","100","B7G0122","B7G0122","NA","S7G0074","1700920","07/21/2017 09:12","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","RCDM-BLANK-20170720","07/20/2017 13:00","AQ","1700920-
07","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","07/31/2017
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"NAWC Trenton","NAWC Trenton","MH-C94-20170720","07/20/2017 15:30","AQ","1700920-
08","NM","","1.90","Modified EPA Method 537","METHOD","Dilution","07/27/2017 07:52","08/01/2017
18:54","Vista","COA","WET","NA","5","NA","NA","01/01/1900
00:00","100","B7G0122","B7G0122","NA","S7G0074","1700920","07/21/2017 09:12","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","MH-C94-20170720","07/20/2017 15:30","AQ","1700920-
08","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","07/31/2017
22:08","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0122","B7G0122","NA","S7G0074","1700920","07/21/2017 09:12","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","RCDM-MW-13S-20170719","07/19/2017 11:45","AQ","1700920-
09","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","07/31/2017
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"NAWC Trenton","NAWC Trenton","LF-MW-14S-20170720","07/20/2017 11:10","AQ","1700920-
10","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","07/31/2017
22:30","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0122","B7G0122","NA","S7G0074","1700920","07/21/2017 09:12","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","LF-MW-11BR-20170720","07/20/2017 11:25","AQ","1700920-
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"NAWC Trenton","NAWC Trenton","RCDM-MW-11BR-20170720","07/20/2017 10:15","AQ","1700920-
13","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","07/31/2017
23:03","Vista","COA","WET","NA","1","NA","NA","01/01/1900
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14","NM","","1.90","Modified EPA Method 537","METHOD","Dilution","07/27/2017 07:52","08/01/2017
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14","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","07/31/2017
23:13","Vista","COA","WET","NA","1","NA","NA","01/01/1900

00:00","100","B7G0122","B7G0122","NA","S7G0074","1700920","07/21/2017 09:12","01/01/1900 00:00",""
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15","NM","","1.90","Modified EPA Method 537","METHOD","Dilution","07/27/2017 07:52","08/01/2017
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16","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","08/01/2017
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17","NM","","1.90","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","07/31/2017
23:45","Vista","COA","WET","NA","1","NA","NA","01/01/1900
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BLK1","MB","","-99","Modified EPA Method 537","METHOD","Initial","07/27/2017 07:52","07/31/2017
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TETRA TECH

INTERNAL CORRESPONDENCE

TO: **MARY MANG** **DATE:** **SEPTEMBER 15, 2017**

FROM: **MEGAN RITCHIE** **COPIES:** **DV FILE/**

SUBJECT: **ORGANIC DATA VALIDATION – POLYFLUOROAKLYL SUBSTANCES (PFAS)**
CTO WE08 - FORMER NAWC TRENTON
SDG 1700920

SAMPLES: 17 / Groundwater / PFAS

RCDM-MW-11BR-20170720	LF-MW-11BR-20170720	MH-A97-20170720
RCDM-12S-20170719	LF-MW-12S-20170719	MH-H93-20170720
RCDM-MW-13S-20170719	LF-MW-13S-20170719	MH-C94-20170720
RCDM-MW-14S-20170720	LF-MW-14S-20170720	MH-DUP01-20170720
RCDM-MW-28S-20170719	LF-MW-28S-20170719	FRB04-20170719
RCDM-BLANK-20170720	DUP-07-20170719	

Overview

The sample set for NAWC Trenton, SDG 1700920 consists of 15 groundwater environmental samples and two (2) field quality control rinsate blanks (designated RCDM-BLANK- and FRB-). Two field duplicate pairs were included in this SDG: LF-MW-13S-20170719/DUP-07-20170719 and MH-A97-20170720/MH-DUP01-20170720. The samples were analyzed for polyfluoroalkyl substances (PFAS).

The samples were collected by Tetra Tech on July 19 and 20, 2017 and analyzed by Vista Analytical. The analysis was conducted in accordance with modified EPA Method 537 Rev. 1.1 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

* Data Completeness
* Holding Times/Sample Preservation
* GC/MS Instrument Tuning and System Performance
* Initial and Continuing Calibration Verification Results
* Laboratory Method/Preparation Blank Analyses
* Surrogate Recoveries
* Ongoing Precision and Recovery (OPR) Results
* Matrix Spike/Matrix Spike Duplicate Results
* Laboratory Duplicate Sample Results
  Internal Standard Results
  Field Duplicate Precision
* Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Issues affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

PFAS

The recoveries of internal standards 13C2-PFDoA and 13C2-PFTeDA were below the lower QC limits for samples RCDM-MW-28S-20170719 and MH-H93-20170720. The non-detected results for analytes PFDoA, PFTrDA, and PFTeDA in these samples were qualified as estimated (UJ).

The recovery of internal standard 13C2-PFTeDA were below the lower QC limits for samples LF-MW-12S-20170719, MH-DUP01-20170720, RCDM-BLANK-20170720, MH-C94-20170720, RCDM-MW-13S-20170719, RCDM-MW-12S-2017019, LF-MW-28S-20170719. The non-detected results for analytes and PFTeDA in these samples were qualified as estimated (UJ).

The recoveries of internal standards d3-MeFOSAA and d5-EtFOSAA were below the lower QC limits for sample FRB04-20170719. The non-detected results for analytes MeFOSAA and EtFOSAA in this sample were qualified as estimated (UJ).

The relative percent difference (RPD) for PFOS exceeded the QC criterion of 30% for field duplicate pair MH-A97-20170720 and MH-DUP01-20170720. The positive PFOS results for these samples qualified as estimated (J).

Detected results reported below the Limit of Quantitation (LOQ) but above the Detection Limit (DL) were qualified as estimated (J).

Notes

The recoveries of several internal standards were below the lower QC limits for the Method Blank and OPR. No action was taken because all OPR recoveries were within the QC recovery limits.

Dilutions were required for the following analytes because the concentration in the original analysis exceeded the calibration range of the instrument.

PFHxS	RCDM-MW-28S-20170719	5X
	LF-MW-12S-20170719	5X
	RCDM-MW-12S-20170719	5X
PFOS	RCDM-MW-28S-20170719	5X
	LF-MW-12S-20170719	5X
	MH-DUP01-20170720	5X
	MH-C9420170720	5X
	RCDM-MW-12S-20170719	5X
	LF-MW-28S-20170719	5X
	DUP-07-20170719	5X

Samples RCDM-MW-28S-20170719, LF-MW-12S-20170719, MH-H93-20170720, MH-C94-20170720, and LF-MW-28S-20170719 were centrifuged to remove particulates prior to extraction.

A discrepancy was noted for the sample collection date for samples LF-MW-13S-20170719 and RCDM-MW-12S-20170719 between the chain-of-custody record and sample container labels. The client confirmed that the samples were collected on July 19, 2017.

All analyses were conducted within the hold times specified by the site specific Sampling and Analysis Plan (SAP) and the analytical method.

Non-detected results were reported to the Limit of Detection (LOD).

Executive Summary

Laboratory Performance: Internal standard recoveries for exceeded QC limits for ten samples.

Other Factors Affecting Data Quality: The field duplicate RPD exceeded the QC criterion for one analyte. Positive results below the LOQ were qualified as estimated.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Superfund Organic Methods Data Review" (January 2017). The text of this report has been formulated to address only those areas affecting data quality.

Megan Ritchie

Tetra Tech, Inc.
Megan Ritchie
Chemist/Data Validator

Joseph A. Samchuck

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08005-WE08	NSAMPLE	DUP-07-20170719			FRB04-20170719			LF-MW-11BR-20170720			LF-MW-12S-20170719		
SDG: 1700920	LAB_ID	1700920-16			1700920-17			1700920-11			1700920-02		
FRACTION: PFAS	SAMP_DATE	7/19/2017			7/19/2017			7/20/2017			7/19/2017		
MEDIA: WATER	QC_TYPE	FD			FB			NM			NM		
	UNITS	NG/L			NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	LF-MW-13S-20170719											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		5.21	U		5.68	UJ	N	5.34	U		5.63	U	
N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		5.21	U		5.68	UJ	N	5.34	U		5.63	U	
PENTADECAFLUOROOCTANOIC ACID		60.5			5.68	U		48.9			444		
PERFLUOROBUTANESULFONIC ACID		60.3			5.68	U		54.2			539		
PERFLUORODECANOIC ACID		2.9	J	P	5.68	U		1.69	J	P	9.26		
PERFLUORODODECANOIC ACID		5.21	U		5.68	U		5.34	U		5.63	U	
PERFLUOROHEPTANOIC ACID		66.2			5.68	U		50.2			640		
PERFLUOROHEXANESULFONIC ACID		690			5.68	U		460			2360		
PERFLUOROHEXANOIC ACID		257			5.68	U		230			1550		
PERFLUORONONANOIC ACID		9			5.68	U		5.65	J	P	190		
PERFLUOROOCTANE SULFONIC ACID		1210			5.68	U		1310			2340		
PERFLUOROTETRADECANOIC ACID		5.21	U		5.68	U		5.34	U		5.63	UJ	N
PERFLUOROTRIDECANOIC ACID		5.21	U		5.68	U		5.34	U		5.63	U	
PERFLUOROUNDECANOIC ACID		5.21	U		5.68	U		5.34	U		5.63	U	

PROJ_NO: 08005-WE08	NSAMPLE	LF-MW-13S-20170719			LF-MW-14S-20170720			LF-MW-28S-20170719			MH-A97-20170720		
SDG: 1700920	LAB_ID	1700920-12			1700920-10			1700920-15			1700920-05		
FRACTION: PFAS	SAMP_DATE	7/19/2017			7/20/2017			7/19/2017			7/20/2017		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	NG/L			NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		5.34	U		5.43	U		5.39	U		5.17	U	
N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		5.34	U		5.43	U		5.39	U		5.17	U	
PENTADECAFLUOROOCTANOIC ACID		59.1			40.9			217			113		
PERFLUOROBUTANESULFONIC ACID		68.3			51.4			243			140		
PERFLUORODECANOIC ACID		1.91	J	P	5.43	U		9.62			5.17	U	
PERFLUORODODECANOIC ACID		5.34	U		5.43	U		5.39	U		5.17	U	
PERFLUOROHEPTANOIC ACID		68			49.5			311			174		
PERFLUOROHEXANESULFONIC ACID		660			489			1670			985		
PERFLUOROHEXANOIC ACID		291			211			884			662		
PERFLUORONONANOIC ACID		8.76			6.59	J	P	55.1			10.1		
PERFLUOROOCTANE SULFONIC ACID		1900			1220			1980			1840	J	G
PERFLUOROTETRADECANOIC ACID		5.34	U		5.43	U		5.39	UJ	N	5.17	U	
PERFLUOROTRIDECANOIC ACID		5.34	U		5.43	U		5.39	U		5.17	U	
PERFLUOROUNDECANOIC ACID		5.34	U		5.43	U		5.39	U		5.17	U	

PROJ_NO: 08005-WE08	NSAMPLE	MH-C94-20170720			MH-DUP01-20170720			MH-H93-20170720			RCDM-BLANK-20170720		
SDG: 1700920	LAB_ID	1700920-08			1700920-04			1700920-06			1700920-07		
FRACTION: PFAS	SAMP_DATE	7/20/2017			7/20/2017			7/20/2017			7/20/2017		
MEDIA: WATER	QC_TYPE	NM			FD			NM			FB		
	UNITS	NG/L			NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF				MH-A97-20170720								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		5.39	U		5.12	U		5.48	U		5.25	U	
N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		5.39	U		5.12	U		5.48	U		5.25	U	
PENTADECAFLUOROOCTANOIC ACID		148			97			1.36	J	P	5.25	U	
PERFLUOROBUTANESULFONIC ACID		217			141			5.48	U		5.25	U	
PERFLUORODECANOIC ACID		5.64	J	P	1.95	J	P	5.48	U		5.25	U	
PERFLUORODODECANOIC ACID		5.39	U		5.12	U		5.48	UJ	N	5.25	U	
PERFLUOROHEPTANOIC ACID		283			183			5.48	U		5.25	U	
PERFLUOROHEXANESULFONIC ACID		1120			1070			9.73			5.25	U	
PERFLUOROHEXANOIC ACID		904			602			4.27	J	P	5.25	U	
PERFLUORONONANOIC ACID		13.4			10.6			5.48	U		5.25	U	
PERFLUOROOCTANE SULFONIC ACID		4140			1240	J	G	9.74			5.25	U	
PERFLUOROTETRADECANOIC ACID		5.39	UJ	N	5.12	UJ	N	5.48	UJ	N	5.25	UJ	N
PERFLUOROTRIDECANOIC ACID		5.39	U		5.12	U		5.48	UJ	N	5.25	U	
PERFLUOROUNDECANOIC ACID		5.39	U		5.12	U		5.48	U		5.25	U	

PROJ_NO: 08005-WE08	NSAMPLE	RCDM-MW-11BR-20170720			RCDM-MW-12S-20170719			RCDM-MW-13S-20170719			RCDM-MW-14S-20170720		
SDG: 1700920	LAB_ID	1700920-13			1700920-14			1700920-09			1700920-03		
FRACTION: PFAS	SAMP_DATE	7/20/2017			7/19/2017			7/19/2017			7/20/2017		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	NG/L			NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		5.3	U		5.39	U		5.25	U		5.48	U	
N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		5.3	U		5.39	U		5.25	U		5.48	U	
PENTADECAFLUOROOCTANOIC ACID		47.7			423			52.5			41.4		
PERFLUOROBUTANESULFONIC ACID		62.9			501			57.2			46.4		
PERFLUORODECANOIC ACID		1.84	J	P	9.82			2.67	J	P	5.48	U	
PERFLUORODODECANOIC ACID		5.3	U		5.39	U		5.25	U		5.48	U	
PERFLUOROHEPTANOIC ACID		56.2			681			62.6			40.6		
PERFLUOROHEXANESULFONIC ACID		531			2210			627			447		
PERFLUOROHEXANOIC ACID		247			1630			239			184		
PERFLUORONONANOIC ACID		5.62	J	P	206			7.41	J	P	5.61	J	P
PERFLUOROOCTANE SULFONIC ACID		1530			2710			1700			1020		
PERFLUOROTETRADECANOIC ACID		5.3	U		5.39	UJ	N	5.25	UJ	N	5.48	U	
PERFLUOROTRIDECANOIC ACID		5.3	U		5.39	U		5.25	U		5.48	U	
PERFLUOROUNDECANOIC ACID		5.3	U		5.39	U		5.25	U		5.48	U	

PROJ_NO: 08005-WE08	NSAMPLE	RCDM-MW-28S-20170719		
SDG: 1700920	LAB_ID	1700920-01		
FRACTION: PFAS	SAMP_DATE	7/19/2017		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	NG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		5.63	U	
N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		5.63	U	
PENTADECAFLUOROOCTANOIC ACID		253		
PERFLUOROBUTANESULFONIC ACID		300		
PERFLUORODECANOIC ACID		12.7		
PERFLUORODODECANOIC ACID		5.63	UJ	N
PERFLUOROHEPTANOIC ACID		390		
PERFLUOROHEXANESULFONIC ACID		1650		
PERFLUOROHEXANOIC ACID		989		
PERFLUORONONANOIC ACID		64.6		
PERFLUOROOCTANE SULFONIC ACID		2110		
PERFLUOROTETRADECANOIC ACID		5.63	UJ	N
PERFLUOROTRIDECANOIC ACID		5.63	UJ	N
PERFLUOROUNDECANOIC ACID		5.63	U	

Appendix B

Results as Reported by the Laboratory

Sample ID: RCDM-MW-28S-20170719

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 19-Jul-2017 8:30
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.111 L

Laboratory Data

Lab Sample: 1700920-01 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 01-Aug-17 14:47 Column: BEH C18
01-Aug-17 18:33 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	300	2.01	5.63	8.98	
PFHxA	989	2.45	5.63	8.98	
PFHpA	390	0.664	5.63	8.98	
PFHxS	1650	5.32	28.2	44.9	D
PFOA	253	0.731	5.63	8.98	
PFOS	2110	4.53	28.2	44.9	D
PFNA	64.6	0.910	5.63	8.98	
PFDA	12.7	1.67	5.63	8.98	
MeFOSAA	ND	1.85	5.63	8.98	
PFUnA	ND	1.18	5.63	8.98	
EtFOSAA	ND	1.54	5.63	8.98	
PFDoA	ND	0.889	5.63	8.98	
PFTrDA	ND	0.555	5.63	8.98	
PFTeDA	ND	0.848	5.63	8.98	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	114	50 - 150	
IS	13C2-PFHxA	82.5	50 - 150	
IS	13C4-PFHpA	60.6	50 - 150	
IS	18O2-PFHxS	87.9	50 - 150	D
IS	13C2-PFOA	78.2	50 - 150	
IS	13C8-PFOS	101	50 - 150	D
IS	13C5-PFNA	66.2	50 - 150	
IS	13C2-PFDA	62.2	50 - 150	
IS	d3-MeFOSAA	71.9	50 - 150	
IS	13C2-PFUnA	70.8	50 - 150	
IS	d5-EtFOSAA	69.4	50 - 150	
IS	13C2-PFDoA	48.0	50 - 150	H
IS	13C2-PFTeDA	27.1	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: LF-MW-12S-20170719

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 19-Jul-2017 11:15
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.111 L

Laboratory Data

Lab Sample: 1700920-02 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 01-Aug-17 14:58 Column: BEH C18
01-Aug-17 18:43 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	539	2.01	5.63	9.00	
PFHxA	1550	2.45	5.63	9.00	
PFHpA	640	0.665	5.63	9.00	
PFHxS	2360	5.33	28.2	45.0	D
PFOA	444	0.732	5.63	9.00	
PFOS	2340	4.54	28.2	45.0	D
PFNA	190	0.911	5.63	9.00	
PFDA	9.26	1.68	5.63	9.00	
MeFOSAA	ND	1.86	5.63	9.00	
PFUnA	ND	1.18	5.63	9.00	
EtFOSAA	ND	1.54	5.63	9.00	
PFDoA	ND	0.891	5.63	9.00	
PFTrDA	ND	0.556	5.63	9.00	
PFTeDA	ND	0.849	5.63	9.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	99.3	50 - 150	
IS	13C2-PFHxA	81.0	50 - 150	
IS	13C4-PFHpA	58.8	50 - 150	
IS	18O2-PFHxS	78.7	50 - 150	D
IS	13C2-PFOA	85.6	50 - 150	
IS	13C8-PFOS	86.0	50 - 150	D
IS	13C5-PFNA	68.3	50 - 150	
IS	13C2-PFDA	72.9	50 - 150	
IS	d3-MeFOSAA	71.8	50 - 150	
IS	13C2-PFUnA	65.5	50 - 150	
IS	d5-EtFOSAA	66.7	50 - 150	
IS	13C2-PFDoA	73.5	50 - 150	
IS	13C2-PFTeDA	46.8	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: RCDM-MW-14S-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 20-Jul-2017 9:30
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.114 L

Laboratory Data

Lab Sample: 1700920-03 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 31-Jul-17 20:43 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	46.4	1.96	5.48	8.77	
PFHxA	184	2.39	5.48	8.77	
PFHpA	40.6	0.648	5.48	8.77	
PFHxS	447	1.04	5.48	8.77	
PFOA	41.4	0.714	5.48	8.77	
PFOS	1020	0.884	5.48	8.77	
PFNA	5.61	0.888	5.48	8.77	J
PFDA	ND	1.63	5.48	8.77	
MeFOSAA	ND	1.81	5.48	8.77	
PFUnA	ND	1.15	5.48	8.77	
EtFOSAA	ND	1.50	5.48	8.77	
PFDoA	ND	0.868	5.48	8.77	
PFTrDA	ND	0.541	5.48	8.77	
PFTeDA	ND	0.827	5.48	8.77	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	50 - 150	
IS	13C2-PFHxA	78.2	50 - 150	
IS	13C4-PFHpA	67.5	50 - 150	
IS	18O2-PFHxS	70.5	50 - 150	
IS	13C2-PFOA	78.3	50 - 150	
IS	13C8-PFOS	77.3	50 - 150	
IS	13C5-PFNA	74.0	50 - 150	
IS	13C2-PFDA	61.2	50 - 150	
IS	d3-MeFOSAA	79.1	50 - 150	
IS	13C2-PFUnA	59.4	50 - 150	
IS	d5-EtFOSAA	75.1	50 - 150	
IS	13C2-PFDoA	59.3	50 - 150	
IS	13C2-PFTeDA	56.1	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: MH-DUP01-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 20-Jul-2017 7:00
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.122 L

Laboratory Data

Lab Sample: 1700920-04 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 11-Aug-17 12:58 Column: BEH C18
31-Jul-17 20:54 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	141	1.84	5.12	8.21	
PFHxA	602	2.24	5.12	8.21	
PFHpA	183	0.607	5.12	8.21	
PFHxS	1070	0.972	5.12	8.21	
PFOA	97.0	0.668	5.12	8.21	
PFOS	1240	4.14	25.6	41.1	D
PFNA	10.6	0.831	5.12	8.21	
PFDA	1.95	1.53	5.12	8.21	J
MeFOSAA	ND	1.69	5.12	8.21	
PFUnA	ND	1.08	5.12	8.21	
EtFOSAA	ND	1.41	5.12	8.21	
PFDoA	ND	0.813	5.12	8.21	
PFTrDA	ND	0.507	5.12	8.21	
PFTeDA	ND	0.775	5.12	8.21	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	106	50 - 150	
IS	13C2-PFHxA	80.4	50 - 150	
IS	13C4-PFHpA	59.8	50 - 150	
IS	18O2-PFHxS	82.0	50 - 150	
IS	13C2-PFOA	74.8	50 - 150	
IS	13C8-PFOS	82.5	50 - 150	D
IS	13C5-PFNA	74.2	50 - 150	
IS	13C2-PFDA	85.9	50 - 150	
IS	d3-MeFOSAA	70.3	50 - 150	
IS	13C2-PFUnA	60.9	50 - 150	
IS	d5-EtFOSAA	66.8	50 - 150	
IS	13C2-PFDoA	58.3	50 - 150	
IS	13C2-PFTeDA	43.8	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: MH-A97-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 20-Jul-2017 14:30
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.121 L

Laboratory Data

Lab Sample: 1700920-05 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 31-Jul-17 21:04 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	140	1.85	5.17	8.27	
PFHxA	662	2.25	5.17	8.27	
PFHpA	174	0.611	5.17	8.27	
PFHxS	985	0.979	5.17	8.27	
PFOA	113	0.673	5.17	8.27	
PFOS	1840	0.835	5.17	8.27	
PFNA	10.1	0.838	5.17	8.27	
PFDA	ND	1.54	5.17	8.27	
MeFOSAA	ND	1.71	5.17	8.27	
PFUnA	ND	1.09	5.17	8.27	
EtFOSAA	ND	1.42	5.17	8.27	
PFDoA	ND	0.819	5.17	8.27	
PFTrDA	ND	0.511	5.17	8.27	
PFTeDA	ND	0.781	5.17	8.27	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	113	50 - 150	
IS	13C2-PFHxA	76.6	50 - 150	
IS	13C4-PFHpA	70.0	50 - 150	
IS	18O2-PFHxS	78.4	50 - 150	
IS	13C2-PFOA	73.6	50 - 150	
IS	13C8-PFOS	73.6	50 - 150	
IS	13C5-PFNA	71.8	50 - 150	
IS	13C2-PFDA	62.9	50 - 150	
IS	d3-MeFOSAA	71.0	50 - 150	
IS	13C2-PFUnA	75.2	50 - 150	
IS	d5-EtFOSAA	65.6	50 - 150	
IS	13C2-PFDoA	56.8	50 - 150	
IS	13C2-PFTeDA	58.5	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: MH-H93-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 20-Jul-2017 15:10
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.114 L

Laboratory Data

Lab Sample: 1700920-06 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 31-Jul-17 21:15 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.97	5.48	8.81	
PFHxA	4.27	2.40	5.48	8.81	J
PFHpA	ND	0.650	5.48	8.81	
PFHxS	9.73	1.04	5.48	8.81	
PFOA	1.36	0.717	5.48	8.81	J
PFOS	9.74	0.888	5.48	8.81	
PFNA	ND	0.892	5.48	8.81	
PFDA	ND	1.64	5.48	8.81	
MeFOSAA	ND	1.82	5.48	8.81	
PFUnA	ND	1.16	5.48	8.81	
EtFOSAA	ND	1.51	5.48	8.81	
PFDoA	ND	0.872	5.48	8.81	
PFTrDA	ND	0.544	5.48	8.81	
PFTeDA	ND	0.831	5.48	8.81	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	118	50 - 150	
IS	13C2-PFHxA	78.1	50 - 150	
IS	13C4-PFHpA	67.1	50 - 150	
IS	18O2-PFHxS	85.0	50 - 150	
IS	13C2-PFOA	79.8	50 - 150	
IS	13C8-PFOS	80.9	50 - 150	
IS	13C5-PFNA	87.2	50 - 150	
IS	13C2-PFDA	81.1	50 - 150	
IS	d3-MeFOSAA	69.1	50 - 150	
IS	13C2-PFUnA	63.5	50 - 150	
IS	d5-EtFOSAA	57.7	50 - 150	
IS	13C2-PFDoA	38.0	50 - 150	H
IS	13C2-PFTeDA	8.20	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: RCDM-BLANK-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 20-Jul-2017 13:00
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.119 L

Laboratory Data

Lab Sample: 1700920-07
QC Batch: B7G0122
Date Analyzed: 31-Jul-17 21:57 Column: BEH C18
Date Received: 21-Jul-2017 9:12
Date Extracted: 27-Jul-2017 7:52

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.88	5.25	8.42	
PFHxA	ND	2.30	5.25	8.42	
PFHpA	ND	0.622	5.25	8.42	
PFHxS	ND	0.997	5.25	8.42	
PFOA	ND	0.685	5.25	8.42	
PFOS	ND	0.850	5.25	8.42	
PFNA	ND	0.853	5.25	8.42	
PFDA	ND	1.57	5.25	8.42	
MeFOSAA	ND	1.74	5.25	8.42	
PFUnA	ND	1.11	5.25	8.42	
EtFOSAA	ND	1.44	5.25	8.42	
PFDoA	ND	0.834	5.25	8.42	
PFTrDA	ND	0.520	5.25	8.42	
PFTeDA	ND	0.795	5.25	8.42	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	96.0	50 - 150	
IS	13C2-PFHxA	72.8	50 - 150	
IS	13C4-PFHpA	61.5	50 - 150	
IS	18O2-PFHxS	82.2	50 - 150	
IS	13C2-PFOA	85.6	50 - 150	
IS	13C8-PFOS	72.0	50 - 150	
IS	13C5-PFNA	70.7	50 - 150	
IS	13C2-PFDA	70.9	50 - 150	
IS	d3-MeFOSAA	62.8	50 - 150	
IS	13C2-PFUnA	53.0	50 - 150	
IS	d5-EtFOSAA	60.8	50 - 150	
IS	13C2-PFDoA	55.9	50 - 150	
IS	13C2-PFTeDA	43.5	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: MH-C94-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 20-Jul-2017 15:30
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.116 L

