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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 1700922

Naval Air Warfare Center Trenton
Trenton, New Jersey

August 2019

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N62376.SF.001180
NAWC TRENTON
5090.3c

LABORATORY DATA PACKAGE, 1700922, NAWC TRENTON, NJ
08/17/2017
VISTA ANALYTICAL LABORATORY

August 17, 2017

Vista Work Order No. 1700922

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 22, 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.

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

SDG Number WE08
Vista Work Order No. 1700922
Case Narrative

Sample Condition on Receipt:

Three surface water samples and three DI water samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

Modified EPA Method 537

Samples "MH-L103-20170721", "MH-N104-20170721" and "Upstream-Culver-109-20170721" contained particulate and were centrifuged twice 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 initially extracted and analyzed within the method hold times. The samples were re-extracted for PFOA due to unacceptable levels of PFOA in the Method Blank. The PFOA contamination was traced to a set of samples with extremely high PFOA concentrations. The re-extractions were performed outside of the method hold times.

The original results, as well was the PFOA results from the re-extractions, are included in this report.

Quality Control

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

A Method Blank and Ongoing Precision and Recovery (OPR) samples were extracted and analyzed with the preparation batches. The PFOA concentration in the MB associated with prep batch B7G0121 is greater than 1/2 the LOQ. No other analytes were detected in the Method Blanks above 1/2 the LOQs. The OPR recoveries were within the method acceptance criteria.

The labeled standard recoveries for the QC and field samples were within the acceptance criteria.

As requested, an MS/MSD was performed on sample "MH-N104-20170721".

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: 8-17-17

Revision 9
ISG
08/18/16

TABLE OF CONTENTS

Case Narrative..... 1

Signed Attestation Statement..... 3

Table of Contents..... 4

Sample Inventory..... 5

Analytical Results..... 6

Qualifiers..... 25

Certifications..... 26

Sample Receipt..... 29

Correspondence..... 31

Extraction Information..... 33

Sample Data - Modified EPA Method 537..... 44

IIS Areas, IBs and CCVs..... 225

ICAL with ICV and IB..... 328

PFAS Standards..... 603

Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1700922-01	MH-L103-20170721		21-Jul-17 10:30	22-Jul-17 08:54	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700922-02	MH-N104-20170721	MS/MSD	21-Jul-17 11:40	22-Jul-17 08:54	HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
1700922-03	Upstream-Culvert-109-20170721		21-Jul-17 12:55	22-Jul-17 08:54	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700922-04	FRB03-20170721		21-Jul-17 13:25	22-Jul-17 08:54	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700922-05	RB08-20170720		20-Jul-17 09:00	22-Jul-17 08:54	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1700922-06	RB09-20170721		21-Jul-17 13:00	22-Jul-17 08:54	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank

Modified EPA Method 537

Matrix: Aqueous
Sample Size: 0.125 L

QC Batch: B7G0121
Date Extracted: 31-Jul-2017 12:30

Lab Sample: B7G0121-BLK1
Date Analyzed: 02-Aug-17 11:22 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.79	5.00	8.00	
PFHxA	ND	2.18	5.00	8.00	
PFHpA	ND	0.591	5.00	8.00	
PFHxS	ND	0.947	5.00	8.00	
PFOA	4.35	0.651	5.00	8.00	J
PFOS	ND	0.807	5.00	8.00	
PFNA	ND	0.810	5.00	8.00	
PFDA	ND	1.49	5.00	8.00	
MeFOSAA	ND	1.65	5.00	8.00	
PFUnA	ND	1.05	5.00	8.00	
EtFOSAA	ND	1.37	5.00	8.00	
PFDoA	ND	0.792	5.00	8.00	
PFTrDA	ND	0.494	5.00	8.00	
PFTeDA	ND	0.755	5.00	8.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	132	50 - 150	
IS	13C2-PFHxA	99.0	50 - 150	
IS	13C4-PFHpA	78.3	50 - 150	
IS	18O2-PFHxS	104	50 - 150	
IS	13C2-PFOA	91.5	50 - 150	
IS	13C8-PFOS	105	50 - 150	
IS	13C5-PFNA	86.5	50 - 150	
IS	13C2-PFDA	84.3	50 - 150	
IS	d3-MeFOSAA	81.7	50 - 150	
IS	13C2-PFUnA	76.0	50 - 150	
IS	d5-EtFOSAA	87.9	50 - 150	
IS	13C2-PFDoA	89.7	50 - 150	
IS	13C2-PFTeDA	82.6	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: OPR

Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7G0121	Lab Sample:	B7G0121-BS1
Sample Size:	0.125 L	Date Extracted:	31-Jul-2017 12:30	Date Analyzed:	02-Aug-17 11:01 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
PFBS	73.8	80.0	92.3	70 - 130	IS	13C3-PFBS	133	50 - 150
PFHxA	78.0	80.0	97.5	70 - 130	IS	13C2-PFHxA	103	50 - 150
PFHpA	72.5	80.0	90.6	70 - 130	IS	13C4-PFHpA	76.8	50 - 150
PFHxS	78.2	80.0	97.7	70 - 130	IS	18O2-PFHxS	109	50 - 150
PFOA	90.2	80.0	113	70 - 130	IS	13C2-PFOA	101	50 - 150
PFOS	77.1	80.0	96.4	70 - 130	IS	13C8-PFOS	108	50 - 150
PFNA	80.9	80.0	101	70 - 130	IS	13C5-PFNA	93.0	50 - 150
PFDA	80.2	80.0	100	70 - 130	IS	13C2-PFDA	81.0	50 - 150
MeFOSAA	75.0	80.0	93.8	70 - 130	IS	d3-MeFOSAA	77.0	50 - 150
PFUnA	80.8	80.0	101	70 - 130	IS	13C2-PFUnA	81.9	50 - 150
EtFOSAA	79.2	80.0	99.0	70 - 130	IS	d5-EtFOSAA	73.5	50 - 150
PFDoA	68.3	80.0	85.4	70 - 130	IS	13C2-PFDoA	85.6	50 - 150
PFTrDA	73.0	80.0	91.3	60 - 130	IS	13C2-PFTeDA	78.6	50 - 150
PFTeDA	77.6	80.0	97.0	70 - 130				

LCL-UCL - Lower control limit - upper control limit

Sample ID: MH-L103-20170721

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 21-Jul-2017 10:30
Location: NAWC TRENTON

Sample Data

Matrix: Surface Water
Sample Size: 0.106 L

Laboratory Data

Lab Sample: 1700922-01 Date Received: 22-Jul-2017 8:54
QC Batch: B7G0121 Date Extracted: 31-Jul-2017 12:30
Date Analyzed: 02-Aug-17 12:17 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	2.12	5.90	9.47	
PFHxA	4.36	2.58	5.90	9.47	J
PFHpA	1.94	0.699	5.90	9.47	J
PFHxS	2.05	1.12	5.90	9.47	J
PFOA	3.98	0.770	5.90	9.47	J, B
PFOS	4.90	0.955	5.90	9.47	J
PFNA	ND	0.958	5.90	9.47	
PFDA	ND	1.76	5.90	9.47	
MeFOSAA	ND	1.95	5.90	9.47	
PFUnA	ND	1.24	5.90	9.47	
EtFOSAA	ND	1.62	5.90	9.47	
PFDoA	ND	0.937	5.90	9.47	
PFTrDA	ND	0.584	5.90	9.47	
PFTeDA	ND	0.893	5.90	9.47	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	125	50 - 150	
IS	13C2-PFHxA	97.2	50 - 150	
IS	13C4-PFHpA	71.3	50 - 150	
IS	18O2-PFHxS	107	50 - 150	
IS	13C2-PFOA	83.9	50 - 150	
IS	13C8-PFOS	96.7	50 - 150	
IS	13C5-PFNA	88.3	50 - 150	
IS	13C2-PFDA	84.9	50 - 150	
IS	d3-MeFOSAA	84.9	50 - 150	
IS	13C2-PFUnA	90.7	50 - 150	
IS	d5-EtFOSAA	97.7	50 - 150	
IS	13C2-PFDoA	92.6	50 - 150	
IS	13C2-PFTeDA	95.5	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-N104-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Surface Water	Lab Sample:	1700622-02	Date Received:	22-Jul-2017 o:54
PrHject:	NAWC TrentHn	Sample Size:	0.110 L	QC Batch:	B7G0121	Date Extracted:	31-Jul-2017 12:30
Date CHllected:	21-Jul-2017 11:40			Date Analyzed:	02-Aug-17 12:2o CHlumn: BE8 C1o		
LHcatiHn:	NAWC TRENT9 N						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
POBS	ND	2.03	5.Fo	6.07	
PO8 xA	4.o0	2.47	5.Fo	6.07	J
PO8 pA	5.20	0.F70	5.Fo	6.07	J
PO8 xS	5.6o	1.07	5.Fo	6.07	J
PO9 A	6.0o	0.73o	5.Fo	6.07	B
PO9 S	14.o	0.615	5.Fo	6.07	
PONA	4.75	0.61o	5.Fo	6.07	J
PODA	ND	1.F6	5.Fo	6.07	
MeO9 SAA	ND	1.o7	5.Fo	6.07	
PO, nA	ND	1.16	5.Fo	6.07	
EtO9 SAA	ND	1.55	5.Fo	6.07	
PODHA	ND	0.o6o	5.Fo	6.07	
POTrDA	ND	0.5F0	5.Fo	6.07	
POTeDA	ND	0.o5F	5.Fo	6.07	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-POBS	125	50 - 150	
IS	13C2-PO8 xA	102	50 - 150	
IS	13C4-PO8 pA	71.4	50 - 150	
IS	1o9 2-PO8 xS	64.6	50 - 150	
IS	13C2-PO9 A	o4.6	50 - 150	
IS	13Co-PO9 S	6F.4	50 - 150	
IS	13C5-PONA	o5.0	50 - 150	
IS	13C2-PODA	73.0	50 - 150	
IS	d3-MeO9 SAA	6F.F	50 - 150	
IS	13C2-PO, nA	102	50 - 150	
IS	d5-EtO9 SAA	6o.2	50 - 150	
IS	13C2-PODHA	62.3	50 - 150	
IS	13C2-POTeDA	6o.1	50 - 150	

DL - DetectiHn limit

RL - RepHrting limit

LCL-, CL - LHUer cHntrHl limit - upper cHntrHl limit

RewltwrepHrted tHDL.

When repHrteds POBSs PO8 xSs PO9 A and PO9 S include bHth linear and branched iwHmerw.

9 nly the linear iwHmer iwrepHrted fHr all Hther analytew

Matrix Spike Results

Modified EPA Method 537

Source Client ID: MH-N104-20170721
Source LabNumber: 1700922-02
Matrix: Aqueous
Sample Size: 0.113/0.112 L

QC Batch: B7G0121
Date Extracted: 31-Jul-2017 12:30

Lab Sample: B7G0121-MS1/B7G0121-MSD1
Date Analyzed: 02-Aug-17 11:33 Column: BEH C18
02-Aug-17 11:44 Column: BEH C18

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit
PFBS	88.5	92.5		89.1	96.6	4.34		70 - 130	25
PFHxA	88.5	98.9		89.1	107	7.87		70 - 130	25
PFHpA	88.5	100.0		89.1	99.1	0.904		70 - 130	25
PFHxS	88.5	90.1		89.1	88.6	1.68		70 - 130	25
PFOA	88.5	**131**	B, H	89.1	121	7.94	B	70 - 130	25
PFOS	88.5	89.7		89.1	97.3	8.13		70 - 130	25
PFNA	88.5	99.2		89.1	92.9	6.56		70 - 130	25
PFDA	88.5	105		89.1	105	0		70 - 130	25
MeFOSAA	88.5	101		89.1	97.8	3.22		70 - 130	25
PFUnA	88.5	105		89.1	116	9.95		70 - 130	25
EtFOSAA	88.5	91.7		89.1	99.6	8.26		70 - 130	25
PFDoA	88.5	104		89.1	98.8	5.13		70 - 130	25
PFTrDA	88.5	103		89.1	110	6.57		60 - 130	25
PFTeDA	88.5	99.3		89.1	103	3.66		70 - 130	25

	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
IS	13C3-PFBS	126		129	
IS	13C2-PFHxA	98.0		97.6	
IS	13C4-PFHpA	68.0		75.5	
IS	18O2-PFHxS	106		111	
IS	13C2-PFOA	82.4		88.5	
IS	13C8-PFOS	106		99.5	
IS	13C5-PFNA	74.4		80.5	
IS	13C2-PFDA	88.6		72.6	
IS	d3-MeFOSAA	84.3		100	
IS	13C2-PFUnA	77.0		84.0	
IS	d5-EtFOSAA	90.5		98.9	
IS	13C2-PFDoA	86.1		97.8	
IS	13C2-PFTeDA	79.2		93.8	

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: Upstream-Culvert-109-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
P ame:	. etra . ech	Matrix:	SurWace R ater	Lab Sample:	1700o22-03	Date v ecei5ed:	22-Jul-2017 f :4N
j rHEct:	P AR C . rentHh	Sample Size:	06l1o L	QC Batch:	B7G0121	Date Extracted:	31-Jul-2017 12:30
Date CHlected:	21-Jul-2017 12:44			Date Analyzed:	02-Aug-17 12:3o CHlumn: BE8 C1f		
LHcatiHn:	P AR C . v EP . 9 P						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
j OBS	F76l	16fo	462.4	f6NN	
j O8 xA	2N4	263.0	462.4	f6NN	
j O8 pA	o263	06F23	462.4	f6NN	
j O8 xS	NNo	06ooo	462.4	f6NN	
j O9 A	7o62	06Ff7	462.4	f6NN	B
j O9 S	o37	06f41	462.4	f6NN	
j OP A	306N	06f4N	462.4	f6NN	
j ODA	376l	164.7	462.4	f6NN	
MeO9 SAA	P D	167N	462.4	f6NN	
j O, nA	106l	16l1	462.4	f6NN	
EtO9 SAA	P D	16NN	462.4	f6NN	
j ODHA	N62N	06f34	462.4	f6NN	J
j O. rDA	P D	0641.1	462.4	f6NN	
j O. eDA	P D	067oF	462.4	f6NN	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-j OBS	122	40 - 140	
IS	13C2-j O8 xA	oN6o	40 - 140	
IS	13CN-j O8 pA	716o	40 - 140	
IS	1f9 2-j O8 xS	112	40 - 140	
IS	13C2-j O9 A	o16f	40 - 140	
IS	13Cf-j O9 S	107	40 - 140	
IS	13C4-j OP A	746.3	40 - 140	
IS	13C2-j ODA	736.7	40 - 140	
IS	d3-MeO9 SAA	4o64	40 - 140	
IS	13C2-j O, nA	FN64	40 - 140	
IS	d4-EtO9 SAA	F36F	40 - 140	
IS	13C2-j ODHA	F26o	40 - 140	
IS	13C2-j O. eDA	706f	40 - 140	

DL - DetectiHn limit

v L - v epHrting limit

LCL-, CL - LHUer cHntrH limit - upper cHntrHl limit

v ewultwrepHted tHDL6

R hen repHtedsj OBSsj O8 xSsj O9 A and j O9 S include bHth linear and branched iwHmerv6

9 nly the linear iwHmer iwrepHted Wr all Hther analytev6

Sample ID: FRB03-20170721

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 21-Jul-2017 13:25
Location: NAWC TRENTON

Sample Data

Matrix: De-ionized Water
Sample Size: 0.110 L

Laboratory Data

Lab Sample: 1700922-04 Date Received: 22-Jul-2017 8:54
QC Batch: B7G0121 Date Extracted: 31-Jul-2017 12:30
Date Analyzed: 02-Aug-17 12:49 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	2.03	5.68	9.08	
PFHxA	ND	2.47	5.68	9.08	
PFHpA	ND	0.671	5.68	9.08	
PFHxS	ND	1.07	5.68	9.08	
PFOA	ND	0.739	5.68	9.08	
PFOS	ND	0.916	5.68	9.08	
PFNA	ND	0.919	5.68	9.08	
PFDA	ND	1.69	5.68	9.08	
MeFOSAA	ND	1.87	5.68	9.08	
PFUnA	ND	1.19	5.68	9.08	
EtFOSAA	ND	1.55	5.68	9.08	
PFDoA	ND	0.899	5.68	9.08	
PFTrDA	ND	0.560	5.68	9.08	
PFTeDA	ND	0.857	5.68	9.08	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	135	50 - 150	
IS	13C2-PFHxA	104	50 - 150	
IS	13C4-PFHpA	78.9	50 - 150	
IS	18O2-PFHxS	114	50 - 150	
IS	13C2-PFOA	90.8	50 - 150	
IS	13C8-PFOS	110	50 - 150	
IS	13C5-PFNA	91.6	50 - 150	
IS	13C2-PFDA	89.2	50 - 150	
IS	d3-MeFOSAA	77.5	50 - 150	
IS	13C2-PFUnA	80.7	50 - 150	
IS	d5-EtFOSAA	75.8	50 - 150	
IS	13C2-PFDoA	90.5	50 - 150	
IS	13C2-PFTeDA	95.3	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: RB08-20170720

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
5 ame:	Tetra Tech	Matrix:	De-i4nized H ater	Lab Sample:	1700j 22-0R	Date 8 eceiWed:	22-Jul-2017 o:Rv
Nr4Rect:	5 AH C Trent4n	Sample Size:	0.11j L	QC Batch:	B7G0121	Date Extracted:	31-Jul-2017 12:30
Date C4llected:	20-Jul-2017 j :00			Date Analyzed:	02-Aug-17 13:00 C4lumn: BE9 C1o		
L4cati4n:	5 AH C T8 E5 TO5						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
NFBS	5 D	1.oo	R2R	o.v1	
NF9 xA	5 D	2.2j	R2R	o.v1	
NF9 pA	5 D	0.621	R2R	o.v1	
NF9 xS	5 D	0.j j R	R2R	o.v1	
NFOA	5 D	0.6ov	R2R	o.v1	
NFOS	5 D	0.ovo	R2R	o.v1	
NF5 A	5 D	0.oRl	R2R	o.v1	
NFDA	5 D	1.R7	R2R	o.v1	
MeFOSAA	5 D	1.73	R2R	o.v1	
NFUnA	5 D	1.10	R2R	o.v1	
EtFOSAA	5 D	1.vv	R2R	o.v1	
NFD4A	5 D	0.o32	R2R	o.v1	
NFTrDA	5 D	0.Rlj	R2R	o.v1	
NFTeDA	5 D	0.7j v	R2R	o.v1	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-NFBS	130	R0 - 1R0	
IS	13C2-NF9 xA	103	R0 - 1R0	
IS	13Cv-NF9 pA	7R.0	R0 - 1R0	
IS	1oO2-NF9 xS	j 0.7	R0 - 1R0	
IS	13C2-NFOA	oR.3	R0 - 1R0	
IS	13Co-NFOS	j j .6	R0 - 1R0	
IS	13CR-NF5 A	o2.R	R0 - 1R0	
IS	13C2-NFDA	oR.7	R0 - 1R0	
IS	d3-MeFOSAA	R6.0	R0 - 1R0	
IS	13C2-NFUnA	70.v	R0 - 1R0	
IS	dR-EtFOSAA	RR.7	R0 - 1R0	
IS	13C2-NFD4A	62.v	R0 - 1R0	
IS	13C2-NFTeDA	77.0	R0 - 1R0	

DL - Detecti4n limit

8 L - 8 ep4rting limit

LCL-UCL - L4wer c4ntr4l limit - upper c4ntr4l limit

8 esults rep4rted t4 DL.

H hen rep4rted, NFBS, NF9 xS, NFOA and NFOS include b4th linear and branched is4mers.

Only the linear is4mer is rep4rted f4r all 4ther analytes.

Sample ID: RB09-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
5 ame:	j etra j ech	Matrix:	De-i4nized H ater	Lab Sample:	1700. 22-0O	Date 8 eceiWed:	22-Jul-2017 o:Rv
Nr4Rect:	5 AH C j rent4n	Sample Size:	0TI17 L	QC Batch:	B7G0121	Date Extracted:	31-Jul-2017 12:30
Date C4llected:	21-Jul-2017 13:00			Date Analyzed:	02-Aug-17 13:11 C4lumn: BE9 C1o		
L4cati4n:	5 AH C j 8 E5 j F 5						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
N6BS	5 D	1T 2	RBv	oTRO	
N69 xA	5 D	2TB3	RBv	oTRO	
N69 pA	5 D	0TD33	RBv	oTRO	
N69 xS	5 D	1TD1	RBv	oTRO	
N6F A	5 D	0TD. 7	RBv	oTRO	
N6F S	5 D	0TbOv	RBv	oTRO	
N65 A	5 D	0TbO7	RBv	oTRO	
N6DA	5 D	1TD0	RBv	oTRO	
Me6F SAA	5 D	1T77	RBv	oTRO	
N6UnA	5 D	1TI2	RBv	oTRO	
Et6F SAA	5 D	1Tv7	RBv	oTRO	
N6D4A	5 D	0Tbvo	RBv	oTRO	
N6j rDA	5 D	0TR2.	RBv	oTRO	
N6j eDA	5 D	0Tb0o	RBv	oTRO	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-N6BS	1R0	R0 - 1R0	
IS	13C2-N69 xA	101	R0 - 1R0	
IS	13Cv-N69 pA	73TB	R0 - 1R0	
IS	1oF 2-N69 xS	101	R0 - 1R0	
IS	13C2-N6F A	. 7TB	R0 - 1R0	
IS	13Co-N6F S	10R	R0 - 1R0	
IS	13CR-N65 A	ooTD	R0 - 1R0	
IS	13C2-N6DA	7OTB	R0 - 1R0	
IS	d3-Me6F SAA	71TD	R0 - 1R0	
IS	13C2-N6UnA	7. Tb	R0 - 1R0	
IS	dR-Et6F SAA	ObT	R0 - 1R0	
IS	13C2-N6D4A	o0TD	R0 - 1R0	
IS	13C2-N6j eDA	73TB	R0 - 1R0	

DL - Detecti4n limit

8 L - 8 ep4rting limit

LCL-UCL - L4wer c4ntr4l limit - upper c4ntr4l limit

8 esults rep4rted t4 DLT

H hen rep4rted, N6BS, N69 xS, N6F A and N6F S include b4th linear and branched is4mersT

F nly the linear is4mer is rep4rted f4r all 4ther analytesT

Sample ID: Method Blank — Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7H0074	Lab Sample:	B7H0074-BLK1
Sample Size:	0.125 L	Date Extracted:	10-Aug-2017 8:51	Date Analyzed:	11-Aug-17 19:40 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFOA	ND	0.651	5.00	8.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C2-PFOA	95.8	50 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

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

Only the linear isomer is reported for all other analytes.

Sample ID: OPR

Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7H0074	Lab Sample:	B7H0074-BS1
Sample Size:	0.125 L	Date Extracted:	10-Aug-2017 8:51	Date Analyzed:	11-Aug-17 19:08 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
PFOA	79.2	80.0	99.0	70 - 130	IS	13C2-PFOA	108	50 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: MH-L103-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Surface Water	Lab Sample:	1700922-01	Date Received:	22-Jul-2017 8:54
Project:	NAWC Trenton	Sample Size:	0.0806 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date Collected:	21-Jul-2017 10:30			Date Analyzed:	11-Aug-17 21:37	Column:	BEH C18
Location:	NAWC TRENTON						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFOA	3.00	1.01	7.75	12.4	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C2-PFOA	95.2	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-N104-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Surface Water	Lab Sample:	1700922-02	Date Received:	22-Jul-2017 8:54
Project:	NAWC Trenton	Sample Size:	0.108 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date Collected:	21-Jul-2017 11:40			Date Analyzed:	11-Aug-17 21:48	Column:	BEH C18
Location:	NAWC TRENTON						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFOA	7.90	0.752	5.79	9.24	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C2-PFOA	98.5	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.

Matrix Spike Results

Modified EPA Method 537

Source Client ID:	MH-N104-20170721	QC Batch:	B7H0074	Lab Sample:	B7H0074-MS1/B7H0074-MSD1
Source LabNumber:	1700922-02	Date Extracted:	10-Aug-2017 8:51	Date Analyzed:	11-Aug-17 20:34 Column: BEH C18
Matrix:	Aqueous				11-Aug-17 20:44 Column: BEH C18
Sample Size:	0.113/0.109 L				

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit
PFOA	88.2	111		91.8	107	3.67		70 - 130	25

	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
IS	13C2-PFOA	92.7		97.7	

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: Upstream-Culvert-109-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Surface Water	Lab Sample:	1700322-06	Date Received:	22-Jul-2017 8:54
Project:	NAWC Trenton	Sample Size:	0.104 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date Collected:	21-Jul-2017 12:55			Date Analyzed:	11-Aug-17 21:53 Column: BEH C18		
Location:	NAWC TRENT9 N						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PO9 A	38.F	0.786	F.01	3.F2	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	16C2-PO9 A	87.4	50 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, POBS, POHxS, PO9 A and PO9 S include both linear and branched isomers.

9 nly the linear isomer is reported for all other analytes.

Sample ID: FRB03-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	De-ionized Water	Lab Sample:	1700922-04	Date Received:	22-Jul-2017 8:54
Project:	NAWC Trenton	Sample Size:	0.116 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date Collected:	21-Jul-2017 13:25			Date Analyzed:	11-Aug-17 22:10	Column:	BEH C18
Location:	NAWC TRENTON						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFOA	ND	0.700	5.39	8.61	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C2-PFOA	101	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: RB08-20170720

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
v ame:	j etra j ech	Matrix:	De-i3nized o ater	Lab Sample:	1700P22-05	Date f eceiWed:	22-Rul-2017 8:54
J r3Nect:	v Ao C j rent3n	Sample Size:	0TI22 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date C3llected:	20-Rul-2017 P:00			Date Analyzed:	11-Aug-17 22:20	C3lumn:	BEH C18
L3cati3n:	v Ao C j f Ev j . v						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
J6. A	v D	0'P97	5TI2	8TIP	

Labeled Standard	%R	LCL-UCL	Qualifiers
,S 1I C2-J6. A	10I	50 - 150	

DL - Detecti3n limit

f L - f ep3rting limit

LCL-OCL - L3F er c3ntr3l limit - upper c3ntr3l limit

f eUiltUrep3rted t3 DLT

o hen rep3rtedwJ6BSwJ6HxSwJ6. A and J6. S include b3th linear and branched iU3merUT

. nly the linear iU3mer iUrep3rted s3r all 3ther analyteUT

Sample ID: RB09-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	De-ionized Water	Lab Sample:	1700622-09	Date Received:	22-Jul-2017 8:54
Project:	PARC Trent Woods	Sample Size:	0.120 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date Collected:	21-Jul-2017 10:00			Date Analyzed:	11-Aug-17 22:01	Column: BEH C18	
Location:	PARC Tv EP TOP						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFOA	ND	0.977	5.21	8.02	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C2-PFOA	88.8	50 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to MDL.

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

Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

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

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

NELAP Accredited Test Methods

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

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

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

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

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

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

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: 1700922 Temp: 2.0 °C
Storage ID: WR-8 Storage Secured: Yes ☑ No ☐

TAT (check one): Standard: ☐ 21 days; Rush (surcharge may apply): ☐ 14 days ☐ 7 days Specify:

Project ID: NAWC TRENTON PO#: 1132541-WR3 Sampler: CHUCK MEYER (name)

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
TETRA TECH	FOSTER PLAZA 7	661 ANDERSON DRIVE	PITTSBURGH	PA 15220	412-921-2090	412-921-4040

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Charles Meyer	7/21/17	17:00	B. Benedict	07/22/17	0857
Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
	7/21/17	18:00			

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: FED EX

Tracking No.: 6612199273 67

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	Mod. EPA Method 537: PFOA/PFOS	UCMR3 PFAS List:6	537 List: 14	Full List of 26	Other: Please List Below	EPA Method 537(DW only): PFOA/PFOS	UCMR3 PFAS List:6	PFAS List: 14	Comments
MH-L103-20170721	7/21/17	10:30	NAWC TRENTON	2	G	SW								X	
MH-N104-20170721	7/21/17	11:40	NAWC TRENTON	6	G	SW								X	MS/MSD
UPSTREAM-CULVERT-109-20170721	7/21/17	12:55	NAWC TRENTON	2	G	SW								X	
FRB03-20170721	7/21/17	13:25	NAWC TRENTON	2	G	DI								X	LAB SUPPLIED WATER
RB08-20170720	7/20/17	09:00	NAWC TRENTON	2	G	DI								X	
RB09-20170721	7/21/17	13:00	NAWC TRENTON	2	G	DI								X	

Special Instructions/Comments:

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:
Email: mary.mang@tetratech.com

Container Types: P= HDPE, PJ= HDPE Jar
O = Other:

Bottle Preservation Type: T = Thiosulfate,
TZ = Trizma:

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

Vista Analytical Laboratory

Sample Log-in Checklist

Vista Work Order #: 1700922 TAT Std

Samples Arrival:	Date/Time 07/22/17 0854	Initials: BLB	Location: WR-2 Shelf/Rack: NA
Logged In:	Date/Time 07/22/17 1019	Initials: BLB	Location: WR-2 Shelf/Rack: E5

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

Temp °C: 2.4 (uncorrected)	Time: 0857	Thermometer ID: IR-2
Temp °C: 2.0 (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 7367	✓		
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: Samples MH-L103-20170721 } Particulate Present
MH-N104-20170721

Correspondence

Karen Volpendesta

From: Karen Volpendesta
Sent: Tuesday, July 25, 2017 8:19 AM
To: Mang, Mary (Mary.Mang@tetratech.com); Ritchie, Megan (Megan.Ritchie@tetratech.com)
Cc: Martha Maier
Subject: Vista Work Order #1700922; NAWC Trenton
Attachments: WO# 1700922_Acklet.pdf

Mary,

Please find attached the sample receiving acknowledgement for Vista Analytical Work Order: 1700922.

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.

EXTRACTION INFORMATION

Process Sheet

Workorder: 1700922

Prep Expiration: 2017-Aug-03
Client: Tetra Tech

Workorder Due: 14-Aug-17 00:00

TAT: 23

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

Prep Batch: B7G0121

Prep Data Entered: 8/2/17 JC
Date and Initials

Version: 537 (14 Analyte)

Initial Sequence: _____

LabSampleID		Recon	ClientSampleID	Date Received	Location	Comments
1700922-01	A	☑	MH-L103-20170721	22-Jul-17 08:54	WR-2 E-5	
1700922-02	ABC	☑	MH-N104-20170721	22-Jul-17 08:54	WR-2 E-5	**MS/MSD**
1700922-03	A	☑	Upstream-Culvert-109-20170721	22-Jul-17 08:54	WR-2 E-5	
1700922-04	A	☑	FRB03-20170721	22-Jul-17 08:54	WR-2 E-5	
1700922-05	A	☑	RB08-20170720	22-Jul-17 08:54	WR-2 E-5	
1700922-06	A	☑	RB09-20170721	22-Jul-17 08:54	WR-2 E-5	

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

Vista PM: Martha Maier

Vial Box ID: Tequila Mocking Bird

Sample Reconciled By: HB 7/31/17 / /

Page 1 of 1

Vista Analytical Laboratory

HRMS - 8

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
7/31/17	✓	1.00	100.01	2000.04	HB	y
8/1/17	✓	1.00	100.00	2000.00	HB	y
8/2/17	✓	0.99	100.00	2000.01	HB	y
Ⓐ 8/3/17	✓	1.00	100.00	2000.05	HB	y

Comments: Ⓐ calibration weights from air lab used because soil lab weights sent out for calibration. HB 8/3/17

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

Batch: B7G0121

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1700922-01	0.10565	NA	NA	1000	31-Jul-17 12:30	HAC			Surface Water	537M PFAS DOD (LOQ as
1700922-02	0.11025			1000	31-Jul-17 12:30	HAC			Surface Water	537M PFAS DOD (LOQ as
1700922-02	0.11025			1000	31-Jul-17 12:30	HAC			Surface Water	537M PFAS
1700922-03	0.11852			1000	31-Jul-17 12:30	HAC			Surface Water	537M PFAS DOD (LOQ as
1700922-04	0.11017			1000	31-Jul-17 12:30	HAC			De-ionized Water	537M PFAS DOD (LOQ as
1700922-05	0.11893			1000	31-Jul-17 12:30	HAC			De-ionized Water	537M PFAS DOD (LOQ as
1700922-06	0.11676			1000	31-Jul-17 12:30	HAC			De-ionized Water	537M PFAS DOD (LOQ as
1700925-01	0.12112			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700925-02	0.12178			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700925-03	0.12135			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700925-04	0.1192			1000	31-Jul-17 12:30	HAC			Water	537M PFAS
1700925-04	0.1192			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700925-05	0.1174			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700925-06	0.1185			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700929-01	0.11834			1000	31-Jul-17 12:30	HAC			QC Water	537M PFAS DOD (LOQ as
1700929-02	0.1157			1000	31-Jul-17 12:30	HAC			QC Water	537M PFAS DOD (LOQ as
1700938-01	0.11844			1000	31-Jul-17 12:30	HAC			Groundwater	537M PFAS DOD (LOQ as
1700938-02	0.12014			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700938-03	0.11247			1000	31-Jul-17 12:30	HAC			Groundwater	537M PFAS DOD (LOQ as
B7G0121-BLK1	0.125			1000	31-Jul-17 12:30	HAC				QC
B7G0121-BS1	0.125			1000	31-Jul-17 12:30	HAC	17D2705	10		QC
B7G0121-MS1	0.11301			1000	31-Jul-17 12:30	HAC	17D2705	10		QC
B7G0121-MS2	0.11554			1000	31-Jul-17 12:30	HAC	17D2705	10		QC
B7G0121-MSD1	0.11225			1000	31-Jul-17 12:30	HAC	17D2705	10		QC
B7G0121-MSD2	0.11866			1000	31-Jul-17 12:30	HAC	17D2705	10		QC

JL 8/2/17

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS

Method: 537M PFAS DOD (LOO as mRL)

B7G0121

Chemist: G. Mendiola

Prep Date/Time: ~~26~~ 31-Jul-17 ~~07:48~~ 12:30

dm 7/31/17 dm 7/31/17

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 (C7H0003)	RS CHEM/WIT DATE
☐	B7G0121-BLK1	5	2	0	2	NA	NA	(0.125)	dm KBF 7/31/17	TC 7/31/17	dm TC 7/31/17
☐	B7G0121-BS1	5	2	0	2	↓	↓	↓			
☐	B7G0121-MS1 1700922-02 (A)(B)(C)(D)	6	2	0	2	139.85	26.84	0.11301			
☐	B7G0121-MS2 1700925-04 (A)(D)	6	2	0	9	143.28	27.74	0.11554			
☐	B7G0121-MSD1 1700922-02 (A)(B)(C)(D)	6	2	0	6	139.21	26.96	0.11225			
☐	B7G0121-MSD2 1700925-04 (A)(D)	6	2	0	6	146.37	27.71	0.11866			
☐	1700922-01 (A)(B)(C)(D)	7	2	0	6	132.56	26.91	0.10565			
☐	1700922-02 (A)(B)(C)(D)	6	2	0	6	137.13	~~26.88~~ 26.88	0.11025			
☐	1700922-03 (A)(B)(D)	5	2	0	3	145.47	26.95	0.11852			
☐	1700922-04	5	2	0	2	136.92	26.75	0.11017			
☐	1700922-05	5	2	0	2	145.80	26.87	0.11893			
☐	1700922-06	5	2	0	2	143.50	26.74	0.11676			
☐	1700925-01 (A)	6	2	0	2	149.23	28.11	0.12112			
☐	1700925-02	5	2	0	2	149.37	27.59	0.12178			
☐	1700925-03 (A)	6	2	0	2	148.95	27.60	0.12135			

(A) sample was centrifuged to remove particulate. HB 7/31/17 (B) centrifuge solids extracted & placed in secondary container HB 7/31/17

IS Name (VS)	NS Name (V1)	RS Name (V1)		
17G1307, 10mL	17D2705, 10mL	17F3038, 10 mL	SPE Chem: Strata XAW 33µm 200mg 6mL Ele SOLV: 0.5% NH4OH in MeOH/MeOH Final Volume(s): 1mL	Check Out: Chemist/Date: HB 7/31/17 Check In: Chemist/Date: empty Balance ID: HRMS-8 pH Adjusted: Chemist/Date: HB 7/31/17

Comments: Assume 1 g = 1 mL (C) samples were centrifuged twice. HB 7/31/17 (D) sample was foamy after HCl added. HB 7/31/17

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS

Method: 537M PFAS DOD (LOO as mRL)

B7G0121

Chemist: G. Mendoza

Prep Date/Time: ~~26~~ 31-Jul-17 ~~07:48~~ 12:30

~~em~~ 7/31/17 em 7/31/17

Prepared using: LCMS - SPE Extraction-LCMS

C7170003

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
☐	1700925-04 (A)(D)	6	2	0	4	146.62	27.42	0.11920	em KBF 7/31/17	7/c 7/31/17	em 7/c 7/31/17
☐	1700925-05 (A)(D)	7	2	0	2	144.83	27.43	0.11740			
☐	1700925-06	5	2	0	2	145.92	27.42	0.11950			
☐	1700929-01	5	2	0	2	145.38	27.04	0.11534			
☐	1700929-02	5	2	0	2	142.98	26.78	0.11570			
☐	1700938-01 (A)	5	2	0	2	145.74	27.30	0.11644			
☐	1700938-02	5	2	0	5	147.18	27.04	0.12014			
☐	1700938-03	6	2	0	5	139.49	27.02	0.11247			

(A) sample was centrifuged to remove particulate. HB 7/31/17 (D) sample was foamy after HCl added HB 7/31/17

IS Name	NS Name	RS Name		
17G1307, 10mL (V5)	17D2705, 10mL (V1)	17F3038, 10mL (V1)	SPE Chem: Strata X-AW 33µm 200mg 6mL 7/c 8:1-MeOH 0.5% Ele SOLV: ~~0.5%~~ NH4OH in MeOH/MeOH Final Volume(s) 1mL	Check Out: Chemist/Date: HB 7/31/17 Check In: Chemist/Date: empty Balance ID: HRMJ-8 pH Adjusted: Chemist/Date: HB 7/31/17

Comments: Assume 1 g = 1 mL

Rx

Process Sheet

Workorder: 1700922

Prep Expiration: 2017-Aug-03
Client: Tetra Tech

Workorder Due: 14-Aug-17 00:00

TAT: 23

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

Prep Batch: B7H0074

Prep Data Entered: 8/11/17 [illegible]
Date and Initials

Version: 537 (14 Analyte)

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700922-01	☑	MH-L103-20170721	22-Jul-17 08:54	WR-2 E-5	125
1700922-02	☑	MH-N104-20170721	22-Jul-17 08:54	WR-2 E-5	**MS/MSD**
1700922-03	☑	Upstream-Culvert-109-20170721	22-Jul-17 08:54	WR-2 E-5	
1700922-04	☑	FRB03-20170721	22-Jul-17 08:54	WR-2 E-5	
1700922-05	☑	RB08-20170720	22-Jul-17 08:54	WR-2 E-5	
1700922-06	☑	RB09-20170721	22-Jul-17 08:54	WR-2 E-5	

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

Vista PM:Martha Maier

Vial Box ID: Reptillary

Sample Reconciled By: BP 8/10/17

Page 1 of 1

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	Acceptab (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
7/31/17	✓	1.00	100.01	2000.04	HB	Y
8/1/17	✓	1.00	100.00	2000.00	HB	Y
8/2/17	✓	0.99	100.00	2000.01	HB	Y
(A) 8/3/17	✓	1.00	100.00	2000.05	HB	Y
8/4/17	✓	1.00	100.04	2000.06	EL	Y
(A) 8/7/17		1.00	100.00	1999.99	KBF	Y
8/8/17		0.99	99.99	1999.98	EL	Y
(A) 8/9/17		1.00	100.01	1999.99	KBF	Y
(A) 8/10/17	✓	1.00	99.99	2000.01	TD	Y
(A) 8.11.17		1.00	100.00	1999.97	MC	Y

Comments: (A) calibration weights from air lab used because soil lab wei sent out for calibration. HB 8/3/17

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

Batch: B7H0074

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1700922-01RE1	0.0806	NA	NA	1000	10-Aug-17 08:51	BAP			Surface Water	537M PFAS DOD (LOQ as
1700922-02RE1	0.10828			1000	10-Aug-17 08:51	BAP			Surface Water	537M PFAS DOD (LOQ as
1700922-03RE1	0.1039			1000	10-Aug-17 08:51	BAP			Surface Water	537M PFAS DOD (LOQ as
1700922-04RE1	0.11621			1000	10-Aug-17 08:51	BAP			De-ionized Water	537M PFAS DOD (LOQ as
1700922-05RE1	0.12208			1000	10-Aug-17 08:51	BAP			De-ionized Water	537M PFAS DOD (LOQ as
1700922-06RE1	0.1202			1000	10-Aug-17 08:51	BAP			De-ionized Water	537M PFAS DOD (LOQ as
1700925-01RE1	0.12168			1000	10-Aug-17 08:51	BAP			Water	537M PFAS DOD (LOQ as
1700925-02RE1	0.11277			1000	10-Aug-17 08:51	BAP			Water	537M PFAS DOD (LOQ as
1700925-03RE1	0.11014			1000	10-Aug-17 08:51	BAP			Water	537M PFAS DOD (LOQ as
1700925-06RE1	0.1402			1000	31-Jul-17 12:30	BAP			Water	537M PFAS DOD (LOQ as
1700929-01RE1	0.12069			1000	10-Aug-17 08:51	BAP			QC Water	537M PFAS DOD (LOQ as
1700929-02RE1	0.11668			1000	10-Aug-17 08:51	BAP			QC Water	537M PFAS DOD (LOQ as
1700938-01RE1	0.11287			1000	10-Aug-17 08:51	BAP			Groundwater	537M PFAS DOD (LOQ as
1700938-02RE1	0.11825			1000	10-Aug-17 08:51	BAP			Water	537M PFAS DOD (LOQ as
1700938-03RE1	0.11598			1000	10-Aug-17 08:51	BAP			Groundwater	537M PFAS DOD (LOQ as
B7H0074-BLK1	0.125			1000	10-Aug-17 08:51	BAP				QC
B7H0074-BS1	0.125			1000	10-Aug-17 08:51	BAP	17G2428	10		QC
B7H0074-MS1	0.11333			1000	10-Aug-17 08:51	BAP	17G2428	10		QC
B7H0074-MSD1	0.10895			1000	10-Aug-17 08:51	BAP	17G2428	10		QC

JK 8/11/17

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS DOD (LOO as mRL)

B7H0074

Chemist: BP

Prep Date/Time: 10-Aug-17 08:51

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 (NA)	RS CHEM/WIT DATE
☐	B7H0074-BLK1	5	2	0	2	NA	NA	(0.125)	BP 8.10.17	BP 8.10.17	BP BP 8/10/17
☐	B7H0074-BS1	5	2	0	2	↓	↓	↓			
☐	B7H0074-MS1 (A) 1700922-02RE1	5	2	0	2	~~135.89~~	26.94	0.11333			
☐	B7H0074-MSD1 (A) 1700922-02RE1	5	2	0	2	135.89	26.94	0.10895			
☐	1700922-01RE1 (A)	5	2	0	2	107.41	26.81	0.08060			
☐	1700922-02RE1 (A)	5	2	0	2	135.17	26.89	0.10828			
☐	1700922-03RE1 (A)	5	2	0	2	130.91	27.01	0.10390			
☐	1700922-04RE1	5	2	0	2	142.93	26.72	0.11621			
☐	1700922-05RE1	5	2	0	2	149.05	26.97	0.12208			
☐	1700922-06RE1	5	2	0	2	146.92	26.72	0.12020			
☐	1700925-01RE1	6	2	0	2	149.86	28.18	0.12168			
☐	1700925-02RE1	5	2	0	2	140.45	27.68	0.11277			
☐	1700925-03RE1 (A)	6	2	0	2	137.76	27.62	0.11014			
☐	1700929-01RE1	6	2	0	2	147.61	26.92	0.12069			
☐	1700929-02RE1	5	2	0	2	143.47	26.79	0.11668			
☐	1700938-01RE1 (A)	6	2	0	–	140.00	27.13	0.11287			

IS Name: 17G1307, 10uL (V2)

NS Name: 17G2428, 10uL (V3)

RS Name: 17H0108, 10uL (V2)

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

Ele SOLV: 0.5% NH4OH in MeOH/MeOH

Final Volume(s): 1mL

Check Out: Chemist/Date: BP 8.10.17

Check In: Chemist/Date: Empty

Balance ID: HRMS-8

pH Adjusted: Chemist/Date: HB 8/10/17

Comments: Assume 1 g = 1 mL (A) Samples were centrifuged to remove particulate BP 8.10.17

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS DOD (LOO as mRL)

B7H0074

Chemist: BP

Prep Date/Time: 10-Aug-17 08:51

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 (NA)	RS CHEM/WIT DATE
☐	1700938-02RE1	5	2	0	2	145.16	26.91	0.11825	BP 8.10.17	BP 8.10.17	BP 8.10.17
☐	1700938-03RE1	6	2	0	2	143.06	27.08	0.11598	↓	↓	↓

IS Name	NS Name	RS Name		
17G1307, 10/6 (12)	1762428, 10/6 (13)	17H0109, 6/6 (12)	SPE Chem: Strata X-AW 33um 200mg/6mL Ele SOLV: 0.3% NH4OH in MeCN/MeOH Final Volume(s) 1mL	Check Out: Chemist/Date: HB 8/10/17 Check In: Chemist/Date: empty Balance ID: MRMS8 pH Adjusted: Chemist/Date: HB 8/10/17

Comments: Assume 1 g = 1 mL

SAMPLE DATA – MODIFIED EPA METHOD 537

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-6.qld

Last Altered: Tuesday, August 08, 2017 13:50:17 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 13:59:07 Pacific Daylight Time

Reviewed: CT 08/09/2017

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 07 Aug 2017 17:59:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_6, Date: 02-Aug-2017, Time: 11:22:55, ID: B7G0121-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		4.82e3	0.125		2.96				
2	4	PFHxA	313.2 > 268.9		1.42e4	0.125		3.19				
3	5	PFHpA	363 > 318.9		3.47e4	0.125		3.45				
4	6	PFHxS	398.9 > 79.6	3.33e1	3.60e3	0.125		3.56	3.49	0.115	0.400	
5	8	PFOA	413 > 368.7	2.31e3	4.35e4	0.125		3.65	3.62	0.664	4.35	
6	10	PFNA	462.9 > 418.8		3.66e4	0.125		3.83				
7	12	PFOS	499 > 79.9	2.03e1	8.84e3	0.125		3.89	3.86	0.0287		
8	13	PFDA	513 > 468.8		3.49e4	0.125		4.01				
9	15	N-MeFOSAA	570.1 > 419		7.90e3	0.125		4.03				
10	16	N-EtFOSAA	584.2 > 419		8.35e3	0.125		4.10				
11	17	PFUnA	562.9 > 518.9		3.43e4	0.125		4.17				
12	19	PFDoA	612.9 > 318.8		4.10e3	0.125		4.34				

GM 8/8/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-6.qld

Last Altered: Tuesday, August 08, 2017 13:50:17 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 13:59:18 Pacific Daylight Time

Reviewed: CT 08/09/2017

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 07 Aug 2017 17:59:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_6, Date: 02-Aug-2017, Time: 11:22:55, ID: B7G0121-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		4.10e3	0.125		4.50				
2	22	PFTeDA	712.9 > 668.8		2.55e4	0.125		4.68				
3	30	13C3-PFBS	302 > 98.8	4.82e3	4.28e4	0.125	0.034	2.96	2.90	0.563	132	132.1
4	31	13C2-PFHxA	315 > 269.8	1.42e4	4.28e4	0.125	0.334	3.19	3.15	1.65	39.6	99.0
5	32	13C4-PFHpA	367.2 > 321.8	3.47e4	4.28e4	0.125	0.414	3.45	3.42	4.05	78.3	78.3
6	33	18O2-PFHxS	403 > 102.6	3.60e3	7.28e3	0.125	0.475	3.56	3.49	6.18	104	104.1
7	35	13C2-PFOA	414.9 > 369.7	4.35e4	3.66e4	0.125	1.298	3.65	3.63	14.9	91.5	91.5
8	36	13C5-PFNA	468.2 > 422.9	3.66e4	3.86e4	0.125	1.094	3.83	3.80	11.8	86.5	86.5
9	38	13C8-PFOS	507 > 79.9	8.84e3	7.29e3	0.125	1.153	3.89	3.85	15.2	105	105.1
10	39	13C2-PFDA	515.1 > 469.9	3.49e4	3.91e4	0.125	1.059	4.01	3.97	11.2	84.3	84.3

GM 8/8/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-6.qld

Last Altered: Tuesday, August 08, 2017 13:50:17 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 13:59:37 Pacific Daylight Time

Reviewed: CT 08/09/2017

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 07 Aug 2017 17:59:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_6, Date: 02-Aug-2017, Time: 11:22:55, ID: B7G0121-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	7.90e3	3.85e4	0.125	0.019	4.03	4.01	2.56	1060	81.7
2	42	d5-N-EtFOSAA	589.3 > 419	8.35e3	3.85e4	0.125	0.019	4.12	4.07	2.71	1140	87.9
3	43	13C2-PFUnA	565 > 519.8	3.43e4	3.85e4	0.125	1.172	4.17	4.14	11.1	76.0	76.0
4	44	13C2-PFDoA	615 > 569.7	4.10e3	3.85e4	0.125	0.118	4.34	4.30	1.33	89.7	89.7
5	46	13C2-PFTeDA	714.8 > 669.6	2.55e4	3.85e4	0.125	0.801	4.68	4.65	8.28	82.6	82.6
6	52	13C5-PFHxA	318 > 272.9	4.28e4	4.28e4	0.125	1.000	3.19	3.15	5.00	40.0	100.0
7	53	13C3-PFHxS	401.9 > 79.9	7.28e3	7.28e3	0.125	1.000	3.56	3.49	12.5	100	100.0
8	54	13C8-PFOA	421.3 > 376	3.66e4	3.66e4	0.125	1.000	3.65	3.63	12.5	100	100.0
9	55	13C9-PFNA	472.2 > 426.9	3.86e4	3.86e4	0.125	1.000	3.83	3.80	12.5	100	100.0
10	56	13C4-PFOS	503 > 79.9	7.29e3	7.29e3	0.125	1.000	3.89	3.86	12.5	100	100.0
11	57	13C6-PFDA	519.1 > 473.7	3.91e4	3.91e4	0.125	1.000	4.01	3.98	12.5	100	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.85e4	3.85e4	0.125	1.000	4.17	4.13	12.5	100	100.0
13	59	Total PFBS	299 > 79.7	0.00e0	4.82e3	0.125		2.96		0.000		
14	60	Total PFHxS	398.9 > 79.6	3.33e1	3.60e3	0.125		3.52		0.115	0.400	
15	61	Total PFOA	413 > 368.7	2.31e3	4.35e4	0.125		3.65		0.664	4.35	
16	62	Total PFOS	499 > 79.9	2.03e1	8.84e3	0.125		3.89		0.000		
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	7.90e3	0.125		4.03		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	8.35e3	0.125		4.17		0.000		

GM 8/8/17

Quantify Totals Report MassLynx MassLynx V4.1 SCN945 SCN960
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-6.qld

Last Altered: Tuesday, August 08, 2017 13:50:17 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 13:59:37 Pacific Daylight Time

Reviewed: CT 08/09/2017

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 07 Aug 2017 17:59:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_6, Date: 02-Aug-2017, Time: 11:22:55, ID: B7G0121-BLK1 Method Blank 0.125, 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	3.49	33.259	3601.977	0.115	bb	0.4

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.62	2312.602	43512.035	0.664	bb	4.3

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.86	20.276	8835.542	0.029	dbl	

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419			7903.898		MM-I	

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419			8345.363		MM-	

GM 8/8/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-6.qld

Last Altered: Tuesday, August 08, 2017 13:50:17 Pacific Daylight Time
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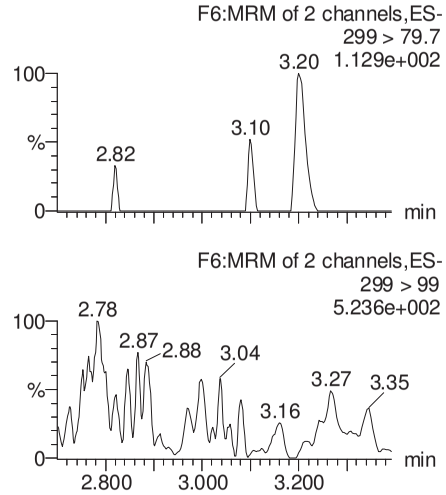
Reviewed: CT 08/09/2017

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 07 Aug 2017 17:59:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_6, Date: 02-Aug-2017, Time: 11:22:55, ID: B7G0121-BLK1 Method Blank 0.125, Description: Method Blank

Total PFBS



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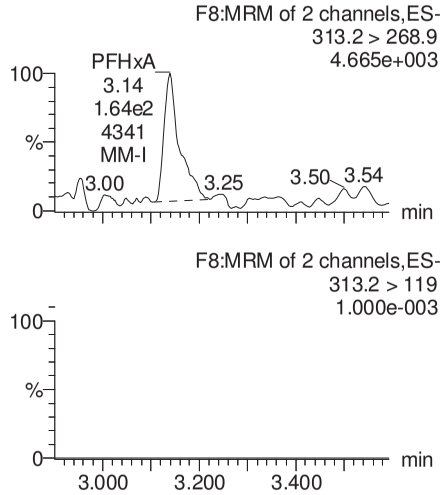

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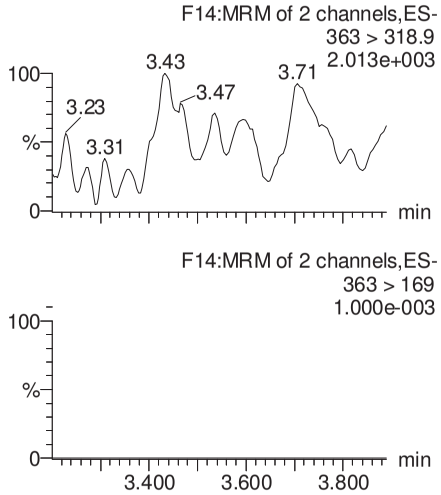

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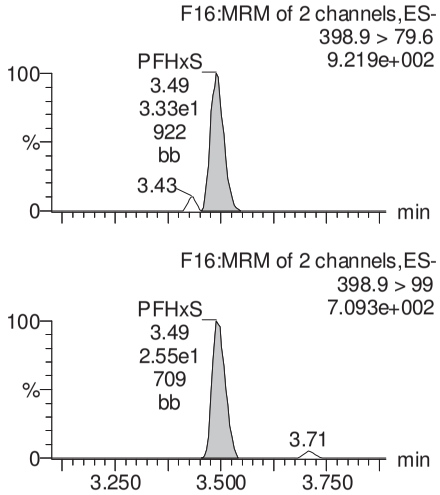
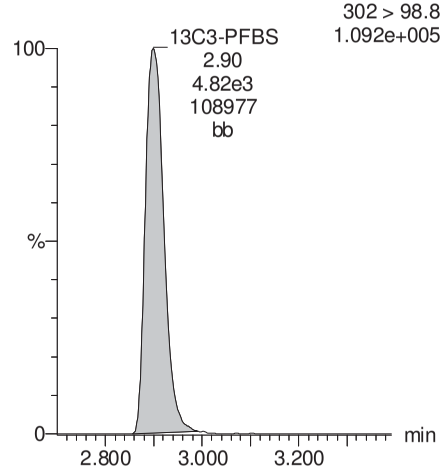


13C3-PFBS



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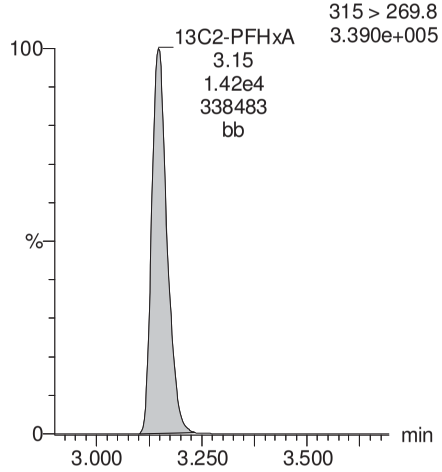

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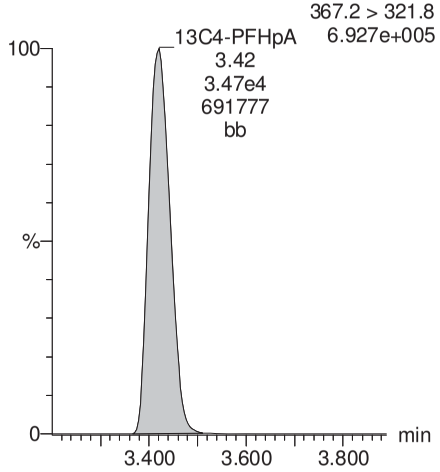

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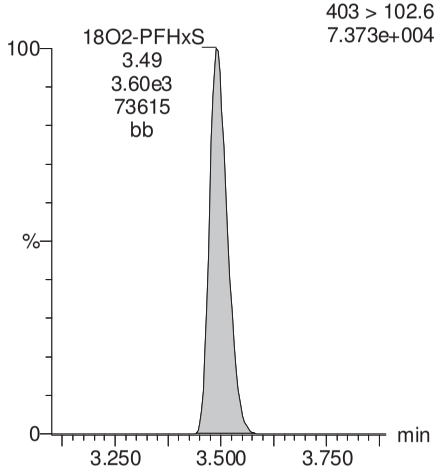


GM 8/8/17

Vista Analytical Laboratory

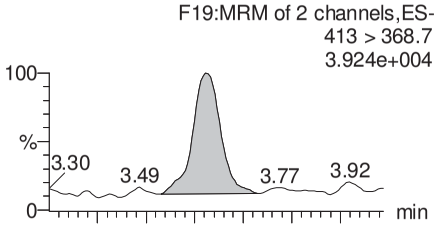
Dataset: U:\Q4.PRO\results\170802M1\170802M1-6.qld

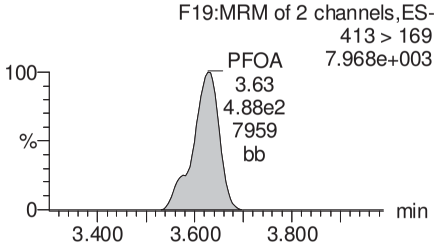
Last Altered: Tuesday, August 08, 2017 13:50:17 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 13:59:37 Pacific Daylight Time

Reviewed: CT 08/09/2017

Name: 170802M1_6, Date: 02-Aug-2017, Time: 11:22:55, ID: B7G0121-BLK1 Method Blank 0.125, Description: Method Blank

Total PFOA





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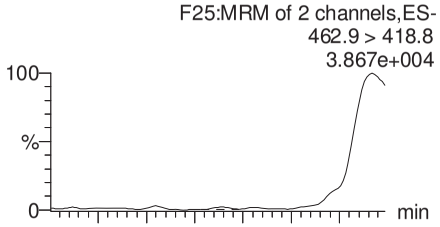
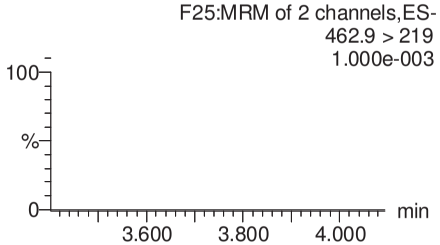
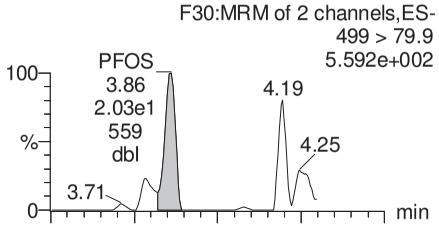
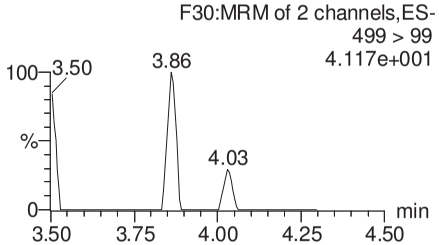




Total PFOS





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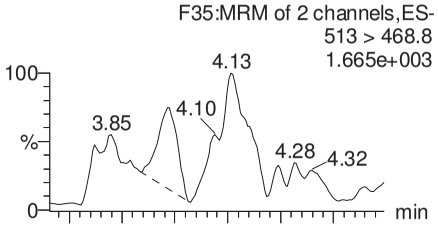
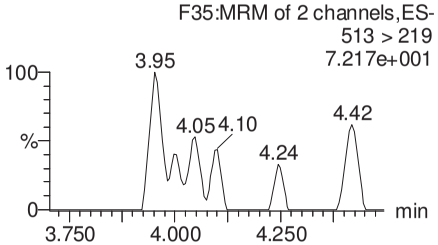
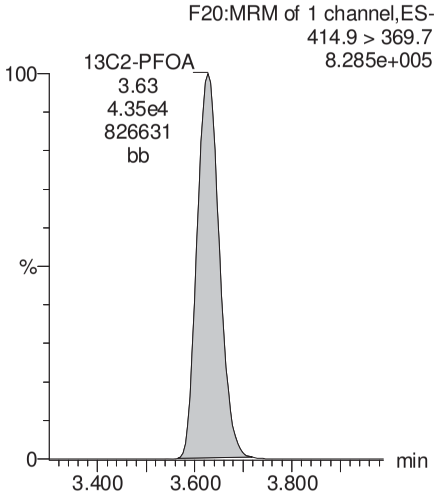
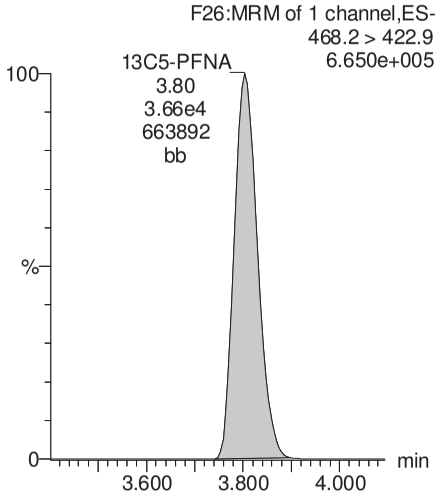




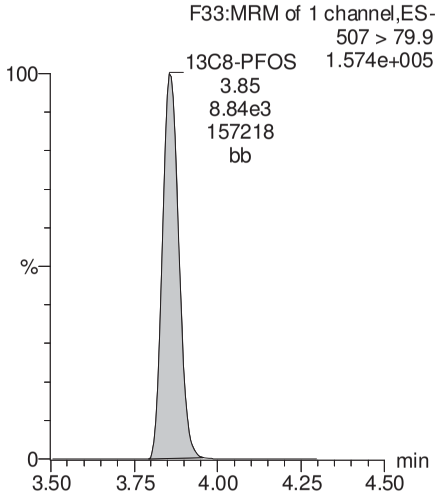
13C2-PFOA



13C5-PFNA



13C8-PFOS



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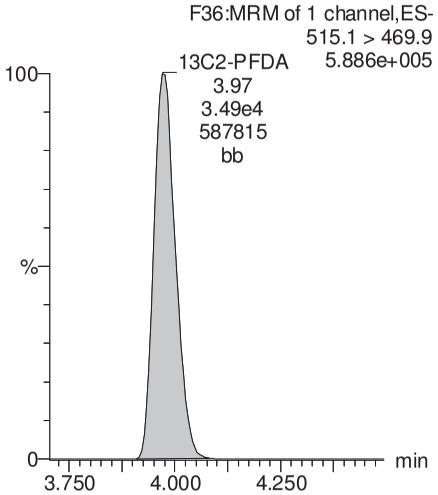


GM 8/8/17

Vista Analytical Laboratory

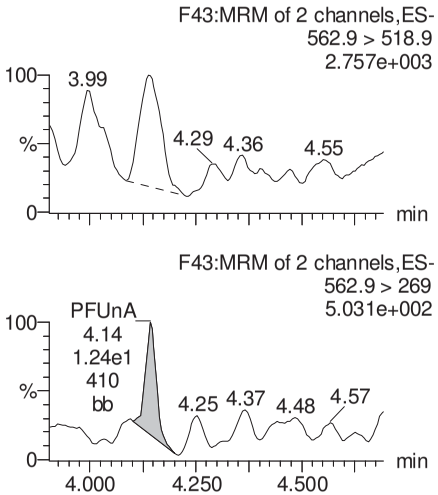
Dataset: U:\Q4.PRO\results\170802M1\170802M1-6.qld

Last Altered: Tuesday, August 08, 2017 13:50:17 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 13:59:37 Pacific Daylight Time

Reviewed: CT 08/09/2017

Name: 170802M1_6, Date: 02-Aug-2017, Time: 11:22:55, ID: B7G0121-BLK1 Method Blank 0.125, Description: Method Blank

PFUnA



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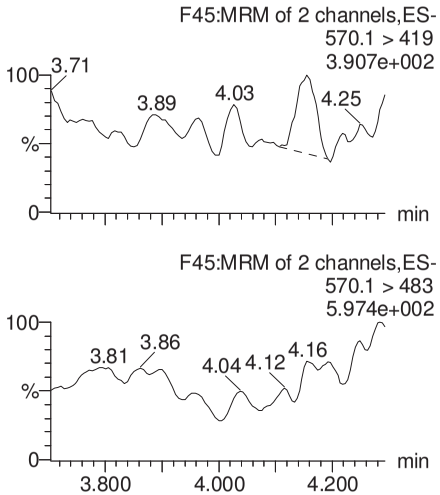

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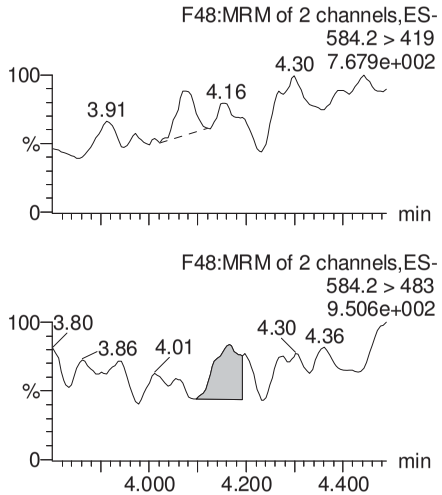

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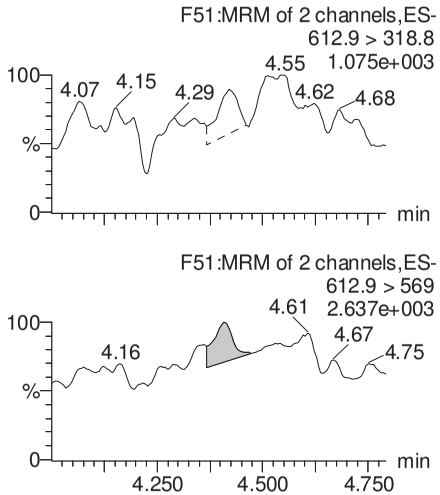

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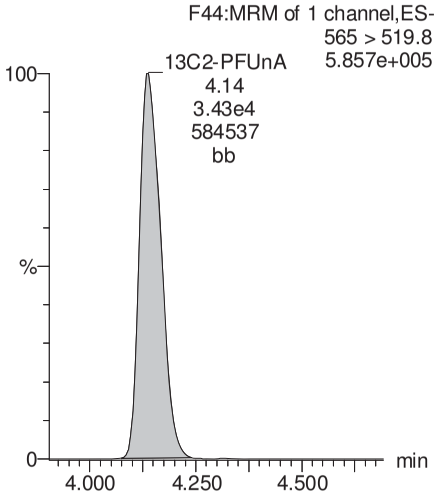

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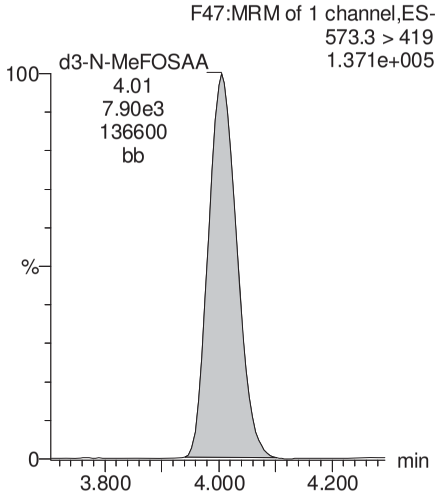

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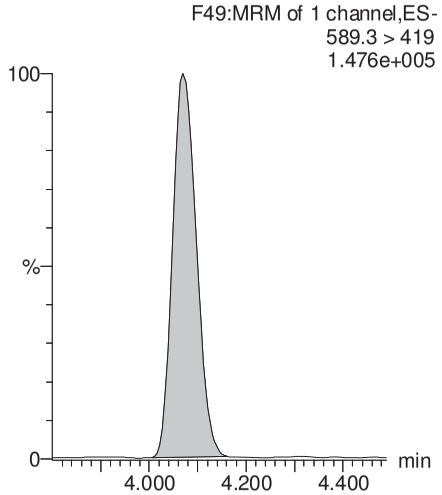

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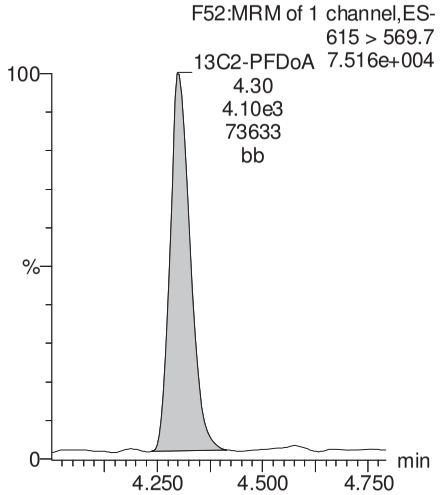

GM 8/8/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-6.qld

Last Altered: Tuesday, August 08, 2017 13:50:17 Pacific Daylight Time
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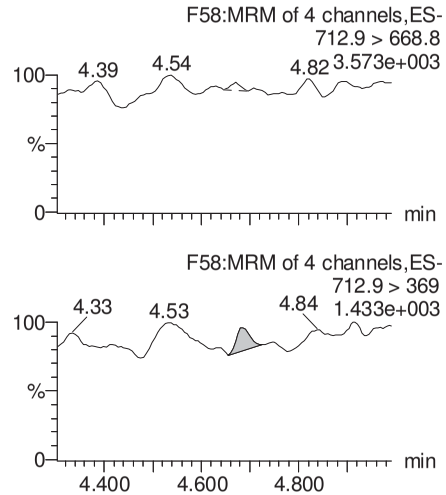
Reviewed: CT 08/09/2017

Name: 170802M1_6, Date: 02-Aug-2017, Time: 11:22:55, ID: B7G0121-BLK1 Method Blank 0.125, Description: Method Blank

PFTeDA



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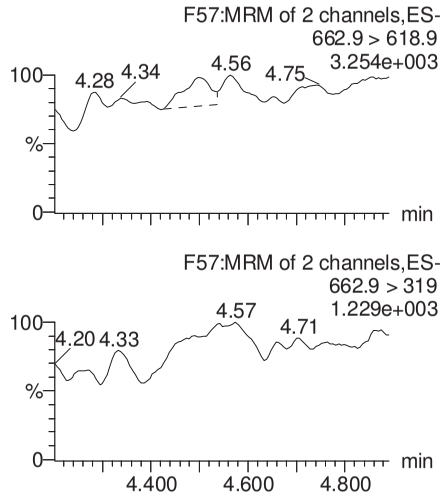

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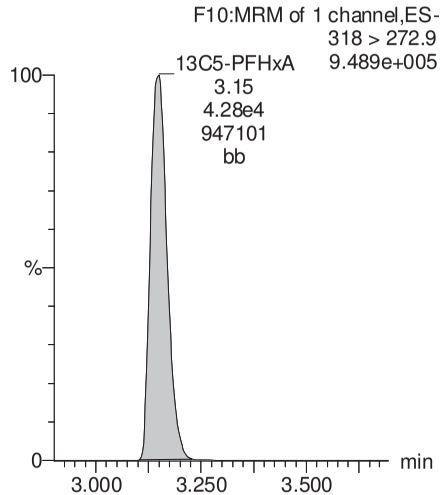

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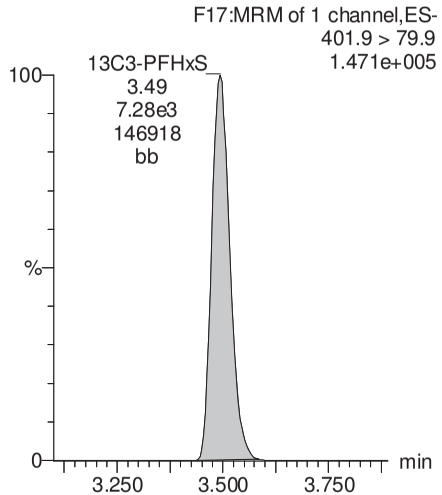

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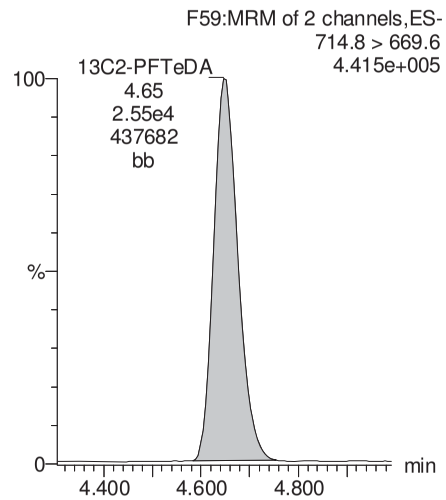

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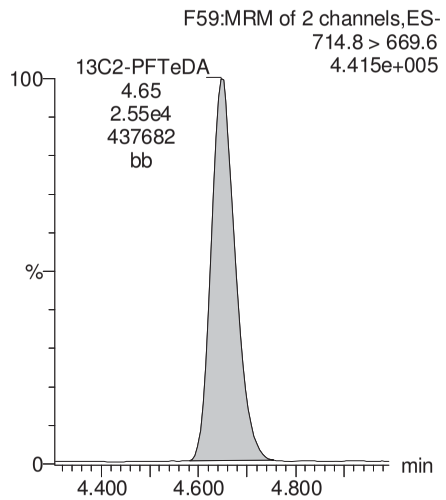

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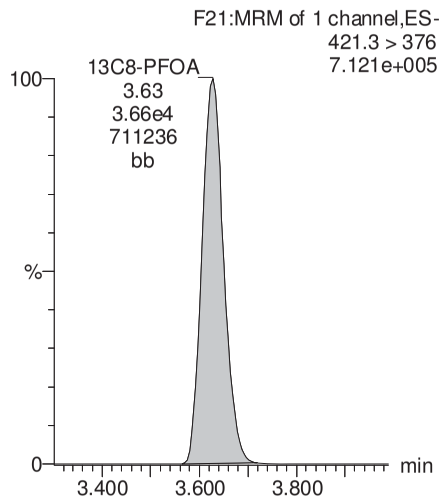

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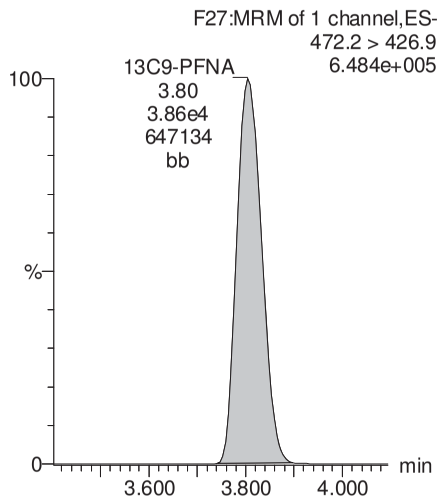

GM 8/8/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-6.qld

Last Altered: Tuesday, August 08, 2017 13:50:17 Pacific Daylight Time
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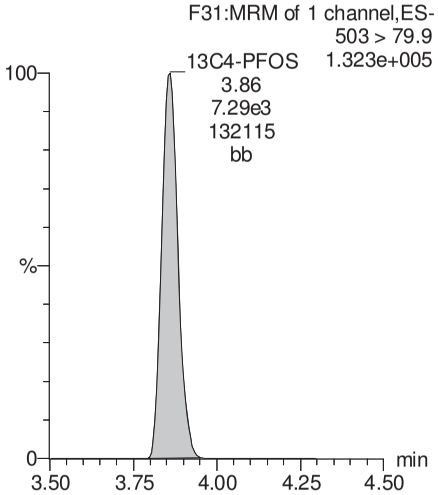
Reviewed: CT 08/09/2017

Name: 170802M1_6, Date: 02-Aug-2017, Time: 11:22:55, ID: B7G0121-BLK1 Method Blank 0.125, Description: Method Blank

13C4-PFOS



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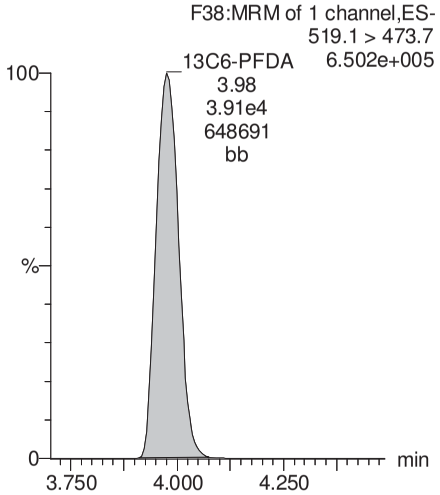

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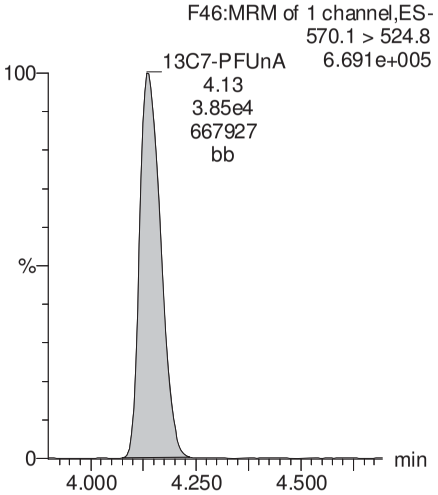

GM 8/8/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-4.qld

Last Altered: Tuesday, August 08, 2017 11:58:47 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 12:15:05 Pacific Daylight Time

Reviewed: CT 08/09/2017

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 07 Aug 2017 17:59:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_4, Date: 02-Aug-2017, Time: 11:01:30, ID: B7G0121-BS1 OPR 0.125, Description: OPR

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	6.30e3	4.51e3	0.125		2.96	2.90	17.5	73.8	92.3
2	4	PFHxA	313.2 > 268.9	3.75e4	1.37e4	0.125		3.19	3.15	13.7	78.0	97.5
3	5	PFHpA	363 > 318.9	2.76e4	3.16e4	0.125		3.45	3.42	10.9	72.5	90.6
4	6	PFHxS	398.9 > 79.6	4.41e3	3.35e3	0.125		3.56	3.49	16.5	78.2	97.7
5	8	PFOA	413 > 368.7	3.50e4	4.01e4	0.125		3.65	3.63	10.9	90.2	112.8
6	10	PFNA	462.9 > 418.8	3.00e4	3.39e4	0.125		3.83	3.81	11.1	80.9	101.2
7	12	PFOS	499 > 79.9	6.31e3	8.00e3	0.125		3.89	3.86	9.87	77.1	96.4
8	13	PFDA	513 > 468.8	3.07e4	3.15e4	0.125		4.01	3.97	12.2	80.2	100.3
9	15	N-MeFOSAA	570.1 > 419	7.00e3	6.80e3	0.125		4.03	4.01	167	75.0	93.8
10	16	N-EtFOSAA	584.2 > 419	5.97e3	6.36e3	0.125		4.10	4.08	153	79.2	99.0
11	17	PFUnA	562.9 > 518.9	2.09e4	3.38e4	0.125		4.17	4.14	7.74	80.8	101.0
12	19	PFDoA	612.9 > 318.8	2.29e3	3.56e3	0.125		4.34	4.30	8.04	68.3	85.4

GM 8/8/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-4.qld

Last Altered: Tuesday, August 08, 2017 11:58:47 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 12:15:19 Pacific Daylight Time

Reviewed: CT 08/09/2017

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 07 Aug 2017 17:59:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_4, Date: 02-Aug-2017, Time: 11:01:30, ID: B7G0121-BS1 OPR 0.125, Description: OPR

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9	2.73e4	3.56e3	0.125		4.50	4.47	95.9	73.0	91.3
2	22	PFTeDA	712.9 > 668.8	1.86e4	2.21e4	0.125		4.68	4.65	10.5	77.6	97.0
3	30	13C3-PFBS	302 > 98.8	4.51e3	3.98e4	0.125	0.034	2.96	2.90	0.568	133	133.1
4	31	13C2-PFHxA	315 > 269.8	1.37e4	3.98e4	0.125	0.334	3.19	3.15	1.72	41.2	103.1
5	32	13C4-PFHpA	367.2 > 321.8	3.16e4	3.98e4	0.125	0.414	3.45	3.42	3.98	76.8	76.8
6	33	18O2-PFHxS	403 > 102.6	3.35e3	6.48e3	0.125	0.475	3.56	3.49	6.46	109	108.7
7	35	13C2-PFOA	414.9 > 369.7	4.01e4	3.07e4	0.125	1.298	3.65	3.63	16.3	101	100.7
8	36	13C5-PFNA	468.2 > 422.9	3.39e4	3.34e4	0.125	1.094	3.83	3.80	12.7	93.0	93.0
9	38	13C8-PFOS	507 > 79.9	8.00e3	6.42e3	0.125	1.153	3.89	3.86	15.6	108	108.0
10	39	13C2-PFDA	515.1 > 469.9	3.15e4	3.68e4	0.125	1.059	4.01	3.97	10.7	81.0	81.0

GM 8/8/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-4.qld

Last Altered: Tuesday, August 08, 2017 11:58:47 Pacific Daylight Time
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Reviewed: CT 08/09/2017

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 07 Aug 2017 17:59:25
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Name: 170802M1_4, Date: 02-Aug-2017, Time: 11:01:30, ID: B7G0121-BS1 OPR 0.125, 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	6.80e3	3.52e4	0.125	0.019	4.03	4.01	2.42	1000	77.0
2	42	d5-N-EtFOSAA	589.3 > 419	6.36e3	3.52e4	0.125	0.019	4.12	4.07	2.26	956	73.5
3	43	13C2-PFUnA	565 > 519.8	3.38e4	3.52e4	0.125	1.172	4.17	4.14	12.0	81.9	81.9
4	44	13C2-PFDoA	615 > 569.7	3.56e3	3.52e4	0.125	0.118	4.34	4.30	1.27	85.6	85.6
5	46	13C2-PFTeDA	714.8 > 669.6	2.21e4	3.52e4	0.125	0.801	4.68	4.65	7.87	78.6	78.6
6	52	13C5-PFHxA	318 > 272.9	3.98e4	3.98e4	0.125	1.000	3.19	3.15	5.00	40.0	100.0
7	53	13C3-PFHxS	401.9 > 79.9	6.48e3	6.48e3	0.125	1.000	3.56	3.50	12.5	100	100.0
8	54	13C8-PFOA	421.3 > 376	3.07e4	3.07e4	0.125	1.000	3.65	3.63	12.5	100	100.0
9	55	13C9-PFNA	472.2 > 426.9	3.34e4	3.34e4	0.125	1.000	3.83	3.81	12.5	100	100.0
10	56	13C4-PFOS	503 > 79.9	6.42e3	6.42e3	0.125	1.000	3.89	3.86	12.5	100	100.0
11	57	13C6-PFDA	519.1 > 473.7	3.68e4	3.68e4	0.125	1.000	4.01	3.98	12.5	100	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.52e4	3.52e4	0.125	1.000	4.17	4.14	12.5	100	100.0
13	59	Total PFBS	299 > 79.7	6.30e3	4.51e3	0.125		2.96		17.5	73.8	
14	60	Total PFHxS	398.9 > 79.6	4.41e3	3.35e3	0.125		3.52		16.5	78.2	
15	61	Total PFOA	413 > 368.7	3.50e4	4.01e4	0.125		3.65		10.9	90.2	
16	62	Total PFOS	499 > 79.9	6.31e3	8.00e3	0.125		3.89		9.87	77.1	
17	63	Total N-Me-FOSAA	570.1 > 419	7.00e3	6.80e3	0.125		4.03		167	75.0	
18	64	Total N-EtFOSAA	584.2 > 419	5.97e3	6.36e3	0.125		4.17		153	79.2	

GM 8/8/17

Quantify Totals Report MassLynx MassLynx V4.1 SCN945 SCN960
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-4.qld

Last Altered: Tuesday, August 08, 2017 11:58:47 Pacific Daylight Time
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Reviewed: CT 08/09/2017

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 07 Aug 2017 17:59:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_4, Date: 02-Aug-2017, Time: 11:01:30, ID: B7G0121-BS1 OPR 0.125, Description: OPR

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.90	6303.591	4514.603	17.453	bb	73.8

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.49	4406.093	3348.089	16.450	MM	78.2

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.63	35023.984	40144.082	10.906	bb	90.2

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.86	6313.102	7997.878	9.867	bb	77.1

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419	4.01	7002.594	6801.601	167.302	bb	75.0

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419	4.08	5971.370	6361.796	152.527	bb	79.2

GM 8/8/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-4.qld

Last Altered: Tuesday, August 08, 2017 11:58:47 Pacific Daylight Time
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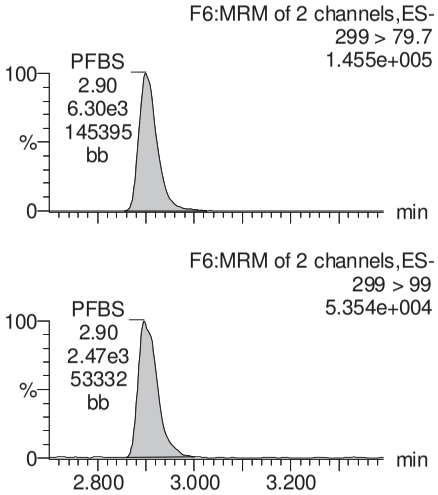
Reviewed: CT 08/09/2017

Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 07 Aug 2017 17:59:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_4, Date: 02-Aug-2017, Time: 11:01:30, ID: B7G0121-BS1 OPR 0.125, Description: OPR

Total PFBS



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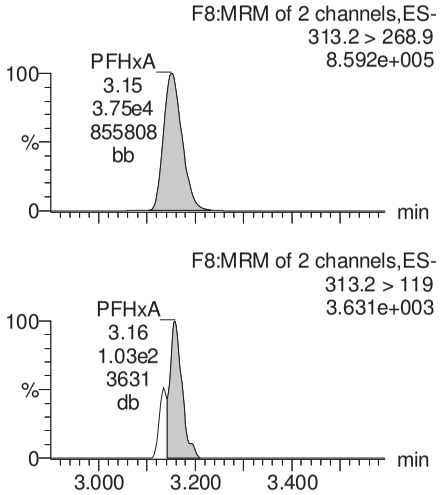

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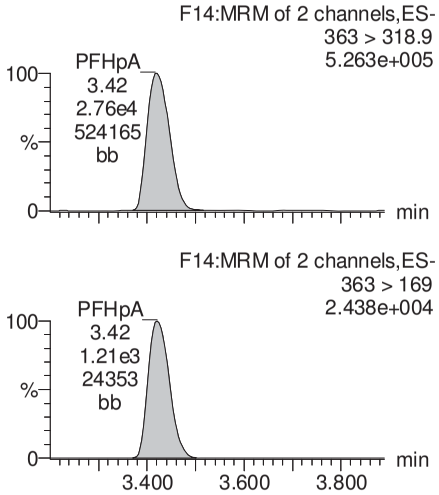

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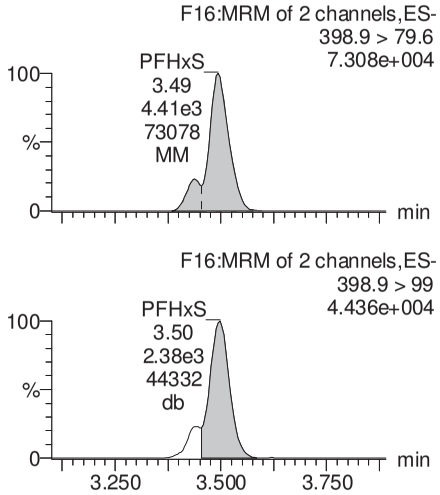

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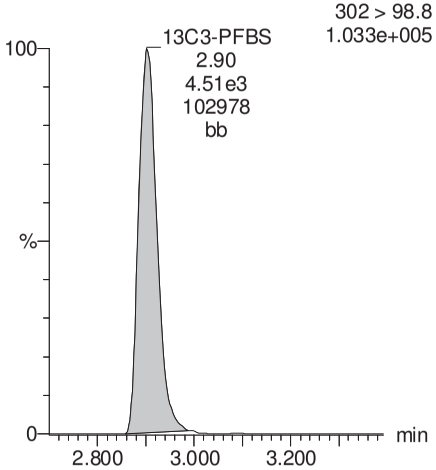

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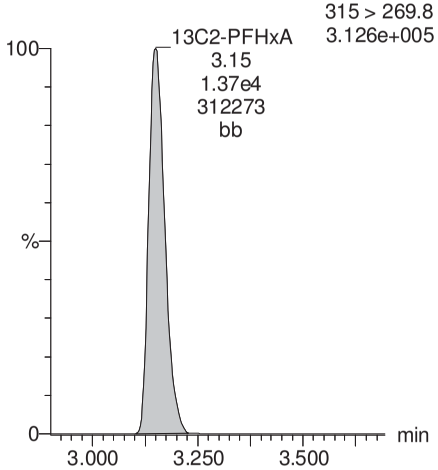

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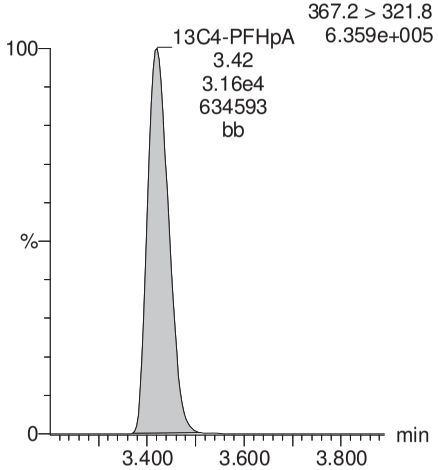

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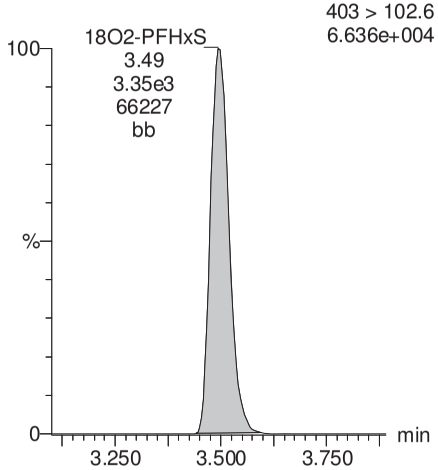


GM 8/8/17

Vista Analytical Laboratory

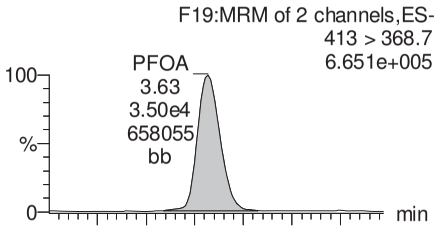
Dataset: U:\Q4.PRO\results\170802M1\170802M1-4.qld

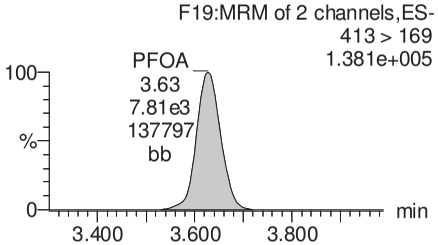
Last Altered: Tuesday, August 08, 2017 11:58:47 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 12:16:21 Pacific Daylight Time

Reviewed: CT 08/09/2017

Name: 170802M1_4, Date: 02-Aug-2017, Time: 11:01:30, ID: B7G0121-BS1 OPR 0.125, Description: OPR

Total PFOA





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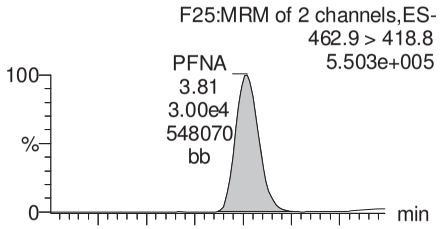
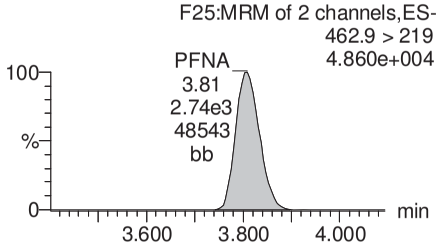
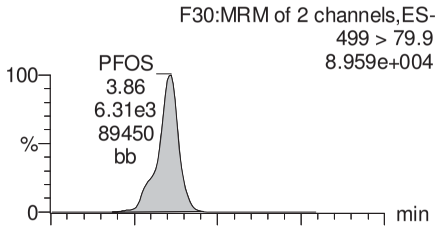
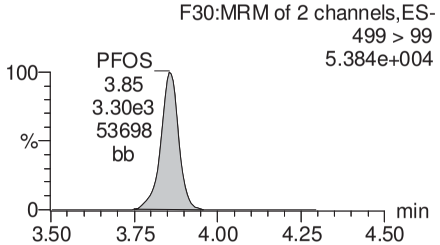




Total PFOS





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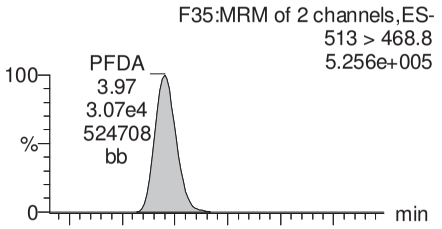

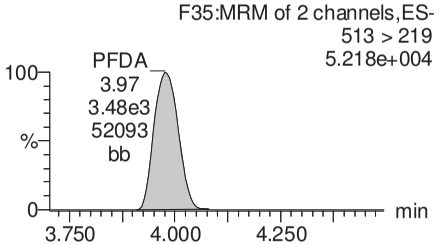

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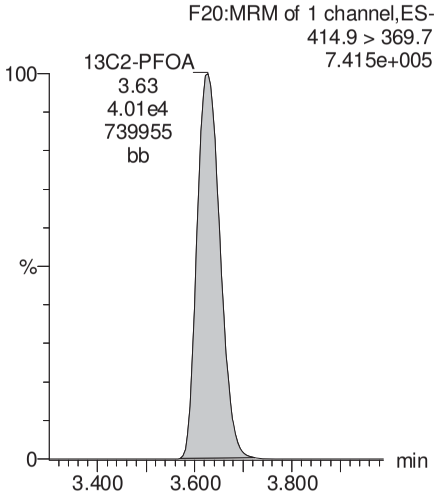

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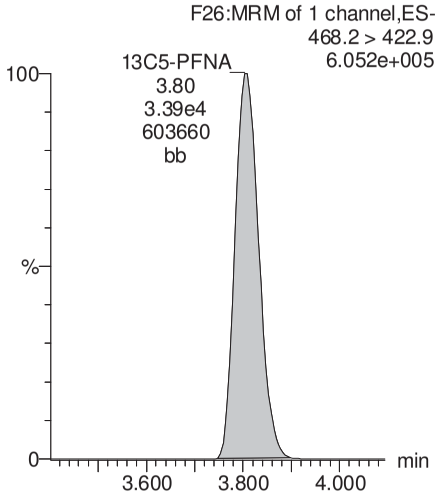

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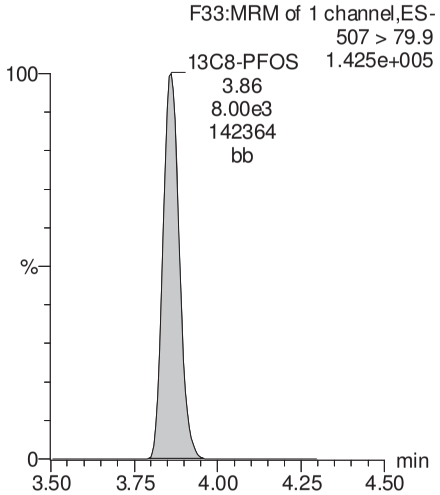

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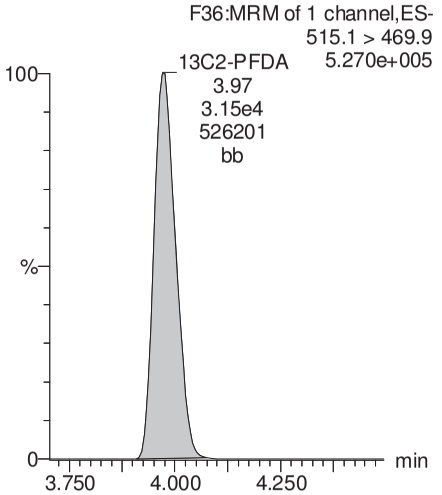

GM 8/8/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-4.qld

Last Altered: Tuesday, August 08, 2017 11:58:47 Pacific Daylight Time
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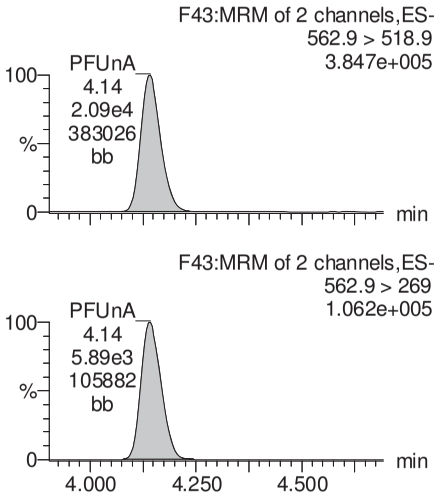
Name: 170802M1_4, Date: 02-Aug-2017, Time: 11:01:30, ID: B7G0121-BS1 OPR 0.125, Description: OPR

PFUnA



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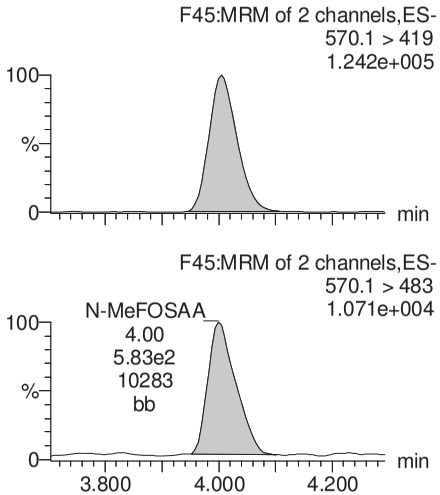

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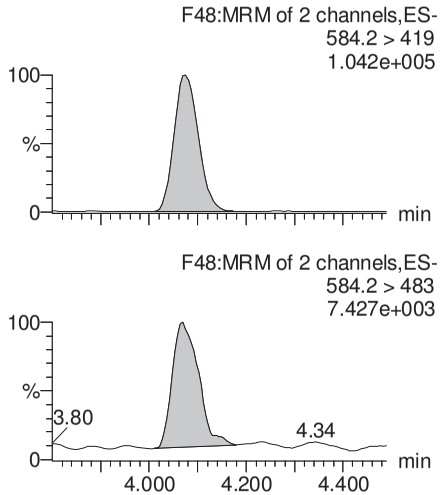

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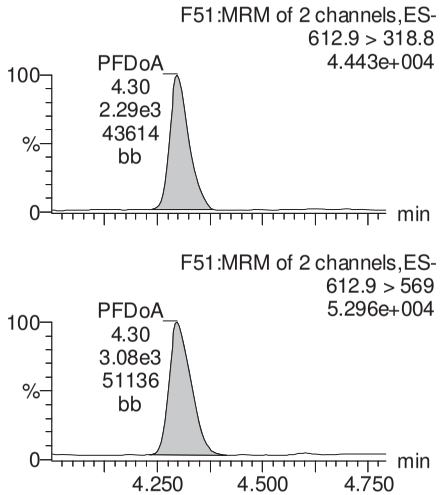

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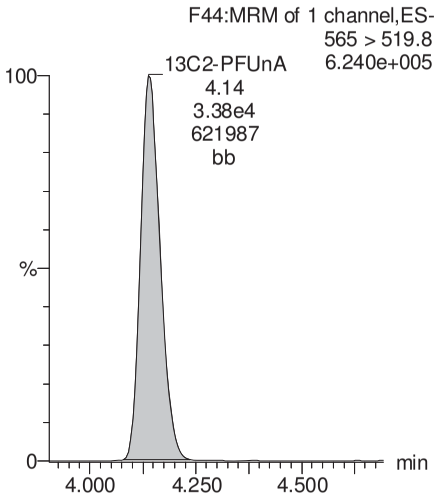

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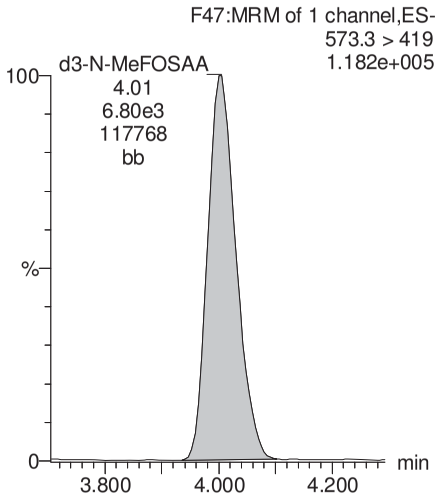

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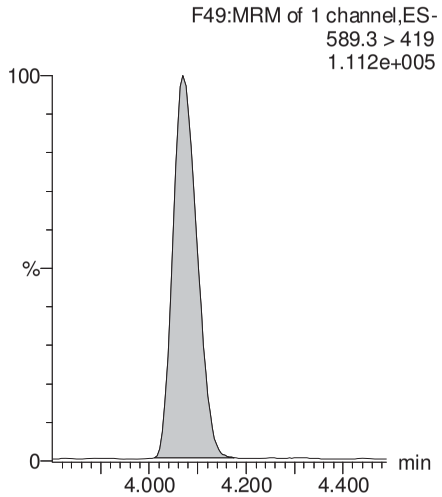

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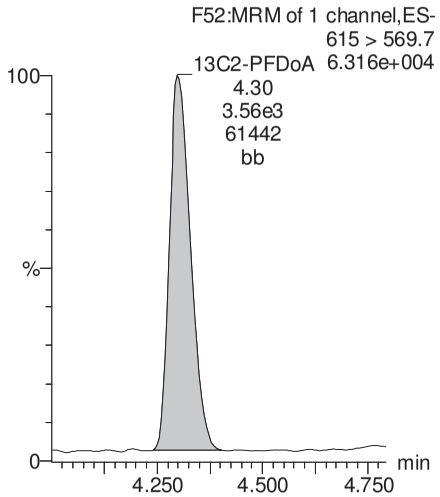


GM 8/8/17

Vista Analytical Laboratory

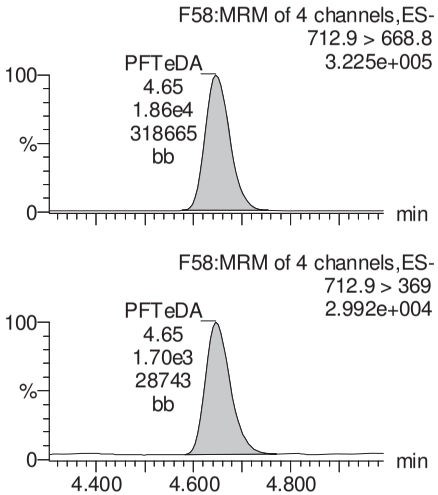
Dataset: U:\Q4.PRO\results\170802M1\170802M1-4.qld

Last Altered: Tuesday, August 08, 2017 11:58:47 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 12:16:21 Pacific Daylight Time

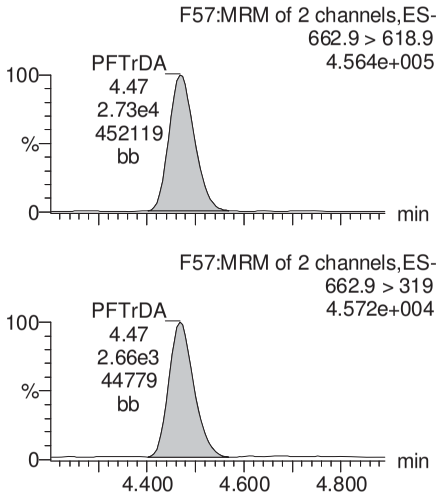
Reviewed: CT 08/09/2017

Name: 170802M1_4, Date: 02-Aug-2017, Time: 11:01:30, ID: B7G0121-BS1 OPR 0.125, Description: OPR

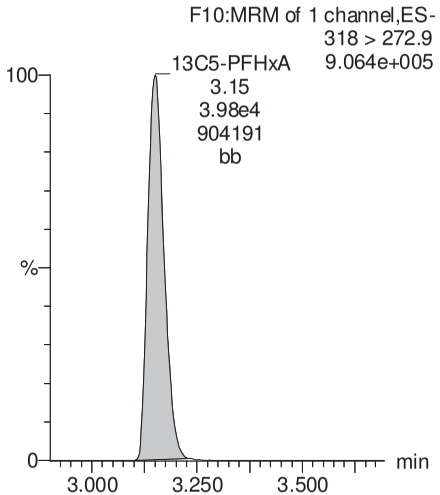
PFTeDA



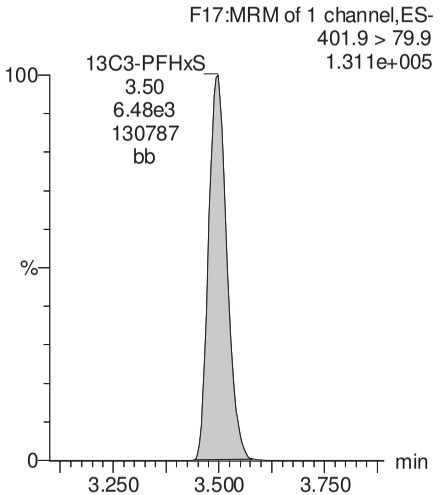
PFTrDA



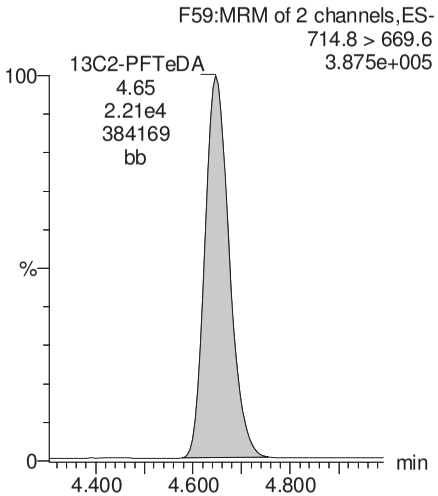
13C5-PFHxA



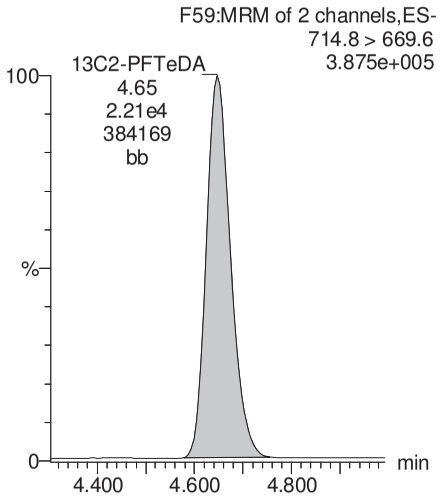
13C3-PFHxS



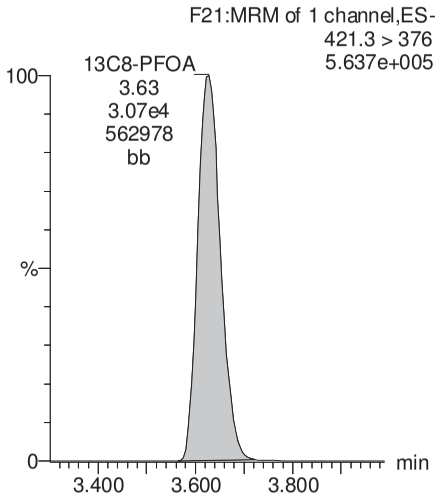
13C2-PFTeDA



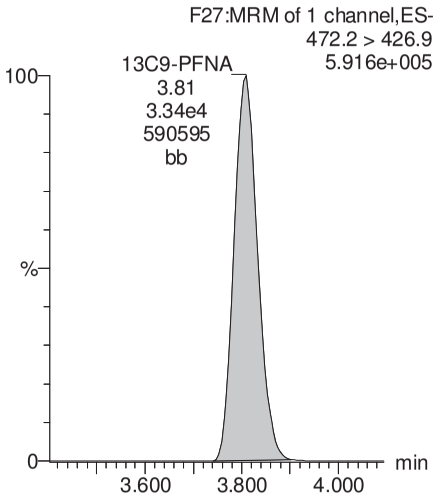
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



GM 8/8/17

Vista Analytical Laboratory

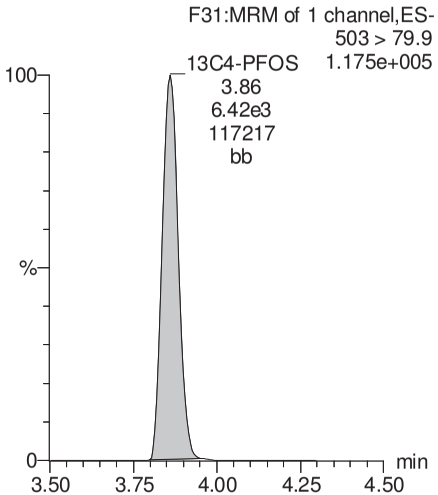
Dataset: U:\Q4.PRO\results\170802M1\170802M1-4.qld

Last Altered: Tuesday, August 08, 2017 11:58:47 Pacific Daylight Time
Printed: Tuesday, August 08, 2017 12:16:21 Pacific Daylight Time

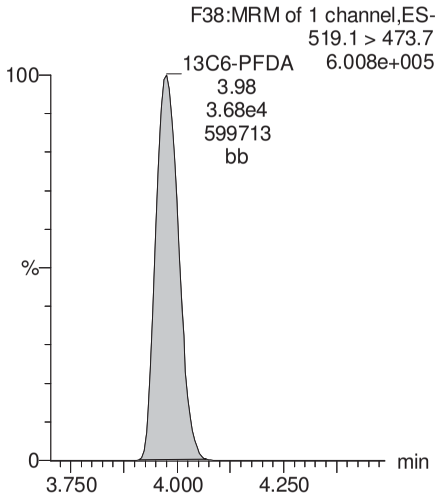
Reviewed: CT 08/09/2017

Name: 170802M1_4, Date: 02-Aug-2017, Time: 11:01:30, ID: B7G0121-BS1 OPR 0.125, Description: OPR

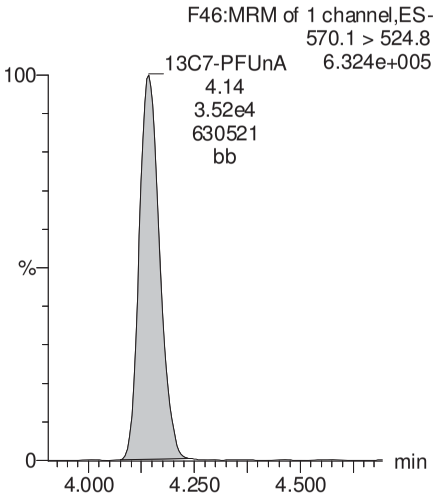
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/8/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-11.qld

Last Altered: Wednesday, August 16, 2017 14:58:08 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:58:42 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: 170802M1_11, Date: 02-Aug-2017, Time: 12:17:05, ID: 1700922-01 MH-L103-20170721 0.10565, Description: MH-L103-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		4.76e3	0.106		2.96				
2	4	PFHxA	313.2 > 268.9	2.29e3	1.44e4	0.106		3.19	3.16	0.791	4.36	
3	5	PFHpA	363 > 318.9	8.48e2	3.29e4	0.106		3.45	3.43	0.322	1.94	
4	6	PFHxS	398.9 > 79.6	1.17e2	3.68e3	0.106		3.56	3.51	0.396	2.05	
5	8	PFOA	413 > 368.7	1.87e3	4.29e4	0.106		3.65	3.63	0.546	3.98	
6	10	PFNA	462.9 > 418.8	5.00e2	3.90e4	0.106		3.83	3.81	0.160	0.757	
7	12	PFOS	499 > 79.9	3.91e2	8.51e3	0.106		3.89	3.86	0.574	4.90	
8	13	PFDA	513 > 468.8	2.58e2	3.75e4	0.106		4.01	3.99	0.0858		
9	15	N-MeFOSAA	570.1 > 419		8.33e3	0.106		4.03				
10	16	N-EtFOSAA	584.2 > 419		9.39e3	0.106		4.10				
11	17	PFUnA	562.9 > 518.9		4.15e4	0.106		4.17				
12	19	PFDoA	612.9 > 318.8		4.28e3	0.106		4.34				

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-11.qld

Last Altered: Wednesday, August 16, 2017 14:58:08 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:59:06 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: 170802M1_11, Date: 02-Aug-2017, Time: 12:17:05, ID: 1700922-01 MH-L103-20170721 0.10565, Description: MH-L103-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		4.28e3	0.106		4.50				
2	22	PFTeDA	712.9 > 668.8		2.99e4	0.106		4.68				
3	30	13C3-PFBS	302 > 98.8	4.76e3	4.45e4	0.106	0.034	2.96	2.91	0.534	148	125.3
4	31	13C2-PFHxA	315 > 269.8	1.44e4	4.45e4	0.106	0.334	3.19	3.16	1.62	46.0	97.2
5	32	13C4-PFHpA	367.2 > 321.8	3.29e4	4.45e4	0.106	0.414	3.45	3.43	3.69	84.4	71.3
6	33	18O2-PFHxS	403 > 102.6	3.68e3	7.21e3	0.106	0.475	3.56	3.50	6.38	127	107.4
7	35	13C2-PFOA	414.9 > 369.7	4.29e4	3.93e4	0.106	1.298	3.65	3.63	13.6	99.3	83.9
8	36	13C5-PFNA	468.2 > 422.9	3.90e4	4.03e4	0.106	1.094	3.83	3.81	12.1	105	88.3
9	38	13C8-PFOS	507 > 79.9	8.51e3	7.63e3	0.106	1.153	3.89	3.87	13.9	114	96.7
10	39	13C2-PFDA	515.1 > 469.9	3.75e4	4.18e4	0.106	1.059	4.01	3.98	11.2	100	84.9

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-11.qld

Last Altered: Wednesday, August 16, 2017 14:58:08 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:59:22 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: 170802M1_11, Date: 02-Aug-2017, Time: 12:17:05, ID: 1700922-01 MH-L103-20170721 0.10565, Description: MH-L103-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	8.33e3	3.90e4	0.106	0.019	4.03	4.02	2.67	1310	84.9
2	42	d5-N-EtFOSAA	589.3 > 419	9.39e3	3.90e4	0.106	0.019	4.12	4.08	3.01	1500	97.7
3	43	13C2-PFUnA	565 > 519.8	4.15e4	3.90e4	0.106	1.172	4.17	4.15	13.3	107	90.7
4	44	13C2-PFDoA	615 > 569.7	4.28e3	3.90e4	0.106	0.118	4.34	4.30	1.37	110	92.6
5	46	13C2-PFTeDA	714.8 > 669.6	2.99e4	3.90e4	0.106	0.801	4.68	4.66	9.57	113	95.5
6	52	13C5-PFHxA	318 > 272.9	4.45e4	4.45e4	0.106	1.000	3.19	3.16	5.00	47.3	100.0
7	53	13C3-PFHxS	401.9 > 79.9	7.21e3	7.21e3	0.106	1.000	3.56	3.50	12.5	118	100.0
8	54	13C8-PFOA	421.3 > 376	3.93e4	3.93e4	0.106	1.000	3.65	3.63	12.5	118	100.0
9	55	13C9-PFNA	472.2 > 426.9	4.03e4	4.03e4	0.106	1.000	3.83	3.81	12.5	118	100.0
10	56	13C4-PFOS	503 > 79.9	7.63e3	7.63e3	0.106	1.000	3.89	3.87	12.5	118	100.0
11	57	13C6-PFDA	519.1 > 473.7	4.18e4	4.18e4	0.106	1.000	4.01	3.98	12.5	118	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.90e4	3.90e4	0.106	1.000	4.17	4.15	12.5	118	100.0
13	59	Total PFBS	299 > 79.7	0.00e0	4.76e3	0.106		2.96		0.000		
14	60	Total PFHxS	398.9 > 79.6	1.17e2	3.68e3	0.106		3.52		0.396	2.05	
15	61	Total PFOA	413 > 368.7	1.87e3	4.29e4	0.106		3.65		0.546	3.98	
16	62	Total PFOS	499 > 79.9	3.91e2	8.51e3	0.106		3.89		0.574	4.90	
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	8.33e3	0.106		4.03		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	9.39e3	0.106		4.17		0.000		

GM 8/16/17

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-11.qld

Last Altered: Wednesday, August 16, 2017 14:58:08 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: 170802M1_11, Date: 02-Aug-2017, Time: 12:17:05, ID: 1700922-01 MH-L103-20170721 0.10565, Description: MH-L103-20170721

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7			4757.434		MM-I	

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.51	116.573	3680.515	0.396	MM	2.1

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.63	1874.581	42881.402	0.546	MM	4.0

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.86	390.746	8505.630	0.574	bb	4.9

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									

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-11.qld

Last Altered: Wednesday, August 16, 2017 14:58:08 Pacific Daylight Time
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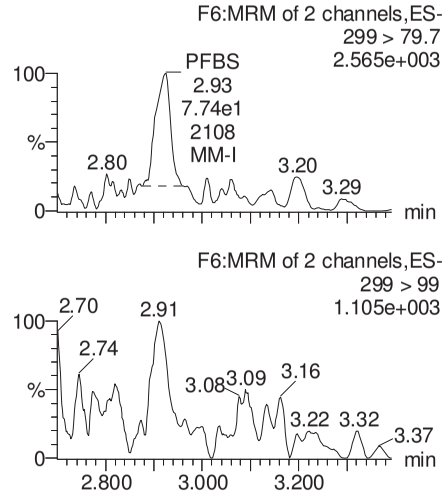
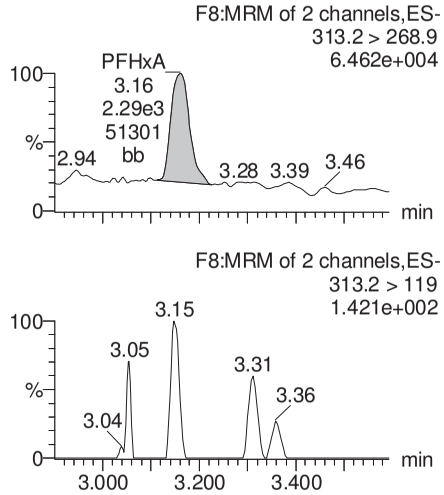
Name: 170802M1_11, Date: 02-Aug-2017, Time: 12:17:05, ID: 1700922-01 MH-L103-20170721 0.10565, Description: MH-L103-20170721

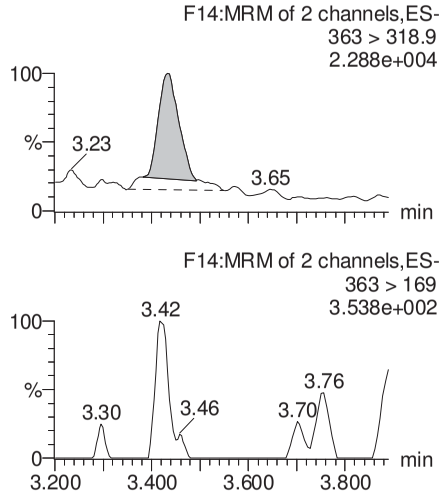
Total PFBS



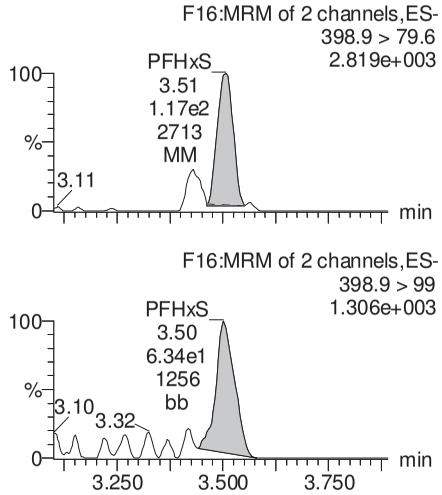
PFHxA



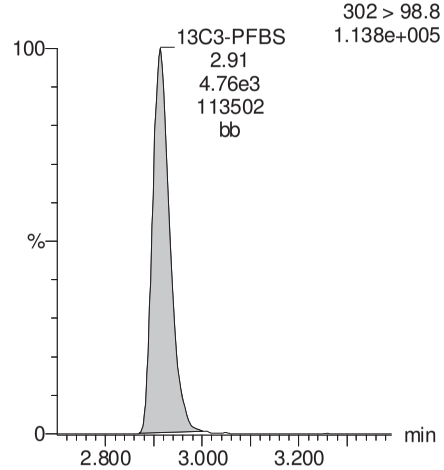
PFHpA



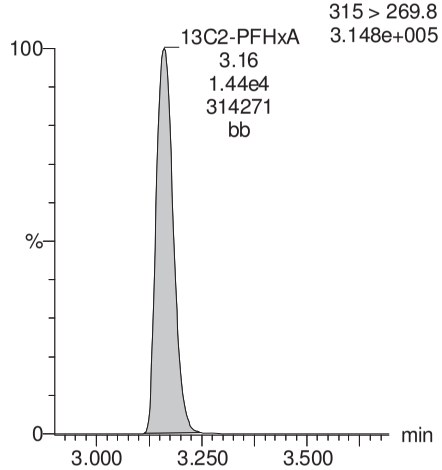
Total PFHxS



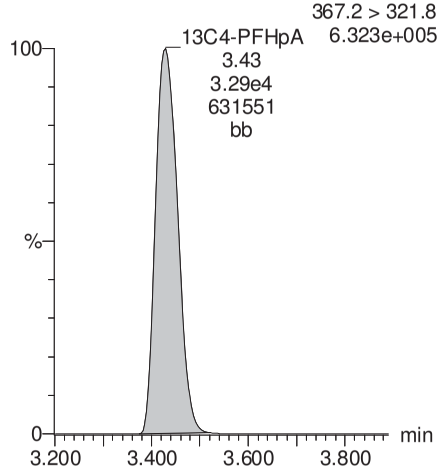
13C3-PFBS



13C2-PFHxA



13C4-PFHpA



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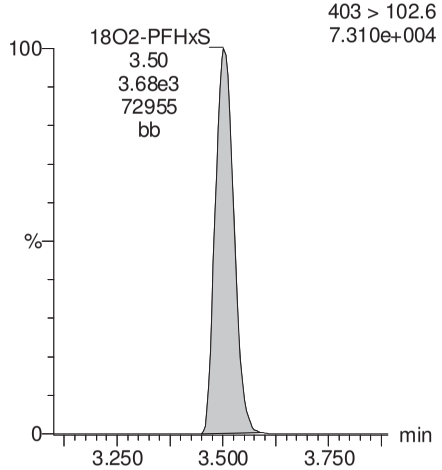


GM 8/16/17

Vista Analytical Laboratory

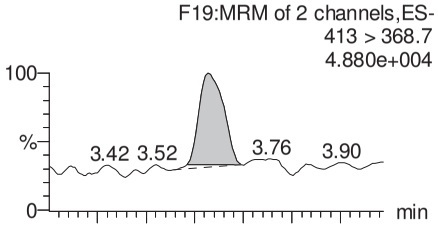
Rev'd: MM 8/16/17

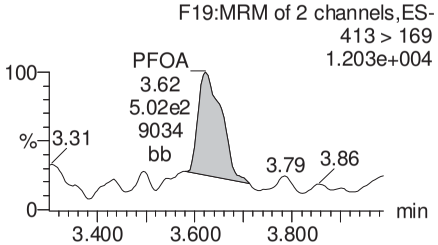
Dataset: U:\Q4.PRO\results\170802M1\170802M1-11.qld

Last Altered: Wednesday, August 16, 2017 14:58:08 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:59:22 Pacific Daylight Time

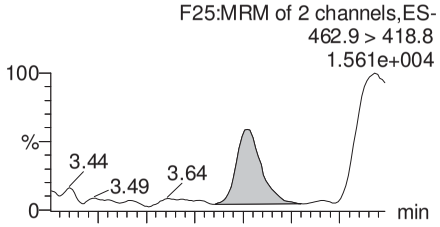
Name: 170802M1_11, Date: 02-Aug-2017, Time: 12:17:05, ID: 1700922-01 MH-L103-20170721 0.10565, Description: MH-L103-20170721

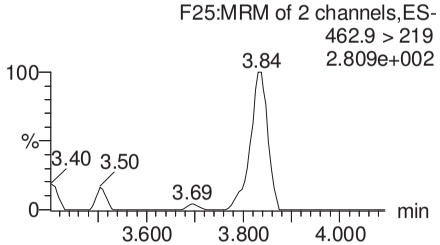
Total PFOA



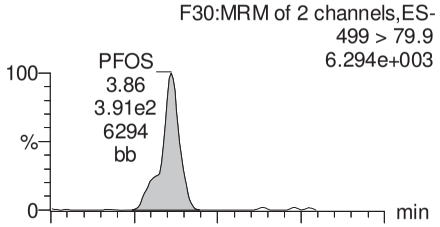


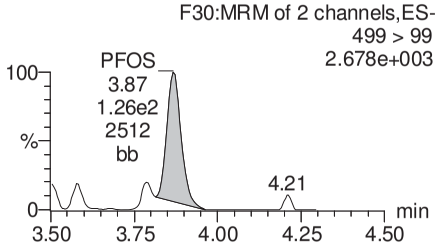
PFNA



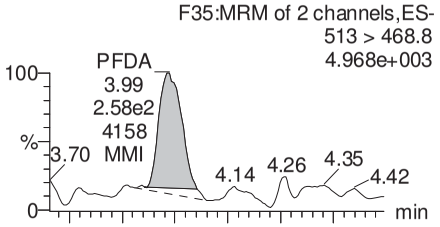


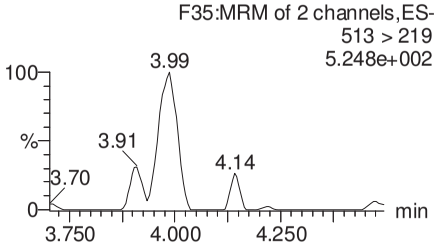
Total PFOS



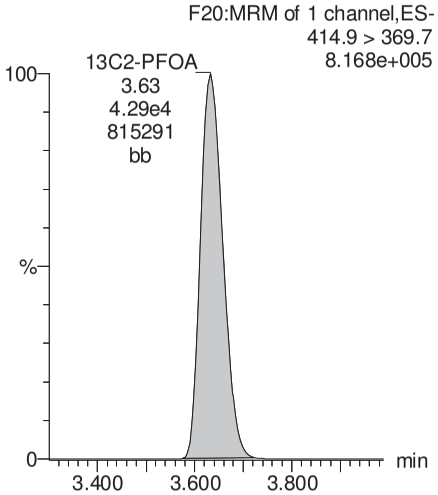


PFDA

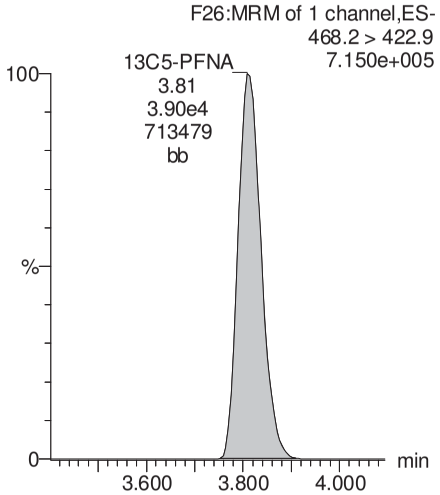




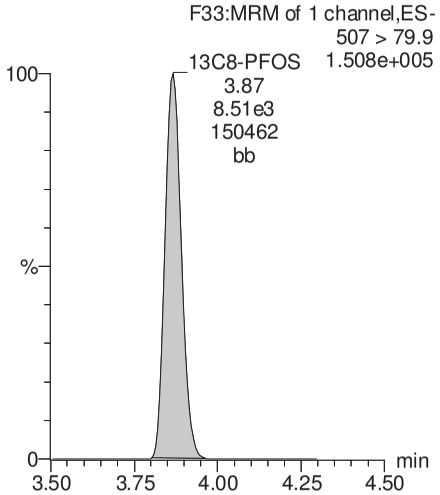
13C2-PFOA



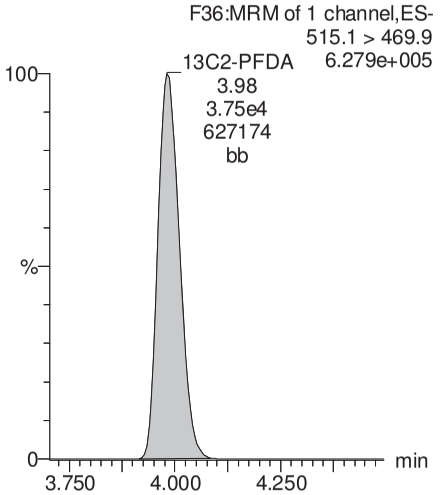
13C5-PFNA



13C8-PFOS



13C2-PFDA



GM 8/16/17

Vista Analytical Laboratory

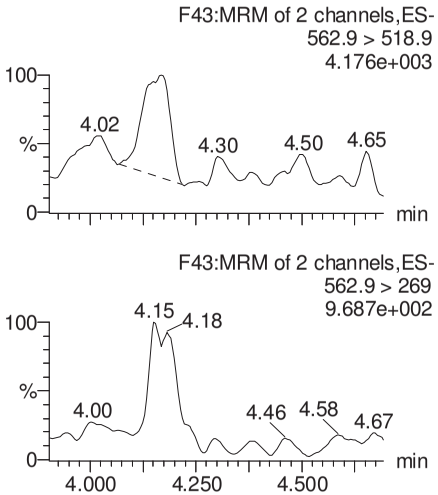
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-11.qld

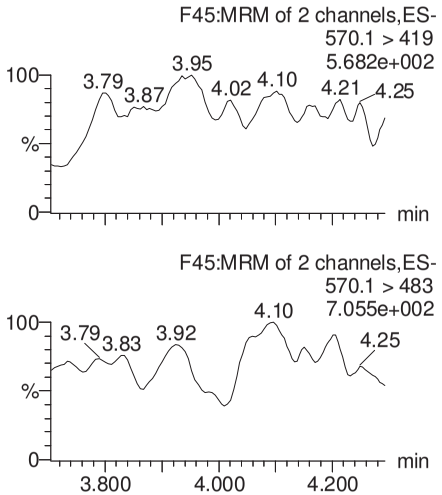
Last Altered: Wednesday, August 16, 2017 14:58:08 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:59:22 Pacific Daylight Time

Name: 170802M1_11, Date: 02-Aug-2017, Time: 12:17:05, ID: 1700922-01 MH-L103-20170721 0.10565, Description: MH-L103-20170721

PFUnA



N-MeFOSAA



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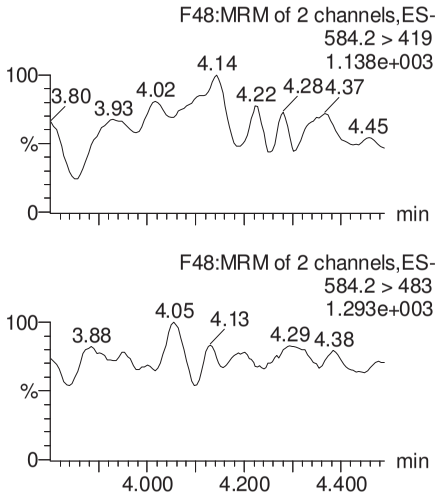
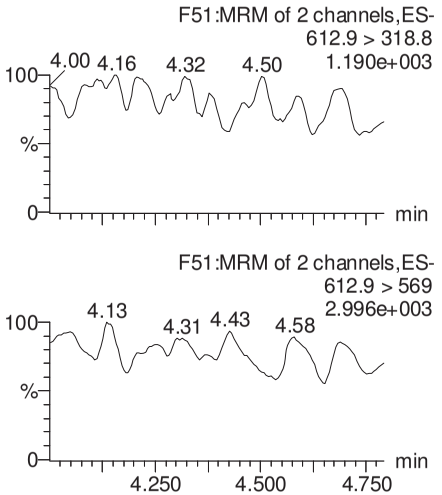
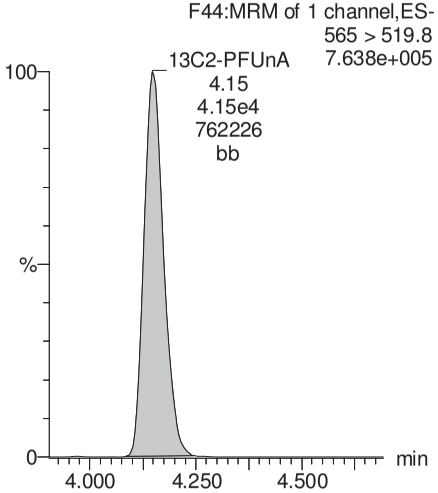


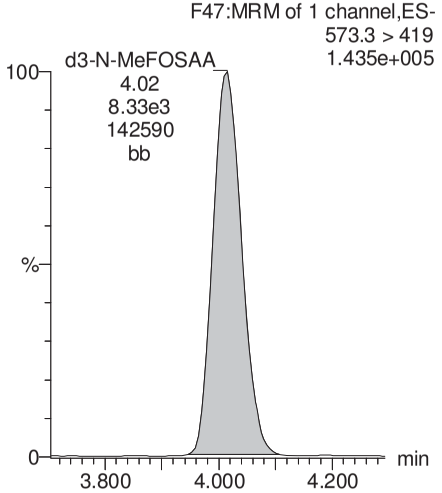
PFDoA



13C2-PFUnA



d3-N-MeFOSAA



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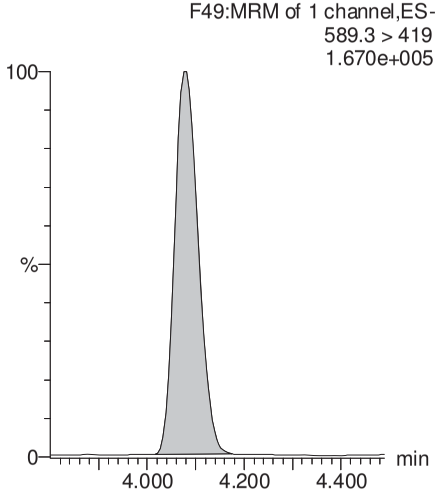

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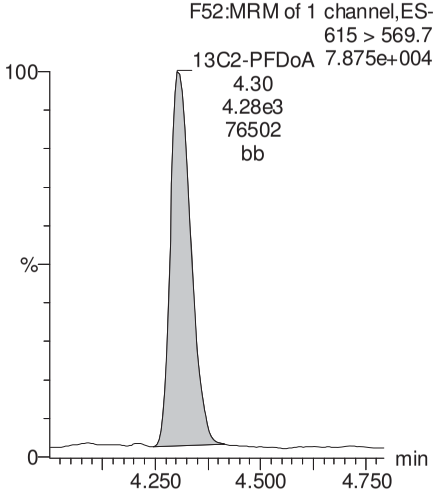


GM 8/16/17

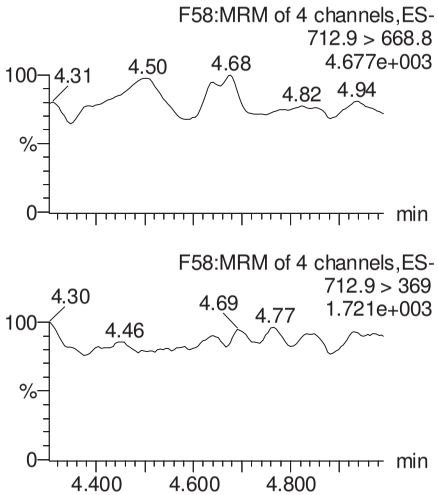
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-11.qld

Last Altered: Wednesday, August 16, 2017 14:58:08 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:59:22 Pacific Daylight Time

Name: 170802M1_11, Date: 02-Aug-2017, Time: 12:17:05, ID: 1700922-01 MH-L103-20170721 0.10565, Description: MH-L103-20170721

PFTeDA



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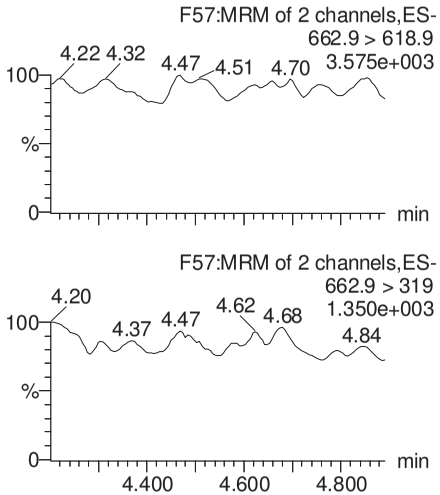
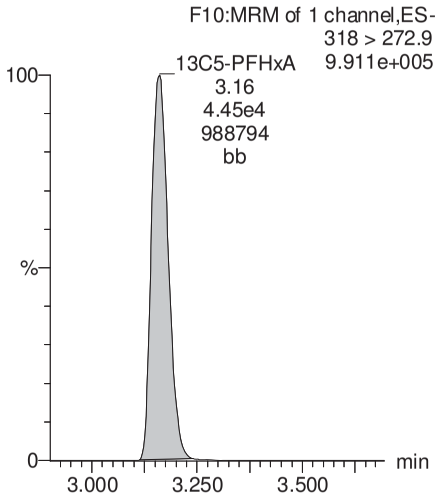


13C5-PFHxA



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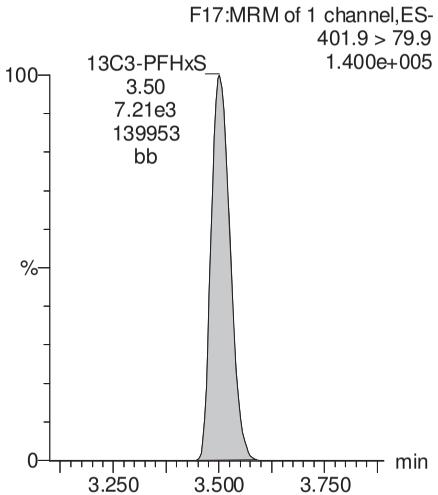

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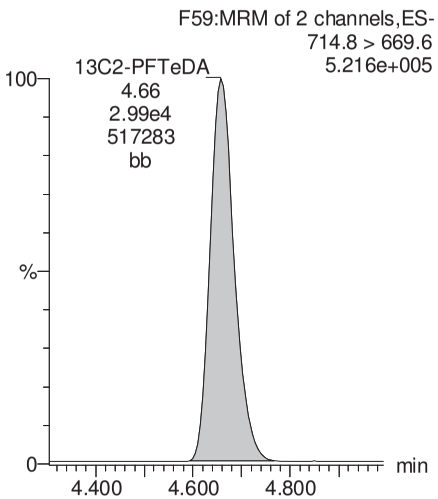
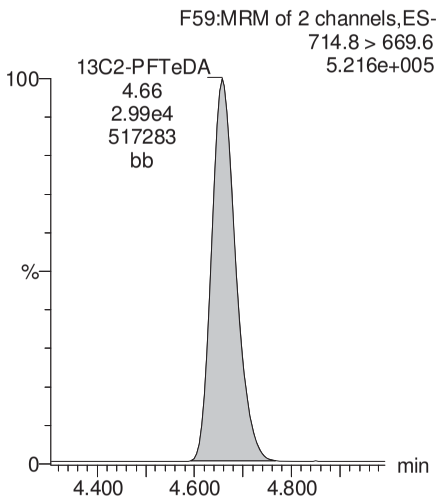
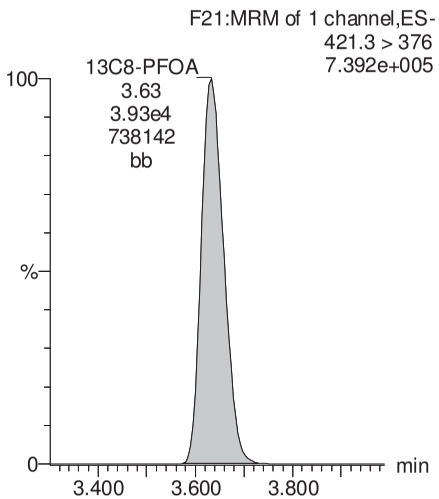


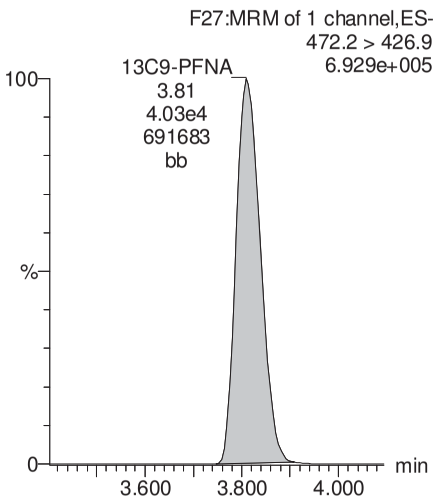
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



GM 8/16/17

Vista Analytical Laboratory

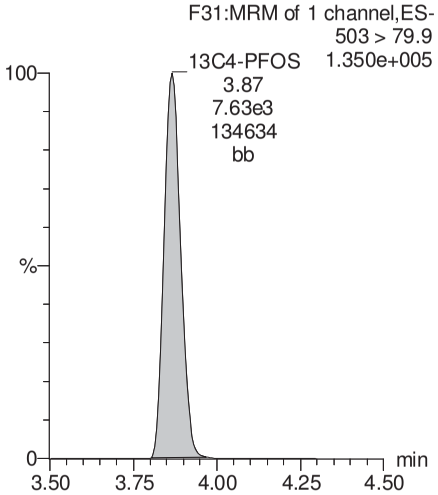
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-11.qld

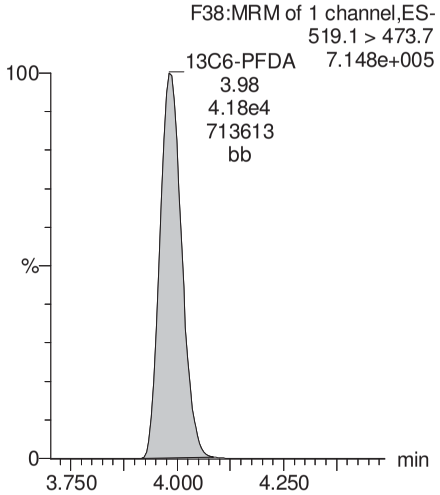
Last Altered: Wednesday, August 16, 2017 14:58:08 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:59:22 Pacific Daylight Time

Name: 170802M1_11, Date: 02-Aug-2017, Time: 12:17:05, ID: 1700922-01 MH-L103-20170721 0.10565, Description: MH-L103-20170721

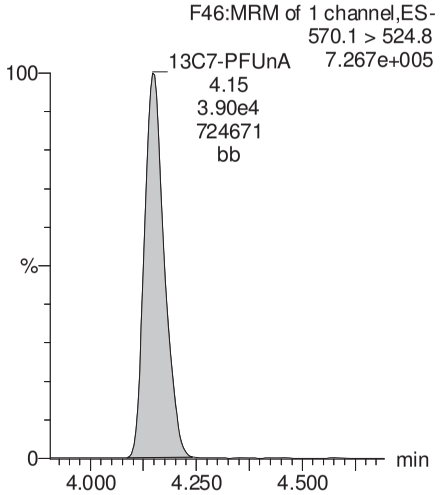
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-12.qld

Last Altered: Wednesday, August 16, 2017 15:02:24 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:02:59 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: 170802M1_12, Date: 02-Aug-2017, Time: 12:28:21, ID: 1700922-02 MH-N104-20170721 0.11025, Description: MH-N104-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	5.57e1	3.96e3	0.110		2.96	2.92	0.176	0.524	
2	4	PFHxA	313.2 > 268.9	2.25e3	1.27e4	0.110		3.19	3.16	0.886	4.80	
3	5	PFHpA	363 > 318.9	1.67e3	2.74e4	0.110		3.45	3.43	0.762	5.20	
4	6	PFHxS	398.9 > 79.6	2.66e2	2.92e3	0.110		3.56	3.50	1.14	5.98	
5	8	PFOA	413 > 368.7	2.95e3	3.35e4	0.110		3.65	3.63	1.10	9.08	
6	10	PFNA	462.9 > 418.8	1.55e3	3.02e4	0.110		3.83	3.81	0.642	4.75	
7	12	PFOS	499 > 79.9	9.34e2	6.84e3	0.110		3.89	3.87	1.71	14.8	
8	13	PFDA	513 > 468.8	6.87e2	2.70e4	0.110		4.01	3.98	0.318	1.22	
9	15	N-MeFOSAA	570.1 > 419		8.00e3	0.110		4.03				
10	16	N-EtFOSAA	584.2 > 419		7.97e3	0.110		4.10				
11	17	PFUnA	562.9 > 518.9	5.25e2	3.94e4	0.110		4.17	4.15	0.167	0.941	
12	19	PFDoA	612.9 > 318.8		3.60e3	0.110		4.34				

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-12.qld

Last Altered: Wednesday, August 16, 2017 15:02:24 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:03:12 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: 170802M1_12, Date: 02-Aug-2017, Time: 12:28:21, ID: 1700922-02 MH-N104-20170721 0.11025, Description: MH-N104-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		3.60e3	0.110		4.50				
2	22	PFTeDA	712.9 > 668.8		2.59e4	0.110		4.68				
3	30	13C3-PFBS	302 > 98.8	3.96e3	3.71e4	0.110	0.034	2.96	2.91	0.534	142	125.1
4	31	13C2-PFHxA	315 > 269.8	1.27e4	3.71e4	0.110	0.334	3.19	3.16	1.71	46.4	102.3
5	32	13C4-PFHpA	367.2 > 321.8	2.74e4	3.71e4	0.110	0.414	3.45	3.43	3.70	81.0	71.4
6	33	18O2-PFHxS	403 > 102.6	2.92e3	6.48e3	0.110	0.475	3.56	3.50	5.64	108	94.9
7	35	13C2-PFOA	414.9 > 369.7	3.35e4	3.04e4	0.110	1.298	3.65	3.64	13.8	96.2	84.9
8	36	13C5-PFNA	468.2 > 422.9	3.02e4	3.25e4	0.110	1.094	3.83	3.81	11.6	96.4	85.0
9	38	13C8-PFOS	507 > 79.9	6.84e3	6.16e3	0.110	1.153	3.89	3.87	13.9	109	96.4
10	39	13C2-PFDA	515.1 > 469.9	2.70e4	3.49e4	0.110	1.059	4.01	3.99	9.66	82.8	73.0

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-12.qld

Last Altered: Wednesday, August 16, 2017 15:02:24 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:03:25 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: 170802M1_12, Date: 02-Aug-2017, Time: 12:28:21, ID: 1700922-02 MH-N104-20170721 0.11025, Description: MH-N104-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	8.00e3	3.30e4	0.110	0.019	4.03	4.01	3.03	1420	96.6
2	42	d5-N-EtFOSAA	589.3 > 419	7.97e3	3.30e4	0.110	0.019	4.12	4.08	3.02	1450	98.2
3	43	13C2-PFUnA	565 > 519.8	3.94e4	3.30e4	0.110	1.172	4.17	4.15	14.9	116	101.9
4	44	13C2-PFDoA	615 > 569.7	3.60e3	3.30e4	0.110	0.118	4.34	4.31	1.37	105	92.3
5	46	13C2-PFTeDA	714.8 > 669.6	2.59e4	3.30e4	0.110	0.801	4.68	4.66	9.83	111	98.1
6	52	13C5-PFHxA	318 > 272.9	3.71e4	3.71e4	0.110	1.000	3.19	3.16	5.00	45.4	100.0
7	53	13C3-PFHxS	401.9 > 79.9	6.48e3	6.48e3	0.110	1.000	3.56	3.50	12.5	113	100.0
8	54	13C8-PFOA	421.3 > 376	3.04e4	3.04e4	0.110	1.000	3.65	3.64	12.5	113	100.0
9	55	13C9-PFNA	472.2 > 426.9	3.25e4	3.25e4	0.110	1.000	3.83	3.81	12.5	113	100.0
10	56	13C4-PFOS	503 > 79.9	6.16e3	6.16e3	0.110	1.000	3.89	3.87	12.5	113	100.0
11	57	13C6-PFDA	519.1 > 473.7	3.49e4	3.49e4	0.110	1.000	4.01	3.98	12.5	113	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.30e4	3.30e4	0.110	1.000	4.17	4.14	12.5	113	100.0
13	59	Total PFBS	299 > 79.7	5.57e1	3.96e3	0.110		2.96		0.176	0.524	
14	60	Total PFHxS	398.9 > 79.6	2.66e2	2.92e3	0.110		3.52		1.14	5.98	
15	61	Total PFOA	413 > 368.7	2.95e3	3.35e4	0.110		3.65		1.10	9.08	
16	62	Total PFOS	499 > 79.9	9.34e2	6.84e3	0.110		3.89		1.71	14.8	
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	8.00e3	0.110		4.03		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	7.97e3	0.110		4.17		0.000		

GM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-12.qld

Last Altered: Wednesday, August 16, 2017 15:02:24 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:03:25 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: 170802M1_12, Date: 02-Aug-2017, Time: 12:28:21, ID: 1700922-02 MH-N104-20170721 0.11025, Description: MH-N104-20170721

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.92	55.664	3957.178	0.176	MM	0.5

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	266.276	2921.776	1.139	MM	6.0

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.63	2950.612	33519.387	1.100	bb	9.1

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.87	933.551	6844.089	1.705	bb	14.8

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									

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-12.qld

Last Altered: Wednesday, August 16, 2017 15:02:24 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:03:25 Pacific Daylight Time

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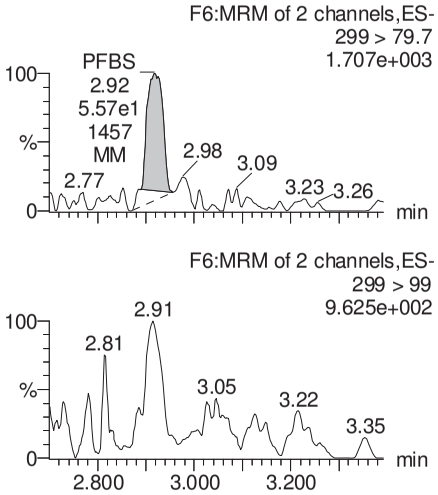
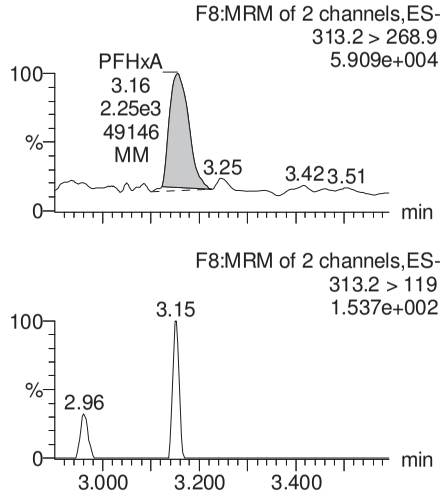
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_12, Date: 02-Aug-2017, Time: 12:28:21, ID: 1700922-02 MH-N104-20170721 0.11025, Description: MH-N104-20170721

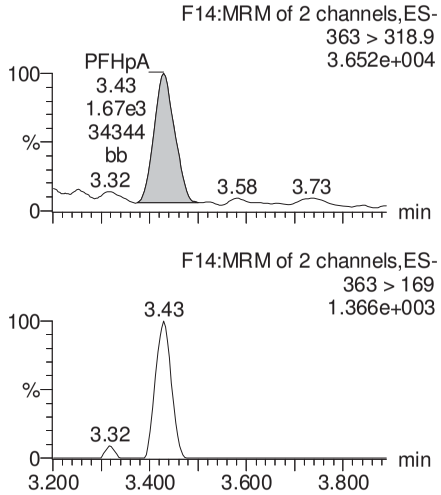
Total PFBS



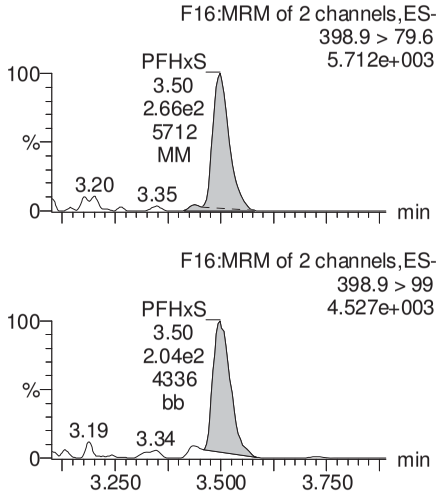
PFHxA



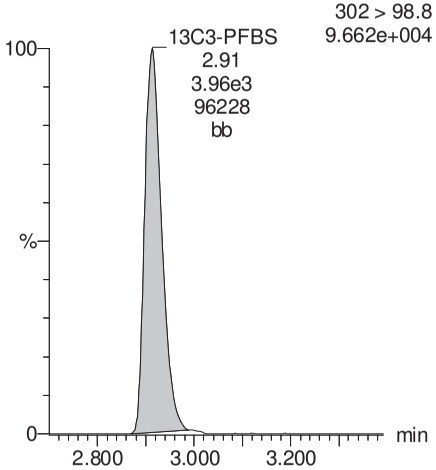
PFHpA



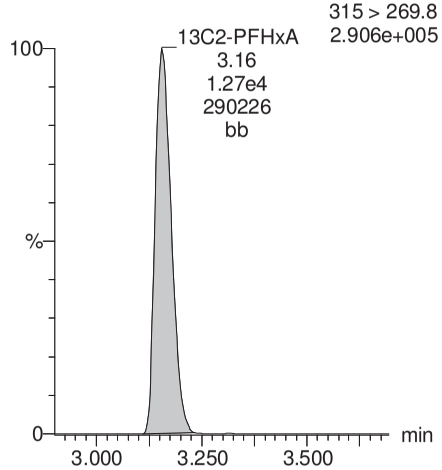
Total PFHxS



13C3-PFBS



13C2-PFHxA



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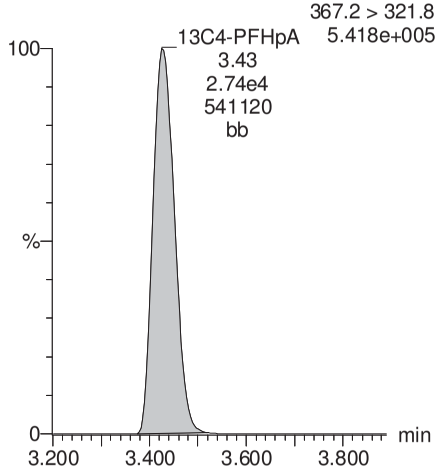

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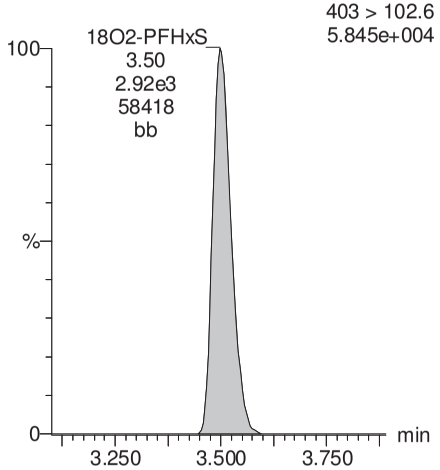


GM 8/16/17

Vista Analytical Laboratory

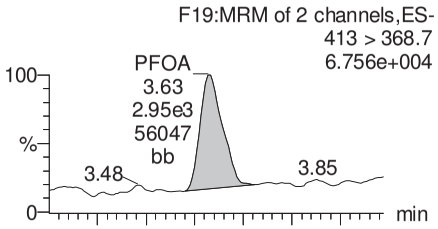
Rev'd: MM 8/16/17

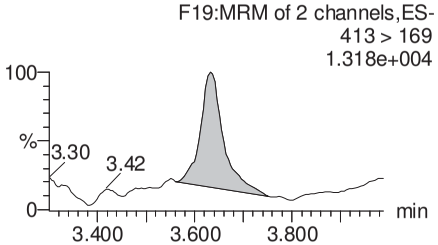
Dataset: U:\Q4.PRO\results\170802M1\170802M1-12.qld

Last Altered: Wednesday, August 16, 2017 15:02:24 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:03:25 Pacific Daylight Time

Name: 170802M1_12, Date: 02-Aug-2017, Time: 12:28:21, ID: 1700922-02 MH-N104-20170721 0.11025, Description: MH-N104-20170721

Total PFOA





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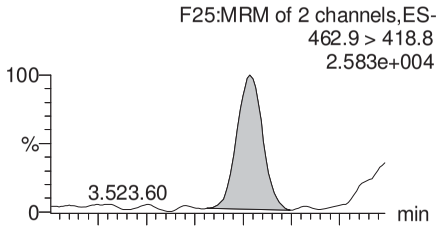

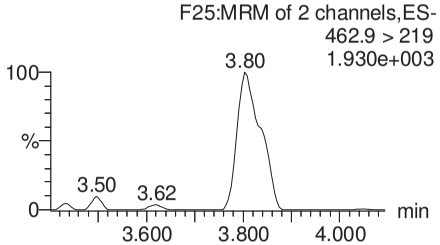

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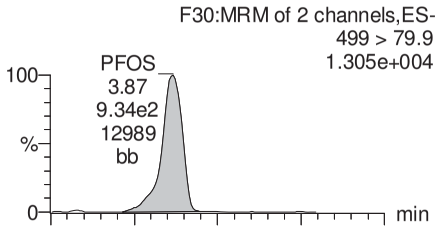
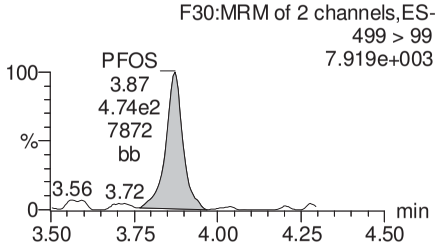
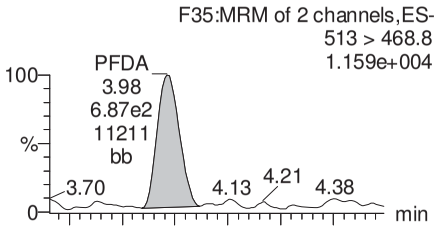
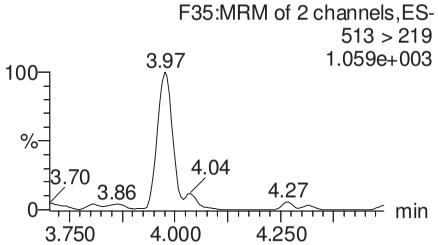


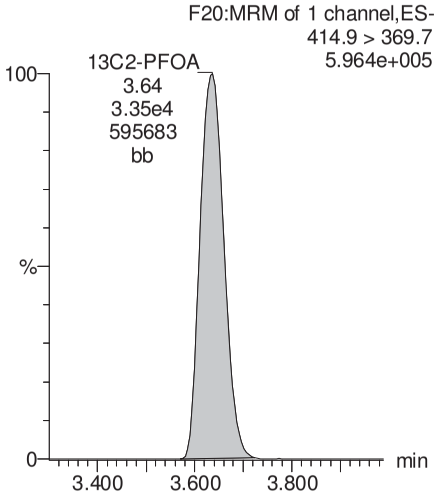


PFDA

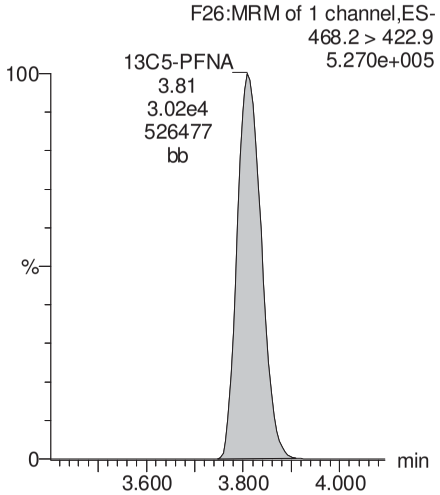




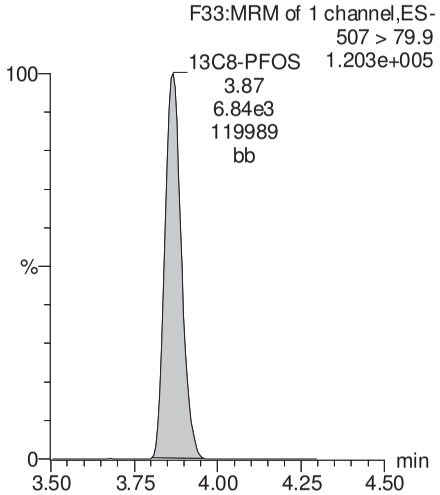
13C2-PFOA



13C5-PFNA



13C8-PFOS



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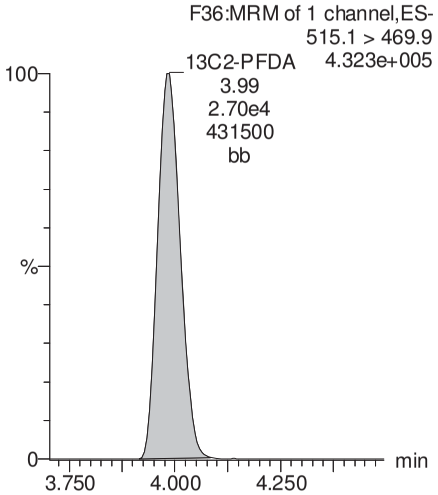


GM 8/16/17

Vista Analytical Laboratory

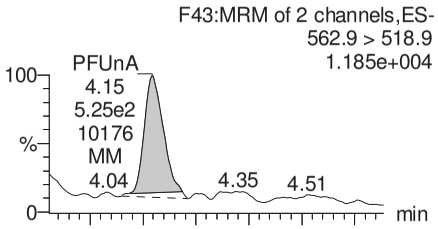
Rev'd: MM 8/16/17

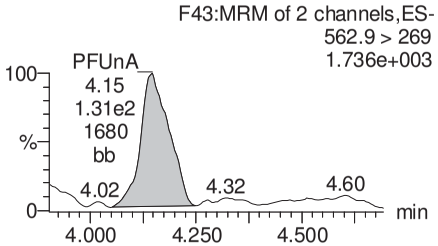
Dataset: U:\Q4.PRO\results\170802M1\170802M1-12.qld

Last Altered: Wednesday, August 16, 2017 15:02:24 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:03:25 Pacific Daylight Time

Name: 170802M1_12, Date: 02-Aug-2017, Time: 12:28:21, ID: 1700922-02 MH-N104-20170721 0.11025, Description: MH-N104-20170721

PFUnA





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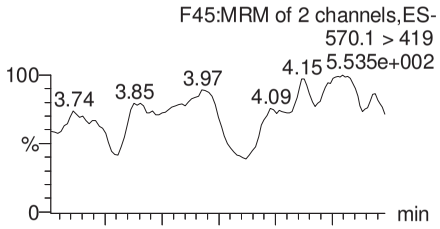

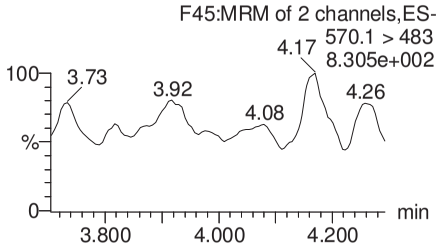

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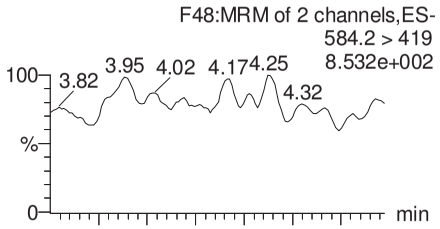

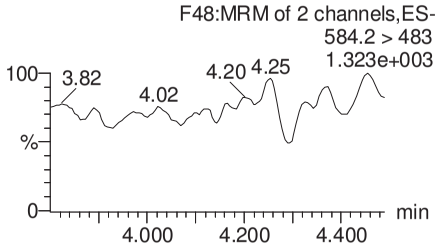

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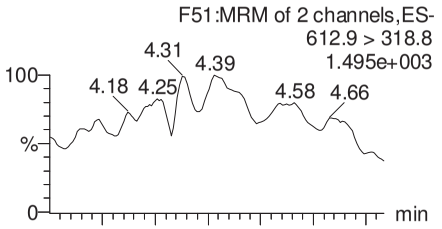

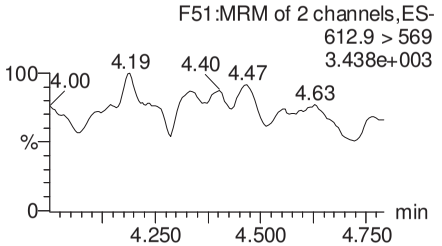

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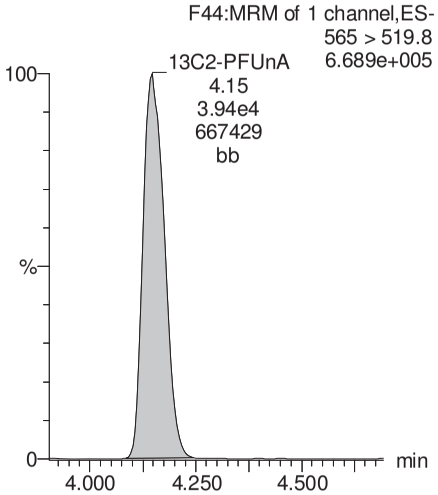

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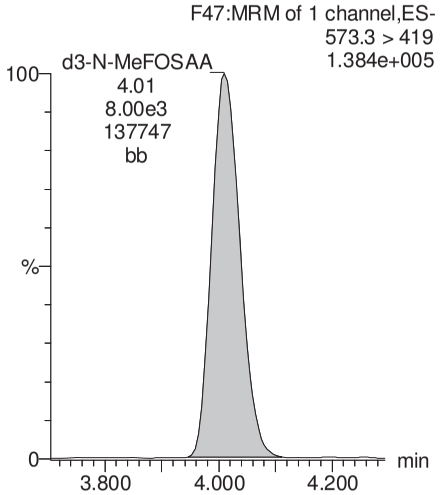

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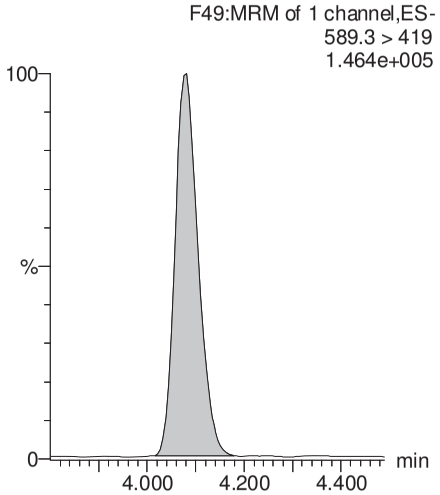

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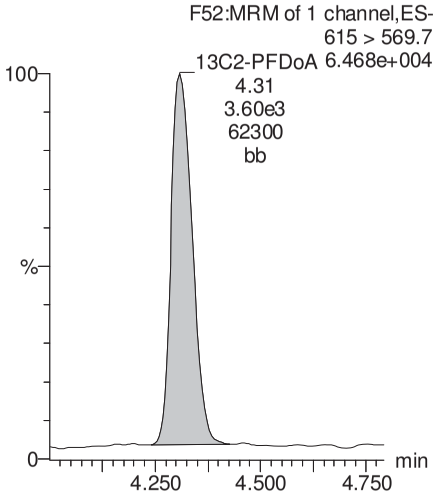


GM 8/16/17

Vista Analytical Laboratory

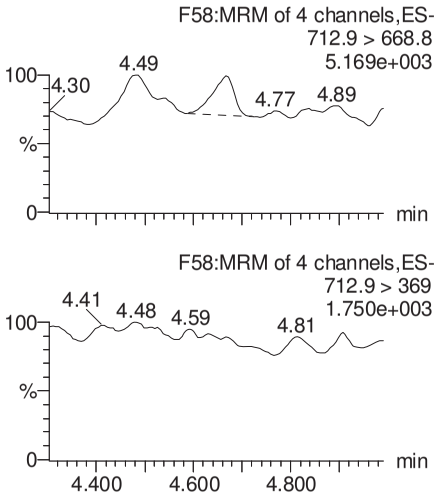
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-12.qld

Last Altered: Wednesday, August 16, 2017 15:02:24 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:03:25 Pacific Daylight Time

Name: 170802M1_12, Date: 02-Aug-2017, Time: 12:28:21, ID: 1700922-02 MH-N104-20170721 0.11025, Description: MH-N104-20170721

PFTeDA



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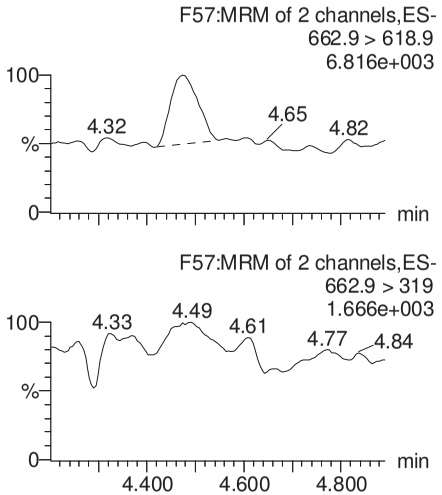
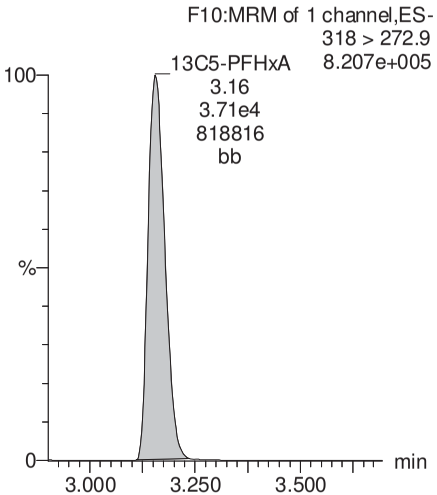
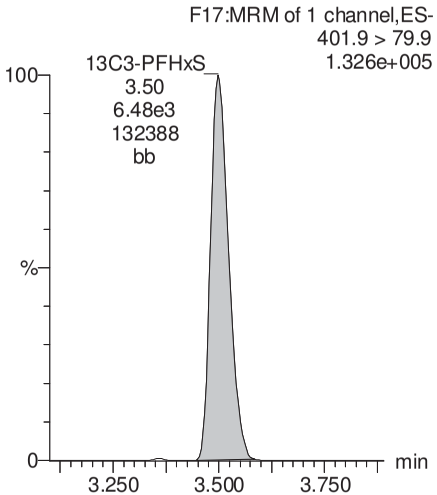


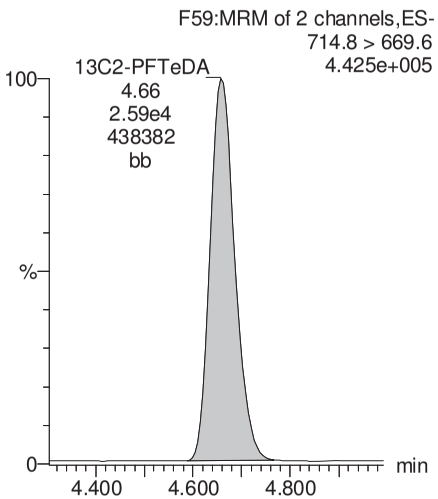
13C5-PFHxA



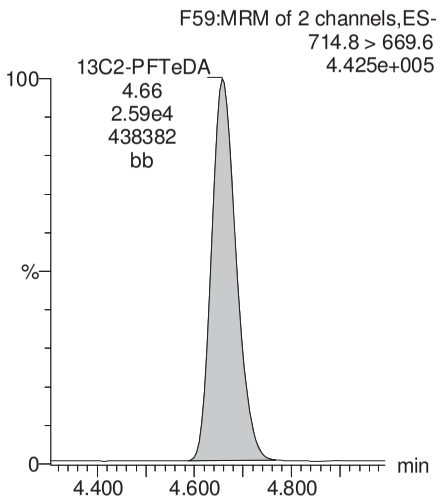
13C3-PFHxS



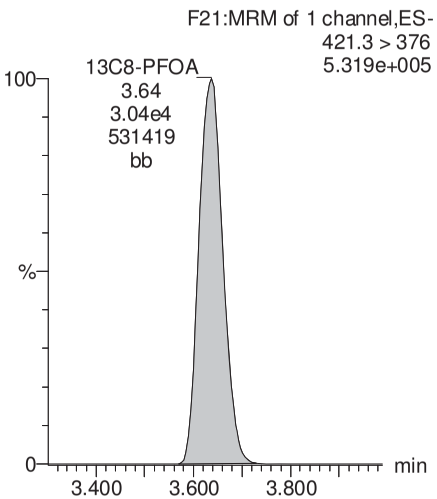
13C2-PFTeDA



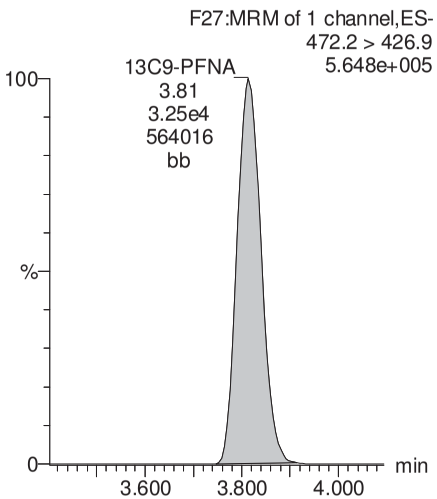
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



GM 8/16/17

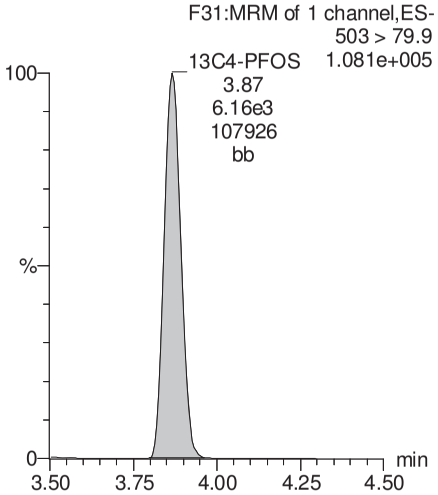
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-12.qld

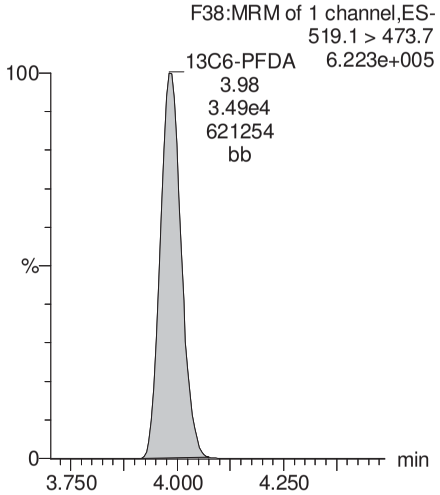
Last Altered: Wednesday, August 16, 2017 15:02:24 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:03:25 Pacific Daylight Time

Name: 170802M1_12, Date: 02-Aug-2017, Time: 12:28:21, ID: 1700922-02 MH-N104-20170721 0.11025, Description: MH-N104-20170721

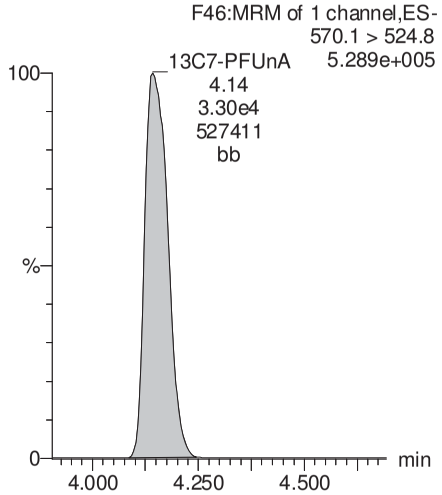
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-7.qld

Last Altered: Tuesday, August 15, 2017 15:44:55 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 15:55:07 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: 170802M1_7, Date: 02-Aug-2017, Time: 11:33:34, ID: B7G0121-MS1 Matrix Spike 0.11301, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	7.15e3	5.07e3	0.113		2.96	2.91	17.6	82.4	
2	4	PFHxA	313.2 > 268.9	4.51e4	1.54e4	0.113		3.19	3.16	14.6	92.3	
3	5	PFHpA	363 > 318.9	3.38e4	3.32e4	0.113		3.45	3.43	12.7	93.7	
4	6	PFHxS	398.9 > 79.6	5.25e3	4.03e3	0.113		3.56	3.50	16.3	85.7	
5	8	PFOA	413 > 368.7	4.88e4	4.49e4	0.113		3.65	3.63	13.6	125	
6	10	PFNA	462.9 > 418.8	3.36e4	3.67e4	0.113		3.83	3.81	11.4	92.5	
7	12	PFOS	499 > 79.9	8.17e3	9.38e3	0.113		3.89	3.86	10.9	94.2	
8	13	PFDA	513 > 468.8	3.92e4	3.78e4	0.113		4.01	3.98	13.0	94.5	
9	15	N-MeFOSAA	570.1 > 419	1.08e4	9.74e3	0.113		4.03	4.01	179	89.0	
10	16	N-EtFOSAA	584.2 > 419	8.91e3	1.02e4	0.113		4.10	4.08	141	81.1	
11	17	PFUnA	562.9 > 518.9	2.70e4	4.15e4	0.113		4.17	4.14	8.14	94.1	
12	19	PFDoA	612.9 > 318.8	3.67e3	4.69e3	0.113		4.34	4.30	9.78	92.0	

GM 8/15/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-7.qld

Last Altered: Tuesday, August 15, 2017 15:44:55 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 15:55:23 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: 170802M1_7, Date: 02-Aug-2017, Time: 11:33:34, ID: B7G0121-MS1 Matrix Spike 0.11301, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9	4.06e4	4.69e3	0.113		4.50	4.47	108	91.3	
2	22	PFTeDA	712.9 > 668.8	2.51e4	2.92e4	0.113		4.68	4.65	10.7	87.8	
3	30	13C3-PFBS	302 > 98.8	5.07e3	4.72e4	0.113	0.034	2.96	2.91	0.538	139	126.1
4	31	13C2-PFHxA	315 > 269.8	1.54e4	4.72e4	0.113	0.334	3.19	3.16	1.64	43.4	98.0
5	32	13C4-PFHpA	367.2 > 321.8	3.32e4	4.72e4	0.113	0.414	3.45	3.43	3.52	75.2	68.0
6	33	18O2-PFHxS	403 > 102.6	4.03e3	8.02e3	0.113	0.475	3.56	3.50	6.28	117	105.7
7	35	13C2-PFOA	414.9 > 369.7	4.49e4	4.19e4	0.113	1.298	3.65	3.63	13.4	91.2	82.4
8	36	13C5-PFNA	468.2 > 422.9	3.67e4	4.51e4	0.113	1.094	3.83	3.81	10.2	82.3	74.4
9	38	13C8-PFOS	507 > 79.9	9.38e3	7.70e3	0.113	1.153	3.89	3.86	15.2	117	105.5
10	39	13C2-PFDA	515.1 > 469.9	3.78e4	4.03e4	0.113	1.059	4.01	3.98	11.7	98.0	88.6

GM 8/15/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-7.qld

Last Altered: Tuesday, August 15, 2017 15:44:55 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 15:55:42 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: 170802M1_7, Date: 02-Aug-2017, Time: 11:33:34, ID: B7G0121-MS1 Matrix Spike 0.11301, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	9.74e3	4.60e4	0.113	0.019	4.03	4.01	2.65	1210	84.3
2	42	d5-N-EtFOSAA	589.3 > 419	1.02e4	4.60e4	0.113	0.019	4.12	4.08	2.78	1300	90.5
3	43	13C2-PFUnA	565 > 519.8	4.15e4	4.60e4	0.113	1.172	4.17	4.14	11.3	85.1	77.0
4	44	13C2-PFDoA	615 > 569.7	4.69e3	4.60e4	0.113	0.118	4.34	4.30	1.27	95.2	86.1
5	46	13C2-PFTeDA	714.8 > 669.6	2.92e4	4.60e4	0.113	0.801	4.68	4.65	7.94	87.6	79.2
6	52	13C5-PFHxA	318 > 272.9	4.72e4	4.72e4	0.113	1.000	3.19	3.16	5.00	44.2	100.0
7	53	13C3-PFHxS	401.9 > 79.9	8.02e3	8.02e3	0.113	1.000	3.56	3.50	12.5	111	100.0
8	54	13C8-PFOA	421.3 > 376	4.19e4	4.19e4	0.113	1.000	3.65	3.63	12.5	111	100.0
9	55	13C9-PFNA	472.2 > 426.9	4.51e4	4.51e4	0.113	1.000	3.83	3.81	12.5	111	100.0
10	56	13C4-PFOS	503 > 79.9	7.70e3	7.70e3	0.113	1.000	3.89	3.86	12.5	111	100.0
11	57	13C6-PFDA	519.1 > 473.7	4.03e4	4.03e4	0.113	1.000	4.01	3.98	12.5	111	100.0
12	58	13C7-PFUnA	570.1 > 524.8	4.60e4	4.60e4	0.113	1.000	4.17	4.15	12.5	111	100.0
13	59	Total PFBS	299 > 79.7	7.15e3	5.07e3	0.113		2.96		17.6	82.4	
14	60	Total PFHxS	398.9 > 79.6	5.25e3	4.03e3	0.113		3.52		16.3	85.7	
15	61	Total PFOA	413 > 368.7	4.88e4	4.49e4	0.113		3.65		13.6	125	
16	62	Total PFOS	499 > 79.9	8.17e3	9.38e3	0.113		3.89		10.9	94.2	
17	63	Total N-Me-FOSAA	570.1 > 419	1.08e4	9.74e3	0.113		4.03		179	89.0	
18	64	Total N-EtFOSAA	584.2 > 419	8.91e3	1.02e4	0.113		4.17		141	81.1	

GM 8/15/17

Rev'd: MM 8/16/17

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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: 170802M1_7, Date: 02-Aug-2017, Time: 11:33:34, ID: B7G0121-MS1 Matrix Spike 0.11301, Description: Matrix Spike

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.91	7147.349	5071.882	17.615	bb	82.4

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	5253.892	4028.304	16.303	bb	85.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.63	48808.496	44876.418	13.595	bb	124.8

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.86	8169.251	9376.658	10.890	bb	94.2

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419	4.01	10759.025	9742.506	179.455	bb	89.0

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419	4.08	8912.422	10247.208	141.333	bb	81.1

GM 8/15/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

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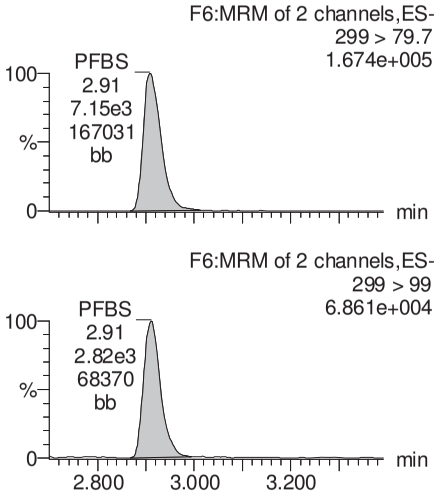
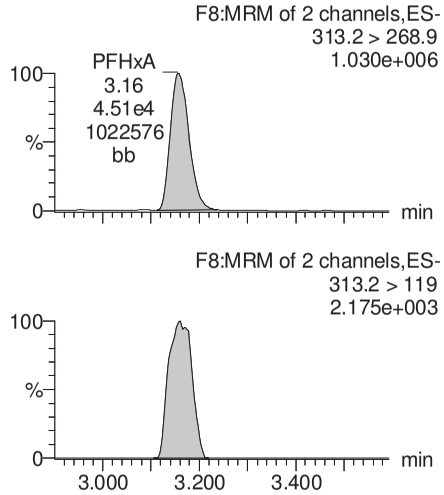
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_7, Date: 02-Aug-2017, Time: 11:33:34, ID: B7G0121-MS1 Matrix Spike 0.11301, Description: Matrix Spike

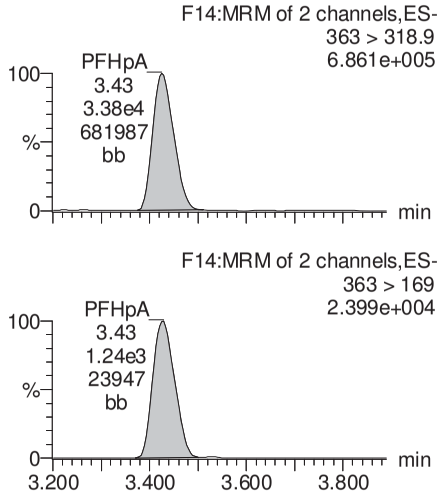
Total PFBS



PFHxA



PFHpA



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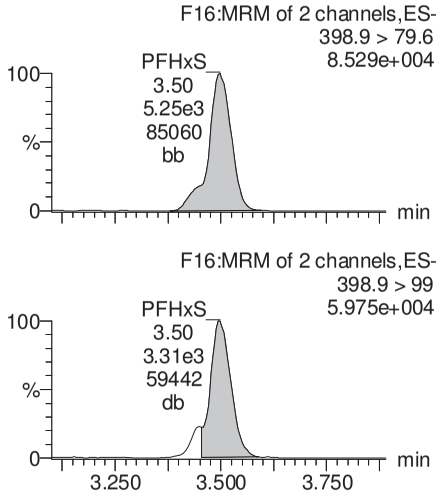

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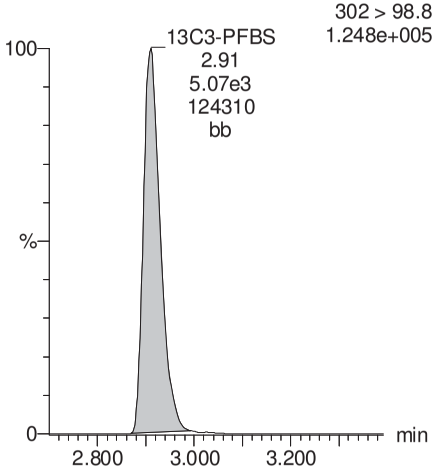

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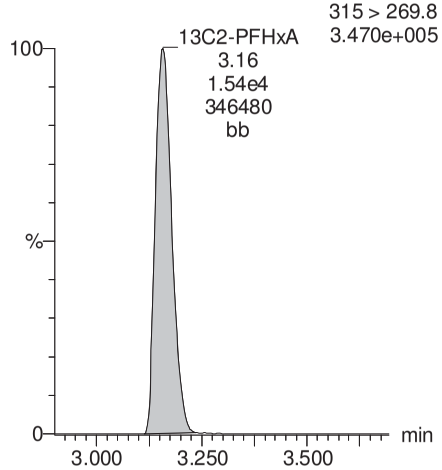

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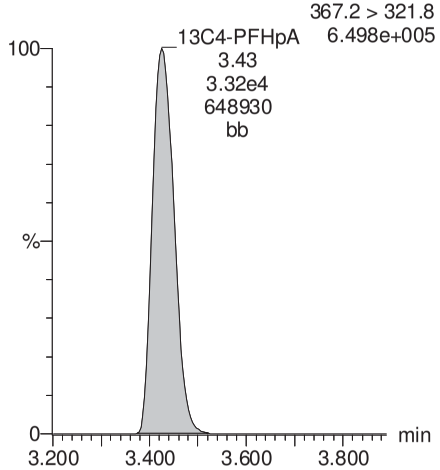

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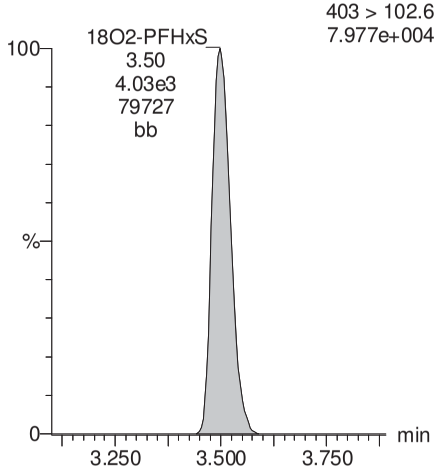

GM 8/15/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-7.qld

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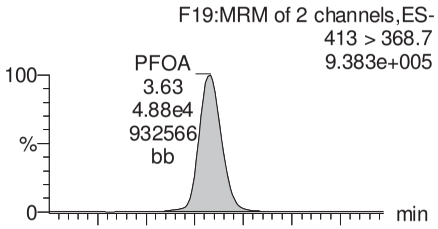
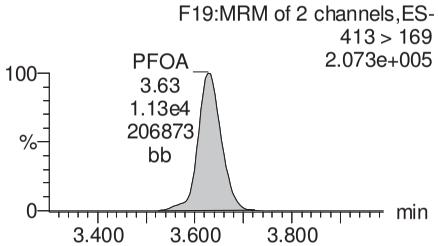
Name: 170802M1_7, Date: 02-Aug-2017, Time: 11:33:34, ID: B7G0121-MS1 Matrix Spike 0.11301, Description: Matrix Spike

Total PFOA





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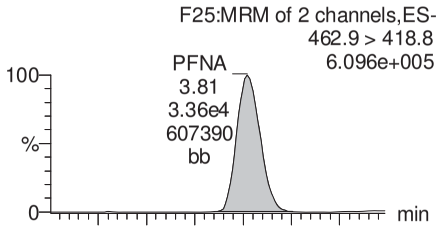
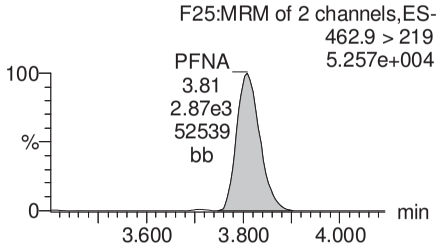
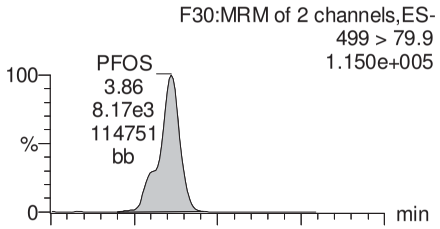
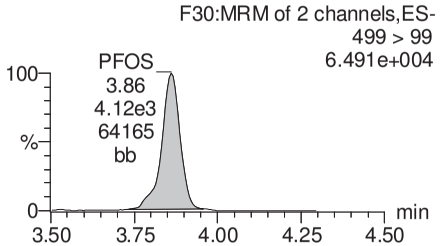




Total PFOS





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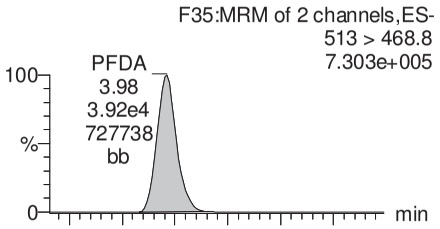
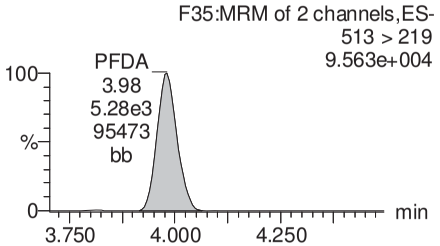
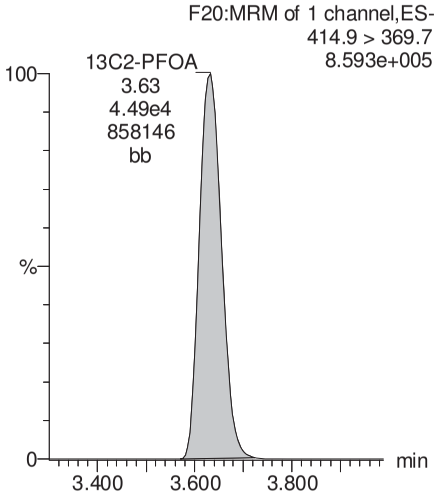
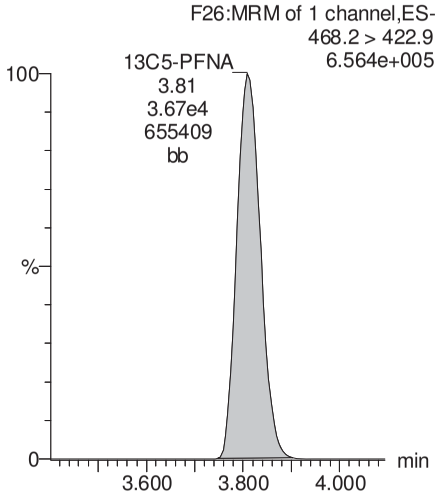




13C2-PFOA



13C5-PFNA



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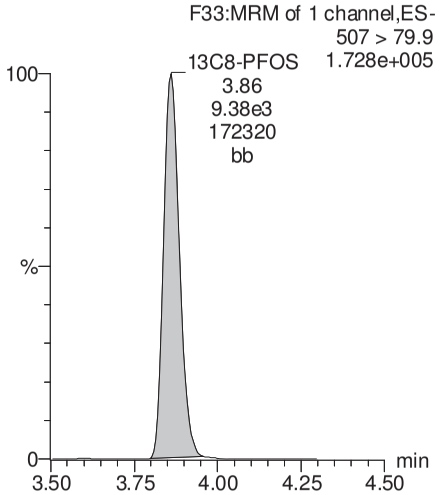

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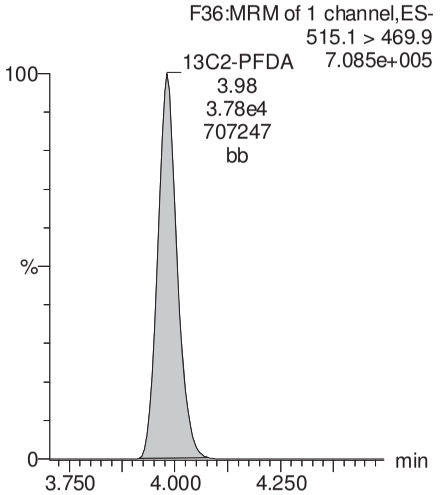

GM 8/15/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-7.qld

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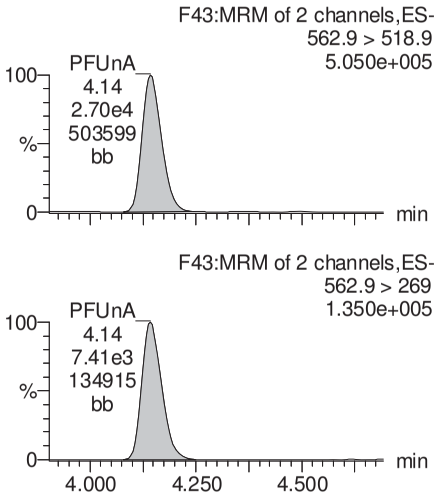
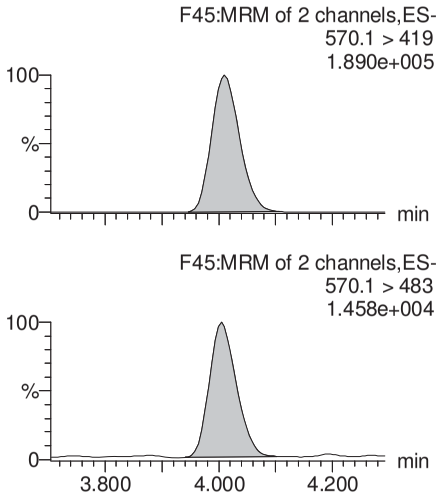
Name: 170802M1_7, Date: 02-Aug-2017, Time: 11:33:34, ID: B7G0121-MS1 Matrix Spike 0.11301, Description: Matrix Spike

PFUnA



N-MeFOSAA



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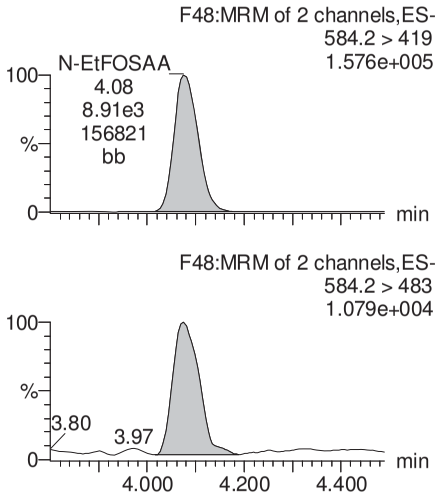
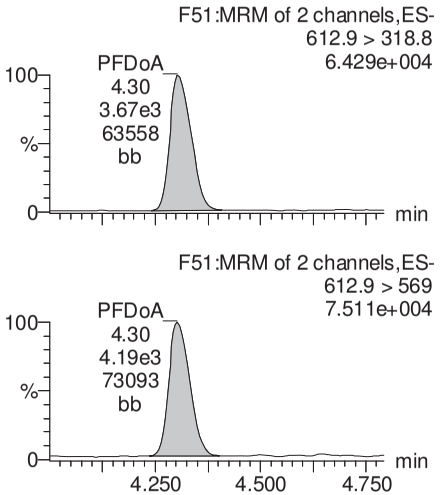


PFDoA



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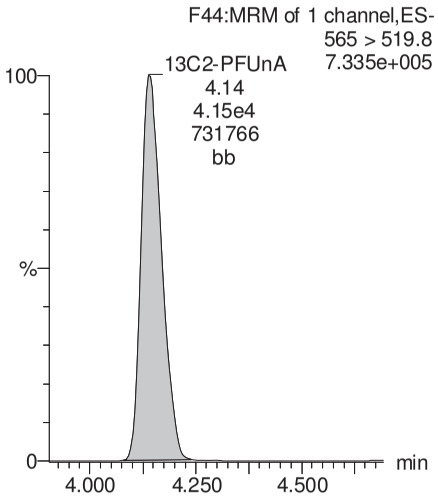

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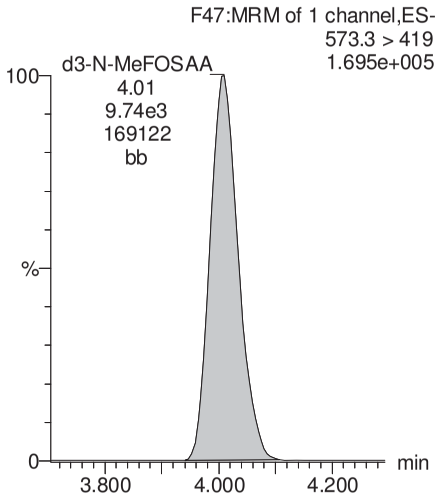

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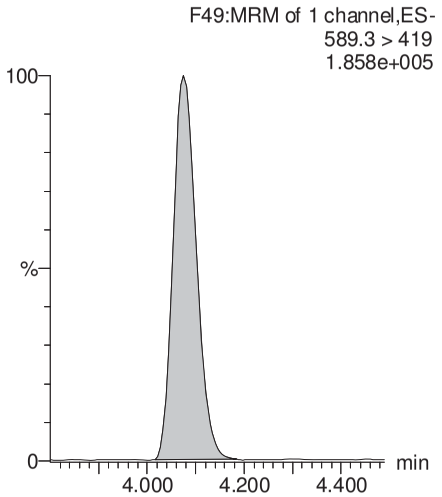

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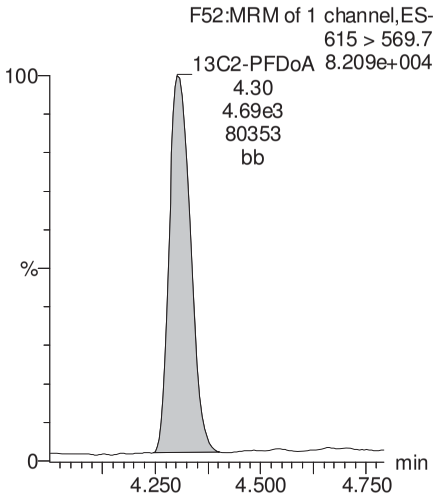

GM 8/15/17

Vista Analytical Laboratory

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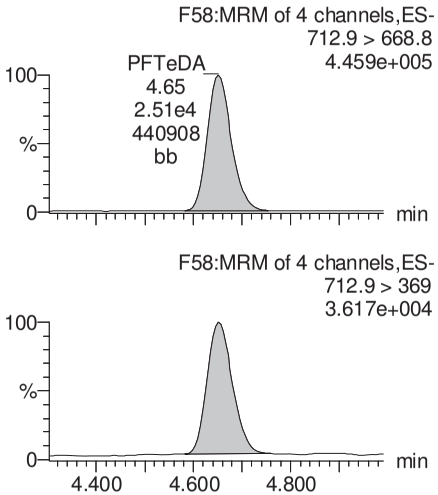
Name: 170802M1_7, Date: 02-Aug-2017, Time: 11:33:34, ID: B7G0121-MS1 Matrix Spike 0.11301, Description: Matrix Spike

PFTeDA



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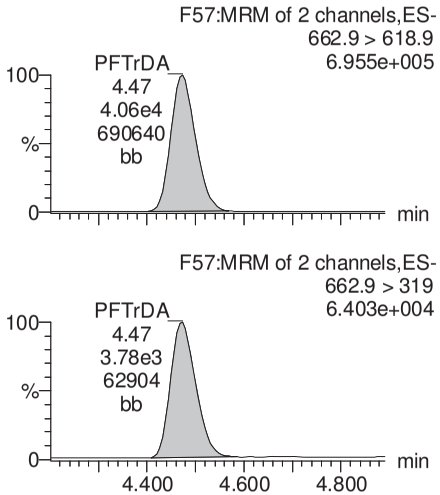

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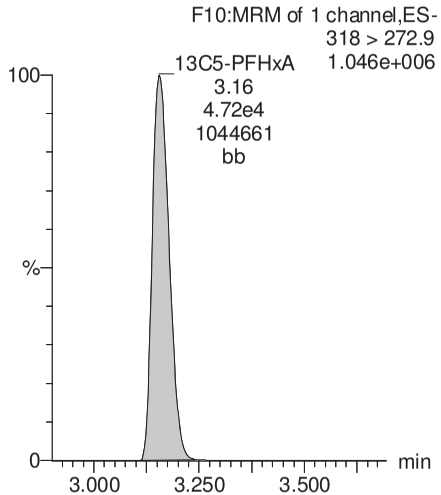

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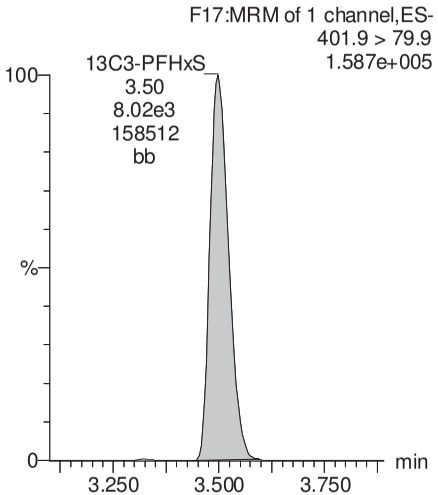

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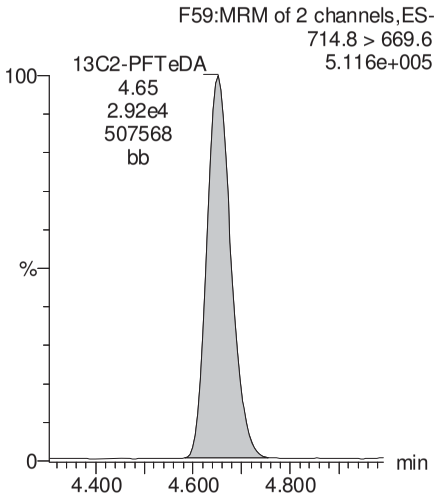

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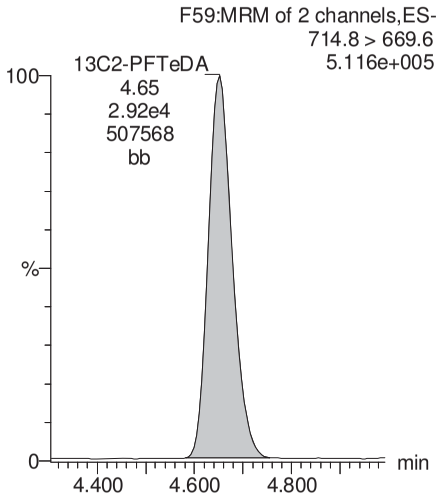

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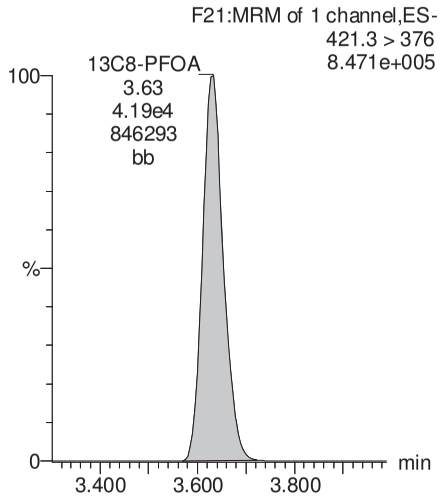

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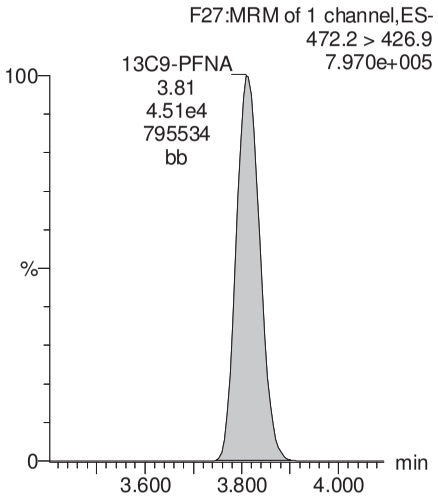

GM 8/15/17

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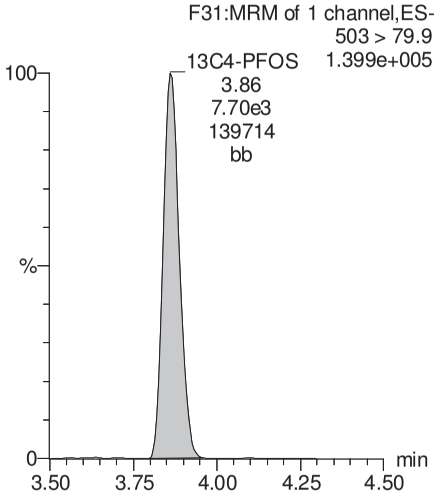
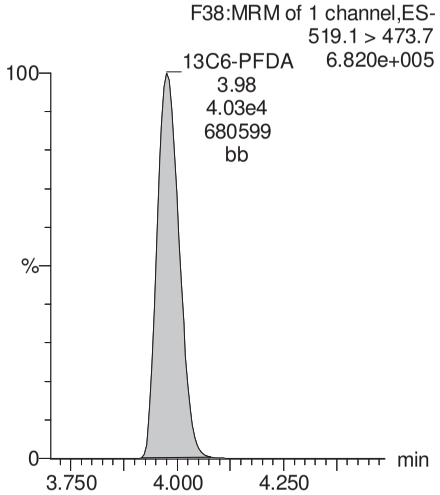
Name: 170802M1_7, Date: 02-Aug-2017, Time: 11:33:34, ID: B7G0121-MS1 Matrix Spike 0.11301, Description: Matrix Spike

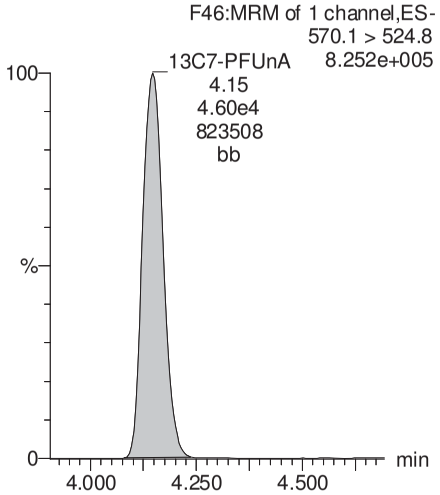
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/15/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-8.qld

Last Altered: Wednesday, August 16, 2017 14:54:48 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:55:48 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: 170802M1_8, Date: 02-Aug-2017, Time: 11:44:20, ID: B7G0121-MSD1 Matrix Spike Dup 0.11225, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	6.02e3	4.09e3	0.112		2.96	2.91	18.4	86.6	
2	4	PFHxA	313.2 > 268.9	3.79e4	1.21e4	0.112		3.19	3.16	15.7	99.7	
3	5	PFHpA	363 > 318.9	2.93e4	2.90e4	0.112		3.45	3.43	12.6	93.5	
4	6	PFHxS	398.9 > 79.6	4.26e3	3.32e3	0.112		3.56	3.50	16.1	85.0	
5	8	PFOA	413 > 368.7	3.92e4	3.88e4	0.112		3.65	3.63	12.6	117	
6	10	PFNA	462.9 > 418.8	2.95e4	3.43e4	0.112		3.83	3.81	10.7	87.5	
7	12	PFOS	499 > 79.9	6.85e3	7.34e3	0.112		3.89	3.86	11.7	101	
8	13	PFDA	513 > 468.8	3.07e4	2.98e4	0.112		4.01	3.98	12.9	94.6	
9	15	N-MeFOSAA	570.1 > 419	8.99e3	8.38e3	0.112		4.03	4.01	174	87.1	
10	16	N-EtFOSAA	584.2 > 419	7.68e3	8.13e3	0.112		4.10	4.08	154	88.8	
11	17	PFUnA	562.9 > 518.9	2.36e4	3.29e4	0.112		4.17	4.14	8.98	105	
12	19	PFDoA	612.9 > 318.8	2.88e3	3.87e3	0.112		4.34	4.30	9.30	88.0	

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-8.qld

Last Altered: Wednesday, August 16, 2017 14:54:48 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:56:02 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: 170802M1_8, Date: 02-Aug-2017, Time: 11:44:20, ID: B7G0121-MSD1 Matrix Spike Dup 0.11225, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9	3.57e4	3.87e3	0.112		4.50	4.47	115	97.9	
2	22	PFTeDA	712.9 > 668.8	2.25e4	2.51e4	0.112		4.68	4.65	11.2	92.2	
3	30	13C3-PFBS	302 > 98.8	4.09e3	3.71e4	0.112	0.034	2.96	2.91	0.552	144	129.3
4	31	13C2-PFHxA	315 > 269.8	1.21e4	3.71e4	0.112	0.334	3.19	3.16	1.63	43.5	97.6
5	32	13C4-PFHpA	367.2 > 321.8	2.90e4	3.71e4	0.112	0.414	3.45	3.43	3.91	84.1	75.5
6	33	18O2-PFHxS	403 > 102.6	3.32e3	6.30e3	0.112	0.475	3.56	3.49	6.58	123	110.8
7	35	13C2-PFOA	414.9 > 369.7	3.88e4	3.37e4	0.112	1.298	3.65	3.63	14.4	98.5	88.5
8	36	13C5-PFNA	468.2 > 422.9	3.43e4	3.90e4	0.112	1.094	3.83	3.81	11.0	89.6	80.5
9	38	13C8-PFOS	507 > 79.9	7.34e3	6.40e3	0.112	1.153	3.89	3.86	14.4	111	99.5
10	39	13C2-PFDA	515.1 > 469.9	2.98e4	3.87e4	0.112	1.059	4.01	3.98	9.61	80.9	72.6

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-8.qld

Last Altered: Wednesday, August 16, 2017 14:54:48 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:56:15 Pacific Daylight Time

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Name: 170802M1_8, Date: 02-Aug-2017, Time: 11:44:20, ID: B7G0121-MSD1 Matrix Spike Dup 0.11225, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	8.38e3	3.34e4	0.112	0.019	4.03	4.01	3.14	1450	100.0
2	42	d5-N-EtFOSAA	589.3 > 419	8.13e3	3.34e4	0.112	0.019	4.12	4.08	3.04	1430	98.9
3	43	13C2-PFUnA	565 > 519.8	3.29e4	3.34e4	0.112	1.172	4.17	4.14	12.3	93.5	84.0
4	44	13C2-PFDoA	615 > 569.7	3.87e3	3.34e4	0.112	0.118	4.34	4.31	1.45	109	97.8
5	46	13C2-PFTeDA	714.8 > 669.6	2.51e4	3.34e4	0.112	0.801	4.68	4.65	9.40	104	93.8
6	52	13C5-PFHxA	318 > 272.9	3.71e4	3.71e4	0.112	1.000	3.19	3.16	5.00	44.5	100.0
7	53	13C3-PFHxS	401.9 > 79.9	6.30e3	6.30e3	0.112	1.000	3.56	3.50	12.5	111	100.0
8	54	13C8-PFOA	421.3 > 376	3.37e4	3.37e4	0.112	1.000	3.65	3.63	12.5	111	100.0
9	55	13C9-PFNA	472.2 > 426.9	3.90e4	3.90e4	0.112	1.000	3.83	3.81	12.5	111	100.0
10	56	13C4-PFOS	503 > 79.9	6.40e3	6.40e3	0.112	1.000	3.89	3.86	12.5	111	100.0
11	57	13C6-PFDA	519.1 > 473.7	3.87e4	3.87e4	0.112	1.000	4.01	3.98	12.5	111	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.34e4	3.34e4	0.112	1.000	4.17	4.15	12.5	111	100.0
13	59	Total PFBS	299 > 79.7	6.02e3	4.09e3	0.112		2.96		18.4	86.6	
14	60	Total PFHxS	398.9 > 79.6	4.26e3	3.32e3	0.112		3.52		16.1	85.0	
15	61	Total PFOA	413 > 368.7	3.92e4	3.88e4	0.112		3.65		12.6	117	
16	62	Total PFOS	499 > 79.9	6.85e3	7.34e3	0.112		3.89		11.7	101	
17	63	Total N-Me-FOSAA	570.1 > 419	8.99e3	8.38e3	0.112		4.03		174	87.1	
18	64	Total N-EtFOSAA	584.2 > 419	7.68e3	8.13e3	0.112		4.17		154	88.8	

GM 8/16/17

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-8.qld

Last Altered: Wednesday, August 16, 2017 14:54:48 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: 170802M1_8, Date: 02-Aug-2017, Time: 11:44:20, ID: B7G0121-MSD1 Matrix Spike Dup 0.11225, Description: Matrix Spike Dup

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.91	6017.169	4094.122	18.371	bb	86.6

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	4263.130	3318.741	16.057	MM	85.0

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.63	39190.266	38775.598	12.634	bb	116.6

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.86	6846.056	7344.325	11.652	bb	101.5

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419	4.01	8993.102	8378.196	174.426	bb	87.1

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419	4.08	7680.321	8126.383	153.580	bb	88.8

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-8.qld

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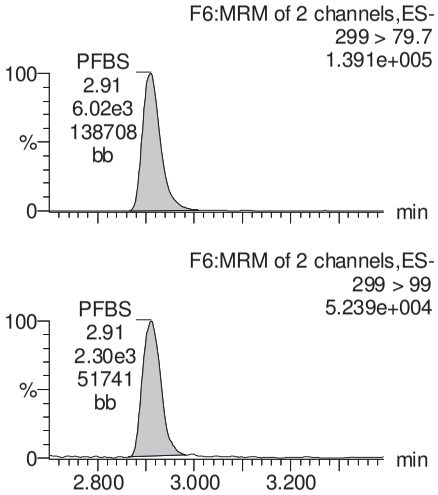
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_8, Date: 02-Aug-2017, Time: 11:44:20, ID: B7G0121-MSD1 Matrix Spike Dup 0.11225, Description: Matrix Spike Dup

Total PFBS



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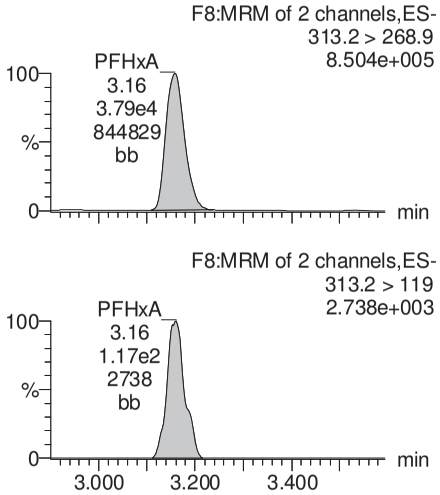

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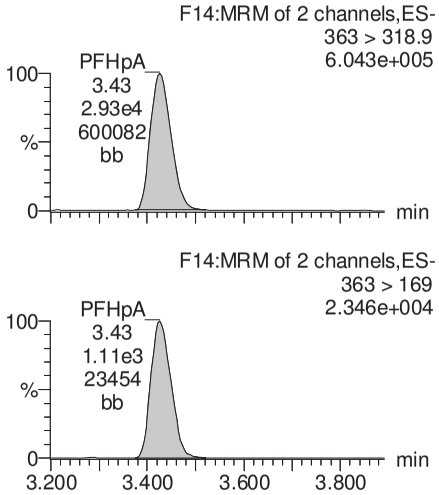
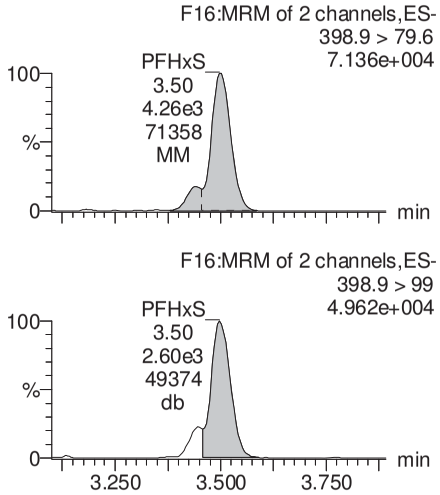
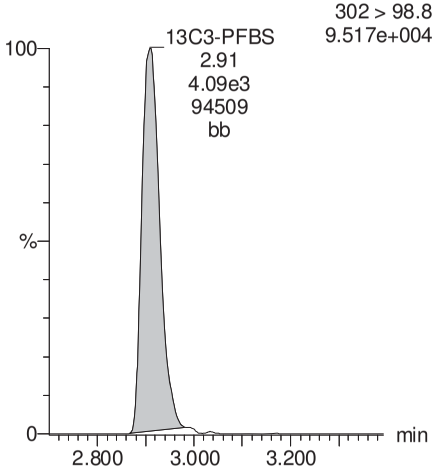


Total PFHxS



13C3-PFBS



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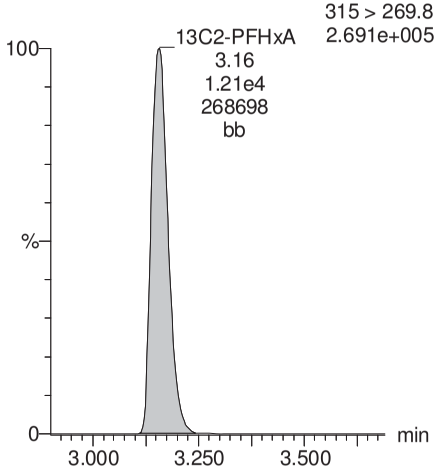

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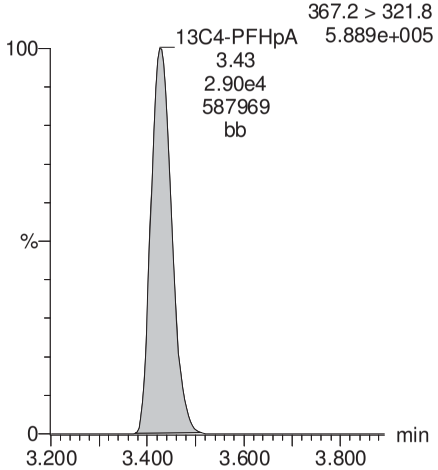

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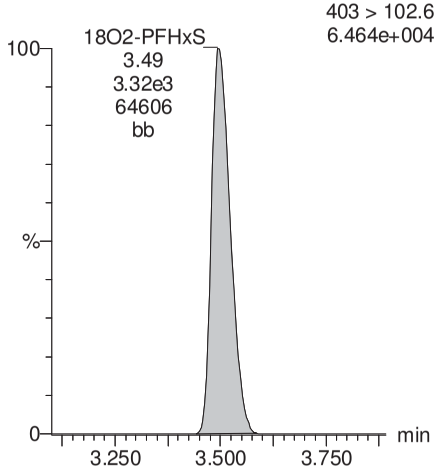


GM 8/16/17

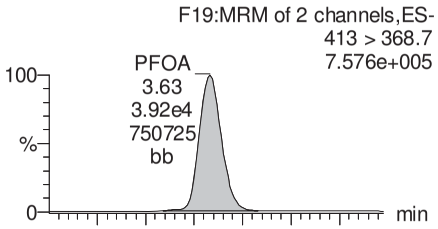
Rev'd: MM 8/16/17

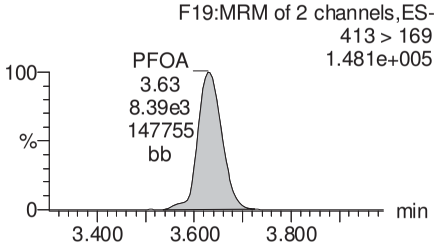
Dataset: U:\Q4.PRO\results\170802M1\170802M1-8.qld

Last Altered: Wednesday, August 16, 2017 14:54:48 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:56:15 Pacific Daylight Time

Name: 170802M1_8, Date: 02-Aug-2017, Time: 11:44:20, ID: B7G0121-MSD1 Matrix Spike Dup 0.11225, Description: Matrix Spike Dup

Total PFOA





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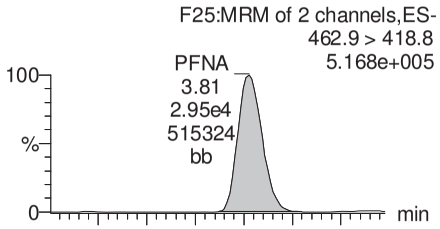
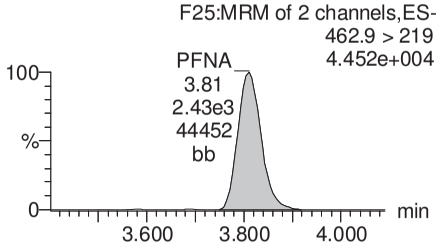
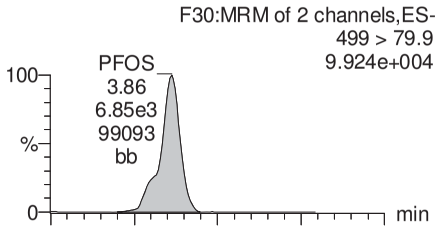
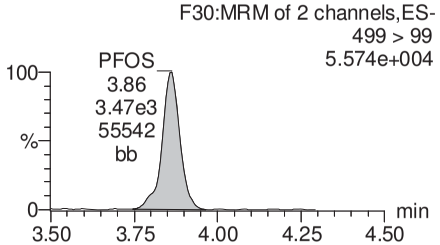




Total PFOS





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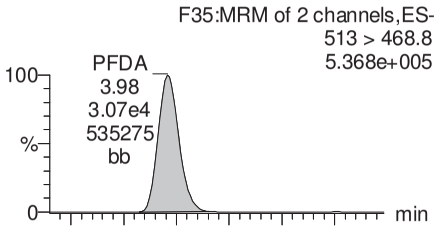
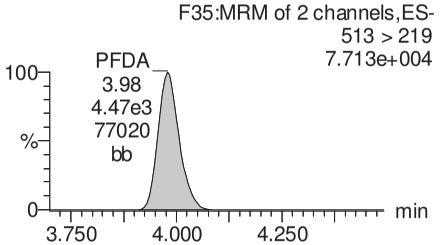
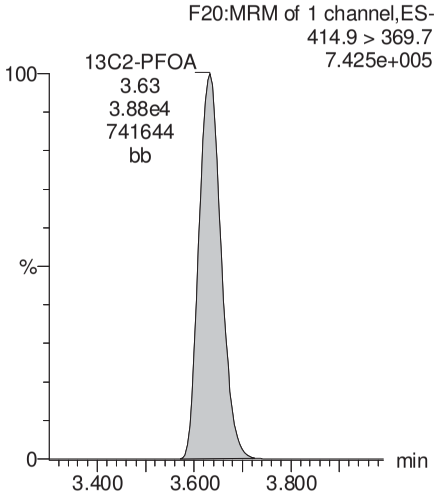
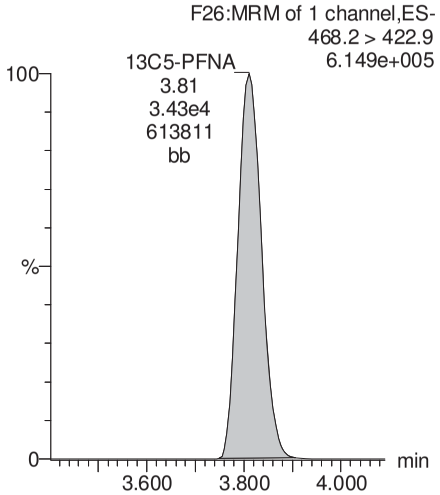




13C2-PFOA



13C5-PFNA



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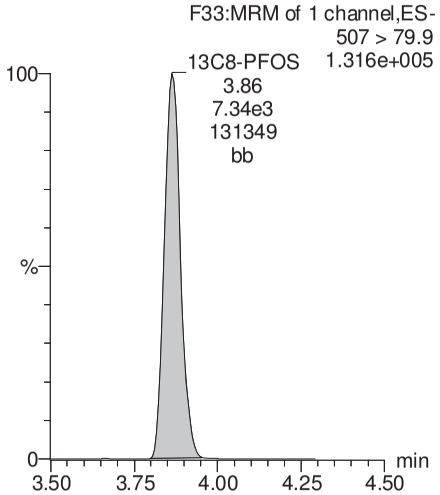

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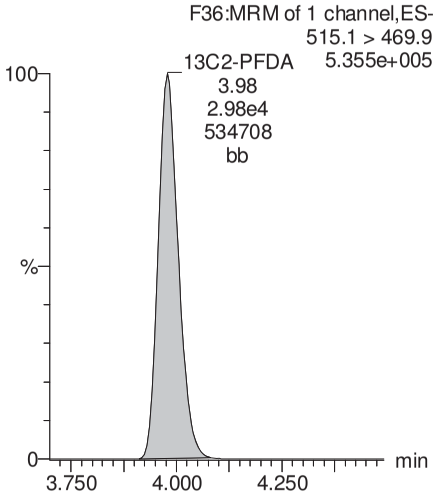

GM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-8.qld

Last Altered: Wednesday, August 16, 2017 14:54:48 Pacific Daylight Time
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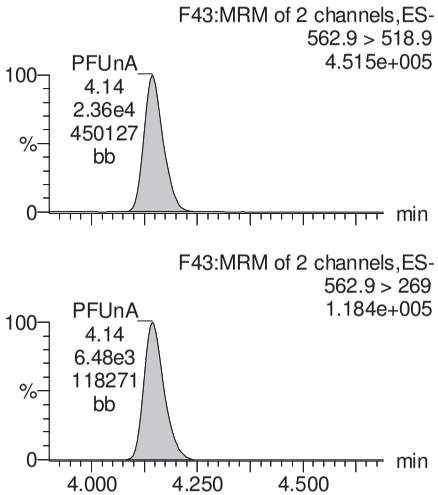
Name: 170802M1_8, Date: 02-Aug-2017, Time: 11:44:20, ID: B7G0121-MSD1 Matrix Spike Dup 0.11225, Description: Matrix Spike Dup

PFUnA



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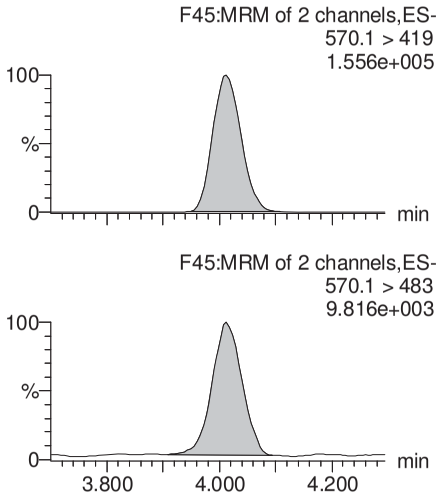

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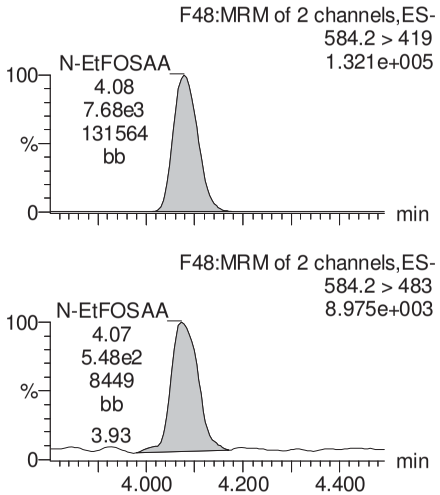

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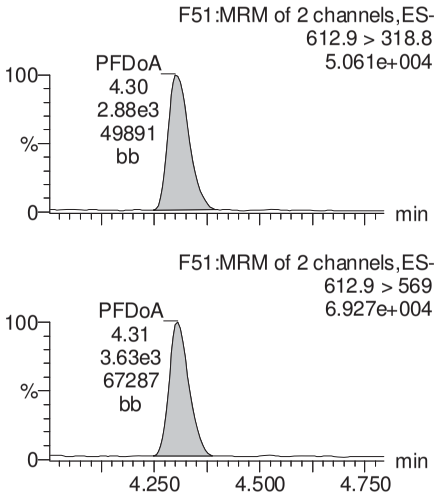
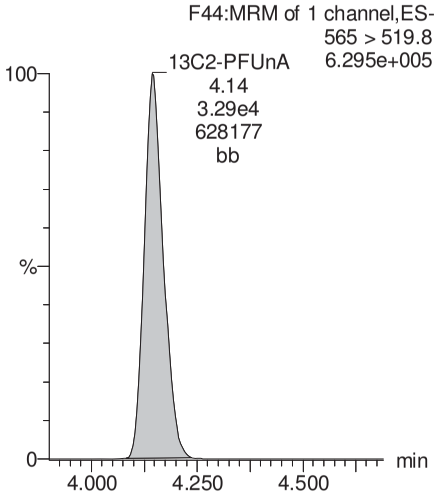
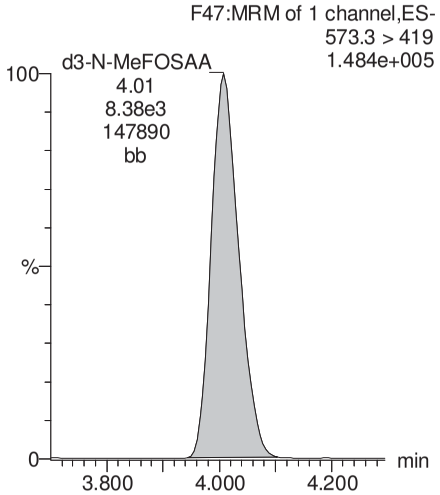


13C2-PFUnA



d3-N-MeFOSAA



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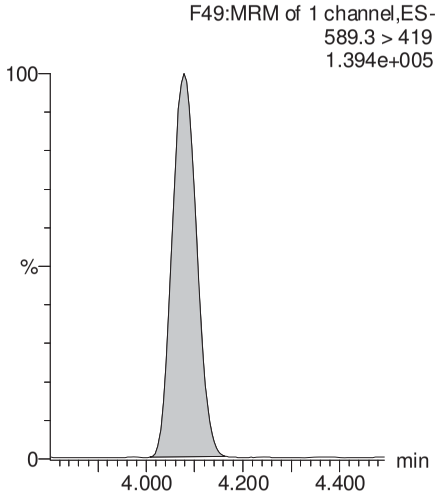
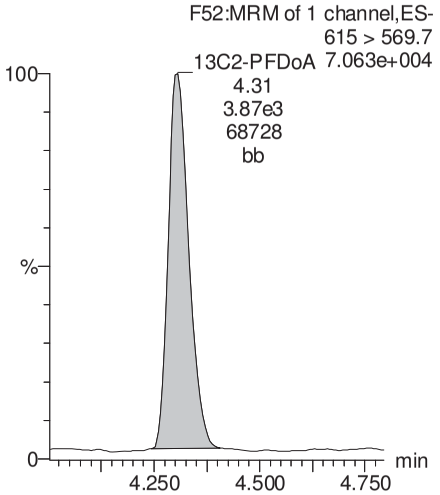


13C2-PFDoA



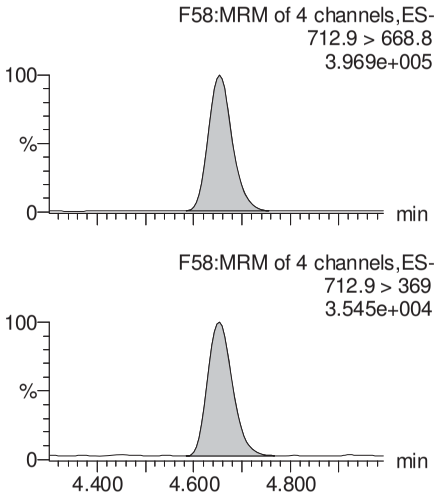
GM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-8.qld

Last Altered: Wednesday, August 16, 2017 14:54:48 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:56:15 Pacific Daylight Time

Name: 170802M1_8, Date: 02-Aug-2017, Time: 11:44:20, ID: B7G0121-MSD1 Matrix Spike Dup 0.11225, Description: Matrix Spike Dup

PFTeDA



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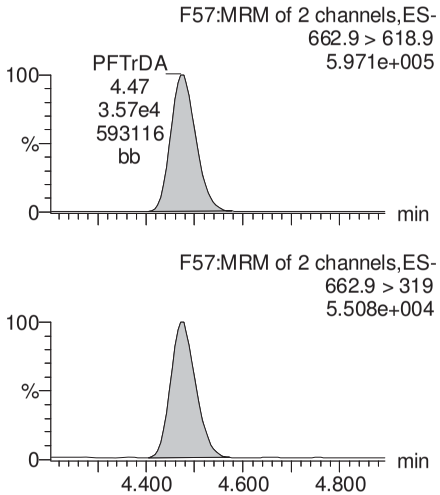
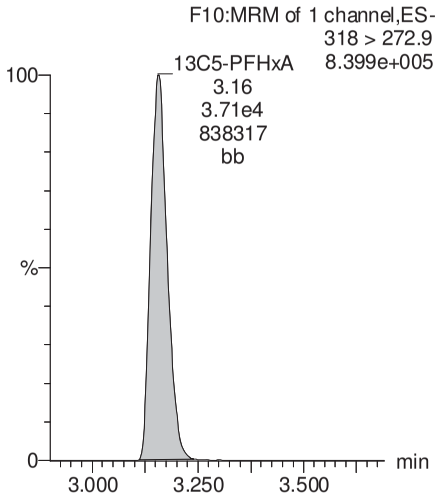
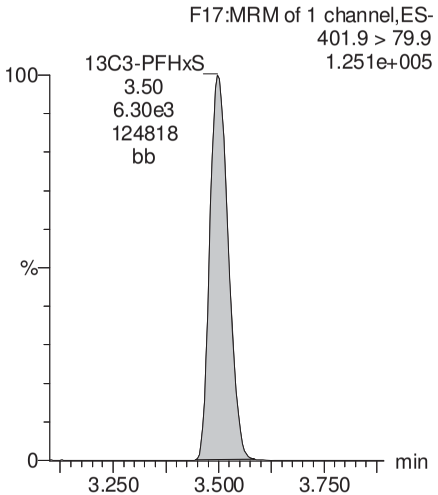


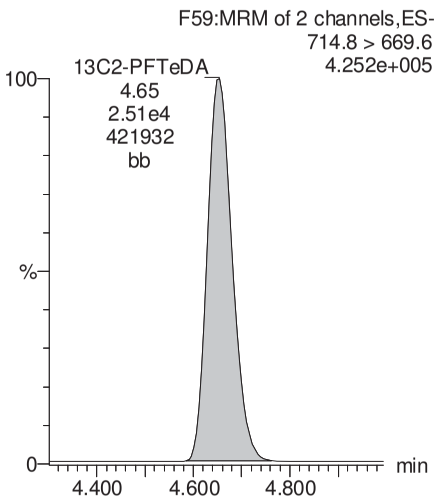
13C5-PFHxA



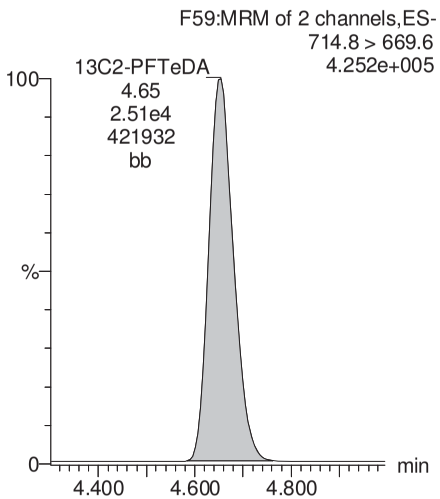
13C3-PFHxS



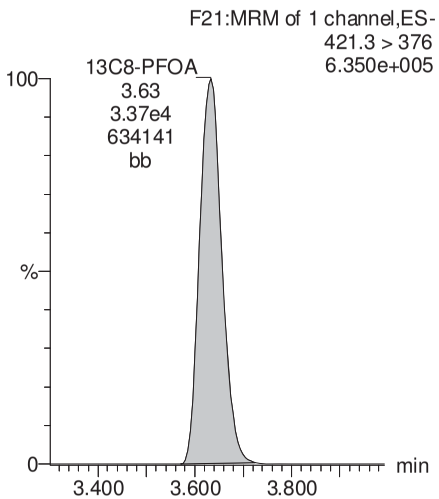
13C2-PFTeDA



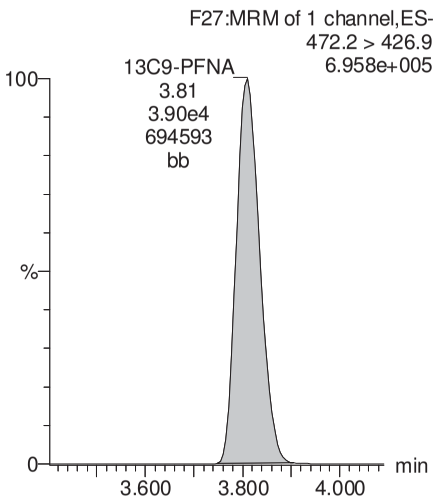
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



GM 8/16/17

Vista Analytical Laboratory

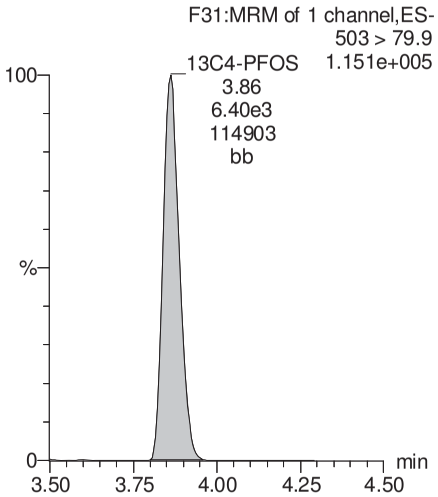
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-8.qld

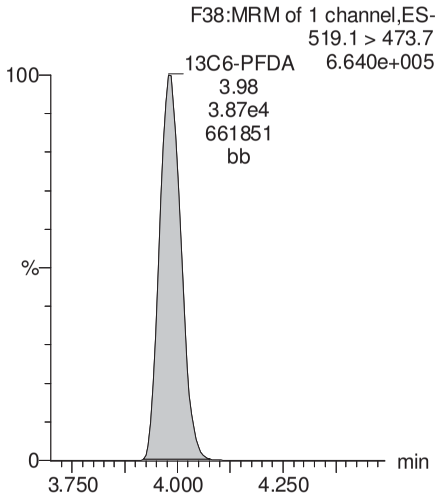
Last Altered: Wednesday, August 16, 2017 14:54:48 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 14:56:15 Pacific Daylight Time

Name: 170802M1_8, Date: 02-Aug-2017, Time: 11:44:20, ID: B7G0121-MSD1 Matrix Spike Dup 0.11225, Description: Matrix Spike Dup

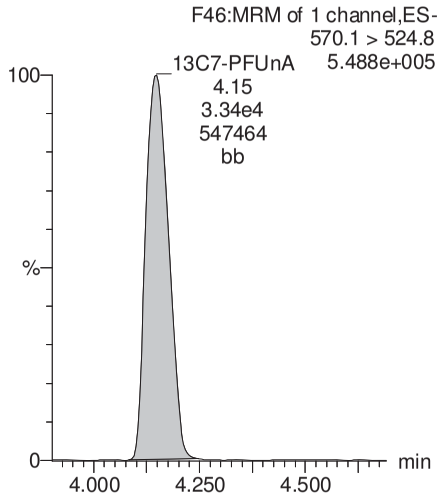
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/16/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-13.qld

Last Altered: Wednesday, August 16, 2017 15:05:13 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:05:46 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: 170802M1_13, Date: 02-Aug-2017, Time: 12:39:13, ID: 1700922-03 Upstream-Culvert-109-20170721 0.11852, Description: Upstream-Culvert-109-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	5.23e3	4.30e3	0.119		2.96	2.91	15.2	67.7	
2	4	PFHxA	313.2 > 268.9	1.06e5	1.31e4	0.119		3.19	3.16	40.4	245	
3	5	PFHpA	363 > 318.9	3.23e4	3.07e4	0.119		3.45	3.43	13.1	92.3	
4	6	PFHxS	398.9 > 79.6	2.41e4	3.38e3	0.119		3.56	3.50	89.4	449	
5	8	PFOA	413 > 368.7	3.12e4	4.31e4	0.119		3.65	3.63	9.05	78.8	
6	10	PFNA	462.9 > 418.8	1.15e4	3.61e4	0.119		3.83	3.81	3.99	30.4	
7	12	PFOS	499 > 79.9	7.08e4	7.59e3	0.119		3.89	3.87	117	937	
8	13	PFDA	513 > 468.8	1.35e4	3.10e4	0.119		4.01	3.98	5.43	37.1	
9	15	N-MeFOSAA	570.1 > 419		6.13e3	0.119		4.03				
10	16	N-EtFOSAA	584.2 > 419		6.42e3	0.119		4.10				
11	17	PFUnA	562.9 > 518.9	2.60e3	3.10e4	0.119		4.17	4.15	1.05	10.7	
12	19	PFDoA	612.9 > 318.8	1.16e2	3.01e3	0.119		4.34	4.31	0.480	4.24	

GM 8/16/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-13.qld

Last Altered: Wednesday, August 16, 2017 15:06:31 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:07:53 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: 170802M1_13, Date: 02-Aug-2017, Time: 12:39:13, ID: 1700922-03 Upstream-Culvert-109-20170721 0.11852, Description: Upstream-Culvert-109-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		3.01e3	0.119		4.50				
2	22	PFTeDA	712.9 > 668.8		2.33e4	0.119		4.68				
3	30	13C3-PFBS	302 > 98.8	4.30e3	4.12e4	0.119	0.034	2.96	2.91	0.522	129	122.4
4	31	13C2-PFHxA	315 > 269.8	1.31e4	4.12e4	0.119	0.334	3.19	3.16	1.59	40.1	94.9
5	32	13C4-PFHpA	367.2 > 321.8	3.07e4	4.12e4	0.119	0.414	3.45	3.43	3.72	75.8	71.9
6	33	18O2-PFHxS	403 > 102.6	3.38e3	6.33e3	0.119	0.475	3.56	3.50	6.67	118	112.2
7	35	13C2-PFOA	414.9 > 369.7	4.31e4	3.62e4	0.119	1.298	3.65	3.63	14.9	96.8	91.8
8	36	13C5-PFNA	468.2 > 422.9	3.61e4	4.39e4	0.119	1.094	3.83	3.81	10.3	79.4	75.3
9	38	13C8-PFOS	507 > 79.9	7.59e3	6.16e3	0.119	1.153	3.89	3.86	15.4	113	106.8
10	39	13C2-PFDA	515.1 > 469.9	3.10e4	3.97e4	0.119	1.059	4.01	3.98	9.76	77.8	73.7

GM 8/16/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-13.qld

Last Altered: Wednesday, August 16, 2017 15:05:13 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:06:14 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: 170802M1_13, Date: 02-Aug-2017, Time: 12:39:13, ID: 1700922-03 Upstream-Culvert-109-20170721 0.11852, Description: Upstream-Culvert-109-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	6.13e3	4.10e4	0.119	0.019	4.03	4.01	1.87	816	59.5
2	42	d5-N-EtFOSAA	589.3 > 419	6.42e3	4.10e4	0.119	0.019	4.12	4.08	1.96	872	63.6
3	43	13C2-PFUnA	565 > 519.8	3.10e4	4.10e4	0.119	1.172	4.17	4.15	9.45	68.1	64.5
4	44	13C2-PFDoA	615 > 569.7	3.01e3	4.10e4	0.119	0.118	4.34	4.31	0.918	65.4	62.0
5	46	13C2-PFTeDA	714.8 > 669.6	2.33e4	4.10e4	0.119	0.801	4.68	4.66	7.09	74.6	70.8
6	52	13C5-PFHxA	318 > 272.9	4.12e4	4.12e4	0.119	1.000	3.19	3.16	5.00	42.2	100.0
7	53	13C3-PFHxS	401.9 > 79.9	6.33e3	6.33e3	0.119	1.000	3.56	3.50	12.5	105	100.0
8	54	13C8-PFOA	421.3 > 376	3.62e4	3.62e4	0.119	1.000	3.65	3.63	12.5	105	100.0
9	55	13C9-PFNA	472.2 > 426.9	4.39e4	4.39e4	0.119	1.000	3.83	3.81	12.5	105	100.0
10	56	13C4-PFOS	503 > 79.9	6.16e3	6.16e3	0.119	1.000	3.89	3.87	12.5	105	100.0
11	57	13C6-PFDA	519.1 > 473.7	3.97e4	3.97e4	0.119	1.000	4.01	3.98	12.5	105	100.0
12	58	13C7-PFUnA	570.1 > 524.8	4.10e4	4.10e4	0.119	1.000	4.17	4.15	12.5	105	100.0
13	59	Total PFBS	299 > 79.7	5.23e3	4.30e3	0.119		2.96		15.2	67.7	
14	60	Total PFHxS	398.9 > 79.6	2.41e4	3.38e3	0.119		3.52		89.4	449	
15	61	Total PFOA	413 > 368.7	3.19e4	4.31e4	0.119		3.65		9.24	79.2	
16	62	Total PFOS	499 > 79.9	7.08e4	7.59e3	0.119		3.89		117	937	
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	6.13e3	0.119		4.03		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	6.42e3	0.119		4.17		0.000		

GM 8/16/17

Quantify Totals Report MassLynx MassLynx V4.1 SCN945 SCN960
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-13.qld

Last Altered: Wednesday, August 16, 2017 15:06:31 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:07:53 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: 170802M1_13, Date: 02-Aug-2017, Time: 12:39:13, ID: 1700922-03 Upstream-Culvert-109-20170721 0.11852, Description: Upstream-Culvert-109-20170721

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	2.91	5227.707	4303.488	15.185	bb	67.7

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.50	24148.088	3376.236	89.405	MM	448.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.63	31246.205	43147.008	9.052	db	78.8
2	61	Total PFOA	413 > 368.7	3.57	660.268	43147.008	0.191	bd	0.4

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.87	70847.992	7588.636	116.701	bb	937.4

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									

GM 8/16/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-13.qld

Last Altered: Wednesday, August 16, 2017 15:06:31 Pacific Daylight Time
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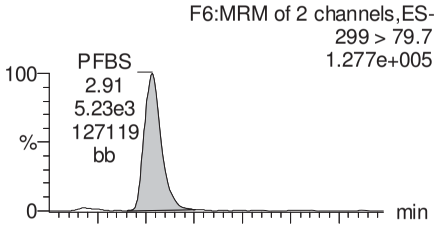
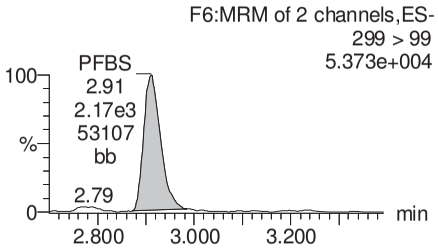
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

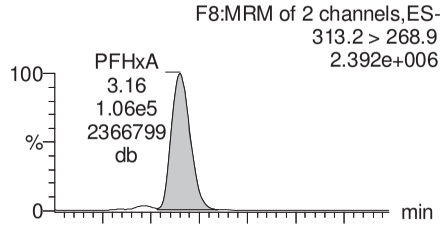
Name: 170802M1_13, Date: 02-Aug-2017, Time: 12:39:13, ID: 1700922-03 Upstream-Culvert-109-20170721 0.11852, Description: Upstream-Culvert-109-20170721

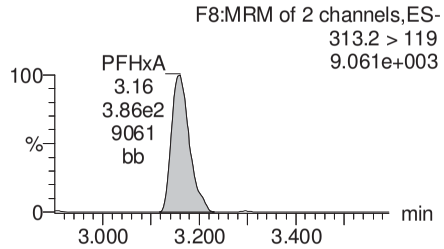
Total PFBS





PFHxA





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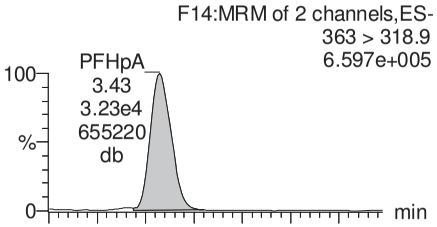
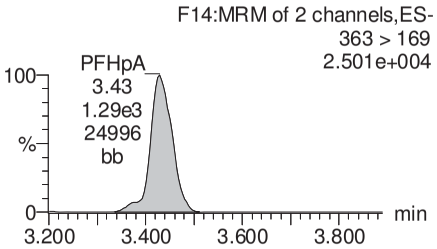
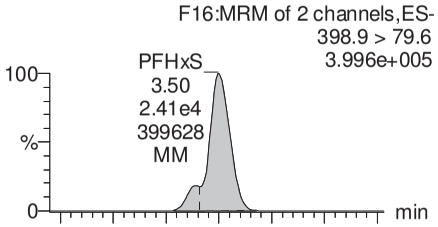
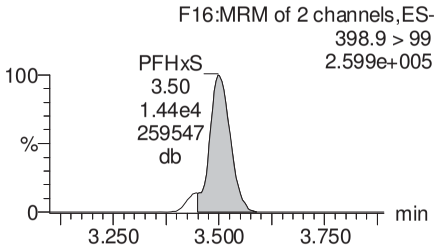


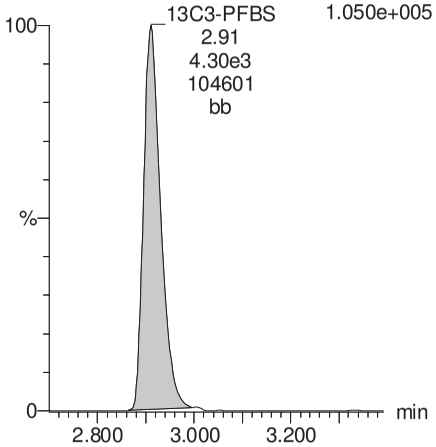


Total PFHxS

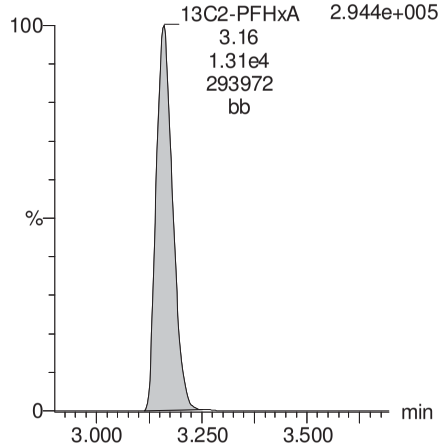




13C3-PFBS



13C2-PFHxA



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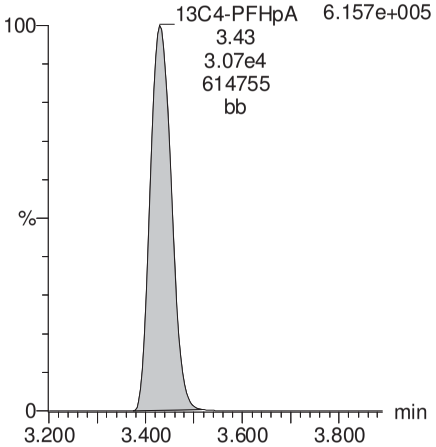
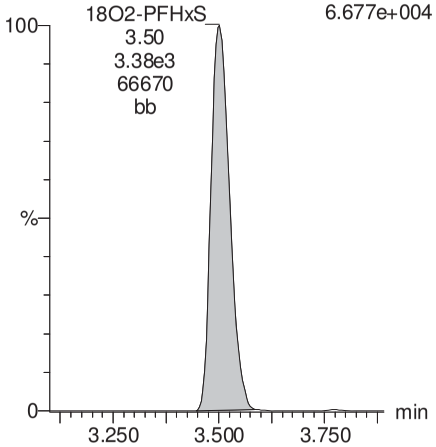


18O2-PFHxS



GM 8/16/17

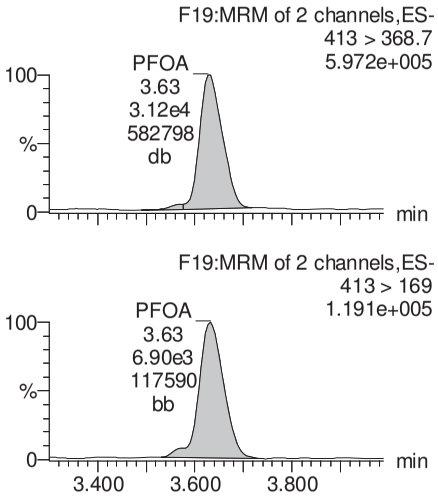
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-13.qld

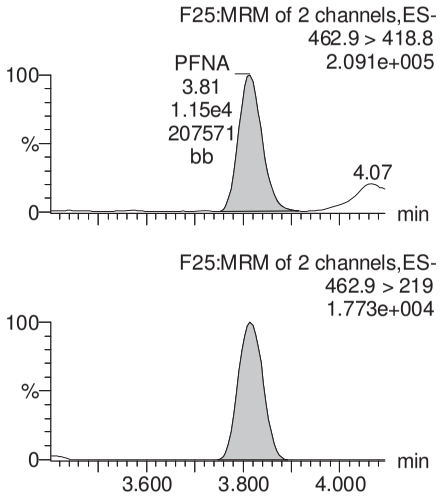
Last Altered: Wednesday, August 16, 2017 15:06:31 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:07:53 Pacific Daylight Time

Name: 170802M1_13, Date: 02-Aug-2017, Time: 12:39:13, ID: 1700922-03 Upstream-Culvert-109-20170721 0.11852, Description: Upstream-Culvert-109-20170721

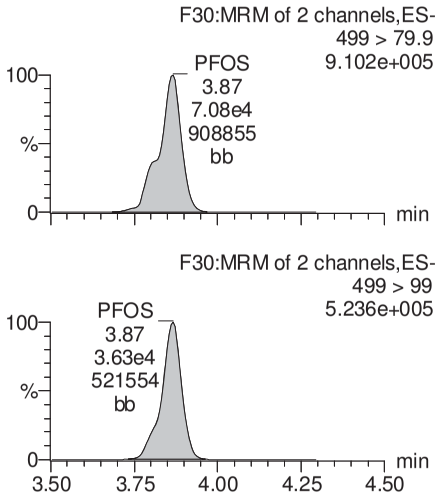
Total PFOA



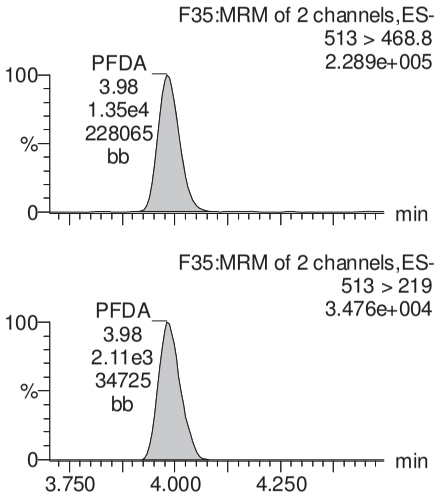
PFNA



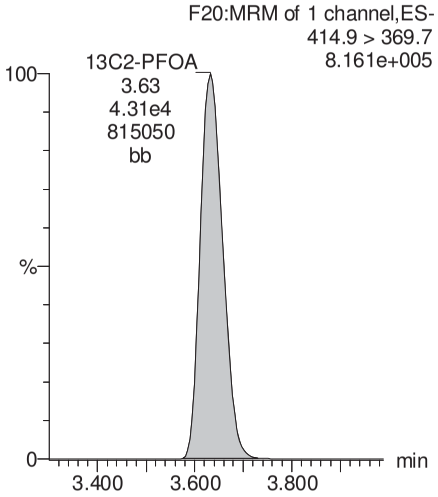
Total PFOS



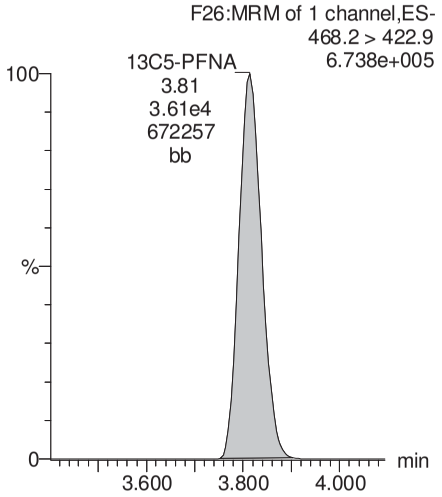
PFDA



13C2-PFOA



13C5-PFNA



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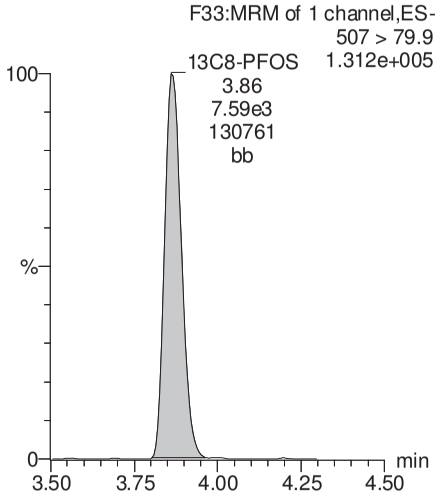
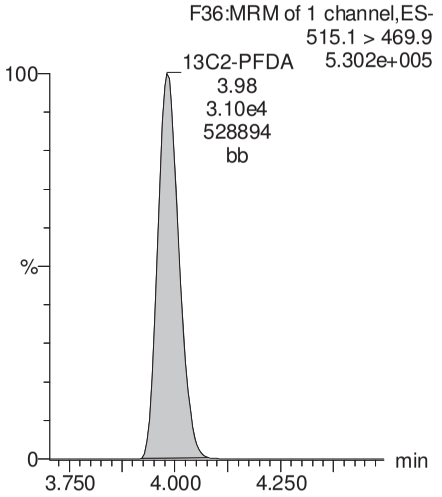


13C2-PFDA



GM 8/16/17

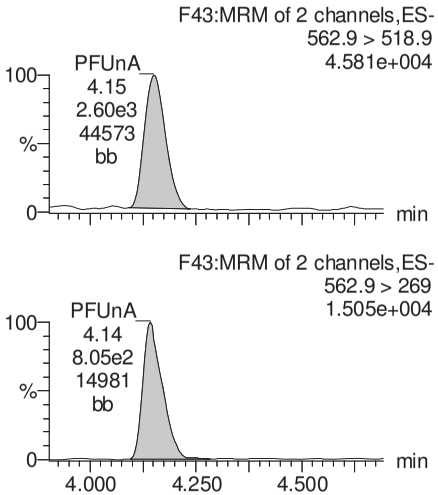
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-13.qld

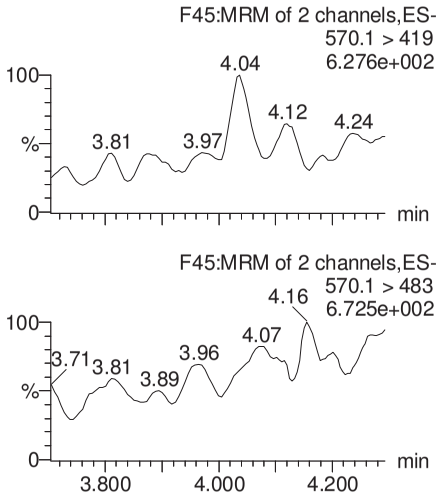
Last Altered: Wednesday, August 16, 2017 15:06:31 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:07:53 Pacific Daylight Time

Name: 170802M1_13, Date: 02-Aug-2017, Time: 12:39:13, ID: 1700922-03 Upstream-Culvert-109-20170721 0.11852, Description: Upstream-Culvert-109-20170721

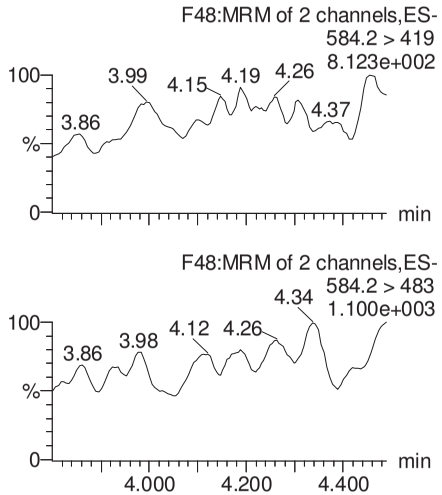
PFUnA



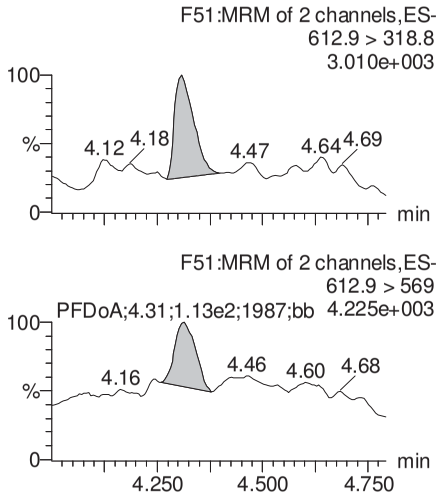
N-MeFOSAA



N-EtFOSAA



PFDoA



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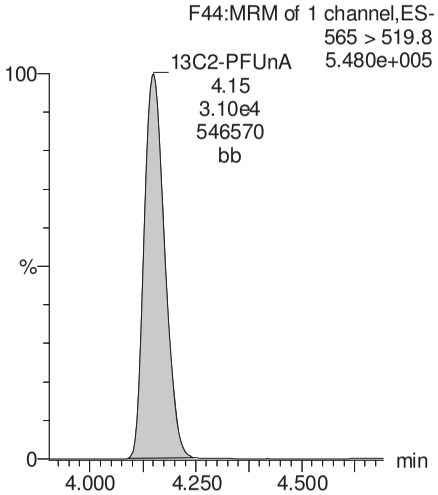

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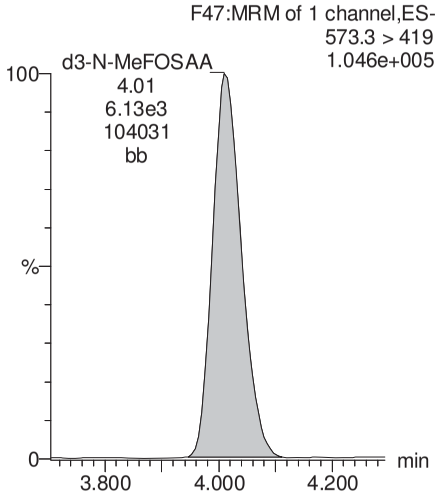
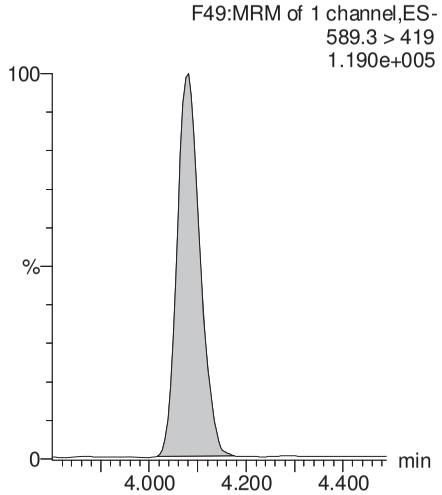
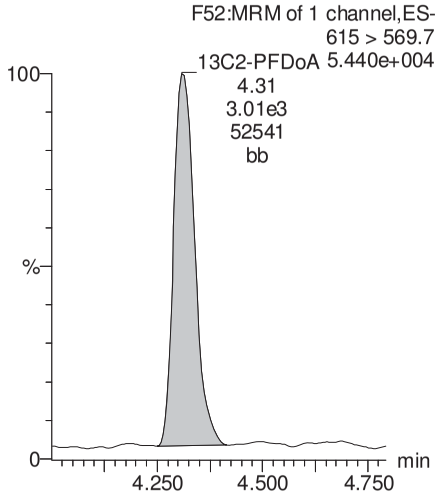


d5-N-EtFOSAA



13C2-PFDoA



GM 8/16/17

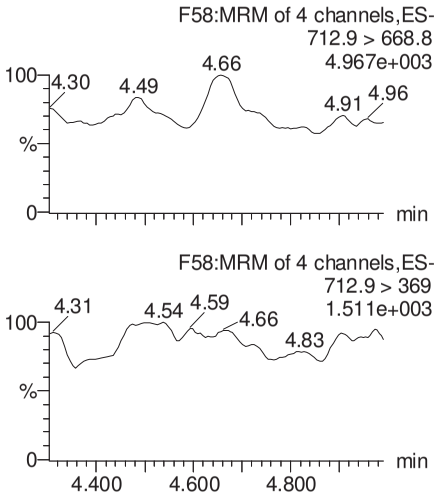
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-13.qld

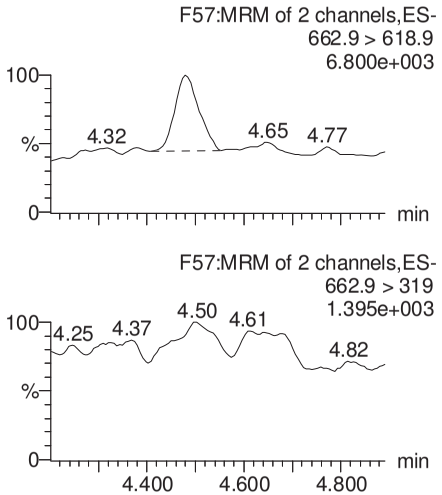
Last Altered: Wednesday, August 16, 2017 15:06:31 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:07:53 Pacific Daylight Time

Name: 170802M1_13, Date: 02-Aug-2017, Time: 12:39:13, ID: 1700922-03 Upstream-Culvert-109-20170721 0.11852, Description: Upstream-Culvert-109-20170721

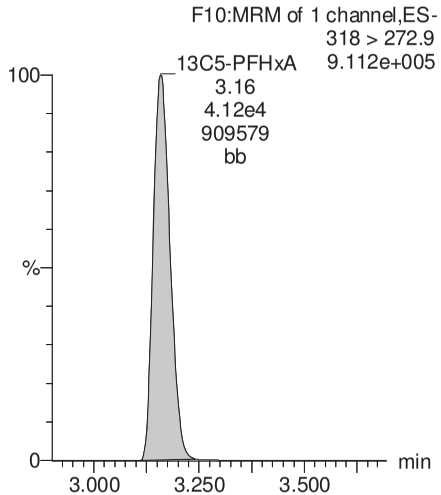
PFTeDA



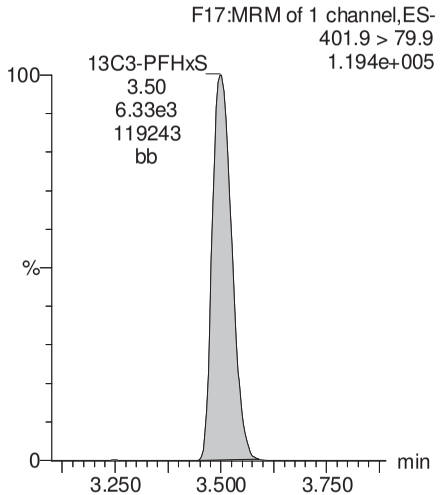
PFTrDA



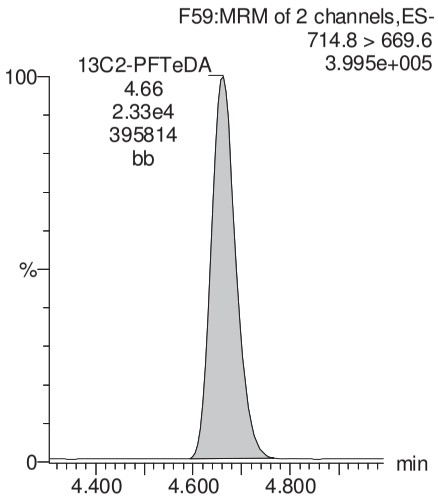
13C5-PFHxA



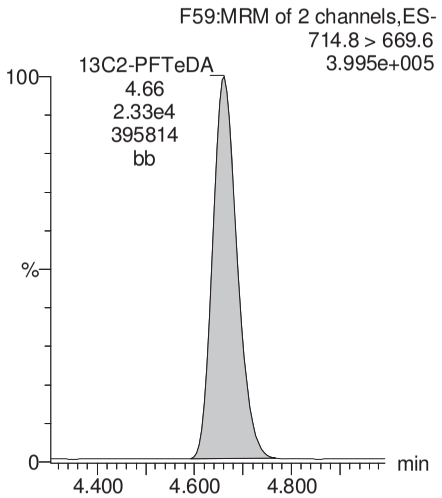
13C3-PFHxS



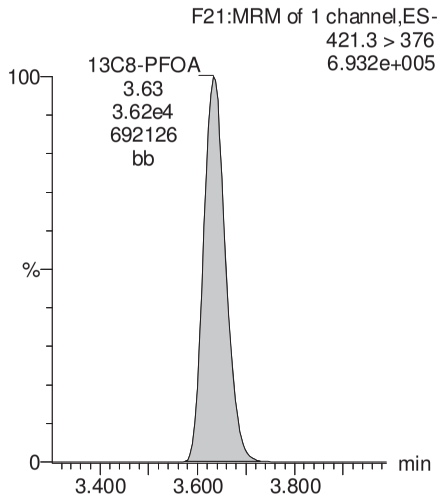
13C2-PFTeDA



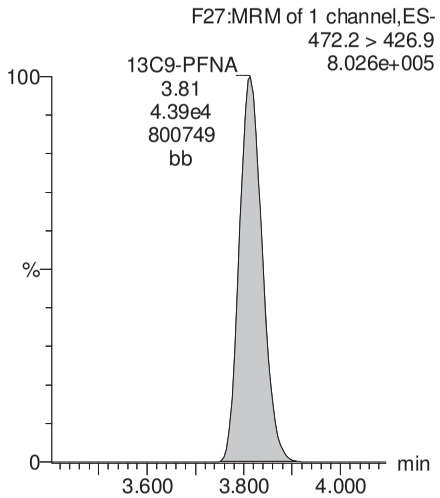
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



GM 8/16/17

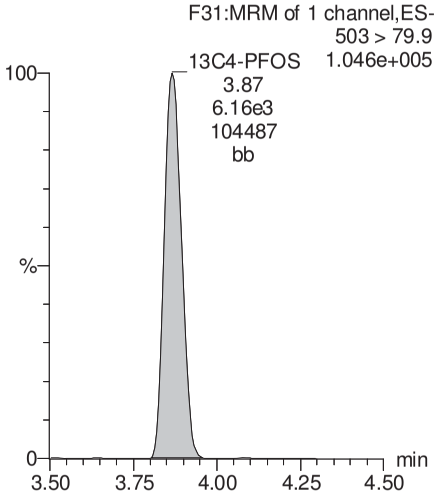
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-13.qld

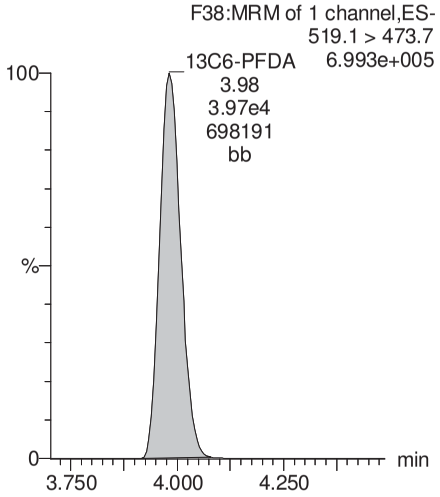
Last Altered: Wednesday, August 16, 2017 15:06:31 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:07:53 Pacific Daylight Time

Name: 170802M1_13, Date: 02-Aug-2017, Time: 12:39:13, ID: 1700922-03 Upstream-Culvert-109-20170721 0.11852, Description: Upstream-Culvert-109-20170721

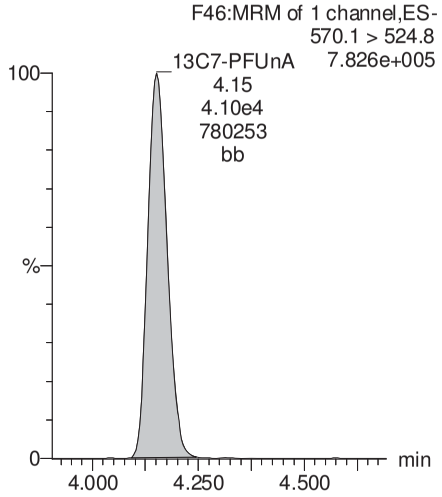
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-14.qld

Last Altered: Wednesday, August 16, 2017 15:09:21 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:09:55 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: 170802M1_14, Date: 02-Aug-2017, Time: 12:49:51, ID: 1700922-04 FRB03-20170721 0.11017, Description: FRB03-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		4.81e3	0.110		2.96				
2	4	PFHxA	313.2 > 268.9		1.45e4	0.110		3.19				
3	5	PFHpA	363 > 318.9		3.42e4	0.110		3.45				
4	6	PFHxS	398.9 > 79.6		3.41e3	0.110		3.56				
5	8	PFOA	413 > 368.7		4.39e4	0.110		3.65				
6	10	PFNA	462.9 > 418.8		3.62e4	0.110		3.83				
7	12	PFOS	499 > 79.9		7.86e3	0.110		3.89				
8	13	PFDA	513 > 468.8		3.52e4	0.110		4.01				
9	15	N-MeFOSAA	570.1 > 419		6.91e3	0.110		4.03				
10	16	N-EtFOSAA	584.2 > 419		6.62e3	0.110		4.10				
11	17	PFUnA	562.9 > 518.9		3.36e4	0.110		4.17				
12	19	PFDoA	612.9 > 318.8		3.81e3	0.110		4.34				

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-14.qld

Last Altered: Wednesday, August 16, 2017 15:09:21 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:10:07 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: 170802M1_14, Date: 02-Aug-2017, Time: 12:49:51, ID: 1700922-04 FRB03-20170721 0.11017, Description: FRB03-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		3.81e3	0.110		4.50				
2	22	PFTeDA	712.9 > 668.8		2.71e4	0.110		4.68				
3	30	13C3-PFBS	302 > 98.8	4.81e3	4.18e4	0.110	0.034	2.96	2.91	0.575	153	134.9
4	31	13C2-PFHxA	315 > 269.8	1.45e4	4.18e4	0.110	0.334	3.19	3.16	1.74	47.2	103.9
5	32	13C4-PFHpA	367.2 > 321.8	3.42e4	4.18e4	0.110	0.414	3.45	3.43	4.09	89.5	78.9
6	33	18O2-PFHxS	403 > 102.6	3.41e3	6.33e3	0.110	0.475	3.56	3.50	6.74	129	113.5
7	35	13C2-PFOA	414.9 > 369.7	4.39e4	3.72e4	0.110	1.298	3.65	3.63	14.7	103	90.8
8	36	13C5-PFNA	468.2 > 422.9	3.62e4	3.61e4	0.110	1.094	3.83	3.81	12.5	104	91.6
9	38	13C8-PFOS	507 > 79.9	7.86e3	6.19e3	0.110	1.153	3.89	3.87	15.9	125	110.1
10	39	13C2-PFDA	515.1 > 469.9	3.52e4	3.73e4	0.110	1.059	4.01	3.98	11.8	101	89.2

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-14.qld

Last Altered: Wednesday, August 16, 2017 15:09:21 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:10:22 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: 170802M1_14, Date: 02-Aug-2017, Time: 12:49:51, ID: 1700922-04 FRB03-20170721 0.11017, Description: FRB03-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	6.91e3	3.55e4	0.110	0.019	4.03	4.01	2.43	1140	77.5
2	42	d5-N-EtFOSAA	589.3 > 419	6.62e3	3.55e4	0.110	0.019	4.12	4.08	2.33	1120	75.8
3	43	13C2-PFUnA	565 > 519.8	3.36e4	3.55e4	0.110	1.172	4.17	4.15	11.8	91.5	80.7
4	44	13C2-PFDoA	615 > 569.7	3.81e3	3.55e4	0.110	0.118	4.34	4.31	1.34	103	90.5
5	46	13C2-PFTeDA	714.8 > 669.6	2.71e4	3.55e4	0.110	0.801	4.68	4.66	9.55	108	95.3
6	52	13C5-PFHxA	318 > 272.9	4.18e4	4.18e4	0.110	1.000	3.19	3.16	5.00	45.4	100.0
7	53	13C3-PFHxS	401.9 > 79.9	6.33e3	6.33e3	0.110	1.000	3.56	3.50	12.5	113	100.0
8	54	13C8-PFOA	421.3 > 376	3.72e4	3.72e4	0.110	1.000	3.65	3.63	12.5	113	100.0
9	55	13C9-PFNA	472.2 > 426.9	3.61e4	3.61e4	0.110	1.000	3.83	3.81	12.5	113	100.0
10	56	13C4-PFOS	503 > 79.9	6.19e3	6.19e3	0.110	1.000	3.89	3.86	12.5	113	100.0
11	57	13C6-PFDA	519.1 > 473.7	3.73e4	3.73e4	0.110	1.000	4.01	3.98	12.5	113	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.55e4	3.55e4	0.110	1.000	4.17	4.15	12.5	113	100.0
13	59	Total PFBS	299 > 79.7	0.00e0	4.81e3	0.110		2.96		0.000		
14	60	Total PFHxS	398.9 > 79.6	0.00e0	3.41e3	0.110		3.52		0.000		
15	61	Total PFOA	413 > 368.7	0.00e0	4.39e4	0.110		3.65		0.000		
16	62	Total PFOS	499 > 79.9	0.00e0	7.86e3	0.110		3.89		0.000		
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	6.91e3	0.110		4.03		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	6.62e3	0.110		4.17		0.000		

GM 8/16/17

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-14.qld

Last Altered: Wednesday, August 16, 2017 15:09:21 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:10:22 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: 170802M1_14, Date: 02-Aug-2017, Time: 12:49:51, ID: 1700922-04 FRB03-20170721 0.11017, Description: FRB03-20170721

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									

Total PFOA

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

Total PFOS

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

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									

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

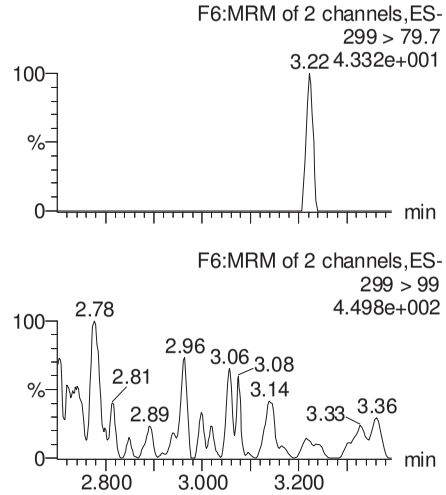
Dataset: U:\Q4.PRO\results\170802M1\170802M1-14.qld

Last Altered: Wednesday, August 16, 2017 15:09:21 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:10:22 Pacific Daylight Time

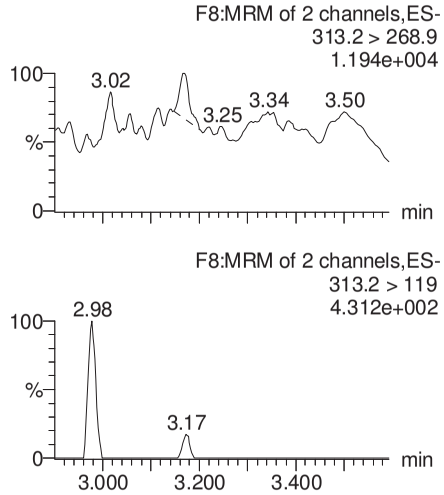
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_14, Date: 02-Aug-2017, Time: 12:49:51, ID: 1700922-04 FRB03-20170721 0.11017, Description: FRB03-20170721

Total PFBS



PFHxA



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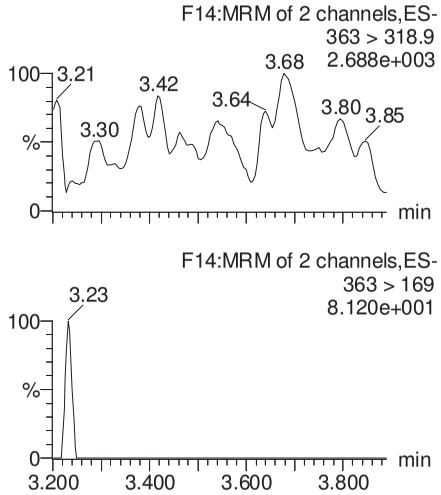
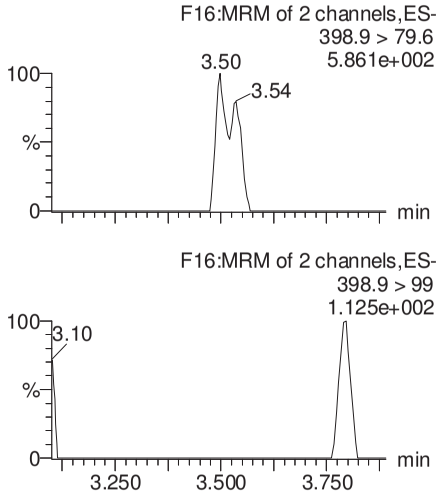
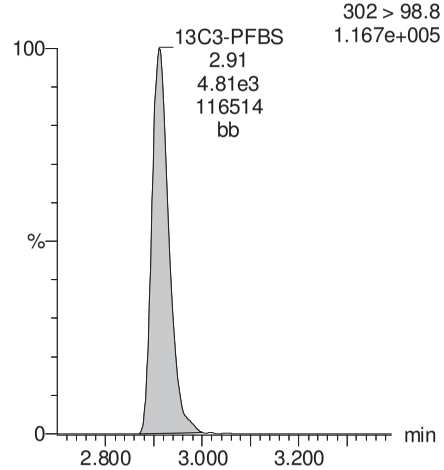


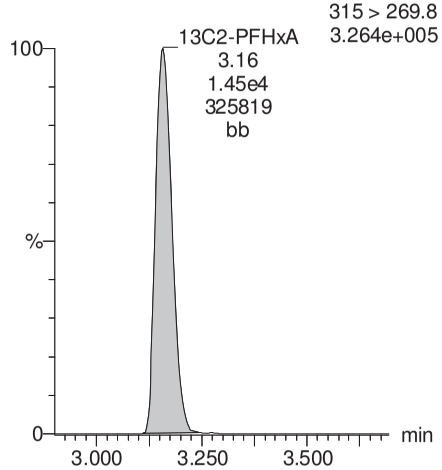
Total PFHxS



13C3-PFBS



13C2-PFHxA



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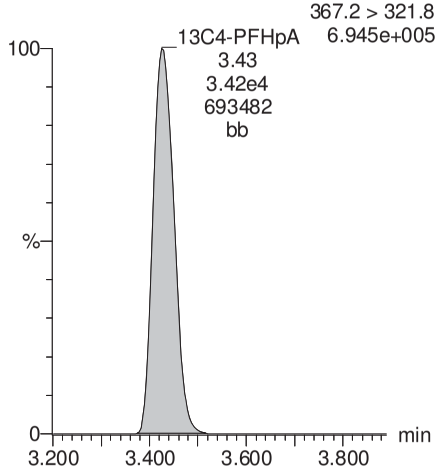

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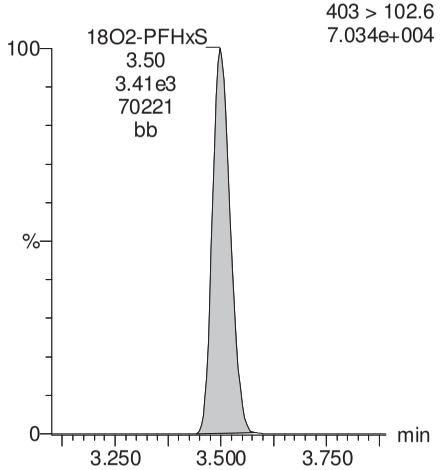


GM 8/16/17

Vista Analytical Laboratory

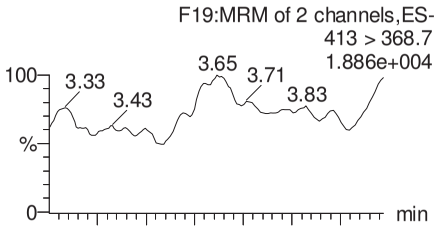
Rev'd: MM 8/16/17

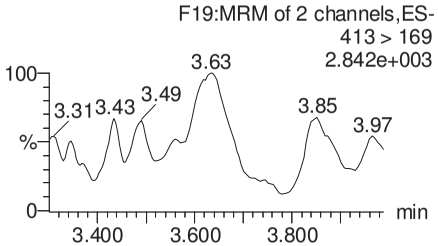
Dataset: U:\Q4.PRO\results\170802M1\170802M1-14.qld

Last Altered: Wednesday, August 16, 2017 15:09:21 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:10:22 Pacific Daylight Time

Name: 170802M1_14, Date: 02-Aug-2017, Time: 12:49:51, ID: 1700922-04 FRB03-20170721 0.11017, Description: FRB03-20170721

Total PFOA





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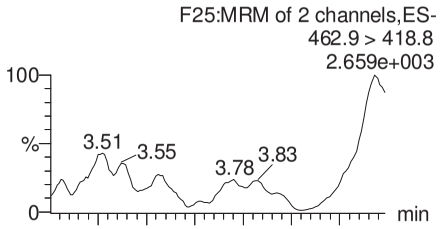
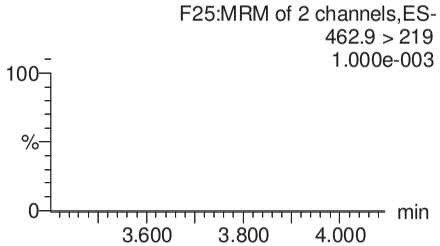
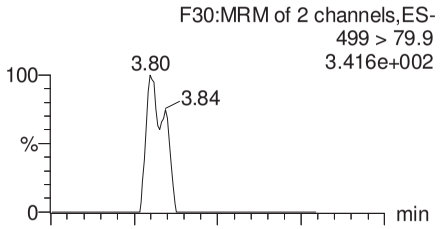
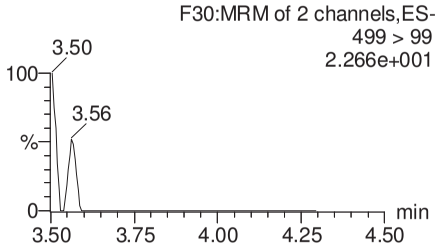




Total PFOS





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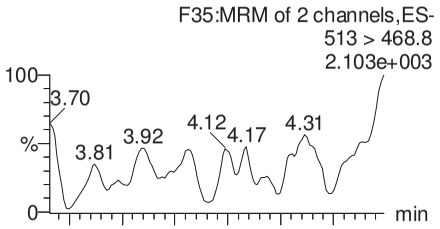
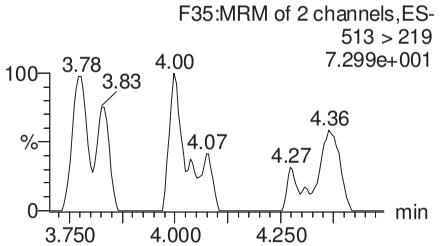
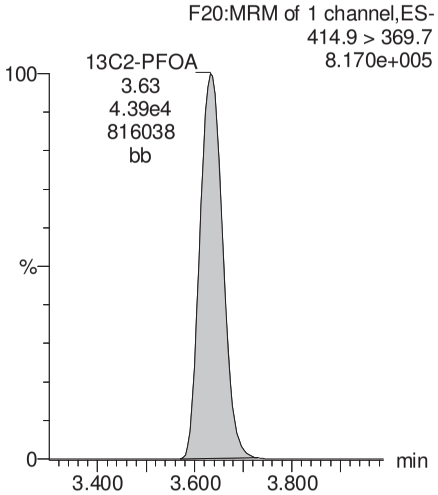




13C2-PFOA



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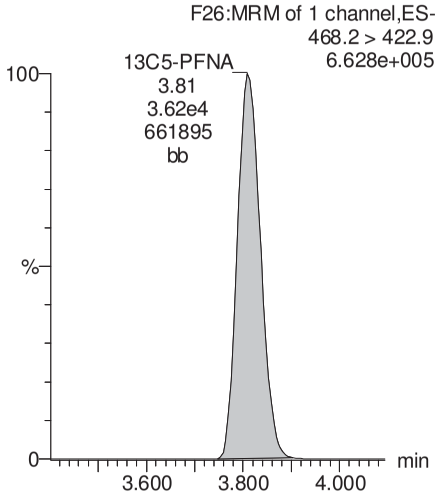

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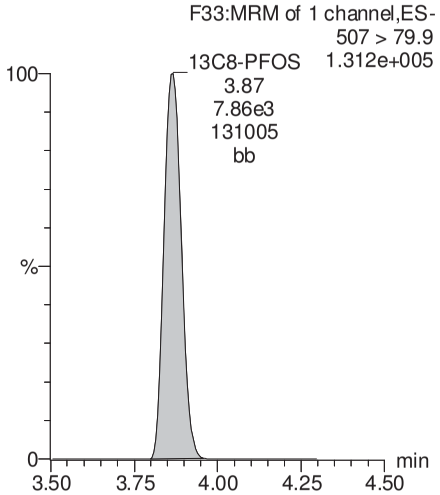

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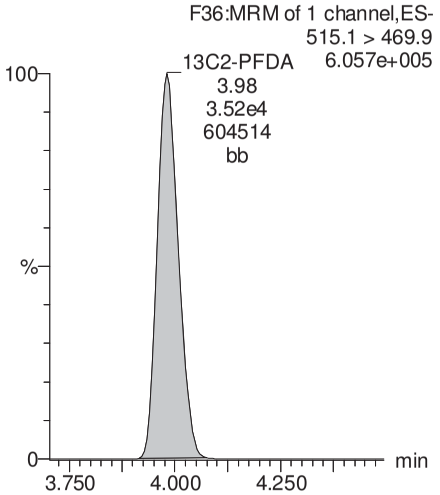

GM 8/16/17

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-14.qld

Last Altered: Wednesday, August 16, 2017 15:09:21 Pacific Daylight Time
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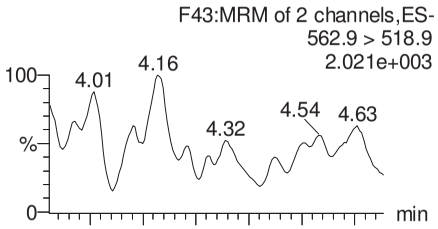
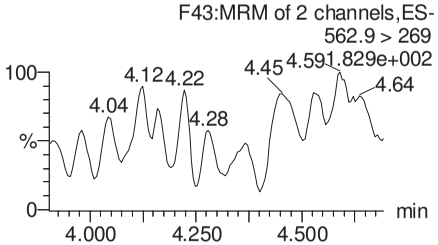
Name: 170802M1_14, Date: 02-Aug-2017, Time: 12:49:51, ID: 1700922-04 FRB03-20170721 0.11017, Description: FRB03-20170721

PFUnA





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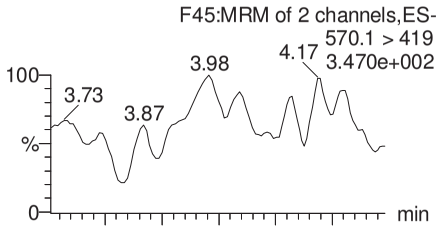

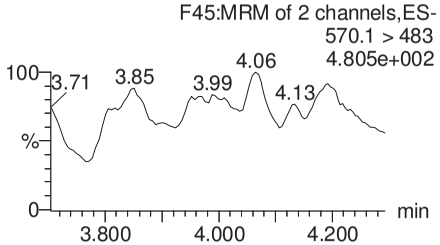

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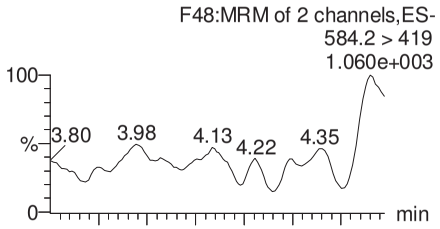
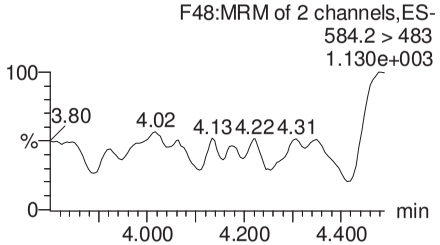
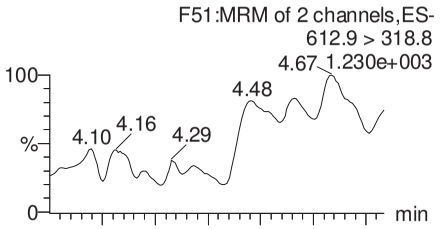
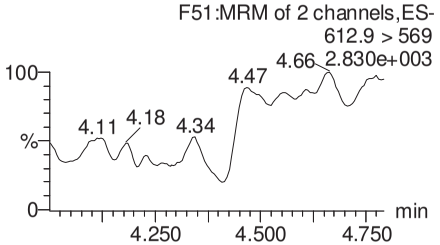




PFDoA





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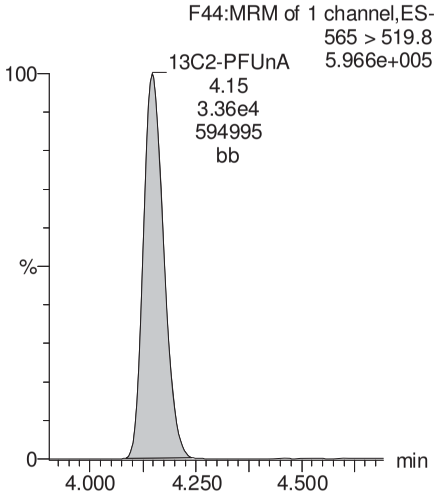

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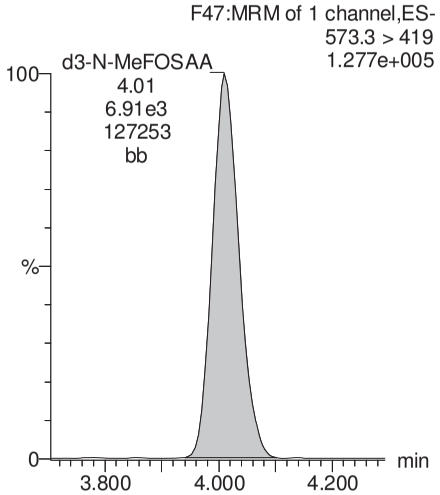

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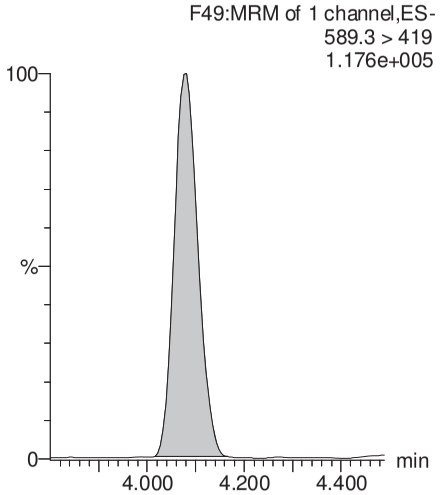

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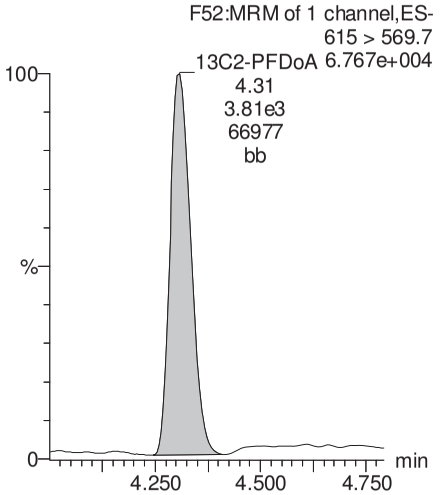


GM 8/16/17

Vista Analytical Laboratory

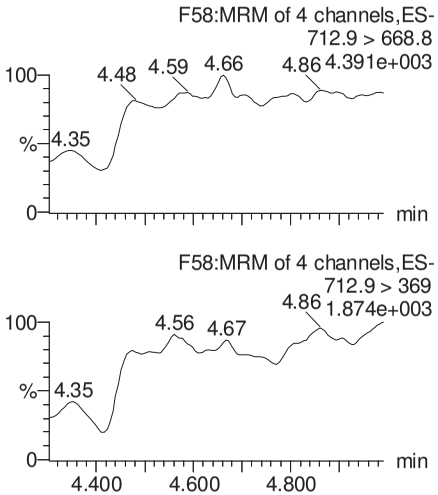
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-14.qld

Last Altered: Wednesday, August 16, 2017 15:09:21 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:10:22 Pacific Daylight Time

Name: 170802M1_14, Date: 02-Aug-2017, Time: 12:49:51, ID: 1700922-04 FRB03-20170721 0.11017, Description: FRB03-20170721

PFTeDA



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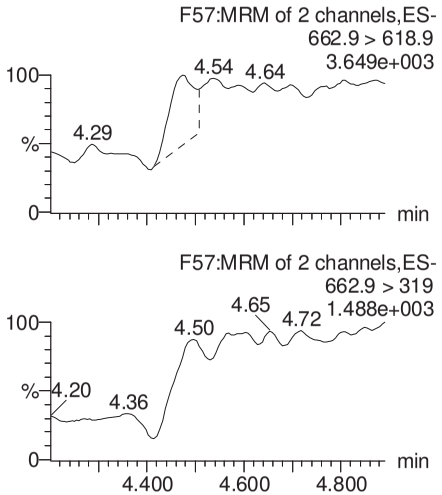
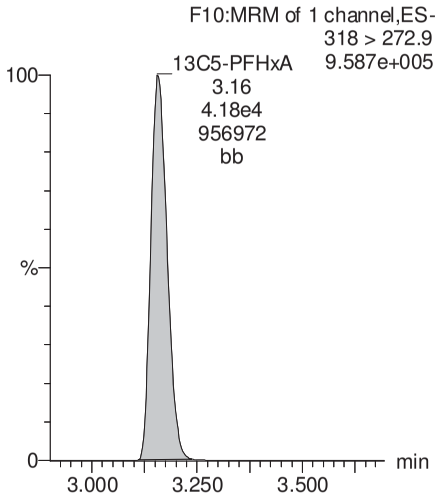


13C5-PFHxA



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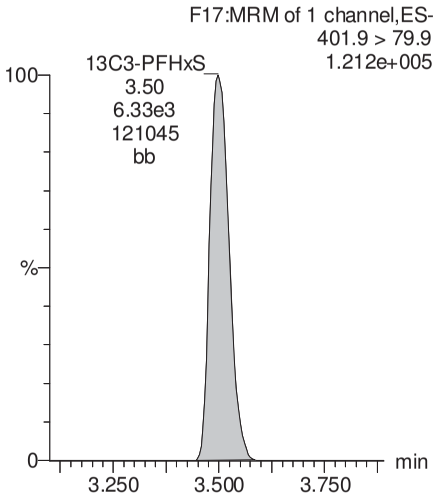
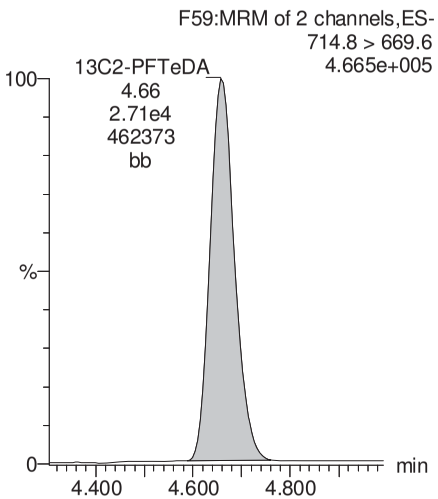
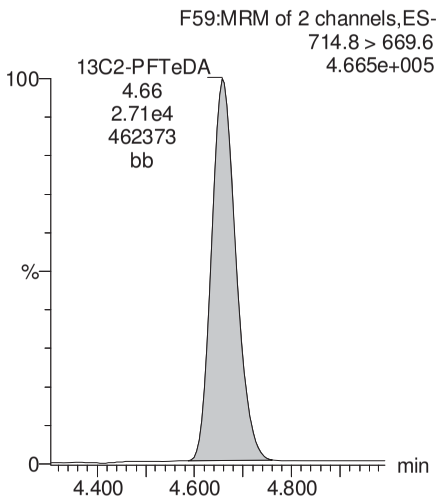


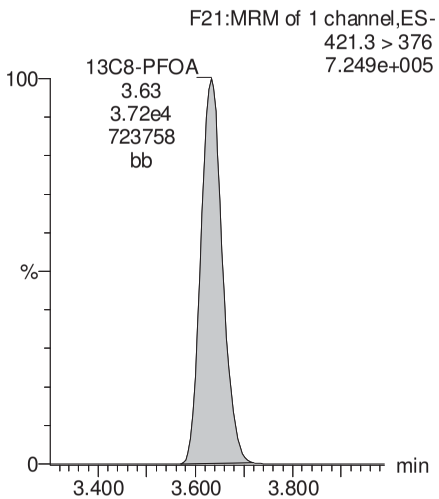
13C2-PFTeDA



13C2-PFTeDA



13C8-PFOA



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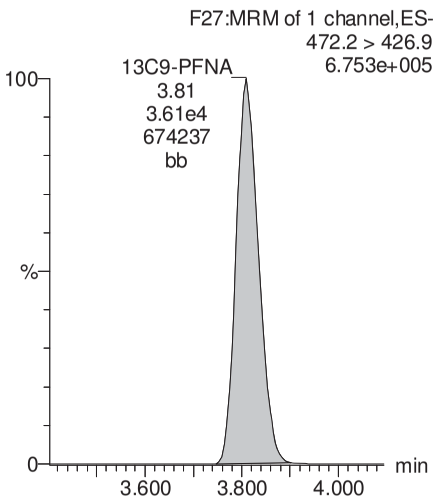


GM 8/16/17

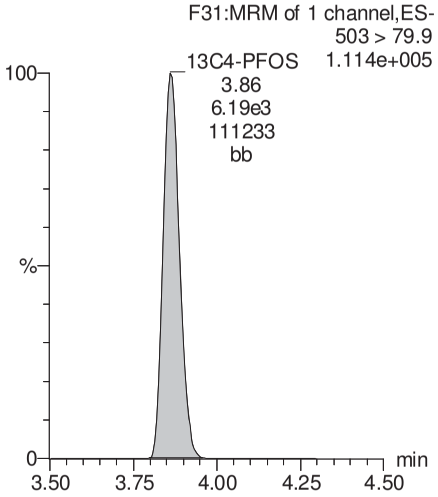
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-14.qld

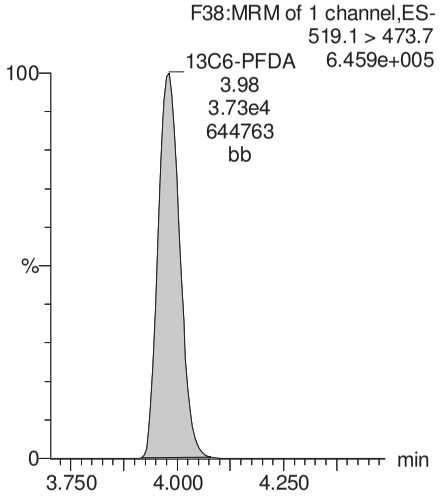
Last Altered: Wednesday, August 16, 2017 15:09:21 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:10:22 Pacific Daylight Time

Name: 170802M1_14, Date: 02-Aug-2017, Time: 12:49:51, ID: 1700922-04 FRB03-20170721 0.11017, Description: FRB03-20170721

13C4-PFOS



13C6-PFDA



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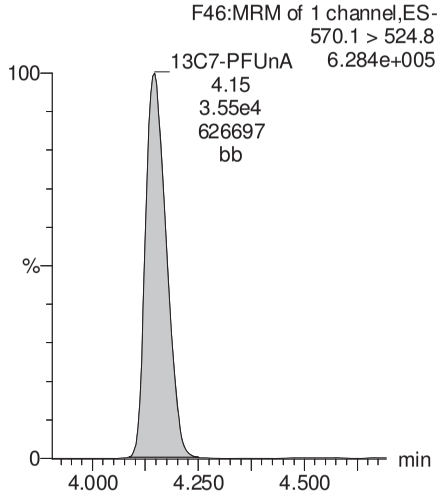

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-15.qld

Last Altered: Wednesday, August 16, 2017 15:11:27 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:11:57 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: 170802M1_15, Date: 02-Aug-2017, Time: 13:00:41, ID: 1700922-05 RB08-20170720 0.11893, Description: RB08-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		4.42e3	0.119		2.96				
2	4	PFHxA	313.2 > 268.9		1.38e4	0.119		3.19				
3	5	PFHpA	363 > 318.9		3.11e4	0.119		3.45				
4	6	PFHxS	398.9 > 79.6	2.81e1	2.74e3	0.119		3.56	3.51	0.129	0.486	
5	8	PFOA	413 > 368.7		3.78e4	0.119		3.65				
6	10	PFNA	462.9 > 418.8		3.54e4	0.119		3.83				
7	12	PFOS	499 > 79.9		7.90e3	0.119		3.89				
8	13	PFDA	513 > 468.8		3.21e4	0.119		4.01				
9	15	N-MeFOSAA	570.1 > 419		5.04e3	0.119		4.03				
10	16	N-EtFOSAA	584.2 > 419		4.92e3	0.119		4.10				
11	17	PFUnA	562.9 > 518.9		2.96e4	0.119		4.17				
12	19	PFDoA	612.9 > 318.8		2.65e3	0.119		4.34				

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-15.qld

Last Altered: Wednesday, August 16, 2017 15:11:27 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:12:09 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: 170802M1_15, Date: 02-Aug-2017, Time: 13:00:41, ID: 1700922-05 RB08-20170720 0.11893, Description: RB08-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		2.65e3	0.119		4.50				
2	22	PFTeDA	712.9 > 668.8		2.21e4	0.119		4.68				
3	30	13C3-PFBS	302 > 98.8	4.42e3	4.00e4	0.119	0.034	2.96	2.91	0.552	136	129.5
4	31	13C2-PFHxA	315 > 269.8	1.38e4	4.00e4	0.119	0.334	3.19	3.16	1.73	43.5	103.4
5	32	13C4-PFHpA	367.2 > 321.8	3.11e4	4.00e4	0.119	0.414	3.45	3.43	3.89	78.9	75.0
6	33	18O2-PFHxS	403 > 102.6	2.74e3	6.34e3	0.119	0.475	3.56	3.50	5.39	95.4	90.7
7	35	13C2-PFOA	414.9 > 369.7	3.78e4	3.41e4	0.119	1.298	3.65	3.64	13.8	89.7	85.3
8	36	13C5-PFNA	468.2 > 422.9	3.54e4	3.92e4	0.119	1.094	3.83	3.81	11.3	86.7	82.5
9	38	13C8-PFOS	507 > 79.9	7.90e3	6.88e3	0.119	1.153	3.89	3.87	14.4	105	99.6
10	39	13C2-PFDA	515.1 > 469.9	3.21e4	3.53e4	0.119	1.059	4.01	3.98	11.3	90.1	85.7

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-15.qld

Last Altered: Wednesday, August 16, 2017 15:11:27 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:12:17 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: 170802M1_15, Date: 02-Aug-2017, Time: 13:00:41, ID: 1700922-05 RB08-20170720 0.11893, Description: RB08-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	5.04e3	3.59e4	0.119	0.019	4.03	4.02	1.76	765	56.0
2	42	d5-N-EtFOSAA	589.3 > 419	4.92e3	3.59e4	0.119	0.019	4.12	4.08	1.71	761	55.7
3	43	13C2-PFUnA	565 > 519.8	2.96e4	3.59e4	0.119	1.172	4.17	4.15	10.3	74.0	70.4
4	44	13C2-PFDoA	615 > 569.7	2.65e3	3.59e4	0.119	0.118	4.34	4.31	0.924	65.6	62.4
5	46	13C2-PFTeDA	714.8 > 669.6	2.21e4	3.59e4	0.119	0.801	4.68	4.66	7.71	80.9	77.0
6	52	13C5-PFHxA	318 > 272.9	4.00e4	4.00e4	0.119	1.000	3.19	3.16	5.00	42.0	100.0
7	53	13C3-PFHxS	401.9 > 79.9	6.34e3	6.34e3	0.119	1.000	3.56	3.50	12.5	105	100.0
8	54	13C8-PFOA	421.3 > 376	3.41e4	3.41e4	0.119	1.000	3.65	3.63	12.5	105	100.0
9	55	13C9-PFNA	472.2 > 426.9	3.92e4	3.92e4	0.119	1.000	3.83	3.81	12.5	105	100.0
10	56	13C4-PFOS	503 > 79.9	6.88e3	6.88e3	0.119	1.000	3.89	3.87	12.5	105	100.0
11	57	13C6-PFDA	519.1 > 473.7	3.53e4	3.53e4	0.119	1.000	4.01	3.98	12.5	105	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.59e4	3.59e4	0.119	1.000	4.17	4.15	12.5	105	100.0
13	59	Total PFBS	299 > 79.7	0.00e0	4.42e3	0.119		2.96		0.000		
14	60	Total PFHxS	398.9 > 79.6	2.81e1	2.74e3	0.119		3.52		0.129	0.486	
15	61	Total PFOA	413 > 368.7	0.00e0	3.78e4	0.119		3.65		0.000		
16	62	Total PFOS	499 > 79.9	0.00e0	7.90e3	0.119		3.89		0.000		
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	5.04e3	0.119		4.03		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	4.92e3	0.119		4.17		0.000		

GM 8/16/17

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-15.qld

Last Altered: Wednesday, August 16, 2017 15:11:27 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:12:36 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: 170802M1_15, Date: 02-Aug-2017, Time: 13:00:41, ID: 1700922-05 RB08-20170720 0.11893, Description: RB08-20170720

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	3.51	28.134	2736.054	0.129	MM	0.5

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7			37786.863		MM-I	

Total PFOS

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

Total N-Me-FOSAA

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

Total N-EtFOSAA

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

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-15.qld

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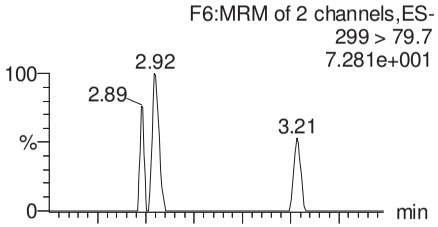
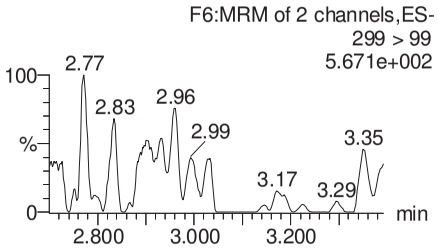
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_15, Date: 02-Aug-2017, Time: 13:00:41, ID: 1700922-05 RB08-20170720 0.11893, Description: RB08-20170720

Total PFBS





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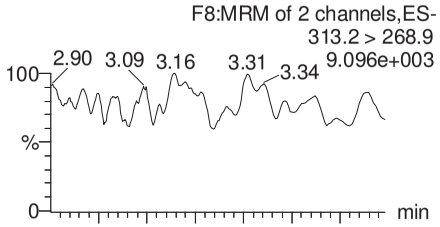

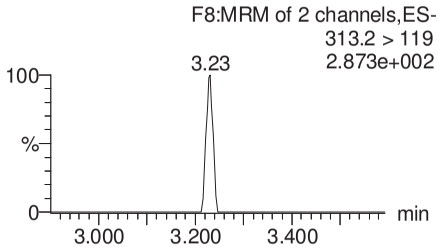

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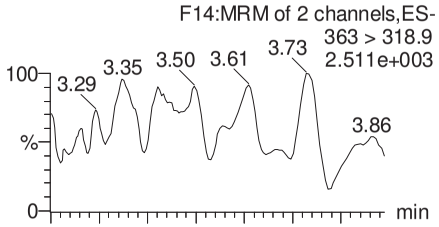

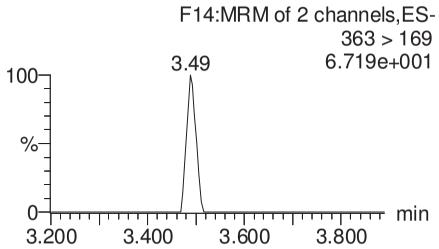

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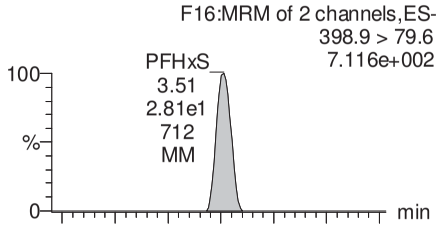

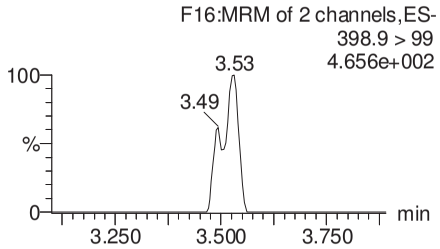

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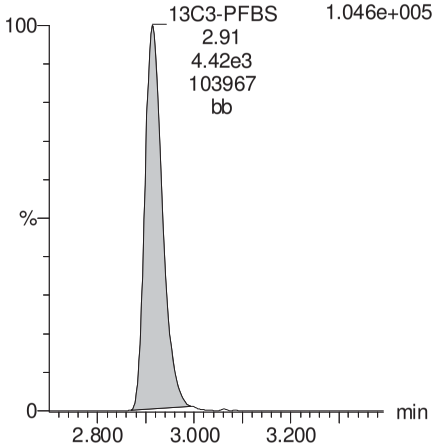

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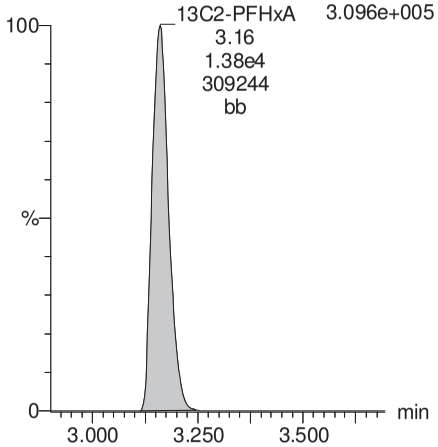

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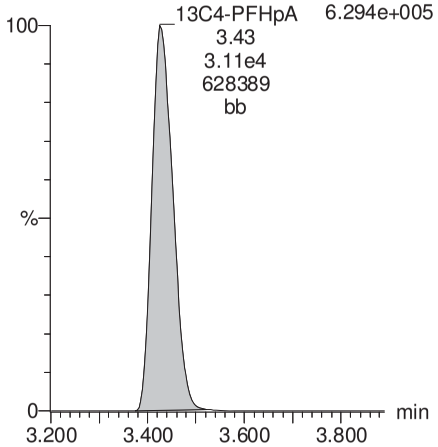

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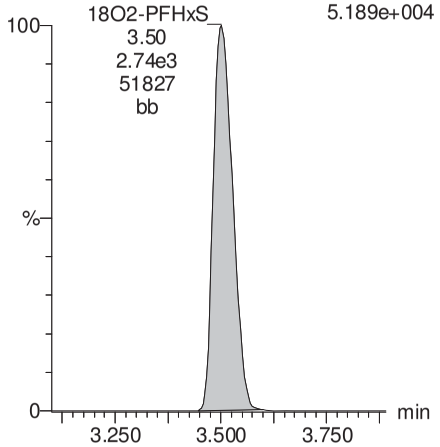


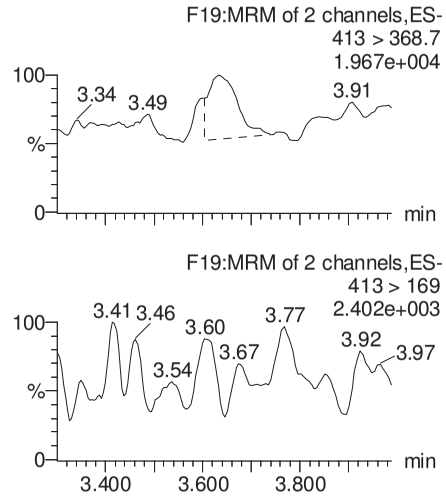
GM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-15.qld

Last Altered: Wednesday, August 16, 2017 15:11:27 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:12:36 Pacific Daylight Time

Name: 170802M1_15, Date: 02-Aug-2017, Time: 13:00:41, ID: 1700922-05 RB08-20170720 0.11893, Description: RB08-20170720

Total PFOA



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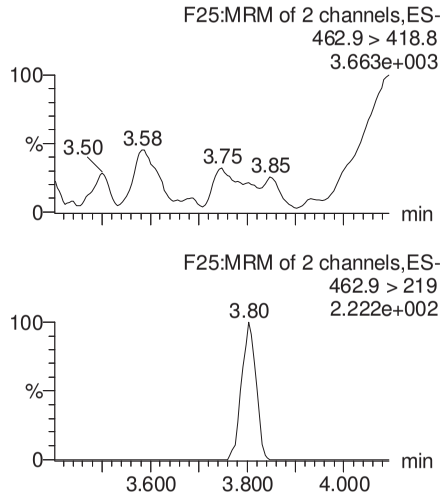
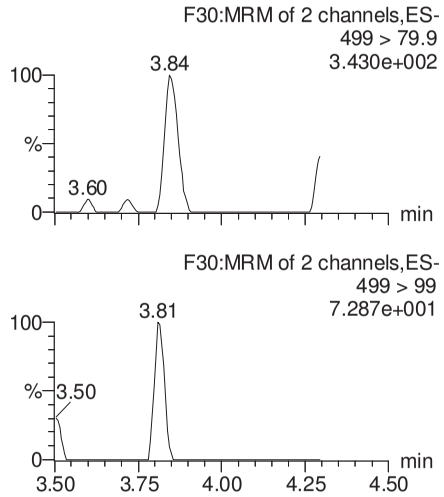


Total PFOS



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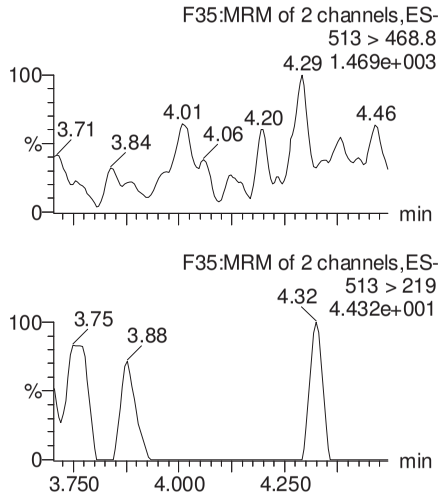

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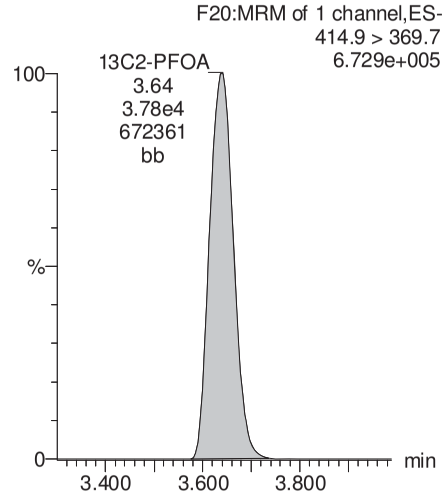

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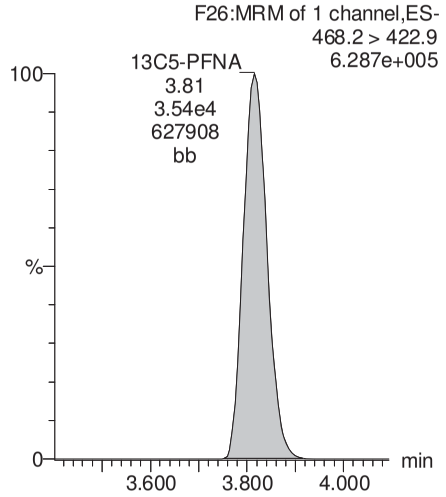

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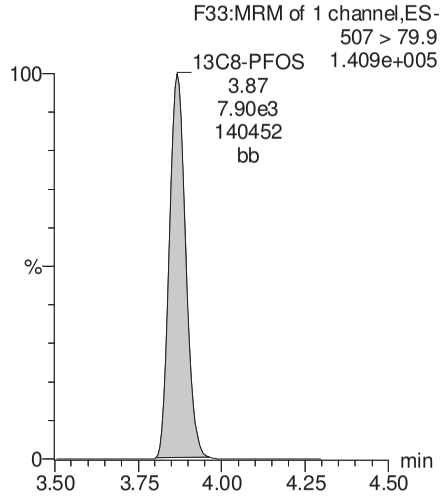

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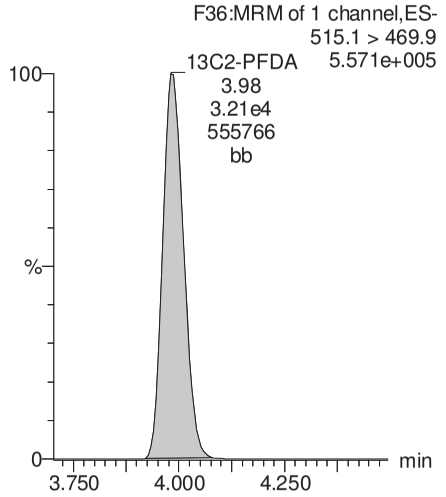

GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-15.qld

Last Altered: Wednesday, August 16, 2017 15:11:27 Pacific Daylight Time
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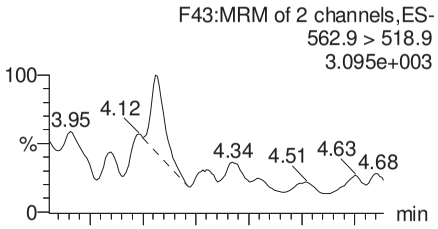
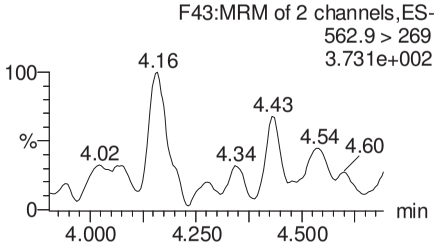
Name: 170802M1_15, Date: 02-Aug-2017, Time: 13:00:41, ID: 1700922-05 RB08-20170720 0.11893, Description: RB08-20170720