Laboratory Data

Lab Sample: 1700920-08 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 01-Aug-17 18:54 Column: BEH C18
31-Jul-17 22:08 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	217	1.93	5.39	8.64	
PFHxA	904	2.36	5.39	8.64	
PFHpA	283	0.639	5.39	8.64	
PFHxS	1120	1.02	5.39	8.64	
PFOA	148	0.703	5.39	8.64	
PFOS	4140	4.36	26.9	43.2	D
PFNA	13.4	0.875	5.39	8.64	
PFDA	5.64	1.61	5.39	8.64	J
MeFOSAA	ND	1.78	5.39	8.64	
PFUnA	ND	1.13	5.39	8.64	
EtFOSAA	ND	1.48	5.39	8.64	
PFDoA	ND	0.856	5.39	8.64	
PFTrDA	ND	0.534	5.39	8.64	
PFTeDA	ND	0.816	5.39	8.64	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	110	50 - 150	
IS	13C2-PFHxA	82.9	50 - 150	
IS	13C4-PFHpA	67.8	50 - 150	
IS	18O2-PFHxS	87.9	50 - 150	
IS	13C2-PFOA	77.6	50 - 150	
IS	13C8-PFOS	68.4	50 - 150	D
IS	13C5-PFNA	75.8	50 - 150	
IS	13C2-PFDA	74.6	50 - 150	
IS	d3-MeFOSAA	74.7	50 - 150	
IS	13C2-PFUnA	68.5	50 - 150	
IS	d5-EtFOSAA	67.3	50 - 150	
IS	13C2-PFDoA	59.4	50 - 150	
IS	13C2-PFTeDA	16.2	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: RCDM-MW-13S-20170719

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 19-Jul-2017 11:45
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.119 L

Laboratory Data

Lab Sample: 1700920-09 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 31-Jul-17 22:19 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	57.2	1.89	5.25	8.43	
PFHxA	239	2.30	5.25	8.43	
PFHpA	62.6	0.623	5.25	8.43	
PFHxS	627	0.998	5.25	8.43	
PFOA	52.5	0.686	5.25	8.43	
PFOS	1700	0.850	5.25	8.43	
PFNA	7.41	0.853	5.25	8.43	J
PFDA	2.67	1.57	5.25	8.43	J
MeFOSAA	ND	1.74	5.25	8.43	
PFUnA	ND	1.11	5.25	8.43	
EtFOSAA	ND	1.44	5.25	8.43	
PFDoA	ND	0.834	5.25	8.43	
PFTrDA	ND	0.520	5.25	8.43	
PFTeDA	ND	0.795	5.25	8.43	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	50 - 150	
IS	13C2-PFHxA	79.7	50 - 150	
IS	13C4-PFHpA	66.4	50 - 150	
IS	18O2-PFHxS	76.5	50 - 150	
IS	13C2-PFOA	74.2	50 - 150	
IS	13C8-PFOS	73.9	50 - 150	
IS	13C5-PFNA	69.2	50 - 150	
IS	13C2-PFDA	67.8	50 - 150	
IS	d3-MeFOSAA	74.4	50 - 150	
IS	13C2-PFUnA	61.0	50 - 150	
IS	d5-EtFOSAA	74.8	50 - 150	
IS	13C2-PFDoA	67.0	50 - 150	
IS	13C2-PFTeDA	44.2	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: LF-MW-14S-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 20-Jul-2017 11:10
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.115 L

Laboratory Data

Lab Sample: 1700920-10 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 31-Jul-17 22:30 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	51.4	1.95	5.43	8.71	
PFHxA	211	2.37	5.43	8.71	
PFHpA	49.5	0.643	5.43	8.71	
PFHxS	489	1.03	5.43	8.71	
PFOA	40.9	0.709	5.43	8.71	
PFOS	1220	0.879	5.43	8.71	
PFNA	6.59	0.882	5.43	8.71	J
PFDA	ND	1.62	5.43	8.71	
MeFOSAA	ND	1.80	5.43	8.71	
PFUnA	ND	1.14	5.43	8.71	
EtFOSAA	ND	1.49	5.43	8.71	
PFDoA	ND	0.862	5.43	8.71	
PFTrDA	ND	0.538	5.43	8.71	
PFTeDA	ND	0.822	5.43	8.71	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	118	50 - 150	
IS	13C2-PFHxA	81.9	50 - 150	
IS	13C4-PFHpA	67.0	50 - 150	
IS	18O2-PFHxS	87.0	50 - 150	
IS	13C2-PFOA	82.2	50 - 150	
IS	13C8-PFOS	82.1	50 - 150	
IS	13C5-PFNA	73.4	50 - 150	
IS	13C2-PFDA	64.9	50 - 150	
IS	d3-MeFOSAA	68.1	50 - 150	
IS	13C2-PFUnA	58.8	50 - 150	
IS	d5-EtFOSAA	64.0	50 - 150	
IS	13C2-PFDoA	59.0	50 - 150	
IS	13C2-PFTeDA	52.1	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: LF-MW-11BR-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 20-Jul-2017 11:25
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.117 L

Laboratory Data

Lab Sample: 1700920-11 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 01-Aug-17 17:18 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	54.2	1.92	5.34	8.57	
PFHxA	230	2.34	5.34	8.57	
PFHpA	50.2	0.633	5.34	8.57	
PFHxS	460	1.01	5.34	8.57	
PFOA	48.9	0.698	5.34	8.57	
PFOS	1310	0.865	5.34	8.57	
PFNA	5.65	0.868	5.34	8.57	J
PFDA	1.69	1.60	5.34	8.57	J
MeFOSAA	ND	1.77	5.34	8.57	
PFUnA	ND	1.13	5.34	8.57	
EtFOSAA	ND	1.47	5.34	8.57	
PFDoA	ND	0.849	5.34	8.57	
PFTrDA	ND	0.529	5.34	8.57	
PFTeDA	ND	0.809	5.34	8.57	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	111	50 - 150	
IS	13C2-PFHxA	80.3	50 - 150	
IS	13C4-PFHpA	59.5	50 - 150	
IS	18O2-PFHxS	84.4	50 - 150	
IS	13C2-PFOA	71.0	50 - 150	
IS	13C8-PFOS	86.4	50 - 150	
IS	13C5-PFNA	65.1	50 - 150	
IS	13C2-PFDA	77.0	50 - 150	
IS	d3-MeFOSAA	60.8	50 - 150	
IS	13C2-PFUnA	65.8	50 - 150	
IS	d5-EtFOSAA	69.5	50 - 150	
IS	13C2-PFDoA	65.8	50 - 150	
IS	13C2-PFTeDA	57.4	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: LF-MW-13S-20170719

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 19-Jul-2017 12:55
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.117 L

Laboratory Data

Lab Sample: 1700920-12 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 31-Jul-17 22:52 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	68.3	1.92	5.34	8.57	
PFHxA	291	2.34	5.34	8.57	
PFHpA	68.0	0.633	5.34	8.57	
PFHxS	660	1.01	5.34	8.57	
PFOA	59.1	0.697	5.34	8.57	
PFOS	1900	0.865	5.34	8.57	
PFNA	8.76	0.868	5.34	8.57	
PFDA	1.91	1.60	5.34	8.57	J
MeFOSAA	ND	1.77	5.34	8.57	
PFUnA	ND	1.12	5.34	8.57	
EtFOSAA	ND	1.47	5.34	8.57	
PFDoA	ND	0.849	5.34	8.57	
PFTrDA	ND	0.529	5.34	8.57	
PFTeDA	ND	0.809	5.34	8.57	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	50 - 150	
IS	13C2-PFHxA	78.9	50 - 150	
IS	13C4-PFHpA	67.9	50 - 150	
IS	18O2-PFHxS	80.5	50 - 150	
IS	13C2-PFOA	80.4	50 - 150	
IS	13C8-PFOS	72.2	50 - 150	
IS	13C5-PFNA	79.7	50 - 150	
IS	13C2-PFDA	66.0	50 - 150	
IS	d3-MeFOSAA	74.6	50 - 150	
IS	13C2-PFUnA	66.7	50 - 150	
IS	d5-EtFOSAA	66.7	50 - 150	
IS	13C2-PFDoA	58.3	50 - 150	
IS	13C2-PFTeDA	51.7	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: RCDM-MW-11BR-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 20-Jul-2017 10:15
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.118 L

Laboratory Data

Lab Sample: 1700920-13
QC Batch: B7G0122
Date Analyzed: 31-Jul-17 23:03 Column: BEH C18
Date Received: 21-Jul-2017 9:12
Date Extracted: 27-Jul-2017 7:52

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	62.9	1.89	5.30	8.47	
PFHxA	247	2.31	5.30	8.47	
PFHpA	56.2	0.625	5.30	8.47	
PFHxS	531	1.00	5.30	8.47	
PFOA	47.7	0.689	5.30	8.47	
PFOS	1530	0.854	5.30	8.47	
PFNA	5.62	0.857	5.30	8.47	J
PFDA	1.84	1.58	5.30	8.47	J
MeFOSAA	ND	1.75	5.30	8.47	
PFUnA	ND	1.11	5.30	8.47	
EtFOSAA	ND	1.45	5.30	8.47	
PFDoA	ND	0.838	5.30	8.47	
PFTrDA	ND	0.523	5.30	8.47	
PFTeDA	ND	0.799	5.30	8.47	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	121	50 - 150	
IS	13C2-PFHxA	85.4	50 - 150	
IS	13C4-PFHpA	63.7	50 - 150	
IS	18O2-PFHxS	85.2	50 - 150	
IS	13C2-PFOA	80.8	50 - 150	
IS	13C8-PFOS	84.4	50 - 150	
IS	13C5-PFNA	78.7	50 - 150	
IS	13C2-PFDA	75.9	50 - 150	
IS	d3-MeFOSAA	84.4	50 - 150	
IS	13C2-PFUnA	74.6	50 - 150	
IS	d5-EtFOSAA	88.5	50 - 150	
IS	13C2-PFDoA	74.7	50 - 150	
IS	13C2-PFTeDA	62.0	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: RCDM-MW-12S-20170719

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 19-Jul-2017 10:05
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.116 L

Laboratory Data

Lab Sample: 1700920-14 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 01-Aug-17 19:39 Column: BEH C18
31-Jul-17 23:13 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	501	1.93	5.39	8.61	
PFHxA	1630	2.35	5.39	8.61	
PFHpA	681	0.636	5.39	8.61	
PFHxS	2210	5.09	26.9	43.0	D
PFOA	423	0.700	5.39	8.61	
PFOS	2710	4.34	26.9	43.0	D
PFNA	206	0.871	5.39	8.61	
PFDA	9.82	1.60	5.39	8.61	
MeFOSAA	ND	1.78	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	119	50 - 150	
IS	13C2-PFHxA	87.7	50 - 150	
IS	13C4-PFHpA	74.3	50 - 150	
IS	18O2-PFHxS	96.5	50 - 150	D
IS	13C2-PFOA	85.5	50 - 150	
IS	13C8-PFOS	75.2	50 - 150	D
IS	13C5-PFNA	78.5	50 - 150	
IS	13C2-PFDA	82.5	50 - 150	
IS	d3-MeFOSAA	67.7	50 - 150	
IS	13C2-PFUnA	80.3	50 - 150	
IS	d5-EtFOSAA	66.7	50 - 150	
IS	13C2-PFDoA	62.6	50 - 150	
IS	13C2-PFTeDA	30.2	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: LF-MW-28S-20170719

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 19-Jul-2017 9:45
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.116 L

Laboratory Data

Lab Sample: 1700920-15 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 01-Aug-17 19:49 Column: BEH C18
31-Jul-17 23:24 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	243	1.93	5.39	8.64	
PFHxA	884	2.35	5.39	8.64	
PFHpA	311	0.638	5.39	8.64	
PFHxS	1670	1.02	5.39	8.64	
PFOA	217	0.703	5.39	8.64	
PFOS	1980	4.36	26.9	43.2	D
PFNA	55.1	0.875	5.39	8.64	
PFDA	9.62	1.61	5.39	8.64	
MeFOSAA	ND	1.78	5.39	8.64	
PFUnA	ND	1.13	5.39	8.64	
EtFOSAA	ND	1.48	5.39	8.64	
PFDoA	ND	0.856	5.39	8.64	
PFTrDA	ND	0.534	5.39	8.64	
PFTeDA	ND	0.816	5.39	8.64	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	50 - 150	
IS	13C2-PFHxA	78.8	50 - 150	
IS	13C4-PFHpA	67.9	50 - 150	
IS	18O2-PFHxS	79.3	50 - 150	
IS	13C2-PFOA	68.4	50 - 150	
IS	13C8-PFOS	76.3	50 - 150	D
IS	13C5-PFNA	70.9	50 - 150	
IS	13C2-PFDA	75.2	50 - 150	
IS	d3-MeFOSAA	63.2	50 - 150	
IS	13C2-PFUnA	66.4	50 - 150	
IS	d5-EtFOSAA	64.8	50 - 150	
IS	13C2-PFDoA	61.0	50 - 150	
IS	13C2-PFTeDA	28.6	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.

Sample ID: DUP-07-20170719

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 19-Jul-2017 12:00
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.120 L

Laboratory Data

Lab Sample: 1700920-16 Date Received: 21-Jul-2017 9:12
QC Batch: B7G0122 Date Extracted: 27-Jul-2017 7:52
Date Analyzed: 01-Aug-17 18:11 Column: BEH C18
11-Aug-17 13:23 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	60.3	1.86	5.21	8.32	
PFHxA	257	2.27	5.21	8.32	
PFHpA	66.2	0.614	5.21	8.32	
PFHxS	690	0.985	5.21	8.32	
PFOA	60.5	0.677	5.21	8.32	
PFOS	1210	4.20	26.0	41.6	D
PFNA	9.00	0.842	5.21	8.32	
PFDA	2.90	1.55	5.21	8.32	J
MeFOSAA	ND	1.72	5.21	8.32	
PFUnA	ND	1.09	5.21	8.32	
EtFOSAA	ND	1.42	5.21	8.32	
PFDoA	ND	0.823	5.21	8.32	
PFTrDA	ND	0.514	5.21	8.32	
PFTeDA	ND	0.785	5.21	8.32	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	117	50 - 150	
IS	13C2-PFHxA	82.2	50 - 150	
IS	13C4-PFHpA	57.4	50 - 150	
IS	18O2-PFHxS	73.2	50 - 150	
IS	13C2-PFOA	74.8	50 - 150	
IS	13C8-PFOS	82.8	50 - 150	D
IS	13C5-PFNA	67.8	50 - 150	
IS	13C2-PFDA	71.8	50 - 150	
IS	d3-MeFOSAA	58.9	50 - 150	
IS	13C2-PFUnA	56.6	50 - 150	
IS	d5-EtFOSAA	55.8	50 - 150	
IS	13C2-PFDoA	60.9	50 - 150	
IS	13C2-PFTeDA	57.6	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: FRB04-20170719

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 19-Jul-2017 11:35
Location: Trenton

Sample Data

Matrix: Aqueous
Sample Size: 0.110 L

Laboratory Data

Lab Sample: 1700920-17
QC Batch: B7G0122
Date Analyzed: 31-Jul-17 23:45 Column: BEH C18
Date Received: 21-Jul-2017 9:12
Date Extracted: 27-Jul-2017 7:52

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	2.03	5.68	9.09	
PFHxA	ND	2.48	5.68	9.09	
PFHpA	ND	0.671	5.68	9.09	
PFHxS	ND	1.08	5.68	9.09	
PFOA	ND	0.739	5.68	9.09	
PFOS	ND	0.916	5.68	9.09	
PFNA	ND	0.920	5.68	9.09	
PFDA	ND	1.69	5.68	9.09	
MeFOSAA	ND	1.87	5.68	9.09	
PFUnA	ND	1.19	5.68	9.09	
EtFOSAA	ND	1.56	5.68	9.09	
PFDoA	ND	0.899	5.68	9.09	
PFTrDA	ND	0.561	5.68	9.09	
PFTeDA	ND	0.857	5.68	9.09	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	121	50 - 150	
IS	13C2-PFHxA	84.5	50 - 150	
IS	13C4-PFHpA	68.9	50 - 150	
IS	18O2-PFHxS	79.6	50 - 150	
IS	13C2-PFOA	75.9	50 - 150	
IS	13C8-PFOS	77.6	50 - 150	
IS	13C5-PFNA	83.5	50 - 150	
IS	13C2-PFDA	76.0	50 - 150	
IS	d3-MeFOSAA	48.0	50 - 150	H
IS	13C2-PFUnA	50.7	50 - 150	
IS	d5-EtFOSAA	48.2	50 - 150	H
IS	13C2-PFDoA	55.9	50 - 150	
IS	13C2-PFTeDA	51.8	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.

Appendix C

Support Documentation

Submit by Email*

1/2

Vista

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY
Laboratory Project ID: 1700920 Temp 1.9 °C
Storage ID: WR-2 Storage Secured: Yes ☑ No ☐

TAT: (Check One)
Standard ◉ 21 days
Rush (surcharge may apply)
◯ 14 days ◯ 7 days Specify:

Project I.D.: **NAWC Trenton** P.O. #: **1132341-WR3** Sampler: **Chuck Myer** (Name)

Invoice to: Name	Company	Address	City	State	Zip	Ph#	Fax #
Tetra Tech	**Foster Plaza VII**	**661 Anderson Drive**	**Pittsburgh**	**PA**	**15220**	**412-921-7090**	**412-921-4040**

Relinquished by: (Printed Name and Signature)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Chuck Myer	**7/20/2017**	**18:00**	B. Benedict B. Benedict	07/21/17	0925
Relinquished by: (Printed Name and Signature)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

ATTN: **Sample Custodian**

Method of Shipment: **FedEx**

Tracking No.:

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDF/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDF/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDF/TCDF	EPA8280 PCDD/PCDF	EPA1668 TOTALS	EPA1668 COPLANAR PCBs	EPA1668 209 CONGENERS	EPA1614 PBDE	CARB429 PAH	WHO-29	PFAS 14 EPA Method 537
RCDM-MW-28S-20170719	7/19/17	08:30	Trenton	2	PJ	AQ															X	
LF-MW-12S-20170719	7/19/17	11:15	Trenton	2	PJ	AQ															X	
RCDM-MW-14S-20170720	7/20/17	09:30	Trenton	2	PJ	AQ															X	
MH-DUP01-20170720	7/20/17	07:00	Trenton		PJ	AQ															X	
MH-A97-20170720	7/20/17	14:30	Trenton	2	PJ	AQ															X	
MH-H93-20170720	7/20/17	15:10	Trenton	2	PJ	AQ															X	
RCDM-BLANK-20170720	7/20/17	13:00	Trenton	2	PJ	AQ															X	
MH-C94-20170720	7/20/17	15:30	Trenton	2	PJ	AQ															X	
RCDM-MW-13S-20170719	7/19/17	11:45	Trenton	2	PJ	AQ															X	
LF-MW-14S-20170720	7/20/17	11:10	Trenton	2	PJ	AQ															X	

Special Instructions/Comments:
FedEx 6612 1992 7345

SEND DOCUMENTATION AND RESULTS TO:

Name: **Mary Mang**
Company: **Tetra Tech**
Address: **234 Mall Blvd Suite 260**
City: **King of Prussia** State: **PA** Zip: **19406**
Phone: **610-382-1174** Fax: **610-491-9645**
Email: **mary.mang@tetratech.com**

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O = Other **PJ**

***Bottle Preservative Type:** ☐ T = Thiosulfate, ☐ O = Other

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B=Blood/Serum O = Other AQ

Submit by Email*

Vista

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY
Laboratory Project ID: 1700920 Temp 1.9 °C
Storage ID: WR-2 Storage Secured: Yes ☑ No ☐

TAT: (Check One)
Standard ◉ 21 days
Rush (surcharge may apply)
◯ 14 days ◯ 7 days Specify:

Project I.D.: **NAWC Trenton** P.O. #: **1132341-WR3** Sampler: **Chuck Myer** (Name)

Invoice to: Name	Company	Address	City	State	Zip	Ph#	Fax #
Tetra Tech	Foster Plaza VII	661 Anderson Drive	Pittsburgh	PA	15220	412-921-7090	412-921-4040

Relinquished by: (Printed Name and Signature)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Chuck Myer	7/20/2017	18:00	Beth Benedict B. Benedict	07/21/17	0925
Relinquished by: (Printed Name and Signature)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 • Fax (916) 673-0106

Method of Shipment: **FedEx**

Tracking No.:

ATTN: **Sample Custodian**

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA1613 2378-TCDD	EPA1613 2378-TCDD/TCDF	EPA1613 PCDD/PCDF	EPA8290 2378-TCDD	EPA8290 2378-TCDD/TCDF	EPA8290 PCDD/PCDF	EPA8280 2378-TCDD	EPA8280 2378-TCDD/TCDF	EPA8280 PCDD/PCDF	EPA1668 TOTALS	EPA1668 COPLANAR PCBs	EPA1668 209 CONGENERS	EPA1614 PBDE	CARB429 PAH	CARB429 WHO-29	PFAS 14 EPA Method 537
LF-MW-11BR-20170720	7/2017	11:25	Trenton	2	PJ	AQ															X	
LF-MW-13S-20170719	7/20/17	12:55	Trenton	2	PJ	AQ															X	
RCDM-MW-11BR-20170720	7/20/17	10:15	Trenton	2	PJ	AQ															X	
RCDM-MW-12S-20170719	7/20/17	10:05	Trenton	2	PJ	AQ															X	
LF-MW-28S-20170719	7/19/17	09:45	Trenton	2	PJ	AQ															X	
DUP-07-20170719	7/19/17	12:00	Trenton	2	PJ	AQ															X	
FRB04-20170719	7/19/17	11:35	Trenton	2	PJ	AQ															X	

Special Instructions/Comments:
FedEx 6612 1992 7345

SEND DOCUMENTATION AND RESULTS TO:

Name: **Mary Mang**
Company: **Tetra Tech**
Address: **234 Mall Blvd Suite 260**
City: **King of Prussia** State: **PA** Zip: **19406**
Phone: **610-382-1174** Fax: **610-491-9645**
Email: **mary.mang@tetratech.com**

Container Types: A = 1 Liter Amber, G = Glass Jar
P = PUF, T = MM5 Train, O = Other **PJ**

***Bottle Preservative Type:** ☐ T = Thiosulfate,
☐ O = Other

Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B=Blood/Serum
O = Other AQ

SDG Number WE08
Vista Work Order No. 1700920
Case Narrative

Sample Condition on Receipt:

Seventeen 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. A discrepancy was noted for the sample collection date for samples "LF-MW-13S-20170719" and "RCDM-MW-12S-20170719" between the Chain of Custody and sample container labels. The client confirmed that the samples were collected on July 19, 2017. The client also confirmed that the handwritten "$" represents the letter "S".

Analytical Notes:

Modified EPA Method 537

Samples "RCDM-MW-28S-20170719", "LF-MW-12S-20170719", "MH-H93-20170720", "MH-C94-20170720", and "LF-MW-28S-20170719" 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.

FORMER NAWC TRENTON
1700920

SAMPLE IDENTIFICATION	RCDM-MW-28S-20170719
COMPOUND	PFOS
COMPOUND AREA	30550.813
INTERNAL STANDARD AMOUNT (ng/ml)	113
DILUTION FACTOR	5
INTERNAL STANDARD AREA	1493.649
AVERAGE RRF	1.153
SAMPLE VOLUME (ml)	111.3
VOLUME EXTRACT (ml)	1
VOLUME INJECTED (µl)	0.025
ml to L	1000
CONCENTRATION =	2251 ng/L

30550.813 x 113ng/ml x 0.1 uL x 1000ml x 5/(1493.649 x 1 x 111.3ml x 1L)

Sample ID: Method Blank

Modified EPA Method 537

Matrix: Aqueous
Sample Size: 0.250 L

QC Batch: B7G0122
Date Extracted: 27-Jul-2017 7:52

Lab Sample: B7G0122-BLK1
Date Analyzed: 31-Jul-17 20:00 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	0.895	2.50	4.00	
PFHxA	ND	1.09	2.50	4.00	
PFHpA	ND	0.296	2.50	4.00	
PFHxS	ND	0.474	2.50	4.00	
PFOA	ND	0.326	2.50	4.00	
PFOS	ND	0.404	2.50	4.00	
PFNA	ND	0.405	2.50	4.00	
PFDA	ND	0.745	2.50	4.00	
MeFOSAA	ND	0.825	2.50	4.00	
PFUnA	ND	0.525	2.50	4.00	
EtFOSAA	ND	0.685	2.50	4.00	
PFDoA	ND	0.396	2.50	4.00	
PFTrDA	ND	0.247	2.50	4.00	
PFTeDA	ND	0.378	2.50	4.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	107	50 - 150	
IS	13C2-PFHxA	75.6	50 - 150	
IS	13C4-PFHpA	66.4	50 - 150	
IS	18O2-PFHxS	74.3	50 - 150	
IS	13C2-PFOA	72.6	50 - 150	
IS	13C8-PFOS	72.6	50 - 150	
IS	13C5-PFNA	78.5	50 - 150	
IS	13C2-PFDA	74.4	50 - 150	
IS	d3-MeFOSAA	51.9	50 - 150	
IS	13C2-PFUnA	62.9	50 - 150	
IS	d5-EtFOSAA	51.7	50 - 150	
IS	13C2-PFDoA	44.1	50 - 150	H
IS	13C2-PFTeDA	42.8	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:	B7G0122	Lab Sample:	B7G0122-BS1
Sample Size:	0.250 L	Date Extracted:	27-Jul-2017 7:52	Date Analyzed:	01-Aug-17 14:03 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits
PFBS	39.4	40.0	98.5	70 - 130
PFHxA	44.1	40.0	110	70 - 130
PFHpA	41.6	40.0	104	70 - 130
PFHxS	44.5	40.0	111	70 - 130
PFOA	46.2	40.0	115	70 - 130
PFOS	41.1	40.0	103	70 - 130
PFNA	41.6	40.0	104	70 - 130
PFDA	44.5	40.0	111	70 - 130
MeFOSAA	46.7	40.0	117	70 - 130
PFUnA	41.9	40.0	105	70 - 130
EtFOSAA	38.7	40.0	96.7	70 - 130
PFDoA	38.1	40.0	95.2	70 - 130
PFTrDA	37.1	40.0	92.8	60 - 130
PFTeDA	41.1	40.0	103	70 - 130

	Labeled Standard	%R	LCL-UCL
IS	13C3-PFBS	104	50 - 150
IS	13C2-PFHxA	76.8	50 - 150
IS	13C4-PFHpA	59.1	50 - 150
IS	18O2-PFHxS	67.2	50 - 150
IS	13C2-PFOA	79.7	50 - 150
IS	13C8-PFOS	80.6	50 - 150
IS	13C5-PFNA	65.4	50 - 150
IS	13C2-PFDA	63.3	50 - 150
IS	d3-MeFOSAA	36.3	50 - 150
IS	13C2-PFUnA	48.2	50 - 150
IS	d5-EtFOSAA	33.9	50 - 150
IS	13C2-PFDoA	43.6	50 - 150
IS	13C2-PFTeDA	37.1	50 - 150

LCL-UCL - Lower control limit - upper control limit

Process Sheet

Workorder: 1700920

Prep Expiration: 2017-Aug-02
Client: Tetra Tech

Workorder Due: 11-Aug-17 00:00
TAT: 21

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

Prep Batch: B7G0122

Prep Data Entered: 7/28/17 KBF
Date and Initials

Version: 537 (14 Analyte)

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700920-01 "A"	☑	RCDM-MW-28S-20170719	21-Jul-17 09:12	A-5	HB 7/27/17 location not included; added to processsheet.
1700920-02	☐	~~LF-MW-12S-20170719~~ LF-MW-12S-20170719 HB 7/27/17	21-Jul-17 09:12		
1700920-03	☑	RCDM-MW-14S-20170720	21-Jul-17 09:12		
1700920-04	☑	MH-DUP01-20170720	21-Jul-17 09:12		
1700920-05	☑	MH-A97-20170720	21-Jul-17 09:12		
1700920-06	☑	MH-H93-20170720	21-Jul-17 09:12		
1700920-07	☑	RCDM-BLANK-20170720	21-Jul-17 09:12		
1700920-08	☑	MH-C94-20170720 HB 7/27/17	21-Jul-17 09:12		
1700920-09	☑	~~RCDM-MW-13S-20170719~~ RCDM-MW-13S-20170719	21-Jul-17 09:12		
1700920-10	☑	LF-MW-14S-20170720	21-Jul-17 09:12		
1700920-11	☑	LF-MW-11BR-20170720	21-Jul-17 09:12		
1700920-12	☐	~~LF-MW-13S-20170719~~ LF-MW-13S-20170719 HB 7/27/17	21-Jul-17 09:12		
1700920-13	☑	RCDM-MW-11BR-20170720 HB 7/27/17	21-Jul-17 09:12		
1700920-14	☐	~~RCDM-MW-12S-20170719~~ RCDM-MW-12S-20170719	21-Jul-17 09:12		
1700920-15	☐	~~LF-MW-28S-20170719~~ LF-MW-28S-20170719 HB 7/27/17	21-Jul-17 09:12		
1700920-16	☑	DUP-07-20170719	21-Jul-17 09:12		
1700920-17	☑	FRB04-20170719	21-Jul-17 09:12		

WO Comments: **Attach balance check doc.**

Vista PM: Martha Maier

Vial Box ID: Barbaloot

Sample Reconciled By: HB 7/27/17 / /

Page 1 of 1

Batch: B7G0122

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1700891-06RE1	0.17113	NA	NA	1000	27-Jul-17 07:52	BAP	NA	NA	Surface Water	537M DoD Linear/Branche
1700920-01	0.1113			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-02	0.11113			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-03	0.11405			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-04	0.12177			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-05	0.12086			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-06	0.11357			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-07	0.11872			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-08	0.11568			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-09	0.11866			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-10	0.11481			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-11	0.11664			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-12	0.11667			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-13	0.11813			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-14	0.11619			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-15	0.11572			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-16	0.12023			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
1700920-17	0.11007			1000	27-Jul-17 07:52	BAP			Aqueous	537M PFAS DOD (LOQ as
~~1700924-01~~	~~0.125~~		Ⓐ	~~1000~~	~~27-Jul-17 07:52~~	~~BAP~~			~~Effluent~~	~~537M PFAS~~
B7G0122-BLK1	0.25	NA	NA	1000	27-Jul-17 07:52	BAP			NA	QC
B7G0122-BS1	0.25			1000	27-Jul-17 07:52	BAP	17D2705	10		QC

Ⓐ Sample not extracted KBF 7/28/17

KBF 7/28/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M1\170731M1-2.qld

Last Altered: Monday, July 31, 2017 13:00:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:18:58 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

(A) out of limit criteria.

Name: 170731M1_2, Date: 31-Jul-2017, Time: 12:09:51, ID: ST170731M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	2.41e3	2.53e4	1.000		1.32	1.35	1.19	1.00	100.1
2	2	PFPeA	263.1 > 218.9	4.67e3	5.57e4	1.000		2.77	2.65	1.05	1.04	103.5
3	3	PFBS	299 > 79.7	1.23e3	7.54e3	1.000		2.96	2.90	2.04	1.10	110.3
4	4	PFHxA	313.2 > 268.9	1.07e4	3.27e4	1.000		3.19	3.14	1.64	1.08	107.9
5	5	PFHpA	363 > 318.9	8.09e3	7.82e4	1.000		3.45	3.41	1.29	1.04	103.9
6	6	PFHxS	398.9 > 79.6	9.84e2	7.52e3	1.000		3.56	3.49	1.64	0.951	95.1
7	7	PFOA	413 > 368.7	9.07e3	1.01e5	1.000		3.65	3.62	1.12	1.03	102.6
8	8	PFHpS	448.9 > 98.8	8.37e2	1.01e5	1.000		3.65	3.68	0.103	1.23	123.1
9	9	PFNA	462.9 > 418.8	8.47e3	8.59e4	1.000		3.83	3.79	1.23	1.07	107.4
10	10	PFOSA	498.1 > 77.8	8.82e2	1.02e4	1.000		3.84	3.80	1.08	0.949	94.9
11	11	PFOS	499 > 79.9	1.40e3	1.89e4	1.000		3.89	3.85	0.924	0.893	89.3
12	12	PFDA	513 > 468.8	7.86e3	7.94e4	1.000		4.01	3.97	1.24	0.891	89.1
13	13	N-MeFOSAA	570.1 > 419	2.21e3	1.87e4	1.000		4.03	3.99	19.2	0.980	98.0
14	14	N-EtFOSAA	584.2 > 419	1.83e3	1.93e4	1.000		4.10	4.06	15.3	0.954	95.4
15	15	PFUnA	562.9 > 518.9	6.68e3	9.51e4	1.000		4.11	4.13	0.878	1.06	106.4
16	16	PFDS	598.9 > 98.7	7.44e2	9.51e4	1.000		4.22	4.17	0.0977	1.38 (A)	138.3
17	17	PFDoA	612.9 > 318.8	8.77e2	1.02e4	1.000		4.34	4.29	1.08	0.954	95.4
18	18	PFTrDA	662.9 > 618.9	1.00e4	1.02e4	1.000		4.50	4.46	12.3	1.15	114.5
19	19	PFTeDA	712.9 > 668.8	6.90e3	7.13e4	1.000		4.68	4.63	1.21	1.02	102.4
20	20	13C3-PFBA	216.1 > 171.8	2.53e4	2.43e4	1.000	1.068	1.32	1.35	13.0	12.1	97.1
21	21	13C3-PFPeA	266 > 221.8	5.57e4	9.54e4	1.000	0.271	2.77	2.65	2.92	10.8	86.0
22	22	13C3-PFBS	302 > 98.8	7.54e3	9.54e4	1.000	0.033	2.96	2.90	0.395	12.0	95.6
23	23	13C2-PFHxA	315 > 269.8	3.27e4	9.54e4	1.000	0.335	3.19	3.14	1.71	5.11	102.2
24	24	13C4-PFHpA	367.2 > 321.8	7.82e4	9.54e4	1.000	0.369	3.45	3.41	4.10	11.1	88.9
25	25	18O2-PFHxS	403 > 102.6	7.52e3	1.47e4	1.000	0.460	3.56	3.49	6.39	13.9	111.1
26	26	13C2-PFOA	414.9 > 369.7	1.01e5	7.14e4	1.000	1.293	3.65	3.62	17.7	13.7	109.8
27	27	13C5-PFNA	468.2 > 422.9	8.59e4	8.16e4	1.000	0.986	3.83	3.79	13.2	13.4	106.8
28	28	13C8-PFOSA	506.1 > 77.7	1.02e4	8.61e4	1.000	0.132	3.84	3.80	1.48	11.2	89.4
29	29	13C8-PFOS	507 > 79.9	1.89e4	1.46e4	1.000	1.184	3.89	3.84	16.2	13.7	109.5
30	30	13C2-PFDA	515.1 > 469.9	7.94e4	7.68e4	1.000	0.998	4.01	3.96	12.9	12.9	103.5
31	31	d3-N-MeFOSAA	573.3 > 419	1.87e4	8.61e4	1.000	0.018	4.03	3.99	2.72	154	94.6
32	32	d5-N-EtFOSAA	589.3 > 419	1.93e4	8.61e4	1.000	0.018	4.12	4.06	2.81	158	97.2

70-130

50-150

DM 9/1/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-2.qld

Last Altered: Monday, July 31, 2017 13:00:17 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:18:58 Pacific Daylight Time

Name: 170731M1_2, Date: 31-Jul-2017, Time: 12:09:51, ID: ST170731M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	33 13C2-PFUnA	565 > 519.8	9.51e4	8.61e4	1.000	1.129	4.17	4.13	13.8	12.2	97.9
34	34 13C2-PFDoA	615 > 569.7	1.02e4	8.61e4	1.000	0.116	4.34	4.29	1.48	12.7	102.0
35	35 13C2-PFTeDA	714.8 > 669.6	7.13e4	8.61e4	1.000	0.762	4.68	4.63	10.4	13.6	108.7
36	36 13C4-PFBA	217 > 171.8	2.43e4	2.43e4	1.000	1.000	1.32	1.36	12.5	12.5	100.0
37	37 13C5-PFHxA	318 > 272.9	9.54e4	9.54e4	1.000	1.000	3.19	3.14	5.00	5.00	100.0
38	38 13C3-PFHxS	401.9 > 79.9	1.47e4	1.47e4	1.000	1.000	3.56	3.49	12.5	12.5	100.0
39	39 13C8-PFOA	421.3 > 376	7.14e4	7.14e4	1.000	1.000	3.65	3.62	12.5	12.5	100.0
40	40 13C9-PFNA	472.2 > 426.9	8.16e4	8.16e4	1.000	1.000	3.83	3.79	12.5	12.5	100.0
41	41 13C4-PFOS	503 > 79.9	1.46e4	1.46e4	1.000	1.000	3.89	3.85	12.5	12.5	100.0
42	42 13C6-PFDA	519.1 > 473.7	7.68e4	7.68e4	1.000	1.000	4.01	3.96	12.5	12.5	100.0
43	43 13C7-PFUnA	570.1 > 524.8	8.61e4	8.61e4	1.000	1.000	4.17	4.13	12.5	12.5	100.0

SD-18D

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M1\170731M1-40.qld

Last Altered: Tuesday, August 01, 2017 10:35:04 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:35:10 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: 170731M1_40, Date: 31-Jul-2017, Time: 19:17:39, ID: ST170731M1-4 PFC CS3 17G2729, Description: PFC CS3 17G2729

	#	Name	Trace	Area	IS Area	Wt/Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	2.37e4	2.80e4	1.000		1.32	1.39	10.6	9.66	96.6
2	2	PFPeA	263.1 > 218.9	5.31e4	6.80e4	1.000		2.77	2.69	9.76	10.1	101.3
3	3	PFBS	299 > 79.7	1.32e4	9.40e3	1.000		2.96	2.92	17.6	9.48	94.8
4	4	PFHxA	313.2 > 268.9	1.00e5	3.52e4	1.000		3.19	3.16	14.3	10.1	101.3
5	5	PFHpA	363 > 318.9	7.17e4	7.78e4	1.000		3.45	3.43	11.5	9.72	97.2
6	6	PFHxS	398.9 > 79.6	8.97e3	6.97e3	1.000		3.56	3.50	16.1	9.63	96.3
7	7	PFOA	413 > 368.7	8.54e4	1.12e5	1.000		3.65	3.63	9.56	9.70	97.0
8	8	PFHpS	448.9 > 98.8	7.99e3	1.12e5	1.000		3.65	3.69	0.893	10.7	106.9
9	9	PFNA	462.9 > 418.8	8.05e4	9.84e4	1.000		3.83	3.81	10.2	9.49	94.9
10	10	PFOSA	498.1 > 77.8	8.92e3	1.06e4	1.000		3.84	3.82	10.5	9.51	95.1
11	11	PFOS	499 > 79.9	1.46e4	1.84e4	1.000		3.89	3.86	9.95	10.0	100.1
12	12	PFDA	513 > 468.8	8.50e4	8.50e4	1.000		4.01	3.98	12.5	10.2	102.3
13	13	N-MeFOSAA	570.1 > 419	2.45e4	2.05e4	1.000		4.03	4.01	195	9.86	98.6
14	14	N-EtFOSAA	584.2 > 419	1.94e4	2.00e4	1.000		4.10	4.08	158	10.3	102.9
15	15	PFUnA	562.9 > 518.9	6.09e4	1.01e5	1.000		4.11	4.15	7.50	10.1	100.8
16	16	PFDS	598.9 > 98.7	6.30e3	1.01e5	1.000		4.22	4.19	0.776	11.0	109.5
17	17	PFDoA	612.9 > 318.8	7.73e3	9.84e3	1.000		4.34	4.30	9.82	12.2	122.1
18	18	PFTrDA	662.9 > 618.9	8.56e4	9.84e3	1.000		4.50	4.47	109	11.0	110.4
19	19	PFTeDA	712.9 > 668.8	5.77e4	6.80e4	1.000		4.68	4.66	10.6	10.1	101.1
20	20	13C3-PFBA	216.1 > 171.8	2.80e4	2.73e4	1.000	1.068	1.32	1.40	12.8	12.0	95.9
21	21	13C3-PFPeA	266 > 221.8	6.80e4	9.67e4	1.000	0.271	2.77	2.69	3.51	13.0	103.6
22	22	13C3-PFBS	302 > 98.8	9.40e3	9.67e4	1.000	0.033	2.96	2.92	0.486	14.7	117.5
23	23	13C2-PFHxA	315 > 269.8	3.52e4	9.67e4	1.000	0.335	3.19	3.16	1.82	5.42	108.4
24	24	13C4-PFHpA	367.2 > 321.8	7.78e4	9.67e4	1.000	0.369	3.45	3.43	4.02	10.9	87.2
25	25	18O2-PFHxS	403 > 102.6	6.97e3	1.39e4	1.000	0.460	3.56	3.50	6.25	13.6	108.6
26	26	13C2-PFOA	414.9 > 369.7	1.12e5	8.09e4	1.000	1.293	3.65	3.63	17.3	13.4	106.8
27	27	13C5-PFNA	468.2 > 422.9	9.84e4	8.92e4	1.000	0.986	3.83	3.81	13.8	14.0	112.0
28	28	13C8-PFOSA	506.1 > 77.7	1.06e4	8.45e4	1.000	0.132	3.84	3.82	1.57	11.9	94.9
29	29	13C8-PFOS	507 > 79.9	1.84e4	1.50e4	1.000	1.184	3.89	3.87	15.3	12.9	103.2
30	30	13C2-PFDA	515.1 > 469.9	8.50e4	8.94e4	1.000	0.998	4.01	3.99	11.9	11.9	95.2
31	31	d3-N-MeFOSAA	573.3 > 419	2.05e4	8.45e4	1.000	0.018	4.03	4.01	3.02	171	105.2
32	32	d5-N-EtFOSAA	589.3 > 419	2.00e4	8.45e4	1.000	0.018	4.12	4.08	2.96	166	102.4

70-130
50-150 DM 8/1/17

DM 8/1/17

50-150

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M1\170731M1-40.qld

Last Altered: Tuesday, August 01, 2017 10:35:04 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:35:10 Pacific Daylight Time

Name: 170731M1_40, Date: 31-Jul-2017, Time: 19:17:39, ID: ST170731M1-4 PFC CS3 17G2729, Description: PFC CS3 17G2729

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	33 13C2-PFUnA	565 > 519.8	1.01e5	8.45e4	1.000	1.129	4.17	4.15	15.0	13.3	106.3
34	34 13C2-PFDoA	615 > 569.7	9.84e3	8.45e4	1.000	0.116	4.34	4.30	1.46	12.5	100.4
35	35 13C2-PFTeDA	714.8 > 669.6	6.80e4	8.45e4	1.000	0.762	4.68	4.66	10.1	13.2	105.5
36	36 13C4-PFBA	217 > 171.8	2.73e4	2.73e4	1.000	1.000	1.32	1.40	12.5	12.5	100.0
37	37 13C5-PFHxA	318 > 272.9	9.67e4	9.67e4	1.000	1.000	3.19	3.16	5.00	5.00	100.0
38	38 13C3-PFHxS	401.9 > 79.9	1.39e4	1.39e4	1.000	1.000	3.56	3.50	12.5	12.5	100.0
39	39 13C8-PFOA	421.3 > 376	8.09e4	8.09e4	1.000	1.000	3.65	3.63	12.5	12.5	100.0
40	40 13C9-PFNA	472.2 > 426.9	8.92e4	8.92e4	1.000	1.000	3.83	3.81	12.5	12.5	100.0
41	41 13C4-PFOS	503 > 79.9	1.50e4	1.50e4	1.000	1.000	3.89	3.87	12.5	12.5	100.0
42	42 13C6-PFDA	519.1 > 473.7	8.94e4	8.94e4	1.000	1.000	4.01	3.98	12.5	12.5	100.0
43	43 13C7-PFUnA	570.1 > 524.8	8.45e4	8.45e4	1.000	1.000	4.17	4.14	12.5	12.5	100.0

50-150 ↓

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M1\170731M1-53.qld

Last Altered: Tuesday, August 01, 2017 10:36:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:36:54 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: 170731M1_53, Date: 31-Jul-2017, Time: 21:36:33, ID: ST170731M1-5 PFC CS3 17G2729, Description: PFC CS3 17G2729

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	2.57e4	3.02e4	1.000		1.32	1.39	10.7	9.75	97.5
2	2	PFPeA	263.1 > 218.9	5.84e4	7.69e4	1.000		2.77	2.69	9.50	9.85	98.5
3	3	PFBS	299 > 79.7	1.40e4	1.00e4	1.000		2.96	2.92	17.4	9.38	93.8
4	4	PFHxA	313.2 > 268.9	1.04e5	3.60e4	1.000		3.19	3.16	14.4	10.2	102.2
5	5	PFHpA	363 > 318.9	8.00e4	8.27e4	1.000		3.45	3.43	12.1	10.2	102.1
6	6	PFHxS	398.9 > 79.6	9.97e3	8.04e3	1.000		3.56	3.50	15.5	9.27	92.7
7	7	PFOA	413 > 368.7	8.54e4	1.15e5	1.000		3.65	3.63	9.31	9.45	94.5
8	8	PFHpS	448.9 > 98.8	8.65e3	1.15e5	1.000		3.65	3.69	0.943	11.3	112.9
9	9	PFNA	462.9 > 418.8	8.13e4	9.55e4	1.000		3.83	3.81	10.6	9.88	98.8
10	10	PFOSA	498.1 > 77.8	9.34e3	1.10e4	1.000		3.84	3.82	10.6	9.61	96.1
11	11	PFOS	499 > 79.9	1.47e4	1.92e4	1.000		3.89	3.87	9.60	9.66	96.6
12	12	PFDA	513 > 468.8	1.02e5	1.04e5	1.000		4.01	3.98	12.4	10.1	101.0
13	13	N-MeFOSAA	570.1 > 419	2.60e4	2.13e4	1.000		4.03	4.02	198	10.0	100.4
14	14	N-EtFOSAA	584.2 > 419	1.99e4	2.06e4	1.000		4.10	4.08	156	10.2	102.1
15	15	PFUnA	562.9 > 518.9	6.28e4	1.04e5	1.000		4.11	4.15	7.56	10.2	101.5
16	16	PFDS	598.9 > 98.7	6.91e3	1.04e5	1.000		4.22	4.20	0.832	11.8	117.5
17	17	PFDoA	612.9 > 318.8	7.83e3	1.01e4	1.000		4.34	4.31	9.65	12.0	119.9
18	18	PFTrDA	662.9 > 618.9	9.07e4	1.01e4	1.000		4.50	4.48	112	11.4	113.5
19	19	PFTeDA	712.9 > 668.8	6.05e4	7.04e4	1.000		4.68	4.66	10.7	10.2	102.2
20	20	13C3-PFBA	216.1 > 171.8	3.02e4	2.91e4	1.000	1.068	1.32	1.39	13.0	12.1	97.1
21	21	13C3-PFPeA	266 > 221.8	7.69e4	1.04e5	1.000	0.271	2.77	2.68	3.69	13.6	108.7
22	22	13C3-PFBS	302 > 98.8	1.00e4	1.04e5	1.000	0.033	2.96	2.92	0.482	14.6	116.5
23	23	13C2-PFHxA	315 > 269.8	3.60e4	1.04e5	1.000	0.335	3.19	3.16	1.73	5.15	103.0
24	24	13C4-PFHpA	367.2 > 321.8	8.27e4	1.04e5	1.000	0.369	3.45	3.43	3.96	10.7	86.0
25	25	18O2-PFHxS	403 > 102.6	8.04e3	1.60e4	1.000	0.460	3.56	3.50	6.28	13.6	109.1
26	26	13C2-PFOA	414.9 > 369.7	1.15e5	8.76e4	1.000	1.293	3.65	3.64	16.4	12.6	101.1
27	27	13C5-PFNA	468.2 > 422.9	9.55e4	9.05e4	1.000	0.986	3.83	3.81	13.2	13.4	107.0
28	28	13C8-PFOSA	506.1 > 77.7	1.10e4	9.19e4	1.000	0.132	3.84	3.82	1.50	11.3	90.4
29	29	13C8-PFOS	507 > 79.9	1.92e4	1.56e4	1.000	1.184	3.89	3.87	15.3	13.0	103.6
30	30	13C2-PFDA	515.1 > 469.9	1.04e5	1.04e5	1.000	0.998	4.01	3.98	12.4	12.5	99.8
31	31	d3-N-MeFOSAA	573.3 > 419	2.13e4	9.19e4	1.000	0.018	4.03	4.01	2.90	164	101.0
32	32	d5-N-EtFOSAA	589.3 > 419	2.06e4	9.19e4	1.000	0.018	4.12	4.08	2.81	158	97.2

70-130

50-150

OM 9/11/17

Dataset: U:\Q4.PRO\results\170731M1\170731M1-53.qld

Last Altered: Tuesday, August 01, 2017 10:36:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:36:54 Pacific Daylight Time

Name: 170731M1_53, Date: 31-Jul-2017, Time: 21:36:33, ID: ST170731M1-5 PFC CS3 17G2729, Description: PFC CS3 17G2729

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	33 13C2-PFUnA	565 > 519.8	1.04e5	9.19e4	1.000	1.129	4.17	4.15	14.1	12.5	100.1
34	34 13C2-PFDoA	615 > 569.7	1.01e4	9.19e4	1.000	0.116	4.34	4.31	1.38	11.9	95.1
35	35 13C2-PFTeDA	714.8 > 669.6	7.04e4	9.19e4	1.000	0.762	4.68	4.66	9.58	12.6	100.5
36	36 13C4-PFBA	217 > 171.8	2.91e4	2.91e4	1.000	1.000	1.32	1.39	12.5	12.5	100.0
37	37 13C5-PFHxA	318 > 272.9	1.04e5	1.04e5	1.000	1.000	3.19	3.16	5.00	5.00	100.0
38	38 13C3-PFHxS	401.9 > 79.9	1.60e4	1.60e4	1.000	1.000	3.56	3.50	12.5	12.5	100.0
39	39 13C8-PFOA	421.3 > 376	8.76e4	8.76e4	1.000	1.000	3.65	3.63	12.5	12.5	100.0
40	40 13C9-PFNA	472.2 > 426.9	9.05e4	9.05e4	1.000	1.000	3.83	3.81	12.5	12.5	100.0
41	41 13C4-PFOS	503 > 79.9	1.56e4	1.56e4	1.000	1.000	3.89	3.87	12.5	12.5	100.0
42	42 13C6-PFDA	519.1 > 473.7	1.04e5	1.04e5	1.000	1.000	4.01	3.98	12.5	12.5	100.0
43	43 13C7-PFUnA	570.1 > 524.8	9.19e4	9.19e4	1.000	1.000	4.17	4.15	12.5	12.5	100.0

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Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M1\170731M1-67.qld

Last Altered: Tuesday, August 01, 2017 10:37:28 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:37:35 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: 170731M1_67, Date: 01-Aug-2017, Time: 00:07:36, ID: ST170731M1-6 PFC CS3 17G2729, Description: PFC CS3 17G2729

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	2.73e4	3.11e4	1.000		1.32	1.41	11.0	10.0	100.3
2	2	PFPeA	263.1 > 218.9	6.52e4	8.55e4	1.000		2.77	2.70	9.53	9.89	98.9
3	3	PFBS	299 > 79.7	1.60e4	1.13e4	1.000		2.96	2.93	17.8	9.56	95.6
4	4	PFHxA	313.2 > 268.9	1.09e5	3.88e4	1.000		3.19	3.16	14.1	9.97	99.7
5	5	PFHpA	363 > 318.9	8.66e4	8.57e4	1.000		3.45	3.43	12.6	10.7	106.6
6	6	PFHxS	398.9 > 79.6	1.05e4	7.99e3	1.000		3.56	3.50	16.5	9.86	98.6
7	7	PFOA	413 > 368.7	9.59e4	1.19e5	1.000		3.65	3.63	10.1	10.3	102.5
8	8	PFHpS	448.9 > 98.8	9.83e3	1.19e5	1.000		3.65	3.70	1.03	12.4	123.9
9	9	PFNA	462.9 > 418.8	9.19e4	1.06e5	1.000		3.83	3.82	10.8	10.1	100.6
10	10	PFOSA	498.1 > 77.8	9.96e3	1.18e4	1.000		3.84	3.83	10.5	9.54	95.4
11	11	PFOS	499 > 79.9	1.56e4	1.97e4	1.000		3.89	3.87	9.87	9.93	99.3
12	12	PFDA	513 > 468.8	1.09e5	9.71e4	1.000		4.01	3.99	14.0	11.5	114.9
13	13	N-MeFOSAA	570.1 > 419	2.67e4	2.32e4	1.000		4.03	4.02	187	9.48	94.8
14	14	N-EtFOSAA	584.2 > 419	2.17e4	2.37e4	1.000		4.10	4.09	149	9.71	97.1
15	15	PFUnA	562.9 > 518.9	6.70e4	1.09e5	1.000		4.11	4.15	7.66	10.3	102.9
16	16	PFDS	598.9 > 98.7	6.82e3	1.09e5	1.000		4.22	4.20	0.781	11.0	110.2
17	17	PFDoA	612.9 > 318.8	8.23e3	1.13e4	1.000		4.34	4.31	9.09	11.3	112.8
18	18	PFTrDA	662.9 > 618.9	9.40e4	1.13e4	1.000		4.50	4.48	104	10.5	105.3
19	19	PFTeDA	712.9 > 668.8	6.16e4	6.95e4	1.000		4.68	4.66	11.1	10.6	105.5
20	20	13C3-PFBA	216.1 > 171.8	3.11e4	3.11e4	1.000	1.068	1.32	1.41	12.5	11.7	93.9
21	21	13C3-PFPeA	266 > 221.8	8.55e4	1.11e5	1.000	0.271	2.77	2.70	3.84	14.1	113.1
22	22	13C3-PFBS	302 > 98.8	1.13e4	1.11e5	1.000	0.033	2.96	2.92	0.505	15.3	122.2
23	23	13C2-PFHxA	315 > 269.8	3.88e4	1.11e5	1.000	0.335	3.19	3.16	1.74	5.19	103.8
24	24	13C4-PFHpA	367.2 > 321.8	8.57e4	1.11e5	1.000	0.369	3.45	3.43	3.85	10.4	83.4
25	25	18O2-PFHxS	403 > 102.6	7.99e3	1.66e4	1.000	0.460	3.56	3.50	6.00	13.0	104.3
26	26	13C2-PFOA	414.9 > 369.7	1.19e5	9.07e4	1.000	1.293	3.65	3.64	16.4	12.7	101.3
27	27	13C5-PFNA	468.2 > 422.9	1.06e5	1.03e5	1.000	0.986	3.83	3.82	12.9	13.0	104.3
28	28	13C8-PFOSA	506.1 > 77.7	1.18e4	9.85e4	1.000	0.132	3.84	3.82	1.50	11.3	90.7
29	29	13C8-PFOS	507 > 79.9	1.97e4	1.64e4	1.000	1.184	3.89	3.87	15.0	12.7	101.6
30	30	13C2-PFDA	515.1 > 469.9	9.71e4	9.76e4	1.000	0.998	4.01	3.99	12.4	12.5	99.7
31	31	d3-N-MeFOSAA	573.3 > 419	2.32e4	9.85e4	1.000	0.018	4.03	4.02	2.94	166	102.3
32	32	d5-N-EtFOSAA	589.3 > 419	2.37e4	9.85e4	1.000	0.018	4.12	4.08	3.00	169	103.9

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Dataset: U:\Q4.PRO\results\170731M1\170731M1-67.qld

Last Altered: Tuesday, August 01, 2017 10:37:28 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:37:35 Pacific Daylight Time