PFUnA





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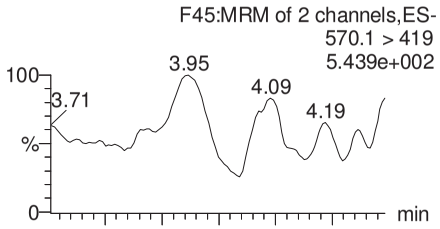

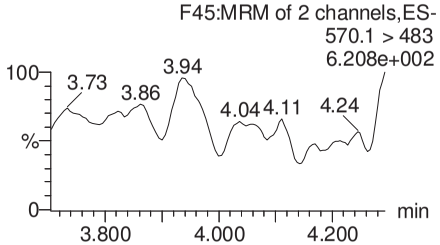

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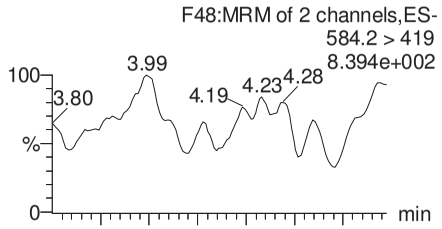
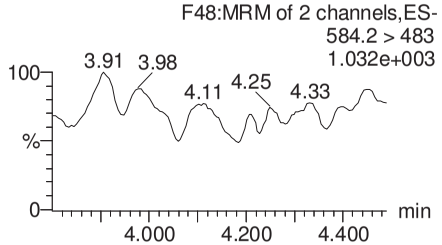
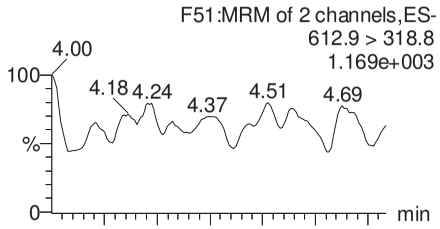
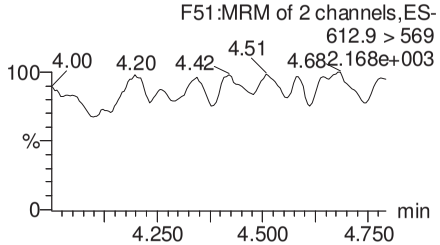




PFDoA





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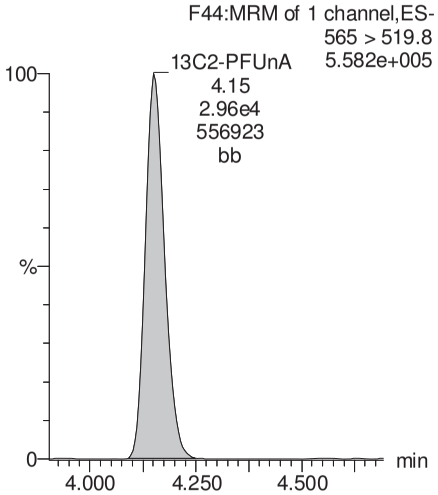
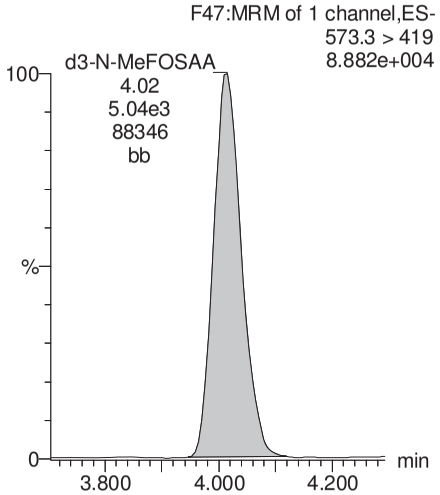


d3-N-MeFOSAA



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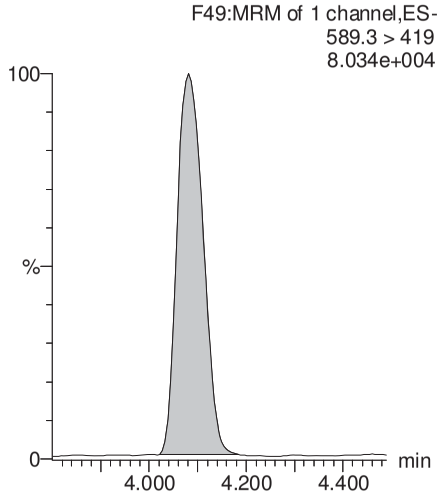

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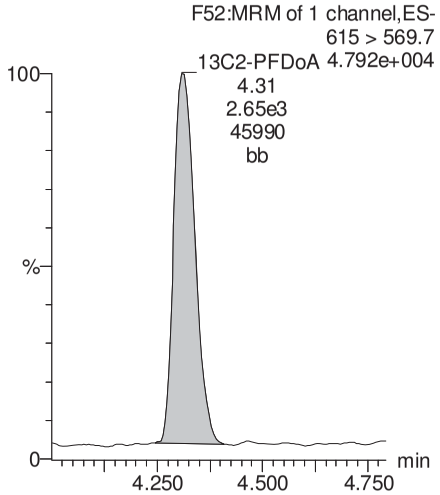

GM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-15.qld

Last Altered: Wednesday, August 16, 2017 15:11:27 Pacific Daylight Time
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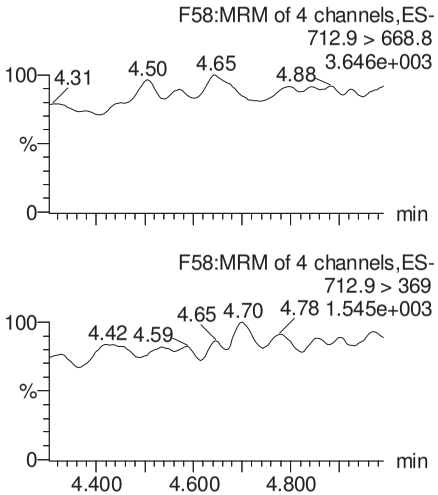
Name: 170802M1_15, Date: 02-Aug-2017, Time: 13:00:41, ID: 1700922-05 RB08-20170720 0.11893, Description: RB08-20170720

PFTeDA



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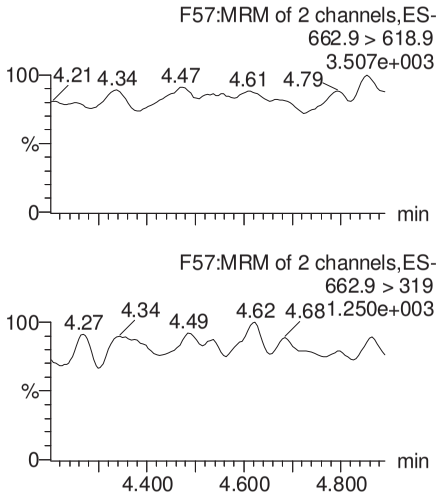
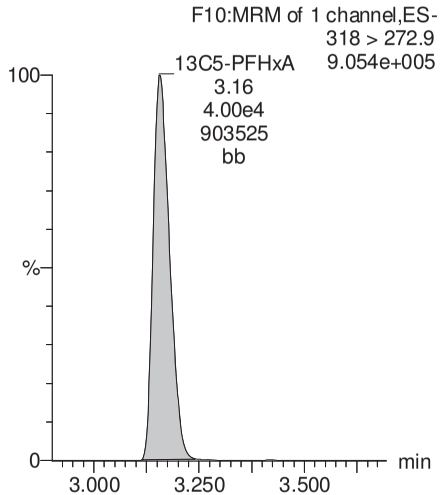


13C5-PFHxA



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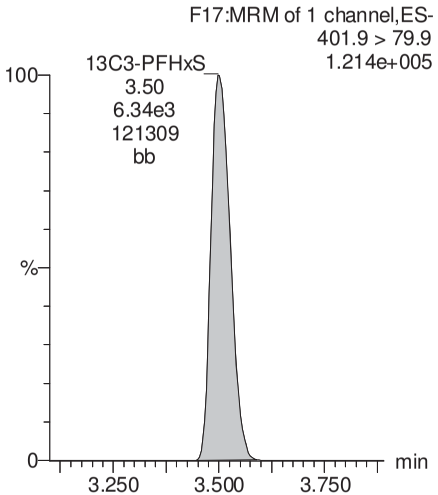
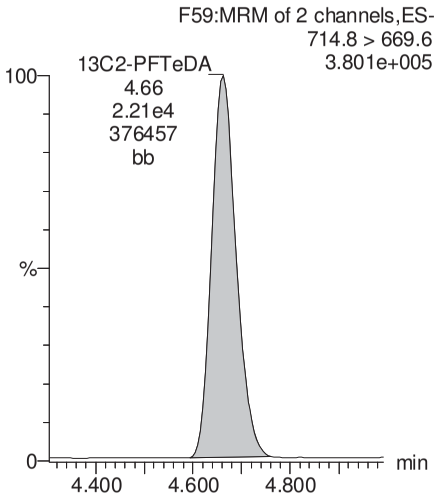
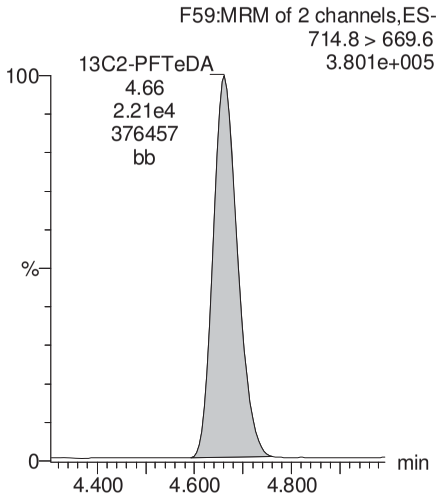


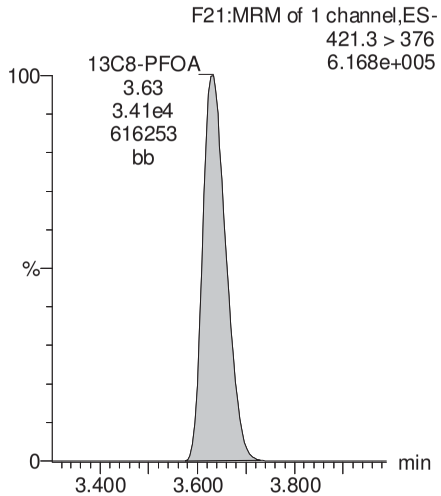
13C2-PFTeDA



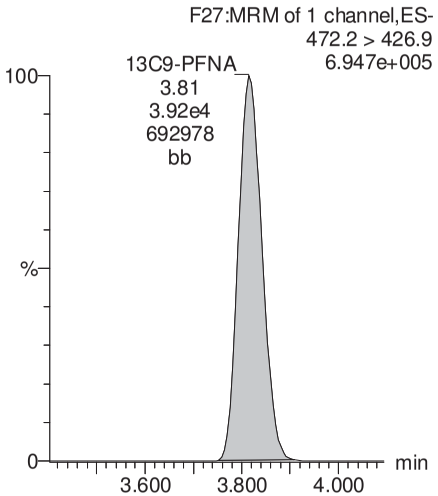
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



GM 8/16/17

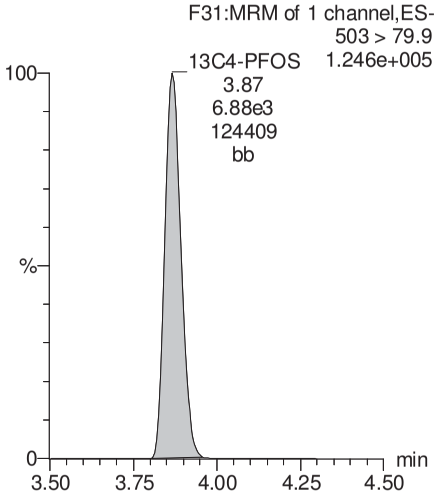
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-15.qld

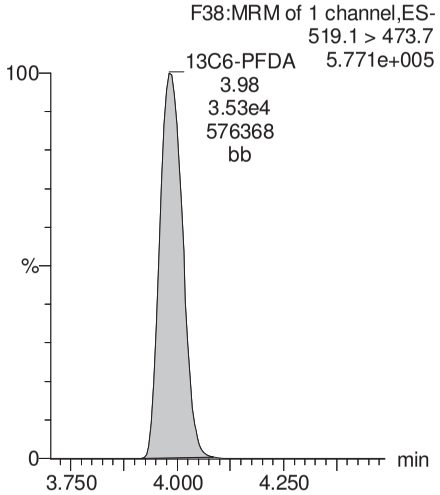
Last Altered: Wednesday, August 16, 2017 15:11:27 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:12:36 Pacific Daylight Time

Name: 170802M1_15, Date: 02-Aug-2017, Time: 13:00:41, ID: 1700922-05 RB08-20170720 0.11893, Description: RB08-20170720

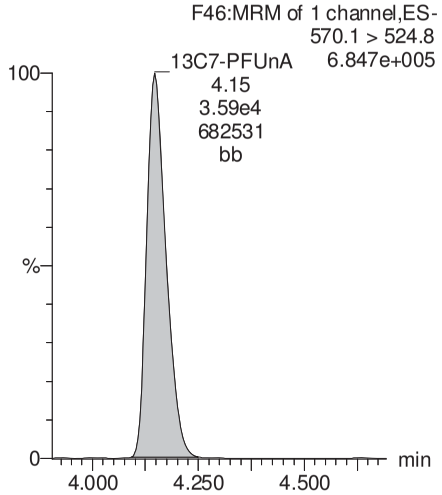
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/16/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-16.qld

Last Altered: Wednesday, August 16, 2017 15:13:29 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:14:07 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: 170802M1_16, Date: 02-Aug-2017, Time: 13:11:25, ID: 1700922-06 RB09-20170721 0.11676, Description: RB09-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		4.49e3	0.117		2.96				
2	4	PFHxA	313.2 > 268.9		1.18e4	0.117		3.19				
3	5	PFHpA	363 > 318.9		2.67e4	0.117		3.45				
4	6	PFHxS	398.9 > 79.6	5.53e0	3.00e3	0.117		3.56	3.51	0.0230		
5	8	PFOA	413 > 368.7		3.65e4	0.117		3.65				
6	10	PFNA	462.9 > 418.8		3.08e4	0.117		3.83				
7	12	PFOS	499 > 79.9		7.68e3	0.117		3.89				
8	13	PFDA	513 > 468.8		2.88e4	0.117		4.01				
9	15	N-MeFOSAA	570.1 > 419		6.25e3	0.117		4.03				
10	16	N-EtFOSAA	584.2 > 419		5.90e3	0.117		4.10				
11	17	PFUnA	562.9 > 518.9		3.25e4	0.117		4.17				
12	19	PFDoA	612.9 > 318.8		3.32e3	0.117		4.34				

GM 8/16/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-16.qld

Last Altered: Wednesday, August 16, 2017 15:13:29 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:14:17 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: 170802M1_16, Date: 02-Aug-2017, Time: 13:11:25, ID: 1700922-06 RB09-20170721 0.11676, Description: RB09-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		3.32e3	0.117		4.50				
2	22	PFTeDA	712.9 > 668.8		2.04e4	0.117		4.68				
3	30	13C3-PFBS	302 > 98.8	4.49e3	3.51e4	0.117	0.034	2.96	2.92	0.639	160	149.7
4	31	13C2-PFHxA	315 > 269.8	1.18e4	3.51e4	0.117	0.334	3.19	3.16	1.68	43.0	100.5
5	32	13C4-PFHpA	367.2 > 321.8	2.67e4	3.51e4	0.117	0.414	3.45	3.43	3.80	78.5	73.3
6	33	18O2-PFHxS	403 > 102.6	3.00e3	6.23e3	0.117	0.475	3.56	3.50	6.02	109	101.4
7	35	13C2-PFOA	414.9 > 369.7	3.65e4	2.89e4	0.117	1.298	3.65	3.63	15.8	104	97.3
8	36	13C5-PFNA	468.2 > 422.9	3.08e4	3.18e4	0.117	1.094	3.83	3.81	12.1	94.8	88.6
9	38	13C8-PFOS	507 > 79.9	7.68e3	6.34e3	0.117	1.153	3.89	3.87	15.1	112	105.1
10	39	13C2-PFDA	515.1 > 469.9	2.88e4	3.56e4	0.117	1.059	4.01	3.98	10.1	81.7	76.3

GM 8/16/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-16.qld

Last Altered: Wednesday, August 16, 2017 15:13:29 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:14:33 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: 170802M1_16, Date: 02-Aug-2017, Time: 13:11:25, ID: 1700922-06 RB09-20170721 0.11676, Description: RB09-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	6.25e3	3.48e4	0.117	0.019	4.03	4.01	2.25	996	71.6
2	42	d5-N-EtFOSAA	589.3 > 419	5.90e3	3.48e4	0.117	0.019	4.12	4.08	2.12	960	68.9
3	43	13C2-PFUnA	565 > 519.8	3.25e4	3.48e4	0.117	1.172	4.17	4.15	11.7	85.4	79.8
4	44	13C2-PFDoA	615 > 569.7	3.32e3	3.48e4	0.117	0.118	4.34	4.31	1.19	86.2	80.6
5	46	13C2-PFTeDA	714.8 > 669.6	2.04e4	3.48e4	0.117	0.801	4.68	4.66	7.34	78.5	73.3
6	52	13C5-PFHxA	318 > 272.9	3.51e4	3.51e4	0.117	1.000	3.19	3.16	5.00	42.8	100.0
7	53	13C3-PFHxS	401.9 > 79.9	6.23e3	6.23e3	0.117	1.000	3.56	3.50	12.5	107	100.0
8	54	13C8-PFOA	421.3 > 376	2.89e4	2.89e4	0.117	1.000	3.65	3.63	12.5	107	100.0
9	55	13C9-PFNA	472.2 > 426.9	3.18e4	3.18e4	0.117	1.000	3.83	3.81	12.5	107	100.0
10	56	13C4-PFOS	503 > 79.9	6.34e3	6.34e3	0.117	1.000	3.89	3.87	12.5	107	100.0
11	57	13C6-PFDA	519.1 > 473.7	3.56e4	3.56e4	0.117	1.000	4.01	3.98	12.5	107	100.0
12	58	13C7-PFUnA	570.1 > 524.8	3.48e4	3.48e4	0.117	1.000	4.17	4.15	12.5	107	100.0
13	59	Total PFBS	299 > 79.7	0.00e0	4.49e3	0.117		2.96		0.000		
14	60	Total PFHxS	398.9 > 79.6	5.53e0	3.00e3	0.117		3.52		0.000		
15	61	Total PFOA	413 > 368.7	0.00e0	3.65e4	0.117		3.65		0.000		
16	62	Total PFOS	499 > 79.9	0.00e0	7.68e3	0.117		3.89		0.000		
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	6.25e3	0.117		4.03		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	5.90e3	0.117		4.17		0.000		

GM 8/16/17

Quantify Totals Report MassLynx MassLynx V4.1 SCN945 SCN960
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-16.qld

Last Altered: Wednesday, August 16, 2017 15:13:29 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:14:33 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: 170802M1_16, Date: 02-Aug-2017, Time: 13:11:25, ID: 1700922-06 RB09-20170721 0.11676, Description: RB09-20170721

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	3.51	5.534	3001.193	0.023	MMI	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7			36456.871		MM-I	

Total PFOS

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

Total N-Me-FOSAA

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

Total N-EtFOSAA

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

GM 8/16/17

Vista Analytical Laboratory

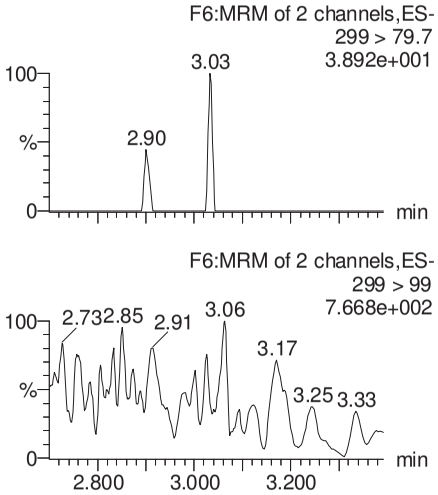
Dataset: U:\Q4.PRO\results\170802M1\170802M1-16.qld

Last Altered: Wednesday, August 16, 2017 15:13:29 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:14:33 Pacific Daylight Time

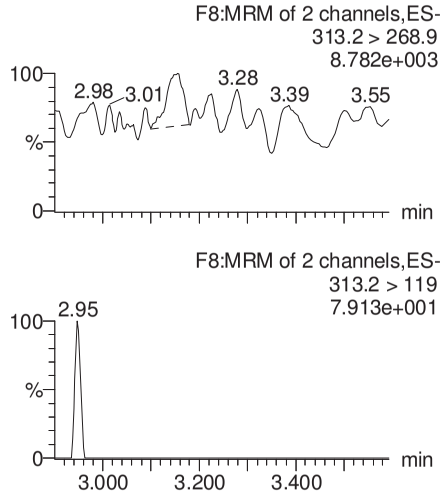
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 10 Aug 2017 09:55:21
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_16, Date: 02-Aug-2017, Time: 13:11:25, ID: 1700922-06 RB09-20170721 0.11676, Description: RB09-20170721

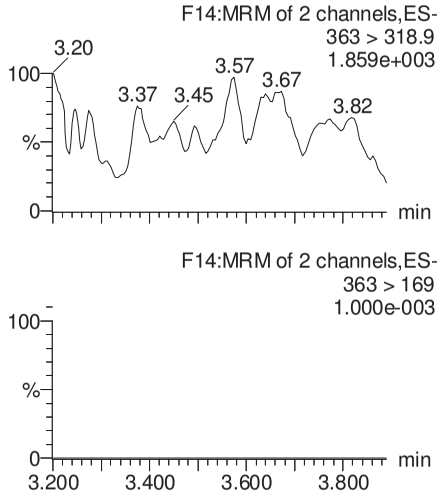
Total PFBS



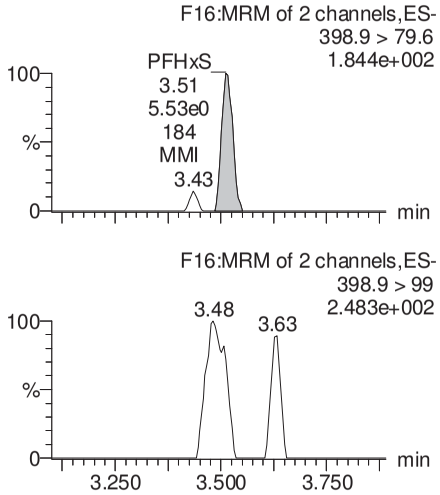
PFHxA



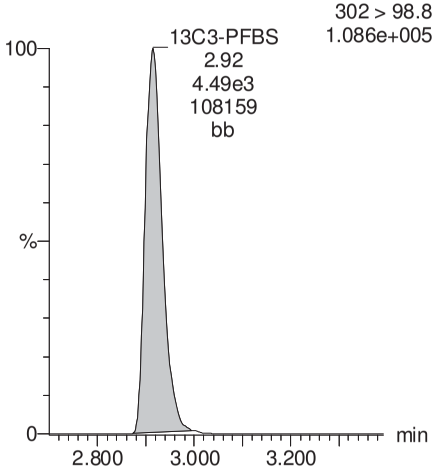
PFHpA



Total PFHxS



13C3-PFBS



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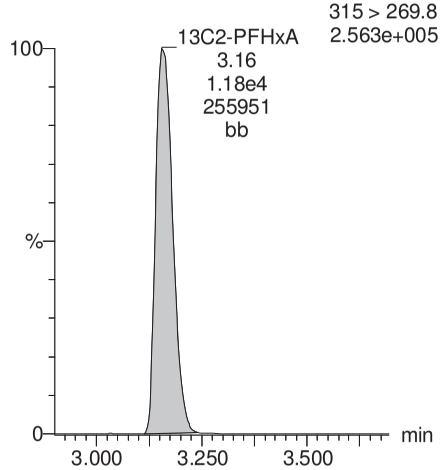

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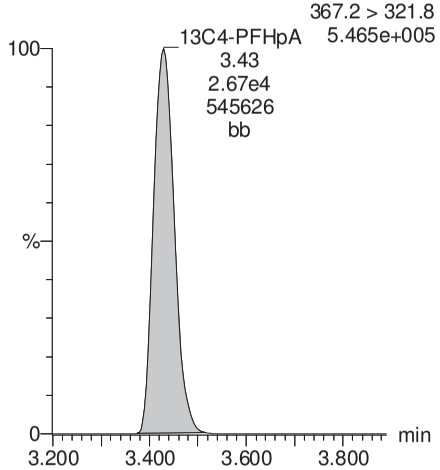
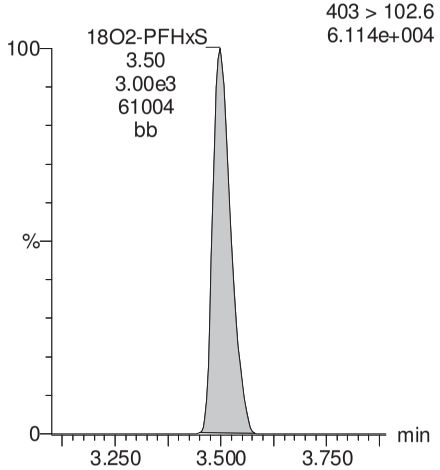


18O2-PFHxS



GM 8/16/17

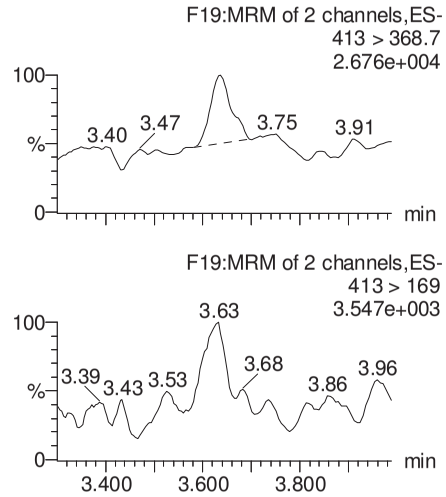
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-16.qld

Last Altered: Wednesday, August 16, 2017 15:13:29 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:14:33 Pacific Daylight Time

Name: 170802M1_16, Date: 02-Aug-2017, Time: 13:11:25, ID: 1700922-06 RB09-20170721 0.11676, Description: RB09-20170721

Total PFOA



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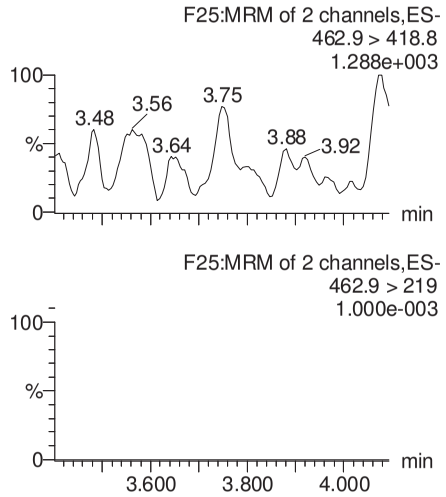
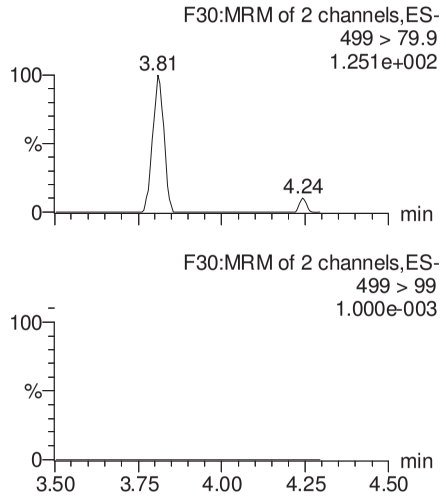


Total PFOS



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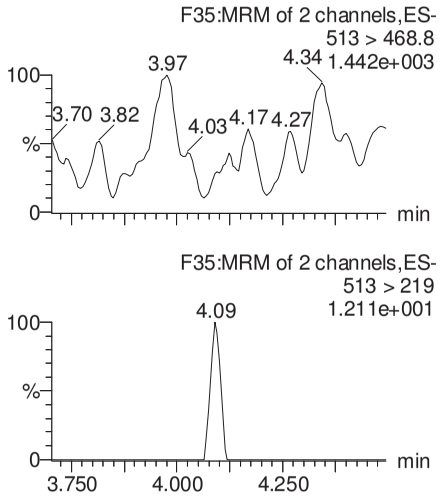
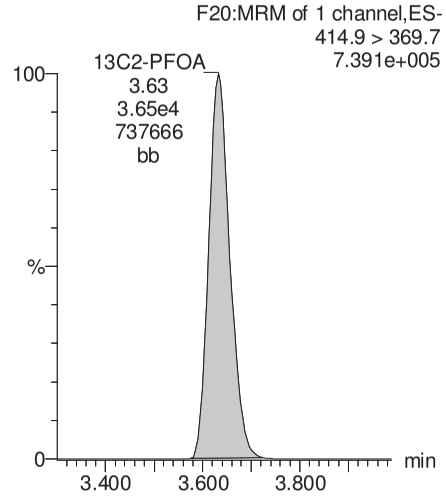
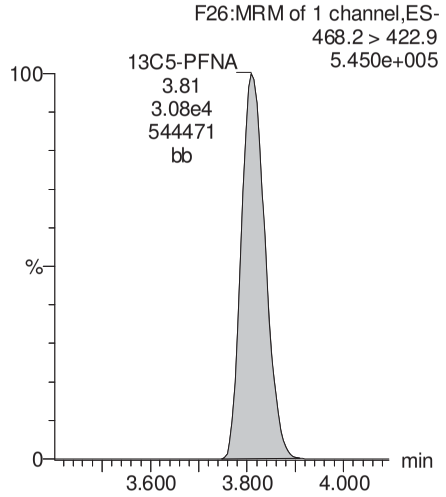


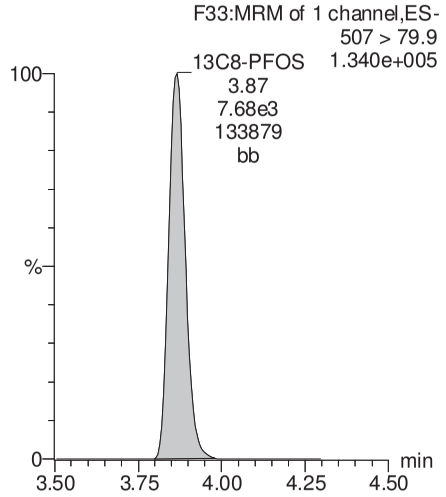
13C2-PFOA



13C5-PFNA



13C8-PFOS



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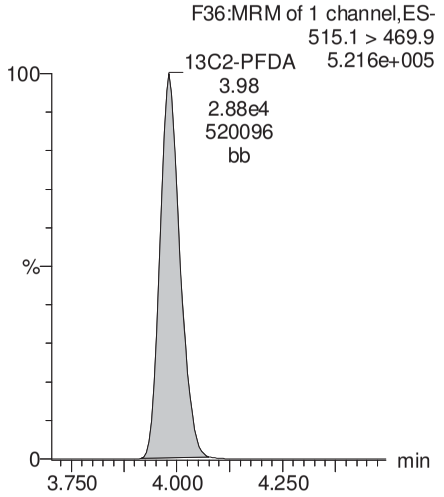


GM 8/16/17

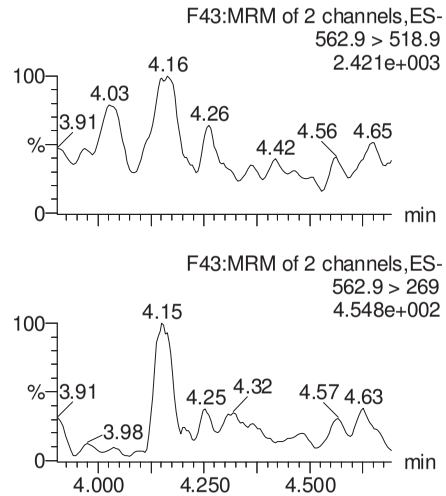
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-16.qld

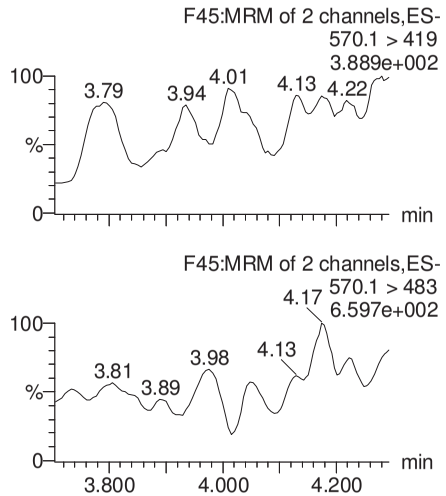
Last Altered: Wednesday, August 16, 2017 15:13:29 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:14:33 Pacific Daylight Time

Name: 170802M1_16, Date: 02-Aug-2017, Time: 13:11:25, ID: 1700922-06 RB09-20170721 0.11676, Description: RB09-20170721

PFUnA



N-MeFOSAA



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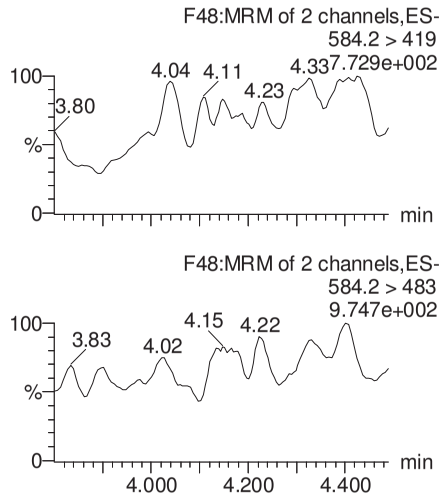

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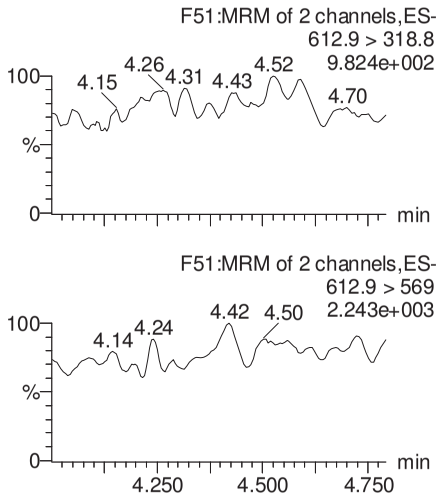

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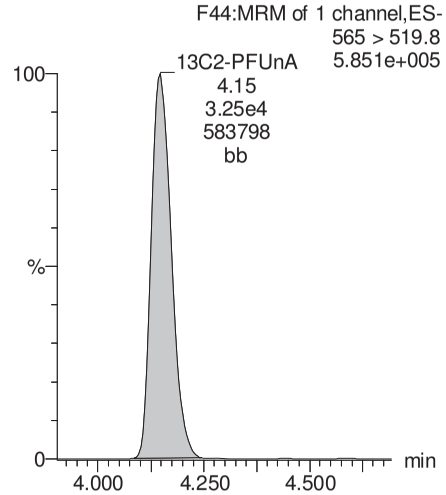
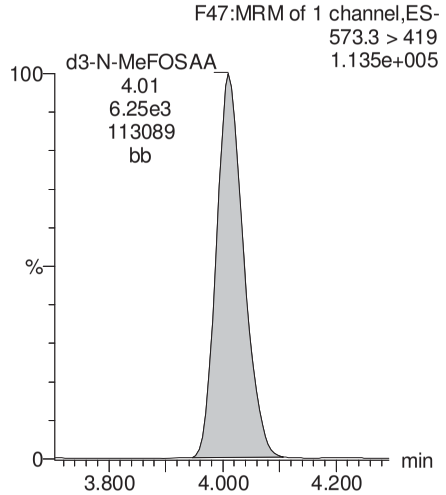


d3-N-MeFOSAA



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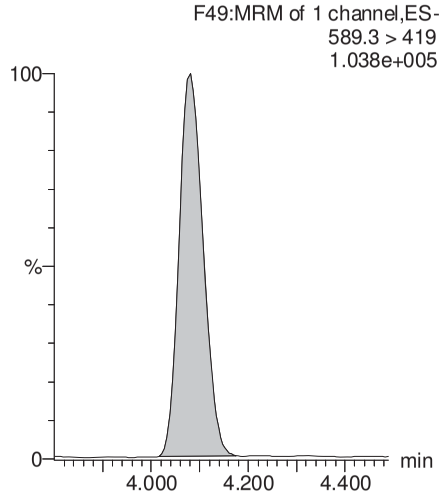
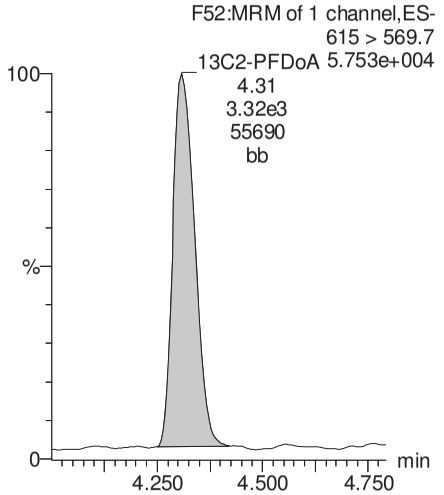


13C2-PFDoA



GM 8/16/17

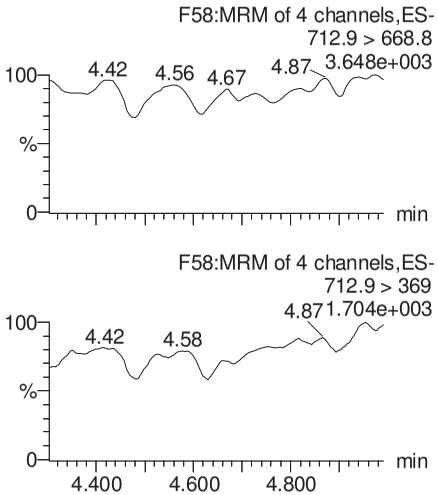
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-16.qld

Last Altered: Wednesday, August 16, 2017 15:13:29 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:14:33 Pacific Daylight Time

Name: 170802M1_16, Date: 02-Aug-2017, Time: 13:11:25, ID: 1700922-06 RB09-20170721 0.11676, Description: RB09-20170721

PFTeDA



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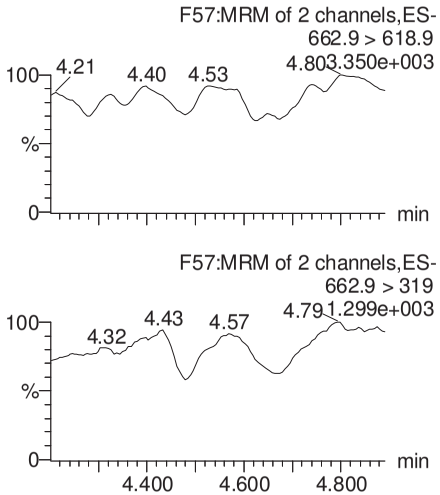
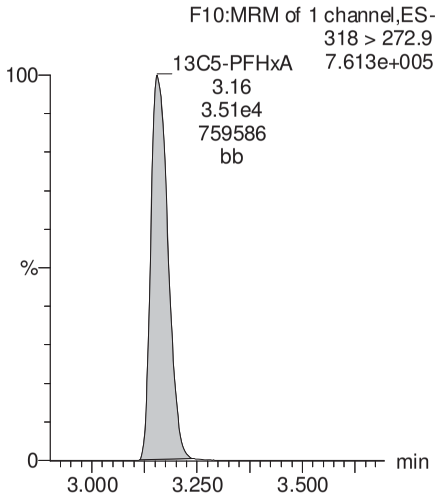
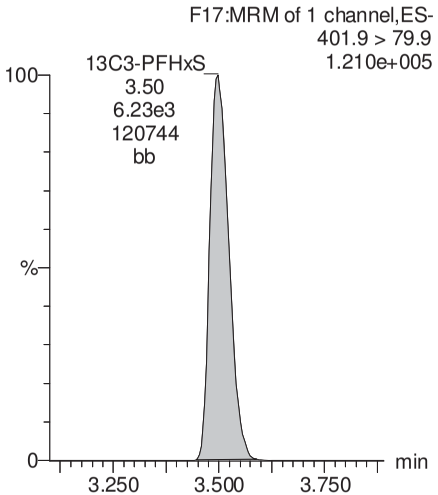


13C5-PFHxA



13C3-PFHxS



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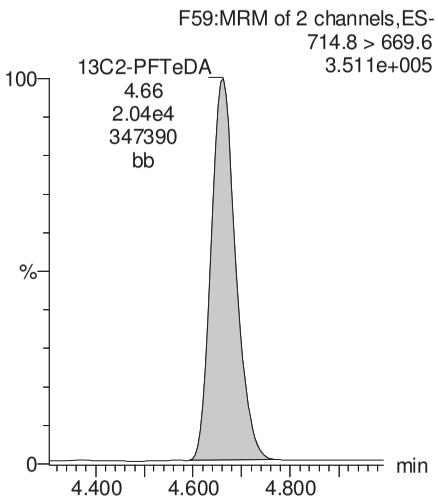

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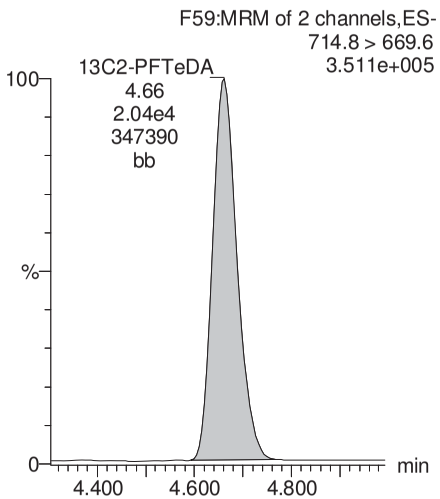
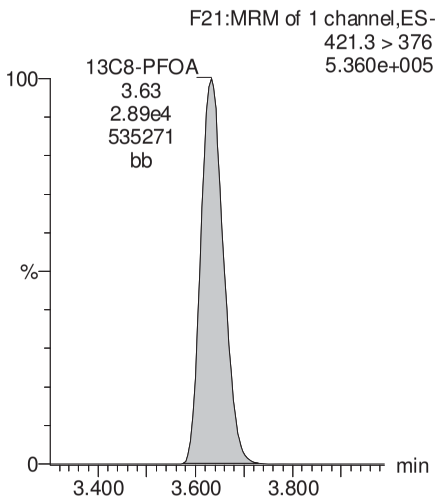
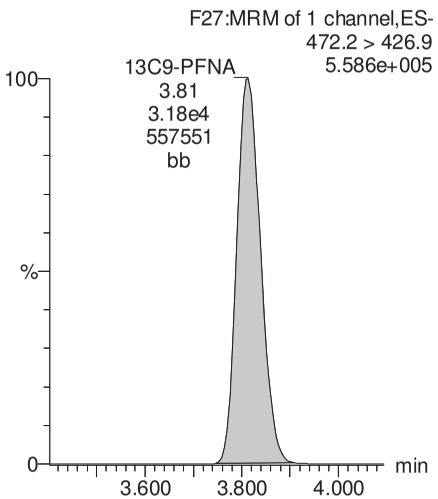


13C8-PFOA



13C9-PFNA



GM 8/16/17

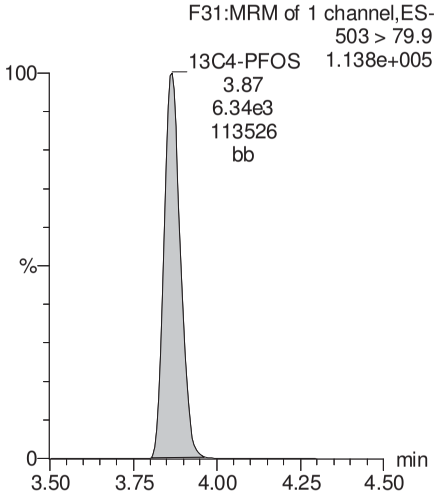
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-16.qld

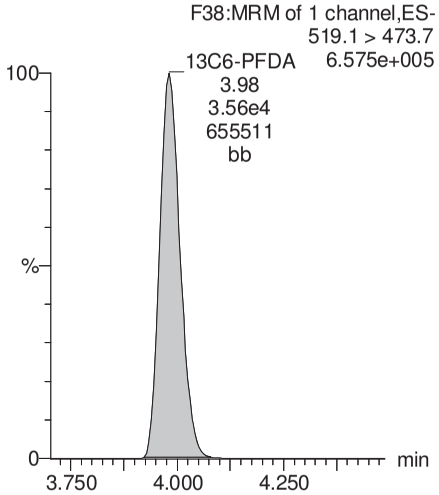
Last Altered: Wednesday, August 16, 2017 15:13:29 Pacific Daylight Time
Printed: Wednesday, August 16, 2017 15:14:33 Pacific Daylight Time

Name: 170802M1_16, Date: 02-Aug-2017, Time: 13:11:25, ID: 1700922-06 RB09-20170721 0.11676, Description: RB09-20170721

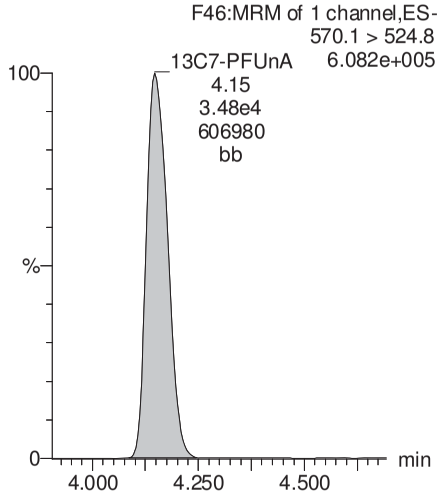
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/16/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-8.qld

Last Altered: Saturday, August 12, 2017 13:44:55 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:48:41 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 11:46:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_8, Date: 11-Aug-2017, Time: 19:40:22, ID: B7H0074-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	3	PFBS	299 > 79.7		5.86e3	0.125		3.06					
2	4	PFHxA	313.2 > 268.9		1.67e4	0.125		3.26					
3	6	PFHxS	398.9 > 79.6	9.56e0	4.07e3	0.125		3.58	3.55	0.0294	0.689		
4	8	PFOA	413 > 368.7		4.89e4	0.125		3.71					Use only
5	10	PFNA	462.9 > 418.8		4.17e4	0.125		3.90					
6	12	PFOS	499 > 79.9	2.33e1	8.68e3	0.125		3.96	3.87	0.0336	0.548		
7	13	PFDA	513 > 468.8		3.97e4	0.125		4.08					
8	15	N-MeFOSAA	570.1 > 419		6.77e3	0.125		4.11					
9	16	N-EtFOSAA	584.2 > 419		7.73e3	0.125		4.18					
10	17	PFUnA	562.9 > 518.9		4.45e4	0.125		4.25					
11	19	PFDoA	612.9 > 318.8		4.31e3	0.125		4.42					

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-8.qld

Last Altered: Saturday, August 12, 2017 13:44:55 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:48:54 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 11:46:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_8, Date: 11-Aug-2017, Time: 19:40:22, ID: B7H0074-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		4.31e3	0.125		4.59				
2	22	PFTeDA	712.9 > 668.8		2.37e4	0.125		4.78				
3	30	13C3-PFBS	302 > 98.8	5.86e3	5.25e4	0.125	0.033	3.06	3.01	0.558	136	135.7
4	31	13C2-PFHxA	315 > 269.8	1.67e4	5.25e4	0.125	0.304	3.26	3.23	1.59	41.8	104.5
5	33	18O2-PFHxS	403 > 102.6	4.07e3	8.89e3	0.125	0.417	3.58	3.55	5.72	110	109.6
6	35	13C2-PFOA	414.9 > 369.7	4.89e4	4.51e4	0.125	1.132	3.71	3.68	13.6	95.8	95.8
7	36	13C5-PFNA	468.2 > 422.9	4.17e4	5.09e4	0.125	0.946	3.90	3.87	10.2	86.5	86.5

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-8.qld

Last Altered: Saturday, August 12, 2017 13:44:55 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:49:15 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 11:46:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_8, Date: 11-Aug-2017, Time: 19:40:22, ID: B7H0074-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	38	13C8-PFOS	507 > 79.9	8.68e3	8.29e3	0.125	1.040	3.96	3.93	13.1	101	100.7
2	39	13C2-PFDA	515.1 > 469.9	3.97e4	5.20e4	0.125	0.971	4.08	4.05	9.53	78.5	78.5
3	41	d3-N-MeFOSAA	573.3 > 419	6.77e3	6.17e4	0.125	0.018	4.11	4.08	1.37	617	47.5
4	42	d5-N-EtFOSAA	589.3 > 419	7.73e3	6.17e4	0.125	0.018	4.18	4.14	1.57	688	52.9
5	43	13C2-PFUnA	565 > 519.8	4.45e4	6.17e4	0.125	1.085	4.25	4.21	9.03	66.5	66.5
6	44	13C2-PFDoA	615 > 569.7	4.31e3	6.17e4	0.125	0.123	4.42	4.38	0.873	56.7	56.7
7	46	13C2-PFTeDA	714.8 > 669.6	2.37e4	6.17e4	0.125	0.798	4.78	4.74	4.80	48.1	48.1
8	52	13C5-PFHxA	318 > 272.9	5.25e4	5.25e4	0.125	1.000	3.26	3.23	5.00	40.0	100.0
9	53	13C3-PFHxS	401.9 > 79.9	8.89e3	8.89e3	0.125	1.000	3.58	3.55	12.5	100	100.0
10	54	13C8-PFOA	421.3 > 376	4.51e4	4.51e4	0.125	1.000	3.71	3.68	12.5	100	100.0
11	55	13C9-PFNA	472.2 > 426.9	5.09e4	5.09e4	0.125	1.000	3.90	3.87	12.5	100	100.0
12	56	13C4-PFOS	503 > 79.9	8.29e3	8.29e3	0.125	1.000	3.96	3.93	12.5	100	100.0
13	57	13C6-PFDA	519.1 > 473.7	5.20e4	5.20e4	0.125	1.000	4.08	4.05	12.5	100	100.0
14	58	13C7-PFUnA	570.1 > 524.8	6.17e4	6.17e4	0.125	1.000	4.25	4.21	12.5	100	100.0
15	59	Total PFBS	299 > 79.7	0.00e0	5.86e3	0.125		3.06		0.000		
16	60	Total PFHxS	398.9 > 79.6	9.56e0	4.07e3	0.125		3.58		0.0294	0.689	
17	61	Total PFOA	413 > 368.7	0.00e0	4.89e4	0.125		3.71		0.000		
18	62	Total PFOS	499 > 79.9	2.33e1	8.68e3	0.125		3.96		0.0336	0.548	
19	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	6.77e3	0.125		4.11		0.000		
20	64	Total N-EtFOSAA	584.2 > 419	0.00e0	7.73e3	0.125		4.18		0.000		

GM 8/12/17

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-8.qld

Last Altered: Saturday, August 12, 2017 13:44:55 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:49:15 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 11:46:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_8, Date: 11-Aug-2017, Time: 19:40:22, ID: B7H0074-BLK1 Method Blank 0.125, 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	3.55	9.563	4065.890	0.029	MM	0.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7			48923.547		MM-I	

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.87	23.329	8683.348	0.034	MM	0.5

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									

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-8.qld

Last Altered: Saturday, August 12, 2017 13:44:55 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:49:15 Pacific Daylight Time

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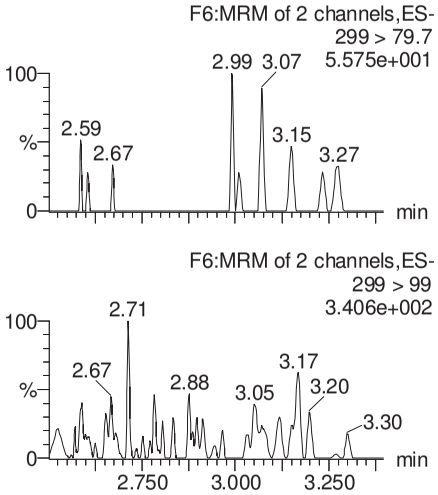
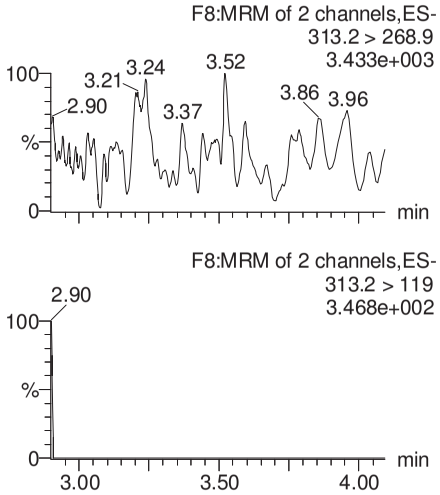
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_8, Date: 11-Aug-2017, Time: 19:40:22, ID: B7H0074-BLK1 Method Blank 0.125, Description: Method Blank

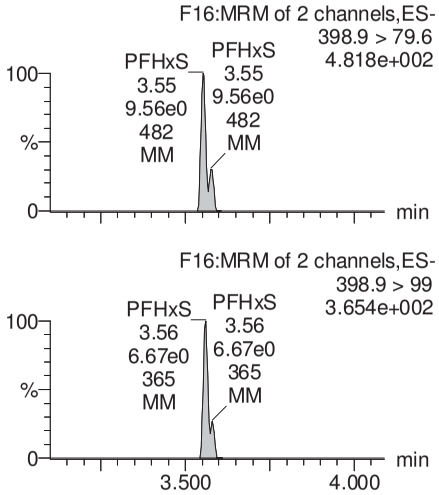
Total PFBS



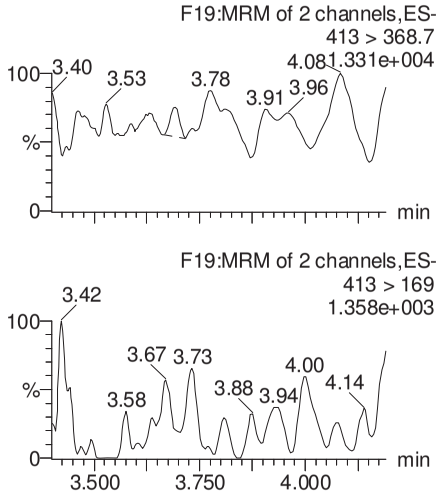
PFHxA



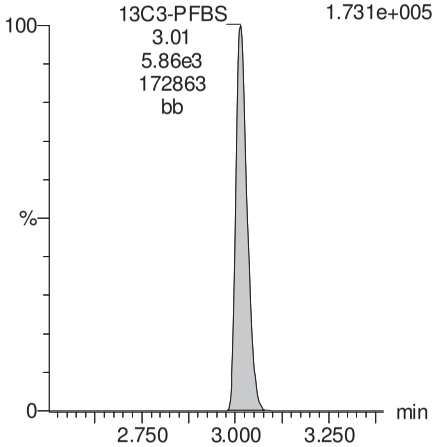
Total PFHxS



Total PFOA



13C3-PFBS



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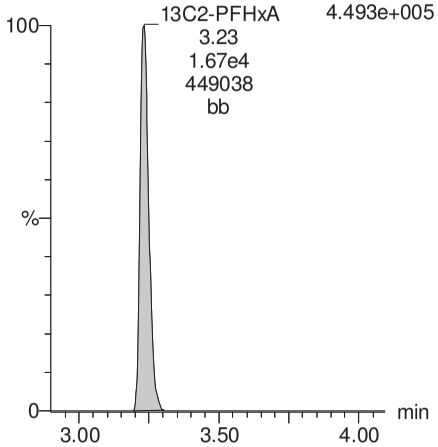
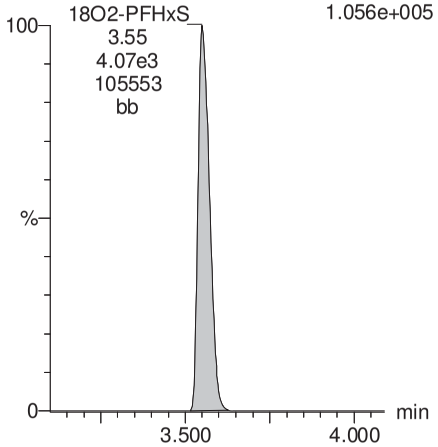


18O2-PFHxS



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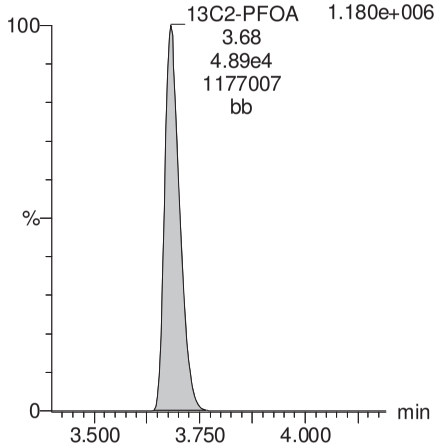

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-8.qld

Last Altered: Saturday, August 12, 2017 13:44:55 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:49:15 Pacific Daylight Time

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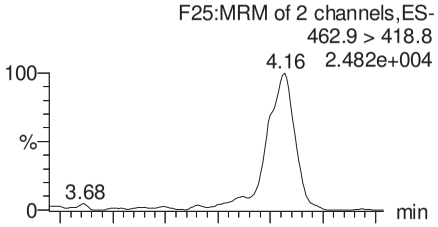
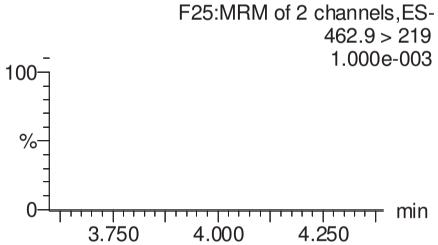
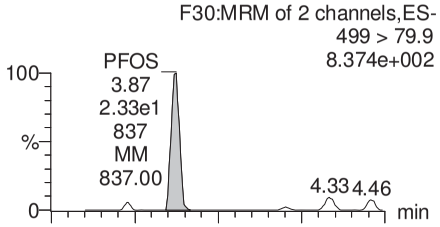
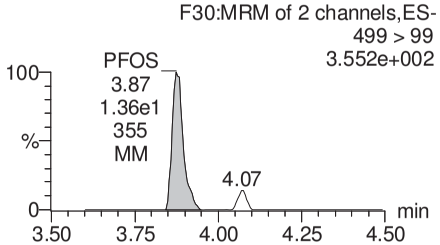




Total PFOS





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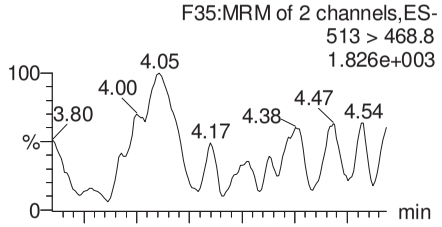
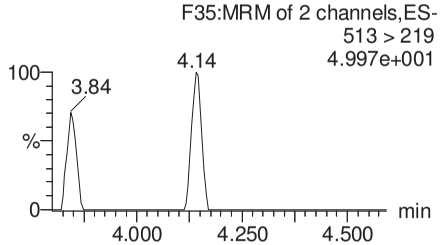
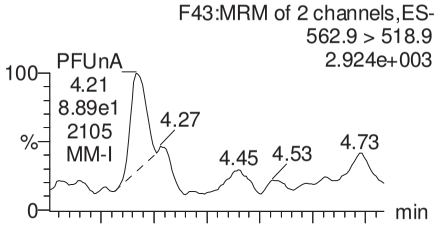
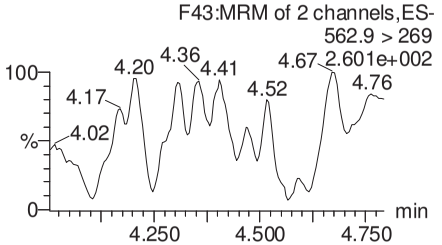


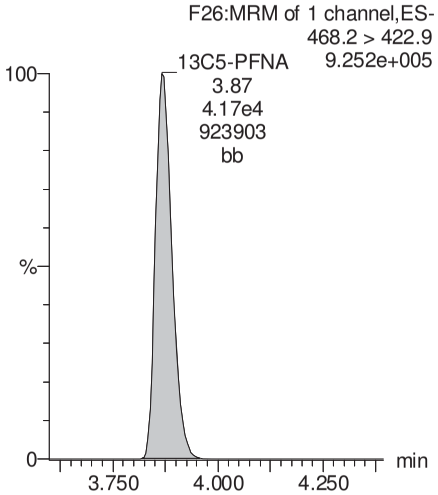


PFUnA

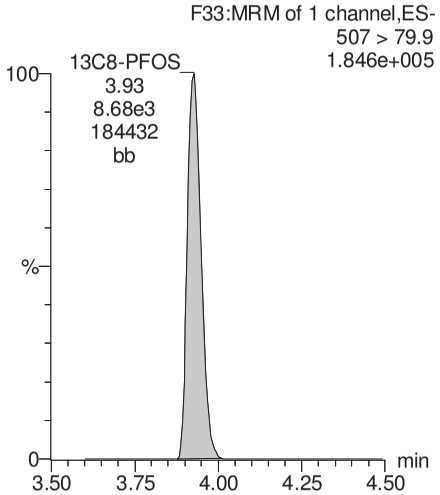




13C5-PFNA



13C8-PFOS



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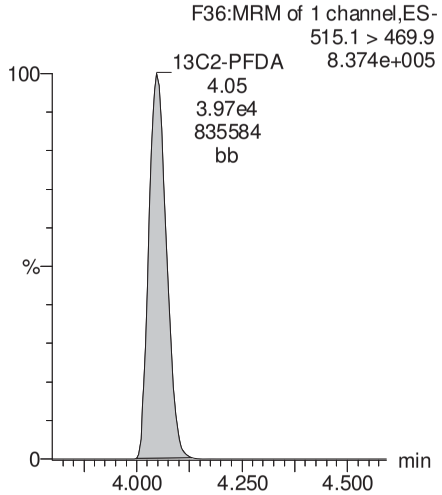

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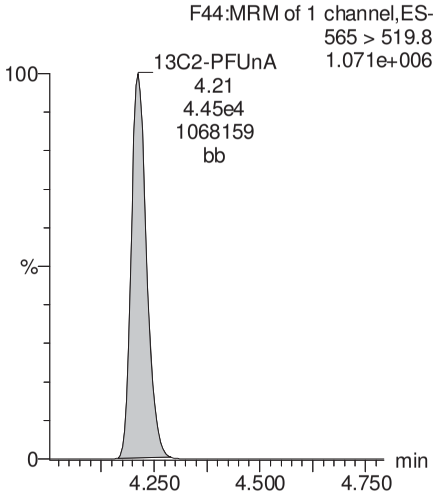


GM 8/12/17

Vista Analytical Laboratory

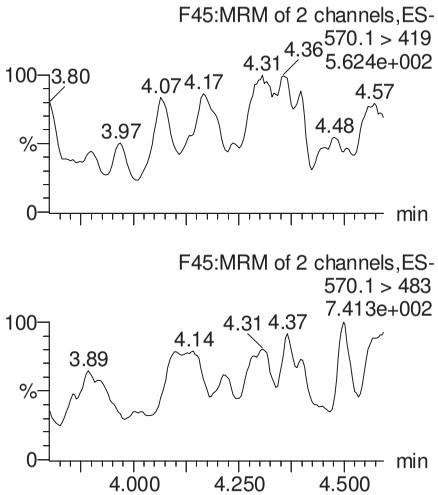
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-8.qld

Last Altered: Saturday, August 12, 2017 13:44:55 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:49:15 Pacific Daylight Time

Name: 170811M2_8, Date: 11-Aug-2017, Time: 19:40:22, ID: B7H0074-BLK1 Method Blank 0.125, Description: Method Blank

N-MeFOSAA



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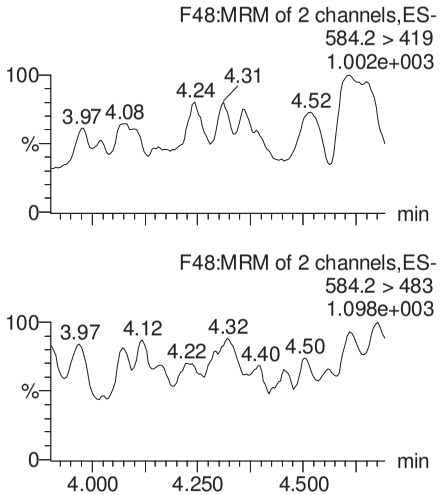
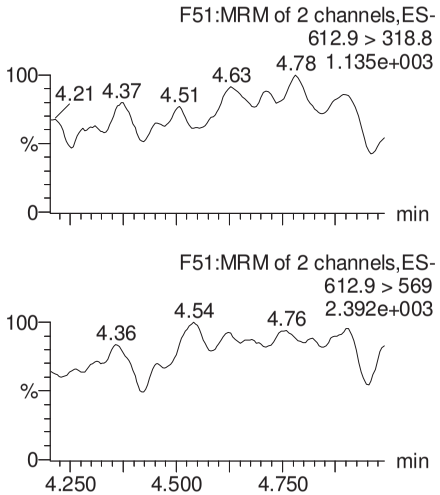
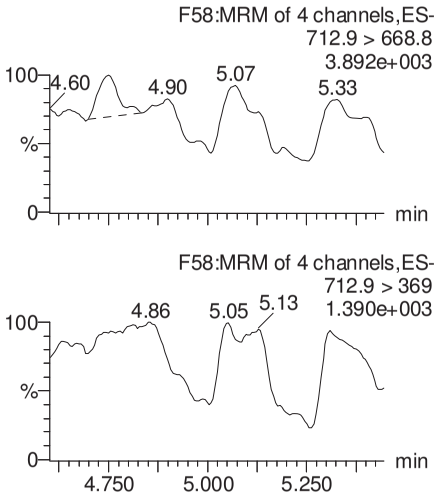


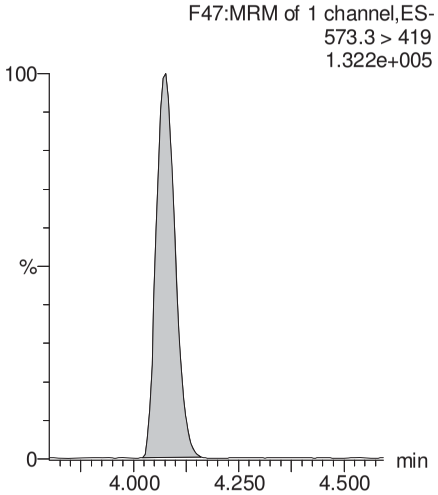
PFDoA



PFTeDA



d3-N-MeFOSAA



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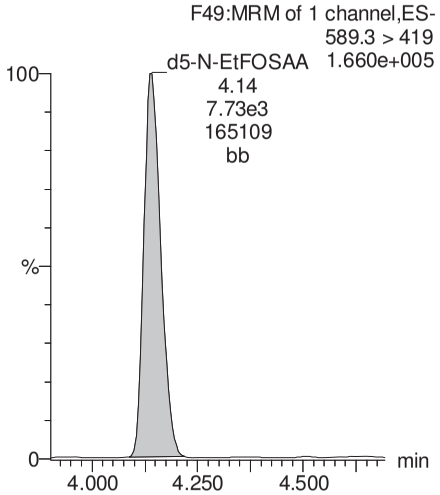

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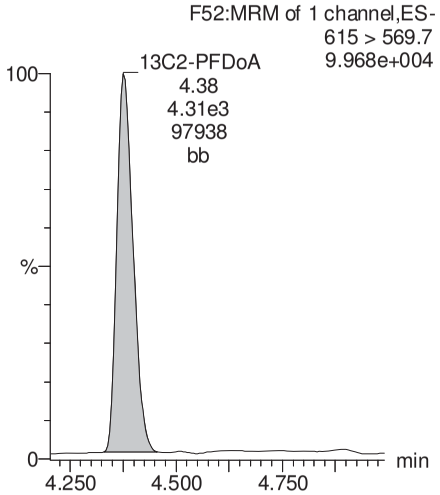

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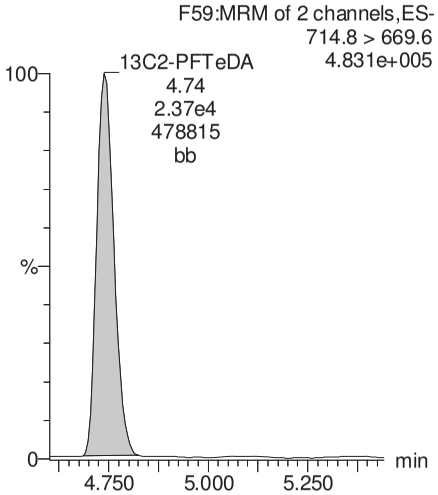


GM 8/12/17

Vista Analytical Laboratory

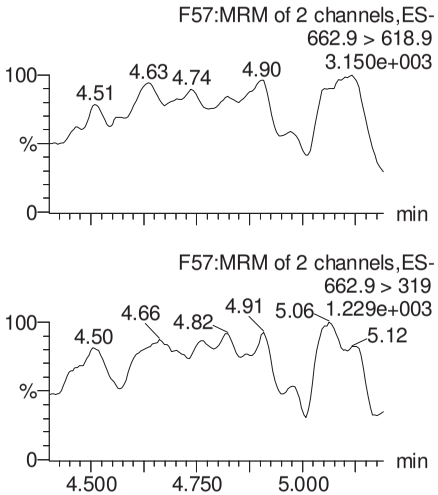
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-8.qld

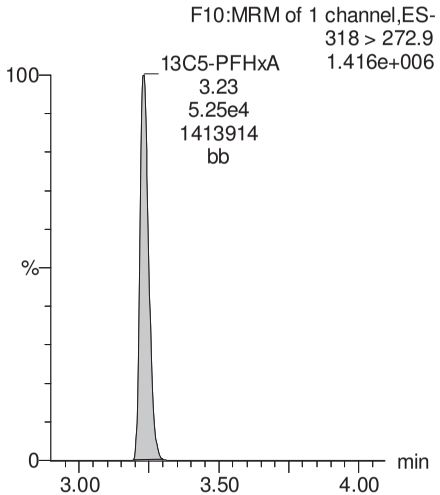
Last Altered: Saturday, August 12, 2017 13:44:55 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:49:15 Pacific Daylight Time

Name: 170811M2_8, Date: 11-Aug-2017, Time: 19:40:22, ID: B7H0074-BLK1 Method Blank 0.125, Description: Method Blank

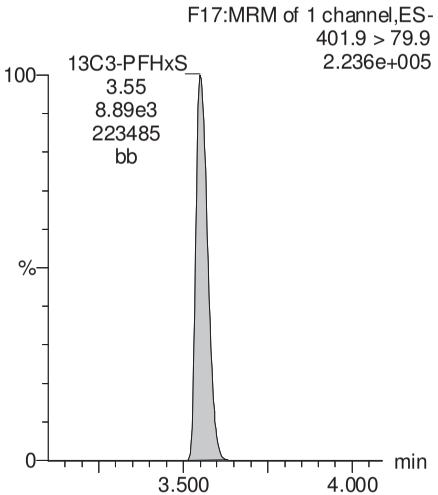
PFTrDA



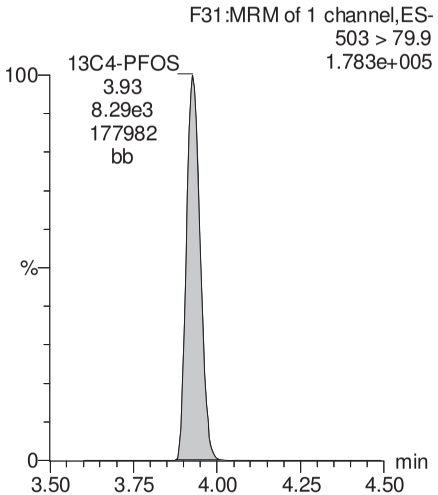
13C5-PFHxA



13C3-PFHxS



13C4-PFOS



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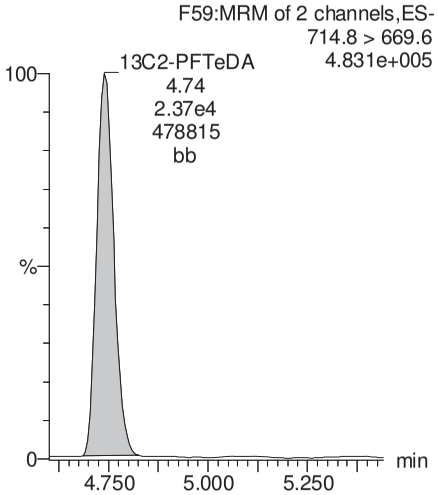
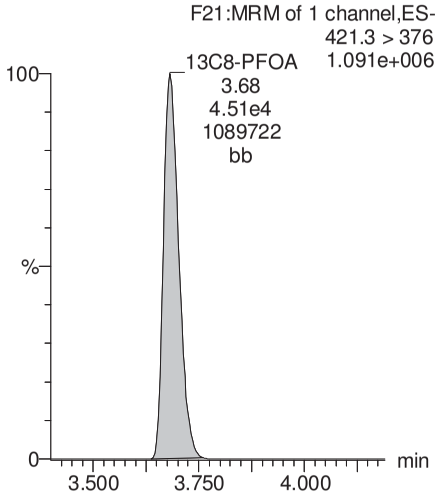
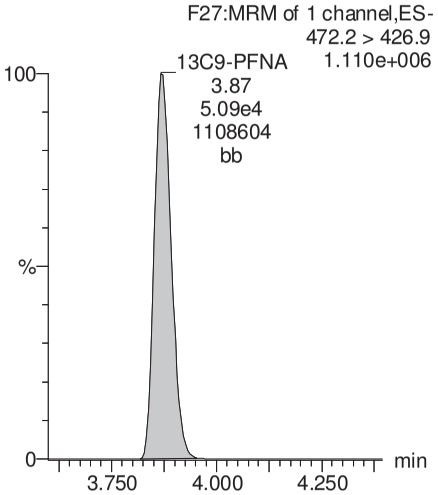


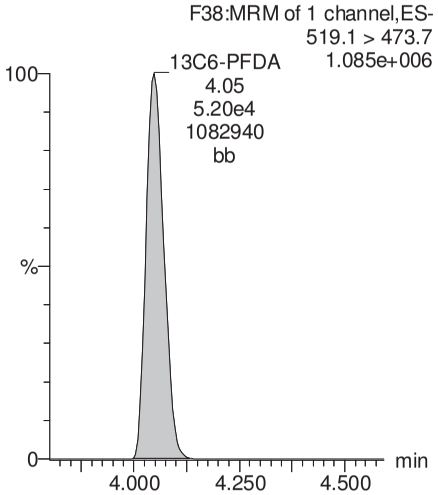
13C8-PFOA



13C9-PFNA



13C6-PFDA



GM 8/12/17

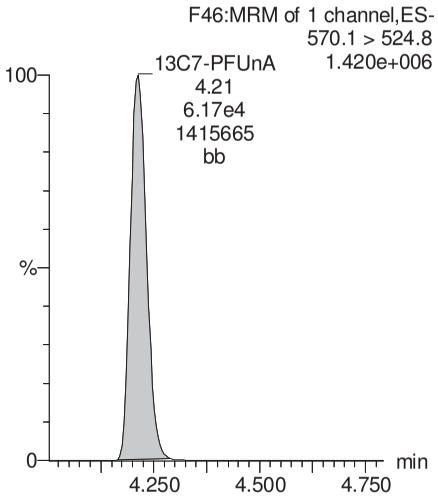
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-8.qld

Last Altered: Saturday, August 12, 2017 13:44:55 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:49:15 Pacific Daylight Time

Name: 170811M2_8, Date: 11-Aug-2017, Time: 19:40:22, ID: B7H0074-BLK1 Method Blank 0.125, Description: Method Blank

13C7-PFUnA



GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-5.qld

Last Altered: Saturday, August 12, 2017 17:45:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:50:41 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 11:46:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_5, Date: 11-Aug-2017, Time: 19:08:08, ID: B7H0074-BS1 OPR 0.125, Description: OPR

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	3	PFBS	299 > 79.7	8.97e3	6.12e3	0.125		3.06	3.01	18.3	84.7	105.9	
2	4	PFHxA	313.2 > 268.9	4.96e4	1.75e4	0.125		3.26	3.22	14.2	85.9	107.4	
3	6	PFHxS	398.9 > 79.6	5.26e3	3.50e3	0.125		3.58	3.54	18.8	85.4	106.7	
4	8	PFOA	413 > 368.7	4.19e4	5.31e4	0.125		3.71	3.67	9.86	79.2	99.0	Use only
5	10	PFNA	462.9 > 418.8	4.28e4	4.74e4	0.125		3.90	3.86	11.3	87.9	109.9	
6	12	PFOS	499 > 79.9	8.03e3	9.40e3	0.125		3.96	3.91	10.7	80.4	100.5	
7	13	PFDA	513 > 468.8	4.00e4	4.86e4	0.125		4.08	4.04	10.3	72.0	90.0	
8	15	N-MeFOSAA	570.1 > 419	1.01e4	8.76e3	0.125		4.11	4.07	187	77.4	96.8	
9	16	N-EtFOSAA	584.2 > 419	8.95e3	9.00e3	0.125		4.18	4.13	162	82.6	103.3	
10	17	PFUnA	562.9 > 518.9	3.16e4	5.19e4	0.125		4.25	4.20	7.60	74.4	93.0	
11	19	PFDoA	612.9 > 318.8	2.92e3	4.85e3	0.125		4.42	4.36	7.53	71.8	89.8	

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-5.qld

Last Altered: Saturday, August 12, 2017 17:45:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:50:53 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 11:46:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_5, Date: 11-Aug-2017, Time: 19:08:08, ID: B7H0074-BS1 OPR 0.125, Description: OPR

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9	3.43e4	4.85e3	0.125		4.59	4.53	88.4	69.6	86.9
2	22	PFTeDA	712.9 > 668.8	2.19e4	2.62e4	0.125		4.78	4.71	10.5	73.0	91.2
3	30	13C3-PFBS	302 > 98.8	6.12e3	5.55e4	0.125	0.033	3.06	3.01	0.551	134	134.2
4	31	13C2-PFHxA	315 > 269.8	1.75e4	5.55e4	0.125	0.304	3.26	3.22	1.57	41.4	103.6
5	33	18O2-PFHxS	403 > 102.6	3.50e3	9.11e3	0.125	0.417	3.58	3.54	4.81	92.2	92.2
6	35	13C2-PFOA	414.9 > 369.7	5.31e4	4.34e4	0.125	1.132	3.71	3.67	15.3	108	108.1
7	36	13C5-PFNA	468.2 > 422.9	4.74e4	5.38e4	0.125	0.946	3.90	3.86	11.0	93.1	93.1

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-5.qld

Last Altered: Saturday, August 12, 2017 17:45:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:51:12 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 11:46:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_5, Date: 11-Aug-2017, Time: 19:08:08, ID: B7H0074-BS1 OPR 0.125, Description: OPR

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	38	13C8-PFOS	507 > 79.9	9.40e3	9.09e3	0.125	1.040	3.96	3.92	12.9	99.5	99.5
2	39	13C2-PFDA	515.1 > 469.9	4.86e4	5.43e4	0.125	0.971	4.08	4.03	11.2	92.1	92.1
3	41	d3-N-MeFOSAA	573.3 > 419	8.76e3	5.94e4	0.125	0.018	4.11	4.06	1.84	829	63.7
4	42	d5-N-EtFOSAA	589.3 > 419	9.00e3	5.94e4	0.125	0.018	4.18	4.13	1.89	830	63.9
5	43	13C2-PFUnA	565 > 519.8	5.19e4	5.94e4	0.125	1.085	4.25	4.20	10.9	80.6	80.6
6	44	13C2-PFDoA	615 > 569.7	4.85e3	5.94e4	0.125	0.123	4.42	4.36	1.02	66.2	66.2
7	46	13C2-PFTeDA	714.8 > 669.6	2.62e4	5.94e4	0.125	0.798	4.78	4.71	5.52	55.3	55.3
8	52	13C5-PFHxA	318 > 272.9	5.55e4	5.55e4	0.125	1.000	3.26	3.23	5.00	40.0	100.0
9	53	13C3-PFHxS	401.9 > 79.9	9.11e3	9.11e3	0.125	1.000	3.58	3.54	12.5	100	100.0
10	54	13C8-PFOA	421.3 > 376	4.34e4	4.34e4	0.125	1.000	3.71	3.67	12.5	100	100.0
11	55	13C9-PFNA	472.2 > 426.9	5.38e4	5.38e4	0.125	1.000	3.90	3.86	12.5	100	100.0
12	56	13C4-PFOS	503 > 79.9	9.09e3	9.09e3	0.125	1.000	3.96	3.91	12.5	100	100.0
13	57	13C6-PFDA	519.1 > 473.7	5.43e4	5.43e4	0.125	1.000	4.08	4.04	12.5	100	100.0
14	58	13C7-PFUnA	570.1 > 524.8	5.94e4	5.94e4	0.125	1.000	4.25	4.20	12.5	100	100.0
15	59	Total PFBS	299 > 79.7	8.97e3	6.12e3	0.125		3.06		18.3	84.7	
16	60	Total PFHxS	398.9 > 79.6	5.26e3	3.50e3	0.125		3.58		18.8	85.4	
17	61	Total PFOA	413 > 368.7	4.19e4	5.31e4	0.125		3.71		9.86	79.2	
18	62	Total PFOS	499 > 79.9	8.03e3	9.40e3	0.125		3.96		10.7	80.4	
19	63	Total N-Me-FOSAA	570.1 > 419	1.01e4	8.76e3	0.125		4.11		187	77.4	
20	64	Total N-EtFOSAA	584.2 > 419	8.95e3	9.00e3	0.125		4.18		162	82.6	

GM 8/12/17

Quantify Totals Report MassLynx MassLynx V4.1 SCN945 SCN960
Vista Analytical Laboratory

Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-5.qld

Last Altered: Saturday, August 12, 2017 17:45:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:51:12 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 11:46:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_5, Date: 11-Aug-2017, Time: 19:08:08, ID: B7H0074-BS1 OPR 0.125, Description: OPR

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	3.01	8970.554	6122.794	18.314	bb	84.7

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.54	5264.029	3504.047	18.778	MM	85.4

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.67	41867.449	53094.262	9.857	bb	79.2

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.91	8034.295	9399.206	10.685	MM	80.4

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419	4.07	10077.366	8759.603	186.946	bb	77.4

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419	4.13	8951.798	8995.045	161.719	bb	82.6

GM 8/12/17

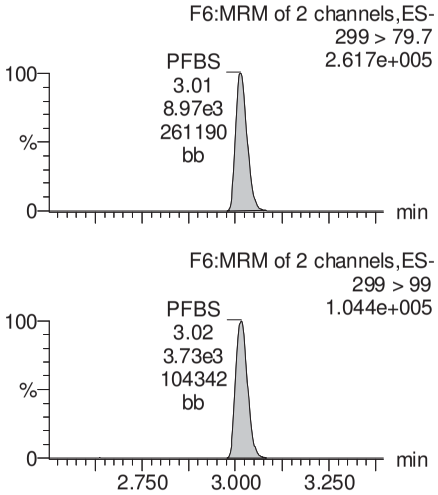
Dataset: U:\Q4.PRO\results\170811M2\170811M2-5.qld

Last Altered: Saturday, August 12, 2017 17:45:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:51:12 Pacific Daylight Time

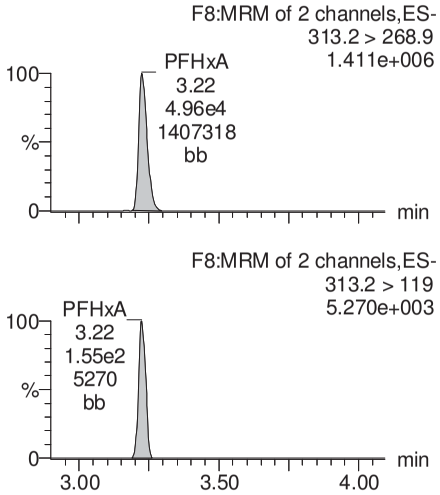
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 11:46:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_5, Date: 11-Aug-2017, Time: 19:08:08, ID: B7H0074-BS1 OPR 0.125, Description: OPR

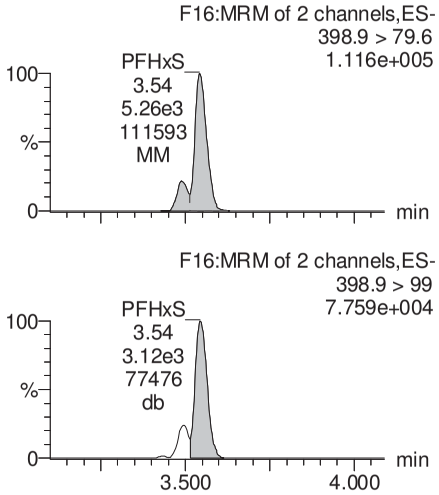
Total PFBS



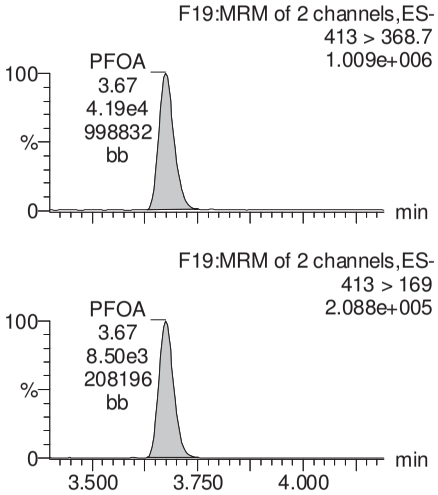
PFHxA



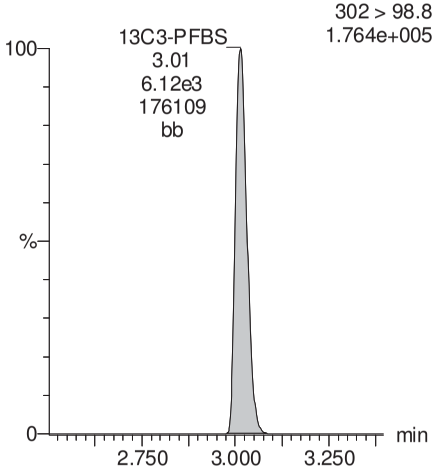
Total PFHxS



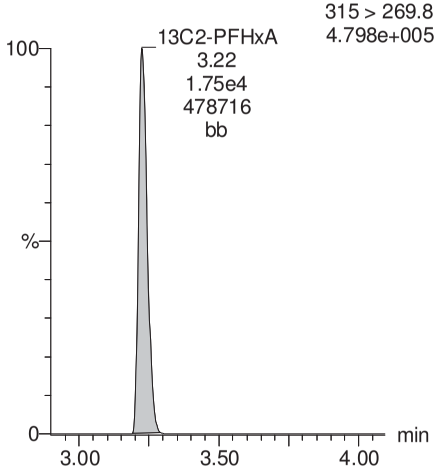
Total PFOA



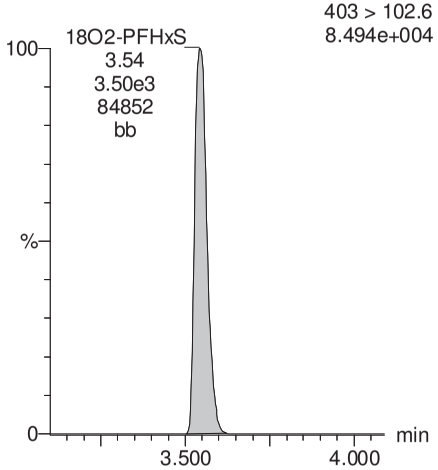
13C3-PFBS



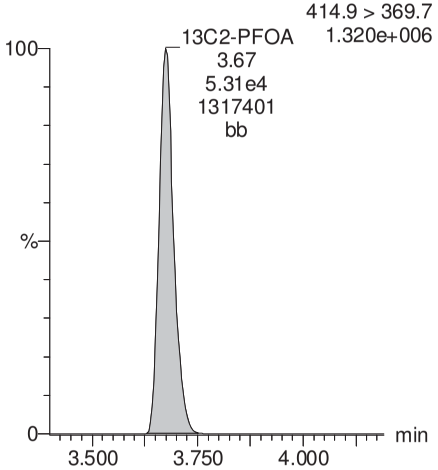
13C2-PFHxA



18O2-PFHxS



13C2-PFOA



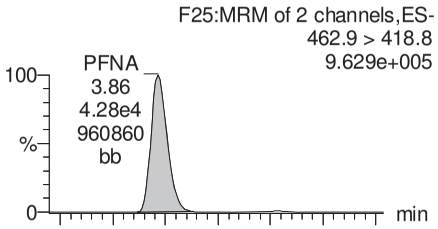
GM 8/12/17

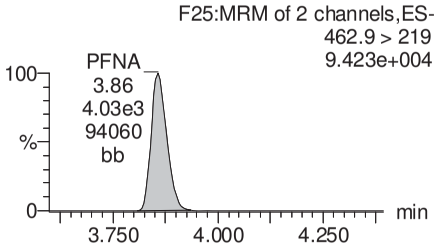
Dataset: U:\Q4.PRO\results\170811M2\170811M2-5.qld

Last Altered: Saturday, August 12, 2017 17:45:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:51:12 Pacific Daylight Time

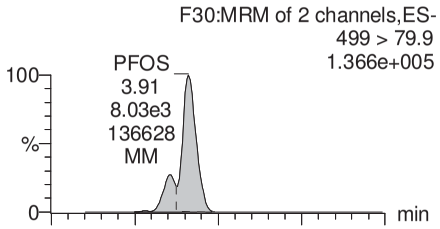
Name: 170811M2_5, Date: 11-Aug-2017, Time: 19:08:08, ID: B7H0074-BS1 OPR 0.125, Description: OPR

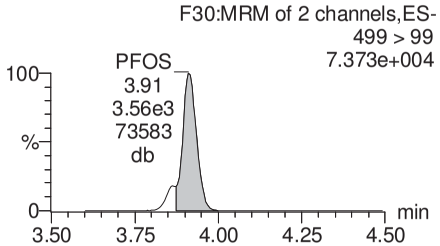
PFNA



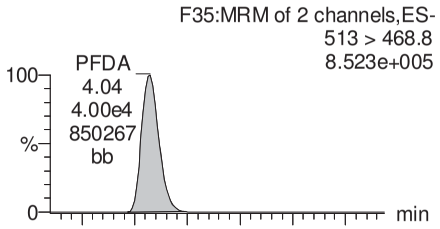


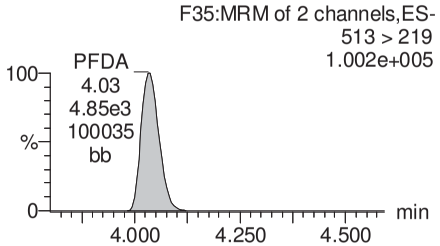
Total PFOS



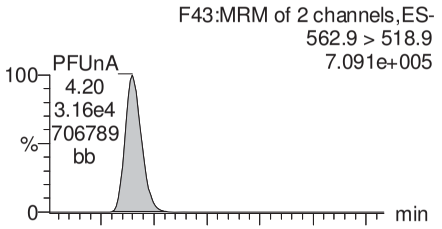


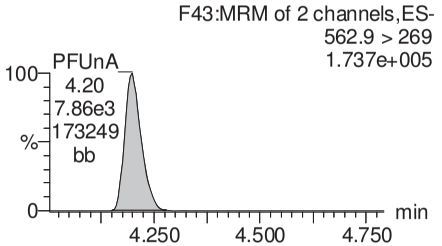
PFDA



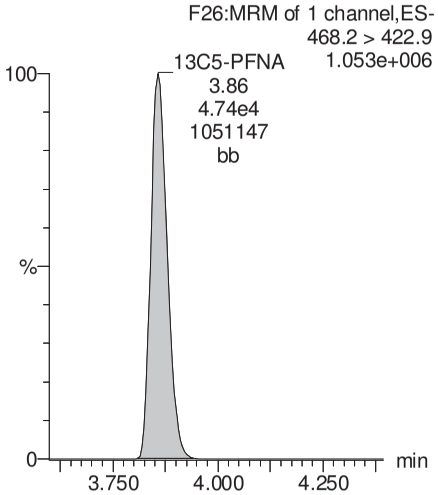


PFUnA

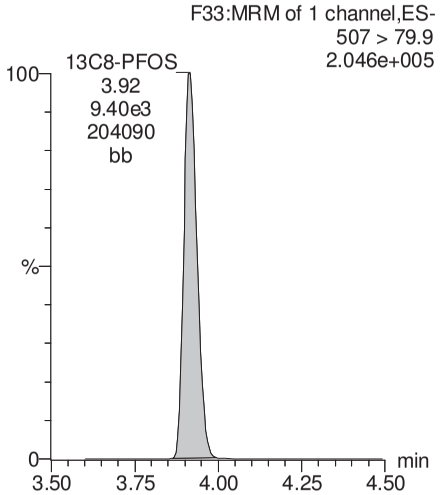




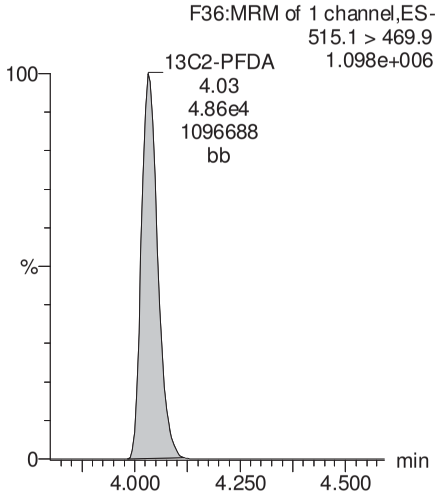
13C5-PFNA



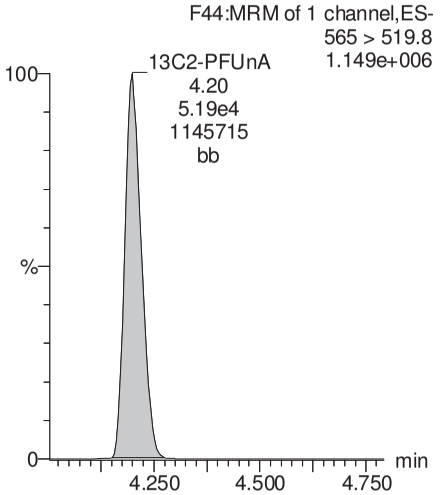
13C8-PFOS



13C2-PFDA



13C2-PFUnA



GM 8/12/17

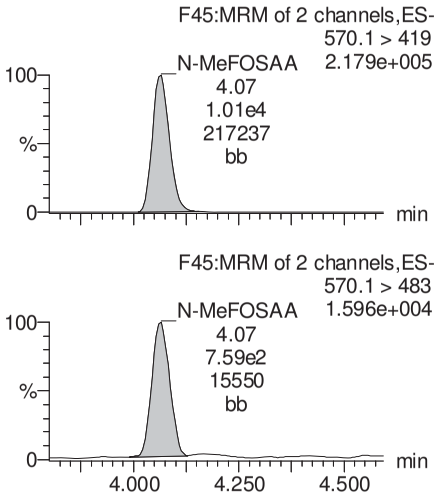
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-5.qld

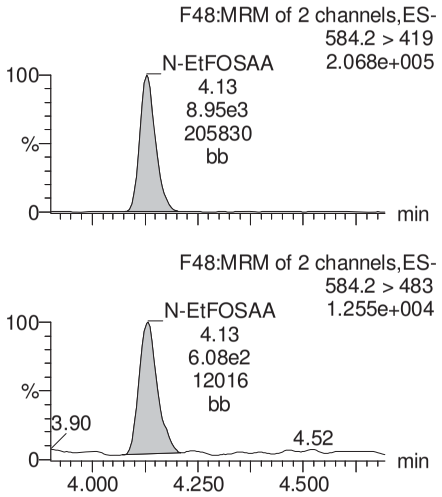
Last Altered: Saturday, August 12, 2017 17:45:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:51:12 Pacific Daylight Time

Name: 170811M2_5, Date: 11-Aug-2017, Time: 19:08:08, ID: B7H0074-BS1 OPR 0.125, Description: OPR

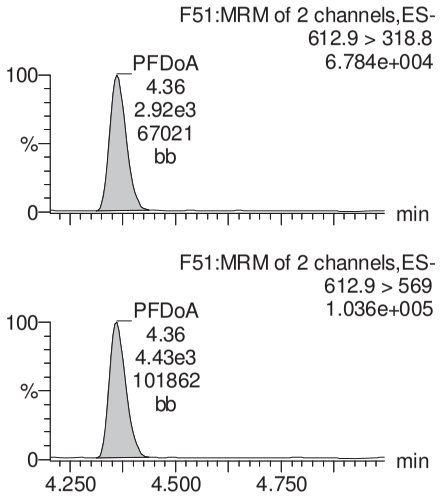
N-MeFOSAA



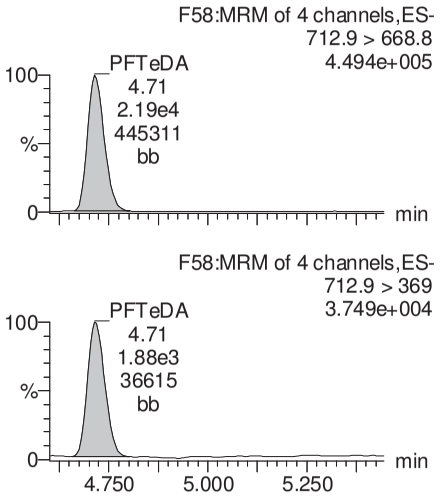
N-EtFOSAA



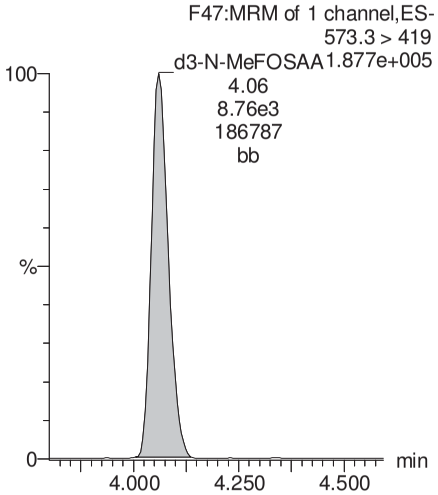
PFDoA



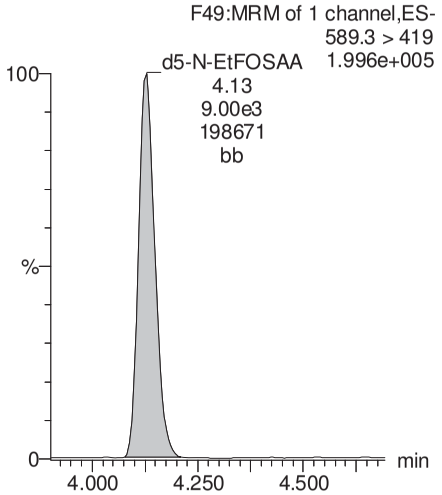
PFTeDA



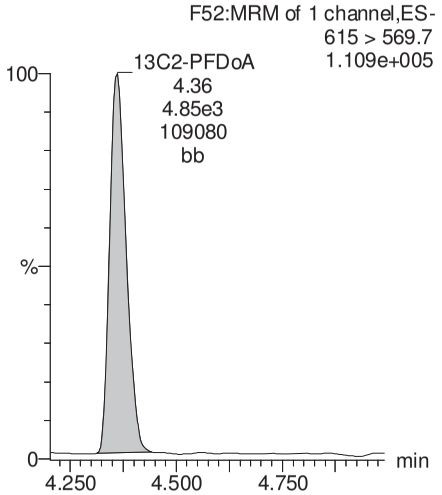
d3-N-MeFOSAA



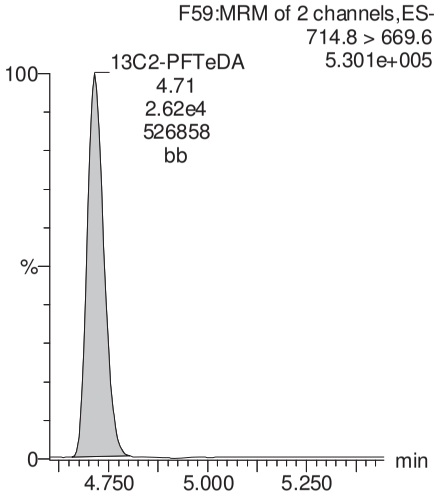
d5-N-EtFOSAA



13C2-PFDoA



13C2-PFTeDA



GM 8/12/17

Vista Analytical Laboratory

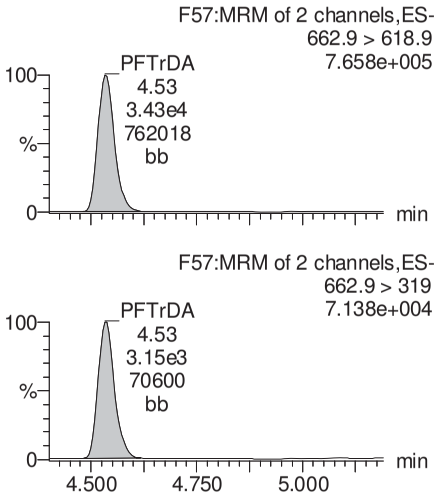
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-5.qld

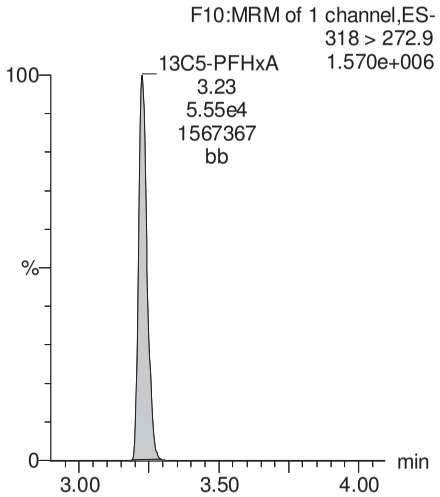
Last Altered: Saturday, August 12, 2017 17:45:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:51:12 Pacific Daylight Time

Name: 170811M2_5, Date: 11-Aug-2017, Time: 19:08:08, ID: B7H0074-BS1 OPR 0.125, Description: OPR

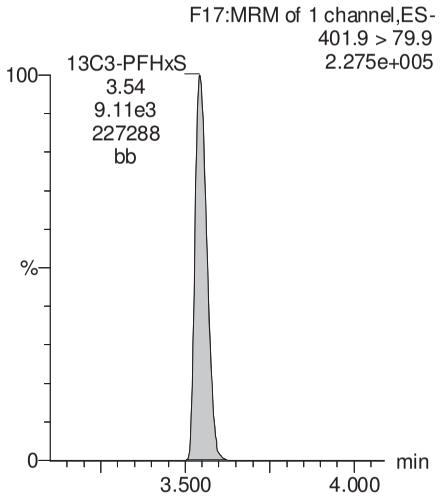
PFTrDA



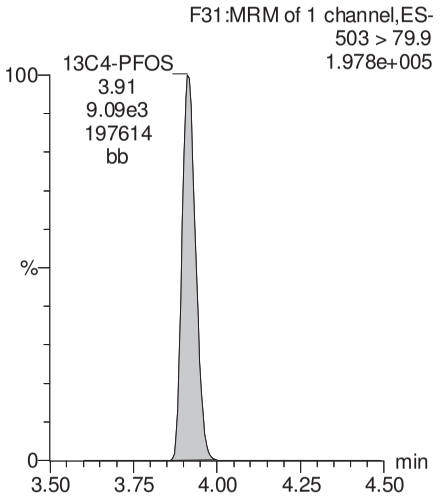
13C5-PFHxA



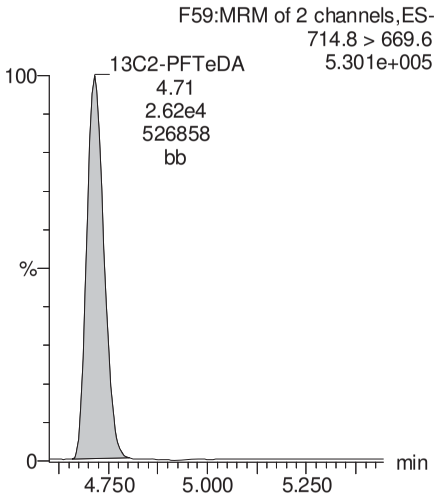
13C3-PFHxS



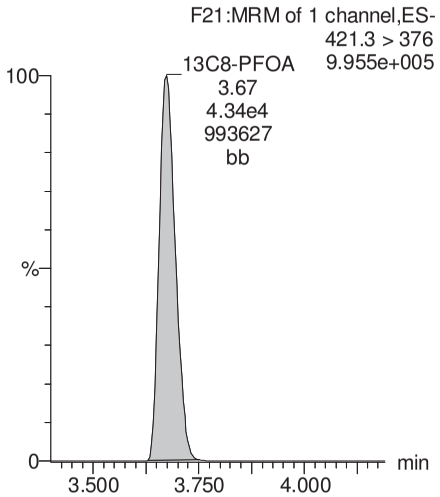
13C4-PFOS



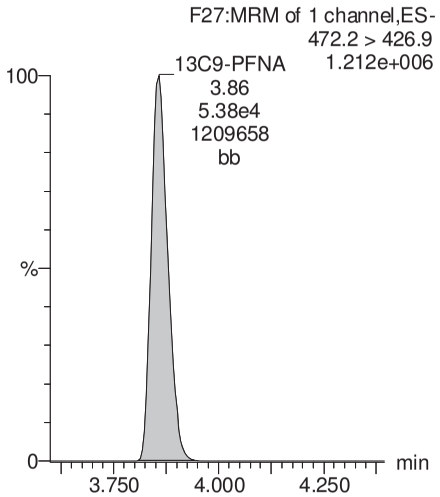
13C2-PFTeDA



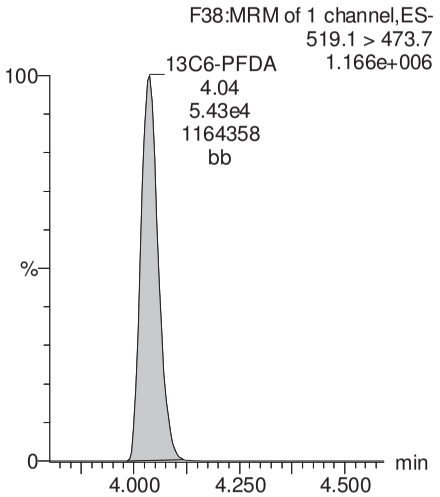
13C8-PFOA



13C9-PFNA



13C6-PFDA



GM 8/12/17

Vista Analytical Laboratory

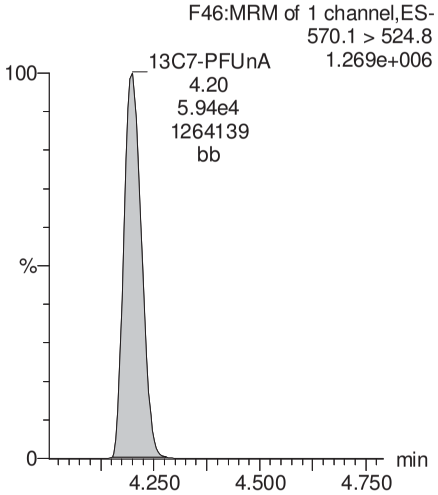
Rev'd: MM 8/16/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-5.qld

Last Altered: Saturday, August 12, 2017 17:45:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:51:12 Pacific Daylight Time

Name: 170811M2_5, Date: 11-Aug-2017, Time: 19:08:08, ID: B7H0074-BS1 OPR 0.125, Description: OPR

13C7-PFUnA



GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-19.qld

Last Altered: Tuesday, August 15, 2017 11:24:49 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 11:41:37 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 14 Aug 2017 15:12:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_19, Date: 11-Aug-2017, Time: 21:37:56, ID: 1700922-01RE1 MH-L103-20170721 0.10565, Description: MH-L103-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		5.15e3	0.0806		3.06				
2	4	PFHxA	313.2 > 268.9		1.53e4	0.0806		3.26				
3	6	PFHxS	398.9 > 79.6	6.28e1	3.40e3	0.0806		3.58	3.54	0.231	2.48	
4	8	PFOA	413 > 368.7	1.28e3	4.13e4	0.0806		3.71	3.69	0.388	3.00	
5	10	PFNA	462.9 > 418.8	5.12e2	3.92e4	0.0806		3.90	3.87	0.163		
6	12	PFOS	499 > 79.9	1.29e2	8.30e3	0.0806		3.96	3.92	0.194	2.71	
7	13	PFDA	513 > 468.8	3.64e2	3.68e4	0.0806		4.08	4.05	0.123	0.0875	
8	15	N-MeFOSAA	570.1 > 419		8.58e3	0.0806		4.11				
9	16	N-EtFOSAA	584.2 > 419		1.03e4	0.0806		4.18				
10	17	PFUnA	562.9 > 518.9	2.60e2	3.97e4	0.0806		4.25	4.21	0.0817		
11	19	PFDoA	612.9 > 318.8		4.78e3	0.0806		4.42				

Use only

GM 8/15/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-19.qld

Last Altered: Tuesday, August 15, 2017 11:24:49 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 11:41:52 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 14 Aug 2017 15:12:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_19, Date: 11-Aug-2017, Time: 21:37:56, ID: 1700922-01RE1 MH-L103-20170721 0.10565, Description: MH-L103-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		4.78e3	0.0806		4.59				
2	22	PFTeDA	712.9 > 668.8		3.36e4	0.0806		4.78				
3	30	13C3-PFBS	302 > 98.8	5.15e3	4.83e4	0.0806	0.033	3.06	3.01	0.534	201	129.9
4	31	13C2-PFHxA	315 > 269.8	1.53e4	4.83e4	0.0806	0.304	3.26	3.23	1.58	64.7	104.3
5	33	18O2-PFHxS	403 > 102.6	3.40e3	7.46e3	0.0806	0.417	3.58	3.55	5.70	169	109.2
6	35	13C2-PFOA	414.9 > 369.7	4.13e4	3.83e4	0.0806	1.132	3.71	3.68	13.5	148	95.2
7	36	13C5-PFNA	468.2 > 422.9	3.92e4	4.52e4	0.0806	0.946	3.90	3.87	10.8	142	91.6

GM 8/15/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-19.qld

Last Altered: Tuesday, August 15, 2017 11:24:49 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 11:42:19 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 14 Aug 2017 15:12:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_19, Date: 11-Aug-2017, Time: 21:37:56, ID: 1700922-01RE1 MH-L103-20170721 0.10565, Description: MH-L103-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	38	13C8-PFOS	507 > 79.9	8.30e3	7.33e3	0.0806	1.040	3.96	3.92	14.2	169	109.0
2	39	13C2-PFDA	515.1 > 469.9	3.68e4	4.64e4	0.0806	0.971	4.08	4.04	9.93	127	81.8
3	41	d3-N-MeFOSAA	573.3 > 419	8.58e3	3.91e4	0.0806	0.018	4.11	4.07	2.74	1910	94.9
4	42	d5-N-EtFOSAA	589.3 > 419	1.03e4	3.91e4	0.0806	0.018	4.18	4.14	3.30	2250	111.4
5	43	13C2-PFUnA	565 > 519.8	3.97e4	3.91e4	0.0806	1.085	4.25	4.21	12.7	145	93.7
6	44	13C2-PFDoA	615 > 569.7	4.78e3	3.91e4	0.0806	0.123	4.42	4.38	1.53	154	99.3
7	46	13C2-PFTeDA	714.8 > 669.6	3.36e4	3.91e4	0.0806	0.798	4.78	4.74	10.7	167	107.7
8	52	13C5-PFHxA	318 > 272.9	4.83e4	4.83e4	0.0806	1.000	3.26	3.23	5.00	62.0	100.0
9	53	13C3-PFHxS	401.9 > 79.9	7.46e3	7.46e3	0.0806	1.000	3.58	3.55	12.5	155	100.0
10	54	13C8-PFOA	421.3 > 376	3.83e4	3.83e4	0.0806	1.000	3.71	3.68	12.5	155	100.0
11	55	13C9-PFNA	472.2 > 426.9	4.52e4	4.52e4	0.0806	1.000	3.90	3.87	12.5	155	100.0
12	56	13C4-PFOS	503 > 79.9	7.33e3	7.33e3	0.0806	1.000	3.96	3.92	12.5	155	100.0
13	57	13C6-PFDA	519.1 > 473.7	4.64e4	4.64e4	0.0806	1.000	4.08	4.04	12.5	155	100.0
14	58	13C7-PFUnA	570.1 > 524.8	3.91e4	3.91e4	0.0806	1.000	4.25	4.21	12.5	155	100.0
15	59	Total PFBS	299 > 79.7	0.00e0	5.15e3	0.0806		3.06		0.000		
16	60	Total PFHxS	398.9 > 79.6	6.28e1	3.40e3	0.0806		3.58		0.231	2.48	
17	61	Total PFOA	413 > 368.7	1.28e3	4.13e4	0.0806		3.71		0.388	3.00	
18	62	Total PFOS	499 > 79.9	1.29e2	8.30e3	0.0806		3.96		0.194	2.71	
19	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	8.58e3	0.0806		4.11		0.000		
20	64	Total N-EtFOSAA	584.2 > 419	0.00e0	1.03e4	0.0806		4.18		0.000		

GM 8/15/17

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-19.qld

Last Altered: Tuesday, August 15, 2017 11:24:49 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 11:42:19 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 14 Aug 2017 15:12:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_19, Date: 11-Aug-2017, Time: 21:37:56, ID: 1700922-01RE1 MH-L103-20170721 0.10565, Description: MH-L103-20170721

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7			5151.026		MM-I	

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.54	62.836	3397.510	0.231	MM	2.5

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.69	1283.778	41316.641	0.388	bb	3.0

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.92	128.780	8302.555	0.194	MM	2.7

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									

GM 8/15/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

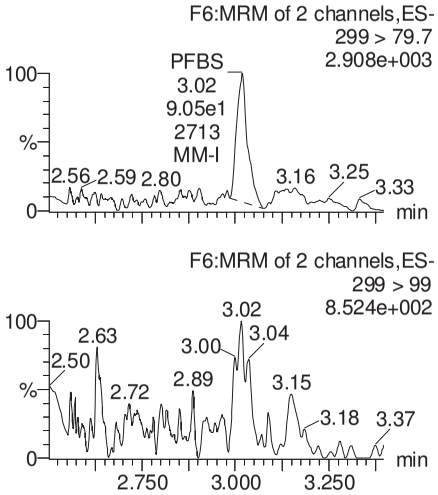
Dataset: U:\Q4.PRO\results\170811M2\170811M2-19.qld

Last Altered: Tuesday, August 15, 2017 11:24:49 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 11:42:19 Pacific Daylight Time

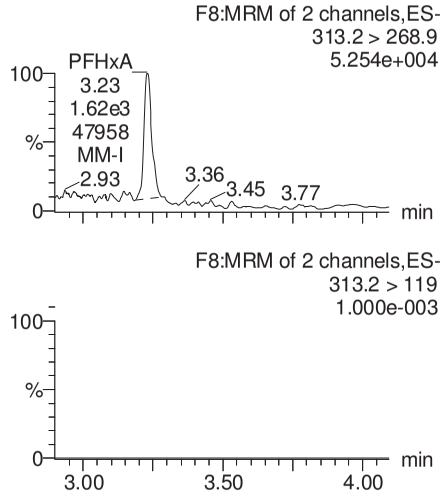
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 14 Aug 2017 15:12:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_19, Date: 11-Aug-2017, Time: 21:37:56, ID: 1700922-01RE1 MH-L103-20170721 0.10565, Description: MH-L103-20170721

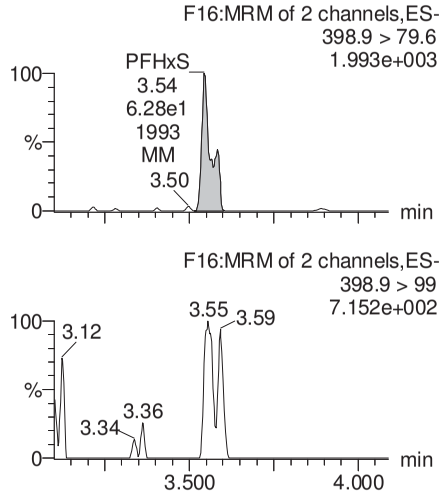
Total PFBS



PFHxA



Total PFHxS



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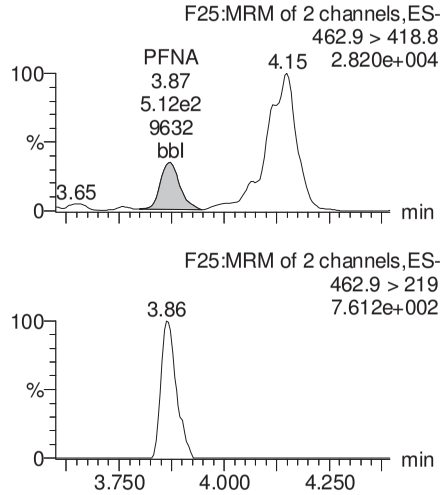
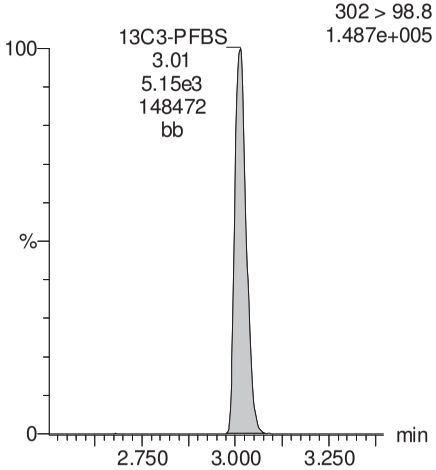


13C3-PFBS



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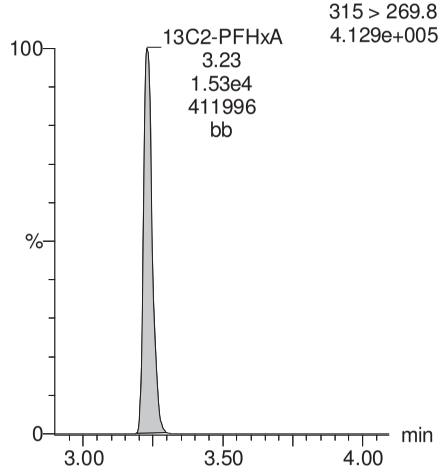

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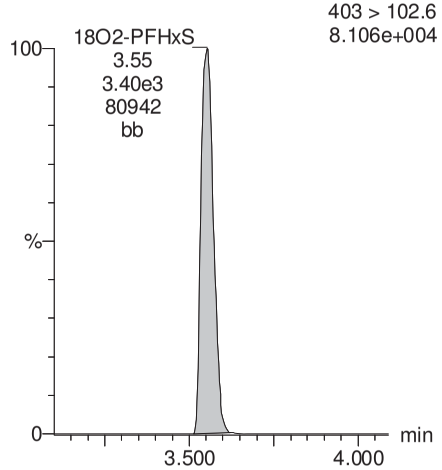
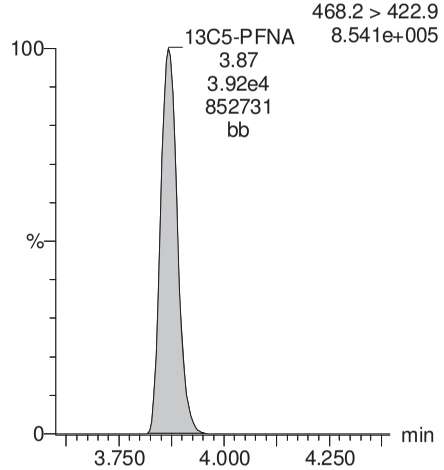


13C5-PFNA



GM 8/15/17

Vista Analytical Laboratory

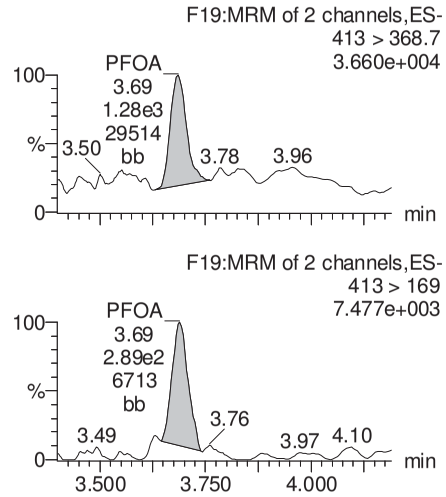
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-19.qld

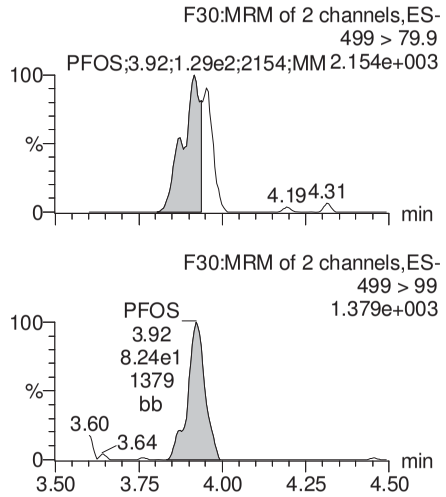
Last Altered: Tuesday, August 15, 2017 11:24:49 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 11:42:19 Pacific Daylight Time

Name: 170811M2_19, Date: 11-Aug-2017, Time: 21:37:56, ID: 1700922-01RE1 MH-L103-20170721 0.10565, Description: MH-L103-20170721

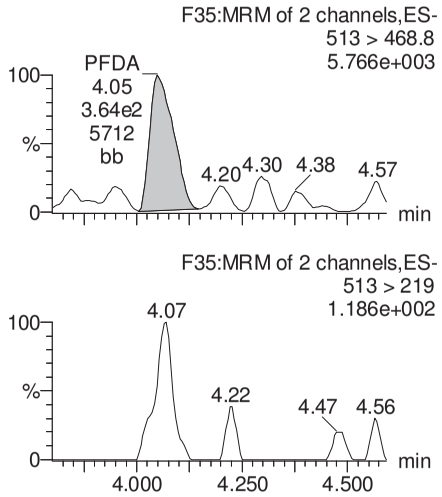
Total PFOA



Total PFOS



PFDA



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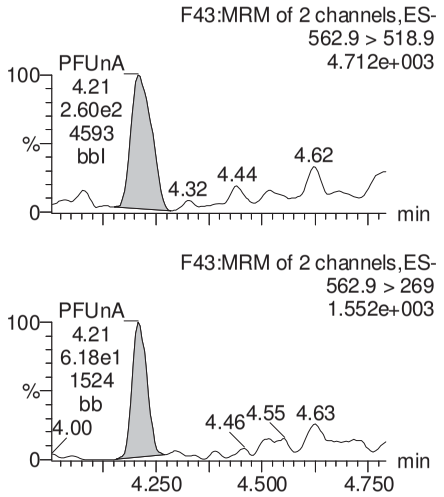
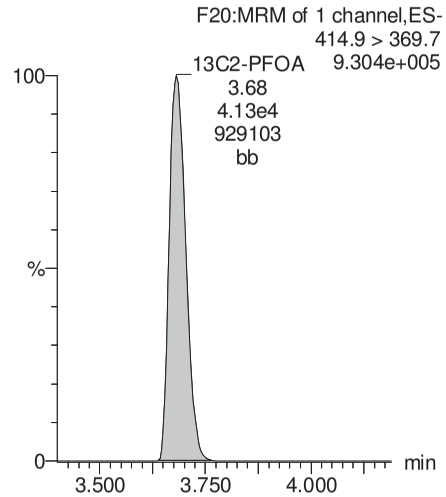
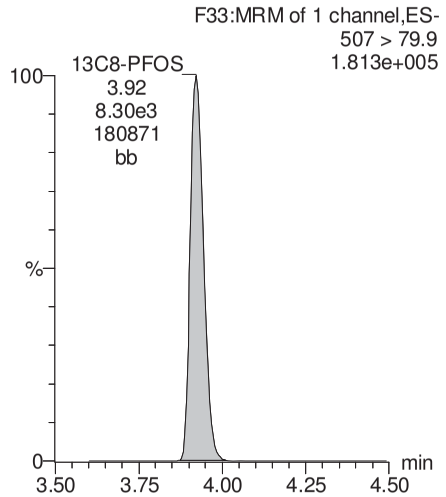


13C2-PFOA



13C8-PFOS



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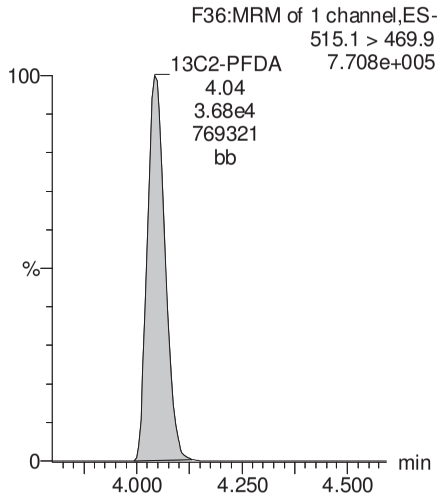

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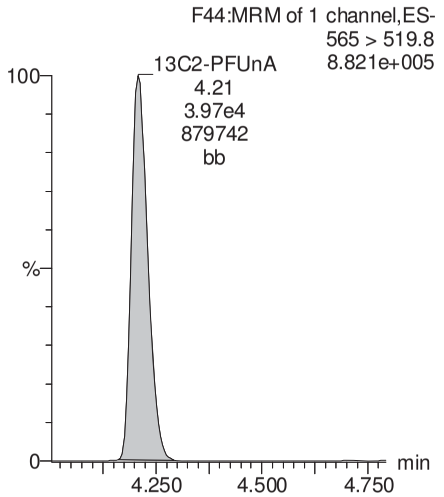


GM 8/15/17

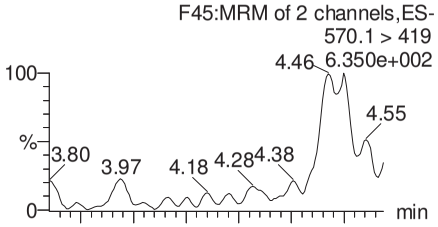
Rev'd: MM 8/15/17

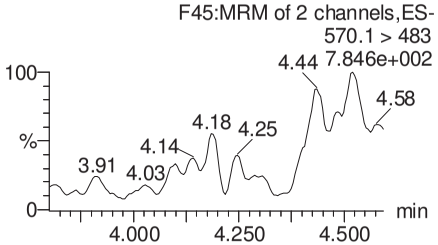
Dataset: U:\Q4.PRO\results\170811M2\170811M2-19.qld

Last Altered: Tuesday, August 15, 2017 11:24:49 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 11:42:19 Pacific Daylight Time

Name: 170811M2_19, Date: 11-Aug-2017, Time: 21:37:56, ID: 1700922-01RE1 MH-L103-20170721 0.10565, Description: MH-L103-20170721

N-MeFOSAA





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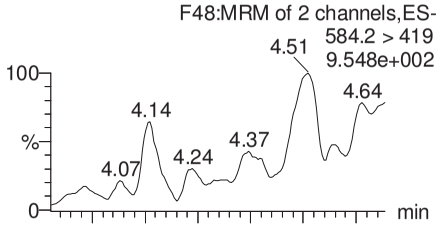
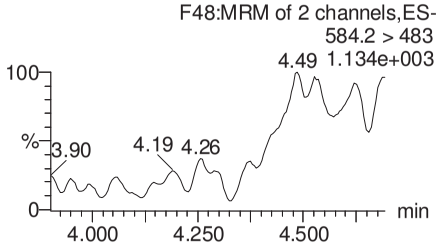
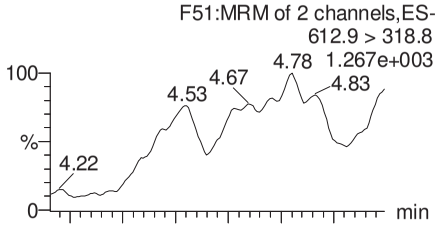
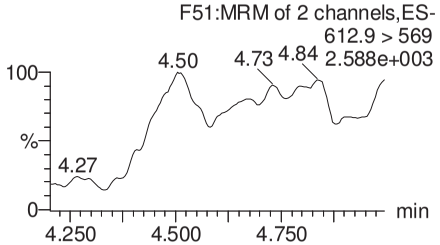




PFDoA





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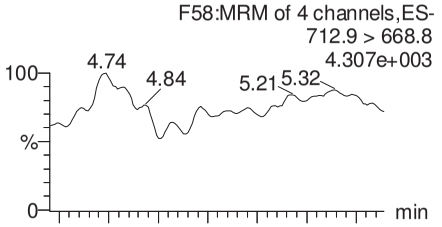
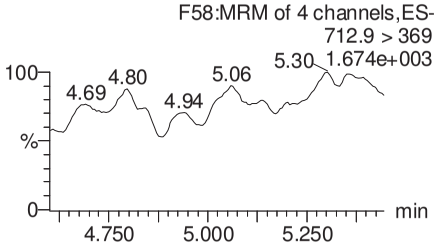
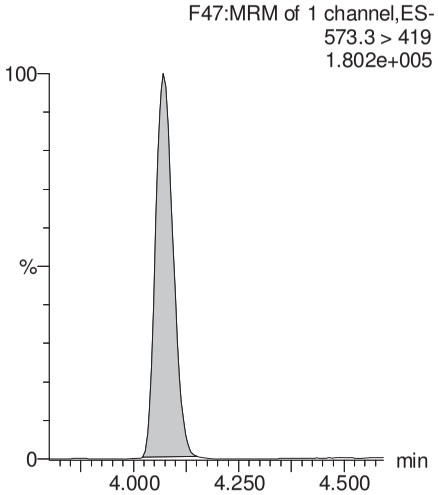
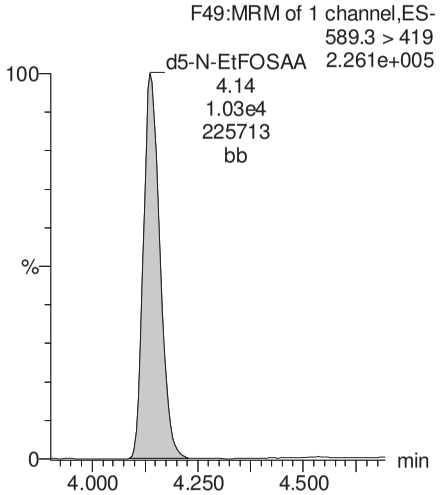




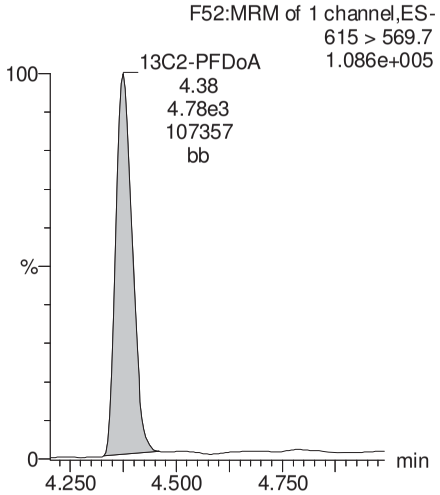
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



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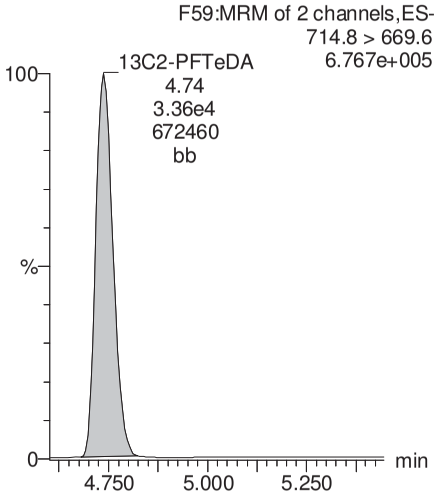


GM 8/15/17

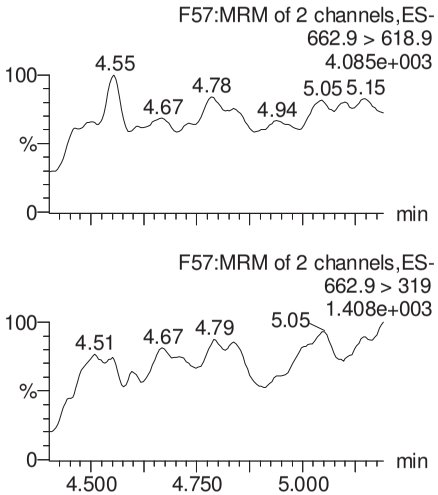
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-19.qld

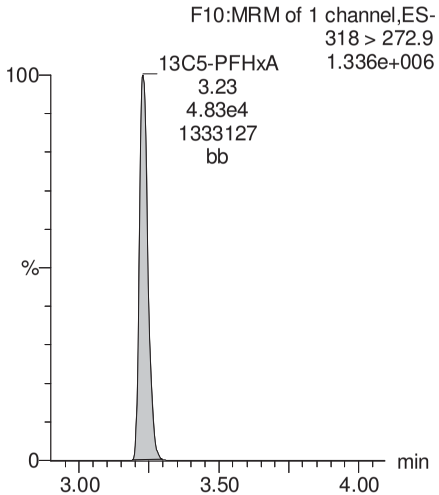
Last Altered: Tuesday, August 15, 2017 11:24:49 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 11:42:19 Pacific Daylight Time

Name: 170811M2_19, Date: 11-Aug-2017, Time: 21:37:56, ID: 1700922-01RE1 MH-L103-20170721 0.10565, Description: MH-L103-20170721

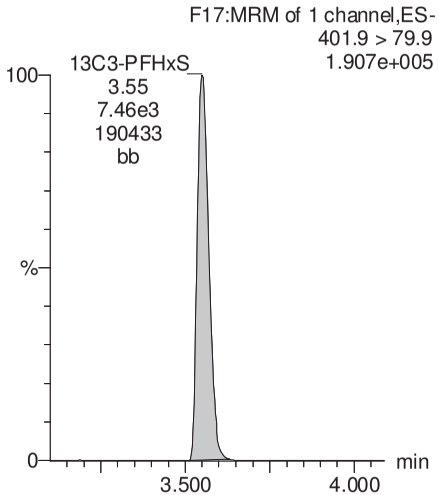
PFTrDA



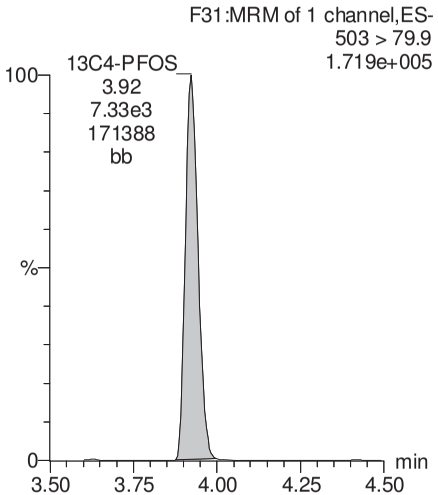
13C5-PFHxA



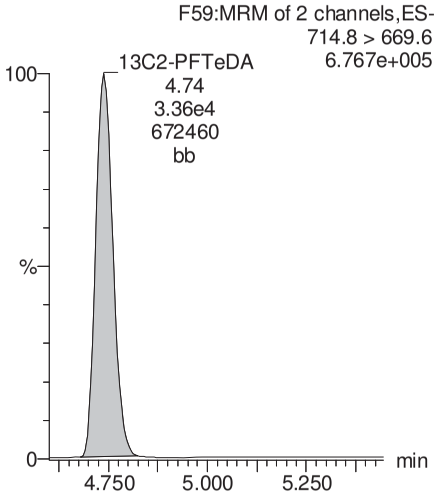
13C3-PFHxS



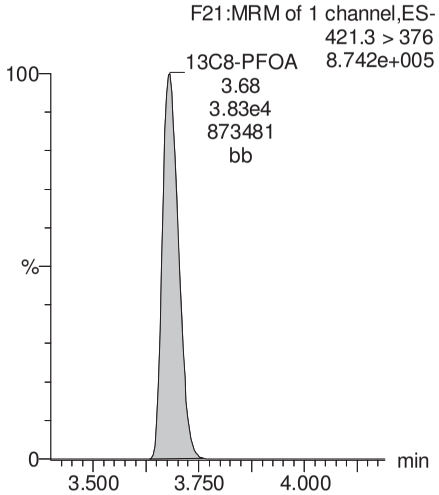
13C4-PFOS



13C2-PFTeDA



13C8-PFOA



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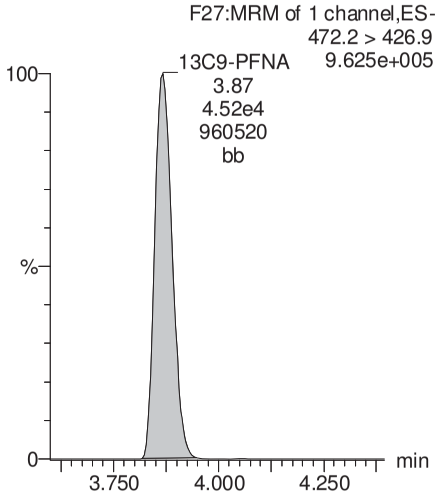
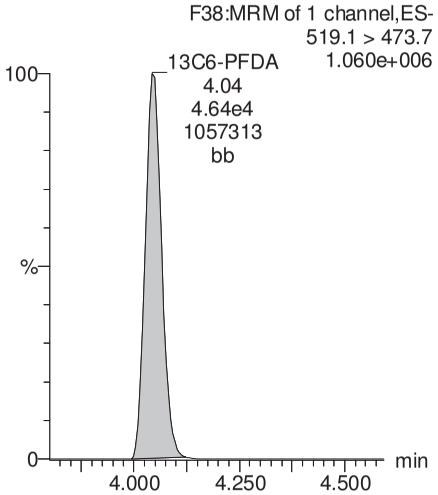


13C6-PFDA



GM 8/15/17

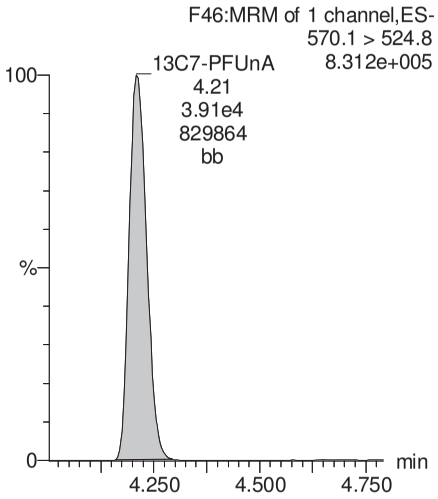
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-19.qld

Last Altered: Tuesday, August 15, 2017 11:24:49 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 11:42:19 Pacific Daylight Time

Name: 170811M2_19, Date: 11-Aug-2017, Time: 21:37:56, ID: 1700922-01RE1 MH-L103-20170721 0.10565, Description: MH-L103-20170721

13C7-PFUnA



GM 8/15/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-20.qld

Last Altered: Saturday, August 12, 2017 20:16:51 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:17:35 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_20, Date: 11-Aug-2017, Time: 21:48:43, ID: 1700922-02RE1 MH-N104-20170721 0.11025, Description: MH-N104-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7		5.36e3	0.108		3.06				
2	4	PFHxA	313.2 > 268.9		1.66e4	0.108		3.26				
3	6	PFHxS	398.9 > 79.6	3.22e2	3.80e3	0.108		3.58	3.55	1.06	6.15	
4	8	PFOA	413 > 368.7	4.08e3	5.15e4	0.108		3.71	3.68	0.990	7.90	
5	10	PFNA	462.9 > 418.8	1.85e3	4.53e4	0.108		3.90	3.87	0.509		
6	12	PFOS	499 > 79.9	1.38e3	8.59e3	0.108		3.96	3.92	2.01	17.7	
7	13	PFDA	513 > 468.8	1.34e3	3.98e4	0.108		4.08	4.04	0.420	2.49	
8	15	N-MeFOSAA	570.1 > 419		9.63e3	0.108		4.11				
9	16	N-EtFOSAA	584.2 > 419		9.81e3	0.108		4.18				
10	17	PFUnA	562.9 > 518.9	9.35e2	5.60e4	0.108		4.25	4.21	0.209	1.37	
11	19	PFDoA	612.9 > 318.8		5.85e3	0.108		4.42				

Use only

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-20.qld

Last Altered: Saturday, August 12, 2017 20:16:51 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:17:47 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_20, Date: 11-Aug-2017, Time: 21:48:43, ID: 1700922-02RE1 MH-N104-20170721 0.11025, Description: MH-N104-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		5.85e3	0.108		4.59				
2	22	PFTeDA	712.9 > 668.8		3.66e4	0.108		4.78				
3	30	13C3-PFBS	302 > 98.8	5.36e3	5.16e4	0.108	0.033	3.06	3.01	0.520	146	126.5
4	31	13C2-PFHxA	315 > 269.8	1.66e4	5.16e4	0.108	0.304	3.26	3.23	1.61	48.9	106.0
5	33	18O2-PFHxS	403 > 102.6	3.80e3	8.18e3	0.108	0.417	3.58	3.55	5.81	129	111.5
6	35	13C2-PFOA	414.9 > 369.7	5.15e4	4.62e4	0.108	1.132	3.71	3.68	13.9	114	98.5
7	36	13C5-PFNA	468.2 > 422.9	4.53e4	5.29e4	0.108	0.946	3.90	3.87	10.7	105	90.6

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-20.qld

Last Altered: Saturday, August 12, 2017 20:16:51 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:18:12 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_20, Date: 11-Aug-2017, Time: 21:48:43, ID: 1700922-02RE1 MH-N104-20170721 0.11025, Description: MH-N104-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	38	13C8-PFOS	507 > 79.9	8.59e3	7.82e3	0.108	1.040	3.96	3.92	13.7	122	105.7
2	39	13C2-PFDA	515.1 > 469.9	3.98e4	4.70e4	0.108	0.971	4.08	4.05	10.6	101	87.2
3	41	d3-N-MeFOSAA	573.3 > 419	9.63e3	4.81e4	0.108	0.018	4.11	4.07	2.51	1300	86.7
4	42	d5-N-EtFOSAA	589.3 > 419	9.81e3	4.81e4	0.108	0.018	4.18	4.14	2.55	1290	86.1
5	43	13C2-PFUnA	565 > 519.8	5.60e4	4.81e4	0.108	1.085	4.25	4.21	14.6	124	107.4
6	44	13C2-PFDoA	615 > 569.7	5.85e3	4.81e4	0.108	0.123	4.42	4.38	1.52	114	98.9
7	46	13C2-PFTeDA	714.8 > 669.6	3.66e4	4.81e4	0.108	0.798	4.78	4.74	9.53	110	95.5
8	52	13C5-PFHxA	318 > 272.9	5.16e4	5.16e4	0.108	1.000	3.26	3.23	5.00	46.2	100.0
9	53	13C3-PFHxS	401.9 > 79.9	8.18e3	8.18e3	0.108	1.000	3.58	3.55	12.5	115	100.0
10	54	13C8-PFOA	421.3 > 376	4.62e4	4.62e4	0.108	1.000	3.71	3.68	12.5	115	100.0
11	55	13C9-PFNA	472.2 > 426.9	5.29e4	5.29e4	0.108	1.000	3.90	3.87	12.5	115	100.0
12	56	13C4-PFOS	503 > 79.9	7.82e3	7.82e3	0.108	1.000	3.96	3.92	12.5	115	100.0
13	57	13C6-PFDA	519.1 > 473.7	4.70e4	4.70e4	0.108	1.000	4.08	4.05	12.5	115	100.0
14	58	13C7-PFUnA	570.1 > 524.8	4.81e4	4.81e4	0.108	1.000	4.25	4.21	12.5	115	100.0
15	59	Total PFBS	299 > 79.7	0.00e0	5.36e3	0.108		3.06		0.000		
16	60	Total PFHxS	398.9 > 79.6	3.22e2	3.80e3	0.108		3.58		1.06	6.15	
17	61	Total PFOA	413 > 368.7	4.08e3	5.15e4	0.108		3.71		0.990	7.90	
18	62	Total PFOS	499 > 79.9	1.38e3	8.59e3	0.108		3.96		2.01	17.7	
19	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	9.63e3	0.108		4.11		0.000		
20	64	Total N-EtFOSAA	584.2 > 419	0.00e0	9.81e3	0.108		4.18		0.000		

GM 8/12/17

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-20.qld

Last Altered: Saturday, August 12, 2017 20:16:51 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:18:12 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_20, Date: 11-Aug-2017, Time: 21:48:43, ID: 1700922-02RE1 MH-N104-20170721 0.11025, Description: MH-N104-20170721

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7			5361.792		MM-I	

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.55	322.337	3803.675	1.059	bb	6.1

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.68	4081.163	51508.766	0.990	db	7.9

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.92	1378.571	8593.385	2.005	MM	17.7

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									

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-20.qld

Last Altered: Saturday, August 12, 2017 20:16:51 Pacific Daylight Time
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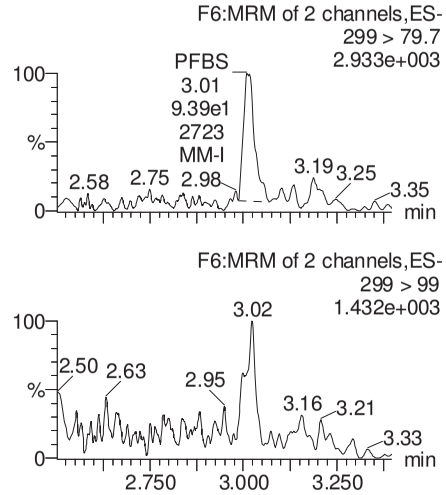
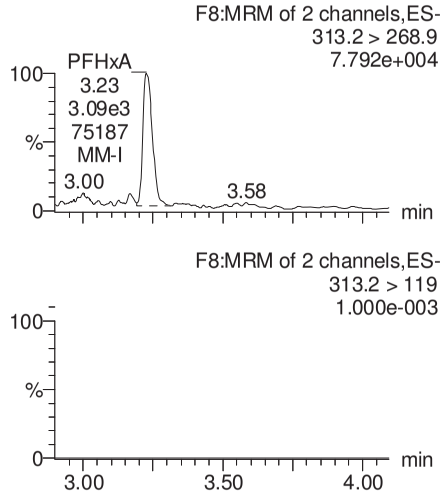
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_20, Date: 11-Aug-2017, Time: 21:48:43, ID: 1700922-02RE1 MH-N104-20170721 0.11025, Description: MH-N104-20170721

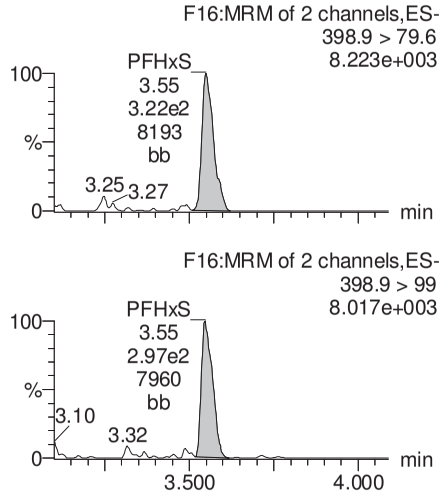
Total PFBS



PFHxA



Total PFHxS



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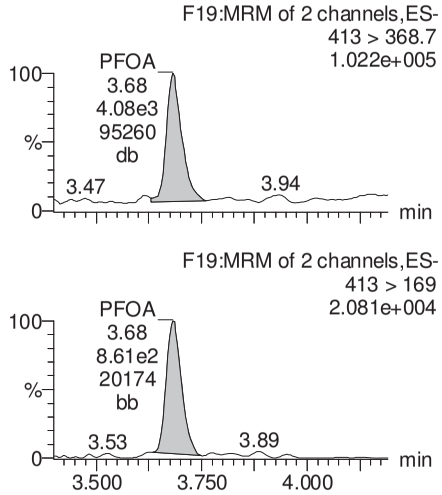

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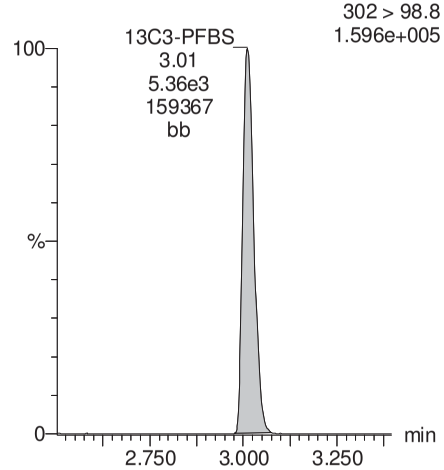

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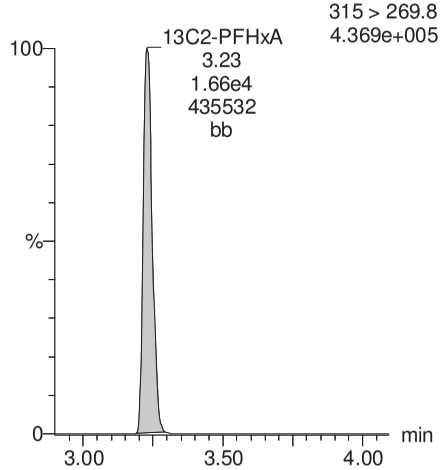

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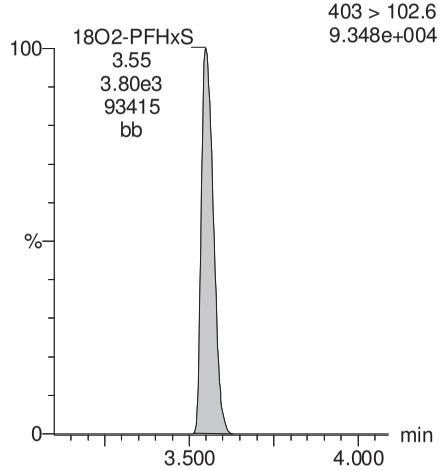

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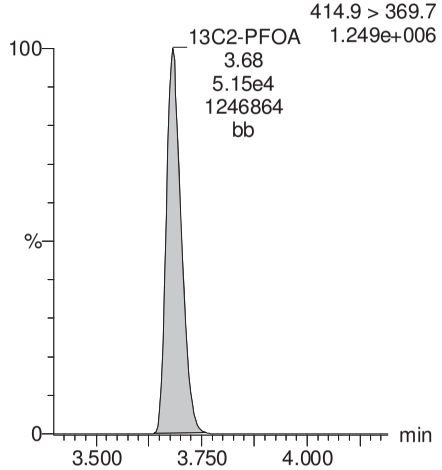


GM 8/12/17

Vista Analytical Laboratory

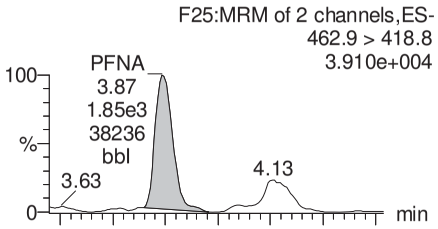
Rev'd: MM 8/15/17

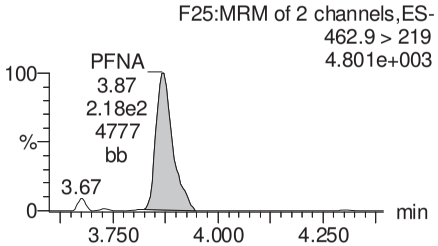
Dataset: U:\Q4.PRO\results\170811M2\170811M2-20.qld

Last Altered: Saturday, August 12, 2017 20:16:51 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:18:12 Pacific Daylight Time

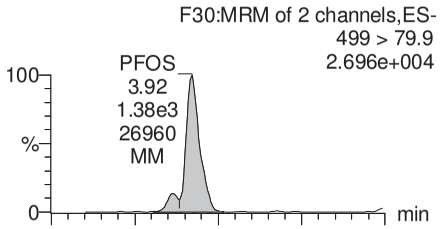
Name: 170811M2_20, Date: 11-Aug-2017, Time: 21:48:43, ID: 1700922-02RE1 MH-N104-20170721 0.11025, Description: MH-N104-20170721

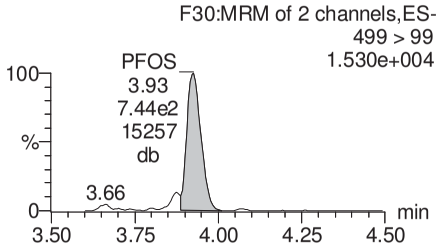
PFNA





Total PFOS





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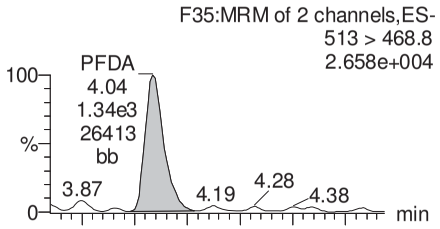

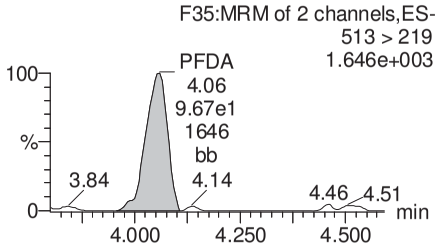

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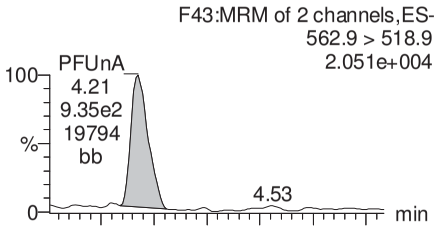

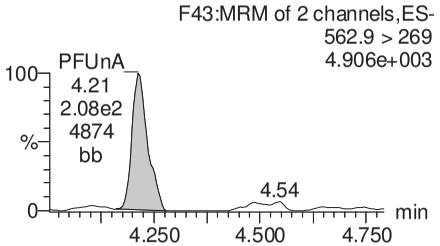

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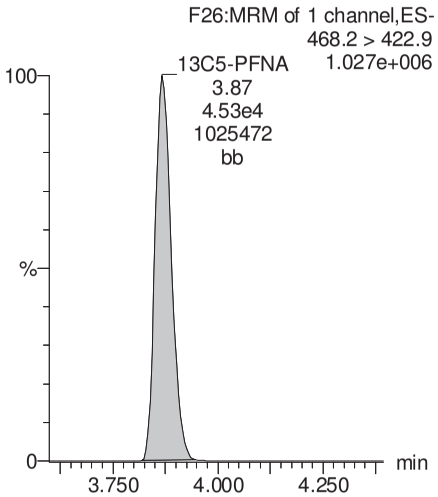

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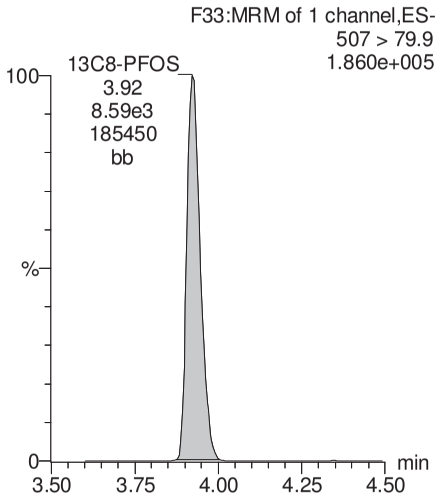

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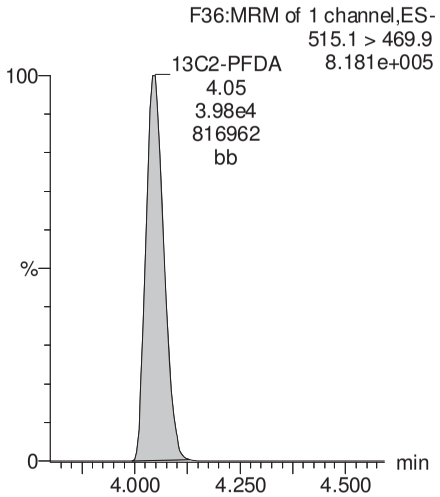

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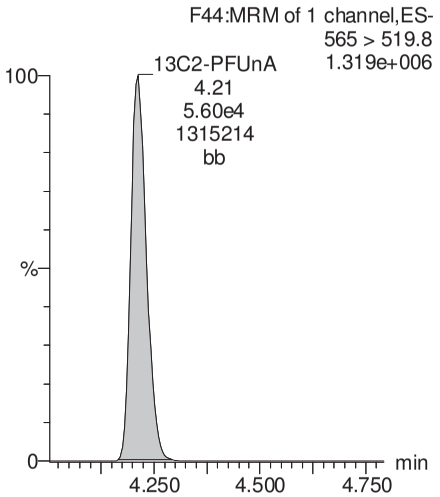


GM 8/12/17

Vista Analytical Laboratory

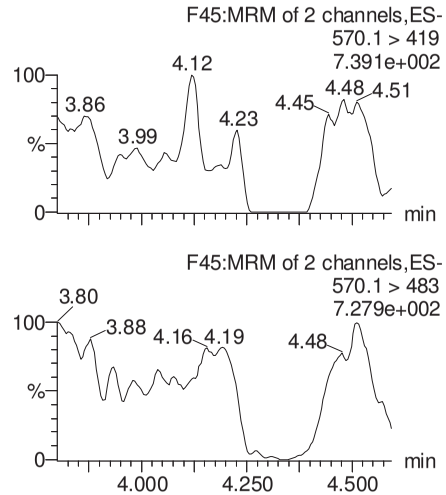
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-20.qld

Last Altered: Saturday, August 12, 2017 20:16:51 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:18:12 Pacific Daylight Time

Name: 170811M2_20, Date: 11-Aug-2017, Time: 21:48:43, ID: 1700922-02RE1 MH-N104-20170721 0.11025, Description: MH-N104-20170721

N-MeFOSAA



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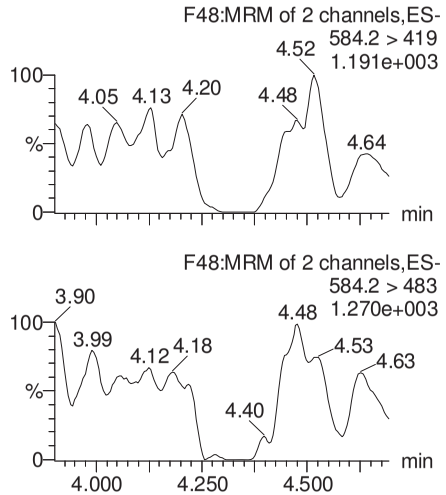

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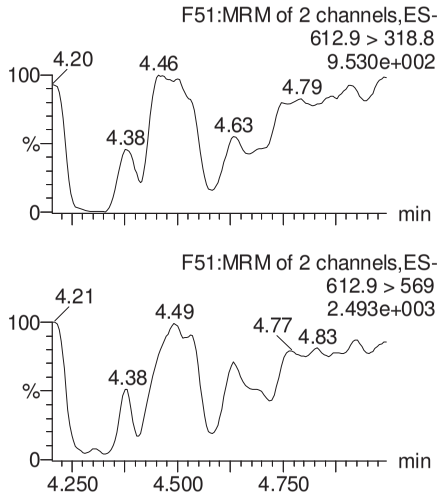

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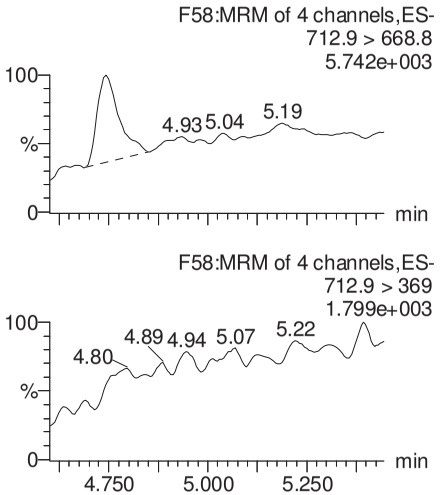

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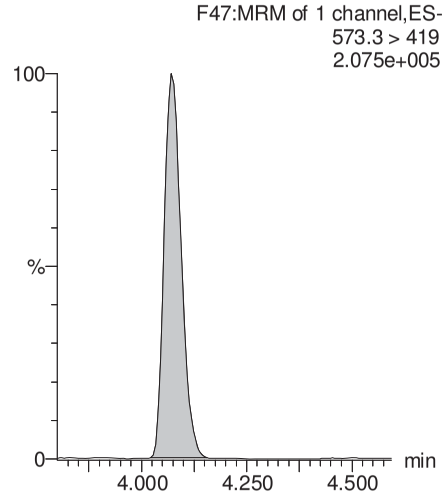

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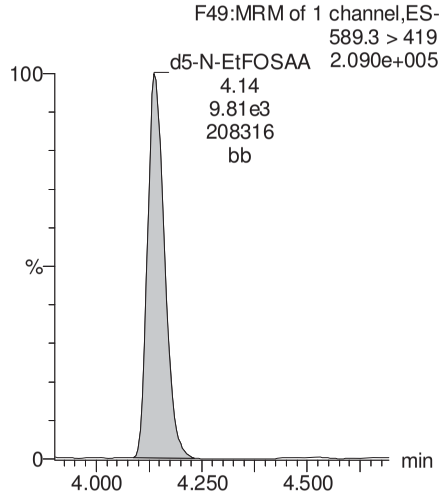

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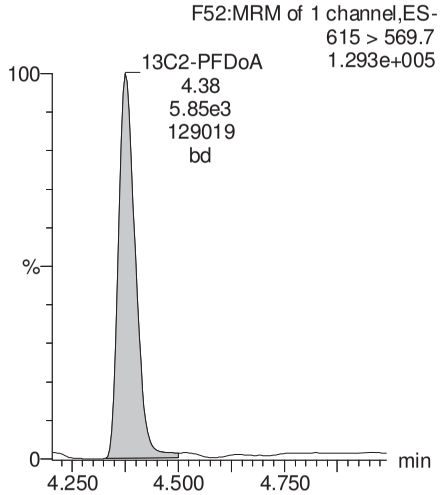

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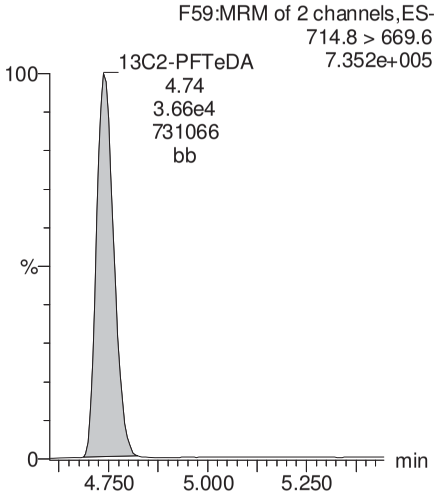

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-20.qld

Last Altered: Saturday, August 12, 2017 20:16:51 Pacific Daylight Time
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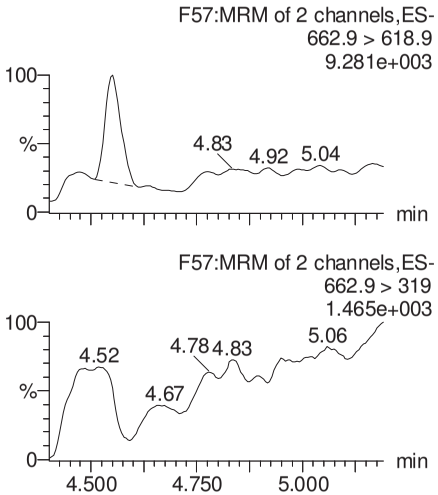
Name: 170811M2_20, Date: 11-Aug-2017, Time: 21:48:43, ID: 1700922-02RE1 MH-N104-20170721 0.11025, Description: MH-N104-20170721

PFTrDA



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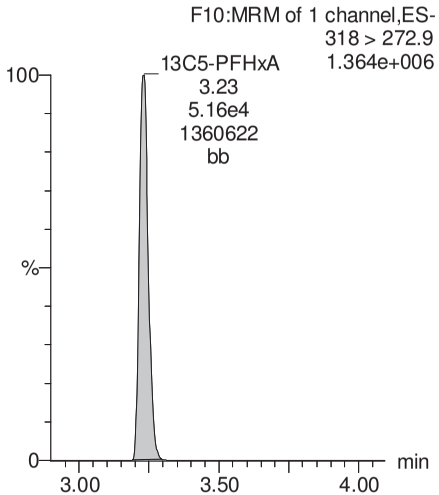

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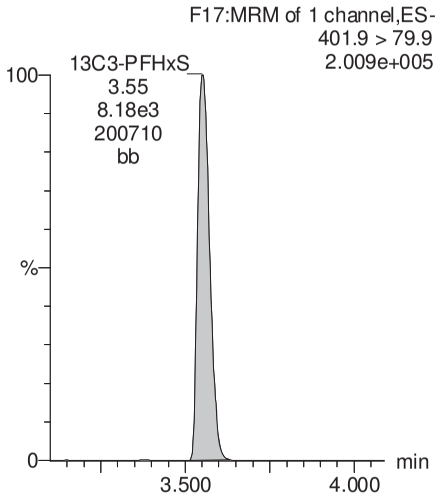

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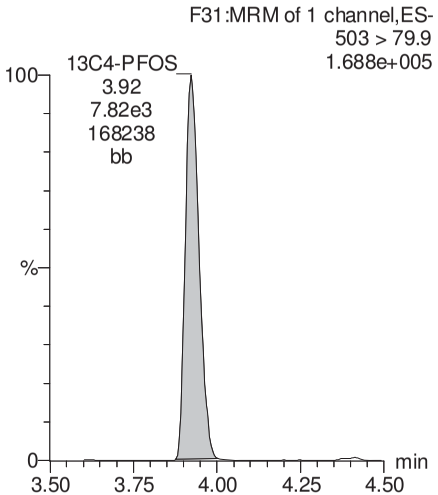
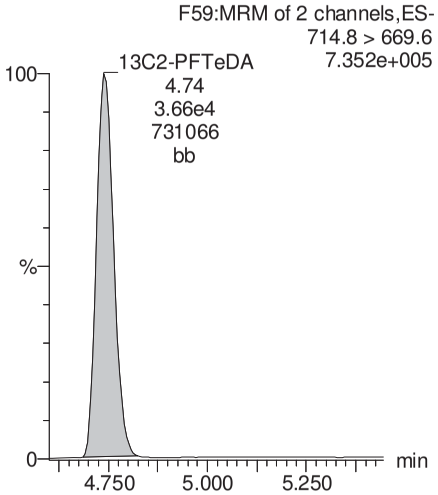
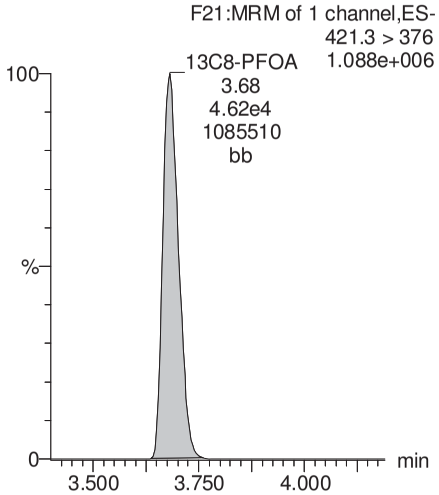


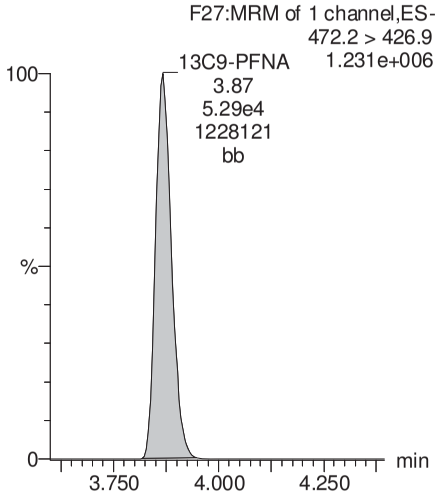
13C2-PFTeDA



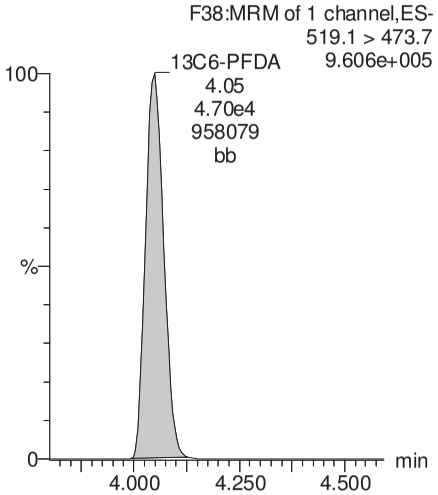
13C8-PFOA



13C9-PFNA



13C6-PFDA



GM 8/12/17

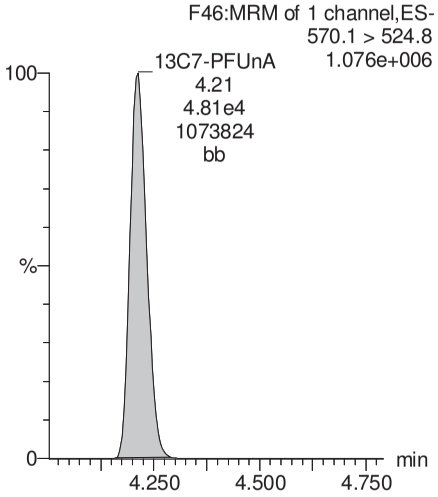
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-20.qld

Last Altered: Saturday, August 12, 2017 20:16:51 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:18:12 Pacific Daylight Time

Name: 170811M2_20, Date: 11-Aug-2017, Time: 21:48:43, ID: 1700922-02RE1 MH-N104-20170721 0.11025, Description: MH-N104-20170721

13C7-PFUnA



GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-13.qld

Last Altered: Saturday, August 12, 2017 17:52:49 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:53:30 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_13, Date: 11-Aug-2017, Time: 20:34:06, ID: B7H0074-MS1 Matrix Spike 0.125, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	8.16e3	5.63e3	0.113		3.06	3.01	18.1	92.4	
2	4	PFHxA	313.2 > 268.9	5.47e4	1.71e4	0.113		3.26	3.23	16.0	108	
3	6	PFHxS	398.9 > 79.6	5.45e3	3.94e3	0.113		3.58	3.55	17.3	86.8	
4	8	PFOA	413 > 368.7	4.82e4	5.07e4	0.113		3.71	3.68	11.9	105	
5	10	PFNA	462.9 > 418.8	4.01e4	4.45e4	0.113		3.90	3.87	11.3	96.7	
6	12	PFOS	499 > 79.9	9.56e3	9.67e3	0.113		3.96	3.92	12.4	103	
7	13	PFDA	513 > 468.8	4.03e4	4.12e4	0.113		4.08	4.05	12.2	94.5	
8	15	N-MeFOSAA	570.1 > 419	1.30e4	1.01e4	0.113		4.11	4.08	209	95.6	
9	16	N-EtFOSAA	584.2 > 419	1.13e4	1.15e4	0.113		4.18	4.14	159	89.8	
10	17	PFUnA	562.9 > 518.9	3.58e4	5.87e4	0.113		4.25	4.21	7.63	82.3	
11	19	PFDoA	612.9 > 318.8	3.85e3	6.34e3	0.113		4.42	4.38	7.59	79.8	

Use only

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-13.qld

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Printed: Saturday, August 12, 2017 17:53:44 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_13, Date: 11-Aug-2017, Time: 20:34:06, ID: B7H0074-MS1 Matrix Spike 0.125, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9	5.24e4	6.34e3	0.113		4.59	4.56	103	89.9	
2	22	PFTeDA	712.9 > 668.8	3.41e4	3.97e4	0.113		4.78	4.74	10.7	82.8	
3	30	13C3-PFBS	302 > 98.8	5.63e3	5.67e4	0.113	0.033	3.06	3.01	0.497	133	120.8
4	31	13C2-PFHxA	315 > 269.8	1.71e4	5.67e4	0.113	0.304	3.26	3.23	1.51	43.8	99.3
5	33	18O2-PFHxS	403 > 102.6	3.94e3	9.36e3	0.113	0.417	3.58	3.55	5.25	111	100.8
6	35	13C2-PFOA	414.9 > 369.7	5.07e4	4.83e4	0.113	1.132	3.71	3.68	13.1	102	92.7
7	36	13C5-PFNA	468.2 > 422.9	4.45e4	5.55e4	0.113	0.946	3.90	3.87	10.0	93.5	84.8

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-13.qld

Last Altered: Saturday, August 12, 2017 17:52:49 Pacific Daylight Time
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Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_13, Date: 11-Aug-2017, Time: 20:34:06, ID: B7H0074-MS1 Matrix Spike 0.125, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	38	13C8-PFOS	507 > 79.9	9.67e3	8.56e3	0.113	1.040	3.96	3.92	14.1	120	108.6
2	39	13C2-PFDA	515.1 > 469.9	4.12e4	5.47e4	0.113	0.971	4.08	4.05	9.41	85.5	77.5
3	41	d3-N-MeFOSAA	573.3 > 419	1.01e4	4.63e4	0.113	0.018	4.11	4.07	2.72	1350	94.2
4	42	d5-N-EtFOSAA	589.3 > 419	1.15e4	4.63e4	0.113	0.018	4.18	4.14	3.10	1500	104.8
5	43	13C2-PFUnA	565 > 519.8	5.87e4	4.63e4	0.113	1.085	4.25	4.21	15.9	129	116.9
6	44	13C2-PFDoA	615 > 569.7	6.34e3	4.63e4	0.113	0.123	4.42	4.38	1.71	123	111.1
7	46	13C2-PFTeDA	714.8 > 669.6	3.97e4	4.63e4	0.113	0.798	4.78	4.74	10.7	118	107.4
8	52	13C5-PFHxA	318 > 272.9	5.67e4	5.67e4	0.113	1.000	3.26	3.23	5.00	44.1	100.0
9	53	13C3-PFHxS	401.9 > 79.9	9.36e3	9.36e3	0.113	1.000	3.58	3.55	12.5	110	100.0
10	54	13C8-PFOA	421.3 > 376	4.83e4	4.83e4	0.113	1.000	3.71	3.68	12.5	110	100.0
11	55	13C9-PFNA	472.2 > 426.9	5.55e4	5.55e4	0.113	1.000	3.90	3.87	12.5	110	100.0
12	56	13C4-PFOS	503 > 79.9	8.56e3	8.56e3	0.113	1.000	3.96	3.92	12.5	110	100.0
13	57	13C6-PFDA	519.1 > 473.7	5.47e4	5.47e4	0.113	1.000	4.08	4.05	12.5	110	100.0
14	58	13C7-PFUnA	570.1 > 524.8	4.63e4	4.63e4	0.113	1.000	4.25	4.21	12.5	110	100.0
15	59	Total PFBS	299 > 79.7	8.16e3	5.63e3	0.113		3.06		18.1	92.4	
16	60	Total PFHxS	398.9 > 79.6	5.45e3	3.94e3	0.113		3.58		17.3	86.8	
17	61	Total PFOA	413 > 368.7	4.82e4	5.07e4	0.113		3.71		11.9	105	
18	62	Total PFOS	499 > 79.9	9.56e3	9.67e3	0.113		3.96		12.4	103	
19	63	Total N-Me-FOSAA	570.1 > 419	1.30e4	1.01e4	0.113		4.11		209	95.6	
20	64	Total N-EtFOSAA	584.2 > 419	1.13e4	1.15e4	0.113		4.18		159	89.8	

GM 8/12/17

Quantify Totals Report MassLynx MassLynx V4.1 SCN945 SCN960
Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-13.qld

Last Altered: Saturday, August 12, 2017 17:52:49 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:54:01 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_13, Date: 11-Aug-2017, Time: 20:34:06, ID: B7H0074-MS1 Matrix Spike 0.125, Description: Matrix Spike

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	3.01	8160.785	5629.134	18.122	bb	92.4

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.55	5450.582	3935.986	17.310	MM	86.8

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.68	48158.672	50730.223	11.866	bb	105.4

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.92	9560.722	9670.901	12.358	MM	102.6

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419	4.08	12987.825	10088.602	209.199	bb	95.6

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419	4.14	11278.520	11502.127	159.341	bb	89.8

GM 8/12/17

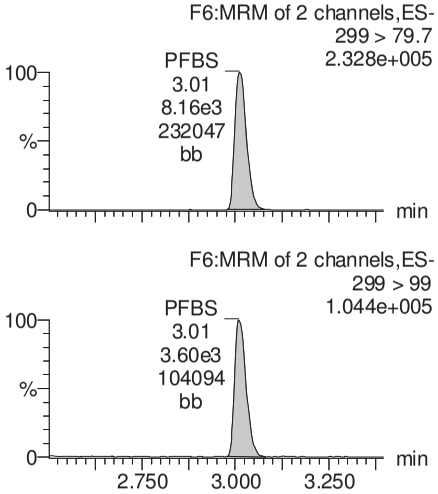
Dataset: U:\Q4.PRO\results\170811M2\170811M2-13.qld

Last Altered: Saturday, August 12, 2017 17:52:49 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:54:01 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_13, Date: 11-Aug-2017, Time: 20:34:06, ID: B7H0074-MS1 Matrix Spike 0.125, Description: Matrix Spike

Total PFBS



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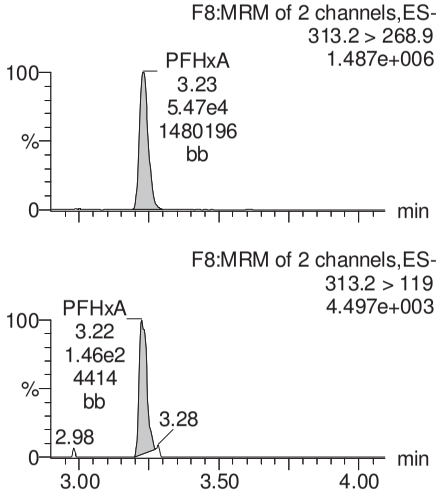
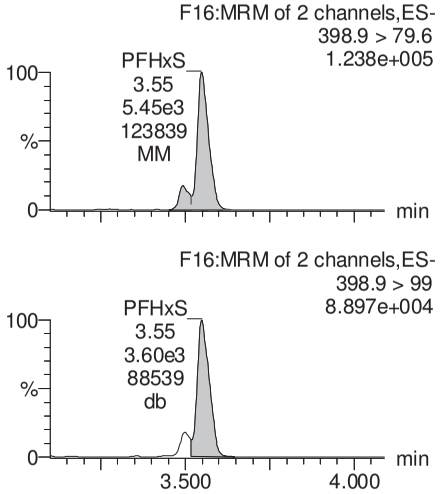
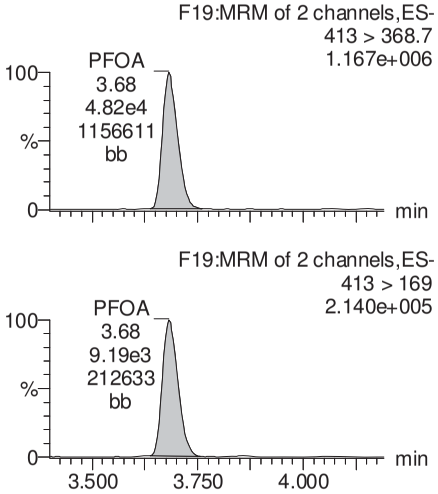


Total PFHxS



Total PFOA



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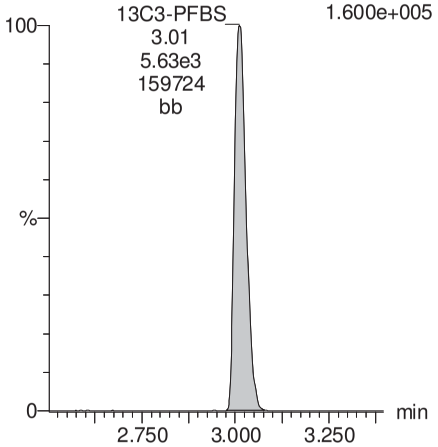

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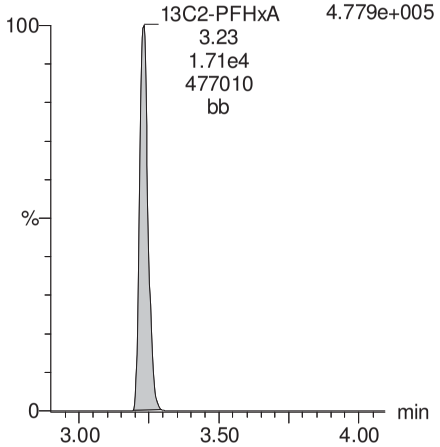

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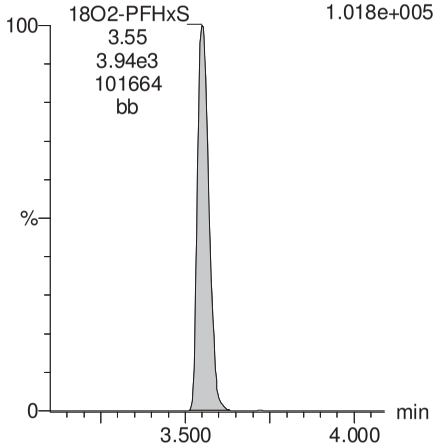

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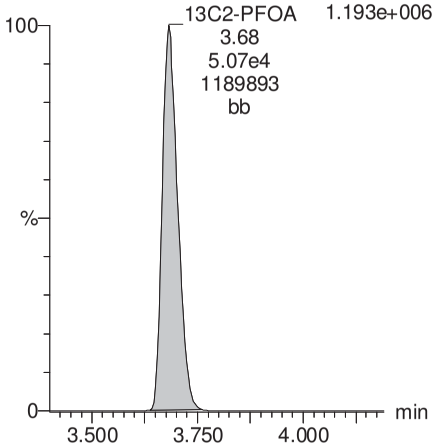


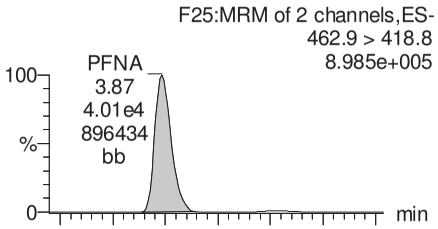
GM 8/12/17

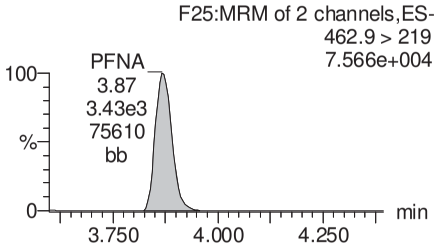
Dataset: U:\Q4.PRO\results\170811M2\170811M2-13.qld

Last Altered: Saturday, August 12, 2017 17:52:49 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:54:01 Pacific Daylight Time

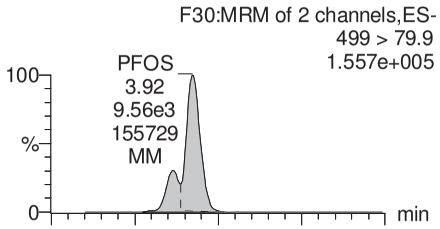
Name: 170811M2_13, Date: 11-Aug-2017, Time: 20:34:06, ID: B7H0074-MS1 Matrix Spike 0.125, Description: Matrix Spike

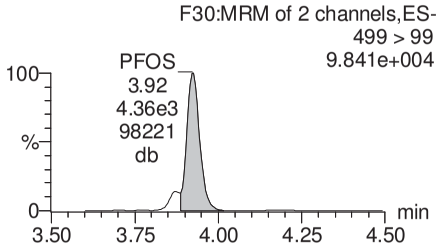
PFNA





Total PFOS





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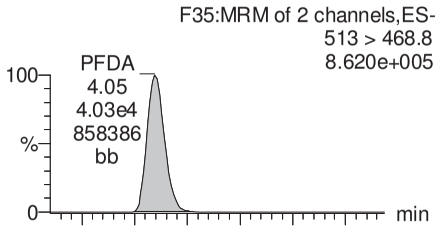

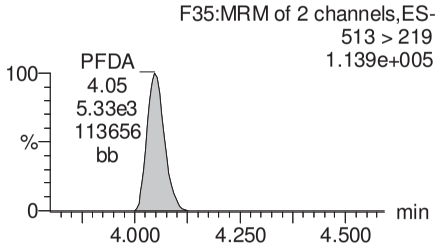

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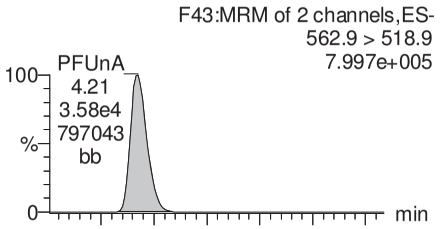
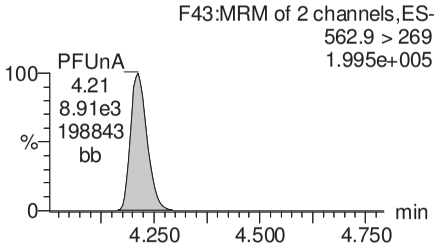
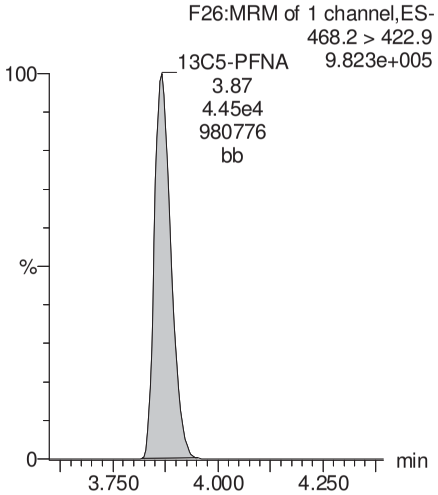
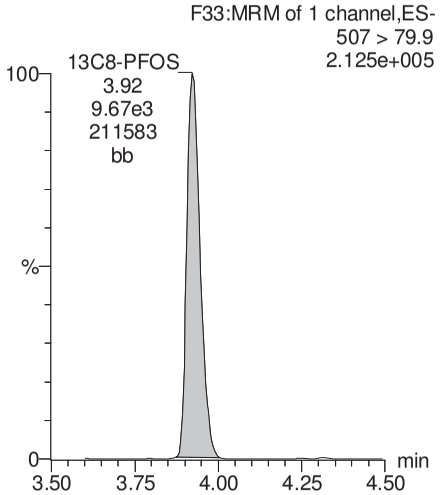




13C5-PFNA



13C8-PFOS



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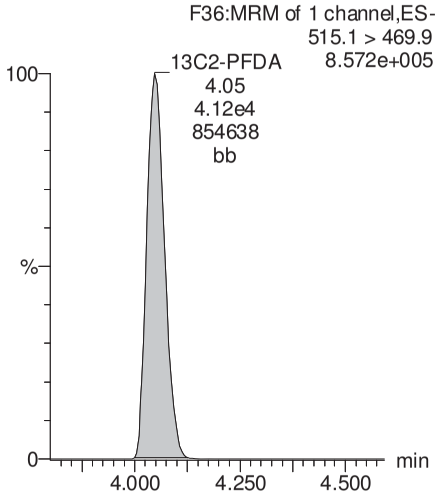

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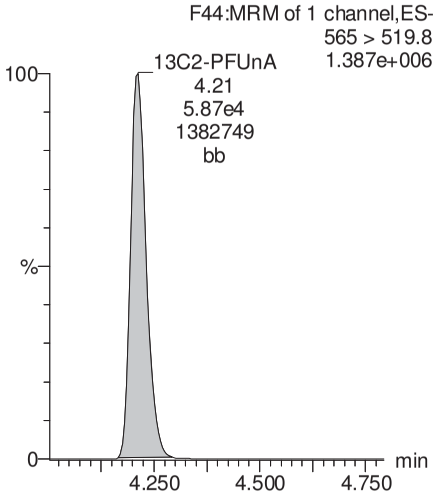


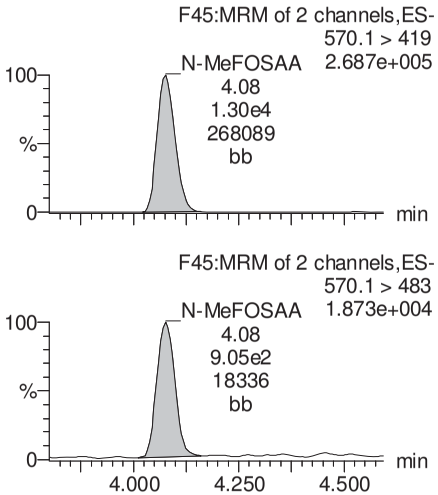
GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-13.qld

Last Altered: Saturday, August 12, 2017 17:52:49 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:54:01 Pacific Daylight Time

Name: 170811M2_13, Date: 11-Aug-2017, Time: 20:34:06, ID: B7H0074-MS1 Matrix Spike 0.125, Description: Matrix Spike

N-MeFOSAA



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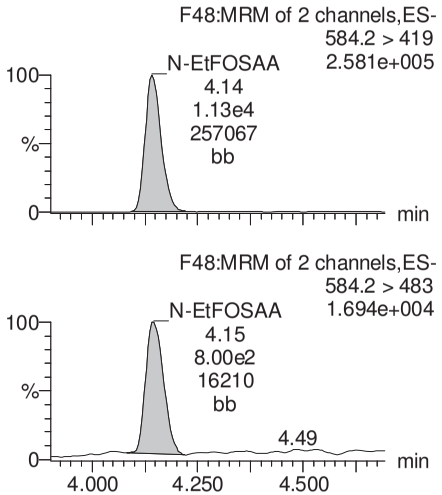

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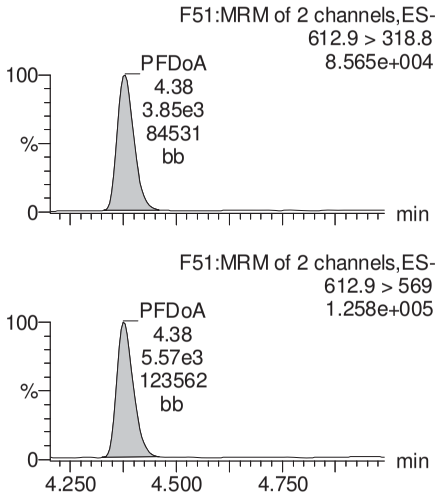
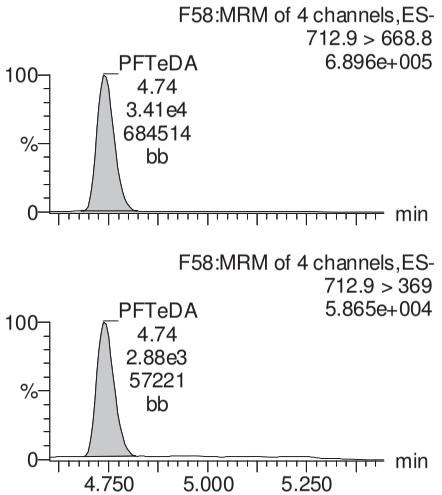
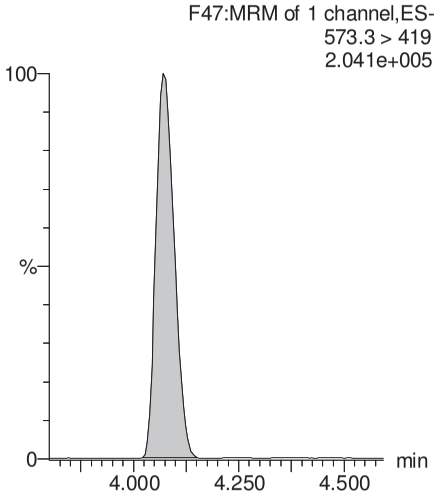


PFTeDA



d3-N-MeFOSAA



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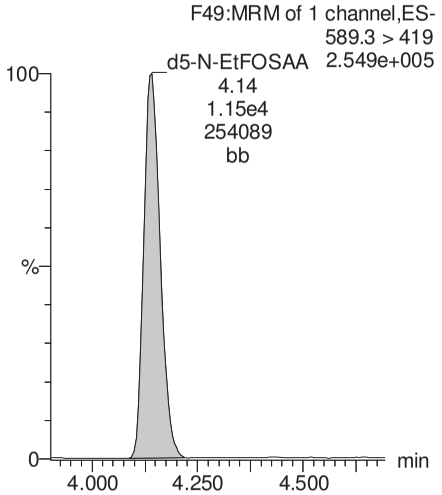
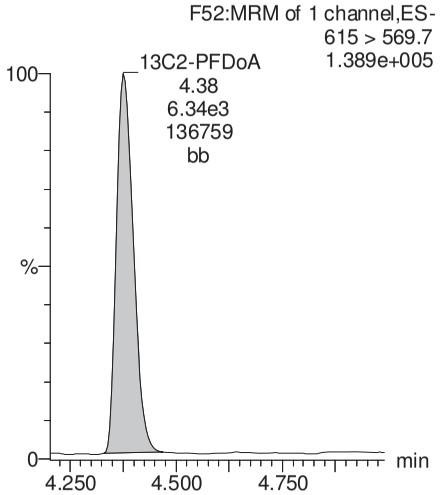
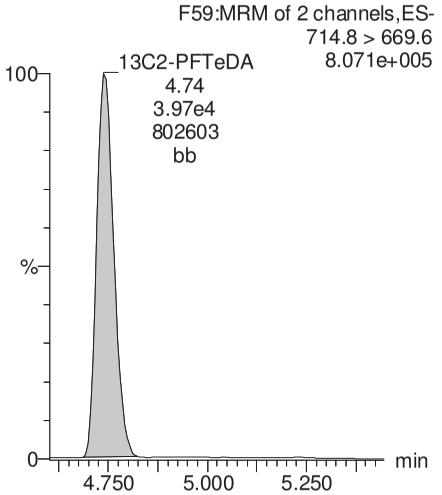


13C2-PFDoA



13C2-PFTeDA



GM 8/12/17

Vista Analytical Laboratory

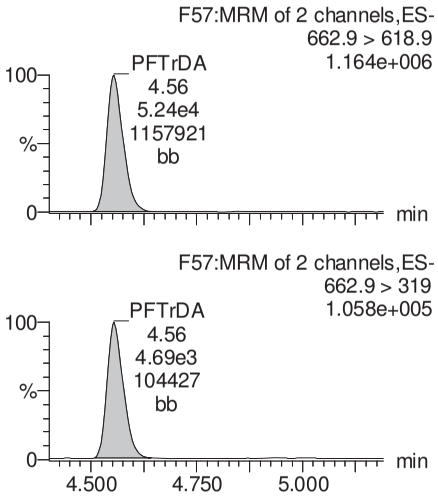
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-13.qld

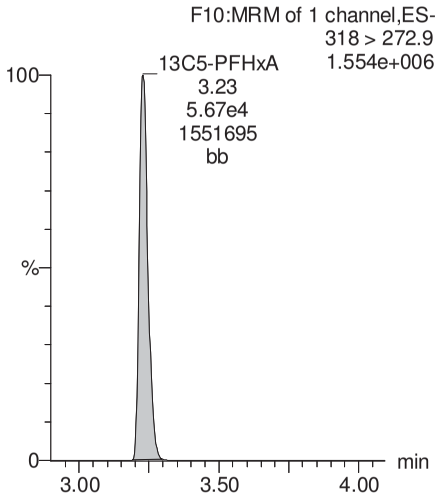
Last Altered: Saturday, August 12, 2017 17:52:49 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:54:01 Pacific Daylight Time

Name: 170811M2_13, Date: 11-Aug-2017, Time: 20:34:06, ID: B7H0074-MS1 Matrix Spike 0.125, Description: Matrix Spike

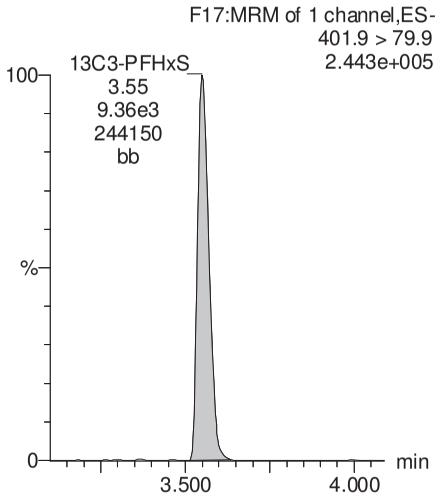
PFTrDA



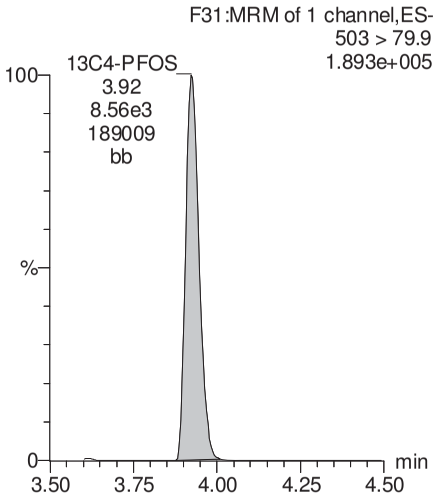
13C5-PFHxA



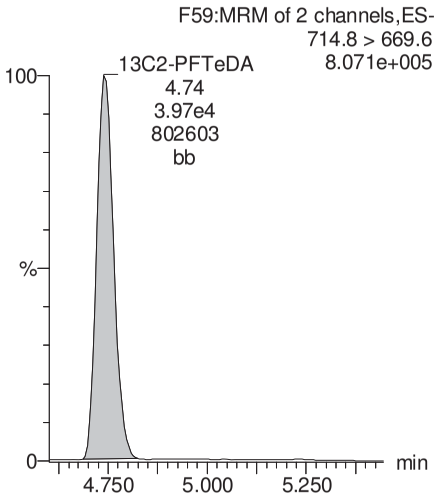
13C3-PFHxS



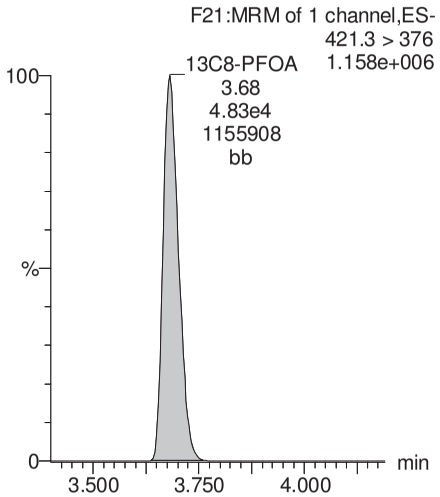
13C4-PFOS



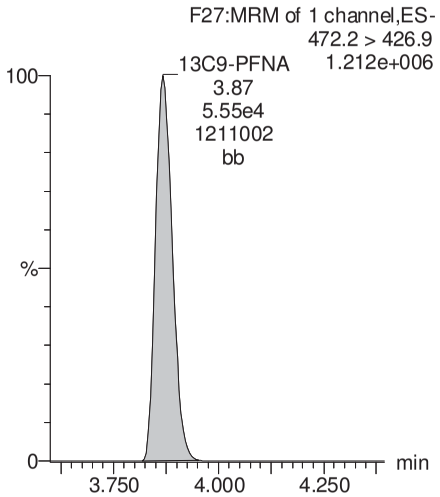
13C2-PFTeDA



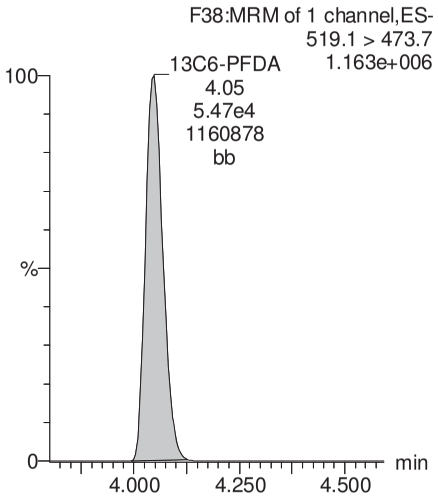
13C8-PFOA



13C9-PFNA



13C6-PFDA



GM 8/12/17

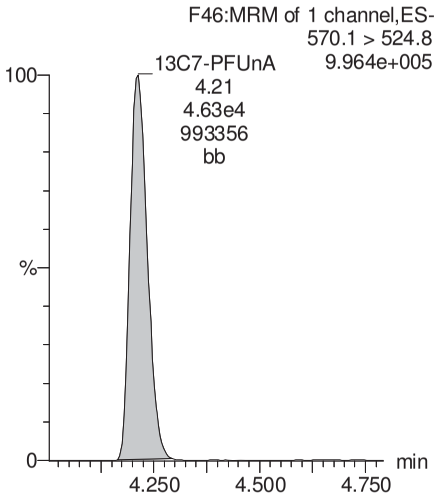
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-13.qld

Last Altered: Saturday, August 12, 2017 17:52:49 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:54:01 Pacific Daylight Time

Name: 170811M2_13, Date: 11-Aug-2017, Time: 20:34:06, ID: B7H0074-MS1 Matrix Spike 0.125, Description: Matrix Spike

13C7-PFUnA



GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-14.qld

Last Altered: Saturday, August 12, 2017 17:55:06 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:55:52 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_14, Date: 11-Aug-2017, Time: 20:44:44, ID: B7H0074-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299 > 79.7	8.21e3	5.34e3	0.109		3.06	3.01	19.2	102	
2	4	PFHxA	313.2 > 268.9	5.05e4	1.60e4	0.109		3.26	3.23	15.8	110	
3	6	PFHxS	398.9 > 79.6	5.43e3	3.66e3	0.109		3.58	3.55	18.6	96.8	
4	8	PFOA	413 > 368.7	4.60e4	4.99e4	0.109		3.71	3.68	11.5	106	
5	10	PFNA	462.9 > 418.8	4.33e4	4.65e4	0.109		3.90	3.87	11.6	104	
6	12	PFOS	499 > 79.9	9.10e3	9.15e3	0.109		3.96	3.93	12.4	107	
7	13	PFDA	513 > 468.8	4.00e4	3.88e4	0.109		4.08	4.05	12.9	104	
8	15	N-MeFOSAA	570.1 > 419	1.13e4	1.00e4	0.109		4.11	4.08	183	87.1	
9	16	N-EtFOSAA	584.2 > 419	1.09e4	1.11e4	0.109		4.18	4.14	159	93.1	
10	17	PFUnA	562.9 > 518.9	3.63e4	4.69e4	0.109		4.25	4.21	9.67	109	
11	19	PFDoA	612.9 > 318.8	3.79e3	6.27e3	0.109		4.42	4.38	7.56	82.8	

Use only

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-14.qld

Last Altered: Saturday, August 12, 2017 17:55:06 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:56:04 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_14, Date: 11-Aug-2017, Time: 20:44:44, ID: B7H0074-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9	5.02e4	6.27e3	0.109		4.59	4.55	100	90.6	
2	22	PFTeDA	712.9 > 668.8	3.53e4	3.98e4	0.109		4.78	4.74	11.1	89.0	
3	30	13C3-PFBS	302 > 98.8	5.34e3	5.48e4	0.109	0.033	3.06	3.01	0.487	136	118.5
4	31	13C2-PFHxA	315 > 269.8	1.60e4	5.48e4	0.109	0.304	3.26	3.23	1.46	44.2	96.2
5	33	18O2-PFHxS	403 > 102.6	3.66e3	9.28e3	0.109	0.417	3.58	3.55	4.93	108	94.5
6	35	13C2-PFOA	414.9 > 369.7	4.99e4	4.51e4	0.109	1.132	3.71	3.68	13.8	112	97.7
7	36	13C5-PFNA	468.2 > 422.9	4.65e4	6.02e4	0.109	0.946	3.90	3.87	9.66	93.7	81.7

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-14.qld

Last Altered: Saturday, August 12, 2017 17:55:06 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:56:19 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_14, Date: 11-Aug-2017, Time: 20:44:44, ID: B7H0074-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	38	13C8-PFOS	507 > 79.9	9.15e3	9.54e3	0.109	1.040	3.96	3.92	12.0	106	92.3
2	39	13C2-PFDA	515.1 > 469.9	3.88e4	5.62e4	0.109	0.971	4.08	4.05	8.63	81.6	71.1
3	41	d3-N-MeFOSAA	573.3 > 419	1.00e4	5.46e4	0.109	0.018	4.11	4.08	2.29	1180	79.2
4	42	d5-N-EtFOSAA	589.3 > 419	1.11e4	5.46e4	0.109	0.018	4.18	4.14	2.54	1280	85.8
5	43	13C2-PFUnA	565 > 519.8	4.69e4	5.46e4	0.109	1.085	4.25	4.21	10.7	90.8	79.1
6	44	13C2-PFDoA	615 > 569.7	6.27e3	5.46e4	0.109	0.123	4.42	4.38	1.43	107	93.2
7	46	13C2-PFTeDA	714.8 > 669.6	3.98e4	5.46e4	0.109	0.798	4.78	4.74	9.10	105	91.2
8	52	13C5-PFHxA	318 > 272.9	5.48e4	5.48e4	0.109	1.000	3.26	3.23	5.00	45.9	100.0
9	53	13C3-PFHxS	401.9 > 79.9	9.28e3	9.28e3	0.109	1.000	3.58	3.55	12.5	115	100.0
10	54	13C8-PFOA	421.3 > 376	4.51e4	4.51e4	0.109	1.000	3.71	3.68	12.5	115	100.0
11	55	13C9-PFNA	472.2 > 426.9	6.02e4	6.02e4	0.109	1.000	3.90	3.87	12.5	115	100.0
12	56	13C4-PFOS	503 > 79.9	9.54e3	9.54e3	0.109	1.000	3.96	3.92	12.5	115	100.0
13	57	13C6-PFDA	519.1 > 473.7	5.62e4	5.62e4	0.109	1.000	4.08	4.04	12.5	115	100.0
14	58	13C7-PFUnA	570.1 > 524.8	5.46e4	5.46e4	0.109	1.000	4.25	4.21	12.5	115	100.0
15	59	Total PFBS	299 > 79.7	8.21e3	5.34e3	0.109		3.06		19.2	102	
16	60	Total PFHxS	398.9 > 79.6	5.43e3	3.66e3	0.109		3.58		18.6	96.8	
17	61	Total PFOA	413 > 368.7	4.60e4	4.99e4	0.109		3.71		11.5	106	
18	62	Total PFOS	499 > 79.9	9.10e3	9.15e3	0.109		3.96		12.4	107	
19	63	Total N-Me-FOSAA	570.1 > 419	1.13e4	1.00e4	0.109		4.11		183	87.1	
20	64	Total N-EtFOSAA	584.2 > 419	1.09e4	1.11e4	0.109		4.18		159	93.1	

GM 8/12/17

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-14.qld

Last Altered: Saturday, August 12, 2017 17:55:06 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:56:19 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_14, Date: 11-Aug-2017, Time: 20:44:44, ID: B7H0074-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	3.01	8205.585	5341.508	19.202	bb	101.9

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.55	5428.600	3656.669	18.557	MM	96.8

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.68	45950.332	49884.059	11.514	bb	106.4

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.93	9104.117	9149.968	12.437	MM	107.4

Total N-Me-FOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	15	N-MeFOSAA	570.1 > 419	4.08	11287.835	10005.527	183.326	bb	87.1

Total N-EtFOSAA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	16	N-EtFOSAA	584.2 > 419	4.14	10867.064	11112.346	158.913	bb	93.1

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

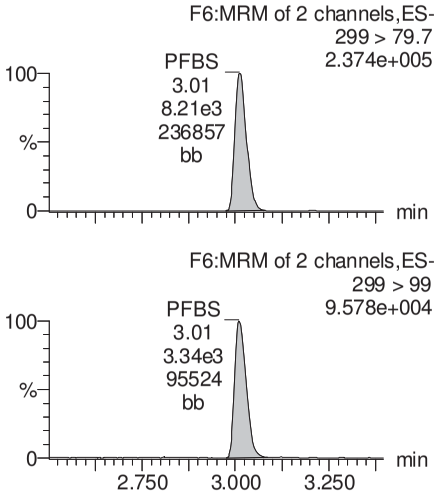
Dataset: U:\Q4.PRO\results\170811M2\170811M2-14.qld

Last Altered: Saturday, August 12, 2017 17:55:06 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:56:19 Pacific Daylight Time

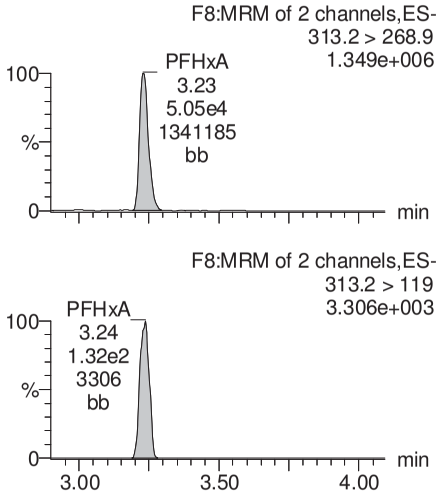
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_14, Date: 11-Aug-2017, Time: 20:44:44, ID: B7H0074-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup

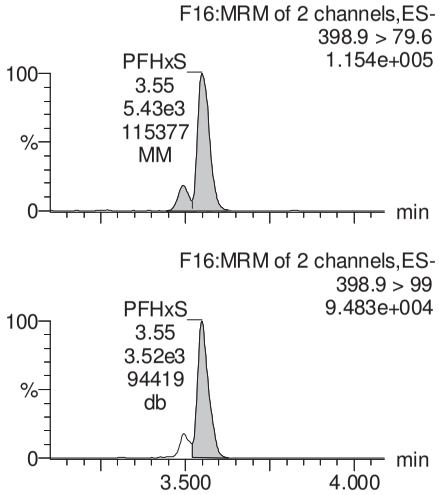
Total PFBS



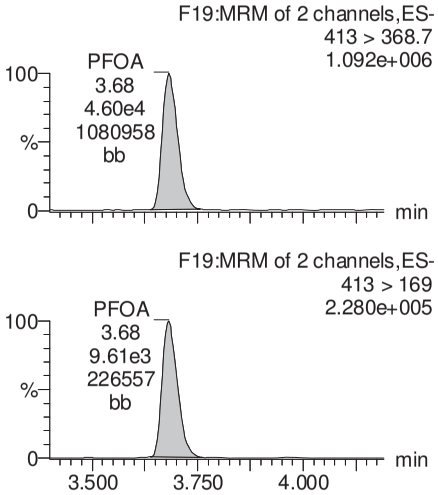
PFHxA



Total PFHxS



Total PFOA



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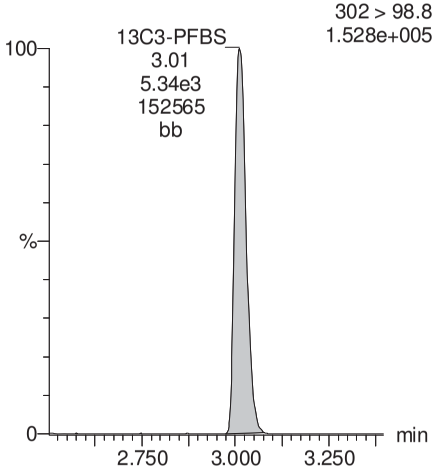

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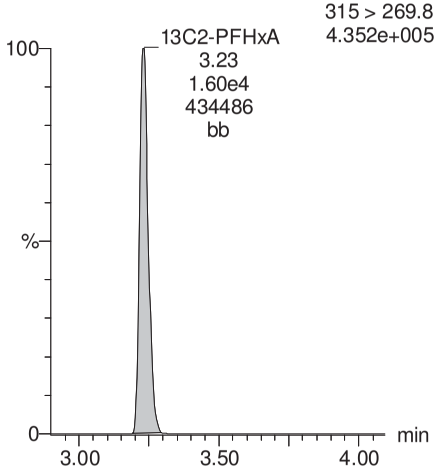
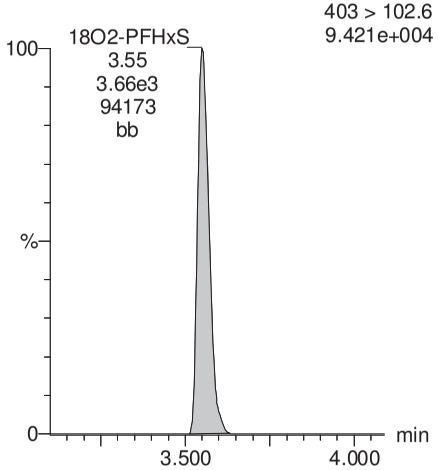
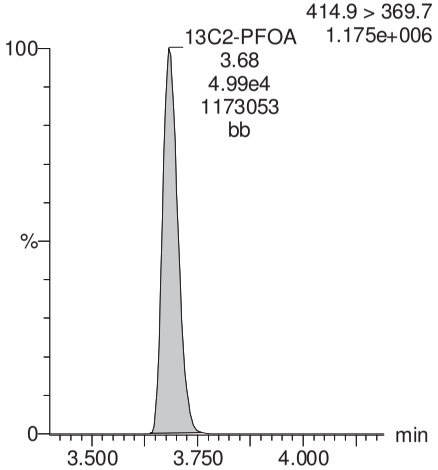


18O2-PFHxS



13C2-PFOA



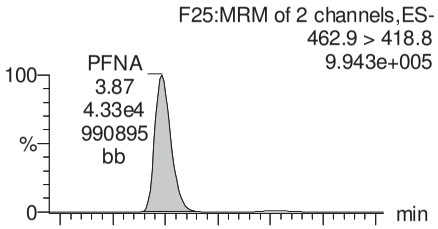
GM 8/12/17

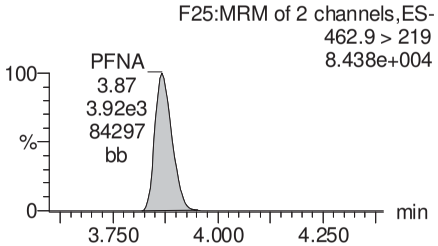
Dataset: U:\Q4.PRO\results\170811M2\170811M2-14.qld

Last Altered: Saturday, August 12, 2017 17:55:06 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:56:19 Pacific Daylight Time

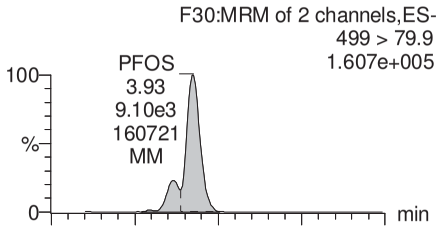
Name: 170811M2_14, Date: 11-Aug-2017, Time: 20:44:44, ID: B7H0074-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup

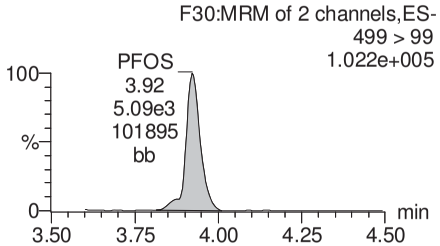
PFNA



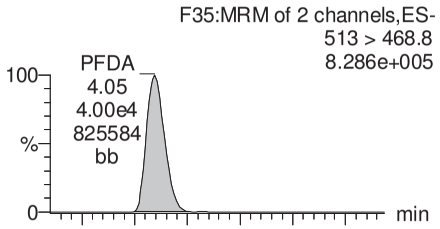


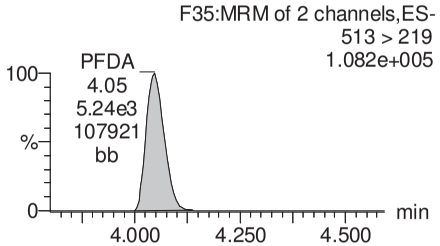
Total PFOS



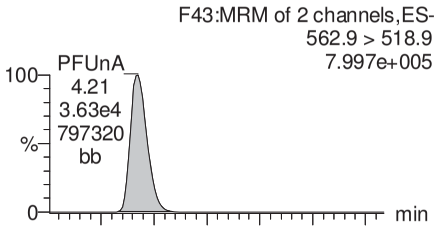


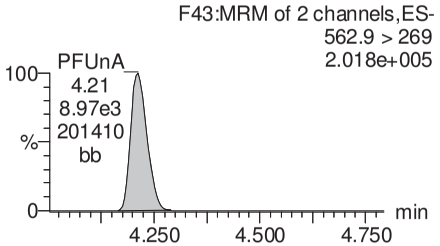
PFDA



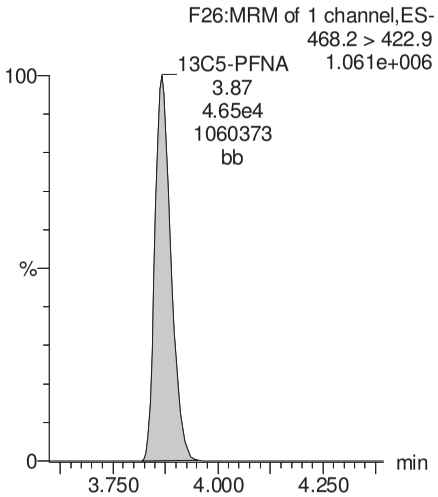


PFUnA

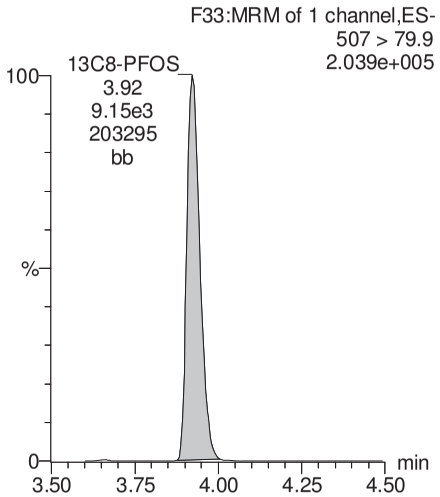




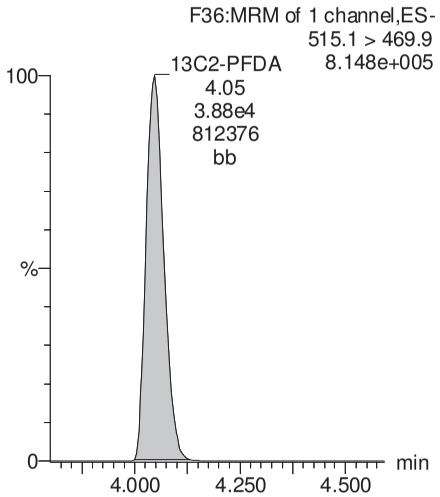
13C5-PFNA



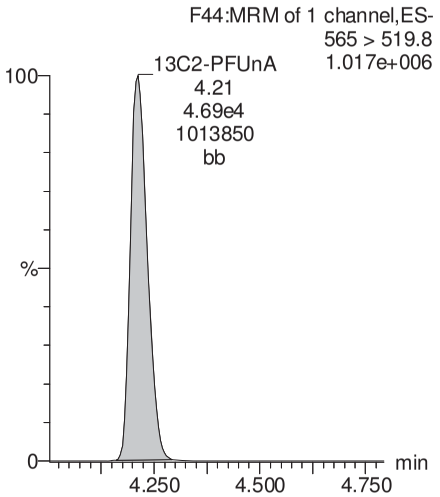
13C8-PFOS



13C2-PFDA



13C2-PFUnA



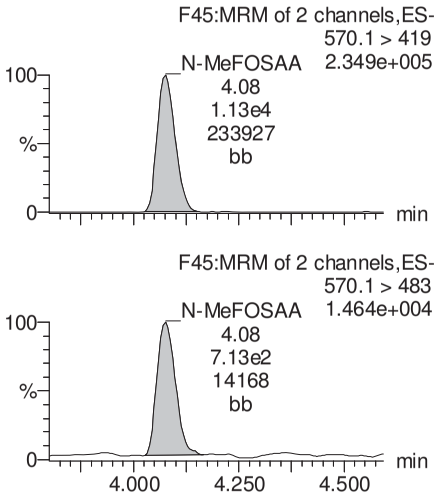
GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-14.qld

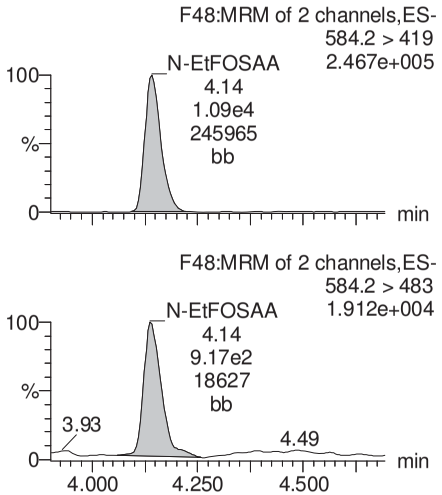
Last Altered: Saturday, August 12, 2017 17:55:06 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:56:19 Pacific Daylight Time

Name: 170811M2_14, Date: 11-Aug-2017, Time: 20:44:44, ID: B7H0074-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup

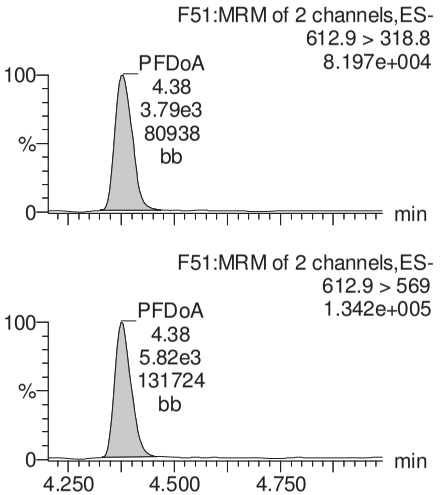
N-MeFOSAA



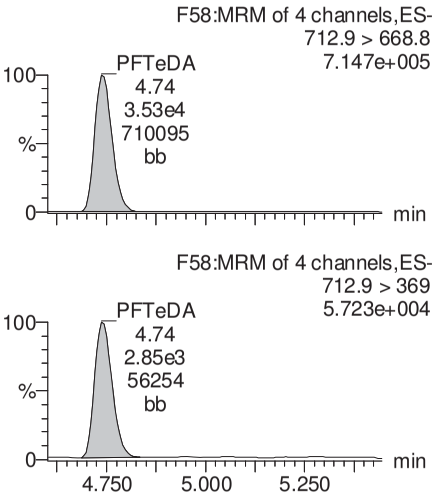
N-EtFOSAA



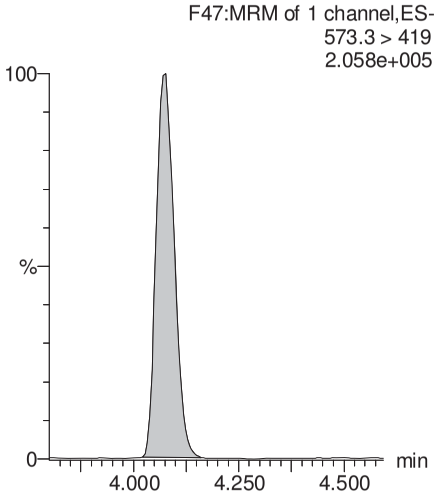
PFDoA



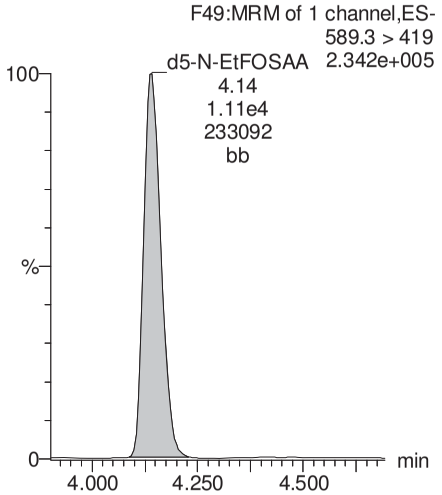
PFTeDA



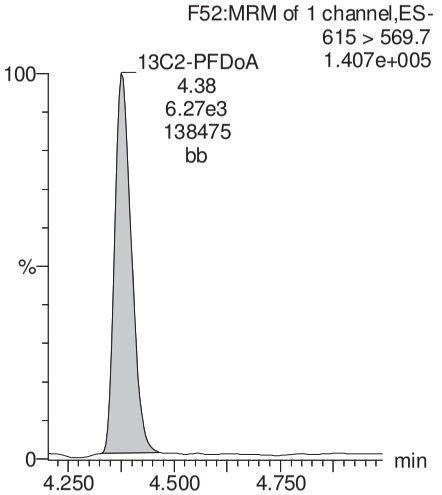
d3-N-MeFOSAA



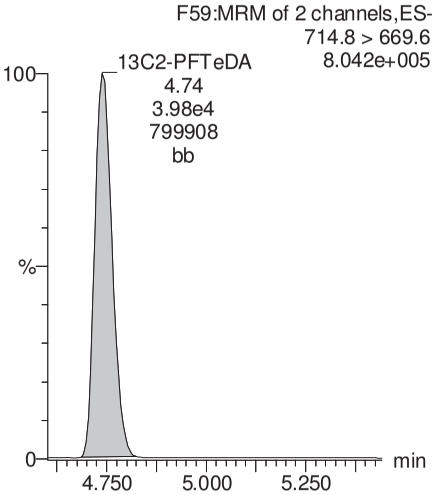
d5-N-EtFOSAA



13C2-PFDoA



13C2-PFTeDA



GM 8/12/17

Vista Analytical Laboratory

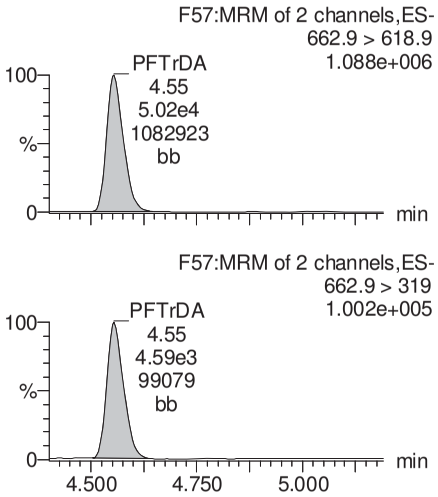
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-14.qld

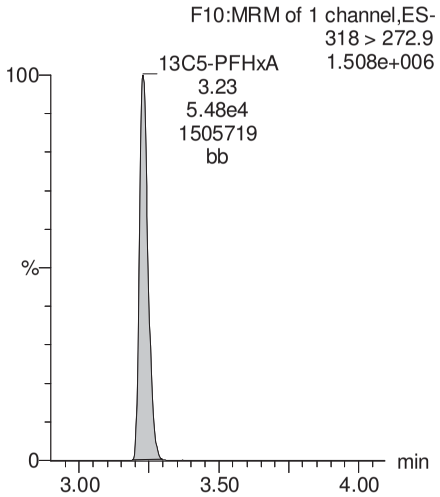
Last Altered: Saturday, August 12, 2017 17:55:06 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:56:19 Pacific Daylight Time

Name: 170811M2_14, Date: 11-Aug-2017, Time: 20:44:44, ID: B7H0074-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup

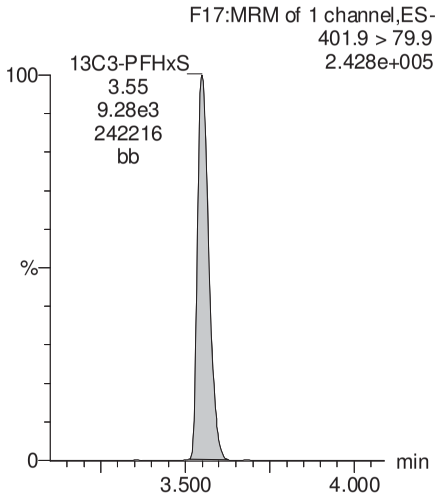
PFTrDA



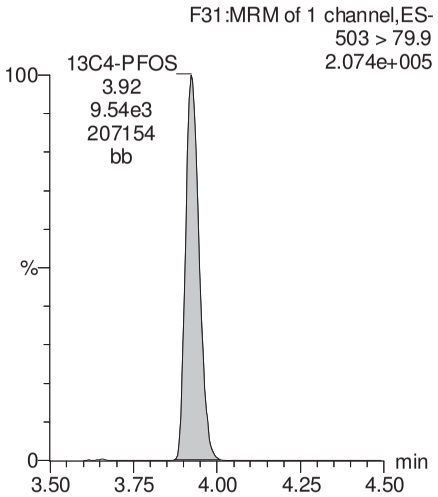
13C5-PFHxA



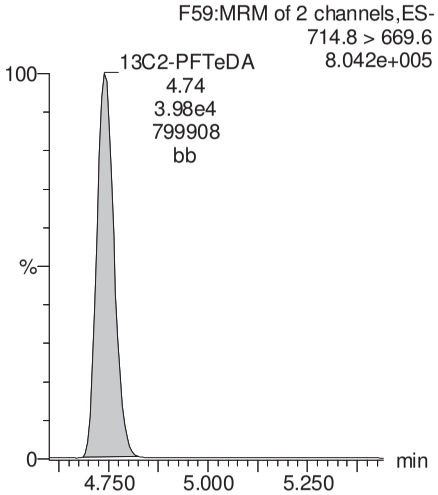
13C3-PFHxS



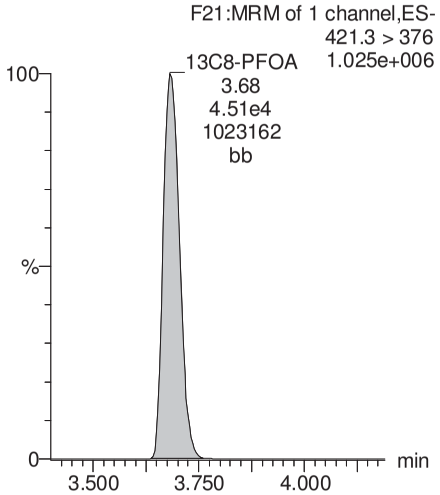
13C4-PFOS



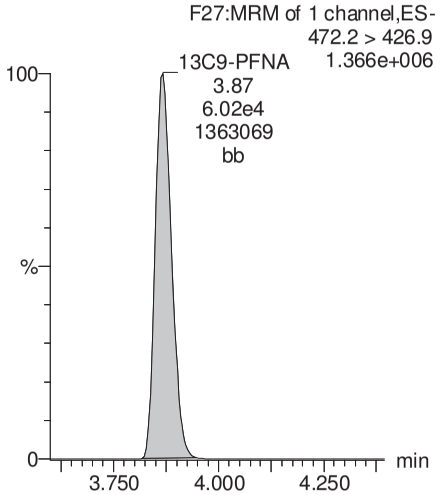
13C2-PFTeDA



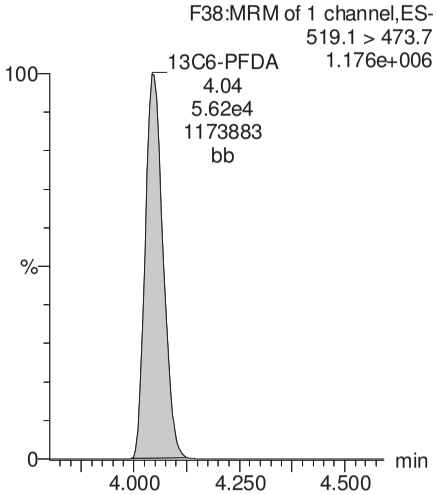
13C8-PFOA



13C9-PFNA



13C6-PFDA



GM 8/12/17

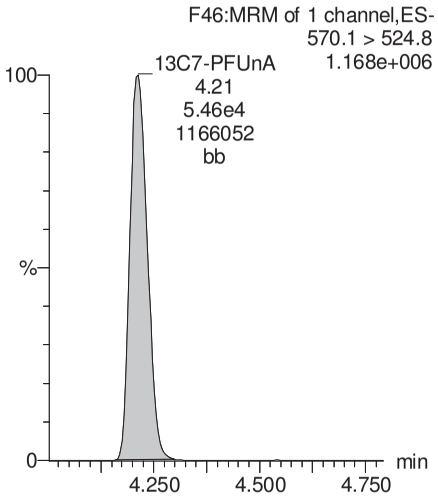
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-14.qld

Last Altered: Saturday, August 12, 2017 17:55:06 Pacific Daylight Time
Printed: Saturday, August 12, 2017 17:56:19 Pacific Daylight Time

Name: 170811M2_14, Date: 11-Aug-2017, Time: 20:44:44, ID: B7H0074-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup

13C7-PFUnA



GM 8/12/17

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

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-21.qld

Last Altered: Saturday, August 12, 2017 20:20:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:21:03 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_21, Date: 11-Aug-2017, Time: 21:59:21, ID: 1700922-03RE1 Upstream-Culvert-109-20170721 0.1185, Description: Upstream-Culvert-109-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	3	PFBS	299 > 79.7	6.44e3	5.32e3	0.104		3.06	3.01	15.1	84.0		
2	4	PFHxA	313.2 > 268.9	1.30e5	1.57e4	0.104		3.26	3.23	41.2	309		
3	6	PFHxS	398.9 > 79.6	2.60e4	3.42e3	0.104		3.58	3.55	95.1	525		
4	8	PFOA	413 > 368.7	3.55e4	4.40e4	0.104		3.71	3.68	10.1	97.5		Use only
5	10	PFNA	462.9 > 418.8	1.22e4	3.81e4	0.104		3.90	3.87	4.01	34.4		
6	12	PFOS	499 > 79.9	7.26e4	8.40e3	0.104		3.96	3.93	108	997		
7	13	PFDA	513 > 468.8	1.51e4	4.20e4	0.104		4.08	4.05	4.50	37.3		
8	15	N-MeFOSAA	570.1 > 419		9.08e3	0.104		4.11					
9	16	N-EtFOSAA	584.2 > 419		9.93e3	0.104		4.18					
10	17	PFUnA	562.9 > 518.9	2.63e3	4.17e4	0.104		4.25	4.21	0.790	8.33		
11	19	PFDoA	612.9 > 318.8		5.35e3	0.104		4.42					

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-21.qld

Last Altered: Saturday, August 12, 2017 20:20:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:21:15 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_21, Date: 11-Aug-2017, Time: 21:59:21, ID: 1700922-03RE1 Upstream-Culvert-109-20170721 0.1185, Description: Upstream-Culvert-109-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		5.35e3	0.104		4.59				
2	22	PFTeDA	712.9 > 668.8		3.43e4	0.104		4.78				
3	30	13C3-PFBS	302 > 98.8	5.32e3	5.18e4	0.104	0.033	3.06	3.01	0.513	150	124.9
4	31	13C2-PFHxA	315 > 269.8	1.57e4	5.18e4	0.104	0.304	3.26	3.23	1.52	48.1	100.1
5	33	18O2-PFHxS	403 > 102.6	3.42e3	8.54e3	0.104	0.417	3.58	3.55	5.00	115	95.9
6	35	13C2-PFOA	414.9 > 369.7	4.40e4	4.45e4	0.104	1.132	3.71	3.68	12.4	105	87.4
7	36	13C5-PFNA	468.2 > 422.9	3.81e4	4.78e4	0.104	0.946	3.90	3.87	9.95	101	84.2

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-21.qld

Last Altered: Saturday, August 12, 2017 20:20:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:21:33 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_21, Date: 11-Aug-2017, Time: 21:59:21, ID: 1700922-03RE1 Upstream-Culvert-109-20170721 0.1185, Description: Upstream-Culvert-109-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	38	13C8-PFOS	507 > 79.9	8.40e3	7.33e3	0.104	1.040	3.96	3.92	14.3	133	110.2
2	39	13C2-PFDA	515.1 > 469.9	4.20e4	4.99e4	0.104	0.971	4.08	4.05	10.5	104	86.6
3	41	d3-N-MeFOSAA	573.3 > 419	9.08e3	5.28e4	0.104	0.018	4.11	4.07	2.15	1160	74.4
4	42	d5-N-EtFOSAA	589.3 > 419	9.93e3	5.28e4	0.104	0.018	4.18	4.14	2.35	1240	79.4
5	43	13C2-PFUnA	565 > 519.8	4.17e4	5.28e4	0.104	1.085	4.25	4.21	9.87	87.5	72.7
6	44	13C2-PFDoA	615 > 569.7	5.35e3	5.28e4	0.104	0.123	4.42	4.38	1.27	99.1	82.4
7	46	13C2-PFTeDA	714.8 > 669.6	3.43e4	5.28e4	0.104	0.798	4.78	4.74	8.13	98.1	81.5
8	52	13C5-PFHxA	318 > 272.9	5.18e4	5.18e4	0.104	1.000	3.26	3.23	5.00	48.1	100.0
9	53	13C3-PFHxS	401.9 > 79.9	8.54e3	8.54e3	0.104	1.000	3.58	3.55	12.5	120	100.0
10	54	13C8-PFOA	421.3 > 376	4.45e4	4.45e4	0.104	1.000	3.71	3.68	12.5	120	100.0
11	55	13C9-PFNA	472.2 > 426.9	4.78e4	4.78e4	0.104	1.000	3.90	3.87	12.5	120	100.0
12	56	13C4-PFOS	503 > 79.9	7.33e3	7.33e3	0.104	1.000	3.96	3.92	12.5	120	100.0
13	57	13C6-PFDA	519.1 > 473.7	4.99e4	4.99e4	0.104	1.000	4.08	4.05	12.5	120	100.0
14	58	13C7-PFUnA	570.1 > 524.8	5.28e4	5.28e4	0.104	1.000	4.25	4.21	12.5	120	100.0
15	59	Total PFBS	299 > 79.7	6.56e3	5.32e3	0.104		3.06		15.4	84.7	
16	60	Total PFHxS	398.9 > 79.6	2.60e4	3.42e3	0.104		3.58		95.1	525	
17	61	Total PFOA	413 > 368.7	3.64e4	4.40e4	0.104		3.71		10.4	98.6	
18	62	Total PFOS	499 > 79.9	7.26e4	8.40e3	0.104		3.96		108	997	
19	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	9.08e3	0.104		4.11		0.000		
20	64	Total N-EtFOSAA	584.2 > 419	0.00e0	9.93e3	0.104		4.18		0.000		

GM 8/12/17

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-21.qld

Last Altered: Saturday, August 12, 2017 20:20:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:21:33 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_21, Date: 11-Aug-2017, Time: 21:59:21, ID: 1700922-03RE1 Upstream-Culvert-109-20170721 0.1185, Description: Upstream-Culvert-109-20170721

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	3	PFBS	299 > 79.7	3.01	6437.465	5317.854	15.132	bb	84.0
2	59	Total PFBS	299 > 79.7	2.90	125.665	5317.854	0.295	bb	0.6

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6	PFHxS	398.9 > 79.6	3.55	25996.807	3417.305	95.093	MM	525.0

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7	3.68	35498.496	44008.152	10.083	db	97.5
2	61	Total PFOA	413 > 368.7	3.62	944.805	44008.152	0.268	bd	1.1

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	12	PFOS	499 > 79.9	3.93	72610.477	8399.871	108.053	MM	997.4

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									

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

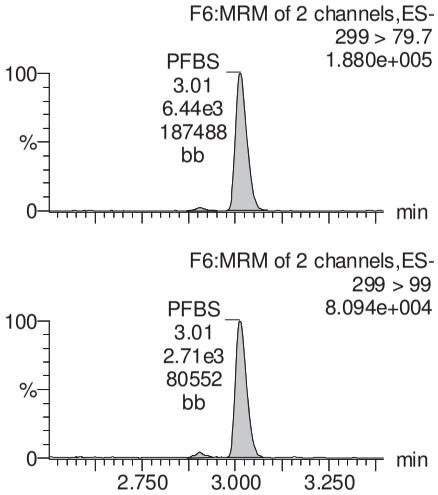
Dataset: U:\Q4.PRO\results\170811M2\170811M2-21.qld

Last Altered: Saturday, August 12, 2017 20:20:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:21:33 Pacific Daylight Time

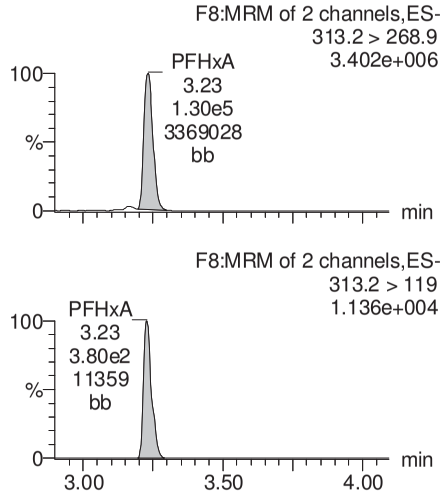
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_21, Date: 11-Aug-2017, Time: 21:59:21, ID: 1700922-03RE1 Upstream-Culvert-109-20170721 0.1185, Description: Upstream-Culvert-109-20170721

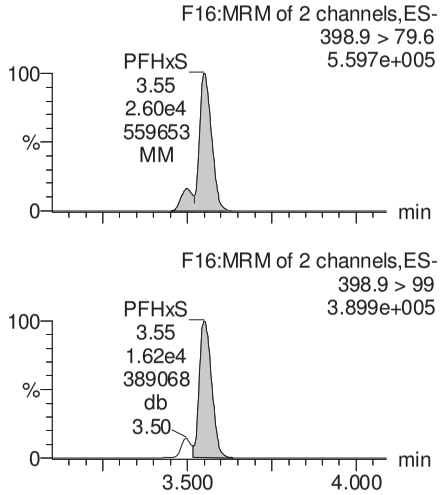
Total PFBS



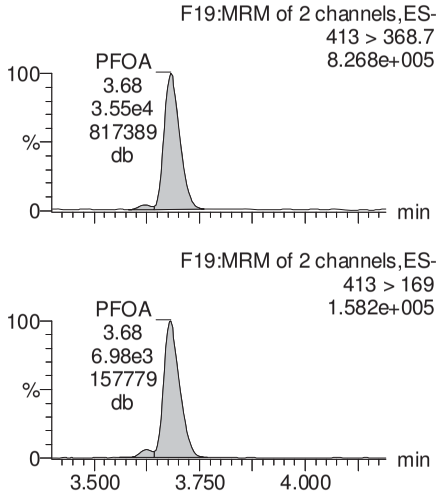
PFHxA



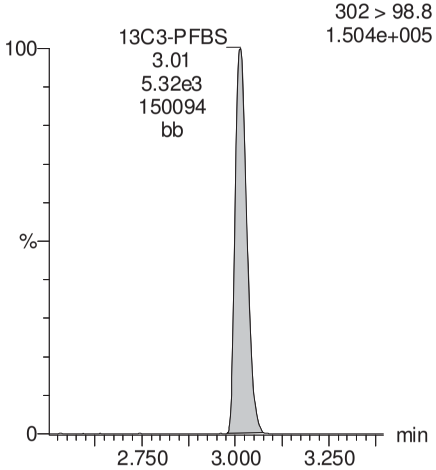
Total PFHxS



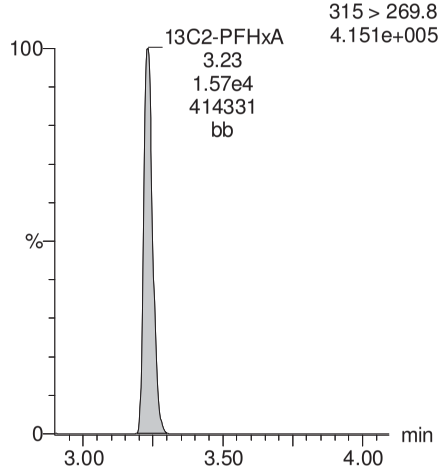
Total PFOA



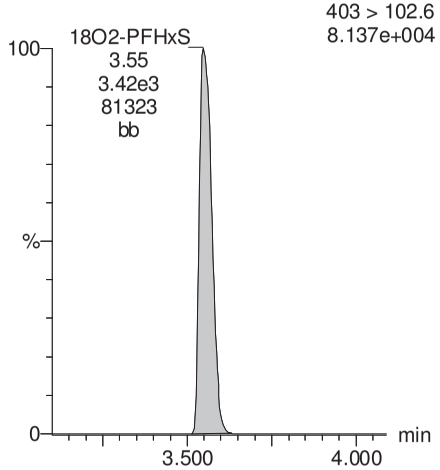
13C3-PFBS



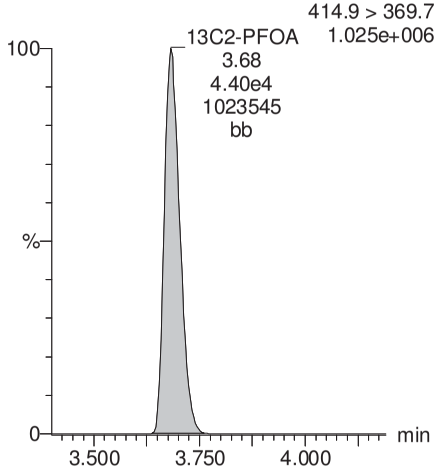
13C2-PFHxA



18O2-PFHxS



13C2-PFOA



GM 8/12/17

Vista Analytical Laboratory

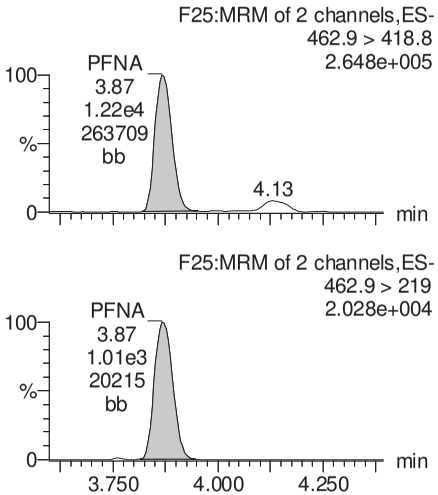
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-21.qld

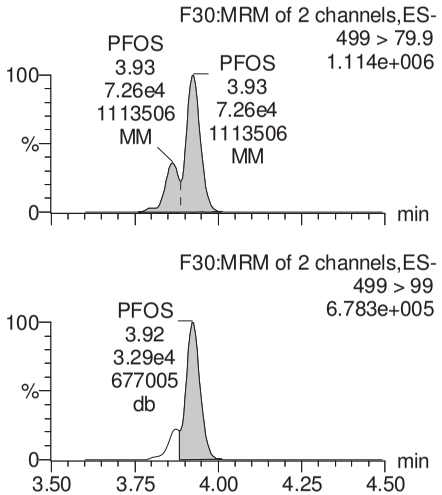
Last Altered: Saturday, August 12, 2017 20:20:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:21:33 Pacific Daylight Time

Name: 170811M2_21, Date: 11-Aug-2017, Time: 21:59:21, ID: 1700922-03RE1 Upstream-Culvert-109-20170721 0.1185, Description: Upstream-Culvert-109-20170721

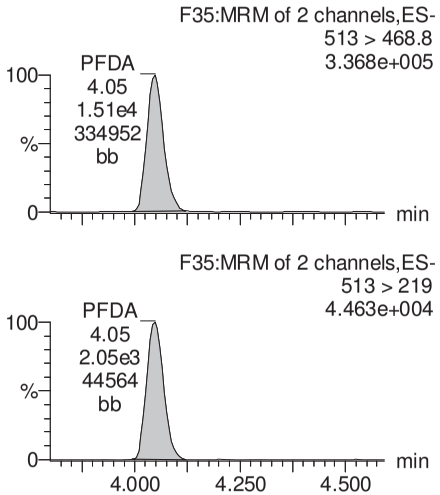
PFNA



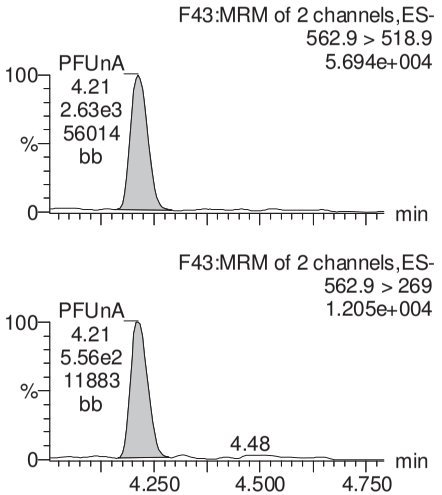
Total PFOS



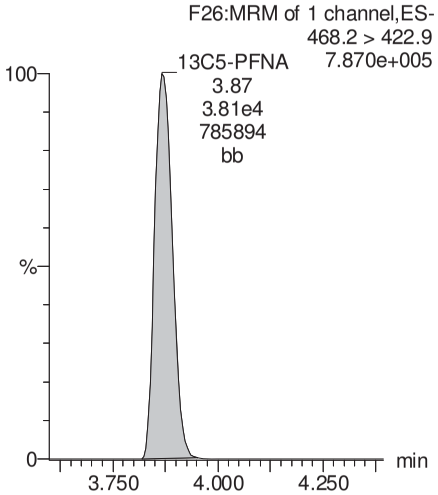
PFDA



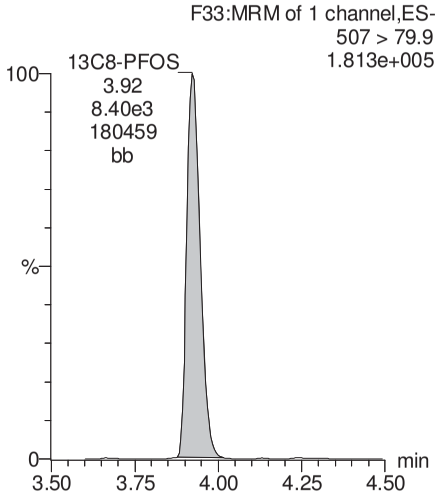
PFUnA



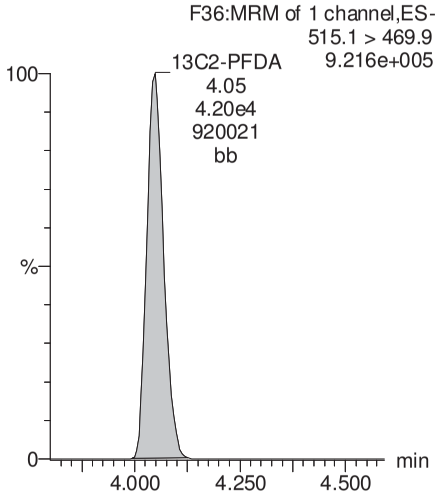
13C5-PFNA



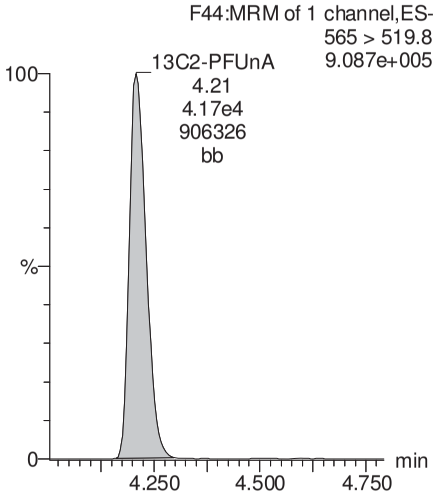
13C8-PFOS



13C2-PFDA



13C2-PFUnA



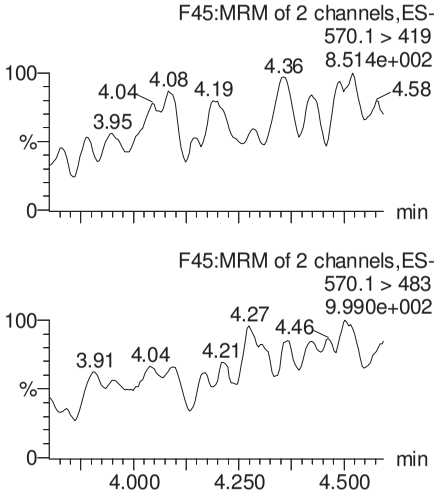
GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-21.qld

Last Altered: Saturday, August 12, 2017 20:20:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:21:33 Pacific Daylight Time

Name: 170811M2_21, Date: 11-Aug-2017, Time: 21:59:21, ID: 1700922-03RE1 Upstream-Culvert-109-20170721 0.1185, Description: Upstream-Culvert-109-20170721

N-MeFOSAA



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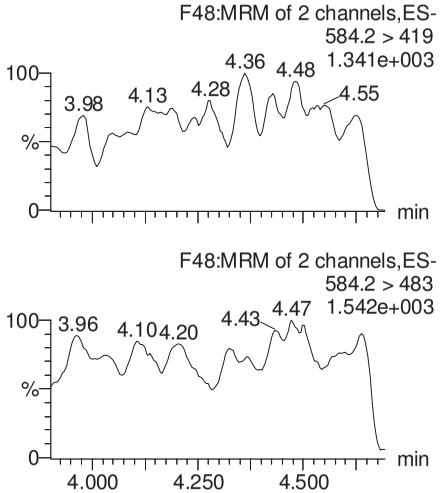
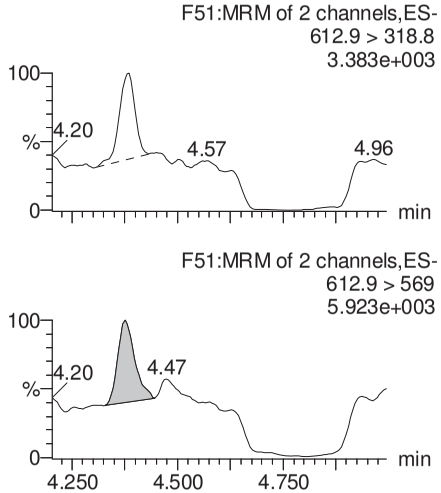
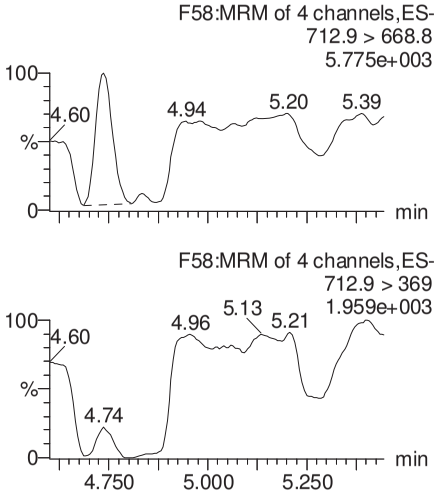


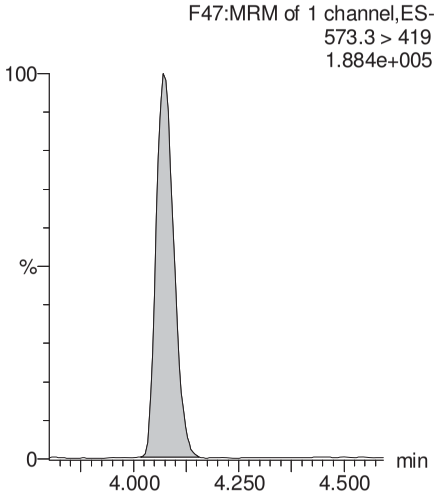
PFDoA



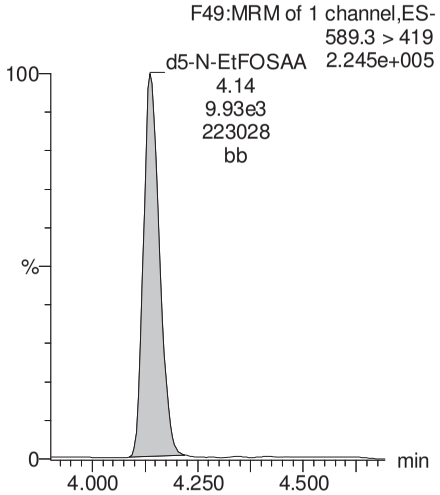
PFTeDA



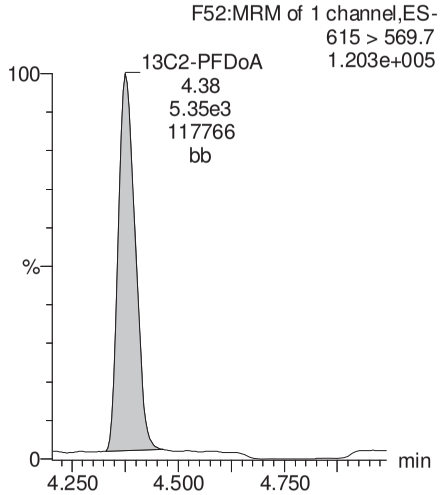
d3-N-MeFOSAA



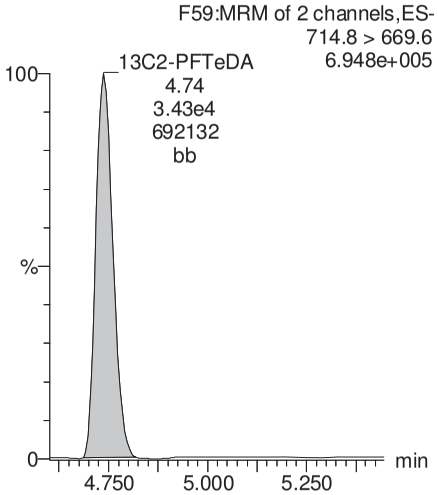
d5-N-EtFOSAA



13C2-PFDoA



13C2-PFTeDA



GM 8/12/17

Vista Analytical Laboratory

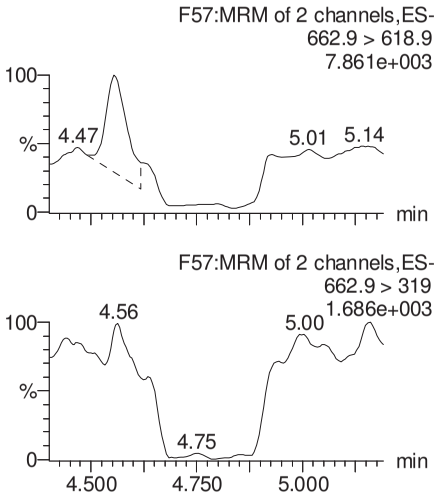
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-21.qld

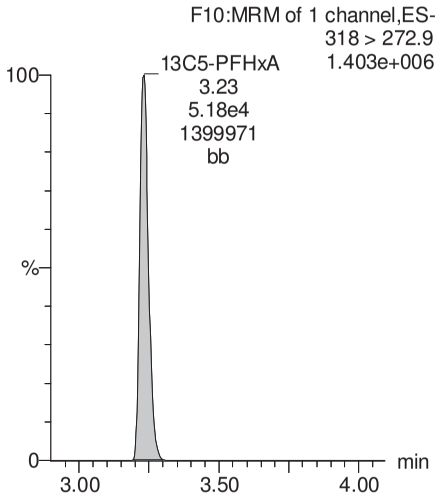
Last Altered: Saturday, August 12, 2017 20:20:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:21:33 Pacific Daylight Time

Name: 170811M2_21, Date: 11-Aug-2017, Time: 21:59:21, ID: 1700922-03RE1 Upstream-Culvert-109-20170721 0.1185, Description: Upstream-Culvert-109-20170721

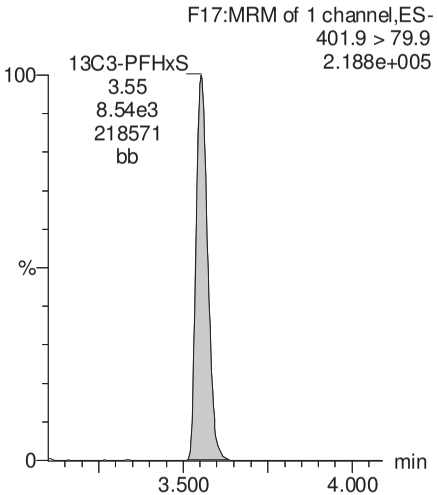
PFTrDA



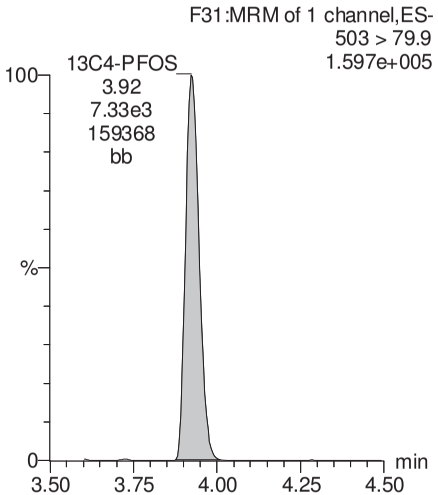
13C5-PFHxA



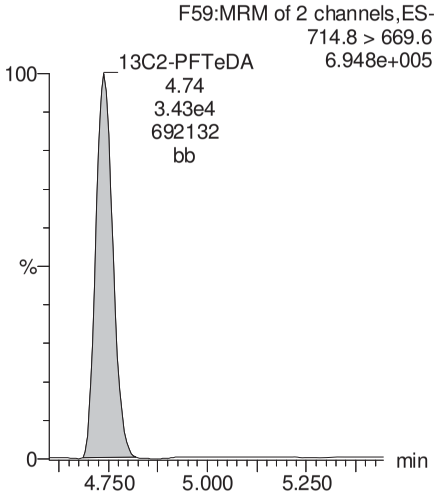
13C3-PFHxS



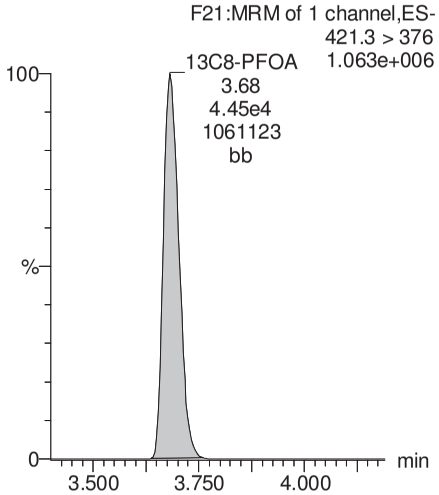
13C4-PFOS



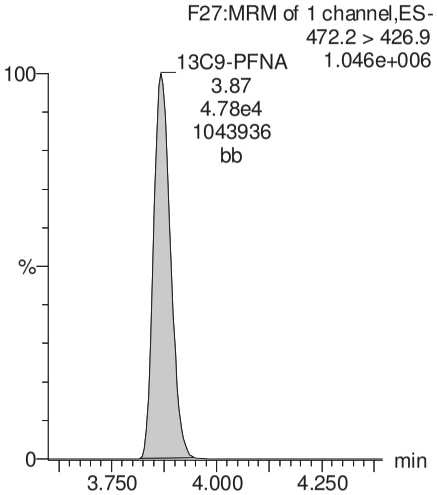
13C2-PFTeDA



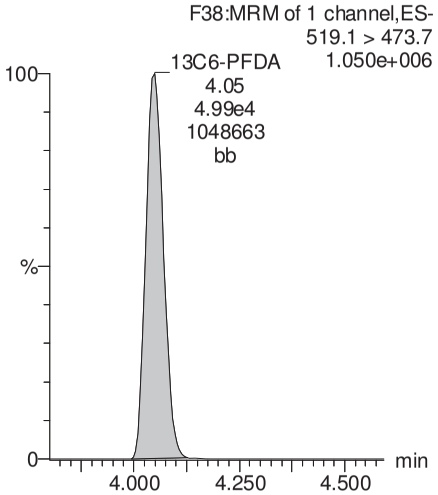
13C8-PFOA



13C9-PFNA



13C6-PFDA



GM 8/12/17

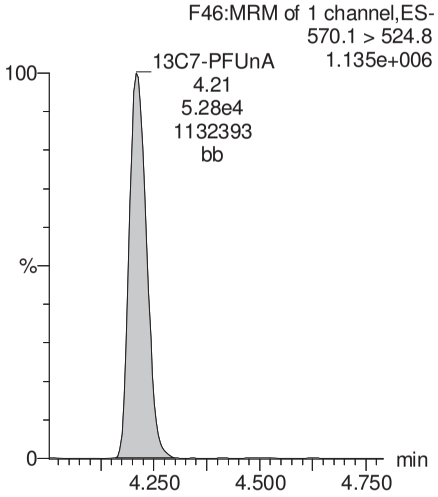
Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-21.qld

Last Altered: Saturday, August 12, 2017 20:20:10 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:21:33 Pacific Daylight Time

Name: 170811M2_21, Date: 11-Aug-2017, Time: 21:59:21, ID: 1700922-03RE1 Upstream-Culvert-109-20170721 0.1185, Description: Upstream-Culvert-109-20170721

13C7-PFUnA



GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-22.qld

Last Altered: Saturday, August 12, 2017 20:23:09 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:24:57 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_22, Date: 11-Aug-2017, Time: 22:10:08, ID: 1700922-04RE1 FRB03-20170721 0.11017, Description: FRB03-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	3	PFBS	299 > 79.7		6.23e3	0.116		3.06					
2	4	PFHxA	313.2 > 268.9		1.73e4	0.116		3.26					
3	6	PFHxS	398.9 > 79.6	1.20e1	4.00e3	0.116		3.58	3.53	0.0375	0.781		
4	8	PFOA	413 > 368.7		5.31e4	0.116		3.71					Use only
5	10	PFNA	462.9 > 418.8		4.88e4	0.116		3.90					
6	12	PFOS	499 > 79.9		9.49e3	0.116		3.96					
7	13	PFDA	513 > 468.8		4.53e4	0.116		4.08					
8	15	N-MeFOSAA	570.1 > 419		7.04e3	0.116		4.11					
9	16	N-EtFOSAA	584.2 > 419		7.10e3	0.116		4.18					
10	17	PFUnA	562.9 > 518.9	8.26e1	4.30e4	0.116		4.25	4.21	0.0240			
11	19	PFDoA	612.9 > 318.8		4.63e3	0.116		4.42					

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-22.qld

Last Altered: Saturday, August 12, 2017 20:23:09 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:25:09 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_22, Date: 11-Aug-2017, Time: 22:10:08, ID: 1700922-04RE1 FRB03-20170721 0.11017, Description: FRB03-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		4.63e3	0.116		4.59				
2	22	PFTeDA	712.9 > 668.8		3.26e4	0.116		4.78				
3	30	13C3-PFBS	302 > 98.8	6.23e3	5.74e4	0.116	0.033	3.06	3.01	0.543	142	132.1
4	31	13C2-PFHxA	315 > 269.8	1.73e4	5.74e4	0.116	0.304	3.26	3.23	1.51	42.8	99.4
5	33	18O2-PFHxS	403 > 102.6	4.00e3	8.86e3	0.116	0.417	3.58	3.55	5.64	116	108.2
6	35	13C2-PFOA	414.9 > 369.7	5.31e4	4.65e4	0.116	1.132	3.71	3.68	14.3	109	101.0
7	36	13C5-PFNA	468.2 > 422.9	4.88e4	5.09e4	0.116	0.946	3.90	3.87	12.0	109	101.2

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-22.qld

Last Altered: Saturday, August 12, 2017 20:23:09 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:25:26 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_22, Date: 11-Aug-2017, Time: 22:10:08, ID: 1700922-04RE1 FRB03-20170721 0.11017, Description: FRB03-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	38	13C8-PFOS	507 > 79.9	9.49e3	9.05e3	0.116	1.040	3.96	3.92	13.1	109	100.9
2	39	13C2-PFDA	515.1 > 469.9	4.53e4	5.11e4	0.116	0.971	4.08	4.04	11.1	98.3	91.4
3	41	d3-N-MeFOSAA	573.3 > 419	7.04e3	5.14e4	0.116	0.018	4.11	4.07	1.71	827	59.2
4	42	d5-N-EtFOSAA	589.3 > 419	7.10e3	5.14e4	0.116	0.018	4.18	4.14	1.72	814	58.2
5	43	13C2-PFUnA	565 > 519.8	4.30e4	5.14e4	0.116	1.085	4.25	4.21	10.4	82.8	77.0
6	44	13C2-PFDoA	615 > 569.7	4.63e3	5.14e4	0.116	0.123	4.42	4.37	1.12	78.6	73.1
7	46	13C2-PFTeDA	714.8 > 669.6	3.26e4	5.14e4	0.116	0.798	4.78	4.74	7.91	85.3	79.3
8	52	13C5-PFHxA	318 > 272.9	5.74e4	5.74e4	0.116	1.000	3.26	3.23	5.00	43.0	100.0
9	53	13C3-PFHxS	401.9 > 79.9	8.86e3	8.86e3	0.116	1.000	3.58	3.55	12.5	108	100.0
10	54	13C8-PFOA	421.3 > 376	4.65e4	4.65e4	0.116	1.000	3.71	3.68	12.5	108	100.0
11	55	13C9-PFNA	472.2 > 426.9	5.09e4	5.09e4	0.116	1.000	3.90	3.87	12.5	108	100.0
12	56	13C4-PFOS	503 > 79.9	9.05e3	9.05e3	0.116	1.000	3.96	3.92	12.5	108	100.0
13	57	13C6-PFDA	519.1 > 473.7	5.11e4	5.11e4	0.116	1.000	4.08	4.04	12.5	108	100.0
14	58	13C7-PFUnA	570.1 > 524.8	5.14e4	5.14e4	0.116	1.000	4.25	4.21	12.5	108	100.0
15	59	Total PFBS	299 > 79.7	0.00e0	6.23e3	0.116		3.06		0.000		
16	60	Total PFHxS	398.9 > 79.6	1.20e1	4.00e3	0.116		3.58		0.0375	0.781	
17	61	Total PFOA	413 > 368.7	0.00e0	5.31e4	0.116		3.71		0.000		
18	62	Total PFOS	499 > 79.9	0.00e0	9.49e3	0.116		3.96		0.000		
19	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	7.04e3	0.116		4.11		0.000		
20	64	Total N-EtFOSAA	584.2 > 419	0.00e0	7.10e3	0.116		4.18		0.000		

GM 8/12/17

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-22.qld

Last Altered: Saturday, August 12, 2017 20:23:09 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:25:26 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_22, Date: 11-Aug-2017, Time: 22:10:08, ID: 1700922-04RE1 FRB03-20170721 0.11017, Description: FRB03-20170721

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	3.53	11.988	3996.562	0.037	MM	0.8

Total PFOA

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

Total PFOS

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

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									

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

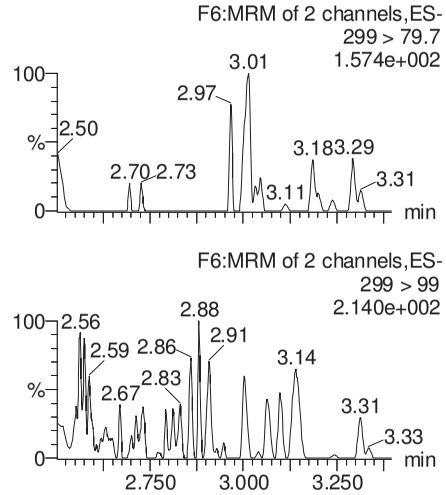
Dataset: U:\Q4.PRO\results\170811M2\170811M2-22.qld

Last Altered: Saturday, August 12, 2017 20:23:09 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:25:26 Pacific Daylight Time

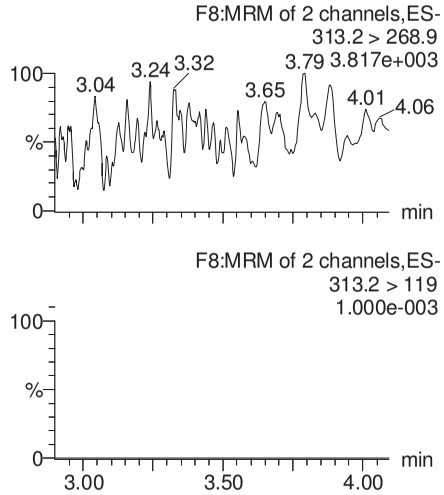
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_22, Date: 11-Aug-2017, Time: 22:10:08, ID: 1700922-04RE1 FRB03-20170721 0.11017, Description: FRB03-20170721

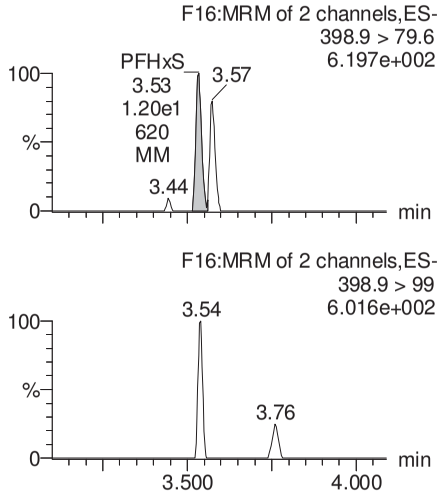
Total PFBS



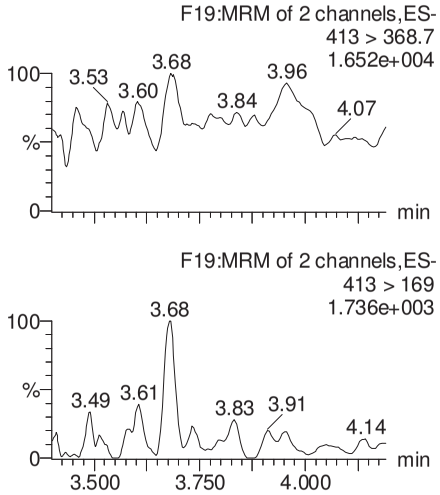
PFHxA



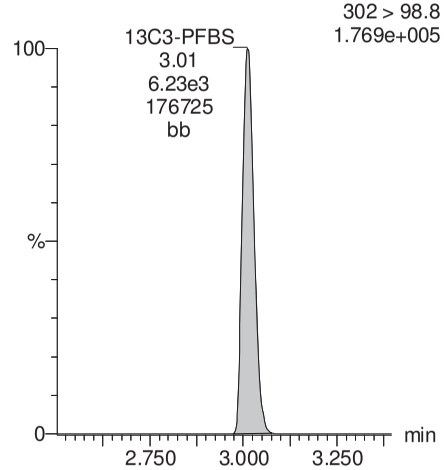
Total PFHxS



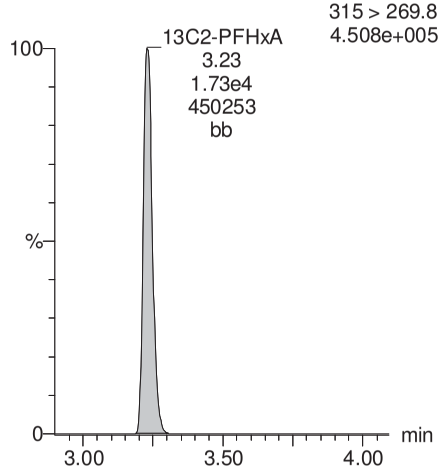
Total PFOA



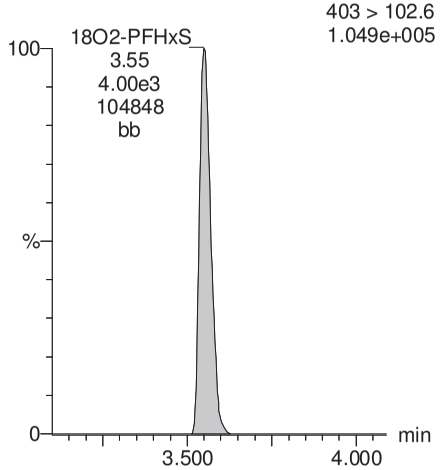
13C3-PFBS



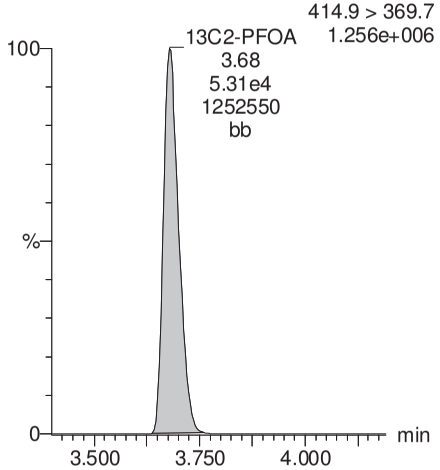
13C2-PFHxA



18O2-PFHxS



13C2-PFOA



GM 8/12/17

Vista Analytical Laboratory

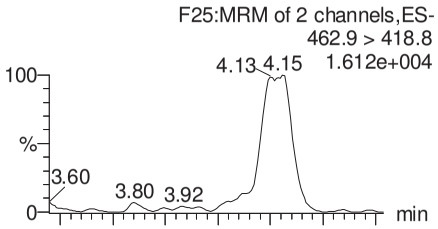
Rev'd: MM 8/17/17

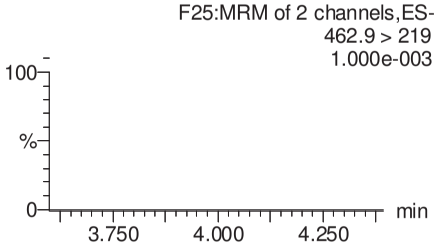
Dataset: U:\Q4.PRO\results\170811M2\170811M2-22.qld

Last Altered: Saturday, August 12, 2017 20:23:09 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:25:26 Pacific Daylight Time

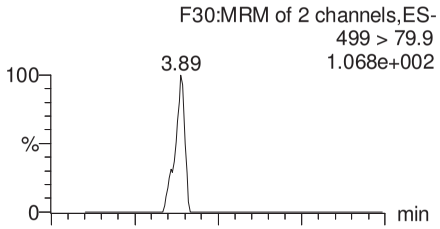
Name: 170811M2_22, Date: 11-Aug-2017, Time: 22:10:08, ID: 1700922-04RE1 FRB03-20170721 0.11017, Description: FRB03-20170721

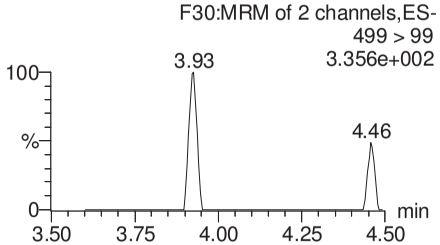
PFNA



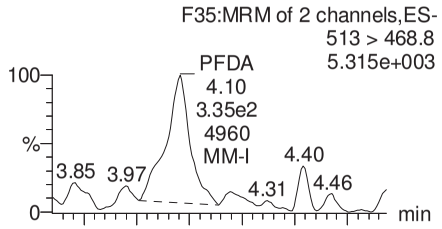


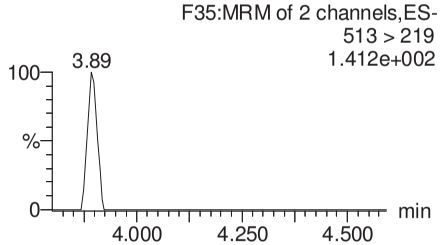
Total PFOS



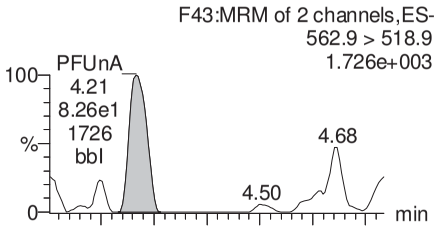


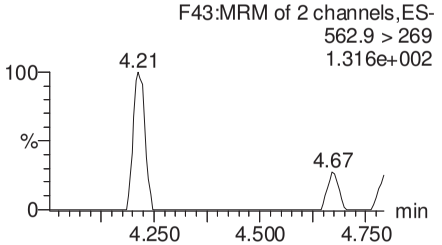
PFDA



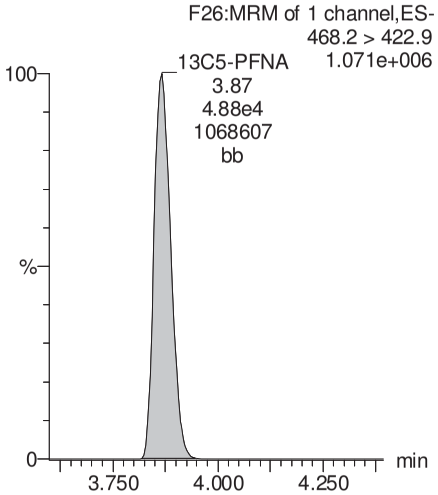


PFUnA

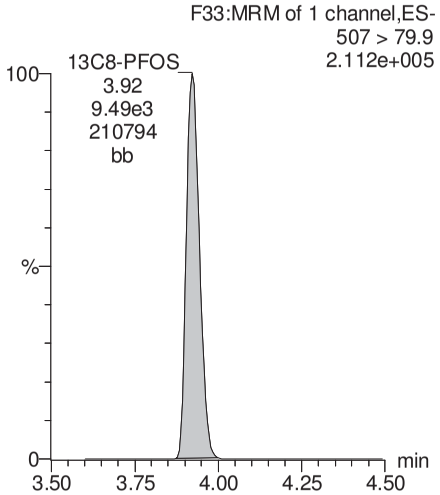




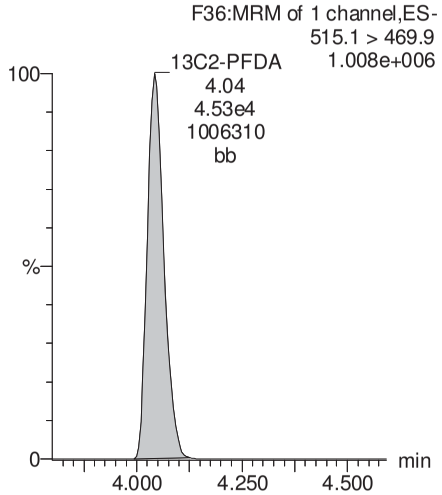
13C5-PFNA



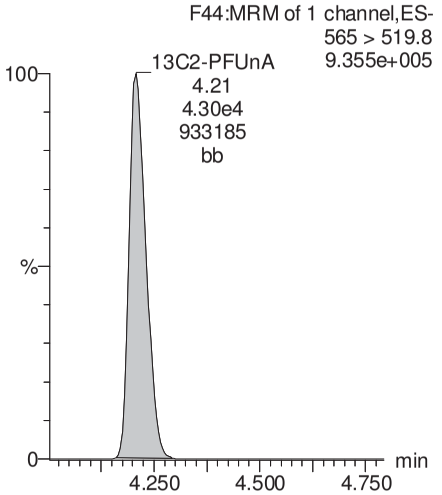
13C8-PFOS



13C2-PFDA



13C2-PFUnA



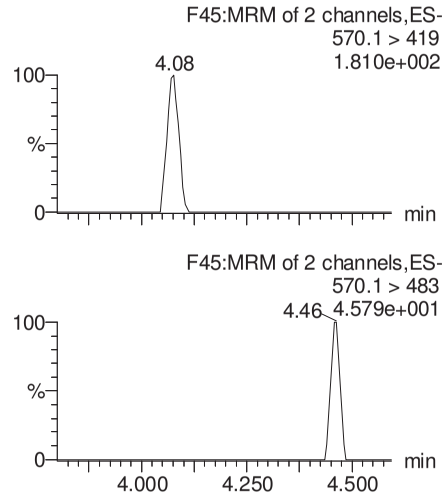
GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-22.qld

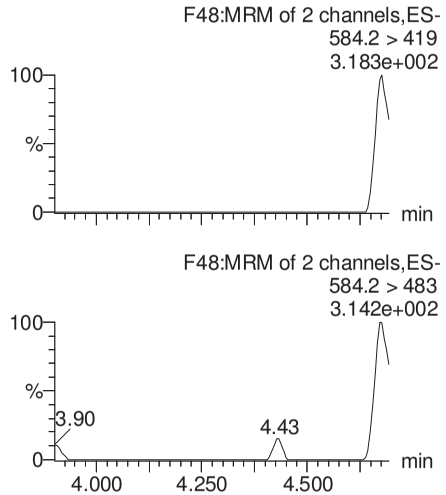
Last Altered: Saturday, August 12, 2017 20:23:09 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:25:26 Pacific Daylight Time

Name: 170811M2_22, Date: 11-Aug-2017, Time: 22:10:08, ID: 1700922-04RE1 FRB03-20170721 0.11017, Description: FRB03-20170721

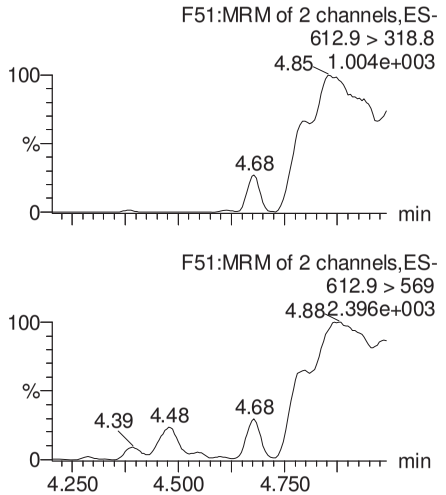
N-MeFOSAA



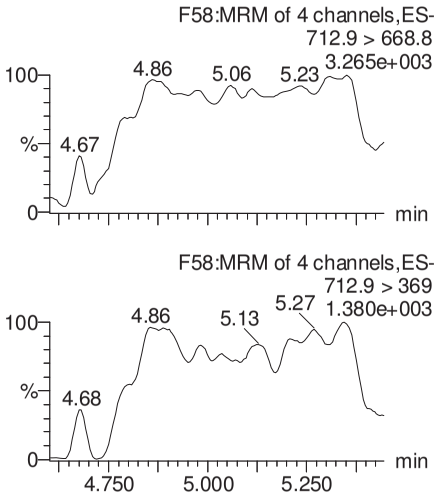
N-EtFOSAA



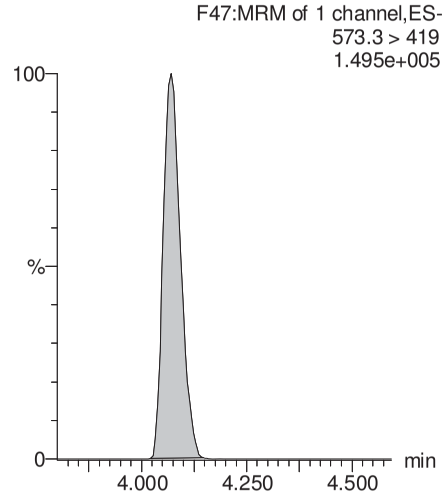
PFDoA



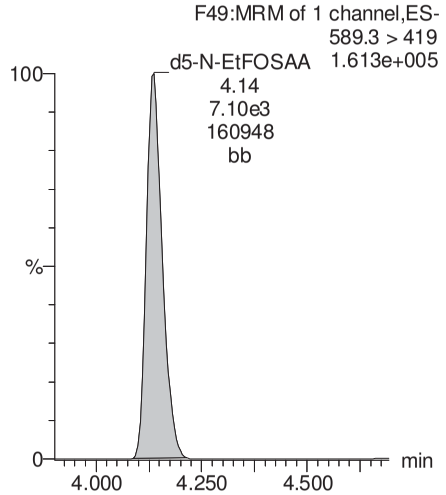
PFTeDA



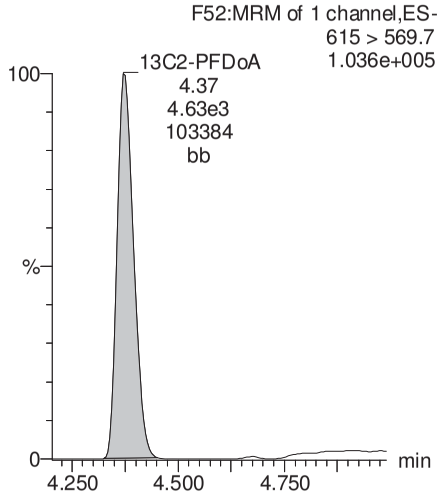
d3-N-MeFOSAA



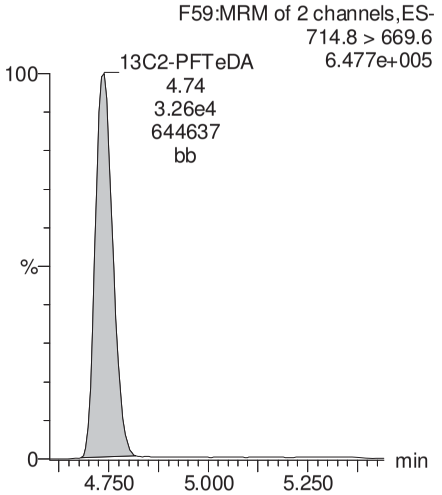
d5-N-EtFOSAA



13C2-PFDoA



13C2-PFTeDA



GM 8/12/17

Vista Analytical Laboratory

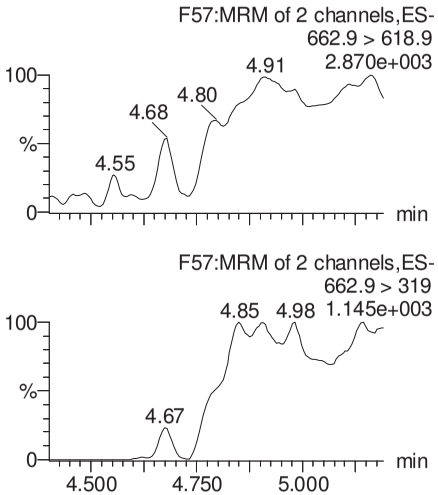
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-22.qld

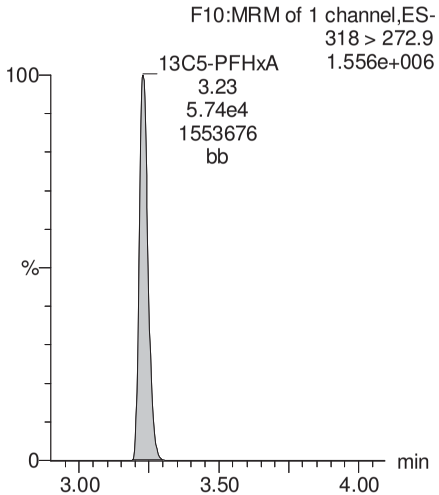
Last Altered: Saturday, August 12, 2017 20:23:09 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:25:26 Pacific Daylight Time

Name: 170811M2_22, Date: 11-Aug-2017, Time: 22:10:08, ID: 1700922-04RE1 FRB03-20170721 0.11017, Description: FRB03-20170721

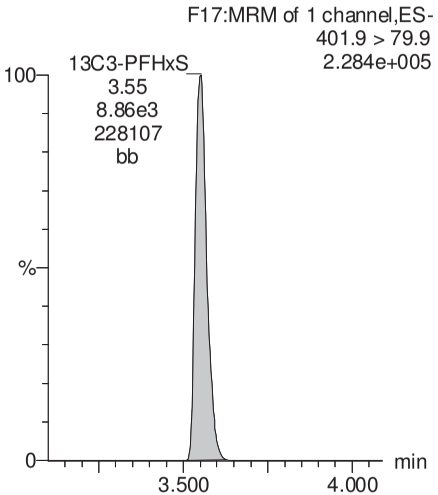
PFTrDA



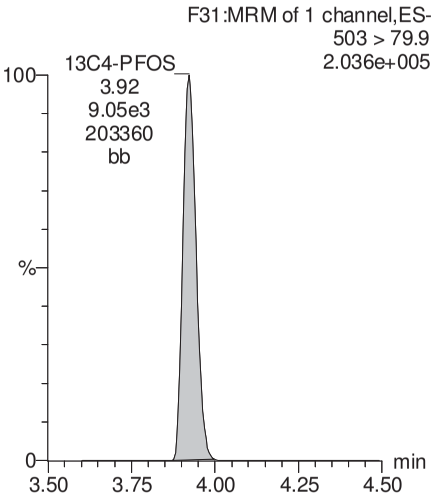
13C5-PFHxA



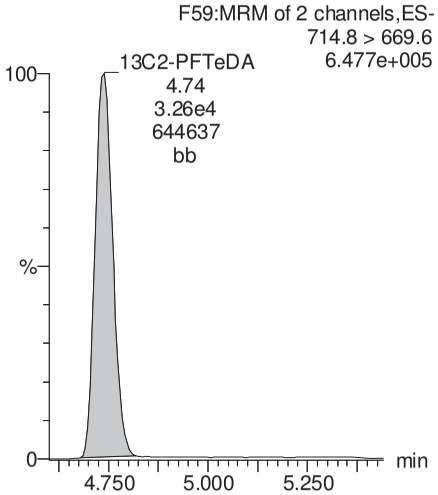
13C3-PFHxS



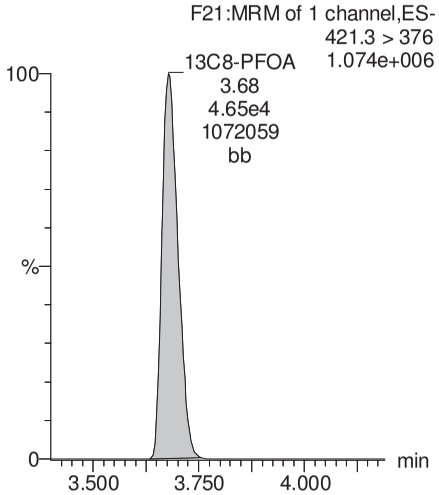
13C4-PFOS



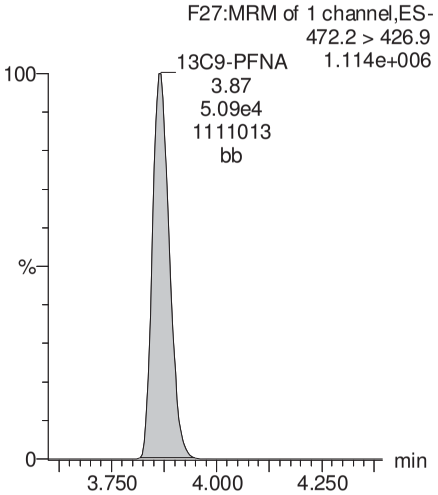
13C2-PFTeDA



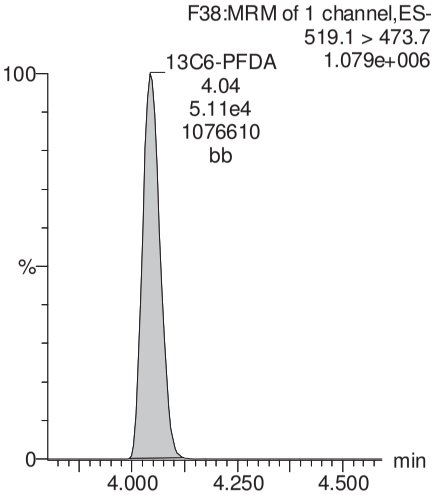
13C8-PFOA



13C9-PFNA



13C6-PFDA



GM 8/12/17

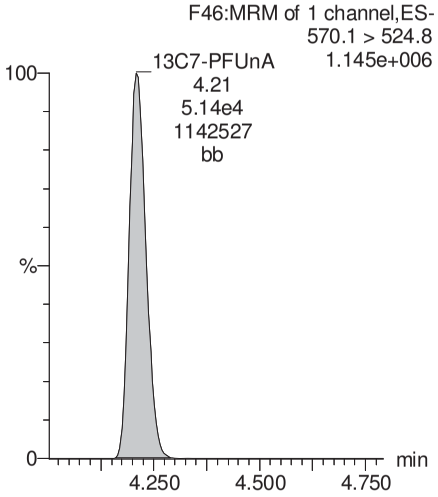
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-22.qld

Last Altered: Saturday, August 12, 2017 20:23:09 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:25:26 Pacific Daylight Time

Name: 170811M2_22, Date: 11-Aug-2017, Time: 22:10:08, ID: 1700922-04RE1 FRB03-20170721 0.11017, Description: FRB03-20170721

13C7-PFUnA



GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-23.qld

Last Altered: Saturday, August 12, 2017 20:27:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:28:14 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_23, Date: 11-Aug-2017, Time: 22:20:54, ID: 1700922-05RE1 RB08-20170720 0.11893, Description: RB08-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	3	PFBS	299 > 79.7		5.55e3	0.122		3.06					
2	4	PFHxA	313.2 > 268.9		1.60e4	0.122		3.26					
3	6	PFHxS	398.9 > 79.6	1.84e1	3.61e3	0.122		3.58	3.54	0.0638	0.864		
4	8	PFOA	413 > 368.7		4.70e4	0.122		3.71					Use only
5	10	PFNA	462.9 > 418.8		3.95e4	0.122		3.90					
6	12	PFOS	499 > 79.9		8.98e3	0.122		3.96					
7	13	PFDA	513 > 468.8		4.19e4	0.122		4.08					
8	15	N-MeFOSAA	570.1 > 419		6.91e3	0.122		4.11					
9	16	N-EtFOSAA	584.2 > 419		6.76e3	0.122		4.18					
10	17	PFUnA	562.9 > 518.9		3.89e4	0.122		4.25					
11	19	PFDoA	612.9 > 318.8		4.63e3	0.122		4.42					

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-23.qld

Last Altered: Saturday, August 12, 2017 20:27:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:28:29 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_23, Date: 11-Aug-2017, Time: 22:20:54, ID: 1700922-05RE1 RB08-20170720 0.11893, Description: RB08-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		4.63e3	0.122		4.59				
2	22	PFTeDA	712.9 > 668.8		3.25e4	0.122		4.78				
3	30	13C3-PFBS	302 > 98.8	5.55e3	5.08e4	0.122	0.033	3.06	3.01	0.546	136	132.9
4	31	13C2-PFHxA	315 > 269.8	1.60e4	5.08e4	0.122	0.304	3.26	3.23	1.57	42.5	103.7
5	33	18O2-PFHxS	403 > 102.6	3.61e3	8.80e3	0.122	0.417	3.58	3.55	5.13	101	98.4
6	35	13C2-PFOA	414.9 > 369.7	4.70e4	4.04e4	0.122	1.132	3.71	3.68	14.6	105	102.9
7	36	13C5-PFNA	468.2 > 422.9	3.95e4	5.17e4	0.122	0.946	3.90	3.87	9.53	82.6	80.6

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-23.qld

Last Altered: Saturday, August 12, 2017 20:27:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:28:50 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_23, Date: 11-Aug-2017, Time: 22:20:54, ID: 1700922-05RE1 RB08-20170720 0.11893, Description: RB08-20170720

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	38	13C8-PFOS	507 > 79.9	8.98e3	8.18e3	0.122	1.040	3.96	3.92	13.7	108	105.5
2	39	13C2-PFDA	515.1 > 469.9	4.19e4	4.86e4	0.122	0.971	4.08	4.05	10.8	90.9	88.8
3	41	d3-N-MeFOSAA	573.3 > 419	6.91e3	5.38e4	0.122	0.018	4.11	4.07	1.60	738	55.5
4	42	d5-N-EtFOSAA	589.3 > 419	6.76e3	5.38e4	0.122	0.018	4.18	4.14	1.57	705	53.0
5	43	13C2-PFUnA	565 > 519.8	3.89e4	5.38e4	0.122	1.085	4.25	4.21	9.03	68.2	66.6
6	44	13C2-PFDoA	615 > 569.7	4.63e3	5.38e4	0.122	0.123	4.42	4.38	1.08	71.5	69.9
7	46	13C2-PFTeDA	714.8 > 669.6	3.25e4	5.38e4	0.122	0.798	4.78	4.74	7.55	77.5	75.7
8	52	13C5-PFHxA	318 > 272.9	5.08e4	5.08e4	0.122	1.000	3.26	3.23	5.00	41.0	100.0
9	53	13C3-PFHxS	401.9 > 79.9	8.80e3	8.80e3	0.122	1.000	3.58	3.55	12.5	102	100.0
10	54	13C8-PFOA	421.3 > 376	4.04e4	4.04e4	0.122	1.000	3.71	3.68	12.5	102	100.0
11	55	13C9-PFNA	472.2 > 426.9	5.17e4	5.17e4	0.122	1.000	3.90	3.87	12.5	102	100.0
12	56	13C4-PFOS	503 > 79.9	8.18e3	8.18e3	0.122	1.000	3.96	3.92	12.5	102	100.0
13	57	13C6-PFDA	519.1 > 473.7	4.86e4	4.86e4	0.122	1.000	4.08	4.05	12.5	102	100.0
14	58	13C7-PFUnA	570.1 > 524.8	5.38e4	5.38e4	0.122	1.000	4.25	4.21	12.5	102	100.0
15	59	Total PFBS	299 > 79.7	0.00e0	5.55e3	0.122		3.06		0.000		
16	60	Total PFHxS	398.9 > 79.6	1.84e1	3.61e3	0.122		3.58		0.0638	0.864	
17	61	Total PFOA	413 > 368.7	0.00e0	4.70e4	0.122		3.71		0.000		
18	62	Total PFOS	499 > 79.9	0.00e0	8.98e3	0.122		3.96		0.000		
19	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	6.91e3	0.122		4.11		0.000		
20	64	Total N-EtFOSAA	584.2 > 419	0.00e0	6.76e3	0.122		4.18		0.000		

GM 8/12/17

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-23.qld

Last Altered: Saturday, August 12, 2017 20:27:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 20:28:50 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_23, Date: 11-Aug-2017, Time: 22:20:54, ID: 1700922-05RE1 RB08-20170720 0.11893, Description: RB08-20170720

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	3.54	18.426	3611.107	0.064	MM	0.9

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7			47015.367		MM-I	

Total PFOS

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

Total N-Me-FOSAA

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

Total N-EtFOSAA

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

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-23.qld

Last Altered: Saturday, August 12, 2017 20:27:33 Pacific Daylight Time
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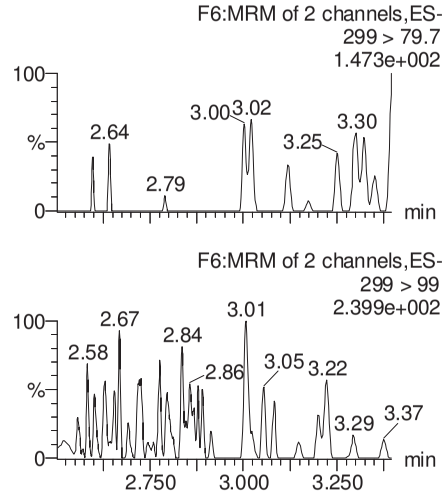
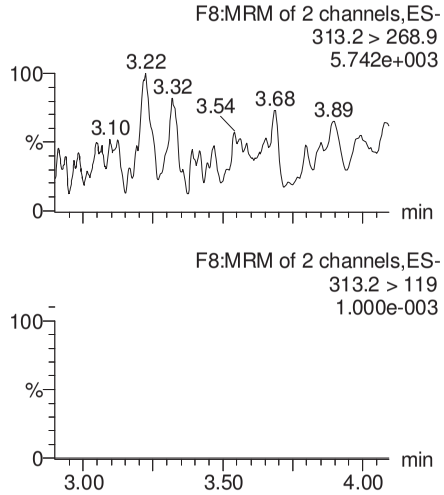
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_23, Date: 11-Aug-2017, Time: 22:20:54, ID: 1700922-05RE1 RB08-20170720 0.11893, Description: RB08-20170720

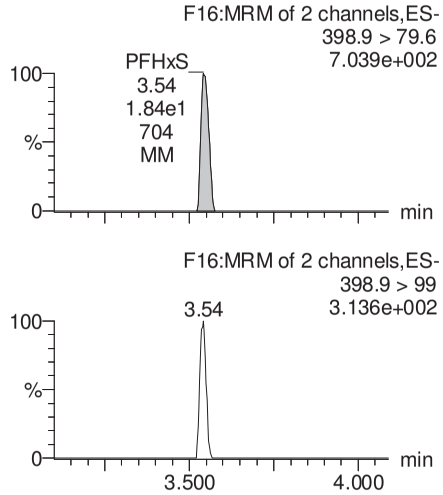
Total PFBS



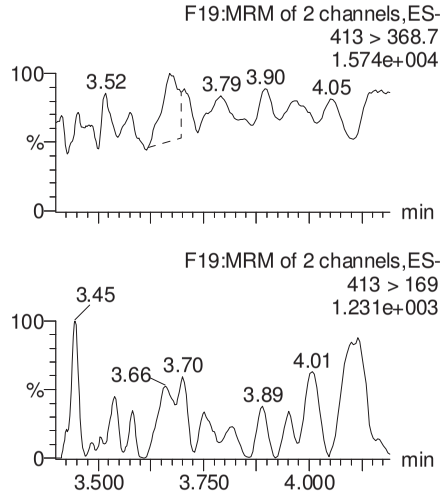
PFHxA



Total PFHxS



Total PFOA



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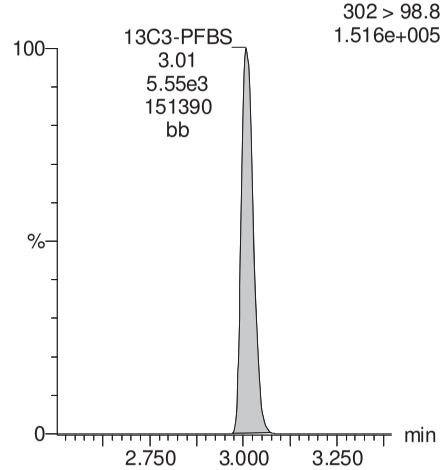

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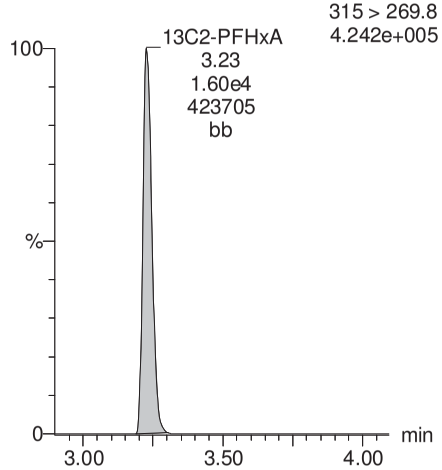

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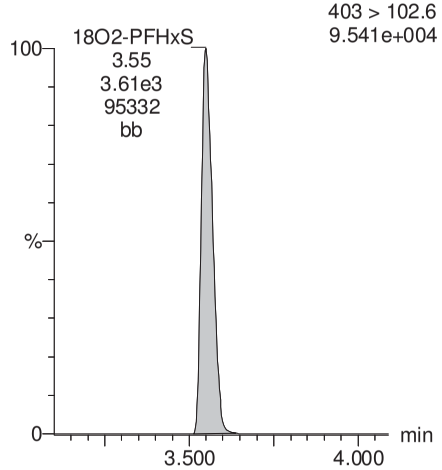

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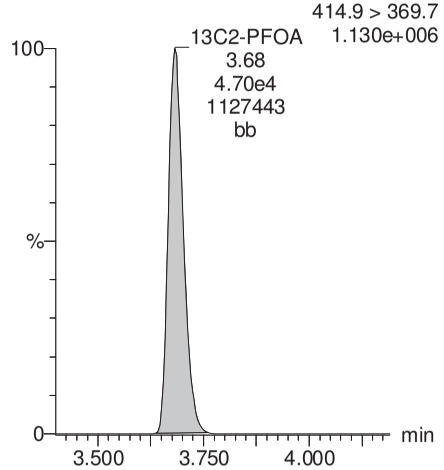

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-23.qld

Last Altered: Saturday, August 12, 2017 20:27:33 Pacific Daylight Time
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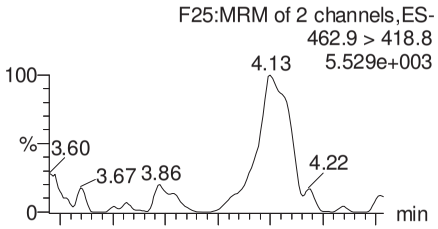
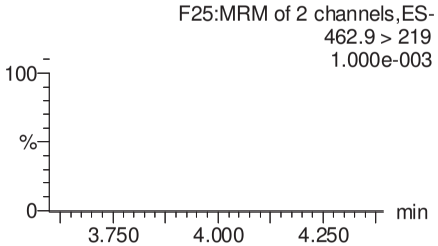
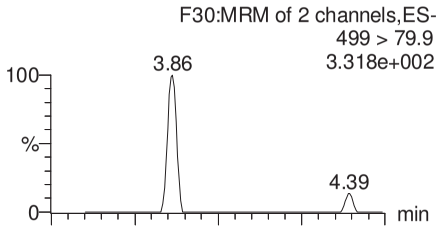
Name: 170811M2_23, Date: 11-Aug-2017, Time: 22:20:54, ID: 1700922-05RE1 RB08-20170720 0.11893, Description: RB08-20170720

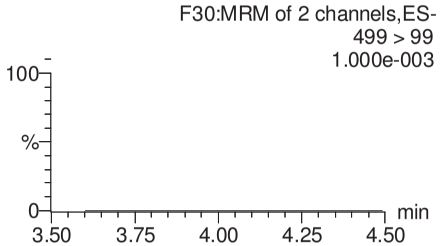
PFNA





Total PFOS





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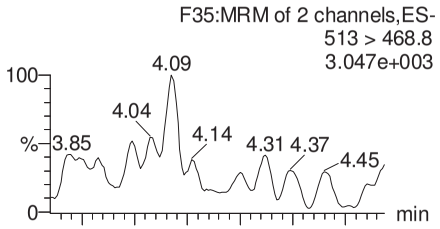

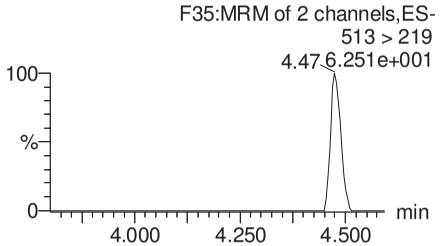

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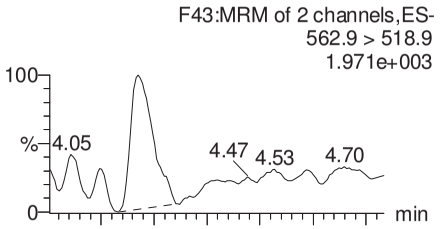
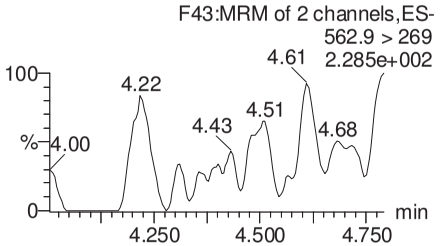
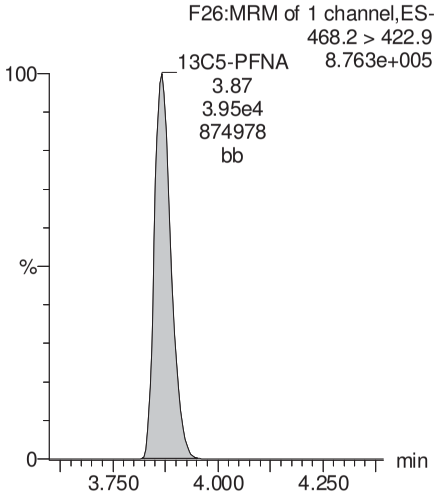
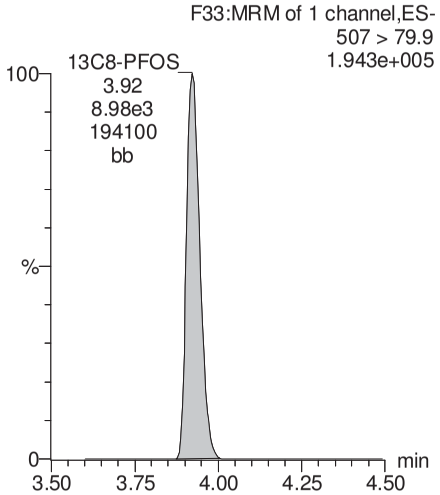




13C5-PFNA



13C8-PFOS



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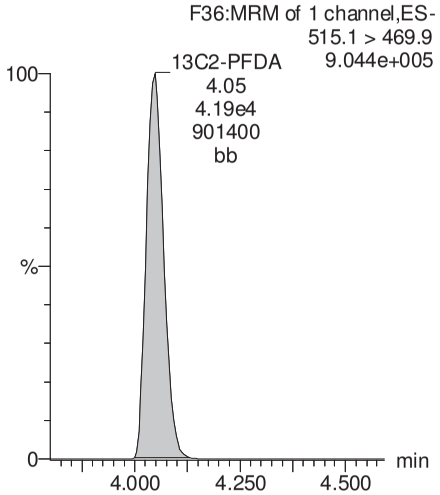

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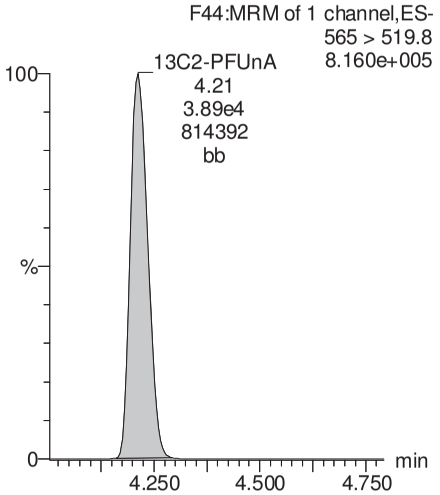

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-23.qld

Last Altered: Saturday, August 12, 2017 20:27:33 Pacific Daylight Time
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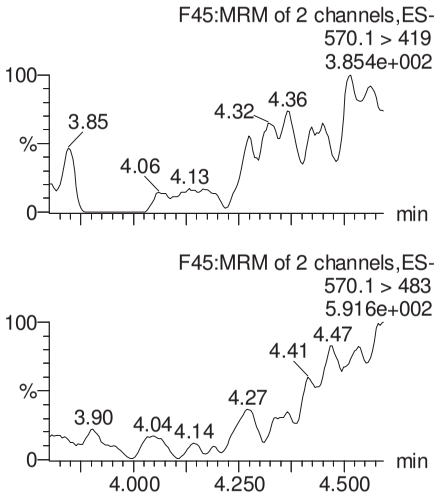
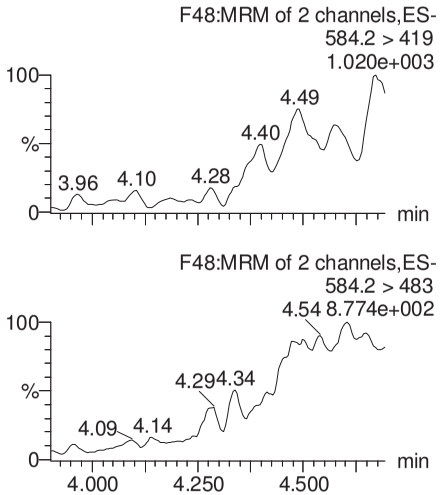
Name: 170811M2_23, Date: 11-Aug-2017, Time: 22:20:54, ID: 1700922-05RE1 RB08-20170720 0.11893, Description: RB08-20170720

N-MeFOSAA



N-EtFOSAA



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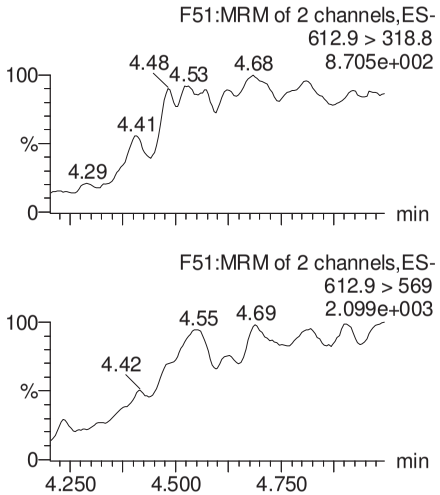

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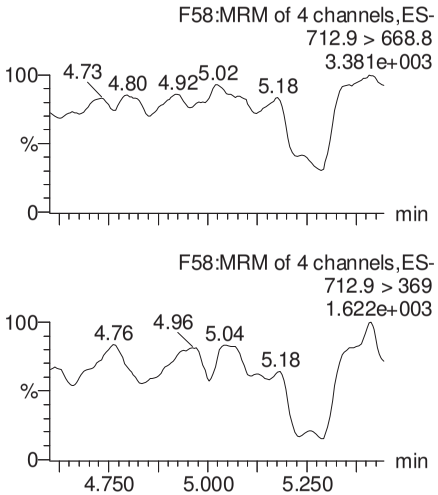

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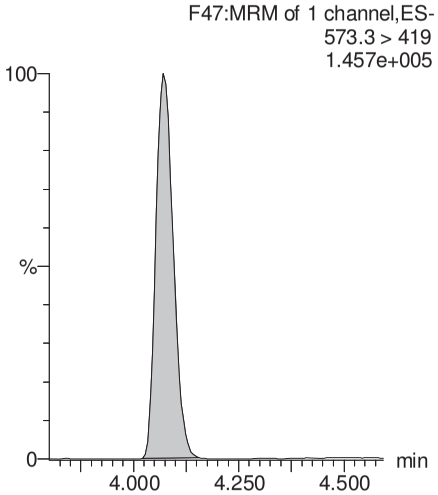

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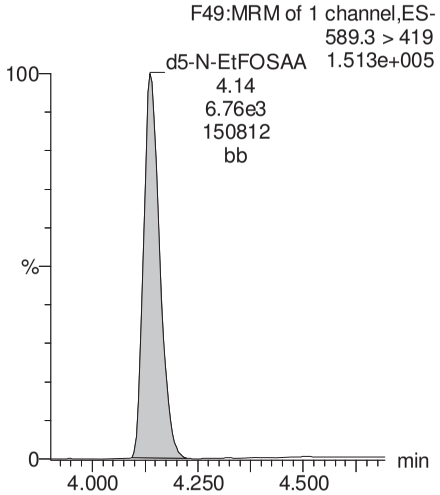

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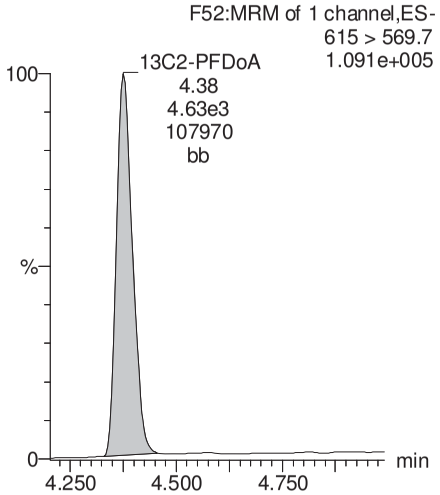

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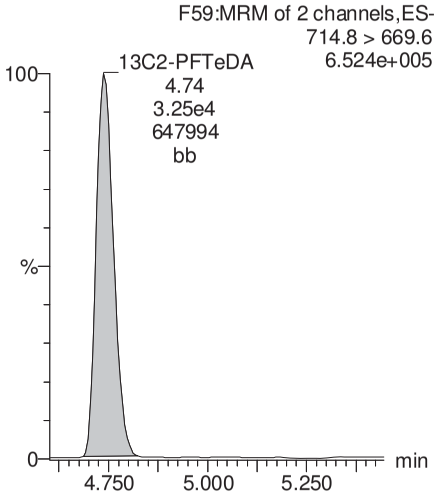

GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/15/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-23.qld

Last Altered: Saturday, August 12, 2017 20:27:33 Pacific Daylight Time
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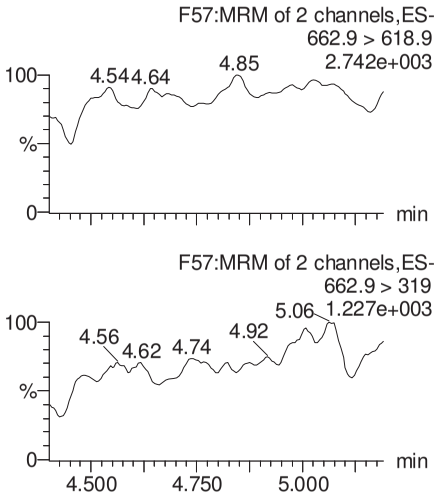
Name: 170811M2_23, Date: 11-Aug-2017, Time: 22:20:54, ID: 1700922-05RE1 RB08-20170720 0.11893, Description: RB08-20170720

PFTrDA



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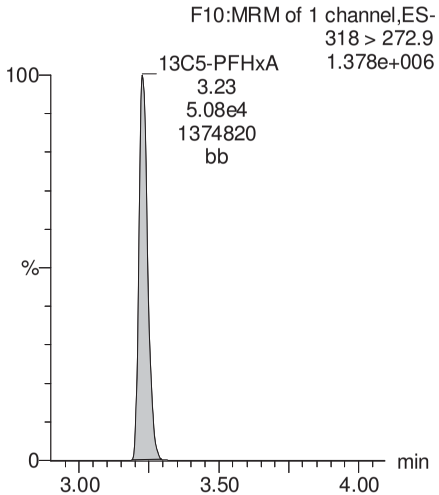

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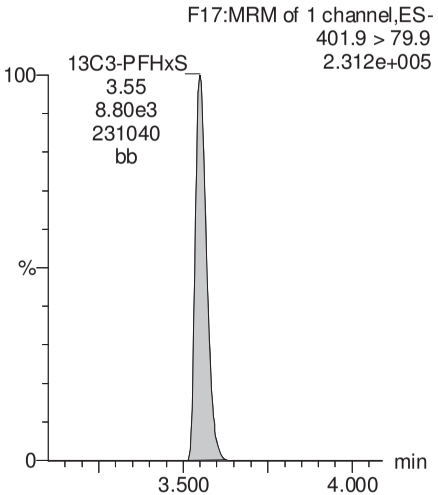

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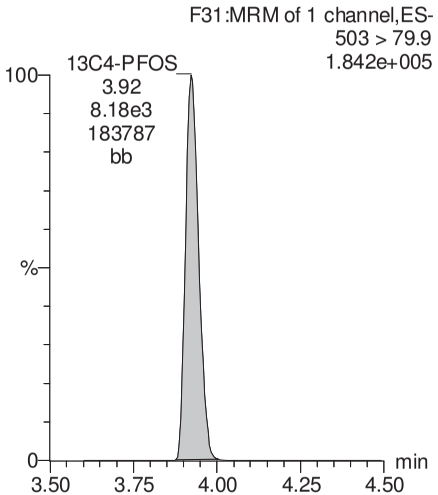

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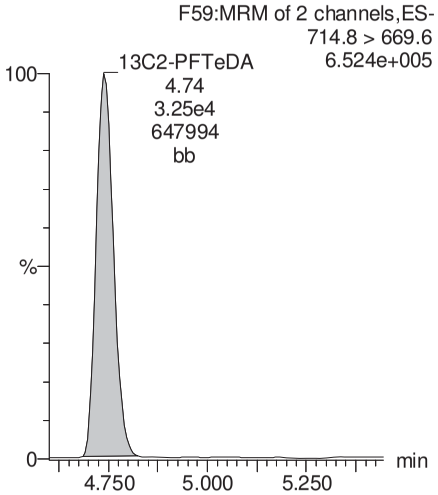

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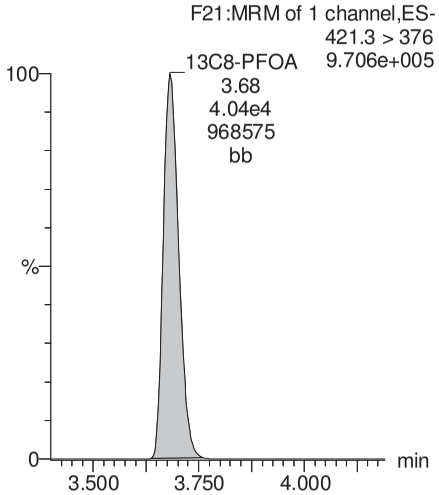

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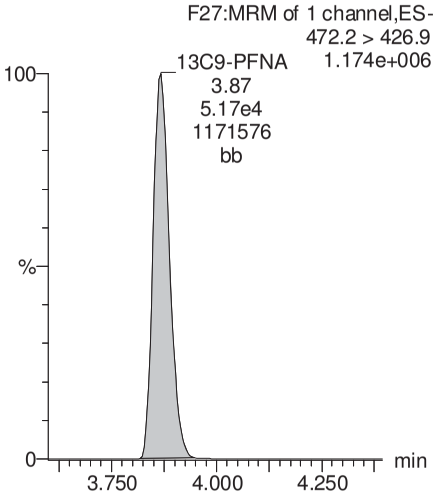
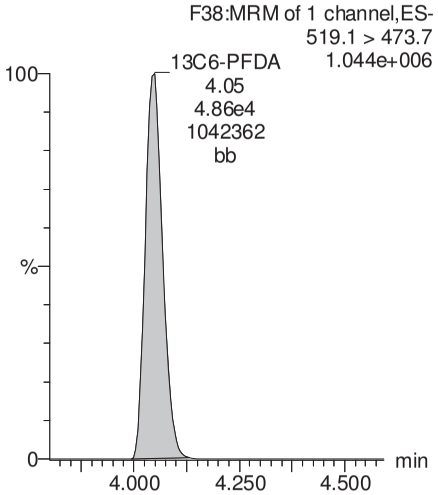