Name: 170731M1_67, Date: 01-Aug-2017, Time: 00:07:36, ID: ST170731M1-6 PFC CS3 17G2729, Description: PFC CS3 17G2729

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	33 13C2-PFUnA	565 > 519.8	1.09e5	9.85e4	1.000	1.129	4.17	4.15	13.9	12.3	98.2
34	34 13C2-PFDoA	615 > 569.7	1.13e4	9.85e4	1.000	0.116	4.34	4.31	1.44	12.4	99.0
35	35 13C2-PFTeDA	714.8 > 669.6	6.95e4	9.85e4	1.000	0.762	4.68	4.66	8.82	11.6	92.6
36	36 13C4-PFBA	217 > 171.8	3.11e4	3.11e4	1.000	1.000	1.32	1.40	12.5	12.5	100.0
37	37 13C5-PFHxA	318 > 272.9	1.11e5	1.11e5	1.000	1.000	3.19	3.16	5.00	5.00	100.0
38	38 13C3-PFHxS	401.9 > 79.9	1.66e4	1.66e4	1.000	1.000	3.56	3.50	12.5	12.5	100.0
39	39 13C8-PFOA	421.3 > 376	9.07e4	9.07e4	1.000	1.000	3.65	3.64	12.5	12.5	100.0
40	40 13C9-PFNA	472.2 > 426.9	1.03e5	1.03e5	1.000	1.000	3.83	3.82	12.5	12.5	100.0
41	41 13C4-PFOS	503 > 79.9	1.64e4	1.64e4	1.000	1.000	3.89	3.87	12.5	12.5	100.0
42	42 13C6-PFDA	519.1 > 473.7	9.76e4	9.76e4	1.000	1.000	4.01	3.99	12.5	12.5	100.0
43	43 13C7-PFUnA	570.1 > 524.8	9.85e4	9.85e4	1.000	1.000	4.17	4.15	12.5	12.5	100.0

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Sample List Report **MassLynx MassLynx V4.1 SCN945 SCN960**

Sample List: U:\Q4.PRO\SampleDB\170731M1.SPL
Last Modified: Monday, July 31, 2017 14:34:49 Pacific Daylight Time
Printed: Monday, July 31, 2017 15:57:00 Pacific Daylight Time

Page Position (1, 1)

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
1	170731M1_1	---	IPA	IPA	1.0000	1:48	Blank
2	170731M1_2	---	ST170731M1-1 PFC CS0 17G2826	PFC CS0 17G2826	1.0000	1:1	Analyte
3	170731M1_3	---	IPA	IPA	1.0000	1:48	Blank
4	170731M1_4	---	B7G0067-BS1 OPR 0.125	OPR	0.1250	1:3	Analyte
5	170731M1_5	---	IPA	IPA	1.0000	1:48	Blank
6	170731M1_6	---	B7G0067-BLK1 Method Blank 0.125	Method Blank	0.1250	1:4	Analyte
7	170731M1_7	---	1700855-01 TF5-EB-02 0.27357	TF5-EB-02	0.2736	1:5	Analyte
8	170731M1_8	---	1700855-02 TF5-MW-987 0.27423	TF5-MW-987	0.2742	1:6	Analyte
9	170731M1_9	---	1700855-03 TF5-MW-987D 0.27164	TF5-MW-987D	0.2716	1:7	Analyte
10	170731M1_10	---	B7G0067-MS1 Matrix Spike 0.27298	Matrix Spike	0.2730	1:8	Analyte
11	170731M1_11	---	B7G0067-MSD1 Matrix Spike Dup 0.2776	Matrix Spike Dup	0.2776	1:9	Analyte
12	170731M1_12	---	1700855-04 TF5-MW-987-D 0.26865	TF5-MW-987-D	0.2687	1:10	Analyte
13	170731M1_13	---	1700855-05 TF5-MW-991 0.2726	TF5-MW-991	0.2726	1:11	Analyte
14	170731M1_14	---	1700855-06 TF5-MW-991D 0.27278	TF5-MW-991D	0.2728	1:12	Analyte
15	170731M1_15	---	1700855-07 TF5-MW-993 0.26881	TF5-MW-993	0.2688	1:13	Analyte
16	170731M1_16	---	1700855-08 TF5-MW-993D 0.2612	TF5-MW-993D	0.2612	1:14	Analyte
17	170731M1_17	---	1700855-09 TF5-MW-994 0.25188	TF5-MW-994	0.2519	1:15	Analyte
18	170731M1_18	---	1700845-03@40X MW-27S-20170707 0.11824	MW-27S-20170707	0.1182	1:16	Analyte
19	170731M1_19	---	IPA	IPA	1.0000	1:48	Blank
20	170731M1_20	---	ST170731M1-2 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
21	170731M1_21	---	IPA	IPA	1.0000	1:48	Blank
22	170731M1_22	---	1700871-01 EB03-20170712 0.12146	EB03-20170712	0.1215	1:17	Analyte
23	170731M1_23	---	1700871-02 5-GW-05_DGMW41B-20170712 0.11547	5-GW-05_DGMW41B-20170712	0.1155	1:18	Analyte
24	170731M1_24	---	1700871-03 18-GW-18BGM03E-20170712 0.11765	18-GW-18BGM03E-20170712	0.1177	1:19	Analyte
25	170731M1_25	---	1700871-04 24-GW-24IN03-20170712 0.11741	24-GW-24IN03-20170712	0.1174	1:20	Analyte
26	170731M1_26	---	1700871-05 DUP02-20170712 0.11807	DUP02-20170712	0.1181	1:21	Analyte
27	170731M1_27	---	1700871-06 24-GW-24EX13A-20170712 0.11851	24-GW-24EX13A-20170712	0.1185	1:22	Analyte
28	170731M1_28	---	1700871-07 24-GW-24MW15D-20170712 0.1193	24-GW-24MW15D-20170712	0.1193	1:23	Analyte
29	170731M1_29	---	1700871-08 16-GW-16_MW28-20170712 0.11899	16-GW-16_MW28-20170712	0.1190	1:24	Analyte
30	170731M1_30	---	1700871-09 16-GW-16_MW19-20170712 0.11913	16-GW-16_MW19-20170712	0.1191	1:25	Analyte
31	170731M1_31	---	1700871-10 EB04-20170713 0.11646	EB04-20170713	0.1165	1:26	Analyte
32	170731M1_32	---	1700871-11 16-GW-16_MW04-20170713 0.12043	16-GW-16_MW04-20170713	0.1204	1:27	Analyte
33	170731M1_33	---	IPA	IPA	1.0000	1:48	Blank
34	170731M1_34	---	ST170731M1-3 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
35	170731M1_35	---	IPA	IPA	1.0000	1:48	Blank
36	170731M1_36	---	1700856-12RE1@5X MW-31S-20170711 0.11732	MW-31S-20170711	0.1173	1:28	Analyte
37	170731M1_37	---	1700935-01 RES29-BLK_20170726 0.11182	RES29-BLK_20170726	0.1118	1:29	Analyte
38	170731M1_38	---	1700935-04 RES29-GAC2_20170726 0.12639	RES29-GAC2_20170726	0.1264	1:30	Analyte
39	170731M1_39	---	IPA	IPA	1.0000	1:48	Blank
40	170731M1_40	---	ST170731M1-4 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
41	170731M1_41	—	IPA	IPA	1.0000	1:48	Blank
42	170731M1_42	—	B7G0122-BS1 OPR 0.25	OPR	0.2500	1:31	Analyte
43	170731M1_43	—	IPA	IPA	1.0000	1:48	Blank
44	170731M1_44	—	B7G0122-BLK1 Method Blank 0.25	Method Blank	0.2500	1:32	Analyte
45	170731M1_45	—	1700891-06RE1 VEL FOAM 0.17113	VEL FOAM	0.1711	1:33	Analyte
46	170731M1_46	—	1700920-01 RCDM-MW-28S-20170719 0.1113	RCDM-MW-28S-20170719	0.1113	1:34	Analyte
47	170731M1_47	—	1700920-02 LF-MW-12S-20170719 0.11113	LF-MW-12S-20170719	0.1111	1:35	Analyte
48	170731M1_48	—	1700920-03 RCDM-MW-14S-20170720 0.11405	RCDM-MW-14S-20170720	0.1141	1:36	Analyte
49	170731M1_49	—	1700920-04 MH-DUP01-20170720 0.12177	MH-DUP01-20170720	0.1218	1:37	Analyte
50	170731M1_50	—	1700920-05 MH-A97-20170720 0.12086	MH-A97-20170720	0.1209	1:38	Analyte
51	170731M1_51	—	1700920-06 MH-H93-20170720 0.11357	MH-H93-20170720	0.1136	1:39	Analyte
52	170731M1_52	—	IPA	IPA	1.0000	1:48	Blank
53	170731M1_53	—	ST170731M1-5 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
54	170731M1_54	—	IPA	IPA	1.0000	1:48	Blank
55	170731M1_55	—	1700920-07 RCDM-BLANK-20170720 0.11872	RCDM-BLANK-20170720	0.1187	1:40	Analyte
56	170731M1_56	—	1700920-08 MH-C94-20170720 0.11568	MH-C94-20170720	0.1157	1:41	Analyte
57	170731M1_57	—	1700920-09 RCDM-MW-13S-20170719 0.11866	RCDM-MW-13S-20170719	0.1187	1:42	Analyte
58	170731M1_58	—	1700920-10 LF-MW-14S-20170720 0.11481	LF-MW-14S-20170720	0.1148	1:43	Analyte
59	170731M1_59	—	1700920-11 LF-MW-11BR-20170720 0.11664	LF-MW-11BR-20170720	0.1166	1:44	Analyte
60	170731M1_60	—	1700920-12 LF-MW-13S-20170719 0.11667	LF-MW-13S-20170719	0.1167	1:45	Analyte
61	170731M1_61	—	1700920-13 RCDM-MW-11BR-20170720 0.11813	RCDM-MW-11BR-20170720	0.1181	1:46	Analyte
62	170731M1_62	—	1700920-14 RCDM-MW-12S-20170719 0.11619	RCDM-MW-12S-20170719	0.1162	1:47	Analyte
63	170731M1_63	—	1700920-15 LF-MW-28S-20170719 0.11572	LF-MW-28S-20170719	0.1157	2:1	Analyte
64	170731M1_64	—	1700920-16 DUP-07-20170719 0.12023	DUP-07-20170719	0.1202	2:2	Analyte
65	170731M1_65	—	1700920-17 FRB04-20170719 0.11007	FRB04-20170719	0.1101	2:3	Analyte
66	170731M1_66	—	IPA	IPA	1.0000	1:48	Blank
67	170731M1_67	—	ST170731M1-6 PFC CS3 17G2729	PFC CS3 17G2729	1.0000	1:2	Analyte
68	170731M1_68	—	IPA	IPA	1.0000	1:48	Blank

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-2.qld

Last Altered: Thursday, August 03, 2017 13:50:07 Pacific Daylight Time
Printed: Thursday, August 03, 2017 13:51:38 Pacific Daylight Time

AC 8/3/17
(A) Not used

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_2, Date: 01-Aug-2017, Time: 09:55:58, ID: ST170801M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	3.50e3	3.47e4	1.0000		1.32	1.39	1.26	1.10	110.2
2	2	PFPeA	263.1 > 218.9	7.35e3	8.65e4	1.0000		2.77	2.68	1.06	1.08	107.9
3	3	PFBS	299 > 79.7	1.86e3	1.16e4	1.0000		2.96	2.91	1.99	1.02	102.2
4	4	PFHxA	313.2 > 268.9	1.33e4	4.09e4	1.0000		3.19	3.16	1.62	1.06	106.1
5	5	PFHpA	363 > 318.9	1.04e4	9.32e4	1.0000		3.45	3.43	1.40	1.11	110.8
6	6	PFHxS	398.9 > 79.6	1.19e3	8.26e3	1.0000		3.56	3.50	1.80	1.05	105.2
7	7	6:2 FTS	427.1 > 407	1.92e3	2.01e4	1.0000		3.64	3.63	1.19	1.08	107.5
8	8	PFOA	413 > 368.7	1.07e4	1.24e5	1.0000		3.65	3.64	1.08	0.978	97.8
9	9	PFHpS	448.9 > 98.8	1.06e3	1.24e5	1.0000		3.65	3.68	0.107	1.16	115.6
10	10	PFNA	462.9 > 418.8	1.06e4	1.14e5	1.0000		3.83	3.81	1.16	0.999	99.9
11	11	PFOSA	498.1 > 77.8	1.02e3	1.18e4	1.0000		3.84	3.82	1.08	1.04	103.5
12	12	PFOS	499 > 79.9	1.92e3	1.91e4	1.0000		3.89	3.86	1.25	1.18	118.5
13	13	PFDA	513 > 468.8	1.07e4	1.08e5	1.0000		4.01	3.98	1.24	0.905	90.5
14	14	8:2 FTS	527 > 506.9	1.77e3	1.37e4	1.0000		4.00	3.98	1.61	1.10	109.6
15	15	N-MeFOSAA	570.1 > 419	3.11e3	2.49e4	1.0000		4.03	4.01	20.4	1.09	109.4
16	16	N-EtFOSAA	584.2 > 419	2.30e3	2.44e4	1.0000		4.10	4.08	15.3	1.01	101.1
17	17	PFUnA	562.9 > 518.9	8.16e3	1.01e5	1.0000		4.17	4.14	1.01	1.22	122.2
18	18	PFDS	598.9 > 98.7	7.79e2	1.01e5	1.0000		4.22	4.19	0.0968	1.23	123.4
19	19	PFDoA	612.9 > 318.8	9.32e2	1.19e4	1.0000		4.34	4.30	0.979	1.03	103.3
20	20	N-MeFOSA	512.1 > 168.9	1.50e3	3.96e4	1.0000		4.29	4.34	5.68	5.42	108.3
21	21	PFTrDA	662.9 > 618.9	1.13e4	1.19e4	1.0000		4.50	4.47	11.9	1.03	103.3
22	22	PFTeDA	712.9 > 668.8	7.18e3	7.49e4	1.0000		4.68	4.65	1.20	1.01	101.0
23	23	N-EtFOSA	526.1 > 168.9	1.82e3	5.13e4	1.0000		4.79	4.93	5.32	5.36	107.2
24	24	PFHxDA	812.8 > 768.9	6.50e3	2.18e4	1.0000		5.06	5.02	1.49	0.992	99.2
25	25	PFODA	912.8 > 868.8	1.64e3	2.18e4	1.0000		5.43	5.38	0.377	0.198	(A) 19.8
26	26	N-MeFOSE	616.1 > 58.9	2.70e3	6.99e4	1.0000		5.42	5.44	5.80	5.24	104.8
27	27	N-EtFOSE	630.1 > 58.9	3.11e3	6.68e4	1.0000		5.59	5.62	6.99	5.00	99.9
28	28	13C3-PFBA	216.1 > 171.8	3.47e4	3.49e4	1.0000	1.006	1.32	1.38	12.4	12.3	98.8
29	29	13C3-PFPeA	266 > 221.8	8.65e4	1.14e5	1.0000	0.275	2.77	2.68	3.78	13.7	109.8
30	30	13C3-PFBS	302 > 98.8	1.16e4	1.14e5	1.0000	0.034	2.96	2.91	0.509	14.9	119.2
31	31	13C2-PFHxA	315 > 269.8	4.09e4	1.14e5	1.0000	0.334	3.19	3.16	1.79	5.35	107.0

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Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-2.qld

Last Altered: Thursday, August 03, 2017 13:50:07 Pacific Daylight Time
Printed: Thursday, August 03, 2017 13:51:38 Pacific Daylight Time

Name: 170801M1_2, Date: 01-Aug-2017, Time: 09:55:58, ID: ST170801M1-1 PFC CS0 17G2826, Description: PFC CS0 17G2826

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	9.32e4	1.14e5	1.0000	0.414	3.45	3.43	4.07	9.82	78.6
33	33	18O2-PFHxS	403 > 102.6	8.26e3	1.62e4	1.0000	0.475	3.56	3.50	6.37	13.4	107.2
34	34	13C2-6:2 FTS	429.1 > 408.9	2.01e4	9.52e4	1.0000	0.214	3.64	3.62	2.64	12.3	98.7
35	35	13C2-PFOA	414.9 > 369.7	1.24e5	9.52e4	1.0000	1.298	3.65	3.63	16.3	12.6	100.5
36	36	13C5-PFNA	468.2 > 422.9	1.14e5	1.09e5	1.0000	1.094	3.83	3.81	13.1	12.0	95.9
37	37	13C8-PFOSA	506.1 > 77.7	1.18e4	1.03e5	1.0000	0.124	3.84	3.82	1.43	11.5	92.0
38	38	13C8-PFOS	507 > 79.9	1.91e4	1.75e4	1.0000	1.153	3.89	3.86	13.7	11.9	94.9
39	39	13C2-PFDA	515.1 > 469.9	1.08e5	1.09e5	1.0000	1.059	4.01	3.98	12.4	11.7	93.7
40	40	13C2-8:2 FTS	529.1 > 508.7	1.37e4	1.09e5	1.0000	0.129	4.00	3.98	1.57	12.2	97.8
41	41	d3-N-MeFOSAA	573.3 > 419	2.49e4	1.03e5	1.0000	0.019	4.03	4.01	3.03	157	96.5
42	42	d5-N-EtFOSAA	589.3 > 419	2.44e4	1.03e5	1.0000	0.019	4.12	4.08	2.97	157	96.5
43	43	13C2-PFUnA	565 > 519.8	1.01e5	1.03e5	1.0000	1.172	4.17	4.14	12.3	10.5	83.6
44	44	13C2-PFDoA	615 > 569.7	1.19e4	1.03e5	1.0000	0.118	4.34	4.30	1.45	12.2	97.9
45	45	d3-N-MeFOSA	515.2 > 168.9	3.96e4	1.03e5	1.0000	0.040	4.29	4.38	4.82	119	79.4
46	46	13C2-PFTeDA	714.8 > 669.6	7.49e4	1.03e5	1.0000	0.801	4.68	4.65	9.12	11.4	91.1
47	47	d5-N-ETFOSA	531.1 > 168.9	5.13e4	1.03e5	1.0000	0.055	4.85	4.97	6.25	114	75.7
48	48	13C2-PFHxDA	815 > 769.7	2.18e4	1.03e5	1.0000	0.991	5.06	5.02	2.65	2.68	53.6
49	49	d7-N-MeFOSE	623.1 > 58.9	6.99e4	1.03e5	1.0000	0.065	5.42	5.43	8.52	131	87.2
50	50	d9-N-EtFOSE	639.2 > 58.8	6.68e4	1.03e5	1.0000	0.065	5.59	5.61	8.14	126	83.8
51	51	13C4-PFBA	217 > 171.8	3.49e4	3.49e4	1.0000	1.000	1.32	1.39	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	1.14e5	1.14e5	1.0000	1.000	3.19	3.15	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	1.62e4	1.62e4	1.0000	1.000	3.56	3.50	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	9.52e4	9.52e4	1.0000	1.000	3.65	3.63	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	1.09e5	1.09e5	1.0000	1.000	3.83	3.81	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.75e4	1.75e4	1.0000	1.000	3.89	3.86	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	1.09e5	1.09e5	1.0000	1.000	4.01	3.98	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	1.03e5	1.03e5	1.0000	1.000	4.17	4.14	12.5	12.5	100.0

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Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-23.qld

Last Altered: Thursday, August 03, 2017 13:58:13 Pacific Daylight Time
Printed: Thursday, August 03, 2017 13:58:44 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

AC 8/3/17

Name: 170801M1_23, Date: 01-Aug-2017, Time: 13:42:24, ID: ST170801M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.18e4	1.40e4	1.0000		1.32	1.41	10.5	9.68	96.8
2	2	PFPeA	263.1 > 218.9	2.15e4	2.83e4	1.0000		2.77	2.70	9.50	9.94	99.4
3	3	PFBS	299 > 79.7	5.23e3	3.70e3	1.0000		2.96	2.93	17.7	9.35	93.5
4	4	PFHxA	313.2 > 268.9	3.86e4	1.37e4	1.0000		3.19	3.17	14.1	10.0	100.4
5	5	PFHpA	363 > 318.9	4.03e4	4.30e4	1.0000		3.45	3.44	11.7	9.75	97.5
6	6	PFHxS	398.9 > 79.6	5.24e3	3.74e3	1.0000		3.56	3.51	17.5	10.4	104.2
7	7	6:2 FTS	427.1 > 407	8.98e3	1.01e4	1.0000		3.64	3.63	11.1	9.86	98.6
8	8	PFOA	413 > 368.7	5.58e4	6.84e4	1.0000		3.65	3.64	10.2	10.5	105.2
9	9	PFHpS	448.9 > 98.8	4.76e3	6.84e4	1.0000		3.65	3.70	0.869	10.0	100.0
10	10	PFNA	462.9 > 418.8	5.20e4	6.22e4	1.0000		3.83	3.82	10.4	9.55	95.5
11	11	PFOSA	498.1 > 77.8	4.98e3	6.35e3	1.0000		3.84	3.83	9.80	9.15	91.5
12	12	PFOS	499 > 79.9	9.24e3	1.16e4	1.0000		3.89	3.87	9.92	9.70	97.0
13	13	PFDA	513 > 468.8	5.92e4	5.45e4	1.0000		4.01	3.99	13.6	11.2	111.8
14	14	8:2 FTS	527 > 506.9	7.38e3	6.24e3	1.0000		4.00	3.99	14.8	10.5	105.2
15	15	N-MeFOSAA	570.1 > 419	1.59e4	1.32e4	1.0000		4.03	4.02	196	11.0	109.9
16	16	N-EtFOSAA	584.2 > 419	1.22e4	1.36e4	1.0000		4.10	4.09	146	9.45	94.5
17	17	PFUnA	562.9 > 518.9	4.11e4	6.38e4	1.0000		4.17	4.16	8.05	10.5	105.1
18	18	PFDS	598.9 > 98.7	3.88e3	6.38e4	1.0000		4.22	4.21	0.760	9.45	94.5
19	19	PFDoA	612.9 > 318.8	4.70e3	6.37e3	1.0000		4.34	4.32	9.23	9.80	98.0
20	20	N-MeFOSA	512.1 > 168.9	9.00e3	2.43e4	1.0000		4.29	4.36	55.6	55.0	110.0
21	21	PFTrDA	662.9 > 618.9	5.79e4	6.37e3	1.0000		4.50	4.49	114	10.8	108.4
22	22	PFTeDA	712.9 > 668.8	3.95e4	4.67e4	1.0000		4.68	4.67	10.6	9.77	97.7
23	23	N-EtFOSA	526.1 > 168.9	1.07e4	3.34e4	1.0000		4.79	4.95	48.0	51.7	103.3
24	24	PFHxDA	812.8 > 768.9	5.92e4	2.24e4	1.0000		5.06	5.04	13.2	10.3	103.2
25	25	PFODA	912.8 > 868.8	5.53e4	2.24e4	1.0000		5.43	5.41	12.3	10.8	108.1
26	26	N-MeFOSE	616.1 > 58.9	1.37e4	3.87e4	1.0000		5.42	5.45	53.3	51.5	103.0
27	27	N-EtFOSE	630.1 > 58.9	1.56e4	3.82e4	1.0000		5.59	5.63	61.3	52.2	104.5
28	28	13C3-PFBA	216.1 > 171.8	1.40e4	1.36e4	1.0000	1.006	1.32	1.41	12.8	12.7	101.8
29	29	13C3-PFPeA	266 > 221.8	2.83e4	4.00e4	1.0000	0.275	2.77	2.70	3.54	12.9	102.8
30	30	13C3-PFBS	302 > 98.8	3.70e3	4.00e4	1.0000	0.034	2.96	2.93	0.462	13.5	108.3
31	31	13C2-PFHxA	315 > 269.8	1.37e4	4.00e4	1.0000	0.334	3.19	3.17	1.71	5.12	102.8

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Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-23.qld

Last Altered: Thursday, August 03, 2017 13:58:13 Pacific Daylight Time
Printed: Thursday, August 03, 2017 13:58:44 Pacific Daylight Time

Name: 170801M1_23, Date: 01-Aug-2017, Time: 13:42:24, ID: ST170801M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32 13C4-PFHpA	367.2 > 321.8	4.30e4	4.00e4	1.0000	0.414	3.45	3.44	5.37	13.0	103.7
33	33 18O2-PFHxS	403 > 102.6	3.74e3	7.59e3	1.0000	0.475	3.56	3.51	6.15	12.9	103.5
34	34 13C2-6:2 FTS	429.1 > 408.9	1.01e4	5.57e4	1.0000	0.214	3.64	3.63	2.27	10.6	85.1
35	35 13C2-PFOA	414.9 > 369.7	6.84e4	5.57e4	1.0000	1.298	3.65	3.65	15.4	11.8	94.7
36	36 13C5-PFNA	468.2 > 422.9	6.22e4	5.57e4	1.0000	1.094	3.83	3.82	14.0	12.8	102.1
37	37 13C8-PFOSA	506.1 > 77.7	6.35e3	5.76e4	1.0000	0.124	3.84	3.83	1.38	11.1	88.7
38	38 13C8-PFOS	507 > 79.9	1.16e4	9.57e3	1.0000	1.153	3.89	3.87	15.2	13.2	105.5
39	39 13C2-PFDA	515.1 > 469.9	5.45e4	6.06e4	1.0000	1.059	4.01	3.99	11.2	10.6	85.0
40	40 13C2-8:2 FTS	529.1 > 508.7	6.24e3	6.06e4	1.0000	0.129	4.00	3.99	1.29	10.0	80.1
41	41 d3-N-MeFOSAA	573.3 > 419	1.32e4	5.76e4	1.0000	0.019	4.03	4.02	2.87	148	91.3
42	42 d5-N-EtFOSAA	589.3 > 419	1.36e4	5.76e4	1.0000	0.019	4.12	4.09	2.95	156	96.0
43	43 13C2-PFUnA	565 > 519.8	6.38e4	5.76e4	1.0000	1.172	4.17	4.16	13.9	11.8	94.6
44	44 13C2-PFDoA	615 > 569.7	6.37e3	5.76e4	1.0000	0.118	4.34	4.32	1.38	11.7	93.5
45	45 d3-N-MeFOSA	515.2 > 168.9	2.43e4	5.76e4	1.0000	0.040	4.29	4.40	5.27	130	86.9
46	46 13C2-PFTeDA	714.8 > 669.6	4.67e4	5.76e4	1.0000	0.801	4.68	4.67	10.1	12.7	101.2
47	47 d5-N-ETFOSA	531.1 > 168.9	3.34e4	5.76e4	1.0000	0.055	4.85	4.99	7.25	132	87.8
48	48 13C2-PFHxDA	815 > 769.7	2.24e4	5.76e4	1.0000	0.991	5.06	5.04	4.88	4.92	98.4
49	49 d7-N-MeFOSE	623.1 > 58.9	3.87e4	5.76e4	1.0000	0.065	5.42	5.44	8.40	129	86.0
50	50 d9-N-EtFOSE	639.2 > 58.8	3.82e4	5.76e4	1.0000	0.065	5.59	5.61	8.30	128	85.4
51	51 13C4-PFBA	217 > 171.8	1.36e4	1.36e4	1.0000	1.000	1.32	1.41	12.5	12.5	100.0
52	52 13C5-PFHxA	318 > 272.9	4.00e4	4.00e4	1.0000	1.000	3.19	3.17	5.00	5.00	100.0
53	53 13C3-PFHxS	401.9 > 79.9	7.59e3	7.59e3	1.0000	1.000	3.56	3.51	12.5	12.5	100.0
54	54 13C8-PFOA	421.3 > 376	5.57e4	5.57e4	1.0000	1.000	3.65	3.65	12.5	12.5	100.0
55	55 13C9-PFNA	472.2 > 426.9	5.57e4	5.57e4	1.0000	1.000	3.83	3.82	12.5	12.5	100.0
56	56 13C4-PFOS	503 > 79.9	9.57e3	9.57e3	1.0000	1.000	3.89	3.87	12.5	12.5	100.0
57	57 13C6-PFDA	519.1 > 473.7	6.06e4	6.06e4	1.0000	1.000	4.01	3.99	12.5	12.5	100.0
58	58 13C7-PFUnA	570.1 > 524.8	5.76e4	5.76e4	1.0000	1.000	4.17	4.16	12.5	12.5	100.0