13C6-PFDA



GM 8/12/17

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Last Altered: Saturday, August 12, 2017 20:27:33 Pacific Daylight Time
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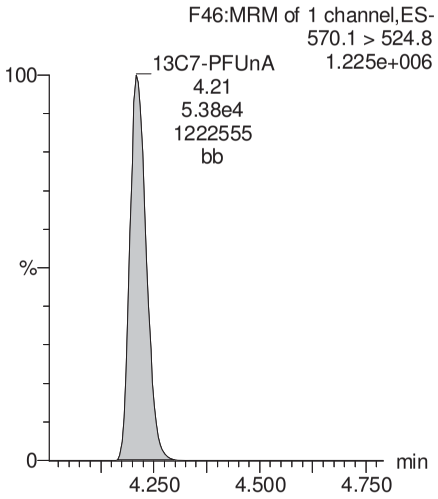
Name: 170811M2_23, Date: 11-Aug-2017, Time: 22:20:54, ID: 1700922-05RE1 RB08-20170720 0.11893, Description: RB08-20170720

13C7-PFUnA



GM 8/12/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-24.qld

Last Altered: Tuesday, August 15, 2017 11:33:21 Pacific Daylight Time
Printed: Thursday, August 17, 2017 13:22:07 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_24, Date: 11-Aug-2017, Time: 22:31:33, ID: 1700922-06RE1 RB09-20170721 0.11676, Description: RB09-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	3	PFBS	299 > 79.7		5.45e3	0.120		3.06					
2	4	PFHxA	313.2 > 268.9		1.56e4	0.120		3.26					
3	5	PFHpA	363 > 318.9		4.08e4	0.120		3.51					
4	6	PFHxS	398.9 > 79.6	4.95e0	3.46e3	0.120		3.58	3.56	0.0179	0.663		
5	8	PFOA	413 > 368.7		4.43e4	0.120		3.71					Use only
6	10	PFNA	462.9 > 418.8		4.04e4	0.120		3.90					
7	12	PFOS	499 > 79.9		9.31e3	0.120		3.96					
8	13	PFDA	513 > 468.8		4.12e4	0.120		4.08					
9	15	N-MeFOSAA	570.1 > 419		7.58e3	0.120		4.11					
10	16	N-EtFOSAA	584.2 > 419		7.52e3	0.120		4.18					
11	17	PFUnA	562.9 > 518.9		3.99e4	0.120		4.25					
12	19	PFDoA	612.9 > 318.8		4.63e3	0.120		4.42					

GM 8/17/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-24.qld

Last Altered: Tuesday, August 15, 2017 11:33:21 Pacific Daylight Time
Printed: Thursday, August 17, 2017 13:22:19 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_24, Date: 11-Aug-2017, Time: 22:31:33, ID: 1700922-06RE1 RB09-20170721 0.11676, Description: RB09-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	21	PFTrDA	662.9 > 618.9		4.63e3	0.120		4.59				
2	22	PFTeDA	712.9 > 668.8		3.01e4	0.120		4.78				
3	30	13C3-PFBS	302 > 98.8	5.45e3	5.51e4	0.120	0.033	3.06	3.01	0.495	125	120.4
4	31	13C2-PFHxA	315 > 269.8	1.56e4	5.51e4	0.120	0.304	3.26	3.23	1.42	38.8	93.2
5	32	13C4-PFHpA	367.2 > 321.8	4.08e4	5.51e4	0.120	0.384	3.51	3.48	3.71	80.4	77.3
6	33	18O2-PFHxS	403 > 102.6	3.46e3	8.44e3	0.120	0.417	3.58	3.55	5.13	102	98.4
7	35	13C2-PFOA	414.9 > 369.7	4.43e4	4.41e4	0.120	1.132	3.71	3.68	12.6	92.3	88.8
8	36	13C5-PFNA	468.2 > 422.9	4.04e4	5.20e4	0.120	0.946	3.90	3.87	9.72	85.5	82.2
9	38	13C8-PFOS	507 > 79.9	9.31e3	8.46e3	0.120	1.040	3.96	3.92	13.8	110	105.8
10	39	13C2-PFDA	515.1 > 469.9	4.12e4	5.27e4	0.120	0.971	4.08	4.05	9.77	83.7	80.5

GM 8/17/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-24.qld

Last Altered: Tuesday, August 15, 2017 11:33:21 Pacific Daylight Time
Printed: Thursday, August 17, 2017 13:22:34 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_24, Date: 11-Aug-2017, Time: 22:31:33, ID: 1700922-06RE1 RB09-20170721 0.11676, Description: RB09-20170721

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	41	d3-N-MeFOSAA	573.3 > 419	7.58e3	4.70e4	0.120	0.018	4.11	4.07	2.01	942	69.7
2	42	d5-N-EtFOSAA	589.3 > 419	7.52e3	4.70e4	0.120	0.018	4.18	4.14	2.00	913	67.5
3	43	13C2-PFUnA	565 > 519.8	3.99e4	4.70e4	0.120	1.085	4.25	4.21	10.6	81.4	78.2
4	44	13C2-PFDoA	615 > 569.7	4.63e3	4.70e4	0.120	0.123	4.42	4.38	1.23	83.1	79.9
5	46	13C2-PFTeDA	714.8 > 669.6	3.01e4	4.70e4	0.120	0.798	4.78	4.74	8.01	83.5	80.3
6	52	13C5-PFHxA	318 > 272.9	5.51e4	5.51e4	0.120	1.000	3.26	3.23	5.00	41.6	100.0
7	53	13C3-PFHxS	401.9 > 79.9	8.44e3	8.44e3	0.120	1.000	3.58	3.55	12.5	104	100.0
8	54	13C8-PFOA	421.3 > 376	4.41e4	4.41e4	0.120	1.000	3.71	3.68	12.5	104	100.0
9	55	13C9-PFNA	472.2 > 426.9	5.20e4	5.20e4	0.120	1.000	3.90	3.87	12.5	104	100.0
10	56	13C4-PFOS	503 > 79.9	8.46e3	8.46e3	0.120	1.000	3.96	3.93	12.5	104	100.0
11	57	13C6-PFDA	519.1 > 473.7	5.27e4	5.27e4	0.120	1.000	4.08	4.05	12.5	104	100.0
12	58	13C7-PFUnA	570.1 > 524.8	4.70e4	4.70e4	0.120	1.000	4.25	4.21	12.5	104	100.0
13	59	Total PFBS	299 > 79.7	0.00e0	5.45e3	0.120		3.06		0.000		
14	60	Total PFHxS	398.9 > 79.6	4.95e0	3.46e3	0.120		3.58		0.0179	0.663	
15	61	Total PFOA	413 > 368.7	0.00e0	4.43e4	0.120		3.71		0.000		
16	62	Total PFOS	499 > 79.9	0.00e0	9.31e3	0.120		3.96		0.000		
17	63	Total N-Me-FOSAA	570.1 > 419	0.00e0	7.58e3	0.120		4.11		0.000		
18	64	Total N-EtFOSAA	584.2 > 419	0.00e0	7.52e3	0.120		4.18		0.000		

GM 8/17/17

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-24.qld

Last Altered: Tuesday, August 15, 2017 11:33:21 Pacific Daylight Time
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Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_24, Date: 11-Aug-2017, Time: 22:31:33, ID: 1700922-06RE1 RB09-20170721 0.11676, Description: RB09-20170721

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	3.56	4.947	3461.511	0.018	MM	0.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	8	PFOA	413 > 368.7			44332.949		MM-I	

Total PFOS

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

Total N-Me-FOSAA

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

Total N-EtFOSAA

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

GM 8/17/17

Vista Analytical Laboratory

Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-24.qld

Last Altered: Tuesday, August 15, 2017 11:33:21 Pacific Daylight Time
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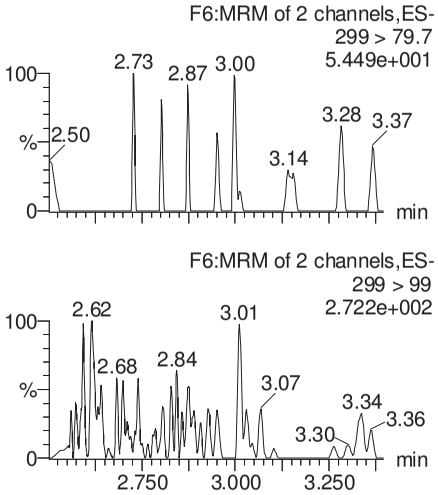
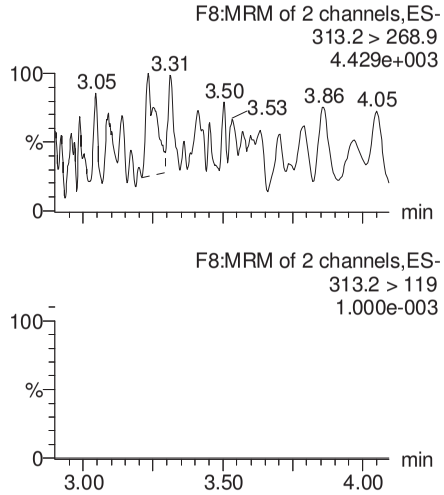
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_24, Date: 11-Aug-2017, Time: 22:31:33, ID: 1700922-06RE1 RB09-20170721 0.11676, Description: RB09-20170721

Total PFBS



PFHxA



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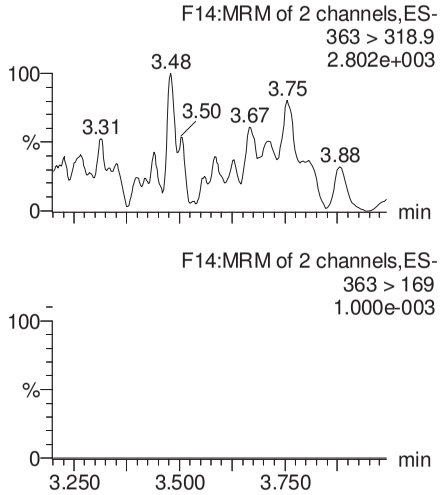
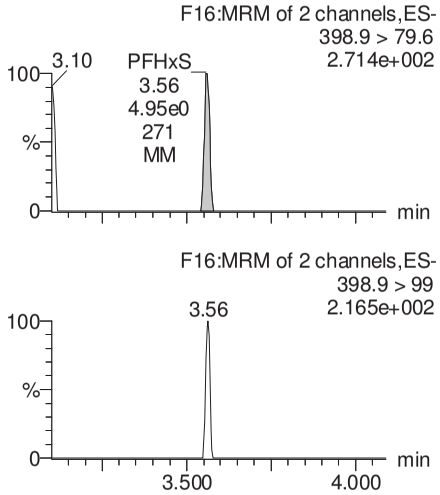


Total PFHxS



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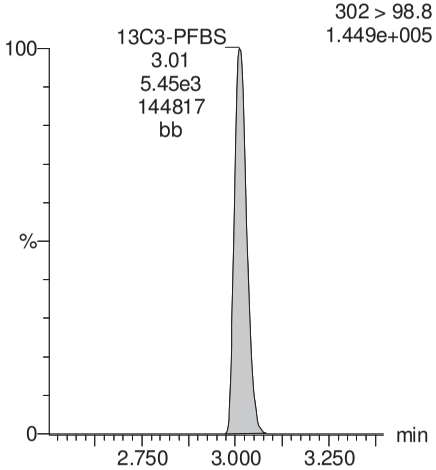

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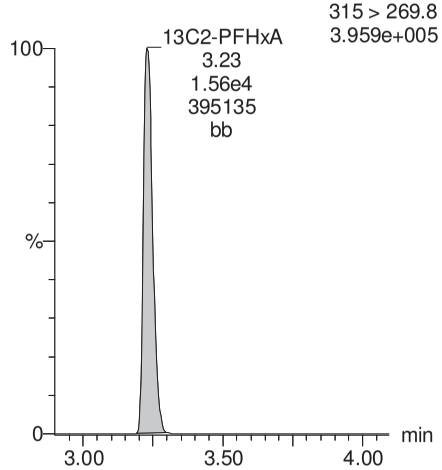

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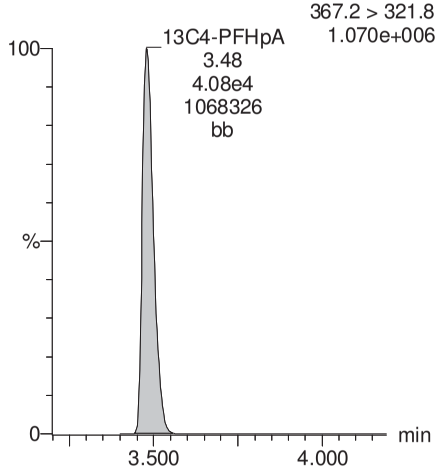

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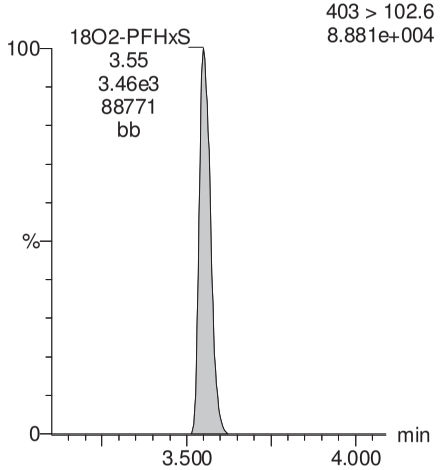


GM 8/17/17

Vista Analytical Laboratory

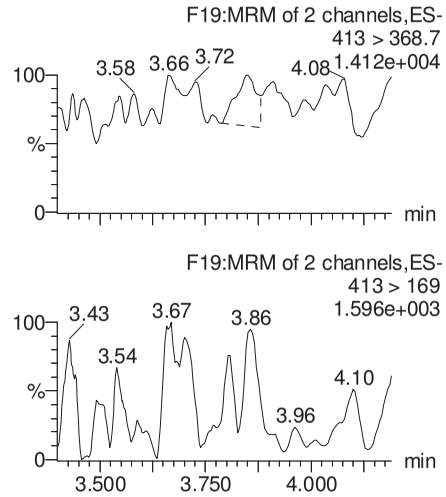
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-24.qld

Last Altered: Tuesday, August 15, 2017 11:33:21 Pacific Daylight Time
Printed: Thursday, August 17, 2017 13:22:34 Pacific Daylight Time

Name: 170811M2_24, Date: 11-Aug-2017, Time: 22:31:33, ID: 1700922-06RE1 RB09-20170721 0.11676, Description: RB09-20170721

Total PFOA



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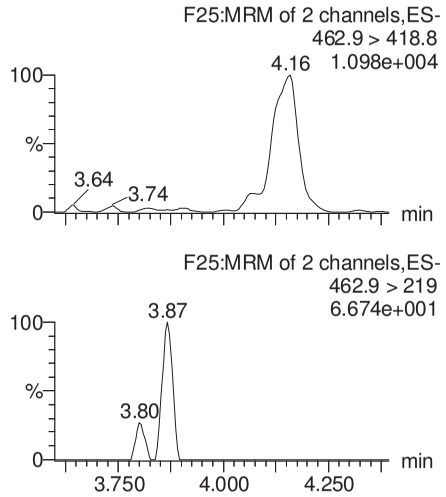
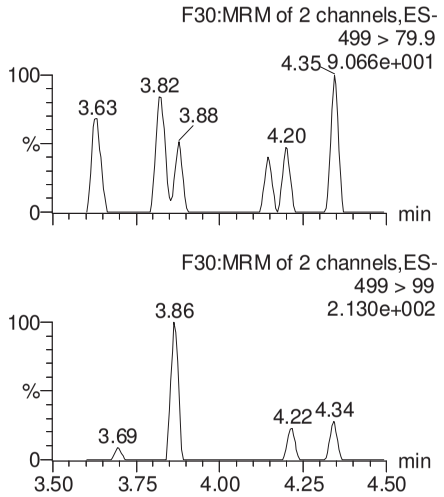


Total PFOS



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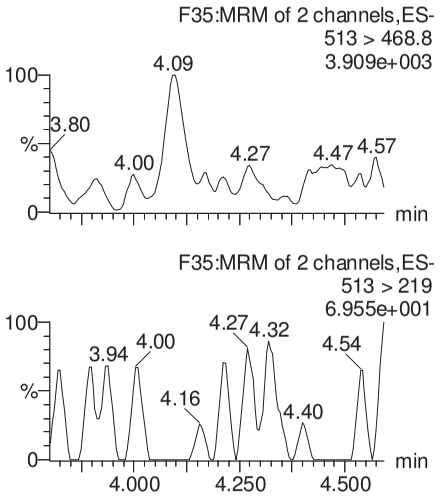

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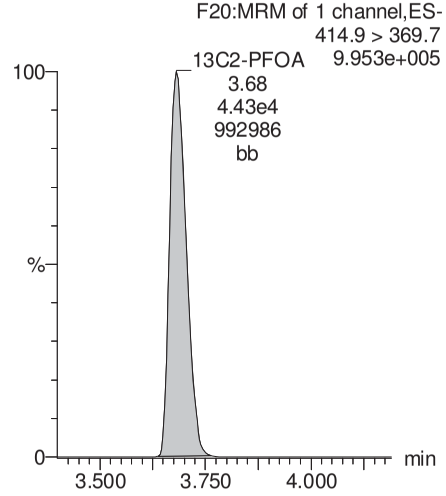

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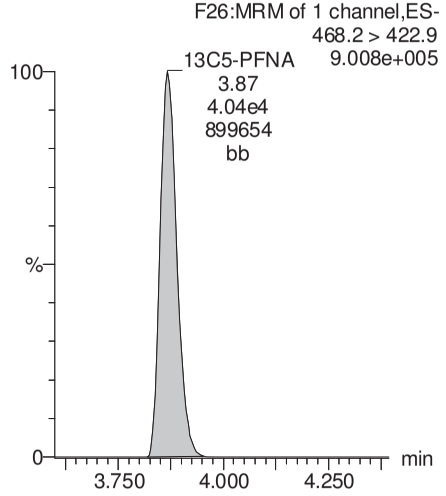

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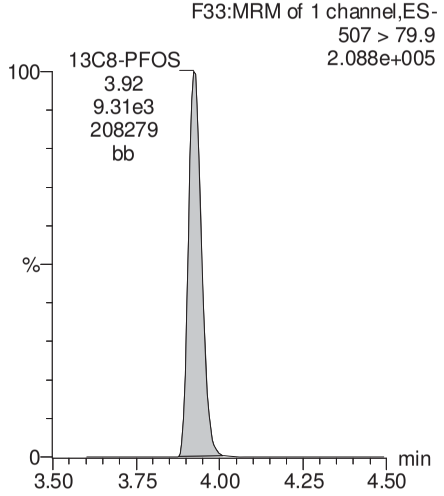

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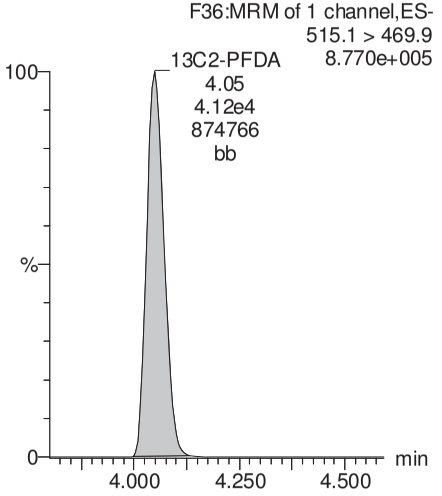


GM 8/17/17

Vista Analytical Laboratory

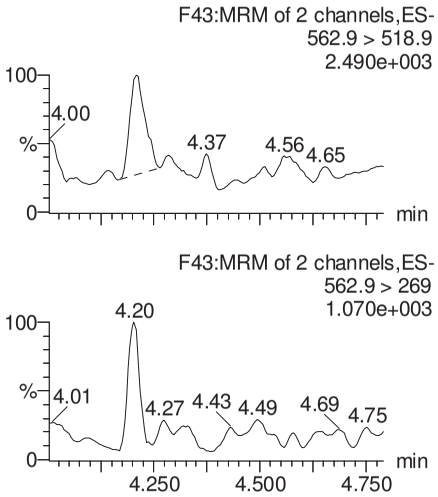
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-24.qld

Last Altered: Tuesday, August 15, 2017 11:33:21 Pacific Daylight Time
Printed: Thursday, August 17, 2017 13:22:34 Pacific Daylight Time

Name: 170811M2_24, Date: 11-Aug-2017, Time: 22:31:33, ID: 1700922-06RE1 RB09-20170721 0.11676, Description: RB09-20170721

PFUnA



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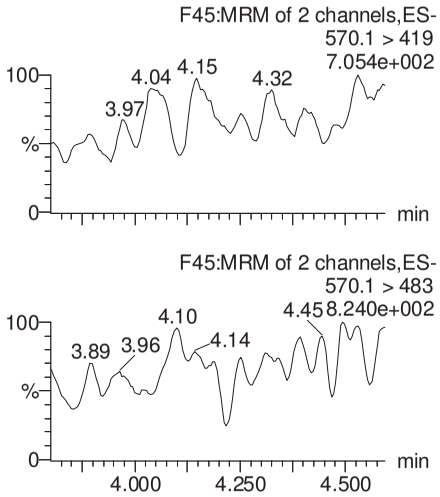

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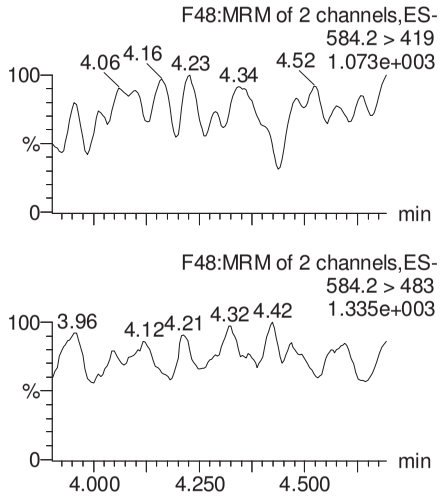

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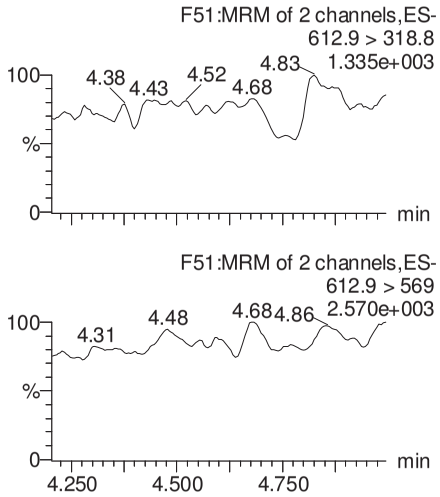

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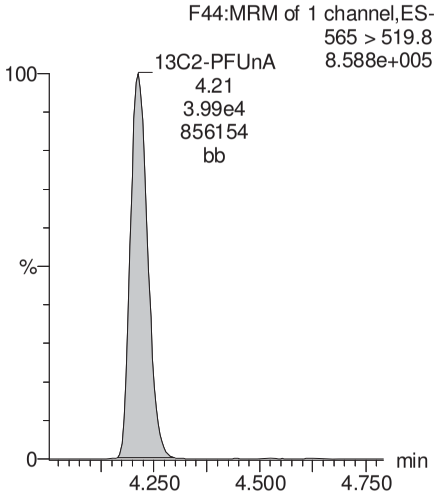

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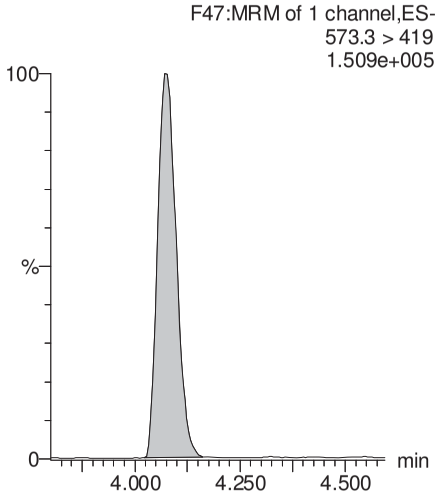

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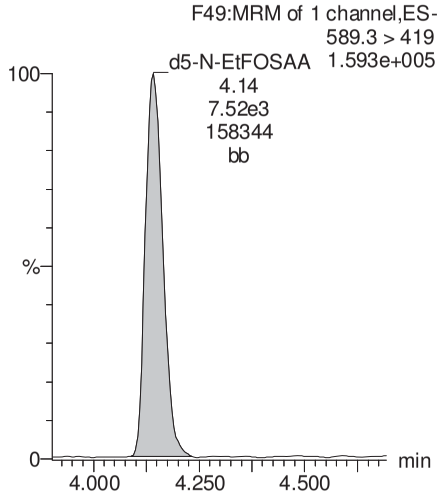

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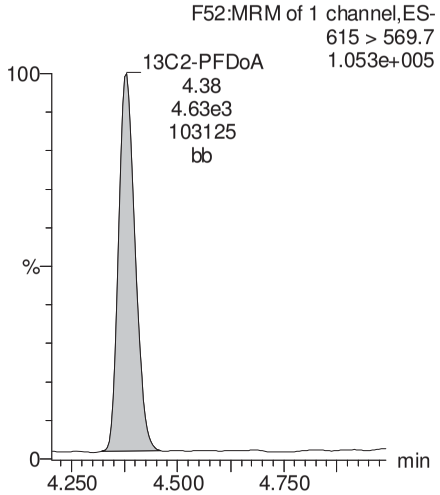


GM 8/17/17

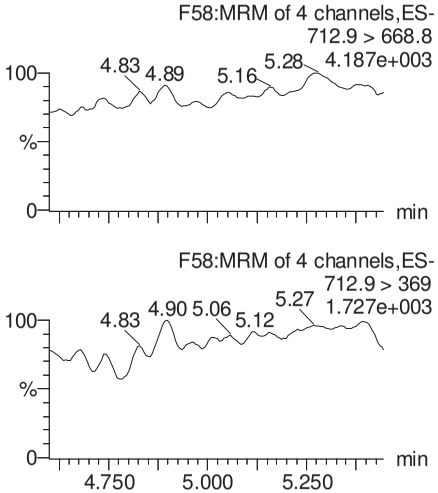
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-24.qld

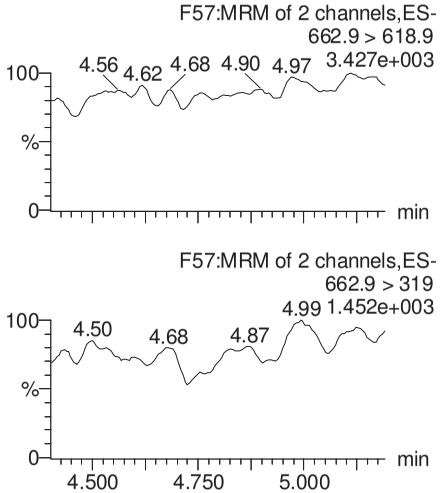
Last Altered: Tuesday, August 15, 2017 11:33:21 Pacific Daylight Time
Printed: Thursday, August 17, 2017 13:22:34 Pacific Daylight Time

Name: 170811M2_24, Date: 11-Aug-2017, Time: 22:31:33, ID: 1700922-06RE1 RB09-20170721 0.11676, Description: RB09-20170721

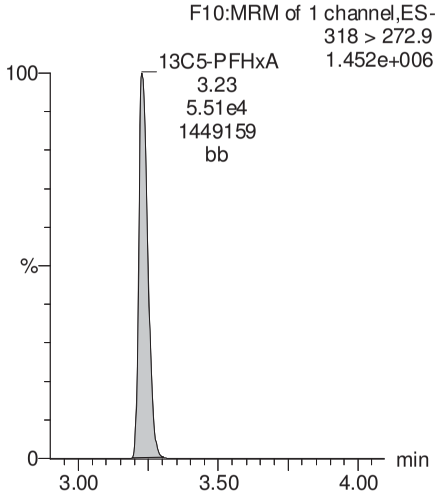
PFTeDA



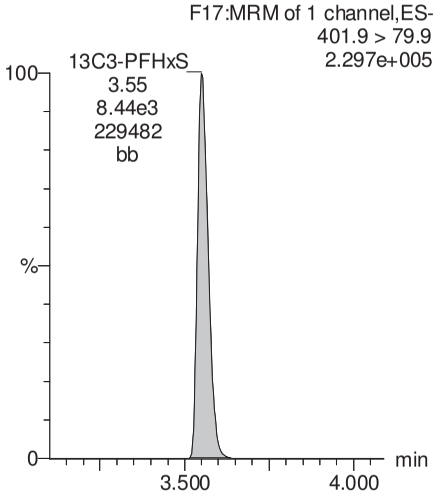
PFTrDA



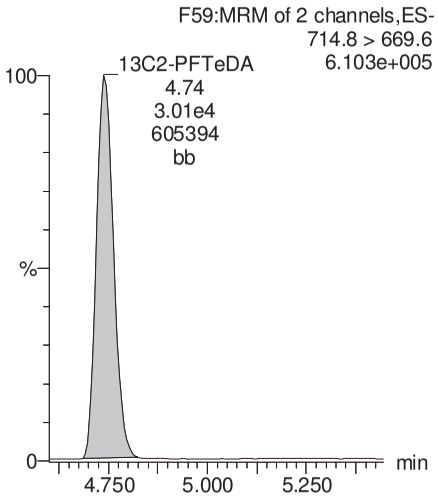
13C5-PFHxA



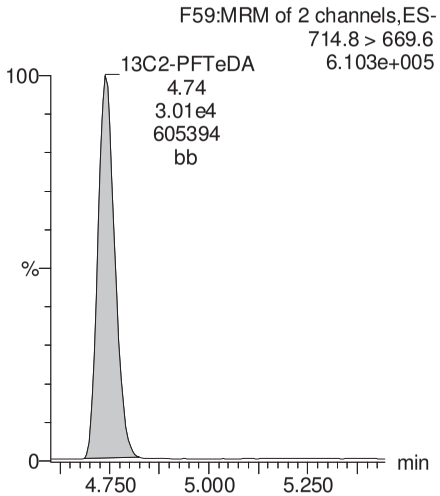
13C3-PFHxS



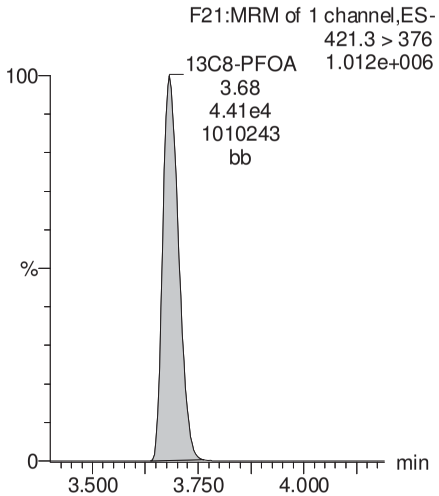
13C2-PFTeDA



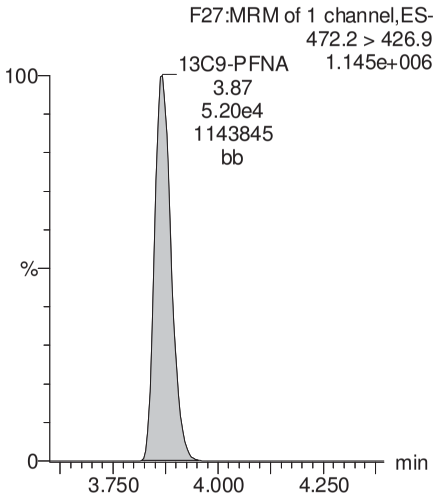
13C2-PFTeDA



13C8-PFOA



13C9-PFNA



GM 8/17/17

Vista Analytical Laboratory

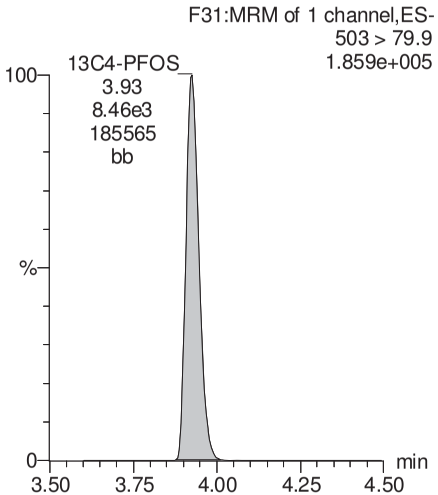
Rev'd: MM 8/17/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-24.qld

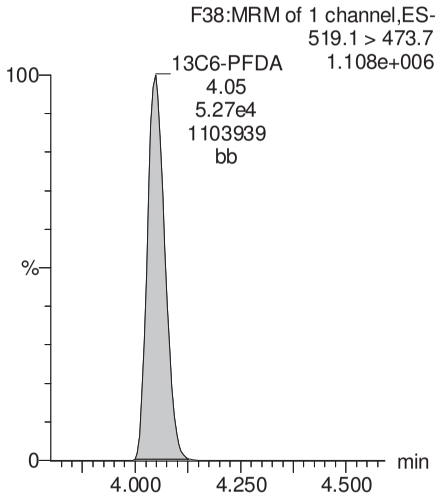
Last Altered: Tuesday, August 15, 2017 11:33:21 Pacific Daylight Time
Printed: Thursday, August 17, 2017 13:22:34 Pacific Daylight Time

Name: 170811M2_24, Date: 11-Aug-2017, Time: 22:31:33, ID: 1700922-06RE1 RB09-20170721 0.11676, Description: RB09-20170721

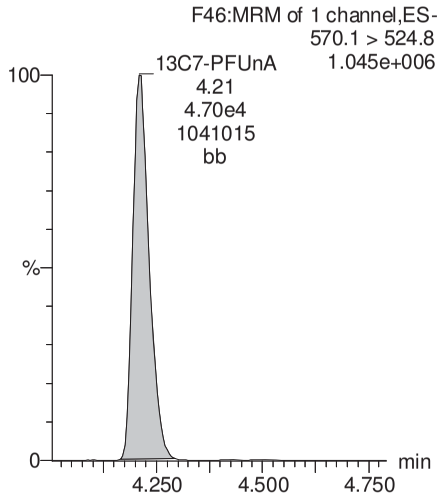
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/17/17

INJECTION INTERNAL STANDARD (IIS) AREAS,

INSTRUMENT BLANKS (IB)

AND

CONTINUTING CALIBRATION VERIFICATIONS CCV)

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_RS=only.mdb 28 Jul 2017 09:34:01
Calibration: 03 Aug 2017 10:24:06

Name: 170802M1_2, Date: 02-Aug-2017, Time: 10:40:05, ID: ST170802M1-1 PFC CS0 17H0201, Description: PFC CS0 17H0201

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	3.90e4	100.0	NO
2	2	13C3-PFHxS	ST170...	7.48e3	100.0	NO
3	3	13C8-PFOA	ST170...	5.22e4	100.0	NO
4	4	13C9-PFNA	ST170...	5.61e4	100.0	NO
5	5	13C4-PFOS	ST170...	9.60e3	100.0	NO
6	6	13C6-PFDA	ST170...	6.22e4	100.0	NO
7	7	13C7-PFUnA	ST170...	5.40e4	100.0	NO

Name: 170802M1_3, Date: 02-Aug-2017, Time: 10:50:52, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	IPA	4.60e-1	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	6.62e0	0.0	NO
7	7	13C7-PFUnA	IPA			NO

Name: 170802M1_4, Date: 02-Aug-2017, Time: 11:01:30, ID: B7G0121-BS1 OPR 0.125, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7G01...	3.98e4	101.8	NO
2	2	13C3-PFHxS	B7G01...	6.48e3	86.6	NO
3	3	13C8-PFOA	B7G01...	3.07e4	58.8	NO
4	4	13C9-PFNA	B7G01...	3.34e4	59.5	NO
5	5	13C4-PFOS	B7G01...	6.42e3	66.8	NO
6	6	13C6-PFDA	B7G01...	3.68e4	59.1	NO
7	7	13C7-PFUnA	B7G01...	3.52e4	65.0	NO

Name: 170802M1_5, Date: 02-Aug-2017, Time: 11:12:16, 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	7.11e0	0.0	NO

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_6, Date: 02-Aug-2017, Time: 11:22:55, ID: B7G0121-BLK1 Method Blank 0.125, Description: Method Blank

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G01...	4.29e4	109.8	NO
2	2 13C3-PFHxS	B7G01...	7.28e3	97.4	NO
3	3 13C8-PFOA	B7G01...	3.66e4	70.1	NO
4	4 13C9-PFNA	B7G01...	3.86e4	68.9	NO
5	5 13C4-PFOS	B7G01...	7.29e3	75.9	NO
6	6 13C6-PFDA	B7G01...	3.91e4	62.8	NO
7	7 13C7-PFUnA	B7G01...	3.85e4	71.3	NO

Name: 170802M1_7, Date: 02-Aug-2017, Time: 11:33:34, ID: B7G0121-MS1 Matrix Spike 0.11301, Description: Matrix Spike

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G01...	4.72e4	120.8	NO
2	2 13C3-PFHxS	B7G01...	8.04e3	107.5	NO
3	3 13C8-PFOA	B7G01...	4.19e4	80.3	NO
4	4 13C9-PFNA	B7G01...	4.51e4	80.5	NO
5	5 13C4-PFOS	B7G01...	7.70e3	80.2	NO
6	6 13C6-PFDA	B7G01...	4.03e4	64.7	NO
7	7 13C7-PFUnA	B7G01...	4.60e4	85.2	NO

Name: 170802M1_8, Date: 02-Aug-2017, Time: 11:44:20, ID: B7G0121-MSD1 Matrix Spike Dup 0.11225, Description: Matrix Spike Dup

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G01...	3.71e4	95.1	NO
2	2 13C3-PFHxS	B7G01...	6.30e3	84.3	NO
3	3 13C8-PFOA	B7G01...	3.37e4	64.6	NO
4	4 13C9-PFNA	B7G01...	3.90e4	69.5	NO
5	5 13C4-PFOS	B7G01...	6.40e3	66.6	NO
6	6 13C6-PFDA	B7G01...	3.87e4	62.2	NO
7	7 13C7-PFUnA	B7G01...	3.34e4	61.8	NO

Name: 170802M1_9, Date: 02-Aug-2017, Time: 11:54:58, ID: B7G0121-MS2 Matrix Spike 0.11554, Description: Matrix Spike

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G01...	5.53e3	14.2	YES
2	2 13C3-PFHxS	B7G01...	1.03e3	13.8	YES
3	3 13C8-PFOA	B7G01...	3.65e3	7.0	YES
4	4 13C9-PFNA	B7G01...	3.29e4	58.7	NO
5	5 13C4-PFOS	B7G01...	4.86e3	50.7	NO
6	6 13C6-PFDA	B7G01...	4.28e4	68.8	NO
7	7 13C7-PFUnA	B7G01...	3.60e4	66.6	NO

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_10, Date: 02-Aug-2017, Time: 12:05:47, ID: B7G0121-MSD2 Matrix Spike Dup 0.11866, Description: Matrix Spike Dup

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7G01...	3.06e3	7.8	YES
2	2	13C3-PFHxS	B7G01...	9.34e2	12.5	YES
3	3	13C8-PFOA	B7G01...	3.23e3	6.2	YES
4	4	13C9-PFNA	B7G01...	3.14e4	56.0	NO
5	5	13C4-PFOS	B7G01...	4.14e3	43.1	YES
6	6	13C6-PFDA	B7G01...	3.99e4	64.1	NO
7	7	13C7-PFUnA	B7G01...	3.79e4	70.1	NO

Name: 170802M1_11, Date: 02-Aug-2017, Time: 12:17:05, ID: 1700922-01 MH-L103-20170721 0.10565, Description: MH-L103-20170721

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	4.45e4	114.0	NO
2	2	13C3-PFHxS	17009...	7.21e3	96.4	NO
3	3	13C8-PFOA	17009...	3.93e4	75.4	NO
4	4	13C9-PFNA	17009...	4.03e4	72.0	NO
5	5	13C4-PFOS	17009...	7.63e3	79.5	NO
6	6	13C6-PFDA	17009...	4.18e4	67.1	NO
7	7	13C7-PFUnA	17009...	3.90e4	72.2	NO

Name: 170802M1_12, Date: 02-Aug-2017, Time: 12:28:21, ID: 1700922-02 MH-N104-20170721 0.11025, Description: MH-N104-20170721

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	3.71e4	95.0	NO
2	2	13C3-PFHxS	17009...	6.48e3	86.7	NO
3	3	13C8-PFOA	17009...	3.04e4	58.3	NO
4	4	13C9-PFNA	17009...	3.25e4	58.0	NO
5	5	13C4-PFOS	17009...	6.16e3	64.1	NO
6	6	13C6-PFDA	17009...	3.49e4	56.2	NO
7	7	13C7-PFUnA	17009...	3.30e4	61.0	NO

Name: 170802M1_13, Date: 02-Aug-2017, Time: 12:39:13, ID: 1700922-03 Upstream-Culvert-109-20170721 0.11852, Description: Upstream-Culvert-109-20170721

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	4.12e4	105.6	NO
2	2	13C3-PFHxS	17009...	6.33e3	84.7	NO
3	3	13C8-PFOA	17009...	3.62e4	69.3	NO
4	4	13C9-PFNA	17009...	4.39e4	78.3	NO
5	5	13C4-PFOS	17009...	6.16e3	64.2	NO
6	6	13C6-PFDA	17009...	3.97e4	63.8	NO
7	7	13C7-PFUnA	17009...	4.10e4	75.9	NO

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_14, Date: 02-Aug-2017, Time: 12:49:51, ID: 1700922-04 FRB03-20170721 0.11017, Description: FRB03-20170721

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.18e4	107.1	NO
2	2 13C3-PFHxS	17009...	6.33e3	84.7	NO
3	3 13C8-PFOA	17009...	3.72e4	71.3	NO
4	4 13C9-PFNA	17009...	3.61e4	64.5	NO
5	5 13C4-PFOS	17009...	6.19e3	64.5	NO
6	6 13C6-PFDA	17009...	3.73e4	60.0	NO
7	7 13C7-PFUnA	17009...	3.55e4	65.7	NO

Name: 170802M1_15, Date: 02-Aug-2017, Time: 13:00:41, ID: 1700922-05 RB08-20170720 0.11893, Description: RB08-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.00e4	102.5	NO
2	2 13C3-PFHxS	17009...	6.34e3	84.8	NO
3	3 13C8-PFOA	17009...	3.41e4	65.3	NO
4	4 13C9-PFNA	17009...	3.92e4	69.9	NO
5	5 13C4-PFOS	17009...	6.88e3	71.6	NO
6	6 13C6-PFDA	17009...	3.53e4	56.8	NO
7	7 13C7-PFUnA	17009...	3.59e4	66.4	NO

Name: 170802M1_16, Date: 02-Aug-2017, Time: 13:11:25, ID: 1700922-06 RB09-20170721 0.11676, Description: RB09-20170721

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.51e4	90.0	NO
2	2 13C3-PFHxS	17009...	6.23e3	83.3	NO
3	3 13C8-PFOA	17009...	2.89e4	55.3	NO
4	4 13C9-PFNA	17009...	3.18e4	56.8	NO
5	5 13C4-PFOS	17009...	6.34e3	66.0	NO
6	6 13C6-PFDA	17009...	3.56e4	57.3	NO
7	7 13C7-PFUnA	17009...	3.48e4	64.3	NO

Name: 170802M1_17, Date: 02-Aug-2017, Time: 13:22:03, ID: 1700925-01 I001BC43S-170724 0.12112, Description: I001BC43S-170724

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	2.64e4	67.6	NO
2	2 13C3-PFHxS	17009...	5.18e3	69.2	NO
3	3 13C8-PFOA	17009...	2.46e4	47.2	YES
4	4 13C9-PFNA	17009...	2.71e4	48.4	YES
5	5 13C4-PFOS	17009...	5.51e3	57.4	NO
6	6 13C6-PFDA	17009...	2.93e4	47.0	YES
7	7 13C7-PFUnA	17009...	2.74e4	50.8	NO

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_18, Date: 02-Aug-2017, Time: 13:32:42, ID: 1700925-02 SB01-170724 0.12178, Description: SB01-170724

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	3.62e4	92.7	NO
2	2	13C3-PFHxS	17009...	6.52e3	87.2	NO
3	3	13C8-PFOA	17009...	3.17e4	60.8	NO
4	4	13C9-PFNA	17009...	3.55e4	63.2	NO
5	5	13C4-PFOS	17009...	7.02e3	73.1	NO
6	6	13C6-PFDA	17009...	4.20e4	67.5	NO
7	7	13C7-PFUnA	17009...	3.64e4	67.3	NO

Name: 170802M1_19, Date: 02-Aug-2017, Time: 13:43:20, ID: 1700925-03 I001BC50S-170724 0.12135, Description: I001BC50S-170724

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	2.53e4	64.9	NO
2	2	13C3-PFHxS	17009...	3.93e3	52.5	NO
3	3	13C8-PFOA	17009...	2.11e4	40.5	YES
4	4	13C9-PFNA	17009...	2.96e4	52.9	NO
5	5	13C4-PFOS	17009...	5.91e3	61.5	NO
6	6	13C6-PFDA	17009...	3.23e4	51.9	NO
7	7	13C7-PFUnA	17009...	3.35e4	62.0	NO

Name: 170802M1_20, Date: 02-Aug-2017, Time: 13:53:59, ID: 1700925-04 I001MW52S-170724 0.1192, Description: I001MW52S-170724

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.17e3	13.2	YES
2	2	13C3-PFHxS	17009...	8.73e2	11.7	YES
3	3	13C8-PFOA	17009...	3.28e3	6.3	YES
4	4	13C9-PFNA	17009...	2.73e4	48.8	YES
5	5	13C4-PFOS	17009...	3.87e3	40.3	YES
6	6	13C6-PFDA	17009...	3.12e4	50.1	NO
7	7	13C7-PFUnA	17009...	3.24e4	60.0	NO

Name: 170802M1_21, Date: 02-Aug-2017, Time: 14:04:37, 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	6.15e0	0.0	YES
7	7	13C7-PFUnA	IPA	1.96e1	0.0	YES

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_22, Date: 02-Aug-2017, Time: 14:15:15, ID: ST170802M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	5.07e4	129.8	NO
2	2 13C3-PFHxS	ST170...	1.12e4	149.3	NO
3	3 13C8-PFOA	ST170...	6.44e4	123.4	NO
4	4 13C9-PFNA	ST170...	6.96e4	124.1	NO
5	5 13C4-PFOS	ST170...	1.21e4	125.5	NO
6	6 13C6-PFDA	ST170...	7.42e4	119.3	NO
7	7 13C7-PFUnA	ST170...	7.06e4	130.7	NO

Name: 170802M1_23, Date: 02-Aug-2017, Time: 14:25:57, 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	1.48e1	0.0	NO

Name: 170802M1_24, Date: 02-Aug-2017, Time: 14:36:40, ID: 1700925-05 I001MW52X-170724 0.1174, Description: I001MW52X-170724

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.22e3	13.4	YES
2	2 13C3-PFHxS	17009...	9.81e2	13.1	YES
3	3 13C8-PFOA	17009...	3.46e3	6.6	YES
4	4 13C9-PFNA	17009...	2.79e4	49.8	YES
5	5 13C4-PFOS	17009...	3.79e3	39.5	YES
6	6 13C6-PFDA	17009...	3.46e4	55.6	NO
7	7 13C7-PFUnA	17009...	3.44e4	63.6	NO

Name: 170802M1_25, Date: 02-Aug-2017, Time: 14:47:19, ID: 1700925-06 EB01-170724 0.1185, Description: EB01-170724

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.71e4	94.9	NO
2	2 13C3-PFHxS	17009...	6.30e3	84.2	NO
3	3 13C8-PFOA	17009...	3.24e4	62.1	NO
4	4 13C9-PFNA	17009...	3.68e4	65.7	NO
5	5 13C4-PFOS	17009...	6.62e3	68.9	NO
6	6 13C6-PFDA	17009...	3.52e4	56.5	NO
7	7 13C7-PFUnA	17009...	3.68e4	68.2	NO

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_26, Date: 02-Aug-2017, Time: 14:57:57, ID: 1700929-01 MATP01001 0.11834, Description: MATP01001

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	3.30e4	84.5	NO
2	2	13C3-PFHxS	17009...	5.95e3	79.5	NO
3	3	13C8-PFOA	17009...	2.67e4	51.2	NO
4	4	13C9-PFNA	17009...	2.56e4	45.6	YES
5	5	13C4-PFOS	17009...	6.17e3	64.3	NO
6	6	13C6-PFDA	17009...	3.07e4	49.4	YES
7	7	13C7-PFUnA	17009...	2.94e4	54.5	NO

Name: 170802M1_27, Date: 02-Aug-2017, Time: 15:08:55, ID: 1700929-02 MATP01002 0.1157, Description: MATP01002

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	3.43e4	88.0	NO
2	2	13C3-PFHxS	17009...	6.80e3	90.9	NO
3	3	13C8-PFOA	17009...	3.22e4	61.6	NO
4	4	13C9-PFNA	17009...	3.60e4	64.2	NO
5	5	13C4-PFOS	17009...	6.34e3	66.0	NO
6	6	13C6-PFDA	17009...	3.63e4	58.3	NO
7	7	13C7-PFUnA	17009...	3.20e4	59.1	NO

Name: 170802M1_28, Date: 02-Aug-2017, Time: 15:19:39, ID: 1700938-01 NORP08102 0.11844, Description: NORP08102

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	3.05e4	78.1	NO
2	2	13C3-PFHxS	17009...	5.50e3	73.6	NO
3	3	13C8-PFOA	17009...	2.75e4	52.7	NO
4	4	13C9-PFNA	17009...	2.78e4	49.6	YES
5	5	13C4-PFOS	17009...	5.26e3	54.7	NO
6	6	13C6-PFDA	17009...	2.71e4	43.5	YES
7	7	13C7-PFUnA	17009...	2.73e4	50.5	NO

Name: 170802M1_29, Date: 02-Aug-2017, Time: 15:30:18, ID: 1700938-02 NORP08103 0.12014, Description: NORP08103

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	3.41e4	87.4	NO
2	2	13C3-PFHxS	17009...	5.30e3	70.9	NO
3	3	13C8-PFOA	17009...	3.10e4	59.3	NO
4	4	13C9-PFNA	17009...	3.20e4	57.1	NO
5	5	13C4-PFOS	17009...	5.61e3	58.4	NO
6	6	13C6-PFDA	17009...	3.38e4	54.3	NO
7	7	13C7-PFUnA	17009...	2.64e4	48.8	YES

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_30, Date: 02-Aug-2017, Time: 15:40:56, ID: 1700938-03 NORP08104 0.11247, Description: NORP08104

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.27e4	109.3	NO
2	2 13C3-PFHxS	17009...	7.36e3	98.4	NO
3	3 13C8-PFOA	17009...	3.41e4	65.3	NO
4	4 13C9-PFNA	17009...	4.05e4	72.3	NO
5	5 13C4-PFOS	17009...	7.35e3	76.5	NO
6	6 13C6-PFDA	17009...	3.71e4	59.6	NO
7	7 13C7-PFUnA	17009...	3.32e4	61.5	NO

Name: 170802M1_31, Date: 02-Aug-2017, Time: 15:51:34, 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...	2.45e4	62.8	NO
2	2 13C3-PFHxS	17008...	4.53e3	60.6	NO
3	3 13C8-PFOA	17008...	2.10e4	40.3	YES
4	4 13C9-PFNA	17008...	2.08e4	37.2	YES
5	5 13C4-PFOS	17008...	3.62e3	37.7	YES
6	6 13C6-PFDA	17008...	1.60e4	25.6	YES
7	7 13C7-PFUnA	17008...	8.00e3	14.8	YES

Name: 170802M1_32, Date: 02-Aug-2017, Time: 16:02:12, 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...	5.74e4	146.9	NO
2	2 13C3-PFHxS	17008...	8.78e3	117.4	NO
3	3 13C8-PFOA	17008...	5.18e4	99.3	NO
4	4 13C9-PFNA	17008...	4.41e4	78.6	NO
5	5 13C4-PFOS	17008...	3.06e3	31.8	YES
6	6 13C6-PFDA	17008...	1.84e4	29.6	YES
7	7 13C7-PFUnA	17008...	5.79e3	10.7	YES

Name: 170802M1_33, Date: 02-Aug-2017, Time: 16:12:51, 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...	5.51e4	141.1	NO
2	2 13C3-PFHxS	17008...	9.57e3	128.0	NO
3	3 13C8-PFOA	17008...	4.08e4	78.2	NO
4	4 13C9-PFNA	17008...	3.70e4	66.1	NO
5	5 13C4-PFOS	17008...	4.21e3	43.8	YES
6	6 13C6-PFDA	17008...	1.42e4	22.8	YES
7	7 13C7-PFUnA	17008...	2.94e3	5.4	YES

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_34, Date: 02-Aug-2017, Time: 16:23:37, 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...	6.12e4	156.8	YES
2	2	13C3-PFHxS	17008...	9.45e3	126.4	NO
3	3	13C8-PFOA	17008...	5.42e4	103.9	NO
4	4	13C9-PFNA	17008...	5.33e4	95.1	NO
5	5	13C4-PFOS	17008...	6.59e3	68.7	NO
6	6	13C6-PFDA	17008...	2.80e4	45.0	YES
7	7	13C7-PFUnA	17008...	9.43e3	17.4	YES

Name: 170802M1_35, Date: 02-Aug-2017, Time: 16:34:16, ID: B7G0086-MS1 Matrix Spike 1.35, Description: Matrix Spike

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7G00...	6.10e4	156.2	YES
2	2	13C3-PFHxS	B7G00...	9.49e3	127.0	NO
3	3	13C8-PFOA	B7G00...	5.07e4	97.1	NO
4	4	13C9-PFNA	B7G00...	4.68e4	83.5	NO
5	5	13C4-PFOS	B7G00...	6.52e3	67.9	NO
6	6	13C6-PFDA	B7G00...	2.52e4	40.4	YES
7	7	13C7-PFUnA	B7G00...	5.17e3	9.6	YES

Name: 170802M1_36, Date: 02-Aug-2017, Time: 16:44:54, 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	7.57e0	0.0	YES
7	7	13C7-PFUnA	IPA			NO

Name: 170802M1_37, Date: 02-Aug-2017, Time: 16:55:33, ID: ST170802M1-3 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	5.66e4	145.0	NO
2	2	13C3-PFHxS	ST170...	1.16e4	155.7	YES
3	3	13C8-PFOA	ST170...	6.10e4	116.9	NO
4	4	13C9-PFNA	ST170...	7.31e4	130.4	NO
5	5	13C4-PFOS	ST170...	1.12e4	117.0	NO
6	6	13C6-PFDA	ST170...	5.97e4	95.9	NO
7	7	13C7-PFUnA	ST170...	6.38e4	118.1	NO

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_38, Date: 02-Aug-2017, Time: 17:06:27, 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	5.13e0	0.0	NO
7	7 13C7-PFUnA	IPA			NO

Name: 170802M1_39, Date: 02-Aug-2017, Time: 17:17:55, ID: 1700906-01 MW-50BR-20170717 0.125, Description: MW-50BR-20170717

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	2.90e4	74.4	NO
2	2 13C3-PFHxS	17009...	5.21e3	69.7	NO
3	3 13C8-PFOA	17009...	2.38e4	45.5	YES
4	4 13C9-PFNA	17009...	2.51e4	44.8	YES
5	5 13C4-PFOS	17009...	5.16e3	53.7	NO
6	6 13C6-PFDA	17009...	2.96e4	47.6	YES
7	7 13C7-PFUnA	17009...	3.06e4	56.6	NO

Name: 170802M1_40, Date: 02-Aug-2017, Time: 17:29:18, ID: 1700906-03 RB-04-20170717 0.125, Description: RB-04-20170717

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	2.03e4	52.1	NO
2	2 13C3-PFHxS	17009...	3.75e3	50.1	NO
3	3 13C8-PFOA	17009...	1.72e4	33.0	YES
4	4 13C9-PFNA	17009...	2.04e4	36.4	YES
5	5 13C4-PFOS	17009...	3.68e3	38.4	YES
6	6 13C6-PFDA	17009...	2.15e4	34.6	YES
7	7 13C7-PFUnA	17009...	1.91e4	35.3	YES

Name: 170802M1_41, Date: 02-Aug-2017, Time: 17:39:57, ID: 1700906-04 MW-12BR-20170718 0.125, Description: MW-12BR-20170718

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	2.60e4	66.7	NO
2	2 13C3-PFHxS	17009...	5.06e3	67.7	NO
3	3 13C8-PFOA	17009...	2.48e4	47.5	YES
4	4 13C9-PFNA	17009...	2.56e4	45.7	YES
5	5 13C4-PFOS	17009...	4.52e3	47.0	YES
6	6 13C6-PFDA	17009...	2.75e4	44.2	YES
7	7 13C7-PFUnA	17009...	2.65e4	49.0	YES

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_42, Date: 02-Aug-2017, Time: 17:50:35, ID: 1700906-05 MW-02BR-20170718 0.125, Description: MW-02BR-20170718

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	2.19e4	56.2	NO
2	2 13C3-PFHxS	17009...	3.83e3	51.2	NO
3	3 13C8-PFOA	17009...	1.94e4	37.1	YES
4	4 13C9-PFNA	17009...	1.81e4	32.4	YES
5	5 13C4-PFOS	17009...	4.14e3	43.1	YES
6	6 13C6-PFDA	17009...	2.14e4	34.3	YES
7	7 13C7-PFUnA	17009...	2.22e4	41.2	YES

Name: 170802M1_43, Date: 02-Aug-2017, Time: 18:01:15, ID: 1700906-06 RB-05-20170718 0.125, Description: RB-05-20170718

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	2.52e4	64.4	NO
2	2 13C3-PFHxS	17009...	4.39e3	58.7	NO
3	3 13C8-PFOA	17009...	2.23e4	42.7	YES
4	4 13C9-PFNA	17009...	2.47e4	44.0	YES
5	5 13C4-PFOS	17009...	4.36e3	45.5	YES
6	6 13C6-PFDA	17009...	2.13e4	34.2	YES
7	7 13C7-PFUnA	17009...	2.01e4	37.3	YES

Name: 170802M1_44, Date: 02-Aug-2017, Time: 18:12:00, ID: 1700907-01 AT028-FB-01-071717-0850 0.125, Description: AT028-FB-01-071717-0850

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	2.84e4	72.9	NO
2	2 13C3-PFHxS	17009...	4.93e3	65.9	NO
3	3 13C8-PFOA	17009...	2.49e4	47.6	YES
4	4 13C9-PFNA	17009...	2.74e4	48.9	YES
5	5 13C4-PFOS	17009...	5.13e3	53.5	NO
6	6 13C6-PFDA	17009...	2.43e4	39.1	YES
7	7 13C7-PFUnA	17009...	2.63e4	48.8	YES

Name: 170802M1_45, Date: 02-Aug-2017, Time: 18:22:46, ID: 1700907-02 AT028-MW17-02-071717-0950 0.125, Description: AT028-MW17-02-071717-0950

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	2.45e4	62.6	NO
2	2 13C3-PFHxS	17009...	3.87e3	51.7	NO
3	3 13C8-PFOA	17009...	2.05e4	39.3	YES
4	4 13C9-PFNA	17009...	2.46e4	44.0	YES
5	5 13C4-PFOS	17009...	4.22e3	43.9	YES
6	6 13C6-PFDA	17009...	2.17e4	34.8	YES
7	7 13C7-PFUnA	17009...	2.31e4	42.7	YES

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_46, Date: 02-Aug-2017, Time: 18:33:33, ID: 1700907-03 AT028-MW17-04-071717-1050 0.125, Description: AT028-MW17-04-071717-1050

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	2.59e4	66.4	NO
2	2 13C3-PFHxS	17009...	4.25e3	56.9	NO
3	3 13C8-PFOA	17009...	2.13e4	40.7	YES
4	4 13C9-PFNA	17009...	2.00e4	35.7	YES
5	5 13C4-PFOS	17009...	3.97e3	41.4	YES
6	6 13C6-PFDA	17009...	2.35e4	37.7	YES
7	7 13C7-PFUnA	17009...	2.23e4	41.4	YES

Name: 170802M1_47, Date: 02-Aug-2017, Time: 18:44:11, ID: B7G0105-MS1 Matrix Spike 0.125, Description: Matrix Spike

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G01...	1.90e4	48.8	YES
2	2 13C3-PFHxS	B7G01...	3.30e3	44.1	YES
3	3 13C8-PFOA	B7G01...	1.59e4	30.4	YES
4	4 13C9-PFNA	B7G01...	1.73e4	30.9	YES
5	5 13C4-PFOS	B7G01...	3.12e3	32.5	YES
6	6 13C6-PFDA	B7G01...	1.90e4	30.6	YES
7	7 13C7-PFUnA	B7G01...	1.56e4	28.8	YES

Name: 170802M1_48, Date: 02-Aug-2017, Time: 18:54:50, ID: B7G0105-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7G01...	2.78e4	71.1	NO
2	2 13C3-PFHxS	B7G01...	4.36e3	58.4	NO
3	3 13C8-PFOA	B7G01...	2.35e4	45.1	YES
4	4 13C9-PFNA	B7G01...	2.56e4	45.7	YES
5	5 13C4-PFOS	B7G01...	4.48e3	46.7	YES
6	6 13C6-PFDA	B7G01...	2.69e4	43.2	YES
7	7 13C7-PFUnA	B7G01...	2.17e4	40.2	YES

Name: 170802M1_49, Date: 02-Aug-2017, Time: 19:05:28, ID: 1700907-04 AT028-MW17-06-071717-1300 0.125, Description: AT028-MW17-06-071717-1300

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.41e4	112.9	NO
2	2 13C3-PFHxS	17009...	5.08e3	67.9	NO
3	3 13C8-PFOA	17009...	3.96e4	75.9	NO
4	4 13C9-PFNA	17009...	4.08e4	72.8	NO
5	5 13C4-PFOS	17009...	7.54e3	78.5	NO
6	6 13C6-PFDA	17009...	3.85e4	61.9	NO
7	7 13C7-PFUnA	17009...	3.63e4	67.2	NO

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_50, Date: 02-Aug-2017, Time: 19:16:12, ID: 1700907-06 AT028-MW17-07-071717-1520 0.125, Description: AT028-MW17-07-071717-1520

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	3.62e4	92.8	NO
2	2 13C3-PFHxS	17009...	5.86e3	78.4	NO
3	3 13C8-PFOA	17009...	2.86e4	54.7	NO
4	4 13C9-PFNA	17009...	3.00e4	53.5	NO
5	5 13C4-PFOS	17009...	5.44e3	56.7	NO
6	6 13C6-PFDA	17009...	2.27e4	36.4	YES
7	7 13C7-PFUnA	17009...	2.28e4	42.2	YES

Name: 170802M1_51, Date: 02-Aug-2017, Time: 19:28:18, 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	5.69e0	0.0	YES
7	7 13C7-PFUnA	IPA	1.02e1	0.0	YES

Name: 170802M1_52, Date: 02-Aug-2017, Time: 19:39:46, ID: ST170802M1-4 PFC CS3 17G3105, Description: PFC CS3 17G3105

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	ST170...	6.25e4	160.0	YES
2	2 13C3-PFHxS	ST170...	1.24e4	166.2	YES
3	3 13C8-PFOA	ST170...	6.71e4	128.4	NO
4	4 13C9-PFNA	ST170...	7.44e4	132.8	NO
5	5 13C4-PFOS	ST170...	1.23e4	128.5	NO
6	6 13C6-PFDA	ST170...	6.54e4	105.1	NO
7	7 13C7-PFUnA	ST170...	6.93e4	128.2	NO

Name: 170802M1_53, Date: 02-Aug-2017, Time: 19:50:32, 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	6.25e0	0.0	NO
7	7 13C7-PFUnA	IPA	1.12e1	0.0	NO

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_54, Date: 02-Aug-2017, Time: 20:01:11, ID: 1700907-08 AT028-MW17-05-071817-0835 0.125, Description: AT028-MW17-05-071817-0835

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	2.44e4	62.6	NO
2	2 13C3-PFHxS	17009...	4.15e3	55.5	NO
3	3 13C8-PFOA	17009...	2.07e4	39.6	YES
4	4 13C9-PFNA	17009...	2.09e4	37.3	YES
5	5 13C4-PFOS	17009...	4.38e3	45.6	YES
6	6 13C6-PFDA	17009...	2.20e4	35.3	YES
7	7 13C7-PFUnA	17009...	2.05e4	37.9	YES

Name: 170802M1_55, Date: 02-Aug-2017, Time: 20:11:49, ID: 1700907-09 AT028-MW17-01-071817-0950 0.125, Description: AT028-MW17-01-071817-0950

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	1.78e4	45.6	YES
2	2 13C3-PFHxS	17009...	2.80e3	37.5	YES
3	3 13C8-PFOA	17009...	1.44e4	27.5	YES
4	4 13C9-PFNA	17009...	1.57e4	28.1	YES
5	5 13C4-PFOS	17009...	2.65e3	27.6	YES
6	6 13C6-PFDA	17009...	1.43e4	23.0	YES
7	7 13C7-PFUnA	17009...	1.52e4	28.2	YES

Name: 170802M1_56, Date: 02-Aug-2017, Time: 20:22:27, ID: 1700875-05@40X MW-11S-20170713 0.11994, Description: MW-11S-20170713

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17008...	2.01e3	5.2	YES
2	2 13C3-PFHxS	17008...	2.62e2	3.5	YES
3	3 13C8-PFOA	17008...	1.83e3	3.5	YES
4	4 13C9-PFNA	17008...	1.59e3	2.8	YES
5	5 13C4-PFOS	17008...	1.86e2	1.9	YES
6	6 13C6-PFDA	17008...	1.22e3	2.0	YES
7	7 13C7-PFUnA	17008...	7.04e2	1.3	YES

Name: 170802M1_57, Date: 02-Aug-2017, Time: 20:33:06, 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	6.11e0	0.0	NO
4	4 13C9-PFNA	IPA			NO
5	5 13C4-PFOS	IPA			NO
6	6 13C6-PFDA	IPA			NO
7	7 13C7-PFUnA	IPA	1.41e1	0.0	NO

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_58, Date: 02-Aug-2017, Time: 20:43:44, ID: B7H0006-BS1 OPR 0.005, Description: OPR

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7H00...	5.00e4	128.2	NO
2	2 13C3-PFHxS	B7H00...	7.13e3	95.3	NO
3	3 13C8-PFOA	B7H00...	3.63e4	69.4	NO
4	4 13C9-PFNA	B7H00...	4.56e4	81.4	NO
5	5 13C4-PFOS	B7H00...	6.51e3	67.8	NO
6	6 13C6-PFDA	B7H00...	3.67e4	59.0	NO
7	7 13C7-PFUnA	B7H00...	2.65e4	49.0	YES

Name: 170802M1_59, Date: 02-Aug-2017, Time: 20:54:23, 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	8.51e0	0.0	NO
7	7 13C7-PFUnA	IPA	1.87e1	0.0	NO

Name: 170802M1_60, Date: 02-Aug-2017, Time: 21:05:01, ID: B7H0006-BLK1 Method Blank 0.005, Description: Method Blank

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7H00...	5.75e4	147.3	NO
2	2 13C3-PFHxS	B7H00...	8.28e3	110.7	NO
3	3 13C8-PFOA	B7H00...	5.06e4	97.0	NO
4	4 13C9-PFNA	B7H00...	5.07e4	90.5	NO
5	5 13C4-PFOS	B7H00...	8.16e3	84.9	NO
6	6 13C6-PFDA	B7H00...	4.28e4	68.8	NO
7	7 13C7-PFUnA	B7H00...	3.36e4	62.1	NO

Name: 170802M1_61, Date: 02-Aug-2017, Time: 21:15:39, ID: 1700936-01 BULK TANK #1 0.005, Description: BULK TANK #1

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.34e4	111.2	NO
2	2 13C3-PFHxS	17009...	6.88e3	91.9	NO
3	3 13C8-PFOA	17009...	3.41e4	65.2	NO
4	4 13C9-PFNA	17009...	2.46e4	43.9	YES
5	5 13C4-PFOS	17009...	3.87e3	40.2	YES
6	6 13C6-PFDA	17009...	1.94e4	31.1	YES
7	7 13C7-PFUnA	17009...	1.94e4	35.9	YES

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_62, Date: 02-Aug-2017, Time: 21:26:18, ID: 1700936-02 BULK TANK #2 0.005, Description: BULK TANK #2

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	4.42e4	113.1	NO
2	2	13C3-PFHxS	17009...	7.14e3	95.5	NO
3	3	13C8-PFOA	17009...	2.98e4	57.1	NO
4	4	13C9-PFNA	17009...	1.98e4	35.4	YES
5	5	13C4-PFOS	17009...	2.56e3	26.7	YES
6	6	13C6-PFDA	17009...	1.19e4	19.2	YES
7	7	13C7-PFUnA	17009...	8.95e3	16.6	YES

Name: 170802M1_63, Date: 02-Aug-2017, Time: 21:36:56, ID: 1700936-03 COW SAMPLE 0.005, Description: COW SAMPLE

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.33e4	136.5	NO
2	2	13C3-PFHxS	17009...	8.09e3	108.2	NO
3	3	13C8-PFOA	17009...	3.92e4	75.2	NO
4	4	13C9-PFNA	17009...	3.77e4	67.2	NO
5	5	13C4-PFOS	17009...	5.27e3	54.9	NO
6	6	13C6-PFDA	17009...	3.14e4	50.5	NO
7	7	13C7-PFUnA	17009...	3.55e4	65.7	NO

Name: 170802M1_64, Date: 02-Aug-2017, Time: 21:47:34, ID: 1700936-04 OAKHURST Whole Pt. 0.005, Description: OAKHURST Whole Pt.

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	4.75e4	121.8	NO
2	2	13C3-PFHxS	17009...	7.46e3	99.7	NO
3	3	13C8-PFOA	17009...	4.01e4	76.9	NO
4	4	13C9-PFNA	17009...	3.77e4	67.2	NO
5	5	13C4-PFOS	17009...	5.18e3	54.0	NO
6	6	13C6-PFDA	17009...	2.49e4	40.0	YES
7	7	13C7-PFUnA	17009...	1.42e4	26.3	YES

Name: 170802M1_65, Date: 02-Aug-2017, Time: 21:58:13, 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	5.37e0	0.0	YES
5	5	13C4-PFOS	IPA			NO
6	6	13C6-PFDA	IPA			NO
7	7	13C7-PFUnA	IPA			NO

Dataset: U:\Q4.PRO\results\170802M1\170802M1-RS AREAS.qld

Last Altered: Thursday, August 03, 2017 10:30:32 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:19:46 Pacific Daylight Time

Name: 170802M1_66, Date: 02-Aug-2017, Time: 22:09:16, ID: ST170802M1-5 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	6.92e4	177.2	YES
2	2	13C3-PFHxS	ST170...	1.27e4	170.1	YES
3	3	13C8-PFOA	ST170...	7.06e4	135.3	NO
4	4	13C9-PFNA	ST170...	7.64e4	136.3	NO
5	5	13C4-PFOS	ST170...	1.31e4	136.8	NO
6	6	13C6-PFDA	ST170...	6.93e4	111.4	NO
7	7	13C7-PFUnA	ST170...	7.65e4	141.6	NO

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Dataset: U:\Q4.PRO\results\170802M1\170802M1-3.qld

Last Altered: Tuesday, August 15, 2017 08:53:24 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 08:53:47 Pacific Daylight Time

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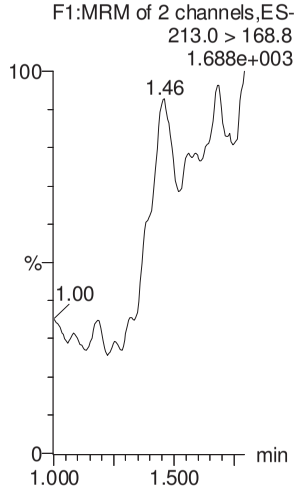

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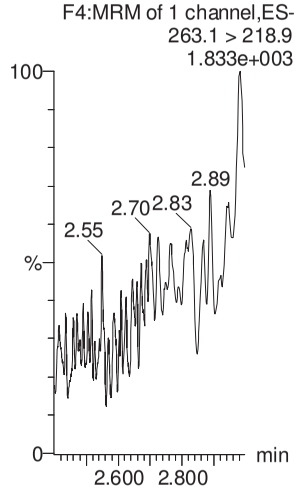

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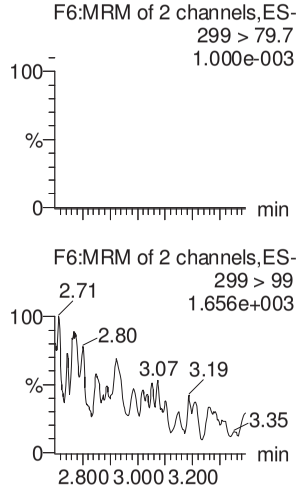

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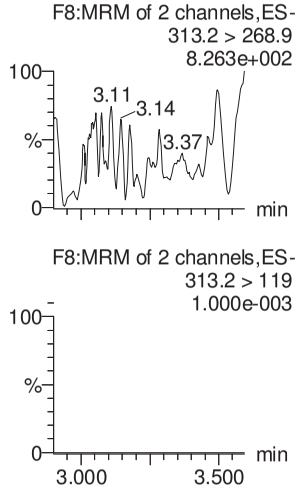

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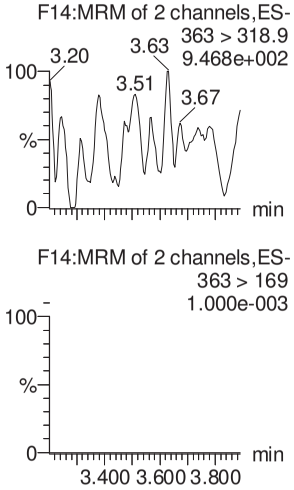

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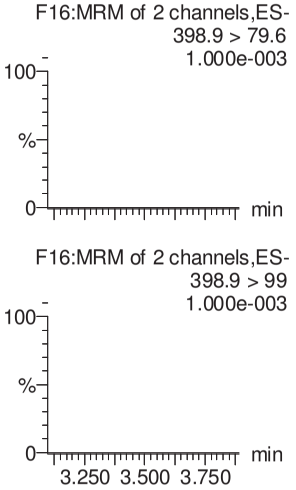

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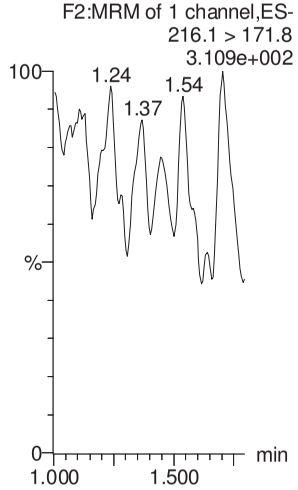

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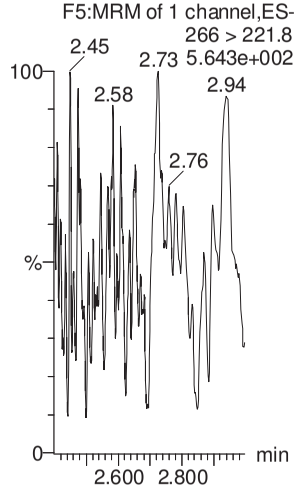

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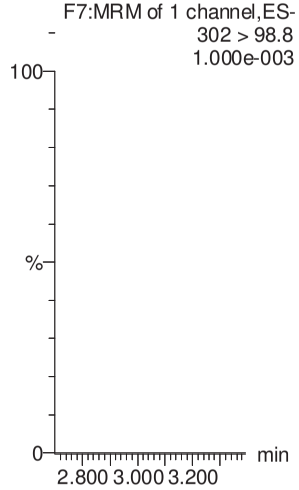

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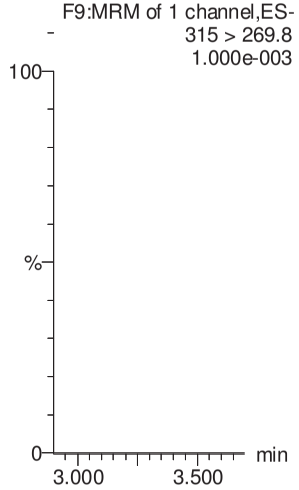

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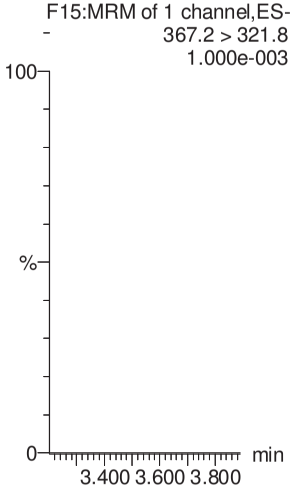

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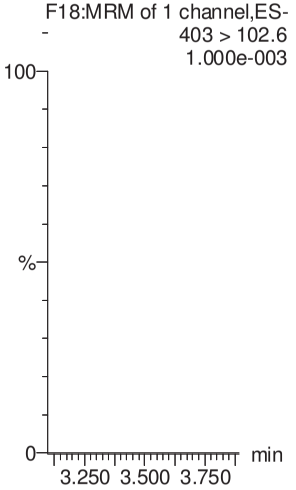

GM 8/15/17

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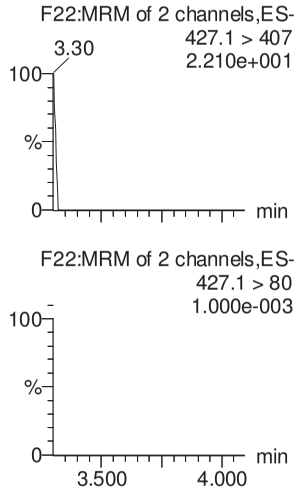
Dataset: U:\Q4.PRO\results\170802M1\170802M1-3.qld

Last Altered: Tuesday, August 15, 2017 08:53:24 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 08:53:47 Pacific Daylight Time

Name: 170802M1_3, Date: 02-Aug-2017, Time: 10:50:52, ID: IPA, Description: IPA

6:2 FTS



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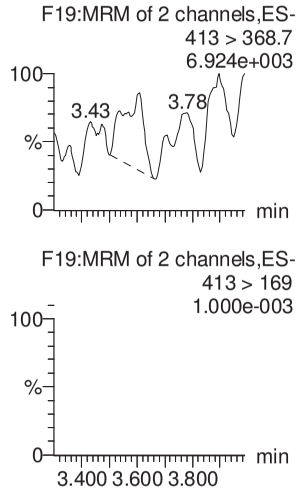

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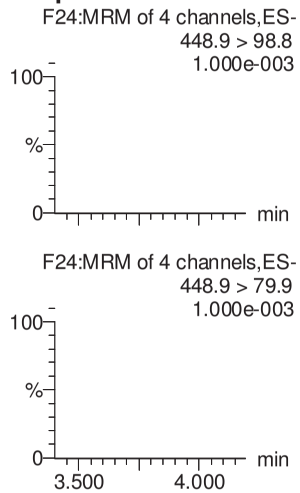

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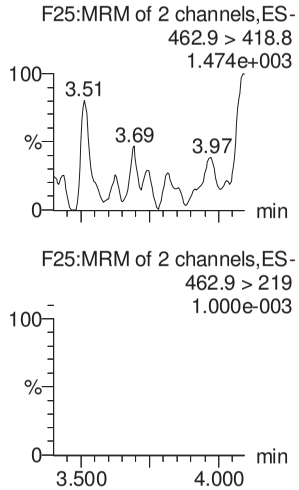

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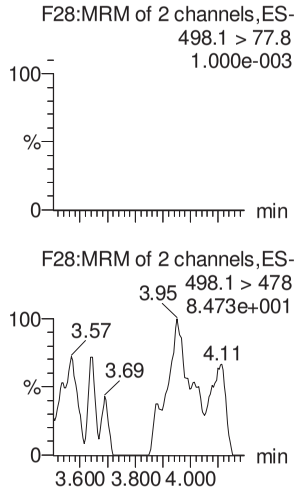

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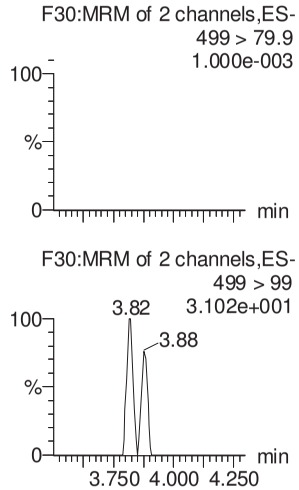

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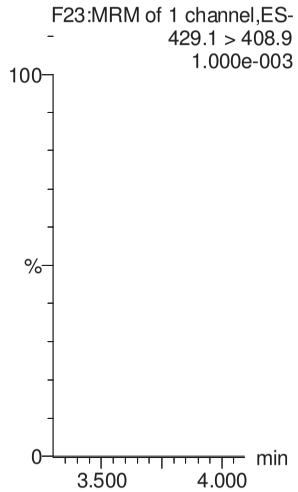

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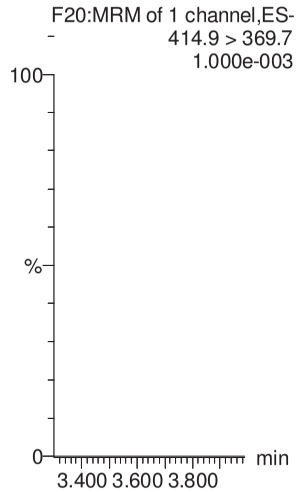

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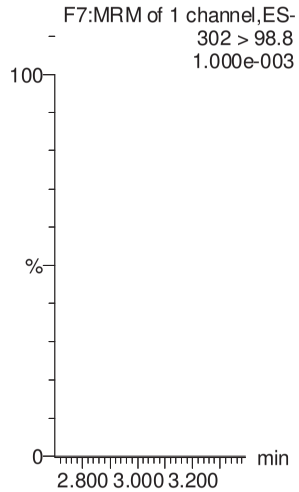

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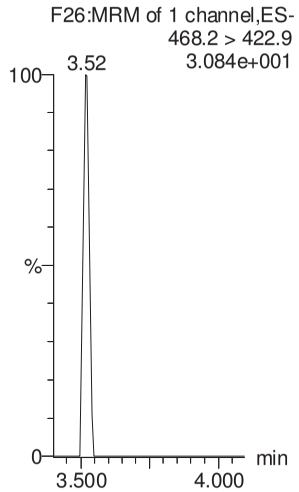

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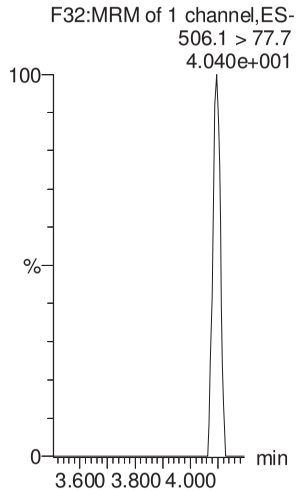

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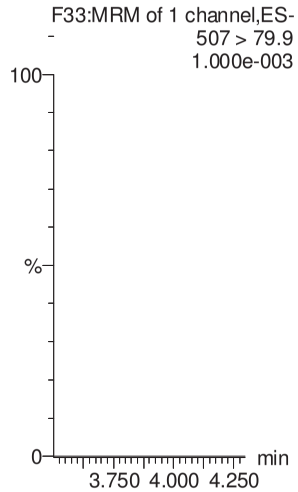

GM 8/15/17

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Dataset: U:\Q4.PRO\results\170802M1\170802M1-3.qld

Last Altered: Tuesday, August 15, 2017 08:53:24 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 08:53:47 Pacific Daylight Time

Name: 170802M1_3, Date: 02-Aug-2017, Time: 10:50:52, ID: IPA, Description: IPA

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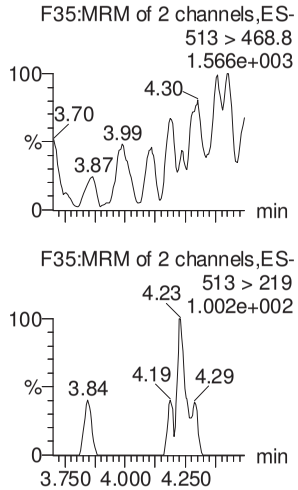
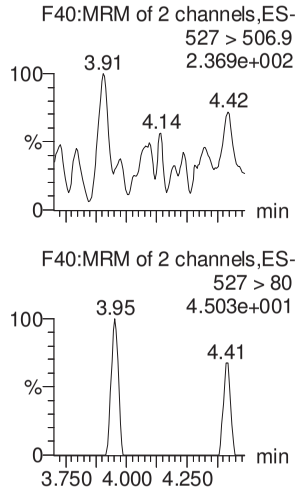
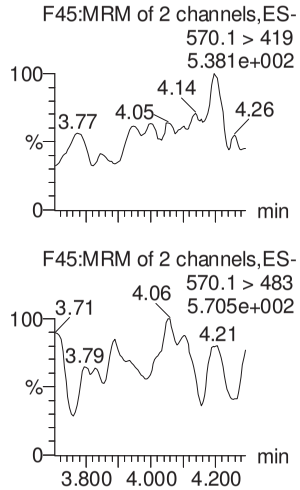


8:2 FTS



N-MeFOSAA



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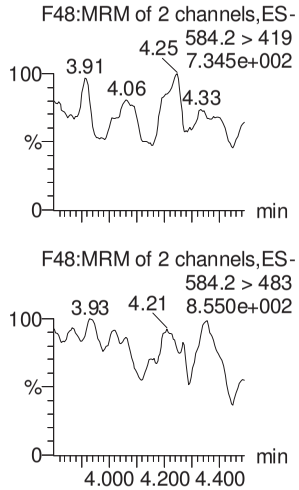

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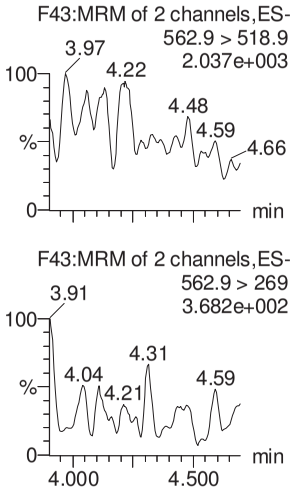

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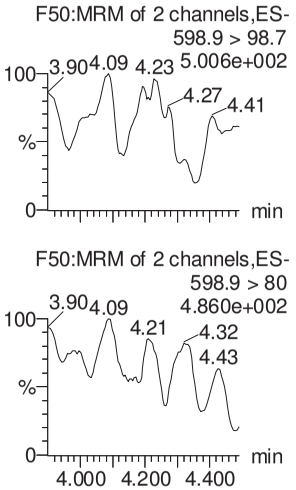

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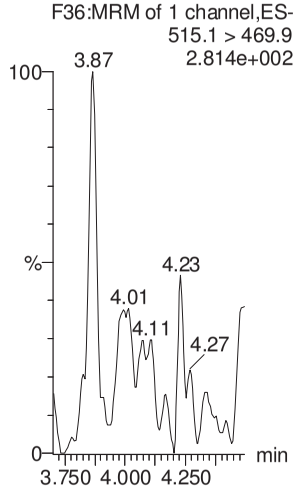
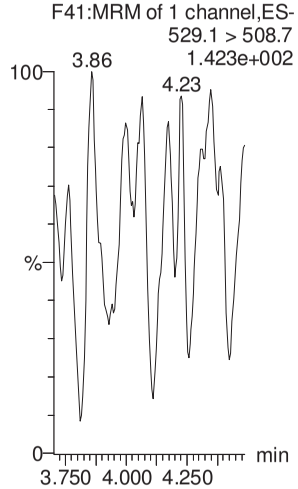
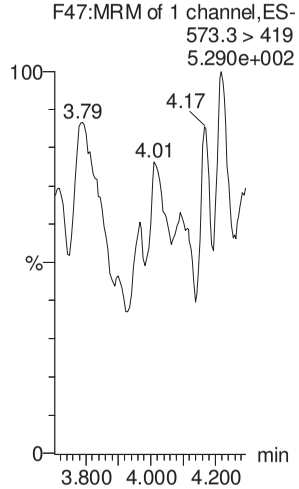


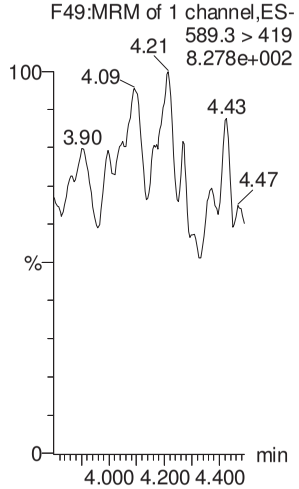
13C2-8:2 FTS



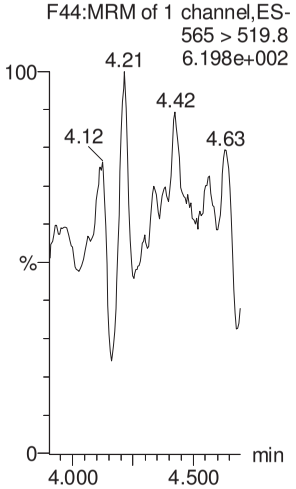
d3-N-MeFOSAA



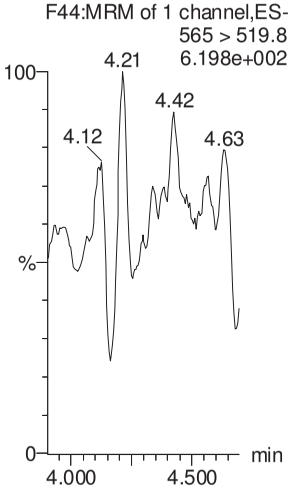
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



GM 8/15/17

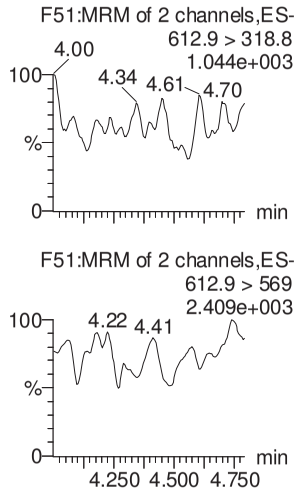
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-3.qld

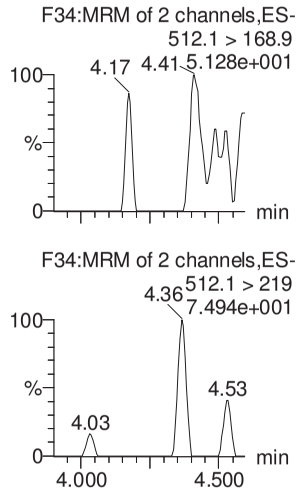
Last Altered: Tuesday, August 15, 2017 08:53:24 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 08:53:47 Pacific Daylight Time

Name: 170802M1_3, Date: 02-Aug-2017, Time: 10:50:52, ID: IPA, Description: IPA

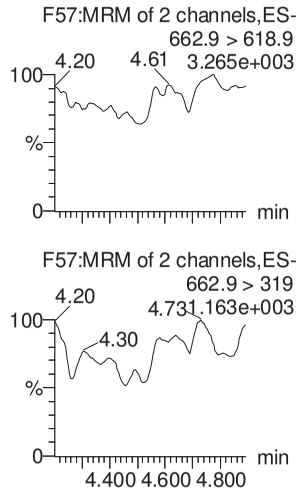
PFDoA



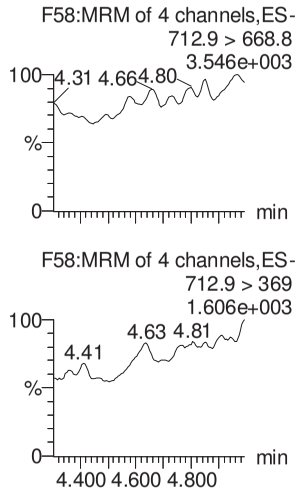
N-MeFOSA



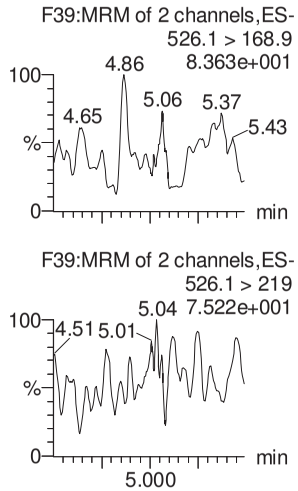
PFTrDA



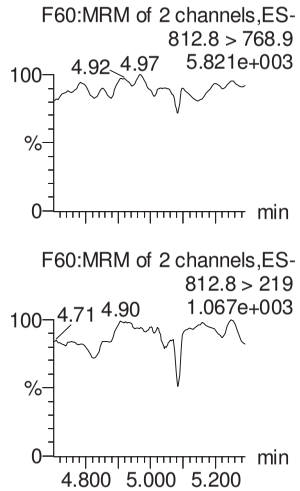
PFTeDA



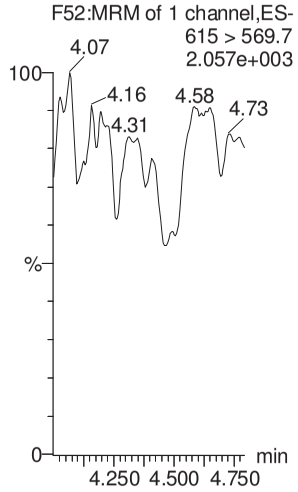
N-EtFOSA



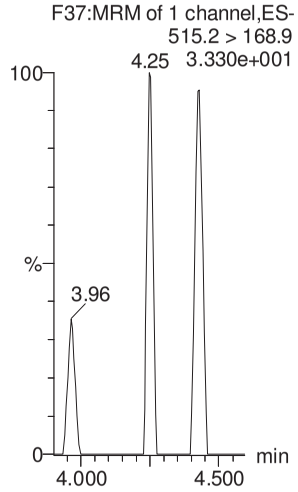
PFHxDA



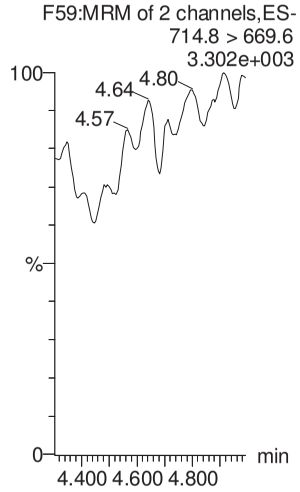
13C2-PFDoA



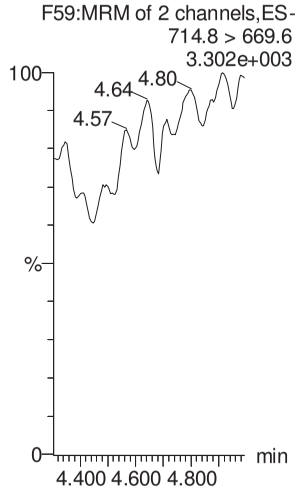
d3-N-MeFOSA



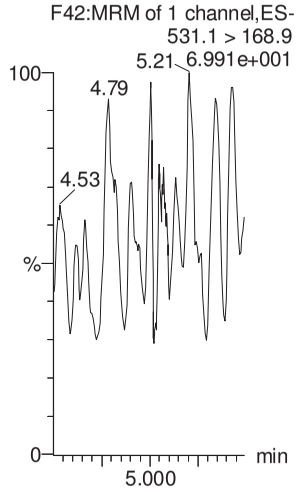
13C2-PFTeDA



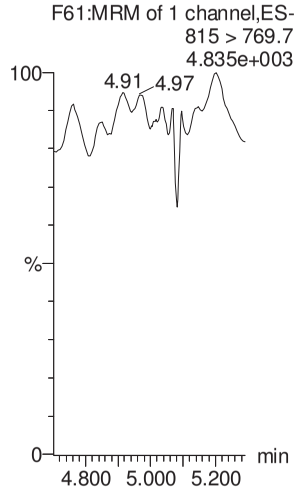
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



GM 8/15/17

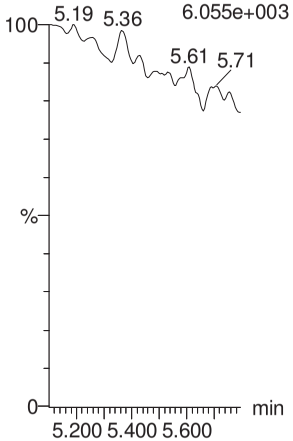
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-3.qld

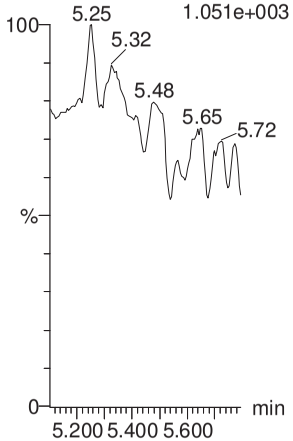
Last Altered: Tuesday, August 15, 2017 08:53:24 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 08:53:47 Pacific Daylight Time

Name: 170802M1_3, Date: 02-Aug-2017, Time: 10:50:52, ID: IPA, Description: IPA

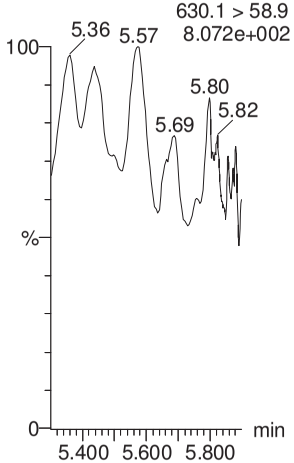
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
6.055e+003



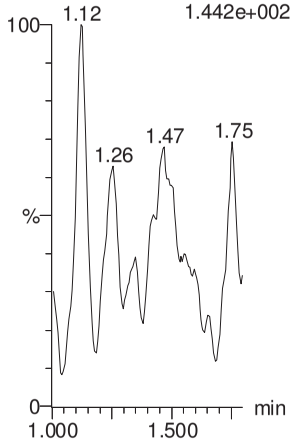
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.051e+003



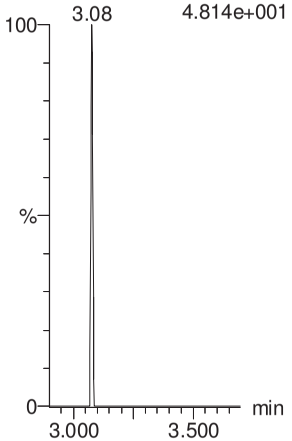
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
8.072e+002



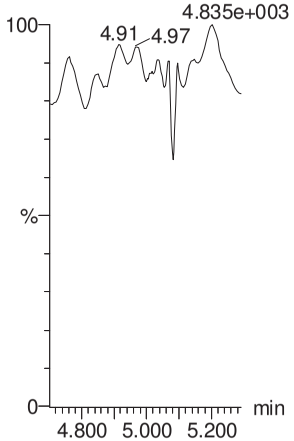
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
1.442e+002



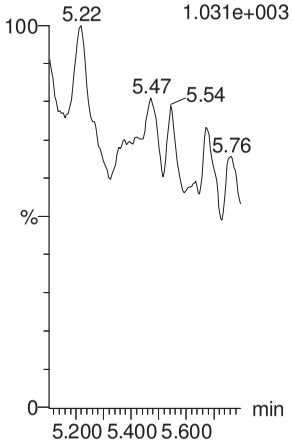
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
4.814e+001



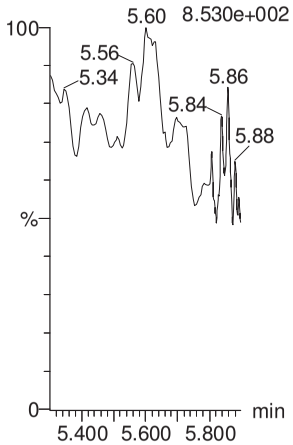
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.835e+003



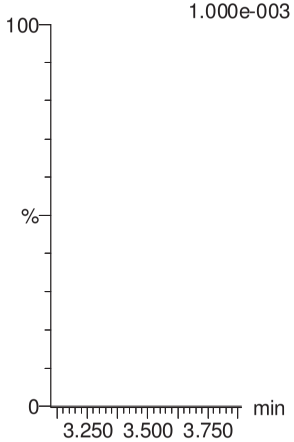
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
1.031e+003



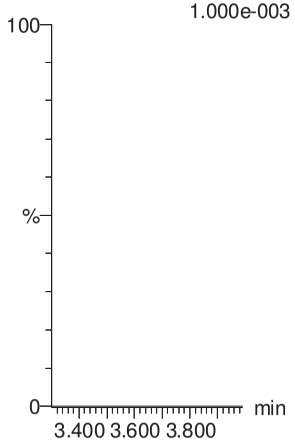
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
8.530e+002



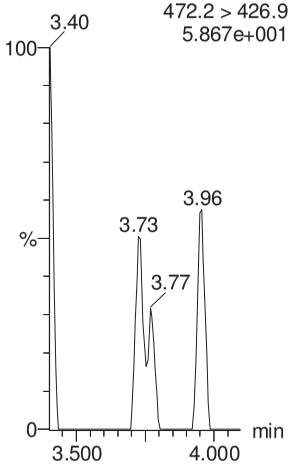
13C3-PFHxS
F17:MRM of 1 channel,ES-
-
401.9 > 79.9
1.000e-003



13C8-PFOA
F21:MRM of 1 channel,ES-
-
421.3 > 376
1.000e-003



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
5.867e+001



GM 8/15/17

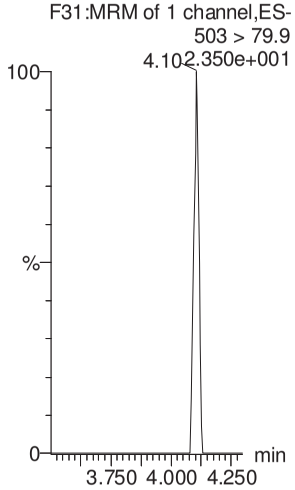
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-3.qld

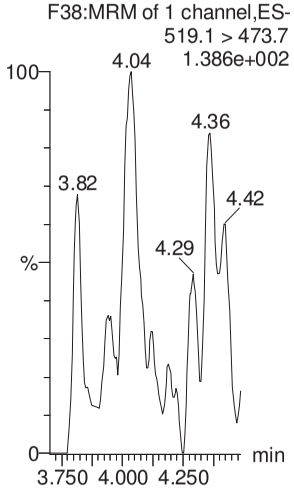
Last Altered: Tuesday, August 15, 2017 08:53:24 Pacific Daylight Time
Printed: Tuesday, August 15, 2017 08:53:47 Pacific Daylight Time

Name: 170802M1_3, Date: 02-Aug-2017, Time: 10:50:52, ID: IPA, Description: IPA

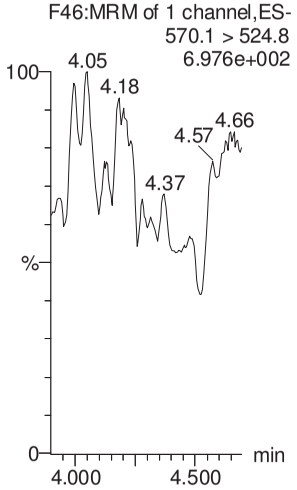
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/15/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-2.qld

Last Altered: Thursday, August 03, 2017 14:49:37 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:57:22 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: 170802M1_2, Date: 02-Aug-2017, Time: 10:40:05, ID: ST170802M1-1 PFC CS0 17H0201, Description: PFC CS0 17H0201

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	1	PFBA	213.0 > 168.8	1.36e3	1.38e4		1.41	1.36	1.24	1.08	107.9	70-130
2	2	PFPeA	263.1 > 218.9	2.05e3	2.44e4		2.77	2.65	1.05	1.07	106.7	
3	3	PFBS	299 > 79.7	5.48e2	3.45e3		2.96	2.89	1.99	1.02	102.0	
4	4	PFHxA	313.2 > 268.9	4.02e3	1.35e4		3.19	3.14	1.50	0.969	96.9	
5	5	PFHpA	363 > 318.9	4.05e3	3.93e4		3.45	3.41	1.29	1.01	101.4	
6	6	PFHxS	398.9 > 79.6	4.83e2	3.53e3		3.56	3.50	1.71	0.998	99.8	
7	7	6:2 FTS	427.1 > 407	1.07e3	1.08e4		3.64	3.60	1.24	1.11	111.3	
8	8	PFOA	413 > 368.7	6.28e3	6.55e4		3.65	3.61	1.20	1.10	110.4	
9	9	PFHpS	448.9 > 98.8	5.08e2	6.55e4		3.71	3.67	0.0970	1.04	104.2	
10	10	PFNA	462.9 > 418.8	5.72e3	6.09e4		3.83	3.80	1.17	1.01	101.3	
11	11	PFOSA	498.1 > 77.8	6.26e2	7.09e3		3.84	3.81	1.10	1.05	105.4	
12	12	PFOS	499 > 79.9	1.01e3	1.15e4		3.89	3.85	1.10	1.03	103.2	
13	13	PFDA	513 > 468.8	6.08e3	5.54e4		4.01	3.97	1.37	1.01	101.3	
14	14	8:2 FTS	527 > 506.9	1.14e3	8.50e3		4.00	3.96	1.67	1.14	114.0	
15	15	N-MeFOSAA	570.1 > 419	1.60e3	1.34e4		4.03	3.99	19.4	1.04	104.1	
16	16	N-EtFOSAA	584.2 > 419	1.14e3	1.34e4		4.10	4.06	13.8	0.915	91.5	
17	17	PFUnA	562.9 > 518.9	4.71e3	6.59e4		4.17	4.13	0.893	1.06	106.3	
18	18	PFDS	598.9 > 98.7	4.13e2	6.59e4		4.22	4.19	0.0782	1.01	100.5	
19	19	PFDoA	612.9 > 318.8	5.56e2	6.78e3		4.34	4.29	1.02	1.08	108.1	
20	20	N-MeFOSA	512.1 > 168.9	1.15e3	2.69e4		4.29	4.30	6.40	6.12	122.5	
21	21	PFTrDA	662.9 > 618.9	6.43e3	6.78e3		4.50	4.46	11.9	1.03	102.8	
22	22	PFTeDA	712.9 > 668.8	4.23e3	4.34e4		4.68	4.63	1.22	1.03	102.9	
23	23	N-EtFOSA	526.1 > 168.9	1.30e3	3.36e4		4.87	4.88	5.80	5.88	117.6	
24	24	PFHxDA	812.8 > 768.9	6.54e3	2.07e4		5.06	5.01	1.58	1.06	106.2	
25	25	PFODA	912.8 > 868.8	6.16e3	2.07e4		5.43	5.38	1.49	1.19	118.6	
26	26	N-MeFOSE	616.1 > 58.9	1.71e3	4.36e4		5.42	5.45	5.89	5.33	106.6	
27	27	N-EtFOSE	630.1 > 58.9	1.94e3	4.42e4		5.59	5.63	6.59	4.65	93.1	
28	28	13C3-PFBA	216.1 > 171.8	1.38e4	1.33e4	1.006	1.41	1.35	12.9	12.8	102.7	50-150
29	29	13C3-PFPeA	266 > 221.8	2.44e4	3.90e4	0.275	2.77	2.65	3.12	11.3	90.8	
30	30	13C3-PFBS	302 > 98.8	3.45e3	3.90e4	0.034	2.96	2.89	0.441	12.9	103.5	
31	31	13C2-PFHxA	315 > 269.8	1.35e4	3.90e4	0.334	3.19	3.14	1.72	5.16	103.1	

EM 8/3/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-2.qld

Last Altered: Thursday, August 03, 2017 14:49:37 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:57:22 Pacific Daylight Time

Name: 170802M1_2, Date: 02-Aug-2017, Time: 10:40:05, ID: ST170802M1-1 PFC CS0 17H0201, Description: PFC CS0 17H0201

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	3.93e4	3.90e4	0.414	3.45	3.41	5.03	12.1	97.2
33	33	18O2-PFHxS	403 > 102.6	3.53e3	7.48e3	0.475	3.56	3.49	5.91	12.4	99.4
34	34	13C2-6:2 FTS	429.1 > 408.9	1.08e4	5.22e4	0.214	3.64	3.61	2.58	12.1	96.6
35	35	13C2-PFOA	414.9 > 369.7	6.55e4	5.22e4	1.298	3.65	3.62	15.7	12.1	96.6
36	36	13C5-PFNA	468.2 > 422.9	6.09e4	5.61e4	1.094	3.83	3.80	13.6	12.4	99.3
37	37	13C8-PFOSA	506.1 > 77.7	7.09e3	5.40e4	0.124	3.84	3.80	1.64	13.2	105.4
38	38	13C8-PFOS	507 > 79.9	1.15e4	9.58e3	1.153	3.89	3.85	14.9	13.0	103.7
39	39	13C2-PFDA	515.1 > 469.9	5.54e4	6.22e4	1.059	4.01	3.97	11.1	10.5	84.1
40	40	13C2-8:2 FTS	529.1 > 508.7	8.50e3	6.22e4	0.129	4.00	3.96	1.71	13.3	106.2
41	41	d3-N-MeFOSAA	573.3 > 419	1.34e4	5.40e4	0.019	4.03	3.99	3.10	161	98.8
42	42	d5-N-EtFOSAA	589.3 > 419	1.34e4	5.40e4	0.019	4.12	4.06	3.11	164	101.0
43	43	13C2-PFUnA	565 > 519.8	6.59e4	5.40e4	1.172	4.17	4.14	15.2	13.0	104.1
44	44	13C2-PFDoA	615 > 569.7	6.78e3	5.40e4	0.118	4.34	4.29	1.57	13.2	105.9
45	45	d3-N-MeFOSA	515.2 > 168.9	2.69e4	5.40e4	0.040	4.29	4.33	6.23	154	102.7
46	46	13C2-PFTeDA	714.8 > 669.6	4.34e4	5.40e4	0.801	4.68	4.64	10.0	12.5	100.2
47	47	d5-N-ETFOSA	531.1 > 168.9	3.36e4	5.40e4	0.055	5.01	4.92	7.78	141	94.2
48	48	13C2-PFHxDA	815 > 769.7	2.07e4	5.40e4	0.991	5.06	5.00	4.79	4.83	96.7
49	49	d7-N-MeFOSE	623.1 > 58.9	4.36e4	5.40e4	0.065	5.42	5.44	10.1	155	103.2
50	50	d9-N-EtFOSE	639.2 > 58.8	4.42e4	5.40e4	0.065	5.59	5.62	10.2	158	105.2
51	51	13C4-PFBA	217 > 171.8	1.33e4	1.33e4	1.000	1.41	1.36	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	3.90e4	3.90e4	1.000	3.19	3.14	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	7.48e3	7.48e3	1.000	3.56	3.49	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	5.22e4	5.22e4	1.000	3.65	3.62	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	5.61e4	5.61e4	1.000	3.83	3.80	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	9.58e3	9.58e3	1.000	3.89	3.85	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	6.22e4	6.22e4	1.000	4.01	3.97	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	5.40e4	5.40e4	1.000	4.17	4.13	12.5	12.5	100.0

50-150

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
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3	170802M1_3	—	IPA	IPA	1.0000	1:48	Blank
4	170802M1_4	—	B7G0121-BS1 OPR 0.125	OPR	0.1250	1:3	Analyte
5	170802M1_5	—	IPA	IPA	1.0000	1:48	Blank
6	170802M1_6	—	B7G0121-BLK1 Method Blank 0.125	Method Blank	0.1250	1:4	Analyte
7	170802M1_7	—	B7G0121-MS1 Matrix Spike 0.11301	Matrix Spike	0.1130	1:5	Analyte
8	170802M1_8	—	B7G0121-MSD1 Matrix Spike Dup 0.11225	Matrix Spike Dup	0.1123	1:6	Analyte
9	170802M1_9	—	B7G0121-MS2 Matrix Spike 0.11554	Matrix Spike	0.1155	1:7	Analyte
10	170802M1_10	—	B7G0121-MSD2 Matrix Spike Dup 0.11866	Matrix Spike Dup	0.1187	1:8	Analyte
11	170802M1_11	—	1700922-01 MH-L103-20170721 0.10565	MH-L103-20170721	0.1056	1:9	Analyte
12	170802M1_12	—	1700922-02 MH-N104-20170721 0.11025	MH-N104-20170721	0.1103	1:10	Analyte
13	170802M1_13	—	1700922-03 Upstream-Culvert-109-20170721 0.11852	Upstream-Culvert-109-20170721	0.1185	1:11	Analyte
14	170802M1_14	—	1700922-04 FRB03-20170721 0.11017	FRB03-20170721	0.1102	1:12	Analyte
15	170802M1_15	—	1700922-05 RB08-20170720 0.11893	RB08-20170720	0.1189	1:13	Analyte
16	170802M1_16	—	1700922-06 RB09-20170721 0.11676	RB09-20170721	0.1168	1:14	Analyte
17	170802M1_17	—	1700925-01 I001BC43S-170724 0.12112	I001BC43S-170724	0.1211	1:15	Analyte
18	170802M1_18	—	1700925-02 SB01-170724 0.12178	SB01-170724	0.1218	1:16	Analyte
19	170802M1_19	—	1700925-03 I001BC50S-170724 0.12135	I001BC50S-170724	0.1214	1:17	Analyte
20	170802M1_20	—	1700925-04 I001MW52S-170724 0.1192	I001MW52S-170724	0.1192	1:18	Analyte
21	170802M1_21	—	IPA	IPA	1.0000	1:48	Analyte
22	170802M1_22	—	ST170802M1-2 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
23	170802M1_23	—	IPA	IPA	1.0000	1:48	Blank
24	170802M1_24	—	1700925-05 I001MW52X-170724 0.1174	I001MW52X-170724	0.1174	1:19	Analyte
25	170802M1_25	—	1700925-06 EB01-170724 0.1185	EB01-170724	0.1185	1:20	Analyte
26	170802M1_26	—	1700929-01 MATP01001 0.11834	MATP01001	0.1183	1:21	Analyte
27	170802M1_27	—	1700929-02 MATP01002 0.1157	MATP01002	0.1157	1:22	Analyte
28	170802M1_28	—	1700938-01 NORP08102 0.11844	NORP08102	0.1184	1:23	Analyte
29	170802M1_29	—	1700938-02 NORP08103 0.12014	NORP08103	0.1201	1:24	Analyte
30	170802M1_30	—	1700938-03 NORP08104 0.11247	NORP08104	0.1125	1:25	Analyte
31	170802M1_31	—	1700886-12 AT028-SD17-02-071317-0845 1.44	AT028-SD17-02-071317-0845	0.9987	1:26	Analyte
32	170802M1_32	—	1700888-03 HARRI-01-SB02-0-2 2.04	HARRI-01-SB02-0-2	1.0167	1:27	Analyte
33	170802M1_33	—	1700888-09 HARRI-02-SB01-6-8 1.47	HARRI-02-SB01-6-8	1.0058	1:28	Analyte
34	170802M1_34	—	1700889-06 HARRI-03-SB03-0-2 1.33	HARRI-03-SB03-0-2	0.9903	1:29	Analyte
35	170802M1_35	—	B7G0086-MS1 Matrix Spike 1.35	Matrix Spike	1.3500	1:30	Analyte
36	170802M1_36	—	IPA	IPA	1.0000	1:48	Analyte
37	170802M1_37	—	ST170802M1-3 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
38	170802M1_38	—	IPA	IPA	1.0000	1:48	Blank
39	170802M1_39	—	1700906-01 MW-50BR-20170717 0.125	MW-50BR-20170717	0.1211	1:31	Analyte
40	170802M1_40	—	1700906-03 RB-04-20170717 0.125	RB-04-20170717	0.1202	1:32	Analyte

✓ am 8/3/17

AC 8/3/17

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42	170802M1_42	—	1700906-05 MW-02BR-20170718 0.125	MW-02BR-20170718	0.1208	1:34	Analyte
43	170802M1_43	—	1700906-06 RB-05-20170718 0.125	RB-05-20170718	0.1215	1:35	Analyte
44	170802M1_44	—	1700907-01 AT028-FB-01-071717-0850 0.125	AT028-FB-01-071717-0850	0.1198	1:36	Analyte
45	170802M1_45	—	1700907-02 AT028-MW17-02-071717-0950 0.125	AT028-MW17-02-071717-0950	0.1199	1:37	Analyte
46	170802M1_46	—	1700907-03 AT028-MW17-04-071717-1050 0.125	AT028-MW17-04-071717-1050	0.1204	1:38	Analyte
47	170802M1_47	—	B7G0105-MS1 Matrix Spike 0.125	Matrix Spike	0.1181	1:39	Analyte
48	170802M1_48	—	B7G0105-MSD1 Matrix Spike Dup 0.125	Matrix Spike Dup	0.1216	1:40	Analyte
49	170802M1_49	—	1700907-04 AT028-MW17-06-071717-1300 0.125	AT028-MW17-06-071717-1300	0.1250	1:41	Analyte
50	170802M1_50	—	1700907-06 AT028-MW17-07-071717-1520 0.125	AT028-MW17-07-071717-1520	0.1163	1:42	Analyte
51	170802M1_51	—	IPA	IPA	1.0000	1:48	Analyte
52	170802M1_52	—	ST170802M1-4 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
53	170802M1_53	—	IPA	IPA	1.0000	1:48	Blank
54	170802M1_54	—	1700907-08 AT028-MW17-05-071817-0835 0.125	AT028-MW17-05-071817-0835	0.1196	1:43	Analyte
55	170802M1_55	—	1700907-09 AT028-MW17-01-071817-0950 0.125	AT028-MW17-01-071817-0950	0.1159	1:44	Analyte
56	170802M1_56	—	1700875-05@40X MW-11S-20170713 0.11994	MW-11S-20170713	0.1199	1:45	Analyte
57	170802M1_57	—	IPA	IPA	1.0000	1:48	Blank
58	170802M1_58	—	B7H0006-BS1 OPR 0.005	OPR	0.0050	1:46	Analyte
59	170802M1_59	—	IPA	IPA	1.0000	1:48	Blank
60	170802M1_60	—	B7H0006-BLK1 Method Blank 0.005	Method Blank	0.0050	1:47	Analyte
61	170802M1_61	—	1700936-01 BULK TANK #1 0.005	BULK TANK #1	0.0050	2:1	Analyte
62	170802M1_62	—	1700936-02 BULK TANK #2 0.005	BULK TANK #2	0.0050	2:2	Analyte
63	170802M1_63	—	1700936-03 COW SAMPLE 0.005	COW SAMPLE	0.0050	2:3	Analyte
64	170802M1_64	—	1700936-04 OAKHURST Whole Pt. 0.005	OAKHURST Whole Pt.	0.0050	2:4	Analyte
65	170802M1_65	—	IPA	IPA	1.0000	1:48	Analyte
66	170802M1_66	—	ST170802M1-5 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
67	170802M1_67	—	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
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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:	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: [illegible] 8/3/17
Initials/Date

Comments:
Full List

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-2.qld

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Printed: Thursday, August 03, 2017 14:57:22 Pacific Daylight Time

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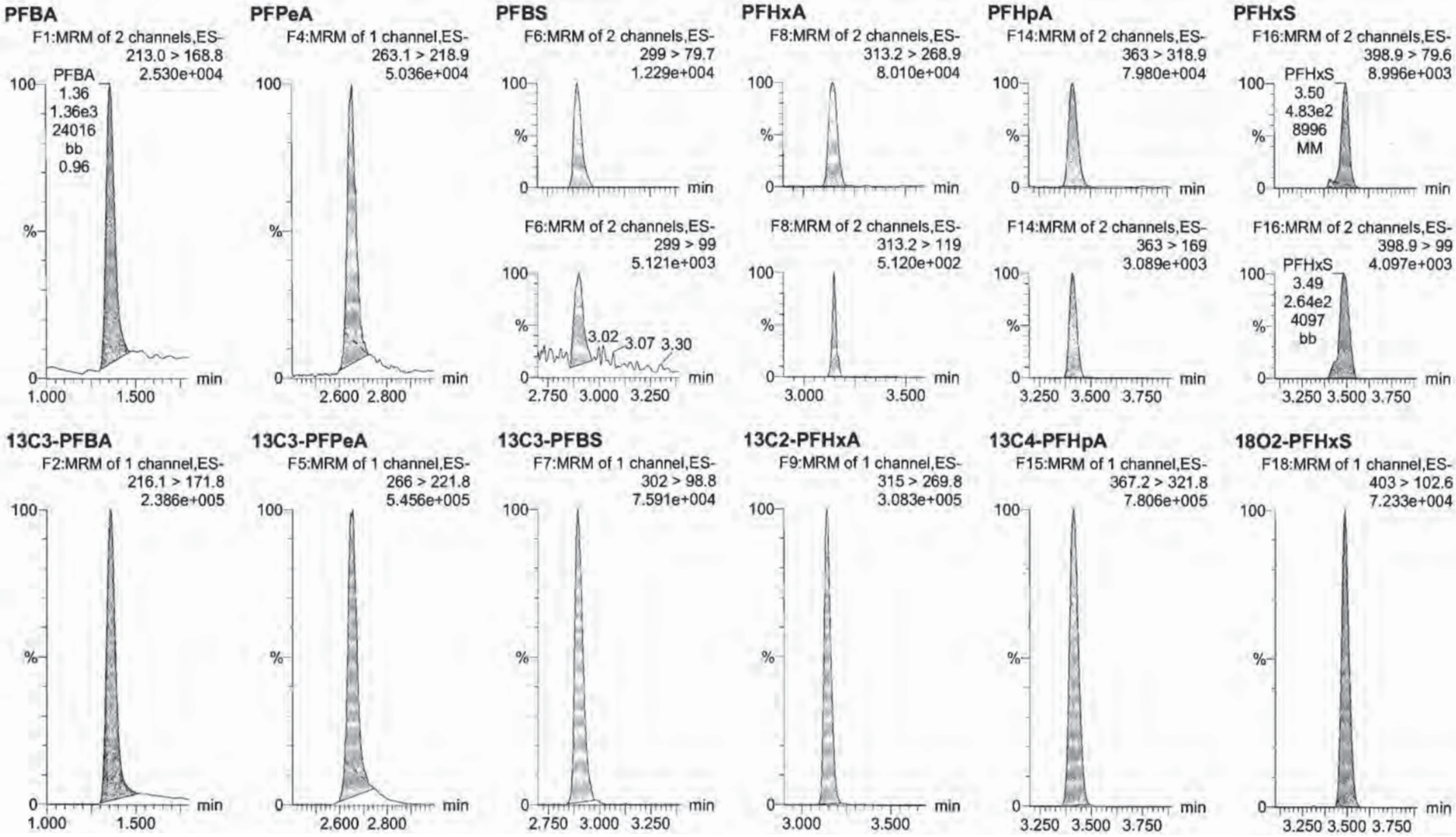

Vista Analytical Laboratory

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Last Altered: Thursday, August 03, 2017 14:49:37 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:57:22 Pacific Daylight Time

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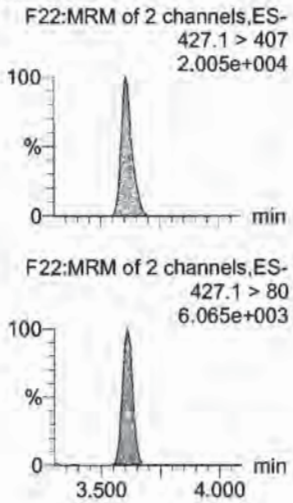
6:2 FTS



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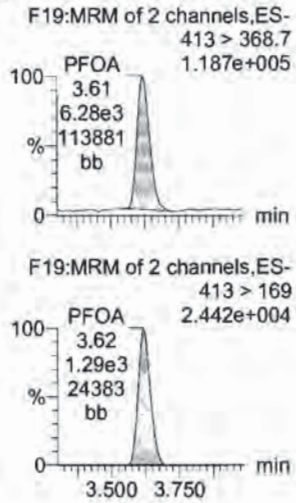

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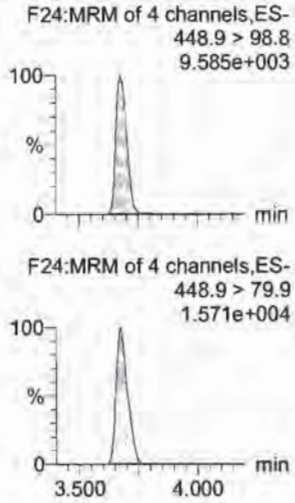

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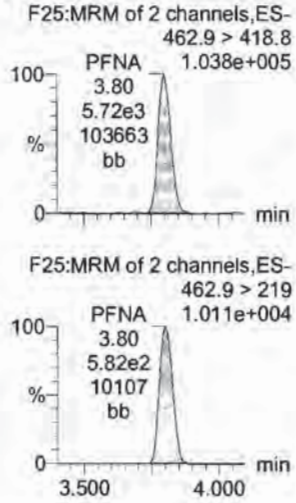

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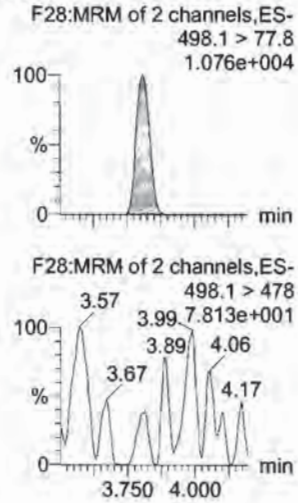

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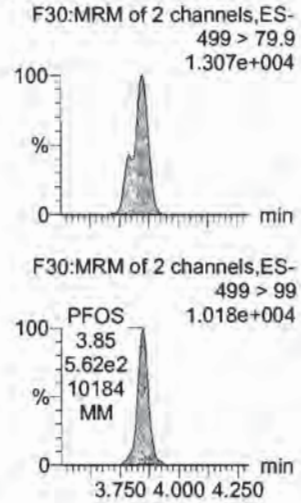

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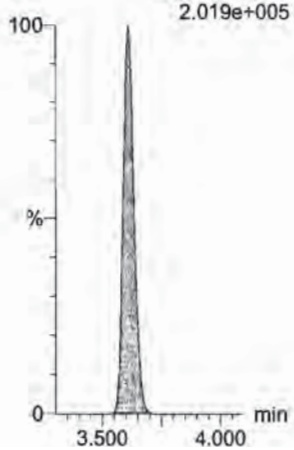

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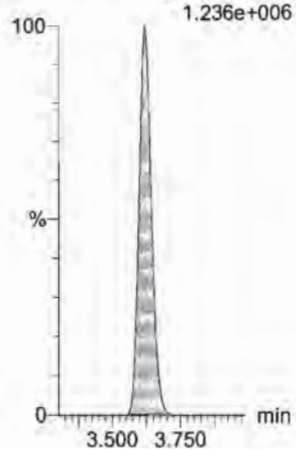

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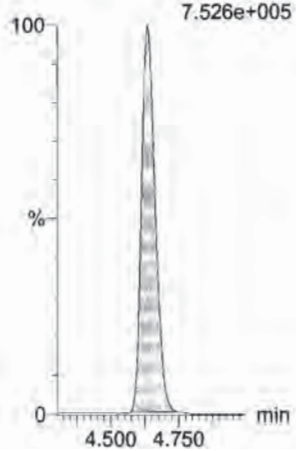

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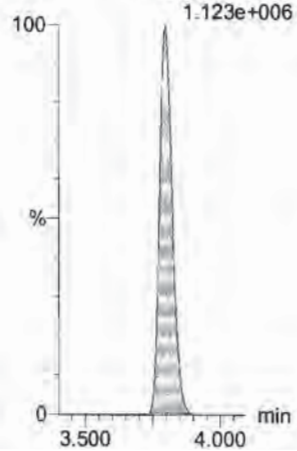

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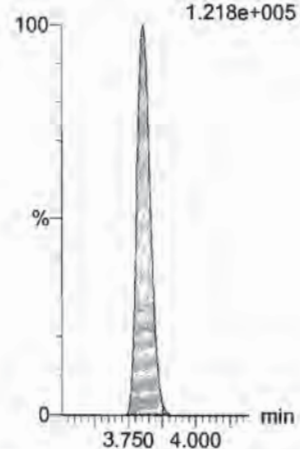

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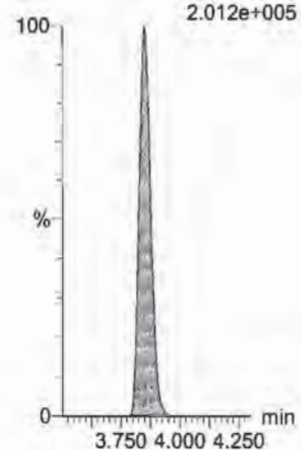

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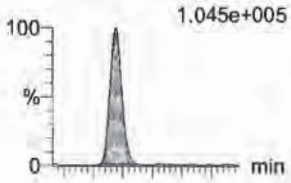
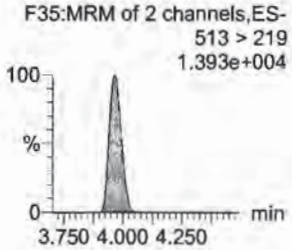
PFDA





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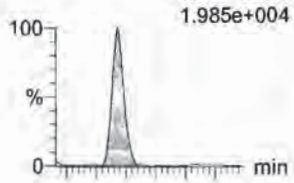

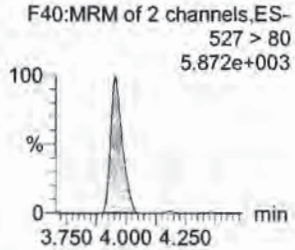

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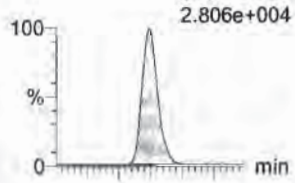

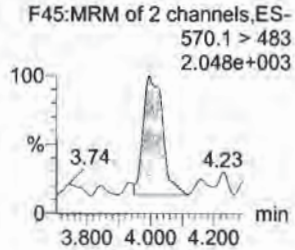

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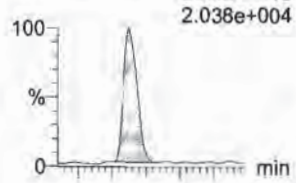
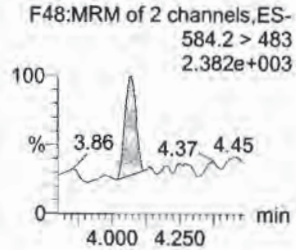
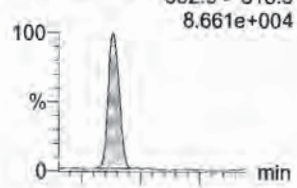
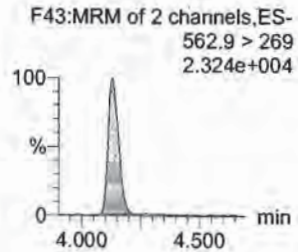


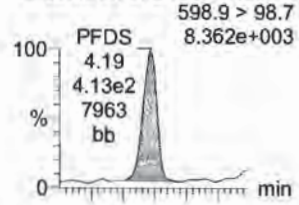


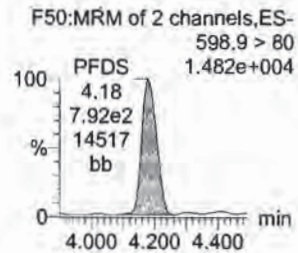
PFUnA



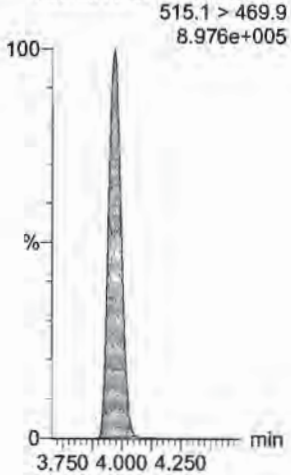


PFDS

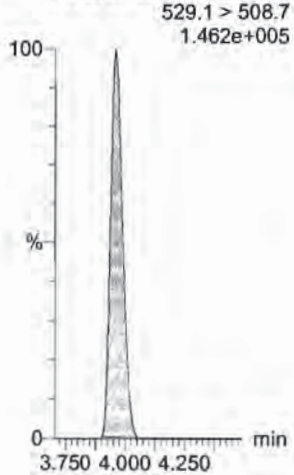




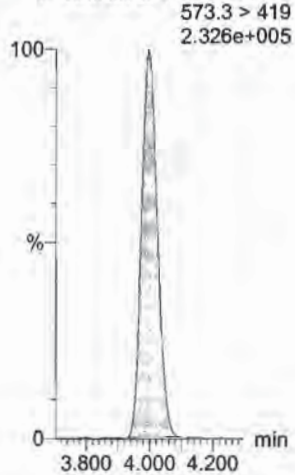
13C2-PFDA



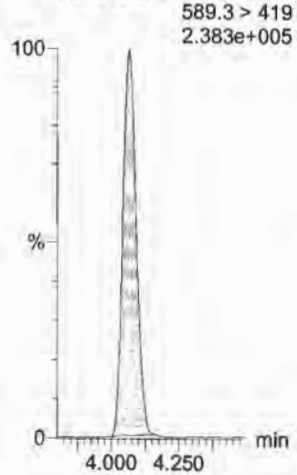
13C2-8:2 FTS



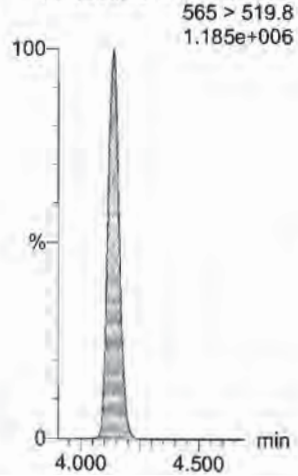
d3-N-MeFOSAA



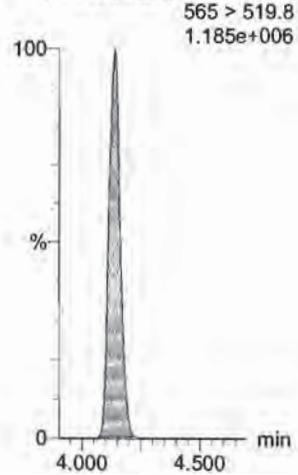
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



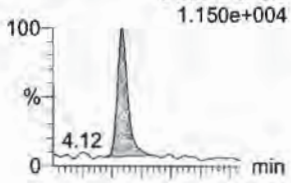
Vista Analytical Laboratory

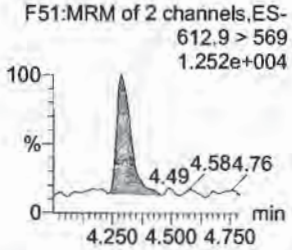
Dataset: U:\Q4.PRO\results\170802M1\170802M1-2.qld

Last Altered: Thursday, August 03, 2017 14:49:37 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:57:22 Pacific Daylight Time

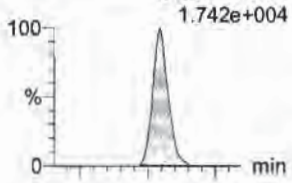
Name: 170802M1_2, Date: 02-Aug-2017, Time: 10:40:05, ID: ST170802M1-1 PFC CS0 17H0201, Description: PFC CS0 17H0201

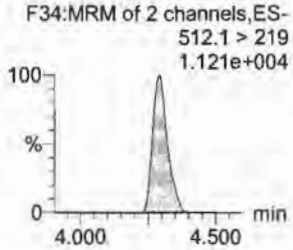
PFDoA



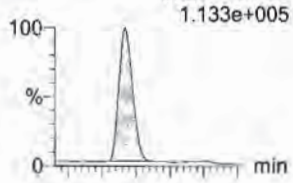


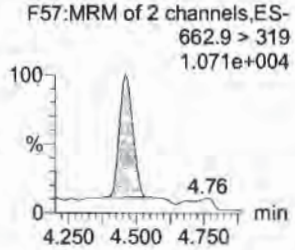
N-MeFOSA



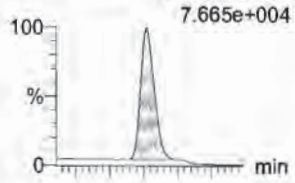


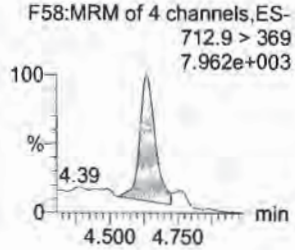
PFTrDA



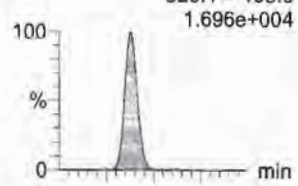


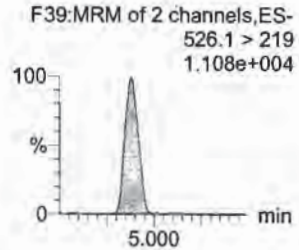
PFTeDA



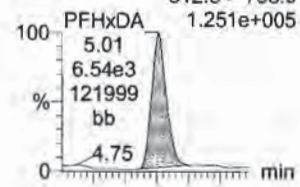


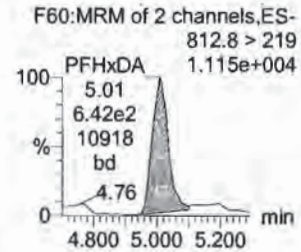
N-EtFOSA



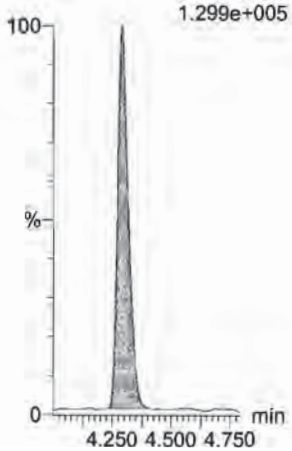


PFHxDA

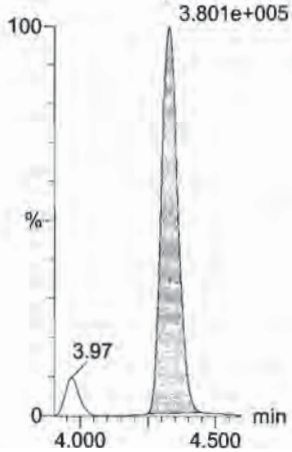




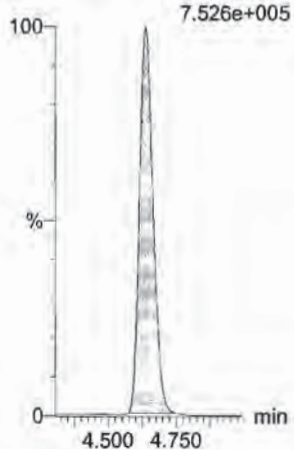
13C2-PFDoA



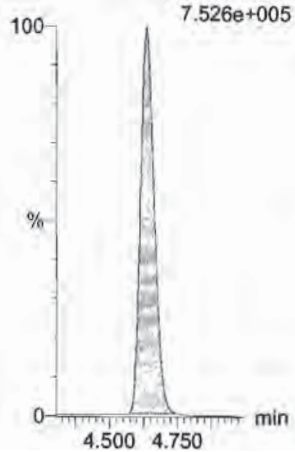
d3-N-MeFOSA



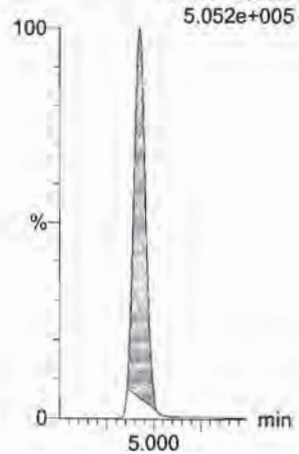
13C2-PFTeDA



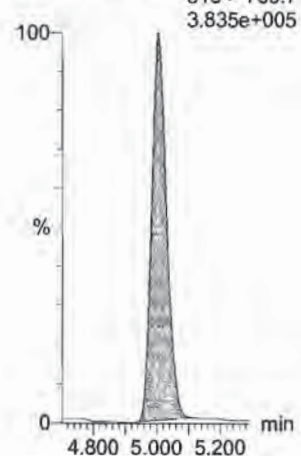
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



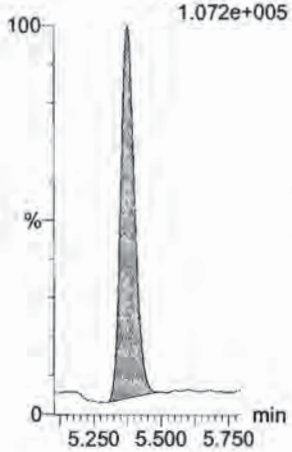
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-2.qld

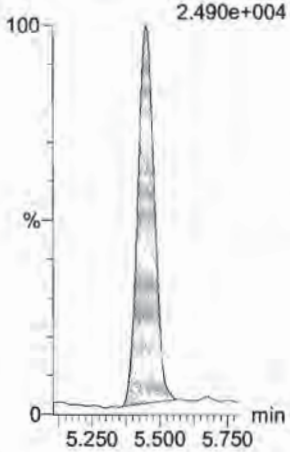
Last Altered: Thursday, August 03, 2017 14:49:37 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:57:22 Pacific Daylight Time

Name: 170802M1_2, Date: 02-Aug-2017, Time: 10:40:05, ID: ST170802M1-1 PFC CS0 17H0201, Description: PFC CS0 17H0201

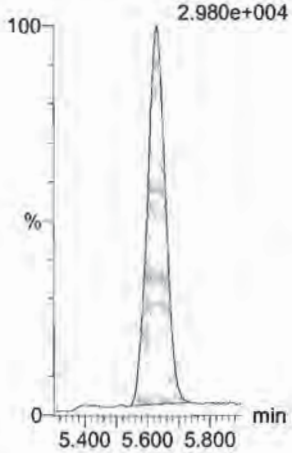
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.072e+005



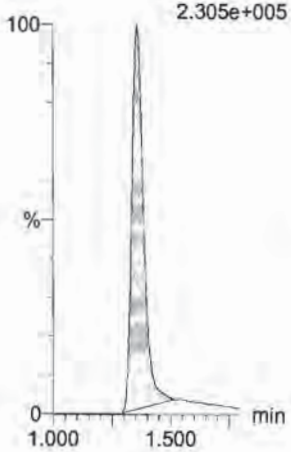
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.490e+004



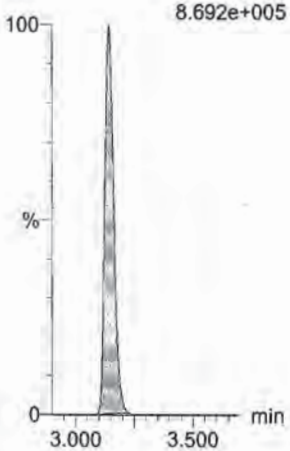
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.980e+004



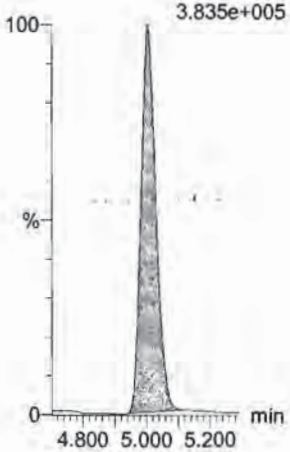
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.305e+005



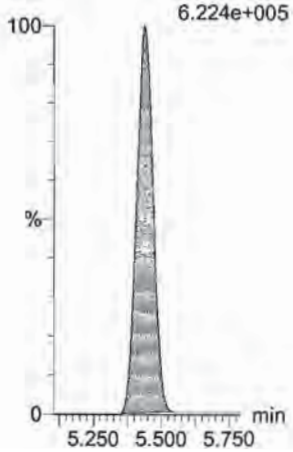
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.692e+005



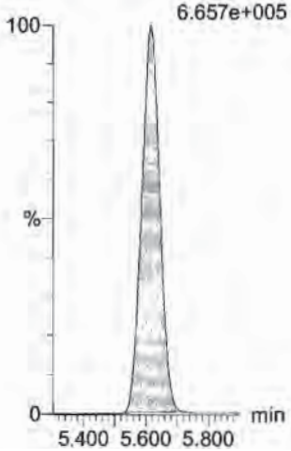
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.835e+005



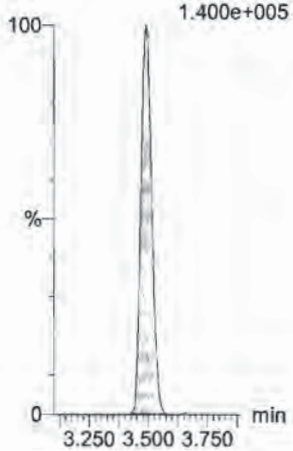
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
6.224e+005



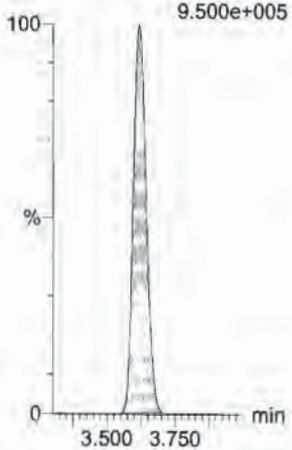
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
6.657e+005



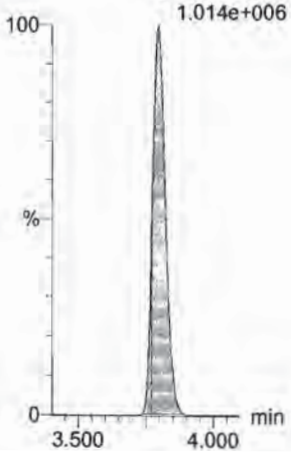
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.400e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
9.500e+005



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.014e+006

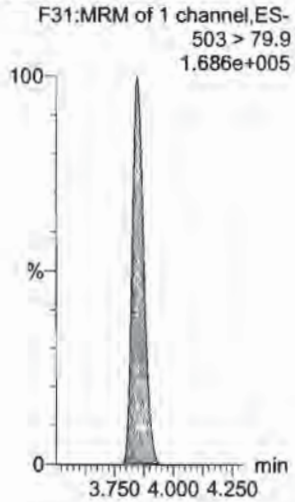


Dataset: U:\Q4.PRO\results\170802M1\170802M1-2.qld

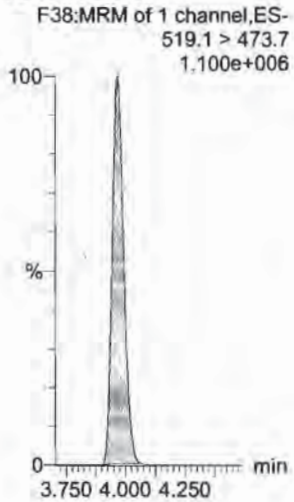
Last Altered: Thursday, August 03, 2017 14:49:37 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:57:22 Pacific Daylight Time

Name: 170802M1_2, Date: 02-Aug-2017, Time: 10:40:05, ID: ST170802M1-1 PFC CS0 17H0201, Description: PFC CS0 17H0201

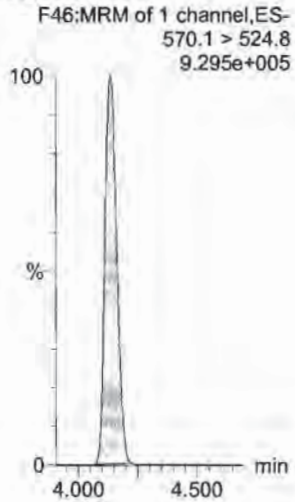
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-22.qld

Last Altered: Thursday, August 03, 2017 15:04:12 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:05:44 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: 170802M1_22, Date: 02-Aug-2017, Time: 14:15:15, ID: ST170802M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

	# Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBA	213.0 > 168.8	1.49e4	1.75e4		1.41	1.38	10.7	9.80	98.0
2	2 PFPeA	263.1 > 218.9	2.69e4	3.36e4		2.77	2.68	9.98	10.4	104.5
3	3 PFBS	299 > 79.7	6.19e3	4.55e3		2.96	2.92	17.0	8.99	89.9
4	4 PFHxA	313.2 > 268.9	4.77e4	1.65e4		3.19	3.16	14.5	10.3	103.1
5	5 PFHpA	363 > 318.9	5.26e4	5.57e4		3.45	3.43	11.8	9.82	98.2
6	6 PFHxS	398.9 > 79.6	7.21e3	5.29e3		3.56	3.50	17.0	10.1	101.2
7	7 6:2 FTS	427.1 > 407	1.09e4	1.21e4		3.64	3.62	11.2	10.0	100.0
8	8 PFOA	413 > 368.7	6.19e4	7.90e4		3.65	3.64	9.79	10.1	101.1
9	9 PFHpS	448.9 > 98.8	6.34e3	7.90e4		3.71	3.69	1.00	11.6	115.6
10	10 PFNA	462.9 > 418.8	6.20e4	6.98e4		3.83	3.81	11.1	10.2	101.6
11	11 PFOSA	498.1 > 77.8	6.71e3	8.59e3		3.84	3.83	9.76	9.12	91.2
12	12 PFOS	499 > 79.9	1.10e4	1.41e4		3.89	3.87	9.74	9.52	95.2
13	13 PFDA	513 > 468.8	6.90e4	7.21e4		4.01	3.98	12.0	9.84	98.4
14	14 8:2 FTS	527 > 506.9	9.16e3	7.57e3		4.00	3.98	15.1	10.8	107.7
15	15 N-MeFOSAA	570.1 > 419	1.78e4	1.49e4		4.03	4.02	194	10.9	108.9
16	16 N-EtFOSAA	584.2 > 419	1.42e4	1.49e4		4.10	4.09	155	10.0	100.3
17	17 PFUnA	562.9 > 518.9	4.63e4	7.20e4		4.17	4.15	8.03	10.5	104.9
18	18 PFDS	598.9 > 98.7	4.58e3	7.20e4		4.22	4.20	0.795	9.88	98.8
19	19 PFDoA	612.9 > 318.8	5.44e3	7.59e3		4.34	4.31	8.97	9.53	95.3
20	20 N-MeFOSA	512.1 > 168.9	1.11e4	3.15e4		4.29	4.32	52.9	52.3	104.7
21	21 PFTrDA	662.9 > 618.9	6.58e4	7.59e3		4.50	4.49	108	10.3	103.4
22	22 PFTeDA	712.9 > 668.8	4.54e4	5.23e4		4.68	4.66	10.8	10.0	100.2
23	23 N-EtFOSA	526.1 > 168.9	1.40e4	4.35e4		4.87	4.91	48.3	52.0	104.0
24	24 PFHxDA	812.8 > 768.9	6.59e4	2.45e4		5.06	5.03	13.4	10.5	105.1
25	25 PFODA	912.8 > 868.8	5.61e4	2.45e4		5.43	5.41	11.4	10.0	100.3
26	26 N-MeFOSE	616.1 > 58.9	1.84e4	5.19e4		5.42	5.47	53.3	51.5	103.0
27	27 N-EtFOSE	630.1 > 58.9	2.09e4	5.14e4		5.59	5.64	61.0	52.0	104.0
28	28 13C3-PFBA	216.1 > 171.8	1.75e4	1.72e4	1.006	1.41	1.38	12.7	12.7	101.3
29	29 13C3-PFPeA	266 > 221.8	3.36e4	5.07e4	0.275	2.77	2.68	3.32	12.1	96.4
30	30 13C3-PFBS	302 > 98.8	4.55e3	5.07e4	0.034	2.96	2.92	0.449	13.2	105.2
31	31 13C2-PFHxA	315 > 269.8	1.65e4	5.07e4	0.334	3.19	3.16	1.63	4.87	97.5

70-130

30-150

cm
8/3/17

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Dataset: U:\Q4.PRO\results\170802M1\170802M1-22.qld

Last Altered: Thursday, August 03, 2017 15:04:12 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:05:44 Pacific Daylight Time

Name: 170802M1_22, Date: 02-Aug-2017, Time: 14:15:15, ID: ST170802M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	5.57e4	5.07e4	0.414	3.45	3.43	5.49	13.3	106.1
33	33	18O2-PFHxS	403 > 102.6	5.29e3	1.11e4	0.475	3.56	3.50	5.95	12.5	100.1
34	34	13C2-6:2 FTS	429.1 > 408.9	1.21e4	6.44e4	0.214	3.64	3.63	2.35	11.0	88.0
35	35	13C2-PFOA	414.9 > 369.7	7.90e4	6.44e4	1.298	3.65	3.64	15.3	11.8	94.5
36	36	13C5-PFNA	468.2 > 422.9	6.98e4	6.96e4	1.094	3.83	3.81	12.5	11.5	91.7
37	37	13C8-PFOSA	506.1 > 77.7	8.59e3	7.06e4	0.124	3.84	3.83	1.52	12.2	97.7
38	38	13C8-PFOS	507 > 79.9	1.41e4	1.21e4	1.153	3.89	3.87	14.6	12.6	101.2
39	39	13C2-PFDA	515.1 > 469.9	7.21e4	7.42e4	1.059	4.01	3.99	12.1	11.5	91.8
40	40	13C2-8:2 FTS	529.1 > 508.7	7.57e3	7.42e4	0.129	4.00	3.98	1.27	9.91	79.3
41	41	d3-N-MeFOSAA	573.3 > 419	1.49e4	7.06e4	0.019	4.03	4.02	2.64	136	84.0
42	42	d5-N-EtFOSAA	589.3 > 419	1.49e4	7.06e4	0.019	4.12	4.08	2.63	139	85.6
43	43	13C2-PFUnA	565 > 519.8	7.20e4	7.06e4	1.172	4.17	4.15	12.7	10.9	87.0
44	44	13C2-PFDoA	615 > 569.7	7.59e3	7.06e4	0.118	4.34	4.31	1.34	11.3	90.7
45	45	d3-N-MeFOSA	515.2 > 168.9	3.15e4	7.06e4	0.040	4.29	4.35	5.58	138	91.9
46	46	13C2-PFTeDA	714.8 > 669.6	5.23e4	7.06e4	0.801	4.68	4.66	9.26	11.6	92.5
47	47	d5-N-ETFOSA	531.1 > 168.9	4.35e4	7.06e4	0.055	5.01	4.95	7.69	140	93.1
48	48	13C2-PFHxDA	815 > 769.7	2.45e4	7.06e4	0.991	5.06	5.04	4.34	4.38	87.6
49	49	d7-N-MeFOSE	623.1 > 58.9	5.19e4	7.06e4	0.065	5.42	5.45	9.18	141	93.9
50	50	d9-N-EtFOSE	639.2 > 58.8	5.14e4	7.06e4	0.065	5.59	5.63	9.10	141	93.7
51	51	13C4-PFBA	217 > 171.8	1.72e4	1.72e4	1.000	1.41	1.38	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	5.07e4	5.07e4	1.000	3.19	3.16	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	1.11e4	1.11e4	1.000	3.56	3.50	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	6.44e4	6.44e4	1.000	3.65	3.64	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	6.96e4	6.96e4	1.000	3.83	3.81	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.21e4	1.21e4	1.000	3.89	3.87	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	7.42e4	7.42e4	1.000	4.01	3.99	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	7.06e4	7.06e4	1.000	4.17	4.15	12.5	12.5	100.0

50-150

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
1	170802M1_1	—	IPA	IPA	1.0000	1:48	Blank
2	170802M1_2	—	ST170802M1-1 PFC CS0 17H0201	PFC CS0 17H0201	1.0000	1:1	Analyte
3	170802M1_3	—	IPA	IPA	1.0000	1:48	Blank
4	170802M1_4	—	B7G0121-BS1 OPR 0.125	OPR	0.1250	1:3	Analyte
5	170802M1_5	—	IPA	IPA	1.0000	1:48	Blank
6	170802M1_6	—	B7G0121-BLK1 Method Blank 0.125	Method Blank	0.1250	1:4	Analyte
7	170802M1_7	—	B7G0121-MS1 Matrix Spike 0.11301	Matrix Spike	0.1130	1:5	Analyte
8	170802M1_8	—	B7G0121-MSD1 Matrix Spike Dup 0.11225	Matrix Spike Dup	0.1123	1:6	Analyte
9	170802M1_9	—	B7G0121-MS2 Matrix Spike 0.11554	Matrix Spike	0.1155	1:7	Analyte
10	170802M1_10	—	B7G0121-MSD2 Matrix Spike Dup 0.11866	Matrix Spike Dup	0.1187	1:8	Analyte
11	170802M1_11	—	1700922-01 MH-L103-20170721 0.10565	MH-L103-20170721	0.1056	1:9	Analyte
12	170802M1_12	—	1700922-02 MH-N104-20170721 0.11025	MH-N104-20170721	0.1103	1:10	Analyte
13	170802M1_13	—	1700922-03 Upstream-Culvert-109-20170721 0.11852	Upstream-Culvert-109-20170721	0.1185	1:11	Analyte
14	170802M1_14	—	1700922-04 FRB03-20170721 0.11017	FRB03-20170721	0.1102	1:12	Analyte
15	170802M1_15	—	1700922-05 RB08-20170720 0.11893	RB08-20170720	0.1189	1:13	Analyte
16	170802M1_16	—	1700922-06 RB09-20170721 0.11676	RB09-20170721	0.1168	1:14	Analyte
17	170802M1_17	—	1700925-01 I001BC43S-170724 0.12112	I001BC43S-170724	0.1211	1:15	Analyte
18	170802M1_18	—	1700925-02 SB01-170724 0.12178	SB01-170724	0.1218	1:16	Analyte
19	170802M1_19	—	1700925-03 I001BC50S-170724 0.12135	I001BC50S-170724	0.1214	1:17	Analyte
20	170802M1_20	—	1700925-04 I001MW52S-170724 0.1192	I001MW52S-170724	0.1192	1:18	Analyte
21	170802M1_21	—	IPA	IPA	1.0000	1:48	Analyte
22	170802M1_22	—	ST170802M1-2 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
23	170802M1_23	—	IPA	IPA	1.0000	1:48	Blank
24	170802M1_24	—	1700925-05 I001MW52X-170724 0.1174	I001MW52X-170724	0.1174	1:19	Analyte
25	170802M1_25	—	1700925-06 EB01-170724 0.1185	EB01-170724	0.1185	1:20	Analyte
26	170802M1_26	—	1700929-01 MATP01001 0.11834	MATP01001	0.1183	1:21	Analyte
27	170802M1_27	—	1700929-02 MATP01002 0.1157	MATP01002	0.1157	1:22	Analyte
28	170802M1_28	—	1700938-01 NORP08102 0.11844	NORP08102	0.1184	1:23	Analyte
29	170802M1_29	—	1700938-02 NORP08103 0.12014	NORP08103	0.1201	1:24	Analyte
30	170802M1_30	—	1700938-03 NORP08104 0.11247	NORP08104	0.1125	1:25	Analyte
31	170802M1_31	—	1700886-12 AT028-SD17-02-071317-0845 1.44	AT028-SD17-02-071317-0845	0.9987	1:26	Analyte
32	170802M1_32	—	1700888-03 HARRI-01-SB02-0-2 2.04	HARRI-01-SB02-0-2	1.0167	1:27	Analyte
33	170802M1_33	—	1700888-09 HARRI-02-SB01-6-8 1.47	HARRI-02-SB01-6-8	1.0058	1:28	Analyte
34	170802M1_34	—	1700889-06 HARRI-03-SB03-0-2 1.33	HARRI-03-SB03-0-2	0.9903	1:29	Analyte
35	170802M1_35	—	B7G0086-MS1 Matrix Spike 1.35	Matrix Spike	1.3500	1:30	Analyte
36	170802M1_36	—	IPA	IPA	1.0000	1:48	Analyte
37	170802M1_37	—	ST170802M1-3 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
38	170802M1_38	—	IPA	IPA	1.0000	1:48	Blank
39	170802M1_39	—	1700906-01 MW-50BR-20170717 0.125	MW-50BR-20170717	0.1211	1:31	Analyte
40	170802M1_40	—	1700906-03 RB-04-20170717 0.125	RB-04-20170717	0.1202	1:32	Analyte

✓ QM 8/3/17 AC 8/3/17

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
41	170802M1_41	—	1700906-04 MW-12BR-20170718 0.125	MW-12BR-20170718	0.1213	1:33	Analyte
42	170802M1_42	—	1700906-05 MW-02BR-20170718 0.125	MW-02BR-20170718	0.1208	1:34	Analyte
43	170802M1_43	—	1700906-06 RB-05-20170718 0.125	RB-05-20170718	0.1215	1:35	Analyte
44	170802M1_44	—	1700907-01 AT028-FB-01-071717-0850 0.125	AT028-FB-01-071717-0850	0.1198	1:36	Analyte
45	170802M1_45	—	1700907-02 AT028-MW17-02-071717-0950 0.125	AT028-MW17-02-071717-0950	0.1199	1:37	Analyte
46	170802M1_46	—	1700907-03 AT028-MW17-04-071717-1050 0.125	AT028-MW17-04-071717-1050	0.1204	1:38	Analyte
47	170802M1_47	—	B7G0105-MS1 Matrix Spike 0.125	Matrix Spike	0.1181	1:39	Analyte
48	170802M1_48	—	B7G0105-MSD1 Matrix Spike Dup 0.125	Matrix Spike Dup	0.1216	1:40	Analyte
49	170802M1_49	—	1700907-04 AT028-MW17-06-071717-1300 0.125	AT028-MW17-06-071717-1300	0.1250	1:41	Analyte
50	170802M1_50	—	1700907-06 AT028-MW17-07-071717-1520 0.125	AT028-MW17-07-071717-1520	0.1163	1:42	Analyte
51	170802M1_51	—	IPA	IPA	1.0000	1:48	Analyte
52	170802M1_52	—	ST170802M1-4 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
53	170802M1_53	—	IPA	IPA	1.0000	1:48	Blank
54	170802M1_54	—	1700907-08 AT028-MW17-05-071817-0835 0.125	AT028-MW17-05-071817-0835	0.1196	1:43	Analyte
55	170802M1_55	—	1700907-09 AT028-MW17-01-071817-0950 0.125	AT028-MW17-01-071817-0950	0.1159	1:44	Analyte
56	170802M1_56	—	1700875-05@40X MW-11S-20170713 0.11994	MW-11S-20170713	0.1199	1:45	Analyte
57	170802M1_57	—	IPA	IPA	1.0000	1:48	Blank
58	170802M1_58	—	B7H0006-BS1 OPR 0.005	OPR	0.0050	1:46	Analyte
59	170802M1_59	—	IPA	IPA	1.0000	1:48	Blank
60	170802M1_60	—	B7H0006-BLK1 Method Blank 0.005	Method Blank	0.0050	1:47	Analyte
61	170802M1_61	—	1700936-01 BULK TANK #1 0.005	BULK TANK #1	0.0050	2:1	Analyte
62	170802M1_62	—	1700936-02 BULK TANK #2 0.005	BULK TANK #2	0.0050	2:2	Analyte
63	170802M1_63	—	1700936-03 COW SAMPLE 0.005	COW SAMPLE	0.0050	2:3	Analyte
64	170802M1_64	—	1700936-04 OAKHURST Whole Pt. 0.005	OAKHURST Whole Pt.	0.0050	2:4	Analyte
65	170802M1_65	—	IPA	IPA	1.0000	1:48	Analyte
66	170802M1_66	—	ST170802M1-5 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
67	170802M1_67	—	IPA	IPA	1.0000	1:48	Blank

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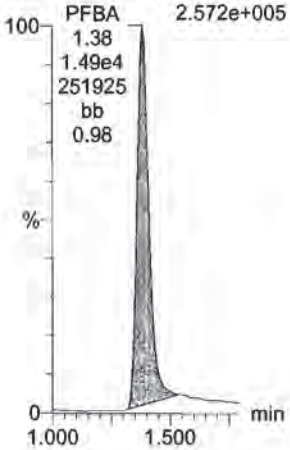
Dataset: U:\Q4.PRO\results\170802M1\170802M1-22.qld

Last Altered: Thursday, August 03, 2017 15:04:12 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:05:44 Pacific Daylight Time

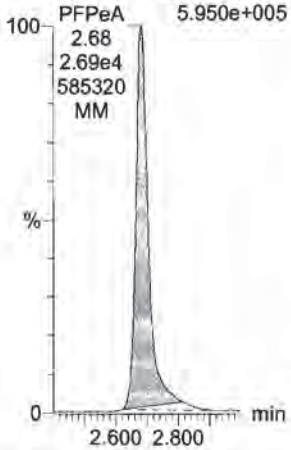
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_7-31-17-FULL.cdb 01 Aug 2017 10:11:08

Name: 170802M1_22, Date: 02-Aug-2017, Time: 14:15:15, ID: ST170802M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

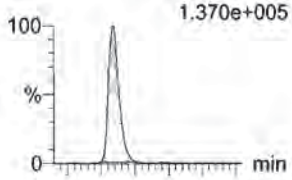
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
2.572e+005



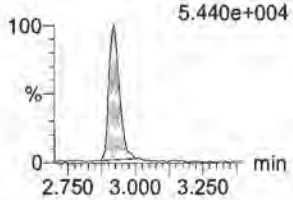
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
5.950e+005



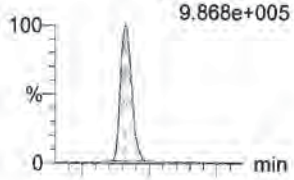
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
1.370e+005



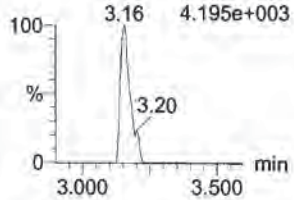
F6:MRM of 2 channels,ES-
299 > 99
5.440e+004



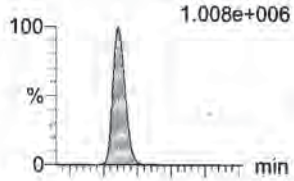
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
9.868e+005



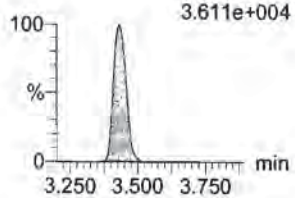
F8:MRM of 2 channels,ES-
313.2 > 119
4.195e+003



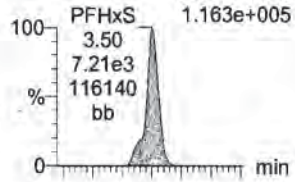
PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
1.008e+006



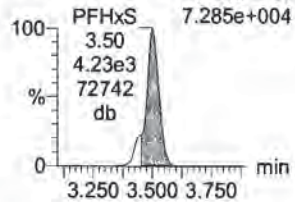
F14:MRM of 2 channels,ES-
363 > 169
3.611e+004



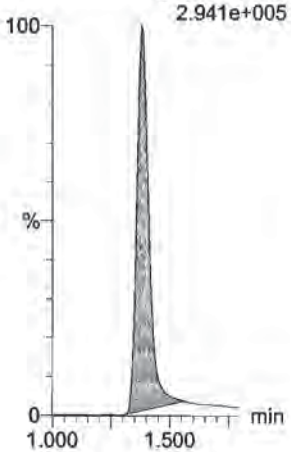
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
1.163e+005



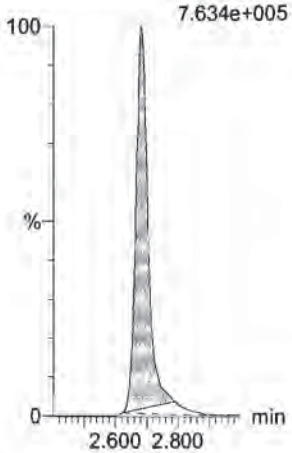
F16:MRM of 2 channels,ES-
398.9 > 99
7.285e+004



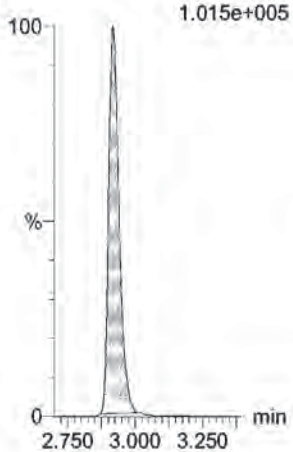
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
2.941e+005



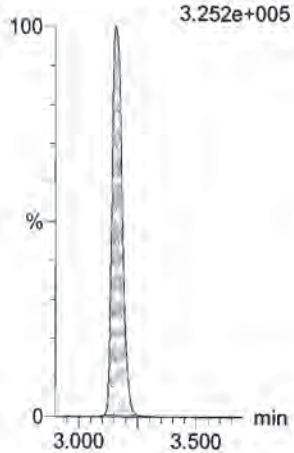
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
7.634e+005



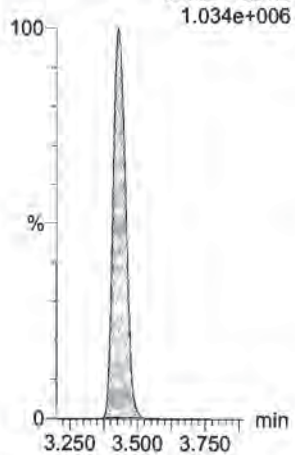
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
1.015e+005



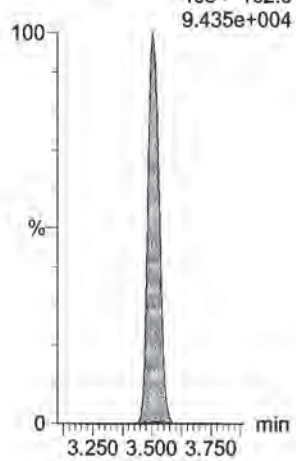
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
3.252e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
1.034e+006



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
9.435e+004

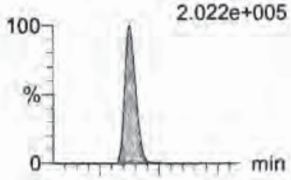


Dataset: U:\Q4.PRO\results\170802M1\170802M1-22.qld

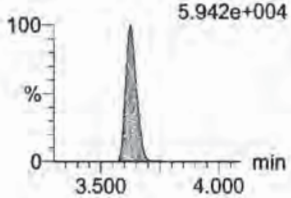
Last Altered: Thursday, August 03, 2017 15:04:12 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:05:44 Pacific Daylight Time

Name: 170802M1_22, Date: 02-Aug-2017, Time: 14:15:15, ID: ST170802M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

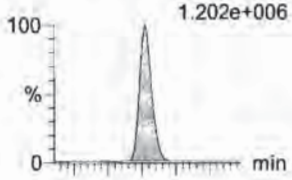
6:2 FTS
F22:MRM of 2 channels,ES-
427.1 > 407
2.022e+005



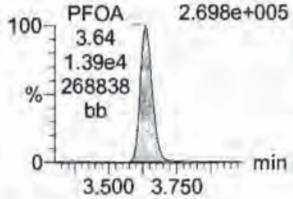
F22:MRM of 2 channels,ES-
427.1 > 80
5.942e+004



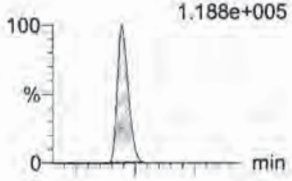
PFOA
F19:MRM of 2 channels,ES-
413 > 368.7
1.202e+006



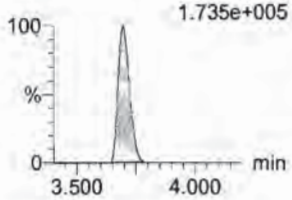
F19:MRM of 2 channels,ES-
413 > 169
2.698e+005



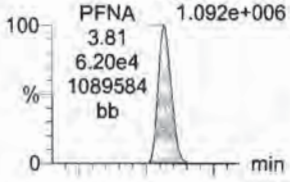
PFHpS
F24:MRM of 4 channels,ES-
448.9 > 98.8
1.188e+005



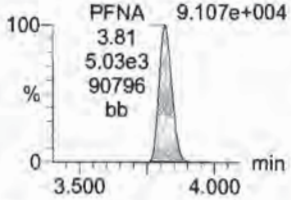
F24:MRM of 4 channels,ES-
448.9 > 79.9
1.735e+005



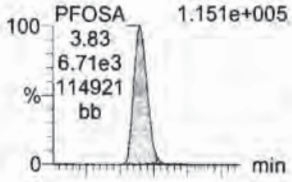
PFNA
F25:MRM of 2 channels,ES-
462.9 > 418.8
1.092e+006



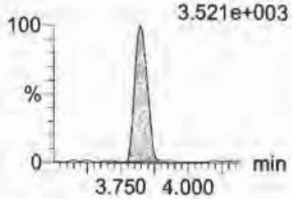
F25:MRM of 2 channels,ES-
462.9 > 219
9.107e+004



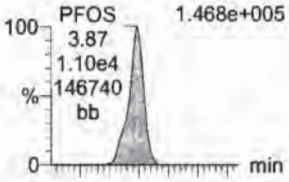
PFOSA
F28:MRM of 2 channels,ES-
498.1 > 77.8
1.151e+005



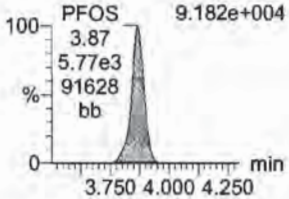
F28:MRM of 2 channels,ES-
498.1 > 478
3.521e+003



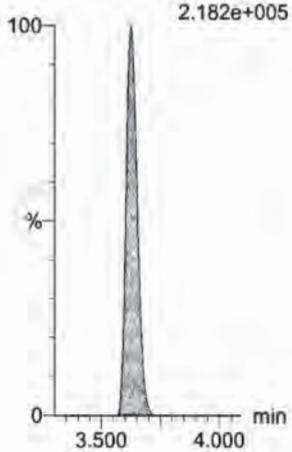
PFOS
F30:MRM of 2 channels,ES-
499 > 79.9
1.468e+005



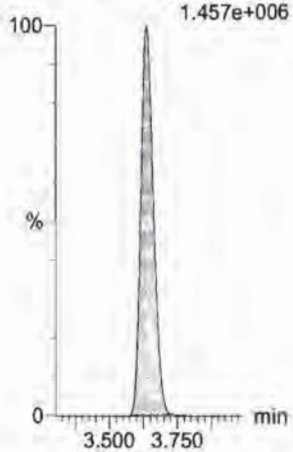
F30:MRM of 2 channels,ES-
499 > 99
9.182e+004



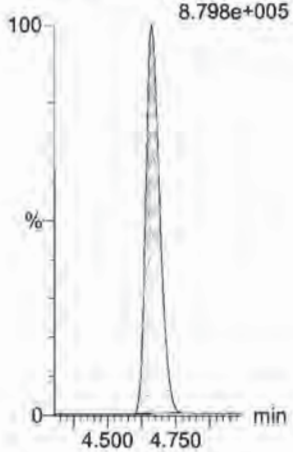
13C2-6:2 FTS
F23:MRM of 1 channel,ES-
429.1 > 408.9
2.182e+005



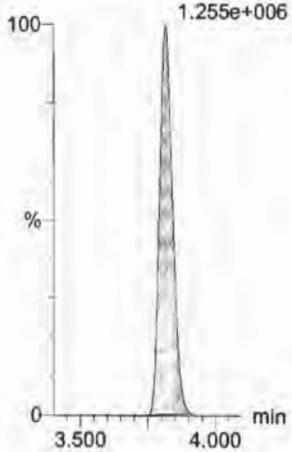
13C2-PFOA
F20:MRM of 1 channel,ES-
414.9 > 369.7
1.457e+006



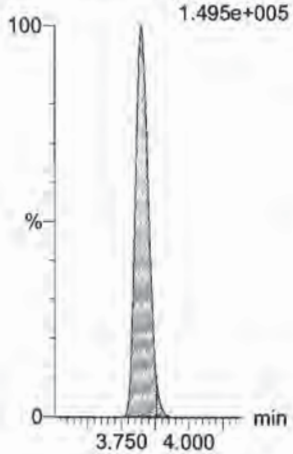
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
8.798e+005



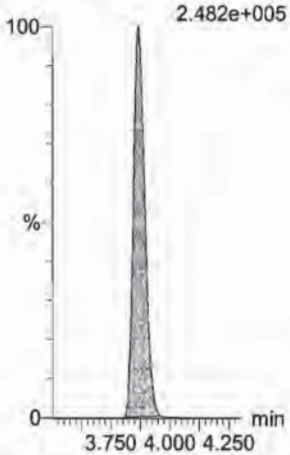
13C5-PFNA
F26:MRM of 1 channel,ES-
468.2 > 422.9
1.255e+006



13C8-PFOSA
F32:MRM of 1 channel,ES-
506.1 > 77.7
1.495e+005



13C8-PFOS
F33:MRM of 1 channel,ES-
507 > 79.9
2.482e+005



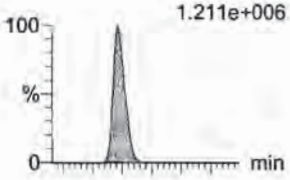
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-22.qld

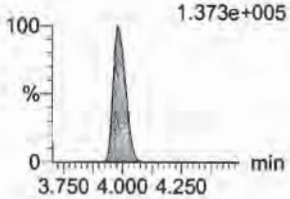
Last Altered: Thursday, August 03, 2017 15:04:12 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:05:44 Pacific Daylight Time

Name: 170802M1_22, Date: 02-Aug-2017, Time: 14:15:15, ID: ST170802M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

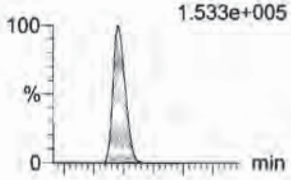
PFDA
F35:MRM of 2 channels,ES-
513 > 468.8
1.211e+006



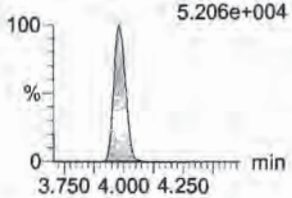
F35:MRM of 2 channels,ES-
513 > 219
1.373e+005



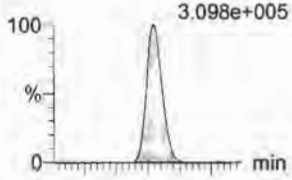
8:2 FTS
F40:MRM of 2 channels,ES-
527 > 506.9
1.533e+005



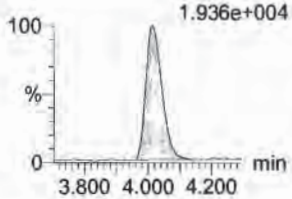
F40:MRM of 2 channels,ES-
527 > 80
5.206e+004



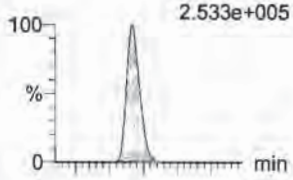
N-MeFOSAA
F45:MRM of 2 channels,ES-
570.1 > 419
3.098e+005



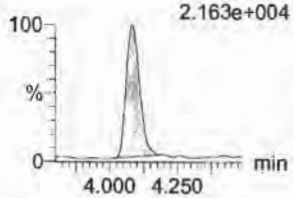
F45:MRM of 2 channels,ES-
570.1 > 483
1.936e+004



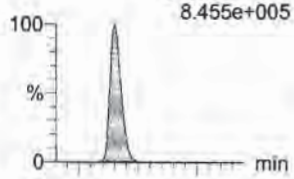
N-EtFOSAA
F48:MRM of 2 channels,ES-
584.2 > 419
2.533e+005



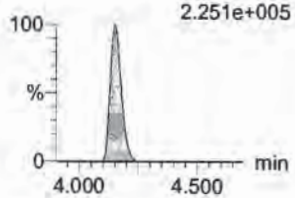
F48:MRM of 2 channels,ES-
584.2 > 483
2.163e+004



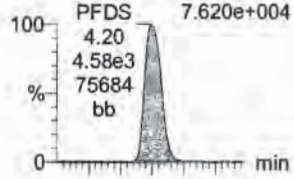
PFUnA
F43:MRM of 2 channels,ES-
562.9 > 518.9
8.455e+005



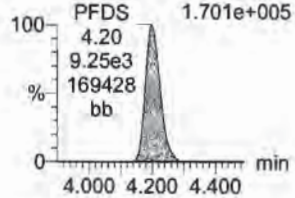
F43:MRM of 2 channels,ES-
562.9 > 269
2.251e+005



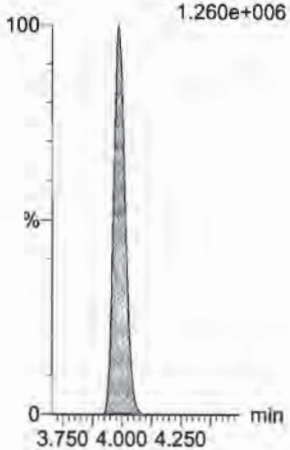
PFDS
F50:MRM of 2 channels,ES-
598.9 > 98.7
7.620e+004



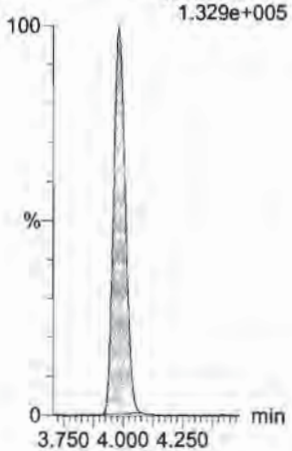
F50:MRM of 2 channels,ES-
598.9 > 80
1.701e+005



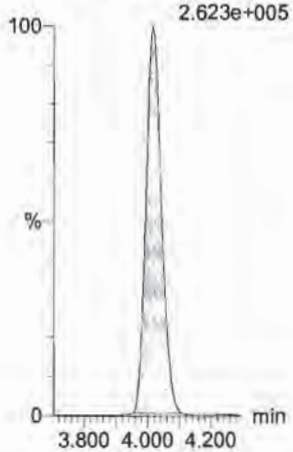
13C2-PFDA
F36:MRM of 1 channel,ES-
515.1 > 469.9
1.260e+006



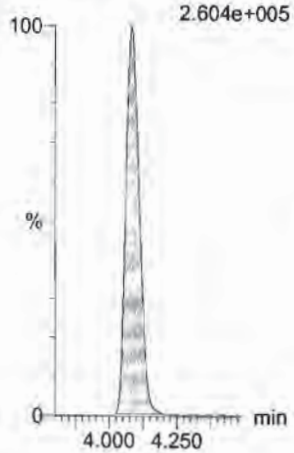
13C2-8:2 FTS
F41:MRM of 1 channel,ES-
529.1 > 508.7
1.329e+005



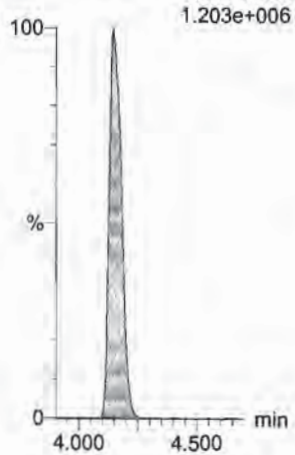
d3-N-MeFOSAA
F47:MRM of 1 channel,ES-
573.3 > 419
2.623e+005



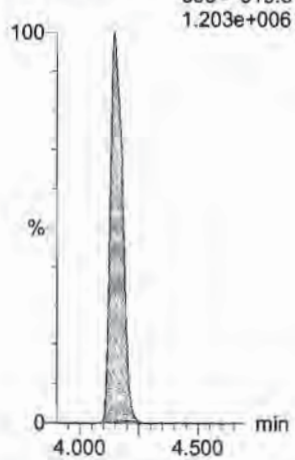
d5-N-EtFOSAA
F49:MRM of 1 channel,ES-
589.3 > 419
2.604e+005



13C2-PFUnA
F44:MRM of 1 channel,ES-
565 > 519.8
1.203e+006



13C2-PFUnA
F44:MRM of 1 channel,ES-
565 > 519.8
1.203e+006

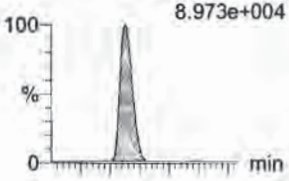


Dataset: U:\Q4.PRO\results\170802M1\170802M1-22.qld

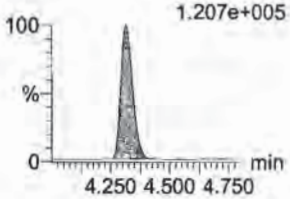
Last Altered: Thursday, August 03, 2017 15:04:12 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:05:44 Pacific Daylight Time

Name: 170802M1_22, Date: 02-Aug-2017, Time: 14:15:15, ID: ST170802M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

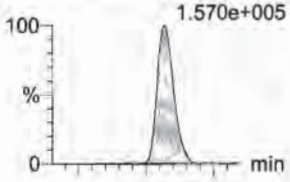
PFDoA
F51:MRM of 2 channels,ES-
612.9 > 318.8
8.973e+004



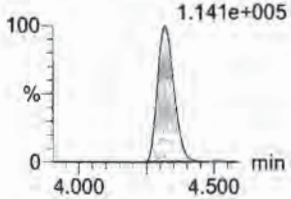
F51:MRM of 2 channels,ES-
612.9 > 569
1.207e+005



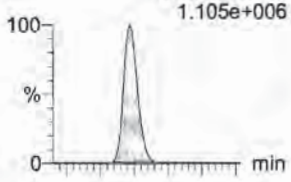
N-MeFOSA
F34:MRM of 2 channels,ES-
512.1 > 168.9
1.570e+005



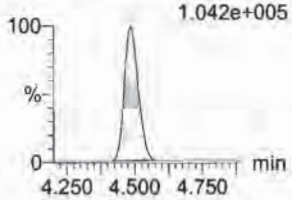
F34:MRM of 2 channels,ES-
512.1 > 219
1.141e+005



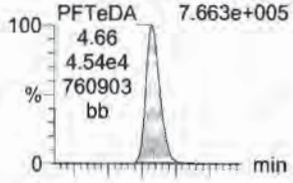
PFTrDA
F57:MRM of 2 channels,ES-
662.9 > 618.9
1.105e+006



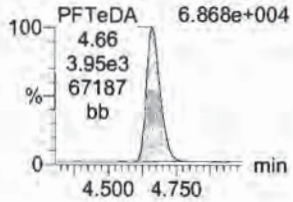
F57:MRM of 2 channels,ES-
662.9 > 319
1.042e+005



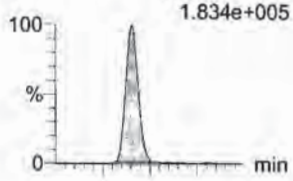
PFTeDA
F58:MRM of 4 channels,ES-
712.9 > 668.8
7.663e+005



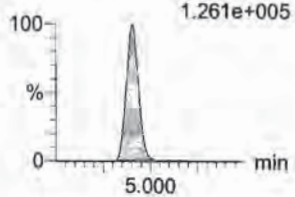
F58:MRM of 4 channels,ES-
712.9 > 369
6.868e+004



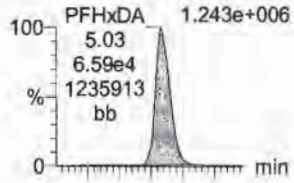
N-EtFOSA
F39:MRM of 2 channels,ES-
526.1 > 168.9
1.834e+005



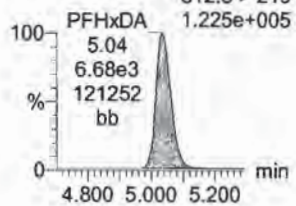
F39:MRM of 2 channels,ES-
526.1 > 219
1.261e+005



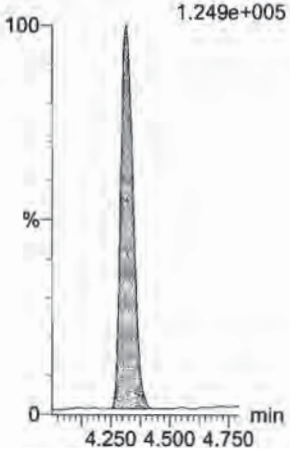
PFHxDA
F60:MRM of 2 channels,ES-
812.8 > 768.9
1.243e+006



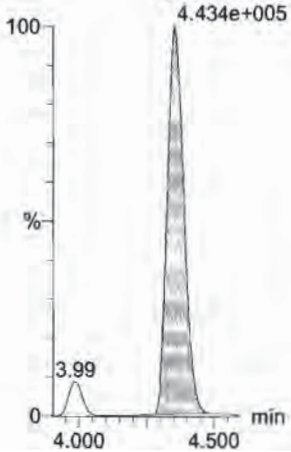
F60:MRM of 2 channels,ES-
812.8 > 219
1.225e+005



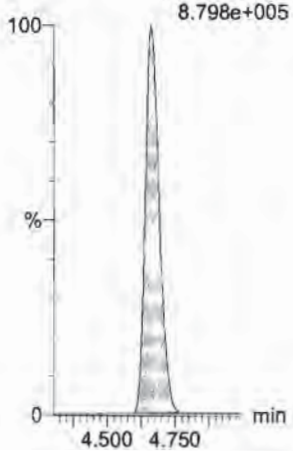
13C2-PFDoA
F52:MRM of 1 channel,ES-
615 > 569.7
1.249e+005



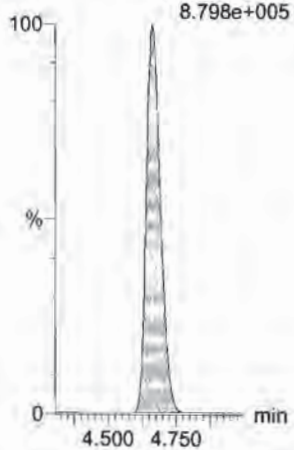
d3-N-MeFOSA
F37:MRM of 1 channel,ES-
515.2 > 168.9
4.434e+005



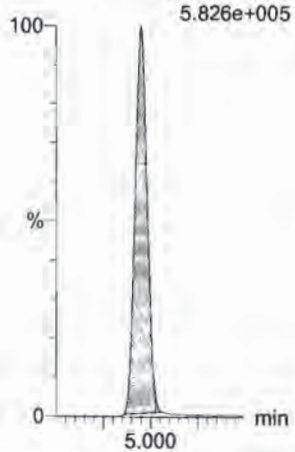
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
8.798e+005



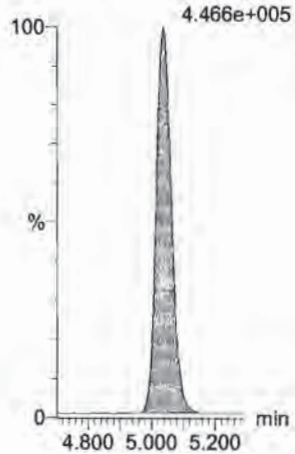
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
8.798e+005



d5-N-ETFOSA
F42:MRM of 1 channel,ES-
531.1 > 168.9
5.826e+005



13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.466e+005



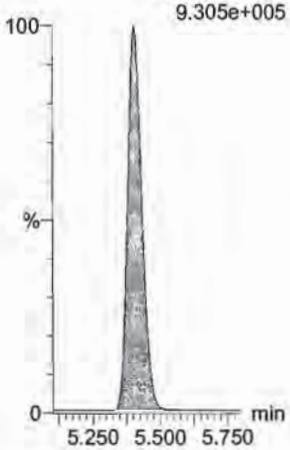
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-22.qld

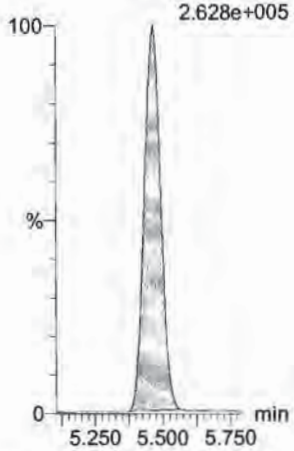
Last Altered: Thursday, August 03, 2017 15:04:12 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:05:44 Pacific Daylight Time

Name: 170802M1_22, Date: 02-Aug-2017, Time: 14:15:15, ID: ST170802M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

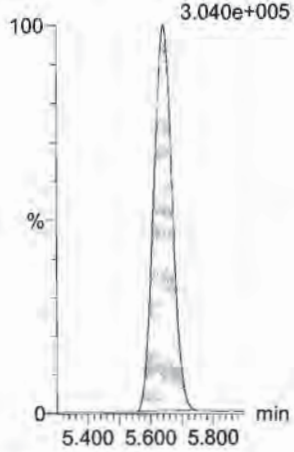
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
9.305e+005



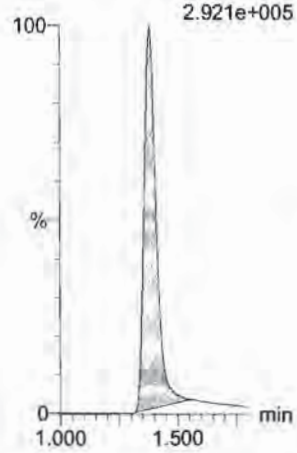
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.628e+005



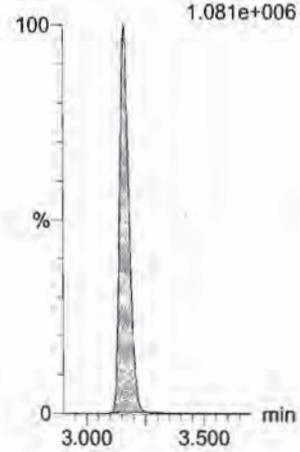
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
3.040e+005



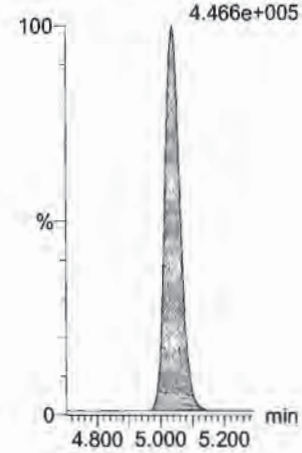
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.921e+005



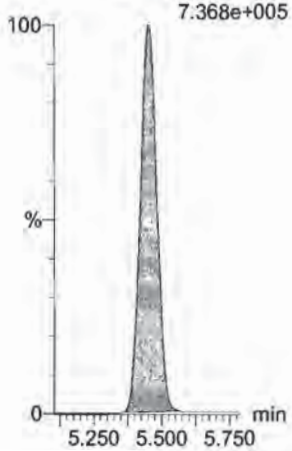
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.081e+006



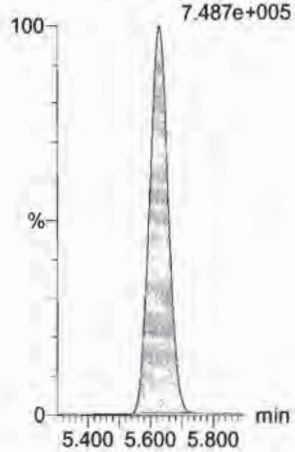
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.466e+005



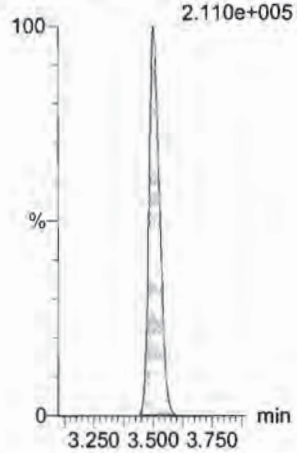
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
7.368e+005



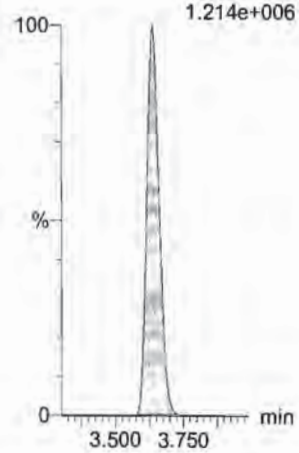
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.487e+005



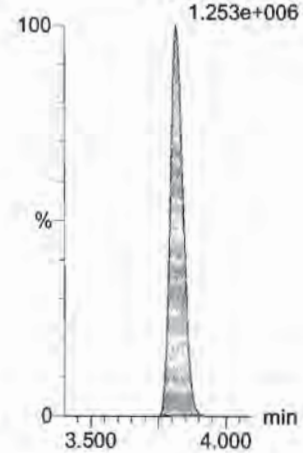
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
2.110e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.214e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.253e+006

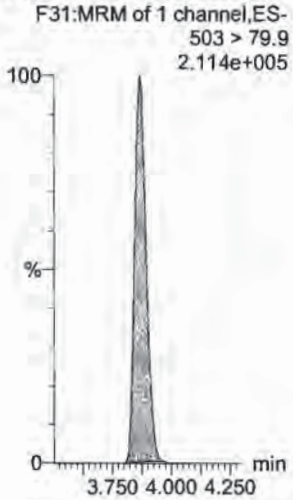


Dataset: U:\Q4.PRO\results\170802M1\170802M1-22.qld

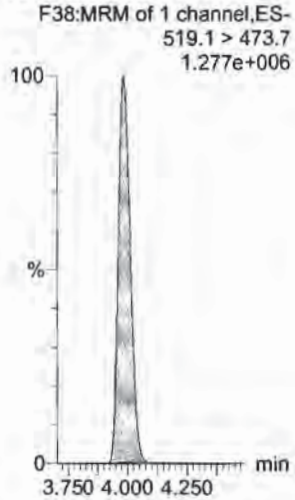
Last Altered: Thursday, August 03, 2017 15:04:12 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:05:44 Pacific Daylight Time

Name: 170802M1_22, Date: 02-Aug-2017, Time: 14:15:15, ID: ST170802M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

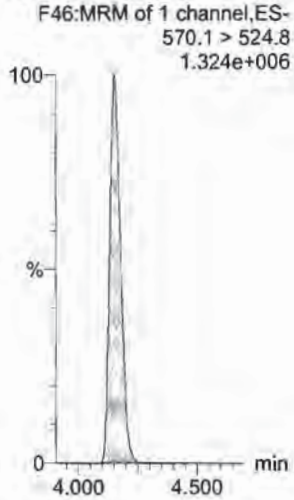
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_RS=only.mdb 11 Aug 2017 12:16:30
Calibration: 12 Aug 2017 15:36:59

Name: 170811M2_2, Date: 11-Aug-2017, Time: 18:35:42, ID: ST170811M2-1 PFC CS0 17H1106, Description: PFC CS0 17H1106

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	3.81e4	92.8	NO
2	2	13C3-PFHxS	ST170...	7.66e3	97.2	NO
3	3	13C8-PFOA	ST170...	6.00e4	97.3	NO
4	4	13C9-PFNA	ST170...	6.82e4	97.9	NO
5	5	13C4-PFOS	ST170...	1.03e4	94.2	NO
6	6	13C6-PFDA	ST170...	5.85e4	90.4	NO
7	7	13C7-PFUnA	ST170...	6.27e4	98.3	NO

Name: 170811M2_3, Date: 11-Aug-2017, Time: 18:46:29, 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	8.16e0	0.0	NO
7	7	13C7-PFUnA	IPA	9.60e0	0.0	NO

Name: 170811M2_4, Date: 11-Aug-2017, Time: 18:57:15, ID: B7H0073-BS1 OPR 0.125, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7H00...	1.23e5	149.9	NO
2	2	13C3-PFHxS	B7H00...	2.02e4	128.0	NO
3	3	13C8-PFOA	B7H00...	1.03e5	83.7	NO
4	4	13C9-PFNA	B7H00...	1.15e5	82.9	NO
5	5	13C4-PFOS	B7H00...	2.03e4	93.2	NO
6	6	13C6-PFDA	B7H00...	1.28e5	99.0	NO
7	7	13C7-PFUnA	B7H00...	1.20e5	94.5	NO

Name: 170811M2_5, Date: 11-Aug-2017, Time: 19:08:08, ID: B7H0074-BS1 OPR 0.125, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7H00...	5.55e4	135.3	NO
2	2	13C3-PFHxS	B7H00...	9.11e3	115.6	NO
3	3	13C8-PFOA	B7H00...	4.34e4	70.3	NO
4	4	13C9-PFNA	B7H00...	5.38e4	77.2	NO
5	5	13C4-PFOS	B7H00...	9.09e3	83.4	NO
6	6	13C6-PFDA	B7H00...	5.43e4	84.0	NO
7	7	13C7-PFUnA	B7H00...	5.94e4	93.2	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_6, Date: 11-Aug-2017, Time: 19:18:57, 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	1.08e1	0.0	NO

Name: 170811M2_7, Date: 11-Aug-2017, Time: 19:29:43, ID: B7H0073-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7H00...	1.21e5	147.8	NO
2	2	13C3-PFHxS	B7H00...	1.85e4	117.3	NO
3	3	13C8-PFOA	B7H00...	1.07e5	87.1	NO
4	4	13C9-PFNA	B7H00...	1.06e5	75.7	NO
5	5	13C4-PFOS	B7H00...	1.67e4	76.6	NO
6	6	13C6-PFDA	B7H00...	1.23e5	94.8	NO
7	7	13C7-PFUnA	B7H00...	1.05e5	82.1	NO

Name: 170811M2_8, Date: 11-Aug-2017, Time: 19:40:22, ID: B7H0074-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7H00...	5.25e4	128.0	NO
2	2	13C3-PFHxS	B7H00...	8.89e3	112.8	NO
3	3	13C8-PFOA	B7H00...	4.51e4	73.1	NO
4	4	13C9-PFNA	B7H00...	5.09e4	73.1	NO
5	5	13C4-PFOS	B7H00...	8.29e3	76.1	NO
6	6	13C6-PFDA	B7H00...	5.20e4	80.5	NO
7	7	13C7-PFUnA	B7H00...	6.17e4	96.7	NO

Name: 170811M2_9, Date: 11-Aug-2017, Time: 19:51:08, ID: B7H0073-MS1 Matrix Spike 0.0005, Description: Matrix Spike

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7H00...	1.03e5	125.5	NO
2	2	13C3-PFHxS	B7H00...	1.37e4	87.0	NO
3	3	13C8-PFOA	B7H00...	7.44e4	60.3	NO
4	4	13C9-PFNA	B7H00...	1.15e5	82.5	NO
5	5	13C4-PFOS	B7H00...	1.76e4	80.9	NO
6	6	13C6-PFDA	B7H00...	1.08e5	83.5	NO
7	7	13C7-PFUnA	B7H00...	1.01e5	79.3	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_10, Date: 11-Aug-2017, Time: 20:01:56, 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	1.88e1	0.0	NO

Name: 170811M2_11, Date: 11-Aug-2017, Time: 20:12:41, ID: B7H0073-MSD1 Matrix Spike Dup 0.00139, Description: Matrix Spike Dup

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7H00...	9.88e4	120.4	NO
2	2	13C3-PFHxS	B7H00...	1.35e4	85.5	NO
3	3	13C8-PFOA	B7H00...	7.34e4	59.5	NO
4	4	13C9-PFNA	B7H00...	1.11e5	79.3	NO
5	5	13C4-PFOS	B7H00...	1.68e4	77.0	NO
6	6	13C6-PFDA	B7H00...	1.05e5	81.2	NO
7	7	13C7-PFUnA	B7H00...	1.06e5	83.4	NO

Name: 170811M2_12, Date: 11-Aug-2017, Time: 20:23:19, 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	6.11e0	0.0	NO
7	7	13C7-PFUnA	IPA	1.70e1	0.0	NO

Name: 170811M2_13, Date: 11-Aug-2017, Time: 20:34:06, ID: B7H0074-MS1 Matrix Spike 0.125, Description: Matrix Spike

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7H00...	5.67e4	138.1	NO
2	2	13C3-PFHxS	B7H00...	9.36e3	118.9	NO
3	3	13C8-PFOA	B7H00...	4.83e4	78.3	NO
4	4	13C9-PFNA	B7H00...	5.55e4	79.7	NO
5	5	13C4-PFOS	B7H00...	8.56e3	78.6	NO
6	6	13C6-PFDA	B7H00...	5.47e4	84.6	NO
7	7	13C7-PFUnA	B7H00...	4.63e4	72.7	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_14, Date: 11-Aug-2017, Time: 20:44:44, ID: B7H0074-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	B7H00...	5.48e4	133.6	NO
2	2 13C3-PFHxS	B7H00...	9.28e3	117.8	NO
3	3 13C8-PFOA	B7H00...	4.51e4	73.1	NO
4	4 13C9-PFNA	B7H00...	6.02e4	86.3	NO
5	5 13C4-PFOS	B7H00...	9.54e3	87.6	NO
6	6 13C6-PFDA	B7H00...	5.62e4	86.9	NO
7	7 13C7-PFUnA	B7H00...	5.44e4	85.4	NO

Name: 170811M2_15, Date: 11-Aug-2017, Time: 20:55:23, ID: 1700925-04RE2 I001MW52S-170724 0.00122, Description: I001MW52S-170724

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	9.83e4	119.8	NO
2	2 13C3-PFHxS	17009...	1.38e4	87.8	NO
3	3 13C8-PFOA	17009...	7.18e4	58.2	NO
4	4 13C9-PFNA	17009...	1.18e5	84.9	NO
5	5 13C4-PFOS	17009...	1.82e4	83.5	NO
6	6 13C6-PFDA	17009...	1.03e5	79.7	NO
7	7 13C7-PFUnA	17009...	1.06e5	83.0	NO

Name: 170811M2_16, Date: 11-Aug-2017, Time: 21:06:01, 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	2.02e1	0.0	NO

Name: 170811M2_17, Date: 11-Aug-2017, Time: 21:16:40, ID: 1700925-05RE2 I001MW52X-170724 0.00133, Description: I001MW52X-170724

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	1.12e5	136.5	NO
2	2 13C3-PFHxS	17009...	1.49e4	94.3	NO
3	3 13C8-PFOA	17009...	8.31e4	67.3	NO
4	4 13C9-PFNA	17009...	1.22e5	87.9	NO
5	5 13C4-PFOS	17009...	2.00e4	91.9	NO
6	6 13C6-PFDA	17009...	1.40e5	108.0	NO
7	7 13C7-PFUnA	17009...	1.33e5	104.5	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_18, Date: 11-Aug-2017, Time: 21:27:18, 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	1.31e1	0.0	NO
7	7 13C7-PFUnA	IPA	1.16e1	0.0	NO

Name: 170811M2_19, Date: 11-Aug-2017, Time: 21:37:56, ID: 1700922-01RE1 MH-L103-20170721 0.10565, Description: MH-L103-20170721

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.83e4	117.6	NO
2	2 13C3-PFHxS	17009...	7.46e3	94.6	NO
3	3 13C8-PFOA	17009...	3.83e4	62.1	NO
4	4 13C9-PFNA	17009...	4.52e4	64.8	NO
5	5 13C4-PFOS	17009...	7.33e3	67.3	NO
6	6 13C6-PFDA	17009...	4.64e4	71.7	NO
7	7 13C7-PFUnA	17009...	3.91e4	61.3	NO

Name: 170811M2_20, Date: 11-Aug-2017, Time: 21:48:43, ID: 1700922-02RE1 MH-N104-20170721 0.11025, Description: MH-N104-20170721

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.16e4	125.6	NO
2	2 13C3-PFHxS	17009...	8.18e3	103.8	NO
3	3 13C8-PFOA	17009...	4.62e4	74.8	NO
4	4 13C9-PFNA	17009...	5.29e4	75.9	NO
5	5 13C4-PFOS	17009...	7.82e3	71.8	NO
6	6 13C6-PFDA	17009...	4.70e4	72.7	NO
7	7 13C7-PFUnA	17009...	4.81e4	75.4	NO

Name: 170811M2_21, Date: 11-Aug-2017, Time: 21:59:21, ID: 1700922-03RE1 Upstream-Culvert-109-20170721 0.1185, Description: Upstream-Culvert-109-20170721

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.18e4	126.2	NO
2	2 13C3-PFHxS	17009...	8.54e3	108.4	NO
3	3 13C8-PFOA	17009...	4.45e4	72.1	NO
4	4 13C9-PFNA	17009...	4.78e4	68.6	NO
5	5 13C4-PFOS	17009...	7.33e3	67.3	NO
6	6 13C6-PFDA	17009...	4.99e4	77.2	NO
7	7 13C7-PFUnA	17009...	5.28e4	82.8	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_22, Date: 11-Aug-2017, Time: 22:10:08, ID: 1700922-04RE1 FRB03-20170721 0.11017, Description: FRB03-20170721

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.74e4	139.9	NO
2	2 13C3-PFHxS	17009...	8.86e3	112.4	NO
3	3 13C8-PFOA	17009...	4.65e4	75.3	NO
4	4 13C9-PFNA	17009...	5.09e4	73.1	NO
5	5 13C4-PFOS	17009...	9.05e3	83.1	NO
6	6 13C6-PFDA	17009...	5.11e4	79.0	NO
7	7 13C7-PFUnA	17009...	5.14e4	80.7	NO

Name: 170811M2_23, Date: 11-Aug-2017, Time: 22:20:54, ID: 1700922-05RE1 RB08-20170720 0.11893, Description: RB08-20170720

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.08e4	123.9	NO
2	2 13C3-PFHxS	17009...	8.80e3	111.7	NO
3	3 13C8-PFOA	17009...	4.04e4	65.4	NO
4	4 13C9-PFNA	17009...	5.17e4	74.3	NO
5	5 13C4-PFOS	17009...	8.18e3	75.1	NO
6	6 13C6-PFDA	17009...	4.86e4	75.2	NO
7	7 13C7-PFUnA	17009...	5.38e4	84.5	NO

Name: 170811M2_24, Date: 11-Aug-2017, Time: 22:31:33, ID: 1700922-06RE1 RB09-20170721 0.11676, Description: RB09-20170721

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.51e4	134.1	NO
2	2 13C3-PFHxS	17009...	8.44e3	107.1	NO
3	3 13C8-PFOA	17009...	4.41e4	71.5	NO
4	4 13C9-PFNA	17009...	5.20e4	74.6	NO
5	5 13C4-PFOS	17009...	8.46e3	77.7	NO
6	6 13C6-PFDA	17009...	5.27e4	81.5	NO
7	7 13C7-PFUnA	17009...	4.70e4	73.8	NO

Name: 170811M2_25, Date: 11-Aug-2017, Time: 22:42:11, ID: 1700925-01RE1 I001BC43S-170724 0.12112, Description: I001BC43S-170724

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	6.04e4	147.1	NO
2	2 13C3-PFHxS	17009...	8.60e3	109.1	NO
3	3 13C8-PFOA	17009...	5.05e4	81.8	NO
4	4 13C9-PFNA	17009...	5.04e4	72.3	NO
5	5 13C4-PFOS	17009...	8.55e3	78.5	NO
6	6 13C6-PFDA	17009...	4.47e4	69.1	NO
7	7 13C7-PFUnA	17009...	5.22e4	81.9	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_26, Date: 11-Aug-2017, Time: 22:52:49, ID: 1700925-02RE1 SB01-170724 0.12178, Description: SB01-170724

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.45e4	132.8	NO
2	2	13C3-PFHxS	17009...	7.95e3	100.9	NO
3	3	13C8-PFOA	17009...	4.46e4	72.3	NO
4	4	13C9-PFNA	17009...	5.17e4	74.2	NO
5	5	13C4-PFOS	17009...	7.95e3	73.0	NO
6	6	13C6-PFDA	17009...	4.69e4	72.6	NO
7	7	13C7-PFUnA	17009...	4.32e4	67.8	NO

Name: 170811M2_27, Date: 11-Aug-2017, Time: 23:03:28, 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	4.35e1	0.1	NO

Name: 170811M2_28, Date: 11-Aug-2017, Time: 23:14:14, ID: ST170811M2-2 PFC CS3 17H1105, Description: PFC CS3 17H1105

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	3.97e4	96.7	NO
2	2	13C3-PFHxS	ST170...	7.67e3	97.3	NO
3	3	13C8-PFOA	ST170...	5.58e4	90.4	NO
4	4	13C9-PFNA	ST170...	6.72e4	96.4	NO
5	5	13C4-PFOS	ST170...	1.04e4	95.3	NO
6	6	13C6-PFDA	ST170...	5.79e4	89.6	NO
7	7	13C7-PFUnA	ST170...	5.86e4	91.9	NO

Name: 170811M2_29, Date: 11-Aug-2017, Time: 23:24:52, 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	1.19e1	0.0	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_30, Date: 11-Aug-2017, Time: 23:35:31, ID: 1700925-03RE1 I001BC50S-170724 0.12135, Description: I001BC50S-170724

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	4.11e4	100.2	NO
2	2	13C3-PFHxS	17009...	4.60e3	58.4	NO
3	3	13C8-PFOA	17009...	3.23e4	52.3	NO
4	4	13C9-PFNA	17009...	4.31e4	61.9	NO
5	5	13C4-PFOS	17009...	7.24e3	66.4	NO
6	6	13C6-PFDA	17009...	3.71e4	57.4	NO
7	7	13C7-PFUnA	17009...	3.98e4	62.5	NO

Name: 170811M2_31, Date: 11-Aug-2017, Time: 23:46:09, ID: 1700925-06RE1 EB01-170724 0.1185, Description: EB01-170724

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.25e4	127.9	NO
2	2	13C3-PFHxS	17009...	7.72e3	98.0	NO
3	3	13C8-PFOA	17009...	4.42e4	71.7	NO
4	4	13C9-PFNA	17009...	5.12e4	73.4	NO
5	5	13C4-PFOS	17009...	8.28e3	76.0	NO
6	6	13C6-PFDA	17009...	4.94e4	76.5	NO
7	7	13C7-PFUnA	17009...	4.68e4	73.4	NO

Name: 170811M2_32, Date: 11-Aug-2017, Time: 23:56:48, ID: 1700929-01RE1 MATP01001 0.11834, Description: MATP01001

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.53e4	134.8	NO
2	2	13C3-PFHxS	17009...	8.81e3	111.9	NO
3	3	13C8-PFOA	17009...	4.29e4	69.5	NO
4	4	13C9-PFNA	17009...	4.80e4	68.9	NO
5	5	13C4-PFOS	17009...	8.49e3	78.0	NO
6	6	13C6-PFDA	17009...	4.42e4	68.4	NO
7	7	13C7-PFUnA	17009...	4.63e4	72.7	NO

Name: 170811M2_33, Date: 12-Aug-2017, Time: 00:07:34, ID: 1700929-02RE1 MATP01002 0.1157, Description: MATP01002

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.62e4	137.0	NO
2	2	13C3-PFHxS	17009...	9.35e3	118.6	NO
3	3	13C8-PFOA	17009...	4.99e4	80.9	NO
4	4	13C9-PFNA	17009...	5.70e4	81.9	NO
5	5	13C4-PFOS	17009...	9.00e3	82.6	NO
6	6	13C6-PFDA	17009...	5.00e4	77.4	NO
7	7	13C7-PFUnA	17009...	5.84e4	91.7	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_34, Date: 12-Aug-2017, Time: 00:18:13, ID: 1700938-01RE1 NORP08102 0.11844, Description: NORP08102

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.63e4	112.7	NO
2	2 13C3-PFHxS	17009...	7.40e3	93.9	NO
3	3 13C8-PFOA	17009...	3.93e4	63.6	NO
4	4 13C9-PFNA	17009...	4.84e4	69.5	NO
5	5 13C4-PFOS	17009...	7.45e3	68.4	NO
6	6 13C6-PFDA	17009...	3.85e4	59.6	NO
7	7 13C7-PFUnA	17009...	4.41e4	69.2	NO

Name: 170811M2_35, Date: 12-Aug-2017, Time: 00:28:51, ID: 1700938-02RE1 NORP08103 0.12014, Description: NORP08103

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.15e4	125.5	NO
2	2 13C3-PFHxS	17009...	8.26e3	104.9	NO
3	3 13C8-PFOA	17009...	4.45e4	72.0	NO
4	4 13C9-PFNA	17009...	5.12e4	73.4	NO
5	5 13C4-PFOS	17009...	8.19e3	75.2	NO
6	6 13C6-PFDA	17009...	4.53e4	70.0	NO
7	7 13C7-PFUnA	17009...	3.88e4	60.9	NO

Name: 170811M2_36, Date: 12-Aug-2017, Time: 00:39:29, ID: 1700938-03RE1 NORP08104 0.11247, Description: NORP08104

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	4.45e4	108.5	NO
2	2 13C3-PFHxS	17009...	7.13e3	90.5	NO
3	3 13C8-PFOA	17009...	3.93e4	63.6	NO
4	4 13C9-PFNA	17009...	4.37e4	62.8	NO
5	5 13C4-PFOS	17009...	6.49e3	59.6	NO
6	6 13C6-PFDA	17009...	3.75e4	58.0	NO
7	7 13C7-PFUnA	17009...	3.59e4	56.3	NO

Name: 170811M2_37, Date: 12-Aug-2017, Time: 00:50:08, 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	9.26e0	0.0	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_38, Date: 12-Aug-2017, Time: 01:00:54, ID: B7H0073-MS1@20X Matrix Spike 0.0005, Description: Matrix Spike

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7H00...	4.56e3	5.6	YES
2	2	13C3-PFHxS	B7H00...	1.06e3	6.7	YES
3	3	13C8-PFOA	B7H00...	6.06e3	4.9	YES
4	4	13C9-PFNA	B7H00...	5.94e3	4.3	YES
5	5	13C4-PFOS	B7H00...	6.84e2	3.1	YES
6	6	13C6-PFDA	B7H00...	6.73e3	5.2	YES
7	7	13C7-PFUnA	B7H00...	6.20e3	4.9	YES

Name: 170811M2_39, Date: 12-Aug-2017, Time: 01:11:32, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	IPA	8.16e0	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	6.79e0	0.0	NO
7	7	13C7-PFUnA	IPA	1.46e1	0.0	NO

Name: 170811M2_40, Date: 12-Aug-2017, Time: 01:22:19, ID: B7H0073-MSD1@20X Matrix Spike Dup 0.00139, Description: Matrix Spike Dup

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	B7H00...	4.60e3	5.6	YES
2	2	13C3-PFHxS	B7H00...	1.14e3	7.2	YES
3	3	13C8-PFOA	B7H00...	5.71e3	4.6	YES
4	4	13C9-PFNA	B7H00...	6.77e3	4.9	YES
5	5	13C4-PFOS	B7H00...	1.16e3	5.3	YES
6	6	13C6-PFDA	B7H00...	6.76e3	5.2	YES
7	7	13C7-PFUnA	B7H00...	6.82e3	5.3	YES

Name: 170811M2_41, Date: 12-Aug-2017, Time: 01:32:57, 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

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_42, Date: 12-Aug-2017, Time: 01:43:36, ID: 1700925-04RE2@20X I001MW52S-170724 0.00122, Description: I001MW52S-170724

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	4.73e3	5.8	YES
2	2	13C3-PFHxS	17009...	9.70e2	6.2	YES
3	3	13C8-PFOA	17009...	6.30e3	5.1	YES
4	4	13C9-PFNA	17009...	6.80e3	4.9	YES
5	5	13C4-PFOS	17009...	1.22e3	5.6	YES
6	6	13C6-PFDA	17009...	6.27e3	4.9	YES
7	7	13C7-PFUnA	17009...	6.88e3	5.4	YES

Name: 170811M2_43, Date: 12-Aug-2017, Time: 01:54:14, 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	1.25e1	0.0	NO

Name: 170811M2_44, Date: 12-Aug-2017, Time: 02:05:00, ID: 1700925-05RE2@20X I001MW52X-170724 0.00133, Description: I001MW52X-170724

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	4.56e3	5.6	YES
2	2	13C3-PFHxS	17009...	1.10e3	7.0	YES
3	3	13C8-PFOA	17009...	6.54e3	5.3	YES
4	4	13C9-PFNA	17009...	6.30e3	4.5	YES
5	5	13C4-PFOS	17009...	1.20e3	5.5	YES
6	6	13C6-PFDA	17009...	6.04e3	4.7	YES
7	7	13C7-PFUnA	17009...	6.82e3	5.3	YES

Name: 170811M2_45, Date: 12-Aug-2017, Time: 02:15:39, 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

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_46, Date: 12-Aug-2017, Time: 02:26:17, ID: 1700958-15RE1@10X MATP05081 1.02, Description: MATP05081

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.58e3	13.6	YES
2	2	13C3-PFHxS	17009...	9.20e2	11.7	YES
3	3	13C8-PFOA	17009...	4.91e3	8.0	YES
4	4	13C9-PFNA	17009...	4.83e3	6.9	YES
5	5	13C4-PFOS	17009...	8.40e2	7.7	YES
6	6	13C6-PFDA	17009...	4.32e3	6.7	YES
7	7	13C7-PFUnA	17009...	4.76e3	7.5	YES

Name: 170811M2_47, Date: 12-Aug-2017, Time: 02:36:56, 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

Name: 170811M2_48, Date: 12-Aug-2017, Time: 02:47:34, ID: ST170811M2-3 PFC CS3 17H1105, Description: PFC CS3 17H1105

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	3.91e4	95.2	NO
2	2	13C3-PFHxS	ST170...	6.98e3	88.6	NO
3	3	13C8-PFOA	ST170...	5.90e4	95.6	NO
4	4	13C9-PFNA	ST170...	6.47e4	92.9	NO
5	5	13C4-PFOS	ST170...	1.05e4	96.4	NO
6	6	13C6-PFDA	ST170...	6.56e4	101.4	NO
7	7	13C7-PFUnA	ST170...	5.83e4	91.5	NO

Name: 170811M2_49, Date: 12-Aug-2017, Time: 02:58:20, 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			NO
7	7	13C7-PFUnA	IPA	3.48e1	0.1	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_50, Date: 12-Aug-2017, Time: 03:08:59, ID: 1701007-03 RI17-EB3-080317 0.26497, Description: RI17-EB3-080317

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17010...	7.15e4	174.2	YES
2	2	13C3-PFHxS	17010...	1.12e4	142.1	NO
3	3	13C8-PFOA	17010...	6.36e4	103.0	NO
4	4	13C9-PFNA	17010...	6.13e4	88.1	NO
5	5	13C4-PFOS	17010...	1.17e4	107.4	NO
6	6	13C6-PFDA	17010...	5.82e4	90.0	NO
7	7	13C7-PFUnA	17010...	7.63e4	119.7	NO

Name: 170811M2_51, Date: 12-Aug-2017, Time: 03:19:37, ID: 1701007-04 RI17-EB8-080317 0.26753, Description: RI17-EB8-080317

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17010...	3.94e4	96.0	NO
2	2	13C3-PFHxS	17010...	5.98e3	75.9	NO
3	3	13C8-PFOA	17010...	3.32e4	53.9	NO
4	4	13C9-PFNA	17010...	3.42e4	49.0	YES
5	5	13C4-PFOS	17010...	5.59e3	51.3	NO
6	6	13C6-PFDA	17010...	3.72e4	57.5	NO
7	7	13C7-PFUnA	17010...	3.36e4	52.7	NO

Name: 170811M2_52, Date: 12-Aug-2017, Time: 03:30:16, 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

Name: 170811M2_53, Date: 12-Aug-2017, Time: 03:40:54, ID: 1700958-06RE1 MATP03050 1.22, Description: MATP03050

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.15e4	125.5	NO
2	2	13C3-PFHxS	17009...	6.07e3	77.0	NO
3	3	13C8-PFOA	17009...	4.71e4	76.3	NO
4	4	13C9-PFNA	17009...	5.10e4	73.1	NO
5	5	13C4-PFOS	17009...	8.49e3	77.9	NO
6	6	13C6-PFDA	17009...	5.18e4	80.2	NO
7	7	13C7-PFUnA	17009...	5.12e4	80.4	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_54, Date: 12-Aug-2017, Time: 03:51:41, 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	8.40e0	0.0	NO

Name: 170811M2_55, Date: 12-Aug-2017, Time: 04:02:19, ID: 1700958-09RE1 MATP04060 1.27, Description: MATP04060

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.12e4	124.7	NO
2	2 13C3-PFHxS	17009...	9.72e3	123.4	NO
3	3 13C8-PFOA	17009...	4.17e4	67.5	NO
4	4 13C9-PFNA	17009...	5.18e4	74.3	NO
5	5 13C4-PFOS	17009...	8.78e3	80.6	NO
6	6 13C6-PFDA	17009...	5.28e4	81.6	NO
7	7 13C7-PFUnA	17009...	5.09e4	79.9	NO

Name: 170811M2_56, Date: 12-Aug-2017, Time: 04:12:57, ID: 1700958-10RE1 MATP04061 1.27, Description: MATP04061

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	6.08e4	148.1	NO
2	2 13C3-PFHxS	17009...	1.13e4	143.0	NO
3	3 13C8-PFOA	17009...	4.99e4	80.8	NO
4	4 13C9-PFNA	17009...	6.45e4	92.6	NO
5	5 13C4-PFOS	17009...	9.32e3	85.5	NO
6	6 13C6-PFDA	17009...	6.75e4	104.3	NO
7	7 13C7-PFUnA	17009...	5.80e4	91.1	NO

Name: 170811M2_57, Date: 12-Aug-2017, Time: 04:23:41, ID: 1700958-13RE1 MATP05079 1.1, Description: MATP05079

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	5.50e4	134.0	NO
2	2 13C3-PFHxS	17009...	1.01e4	128.0	NO
3	3 13C8-PFOA	17009...	4.55e4	73.8	NO
4	4 13C9-PFNA	17009...	5.19e4	74.5	NO
5	5 13C4-PFOS	17009...	1.01e4	92.7	NO
6	6 13C6-PFDA	17009...	5.74e4	88.7	NO
7	7 13C7-PFUnA	17009...	5.74e4	90.1	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_58, Date: 12-Aug-2017, Time: 04:34:36, ID: 1700958-15RE1 MATP05081 1.02, Description: MATP05081

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.72e4	139.4	NO
2	2	13C3-PFHxS	17009...	9.37e3	119.0	NO
3	3	13C8-PFOA	17009...	4.89e4	79.2	NO
4	4	13C9-PFNA	17009...	4.77e4	68.4	NO
5	5	13C4-PFOS	17009...	5.02e3	46.1	YES
6	6	13C6-PFDA	17009...	5.10e4	78.9	NO
7	7	13C7-PFUnA	17009...	5.28e4	82.8	NO

Name: 170811M2_59, Date: 12-Aug-2017, Time: 04:45:27, 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	9.58e0	0.0	NO

Name: 170811M2_60, Date: 12-Aug-2017, Time: 04:56:09, ID: 1700961-02 MATP05098 1, Description: MATP05098

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.32e4	129.7	NO
2	2	13C3-PFHxS	17009...	9.88e3	125.4	NO
3	3	13C8-PFOA	17009...	4.36e4	70.6	NO
4	4	13C9-PFNA	17009...	5.66e4	81.2	NO
5	5	13C4-PFOS	17009...	8.85e3	81.2	NO
6	6	13C6-PFDA	17009...	4.43e4	68.6	NO
7	7	13C7-PFUnA	17009...	4.62e4	72.6	NO

Name: 170811M2_61, Date: 12-Aug-2017, Time: 05:07:16, ID: 1700961-03 MATP05099 1, Description: MATP05099

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.56e4	135.4	NO
2	2	13C3-PFHxS	17009...	1.03e4	130.8	NO
3	3	13C8-PFOA	17009...	4.74e4	76.8	NO
4	4	13C9-PFNA	17009...	5.46e4	78.4	NO
5	5	13C4-PFOS	17009...	8.63e3	79.2	NO
6	6	13C6-PFDA	17009...	4.93e4	76.3	NO
7	7	13C7-PFUnA	17009...	5.40e4	84.8	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_62, Date: 12-Aug-2017, Time: 05:18:08, ID: 1700961-04 MATP05100 1, Description: MATP05100

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.08e4	148.1	NO
2	2	13C3-PFHxS	17009...	9.87e3	125.2	NO
3	3	13C8-PFOA	17009...	4.96e4	80.4	NO
4	4	13C9-PFNA	17009...	5.24e4	75.2	NO
5	5	13C4-PFOS	17009...	9.46e3	86.9	NO
6	6	13C6-PFDA	17009...	5.52e4	85.4	NO
7	7	13C7-PFUnA	17009...	5.81e4	91.2	NO

Name: 170811M2_63, Date: 12-Aug-2017, Time: 05:28:47, 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	5.96e0	0.0	NO
4	4	13C9-PFNA	IPA			NO
5	5	13C4-PFOS	IPA			NO
6	6	13C6-PFDA	IPA			NO
7	7	13C7-PFUnA	IPA	8.02e0	0.0	NO

Name: 170811M2_64, Date: 12-Aug-2017, Time: 05:39:33, ID: ST170811M2-4 PFC CS0 17H1106, Description: PFC CS0 17H1106

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	4.05e4	98.6	NO
2	2	13C3-PFHxS	ST170...	7.85e3	99.6	NO
3	3	13C8-PFOA	ST170...	6.14e4	99.4	NO
4	4	13C9-PFNA	ST170...	6.94e4	99.6	NO
5	5	13C4-PFOS	ST170...	1.14e4	104.4	NO
6	6	13C6-PFDA	ST170...	5.90e4	91.2	NO
7	7	13C7-PFUnA	ST170...	6.57e4	103.2	NO

Name: 170811M2_65, Date: 12-Aug-2017, Time: 05:50:19, 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

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_66, Date: 12-Aug-2017, Time: 06:01:06, ID: 1700961-05 MATP05102 1, Description: MATP05102

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.13e4	149.5	NO
2	2	13C3-PFHxS	17009...	9.38e3	119.0	NO
3	3	13C8-PFOA	17009...	5.31e4	86.0	NO
4	4	13C9-PFNA	17009...	5.92e4	85.0	NO
5	5	13C4-PFOS	17009...	1.00e4	92.2	NO
6	6	13C6-PFDA	17009...	5.18e4	80.1	NO
7	7	13C7-PFUnA	17009...	5.28e4	82.9	NO

Name: 170811M2_67, Date: 12-Aug-2017, Time: 06:11:44, ID: 1700961-06 MATP05103 1, Description: MATP05103

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.93e4	144.5	NO
2	2	13C3-PFHxS	17009...	1.02e4	130.0	NO
3	3	13C8-PFOA	17009...	5.15e4	83.4	NO
4	4	13C9-PFNA	17009...	5.66e4	81.2	NO
5	5	13C4-PFOS	17009...	1.01e4	92.6	NO
6	6	13C6-PFDA	17009...	5.72e4	88.5	NO
7	7	13C7-PFUnA	17009...	4.92e4	77.1	NO

Name: 170811M2_68, Date: 12-Aug-2017, Time: 06:22:23, ID: 1700961-07 MATP04055 1, Description: MATP04055

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.33e4	129.8	NO
2	2	13C3-PFHxS	17009...	9.20e3	116.8	NO
3	3	13C8-PFOA	17009...	4.61e4	74.7	NO
4	4	13C9-PFNA	17009...	5.25e4	75.3	NO
5	5	13C4-PFOS	17009...	9.02e3	82.8	NO
6	6	13C6-PFDA	17009...	4.52e4	69.8	NO
7	7	13C7-PFUnA	17009...	4.85e4	76.0	NO

Name: 170811M2_69, Date: 12-Aug-2017, Time: 06:33:01, ID: 1700961-08 MATP03041 1, Description: MATP03041

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.32e4	129.6	NO
2	2	13C3-PFHxS	17009...	8.34e3	105.8	NO
3	3	13C8-PFOA	17009...	4.26e4	69.1	NO
4	4	13C9-PFNA	17009...	4.97e4	71.3	NO
5	5	13C4-PFOS	17009...	8.31e3	76.3	NO
6	6	13C6-PFDA	17009...	5.02e4	77.7	NO
7	7	13C7-PFUnA	17009...	4.62e4	72.6	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_70, Date: 12-Aug-2017, Time: 06:43:40, ID: 1700961-09 MATP04063 1, Description: MATP04063

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	4.58e4	111.5	NO
2	2	13C3-PFHxS	17009...	8.13e3	103.2	NO
3	3	13C8-PFOA	17009...	4.28e4	69.4	NO
4	4	13C9-PFNA	17009...	4.79e4	68.7	NO
5	5	13C4-PFOS	17009...	7.57e3	69.5	NO
6	6	13C6-PFDA	17009...	4.96e4	76.8	NO
7	7	13C7-PFUnA	17009...	4.45e4	69.8	NO

Name: 170811M2_71, Date: 12-Aug-2017, Time: 06:54:18, ID: 1700961-11 MATP04065 1, Description: MATP04065

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.91e4	143.9	NO
2	2	13C3-PFHxS	17009...	9.51e3	120.7	NO
3	3	13C8-PFOA	17009...	4.70e4	76.1	NO
4	4	13C9-PFNA	17009...	6.40e4	91.9	NO
5	5	13C4-PFOS	17009...	9.61e3	88.2	NO
6	6	13C6-PFDA	17009...	5.30e4	82.0	NO
7	7	13C7-PFUnA	17009...	5.40e4	84.8	NO

Name: 170811M2_72, Date: 12-Aug-2017, Time: 07:04:56, ID: 1700961-12 MATP04066 1, Description: MATP04066

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.77e4	140.6	NO
2	2	13C3-PFHxS	17009...	9.98e3	126.7	NO
3	3	13C8-PFOA	17009...	4.73e4	76.6	NO
4	4	13C9-PFNA	17009...	5.99e4	86.0	NO
5	5	13C4-PFOS	17009...	1.00e4	92.0	NO
6	6	13C6-PFDA	17009...	5.92e4	91.5	NO
7	7	13C7-PFUnA	17009...	5.28e4	82.9	NO

Name: 170811M2_73, Date: 12-Aug-2017, Time: 07:15:34, ID: 1700960-03 MATP05084 0.125, Description: MATP05084

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.75e4	164.4	YES
2	2	13C3-PFHxS	17009...	1.07e4	135.3	NO
3	3	13C8-PFOA	17009...	5.93e4	96.1	NO
4	4	13C9-PFNA	17009...	5.79e4	83.1	NO
5	5	13C4-PFOS	17009...	1.02e4	94.0	NO
6	6	13C6-PFDA	17009...	5.70e4	88.1	NO
7	7	13C7-PFUnA	17009...	6.60e4	103.6	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_74, Date: 12-Aug-2017, Time: 07:27:11, ID: 1700960-05 MATP05086 1, Description: MATP05086

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.43e4	156.6	YES
2	2	13C3-PFHxS	17009...	1.03e4	131.1	NO
3	3	13C8-PFOA	17009...	5.26e4	85.2	NO
4	4	13C9-PFNA	17009...	5.84e4	83.8	NO
5	5	13C4-PFOS	17009...	9.26e3	85.0	NO
6	6	13C6-PFDA	17009...	5.47e4	84.5	NO
7	7	13C7-PFUnA	17009...	5.45e4	85.6	NO

Name: 170811M2_75, Date: 12-Aug-2017, Time: 07:38:48, ID: 1700960-10 MATP05091 1, Description: MATP05091

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	7.35e4	179.0	YES
2	2	13C3-PFHxS	17009...	1.21e4	153.0	YES
3	3	13C8-PFOA	17009...	6.31e4	102.3	NO
4	4	13C9-PFNA	17009...	7.07e4	101.4	NO
5	5	13C4-PFOS	17009...	1.01e4	93.1	NO
6	6	13C6-PFDA	17009...	6.86e4	106.1	NO
7	7	13C7-PFUnA	17009...	6.20e4	97.2	NO

Name: 170811M2_76, Date: 12-Aug-2017, Time: 07:49:26, 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	1.11e1	0.0	NO

Name: 170811M2_77, Date: 12-Aug-2017, Time: 08:00:04, ID: ST170811M2-3 PFC CS3 17H1105, Description: PFC CS3 17H1105

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	4.10e4	99.9	NO
2	2	13C3-PFHxS	ST170...	7.43e3	94.3	NO
3	3	13C8-PFOA	ST170...	6.17e4	100.0	NO
4	4	13C9-PFNA	ST170...	6.95e4	99.7	NO
5	5	13C4-PFOS	ST170...	1.09e4	100.2	NO
6	6	13C6-PFDA	ST170...	6.98e4	108.0	NO
7	7	13C7-PFUnA	ST170...	6.52e4	102.3	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_78, Date: 12-Aug-2017, Time: 08:10:51, ID: IPA, Description: IPA

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	IPA	6.65e0	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: 170811M2_79, Date: 12-Aug-2017, Time: 08:21:29, ID: 1700960-11 MATP05092 1, Description: MATP05092

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	6.97e4	169.8	YES
2	2 13C3-PFHxS	17009...	1.14e4	145.2	NO
3	3 13C8-PFOA	17009...	5.54e4	89.8	NO
4	4 13C9-PFNA	17009...	6.06e4	87.0	NO
5	5 13C4-PFOS	17009...	9.81e3	90.0	NO
6	6 13C6-PFDA	17009...	5.97e4	92.3	NO
7	7 13C7-PFUnA	17009...	6.87e4	107.8	NO

Name: 170811M2_80, Date: 12-Aug-2017, Time: 08:32:16, 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	5.67e0	0.0	NO
7	7 13C7-PFUnA	IPA			NO

Name: 170811M2_81, Date: 12-Aug-2017, Time: 08:42:54, ID: 1700960-04@5X MATP05085 1, Description: MATP05085

	# Name	ID	Area	%Rec	Area Out
1	1 13C5-PFHxA	17009...	1.91e4	46.4	YES
2	2 13C3-PFHxS	17009...	2.98e3	37.8	YES
3	3 13C8-PFOA	17009...	1.56e4	25.3	YES
4	4 13C9-PFNA	17009...	1.70e4	24.4	YES
5	5 13C4-PFOS	17009...	2.50e3	23.0	YES
6	6 13C6-PFDA	17009...	1.90e4	29.3	YES
7	7 13C7-PFUnA	17009...	1.59e4	24.9	YES

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_82, Date: 12-Aug-2017, Time: 08:53:40, 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

Name: 170811M2_83, Date: 12-Aug-2017, Time: 09:04:19, ID: 1700958-04 MATP03048 1, Description: MATP03048

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.50e4	134.0	NO
2	2	13C3-PFHxS	17009...	8.85e3	112.4	NO
3	3	13C8-PFOA	17009...	4.30e4	69.7	NO
4	4	13C9-PFNA	17009...	4.91e4	70.5	NO
5	5	13C4-PFOS	17009...	5.72e3	52.5	NO
6	6	13C6-PFDA	17009...	4.64e4	71.8	NO
7	7	13C7-PFUnA	17009...	5.04e4	79.1	NO

Name: 170811M2_84, Date: 12-Aug-2017, Time: 09:14:58, 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	6.05e0	0.0	NO

Name: 170811M2_85, Date: 12-Aug-2017, Time: 09:25:36, ID: 1700958-04@20X MATP03048 1, Description: MATP03048

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	2.38e3	5.8	YES
2	2	13C3-PFHxS	17009...	4.07e2	5.2	YES
3	3	13C8-PFOA	17009...	2.34e3	3.8	YES
4	4	13C9-PFNA	17009...	2.91e3	4.2	YES
5	5	13C4-PFOS	17009...	4.76e2	4.4	YES
6	6	13C6-PFDA	17009...	2.43e3	3.8	YES
7	7	13C7-PFUnA	17009...	2.76e3	4.3	YES

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_86, Date: 12-Aug-2017, Time: 09:36:27, 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	1.71e1	0.0	NO

Name: 170811M2_87, Date: 12-Aug-2017, Time: 09:47:09, ID: 1700958-05@10X MATP03049 1, Description: MATP03049

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.44e3	15.7	YES
2	2	13C3-PFHxS	17009...	9.83e2	12.5	YES
3	3	13C8-PFOA	17009...	5.13e3	8.3	YES
4	4	13C9-PFNA	17009...	6.21e3	8.9	YES
5	5	13C4-PFOS	17009...	1.04e3	9.6	YES
6	6	13C6-PFDA	17009...	5.71e3	8.8	YES
7	7	13C7-PFUnA	17009...	5.67e3	8.9	YES

Name: 170811M2_88, Date: 12-Aug-2017, Time: 09:57:55, 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			NO
7	7	13C7-PFUnA	IPA	7.56e0	0.0	NO

Name: 170811M2_89, Date: 12-Aug-2017, Time: 10:08:50, ID: 1700958-05 MATP03049 1, Description: MATP03049

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.39e4	131.3	NO
2	2	13C3-PFHxS	17009...	8.43e3	107.0	NO
3	3	13C8-PFOA	17009...	4.49e4	72.7	NO
4	4	13C9-PFNA	17009...	4.33e4	62.1	NO
5	5	13C4-PFOS	17009...	6.28e3	57.7	NO
6	6	13C6-PFDA	17009...	4.86e4	75.1	NO
7	7	13C7-PFUnA	17009...	4.56e4	71.6	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_90, Date: 12-Aug-2017, Time: 10:19:52, 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	1.38e1	0.0	NO

Name: 170811M2_91, Date: 12-Aug-2017, Time: 10:30:50, ID: 1700958-06 MATP03050 1, Description: MATP03050

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.14e4	149.7	NO
2	2	13C3-PFHxS	17009...	6.50e3	82.6	NO
3	3	13C8-PFOA	17009...	5.32e4	86.3	NO
4	4	13C9-PFNA	17009...	4.96e4	71.2	NO
5	5	13C4-PFOS	17009...	9.17e3	84.2	NO
6	6	13C6-PFDA	17009...	5.44e4	84.1	NO
7	7	13C7-PFUnA	17009...	5.46e4	85.6	NO

Name: 170811M2_92, Date: 12-Aug-2017, Time: 10:41:45, 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	2.98e1	0.0	NO

Name: 170811M2_93, Date: 12-Aug-2017, Time: 10:52:40, ID: 1700958-06@5X MATP03050 1, Description: MATP03050

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	1.99e4	48.5	YES
2	2	13C3-PFHxS	17009...	2.52e3	32.0	YES
3	3	13C8-PFOA	17009...	1.71e4	27.7	YES
4	4	13C9-PFNA	17009...	1.70e4	24.4	YES
5	5	13C4-PFOS	17009...	2.86e3	26.2	YES
6	6	13C6-PFDA	17009...	1.86e4	28.8	YES
7	7	13C7-PFUnA	17009...	1.54e4	24.2	YES

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_94, Date: 12-Aug-2017, Time: 11:03:33, 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

Name: 170811M2_95, Date: 12-Aug-2017, Time: 11:14:31, ID: 1700958-07 MATP03051 1, Description: MATP03051

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.50e4	158.4	YES
2	2	13C3-PFHxS	17009...	1.10e4	139.8	NO
3	3	13C8-PFOA	17009...	5.54e4	89.8	NO
4	4	13C9-PFNA	17009...	6.10e4	87.5	NO
5	5	13C4-PFOS	17009...	1.00e4	92.1	NO
6	6	13C6-PFDA	17009...	6.35e4	98.3	NO
7	7	13C7-PFUnA	17009...	5.33e4	83.6	NO

Name: 170811M2_96, Date: 12-Aug-2017, Time: 11:25:25, ID: 1700958-09 MATP04060 1, Description: MATP04060

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	7.06e4	172.1	YES
2	2	13C3-PFHxS	17009...	1.15e4	145.9	NO
3	3	13C8-PFOA	17009...	5.75e4	93.3	NO
4	4	13C9-PFNA	17009...	6.83e4	98.0	NO
5	5	13C4-PFOS	17009...	1.01e4	92.9	NO
6	6	13C6-PFDA	17009...	6.47e4	100.1	NO
7	7	13C7-PFUnA	17009...	6.37e4	100.0	NO

Name: 170811M2_97, Date: 12-Aug-2017, Time: 11:36:27, 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	8.35e0	0.0	NO
5	5	13C4-PFOS	IPA			NO
6	6	13C6-PFDA	IPA			NO
7	7	13C7-PFUnA	IPA			NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_98, Date: 12-Aug-2017, Time: 11:47:23, ID: ST170811M2-6 PFC CS3 17H1105, Description: PFC CS3 17H1105

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	4.43e4	107.9	NO
2	2	13C3-PFHxS	ST170...	8.69e3	110.3	NO
3	3	13C8-PFOA	ST170...	6.68e4	108.3	NO
4	4	13C9-PFNA	ST170...	7.30e4	104.7	NO
5	5	13C4-PFOS	ST170...	1.10e4	100.8	NO
6	6	13C6-PFDA	ST170...	6.46e4	99.9	NO
7	7	13C7-PFUnA	ST170...	6.41e4	100.7	NO

Name: 170811M2_99, Date: 12-Aug-2017, Time: 11:58:20, 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			NO
7	7	13C7-PFUnA	IPA	8.58e0	0.0	NO

Name: 170811M2_100, Date: 12-Aug-2017, Time: 12:09:15, ID: 1700958-13 MATP05079 1, Description: MATP05079

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.56e4	159.7	YES
2	2	13C3-PFHxS	17009...	1.04e4	132.1	NO
3	3	13C8-PFOA	17009...	5.33e4	86.4	NO
4	4	13C9-PFNA	17009...	6.25e4	89.7	NO
5	5	13C4-PFOS	17009...	9.85e3	90.5	NO
6	6	13C6-PFDA	17009...	5.78e4	89.4	NO
7	7	13C7-PFUnA	17009...	5.91e4	92.8	NO

Name: 170811M2_101, Date: 12-Aug-2017, Time: 12:20:04, ID: 1700958-14 MATP05080 0.125, Description: MATP05080

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.27e4	152.8	YES
2	2	13C3-PFHxS	17009...	1.02e4	129.9	NO
3	3	13C8-PFOA	17009...	4.94e4	80.0	NO
4	4	13C9-PFNA	17009...	6.07e4	87.1	NO
5	5	13C4-PFOS	17009...	1.03e4	94.2	NO
6	6	13C6-PFDA	17009...	6.32e4	97.7	NO
7	7	13C7-PFUnA	17009...	6.68e4	104.8	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_102, Date: 12-Aug-2017, Time: 12:31:04, ID: 1700958-15@10X MATP05081 1, Description: MATP05081

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.86e3	16.7	YES
2	2	13C3-PFHxS	17009...	8.28e2	10.5	YES
3	3	13C8-PFOA	17009...	5.58e3	9.0	YES
4	4	13C9-PFNA	17009...	6.45e3	9.3	YES
5	5	13C4-PFOS	17009...	1.00e3	9.2	YES
6	6	13C6-PFDA	17009...	6.29e3	9.7	YES
7	7	13C7-PFUnA	17009...	5.90e3	9.3	YES

Name: 170811M2_103, Date: 12-Aug-2017, Time: 12:41:58, 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	1.18e1	0.0	NO

Name: 170811M2_104, Date: 12-Aug-2017, Time: 12:52:54, ID: 1700958-15 MATP05081 1, Description: MATP05081

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.81e4	141.4	NO
2	2	13C3-PFHxS	17009...	9.09e3	115.4	NO
3	3	13C8-PFOA	17009...	5.35e4	86.8	NO
4	4	13C9-PFNA	17009...	5.67e4	81.4	NO
5	5	13C4-PFOS	17009...	5.36e3	49.2	YES
6	6	13C6-PFDA	17009...	5.58e4	86.3	NO
7	7	13C7-PFUnA	17009...	5.54e4	86.9	NO

Name: 170811M2_105, Date: 12-Aug-2017, Time: 13:03:49, 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	2.03e1	0.0	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_106, Date: 12-Aug-2017, Time: 13:14:44, ID: 1700959-04@5X MATP10119a 0.125, Description: MATP10119a

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	1.31e4	31.9	YES
2	2	13C3-PFHxS	17009...	2.07e3	26.3	YES
3	3	13C8-PFOA	17009...	1.06e4	17.1	YES
4	4	13C9-PFNA	17009...	1.38e4	19.8	YES
5	5	13C4-PFOS	17009...	2.27e3	20.9	YES
6	6	13C6-PFDA	17009...	1.04e4	16.1	YES
7	7	13C7-PFUnA	17009...	1.14e4	17.9	YES

Name: 170811M2_107, Date: 12-Aug-2017, Time: 13:25:39, 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	9.91e0	0.0	NO

Name: 170811M2_108, Date: 12-Aug-2017, Time: 13:36:33, ID: 1700959-05@10X MATPXX132a 0.125, Description: MATPXX132a

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.59e3	16.1	YES
2	2	13C3-PFHxS	17009...	1.04e3	13.2	YES
3	3	13C8-PFOA	17009...	5.92e3	9.6	YES
4	4	13C9-PFNA	17009...	6.04e3	8.7	YES
5	5	13C4-PFOS	17009...	1.01e3	9.3	YES
6	6	13C6-PFDA	17009...	6.18e3	9.6	YES
7	7	13C7-PFUnA	17009...	5.47e3	8.6	YES

Name: 170811M2_109, Date: 12-Aug-2017, Time: 13:47:27, 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			NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_110, Date: 12-Aug-2017, Time: 13:58:21, ID: 1700959-06 MATPXX130a 0.125, Description: MATPXX130a

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	5.94e4	144.6	NO
2	2	13C3-PFHxS	17009...	9.81e3	124.5	NO
3	3	13C8-PFOA	17009...	5.18e4	83.9	NO
4	4	13C9-PFNA	17009...	5.47e4	78.5	NO
5	5	13C4-PFOS	17009...	9.84e3	90.3	NO
6	6	13C6-PFDA	17009...	5.01e4	77.5	NO
7	7	13C7-PFUnA	17009...	5.67e4	89.0	NO

Name: 170811M2_111, Date: 12-Aug-2017, Time: 14:09:18, ID: 1700959-07@20X MATPXX126a 0.125, Description: MATPXX126a

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	2.62e3	6.4	YES
2	2	13C3-PFHxS	17009...	4.97e2	6.3	YES
3	3	13C8-PFOA	17009...	2.74e3	4.4	YES
4	4	13C9-PFNA	17009...	3.32e3	4.8	YES
5	5	13C4-PFOS	17009...	5.41e2	5.0	YES
6	6	13C6-PFDA	17009...	3.05e3	4.7	YES
7	7	13C7-PFUnA	17009...	3.46e3	5.4	YES

Name: 170811M2_112, Date: 12-Aug-2017, Time: 14:20:12, 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	1.27e1	0.0	NO
7	7	13C7-PFUnA	IPA	3.00e1	0.0	NO

Name: 170811M2_113, Date: 12-Aug-2017, Time: 14:31:05, ID: 1700961-10 MATP04064 0.125, Description: MATP04064

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	6.96e4	169.7	YES
2	2	13C3-PFHxS	17009...	1.11e4	140.8	NO
3	3	13C8-PFOA	17009...	5.87e4	95.2	NO
4	4	13C9-PFNA	17009...	6.00e4	86.2	NO
5	5	13C4-PFOS	17009...	1.03e4	95.0	NO
6	6	13C6-PFDA	17009...	5.30e4	81.9	NO
7	7	13C7-PFUnA	17009...	6.04e4	94.7	NO

GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\RS AREAS.qld

Last Altered: Saturday, August 12, 2017 15:54:33 Pacific Daylight Time
Printed: Saturday, August 12, 2017 15:57:23 Pacific Daylight Time

Name: 170811M2_114, Date: 12-Aug-2017, Time: 14:42:02, ID: 1700966-03 MW-13 0.125, Description: MW-13

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	17009...	7.37e4	179.7	YES
2	2	13C3-PFHxS	17009...	1.17e4	148.8	NO
3	3	13C8-PFOA	17009...	6.40e4	103.7	NO
4	4	13C9-PFNA	17009...	7.52e4	107.9	NO
5	5	13C4-PFOS	17009...	1.22e4	111.9	NO
6	6	13C6-PFDA	17009...	7.49e4	115.9	NO
7	7	13C7-PFUnA	17009...	6.42e4	100.8	NO

Name: 170811M2_115, Date: 12-Aug-2017, Time: 14:52:59, 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			NO
7	7	13C7-PFUnA	IPA	9.53e0	0.0	NO

Name: 170811M2_116, Date: 12-Aug-2017, Time: 15:03:54, ID: ST170811M2-7 PFC CS3 17H1105, Description: PFC CS3 17H1105

	#	Name	ID	Area	%Rec	Area Out
1	1	13C5-PFHxA	ST170...	4.47e4	108.9	NO
2	2	13C3-PFHxS	ST170...	8.88e3	112.7	NO
3	3	13C8-PFOA	ST170...	6.72e4	109.0	NO
4	4	13C9-PFNA	ST170...	7.57e4	108.7	NO
5	5	13C4-PFOS	ST170...	1.18e4	108.7	NO
6	6	13C6-PFDA	ST170...	7.73e4	119.6	NO
7	7	13C7-PFUnA	ST170...	7.15e4	112.1	NO

GM 8/12/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170811M1\170811M1-3.qld

Last Altered: Saturday, August 12, 2017 10:41:21 Pacific Daylight Time
Printed: Saturday, August 12, 2017 10:41:53 Pacific Daylight Time

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Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M1_3, Date: 11-Aug-2017, Time: 11:39:40, ID: IPA, Description: IPA

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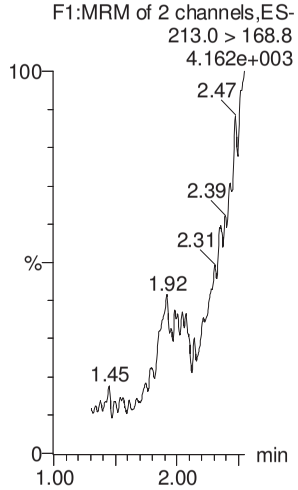

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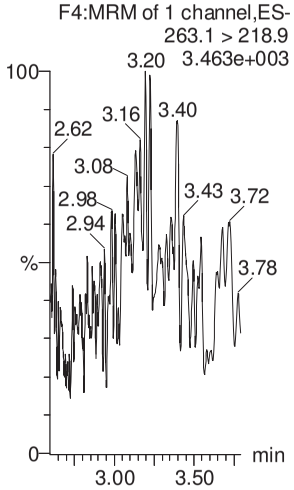
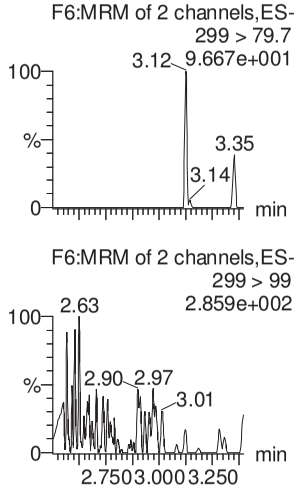
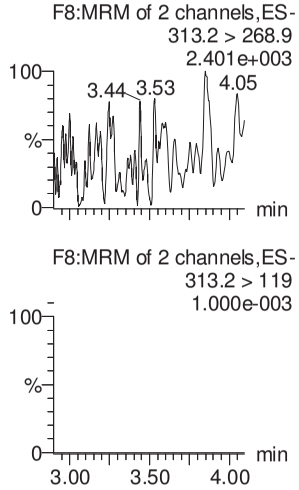


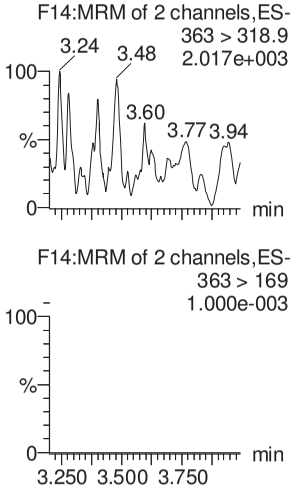
PFBS



PFHxA



PFHpA



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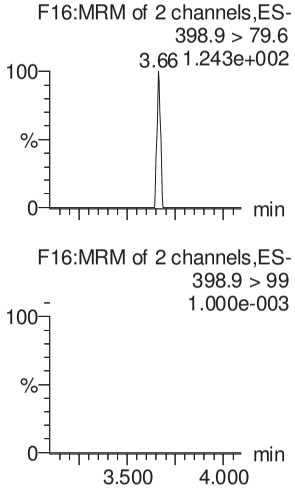
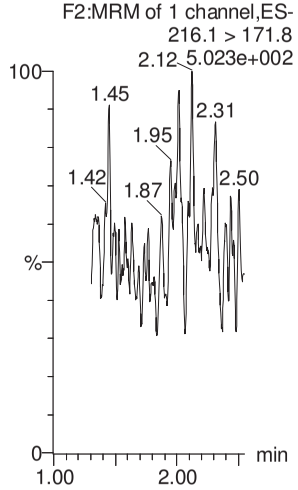


13C3-PFBA



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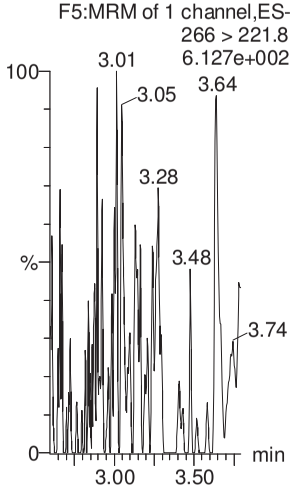
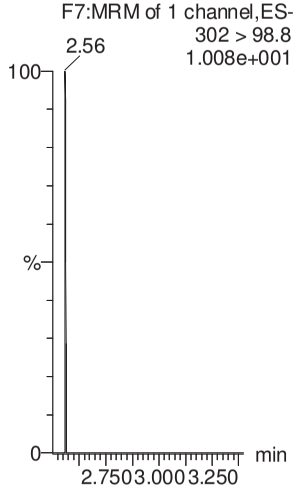


13C3-PFBS



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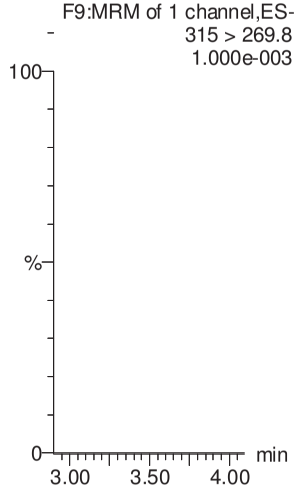

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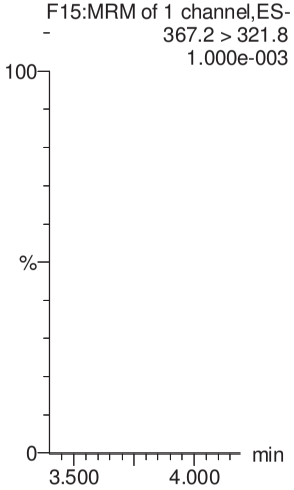
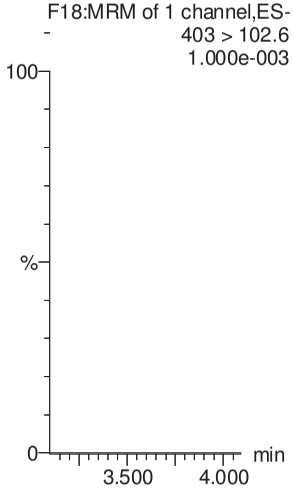


18O2-PFHxS



GM 8/12/17

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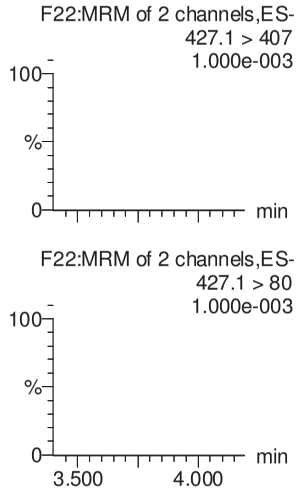
Dataset: U:\Q4.PRO\results\170811M1\170811M1-3.qld

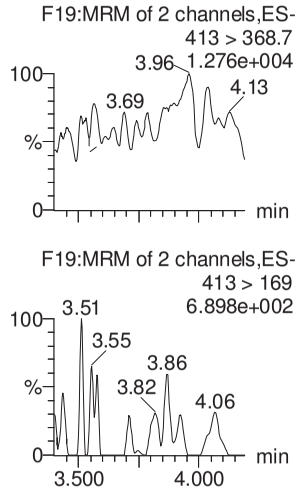
Last Altered: Saturday, August 12, 2017 10:41:21 Pacific Daylight Time
Printed: Saturday, August 12, 2017 10:41:53 Pacific Daylight Time

Name: 170811M1_3, Date: 11-Aug-2017, Time: 11:39:40, ID: IPA, Description: IPA

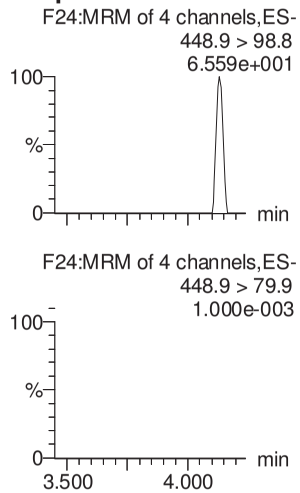
6:2 FTS



PFOA



PFHpS



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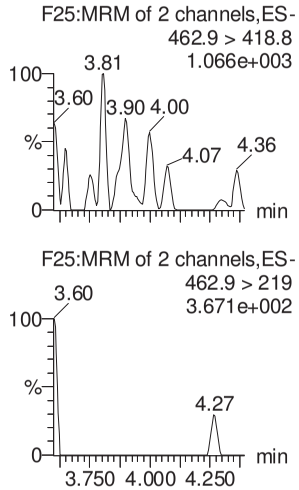
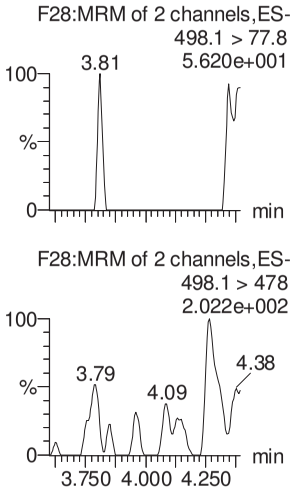
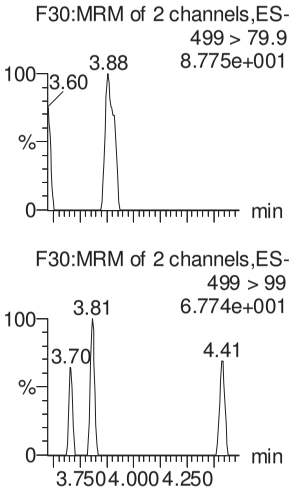


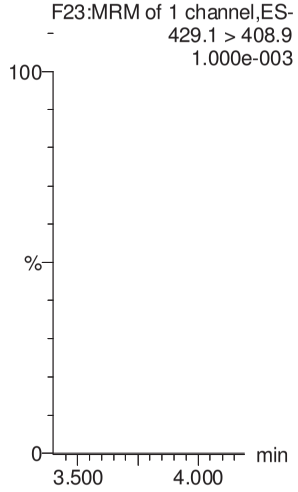
PFOSA



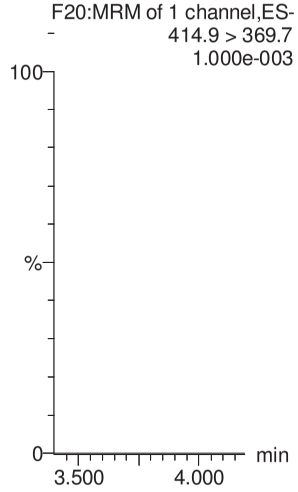
PFOS



13C2-6:2 FTS



13C2-PFOA



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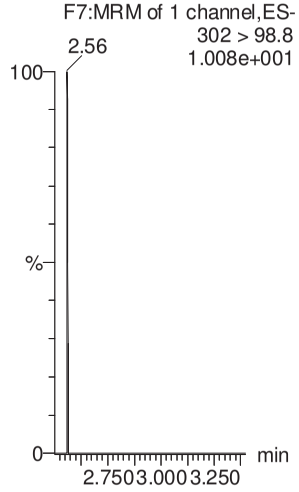
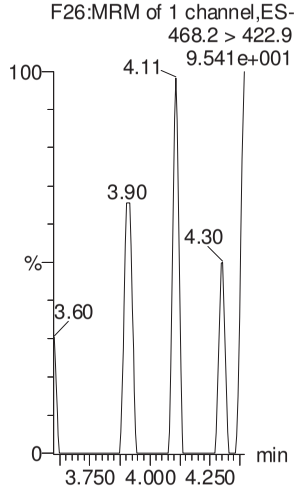
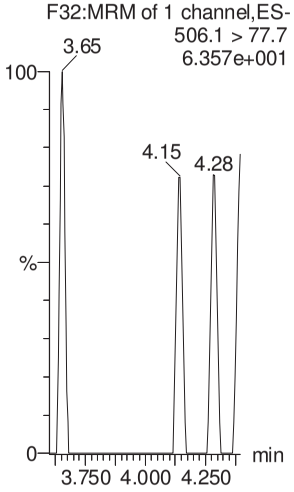


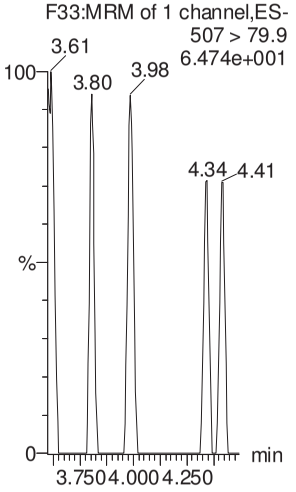
13C5-PFNA



13C8-PFOSA



13C8-PFOS



GM 8/12/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170811M1\170811M1-3.qld

Last Altered: Saturday, August 12, 2017 10:41:21 Pacific Daylight Time
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Name: 170811M1_3, Date: 11-Aug-2017, Time: 11:39:40, ID: IPA, Description: IPA

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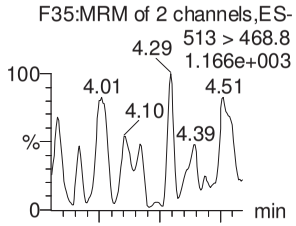
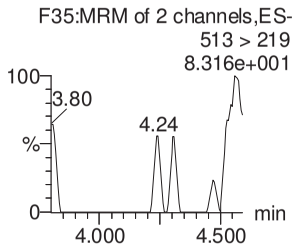
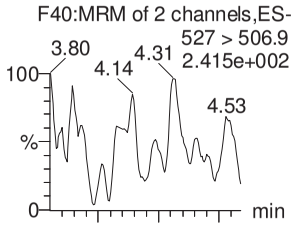
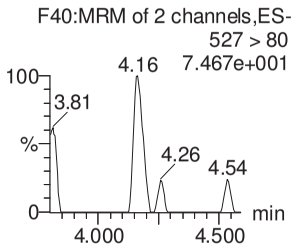


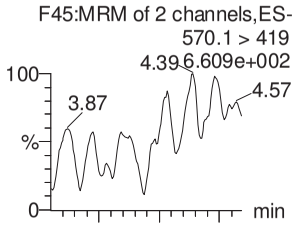


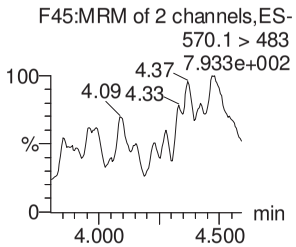
8:2 FTS



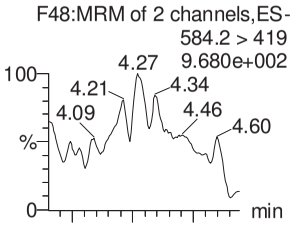


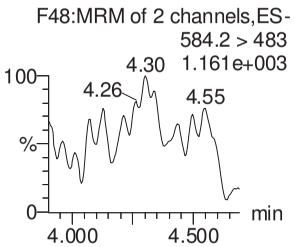
N-MeFOSAA





N-EtFOSAA





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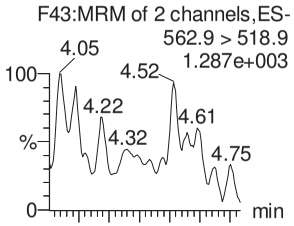
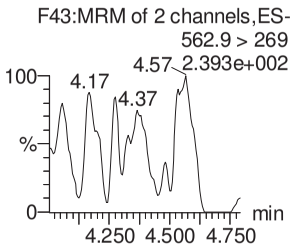
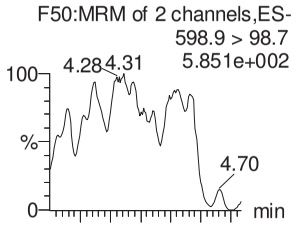
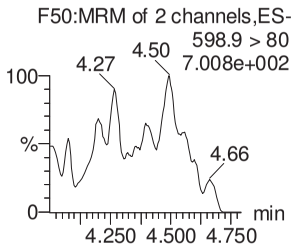


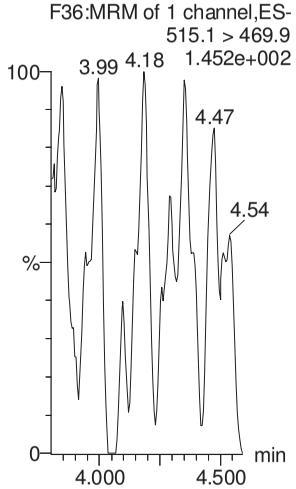


PFDS

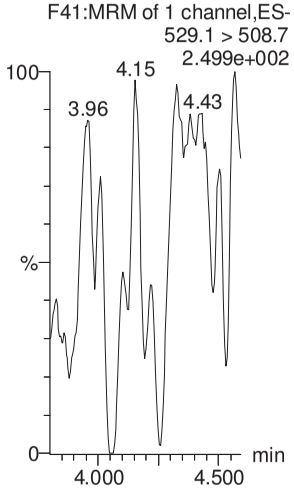




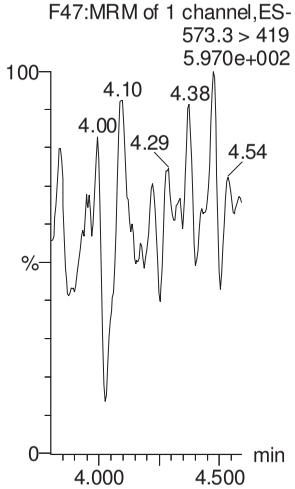
13C2-PFDA



13C2-8:2 FTS



d3-N-MeFOSAA



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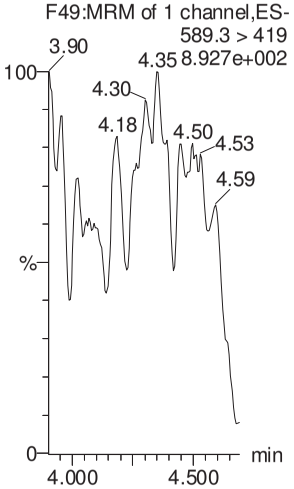
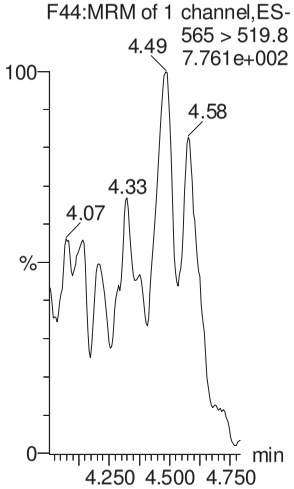


13C2-PFUnA



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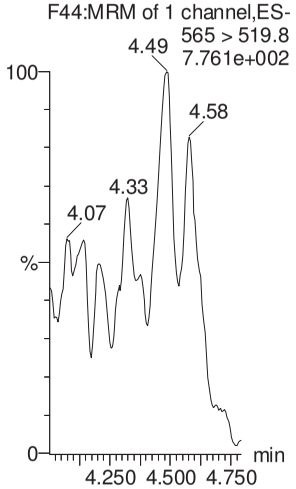


GM 8/12/17

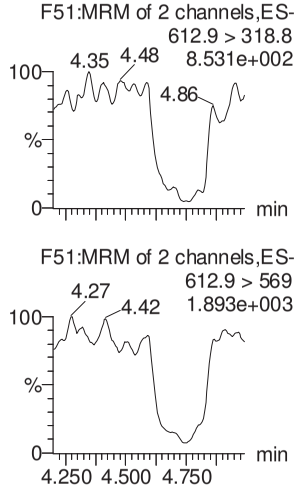
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170811M1\170811M1-3.qld

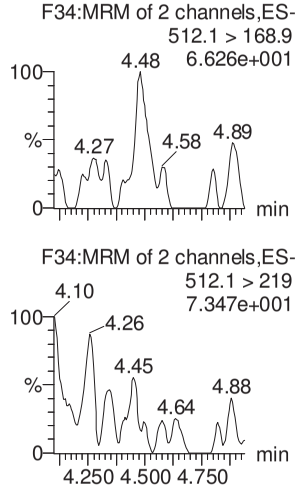
Last Altered: Saturday, August 12, 2017 10:41:21 Pacific Daylight Time
Printed: Saturday, August 12, 2017 10:41:53 Pacific Daylight Time

Name: 170811M1_3, Date: 11-Aug-2017, Time: 11:39:40, ID: IPA, Description: IPA

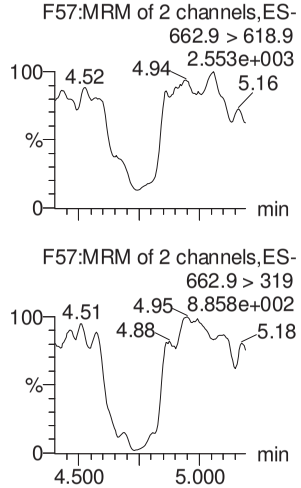
PFDoA



N-MeFOSA



PFTrDA



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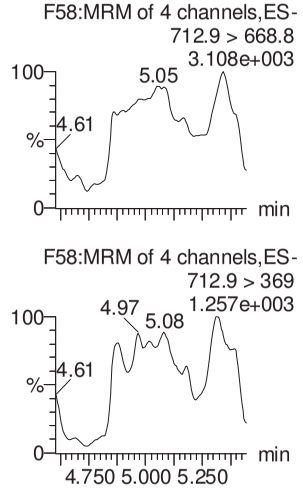
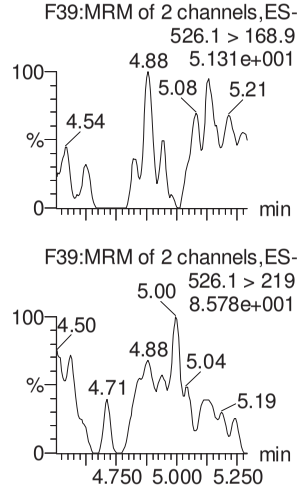


N-EtFOSA



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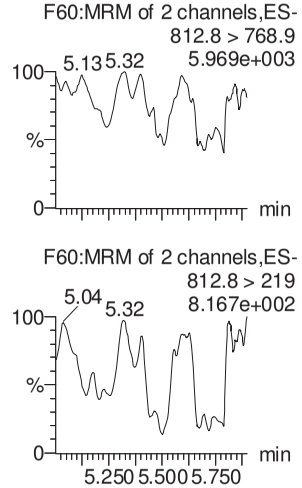

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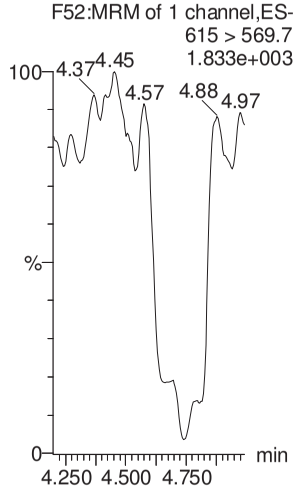

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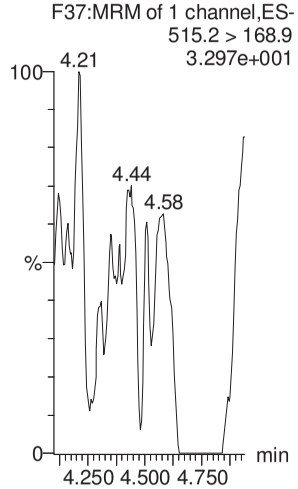

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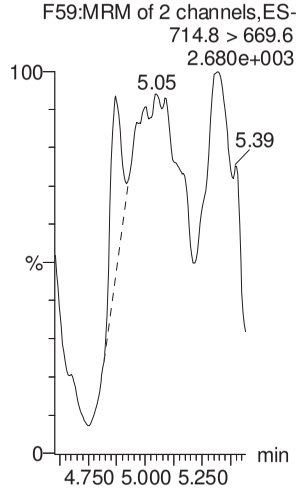

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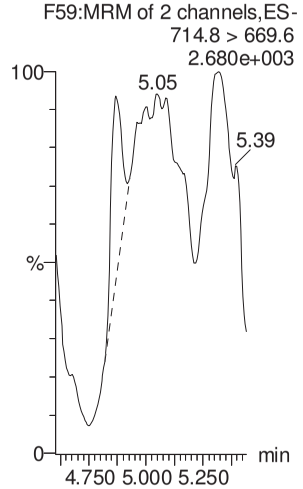

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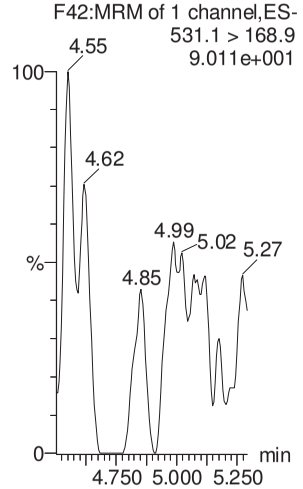

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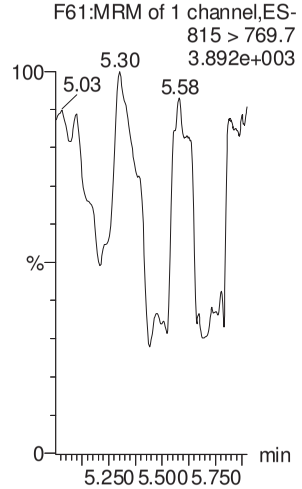


GM 8/12/17

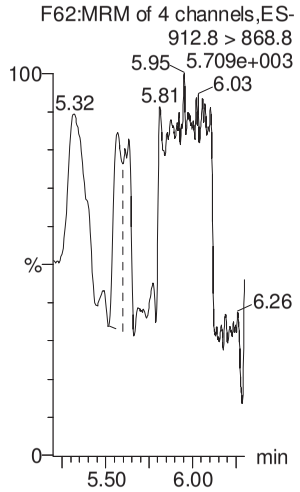
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170811M1\170811M1-3.qld

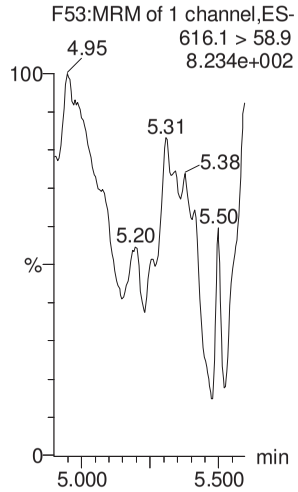
Last Altered: Saturday, August 12, 2017 10:41:21 Pacific Daylight Time
Printed: Saturday, August 12, 2017 10:41:53 Pacific Daylight Time

Name: 170811M1_3, Date: 11-Aug-2017, Time: 11:39:40, ID: IPA, Description: IPA

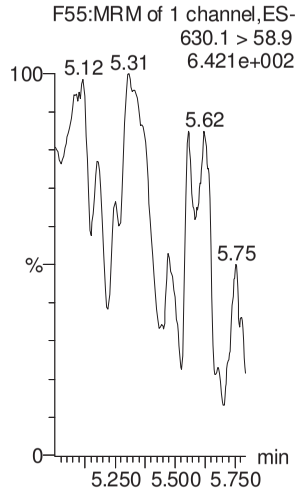
PFODA



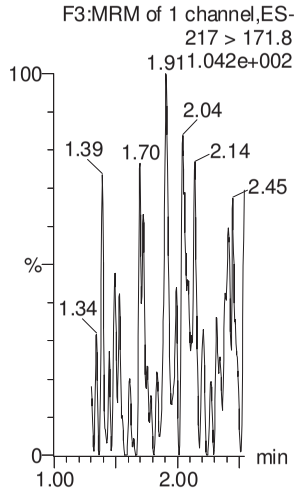
N-MeFOSE



N-EtFOSE



13C4-PFBA



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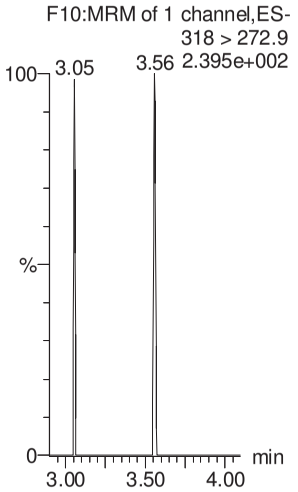
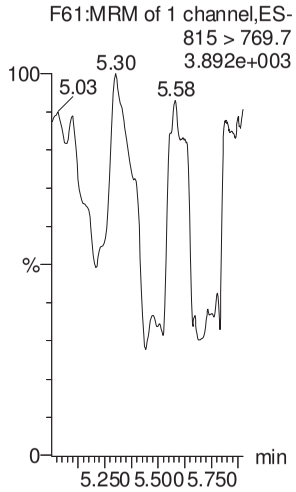
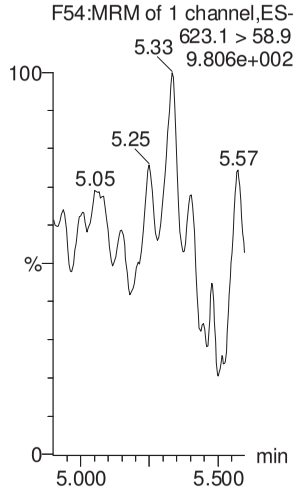


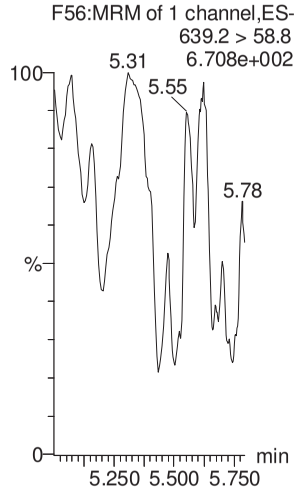
13C2-PFHxDA



d7-N-MeFOSE



d9-N-EtFOSE



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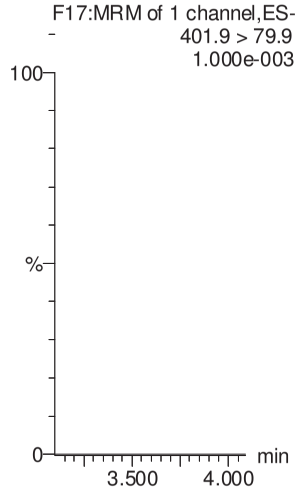
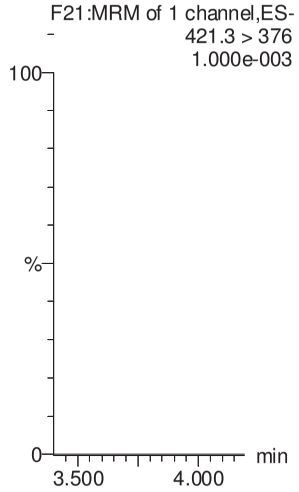
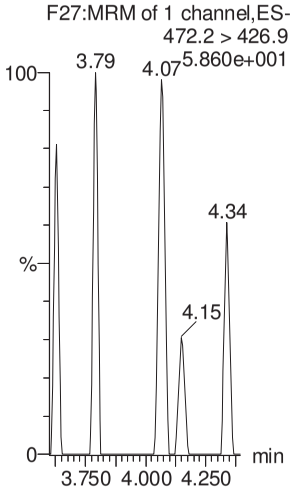


13C8-PFOA



13C9-PFNA



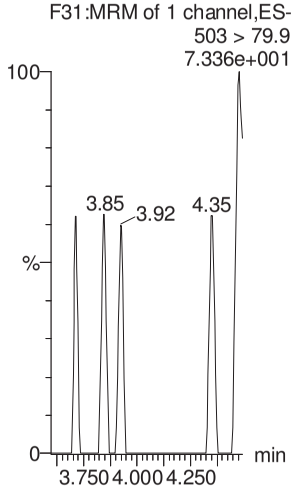
GM 8/12/17

Dataset: U:\Q4.PRO\results\170811M1\170811M1-3.qld

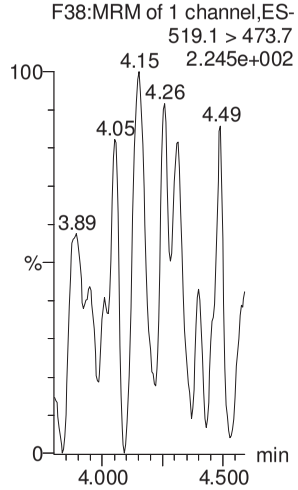
Last Altered: Saturday, August 12, 2017 10:41:21 Pacific Daylight Time
Printed: Saturday, August 12, 2017 10:41:53 Pacific Daylight Time

Name: 170811M1_3, Date: 11-Aug-2017, Time: 11:39:40, ID: IPA, Description: IPA

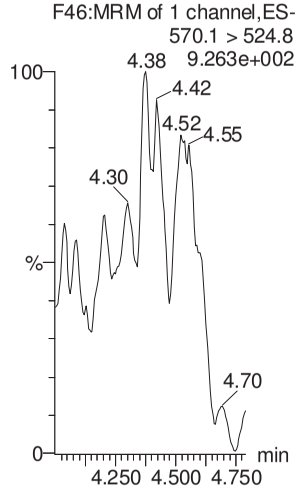
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/12/17

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

Dataset: U:\Q4.PRO\results\170811M2\170811M2-2.qld

Last Altered: Saturday, August 12, 2017 16:41:42 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:42:14 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_2, Date: 11-Aug-2017, Time: 18:35:42, ID: ST170811M2-1 PFC CS0 17H1106, Description: PFC CS0 17H1106

(A) out of limit criteria, not used.

	#	Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec	
1	1	PFBA	213.0 > 168.8	1526.804	15896.248		1.000	1.73	1.04	104.45	70-130
2	2	PFPeA	263.1 > 218.9	2290.760	27362.303		1.000	2.85	0.98	98.47	
3	3	PFBS	299 > 79.7	482.625	3320.060		1.000	3.03	0.96	95.55	
4	4	PFHxA	313.2 > 268.9	3588.384	11502.362		1.000	3.23	0.73	73.01	
5	5	PFHpA	363 > 318.9	3516.268	35960.523		1.000	3.48	0.62 (A)	62.09	
6	6	PFHxS	398.9 > 79.6	428.208	3200.417		1.000	3.55	1.01	101.07	
7	7	6:2 FTS	427.1 > 407	991.113	11445.396		1.000	3.67	1.09	108.83	
8	8	PFOA	413 > 368.7	6056.989	65550.398		1.000	3.68	1.02	102.36	
9	9	PFHpS	448.9 > 98.8	484.435	65550.398		1.000	3.74	1.08	107.57	
10	10	PFNA	462.9 > 418.8	5996.742	61399.238		1.000	3.87	0.72	72.19	
11	11	PFOSA	498.1 > 77.8	568.032	6952.180		1.000	3.88	0.94	94.29	
12	12	PFOS	499 > 79.9	904.373	10122.739		1.000	3.92	1.08	108.19	
13	13	PFDA	513 > 468.8	5922.467	57358.012		1.000	4.04	1.04	103.91	
14	14	8:2 FTS	527 > 506.9	880.276	5777.006		1.000	4.04	1.34 (A)	134.39	
15	15	N-MeFOSAA	570.1 > 419	1627.344	13360.443		1.000	4.07	1.04	104.21	
16	16	N-EtFOSAA	584.2 > 419	1447.248	13874.303		1.000	4.14	1.04	104.29	
17	17	PFUnA	562.9 > 518.9	4680.717	64991.797		1.000	4.20	1.00	100.17	
18	18	PFDS	598.9 > 98.7	457.441	64991.797		1.000	4.25	0.94	93.53	
19	19	PFDoA	612.9 > 318.8	455.310	7639.764		1.000	4.37	0.84	83.99	
20	20	N-MeFOSA	512.1 > 168.9	946.892	27743.004		1.000	4.42	4.94	98.80	
21	21	PFTrDA	662.9 > 618.9	6957.736	7639.764		1.000	4.55	1.01	101.29	
22	22	PFTeDA	712.9 > 668.8	4867.505	50590.969		1.000	4.73	0.96	96.18	
23	23	N-EtFOSA	526.1 > 168.9	1273.096	35470.379		1.000	4.90	5.61	112.17	
24	24	PFHxDA	812.8 > 768.9	6941.739	23603.436		1.000	5.09	0.89	88.94	
25	25	PFODA	912.8 > 868.8	6606.429	23603.436		1.000	5.45	1.02	101.97	
26	26	N-MeFOSE	616.1 > 58.9	1374.597	38699.793		1.000	5.25	4.83	96.58	
27	27	N-EtFOSE	630.1 > 58.9	1522.963	37771.453		1.000	5.42	3.45 (A)	68.92	
28	28	13C3-PFBA	216.1 > 171.8	15896.248	17561.268	0.906	1.000	1.73	12.49	99.93	50-150
29	29	13C3-PFPeA	266 > 221.8	27362.303	38167.094	0.284	1.000	2.85	12.63	101.01	
30	30	13C3-PFBS	302 > 98.8	3320.060	38167.094	0.033	1.000	3.03	13.23	105.83	
31	31	13C2-PFHxA	315 > 269.8	11502.362	38167.094	0.304	1.000	3.23	4.96	99.25	

QM 8/12/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170811M2\170811M2-2.qld

Last Altered: Saturday, August 12, 2017 16:41:42 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:42:14 Pacific Daylight Time

Name: 170811M2_2, Date: 11-Aug-2017, Time: 18:35:42, ID: ST170811M2-1 PFC CS0 17H1106, Description: PFC CS0 17H1106

	#	Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	35960.523	38167.094	0.384	1.000	3.49	12.27	98.13
33	33	18O2-PFHxS	403 > 102.6	3200.417	7658.811	0.417	1.000	3.55	12.52	100.18
34	34	13C2-6:2 FTS	429.1 > 408.9	11445.396	60030.492	0.202	1.000	3.67	11.81	94.52
35	35	13C2-PFOA	414.9 > 369.7	65550.398	60030.492	1.132	1.000	3.68	12.06	96.45
36	36	13C5-PFNA	468.2 > 422.9	61399.238	68212.227	0.946	1.000	3.87	11.89	95.14
37	37	13C8-PFOSA	506.1 > 77.7	6952.180	62654.039	0.119	1.000	3.87	11.61	92.92
38	38	13C8-PFOS	507 > 79.9	10122.739	10264.832	1.040	1.000	3.92	11.85	94.84
39	39	13C2-PFDA	515.1 > 469.9	57358.012	58465.094	0.971	1.000	4.04	12.63	101.06
40	40	13C2-8:2 FTS	529.1 > 508.7	5777.006	58465.094	0.140	1.000	4.04	8.80	70.44
41	41	d3-N-MeFOSAA	573.3 > 419	13360.443	62654.039	0.018	1.000	4.07	149.84	92.21
42	42	d5-N-EtFOSAA	589.3 > 419	13874.303	62654.039	0.018	1.000	4.14	151.83	93.43
43	43	13C2-PFUnA	565 > 519.8	64991.797	62654.039	1.085	1.000	4.21	11.95	95.59
44	44	13C2-PFDoA	615 > 569.7	7639.764	62654.039	0.123	1.000	4.37	12.38	99.03
45	45	d3-N-MeFOSA	515.2 > 168.9	27743.004	62654.039	0.043	1.000	4.45	127.93	85.28
46	46	13C2-PFTeDA	714.8 > 669.6	50590.969	62654.039	0.798	1.000	4.73	12.65	101.21
47	47	d5-N-ETFOSA	531.1 > 168.9	35470.379	62654.039	0.056	1.000	4.93	127.10	84.73
48	48	13C2-PFHxDA	815 > 769.7	23603.436	62654.039	0.926	1.000	5.09	5.08	101.66
49	49	d7-N-MeFOSE	623.1 > 58.9	38699.793	62654.039	0.059	1.000	5.24	129.88	86.59
50	50	d9-N-EtFOSE	639.2 > 58.8	37771.453	62654.039	0.059	1.000	5.40	126.69	84.46
51	51	13C4-PFBA	217 > 171.8	17561.268	17561.268	1.000	1.000	1.73	12.50	100.00
52	52	13C5-PFHxA	318 > 272.9	38167.094	38167.094	1.000	1.000	3.23	5.00	100.00
53	53	13C3-PFHxS	401.9 > 79.9	7658.811	7658.811	1.000	1.000	3.55	12.50	100.00
54	54	13C8-PFOA	421.3 > 376	60030.492	60030.492	1.000	1.000	3.68	12.50	100.00
55	55	13C9-PFNA	472.2 > 426.9	68212.227	68212.227	1.000	1.000	3.87	12.50	100.00
56	56	13C4-PFOS	503 > 79.9	10264.832	10264.832	1.000	1.000	3.92	12.50	100.00
57	57	13C6-PFDA	519.1 > 473.7	58465.094	58465.094	1.000	1.000	4.04	12.50	100.00
58	58	13C7-PFUnA	570.1 > 524.8	62654.039	62654.039	1.000	1.000	4.20	12.50	100.00

50-150

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
1	170811M2_1	—	IPA	IPA	1.0000	1:48	Blank
2	170811M2_2	X	ST170811M2-1 PFC CS0 17H1106	PFC CS0 17H1106	1.0000	1:1	Standard
3	170811M2_3	—	IPA	IPA	1.0000	1:48	Blank
4	170811M2_4	X	B7H0073-BS1 OPR 0.125	OPR	0.1250	1:3	Analyte
5	170811M2_5	X	B7H0074-BS1 OPR 0.125	OPR	0.1250	1:4	Analyte
6	170811M2_6	—	IPA	IPA	1.0000	1:48	Blank
7	170811M2_7	X	B7H0073-BLK1 Method Blank 0.125	Method Blank	0.1250	1:5	Analyte
8	170811M2_8	X	B7H0074-BLK1 Method Blank 0.125	Method Blank	0.1250	1:6	Analyte
9	170811M2_9	X	B7H0073-MS1 Matrix Spike 0.0005	Matrix Spike	0.0005	1:7	Analyte
10	170811M2_10	—	IPA	IPA	1.0000	1:48	Blank
11	170811M2_11	X	B7H0073-MSD1 Matrix Spike Dup 0.00139	Matrix Spike Dup	0.0014	1:8	Analyte
12	170811M2_12	—	IPA	IPA	1.0000	1:48	Blank
13	170811M2_13	X	B7H0074-MS1 Matrix Spike 0.125	Matrix Spike	0.1250	1:9	Analyte
14	170811M2_14	X	B7H0074-MSD1 Matrix Spike Dup 0.125	Matrix Spike Dup	0.1250	1:10	Analyte
15	170811M2_15	x	1700925-04RE2 I001MW52S-170724 0.00122	I001MW52S-170724	0.0012	1:11	Analyte
16	170811M2_16	—	IPA	IPA	1.0000	1:48	Blank
17	170811M2_17	x	1700925-05RE2 I001MW52X-170724 0.00133	I001MW52X-170724	0.0013	1:12	Analyte
18	170811M2_18	—	IPA	IPA	1.0000	1:48	Blank
19	170811M2_19	x	1700922-01RE1 MH-L103-20170721 0.10565	MH-L103-20170721	0.1056	1:14	Analyte
20	170811M2_20	x	1700922-02RE1 MH-N104-20170721 0.11025	MH-N104-20170721	0.1103	1:15	Analyte
21	170811M2_21	x	1700922-03RE1 Upstream-Culvert-109-20170721 0.1185	Upstream-Culvert-109-20170721	0.1185	1:16	Analyte
22	170811M2_22	x	1700922-04RE1 FRB03-20170721 0.11017	FRB03-20170721	0.1102	1:17	Analyte
23	170811M2_23	x	1700922-05RE1 RB08-20170720 0.11893	RB08-20170720	0.1189	1:18	Analyte
24	170811M2_24	—	1700922-06RE1 RB09-20170721 0.11676	RB09-20170721	0.1168	1:19	Analyte
25	170811M2_25	—	1700925-01RE1 I001BC43S-170724 0.12112	I001BC43S-170724	0.1211	1:20	Analyte
26	170811M2_26	—	1700925-02RE1 SB01-170724 0.12178	SB01-170724	0.1218	1:21	Analyte
27	170811M2_27	—	IPA	IPA	1.0000	1:48	Blank
28	170811M2_28	—	ST170811M2-2 PFC CS3 17H1105	PFC CS3 17H1105	1.0000	1:2	Standard
29	170811M2_29	—	IPA	IPA	1.0000	1:48	Blank
30	170811M2_30	—	1700925-03RE1 I001BC50S-170724 0.12135	I001BC50S-170724	0.1214	1:22	Analyte
31	170811M2_31	—	1700925-06RE1 EB01-170724 0.1185	EB01-170724	0.1185	1:23	Analyte
32	170811M2_32	—	1700929-01RE1 MATP01001 0.11834	MATP01001	0.1183	1:24	Analyte
33	170811M2_33	—	1700929-02RE1 MATP01002 0.1157	MATP01002	0.1157	1:25	Analyte
34	170811M2_34	—	1700938-01RE1 NORP08102 0.11844	NORP08102	0.1184	1:26	Analyte
35	170811M2_35	—	1700938-02RE1 NORP08103 0.12014	NORP08103	0.1201	1:27	Analyte
36	170811M2_36	—	1700938-03RE1 NORP08104 0.11247	NORP08104	0.1125	1:28	Analyte
37	170811M2_37	—	IPA	IPA	1.0000	1:48	Blank
38	170811M2_38	—	B7H0073-MS1@20X Matrix Spike 0.0005	Matrix Spike	0.0005	1:29	Analyte
39	170811M2_39	—	IPA	IPA	1.0000	1:48	Blank
40	170811M2_40	—	B7H0073-MSD1@20X Matrix Spike Dup 0.00139	Matrix Spike Dup	0.0014	1:30	Analyte

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
41	170811M2_41	---	IPA	IPA	1.0000	1:48	Blank
42	170811M2_42	---	1700925-04RE2@20X I001MW52S-170724 0.00122	I001MW52S-170724	0.0012	1:31	Analyte
43	170811M2_43	---	IPA	IPA	1.0000	1:48	Blank
44	170811M2_44	---	1700925-05RE2@20X I001MW52X-170724 0.00133	I001MW52X-170724	0.0013	1:32	Analyte
45	170811M2_45	---	IPA	IPA	1.0000	1:48	Blank
46	170811M2_46	---	1700958-15RE1@10X MATP05081 1.02	MATP05081	0.9982	2:26	Analyte
47	170811M2_47	---	IPA	IPA	1.0000	1:48	Blank
48	170811M2_48	---	ST170811M2-3 PFC CS3 17H1105	PFC CS3 17H1105	1.0000	1:2	Standard
49	170811M2_49	---	IPA	IPA	1.0000	1:48	Blank
50	170811M2_50	---	1701007-03 RI17-EB3-080317 0.26497	RI17-EB3-080317	0.2650	1:33	Analyte
51	170811M2_51	---	1701007-04 RI17-EB8-080317 0.26753	RI17-EB8-080317	0.2675	1:34	Analyte
52	170811M2_52	---	IPA	IPA	1.0000	1:48	Blank
53	170811M2_53	---	1700958-06RE1 MATP03050 1.22	MATP03050	1.0219	1:35	Analyte
54	170811M2_54	---	IPA	IPA	1.0000	1:48	Blank
55	170811M2_55	---	1700958-09RE1 MATP04060 1.27	MATP04060	1.0295	1:36	Analyte
56	170811M2_56	---	1700958-10RE1 MATP04061 1.27	MATP04061	1.0096	1:37	Analyte
57	170811M2_57	---	1700958-13RE1 MATP05079 1.1	MATP05079	1.0125	1:38	Analyte
58	170811M2_58	---	1700958-15RE1 MATP05081 1.02	MATP05081	0.9982	1:39	Analyte
59	170811M2_59	---	IPA	IPA	1.0000	1:48	Blank
60	170811M2_60	---	1700961-02 MATP05098 1	MATP05098	1.0000	1:40	Analyte
61	170811M2_61	---	1700961-03 MATP05099 1	MATP05099	1.0000	1:41	Analyte
62	170811M2_62	---	1700961-04 MATP05100 1	MATP05100	1.0000	1:42	Analyte
63	170811M2_63	---	IPA	IPA	1.0000	1:48	Blank
64	170811M2_64	---	ST170811M2-4 PFC CS0 17H1106	PFC CS0 17H1106	1.0000	1:1	Standard
65	170811M2_65	---	IPA	IPA	1.0000	1:48	Blank
66	170811M2_66	---	1700961-05 MATP05102 1	MATP05102	1.0000	1:43	Analyte
67	170811M2_67	---	1700961-06 MATP05103 1	MATP05103	1.0000	1:44	Analyte
68	170811M2_68	---	1700961-07 MATP04055 1	MATP04055	1.0000	1:45	Analyte
69	170811M2_69	---	1700961-08 MATP03041 1	MATP03041	1.0000	1:46	Analyte
70	170811M2_70	---	1700961-09 MATP04063 1	MATP04063	1.0000	1:47	Analyte
71	170811M2_71	---	1700961-11 MATP04065 1	MATP04065	1.0000	2:1	Analyte
72	170811M2_72	---	1700961-12 MATP04066 1	MATP04066	1.0000	2:2	Analyte
73	170811M2_73	X	1700960-03 MATP05084 0.125	MATP05084	0.1250	2:3	Analyte
74	170811M2_74	X	1700960-05 MATP05086 1	MATP05086	1.0000	2:4	Analyte
75	170811M2_75	---	1700960-10 MATP05091 1	MATP05091	1.0000	2:5	Analyte
76	170811M2_76	---	IPA	IPA	1.0000	1:48	Blank
77	170811M2_77	X	ST170811M2-~~3~~ 5 PFC CS3 17H1105	PFC CS3 17H1105	1.0000	1:2	Standard
78	170811M2_78	---	IPA	IPA	1.0000	1:48	Blank
79	170811M2_79	---	1700960-11 MATP05092 1	MATP05092	1.0000	2:6	Analyte
80	170811M2_80	---	IPA	IPA	1.0000	1:48	Blank

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
81	170811M2_81	X	1700960-04@5X MATP05085 1	MATP05085	1.0000	2:7	Analyte
82	170811M2_82	—	IPA	IPA	1.0000	1:48	Blank
83	170811M2_83	X	1700958-04 MATP03048 1	MATP03048	1.0000	2:8	Analyte
84	170811M2_84	—	IPA	IPA	1.0000	1:48	Blank
85	170811M2_85	X	1700958-04@20X MATP03048 1	MATP03048	1.0000	2:9	Analyte
86	170811M2_86	—	IPA	IPA	1.0000	1:48	Blank
87	170811M2_87	X	1700958-05@10X MATP03049 1	MATP03049	1.0000	2:10	Analyte
88	170811M2_88	—	IPA	IPA	1.0000	1:48	Blank
89	170811M2_89	X	1700958-05 MATP03049 1	MATP03049	1.0000	2:11	Analyte
90	170811M2_90	—	IPA	IPA	1.0000	1:48	Blank
91	170811M2_91	X	1700958-06 MATP03050 1	MATP03050	1.0000	2:12	Analyte
92	170811M2_92	—	IPA	IPA	1.0000	1:48	Blank
93	170811M2_93	X	1700958-06@5X MATP03050 1	MATP03050	1.0000	2:13	Analyte
94	170811M2_94	—	IPA	IPA	1.0000	1:48	Blank
95	170811M2_95	X	1700958-07 MATP03051 1	MATP03051	1.0000	2:14	Analyte
96	170811M2_96	—	1700958-09 MATP04060 1	MATP04060	1.0000	2:15	Analyte
97	170811M2_97	—	IPA	IPA	1.0000	1:48	Blank
98	170811M2_98	—	ST170811M2-6 PFC CS3 17H1105	PFC CS3 17H1105	1.0000	1:2	Standard
99	170811M2_99	—	IPA	IPA	1.0000	1:48	Blank
100	170811M2_100	—	1700958-13 MATP05079 1	MATP05079	1.0000	2:16	Analyte
101	170811M2_101	X	1700958-14 MATP05080 0.125	MATP05080	0.1250	2:17	Analyte
102	170811M2_102	—	1700958-15@10X MATP05081 1	MATP05081	1.0000	2:18	Analyte
103	170811M2_103	—	IPA	IPA	1.0000	1:48	Blank
104	170811M2_104	—	1700958-15 MATP05081 1	MATP05081	1.0000	2:19	Analyte
105	170811M2_105	—	IPA	IPA	1.0000	1:48	Blank
106	170811M2_106	X	1700959-04@5X MATP10119a 0.125	MATP10119a	0.1250	2:20	Analyte
107	170811M2_107	—	IPA	IPA	1.0000	1:48	Blank
108	170811M2_108	X	1700959-05@10X MATPXX132a 0.125	MATPXX132a	0.1250	2:21	Analyte
109	170811M2_109	—	IPA	IPA	1.0000	1:48	Blank
110	170811M2_110	X	1700959-06 MATPXX130a 0.125	MATPXX130a	0.1250	2:22	Analyte
111	170811M2_111	X	1700959-07@20X MATPXX126a 0.125	MATPXX126a	0.1250	2:23	Analyte
112	170811M2_112	—	IPA	IPA	1.0000	1:48	Blank
113	170811M2_113	—	1700961-10 MATP04064 0.125	MATP04064	0.1250	2:24	Analyte
114	170811M2_114	—	1700966-03 MW-13 0.125	MW-13	0.1250	2:25	Analyte
115	170811M2_115	—	IPA	IPA	1.0000	1:48	Blank
116	170811M2_116	—	ST170811M2-7 PFC CS3 17H1105	PFC CS3 17H1105	1.0000	1:2	Standard
117	170811M2_117	—	IPA	IPA	1.0000	1:48	Blank
118	170811M2_118	—	170811_BLUE	170811_BLUE	1.0000	2:28	Blank
119	170811M2_119	—	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: ST170811M2-1	L M H	NA	☐ (A)	☐	☐	☐	☐	☐
Calibration ID: -2	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID: -3	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID: -4	L M H	☐	☐ (B)	☐	☐	☐	☐	☐
Calibration ID: -5	L M H	☐	☐ (C)	☐	☐	☐	☐	☐
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: KOL 8/14/17
Initials/Date

Comments:
(A) PFHpA, N-ETFOSE out of limit criteria, not used.
(B) PFHxA, PFHpA, PFNA, PFDS out of limit criteria, not used.
(C) PFHpS out of limit criteria.