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Dataset: U:\Q4.PRO\results\170801M1\170801M1-40.qld

Last Altered: Thursday, August 03, 2017 14:08:49 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:10:03 Pacific Daylight Time

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Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_40, Date: 01-Aug-2017, Time: 16:46:13, ID: ST170801M1-3 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.27e4	1.47e4	1.0000		1.32	1.42	10.8	9.97	99.7
2	2	PFPeA	263.1 > 218.9	2.17e4	2.90e4	1.0000		2.77	2.71	9.35	9.78	97.8
3	3	PFBS	299 > 79.7	5.05e3	3.71e3	1.0000		2.96	2.93	17.0	8.98	89.8
4	4	PFHxA	313.2 > 268.9	4.00e4	1.45e4	1.0000		3.19	3.17	13.8	9.83	98.3
5	5	PFHpA	363 > 318.9	4.35e4	4.77e4	1.0000		3.45	3.44	11.4	9.47	94.7
6	6	PFHxS	398.9 > 79.6	5.23e3	4.01e3	1.0000		3.56	3.52	16.3	9.68	96.8
7	7	6:2 FTS	427.1 > 407	8.62e3	9.99e3	1.0000		3.64	3.64	10.8	9.58	95.8
8	8	PFOA	413 > 368.7	5.33e4	7.17e4	1.0000		3.65	3.65	9.28	9.58	95.8
9	9	PFHpS	448.9 > 98.8	5.42e3	7.17e4	1.0000		3.65	3.70	0.945	10.9	108.8
10	10	PFNA	462.9 > 418.8	5.51e4	6.33e4	1.0000		3.83	3.83	10.9	9.94	99.4
11	11	PFOSA	498.1 > 77.8	5.39e3	6.27e3	1.0000		3.84	3.83	10.8	10.0	100.4
12	12	PFOS	499 > 79.9	8.96e3	1.18e4	1.0000		3.89	3.88	9.49	9.27	92.7
13	13	PFDA	513 > 468.8	5.88e4	6.41e4	1.0000		4.01	3.99	11.5	9.42	94.2
14	14	8:2 FTS	527 > 506.9	7.01e3	6.81e3	1.0000		4.00	3.99	12.9	9.10	91.0
15	15	N-MeFOSAA	570.1 > 419	1.58e4	1.40e4	1.0000		4.03	4.02	183	10.3	102.7
16	16	N-EtFOSAA	584.2 > 419	1.21e4	1.35e4	1.0000		4.10	4.10	146	9.46	94.6
17	17	PFUnA	562.9 > 518.9	4.20e4	7.47e4	1.0000		4.17	4.16	7.04	9.18	91.8
18	18	PFDS	598.9 > 98.7	4.24e3	7.47e4	1.0000		4.22	4.21	0.710	8.82	88.2
19	19	PFDoA	612.9 > 318.8	5.28e3	7.00e3	1.0000		4.34	4.32	9.43	10.0	100.2
20	20	N-MeFOSA	512.1 > 168.9	9.12e3	2.47e4	1.0000		4.29	4.37	55.4	54.8	109.6
21	21	PFTrDA	662.9 > 618.9	5.94e4	7.00e3	1.0000		4.50	4.49	106	10.1	101.1
22	22	PFTeDA	712.9 > 668.8	4.07e4	4.79e4	1.0000		4.68	4.67	10.6	9.80	98.0
23	23	N-EtFOSA	526.1 > 168.9	1.09e4	3.47e4	1.0000		4.79	4.95	47.2	50.8	101.5
24	24	PFHxDA	812.8 > 768.9	5.97e4	2.24e4	1.0000		5.06	5.04	13.4	10.5	104.5
25	25	PFODA	912.8 > 868.8	5.63e4	2.24e4	1.0000		5.43	5.41	12.6	11.1	110.6
26	26	N-MeFOSE	616.1 > 58.9	1.42e4	3.98e4	1.0000		5.42	5.45	53.4	51.6	103.3
27	27	N-EtFOSE	630.1 > 58.9	1.61e4	3.99e4	1.0000		5.59	5.63	60.6	51.7	103.3
28	28	13C3-PFBA	216.1 > 171.8	1.47e4	1.39e4	1.0000	1.006	1.32	1.41	13.2	13.1	104.9
29	29	13C3-PFPeA	266 > 221.8	2.90e4	4.34e4	1.0000	0.275	2.77	2.71	3.34	12.1	97.2
30	30	13C3-PFBS	302 > 98.8	3.71e3	4.34e4	1.0000	0.034	2.96	2.93	0.428	12.5	100.3
31	31	13C2-PFHxA	315 > 269.8	1.45e4	4.34e4	1.0000	0.334	3.19	3.17	1.67	5.01	100.3

70-130

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Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-40.qld

Last Altered: Thursday, August 03, 2017 14:08:49 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:10:03 Pacific Daylight Time

Name: 170801M1_40, Date: 01-Aug-2017, Time: 16:46:13, ID: ST170801M1-3 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.77e4	4.34e4	1.0000	0.414	3.45	3.44	5.49	13.3	106.1
33	33	18O2-PFHxS	403 > 102.6	4.01e3	8.58e3	1.0000	0.475	3.56	3.51	5.84	12.3	98.3
34	34	13C2-6:2 FTS	429.1 > 408.9	9.99e3	5.63e4	1.0000	0.214	3.64	3.64	2.22	10.4	83.0
35	35	13C2-PFOA	414.9 > 369.7	7.17e4	5.63e4	1.0000	1.298	3.65	3.65	15.9	12.3	98.2
36	36	13C5-PFNA	468.2 > 422.9	6.33e4	6.12e4	1.0000	1.094	3.83	3.83	12.9	11.8	94.6
37	37	13C8-PFOSA	506.1 > 77.7	6.27e3	6.03e4	1.0000	0.124	3.84	3.83	1.30	10.4	83.4
38	38	13C8-PFOS	507 > 79.9	1.18e4	9.47e3	1.0000	1.153	3.89	3.88	15.6	13.5	108.1
39	39	13C2-PFDA	515.1 > 469.9	6.41e4	5.90e4	1.0000	1.059	4.01	3.99	13.6	12.8	102.7
40	40	13C2-8:2 FTS	529.1 > 508.7	6.81e3	5.90e4	1.0000	0.129	4.00	3.99	1.44	11.2	89.8
41	41	d3-N-MeFOSAA	573.3 > 419	1.40e4	6.03e4	1.0000	0.019	4.03	4.03	2.91	150	92.5
42	42	d5-N-EtFOSAA	589.3 > 419	1.35e4	6.03e4	1.0000	0.019	4.12	4.09	2.80	148	90.8
43	43	13C2-PFUnA	565 > 519.8	7.47e4	6.03e4	1.0000	1.172	4.17	4.16	15.5	13.2	105.6
44	44	13C2-PFDoA	615 > 569.7	7.00e3	6.03e4	1.0000	0.118	4.34	4.32	1.45	12.2	97.9
45	45	d3-N-MeFOSA	515.2 > 168.9	2.47e4	6.03e4	1.0000	0.040	4.29	4.41	5.12	127	84.4
46	46	13C2-PFTeDA	714.8 > 669.6	4.79e4	6.03e4	1.0000	0.801	4.68	4.67	9.93	12.4	99.1
47	47	d5-N-ETFOSA	531.1 > 168.9	3.47e4	6.03e4	1.0000	0.055	4.85	4.99	7.18	130	86.9
48	48	13C2-PFHxDA	815 > 769.7	2.24e4	6.03e4	1.0000	0.991	5.06	5.04	4.63	4.67	93.4
49	49	d7-N-MeFOSE	623.1 > 58.9	3.98e4	6.03e4	1.0000	0.065	5.42	5.44	8.25	127	84.5
50	50	d9-N-EtFOSE	639.2 > 58.8	3.99e4	6.03e4	1.0000	0.065	5.59	5.61	8.27	128	85.1
51	51	13C4-PFBA	217 > 171.8	1.39e4	1.39e4	1.0000	1.000	1.32	1.42	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	4.34e4	4.34e4	1.0000	1.000	3.19	3.17	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	8.58e3	8.58e3	1.0000	1.000	3.56	3.52	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	5.63e4	5.63e4	1.0000	1.000	3.65	3.64	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	6.12e4	6.12e4	1.0000	1.000	3.83	3.83	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	9.47e3	9.47e3	1.0000	1.000	3.89	3.88	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	5.90e4	5.90e4	1.0000	1.000	4.01	4.00	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	6.03e4	6.03e4	1.0000	1.000	4.17	4.16	12.5	12.5	100.0

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Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-54.qld

Last Altered: Thursday, August 03, 2017 14:22:27 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:23:24 Pacific Daylight Time

AC 8/3/17

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_54, Date: 01-Aug-2017, Time: 19:16:05, ID: ST170801M1-4 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.26e4	1.50e4	1.0000		1.32	1.42	10.5	9.65	96.5
2	2	PFPeA	263.1 > 218.9	2.30e4	2.98e4	1.0000		2.77	2.71	9.66	10.1	101.1
3	3	PFBS	299 > 79.7	5.52e3	3.96e3	1.0000		2.96	2.94	17.4	9.21	92.1
4	4	PFHxA	313.2 > 268.9	4.32e4	1.53e4	1.0000		3.19	3.18	14.2	10.1	100.9
5	5	PFHpA	363 > 318.9	4.60e4	4.67e4	1.0000		3.45	3.44	12.3	10.2	102.5
6	6	PFHxS	398.9 > 79.6	5.43e3	4.09e3	1.0000		3.56	3.52	16.6	9.85	98.5
7	7	6:2 FTS	427.1 > 407	9.52e3	1.06e4	1.0000		3.64	3.64	11.2	9.95	99.5
8	8	PFOA	413 > 368.7	6.06e4	7.39e4	1.0000		3.65	3.65	10.3	10.6	106.0
9	9	PFHpS	448.9 > 98.8	5.90e3	7.39e4	1.0000		3.65	3.70	0.998	11.5	115.0
10	10	PFNA	462.9 > 418.8	5.63e4	6.40e4	1.0000		3.83	3.83	11.0	10.1	100.5
11	11	PFOSA	498.1 > 77.8	5.60e3	6.92e3	1.0000		3.84	3.84	10.1	9.44	94.4
12	12	PFOS	499 > 79.9	9.74e3	1.19e4	1.0000		3.89	3.88	10.2	10.0	100.1
13	13	PFDA	513 > 468.8	6.76e4	7.26e4	1.0000		4.01	4.00	11.6	9.58	95.8
14	14	8:2 FTS	527 > 506.9	8.24e3	7.54e3	1.0000		4.00	3.99	13.7	9.69	96.9
15	15	N-MeFOSAA	570.1 > 419	1.71e4	1.47e4	1.0000		4.03	4.03	188	10.6	105.7
16	16	N-EtFOSAA	584.2 > 419	1.34e4	1.41e4	1.0000		4.10	4.10	154	9.98	99.8
17	17	PFUnA	562.9 > 518.9	4.28e4	7.21e4	1.0000		4.17	4.16	7.42	9.68	96.8
18	18	PFDS	598.9 > 98.7	4.27e3	7.21e4	1.0000		4.22	4.21	0.740	9.20	92.0
19	19	PFDoA	612.9 > 318.8	5.30e3	7.67e3	1.0000		4.34	4.33	8.64	9.17	91.7
20	20	N-MeFOSA	512.1 > 168.9	1.00e4	2.55e4	1.0000		4.29	4.38	58.9	58.3	116.7
21	21	PFTrDA	662.9 > 618.9	6.24e4	7.67e3	1.0000		4.50	4.50	102	9.68	96.8
22	22	PFTeDA	712.9 > 668.8	4.16e4	4.99e4	1.0000		4.68	4.68	10.4	9.63	96.3
23	23	N-EtFOSA	526.1 > 168.9	1.12e4	3.55e4	1.0000		4.79	4.96	47.4	51.0	102.0
24	24	PFHxDA	812.8 > 768.9	6.20e4	2.32e4	1.0000		5.06	5.04	13.4	10.5	104.5
25	25	PFODA	912.8 > 868.8	5.75e4	2.32e4	1.0000		5.43	5.42	12.4	10.9	108.8
26	26	N-MeFOSE	616.1 > 58.9	1.48e4	4.12e4	1.0000		5.42	5.45	53.8	52.0	103.9
27	27	N-EtFOSE	630.1 > 58.9	1.64e4	4.06e4	1.0000		5.59	5.63	60.5	51.6	103.2
28	28	13C3-PFBA	216.1 > 171.8	1.50e4	1.45e4	1.0000	1.006	1.32	1.42	13.0	12.9	103.2
29	29	13C3-PFPeA	266 > 221.8	2.98e4	4.63e4	1.0000	0.275	2.77	2.71	3.21	11.7	93.4
30	30	13C3-PFBS	302 > 98.8	3.96e3	4.63e4	1.0000	0.034	2.96	2.94	0.427	12.5	100.2
31	31	13C2-PFHxA	315 > 269.8	1.53e4	4.63e4	1.0000	0.334	3.19	3.18	1.65	4.93	98.7

70-130

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Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-54.qld

Last Altered: Thursday, August 03, 2017 14:22:27 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:23:24 Pacific Daylight Time

Name: 170801M1_54, Date: 01-Aug-2017, Time: 19:16:05, ID: ST170801M1-4 PFC CS3 17G3105, Description: PFC CS3 17G3105

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32 13C4-PFHpA	367.2 > 321.8	4.67e4	4.63e4	1.0000	0.414	3.45	3.45	5.03	12.2	97.2
33	33 18O2-PFHxS	403 > 102.6	4.09e3	8.82e3	1.0000	0.475	3.56	3.52	5.79	12.2	97.5
34	34 13C2-6:2 FTS	429.1 > 408.9	1.06e4	5.47e4	1.0000	0.214	3.64	3.64	2.43	11.4	90.9
35	35 13C2-PFOA	414.9 > 369.7	7.39e4	5.47e4	1.0000	1.298	3.65	3.65	16.9	13.0	104.0
36	36 13C5-PFNA	468.2 > 422.9	6.40e4	6.70e4	1.0000	1.094	3.83	3.83	11.9	10.9	87.3
37	37 13C8-PFOSA	506.1 > 77.7	6.92e3	5.92e4	1.0000	0.124	3.84	3.84	1.46	11.7	93.9
38	38 13C8-PFOS	507 > 79.9	1.19e4	1.02e4	1.0000	1.153	3.89	3.88	14.6	12.6	101.0
39	39 13C2-PFDA	515.1 > 469.9	7.26e4	6.39e4	1.0000	1.059	4.01	4.00	14.2	13.4	107.2
40	40 13C2-8:2 FTS	529.1 > 508.7	7.54e3	6.39e4	1.0000	0.129	4.00	3.99	1.48	11.5	91.8
41	41 d3-N-MeFOSAA	573.3 > 419	1.47e4	5.92e4	1.0000	0.019	4.03	4.03	3.11	161	99.0
42	42 d5-N-EtFOSAA	589.3 > 419	1.41e4	5.92e4	1.0000	0.019	4.12	4.09	2.99	158	97.1
43	43 13C2-PFUnA	565 > 519.8	7.21e4	5.92e4	1.0000	1.172	4.17	4.16	15.2	13.0	104.0
44	44 13C2-PFDoA	615 > 569.7	7.67e3	5.92e4	1.0000	0.118	4.34	4.33	1.62	13.7	109.4
45	45 d3-N-MeFOSA	515.2 > 168.9	2.55e4	5.92e4	1.0000	0.040	4.29	4.42	5.38	133	88.7
46	46 13C2-PFTeDA	714.8 > 669.6	4.99e4	5.92e4	1.0000	0.801	4.68	4.68	10.5	13.1	105.2
47	47 d5-N-ETFOSA	531.1 > 168.9	3.55e4	5.92e4	1.0000	0.055	4.85	5.00	7.49	136	90.6
48	48 13C2-PFHxDA	815 > 769.7	2.32e4	5.92e4	1.0000	0.991	5.06	5.05	4.90	4.95	98.9
49	49 d7-N-MeFOSE	623.1 > 58.9	4.12e4	5.92e4	1.0000	0.065	5.42	5.44	8.71	134	89.1
50	50 d9-N-EtFOSE	639.2 > 58.8	4.06e4	5.92e4	1.0000	0.065	5.59	5.62	8.58	132	88.3
51	51 13C4-PFBA	217 > 171.8	1.45e4	1.45e4	1.0000	1.000	1.32	1.42	12.5	12.5	100.0
52	52 13C5-PFHxA	318 > 272.9	4.63e4	4.63e4	1.0000	1.000	3.19	3.17	5.00	5.00	100.0
53	53 13C3-PFHxS	401.9 > 79.9	8.82e3	8.82e3	1.0000	1.000	3.56	3.52	12.5	12.5	100.0
54	54 13C8-PFOA	421.3 > 376	5.47e4	5.47e4	1.0000	1.000	3.65	3.65	12.5	12.5	100.0
55	55 13C9-PFNA	472.2 > 426.9	6.70e4	6.70e4	1.0000	1.000	3.83	3.83	12.5	12.5	100.0
56	56 13C4-PFOS	503 > 79.9	1.02e4	1.02e4	1.0000	1.000	3.89	3.88	12.5	12.5	100.0
57	57 13C6-PFDA	519.1 > 473.7	6.39e4	6.39e4	1.0000	1.000	4.01	4.00	12.5	12.5	100.0
58	58 13C7-PFUnA	570.1 > 524.8	5.92e4	5.92e4	1.0000	1.000	4.17	4.17	12.5	12.5	100.0

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Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170801M1\170801M1-70.qld

Last Altered: Thursday, August 03, 2017 14:25:34 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:32:20 Pacific Daylight Time

AC 8/3/17

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170801M1_70, Date: 01-Aug-2017, Time: 22:08:40, ID: ST170801M1-5 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	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	1.57e4	1.0000		1.32	1.42	10.4	9.57	95.7
2	2	PFPeA	263.1 > 218.9	2.40e4	3.25e4	1.0000		2.77	2.71	9.23	9.66	96.6
3	3	PFBS	299 > 79.7	5.38e3	3.83e3	1.0000		2.96	2.94	17.6	9.28	92.8
4	4	PFHxA	313.2 > 268.9	4.29e4	1.50e4	1.0000		3.19	3.18	14.3	10.2	102.0
5	5	PFHpA	363 > 318.9	4.68e4	4.78e4	1.0000		3.45	3.45	12.2	10.2	101.8
6	6	PFHxS	398.9 > 79.6	5.66e3	4.71e3	1.0000		3.56	3.52	15.0	8.92	89.2
7	7	6:2 FTS	427.1 > 407	9.05e3	1.08e4	1.0000		3.64	3.64	10.4	9.26	92.6
8	8	PFOA	413 > 368.7	5.93e4	7.52e4	1.0000		3.65	3.65	9.86	10.2	101.8
9	9	PFHpS	448.9 > 98.8	5.28e3	7.52e4	1.0000		3.65	3.71	0.878	10.1	101.1
10	10	PFNA	462.9 > 418.8	6.01e4	6.48e4	1.0000		3.83	3.83	11.6	10.6	106.1
11	11	PFOSA	498.1 > 77.8	5.62e3	7.20e3	1.0000		3.84	3.84	9.76	9.12	91.2
12	12	PFOS	499 > 79.9	1.08e4	1.24e4	1.0000		3.89	3.88	10.9	10.7	106.5
13	13	PFDA	513 > 468.8	6.12e4	6.50e4	1.0000		4.01	4.00	11.8	9.68	96.8
14	14	8:2 FTS	527 > 506.9	7.72e3	6.54e3	1.0000		4.00	4.00	14.8	10.5	105.0
15	15	N-MeFOSAA	570.1 > 419	1.68e4	1.43e4	1.0000		4.03	4.03	191	10.7	107.2
16	16	N-EtFOSAA	584.2 > 419	1.31e4	1.40e4	1.0000		4.10	4.10	152	9.85	98.5
17	17	PFUnA	562.9 > 518.9	4.37e4	7.05e4	1.0000		4.17	4.16	7.76	10.1	101.3
18	18	PFDS	598.9 > 98.7	4.54e3	7.05e4	1.0000		4.22	4.21	0.805	10.0	100.1
19	19	PFDoA	612.9 > 318.8	4.87e3	6.51e3	1.0000		4.34	4.33	9.35	9.94	99.4
20	20	N-MeFOSA	512.1 > 168.9	9.46e3	2.55e4	1.0000		4.29	4.39	55.6	55.1	110.1
21	21	PFTrDA	662.9 > 618.9	6.22e4	6.51e3	1.0000		4.50	4.50	119	11.4	113.8
22	22	PFTeDA	712.9 > 668.8	4.24e4	5.03e4	1.0000		4.68	4.68	10.5	9.73	97.3
23	23	N-EtFOSA	526.1 > 168.9	1.12e4	3.54e4	1.0000		4.79	4.97	47.5	51.2	102.3
24	24	PFHxDA	812.8 > 768.9	6.21e4	2.35e4	1.0000		5.06	5.05	13.2	10.3	103.4
25	25	PFODA	912.8 > 868.8	5.64e4	2.35e4	1.0000		5.43	5.42	12.0	10.5	105.4
26	26	N-MeFOSE	616.1 > 58.9	1.44e4	4.08e4	1.0000		5.42	5.45	53.1	51.3	102.6
27	27	N-EtFOSE	630.1 > 58.9	1.65e4	4.00e4	1.0000		5.59	5.63	61.8	52.7	105.4
28	28	13C3-PFBA	216.1 > 171.8	1.57e4	1.49e4	1.0000	1.006	1.32	1.43	13.2	13.1	104.8
29	29	13C3-PFPeA	266 > 221.8	3.25e4	4.29e4	1.0000	0.275	2.77	2.71	3.79	13.8	110.2
30	30	13C3-PFBS	302 > 98.8	3.83e3	4.29e4	1.0000	0.034	2.96	2.94	0.447	13.1	104.8
31	31	13C2-PFHxA	315 > 269.8	1.50e4	4.29e4	1.0000	0.334	3.19	3.18	1.75	5.23	104.6

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50-150

Dataset: U:\Q4.PRO\results\170801M1\170801M1-70.qld

Last Altered: Thursday, August 03, 2017 14:25:34 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:32:20 Pacific Daylight Time

Name: 170801M1_70, Date: 01-Aug-2017, Time: 22:08:40, ID: ST170801M1-5 PFC CS3 17G3105, Description: PFC CS3 17G3105

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70-130 50-150

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.78e4	4.29e4	1.0000	0.414	3.45	3.45	5.57	13.4	107.5
33	33	18O2-PFHxS	403 > 102.6	4.71e3	9.74e3	1.0000	0.475	3.56	3.52	6.04	12.7	101.7
34	34	13C2-6:2 FTS	429.1 > 408.9	1.08e4	5.79e4	1.0000	0.214	3.64	3.64	2.34	11.0	87.6
35	35	13C2-PFOA	414.9 > 369.7	7.52e4	5.79e4	1.0000	1.298	3.65	3.65	16.2	12.5	100.1
36	36	13C5-PFNA	468.2 > 422.9	6.48e4	6.23e4	1.0000	1.094	3.83	3.83	13.0	11.9	95.1
37	37	13C8-PFOSA	506.1 > 77.7	7.20e3	6.18e4	1.0000	0.124	3.84	3.84	1.46	11.7	93.5
38	38	13C8-PFOS	507 > 79.9	1.24e4	1.05e4	1.0000	1.153	3.89	3.88	14.7	12.8	102.1
39	39	13C2-PFDA	515.1 > 469.9	6.50e4	6.36e4	1.0000	1.059	4.01	4.00	12.8	12.1	96.5
40	40	13C2-8:2 FTS	529.1 > 508.7	6.54e3	6.36e4	1.0000	0.129	4.00	4.00	1.28	9.99	79.9
41	41	d3-N-MeFOSAA	573.3 > 419	1.43e4	6.18e4	1.0000	0.019	4.03	4.03	2.90	150	92.2
42	42	d5-N-EtFOSAA	589.3 > 419	1.40e4	6.18e4	1.0000	0.019	4.12	4.10	2.84	150	92.1
43	43	13C2-PFUnA	565 > 519.8	7.05e4	6.18e4	1.0000	1.172	4.17	4.16	14.2	12.2	97.2
44	44	13C2-PFDoA	615 > 569.7	6.51e3	6.18e4	1.0000	0.118	4.34	4.33	1.32	11.1	88.9
45	45	d3-N-MeFOSA	515.2 > 168.9	2.55e4	6.18e4	1.0000	0.040	4.29	4.42	5.15	127	84.9
46	46	13C2-PFTeDA	714.8 > 669.6	5.03e4	6.18e4	1.0000	0.801	4.68	4.68	10.2	12.7	101.5
47	47	d5-N-ETFOSA	531.1 > 168.9	3.54e4	6.18e4	1.0000	0.055	4.85	5.01	7.15	130	86.6
48	48	13C2-PFHxDA	815 > 769.7	2.35e4	6.18e4	1.0000	0.991	5.06	5.05	4.75	4.79	95.8
49	49	d7-N-MeFOSE	623.1 > 58.9	4.08e4	6.18e4	1.0000	0.065	5.42	5.44	8.24	126	84.3
50	50	d9-N-EtFOSE	639.2 > 58.8	4.00e4	6.18e4	1.0000	0.065	5.59	5.62	8.08	125	83.2
51	51	13C4-PFBA	217 > 171.8	1.49e4	1.49e4	1.0000	1.000	1.32	1.43	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	4.29e4	4.29e4	1.0000	1.000	3.19	3.18	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	9.74e3	9.74e3	1.0000	1.000	3.56	3.52	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	5.79e4	5.79e4	1.0000	1.000	3.65	3.65	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	6.23e4	6.23e4	1.0000	1.000	3.83	3.83	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.05e4	1.05e4	1.0000	1.000	3.89	3.88	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	6.36e4	6.36e4	1.0000	1.000	4.01	4.00	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	6.18e4	6.18e4	1.0000	1.000	4.17	4.17	12.5	12.5	100.0