Vista Analytical Laboratory

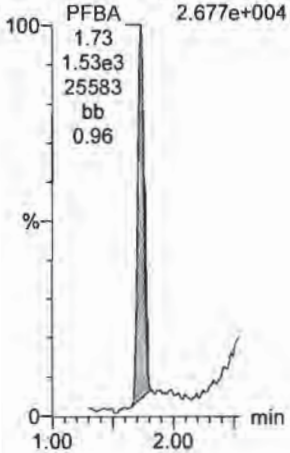
Dataset: U:\Q4.PRO\results\170811M2\170811M2-2.qld

Last Altered: Saturday, August 12, 2017 16:41:42 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:43:19 Pacific Daylight Time

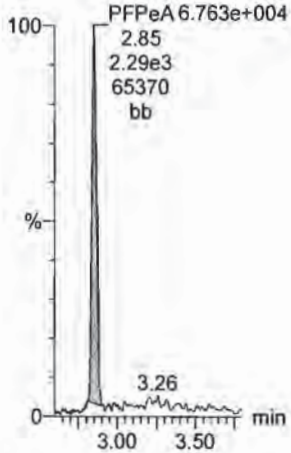
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_2, Date: 11-Aug-2017, Time: 18:35:42, ID: ST170811M2-1 PFC CS0 17H1106, Description: PFC CS0 17H1106

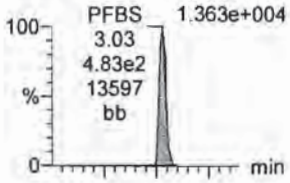
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
2.677e+004



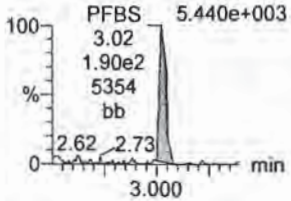
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
PFPeA 6.763e+004



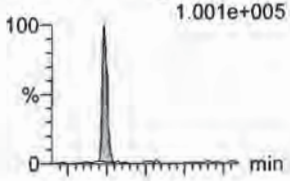
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
1.363e+004



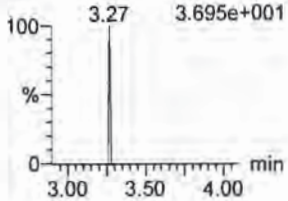
F6:MRM of 2 channels,ES-
299 > 99
5.440e+003



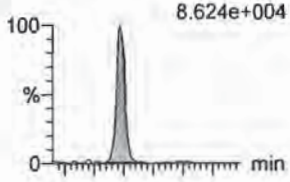
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
1.001e+005



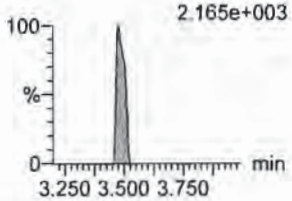
F8:MRM of 2 channels,ES-
313.2 > 119
3.695e+001



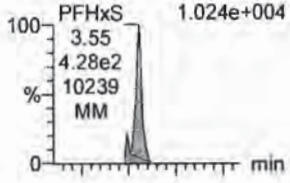
PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
8.624e+004



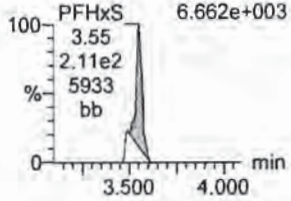
F14:MRM of 2 channels,ES-
363 > 169
2.165e+003



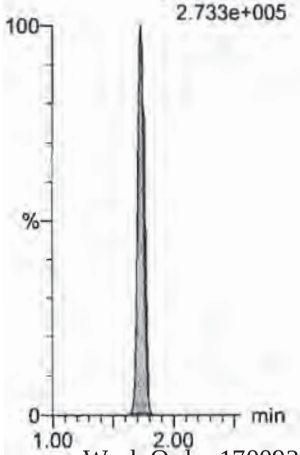
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
1.024e+004



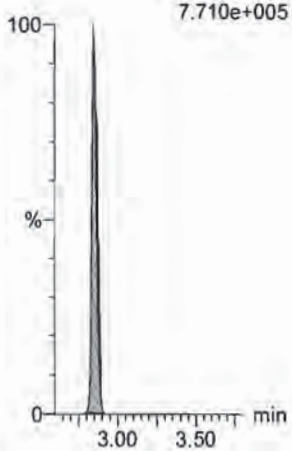
F16:MRM of 2 channels,ES-
398.9 > 99
6.662e+003



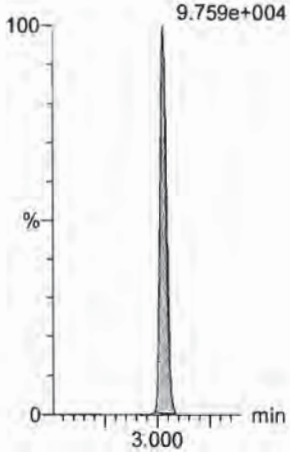
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
2.733e+005



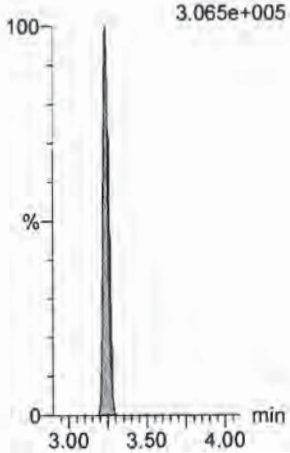
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
7.710e+005



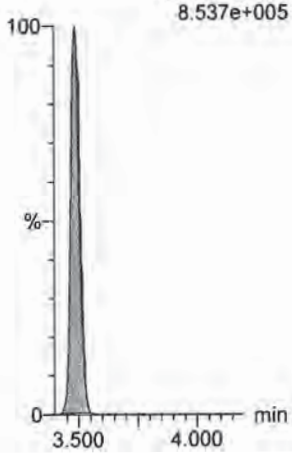
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
9.759e+004



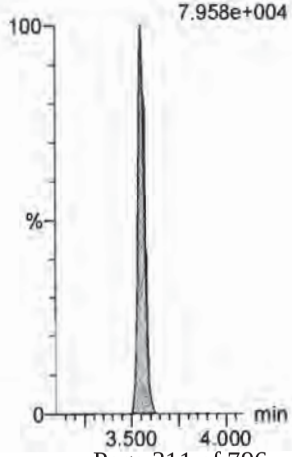
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
3.065e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
8.537e+005



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
7.958e+004



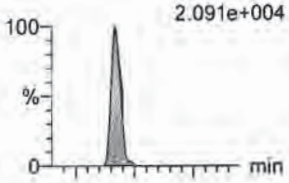
Dataset: U:\Q4.PRO\results\170811M2\170811M2-2.qld

Last Altered: Saturday, August 12, 2017 16:41:42 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:43:19 Pacific Daylight Time

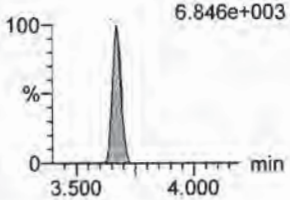
Name: 170811M2_2, Date: 11-Aug-2017, Time: 18:35:42, ID: ST170811M2-1 PFC CS0 17H1106, Description: PFC CS0 17H1106

6:2 FTS

F22:MRM of 2 channels,ES-
427.1 > 407
2.091e+004

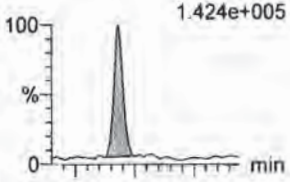


F22:MRM of 2 channels,ES-
427.1 > 80
6.846e+003

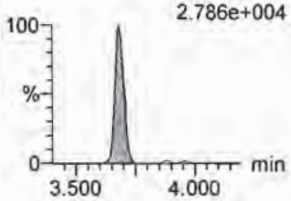


PFOA

F19:MRM of 2 channels,ES-
413 > 368.7
1.424e+005

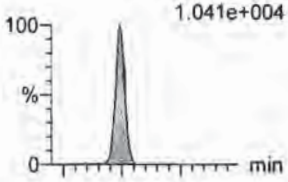


F19:MRM of 2 channels,ES-
413 > 169
2.786e+004

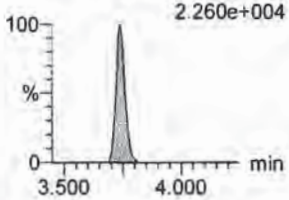


PFHpS

F24:MRM of 4 channels,ES-
448.9 > 98.8
1.041e+004

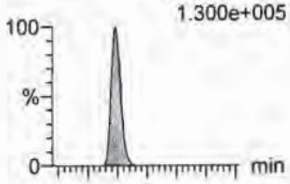


F24:MRM of 4 channels,ES-
448.9 > 79.9
2.260e+004

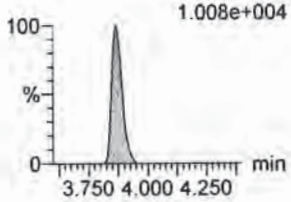


PFNA

F25:MRM of 2 channels,ES-
462.9 > 418.8
1.300e+005

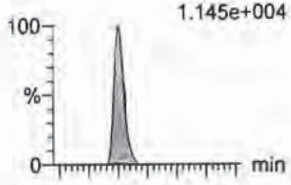


F25:MRM of 2 channels,ES-
462.9 > 219
1.008e+004

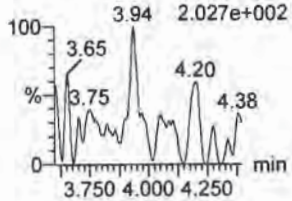


PFOSA

F28:MRM of 2 channels,ES-
498.1 > 77.8
1.145e+004

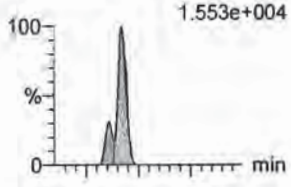


F28:MRM of 2 channels,ES-
498.1 > 478
2.027e+002

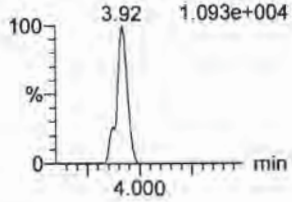


PFOS

F30:MRM of 2 channels,ES-
499 > 79.9
1.553e+004

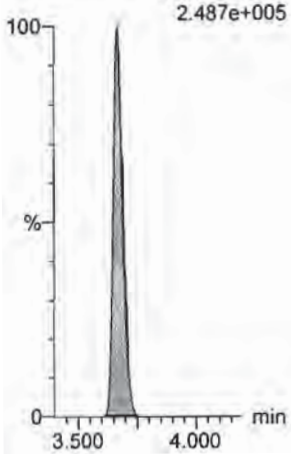


F30:MRM of 2 channels,ES-
499 > 99
1.093e+004



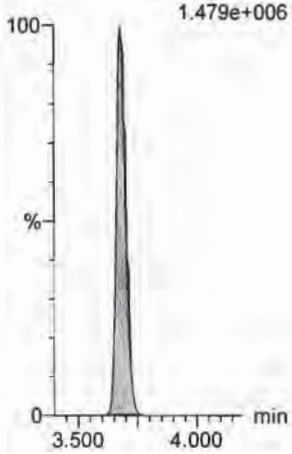
13C2-6:2 FTS

F23:MRM of 1 channel,ES-
429.1 > 408.9
2.487e+005



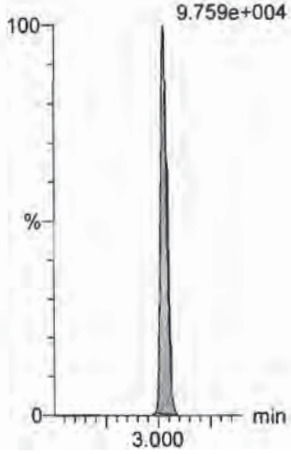
13C2-PFOA

F20:MRM of 1 channel,ES-
414.9 > 369.7
1.479e+006



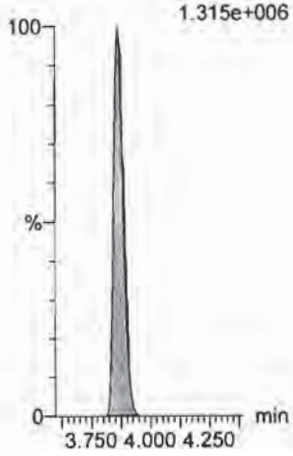
13C3-PFBS

F7:MRM of 1 channel,ES-
302 > 98.8
9.759e+004



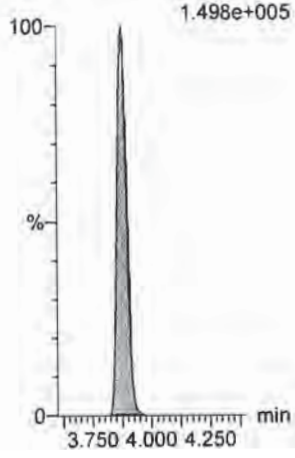
13C5-PFNA

F26:MRM of 1 channel,ES-
468.2 > 422.9
1.315e+006



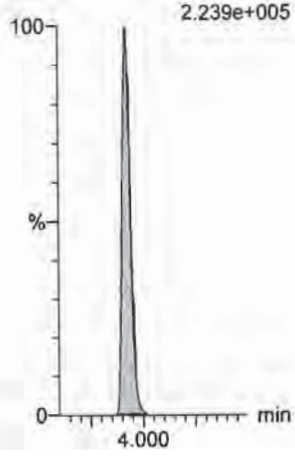
13C8-PFOSA

F32:MRM of 1 channel,ES-
506.1 > 77.7
1.498e+005



13C8-PFOS

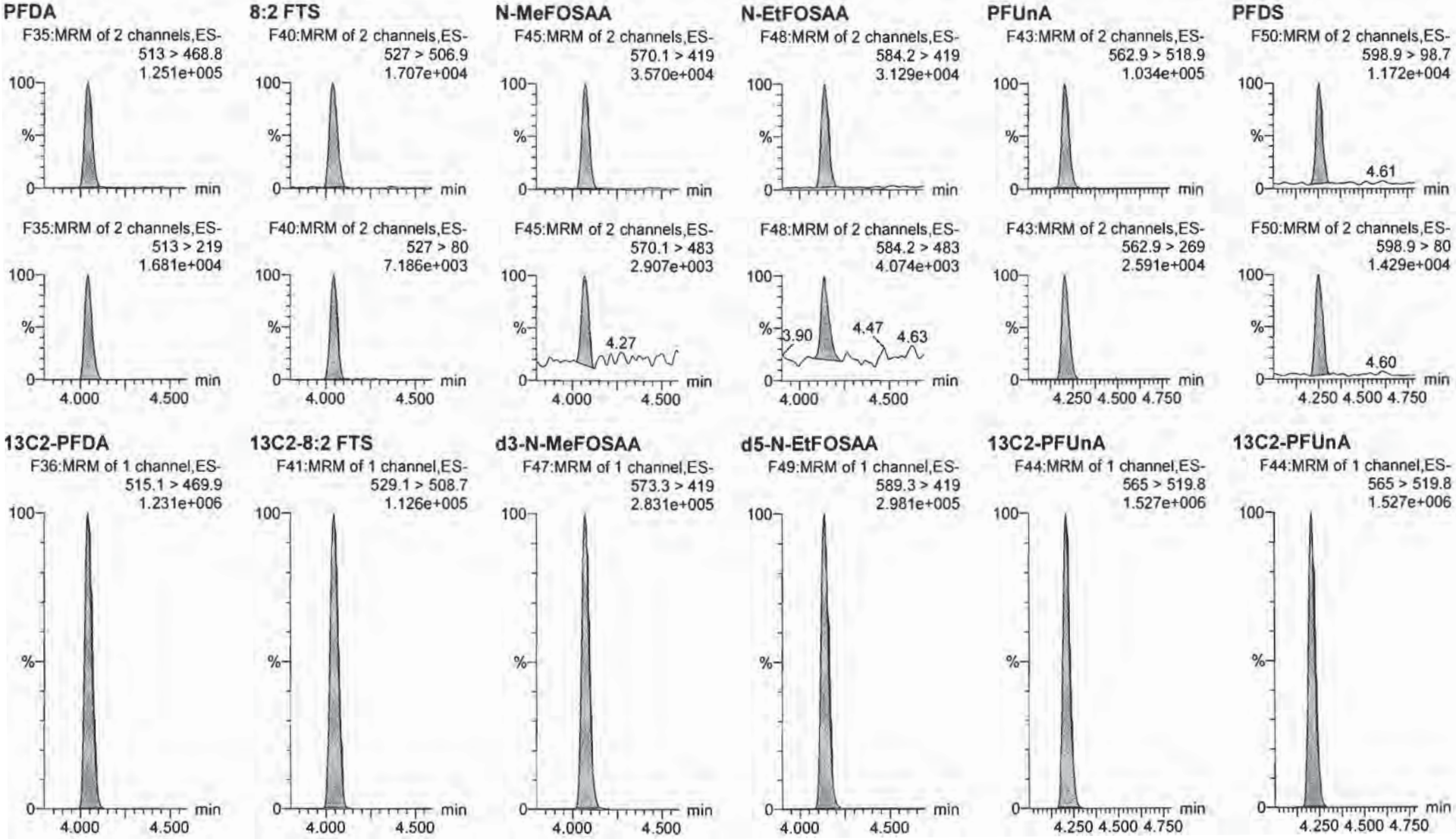
F33:MRM of 1 channel,ES-
507 > 79.9
2.239e+005



Dataset: U:\Q4.PRO\results\170811M2\170811M2-2.qld

Last Altered: Saturday, August 12, 2017 16:41:42 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:43:19 Pacific Daylight Time

Name: 170811M2_2, Date: 11-Aug-2017, Time: 18:35:42, ID: ST170811M2-1 PFC CS0 17H1106, Description: PFC CS0 17H1106

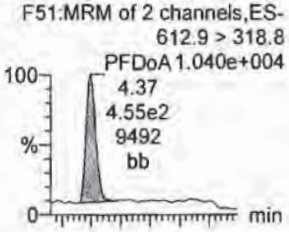


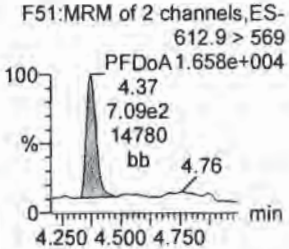
Dataset: U:\Q4.PRO\results\170811M2\170811M2-2.qld

Last Altered: Saturday, August 12, 2017 16:41:42 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:43:19 Pacific Daylight Time

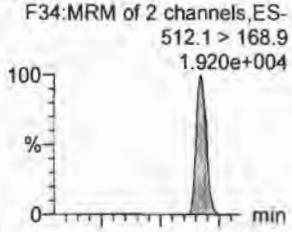
Name: 170811M2_2, Date: 11-Aug-2017, Time: 18:35:42, ID: ST170811M2-1 PFC CS0 17H1106, Description: PFC CS0 17H1106

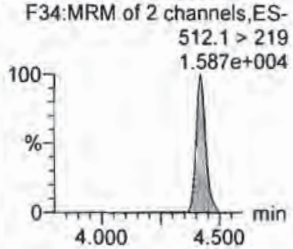
PFDoA



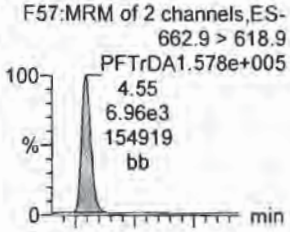


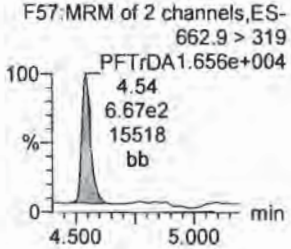
N-MeFOSA



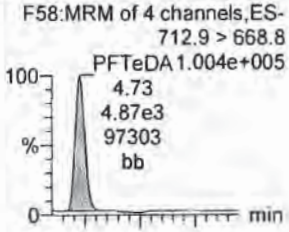


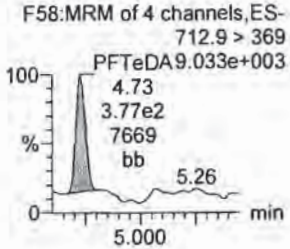
PFTrDA



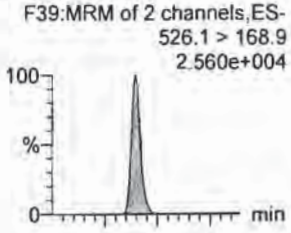


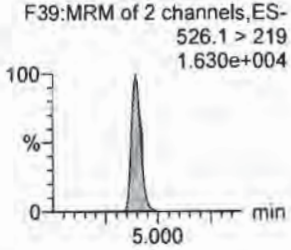
PFTeDA



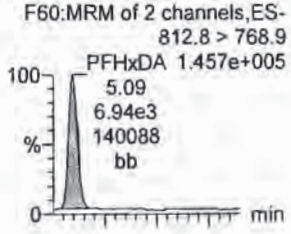


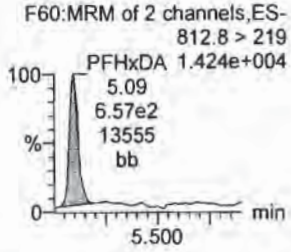
N-EtFOSA



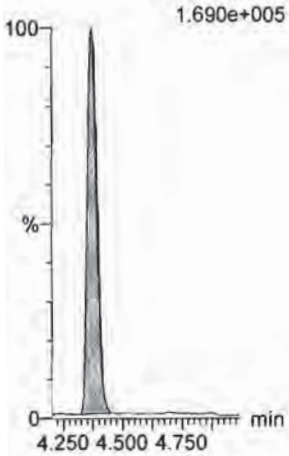


PFHxDA

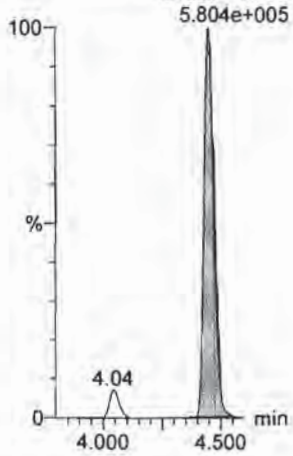




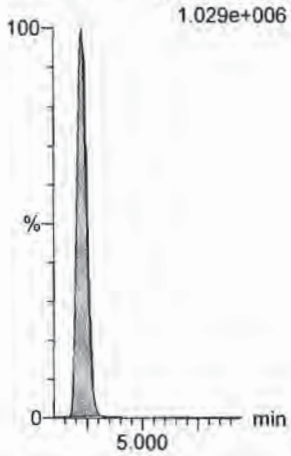
13C2-PFDoA



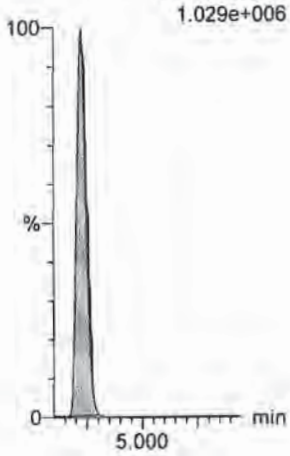
d3-N-MeFOSA



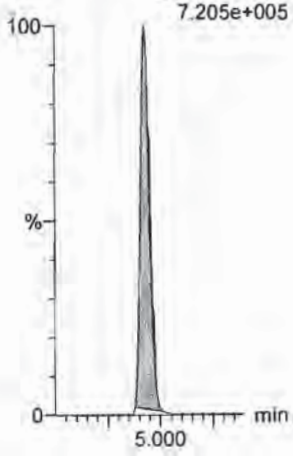
13C2-PFTeDA



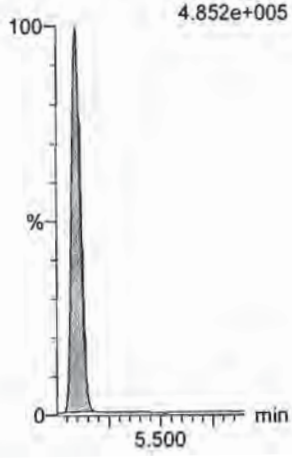
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



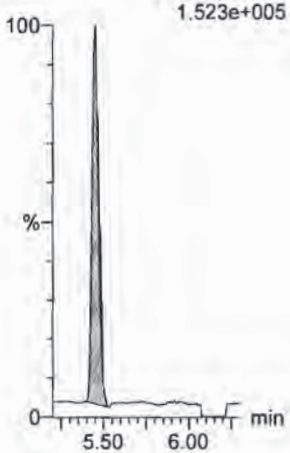
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170811M2\170811M2-2.qld

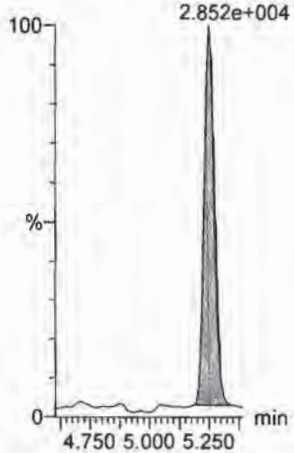
Last Altered: Saturday, August 12, 2017 16:41:42 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:43:19 Pacific Daylight Time

Name: 170811M2_2, Date: 11-Aug-2017, Time: 18:35:42, ID: ST170811M2-1 PFC CS0 17H1106, Description: PFC CS0 17H1106

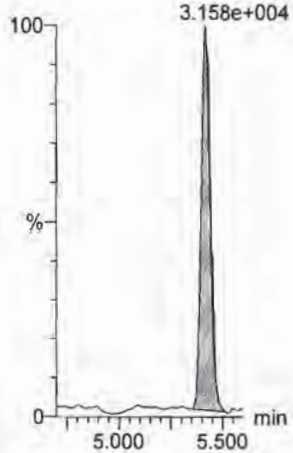
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.523e+005



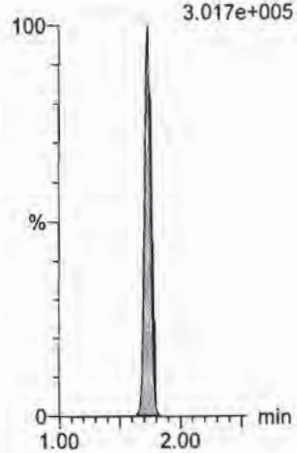
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.852e+004



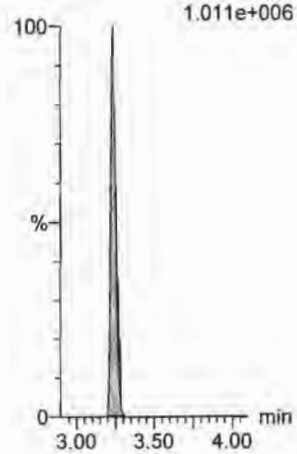
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
3.158e+004



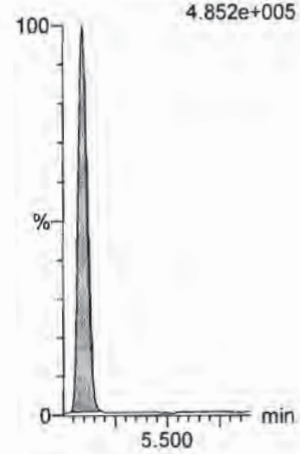
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
3.017e+005



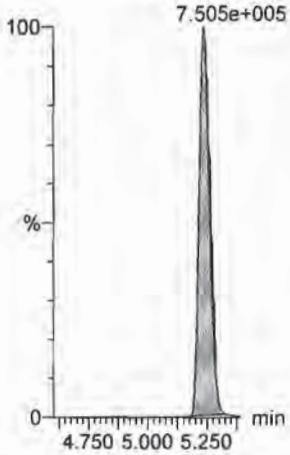
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.011e+006



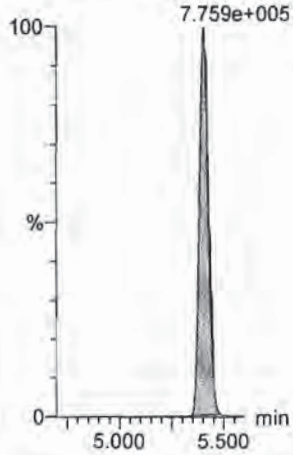
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.852e+005



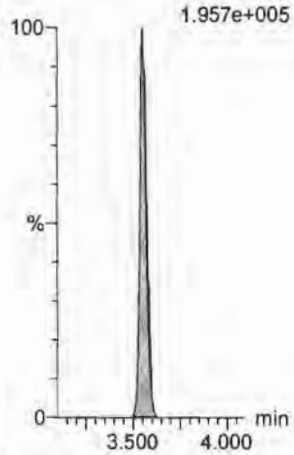
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
7.505e+005



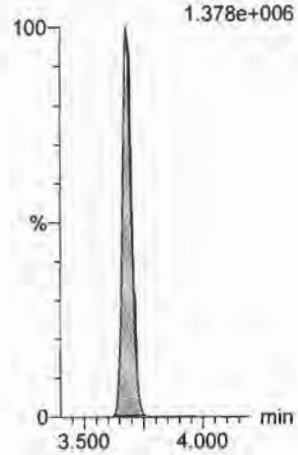
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.759e+005



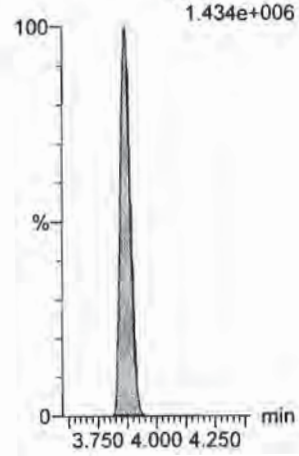
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.957e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.378e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.434e+006

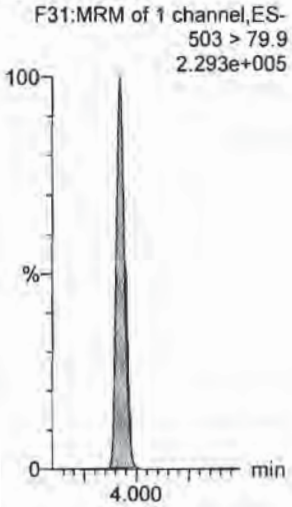


Dataset: U:\Q4.PRO\results\170811M2\170811M2-2.qld

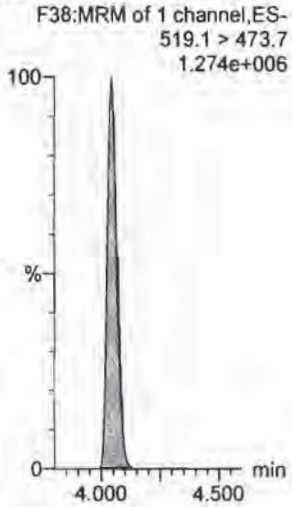
Last Altered: Saturday, August 12, 2017 16:41:42 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:43:19 Pacific Daylight Time

Name: 170811M2_2, Date: 11-Aug-2017, Time: 18:35:42, ID: ST170811M2-1 PFC CS0 17H1106, Description: PFC CS0 17H1106

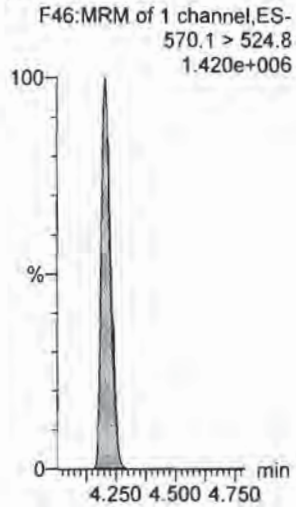
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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

Dataset: U:\Q4.PRO\results\170811M2\170811M2-28.qld

Last Altered: Saturday, August 12, 2017 16:30:34 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:30:41 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 11:46:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_28, Date: 11-Aug-2017, Time: 23:14:14, ID: ST170811M2-2 PFC CS3 17H1105, Description: PFC CS3 17H1105

	#	Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	13967.642	15610.922		1.000	1.68	10.20	101.96
2	2	PFPeA	263.1 > 218.9	22539.412	27810.395		1.000	2.82	10.61	106.15
3	3	PFBS	299 > 79.7	4730.332	3328.019		1.000	3.01	10.27	102.68
4	4	PFHxA	313.2 > 268.9	33955.551	12602.975		1.000	3.23	10.17	101.68
5	5	PFHpA	363 > 318.9	36299.758	36499.418		1.000	3.48	10.54	105.37
6	6	PFHxS	398.9 > 79.6	4119.456	2962.842		1.000	3.55	9.88	98.78
7	7	6:2 FTS	427.1 > 407	8251.935	10117.797		1.000	3.67	10.94	109.43
8	8	PFOA	413 > 368.7	55049.531	65332.320		1.000	3.68	10.59	105.89
9	9	PFHpS	448.9 > 98.8	4444.959	65332.320		1.000	3.74	10.72	107.17
10	10	PFNA	462.9 > 418.8	56469.422	62806.094		1.000	3.87	10.95	109.46
11	11	PFOSA	498.1 > 77.8	6850.161	7885.450		1.000	3.87	10.31	103.13
12	12	PFOS	499 > 79.9	9305.381	10281.214		1.000	3.92	10.64	106.45
13	13	PFDA	513 > 468.8	55183.238	59125.195		1.000	4.04	10.21	102.13
14	14	8:2 FTS	527 > 506.9	6759.579	5882.761		1.000	4.04	10.39	103.89
15	15	N-MeFOSAA	570.1 > 419	15085.541	13420.082		1.000	4.07	9.45	94.55
16	16	N-EtFOSAA	584.2 > 419	12415.940	13316.688		1.000	4.14	9.67	96.72
17	17	PFUnA	562.9 > 518.9	42665.273	60167.199		1.000	4.21	10.87	108.71
18	18	PFDS	598.9 > 98.7	3781.925	60167.199		1.000	4.26	9.50	95.04
19	19	PFDoA	612.9 > 318.8	4448.306	7018.458		1.000	4.38	9.45	94.52
20	20	N-MeFOSA	512.1 > 168.9	10599.475	29829.063		1.000	4.41	59.76	119.52
21	21	PFTrDA	662.9 > 618.9	61208.441	7018.458		1.000	4.55	10.76	107.55
22	22	PFTeDA	712.9 > 668.8	42053.473	47475.164		1.000	4.74	9.67	96.73
23	23	N-EtFOSA	526.1 > 168.9	11913.469	38500.605		1.000	4.90	52.35	104.70
24	24	PFHxDA	812.8 > 768.9	59576.715	20444.906		1.000	5.11	10.05	100.55
25	25	PFODA	912.8 > 868.8	57783.109	20444.906		1.000	5.47	11.04	110.39
26	26	N-MeFOSE	616.1 > 58.9	13902.591	42590.539		1.000	5.29	52.57	105.14
27	27	N-EtFOSE	630.1 > 58.9	15773.499	40149.277		1.000	5.46	55.51	111.02
28	28	13C3-PFBA	216.1 > 171.8	15610.922	17039.010	0.906	1.000	1.67	12.64	101.14
29	29	13C3-PFPeA	266 > 221.8	27810.395	39679.504	0.284	1.000	2.82	12.34	98.75
30	30	13C3-PFBS	302 > 98.8	3328.019	39679.504	0.033	1.000	3.01	12.75	102.04
31	31	13C2-PFHxA	315 > 269.8	12602.975	39679.504	0.304	1.000	3.23	5.23	104.61

70-130

50-150

OM
9/12/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-28.qld

Last Altered: Saturday, August 12, 2017 16:30:34 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:30:41 Pacific Daylight Time

Name: 170811M2_28, Date: 11-Aug-2017, Time: 23:14:14, ID: ST170811M2-2 PFC CS3 17H1105, Description: PFC CS3 17H1105

	#	Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	36499.418	39679.504	0.384	1.000	3.48	11.98	95.80
33	33	18O2-PFHxS	403 > 102.6	2962.842	7668.526	0.417	1.000	3.55	11.58	92.63
34	34	13C2-6:2 FTS	429.1 > 408.9	10117.797	55810.352	0.202	1.000	3.67	11.23	89.87
35	35	13C2-PFOA	414.9 > 369.7	65332.320	55810.352	1.132	1.000	3.68	12.92	103.39
36	36	13C5-PFNA	468.2 > 422.9	62806.094	67192.922	0.946	1.000	3.87	12.35	98.80
37	37	13C8-PFOSA	506.1 > 77.7	7885.450	58560.172	0.119	1.000	3.87	14.09	112.76
38	38	13C8-PFOS	507 > 79.9	10281.214	10376.990	1.040	1.000	3.92	11.91	95.28
39	39	13C2-PFDA	515.1 > 469.9	59125.195	57907.773	0.971	1.000	4.04	13.15	105.17
40	40	13C2-8:2 FTS	529.1 > 508.7	5882.761	57907.773	0.140	1.000	4.04	9.05	72.42
41	41	d3-N-MeFOSAA	573.3 > 419	13420.082	58560.172	0.018	1.000	4.07	161.04	99.10
42	42	d5-N-EtFOSAA	589.3 > 419	13316.688	58560.172	0.018	1.000	4.14	155.92	95.95
43	43	13C2-PFUnA	565 > 519.8	60167.199	58560.172	1.085	1.000	4.21	11.84	94.68
44	44	13C2-PFDoA	615 > 569.7	7018.458	58560.172	0.123	1.000	4.38	12.17	97.33
45	45	d3-N-MeFOSA	515.2 > 168.9	29829.063	58560.172	0.043	1.000	4.44	147.16	98.11
46	46	13C2-PFTeDA	714.8 > 669.6	47475.164	58560.172	0.798	1.000	4.74	12.70	101.62
47	47	d5-N-ETFOSA	531.1 > 168.9	38500.605	58560.172	0.056	1.000	4.94	147.60	98.40
48	48	13C2-PFHxDA	815 > 769.7	20444.906	58560.172	0.926	1.000	5.11	4.71	94.21
49	49	d7-N-MeFOSE	623.1 > 58.9	42590.539	58560.172	0.059	1.000	5.28	152.93	101.96
50	50	d9-N-EtFOSE	639.2 > 58.8	40149.277	58560.172	0.059	1.000	5.44	144.08	96.05
51	51	13C4-PFBA	217 > 171.8	17039.010	17039.010	1.000	1.000	1.67	12.50	100.00
52	52	13C5-PFHxA	318 > 272.9	39679.504	39679.504	1.000	1.000	3.23	5.00	100.00
53	53	13C3-PFHxS	401.9 > 79.9	7668.526	7668.526	1.000	1.000	3.55	12.50	100.00
54	54	13C8-PFOA	421.3 > 376	55810.352	55810.352	1.000	1.000	3.68	12.50	100.00
55	55	13C9-PFNA	472.2 > 426.9	67192.922	67192.922	1.000	1.000	3.86	12.50	100.00
56	56	13C4-PFOS	503 > 79.9	10376.990	10376.990	1.000	1.000	3.92	12.50	100.00
57	57	13C6-PFDA	519.1 > 473.7	57907.773	57907.773	1.000	1.000	4.04	12.50	100.00
58	58	13C7-PFUnA	570.1 > 524.8	58560.172	58560.172	1.000	1.000	4.21	12.50	100.00

50-150

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
1	170811M2_1	---	IPA	IPA	1.0000	1:48	Blank
2	170811M2_2	X	ST170811M2-1 PFC CS0 17H1106	PFC CS0 17H1106	1.0000	1:1	Standard
3	170811M2_3	---	IPA	IPA	1.0000	1:48	Blank
4	170811M2_4	X	B7H0073-BS1 OPR 0.125	OPR	0.1250	1:3	Analyte
5	170811M2_5	X	B7H0074-BS1 OPR 0.125	OPR	0.1250	1:4	Analyte
6	170811M2_6	---	IPA	IPA	1.0000	1:48	Blank
7	170811M2_7	X	B7H0073-BLK1 Method Blank 0.125	Method Blank	0.1250	1:5	Analyte
8	170811M2_8	X	B7H0074-BLK1 Method Blank 0.125	Method Blank	0.1250	1:6	Analyte
9	170811M2_9	X	B7H0073-MS1 Matrix Spike 0.0005	Matrix Spike	0.0005	1:7	Analyte
10	170811M2_10	---	IPA	IPA	1.0000	1:48	Blank
11	170811M2_11	X	B7H0073-MSD1 Matrix Spike Dup 0.00139	Matrix Spike Dup	0.0014	1:8	Analyte
12	170811M2_12	---	IPA	IPA	1.0000	1:48	Blank
13	170811M2_13	X	B7H0074-MS1 Matrix Spike 0.125	Matrix Spike	0.1250	1:9	Analyte
14	170811M2_14	X	B7H0074-MSD1 Matrix Spike Dup 0.125	Matrix Spike Dup	0.1250	1:10	Analyte
15	170811M2_15	x	1700925-04RE2 I001MW52S-170724 0.00122	I001MW52S-170724	0.0012	1:11	Analyte
16	170811M2_16	---	IPA	IPA	1.0000	1:48	Blank
17	170811M2_17	x	1700925-05RE2 I001MW52X-170724 0.00133	I001MW52X-170724	0.0013	1:12	Analyte
18	170811M2_18	---	IPA	IPA	1.0000	1:48	Blank
19	170811M2_19	x	1700922-01RE1 MH-L103-20170721 0.10565	MH-L103-20170721	0.1056	1:14	Analyte
20	170811M2_20	x	1700922-02RE1 MH-N104-20170721 0.11025	MH-N104-20170721	0.1103	1:15	Analyte
21	170811M2_21	x	1700922-03RE1 Upstream-Culvert-109-20170721 0.1185	Upstream-Culvert-109-20170721	0.1185	1:16	Analyte
22	170811M2_22	x	1700922-04RE1 FRB03-20170721 0.11017	FRB03-20170721	0.1102	1:17	Analyte
23	170811M2_23	x	1700922-05RE1 RB08-20170720 0.11893	RB08-20170720	0.1189	1:18	Analyte
24	170811M2_24	---	1700922-06RE1 RB09-20170721 0.11676	RB09-20170721	0.1168	1:19	Analyte
25	170811M2_25	---	1700925-01RE1 I001BC43S-170724 0.12112	I001BC43S-170724	0.1211	1:20	Analyte
26	170811M2_26	---	1700925-02RE1 SB01-170724 0.12178	SB01-170724	0.1218	1:21	Analyte
27	170811M2_27	---	IPA	IPA	1.0000	1:48	Blank
28	170811M2_28	---	ST170811M2-2 PFC CS3 17H1105	PFC CS3 17H1105	1.0000	1:2	Standard
29	170811M2_29	---	IPA	IPA	1.0000	1:48	Blank
30	170811M2_30	---	1700925-03RE1 I001BC50S-170724 0.12135	I001BC50S-170724	0.1214	1:22	Analyte
31	170811M2_31	---	1700925-06RE1 EB01-170724 0.1185	EB01-170724	0.1185	1:23	Analyte
32	170811M2_32	---	1700929-01RE1 MATP01001 0.11834	MATP01001	0.1183	1:24	Analyte
33	170811M2_33	---	1700929-02RE1 MATP01002 0.1157	MATP01002	0.1157	1:25	Analyte
34	170811M2_34	---	1700938-01RE1 NORP08102 0.11844	NORP08102	0.1184	1:26	Analyte
35	170811M2_35	---	1700938-02RE1 NORP08103 0.12014	NORP08103	0.1201	1:27	Analyte
36	170811M2_36	---	1700938-03RE1 NORP08104 0.11247	NORP08104	0.1125	1:28	Analyte
37	170811M2_37	---	IPA	IPA	1.0000	1:48	Blank
38	170811M2_38	---	B7H0073-MS1@20X Matrix Spike 0.0005	Matrix Spike	0.0005	1:29	Analyte
39	170811M2_39	---	IPA	IPA	1.0000	1:48	Blank
40	170811M2_40	---	B7H0073-MSD1@20X Matrix Spike Dup 0.00139	Matrix Spike Dup	0.0014	1:30	Analyte

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
41	170811M2_41	---	IPA	IPA	1.0000	1:48	Blank
42	170811M2_42	---	1700925-04RE2@20X I001MW52S-170724 0.00122	I001MW52S-170724	0.0012	1:31	Analyte
43	170811M2_43	---	IPA	IPA	1.0000	1:48	Blank
44	170811M2_44	---	1700925-05RE2@20X I001MW52X-170724 0.00133	I001MW52X-170724	0.0013	1:32	Analyte
45	170811M2_45	---	IPA	IPA	1.0000	1:48	Blank
46	170811M2_46	---	1700958-15RE1@10X MATP05081 1.02	MATP05081	0.9982	2:26	Analyte
47	170811M2_47	---	IPA	IPA	1.0000	1:48	Blank
48	170811M2_48	---	ST170811M2-3 PFC CS3 17H1105	PFC CS3 17H1105	1.0000	1:2	Standard
49	170811M2_49	---	IPA	IPA	1.0000	1:48	Blank
50	170811M2_50	---	1701007-03 RI17-EB3-080317 0.26497	RI17-EB3-080317	0.2650	1:33	Analyte
51	170811M2_51	---	1701007-04 RI17-EB8-080317 0.26753	RI17-EB8-080317	0.2675	1:34	Analyte
52	170811M2_52	---	IPA	IPA	1.0000	1:48	Blank
53	170811M2_53	---	1700958-06RE1 MATP03050 1.22	MATP03050	1.0219	1:35	Analyte
54	170811M2_54	---	IPA	IPA	1.0000	1:48	Blank
55	170811M2_55	---	1700958-09RE1 MATP04060 1.27	MATP04060	1.0295	1:36	Analyte
56	170811M2_56	---	1700958-10RE1 MATP04061 1.27	MATP04061	1.0096	1:37	Analyte
57	170811M2_57	---	1700958-13RE1 MATP05079 1.1	MATP05079	1.0125	1:38	Analyte
58	170811M2_58	---	1700958-15RE1 MATP05081 1.02	MATP05081	0.9982	1:39	Analyte
59	170811M2_59	---	IPA	IPA	1.0000	1:48	Blank
60	170811M2_60	---	1700961-02 MATP05098 1	MATP05098	1.0000	1:40	Analyte
61	170811M2_61	---	1700961-03 MATP05099 1	MATP05099	1.0000	1:41	Analyte
62	170811M2_62	---	1700961-04 MATP05100 1	MATP05100	1.0000	1:42	Analyte
63	170811M2_63	---	IPA	IPA	1.0000	1:48	Blank
64	170811M2_64	---	ST170811M2-4 PFC CS0 17H1106	PFC CS0 17H1106	1.0000	1:1	Standard
65	170811M2_65	---	IPA	IPA	1.0000	1:48	Blank
66	170811M2_66	---	1700961-05 MATP05102 1	MATP05102	1.0000	1:43	Analyte
67	170811M2_67	---	1700961-06 MATP05103 1	MATP05103	1.0000	1:44	Analyte
68	170811M2_68	---	1700961-07 MATP04055 1	MATP04055	1.0000	1:45	Analyte
69	170811M2_69	---	1700961-08 MATP03041 1	MATP03041	1.0000	1:46	Analyte
70	170811M2_70	---	1700961-09 MATP04063 1	MATP04063	1.0000	1:47	Analyte
71	170811M2_71	---	1700961-11 MATP04065 1	MATP04065	1.0000	2:1	Analyte
72	170811M2_72	---	1700961-12 MATP04066 1	MATP04066	1.0000	2:2	Analyte
73	170811M2_73	X	1700960-03 MATP05084 0.125	MATP05084	0.1250	2:3	Analyte
74	170811M2_74	X	1700960-05 MATP05086 1	MATP05086	1.0000	2:4	Analyte
75	170811M2_75	---	1700960-10 MATP05091 1	MATP05091	1.0000	2:5	Analyte
76	170811M2_76	---	IPA ~ OM 8/12/17	IPA	1.0000	1:48	Blank
77	170811M2_77	X	ST170811M2-~~3~~ PFC CS3 17H1105	PFC CS3 17H1105	1.0000	1:2	Standard
78	170811M2_78	---	IPA	IPA	1.0000	1:48	Blank
79	170811M2_79	---	1700960-11 MATP05092 1	MATP05092	1.0000	2:6	Analyte
80	170811M2_80	---	IPA	IPA	1.0000	1:48	Blank

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
81	170811M2_81	X	1700960-04@5X MATP05085 1	MATP05085	1.0000	2:7	Analyte
82	170811M2_82	---	IPA	IPA	1.0000	1:48	Blank
83	170811M2_83	X	1700958-04 MATP03048 1	MATP03048	1.0000	2:8	Analyte
84	170811M2_84	---	IPA	IPA	1.0000	1:48	Blank
85	170811M2_85	X	1700958-04@20X MATP03048 1	MATP03048	1.0000	2:9	Analyte
86	170811M2_86	---	IPA	IPA	1.0000	1:48	Blank
87	170811M2_87	X	1700958-05@10X MATP03049 1	MATP03049	1.0000	2:10	Analyte
88	170811M2_88	---	IPA	IPA	1.0000	1:48	Blank
89	170811M2_89	X	1700958-05 MATP03049 1	MATP03049	1.0000	2:11	Analyte
90	170811M2_90	---	IPA	IPA	1.0000	1:48	Blank
91	170811M2_91	X	1700958-06 MATP03050 1	MATP03050	1.0000	2:12	Analyte
92	170811M2_92	---	IPA	IPA	1.0000	1:48	Blank
93	170811M2_93	X	1700958-06@5X MATP03050 1	MATP03050	1.0000	2:13	Analyte
94	170811M2_94	---	IPA	IPA	1.0000	1:48	Blank
95	170811M2_95	X	1700958-07 MATP03051 1	MATP03051	1.0000	2:14	Analyte
96	170811M2_96	---	1700958-09 MATP04060 1	MATP04060	1.0000	2:15	Analyte
97	170811M2_97	---	IPA	IPA	1.0000	1:48	Blank
98	170811M2_98	---	ST170811M2-6 PFC CS3 17H1105	PFC CS3 17H1105	1.0000	1:2	Standard
99	170811M2_99	---	IPA	IPA	1.0000	1:48	Blank
100	170811M2_100	---	1700958-13 MATP05079 1	MATP05079	1.0000	2:16	Analyte
101	170811M2_101	X	1700958-14 MATP05080 0.125	MATP05080	0.1250	2:17	Analyte
102	170811M2_102	---	1700958-15@10X MATP05081 1	MATP05081	1.0000	2:18	Analyte
103	170811M2_103	---	IPA	IPA	1.0000	1:48	Blank
104	170811M2_104	---	1700958-15 MATP05081 1	MATP05081	1.0000	2:19	Analyte
105	170811M2_105	---	IPA	IPA	1.0000	1:48	Blank
106	170811M2_106	X	1700959-04@5X MATP10119a 0.125	MATP10119a	0.1250	2:20	Analyte
107	170811M2_107	---	IPA	IPA	1.0000	1:48	Blank
108	170811M2_108	X	1700959-05@10X MATPXX132a 0.125	MATPXX132a	0.1250	2:21	Analyte
109	170811M2_109	---	IPA	IPA	1.0000	1:48	Blank
110	170811M2_110	X	1700959-06 MATPXX130a 0.125	MATPXX130a	0.1250	2:22	Analyte
111	170811M2_111	X	1700959-07@20X MATPXX126a 0.125	MATPXX126a	0.1250	2:23	Analyte
112	170811M2_112	---	IPA	IPA	1.0000	1:48	Blank
113	170811M2_113	---	1700961-10 MATP04064 0.125	MATP04064	0.1250	2:24	Analyte
114	170811M2_114	---	1700966-03 MW-13 0.125	MW-13	0.1250	2:25	Analyte
115	170811M2_115	---	IPA	IPA	1.0000	1:48	Blank
116	170811M2_116	---	ST170811M2-7 PFC CS3 17H1105	PFC CS3 17H1105	1.0000	1:2	Standard
117	170811M2_117	---	IPA	IPA	1.0000	1:48	Blank
118	170811M2_118	---	170811_BLUE	170811_BLUE	1.0000	2:28	Blank
119	170811M2_119	---	IPA	IPA	1.0000	1:48	Blank

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170811M2\170811M2-28.qld

Last Altered: Saturday, August 12, 2017 16:30:34 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:30:50 Pacific Daylight Time

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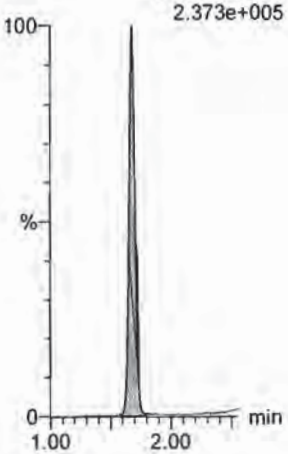
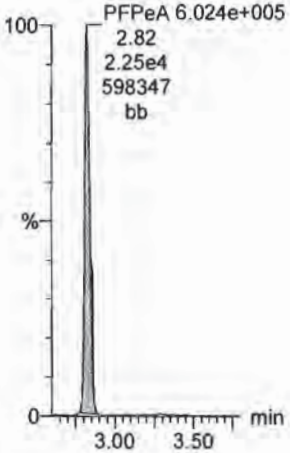
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_28, Date: 11-Aug-2017, Time: 23:14:14, ID: ST170811M2-2 PFC CS3 17H1105, Description: PFC CS3 17H1105

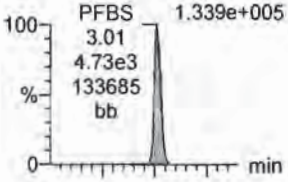
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
2.373e+005



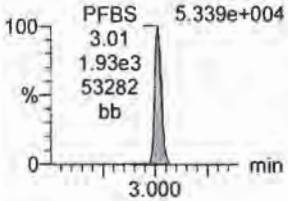
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
PFPeA 6.024e+005
2.82
2.25e4
598347
bb



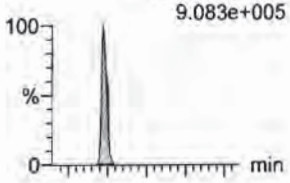
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
1.339e+005
PFBS
3.01
4.73e3
133685
bb



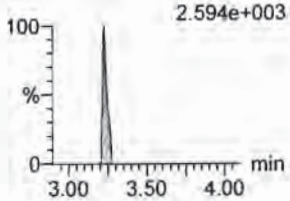
F6:MRM of 2 channels,ES-
299 > 99
5.339e+004
PFBS
3.01
1.93e3
53282
bb



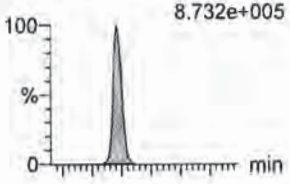
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
9.083e+005



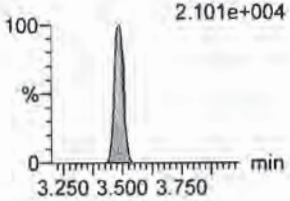
F8:MRM of 2 channels,ES-
313.2 > 119
2.594e+003



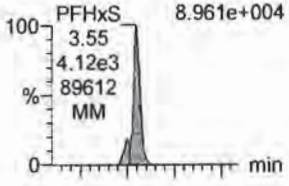
PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
8.732e+005



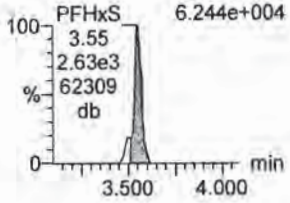
F14:MRM of 2 channels,ES-
363 > 169
2.101e+004



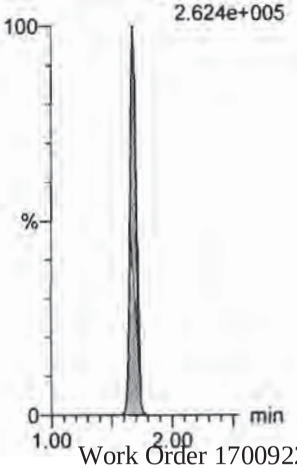
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
8.961e+004
PFHxS
3.55
4.12e3
89612
MM



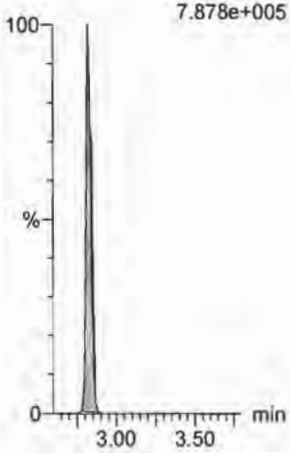
F16:MRM of 2 channels,ES-
398.9 > 99
6.244e+004
PFHxS
3.55
2.63e3
62309
db



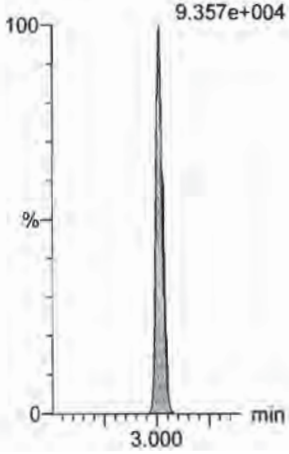
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
2.624e+005



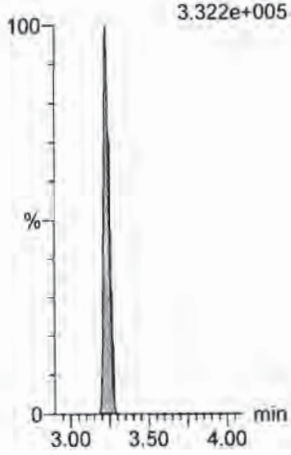
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
7.878e+005



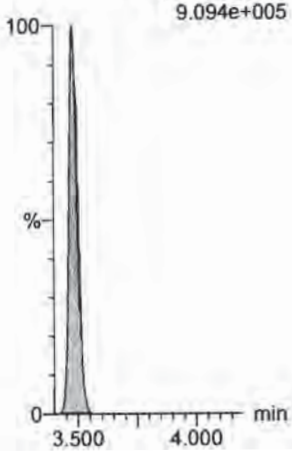
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
9.357e+004



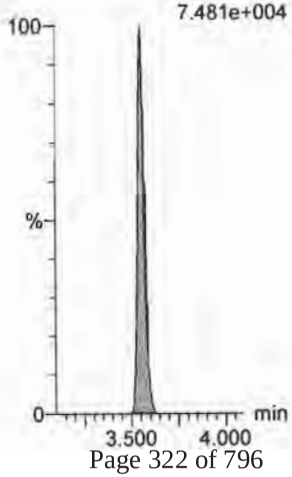
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
3.322e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
9.094e+005



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
7.481e+004



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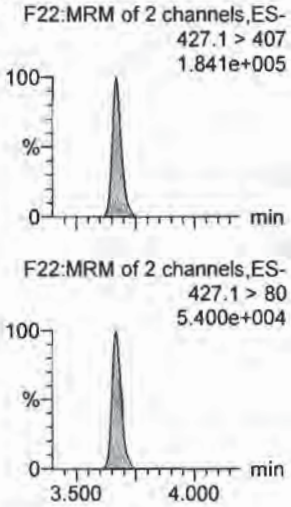
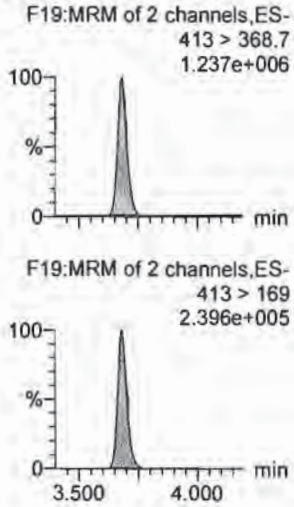
Printed: Saturday, August 12, 2017 16:30:50 Pacific Daylight Time

Name: 170811M2_28, Date: 11-Aug-2017, Time: 23:14:14, ID: ST170811M2-2 PFC CS3 17H1105, Description: PFC CS3 17H1105

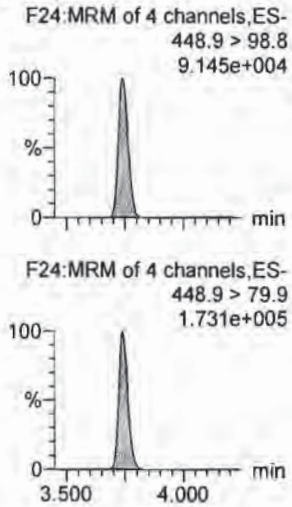
6:2 FTS



PFOA



PFHpS



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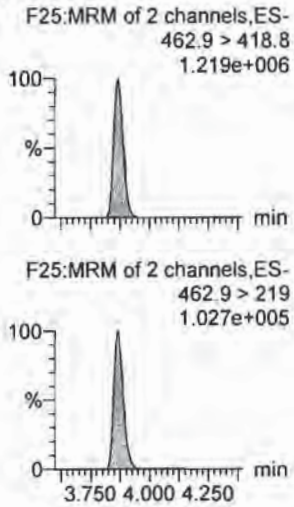
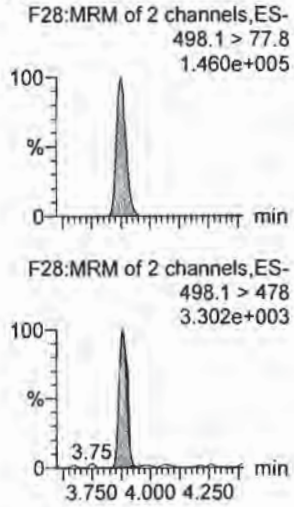
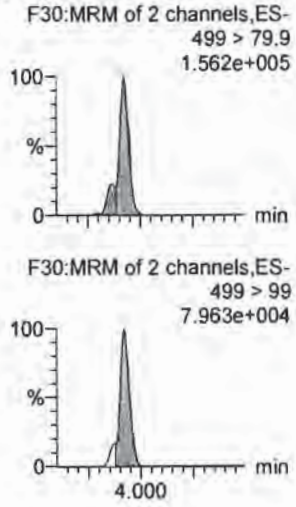


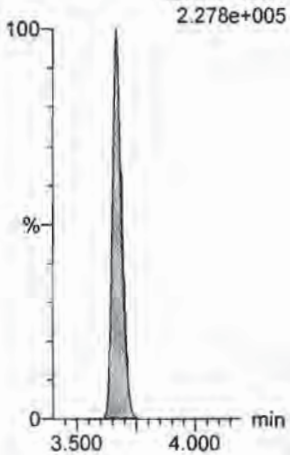
PFOSA



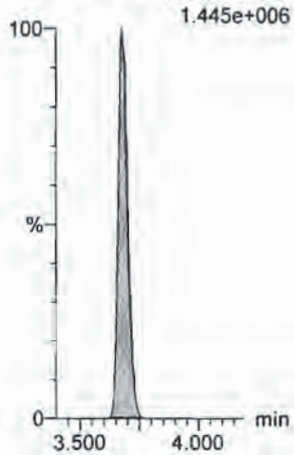
PFOS



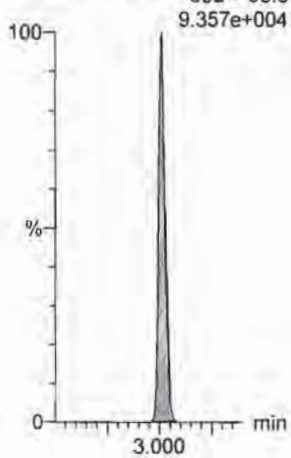
13C2-6:2 FTS



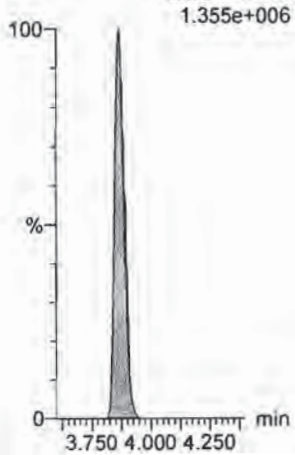
13C2-PFOA



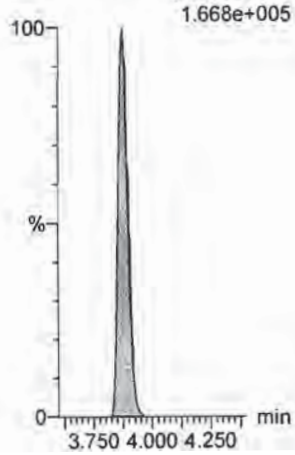
13C3-PFBS



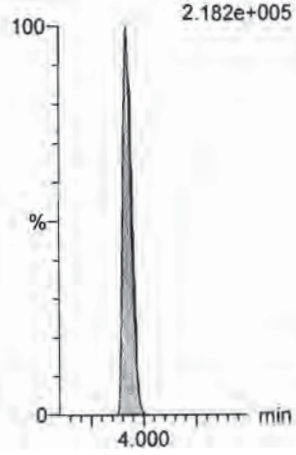
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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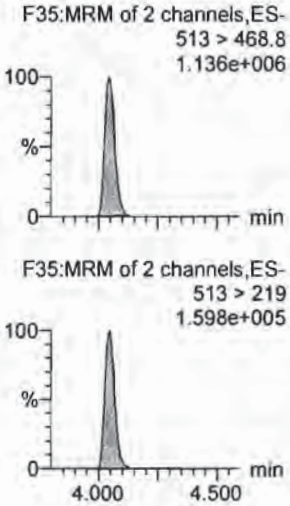
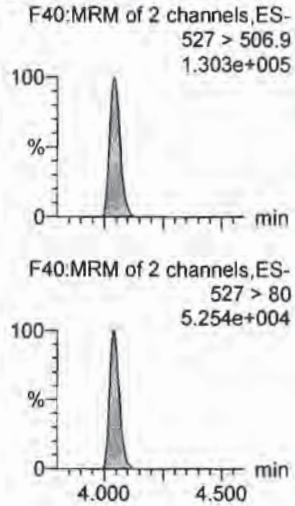
Printed: Saturday, August 12, 2017 16:30:50 Pacific Daylight Time

Name: 170811M2_28, Date: 11-Aug-2017, Time: 23:14:14, ID: ST170811M2-2 PFC CS3 17H1105, Description: PFC CS3 17H1105

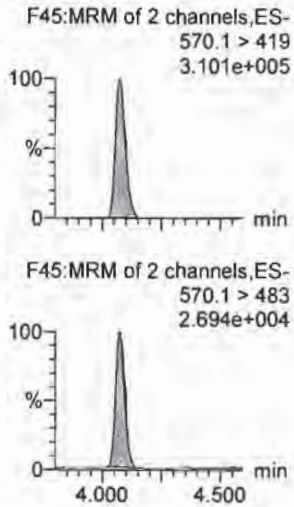
PFDA



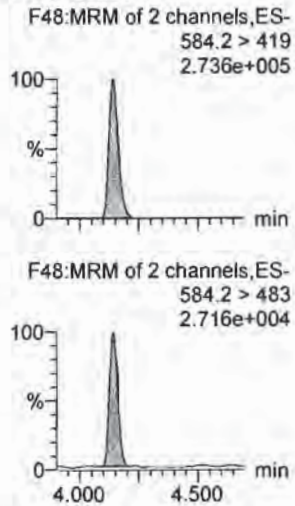
8:2 FTS



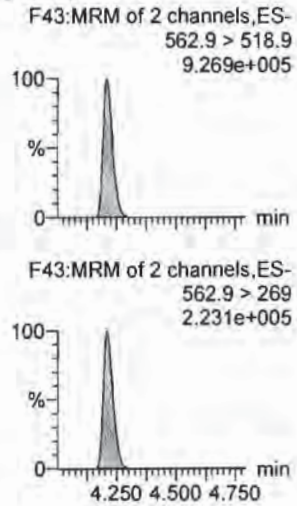
N-MeFOSAA



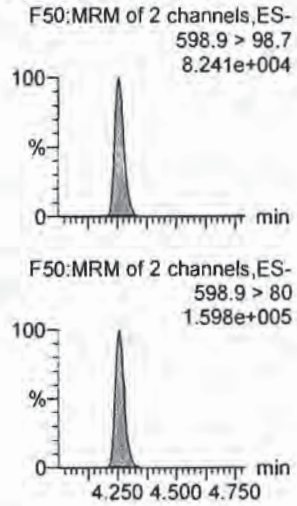
N-EtFOSAA



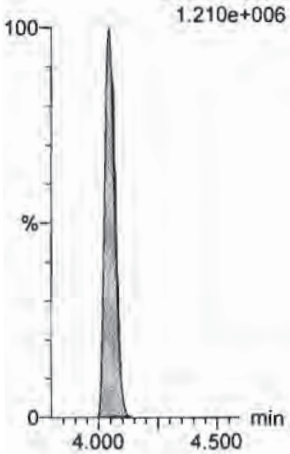
PFUnA



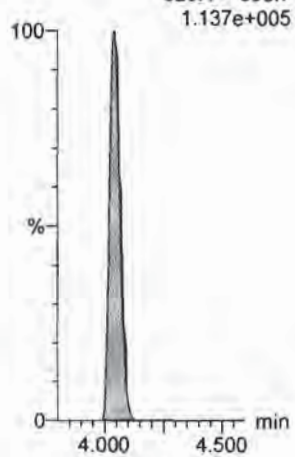
PFDS



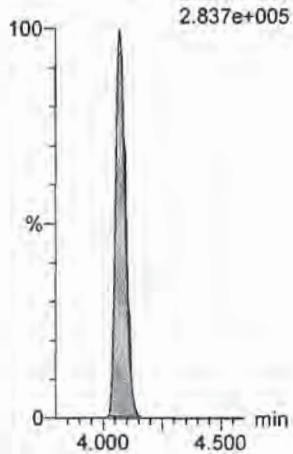
13C2-PFDA



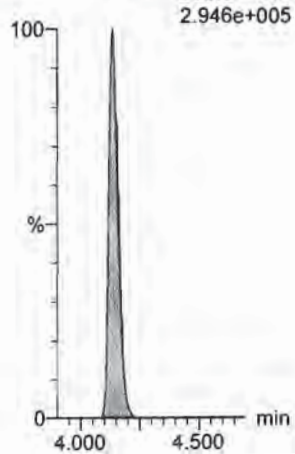
13C2-8:2 FTS



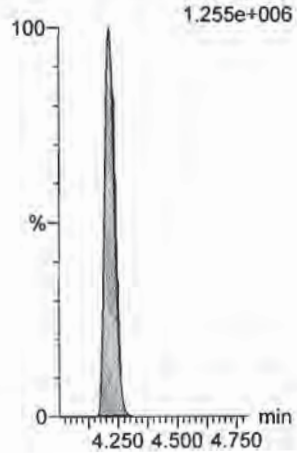
d3-N-MeFOSAA



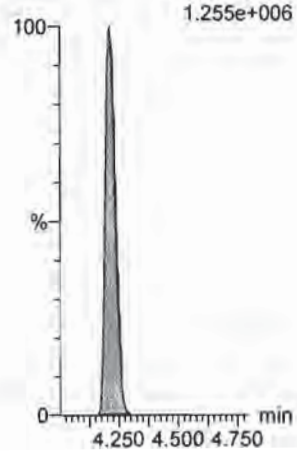
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA

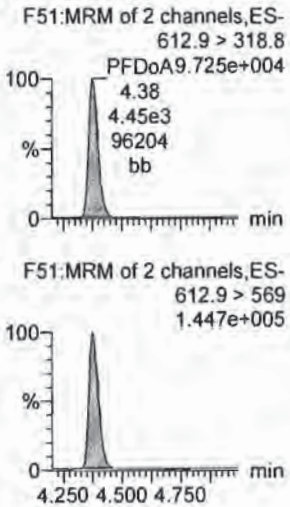


Dataset: U:\Q4.PRO\results\170811M2\170811M2-28.qld

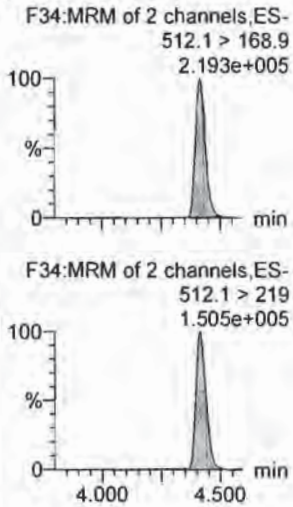
Last Altered: Saturday, August 12, 2017 16:30:34 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:30:50 Pacific Daylight Time

Name: 170811M2_28, Date: 11-Aug-2017, Time: 23:14:14, ID: ST170811M2-2 PFC CS3 17H1105, Description: PFC CS3 17H1105

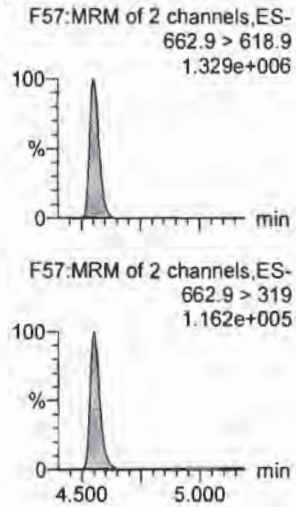
PFDoA



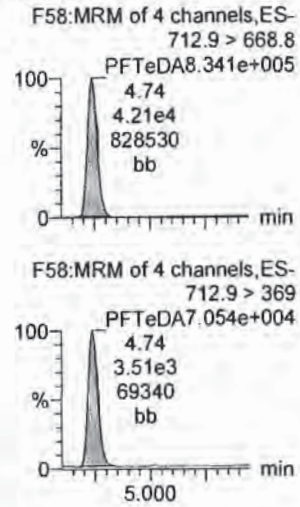
N-MeFOSA



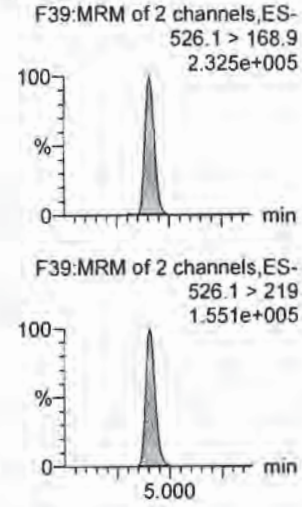
PFTrDA



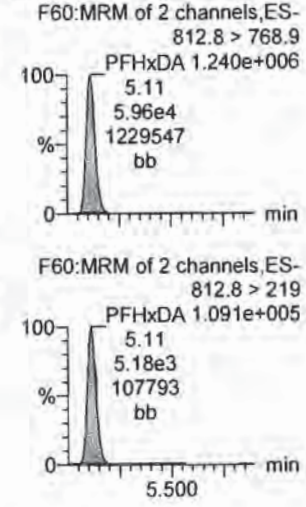
PFTeDA



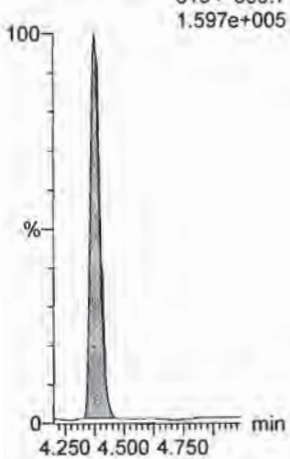
N-EtFOSA



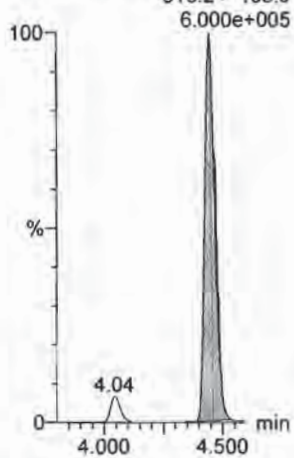
PFHxDA



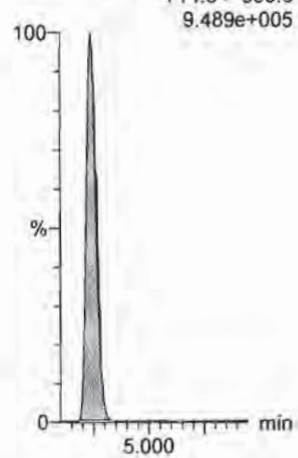
13C2-PFDoA



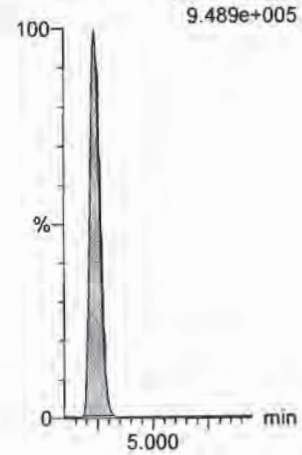
d3-N-MeFOSA



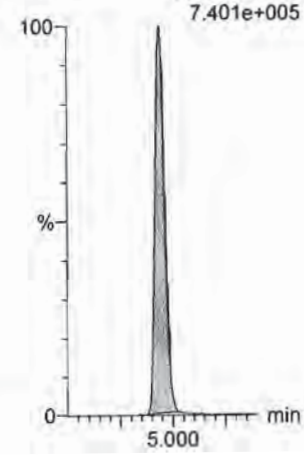
13C2-PFTeDA



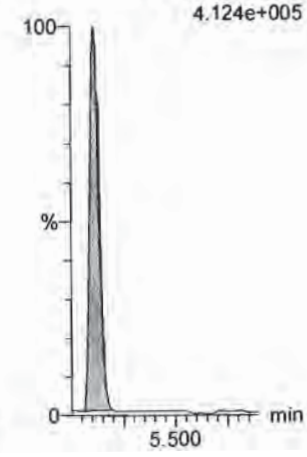
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



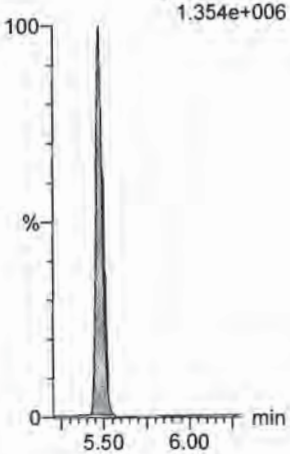
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170811M2\170811M2-28.qld

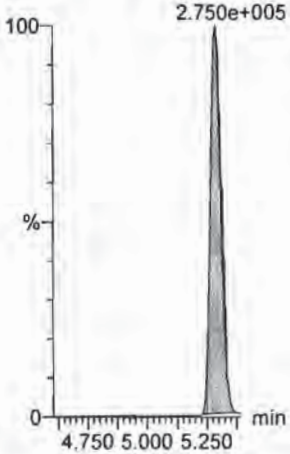
Last Altered: Saturday, August 12, 2017 16:30:34 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:30:50 Pacific Daylight Time

Name: 170811M2_28, Date: 11-Aug-2017, Time: 23:14:14, ID: ST170811M2-2 PFC CS3 17H1105, Description: PFC CS3 17H1105

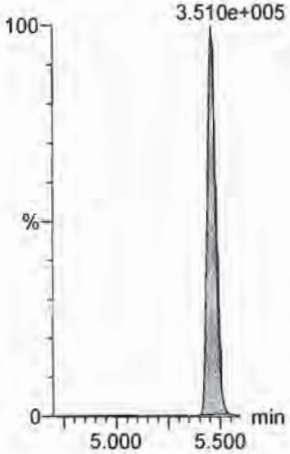
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.354e+006



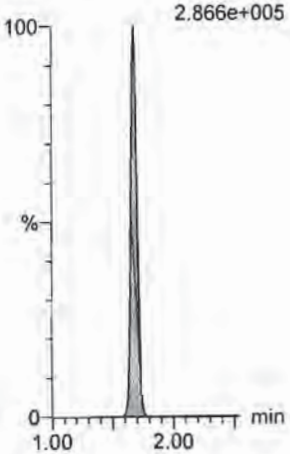
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.750e+005



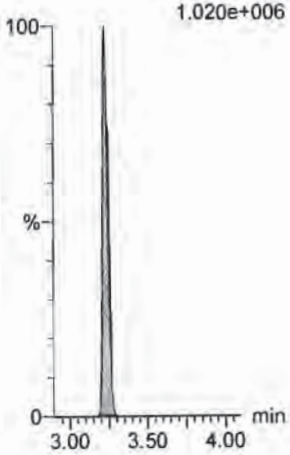
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
3.510e+005



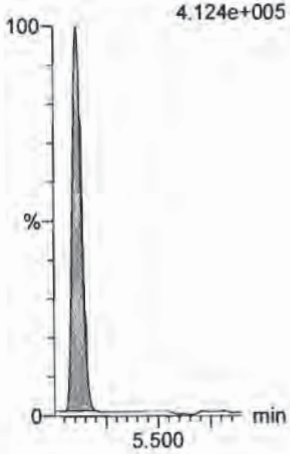
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.866e+005



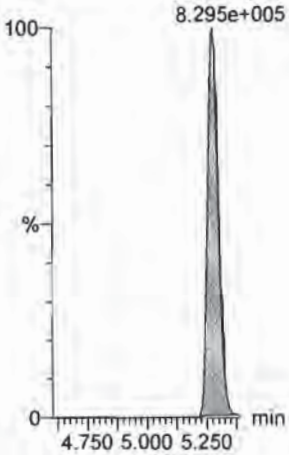
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.020e+006



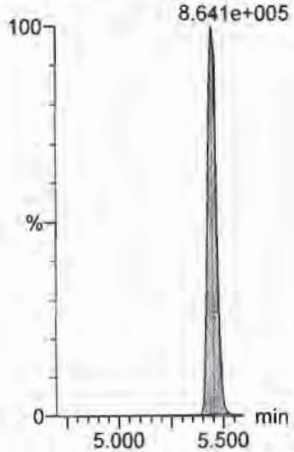
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.124e+005



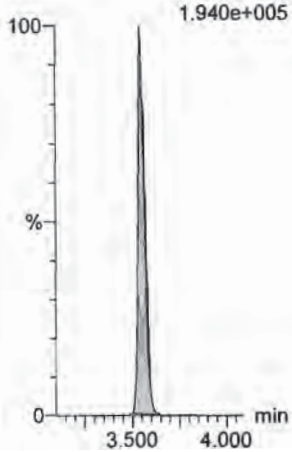
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
8.295e+005



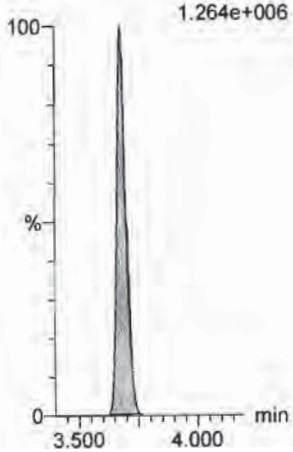
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
8.641e+005



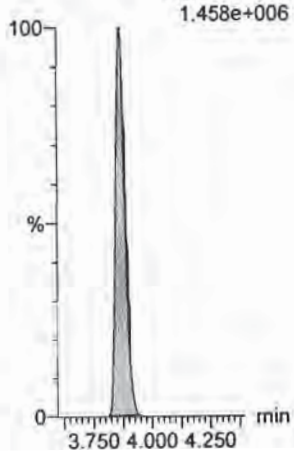
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.940e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.264e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.458e+006

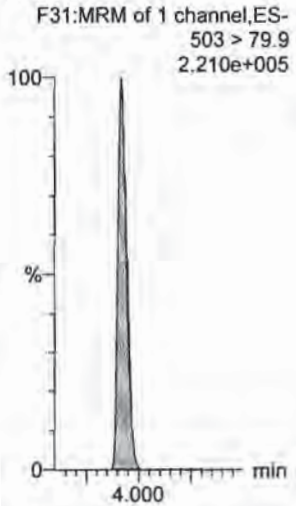


Dataset: U:\Q4.PRO\results\170811M2\170811M2-28.qld

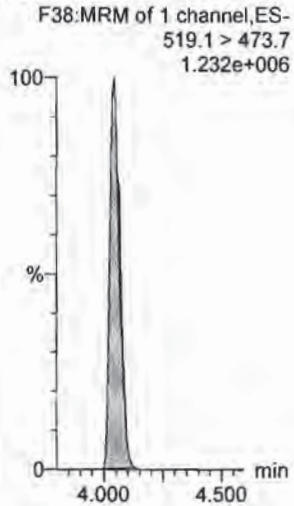
Last Altered: Saturday, August 12, 2017 16:30:34 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:30:50 Pacific Daylight Time

Name: 170811M2_28, Date: 11-Aug-2017, Time: 23:14:14, ID: ST170811M2-2 PFC CS3 17H1105, Description: PFC CS3 17H1105

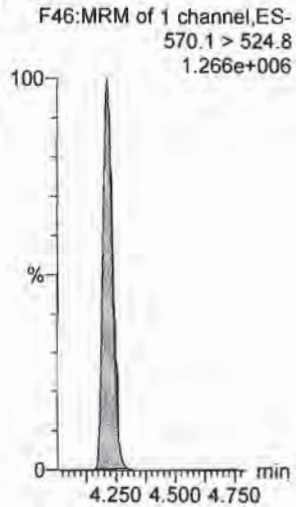
13C4-PFOS



13C6-PFDA



13C7-PFUnA



INITIAL CALIBRATION (ICAL)

INCLUDING ASSOCIATED

INITIAL CALIBRATION VERIFICATION (ICV) AND INSTRUMENT BLANK (IB)

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

KCL 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

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: 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

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: 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

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: 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

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: 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

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: 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

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: 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

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-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

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: 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

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: 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

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: 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

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-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

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: 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

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: 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

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: 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

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: 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

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: 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

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: 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

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: 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

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: 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

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: 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

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: 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

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: 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

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: 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
Printed: Tuesday, August 01, 2017 10:16:34 Pacific Daylight Time

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

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: 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

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: 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

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

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

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
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

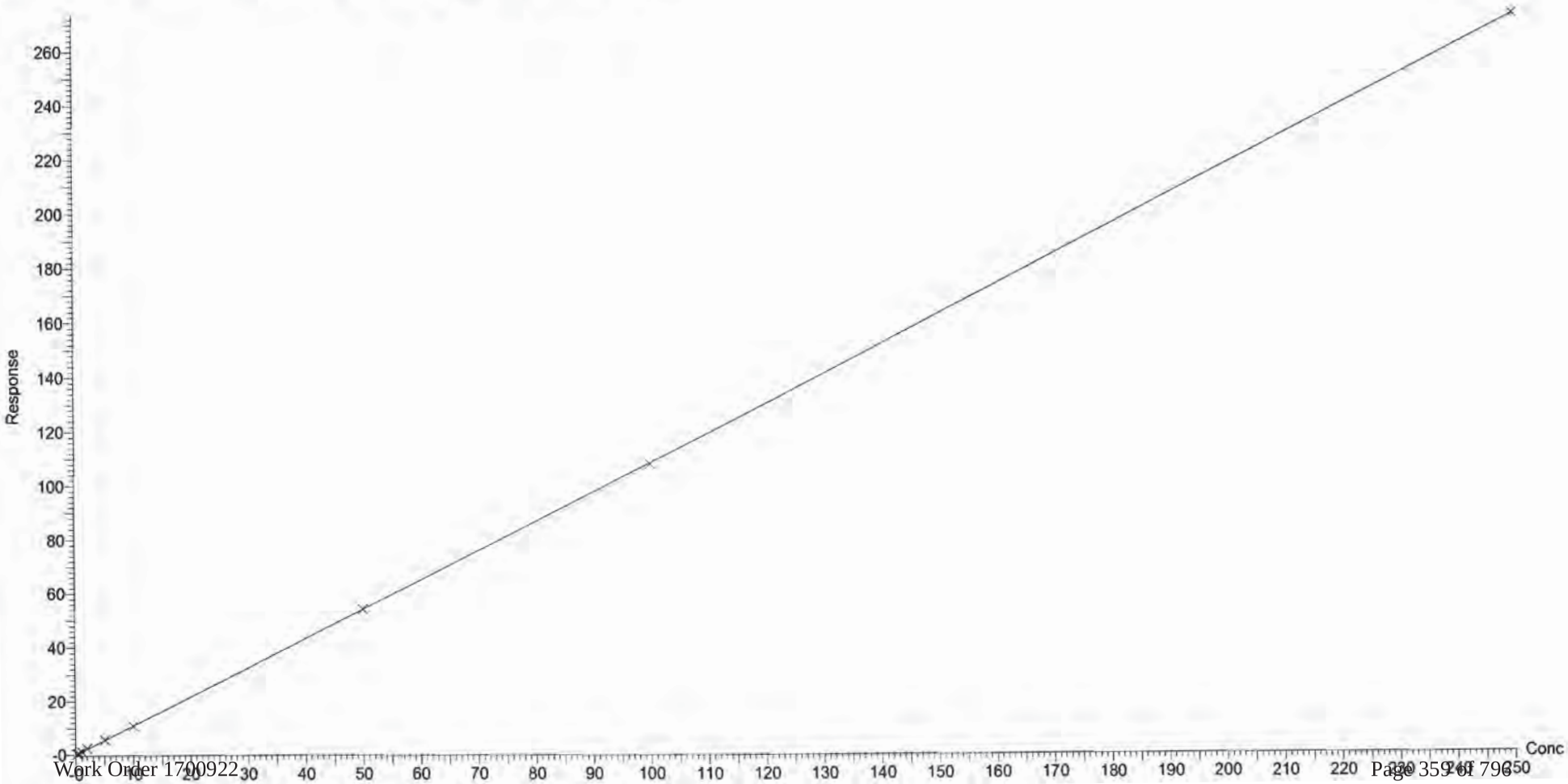
Quantify Calibration Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory Q1

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

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

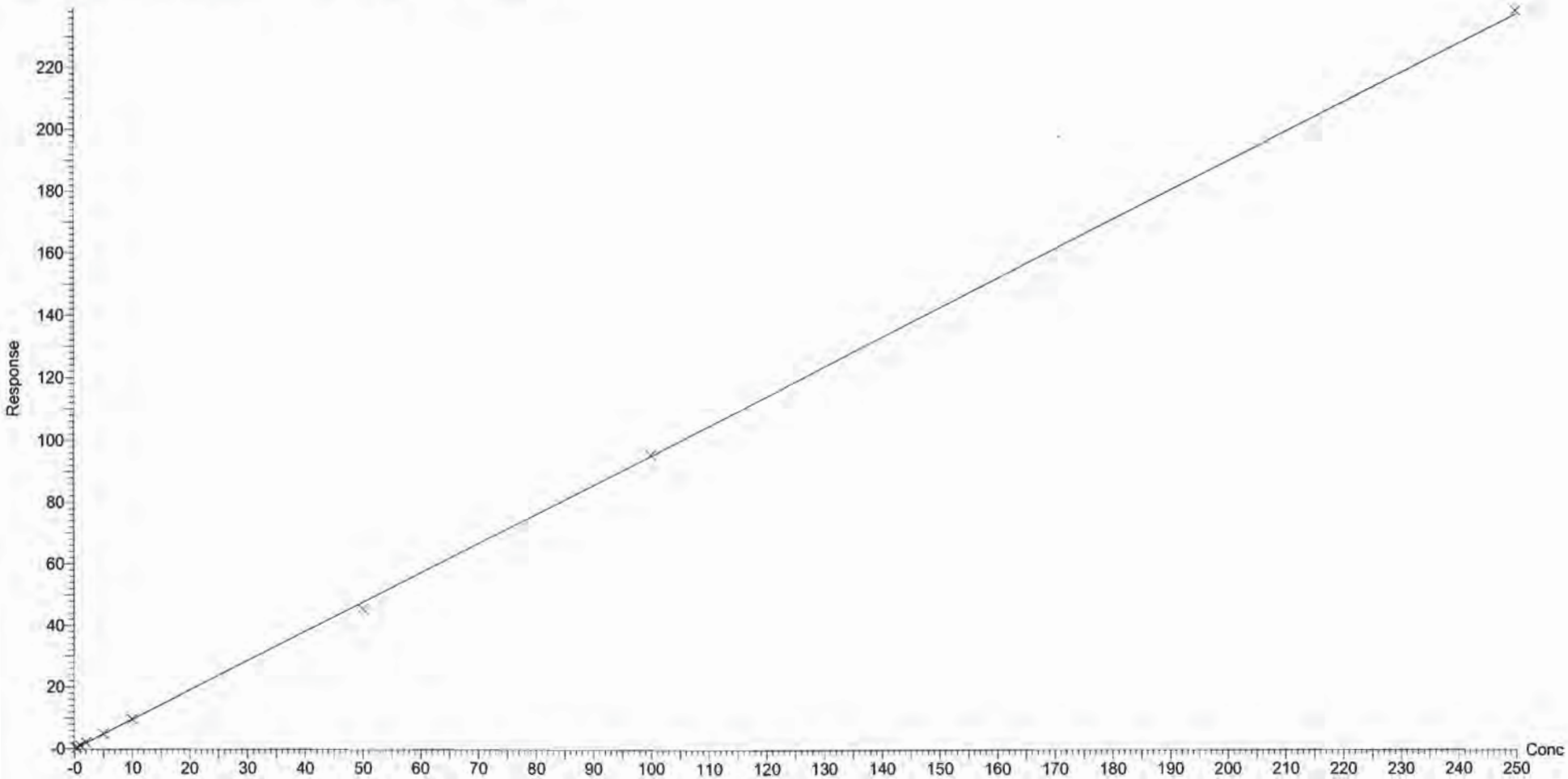
Compound name: PFBA
Coefficient of Determination: R^2 = 0.999898
Calibration curve: 6.26653e-005 * x^2 + 1.07835 * x + 0.0734459
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

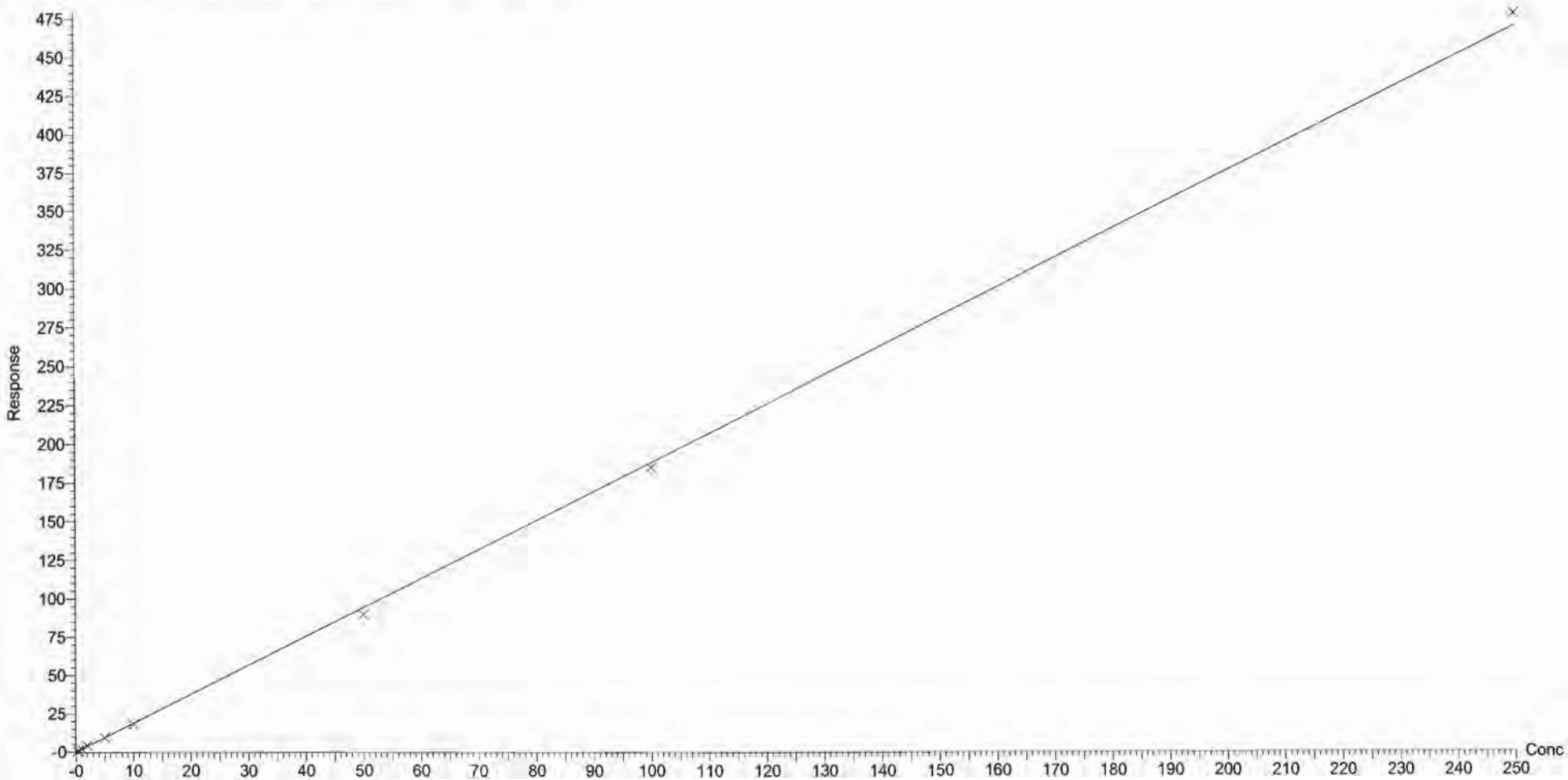
Compound name: PFPeA
Correlation coefficient: r = 0.999842, r^2 = 0.999685
Calibration curve: 0.95207 * x + 0.034134
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

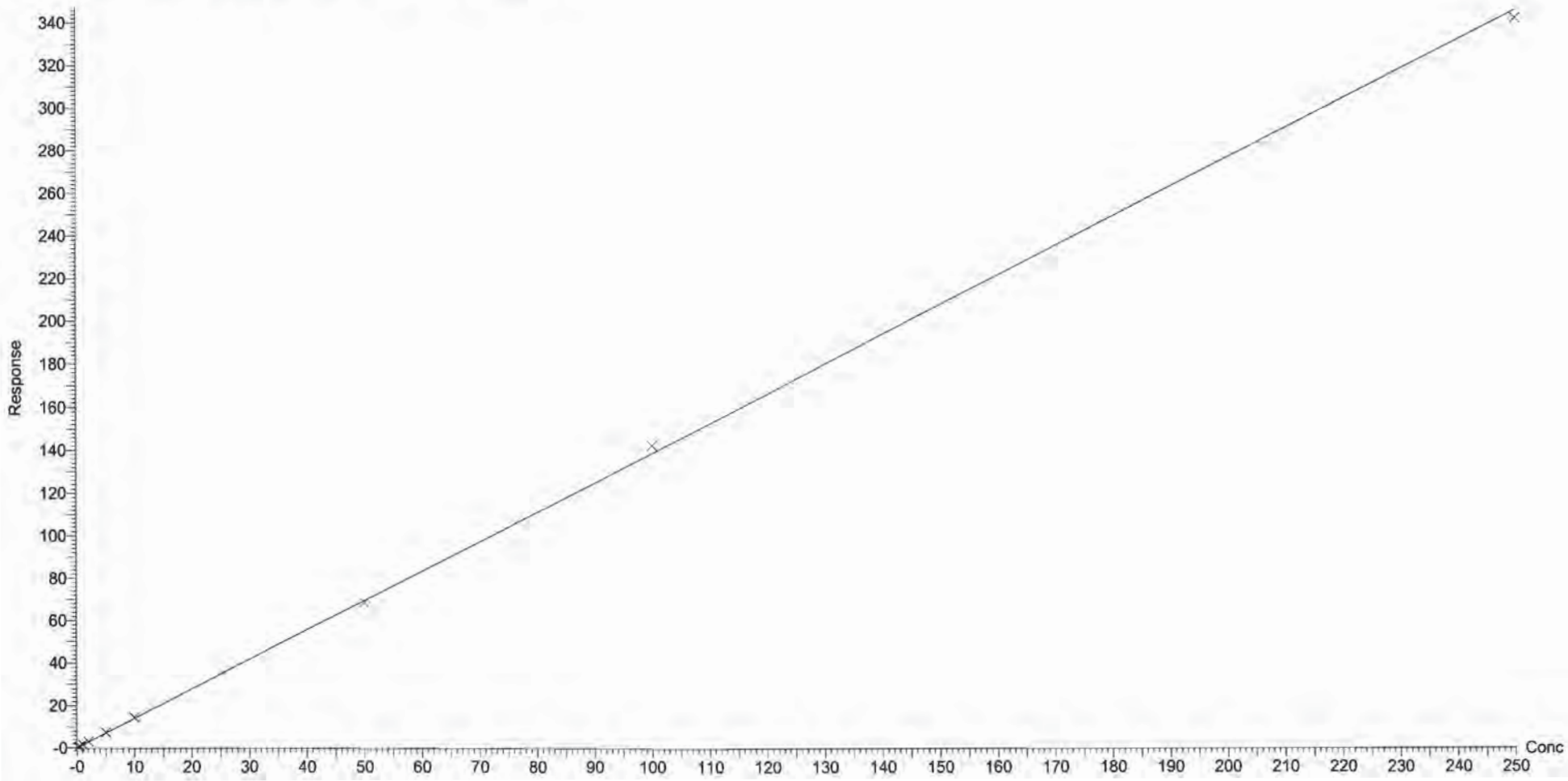
Compound name: PFBS
Correlation coefficient: r = 0.999700, r^2 = 0.999400
Calibration curve: 1.88408 * x + 0.0670139
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

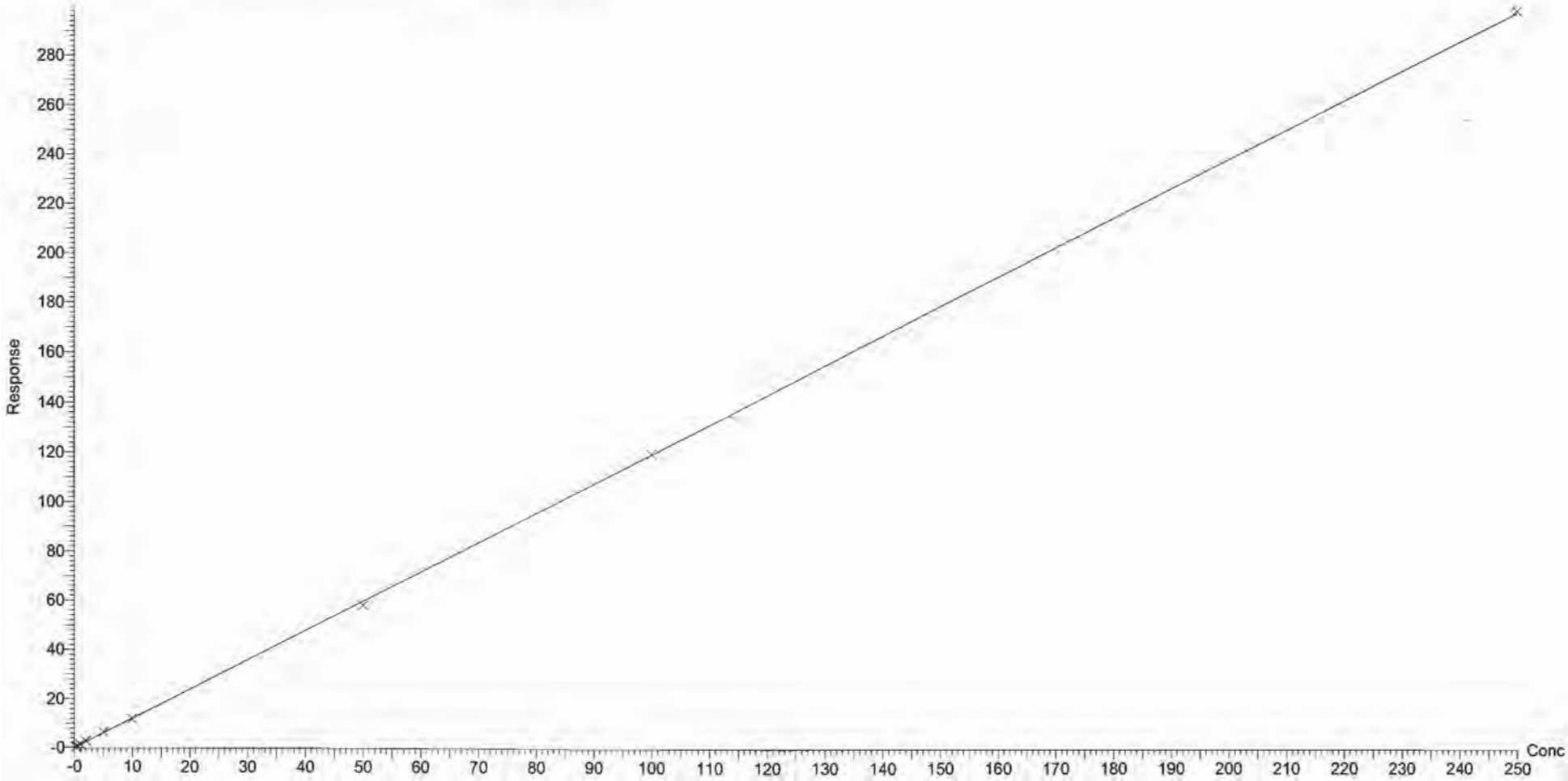
Compound name: PFHxA
Correlation coefficient: r = 0.999770, r^2 = 0.999541
Calibration curve: 1.38743 * x + 0.151774
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

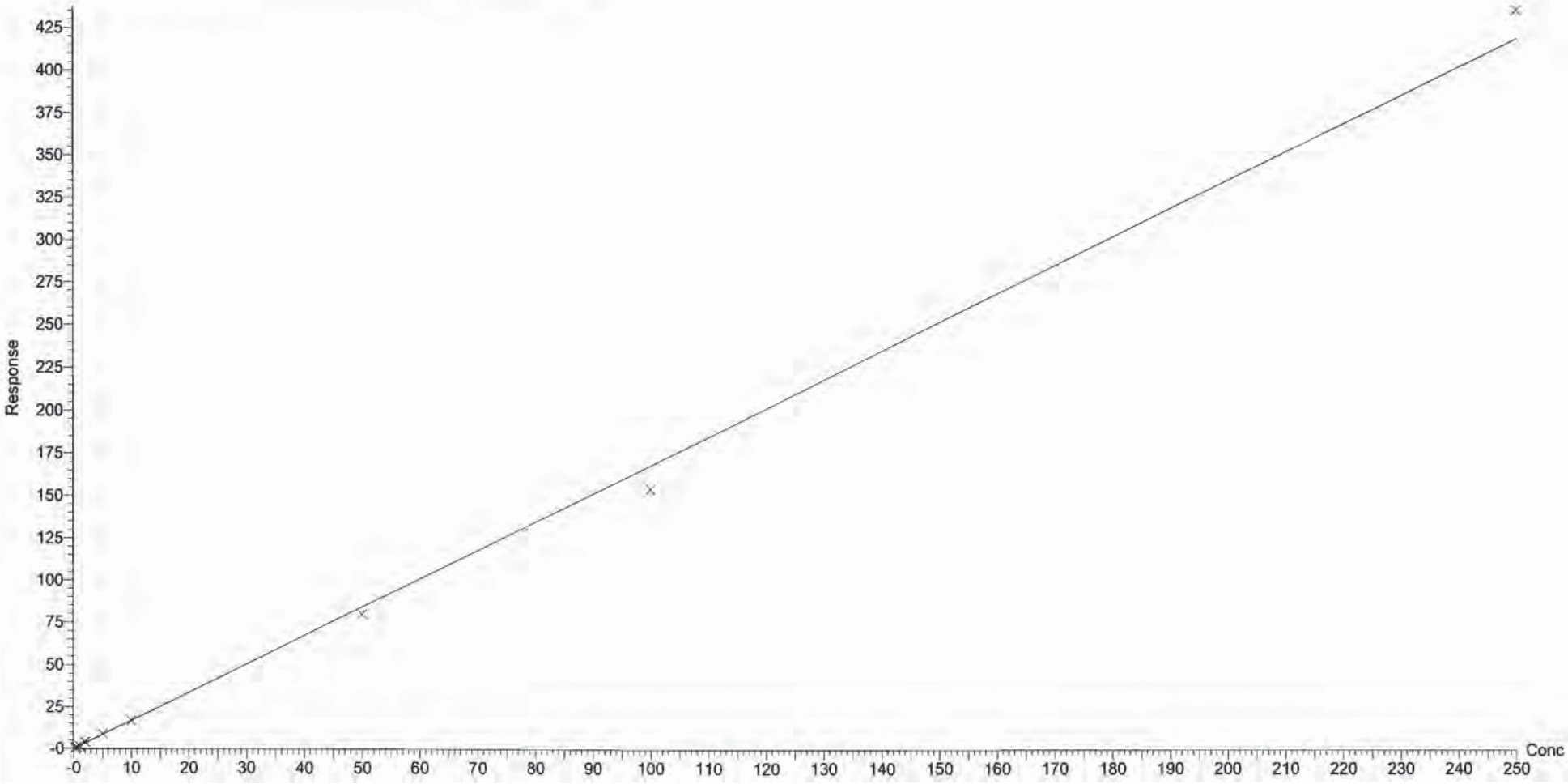
Compound name: PFHpA
Correlation coefficient: r = 0.999907, r^2 = 0.999814
Calibration curve: 1.19527 * x + 0.0770691
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

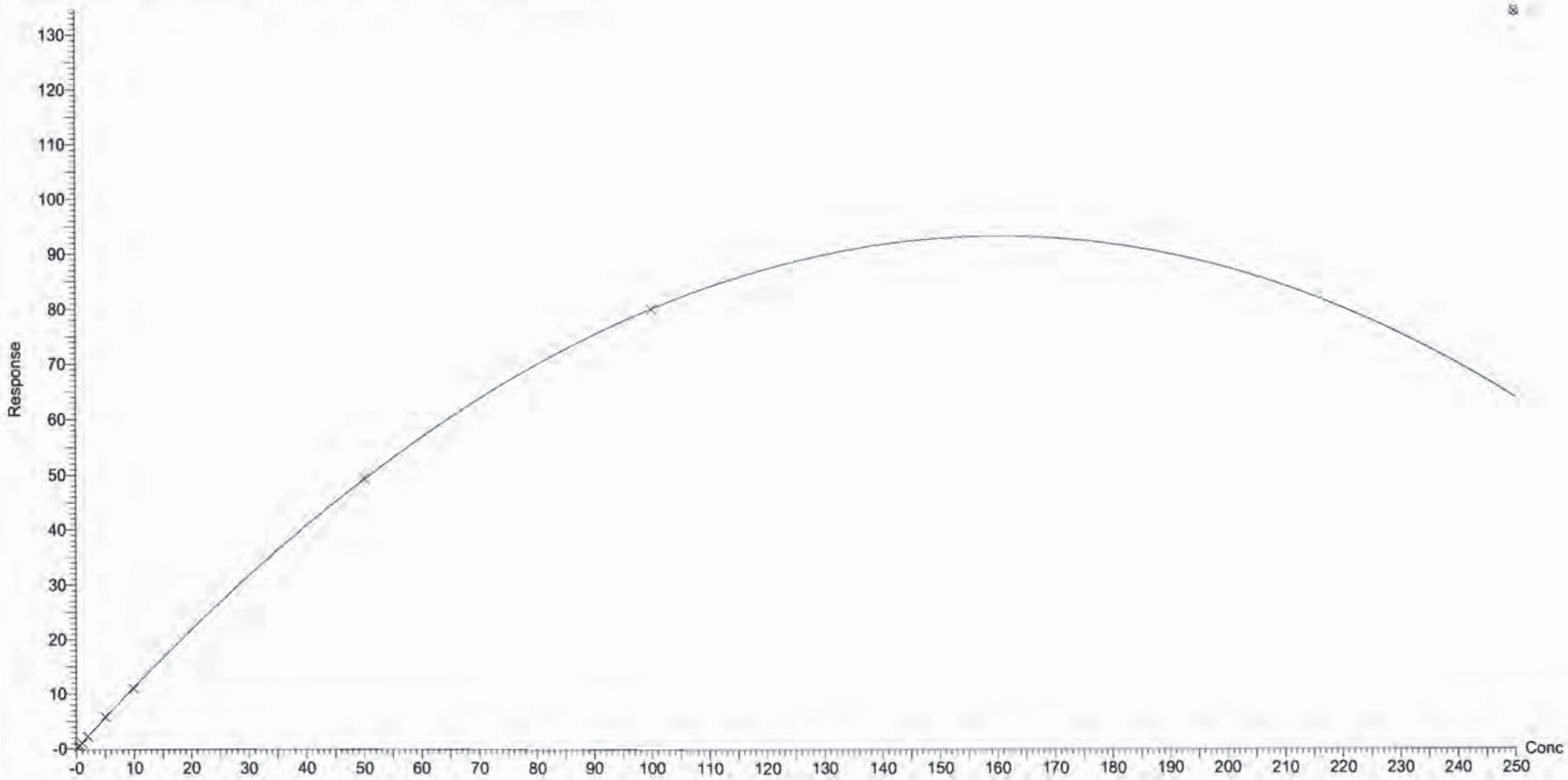
Compound name: PFHxS
Correlation coefficient: r = 0.998411, r^2 = 0.996824
Calibration curve: 1.6806 * x + 0.0313148
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:14:31 Pacific Daylight Time

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

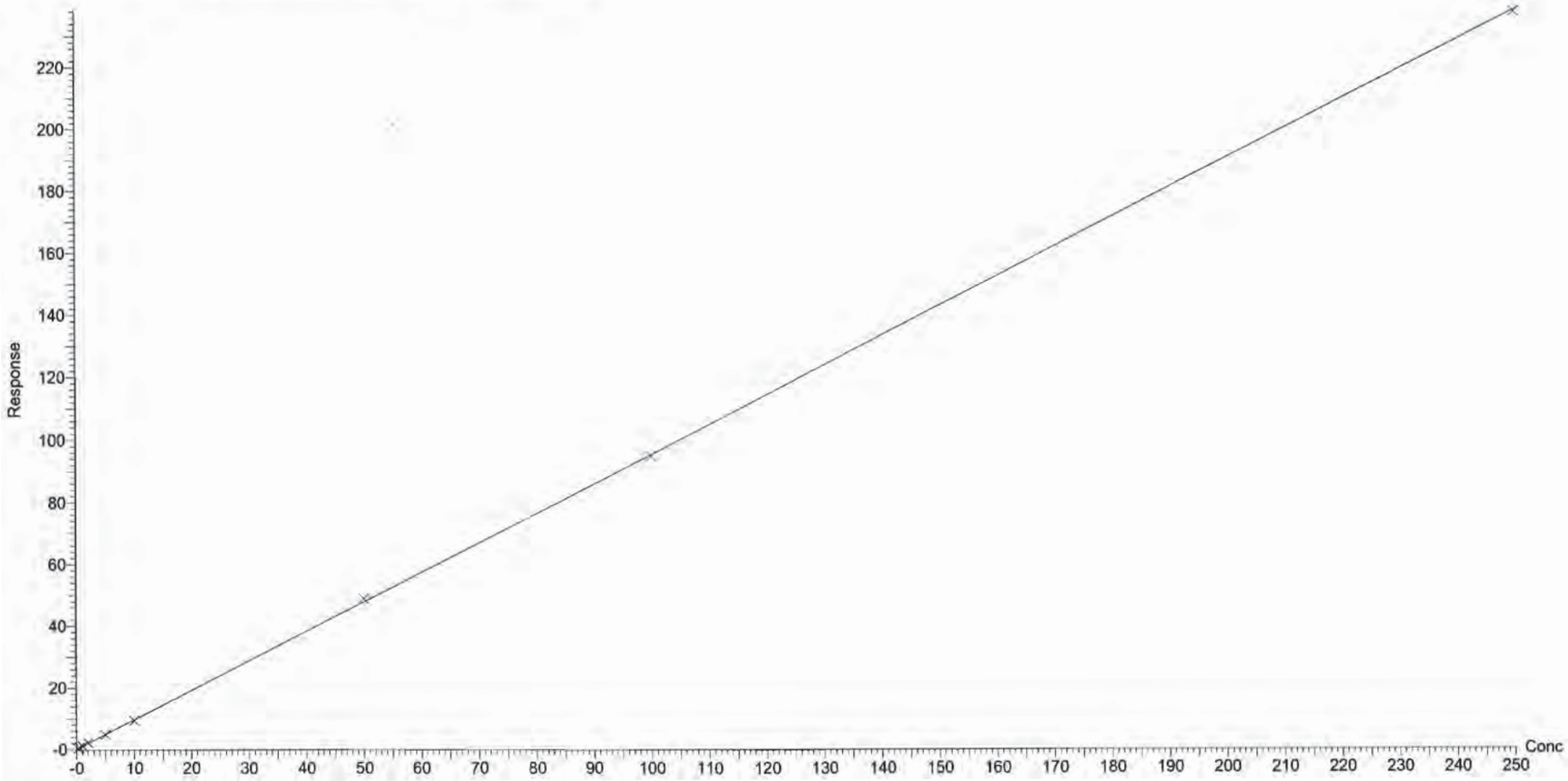


Vista Analytical Laboratory Q1

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

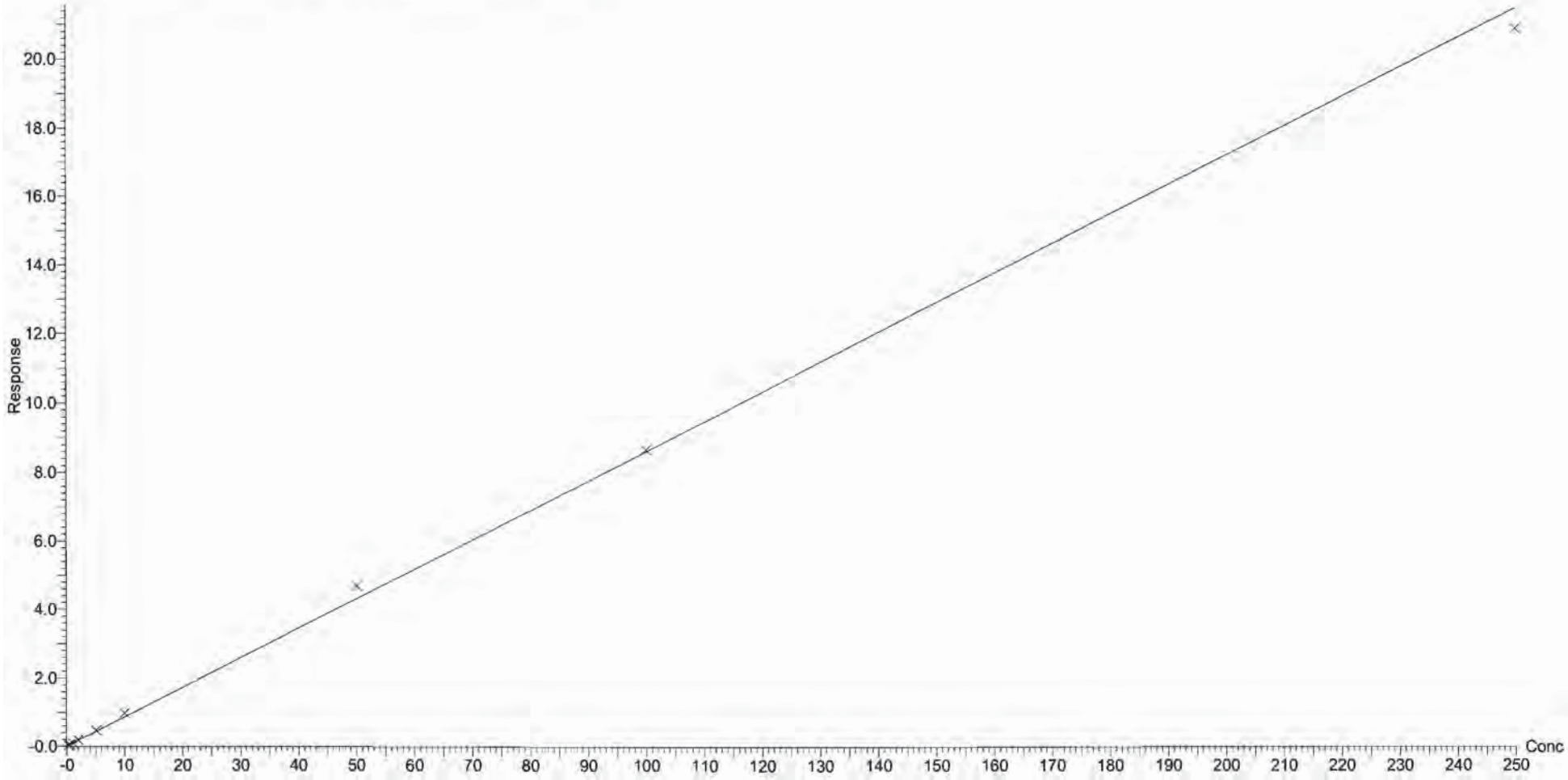
Compound name: PFOA
Correlation coefficient: r = 0.999910, r^2 = 0.999821
Calibration curve: 0.953928 * x + 0.14566
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

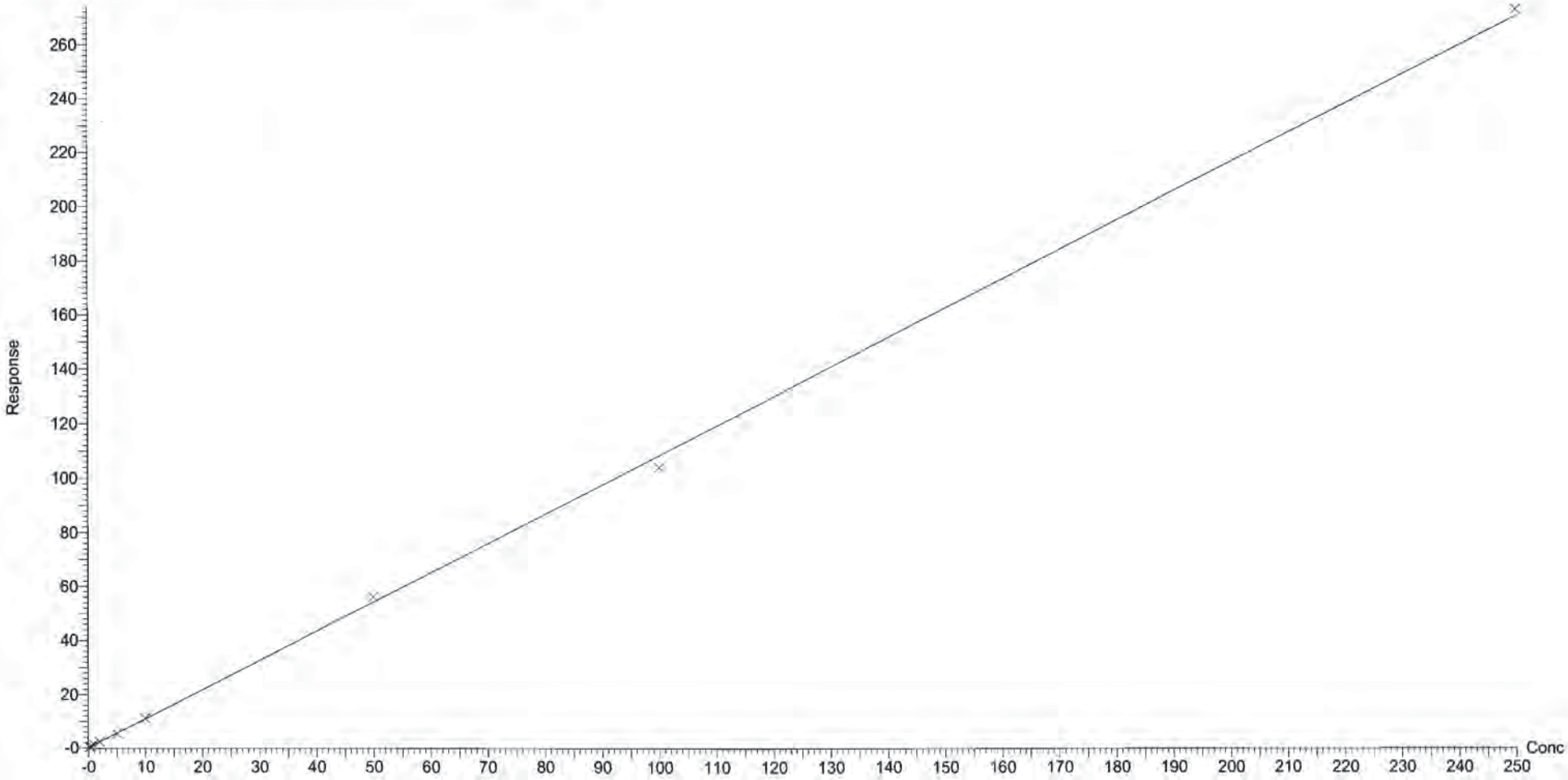
Compound name: PFHpS
Correlation coefficient: r = 0.999006, r^2 = 0.998013
Calibration curve: 0.0861619 * x + 0.0071876
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



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

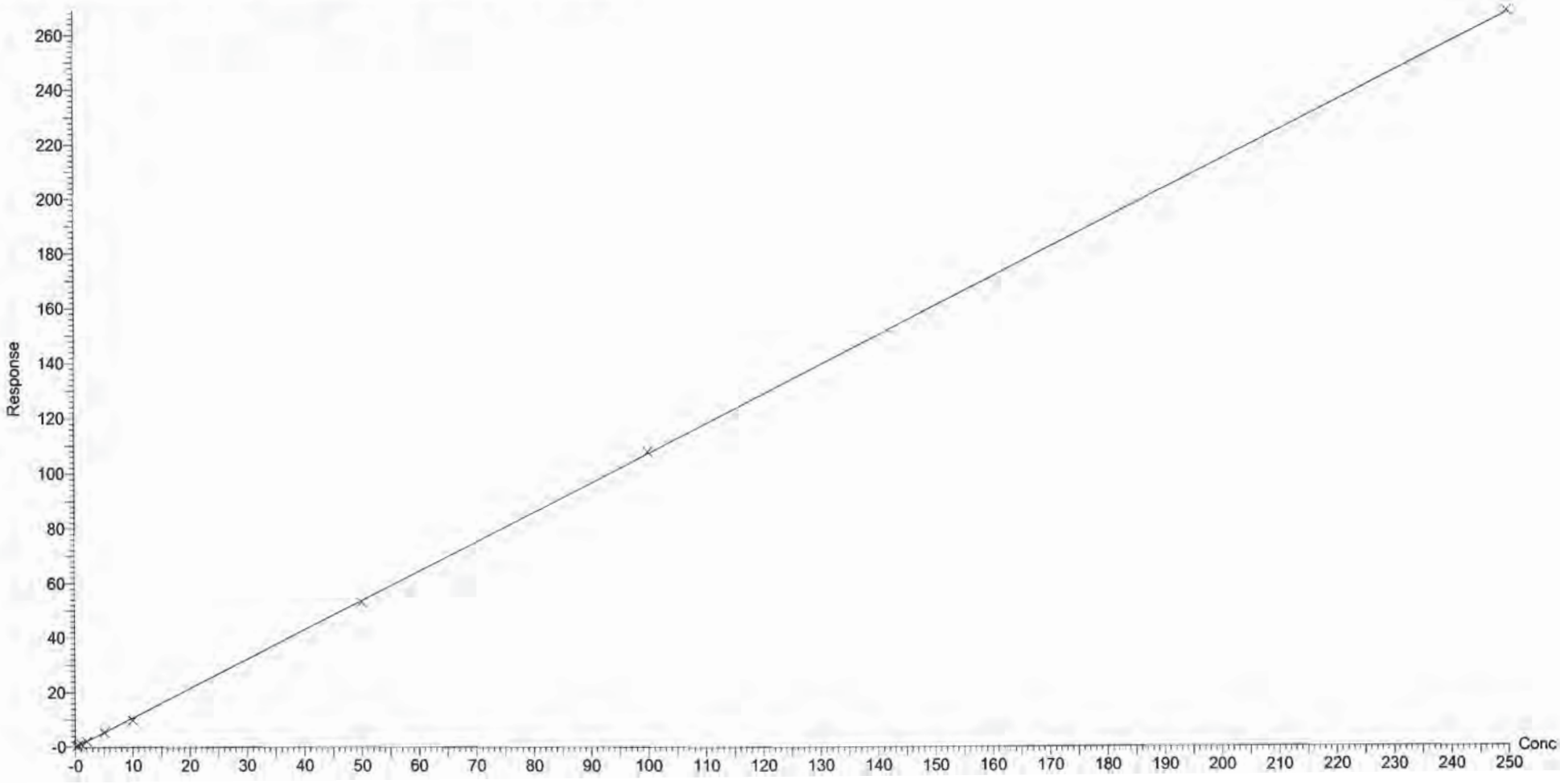
Compound name: PFNA
Correlation coefficient: r = 0.999697, r^2 = 0.999394
Calibration curve: 1.08541 * x + 0.0735739
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

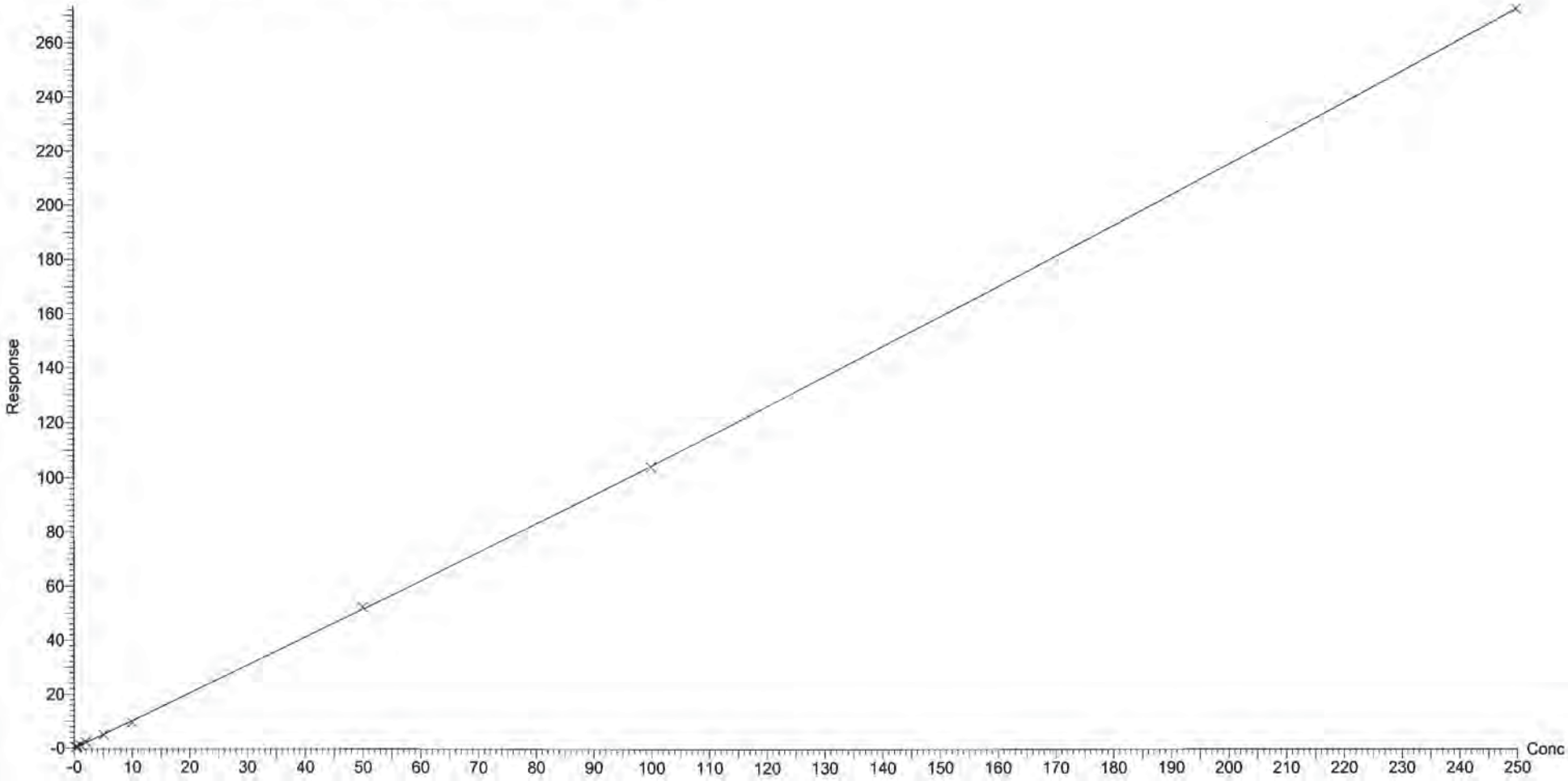
Compound name: PFOSA
Correlation coefficient: r = 0.999883, r^2 = 0.999766
Calibration curve: 1.0734 * x + -0.0271184
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

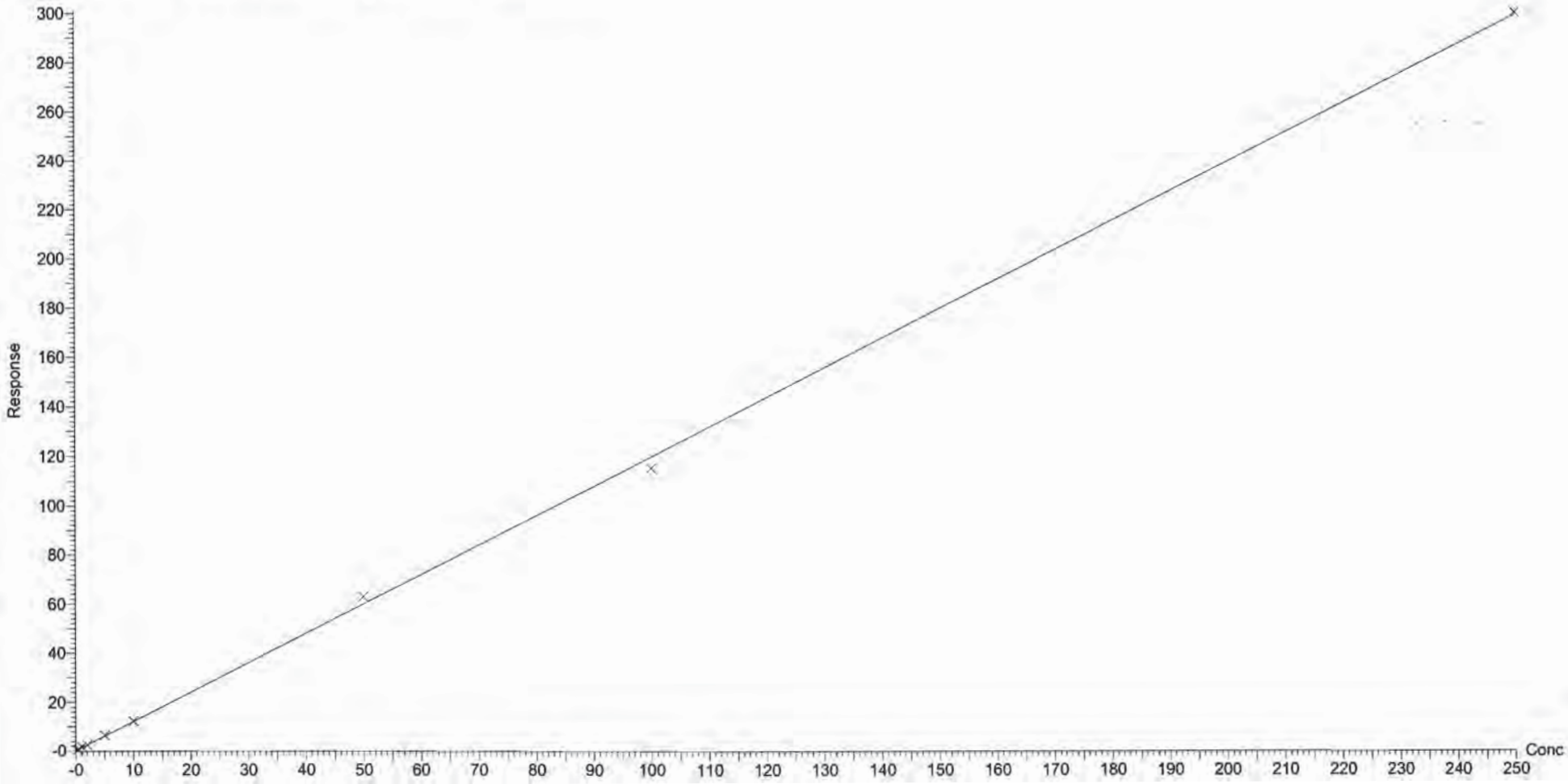
Compound name: PFOS
Coefficient of Determination: R^2 = 0.999779
Calibration curve: 0.000313423 * x^2 + 1.01509 * x + 0.0486823
Response type: Internal Std (Ref 38), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



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

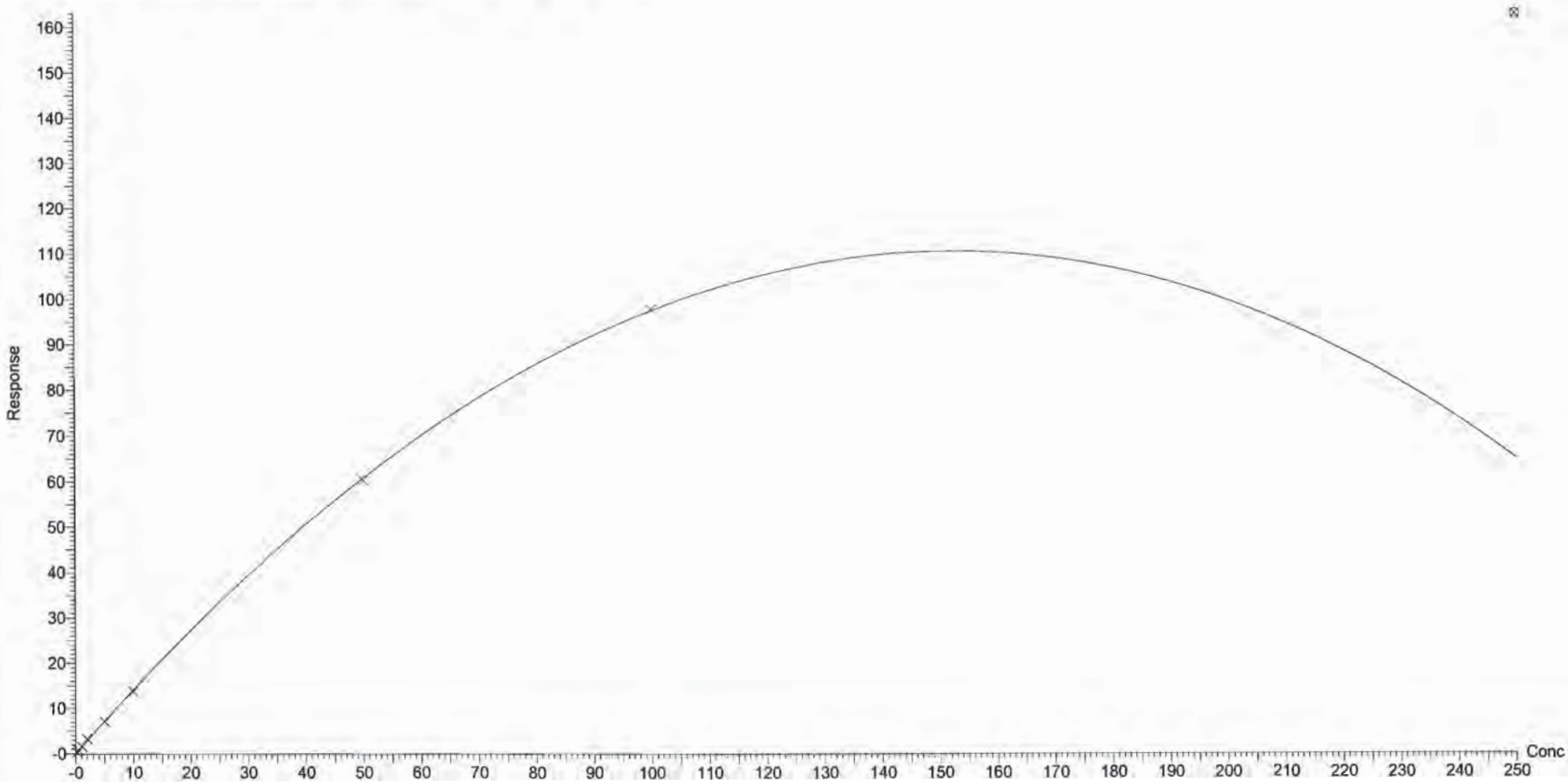
Compound name: PFDA
Correlation coefficient: r = 0.999542, r^2 = 0.999084
Calibration curve: 1.19993 * x + 0.156566
Response type: Internal Std (Ref 39), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

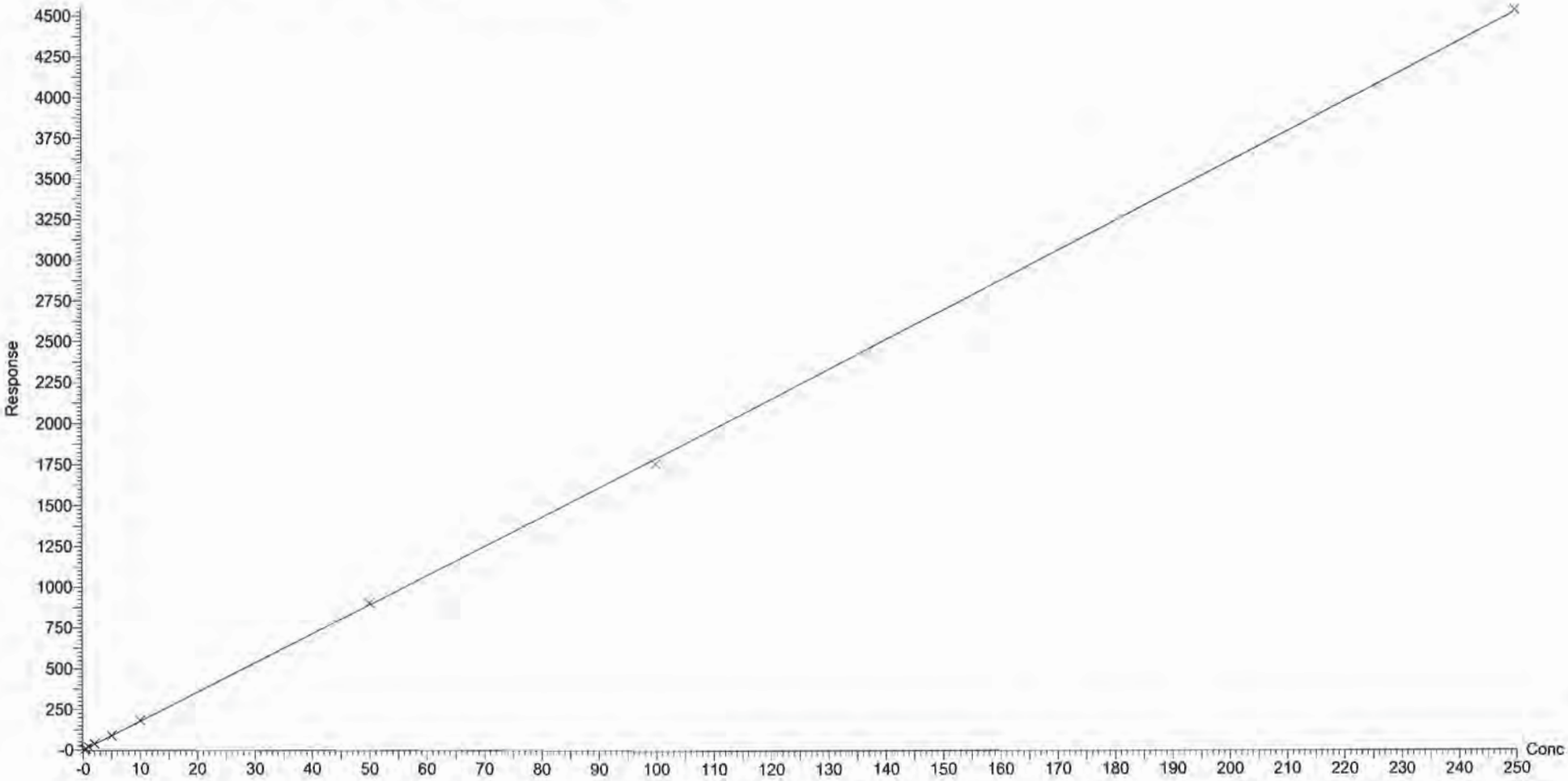
Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.999107
Calibration curve: -0.00477278 * x^2 + 1.45357 * x + 0.0233651
Response type: Internal Std (Ref 40), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



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

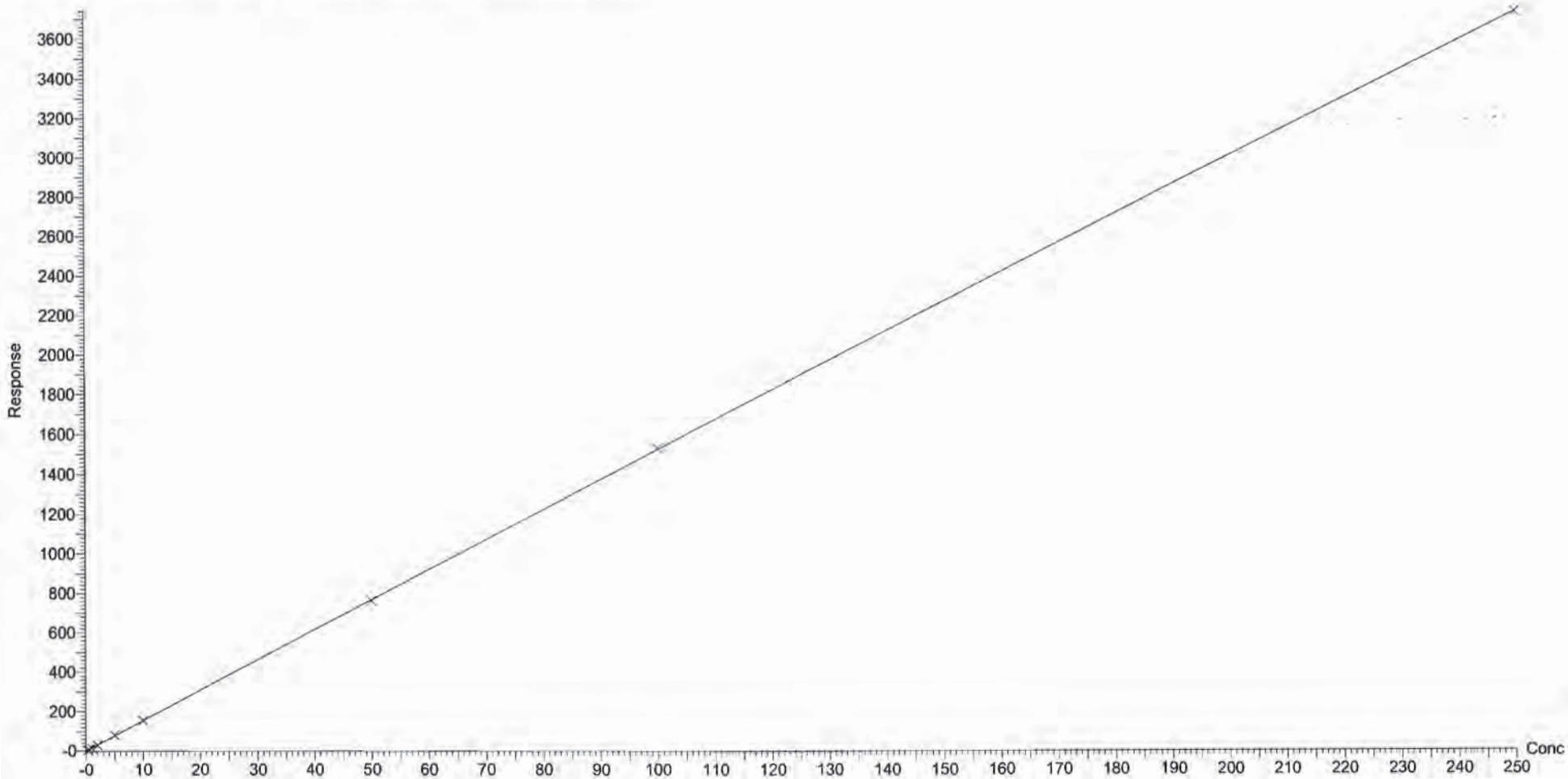
Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.999795
Calibration curve: 0.00169243 * x^2 + 17.7214 * x + 0.975242
Response type: Internal Std (Ref 41), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

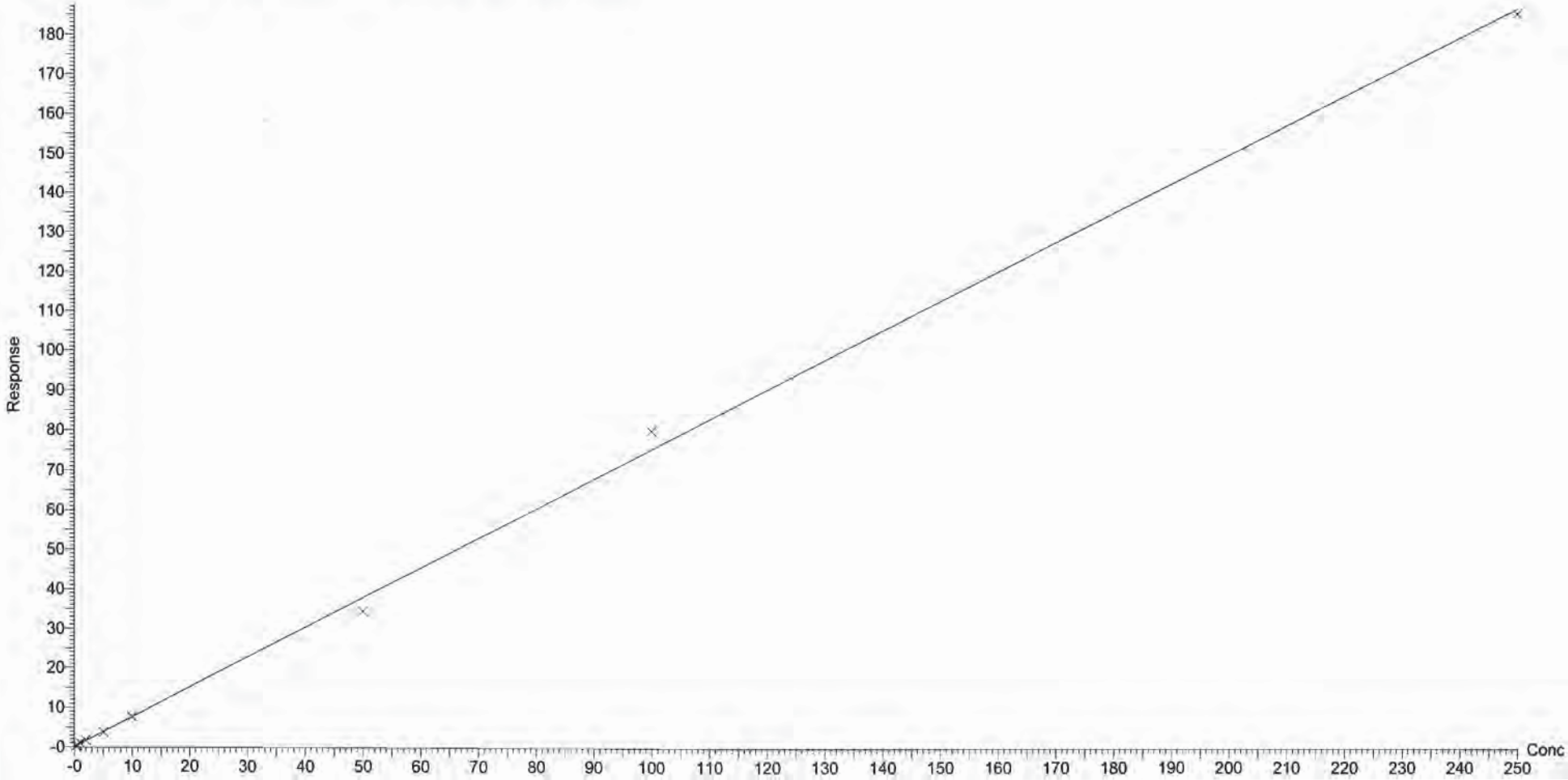
Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999924
Calibration curve: -0.0019298 * x^2 + 15.4647 * x + -0.327453
Response type: Internal Std (Ref 42), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



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

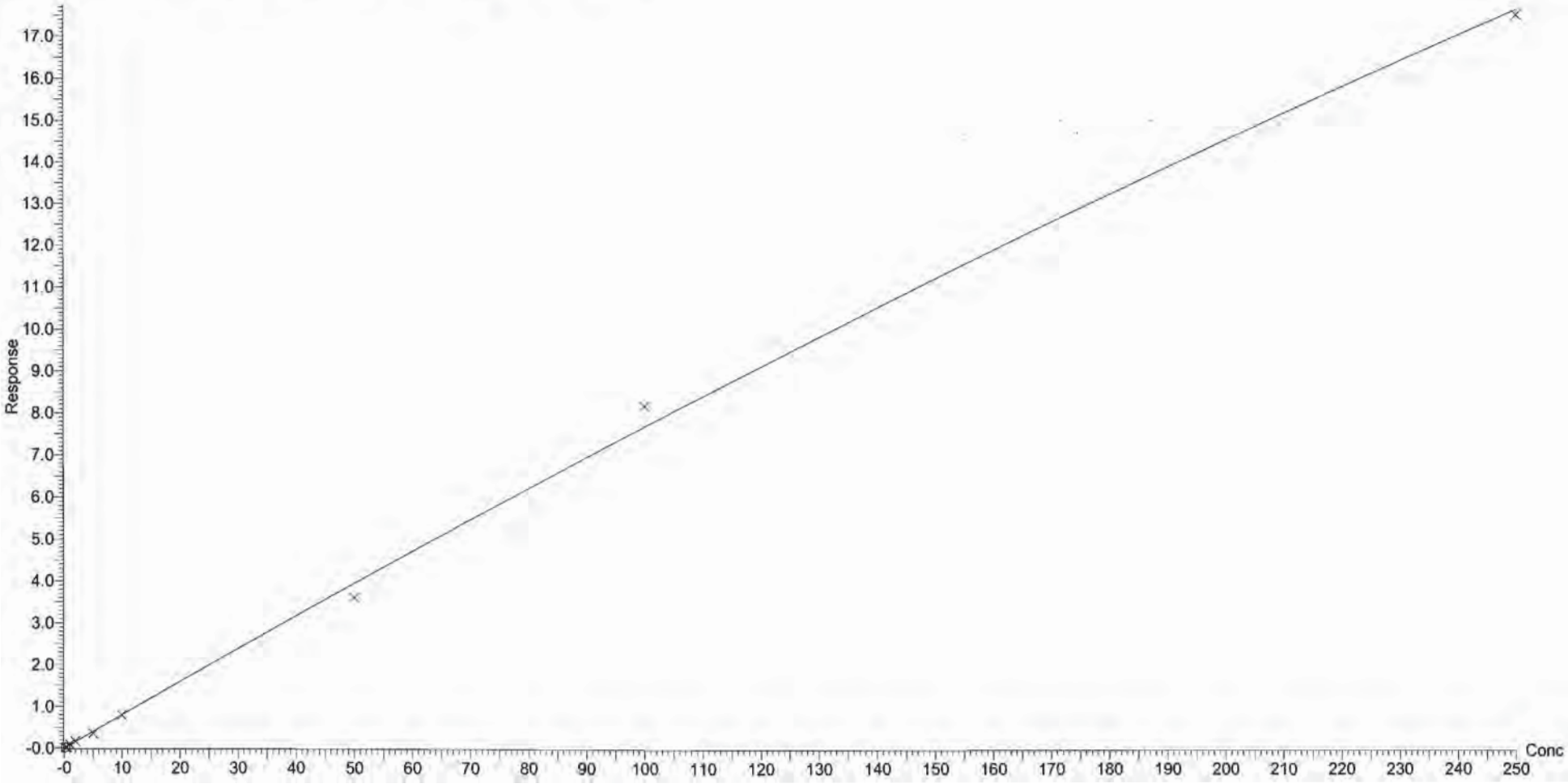
Compound name: PFUnA
Coefficient of Determination: R^2 = 0.997941
Calibration curve: -3.28617e-005 * x^2 + 0.757566 * x + 0.0881327
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

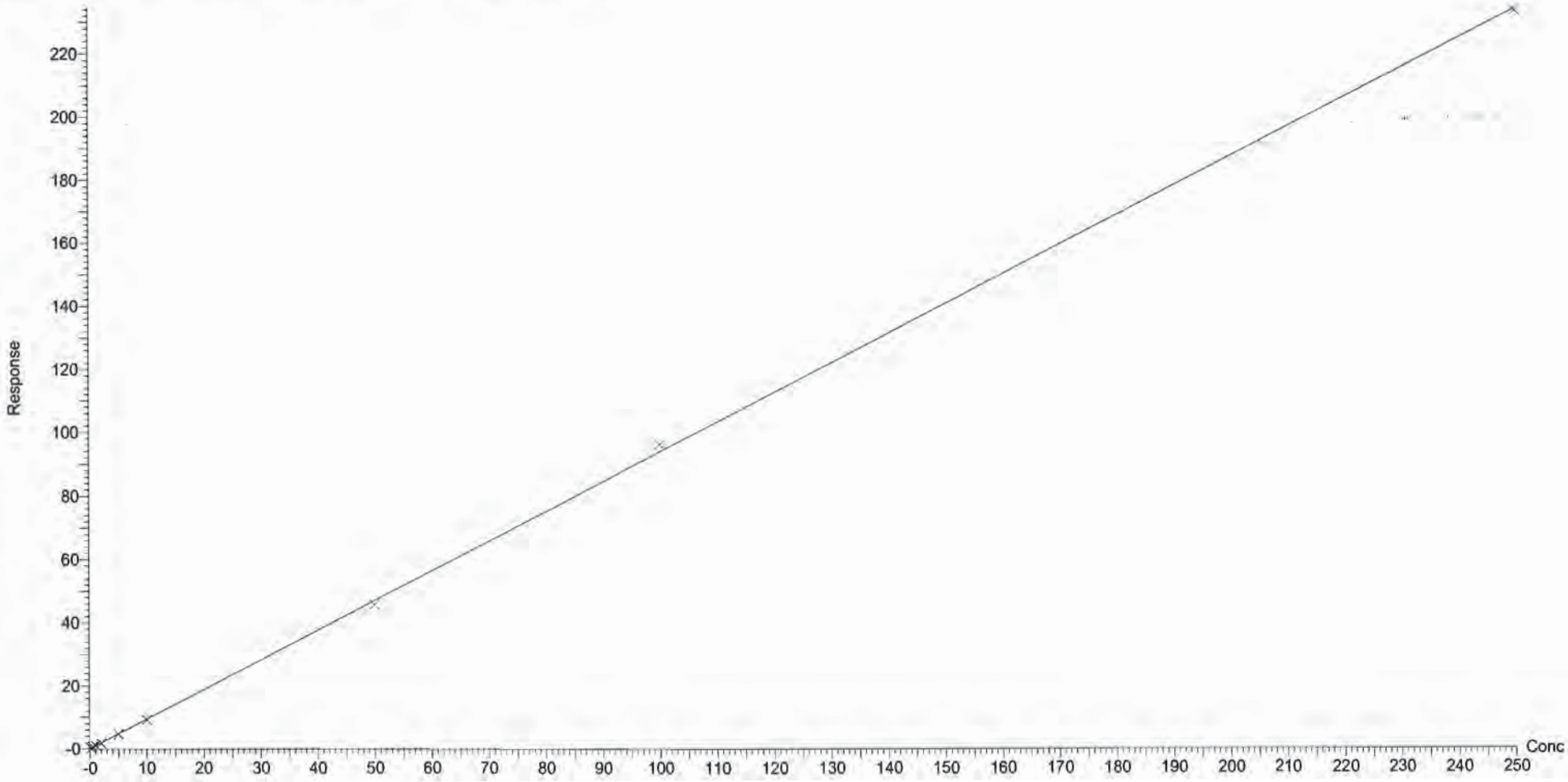
Compound name: PFDS
Coefficient of Determination: R^2 = 0.997578
Calibration curve: -4.11818e-005 * x^2 + 0.0811765 * x + -0.0032981
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

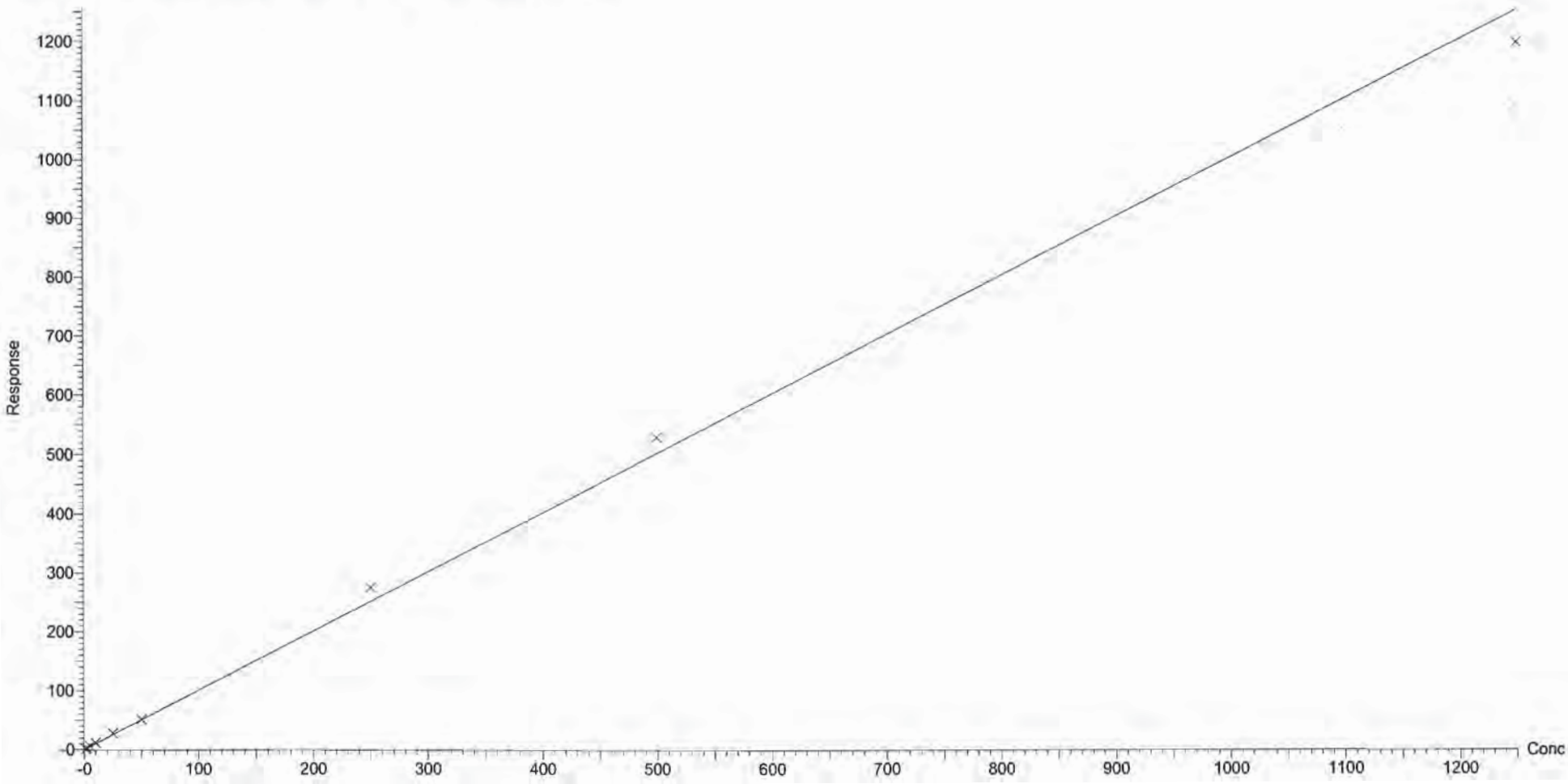
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999599
Calibration curve: -9.87083e-006 * x^2 + 0.940673 * x + 0.00742583
Response type: Internal Std (Ref 44), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

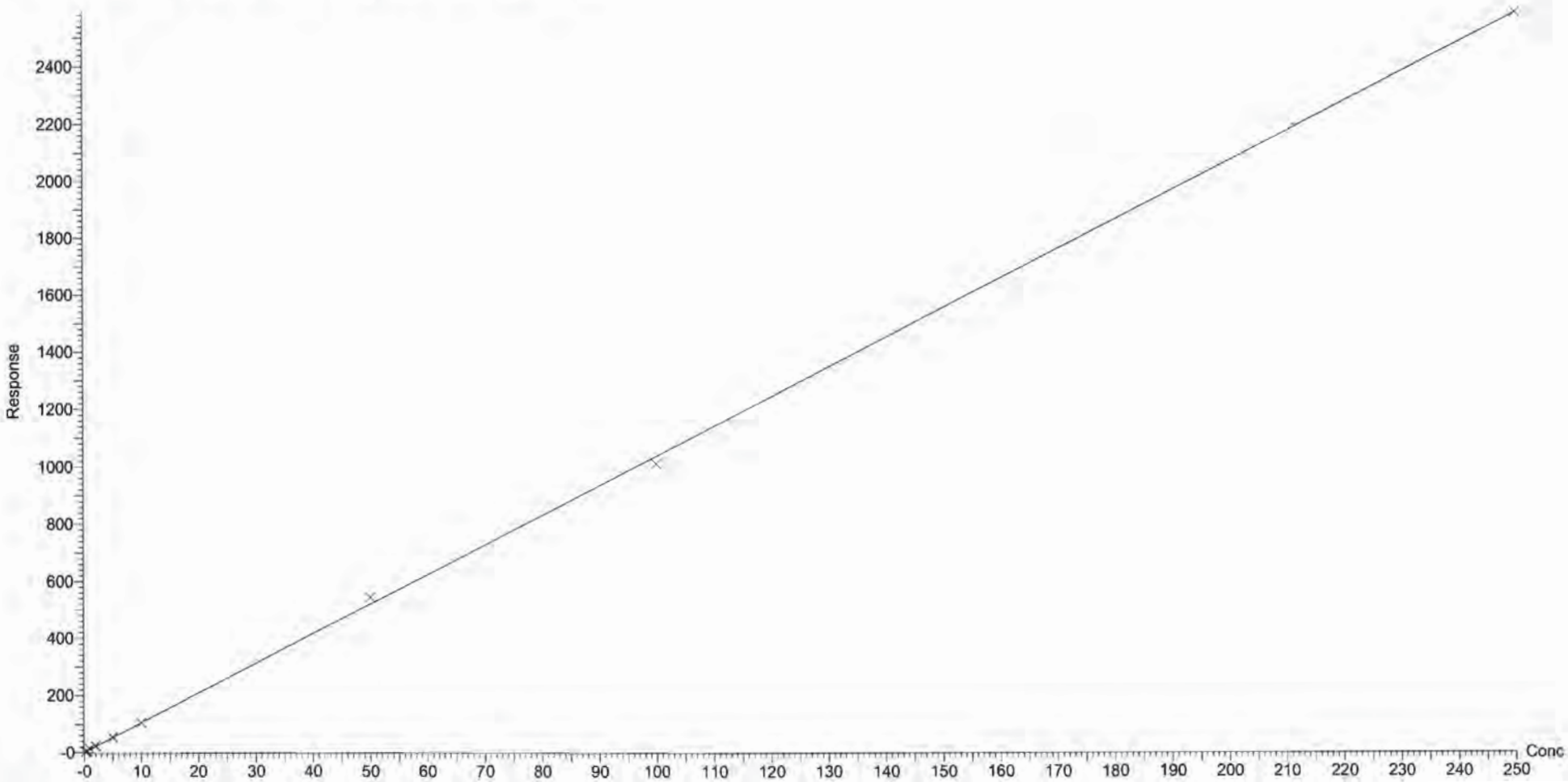
Compound name: N-MeFOSA
Correlation coefficient: r = 0.998345, r^2 = 0.996693
Calibration curve: 1.00604 * x + 0.235716
Response type: Internal Std (Ref 45), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



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

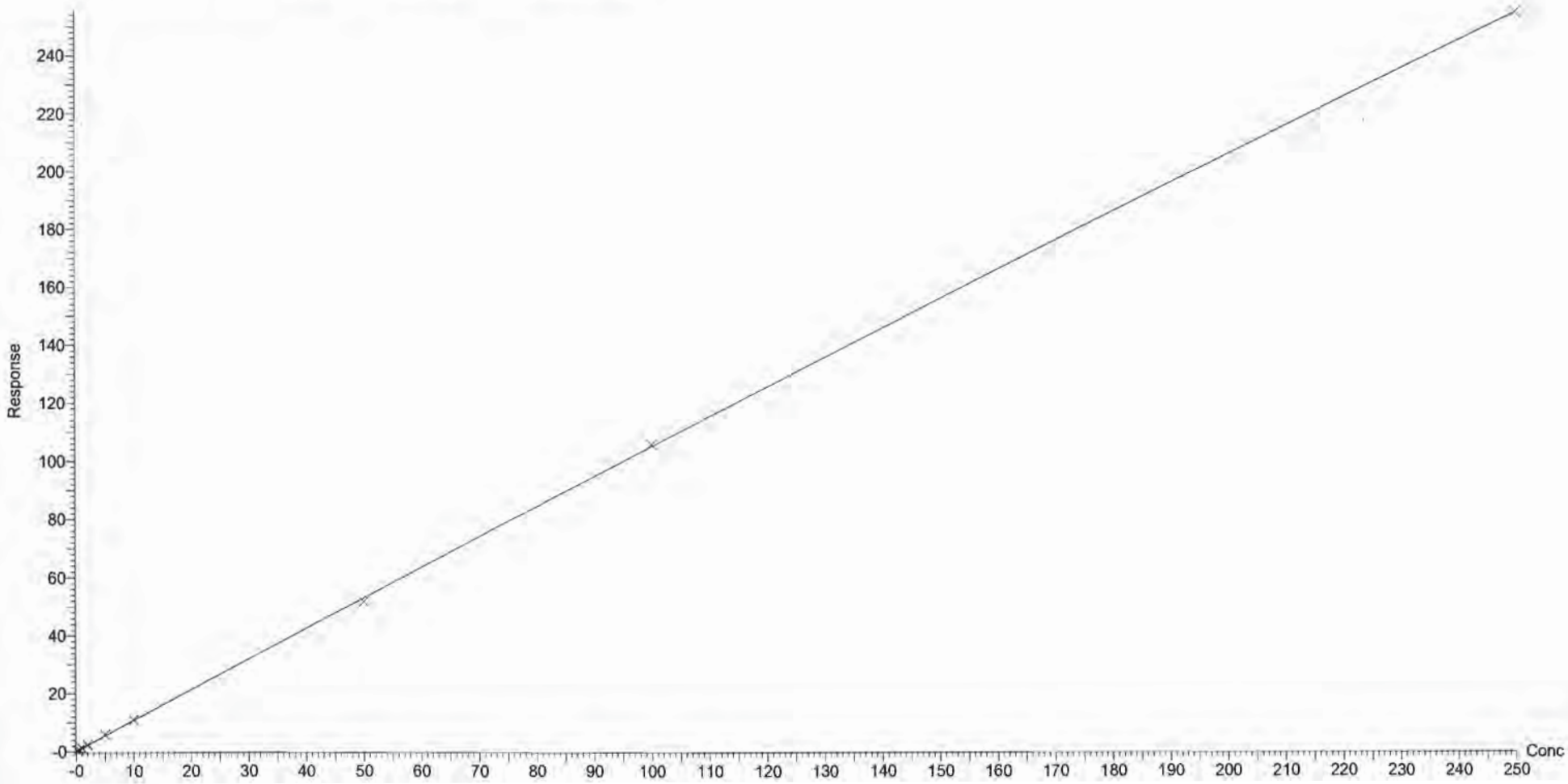
Compound name: PFTrDA
Correlation coefficient: r = 0.999725, r^2 = 0.999450
Calibration curve: 10.3774 * x + 1.19316
Response type: Internal Std (Ref 44), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

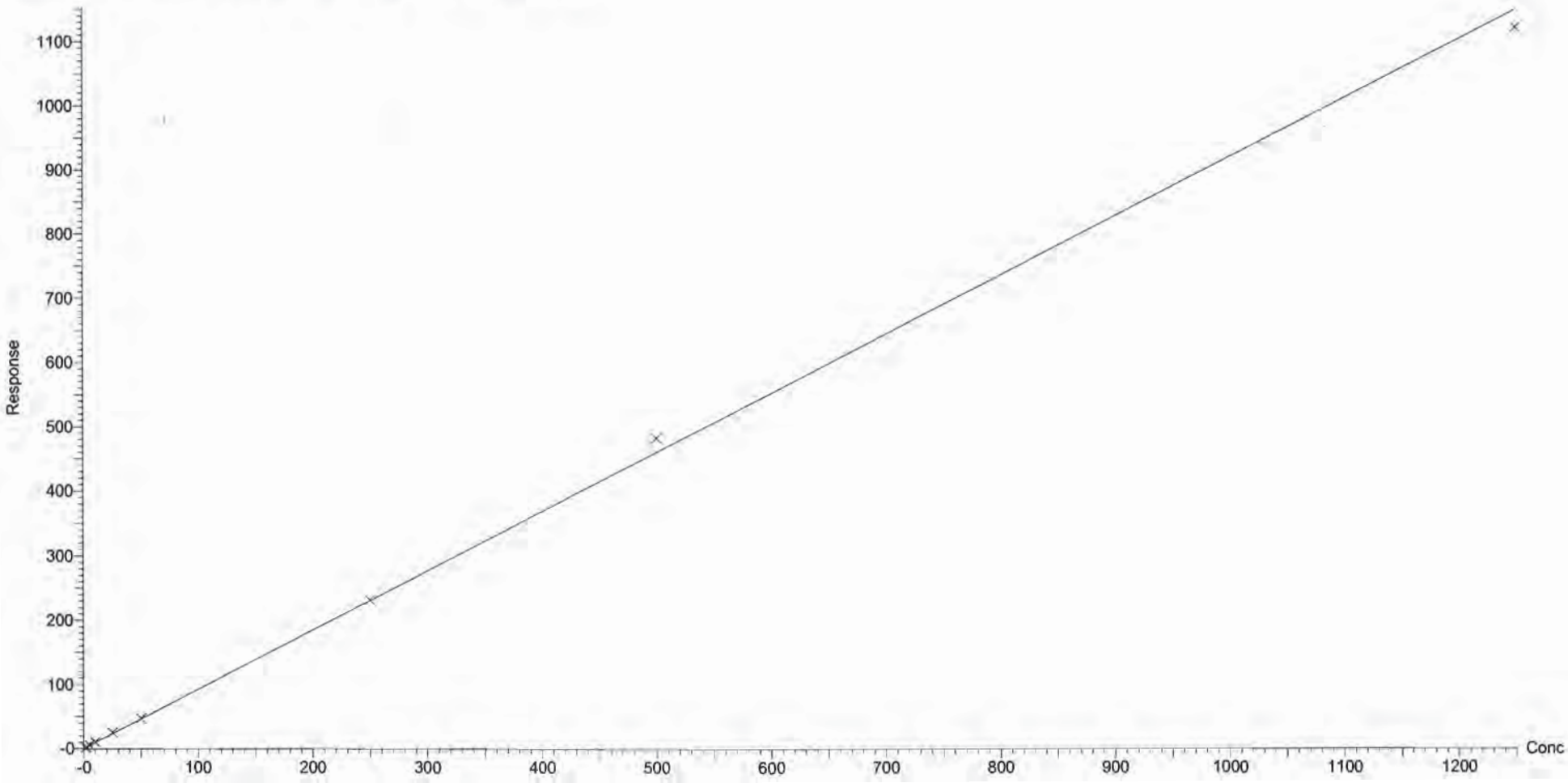
Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999821
Calibration curve: -0.000206845 * x^2 + 1.07301 * x + 0.115151
Response type: Internal Std (Ref 46), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

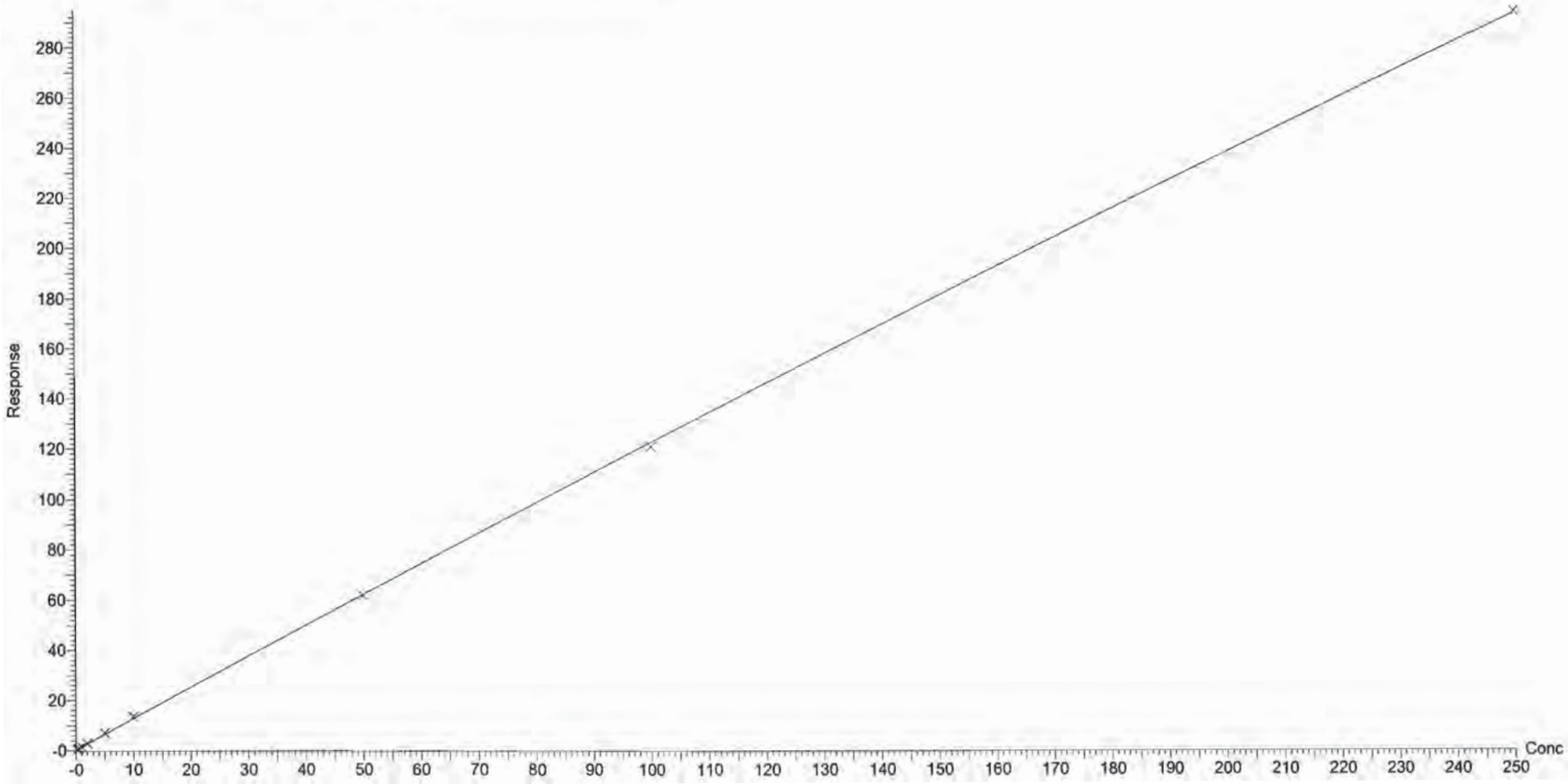
Compound name: N-EtFOSA
Correlation coefficient: r = 0.999415, r^2 = 0.998831
Calibration curve: 0.921854 * x + 0.382781
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

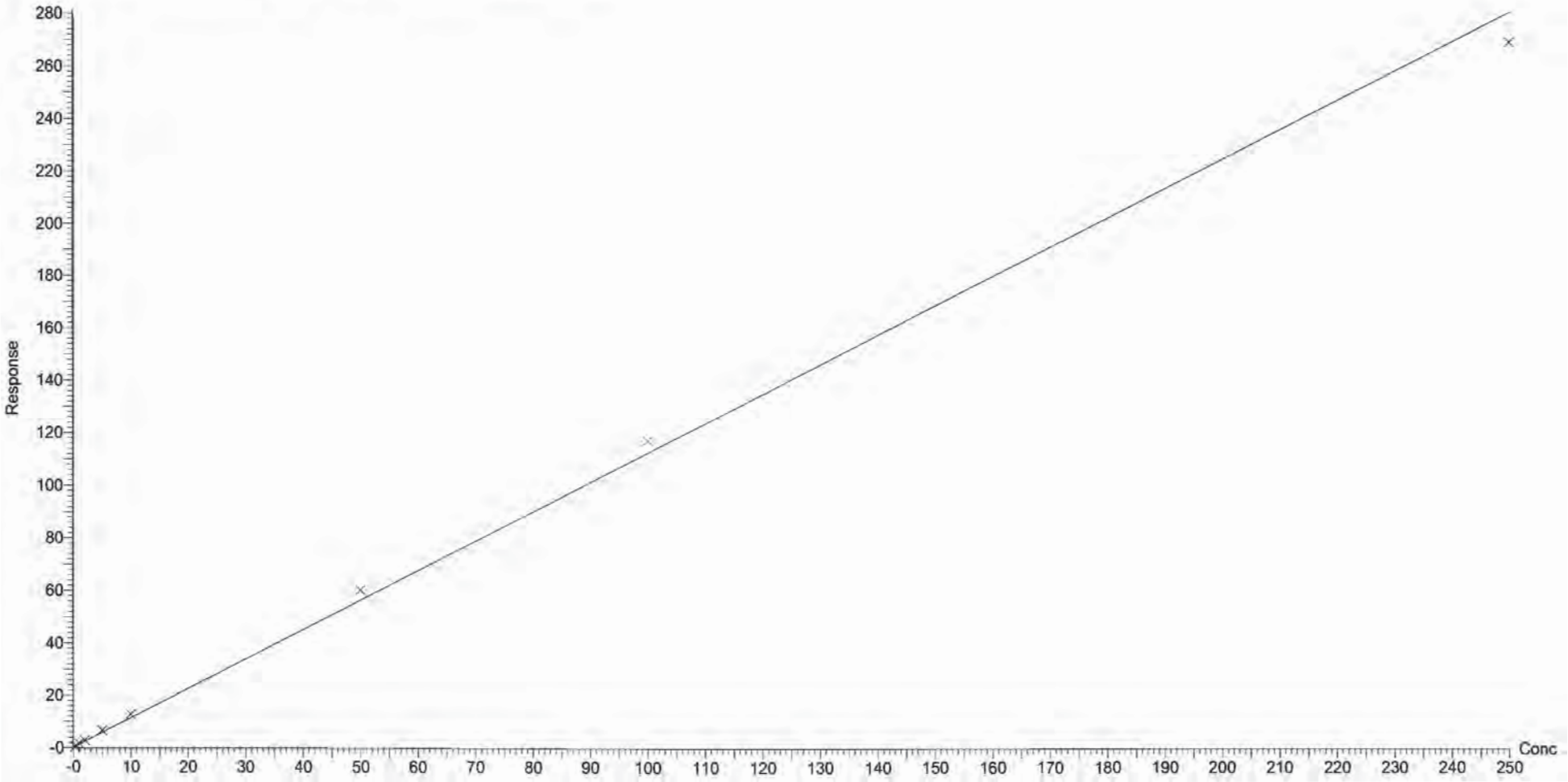
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999687
Calibration curve: -0.000332417 * x^2 + 1.25821 * x + 0.243616
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



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

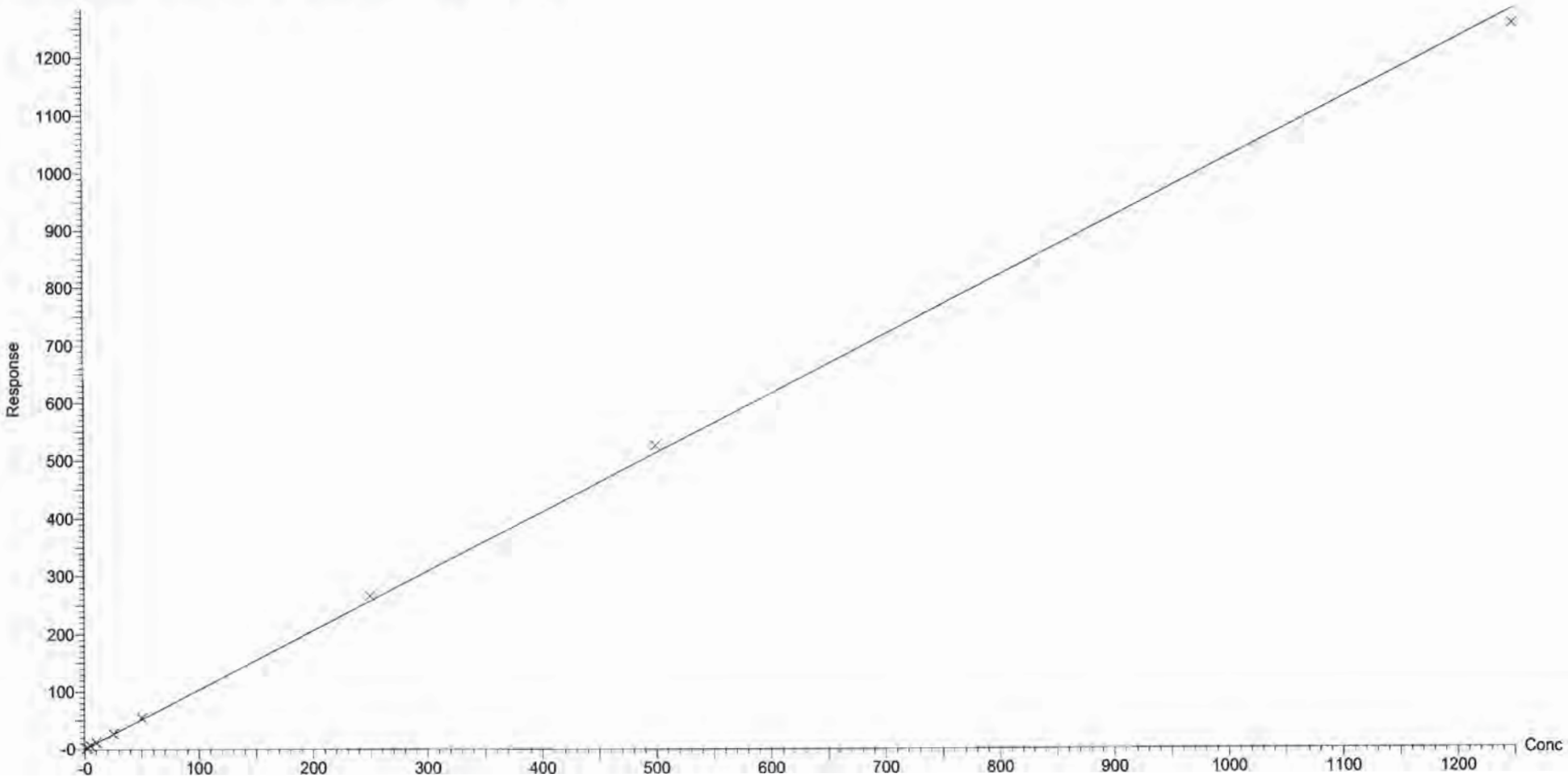


Vista Analytical Laboratory Q1

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

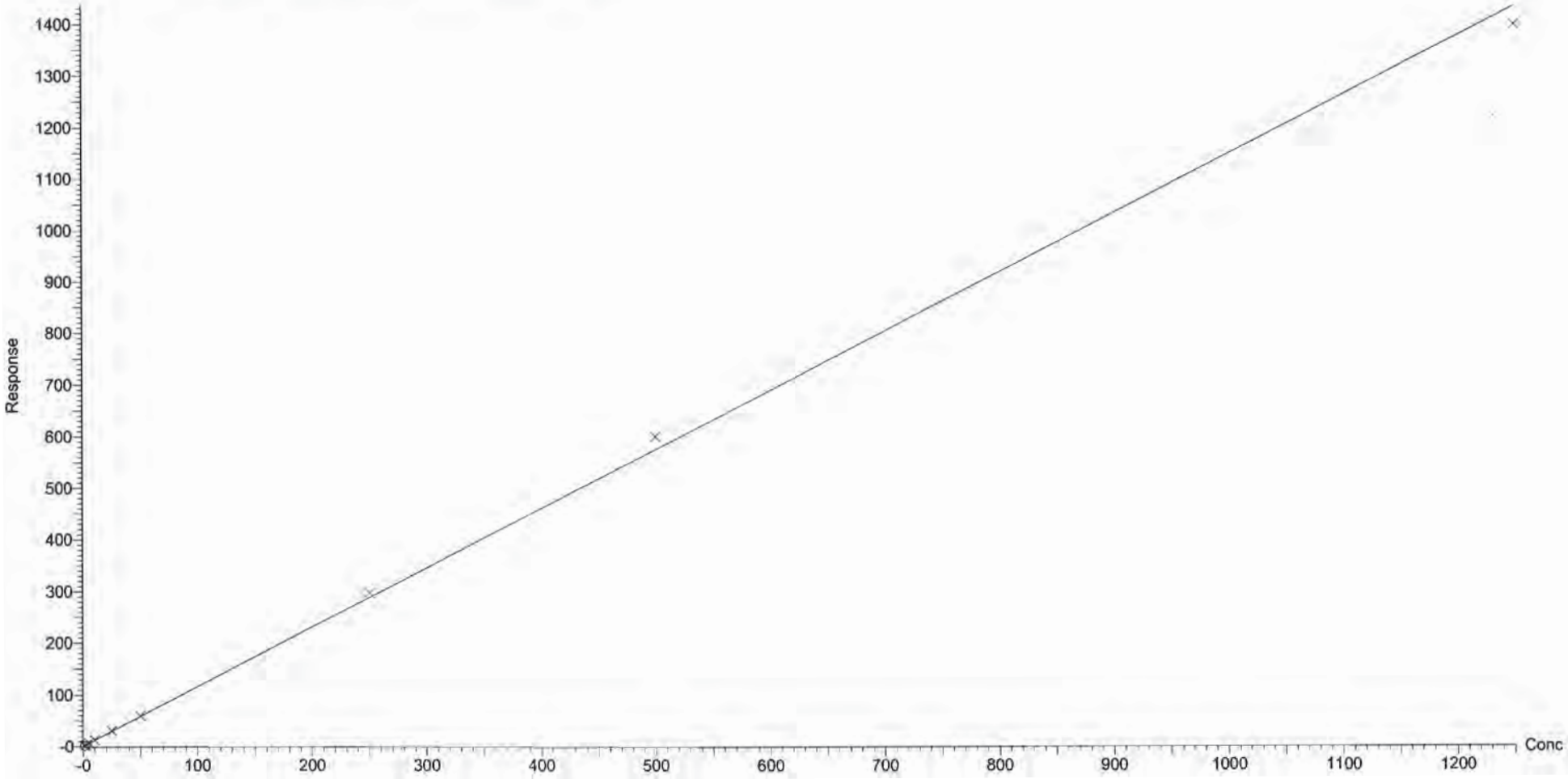


Vista Analytical Laboratory Q1

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



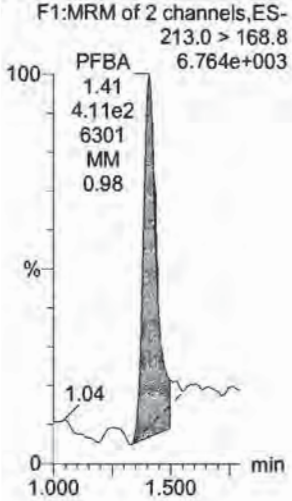
Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

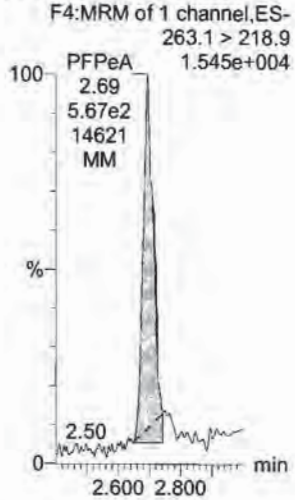
Method: U:\Q4.PRO\MethDB\PFAS_FULL_7-20-17.mdb 01 Aug 2017 09:55:07
Calibration: 01 Aug 2017 10:11:08

Name: 170731M2_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107

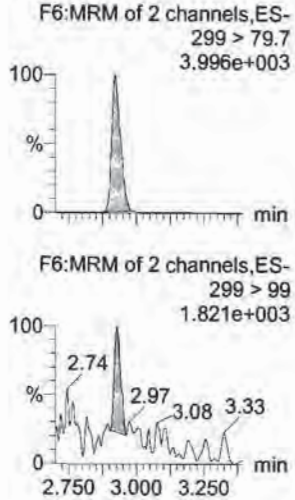
PFBA



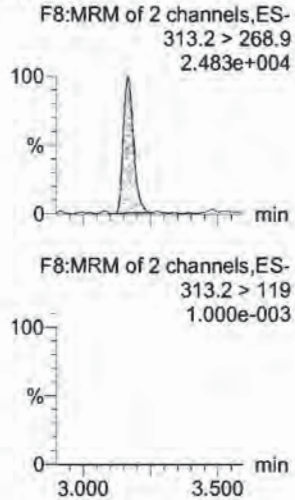
PFPeA



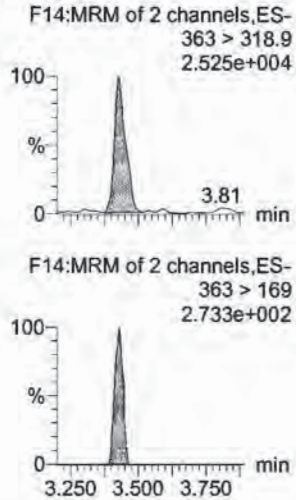
PFBS



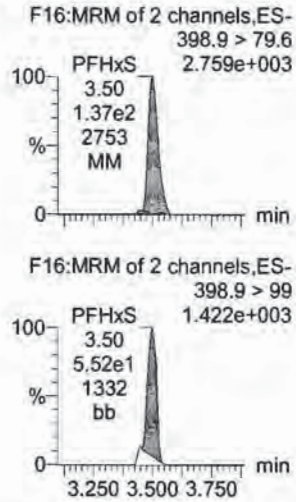
PFHxA



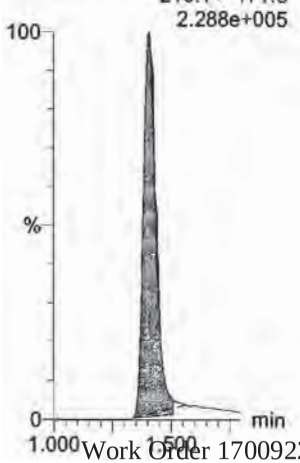
PFHpA



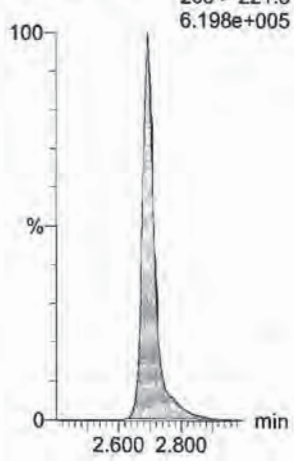
PFHxS



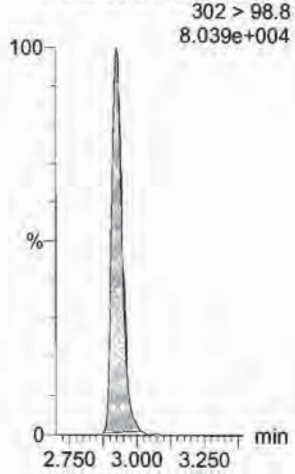
13C3-PFBA



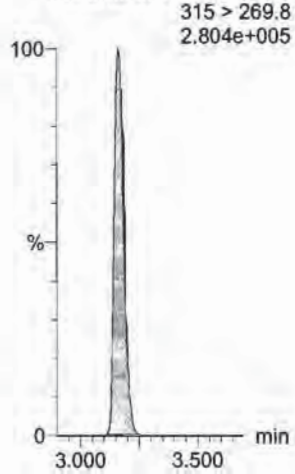
13C3-PFPeA



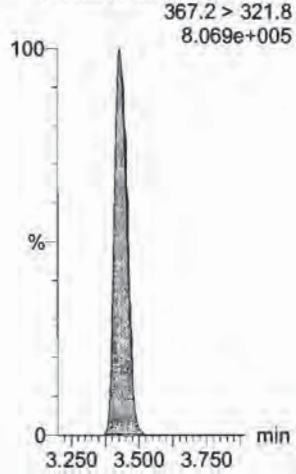
13C3-PFBS



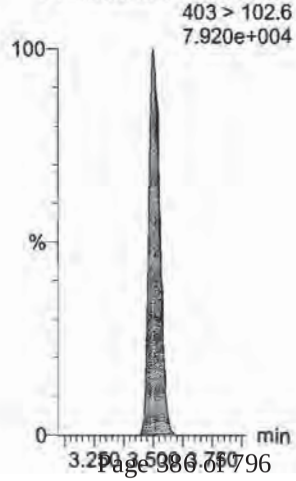
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS

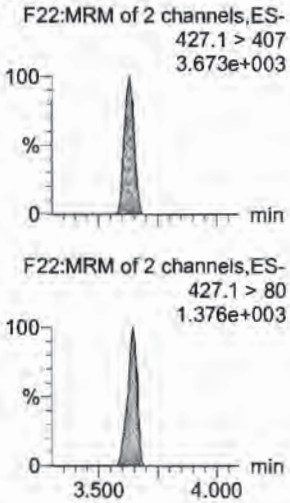


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

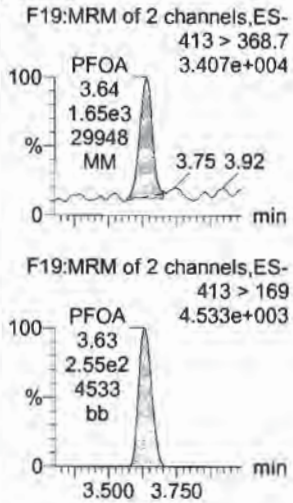
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107

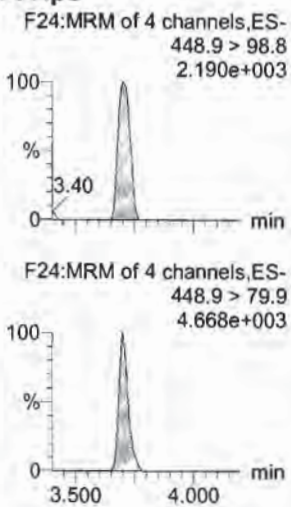
6:2 FTS



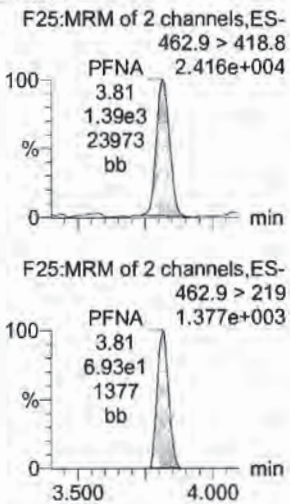
PFOA



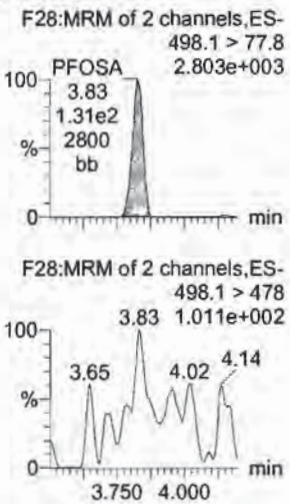
PFHpS



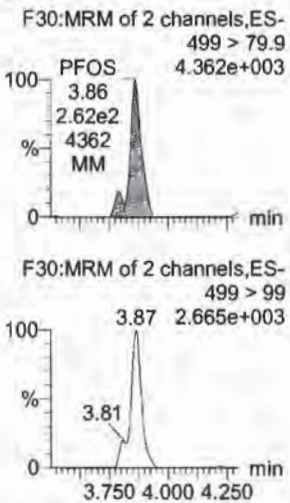
PFNA



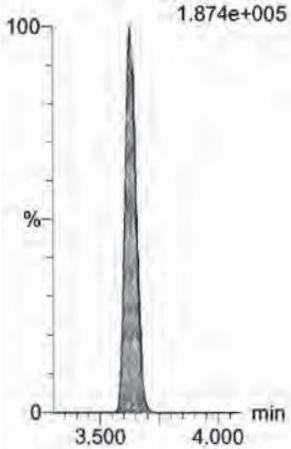
PFOSA



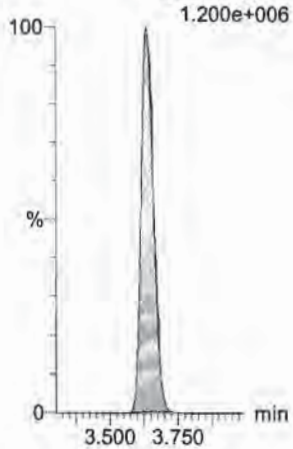
PFOS



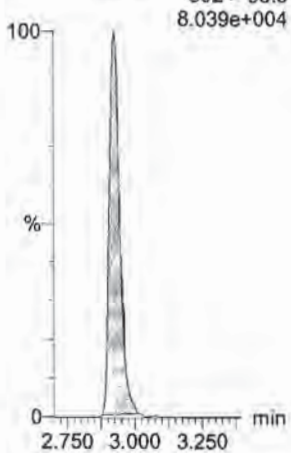
13C2-6:2 FTS



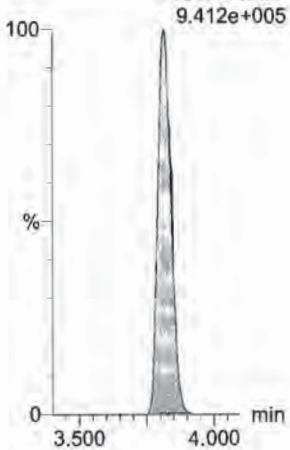
13C2-PFOA



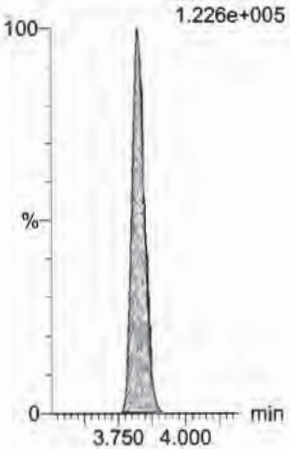
13C3-PFBS



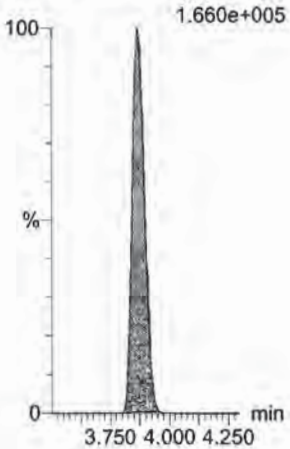
13C5-PFNA



13C8-PFOSA



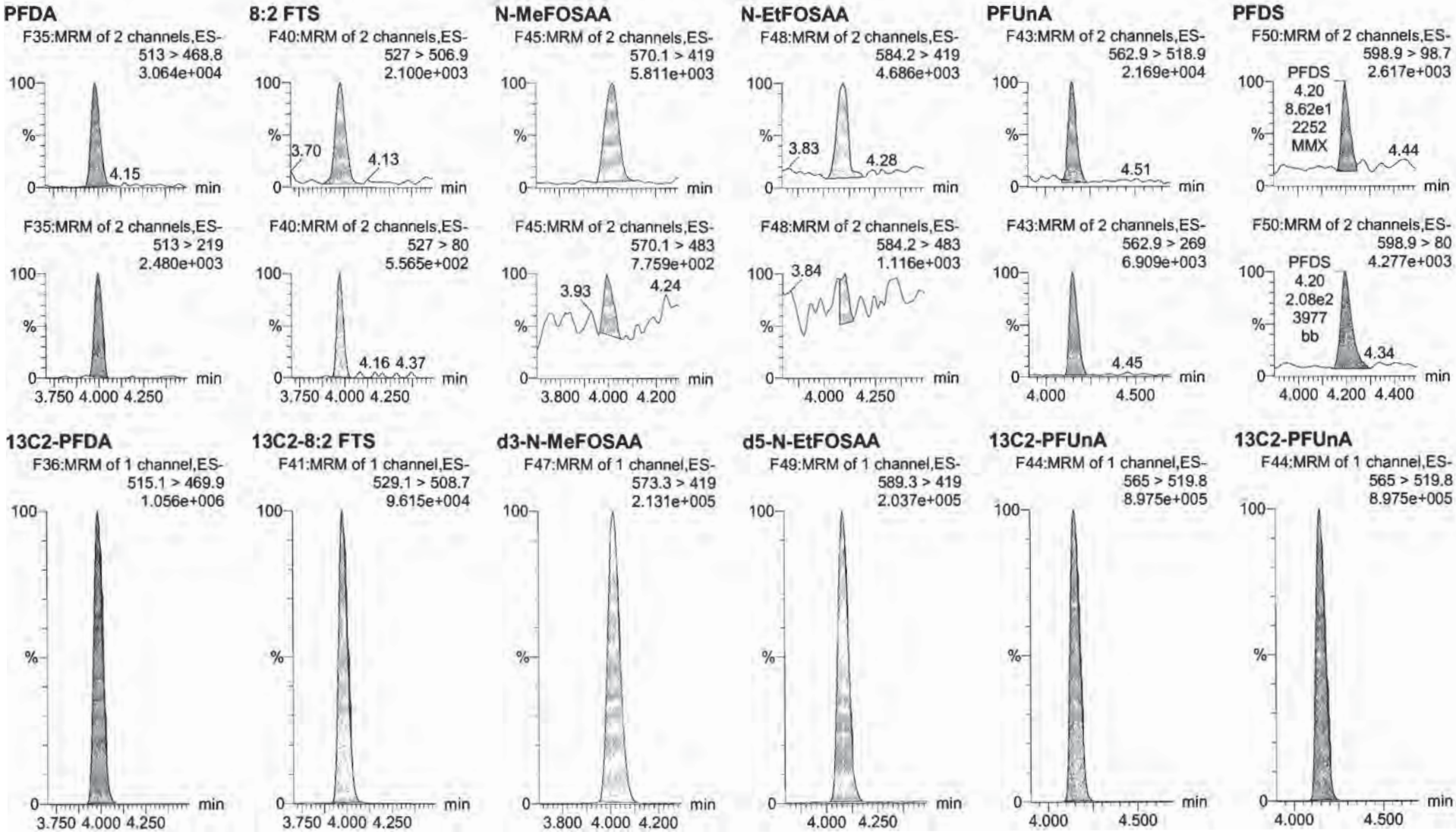
13C8-PFOS



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

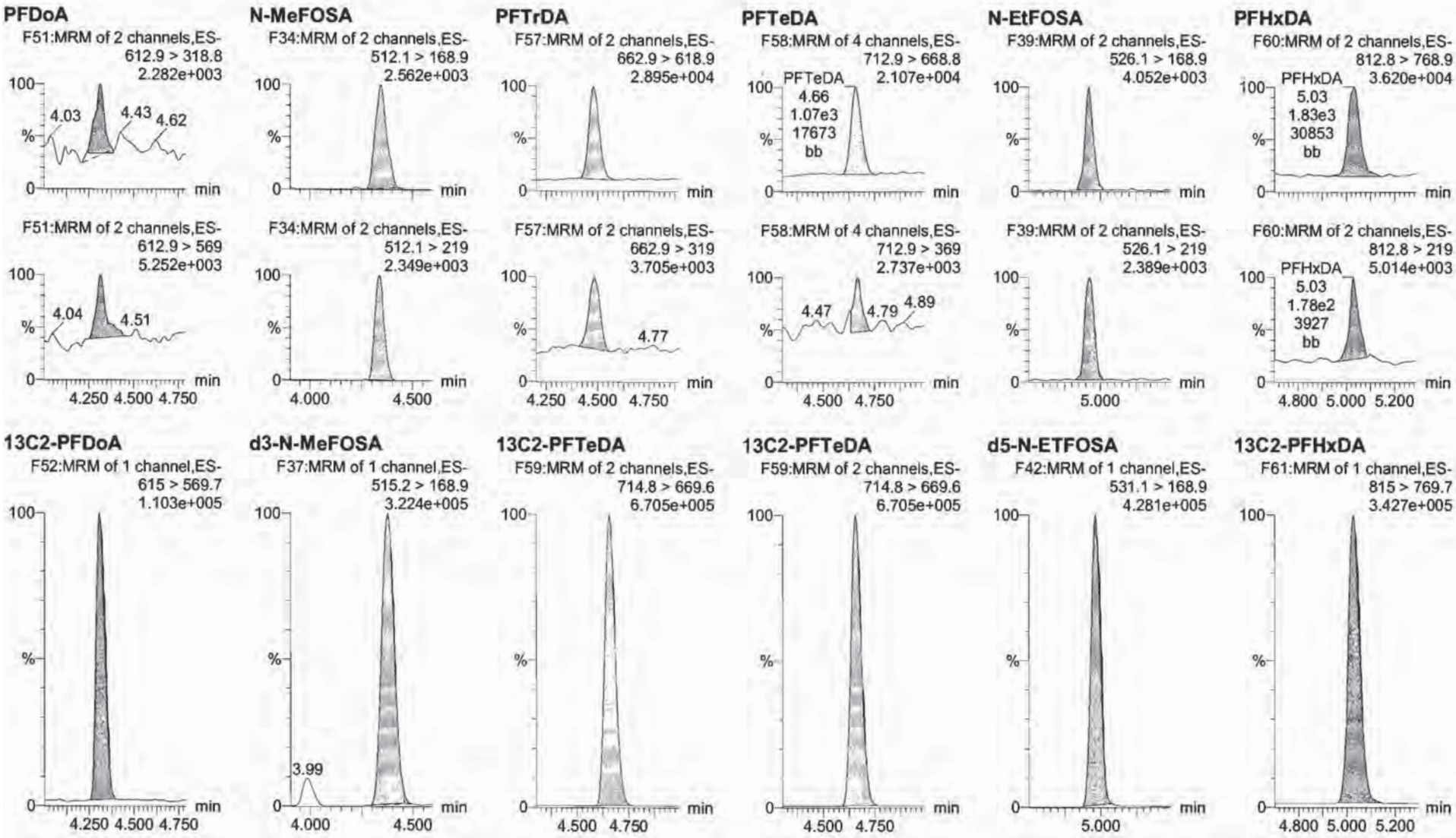
Name: 170731M2_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107



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_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107

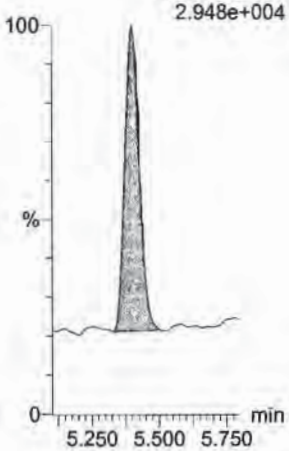


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

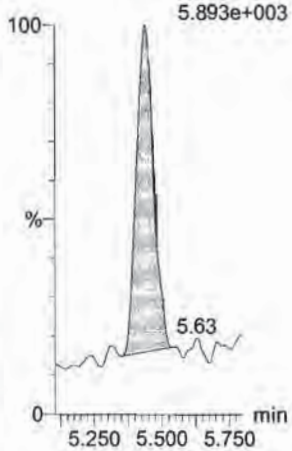
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107

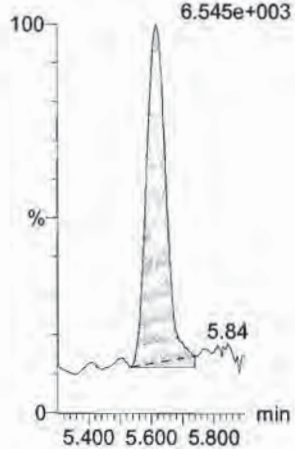
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
2.948e+004



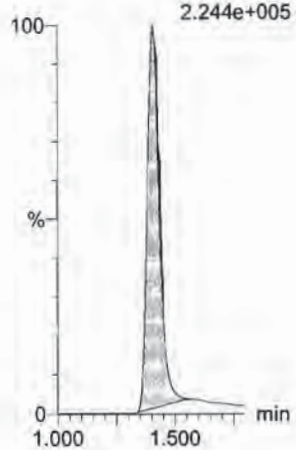
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
5.893e+003



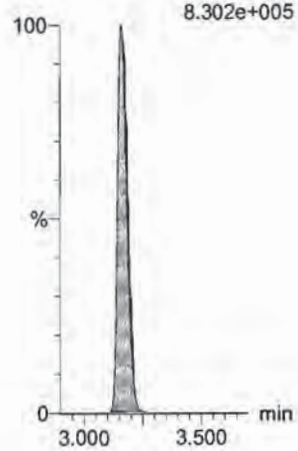
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
6.545e+003



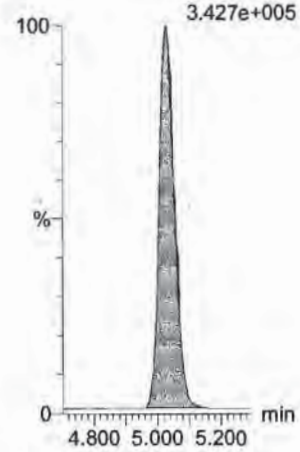
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.244e+005



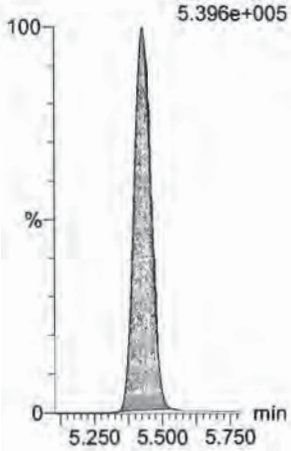
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.302e+005



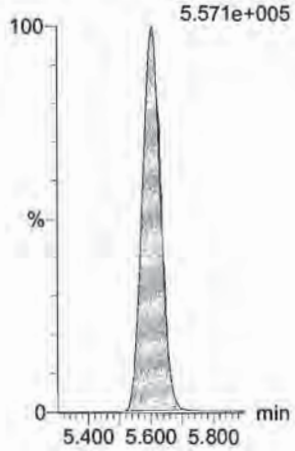
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.427e+005



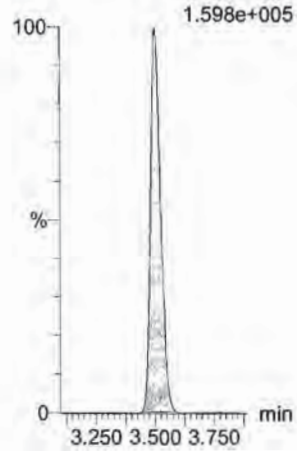
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.396e+005



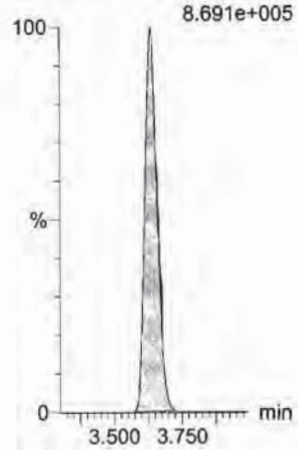
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.571e+005



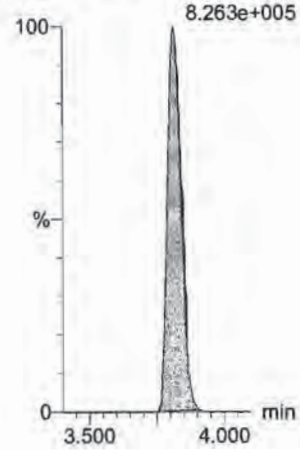
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.598e+005



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

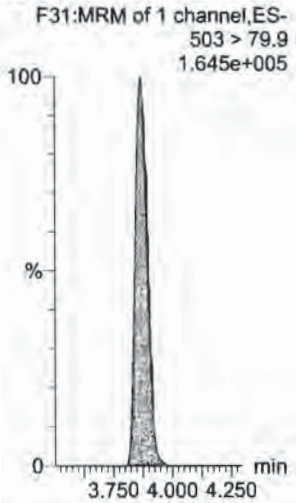


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

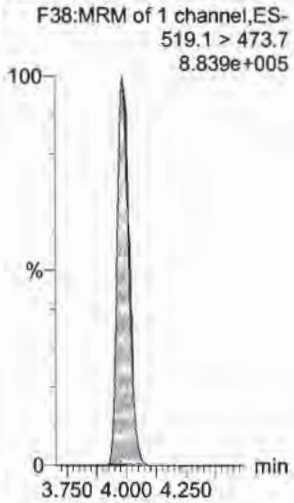
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_2, Date: 01-Aug-2017, Time: 00:39:54, ID: ST170731M2-1 PFC CS-2 17G3107, Description: PFC CS-2 17G3107

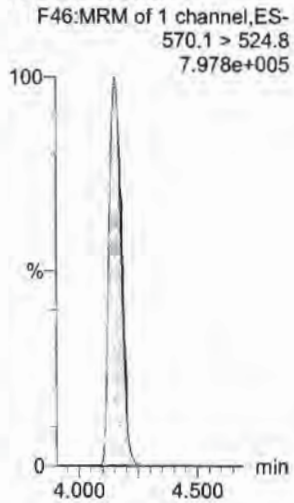
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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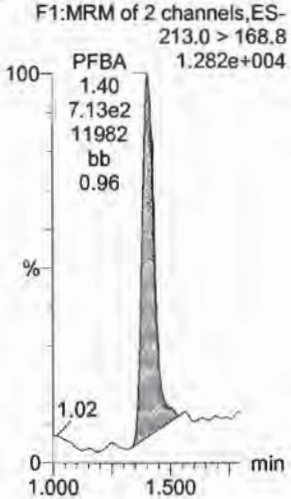
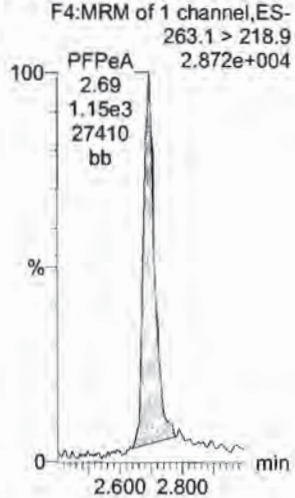
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_3, Date: 01-Aug-2017, Time: 00:50:40, ID: ST170731M2-2 PFC CS-1 17G3108, Description: PFC CS-1 17G3108

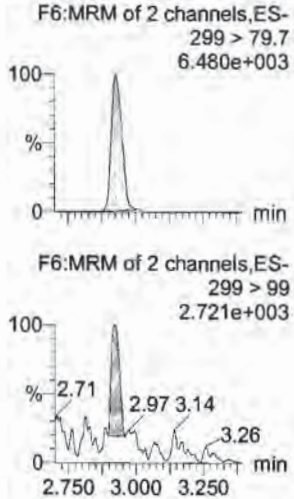
PFBA



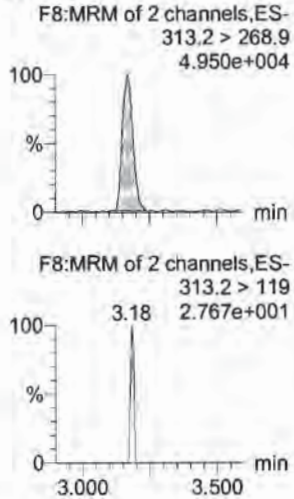
PFPeA



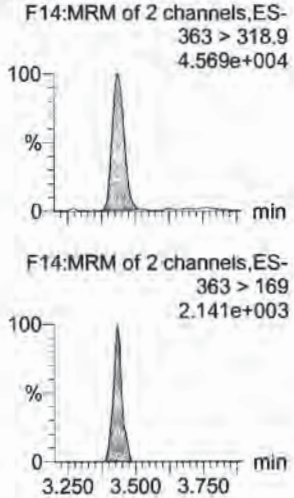
PFBS



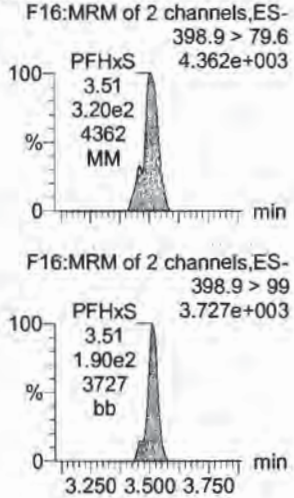
PFHxA



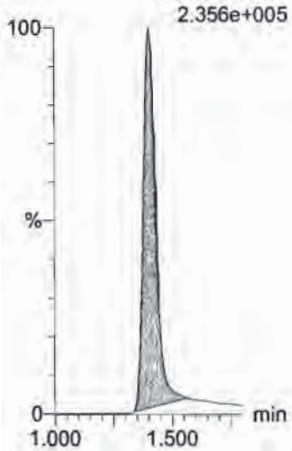
PFHpA



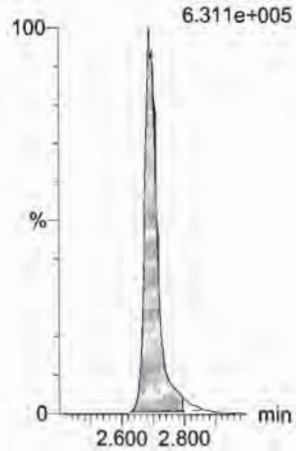
PFHxS



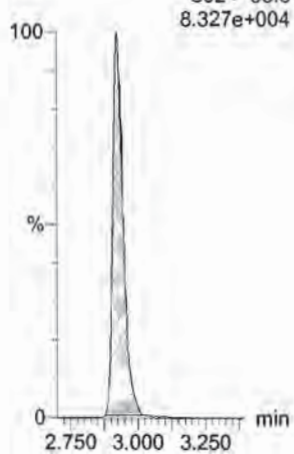
13C3-PFBA



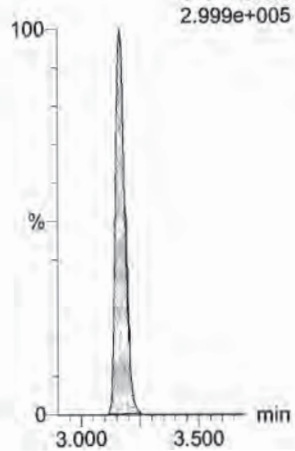
13C3-PFPeA



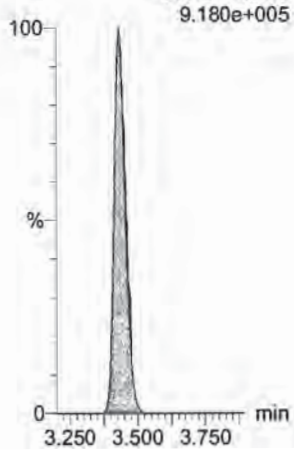
13C3-PFBS



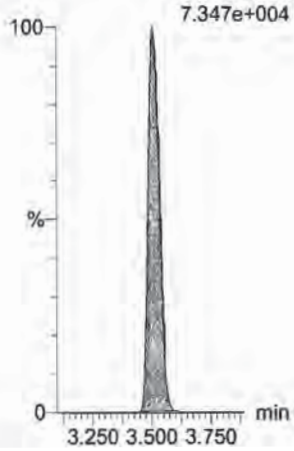
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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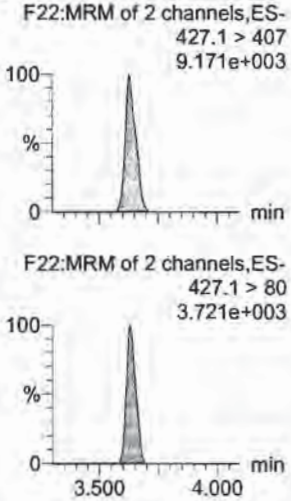
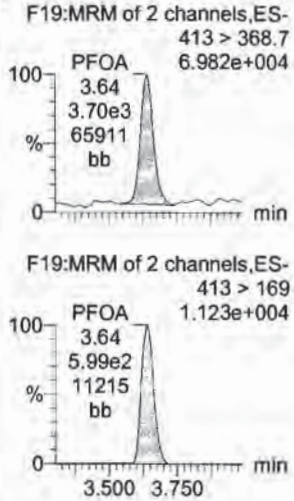
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_3, Date: 01-Aug-2017, Time: 00:50:40, ID: ST170731M2-2 PFC CS-1 17G3108, Description: PFC CS-1 17G3108

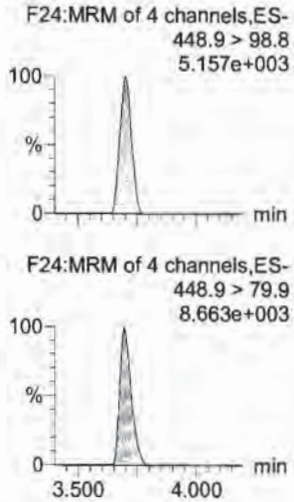
6:2 FTS



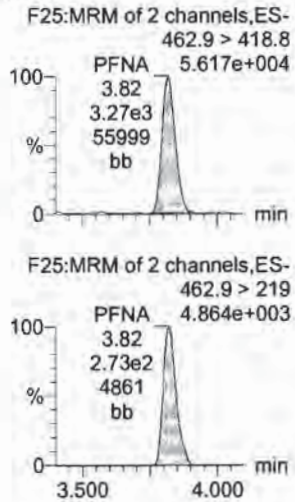
PFOA



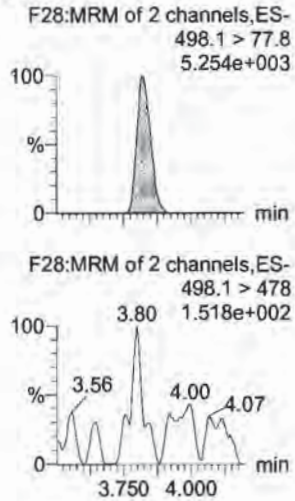
PFHpS



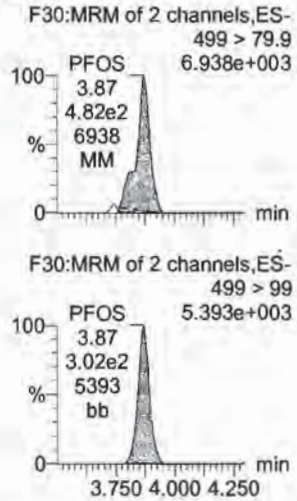
PFNA



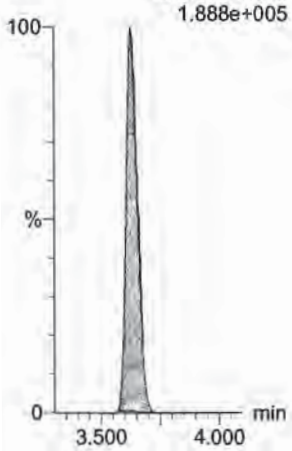
PFOSA



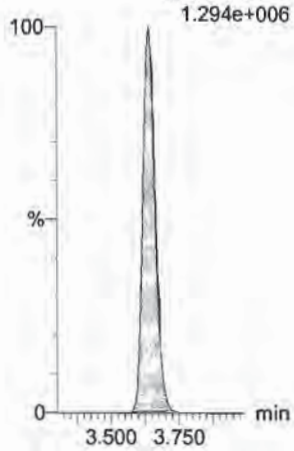
PFOS



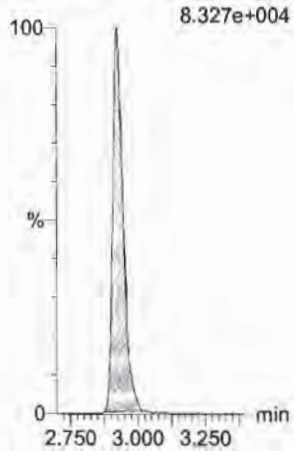
13C2-6:2 FTS



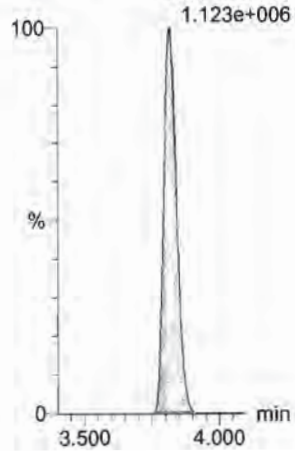
13C2-PFOA



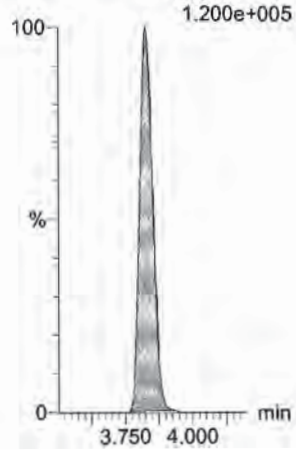
13C3-PFBS



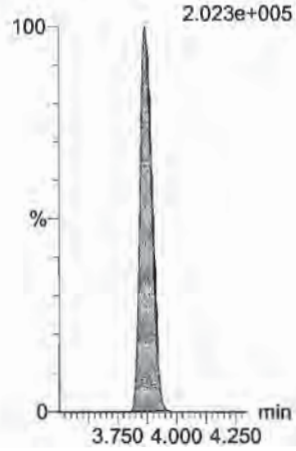
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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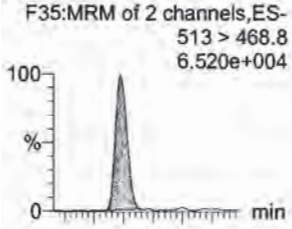
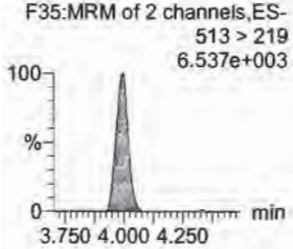
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

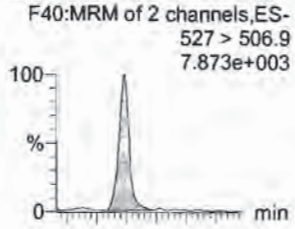
Name: 170731M2_3, Date: 01-Aug-2017, Time: 00:50:40, ID: ST170731M2-2 PFC CS-1 17G3108, Description: PFC CS-1 17G3108

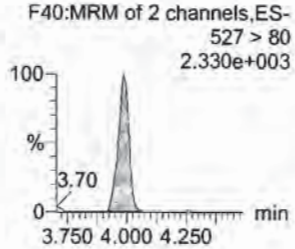
PFDA



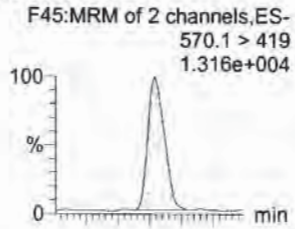


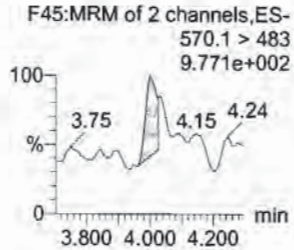
8:2 FTS



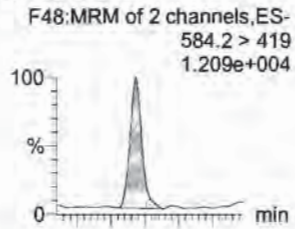


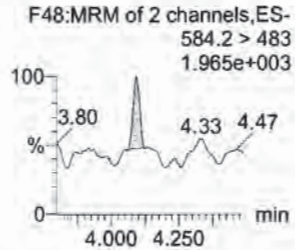
N-MeFOSAA



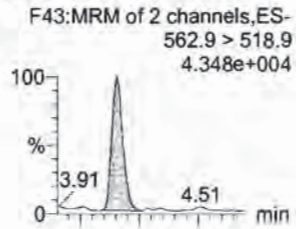


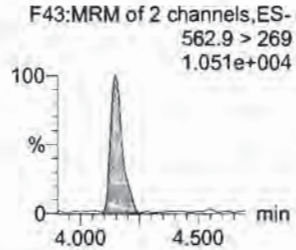
N-EtFOSAA



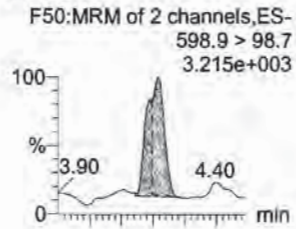


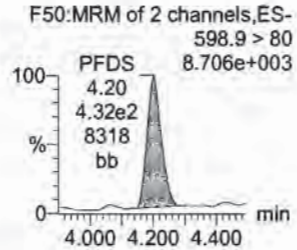
PFUnA



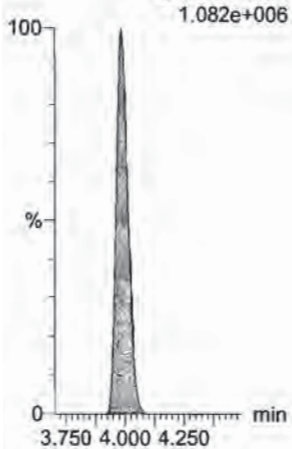


PFDS

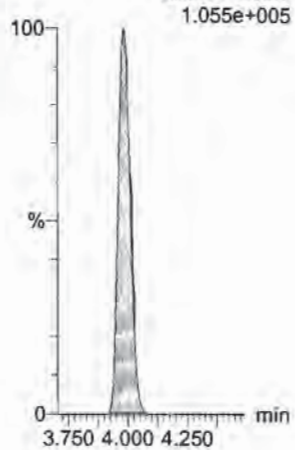




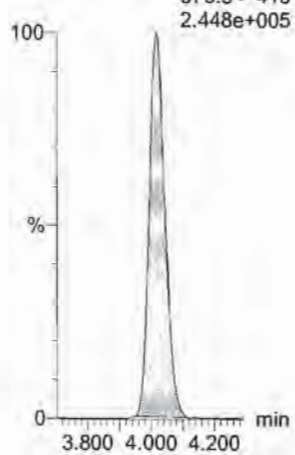
13C2-PFDA



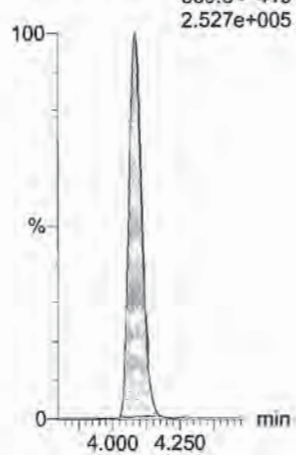
13C2-8:2 FTS



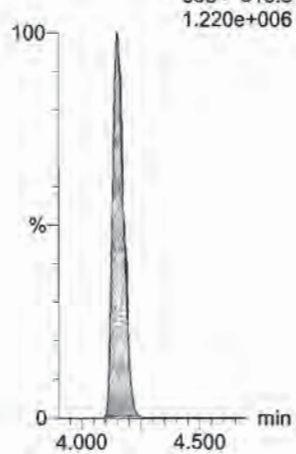
d3-N-MeFOSAA



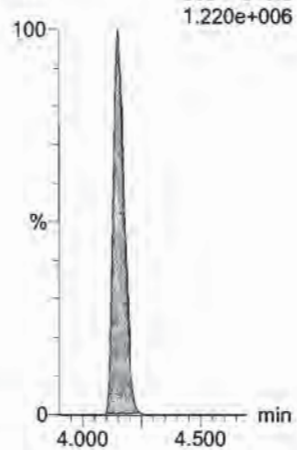
d5-N-EtFOSAA



13C2-PFUnA



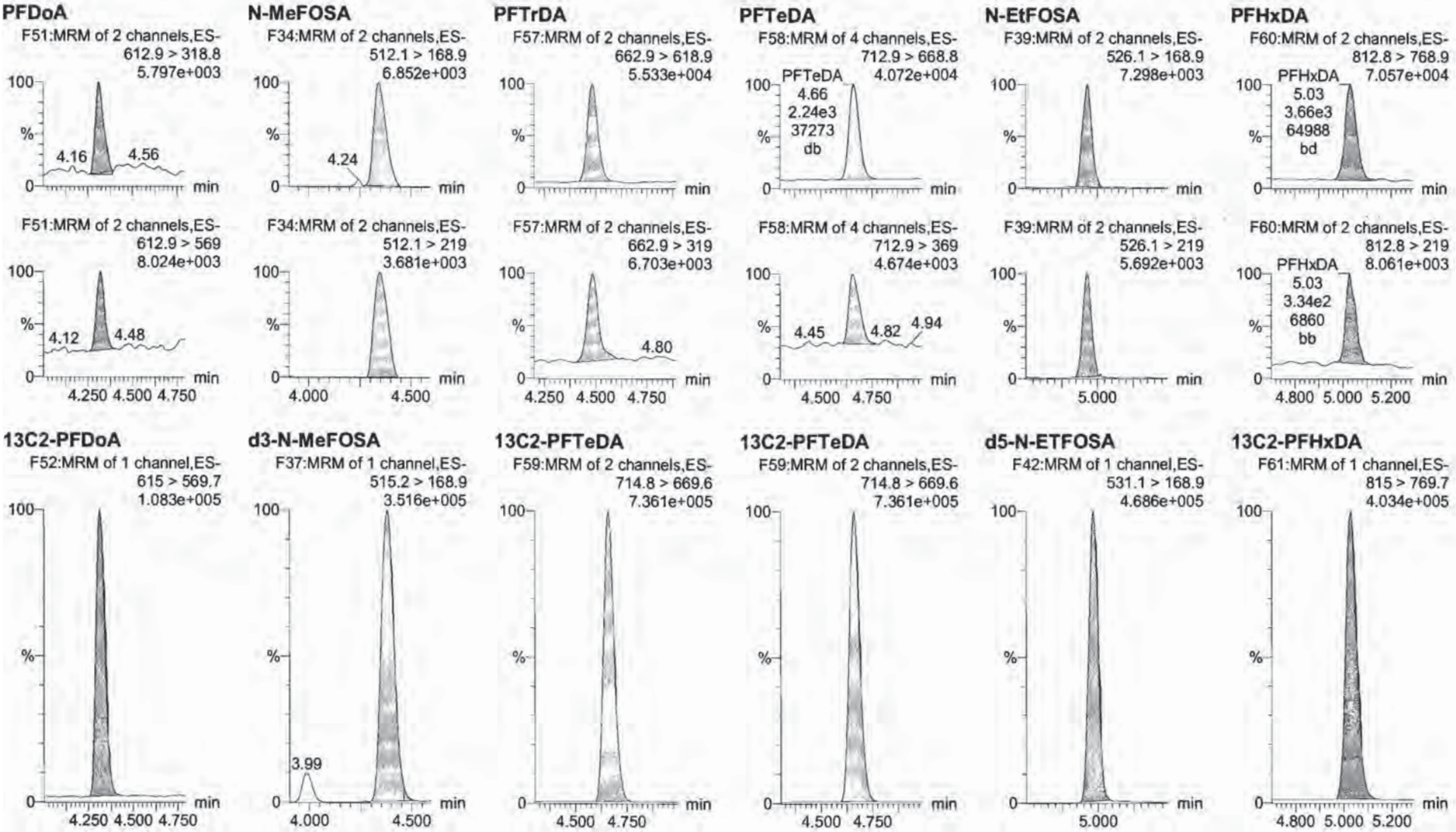
13C2-PFUnA



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

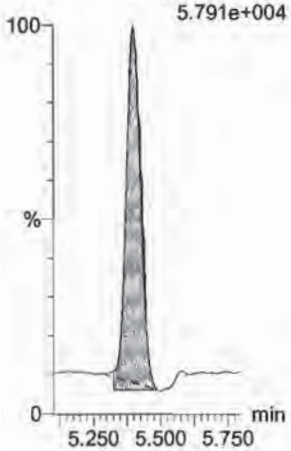


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

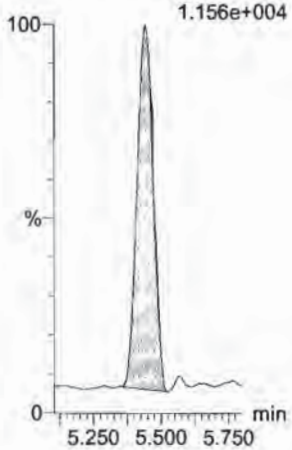
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_3, Date: 01-Aug-2017, Time: 00:50:40, ID: ST170731M2-2 PFC CS-1 17G3108, Description: PFC CS-1 17G3108

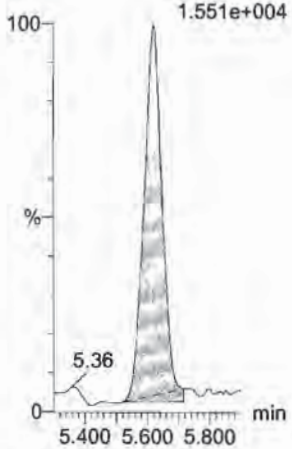
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
5.791e+004



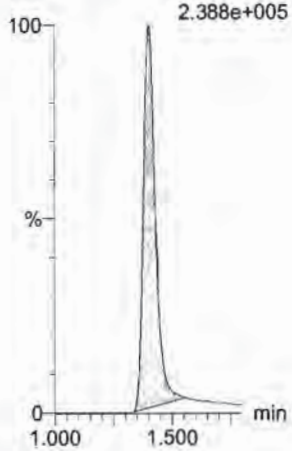
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.156e+004



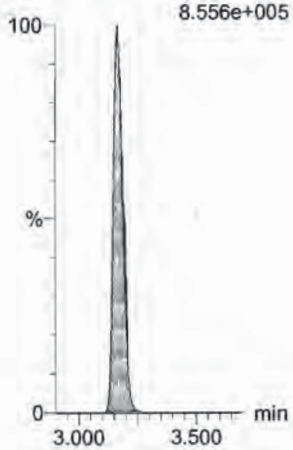
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.551e+004



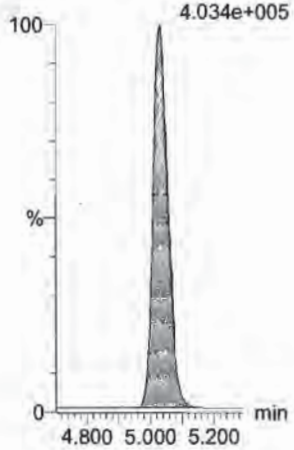
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.388e+005



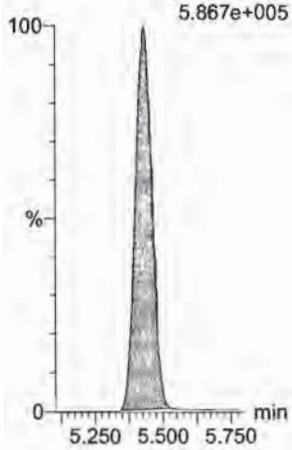
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.556e+005



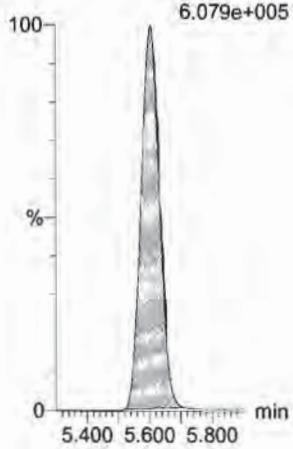
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.034e+005



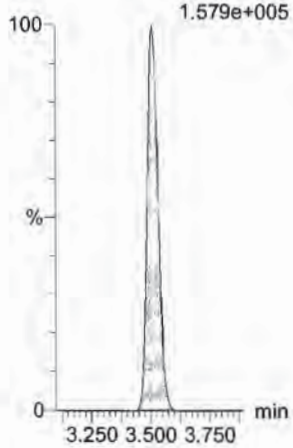
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.867e+005



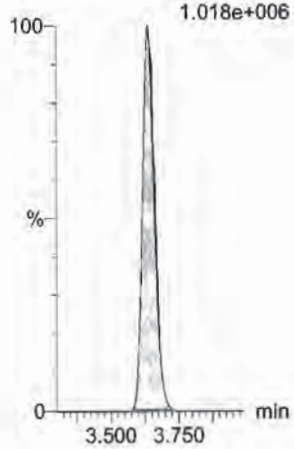
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
6.079e+005



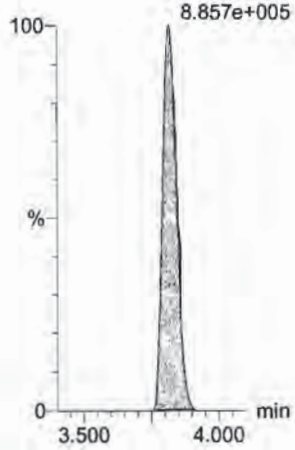
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.579e+005



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
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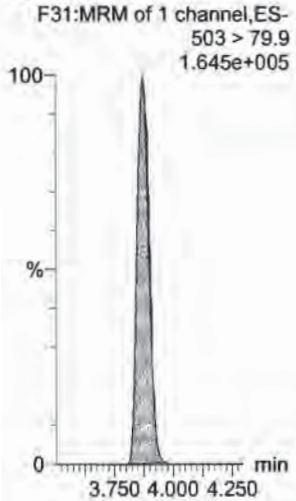
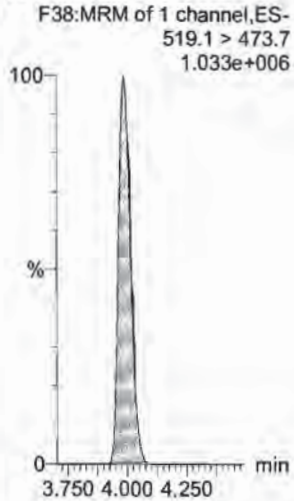
Name: 170731M2_3, Date: 01-Aug-2017, Time: 00:50:40, ID: ST170731M2-2 PFC CS-1 17G3108, Description: PFC CS-1 17G3108

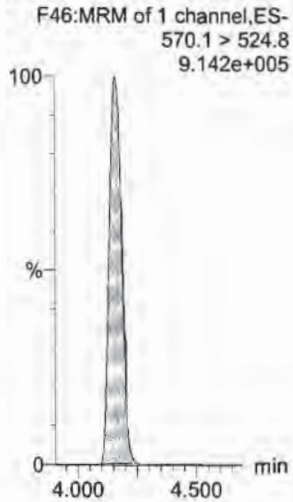
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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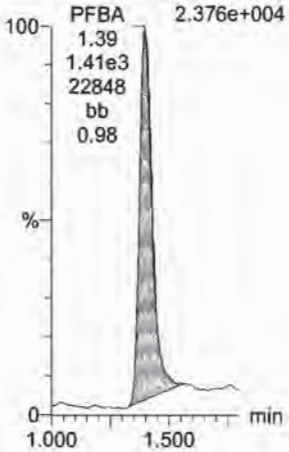
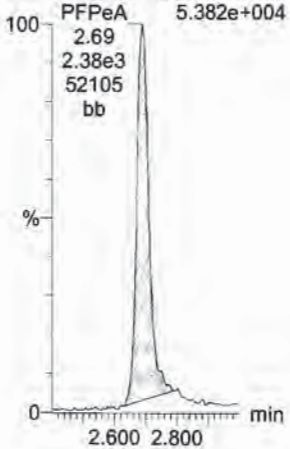
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_4, Date: 01-Aug-2017, Time: 01:01:18, ID: ST170731M2-3 PFC CS0 17G3109, Description: PFC CS0 17G3109

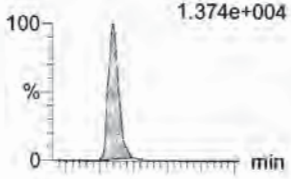
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
2.376e+004



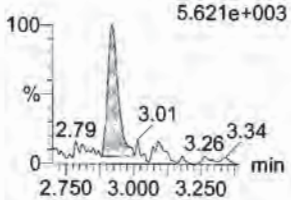
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
5.382e+004



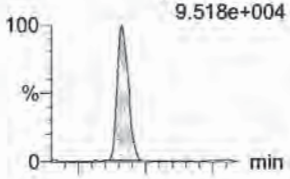
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
1.374e+004



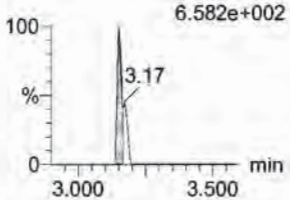
F6:MRM of 2 channels,ES-
299 > 99
5.621e+003



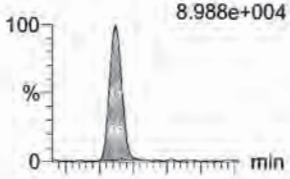
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
9.518e+004



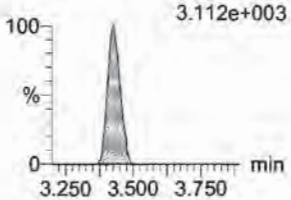
F8:MRM of 2 channels,ES-
313.2 > 119
6.582e+002



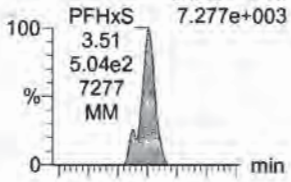
PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
8.988e+004



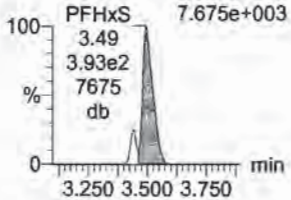
F14:MRM of 2 channels,ES-
363 > 169
3.112e+003



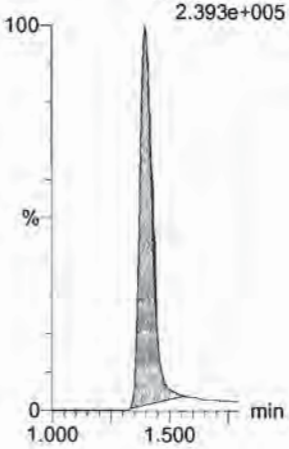
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
7.277e+003



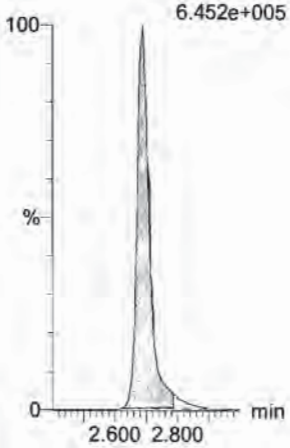
F16:MRM of 2 channels,ES-
398.9 > 99
7.675e+003



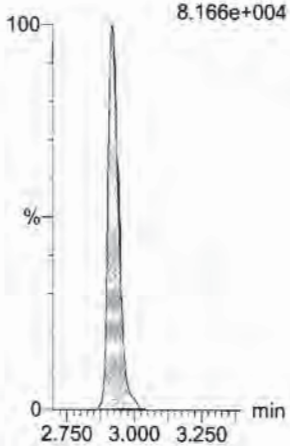
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
2.393e+005



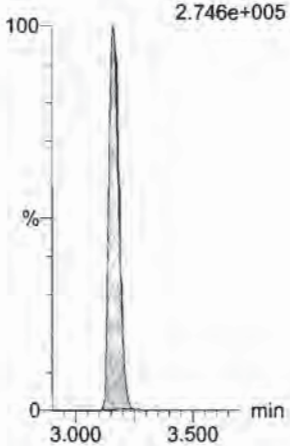
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
6.452e+005



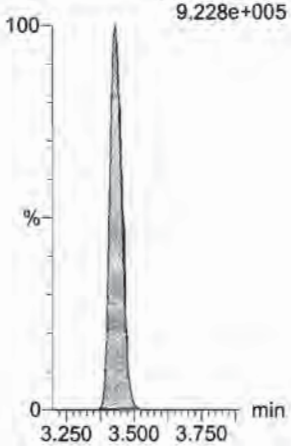
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
8.166e+004



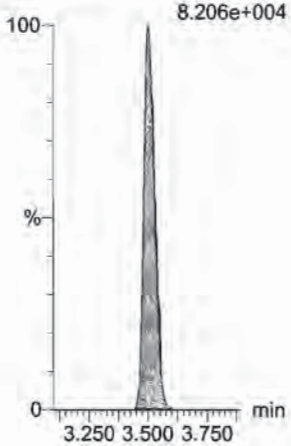
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
2.746e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
9.228e+005



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
8.206e+004



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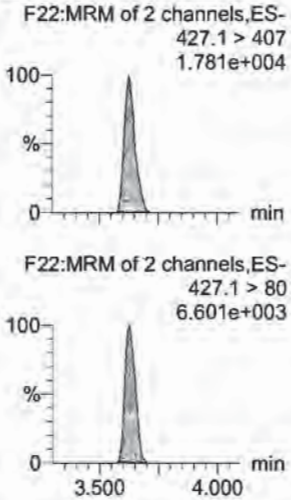
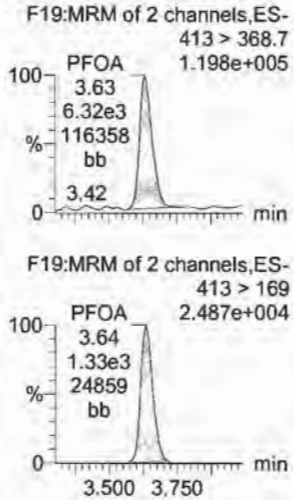
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_4, Date: 01-Aug-2017, Time: 01:01:18, ID: ST170731M2-3 PFC CS0 17G3109, Description: PFC CS0 17G3109

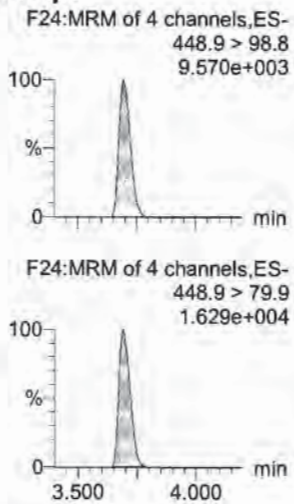
6:2 FTS



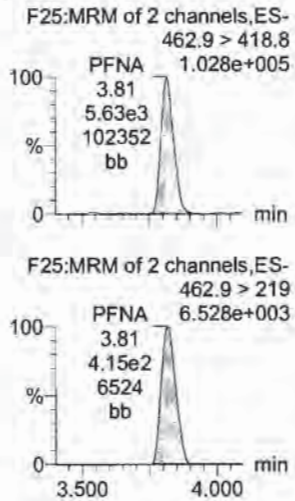
PFOA



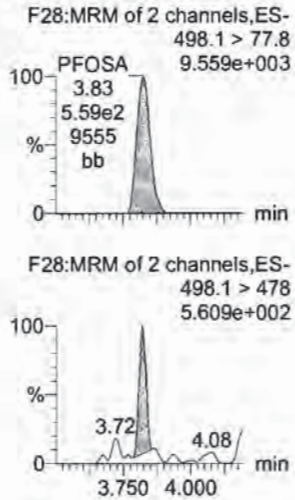
PFHpS



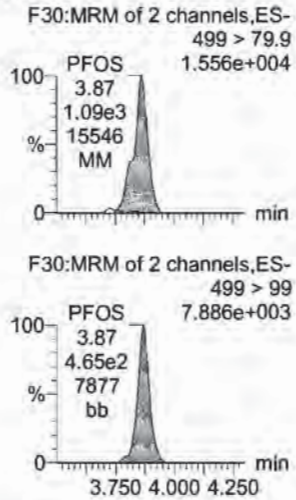
PFNA



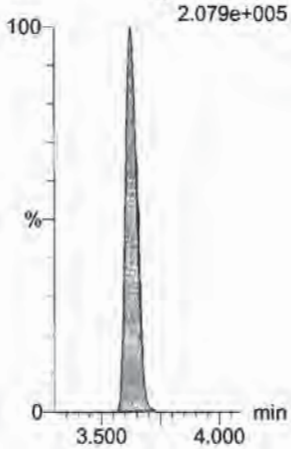
PFOSA



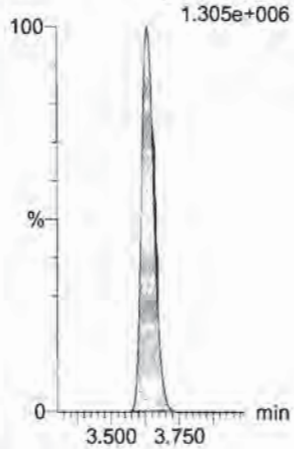
PFOS



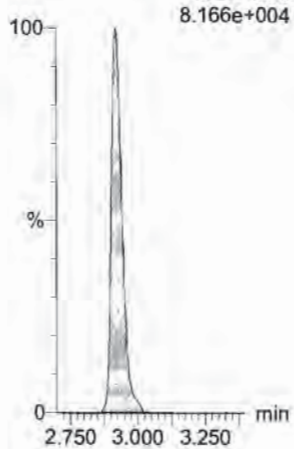
13C2-6:2 FTS



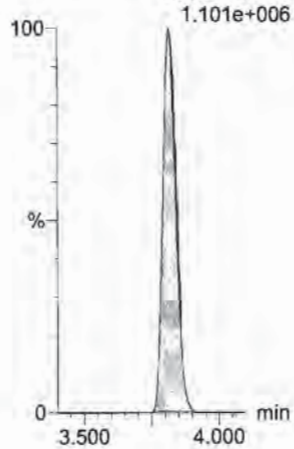
13C2-PFOA



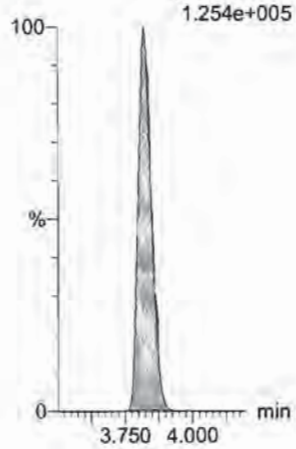
13C3-PFBS



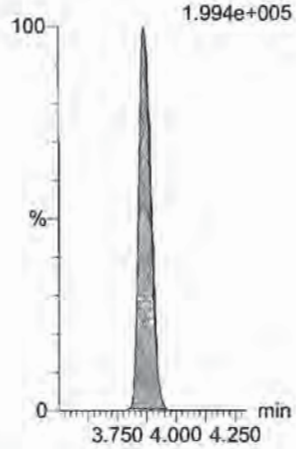
13C5-PFNA



13C8-PFOSA



13C8-PFOS



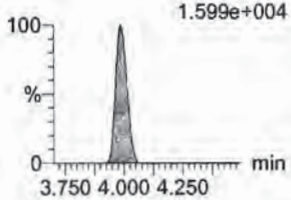
Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

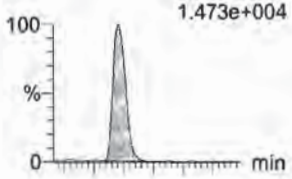
Name: 170731M2_4, Date: 01-Aug-2017, Time: 01:01:18, ID: ST170731M2-3 PFC CS0 17G3109, Description: PFC CS0 17G3109

PFDA
F35:MRM of 2 channels,ES-
513 > 468.8
1.255e+005

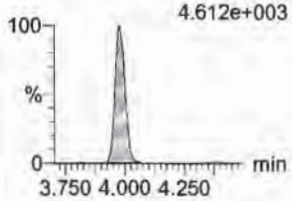
F35:MRM of 2 channels,ES-
513 > 219
1.599e+004



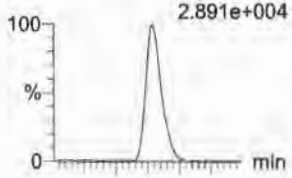
8:2 FTS
F40:MRM of 2 channels,ES-
527 > 506.9
1.473e+004



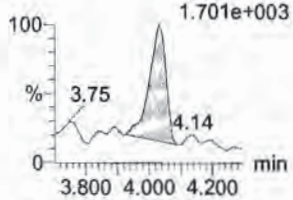
F40:MRM of 2 channels,ES-
527 > 80
4.612e+003



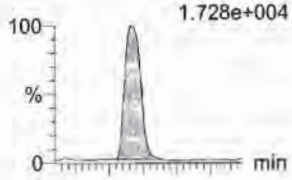
N-MeFOSAA
F45:MRM of 2 channels,ES-
570.1 > 419
2.891e+004



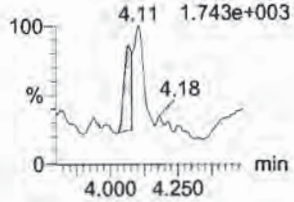
F45:MRM of 2 channels,ES-
570.1 > 483
1.701e+003



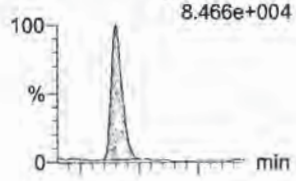
N-EtFOSAA
F48:MRM of 2 channels,ES-
584.2 > 419
1.728e+004



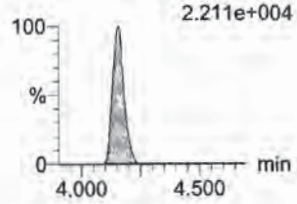
F48:MRM of 2 channels,ES-
584.2 > 483
1.743e+003



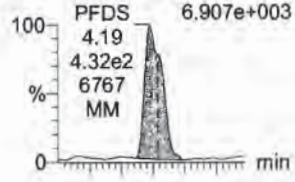
PFUnA
F43:MRM of 2 channels,ES-
562.9 > 518.9
8.466e+004



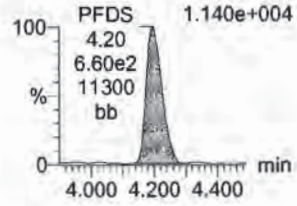
F43:MRM of 2 channels,ES-
562.9 > 269
2.211e+004



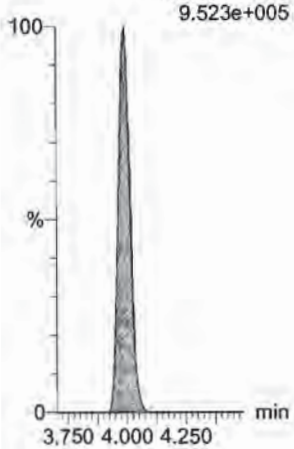
PFDS
F50:MRM of 2 channels,ES-
598.9 > 98.7
6.907e+003



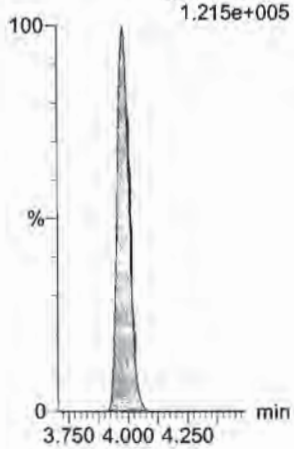
F50:MRM of 2 channels,ES-
598.9 > 80
1.140e+004



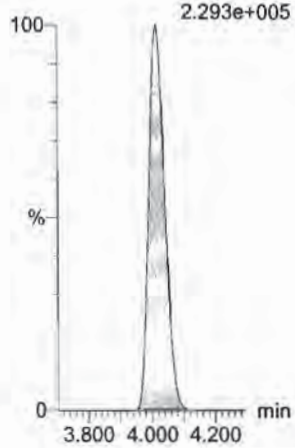
13C2-PFDA
F36:MRM of 1 channel,ES-
515.1 > 469.9
9.523e+005



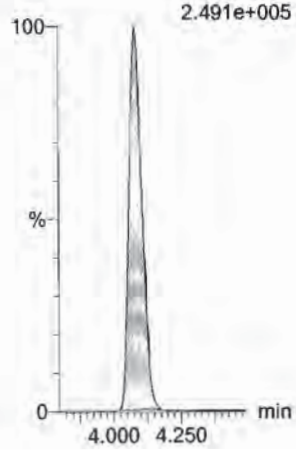
13C2-8:2 FTS
F41:MRM of 1 channel,ES-
529.1 > 508.7
1.215e+005



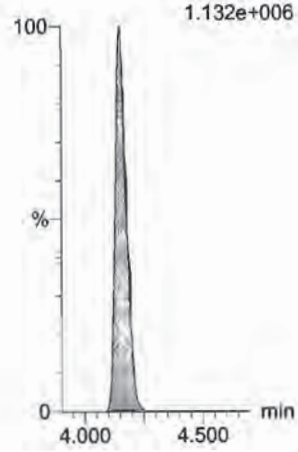
d3-N-MeFOSAA
F47:MRM of 1 channel,ES-
573.3 > 419
2.293e+005



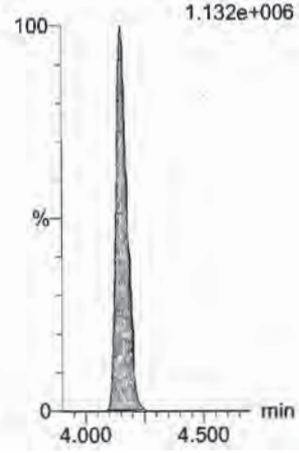
d5-N-EtFOSAA
F49:MRM of 1 channel,ES-
589.3 > 419
2.491e+005



13C2-PFUnA
F44:MRM of 1 channel,ES-
565 > 519.8
1.132e+006



13C2-PFUnA
F44:MRM of 1 channel,ES-
565 > 519.8
1.132e+006

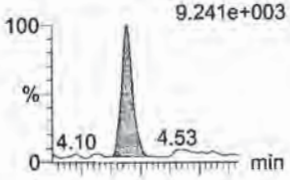


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

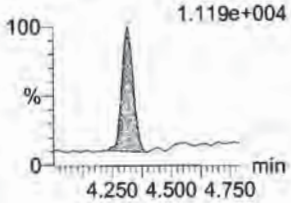
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_4, Date: 01-Aug-2017, Time: 01:01:18, ID: ST170731M2-3 PFC CS0 17G3109, Description: PFC CS0 17G3109

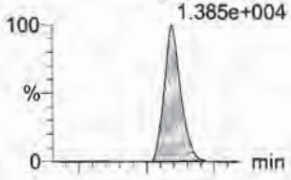
PFDoA
F51:MRM of 2 channels,ES-
612.9 > 318.8
9.241e+003



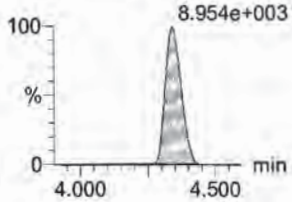
F51:MRM of 2 channels,ES-
612.9 > 569
1.119e+004



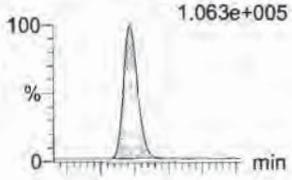
N-MeFOSA
F34:MRM of 2 channels,ES-
512.1 > 168.9
1.385e+004



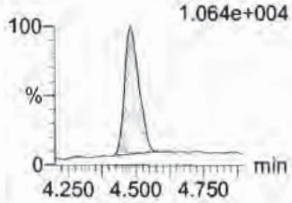
F34:MRM of 2 channels,ES-
512.1 > 219
8.954e+003



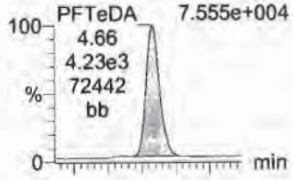
PFTrDA
F57:MRM of 2 channels,ES-
662.9 > 618.9
1.063e+005



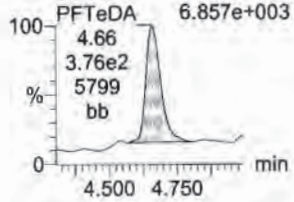
F57:MRM of 2 channels,ES-
662.9 > 319
1.064e+004



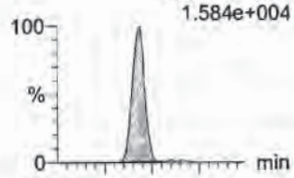
PFTeDA
F58:MRM of 4 channels,ES-
712.9 > 668.8
7.555e+004



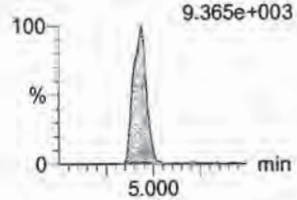
F58:MRM of 4 channels,ES-
712.9 > 369
6.857e+003



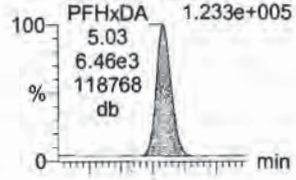
N-EtFOSA
F39:MRM of 2 channels,ES-
526.1 > 168.9
1.584e+004



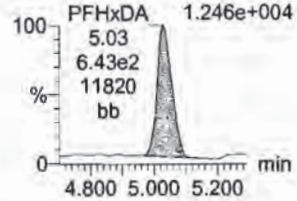
F39:MRM of 2 channels,ES-
526.1 > 219
9.365e+003



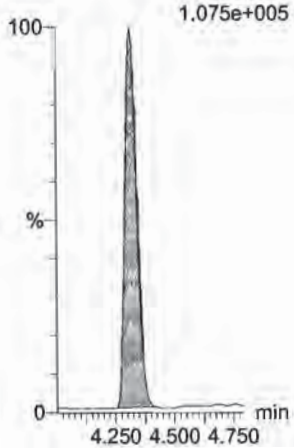
PFHxDA
F60:MRM of 2 channels,ES-
812.8 > 768.9
1.233e+005



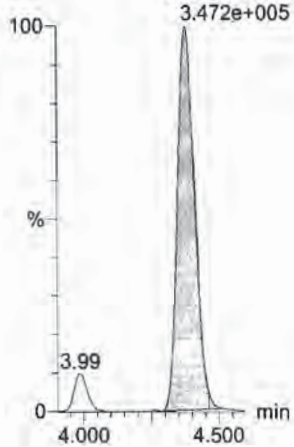
F60:MRM of 2 channels,ES-
812.8 > 219
1.246e+004



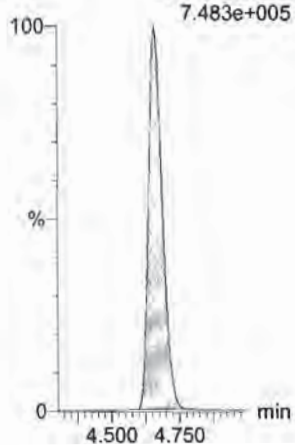
13C2-PFDoA
F52:MRM of 1 channel,ES-
615 > 569.7
1.075e+005



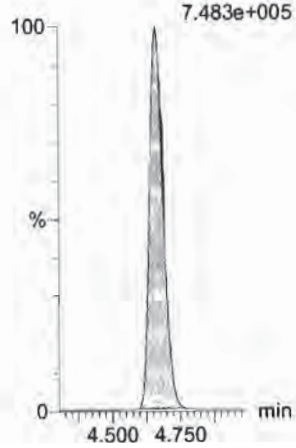
d3-N-MeFOSA
F37:MRM of 1 channel,ES-
515.2 > 168.9
3.472e+005



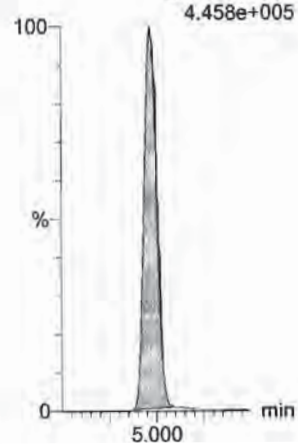
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
7.483e+005



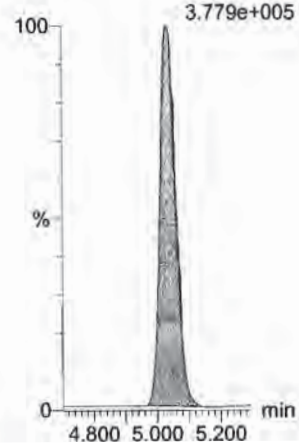
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
7.483e+005



d5-N-ETFOSA
F42:MRM of 1 channel,ES-
531.1 > 168.9
4.458e+005



13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.779e+005

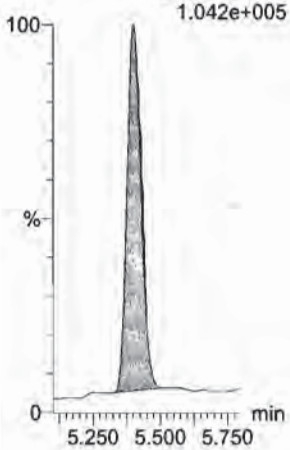


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

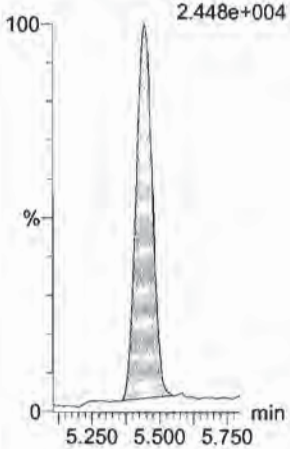
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_4, Date: 01-Aug-2017, Time: 01:01:18, ID: ST170731M2-3 PFC CS0 17G3109, Description: PFC CS0 17G3109

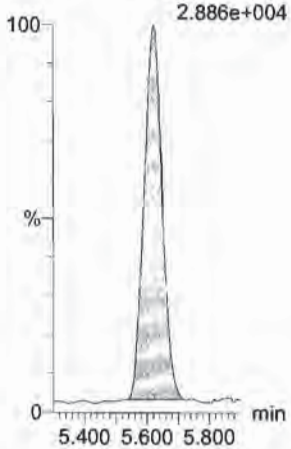
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.042e+005



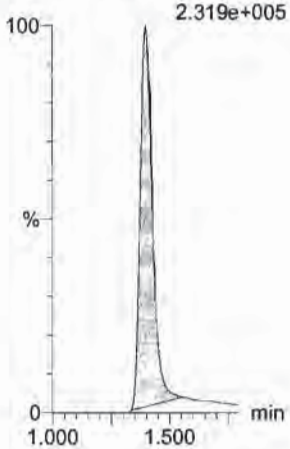
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.448e+004



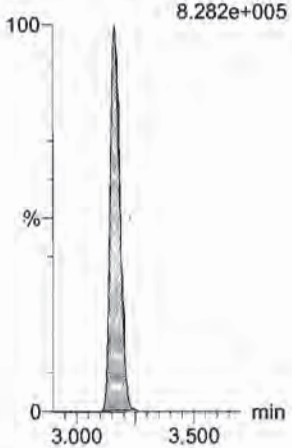
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.886e+004



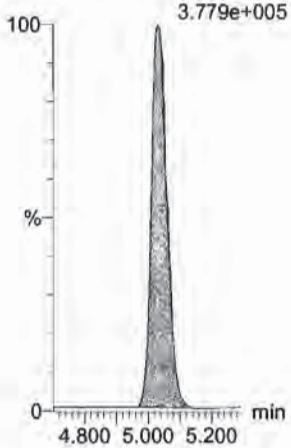
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.319e+005



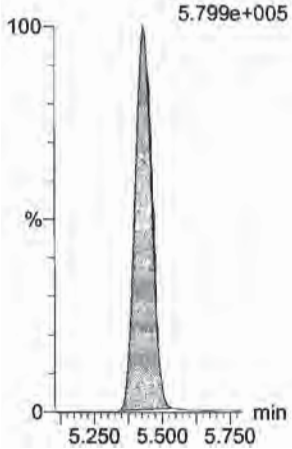
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.282e+005



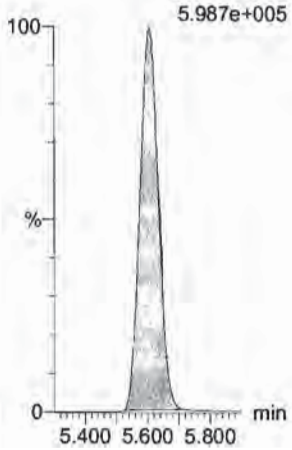
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.779e+005



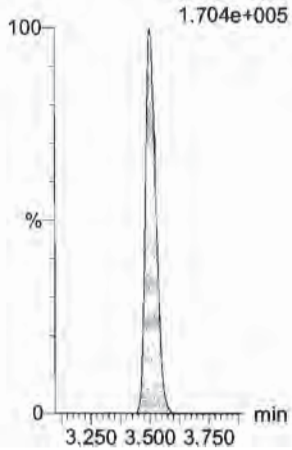
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.799e+005



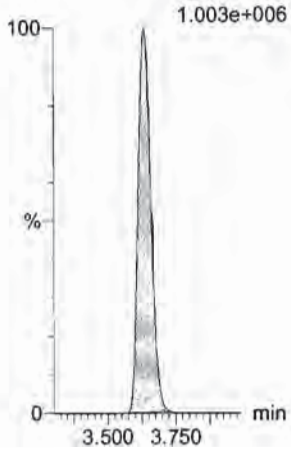
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.987e+005



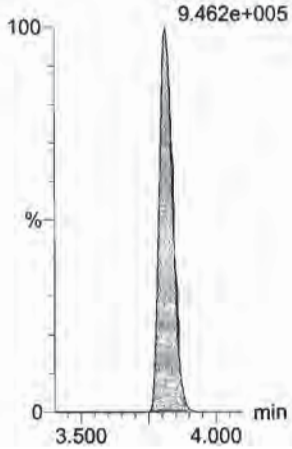
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.704e+005



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

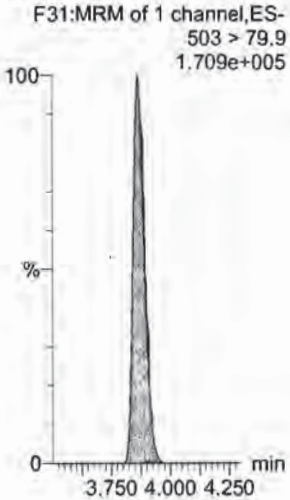


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

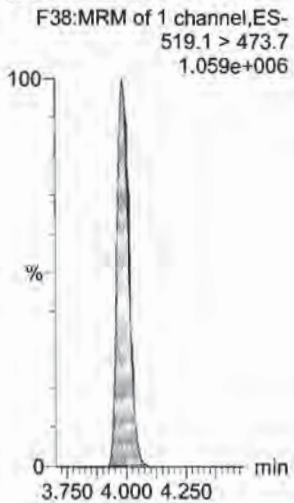
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_4, Date: 01-Aug-2017, Time: 01:01:18, ID: ST170731M2-3 PFC CS0 17G3109, Description: PFC CS0 17G3109

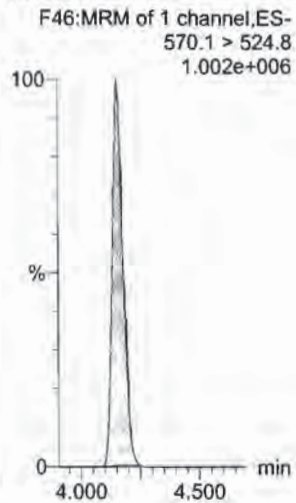
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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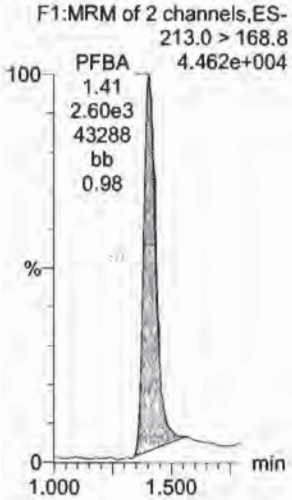
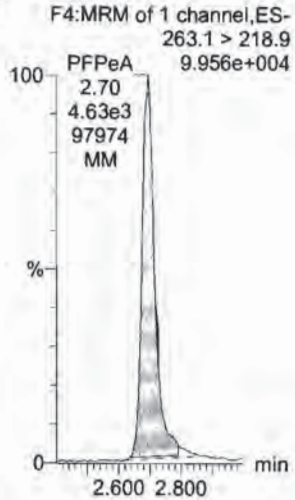
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

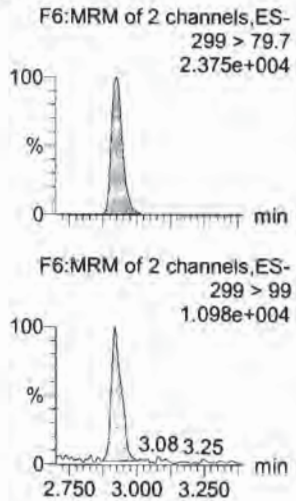
PFBA



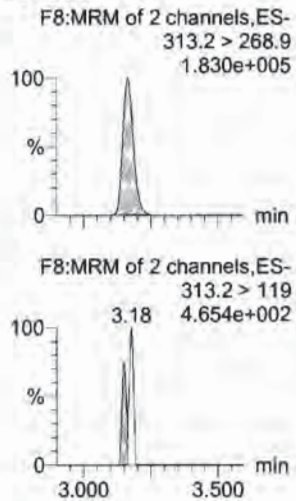
PFPeA



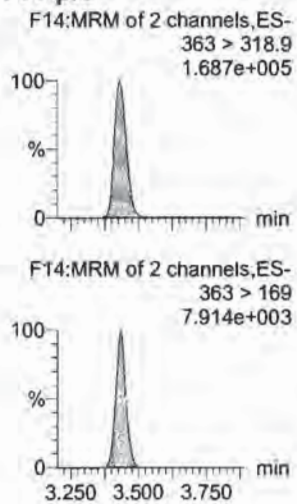
PFBS



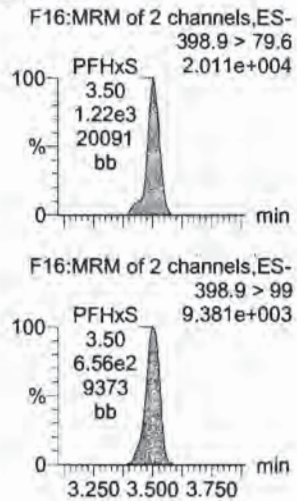
PFHxA



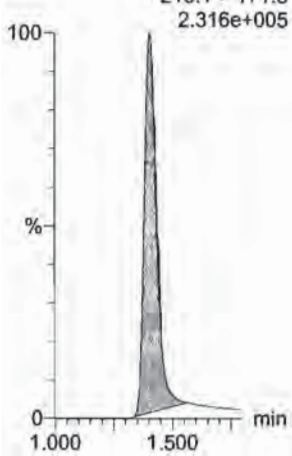
PFHpA



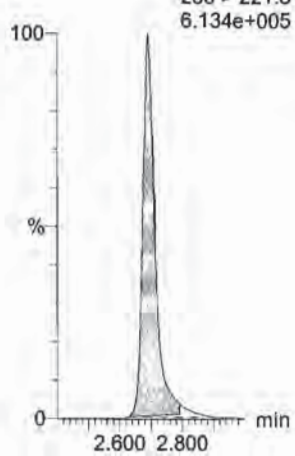
PFHxS



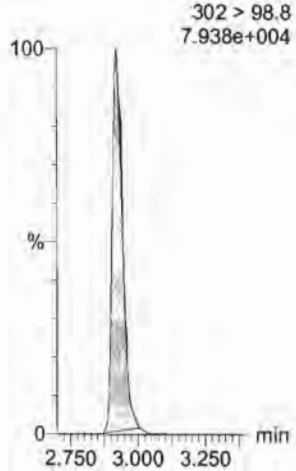
13C3-PFBA



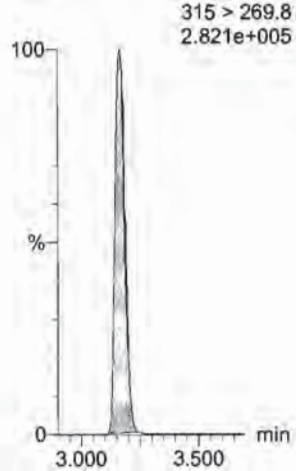
13C3-PFPeA



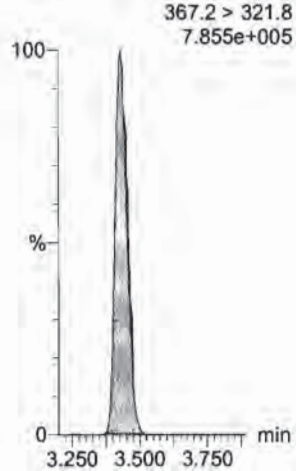
13C3-PFBS



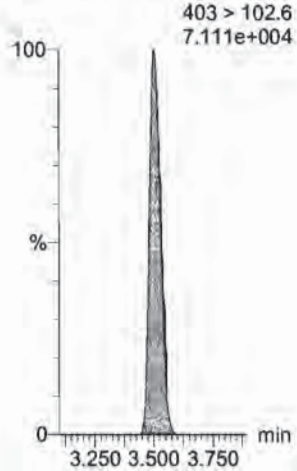
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS

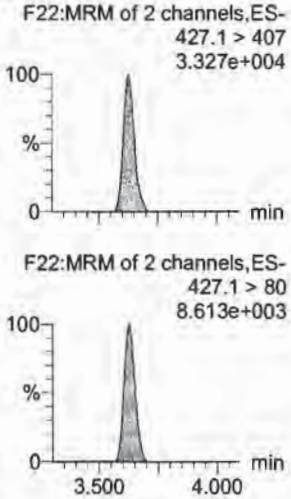


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

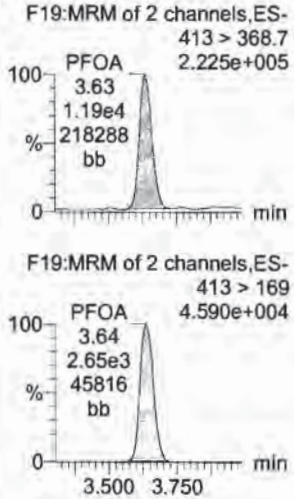
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

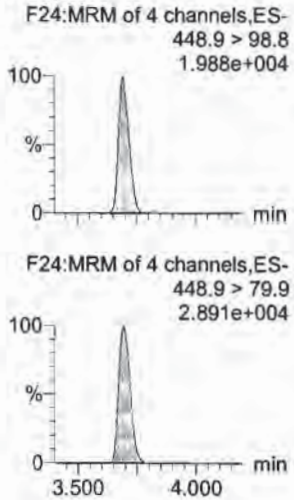
6:2 FTS



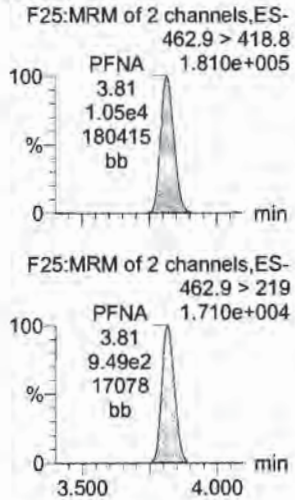
PFOA



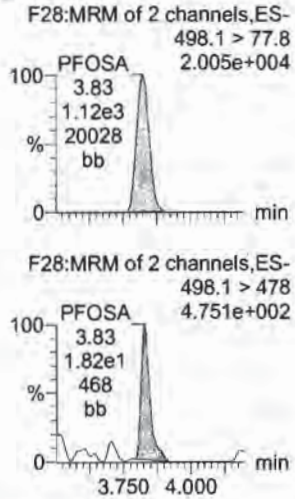
PFHpS



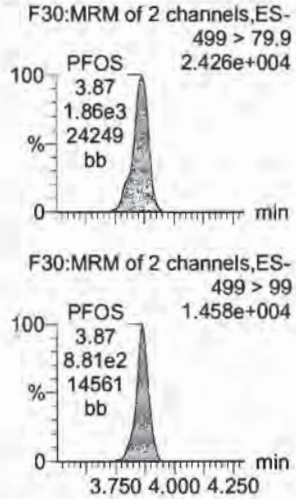
PFNA



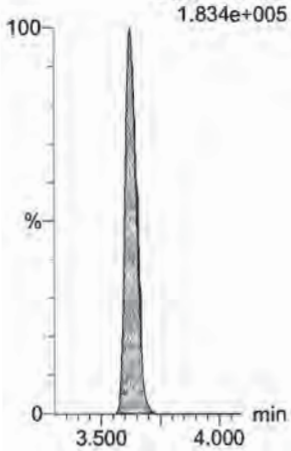
PFOSA



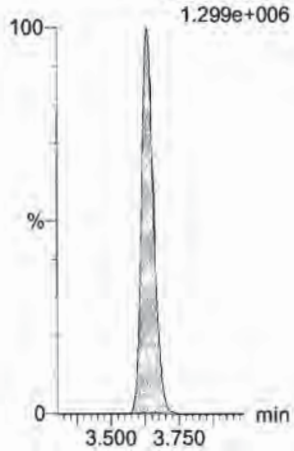
PFOS



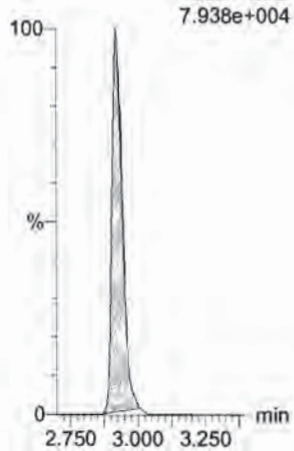
13C2-6:2 FTS



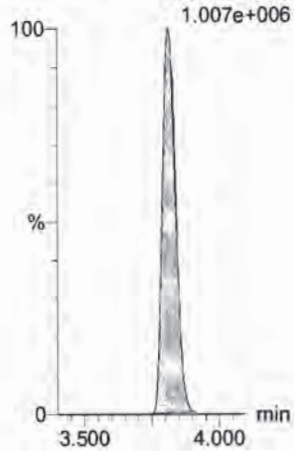
13C2-PFOA



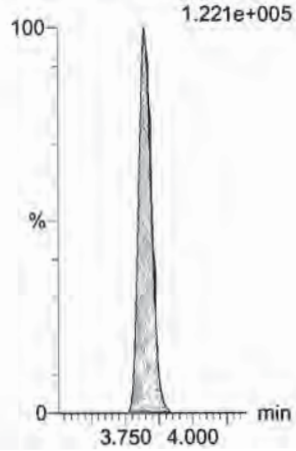
13C3-PFBS



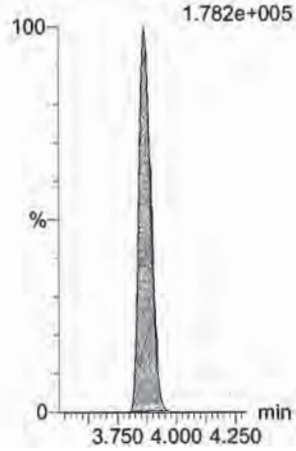
13C5-PFNA



13C8-PFOSA



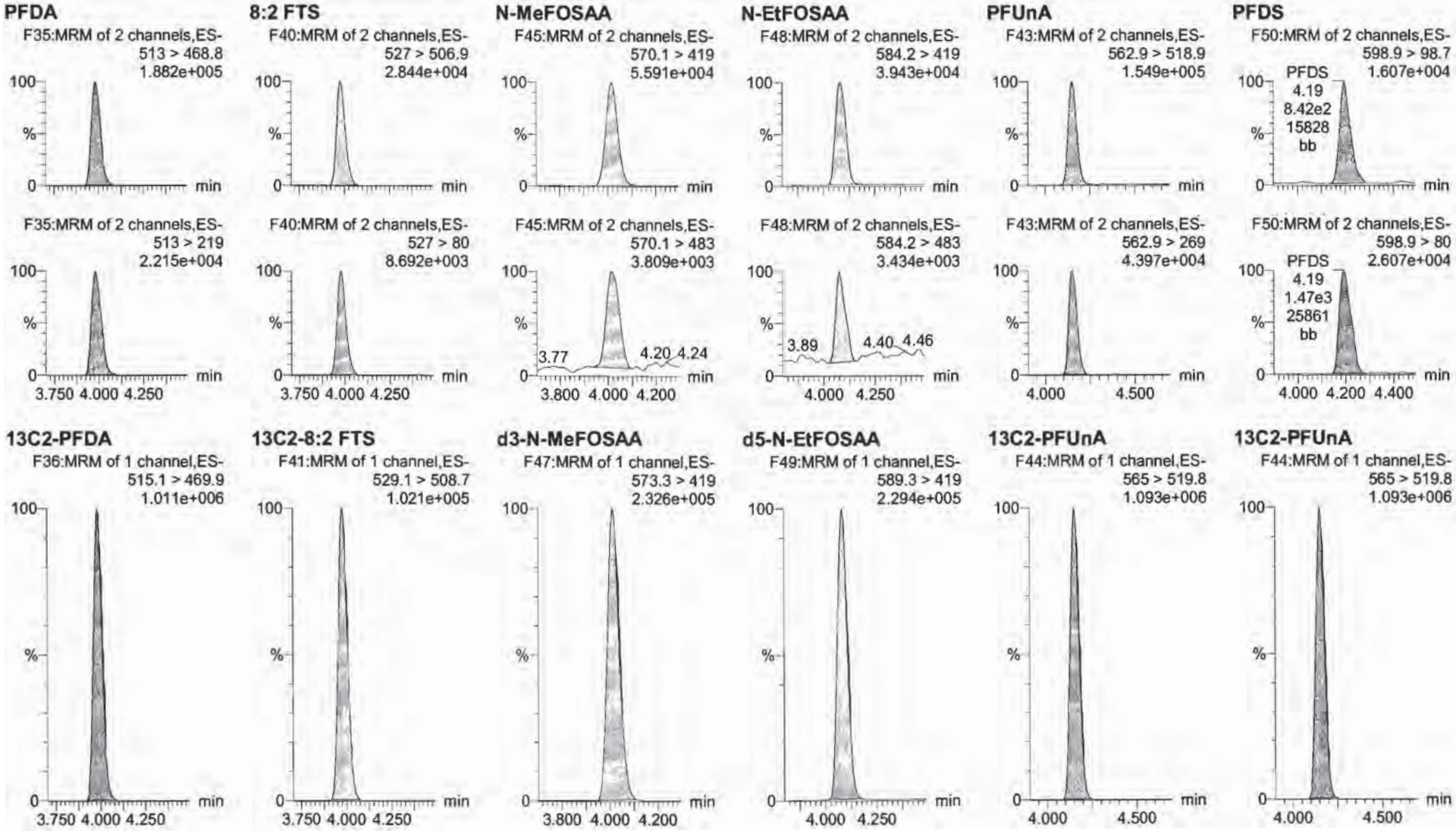
13C8-PFOS



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_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

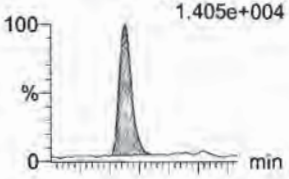


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

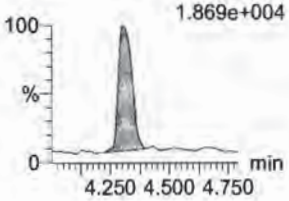
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

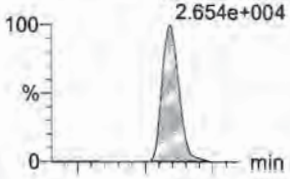
PFDoA
F51:MRM of 2 channels,ES-
612.9 > 318.8
1.405e+004



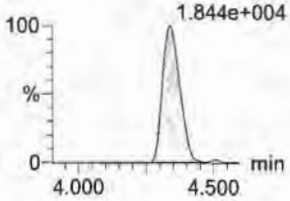
F51:MRM of 2 channels,ES-
612.9 > 569
1.869e+004



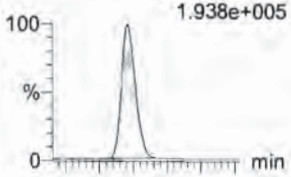
N-MeFOSA
F34:MRM of 2 channels,ES-
512.1 > 168.9
2.654e+004



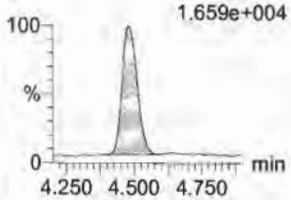
F34:MRM of 2 channels,ES-
512.1 > 219
1.844e+004



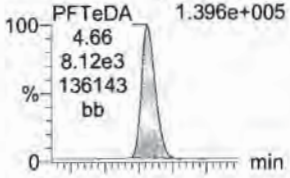
PFTrDA
F57:MRM of 2 channels,ES-
662.9 > 618.9
1.938e+005



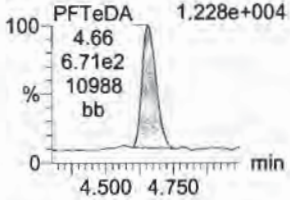
F57:MRM of 2 channels,ES-
662.9 > 319
1.659e+004



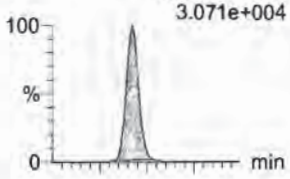
PFTeDA
F58:MRM of 4 channels,ES-
712.9 > 668.8
1.396e+005



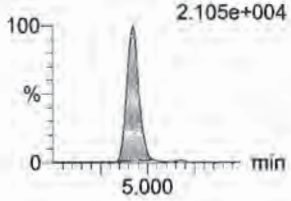
F58:MRM of 4 channels,ES-
712.9 > 369
1.228e+004



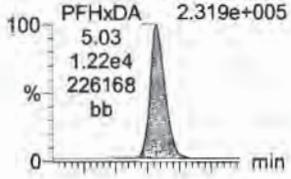
N-EtFOSA
F39:MRM of 2 channels,ES-
526.1 > 168.9
3.071e+004



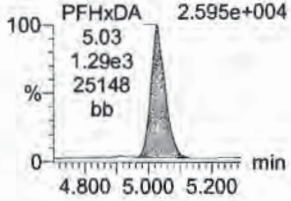
F39:MRM of 2 channels,ES-
526.1 > 219
2.105e+004



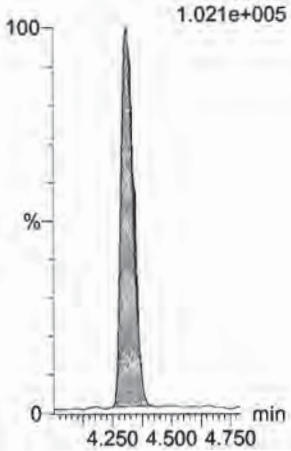
PFHxDA
F60:MRM of 2 channels,ES-
812.8 > 768.9
2.319e+005



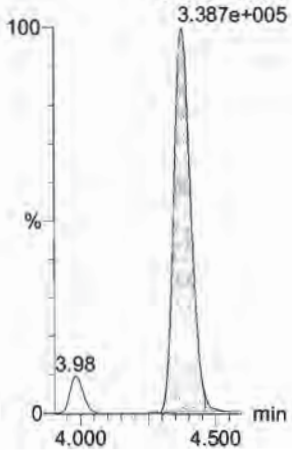
F60:MRM of 2 channels,ES-
812.8 > 219
2.595e+004



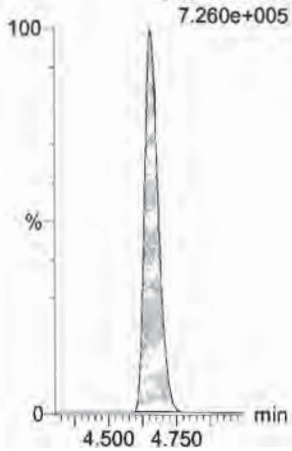
13C2-PFDoA
F52:MRM of 1 channel,ES-
615 > 569.7
1.021e+005



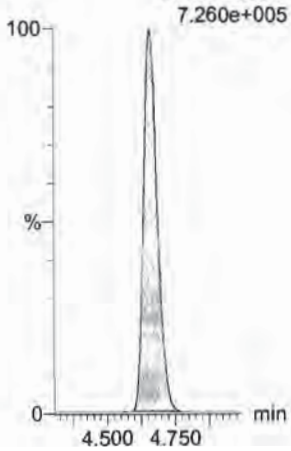
d3-N-MeFOSA
F37:MRM of 1 channel,ES-
515.2 > 168.9
3.387e+005



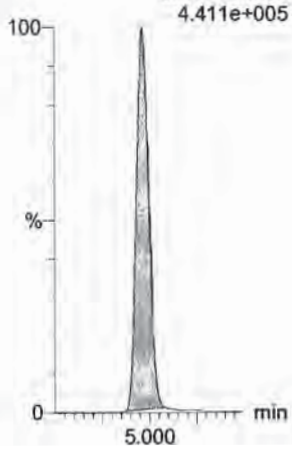
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
7.260e+005



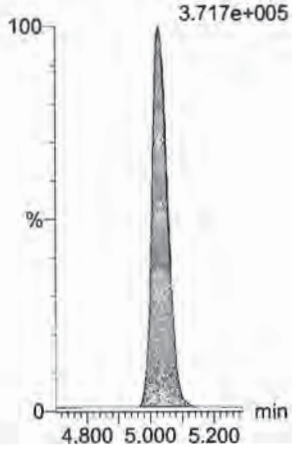
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
7.260e+005



d5-N-ETFOSA
F42:MRM of 1 channel,ES-
531.1 > 168.9
4.411e+005



13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.717e+005



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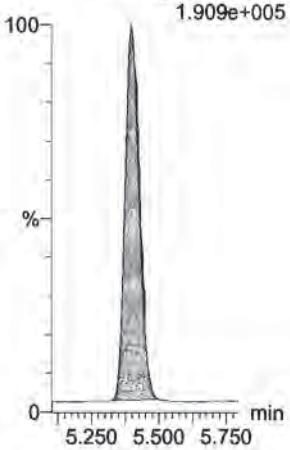
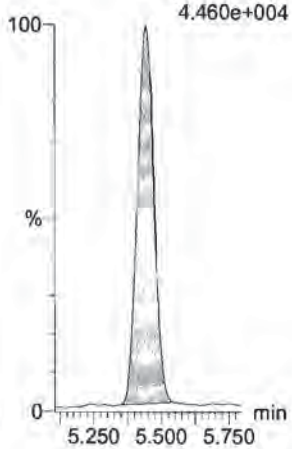
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

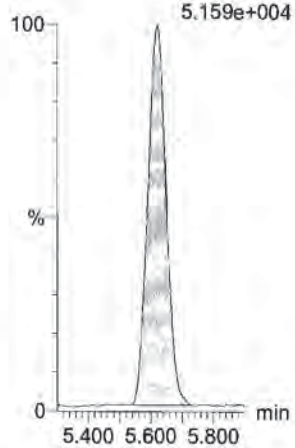
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.909e+005



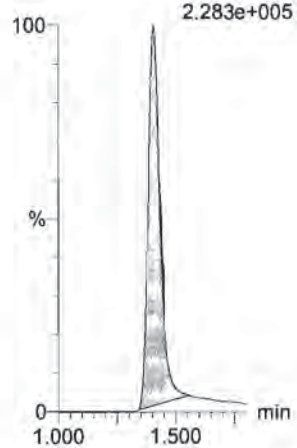
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
4.460e+004



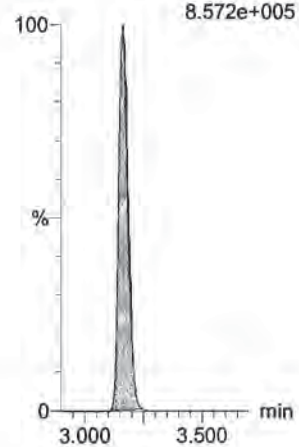
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
5.159e+004



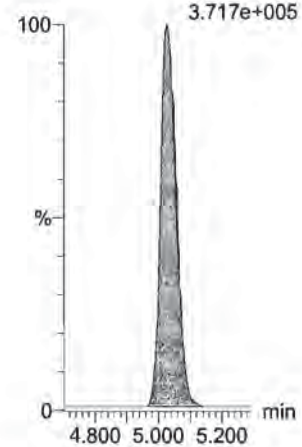
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.283e+005



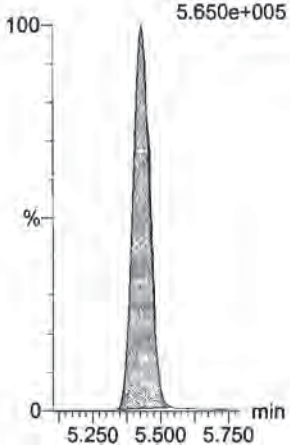
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.572e+005



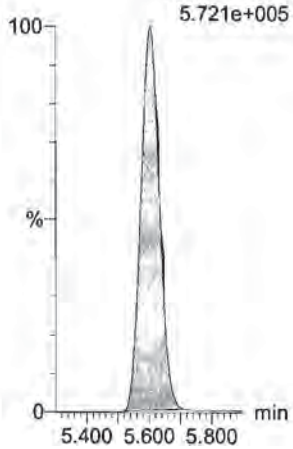
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.717e+005



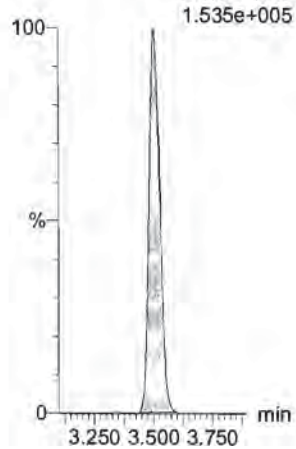
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.650e+005



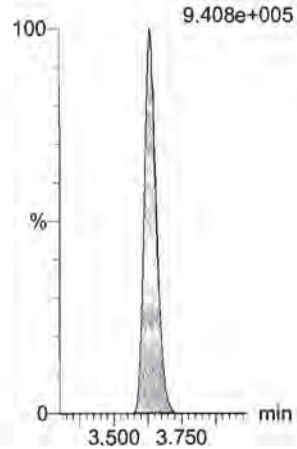
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.721e+005



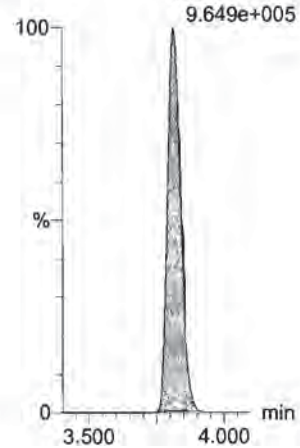
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.535e+005



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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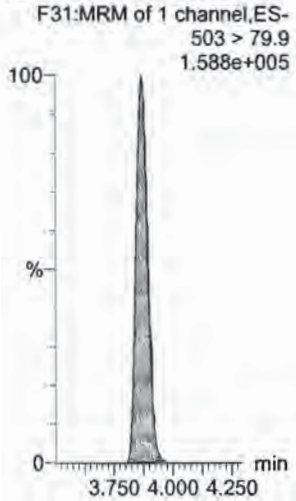
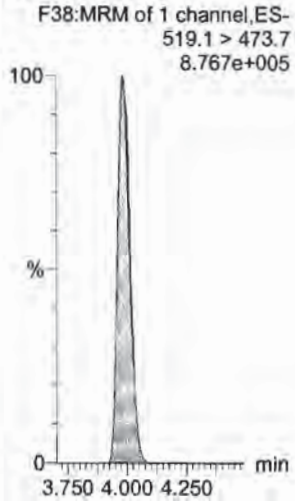
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_5, Date: 01-Aug-2017, Time: 01:12:05, ID: ST170731M2-4 PFC CS1 17G3110, Description: PFC CS1 17G3110

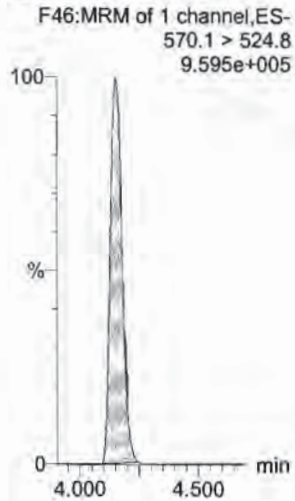
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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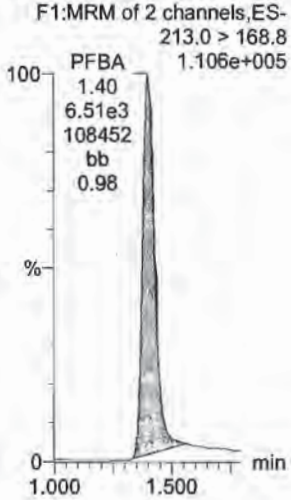
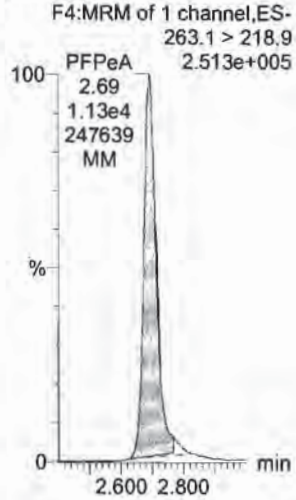
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111

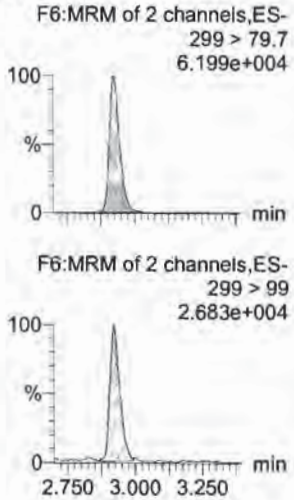
PFBA



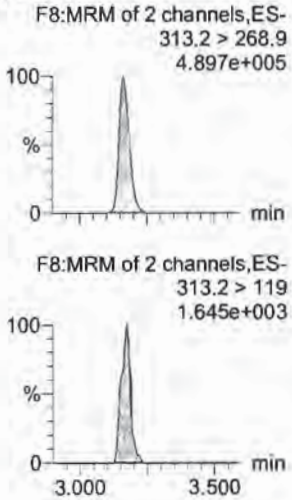
PFPeA



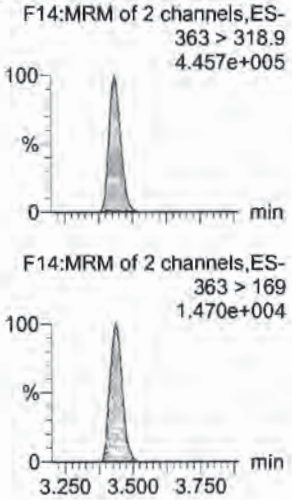
PFBS



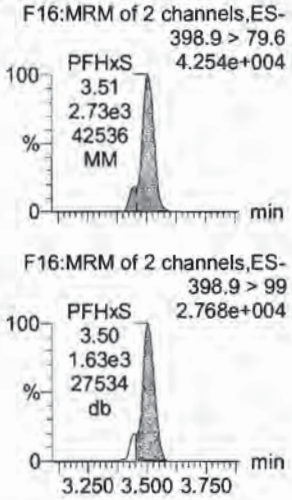
PFHxA



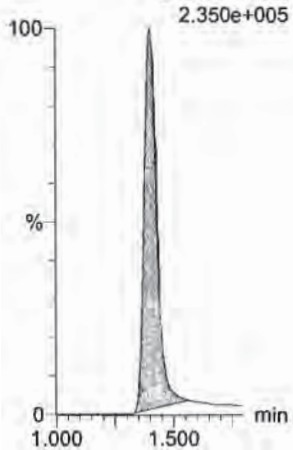
PFHpA



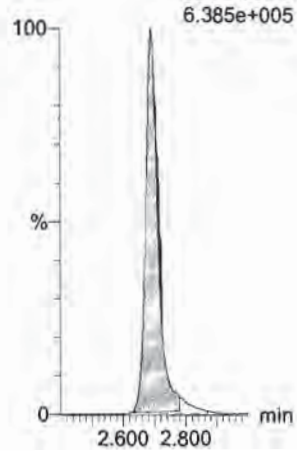
PFHxS



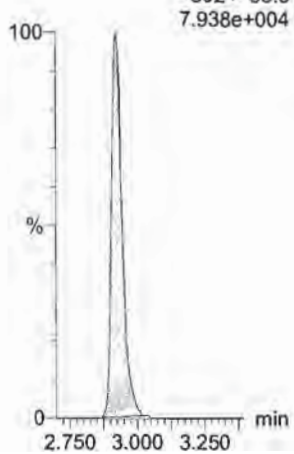
13C3-PFBA



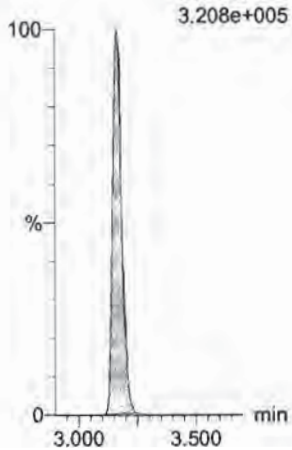
13C3-PFPeA



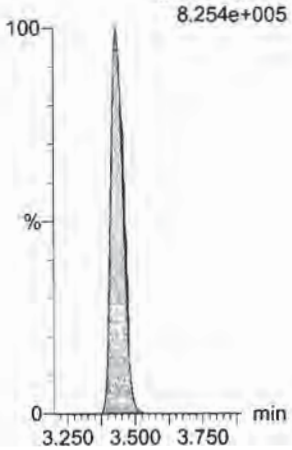
13C3-PFBS



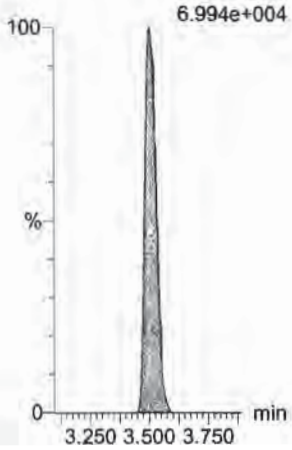
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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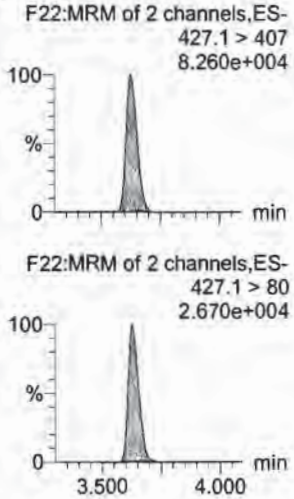
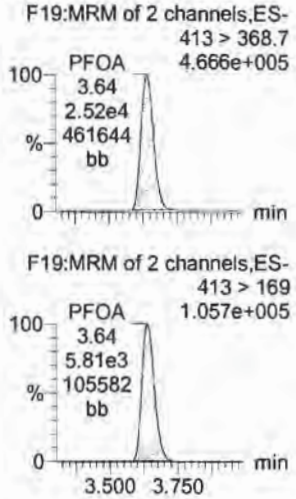
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111

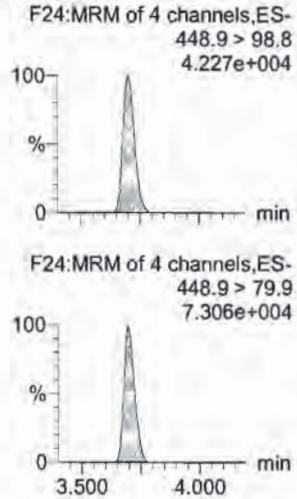
6:2 FTS



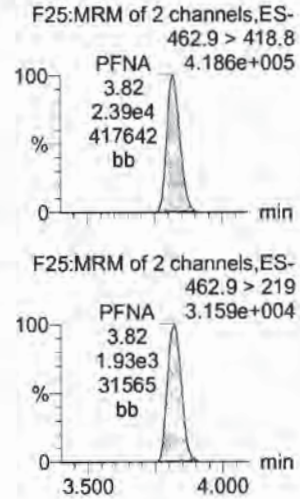
PFOA



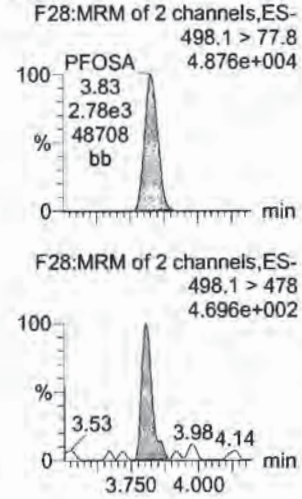
PFHpS



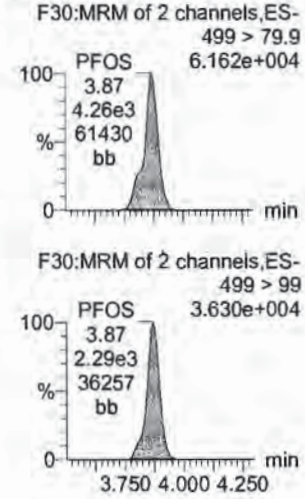
PFNA



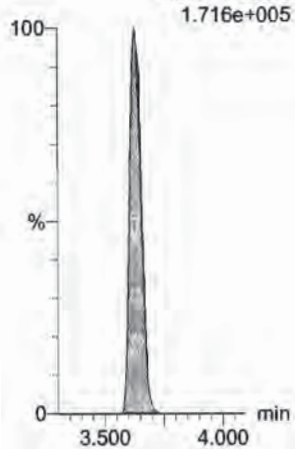
PFOSA



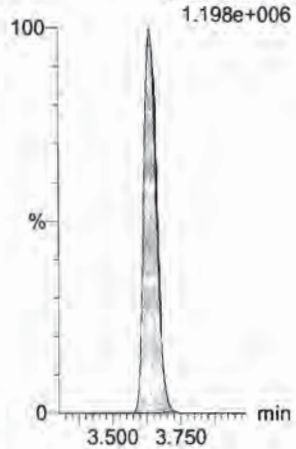
PFOS



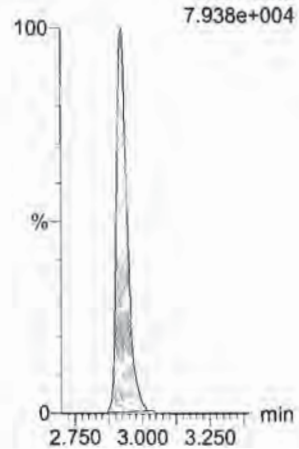
13C2-6:2 FTS



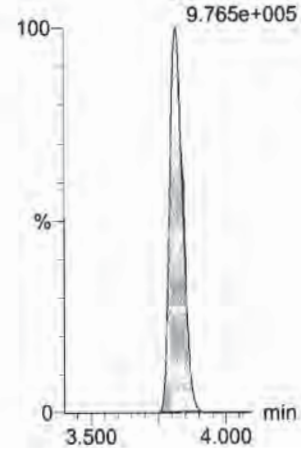
13C2-PFOA



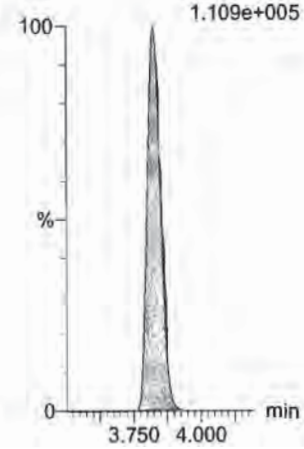
13C3-PFBS



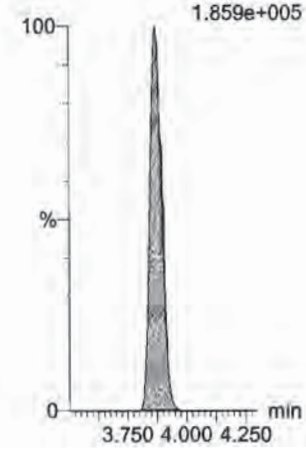
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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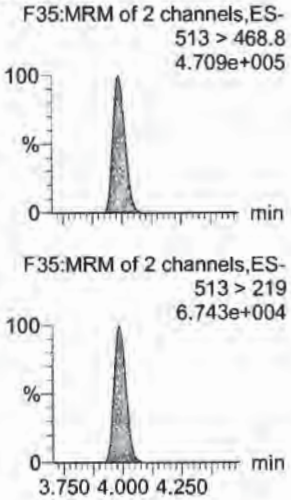
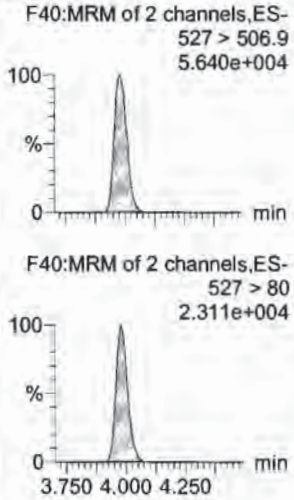
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111

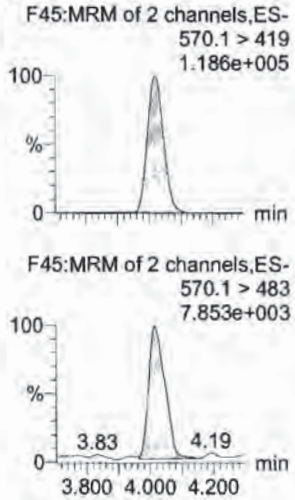
PFDA



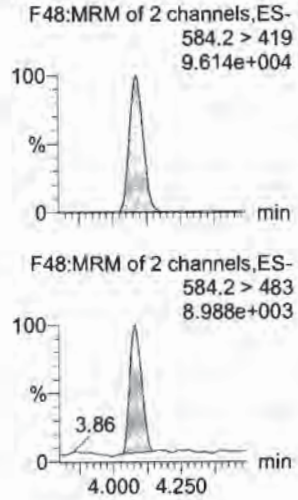
8:2 FTS



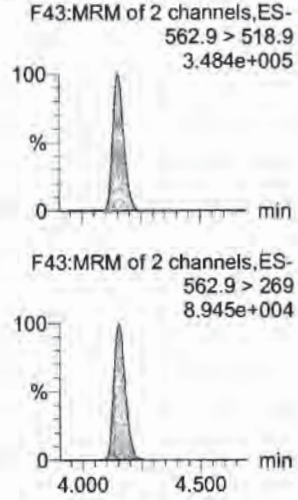
N-MeFOSAA



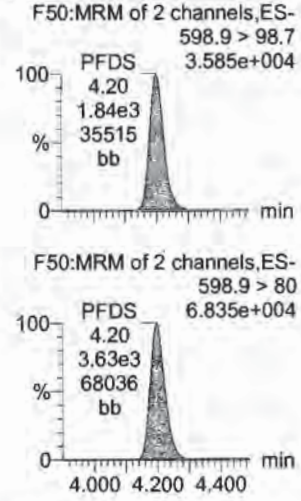
N-EtFOSAA



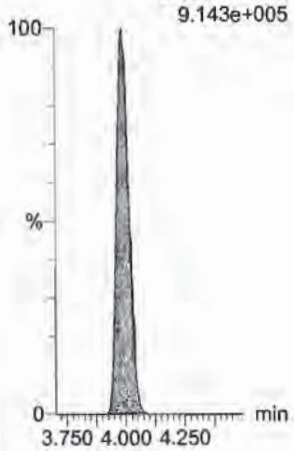
PFUnA



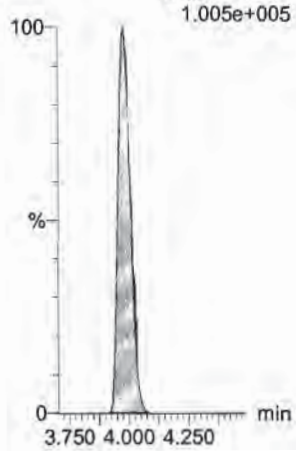
PFDS



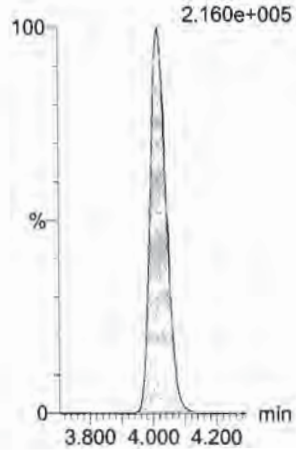
13C2-PFDA



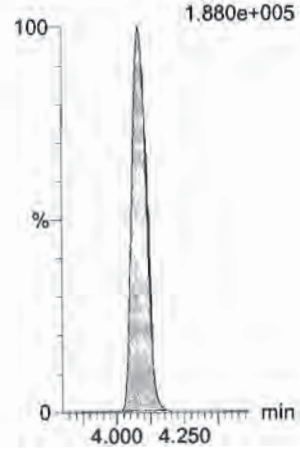
13C2-8:2 FTS



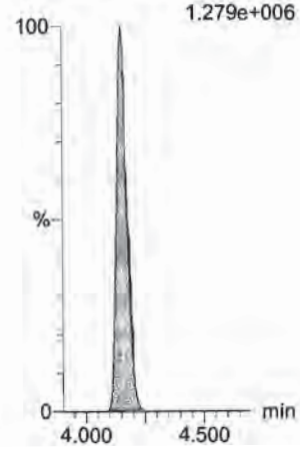
d3-N-MeFOSAA



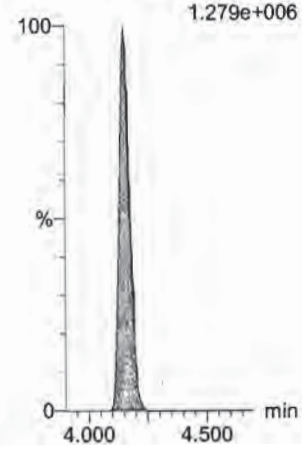
d5-N-EtFOSAA



13C2-PFUnA



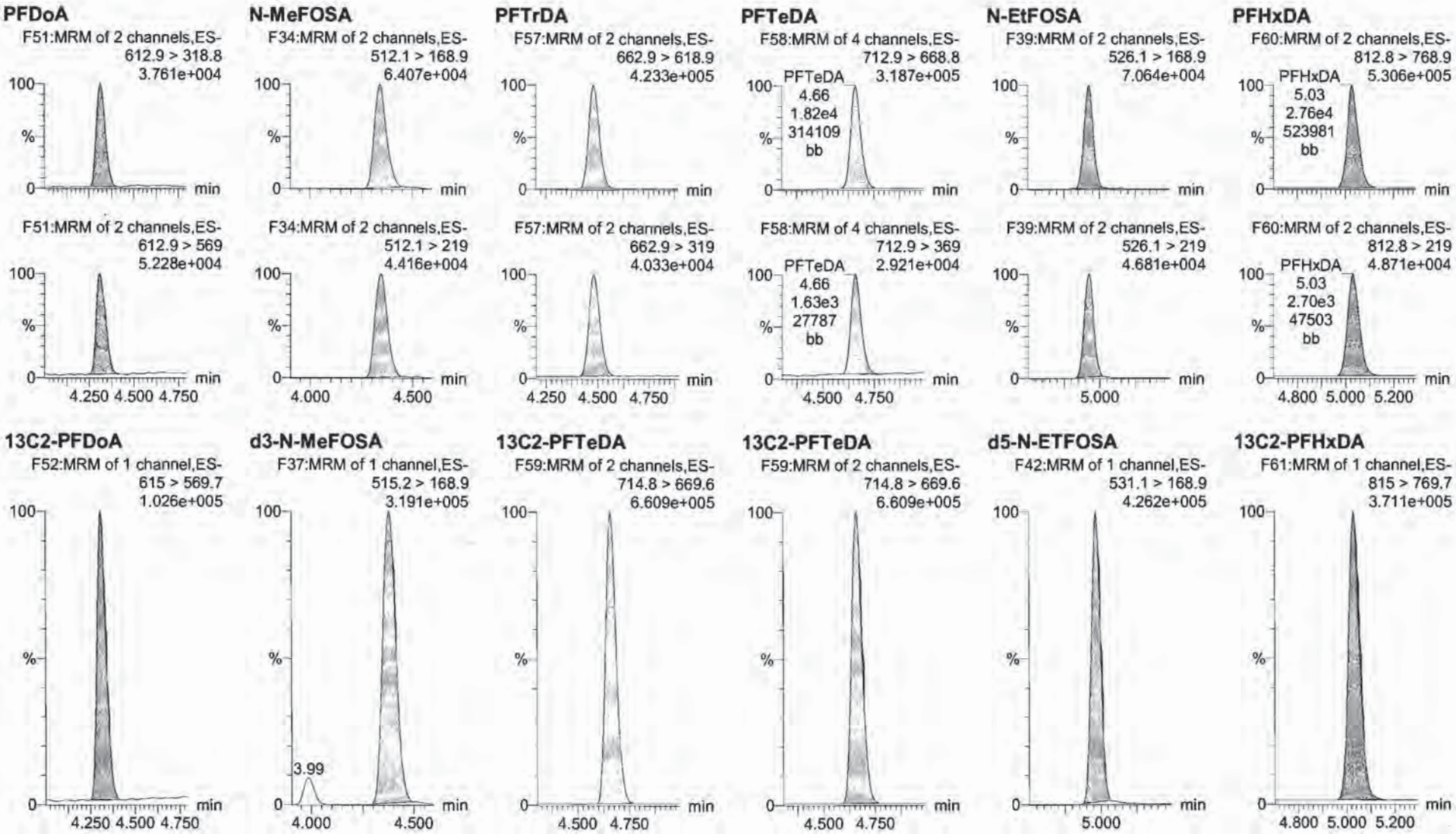
13C2-PFUnA



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_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111



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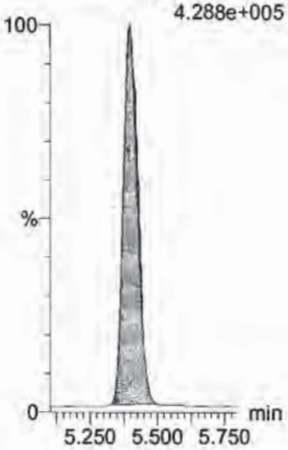
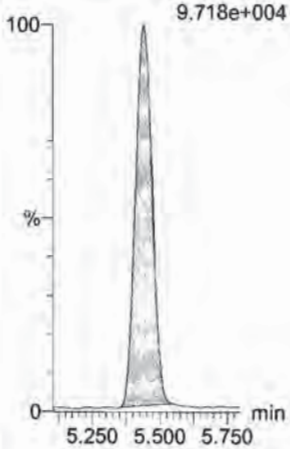
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111

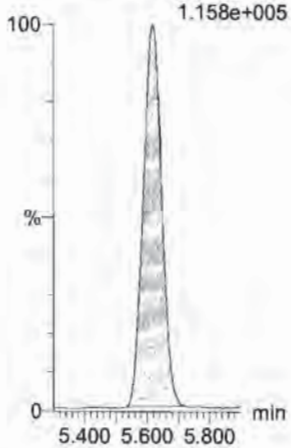
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
4.288e+005



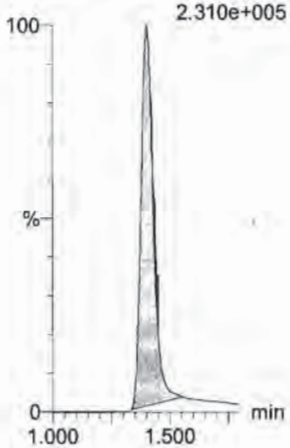
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
9.718e+004



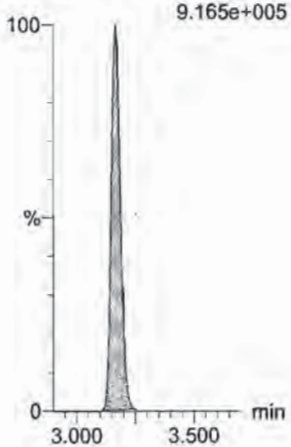
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.158e+005



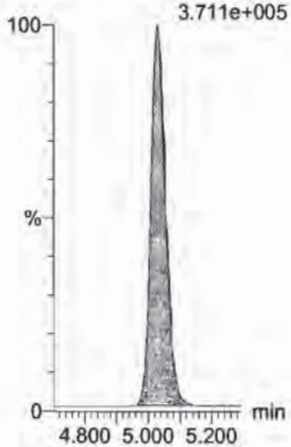
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.310e+005



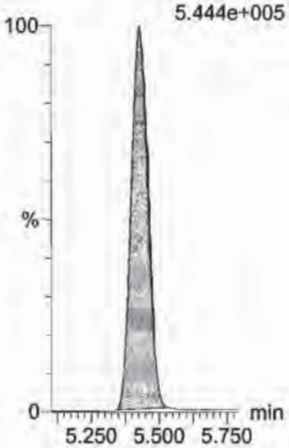
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
9.165e+005



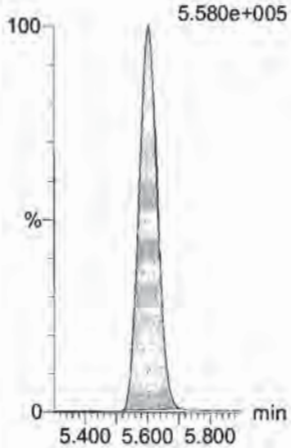
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.711e+005



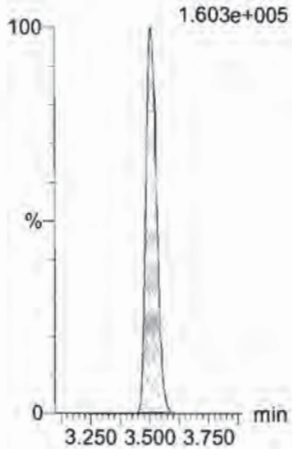
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.444e+005



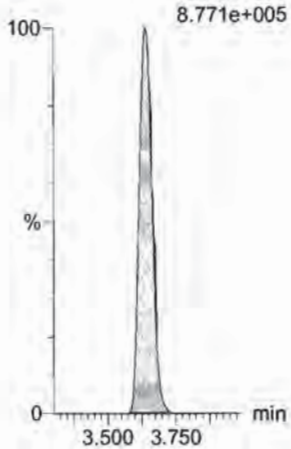
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.580e+005



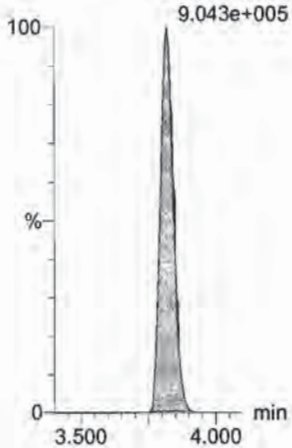
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.603e+005



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



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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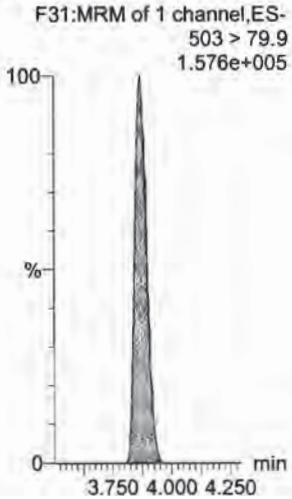
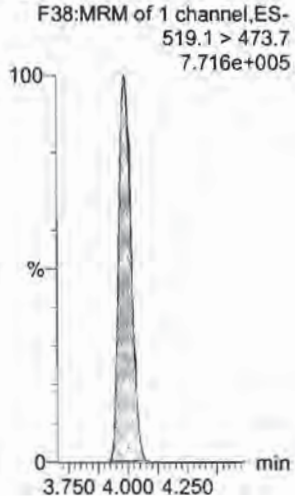
Name: 170731M2_6, Date: 01-Aug-2017, Time: 01:22:43, ID: ST170731M2-5 PFC CS2 17G3111, Description: PFC CS2 17G3111

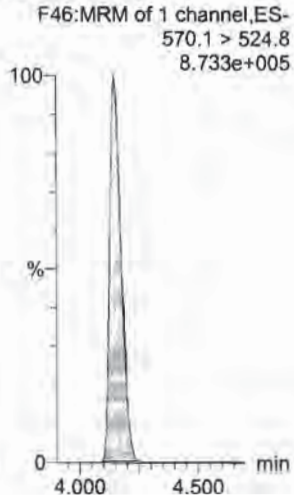
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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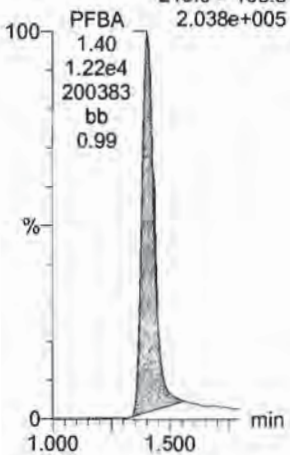
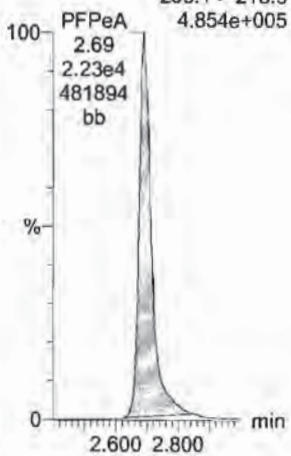
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

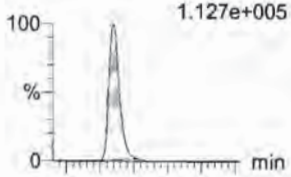
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
2.038e+005



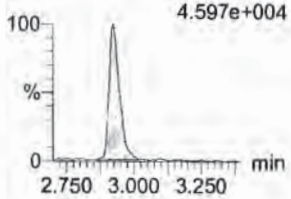
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
4.854e+005



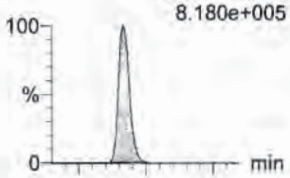
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
1.127e+005



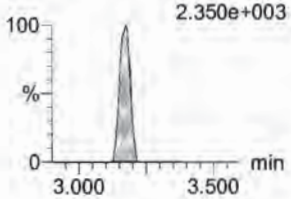
F6:MRM of 2 channels,ES-
299 > 99
4.597e+004



PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
8.180e+005

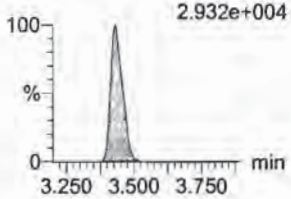


F8:MRM of 2 channels,ES-
313.2 > 119
2.350e+003

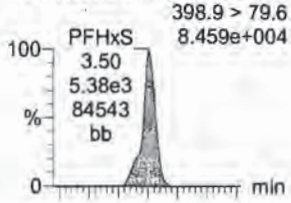


PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
7.941e+005

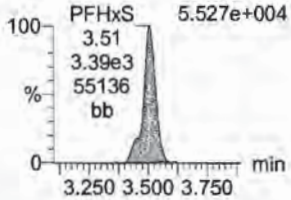
F14:MRM of 2 channels,ES-
363 > 169
2.932e+004



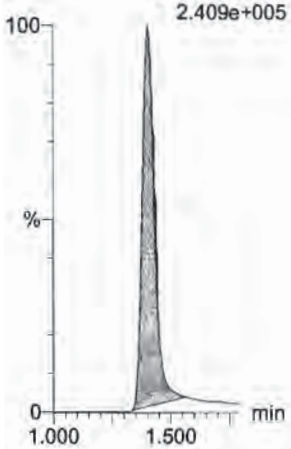
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
8.459e+004



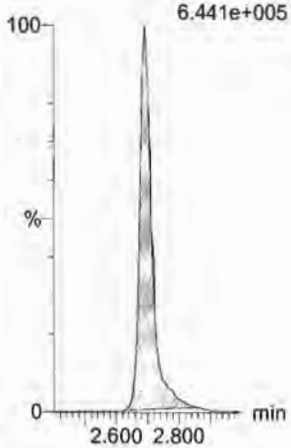
F16:MRM of 2 channels,ES-
398.9 > 99
5.527e+004



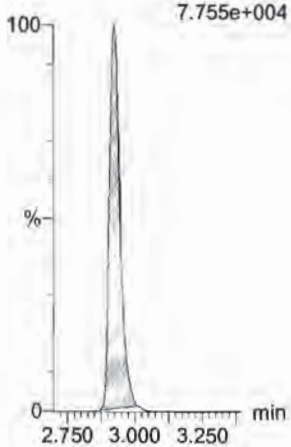
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
2.409e+005



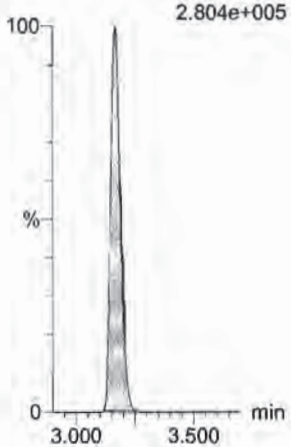
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
6.441e+005



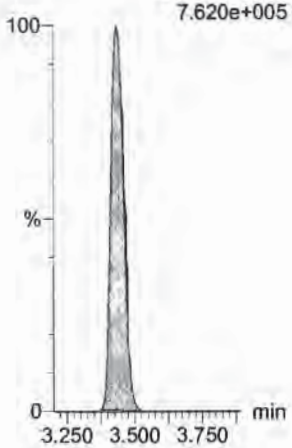
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
7.755e+004



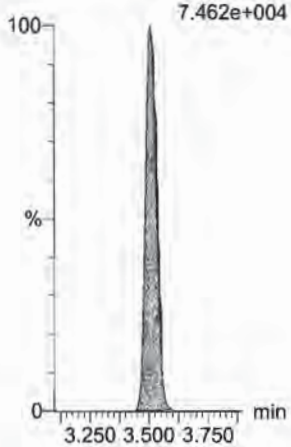
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
2.804e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
7.620e+005



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
7.462e+004



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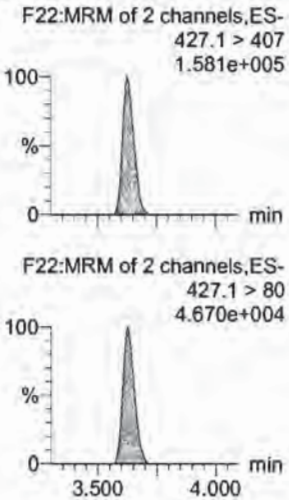
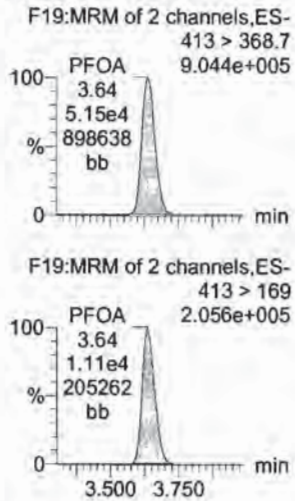
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

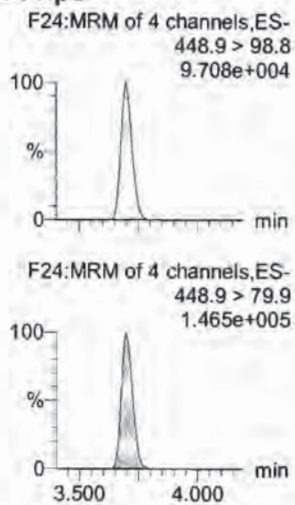
6:2 FTS



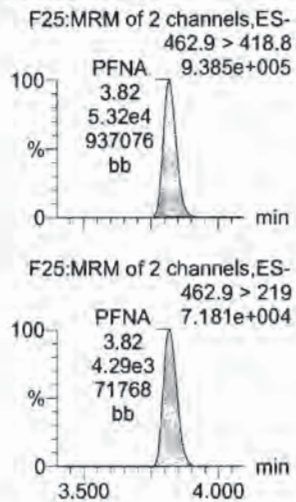
PFOA



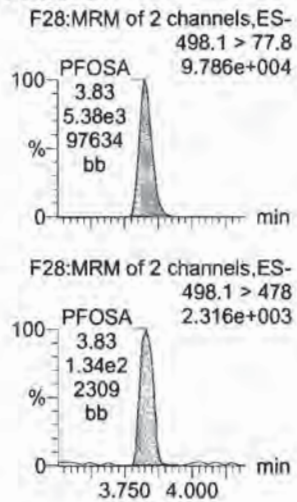
PFHpS



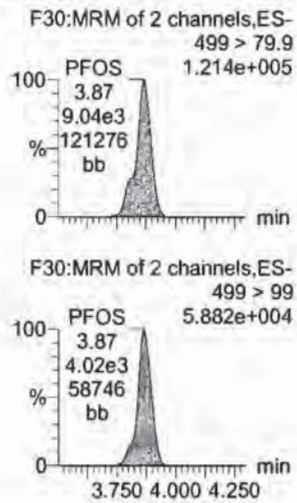
PFNA



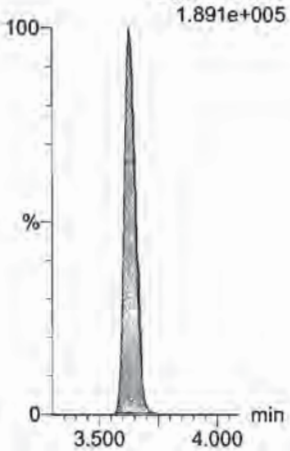
PFOSA



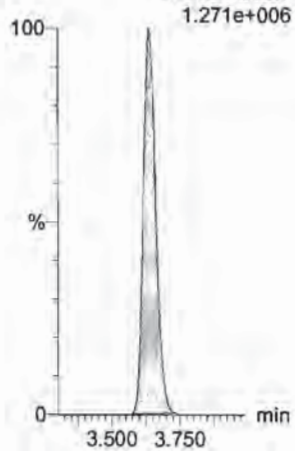
PFOS



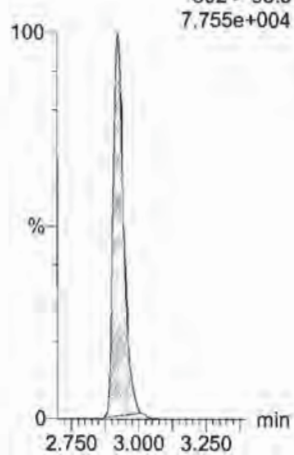
13C2-6:2 FTS



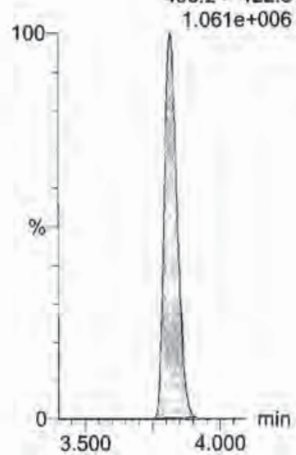
13C2-PFOA



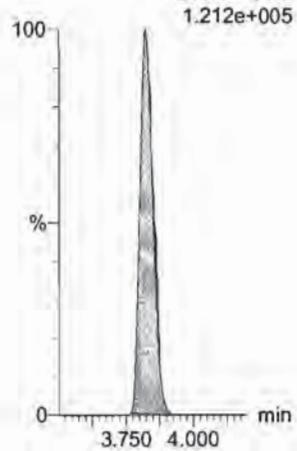
13C3-PFBS



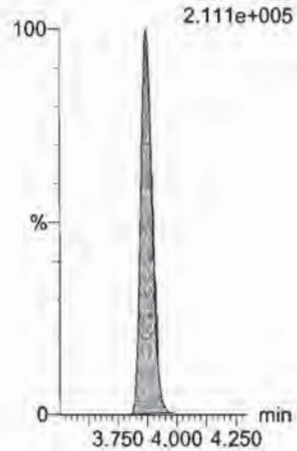
13C5-PFNA



13C8-PFOSA



13C8-PFOS

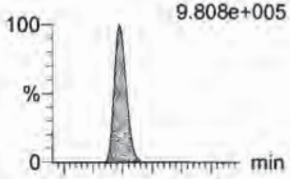


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

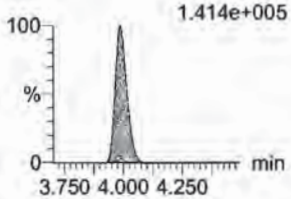
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

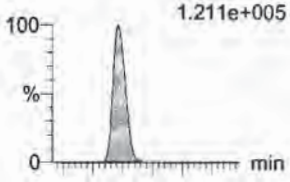
PFDA
F35:MRM of 2 channels,ES-
513 > 468.8
9.808e+005



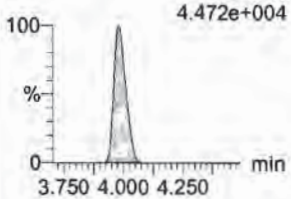
F35:MRM of 2 channels,ES-
513 > 219
1.414e+005



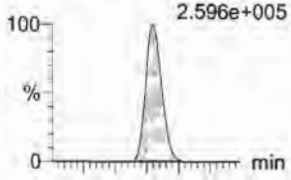
8:2 FTS
F40:MRM of 2 channels,ES-
527 > 506.9
1.211e+005



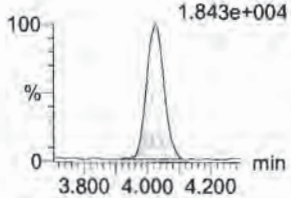
F40:MRM of 2 channels,ES-
527 > 80
4.472e+004



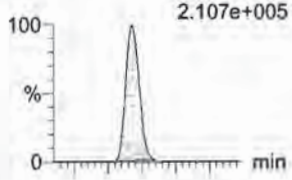
N-MeFOSAA
F45:MRM of 2 channels,ES-
570.1 > 419
2.596e+005



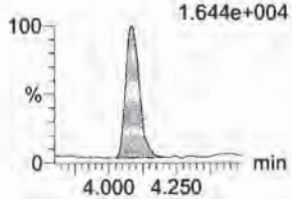
F45:MRM of 2 channels,ES-
570.1 > 483
1.843e+004



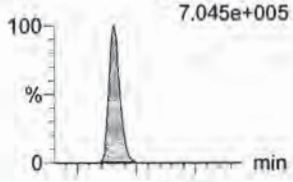
N-EtFOSAA
F48:MRM of 2 channels,ES-
584.2 > 419
2.107e+005



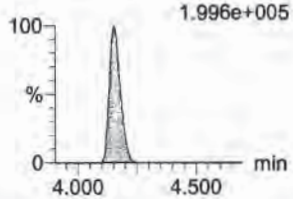
F48:MRM of 2 channels,ES-
584.2 > 483
1.644e+004



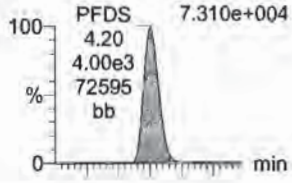
PFUnA
F43:MRM of 2 channels,ES-
562.9 > 518.9
7.045e+005



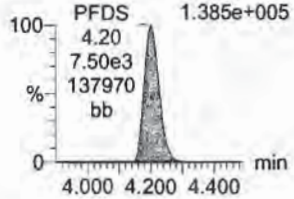
F43:MRM of 2 channels,ES-
562.9 > 269
1.996e+005



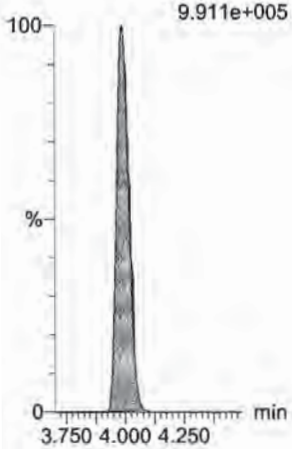
PFDS
F50:MRM of 2 channels,ES-
598.9 > 98.7
7.310e+004



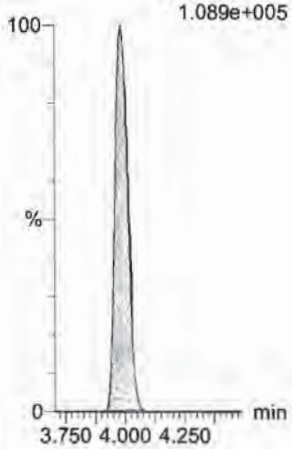
F50:MRM of 2 channels,ES-
598.9 > 80
1.385e+005



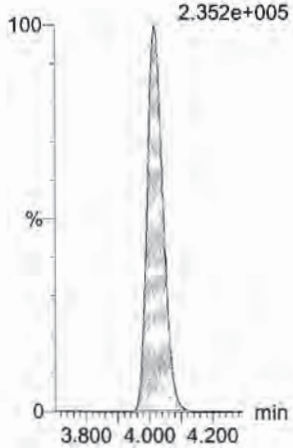
13C2-PFDA
F36:MRM of 1 channel,ES-
515.1 > 469.9
9.911e+005



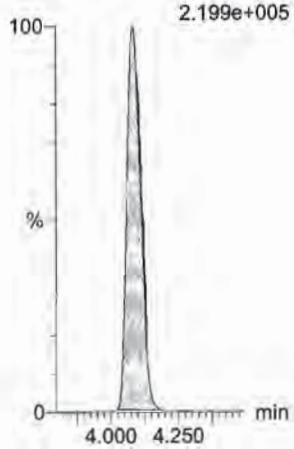
13C2-8:2 FTS
F41:MRM of 1 channel,ES-
529.1 > 508.7
1.089e+005



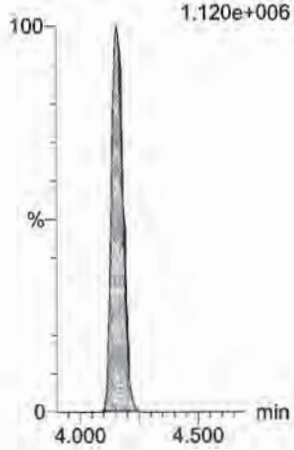
d3-N-MeFOSAA
F47:MRM of 1 channel,ES-
573.3 > 419
2.352e+005



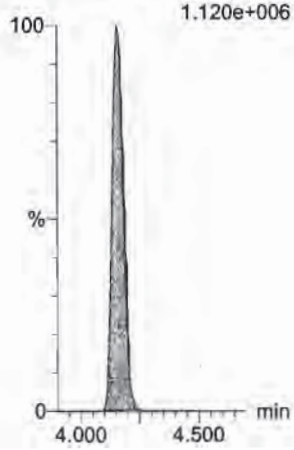
d5-N-EtFOSAA
F49:MRM of 1 channel,ES-
589.3 > 419
2.199e+005



13C2-PFUnA
F44:MRM of 1 channel,ES-
565 > 519.8
1.120e+006



13C2-PFUnA
F44:MRM of 1 channel,ES-
565 > 519.8
1.120e+006



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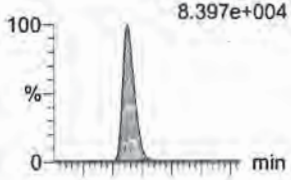
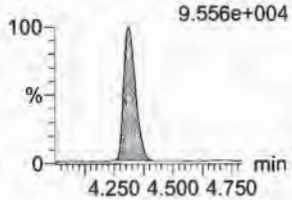
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

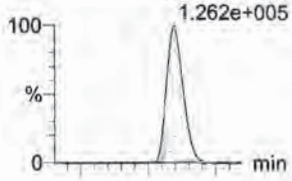
PFDoA
F51:MRM of 2 channels,ES-
612.9 > 318.8
8.397e+004



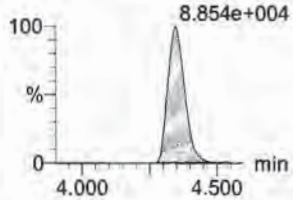
F51:MRM of 2 channels,ES-
612.9 > 569
9.556e+004



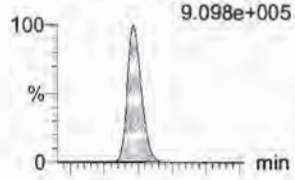
N-MeFOSA
F34:MRM of 2 channels,ES-
512.1 > 168.9
1.262e+005



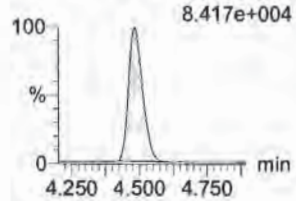
F34:MRM of 2 channels,ES-
512.1 > 219
8.854e+004



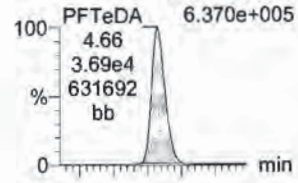
PFTrDA
F57:MRM of 2 channels,ES-
662.9 > 618.9
9.098e+005



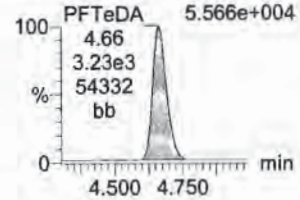
F57:MRM of 2 channels,ES-
662.9 > 319
8.417e+004



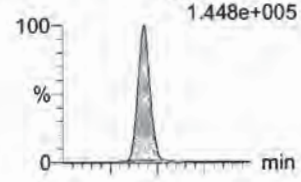
PFTeDA
F58:MRM of 4 channels,ES-
712.9 > 668.8
6.370e+005



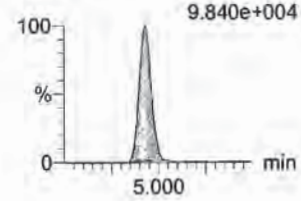
F58:MRM of 4 channels,ES-
712.9 > 369
5.566e+004



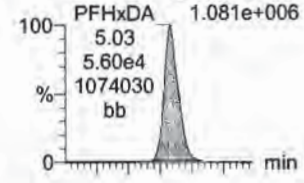
N-EtFOSA
F39:MRM of 2 channels,ES-
526.1 > 168.9
1.448e+005



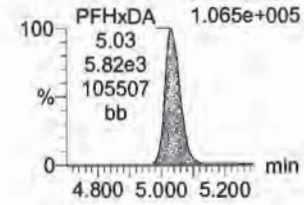
F39:MRM of 2 channels,ES-
526.1 > 219
9.840e+004



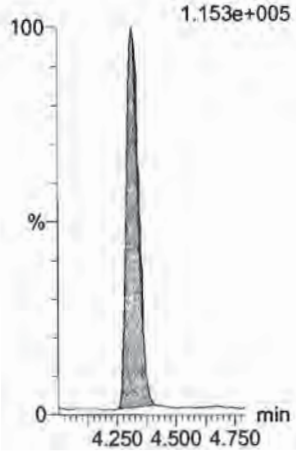
PFHxDA
F60:MRM of 2 channels,ES-
812.8 > 768.9
1.081e+006



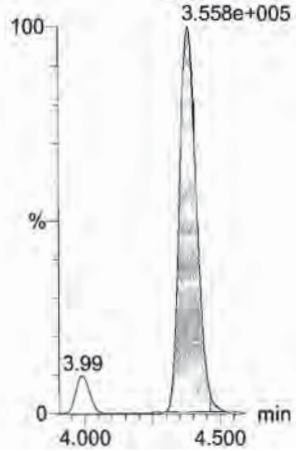
F60:MRM of 2 channels,ES-
812.8 > 219
1.065e+005



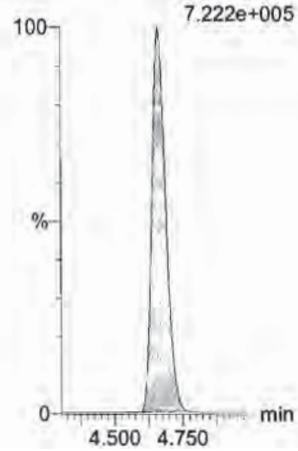
13C2-PFDoA
F52:MRM of 1 channel,ES-
615 > 569.7
1.153e+005



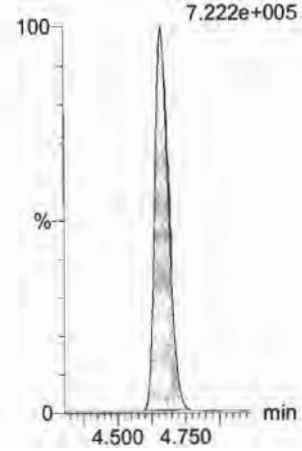
d3-N-MeFOSA
F37:MRM of 1 channel,ES-
515.2 > 168.9
3.558e+005



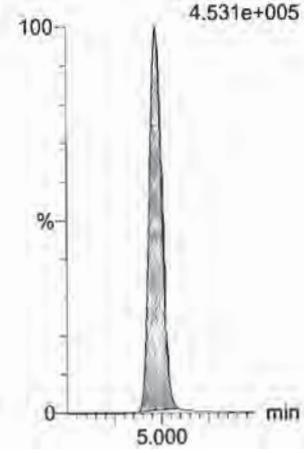
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
7.222e+005



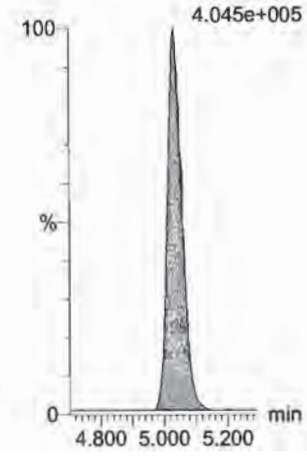
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
7.222e+005



d5-N-ETFOSA
F42:MRM of 1 channel,ES-
531.1 > 168.9
4.531e+005



13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.045e+005



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Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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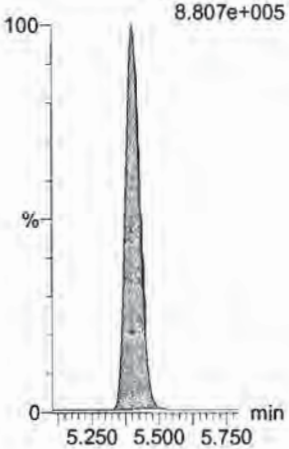
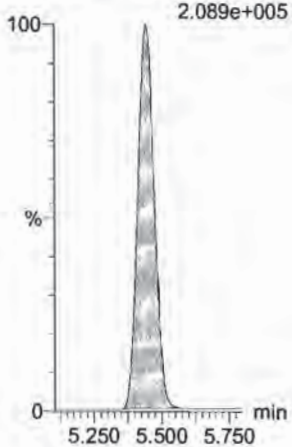
Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

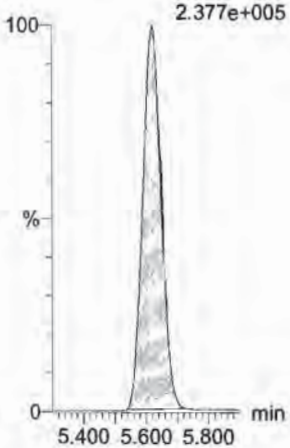
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
8.807e+005



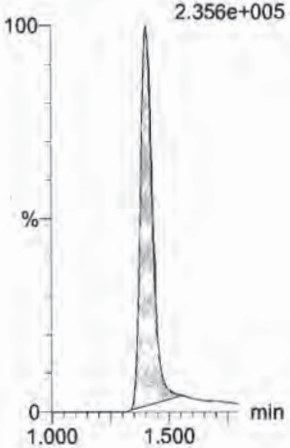
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.089e+005



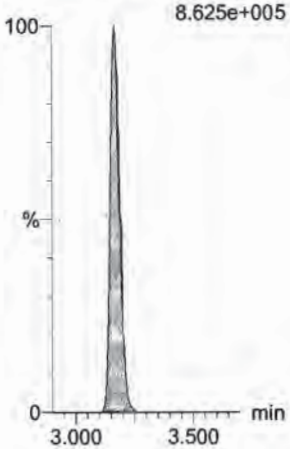
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.377e+005



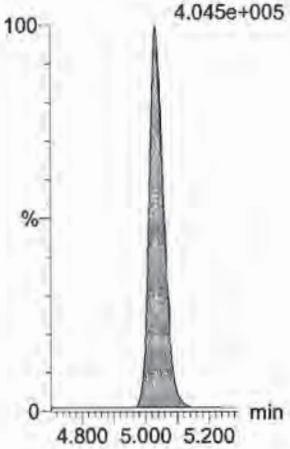
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.356e+005



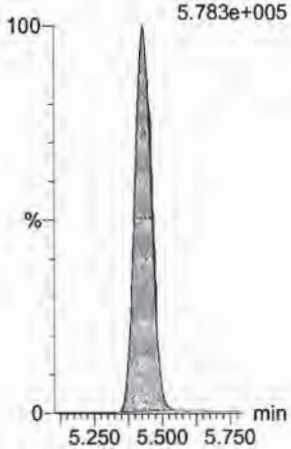
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.625e+005



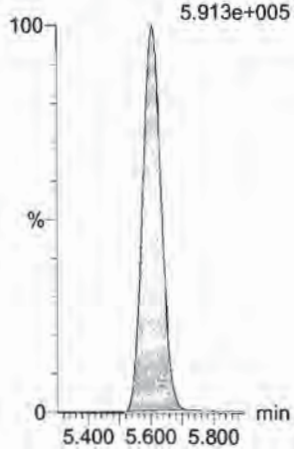
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.045e+005



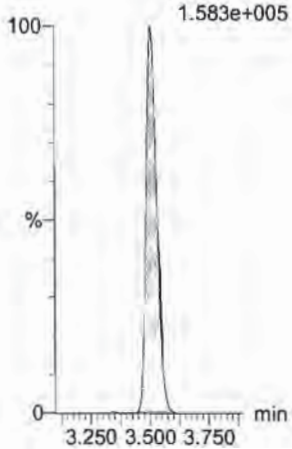
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.783e+005



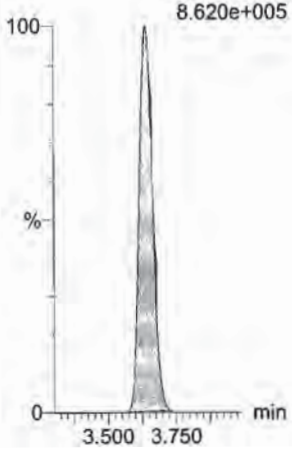
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.913e+005



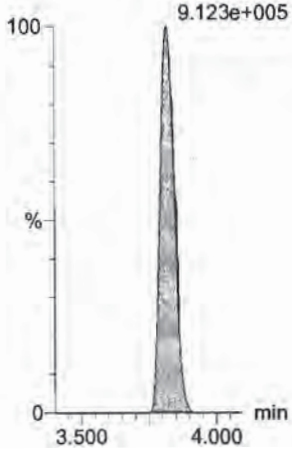
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.583e+005



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

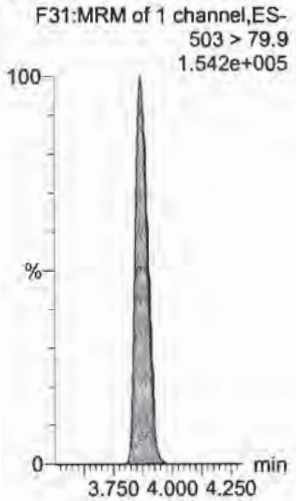


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

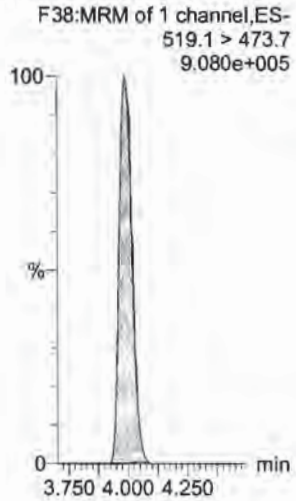
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_7, Date: 01-Aug-2017, Time: 01:33:30, ID: ST170731M2-6 PFC CS3 17G3105, Description: PFC CS3 17G3105

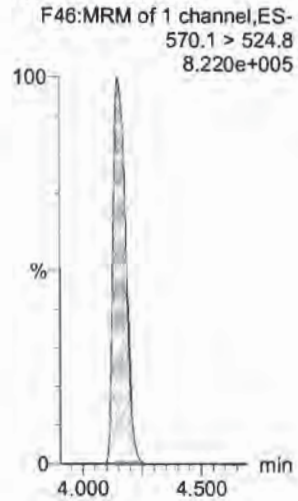
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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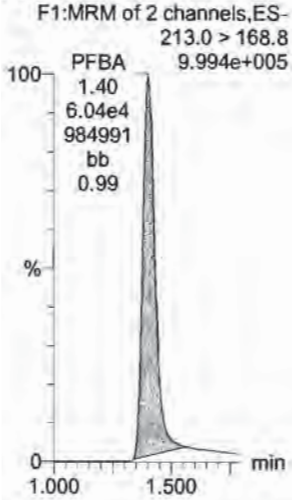
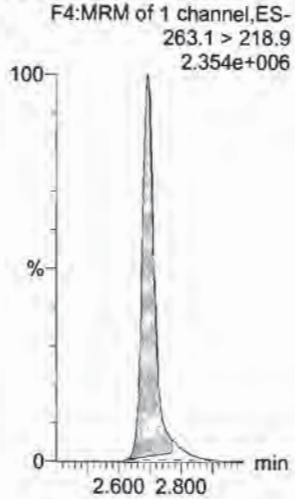
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

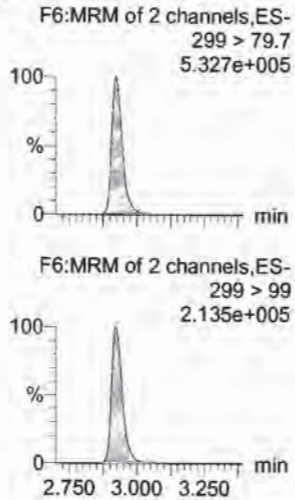
PFBA



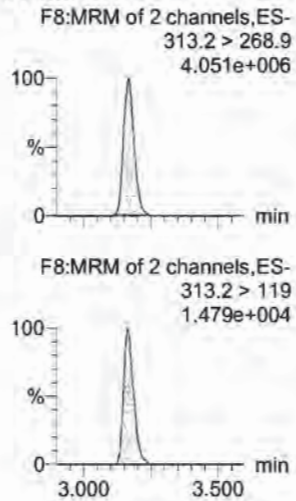
PFPeA



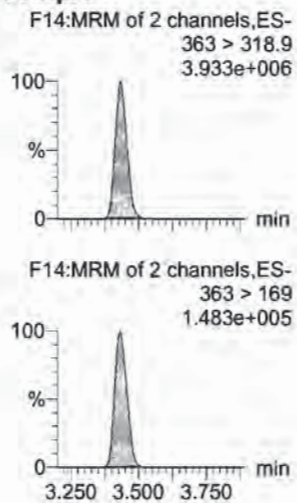
PFBS



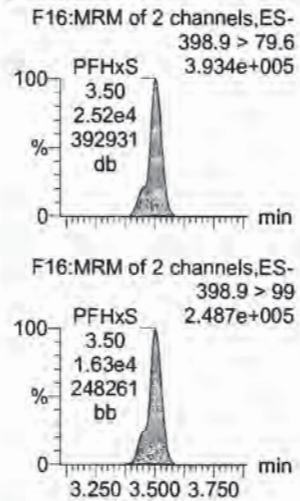
PFHxA



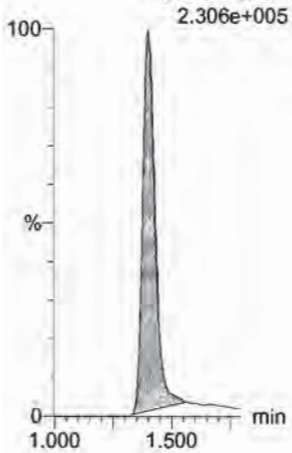
PFHpA



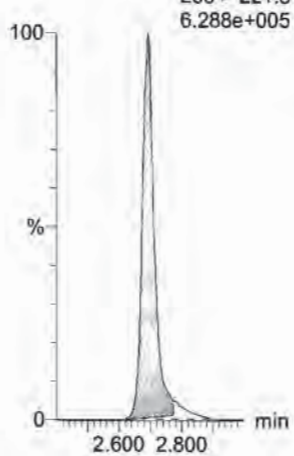
PFHxS



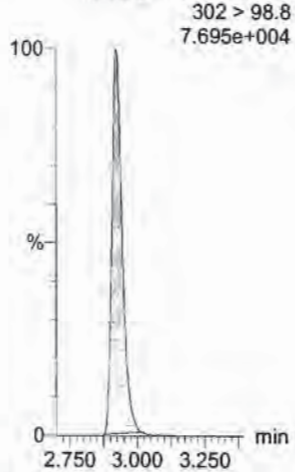
13C3-PFBA



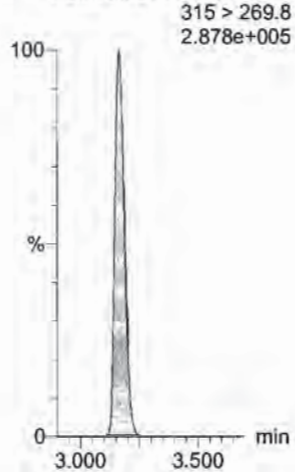
13C3-PFPeA



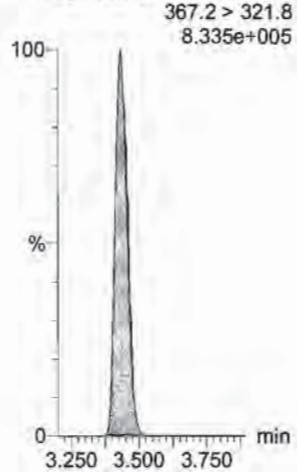
13C3-PFBS



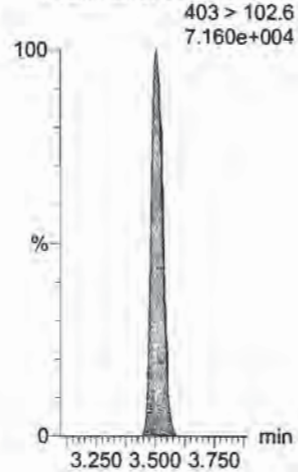
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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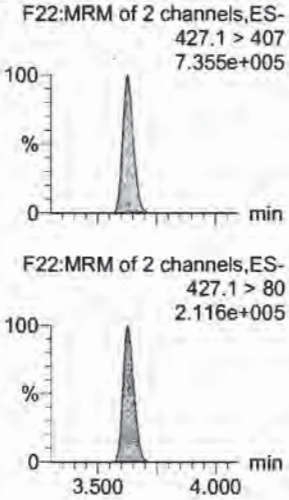
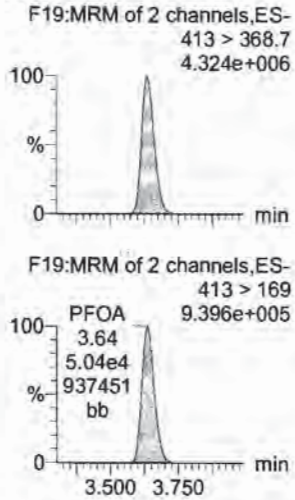
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

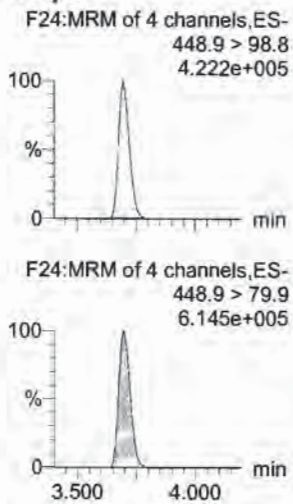
6:2 FTS



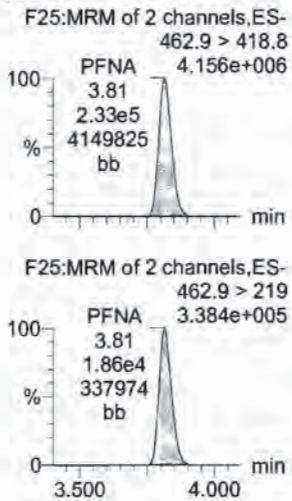
PFOA



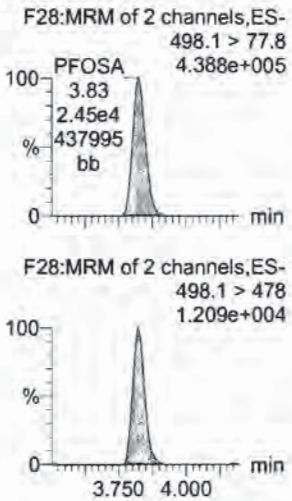
PFHpS



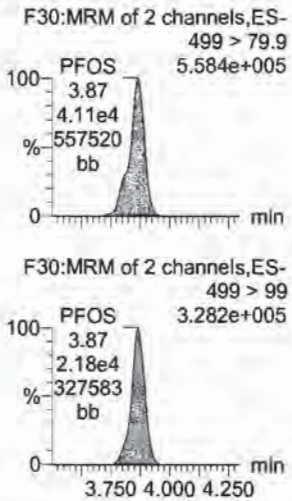
PFNA



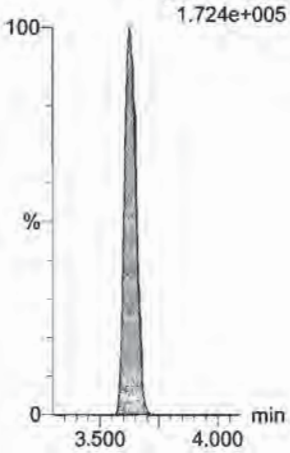
PFOSA



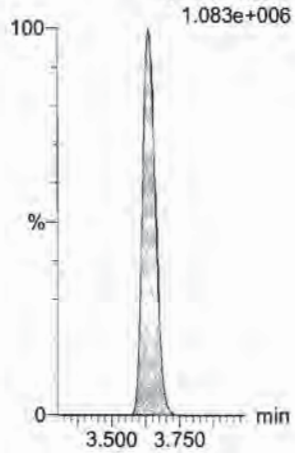
PFOS



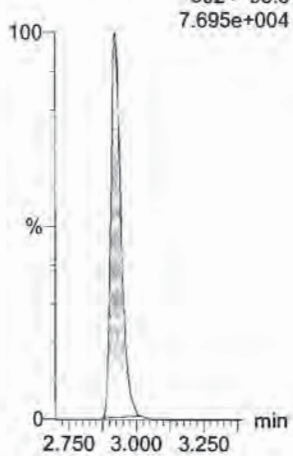
13C2-6:2 FTS



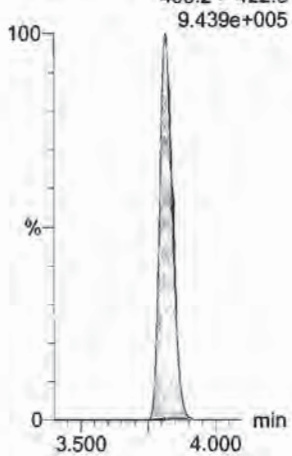
13C2-PFOA



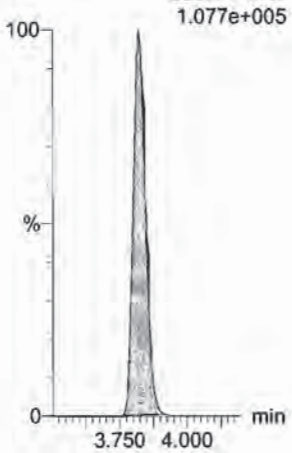
13C3-PFBS



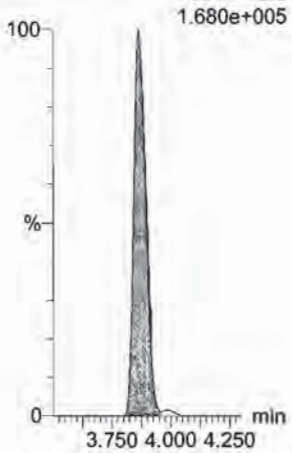
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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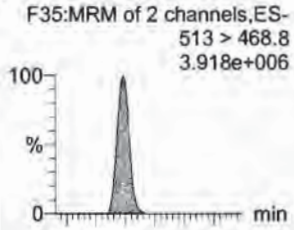
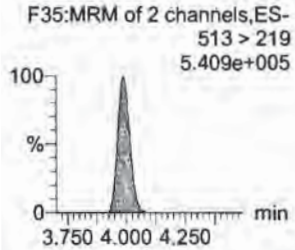
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

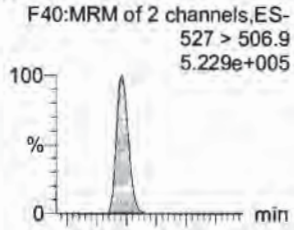
Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

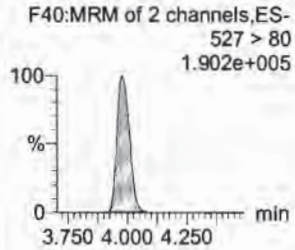
PFDA



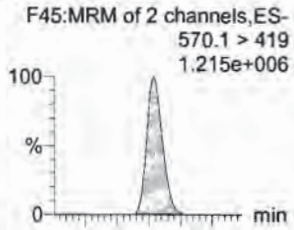


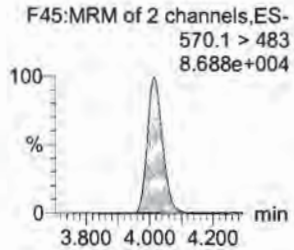
8:2 FTS



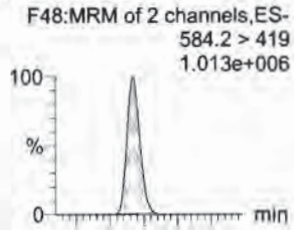


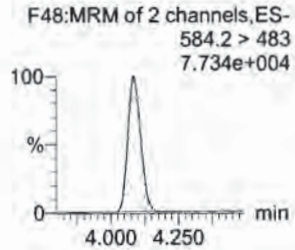
N-MeFOSAA



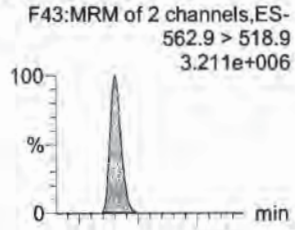


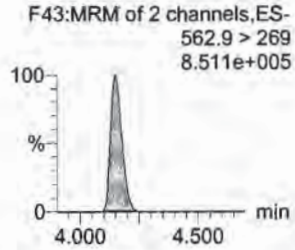
N-EtFOSAA



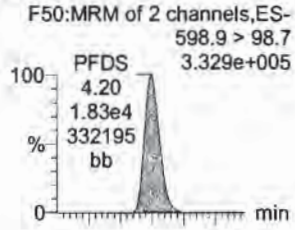


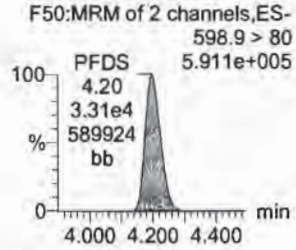
PFUnA



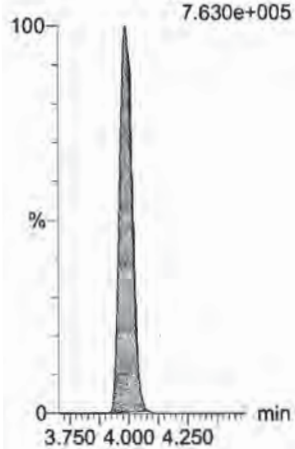


PFDS

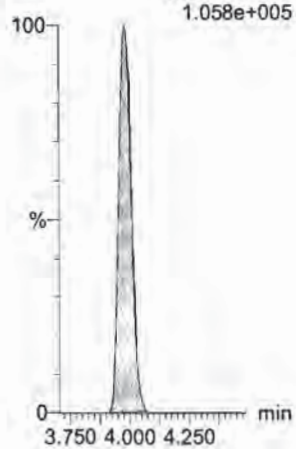




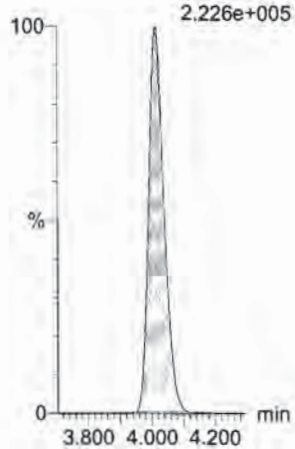
13C2-PFDA



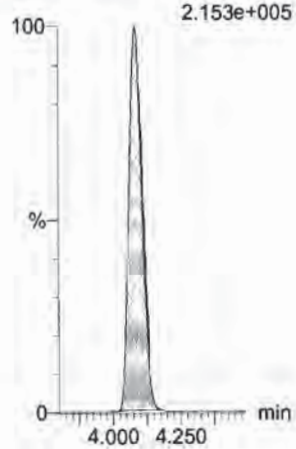
13C2-8:2 FTS



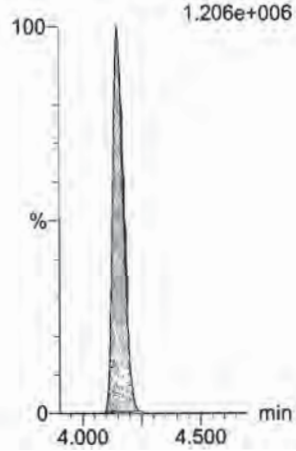
d3-N-MeFOSAA



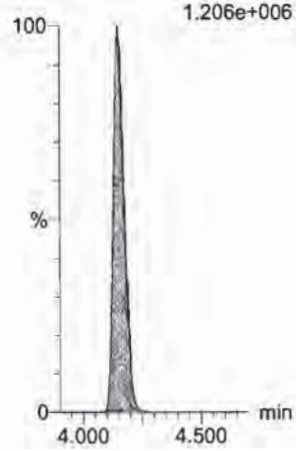
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA

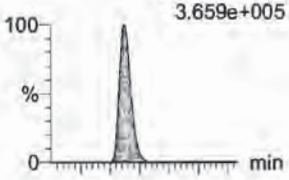


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

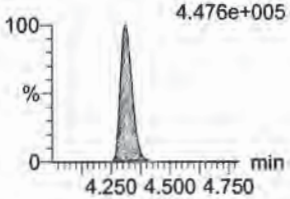
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

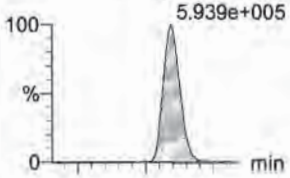
PFDoA
F51:MRM of 2 channels,ES-
612.9 > 318.8
3.659e+005



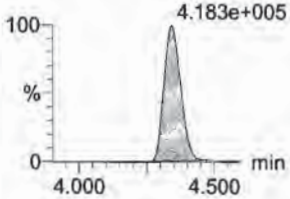
F51:MRM of 2 channels,ES-
612.9 > 569
4.476e+005



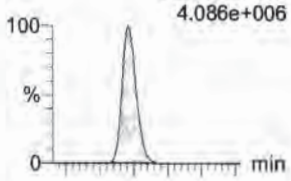
N-MeFOSA
F34:MRM of 2 channels,ES-
512.1 > 168.9
5.939e+005



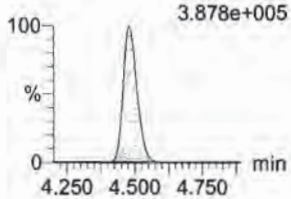
F34:MRM of 2 channels,ES-
512.1 > 219
4.183e+005



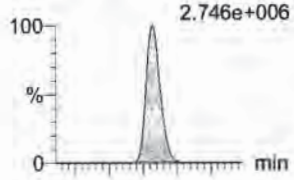
PFTrDA
F57:MRM of 2 channels,ES-
662.9 > 618.9
4.086e+006



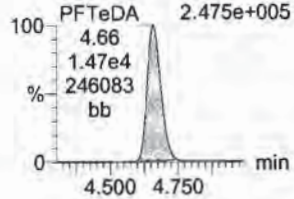
F57:MRM of 2 channels,ES-
662.9 > 319
3.878e+005



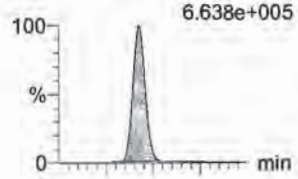
PFTeDA
F58:MRM of 4 channels,ES-
712.9 > 668.8
2.746e+006



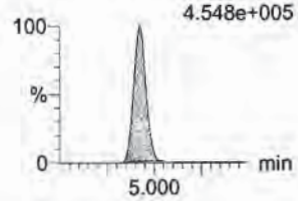
F58:MRM of 4 channels,ES-
712.9 > 369
2.475e+005



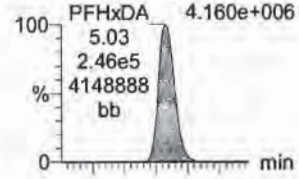
N-EtFOSA
F39:MRM of 2 channels,ES-
526.1 > 168.9
6.638e+005



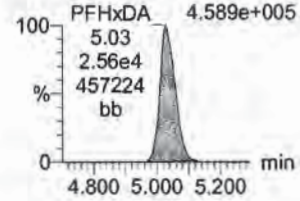
F39:MRM of 2 channels,ES-
526.1 > 219
4.548e+005



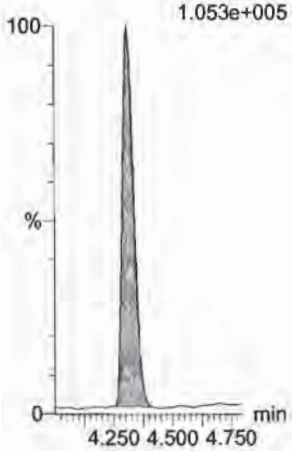
PFHxDA
F60:MRM of 2 channels,ES-
812.8 > 768.9
4.160e+006



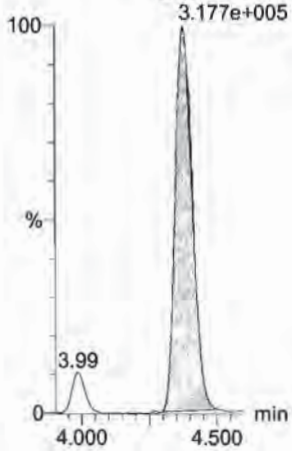
F60:MRM of 2 channels,ES-
812.8 > 219
4.589e+005



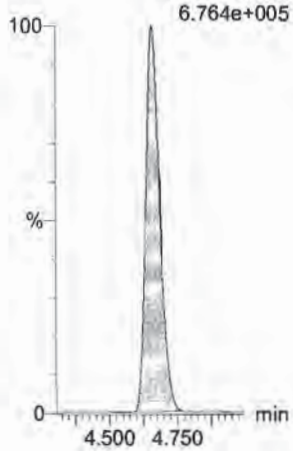
13C2-PFDoA
F52:MRM of 1 channel,ES-
615 > 569.7
1.053e+005



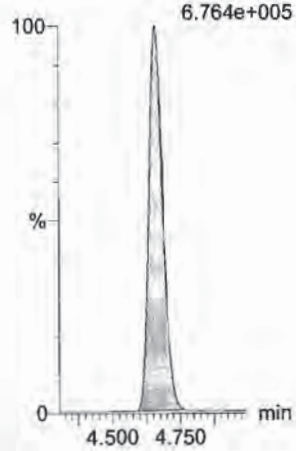
d3-N-MeFOSA
F37:MRM of 1 channel,ES-
515.2 > 168.9
3.177e+005



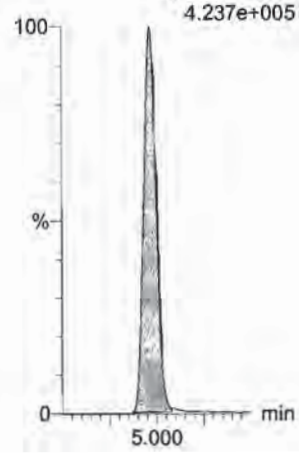
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
6.764e+005



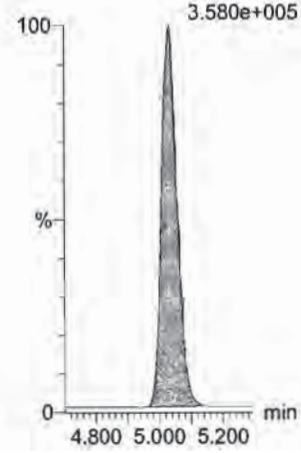
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
6.764e+005



d5-N-ETFOSA
F42:MRM of 1 channel,ES-
531.1 > 168.9
4.237e+005



13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.580e+005

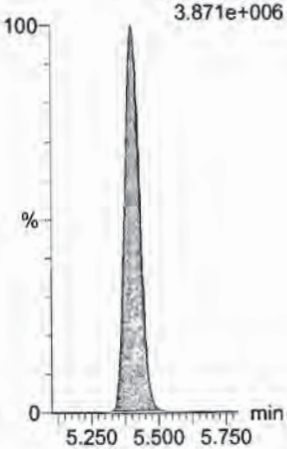


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

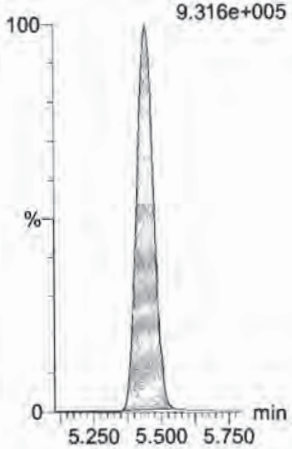
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

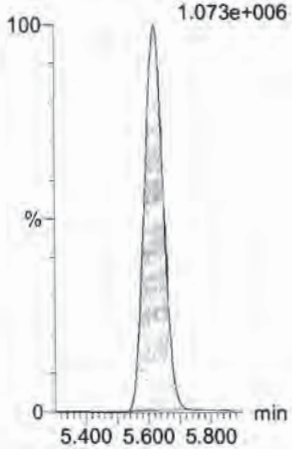
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
3.871e+006



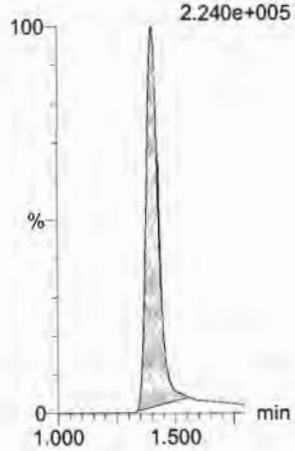
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
9.316e+005



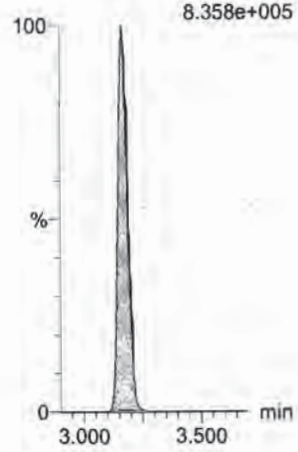
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.073e+006



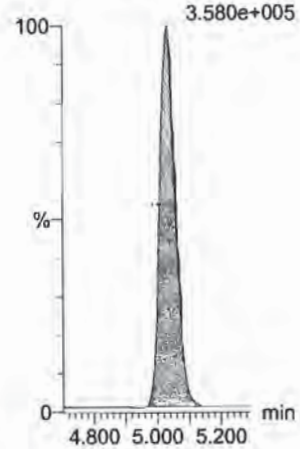
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.240e+005



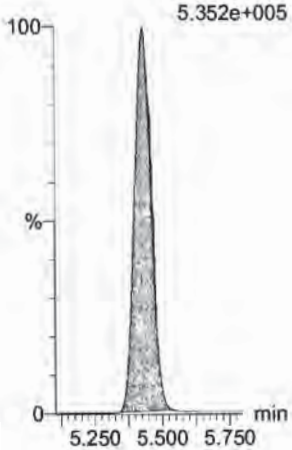
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.358e+005



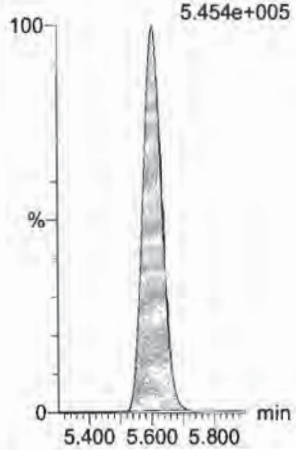
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.580e+005



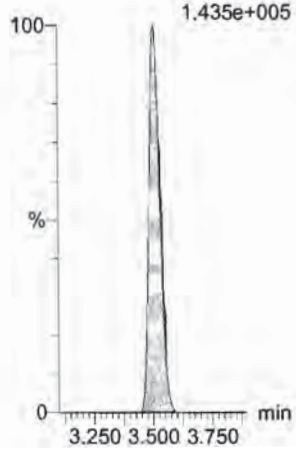
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.352e+005



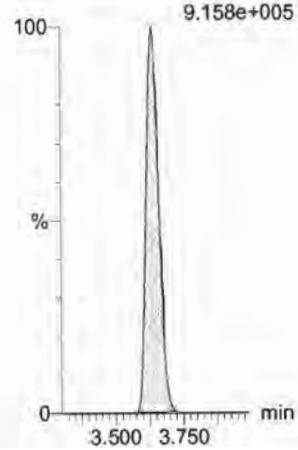
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.454e+005



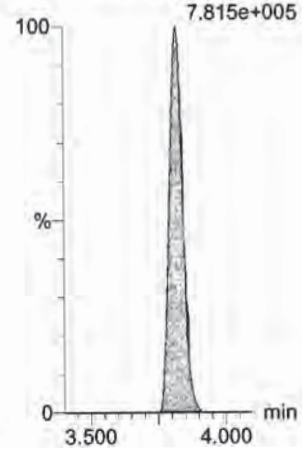
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.435e+005



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

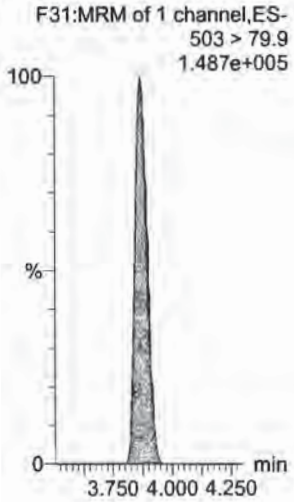


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

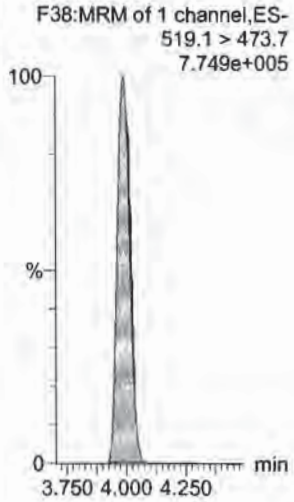
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_8, Date: 01-Aug-2017, Time: 01:44:08, ID: ST170731M2-7 PFC CS4 17G3112, Description: PFC CS4 17G3112

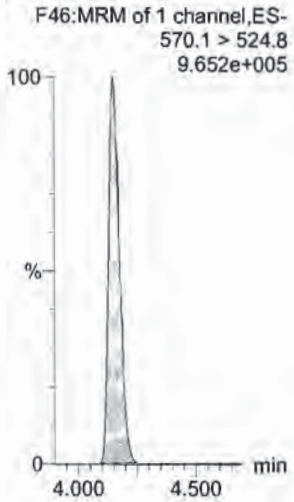
13C4-PFOS



13C6-PFDA



13C7-PFUnA

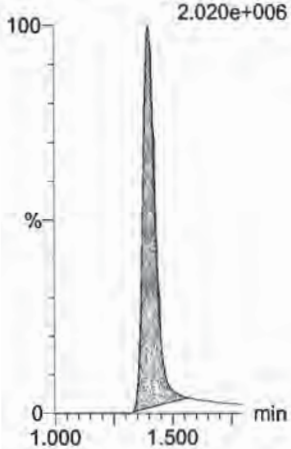


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

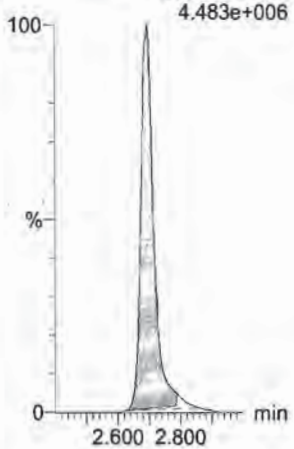
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_9, Date: 01-Aug-2017, Time: 01:54:46, ID: ST170731M2-8 PFC CS5 17G3113, Description: PFC CS5 17G3113

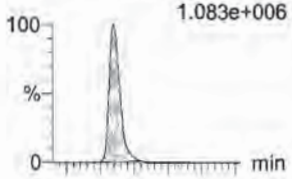
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
2.020e+006



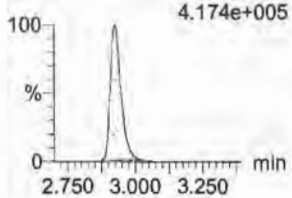
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
4.483e+006



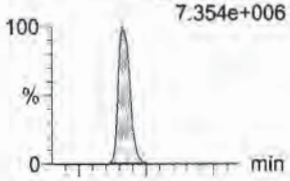
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
1.083e+006



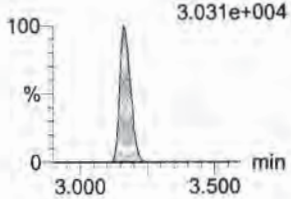
F6:MRM of 2 channels,ES-
299 > 99
4.174e+005



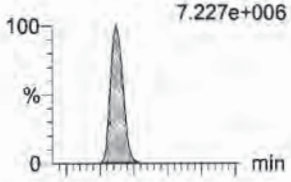
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
7.354e+006



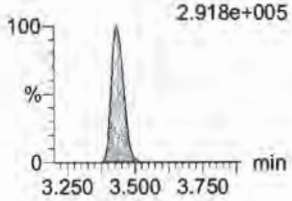
F8:MRM of 2 channels,ES-
313.2 > 119
3.031e+004



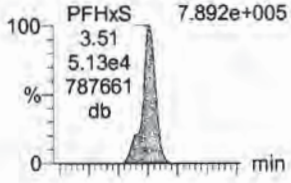
PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
7.227e+006



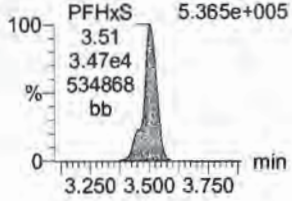
F14:MRM of 2 channels,ES-
363 > 169
2.918e+005



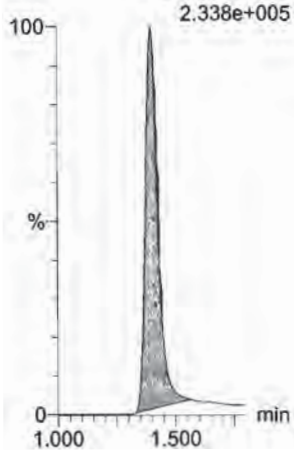
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
7.892e+005



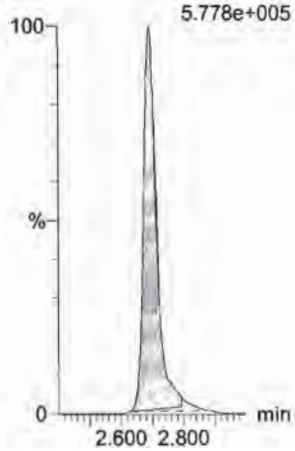
F16:MRM of 2 channels,ES-
398.9 > 99
5.365e+005



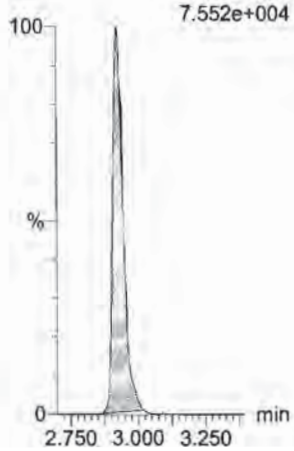
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
2.338e+005



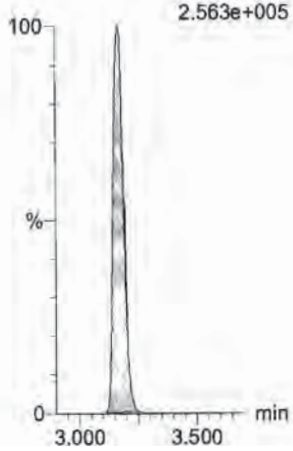
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
5.778e+005



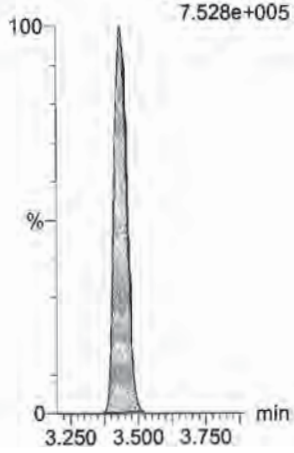
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
7.552e+004



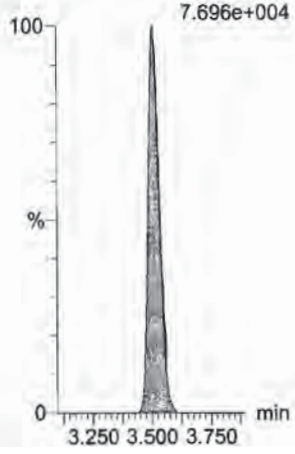
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
2.563e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
7.528e+005



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
7.696e+004



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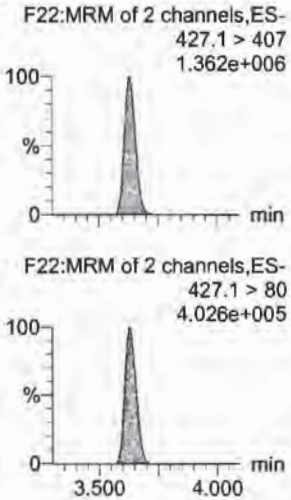
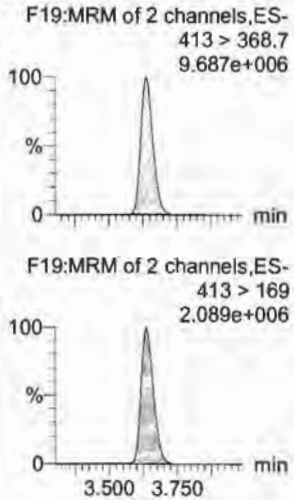
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_9, Date: 01-Aug-2017, Time: 01:54:46, ID: ST170731M2-8 PFC CS5 17G3113, Description: PFC CS5 17G3113

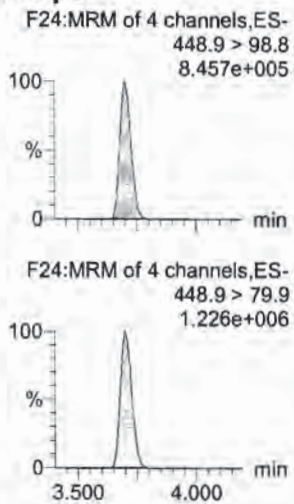
6:2 FTS



PFOA



PFHpS



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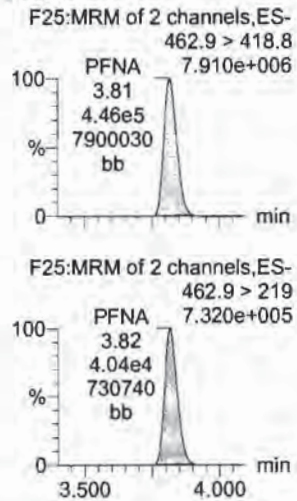

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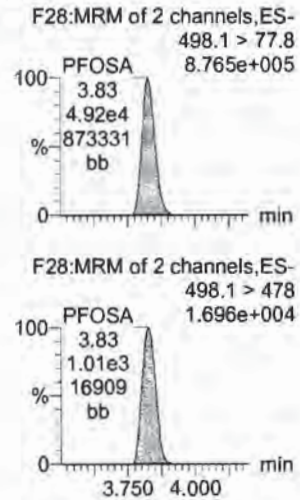
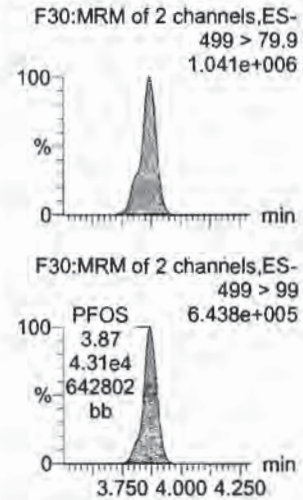
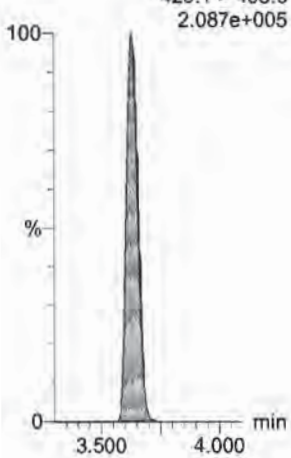


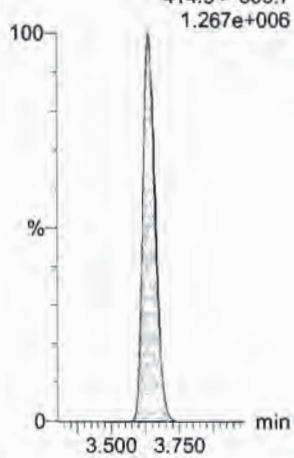
PFOS



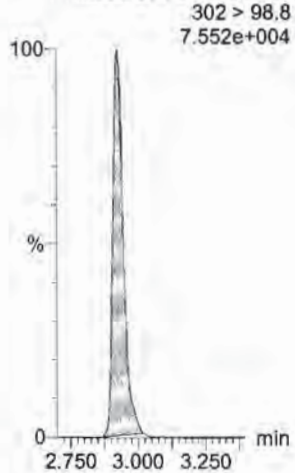
13C2-6:2 FTS



13C2-PFOA



13C3-PFBS



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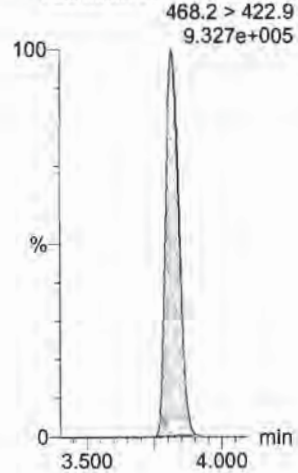
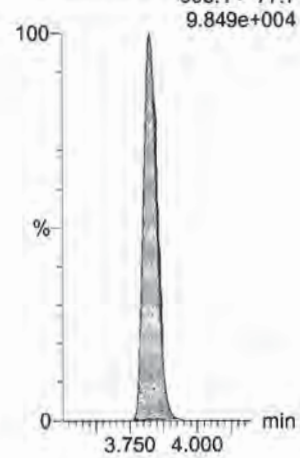


13C8-PFOSA



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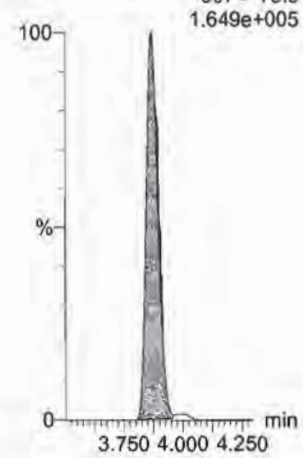

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Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_9, Date: 01-Aug-2017, Time: 01:54:46, ID: ST170731M2-8 PFC CS5 17G3113, Description: PFC CS5 17G3113

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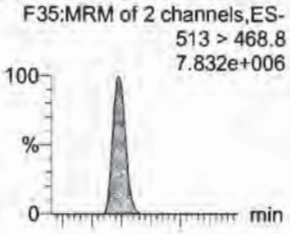
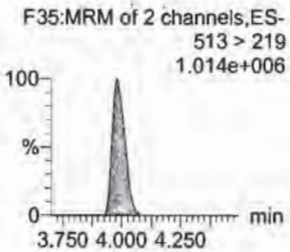
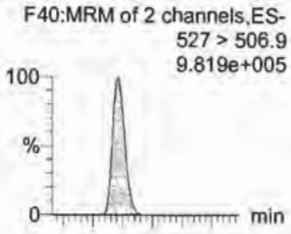
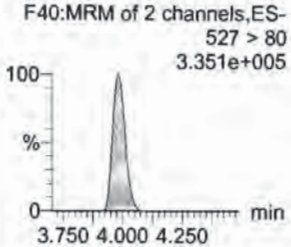




8:2 FTS





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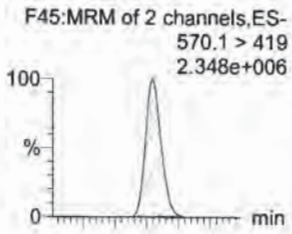

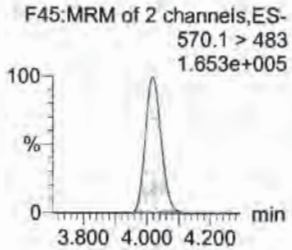

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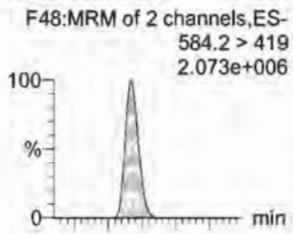

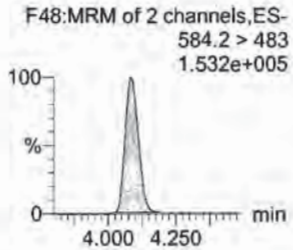

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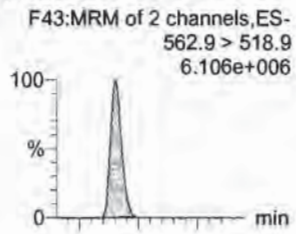

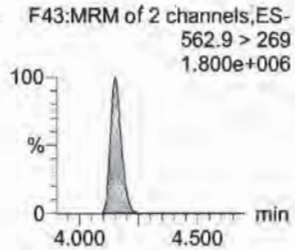

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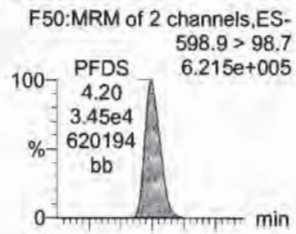

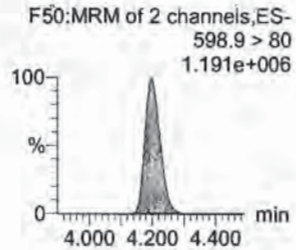

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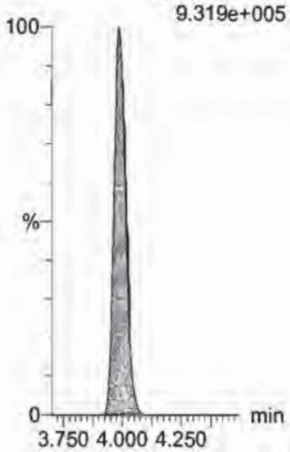
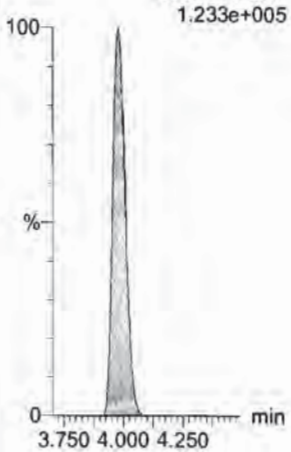


13C2-8:2 FTS



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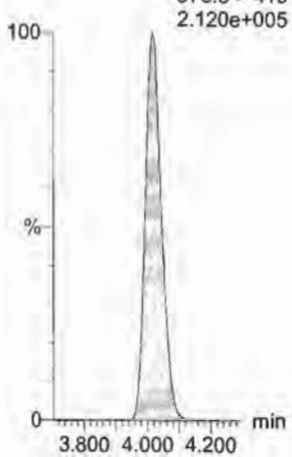
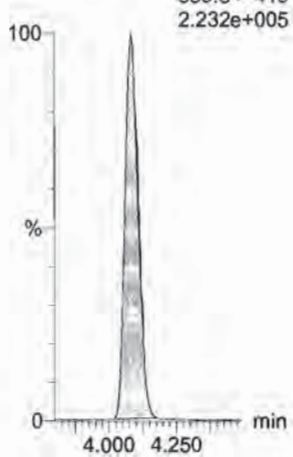


d5-N-EtFOSAA



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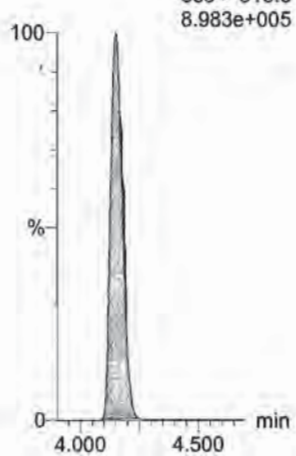

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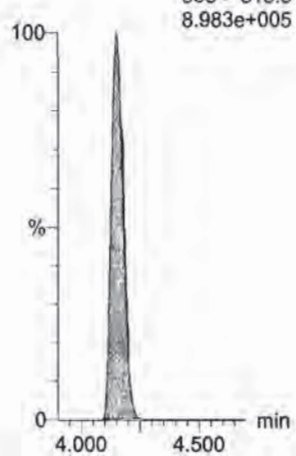

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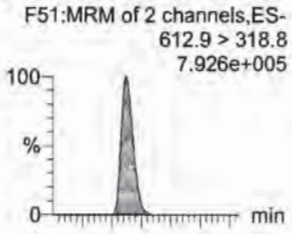
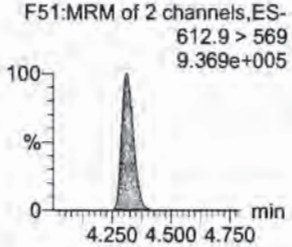
PFDoA





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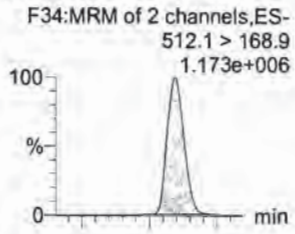

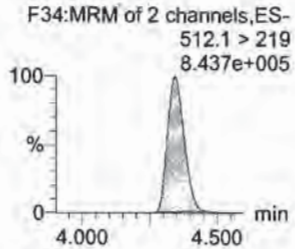

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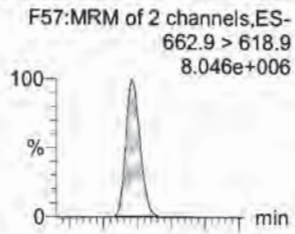

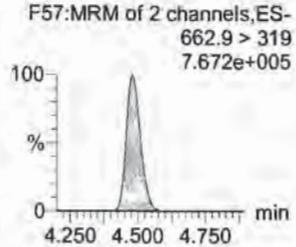

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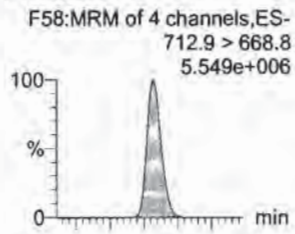

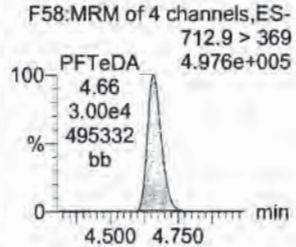

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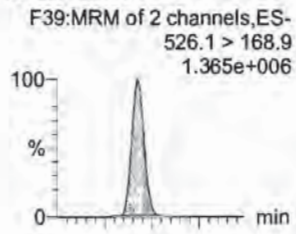

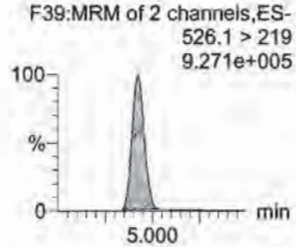

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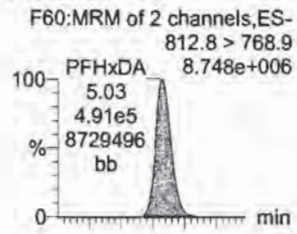

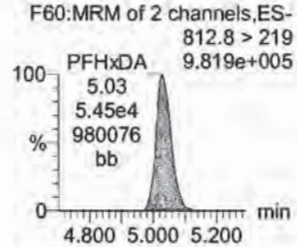

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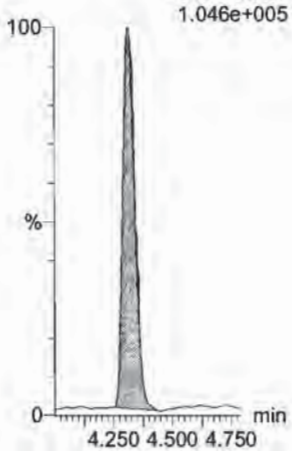

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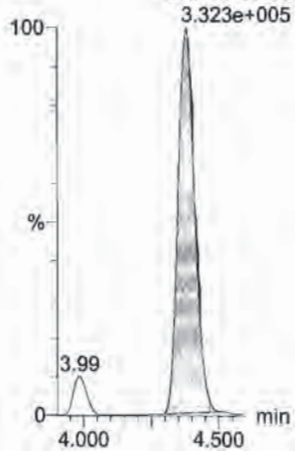
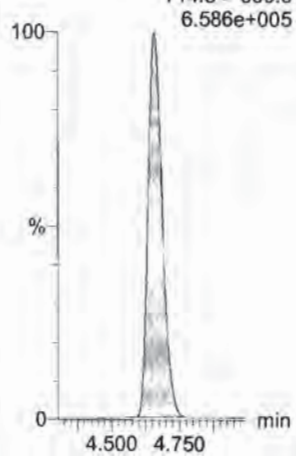
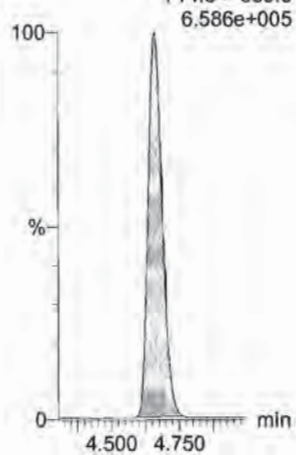


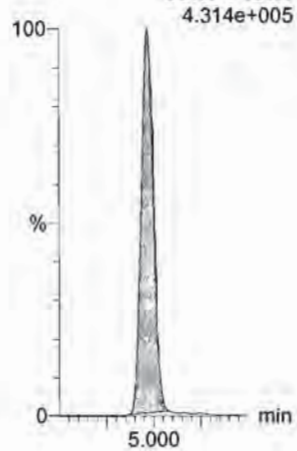
13C2-PFTeDA



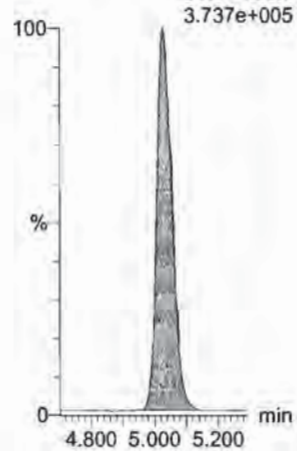
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



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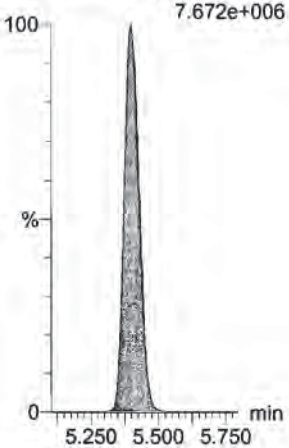
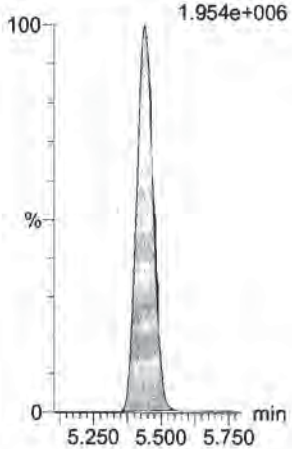
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_9, Date: 01-Aug-2017, Time: 01:54:46, ID: ST170731M2-8 PFC CS5 17G3113, Description: PFC CS5 17G3113

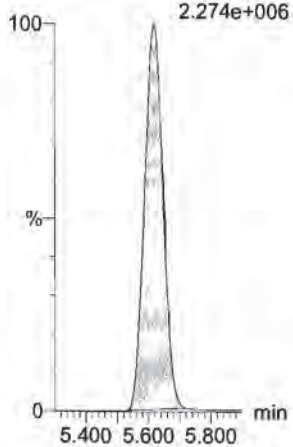
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
7.672e+006



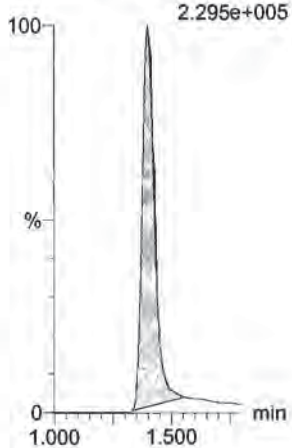
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.954e+006



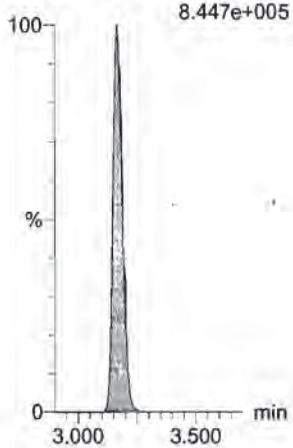
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
2.274e+006



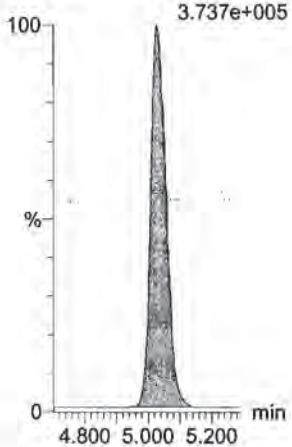
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.295e+005



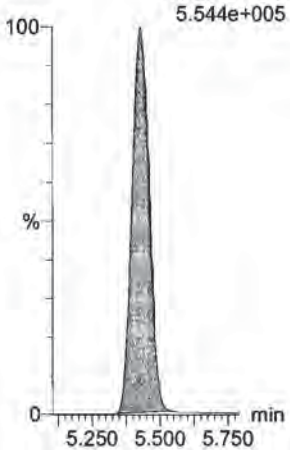
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.447e+005



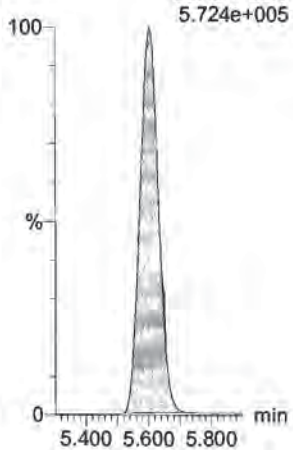
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.737e+005



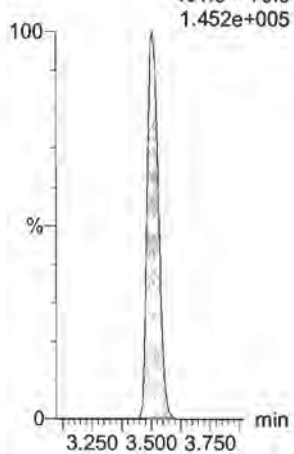
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.544e+005



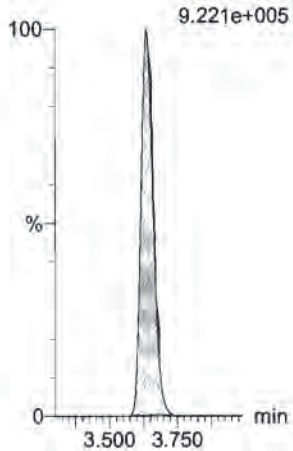
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.724e+005



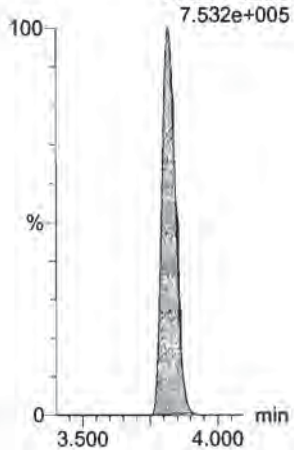
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.452e+005



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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Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
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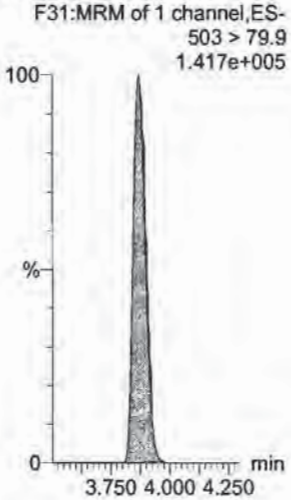
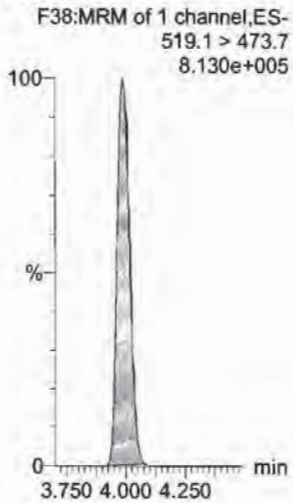
Name: 170731M2_9, Date: 01-Aug-2017, Time: 01:54:46, ID: ST170731M2-8 PFC CS5 17G3113, Description: PFC CS5 17G3113

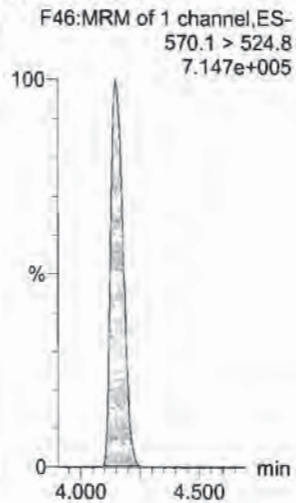
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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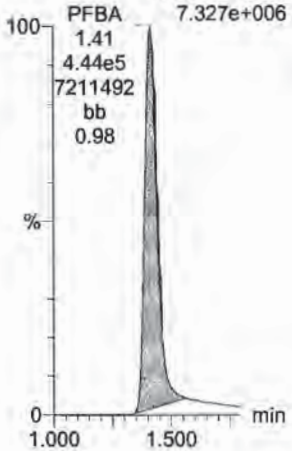
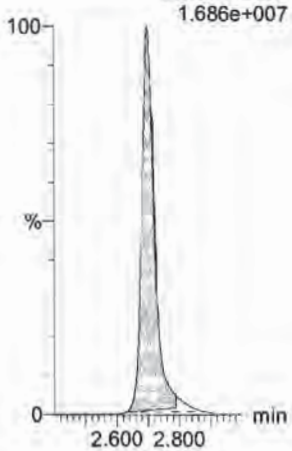
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_10, Date: 01-Aug-2017, Time: 02:05:40, ID: ST170731M2-9 PFC CS6 17G2801, Description: PFC CS6 17G2801

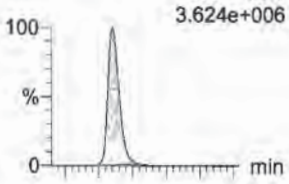
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
7.327e+006



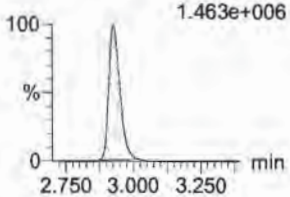
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
1.686e+007



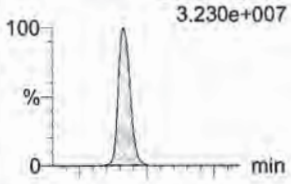
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
3.624e+006



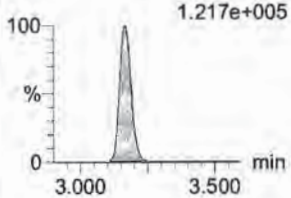
F6:MRM of 2 channels,ES-
299 > 99
1.463e+006



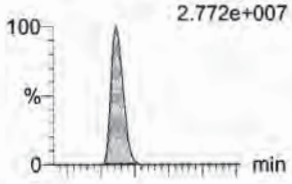
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
3.230e+007



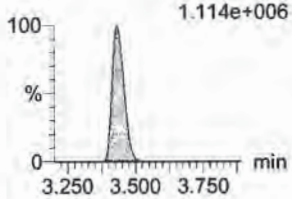
F8:MRM of 2 channels,ES-
313.2 > 119
1.217e+005



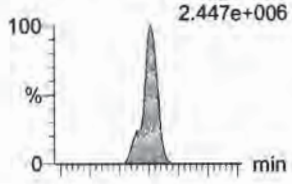
PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
2.772e+007



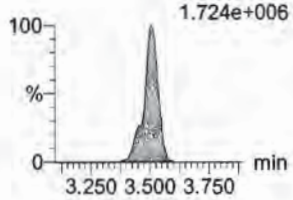
F14:MRM of 2 channels,ES-
363 > 169
1.114e+006



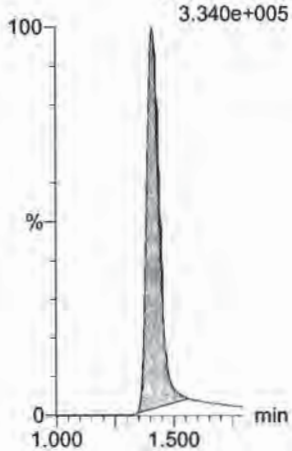
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
2.447e+006



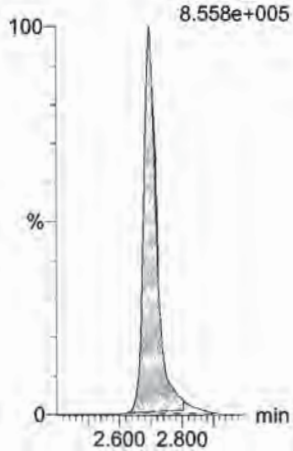
F16:MRM of 2 channels,ES-
398.9 > 99
1.724e+006



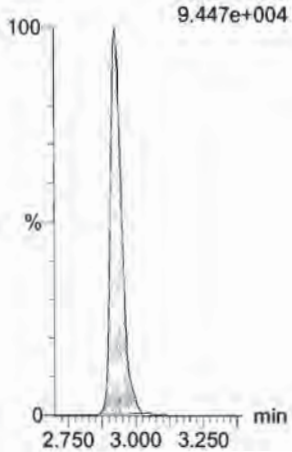
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
3.340e+005



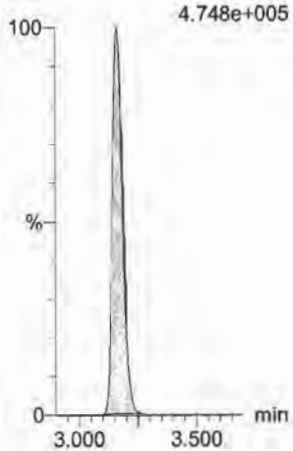
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
8.558e+005



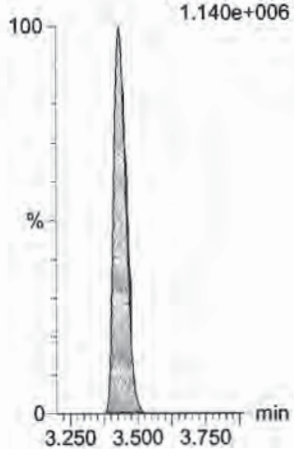
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
9.447e+004



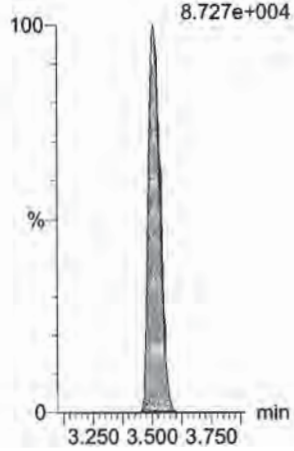
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
4.748e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
1.140e+006



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
8.727e+004



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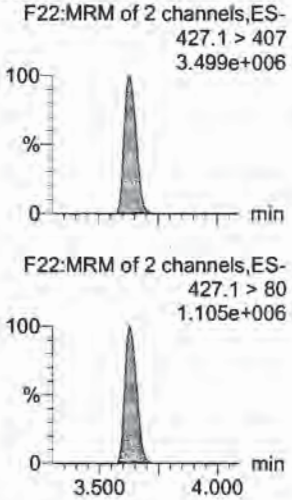
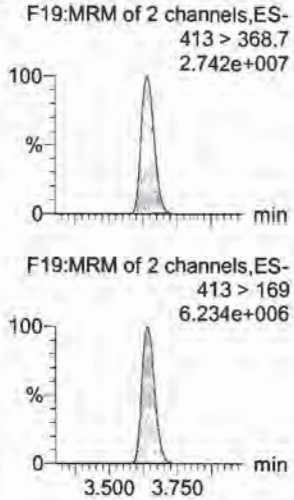
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_10, Date: 01-Aug-2017, Time: 02:05:40, ID: ST170731M2-9 PFC CS6 17G2801, Description: PFC CS6 17G2801

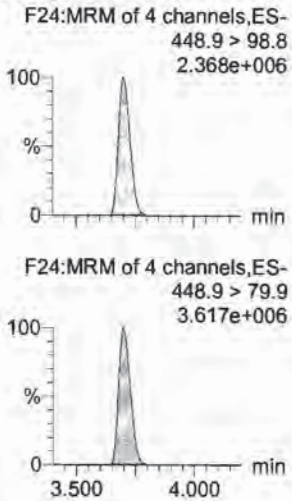
6:2 FTS



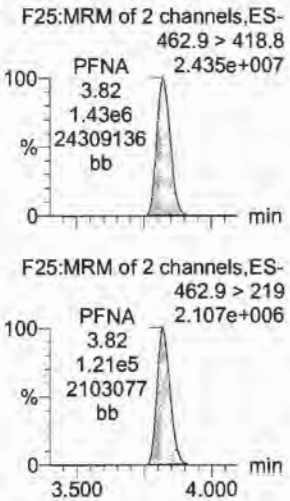
PFOA



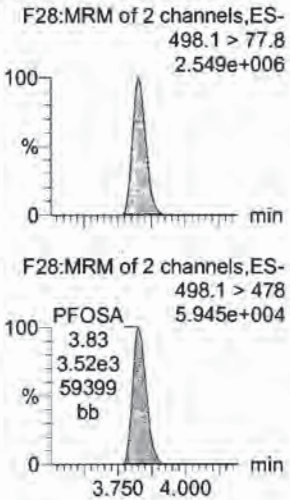
PFHpS



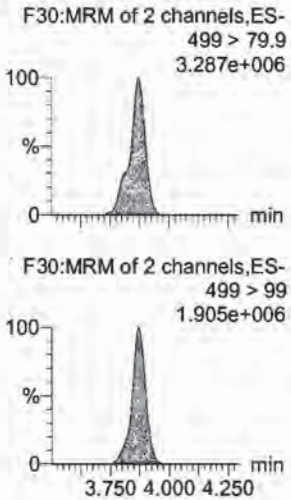
PFNA



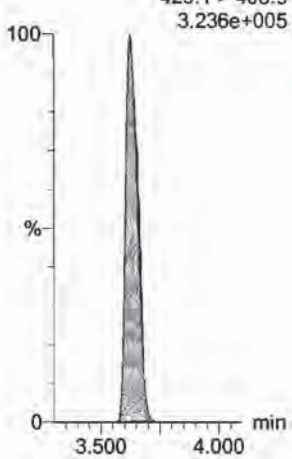
PFOSA



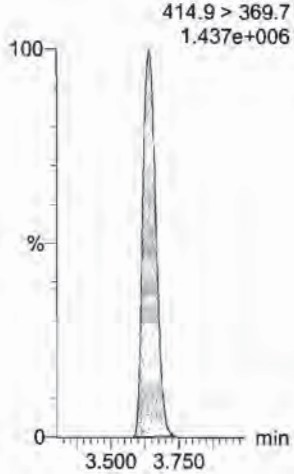
PFOS



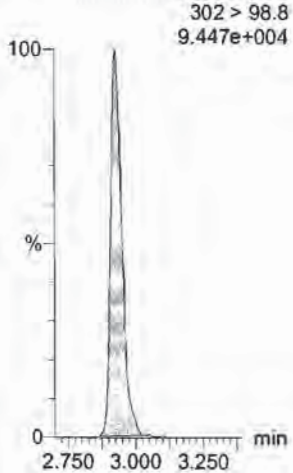
13C2-6:2 FTS



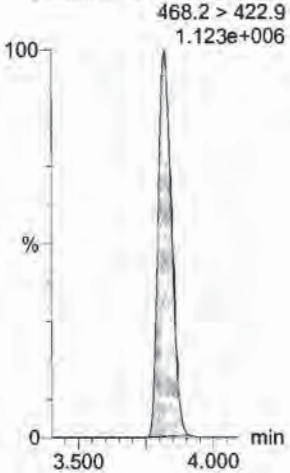
13C2-PFOA



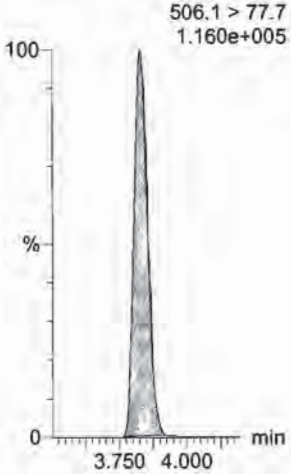
13C3-PFBS



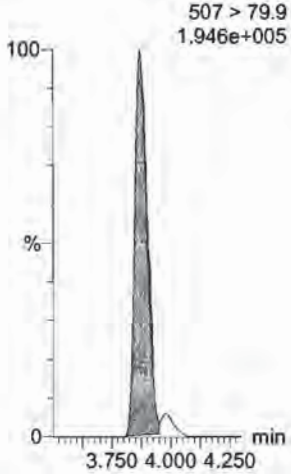
13C5-PFNA



13C8-PFOSA



13C8-PFOS

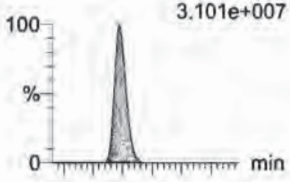


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

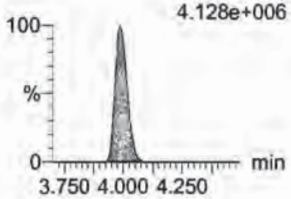
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_10, Date: 01-Aug-2017, Time: 02:05:40, ID: ST170731M2-9 PFC CS6 17G2801, Description: PFC CS6 17G2801

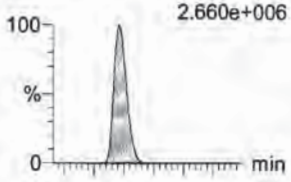
PFDA
F35:MRM of 2 channels,ES-
513 > 468.8
3.101e+007



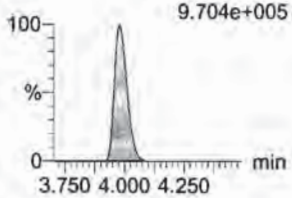
F35:MRM of 2 channels,ES-
513 > 219
4.128e+006



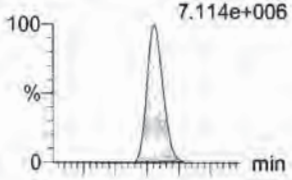
8:2 FTS
F40:MRM of 2 channels,ES-
527 > 506.9
2.660e+006



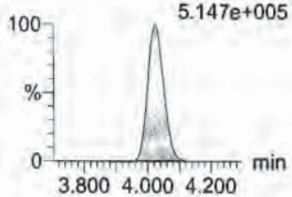
F40:MRM of 2 channels,ES-
527 > 80
9.704e+005



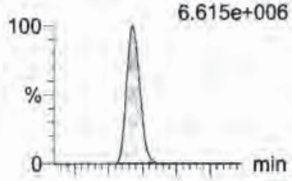
N-MeFOSAA
F45:MRM of 2 channels,ES-
570.1 > 419
7.114e+006



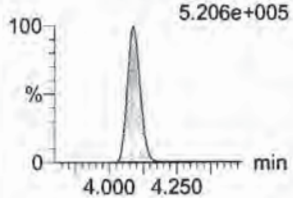
F45:MRM of 2 channels,ES-
570.1 > 483
5.147e+005



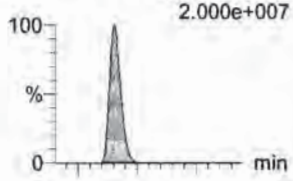
N-EtFOSAA
F48:MRM of 2 channels,ES-
584.2 > 419
6.615e+006



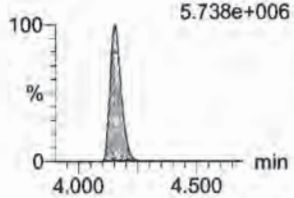
F48:MRM of 2 channels,ES-
584.2 > 483
5.206e+005



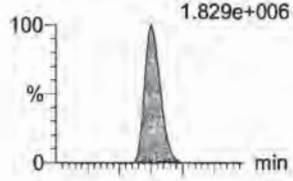
PFUnA
F43:MRM of 2 channels,ES-
562.9 > 518.9
2.000e+007



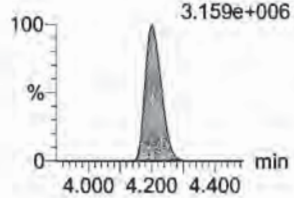
F43:MRM of 2 channels,ES-
562.9 > 269
5.738e+006



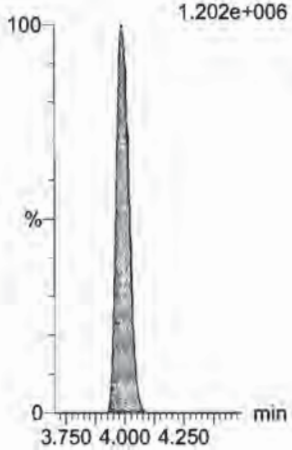
PFDS
F50:MRM of 2 channels,ES-
598.9 > 98.7
1.829e+006



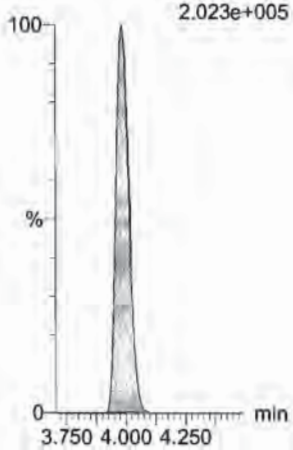
F50:MRM of 2 channels,ES-
598.9 > 80
3.159e+006



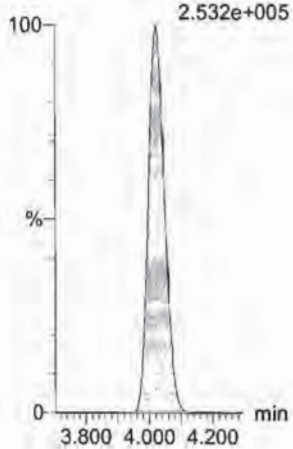
13C2-PFDA
F36:MRM of 1 channel,ES-
515.1 > 469.9
1.202e+006



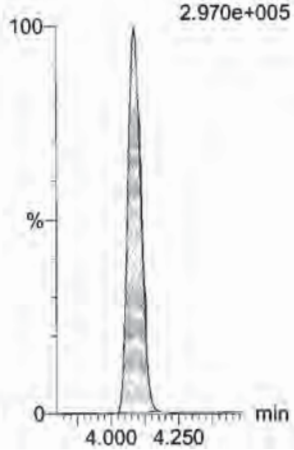
13C2-8:2 FTS
F41:MRM of 1 channel,ES-
529.1 > 508.7
2.023e+005



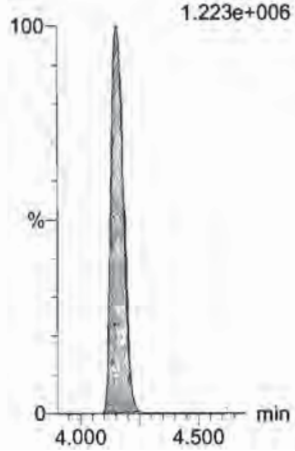
d3-N-MeFOSAA
F47:MRM of 1 channel,ES-
573.3 > 419
2.532e+005



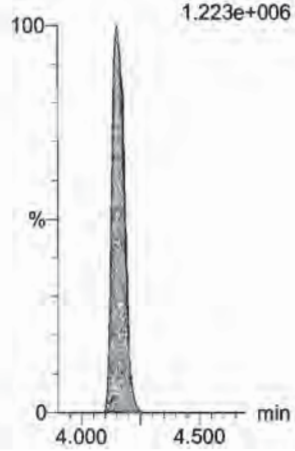
d5-N-EtFOSAA
F49:MRM of 1 channel,ES-
589.3 > 419
2.970e+005



13C2-PFUnA
F44:MRM of 1 channel,ES-
565 > 519.8
1.223e+006



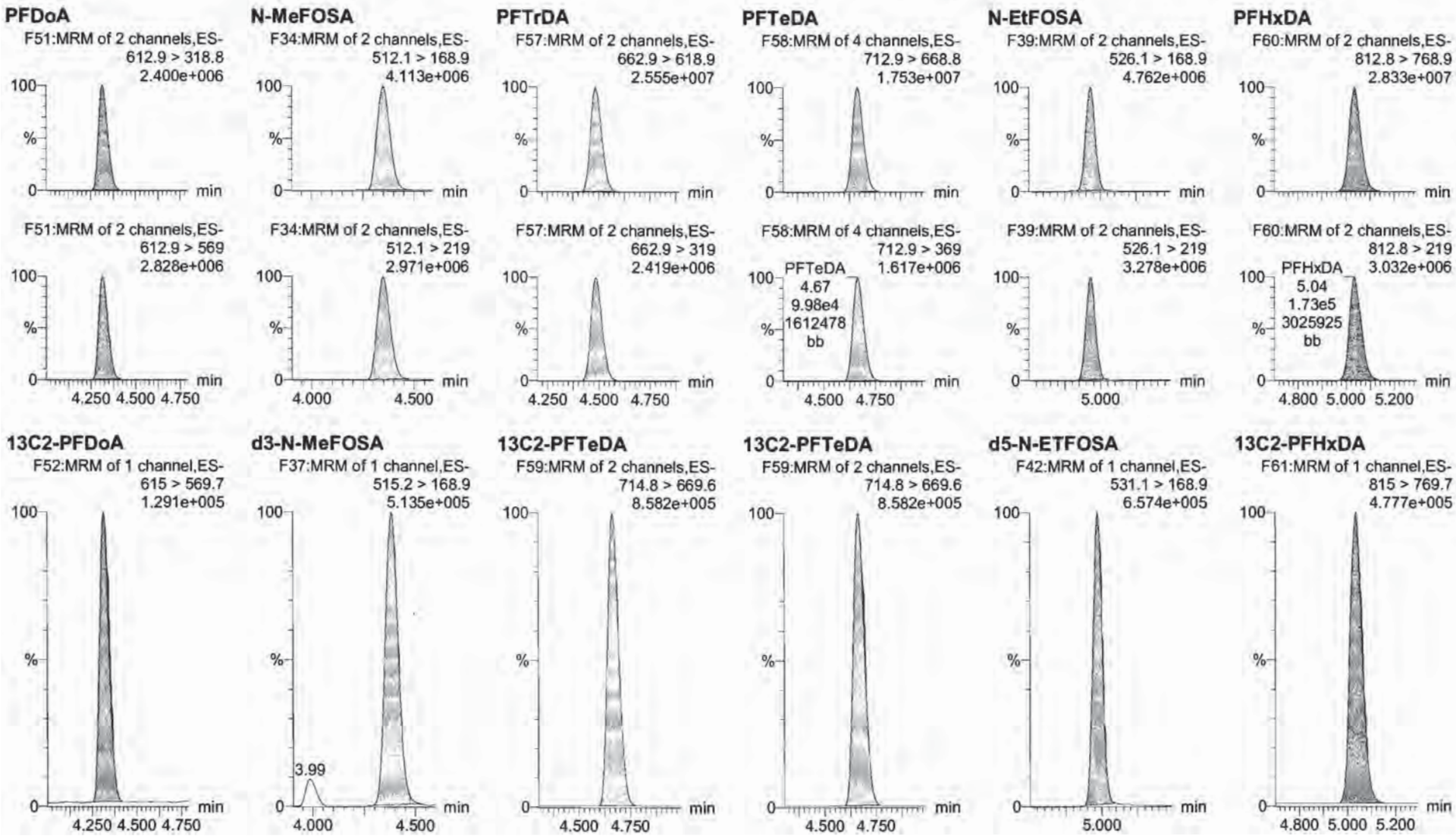
13C2-PFUnA
F44:MRM of 1 channel,ES-
565 > 519.8
1.223e+006



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_10, Date: 01-Aug-2017, Time: 02:05:40, ID: ST170731M2-9 PFC CS6 17G2801, Description: PFC CS6 17G2801

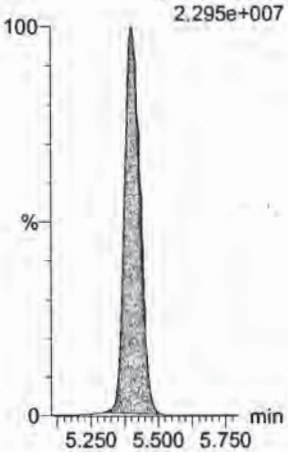


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

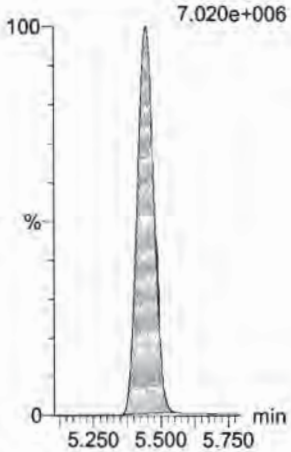
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_10, Date: 01-Aug-2017, Time: 02:05:40, ID: ST170731M2-9 PFC CS6 17G2801, Description: PFC CS6 17G2801

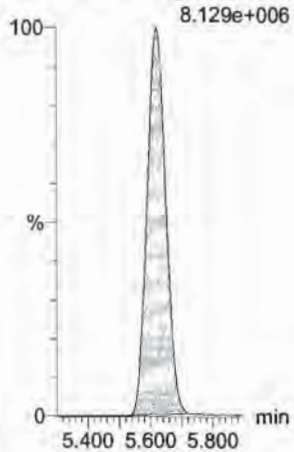
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
2.295e+007



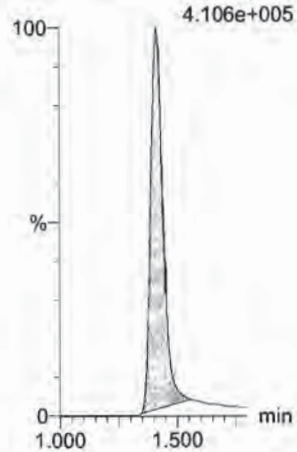
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
7.020e+006



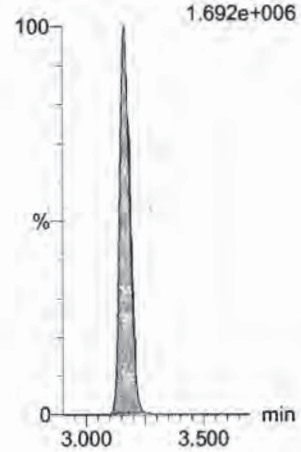
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
8.129e+006



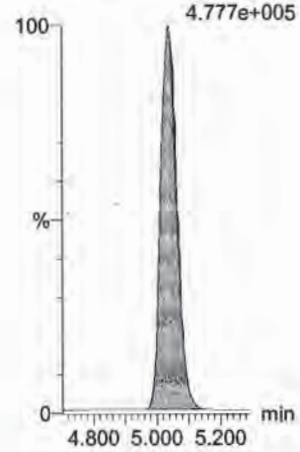
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
4.106e+005



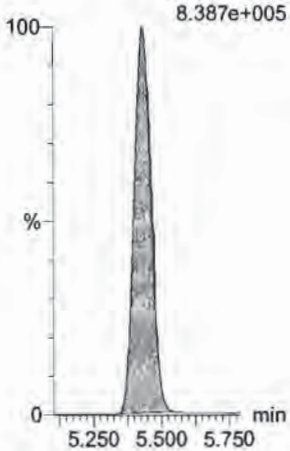
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.692e+006



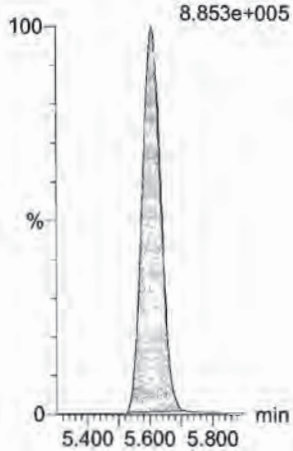
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.777e+005



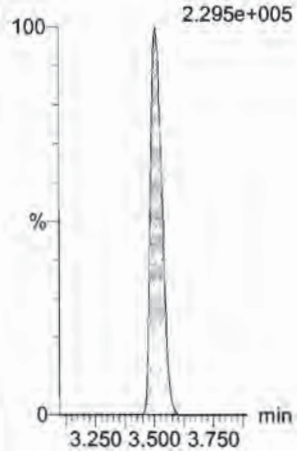
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
8.387e+005



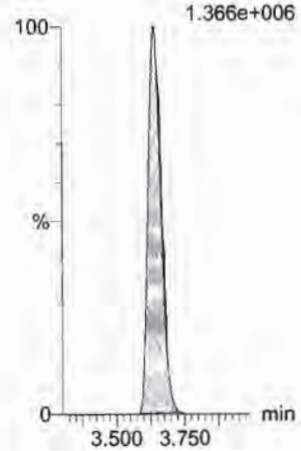
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
8.853e+005



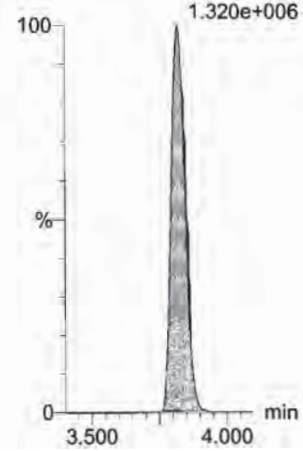
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
2.295e+005



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

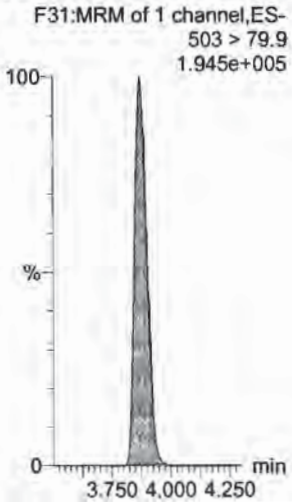


Dataset: U:\Q4.PRO\results\170731M2\170731M2-CRV.qld

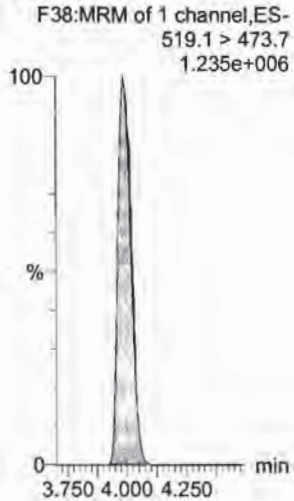
Last Altered: Tuesday, August 01, 2017 10:11:08 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:12:04 Pacific Daylight Time

Name: 170731M2_10, Date: 01-Aug-2017, Time: 02:05:40, ID: ST170731M2-9 PFC CS6 17G2801, Description: PFC CS6 17G2801

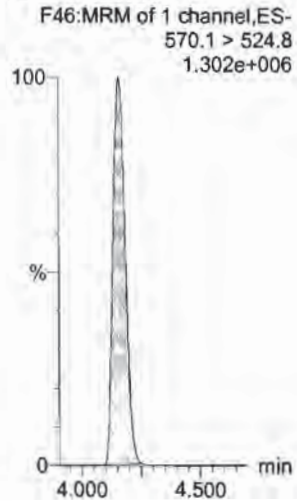
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
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.

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

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

Quantify Totals Report MassLynx MassLynx V4.1 SCN945 SCN960
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

Dataset: U:\Q4.PRO\results\170731M2\170731M2-13.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

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

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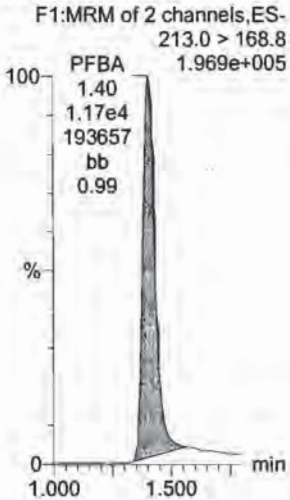

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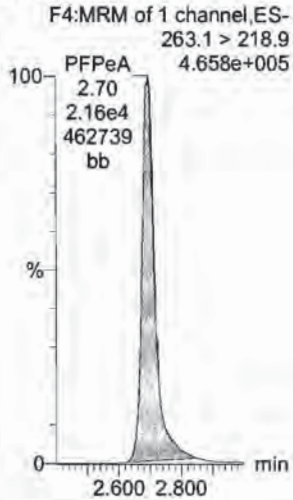

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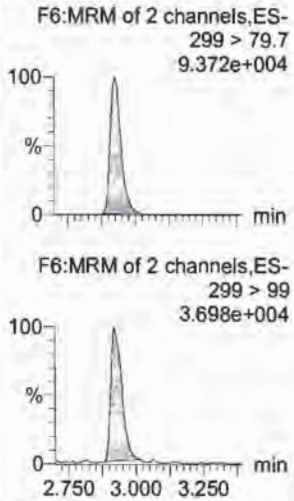

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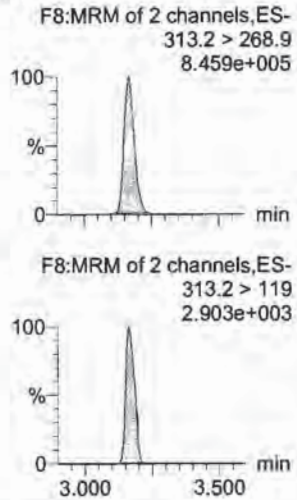

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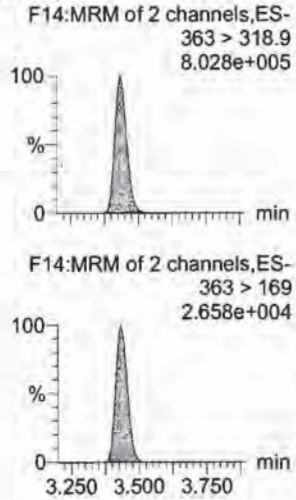

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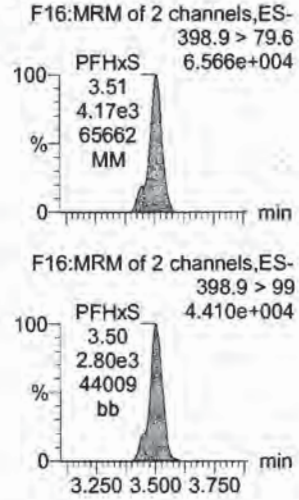

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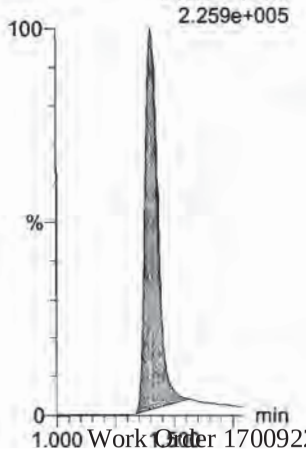

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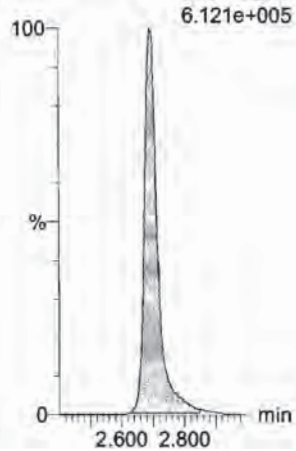

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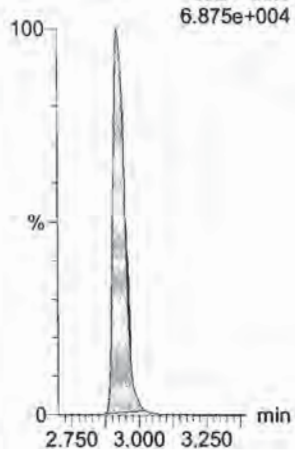

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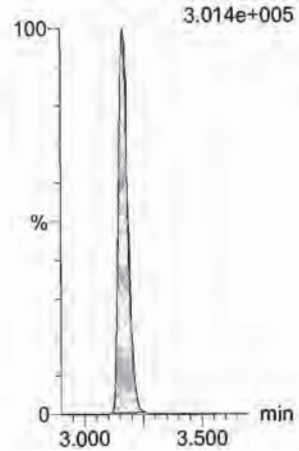

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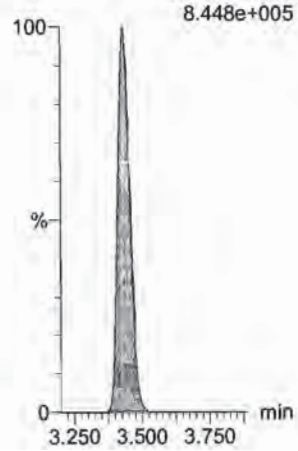

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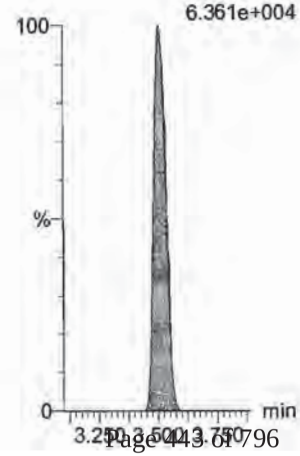

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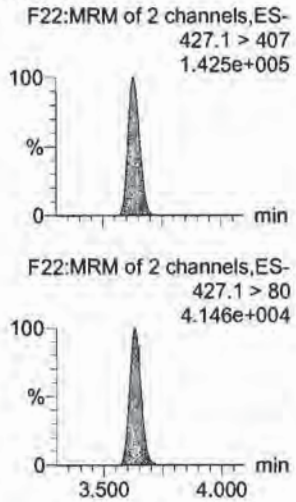
Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:30 Pacific Daylight Time

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

6:2 FTS



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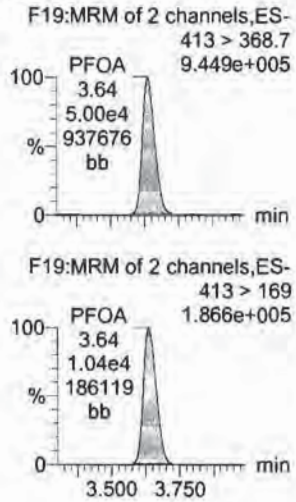

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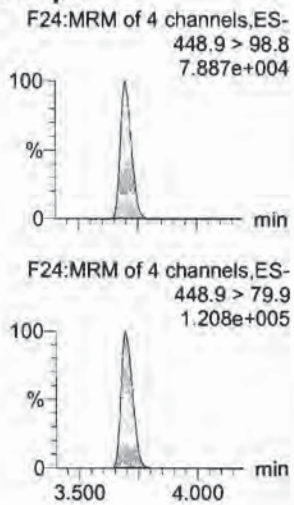

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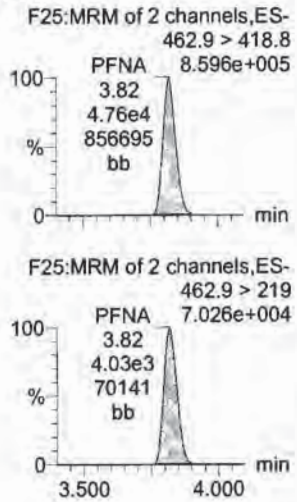

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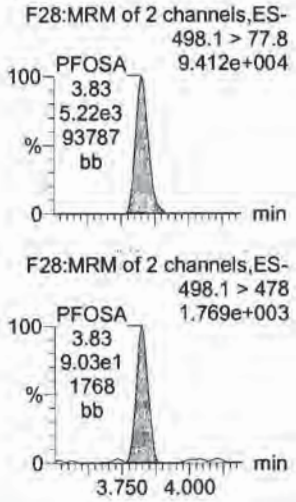

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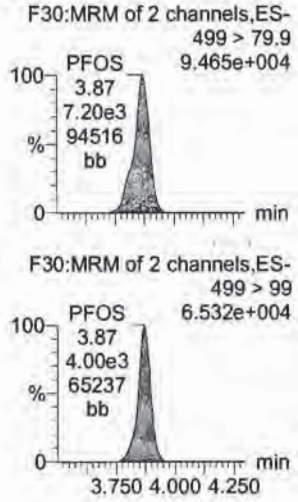

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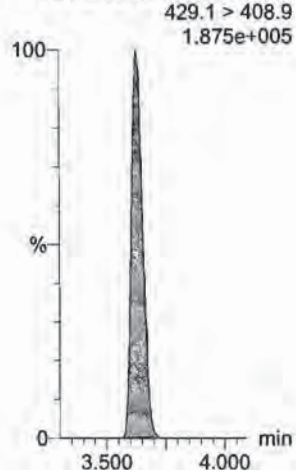

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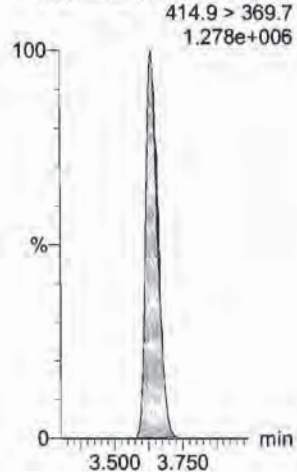

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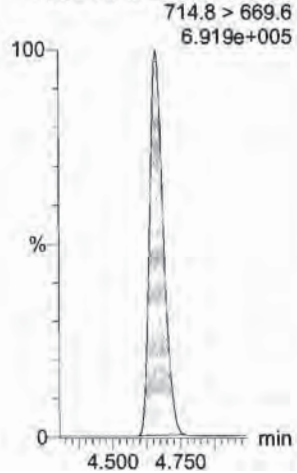

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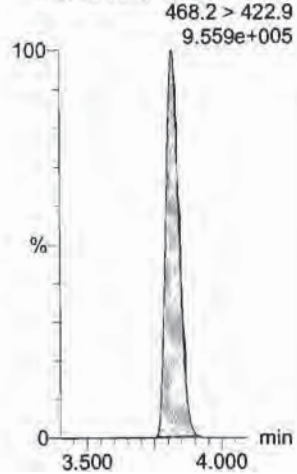

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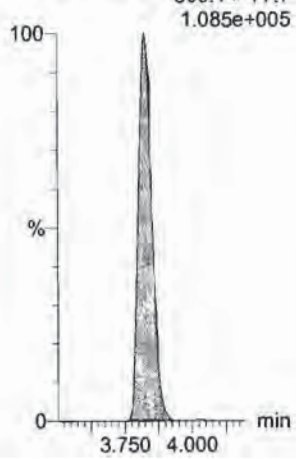

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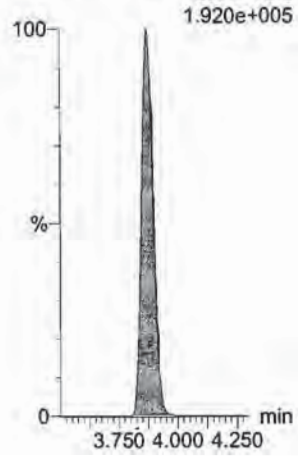

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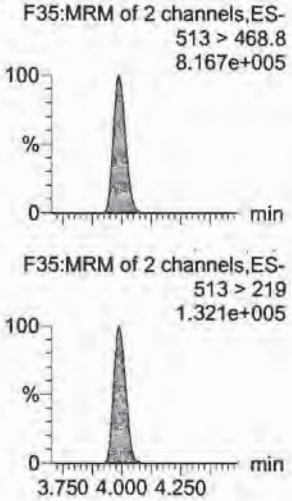
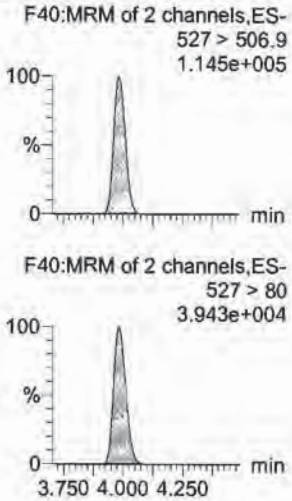
Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

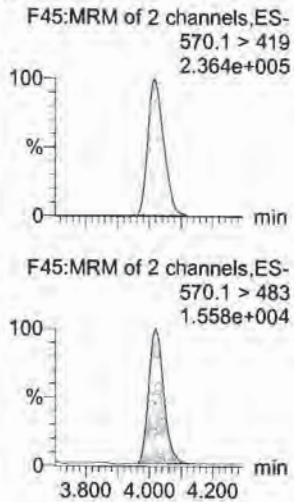
PFDA



8:2 FTS



N-MeFOSAA



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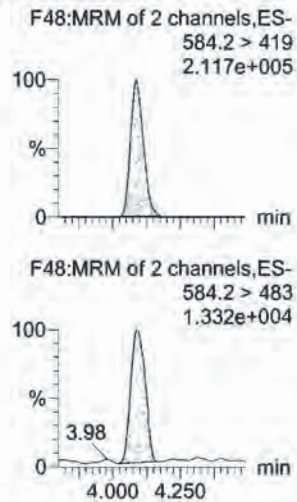

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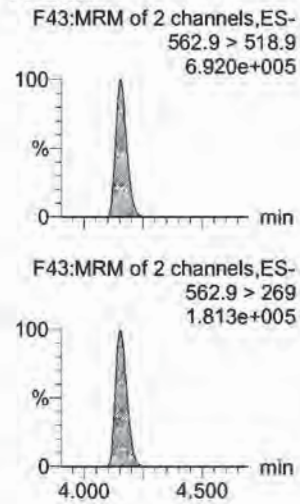

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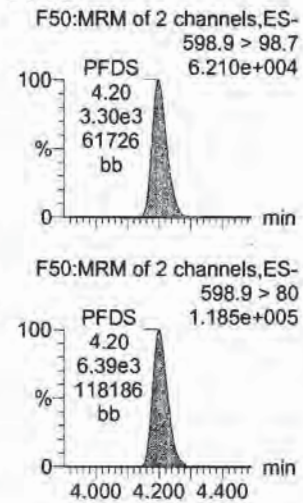

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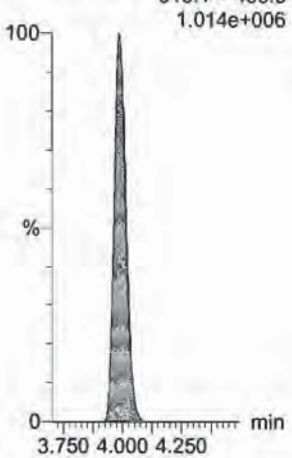
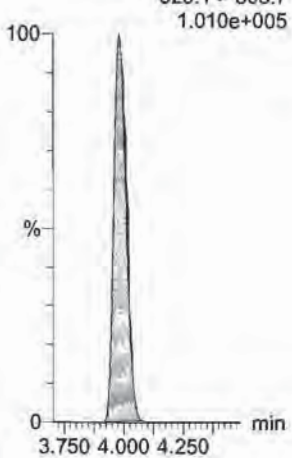


13C2-8:2 FTS



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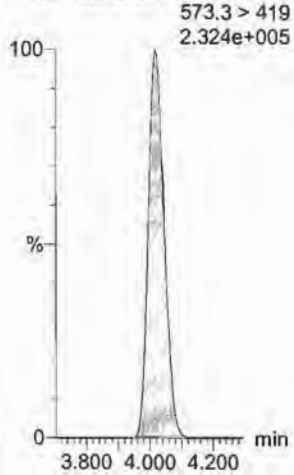
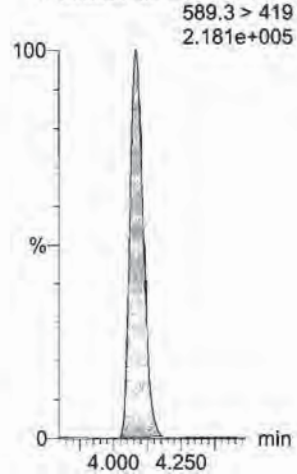
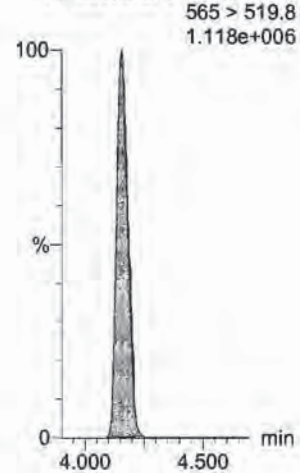


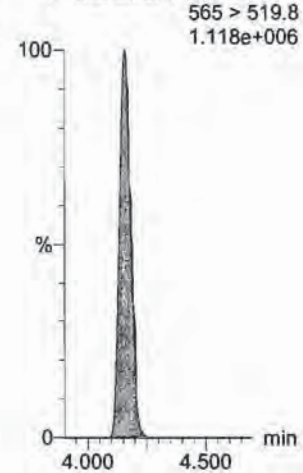
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA

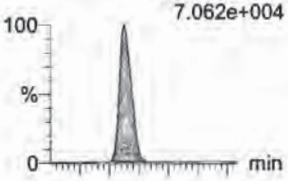


Dataset: U:\Q4.PRO\results\170731M2\170731M2-13.qld

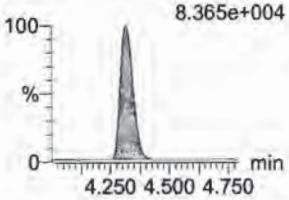
Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:30 Pacific Daylight Time

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

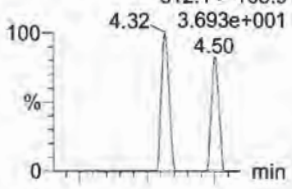
PFDoA
F51:MRM of 2 channels,ES-
612.9 > 318.8
7.062e+004



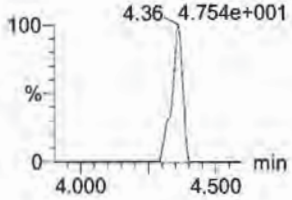
F51:MRM of 2 channels,ES-
612.9 > 569
8.365e+004



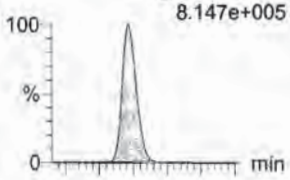
N-MeFOSA
F34:MRM of 2 channels,ES-
512.1 > 168.9
3.693e+001



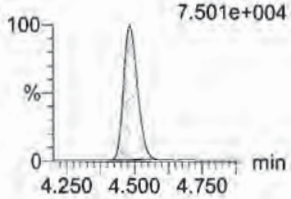
F34:MRM of 2 channels,ES-
512.1 > 219
4.754e+001



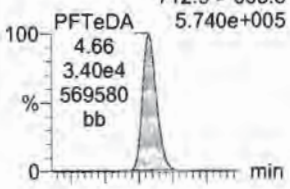
PFTrDA
F57:MRM of 2 channels,ES-
662.9 > 618.9
8.147e+005



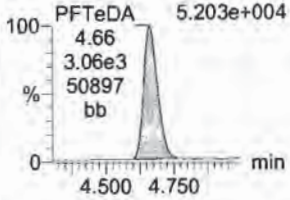
F57:MRM of 2 channels,ES-
662.9 > 319
7.501e+004



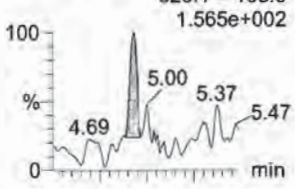
PFTeDA
F58:MRM of 4 channels,ES-
712.9 > 668.8
5.740e+005



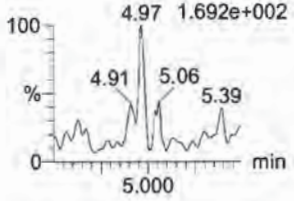
F58:MRM of 4 channels,ES-
712.9 > 369
5.203e+004



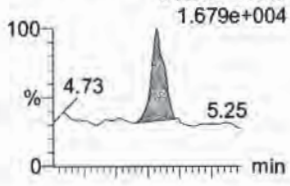
N-EtFOSA
F39:MRM of 2 channels,ES-
526.1 > 168.9
1.565e+002



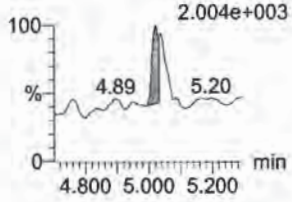
F39:MRM of 2 channels,ES-
526.1 > 219
1.692e+002



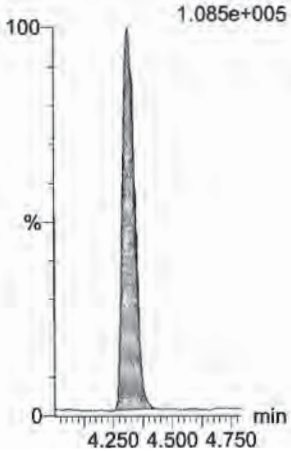
PFHxDA
F60:MRM of 2 channels,ES-
812.8 > 768.9
1.679e+004



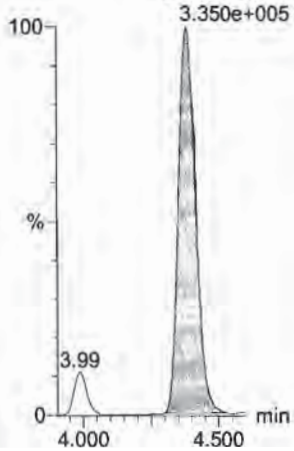
F60:MRM of 2 channels,ES-
812.8 > 219
2.004e+003



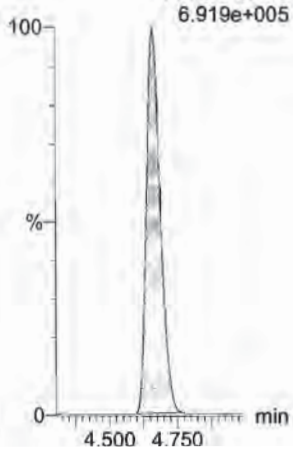
13C2-PFDoA
F52:MRM of 1 channel,ES-
615 > 569.7
1.085e+005



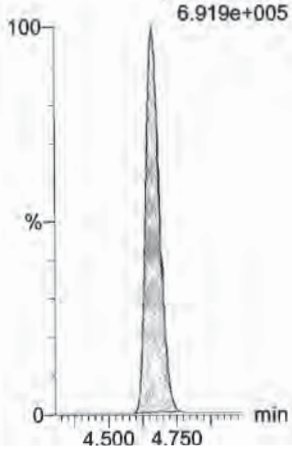
d3-N-MeFOSA
F37:MRM of 1 channel,ES-
515.2 > 168.9
3.350e+005



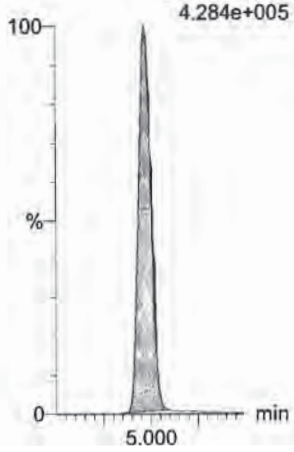
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
6.919e+005



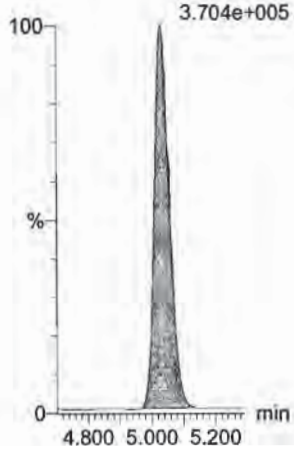
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
6.919e+005



d5-N-ETFOSA
F42:MRM of 1 channel,ES-
531.1 > 168.9
4.284e+005



13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.704e+005

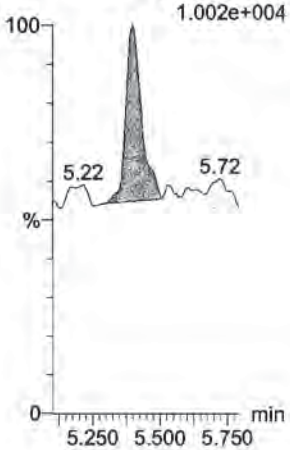


Dataset: U:\Q4.PRO\results\170731M2\170731M2-13.qld

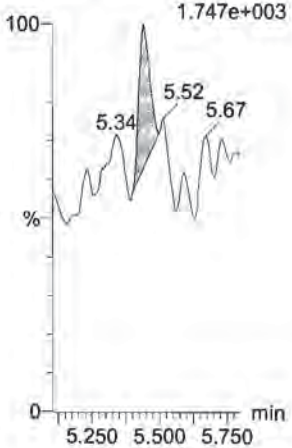
Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:30 Pacific Daylight Time

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

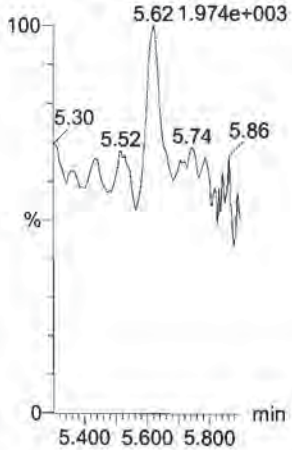
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.002e+004



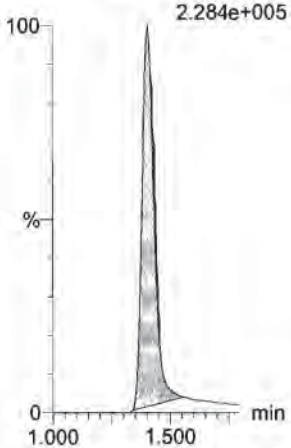
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.747e+003



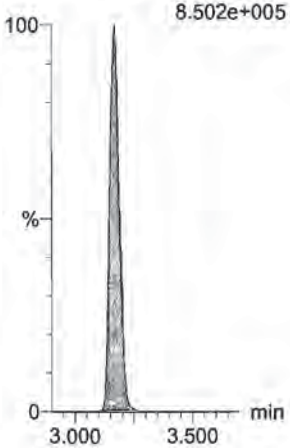
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
5.62 1.974e+003



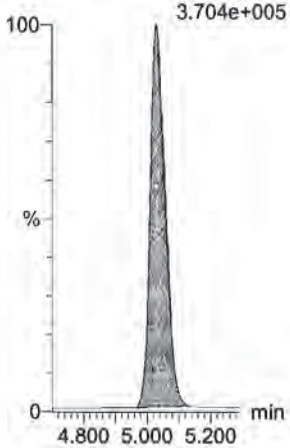
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.284e+005



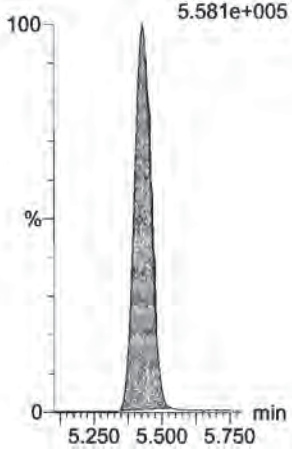
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
8.502e+005



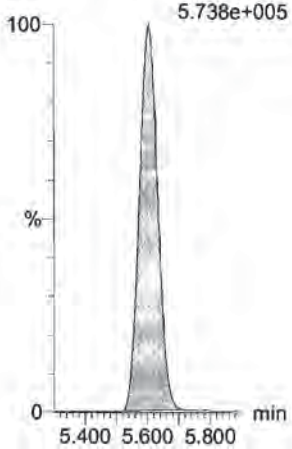
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
3.704e+005



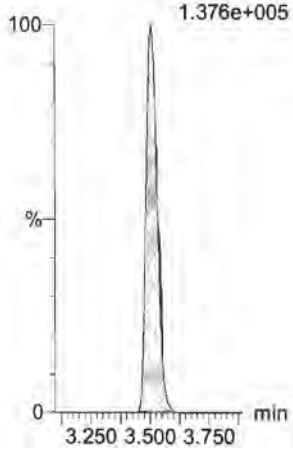
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
5.581e+005



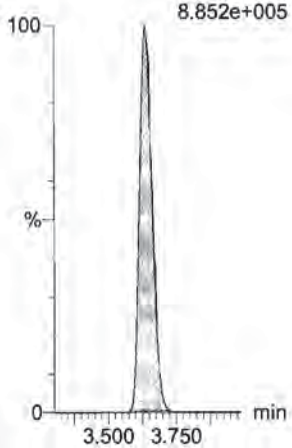
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
5.738e+005



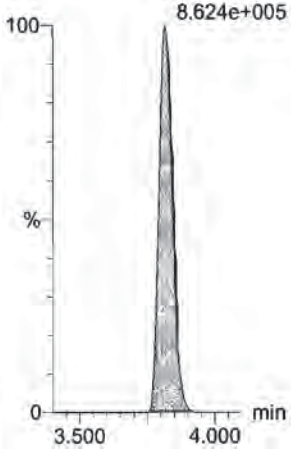
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.376e+005



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

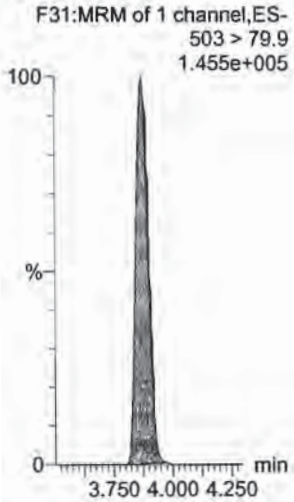


Dataset: U:\Q4.PRO\results\170731M2\170731M2-13.qld

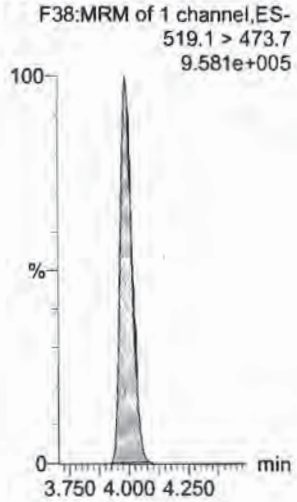
Last Altered: Tuesday, August 01, 2017 10:24:48 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:25:30 Pacific Daylight Time

Name: 170731M2_13, Date: 01-Aug-2017, Time: 02:38:37, ID: SS170731M2-1 PFC SSS 17G3106, Description: PFC SSS 17G3106

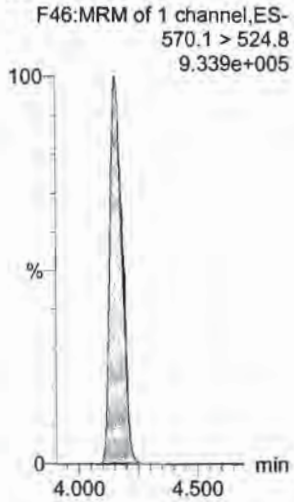
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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

Dataset: Untitled

Last Altered: Tuesday, August 01, 2017 10:23:10 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

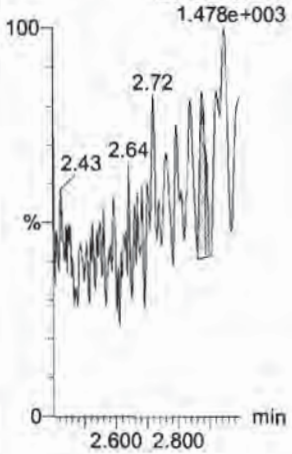
Inst. Blank
AC 8/1/17

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

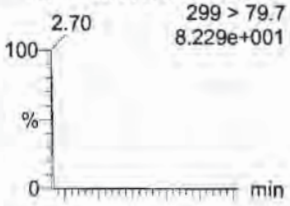
Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
1.181e+003

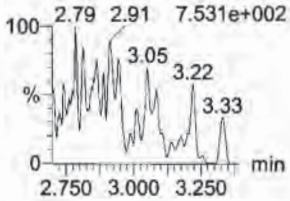
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
1.478e+003



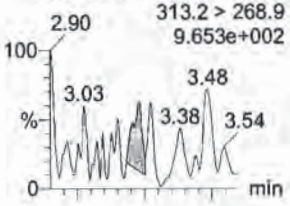
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
8.229e+001



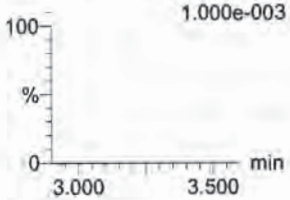
F6:MRM of 2 channels,ES-
299 > 99
7.531e+002



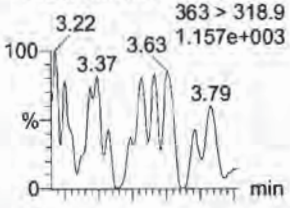
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
9.653e+002



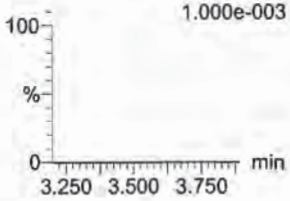
F8:MRM of 2 channels,ES-
313.2 > 119
1.000e-003



PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
1.157e+003

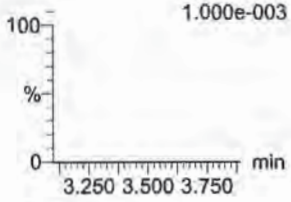


F14:MRM of 2 channels,ES-
363 > 169
1.000e-003

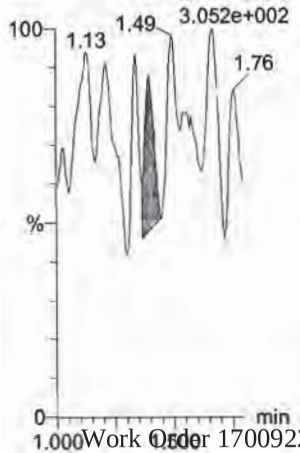


PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
1.000e-003

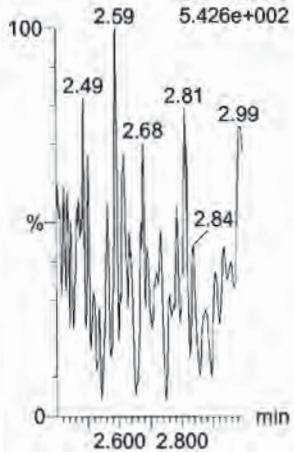
F16:MRM of 2 channels,ES-
398.9 > 99
1.000e-003



13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
3.052e+002

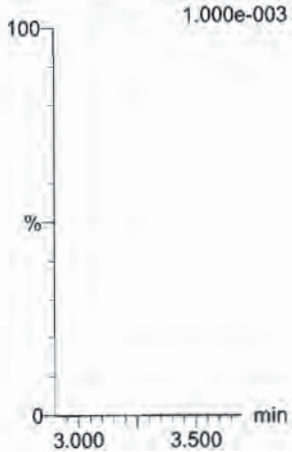


13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
5.426e+002

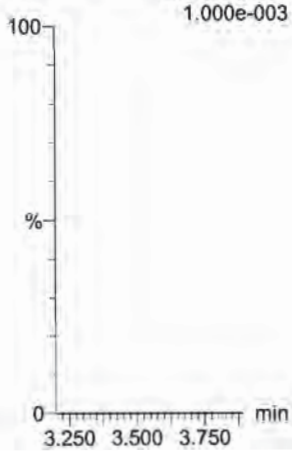


13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
1.000e-003

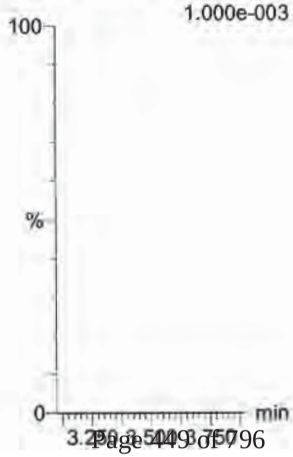
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
1.000e-003



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
1.000e-003



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
1.000e-003



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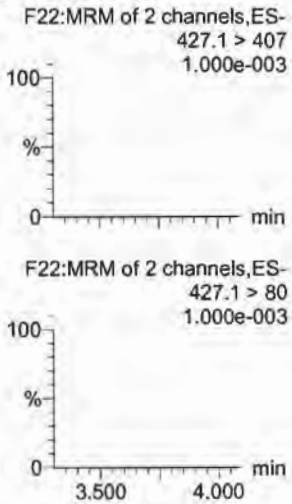
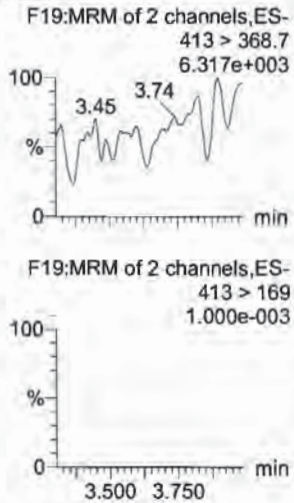
Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

6:2 FTS



PFOA



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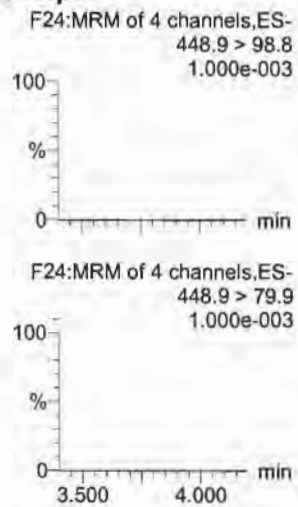

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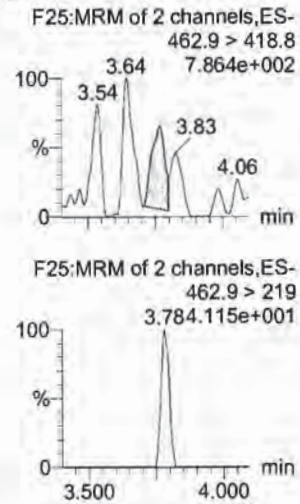
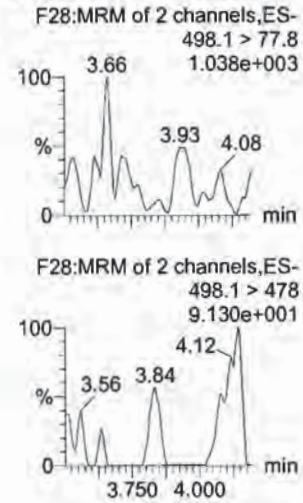
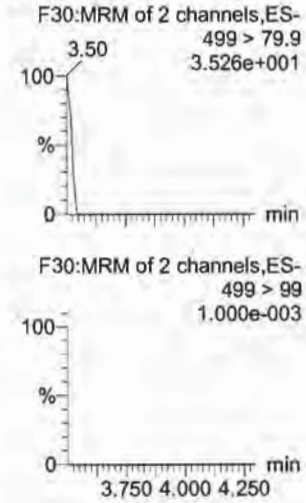


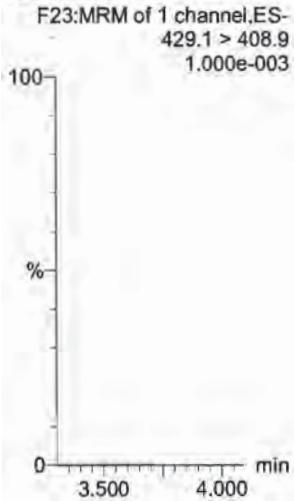
PFOSA



PFOS



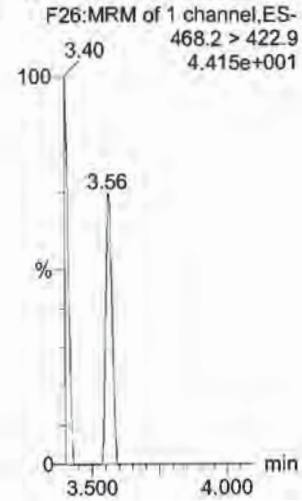
13C2-6:2 FTS



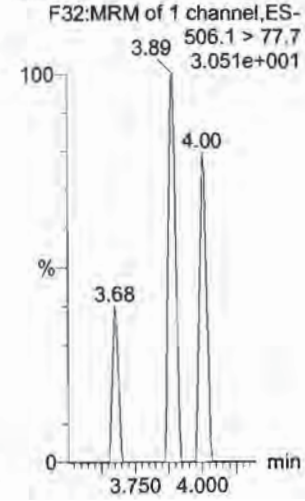
13C2-PFOA

13C3-PFBS

13C5-PFNA



13C8-PFOSA



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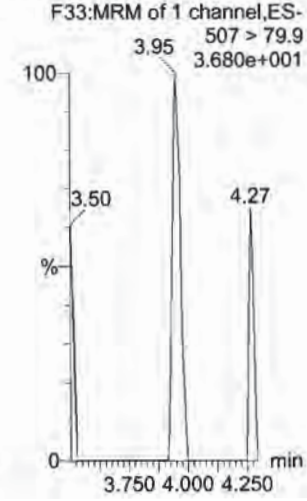

Vista Analytical Laboratory

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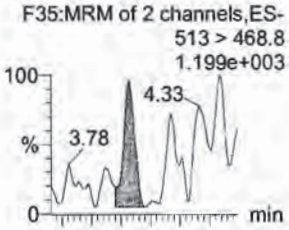
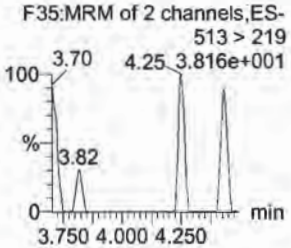
Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

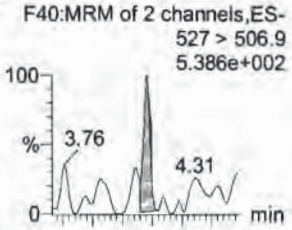
Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

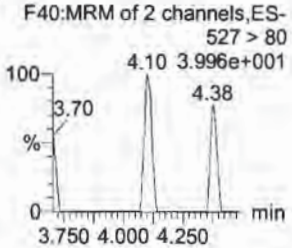
PFDA



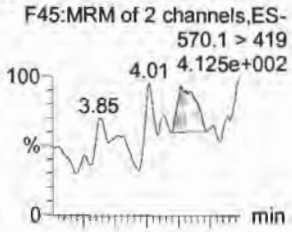


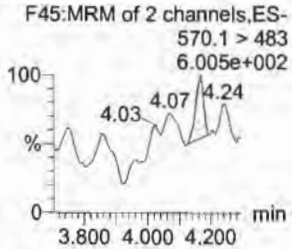
8:2 FTS





N-MeFOSAA





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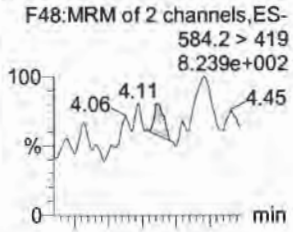

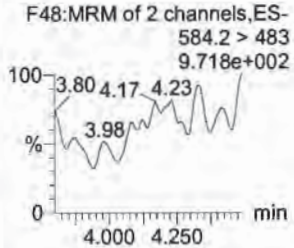

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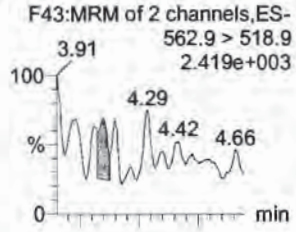

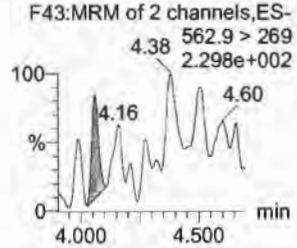

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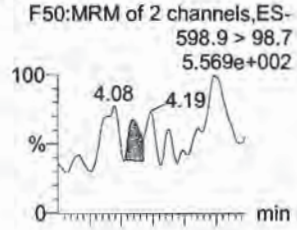
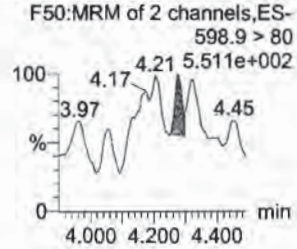
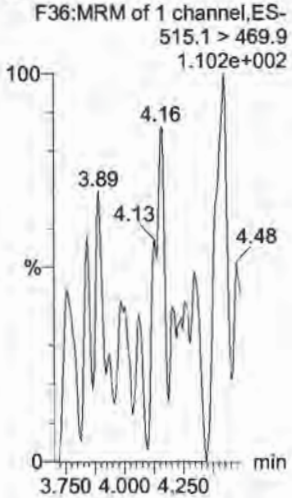
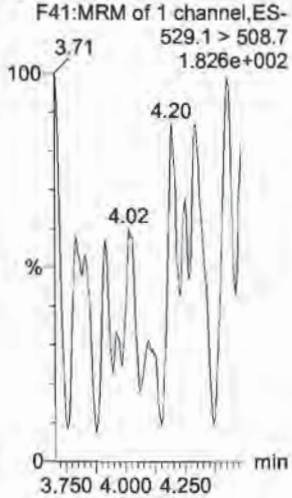




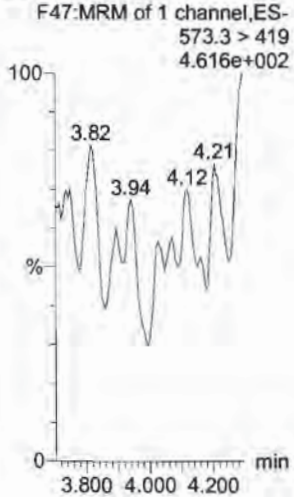
13C2-PFDA



13C2-8:2 FTS



d3-N-MeFOSAA



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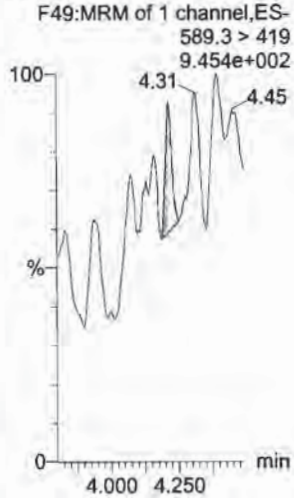

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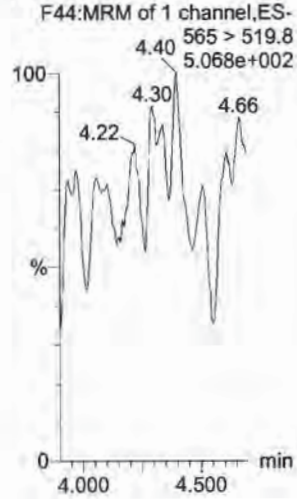

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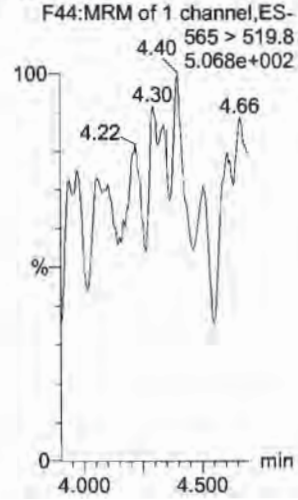

Vista Analytical Laboratory

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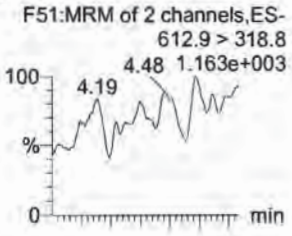

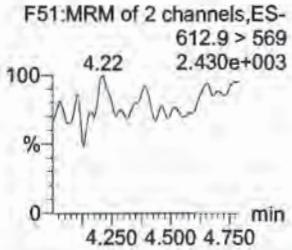

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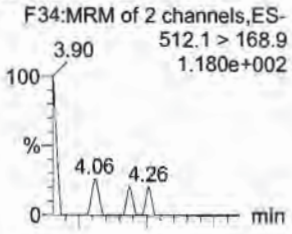

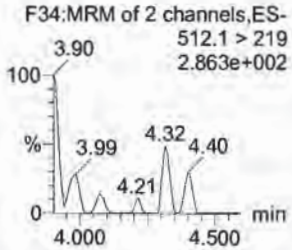

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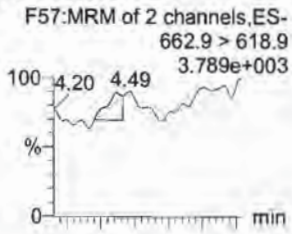

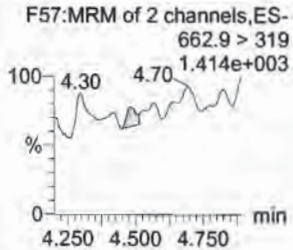

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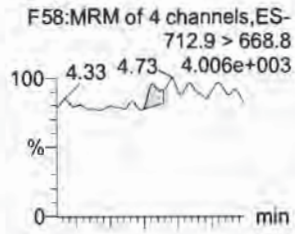

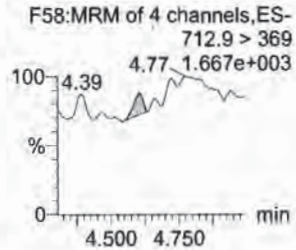

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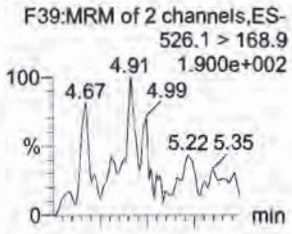

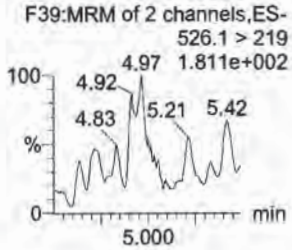

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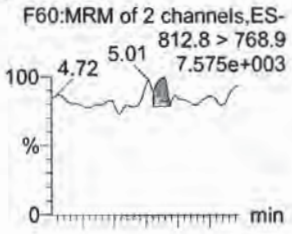

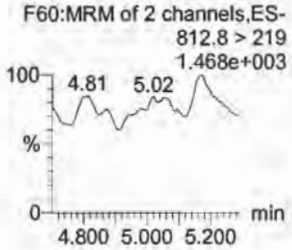

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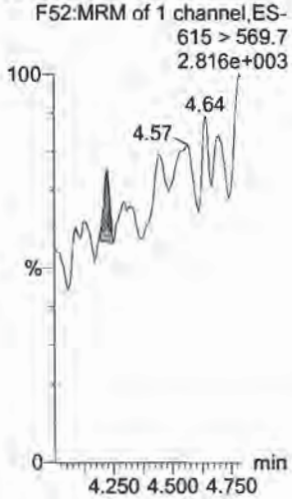
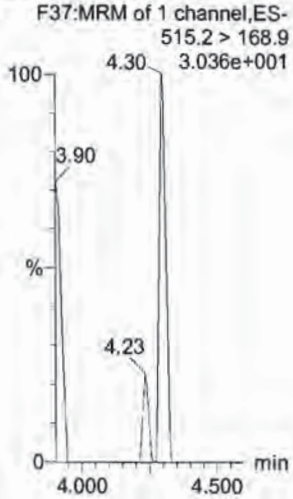


d3-N-MeFOSA



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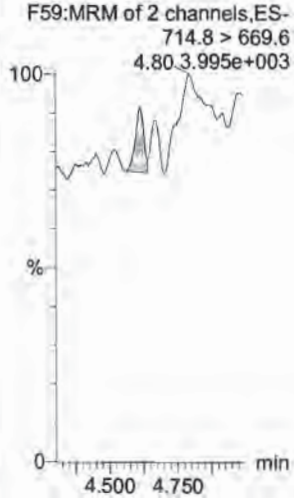

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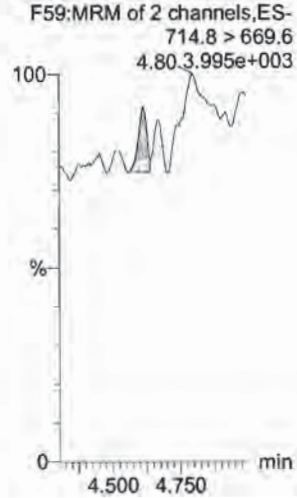
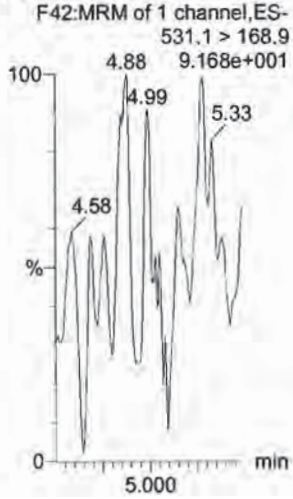


d5-N-ETFOSA



13C2-PFHxDA

Vista Analytical Laboratory

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Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

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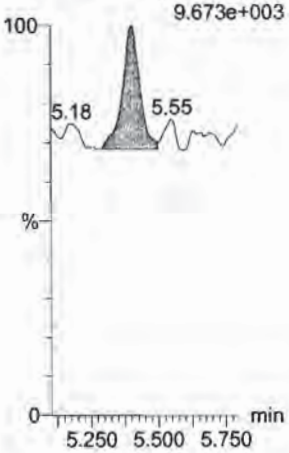
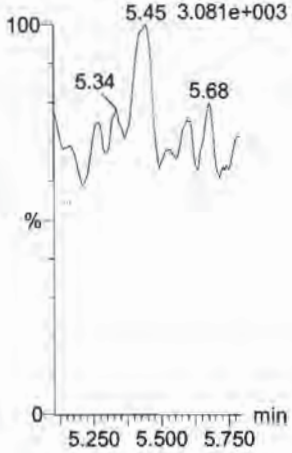
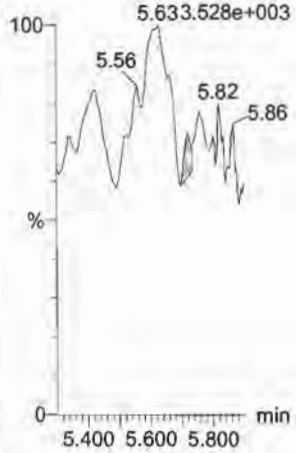
912.8 > 868.8
9.673e+003



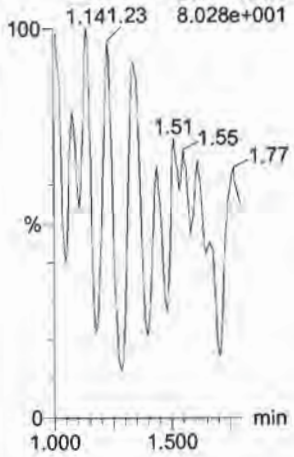
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
3.081e+003



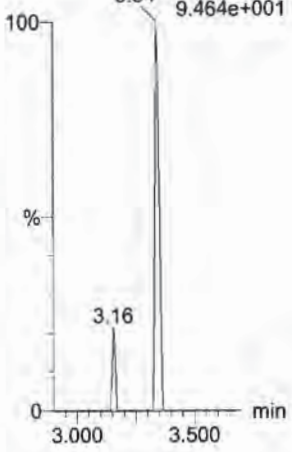
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
3.528e+003



13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
8.028e+001

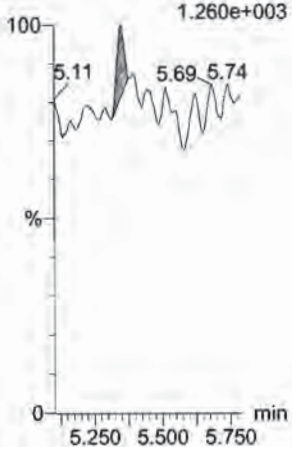


13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
9.464e+001

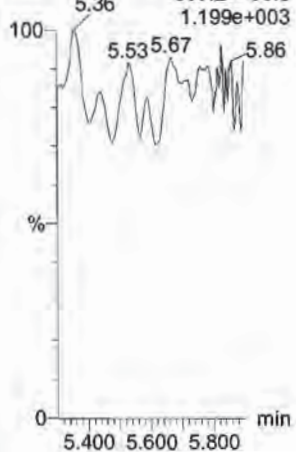


13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
5.262e+003

d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
1.260e+003



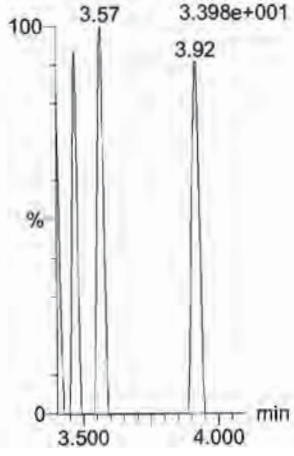
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
1.199e+003



13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.000e-003

13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.000e-003

13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
3.398e+001



Vista Analytical Laboratory

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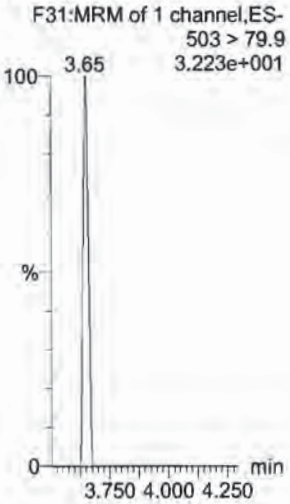
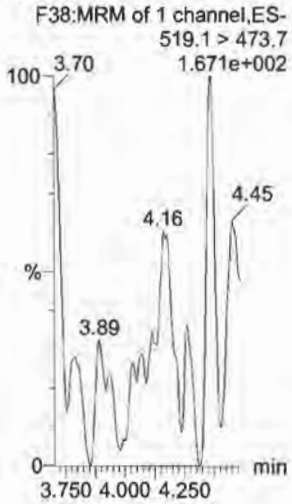
Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

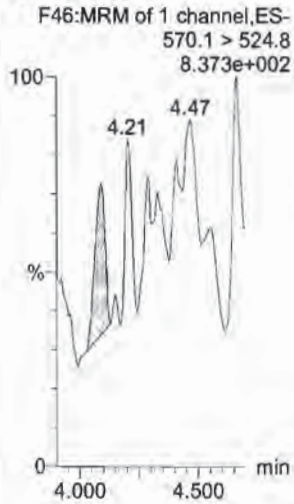
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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

Dataset: Untitled

Last Altered: Tuesday, August 01, 2017 10:23:10 Pacific Daylight Time
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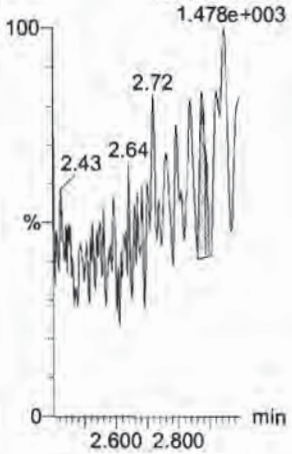
Inst. Blank
AC 8/1/17

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

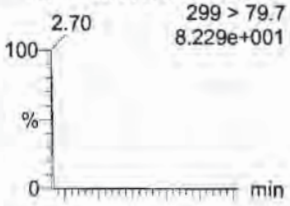
Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
1.181e+003

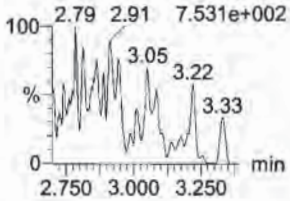
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
1.478e+003



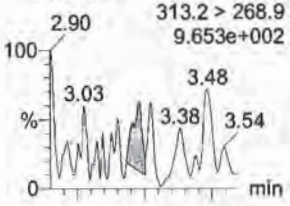
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
8.229e+001



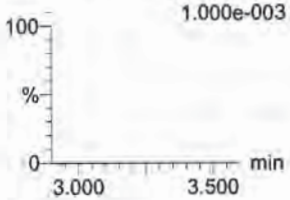
F6:MRM of 2 channels,ES-
299 > 99
7.531e+002



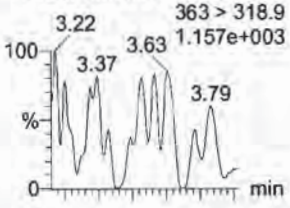
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
9.653e+002



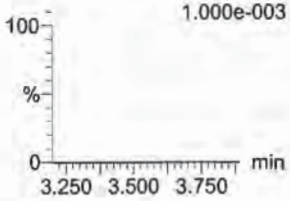
F8:MRM of 2 channels,ES-
313.2 > 119
1.000e-003



PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
1.157e+003

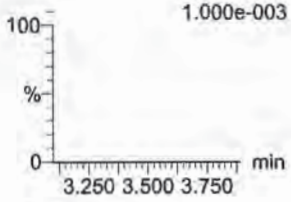


F14:MRM of 2 channels,ES-
363 > 169
1.000e-003

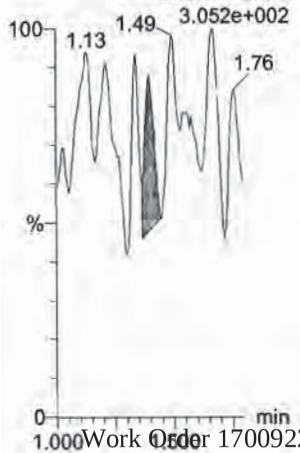


PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
1.000e-003

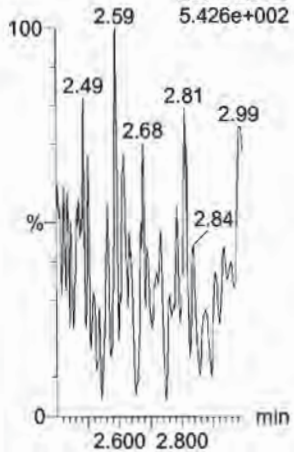
F16:MRM of 2 channels,ES-
398.9 > 99
1.000e-003



13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
3.052e+002

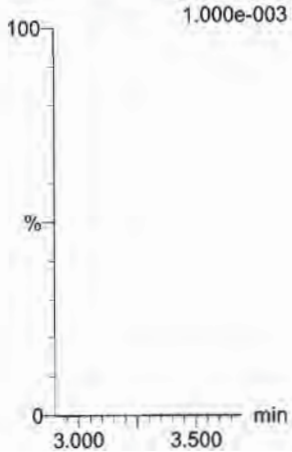


13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
5.426e+002

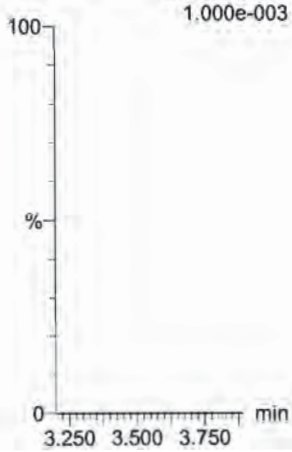


13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
1.000e-003

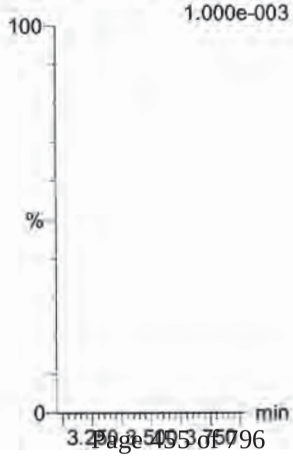
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
1.000e-003



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
1.000e-003



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
1.000e-003



Vista Analytical Laboratory

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Last Altered: Tuesday, August 01, 2017 10:23:10 Pacific Daylight Time
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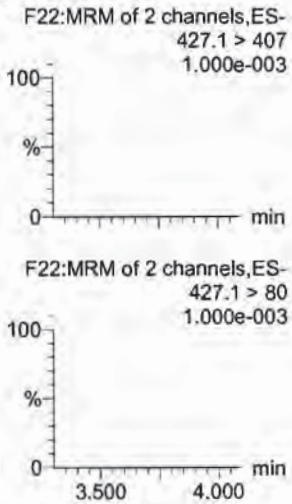
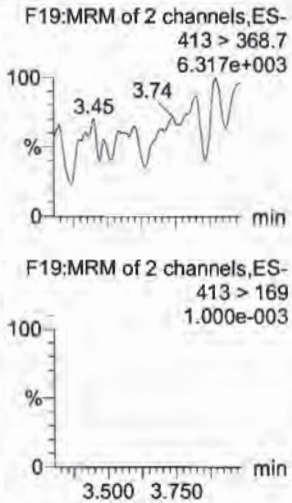
Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

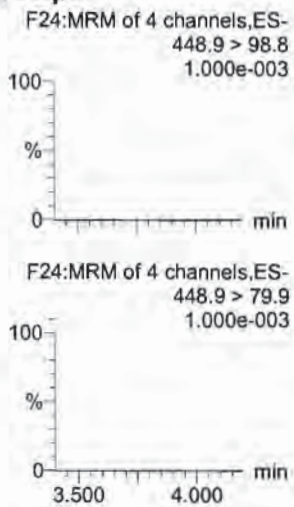
6:2 FTS



PFOA



PFHpS



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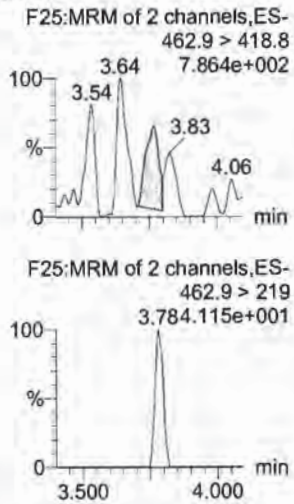
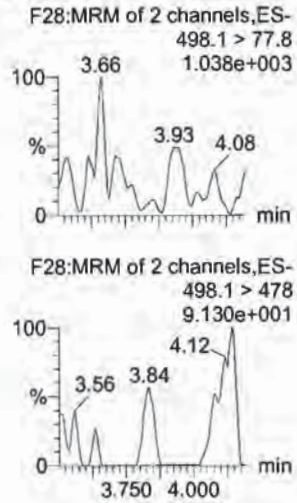
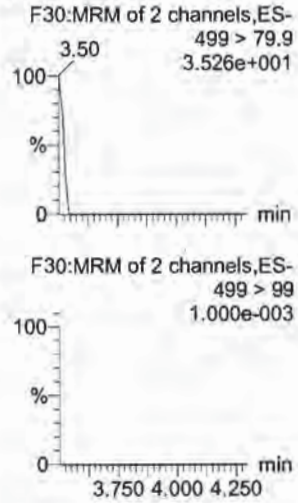


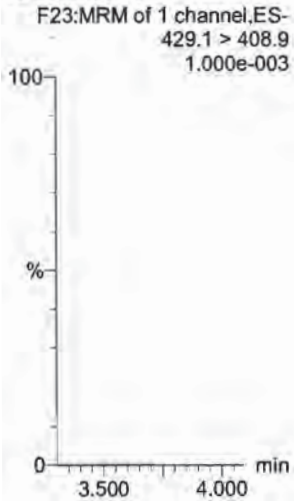
PFOSA



PFOS



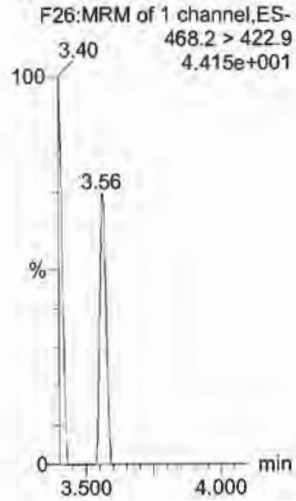
13C2-6:2 FTS



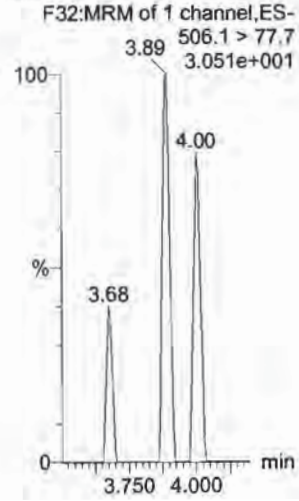
13C2-PFOA

13C3-PFBS

13C5-PFNA



13C8-PFOSA



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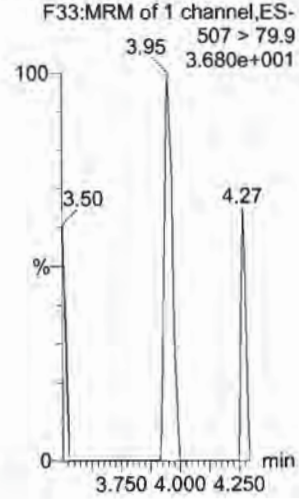

Vista Analytical Laboratory

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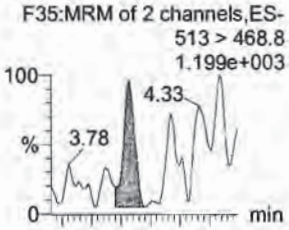
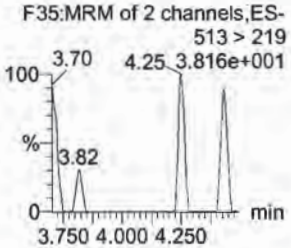
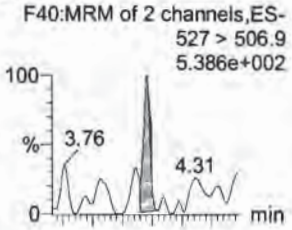
Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

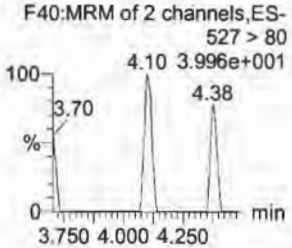
PFDA





8:2 FTS





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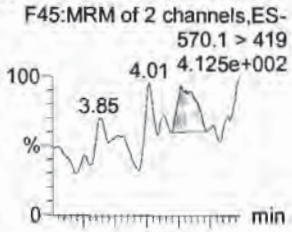

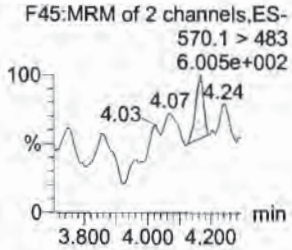

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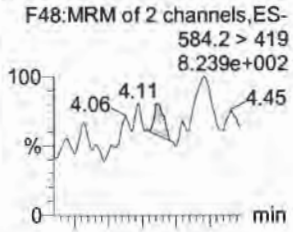

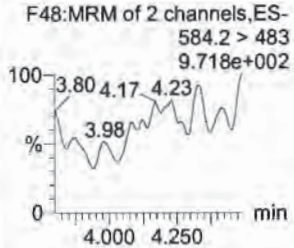

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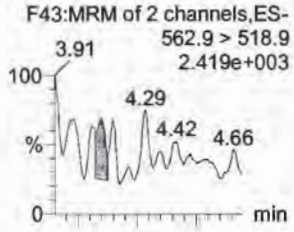

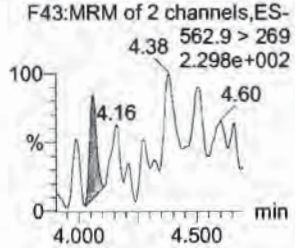

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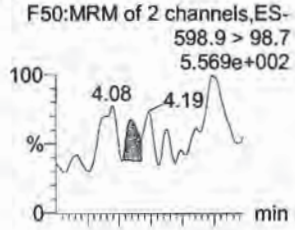
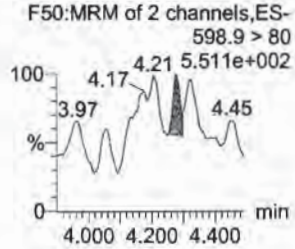
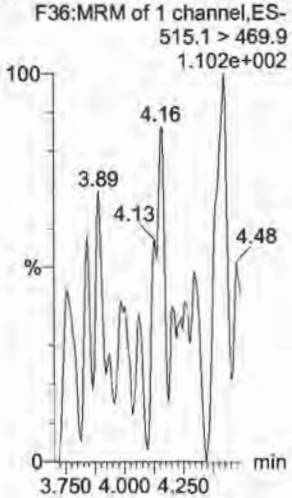
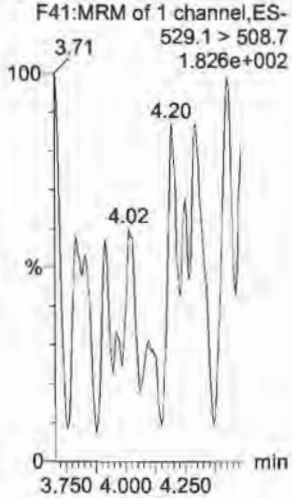




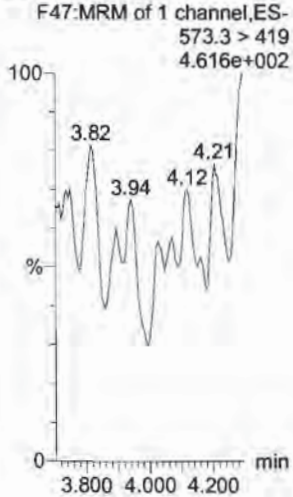
13C2-PFDA



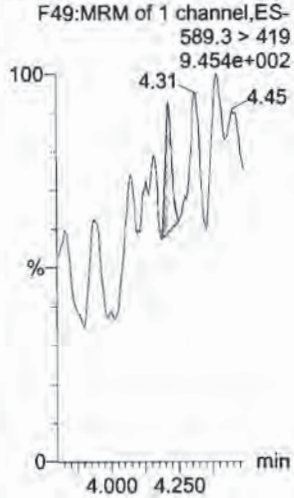
13C2-8:2 FTS



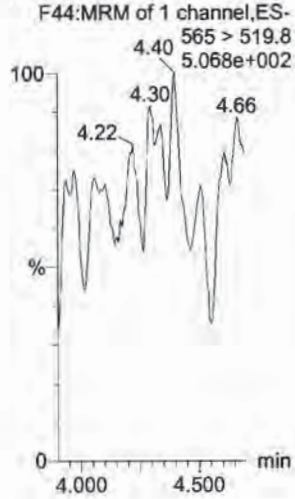
d3-N-MeFOSAA



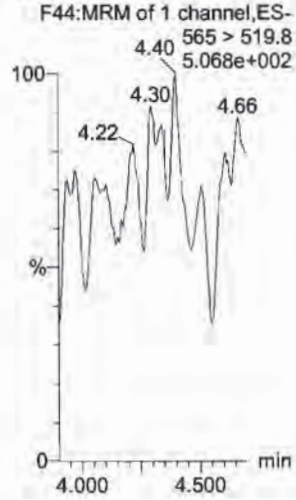
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



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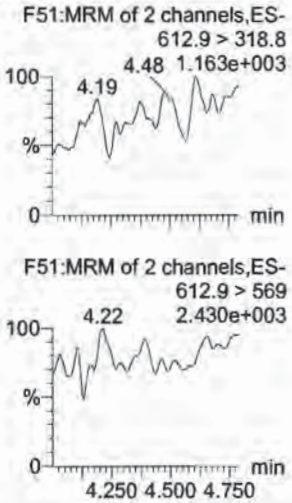
Last Altered: Tuesday, August 01, 2017 10:23:10 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

PFDoA



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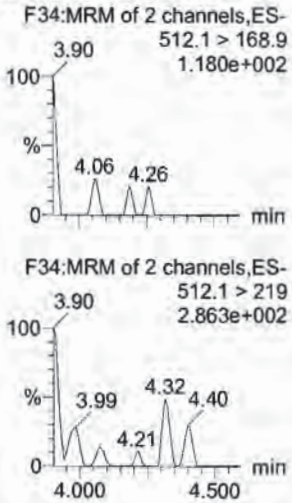
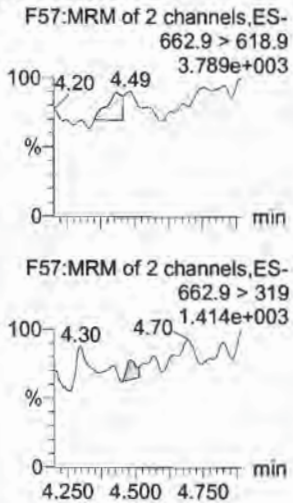
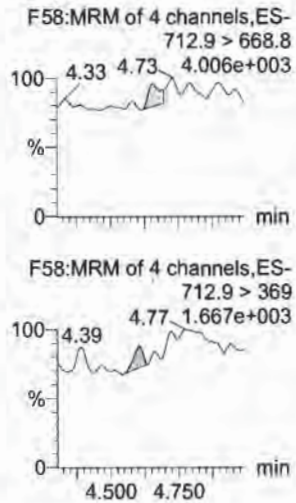


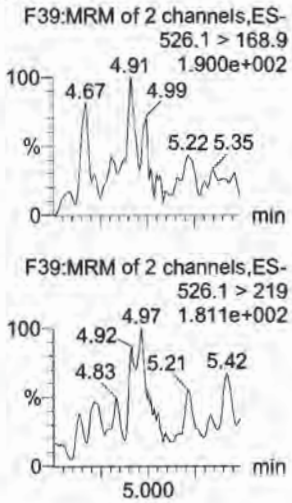
PFTrDA



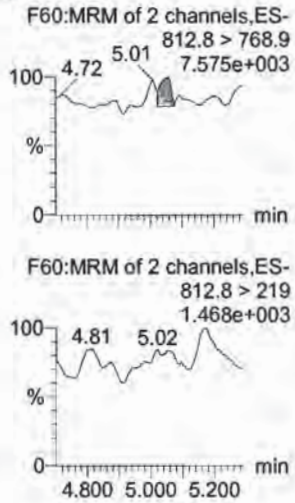
PFTeDA



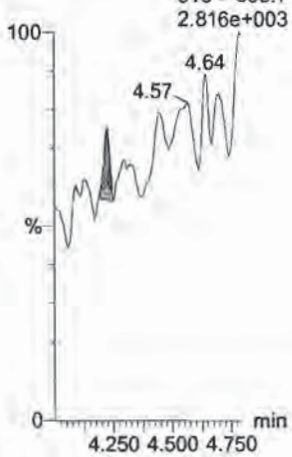
N-EtFOSA



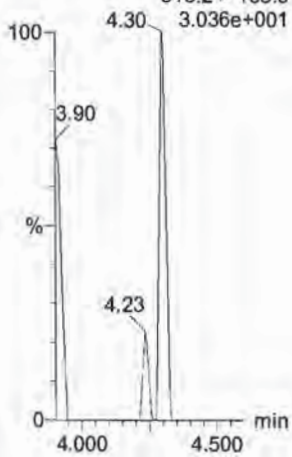
PFHxDA



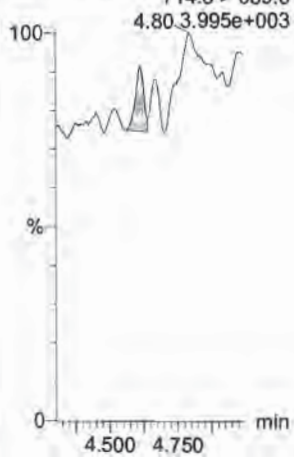
13C2-PFDoA



d3-N-MeFOSA



13C2-PFTeDA



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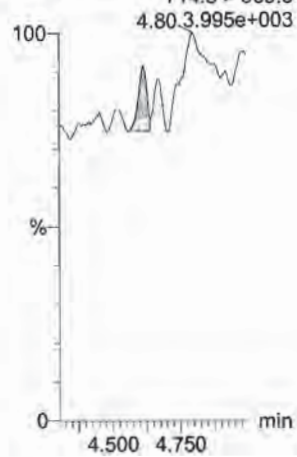
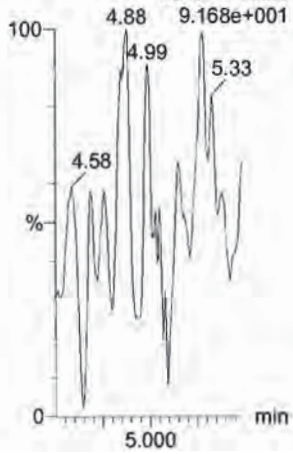


d5-N-ETFOSA



13C2-PFHxDA

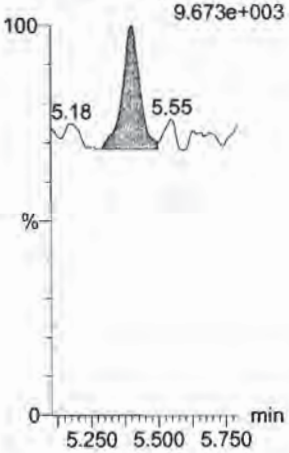
Vista Analytical Laboratory

Dataset: Untitled

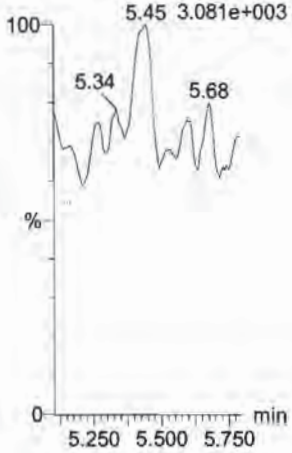
Last Altered: Tuesday, August 01, 2017 10:23:10 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

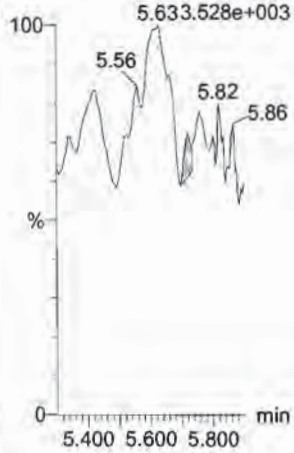
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
9.673e+003



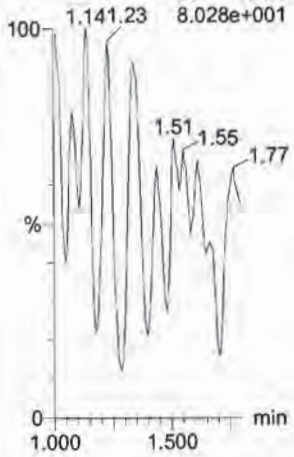
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
3.081e+003



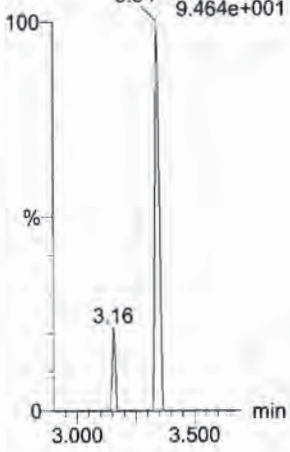
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
3.528e+003



13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
8.028e+001

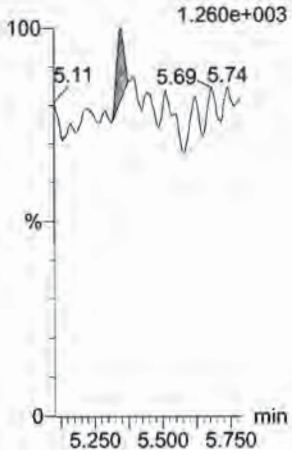


13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
9.464e+001

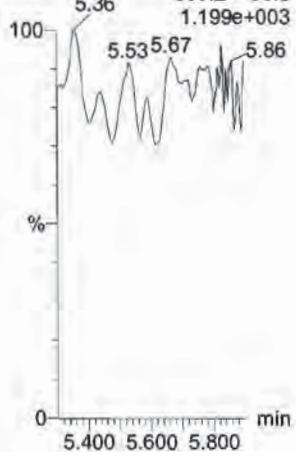


13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
5.262e+003

d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
1.260e+003



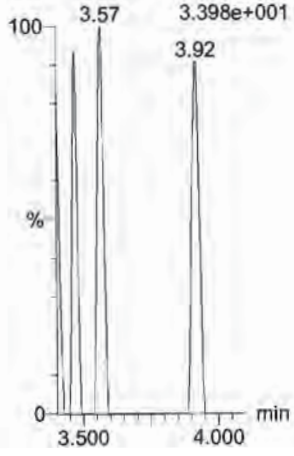
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
1.199e+003



13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.000e-003

13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.000e-003

13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
3.398e+001

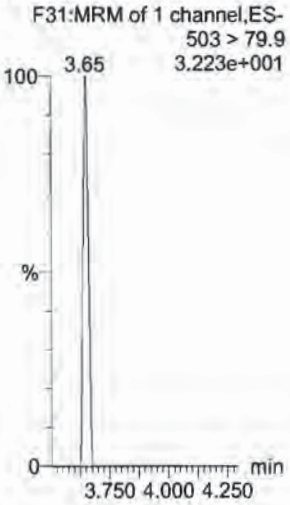


Dataset: Untitled

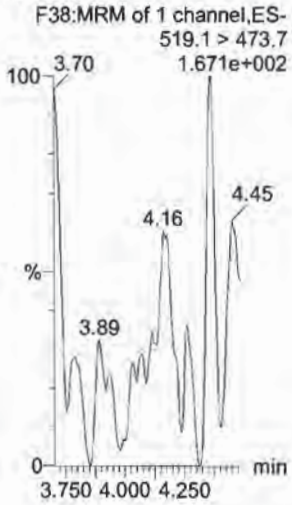
Last Altered: Tuesday, August 01, 2017 10:23:10 Pacific Daylight Time
Printed: Tuesday, August 01, 2017 10:23:20 Pacific Daylight Time

Name: 170731M2_12, Date: 01-Aug-2017, Time: 02:27:32, ID: IPA, Description: IPA

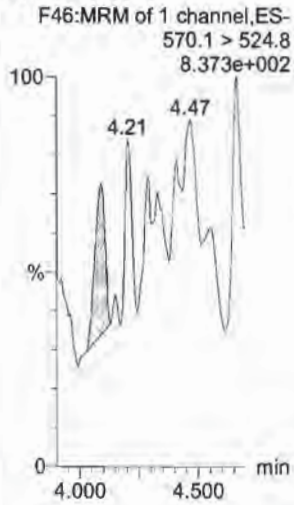
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:31:51 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 08:55:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999558
Calibration curve: -0.000132012 * x^2 + 1.09237 * x + 0.0597566
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

CM 8/11/17 8/11/17

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170810M2_2	Standard	0.250	1.92	424.371	15542.773	0.341	0.3	3.1	NO	1.000	NO	bb
2	2	170810M2_3	Standard	0.500	1.92	754.429	15666.696	0.602	0.5	-0.7	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	1.92	1618.036	16473.561	1.228	1.1	6.9	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	1.92	2982.913	15767.530	2.365	2.1	5.5	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	1.91	7409.122	16464.104	5.625	5.1	2.0	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	1.91	14834.788	16369.950	11.328	10.3	3.3	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	1.92	71756.844	16361.661	54.821	50.4	0.9	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	1.91	168270.703	18859.416	111.530	103.3	3.3	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	1.91	386171.219	18778.650	257.055	242.4	-3.1	NO	1.000	NO	bb
10	10	170810M2_11	Standard	500.000	1.90	760893.688	18418.195	516.401	503.3	0.7	NO	1.000	NO	bb

Compound name: PFPeA
Correlation coefficient: r = 0.999003, r^2 = 0.998007
Calibration curve: 0.943317 * x + 0.117613
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	170810M2_2	Standard	0.250	2.95	653.409	27880.619	0.293	0.2	-25.7	NO	0.998	NO	bb
2	2	170810M2_3	Standard	0.500	2.96	1172.739	28322.555	0.518	0.4	-15.2	NO	0.998	NO	bb
3	3	170810M2_4	Standard	1.000	2.95	2464.434	28875.371	1.067	1.0	0.6	NO	0.998	NO	bb
4	4	170810M2_5	Standard	2.000	2.95	4911.096	27712.795	2.215	2.2	11.2	NO	0.998	NO	bb
5	5	170810M2_6	Standard	5.000	2.95	12193.369	29315.059	5.199	5.4	7.7	NO	0.998	NO	bb
6	6	170810M2_7	Standard	10.000	2.96	24281.596	29802.102	10.185	10.7	6.7	NO	0.998	NO	bb
7	7	170810M2_8	Standard	50.000	2.95	116934.664	28667.293	50.988	53.9	7.9	NO	0.998	NO	bb
8	8	170810M2_9	Standard	100.000	2.95	277388.313	33506.395	103.483	109.6	9.6	NO	0.998	NO	bb
9	9	170810M2_10	Standard	250.000	2.94	605455.688	32021.633	236.346	250.4	0.2	NO	0.998	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:31:51 Pacific Daylight Time

Compound name: PFPeA

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
10	10	170810M2_11	Standard	500.000	2.94	1128645.625	30833.635	457.555	484.9	-3.0	NO	0.998	NO	bb

Compound name: PFBS
Correlation coefficient: r = 0.999068, r^2 = 0.998137
Calibration curve: 1.7128 * x + 0.180452
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	170810M2_2	Standard	0.250	3.11	130.566	3242.905	0.503	0.2	-24.6	NO	0.998	NO	MM
2	2	170810M2_3	Standard	0.500	3.11	260.774	3291.404	0.990	0.5	-5.4	NO	0.998	NO	bb
3	3	170810M2_4	Standard	1.000	3.11	535.091	3435.015	1.947	1.0	3.1	NO	0.998	NO	bb
4	4	170810M2_5	Standard	2.000	3.12	1039.628	3373.359	3.852	2.1	7.2	NO	0.998	NO	bb
5	5	170810M2_6	Standard	5.000	3.12	2403.595	3305.415	9.090	5.2	4.0	NO	0.998	NO	bb
6	6	170810M2_7	Standard	10.000	3.12	5112.701	3622.048	17.644	10.2	2.0	NO	0.998	NO	bb
7	7	170810M2_8	Standard	50.000	3.11	25072.861	3433.760	91.273	53.2	6.4	NO	0.998	NO	bb
8	8	170810M2_9	Standard	100.000	3.11	56239.211	3757.638	187.083	109.1	9.1	NO	0.998	NO	bb
9	9	170810M2_10	Standard	250.000	3.10	124185.078	3568.171	435.045	253.9	1.6	NO	0.998	NO	bb
10	10	170810M2_11	Standard	500.000	3.10	218811.797	3303.260	828.015	483.3	-3.3	NO	0.998	NO	bb

Compound name: PFHxA
Correlation coefficient: r = 0.997990, r^2 = 0.995984
Calibration curve: 1.26213 * x + 0.638423
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	170810M2_2	Standard	0.250	3.32	973.456	11232.063	0.433			NO	0.996	NO	bbXI
2	2	170810M2_3	Standard	0.500	3.32	1845.170	11474.060	0.804	0.1	-73.8	NO	0.996	NO	bbX
3	3	170810M2_4	Standard	1.000	3.33	3912.146	12197.214	1.604	0.8	-23.5	NO	0.996	NO	bb
4	4	170810M2_5	Standard	2.000	3.32	7263.097	12310.407	2.950	1.8	-8.4	NO	0.996	NO	bb
5	5	170810M2_6	Standard	5.000	3.32	18200.357	12691.323	7.170	5.2	3.5	NO	0.996	NO	bb
6	6	170810M2_7	Standard	10.000	3.32	36521.176	13114.998	13.923	10.5	5.3	NO	0.996	NO	bb
7	7	170810M2_8	Standard	50.000	3.32	177809.250	12075.982	73.621	57.8	15.6	NO	0.996	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:31:51 Pacific Daylight Time

Compound name: PFHxA

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
8	8	170810M2_9	Standard	100.000	3.31	393866.563	14098.515	139.684	110.2	10.2	NO	0.996	NO	bb
9	9	170810M2_10	Standard	250.000	3.30	896249.938	13890.280	322.618	255.1	2.0	NO	0.996	NO	bb
10	10	170810M2_11	Standard	500.000	3.30	1694936.625	14073.479	602.174	476.6	-4.7	NO	0.996	NO	bb

Compound name: PFHpA
Correlation coefficient: r = 0.998520, r^2 = 0.997041
Calibration curve: 1.13042 * x + 0.520352
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	170810M2_2	Standard	0.250	3.57	1021.577	32744.631	0.390			NO	0.997	NO	bbXI
2	2	170810M2_3	Standard	0.500	3.57	2115.316	37927.195	0.697	0.2	-68.7	NO	0.997	NO	bbX
3	3	170810M2_4	Standard	1.000	3.58	4504.139	40517.414	1.390	0.8	-23.1	NO	0.997	NO	bb
4	4	170810M2_5	Standard	2.000	3.57	8848.725	40261.074	2.747	2.0	-1.5	NO	0.997	NO	bb
5	5	170810M2_6	Standard	5.000	3.57	20480.195	40307.914	6.351	5.2	3.2	NO	0.997	NO	bb
6	6	170810M2_7	Standard	10.000	3.57	39021.555	40487.199	12.047	10.2	2.0	NO	0.997	NO	bb
7	7	170810M2_8	Standard	50.000	3.57	204471.547	40139.113	63.676	55.9	11.7	NO	0.997	NO	bb
8	8	170810M2_9	Standard	100.000	3.56	439243.500	43301.590	126.798	111.7	11.7	NO	0.997	NO	bb
9	9	170810M2_10	Standard	250.000	3.55	986020.313	43919.035	280.636	247.8	-0.9	NO	0.997	NO	bb
10	10	170810M2_11	Standard	500.000	3.55	1853039.250	42249.473	548.243	484.5	-3.1	NO	0.997	NO	bb

Compound name: PFHxS
Coefficient of Determination: R^2 = 0.999727
Calibration curve: -0.00059344 * x^2 + 1.77788 * x + -0.123769
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	170810M2_2	Standard	0.250	3.64	104.558	2973.079	0.440	0.3	26.8	NO	1.000	NO	MM
2	2	170810M2_3	Standard	0.500	3.66	147.156	3418.749	0.538	0.4	-25.5	NO	1.000	NO	MM
3	3	170810M2_4	Standard	1.000	3.65	505.877	3603.866	1.755	1.1	5.7	NO	1.000	NO	MM
4	4	170810M2_5	Standard	2.000	3.64	970.668	3657.688	3.317	1.9	-3.2	NO	1.000	NO	MM
5	5	170810M2_6	Standard	5.000	3.64	2611.106	3713.872	8.788	5.0	0.4	NO	1.000	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:31:51 Pacific Daylight Time

Compound name: PFHxS

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
6	6	170810M2_7	Standard	10.000	3.64	5130.715	3730.608	17.191	9.8	-2.3	NO	1.000	NO	MM
7	7	170810M2_8	Standard	50.000	3.64	24993.557	3648.731	85.624	49.0	-1.9	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	3.63	53419.980	3949.262	169.082	98.4	-1.6	NO	1.000	NO	MM
9	9	170810M2_10	Standard	250.000	3.63	117028.563	3521.197	415.443	255.5	2.2	NO	1.000	NO	db
10	10	170810M2_11	Standard	500.000	3.62	217790.609	3693.524	737.069	497.1	-0.6	NO	1.000	NO	db

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.998948
Calibration curve: -0.00172688 * x^2 + 0.945449 * x + 0.0555048
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	170810M2_2	Standard	0.250	3.75	200.187	10827.486	0.231	0.2	-25.7	NO	0.999	NO	bb
2	2	170810M2_3	Standard	0.500	3.77	486.104	10909.211	0.557	0.5	6.2	NO	0.999	NO	bb
3	3	170810M2_4	Standard	1.000	3.77	883.831	10654.119	1.037	1.0	4.0	NO	0.999	NO	bb
4	4	170810M2_5	Standard	2.000	3.76	1608.501	10669.914	1.884	1.9	-2.9	NO	0.999	NO	bb
5	5	170810M2_6	Standard	5.000	3.77	4302.423	10053.431	5.349	5.7	13.2	NO	0.999	NO	bb
6	6	170810M2_7	Standard	10.000	3.77	8047.447	10016.485	10.043	10.8	7.8	NO	0.999	NO	bb
7	7	170810M2_8	Standard	50.000	3.76	39191.262	11428.154	42.867	49.8	-0.4	NO	0.999	NO	bb
8	8	170810M2_9	Standard	100.000	3.75	85670.922	14187.794	75.479	96.9	-3.1	NO	0.999	NO	bb
9	9	170810M2_10	Standard	250.000	3.74	179225.031	17337.529	129.218	261.9	4.7	NO	0.999	NO	bb
10	10	170810M2_11	Standard	500.000	3.74	272261.250	19594.984	173.680			NO	0.999	NO	bbXI

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: PFOA
Correlation coefficient: r = 0.999304, r^2 = 0.998608
Calibration curve: 0.980416 * x + 0.151461
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	170810M2_2	Standard	0.250	3.78	1692.874	61642.953	0.343	0.2	-21.7	NO	0.999	NO	bb
2	2	170810M2_3	Standard	0.500	3.78	3289.689	67663.805	0.608	0.5	-6.9	NO	0.999	NO	bb
3	3	170810M2_4	Standard	1.000	3.78	6109.179	67625.266	1.129	1.0	-0.3	NO	0.999	NO	bb
4	4	170810M2_5	Standard	2.000	3.78	12862.762	69456.469	2.315	2.2	10.3	NO	0.999	NO	bb
5	5	170810M2_6	Standard	5.000	3.78	26522.385	61218.832	5.415	5.4	7.4	NO	0.999	NO	bb
6	6	170810M2_7	Standard	10.000	3.78	54100.707	64709.793	10.451	10.5	5.0	NO	0.999	NO	db
7	7	170810M2_8	Standard	50.000	3.78	248422.766	59761.141	51.962	52.8	5.7	NO	0.999	NO	bb
8	8	170810M2_9	Standard	100.000	3.77	559988.438	68978.094	101.479	103.4	3.4	NO	0.999	NO	bb
9	9	170810M2_10	Standard	250.000	3.76	1313767.500	68939.547	238.210	242.8	-2.9	NO	0.999	NO	bb
10	10	170810M2_11	Standard	500.000	3.75	2233816.250	64044.930	435.986	444.5	-11.1	NO	0.999	NO	bbX

Compound name: PFHpS
Correlation coefficient: r = 0.995991, r^2 = 0.991997
Calibration curve: 0.0786311 * x + 0.00779766
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	170810M2_2	Standard	0.250	3.84	115.389	61642.953	0.023	0.2	-20.6	NO	0.992	NO	bb
2	2	170810M2_3	Standard	0.500	3.85	247.359	67663.805	0.046	0.5	-3.6	NO	0.992	NO	bb
3	3	170810M2_4	Standard	1.000	3.85	467.065	67625.266	0.086	1.0	-0.1	NO	0.992	NO	bb
4	4	170810M2_5	Standard	2.000	3.85	1021.924	69456.469	0.184	2.2	12.0	NO	0.992	NO	bb
5	5	170810M2_6	Standard	5.000	3.85	2169.387	61218.832	0.443	5.5	10.7	NO	0.992	NO	bb
6	6	170810M2_7	Standard	10.000	3.84	4681.044	64709.793	0.904	11.4	14.0	NO	0.992	NO	bb
7	7	170810M2_8	Standard	50.000	3.84	21604.721	59761.141	4.519	57.4	14.7	NO	0.992	NO	bb
8	8	170810M2_9	Standard	100.000	3.83	49713.887	68978.094	9.009	114.5	14.5	NO	0.992	NO	bb
9	9	170810M2_10	Standard	250.000	3.82	114797.594	68939.547	20.815	264.6	5.8	NO	0.992	NO	bb
10	10	170810M2_11	Standard	500.000	3.82	185939.734	64044.930	36.291	461.4	-7.7	NO	0.992	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: PFNA
Correlation coefficient: r = 0.998366, r^2 = 0.996735
Calibration curve: 0.979826 * x + 0.513479
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	170810M2_2	Standard	0.250	3.97	1700.456	62033.051	0.343			NO	0.997	NO	bbXI
2	2	170810M2_3	Standard	0.500	3.98	2793.827	56715.289	0.616	0.1	-79.1	NO	0.997	NO	bbX
3	3	170810M2_4	Standard	1.000	3.98	6302.374	60834.914	1.295	0.8	-20.2	NO	0.997	NO	bb
4	4	170810M2_5	Standard	2.000	3.97	11665.123	61086.734	2.387	1.9	-4.4	NO	0.997	NO	bb
5	5	170810M2_6	Standard	5.000	3.97	26210.676	58121.105	5.637	5.2	4.6	NO	0.997	NO	bb
6	6	170810M2_7	Standard	10.000	3.97	54617.367	63817.566	10.698	10.4	3.9	NO	0.997	NO	bb
7	7	170810M2_8	Standard	50.000	3.97	241126.203	57678.809	52.256	52.8	5.6	NO	0.997	NO	bb
8	8	170810M2_9	Standard	100.000	3.96	570147.125	64540.883	110.424	112.2	12.2	NO	0.997	NO	bb
9	9	170810M2_10	Standard	250.000	3.96	1276250.000	63239.992	252.263	256.9	2.8	NO	0.997	NO	bb
10	10	170810M2_11	Standard	500.000	3.95	2011288.625	53648.328	468.628	477.8	-4.4	NO	0.997	NO	bb

Compound name: PFOSA
Correlation coefficient: r = 0.999155, r^2 = 0.998311
Calibration curve: 1.04987 * x + 0.0313857
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	170810M2_2	Standard	0.250	3.99	140.984	6459.227	0.273	0.2	-8.0	NO	0.998	NO	bb
2	2	170810M2_3	Standard	0.500	4.00	317.971	6795.560	0.585	0.5	5.4	NO	0.998	NO	bb
3	3	170810M2_4	Standard	1.000	3.99	679.323	7247.529	1.172	1.1	8.6	NO	0.998	NO	bb
4	4	170810M2_5	Standard	2.000	3.98	1225.911	6795.770	2.255	2.1	5.9	NO	0.998	NO	bb
5	5	170810M2_6	Standard	5.000	3.99	2957.377	7263.316	5.090	4.8	-3.6	NO	0.998	NO	bb
6	6	170810M2_7	Standard	10.000	3.99	6346.346	7321.714	10.835	10.3	2.9	NO	0.998	NO	bb
7	7	170810M2_8	Standard	50.000	3.98	29107.096	7239.874	50.255	47.8	-4.3	NO	0.998	NO	bb
8	8	170810M2_9	Standard	100.000	3.97	63806.832	8149.971	97.864	93.2	-6.8	NO	0.998	NO	bb
9	9	170810M2_10	Standard	250.000	3.96	141035.125	6965.660	253.090	241.0	-3.6	NO	0.998	NO	bb
10	10	170810M2_11	Standard	500.000	3.96	220683.688	5075.854	543.464	517.6	3.5	NO	0.998	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: PFOS
Coefficient of Determination: R^2 = 0.999791
Calibration curve: -0.000252174 * x^2 + 1.06922 * x + -0.0396957
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	170810M2_2	Standard	0.250	4.03	202.820	10626.669	0.239	0.3	4.1	NO	1.000	NO	MM
2	2	170810M2_3	Standard	0.500	4.04	413.253	11363.964	0.455	0.5	-7.5	NO	1.000	NO	MM
3	3	170810M2_4	Standard	1.000	4.03	862.786	10971.130	0.983	1.0	-4.3	NO	1.000	NO	MM
4	4	170810M2_5	Standard	2.000	4.03	1937.711	11205.850	2.161	2.1	3.0	NO	1.000	NO	MM
5	5	170810M2_6	Standard	5.000	4.03	4462.908	11041.968	5.052	4.8	-4.6	NO	1.000	NO	MM
6	6	170810M2_7	Standard	10.000	4.03	8765.405	11122.137	9.851	9.3	-7.3	NO	1.000	NO	MM
7	7	170810M2_8	Standard	50.000	4.03	43448.457	10002.095	54.299	51.4	2.9	NO	1.000	NO	MM
8	8	170810M2_9	Standard	100.000	4.02	95483.617	11632.687	102.603	98.3	-1.7	NO	1.000	NO	MM
9	9	170810M2_10	Standard	250.000	4.01	215446.594	10617.809	253.638	252.3	0.9	NO	1.000	NO	MM
10	10	170810M2_11	Standard	500.000	4.01	348312.906	9250.272	470.679	499.0	-0.2	NO	1.000	NO	MM

Compound name: PFDA
Correlation coefficient: r = 0.999612, r^2 = 0.999225
Calibration curve: 1.13105 * x + 0.115427
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	170810M2_2	Standard	0.250	4.15	1467.511	55995.238	0.328	0.2	-25.0	NO	0.999	NO	bb
2	2	170810M2_3	Standard	0.500	4.16	2956.190	55977.539	0.660	0.5	-3.7	NO	0.999	NO	bb
3	3	170810M2_4	Standard	1.000	4.16	6754.155	58804.391	1.436	1.2	16.7	NO	0.999	NO	bb
4	4	170810M2_5	Standard	2.000	4.15	10501.298	50928.629	2.577	2.2	8.8	NO	0.999	NO	bb
5	5	170810M2_6	Standard	5.000	4.16	26044.916	56490.598	5.763	5.0	-0.1	NO	0.999	NO	bb
6	6	170810M2_7	Standard	10.000	4.16	53593.426	59644.734	11.232	9.8	-1.7	NO	0.999	NO	bb
7	7	170810M2_8	Standard	50.000	4.16	238216.063	50433.004	59.043	52.1	4.2	NO	0.999	NO	bb
8	8	170810M2_9	Standard	100.000	4.14	591185.688	63572.438	116.243	102.7	2.7	NO	0.999	NO	bb
9	9	170810M2_10	Standard	250.000	4.13	1293616.750	58295.023	277.386	245.1	-1.9	NO	0.999	NO	bb
10	10	170810M2_11	Standard	500.000	4.13	1924513.000	52405.832	459.041	405.8	-18.8	NO	0.999	NO	bbX

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.997950
Calibration curve: -0.00480406 * x^2 + 1.4337 * x + -0.0133124
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	170810M2_2	Standard	0.250	4.15	222.118	7665.451	0.362	0.3	4.9	NO	0.998	NO	bb
2	2	170810M2_3	Standard	0.500	4.16	397.530	7353.410	0.676	0.5	-3.7	NO	0.998	NO	bb
3	3	170810M2_4	Standard	1.000	4.15	986.639	7736.133	1.594	1.1	12.5	NO	0.998	NO	bb
4	4	170810M2_5	Standard	2.000	4.15	1700.260	7913.699	2.686	1.9	-5.3	NO	0.998	NO	bb
5	5	170810M2_6	Standard	5.000	4.15	3979.425	7743.167	6.424	4.6	-8.8	NO	0.998	NO	bb
6	6	170810M2_7	Standard	10.000	4.15	7871.591	7632.894	12.891	9.3	-7.1	NO	0.998	NO	bb
7	7	170810M2_8	Standard	50.000	4.15	36677.406	7336.241	62.494	53.0	6.0	NO	0.998	NO	bb
8	8	170810M2_9	Standard	100.000	4.14	73436.234	9762.668	94.027	97.3	-2.7	NO	0.998	NO	bb
9	9	170810M2_10	Standard	250.000	4.13	154924.188	11954.295	161.996			NO	0.998	NO	bbXI
10	10	170810M2_11	Standard	500.000	4.12	222765.531	13632.657	204.257			NO	0.998	NO	bbXI

Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.999893
Calibration curve: -0.00750568 * x^2 + 19.4398 * x + -0.45786
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	170810M2_2	Standard	0.250	4.17	319.184	13096.980	3.960	0.2	-9.1	NO	1.000	NO	bb
2	2	170810M2_3	Standard	0.500	4.19	832.861	13619.695	9.937	0.5	7.0	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	4.19	1638.138	13420.139	19.836	1.0	4.4	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	4.18	3473.874	14342.013	39.360	2.0	2.5	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	4.18	7888.805	14009.009	91.508	4.7	-5.2	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	4.19	15596.266	13329.100	190.140	9.8	-1.6	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	4.18	74786.219	12505.077	971.826	51.0	2.0	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	4.17	166516.688	14369.895	1883.031	100.8	0.8	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	4.16	363121.188	13581.694	4344.612	247.1	-1.2	NO	1.000	NO	bb
10	10	170810M2_11	Standard	500.000	4.16	577726.813	11942.306	7861.179	501.5	0.3	NO	1.000	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999638
Calibration curve: -0.00353476 * x^2 + 15.6313 * x + 0.651764
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	170810M2_2	Standard	0.250	4.26	313.074	13212.761	3.850	0.2	-18.1	NO	1.000	NO	bb
2	2	170810M2_3	Standard	0.500	4.26	835.143	13188.293	10.290	0.6	23.3	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	4.26	1459.771	13739.960	17.264	1.1	6.3	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	4.25	2723.785	13472.679	32.853	2.1	3.0	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	4.25	6536.180	13386.724	79.342	5.0	0.8	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	4.25	13418.110	14147.375	154.123	9.8	-1.6	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	4.25	64230.766	13121.947	795.423	51.4	2.9	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	4.24	148325.734	15456.478	1559.406	102.1	2.1	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	4.23	327290.563	14790.417	3595.890	243.4	-2.6	NO	1.000	NO	bb
10	10	170810M2_11	Standard	500.000	4.23	562908.563	13123.576	6970.100	503.1	0.6	NO	1.000	NO	bb

Compound name: PFUnA
Coefficient of Determination: R^2 = 0.995537
Calibration curve: -0.000304422 * x^2 + 0.810482 * x + 0.0887281
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	170810M2_2	Standard	0.250	4.33	1082.861	57444.809	0.236	0.2	-27.5	NO	0.996	NO	bb
2	2	170810M2_3	Standard	0.500	4.34	2396.822	62078.648	0.483	0.5	-2.8	NO	0.996	NO	bb
3	3	170810M2_4	Standard	1.000	4.34	4977.892	64503.668	0.965	1.1	8.1	NO	0.996	NO	bb
4	4	170810M2_5	Standard	2.000	4.33	9185.262	59270.816	1.937	2.3	14.1	NO	0.996	NO	bb
5	5	170810M2_6	Standard	5.000	4.33	21770.973	69700.664	3.904	4.7	-5.7	NO	0.996	NO	bb
6	6	170810M2_7	Standard	10.000	4.33	40820.391	61611.820	8.282	10.1	1.5	NO	0.996	NO	bb
7	7	170810M2_8	Standard	50.000	4.33	192810.016	52882.594	45.575	57.4	14.7	NO	0.996	NO	bb
8	8	170810M2_9	Standard	100.000	4.31	448601.406	68600.250	81.742	104.9	4.9	NO	0.996	NO	bb
9	9	170810M2_10	Standard	250.000	4.30	1001369.188	74813.570	167.311	225.4	-9.8	NO	0.996	NO	bb
10	10	170810M2_11	Standard	500.000	4.30	1654232.125	61521.715	336.107	513.7	2.7	NO	0.996	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: PFDS
Coefficient of Determination: R^2 = 0.992589
Calibration curve: -4.87611e-005 * x^2 + 0.0819404 * x + 0.0113831
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	170810M2_2	Standard	0.250	4.38	50.134	57444.809	0.011			NO	0.993	NO	MMXI
2	2	170810M2_3	Standard	0.500	4.39	251.218	62078.648	0.051	0.5	-4.3	NO	0.993	NO	bb
3	3	170810M2_4	Standard	1.000	4.39	485.986	64503.668	0.094	1.0	1.1	NO	0.993	NO	bb
4	4	170810M2_5	Standard	2.000	4.38	806.569	59270.816	0.170	1.9	-3.0	NO	0.993	NO	bb
5	5	170810M2_6	Standard	5.000	4.38	2118.120	69700.664	0.380	4.5	-9.8	NO	0.993	NO	bb
6	6	170810M2_7	Standard	10.000	4.38	4130.849	61611.820	0.838	10.2	1.5	NO	0.993	NO	bb
7	7	170810M2_8	Standard	50.000	4.38	19476.701	52882.594	4.604	58.1	16.1	NO	0.993	NO	bb
8	8	170810M2_9	Standard	100.000	4.36	45542.465	68600.250	8.299	108.1	8.1	NO	0.993	NO	bb
9	9	170810M2_10	Standard	250.000	4.36	92623.195	74813.570	15.476	216.7	-13.3	NO	0.993	NO	bb
10	10	170810M2_11	Standard	500.000	4.35	145684.594	61521.715	29.600	525.3	5.1	NO	0.993	NO	bb

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999746
Calibration curve: -0.000238279 * x^2 + 0.835861 * x + 0.0431344
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	170810M2_2	Standard	0.250	4.51	126.520	6520.931	0.243	0.2	-4.6	NO	1.000	NO	bb
2	2	170810M2_3	Standard	0.500	4.53	246.742	7169.665	0.430	0.5	-7.4	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	4.52	609.030	7950.386	0.958	1.1	9.4	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	4.51	1069.381	7572.749	1.765	2.1	3.1	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	4.51	2402.908	6676.272	4.499	5.3	6.8	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	4.51	4358.342	7074.396	7.701	9.2	-8.1	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	4.51	21732.080	6639.138	40.917	49.6	-0.8	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	4.49	51974.469	7805.791	83.231	102.5	2.5	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	4.48	109401.664	7118.316	192.113	247.2	-1.1	NO	1.000	NO	bb
10	10	170810M2_11	Standard	500.000	4.48	198369.359	6906.029	359.051	501.1	0.2	NO	1.000	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: N-MeFOSA
Correlation coefficient: r = 0.995786, r^2 = 0.991590
Calibration curve: 0.878916 * x + 0.777845
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	170810M2_2	Standard	1.250	4.55	296.818	27716.932	1.606	0.9	-24.6	NO	0.992	NO	bb
2	2	170810M2_3	Standard	2.500	4.56	506.989	27527.555	2.763	2.3	-9.7	NO	0.992	NO	bb
3	3	170810M2_4	Standard	5.000	4.56	1040.113	27554.281	5.662	5.6	11.1	NO	0.992	NO	bb
4	4	170810M2_5	Standard	10.000	4.56	2132.267	27954.211	11.442	12.1	21.3	NO	0.992	NO	bb
5	5	170810M2_6	Standard	25.000	4.55	4991.766	26972.852	27.760	30.7	22.8	NO	0.992	NO	bb
6	6	170810M2_7	Standard	50.000	4.54	10478.551	29265.723	53.707	60.2	20.4	NO	0.992	NO	bb
7	7	170810M2_8	Standard	250.000	4.53	50625.969	29202.176	260.046	295.0	18.0	NO	0.992	NO	db
8	8	170810M2_9	Standard	500.000	4.51	118740.742	35066.203	507.928	577.0	15.4	NO	0.992	NO	bb
9	9	170810M2_10	Standard	1250.000	4.50	273392.375	36176.391	1133.581	1288.9	3.1	NO	0.992	NO	bb
10	10	170810M2_11	Standard	2500.000	4.50	473733.750	34819.609	2040.806	2321.1	-7.2	NO	0.992	NO	db

Compound name: PFTrDA
Correlation coefficient: r = 0.999754, r^2 = 0.999507
Calibration curve: 10.0213 * x + 1.2331
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	170810M2_2	Standard	0.250	4.70	1808.306	6520.931	3.466	0.2	-10.9	NO	1.000	NO	MM
2	2	170810M2_3	Standard	0.500	4.71	3277.177	7169.665	5.714	0.4	-10.6	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	4.71	7157.351	7950.386	11.253	1.0	-0.0	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	4.70	13517.759	7572.749	22.313	2.1	5.2	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	4.70	29636.258	6676.272	55.488	5.4	8.3	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	4.70	60225.457	7074.396	106.414	10.5	5.0	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	4.70	275791.281	6639.138	519.253	51.7	3.4	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	4.68	633892.563	7805.791	1015.100	101.2	1.2	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	4.67	1405725.625	7118.316	2468.501	246.2	-1.5	NO	1.000	NO	bb
10	10	170810M2_11	Standard	500.000	4.67	2233990.500	6906.029	4043.551	403.4	-19.3	NO	1.000	NO	bbX

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999640
Calibration curve: -0.000533447 * x^2 + 1.13867 * x + 0.107998
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	170810M2_2	Standard	0.250	4.90	1296.794	43934.512	0.369	0.2	-8.3	NO	1.000	NO	bb
2	2	170810M2_3	Standard	0.500	4.91	2459.198	44478.961	0.691	0.5	2.4	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	4.91	4822.091	48823.219	1.235	1.0	-1.0	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	4.90	9330.564	47903.941	2.435	2.0	2.3	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	4.90	20629.588	43352.480	5.948	5.1	2.8	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	4.90	41831.395	45414.316	11.514	10.1	0.6	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	4.90	191464.297	43089.582	55.543	49.8	-0.3	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	4.87	448893.063	49984.359	112.258	103.5	3.5	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	4.87	983211.563	50076.543	245.427	243.1	-2.7	NO	1.000	NO	MM
10	10	170810M2_11	Standard	500.000	4.86	1620744.750	46214.285	438.378	503.8	0.8	NO	1.000	NO	MM

Compound name: N-EtFOSA
Correlation coefficient: r = 0.998278, r^2 = 0.996558
Calibration curve: 0.877827 * x + 0.460454
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	170810M2_2	Standard	1.250	5.00	300.846	35807.328	1.260	0.9	-27.1	NO	0.997	NO	bb
2	2	170810M2_3	Standard	2.500	5.01	616.719	35651.246	2.595	2.4	-2.7	NO	0.997	NO	bb
3	3	170810M2_4	Standard	5.000	5.00	1224.420	36907.691	4.976	5.1	2.9	NO	0.997	NO	bb
4	4	170810M2_5	Standard	10.000	5.00	2355.630	37358.246	9.458	10.3	2.5	NO	0.997	NO	bb
5	5	170810M2_6	Standard	25.000	5.00	5722.799	34930.285	24.575	27.5	9.9	NO	0.997	NO	bb
6	6	170810M2_7	Standard	50.000	4.98	11801.225	38343.563	46.166	52.1	4.1	NO	0.997	NO	bb
7	7	170810M2_8	Standard	250.000	4.97	58068.348	36419.504	239.164	271.9	8.8	NO	0.997	NO	db
8	8	170810M2_9	Standard	500.000	4.95	136462.141	43820.121	467.122	531.6	6.3	NO	0.997	NO	db
9	9	170810M2_10	Standard	1250.000	4.94	323008.469	46286.176	1046.776	1191.9	-4.6	NO	0.997	NO	bb
10	10	170810M2_11	Standard	2500.000	4.94	574823.688	43106.852	2000.228	2278.1	-8.9	NO	0.997	NO	bbX

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999241
Calibration curve: -0.00134262 * x^2 + 1.44391 * x + 0.187386
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	170810M2_2	Standard	0.250	5.29	2439.806	20425.877	0.597	0.3	13.6	NO	0.999	NO	bd
2	2	170810M2_3	Standard	0.500	5.30	3560.579	20498.971	0.868	0.5	-5.6	NO	0.999	NO	bb
3	3	170810M2_4	Standard	1.000	5.30	6815.783	21206.127	1.607	1.0	-1.6	NO	0.999	NO	bb
4	4	170810M2_5	Standard	2.000	5.29	13956.986	22826.240	3.057	2.0	-0.4	NO	0.999	NO	bb
5	5	170810M2_6	Standard	5.000	5.28	30517.473	20867.588	7.312	5.0	-0.9	NO	0.999	NO	bb
6	6	170810M2_7	Standard	10.000	5.29	57583.516	21425.330	13.438	9.3	-7.4	NO	0.999	NO	bb
7	7	170810M2_8	Standard	50.000	5.28	276492.656	19445.941	71.093	51.6	3.2	NO	0.999	NO	bb
8	8	170810M2_9	Standard	100.000	5.26	606868.313	23300.309	130.228	99.2	-0.8	NO	0.999	NO	MM
9	9	170810M2_10	Standard	250.000	5.25	897246.125	15976.768	280.797	254.6	1.9	NO	0.999	NO	bbX
10	10	170810M2_11	Standard	500.000	5.24	1213814.625	11401.953	532.284			NO	0.999	NO	bbXI

Compound name: PFODA
Correlation coefficient: r = 0.999467, r^2 = 0.998934
Calibration curve: 1.27081 * x + 0.103615
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	170810M2_2	Standard	0.250	5.66	1714.516	20425.877	0.420	0.2	-0.5	NO	0.999	NO	bb
2	2	170810M2_3	Standard	0.500	5.66	3188.736	20498.971	0.778	0.5	6.1	NO	0.999	NO	bb
3	3	170810M2_4	Standard	1.000	5.66	6602.740	21206.127	1.557	1.1	14.4	NO	0.999	NO	bb
4	4	170810M2_5	Standard	2.000	5.66	12914.733	22826.240	2.829	2.1	7.2	NO	0.999	NO	bb
5	5	170810M2_6	Standard	5.000	5.66	27537.434	20867.588	6.598	5.1	2.2	NO	0.999	NO	bb
6	6	170810M2_7	Standard	10.000	5.66	56117.164	21425.330	13.096	10.2	2.2	NO	0.999	NO	bb
7	7	170810M2_8	Standard	50.000	5.65	255676.906	19445.941	65.740	51.6	3.3	NO	0.999	NO	bb
8	8	170810M2_9	Standard	100.000	5.62	579058.625	23300.309	124.260	97.7	-2.3	NO	0.999	NO	bb
9	9	170810M2_10	Standard	250.000	5.61	1368190.375	15976.768	428.181	336.9	34.7	NO	0.999	NO	bbX
10	10	170810M2_11	Standard	500.000	5.60	2323741.500	11401.953	1019.010	801.8	60.4	NO	0.999	NO	bbX

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: N-MeFOSE
Correlation coefficient: r = 0.998979, r^2 = 0.997958
Calibration curve: 0.913987 * x + 0.914175
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	170810M2_2	Standard	1.250	5.28	449.666	37456.684	1.801	1.0	-22.4	NO	0.998	NO	bb
2	2	170810M2_3	Standard	2.500	5.29	709.438	37182.391	2.862	2.1	-14.8	NO	0.998	NO	bb
3	3	170810M2_4	Standard	5.000	5.29	1441.188	38748.840	5.579	5.1	2.1	NO	0.998	NO	bb
4	4	170810M2_5	Standard	10.000	5.28	2749.127	38784.367	10.632	10.6	6.3	NO	0.998	NO	bb
5	5	170810M2_6	Standard	25.000	5.28	6369.167	37768.906	25.295	26.7	6.7	NO	0.998	NO	bb
6	6	170810M2_7	Standard	50.000	5.28	13694.196	41681.102	49.282	52.9	5.8	NO	0.998	NO	bb
7	7	170810M2_8	Standard	250.000	5.28	68194.742	40391.512	253.252	276.1	10.4	NO	0.998	NO	bb
8	8	170810M2_9	Standard	500.000	5.26	159694.672	48233.188	496.633	542.4	8.5	NO	0.998	NO	bb
9	9	170810M2_10	Standard	1250.000	5.25	369344.906	48233.070	1148.626	1255.7	0.5	NO	0.998	NO	bb
10	10	170810M2_11	Standard	2500.000	5.25	687202.625	46562.453	2213.809	2421.1	-3.2	NO	0.998	NO	bb

Compound name: N-EtFOSE
Correlation coefficient: r = 0.998468, r^2 = 0.996938
Calibration curve: 1.01573 * x + 2.54785
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	170810M2_2	Standard	1.250	5.45	431.103	36366.551	1.778			NO	0.997	NO	bbXI
2	2	170810M2_3	Standard	2.500	5.46	845.634	37921.910	3.345	0.8	-68.6	NO	0.997	NO	bbX
3	3	170810M2_4	Standard	5.000	5.46	1629.428	37938.703	6.442	3.8	-23.3	NO	0.997	NO	bb
4	4	170810M2_5	Standard	10.000	5.45	3162.947	39692.059	11.953	9.3	-7.4	NO	0.997	NO	bb
5	5	170810M2_6	Standard	25.000	5.45	7056.696	37298.547	28.379	25.4	1.7	NO	0.997	NO	bb
6	6	170810M2_7	Standard	50.000	5.45	15470.291	39826.883	58.266	54.9	9.7	NO	0.997	NO	bb
7	7	170810M2_8	Standard	250.000	5.45	75266.070	39464.043	286.081	279.1	11.7	NO	0.997	NO	bb
8	8	170810M2_9	Standard	500.000	5.43	181684.203	48142.445	566.083	554.8	11.0	NO	0.997	NO	bb
9	9	170810M2_10	Standard	1250.000	5.42	430891.406	50641.645	1276.296	1254.0	0.3	NO	0.997	NO	bb
10	10	170810M2_11	Standard	2500.000	5.42	790079.563	48390.172	2449.091	2408.7	-3.7	NO	0.997	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C3-PFBA
Response Factor: 0.905828
RRF SD: 0.0122576, Relative SD: 1.35319
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	170810M2_2	Standard	12.500	1.91	15542.773	17253.230	11.261	12.4	-0.5	NO		NO	bb
2	2	170810M2_3	Standard	12.500	1.92	15666.696	17209.924	11.379	12.6	0.5	NO		NO	bb
3	3	170810M2_4	Standard	12.500	1.92	16473.561	17869.518	11.524	12.7	1.8	NO		NO	bb
4	4	170810M2_5	Standard	12.500	1.92	15767.530	17173.609	11.477	12.7	1.4	NO		NO	bb
5	5	170810M2_6	Standard	12.500	1.91	16464.104	18114.355	11.361	12.5	0.3	NO		NO	bb
6	6	170810M2_7	Standard	12.500	1.92	16369.950	18442.018	11.096	12.2	-2.0	NO		NO	bb
7	7	170810M2_8	Standard	12.500	1.92	16361.661	17753.158	11.520	12.7	1.7	NO		NO	bb
8	8	170810M2_9	Standard	12.500	1.91	18859.416	21098.885	11.173	12.3	-1.3	NO		NO	bb
9	9	170810M2_10	Standard	12.500	1.91	18778.650	20835.586	11.266	12.4	-0.5	NO		NO	bb
10	10	170810M2_11	Standard	12.500	1.90	18418.195	20606.902	11.172	12.3	-1.3	NO		NO	bb

Compound name: 13C3-PFPeA
Response Factor: 0.283893
RRF SD: 0.00573445, Relative SD: 2.01993
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	170810M2_2	Standard	12.500	2.95	27880.619	38245.879	3.645	12.8	2.7	NO		NO	bb
2	2	170810M2_3	Standard	12.500	2.95	28322.555	40090.316	3.532	12.4	-0.5	NO		NO	bb
3	3	170810M2_4	Standard	12.500	2.96	28875.371	41622.215	3.469	12.2	-2.3	NO		NO	bb
4	4	170810M2_5	Standard	12.500	2.95	27712.795	39798.098	3.482	12.3	-1.9	NO		NO	bb
5	5	170810M2_6	Standard	12.500	2.95	29315.059	41689.316	3.516	12.4	-0.9	NO		NO	bb
6	6	170810M2_7	Standard	12.500	2.95	29802.102	41735.027	3.570	12.6	0.6	NO		NO	bb
7	7	170810M2_8	Standard	12.500	2.95	28667.293	39240.863	3.653	12.9	2.9	NO		NO	bb
8	8	170810M2_9	Standard	12.500	2.94	33506.395	46120.840	3.632	12.8	2.4	NO		NO	bb
9	9	170810M2_10	Standard	12.500	2.94	32021.633	45642.266	3.508	12.4	-1.1	NO		NO	bb
10	10	170810M2_11	Standard	12.500	2.94	30833.635	44306.922	3.480	12.3	-1.9	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C3-PFBS
Response Factor: 0.0328786
RRF SD: 0.00161235, Relative SD: 4.90396
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	170810M2_2	Standard	12.500	3.11	3242.905	38245.879	0.424	12.9	3.2	NO		NO	bb
2	2	170810M2_3	Standard	12.500	3.11	3291.404	40090.316	0.410	12.5	-0.1	NO		NO	bb
3	3	170810M2_4	Standard	12.500	3.12	3435.015	41622.215	0.413	12.6	0.4	NO		NO	bb
4	4	170810M2_5	Standard	12.500	3.11	3373.359	39798.098	0.424	12.9	3.1	NO		NO	bb
5	5	170810M2_6	Standard	12.500	3.12	3305.415	41689.316	0.396	12.1	-3.5	NO		NO	bb
6	6	170810M2_7	Standard	12.500	3.12	3622.048	41735.027	0.434	13.2	5.6	NO		NO	bb
7	7	170810M2_8	Standard	12.500	3.12	3433.760	39240.863	0.438	13.3	6.5	NO		NO	bb
8	8	170810M2_9	Standard	12.500	3.11	3757.638	46120.840	0.407	12.4	-0.9	NO		NO	bb
9	9	170810M2_10	Standard	12.500	3.10	3568.171	45642.266	0.391	11.9	-4.9	NO		NO	bb
10	10	170810M2_11	Standard	12.500	3.10	3303.260	44306.922	0.373	11.3	-9.3	NO		NO	bb

Compound name: 13C2-PFHxA
Response Factor: 0.303632
RRF SD: 0.00987768, Relative SD: 3.25318
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	170810M2_2	Standard	5.000	3.32	11232.063	38245.879	1.468	4.8	-3.3	NO		NO	bb
2	2	170810M2_3	Standard	5.000	3.32	11474.060	40090.316	1.431	4.7	-5.7	NO		NO	bb
3	3	170810M2_4	Standard	5.000	3.33	12197.214	41622.215	1.465	4.8	-3.5	NO		NO	bb
4	4	170810M2_5	Standard	5.000	3.32	12310.407	39798.098	1.547	5.1	1.9	NO		NO	bb
5	5	170810M2_6	Standard	5.000	3.32	12691.323	41689.316	1.522	5.0	0.3	NO		NO	bb
6	6	170810M2_7	Standard	5.000	3.32	13114.998	41735.027	1.571	5.2	3.5	NO		NO	bb
7	7	170810M2_8	Standard	5.000	3.32	12075.982	39240.863	1.539	5.1	1.4	NO		NO	bb
8	8	170810M2_9	Standard	5.000	3.31	14098.515	46120.840	1.528	5.0	0.7	NO		NO	bb
9	9	170810M2_10	Standard	5.000	3.30	13890.280	45642.266	1.522	5.0	0.2	NO		NO	bb
10	10	170810M2_11	Standard	5.000	3.30	14073.479	44306.922	1.588	5.2	4.6	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C4-PFHpA
Response Factor: 0.384073
RRF SD: 0.0180967, Relative SD: 4.71177
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	170810M2_2	Standard	12.500	3.57	32744.631	38245.879	4.281	11.1	-10.8	NO		NO	bb
2	2	170810M2_3	Standard	12.500	3.58	37927.195	40090.316	4.730	12.3	-1.5	NO		NO	bb
3	3	170810M2_4	Standard	12.500	3.58	40517.414	41622.215	4.867	12.7	1.4	NO		NO	bb
4	4	170810M2_5	Standard	12.500	3.57	40261.074	39798.098	5.058	13.2	5.4	NO		NO	bb
5	5	170810M2_6	Standard	12.500	3.57	40307.914	41689.316	4.834	12.6	0.7	NO		NO	bb
6	6	170810M2_7	Standard	12.500	3.57	40487.199	41735.027	4.851	12.6	1.0	NO		NO	bb
7	7	170810M2_8	Standard	12.500	3.57	40139.113	39240.863	5.114	13.3	6.5	NO		NO	bb
8	8	170810M2_9	Standard	12.500	3.56	43301.590	46120.840	4.694	12.2	-2.2	NO		NO	bb
9	9	170810M2_10	Standard	12.500	3.55	43919.035	45642.266	4.811	12.5	0.2	NO		NO	bb
10	10	170810M2_11	Standard	12.500	3.55	42249.473	44306.922	4.768	12.4	-0.7	NO		NO	bb

Compound name: 18O2-PFHxS
Response Factor: 0.417122
RRF SD: 0.0140806, Relative SD: 3.37566
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	170810M2_2	Standard	12.500	3.64	2973.079	7282.960	5.103	12.2	-2.1	NO		NO	bb
2	2	170810M2_3	Standard	12.500	3.65	3418.749	8095.660	5.279	12.7	1.2	NO		NO	bb
3	3	170810M2_4	Standard	12.500	3.65	3603.866	8554.390	5.266	12.6	1.0	NO		NO	bb
4	4	170810M2_5	Standard	12.500	3.64	3657.688	9118.271	5.014	12.0	-3.8	NO		NO	bb
5	5	170810M2_6	Standard	12.500	3.64	3713.872	8806.590	5.271	12.6	1.1	NO		NO	bb
6	6	170810M2_7	Standard	12.500	3.65	3730.608	8875.088	5.254	12.6	0.8	NO		NO	bb
7	7	170810M2_8	Standard	12.500	3.64	3648.731	8462.481	5.390	12.9	3.4	NO		NO	bb
8	8	170810M2_9	Standard	12.500	3.63	3949.262	9360.616	5.274	12.6	1.1	NO		NO	bb
9	9	170810M2_10	Standard	12.500	3.63	3521.197	9070.533	4.853	11.6	-6.9	NO		NO	bb
10	10	170810M2_11	Standard	12.500	3.62	3693.524	8491.929	5.437	13.0	4.3	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C2-6:2 FTS
Response Factor: 0.201722
RRF SD: 0.0340952, Relative SD: 16.9021
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	170810M2_2	Standard	12.500	3.76	10827.486	54603.613	2.479	12.3	-1.7	NO		NO	bb
2	2	170810M2_3	Standard	12.500	3.77	10909.211	58987.684	2.312	11.5	-8.3	NO		NO	bb
3	3	170810M2_4	Standard	12.500	3.77	10654.119	60428.516	2.204	10.9	-12.6	NO		NO	bb
4	4	170810M2_5	Standard	12.500	3.77	10669.914	61095.281	2.183	10.8	-13.4	NO		NO	bb
5	5	170810M2_6	Standard	12.500	3.77	10053.431	56983.695	2.205	10.9	-12.5	NO		NO	bb
6	6	170810M2_7	Standard	12.500	3.77	10016.485	53819.109	2.326	11.5	-7.7	NO		NO	bb
7	7	170810M2_8	Standard	12.500	3.76	11428.154	52844.020	2.703	13.4	7.2	NO		NO	bb
8	8	170810M2_9	Standard	12.500	3.75	14187.794	63696.625	2.784	13.8	10.4	NO		NO	bb
9	9	170810M2_10	Standard	12.500	3.74	17337.529	61971.621	3.497	17.3	38.7	NO		NO	bb
10	10	170810M2_11	Standard	12.500	3.74	19594.984	53950.348	4.540	22.5	80.1	NO		NO	bbX

Compound name: 13C2-PFOA
Response Factor: 1.1322
RRF SD: 0.0401853, Relative SD: 3.54932
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	170810M2_2	Standard	12.500	3.78	61642.953	54603.613	14.111	12.5	-0.3	NO		NO	bb
2	2	170810M2_3	Standard	12.500	3.79	67663.805	58987.684	14.339	12.7	1.3	NO		NO	bb
3	3	170810M2_4	Standard	12.500	3.79	67625.266	60428.516	13.989	12.4	-1.2	NO		NO	bb
4	4	170810M2_5	Standard	12.500	3.78	69456.469	61095.281	14.211	12.6	0.4	NO		NO	bb
5	5	170810M2_6	Standard	12.500	3.78	61218.832	56983.695	13.429	11.9	-5.1	NO		NO	bb
6	6	170810M2_7	Standard	12.500	3.78	64709.793	53819.109	15.029	13.3	6.2	NO		NO	bb
7	7	170810M2_8	Standard	12.500	3.78	59761.141	52844.020	14.136	12.5	-0.1	NO		NO	bb
8	8	170810M2_9	Standard	12.500	3.77	68978.094	63696.625	13.536	12.0	-4.4	NO		NO	bb
9	9	170810M2_10	Standard	12.500	3.76	68939.547	61971.621	13.905	12.3	-1.7	NO		NO	bb
10	10	170810M2_11	Standard	12.500	3.76	64044.930	53950.348	14.839	13.1	4.8	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C5-PFNA
Response Factor: 0.94609
RRF SD: 0.0460977, Relative SD: 4.87244
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	170810M2_2	Standard	12.500	3.97	62033.051	62822.277	12.343	13.0	4.4	NO		NO	bb
2	2	170810M2_3	Standard	12.500	3.98	56715.289	69006.492	10.274	10.9	-13.1	NO		NO	bb
3	3	170810M2_4	Standard	12.500	3.98	60834.914	64031.563	11.876	12.6	0.4	NO		NO	bb
4	4	170810M2_5	Standard	12.500	3.97	61086.734	63786.367	11.971	12.7	1.2	NO		NO	bb
5	5	170810M2_6	Standard	12.500	3.97	58121.105	59683.719	12.173	12.9	2.9	NO		NO	bb
6	6	170810M2_7	Standard	12.500	3.97	63817.566	67704.961	11.782	12.5	-0.4	NO		NO	bb
7	7	170810M2_8	Standard	12.500	3.97	57678.809	61617.066	11.701	12.4	-1.1	NO		NO	bb
8	8	170810M2_9	Standard	12.500	3.96	64540.883	67146.039	12.015	12.7	1.6	NO		NO	bb
9	9	170810M2_10	Standard	12.500	3.95	63239.992	65393.742	12.088	12.8	2.2	NO		NO	bb
10	10	170810M2_11	Standard	12.500	3.95	53648.328	55705.484	12.038	12.7	1.8	NO		NO	bb

Compound name: 13C8-PFOSA
Response Factor: 0.11942
RRF SD: 0.0160933, Relative SD: 13.4762
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	170810M2_2	Standard	12.500	3.99	6459.227	56516.137	1.429	12.0	-4.3	NO		NO	bb
2	2	170810M2_3	Standard	12.500	3.99	6795.560	54058.969	1.571	13.2	5.3	NO		NO	bb
3	3	170810M2_4	Standard	12.500	3.99	7247.529	58876.535	1.539	12.9	3.1	NO		NO	bb
4	4	170810M2_5	Standard	12.500	3.98	6795.770	54908.402	1.547	13.0	3.6	NO		NO	bb
5	5	170810M2_6	Standard	12.500	3.99	7263.316	66408.094	1.367	11.4	-8.4	NO		NO	bb
6	6	170810M2_7	Standard	12.500	3.99	7321.714	50136.242	1.825	15.3	22.3	NO		NO	bb
7	7	170810M2_8	Standard	12.500	3.98	7239.874	55712.629	1.624	13.6	8.8	NO		NO	bb
8	8	170810M2_9	Standard	12.500	3.97	8149.971	65160.934	1.563	13.1	4.7	NO		NO	bb
9	9	170810M2_10	Standard	12.500	3.96	6965.660	61852.313	1.408	11.8	-5.7	NO		NO	bb
10	10	170810M2_11	Standard	12.500	3.96	5075.854	60220.047	1.054	8.8	-29.4	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C8-PFOS
Response Factor: 1.03984
RRF SD: 0.043134, Relative SD: 4.14815
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	170810M2_2	Standard	12.500	4.03	10626.669	10014.264	13.264	12.8	2.0	NO		NO	bb
2	2	170810M2_3	Standard	12.500	4.04	11363.964	11495.998	12.356	11.9	-4.9	NO		NO	bb
3	3	170810M2_4	Standard	12.500	4.03	10971.130	10441.012	13.135	12.6	1.1	NO		NO	bb
4	4	170810M2_5	Standard	12.500	4.03	11205.850	10602.818	13.211	12.7	1.6	NO		NO	bb
5	5	170810M2_6	Standard	12.500	4.03	11041.968	10918.573	12.641	12.2	-2.7	NO		NO	bb
6	6	170810M2_7	Standard	12.500	4.03	11122.137	9895.137	14.050	13.5	8.1	NO		NO	bb
7	7	170810M2_8	Standard	12.500	4.03	10002.095	10000.603	12.502	12.0	-3.8	NO		NO	bb
8	8	170810M2_9	Standard	12.500	4.02	11632.687	11222.943	12.956	12.5	-0.3	NO		NO	bb
9	9	170810M2_10	Standard	12.500	4.01	10617.809	10708.807	12.394	11.9	-4.6	NO		NO	bd
10	10	170810M2_11	Standard	12.500	4.01	9250.272	8584.092	13.470	13.0	3.6	NO		NO	bd

Compound name: 13C2-PFDA
Response Factor: 0.970789
RRF SD: 0.0673883, Relative SD: 6.9416
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	170810M2_2	Standard	12.500	4.15	55995.238	62130.031	11.266	11.6	-7.2	NO		NO	bb
2	2	170810M2_3	Standard	12.500	4.16	55977.539	56889.133	12.300	12.7	1.4	NO		NO	bb
3	3	170810M2_4	Standard	12.500	4.16	58804.391	63530.797	11.570	11.9	-4.7	NO		NO	bb
4	4	170810M2_5	Standard	12.500	4.16	50928.629	56949.430	11.178	11.5	-7.9	NO		NO	bb
5	5	170810M2_6	Standard	12.500	4.16	56490.598	58825.063	12.004	12.4	-1.1	NO		NO	bb
6	6	170810M2_7	Standard	12.500	4.16	59644.734	57823.469	12.894	13.3	6.3	NO		NO	bb
7	7	170810M2_8	Standard	12.500	4.15	50433.004	53425.855	11.800	12.2	-2.8	NO		NO	bb
8	8	170810M2_9	Standard	12.500	4.14	63572.438	62756.719	12.662	13.0	4.3	NO		NO	bb
9	9	170810M2_10	Standard	12.500	4.13	58295.023	62057.383	11.742	12.1	-3.2	NO		NO	bb
10	10	170810M2_11	Standard	12.500	4.13	52405.832	47017.207	13.933	14.4	14.8	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C2-8:2 FTS
Response Factor: 0.140279
RRF SD: 0.0220172, Relative SD: 15.6953
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	170810M2_2	Standard	12.500	4.15	7665.451	62130.031	1.542	11.0	-12.0	NO		NO	bb
2	2	170810M2_3	Standard	12.500	4.16	7353.410	56889.133	1.616	11.5	-7.9	NO		NO	bb
3	3	170810M2_4	Standard	12.500	4.16	7736.133	63530.797	1.522	10.9	-13.2	NO		NO	bb
4	4	170810M2_5	Standard	12.500	4.15	7913.699	56949.430	1.737	12.4	-0.9	NO		NO	bb
5	5	170810M2_6	Standard	12.500	4.15	7743.167	58825.063	1.645	11.7	-6.2	NO		NO	bb
6	6	170810M2_7	Standard	12.500	4.15	7632.894	57823.469	1.650	11.8	-5.9	NO		NO	bb
7	7	170810M2_8	Standard	12.500	4.15	7336.241	53425.855	1.716	12.2	-2.1	NO		NO	bb
8	8	170810M2_9	Standard	12.500	4.14	9762.668	62756.719	1.945	13.9	10.9	NO		NO	bb
9	9	170810M2_10	Standard	12.500	4.12	11954.295	62057.383	2.408	17.2	37.3	NO		NO	bb
10	10	170810M2_11	Standard	12.500	4.12	13632.657	47017.207	3.624	25.8	106.7	NO		NO	bbX

Compound name: d3-N-MeFOSAA
Response Factor: 0.0177885
RRF SD: 0.00168688, Relative SD: 9.48297
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	170810M2_2	Standard	162.500	4.18	13096.980	56516.137	2.897	162.8	0.2	NO		NO	bb
2	2	170810M2_3	Standard	162.500	4.19	13619.695	54058.969	3.149	177.0	8.9	NO		NO	bb
3	3	170810M2_4	Standard	162.500	4.19	13420.139	58876.535	2.849	160.2	-1.4	NO		NO	bb
4	4	170810M2_5	Standard	162.500	4.18	14342.013	54908.402	3.265	183.5	13.0	NO		NO	bb
5	5	170810M2_6	Standard	162.500	4.18	14009.009	66408.094	2.637	148.2	-8.8	NO		NO	bb
6	6	170810M2_7	Standard	162.500	4.18	13329.100	50136.242	3.323	186.8	15.0	NO		NO	bb
7	7	170810M2_8	Standard	162.500	4.18	12505.077	55712.629	2.806	157.7	-2.9	NO		NO	bb
8	8	170810M2_9	Standard	162.500	4.17	14369.895	65160.934	2.757	155.0	-4.6	NO		NO	bb
9	9	170810M2_10	Standard	162.500	4.16	13581.694	61852.313	2.745	154.3	-5.0	NO		NO	bb
10	10	170810M2_11	Standard	162.500	4.16	11942.306	60220.047	2.479	139.4	-14.2	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: d5-N-EtFOSAA
Response Factor: 0.018231
RRF SD: 0.00158227, Relative SD: 8.67901
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	170810M2_2	Standard	162.500	4.25	13212.761	56516.137	2.922	160.3	-1.4	NO		NO	bb
2	2	170810M2_3	Standard	162.500	4.26	13188.293	54058.969	3.050	167.3	2.9	NO		NO	bb
3	3	170810M2_4	Standard	162.500	4.26	13739.960	58876.535	2.917	160.0	-1.5	NO		NO	bb
4	4	170810M2_5	Standard	162.500	4.25	13472.679	54908.402	3.067	168.2	3.5	NO		NO	bb
5	5	170810M2_6	Standard	162.500	4.25	13386.724	66408.094	2.520	138.2	-14.9	NO		NO	bb
6	6	170810M2_7	Standard	162.500	4.25	14147.375	50136.242	3.527	193.5	19.1	NO		NO	bb
7	7	170810M2_8	Standard	162.500	4.25	13121.947	55712.629	2.944	161.5	-0.6	NO		NO	bb
8	8	170810M2_9	Standard	162.500	4.23	15456.478	65160.934	2.965	162.6	0.1	NO		NO	bb
9	9	170810M2_10	Standard	162.500	4.23	14790.417	61852.313	2.989	164.0	0.9	NO		NO	bb
10	10	170810M2_11	Standard	162.500	4.22	13123.576	60220.047	2.724	149.4	-8.0	NO		NO	bb

Compound name: 13C2-PFUnA
Response Factor: 1.08514
RRF SD: 0.0880815, Relative SD: 8.11704
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	170810M2_2	Standard	12.500	4.33	57444.809	56516.137	12.705	11.7	-6.3	NO		NO	bb
2	2	170810M2_3	Standard	12.500	4.34	62078.648	54058.969	14.354	13.2	5.8	NO		NO	bb
3	3	170810M2_4	Standard	12.500	4.34	64503.668	58876.535	13.695	12.6	1.0	NO		NO	bb
4	4	170810M2_5	Standard	12.500	4.33	59270.816	54908.402	13.493	12.4	-0.5	NO		NO	bb
5	5	170810M2_6	Standard	12.500	4.32	69700.664	66408.094	13.120	12.1	-3.3	NO		NO	bb
6	6	170810M2_7	Standard	12.500	4.34	61611.820	50136.242	15.361	14.2	13.2	NO		NO	bb
7	7	170810M2_8	Standard	12.500	4.33	52882.594	55712.629	11.865	10.9	-12.5	NO		NO	bb
8	8	170810M2_9	Standard	12.500	4.32	68600.250	65160.934	13.160	12.1	-3.0	NO		NO	bb
9	9	170810M2_10	Standard	12.500	4.30	74813.570	61852.313	15.119	13.9	11.5	NO		NO	bb
10	10	170810M2_11	Standard	12.500	4.30	61521.715	60220.047	12.770	11.8	-5.9	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C2-PFDoA
Response Factor: 0.123132
RRF SD: 0.0129407, Relative SD: 10.5096
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	170810M2_2	Standard	12.500	4.51	6520.931	56516.137	1.442	11.7	-6.3	NO		NO	bb
2	2	170810M2_3	Standard	12.500	4.52	7169.665	54058.969	1.658	13.5	7.7	NO		NO	bb
3	3	170810M2_4	Standard	12.500	4.52	7950.386	58876.535	1.688	13.7	9.7	NO		NO	bb
4	4	170810M2_5	Standard	12.500	4.51	7572.749	54908.402	1.724	14.0	12.0	NO		NO	bb
5	5	170810M2_6	Standard	12.500	4.51	6676.272	66408.094	1.257	10.2	-18.4	NO		NO	bb
6	6	170810M2_7	Standard	12.500	4.51	7074.396	50136.242	1.764	14.3	14.6	NO		NO	bb
7	7	170810M2_8	Standard	12.500	4.51	6639.138	55712.629	1.490	12.1	-3.2	NO		NO	bb
8	8	170810M2_9	Standard	12.500	4.49	7805.791	65160.934	1.497	12.2	-2.7	NO		NO	bb
9	9	170810M2_10	Standard	12.500	4.48	7118.316	61852.313	1.439	11.7	-6.5	NO		NO	bb
10	10	170810M2_11	Standard	12.500	4.48	6906.029	60220.047	1.433	11.6	-6.9	NO		NO	MM

Compound name: d3-N-MeFOSA
Response Factor: 0.0432669
RRF SD: 0.0047116, Relative SD: 10.8896
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	170810M2_2	Standard	150.000	4.58	27716.932	56516.137	6.130	141.7	-5.5	NO		NO	bb
2	2	170810M2_3	Standard	150.000	4.59	27527.555	54058.969	6.365	147.1	-1.9	NO		NO	bb
3	3	170810M2_4	Standard	150.000	4.59	27554.281	58876.535	5.850	135.2	-9.9	NO		NO	bb
4	4	170810M2_5	Standard	150.000	4.58	27954.211	54908.402	6.364	147.1	-1.9	NO		NO	bb
5	5	170810M2_6	Standard	150.000	4.58	26972.852	66408.094	5.077	117.3	-21.8	NO		NO	bb
6	6	170810M2_7	Standard	150.000	4.57	29265.723	50136.242	7.297	168.6	12.4	NO		NO	bb
7	7	170810M2_8	Standard	150.000	4.55	29202.176	55712.629	6.552	151.4	1.0	NO		NO	bb
8	8	170810M2_9	Standard	150.000	4.54	35066.203	65160.934	6.727	155.5	3.6	NO		NO	bb
9	9	170810M2_10	Standard	150.000	4.53	36176.391	61852.313	7.311	169.0	12.7	NO		NO	bb
10	10	170810M2_11	Standard	150.000	4.53	34819.609	60220.047	7.228	167.0	11.4	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C2-PFTeDA
Response Factor: 0.797804
RRF SD: 0.0690308, Relative SD: 8.6526
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	170810M2_2	Standard	12.500	4.90	43934.512	56516.137	9.717	12.2	-2.6	NO		NO	bb
2	2	170810M2_3	Standard	12.500	4.91	44478.961	54058.969	10.285	12.9	3.1	NO		NO	bb
3	3	170810M2_4	Standard	12.500	4.91	48823.219	58876.535	10.366	13.0	3.9	NO		NO	bb
4	4	170810M2_5	Standard	12.500	4.90	47903.941	54908.402	10.905	13.7	9.4	NO		NO	bb
5	5	170810M2_6	Standard	12.500	4.90	43352.480	66408.094	8.160	10.2	-18.2	NO		NO	bb
6	6	170810M2_7	Standard	12.500	4.90	45414.316	50136.242	11.323	14.2	13.5	NO		NO	bb
7	7	170810M2_8	Standard	12.500	4.90	43089.582	55712.629	9.668	12.1	-3.1	NO		NO	bb
8	8	170810M2_9	Standard	12.500	4.87	49984.359	65160.934	9.589	12.0	-3.8	NO		NO	bb
9	9	170810M2_10	Standard	12.500	4.86	50076.543	61852.313	10.120	12.7	1.5	NO		NO	MM
10	10	170810M2_11	Standard	12.500	4.86	46214.285	60220.047	9.593	12.0	-3.8	NO		NO	MM

Compound name: d5-N-ETFOSA
Response Factor: 0.0556786
RRF SD: 0.00566563, Relative SD: 10.1756
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	170810M2_2	Standard	150.000	5.02	35807.328	56516.137	7.920	142.2	-5.2	NO		NO	bb
2	2	170810M2_3	Standard	150.000	5.03	35651.246	54058.969	8.244	148.1	-1.3	NO		NO	bb
3	3	170810M2_4	Standard	150.000	5.03	36907.691	58876.535	7.836	140.7	-6.2	NO		NO	bb
4	4	170810M2_5	Standard	150.000	5.03	37358.246	54908.402	8.505	152.7	1.8	NO		NO	bb
5	5	170810M2_6	Standard	150.000	5.02	34930.285	66408.094	6.575	118.1	-21.3	NO		NO	bb
6	6	170810M2_7	Standard	150.000	5.01	38343.563	50136.242	9.560	171.7	14.5	NO		NO	bb
7	7	170810M2_8	Standard	150.000	5.00	36419.504	55712.629	8.171	146.8	-2.2	NO		NO	bb
8	8	170810M2_9	Standard	150.000	4.98	43820.121	65160.934	8.406	151.0	0.7	NO		NO	bb
9	9	170810M2_10	Standard	150.000	4.97	46286.176	61852.313	9.354	168.0	12.0	NO		NO	bb
10	10	170810M2_11	Standard	150.000	4.97	43106.852	60220.047	8.948	160.7	7.1	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C2-PFHxDA
Response Factor: 0.92647
RRF SD: 0.0912877, Relative SD: 9.85328
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	170810M2_2	Standard	5.000	5.29	20425.877	56516.137	4.518	4.9	-2.5	NO		NO	bb
2	2	170810M2_3	Standard	5.000	5.30	20498.971	54058.969	4.740	5.1	2.3	NO		NO	bb
3	3	170810M2_4	Standard	5.000	5.30	21206.127	58876.535	4.502	4.9	-2.8	NO		NO	bb
4	4	170810M2_5	Standard	5.000	5.29	22826.240	54908.402	5.196	5.6	12.2	NO		NO	bb
5	5	170810M2_6	Standard	5.000	5.28	20867.588	66408.094	3.928	4.2	-15.2	NO		NO	bb
6	6	170810M2_7	Standard	5.000	5.29	21425.330	50136.242	5.342	5.8	15.3	NO		NO	bb
7	7	170810M2_8	Standard	5.000	5.28	19445.941	55712.629	4.363	4.7	-5.8	NO		NO	bb
8	8	170810M2_9	Standard	5.000	5.26	23300.309	65160.934	4.470	4.8	-3.5	NO		NO	MM
9	9	170810M2_10	Standard	5.000	5.25	15976.768	61852.313	3.229	3.5	-30.3	NO		NO	bbX
10	10	170810M2_11	Standard	5.000	5.24	11401.953	60220.047	2.367	2.6	-48.9	NO		NO	bbX

Compound name: d7-N-MeFOSE
Response Factor: 0.0594448
RRF SD: 0.00621154, Relative SD: 10.4492
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	170810M2_2	Standard	150.000	5.26	37456.684	56516.137	8.285	139.4	-7.1	NO		NO	bb
2	2	170810M2_3	Standard	150.000	5.28	37182.391	54058.969	8.598	144.6	-3.6	NO		NO	bb
3	3	170810M2_4	Standard	150.000	5.28	38748.840	58876.535	8.227	138.4	-7.7	NO		NO	bb
4	4	170810M2_5	Standard	150.000	5.27	38784.367	54908.402	8.829	148.5	-1.0	NO		NO	bb
5	5	170810M2_6	Standard	150.000	5.26	37768.906	66408.094	7.109	119.6	-20.3	NO		NO	bb
6	6	170810M2_7	Standard	150.000	5.27	41681.102	50136.242	10.392	174.8	16.5	NO		NO	bb
7	7	170810M2_8	Standard	150.000	5.26	40391.512	55712.629	9.062	152.5	1.6	NO		NO	bb
8	8	170810M2_9	Standard	150.000	5.25	48233.188	65160.934	9.253	155.7	3.8	NO		NO	bb
9	9	170810M2_10	Standard	150.000	5.24	48233.070	61852.313	9.748	164.0	9.3	NO		NO	bb
10	10	170810M2_11	Standard	150.000	5.24	46562.453	60220.047	9.665	162.6	8.4	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: d9-N-EtFOSE
Response Factor: 0.0594811
RRF SD: 0.00676808, Relative SD: 11.3785
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	170810M2_2	Standard	150.000	5.44	36366.551	56516.137	8.043	135.2	-9.8	NO		NO	bb
2	2	170810M2_3	Standard	150.000	5.45	37921.910	54058.969	8.769	147.4	-1.7	NO		NO	bb
3	3	170810M2_4	Standard	150.000	5.44	37938.703	58876.535	8.055	135.4	-9.7	NO		NO	bb
4	4	170810M2_5	Standard	150.000	5.44	39692.059	54908.402	9.036	151.9	1.3	NO		NO	bb
5	5	170810M2_6	Standard	150.000	5.44	37298.547	66408.094	7.021	118.0	-21.3	NO		NO	bb
6	6	170810M2_7	Standard	150.000	5.44	39826.883	50136.242	9.930	166.9	11.3	NO		NO	bb
7	7	170810M2_8	Standard	150.000	5.43	39464.043	55712.629	8.854	148.9	-0.8	NO		NO	bb
8	8	170810M2_9	Standard	150.000	5.42	48142.445	65160.934	9.235	155.3	3.5	NO		NO	bb
9	9	170810M2_10	Standard	150.000	5.41	50641.645	61852.313	10.234	172.1	14.7	NO		NO	bb
10	10	170810M2_11	Standard	150.000	5.41	48390.172	60220.047	10.044	168.9	12.6	NO		NO	bb

Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 7.40149e-017, Relative SD: 7.40149e-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	170810M2_2	Standard	12.500	1.91	17253.230	17253.230	12.500	12.5	0.0	NO		NO	bb
2	2	170810M2_3	Standard	12.500	1.92	17209.924	17209.924	12.500	12.5	0.0	NO		NO	bb
3	3	170810M2_4	Standard	12.500	1.92	17869.518	17869.518	12.500	12.5	0.0	NO		NO	bb
4	4	170810M2_5	Standard	12.500	1.91	17173.609	17173.609	12.500	12.5	0.0	NO		NO	bb
5	5	170810M2_6	Standard	12.500	1.91	18114.355	18114.355	12.500	12.5	0.0	NO		NO	bb
6	6	170810M2_7	Standard	12.500	1.91	18442.018	18442.018	12.500	12.5	0.0	NO		NO	bb
7	7	170810M2_8	Standard	12.500	1.92	17753.158	17753.158	12.500	12.5	0.0	NO		NO	bb
8	8	170810M2_9	Standard	12.500	1.91	21098.885	21098.885	12.500	12.5	0.0	NO		NO	bb
9	9	170810M2_10	Standard	12.500	1.90	20835.586	20835.586	12.500	12.5	0.0	NO		NO	bb
10	10	170810M2_11	Standard	12.500	1.90	20606.902	20606.902	12.500	12.5	0.0	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

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	170810M2_2	Standard	5.000	3.32	38245.879	38245.879	5.000	5.0	0.0	NO		NO	bb
2	2	170810M2_3	Standard	5.000	3.32	40090.316	40090.316	5.000	5.0	0.0	NO		NO	bb
3	3	170810M2_4	Standard	5.000	3.32	41622.215	41622.215	5.000	5.0	0.0	NO		NO	bb
4	4	170810M2_5	Standard	5.000	3.32	39798.098	39798.098	5.000	5.0	0.0	NO		NO	bb
5	5	170810M2_6	Standard	5.000	3.32	41689.316	41689.316	5.000	5.0	0.0	NO		NO	bb
6	6	170810M2_7	Standard	5.000	3.32	41735.027	41735.027	5.000	5.0	0.0	NO		NO	bb
7	7	170810M2_8	Standard	5.000	3.32	39240.863	39240.863	5.000	5.0	0.0	NO		NO	bb
8	8	170810M2_9	Standard	5.000	3.31	46120.840	46120.840	5.000	5.0	0.0	NO		NO	bb
9	9	170810M2_10	Standard	5.000	3.30	45642.266	45642.266	5.000	5.0	0.0	NO		NO	bb
10	10	170810M2_11	Standard	5.000	3.30	44306.922	44306.922	5.000	5.0	0.0	NO		NO	bb

Compound name: 13C3-PFHxS
Response Factor: 1
RRF SD: 0, Relative SD: 0
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	170810M2_2	Standard	12.500	3.65	7282.960	7282.960	12.500	12.5	0.0	NO		NO	bb
2	2	170810M2_3	Standard	12.500	3.65	8095.660	8095.660	12.500	12.5	0.0	NO		NO	bb
3	3	170810M2_4	Standard	12.500	3.65	8554.390	8554.390	12.500	12.5	0.0	NO		NO	bb
4	4	170810M2_5	Standard	12.500	3.64	9118.271	9118.271	12.500	12.5	0.0	NO		NO	bb
5	5	170810M2_6	Standard	12.500	3.64	8806.590	8806.590	12.500	12.5	0.0	NO		NO	bb
6	6	170810M2_7	Standard	12.500	3.64	8875.088	8875.088	12.500	12.5	0.0	NO		NO	bb
7	7	170810M2_8	Standard	12.500	3.64	8462.481	8462.481	12.500	12.5	0.0	NO		NO	bb
8	8	170810M2_9	Standard	12.500	3.63	9360.616	9360.616	12.500	12.5	0.0	NO		NO	bb
9	9	170810M2_10	Standard	12.500	3.63	9070.533	9070.533	12.500	12.5	0.0	NO		NO	bb
10	10	170810M2_11	Standard	12.500	3.62	8491.929	8491.929	12.500	12.5	0.0	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 1.11022e-016, Relative SD: 1.11022e-014
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	170810M2_2	Standard	12.500	3.78	54603.613	54603.613	12.500	12.5	0.0	NO		NO	bb
2	2	170810M2_3	Standard	12.500	3.78	58987.684	58987.684	12.500	12.5	0.0	NO		NO	bb
3	3	170810M2_4	Standard	12.500	3.79	60428.516	60428.516	12.500	12.5	0.0	NO		NO	bb
4	4	170810M2_5	Standard	12.500	3.78	61095.281	61095.281	12.500	12.5	0.0	NO		NO	bb
5	5	170810M2_6	Standard	12.500	3.78	56983.695	56983.695	12.500	12.5	0.0	NO		NO	bb
6	6	170810M2_7	Standard	12.500	3.78	53819.109	53819.109	12.500	12.5	0.0	NO		NO	bb
7	7	170810M2_8	Standard	12.500	3.78	52844.020	52844.020	12.500	12.5	0.0	NO		NO	bb
8	8	170810M2_9	Standard	12.500	3.76	63696.625	63696.625	12.500	12.5	0.0	NO		NO	bb
9	9	170810M2_10	Standard	12.500	3.76	61971.621	61971.621	12.500	12.5	0.0	NO		NO	bb
10	10	170810M2_11	Standard	12.500	3.76	53950.348	53950.348	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 8.27511e-017, Relative SD: 8.27511e-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	170810M2_2	Standard	12.500	3.97	62822.277	62822.277	12.500	12.5	0.0	NO		NO	bb
2	2	170810M2_3	Standard	12.500	3.98	69006.492	69006.492	12.500	12.5	0.0	NO		NO	bb
3	3	170810M2_4	Standard	12.500	3.98	64031.563	64031.563	12.500	12.5	0.0	NO		NO	bb
4	4	170810M2_5	Standard	12.500	3.97	63786.367	63786.367	12.500	12.5	0.0	NO		NO	bb
5	5	170810M2_6	Standard	12.500	3.97	59683.719	59683.719	12.500	12.5	0.0	NO		NO	bb
6	6	170810M2_7	Standard	12.500	3.97	67704.961	67704.961	12.500	12.5	0.0	NO		NO	bb
7	7	170810M2_8	Standard	12.500	3.97	61617.066	61617.066	12.500	12.5	0.0	NO		NO	bb
8	8	170810M2_9	Standard	12.500	3.96	67146.039	67146.039	12.500	12.5	0.0	NO		NO	bb
9	9	170810M2_10	Standard	12.500	3.96	65393.742	65393.742	12.500	12.5	0.0	NO		NO	bb
10	10	170810M2_11	Standard	12.500	3.95	55705.484	55705.484	12.500	12.5	0.0	NO		NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 56), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170810M2_2	Standard	12.500	4.03	10014.264	10014.264	12.500	12.5	0.0	NO		NO	bb
2	2	170810M2_3	Standard	12.500	4.03	11495.998	11495.998	12.500	12.5	0.0	NO		NO	bb
3	3	170810M2_4	Standard	12.500	4.04	10441.012	10441.012	12.500	12.5	0.0	NO		NO	bb
4	4	170810M2_5	Standard	12.500	4.03	10602.818	10602.818	12.500	12.5	0.0	NO		NO	bb
5	5	170810M2_6	Standard	12.500	4.03	10918.573	10918.573	12.500	12.5	0.0	NO		NO	bb
6	6	170810M2_7	Standard	12.500	4.03	9895.137	9895.137	12.500	12.5	0.0	NO		NO	bb
7	7	170810M2_8	Standard	12.500	4.03	10000.603	10000.603	12.500	12.5	0.0	NO		NO	bb
8	8	170810M2_9	Standard	12.500	4.02	11222.943	11222.943	12.500	12.5	0.0	NO		NO	bb
9	9	170810M2_10	Standard	12.500	4.01	10708.807	10708.807	12.500	12.5	0.0	NO		NO	bb
10	10	170810M2_11	Standard	12.500	4.01	8584.092	8584.092	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C6-PFDA
Response Factor: 1
RRF SD: 8.27511e-017, Relative SD: 8.27511e-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	170810M2_2	Standard	12.500	4.16	62130.031	62130.031	12.500	12.5	0.0	NO		NO	bb
2	2	170810M2_3	Standard	12.500	4.16	56889.133	56889.133	12.500	12.5	0.0	NO		NO	bb
3	3	170810M2_4	Standard	12.500	4.16	63530.797	63530.797	12.500	12.5	0.0	NO		NO	bb
4	4	170810M2_5	Standard	12.500	4.16	56949.430	56949.430	12.500	12.5	0.0	NO		NO	bb
5	5	170810M2_6	Standard	12.500	4.16	58825.063	58825.063	12.500	12.5	0.0	NO		NO	bb
6	6	170810M2_7	Standard	12.500	4.16	57823.469	57823.469	12.500	12.5	0.0	NO		NO	bb
7	7	170810M2_8	Standard	12.500	4.15	53425.855	53425.855	12.500	12.5	0.0	NO		NO	bb
8	8	170810M2_9	Standard	12.500	4.14	62756.719	62756.719	12.500	12.5	0.0	NO		NO	bb
9	9	170810M2_10	Standard	12.500	4.13	62057.383	62057.383	12.500	12.5	0.0	NO		NO	bb
10	10	170810M2_11	Standard	12.500	4.13	47017.207	47017.207	12.500	12.5	0.0	NO		NO	bb

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Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 13C7-PFUnA
Response Factor: 1
RRF SD: 3.70074e-017, Relative SD: 3.70074e-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	170810M2_2	Standard	12.500	4.33	56516.137	56516.137	12.500	12.5	0.0	NO		NO	bb
2	2	170810M2_3	Standard	12.500	4.34	54058.969	54058.969	12.500	12.5	0.0	NO		NO	bb
3	3	170810M2_4	Standard	12.500	4.34	58876.535	58876.535	12.500	12.5	0.0	NO		NO	bb
4	4	170810M2_5	Standard	12.500	4.34	54908.402	54908.402	12.500	12.5	0.0	NO		NO	bb
5	5	170810M2_6	Standard	12.500	4.33	66408.094	66408.094	12.500	12.5	0.0	NO		NO	bb
6	6	170810M2_7	Standard	12.500	4.33	50136.242	50136.242	12.500	12.5	0.0	NO		NO	bb
7	7	170810M2_8	Standard	12.500	4.32	55712.629	55712.629	12.500	12.5	0.0	NO		NO	bb
8	8	170810M2_9	Standard	12.500	4.31	65160.934	65160.934	12.500	12.5	0.0	NO		NO	bb
9	9	170810M2_10	Standard	12.500	4.30	61852.313	61852.313	12.500	12.5	0.0	NO		NO	bb
10	10	170810M2_11	Standard	12.500	4.30	60220.047	60220.047	12.500	12.5	0.0	NO		NO	bb

Sample List Report MassLynx MassLynx V4.1 SCN945 SCN960

Sample List: U:\Q4.PRO\SampleDB\170810M2.SPL

Last Modified: Thursday, August 10, 2017 20:07:32 Pacific Daylight Time

Printed: Thursday, August 10, 2017 20:46:13 Pacific Daylight Time

Page Position (1, 1)

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
1	170810M2_1	---	IPA	IPA	1.0000	1:48	Blank
2	170810M2_2	---	ST170810M2-1 PFC CS-2 17H1015	PFC CS-2 17H1015	1.0000	1:1	Standard
3	170810M2_3	---	ST170810M2-2 PFC CS-1 17H1003	PFC CS-1 17H1003	1.0000	1:2	Standard
4	170810M2_4	---	ST170810M2-3 PFC CS0 17H1004	PFC CS0 17H1004	1.0000	1:3	Standard
5	170810M2_5	---	ST170810M2-4 PFC CS1 17H1016	PFC CS1 17H1016	1.0000	1:4	Standard
6	170810M2_6	---	ST170810M2-5 PFC CS2 17H1017	PFC CS2 17H1017	1.0000	1:5	Standard
7	170810M2_7	---	ST170810M2-6 PFC CS3 17H1005	PFC CS3 17H1005	1.0000	1:6	Standard
8	170810M2_8	---	ST170810M2-7 PFC CS4 17H1018	PFC CS4 17H1018	1.0000	1:7	Standard
9	170810M2_9	---	ST170810M2-8 PFC CS5 17H1019	PFC CS5 17H1019	1.0000	1:8	Standard
10	170810M2_10	---	ST170810M2-9 PFC CS6 17H1013	PFC CS6 17H1013	1.0000	1:9	Standard
11	170810M2_11	---	ST170810M2-10 PFC CS7 17H1012	PFC CS7 17H1012	1.0000	1:10	Analyte
12	170810M2_12	---	IPA	IPA	1.0000	1:48	Blank
13	170810M2_13	---	SS170810M2-1 PFC SSS 17H1020	PFC SSS 17H1020	1.0000	1:11	Analyte
14	170810M2_14	---	IPA	IPA	1.0000	1:48	Blank
15	170810M2_15	O	1700946-05RE1 MATP05077 1.06	MATP05077	1.0233	1:12	Analyte
16	170810M2_16	---	IPA	IPA	1.0000	1:48	Blank
17	170810M2_17	O	1700946-05RE1@5X MATP05077 1.06	MATP05077	1.0233	1:13	Analyte
18	170810M2_18	---	IPA	IPA	1.0000	1:48	Blank
19	170810M2_19	X	B7H0026-BS1 OPR 1	OPR	1.0000	1:14	Analyte
20	170810M2_20	---	IPA	IPA	1.0000	1:48	Blank
21	170810M2_21	X	B7H0026-BLK1 Method Blank 1	Method Blank	1.0000	1:15	Analyte
22	170810M2_22	---	IPA	IPA	1.0000	1:48	Blank
23	170810M2_23	X	1700946-01 MATP05073 1	MATP05073	1.0000	1:16	Analyte
24	170810M2_24	X	1700946-02 MATP05074 1	MATP05074	1.0000	1:17	Analyte
25	170810M2_25	X	1700946-03 MATP05075 1	MATP05075	1.0000	1:18	Analyte
26	170810M2_26	---	1700946-05 MATP05077 1	MATP05077	1.0000	1:19	Analyte
27	170810M2_27	---	IPA	IPA	1.0000	1:48	Blank
28	170810M2_28	X	1700946-04 MATP05076 1	MATP05076	1.0000	1:20	Analyte
29	170810M2_29	---	IPA	IPA	1.0000	1:48	Blank
30	170810M2_30	---	1700946-05@10X MATP05077 1	MATP05077	1.0000	1:22	Analyte
31	170810M2_31	---	IPA	IPA	1.0000	1:48	Blank
32	170810M2_32	X	1700946-04@10X MATP05076 1	MATP05076	1.0000	1:23	Analyte
33	170810M2_33	---	IPA	IPA	1.0000	1:48	Blank
34	170810M2_34	---	B7H0037-BS1 OPR 0.125	OPR	0.2500	1:24	Analyte
35	170810M2_35	---	IPA	IPA	1.0000	1:48	Blank
36	170810M2_36	X	1701010-02@10X VEL-FOAM-080317 0.125	VEL-FOAM-080317	0.0065	1:25	Analyte
37	170810M2_37	---	IPA	IPA	1.0000	1:48	Blank
38	170810M2_38	---	ST170810M2-11 PFC CS3 17H1005	PFC CS3 17H1005	1.0000	1:6	Standard
39	170810M2_39	---	IPA	IPA	1.0000	1:48	Blank
40	170810M2_40	X	1701010-02 VEL-FOAM-080317 0.125	VEL-FOAM-080317	0.1250	1:26	Analyte

(A) Column was changed, new curve run due to slight shifts in RT. OM 8/11/17 OM 8/10/17

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
41	170810M2_41	---	IPA	IPA	1.0000	1:48	Blank
42	170810M2_42	---	B7H0060-BS1 OPR 2.5	OPR	2.5000	1:27	Analyte
43	170810M2_43	---	B7H0073-BS1 OPR 0.125	OPR	0.1250	1:28	Analyte
44	170810M2_44	---	B7H0074-BS1 OPR 0.125	OPR	0.1250	1:29	Analyte
45	170810M2_45	---	B7H0060-BLK1 Method Blank 2.5	Method Blank	2.5000	1:30	Analyte
46	170810M2_46	---	B7H0073-BLK1 Method Blank 0.125	Method Blank	0.1250	1:31	Analyte
47	170810M2_47	---	B7H0074-BLK1 Method Blank 0.125	Method Blank	0.1250	1:32	Analyte
48	170810M2_48	---	B7H0073-MS1 Matrix Spike 0.0005	Matrix Spike	0.0005	1:33	Analyte
49	170810M2_49	---	IPA	IPA	1.0000	1:48	Blank
50	170810M2_50	---	B7H0073-MSD1 Matrix Spike Dup 0.00139	Matrix Spike Dup	0.0014	1:34	Analyte
51	170810M2_51	---	IPA	IPA	1.0000	1:48	Blank
52	170810M2_52	---	B7H0074-MS1 Matrix Spike 0.125	Matrix Spike	0.1250	1:35	Analyte
53	170810M2_53	---	B7H0074-MSD1 Matrix Spike Dup 0.125	Matrix Spike Dup	0.1250	1:36	Analyte
54	170810M2_54	---	1700819-01RE1 QPFD-14 2.5	QPFD-14	2.5000	1:37	Analyte
55	170810M2_55	---	1700819-02RE1 QPFD-15 2.5	QPFD-15	2.5000	1:38	Analyte
56	170810M2_56	---	IPA	IPA	1.0000	1:48	Blank
57	170810M2_57	---	1700819-03RE1 QPFD-16 2.5	QPFD-16	2.5000	1:39	Analyte
58	170810M2_58	---	1700819-04RE1 QPFD-17 2	QPFD-17	2.0000	1:40	Analyte
59	170810M2_59	---	1700819-05RE1 QPFD-18 2.5	QPFD-18	2.5000	1:41	Analyte
60	170810M2_60	---	1700819-06RE1 QPFD-19 2.5	QPFD-19	2.5000	1:42	Analyte
61	170810M2_61	---	1700819-07RE1 QPFD-20 2.5	QPFD-20	2.5000	1:43	Analyte
62	170810M2_62	---	1700819-08RE1 QPFD-21 2.5	QPFD-21	2.5000	1:44	Analyte
63	170810M2_63	---	1700819-09RE1 QPFD-22 2.5	QPFD-22	2.5000	1:45	Analyte
64	170810M2_64	---	1700819-10RE1 QPFD-23 2.5	QPFD-23	2.5000	1:46	Analyte
65	170810M2_65	---	IPA	IPA	1.0000	1:48	Blank
66	170810M2_66	---	ST170810M2-12 PFC CS0 17H1004	PFC CS0 17H1004	1.0000	1:3	Standard
67	170810M2_67	---	IPA	IPA	1.0000	1:48	Blank
68	170810M2_68	---	1700819-11RE1 QPFD-24 2.5	QPFD-24	2.5000	1:47	Analyte
69	170810M2_69	---	1700819-12RE1 QPFD-25 2.5	QPFD-25	2.5000	2:1	Analyte
70	170810M2_70	---	1700819-13RE1 QPFD-26 2.5	QPFD-26	2.5000	2:2	Analyte
71	170810M2_71	---	1700925-04RE2 I001MW52S-170724 0.00122	I001MW52S-170724	0.0012	2:3	Analyte
72	170810M2_72	---	IPA	IPA	1.0000	1:48	Blank
73	170810M2_73	---	1700925-05RE2 I001MW52X-170724 0.00133	I001MW52X-170724	0.0013	2:4	Analyte
74	170810M2_74	---	IPA	IPA	1.0000	1:48	Blank
75	170810M2_75	---	1700922-01RE1 MH-L103-20170721 0.10565	MH-L103-20170721	0.1056	2:5	Analyte
76	170810M2_76	---	1700922-02RE1 MH-N104-20170721 0.11025	MH-N104-20170721	0.1103	2:6	Analyte
77	170810M2_77	---	1700922-03RE1 Upstream-Culvert-109-20170721 0.1185	Upstream-Culvert-109-20170721	0.1185	2:7	Analyte
78	170810M2_78	---	1700922-04RE1 FRB03-20170721 0.11017	FRB03-20170721	0.1102	2:8	Analyte
79	170810M2_79	---	1700922-05RE1 RB08-20170720 0.11893	RB08-20170720	0.1189	2:9	Analyte
80	170810M2_80	---	IPA	IPA	1.0000	1:48	Blank

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
		am 8/11/17	(A) (B) am 8/4/17				
81	170810M2_81	X	ST170810M2-13 PFC CS3 17H1005	PFC CS3 17H1005	1.0000	1:6	Analyte
82	170810M2_82	---	IPA	IPA	1.0000	1:48	Blank
83	170810M2_83	---	(B) 1700922-06RE1 RB09-20170721 0.11676	RB09-20170721	0.1168	2:10	Analyte
84	170810M2_84	---	1700925-01RE1 I001BC43S-170724 0.12112	I001BC43S-170724	0.1211	2:11	Analyte
85	170810M2_85	---	1700925-02RE1 SB01-170724 0.12178	SB01-170724	0.1218	2:12	Analyte
86	170810M2_86	---	1700925-03RE1 I001BC50S-170724 0.12135	I001BC50S-170724	0.1214	2:13	Analyte
87	170810M2_87	---	1700925-06RE1 EB01-170724 0.1185	EB01-170724	0.1185	2:14	Analyte
88	170810M2_88	---	1700929-01RE1 MATP01001 0.11834	MATP01001	0.1183	2:15	Analyte
89	170810M2_89	---	1700929-02RE1 MATP01002 0.1157	MATP01002	0.1157	2:16	Analyte
90	170810M2_90	---	1700938-01RE1 NORP08102 0.11844	NORP08102	0.1184	2:17	Analyte
91	170810M2_91	---	1700938-02RE1 NORP08103 0.12014	NORP08103	0.1201	2:18	Analyte
92	170810M2_92	---	1700938-03RE1 NORP08104 0.11247	NORP08104	0.1125	2:19	Analyte
93	170810M2_93	---	IPA	IPA	1.0000	1:48	Blank
94	170810M2_94	---	ST170810M2-14 PFC CS3 17H1005	PFC CS3 17H1005	1.0000	1:6	Standard
95	170810M2_95	---	IPA	IPA	1.0000	1:48	Blank
96	170810M2_96	---	1700819-02RE1 QPFD-15 2.5 (25X)	QPFD-15	2.5000	1:21	Analyte
97	170810M2_97	---	IPA	IPA	1.0000	1:48	Blank
98	170810M2_98	---	B7H0073-MS1@20X Matrix Spike 0.0005	Matrix Spike	0.0005	2:20	Analyte
99	170810M2_99	---	IPA	IPA	1.0000	1:48	Blank
100	170810M2_100	---	B7H0073-MSD1@20X Matrix Spike Dup 0.00139	Matrix Spike Dup	0.0014	2:21	Analyte
101	170810M2_101	---	IPA	IPA	1.0000	1:48	Blank
102	170810M2_102	---	1700925-04RE2 I001MW52S-170724 0.00122	I001MW52S-170724	0.0012	2:22	Analyte
103	170810M2_103	---	IPA	IPA	1.0000	1:48	Blank
104	170810M2_104	---	1700925-05RE2 I001MW52X-170724 0.00133	I001MW52X-170724	0.0013	2:23	Analyte
105	170810M2_105	---	IPA	IPA	1.0000	1:48	Blank
106	170810M2_106	X	ST170810M2-15 PFC CS3 17H1005	PFC CS3 17H1005	1.0000	1:6	Analyte
107	170810M2_107	---	IPA	IPA	1.0000	1:48	Blank

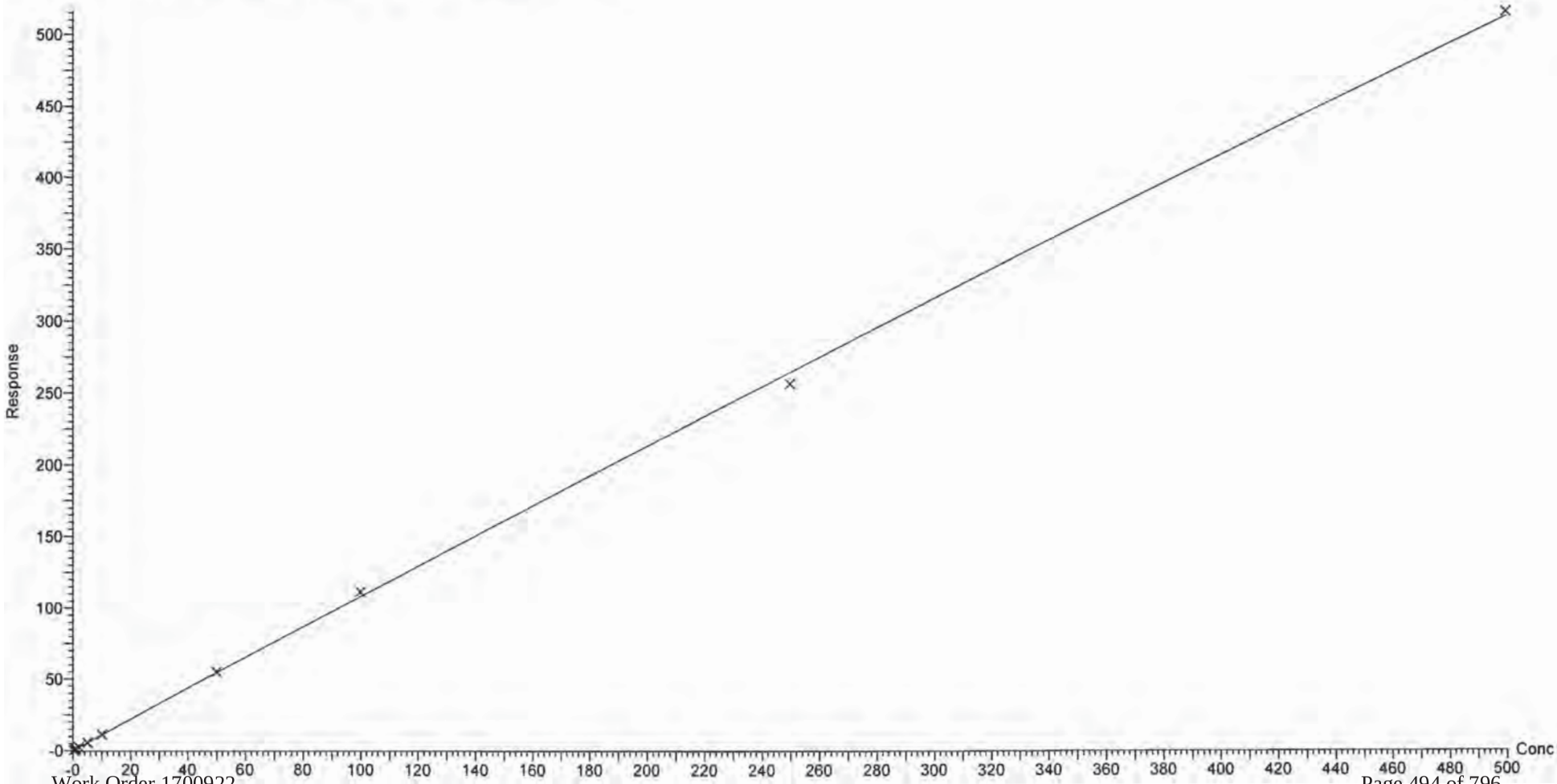
(B) PFDoA, PFTrDA, PFTeDA, PFODA, & PFHxDA shifted out of window, samples not injected. am 8/11/17

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 08:55:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

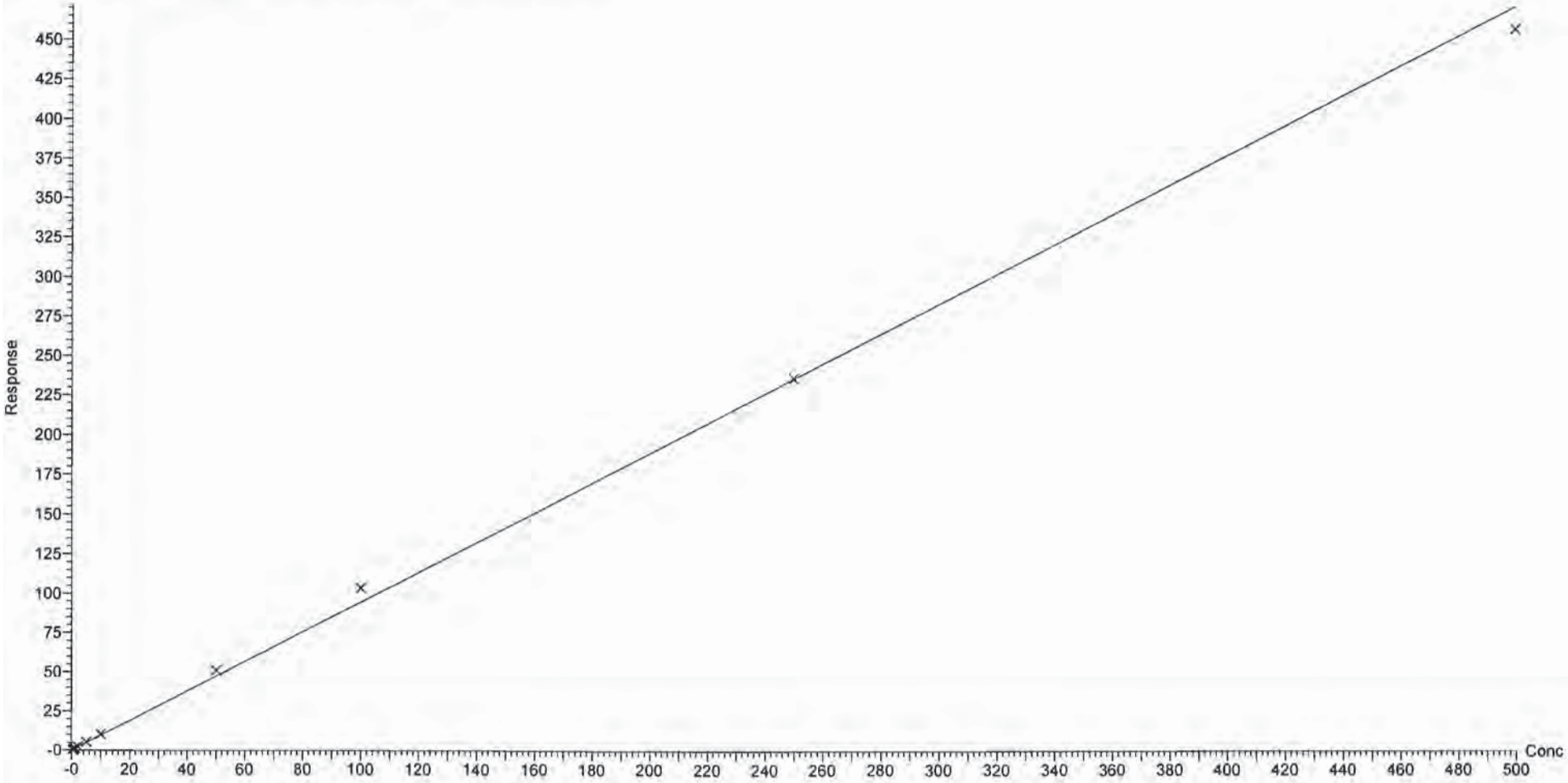
Compound name: PFBA
Coefficient of Determination: R^2 = 0.999558
Calibration curve: -0.000132012 * x^2 + 1.09237 * x + 0.0597566
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

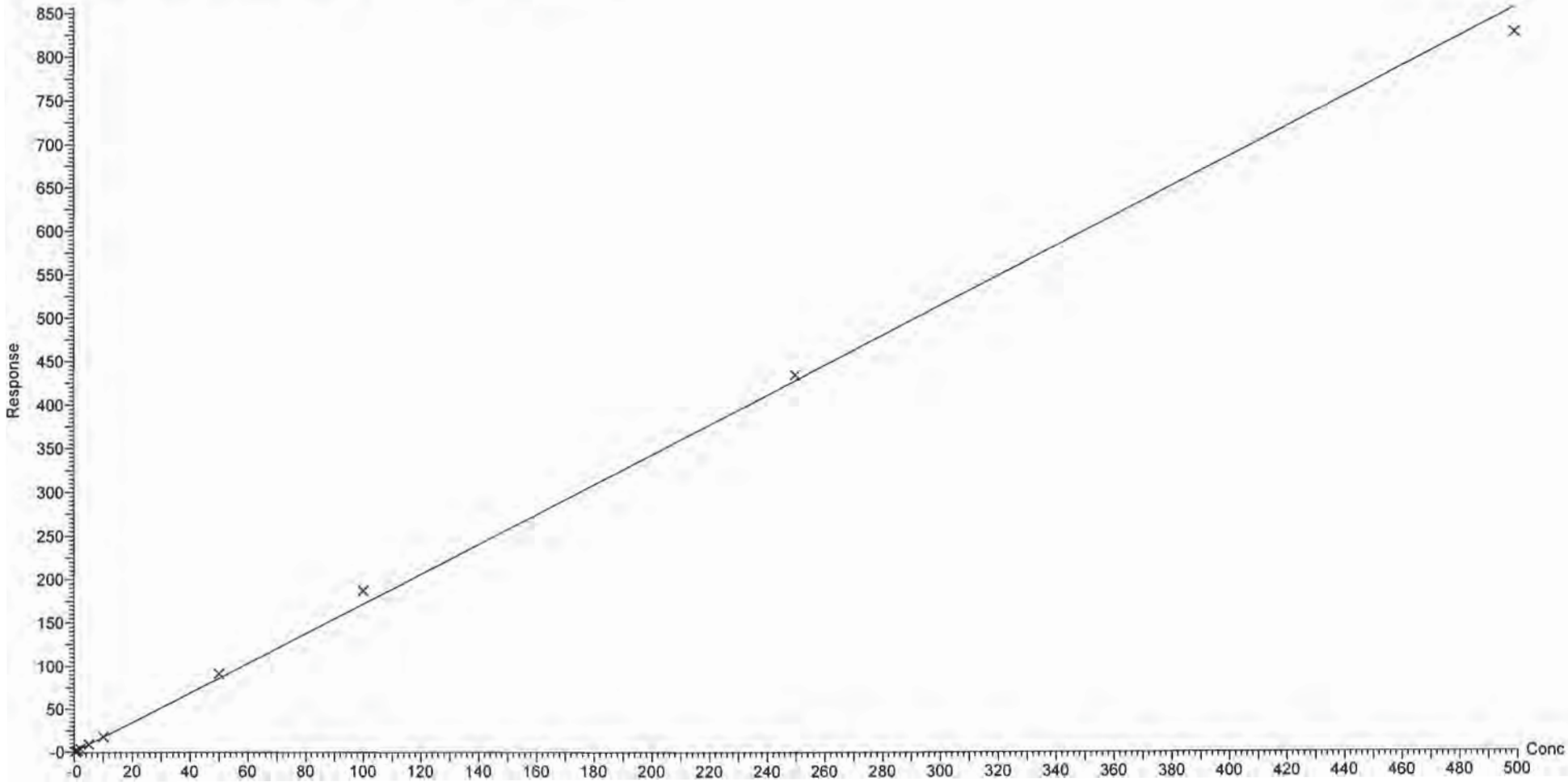
Compound name: PFPeA
Correlation coefficient: r = 0.999003, r^2 = 0.998007
Calibration curve: 0.943317 * x + 0.117613
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

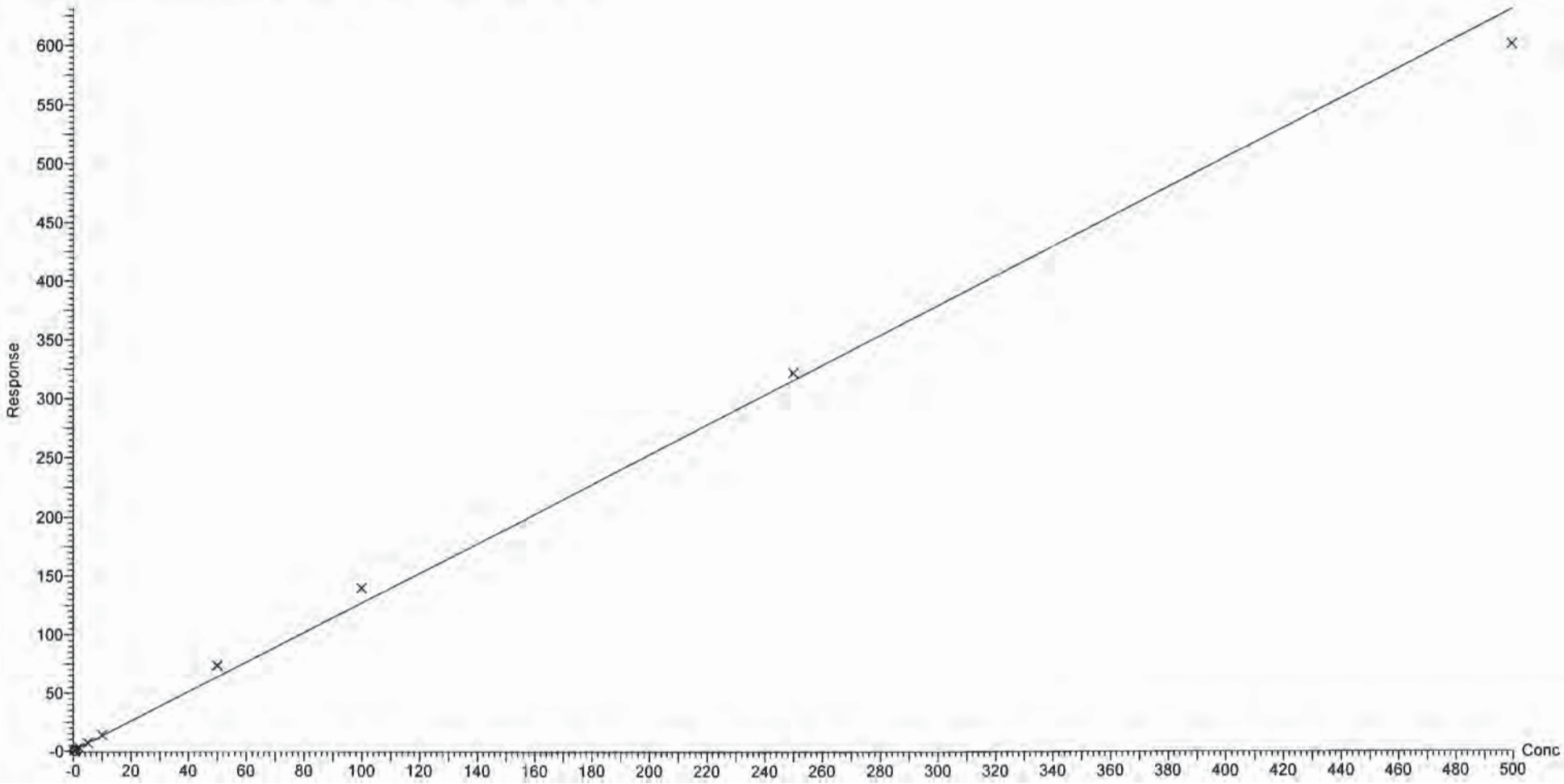
Compound name: PFBS
Correlation coefficient: r = 0.999068, r^2 = 0.998137
Calibration curve: 1.7128 * x + 0.180452
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

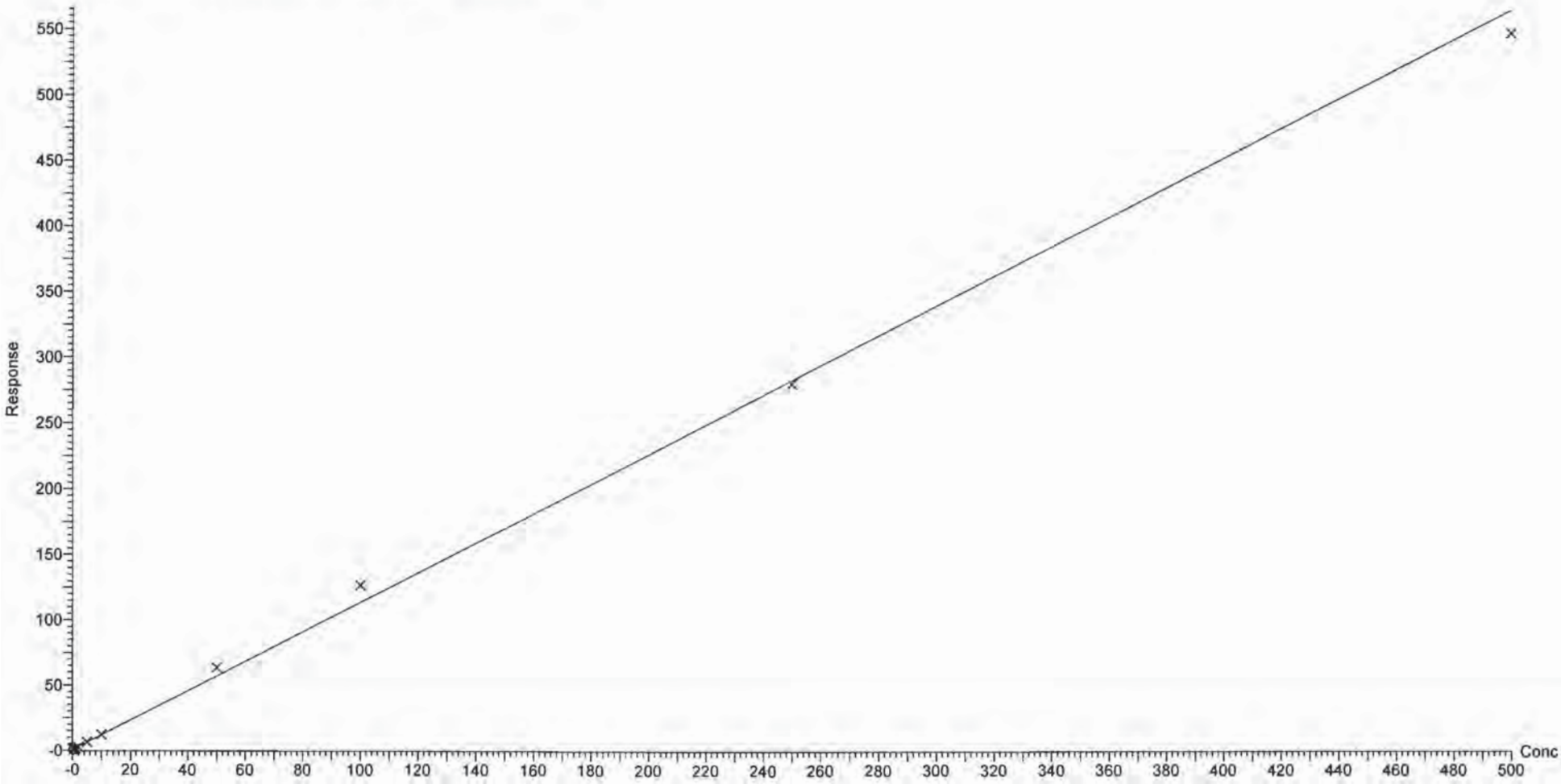
Compound name: PFHxA
Correlation coefficient: r = 0.997990, r^2 = 0.995984
Calibration curve: 1.26213 * x + 0.638423
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

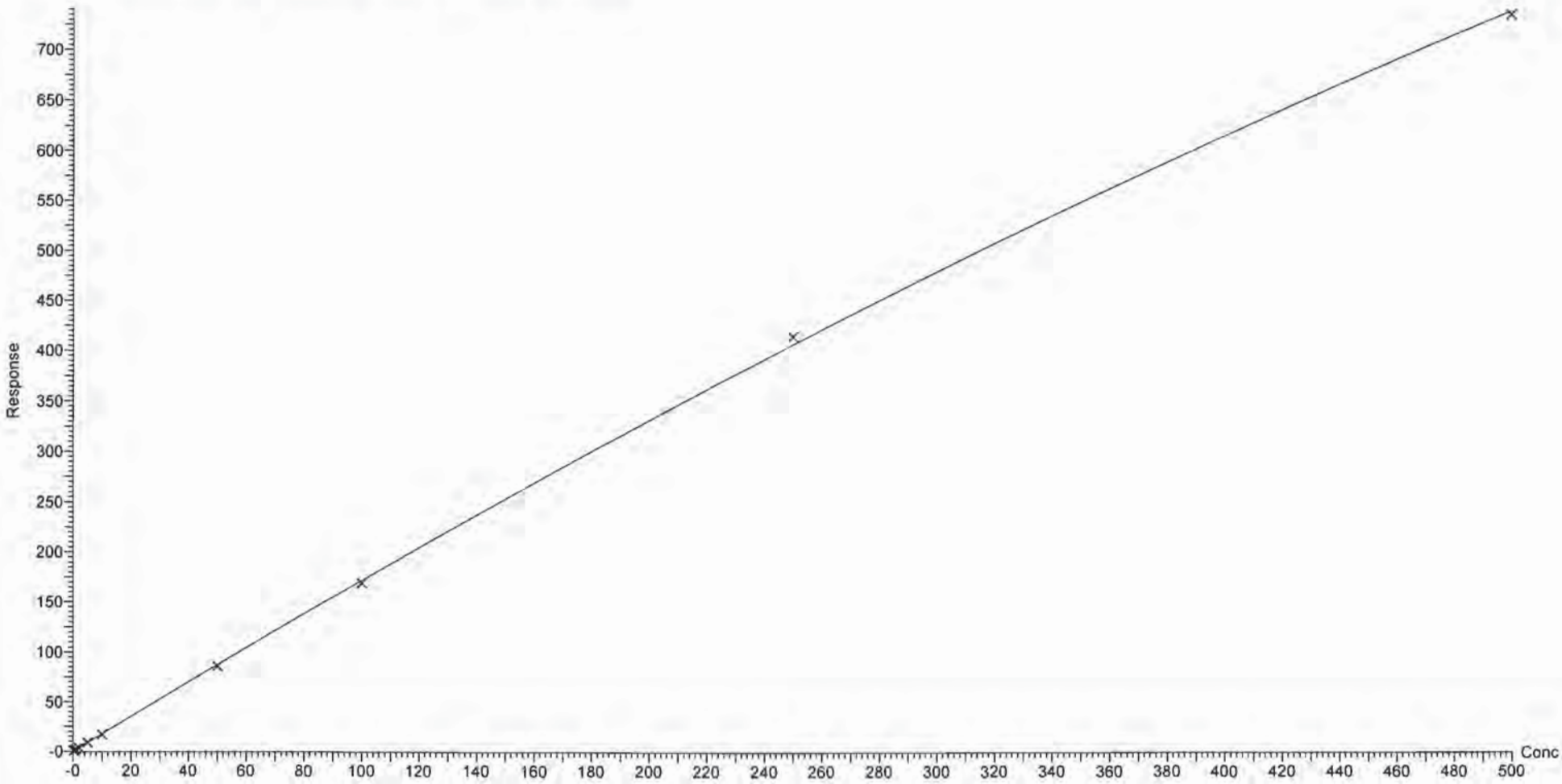
Compound name: PFHpA
Correlation coefficient: r = 0.998520, r^2 = 0.997041
Calibration curve: 1.13042 * x + 0.520352
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

Compound name: PFHxS
Coefficient of Determination: R^2 = 0.999727
Calibration curve: -0.00059344 * x^2 + 1.77788 * x + -0.123769
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

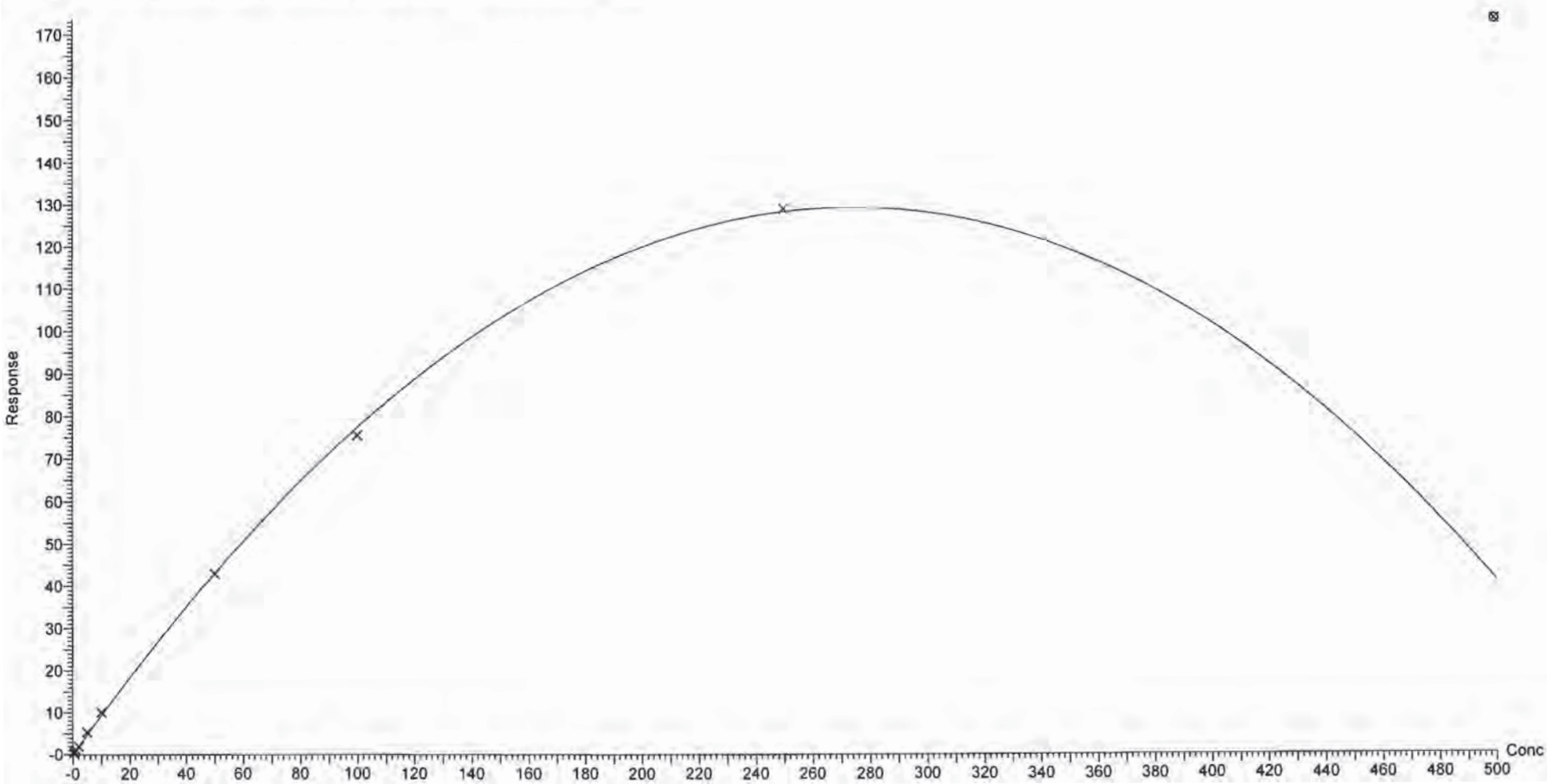


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.998948
Calibration curve: -0.00172688 * x^2 + 0.945449 * x + 0.0555048
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

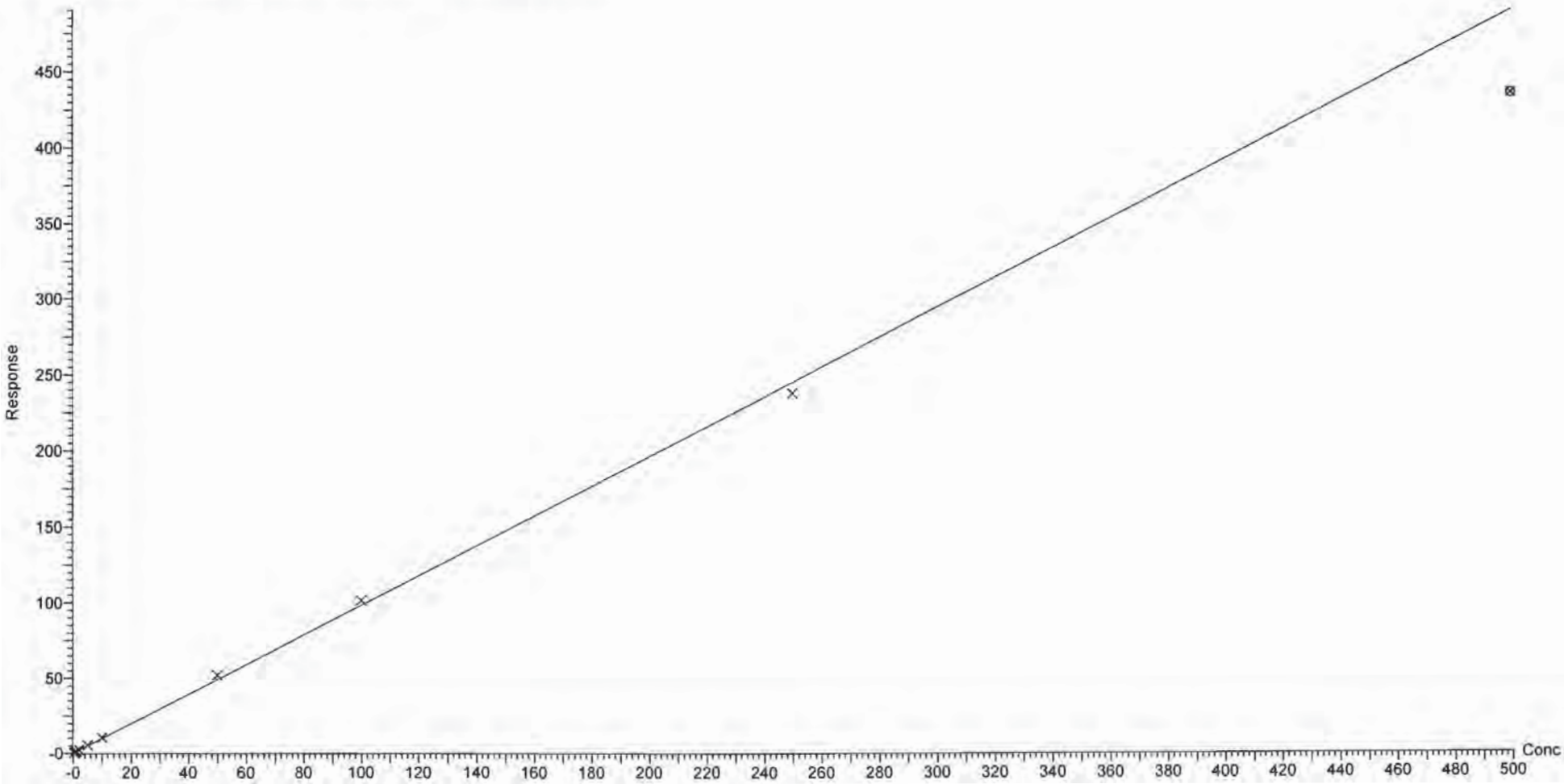


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

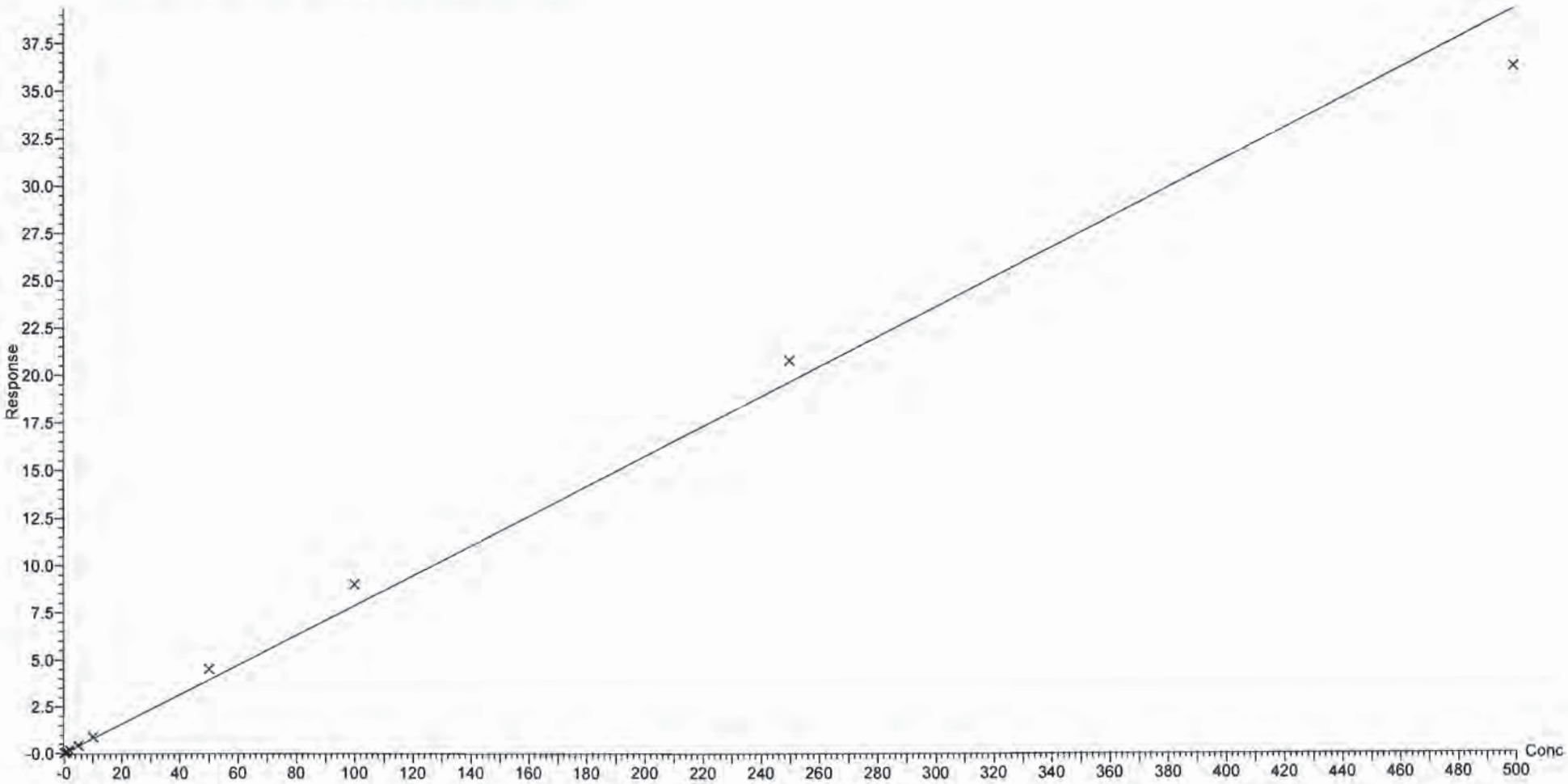
Compound name: PFOA
Correlation coefficient: r = 0.999304, r^2 = 0.998608
Calibration curve: 0.980416 * x + 0.151461
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