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-27-17.mdb 28 Jul 2017 08:06:09
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170801M1_1	IPA	01-Aug-17	09:45:15
2	170801M1_2	ST170801M1-1 PFC CS0 17G2826	01-Aug-17	09:55:58
3	170801M1_3	IPA	01-Aug-17	10:06:45
4	170801M1_4	B7G0124-BLK1 Method Blank 5	01-Aug-17	10:17:40
5	170801M1_5	B7G0125-BLK1 Method Blank 5	01-Aug-17	10:30:10
6	170801M1_6	B7G0126-BLK1 Method Blank 5	01-Aug-17	10:40:49
7	170801M1_7	B7G0125-BS1 OPR 5	01-Aug-17	10:51:27
8	170801M1_8	B7G0125-BS2 OPR 5	01-Aug-17	11:02:05
9	170801M1_9	B7G0125-BS3 OPR 5	01-Aug-17	11:12:44
10	170801M1_10	B7G0125-BS4 OPR 5	01-Aug-17	11:23:22
11	170801M1_11	B7G0125-BS5 OPR 5	01-Aug-17	11:34:09
12	170801M1_12	B7G0125-BS6 OPR 5	01-Aug-17	11:44:47
13	170801M1_13	B7G0125-BS7 OPR 5	01-Aug-17	11:55:25
14	170801M1_14	B7G0126-BS2 OPR 5	01-Aug-17	12:06:12
15	170801M1_15	B7G0126-BS3 OPR 5	01-Aug-17	12:16:52
16	170801M1_16	B7G0126-BS4 OPR 5	01-Aug-17	12:27:41
17	170801M1_17	B7G0126-BS5 OPR 5	01-Aug-17	12:38:25
18	170801M1_18	B7G0124-BS1 OPR 5	01-Aug-17	12:49:04
19	170801M1_19	B7G0124-BS2 OPR 5	01-Aug-17	12:59:42
20	170801M1_20	B7G0124-BS3 OPR 5	01-Aug-17	13:10:20
21	170801M1_21	B7G0124-BS4 OPR 5	01-Aug-17	13:20:59
22	170801M1_22	IPA	01-Aug-17	13:31:45
23	170801M1_23	ST170801M1-2 PFC CS3 17G3105	01-Aug-17	13:42:24
24	170801M1_24	IPA	01-Aug-17	13:53:02
25	170801M1_25	B7G0122-BS1 OPR 0.25	01-Aug-17	14:03:43
26	170801M1_26	IPA	01-Aug-17	14:14:27
27	170801M1_27	B7G0122-BLK1 Method Blank 0.25	01-Aug-17	14:25:05
28	170801M1_28	1700891-06RE1 VEL FOAM 0.17113	01-Aug-17	14:35:50
29	170801M1_29	1700920-01 RCDM-MW-28S-20170719 0.1113	01-Aug-17	14:47:19
30	170801M1_30	1700920-02 LF-MW-12S-20170719 0.11113	01-Aug-17	14:58:06
31	170801M1_31	1700920-03 RCDM-MW-14S-20170720 0.11405	01-Aug-17	15:09:41

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
32	170801M1_32	1700920-04 MH-DUP01-20170720 0.12177	01-Aug-17	15:20:50
33	170801M1_33	1700920-05 MH-A97-20170720 0.12086	01-Aug-17	15:31:28
34	170801M1_34	1700920-06 MH-H93-20170720 0.11357	01-Aug-17	15:42:06
35	170801M1_35	1700920-07 RCDM-BLANK-20170720 0.11872	01-Aug-17	15:52:53
36	170801M1_36	1700920-08 MH-C94-20170720 0.11568	01-Aug-17	16:03:31
37	170801M1_37	IPA	01-Aug-17	16:14:18
38	170801M1_38	1700920-09 RCDM-MW-13S-20170719 0.11866	01-Aug-17	16:24:56
39	170801M1_39	IPA	01-Aug-17	16:35:34
40	170801M1_40	ST170801M1-3 PFC CS3 17G3105	01-Aug-17	16:46:13
41	170801M1_41	IPA	01-Aug-17	16:56:59
42	170801M1_42	1700920-10 LF-MW-14S-20170720 0.11481	01-Aug-17	17:08:05
43	170801M1_43	1700920-11 LF-MW-11BR-20170720 0.11664	01-Aug-17	17:18:47
44	170801M1_44	1700920-12 LF-MW-13S-20170719 0.11667	01-Aug-17	17:29:25
45	170801M1_45	1700920-13 RCDM-MW-11BR-20170720 0.11...	01-Aug-17	17:40:03
46	170801M1_46	1700920-14 RCDM-MW-12S-20170719 0.11619	01-Aug-17	17:50:42
47	170801M1_47	1700920-15 LF-MW-28S-20170719 0.11572	01-Aug-17	18:01:20
48	170801M1_48	1700920-16 DUP-07-20170719 0.12023	01-Aug-17	18:11:59
49	170801M1_49	1700920-17 FRB04-20170719 0.11007	01-Aug-17	18:22:37
50	170801M1_50	1700920-01@5X RCDM-MW-28S-20170719 ...	01-Aug-17	18:33:15
51	170801M1_51	1700920-02@5X LF-MW-12S-20170719 0.11...	01-Aug-17	18:43:54
52	170801M1_52	1700920-08@5X MH-C94-20170720 0.11568	01-Aug-17	18:54:40
53	170801M1_53	IPA	01-Aug-17	19:05:27
54	170801M1_54	ST170801M1-4 PFC CS3 17G3105	01-Aug-17	19:16:05
55	170801M1_55	IPA	01-Aug-17	19:27:09
56	170801M1_56	1700920-14@5X RCDM-MW-12S-20170719 ...	01-Aug-17	19:39:06
57	170801M1_57	1700920-15@5X LF-MW-28S-20170719 0.11...	01-Aug-17	19:49:49
58	170801M1_58	B7G0086-BS1 OPR 1	01-Aug-17	20:00:27
59	170801M1_59	IPA	01-Aug-17	20:11:13
60	170801M1_60	B7G0086-BLK1 Method Blank 1	01-Aug-17	20:21:52
61	170801M1_61	1700886-11 AT028-SD17-01-071217-1430 1.84	01-Aug-17	20:32:30
62	170801M1_62	1700886-12 AT028-SD17-02-071317-0845 1.44	01-Aug-17	20:43:09
63	170801M1_63	1700888-01 HARRI-01-SB01-0-2 1.52	01-Aug-17	20:53:47
64	170801M1_64	1700888-02 HARRI-01-SB01-6-8 1.32	01-Aug-17	21:04:25
65	170801M1_65	1700888-03 HARRI-01-SB02-0-2 2.04	01-Aug-17	21:15:04

Dataset: Untitled

Last Altered: Thursday, August 03, 2017 15:01:25 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:10:00 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
66	170801M1_66	1700888-04 HARRI-01-SO-DUP01-071117 1.06	01-Aug-17	21:25:42
67	170801M1_67	1700888-05 HARRI-01-SB02-8-10 1.35	01-Aug-17	21:36:29
68	170801M1_68	1700888-06 HARRI-01-SB03-0-2 1.33	01-Aug-17	21:47:15
69	170801M1_69	IPA	01-Aug-17	21:58:02
70	170801M1_70	ST170801M1-5 PFC CS3 17G3105	01-Aug-17	22:08:40
71	170801M1_71	IPA	01-Aug-17	22:19:26
72	170801M1_72	1700888-07 HARRI-01-SB03-8-10 1.37	01-Aug-17	22:31:08
73	170801M1_73	1700888-08 HARRI-02-SB01-0-2 1.21	01-Aug-17	22:42:08
74	170801M1_74	1700888-09 HARRI-02-SB01-6-8 1.47	01-Aug-17	22:52:47
75	170801M1_75	1700888-10 HARRI-02-SB02-0-2 1.3	01-Aug-17	23:03:25
76	170801M1_76	1700888-11 HARRI-02-SB02-6-8 1.38	01-Aug-17	23:14:04
77	170801M1_77	1700889-01 HARRI-03-SB01-0-2 1.36	01-Aug-17	23:24:50
78	170801M1_78	1700889-02 HARRI-03-SB01-WT-WT 1.33	01-Aug-17	23:35:28
79	170801M1_79	1700889-03 HARRI-03-SO-Dup02-01000 1.37	01-Aug-17	23:46:15
80	170801M1_80	1700889-04 HARRI-03-SB02-0-2 1.34	01-Aug-17	23:57:01
81	170801M1_81	1700889-05 HARRI-03-SB02-WT-WT 1.17	02-Aug-17	00:07:48
82	170801M1_82	IPA	02-Aug-17	00:18:27
83	170801M1_83	ST170801M1-6 PFC CS3 17G3105	02-Aug-17	00:29:13
84	170801M1_84	IPA	02-Aug-17	00:40:01
85	170801M1_85	1700889-06 HARRI-03-SB03-0-2 1.33	02-Aug-17	00:50:50
86	170801M1_86	1700889-07 HARRI-03-SB03-WT-WT 1.34	02-Aug-17	01:01:34
87	170801M1_87	B7G0086-MS1 Matrix Spike 1.35	02-Aug-17	01:12:13
88	170801M1_88	B7G0086-MSD1 Matrix Spike Dup 1.4	02-Aug-17	01:22:51
89	170801M1_89	IPA	02-Aug-17	01:33:37
90	170801M1_90	ST170801M1-7 PFC CS3 17G3105	02-Aug-17	01:44:16
91	170801M1_91	IPA	02-Aug-17	01:55:02

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-4.qld

Last Altered: Friday, August 11, 2017 14:41:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 14:43:38 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

Name: 170811G2_4, Date: 11-Aug-2017, Time: 12:23:36, ID: ST170811G2-2 PFC CS-1 17H0708, Description: PFC CS-1 17H0708 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	3	PFBS	299.0 > 79.7	3.42e2	7.61e3		1.000	2.86	0.566	113.1
2	4	PFHxA	312.9 > 268.9	7.98e2	8.67e3		1.000	3.24	0.481	96.2
3	5	PFHpA	363 > 318.9	1.11e3	1.28e4		1.000	3.76	0.542	108.3
4	6	PFHxS	398.9 > 79.6	5.26e2	7.51e3		1.000	3.89	0.551	110.2
5	7	PFOA	413.0 > 368.7	1.13e3	2.88e4		1.000	4.18	0.466	93.2
6	8	PFNA	463.0 > 418.8	1.09e3	1.40e4		1.000	4.54	0.499	99.8
7	9	PFOS	499.0 >79.9	2.14e2	1.32e4		1.000	4.61	0.506	101.2
8	10	PFDA	512.7 > 219.0	1.82e2	1.82e4		1.000	4.85	0.576	115.2
9	12	13C3-PFBS	302.0 > 98.8	7.61e3	2.19e4	0.351	1.000	2.86	12.4	99.0
10	14	13C2-PFHxA	315.0 > 269.8	8.67e3	2.19e4	0.443	1.000	3.24	11.2	89.4
11	15	13C4-PFHpA	367.2 > 321.8	1.28e4	2.19e4	0.496	1.000	3.76	14.7	117.3
12	16	18O2-PFHxS	403 > 102.6	7.51e3	1.44e4	0.528	1.000	3.89	12.3	98.6
13	17	13C2-PFOA	414.9 > 369.7	2.88e4	9.24e3	3.356	1.000	4.18	11.6	92.8
14	18	13C5-PFNA	468.2 > 422.9	1.40e4	1.35e4	0.991	1.000	4.54	13.1	105.0
15	19	13C2-PFDA	514.8 > 469.7	1.82e4	1.11e4	1.458	1.000	4.85	14.0	112.2
16	20	13C8-PFOS	507.0 > 79.9	1.32e4	1.15e4	1.109	1.000	4.61	12.9	102.9
17	22	13C5-PFHxA	318>272.9	2.19e4	2.19e4	1.000	1.000	3.24	12.5	100.0
18	23	13C3-PFHxS	401.9 > 79.9	1.44e4	1.44e4	1.000	1.000	3.89	12.5	100.0
19	24	13C8-PFOA	421.3 > 376	9.24e3	9.24e3	1.000	1.000	4.18	12.5	100.0
20	25	13C9-PFNA	472.2 > 426.9	1.35e4	1.35e4	1.000	1.000	4.54	12.5	100.0
21	26	13C4-PFOS	503.0 > 79.9	1.15e4	1.15e4	1.000	1.000	4.61	12.5	100.0
22	27	13C6-PFDA	519.10 > 47...	1.11e4	1.11e4	1.000	1.000	4.84	12.5	100.0
23	28	Total PFBS	299.0 > 79.7		7.61e3		1.000		0.566	
24	29	Total PFHxS	398.9 > 79.6		7.51e3		1.000		0.551	
25	30	Total PFOA	413.0 > 368.7		2.88e4		1.000		0.466	
26	31	Total PFOS	499.0 >79.9		1.32e4		1.000		0.506	

70-130

50-150

8/11/17

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170811G2\170811G2-15.qld

Last Altered: Friday, August 11, 2017 15:09:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 15:10:41 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

Name: 170811G2_15, Date: 11-Aug-2017, Time: 14:51:29, ID: ST170811G2-3 PFC CS3 17H1009, Description: PFC CS3 17H1009 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	3	PFBS	299.0 > 79.7	7.44e3	6.47e3		1.000	2.85	12.2	121.7
2	4	PFHxA	312.9 > 268.9	1.39e4	8.01e3		1.000	3.25	11.2	112.2
3	5	PFHpA	363 > 318.9	2.09e4	1.10e4		1.000	3.75	11.8	118.1
4	6	PFHxS	398.9 > 79.6	7.49e3	6.11e3		1.000	3.88	10.2	102.2
5	7	PFOA	413.0 > 368.7	1.67e4	2.16e4		1.000	4.18	11.5	114.6
6	8	PFNA	463.0 > 418.8	1.39e4	8.18e3		1.000	4.54	12.0	119.9
7	9	PFOS	499.0 >79.9	1.66e3	5.36e3		1.000	4.60	10.6	106.0
8	10	PFDA	512.7 > 219.0	1.02e3	5.64e3		1.000	4.84	11.9	118.5
9	12	13C3-PFBS	302.0 > 98.8	6.47e3	2.09e4	0.351	1.000	2.85	11.0	88.3
10	14	13C2-PFHxA	315.0 > 269.8	8.01e3	2.09e4	0.443	1.000	3.24	10.8	86.6
11	15	13C4-PFHpA	367.2 > 321.8	1.10e4	2.09e4	0.496	1.000	3.75	13.2	105.9
12	16	18O2-PFHxS	403 > 102.6	6.11e3	1.32e4	0.528	1.000	3.88	11.0	87.9
13	17	13C2-PFOA	414.9 > 369.7	2.16e4	8.34e3	3.356	1.000	4.18	9.64	77.1
14	18	13C5-PFNA	468.2 > 422.9	8.18e3	8.54e3	0.991	1.000	4.54	12.1	96.6
15	19	13C2-PFDA	514.8 > 469.7	5.64e3	3.41e3	1.458	1.000	4.84	14.2	113.5
16	20	13C8-PFOS	507.0 > 79.9	5.36e3	5.13e3	1.109	1.000	4.60	11.8	94.3
17	22	13C5-PFHxA	318>272.9	2.09e4	2.09e4	1.000	1.000	3.24	12.5	100.0
18	23	13C3-PFHxS	401.9 > 79.9	1.32e4	1.32e4	1.000	1.000	3.88	12.5	100.0
19	24	13C8-PFOA	421.3 > 376	8.34e3	8.34e3	1.000	1.000	4.18	12.5	100.0
20	25	13C9-PFNA	472.2 > 426.9	8.54e3	8.54e3	1.000	1.000	4.54	12.5	100.0
21	26	13C4-PFOS	503.0 > 79.9	5.13e3	5.13e3	1.000	1.000	4.60	12.5	100.0
22	27	13C6-PFDA	519.10 > 47...	3.41e3	3.41e3	1.000	1.000	4.84	12.5	100.0
23	28	Total PFBS	299.0 > 79.7		6.47e3		1.000		12.2	
24	29	Total PFHxS	398.9 > 79.6		6.11e3		1.000		10.2	
25	30	Total PFOA	413.0 > 368.7		2.16e4		1.000		11.5	
26	31	Total PFOS	499.0 >79.9		5.36e3		1.000		10.6	

70-130

50-130 150

8/11/17

8/11/17

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Friday, August 11, 2017 15:12:59 Pacific Daylight Time
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Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

Compound name: PFBA

	Name		ID	Acq.Date	Acq.Time
1	170811G2_1		IPA	11-Aug-17	11:00:11
2	170811G2_2	(A)	ST170811G2-1 PFC CS0 17H1010	11-Aug-17	11:12:24
3	170811G2_3		IPA	11-Aug-17	11:24:56
4	170811G2_4		ST170811G2-2 PFC CS-1 17H0708	11-Aug-17	12:23:36
5	170811G2_5		IPA	11-Aug-17	12:35:47
6	170811G2_6		1700920-04@5X MH-DUP01-20170720 0.121...	11-Aug-17	12:58:42
7	170811G2_7		1700920-15 LF-MW-28S-20170719 0.11572	11-Aug-17	13:10:54
8	170811G2_8		1700920-16@5X DUP-07-20170719 0.12023	11-Aug-17	13:23:31
9	170811G2_9		1700920-17 FRB04-20170719 0.11007	11-Aug-17	13:36:03
10	170811G2_10		1700907-04@5X AT028-MW17-06-071717-13...	11-Aug-17	13:48:39
11	170811G2_11		1700962-01@20X East Tank 0.125	11-Aug-17	14:01:11
12	170811G2_12		1700962-02@20X West Tank 0.125	11-Aug-17	14:13:40
13	170811G2_13		1700962-03@20X MiddleTank 0.125	11-Aug-17	14:26:14
14	170811G2_14		IPA	11-Aug-17	14:38:51
15	170811G2_15		ST170811G2-3 PFC CS3 17H1009	11-Aug-17	14:51:29
16	170811G2_16				

(A) INJECTION NOT USED. YAA 8/11/17

Vista Analytical Laboratory

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

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 AC 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

Last Altered: Sunday, July 30, 2017 08:10:19 Pacific Daylight Time
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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

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: 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

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: 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

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

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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

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: 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

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: 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

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: 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

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

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

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 7/30/17

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
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

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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

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

Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:16:34 Pacific Daylight Time

KEL 8/1/17

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

AC 8/1/17

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999898
Calibration curve: 6.26653e-005 * x^2 + 1.07835 * x + 0.0734459
Response type: Internal Std (Ref 28), 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	170731M2_2	Standard	0.250	1.41	411.114	13874.437	0.370	0.3	10.1	NO	1.000	NO	MM
2	2	170731M2_3	Standard	0.500	1.40	713.007	14032.984	0.635	0.5	4.2	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	1.39	1410.952	14534.191	1.213	1.1	5.7	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	1.41	2604.108	13825.355	2.354	2.1	5.8	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	1.40	6507.126	14375.643	5.658	5.2	3.5	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	1.40	12186.419	14275.662	10.671	9.8	-1.8	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	1.40	60399.383	13941.181	54.156	50.0	0.0	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	1.40	122688.352	14182.987	108.130	99.6	-0.4	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	1.41	444076.063	20278.131	273.741	250.1	0.1	NO	1.000	NO	bb

Compound name: PFPeA
Correlation coefficient: r = 0.999842, r^2 = 0.999685
Calibration curve: 0.95207 * x + 0.034134
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	170731M2_2	Standard	0.250	2.69	567.060	28315.961	0.250	0.2	-9.2	NO	1.000	NO	MM
2	2	170731M2_3	Standard	0.500	2.69	1149.332	28971.373	0.496	0.5	-3.0	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	2.69	2381.328	29344.844	1.014	1.0	3.0	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	2.70	4632.085	27224.277	2.127	2.2	9.9	NO	1.000	NO	MM
5	5	170731M2_6	Standard	5.000	2.69	11287.421	28900.883	4.882	5.1	1.8	NO	1.000	NO	MM
6	6	170731M2_7	Standard	10.000	2.69	22284.025	28928.092	9.629	10.1	0.8	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	2.69	101931.336	27958.209	45.573	47.8	-4.3	NO	1.000	NO	MM
8	8	170731M2_9	Standard	100.000	2.70	209969.516	27418.373	95.725	100.5	0.5	NO	1.000	NO	MM
9	9	170731M2_10	Standard	250.000	2.70	777214.313	40599.961	239.290	251.3	0.5	NO	1.000	NO	MM

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Compound name: PFBS
Correlation coefficient: r = 0.999700, r^2 = 0.999400
Calibration curve: 1.88408 * x + 0.0670139
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	170731M2_2	Standard	0.250	2.92	151.762	3567.166	0.532	0.2	-1.3	NO	0.999	NO	bb
2	2	170731M2_3	Standard	0.500	2.93	294.717	3674.875	1.002	0.5	-0.7	NO	0.999	NO	bb
3	3	170731M2_4	Standard	1.000	2.93	602.633	3756.884	2.005	1.0	2.9	NO	0.999	NO	bb
4	4	170731M2_5	Standard	2.000	2.93	1142.969	3453.801	4.137	2.2	8.0	NO	0.999	NO	bb
5	5	170731M2_6	Standard	5.000	2.92	2761.764	3669.754	9.407	5.0	-0.9	NO	0.999	NO	db
6	6	170731M2_7	Standard	10.000	2.93	5120.116	3495.072	18.312	9.7	-3.2	NO	0.999	NO	bb
7	7	170731M2_8	Standard	50.000	2.92	24305.621	3386.169	89.724	47.6	-4.8	NO	0.999	NO	bb
8	8	170731M2_9	Standard	100.000	2.93	49918.813	3369.060	185.210	98.3	-1.7	NO	0.999	NO	bb
9	9	170731M2_10	Standard	250.000	2.93	175245.609	4571.001	479.232	254.3	1.7	NO	0.999	NO	bb

Compound name: PFHxA
Correlation coefficient: r = 0.999770, r^2 = 0.999541
Calibration curve: 1.38743 * x + 0.151774
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	170731M2_2	Standard	0.250	3.17	1105.240	13289.316	0.416	0.2	-23.9	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	3.17	2259.732	13996.411	0.807	0.5	-5.5	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	3.16	4555.615	13471.391	1.691	1.1	10.9	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	3.16	8364.676	13180.728	3.173	2.2	8.9	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.16	21557.746	14300.003	7.538	5.3	6.5	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.16	38887.297	13464.359	14.441	10.3	3.0	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.17	186053.391	13579.439	68.506	49.3	-1.5	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.16	370981.719	13004.882	142.632	102.7	2.7	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.16	1637628.125	23861.670	343.150	247.2	-1.1	NO	1.000	NO	bb

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Compound name: PFHpA
Correlation coefficient: r = 0.999907, r^2 = 0.999814
Calibration curve: 1.19527 * x + 0.0770691
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	170731M2_2	Standard	0.250	3.43	1188.512	42267.941	0.351	0.2	-8.2	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	3.43	2346.575	44035.770	0.666	0.5	-1.4	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	3.43	4665.274	47111.973	1.238	1.0	-2.9	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	3.43	8684.659	40041.188	2.711	2.2	10.2	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.43	22188.094	43531.445	6.371	5.3	5.3	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.43	39873.324	41835.402	11.914	9.9	-1.0	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.43	198036.984	42486.371	58.265	48.7	-2.6	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.43	391289.031	40762.777	119.990	100.3	0.3	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.43	1450839.000	60510.934	299.706	250.7	0.3	NO	1.000	NO	bb

Compound name: PFHxS
Correlation coefficient: r = 0.998411, r^2 = 0.996824
Calibration curve: 1.6806 * x + 0.0313148
Response type: Internal Std (Ref 33), 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	170731M2_2	Standard	0.250	3.50	136.913	4105.498	0.417	0.2	-8.2	NO	0.997	NO	MM
2	2	170731M2_3	Standard	0.500	3.51	320.409	4057.192	0.987	0.6	13.8	NO	0.997	NO	MM
3	3	170731M2_4	Standard	1.000	3.51	503.736	4402.638	1.430	0.8	-16.8	NO	0.997	NO	MM
4	4	170731M2_5	Standard	2.000	3.50	1217.100	3891.568	3.909	2.3	15.4	NO	0.997	NO	bb
5	5	170731M2_6	Standard	5.000	3.51	2734.810	3878.935	8.813	5.2	4.5	NO	0.997	NO	MM
6	6	170731M2_7	Standard	10.000	3.50	5376.990	3978.140	16.895	10.0	0.3	NO	0.997	NO	bb
7	7	170731M2_8	Standard	50.000	3.50	25163.787	3932.861	79.979	47.6	-4.9	NO	0.997	NO	db
8	8	170731M2_9	Standard	100.000	3.51	51344.988	4159.138	154.314	91.8	-8.2	NO	0.997	NO	db
9	9	170731M2_10	Standard	250.000	3.51	172302.625	4925.332	437.287	260.2	4.1	NO	0.997	NO	bb

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Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.999797
Calibration curve: -0.00364043 * x^2 + 1.16681 * x + -0.0592153
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	170731M2_2	Standard	0.250	3.63	177.680	9927.280	0.224	0.2	-2.9	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	3.63	478.991	10315.116	0.580	0.5	9.8	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	3.63	943.278	11541.119	1.022	0.9	-7.1	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	3.63	1822.126	10131.339	2.248	2.0	-0.5	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.62	4473.807	9593.972	5.829	5.1	2.6	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.62	8896.104	10116.732	10.992	9.8	-2.3	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.63	38899.715	9833.309	49.449	50.3	0.7	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.63	74054.742	11556.366	80.102	99.7	-0.3	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.63	204101.719	18952.229	134.616			NO	1.000	NO	bbXI

Compound name: PFOA
Correlation coefficient: r = 0.999910, r^2 = 0.999821
Calibration curve: 0.953928 * x + 0.14566
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	170731M2_2	Standard	0.250	3.64	1648.688	63401.359	0.325	0.2	-24.8	NO	1.000	NO	MM
2	2	170731M2_3	Standard	0.500	3.64	3703.540	67191.539	0.689	0.6	13.9	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	3.63	6322.338	70281.578	1.124	1.0	2.6	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	3.63	11893.063	66790.375	2.226	2.2	9.0	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.64	25166.590	63977.652	4.917	5.0	0.0	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.64	51478.270	67944.383	9.471	9.8	-2.2	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.64	233790.078	59813.004	48.859	51.1	2.1	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.64	508100.156	66783.320	95.102	99.5	-0.5	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.64	1538457.125	80782.586	238.055	249.4	-0.2	NO	1.000	NO	bb

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Compound name: PFHpS
Correlation coefficient: r = 0.999006, r^2 = 0.998013
Calibration curve: 0.0861619 * x + 0.0071876
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	170731M2_2	Standard	0.250	3.70	130.645	63401.359	0.026	0.2	-13.8	NO	0.998	NO	bb
2	2	170731M2_3	Standard	0.500	3.70	294.334	67191.539	0.055	0.6	10.4	NO	0.998	NO	bb
3	3	170731M2_4	Standard	1.000	3.69	538.985	70281.578	0.096	1.0	2.9	NO	0.998	NO	bb
4	4	170731M2_5	Standard	2.000	3.69	1018.044	66790.375	0.191	2.1	6.4	NO	0.998	NO	bb
5	5	170731M2_6	Standard	5.000	3.70	2421.679	63977.652	0.473	5.4	8.2	NO	0.998	NO	bb
6	6	170731M2_7	Standard	10.000	3.70	5311.248	67944.383	0.977	11.3	12.6	NO	0.998	NO	bb
7	7	170731M2_8	Standard	50.000	3.69	22461.885	59813.004	4.694	54.4	8.8	NO	0.998	NO	bb
8	8	170731M2_9	Standard	100.000	3.70	46378.051	66783.320	8.681	100.7	0.7	NO	0.998	NO	bb
9	9	170731M2_10	Standard	250.000	3.70	135410.438	80782.586	20.953	243.1	-2.8	NO	0.998	NO	bb

Compound name: PFNA
Correlation coefficient: r = 0.999697, r^2 = 0.999394
Calibration curve: 1.08541 * x + 0.0735739
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	170731M2_2	Standard	0.250	3.81	1389.836	54018.730	0.322	0.2	-8.6	NO	0.999	NO	bb
2	2	170731M2_3	Standard	0.500	3.82	3272.709	62262.660	0.657	0.5	7.5	NO	0.999	NO	bb
3	3	170731M2_4	Standard	1.000	3.81	5627.537	61609.746	1.142	1.0	-1.6	NO	0.999	NO	bb
4	4	170731M2_5	Standard	2.000	3.81	10519.000	57196.430	2.299	2.1	2.5	NO	0.999	NO	bb
5	5	170731M2_6	Standard	5.000	3.82	23937.521	55674.484	5.374	4.9	-2.3	NO	0.999	NO	bb
6	6	170731M2_7	Standard	10.000	3.82	53188.000	59478.996	11.178	10.2	2.3	NO	0.999	NO	bb
7	7	170731M2_8	Standard	50.000	3.81	232756.781	51828.512	56.136	51.7	3.3	NO	0.999	NO	bb
8	8	170731M2_9	Standard	100.000	3.81	446148.219	53481.383	104.277	96.0	-4.0	NO	0.999	NO	bb
9	9	170731M2_10	Standard	250.000	3.82	1433063.500	65426.449	273.793	252.2	0.9	NO	0.999	NO	bb