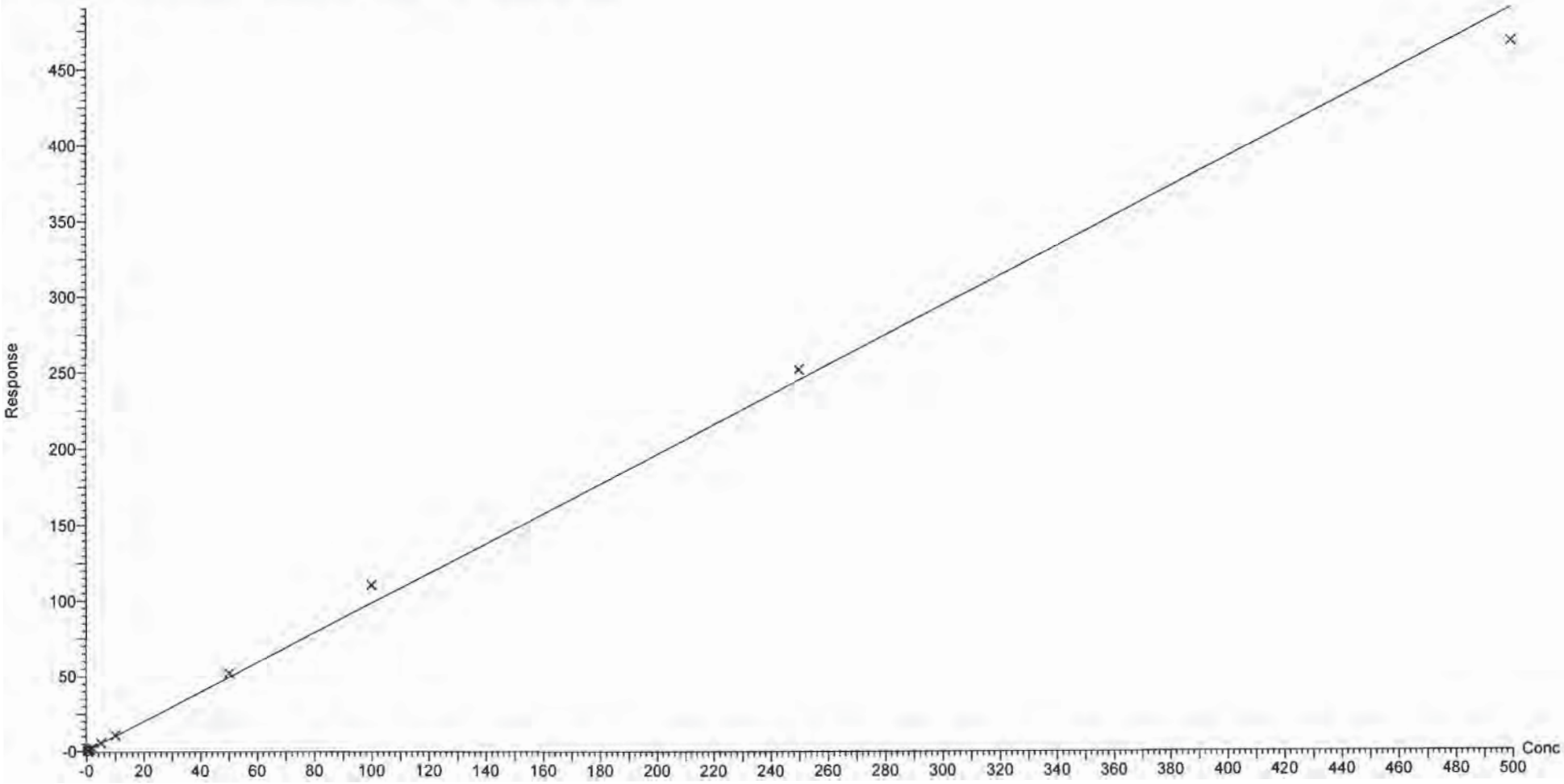
Compound name: PFHpS
Correlation coefficient: r = 0.995991, r^2 = 0.991997
Calibration curve: 0.0786311 * x + 0.00779766
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

Compound name: PFNA
Correlation coefficient: r = 0.998366, r^2 = 0.996735
Calibration curve: 0.979826 * x + 0.513479
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

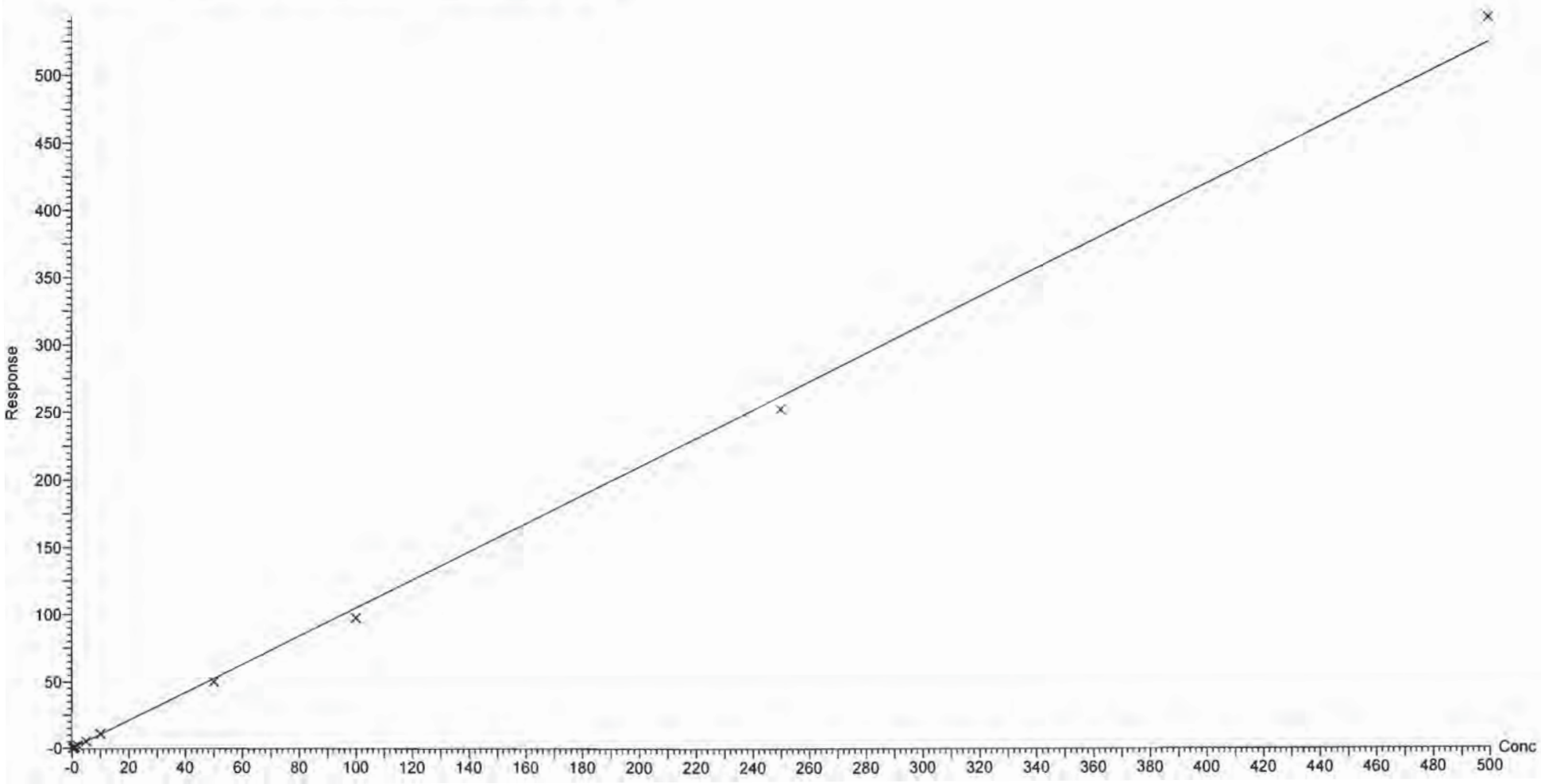


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

Compound name: PFOSA
Correlation coefficient: r = 0.999155, r^2 = 0.998311
Calibration curve: 1.04987 * x + 0.0313857
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

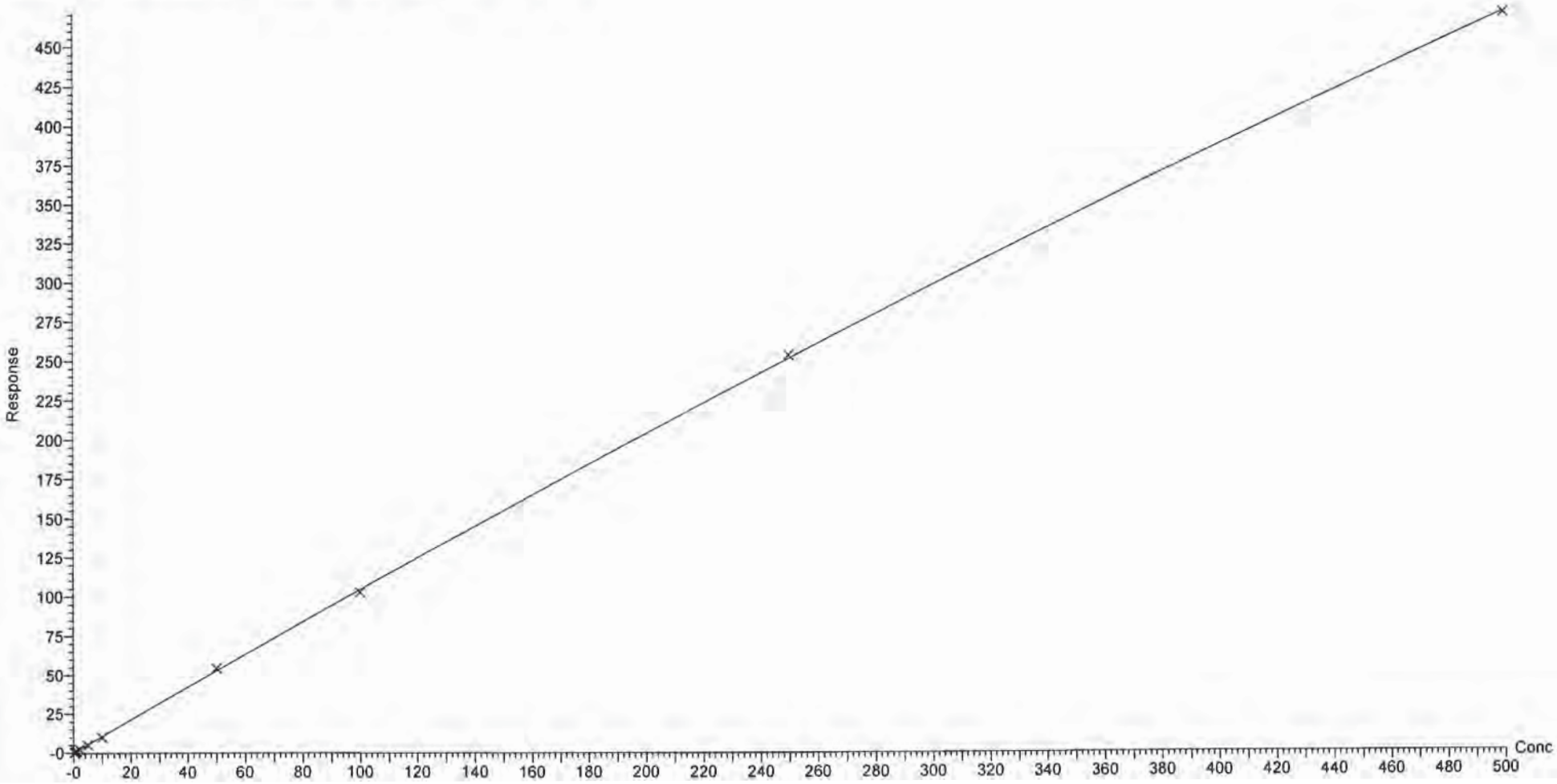


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

Compound name: PFOS
Coefficient of Determination: R^2 = 0.999791
Calibration curve: -0.000252174 * x^2 + 1.06922 * x + -0.0396957
Response type: Internal Std (Ref 38), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

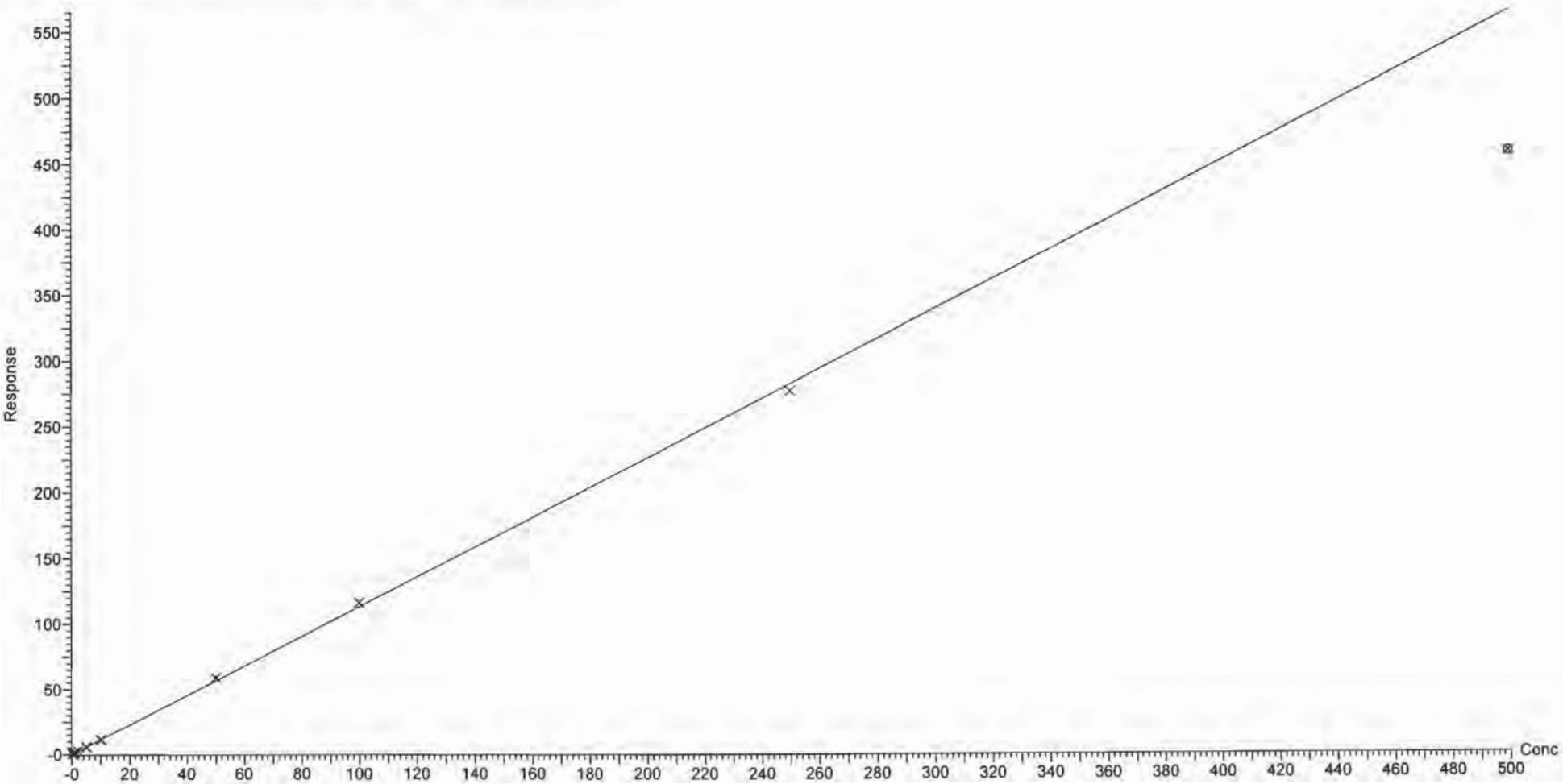


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

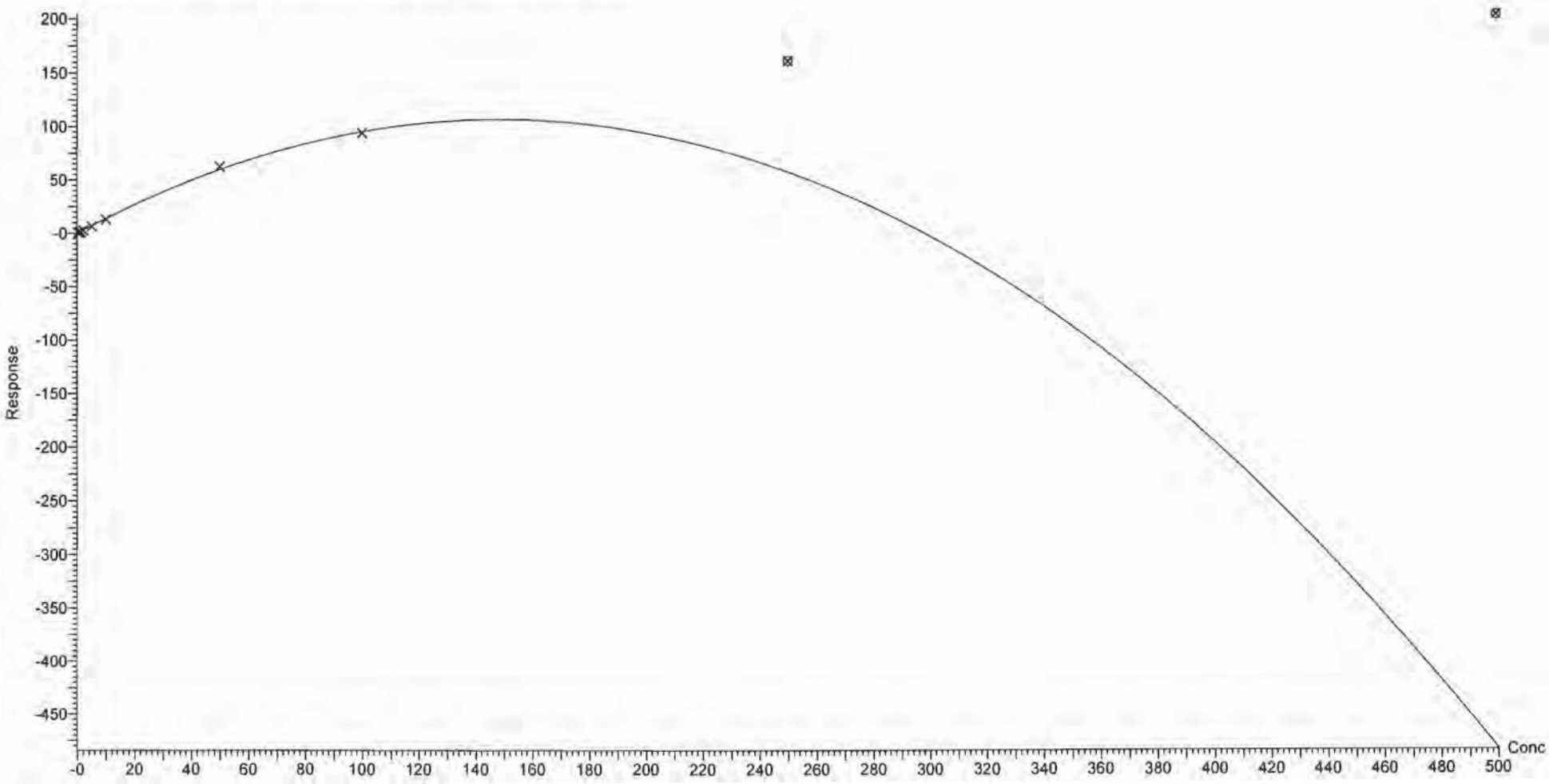
Compound name: PFDA
Correlation coefficient: r = 0.999612, r^2 = 0.999225
Calibration curve: 1.13105 * x + 0.115427
Response type: Internal Std (Ref 39), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

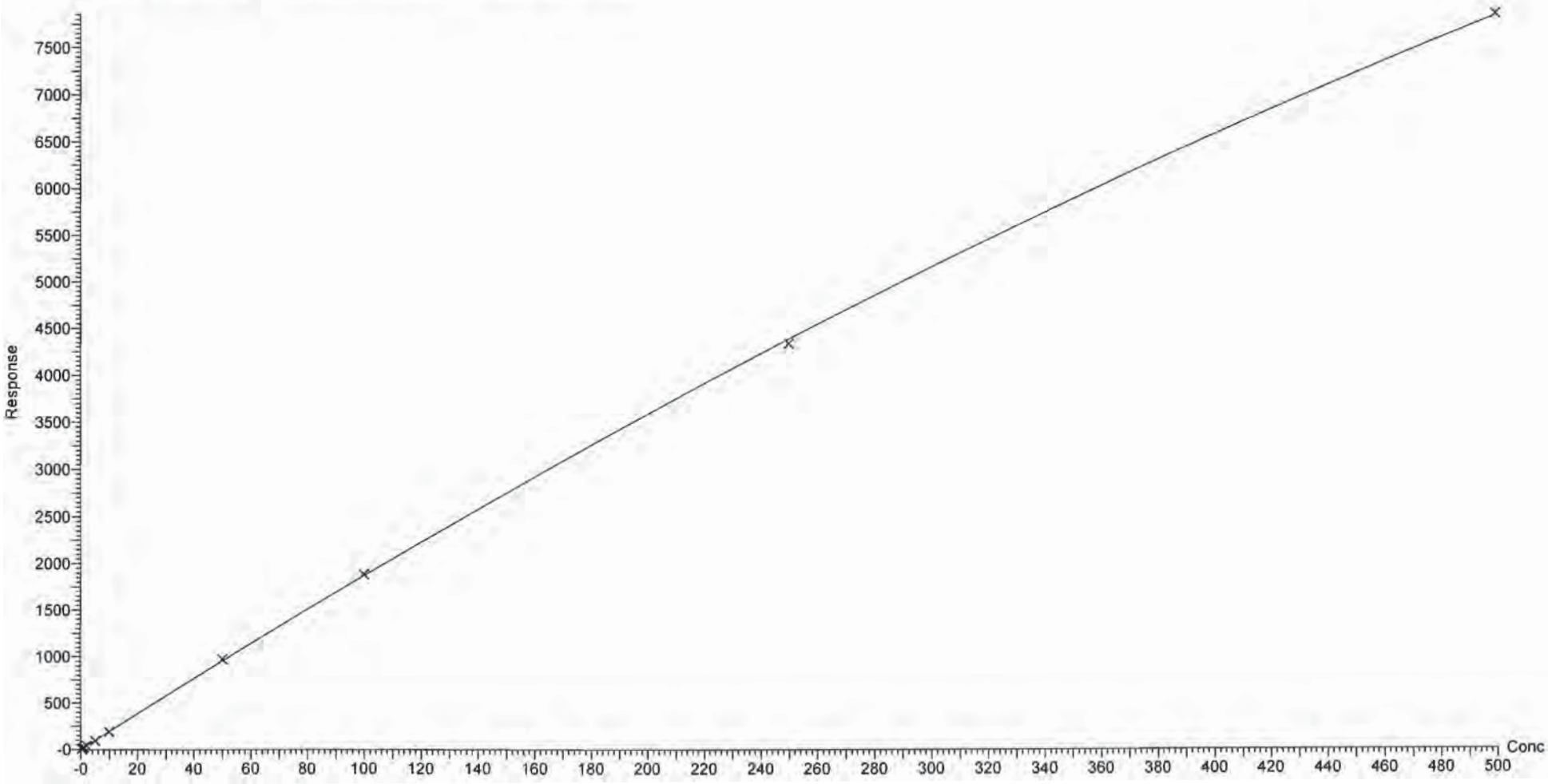
Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.997950
Calibration curve: -0.00480406 * x^2 + 1.4337 * x + -0.0133124
Response type: Internal Std (Ref 40), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

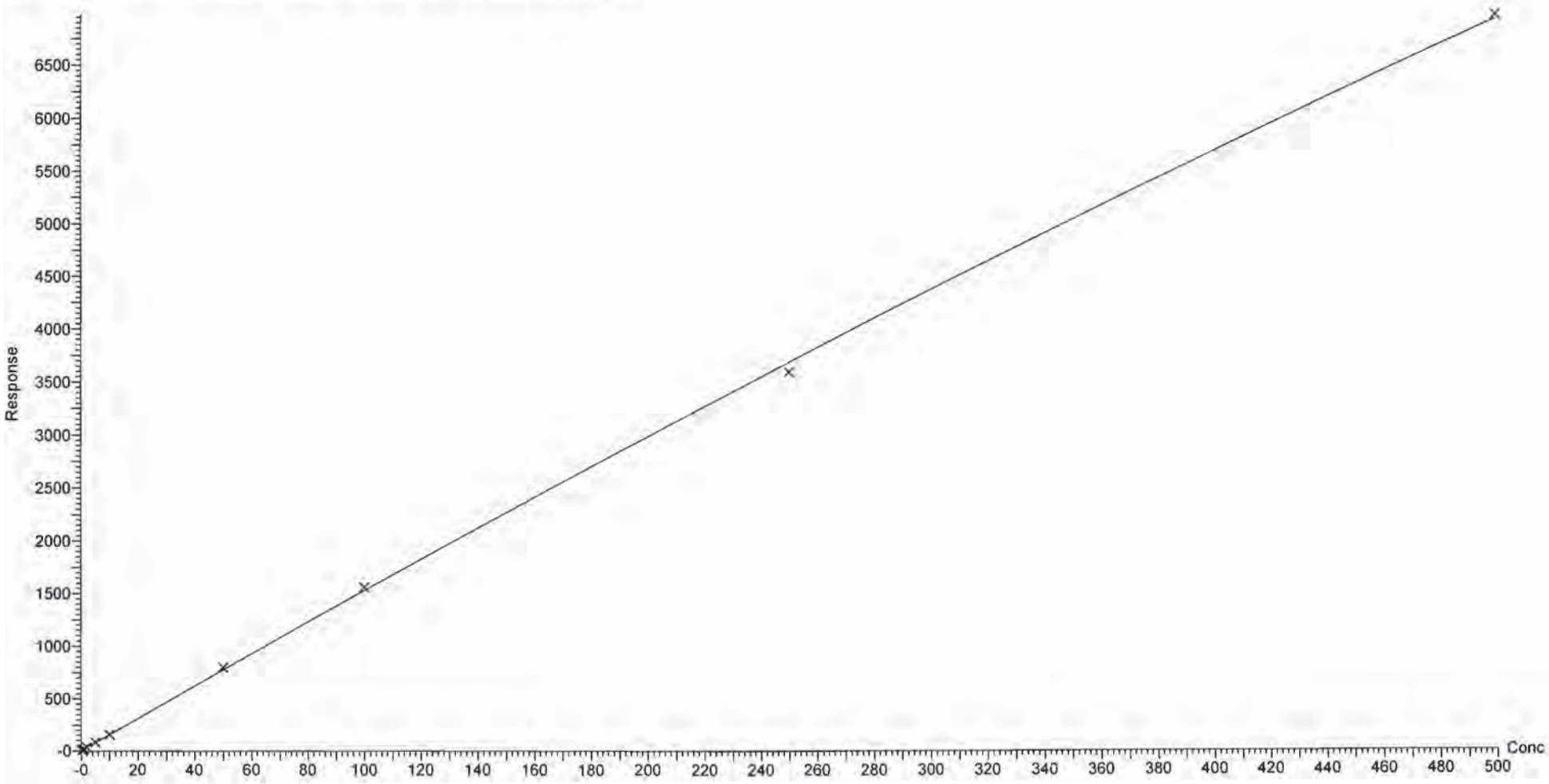
Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.999893
Calibration curve: -0.00750568 * x^2 + 19.4398 * x + -0.45786
Response type: Internal Std (Ref 41), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999638
Calibration curve: -0.00353476 * x^2 + 15.6313 * x + 0.651764
Response type: Internal Std (Ref 42), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

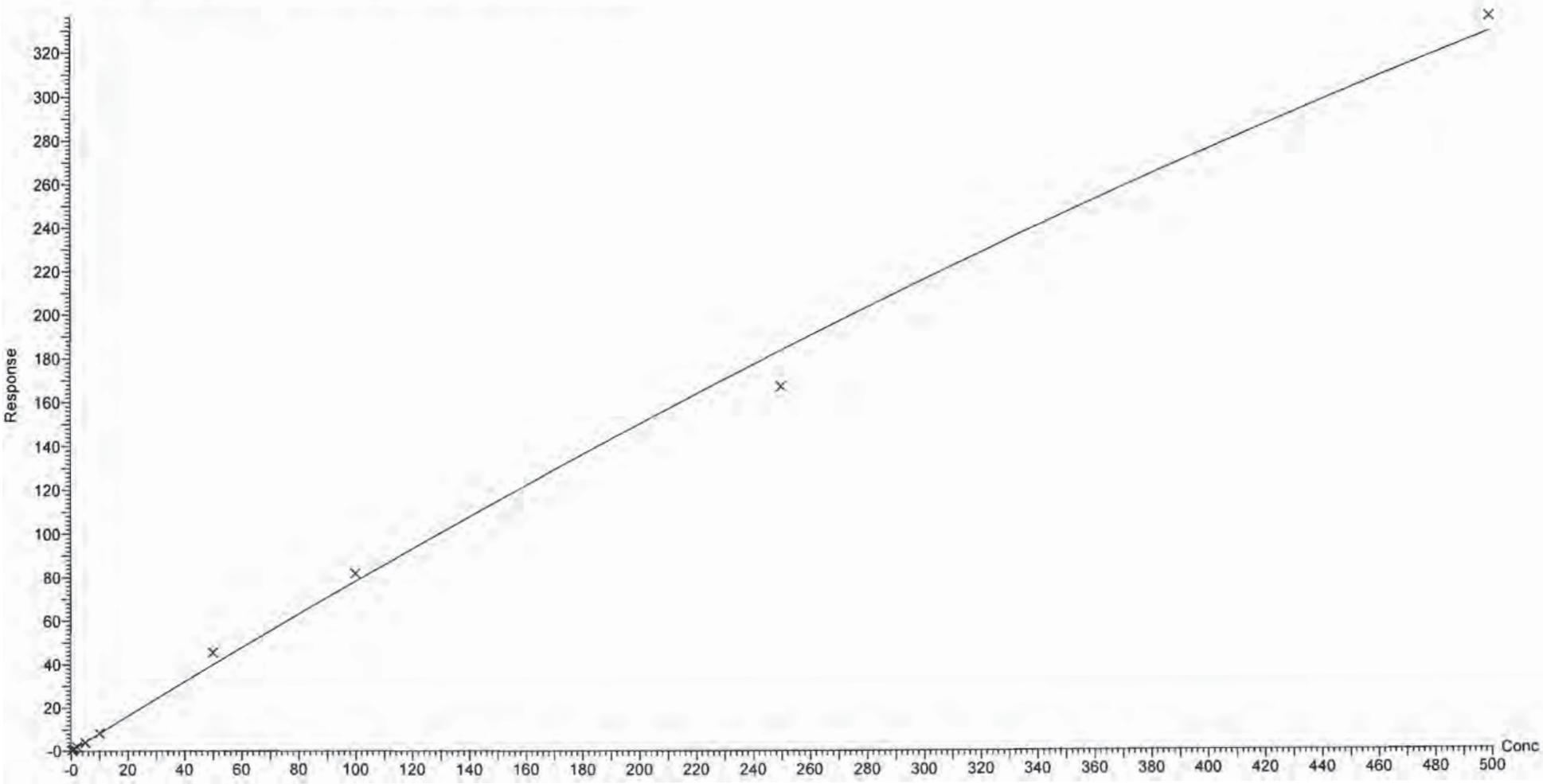


Vista Analytical Laboratory Q1

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

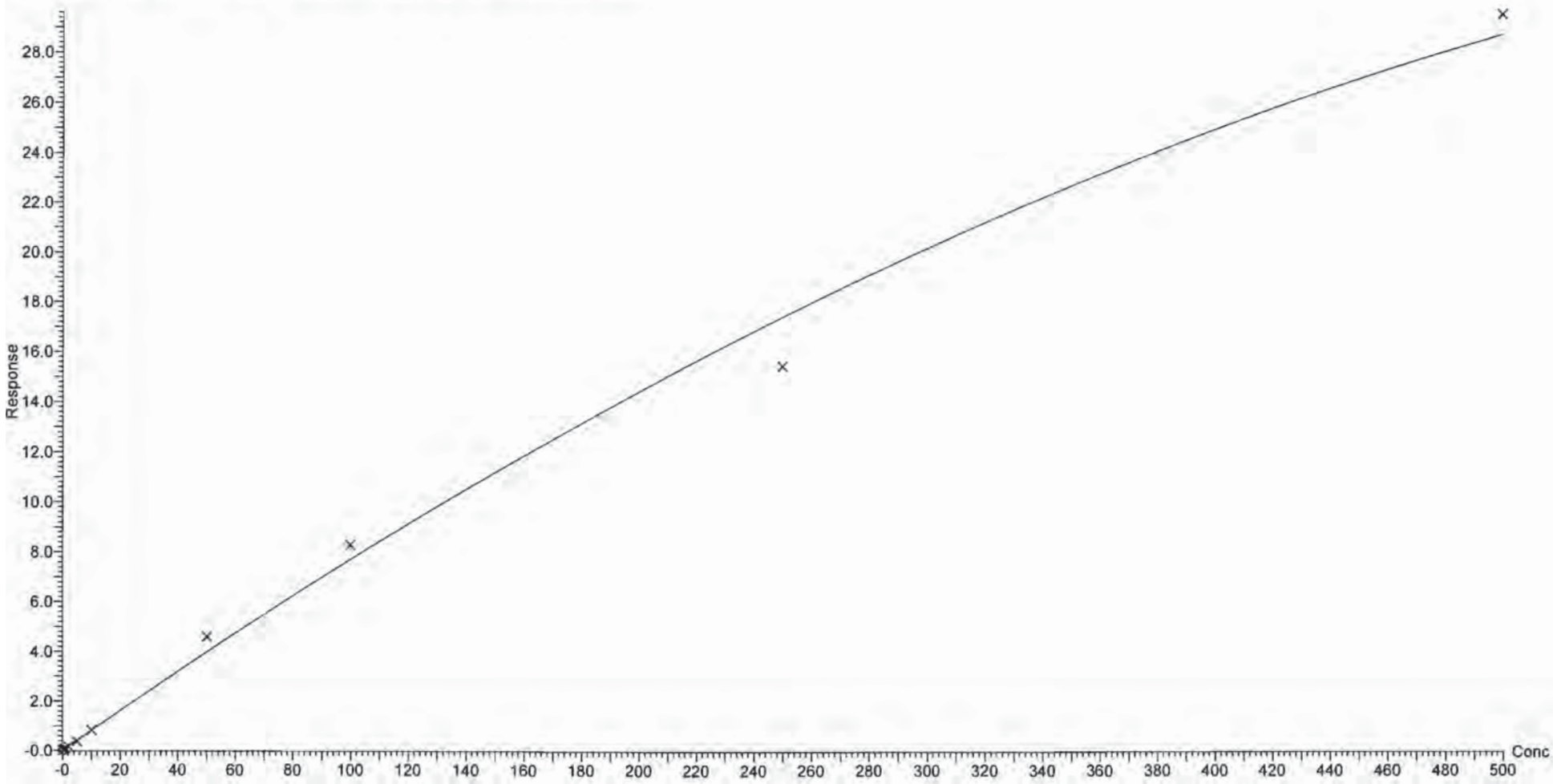
Compound name: PFUnA
Coefficient of Determination: R^2 = 0.995537
Calibration curve: -0.000304422 * x^2 + 0.810482 * x + 0.0887281
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

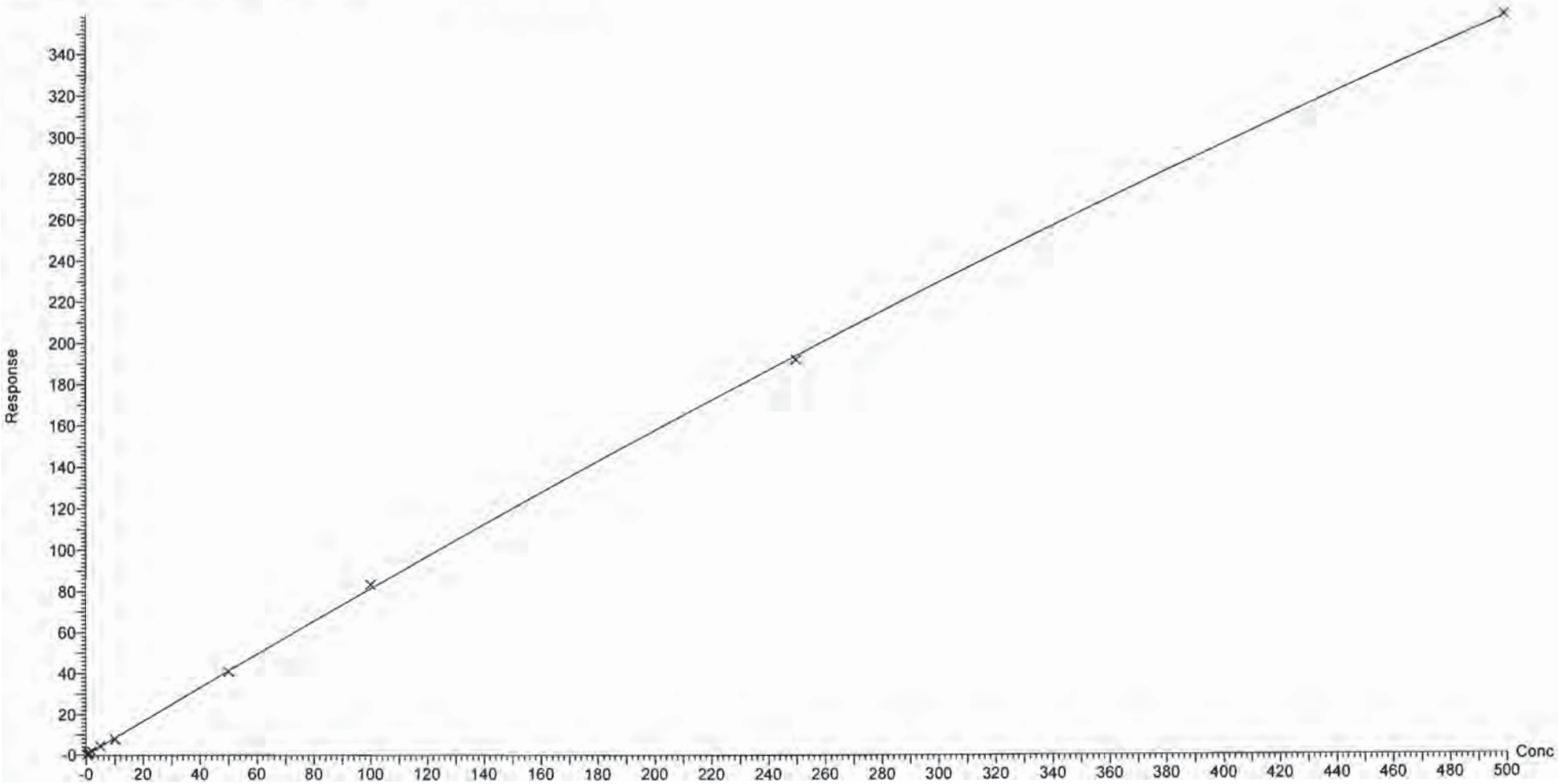
Compound name: PFDS
Coefficient of Determination: R^2 = 0.992589
Calibration curve: -4.87611e-005 * x^2 + 0.0819404 * x + 0.0113831
Response type: Internal Std (Ref 43), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

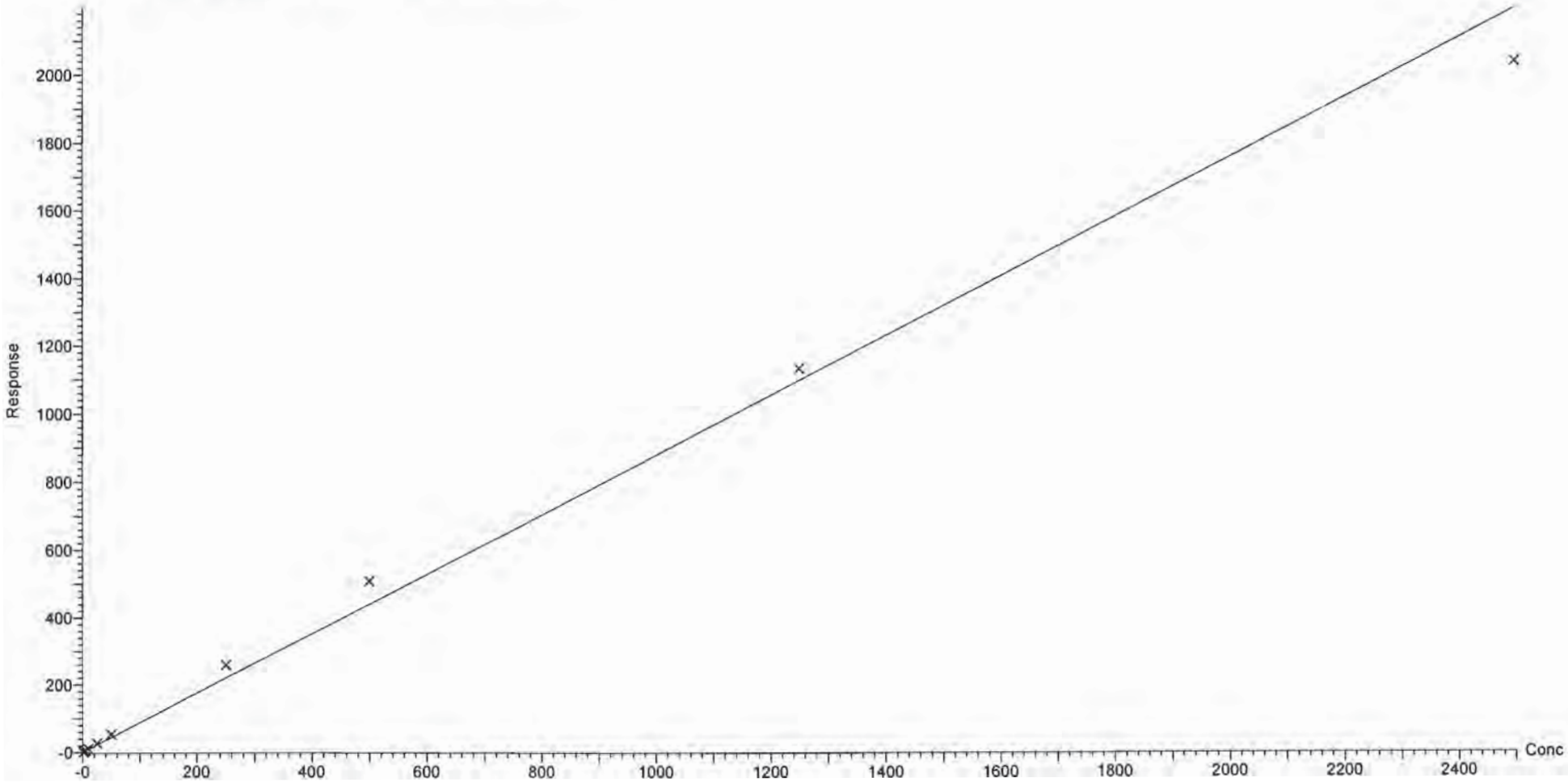
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999746
Calibration curve: -0.000238279 * x^2 + 0.835861 * x + 0.0431344
Response type: Internal Std (Ref 44), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

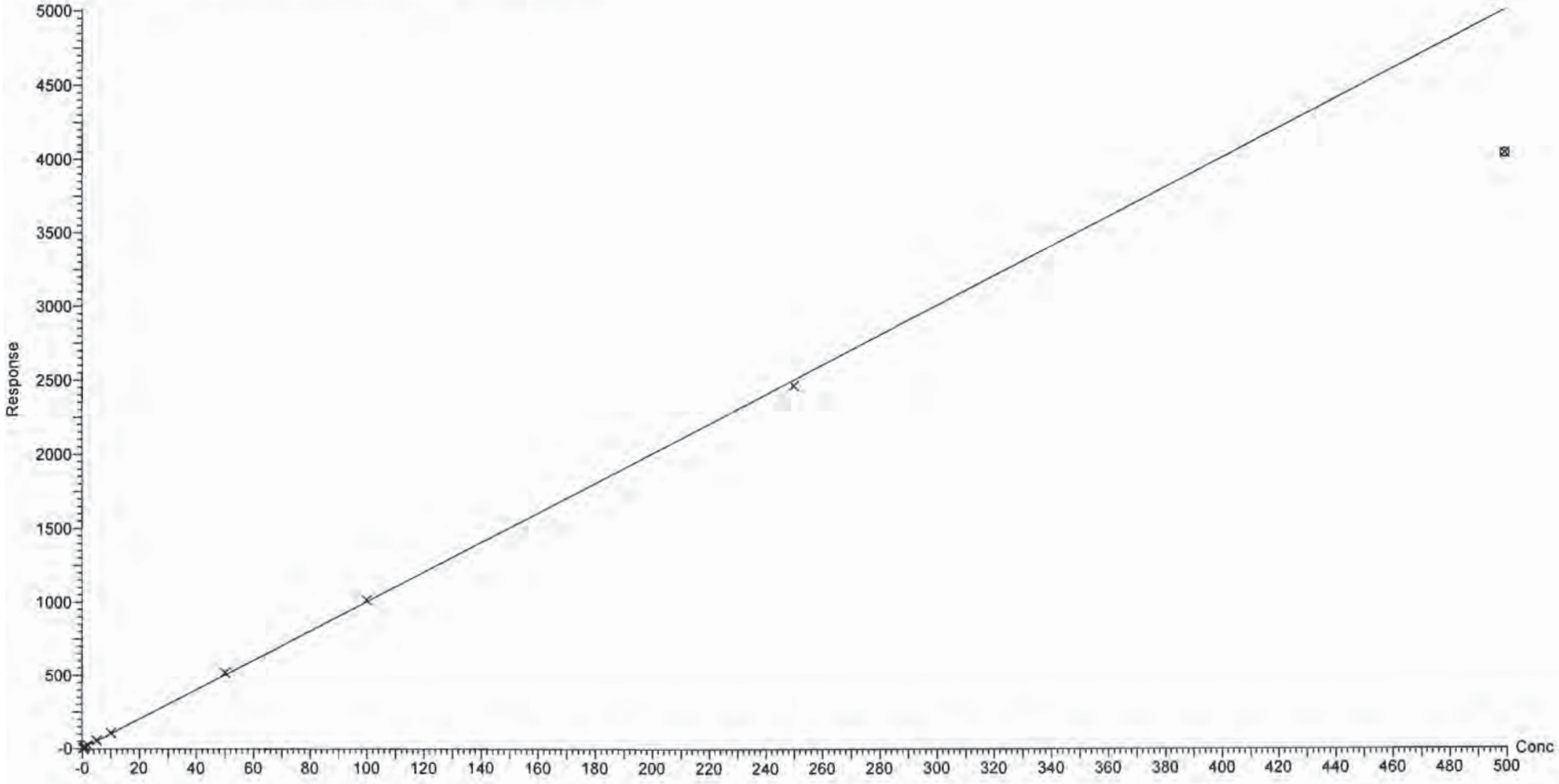
Compound name: N-MeFOSA
Correlation coefficient: r = 0.995786, r^2 = 0.991590
Calibration curve: 0.878916 * x + 0.777845
Response type: Internal Std (Ref 45), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

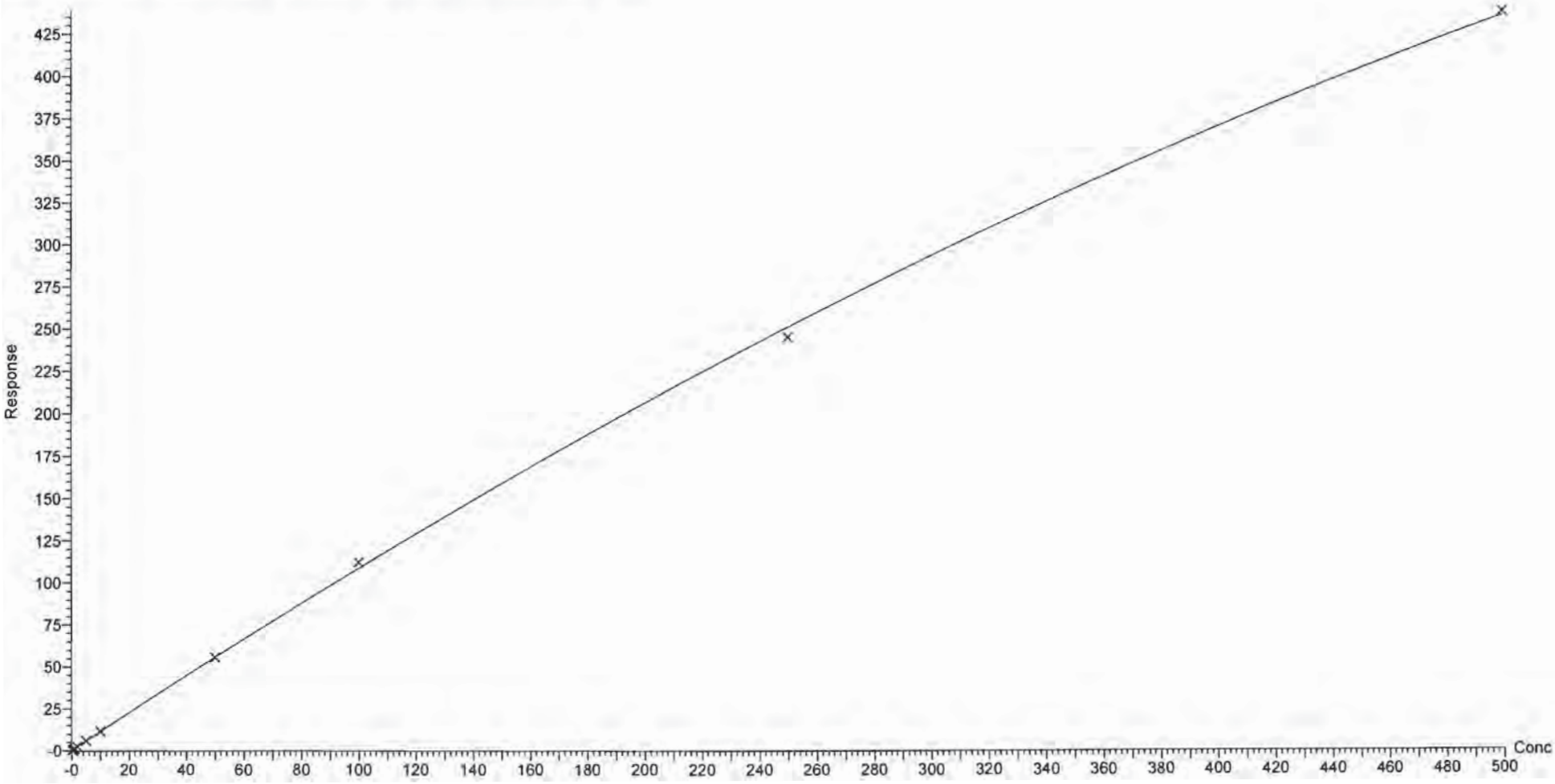
Compound name: PFTrDA
Correlation coefficient: r = 0.999754, r^2 = 0.999507
Calibration curve: 10.0213 * x + 1.2331
Response type: Internal Std (Ref 44), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

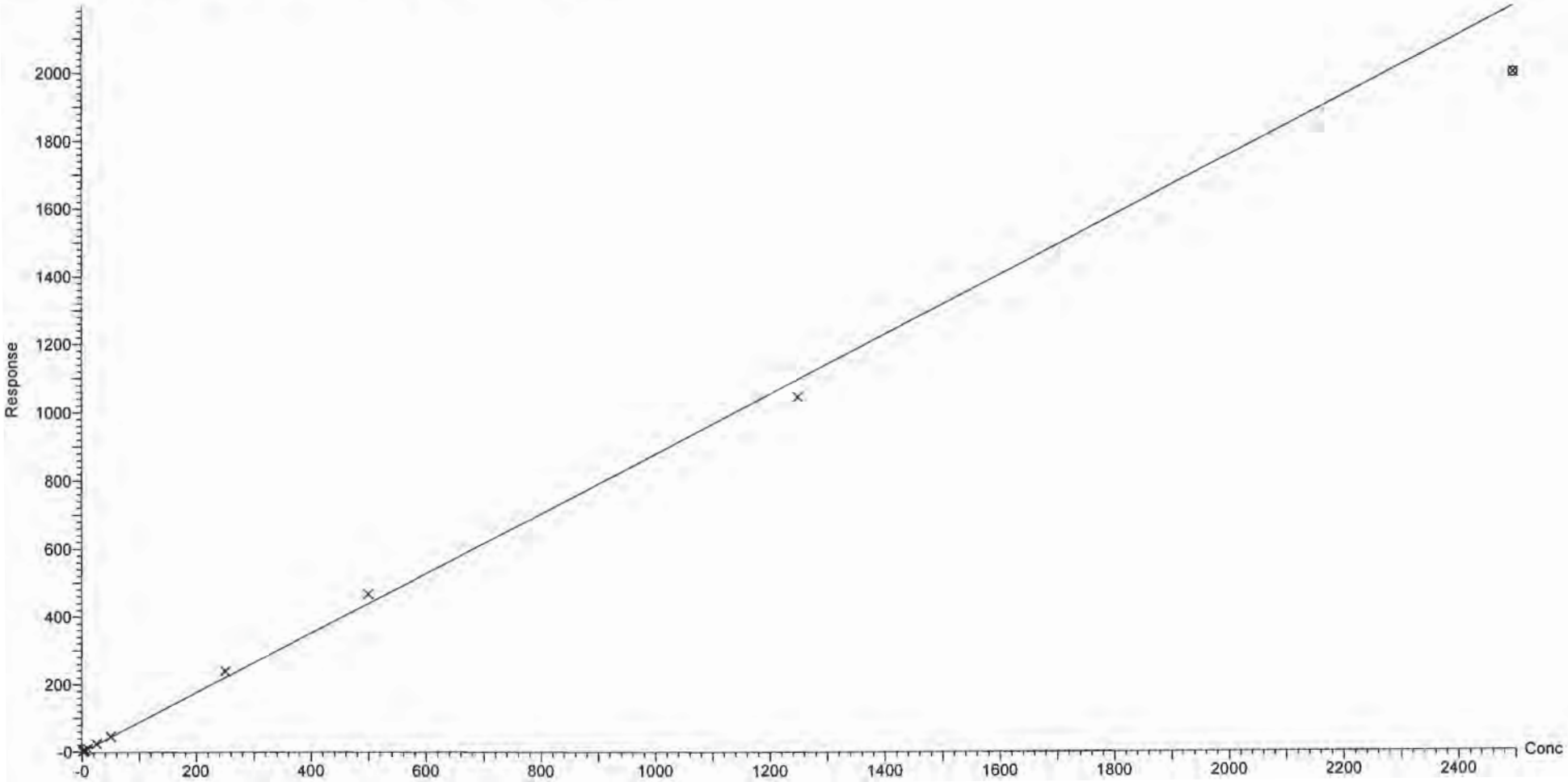
Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999640
Calibration curve: -0.000533447 * x^2 + 1.13867 * x + 0.107998
Response type: Internal Std (Ref 46), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

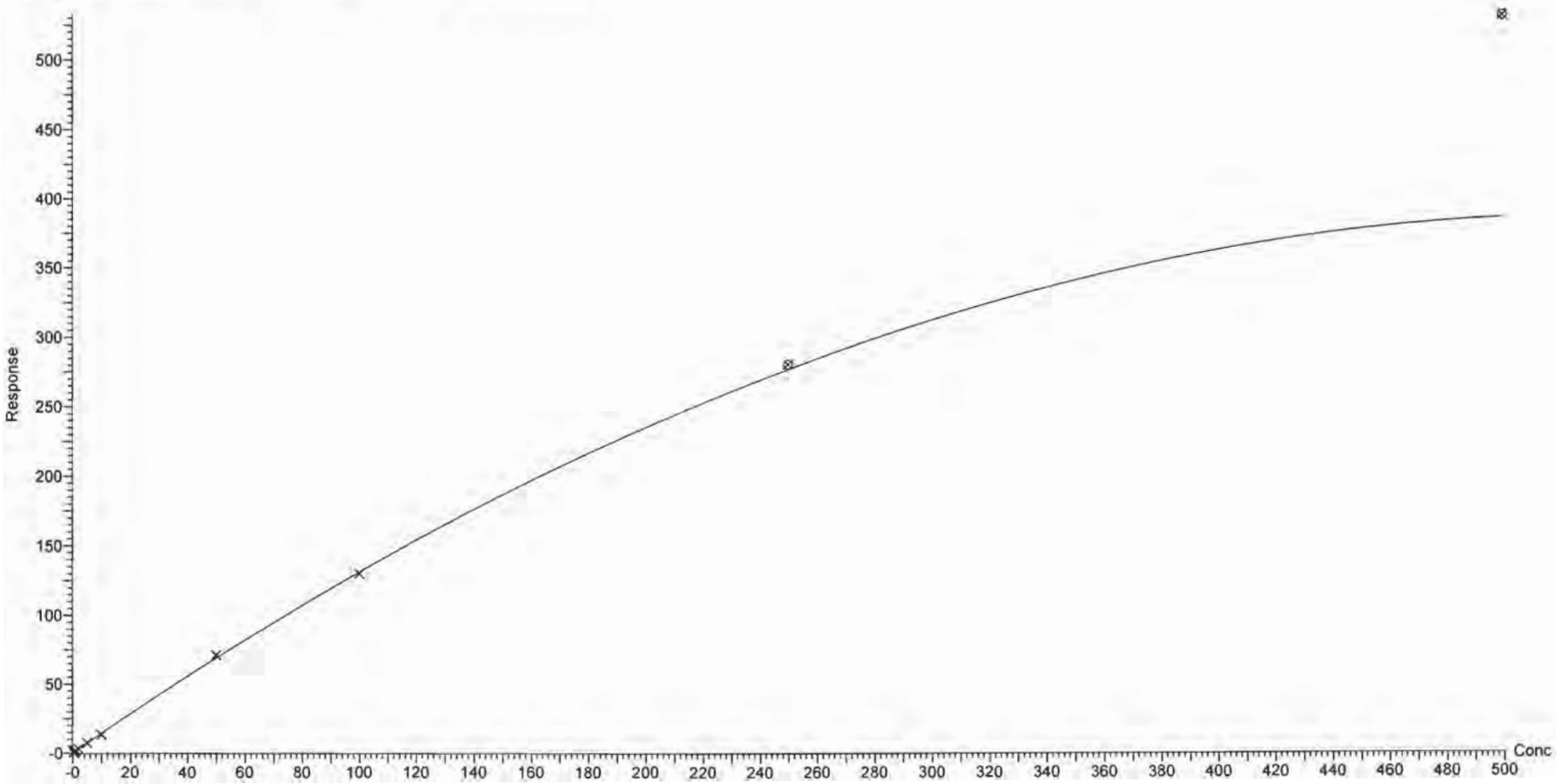
Compound name: N-EtFOSA
Correlation coefficient: r = 0.998278, r^2 = 0.996558
Calibration curve: 0.877827 * x + 0.460454
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

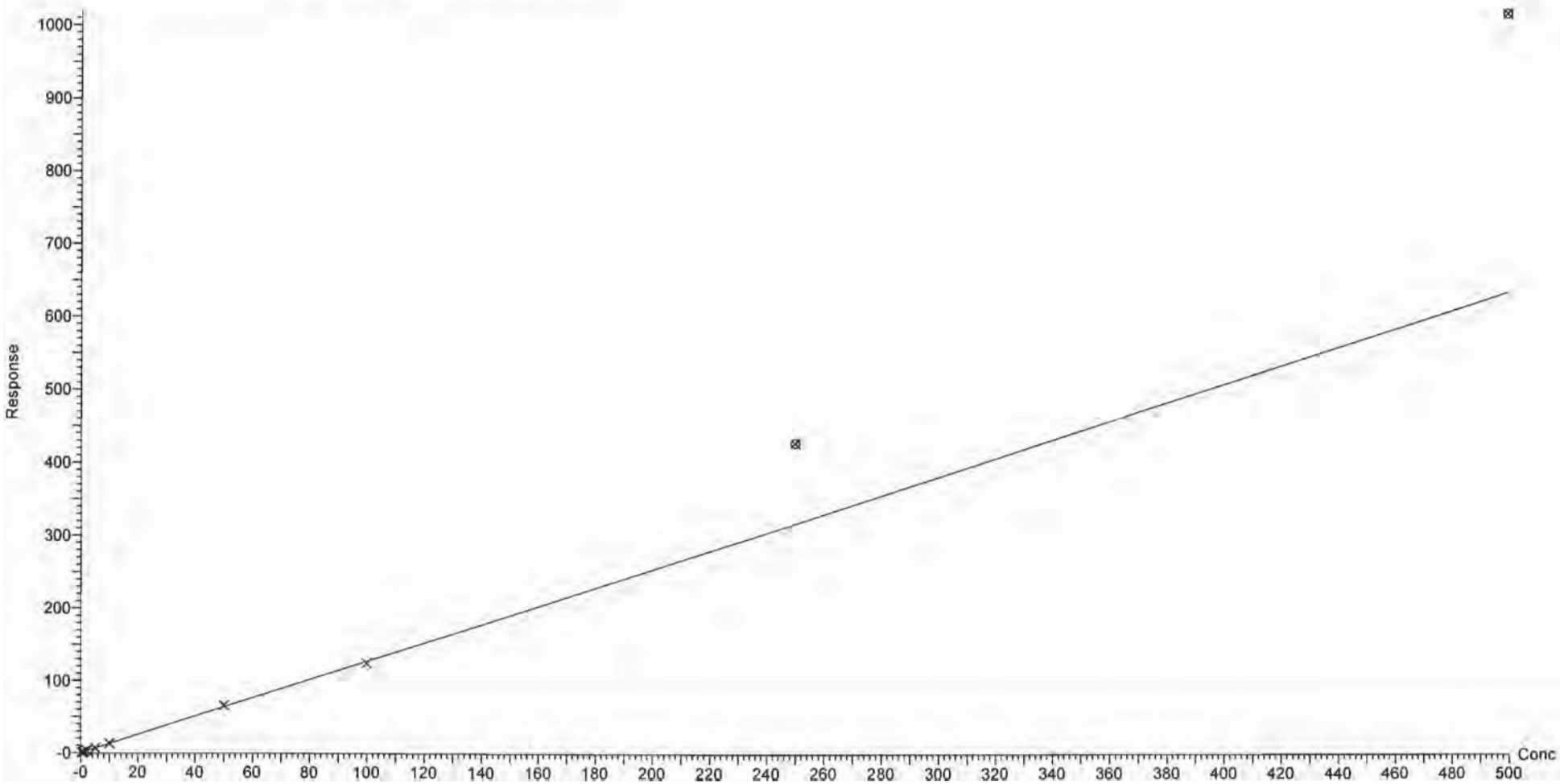
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999241
Calibration curve: -0.00134262 * x^2 + 1.44391 * x + 0.187386
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

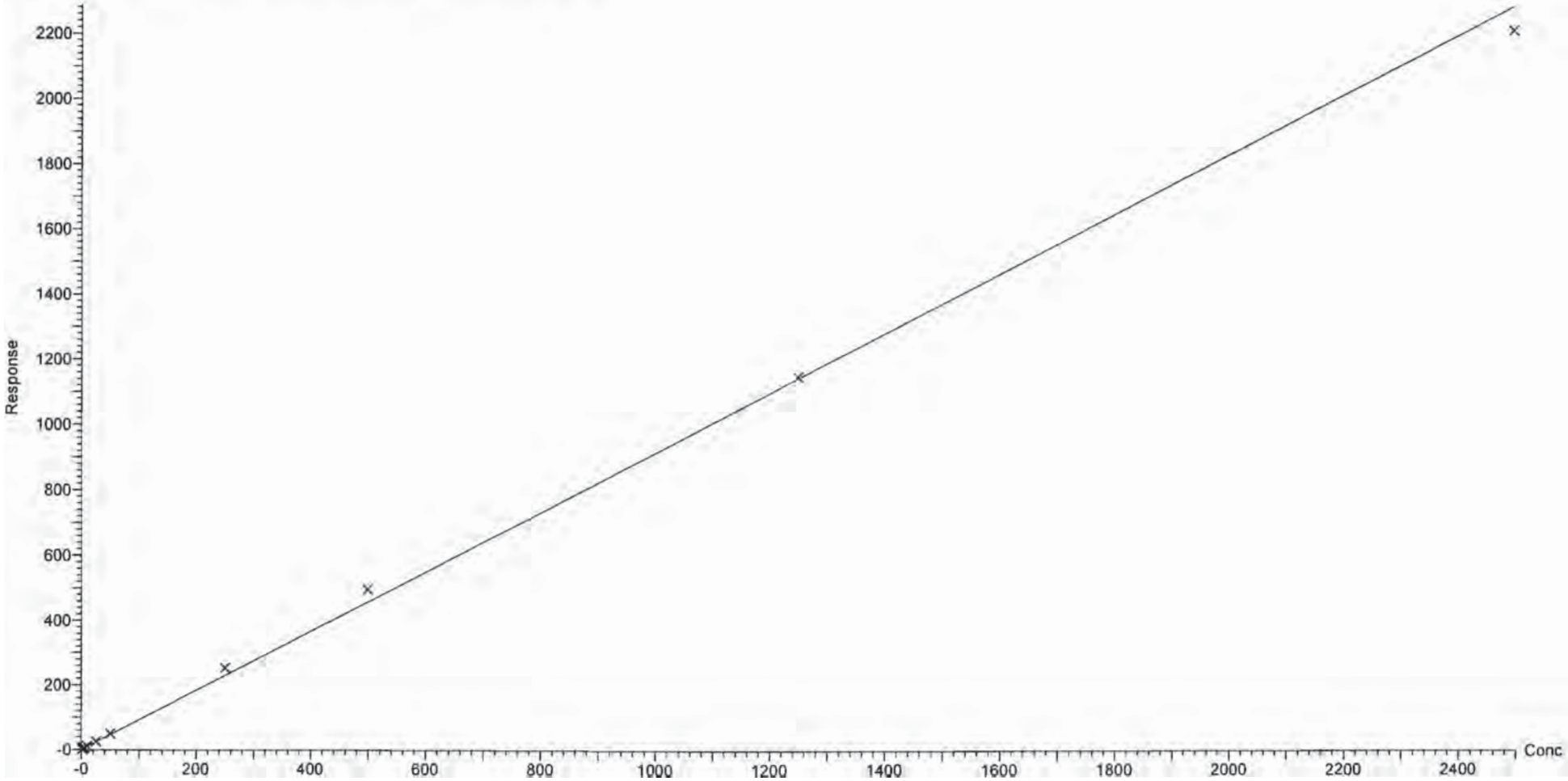
Compound name: PFODA
Correlation coefficient: r = 0.999467, r^2 = 0.998934
Calibration curve: 1.27081 * x + 0.103615
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

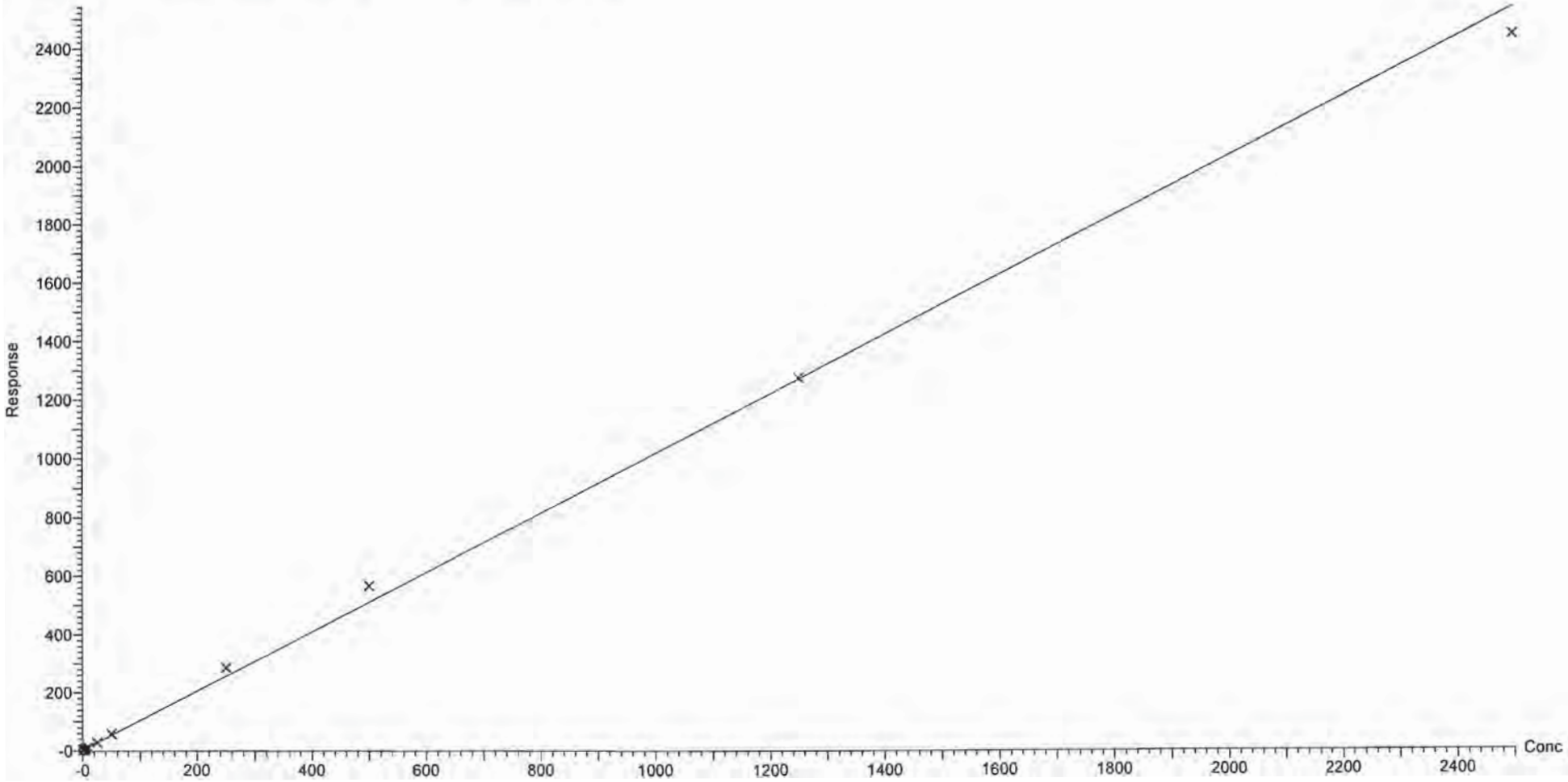
Compound name: N-MeFOSE
Correlation coefficient: r = 0.998979, r^2 = 0.997958
Calibration curve: 0.913987 * x + 0.914175
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:32:45 Pacific Daylight Time

Compound name: N-EtFOSE
Correlation coefficient: r = 0.998468, r^2 = 0.996938
Calibration curve: 1.01573 * x + 2.54785
Response type: Internal Std (Ref 50), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



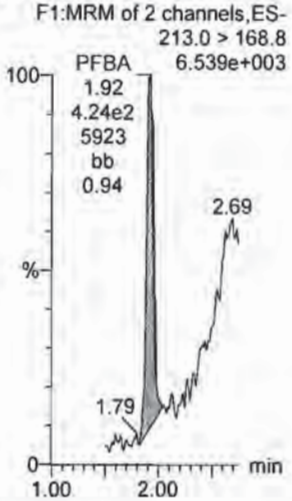
Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

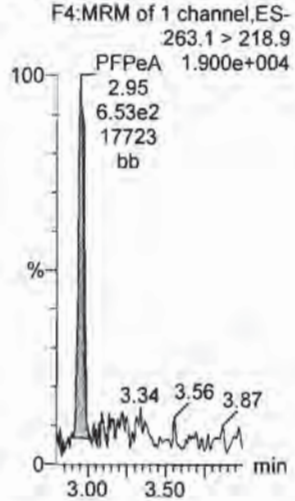
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 08:55:25
Calibration: 11 Aug 2017 09:08:45

Name: 170810M2_2, Date: 10-Aug-2017, Time: 20:32:31, ID: ST170810M2-1 PFC CS-2 17H1015, Description: PFC CS-2 17H1015

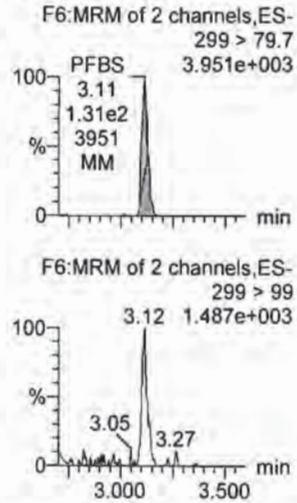
PFBA



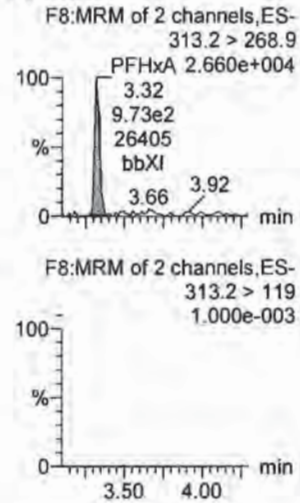
PFPeA



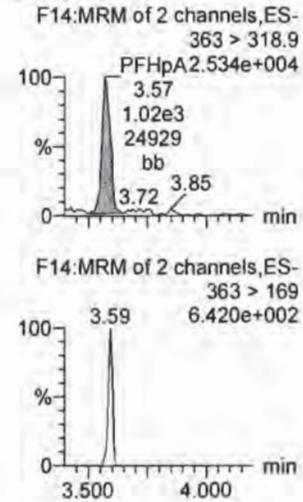
PFBS



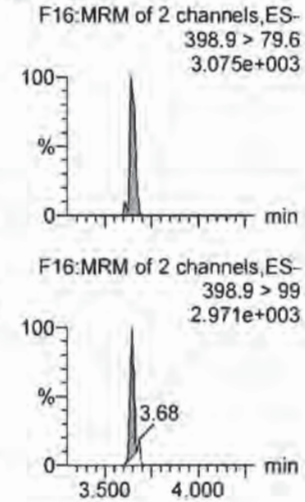
PFHxA



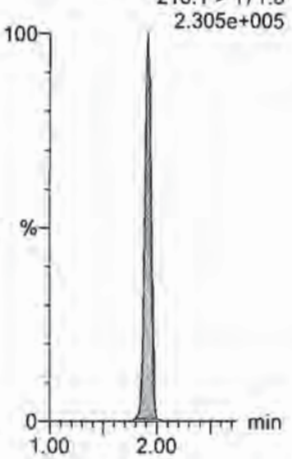
PFHpA



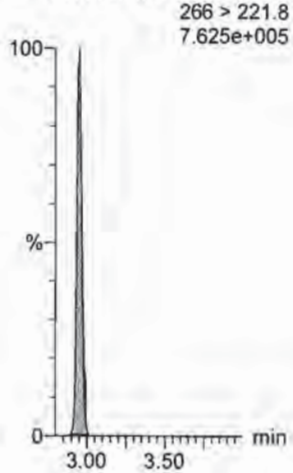
PFHxS



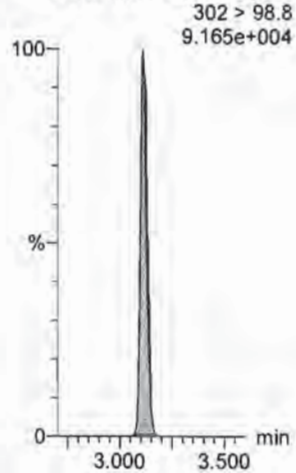
13C3-PFBA



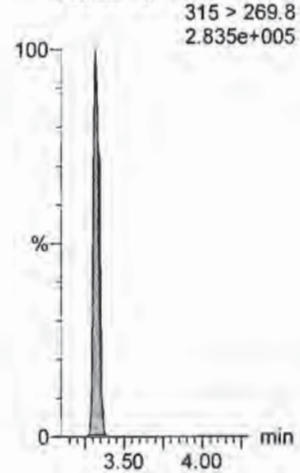
13C3-PFPeA



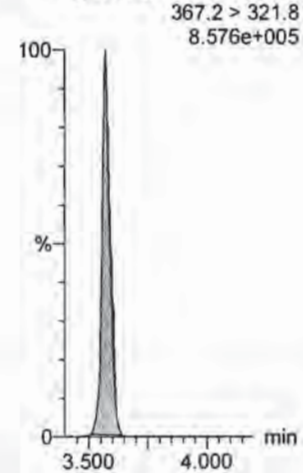
13C3-PFBS



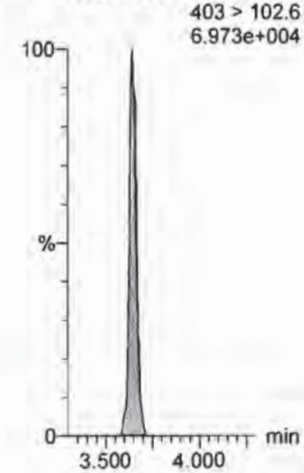
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS

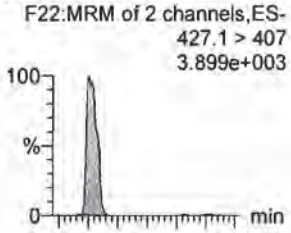


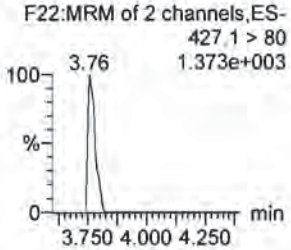
Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

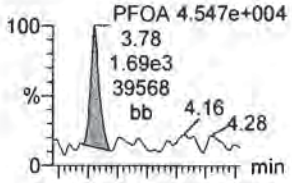
Name: 170810M2_2, Date: 10-Aug-2017, Time: 20:32:31, ID: ST170810M2-1 PFC CS-2 17H1015, Description: PFC CS-2 17H1015

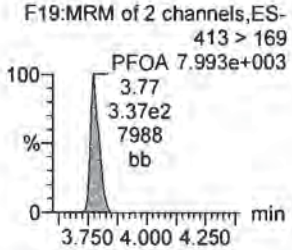
6:2 FTS



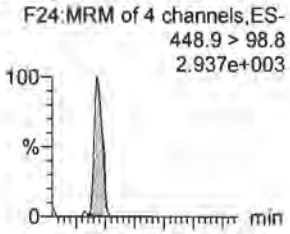


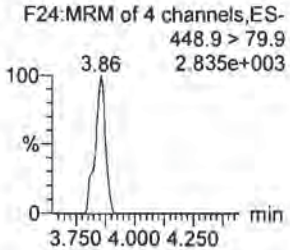
PFOA



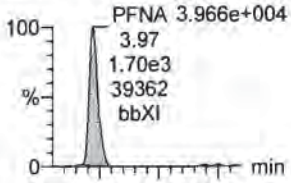


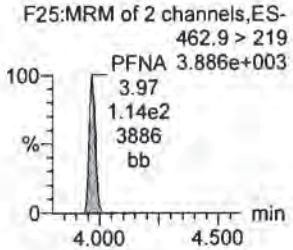
PFHpS



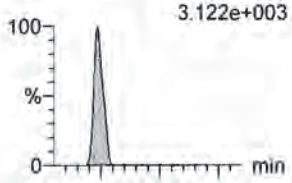


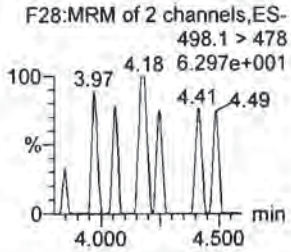
PFNA



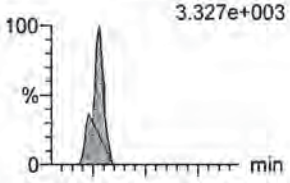


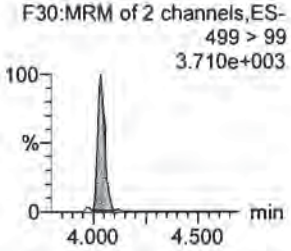
PFOSA



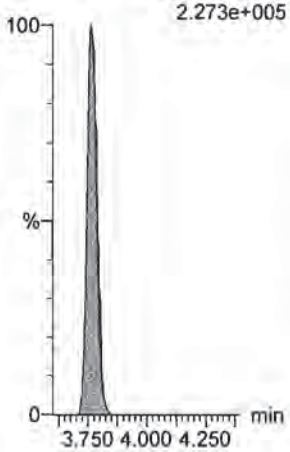


PFOS

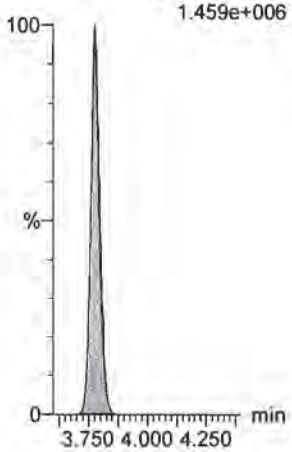




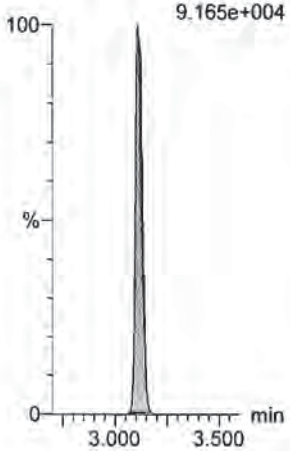
13C2-6:2 FTS



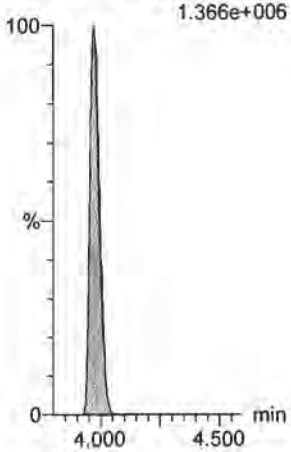
13C2-PFOA



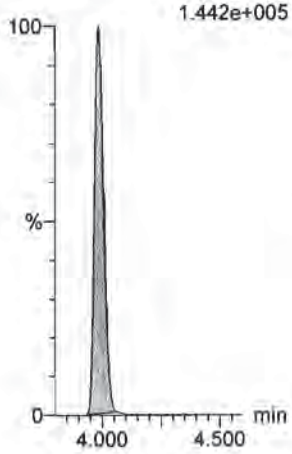
13C3-PFBS



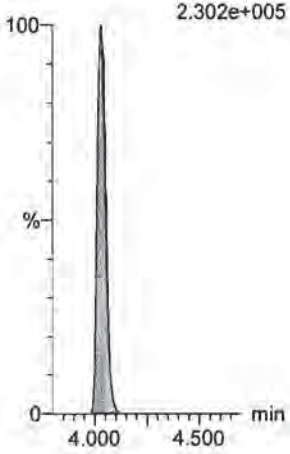
13C5-PFNA



13C8-PFOSA



13C8-PFOS

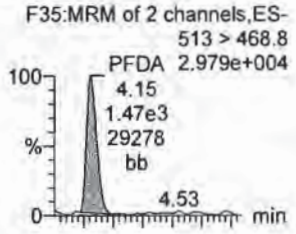


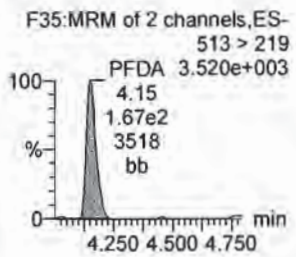
Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

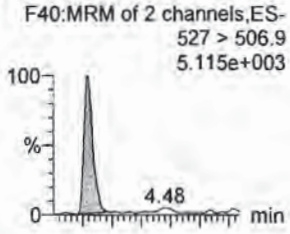
Name: 170810M2_2, Date: 10-Aug-2017, Time: 20:32:31, ID: ST170810M2-1 PFC CS-2 17H1015, Description: PFC CS-2 17H1015

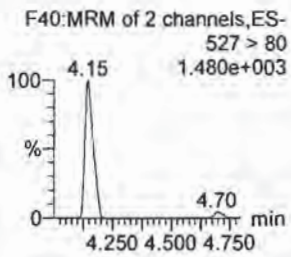
PFDA



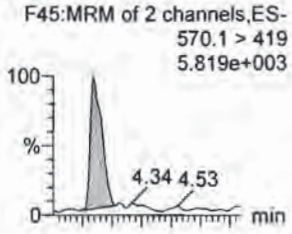


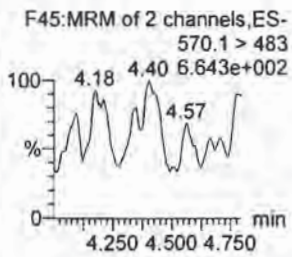
8:2 FTS



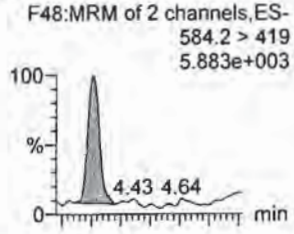


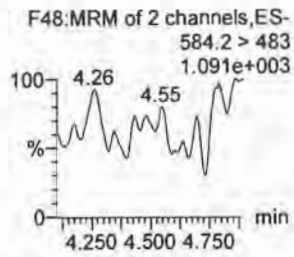
N-MeFOSAA



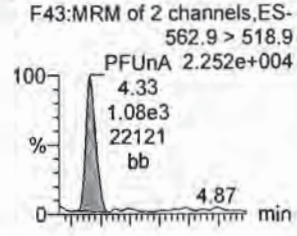


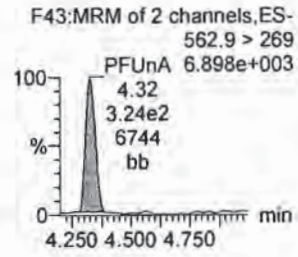
N-EtFOSAA



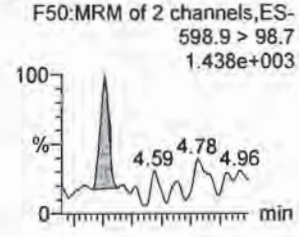


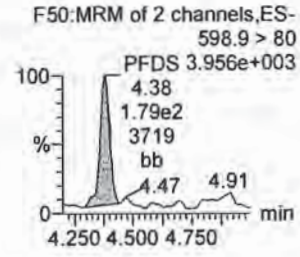
PFUnA



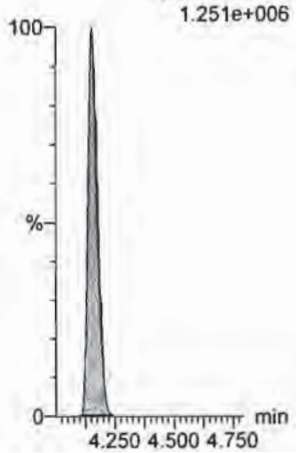


PFDS

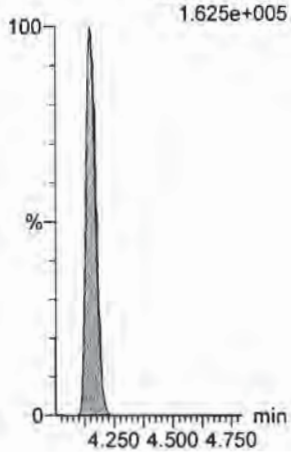




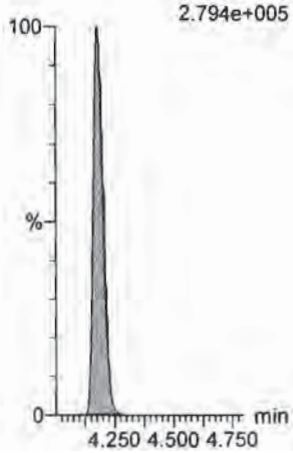
13C2-PFDA



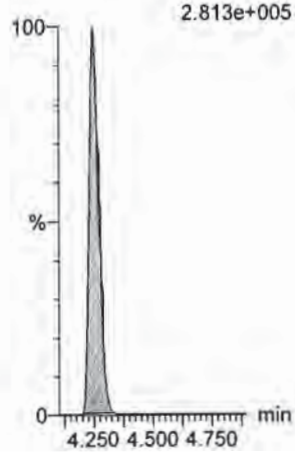
13C2-8:2 FTS



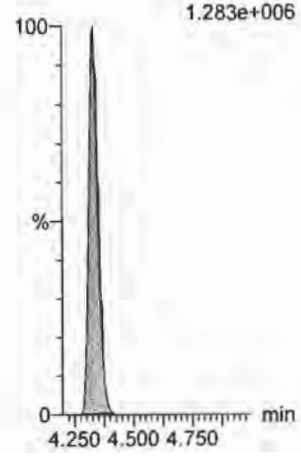
d3-N-MeFOSAA



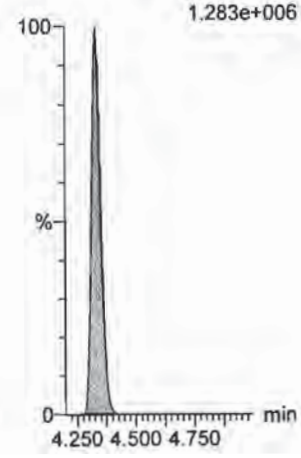
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA

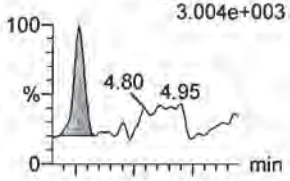


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

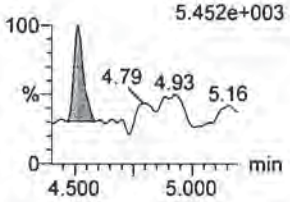
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_2, Date: 10-Aug-2017, Time: 20:32:31, ID: ST170810M2-1 PFC CS-2 17H1015, Description: PFC CS-2 17H1015

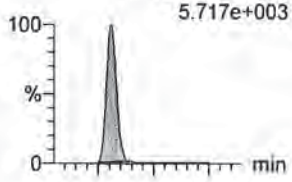
PFDoA
F51:MRM of 2 channels,ES-
612.9 > 318.8
3.004e+003



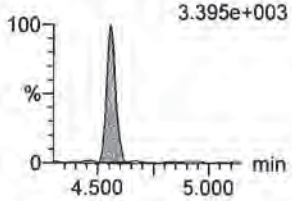
F51:MRM of 2 channels,ES-
612.9 > 569
5.452e+003



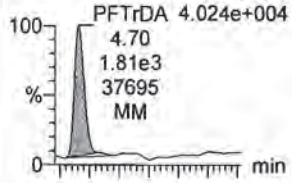
N-MeFOSA
F34:MRM of 2 channels,ES-
512.1 > 168.9
5.717e+003



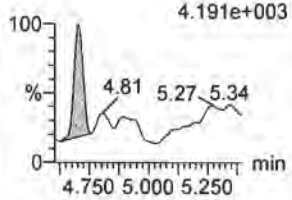
F34:MRM of 2 channels,ES-
512.1 > 219
3.395e+003



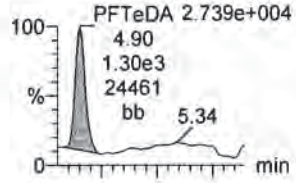
PFTrDA
F57:MRM of 2 channels,ES-
662.9 > 618.9
PFTrDA 4.024e+004



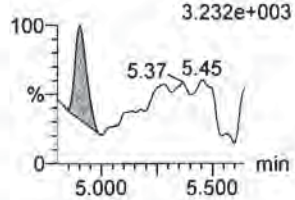
F57:MRM of 2 channels,ES-
662.9 > 319
4.191e+003



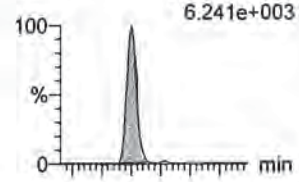
PFTeDA
F58:MRM of 4 channels,ES-
712.9 > 668.8
PFTeDA 2.739e+004



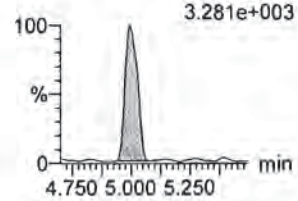
F58:MRM of 4 channels,ES-
712.9 > 369
3.232e+003



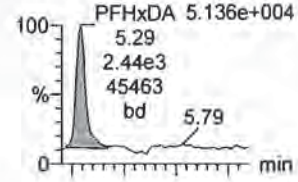
N-EtFOSA
F39:MRM of 2 channels,ES-
526.1 > 168.9
6.241e+003



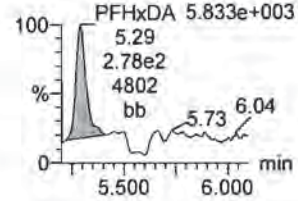
F39:MRM of 2 channels,ES-
526.1 > 219
3.281e+003



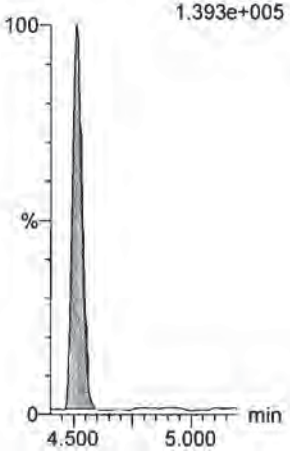
PFHxDA
F60:MRM of 2 channels,ES-
812.8 > 768.9
PFHxDA 5.136e+004



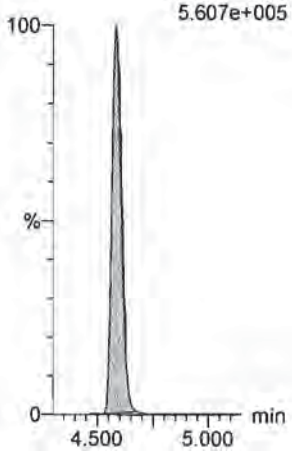
F60:MRM of 2 channels,ES-
812.8 > 219
PFHxDA 5.833e+003



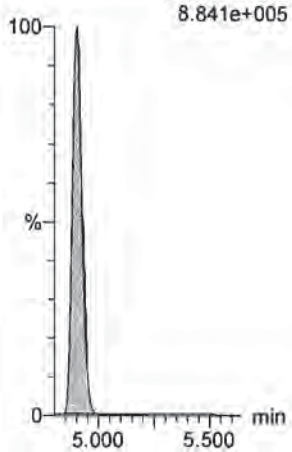
13C2-PFDoA
F52:MRM of 1 channel,ES-
615 > 569.7
1.393e+005



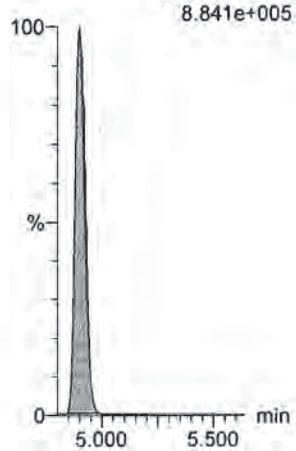
d3-N-MeFOSA
F37:MRM of 1 channel,ES-
515.2 > 168.9
5.607e+005



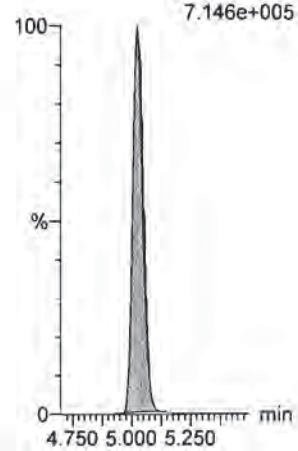
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
8.841e+005



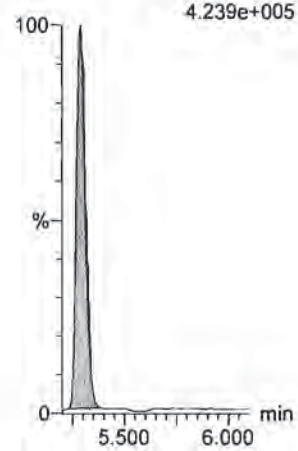
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
8.841e+005



d5-N-ETFOSA
F42:MRM of 1 channel,ES-
531.1 > 168.9
7.146e+005



13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.239e+005

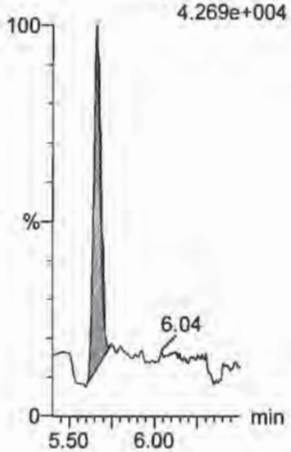


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

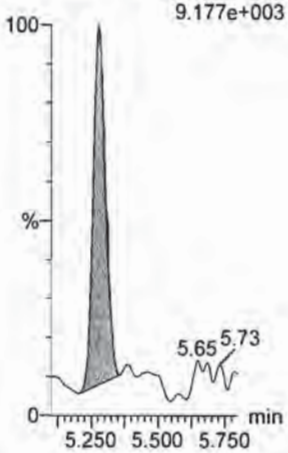
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_2, Date: 10-Aug-2017, Time: 20:32:31, ID: ST170810M2-1 PFC CS-2 17H1015, Description: PFC CS-2 17H1015

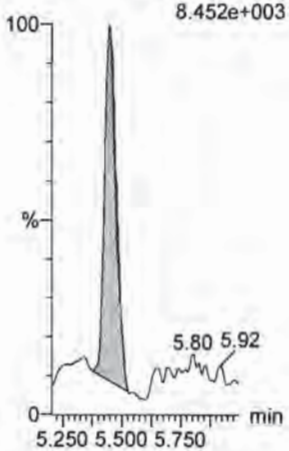
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
4.269e+004



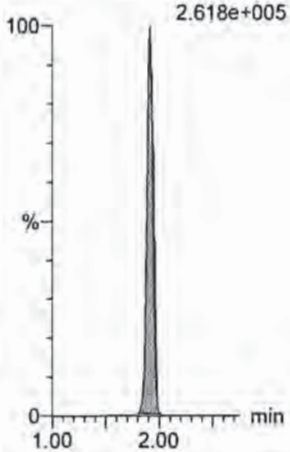
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
9.177e+003



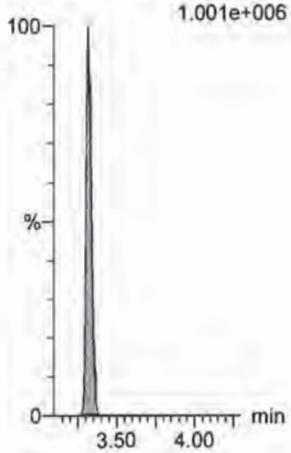
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
8.452e+003



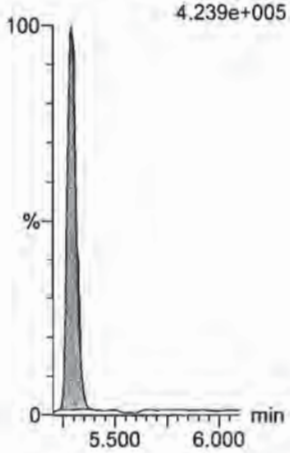
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.618e+005



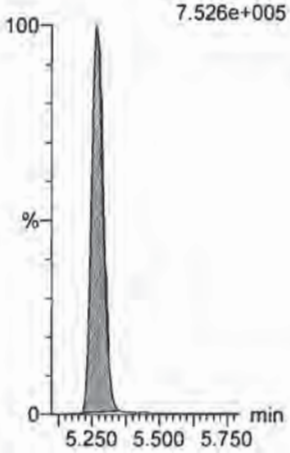
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.001e+006



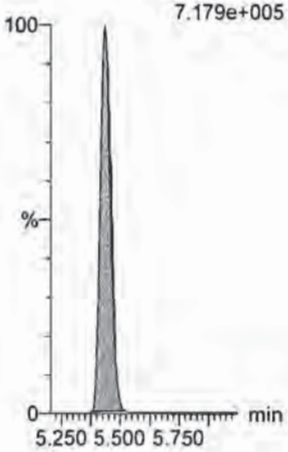
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.239e+005



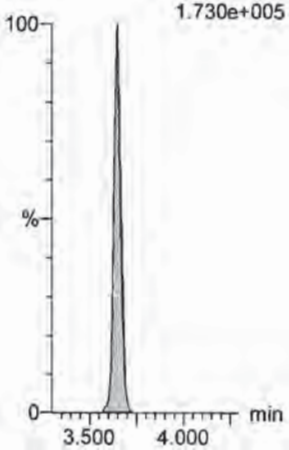
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
7.526e+005



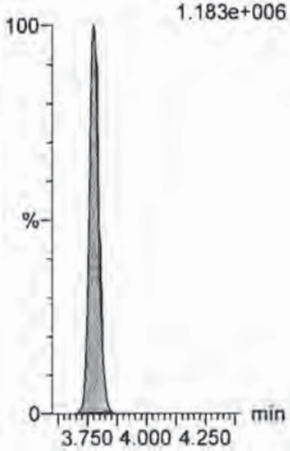
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.179e+005



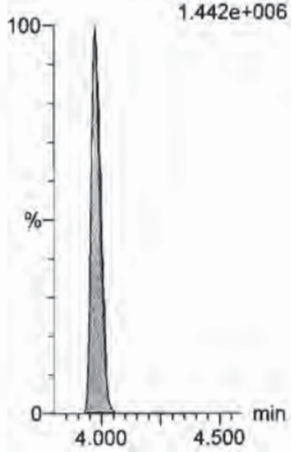
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.730e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.183e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.442e+006

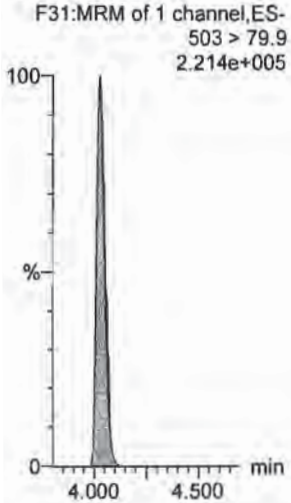


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

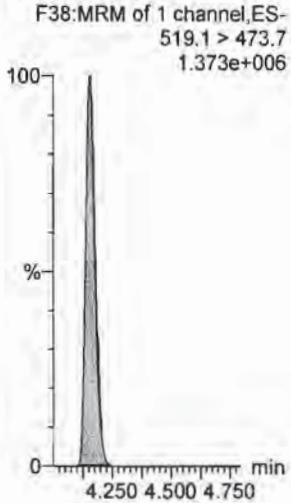
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_2, Date: 10-Aug-2017, Time: 20:32:31, ID: ST170810M2-1 PFC CS-2 17H1015, Description: PFC CS-2 17H1015

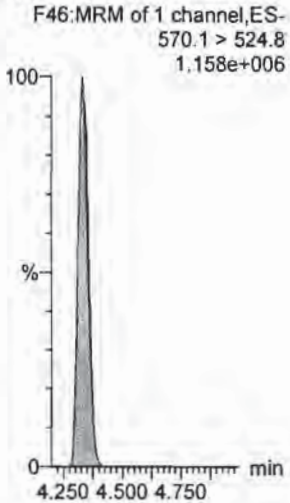
13C4-PFOS



13C6-PFDA



13C7-PFUnA

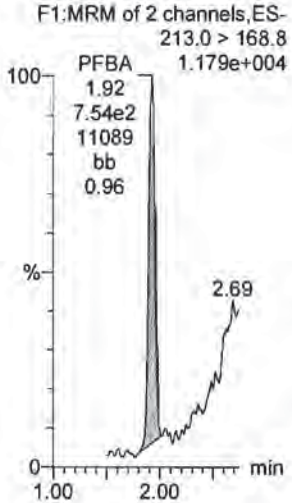


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

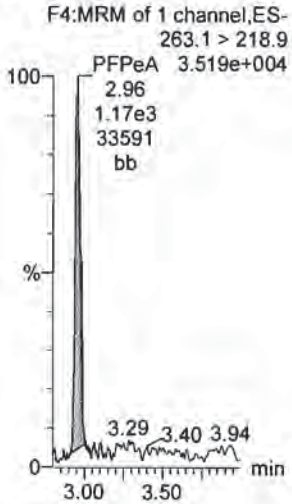
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_3, Date: 10-Aug-2017, Time: 20:43:21, ID: ST170810M2-2 PFC CS-1 17H1003, Description: PFC CS-1 17H1003

PFBA



PFPeA



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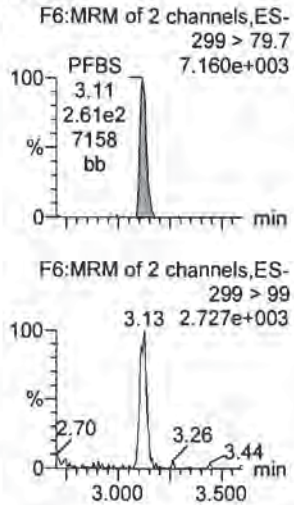

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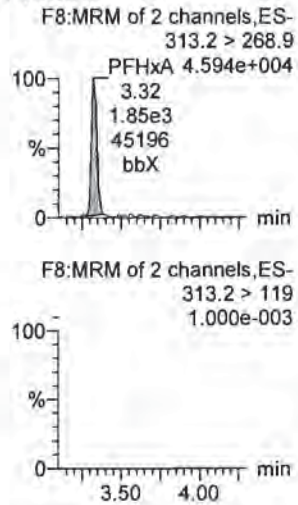

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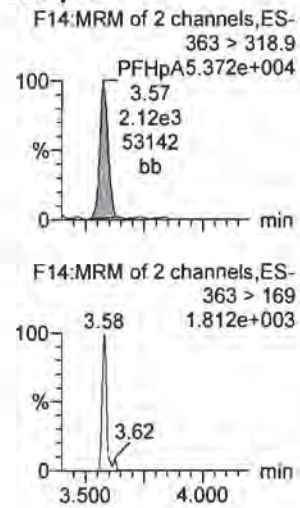

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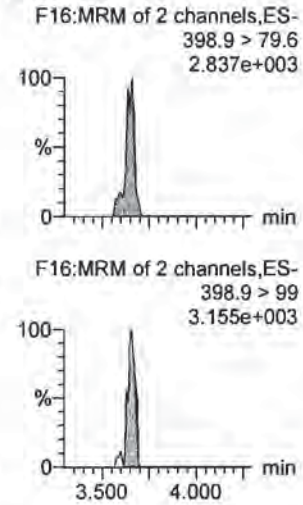
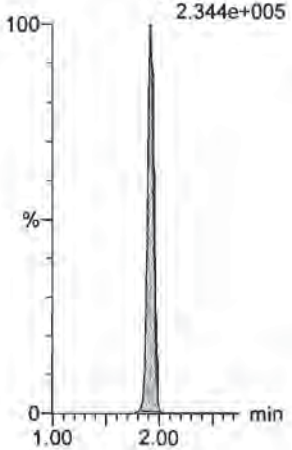
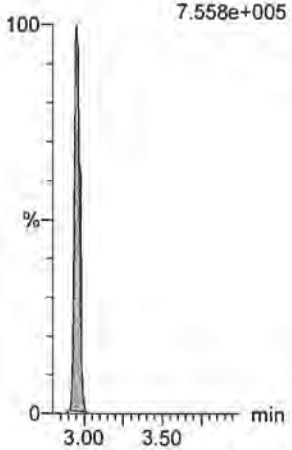


13C3-PFBA



13C3-PFPeA



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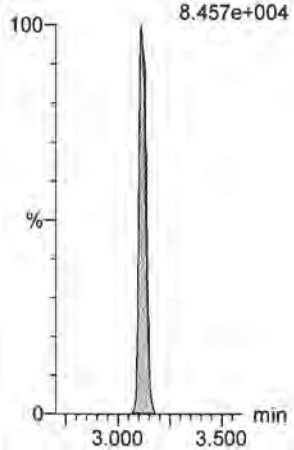
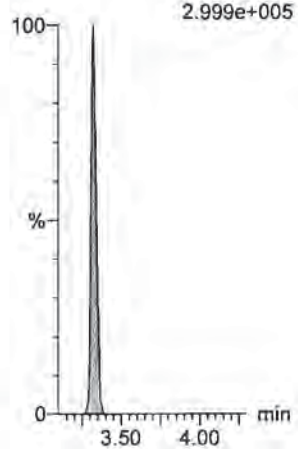
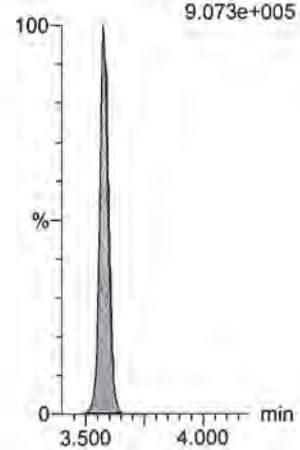


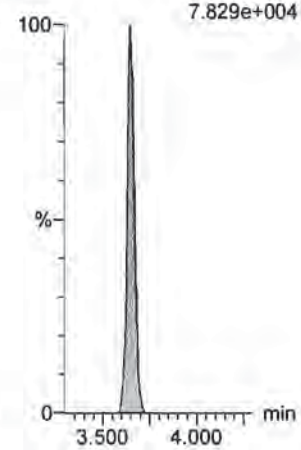
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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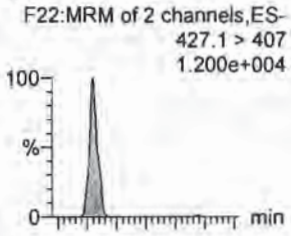
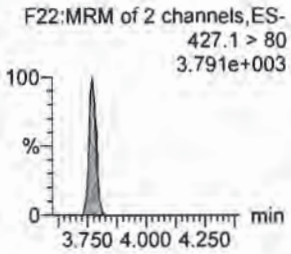
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_3, Date: 10-Aug-2017, Time: 20:43:21, ID: ST170810M2-2 PFC CS-1 17H1003, Description: PFC CS-1 17H1003

6:2 FTS





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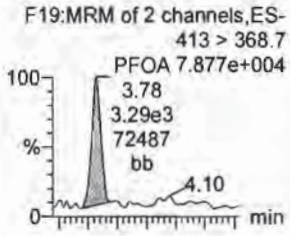

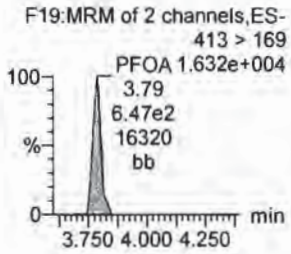

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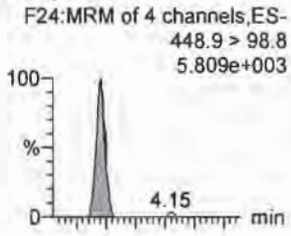

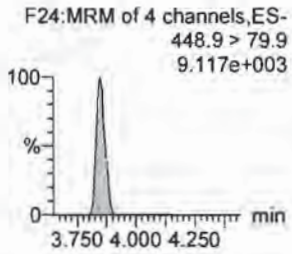

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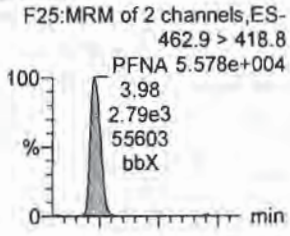
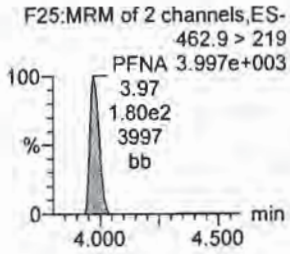
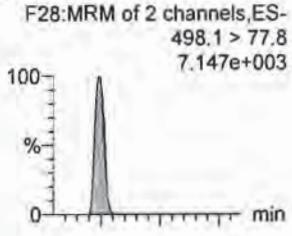
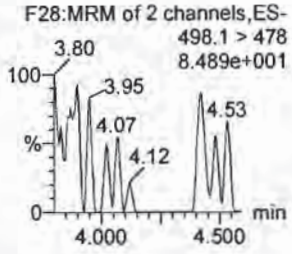




PFOSA





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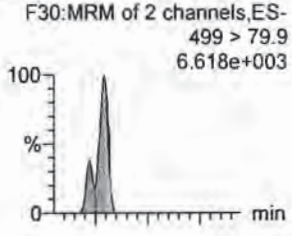
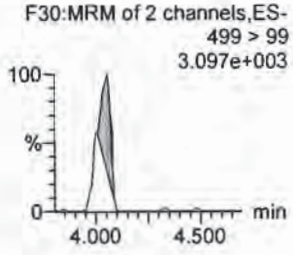
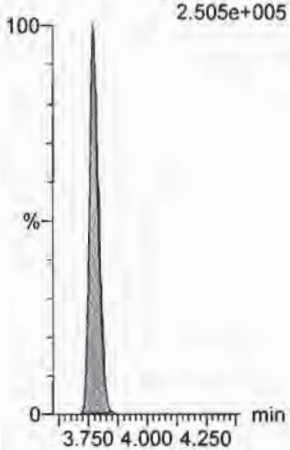
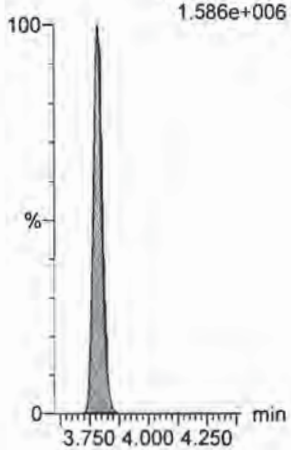




13C2-6:2 FTS



13C2-PFOA



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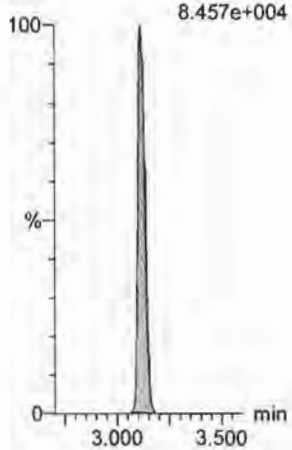
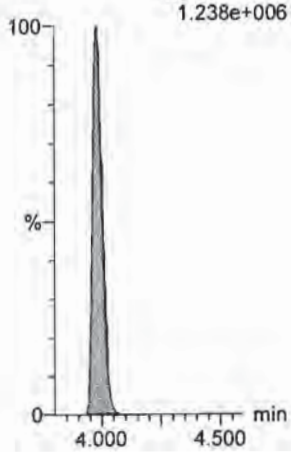
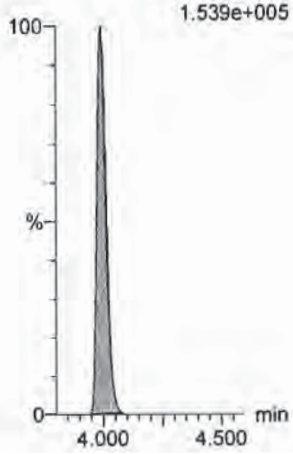


13C5-PFNA



13C8-PFOSA



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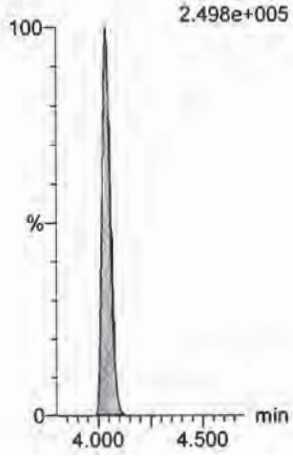
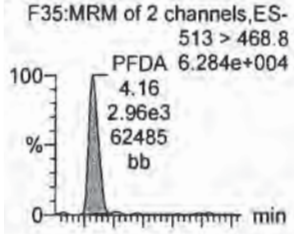


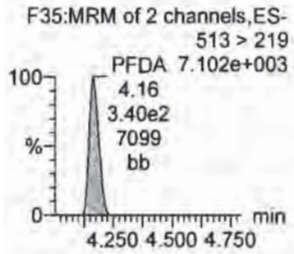
Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

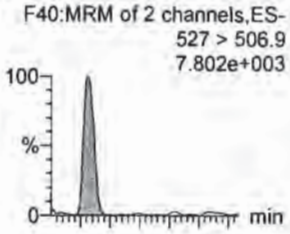
Name: 170810M2_3, Date: 10-Aug-2017, Time: 20:43:21, ID: ST170810M2-2 PFC CS-1 17H1003, Description: PFC CS-1 17H1003

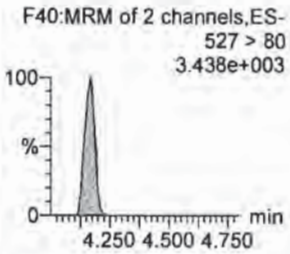
PFDA





8:2 FTS





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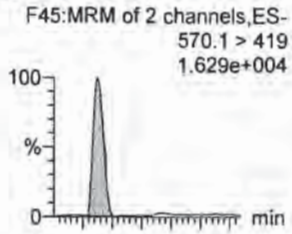

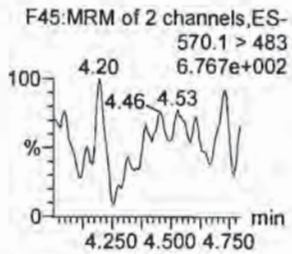

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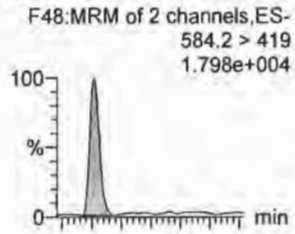

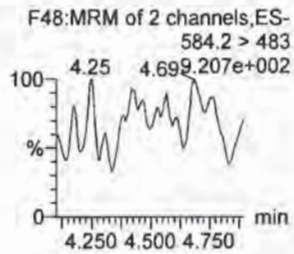

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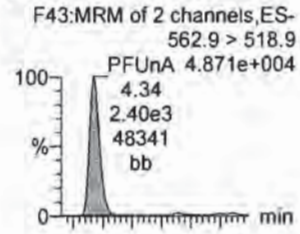

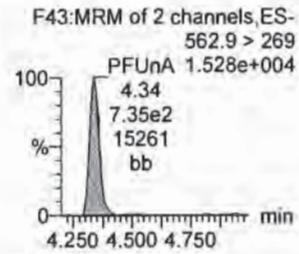

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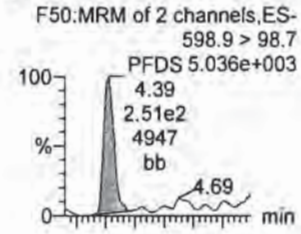
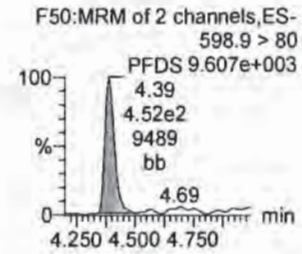
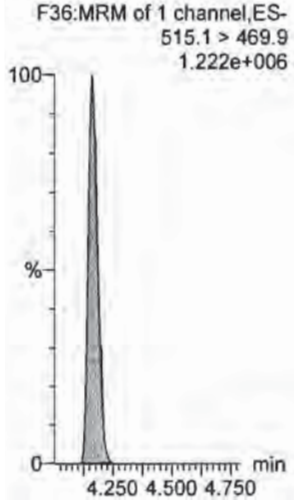
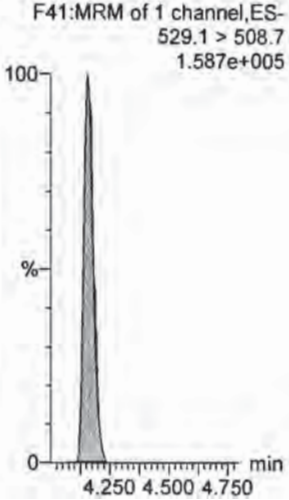




13C2-PFDA



13C2-8:2 FTS



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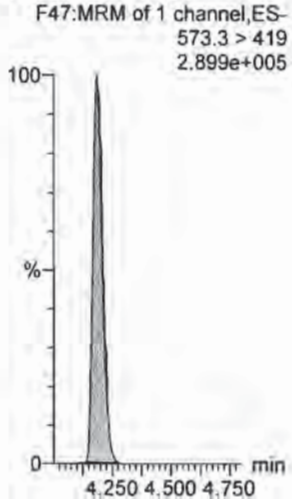

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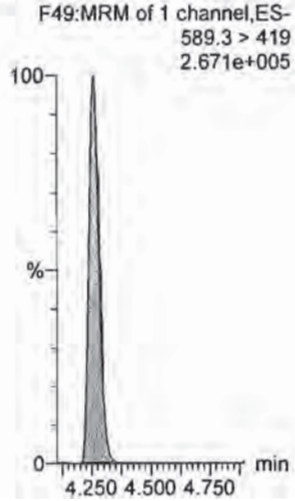

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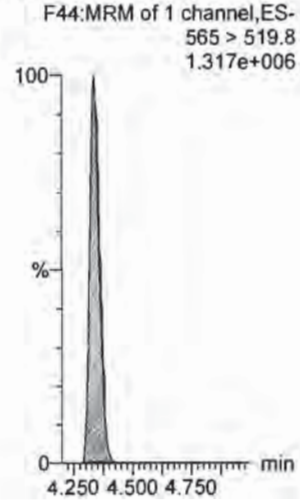

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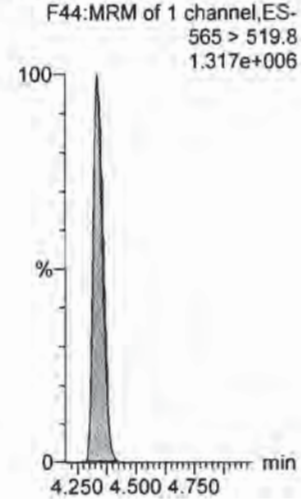

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Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_3, Date: 10-Aug-2017, Time: 20:43:21, ID: ST170810M2-2 PFC CS-1 17H1003, Description: PFC CS-1 17H1003

PFDoA
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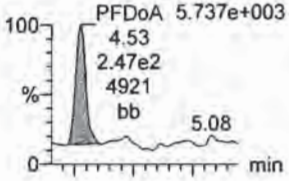
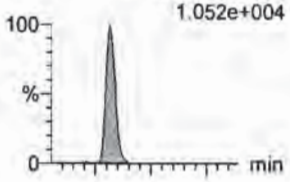
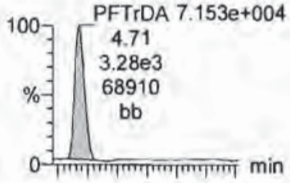
612.9 > 318.8
PFDoA 5.737e+003
4.53
2.47e2
4921
bb
5.08



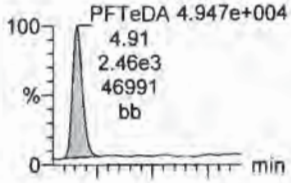
N-MeFOSA
F34:MRM of 2 channels,ES-
512.1 > 168.9
1.052e+004



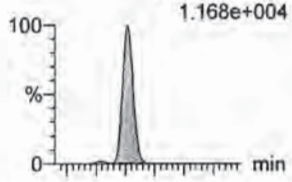
PFTrDA
F57:MRM of 2 channels,ES-
662.9 > 618.9
PFTrDA 7.153e+004
4.71
3.28e3
68910
bb



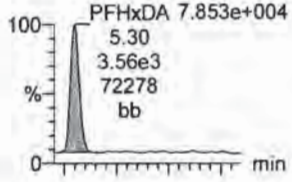
PFTeDA
F58:MRM of 4 channels,ES-
712.9 > 668.8
PFTeDA 4.947e+004
4.91
2.46e3
46991
bb



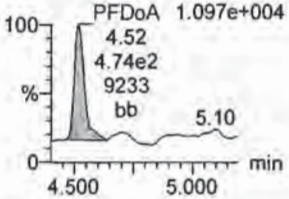
N-EtFOSA
F39:MRM of 2 channels,ES-
526.1 > 168.9
1.168e+004



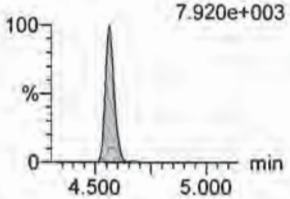
PFHxDA
F60:MRM of 2 channels,ES-
812.8 > 768.9
PFHxDA 7.853e+004
5.30
3.56e3
72278
bb



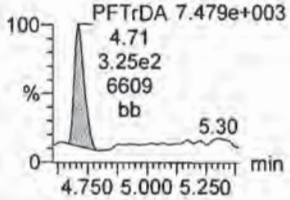
F51:MRM of 2 channels,ES-
612.9 > 569
PFDoA 1.097e+004
4.52
4.74e2
9233
bb
5.10



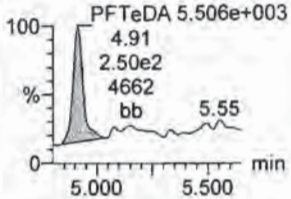
F34:MRM of 2 channels,ES-
512.1 > 219
7.920e+003



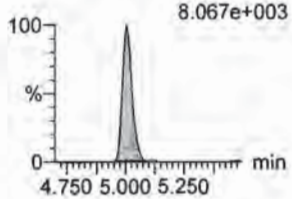
F57:MRM of 2 channels,ES-
662.9 > 319
PFTrDA 7.479e+003
4.71
3.25e2
6609
bb
5.30



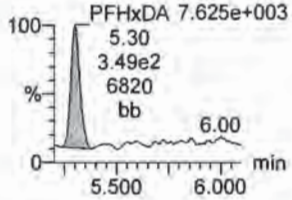
F58:MRM of 4 channels,ES-
712.9 > 369
PFTeDA 5.506e+003
4.91
2.50e2
4662
bb
5.55



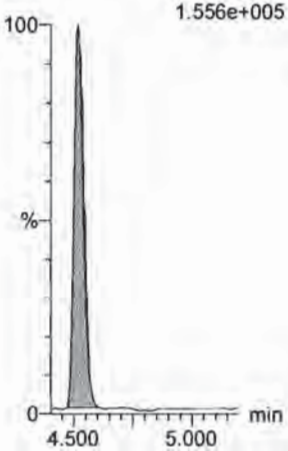
F39:MRM of 2 channels,ES-
526.1 > 219
8.067e+003



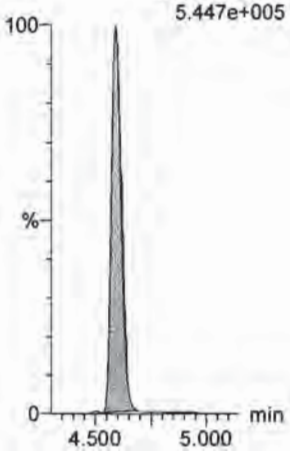
F60:MRM of 2 channels,ES-
812.8 > 219
PFHxDA 7.625e+003
5.30
3.49e2
6820
bb
6.00



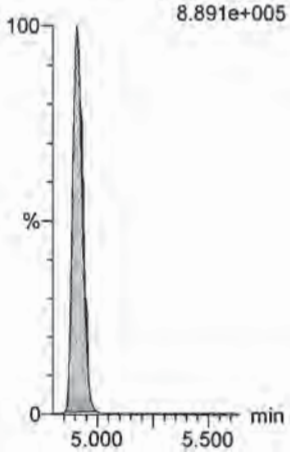
13C2-PFDoA
F52:MRM of 1 channel,ES-
615 > 569.7
1.556e+005



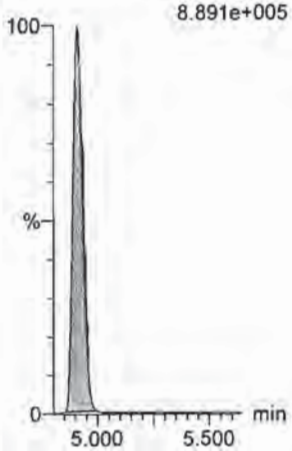
d3-N-MeFOSA
F37:MRM of 1 channel,ES-
515.2 > 168.9
5.447e+005



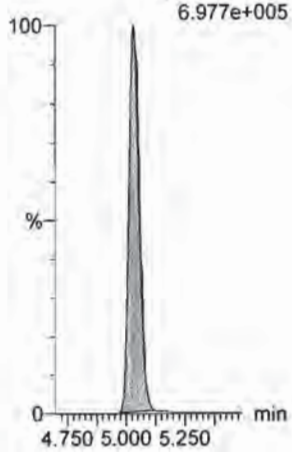
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
8.891e+005



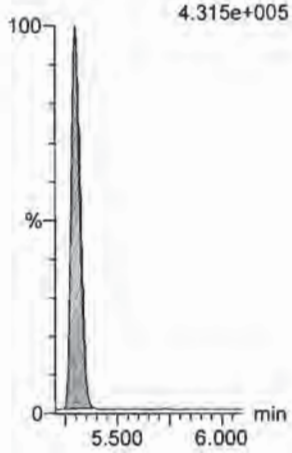
13C2-PFTeDA
F59:MRM of 2 channels,ES-
714.8 > 669.6
8.891e+005



d5-N-ETFOSA
F42:MRM of 1 channel,ES-
531.1 > 168.9
6.977e+005



13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.315e+005

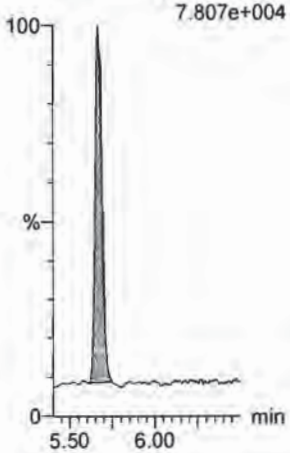


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

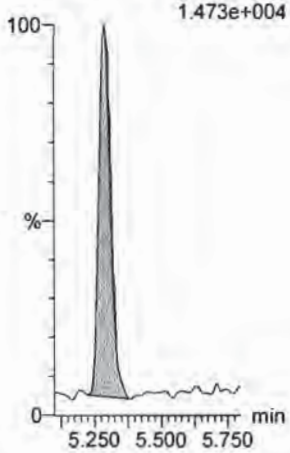
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_3, Date: 10-Aug-2017, Time: 20:43:21, ID: ST170810M2-2 PFC CS-1 17H1003, Description: PFC CS-1 17H1003

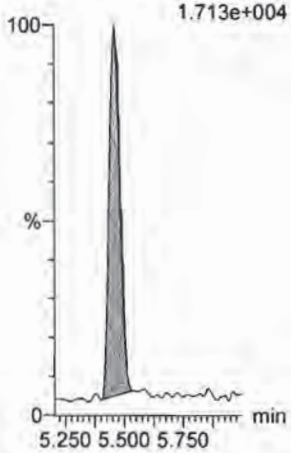
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
7.807e+004



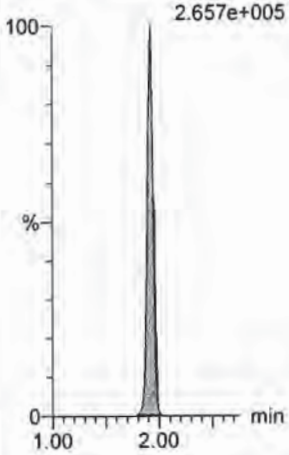
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.473e+004



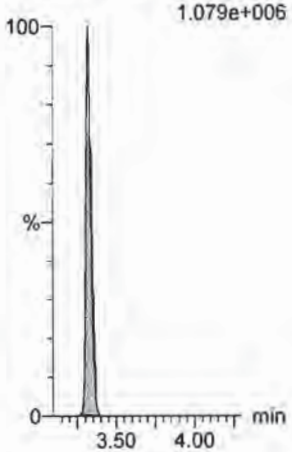
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.713e+004



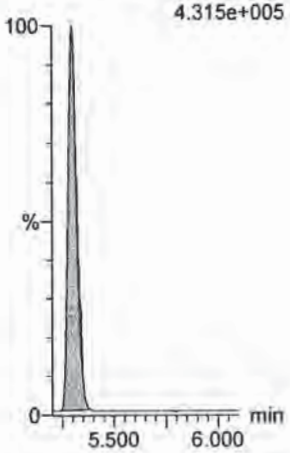
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.657e+005



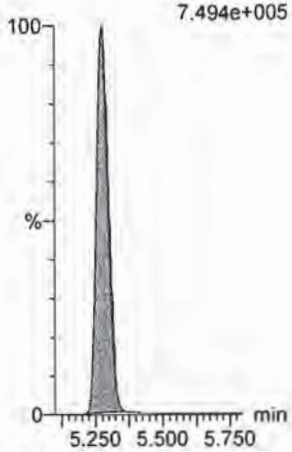
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.079e+006



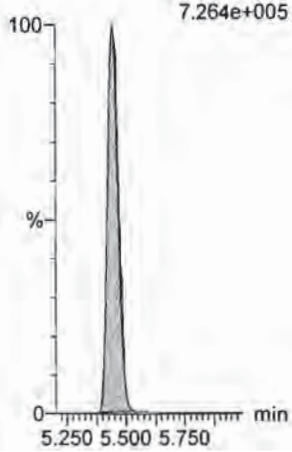
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.315e+005



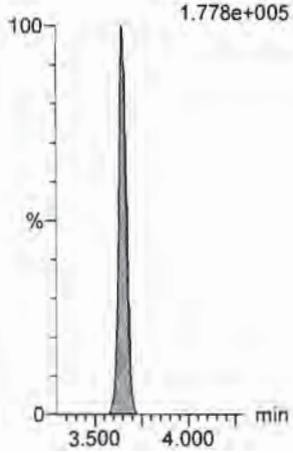
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
7.494e+005



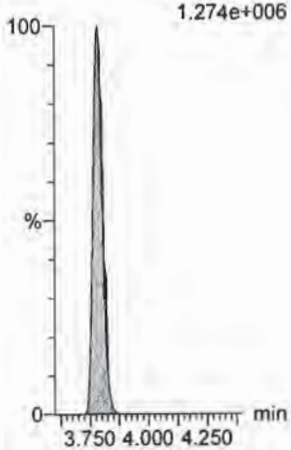
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.264e+005



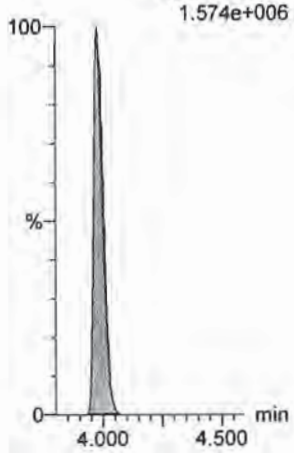
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.778e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.274e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.574e+006

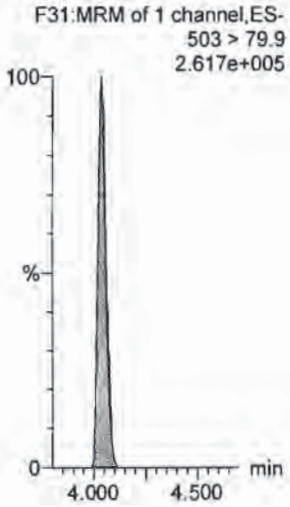


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

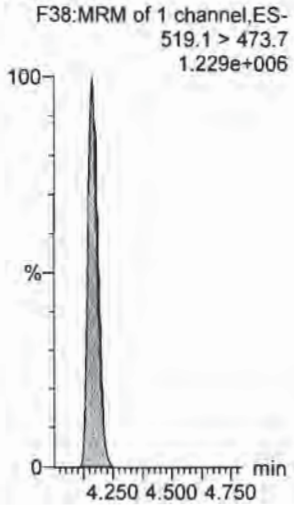
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_3, Date: 10-Aug-2017, Time: 20:43:21, ID: ST170810M2-2 PFC CS-1 17H1003, Description: PFC CS-1 17H1003

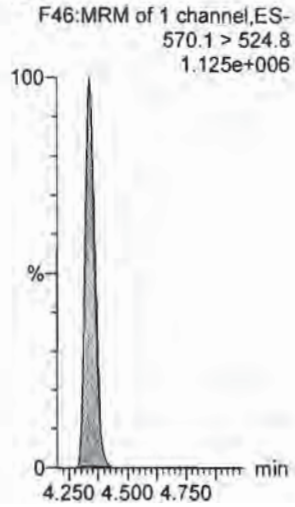
13C4-PFOS



13C6-PFDA



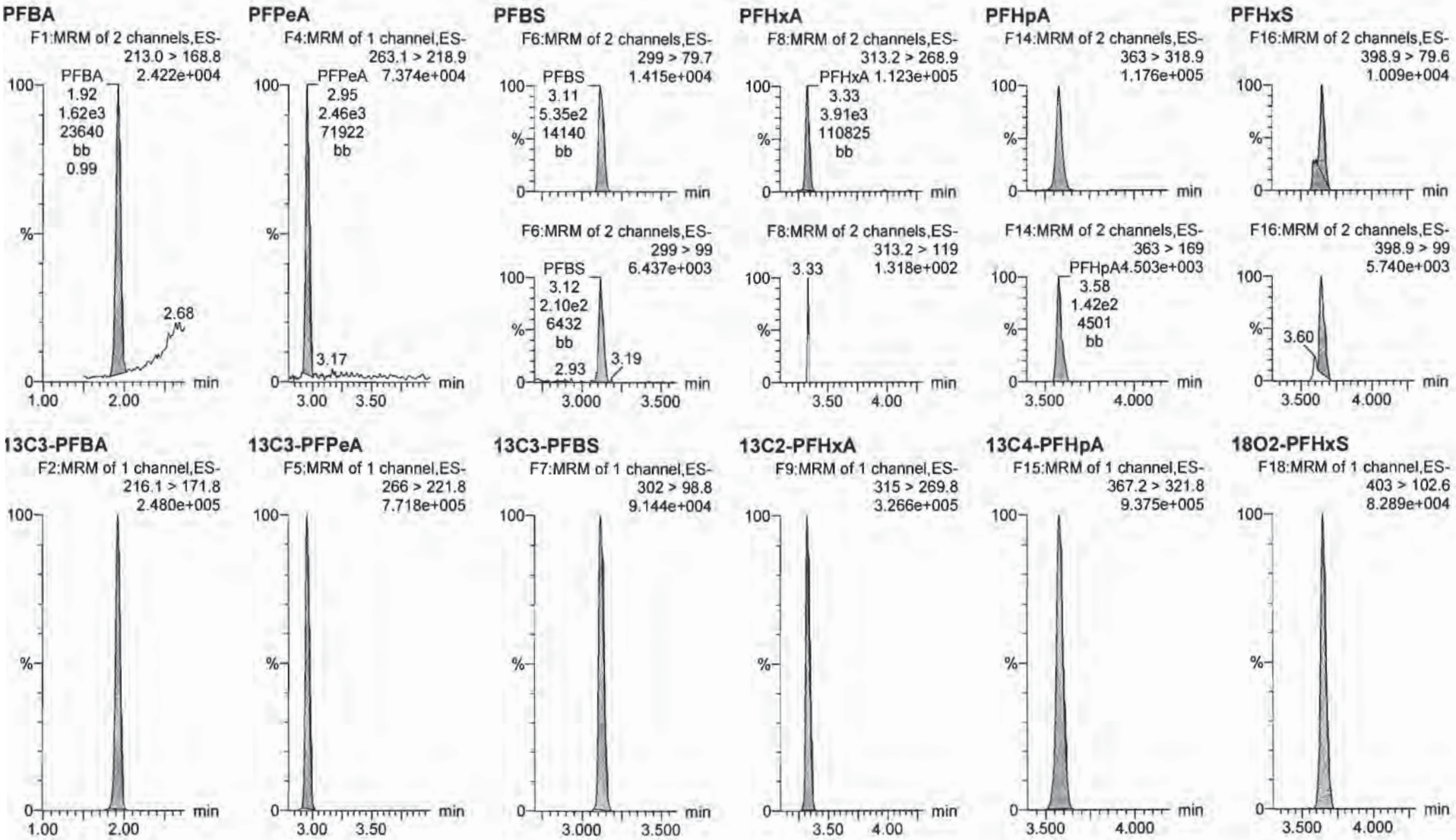
13C7-PFUnA



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

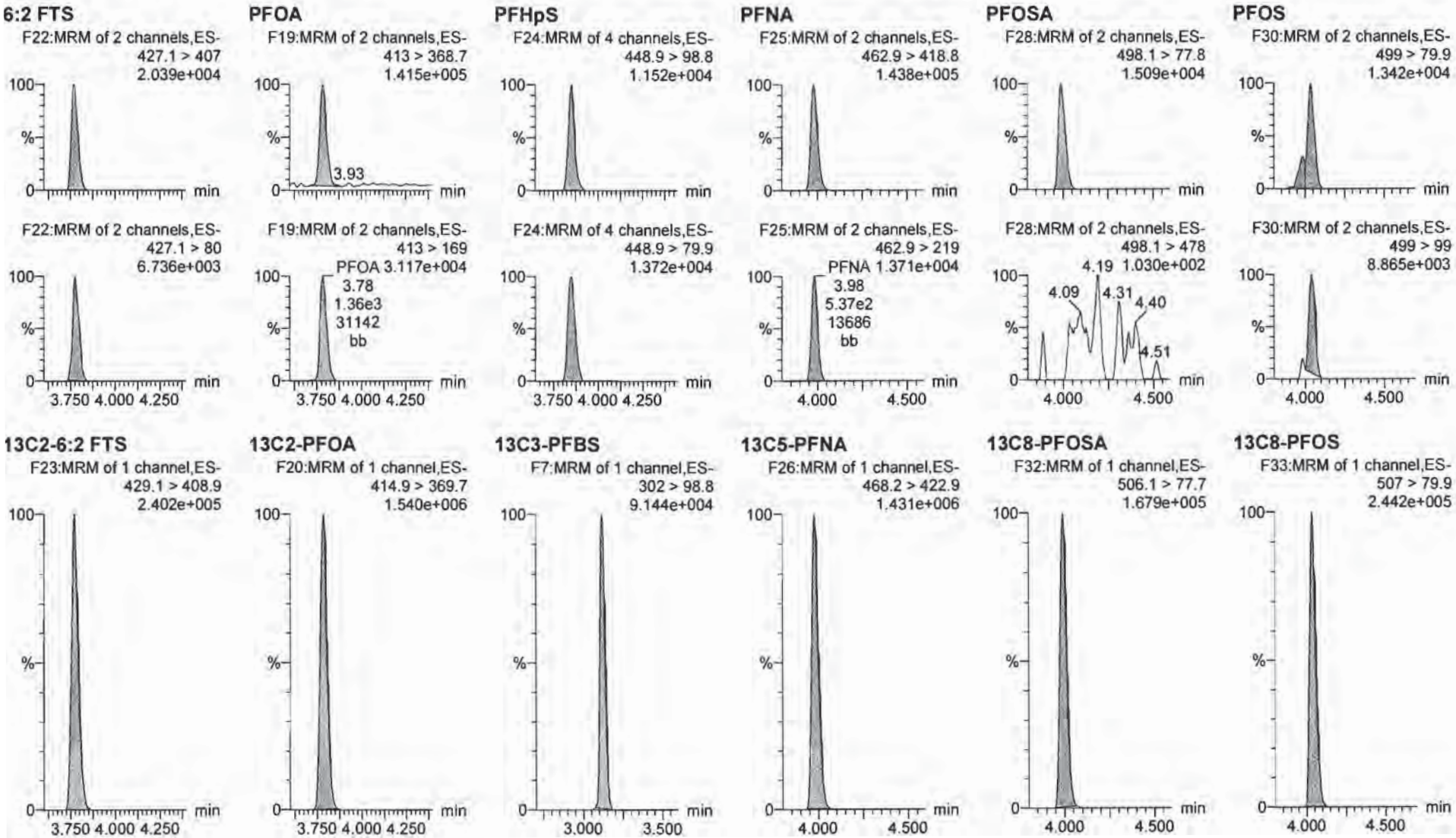
Name: 170810M2_4, Date: 10-Aug-2017, Time: 20:54:09, ID: ST170810M2-3 PFC CS0 17H1004, Description: PFC CS0 17H1004



Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_4, Date: 10-Aug-2017, Time: 20:54:09, ID: ST170810M2-3 PFC CS0 17H1004, Description: PFC CS0 17H1004

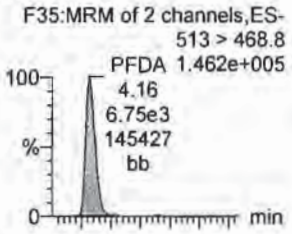


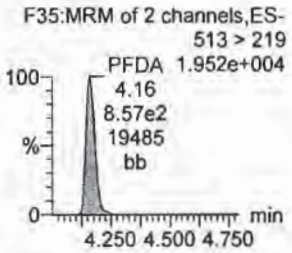
Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

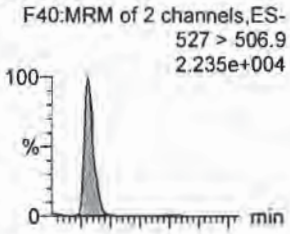
Name: 170810M2_4, Date: 10-Aug-2017, Time: 20:54:09, ID: ST170810M2-3 PFC CS0 17H1004, Description: PFC CS0 17H1004

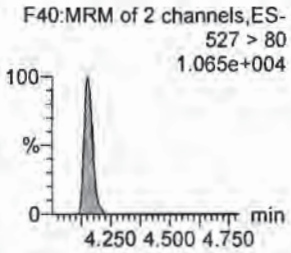
PFDA



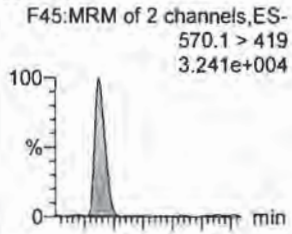


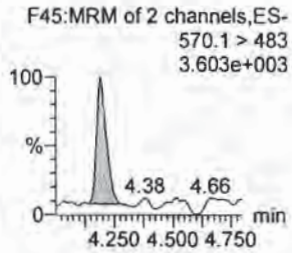
8:2 FTS



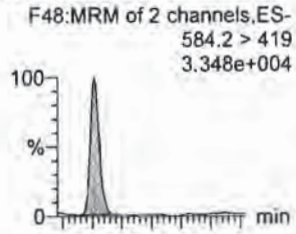


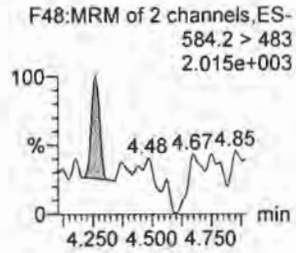
N-MeFOSAA



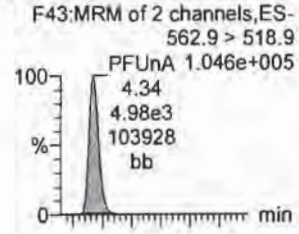


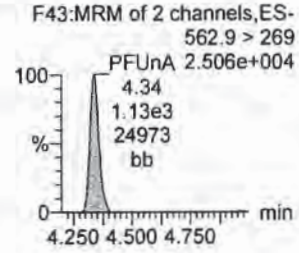
N-EtFOSAA



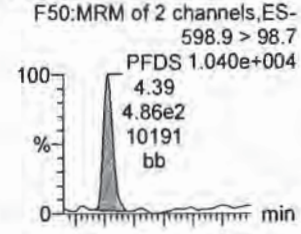


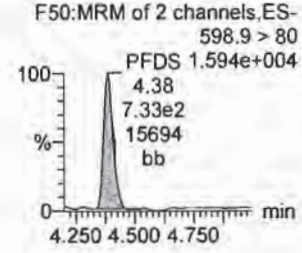
PFUnA



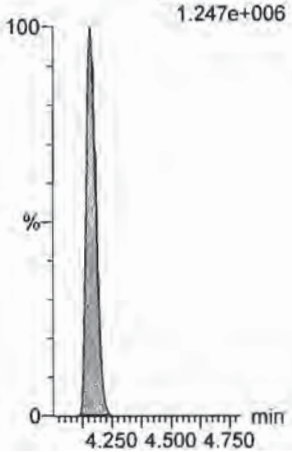


PFDS

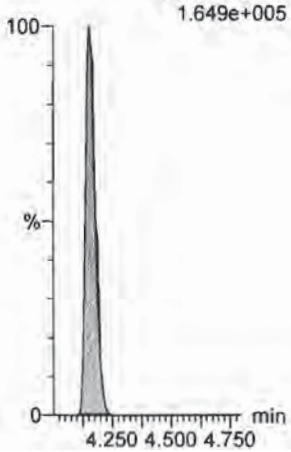




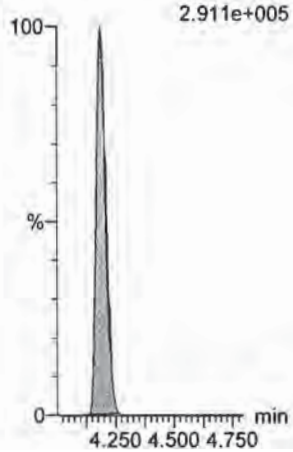
13C2-PFDA



13C2-8:2 FTS



d3-N-MeFOSAA



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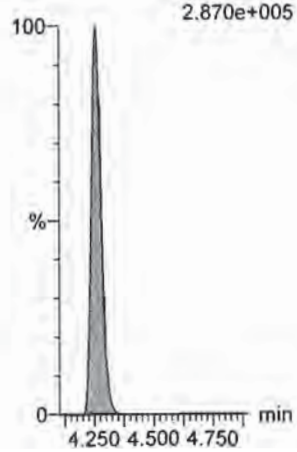
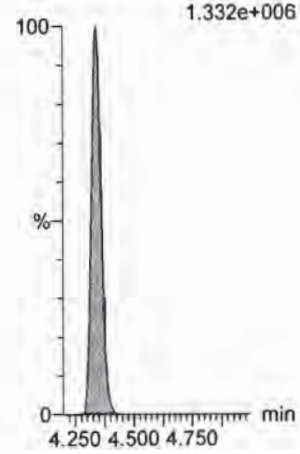
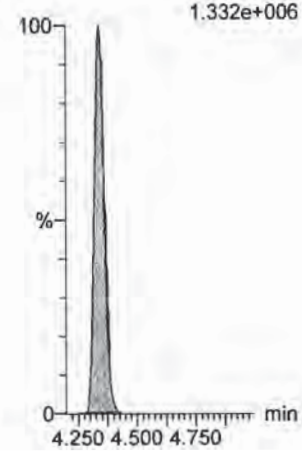


13C2-PFUnA



13C2-PFUnA



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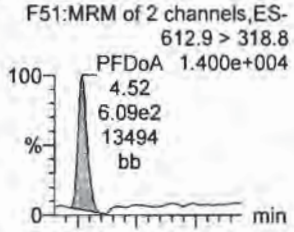
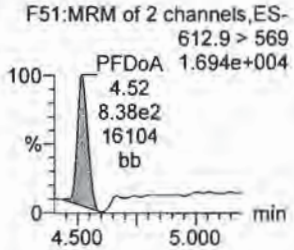
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

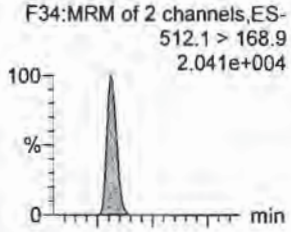
Name: 170810M2_4, Date: 10-Aug-2017, Time: 20:54:09, ID: ST170810M2-3 PFC CS0 17H1004, Description: PFC CS0 17H1004

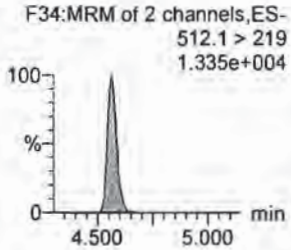
PFDoA



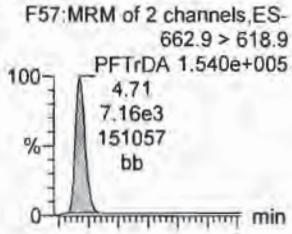


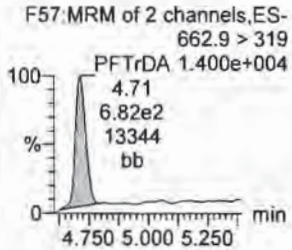
N-MeFOSA



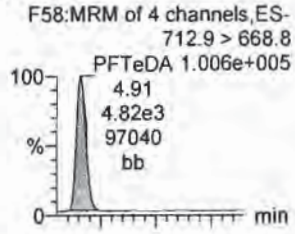


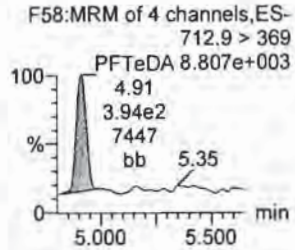
PFTrDA



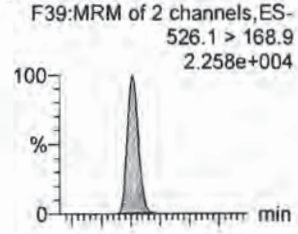


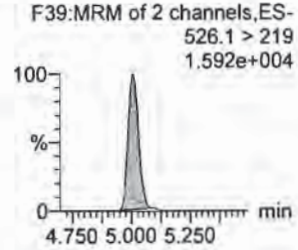
PFTeDA



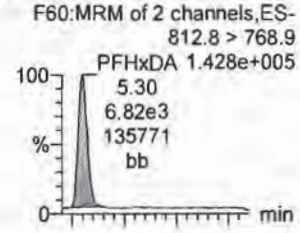


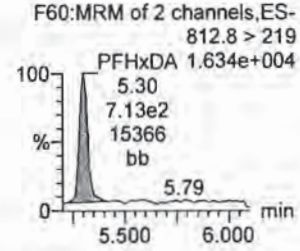
N-EtFOSA



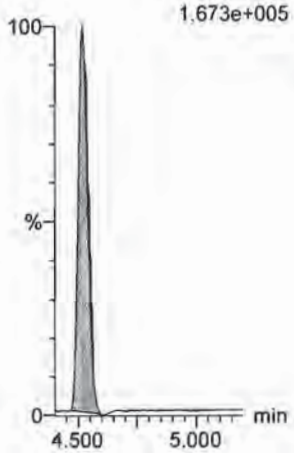


PFHxDA

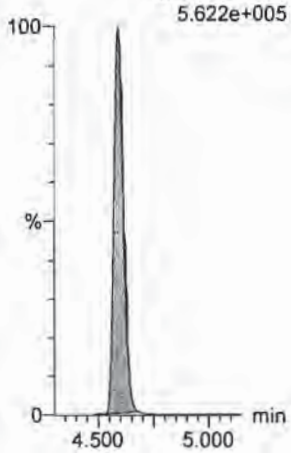




13C2-PFDoA



d3-N-MeFOSA



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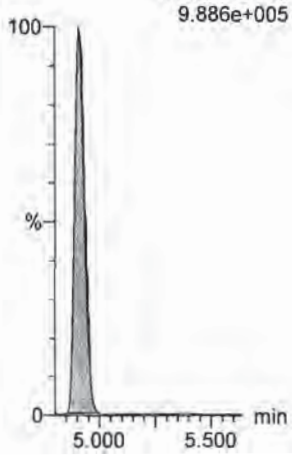

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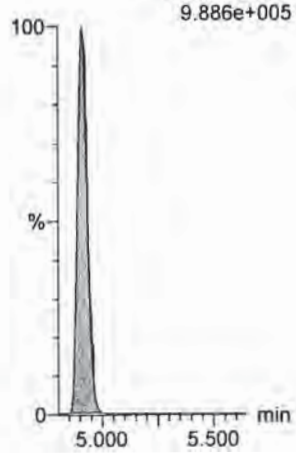
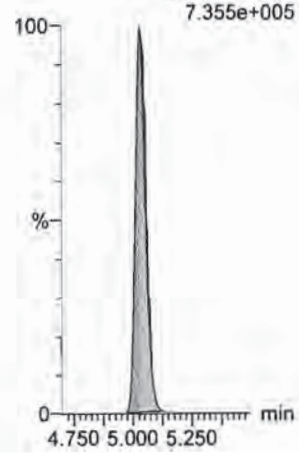
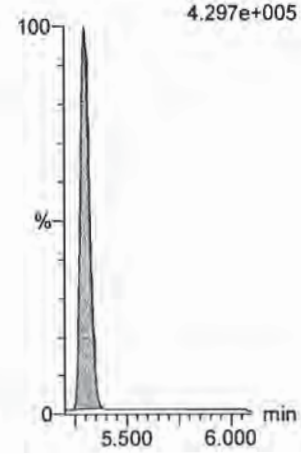


d5-N-ETFOSA



13C2-PFHxDA



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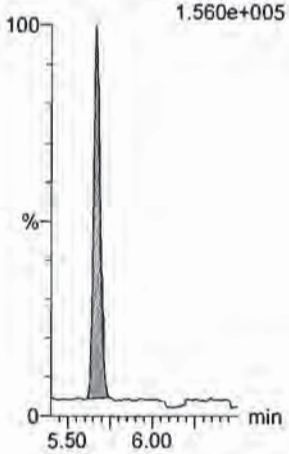
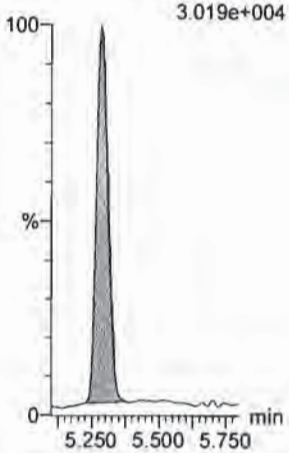
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_4, Date: 10-Aug-2017, Time: 20:54:09, ID: ST170810M2-3 PFC CS0 17H1004, Description: PFC CS0 17H1004

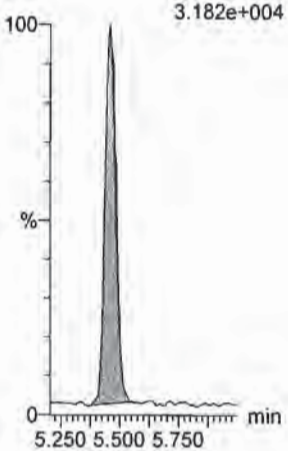
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.560e+005



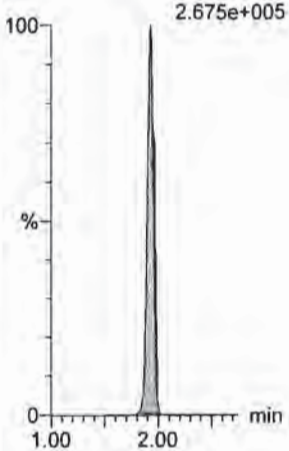
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
3.019e+004



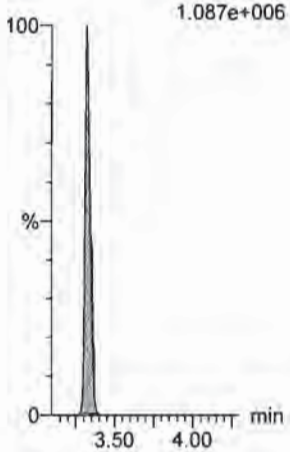
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
3.182e+004



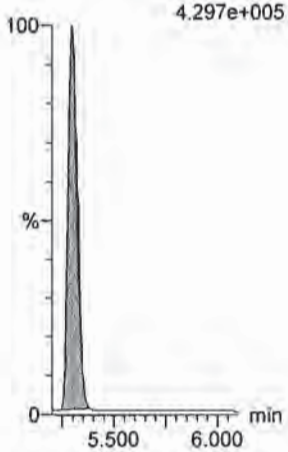
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.675e+005



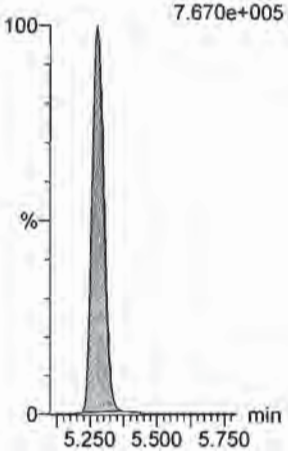
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.087e+006



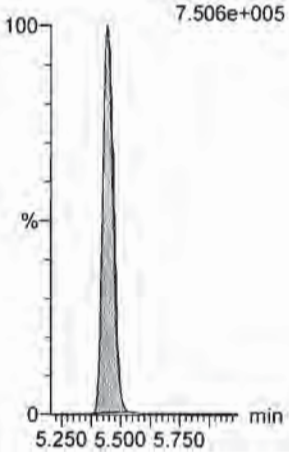
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.297e+005



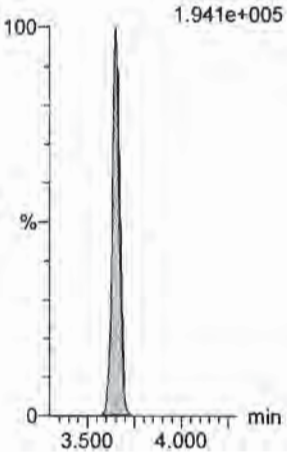
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
7.670e+005



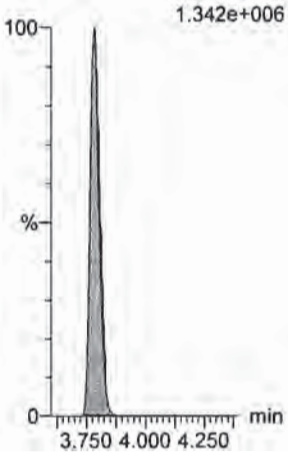
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.506e+005



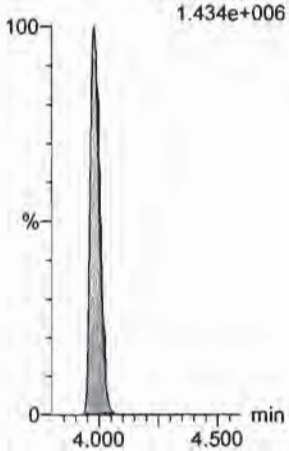
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.941e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.342e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.434e+006



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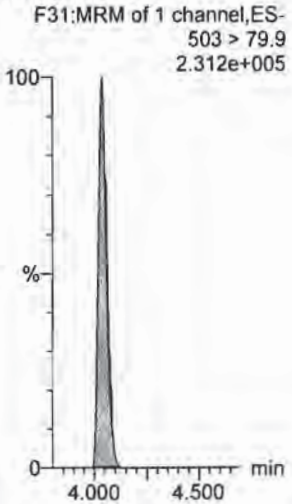
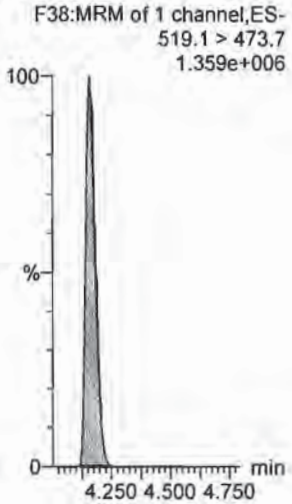
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_4, Date: 10-Aug-2017, Time: 20:54:09, ID: ST170810M2-3 PFC CS0 17H1004, Description: PFC CS0 17H1004

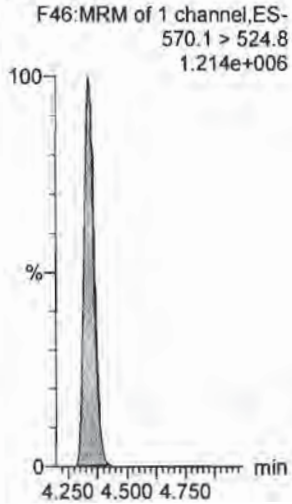
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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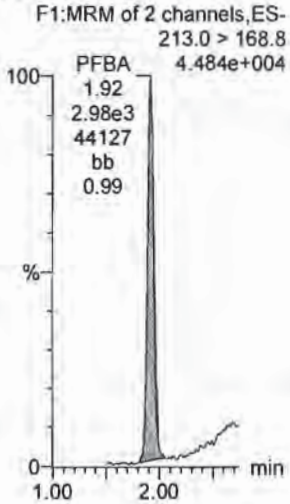
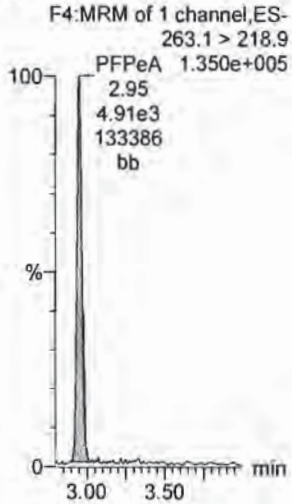
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_5, Date: 10-Aug-2017, Time: 21:05:02, ID: ST170810M2-4 PFC CS1 17H1016, Description: PFC CS1 17H1016

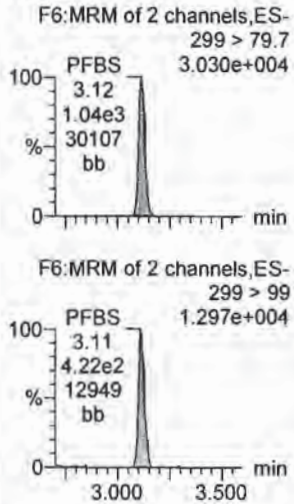
PFBA



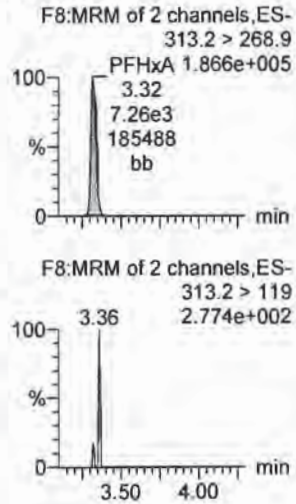
PFPeA



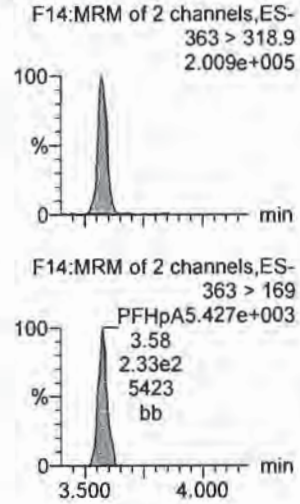
PFBS



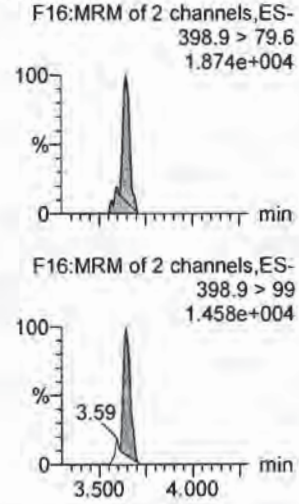
PFHxA



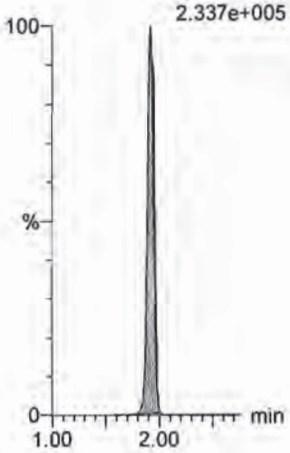
PFHpA



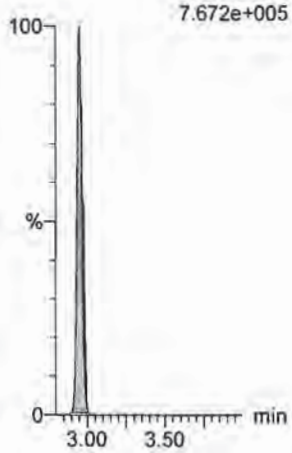
PFHxS



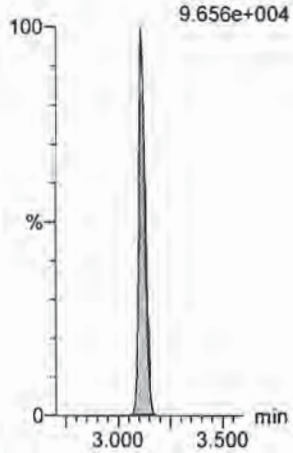
13C3-PFBA



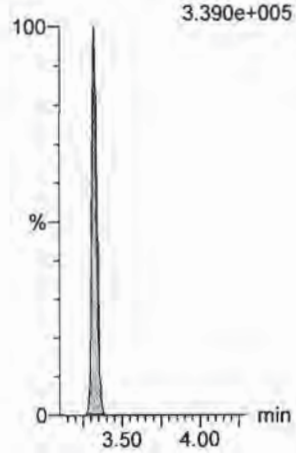
13C3-PFPeA



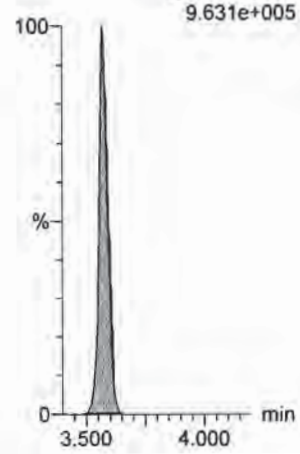
13C3-PFBS



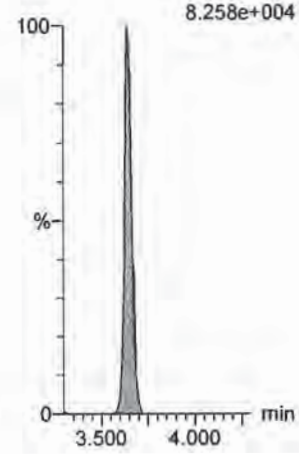
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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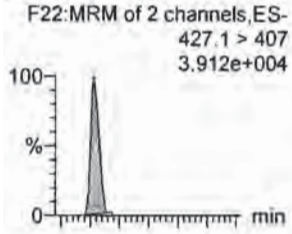
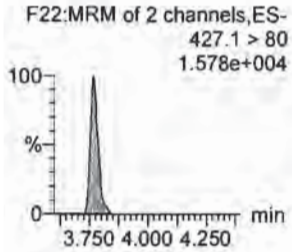
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

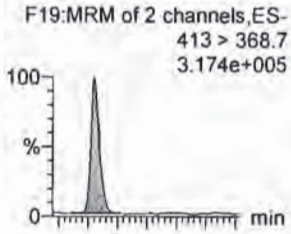
Name: 170810M2_5, Date: 10-Aug-2017, Time: 21:05:02, ID: ST170810M2-4 PFC CS1 17H1016, Description: PFC CS1 17H1016

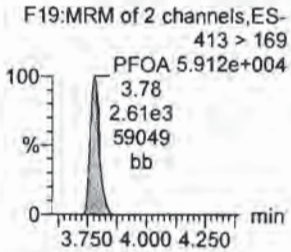
6:2 FTS



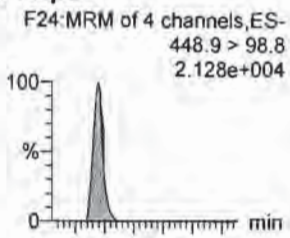


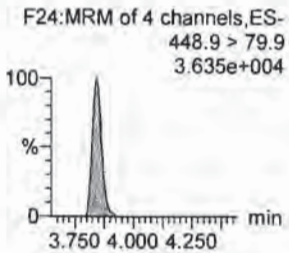
PFOA



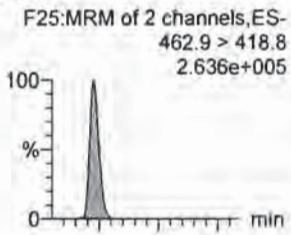


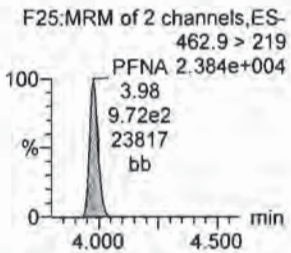
PFHpS



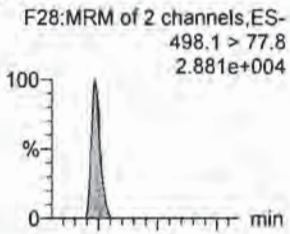


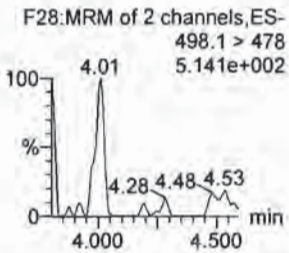
PFNA



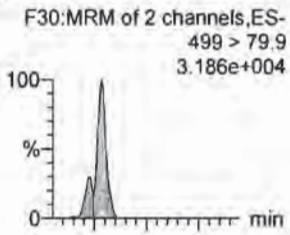


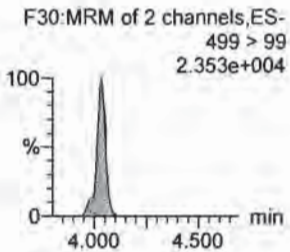
PFOSA



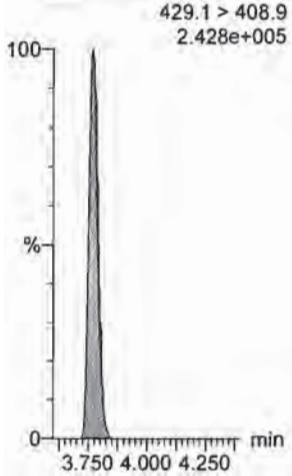


PFOS

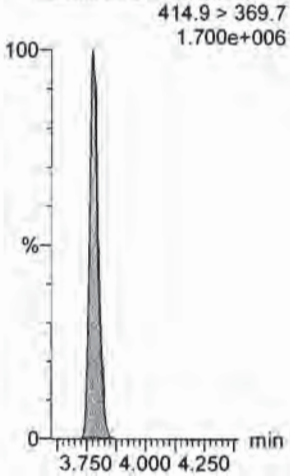




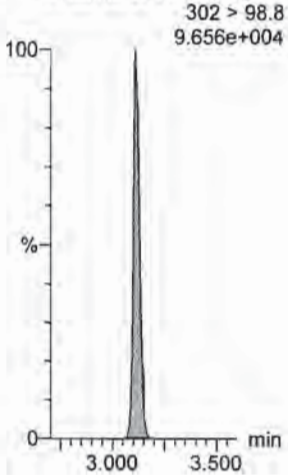
13C2-6:2 FTS



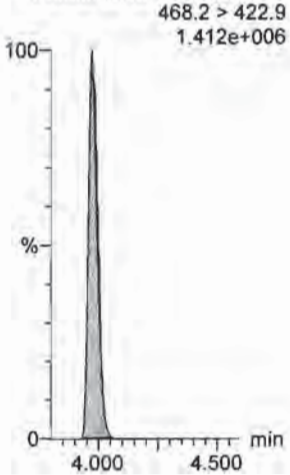
13C2-PFOA



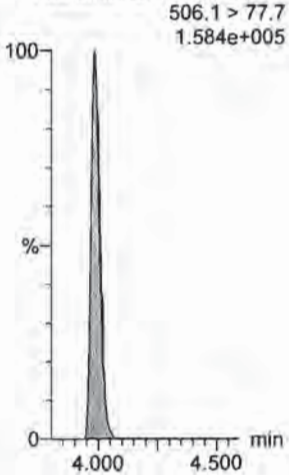
13C3-PFBS



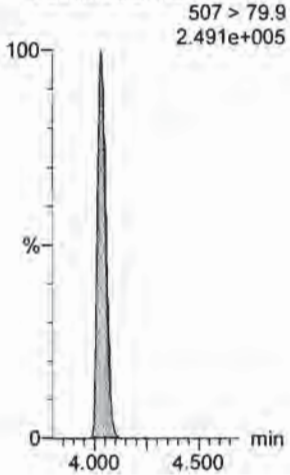
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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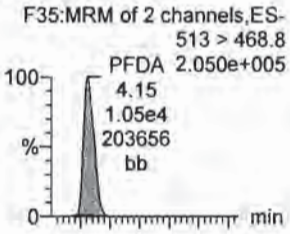
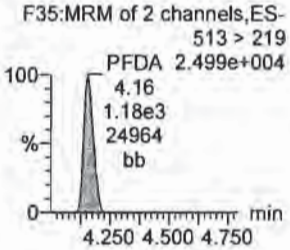
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

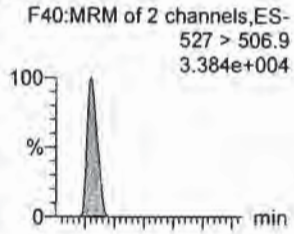
Name: 170810M2_5, Date: 10-Aug-2017, Time: 21:05:02, ID: ST170810M2-4 PFC CS1 17H1016, Description: PFC CS1 17H1016

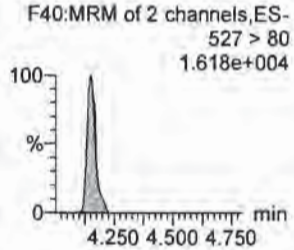
PFDA



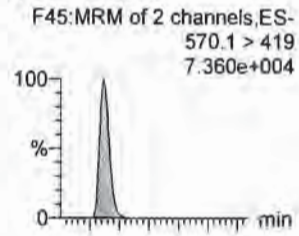


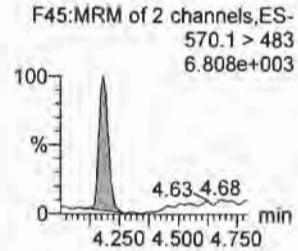
8:2 FTS





N-MeFOSAA





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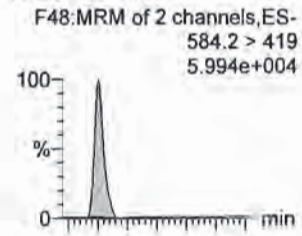
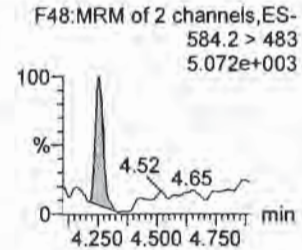
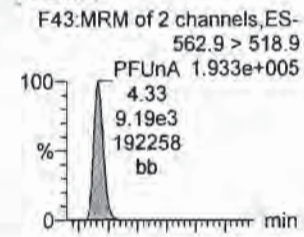
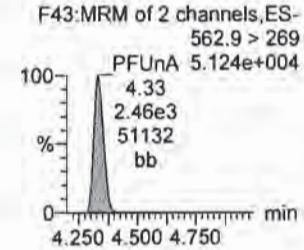


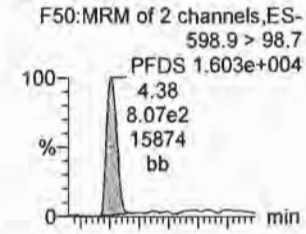


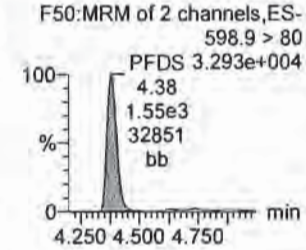
PFUnA



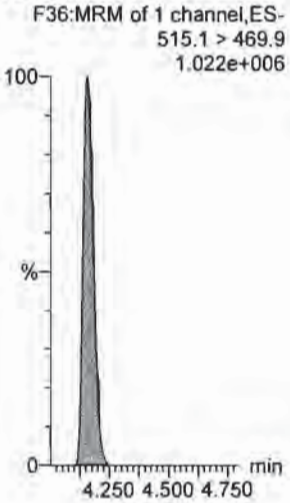


PFDS

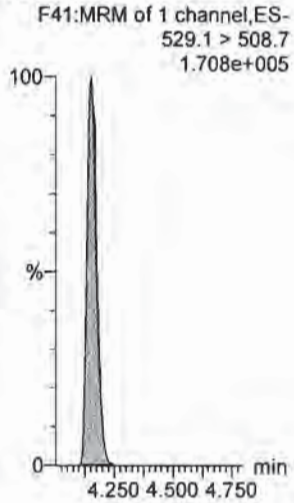




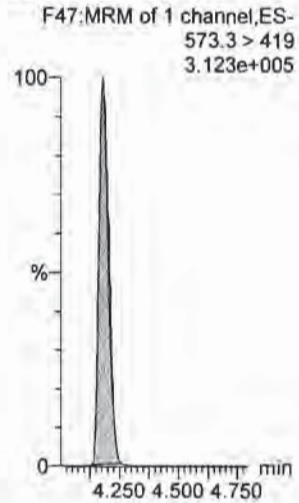
13C2-PFDA



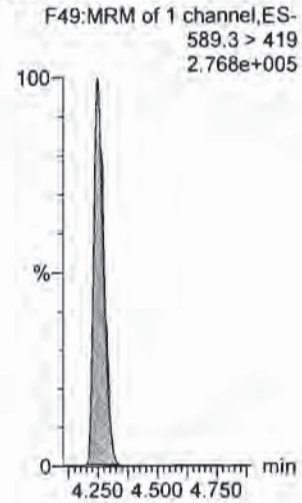
13C2-8:2 FTS



d3-N-MeFOSAA



d5-N-EtFOSAA



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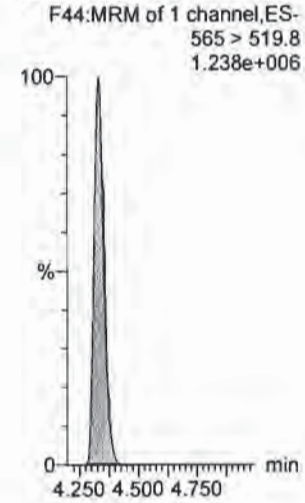

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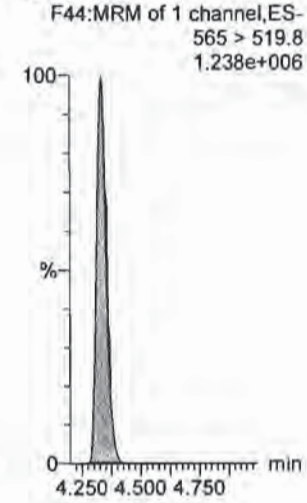

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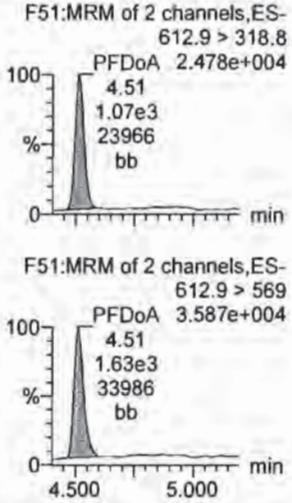
Name: 170810M2_5, Date: 10-Aug-2017, Time: 21:05:02, ID: ST170810M2-4 PFC CS1 17H1016, Description: PFC CS1 17H1016

PFDoA



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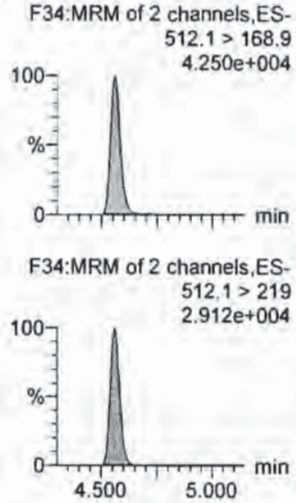

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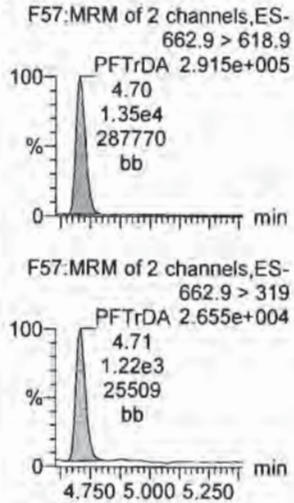
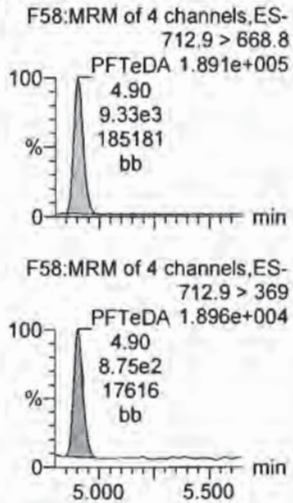


PFTeDA



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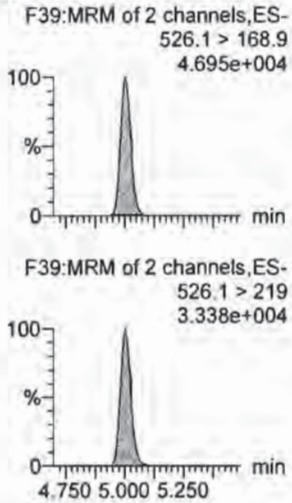
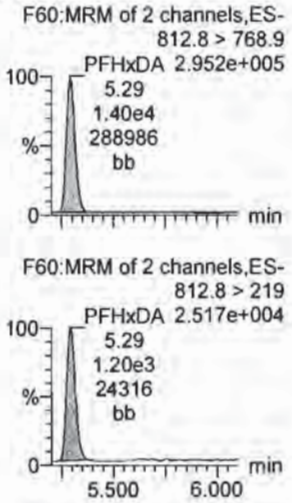


PFHxDA



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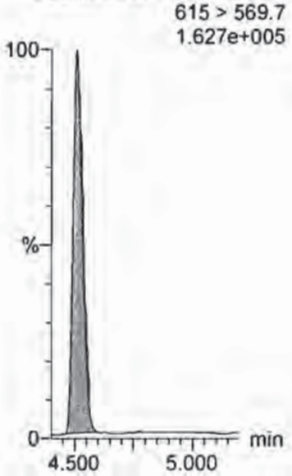
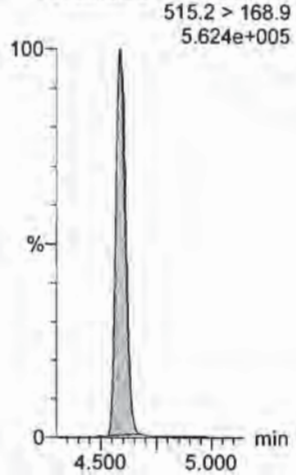


d3-N-MeFOSA



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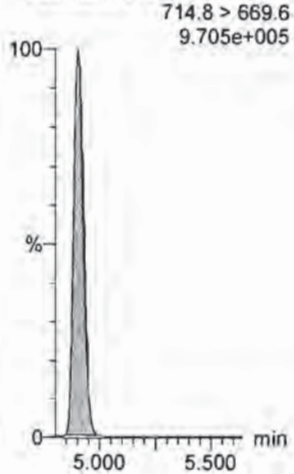

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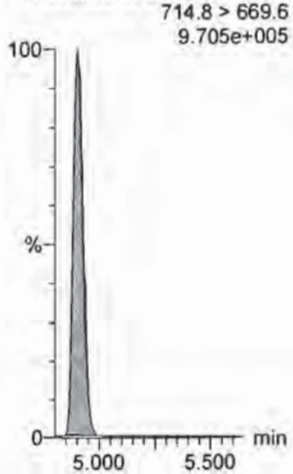

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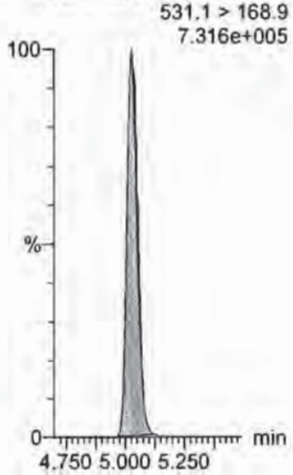

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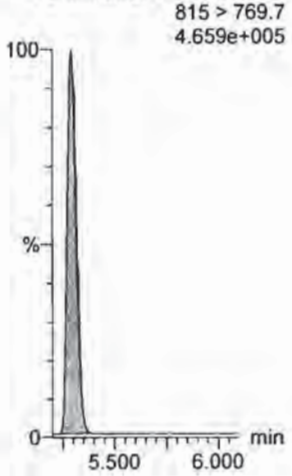

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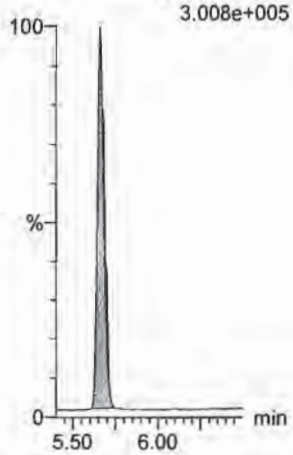
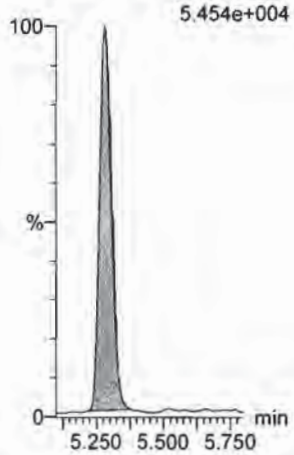
Name: 170810M2_5, Date: 10-Aug-2017, Time: 21:05:02, ID: ST170810M2-4 PFC CS1 17H1016, Description: PFC CS1 17H1016

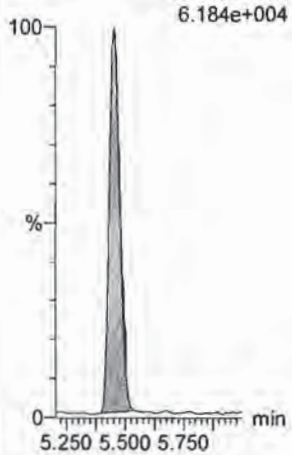
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
3.008e+005



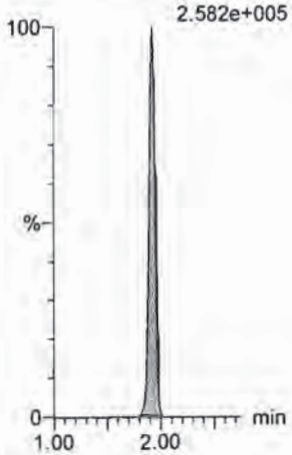
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
5.454e+004



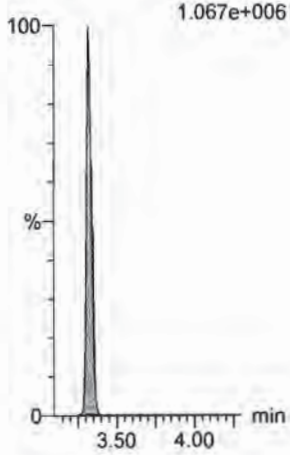
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
6.184e+004



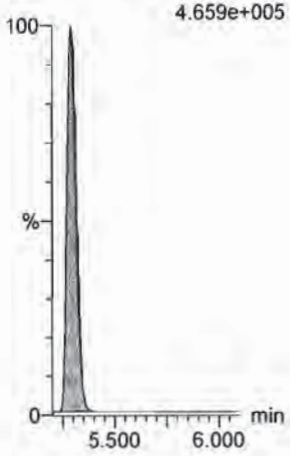
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.582e+005



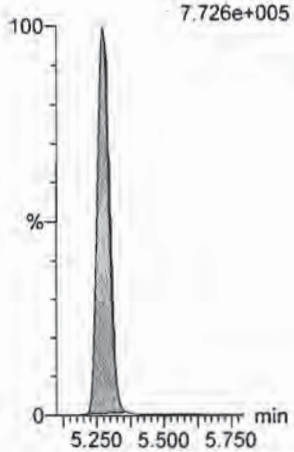
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.067e+006



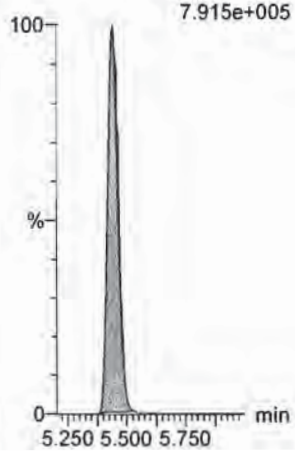
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.659e+005



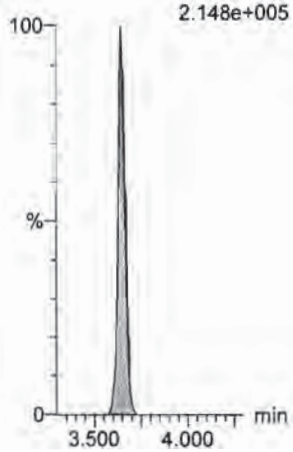
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
7.726e+005



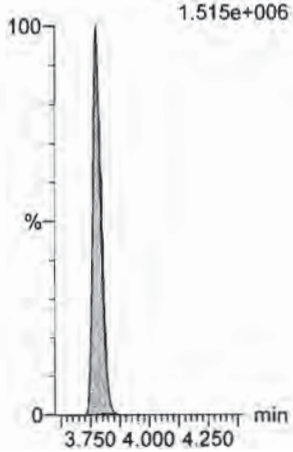
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.915e+005



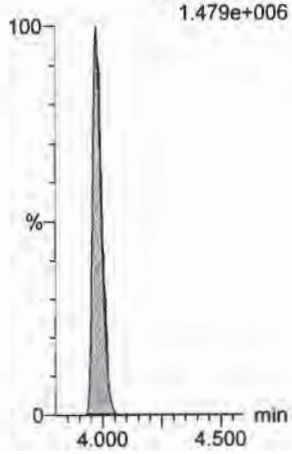
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
2.148e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.515e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.479e+006

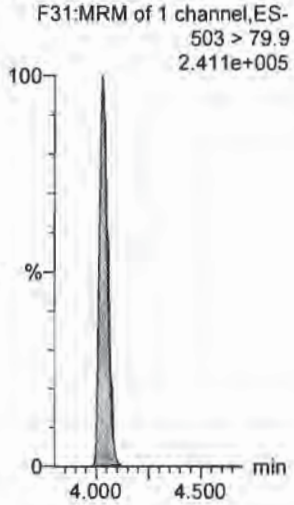


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

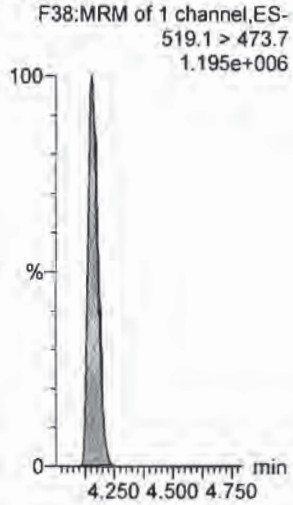
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_5, Date: 10-Aug-2017, Time: 21:05:02, ID: ST170810M2-4 PFC CS1 17H1016, Description: PFC CS1 17H1016

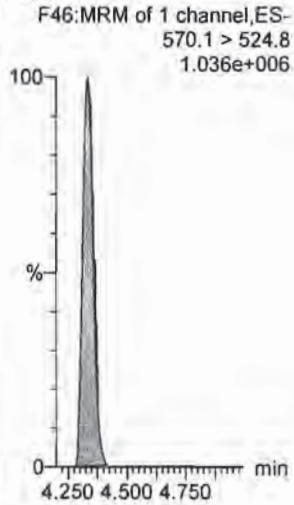
13C4-PFOS



13C6-PFDA



13C7-PFUnA

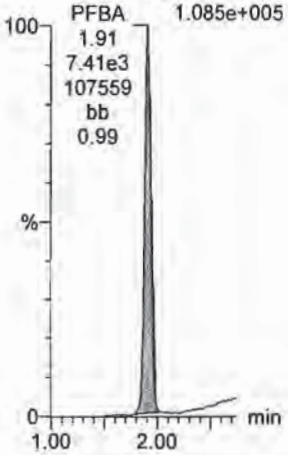


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

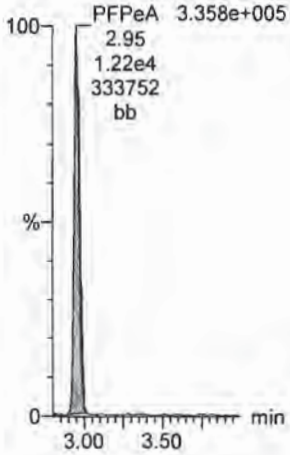
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_6, Date: 10-Aug-2017, Time: 21:15:44, ID: ST170810M2-5 PFC CS2 17H1017, Description: PFC CS2 17H1017

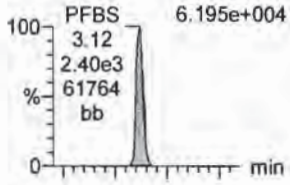
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
1.085e+005



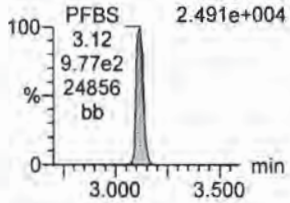
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
3.358e+005



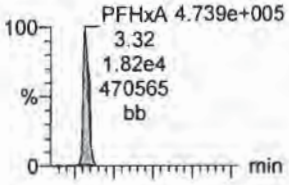
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
6.195e+004



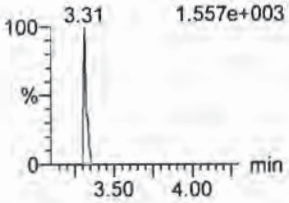
F6:MRM of 2 channels,ES-
299 > 99
2.491e+004



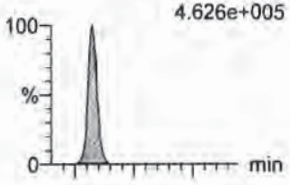
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
4.739e+005



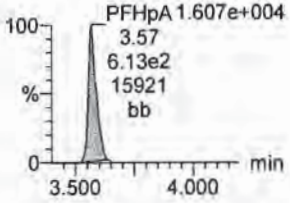
F8:MRM of 2 channels,ES-
313.2 > 119
1.557e+003



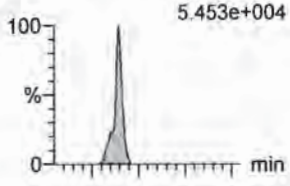
PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
4.626e+005



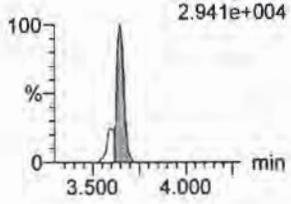
F14:MRM of 2 channels,ES-
363 > 169
PFHpA 1.607e+004



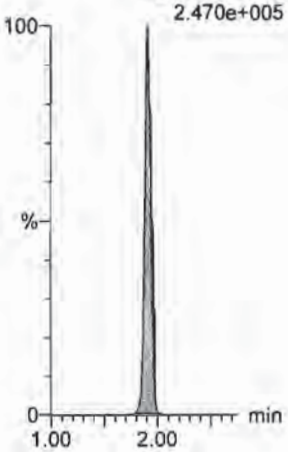
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
5.453e+004



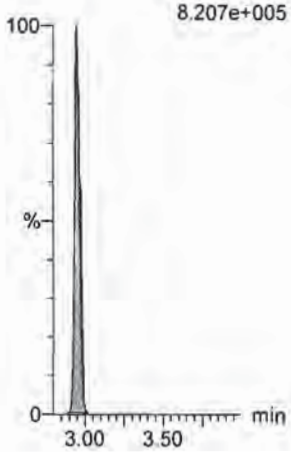
F16:MRM of 2 channels,ES-
398.9 > 99
2.941e+004



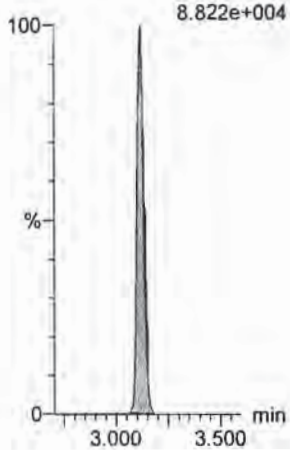
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
2.470e+005



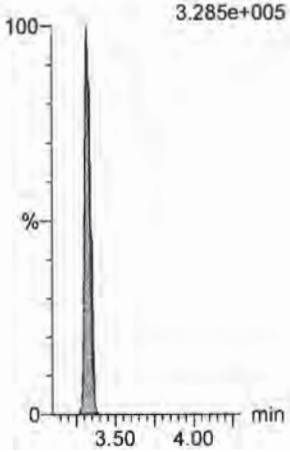
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
8.207e+005



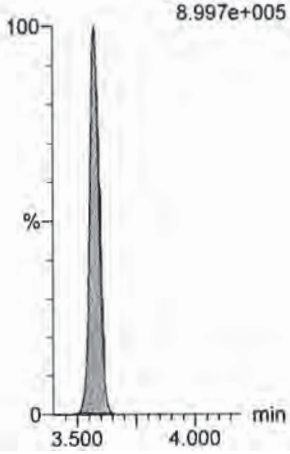
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
8.822e+004



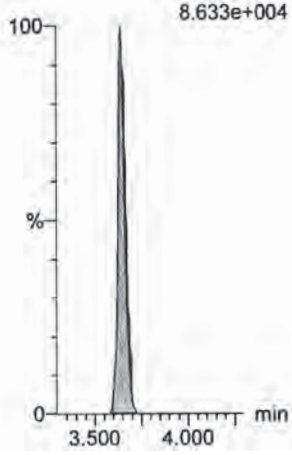
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
3.285e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
8.997e+005



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
8.633e+004



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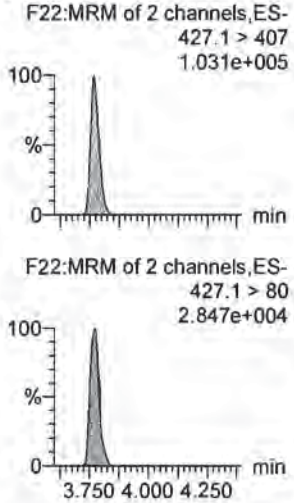
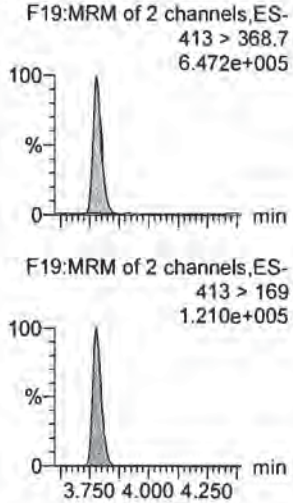
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_6, Date: 10-Aug-2017, Time: 21:15:44, ID: ST170810M2-5 PFC CS2 17H1017, Description: PFC CS2 17H1017

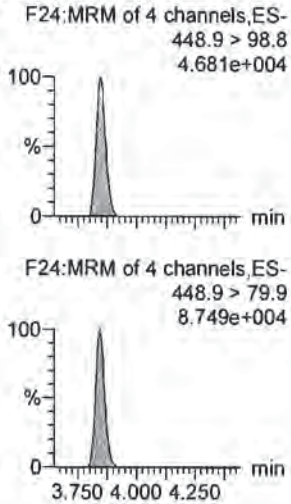
6:2 FTS



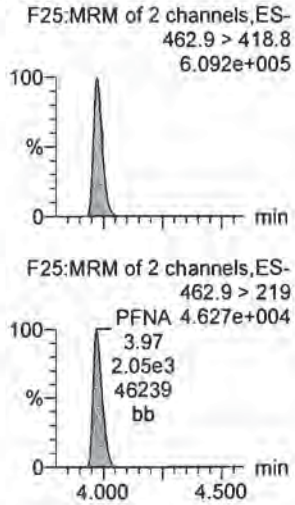
PFOA



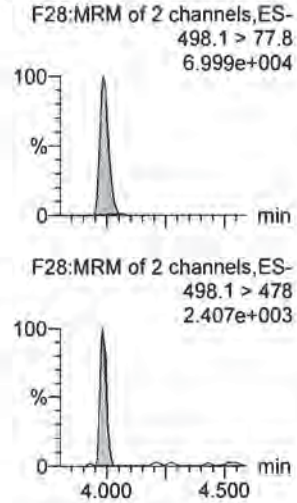
PFHpS



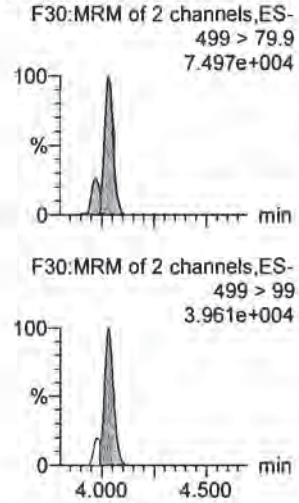
PFNA



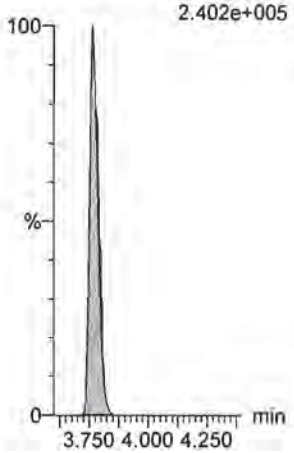
PFOSA



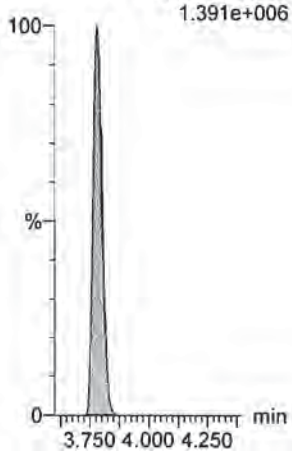
PFOS



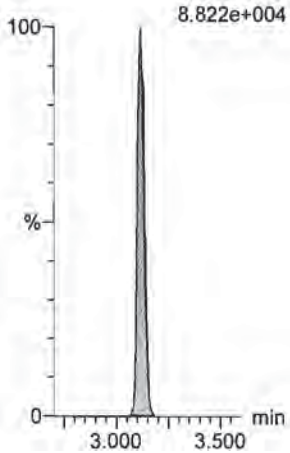
13C2-6:2 FTS



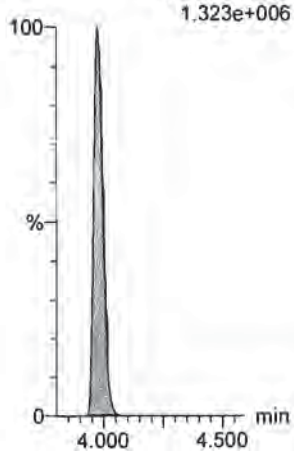
13C2-PFOA



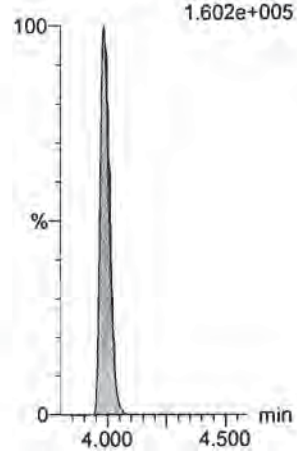
13C3-PFBS



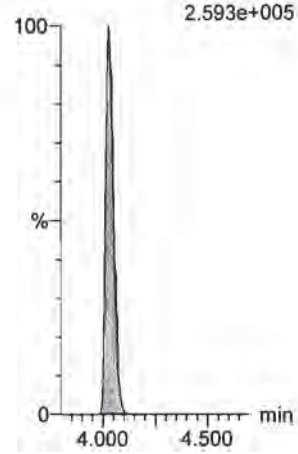
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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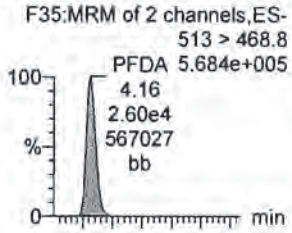
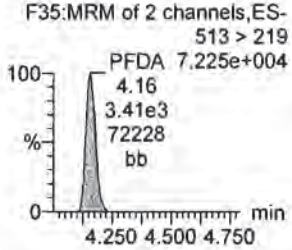
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

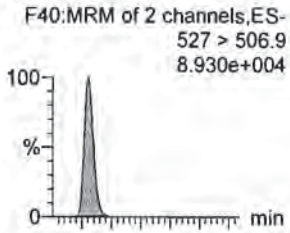
Name: 170810M2_6, Date: 10-Aug-2017, Time: 21:15:44, ID: ST170810M2-5 PFC CS2 17H1017, Description: PFC CS2 17H1017

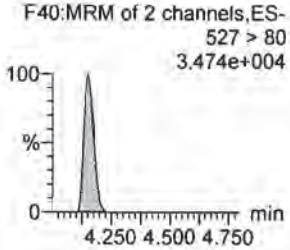
PFDA



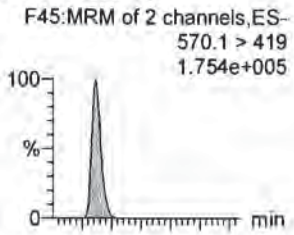


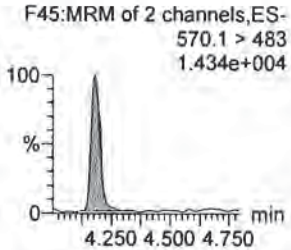
8:2 FTS



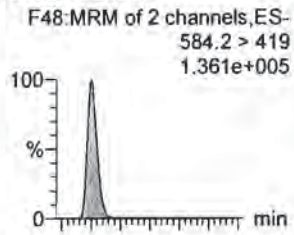


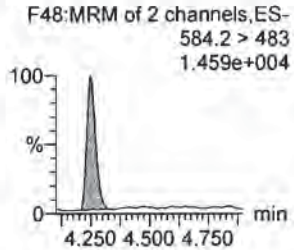
N-MeFOSAA



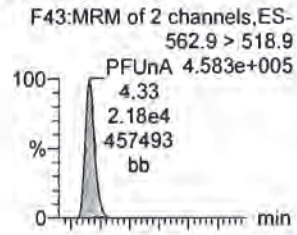


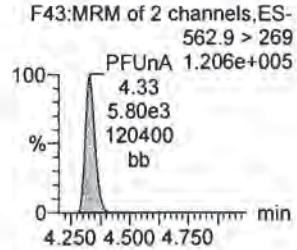
N-EtFOSAA



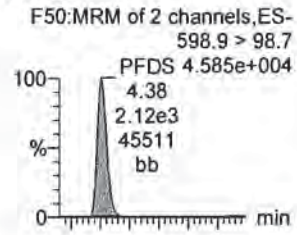


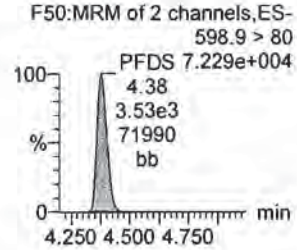
PFUnA



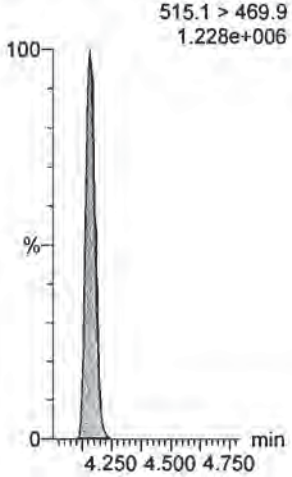


PFDS

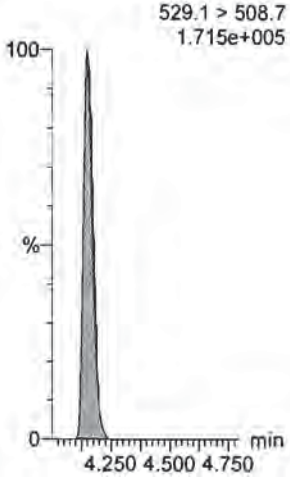




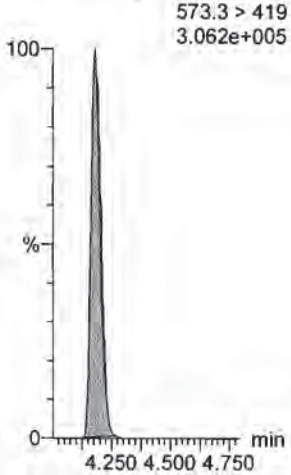
13C2-PFDA



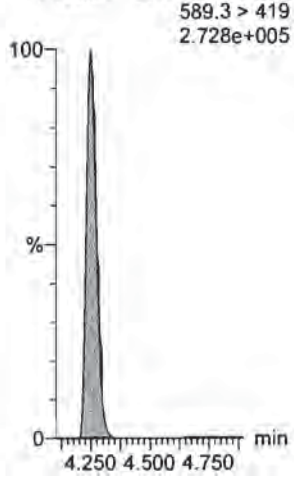
13C2-8:2 FTS



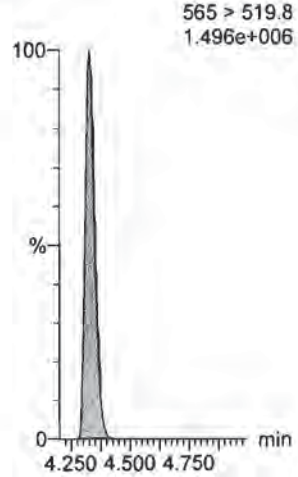
d3-N-MeFOSAA



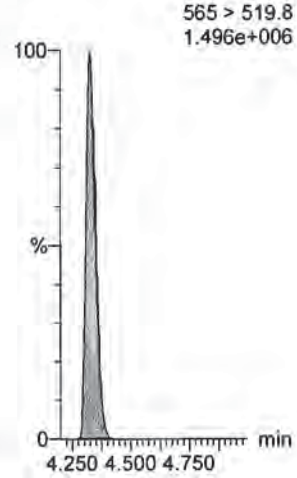
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



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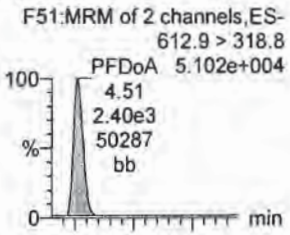
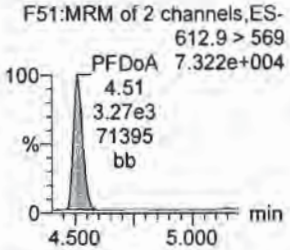
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

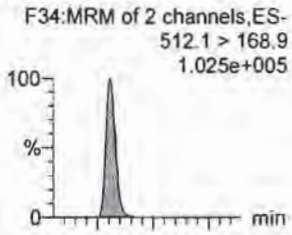
Name: 170810M2_6, Date: 10-Aug-2017, Time: 21:15:44, ID: ST170810M2-5 PFC CS2 17H1017, Description: PFC CS2 17H1017

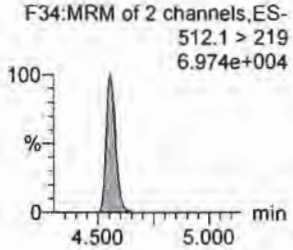
PFDoA



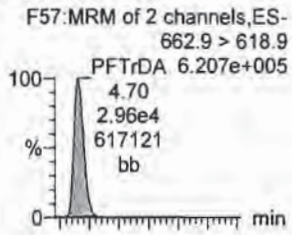


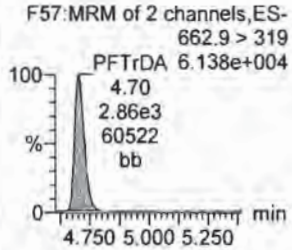
N-MeFOSA



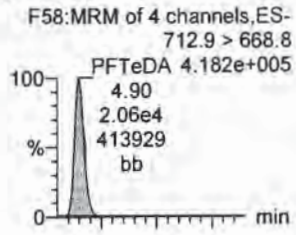


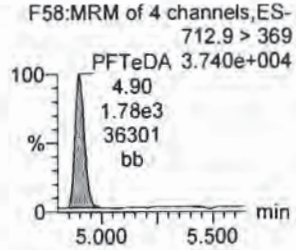
PFTrDA



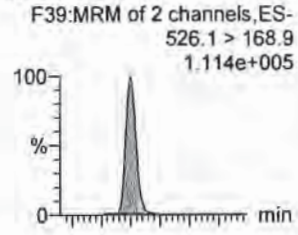


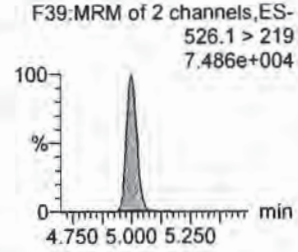
PFTeDA



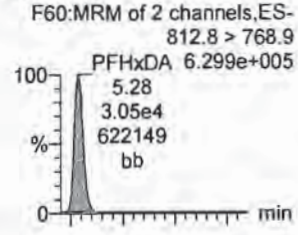


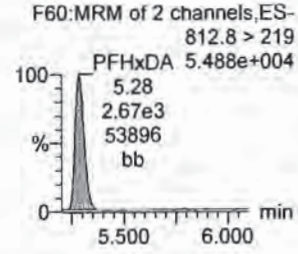
N-EtFOSA



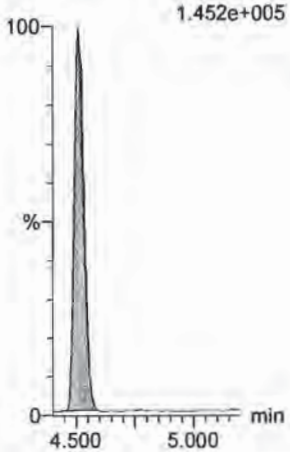


PFHxDA

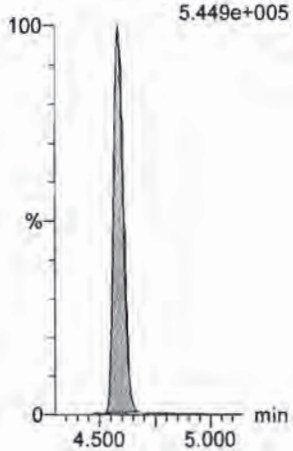




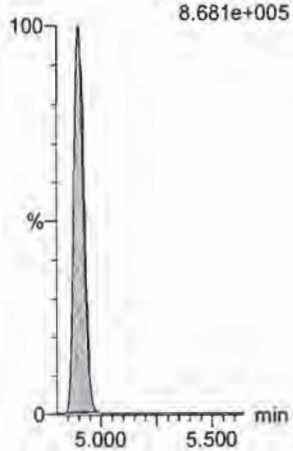
13C2-PFDoA



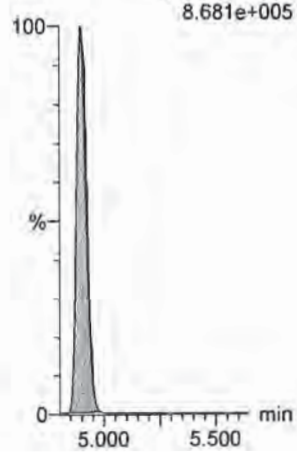
d3-N-MeFOSA



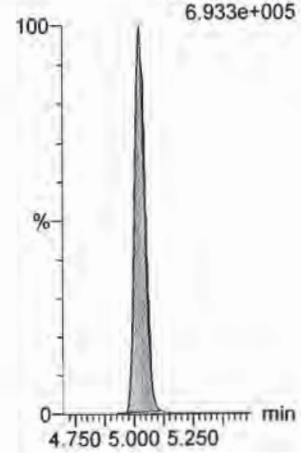
13C2-PFTeDA



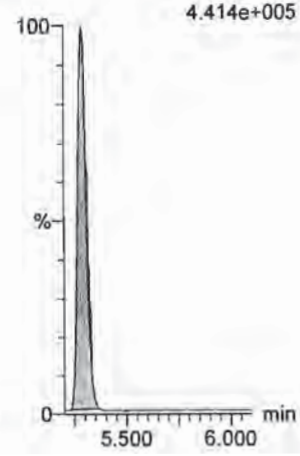
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



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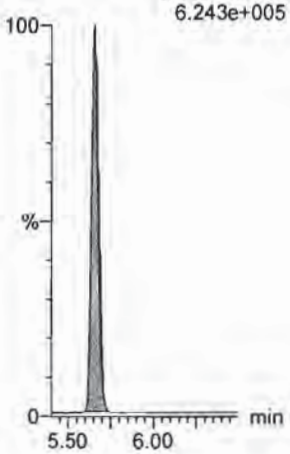
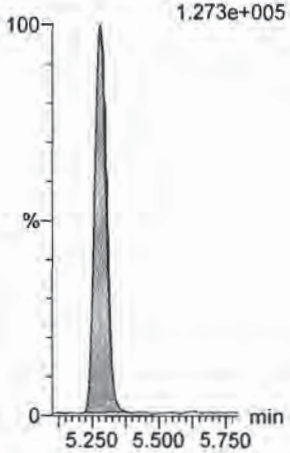
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_6, Date: 10-Aug-2017, Time: 21:15:44, ID: ST170810M2-5 PFC CS2 17H1017, Description: PFC CS2 17H1017

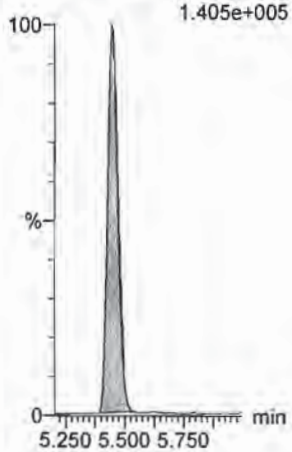
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
6.243e+005



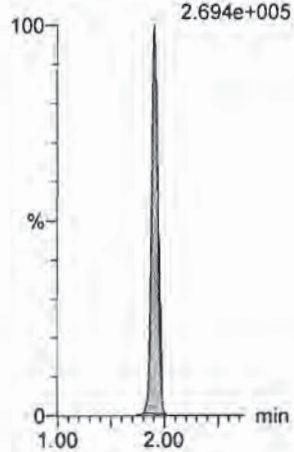
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.273e+005



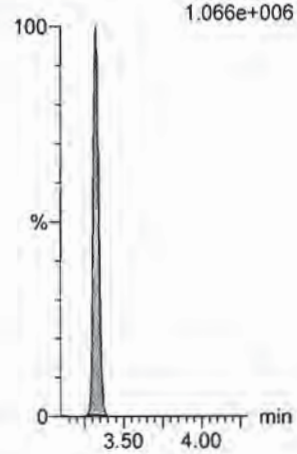
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.405e+005



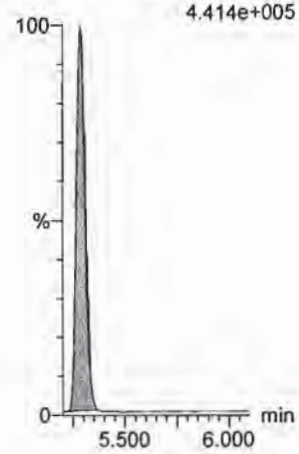
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.694e+005



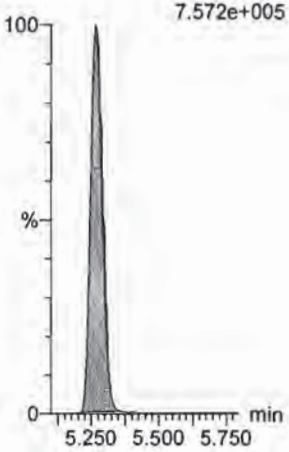
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.066e+006



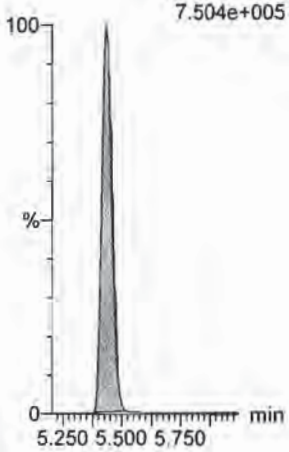
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.414e+005



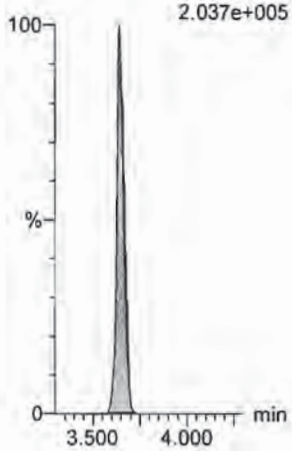
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
7.572e+005



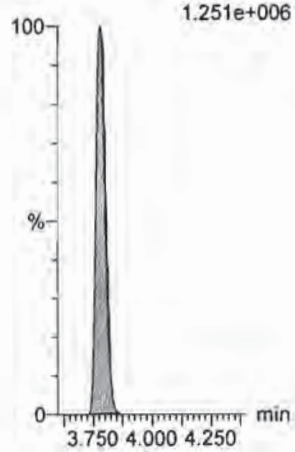
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.504e+005



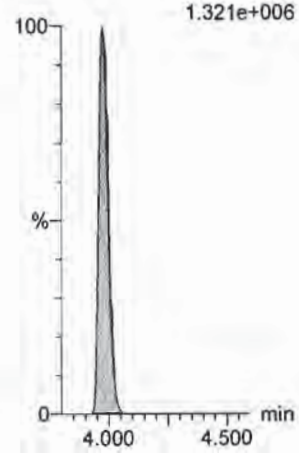
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
2.037e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.251e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.321e+006



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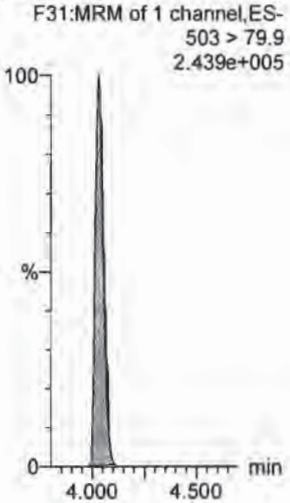
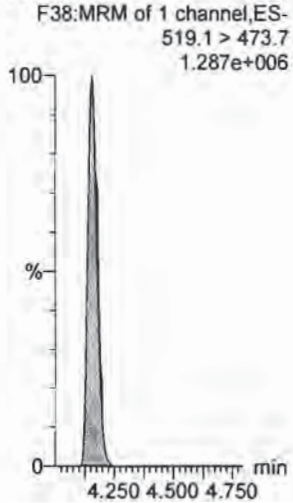
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_6, Date: 10-Aug-2017, Time: 21:15:44, ID: ST170810M2-5 PFC CS2 17H1017, Description: PFC CS2 17H1017

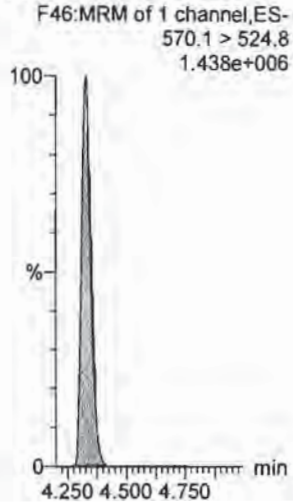
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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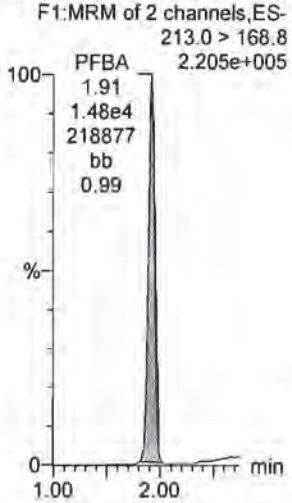
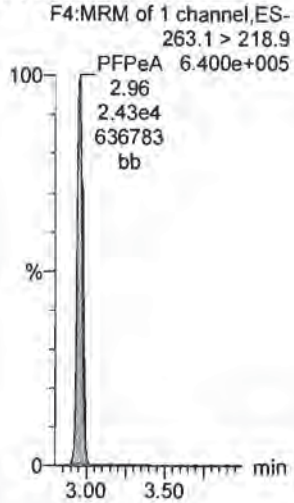
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_7, Date: 10-Aug-2017, Time: 21:26:22, ID: ST170810M2-6 PFC CS3 17H1005, Description: PFC CS3 17H1005

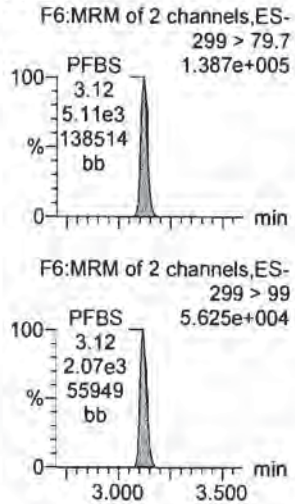
PFBA



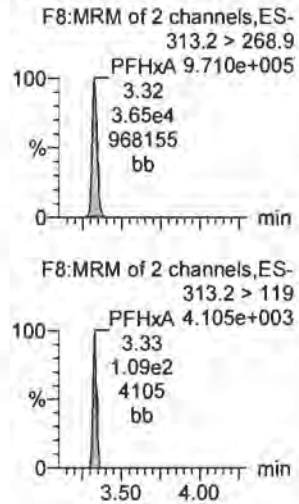
PFPeA



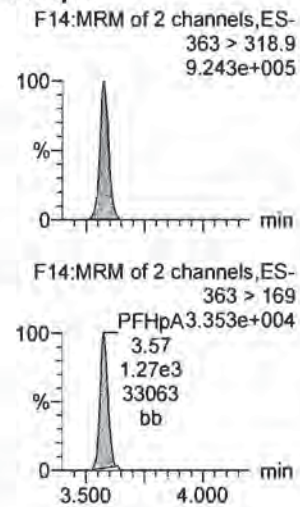
PFBS



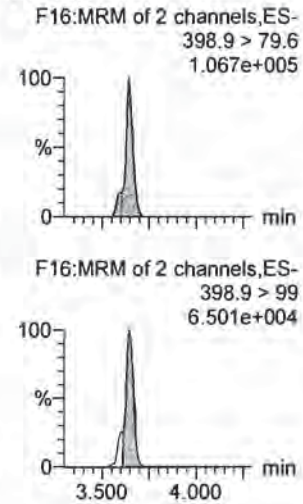
PFHxA



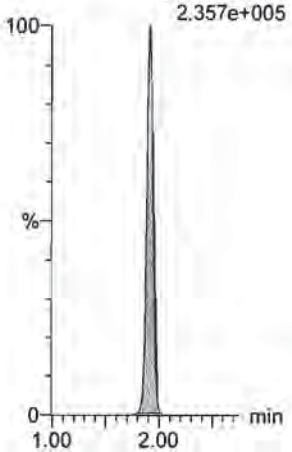
PFHpA



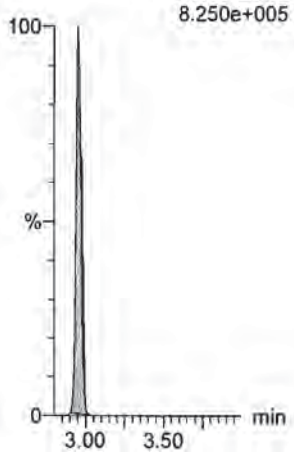
PFHxS



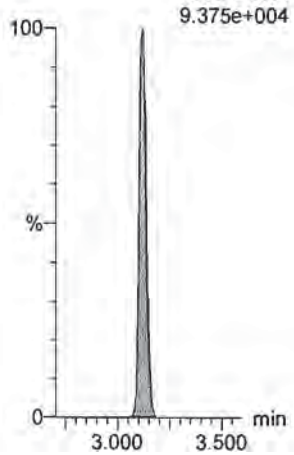
13C3-PFBA



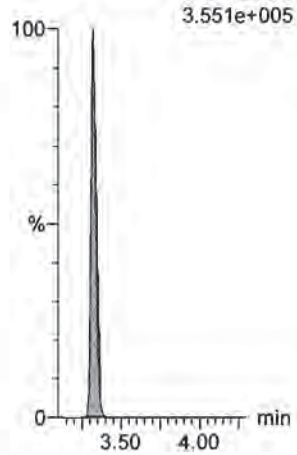
13C3-PFPeA



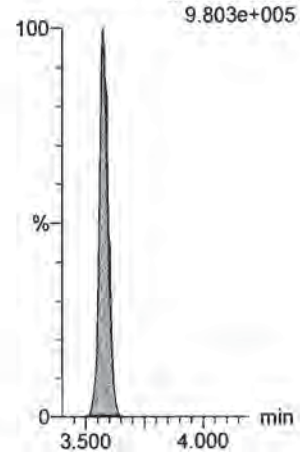
13C3-PFBS



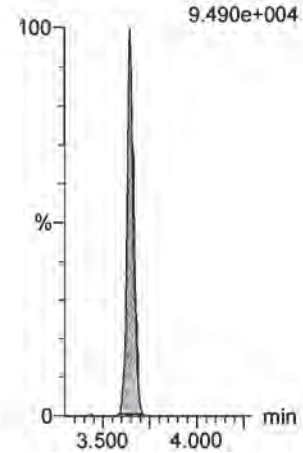
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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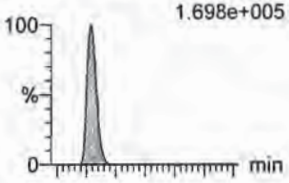
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

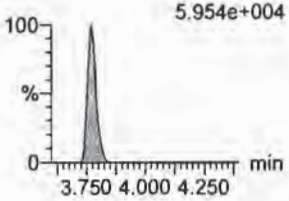
Name: 170810M2_7, Date: 10-Aug-2017, Time: 21:26:22, ID: ST170810M2-6 PFC CS3 17H1005, Description: PFC CS3 17H1005

6:2 FTS

F22:MRM of 2 channels,ES-
427.1 > 407
1.698e+005

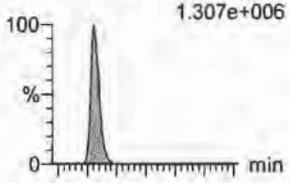


F22:MRM of 2 channels,ES-
427.1 > 80
5.954e+004

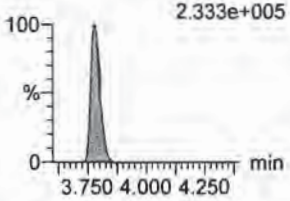


PFOA

F19:MRM of 2 channels,ES-
413 > 368.7
1.307e+006

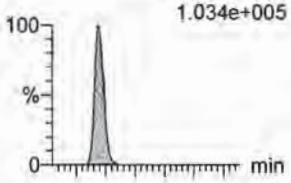


F19:MRM of 2 channels,ES-
413 > 169
2.333e+005

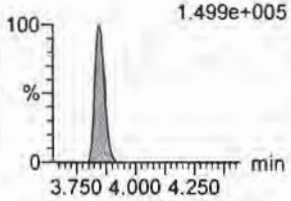


PFHpS

F24:MRM of 4 channels,ES-
448.9 > 98.8
1.034e+005

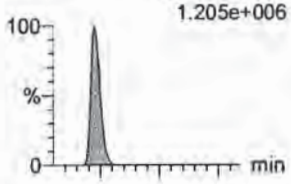


F24:MRM of 4 channels,ES-
448.9 > 79.9
1.499e+005

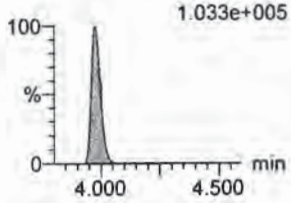


PFNA

F25:MRM of 2 channels,ES-
462.9 > 418.8
1.205e+006

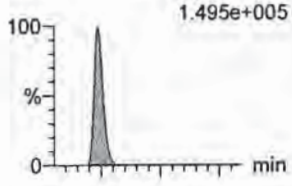


F25:MRM of 2 channels,ES-
462.9 > 219
1.033e+005

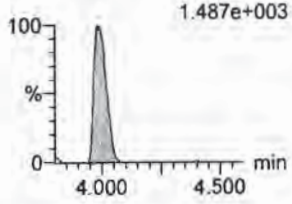


PFOSA

F28:MRM of 2 channels,ES-
498.1 > 77.8
1.495e+005

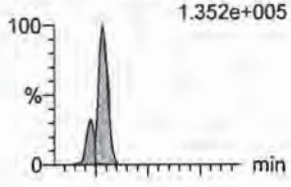


F28:MRM of 2 channels,ES-
498.1 > 478
1.487e+003

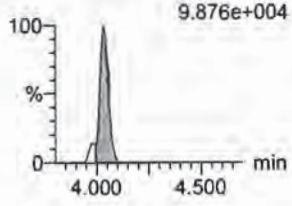


PFOS

F30:MRM of 2 channels,ES-
499 > 79.9
1.352e+005

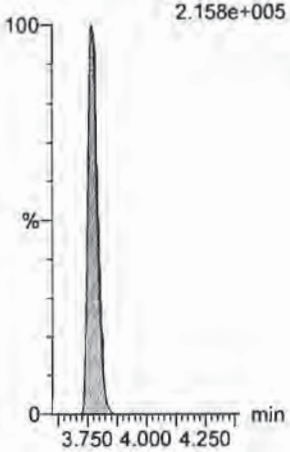


F30:MRM of 2 channels,ES-
499 > 99
9.876e+004



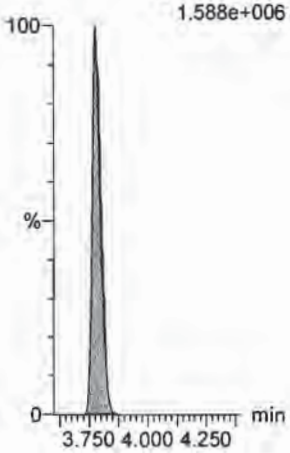
13C2-6:2 FTS

F23:MRM of 1 channel,ES-
429.1 > 408.9
2.158e+005



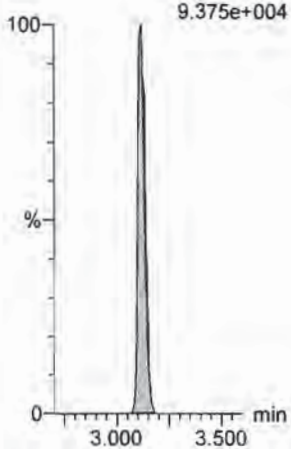
13C2-PFOA

F20:MRM of 1 channel,ES-
414.9 > 369.7
1.588e+006



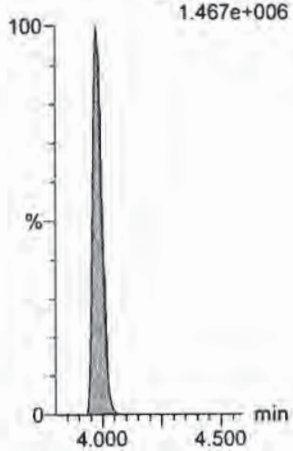
13C3-PFBS

F7:MRM of 1 channel,ES-
302 > 98.8
9.375e+004



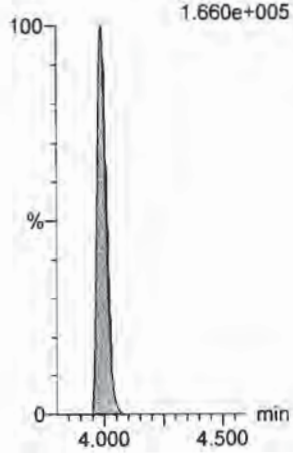
13C5-PFNA

F26:MRM of 1 channel,ES-
468.2 > 422.9
1.467e+006



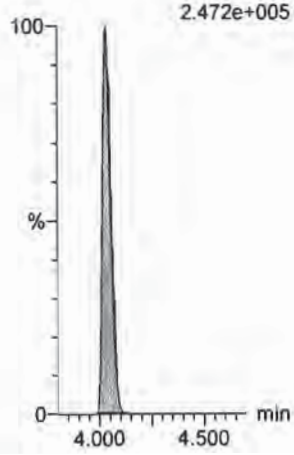
13C8-PFOSA

F32:MRM of 1 channel,ES-
506.1 > 77.7
1.660e+005



13C8-PFOS

F33:MRM of 1 channel,ES-
507 > 79.9
2.472e+005



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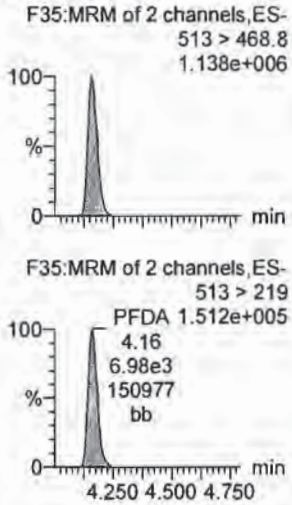
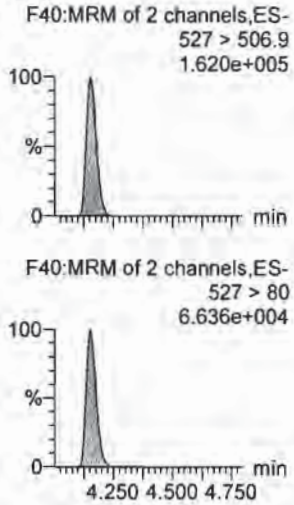
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_7, Date: 10-Aug-2017, Time: 21:26:22, ID: ST170810M2-6 PFC CS3 17H1005, Description: PFC CS3 17H1005

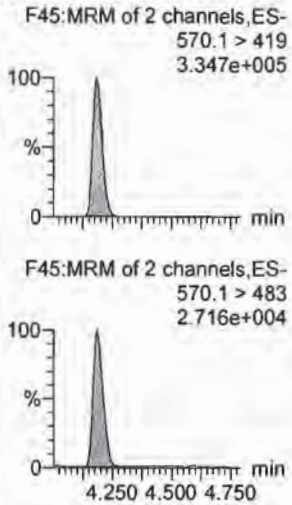
PFDA



8:2 FTS



N-MeFOSAA



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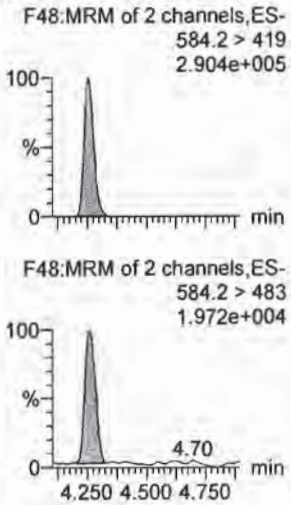
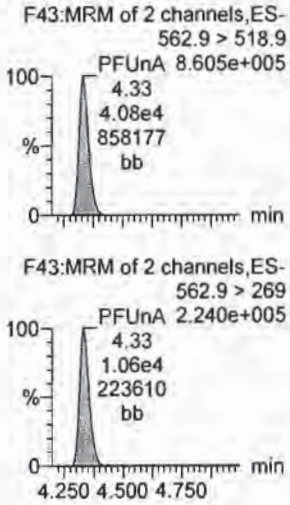
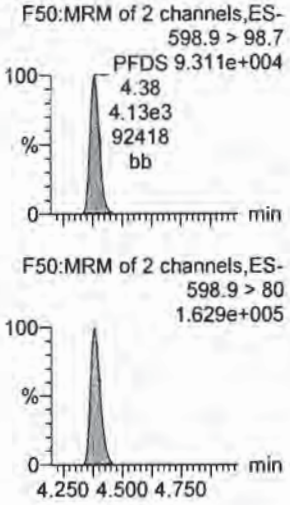


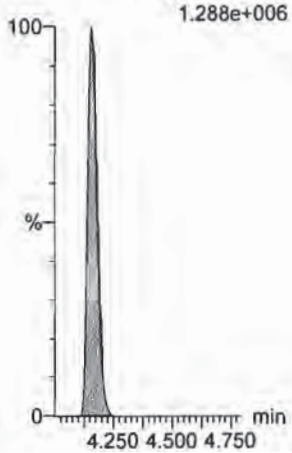
PFUnA



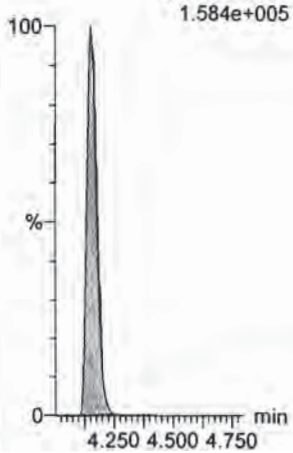
PFDS



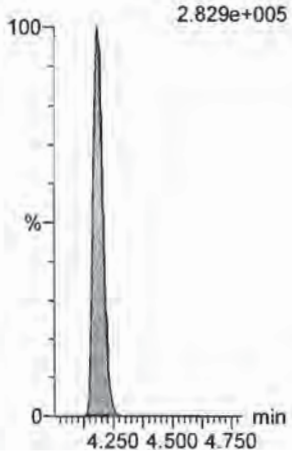
13C2-PFDA



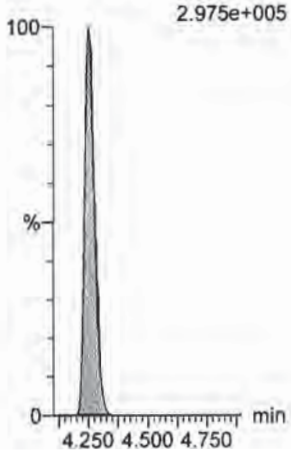
13C2-8:2 FTS



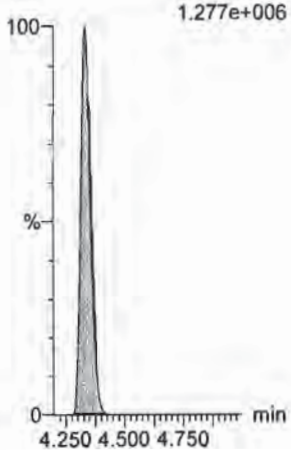
d3-N-MeFOSAA



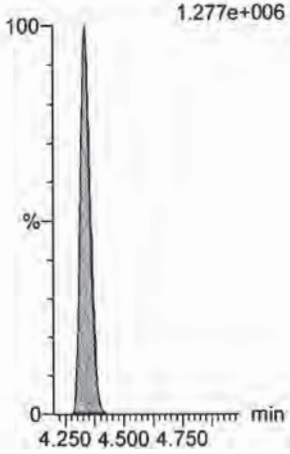
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



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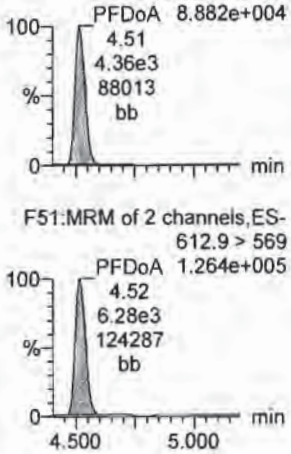
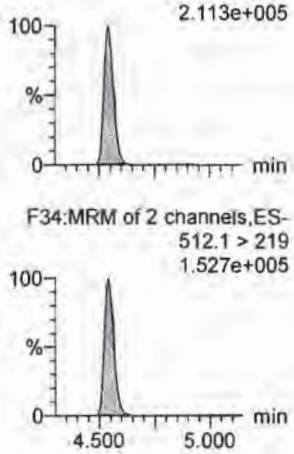
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_7, Date: 10-Aug-2017, Time: 21:26:22, ID: ST170810M2-6 PFC CS3 17H1005, Description: PFC CS3 17H1005

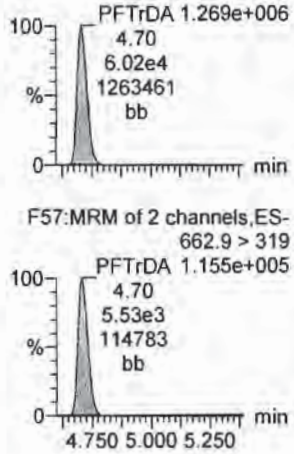
PFDoA



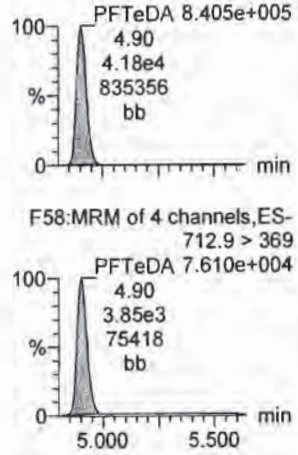
N-MeFOSA



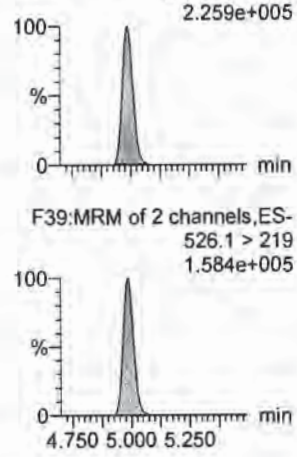
PFTrDA



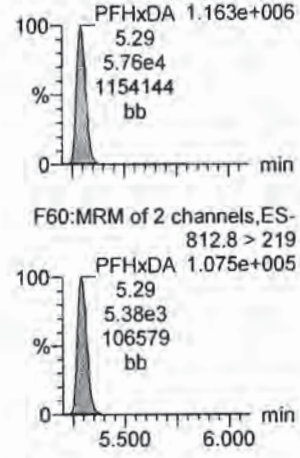
PFTeDA



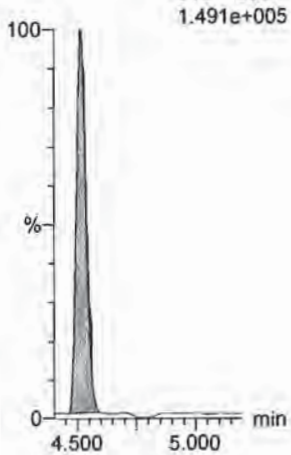
N-EtFOSA



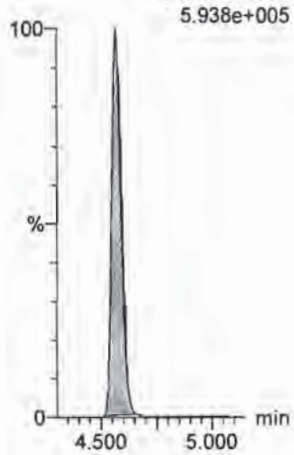
PFHxDA



13C2-PFDoA



d3-N-MeFOSA



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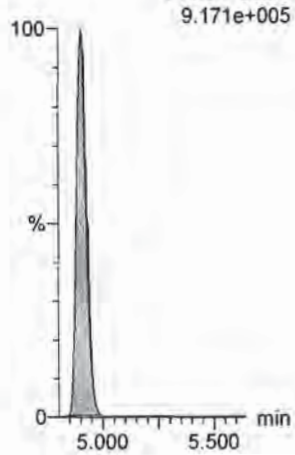

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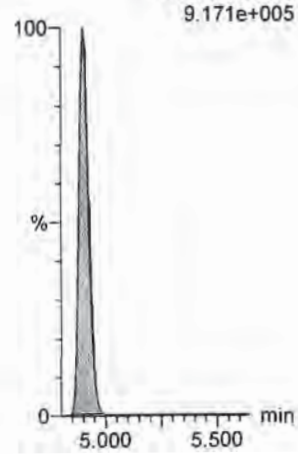
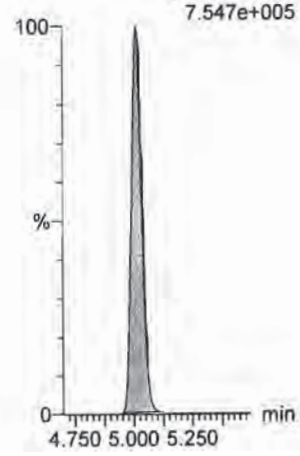
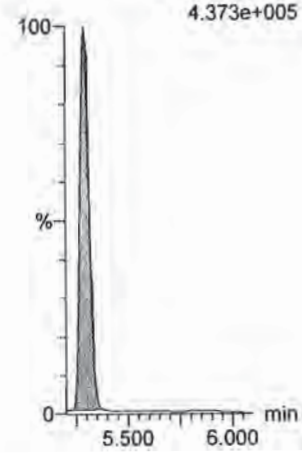


d5-N-ETFOSA



13C2-PFHxDA



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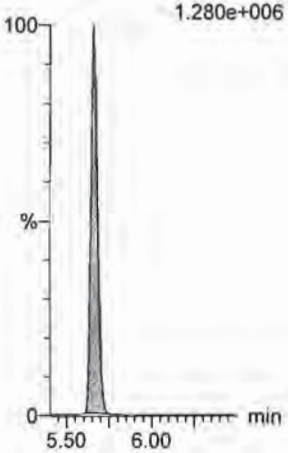
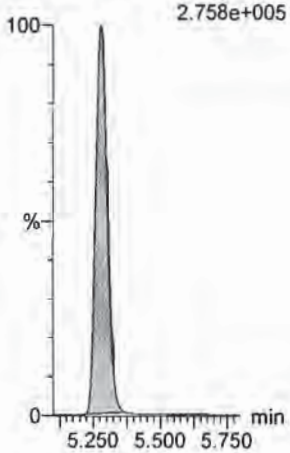
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_7, Date: 10-Aug-2017, Time: 21:26:22, ID: ST170810M2-6 PFC CS3 17H1005, Description: PFC CS3 17H1005

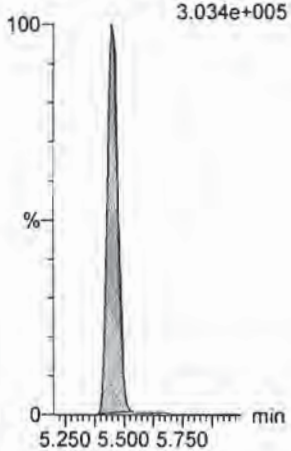
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.280e+006



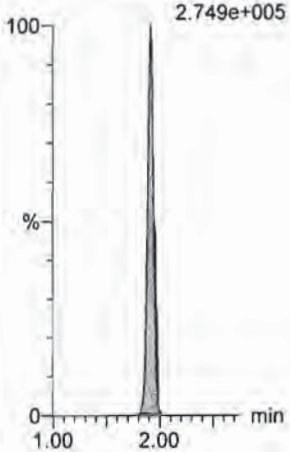
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
2.758e+005



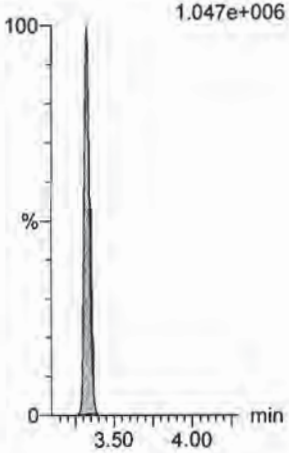
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
3.034e+005



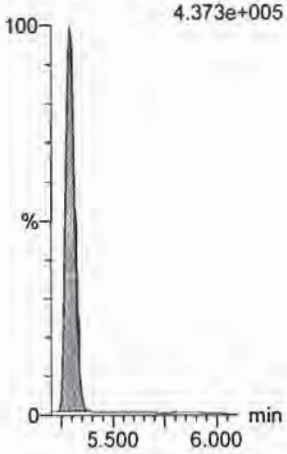
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.749e+005



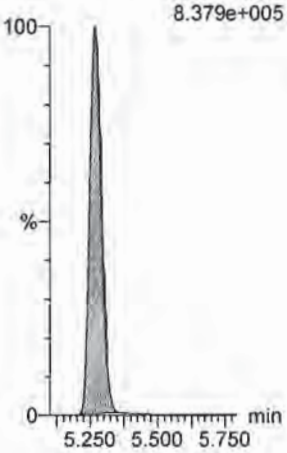
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.047e+006



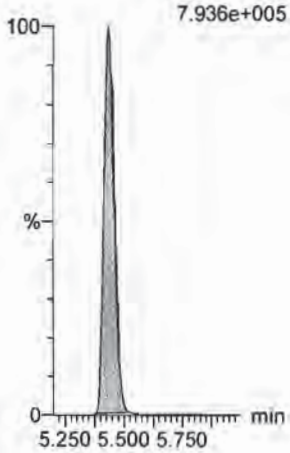
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.373e+005



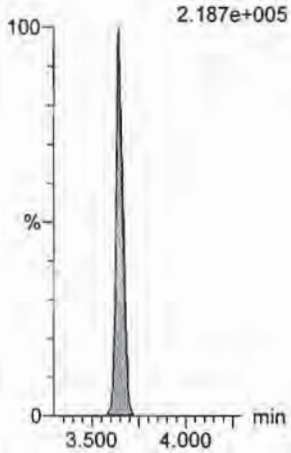
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
8.379e+005



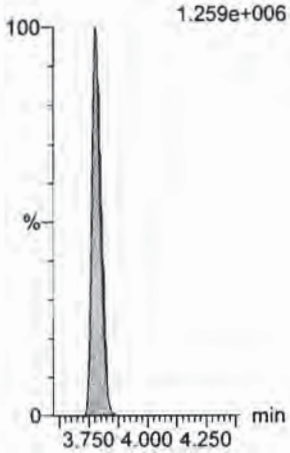
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.936e+005



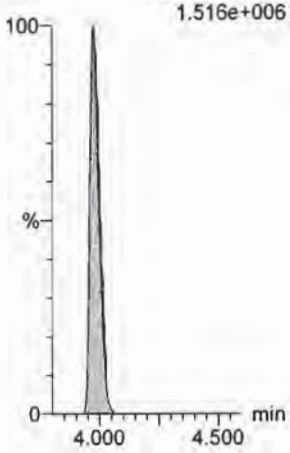
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
2.187e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.259e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.516e+006

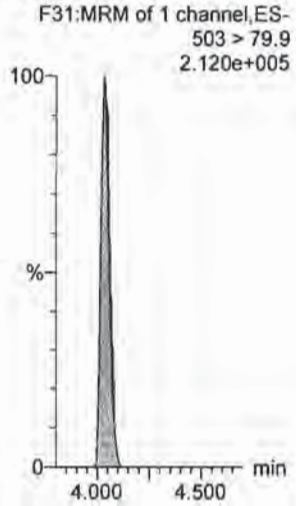


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

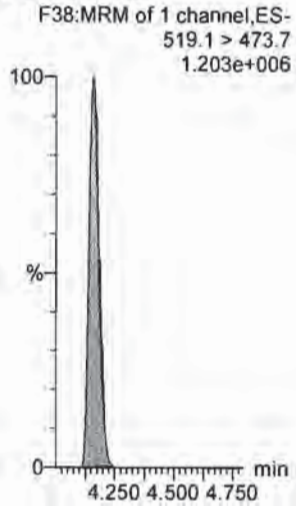
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_7, Date: 10-Aug-2017, Time: 21:26:22, ID: ST170810M2-6 PFC CS3 17H1005, Description: PFC CS3 17H1005

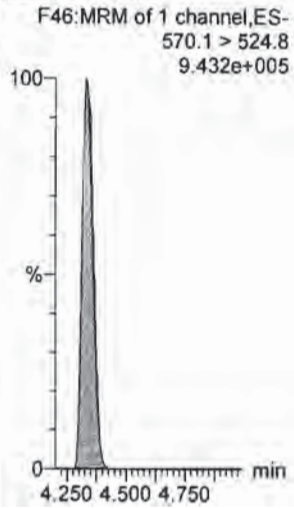
13C4-PFOS



13C6-PFDA



13C7-PFUnA

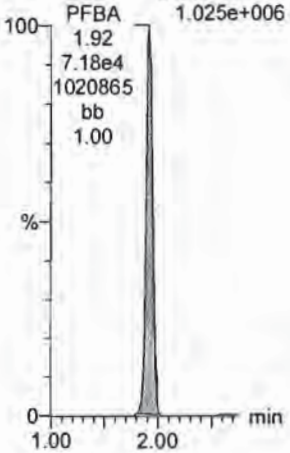


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

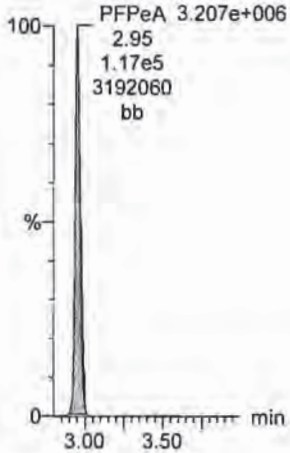
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_8, Date: 10-Aug-2017, Time: 21:37:09, ID: ST170810M2-7 PFC CS4 17H1018, Description: PFC CS4 17H1018

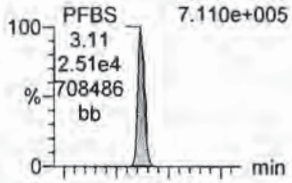
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
1.025e+006



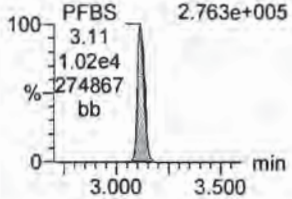
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
3.207e+006



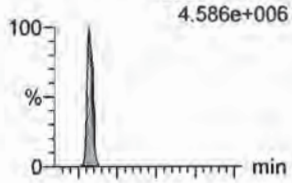
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
7.110e+005



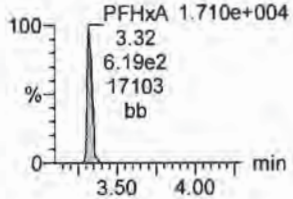
F6:MRM of 2 channels,ES-
299 > 99
2.763e+005



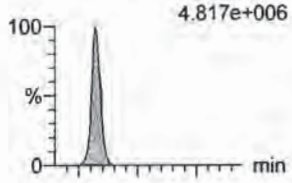
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
4.586e+006



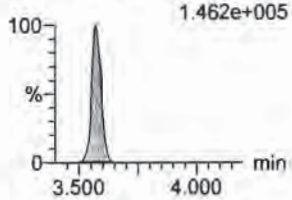
F8:MRM of 2 channels,ES-
313.2 > 119
1.710e+004



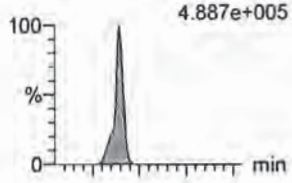
PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
4.817e+006



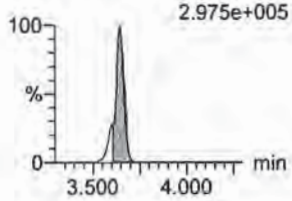
F14:MRM of 2 channels,ES-
363 > 169
1.462e+005



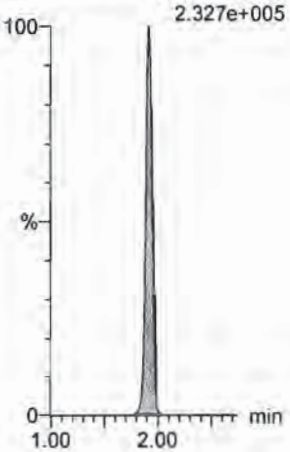
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
4.887e+005



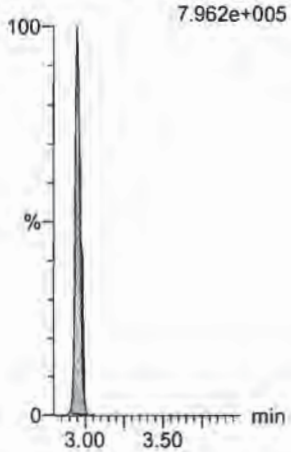
F16:MRM of 2 channels,ES-
398.9 > 99
2.975e+005



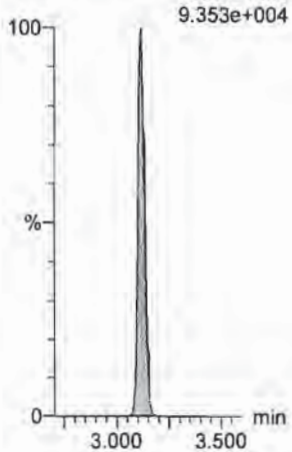
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
2.327e+005



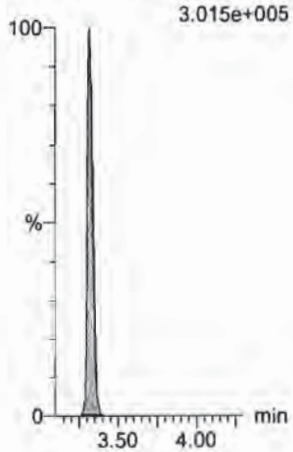
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
7.962e+005



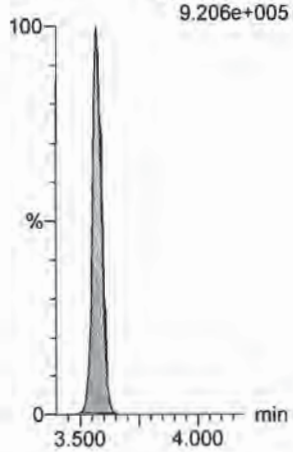
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
9.353e+004



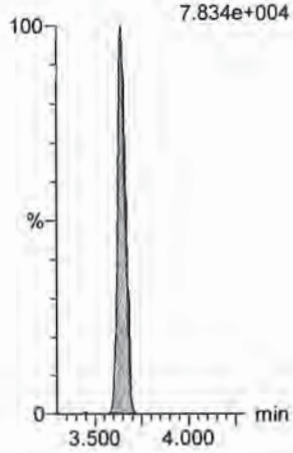
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
3.015e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
9.206e+005



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
7.834e+004



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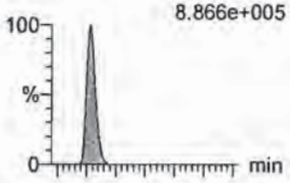
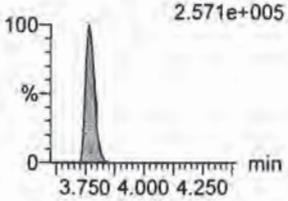
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_8, Date: 10-Aug-2017, Time: 21:37:09, ID: ST170810M2-7 PFC CS4 17H1018, Description: PFC CS4 17H1018

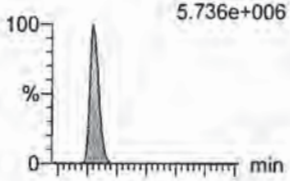
6:2 FTS
F22:MRM of 2 channels,ES-
427.1 > 407
8.866e+005



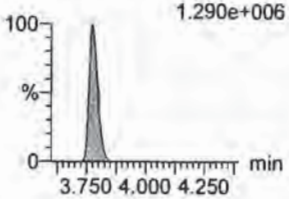
F22:MRM of 2 channels,ES-
427.1 > 80
2.571e+005



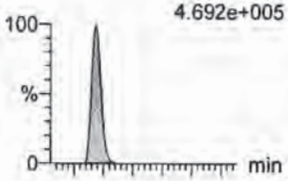
PFOA
F19:MRM of 2 channels,ES-
413 > 368.7
5.736e+006



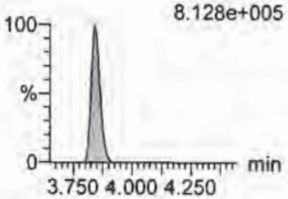
F19:MRM of 2 channels,ES-
413 > 169
1.290e+006



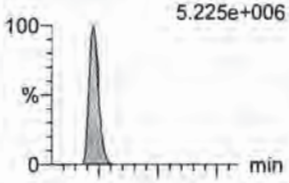
PFHpS
F24:MRM of 4 channels,ES-
448.9 > 98.8
4.692e+005



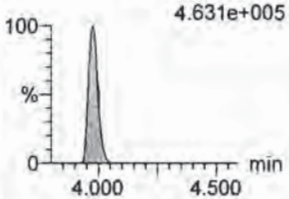
F24:MRM of 4 channels,ES-
448.9 > 79.9
8.128e+005



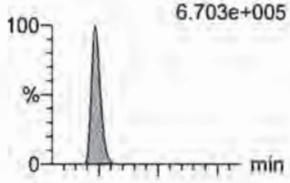
PFNA
F25:MRM of 2 channels,ES-
462.9 > 418.8
5.225e+006



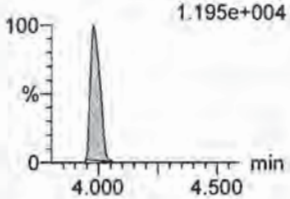
F25:MRM of 2 channels,ES-
462.9 > 219
4.631e+005



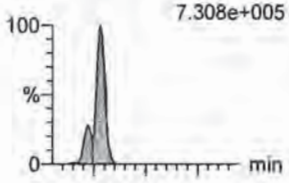
PFOSA
F28:MRM of 2 channels,ES-
498.1 > 77.8
6.703e+005



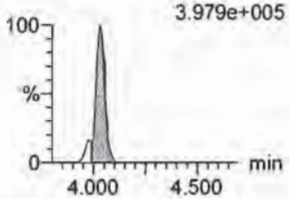
F28:MRM of 2 channels,ES-
498.1 > 478
1.195e+004



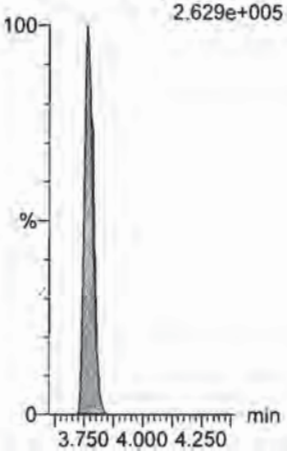
PFOS
F30:MRM of 2 channels,ES-
499 > 79.9
7.308e+005



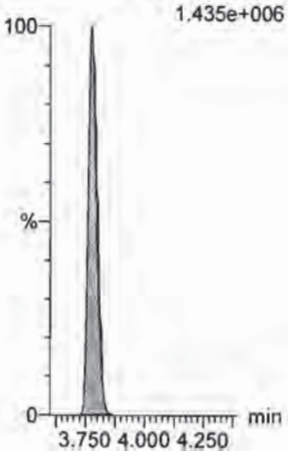
F30:MRM of 2 channels,ES-
499 > 99
3.979e+005



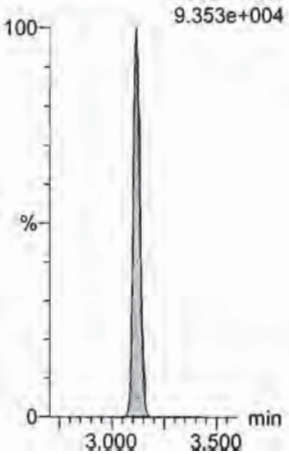
13C2-6:2 FTS
F23:MRM of 1 channel,ES-
429.1 > 408.9
2.629e+005



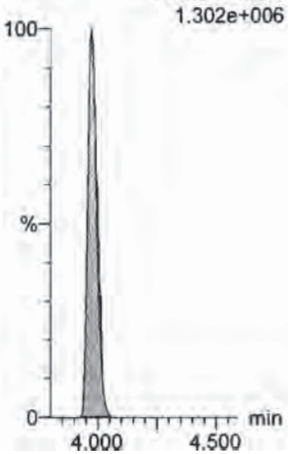
13C2-PFOA
F20:MRM of 1 channel,ES-
414.9 > 369.7
1.435e+006



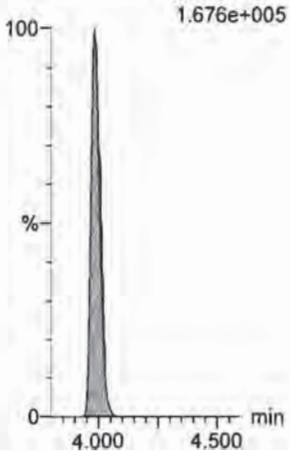
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
9.353e+004



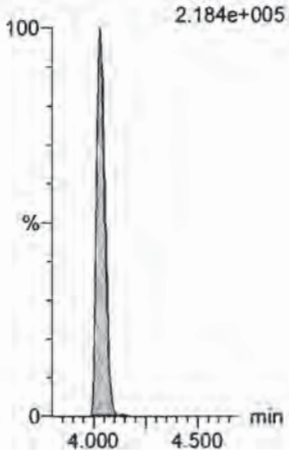
13C5-PFNA
F26:MRM of 1 channel,ES-
468.2 > 422.9
1.302e+006



13C8-PFOSA
F32:MRM of 1 channel,ES-
506.1 > 77.7
1.676e+005



13C8-PFOS
F33:MRM of 1 channel,ES-
507 > 79.9
2.184e+005



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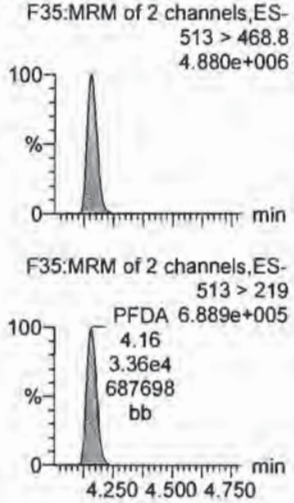
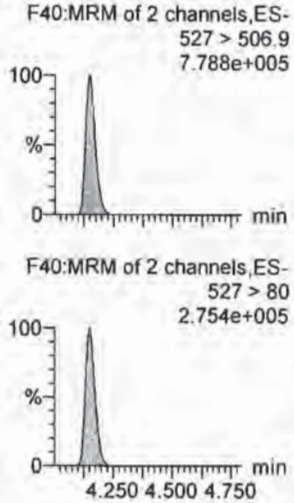
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_8, Date: 10-Aug-2017, Time: 21:37:09, ID: ST170810M2-7 PFC CS4 17H1018, Description: PFC CS4 17H1018

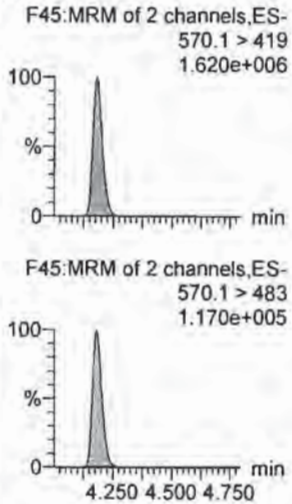
PFDA



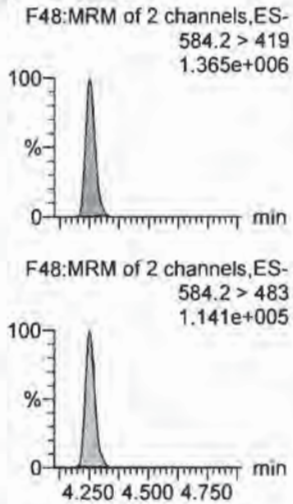
8:2 FTS



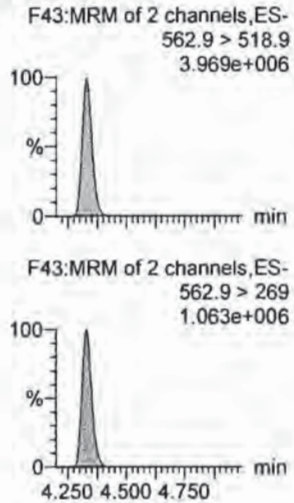
N-MeFOSAA



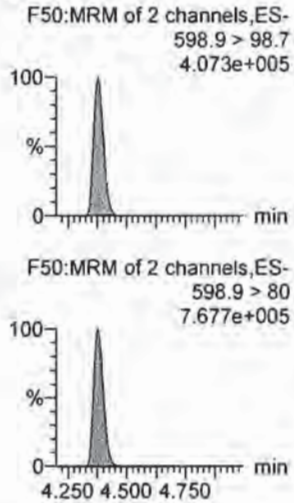
N-EtFOSAA



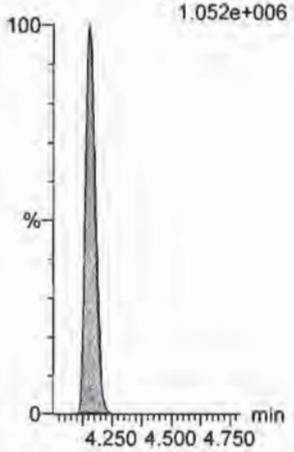
PFUnA



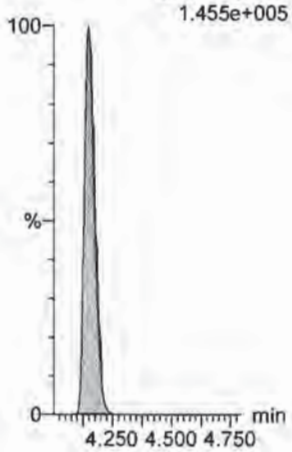
PFDS



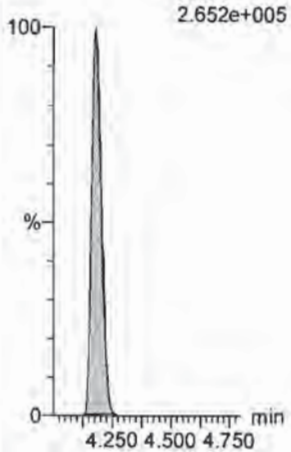
13C2-PFDA



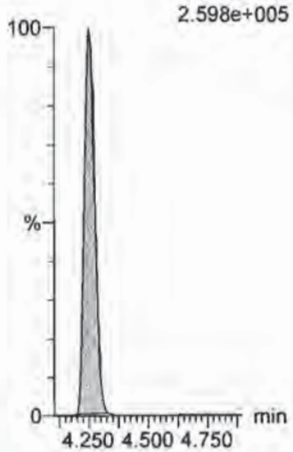
13C2-8:2 FTS



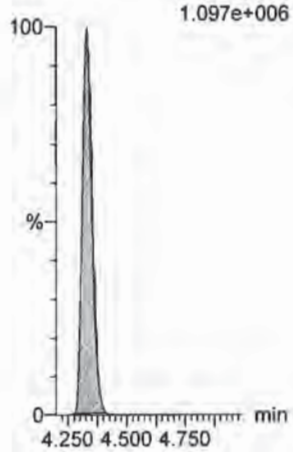
d3-N-MeFOSAA



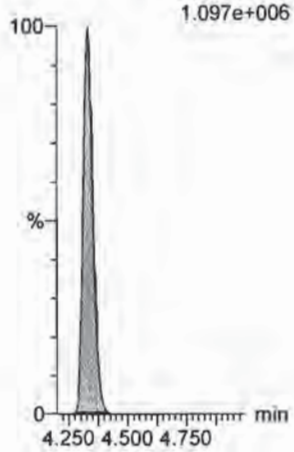
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



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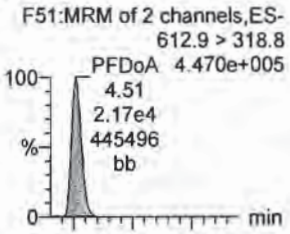
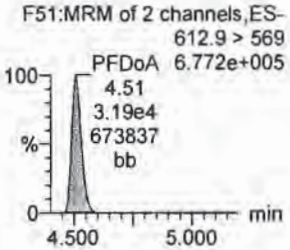
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

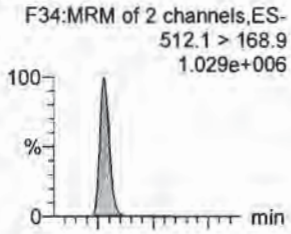
Name: 170810M2_8, Date: 10-Aug-2017, Time: 21:37:09, ID: ST170810M2-7 PFC CS4 17H1018, Description: PFC CS4 17H1018

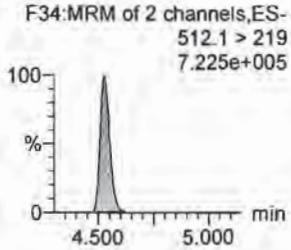
PFDoA



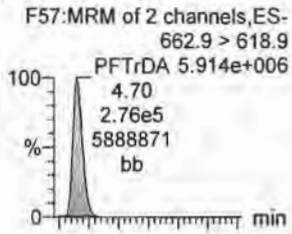


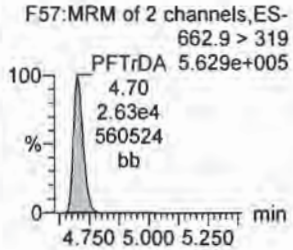
N-MeFOSA



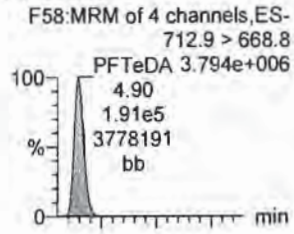


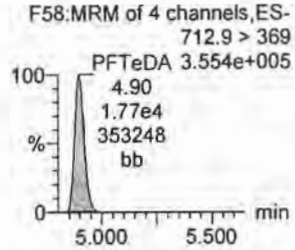
PFTrDA



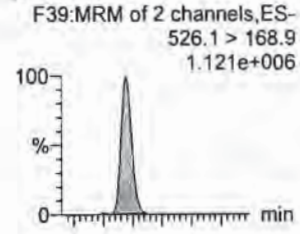


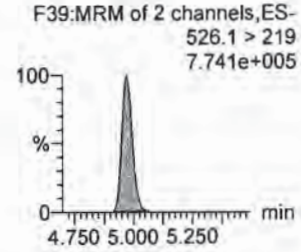
PFTeDA



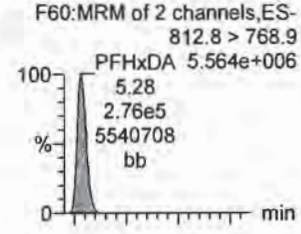


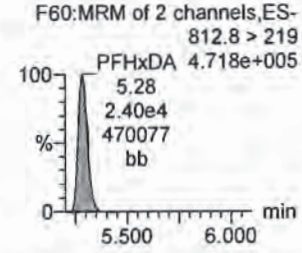
N-EtFOSA



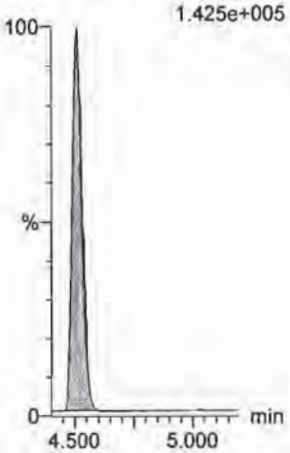


PFHxDA

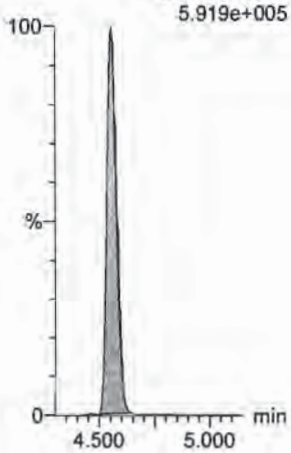




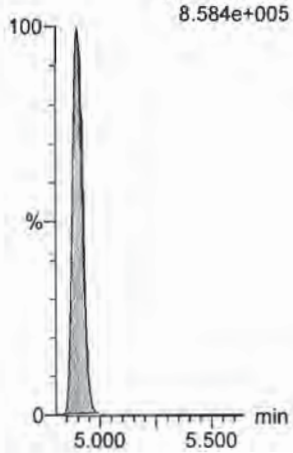
13C2-PFDoA



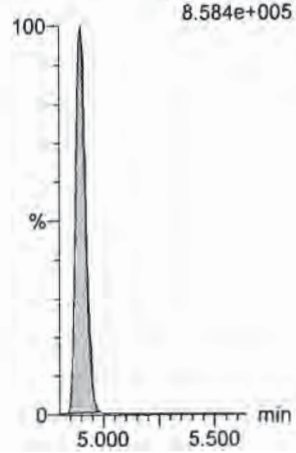
d3-N-MeFOSA



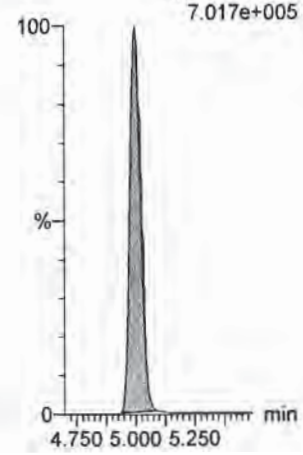
13C2-PFTeDA



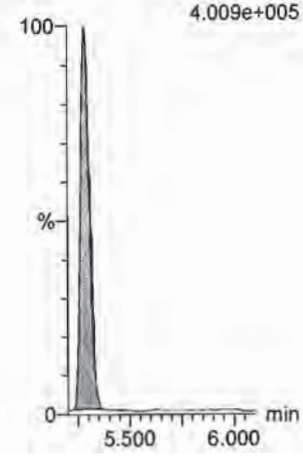
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



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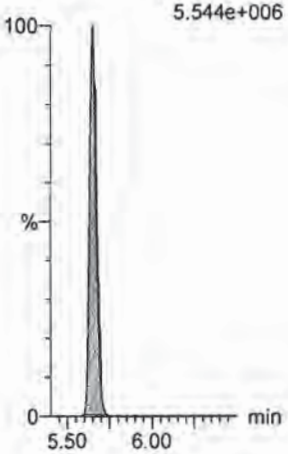
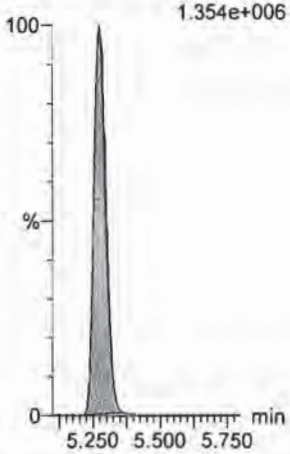
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_8, Date: 10-Aug-2017, Time: 21:37:09, ID: ST170810M2-7 PFC CS4 17H1018, Description: PFC CS4 17H1018

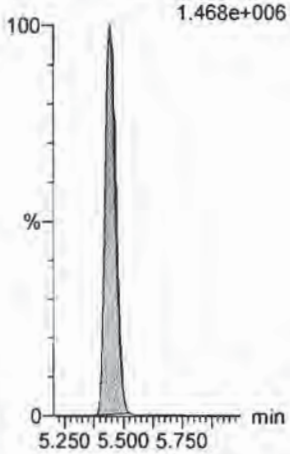
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
5.544e+006



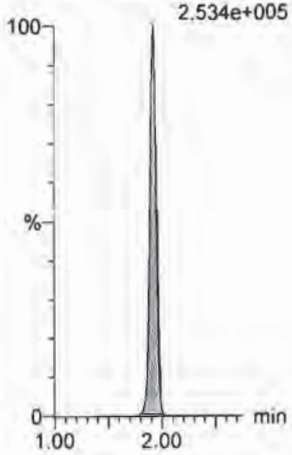
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.354e+006



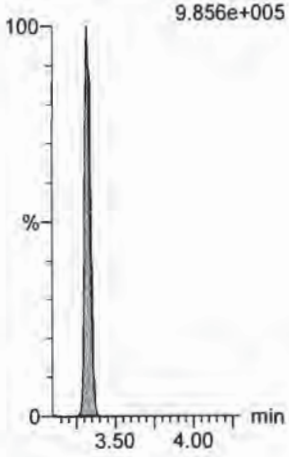
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.468e+006



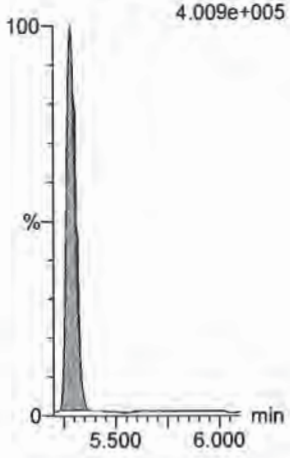
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.534e+005



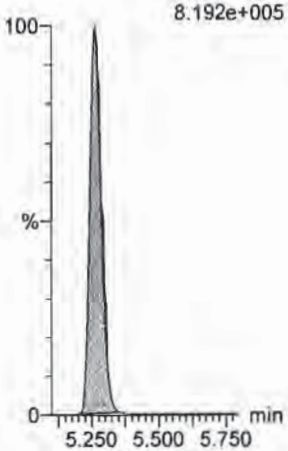
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
9.856e+005



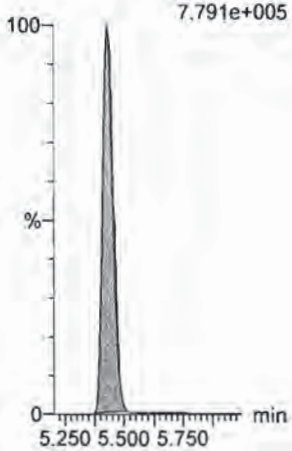
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.009e+005



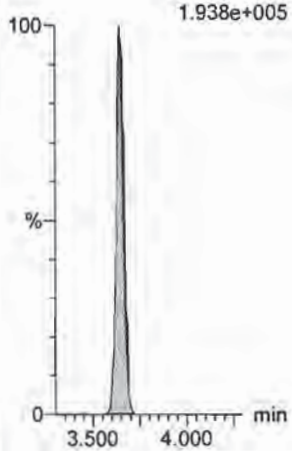
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
8.192e+005



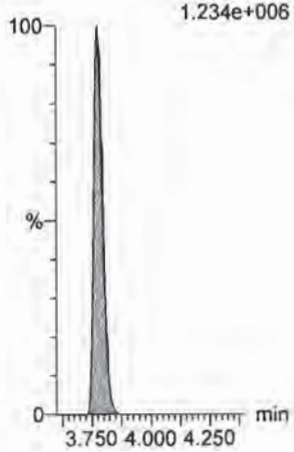
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
7.791e+005



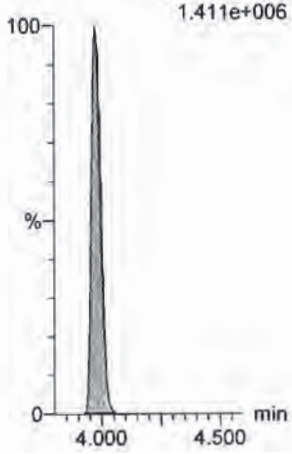
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.938e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.234e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.411e+006



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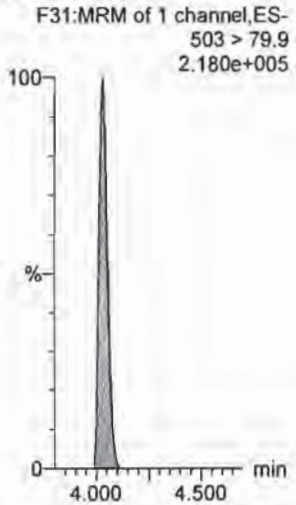
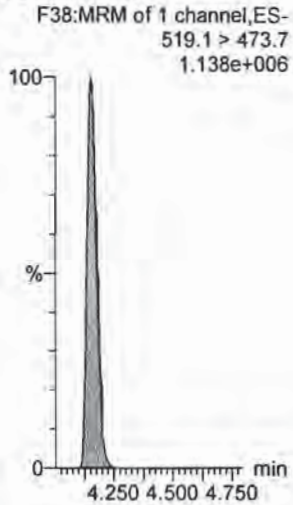
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_8, Date: 10-Aug-2017, Time: 21:37:09, ID: ST170810M2-7 PFC CS4 17H1018, Description: PFC CS4 17H1018

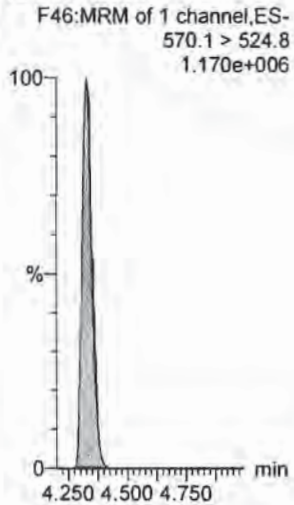
13C4-PFOS



13C6-PFDA



13C7-PFUnA



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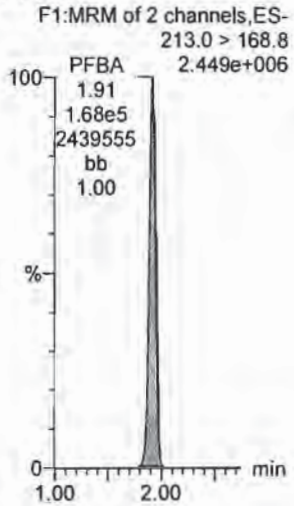
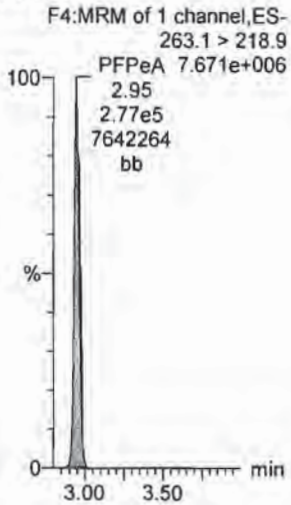
Name: 170810M2_9, Date: 10-Aug-2017, Time: 21:47:47, ID: ST170810M2-8 PFC CS5 17H1019, Description: PFC CS5 17H1019

PFBA



PFPeA



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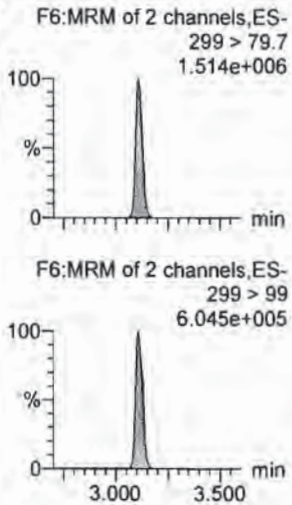

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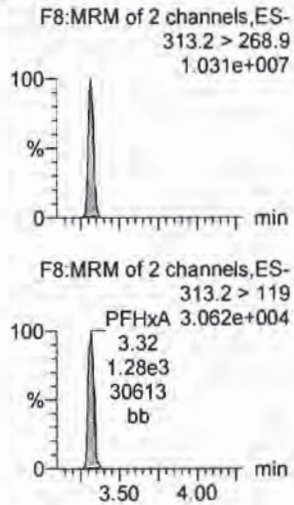

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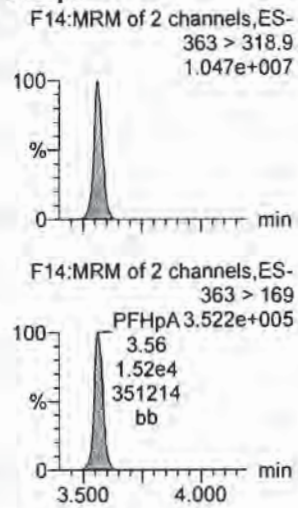

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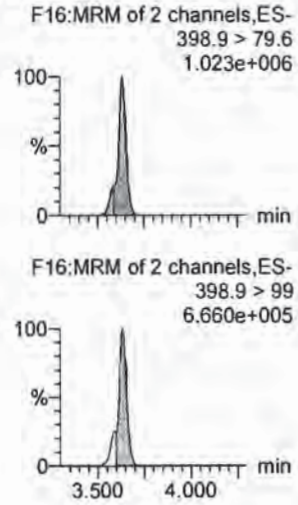
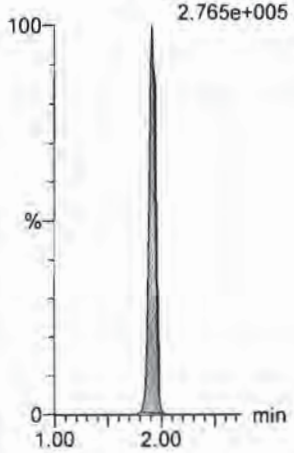


13C3-PFBA



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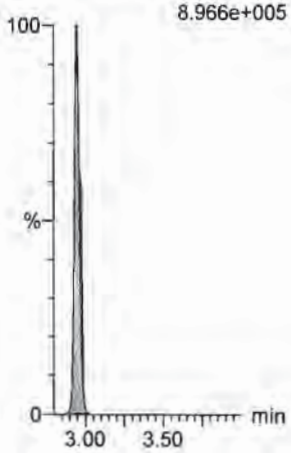

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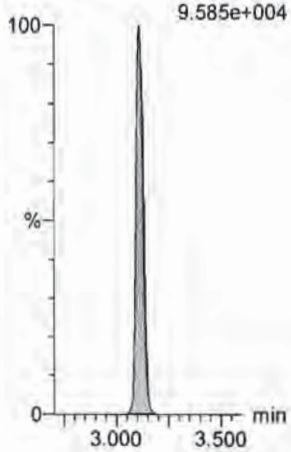

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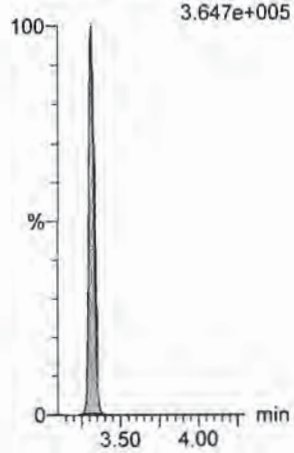

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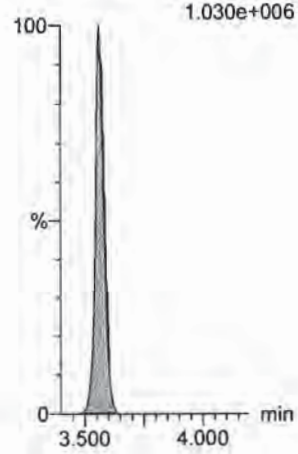
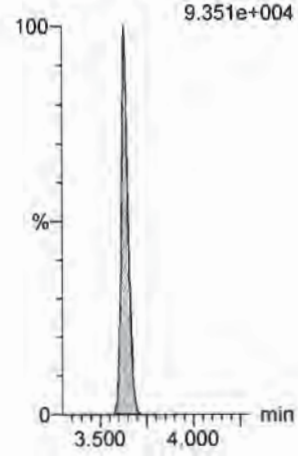


18O2-PFHxS



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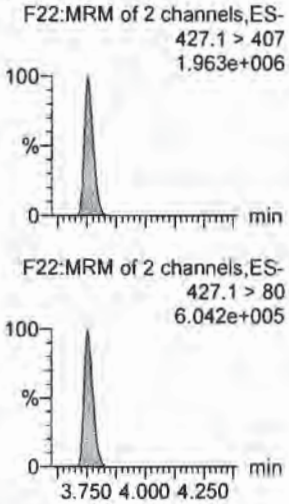
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_9, Date: 10-Aug-2017, Time: 21:47:47, ID: ST170810M2-8 PFC CS5 17H1019, Description: PFC CS5 17H1019

6:2 FTS



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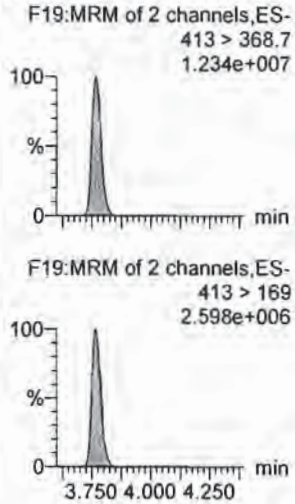

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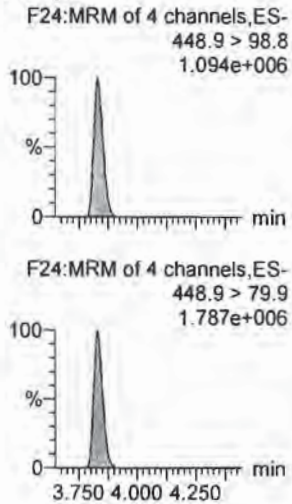

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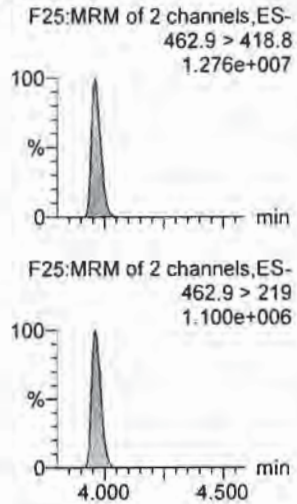

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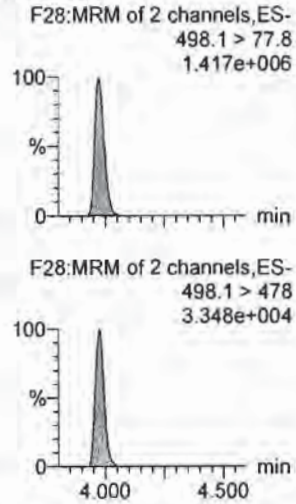

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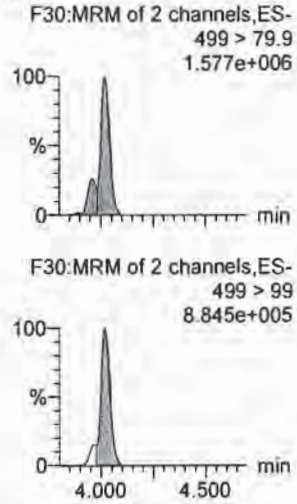
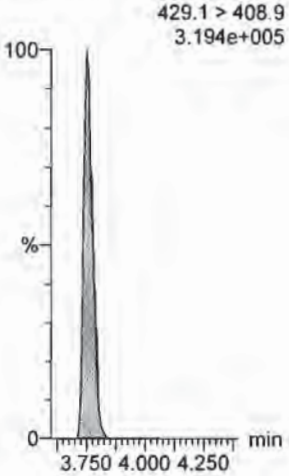
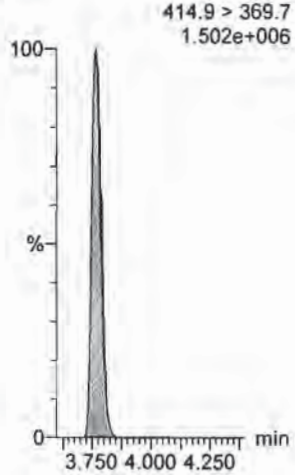


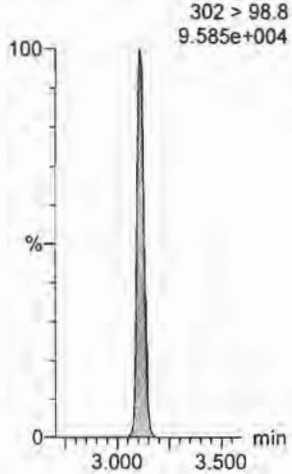
13C2-6:2 FTS



13C2-PFOA



13C3-PFBS



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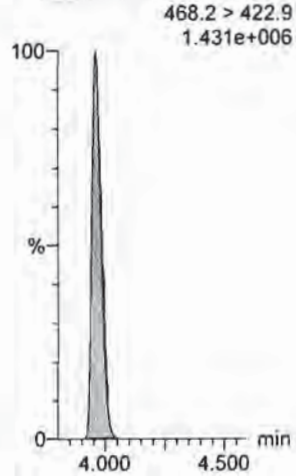

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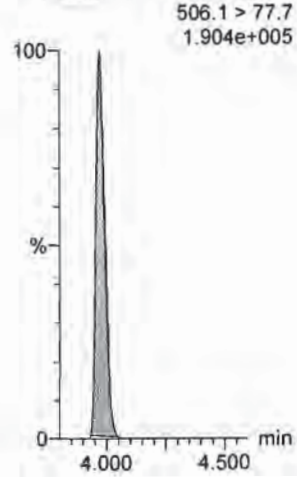

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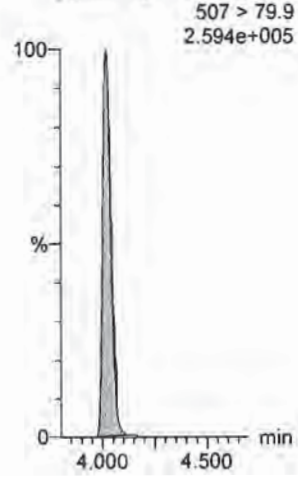

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Name: 170810M2_9, Date: 10-Aug-2017, Time: 21:47:47, ID: ST170810M2-8 PFC CS5 17H1019, Description: PFC CS5 17H1019

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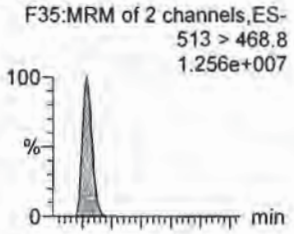
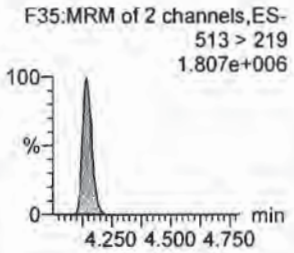
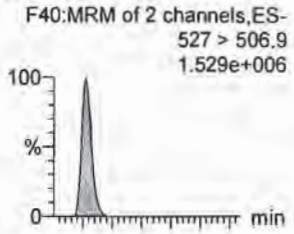
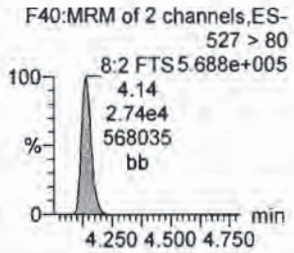




8:2 FTS





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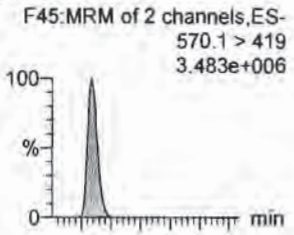

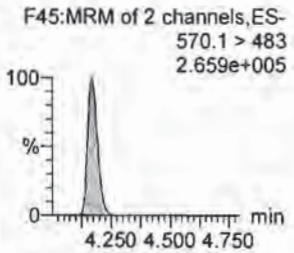

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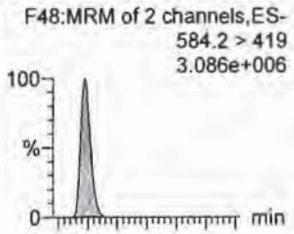

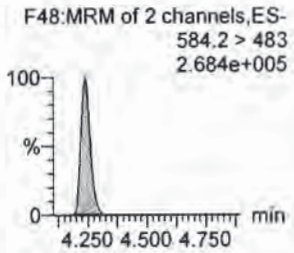

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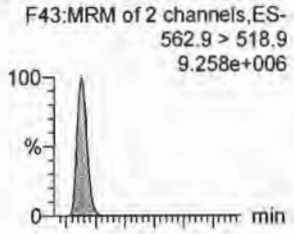

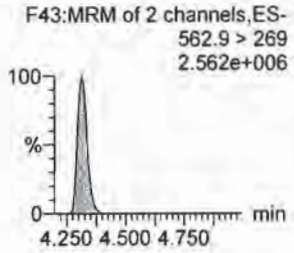

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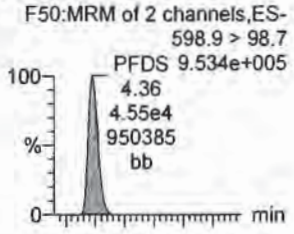
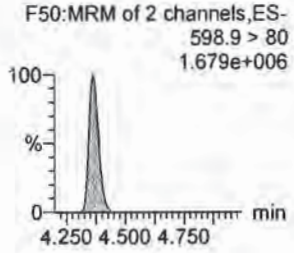
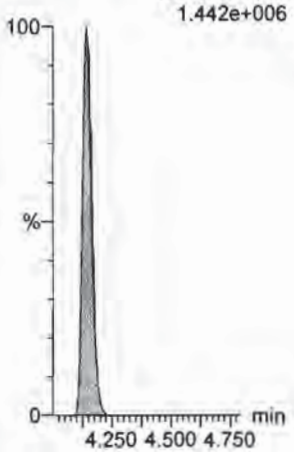
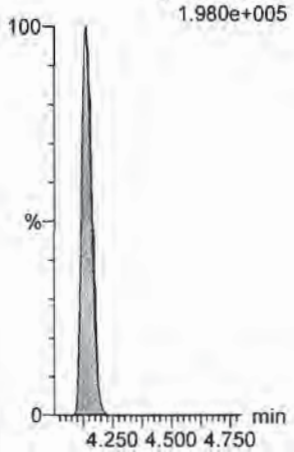




13C2-PFDA



13C2-8:2 FTS



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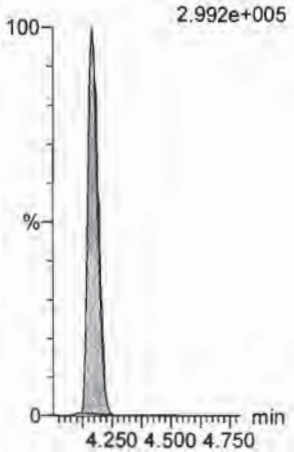
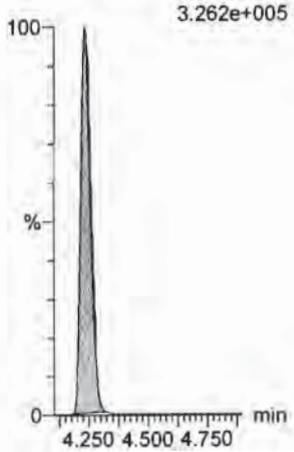


d5-N-EtFOSAA



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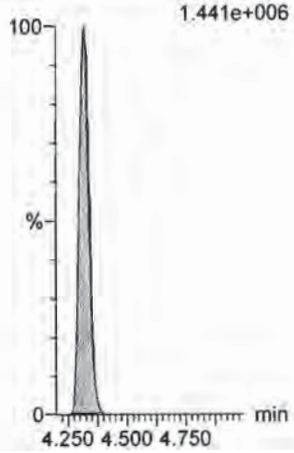

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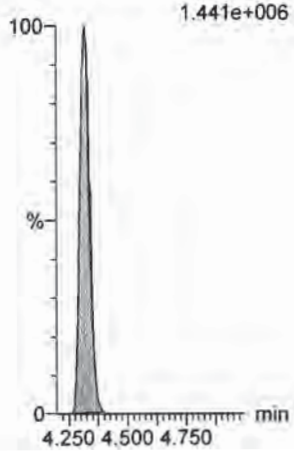

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Name: 170810M2_9, Date: 10-Aug-2017, Time: 21:47:47, ID: ST170810M2-8 PFC CS5 17H1019, Description: PFC CS5 17H1019

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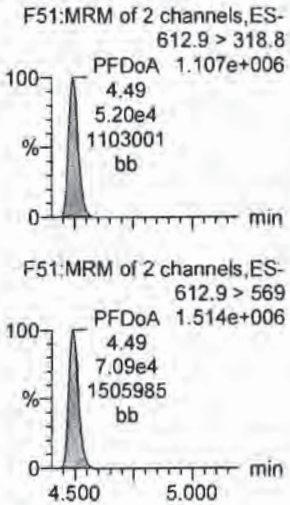

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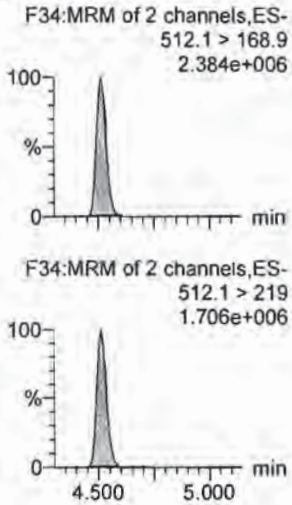

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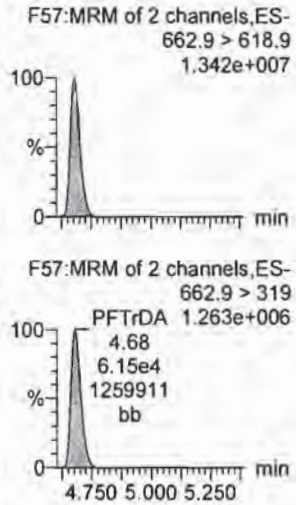

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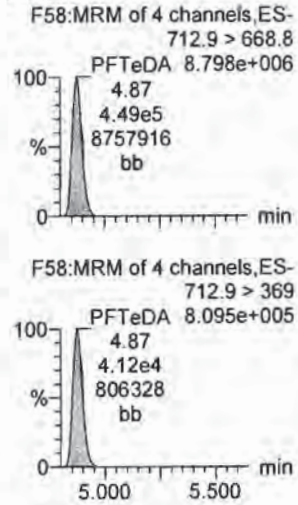

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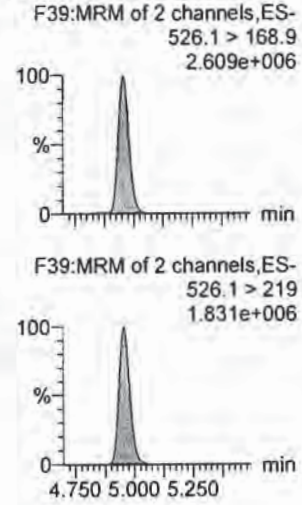

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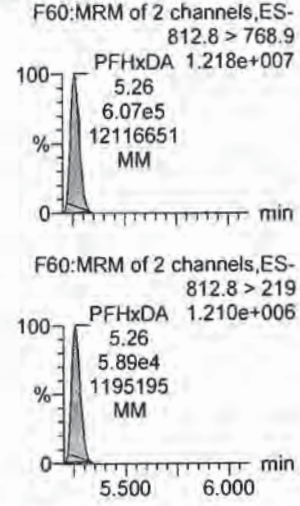

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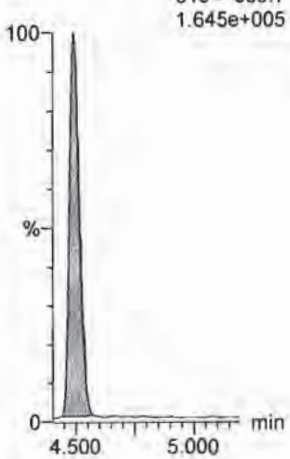
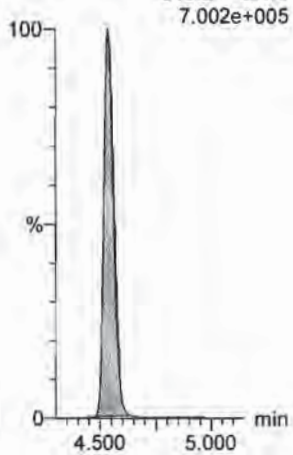


d3-N-MeFOSA



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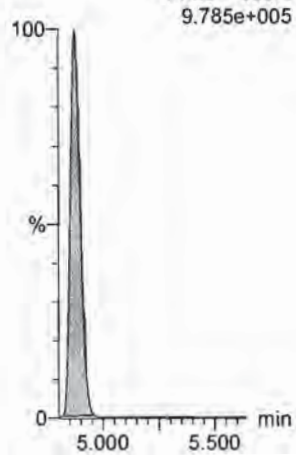

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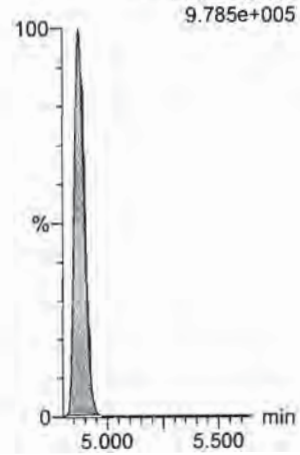

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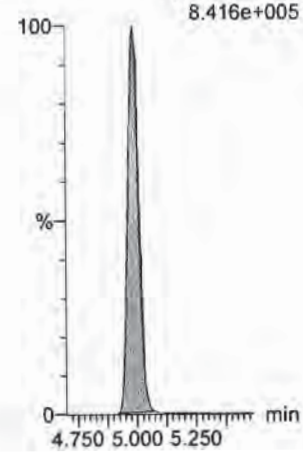
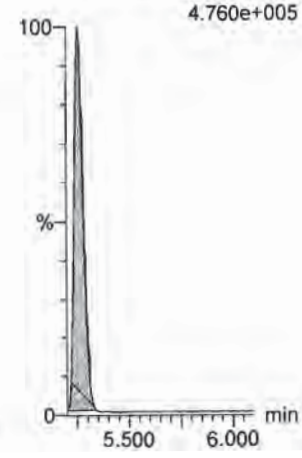


13C2-PFHxDA

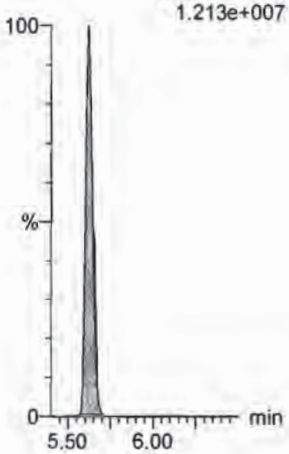


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

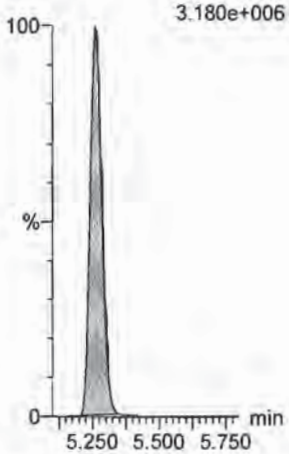
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_9, Date: 10-Aug-2017, Time: 21:47:47, ID: ST170810M2-8 PFC CS5 17H1019, Description: PFC CS5 17H1019

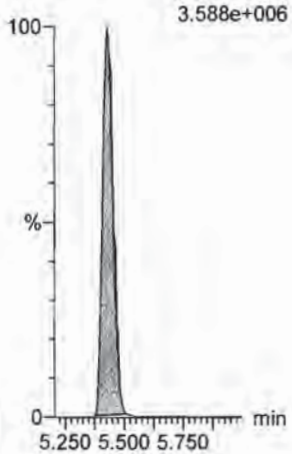
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
1.213e+007



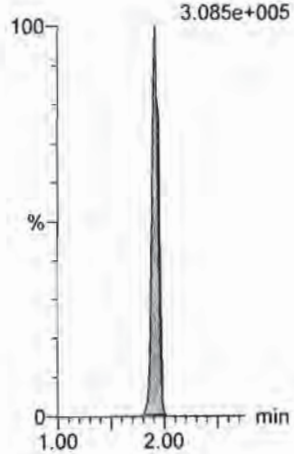
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
3.180e+006



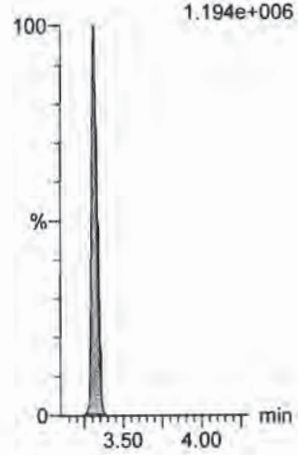
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
3.588e+006



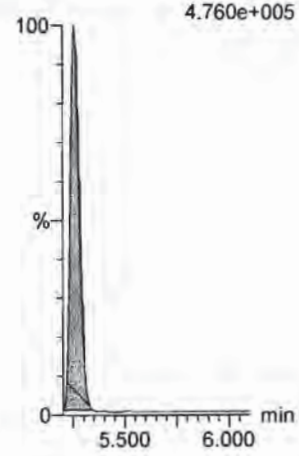
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
3.085e+005



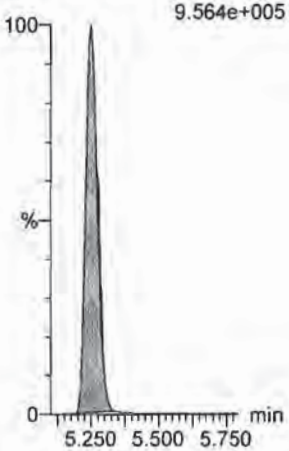
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.194e+006



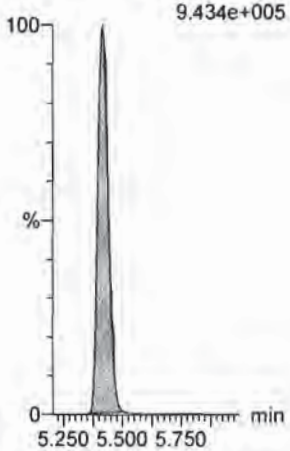
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.760e+005



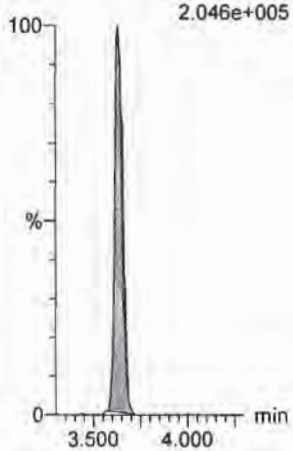
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
9.564e+005



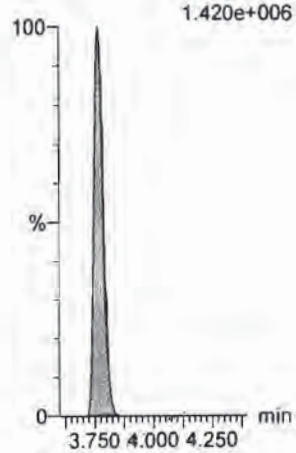
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
9.434e+005



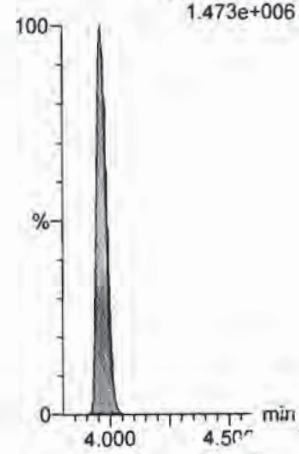
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
2.046e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.420e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.473e+006

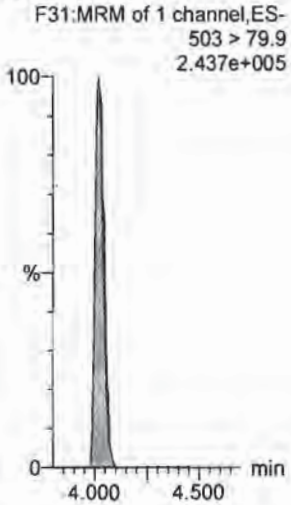


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

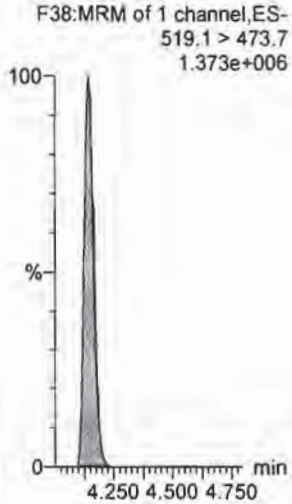
Last Altered: Friday, August 11, 2017 09:08:45 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:09:53 Pacific Daylight Time

Name: 170810M2_9, Date: 10-Aug-2017, Time: 21:47:47, ID: ST170810M2-8 PFC CS5 17H1019, Description: PFC CS5 17H1019

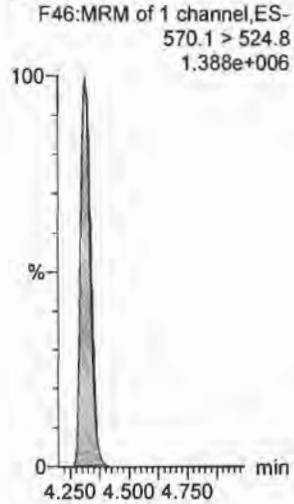
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

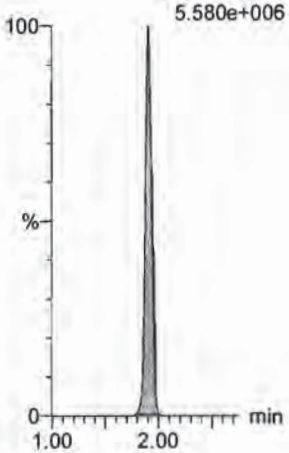
Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:08 Pacific Daylight Time

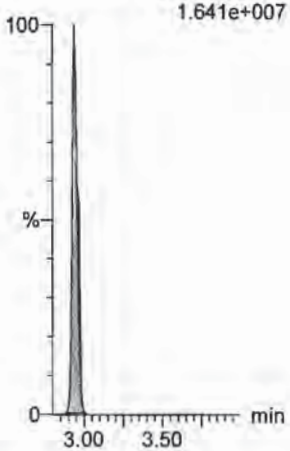
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 08:55:25
Calibration: 11 Aug 2017 09:12:09

Name: 170810M2_10, Date: 10-Aug-2017, Time: 21:58:34, ID: ST170810M2-9 PFC CS6 17H1013, Description: PFC CS6 17H1013

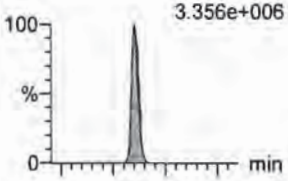
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
5.580e+006



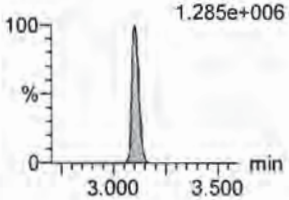
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
1.641e+007



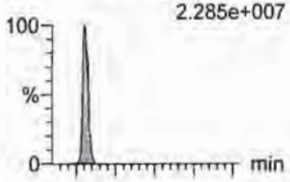
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
3.356e+006



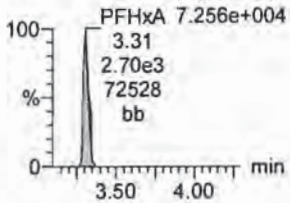
F6:MRM of 2 channels,ES-
299 > 99
1.285e+006



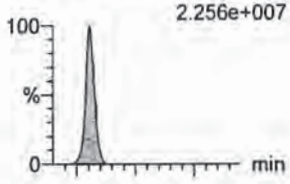
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
2.285e+007



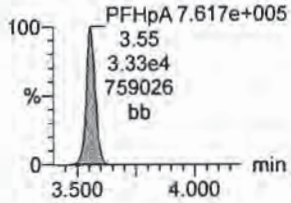
F8:MRM of 2 channels,ES-
313.2 > 119
PFHxA 7.256e+004
3.31
2.70e3
72528
bb



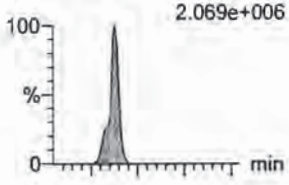
PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
2.256e+007



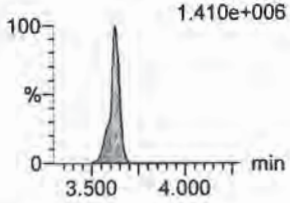
F14:MRM of 2 channels,ES-
363 > 169
PFHpA 7.617e+005
3.55
3.33e4
759026
bb



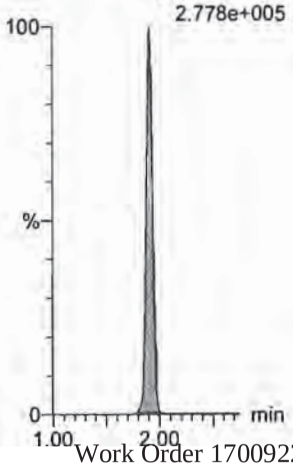
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
2.069e+006



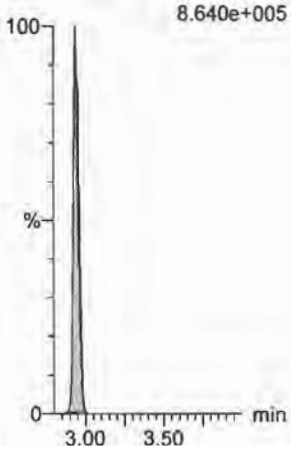
F16:MRM of 2 channels,ES-
398.9 > 99
1.410e+006



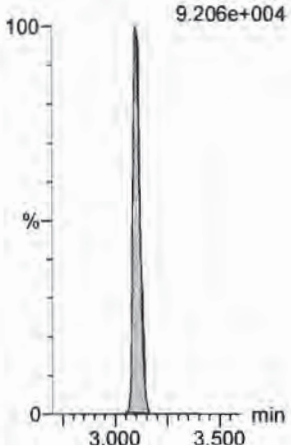
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
2.778e+005



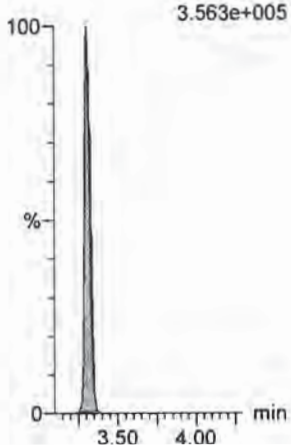
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
8.640e+005



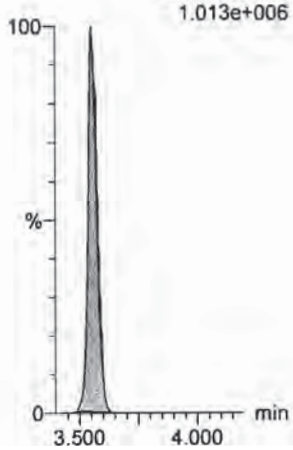
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
9.206e+004



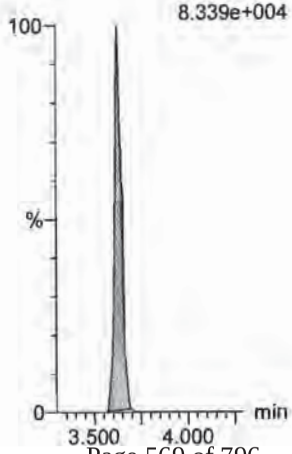
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
3.563e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
1.013e+006



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
8.339e+004

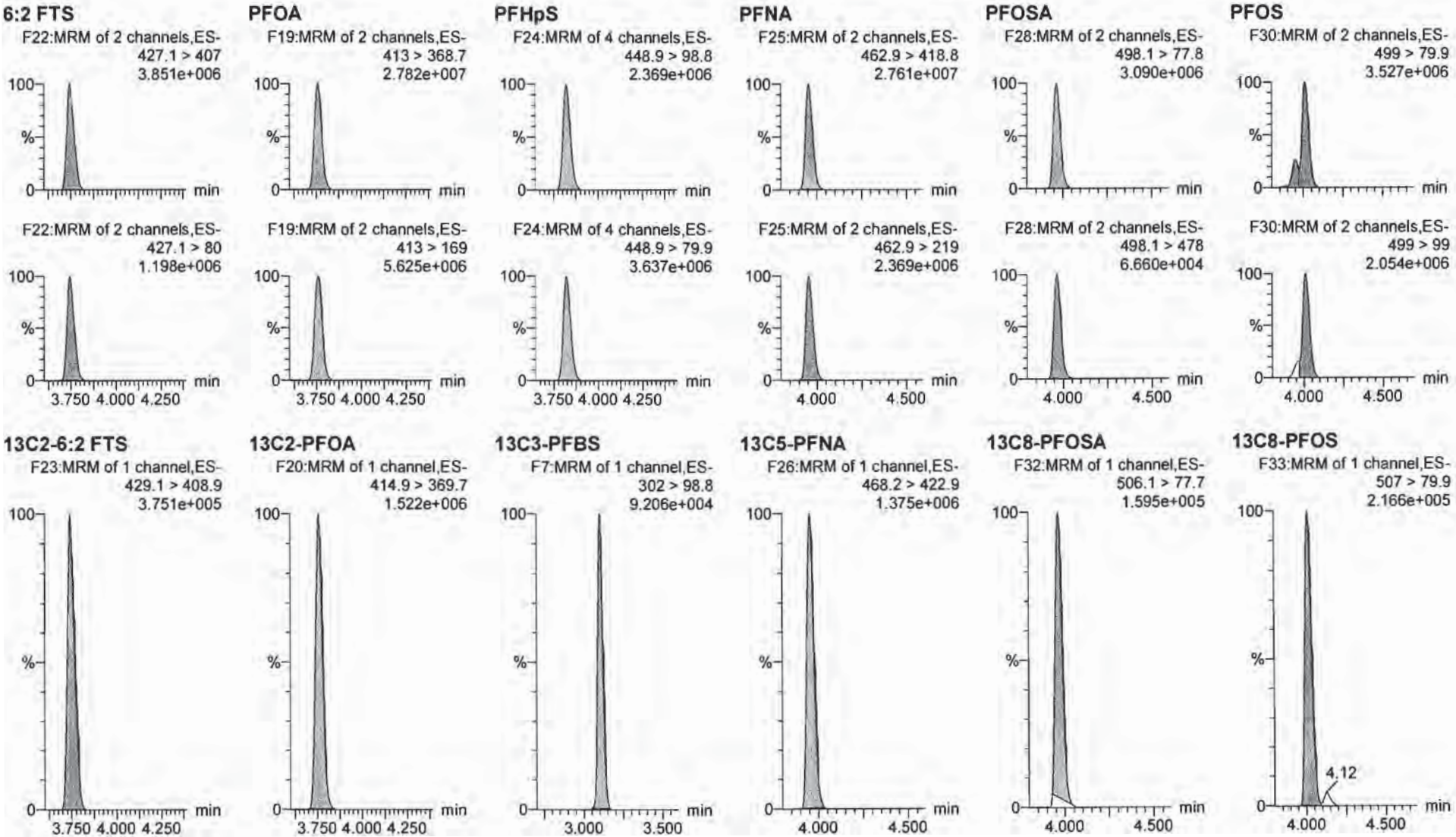


Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:08 Pacific Daylight Time

Name: 170810M2_10, Date: 10-Aug-2017, Time: 21:58:34, ID: ST170810M2-9 PFC CS6 17H1013, Description: PFC CS6 17H1013

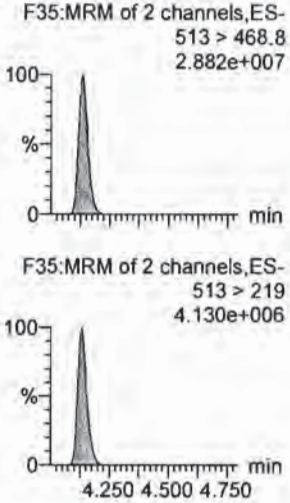


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

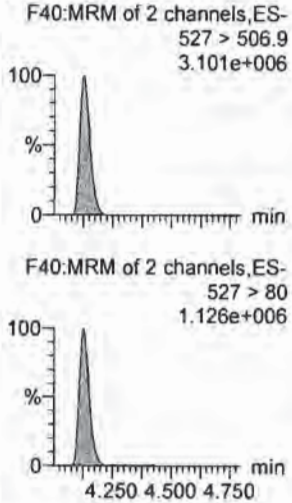
Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:08 Pacific Daylight Time

Name: 170810M2_10, Date: 10-Aug-2017, Time: 21:58:34, ID: ST170810M2-9 PFC CS6 17H1013, Description: PFC CS6 17H1013

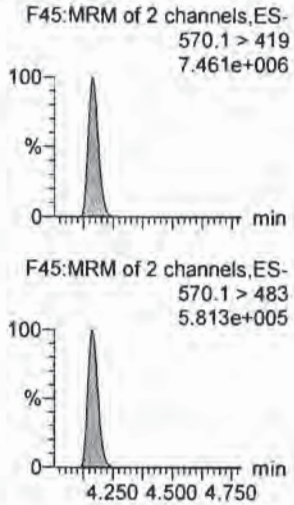
PFDA



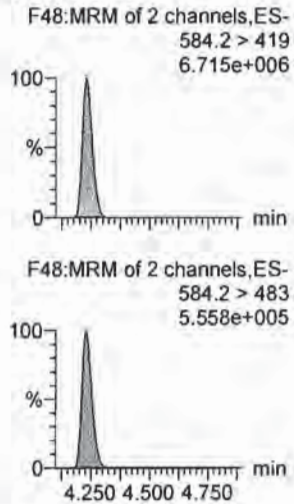
8:2 FTS



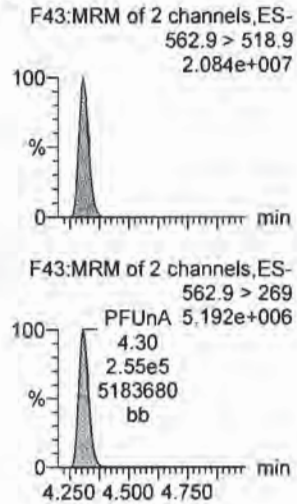
N-MeFOSAA



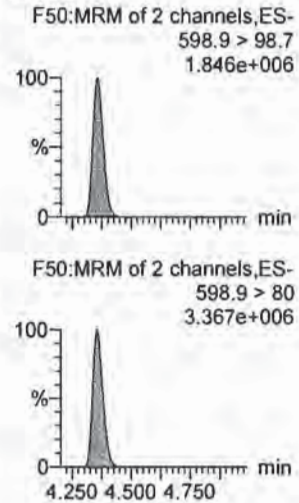
N-EtFOSAA



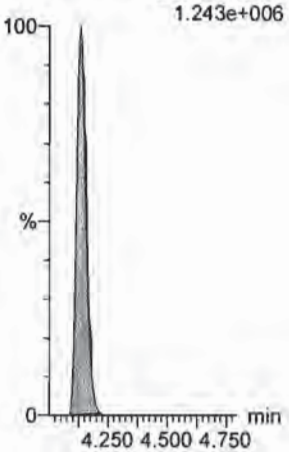
PFUnA



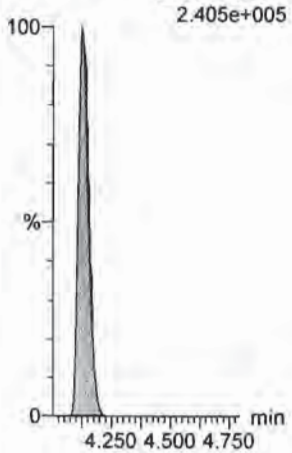
PFDS



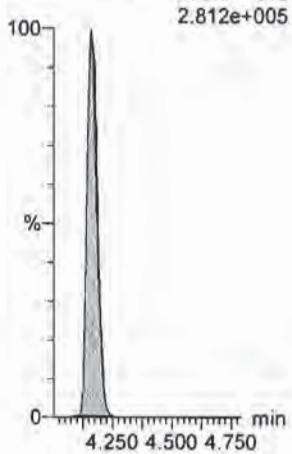
13C2-PFDA



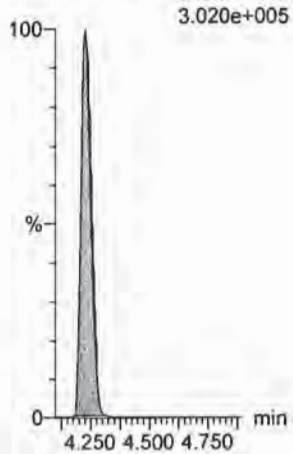
13C2-8:2 FTS



d3-N-MeFOSAA



d5-N-EtFOSAA



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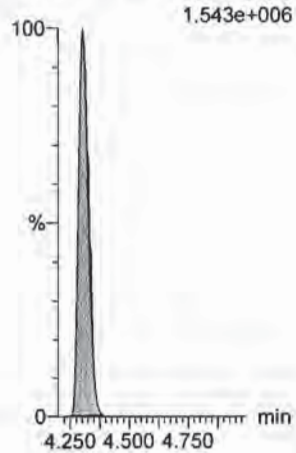
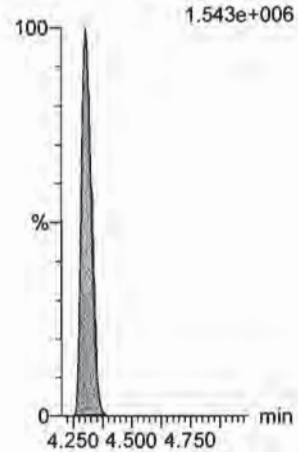


13C2-PFUnA

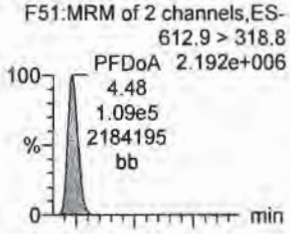


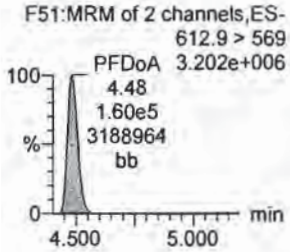
Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:08 Pacific Daylight Time

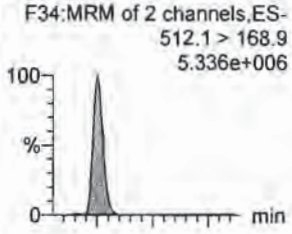
Name: 170810M2_10, Date: 10-Aug-2017, Time: 21:58:34, ID: ST170810M2-9 PFC CS6 17H1013, Description: PFC CS6 17H1013

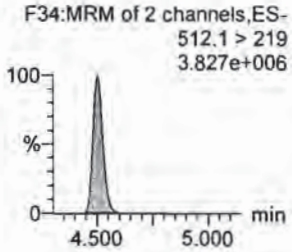
PFDoA



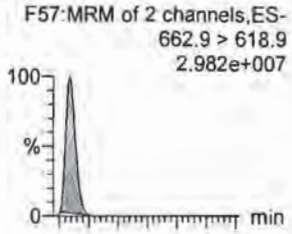


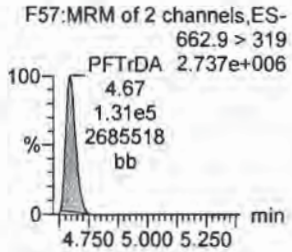
N-MeFOSA



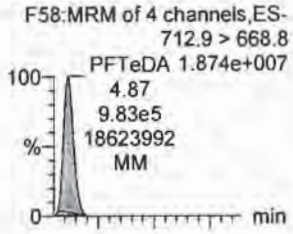


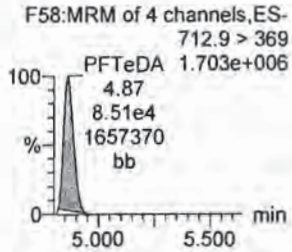
PFTrDA



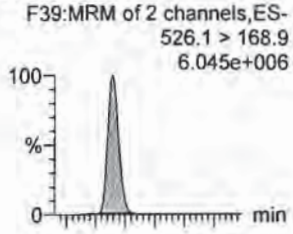


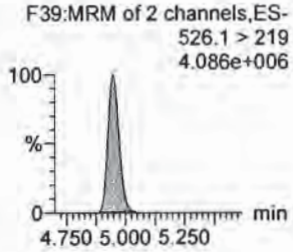
PFTeDA



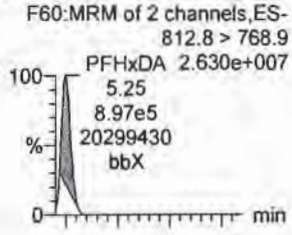


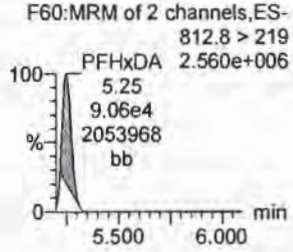
N-EtFOSA



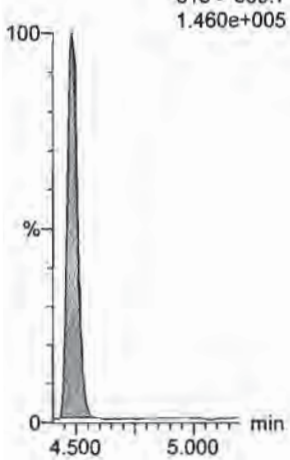


PFHxDA

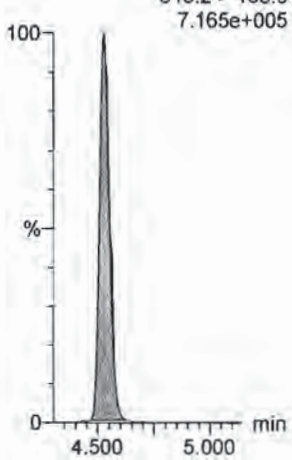




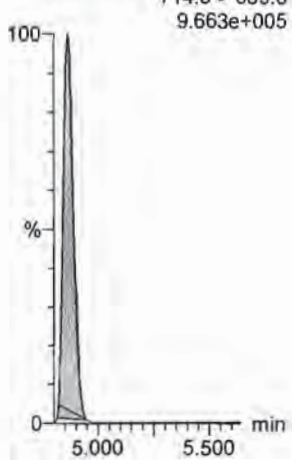
13C2-PFDoA



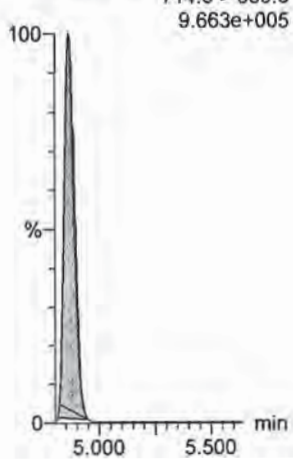
d3-N-MeFOSA



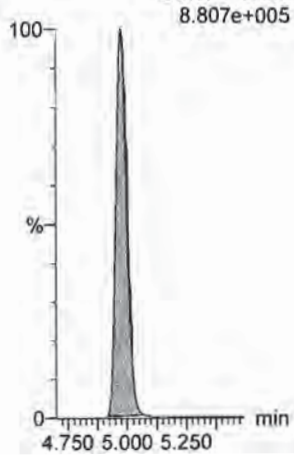
13C2-PFTeDA



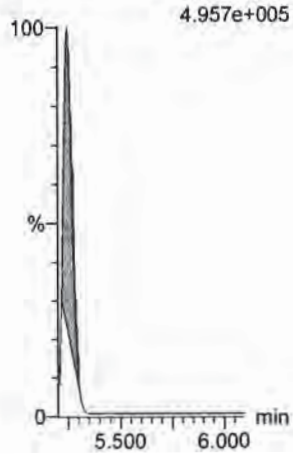
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA

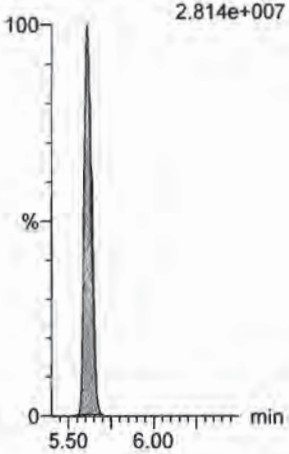


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

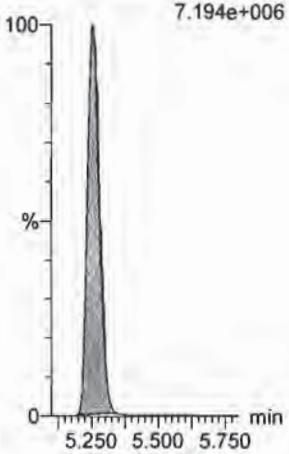
Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:08 Pacific Daylight Time

Name: 170810M2_10, Date: 10-Aug-2017, Time: 21:58:34, ID: ST170810M2-9 PFC CS6 17H1013, Description: PFC CS6 17H1013

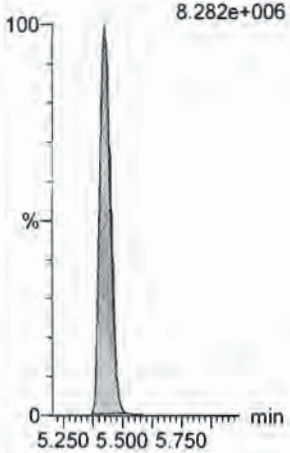
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
2.814e+007



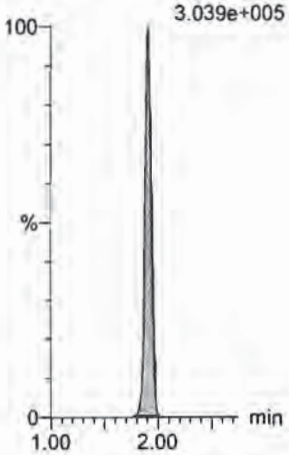
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
7.194e+006



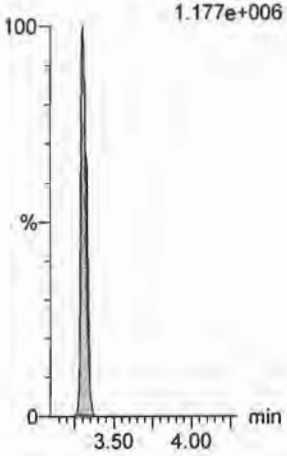
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
8.282e+006



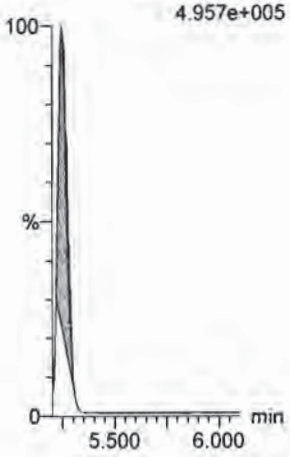
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
3.039e+005



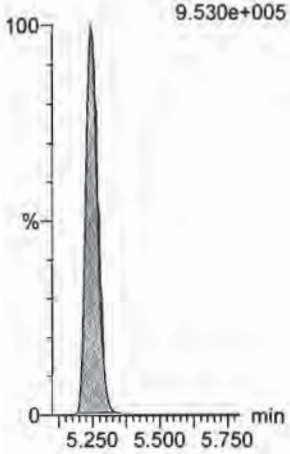
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.177e+006



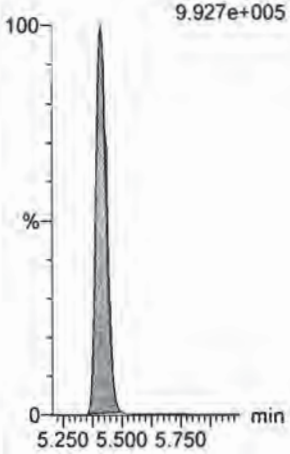
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.957e+005



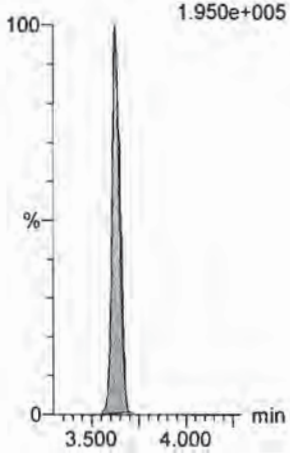
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
9.530e+005



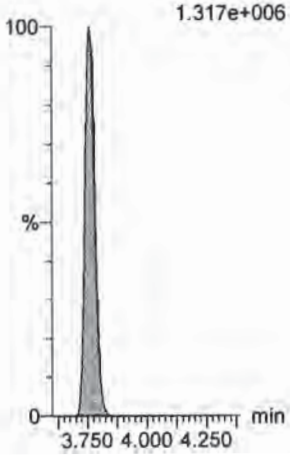
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
9.927e+005



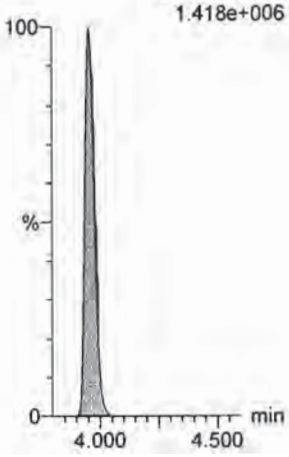
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.950e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.317e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.418e+006

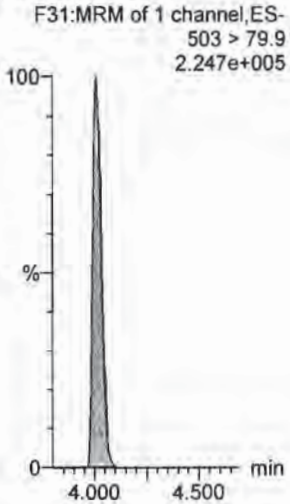


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

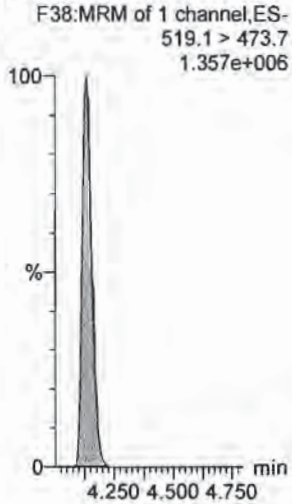
Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:08 Pacific Daylight Time

Name: 170810M2_10, Date: 10-Aug-2017, Time: 21:58:34, ID: ST170810M2-9 PFC CS6 17H1013, Description: PFC CS6 17H1013

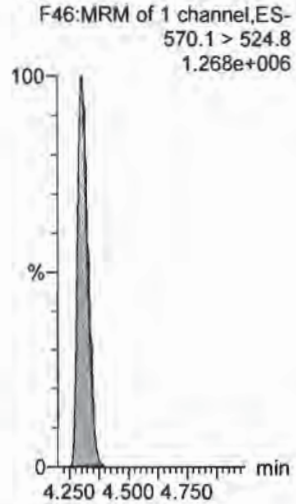
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

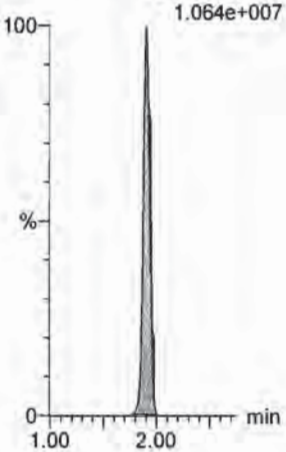
Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:16 Pacific Daylight Time

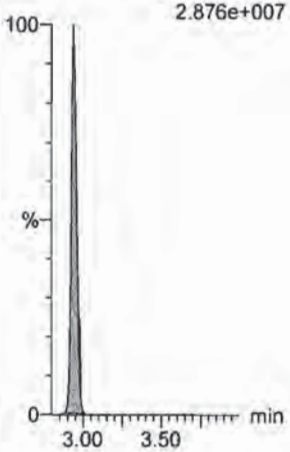
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 08:55:25
Calibration: 11 Aug 2017 09:12:09

Name: 170810M2_11, Date: 10-Aug-2017, Time: 22:09:12, ID: ST170810M2-10 PFC CS7 17H1012, Description: PFC CS7 17H1012

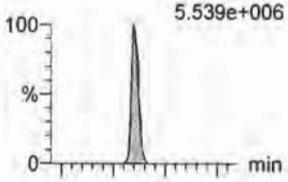
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
1.064e+007



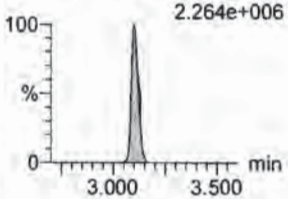
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
2.876e+007



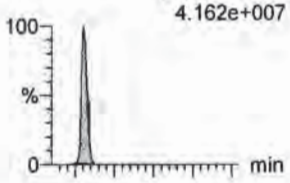
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
5.539e+006



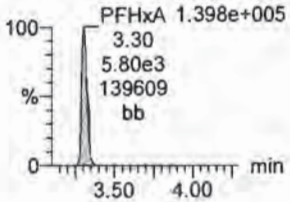
F6:MRM of 2 channels,ES-
299 > 99
2.264e+006



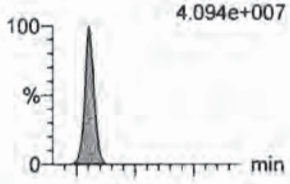
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
4.162e+007



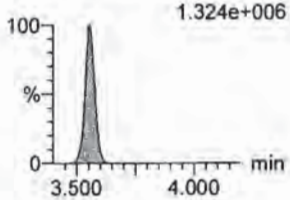
F8:MRM of 2 channels,ES-
313.2 > 119
PFHxA 1.398e+005



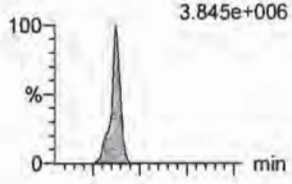
PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
4.094e+007



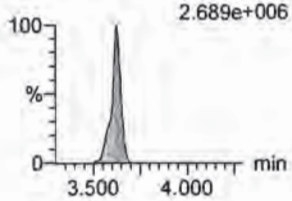
F14:MRM of 2 channels,ES-
363 > 169
1.324e+006



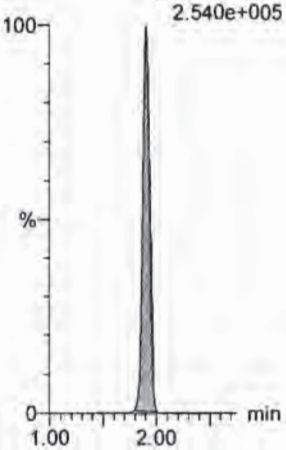
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
3.845e+006



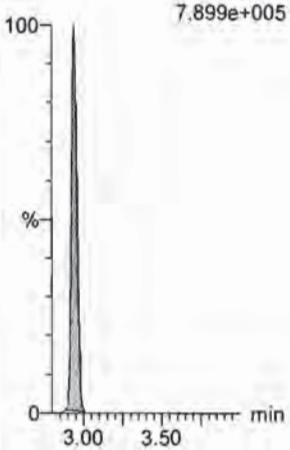
F16:MRM of 2 channels,ES-
398.9 > 99
2.689e+006



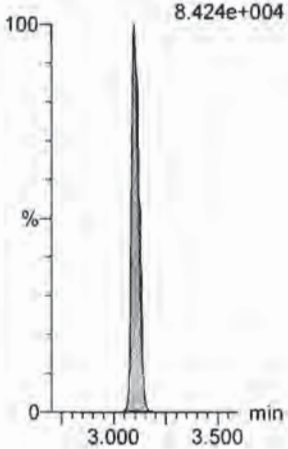
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
2.540e+005



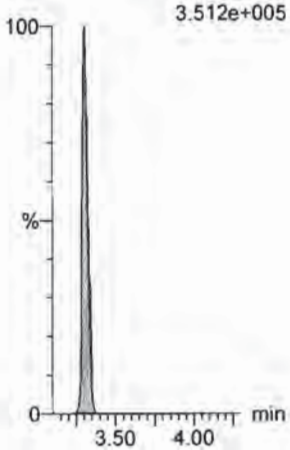
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
7.899e+005



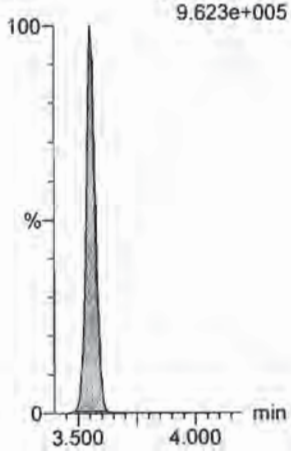
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
8.424e+004



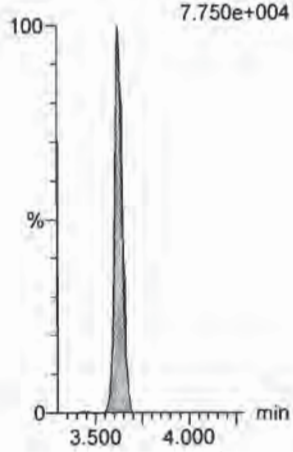
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
3.512e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
9.623e+005



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
7.750e+004

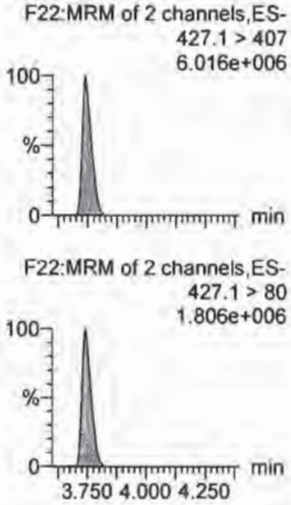


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

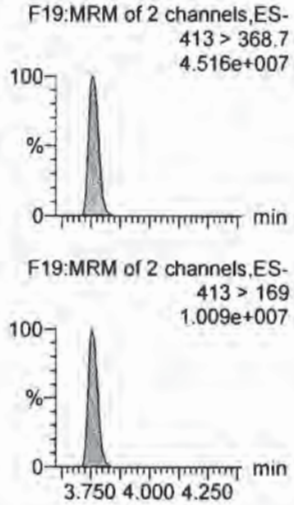
Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:16 Pacific Daylight Time

Name: 170810M2_11, Date: 10-Aug-2017, Time: 22:09:12, ID: ST170810M2-10 PFC CS7 17H1012, Description: PFC CS7 17H1012

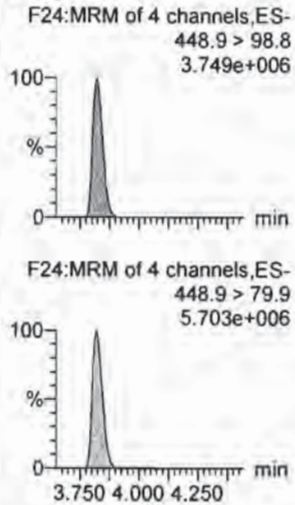
6:2 FTS



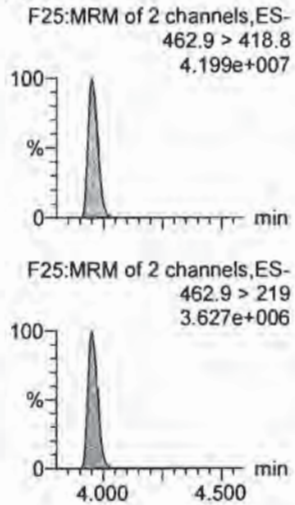
PFOA



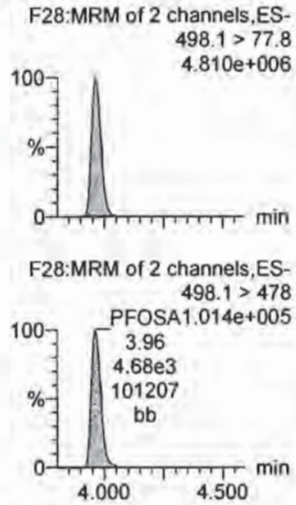
PFHpS



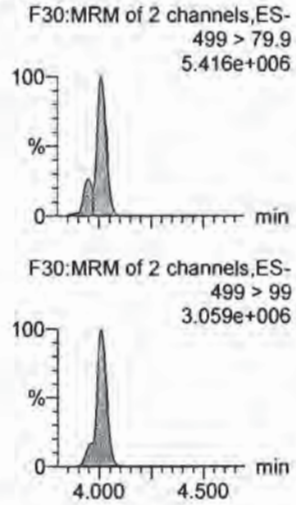
PFNA



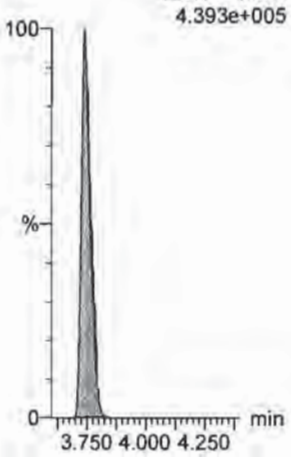
PFOSA



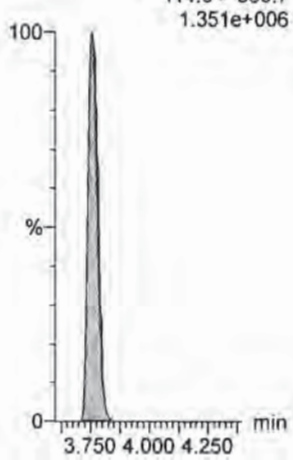
PFOS



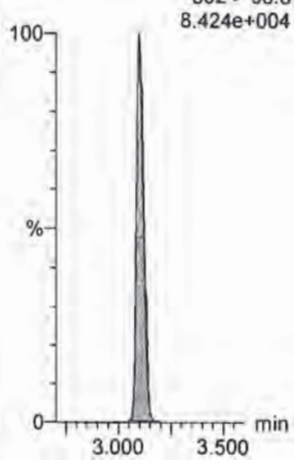
13C2-6:2 FTS



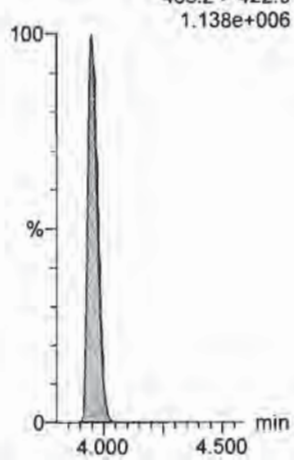
13C2-PFOA



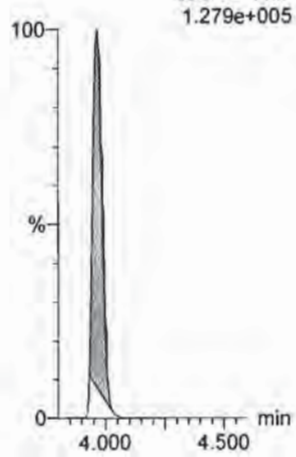
13C3-PFBS



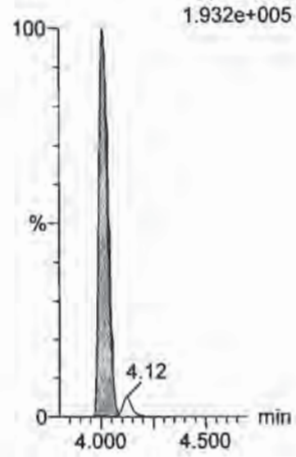
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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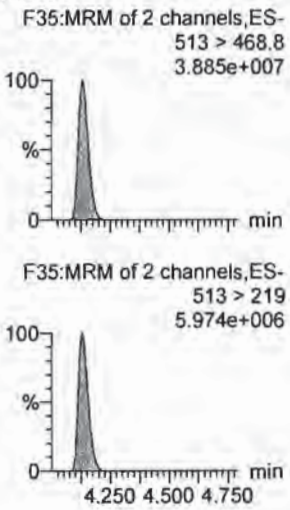
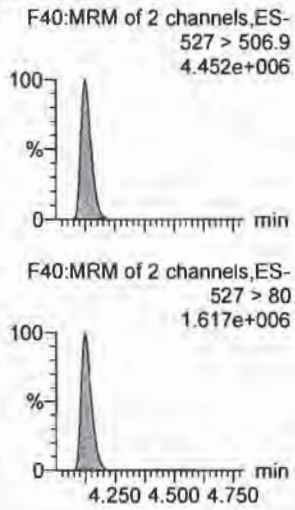
Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:16 Pacific Daylight Time

Name: 170810M2_11, Date: 10-Aug-2017, Time: 22:09:12, ID: ST170810M2-10 PFC CS7 17H1012, Description: PFC CS7 17H1012

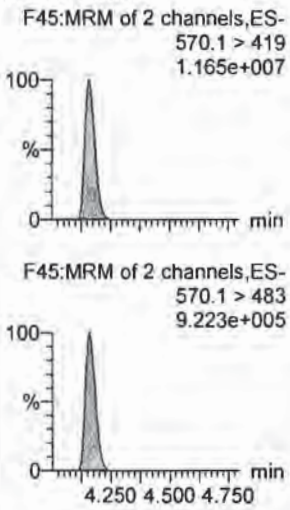
PFDA



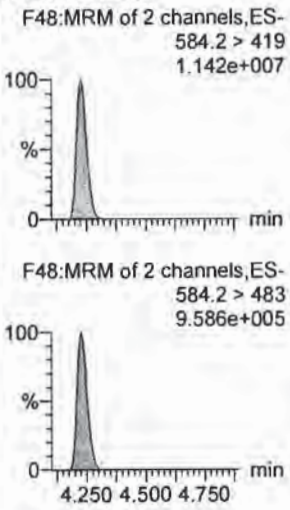
8:2 FTS



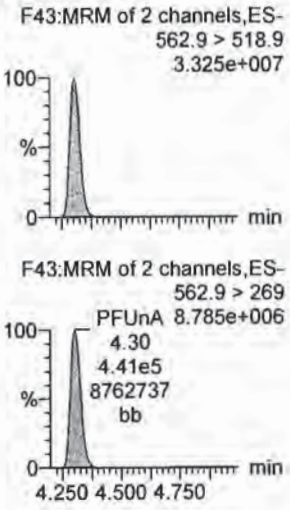
N-MeFOSAA



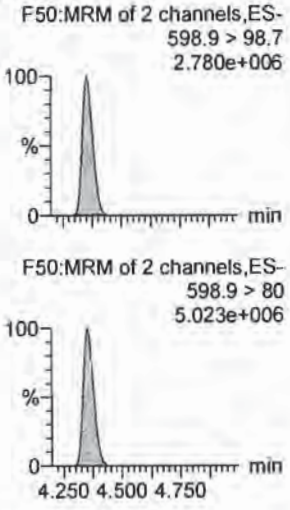
N-EtFOSAA



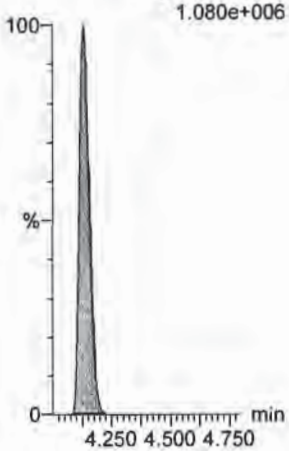
PFUnA



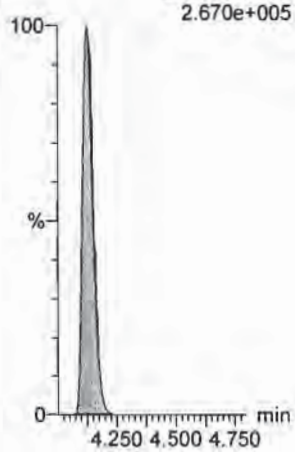
PFDS



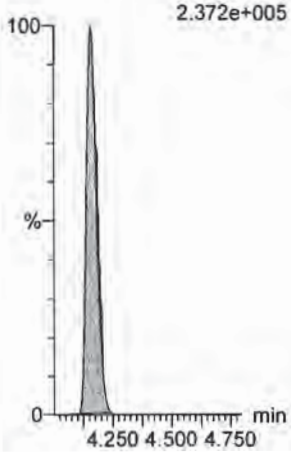
13C2-PFDA



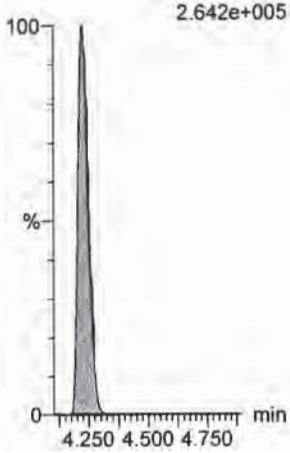
13C2-8:2 FTS



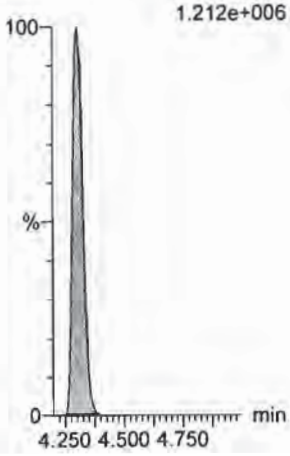
d3-N-MeFOSAA



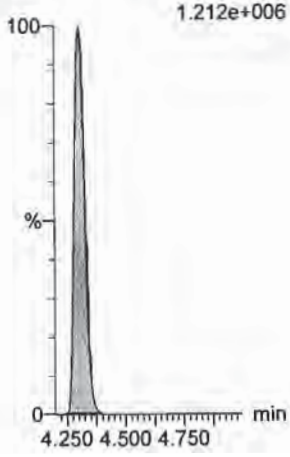
d5-N-EtFOSAA



13C2-PFUnA



13C2-PFUnA



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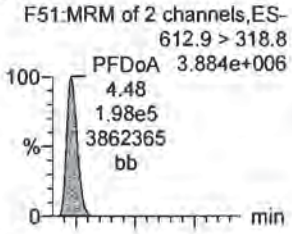
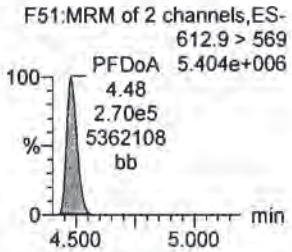
Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:16 Pacific Daylight Time

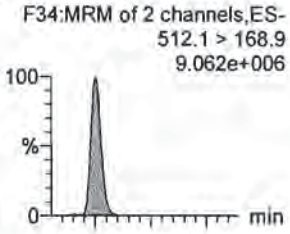
Name: 170810M2_11, Date: 10-Aug-2017, Time: 22:09:12, ID: ST170810M2-10 PFC CS7 17H1012, Description: PFC CS7 17H1012

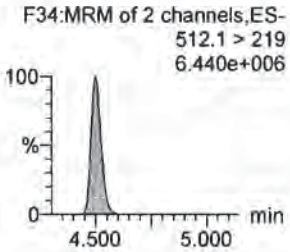
PFDoA



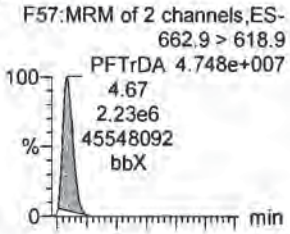


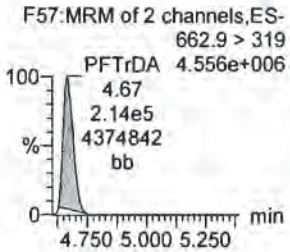
N-MeFOSA



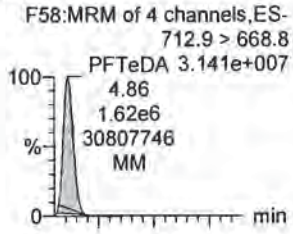


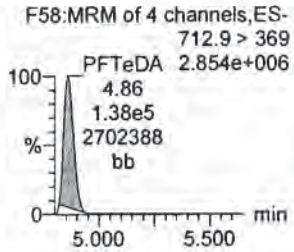
PFTrDA



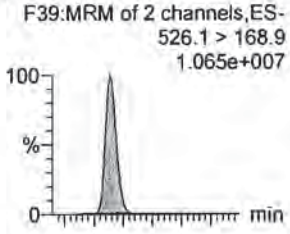


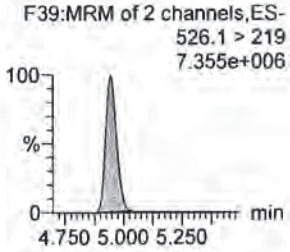
PFTeDA



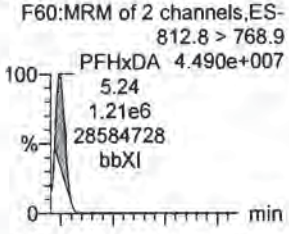


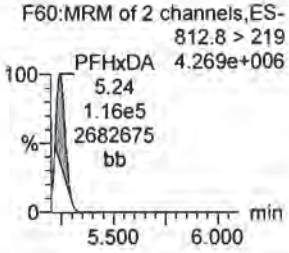
N-EtFOSA



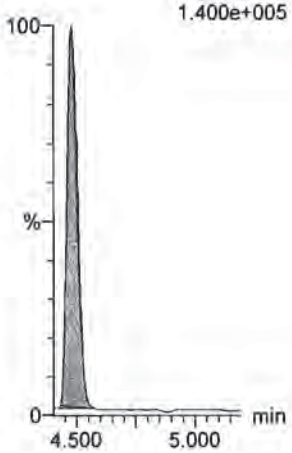


PFHxDA

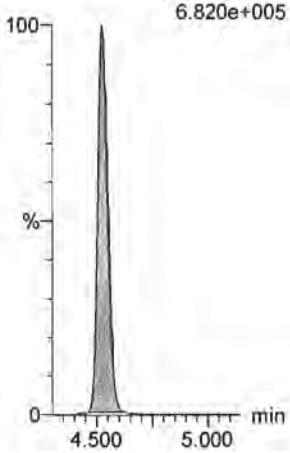




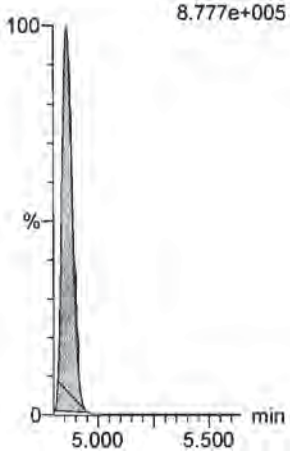
13C2-PFDoA



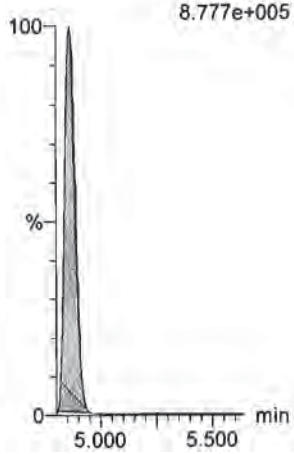
d3-N-MeFOSA



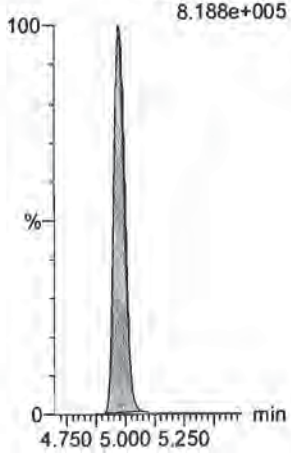
13C2-PFTeDA



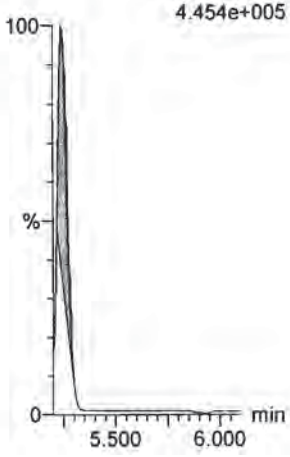
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA

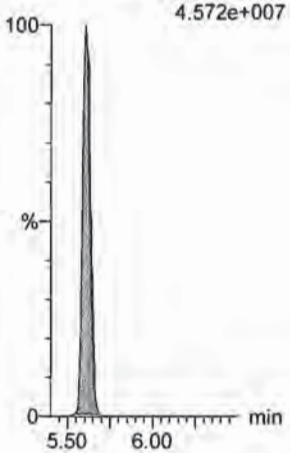


Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

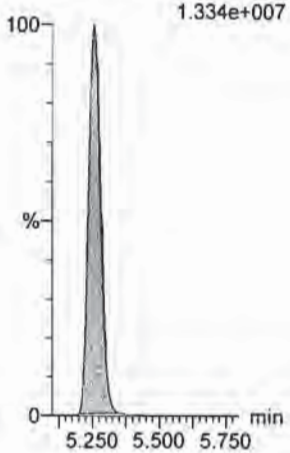
Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:16 Pacific Daylight Time

Name: 170810M2_11, Date: 10-Aug-2017, Time: 22:09:12, ID: ST170810M2-10 PFC CS7 17H1012, Description: PFC CS7 17H1012

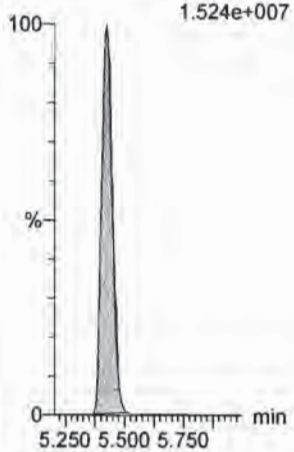
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
4.572e+007



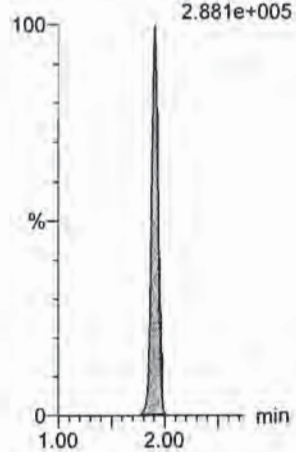
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.334e+007



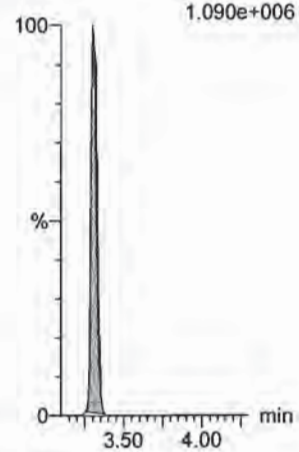
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.524e+007



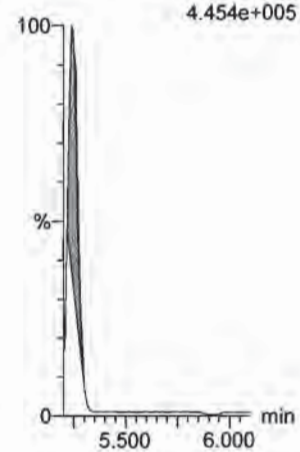
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.881e+005



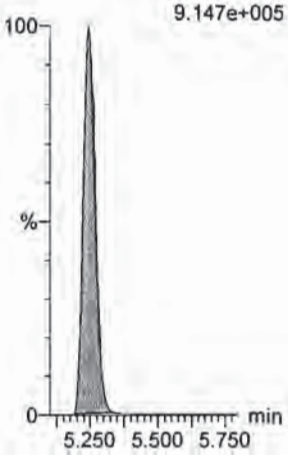
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.090e+006



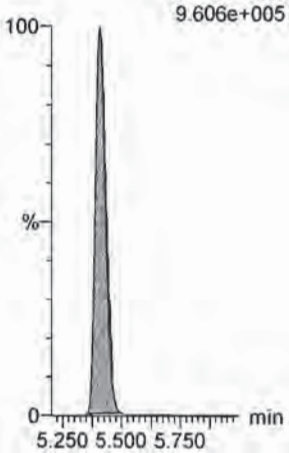
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.454e+005



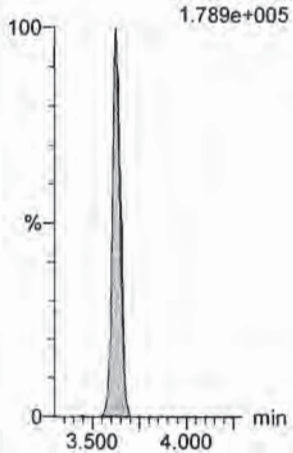
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
9.147e+005



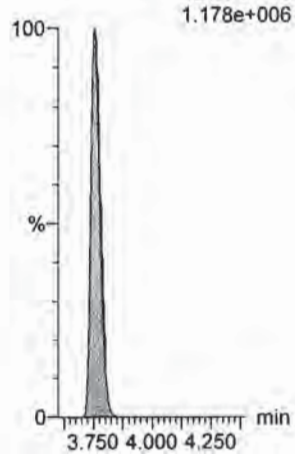
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
9.606e+005



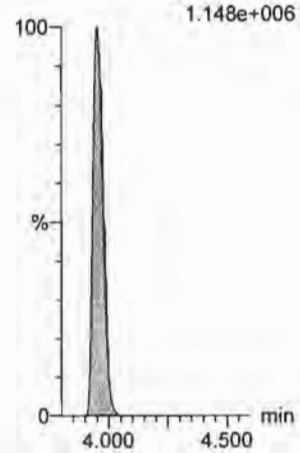
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.789e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.178e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.148e+006



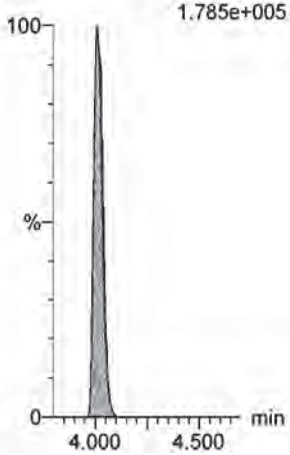
Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:27:16 Pacific Daylight Time

Name: 170810M2_11, Date: 10-Aug-2017, Time: 22:09:12, ID: ST170810M2-10 PFC CS7 17H1012, Description: PFC CS7 17H1012

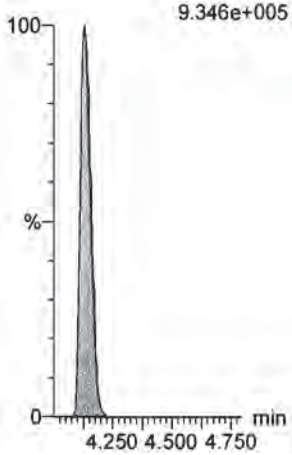
13C4-PFOS

F31:MRM of 1 channel,ES-
503 > 79.9
1.785e+005



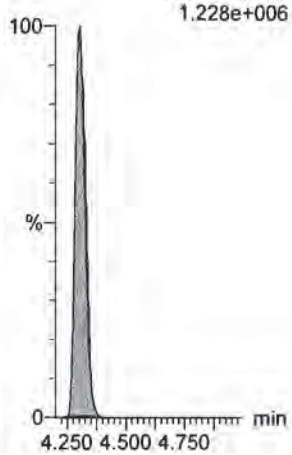
13C6-PFDA

F38:MRM of 1 channel,ES-
519.1 > 473.7
9.346e+005



13C7-PFUnA

F46:MRM of 1 channel,ES-
570.1 > 524.8
1.228e+006



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

Dataset: U:\Q4.PRO\results\170810M1\170810M2-13.qld

Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 08:55:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.58e4	1.65e4		1.90	1.90	11.9	10.9	108.9
2	2	PFPeA	263.1 > 218.9	2.50e4	3.00e4		3.00	2.93	10.4	10.9	109.1
3	3	PFBS	299 > 79.7	4.94e3	3.50e3		3.16	3.10	17.6	10.2	102.0
4	4	PFHxA	313.2 > 268.9	3.88e4	1.21e4		3.35	3.30	16.1	12.2	122.4
5	5	PFHpA	363 > 318.9	4.45e4	4.43e4		3.61	3.55	12.6	10.7	106.6
6	6	PFHxS	398.9 > 79.6	5.19e3	3.78e3		3.65	3.62	17.2	9.76	97.6
7	7	6:2 FTS	427.1 > 407	8.64e3	1.08e4		3.80	3.74	10.0	10.7	107.4
8	8	PFOA	413 > 368.7	5.53e4	6.29e4		3.82	3.75	11.0	11.1	110.5
9	9	PFHpS	448.9 > 98.8	4.60e3	6.29e4		3.80	3.82	0.914	11.5	115.2
10	10	PFNA	462.9 > 418.8	5.12e4	5.49e4		4.02	3.95	11.7	11.4	113.9
11	11	PFOSA	498.1 > 77.8	6.91e3	7.39e3		4.05	3.96	11.7	11.1	111.0
12	12	PFOS	499 > 79.9	9.36e3	1.10e4		4.07	4.01	10.6	9.98	99.8
13	13	PFDA	513 > 468.8	5.63e4	5.29e4		4.21	4.13	13.3	11.7	116.5
14	14	8:2 FTS	527 > 506.9	9.04e3	7.56e3		4.20	4.12	14.9	10.8	108.3
15	15	N-MeFOSAA	570.1 > 419	1.62e4	1.27e4		4.23	4.16	208	10.8	107.7
16	16	N-EtFOSAA	584.2 > 419	1.43e4	1.37e4		4.30	4.23	170	10.8	108.4
17	17	PFUnA	562.9 > 518.9	4.38e4	6.22e4		4.38	4.30	8.80	10.8	107.9
18	18	PFDS	598.9 > 98.7	4.05e3	6.22e4		4.40	4.35	0.815	9.87	98.7
19	19	PFDoA	612.9 > 318.8	4.95e3	6.76e3		4.58	4.48	9.16	10.9	109.4
20	20	N-MeFOSA	512.1 > 168.9		3.08e4		4.56			(A)	
21	21	PFTrDA	662.9 > 618.9	6.41e4	6.76e3		4.78	4.66	118	11.7	117.0
22	22	PFTeDA	712.9 > 668.8	4.52e4	4.45e4		4.97	4.86	12.7	11.1	110.9
23	23	N-EtFOSA	526.1 > 168.9		3.80e4		5.03			(A)	
24	24	PFHxDA	812.8 > 768.9	2.74e2	2.09e4		5.37	5.24	0.0656		
25	25	PFODA	912.8 > 868.8	3.35e2	2.09e4		5.60	5.60	0.0800		
26	26	N-MeFOSE	616.1 > 58.9		4.35e4		5.30				
27	27	N-EtFOSE	630.1 > 58.9		4.17e4		5.40				
28	28	13C3-PFBA	216.1 > 171.8	1.65e4	1.87e4	0.906	1.90	1.90	11.1	12.2	97.6
29	29	13C3-PFPeA	266 > 221.8	3.00e4	4.18e4	0.284	2.99	2.94	3.59	12.6	101.1
30	30	13C3-PFBS	302 > 98.8	3.50e3	4.18e4	0.033	3.15	3.10	0.418	12.7	101.8
31	31	13C2-PFHxA	315 > 269.8	1.21e4	4.18e4	0.304	3.35	3.30	1.44	4.75	94.9

70-130

50-150

DM 8/11/17

(A) Not present in ICV standard. dm 8/11/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170810M1\170810M2-13.qld

Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.43e4	4.18e4	0.384	3.61	3.55	5.29	13.8	110.2
33	33	18O2-PFHxS	403 > 102.6	3.78e3	8.56e3	0.417	3.68	3.62	5.52	13.2	105.8
34	34	13C2-6:2 FTS	429.1 > 408.9	1.08e4	6.07e4	0.202	3.80	3.75	2.22	11.0	88.1
35	35	13C2-PFOA	414.9 > 369.7	6.29e4	6.07e4	1.132	3.82	3.75	12.9	11.4	91.5
36	36	13C5-PFNA	468.2 > 422.9	5.49e4	6.37e4	0.946	4.02	3.95	10.8	11.4	91.0
37	37	13C8-PFOSA	506.1 > 77.7	7.39e3	6.42e4	0.119	4.08	3.96	1.44	12.0	96.4
38	38	13C8-PFOS	507 > 79.9	1.10e4	1.05e4	1.040	4.07	4.01	13.1	12.6	101.1
39	39	13C2-PFDA	515.1 > 469.9	5.29e4	5.81e4	0.971	4.21	4.13	11.4	11.7	93.9
40	40	13C2-8:2 FTS	529.1 > 508.7	7.56e3	5.81e4	0.140	4.20	4.12	1.63	11.6	92.8
41	41	d3-N-MeFOSAA	573.3 > 419	1.27e4	6.42e4	0.018	4.23	4.16	2.47	139	85.4
42	42	d5-N-EtFOSAA	589.3 > 419	1.37e4	6.42e4	0.018	4.30	4.22	2.67	146	90.1
43	43	13C2-PFUnA	565 > 519.8	6.22e4	6.42e4	1.085	4.38	4.30	12.1	11.1	89.2
44	44	13C2-PFDoA	615 > 569.7	6.76e3	6.42e4	0.123	4.58	4.48	1.32	10.7	85.5
45	45	d3-N-MeFOSA	515.2 > 168.9	3.08e4	6.42e4	0.043	4.56	4.53	5.99	138	92.3
46	46	13C2-PFTeDA	714.8 > 669.6	4.45e4	6.42e4	0.798	4.97	4.86	8.67	10.9	86.9
47	47	d5-N-ETFOSA	531.1 > 168.9	3.80e4	6.42e4	0.056	5.03	4.97	7.40	133	88.6
48	48	13C2-PFHxDA	815 > 769.7	2.09e4	6.42e4	0.926	5.37	5.24	4.07	4.40	87.9
49	49	d7-N-MeFOSE	623.1 > 58.9	4.35e4	6.42e4	0.059	5.30	5.24	8.46	142	94.9
50	50	d9-N-EtFOSE	639.2 > 58.8	4.17e4	6.42e4	0.059	5.40	5.41	8.12	137	91.1
51	51	13C4-PFBA	217 > 171.8	1.87e4	1.87e4	1.000	1.90	1.90	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	4.18e4	4.18e4	1.000	3.35	3.30	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	8.56e3	8.56e3	1.000	3.68	3.62	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	6.07e4	6.07e4	1.000	3.82	3.76	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	6.37e4	6.37e4	1.000	4.02	3.95	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.05e4	1.05e4	1.000	4.07	4.01	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	5.81e4	5.81e4	1.000	4.21	4.13	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	6.42e4	6.42e4	1.000	4.38	4.30	12.5	12.5	100.0

B-150

B out of window, not used. ah 8/11/17

Vista Analytical Laboratory

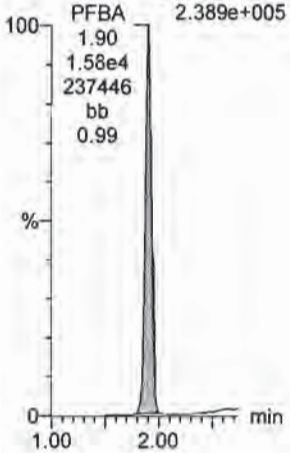
Dataset: U:\Q4.PRO\results\170810M1\170810M2-13.qld

Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

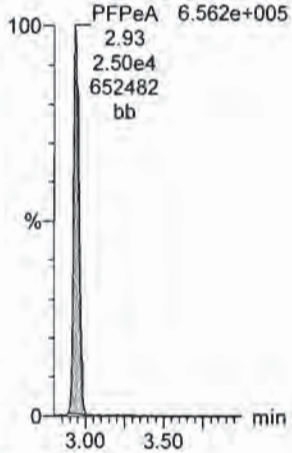
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 08:55:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

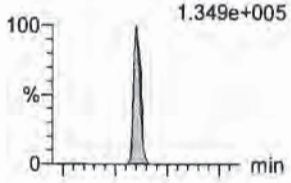
PFBA
F1:MRM of 2 channels,ES-
213.0 > 168.8
2.389e+005



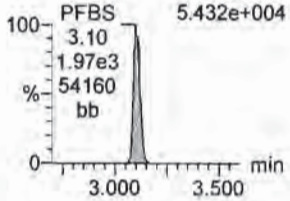
PFPeA
F4:MRM of 1 channel,ES-
263.1 > 218.9
6.562e+005



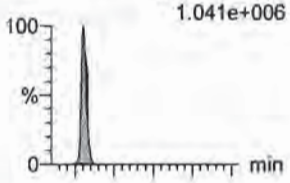
PFBS
F6:MRM of 2 channels,ES-
299 > 79.7
1.349e+005



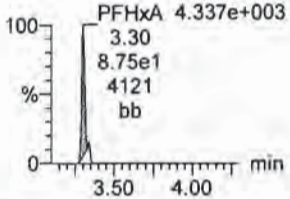
F6:MRM of 2 channels,ES-
299 > 99
5.432e+004



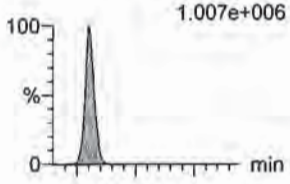
PFHxA
F8:MRM of 2 channels,ES-
313.2 > 268.9
1.041e+006



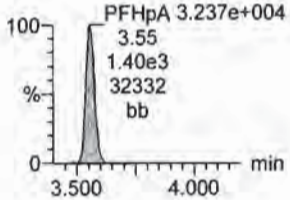
F8:MRM of 2 channels,ES-
313.2 > 119
4.337e+003



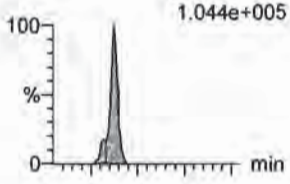
PFHpA
F14:MRM of 2 channels,ES-
363 > 318.9
1.007e+006



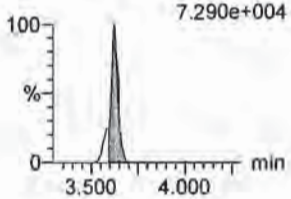
F14:MRM of 2 channels,ES-
363 > 169
3.237e+004



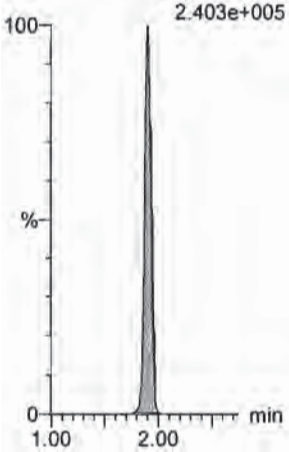
PFHxS
F16:MRM of 2 channels,ES-
398.9 > 79.6
1.044e+005



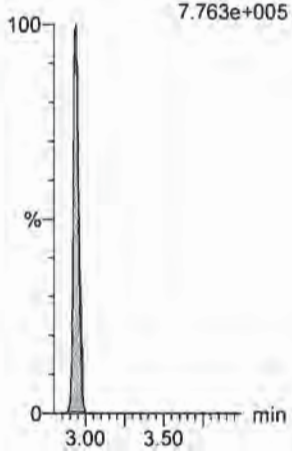
F16:MRM of 2 channels,ES-
398.9 > 99
7.290e+004



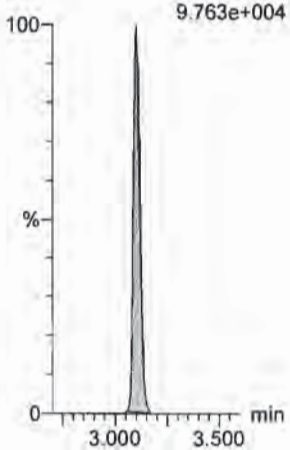
13C3-PFBA
F2:MRM of 1 channel,ES-
216.1 > 171.8
2.403e+005



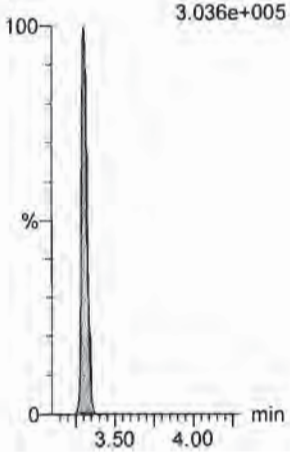
13C3-PFPeA
F5:MRM of 1 channel,ES-
266 > 221.8
7.763e+005



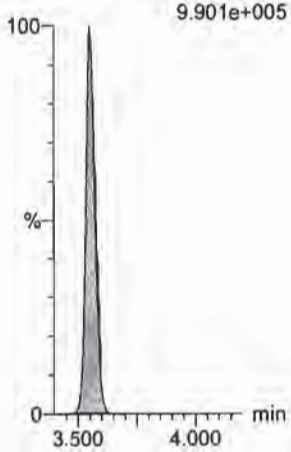
13C3-PFBS
F7:MRM of 1 channel,ES-
302 > 98.8
9.763e+004



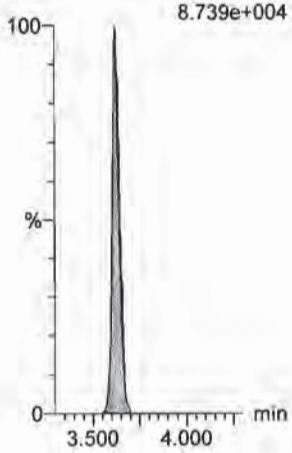
13C2-PFHxA
F9:MRM of 1 channel,ES-
315 > 269.8
3.036e+005



13C4-PFHpA
F15:MRM of 1 channel,ES-
367.2 > 321.8
9.901e+005



18O2-PFHxS
F18:MRM of 1 channel,ES-
403 > 102.6
8.739e+004

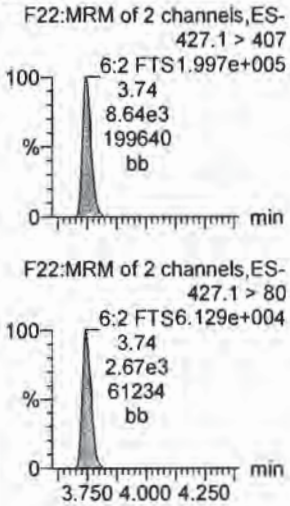


Dataset: U:\Q4.PRO\results\170810M1\170810M2-13.qld

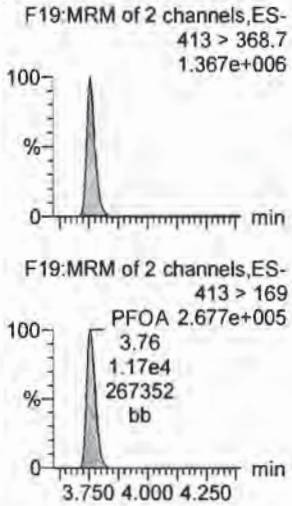
Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

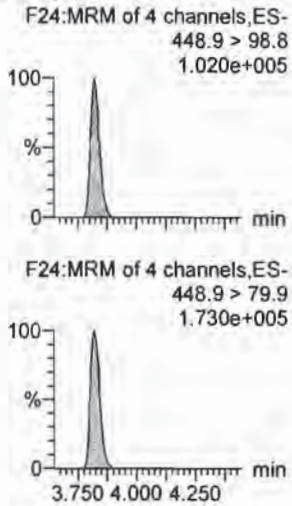
6:2 FTS



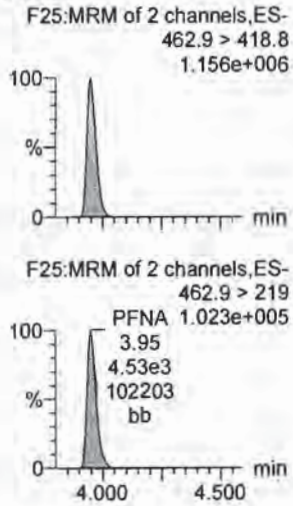
PFOA



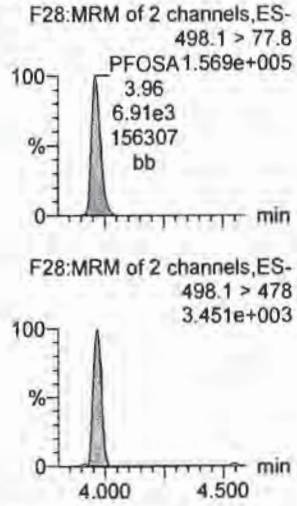
PFHpS



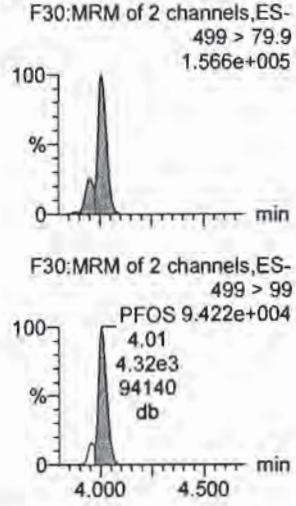
PFNA



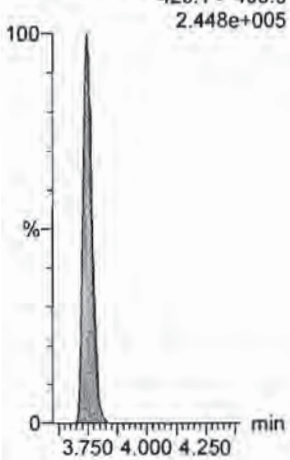
PFOSA



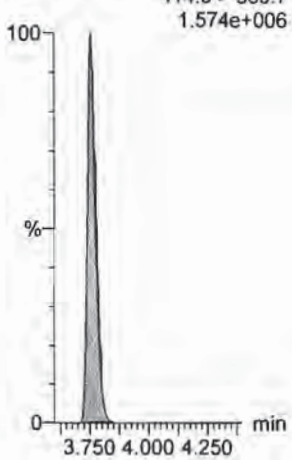
PFOS



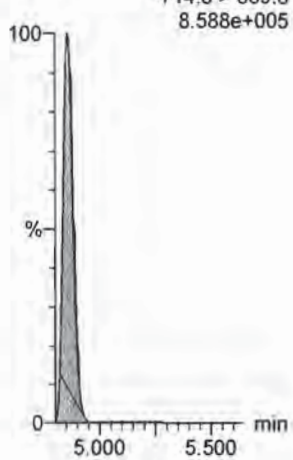
13C2-6:2 FTS



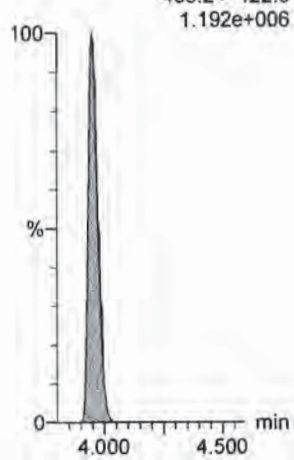
13C2-PFOA



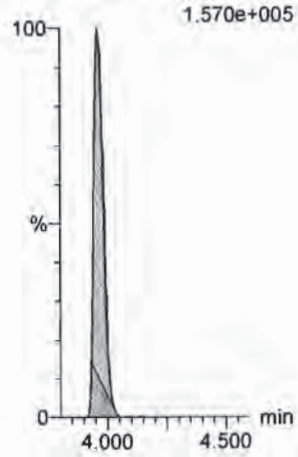
13C2-PFTeDA



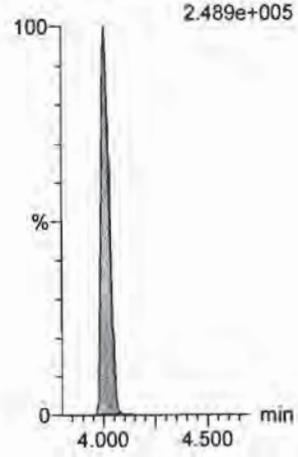
13C5-PFNA



13C8-PFOSA



13C8-PFOS



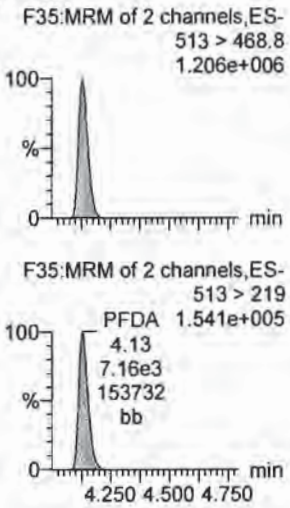
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170810M1\170810M2-13.qld

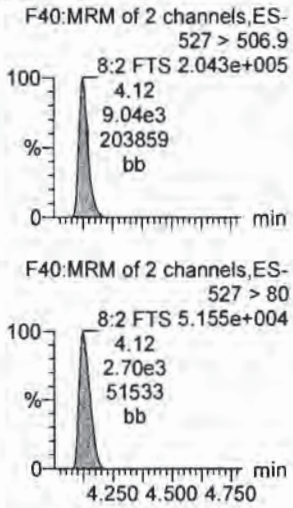
Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

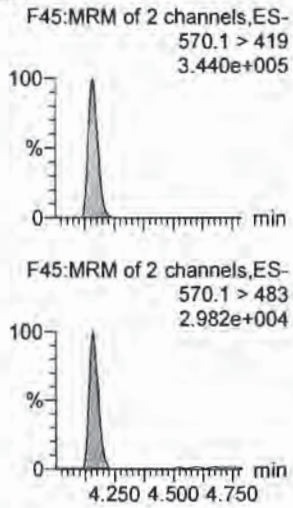
PFDA



8:2 FTS



N-MeFOSAA



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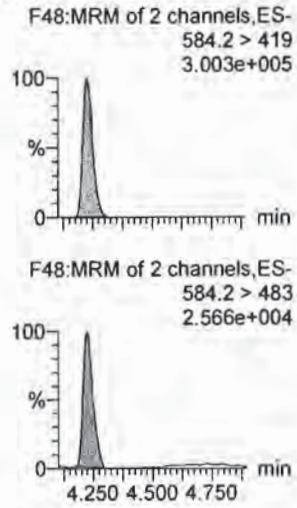
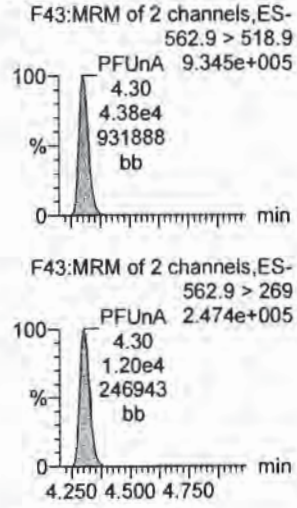
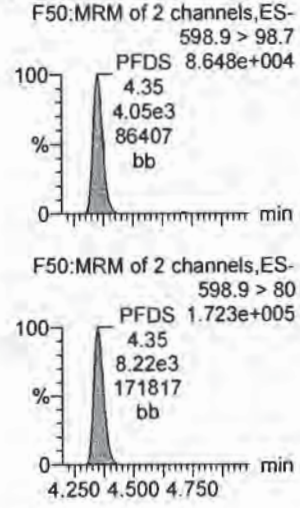


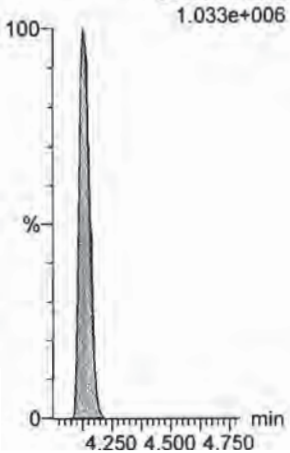
PFUnA



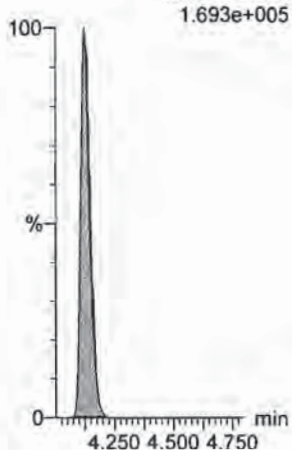
PFDS



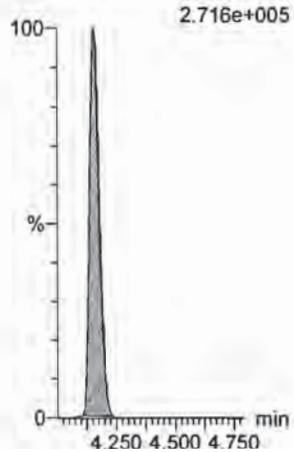
13C2-PFDA



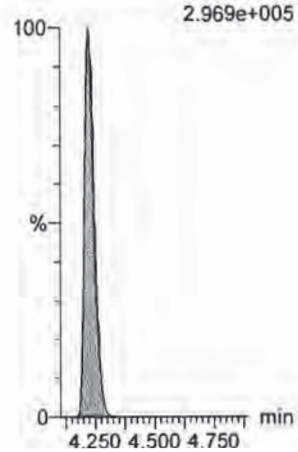
13C2-8:2 FTS



d3-N-MeFOSAA



d5-N-EtFOSAA



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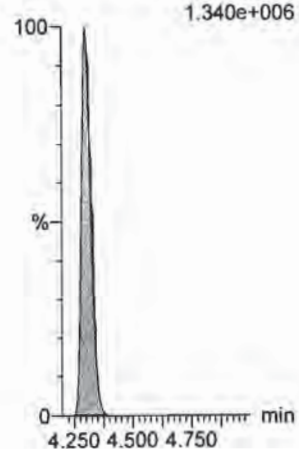

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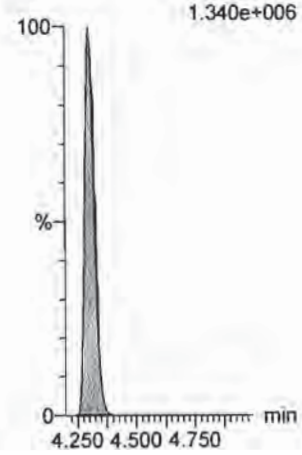

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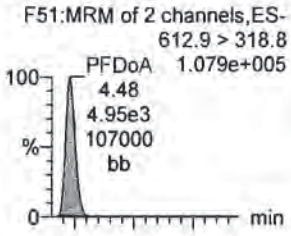
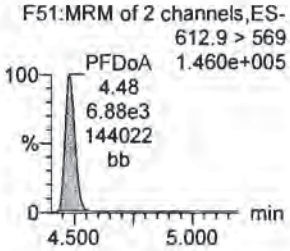
Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

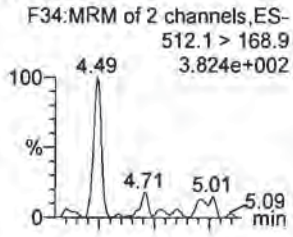
Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

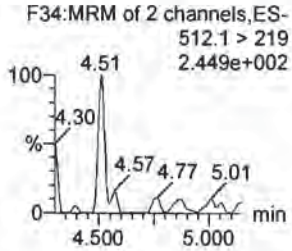
PFDoA



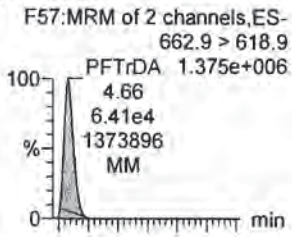


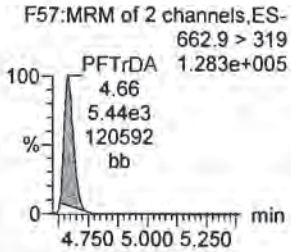
N-MeFOSA



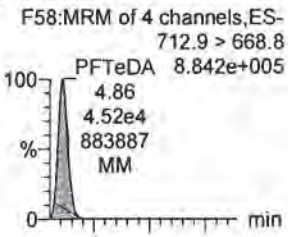


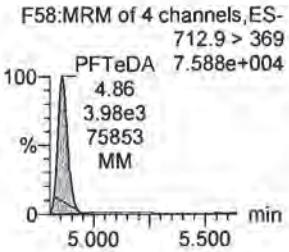
PFTrDA



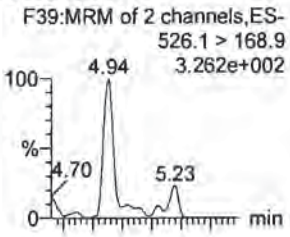


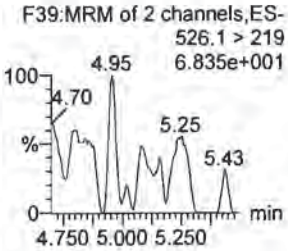
PFTeDA



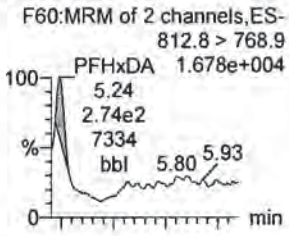


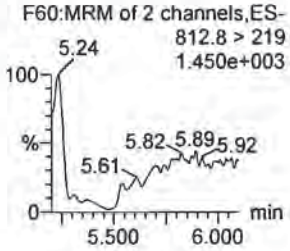
N-EtFOSA





PFHxDA





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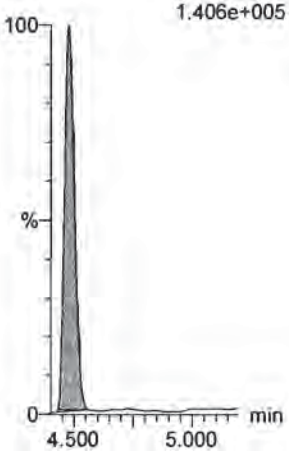
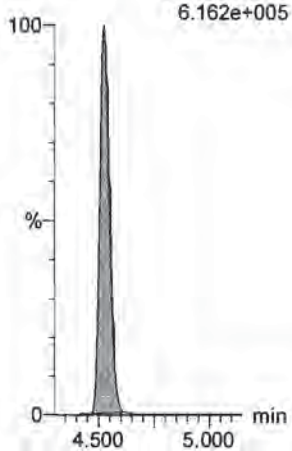
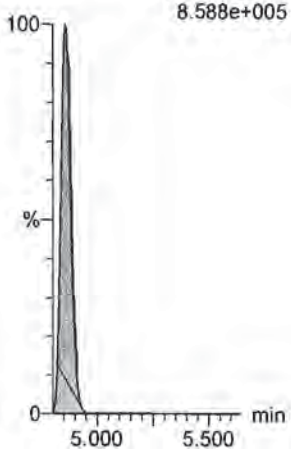


d3-N-MeFOSA



13C2-PFTeDA



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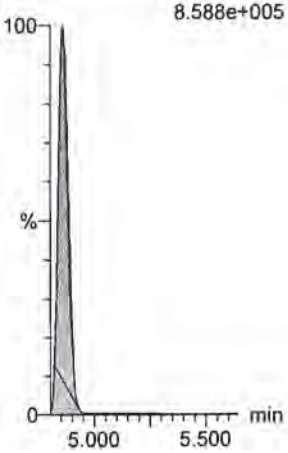
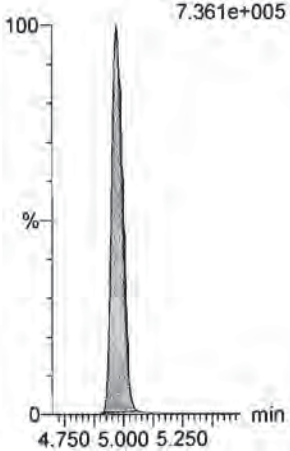
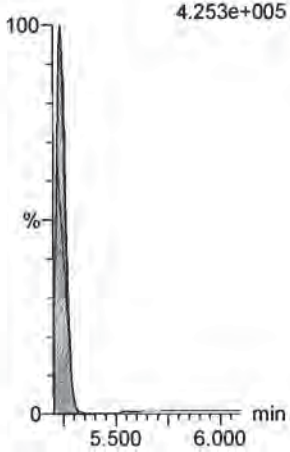


d5-N-ETFOSA



13C2-PFHxDA



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Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
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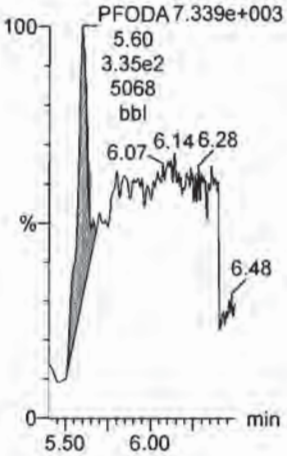
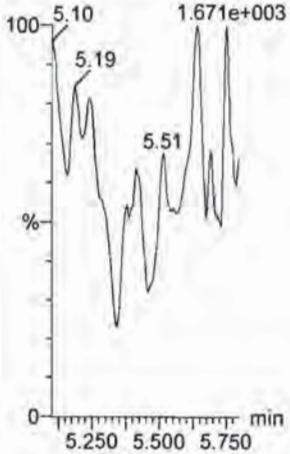
Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

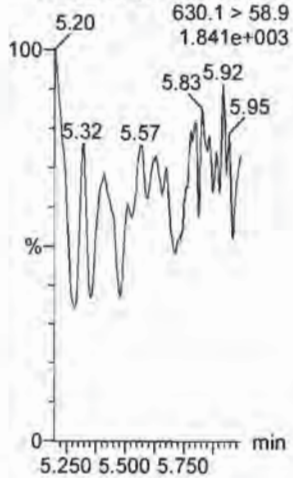
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
PFODA 7.339e+003



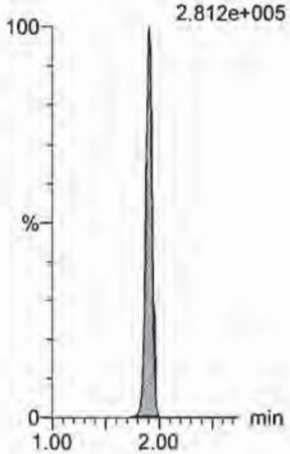
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.671e+003



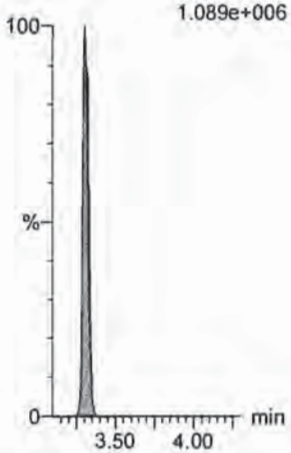
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.841e+003



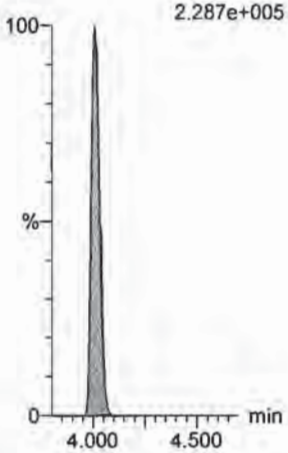
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.812e+005



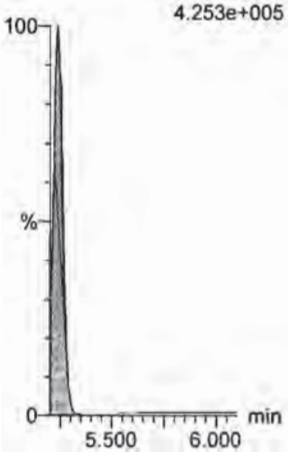
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.089e+006



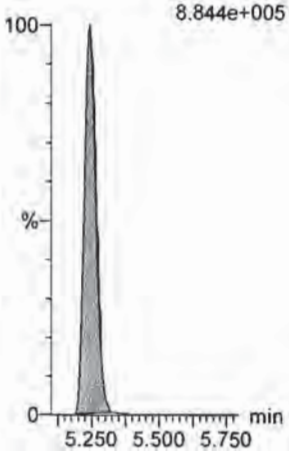
13C4-PFOS
F31:MRM of 1 channel,ES-
503 > 79.9
2.287e+005



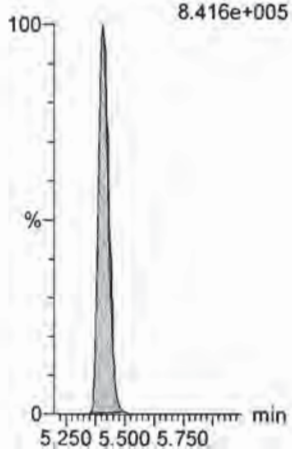
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.253e+005



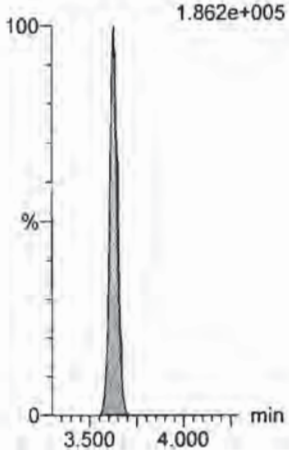
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
8.844e+005



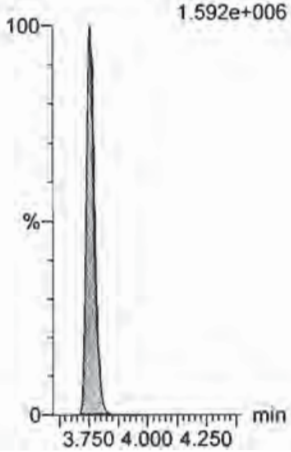
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
8.416e+005



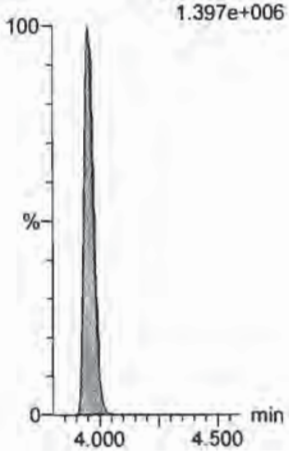
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.862e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.592e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.397e+006



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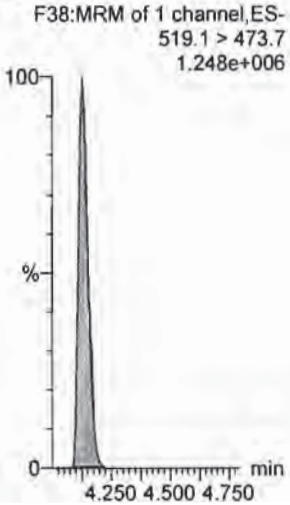
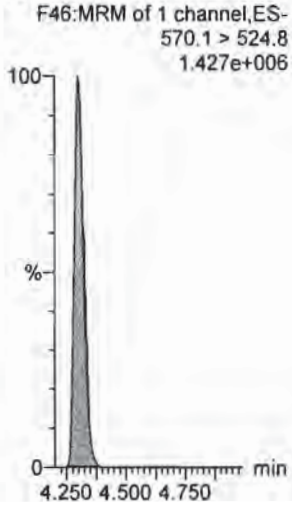
Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

13C6-PFDA



13C7-PFUnA



Vista Analytical Laboratory

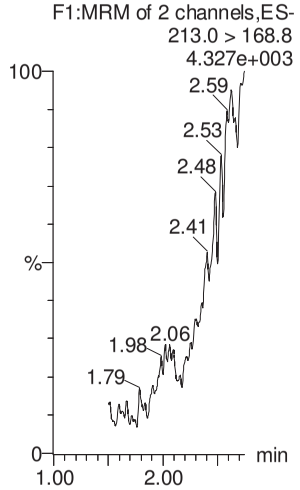
Dataset: U:\Q4.PRO\results\170810M1\170810M2-12.qld

Last Altered: Friday, August 11, 2017 10:12:48 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:13:44 Pacific Daylight Time

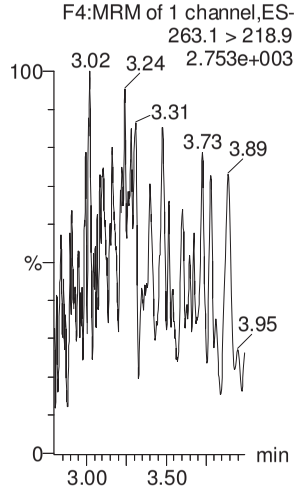
Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 08:55:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170810M2_12, Date: 10-Aug-2017, Time: 22:19:51, ID: IPA, Description: IPA

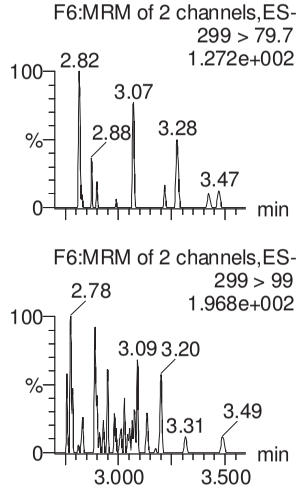
PFBA



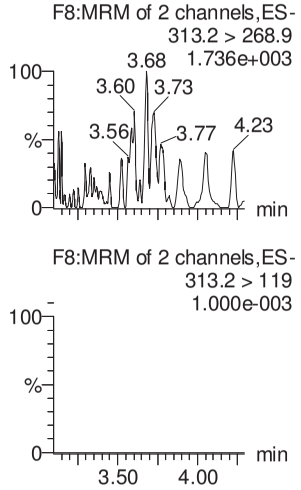
PFPeA



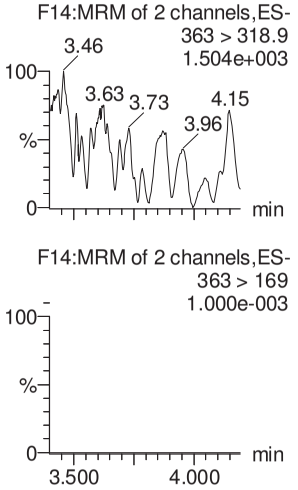
PFBS



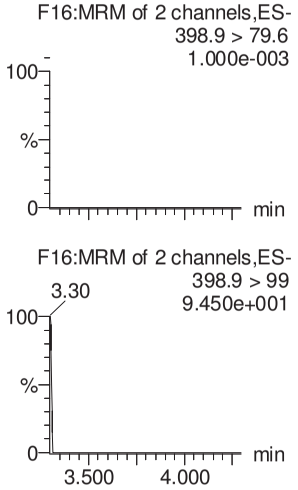
PFHxA



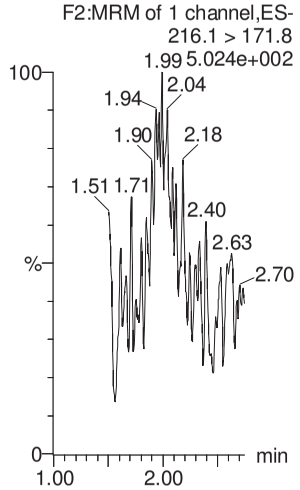
PFHpA



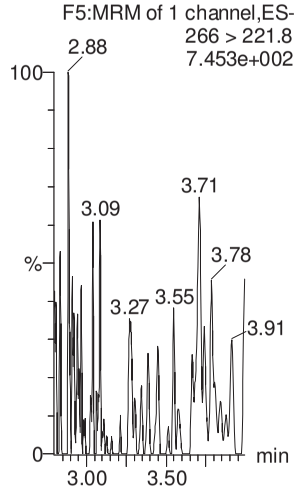
PFHxS



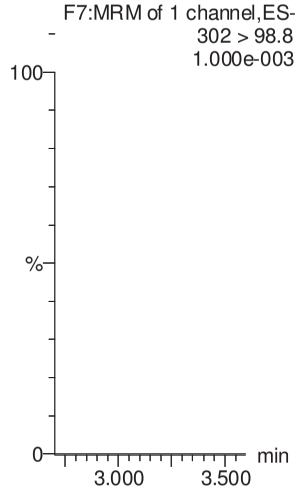
13C3-PFBA



13C3-PFPeA



13C3-PFBS



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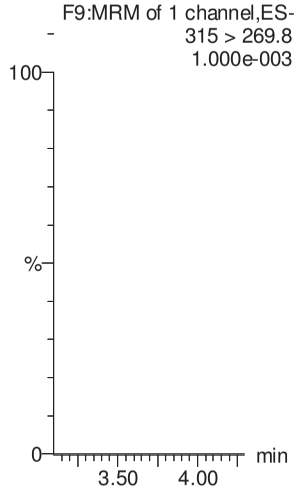
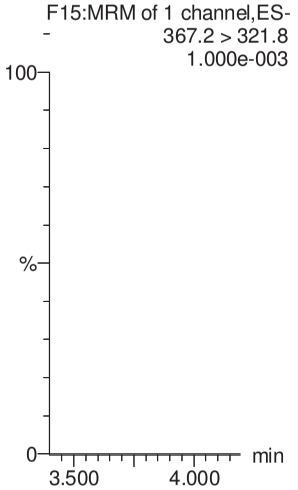
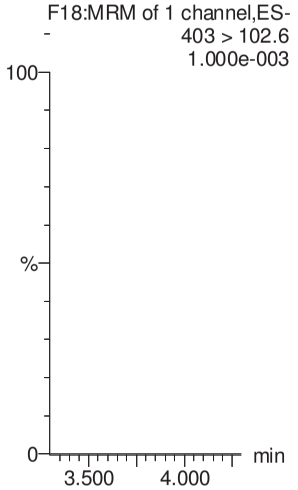


13C4-PFHpA



18O2-PFHxS



GM 8/11/17

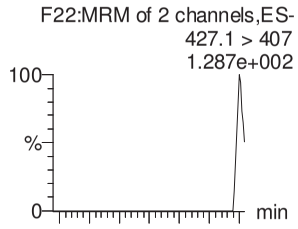
Vista Analytical Laboratory

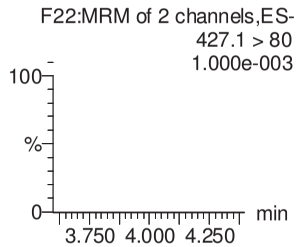
Dataset: U:\Q4.PRO\results\170810M1\170810M2-12.qld

Last Altered: Friday, August 11, 2017 10:12:48 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:13:44 Pacific Daylight Time

Name: 170810M2_12, Date: 10-Aug-2017, Time: 22:19:51, ID: IPA, Description: IPA

6:2 FTS





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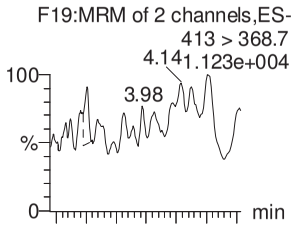
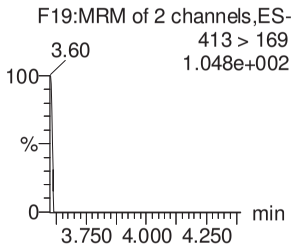
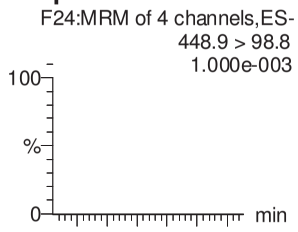
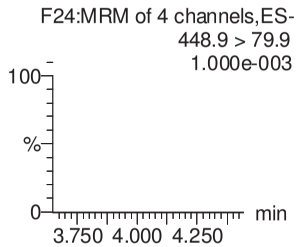




PFHpS





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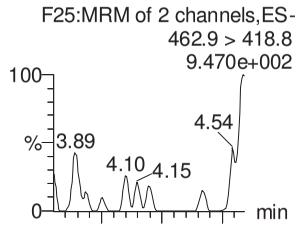
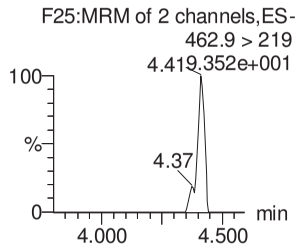
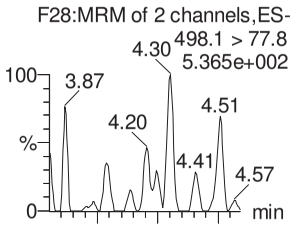
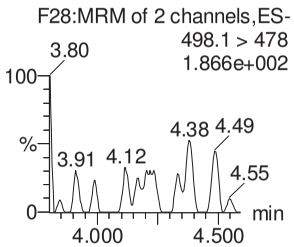


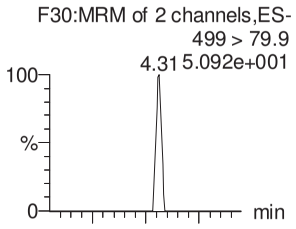


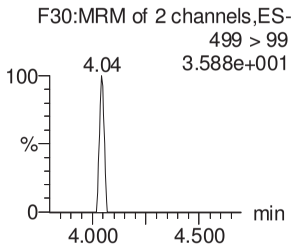
PFOSA



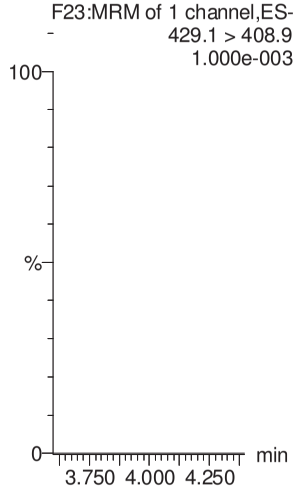


PFOS

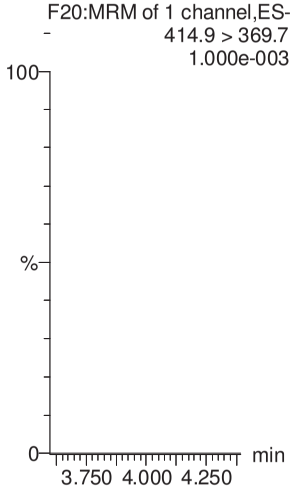




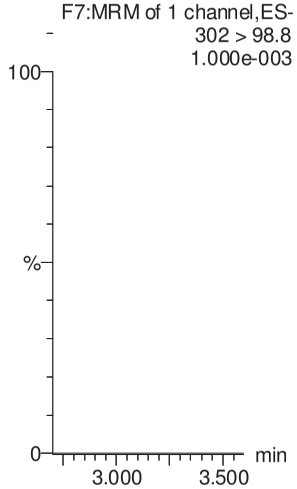
13C2-6:2 FTS



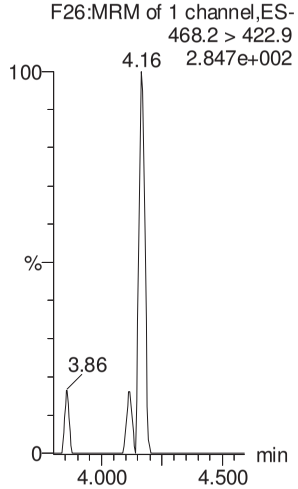
13C2-PFOA



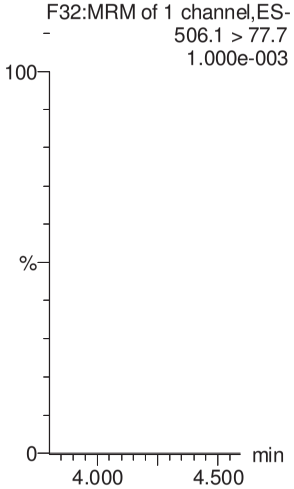
13C3-PFBS



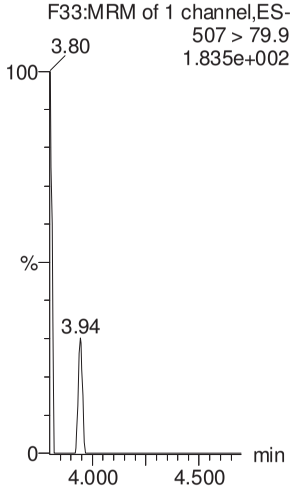
13C5-PFNA



13C8-PFOSA



13C8-PFOS



GM 8/11/17

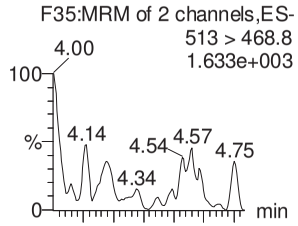
Vista Analytical Laboratory

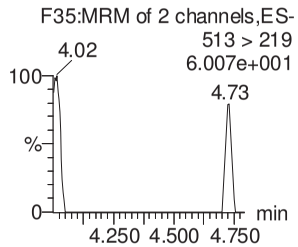
Dataset: U:\Q4.PRO\results\170810M1\170810M2-12.qld

Last Altered: Friday, August 11, 2017 10:12:48 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:13:44 Pacific Daylight Time

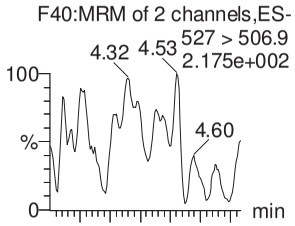
Name: 170810M2_12, Date: 10-Aug-2017, Time: 22:19:51, ID: IPA, Description: IPA

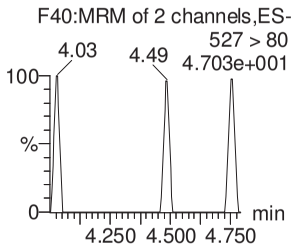
PFDA



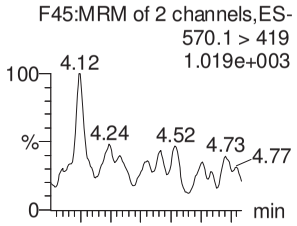


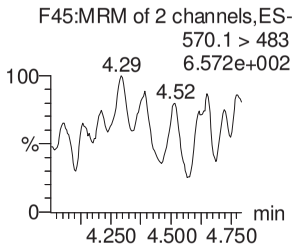
8:2 FTS





N-MeFOSAA





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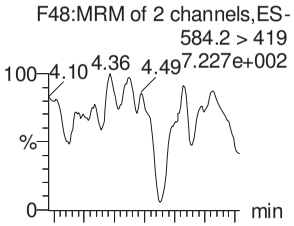
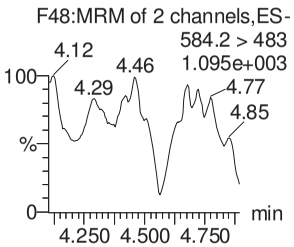
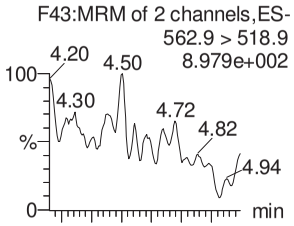
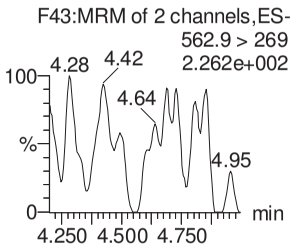




PFUnA





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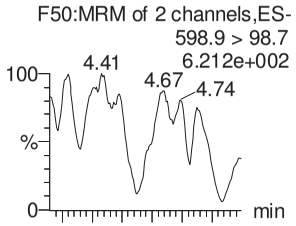

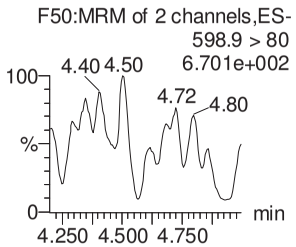

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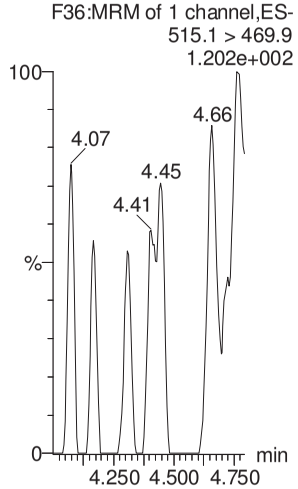
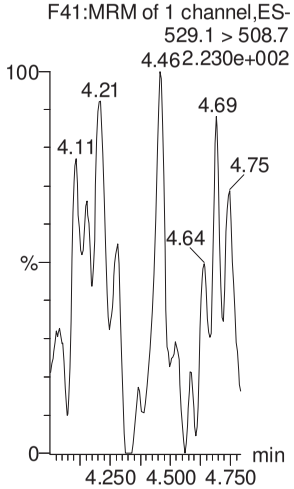
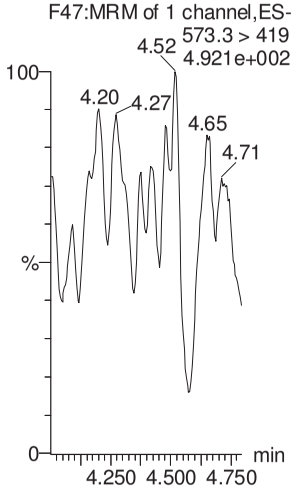


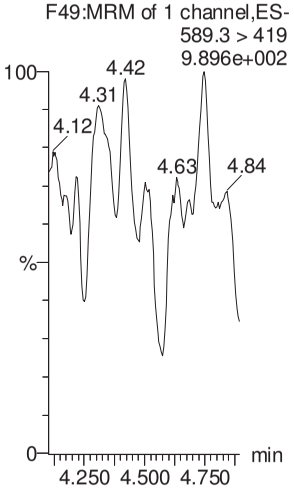
13C2-8:2 FTS



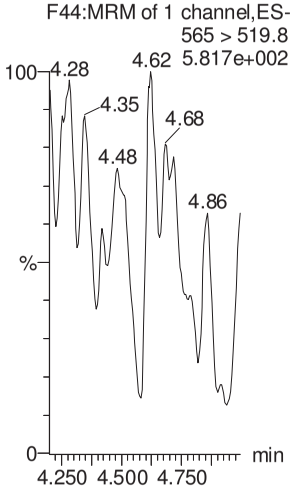
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFUnA



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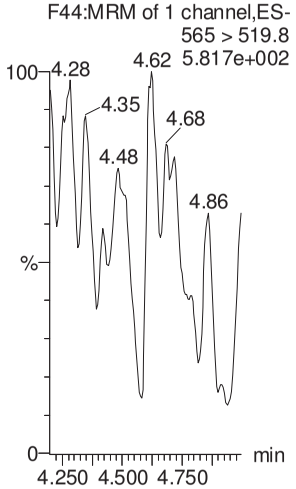


GM 8/11/17

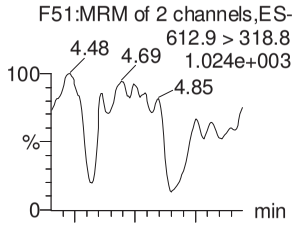
Vista Analytical Laboratory

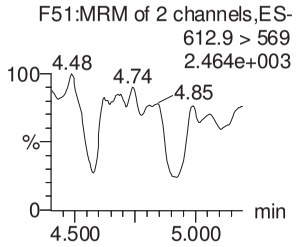
Dataset: U:\Q4.PRO\results\170810M1\170810M2-12.qld

Last Altered: Friday, August 11, 2017 10:12:48 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:13:44 Pacific Daylight Time

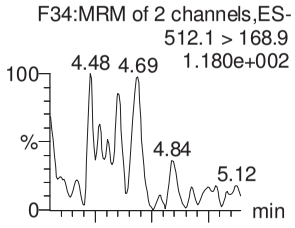
Name: 170810M2_12, Date: 10-Aug-2017, Time: 22:19:51, ID: IPA, Description: IPA

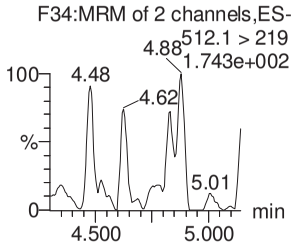
PFDoA



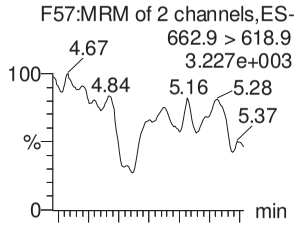


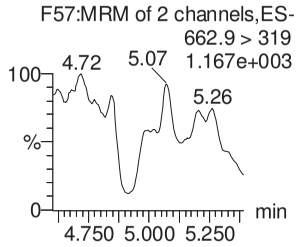
N-MeFOSA



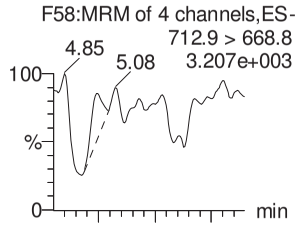


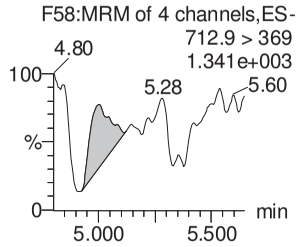
PFTrDA



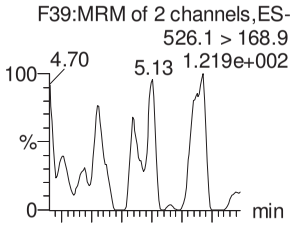


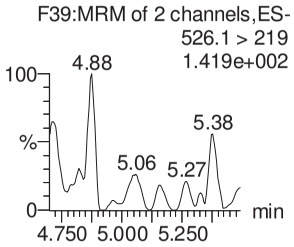
PFTeDA



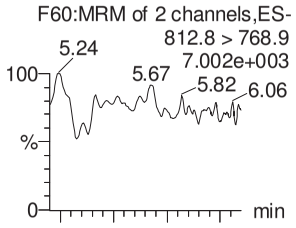


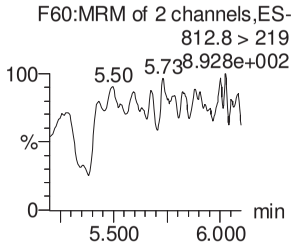
N-EtFOSA



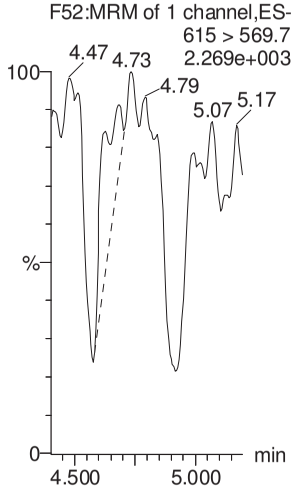


PFHxDA

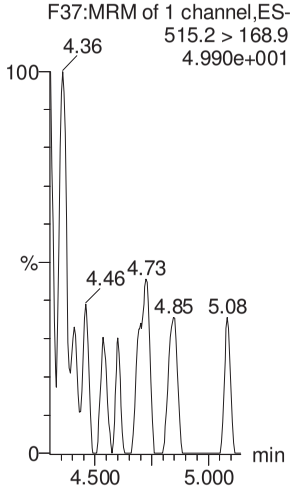




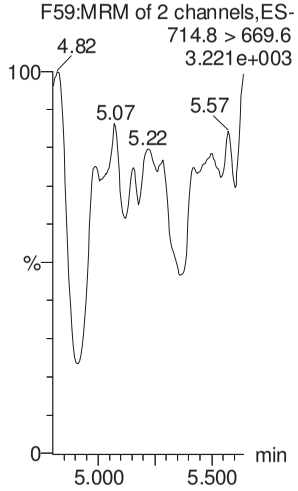
13C2-PFDoA



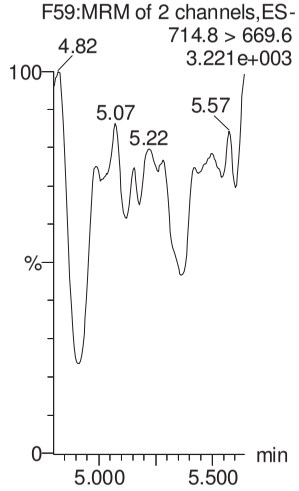
d3-N-MeFOSA



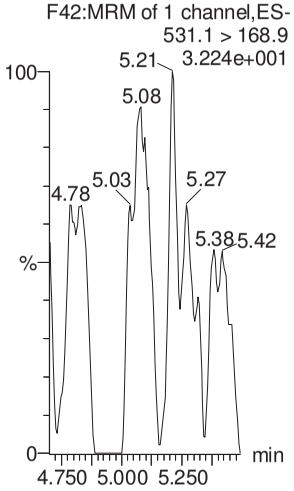
13C2-PFTeDA



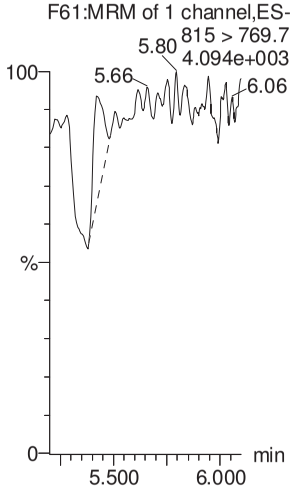
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



GM 8/11/17

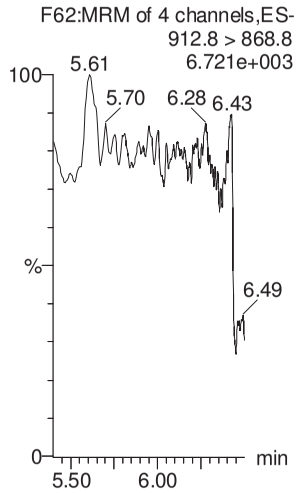
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170810M1\170810M2-12.qld

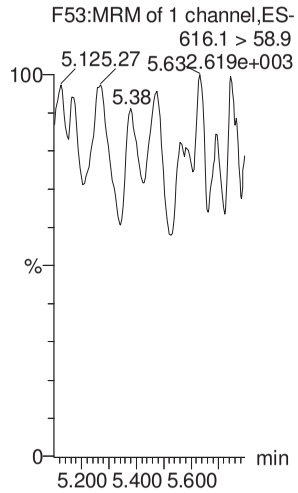
Last Altered: Friday, August 11, 2017 10:12:48 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:13:44 Pacific Daylight Time

Name: 170810M2_12, Date: 10-Aug-2017, Time: 22:19:51, ID: IPA, Description: IPA

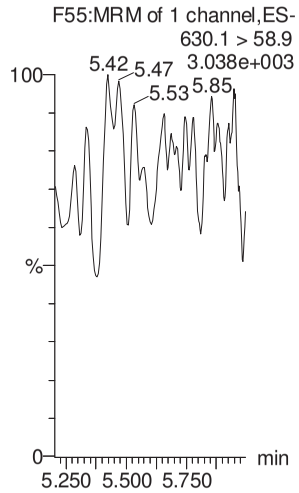
PFODA



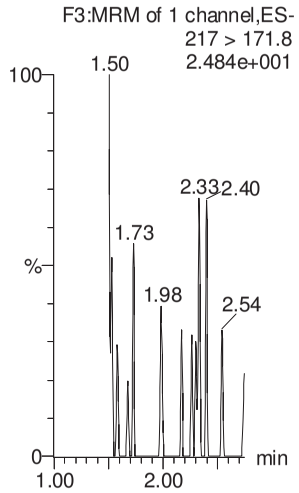
N-MeFOSE



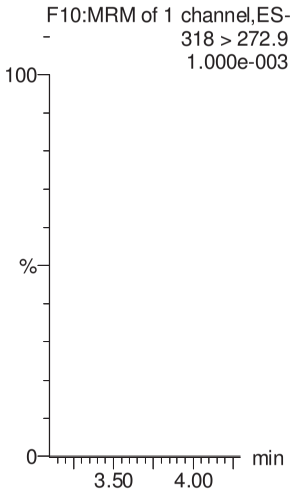
N-EtFOSE



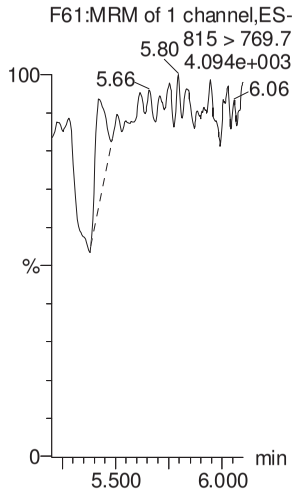
13C4-PFBA



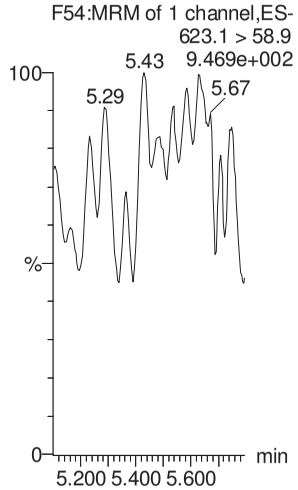
13C5-PFHxA



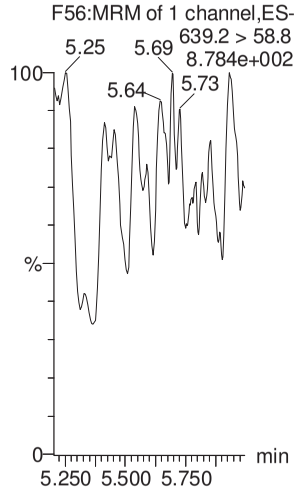
13C2-PFHxDA



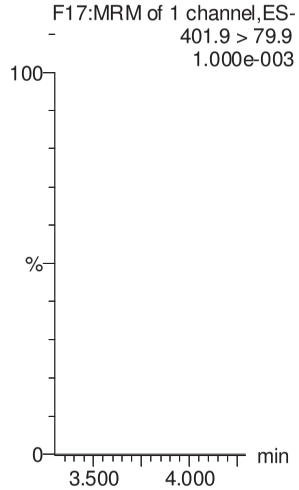
d7-N-MeFOSE



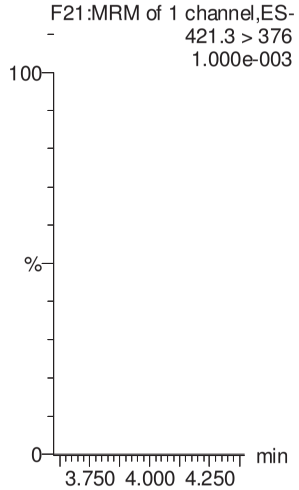
d9-N-EtFOSE



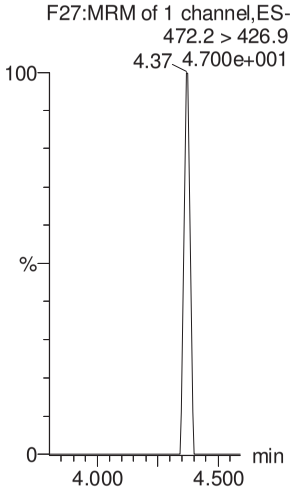
13C3-PFHxS



13C8-PFOA



13C9-PFNA



GM 8/11/17

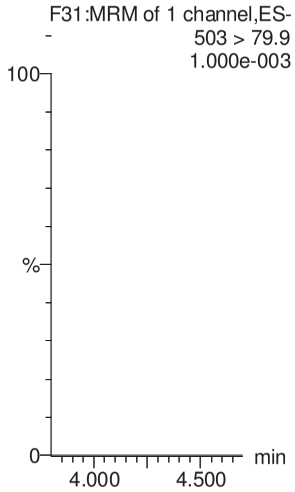
Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170810M1\170810M2-12.qld

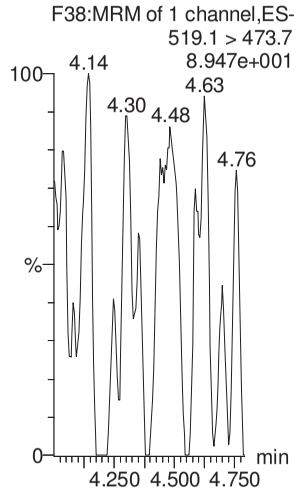
Last Altered: Friday, August 11, 2017 10:12:48 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:13:44 Pacific Daylight Time

Name: 170810M2_12, Date: 10-Aug-2017, Time: 22:19:51, ID: IPA, Description: IPA

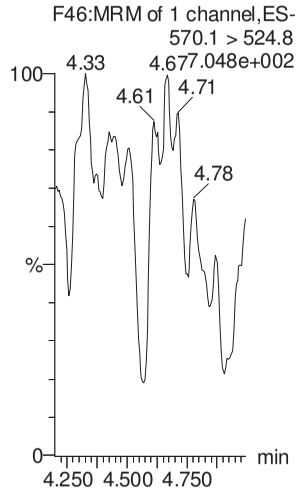
13C4-PFOS



13C6-PFDA



13C7-PFUnA



GM 8/11/17

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

Dataset: U:\Q4.PRO\results\170810M1\170810M2-13.qld

Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 08:55:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.58e4	1.65e4		1.90	1.90	11.9	10.9	108.9
2	2	PFPeA	263.1 > 218.9	2.50e4	3.00e4		3.00	2.93	10.4	10.9	109.1
3	3	PFBS	299 > 79.7	4.94e3	3.50e3		3.16	3.10	17.6	10.2	102.0
4	4	PFHxA	313.2 > 268.9	3.88e4	1.21e4		3.35	3.30	16.1	12.2	122.4
5	5	PFHpA	363 > 318.9	4.45e4	4.43e4		3.61	3.55	12.6	10.7	106.6
6	6	PFHxS	398.9 > 79.6	5.19e3	3.78e3		3.65	3.62	17.2	9.76	97.6
7	7	6:2 FTS	427.1 > 407	8.64e3	1.08e4		3.80	3.74	10.0	10.7	107.4
8	8	PFOA	413 > 368.7	5.53e4	6.29e4		3.82	3.75	11.0	11.1	110.5
9	9	PFHpS	448.9 > 98.8	4.60e3	6.29e4		3.80	3.82	0.914	11.5	115.2
10	10	PFNA	462.9 > 418.8	5.12e4	5.49e4		4.02	3.95	11.7	11.4	113.9
11	11	PFOSA	498.1 > 77.8	6.91e3	7.39e3		4.05	3.96	11.7	11.1	111.0
12	12	PFOS	499 > 79.9	9.36e3	1.10e4		4.07	4.01	10.6	9.98	99.8
13	13	PFDA	513 > 468.8	5.63e4	5.29e4		4.21	4.13	13.3	11.7	116.5
14	14	8:2 FTS	527 > 506.9	9.04e3	7.56e3		4.20	4.12	14.9	10.8	108.3
15	15	N-MeFOSAA	570.1 > 419	1.62e4	1.27e4		4.23	4.16	208	10.8	107.7
16	16	N-EtFOSAA	584.2 > 419	1.43e4	1.37e4		4.30	4.23	170	10.8	108.4
17	17	PFUnA	562.9 > 518.9	4.38e4	6.22e4		4.38	4.30	8.80	10.8	107.9
18	18	PFDS	598.9 > 98.7	4.05e3	6.22e4		4.40	4.35	0.815	9.87	98.7
19	19	PFDoA	612.9 > 318.8	4.95e3	6.76e3		4.58	4.48	9.16	10.9	109.4
20	20	N-MeFOSA	512.1 > 168.9		3.08e4		4.56			(A)	
21	21	PFTrDA	662.9 > 618.9	6.41e4	6.76e3		4.78	4.66	118	11.7	117.0
22	22	PFTeDA	712.9 > 668.8	4.52e4	4.45e4		4.97	4.86	12.7	11.1	110.9
23	23	N-EtFOSA	526.1 > 168.9		3.80e4		5.03			(A)	
24	24	PFHxDA	812.8 > 768.9	2.74e2	2.09e4		5.37	5.24	0.0656		
25	25	PFODA	912.8 > 868.8	3.35e2	2.09e4		5.60	5.60	0.0800		
26	26	N-MeFOSE	616.1 > 58.9		4.35e4		5.30				
27	27	N-EtFOSE	630.1 > 58.9		4.17e4		5.40				
28	28	13C3-PFBA	216.1 > 171.8	1.65e4	1.87e4	0.906	1.90	1.90	11.1	12.2	97.6
29	29	13C3-PFPeA	266 > 221.8	3.00e4	4.18e4	0.284	2.99	2.94	3.59	12.6	101.1
30	30	13C3-PFBS	302 > 98.8	3.50e3	4.18e4	0.033	3.15	3.10	0.418	12.7	101.8
31	31	13C2-PFHxA	315 > 269.8	1.21e4	4.18e4	0.304	3.35	3.30	1.44	4.75	94.9

70-130

50-150

DM 8/11/17

(A) Not present in ICV standard. dm 8/11/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170810M1\170810M2-13.qld

Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.43e4	4.18e4	0.384	3.61	3.55	5.29	13.8	110.2
33	33	18O2-PFHxS	403 > 102.6	3.78e3	8.56e3	0.417	3.68	3.62	5.52	13.2	105.8
34	34	13C2-6:2 FTS	429.1 > 408.9	1.08e4	6.07e4	0.202	3.80	3.75	2.22	11.0	88.1
35	35	13C2-PFOA	414.9 > 369.7	6.29e4	6.07e4	1.132	3.82	3.75	12.9	11.4	91.5
36	36	13C5-PFNA	468.2 > 422.9	5.49e4	6.37e4	0.946	4.02	3.95	10.8	11.4	91.0
37	37	13C8-PFOSA	506.1 > 77.7	7.39e3	6.42e4	0.119	4.08	3.96	1.44	12.0	96.4
38	38	13C8-PFOS	507 > 79.9	1.10e4	1.05e4	1.040	4.07	4.01	13.1	12.6	101.1
39	39	13C2-PFDA	515.1 > 469.9	5.29e4	5.81e4	0.971	4.21	4.13	11.4	11.7	93.9
40	40	13C2-8:2 FTS	529.1 > 508.7	7.56e3	5.81e4	0.140	4.20	4.12	1.63	11.6	92.8
41	41	d3-N-MeFOSAA	573.3 > 419	1.27e4	6.42e4	0.018	4.23	4.16	2.47	139	85.4
42	42	d5-N-EtFOSAA	589.3 > 419	1.37e4	6.42e4	0.018	4.30	4.22	2.67	146	90.1
43	43	13C2-PFUnA	565 > 519.8	6.22e4	6.42e4	1.085	4.38	4.30	12.1	11.1	89.2
44	44	13C2-PFDoA	615 > 569.7	6.76e3	6.42e4	0.123	4.58	4.48	1.32	10.7	85.5
45	45	d3-N-MeFOSA	515.2 > 168.9	3.08e4	6.42e4	0.043	4.56	4.53	5.99	138	92.3
46	46	13C2-PFTeDA	714.8 > 669.6	4.45e4	6.42e4	0.798	4.97	4.86	8.67	10.9	86.9
47	47	d5-N-ETFOSA	531.1 > 168.9	3.80e4	6.42e4	0.056	5.03	4.97	7.40	133	88.6
48	48	13C2-PFHxDA	815 > 769.7	2.09e4	6.42e4	0.926	5.37	5.24	4.07	4.40	87.9
49	49	d7-N-MeFOSE	623.1 > 58.9	4.35e4	6.42e4	0.059	5.30	5.24	8.46	142	94.9
50	50	d9-N-EtFOSE	639.2 > 58.8	4.17e4	6.42e4	0.059	5.40	5.41	8.12	137	91.1
51	51	13C4-PFBA	217 > 171.8	1.87e4	1.87e4	1.000	1.90	1.90	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	4.18e4	4.18e4	1.000	3.35	3.30	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	8.56e3	8.56e3	1.000	3.68	3.62	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	6.07e4	6.07e4	1.000	3.82	3.76	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	6.37e4	6.37e4	1.000	4.02	3.95	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.05e4	1.05e4	1.000	4.07	4.01	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	5.81e4	5.81e4	1.000	4.21	4.13	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	6.42e4	6.42e4	1.000	4.38	4.30	12.5	12.5	100.0

8-150

(B) out of window, not used. ah 8/11/17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170810M1\170810M2-13.qld

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Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

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Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

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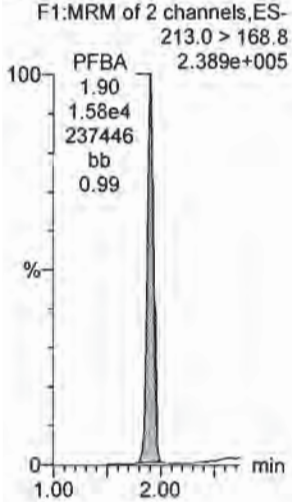
PFBA



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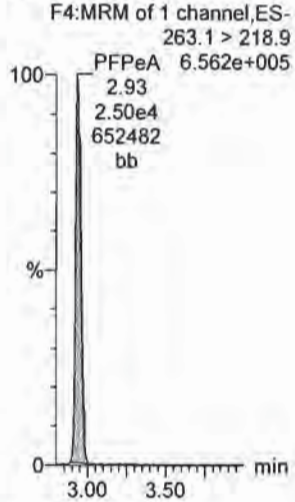
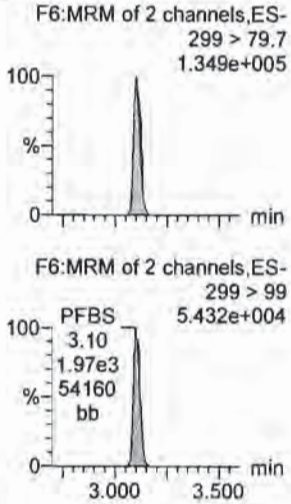


PFBS



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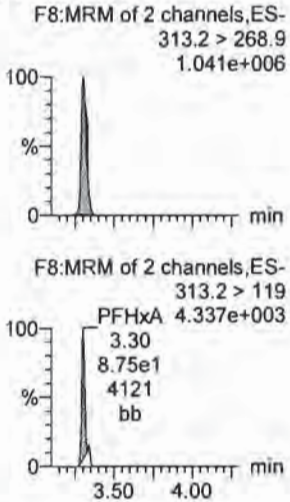

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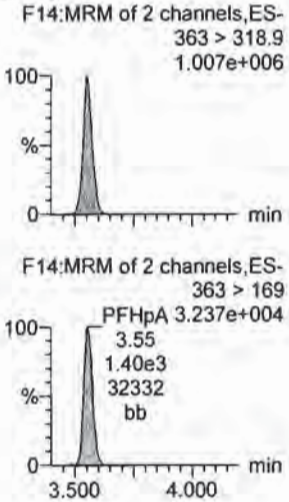

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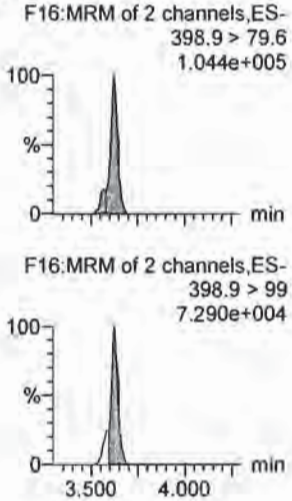

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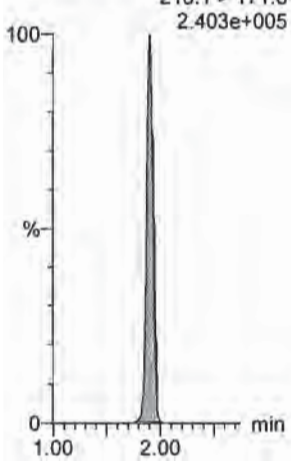

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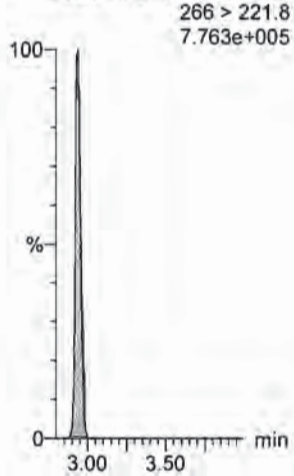

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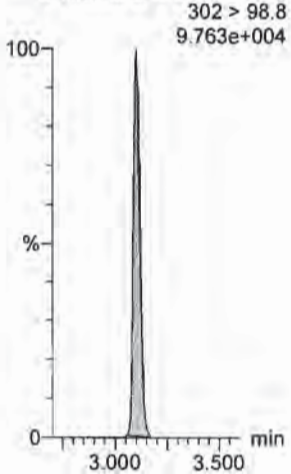

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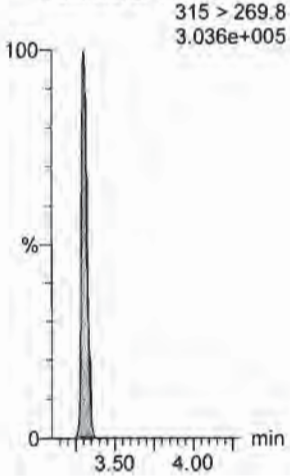

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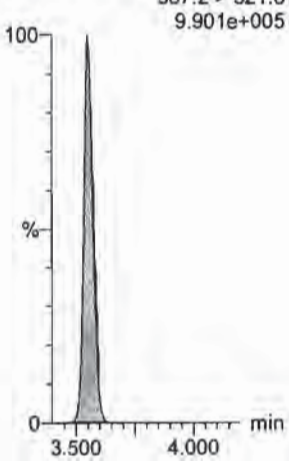

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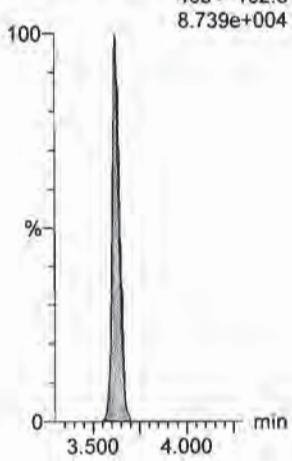

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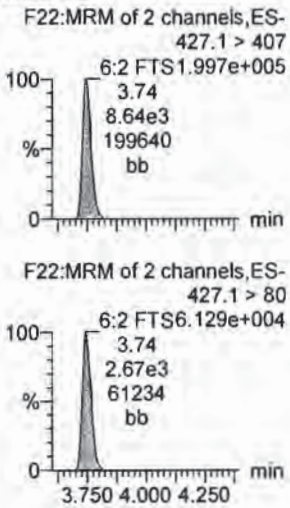
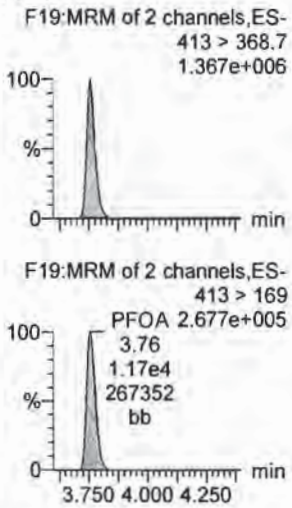
Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

6:2 FTS



PFOA



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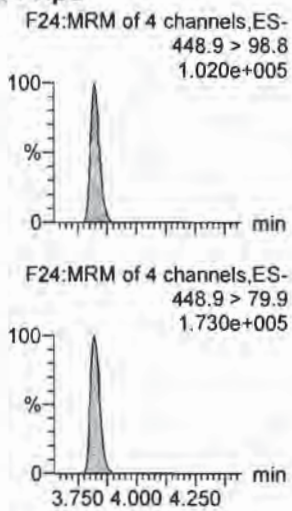

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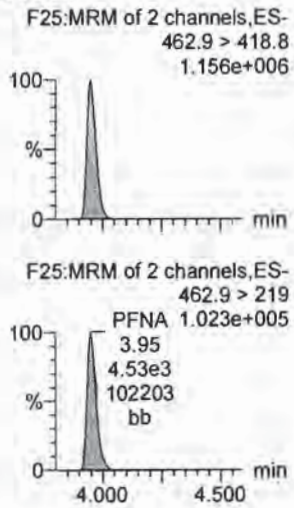

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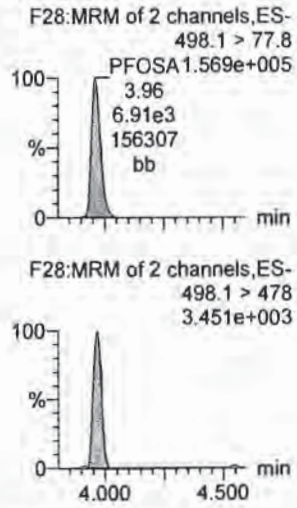

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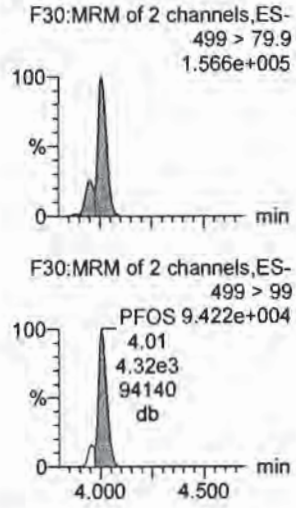
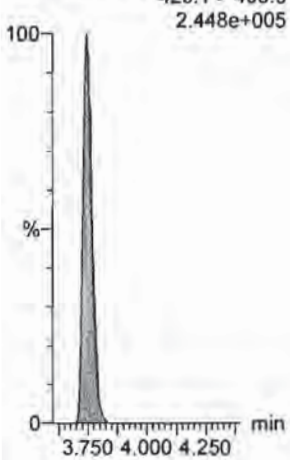


13C2-6:2 FTS



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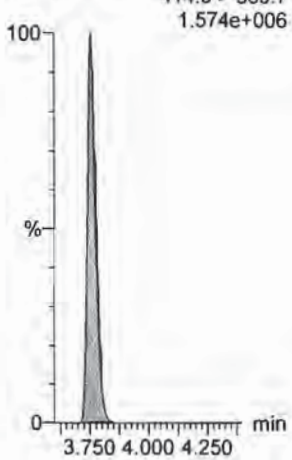
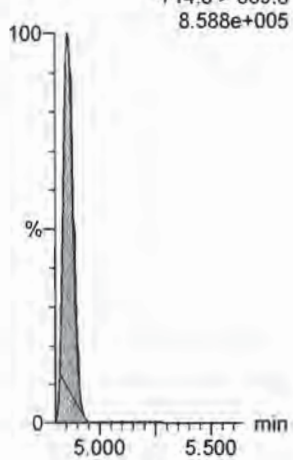


13C2-PFTeDA



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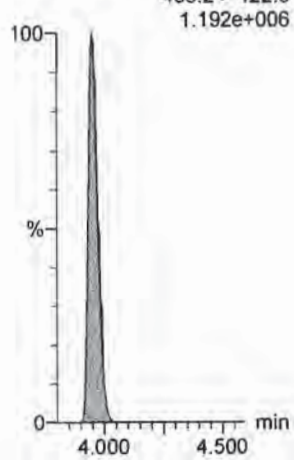

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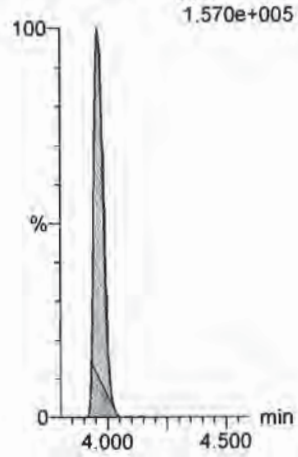

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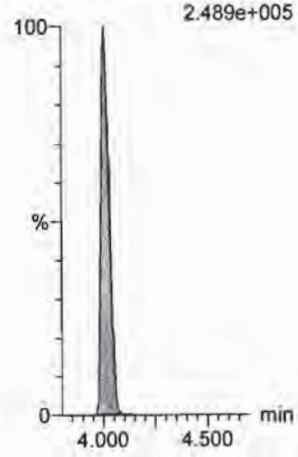

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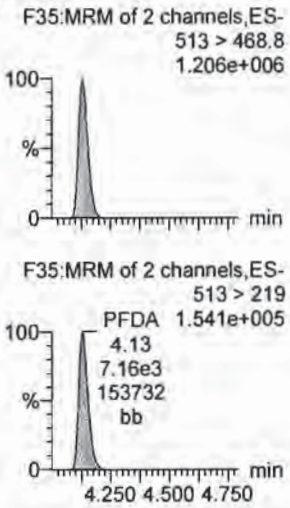
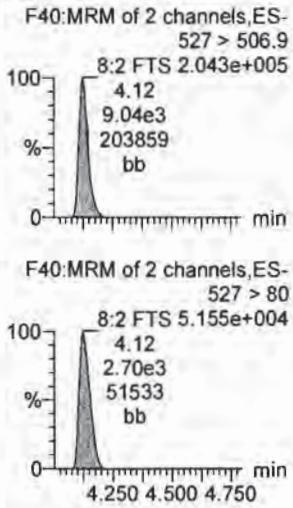


8:2 FTS



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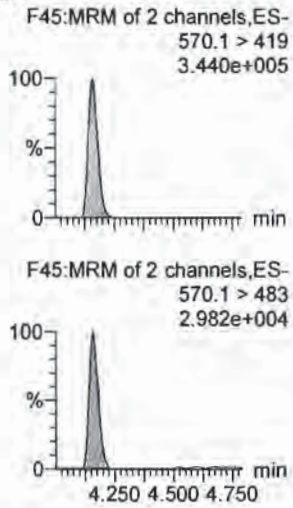
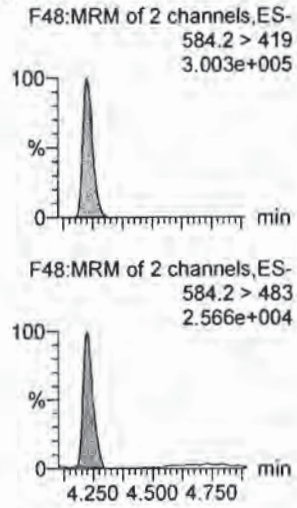
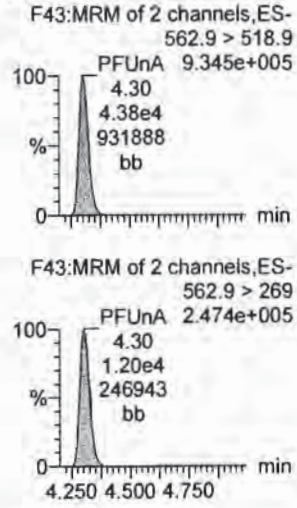


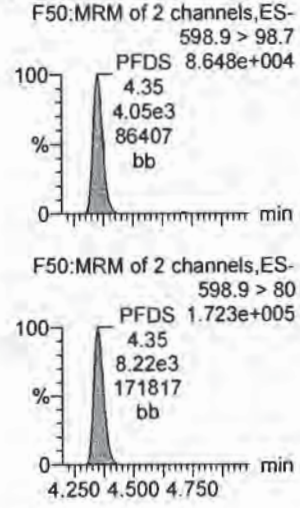
N-EtFOSAA



PFUnA



PFDS



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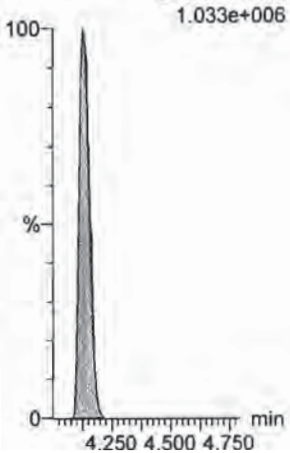

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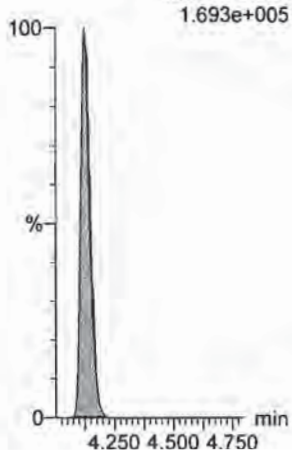

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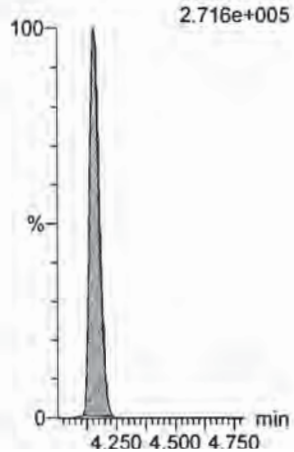

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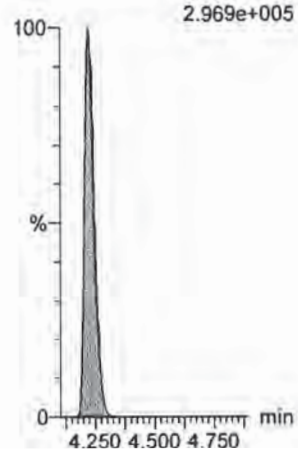

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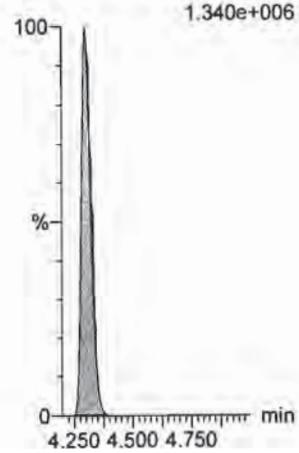

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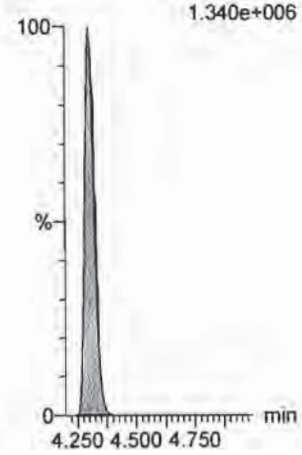

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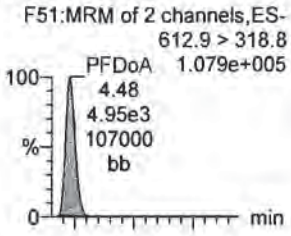
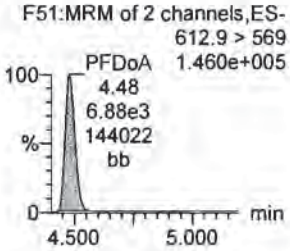
PFDoA





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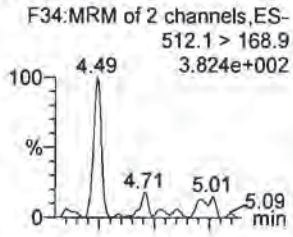

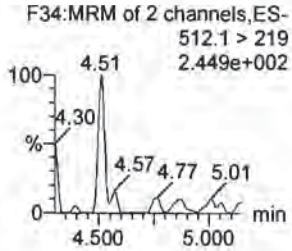

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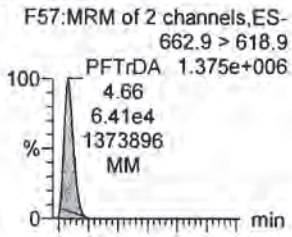
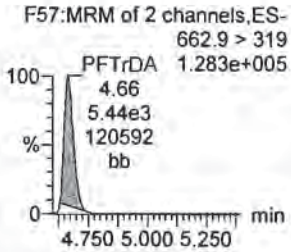
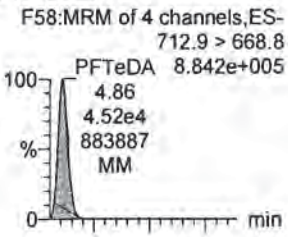
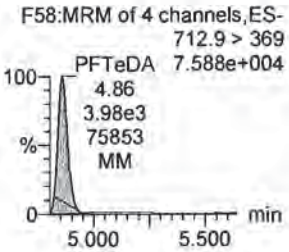


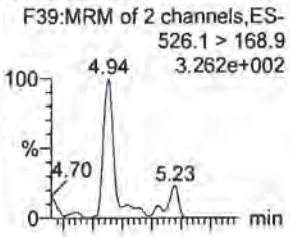


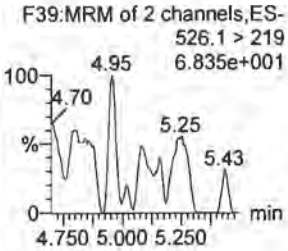
PFTeDA



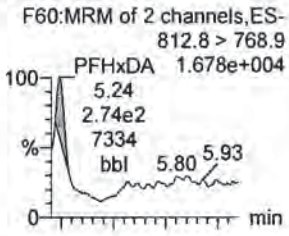


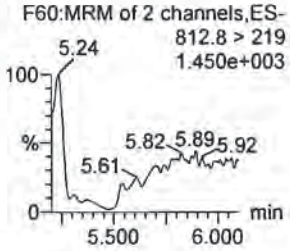
N-EtFOSA



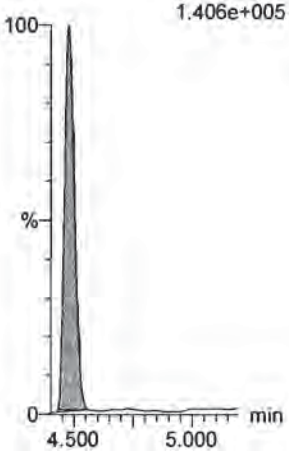


PFHxDA

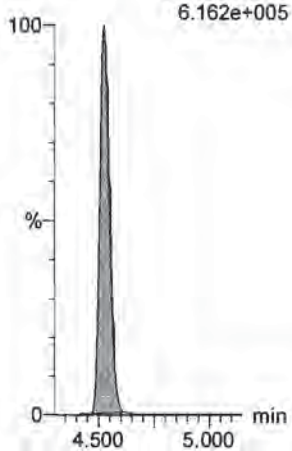




13C2-PFDoA



d3-N-MeFOSA



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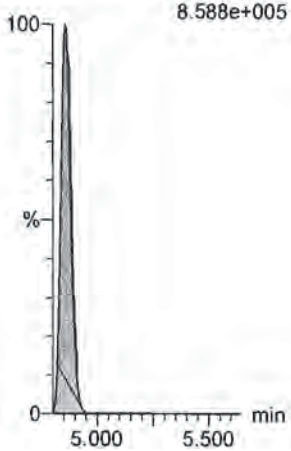
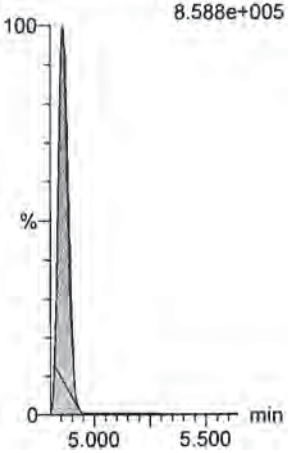
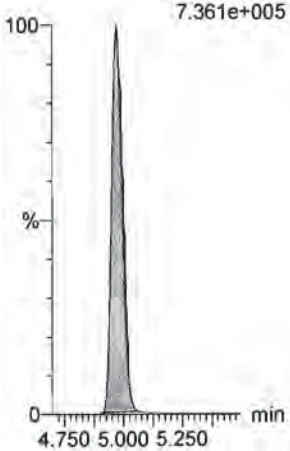


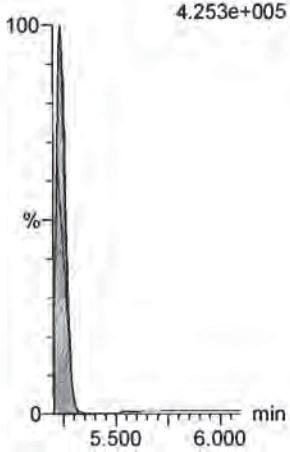
13C2-PFTeDA



d5-N-ETFOSA



13C2-PFHxDA



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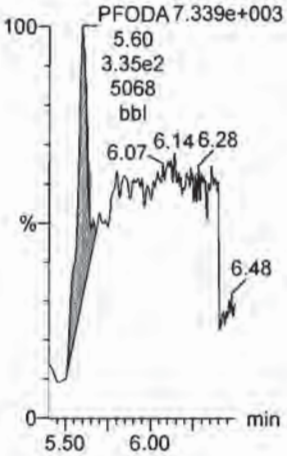
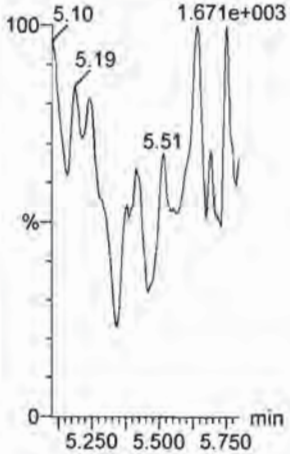
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

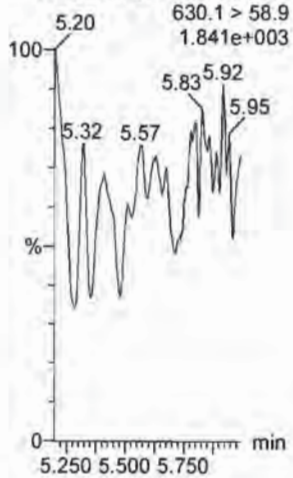
PFODA
F62:MRM of 4 channels,ES-
912.8 > 868.8
PFODA 7.339e+003



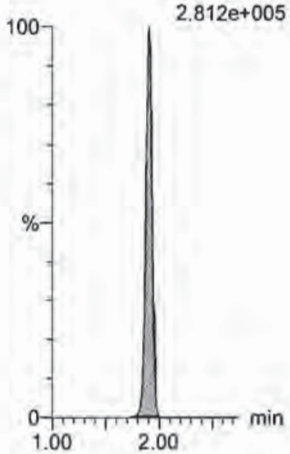
N-MeFOSE
F53:MRM of 1 channel,ES-
616.1 > 58.9
1.671e+003



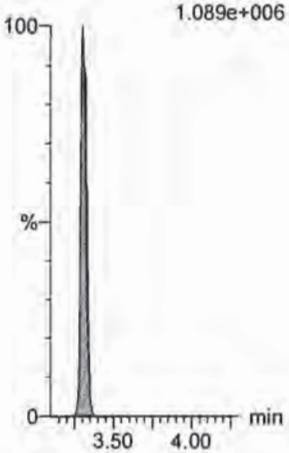
N-EtFOSE
F55:MRM of 1 channel,ES-
630.1 > 58.9
1.841e+003



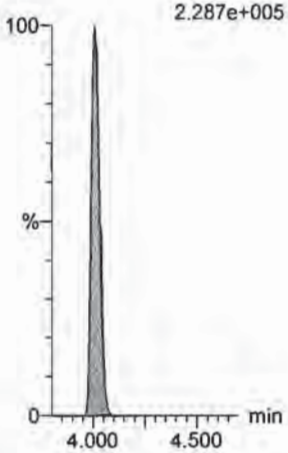
13C4-PFBA
F3:MRM of 1 channel,ES-
217 > 171.8
2.812e+005



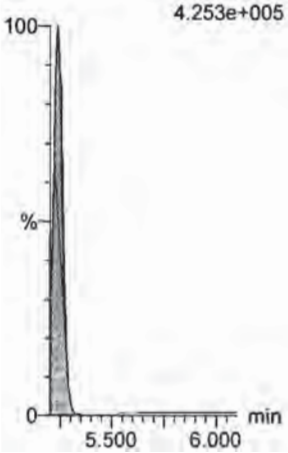
13C5-PFHxA
F10:MRM of 1 channel,ES-
318 > 272.9
1.089e+006



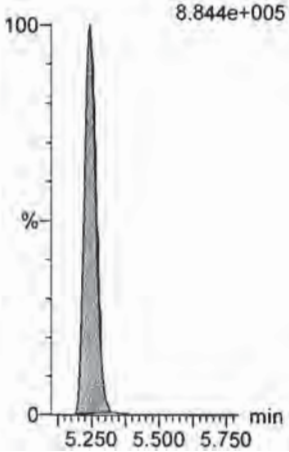
13C4-PFOS
F31:MRM of 1 channel,ES-
503 > 79.9
2.287e+005



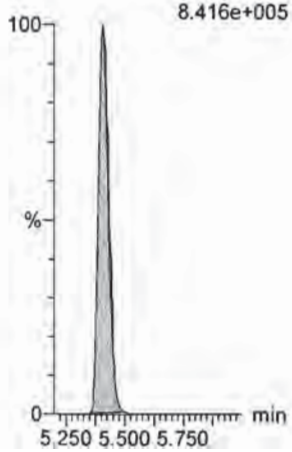
13C2-PFHxDA
F61:MRM of 1 channel,ES-
815 > 769.7
4.253e+005



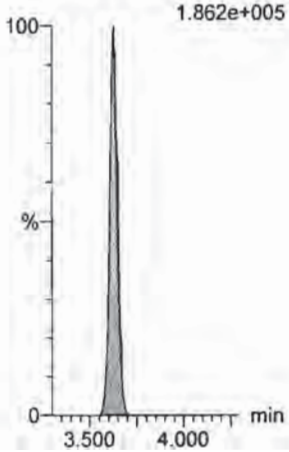
d7-N-MeFOSE
F54:MRM of 1 channel,ES-
623.1 > 58.9
8.844e+005



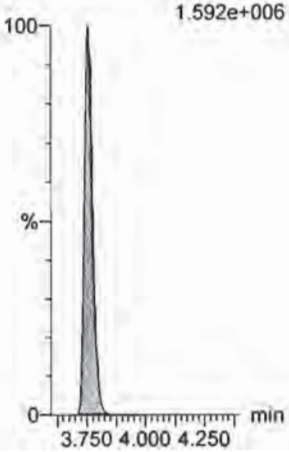
d9-N-EtFOSE
F56:MRM of 1 channel,ES-
639.2 > 58.8
8.416e+005



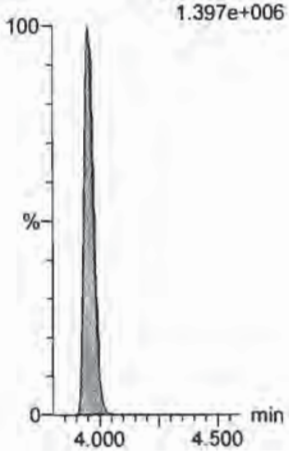
13C3-PFHxS
F17:MRM of 1 channel,ES-
401.9 > 79.9
1.862e+005



13C8-PFOA
F21:MRM of 1 channel,ES-
421.3 > 376
1.592e+006



13C9-PFNA
F27:MRM of 1 channel,ES-
472.2 > 426.9
1.397e+006



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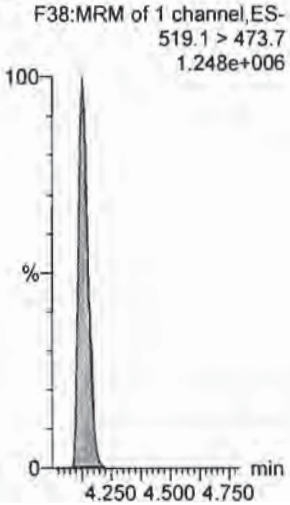
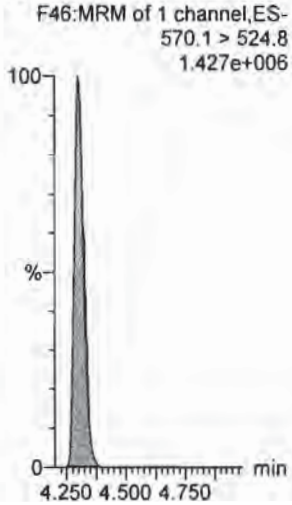
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

13C6-PFDA



13C7-PFUnA



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

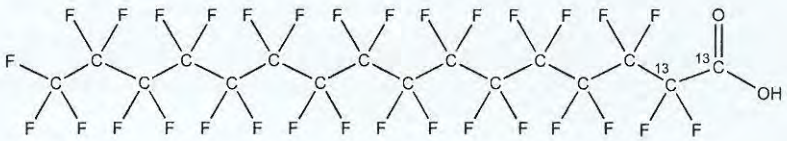
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

13C2-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-$^{13}C_2$)
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 $x_1, x_2, \ldots x_n$ 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.

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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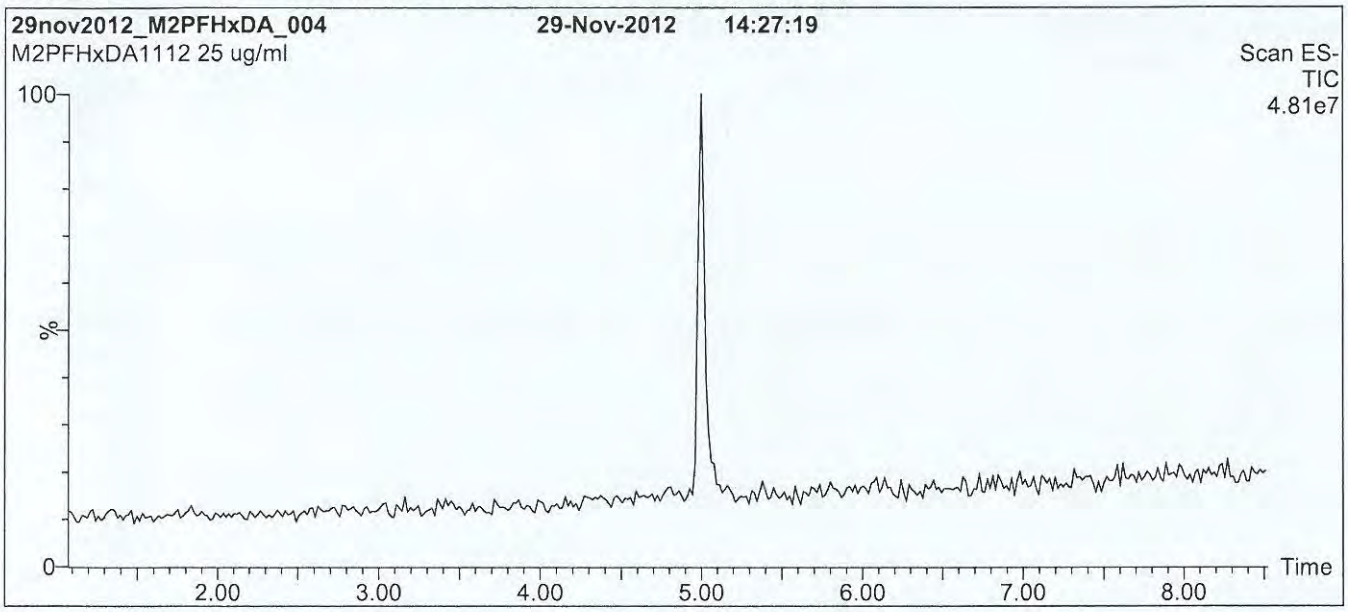
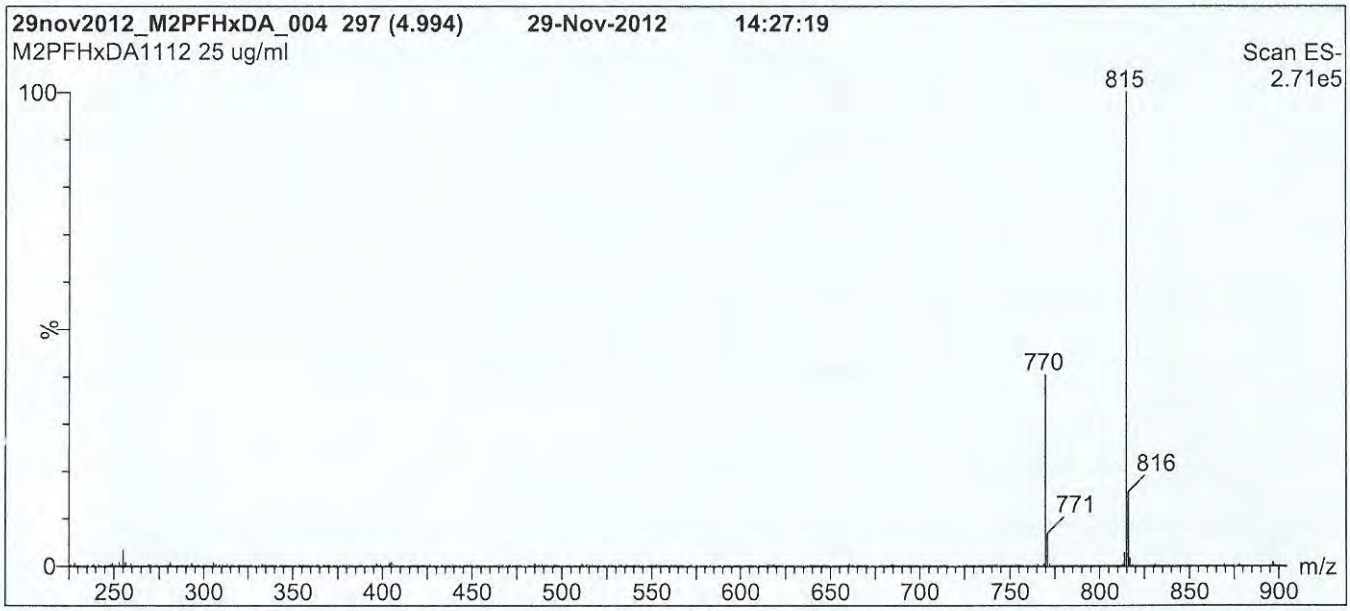
CALA

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: **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

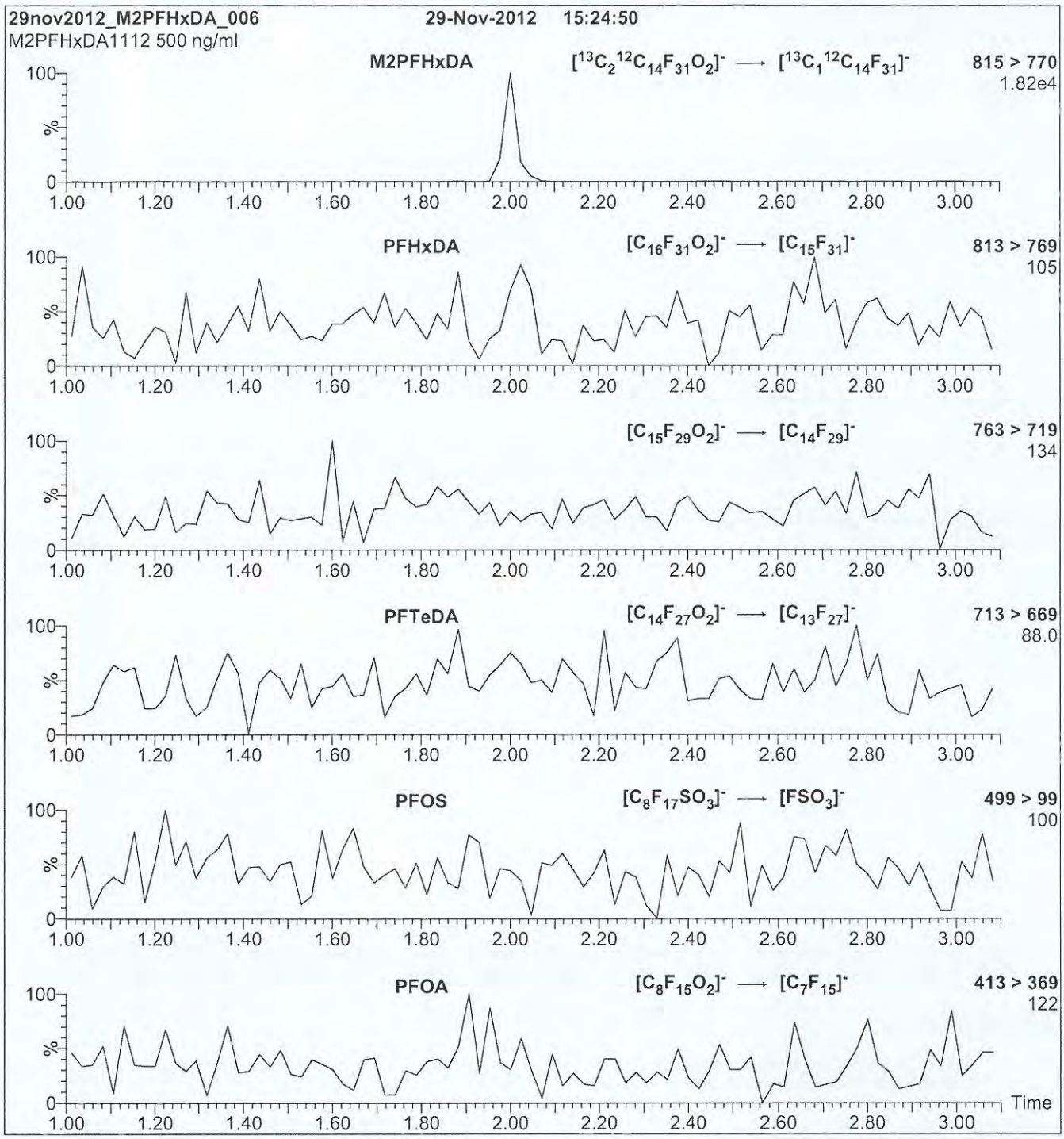
Flow: 300 µl/min

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

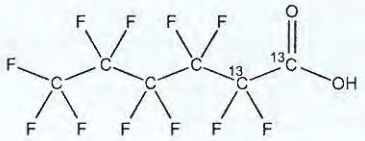
PRODUCT CODE: MPFHxA

COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]hexanoic acid

LOT NUMBER: MPFHxA0416

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_2{}^{12}C_4HF_{11}O_2$

CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 316.04

SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%

ISOTOPIC PURITY: ≥99% ^{13}C (1,2-$^{13}C_2$)

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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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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CALA

ANAB ACCREDITED

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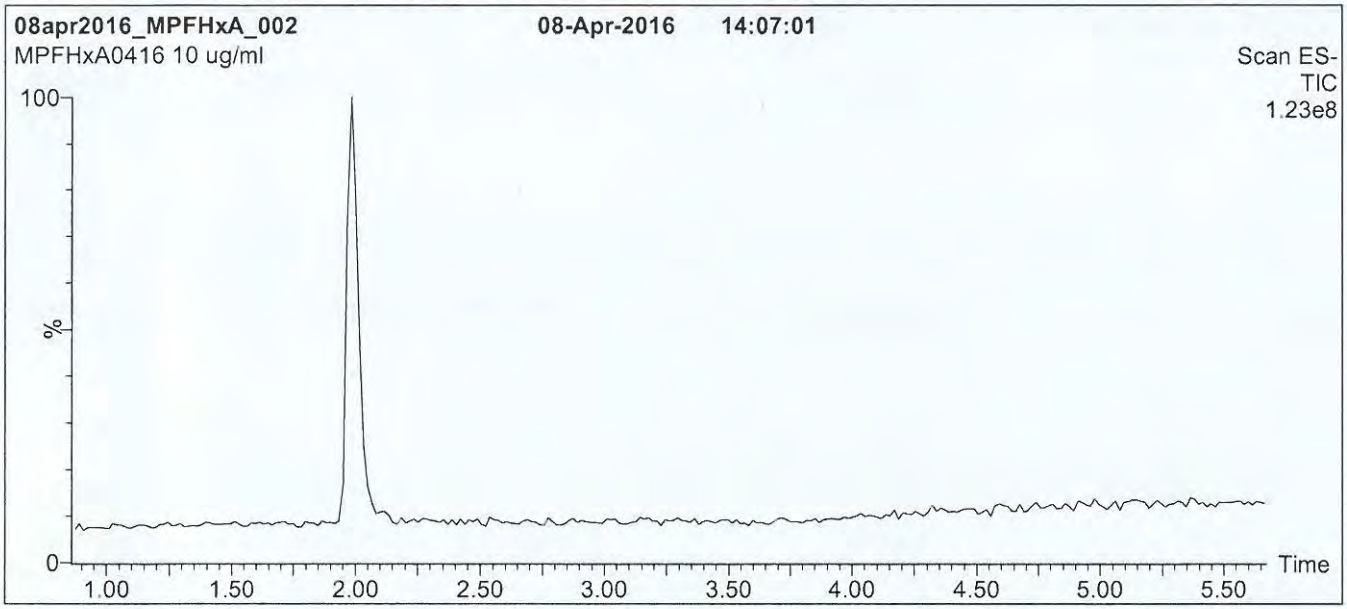
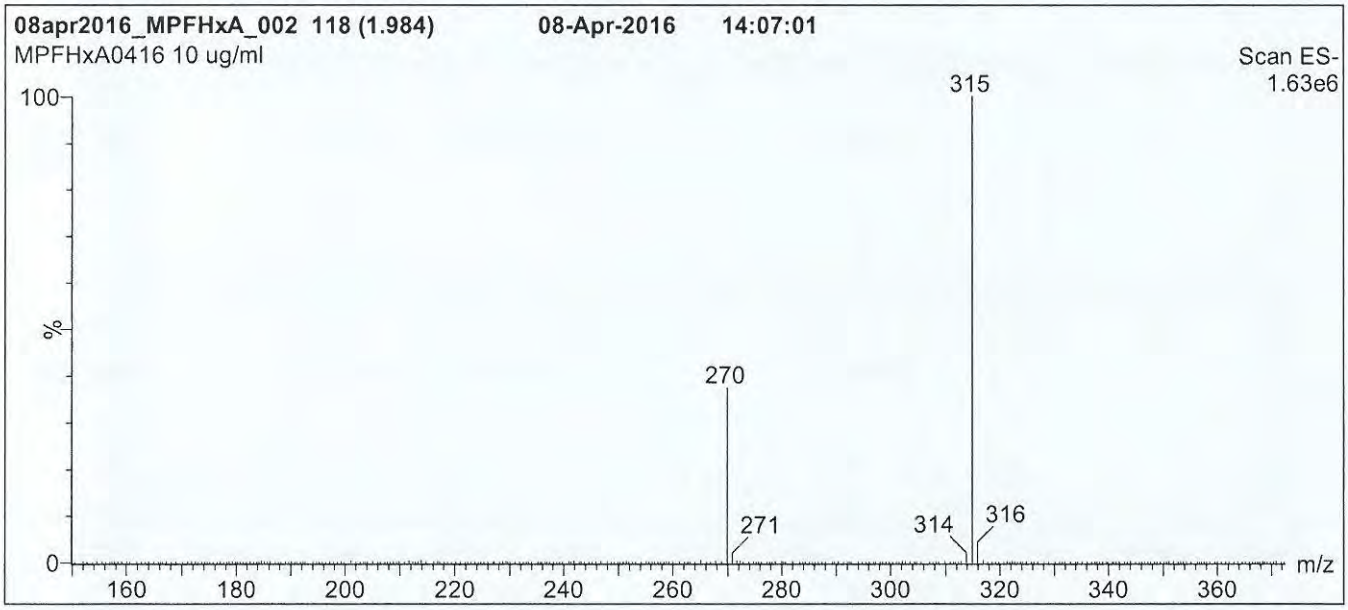
Figure 1: **MPFHxA; LC/MS Data (TIC and Mass Spectrum)**





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

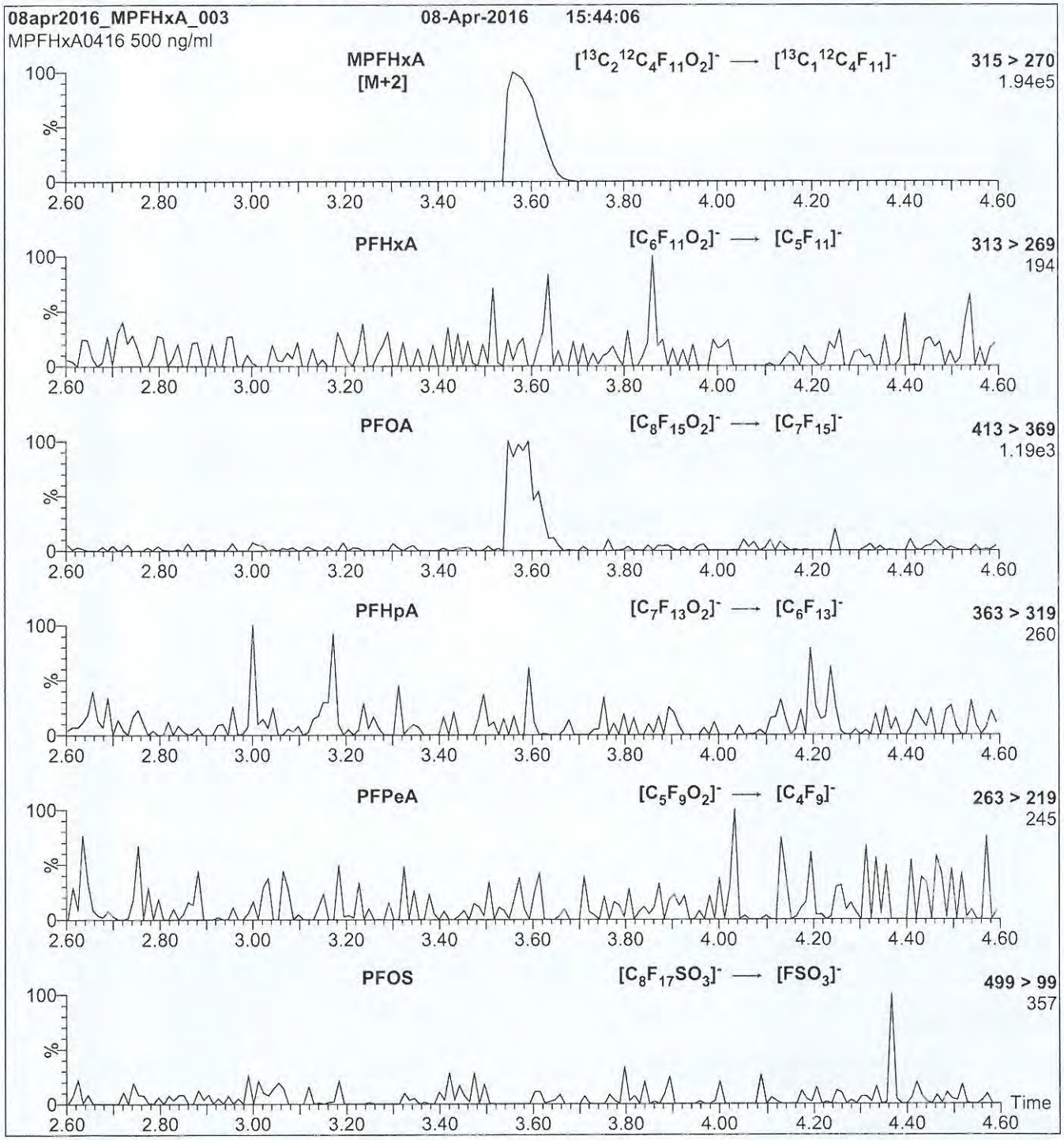
Flow: 300 µl/min

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

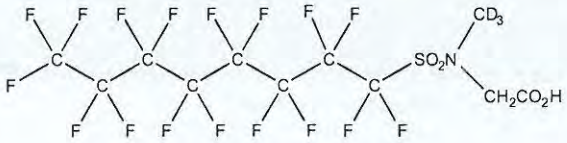
WELLINGTON LABORATORIES

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:

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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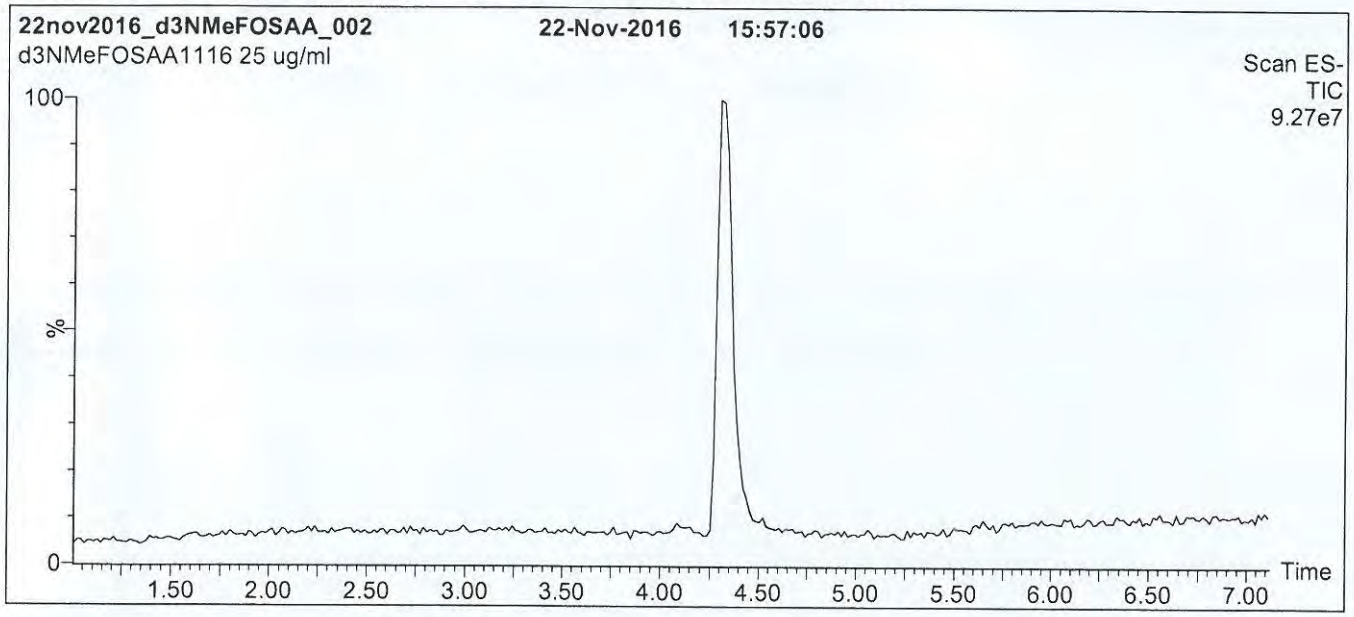
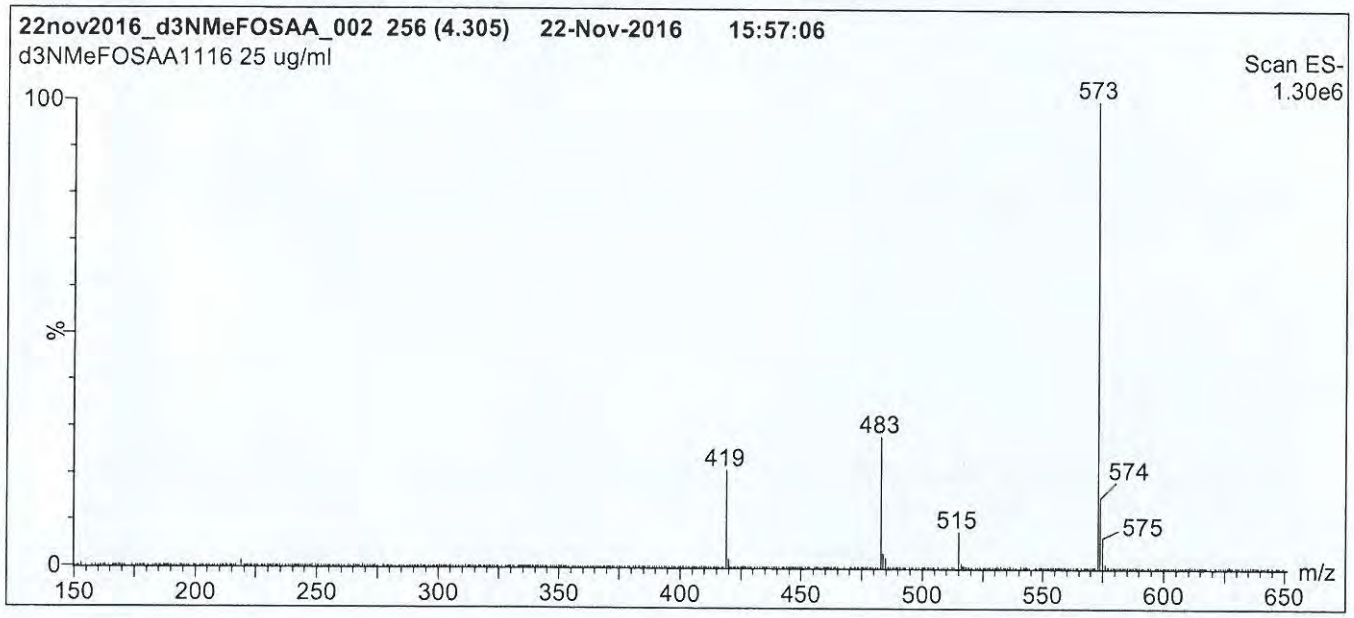
Figure 1: **d3-N-MeFOSAA; LC/MS Data (TIC and Mass Spectrum)**





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

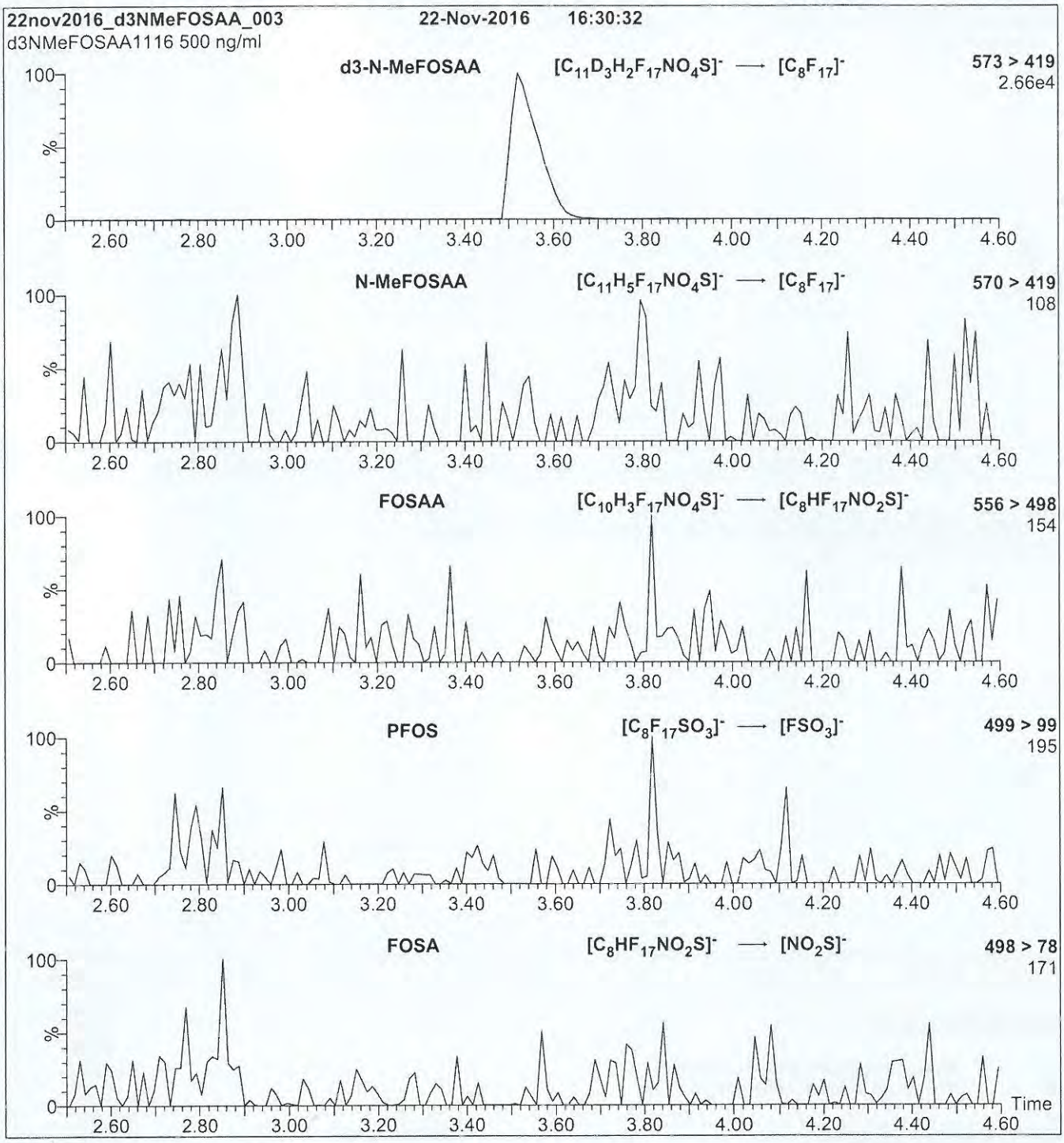
Flow: 300 µl/min

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

17B2811

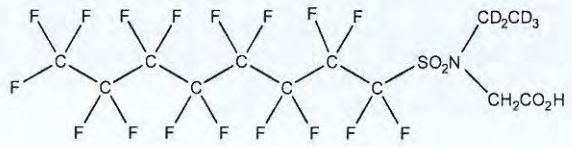
WELLINGTON LABORATORIES

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.
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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
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CALA

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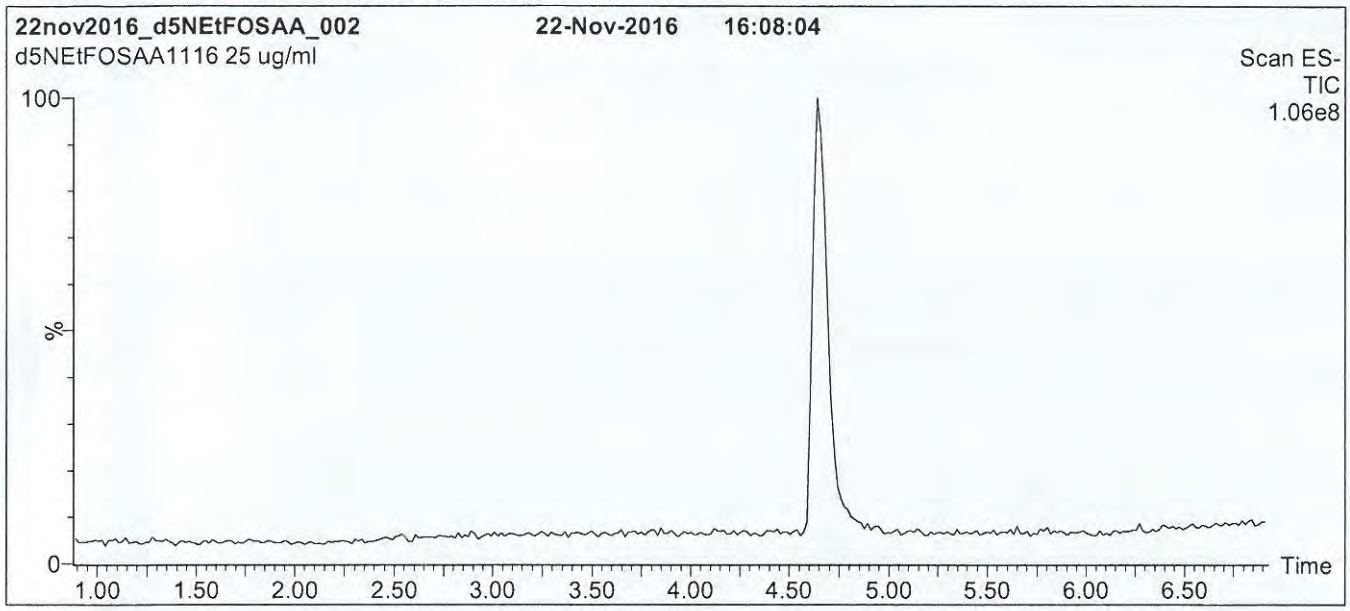
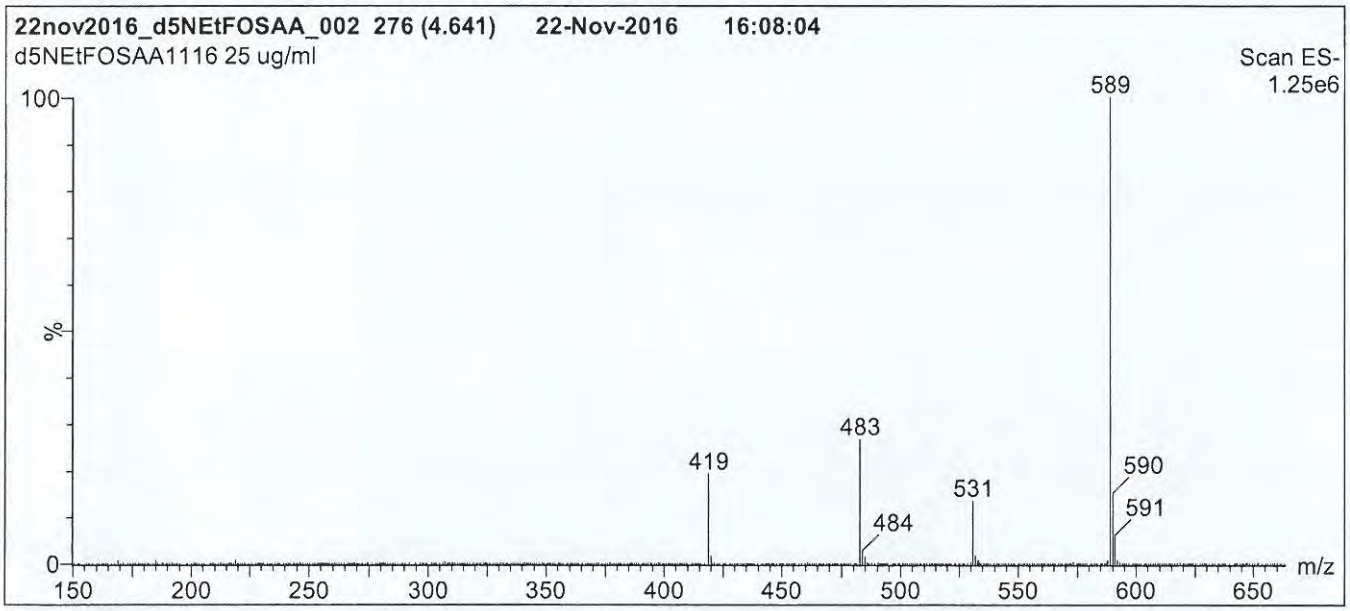




Conditions for Figure 1:

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

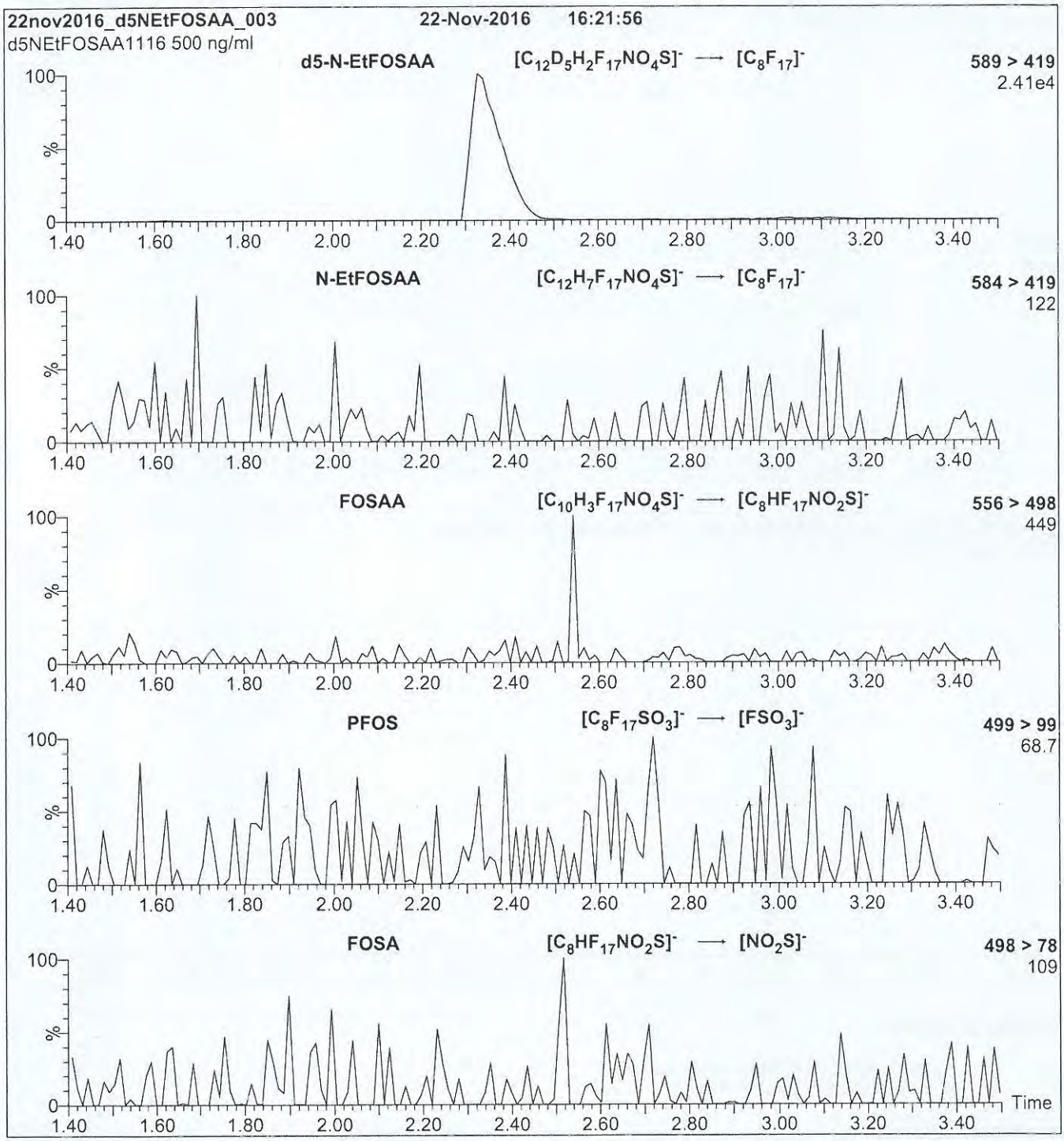
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 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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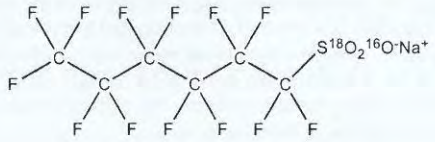
CERTIFICATE OF ANALYSIS DOCUMENTATION

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

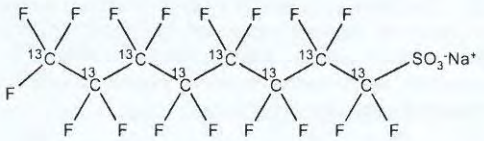
PRODUCT CODE: M8PFOS

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

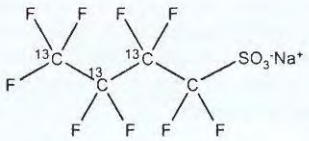
WELLINGTON LABORATORIES

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) **SOLVENT(S):** Methanol
46.5 ± 2.3 µg/ml (M3PFBS anion)

CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ^{13}C (2,3,4-$^{13}C_3$)

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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Certified By: B.G. Chittim **Date:** 08/05/2016 (mm/dd/yyyy)

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17E2414

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

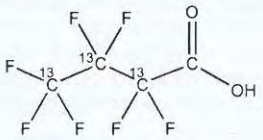
PRODUCT CODE: M3PFBA

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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Certified By: B.G. Chittim **Date:** 07/08/2016 (mm/dd/yyyy)

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17E2415

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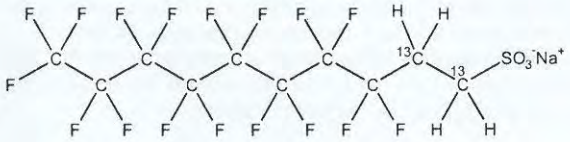
CERTIFICATE OF ANALYSIS DOCUMENTATION

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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Certified By: B.G. Chittim **Date:** 09/02/2016 (mm/dd/yyyy)

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17E2416

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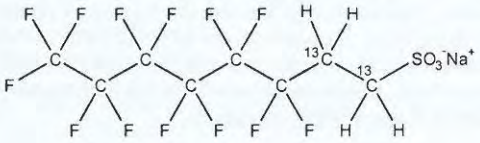
CERTIFICATE OF ANALYSIS DOCUMENTATION

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)	**SOLVENT(S):**	Methanol
	47.5 ± 2.4 µg/ml (M2-6:2FTS anion)		
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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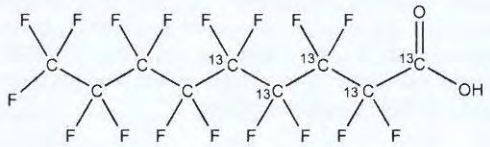
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFNA
COMPOUND: Perfluoro-n-[1,2,3,4,5-$^{13}C_5$]nonanoic acid

LOT NUMBER: MPFNA0916

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_5{}^{12}C_4HF_{17}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 469.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
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

ISOTOPIC PURITY: ≥99% ^{13}C (1,2,3,4,5-$^{13}C_5$)

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:** 10/11/2016 (mm/dd/yyyy)

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17E2418

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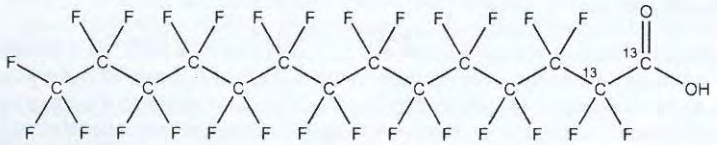
CERTIFICATE OF ANALYSIS DOCUMENTATION

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-$^{13}C_2$)
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

WELLINGTON LABORATORIES

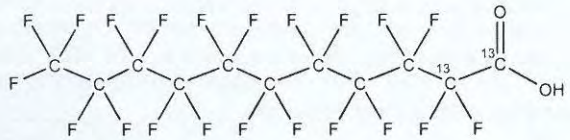
CERTIFICATE OF ANALYSIS DOCUMENTATION

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%
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

ISOTOPIC PURITY: ≥99% ^{13}C (1,2-$^{13}C_2$)

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

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

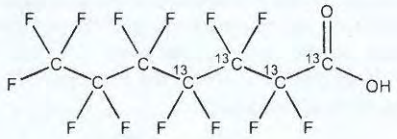
PRODUCT CODE: M4PFHpA

LOT NUMBER: M4PFHpA0516

COMPOUND: Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_4{}^{12}C_3HF_{13}O_2$

MOLECULAR WEIGHT: 368.03

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) 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.

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Certified By: B.G. Chittim **Date:** 07/05/2016 (mm/dd/yyyy)

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17E2421

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

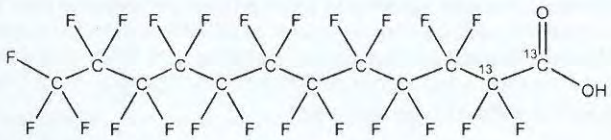
PRODUCT CODE: MPFDoA

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-$^{13}C_2$)

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: B.G. Chittim **Date:** 04/15/2016 (mm/dd/yyyy)

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17G1303

WELLINGTON LABORATORIES

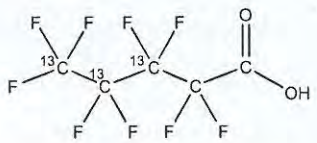
CERTIFICATE OF ANALYSIS DOCUMENTATION

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 $x_1, x_2, \ldots x_n$ 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).

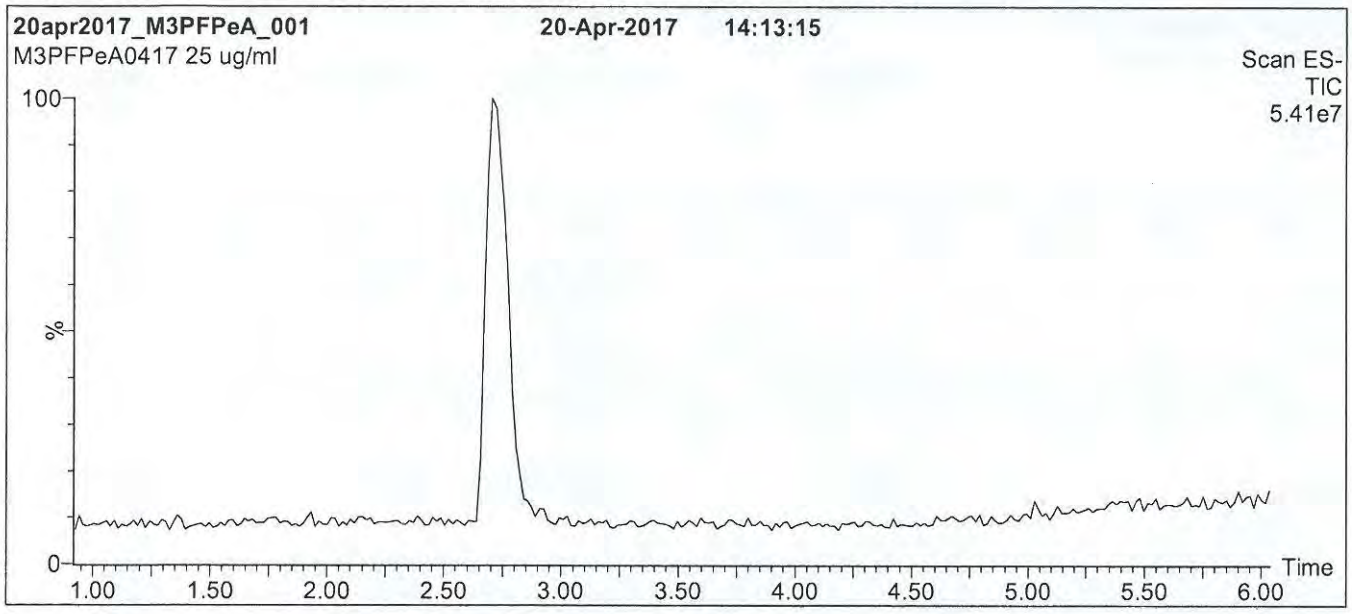
CALA

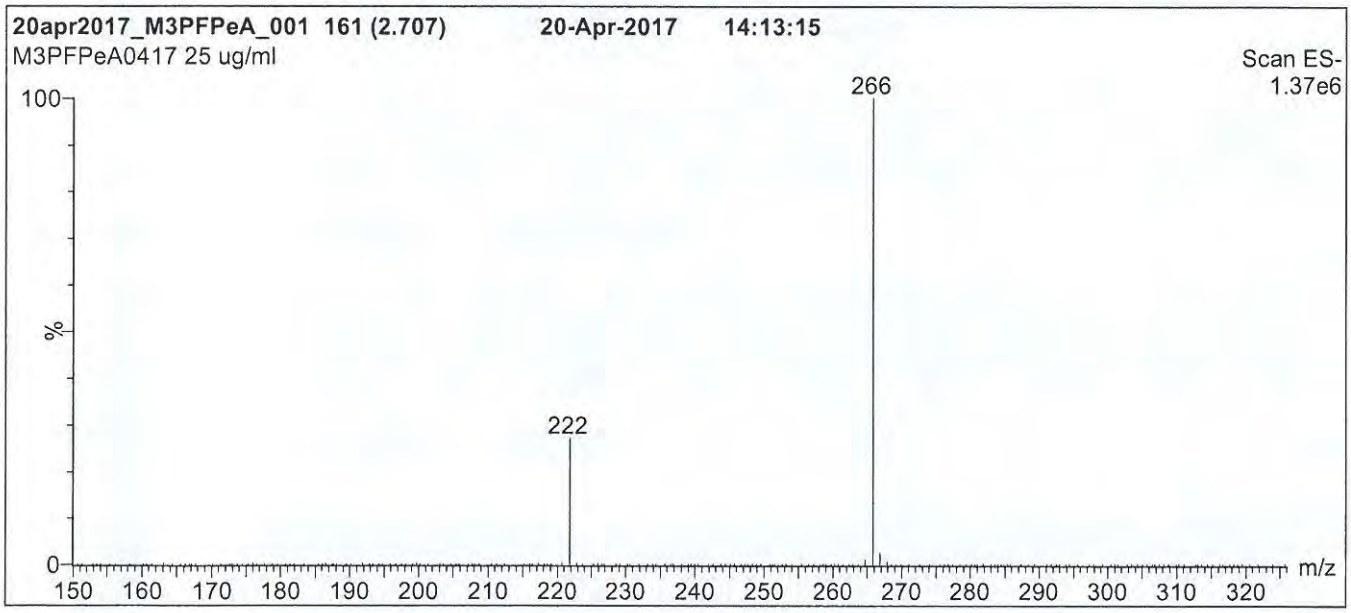
ANAB ACCREDITED

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

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

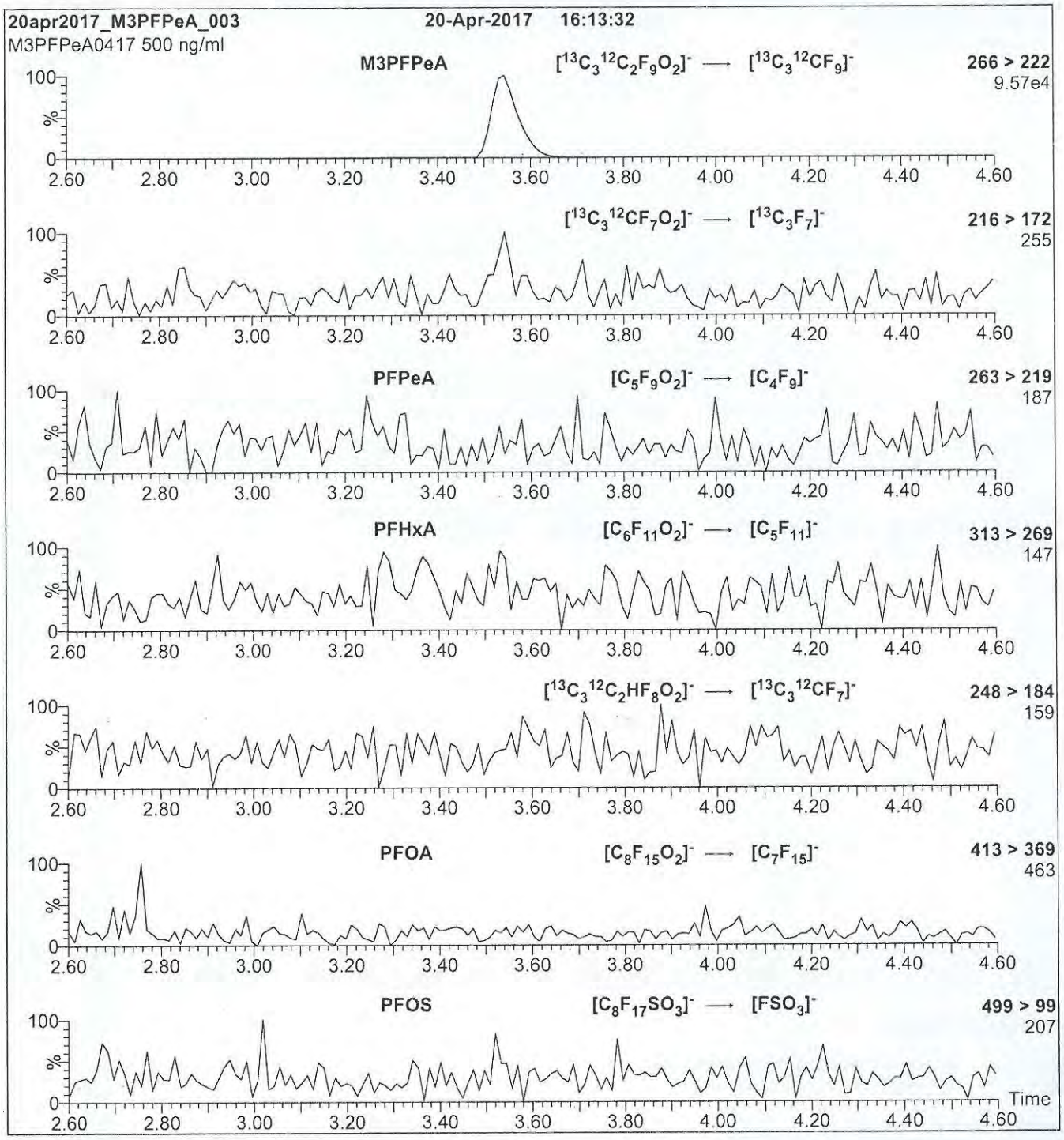
MS Parameters

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

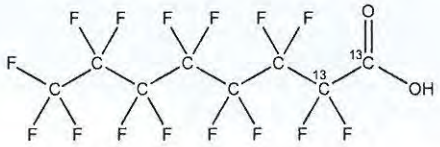
17G1304

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2PFOA
LOT NUMBER: M2PFOA0216
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]octanoic acid

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-$^{13}C_2$)
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:

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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.

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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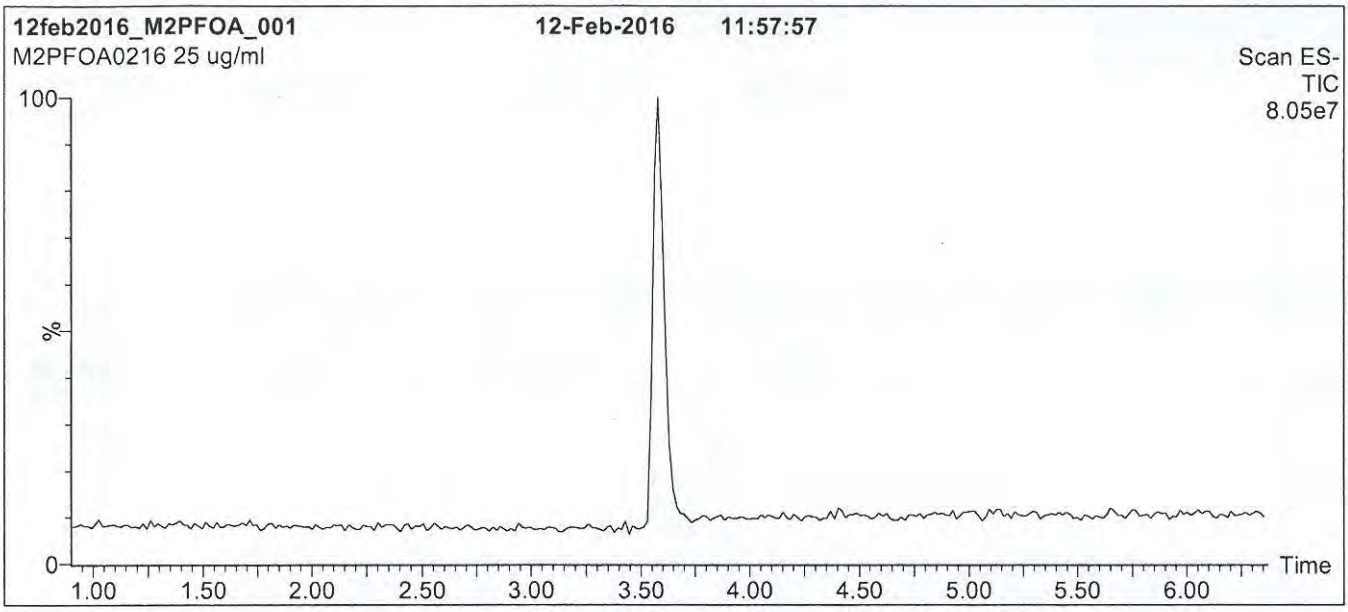
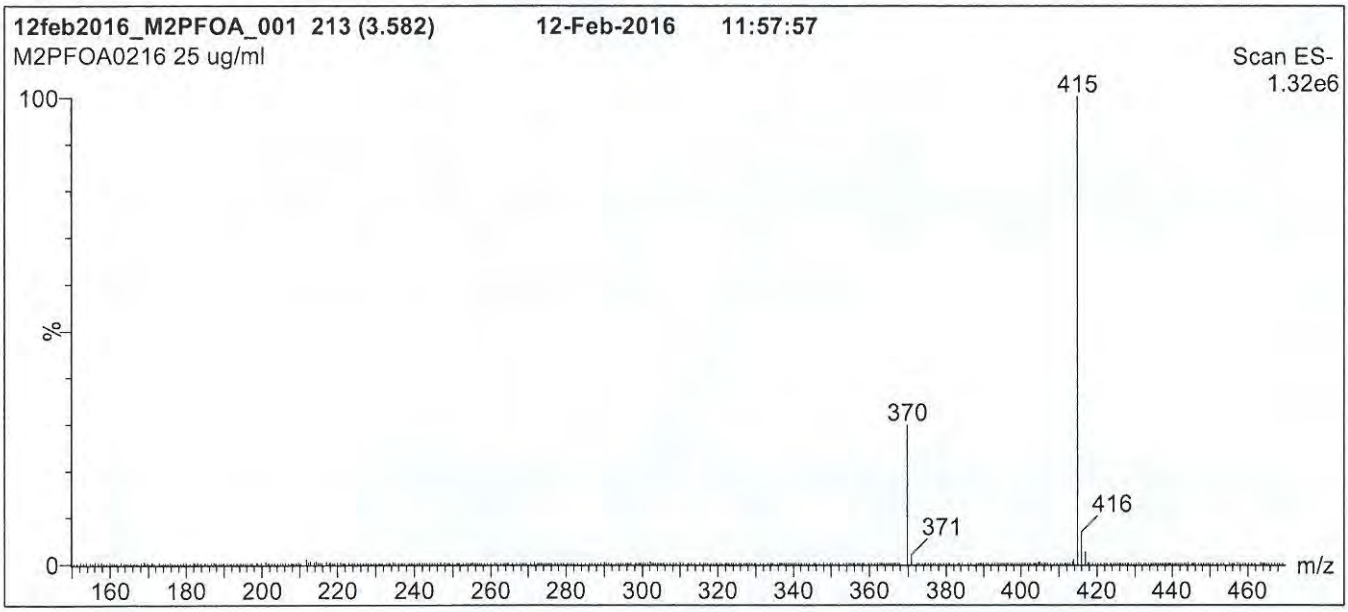
17G1304

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

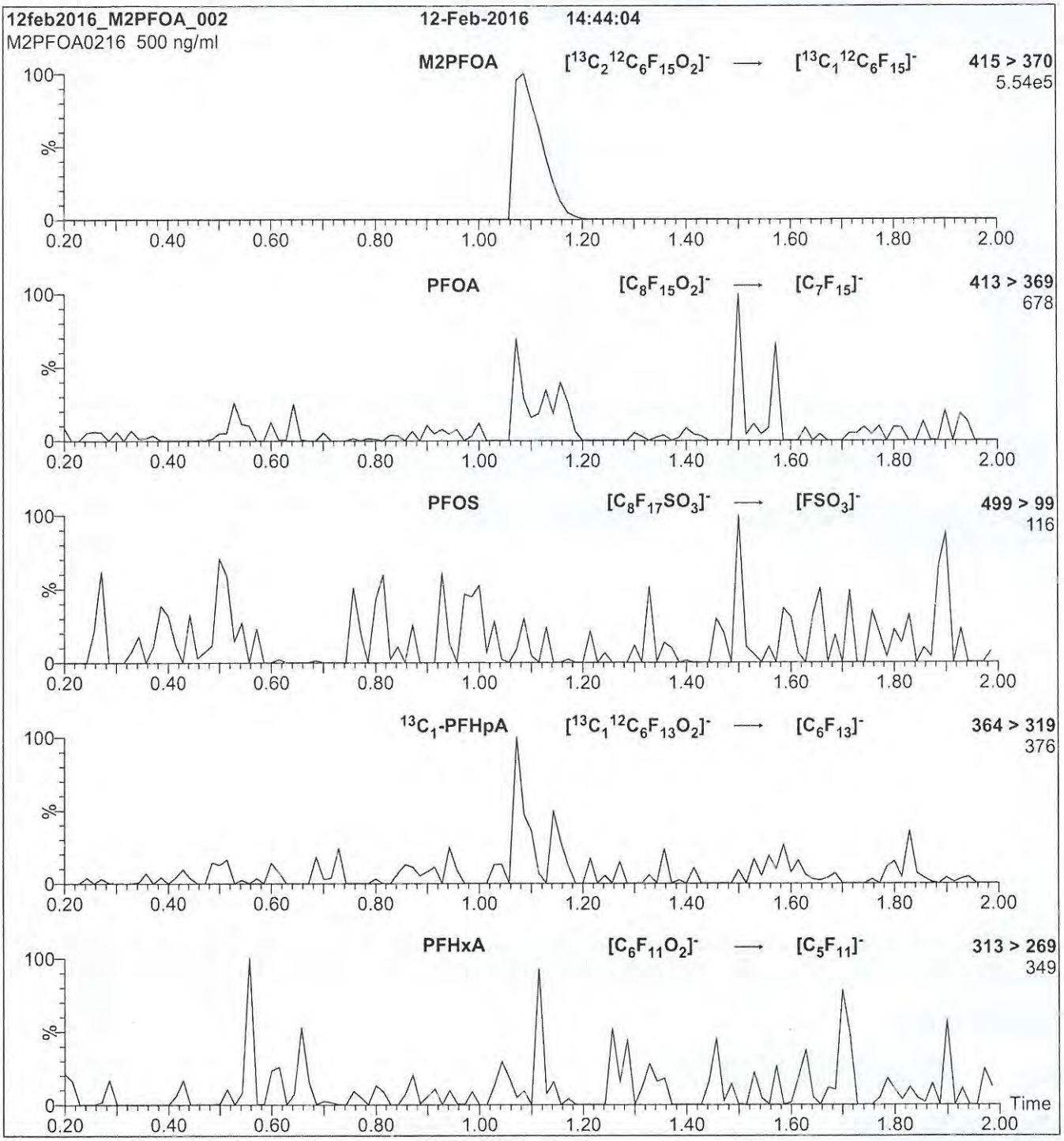
MS Parameters

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

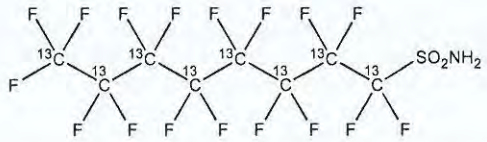
WELLINGTON LABORATORIES

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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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:

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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.

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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.

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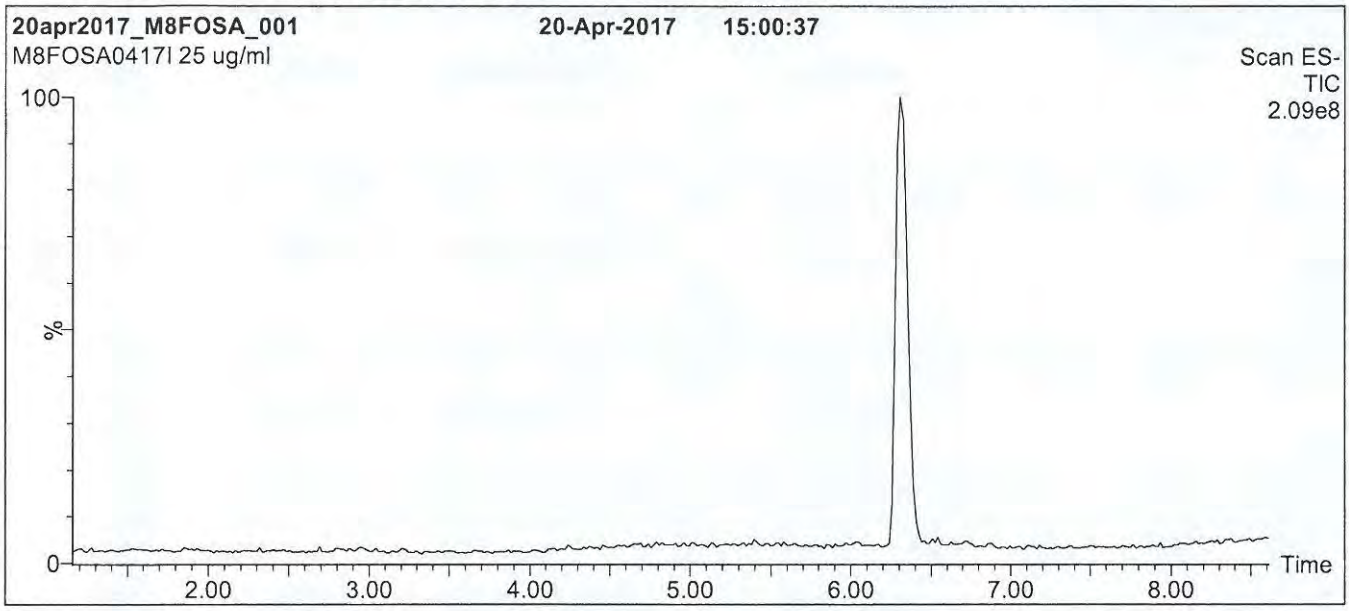
CALA

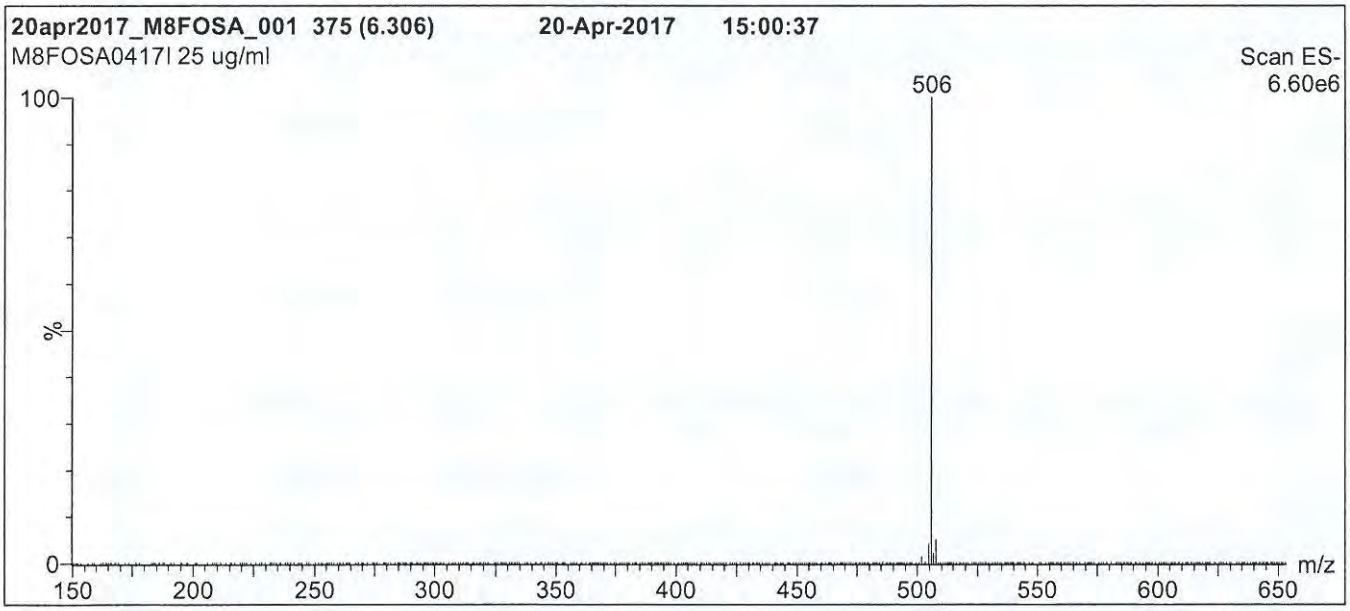
ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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

+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

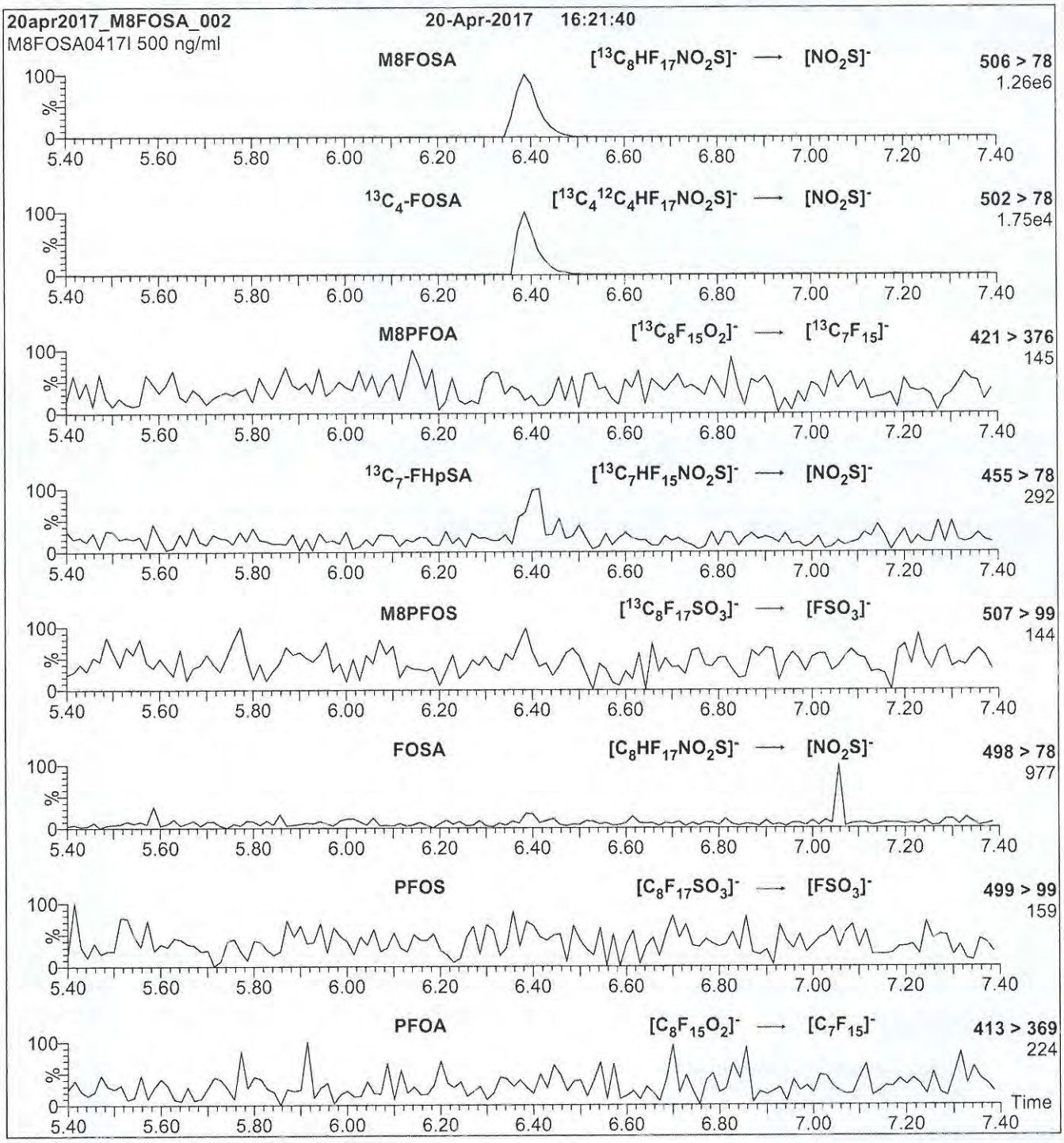
MS Parameters

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

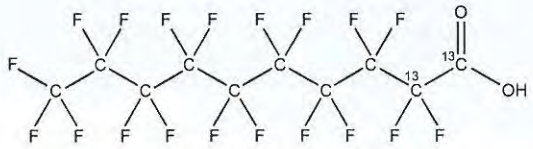
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFDA
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]decanoic acid

LOT NUMBER: MPFDA0916

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_2{}^{12}C_8HF_{19}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 516.07
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
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

ISOTOPIC PURITY: ≥99% ^{13}C (1,2-$^{13}C_2$)

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

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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).

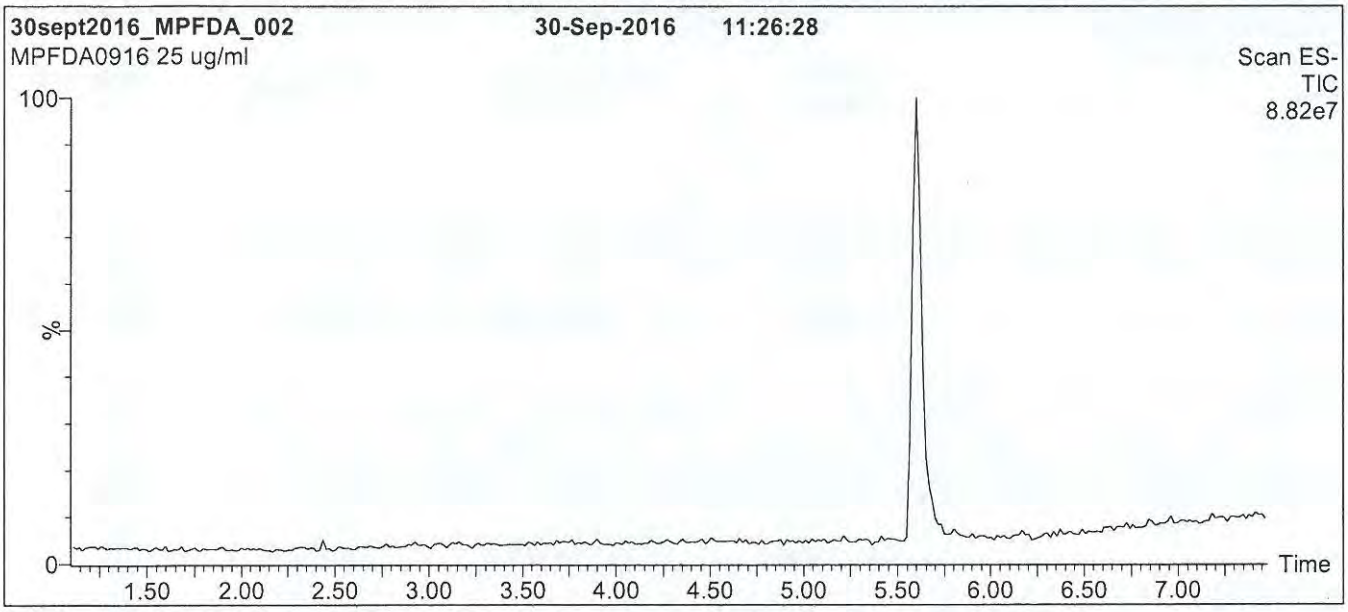
CALA Testing Accreditation No. A 1226

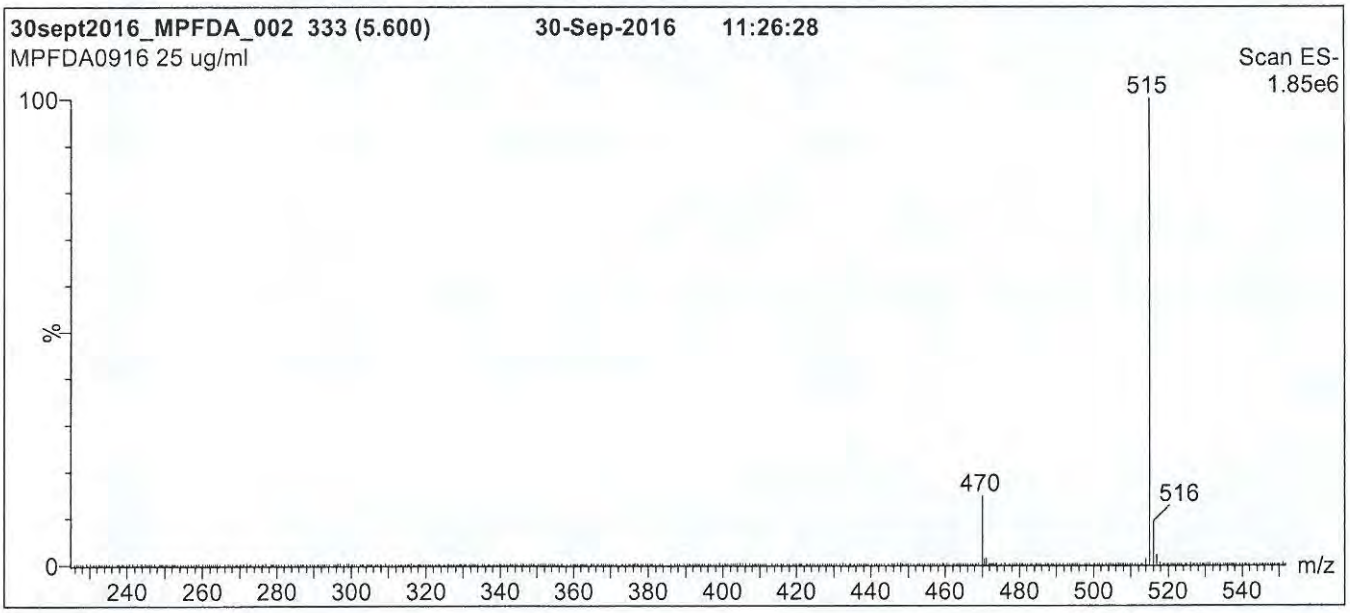
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

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

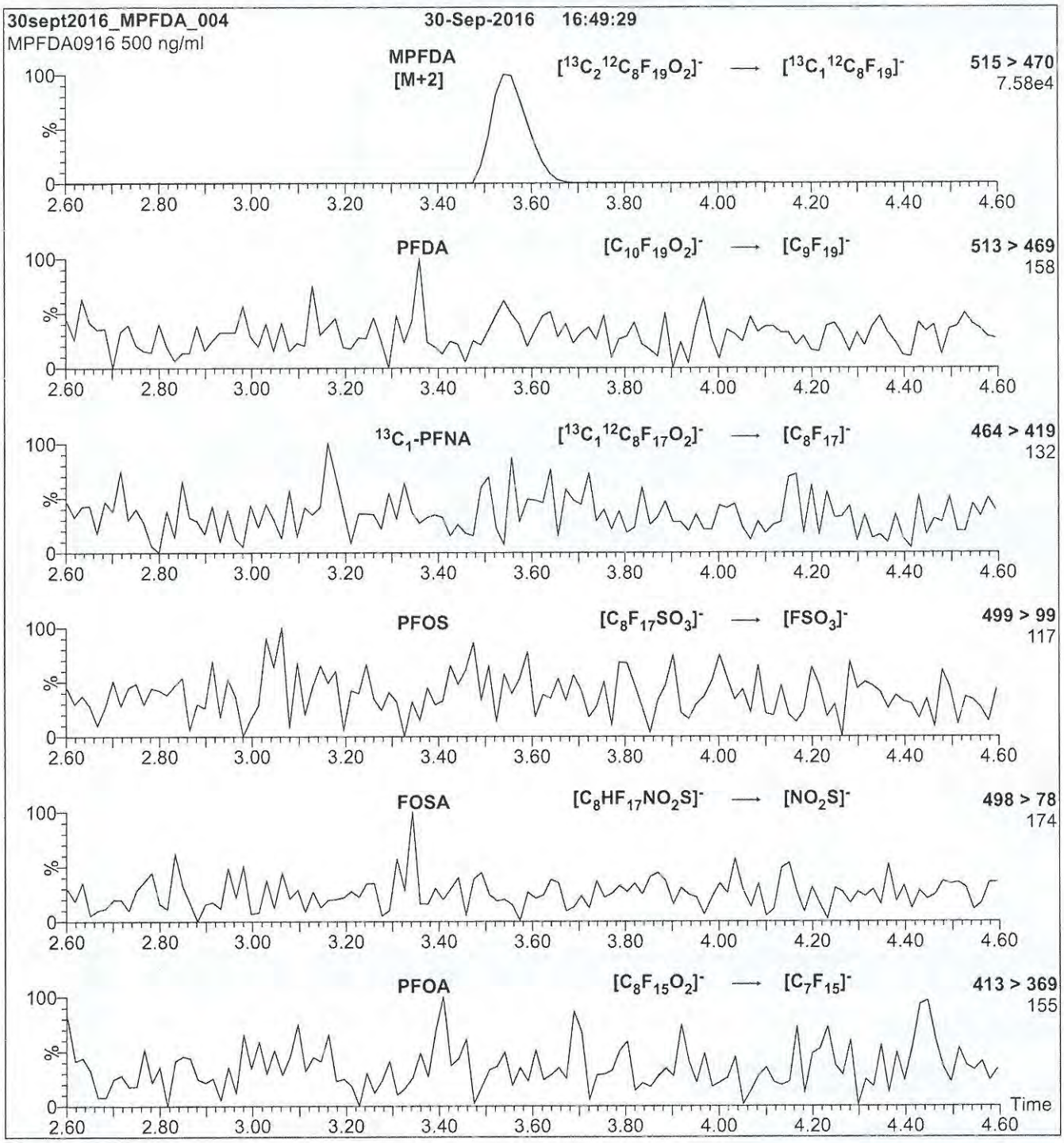
MS Parameters

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

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-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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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-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
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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
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
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

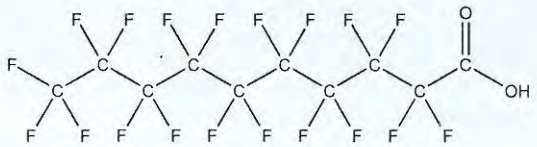
CERTIFICATE OF ANALYSIS DOCUMENTATION

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 $x_1, x_2, \ldots x_n$ 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:

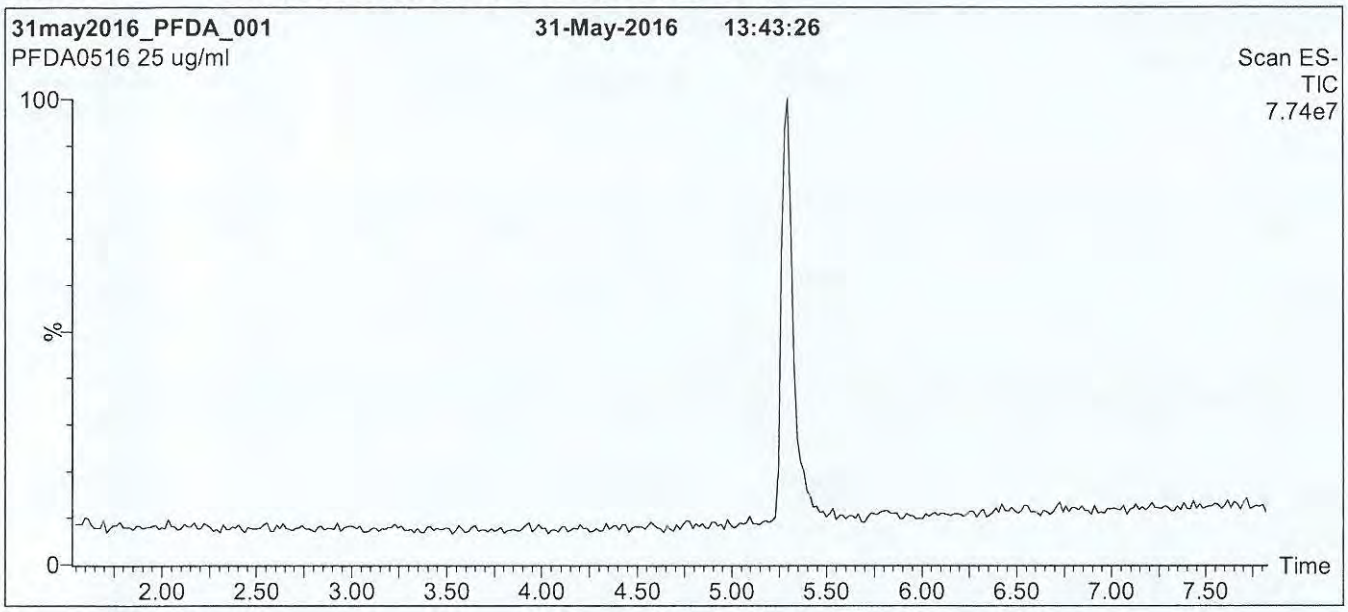
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

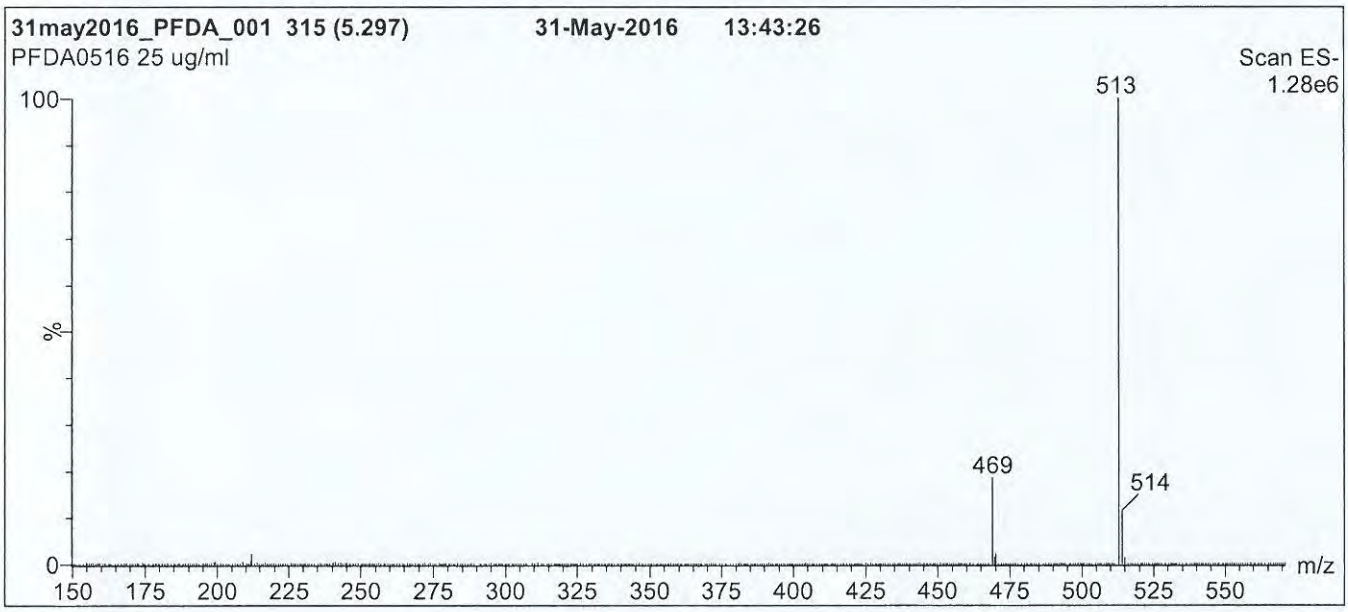
CALA Testing

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: **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

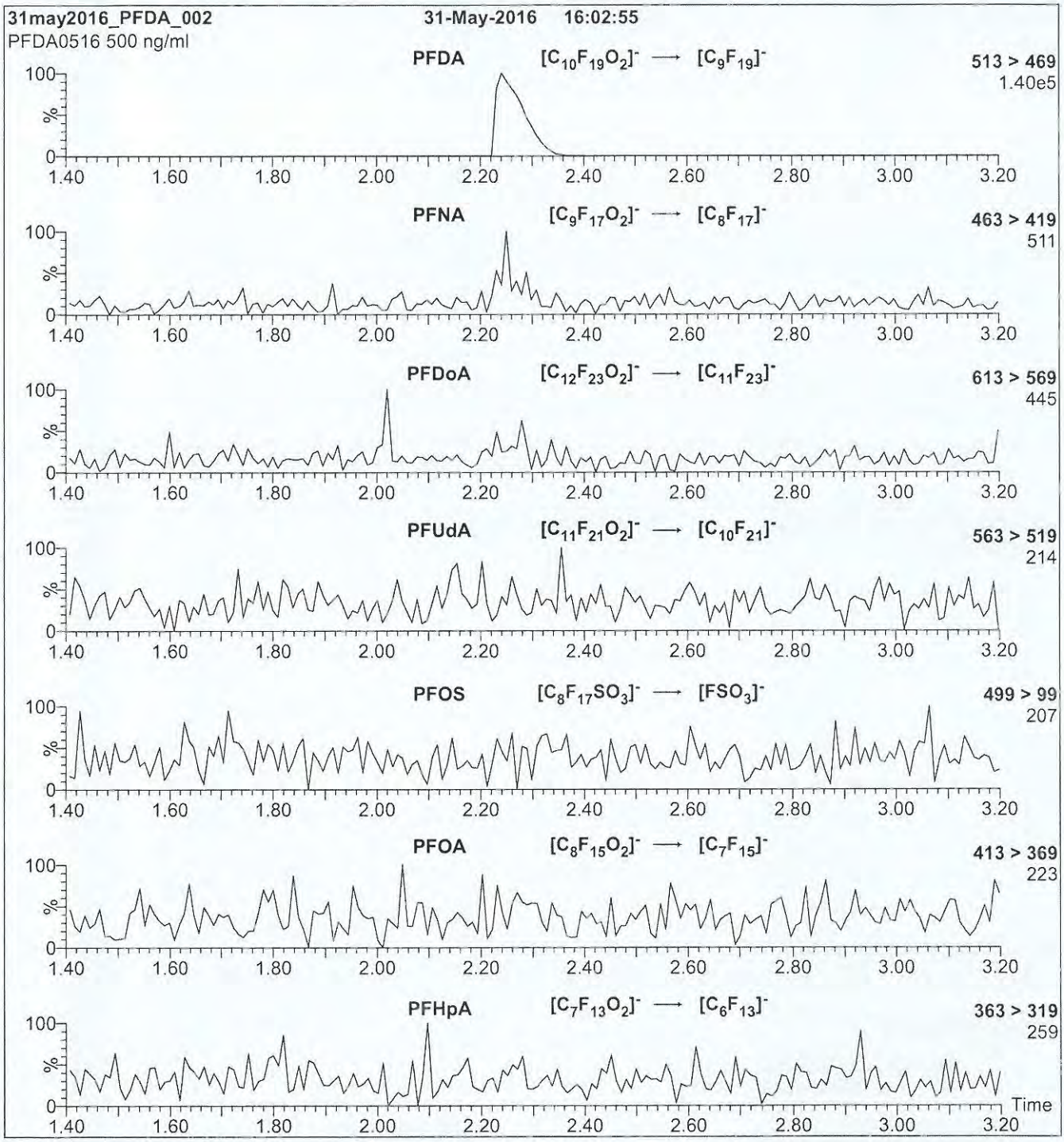
Flow: 300 µl/min

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

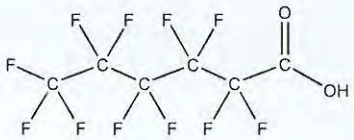
CERTIFICATE OF ANALYSIS DOCUMENTATION

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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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.

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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:

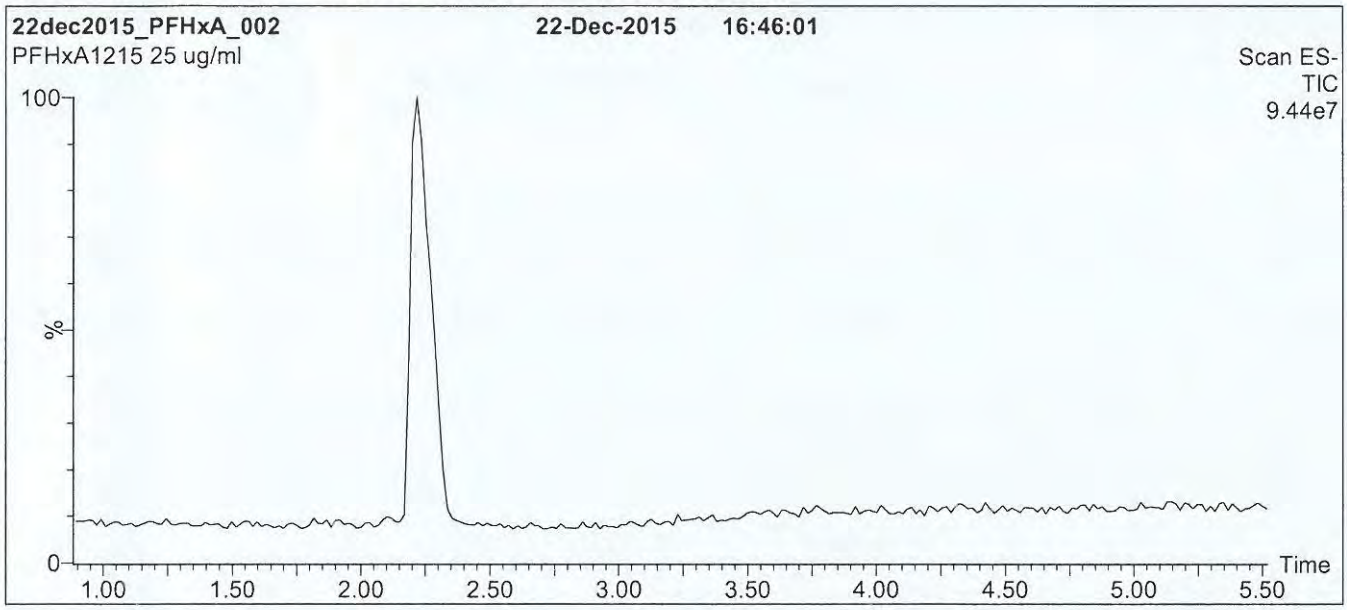
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

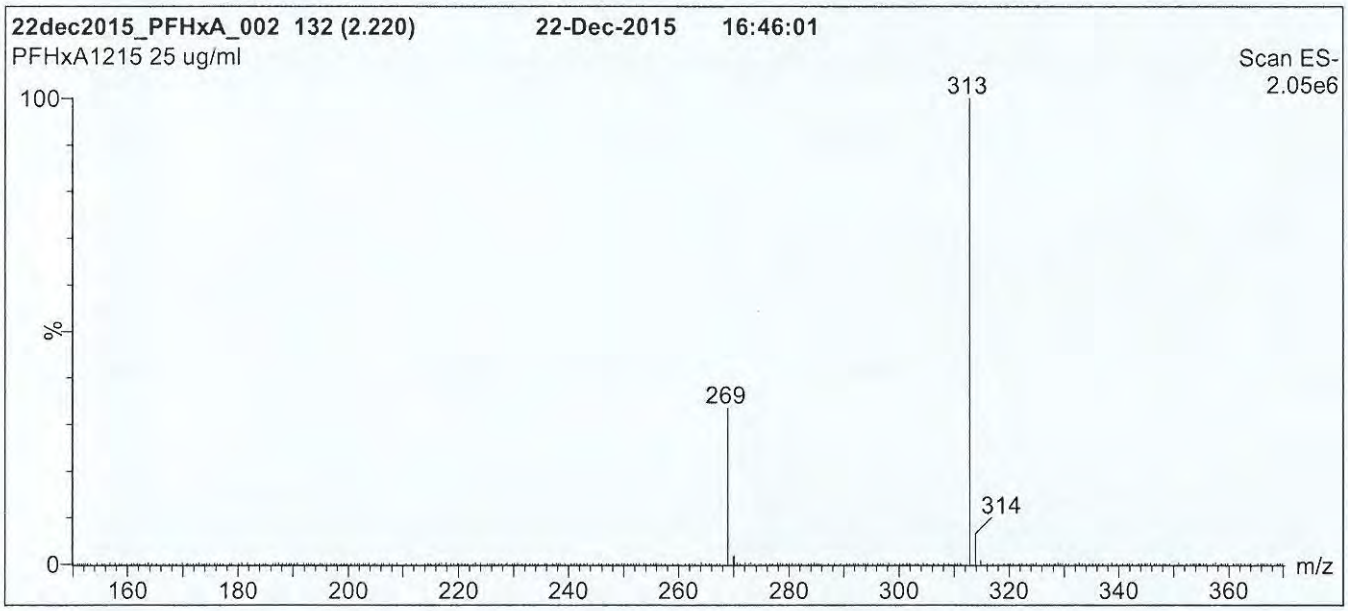
CALA

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: **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

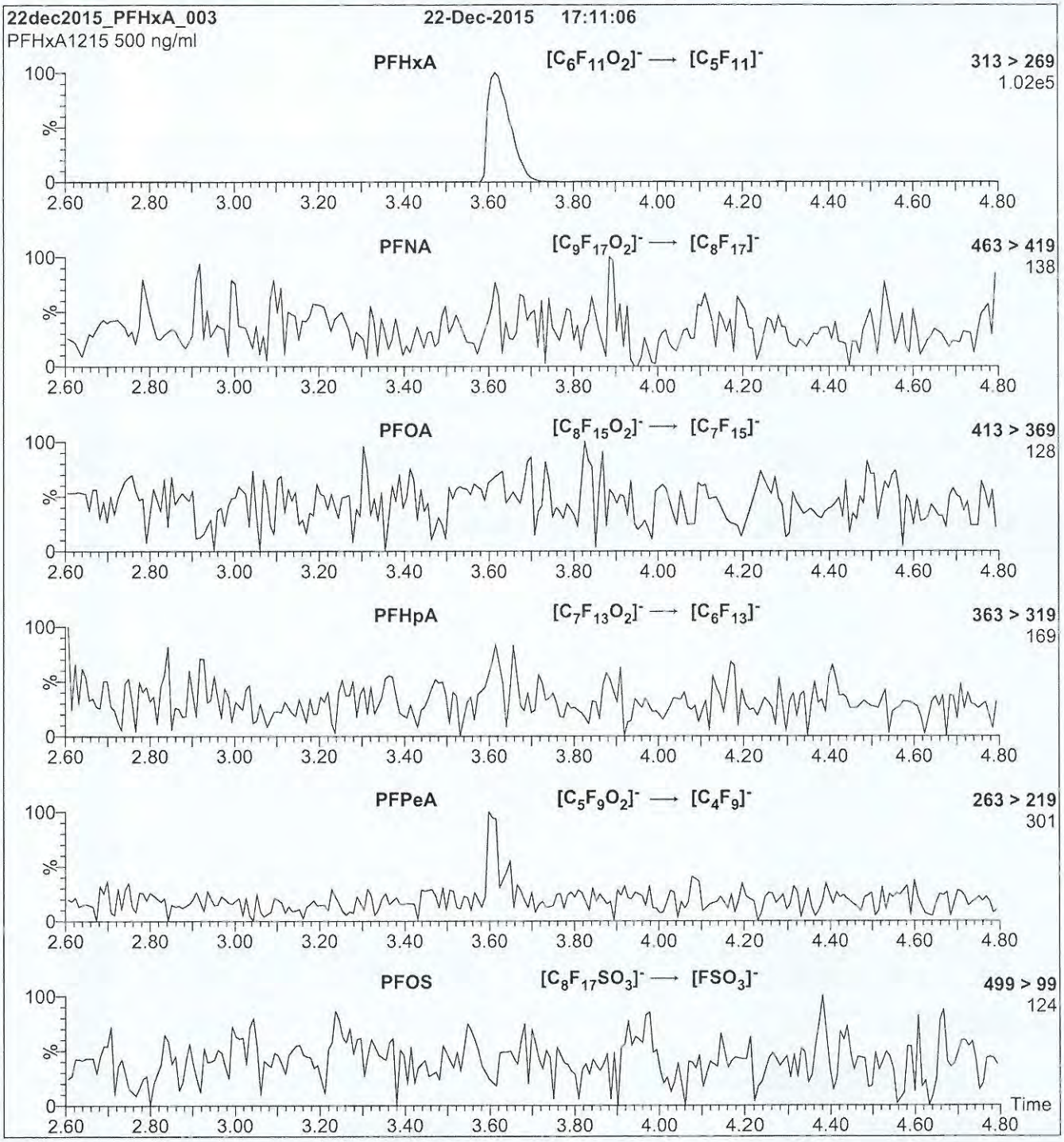
Flow: 300 µl/min

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

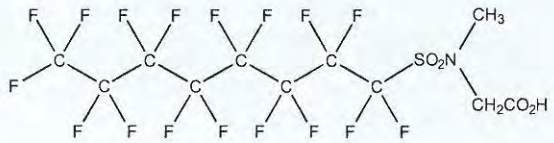
CERTIFICATE OF ANALYSIS DOCUMENTATION

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:

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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 $x_1, x_2, \ldots x_n$ 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:

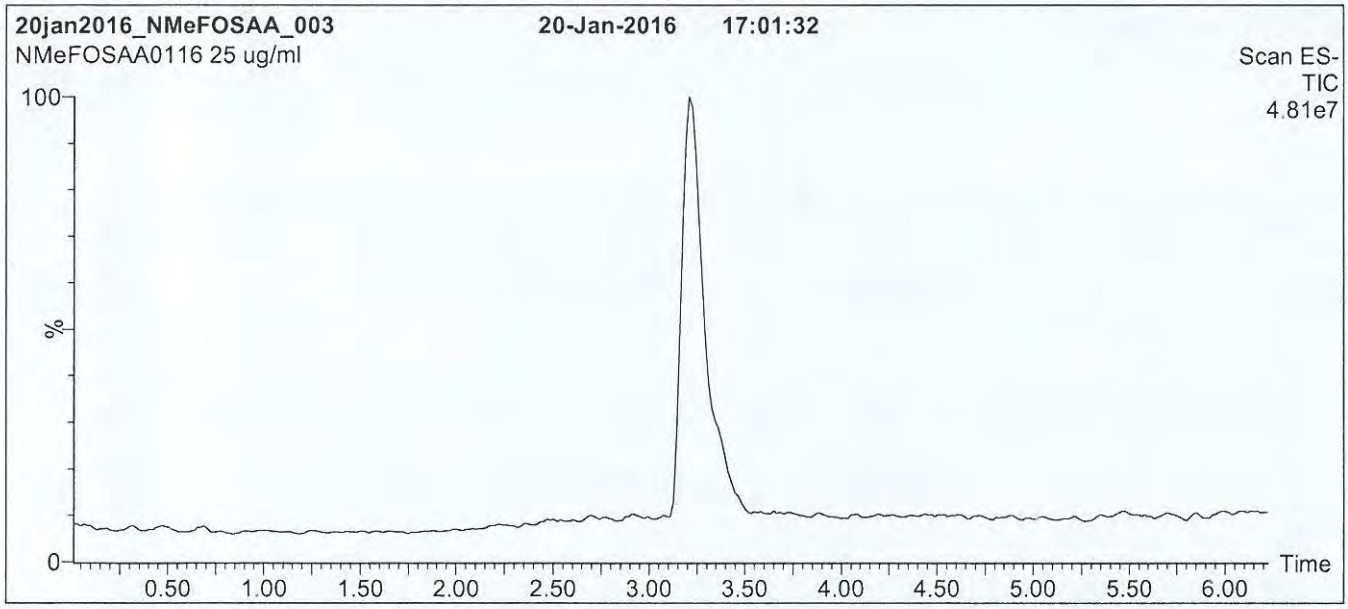
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

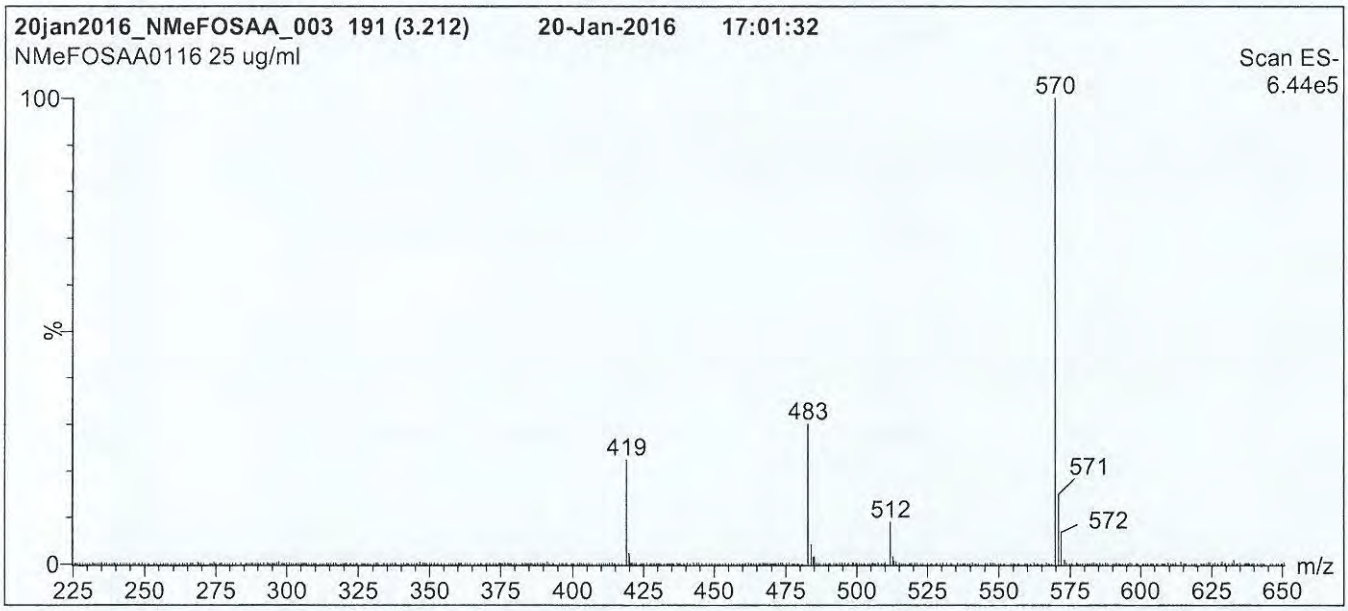
CALA

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: **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

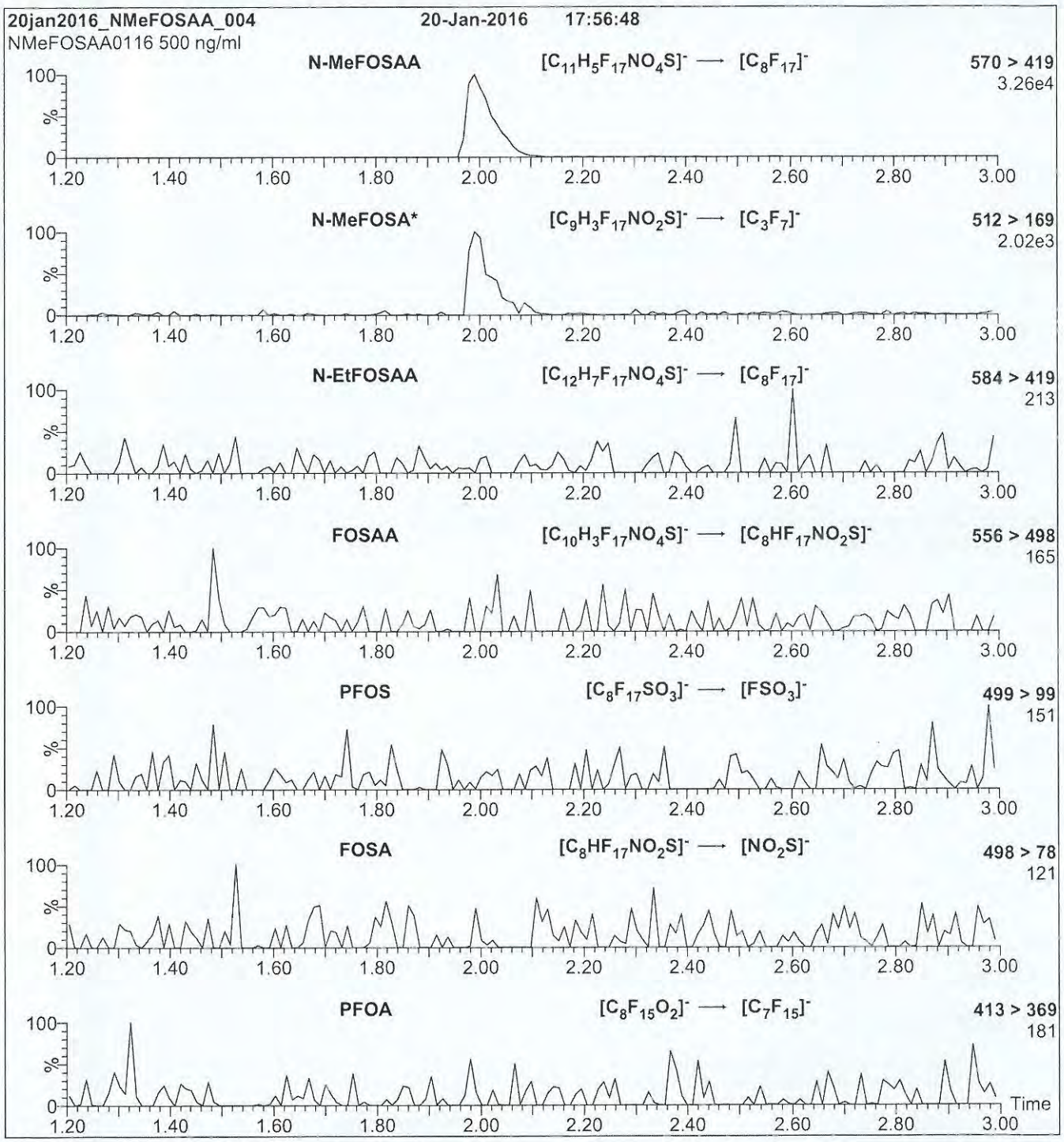
Flow: 300 µl/min

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

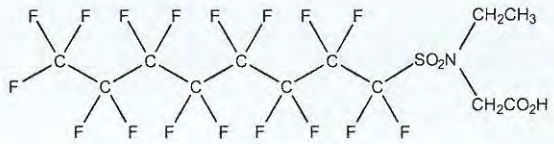
CERTIFICATE OF ANALYSIS DOCUMENTATION

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:

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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:

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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.

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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:

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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

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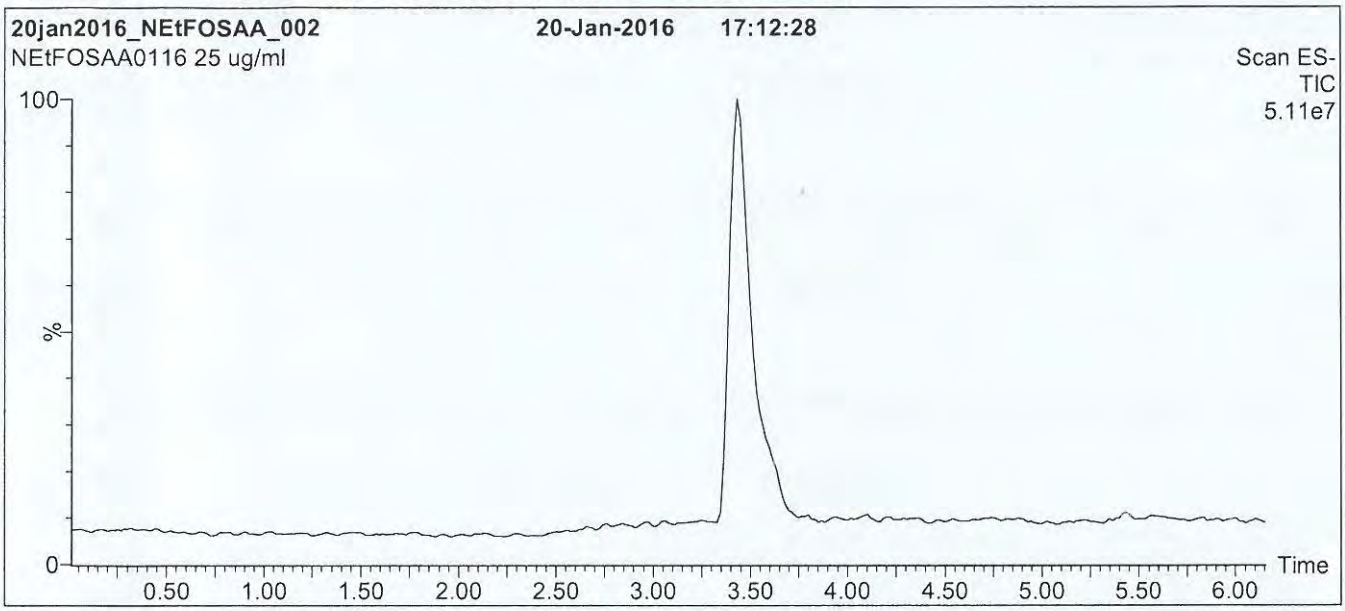
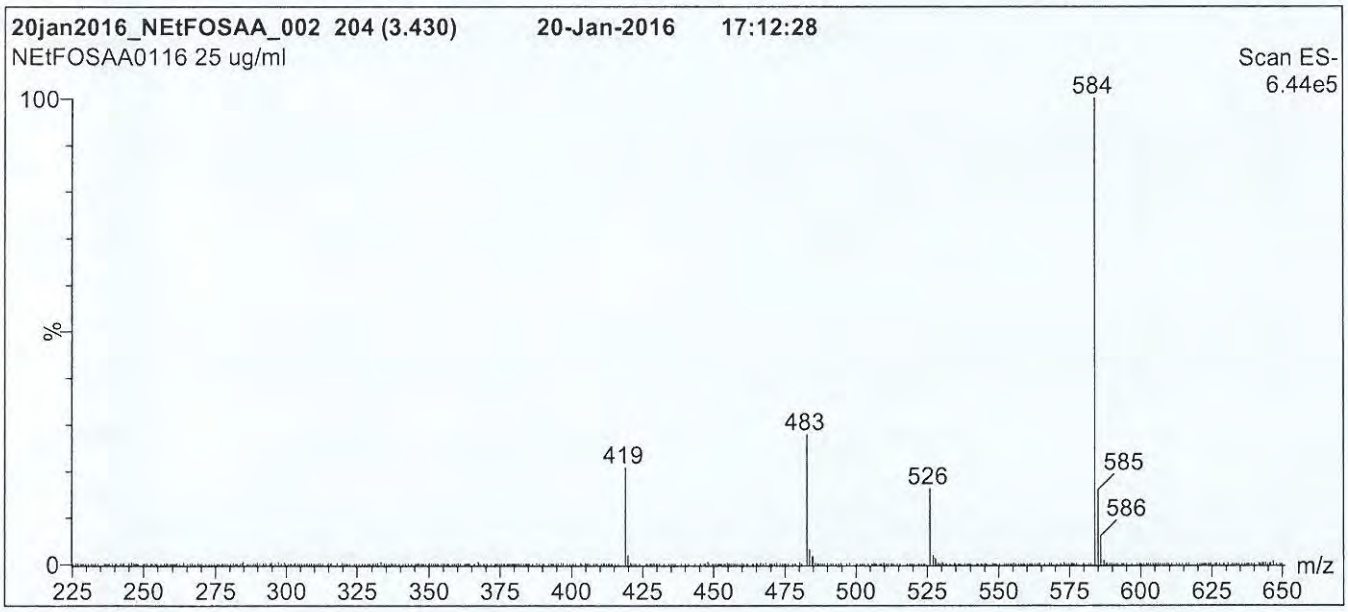
Figure 1: **N-EtFOSAA; LC/MS Data (TIC and Mass Spectrum)**





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

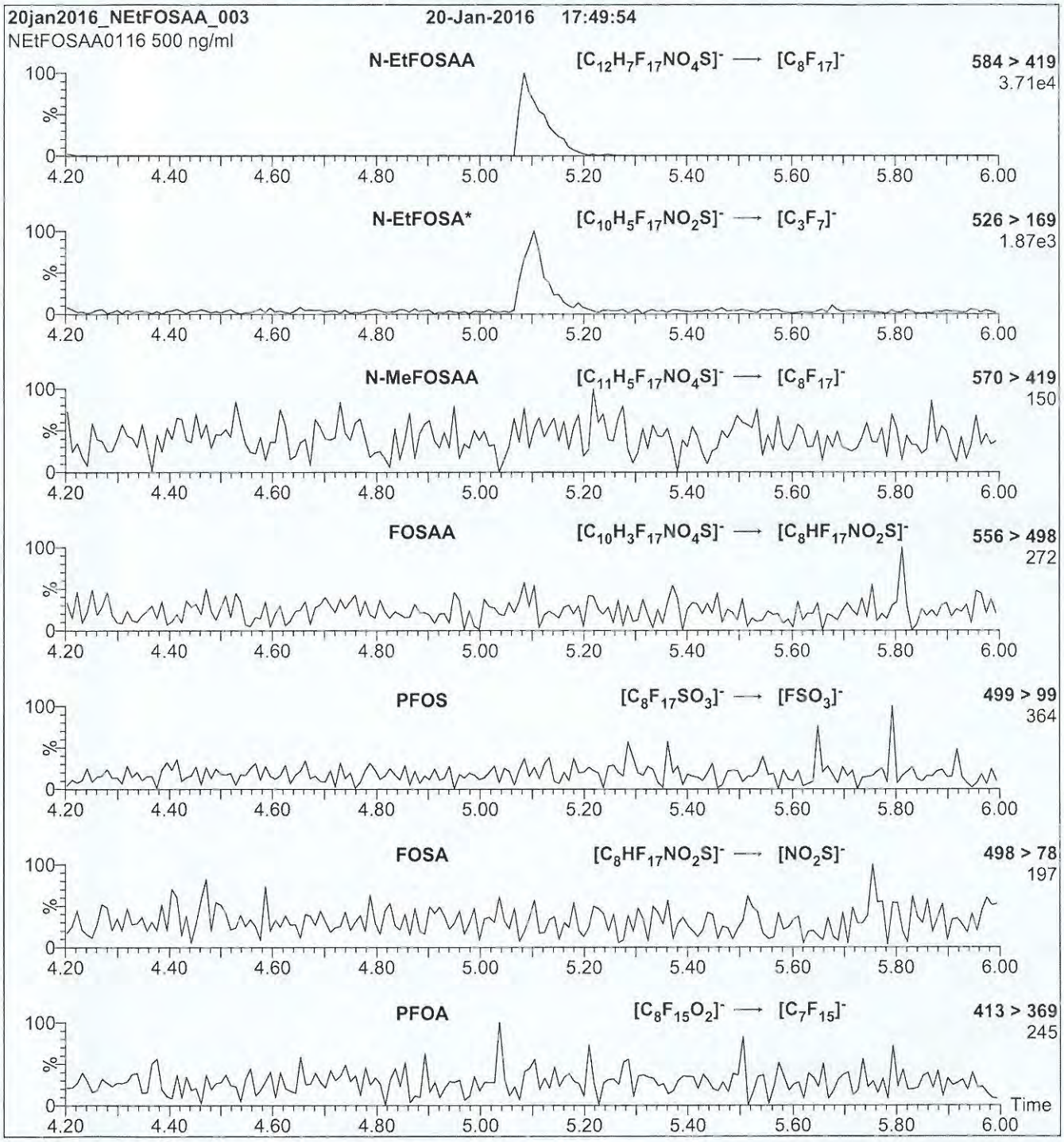
Flow: 300 µl/min

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

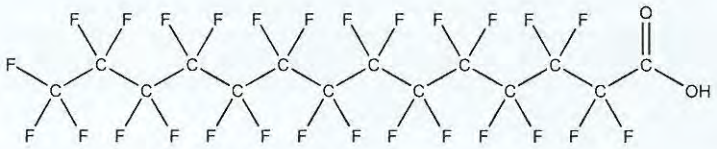
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFTeDA

PRODUCT CODE: PFTeDA
LOT NUMBER: PFTeDA1215
COMPOUND: Perfluoro-n-tetradecanoic acid

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

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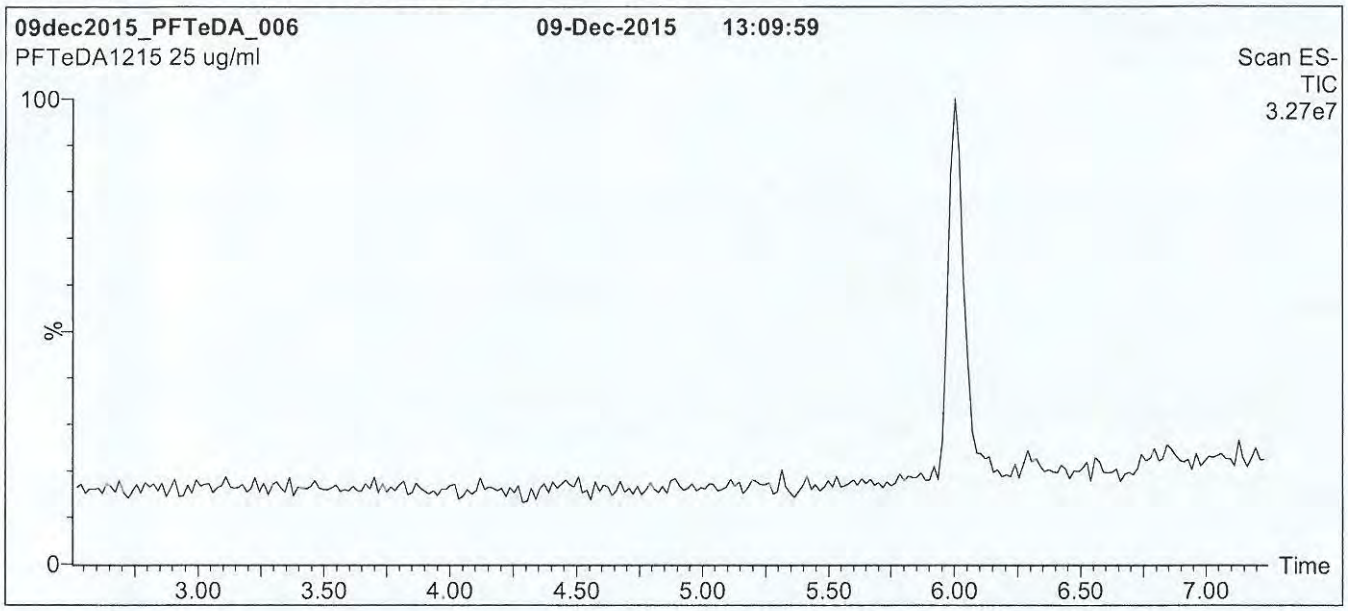
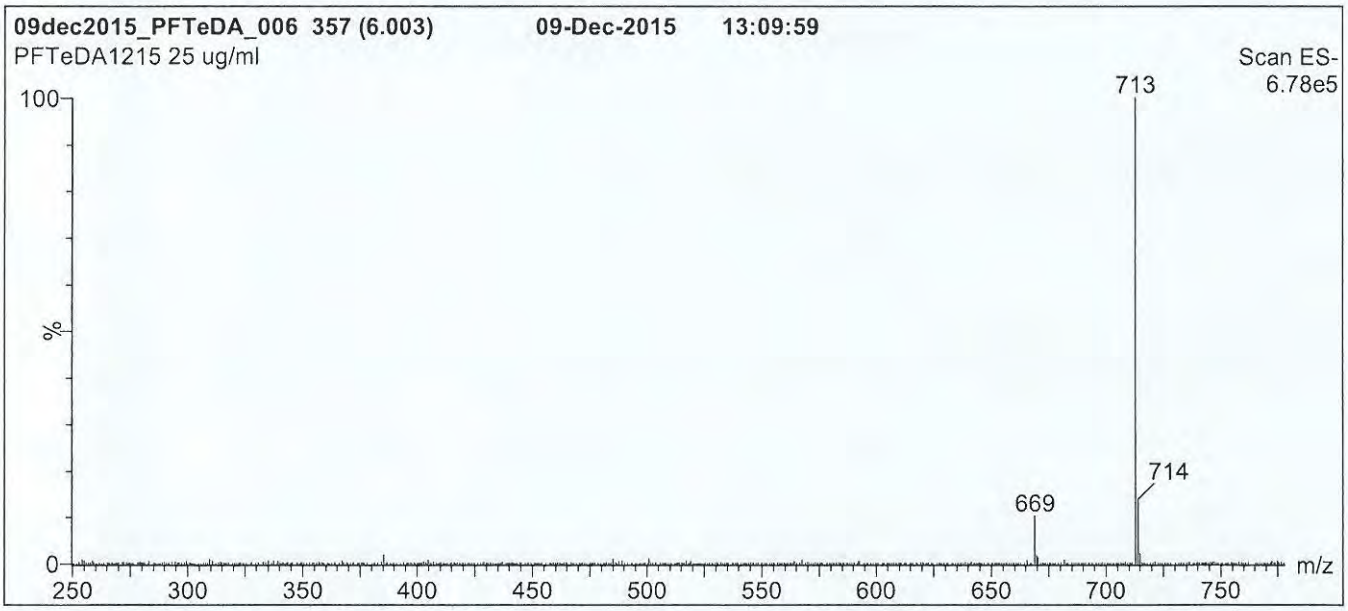
Figure 1: **PFTeDA; LC/MS Data (TIC and Mass Spectrum)**





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

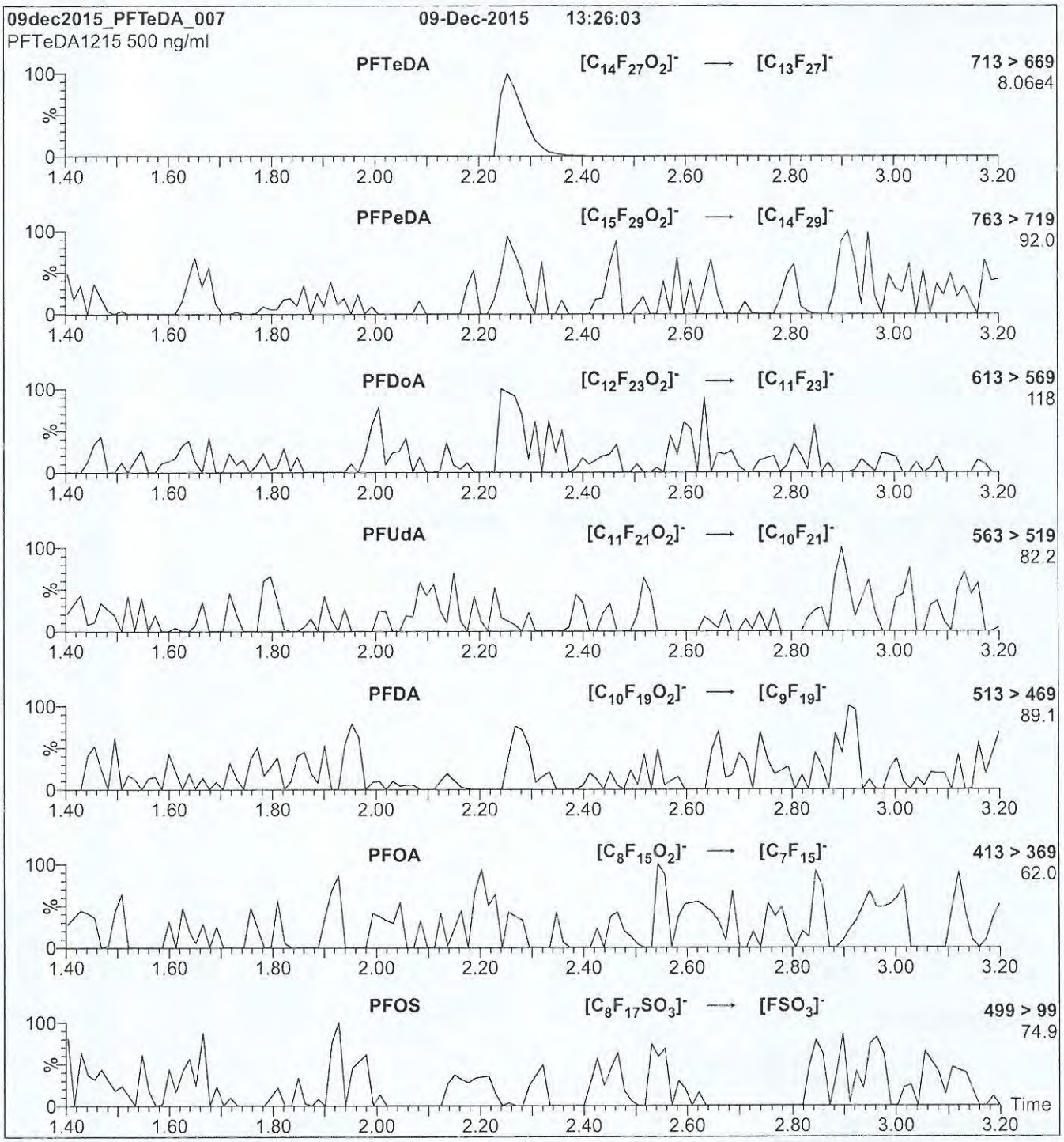
Flow: 300 µl/min

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

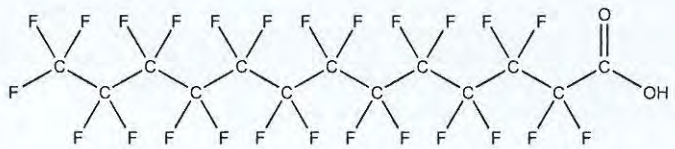
16I3001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTrDA
LOT NUMBER: PFTrDA0216
COMPOUND: Perfluoro-n-tridecanoic acid

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:

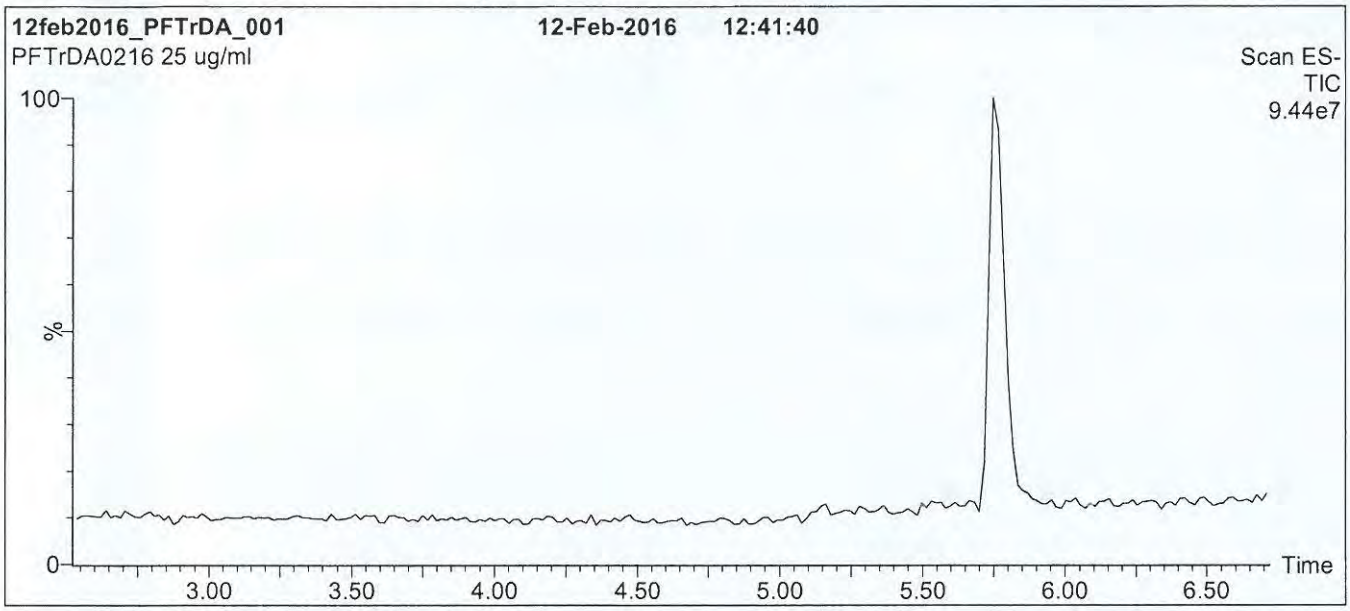
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

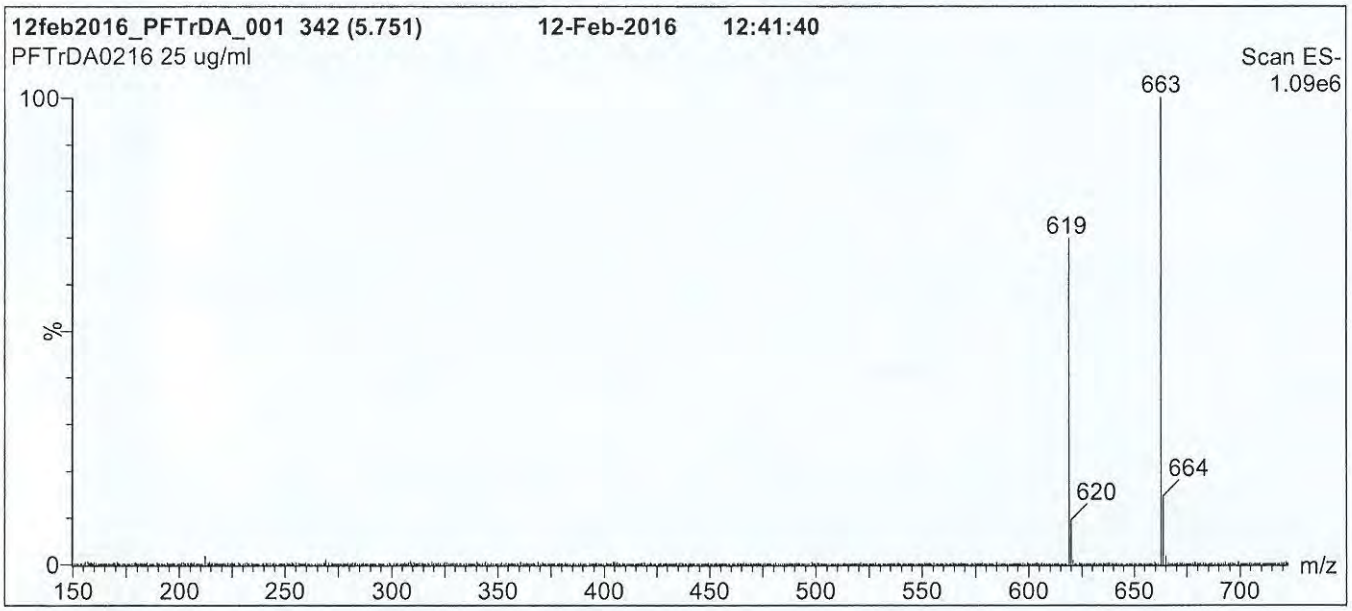
CALA Testing

ANAB ACCREDITED ISO GUIDE 34 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

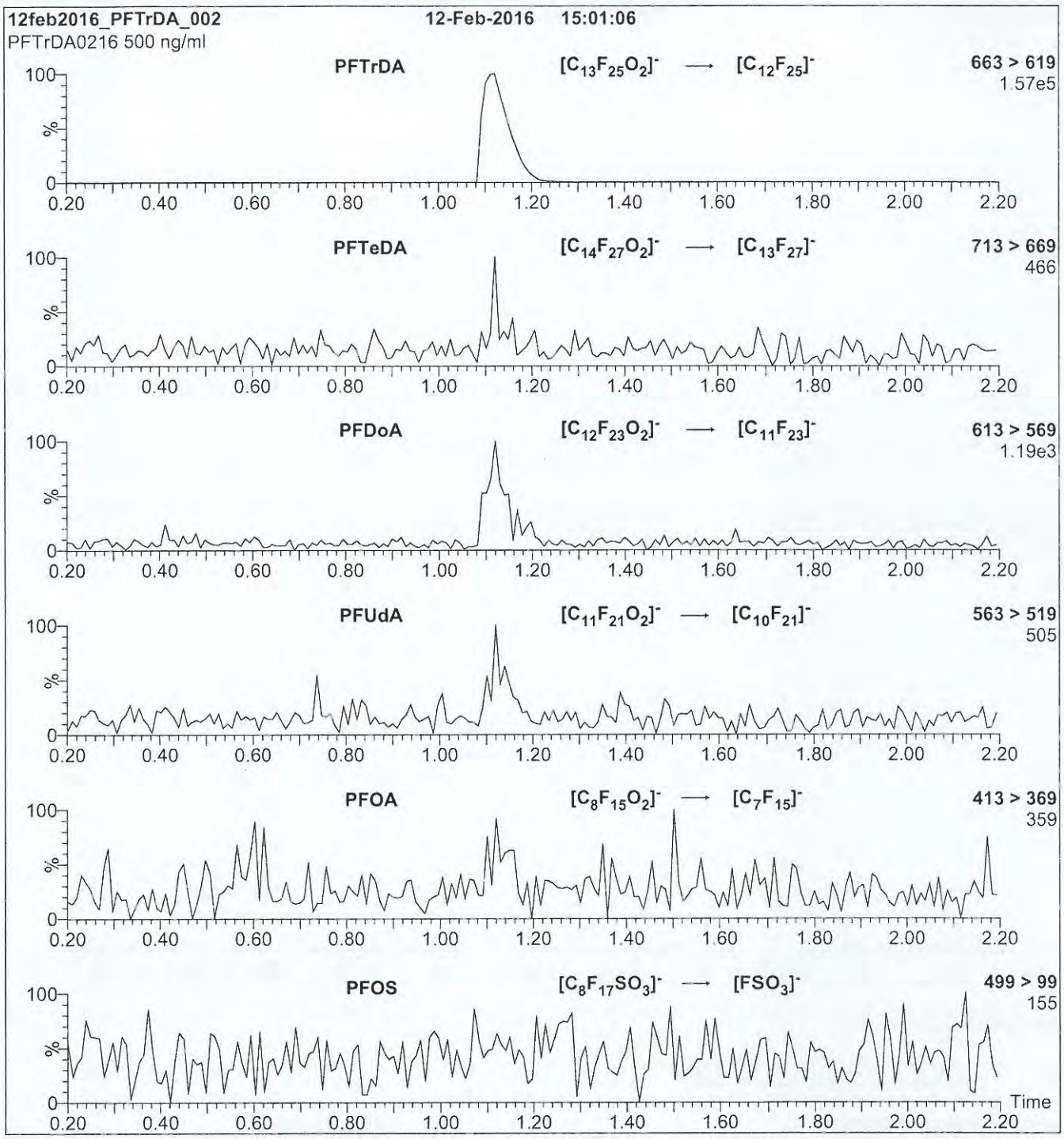
Flow: 300 µl/min

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

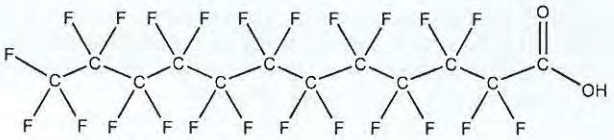
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFDoA
COMPOUND: Perfluoro-n-dodecanoic acid

LOT NUMBER: PFDoA0516

STRUCTURE:

CAS #: 307-55-1



MOLECULAR FORMULA: $C_{12}HF_{23}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 614.10
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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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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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED Reference Material Producer

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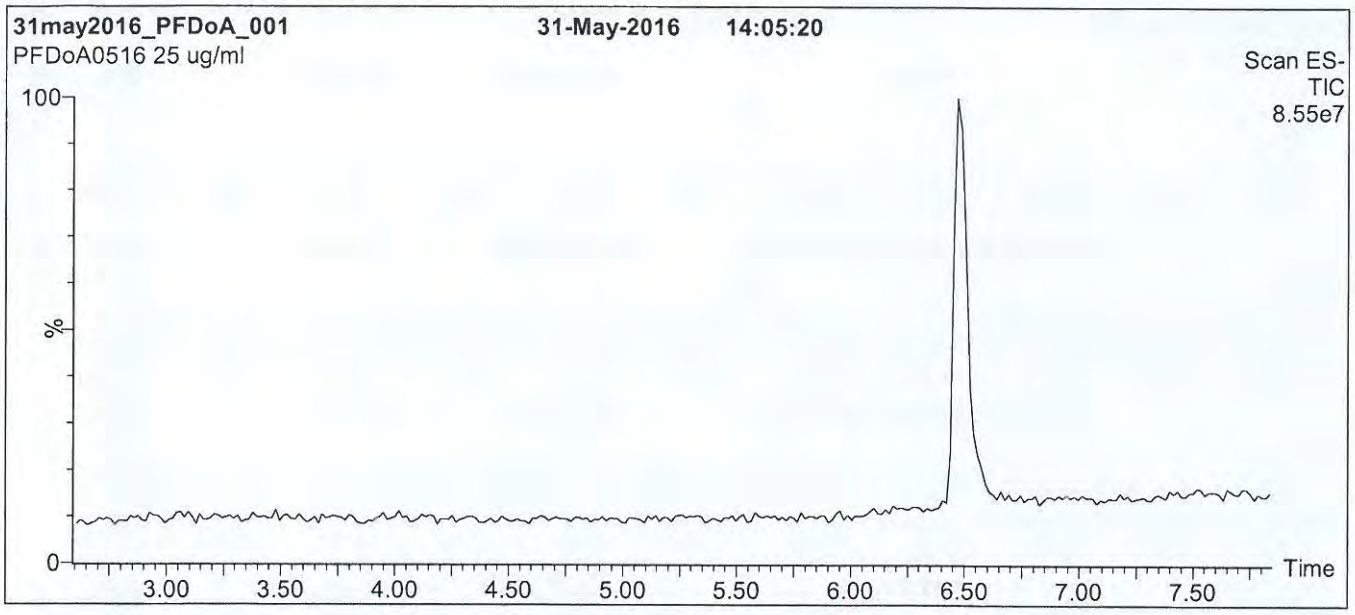
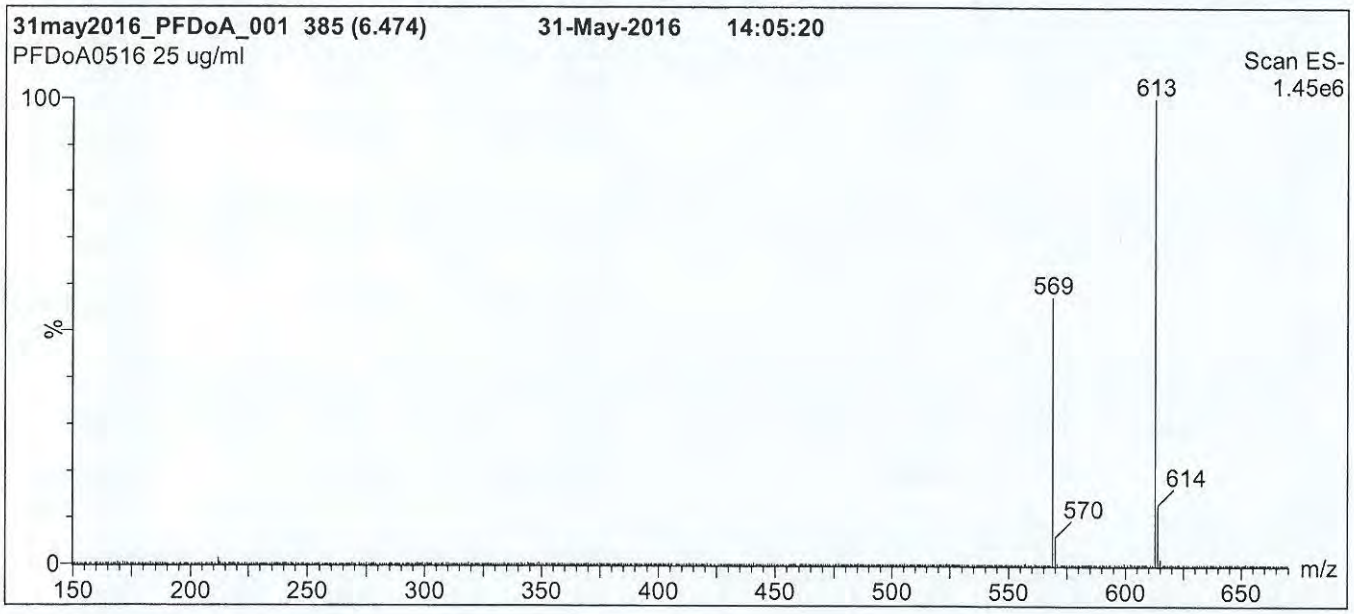
Figure 1: **PFDoA; LC/MS Data (TIC and Mass Spectrum)**





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

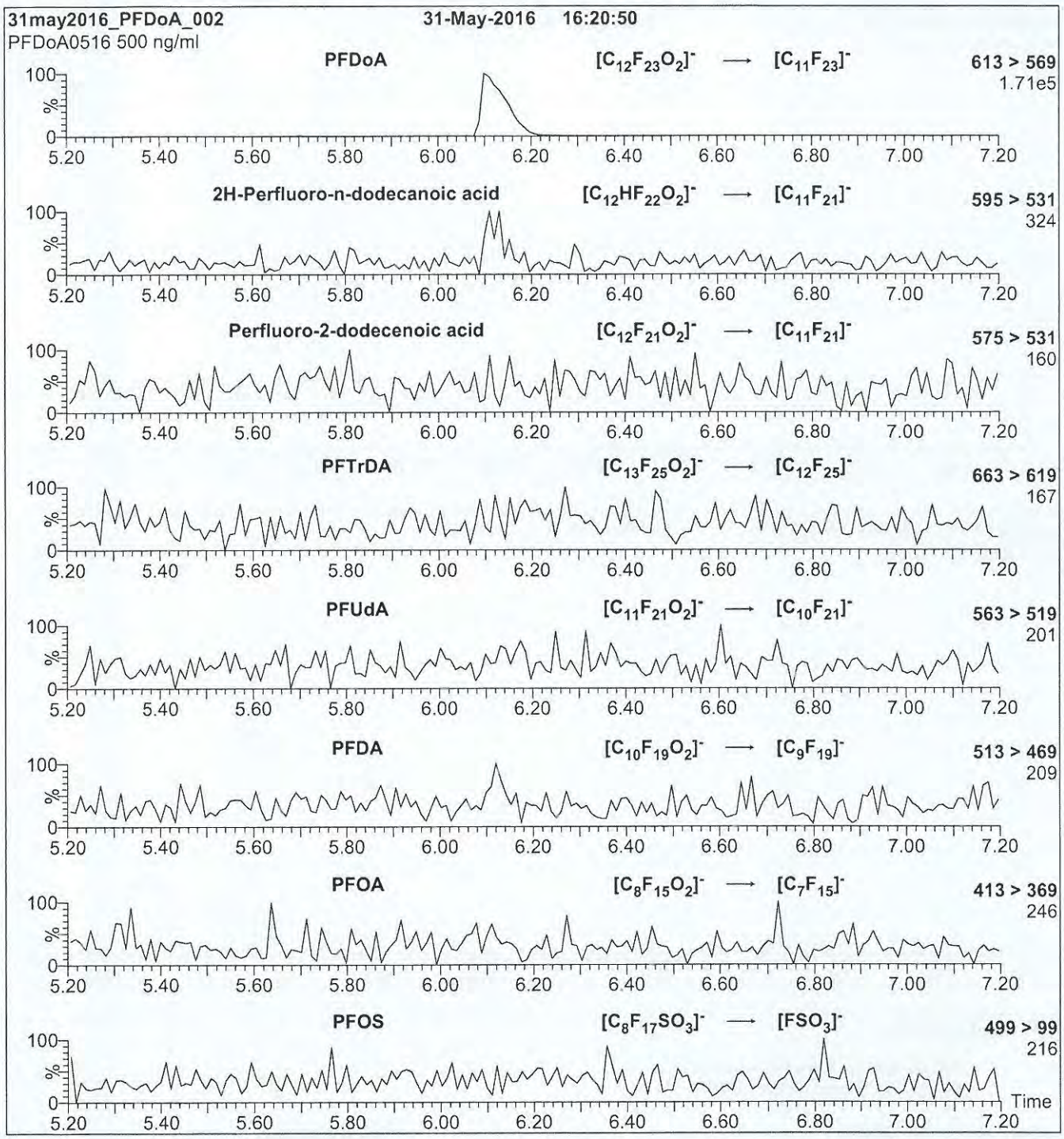
Flow: 300 µl/min

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

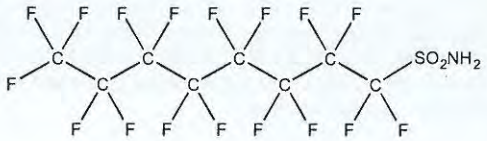
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: FOSA-I
COMPOUND: Perfluoro-1-octanesulfonamide

LOT NUMBER: FOSA0815I

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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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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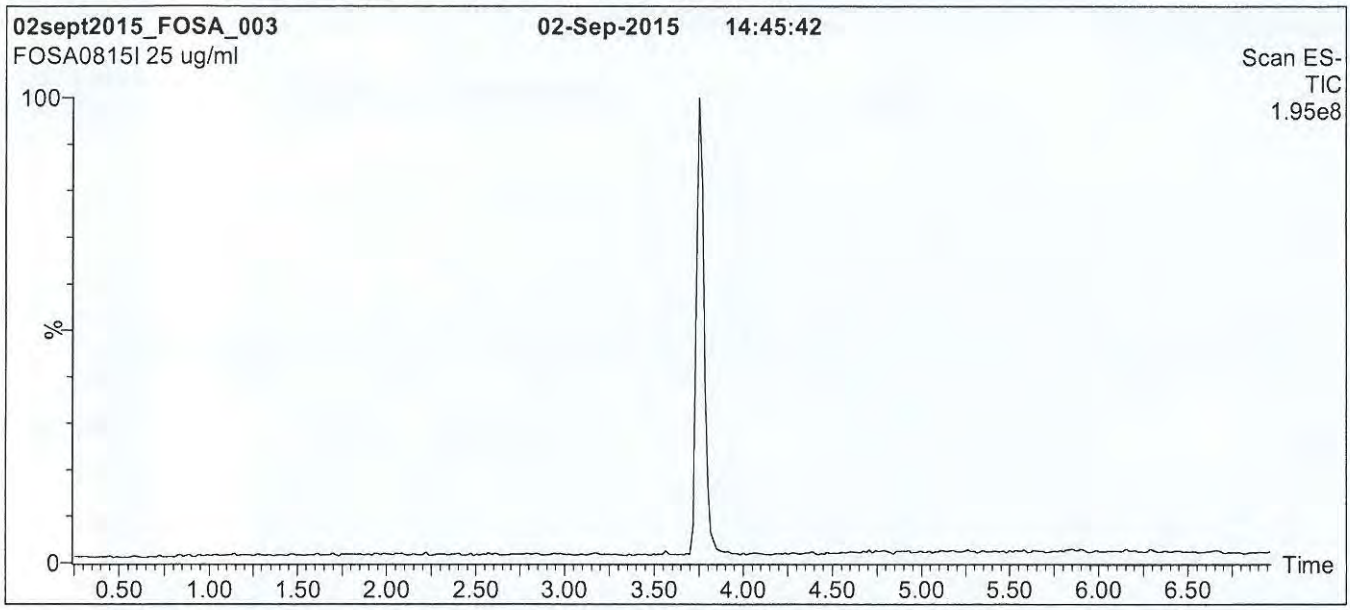
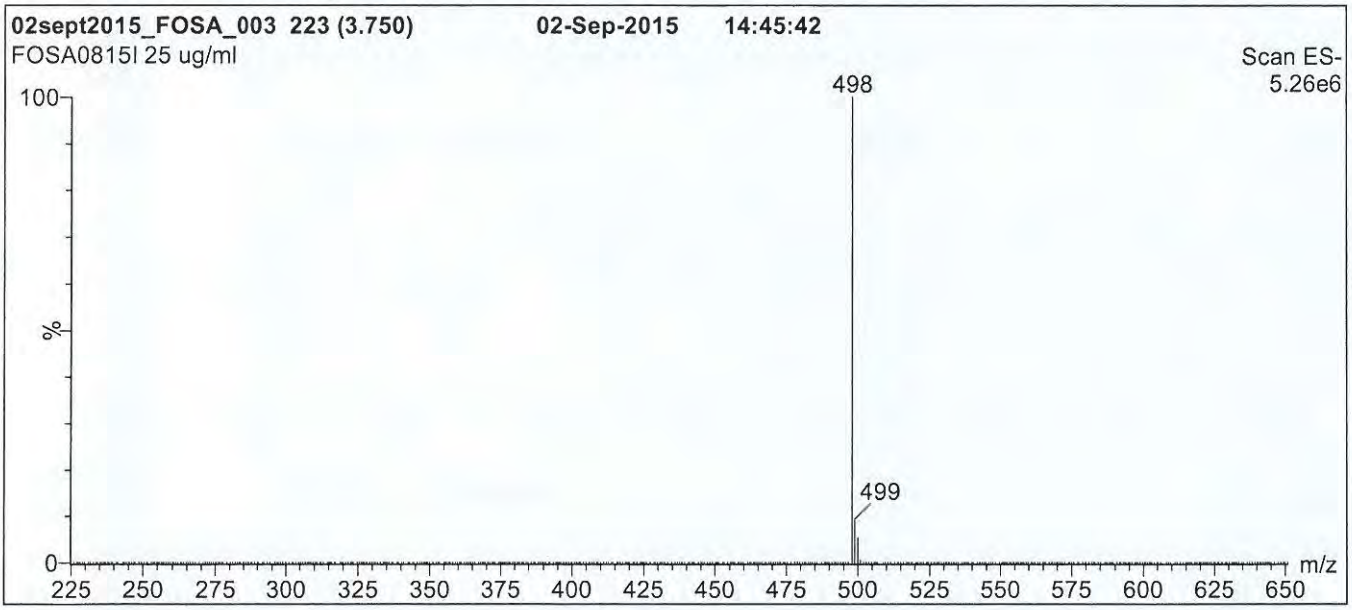
Figure 1: **FOSA-I; LC/MS Data (TIC and Mass Spectrum)**





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

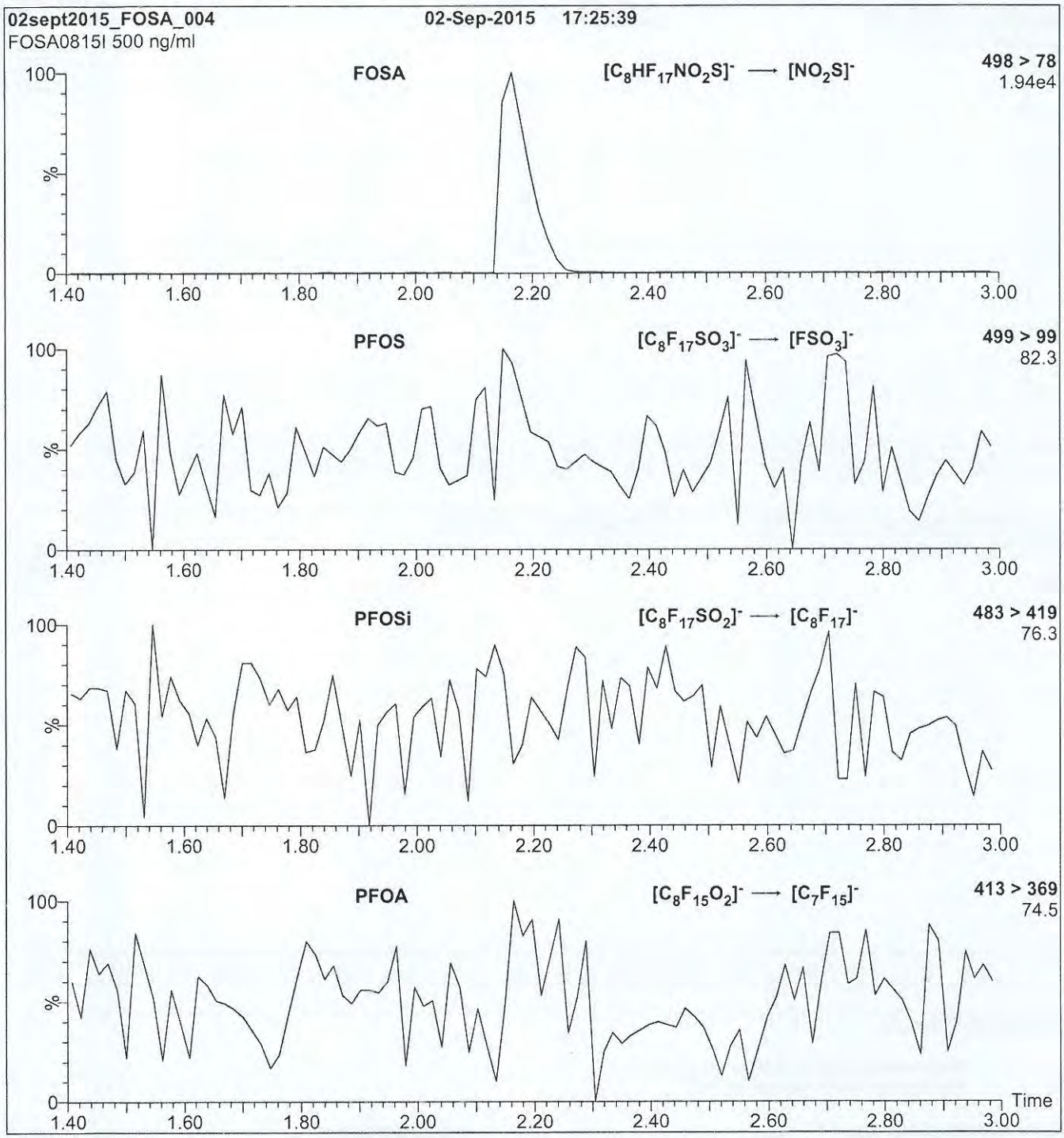
Flow: 300 µl/min

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

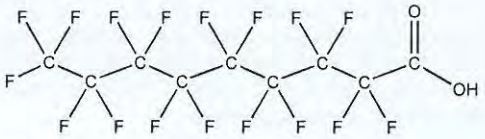
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFNA
COMPOUND: Perfluoro-n-nonanoic acid

LOT NUMBER: PFNA1015

STRUCTURE:

CAS #: 375-95-1



MOLECULAR FORMULA: $C_9HF_{17}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 464.08
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 $x_1, x_2, \ldots x_n$ 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.