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Compound name: PFOSA
Correlation coefficient: r = 0.999883, r^2 = 0.999766
Calibration curve: 1.0734 * x + -0.0271184
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	170731M2_2	Standard	0.250	3.83	130.593	6628.687	0.246	0.3	1.9	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	3.82	315.894	6757.332	0.584	0.6	13.9	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	3.83	559.472	7148.018	0.978	0.9	-6.3	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	3.83	1121.168	6732.580	2.082	2.0	-1.8	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.83	2778.576	6463.064	5.374	5.0	0.6	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.83	5384.216	6861.386	9.809	9.2	-8.4	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.83	24500.219	5762.874	53.142	49.5	-0.9	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.83	49243.563	5694.701	108.091	100.7	0.7	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.83	146323.297	6801.088	268.934	250.6	0.2	NO	1.000	NO	bb

Compound name: PFOS
Coefficient of Determination: R^2 = 0.999779
Calibration curve: 0.000313423 * x^2 + 1.01509 * x + 0.0486823
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	170731M2_2	Standard	0.250	3.86	262.377	9891.881	0.332	0.3	11.5	NO	1.000	NO	MM
2	2	170731M2_3	Standard	0.500	3.87	481.675	11460.590	0.525	0.5	-6.1	NO	1.000	NO	MM
3	3	170731M2_4	Standard	1.000	3.87	1088.575	11503.416	1.183	1.1	11.7	NO	1.000	NO	MM
4	4	170731M2_5	Standard	2.000	3.87	1856.085	10201.429	2.274	2.2	9.6	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	3.87	4259.738	10639.481	5.005	4.9	-2.5	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	3.87	9044.098	11768.862	9.606	9.4	-6.1	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	3.87	41100.910	9805.450	52.395	50.8	1.5	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	3.87	79111.719	9480.636	104.307	99.6	-0.4	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	3.87	250476.469	11450.712	273.429	250.0	0.0	NO	1.000	NO	bb

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Compound name: PFDA
Correlation coefficient: r = 0.999542, r^2 = 0.999084
Calibration curve: 1.19993 * x + 0.156566
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	170731M2_2	Standard	0.250	3.98	1774.405	59781.418	0.371	0.2	-28.5	NO	0.999	NO	bb
2	2	170731M2_3	Standard	0.500	3.99	3704.363	61812.703	0.749	0.5	-1.2	NO	0.999	NO	bb
3	3	170731M2_4	Standard	1.000	3.99	7125.412	54053.125	1.648	1.2	24.3	NO	0.999	NO	bb
4	4	170731M2_5	Standard	2.000	3.98	11131.300	56405.016	2.467	1.9	-3.7	NO	0.999	NO	bb
5	5	170731M2_6	Standard	5.000	3.99	27851.160	53527.699	6.504	5.3	5.8	NO	0.999	NO	bb
6	6	170731M2_7	Standard	10.000	3.99	58244.602	58740.922	12.394	10.2	2.0	NO	0.999	NO	bb
7	7	170731M2_8	Standard	50.000	3.99	232759.141	46095.934	63.118	52.5	4.9	NO	0.999	NO	bb
8	8	170731M2_9	Standard	100.000	3.99	492152.594	53241.500	115.547	96.2	-3.8	NO	0.999	NO	bb
9	9	170731M2_10	Standard	250.000	3.99	1764954.750	73276.133	301.079	250.8	0.3	NO	0.999	NO	bb

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.999107
Calibration curve: -0.00477278 * x^2 + 1.45357 * x + 0.0233651
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	170731M2_2	Standard	0.250	3.98	133.416	5442.396	0.306	0.2	-22.1	NO	0.999	NO	bb
2	2	170731M2_3	Standard	0.500	3.99	391.677	6198.728	0.790	0.5	5.6	NO	0.999	NO	bb
3	3	170731M2_4	Standard	1.000	3.98	911.492	7001.858	1.627	1.1	10.7	NO	0.999	NO	bb
4	4	170731M2_5	Standard	2.000	3.98	1614.354	5984.115	3.372	2.3	16.1	NO	0.999	NO	bb
5	5	170731M2_6	Standard	5.000	3.98	3426.112	6043.006	7.087	4.9	-1.2	NO	0.999	NO	bb
6	6	170731M2_7	Standard	10.000	3.98	7395.563	6710.449	13.776	9.8	-2.2	NO	0.999	NO	bb
7	7	170731M2_8	Standard	50.000	3.98	30902.635	6400.762	60.350	49.6	-0.9	NO	0.999	NO	bb
8	8	170731M2_9	Standard	100.000	3.98	58744.098	7501.545	97.887	100.5	0.5	NO	0.999	NO	bb
9	9	170731M2_10	Standard	250.000	3.98	165445.906	12670.185	163.224			NO	0.999	NO	bbXI

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Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.999795
Calibration curve: 0.00169243 * x^2 + 17.7214 * x + 0.975242
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	170731M2_2	Standard	0.250	4.02	367.535	12318.428	4.848	0.2	-12.6	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	4.02	784.251	14049.963	9.071	0.5	-8.6	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	4.02	1656.366	13356.303	20.152	1.1	8.2	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	4.02	3233.362	13264.592	39.611	2.2	9.0	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	4.02	7035.678	12616.413	90.620	5.1	1.1	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	4.02	15347.673	13566.270	183.838	10.3	3.1	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	4.02	69404.688	12476.236	903.980	50.7	1.4	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	4.02	135373.609	12518.632	1757.238	98.2	-1.8	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	4.02	419427.906	14988.046	4547.426	250.6	0.2	NO	1.000	NO	bb

Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999924
Calibration curve: -0.0019298 * x^2 + 15.4647 * x + -0.327453
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	170731M2_2	Standard	0.250	4.10	276.167	11737.404	3.823	0.3	7.4	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	4.09	591.342	13698.948	7.015	0.5	-5.0	NO	1.000	NO	bb
3	3	170731M2_4	Standard	1.000	4.08	1153.289	13688.059	13.691	0.9	-9.3	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	4.08	2299.673	12896.733	28.976	1.9	-5.2	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	4.09	5664.419	11500.281	80.039	5.2	4.0	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	4.09	12266.051	12932.044	154.131	10.0	0.0	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	4.09	56522.008	12029.896	763.500	49.7	-0.6	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	4.09	117651.883	12470.056	1533.147	100.4	0.4	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	4.09	380863.594	16532.346	3743.591	249.9	-0.0	NO	1.000	NO	bb

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Compound name: PFUnA
Coefficient of Determination: R^2 = 0.997941
Calibration curve: -3.28617e-005 * x^2 + 0.757566 * x + 0.0881327
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	170731M2_2	Standard	0.250	4.15	1143.224	54062.352	0.264	0.2	-7.0	NO	0.998	NO	MM
2	2	170731M2_3	Standard	0.500	4.16	2356.846	65699.883	0.448	0.5	-4.9	NO	0.998	NO	bb
3	3	170731M2_4	Standard	1.000	4.15	4520.437	60141.438	0.940	1.1	12.4	NO	0.998	NO	bb
4	4	170731M2_5	Standard	2.000	4.15	8631.595	62558.703	1.725	2.2	8.0	NO	0.998	NO	bb
5	5	170731M2_6	Standard	5.000	4.15	18829.459	63691.332	3.695	4.8	-4.7	NO	0.998	NO	bb
6	6	170731M2_7	Standard	10.000	4.16	38130.637	62353.184	7.644	10.0	-0.2	NO	0.998	NO	bb
7	7	170731M2_8	Standard	50.000	4.15	174377.125	63269.566	34.451	45.4	-9.1	NO	0.998	NO	bb
8	8	170731M2_9	Standard	100.000	4.15	337593.438	52677.117	80.109	106.1	6.1	NO	0.998	NO	bb
9	9	170731M2_10	Standard	250.000	4.16	1108908.375	74412.180	186.278	248.5	-0.6	NO	0.998	NO	bb

Compound name: PFDS
Coefficient of Determination: R^2 = 0.997578
Calibration curve: -4.11818e-005 * x^2 + 0.0811765 * x + -0.0032981
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	170731M2_2	Standard	0.250	4.20	86.193	54062.352	0.020	0.3	14.5	NO	0.998	NO	MMX
2	2	170731M2_3	Standard	0.500	4.21	180.557	65699.883	0.034	0.5	-7.2	NO	0.998	NO	MM
3	3	170731M2_4	Standard	1.000	4.19	431.861	60141.438	0.090	1.1	14.7	NO	0.998	NO	MM
4	4	170731M2_5	Standard	2.000	4.19	842.372	62558.703	0.168	2.1	5.8	NO	0.998	NO	bb
5	5	170731M2_6	Standard	5.000	4.20	1836.227	63691.332	0.360	4.5	-10.2	NO	0.998	NO	bb
6	6	170731M2_7	Standard	10.000	4.20	4003.412	62353.184	0.803	10.0	-0.2	NO	0.998	NO	bb
7	7	170731M2_8	Standard	50.000	4.20	18296.340	63269.566	3.615	45.6	-8.7	NO	0.998	NO	bb
8	8	170731M2_9	Standard	100.000	4.20	34524.848	52677.117	8.193	106.7	6.7	NO	0.998	NO	bb
9	9	170731M2_10	Standard	250.000	4.20	104708.711	74412.180	17.589	247.9	-0.8	NO	0.998	NO	bb

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Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999599
Calibration curve: -9.87083e-006 * x^2 + 0.940673 * x + 0.00742583
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	170731M2_2	Standard	0.250	4.31	97.386	6100.251	0.200	0.2	-18.3	NO	1.000	NO	MM
2	2	170731M2_3	Standard	0.500	4.31	297.108	6198.730	0.599	0.6	25.8	NO	1.000	NO	MM
3	3	170731M2_4	Standard	1.000	4.32	486.738	6089.570	0.999	1.1	5.4	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	4.31	821.016	5996.160	1.712	1.8	-9.4	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	4.31	2199.727	5858.786	4.693	5.0	-0.4	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	4.31	4813.721	6554.075	9.181	9.8	-2.5	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	4.31	20853.395	5701.481	45.719	48.6	-2.8	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	4.31	46647.582	6062.306	96.184	102.4	2.4	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	4.31	145761.844	7788.229	233.946	249.3	-0.3	NO	1.000	NO	bb

Compound name: N-MeFOSA
Correlation coefficient: r = 0.998345, r^2 = 0.996693
Calibration curve: 1.00604 * x + 0.235716
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	170731M2_2	Standard	1.250	4.35	171.072	22996.787	1.116	0.9	-30.0	NO	0.997	NO	MM
2	2	170731M2_3	Standard	2.500	4.34	482.139	25726.459	2.811	2.6	2.4	NO	0.997	NO	bb
3	3	170731M2_4	Standard	5.000	4.34	982.633	25550.789	5.769	5.5	10.0	NO	0.997	NO	bb
4	4	170731M2_5	Standard	10.000	4.34	1926.980	24786.727	11.661	11.4	13.6	NO	0.997	NO	bb
5	5	170731M2_6	Standard	25.000	4.34	4419.905	23582.914	28.113	27.7	10.8	NO	0.997	NO	bb
6	6	170731M2_7	Standard	50.000	4.35	8956.011	26155.398	51.362	50.8	1.6	NO	0.997	NO	db
7	7	170731M2_8	Standard	250.000	4.34	42345.395	23085.887	275.138	273.3	9.3	NO	0.997	NO	db
8	8	170731M2_9	Standard	500.000	4.35	84341.039	23835.992	530.759	527.3	5.5	NO	0.997	NO	bb
9	9	170731M2_10	Standard	1250.000	4.35	300837.125	37548.465	1201.795	1194.3	-4.5	NO	0.997	NO	bb

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Compound name: PFTrDA
Correlation coefficient: r = 0.999725, r^2 = 0.999450
Calibration curve: 10.3774 * x + 1.19316
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	170731M2_2	Standard	0.250	4.48	1546.429	6100.251	3.169	0.2	-23.8	NO	0.999	NO	bb
2	2	170731M2_3	Standard	0.500	4.49	3084.918	6198.730	6.221	0.5	-3.1	NO	0.999	NO	bb
3	3	170731M2_4	Standard	1.000	4.49	6341.854	6089.570	13.018	1.1	13.9	NO	0.999	NO	bb
4	4	170731M2_5	Standard	2.000	4.48	11501.922	5996.160	23.978	2.2	9.8	NO	0.999	NO	bb
5	5	170731M2_6	Standard	5.000	4.48	25400.311	5858.786	54.193	5.1	2.1	NO	0.999	NO	bb
6	6	170731M2_7	Standard	10.000	4.49	54547.922	6554.075	104.034	9.9	-0.9	NO	0.999	NO	bb
7	7	170731M2_8	Standard	50.000	4.48	247945.563	5701.481	543.599	52.3	4.5	NO	0.999	NO	bb
8	8	170731M2_9	Standard	100.000	4.48	490967.313	6062.306	1012.336	97.4	-2.6	NO	0.999	NO	bb
9	9	170731M2_10	Standard	250.000	4.49	1617289.125	7788.229	2595.727	250.0	0.0	NO	0.999	NO	bb

Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999821
Calibration curve: -0.000206845 * x^2 + 1.07301 * x + 0.115151
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	170731M2_2	Standard	0.250	4.66	1070.982	38964.742	0.344	0.2	-14.8	NO	1.000	NO	bb
2	2	170731M2_3	Standard	0.500	4.66	2242.796	43108.695	0.650	0.5	-0.2	NO	1.000	NO	db
3	3	170731M2_4	Standard	1.000	4.66	4228.840	43416.883	1.218	1.0	2.8	NO	1.000	NO	bb
4	4	170731M2_5	Standard	2.000	4.66	8124.685	42363.957	2.397	2.1	6.4	NO	1.000	NO	bb
5	5	170731M2_6	Standard	5.000	4.66	18184.229	38970.395	5.833	5.3	6.7	NO	1.000	NO	bb
6	6	170731M2_7	Standard	10.000	4.66	36936.945	42258.219	10.926	10.1	0.9	NO	1.000	NO	bb
7	7	170731M2_8	Standard	50.000	4.66	166736.000	40066.441	52.019	48.8	-2.3	NO	1.000	NO	bb
8	8	170731M2_9	Standard	100.000	4.66	335759.844	39581.660	106.034	100.7	0.7	NO	1.000	NO	bb
9	9	170731M2_10	Standard	250.000	4.67	1095646.375	53624.324	255.399	250.0	-0.0	NO	1.000	NO	bb

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Compound name: N-EtFOSA
Correlation coefficient: r = 0.999415, r^2 = 0.998831
Calibration curve: 0.921854 * x + 0.382781
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 170731M2_2	Standard	1.250	4.92	281.374	32355.941	1.304	1.0	-20.0	NO	0.999	NO	bb
2	2 170731M2_3	Standard	2.500	4.93	566.467	35601.133	2.387	2.2	-13.0	NO	0.999	NO	bb
3	3 170731M2_4	Standard	5.000	4.93	1233.600	34205.117	5.410	5.5	9.1	NO	0.999	NO	bb
4	4 170731M2_5	Standard	10.000	4.92	2359.483	33521.320	10.558	11.0	10.4	NO	0.999	NO	bb
5	5 170731M2_6	Standard	25.000	4.92	5411.886	32043.641	25.334	27.1	8.3	NO	0.999	NO	db
6	6 170731M2_7	Standard	50.000	4.93	10900.199	34405.922	47.522	51.1	2.3	NO	0.999	NO	bb
7	7 170731M2_8	Standard	250.000	4.92	50732.695	32776.059	232.179	251.4	0.6	NO	0.999	NO	db
8	8 170731M2_9	Standard	500.000	4.92	104693.227	32444.443	484.027	524.6	4.9	NO	0.999	NO	bb
9	9 170731M2_10	Standard	1250.000	4.93	373166.781	49761.906	1124.857	1219.8	-2.4	NO	0.999	NO	db

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999687
Calibration curve: -0.000332417 * x^2 + 1.25821 * x + 0.243616
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 170731M2_2	Standard	0.250	5.03	1832.064	18578.701	0.493	0.2	-20.7	NO	1.000	NO	bb
2	2 170731M2_3	Standard	0.500	5.03	3655.248	21305.383	0.858	0.5	-2.4	NO	1.000	NO	bd
3	3 170731M2_4	Standard	1.000	5.03	6457.158	21093.645	1.531	1.0	2.3	NO	1.000	NO	db
4	4 170731M2_5	Standard	2.000	5.03	12237.453	20624.443	2.967	2.2	8.3	NO	1.000	NO	bb
5	5 170731M2_6	Standard	5.000	5.03	27610.768	19494.348	7.082	5.4	8.9	NO	1.000	NO	bb
6	6 170731M2_7	Standard	10.000	5.03	55985.383	20781.805	13.470	10.5	5.4	NO	1.000	NO	bb
7	7 170731M2_8	Standard	50.000	5.03	245522.141	19811.059	61.966	49.7	-0.6	NO	1.000	NO	bb
8	8 170731M2_9	Standard	100.000	5.03	490538.219	20275.766	120.967	98.5	-1.5	NO	1.000	NO	bb
9	9 170731M2_10	Standard	250.000	5.04	1614512.375	27386.783	294.761	250.7	0.3	NO	1.000	NO	bb

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Compound name: PFODA
Correlation coefficient: r = 0.998537, r^2 = 0.997077
Calibration curve: 1.12504 * x + 0.153988
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	170731M2_2	Standard	0.250	5.40	1427.299	18578.701	0.384	0.2	-18.2	NO	0.997	NO	bb
2	2	170731M2_3	Standard	0.500	5.40	3408.691	21305.383	0.800	0.6	14.8	NO	0.997	NO	MM
3	3	170731M2_4	Standard	1.000	5.40	5937.597	21093.645	1.407	1.1	11.4	NO	0.997	NO	bb
4	4	170731M2_5	Standard	2.000	5.40	11189.688	20624.443	2.713	2.3	13.7	NO	0.997	NO	bb
5	5	170731M2_6	Standard	5.000	5.40	25545.443	19494.348	6.552	5.7	13.7	NO	0.997	NO	bb
6	6	170731M2_7	Standard	10.000	5.40	53019.988	20781.805	12.756	11.2	12.0	NO	0.997	NO	bb
7	7	170731M2_8	Standard	50.000	5.40	239072.719	19811.059	60.338	53.5	7.0	NO	0.997	NO	bb
8	8	170731M2_9	Standard	100.000	5.40	476093.531	20275.766	117.405	104.2	4.2	NO	0.997	NO	bb
9	9	170731M2_10	Standard	250.000	5.40	1479649.750	27386.783	270.139	240.0	-4.0	NO	0.997	NO	bb

Compound name: N-MeFOSE
Correlation coefficient: r = 0.999653, r^2 = 0.999306
Calibration curve: 1.02661 * x + 0.421311
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	170731M2_2	Standard	1.250	5.44	362.749	38065.852	1.429	1.0	-21.4	NO	0.999	NO	bb
2	2	170731M2_3	Standard	2.500	5.44	750.944	40818.066	2.760	2.3	-8.9	NO	0.999	NO	bb
3	3	170731M2_4	Standard	5.000	5.44	1644.402	40754.777	6.052	5.5	9.7	NO	0.999	NO	bb
4	4	170731M2_5	Standard	10.000	5.44	3091.344	39794.629	11.652	10.9	9.4	NO	0.999	NO	bb
5	5	170731M2_6	Standard	25.000	5.44	6838.694	38172.813	26.873	25.8	3.1	NO	0.999	NO	bb
6	6	170731M2_7	Standard	50.000	5.44	14673.296	40819.426	53.920	52.1	4.2	NO	0.999	NO	bb
7	7	170731M2_8	Standard	250.000	5.44	66914.719	37733.039	266.006	258.7	3.5	NO	0.999	NO	bb
8	8	170731M2_9	Standard	500.000	5.44	138132.109	39369.297	526.294	512.2	2.4	NO	0.999	NO	bb
9	9	170731M2_10	Standard	1250.000	5.45	499589.844	59556.500	1258.275	1225.2	-2.0	NO	0.999	NO	bb

Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:16:34 Pacific Daylight Time

Compound name: N-EtFOSE
Correlation coefficient: r = 0.999481, r^2 = 0.998963
Calibration curve: 1.14913 * x + 1.24499
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	170731M2_2	Standard	1.250	5.62	424.316	37434.258	1.700	0.4	-68.3	NO	0.999	NO	MMX
2	2	170731M2_3	Standard	2.500	5.62	1021.850	40953.574	3.743	2.2	-13.1	NO	0.999	NO	MM
3	3	170731M2_4	Standard	5.000	5.62	1868.327	40593.066	6.904	4.9	-1.5	NO	0.999	NO	bb
4	4	170731M2_5	Standard	10.000	5.62	3452.958	39083.969	13.252	10.4	4.5	NO	0.999	NO	bb
5	5	170731M2_6	Standard	25.000	5.62	7821.364	37934.445	30.927	25.8	3.3	NO	0.999	NO	bb
6	6	170731M2_7	Standard	50.000	5.62	16071.865	40396.703	59.678	50.8	1.7	NO	0.999	NO	bb
7	7	170731M2_8	Standard	250.000	5.62	74830.914	37673.949	297.942	258.2	3.3	NO	0.999	NO	bb
8	8	170731M2_9	Standard	500.000	5.62	156146.688	39004.324	600.498	521.5	4.3	NO	0.999	NO	bb
9	9	170731M2_10	Standard	1250.000	5.62	563632.000	60321.027	1401.581	1218.6	-2.5	NO	0.999	NO	bb

Compound name: 13C3-PFBA
Response Factor: 1.00566
RRF SD: 0.070969, Relative SD: 7.05699
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	170731M2_2	Standard	12.500	1.41	13874.437	13370.174	12.971	12.9	3.2	NO		NO	MM
2	2	170731M2_3	Standard	12.500	1.40	14032.984	14138.808	12.406	12.3	-1.3	NO		NO	bb
3	3	170731M2_4	Standard	12.500	1.40	14534.191	13876.813	13.092	13.0	4.1	NO		NO	bb
4	4	170731M2_5	Standard	12.500	1.40	13825.355	13352.213	12.943	12.9	3.0	NO		NO	bb
5	5	170731M2_6	Standard	12.500	1.40	14375.643	13996.207	12.839	12.8	2.1	NO		NO	bb
6	6	170731M2_7	Standard	12.500	1.40	14275.662	13824.148	12.908	12.8	2.7	NO		NO	bb
7	7	170731M2_8	Standard	12.500	1.40	13941.181	13506.435	12.902	12.8	2.6	NO		NO	bb
8	8	170731M2_9	Standard	12.500	1.40	14182.987	13834.986	12.814	12.7	1.9	NO		NO	bb
9	9	170731M2_10	Standard	12.500	1.41	20278.131	24706.939	10.259	10.2	-18.4	NO		NO	bb

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, August 01, 2017 10:20:34 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:21:31 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170731M2_1	IPA	01-Aug-17	00:29:09
2	170731M2_2	ST170731M2-1 PFC CS-2 17G3107	01-Aug-17	00:39:54
3	170731M2_3	ST170731M2-2 PFC CS-1 17G3108	01-Aug-17	00:50:40
4	170731M2_4	ST170731M2-3 PFC CS0 17G3109	01-Aug-17	01:01:18
5	170731M2_5	ST170731M2-4 PFC CS1 17G3110	01-Aug-17	01:12:05
6	170731M2_6	ST170731M2-5 PFC CS2 17G3111	01-Aug-17	01:22:43
7	170731M2_7	ST170731M2-6 PFC CS3 17G3105	01-Aug-17	01:33:30
8	170731M2_8	ST170731M2-7 PFC CS4 17G3112	01-Aug-17	01:44:08
9	170731M2_9	ST170731M2-8 PFC CS5 17G3113	01-Aug-17	01:54:46
10	170731M2_10	ST170731M2-9 PFC CS6 17G2801	01-Aug-17	02:05:40
11	170731M2_11	ST170731M2-10 PFC CS7 17G2802	01-Aug-17	02:16:49
12	170731M2_12	IPA	01-Aug-17	02:27:32
13	170731M2_13	SS170731M2-1 PFC SSS 17G3106	01-Aug-17	02:38:37
14	170731M2_14	IPA	01-Aug-17	02:49:24

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M2\170731M2-13.qld

Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:30 Pacific Daylight Time

(A) Not included in SS.

AC 8/1/17

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.17e4	1.36e4		1.41	1.40	10.7	9.89	98.9
2	2	PFPeA	263.1 > 218.9	2.16e4	2.96e4		2.77	2.70	9.11	9.54	95.4
3	3	PFBS	299 > 79.7	4.36e3	3.41e3		2.96	2.93	16.0	8.45	84.5
4	4	PFHxA	313.2 > 268.9	3.76e4	1.39e4		3.19	3.17	13.6	9.67	96.7
5	5	PFHpA	363 > 318.9	4.01e4	4.36e4		3.45	3.43	11.5	9.55	95.5
6	6	PFHxS	398.9 > 79.6	4.17e3	3.75e3		3.56	3.51	13.9	8.26	82.6
7	7	6:2 FTS	427.1 > 407	8.12e3	1.03e4		3.64	3.63	9.86	8.74	87.4
8	8	PFOA	413 > 368.7	5.00e4	6.49e4		3.65	3.64	9.63	9.94	99.4
9	9	PFHpS	448.9 > 98.8	4.25e3	6.49e4		3.71	3.70	0.818	9.42	94.2
10	10	PFNA	462.9 > 418.8	4.76e4	5.50e4		3.83	3.82	10.8	9.89	98.9
11	11	PFOSA	498.1 > 77.8	5.22e3	6.35e3		3.84	3.83	10.3	9.60	96.0
12	12	PFOS	499 > 79.9	7.20e3	1.06e4		3.89	3.87	8.48	8.29	82.9
13	13	PFDA	513 > 468.8	4.82e4	5.65e4		4.01	3.99	10.6	8.74	87.4
14	14	8:2 FTS	527 > 506.9	6.54e3	6.05e3		4.00	3.98	13.5	9.58	95.8
15	15	N-MeFOSAA	570.1 > 419	1.39e4	1.35e4		4.03	4.02	167	9.37	93.7
16	16	N-EtFOSAA	584.2 > 419	1.18e4	1.25e4		4.10	4.09	153	9.93	99.3
17	17	PFUnA	562.9 > 518.9	3.73e4	6.16e4		4.17	4.16	7.57	9.88	98.8
18	18	PFDS	598.9 > 98.7	3.30e3	6.16e4		4.22	4.20	0.669	8.31	83.1
19	19	PFDoA	612.9 > 318.8	4.17e3	6.21e3		4.34	4.31	8.40	8.92	89.2
20	20	N-MeFOSA	512.1 > 168.9		2.44e4		4.29				(A)
21	21	PFTrDA	662.9 > 618.9	4.94e4	6.21e3		4.50	4.49	99.5	9.48	94.8
22	22	PFTeDA	712.9 > 668.8	3.40e4	4.04e4		4.68	4.66	10.5	9.73	97.3
23	23	N-EtFOSA	526.1 > 168.9	5.15e0	3.29e4		4.87	4.93	0.0235		(A)
24	24	PFHxDA	812.8 > 768.9	5.23e2	1.96e4		5.06	5.03	0.133		
25	25	PFODA	912.8 > 868.8	3.08e2	1.96e4		5.43	5.40	0.0785		
26	26	N-MeFOSE	616.1 > 58.9	2.97e1	3.90e4		5.42	5.44	0.114		
27	27	N-EtFOSE	630.1 > 58.9		3.88e4		5.59				
28	28	13C3-PFBA	216.1 > 171.8	1.36e4	1.36e4	1.006	1.41	1.40	12.5	12.4	99.5
29	29	13C3-PFPeA	266 > 221.8	2.96e4	3.98e4	0.275	2.77	2.69	3.73	13.5	108.4
30	30	13C3-PFBS	302 > 98.8	3.41e3	3.98e4	0.034	2.96	2.92	0.428	12.6	100.4
31	31	13C2-PFHxA	315 > 269.8	1.39e4	3.98e4	0.334	3.19	3.17	1.74	5.22	104.3

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Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M2\170731M2-13.qld

Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:30 Pacific Daylight Time

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

	# Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32 13C4-PFHpA	367.2 > 321.8	4.36e4	3.98e4	0.414	3.45	3.43	5.48	13.2	105.9
33	33 18O2-PFHxS	403 > 102.6	3.75e3	7.57e3	0.475	3.56	3.51	6.19	13.0	104.2
34	34 13C2-6:2 FTS	429.1 > 408.9	1.03e4	4.79e4	0.214	3.64	3.63	2.68	12.5	100.3
35	35 13C2-PFOA	414.9 > 369.7	6.49e4	4.79e4	1.298	3.65	3.64	16.9	13.0	104.2
36	36 13C5-PFNA	468.2 > 422.9	5.50e4	4.99e4	1.094	3.83	3.82	13.8	12.6	100.7
37	37 13C8-PFOSA	506.1 > 77.7	6.35e3	5.45e4	0.124	3.84	3.83	1.46	11.7	93.5
38	38 13C8-PFOS	507 > 79.9	1.06e4	8.57e3	1.153	3.89	3.87	15.5	13.4	107.4
39	39 13C2-PFDA	515.1 > 469.9	5.65e4	5.31e4	1.059	4.01	3.99	13.3	12.6	100.6
40	40 13C2-8:2 FTS	529.1 > 508.7	6.05e3	5.31e4	0.129	4.00	3.98	1.43	11.1	88.7
41	41 d3-N-MeFOSAA	573.3 > 419	1.35e4	5.45e4	0.019	4.03	4.02	3.09	160	98.5
42	42 d5-N-EtFOSAA	589.3 > 419	1.25e4	5.45e4	0.019	4.12	4.09	2.87	151	93.2
43	43 13C2-PFUnA	565 > 519.8	6.16e4	5.45e4	1.172	4.17	4.16	14.1	12.1	96.4
44	44 13C2-PFDoA	615 > 569.7	6.21e3	5.45e4	0.118	4.34	4.31	1.42	12.0	96.1
45	45 d3-N-MeFOSA	515.2 > 168.9	2.44e4	5.45e4	0.040	4.29	4.38	5.60	138	92.3
46	46 13C2-PFTeDA	714.8 > 669.6	4.04e4	5.45e4	0.801	4.68	4.66	9.26	11.6	92.5
47	47 d5-N-ETFOSA	531.1 > 168.9	3.29e4	5.45e4	0.055	5.01	4.97	7.55	137	91.4
48	48 13C2-PFHxDA	815 > 769.7	1.96e4	5.45e4	0.991	5.06	5.03	4.50	4.54	90.7
49	49 d7-N-MeFOSE	623.1 > 58.9	3.90e4	5.45e4	0.065	5.42	5.43	8.94	137	91.4
50	50 d9-N-EtFOSE	639.2 > 58.8	3.88e4	5.45e4	0.065	5.59	5.61	8.89	137	91.5
51	51 13C4-PFBA	217 > 171.8	1.36e4	1.36e4	1.000	1.41	1.40	12.5	12.5	100.0
52	52 13C5-PFHxA	318 > 272.9	3.98e4	3.98e4	1.000	3.19	3.17	5.00	5.00	100.0
53	53 13C3-PFHxS	401.9 > 79.9	7.57e3	7.57e3	1.000	3.56	3.51	12.5	12.5	100.0
54	54 13C8-PFOA	421.3 > 376	4.79e4	4.79e4	1.000	3.65	3.64	12.5	12.5	100.0
55	55 13C9-PFNA	472.2 > 426.9	4.99e4	4.99e4	1.000	3.83	3.82	12.5	12.5	100.0
56	56 13C4-PFOS	503 > 79.9	8.57e3	8.57e3	1.000	3.89	3.87	12.5	12.5	100.0
57	57 13C6-PFDA	519.1 > 473.7	5.31e4	5.31e4	1.000	4.01	3.99	12.5	12.5	100.0
58	58 13C7-PFUnA	570.1 > 524.8	5.45e4	5.45e4	1.000	4.17	4.16	12.5	12.5	100.0

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170731M2\170731M2-13.qld

Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:30 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.93	4357.564	3405.490	15.995	bb	8.45

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.51	4174.485	3749.125	13.918	MM	8.26

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.64	49957.527	64869.781	9.627	bb	9.94

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.87	7204.411	10619.089	8.480	bb	8.29

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419	4.02	13886.400	13491.591	167.255	bb	9.37
2	63	Total N-Me-FOSAA	570.1 > 419	3.87	6.033	13491.591	0.073	bbl	
3	63	Total N-Me-FOSAA	570.1 > 419	3.76	12.109	13491.591	0.146	bbl	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419	4.09	11783.439	12511.836	153.040	bb	9.93
2	64	Total N-EtFOSAA	584.2 > 419	4.33	9.825	12511.836	0.128	bb	0.0294

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:36:59 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999660
Calibration curve: -0.000838043 * x^2 + 0.778045 * x + 0.0580166
Response type: Internal Std (Ref 11), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	1.73	3.78e2	2.15e4	0.208	-16.8	0.879
2	2	170807G3_3	0.500	1.73	7.73e2	2.20e4	0.490	-1.9	0.879
3	3	170807G3_4	1.00	1.73	1.53e3	2.05e4	1.12	12.3	0.931
4	4	170807G3_5	2.00	1.73	2.72e3	2.02e4	2.09	4.6	0.841
5	5	170807G3_6	5.00	1.73	6.61e3	2.01e4	5.24	4.8	0.822
6	6	170807G3_7	10.0	1.79	1.56e4	2.57e4	9.76	-2.4	0.757
7	7	170807G3_8	50.0	1.74	6.00e4	2.05e4	49.6	-0.8	0.732
8	8	170807G3_9	100	1.73	1.27e5	2.27e4	100	0.2	0.696

Compound name: PFPeA
Correlation coefficient: r = 0.999705, r^2 = 0.999410
Calibration curve: 1.07143 * x + 0.0515195
Response type: Internal Std (Ref 13), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	2.66	1.54e2	7.97e3	0.178	-28.9	0.968
2	2	170807G3_3	0.500	2.67	4.17e2	8.14e3	0.550	10.0	1.28
3	3	170807G3_4	1.00	2.70	7.41e2	7.68e3	1.08	7.7	1.21
4	4	170807G3_5	2.00	2.66	1.46e3	7.56e3	2.21	10.4	1.21
5	5	170807G3_6	5.00	2.67	3.27e3	7.17e3	5.28	5.6	1.14
6	6	170807G3_7	10.0	2.67	7.60e3	9.29e3	9.50	-5.0	1.02
7	7	170807G3_8	50.0	2.67	2.84e4	6.61e3	50.1	0.2	1.07
8	8	170807G3_9	100	2.67	5.81e4	6.79e3	99.8	-0.2	1.07

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:36:59 Pacific Daylight Time

Compound name: PFBS
Correlation coefficient: r = 0.999608, r^2 = 0.999217
Calibration curve: 1.18972 * x + -0.111193
Response type: Internal Std (Ref 12), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	2.94	6.97e1	5.09e3	0.237	-5.1	0.685
2	2	170807G3_3	0.500	2.94	2.32e2	5.33e3	0.550	10.0	1.09
3	3	170807G3_4	1.00	2.97	4.36e2	4.81e3	1.04	4.5	1.13
4	4	170807G3_5	2.00	2.94	8.42e2	4.45e3	2.08	3.9	1.18
5	5	170807G3_6	5.00	2.94	2.00e3	4.80e3	4.48	-10.4	1.04
6	6	170807G3_7	10.0	2.94	4.77e3	5.19e3	9.76	-2.4	1.15
7	7	170807G3_8	50.0	2.94	1.74e4	3.75e3	48.9	-2.2	1.16
8	8	170807G3_9	100	2.94	3.71e4	3.84e3	102	1.7	1.21

Compound name: PFHxA
Correlation coefficient: r = 0.999708, r^2 = 0.999416
Calibration curve: 1.91046 * x + 0.230955
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	3.31	2.84e2	5.68e3	0.206	-17.5	2.50
2	2	170807G3_3	0.500	3.31	5.71e2	6.05e3	0.496	-0.7	2.36
3	3	170807G3_4	1.00	3.23	1.20e3	7.23e3	0.967	-3.3	2.08
4	4	170807G3_5	2.00	3.31	1.99e3	5.55e3	2.23	11.4	2.24
5	5	170807G3_6	5.00	3.31	4.53e3	5.32e3	5.45	9.0	2.13
6	6	170807G3_7	10.0	3.32	1.07e4	6.86e3	10.1	1.3	1.96
7	7	170807G3_8	50.0	3.31	3.92e4	5.07e3	50.4	0.8	1.93
8	8	170807G3_9	100	3.31	8.10e4	5.35e3	98.8	-1.2	1.89

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:36:59 Pacific Daylight Time

Compound name: PFHpA
Correlation coefficient: r = 0.999829, r^2 = 0.999658
Calibration curve: 2.02015 * x + -0.00519606
Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	3.84	2.41e2	6.88e3	0.219	-12.4	1.75
2	2	170807G3_3	0.500	3.83	6.01e2	6.90e3	0.542	8.4	2.18
3	3	170807G3_4	1.00	3.73	1.13e3	6.43e3	1.09	9.3	2.20
4	4	170807G3_5	2.00	3.83	2.06e3	6.22e3	2.05	2.4	2.07
5	5	170807G3_6	5.00	3.83	5.03e3	6.55e3	4.75	-5.0	1.92
6	6	170807G3_7	10.0	3.83	1.23e4	7.82e3	9.77	-2.3	1.97
7	7	170807G3_8	50.0	3.83	4.81e4	6.04e3	49.3	-1.4	1.99
8	8	170807G3_9	100	3.83	9.32e4	5.71e3	101	1.0	2.04

Compound name: PFHxS
Correlation coefficient: r = 0.999295, r^2 = 0.998591
Calibration curve: 1.49643 * x + 0.0513693
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	3.96	1.27e2	4.40e3	0.206	-17.5	1.44
2	2	170807G3_3	0.500	3.96	3.16e2	4.47e3	0.557	11.4	1.77
3	3	170807G3_4	1.00	3.89	5.17e2	3.83e3	1.09	9.3	1.69
4	4	170807G3_5	2.00	3.96	9.70e2	3.91e3	2.04	1.8	1.55
5	5	170807G3_6	5.00	3.96	2.35e3	3.83e3	5.09	1.9	1.53
6	6	170807G3_7	10.0	3.97	5.58e3	4.88e3	9.52	-4.8	1.43
7	7	170807G3_8	50.0	3.97	2.15e4	3.77e3	47.6	-4.7	1.43
8	8	170807G3_9	100	3.96	4.55e4	3.71e3	103	2.6	1.54

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:36:59 Pacific Daylight Time

Compound name: PFOA
Coefficient of Determination: R^2 = 0.999319
Calibration curve: -0.00115809 * x^2 + 0.846733 * x + 0.0978197
Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	4.26	4.34e2	1.57e4	0.293	17.2	1.38
2	2	170807G3_3	0.500	4.25	5.21e2	1.59e4	0.368	-26.3	0.819
3	3	170807G3_4	1.00	4.21	1.22e3	1.40e4	1.17	17.0	1.09
4	4	170807G3_5	2.00	4.25	1.90e3	1.39e4	1.91	-4.5	0.855
5	5	170807G3_6	5.00	4.26	4.94e3	1.50e4	4.77	-4.6	0.822
6	6	170807G3_7	10.0	4.26	1.23e4	1.81e4	10.1	0.7	0.851
7	7	170807G3_8	50.0	4.26	4.57e4	1.43e4	50.4	0.7	0.796
8	8	170807G3_9	100	4.26	9.45e4	1.62e4	99.8	-0.2	0.731

Compound name: PFNA
Coefficient of Determination: R^2 = 0.998786
Calibration curve: 0.00124304 * x^2 + 1.75438 * x + 0.095479
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	4.60	3.08e2	6.83e3	0.267	6.7	2.25
2	2	170807G3_3	0.500	4.60	4.56e2	6.70e3	0.430	-14.0	1.70
3	3	170807G3_4	1.00	4.58	9.43e2	7.14e3	0.886	-11.4	1.65
4	4	170807G3_5	2.00	4.60	2.05e3	6.74e3	2.11	5.6	1.90
5	5	170807G3_6	5.00	4.60	5.27e3	6.81e3	5.44	8.8	1.94
6	6	170807G3_7	10.0	4.60	1.16e4	7.64e3	10.7	7.3	1.91
7	7	170807G3_8	50.0	4.60	4.88e4	6.98e3	48.1	-3.8	1.75
8	8	170807G3_9	100	4.60	1.03e5	6.78e3	101	0.8	1.90

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-CRV.qld

Last Altered: Tuesday, August 08, 2017 09:34:38 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:36:59 Pacific Daylight Time

Compound name: PFOS
Coefficient of Determination: R^2 = 0.999151
Calibration curve: 0.000618235 * x^2 + 0.356557 * x + 0.0224255
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	4.67	7.91e1	8.29e3	0.271	8.5	0.477
2	2	170807G3_3	0.500	4.67	8.90e1	7.00e3	0.382	-23.5	0.318
3	3	170807G3_4	1.00	4.65	1.89e2	5.91e3	1.06	5.7	0.400
4	4	170807G3_5	2.00	4.66	3.61e2	5.97e3	2.05	2.5	0.378
5	5	170807G3_6	5.00	4.67	1.28e3	7.73e3	5.68	13.5	0.413
6	6	170807G3_7	10.0	4.67	1.93e3	7.10e3	9.34	-6.6	0.340
7	7	170807G3_8	50.0	4.67	1.21e4	7.79e3	49.9	-0.2	0.387
8	8	170807G3_9	100	4.67	2.73e4	8.15e3	100	0.1	0.419

Compound name: PFDA
Coefficient of Determination: R^2 = 0.999960
Calibration curve: -5.7047e-005 * x^2 + 0.190696 * x + 0.015188
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170807G3_2	0.250	4.89	4.81e1	9.15e3	0.265	6.0	0.263
2	2	170807G3_3	0.500	4.89	7.13e1	8.46e3	0.473	-5.4	0.211
3	3	170807G3_4	1.00	4.89	1.18e2	7.02e3	1.02	1.9	0.210
4	4	170807G3_5	2.00	4.89	2.53e2	8.04e3	1.98	-0.8	0.197
5	5	170807G3_6	5.00	4.89	7.59e2	9.97e3	4.92	-1.7	0.190
6	6	170807G3_7	10.0	4.90	1.11e3	7.25e3	9.95	-0.5	0.191
7	7	170807G3_8	50.0	4.89	7.79e3	1.03e4	50.3	0.6	0.189
8	8	170807G3_9	100	4.89	1.73e4	1.17e4	99.9	-0.1	0.185

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Tuesday, August 08, 2017 08:47:18 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 08:47:33 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 08:36:32

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170807G3_1	IPA	07-Aug-17	15:51:37
2	170807G3_2	ST170807G3-1 PFC CS-2 17H0707	07-Aug-17	16:03:49
3	170807G3_3	ST170807G3-2 PFC CS-1 17H0708	07-Aug-17	16:16:27
4	170807G3_4	ST170807G3-3 PFC CS0 17H0709	07-Aug-17	16:28:53
5	170807G3_5	ST170807G3-4 PFC CS1 17H0710	07-Aug-17	16:41:23
6	170807G3_6	ST170807G3-5 PFC CS2 17H0711	07-Aug-17	16:53:57
7	170807G3_7	ST170807G3-6 PFC CS3 17H0712	07-Aug-17	17:10:43
8	170807G3_8	ST170807G3-7 PFC CS4 17H0713	07-Aug-17	17:22:55
9	170807G3_9	ST170807G3-8 PFC CS5 17H0714	07-Aug-17	17:35:31
10	170807G3_10	IPA	07-Aug-17	17:48:05
11	170807G3_11	SS170807G3-1 PFC SSS 17H0715	07-Aug-17	18:00:37
12	170807G3_12	IPA	07-Aug-17	18:13:06
13	170807G3_13	B7H0005-BS1 OPR 0.125	07-Aug-17	18:25:45
14	170807G3_14	IPA	07-Aug-17	18:38:13
15	170807G3_15	B7H0005-BLK1 Method Blank 0.125	07-Aug-17	18:50:47
16	170807G3_16	1700925-04RE1@10X I001MW52S-170724 0....	07-Aug-17	19:03:18
17	170807G3_17	B7H0018-MS1@10X Matrix Spike 0.125	07-Aug-17	19:15:50
18	170807G3_18	B7H0018-MSD1@10X Matrix Spike Dup 0.125	07-Aug-17	19:28:25
19	170807G3_19	1700925-05RE1@10X I001MW52X-170724 0....	07-Aug-17	19:40:59
20	170807G3_20	1700947-01 7-EFF-GAC-0727-NS 0.125	07-Aug-17	19:53:31
21	170807G3_21	1700947-02 7-MID-GAC-0727-NS 0.125	07-Aug-17	20:06:18
22	170807G3_22	1700947-03 7-IN-GAC-0727-NS 0.125	07-Aug-17	20:18:39
23	170807G3_23	IPA	07-Aug-17	20:31:10
24	170807G3_24	ST170807G3-9 PFC CS3 17H0712	07-Aug-17	20:43:44
25	170807G3_25	IPA	07-Aug-17	20:56:16

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170807G3\070807G3-11.qld

Last Altered: Tuesday, August 08, 2017 09:40:22 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 09:40:43 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_14or16_2trans_0712.mdb 12 Jul 2017 13:38:17
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_8-7-17_A_2Trans_OLD.cdb 08 Aug 2017 09:34:38

Name: 170807G3_11, Date: 07-Aug-2017, Time: 18:00:37, ID: SS170807G3-1 PFC SSS 17H0715, Description: PFC SSS 17H0715 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1	PFBA	212.9 > 168.9	1.12e4	2.24e4		1.000	1.73	8.02	80.2
2	2	PFPeA	263.0 > 218.8	6.04e3	7.15e3		1.000	2.67	9.81	98.1
3	3	PFBS	299.0 > 79.7	3.46e3	4.54e3		1.000	2.94	8.09	80.9
4	4	PFHxA	312.9 > 268.9	8.33e3	5.69e3		1.000	3.32	9.45	94.5
5	5	PFHpA	363 > 318.9	9.13e3	5.56e3		1.000	3.83	10.2	101.7
6	6	PFHxS	398.9 > 79.6	3.80e3	3.94e3		1.000	3.96	8.01	80.1
7	7	PFOA	413.0 > 368.7	9.15e3	1.41e4		1.000	4.26	9.61	96.1
8	8	PFNA	463.0 > 418.8	8.10e3	5.58e3		1.000	4.60	10.2	102.1
9	9	PFOS	499.0 >79.9	1.46e3	5.44e3		1.000	4.67	9.19	91.9
10	10	PFDA	512.7 > 219.0	9.39e2	6.74e3		1.000	4.89	9.08	90.8
11	11	13C3-PFBA	215.9 > 171.8	2.24e4	1.43e4	1.391	1.000	1.73	14.0	112.4
12	12	13C3-PFBS	302.0 > 98.8	4.54e3	1.26e4	0.351	1.000	2.94	12.9	103.2
13	13	13C3-PFPeA	266.0 > 221.8	7.15e3	1.26e4	0.577	1.000	2.67	12.3	98.7
14	14	13C2-PFHxA	315.0 > 269.8	5.69e3	1.26e4	0.443	1.000	3.31	12.8	102.5
15	15	13C4-PFHpA	367.2 > 321.8	5.56e3	1.26e4	0.496	1.000	3.83	11.2	89.2
16	16	18O2-PFHxS	403 > 102.6	3.94e3	7.78e3	0.528	1.000	3.96	12.0	96.0
17	17	13C2-PFOA	414.9 > 369.7	1.41e4	3.80e3	3.356	1.000	4.26	13.8	110.4
18	18	13C5-PFNA	468.2 > 422.9	5.58e3	5.97e3	0.991	1.000	4.60	11.8	94.3
19	19	13C2-PFDA	514.8 > 469.7	6.74e3	4.77e3	1.458	1.000	4.89	12.1	96.8
20	20	13C8-PFOS	507.0 > 79.9	5.44e3	4.65e3	1.109	1.000	4.67	13.2	105.6
21	21	13C4-PFBA	216.9 > 171.8	1.43e4	1.43e4	1.000	1.000	1.73	12.5	100.0
22	22	13C5-PFHxA	318>272.9	1.26e4	1.26e4	1.000	1.000	3.31	12.5	100.0
23	23	13C3-PFHxS	401.9 > 79.9	7.78e3	7.78e3	1.000	1.000	3.96	12.5	100.0
24	24	13C8-PFOA	421.3 > 376	3.80e3	3.80e3	1.000	1.000	4.26	12.5	100.0
25	25	13C9-PFNA	472.2 > 426.9	5.97e3	5.97e3	1.000	1.000	4.60	12.5	100.0
26	26	13C4-PFOS	503.0 > 79.9	4.65e3	4.65e3	1.000	1.000	4.67	12.5	100.0
27	27	13C6-PFDA	519.10 > 47...	4.77e3	4.77e3	1.000	1.000	4.89	12.5	100.0

70-130

8/8/17

FIELD DUPLICATE PRECISION
SDG 1700845

ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 30%	ORIGINAL SAMPLE CONC >2xRL	DUPLICATE SAMPLE CONC >2xRL	DIFFERENCE >RL
PENTADECAFLUOROOCTANOIC ACID	59.1	60.5	8.27	2	FALSE	TRUE	TRUE	FALSE
PERFLUOROBUTANESULFONIC ACID	68.3	60.3	8.27	12	FALSE	TRUE	TRUE	FALSE
PERFLUORODECANOIC ACID	1.91	2.9	8.27	41	TRUE	FALSE	FALSE	FALSE
PERFLUOROHEPTANOIC ACID	68	66.2	8.27	3	FALSE	TRUE	TRUE	FALSE
PERFLUOROHEXANESULFONIC ACID	660	690	8.27	4	FALSE	TRUE	TRUE	TRUE
PERFLUOROHEXANOIC ACID	291	257	8.27	12	FALSE	TRUE	TRUE	TRUE
PERFLUORONONANOIC ACID	8.76	9	8.27	3	FALSE	FALSE	FALSE	FALSE
PERFLUOROOCTANE SULFONIC ACID	1900	1210	8.27	44	TRUE	TRUE	TRUE	TRUE

FIELD DUPLICATE PRECISION
SDG 1700920

ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 30%	ORIGINAL SAMPLE CONC >2xRL	DUPLICATE SAMPLE CONC >2xRL	DIFFERENCE >RL
PENTADECAFLUOROOCTANOIC ACID	113	97	8.57	15	FALSE	TRUE	TRUE	TRUE
PERFLUOROBUTANESULFONIC ACID	140	141	8.57	1	FALSE	TRUE	TRUE	FALSE
PERFLUOROHEPTANOIC ACID	174	183	8.57	5	FALSE	TRUE	TRUE	TRUE
PERFLUOROHEXANESULFONIC ACID	985	1070	8.57	8	FALSE	TRUE	TRUE	TRUE
PERFLUOROHEXANOIC ACID	662	602	8.57	9	FALSE	TRUE	TRUE	TRUE
PERFLUORONONANOIC ACID	10.1	10.6	8.57	5	FALSE	FALSE	FALSE	FALSE
PERFLUOROOCTANE SULFONIC ACID	1840	1240	8.57	39	TRUE	TRUE	TRUE	TRUE

DODCMD_ID	INSTALLATION_ID	SDG	SITE_NAME	NORM_SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	CONTRACT_ID	DO_CTO_NUMBER	CONTR_NAME	SAMPLE_NAME	SAMPLE_MATRIX_DESC	SAMPLE_TYPE_DESC	COLLECT_DATE	ANALYTICAL_METHOD	ANALYTICAL_METHOD_GRP_DESC
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	13S	Monitoring well	406035.74	523588.53	N6247016D9008	WE08	TETRA TECH, INC.	RCDM-MW-13S-20170719	Ground water	Normal (Regular)	19-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	11BR	Monitoring well	406100.08	523691.59	N6247016D9008	WE08	TETRA TECH, INC.	LF-MW-11BR-20170720	Ground water	Normal (Regular)	20-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	28S	Monitoring well	405906.02	523359.59	N6247016D9008	WE08	TETRA TECH, INC.	RCDM-MW-28S-20170719	Ground water	Normal (Regular)	19-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920							N6247016D9008	WE08	TETRA TECH, INC.	FRB-04-20170719	Water for QC samples	Field Reagent Blank	19-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	MH-A97	Manhole/Catch basin	405660.4667	522646.1976	N6247016D9008	WE08	TETRA TECH, INC.	MH-A97-20170720-D	Surface water	Field duplicate	20-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	12S	Monitoring well	405934.17	523483.93	N6247016D9008	WE08	TETRA TECH, INC.	LF-MW-12S-20170719	Ground water	Normal (Regular)	19-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	MH-A97	Manhole/Catch basin	405660.4667	522646.1976	N6247016D9008	WE08	TETRA TECH, INC.	MH-A97-20170720	Surface water	Normal (Regular)	20-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	13S	Monitoring well	406035.74	523588.53	N6247016D9008	WE08	TETRA TECH, INC.	LF-MW-13S-20170719-D	Ground water	Field duplicate	19-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	13S	Monitoring well	406035.74	523588.53	N6247016D9008	WE08	TETRA TECH, INC.	LF-MW-13S-20170719	Ground water	Normal (Regular)	19-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	MH-C94	Manhole/Catch basin	405593.2607	522922.5842	N6247016D9008	WE08	TETRA TECH, INC.	MH-C94-20170720	Surface water	Normal (Regular)	20-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	14S	Monitoring well	406091.34	523676.31	N6247016D9008	WE08	TETRA TECH, INC.	LF-MW-14S-20170720	Ground water	Normal (Regular)	20-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	28S	Monitoring well	405906.02	523359.59	N6247016D9008	WE08	TETRA TECH, INC.	LF-MW-28S-20170719	Ground water	Normal (Regular)	19-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	MH-H93	Manhole/Catch basin	405509.4921	522883.3014	N6247016D9008	WE08	TETRA TECH, INC.	MH-H93-20170720	Surface water	Normal (Regular)	20-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	14S	Monitoring well	406091.34	523676.31	N6247016D9008	WE08	TETRA TECH, INC.	RCDM-MW-14S-20170720	Ground water	Normal (Regular)	20-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	12S	Monitoring well	405934.17	523483.93	N6247016D9008	WE08	TETRA TECH, INC.	RCDM-MW-12S-20170719	Ground water	Normal (Regular)	19-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920	EBS PHASE2	EBS PHASE2	11BR	Monitoring well	406100.08	523691.59	N6247016D9008	WE08	TETRA TECH, INC.	RCDM-MW-11BR-20170720	Ground water	Normal (Regular)	20-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700920							N6247016D9008	WE08	TETRA TECH, INC.	RCDM-BLANK-20170720	Water for QC samples	Field blank	20-Jul-17	537	Perfluoroalkyl Compounds