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER

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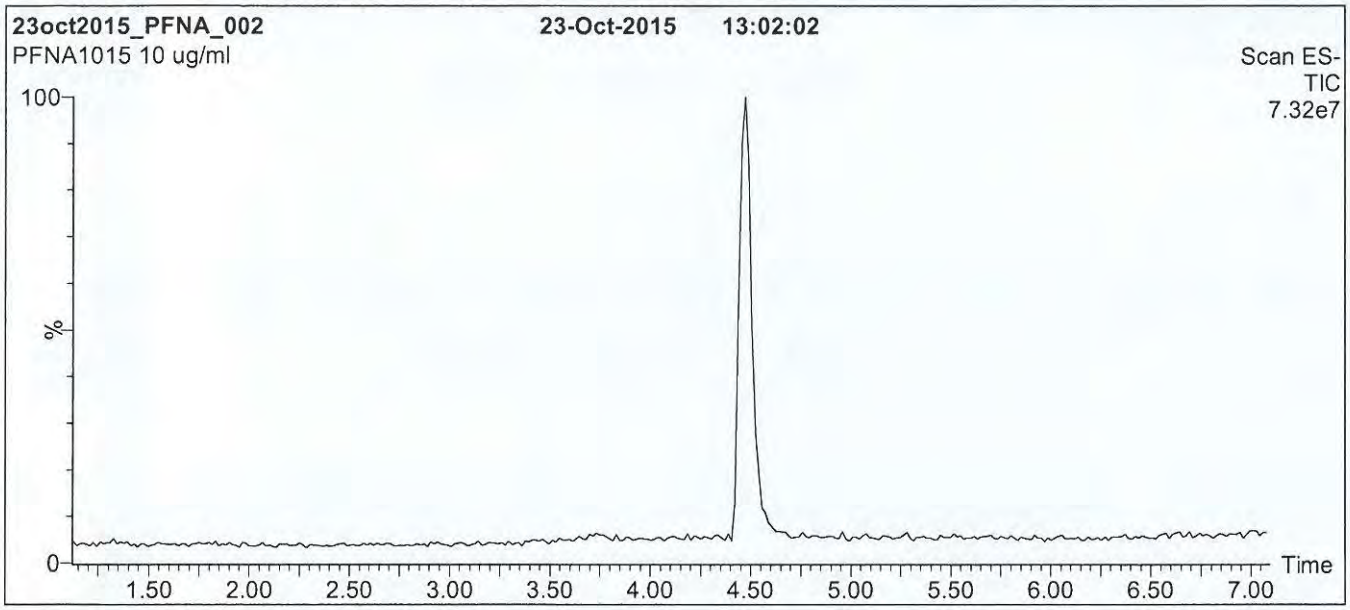
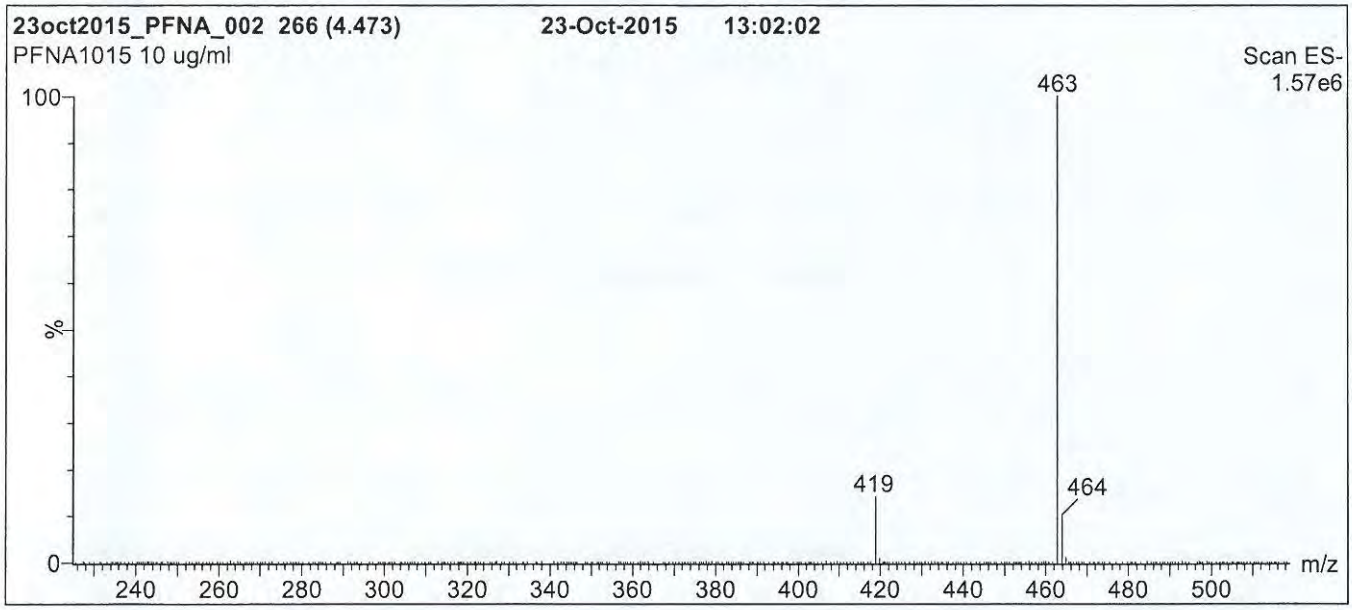
Figure 1: **PFNA; LC/MS Data (TIC and Mass Spectrum)**





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

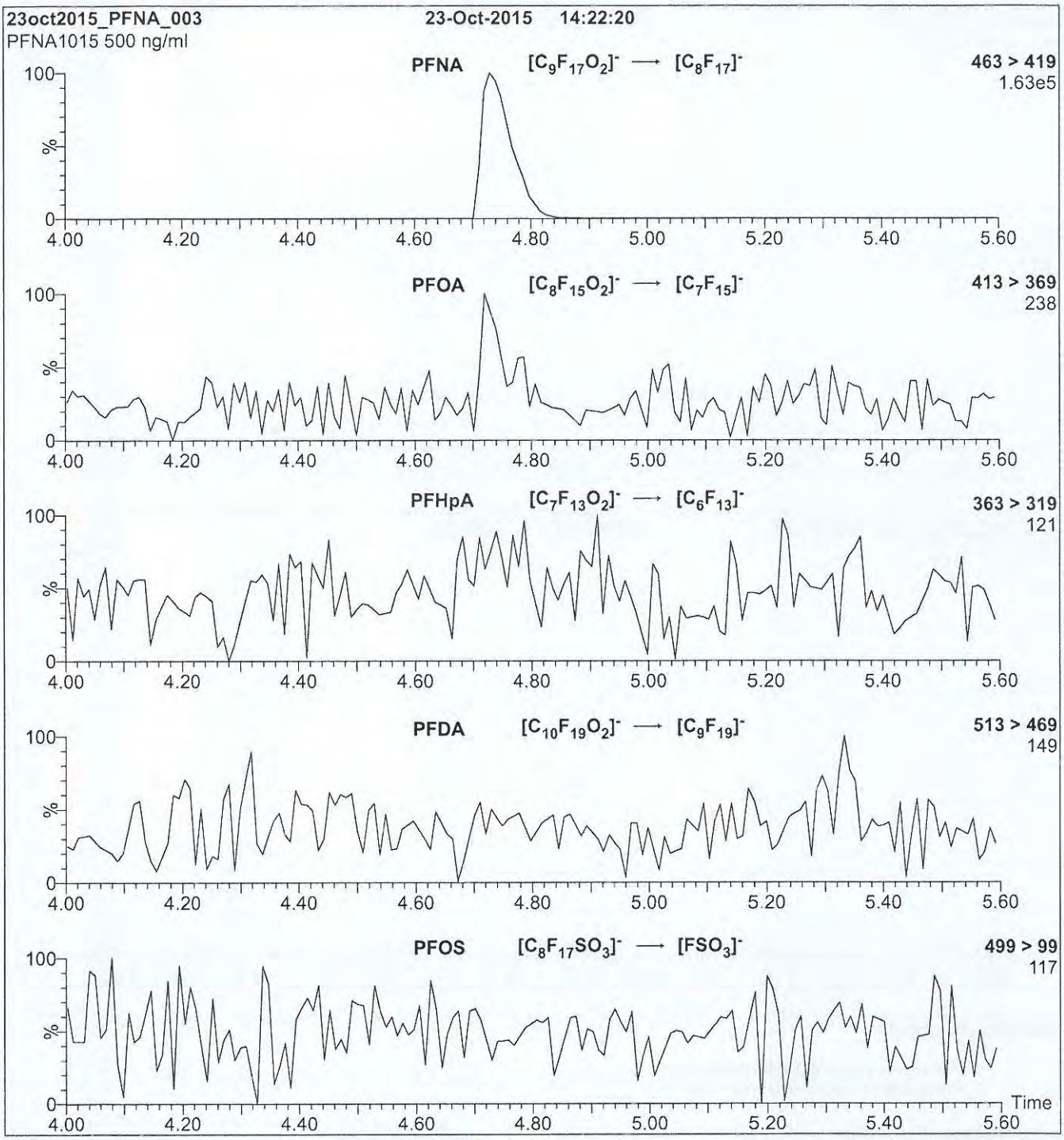
Flow: 300 µl/min

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 J09/25

WELLINGTON LABORATORIES

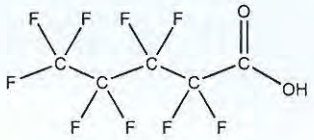
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFPeA
COMPOUND: Perfluoro-n-pentanoic acid

LOT NUMBER: PFPeA0516

STRUCTURE:

CAS #: 2706-90-3



MOLECULAR FORMULA: $C_5HF_9O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 264.05
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

INTENDED USE:

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CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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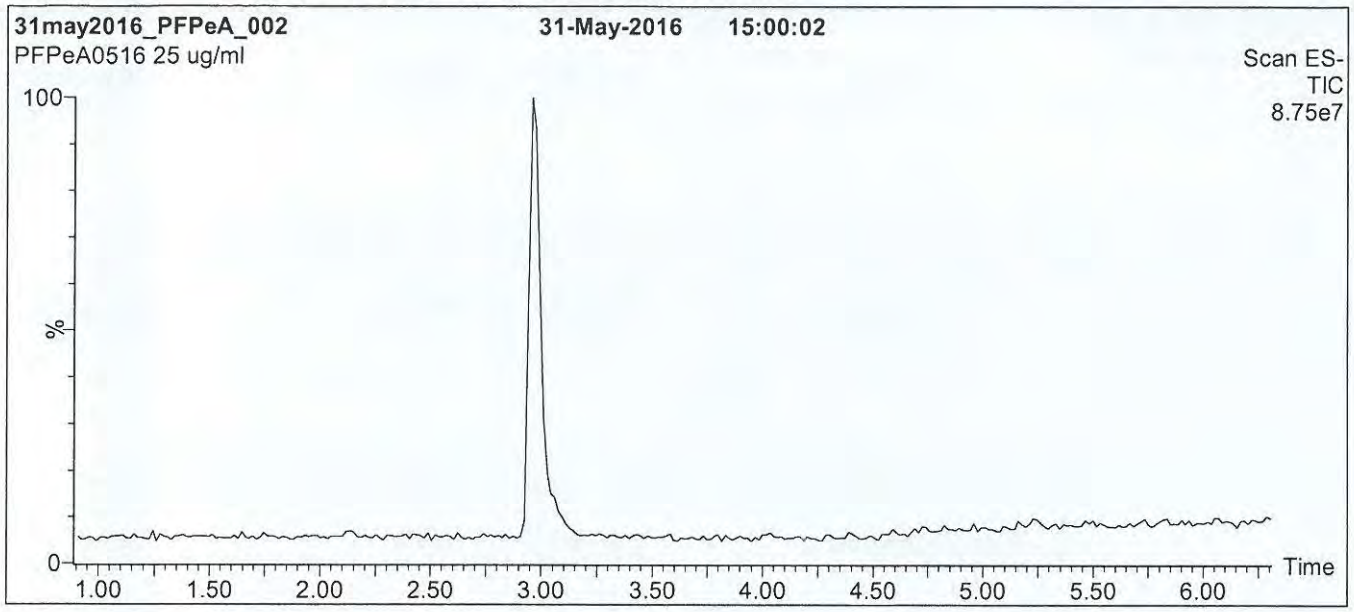
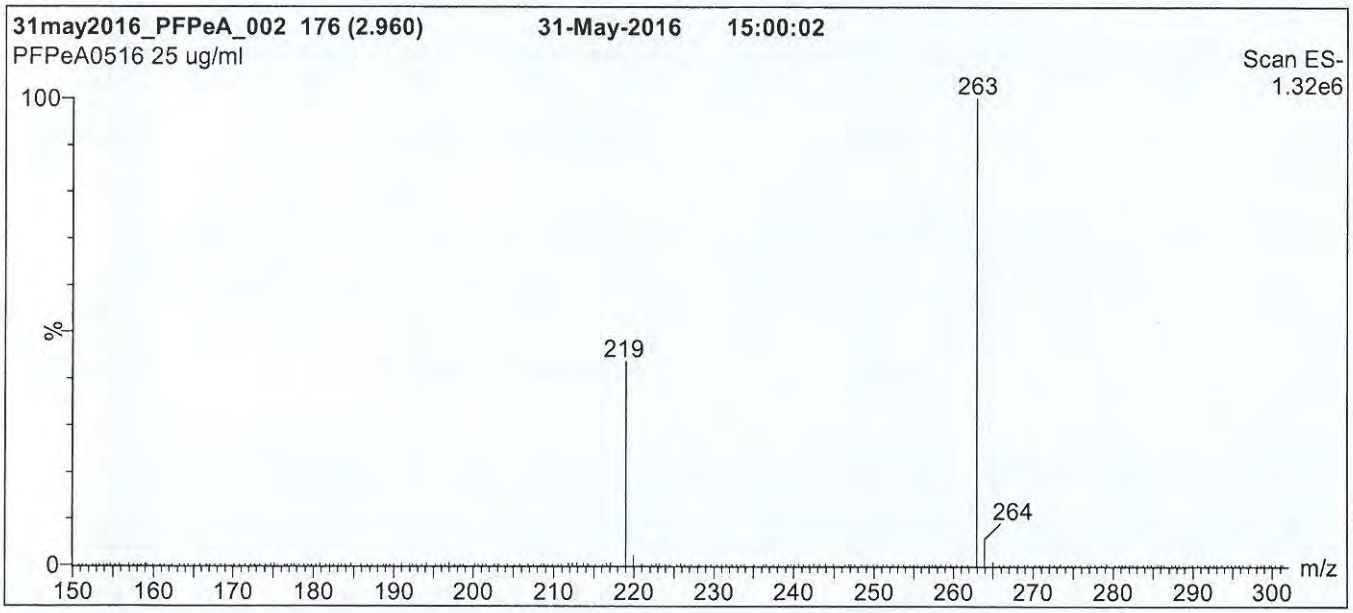




Conditions for Figure 1:

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

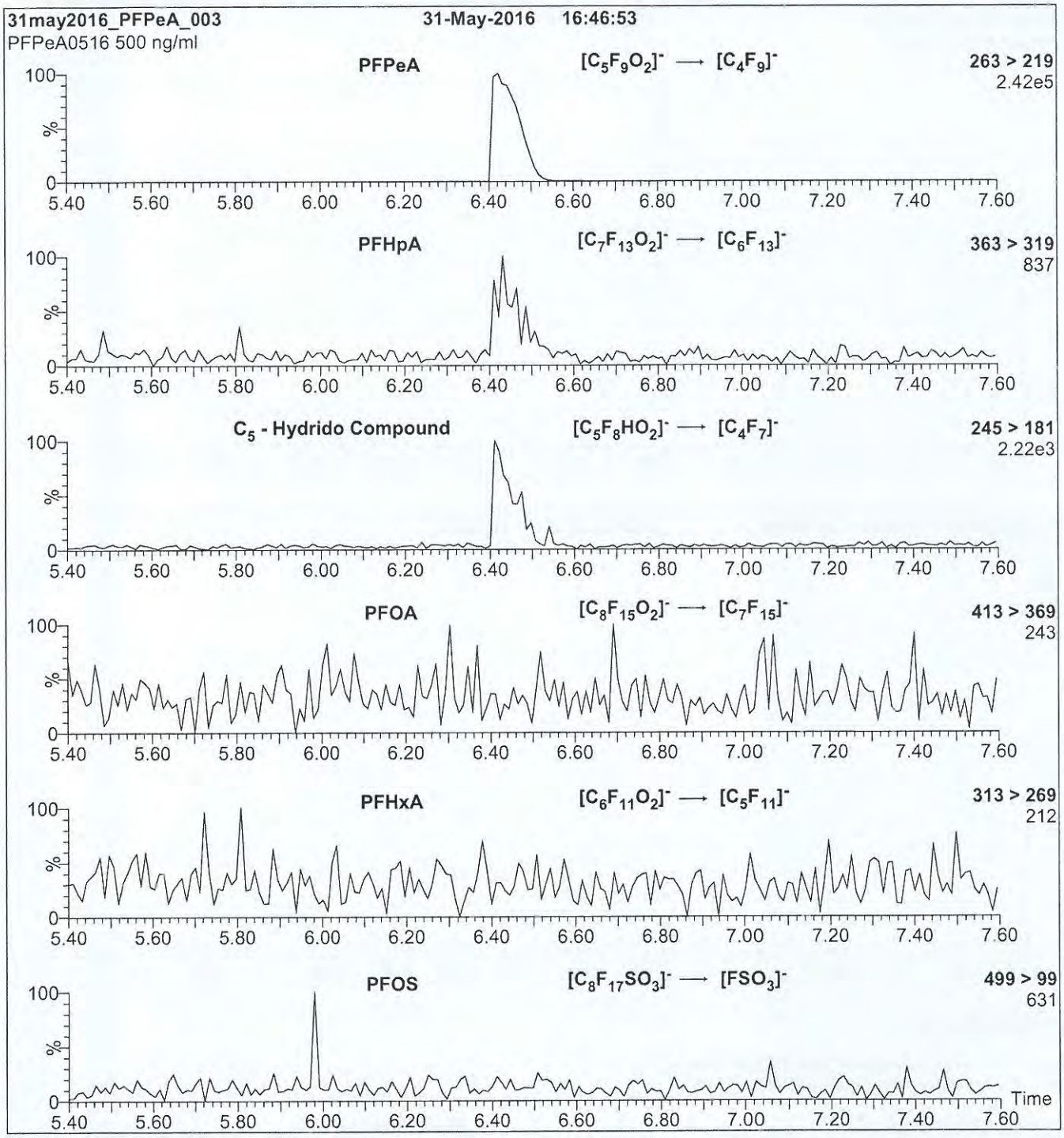
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 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

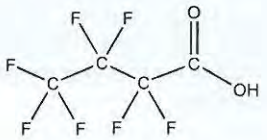
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFBA
COMPOUND: Perfluoro-n-butanoic acid

LOT NUMBER: PFBA0516

STRUCTURE:

CAS #: 375-22-4



MOLECULAR FORMULA: $C_4HF_7O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 214.04
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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CALA

ANAB ACCREDITED

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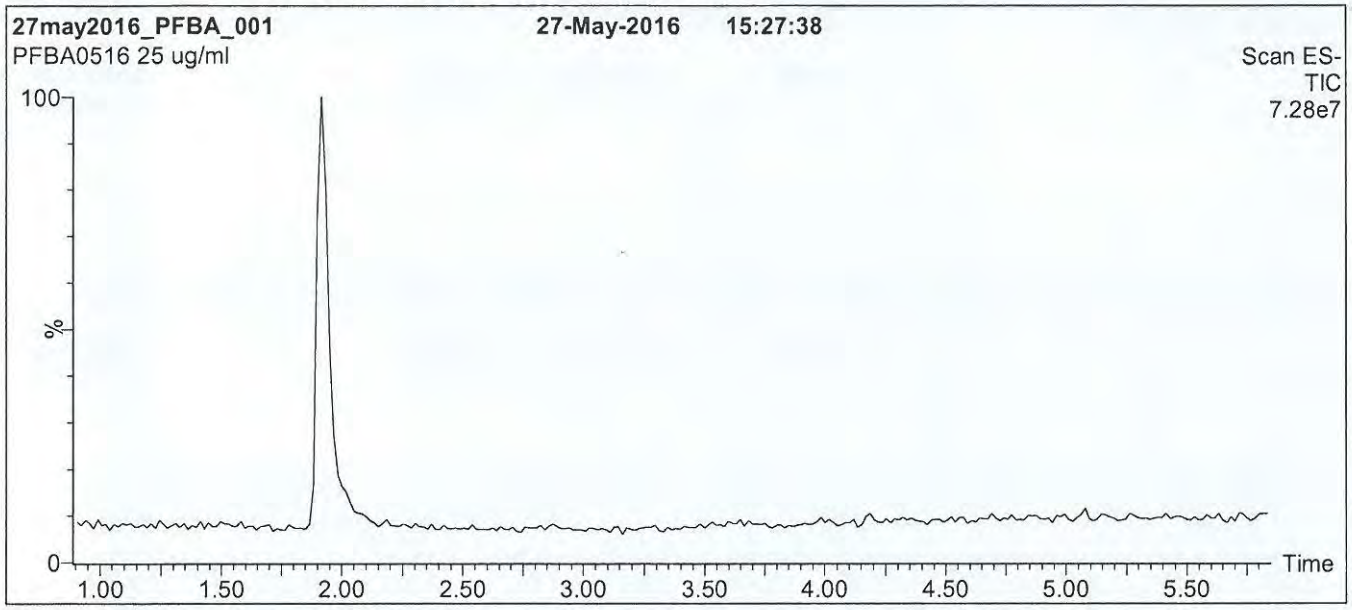
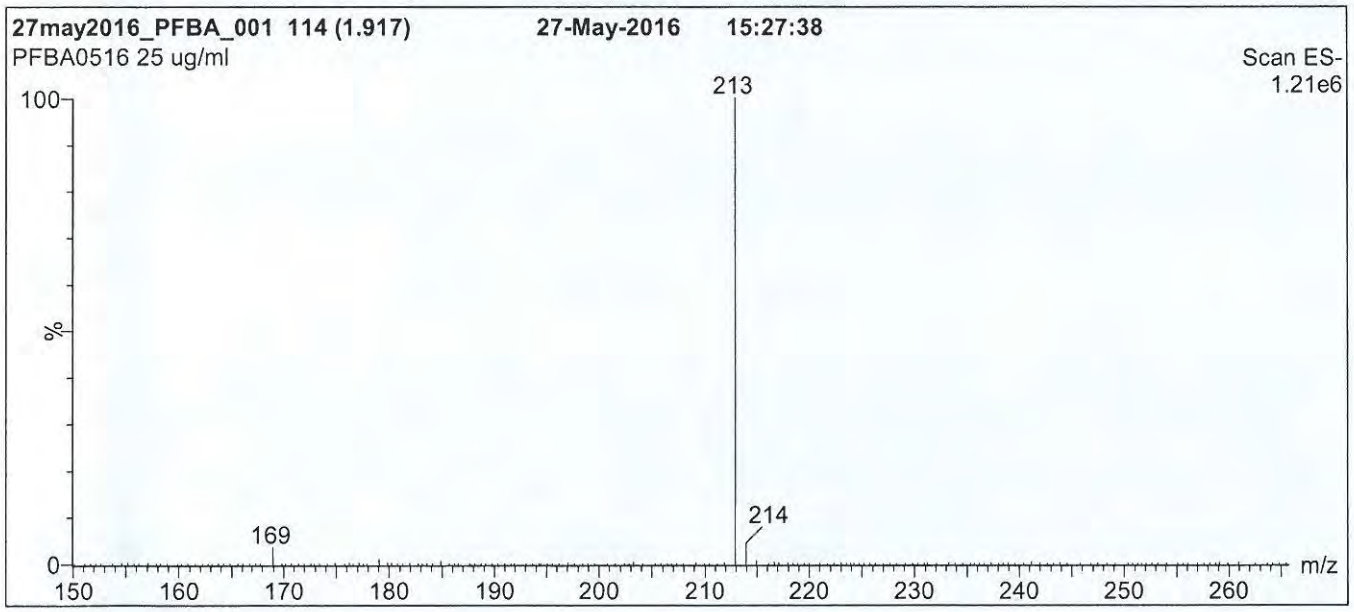




Conditions for Figure 1:

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

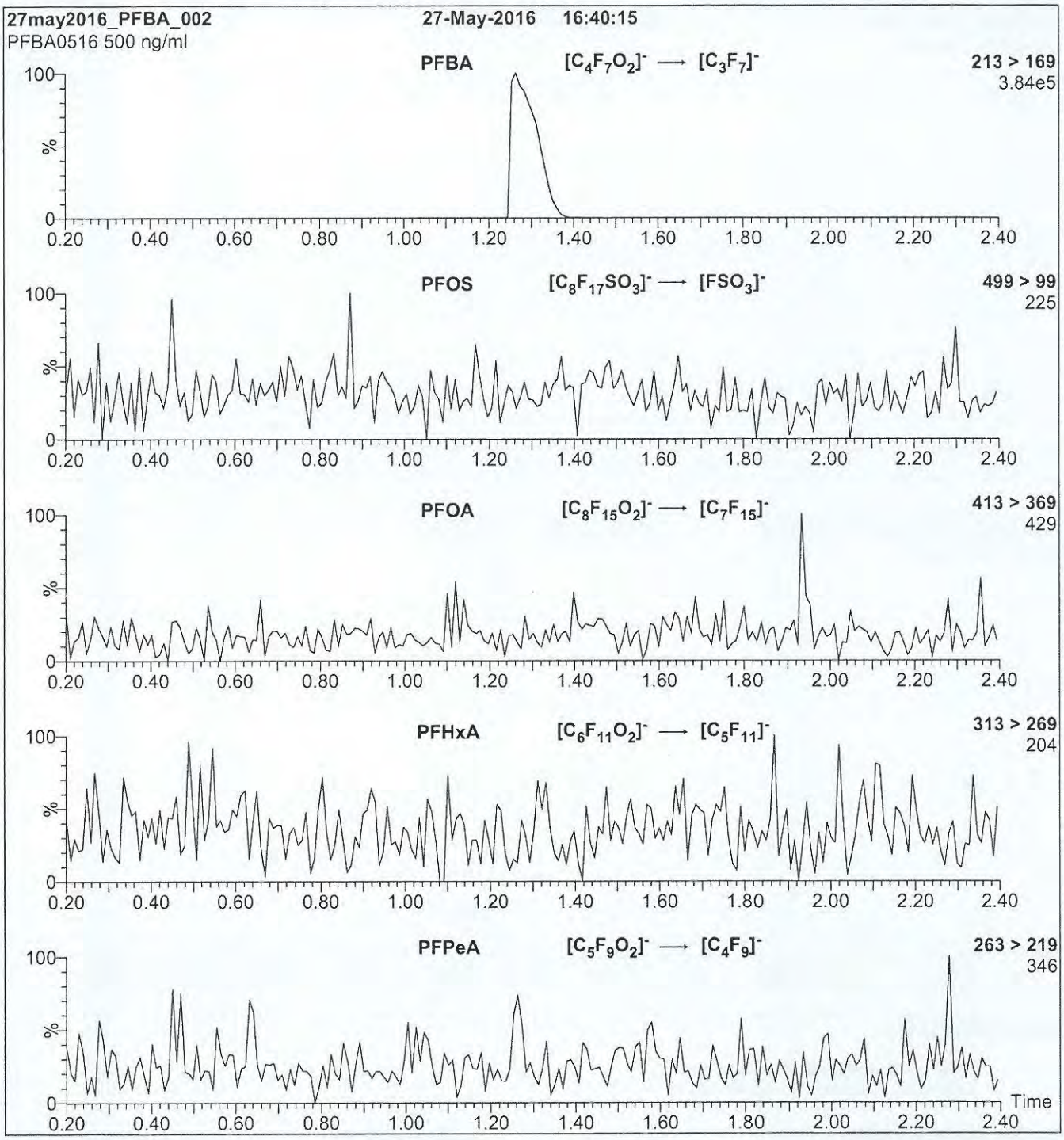
Flow: 300 µl/min

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

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

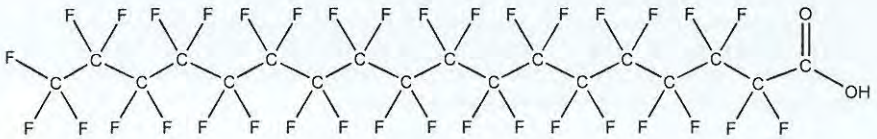
16L0512

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFODA
LOT NUMBER: PFODA0416
COMPOUND: Perfluoro-n-octadecanoic acid

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)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

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CALA Testing Accreditation No. A 1226

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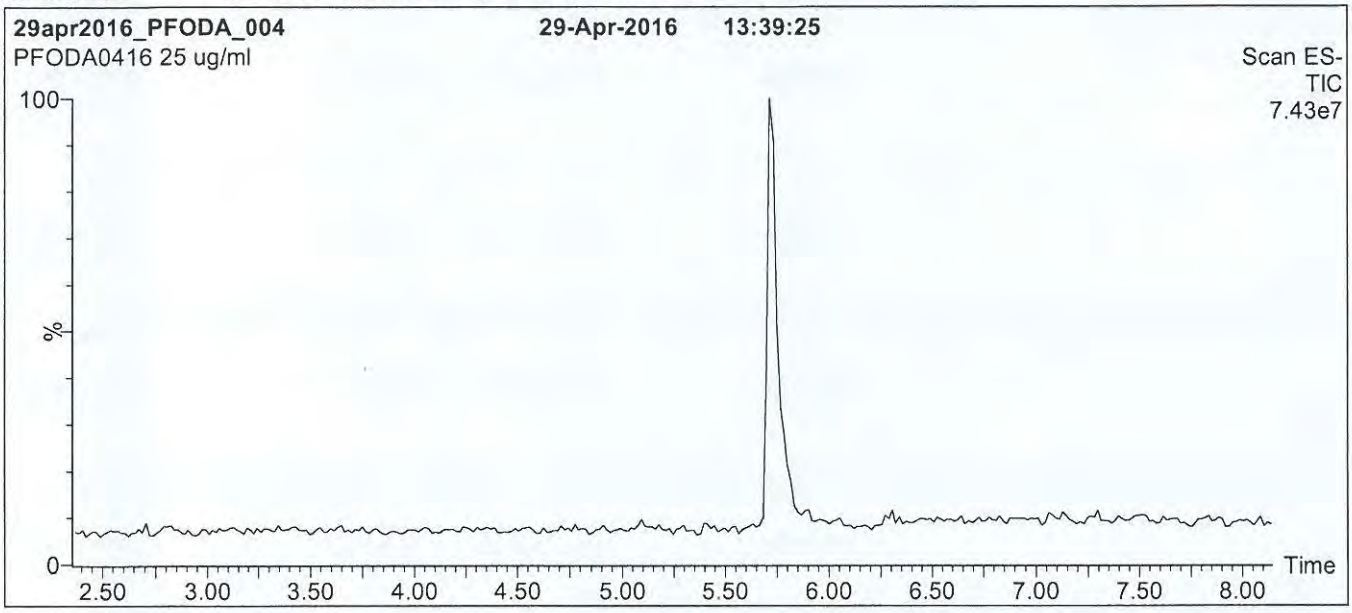

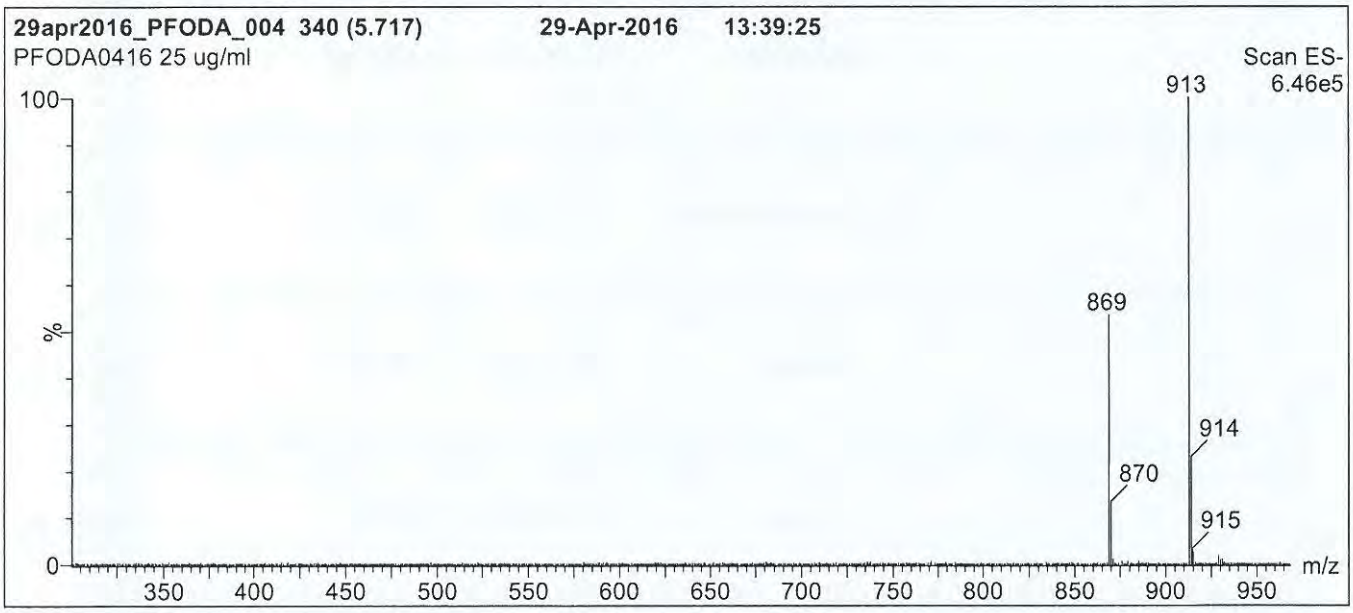

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Start: 70% (80:20 MeOH:ACN) / 30% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 95% organic over 6 min and hold for
2.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

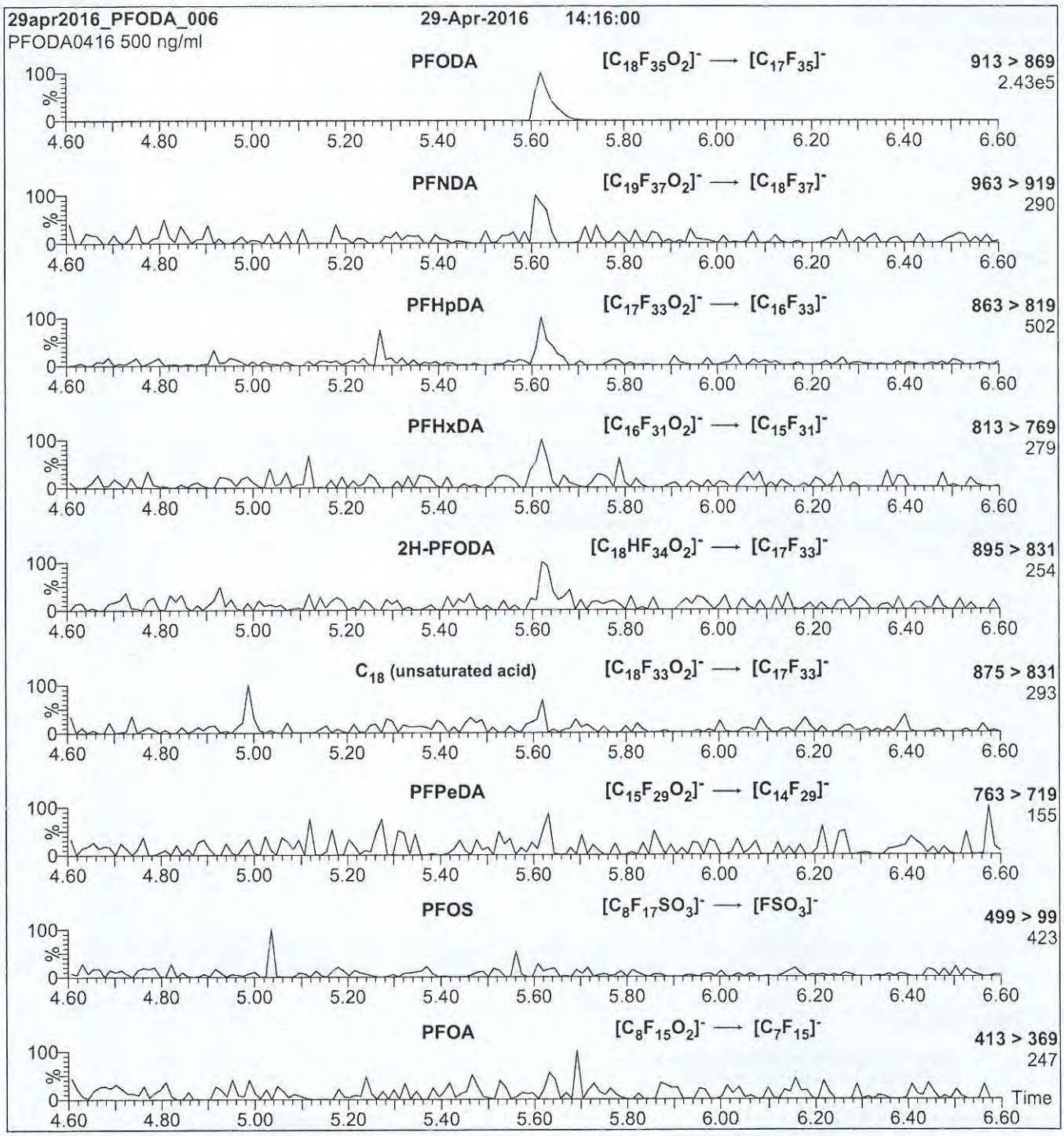
Flow: 300 µl/min

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

WELLINGTON LABORATORIES

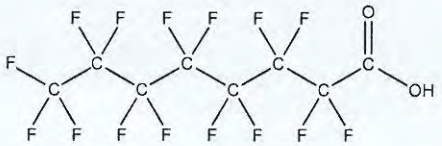
CERTIFICATE OF ANALYSIS DOCUMENTATION

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: B.G. Chittim **Date:** 08/05/2016 (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:

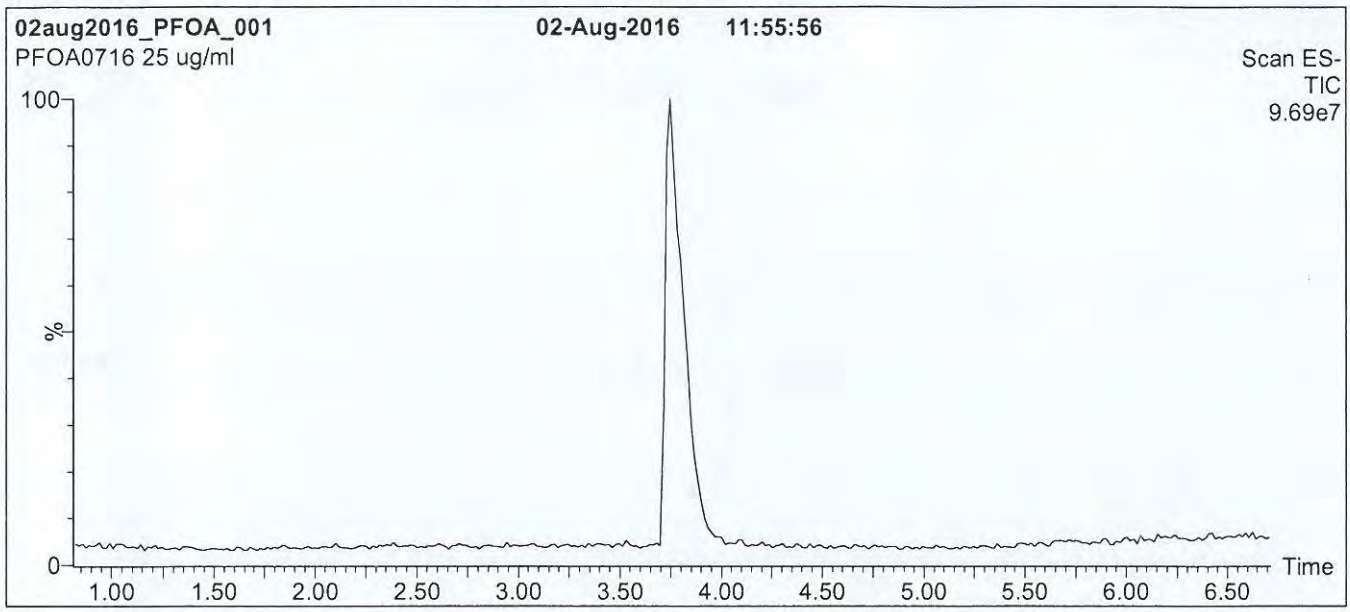
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

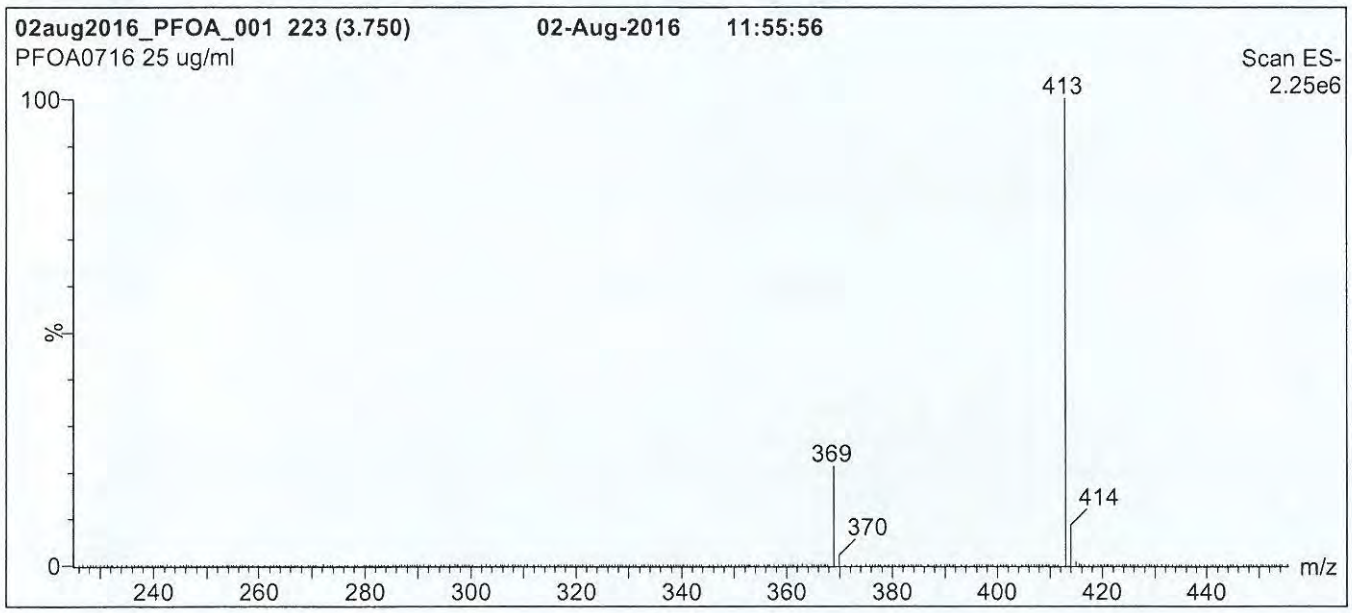
CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17025 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

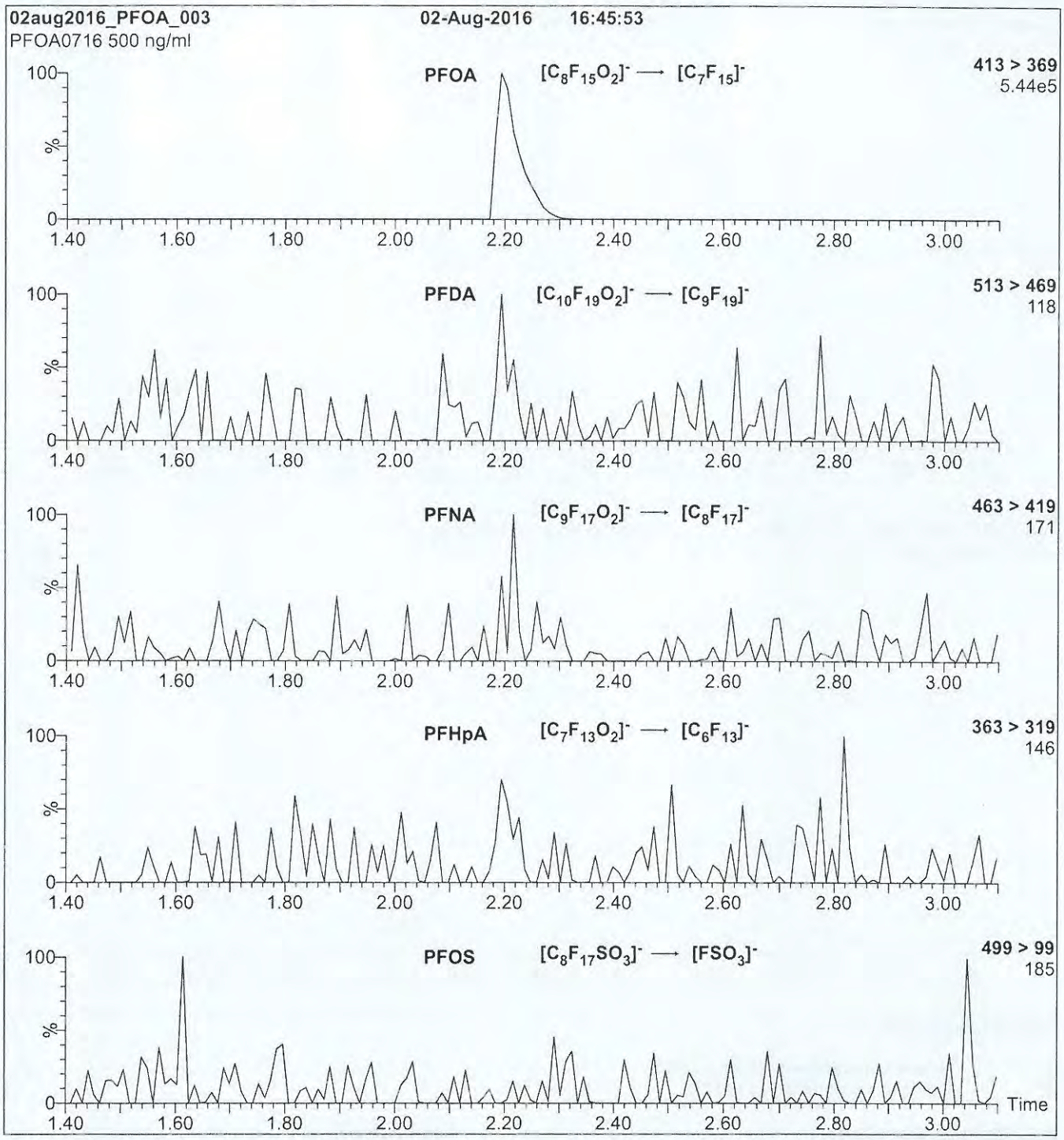
Flow: 300 µl/min

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

17D2612

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

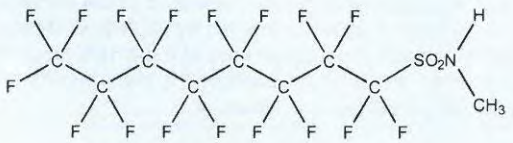
PRODUCT CODE: N-MeFOSA-M

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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17D2613

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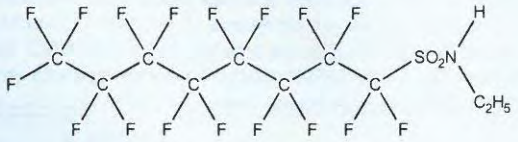
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSA-M
COMPOUND: N-ethylperfluoro-1-octanesulfonamide

LOT NUMBER: NEtFOSA0516M

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: B.G. Chittim **Date:** 05/27/2016 (mm/dd/yyyy)

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17D2614

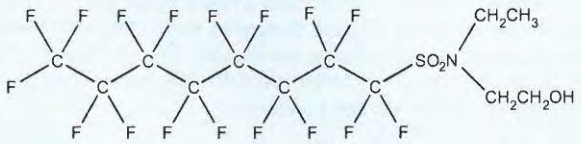
WELLINGTON LABORATORIES

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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 11/11/2015 (mm/dd/yyyy)

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1702616

WELLINGTON LABORATORIES

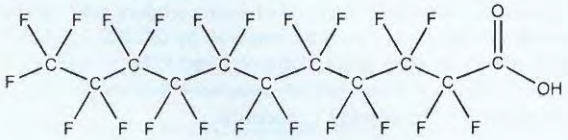
CERTIFICATE OF ANALYSIS DOCUMENTATION

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

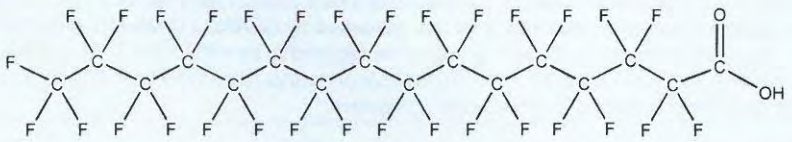
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFHxDA
COMPOUND: Perfluoro-n-hexadecanoic acid

LOT NUMBER: PFHxDA0516

STRUCTURE:

CAS #: 67905-19-5



MOLECULAR FORMULA: $C_{16}HF_{31}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 814.13
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)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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1702618

WELLINGTON LABORATORIES

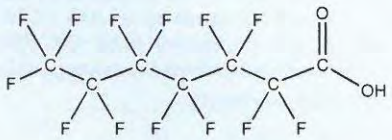
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFHpA
COMPOUND: Perfluoro-n-heptanoic acid

LOT NUMBER: PFHpA1216

STRUCTURE:

CAS #: 375-85-9



MOLECULAR FORMULA: $C_7HF_{13}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 364.06
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)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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17D2621

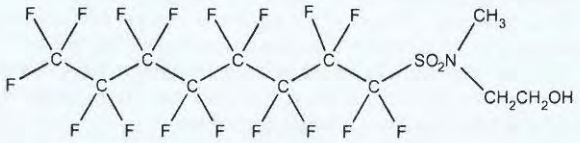
WELLINGTON LABORATORIES

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)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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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

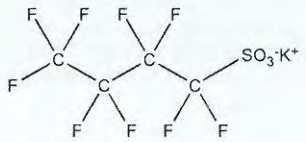
17C1027

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)

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:

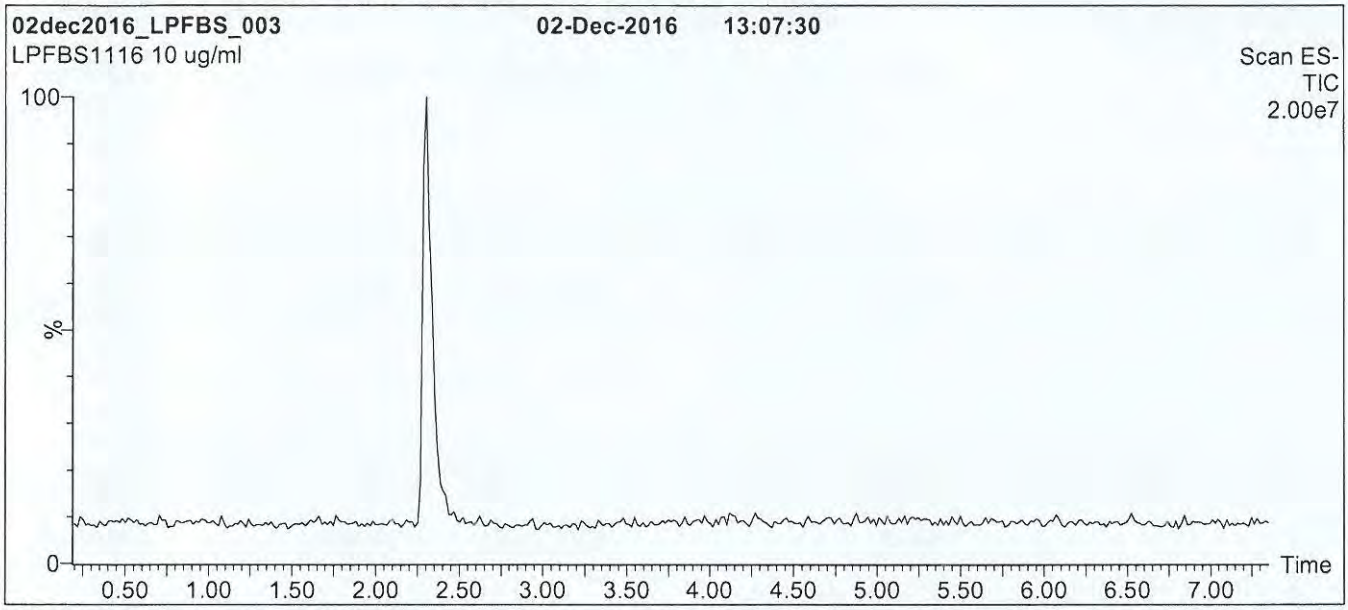
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

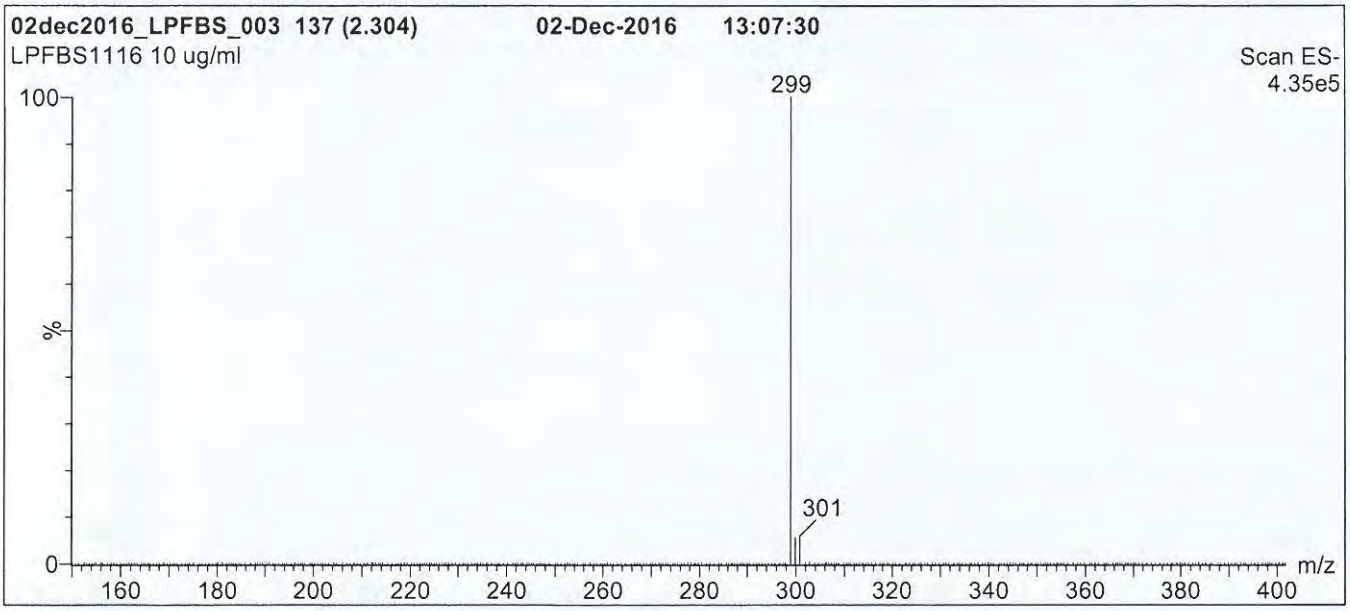
CALA

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: **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

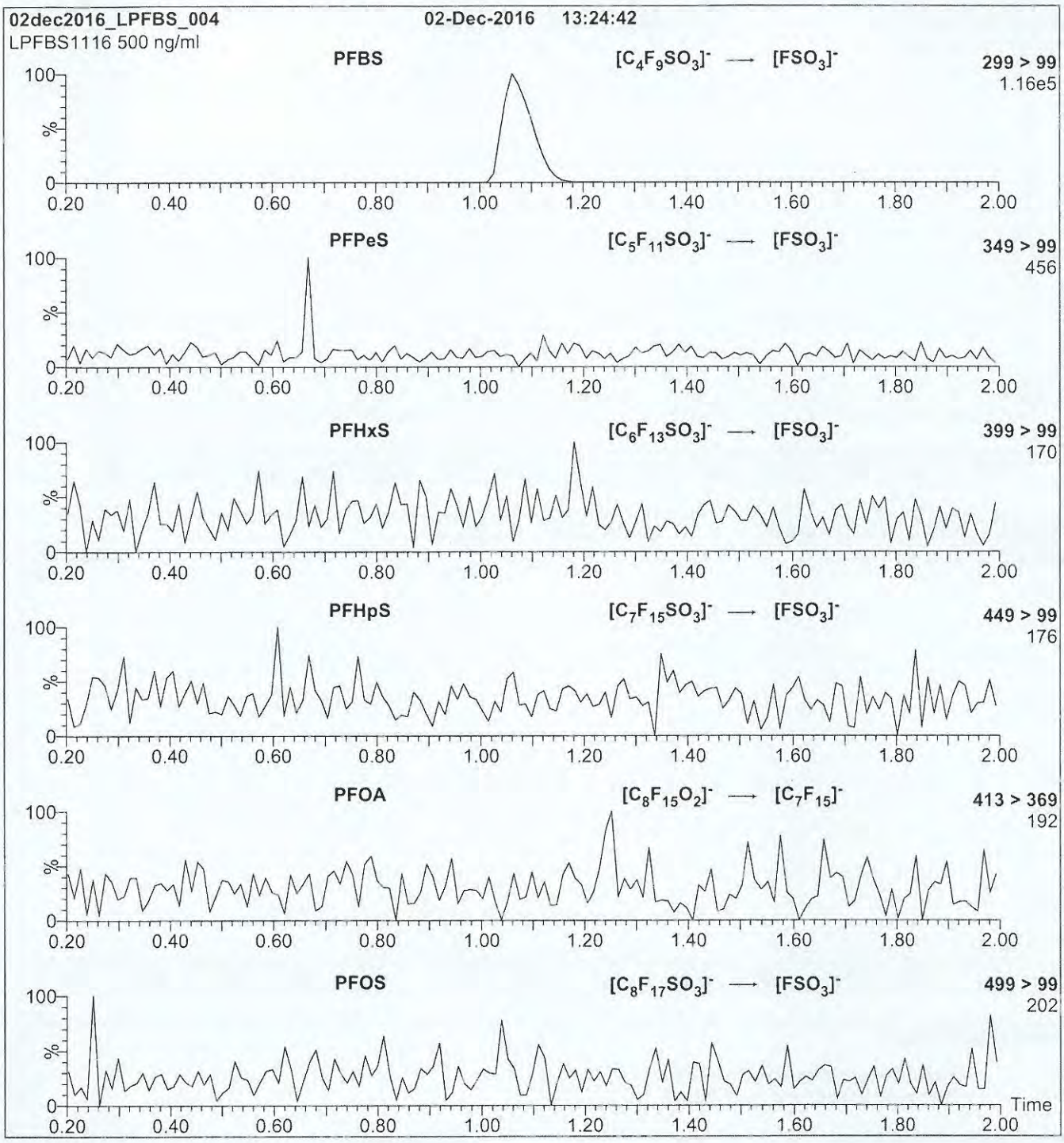
Flow: 300 µl/min

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

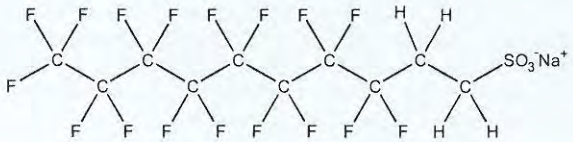
CERTIFICATE OF ANALYSIS DOCUMENTATION

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.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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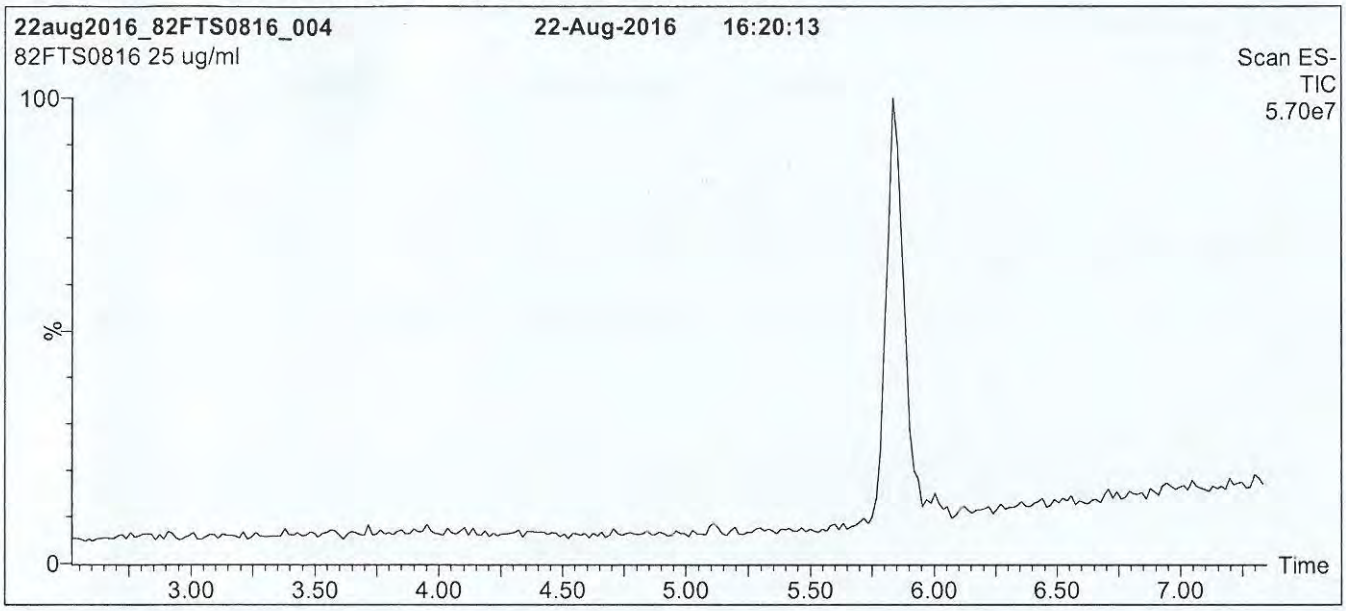
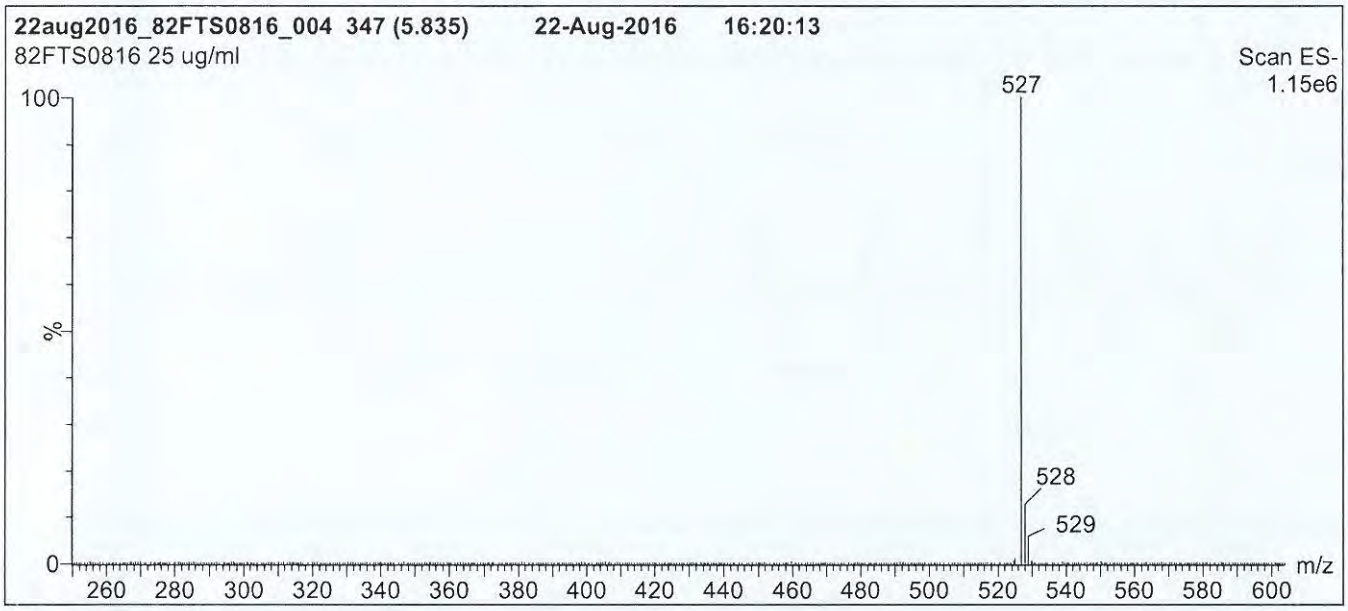
CALA Testing

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

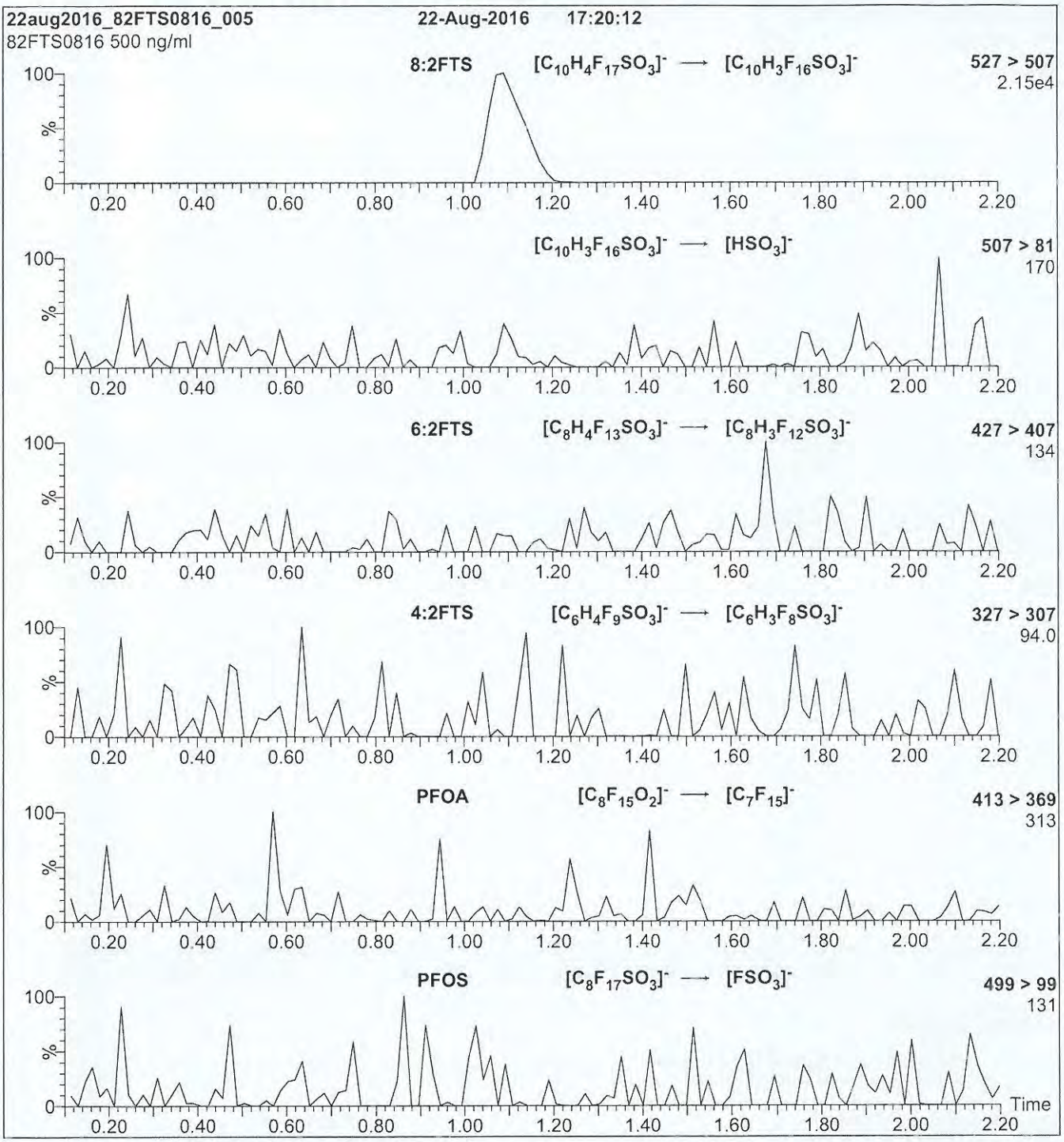
Flow: 300 µl/min

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

17D2622

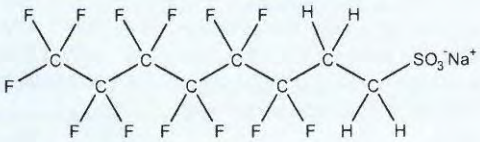
WELLINGTON LABORATORIES

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
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Analytical Standard Record

Vista Analytical Laboratory

17D2716

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
16DI4I2	L.P5DS	I4.Apr.16	88 : endor 88	16.5eb.II	1I.FTn.16 2*V3 by AEW	270

DescriptionV	L.P5DS anion DvL	ExpiresV	I6.Apr.1N
Standard OypeV	u tger	PreparedV	I6.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*V3 by AEW

Analyte	CAS Number	Concentration	Units
Ootal P5DS		I0	TJ/mL
P5DS	--0.66.-	I0	TJ/mL
L.P5DS		I0	TJ/mL

17D2620

WELLINGTON LABORATORIES

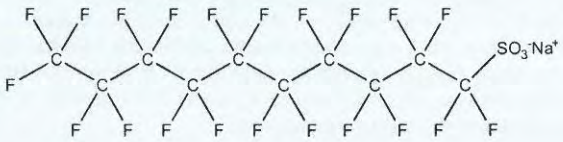
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFDS
COMPOUND: Sodium perfluoro-1-decanesulfonate

LOT NUMBER: LPFDS0217

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:

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

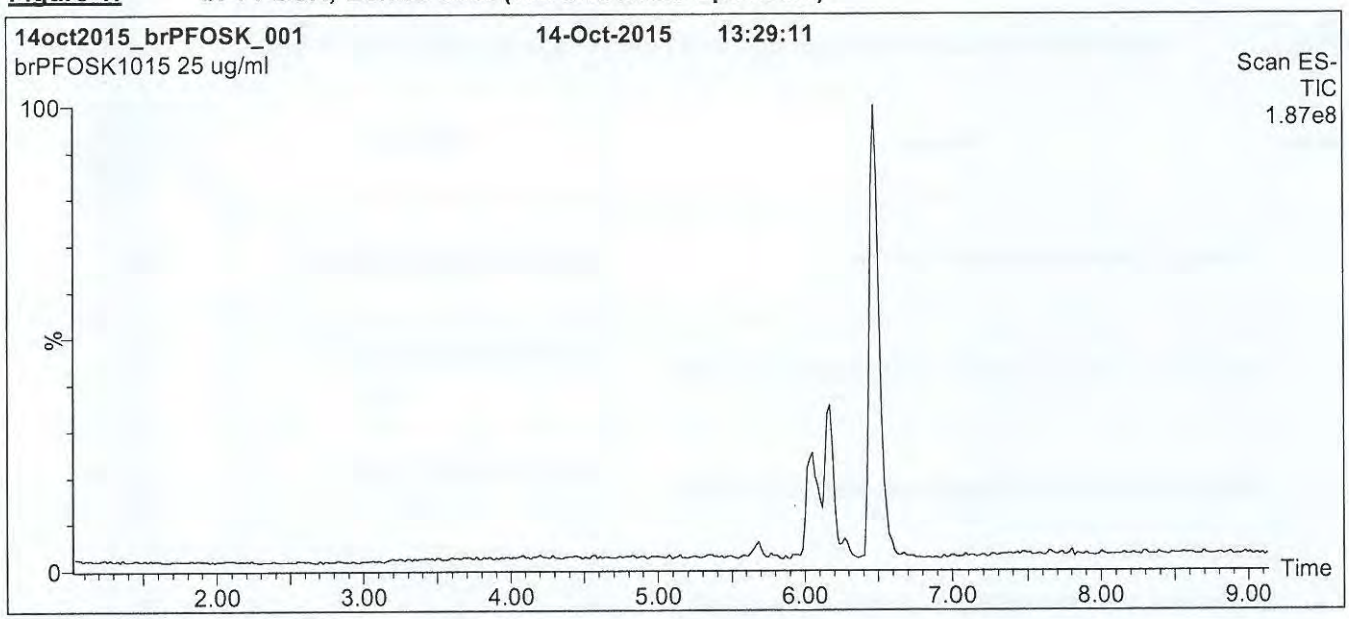
Table A: **br-PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

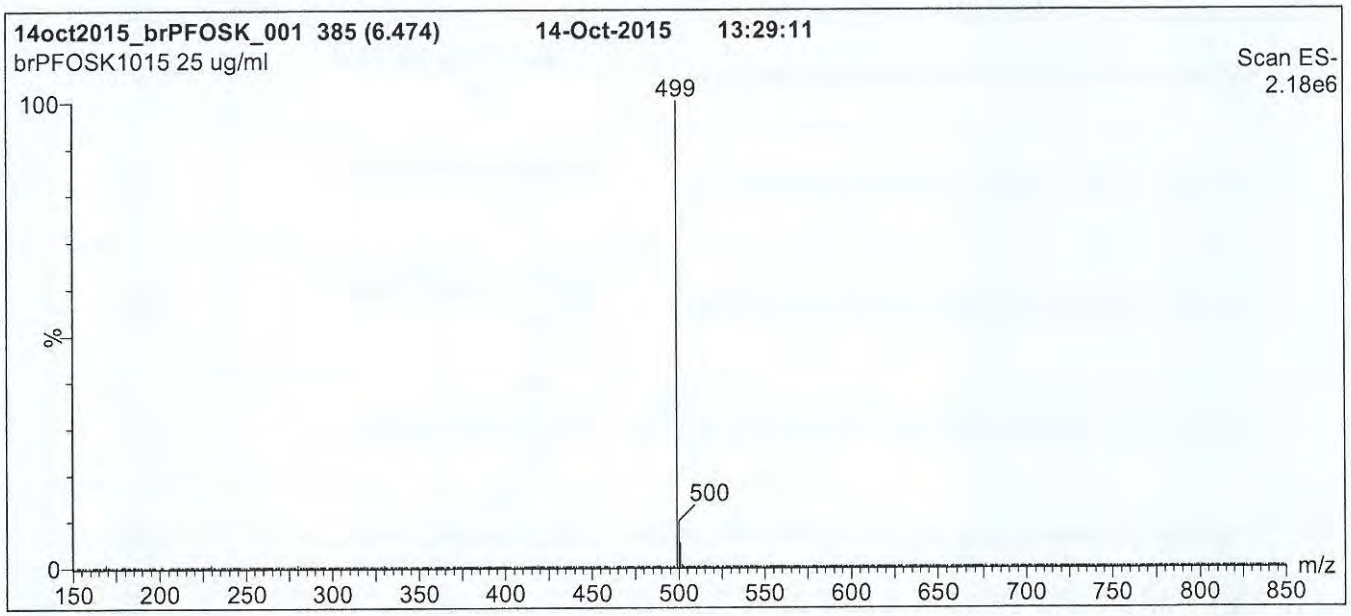
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8
2	Potassium 1-trifluoromethylperfluoroheptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	1.2
3	Potassium 2-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	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	$CF_3-C(CF_3)_2CF_2CF_2CF_2CF_2SO_3^-K^+$	0.2
9	Potassium 4,4-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF_2-C(CF_3)_2-CF_2CF_2CF_2SO_3^-K^+$	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: B.G. Chittim **Date:** 10/15/2015 (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

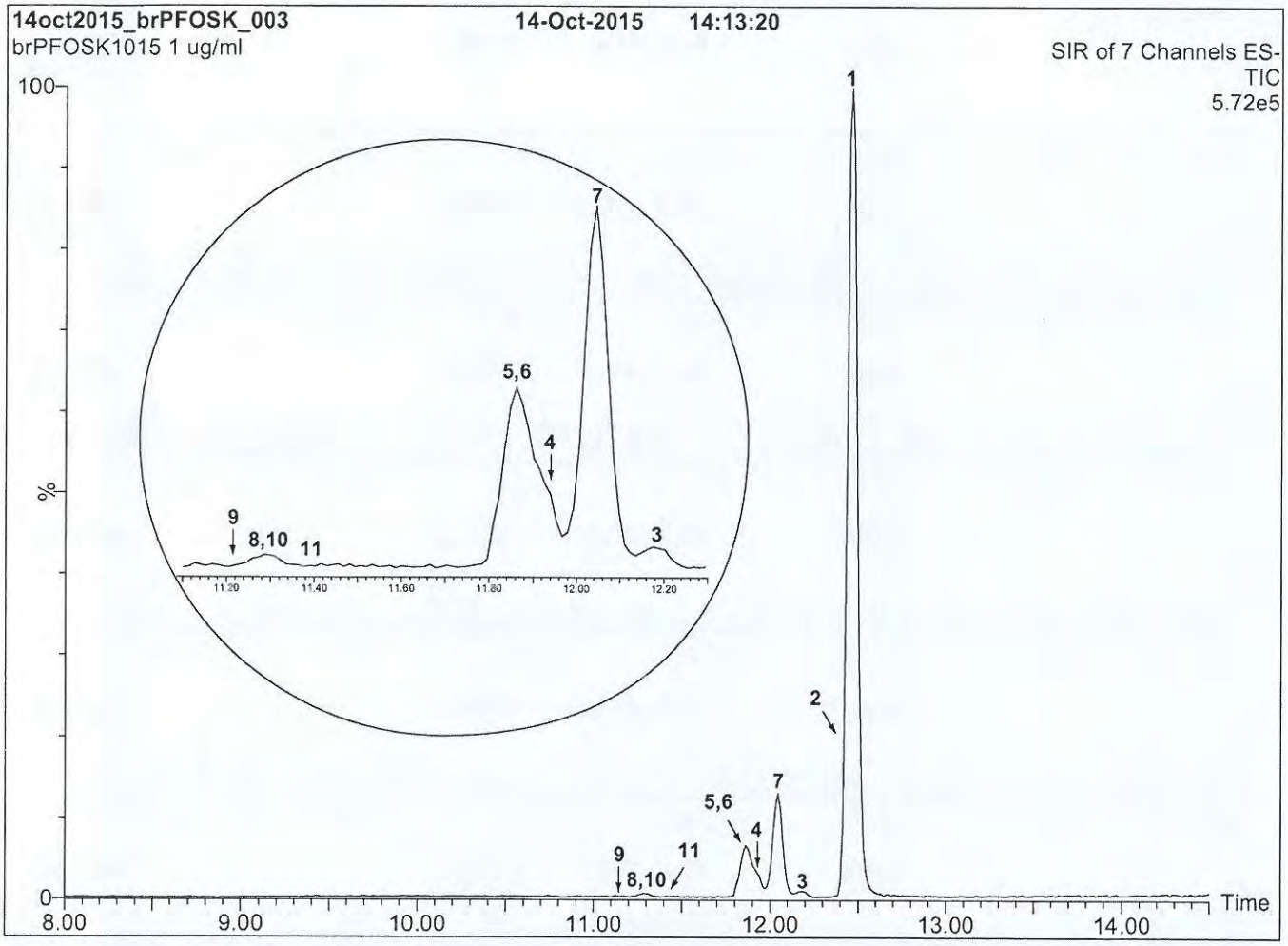
Flow: 300 µl/min

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

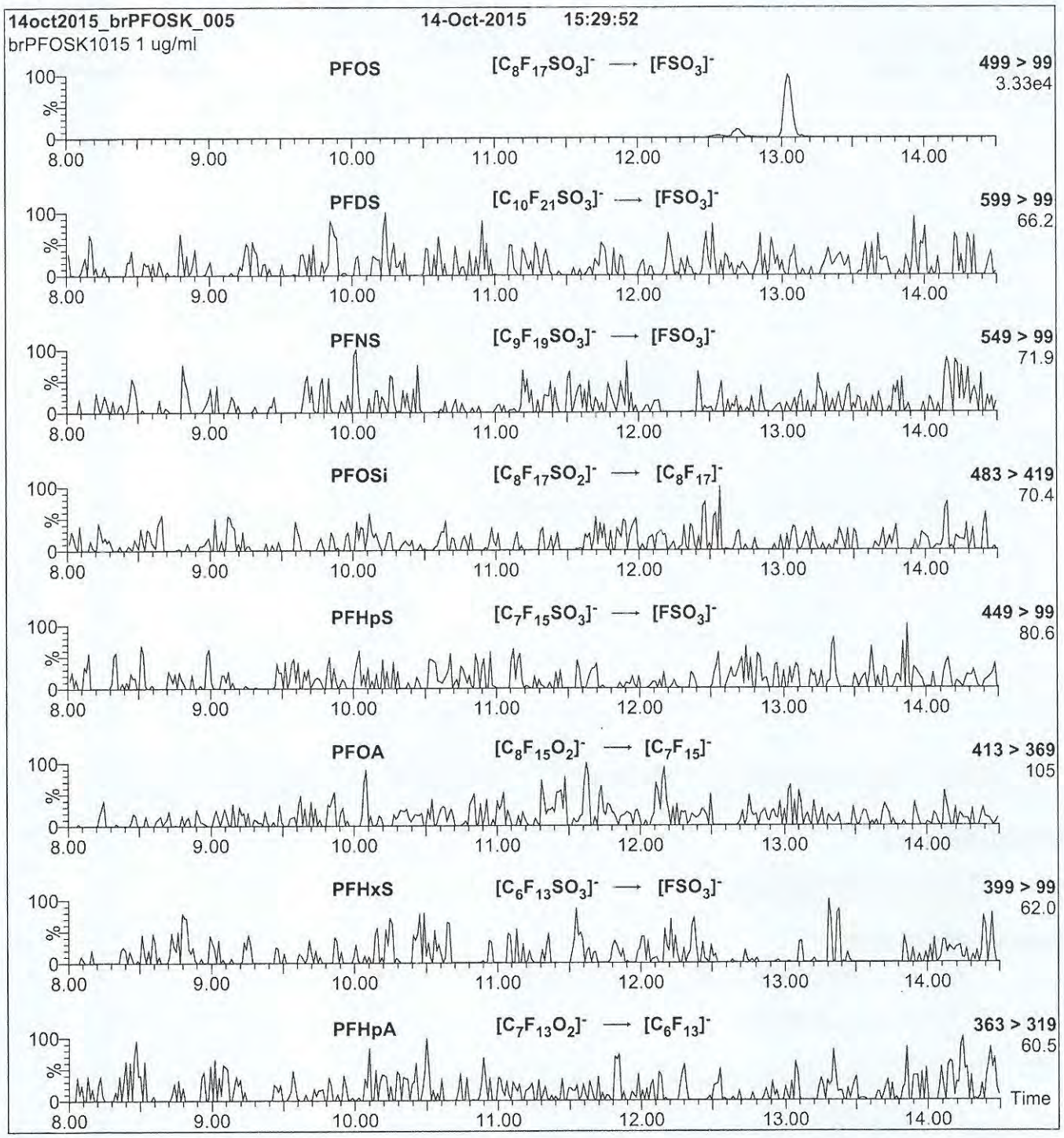
Mobile Phase: Gradient
45% (80:20 MeOH:ACN) / 55% H_2O (both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 15 min and hold for 3 min.
Return to initial conditions over 1 min.
Time: 20 min

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	J0bWprb16	KK*endor KK	3hbVanbJJ	1JbV7nb16 3: A41 5y WE2	3.4

DescriptionA	BrbP- F xSO anion DCL	ExpiresA	J6bWprb1:
Standard uypeA	Ttver	PreparedA	J6bWprb16
SolI entA	H eT F	Prepared ByA	Gsaac 8 . Vovnson
- inal *ol7me (mls)A	3.91	DepartmentA	LMHS
*ialsA	1	Last EditA	1JbV7nb16 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

17D2615

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

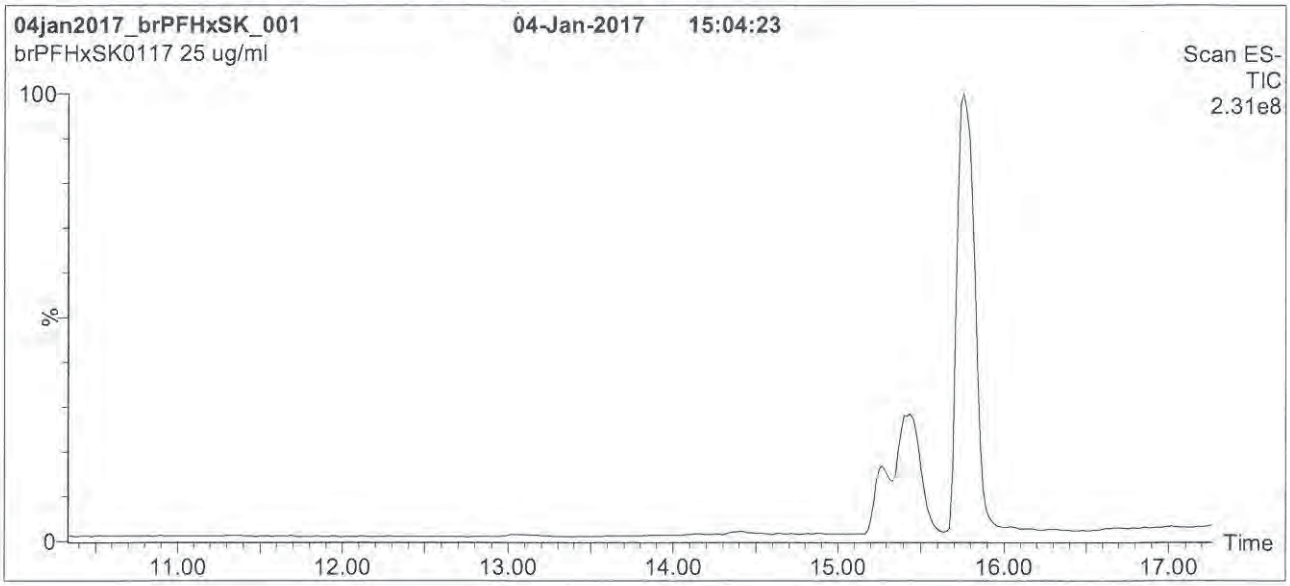
Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

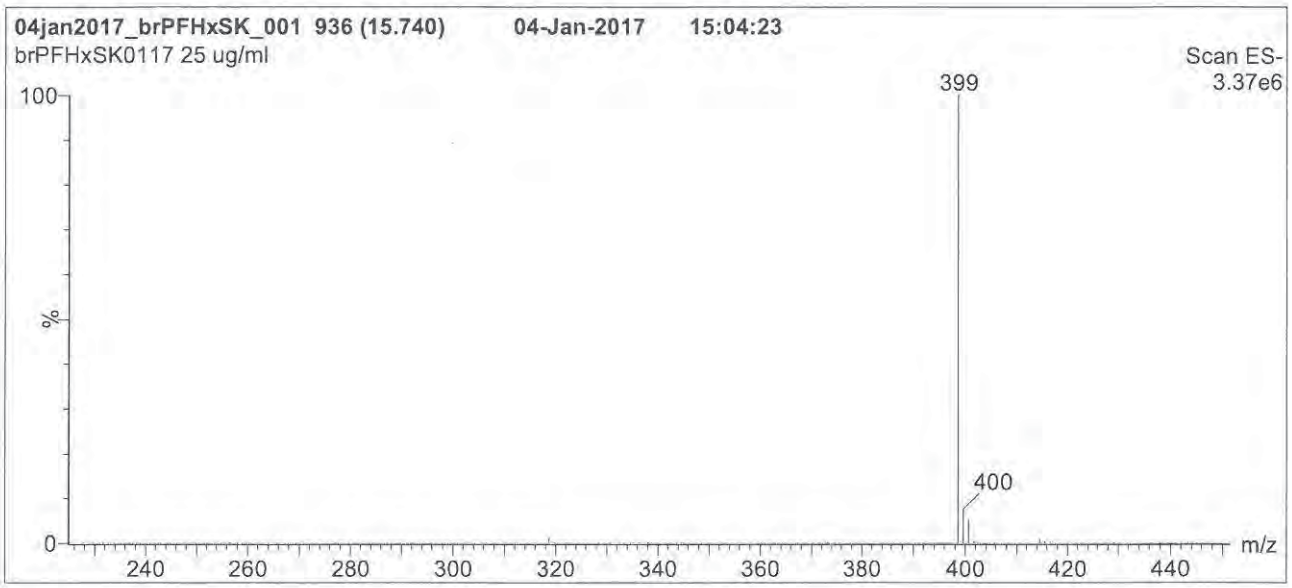
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium 1-trifluoromethylperfluoropentanesulfonate**	$CF_3CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	2.9
3	Potassium 2-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	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	$CF_3C(CF_3)_2CF_2CF_2SO_3^-K^+$	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

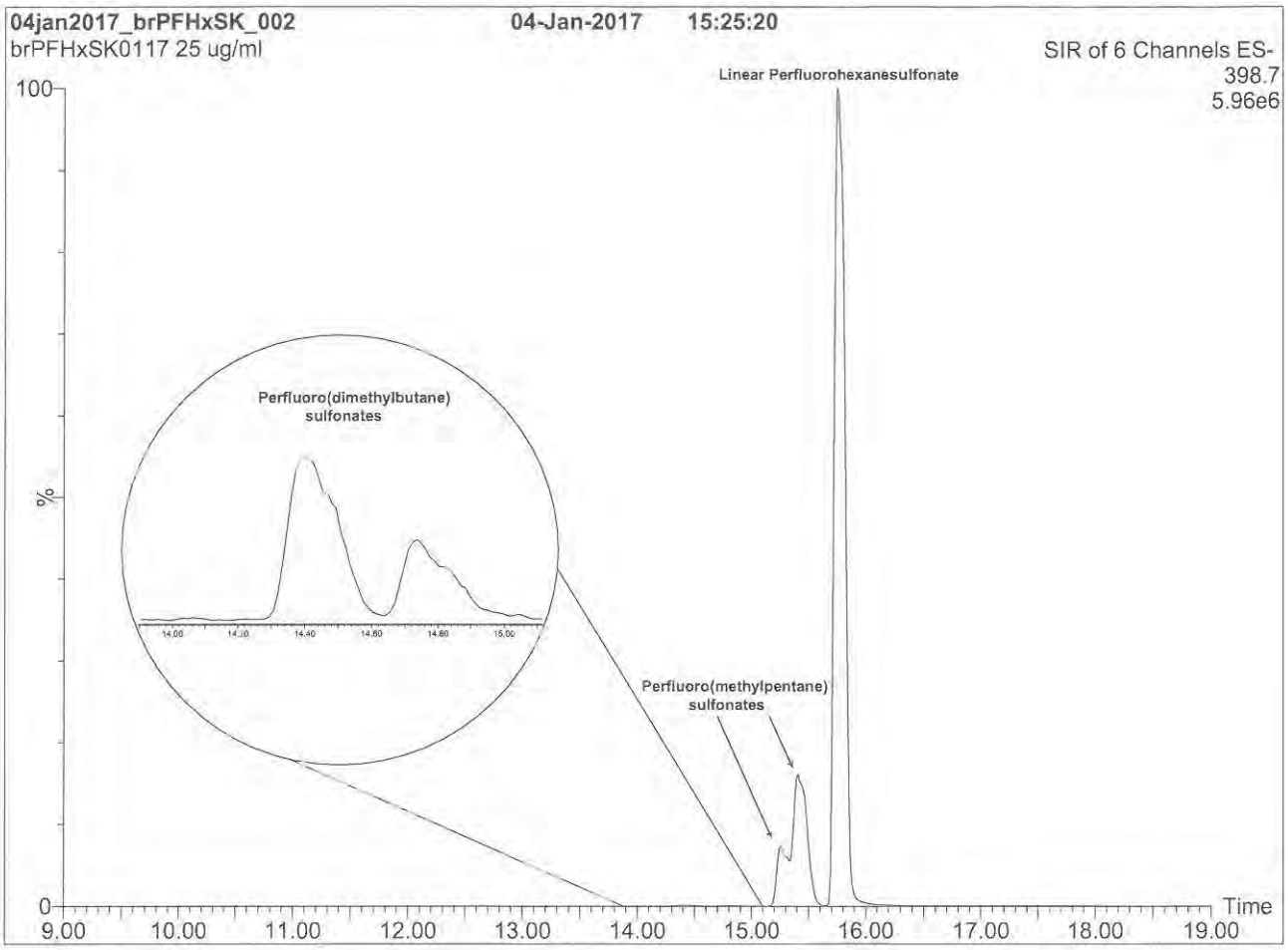
Flow: 300 µl/min

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

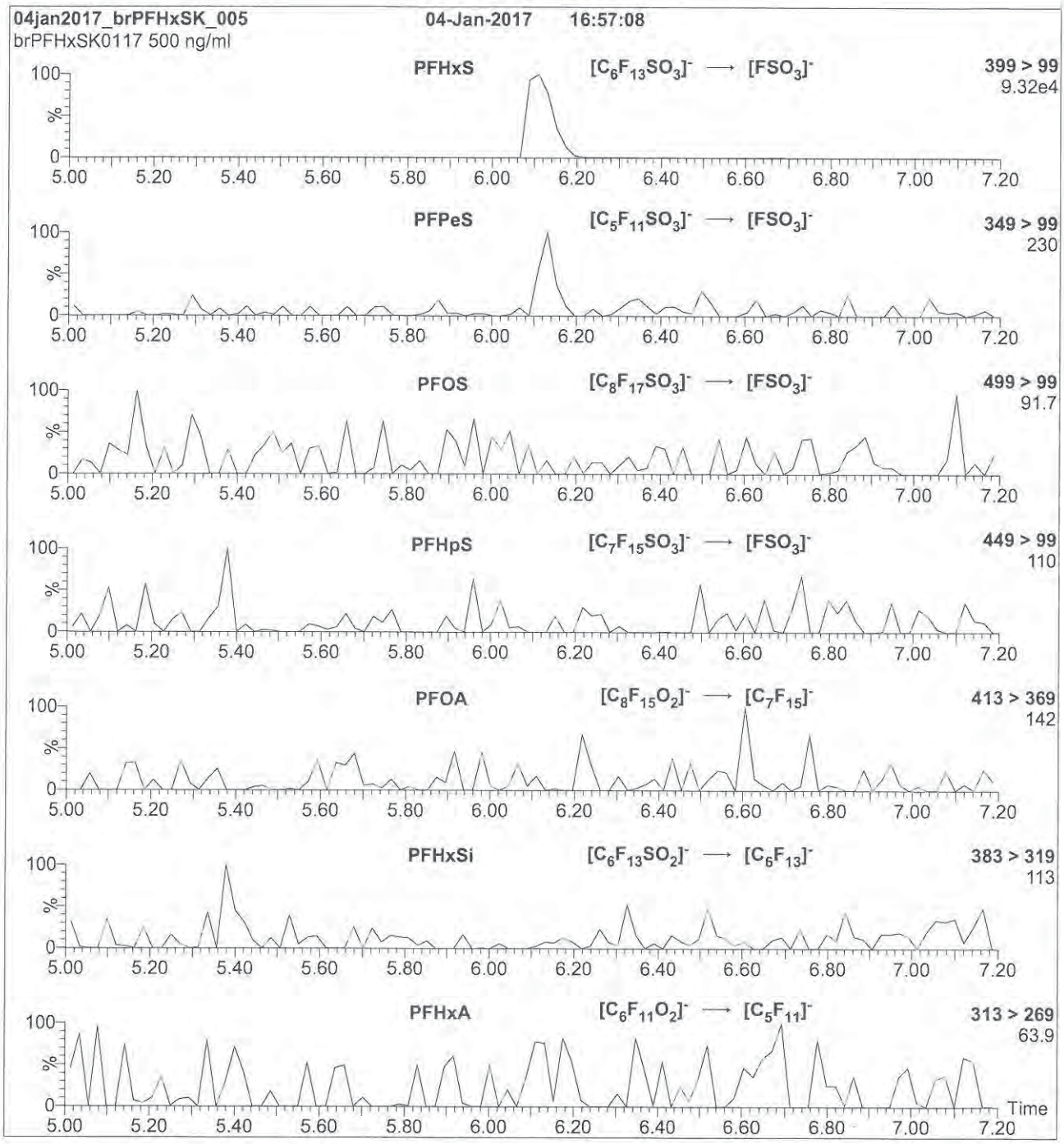
Flow: 300 µl/min

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

WELLINGTON LABORATORIES

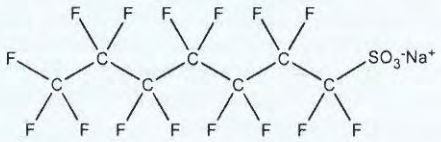
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFHpS
COMPOUND: Sodium perfluoro-1-heptanesulfonate

LOT NUMBER: LPFHpS1016

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

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

17D0605

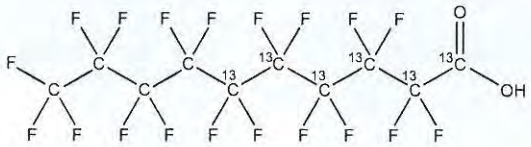
PRODUCT CODE: M6PFDA

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:

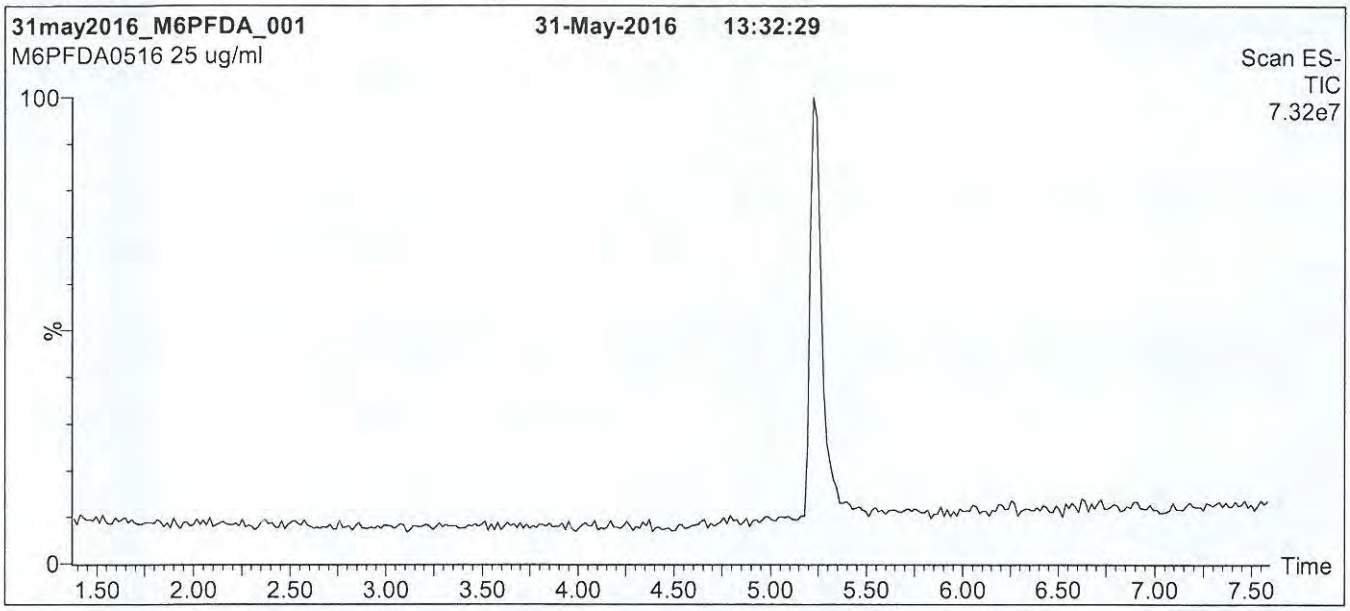
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

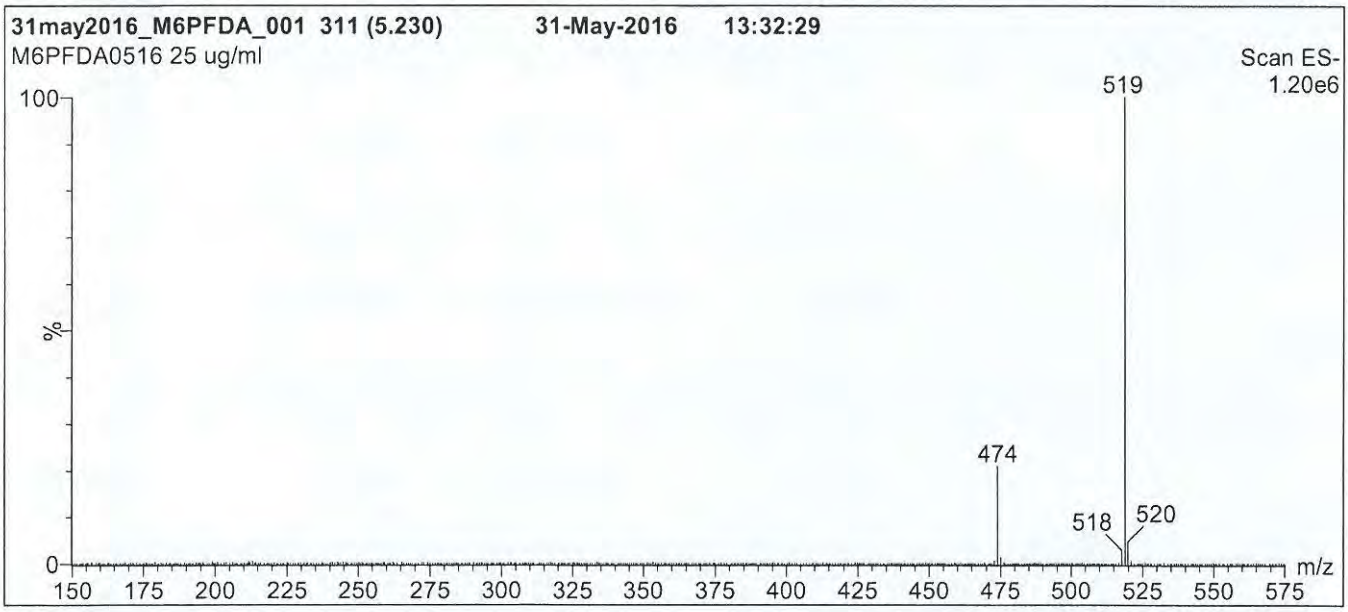
CALA

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

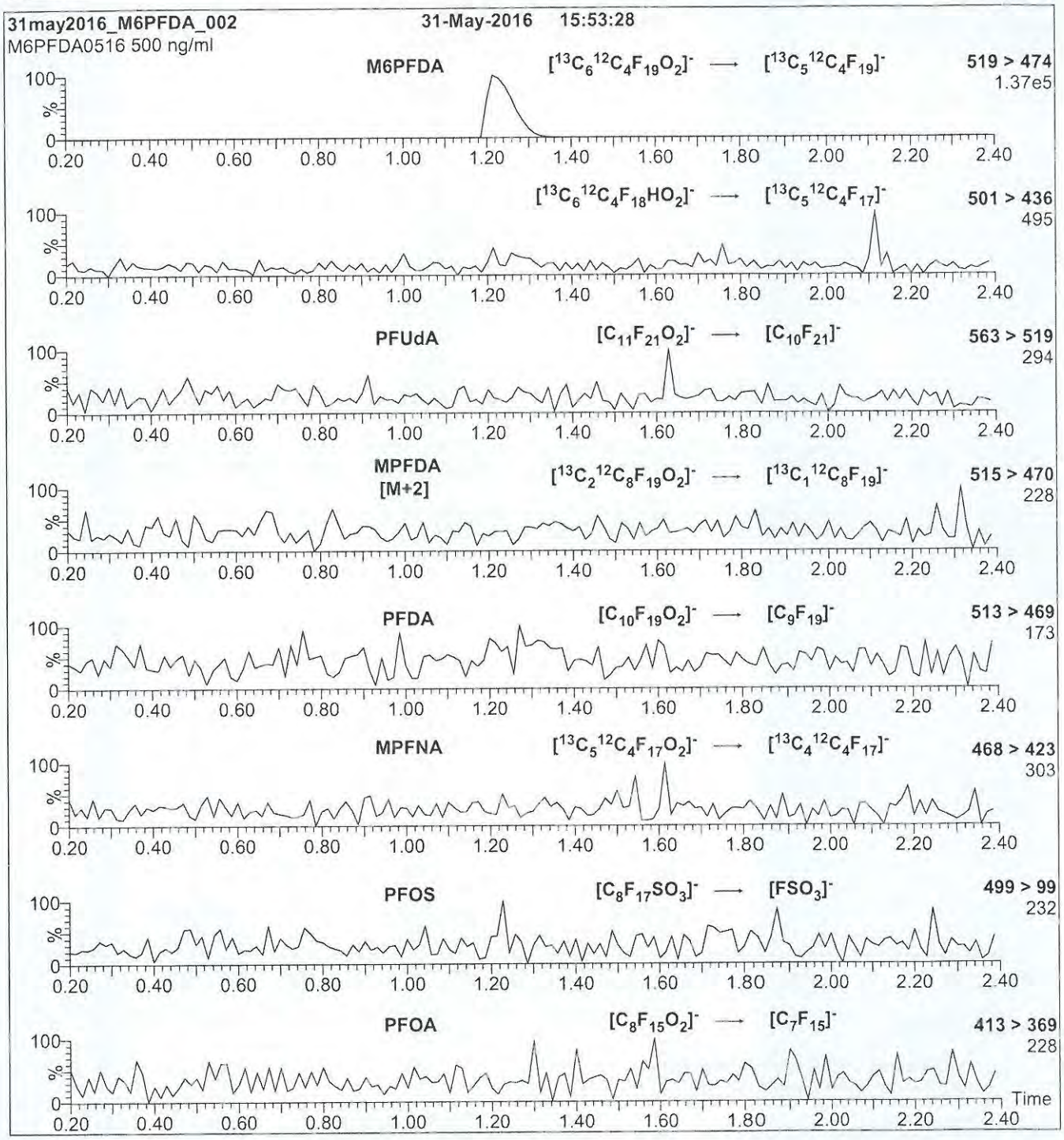
Flow: 300 µl/min

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

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

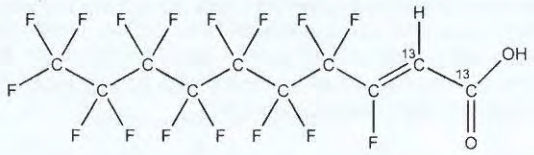
PRODUCT CODE: MFOUEA

LOT NUMBER: MFOUEA0716

COMPOUND: 2H-Perfluoro-[1,2-$^{13}C_2$]-2-decenoic acid

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-$^{13}C_2$)

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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 08/19/2016 (mm/dd/yyyy)

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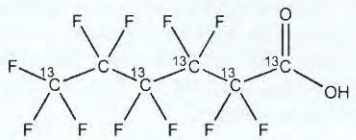
17E2411

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: B.G. Chittim **Date:** 03/31/2015 (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

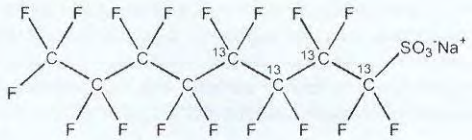
WELLINGTON LABORATORIES

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) **SOLVENT(S):** Methanol

47.8 ± 2.4 µg/ml (MPFOS anion)

CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ^{13}C (1,2,3,4-$^{13}C_4$)

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

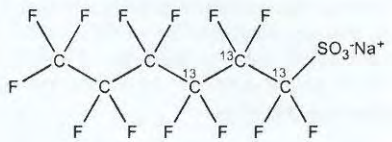
WELLINGTON LABORATORIES

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-$^{13}C_3$)
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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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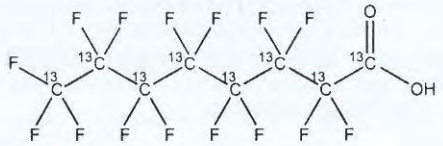
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M8PFOA
COMPOUND: Perfluoro-n-[$^{13}C_8$]octanoic acid

LOT NUMBER: M8PFOA0216

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_8HF_{15}O_2$
CONCENTRATION: 49 ± 2.45 µg/ml

MOLECULAR WEIGHT: 422.01
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 02/24/2016 (mm/dd/yyyy)

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17F3035

WELLINGTON LABORATORIES

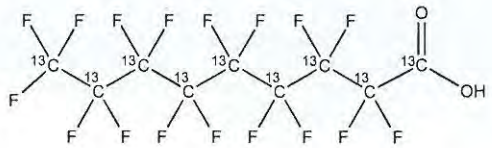
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M9PFNA
COMPOUND: Perfluoro-n-[$^{13}C_9$]nonanoic acid

LOT NUMBER: M9PFNA0814

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_9HF_{17}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 473.01
SOLVENT(S): Methanol, Water (<1%)

CHEMICAL PURITY: >98%
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

ISOTOPIC PURITY: ≥99% ^{13}C ($^{13}C_9$)

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 $x_1, x_2, \ldots x_n$ 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).

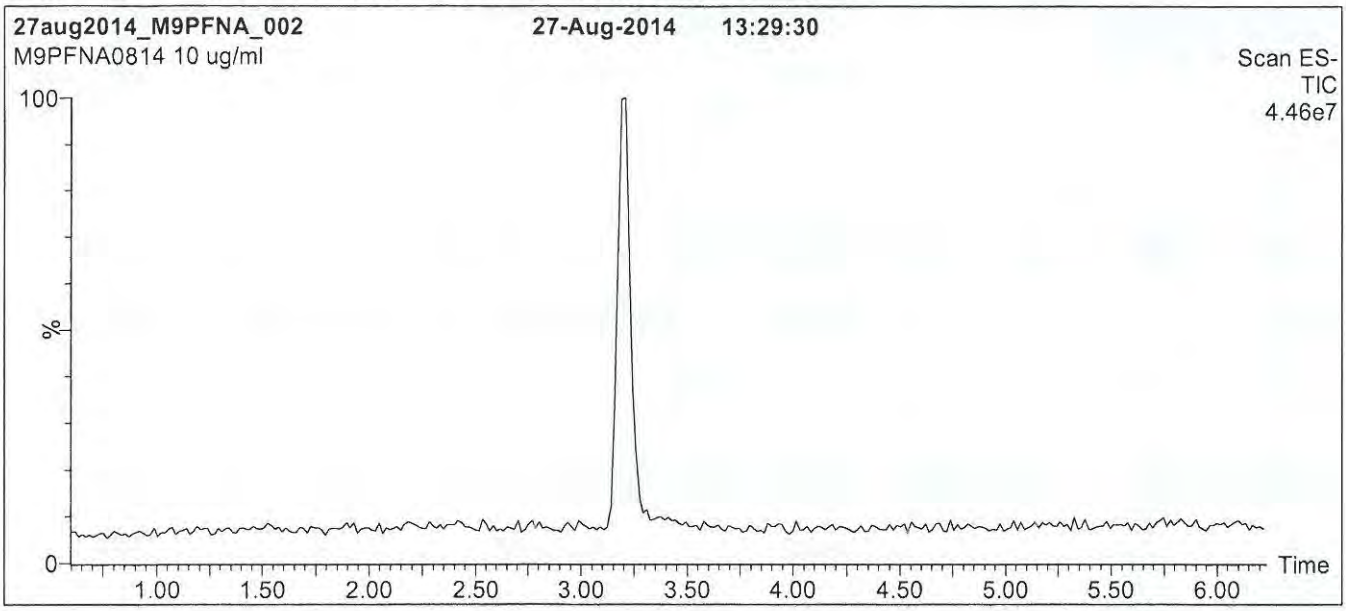
CALA

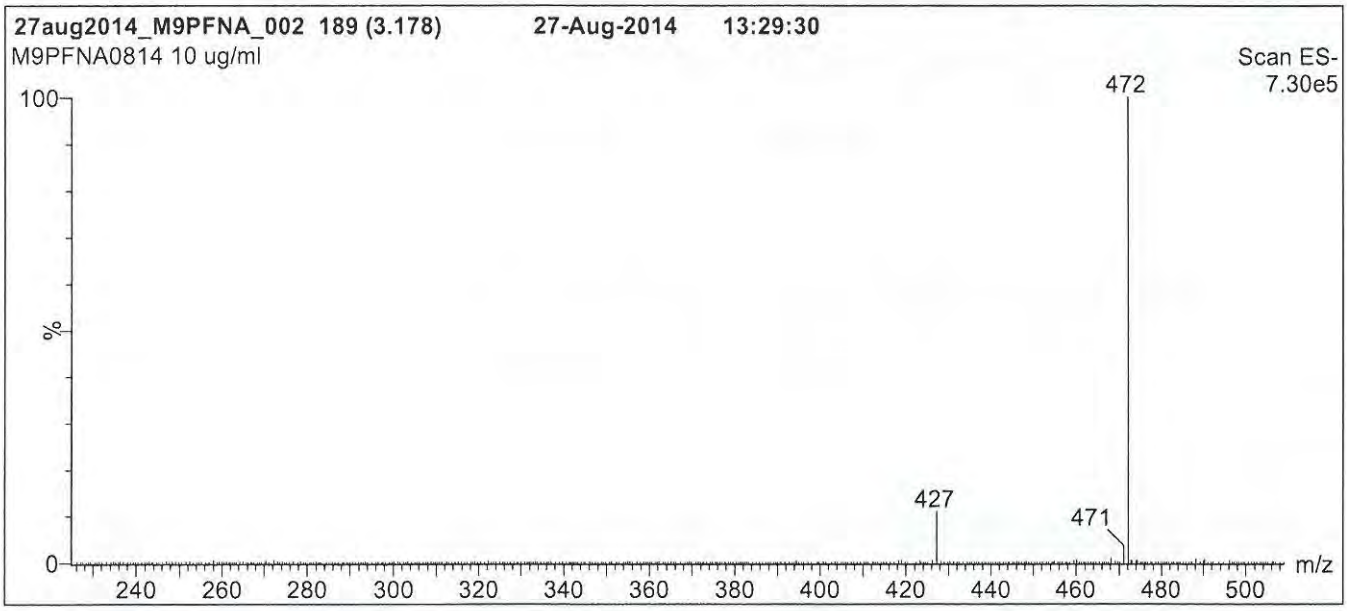
ANAB ACCREDITED

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

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

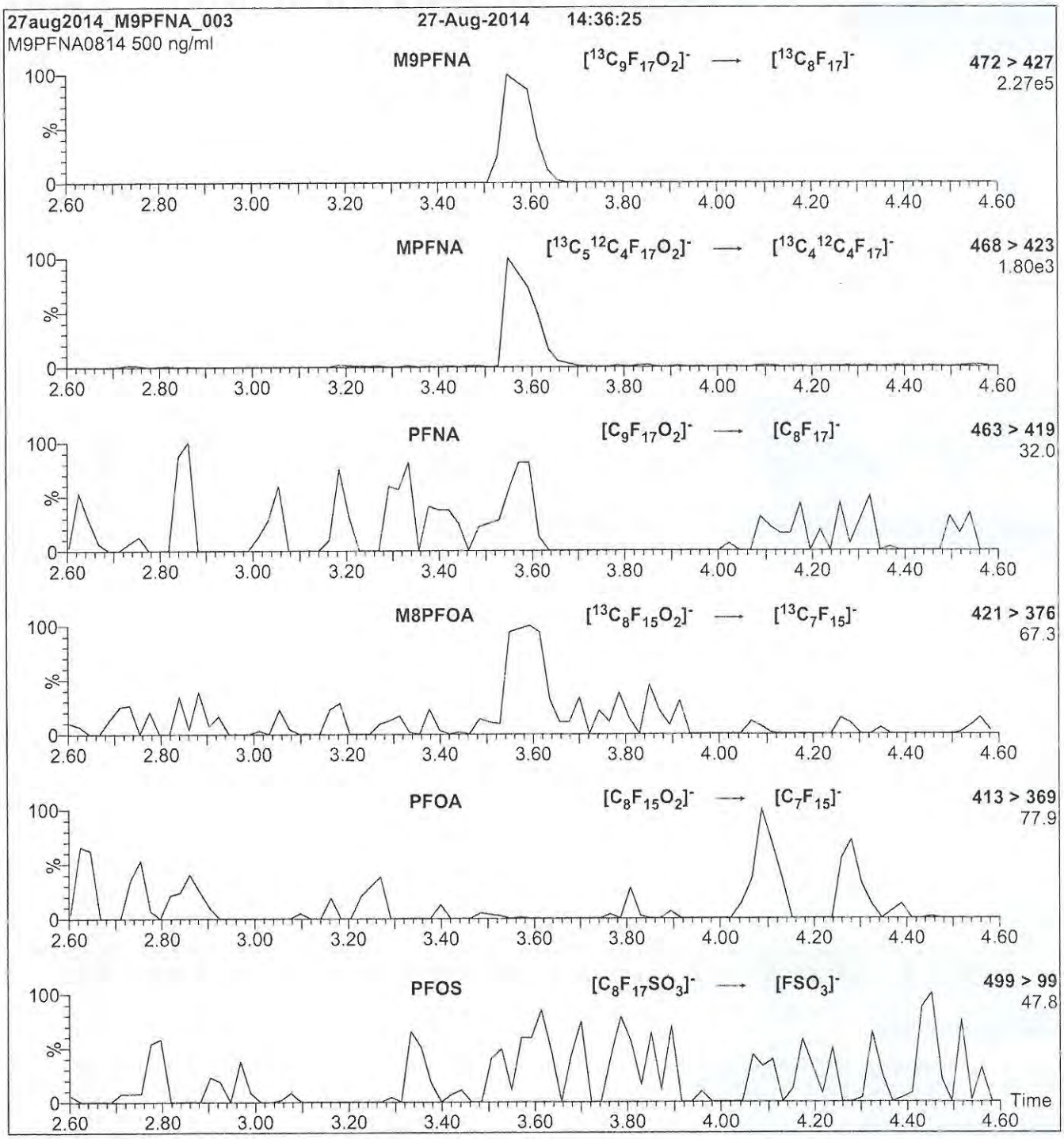
MS Parameters

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

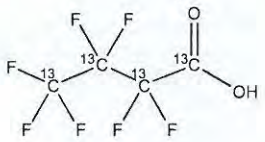
CERTIFICATE OF ANALYSIS DOCUMENTATION

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~~ IN 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).

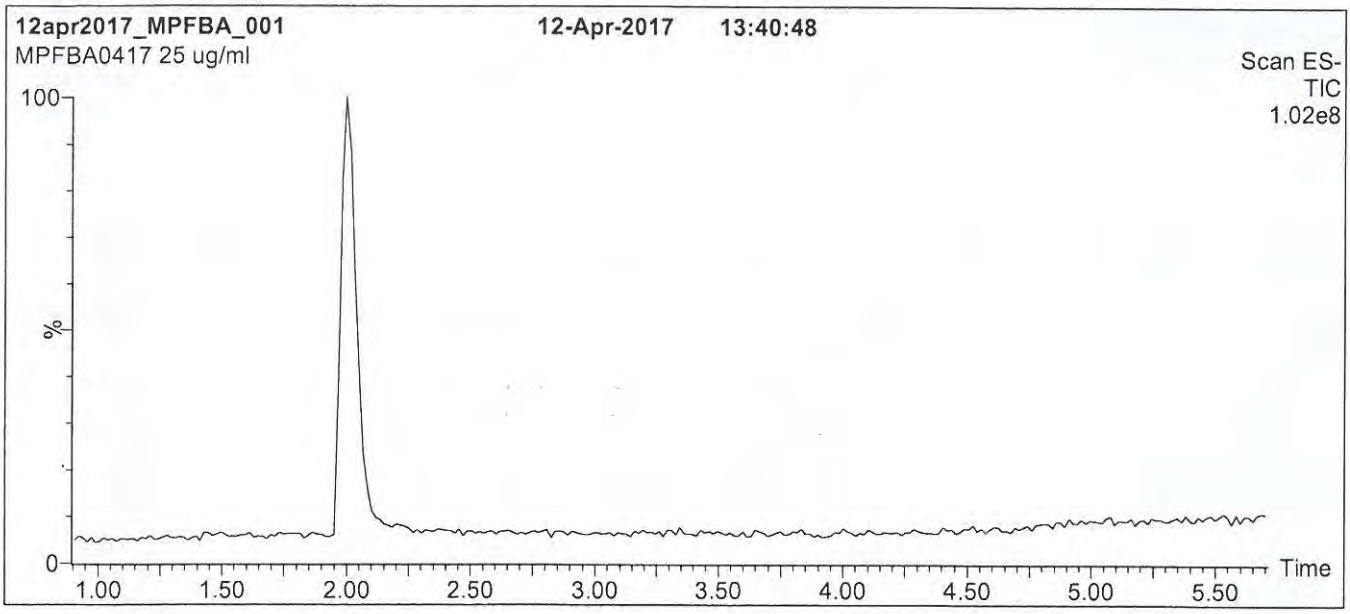
CALA

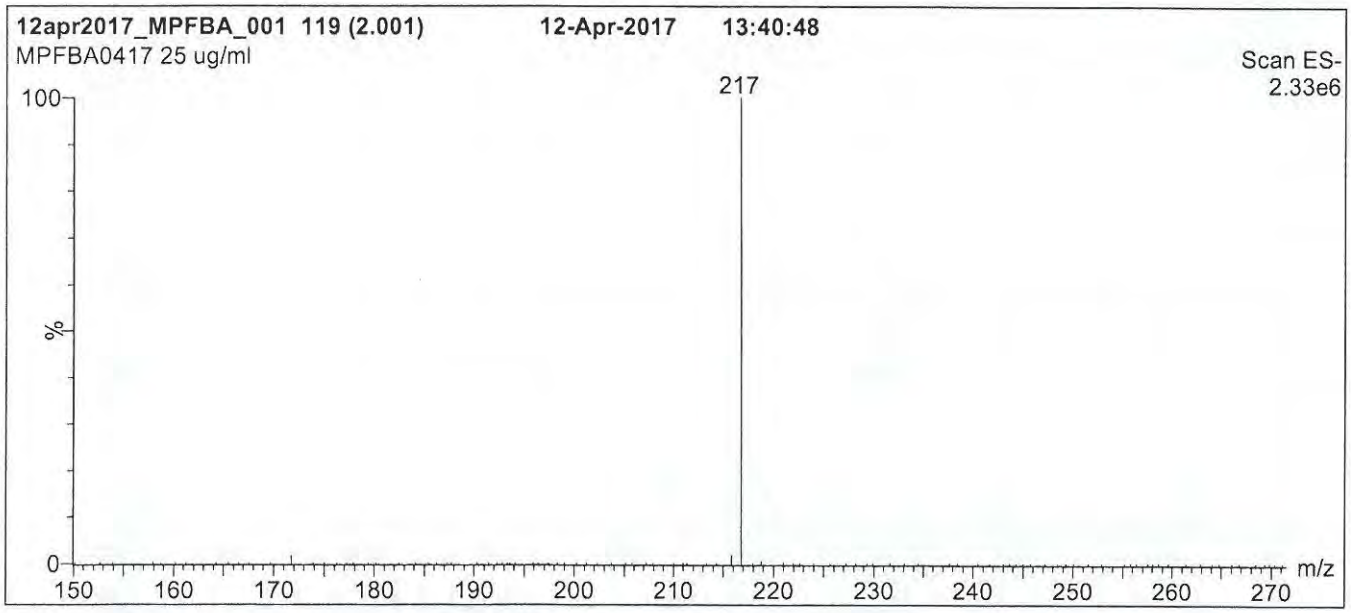
ANAB ACCREDITED

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

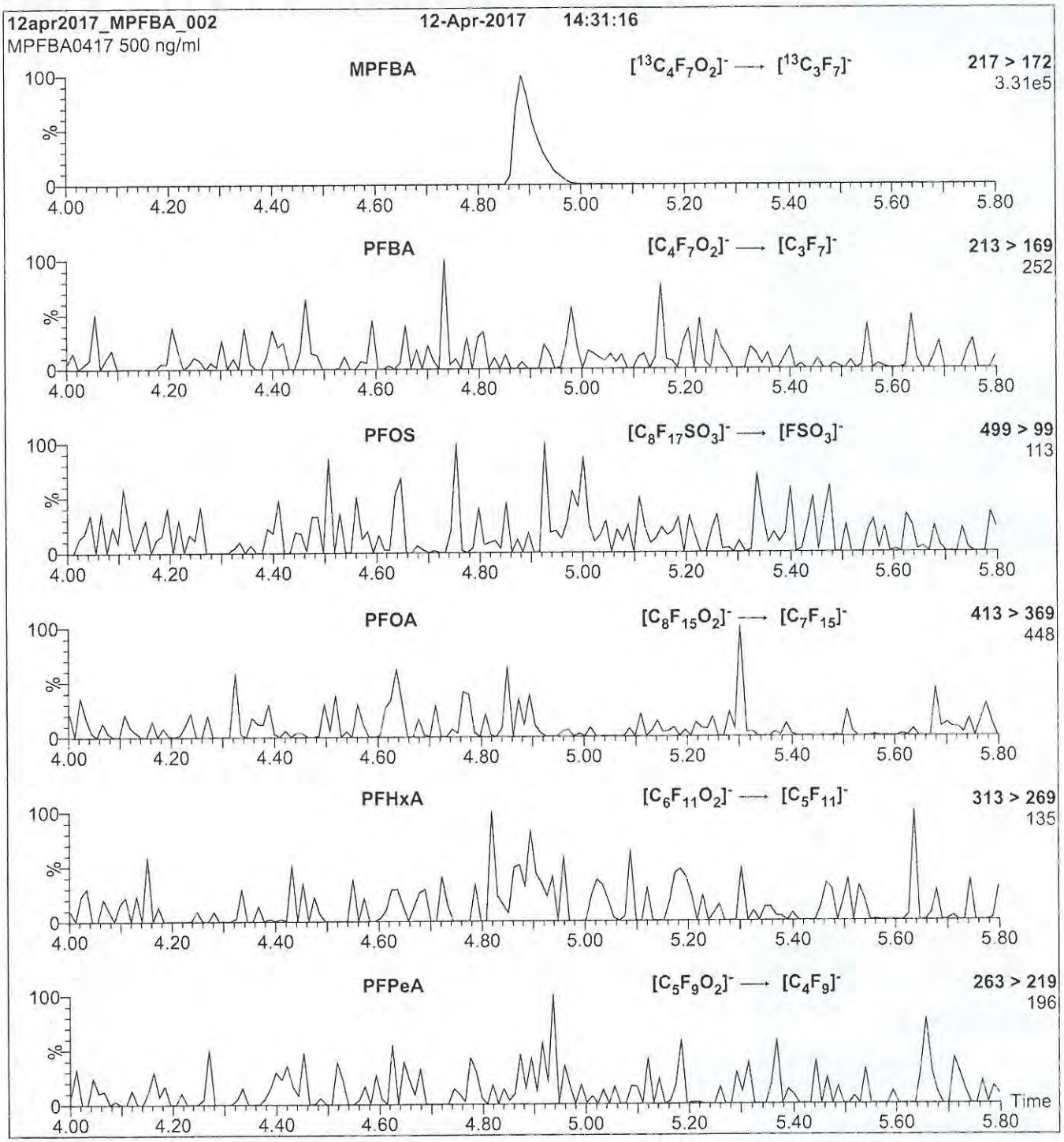
MS Parameters

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

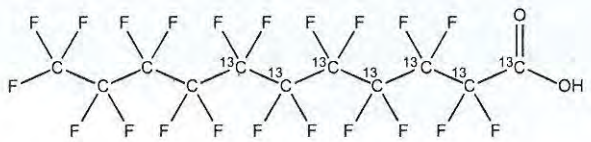
Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 10

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 (1,2,3,4,5,6,7-$^{13}C_7$)
LAST TESTED: (mm/dd/yyyy) 01/22/2016
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.

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:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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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:

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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).

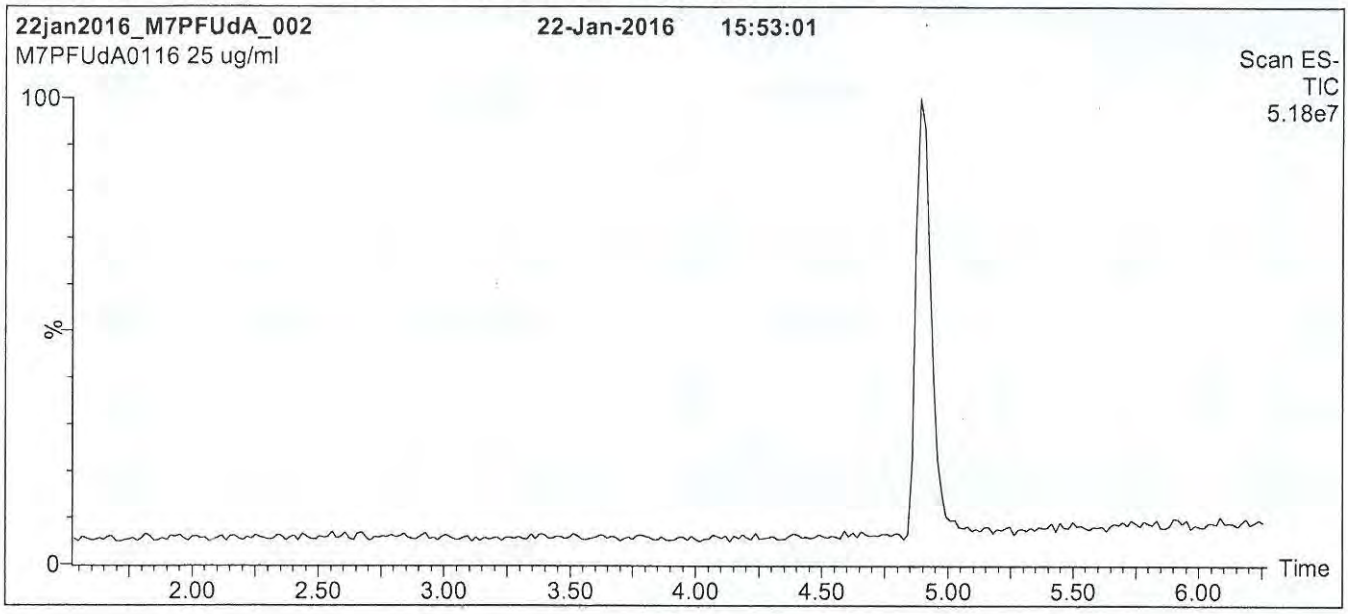
CALA

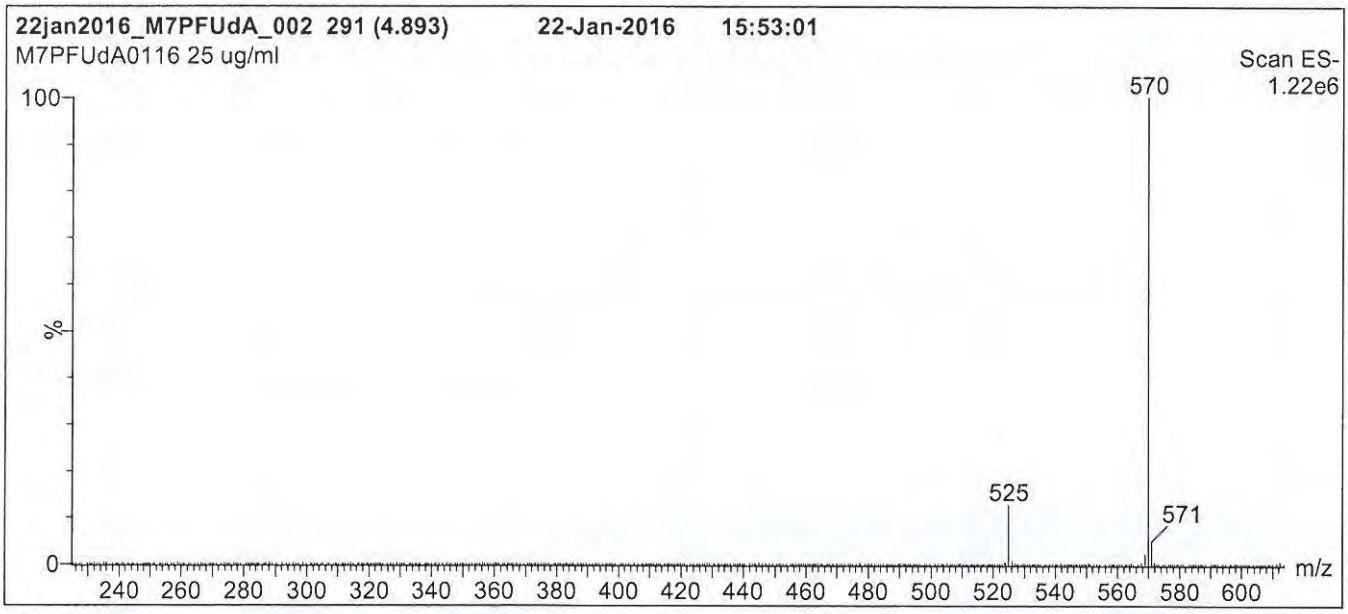
ANAB ACCREDITED

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

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

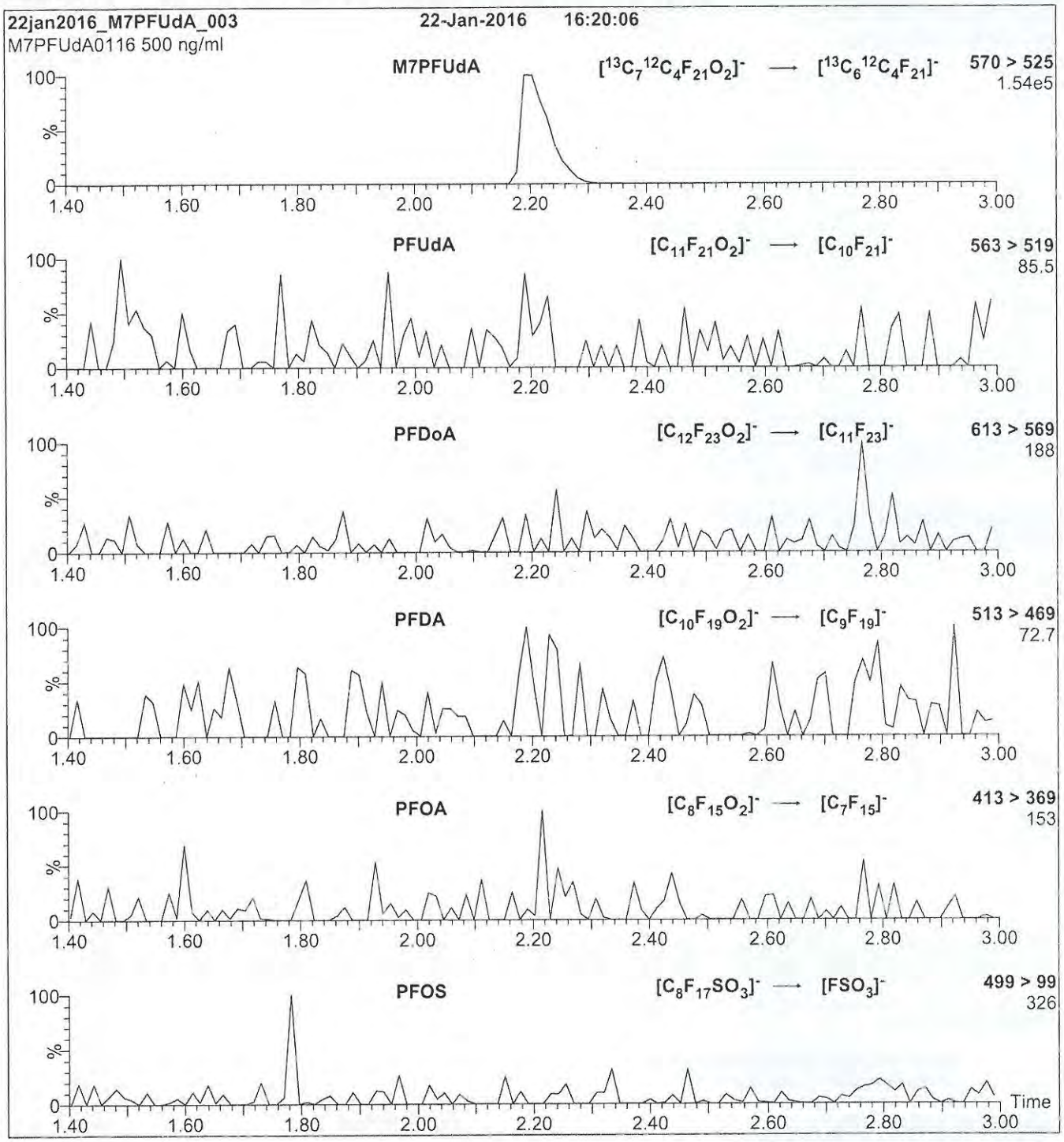
MS Parameters

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

Analytical Standard Record

Vista Analytical Laboratory

17H0108

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
17D0607	13C4-PFOS	06-Apr-17	Jamie C. Stockman	12-Dec-21	06-Apr-17 09:45 by JCS	0.392
17E1717	13C2-FOUEA	17-May-17	** Vendor **	02-Aug-18	17-May-17 12:46 by INJ	0.375
17E2410	13C3-PFHxS	24-May-17	** Vendor **	31-May-21	24-May-17 11:18 by INJ	0.396
17E2411	13C5-PFHxA	24-May-17	** Vendor **	27-Aug-19	24-May-17 11:19 by INJ	0.375
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
17G1207	13C6-PFDA	12-Jul-17	** Vendor **	31-May-21	13-Jul-17 08:41 by INJ	0.375
17G1302	13C8-PFOA	13-Jul-17	** Vendor **	12-Feb-21	13-Jul-17 09:13 by INJ	0.383

Description:	PFC-RS	Expires:	01-Aug-18
Standard Type:	Reagent	Prepared:	01-Aug-17
Solvent:	MeOH	Prepared By:	Isaac N. Johnson
Final Volume (mls):	15	Department:	LCMS
Vials:	1	Last Edit:	01-Aug-17 13:26 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

WELLINGTON LABORATORIES

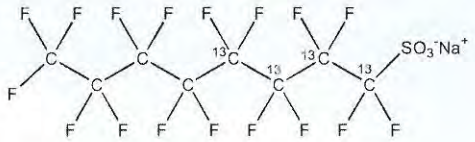
CERTIFICATE OF ANALYSIS DOCUMENTATION

1700407

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-$^{13}C_4$)
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)

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:

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.

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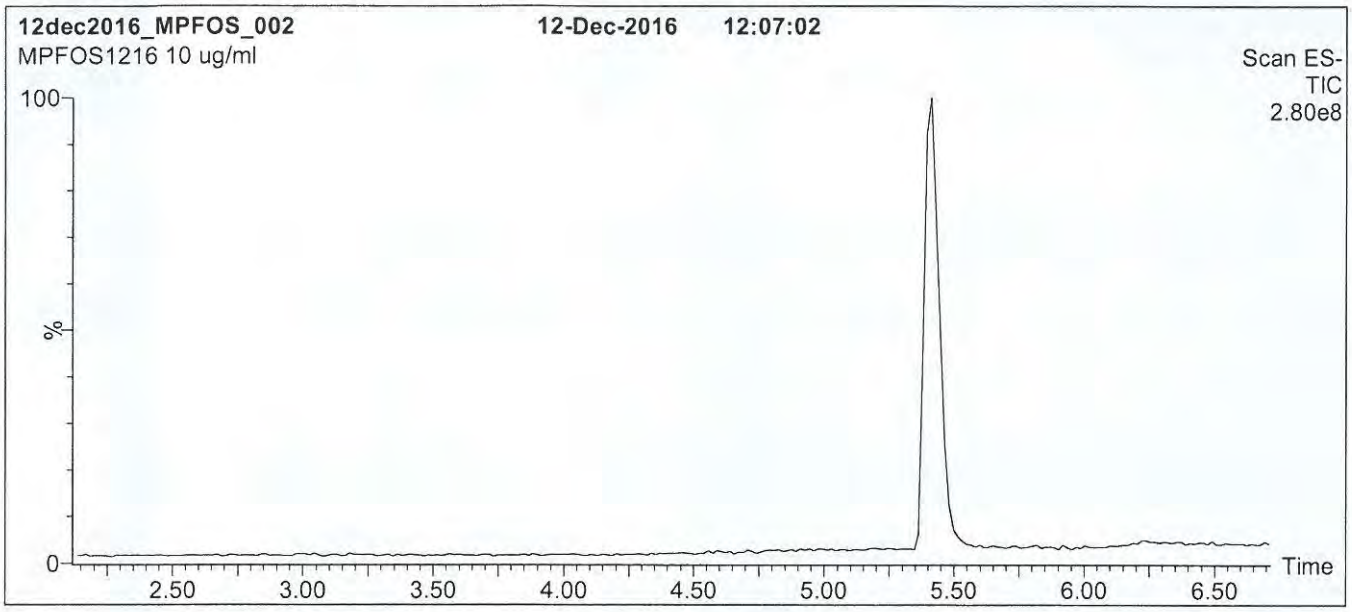
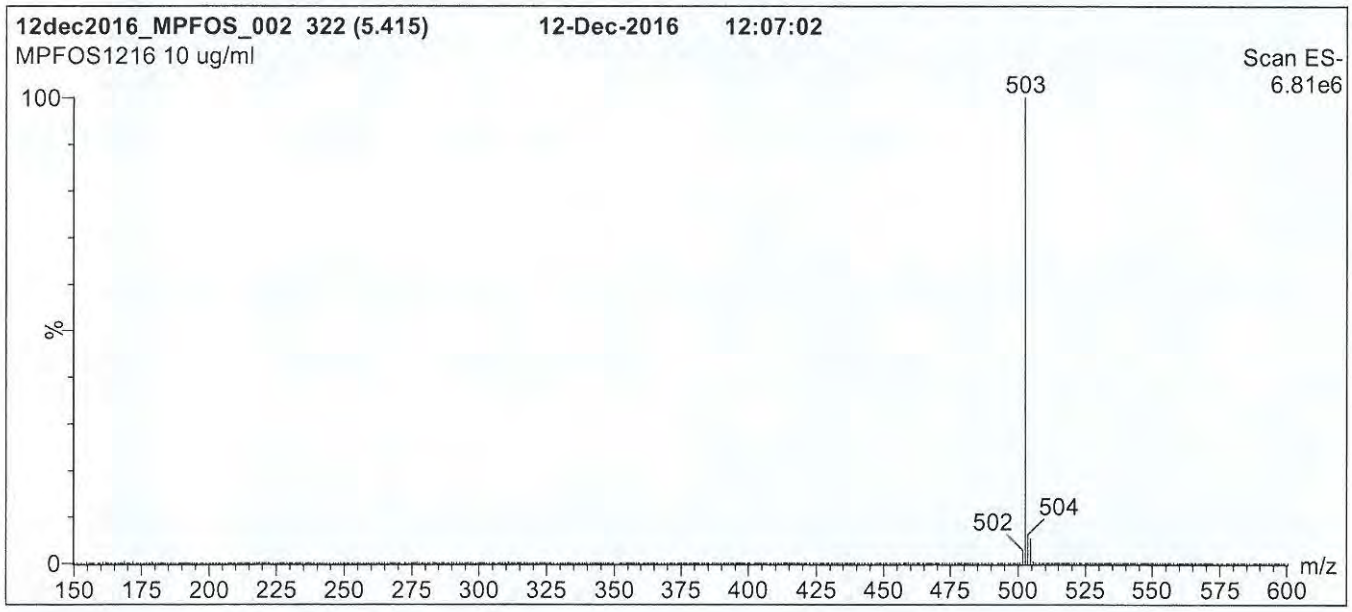
CALA

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

Figure 1: **MPFOS; 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

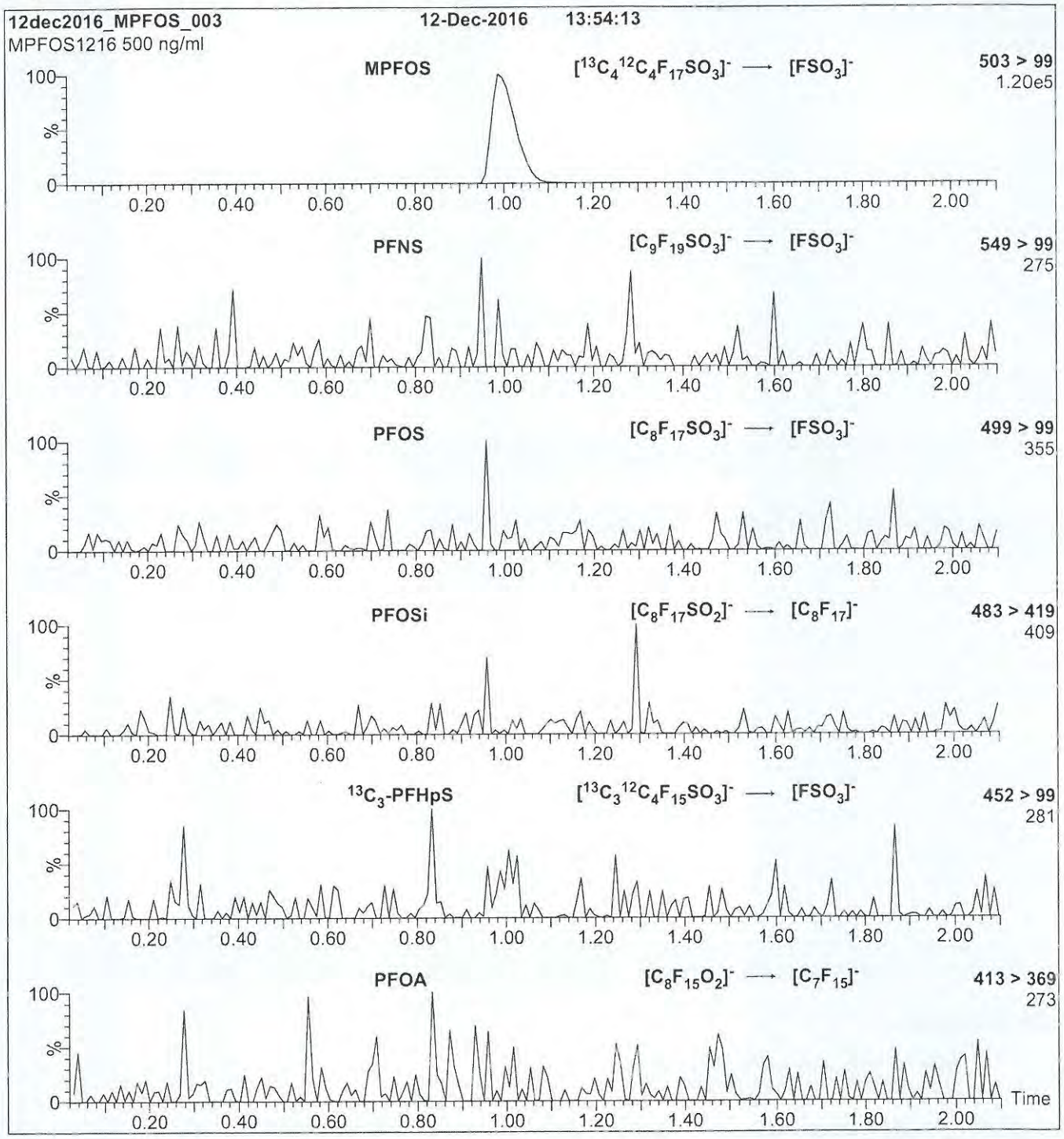
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 60.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFOS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFOS)

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) = 40

17E1717

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

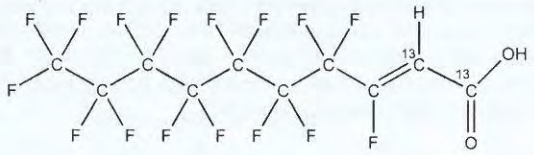
PRODUCT CODE: MFOUEA

LOT NUMBER: MFOUEA0716

COMPOUND: 2H-Perfluoro-[1,2-$^{13}C_2$]-2-decenoic acid

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-$^{13}C_2$)

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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 08/19/2016 (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

17E2410

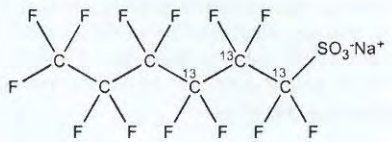
WELLINGTON LABORATORIES

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-$^{13}C_3$)
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 07/05/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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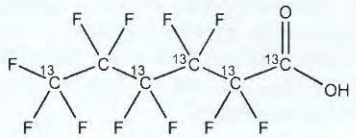
17E2411

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: B.G. Chittim **Date:** 03/31/2015 (mm/dd/yyyy)

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17F3035

WELLINGTON LABORATORIES

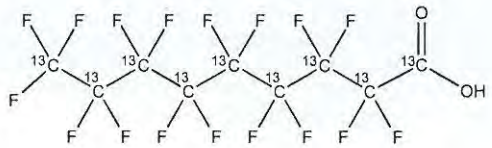
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M9PFNA
COMPOUND: Perfluoro-n-[$^{13}C_9$]nonanoic acid

LOT NUMBER: M9PFNA0814

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_9HF_{17}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 473.01
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
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

ISOTOPIC PURITY: ≥99% ^{13}C ($^{13}C_9$)

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)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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INTENDED USE:

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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).

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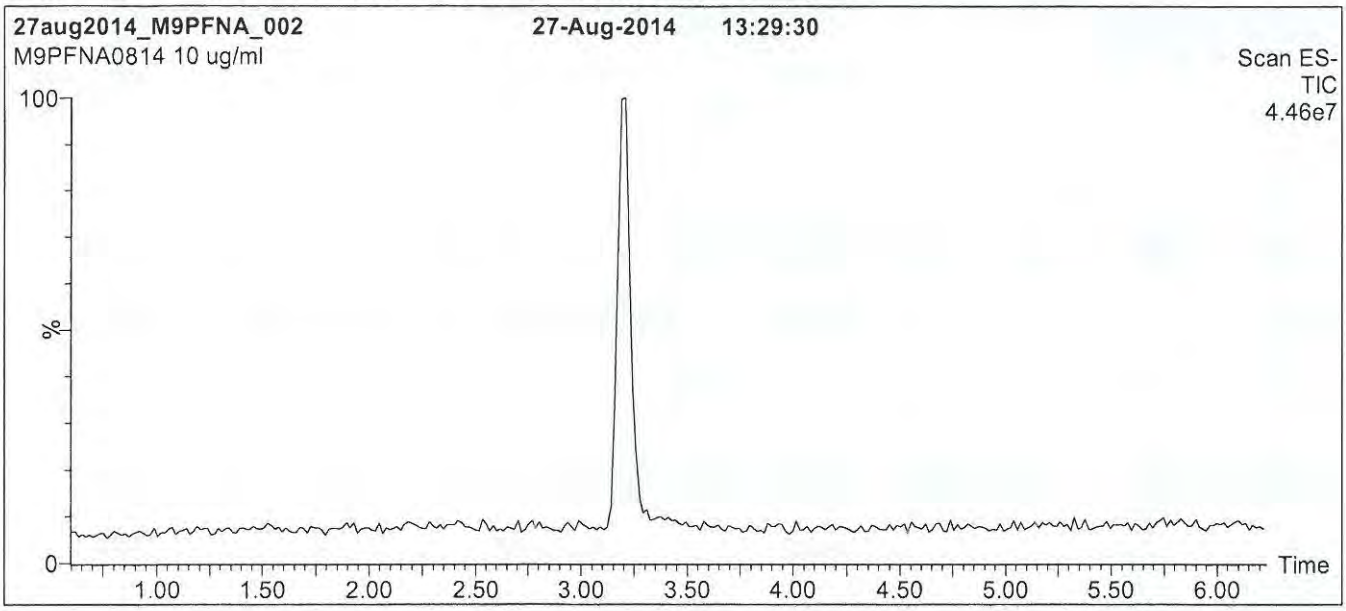
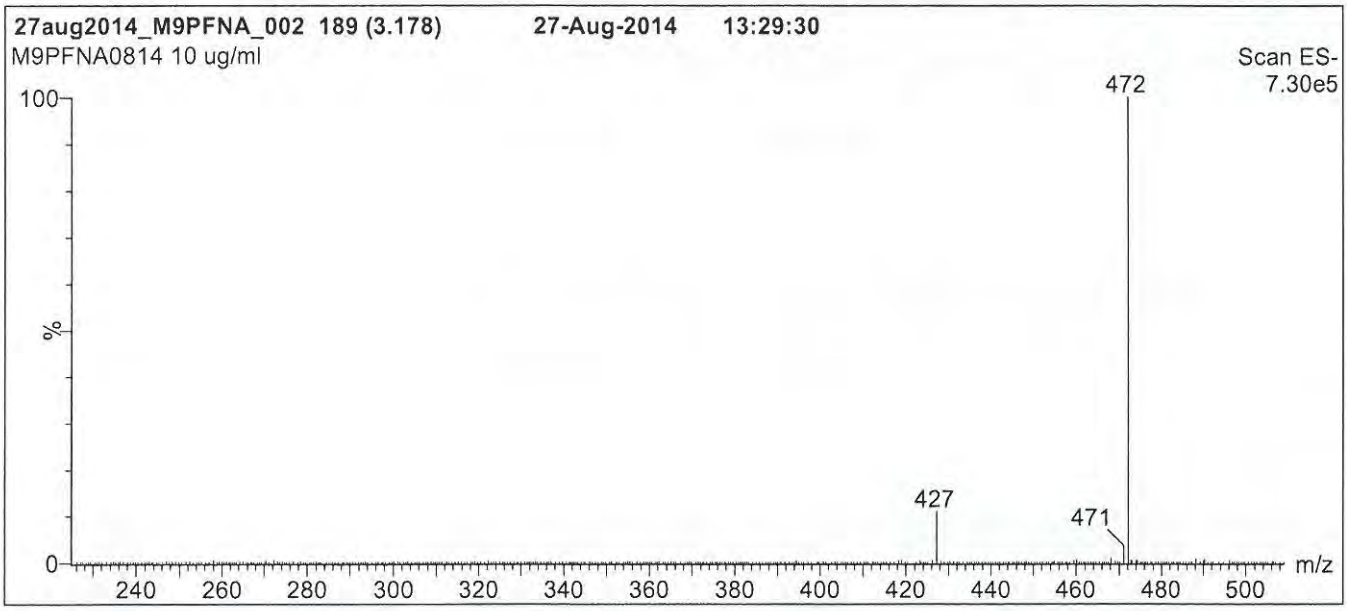
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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

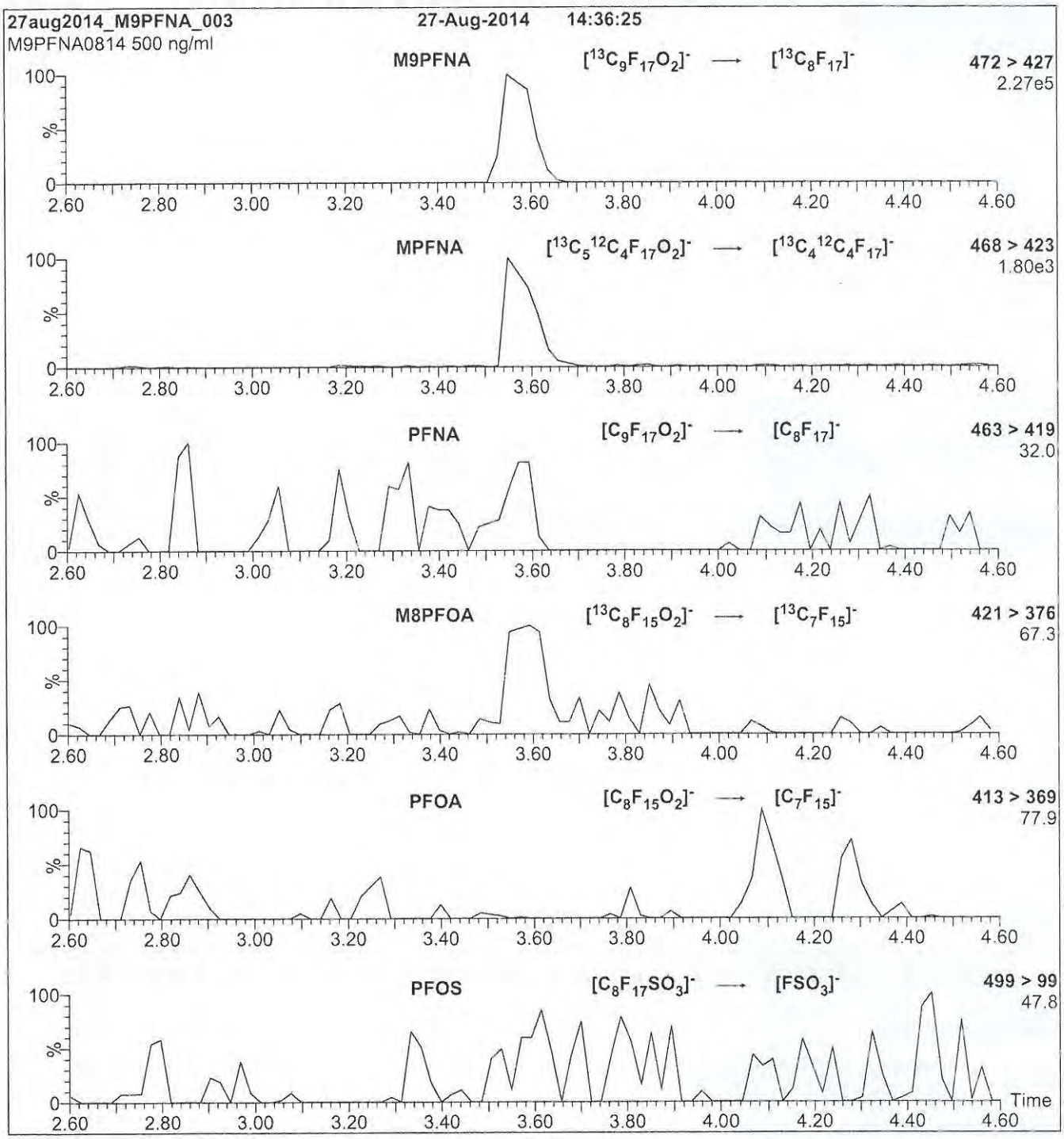
MS Parameters

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

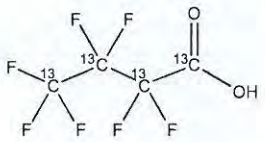
CERTIFICATE OF ANALYSIS DOCUMENTATION

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~~ IN 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:

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QUALITY MANAGEMENT:

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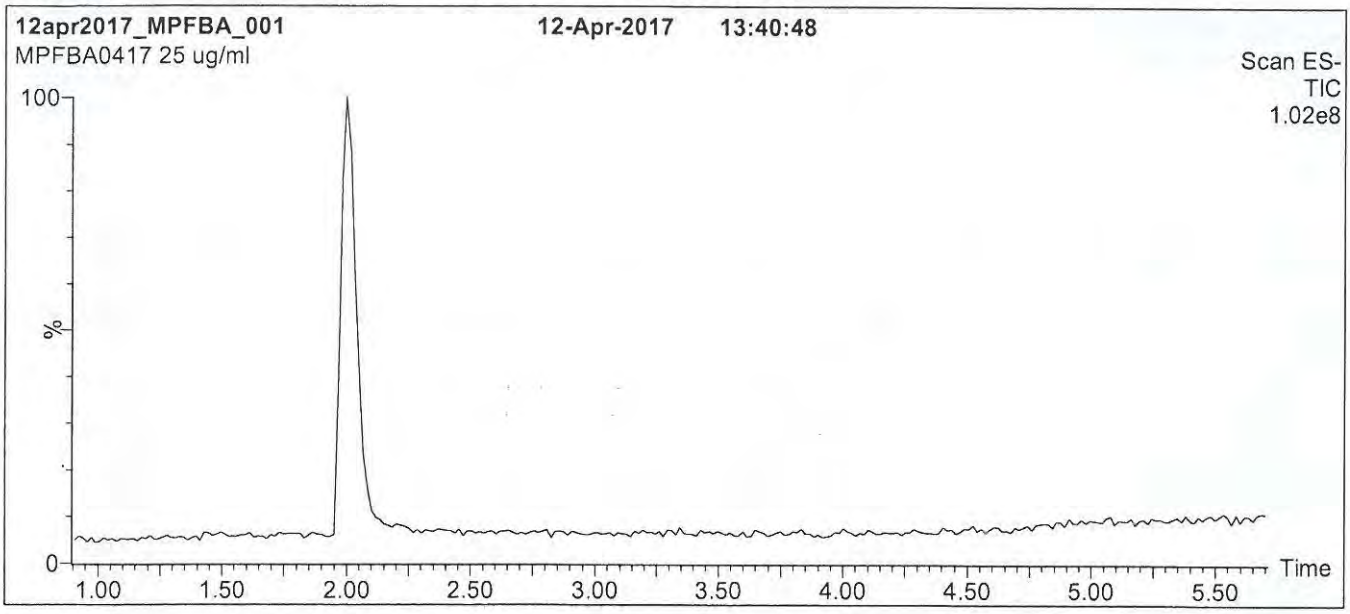
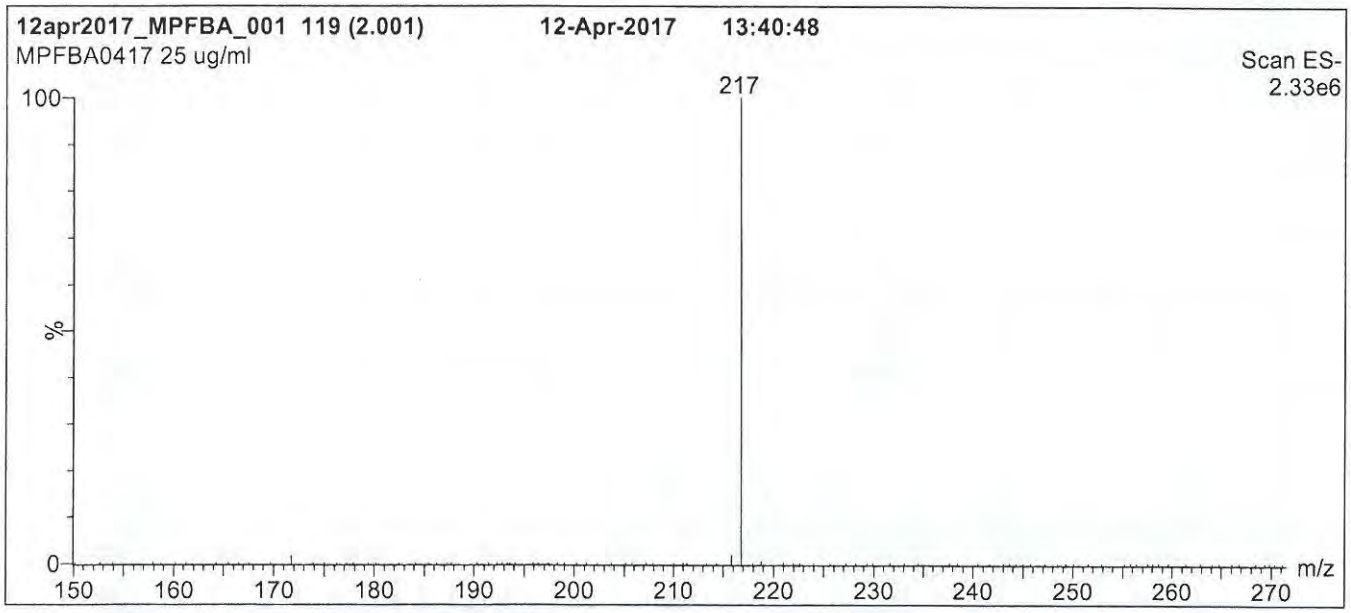
17F3036

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

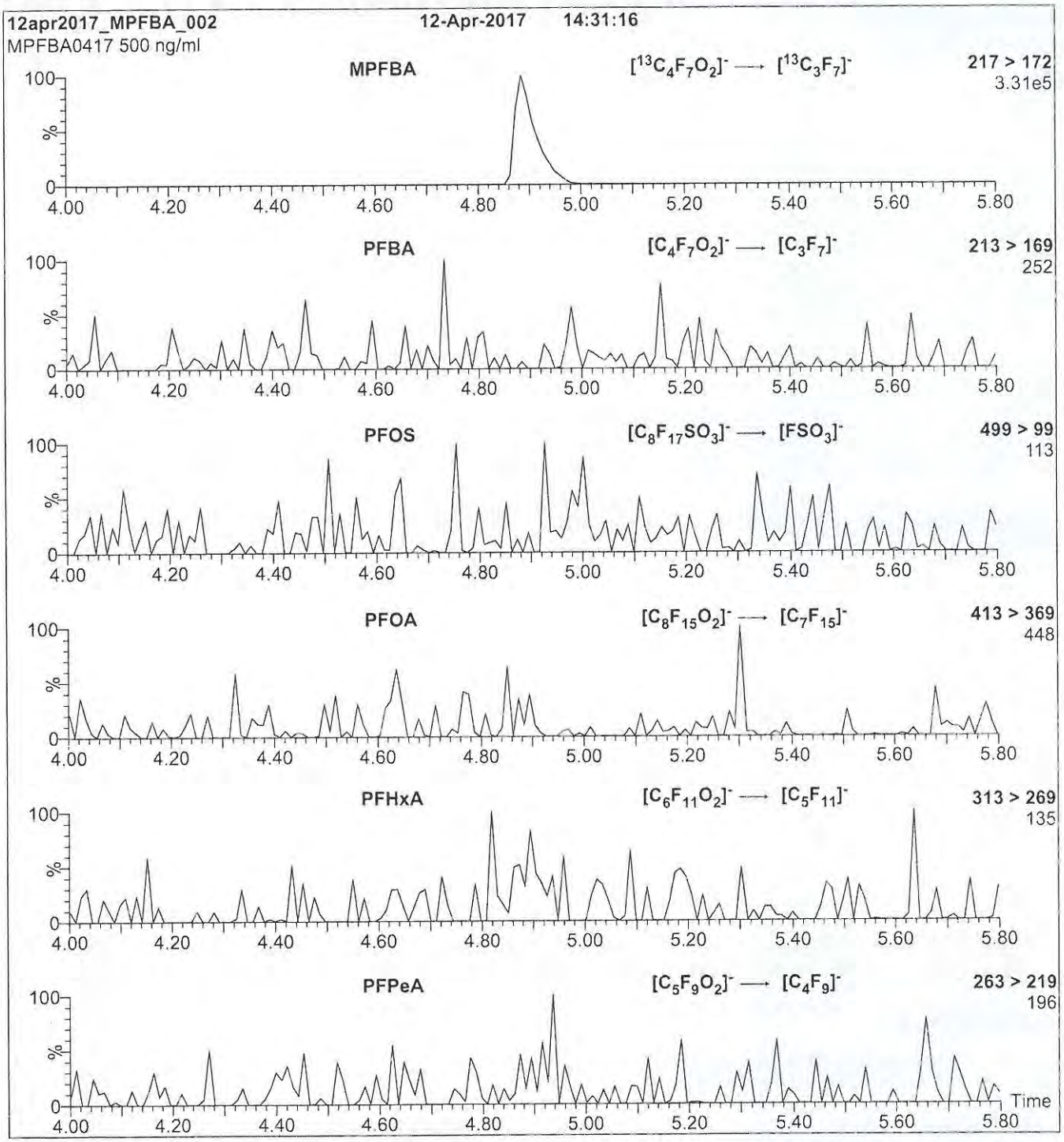
MS Parameters

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

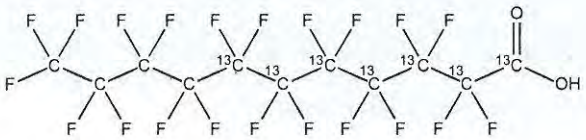
WELLINGTON LABORATORIES

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 (1,2,3,4,5,6,7-$^{13}C_7$)

LAST TESTED: (mm/dd/yyyy) 01/22/2016

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
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ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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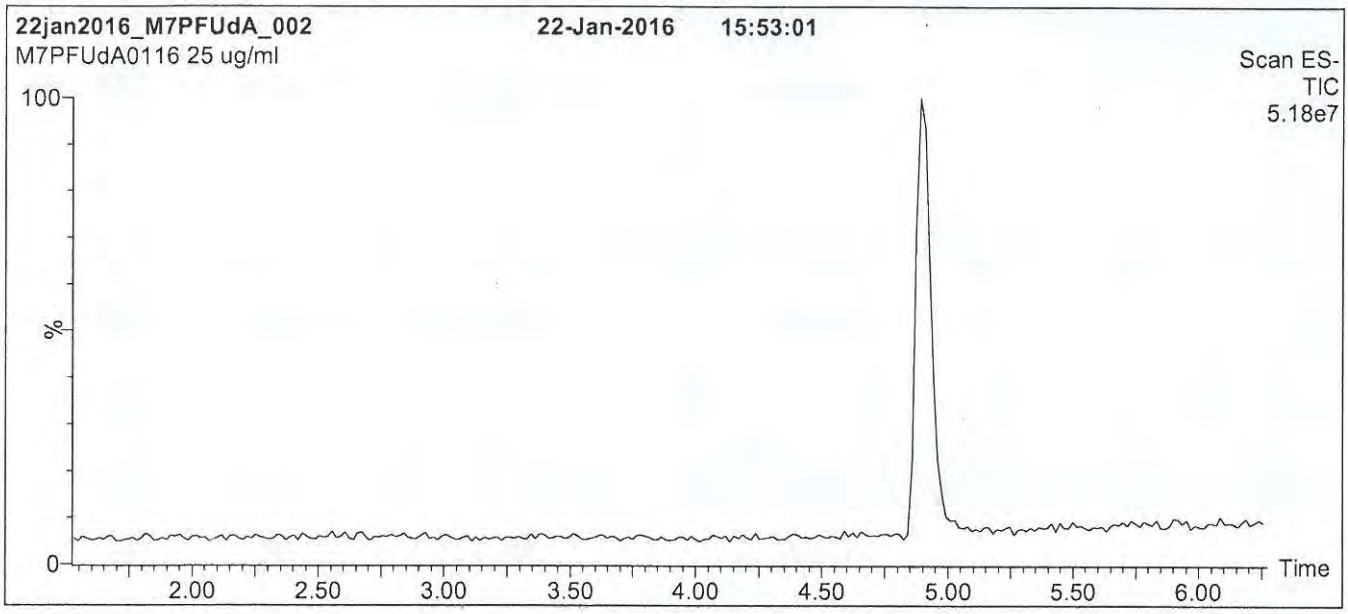
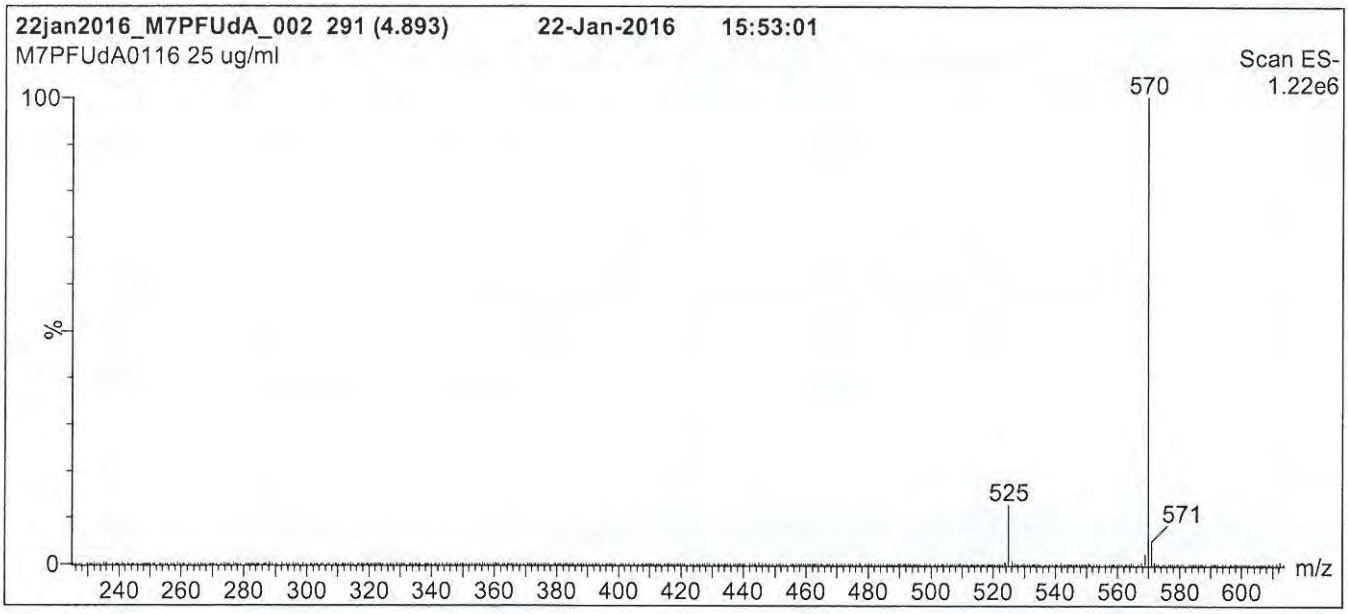
17F3037

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

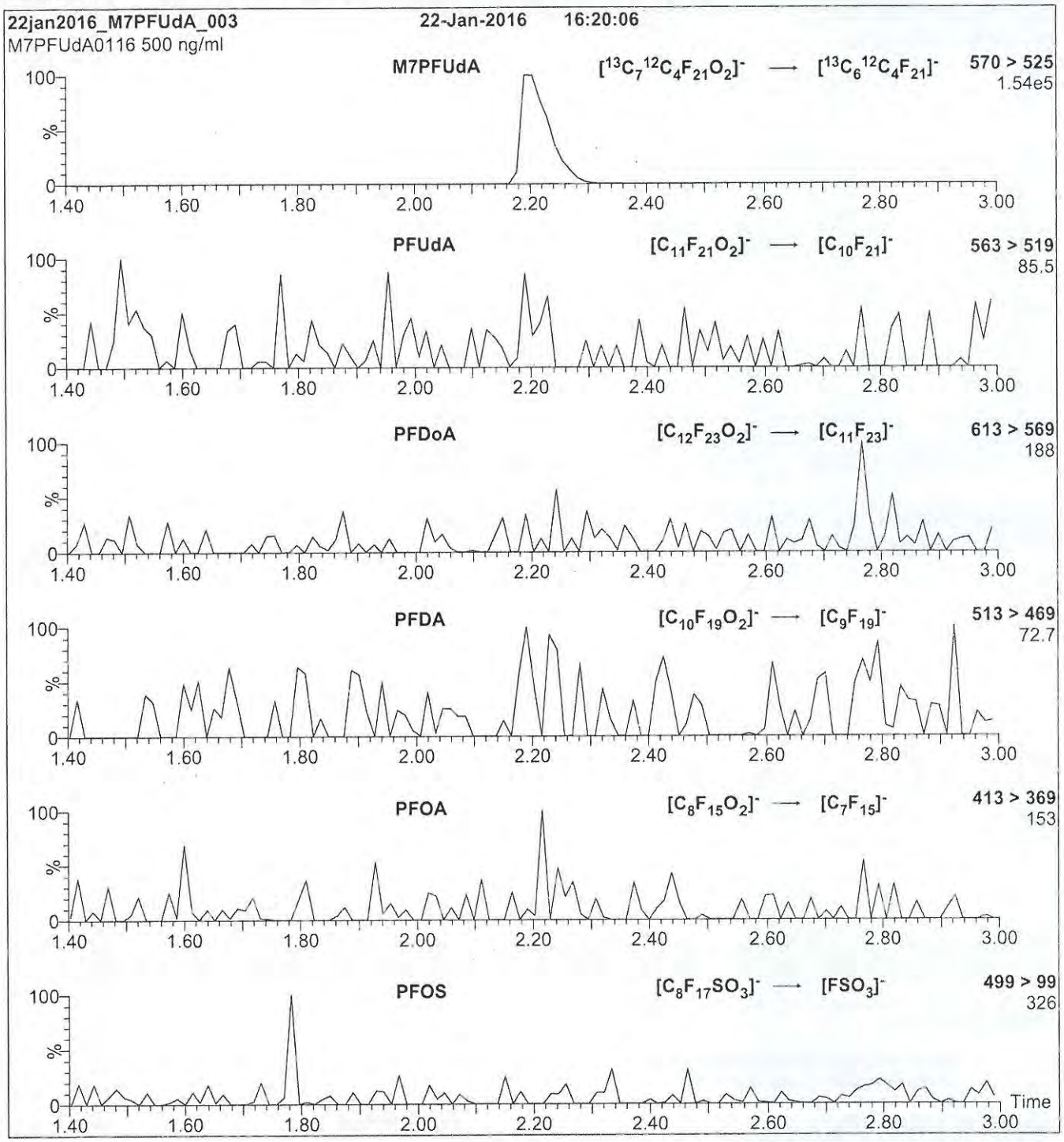
MS Parameters

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

17G1207

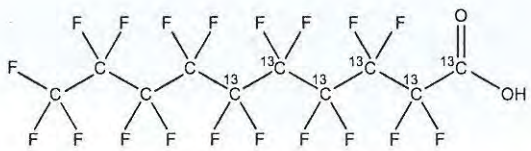
WELLINGTON LABORATORIES

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

17G1207

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).

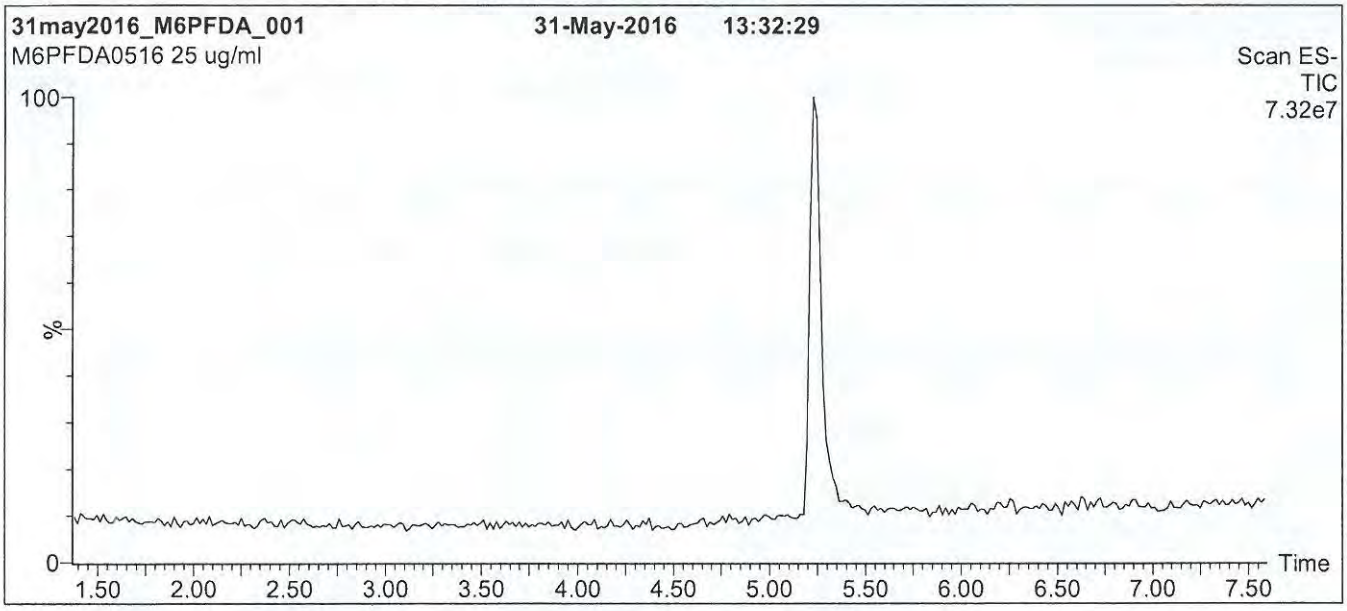
CALA

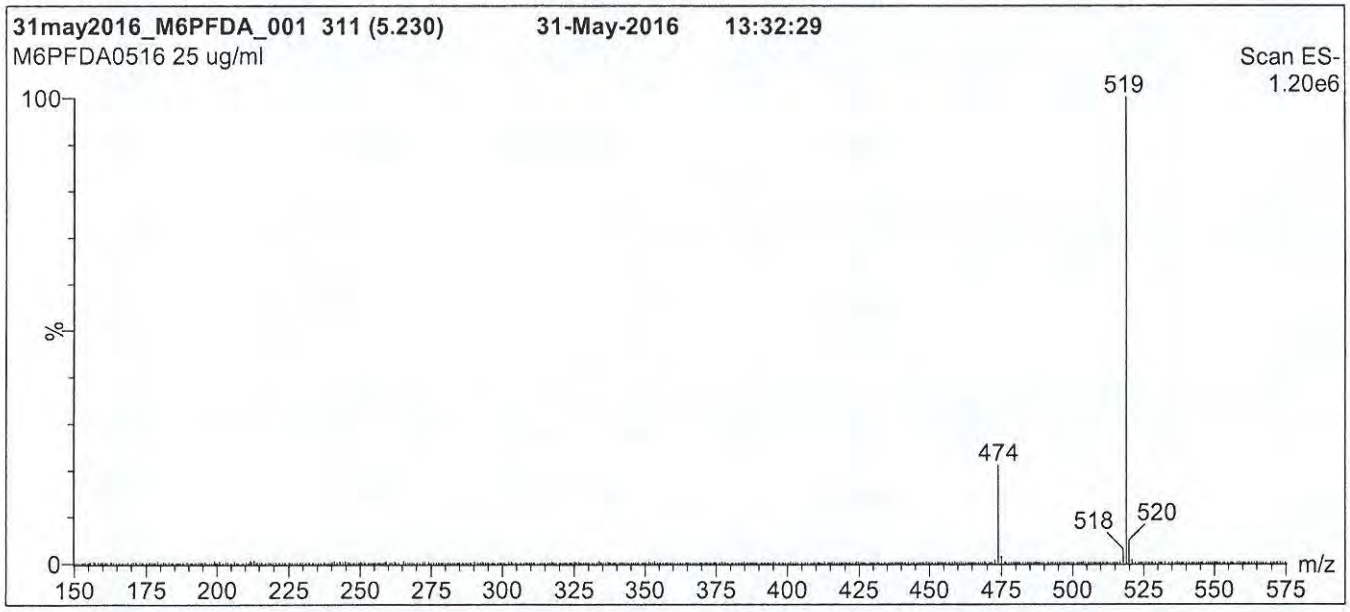
ANAB ACCREDITED

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

17G1207

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

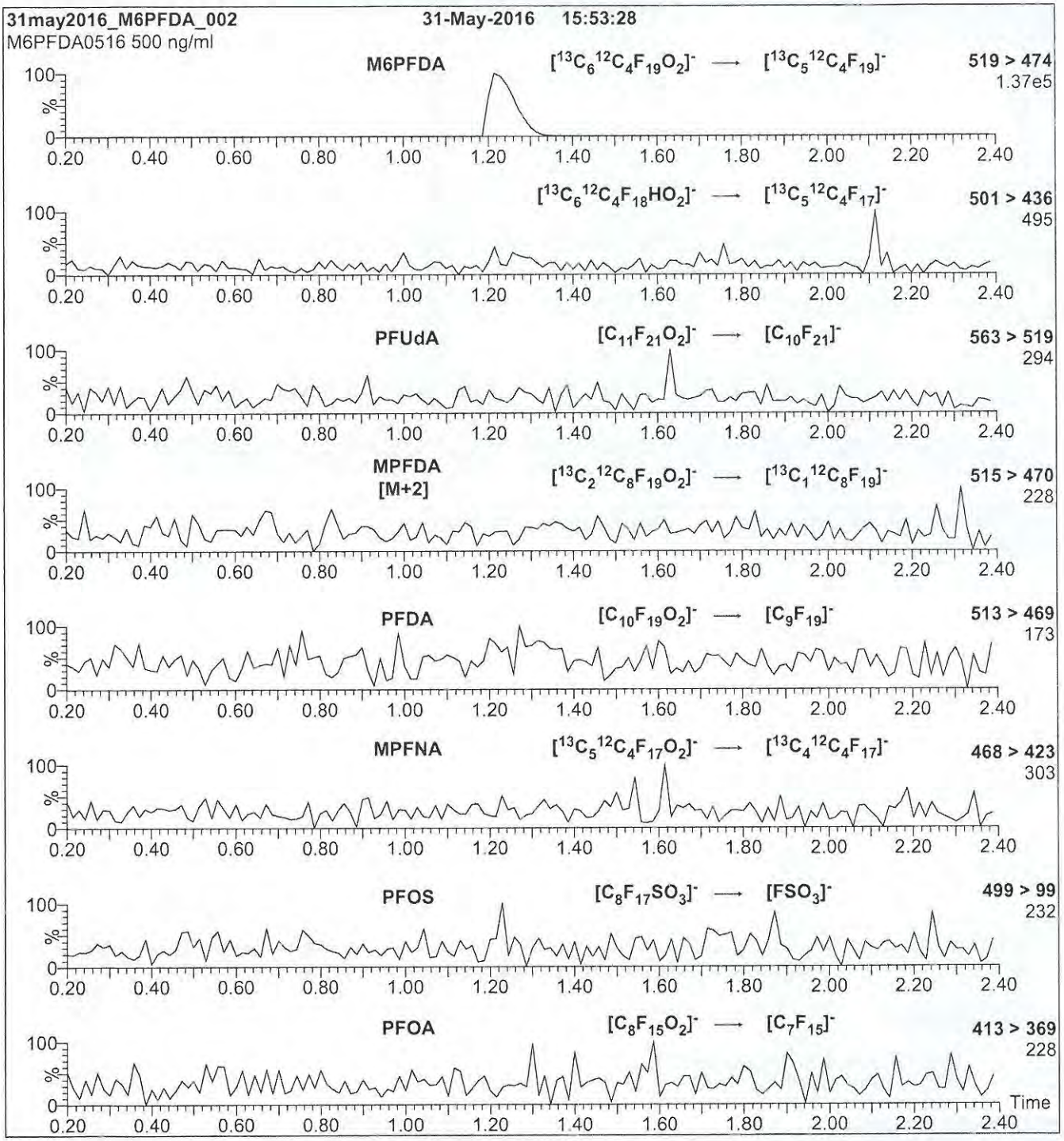
MS Parameters

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

17G1207

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

~~17G1208~~ 17G1302

WELLINGTON LABORATORIES

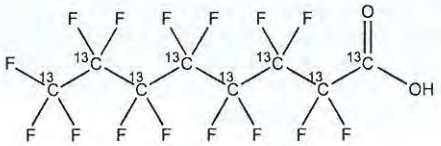
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M8PFOA
COMPOUND: Perfluoro-n-[$^{13}C_8$]octanoic acid

LOT NUMBER: M8PFOA0216

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_8HF_{15}O_2$
CONCENTRATION: 49 ± 2.45 µg/ml

CHEMICAL PURITY: 97.9% (M8PFOA)
2.1% (MPFOA [M+4])

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

MOLECULAR WEIGHT: 422.01
SOLVENT(S): Methanol
Water (<1%)

ISOTOPIC PURITY: ≥99% ^{13}C ($^{13}C_8$)

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.

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

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CALA

ANAB ACCREDITED

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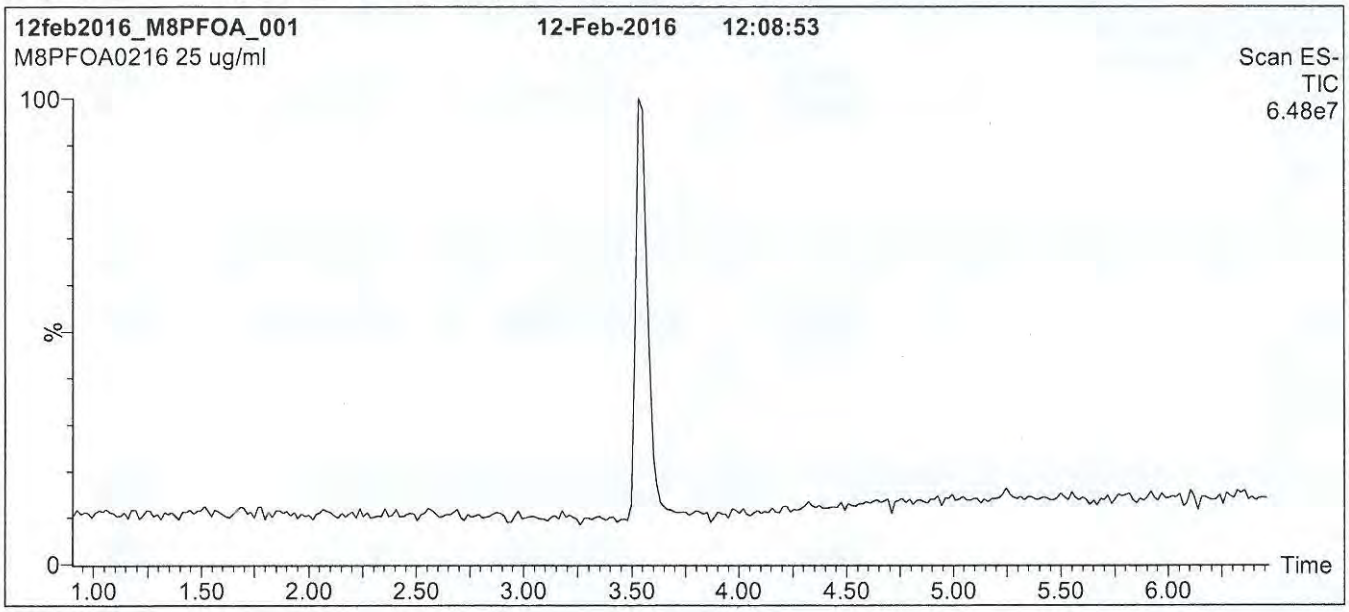
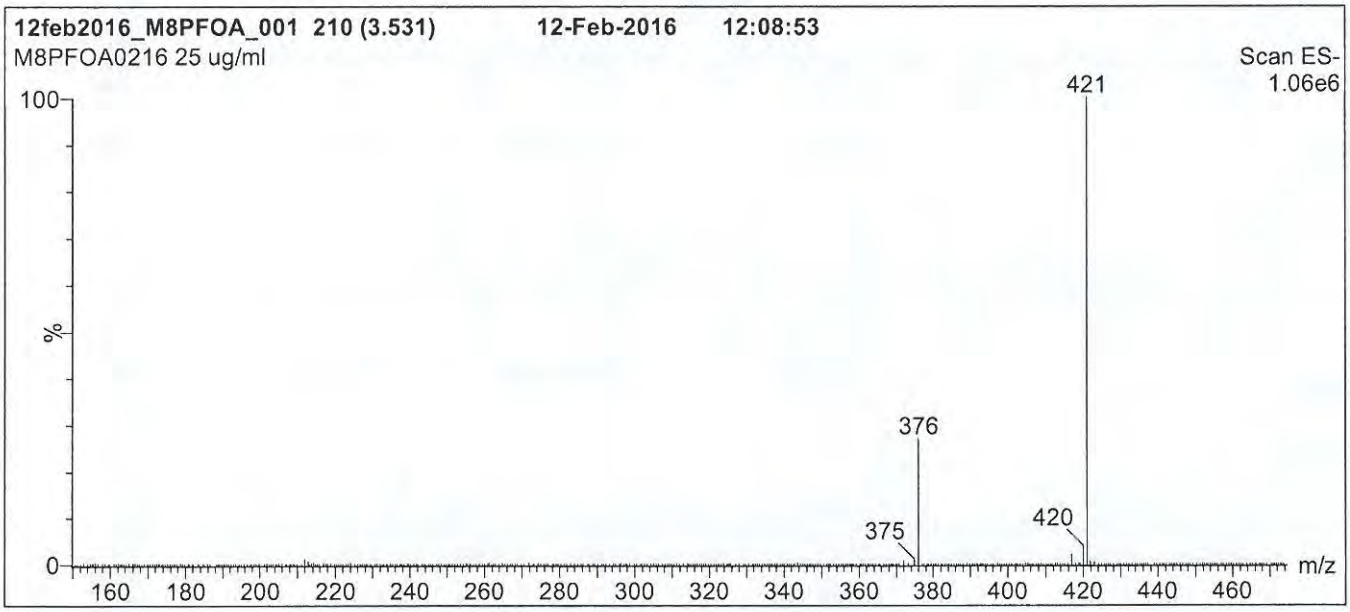
~~17G1208~~ 17G1302

Figure 1: **M8PFOA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

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MS: **Micromass Quattro *micro* API MS**

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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

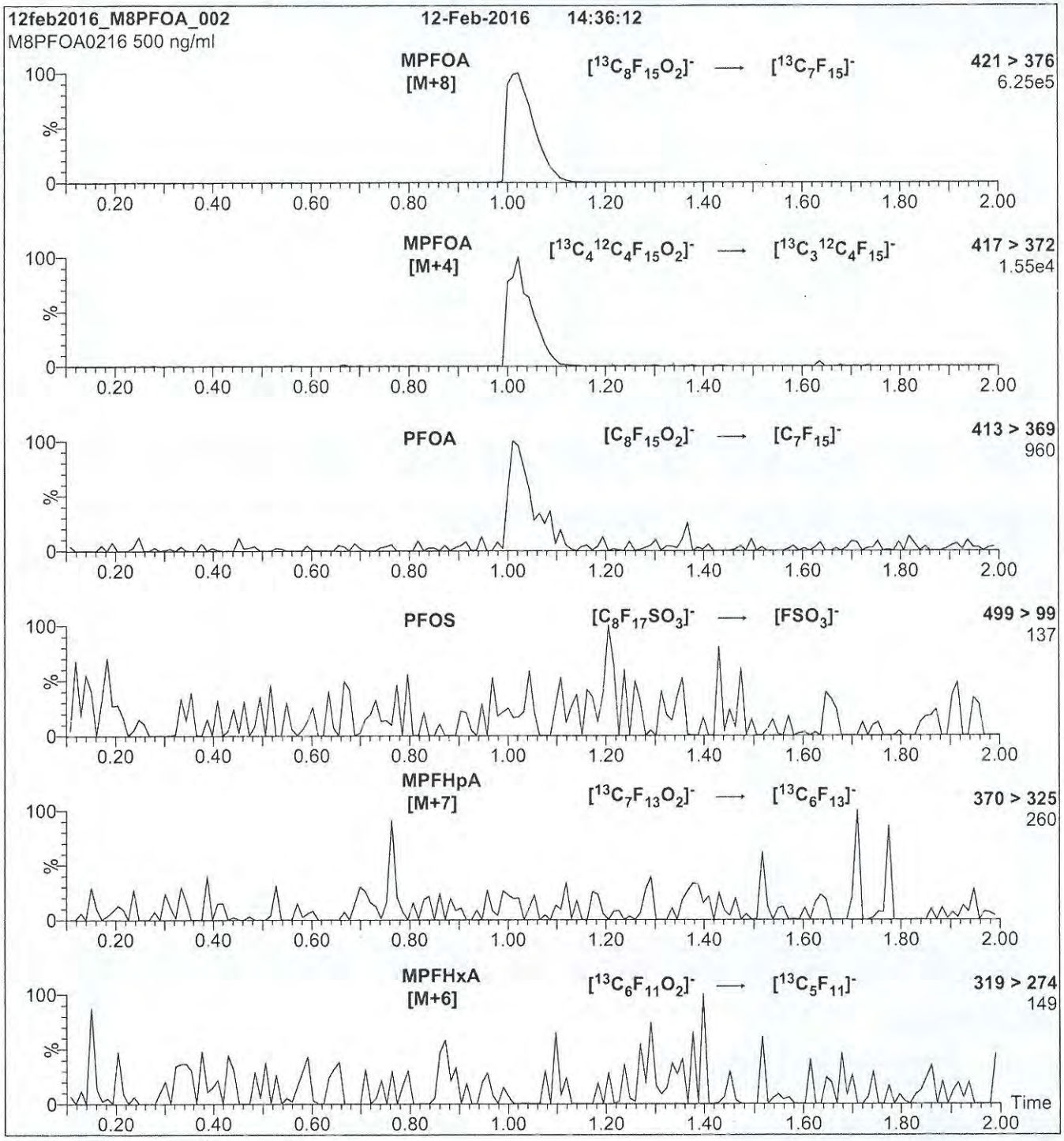
MS Parameters

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

~~17G1208~~ 17G1302

Figure 2: **M8PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M8PFOA)

Mobile phase: Isocratic 80% MeOH / 20% H_2O

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 10

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"MH-L103-20170721","Modified EPA Method 537","Initial","1700922-01","Vista","d3-MeFOSAA","d3-MeFOSAA","84.9","%R","","-99","NA","","IS","84.9","","-99","NA","YES","100","","0.106","0.001","-99",""
"MH-L103-20170721","Modified EPA Method 537","Initial","1700922-01","Vista","13C2-PFUnA","13C2-PFUnA","90.7","%R","","-99","NA","","IS","90.7","","-99","NA","YES","100","","0.106","0.001","-99",""
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"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","355-46-4","PFHxS","5.98","ng/L","J","1.07","LOD","","TRG","","","9.07","LOQ","YES","-99","","0.110","0.001","5.68",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","335-67-1","PFOA","9.08","ng/L","B","0.738","LOD","","TRG","","","9.07","LOQ","YES","-99","","0.110","0.001","5.68",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","335-67-1","PFOA","7.90","ng/L","J","0.752","LOD","","TRG","","","9.24","LOQ","YES","-99","","0.108","0.001","5.79",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","1763-23-1","PFOS","14.8","ng/L","","0.915","LOD","","TRG","","","9.07","LOQ","YES","-99","","0.110","0.001","5.68",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","375-95-1","PFNA","4.75","ng/L","J","0.918","LOD","","TRG","","","9.07","LOQ","YES","-99","","0.110","0.001","5.68",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","335-76-2","PFDA","5.68","ng/L","U","1.69","LOD","","TRG","","","9.07","LOQ","YES","-99","","0.110","0.001","5.68",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","2355-31-9","MeFOSAA","5.68","ng/L","U","1.87","LOD","","TRG","","","9.07","LOQ","YES","-99","","0.110","0.001","5.68",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","2058-94-8","PFUnA","5.68","ng/L","U","1.19","LOD","","TRG","","","9.07","LOQ","YES","-99","","0.110","0.001","5.68",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","2991-50-6","EtFOSAA","5.68","ng/L","U","1.55","LOD","","TRG","","","9.07","LOQ","YES","-99","","0.110","0.001","5.68",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","307-55-1","PFDoA","5.68","ng/L","U","0.898","LOD","","TRG","","","9.07","LOQ","YES","-99","","0.110","0.001","5.68",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","72629-94-8","PFTrDA","5.68","ng/L","U","0.560","LOD","","TRG","","","9.07","LOQ","YES","-99","","0.110","0.001","5.68",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","376-06-7","PFTeDA","5.68","ng/L","U","0.856","LOD","","TRG","","","9.07","LOQ","YES","-99","","0.110","0.001","5.68",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","13C3-PFBS","13C3-PFBS","125","%R","","-99","NA","","IS","125","","-99","NA","YES","100","","0.110","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","13C2-PFHxA","13C2-PFHxA","102","%R","","-99","NA","","IS","102","","-99","NA","YES","100","","0.110","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","13C4-PFHpA","13C4-PFHpA","71.4","%R","","-99","NA","","IS","71.4","","-99","NA","YES","100","","0.110","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","18O2-PFHxS","18O2-PFHxS","94.9","%R","","-99","NA","","IS","94.9","","-99","NA","YES","100","","0.110","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","13C2-PFOA","13C2-PFOA","84.9","%R","","-99","NA","","IS","84.9","","-99","NA","YES","100","","0.110","0.001","-99",""

"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","13C2-PFOA","13C2-PFOA","98.5","%R","","-99","NA","","IS","98.5","","-99","NA","YES","100","","0.108","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","13C8-PFOS","13C8-PFOS","96.4","%R","","-99","NA","","IS","96.4","","-99","NA","YES","100","","0.110","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","13C5-PFNA","13C5-PFNA","85.0","%R","","-99","NA","","IS","85.0","","-99","NA","YES","100","","0.110","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","13C2-PFDA","13C2-PFDA","73.0","%R","","-99","NA","","IS","73.0","","-99","NA","YES","100","","0.110","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","d3-MeFOSAA","d3-MeFOSAA","96.6","%R","","-99","NA","","IS","96.6","","-99","NA","YES","100","","0.110","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","13C2-PFUnA","13C2-PFUnA","102","%R","","-99","NA","","IS","102","","-99","NA","YES","100","","0.110","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","d5-EtFOSAA","d5-EtFOSAA","98.2","%R","","-99","NA","","IS","98.2","","-99","NA","YES","100","","0.110","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","13C2-PFDoA","13C2-PFDoA","92.3","%R","","-99","NA","","IS","92.3","","-99","NA","YES","100","","0.110","0.001","-99",""
"MH-N104-20170721","Modified EPA Method 537","Initial","1700922-02","Vista","13C2-PFTeDA","13C2-PFTeDA","98.1","%R","","-99","NA","","IS","98.1","","-99","NA","YES","100","","0.110","0.001","-99",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","375-73-5","PFBS","67.7","ng/L","","1.89","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","307-24-4","PFHxA","245","ng/L","","2.30","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","375-85-9","PFHpA","92.3","ng/L","","0.623","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","355-46-4","PFHxS","449","ng/L","","0.999","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","335-67-1","PFOA","98.6","ng/L","","0.783","LOD","","TRG","","","9.62","LOQ","YES","-99","","0.104","0.001","6.01",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","335-67-1","PFOA","79.2","ng/L","B","0.687","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","1763-23-1","PFOS","937","ng/L","","0.851","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","375-95-1","PFNA","30.4","ng/L","","0.854","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","335-76-2","PFDA","37.1","ng/L","","1.57","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","2355-31-9","MeFOSAA","5.25","ng/L","U","1.74","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","2058-94-8","PFUnA","10.7","ng/L","","1.11","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","2991-50-6","EtFOSAA","5.25","ng/L","U","1.44","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","307-55-1","PFDoA","4.24","ng/L","J","0.835","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","72629-94-8","PFTrDA","5.25","ng/L","U","0.521","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","376-06-7","PFTeDA","5.25","ng/L","U","0.796","LOD","","TRG","","","8.44","LOQ","YES","-99","","0.119","0.001","5.25",""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","13C3-PFBS","13C3-PFBS","122","%R","","-99","NA","","IS","122","","-99","NA","YES","100","","0.119","0.001","-99",""

"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","13C2-PFHxA","13C2-PFHxA","94.9","%R","","-99","NA","","IS","94.9","","-99","NA","YES","100","","0.119","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","13C4-PFHpA","13C4-PFHpA","71.9","%R","","-99","NA","","IS","71.9","","-99","NA","YES","100","","0.119","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","18O2-PFHxS","18O2-PFHxS","112","%R","","-99","NA","","IS","112","","-99","NA","YES","100","","0.119","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","13C2-PFOA","13C2-PFOA","91.8","%R","","-99","NA","","IS","91.8","","-99","NA","YES","100","","0.119","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","13C2-PFOA","13C2-PFOA","87.4","%R","","-99","NA","","IS","87.4","","-99","NA","YES","100","","0.104","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","13C8-PFOS","13C8-PFOS","107","%R","","-99","NA","","IS","107","","-99","NA","YES","100","","0.119","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","13C5-PFNA","13C5-PFNA","75.3","%R","","-99","NA","","IS","75.3","","-99","NA","YES","100","","0.119","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","13C2-PFDA","13C2-PFDA","73.7","%R","","-99","NA","","IS","73.7","","-99","NA","YES","100","","0.119","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","d3-MeFOSAA","d3-MeFOSAA","59.5","%R","","-99","NA","","IS","59.5","","-99","NA","YES","100","","0.119","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","13C2-PFUnA","13C2-PFUnA","64.5","%R","","-99","NA","","IS","64.5","","-99","NA","YES","100","","0.119","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","d5-EtFOSAA","d5-EtFOSAA","63.6","%R","","-99","NA","","IS","63.6","","-99","NA","YES","100","","0.119","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","13C2-PFDoA","13C2-PFDoA","62.0","%R","","-99","NA","","IS","62.0","","-99","NA","YES","100","","0.119","0.001","-99","""
"Upstream-Culvert-109-20170721","Modified EPA Method 537","Initial","1700922-03","Vista","13C2-PFTeDA","13C2-PFTeDA","70.8","%R","","-99","NA","","IS","70.8","","-99","NA","YES","100","","0.119","0.001","-99","""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","375-73-5","PFBS","5.68","ng/L","U","2.03","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","307-24-4","PFHxA","5.68","ng/L","U","2.47","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","375-85-9","PFHpA","5.68","ng/L","U","0.671","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","355-46-4","PFHxS","5.68","ng/L","U","1.07","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","335-67-1","PFOA","5.39","ng/L","U","0.700","LOD","","TRG","","","8.61","LOQ","YES","-99","","0.116","0.001","5.39","""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","335-67-1","PFOA","5.68","ng/L","U","0.739","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","1763-23-1","PFOS","5.68","ng/L","U","0.916","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","375-95-1","PFNA","5.68","ng/L","U","0.919","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","335-76-2","PFDA","5.68","ng/L","U","1.69","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","2355-31-9","MeFOSAA","5.68","ng/L","U","1.87","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","2058-94-

8","PFUnA","5.68","ng/L","U","1.19","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","2991-50-
6","EtFOSAA","5.68","ng/L","U","1.55","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68",
""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","307-55-
1","PFDoA","5.68","ng/L","U","0.899","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","72629-94-
8","PFTrDA","5.68","ng/L","U","0.560","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68","
"
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","376-06-
7","PFTeDA","5.68","ng/L","U","0.857","LOD","","TRG","","","9.08","LOQ","YES","-99","","0.110","0.001","5.68",
""
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","13C3-PFBS","13C3-
PFBS","135","%R","","-99","NA","","IS","135","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","13C2-PFHxA","13C2-
PFHxA","104","%R","","-99","NA","","IS","104","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","13C4-PFHpA","13C4-
PFHpA","78.9","%R","","-99","NA","","IS","78.9","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","18O2-PFHxS","18O2-
PFHxS","114","%R","","-99","NA","","IS","114","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","13C2-PFOA","13C2-
PFOA","90.8","%R","","-99","NA","","IS","90.8","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","13C2-PFOA","13C2-
PFOA","101","%R","","-99","NA","","IS","101","","-99","NA","YES","100","","0.116","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","13C8-PFOS","13C8-
PFOS","110","%R","","-99","NA","","IS","110","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","13C5-PFNA","13C5-
PFNA","91.6","%R","","-99","NA","","IS","91.6","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","13C2-PFDA","13C2-
PFDA","89.2","%R","","-99","NA","","IS","89.2","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","d3-MeFOSAA","d3-
MeFOSAA","77.5","%R","","-99","NA","","IS","77.5","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","13C2-PFUnA","13C2-
PFUnA","80.7","%R","","-99","NA","","IS","80.7","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","d5-EtFOSAA","d5-
EtFOSAA","75.8","%R","","-99","NA","","IS","75.8","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","13C2-PFDoA","13C2-
PFDoA","90.5","%R","","-99","NA","","IS","90.5","","-99","NA","YES","100","","0.110","0.001","-99","
"FRB03-20170721","Modified EPA Method 537","Initial","1700922-04","Vista","13C2-PFTeDA","13C2-
PFTeDA","95.3","%R","","-99","NA","","IS","95.3","","-99","NA","YES","100","","0.110","0.001","-99","
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","375-73-
5","PFBS","5.25","ng/L","U","1.88","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25","
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","307-24-
4","PFHxA","5.25","ng/L","U","2.29","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25","
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","375-85-
9","PFHpA","5.25","ng/L","U","0.621","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25","
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","355-46-
4","PFHxS","5.25","ng/L","U","0.995","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25","
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","335-67-
1","PFOA","5.12","ng/L","U","0.667","LOD","","TRG","","","8.19","LOQ","YES","-99","","0.122","0.001","5.12","
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","335-67-
1","PFOA","5.25","ng/L","U","0.684","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25","
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","1763-23-
1","PFOS","5.25","ng/L","U","0.848","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25","

"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","375-95-1","PFNA","5.25","ng/L","U","0.851","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","335-76-2","PFDA","5.25","ng/L","U","1.57","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","2355-31-9","MeFOSAA","5.25","ng/L","U","1.73","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","2058-94-8","PFUnA","5.25","ng/L","U","1.10","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","2991-50-6","EtFOSAA","5.25","ng/L","U","1.44","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","307-55-1","PFDoA","5.25","ng/L","U","0.832","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","72629-94-8","PFTrDA","5.25","ng/L","U","0.519","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","376-06-7","PFTeDA","5.25","ng/L","U","0.794","LOD","","TRG","","","8.41","LOQ","YES","-99","","0.119","0.001","5.25",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","13C3-PFBS","13C3-PFBS","130","%R","","-99","NA","","IS","130","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","13C2-PFHxA","13C2-PFHxA","103","%R","","-99","NA","","IS","103","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","13C4-PFHpA","13C4-PFHpA","75.0","%R","","-99","NA","","IS","75.0","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","18O2-PFHxS","18O2-PFHxS","90.7","%R","","-99","NA","","IS","90.7","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","13C2-PFOA","13C2-PFOA","85.3","%R","","-99","NA","","IS","85.3","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","13C2-PFOA","13C2-PFOA","103","%R","","-99","NA","","IS","103","","-99","NA","YES","100","","0.122","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","13C8-PFOS","13C8-PFOS","99.6","%R","","-99","NA","","IS","99.6","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","13C5-PFNA","13C5-PFNA","82.5","%R","","-99","NA","","IS","82.5","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","13C2-PFDA","13C2-PFDA","85.7","%R","","-99","NA","","IS","85.7","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","d3-MeFOSAA","d3-MeFOSAA","56.0","%R","","-99","NA","","IS","56.0","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","13C2-PFUnA","13C2-PFUnA","70.4","%R","","-99","NA","","IS","70.4","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","d5-EtFOSAA","d5-EtFOSAA","55.7","%R","","-99","NA","","IS","55.7","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","13C2-PFDoA","13C2-PFDoA","62.4","%R","","-99","NA","","IS","62.4","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB08-20170720","Modified EPA Method 537","Initial","1700922-05","Vista","13C2-PFTeDA","13C2-PFTeDA","77.0","%R","","-99","NA","","IS","77.0","","-99","NA","YES","100","","0.119","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","375-73-5","PFBS","5.34","ng/L","U","1.92","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","307-24-4","PFHxA","5.34","ng/L","U","2.33","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","375-85-9","PFHpA","5.34","ng/L","U","0.633","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""

"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","355-46-4","PFHxS","5.34","ng/L","U","1.01","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","335-67-1","PFOA","5.34","ng/L","U","0.697","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","335-67-1","PFOA","5.21","ng/L","U","0.677","LOD","","TRG","","","8.32","LOQ","YES","-99","","0.120","0.001","5.21",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","1763-23-1","PFOS","5.34","ng/L","U","0.864","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","375-95-1","PFNA","5.34","ng/L","U","0.867","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","335-76-2","PFDA","5.34","ng/L","U","1.60","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","2355-31-9","MeFOSAA","5.34","ng/L","U","1.77","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","2058-94-8","PFUnA","5.34","ng/L","U","1.12","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","2991-50-6","EtFOSAA","5.34","ng/L","U","1.47","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","307-55-1","PFDoA","5.34","ng/L","U","0.848","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","72629-94-8","PFTrDA","5.34","ng/L","U","0.529","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","376-06-7","PFTeDA","5.34","ng/L","U","0.808","LOD","","TRG","","","8.56","LOQ","YES","-99","","0.117","0.001","5.34",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","13C3-PFBS","13C3-PFBS","150","%R","","-99","NA","","IS","150","","-99","NA","YES","100","","0.117","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","13C2-PFHxA","13C2-PFHxA","101","%R","","-99","NA","","IS","101","","-99","NA","YES","100","","0.117","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","13C4-PFHpA","13C4-PFHpA","73.3","%R","","-99","NA","","IS","73.3","","-99","NA","YES","100","","0.117","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","18O2-PFHxS","18O2-PFHxS","101","%R","","-99","NA","","IS","101","","-99","NA","YES","100","","0.117","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","13C2-PFOA","13C2-PFOA","88.8","%R","","-99","NA","","IS","88.8","","-99","NA","YES","100","","0.120","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","13C2-PFOA","13C2-PFOA","97.3","%R","","-99","NA","","IS","97.3","","-99","NA","YES","100","","0.117","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","13C8-PFOS","13C8-PFOS","105","%R","","-99","NA","","IS","105","","-99","NA","YES","100","","0.117","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","13C5-PFNA","13C5-PFNA","88.6","%R","","-99","NA","","IS","88.6","","-99","NA","YES","100","","0.117","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","13C2-PFDA","13C2-PFDA","76.3","%R","","-99","NA","","IS","76.3","","-99","NA","YES","100","","0.117","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","d3-MeFOSAA","d3-MeFOSAA","71.6","%R","","-99","NA","","IS","71.6","","-99","NA","YES","100","","0.117","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","13C2-PFUnA","13C2-PFUnA","79.8","%R","","-99","NA","","IS","79.8","","-99","NA","YES","100","","0.117","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","d5-EtFOSAA","d5-EtFOSAA","68.9","%R","","-99","NA","","IS","68.9","","-99","NA","YES","100","","0.117","0.001","-99",""
"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","13C2-PFDoA","13C2-PFDoA","80.6","%R","","-99","NA","","IS","80.6","","-99","NA","YES","100","","0.117","0.001","-99",""

"RB09-20170721","Modified EPA Method 537","Initial","1700922-06","Vista","13C2-PFTeDA","13C2-PFTeDA","73.3","%R","","-99","NA","","IS","73.3","","-99","NA","YES","100","","0.117","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","375-73-5","PFBS","5.00","ng/L","U","1.79","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","307-24-4","PFHxA","5.00","ng/L","U","2.18","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","375-85-9","PFHpA","5.00","ng/L","U","0.591","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","355-46-4","PFHxS","5.00","ng/L","U","0.947","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","335-67-1","PFOA","4.35","ng/L","J","0.651","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","1763-23-1","PFOS","5.00","ng/L","U","0.807","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","375-95-1","PFNA","5.00","ng/L","U","0.810","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","335-76-2","PFDA","5.00","ng/L","U","1.49","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","2355-31-9","MeFOSAA","5.00","ng/L","U","1.65","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","2058-94-8","PFUnA","5.00","ng/L","U","1.05","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","2991-50-6","EtFOSAA","5.00","ng/L","U","1.37","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","307-55-1","PFDoA","5.00","ng/L","U","0.792","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","72629-94-8","PFTrDA","5.00","ng/L","U","0.494","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","376-06-7","PFTeDA","5.00","ng/L","U","0.755","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","13C3-PFBS","13C3-PFBS","132","%R","","-99","NA","","IS","132","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","13C2-PFHxA","13C2-PFHxA","99.0","%R","","-99","NA","","IS","99.0","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","13C4-PFHpA","13C4-PFHpA","78.3","%R","","-99","NA","","IS","78.3","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","18O2-PFHxS","18O2-PFHxS","104","%R","","-99","NA","","IS","104","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","13C2-PFOA","13C2-PFOA","91.5","%R","","-99","NA","","IS","91.5","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","13C8-PFOS","13C8-PFOS","105","%R","","-99","NA","","IS","105","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","13C5-PFNA","13C5-PFNA","86.5","%R","","-99","NA","","IS","86.5","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","13C2-PFDA","13C2-PFDA","84.3","%R","","-99","NA","","IS","84.3","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","d3-MeFOSAA","d3-MeFOSAA","81.7","%R","","-99","NA","","IS","81.7","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","13C2-PFUnA","13C2-PFUnA","76.0","%R","","-99","NA","","IS","76.0","","-99","NA","YES","100","","0.125","0.001","-99",""

"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","d5-EtFOSAA","d5-EtFOSAA","87.9","%R","","-99","NA","","IS","87.9","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","13C2-PFDoA","13C2-PFDoA","89.7","%R","","-99","NA","","IS","89.7","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BLK1","Modified EPA Method 537","Initial","B7G0121-BLK1","Vista","13C2-PFTeDA","13C2-PFTeDA","82.6","%R","","-99","NA","","IS","82.6","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","375-73-5","PFBS","73.8","ng/L","","1.79","LOD","","TRG","92.3","","8.00","LOQ","YES","80.0","","0.125","0.001","5.00","
"
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","307-24-4","PFHxA","78.0","ng/L","","2.18","LOD","","TRG","97.5","","8.00","LOQ","YES","80.0","","0.125","0.001","5.00",
""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","375-85-9","PFHpA","72.5","ng/L","","0.591","LOD","","TRG","90.6","","8.00","LOQ","YES","80.0","","0.125","0.001","5.00
","
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","355-46-4","PFHxS","78.2","ng/L","","0.947","LOD","","TRG","97.7","","8.00","LOQ","YES","80.0","","0.125","0.001","5.00
","
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","335-67-1","PFOA","90.2","ng/L","B","0.651","LOD","","TRG","113","","8.00","LOQ","YES","80.0","","0.125","0.001","5.00
","
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","1763-23-1","PFOS","77.1","ng/L","","0.807","LOD","","TRG","96.4","","8.00","LOQ","YES","80.0","","0.125","0.001","5.00",
""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","375-95-1","PFNA","80.9","ng/L","","0.810","LOD","","TRG","101","","8.00","LOQ","YES","80.0","","0.125","0.001","5.00",
""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","335-76-2","PFDA","80.2","ng/L","","1.49","LOD","","TRG","100","","8.00","LOQ","YES","80.0","","0.125","0.001","5.00","
"
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","2355-31-9","MeFOSAA","75.0","ng/L","","1.65","LOD","","TRG","93.8","","8.00","LOQ","YES","80.0","","0.125","0.001","5.
00","
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","2058-94-8","PFUnA","80.8","ng/L","","1.05","LOD","","TRG","101","","8.00","LOQ","YES","80.0","","0.125","0.001","5.00",
""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","2991-50-6","EtFOSAA","79.2","ng/L","","1.37","LOD","","TRG","99.0","","8.00","LOQ","YES","80.0","","0.125","0.001","5.0
0","
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","307-55-1","PFDoA","68.3","ng/L","","0.792","LOD","","TRG","85.4","","8.00","LOQ","YES","80.0","","0.125","0.001","5.00
","
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","72629-94-8","PFTrDA","73.0","ng/L","","0.494","LOD","","TRG","91.3","","8.00","LOQ","YES","80.0","","0.125","0.001","5.0
0","
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","376-06-7","PFTeDA","77.6","ng/L","","0.755","LOD","","TRG","97.0","","8.00","LOQ","YES","80.0","","0.125","0.001","5.0
0","
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","13C3-PFBS","13C3-PFBS","133","%R","","-99","NA","","IS","133","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","13C2-PFHxA","13C2-PFHxA","103","%R","","-99","NA","","IS","103","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","13C4-PFHpA","13C4-PFHpA","76.8","%R","","-99","NA","","IS","76.8","","-99","NA","YES","100","","0.125","0.001","-99",""

"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","18O2-PFHxS","18O2-PFHxS","109","%R","","-99","NA","","IS","109","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","13C2-PFOA","13C2-PFOA","101","%R","","-99","NA","","IS","101","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","13C8-PFOS","13C8-PFOS","108","%R","","-99","NA","","IS","108","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","13C5-PFNA","13C5-PFNA","93.0","%R","","-99","NA","","IS","93.0","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","13C2-PFDA","13C2-PFDA","81.0","%R","","-99","NA","","IS","81.0","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","d3-MeFOSAA","d3-MeFOSAA","77.0","%R","","-99","NA","","IS","77.0","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","13C2-PFUnA","13C2-PFUnA","81.9","%R","","-99","NA","","IS","81.9","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","d5-EtFOSAA","d5-EtFOSAA","73.5","%R","","-99","NA","","IS","73.5","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","13C2-PFDoA","13C2-PFDoA","85.6","%R","","-99","NA","","IS","85.6","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-BS1","Modified EPA Method 537","Initial","B7G0121-BS1","Vista","13C2-PFTeDA","13C2-PFTeDA","78.6","%R","","-99","NA","","IS","78.6","","-99","NA","YES","100","","0.125","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","375-73-5","PFBS","82.4","ng/L","","1.98","LOD","","TRG","92.5","","8.85","LOQ","YES","88.5","MH-N104-20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","307-24-4","PFHxA","92.3","ng/L","","2.41","LOD","","TRG","98.9","","8.85","LOQ","YES","88.5","MH-N104-20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","375-85-9","PFHpA","93.7","ng/L","","0.654","LOD","","TRG","100.0","","8.85","LOQ","YES","88.5","MH-N104-20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","355-46-4","PFHxS","85.7","ng/L","","1.05","LOD","","TRG","90.1","","8.85","LOQ","YES","88.5","MH-N104-20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","335-67-1","PFOA","125","ng/L","B, H","0.720","LOD","","TRG","131","","8.85","LOQ","YES","88.5","MH-N104-20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","1763-23-1","PFOS","94.2","ng/L","","0.893","LOD","","TRG","89.7","","8.85","LOQ","YES","88.5","MH-N104-20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","375-95-1","PFNA","92.5","ng/L","","0.896","LOD","","TRG","99.2","","8.85","LOQ","YES","88.5","MH-N104-20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","335-76-2","PFDA","94.5","ng/L","","1.65","LOD","","TRG","105","","8.85","LOQ","YES","88.5","MH-N104-20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","2355-31-9","MeFOSAA","89.0","ng/L","","1.83","LOD","","TRG","101","","8.85","LOQ","YES","88.5","MH-N104-20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","2058-94-8","PFUnA","94.1","ng/L","","1.16","LOD","","TRG","105","","8.85","LOQ","YES","88.5","MH-N104-20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","2991-50-6","EtFOSAA","81.1","ng/L","","1.52","LOD","","TRG","91.7","","8.85","LOQ","YES","88.5","MH-N104-20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","307-55-

1","PFDoA","92.0","ng/L","","0.876","LOD","","TRG","104","","8.85","LOQ","YES","88.5","MH-N104-
20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","72629-94-
8","PFTrDA","91.3","ng/L","","0.546","LOD","","TRG","103","","8.85","LOQ","YES","88.5","MH-N104-
20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","376-06-
7","PFTeDA","87.8","ng/L","","0.835","LOD","","TRG","99.3","","8.85","LOQ","YES","88.5","MH-N104-
20170721","0.113","0.001","5.53",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","13C3-PFBS","13C3-
PFBS","126","%R","","-99","NA","","IS","126","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","13C2-PFHxA","13C2-
PFHxA","98.0","%R","","-99","NA","","IS","98.0","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","13C4-PFHpA","13C4-
PFHpA","68.0","%R","","-99","NA","","IS","68.0","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","18O2-PFHxS","18O2-
PFHxS","106","%R","","-99","NA","","IS","106","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","13C2-PFOA","13C2-
PFOA","82.4","%R","","-99","NA","","IS","82.4","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","13C8-PFOS","13C8-
PFOS","106","%R","","-99","NA","","IS","106","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","13C5-PFNA","13C5-
PFNA","74.4","%R","","-99","NA","","IS","74.4","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","13C2-PFDA","13C2-
PFDA","88.6","%R","","-99","NA","","IS","88.6","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","d3-MeFOSAA","d3-
MeFOSAA","84.3","%R","","-99","NA","","IS","84.3","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","13C2-PFUnA","13C2-
PFUnA","77.0","%R","","-99","NA","","IS","77.0","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","d5-EtFOSAA","d5-
EtFOSAA","90.5","%R","","-99","NA","","IS","90.5","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","13C2-PFDoA","13C2-
PFDoA","86.1","%R","","-99","NA","","IS","86.1","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MS1","Modified EPA Method 537","Initial","B7G0121-MS1","Vista","13C2-PFTeDA","13C2-
PFTeDA","79.2","%R","","-99","NA","","IS","79.2","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","375-73-
5","PFBS","86.6","ng/L","","1.99","LOD","","TRG","96.6","4.34","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","307-24-
4","PFHxA","99.7","ng/L","","2.43","LOD","","TRG","107","7.87","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","375-85-

9","PFHpA","93.5","ng/L","","0.658","LOD","","TRG","99.1","0.904","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","355-46-
4","PFHxS","85.0","ng/L","","1.05","LOD","","TRG","88.6","1.68","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","335-67-
1","PFOA","117","ng/L","B","0.725","LOD","","TRG","121","7.11","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","1763-23-
1","PFOS","101","ng/L","","0.899","LOD","","TRG","97.3","8.13","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","375-95-
1","PFNA","87.5","ng/L","","0.902","LOD","","TRG","92.9","6.56","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","335-76-
2","PFDA","94.6","ng/L","","1.66","LOD","","TRG","105","0","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","2355-31-
9","MeFOSAA","87.1","ng/L","","1.84","LOD","","TRG","97.8","3.22","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","2058-94-
8","PFUnA","105","ng/L","","1.17","LOD","","TRG","116","9.95","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","2991-50-
6","EtFOSAA","88.8","ng/L","","1.53","LOD","","TRG","99.6","8.26","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","307-55-
1","PFDoA","88.0","ng/L","","0.882","LOD","","TRG","98.8","5.13","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","72629-94-
8","PFTrDA","97.9","ng/L","","0.550","LOD","","TRG","110","6.57","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","376-06-
7","PFTeDA","92.2","ng/L","","0.841","LOD","","TRG","103","3.66","8.91","LOQ","YES","89.1","MH-N104-
20170721","0.112","0.001","5.58",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","13C3-PFBS","13C3-
PFBS","129","%R","","-99","NA","","IS","129","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","13C2-PFHxA","13C2-
PFHxA","97.6","%R","","-99","NA","","IS","97.6","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","13C4-PFHpA","13C4-
PFHpA","75.5","%R","","-99","NA","","IS","75.5","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","18O2-PFHxS","18O2-
PFHxS","111","%R","","-99","NA","","IS","111","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","13C2-PFOA","13C2-
PFOA","88.5","%R","","-99","NA","","IS","88.5","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","13C8-PFOS","13C8-
PFOS","99.5","%R","","-99","NA","","IS","99.5","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99",""
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","13C5-PFNA","13C5-

PFNA","80.5","%R","","-99","NA","","IS","80.5","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99","
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","13C2-PFDA","13C2-
PFDA","72.6","%R","","-99","NA","","IS","72.6","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99","
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","d3-MeFOSAA","d3-
MeFOSAA","100","%R","","-99","NA","","IS","100","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99","
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","13C2-PFUnA","13C2-
PFUnA","84.0","%R","","-99","NA","","IS","84.0","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99","
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","d5-EtFOSAA","d5-
EtFOSAA","98.9","%R","","-99","NA","","IS","98.9","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99","
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","13C2-PFDoA","13C2-
PFDoA","97.8","%R","","-99","NA","","IS","97.8","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99","
"B7G0121-MSD1","Modified EPA Method 537","Initial","B7G0121-MSD1","Vista","13C2-PFTeDA","13C2-
PFTeDA","93.8","%R","","-99","NA","","IS","93.8","","-99","NA","YES","100","MH-N104-
20170721","0.112","0.001","-99","
"B7H0074-BLK1","Modified EPA Method 537","Initial","B7H0074-BLK1","Vista","335-67-
1","PFOA","5.00","ng/L","U","0.651","LOD","","TRG","","","8.00","LOQ","YES","-99","","0.125","0.001","5.00","
"B7H0074-BLK1","Modified EPA Method 537","Initial","B7H0074-BLK1","Vista","13C2-PFOA","13C2-
PFOA","95.8","%R","","-99","NA","","IS","95.8","","-99","NA","YES","100","","0.125","0.001","-99","
"B7H0074-BS1","Modified EPA Method 537","Initial","B7H0074-BS1","Vista","335-67-
1","PFOA","79.2","ng/L","","0.651","LOD","","TRG","99.0","","8.00","LOQ","YES","80.0","","0.125","0.001","5.00",
""
"B7H0074-BS1","Modified EPA Method 537","Initial","B7H0074-BS1","Vista","13C2-PFOA","13C2-
PFOA","108","%R","","-99","NA","","IS","108","","-99","NA","YES","100","","0.125","0.001","-99","
"B7H0074-MS1","Modified EPA Method 537","Initial","B7H0074-MS1","Vista","335-67-
1","PFOA","105","ng/L","","0.718","LOD","","TRG","109","","8.82","LOQ","YES","88.2","MH-N104-
20170721","0.113","0.001","5.53","
"B7H0074-MS1","Modified EPA Method 537","Initial","B7H0074-MS1","Vista","13C2-PFOA","13C2-
PFOA","92.7","%R","","-99","NA","","IS","92.7","","-99","NA","YES","100","MH-N104-
20170721","0.113","0.001","-99","
"B7H0074-MSD1","Modified EPA Method 537","Initial","B7H0074-MSD1","Vista","335-67-
1","PFOA","106","ng/L","","0.747","LOD","","TRG","106","1.85","9.18","LOQ","YES","91.8","MH-N104-
20170721","0.109","0.001","5.73","
"B7H0074-MSD1","Modified EPA Method 537","Initial","B7H0074-MSD1","Vista","13C2-PFOA","13C2-
PFOA","97.7","%R","","-99","NA","","IS","97.7","","-99","NA","YES","100","MH-N104-
20170721","0.109","0.001","-99","
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01","NM","","2.00","Modified EPA Method 537","METHOD","Initial","07/31/2017 12:30","08/02/2017
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01","NM","","2.00","Modified EPA Method 537","METHOD","Initial","08/10/2017 08:51","08/11/2017
21:37","Vista","COA","WET","NA","1","NA","NA","01/01/1900
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02","NM","","2.00","Modified EPA Method 537","METHOD","Initial","07/31/2017 12:30","08/02/2017
12:28","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0121","B7G0121","NA","S7H0006","1700922","07/22/2017 08:54","01/01/1900 00:00","
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02","NM","","2.00","Modified EPA Method 537","METHOD","Initial","08/10/2017 08:51","08/11/2017
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03","NM","","2.00","Modified EPA Method 537","METHOD","Initial","07/31/2017 12:30","08/02/2017
12:39","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0121","B7G0121","NA","S7H0006","1700922","07/22/2017 08:54","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","Upstream-Culvert-109-20170721","07/21/2017 12:55","AQ","1700922-
03","NM","","2.00","Modified EPA Method 537","METHOD","Initial","08/10/2017 08:51","08/11/2017
21:59","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7H0074","B7H0074","NA","S7H0033","1700922","07/22/2017 08:54","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","FRB03-20170721","07/21/2017 13:25","AQ","1700922-
04","NM","","2.00","Modified EPA Method 537","METHOD","Initial","08/10/2017 08:51","08/11/2017
22:10","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7H0074","B7H0074","NA","S7H0033","1700922","07/22/2017 08:54","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","FRB03-20170721","07/21/2017 13:25","AQ","1700922-
04","NM","","2.00","Modified EPA Method 537","METHOD","Initial","07/31/2017 12:30","08/02/2017
12:49","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0121","B7G0121","NA","S7H0006","1700922","07/22/2017 08:54","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","RB08-20170720","07/20/2017 09:00","AQ","1700922-
05","NM","","2.00","Modified EPA Method 537","METHOD","Initial","07/31/2017 12:30","08/02/2017
13:00","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0121","B7G0121","NA","S7H0006","1700922","07/22/2017 08:54","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","RB08-20170720","07/20/2017 09:00","AQ","1700922-
05","NM","","2.00","Modified EPA Method 537","METHOD","Initial","08/10/2017 08:51","08/11/2017
22:20","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7H0074","B7H0074","NA","S7H0033","1700922","07/22/2017 08:54","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","RB09-20170721","07/21/2017 13:00","AQ","1700922-
06","NM","","2.00","Modified EPA Method 537","METHOD","Initial","07/31/2017 12:30","08/02/2017
13:11","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0121","B7G0121","NA","S7H0006","1700922","07/22/2017 08:54","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","RB09-20170721","07/21/2017 13:00","AQ","1700922-
06","NM","","2.00","Modified EPA Method 537","METHOD","Initial","08/10/2017 08:51","08/11/2017
22:31","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7H0074","B7H0074","NA","S7H0033","1700922","07/22/2017 08:54","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","B7G0121-BLK1","01/01/1900 00:00","AQ","B7G0121-
BLK1","MB","","-99","Modified EPA Method 537","METHOD","Initial","07/31/2017 12:30","08/02/2017
11:22","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0121","B7G0121","NA","S7H0006","1700922","01/01/1900 00:00","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","B7G0121-BS1","01/01/1900 00:00","AQ","B7G0121-
BS1","LCS","","-99","Modified EPA Method 537","METHOD","Initial","07/31/2017 12:30","08/02/2017
11:01","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0121","B7G0121","NA","S7H0006","1700922","01/01/1900 00:00","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","B7G0121-MS1","01/01/1900 00:00","AQ","B7G0121-
MS1","MS","","-99","Modified EPA Method 537","METHOD","Initial","07/31/2017 12:30","08/02/2017
11:33","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0121","B7G0121","NA","S7H0006","1700922","01/01/1900 00:00","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","B7G0121-MSD1","01/01/1900 00:00","AQ","B7G0121-
MSD1","MSD","","-99","Modified EPA Method 537","METHOD","Initial","07/31/2017 12:30","08/02/2017
11:44","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7G0121","B7G0121","NA","S7H0006","1700922","01/01/1900 00:00","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","B7H0074-BLK1","01/01/1900 00:00","AQ","B7H0074-
BLK1","MB","","-99","Modified EPA Method 537","METHOD","Initial","08/10/2017 08:51","08/11/2017
19:40","Vista","COA","WET","NA","1","NA","NA","01/01/1900

00:00","100","B7H0074","B7H0074","NA","S7H0033","1700922","01/01/1900 00:00","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","B7H0074-BS1","01/01/1900 00:00","AQ","B7H0074-
BS1","LCS","","-99","Modified EPA Method 537","METHOD","Initial","08/10/2017 08:51","08/11/2017
19:08","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7H0074","B7H0074","NA","S7H0033","1700922","01/01/1900 00:00","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","B7H0074-MS1","01/01/1900 00:00","AQ","B7H0074-
MS1","MS","","-99","Modified EPA Method 537","METHOD","Initial","08/10/2017 08:51","08/11/2017
20:34","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7H0074","B7H0074","NA","S7H0033","1700922","01/01/1900 00:00","01/01/1900 00:00",""
"NAWC Trenton","NAWC Trenton","B7H0074-MSD1","01/01/1900 00:00","AQ","B7H0074-
MSD1","MSD","","-99","Modified EPA Method 537","METHOD","Initial","08/10/2017 08:51","08/11/2017
20:44","Vista","COA","WET","NA","1","NA","NA","01/01/1900
00:00","100","B7H0074","B7H0074","NA","S7H0033","1700922","01/01/1900 00:00","01/01/1900 00:00",""

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 1700922

SAMPLES: 6 / Groundwater / PFAS

MH-L103-20170721	UPSTREAM-CULVERT-109-20170721	RB08-20170720
MH-N104-20170721	FRB03-20170721	RB09-20170721

Overview

The sample set for NAWC Trenton, SDG 1700920 consists of three (3) groundwater environmental samples and three (3) field quality control blanks (designated RB- and FRB-). No field duplicate pairs were included in this SDG. The samples were analyzed for polyfluoroalkyl substances (PFAS).

The samples were collected by Tetra Tech on July 20 and 21, 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
* 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 samples were re-extracted for PFOA due to an unacceptable level of PFOA in the method blank (> ½ method reporting limit). The re-extractions were performed outside of the method hold times. The PFOA results were qualified as estimated in samples MH-L103-20170721, MH-N104-20170721, and Upstream-Culvert-109-20170721 (J) because of the holding time exceedance.

Detected results reported below the Limit of Quantitation (LOQ) but above the Detection Limit (DL) were qualified as estimated (J).

Notes

All of the samples were reanalyzed for PFOA because PFOA was detected in the original method blank. Results for PFOA were reported from the reanalysis unless PFOA was not detected in the original analysis (samples FRB03-20170721, RB08-20170720, RB09-20170721).

Samples MH-L103-20170721, MH-N104-20170721 and Upstream-Culver-109-20170721 contained particulate and were centrifuged twice prior to extraction.

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: PFOA was detected in a method blank.

Other Factors Affecting Data Quality: Samples were analyzed outside of holding time for PFOA. 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	FRB03-20170721			MH-L103-20170721			MH-L103-20170721-REA			MH-N104-20170721		
SDG: 1700922	LAB_ID	1700922-04			1700922-01			1700922-01			1700922-02		
FRACTION: PFAS	SAMP_DATE	7/21/2017			7/21/2017			7/21/2017			7/21/2017		
MEDIA: WATER	QC_TYPE	FB			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		5.68	U		5.9	U					5.68	U	
N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		5.68	U		5.9	U					5.68	U	
PENTADECAFLUOROOCTANOIC ACID		5.68	U					3	J	HP			
PERFLUOROBUTANESULFONIC ACID		5.68	U		5.9	U					5.68	U	
PERFLUORODECANOIC ACID		5.68	U		5.9	U					5.68	U	
PERFLUORODODECANOIC ACID		5.68	U		5.9	U					5.68	U	
PERFLUOROHEPTANOIC ACID		5.68	U		1.94	J	P				5.2	J	P
PERFLUOROHEXANESULFONIC ACID		5.68	U		2.05	J	P				5.98	J	P
PERFLUOROHEXANOIC ACID		5.68	U		4.36	J	P				4.8	J	P
PERFLUORONONANOIC ACID		5.68	U		5.9	U					4.75	J	P
PERFLUOROOCTANE SULFONIC ACID		5.68	U		4.9	J	P				14.8		
PERFLUOROTETRADECANOIC ACID		5.68	U		5.9	U					5.68	U	
PERFLUOROTRIDECANOIC ACID		5.68	U		5.9	U					5.68	U	
PERFLUOROUNDECANOIC ACID		5.68	U		5.9	U					5.68	U	

PROJ_NO: 08005-WE08	NSAMPLE	MH-N104-20170721-REA			RB08-20170720			RB09-20170721			Upstream-Culvert-109-20170721		
SDG: 1700922	LAB_ID	1700922-02			1700922-05			1700922-06			1700922-03		
FRACTION: PFAS	SAMP_DATE	7/21/2017			7/20/2017			7/21/2017			7/21/2017		
MEDIA: WATER	QC_TYPE	NM			RB			RB			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					5.25	U		5.34	U		5.25	U	
N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID					5.25	U		5.34	U		5.25	U	
PENTADECAFLUOROOCTANOIC ACID		7.9	J	HP	5.25	U		5.34	U				
PERFLUOROBUTANESULFONIC ACID					5.25	U		5.34	U		67.7		
PERFLUORODECANOIC ACID					5.25	U		5.34	U		37.1		
PERFLUORODODECANOIC ACID					5.25	U		5.34	U		4.24	J	P
PERFLUOROHEPTANOIC ACID					5.25	U		5.34	U		92.3		
PERFLUOROHEXANESULFONIC ACID					5.25	U		5.34	U		449		
PERFLUOROHEXANOIC ACID					5.25	U		5.34	U		245		
PERFLUORONONANOIC ACID					5.25	U		5.34	U		30.4		
PERFLUOROOCTANE SULFONIC ACID					5.25	U		5.34	U		937		
PERFLUOROTETRADECANOIC ACID					5.25	U		5.34	U		5.25	U	
PERFLUOROTRIDECANOIC ACID					5.25	U		5.34	U		5.25	U	
PERFLUOROUNDECANOIC ACID					5.25	U		5.34	U		10.7		

PROJ_NO: 08005-WE08	NSAMPLE	Upstream-Culvert-109-20170721-RE		
SDG: 1700922	LAB_ID	1700922-03		
FRACTION: PFAS	SAMP_DATE	7/21/2017		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	NG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID				
N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID				
PENTADECAFLUOROOCTANOIC ACID		98.6	J	H
PERFLUOROBUTANESULFONIC ACID				
PERFLUORODECANOIC ACID				
PERFLUORODODECANOIC ACID				
PERFLUOROHEPTANOIC ACID				
PERFLUOROHEXANESULFONIC ACID				
PERFLUOROHEXANOIC ACID				
PERFLUORONONANOIC ACID				
PERFLUOROOCTANE SULFONIC ACID				
PERFLUOROTETRADECANOIC ACID				
PERFLUOROTRIDECANOIC ACID				
PERFLUOROUNDECANOIC ACID				

Appendix B

Results as Reported by the Laboratory

Sample ID: MH-L103-20170721

Modified EPA Method 537

Client Data

Name:	Tetra Tech
Project:	NAWC Trenton
Date Collected:	21-Jul-2017 10:30
Location:	NAWC TRENTON

Sample Data

Matrix:	Surface Water
Sample Size:	0.106 L

Laboratory Data

Lab Sample:	1700922-01	Date Received:	22-Jul-2017 8:54
QC Batch:	B7G0121	Date Extracted:	31-Jul-2017 12:30
Date Analyzed:	02-Aug-17 12:17	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	2.12	5.90	9.47	
PFHxA	4.36	2.58	5.90	9.47	J
PFHpA	1.94	0.699	5.90	9.47	J
PFHxS	2.05	1.12	5.90	9.47	J
PFOA	3.98	0.770	5.90	9.47	J, B
PFOS	4.90	0.955	5.90	9.47	J
PFNA	ND	0.958	5.90	9.47	
PFDA	ND	1.76	5.90	9.47	
MeFOSAA	ND	1.95	5.90	9.47	
PFUnA	ND	1.24	5.90	9.47	
EtFOSAA	ND	1.62	5.90	9.47	
PFDoA	ND	0.937	5.90	9.47	
PFTrDA	ND	0.584	5.90	9.47	
PFTeDA	ND	0.893	5.90	9.47	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	125	50 - 150	
IS	13C2-PFHxA	97.2	50 - 150	
IS	13C4-PFHpA	71.3	50 - 150	
IS	18O2-PFHxS	107	50 - 150	
IS	13C2-PFOA	83.9	50 - 150	
IS	13C8-PFOS	96.7	50 - 150	
IS	13C5-PFNA	88.3	50 - 150	
IS	13C2-PFDA	84.9	50 - 150	
IS	d3-MeFOSAA	84.9	50 - 150	
IS	13C2-PFUnA	90.7	50 - 150	
IS	d5-EtFOSAA	97.7	50 - 150	
IS	13C2-PFDoA	92.6	50 - 150	
IS	13C2-PFTeDA	95.5	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-N104-20170721

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 21-Jul-2017 11:40
Location: NAWC TRENTON

Sample Data

Matrix: Surface Water
Sample Size: 0.110 L

Laboratory Data

Lab Sample: 1700922-02 Date Received: 22-Jul-2017 8:54
QC Batch: B7G0121 Date Extracted: 31-Jul-2017 12:30
Date Analyzed: 02-Aug-17 12:28 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	2.03	5.68	9.07	
PFHxA	4.80	2.47	5.68	9.07	J
PFHpA	5.20	0.670	5.68	9.07	J
PFHxS	5.98	1.07	5.68	9.07	J
PFOA	9.08	0.738	5.68	9.07	B
PFOS	14.8	0.915	5.68	9.07	
PFNA	4.75	0.918	5.68	9.07	J
PFDA	ND	1.69	5.68	9.07	
MeFOSAA	ND	1.87	5.68	9.07	
PFUnA	ND	1.19	5.68	9.07	
EtFOSAA	ND	1.55	5.68	9.07	
PFDoA	ND	0.898	5.68	9.07	
PFTrDA	ND	0.560	5.68	9.07	
PFTeDA	ND	0.856	5.68	9.07	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	125	50 - 150	
IS	13C2-PFHxA	102	50 - 150	
IS	13C4-PFHpA	71.4	50 - 150	
IS	18O2-PFHxS	94.9	50 - 150	
IS	13C2-PFOA	84.9	50 - 150	
IS	13C8-PFOS	96.4	50 - 150	
IS	13C5-PFNA	85.0	50 - 150	
IS	13C2-PFDA	73.0	50 - 150	
IS	d3-MeFOSAA	96.6	50 - 150	
IS	13C2-PFUnA	102	50 - 150	
IS	d5-EtFOSAA	98.2	50 - 150	
IS	13C2-PFDoA	92.3	50 - 150	
IS	13C2-PFTeDA	98.1	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: Upstream-Culvert-109-20170721

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 21-Jul-2017 12:55
Location: NAWC TRENTON

Sample Data

Matrix: Surface Water
Sample Size: 0.119 L

Laboratory Data

Lab Sample: 1700922-03 Date Received: 22-Jul-2017 8:54
QC Batch: B7G0121 Date Extracted: 31-Jul-2017 12:30
Date Analyzed: 02-Aug-17 12:39 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	67.7	1.89	5.25	8.44	
PFHxA	245	2.30	5.25	8.44	
PFHpA	92.3	0.623	5.25	8.44	
PFHxS	449	0.999	5.25	8.44	
PFOA	79.2	0.687	5.25	8.44	B
PFOS	937	0.851	5.25	8.44	
PFNA	30.4	0.854	5.25	8.44	
PFDA	37.1	1.57	5.25	8.44	
MeFOSAA	ND	1.74	5.25	8.44	
PFUnA	10.7	1.11	5.25	8.44	
EtFOSAA	ND	1.44	5.25	8.44	
PFDoA	4.24	0.835	5.25	8.44	J
PFTrDA	ND	0.521	5.25	8.44	
PFTeDA	ND	0.796	5.25	8.44	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	122	50 - 150	
IS	13C2-PFHxA	94.9	50 - 150	
IS	13C4-PFHpA	71.9	50 - 150	
IS	18O2-PFHxS	112	50 - 150	
IS	13C2-PFOA	91.8	50 - 150	
IS	13C8-PFOS	107	50 - 150	
IS	13C5-PFNA	75.3	50 - 150	
IS	13C2-PFDA	73.7	50 - 150	
IS	d3-MeFOSAA	59.5	50 - 150	
IS	13C2-PFUnA	64.5	50 - 150	
IS	d5-EtFOSAA	63.6	50 - 150	
IS	13C2-PFDoA	62.0	50 - 150	
IS	13C2-PFTeDA	70.8	50 - 150	

DL - Detection limit
RL - Reporting limit

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

Sample ID: FRB03-20170721

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 21-Jul-2017 13:25
Location: NAWC TRENTON

Sample Data

Matrix: De-ionized Water
Sample Size: 0.110 L

Laboratory Data

Lab Sample: 1700922-04 Date Received: 22-Jul-2017 8:54
QC Batch: B7G0121 Date Extracted: 31-Jul-2017 12:30
Date Analyzed: 02-Aug-17 12:49 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	2.03	5.68	9.08	
PFHxA	ND	2.47	5.68	9.08	
PFHpA	ND	0.671	5.68	9.08	
PFHxS	ND	1.07	5.68	9.08	
PFOA	ND	0.739	5.68	9.08	
PFOS	ND	0.916	5.68	9.08	
PFNA	ND	0.919	5.68	9.08	
PFDA	ND	1.69	5.68	9.08	
MeFOSAA	ND	1.87	5.68	9.08	
PFUnA	ND	1.19	5.68	9.08	
EtFOSAA	ND	1.55	5.68	9.08	
PFDoA	ND	0.899	5.68	9.08	
PFTrDA	ND	0.560	5.68	9.08	
PFTeDA	ND	0.857	5.68	9.08	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	135	50 - 150	
IS	13C2-PFHxA	104	50 - 150	
IS	13C4-PFHpA	78.9	50 - 150	
IS	18O2-PFHxS	114	50 - 150	
IS	13C2-PFOA	90.8	50 - 150	
IS	13C8-PFOS	110	50 - 150	
IS	13C5-PFNA	91.6	50 - 150	
IS	13C2-PFDA	89.2	50 - 150	
IS	d3-MeFOSAA	77.5	50 - 150	
IS	13C2-PFUnA	80.7	50 - 150	
IS	d5-EtFOSAA	75.8	50 - 150	
IS	13C2-PFDoA	90.5	50 - 150	
IS	13C2-PFTeDA	95.3	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: RB08-20170720

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 20-Jul-2017 9:00
Location: NAWC TRENTON

Sample Data

Matrix: De-ionized Water
Sample Size: 0.119 L

Laboratory Data

Lab Sample: 1700922-05 Date Received: 22-Jul-2017 8:54
QC Batch: B7G0121 Date Extracted: 31-Jul-2017 12:30
Date Analyzed: 02-Aug-17 13:00 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.88	5.25	8.41	
PFHxA	ND	2.29	5.25	8.41	
PFHpA	ND	0.621	5.25	8.41	
PFHxS	ND	0.995	5.25	8.41	
PFOA	ND	0.684	5.25	8.41	
PFOS	ND	0.848	5.25	8.41	
PFNA	ND	0.851	5.25	8.41	
PFDA	ND	1.57	5.25	8.41	
MeFOSAA	ND	1.73	5.25	8.41	
PFUnA	ND	1.10	5.25	8.41	
EtFOSAA	ND	1.44	5.25	8.41	
PFDoA	ND	0.832	5.25	8.41	
PFTrDA	ND	0.519	5.25	8.41	
PFTeDA	ND	0.794	5.25	8.41	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	130	50 - 150	
IS	13C2-PFHxA	103	50 - 150	
IS	13C4-PFHpA	75.0	50 - 150	
IS	18O2-PFHxS	90.7	50 - 150	
IS	13C2-PFOA	85.3	50 - 150	
IS	13C8-PFOS	99.6	50 - 150	
IS	13C5-PFNA	82.5	50 - 150	
IS	13C2-PFDA	85.7	50 - 150	
IS	d3-MeFOSAA	56.0	50 - 150	
IS	13C2-PFUnA	70.4	50 - 150	
IS	d5-EtFOSAA	55.7	50 - 150	
IS	13C2-PFDoA	62.4	50 - 150	
IS	13C2-PFTeDA	77.0	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: RB09-20170721

Modified EPA Method 537

Client Data

Name: Tetra Tech
Project: NAWC Trenton
Date Collected: 21-Jul-2017 13:00
Location: NAWC TRENTON

Sample Data

Matrix: De-ionized Water
Sample Size: 0.117 L

Laboratory Data

Lab Sample: 1700922-06 Date Received: 22-Jul-2017 8:54
QC Batch: B7G0121 Date Extracted: 31-Jul-2017 12:30
Date Analyzed: 02-Aug-17 13:11 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.92	5.34	8.56	
PFHxA	ND	2.33	5.34	8.56	
PFHpA	ND	0.633	5.34	8.56	
PFHxS	ND	1.01	5.34	8.56	
PFOA	ND	0.697	5.34	8.56	
PFOS	ND	0.864	5.34	8.56	
PFNA	ND	0.867	5.34	8.56	
PFDA	ND	1.60	5.34	8.56	
MeFOSAA	ND	1.77	5.34	8.56	
PFUnA	ND	1.12	5.34	8.56	
EtFOSAA	ND	1.47	5.34	8.56	
PFDoA	ND	0.848	5.34	8.56	
PFTrDA	ND	0.529	5.34	8.56	
PFTeDA	ND	0.808	5.34	8.56	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	150	50 - 150	
IS	13C2-PFHxA	101	50 - 150	
IS	13C4-PFHpA	73.3	50 - 150	
IS	18O2-PFHxS	101	50 - 150	
IS	13C2-PFOA	97.3	50 - 150	
IS	13C8-PFOS	105	50 - 150	
IS	13C5-PFNA	88.6	50 - 150	
IS	13C2-PFDA	76.3	50 - 150	
IS	d3-MeFOSAA	71.6	50 - 150	
IS	13C2-PFUnA	79.8	50 - 150	
IS	d5-EtFOSAA	68.9	50 - 150	
IS	13C2-PFDoA	80.6	50 - 150	
IS	13C2-PFTeDA	73.3	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-L103-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Surface Water	Lab Sample:	1700922-01	Date Received:	22-Jul-2017 8:54
Project:	NAWC Trenton	Sample Size:	0.0806 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date Collected:	21-Jul-2017 10:30			Date Analyzed:	11-Aug-17 21:37	Column:	BEH C18
Location:	NAWC TRENTON						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFOA	3.00	1.01	7.75	12.4	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C2-PFOA	95.2	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-N104-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Surface Water	Lab Sample:	1700922-02	Date Received:	22-Jul-2017 8:54
Project:	NAWC Trenton	Sample Size:	0.108 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date Collected:	21-Jul-2017 11:40			Date Analyzed:	11-Aug-17 21:48	Column:	BEH C18
Location:	NAWC TRENTON						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFOA	7.90	0.752	5.79	9.24	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C2-PFOA	98.5	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: Upstream-Culvert-109-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Surface Water	Lab Sample:	1700922-03	Date Received:	22-Jul-2017 8:54
Project:	NAWC Trenton	Sample Size:	0.104 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date Collected:	21-Jul-2017 12:55			Date Analyzed:	11-Aug-17 21:59	Column:	BEH C18
Location:	NAWC TRENTON						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFOA	98.6	0.783	6.01	9.62	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C2-PFOA	87.4	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: FRB03-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	De-ionized Water	Lab Sample:	1700922-04	Date Received:	22-Jul-2017 8:54
Project:	NAWC Trenton	Sample Size:	0.116 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date Collected:	21-Jul-2017 13:25			Date Analyzed:	11-Aug-17 22:10	Column:	BEH C18
Location:	NAWC TRENTON						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFOA	ND	0.700	5.39	8.61	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C2-PFOA	101	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: RB08-20170720

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	De-ionized Water	Lab Sample:	1700922-05	Date Received:	22-Jul-2017 8:54
Project:	NAWC Trenton	Sample Size:	0.122 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date Collected:	20-Jul-2017 9:00			Date Analyzed:	11-Aug-17 22:20	Column:	BEH C18
Location:	NAWC TRENTON						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFOA	ND	0.667	5.12	8.19	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C2-PFOA	103	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: RB09-20170721

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	De-ionized Water	Lab Sample:	1700922-06	Date Received:	22-Jul-2017 8:54
Project:	NAWC Trenton	Sample Size:	0.120 L	QC Batch:	B7H0074	Date Extracted:	10-Aug-2017 8:51
Date Collected:	21-Jul-2017 13:00			Date Analyzed:	11-Aug-17 22:31	Column: BEH C18	
Location:	NAWC TRENTON						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFOA	ND	0.677	5.21	8.32	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C2-PFOA	88.8	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

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: 1700922 Temp: 2.0 °C
Storage ID: WR-8 Storage Secured: Yes ☑ No ☐

TAT (check one): Standard: ☐ 21 days; Rush (surcharge may apply): ☐ 14 days ☐ 7 days Specify:

Project ID: NAWC TRENTON PO#: 1132541-WR3 Sampler: CHUCK MEYER (name)

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
TETRA TECH	FOSTER PLAZA 7	661 ANDERSON DR WE	PITTSBURGH	PA 15220	412-921-2090	412-921-4040

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Charles Meyer	7/21/17	17:00	B. Benedict	07/22/17	0857
Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time

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: FED EX

Tracking No.: 6612199273 67

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	Mod. EPA Method 537: PFOA/PFOS	UCMR3 PFAS List:6	537 List: 14	Full List of 26	Other: Please List Below	EPA Method 537(DW only): PFOA/PFOS	UCMR3 PFAS List:6	PFAS List: 14	Comments
MH-L103-20170721	7/21/17	10:30	NAWC TRENTON	2	G	SW								X	
MH-N104-20170721	7/21/17	11:40	NAWC TRENTON	6	G	SW								X	MS/MSD
UPSTREAM-CULVERT-109-20170721	7/21/17	12:55	NAWC TRENTON	2	G	SW								X	
FRB03-20170721	7/21/17	13:25	NAWC TRENTON	2	G	DI								X	LAB SUPPLIED WATER
RB08-20170720	7/20/17	09:00	NAWC TRENTON	2	G	DI								X	
RB09-20170721	7/21/17	13:00	NAWC TRENTON	2	G	DI								X	

Special Instructions/Comments:

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:
Email: mary.mang@tetratech.com

Container Types: P= HDPE, PJ= HDPE Jar
O = Other:

Bottle Preservation Type: T = Thiosulfate,
TZ = Trizma:

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

SDG Number WE08
Vista Work Order No. 1700922
Case Narrative

Sample Condition on Receipt:

Three surface water samples and three DI water samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

Modified EPA Method 537

Samples "MH-L103-20170721", "MH-N104-20170721" and "Upstream-Culver-109-20170721" contained particulate and were centrifuged twice 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 initially extracted and analyzed within the method hold times. The samples were re-extracted for PFOA due to unacceptable levels of PFOA in the Method Blank. The PFOA contamination was traced to a set of samples with extremely high PFOA concentrations. The re-extractions were performed outside of the method hold times.

The original results, as well was the PFOA results from the re-extractions, are included in this report.

Quality Control

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

A Method Blank and Ongoing Precision and Recovery (OPR) samples were extracted and analyzed with the preparation batches. The PFOA concentration in the MB associated with prep batch B7G0121 is greater than 1/2 the LOQ. No other analytes were detected in the Method Blanks above 1/2 the LOQs. The OPR recoveries were within the method acceptance criteria.

The labeled standard recoveries for the QC and field samples were within the acceptance criteria.

As requested, an MS/MSD was performed on sample "MH-N104-20170721".

FORMER NAWC TRENTON
1700922

SAMPLE IDENTIFICATION	Upstream-Culvert-109-20170721	
COMPOUND	PFOA	
COMPOUND AREA	35498.496	
INTERNAL STANDARD AMOUNT (ng/ml)	120	
DILUTION FACTOR	1	
INTERNAL STANDARD AREA	44008.152	
AVERAGE RRF	1.132	
SAMPLE VOLUME (ml)	103.9	
VOLUME EXTRACT (ml)	1	
VOLUME INJECTED (µl)	0.1	
ml to L	1000	
CONCENTRATION =	82	ng/L

35498.496 x 120ng/ml x 0.1 uL x 1000ml x 1/(44008.152 x 1 x 103.9ml x 1L)

Vista Analytical Laboratory

Sample ID: Method Blank — Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7G0121	Lab Sample:	B7G0121-BLK1
Sample Size:	0.125 L	Date Extracted:	31-Jul-2017 12:30	Date Analyzed:	02-Aug-17 11:22 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.79	5.00	8.00	
PFHxA	ND	2.18	5.00	8.00	
PFHpA	ND	0.591	5.00	8.00	
PFHxS	ND	0.947	5.00	8.00	
PFOA	4.35	0.651	5.00	8.00	J
PFOS	ND	0.807	5.00	8.00	
PFNA	ND	0.810	5.00	8.00	
PFDA	ND	1.49	5.00	8.00	
MeFOSAA	ND	1.65	5.00	8.00	
PFUnA	ND	1.05	5.00	8.00	
EtFOSAA	ND	1.37	5.00	8.00	
PFDoA	ND	0.792	5.00	8.00	
PFTrDA	ND	0.494	5.00	8.00	
PFTeDA	ND	0.755	5.00	8.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	132	50 - 150	
IS	13C2-PFHxA	99.0	50 - 150	
IS	13C4-PFHpA	78.3	50 - 150	
IS	18O2-PFHxS	104	50 - 150	
IS	13C2-PFOA	91.5	50 - 150	
IS	13C8-PFOS	105	50 - 150	
IS	13C5-PFNA	86.5	50 - 150	
IS	13C2-PFDA	84.3	50 - 150	
IS	d3-MeFOSAA	81.7	50 - 150	
IS	13C2-PFUnA	76.0	50 - 150	
IS	d5-EtFOSAA	87.9	50 - 150	
IS	13C2-PFDoA	89.7	50 - 150	
IS	13C2-PFTeDA	82.6	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: OPR

Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7G0121	Lab Sample:	B7G0121-BS1
Sample Size:	0.125 L	Date Extracted:	31-Jul-2017 12:30	Date Analyzed:	02-Aug-17 11:01 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
PFBS	73.8	80.0	92.3	70 - 130	IS	13C3-PFBS	133	50 - 150
PFHxA	78.0	80.0	97.5	70 - 130	IS	13C2-PFHxA	103	50 - 150
PFHpA	72.5	80.0	90.6	70 - 130	IS	13C4-PFHpA	76.8	50 - 150
PFHxS	78.2	80.0	97.7	70 - 130	IS	18O2-PFHxS	109	50 - 150
PFOA	90.2	80.0	113	70 - 130	IS	13C2-PFOA	101	50 - 150
PFOS	77.1	80.0	96.4	70 - 130	IS	13C8-PFOS	108	50 - 150
PFNA	80.9	80.0	101	70 - 130	IS	13C5-PFNA	93.0	50 - 150
PFDA	80.2	80.0	100	70 - 130	IS	13C2-PFDA	81.0	50 - 150
MeFOSAA	75.0	80.0	93.8	70 - 130	IS	d3-MeFOSAA	77.0	50 - 150
PFUnA	80.8	80.0	101	70 - 130	IS	13C2-PFUnA	81.9	50 - 150
EtFOSAA	79.2	80.0	99.0	70 - 130	IS	d5-EtFOSAA	73.5	50 - 150
PFDoA	68.3	80.0	85.4	70 - 130	IS	13C2-PFDoA	85.6	50 - 150
PFTrDA	73.0	80.0	91.3	60 - 130	IS	13C2-PFTeDA	78.6	50 - 150
PFTeDA	77.6	80.0	97.0	70 - 130				

LCL-UCL - Lower control limit - upper control limit

Matrix Spike Results

Modified EPA Method 537

Source Client ID: MH-N104-20170721
Source LabNumber: 1700922-02
Matrix: Aqueous
Sample Size: 0.113/0.112 L

QC Batch: B7G0121
Date Extracted: 31-Jul-2017 12:30

Lab Sample: B7G0121-MS1/B7G0121-MSD1
Date Analyzed: 02-Aug-17 11:33 Column: BEH C18
02-Aug-17 11:44 Column: BEH C18

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit
PFBS	88.5	92.5		89.1	96.6	4.34		70 - 130	25
PFHxA	88.5	98.9		89.1	107	7.87		70 - 130	25
PFHpA	88.5	100.0		89.1	99.1	0.904		70 - 130	25
PFHxS	88.5	90.1		89.1	88.6	1.68		70 - 130	25
PFOA	88.5	**131**	B, H	89.1	121	7.94	B	70 - 130	25
PFOS	88.5	89.7		89.1	97.3	8.13		70 - 130	25
PFNA	88.5	99.2		89.1	92.9	6.56		70 - 130	25
PFDA	88.5	105		89.1	105	0		70 - 130	25
MeFOSAA	88.5	101		89.1	97.8	3.22		70 - 130	25
PFUnA	88.5	105		89.1	116	9.95		70 - 130	25
EtFOSAA	88.5	91.7		89.1	99.6	8.26		70 - 130	25
PFDoA	88.5	104		89.1	98.8	5.13		70 - 130	25
PFTrDA	88.5	103		89.1	110	6.57		60 - 130	25
PFTeDA	88.5	99.3		89.1	103	3.66		70 - 130	25

Labeled Standard		MS %R	MS Qualifiers	MSD %R	MS Qual.
IS	13C3-PFBS	126		129	
IS	13C2-PFHxA	98.0		97.6	
IS	13C4-PFHpA	68.0		75.5	
IS	18O2-PFHxS	106		111	
IS	13C2-PFOA	82.4		88.5	
IS	13C8-PFOS	106		99.5	
IS	13C5-PFNA	74.4		80.5	
IS	13C2-PFDA	88.6		72.6	
IS	d3-MeFOSAA	84.3		100	
IS	13C2-PFUnA	77.0		84.0	
IS	d5-EtFOSAA	90.5		98.9	
IS	13C2-PFDoA	86.1		97.8	
IS	13C2-PFTeDA	79.2		93.8	

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: Method Blank — Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7H0074	Lab Sample:	B7H0074-BLK1
Sample Size:	0.125 L	Date Extracted:	10-Aug-2017 8:51	Date Analyzed:	11-Aug-17 19:40 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
PFOA	ND	0.651	5.00	8.00		IS	13C2-PFOA	95.8	50 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

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

Only the linear isomer is reported for all other analytes.

Sample ID: OPR

Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7H0074	Lab Sample:	B7H0074-BS1
Sample Size:	0.125 L	Date Extracted:	10-Aug-2017 8:51	Date Analyzed:	11-Aug-17 19:08 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
PFOA	79.2	80.0	99.0	70 - 130	IS	13C2-PFOA	108	50 - 150

LCL-UCL - Lower control limit - upper control limit

Matrix Spike Results

Modified EPA Method 537

Source Client ID:	MH-N104-20170721	QC Batch:	B7H0074	Lab Sample:	B7H0074-MS1/B7H0074-MSD1
Source LabNumber:	1700922-02	Date Extracted:	10-Aug-2017 8:51	Date Analyzed:	11-Aug-17 20:34 Column: BEH C18
Matrix:	Aqueous				11-Aug-17 20:44 Column: BEH C18
Sample Size:	0.113/0.109 L				

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit
PFOA	88.2	111		91.8	107	3.67		70 - 130	25

	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
IS	13C2-PFOA	92.7		97.7	

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

Process Sheet

Workorder: 1700922

Prep Expiration: 2017-Aug-03
Client: Tetra Tech

Workorder Due: 14-Aug-17 00:00

TAT: 23

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

Prep Batch: B7G0121

Prep Data Entered: 8/2/17 7/C
Date and Initials

Version: 537 (14 Analyte)

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700922-01 A	☑	MH-L103-20170721	22-Jul-17 08:54	WR-2 E-5	
1700922-02 ABC	☑	MH-N104-20170721	22-Jul-17 08:54	WR-2 E-5	**MS/MSD**
1700922-03 A	☑	Upstream-Culvert-109-20170721	22-Jul-17 08:54	WR-2 E-5	
1700922-04 A	☑	FRB03-20170721	22-Jul-17 08:54	WR-2 E-5	
1700922-05 A	☑	RB08-20170720	22-Jul-17 08:54	WR-2 E-5	
1700922-06 A	☑	RB09-20170721	22-Jul-17 08:54	WR-2 E-5	

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

Vista PM: Martha Maier

Vial Box ID: Tequila Mocking Bird

Sample Reconciled By: HB 7/31/17 __/__/__

Page 1 of 1

Vista Analytical Laboratory

HRMS - 8

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
7/31/17	✓	1.00	100.01	2000.04	HB	Y
8/1/17	✓	1.00	100.00	2000.00	HB	Y
8/2/17	✓	0.99	100.00	2000.01	HB	Y
Ⓐ 8/3/17	✓	1.00	100.00	2000.05	HB	Y

Comments: Ⓐ calibration weights from air lab used because soil lab weights sent out for calibration. HB 8/3/17

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

Batch: B7G0121

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1700922-01	0.10565 ✓	NA	NA	1000	31-Jul-17 12:30	HAC			Surface Water	537M PFAS DOD (LOQ as
1700922-02	0.11025 ✓			1000	31-Jul-17 12:30	HAC			Surface Water	537M PFAS DOD (LOQ as
1700922-02	0.11025 ✓			1000	31-Jul-17 12:30	HAC			Surface Water	537M PFAS
1700922-03	0.11852 ✓			1000	31-Jul-17 12:30	HAC			Surface Water	537M PFAS DOD (LOQ as
1700922-04	0.11017 ✓			1000	31-Jul-17 12:30	HAC			De-ionized Water	537M PFAS DOD (LOQ as
1700922-05	0.11893 ✓			1000	31-Jul-17 12:30	HAC			De-ionized Water	537M PFAS DOD (LOQ as
1700922-06	0.11676 ✓			1000	31-Jul-17 12:30	HAC			De-ionized Water	537M PFAS DOD (LOQ as
1700925-01	0.12112 ✓			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700925-02	0.12178 ✓			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700925-03	0.12135 ✓			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700925-04	0.1192 ✓			1000	31-Jul-17 12:30	HAC			Water	537M PFAS
1700925-04	0.1192 ✓			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700925-05	0.1174 ✓			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700925-06	0.1185 ✓			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700929-01	0.11834 ✓			1000	31-Jul-17 12:30	HAC			QC Water	537M PFAS DOD (LOQ as
1700929-02	0.1157 ✓			1000	31-Jul-17 12:30	HAC			QC Water	537M PFAS DOD (LOQ as
1700938-01	0.11844 ✓			1000	31-Jul-17 12:30	HAC			Groundwater	537M PFAS DOD (LOQ as
1700938-02	0.12014 ✓			1000	31-Jul-17 12:30	HAC			Water	537M PFAS DOD (LOQ as
1700938-03	0.11247 ✓			1000	31-Jul-17 12:30	HAC			Groundwater	537M PFAS DOD (LOQ as
B7G0121-BLK1	0.125			1000	31-Jul-17 12:30	HAC				QC
B7G0121-BS1	0.125			1000	31-Jul-17 12:30	HAC	17D2705	10 ✓		QC
B7G0121-MS1	0.11301 ✓			1000	31-Jul-17 12:30	HAC	17D2705	10 ✓		QC
B7G0121-MS2	0.11554 ✓			1000	31-Jul-17 12:30	HAC	17D2705	10 ✓		QC
B7G0121-MSD1	0.11225 ✓			1000	31-Jul-17 12:30	HAC	17D2705	10 ✓		QC
B7G0121-MSD2	0.11866 ✓			1000	31-Jul-17 12:30	HAC	17D2705	10 ✓		QC

JL 8/2/17

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS

Method: 537M PFAS DOD (LOO as mRL)

B7G0121

Chemist: G. Mendiola

Prep Date/Time: ~~26~~ 31-Jul-17 ~~07:48~~ 12:30

am 7/31/17 am 7/31/17

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 (C7H0003)	RS CHEM/WIT DATE
☐	B7G0121-BLK1	5	2	0	2	NA	NA	(0.125)	am KBF 7/31/17	TK 7/31/17	am ZTC 7/31/17
☐	B7G0121-BS1	5	2	0	2	↓	↓	↓			
☐	B7G0121-MS1 1700922-02 (A)(B)(C)(D)	6	2	0	2	139.85	26.84	0.11301			
☐	B7G0121-MS2 1700925-04 (A)(D)	6	2	0	9	143.28	27.74	0.11554			
☐	B7G0121-MSD1 1700922-02 (A)(B)(C)(D)	6	2	0	6	139.21	26.96	0.11225			
☐	B7G0121-MSD2 1700925-04 (A)(D)	6	2	0	6	146.37	27.71	0.11866			
☐	1700922-01 (A)(B)(C)(D)	7	2	0	6	132.56	26.91	0.10565 ✓			
☐	1700922-02 (A)(B)(C)(D)	6	2	0	6	137.13	~~26.88~~ 26.88	0.11025 ✓			
☐	1700922-03 (A)(B)(D)	5	2	0	3	145.47	26.95	0.11852 ✓			
☐	1700922-04	5	2	0	2	136.92	26.75	0.11017 ✓			
☐	1700922-05	5	2	0	2	145.80	26.87	0.11893 ✓			
☐	1700922-06	5	2	0	2	143.50	26.74	0.11676			
☐	1700925-01 (A)	6	2	0	2	149.23	28.11	0.12112			
☐	1700925-02	5	2	0	2	149.37	27.59	0.12178			
☐	1700925-03 (A)	6	2	0	2	148.95	27.60	0.12135			

(A) sample was centrifuged to remove particulate. HB 7/31/17 (B) centrifuge solids extracted & placed in secondary container HB 7/31/17

IS Name	NS Name	RS Name
(V5) 17G1307, 10mL	(V1) 17D2705, 10mL	(V1) 17F3038, 10 mL

SPE Chem: Strata XAW 33µm 200mg 6mL

Ele SOLV: 0.5% NH4OH in MeOH/MeOH

Final Volume(s) 1mL

Check Out: Chemist/Date: HB 7/31/17

Check In: Chemist/Date: empty

Balance ID: HRMS-8

pH Adjusted: Chemist/Date: HB 7/31/17

Comments: Assume 1 g = 1 mL (C) samples were centrifuged twice. HB 7/31/17 (D) sample was foamy after HCl added. HB 7/31/17

Rx

Process Sheet

Workorder: 1700922

Prep Expiration: 2017-Aug-03
Client: Tetra Tech

Workorder Due: 14-Aug-17 00:00

TAT: 23

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

Prep Batch: B7H0074

Prep Data Entered: 8/11/17 [illegible]
Date and Initials

Version: 537 (14 Analyte)

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700922-01	☑	MH-L103-20170721	22-Jul-17 08:54	WR-2 E-5	125
1700922-02	☑	MH-N104-20170721	22-Jul-17 08:54	WR-2 E-5	**MS/MSD**
1700922-03	☑	Upstream-Culvert-109-20170721	22-Jul-17 08:54	WR-2 E-5	
1700922-04	☑	FRB03-20170721	22-Jul-17 08:54	WR-2 E-5	
1700922-05	☑	RB08-20170720	22-Jul-17 08:54	WR-2 E-5	
1700922-06	☑	RB09-20170721	22-Jul-17 08:54	WR-2 E-5	

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

Vista PM:Martha Maier

Vial Box ID: Reptillary

Sample Reconciled By: BP 8/10/17

Page 1 of 1

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	Acceptab (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
7/31/17	✓	1.00	100.01	2000.04	HB	Y
8/1/17	✓	1.00	100.00	2000.00	HB	Y
8/2/17	✓	0.99	100.00	2000.01	HB	Y
(A) 8/3/17	✓	1.00	100.00	2000.05	HB	Y
8/4/17	✓	1.00	100.04	2000.06	EL	Y
(A) 8/7/17		1.00	100.00	1999.99	KBF	Y
8/8/17		0.99	99.99	1999.98	EL	Y
(A) 8/9/17		1.00	100.01	1999.99	KBF	Y
(A) 8/10/17	✓	1.00	99.99	2000.01	TD	Y
(A) 8.11.17		1.00	100.00	1999.97	MC	Y

Comments: (A) calibration weights from air lab used because soil lab wei sent out for calibration. HB 8/3/17

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

Batch: B7H0074

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1700922-01RE1	0.0806	NA	NA	1000	10-Aug-17 08:51	BAP			Surface Water	537M PFAS DOD (LOQ as
1700922-02RE1	0.10828			1000	10-Aug-17 08:51	BAP			Surface Water	537M PFAS DOD (LOQ as
1700922-03RE1	0.1039			1000	10-Aug-17 08:51	BAP			Surface Water	537M PFAS DOD (LOQ as
1700922-04RE1	0.11621			1000	10-Aug-17 08:51	BAP			De-ionized Water	537M PFAS DOD (LOQ as
1700922-05RE1	0.12208			1000	10-Aug-17 08:51	BAP			De-ionized Water	537M PFAS DOD (LOQ as
1700922-06RE1	0.1202			1000	10-Aug-17 08:51	BAP			De-ionized Water	537M PFAS DOD (LOQ as
1700925-01RE1	0.12168			1000	10-Aug-17 08:51	BAP			Water	537M PFAS DOD (LOQ as
1700925-02RE1	0.11277			1000	10-Aug-17 08:51	BAP			Water	537M PFAS DOD (LOQ as
1700925-03RE1	0.11014			1000	10-Aug-17 08:51	BAP			Water	537M PFAS DOD (LOQ as
1700925-06RE1	0.1402			1000	31-Jul-17 12:30	BAP			Water	537M PFAS DOD (LOQ as
1700929-01RE1	0.12069			1000	10-Aug-17 08:51	BAP			QC Water	537M PFAS DOD (LOQ as
1700929-02RE1	0.11668			1000	10-Aug-17 08:51	BAP			QC Water	537M PFAS DOD (LOQ as
1700938-01RE1	0.11287			1000	10-Aug-17 08:51	BAP			Groundwater	537M PFAS DOD (LOQ as
1700938-02RE1	0.11825			1000	10-Aug-17 08:51	BAP			Water	537M PFAS DOD (LOQ as
1700938-03RE1	0.11598			1000	10-Aug-17 08:51	BAP			Groundwater	537M PFAS DOD (LOQ as
B7H0074-BLK1	0.125			1000	10-Aug-17 08:51	BAP				QC
B7H0074-BS1	0.125			1000	10-Aug-17 08:51	BAP	17G2428	10		QC
B7H0074-MS1	0.11333			1000	10-Aug-17 08:51	BAP	17G2428	10		QC
B7H0074-MSD1	0.10895			1000	10-Aug-17 08:51	BAP	17G2428	10		QC

JK 8/11/17

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS DOD (LOO as mRL)

B7H0074

Chemist: BP

Prep Date/Time: 10-Aug-17 08:51

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 (NA)	RS CHEM/WIT DATE
☐	B7H0074-BLK1	5	2	0	2	NA	NA	(0.125)	BP 8.10.17	BP 8.10.17	BP BP 8/10/17
☐	B7H0074-BS1	5	2	0	2	↓	↓	↓			
☐	B7H0074-MS1 (A) 1700922-02RE1	5	2	0	2	~~135.89~~	26.94	0.11333			
☐	B7H0074-MSD1 (A) 1700922-02RE1	5	2	0	2	135.89	26.94	0.10895			
☐	1700922-01RE1 (A)	5	2	0	2	107.41	26.81	0.08060			
☐	1700922-02RE1 (A)	5	2	0	2	135.17	26.89	0.10828			
☐	1700922-03RE1 (A)	5	2	0	2	130.91	27.01	0.10390			
☐	1700922-04RE1	5	2	0	2	142.93	26.72	0.11621			
☐	1700922-05RE1	5	2	0	2	149.05	26.97	0.12208			
☐	1700922-06RE1	5	2	0	2	146.92	26.72	0.12020			
☐	1700925-01RE1	6	2	0	2	149.86	28.18	0.12168			
☐	1700925-02RE1	5	2	0	2	140.45	27.68	0.11277			
☐	1700925-03RE1 (A)	6	2	0	2	137.76	27.62	0.11014			
☐	1700929-01RE1	6	2	0	2	147.61	26.92	0.12069			
☐	1700929-02RE1	5	2	0	2	143.47	26.79	0.11668			
☐	1700938-01RE1 (A)	6	2	0	–	140.00	27.13	0.11287			

IS Name	NS Name	RS Name
1761307, 10ul (V2)	1762428, 10ul (V5)	1710108, 10ul (V2)

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

Ele SOLV: 0.5% NH4OH in MeOH/MeOH

Final Volume(s) 1mL

Check Out: Chemist/Date: BP 8.10.17

Check In: Chemist/Date: Empty

Balance ID: HRMS-8

pH Adjusted: Chemist/Date: HB 8/10/17

Comments: Assume 1 g = 1 mL (A) Samples were centrifuged to remove particulate BP 8.10.17

Vista Analytical Laboratory

Dataset: U:\Q4.PRO\results\170802M1\170802M1-2.qld

Last Altered: Thursday, August 03, 2017 14:49:37 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:57:22 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: 170802M1_2, Date: 02-Aug-2017, Time: 10:40:05, ID: ST170802M1-1 PFC CS0 17H0201, Description: PFC CS0 17H0201

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	1	PFBA	213.0 > 168.8	1.36e3	1.38e4		1.41	1.36	1.24	1.08	107.9	70-130
2	2	PFPeA	263.1 > 218.9	2.05e3	2.44e4		2.77	2.65	1.05	1.07	106.7	
3	3	PFBS	299 > 79.7	5.48e2	3.45e3		2.96	2.89	1.99	1.02	102.0	
4	4	PFHxA	313.2 > 268.9	4.02e3	1.35e4		3.19	3.14	1.50	0.969	96.9	
5	5	PFHpA	363 > 318.9	4.05e3	3.93e4		3.45	3.41	1.29	1.01	101.4	
6	6	PFHxS	398.9 > 79.6	4.83e2	3.53e3		3.56	3.50	1.71	0.998	99.8	
7	7	6:2 FTS	427.1 > 407	1.07e3	1.08e4		3.64	3.60	1.24	1.11	111.3	
8	8	PFOA	413 > 368.7	6.28e3	6.55e4		3.65	3.61	1.20	1.10	110.4	
9	9	PFHpS	448.9 > 98.8	5.08e2	6.55e4		3.71	3.67	0.0970	1.04	104.2	
10	10	PFNA	462.9 > 418.8	5.72e3	6.09e4		3.83	3.80	1.17	1.01	101.3	
11	11	PFOSA	498.1 > 77.8	6.26e2	7.09e3		3.84	3.81	1.10	1.05	105.4	
12	12	PFOS	499 > 79.9	1.01e3	1.15e4		3.89	3.85	1.10	1.03	103.2	
13	13	PFDA	513 > 468.8	6.08e3	5.54e4		4.01	3.97	1.37	1.01	101.3	
14	14	8:2 FTS	527 > 506.9	1.14e3	8.50e3		4.00	3.96	1.67	1.14	114.0	
15	15	N-MeFOSAA	570.1 > 419	1.60e3	1.34e4		4.03	3.99	19.4	1.04	104.1	
16	16	N-EtFOSAA	584.2 > 419	1.14e3	1.34e4		4.10	4.06	13.8	0.915	91.5	
17	17	PFUnA	562.9 > 518.9	4.71e3	6.59e4		4.17	4.13	0.893	1.06	106.3	
18	18	PFDS	598.9 > 98.7	4.13e2	6.59e4		4.22	4.19	0.0782	1.01	100.5	
19	19	PFDoA	612.9 > 318.8	5.56e2	6.78e3		4.34	4.29	1.02	1.08	108.1	
20	20	N-MeFOSA	512.1 > 168.9	1.15e3	2.69e4		4.29	4.30	6.40	6.12	122.5	
21	21	PFTrDA	662.9 > 618.9	6.43e3	6.78e3		4.50	4.46	11.9	1.03	102.8	
22	22	PFTeDA	712.9 > 668.8	4.23e3	4.34e4		4.68	4.63	1.22	1.03	102.9	
23	23	N-EtFOSA	526.1 > 168.9	1.30e3	3.36e4		4.87	4.88	5.80	5.88	117.6	
24	24	PFHxDA	812.8 > 768.9	6.54e3	2.07e4		5.06	5.01	1.58	1.06	106.2	
25	25	PFODA	912.8 > 868.8	6.16e3	2.07e4		5.43	5.38	1.49	1.19	118.6	
26	26	N-MeFOSE	616.1 > 58.9	1.71e3	4.36e4		5.42	5.45	5.89	5.33	106.6	
27	27	N-EtFOSE	630.1 > 58.9	1.94e3	4.42e4		5.59	5.63	6.59	4.65	93.1	
28	28	13C3-PFBA	216.1 > 171.8	1.38e4	1.33e4	1.006	1.41	1.35	12.9	12.8	102.7	50-150
29	29	13C3-PFPeA	266 > 221.8	2.44e4	3.90e4	0.275	2.77	2.65	3.12	11.3	90.8	
30	30	13C3-PFBS	302 > 98.8	3.45e3	3.90e4	0.034	2.96	2.89	0.441	12.9	103.5	
31	31	13C2-PFHxA	315 > 269.8	1.35e4	3.90e4	0.334	3.19	3.14	1.72	5.16	103.1	

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8/3/17

Dataset: U:\Q4.PRO\results\170802M1\170802M1-2.qld

Last Altered: Thursday, August 03, 2017 14:49:37 Pacific Daylight Time
Printed: Thursday, August 03, 2017 14:57:22 Pacific Daylight Time

Name: 170802M1_2, Date: 02-Aug-2017, Time: 10:40:05, ID: ST170802M1-1 PFC CS0 17H0201, Description: PFC CS0 17H0201

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	3.93e4	3.90e4	0.414	3.45	3.41	5.03	12.1	97.2
33	33	18O2-PFHxS	403 > 102.6	3.53e3	7.48e3	0.475	3.56	3.49	5.91	12.4	99.4
34	34	13C2-6:2 FTS	429.1 > 408.9	1.08e4	5.22e4	0.214	3.64	3.61	2.58	12.1	96.6
35	35	13C2-PFOA	414.9 > 369.7	6.55e4	5.22e4	1.298	3.65	3.62	15.7	12.1	96.6
36	36	13C5-PFNA	468.2 > 422.9	6.09e4	5.61e4	1.094	3.83	3.80	13.6	12.4	99.3
37	37	13C8-PFOSA	506.1 > 77.7	7.09e3	5.40e4	0.124	3.84	3.80	1.64	13.2	105.4
38	38	13C8-PFOS	507 > 79.9	1.15e4	9.58e3	1.153	3.89	3.85	14.9	13.0	103.7
39	39	13C2-PFDA	515.1 > 469.9	5.54e4	6.22e4	1.059	4.01	3.97	11.1	10.5	84.1
40	40	13C2-8:2 FTS	529.1 > 508.7	8.50e3	6.22e4	0.129	4.00	3.96	1.71	13.3	106.2
41	41	d3-N-MeFOSAA	573.3 > 419	1.34e4	5.40e4	0.019	4.03	3.99	3.10	161	98.8
42	42	d5-N-EtFOSAA	589.3 > 419	1.34e4	5.40e4	0.019	4.12	4.06	3.11	164	101.0
43	43	13C2-PFUnA	565 > 519.8	6.59e4	5.40e4	1.172	4.17	4.14	15.2	13.0	104.1
44	44	13C2-PFDoA	615 > 569.7	6.78e3	5.40e4	0.118	4.34	4.29	1.57	13.2	105.9
45	45	d3-N-MeFOSA	515.2 > 168.9	2.69e4	5.40e4	0.040	4.29	4.33	6.23	154	102.7
46	46	13C2-PFTeDA	714.8 > 669.6	4.34e4	5.40e4	0.801	4.68	4.64	10.0	12.5	100.2
47	47	d5-N-ETFOSA	531.1 > 168.9	3.36e4	5.40e4	0.055	5.01	4.92	7.78	141	94.2
48	48	13C2-PFHxDA	815 > 769.7	2.07e4	5.40e4	0.991	5.06	5.00	4.79	4.83	96.7
49	49	d7-N-MeFOSE	623.1 > 58.9	4.36e4	5.40e4	0.065	5.42	5.44	10.1	155	103.2
50	50	d9-N-EtFOSE	639.2 > 58.8	4.42e4	5.40e4	0.065	5.59	5.62	10.2	158	105.2
51	51	13C4-PFBA	217 > 171.8	1.33e4	1.33e4	1.000	1.41	1.36	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	3.90e4	3.90e4	1.000	3.19	3.14	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	7.48e3	7.48e3	1.000	3.56	3.49	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	5.22e4	5.22e4	1.000	3.65	3.62	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	5.61e4	5.61e4	1.000	3.83	3.80	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	9.58e3	9.58e3	1.000	3.89	3.85	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	6.22e4	6.22e4	1.000	4.01	3.97	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	5.40e4	5.40e4	1.000	4.17	4.13	12.5	12.5	100.0

50-150

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Dataset: U:\Q4.PRO\results\170802M1\170802M1-22.qld

Last Altered: Thursday, August 03, 2017 15:04:12 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:05:44 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: 170802M1_22, Date: 02-Aug-2017, Time: 14:15:15, ID: ST170802M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	1	PFBA	213.0 > 168.8	1.49e4	1.75e4		1.41	1.38	10.7	9.80	98.0	70-130
2	2	PFPeA	263.1 > 218.9	2.69e4	3.36e4		2.77	2.68	9.98	10.4	104.5	
3	3	PFBS	299 > 79.7	6.19e3	4.55e3		2.96	2.92	17.0	8.99	89.9	
4	4	PFHxA	313.2 > 268.9	4.77e4	1.65e4		3.19	3.16	14.5	10.3	103.1	
5	5	PFHpA	363 > 318.9	5.26e4	5.57e4		3.45	3.43	11.8	9.82	98.2	
6	6	PFHxS	398.9 > 79.6	7.21e3	5.29e3		3.56	3.50	17.0	10.1	101.2	
7	7	6:2 FTS	427.1 > 407	1.09e4	1.21e4		3.64	3.62	11.2	10.0	100.0	
8	8	PFOA	413 > 368.7	6.19e4	7.90e4		3.65	3.64	9.79	10.1	101.1	
9	9	PFHpS	448.9 > 98.8	6.34e3	7.90e4		3.71	3.69	1.00	11.6	115.6	
10	10	PFNA	462.9 > 418.8	6.20e4	6.98e4		3.83	3.81	11.1	10.2	101.6	
11	11	PFOSA	498.1 > 77.8	6.71e3	8.59e3		3.84	3.83	9.76	9.12	91.2	
12	12	PFOS	499 > 79.9	1.10e4	1.41e4		3.89	3.87	9.74	9.52	95.2	
13	13	PFDA	513 > 468.8	6.90e4	7.21e4		4.01	3.98	12.0	9.84	98.4	
14	14	8:2 FTS	527 > 506.9	9.16e3	7.57e3		4.00	3.98	15.1	10.8	107.7	
15	15	N-MeFOSAA	570.1 > 419	1.78e4	1.49e4		4.03	4.02	194	10.9	108.9	
16	16	N-EtFOSAA	584.2 > 419	1.42e4	1.49e4		4.10	4.09	155	10.0	100.3	
17	17	PFUnA	562.9 > 518.9	4.63e4	7.20e4		4.17	4.15	8.03	10.5	104.9	
18	18	PFDS	598.9 > 98.7	4.58e3	7.20e4		4.22	4.20	0.795	9.88	98.8	
19	19	PFDoA	612.9 > 318.8	5.44e3	7.59e3		4.34	4.31	8.97	9.53	95.3	
20	20	N-MeFOSA	512.1 > 168.9	1.11e4	3.15e4		4.29	4.32	52.9	52.3	104.7	
21	21	PFTrDA	662.9 > 618.9	6.58e4	7.59e3		4.50	4.49	108	10.3	103.4	
22	22	PFTeDA	712.9 > 668.8	4.54e4	5.23e4		4.68	4.66	10.8	10.0	100.2	
23	23	N-EtFOSA	526.1 > 168.9	1.40e4	4.35e4		4.87	4.91	48.3	52.0	104.0	
24	24	PFHxDA	812.8 > 768.9	6.59e4	2.45e4		5.06	5.03	13.4	10.5	105.1	
25	25	PFODA	912.8 > 868.8	5.61e4	2.45e4		5.43	5.41	11.4	10.0	100.3	
26	26	N-MeFOSE	616.1 > 58.9	1.84e4	5.19e4		5.42	5.47	53.3	51.5	103.0	
27	27	N-EtFOSE	630.1 > 58.9	2.09e4	5.14e4		5.59	5.64	61.0	52.0	104.0	
28	28	13C3-PFBA	216.1 > 171.8	1.75e4	1.72e4	1.006	1.41	1.38	12.7	12.7	101.3	30-150
29	29	13C3-PFPeA	266 > 221.8	3.36e4	5.07e4	0.275	2.77	2.68	3.32	12.1	96.4	
30	30	13C3-PFBS	302 > 98.8	4.55e3	5.07e4	0.034	2.96	2.92	0.449	13.2	105.2	
31	31	13C2-PFHxA	315 > 269.8	1.65e4	5.07e4	0.334	3.19	3.16	1.63	4.87	97.5	

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8/3/17

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Dataset: U:\Q4.PRO\results\170802M1\170802M1-22.qld

Last Altered: Thursday, August 03, 2017 15:04:12 Pacific Daylight Time
Printed: Thursday, August 03, 2017 15:05:44 Pacific Daylight Time

Name: 170802M1_22, Date: 02-Aug-2017, Time: 14:15:15, ID: ST170802M1-2 PFC CS3 17G3105, Description: PFC CS3 17G3105

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	5.57e4	5.07e4	0.414	3.45	3.43	5.49	13.3	106.1
33	33	18O2-PFHxS	403 > 102.6	5.29e3	1.11e4	0.475	3.56	3.50	5.95	12.5	100.1
34	34	13C2-6:2 FTS	429.1 > 408.9	1.21e4	6.44e4	0.214	3.64	3.63	2.35	11.0	88.0
35	35	13C2-PFOA	414.9 > 369.7	7.90e4	6.44e4	1.298	3.65	3.64	15.3	11.8	94.5
36	36	13C5-PFNA	468.2 > 422.9	6.98e4	6.96e4	1.094	3.83	3.81	12.5	11.5	91.7
37	37	13C8-PFOSA	506.1 > 77.7	8.59e3	7.06e4	0.124	3.84	3.83	1.52	12.2	97.7
38	38	13C8-PFOS	507 > 79.9	1.41e4	1.21e4	1.153	3.89	3.87	14.6	12.6	101.2
39	39	13C2-PFDA	515.1 > 469.9	7.21e4	7.42e4	1.059	4.01	3.99	12.1	11.5	91.8
40	40	13C2-8:2 FTS	529.1 > 508.7	7.57e3	7.42e4	0.129	4.00	3.98	1.27	9.91	79.3
41	41	d3-N-MeFOSAA	573.3 > 419	1.49e4	7.06e4	0.019	4.03	4.02	2.64	136	84.0
42	42	d5-N-EtFOSAA	589.3 > 419	1.49e4	7.06e4	0.019	4.12	4.08	2.63	139	85.6
43	43	13C2-PFUnA	565 > 519.8	7.20e4	7.06e4	1.172	4.17	4.15	12.7	10.9	87.0
44	44	13C2-PFDoA	615 > 569.7	7.59e3	7.06e4	0.118	4.34	4.31	1.34	11.3	90.7
45	45	d3-N-MeFOSA	515.2 > 168.9	3.15e4	7.06e4	0.040	4.29	4.35	5.58	138	91.9
46	46	13C2-PFTeDA	714.8 > 669.6	5.23e4	7.06e4	0.801	4.68	4.66	9.26	11.6	92.5
47	47	d5-N-ETFOSA	531.1 > 168.9	4.35e4	7.06e4	0.055	5.01	4.95	7.69	140	93.1
48	48	13C2-PFHxDA	815 > 769.7	2.45e4	7.06e4	0.991	5.06	5.04	4.34	4.38	87.6
49	49	d7-N-MeFOSE	623.1 > 58.9	5.19e4	7.06e4	0.065	5.42	5.45	9.18	141	93.9
50	50	d9-N-EtFOSE	639.2 > 58.8	5.14e4	7.06e4	0.065	5.59	5.63	9.10	141	93.7
51	51	13C4-PFBA	217 > 171.8	1.72e4	1.72e4	1.000	1.41	1.38	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	5.07e4	5.07e4	1.000	3.19	3.16	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	1.11e4	1.11e4	1.000	3.56	3.50	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	6.44e4	6.44e4	1.000	3.65	3.64	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	6.96e4	6.96e4	1.000	3.83	3.81	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.21e4	1.21e4	1.000	3.89	3.87	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	7.42e4	7.42e4	1.000	4.01	3.99	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	7.06e4	7.06e4	1.000	4.17	4.15	12.5	12.5	100.0

50-150

Sample List: U:\Q4.PRO\SampleDB\170802M1.SPL
Last Modified: Wednesday, August 02, 2017 14:54:09 Pacific Daylight Time
Printed: Thursday, August 03, 2017 09:42:21 Pacific Daylight Time

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
1	170802M1_1	---	IPA	IPA	1.0000	1:48	Blank
2	170802M1_2	---	ST170802M1-1 PFC CS0 17H0201	PFC CS0 17H0201	1.0000	1:1	Analyte
3	170802M1_3	---	IPA	IPA	1.0000	1:48	Blank
4	170802M1_4	---	B7G0121-BS1 OPR 0.125	OPR	0.1250	1:3	Analyte
5	170802M1_5	---	IPA	IPA	1.0000	1:48	Blank
6	170802M1_6	---	B7G0121-BLK1 Method Blank 0.125	Method Blank	0.1250	1:4	Analyte
7	170802M1_7	---	B7G0121-MS1 Matrix Spike 0.11301	Matrix Spike	0.1130	1:5	Analyte
8	170802M1_8	---	B7G0121-MSD1 Matrix Spike Dup 0.11225	Matrix Spike Dup	0.1123	1:6	Analyte
9	170802M1_9	---	B7G0121-MS2 Matrix Spike 0.11554	Matrix Spike	0.1155	1:7	Analyte
10	170802M1_10	---	B7G0121-MSD2 Matrix Spike Dup 0.11866	Matrix Spike Dup	0.1187	1:8	Analyte
11	170802M1_11	---	1700922-01 MH-L103-20170721 0.10565	MH-L103-20170721	0.1056	1:9	Analyte
12	170802M1_12	---	1700922-02 MH-N104-20170721 0.11025	MH-N104-20170721	0.1103	1:10	Analyte
13	170802M1_13	---	1700922-03 Upstream-Culvert-109-20170721 0.11852	Upstream-Culvert-109-20170721	0.1185	1:11	Analyte
14	170802M1_14	---	1700922-04 FRB03-20170721 0.11017	FRB03-20170721	0.1102	1:12	Analyte
15	170802M1_15	---	1700922-05 RB08-20170720 0.11893	RB08-20170720	0.1189	1:13	Analyte
16	170802M1_16	---	1700922-06 RB09-20170721 0.11676	RB09-20170721	0.1168	1:14	Analyte
17	170802M1_17	---	1700925-01 I001BC43S-170724 0.12112	I001BC43S-170724	0.1211	1:15	Analyte
18	170802M1_18	---	1700925-02 SB01-170724 0.12178	SB01-170724	0.1218	1:16	Analyte
19	170802M1_19	---	1700925-03 I001BC50S-170724 0.12135	I001BC50S-170724	0.1214	1:17	Analyte
20	170802M1_20	---	1700925-04 I001MW52S-170724 0.1192	I001MW52S-170724	0.1192	1:18	Analyte
21	170802M1_21	---	IPA	IPA	1.0000	1:48	Analyte
22	170802M1_22	---	ST170802M1-2 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
23	170802M1_23	---	IPA	IPA	1.0000	1:48	Blank
24	170802M1_24	---	1700925-05 I001MW52X-170724 0.1174	I001MW52X-170724	0.1174	1:19	Analyte
25	170802M1_25	---	1700925-06 EB01-170724 0.1185	EB01-170724	0.1185	1:20	Analyte
26	170802M1_26	---	1700929-01 MATP01001 0.11834	MATP01001	0.1183	1:21	Analyte
27	170802M1_27	---	1700929-02 MATP01002 0.1157	MATP01002	0.1157	1:22	Analyte
28	170802M1_28	---	1700938-01 NORP08102 0.11844	NORP08102	0.1184	1:23	Analyte
29	170802M1_29	---	1700938-02 NORP08103 0.12014	NORP08103	0.1201	1:24	Analyte
30	170802M1_30	---	1700938-03 NORP08104 0.11247	NORP08104	0.1125	1:25	Analyte
31	170802M1_31	---	1700886-12 AT028-SD17-02-071317-0845 1.44	AT028-SD17-02-071317-0845	0.9987	1:26	Analyte
32	170802M1_32	---	1700888-03 HARRI-01-SB02-0-2 2.04	HARRI-01-SB02-0-2	1.0167	1:27	Analyte
33	170802M1_33	---	1700888-09 HARRI-02-SB01-6-8 1.47	HARRI-02-SB01-6-8	1.0058	1:28	Analyte
34	170802M1_34	---	1700889-06 HARRI-03-SB03-0-2 1.33	HARRI-03-SB03-0-2	0.9903	1:29	Analyte
35	170802M1_35	---	B7G0086-MS1 Matrix Spike 1.35	Matrix Spike	1.3500	1:30	Analyte
36	170802M1_36	---	IPA	IPA	1.0000	1:48	Analyte
37	170802M1_37	---	ST170802M1-3 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
38	170802M1_38	---	IPA	IPA	1.0000	1:48	Blank
39	170802M1_39	---	1700906-01 MW-50BR-20170717 0.125	MW-50BR-20170717	0.1211	1:31	Analyte
40	170802M1_40	---	1700906-03 RB-04-20170717 0.125	RB-04-20170717	0.1202	1:32	Analyte

✓ QM 8/3/17 AC 8/3/17

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
41	170802M1_41	---	1700906-04 MW-12BR-20170718 0.125	MW-12BR-20170718	0.1213	1:33	Analyte
42	170802M1_42	---	1700906-05 MW-02BR-20170718 0.125	MW-02BR-20170718	0.1208	1:34	Analyte
43	170802M1_43	---	1700906-06 RB-05-20170718 0.125	RB-05-20170718	0.1215	1:35	Analyte
44	170802M1_44	---	1700907-01 AT028-FB-01-071717-0850 0.125	AT028-FB-01-071717-0850	0.1198	1:36	Analyte
45	170802M1_45	---	1700907-02 AT028-MW17-02-071717-0950 0.125	AT028-MW17-02-071717-0950	0.1199	1:37	Analyte
46	170802M1_46	---	1700907-03 AT028-MW17-04-071717-1050 0.125	AT028-MW17-04-071717-1050	0.1204	1:38	Analyte
47	170802M1_47	---	B7G0105-MS1 Matrix Spike 0.125	Matrix Spike	0.1181	1:39	Analyte
48	170802M1_48	---	B7G0105-MSD1 Matrix Spike Dup 0.125	Matrix Spike Dup	0.1216	1:40	Analyte
49	170802M1_49	---	1700907-04 AT028-MW17-06-071717-1300 0.125	AT028-MW17-06-071717-1300	0.1250	1:41	Analyte
50	170802M1_50	---	1700907-06 AT028-MW17-07-071717-1520 0.125	AT028-MW17-07-071717-1520	0.1163	1:42	Analyte
51	170802M1_51	---	IPA	IPA	1.0000	1:48	Analyte
52	170802M1_52	---	ST170802M1-4 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
53	170802M1_53	---	IPA	IPA	1.0000	1:48	Blank
54	170802M1_54	---	1700907-08 AT028-MW17-05-071817-0835 0.125	AT028-MW17-05-071817-0835	0.1196	1:43	Analyte
55	170802M1_55	---	1700907-09 AT028-MW17-01-071817-0950 0.125	AT028-MW17-01-071817-0950	0.1159	1:44	Analyte
56	170802M1_56	---	1700875-05@40X MW-11S-20170713 0.11994	MW-11S-20170713	0.1199	1:45	Analyte
57	170802M1_57	---	IPA	IPA	1.0000	1:48	Blank
58	170802M1_58	---	B7H0006-BS1 OPR 0.005	OPR	0.0050	1:46	Analyte
59	170802M1_59	---	IPA	IPA	1.0000	1:48	Blank
60	170802M1_60	---	B7H0006-BLK1 Method Blank 0.005	Method Blank	0.0050	1:47	Analyte
61	170802M1_61	---	1700936-01 BULK TANK #1 0.005	BULK TANK #1	0.0050	2:1	Analyte
62	170802M1_62	---	1700936-02 BULK TANK #2 0.005	BULK TANK #2	0.0050	2:2	Analyte
63	170802M1_63	---	1700936-03 COW SAMPLE 0.005	COW SAMPLE	0.0050	2:3	Analyte
64	170802M1_64	---	1700936-04 OAKHURST Whole Pt. 0.005	OAKHURST Whole Pt.	0.0050	2:4	Analyte
65	170802M1_65	---	IPA	IPA	1.0000	1:48	Analyte
66	170802M1_66	---	ST170802M1-5 PFC CS3 17G3105	PFC CS3 17G3105	1.0000	1:2	Analyte
67	170802M1_67	---	IPA	IPA	1.0000	1:48	Blank

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

Dataset: U:\Q4.PRO\results\170811M2\170811M2-2.qld

Last Altered: Saturday, August 12, 2017 16:41:42 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:42:14 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 12 Aug 2017 16:32:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_2, Date: 11-Aug-2017, Time: 18:35:42, ID: ST170811M2-1 PFC CS0 17H1106, Description: PFC CS0 17H1106

(A) out of limit criteria, not used.

	#	Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec	
1	1	PFBA	213.0 > 168.8	1526.804	15896.248		1.000	1.73	1.04	104.45	70-130
2	2	PFPeA	263.1 > 218.9	2290.760	27362.303		1.000	2.85	0.98	98.47	
3	3	PFBS	299 > 79.7	482.625	3320.060		1.000	3.03	0.96	95.55	
4	4	PFHxA	313.2 > 268.9	3588.384	11502.362		1.000	3.23	0.73	73.01	
5	5	PFHpA	363 > 318.9	3516.268	35960.523		1.000	3.48	0.62	(A) 62.09	
6	6	PFHxS	398.9 > 79.6	428.208	3200.417		1.000	3.55	1.01	101.07	
7	7	6:2 FTS	427.1 > 407	991.113	11445.396		1.000	3.67	1.09	108.83	
8	8	PFOA	413 > 368.7	6056.989	65550.398		1.000	3.68	1.02	102.36	
9	9	PFHpS	448.9 > 98.8	484.435	65550.398		1.000	3.74	1.08	107.57	
10	10	PFNA	462.9 > 418.8	5996.742	61399.238		1.000	3.87	0.72	72.19	
11	11	PFOSA	498.1 > 77.8	568.032	6952.180		1.000	3.88	0.94	94.29	
12	12	PFOS	499 > 79.9	904.373	10122.739		1.000	3.92	1.08	108.19	
13	13	PFDA	513 > 468.8	5922.467	57358.012		1.000	4.04	1.04	103.91	
14	14	8:2 FTS	527 > 506.9	880.276	5777.006		1.000	4.04	1.34	(A) 134.39	
15	15	N-MeFOSAA	570.1 > 419	1627.344	13360.443		1.000	4.07	1.04	104.21	
16	16	N-EtFOSAA	584.2 > 419	1447.248	13874.303		1.000	4.14	1.04	104.29	
17	17	PFUnA	562.9 > 518.9	4680.717	64991.797		1.000	4.20	1.00	100.17	
18	18	PFDS	598.9 > 98.7	457.441	64991.797		1.000	4.25	0.94	93.53	
19	19	PFDoA	612.9 > 318.8	455.310	7639.764		1.000	4.37	0.84	83.99	
20	20	N-MeFOSA	512.1 > 168.9	946.892	27743.004		1.000	4.42	4.94	98.80	
21	21	PFTrDA	662.9 > 618.9	6957.736	7639.764		1.000	4.55	1.01	101.29	
22	22	PFTeDA	712.9 > 668.8	4867.505	50590.969		1.000	4.73	0.96	96.18	
23	23	N-EtFOSA	526.1 > 168.9	1273.096	35470.379		1.000	4.90	5.61	112.17	
24	24	PFHxDA	812.8 > 768.9	6941.739	23603.436		1.000	5.09	0.89	88.94	
25	25	PFODA	912.8 > 868.8	6606.429	23603.436		1.000	5.45	1.02	101.97	
26	26	N-MeFOSE	616.1 > 58.9	1374.597	38699.793		1.000	5.25	4.83	96.58	
27	27	N-EtFOSE	630.1 > 58.9	1522.963	37771.453		1.000	5.42	3.45	(A) 68.92	
28	28	13C3-PFBA	216.1 > 171.8	15896.248	17561.268	0.906	1.000	1.73	12.49	99.93	50-150
29	29	13C3-PFPeA	266 > 221.8	27362.303	38167.094	0.284	1.000	2.85	12.63	101.01	
30	30	13C3-PFBS	302 > 98.8	3320.060	38167.094	0.033	1.000	3.03	13.23	105.83	
31	31	13C2-PFHxA	315 > 269.8	11502.362	38167.094	0.304	1.000	3.23	4.96	99.25	

dm 8/12/17

Dataset: U:\Q4.PRO\results\170811M2\170811M2-2.qld

Last Altered: Saturday, August 12, 2017 16:41:42 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:42:14 Pacific Daylight Time

Name: 170811M2_2, Date: 11-Aug-2017, Time: 18:35:42, ID: ST170811M2-1 PFC CS0 17H1106, Description: PFC CS0 17H1106

	#	Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	35960.523	38167.094	0.384	1.000	3.49	12.27	98.13
33	33	18O2-PFHxS	403 > 102.6	3200.417	7658.811	0.417	1.000	3.55	12.52	100.18
34	34	13C2-6:2 FTS	429.1 > 408.9	11445.396	60030.492	0.202	1.000	3.67	11.81	94.52
35	35	13C2-PFOA	414.9 > 369.7	65550.398	60030.492	1.132	1.000	3.68	12.06	96.45
36	36	13C5-PFNA	468.2 > 422.9	61399.238	68212.227	0.946	1.000	3.87	11.89	95.14
37	37	13C8-PFOSA	506.1 > 77.7	6952.180	62654.039	0.119	1.000	3.87	11.61	92.92
38	38	13C8-PFOS	507 > 79.9	10122.739	10264.832	1.040	1.000	3.92	11.85	94.84
39	39	13C2-PFDA	515.1 > 469.9	57358.012	58465.094	0.971	1.000	4.04	12.63	101.06
40	40	13C2-8:2 FTS	529.1 > 508.7	5777.006	58465.094	0.140	1.000	4.04	8.80	70.44
41	41	d3-N-MeFOSAA	573.3 > 419	13360.443	62654.039	0.018	1.000	4.07	149.84	92.21
42	42	d5-N-EtFOSAA	589.3 > 419	13874.303	62654.039	0.018	1.000	4.14	151.83	93.43
43	43	13C2-PFUnA	565 > 519.8	64991.797	62654.039	1.085	1.000	4.21	11.95	95.59
44	44	13C2-PFDoA	615 > 569.7	7639.764	62654.039	0.123	1.000	4.37	12.38	99.03
45	45	d3-N-MeFOSA	515.2 > 168.9	27743.004	62654.039	0.043	1.000	4.45	127.93	85.28
46	46	13C2-PFTeDA	714.8 > 669.6	50590.969	62654.039	0.798	1.000	4.73	12.65	101.21
47	47	d5-N-ETFOSA	531.1 > 168.9	35470.379	62654.039	0.056	1.000	4.93	127.10	84.73
48	48	13C2-PFHxDA	815 > 769.7	23603.436	62654.039	0.926	1.000	5.09	5.08	101.66
49	49	d7-N-MeFOSE	623.1 > 58.9	38699.793	62654.039	0.059	1.000	5.24	129.88	86.59
50	50	d9-N-EtFOSE	639.2 > 58.8	37771.453	62654.039	0.059	1.000	5.40	126.69	84.46
51	51	13C4-PFBA	217 > 171.8	17561.268	17561.268	1.000	1.000	1.73	12.50	100.00
52	52	13C5-PFHxA	318 > 272.9	38167.094	38167.094	1.000	1.000	3.23	5.00	100.00
53	53	13C3-PFHxS	401.9 > 79.9	7658.811	7658.811	1.000	1.000	3.55	12.50	100.00
54	54	13C8-PFOA	421.3 > 376	60030.492	60030.492	1.000	1.000	3.68	12.50	100.00
55	55	13C9-PFNA	472.2 > 426.9	68212.227	68212.227	1.000	1.000	3.87	12.50	100.00
56	56	13C4-PFOS	503 > 79.9	10264.832	10264.832	1.000	1.000	3.92	12.50	100.00
57	57	13C6-PFDA	519.1 > 473.7	58465.094	58465.094	1.000	1.000	4.04	12.50	100.00
58	58	13C7-PFUnA	570.1 > 524.8	62654.039	62654.039	1.000	1.000	4.20	12.50	100.00

50-150

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

Dataset: U:\Q4.PRO\results\170811M2\170811M2-28.qld

Last Altered: Saturday, August 12, 2017 16:30:34 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:30:41 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 11:46:40
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170811M2_28, Date: 11-Aug-2017, Time: 23:14:14, ID: ST170811M2-2 PFC CS3 17H1105, Description: PFC CS3 17H1105

	#	Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	13967.642	15610.922		1.000	1.68	10.20	101.96
2	2	PFPeA	263.1 > 218.9	22539.412	27810.395		1.000	2.82	10.61	106.15
3	3	PFBS	299 > 79.7	4730.332	3328.019		1.000	3.01	10.27	102.68
4	4	PFHxA	313.2 > 268.9	33955.551	12602.975		1.000	3.23	10.17	101.68
5	5	PFHpA	363 > 318.9	36299.758	36499.418		1.000	3.48	10.54	105.37
6	6	PFHxS	398.9 > 79.6	4119.456	2962.842		1.000	3.55	9.88	98.78
7	7	6:2 FTS	427.1 > 407	8251.935	10117.797		1.000	3.67	10.94	109.43
8	8	PFOA	413 > 368.7	55049.531	65332.320		1.000	3.68	10.59	105.89
9	9	PFHpS	448.9 > 98.8	4444.959	65332.320		1.000	3.74	10.72	107.17
10	10	PFNA	462.9 > 418.8	56469.422	62806.094		1.000	3.87	10.95	109.46
11	11	PFOSA	498.1 > 77.8	6850.161	7885.450		1.000	3.87	10.31	103.13
12	12	PFOS	499 > 79.9	9305.381	10281.214		1.000	3.92	10.64	106.45
13	13	PFDA	513 > 468.8	55183.238	59125.195		1.000	4.04	10.21	102.13
14	14	8:2 FTS	527 > 506.9	6759.579	5882.761		1.000	4.04	10.39	103.89
15	15	N-MeFOSAA	570.1 > 419	15085.541	13420.082		1.000	4.07	9.45	94.55
16	16	N-EtFOSAA	584.2 > 419	12415.940	13316.688		1.000	4.14	9.67	96.72
17	17	PFUnA	562.9 > 518.9	42665.273	60167.199		1.000	4.21	10.87	108.71
18	18	PFDS	598.9 > 98.7	3781.925	60167.199		1.000	4.26	9.50	95.04
19	19	PFDoA	612.9 > 318.8	4448.306	7018.458		1.000	4.38	9.45	94.52
20	20	N-MeFOSA	512.1 > 168.9	10599.475	29829.063		1.000	4.41	59.76	119.52
21	21	PFTrDA	662.9 > 618.9	61208.441	7018.458		1.000	4.55	10.76	107.55
22	22	PFTeDA	712.9 > 668.8	42053.473	47475.164		1.000	4.74	9.67	96.73
23	23	N-EtFOSA	526.1 > 168.9	11913.469	38500.605		1.000	4.90	52.35	104.70
24	24	PFHxDA	812.8 > 768.9	59576.715	20444.906		1.000	5.11	10.05	100.55
25	25	PFODA	912.8 > 868.8	57783.109	20444.906		1.000	5.47	11.04	110.39
26	26	N-MeFOSE	616.1 > 58.9	13902.591	42590.539		1.000	5.29	52.57	105.14
27	27	N-EtFOSE	630.1 > 58.9	15773.499	40149.277		1.000	5.46	55.51	111.02
28	28	13C3-PFBA	216.1 > 171.8	15610.922	17039.010	0.906	1.000	1.67	12.64	101.14
29	29	13C3-PFPeA	266 > 221.8	27810.395	39679.504	0.284	1.000	2.82	12.34	98.75
30	30	13C3-PFBS	302 > 98.8	3328.019	39679.504	0.033	1.000	3.01	12.75	102.04
31	31	13C2-PFHxA	315 > 269.8	12602.975	39679.504	0.304	1.000	3.23	5.23	104.61

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Dataset: U:\Q4.PRO\results\170811M2\170811M2-28.qld

Last Altered: Saturday, August 12, 2017 16:30:34 Pacific Daylight Time
Printed: Saturday, August 12, 2017 16:30:41 Pacific Daylight Time

Name: 170811M2_28, Date: 11-Aug-2017, Time: 23:14:14, ID: ST170811M2-2 PFC CS3 17H1105, Description: PFC CS3 17H1105

	#	Name	Trace	Area	IS Resp	RRF	Wt./Vol	RT	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	36499.418	39679.504	0.384	1.000	3.48	11.98	95.80
33	33	18O2-PFHxS	403 > 102.6	2962.842	7668.526	0.417	1.000	3.55	11.58	92.63
34	34	13C2-6:2 FTS	429.1 > 408.9	10117.797	55810.352	0.202	1.000	3.67	11.23	89.87
35	35	13C2-PFOA	414.9 > 369.7	65332.320	55810.352	1.132	1.000	3.68	12.92	103.39
36	36	13C5-PFNA	468.2 > 422.9	62806.094	67192.922	0.946	1.000	3.87	12.35	98.80
37	37	13C8-PFOSA	506.1 > 77.7	7885.450	58560.172	0.119	1.000	3.87	14.09	112.76
38	38	13C8-PFOS	507 > 79.9	10281.214	10376.990	1.040	1.000	3.92	11.91	95.28
39	39	13C2-PFDA	515.1 > 469.9	59125.195	57907.773	0.971	1.000	4.04	13.15	105.17
40	40	13C2-8:2 FTS	529.1 > 508.7	5882.761	57907.773	0.140	1.000	4.04	9.05	72.42
41	41	d3-N-MeFOSAA	573.3 > 419	13420.082	58560.172	0.018	1.000	4.07	161.04	99.10
42	42	d5-N-EtFOSAA	589.3 > 419	13316.688	58560.172	0.018	1.000	4.14	155.92	95.95
43	43	13C2-PFUnA	565 > 519.8	60167.199	58560.172	1.085	1.000	4.21	11.84	94.68
44	44	13C2-PFDoA	615 > 569.7	7018.458	58560.172	0.123	1.000	4.38	12.17	97.33
45	45	d3-N-MeFOSA	515.2 > 168.9	29829.063	58560.172	0.043	1.000	4.44	147.16	98.11
46	46	13C2-PFTeDA	714.8 > 669.6	47475.164	58560.172	0.798	1.000	4.74	12.70	101.62
47	47	d5-N-ETFOSA	531.1 > 168.9	38500.605	58560.172	0.056	1.000	4.94	147.60	98.40
48	48	13C2-PFHxDA	815 > 769.7	20444.906	58560.172	0.926	1.000	5.11	4.71	94.21
49	49	d7-N-MeFOSE	623.1 > 58.9	42590.539	58560.172	0.059	1.000	5.28	152.93	101.96
50	50	d9-N-EtFOSE	639.2 > 58.8	40149.277	58560.172	0.059	1.000	5.44	144.08	96.05
51	51	13C4-PFBA	217 > 171.8	17039.010	17039.010	1.000	1.000	1.67	12.50	100.00
52	52	13C5-PFHxA	318 > 272.9	39679.504	39679.504	1.000	1.000	3.23	5.00	100.00
53	53	13C3-PFHxS	401.9 > 79.9	7668.526	7668.526	1.000	1.000	3.55	12.50	100.00
54	54	13C8-PFOA	421.3 > 376	55810.352	55810.352	1.000	1.000	3.68	12.50	100.00
55	55	13C9-PFNA	472.2 > 426.9	67192.922	67192.922	1.000	1.000	3.86	12.50	100.00
56	56	13C4-PFOS	503 > 79.9	10376.990	10376.990	1.000	1.000	3.92	12.50	100.00
57	57	13C6-PFDA	519.1 > 473.7	57907.773	57907.773	1.000	1.000	4.04	12.50	100.00
58	58	13C7-PFUnA	570.1 > 524.8	58560.172	58560.172	1.000	1.000	4.21	12.50	100.00

50-150

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
1	170811M2_1	---	IPA	IPA	1.0000	1:48	Blank
2	170811M2_2	X	ST170811M2-1 PFC CS0 17H1106	PFC CS0 17H1106	1.0000	1:1	Standard
3	170811M2_3	---	IPA	IPA	1.0000	1:48	Blank
4	170811M2_4	X	B7H0073-BS1 OPR 0.125	OPR	0.1250	1:3	Analyte
5	170811M2_5	X	B7H0074-BS1 OPR 0.125	OPR	0.1250	1:4	Analyte
6	170811M2_6	---	IPA	IPA	1.0000	1:48	Blank
7	170811M2_7	X	B7H0073-BLK1 Method Blank 0.125	Method Blank	0.1250	1:5	Analyte
8	170811M2_8	X	B7H0074-BLK1 Method Blank 0.125	Method Blank	0.1250	1:6	Analyte
9	170811M2_9	X	B7H0073-MS1 Matrix Spike 0.0005	Matrix Spike	0.0005	1:7	Analyte
10	170811M2_10	---	IPA	IPA	1.0000	1:48	Blank
11	170811M2_11	X	B7H0073-MSD1 Matrix Spike Dup 0.00139	Matrix Spike Dup	0.0014	1:8	Analyte
12	170811M2_12	---	IPA	IPA	1.0000	1:48	Blank
13	170811M2_13	X	B7H0074-MS1 Matrix Spike 0.125	Matrix Spike	0.1250	1:9	Analyte
14	170811M2_14	X	B7H0074-MSD1 Matrix Spike Dup 0.125	Matrix Spike Dup	0.1250	1:10	Analyte
15	170811M2_15	x	1700925-04RE2 I001MW52S-170724 0.00122	I001MW52S-170724	0.0012	1:11	Analyte
16	170811M2_16	---	IPA	IPA	1.0000	1:48	Blank
17	170811M2_17	x	1700925-05RE2 I001MW52X-170724 0.00133	I001MW52X-170724	0.0013	1:12	Analyte
18	170811M2_18	---	IPA	IPA	1.0000	1:48	Blank
19	170811M2_19	x	1700922-01RE1 MH-L103-20170721 0.10565	MH-L103-20170721	0.1056	1:14	Analyte
20	170811M2_20	x	1700922-02RE1 MH-N104-20170721 0.11025	MH-N104-20170721	0.1103	1:15	Analyte
21	170811M2_21	x	1700922-03RE1 Upstream-Culvert-109-20170721 0.1185	Upstream-Culvert-109-20170721	0.1185	1:16	Analyte
22	170811M2_22	x	1700922-04RE1 FRB03-20170721 0.11017	FRB03-20170721	0.1102	1:17	Analyte
23	170811M2_23	x	1700922-05RE1 RB08-20170720 0.11893	RB08-20170720	0.1189	1:18	Analyte
24	170811M2_24	---	1700922-06RE1 RB09-20170721 0.11676	RB09-20170721	0.1168	1:19	Analyte
25	170811M2_25	---	1700925-01RE1 I001BC43S-170724 0.12112	I001BC43S-170724	0.1211	1:20	Analyte
26	170811M2_26	---	1700925-02RE1 SB01-170724 0.12178	SB01-170724	0.1218	1:21	Analyte
27	170811M2_27	---	IPA	IPA	1.0000	1:48	Blank
28	170811M2_28	---	ST170811M2-2 PFC CS3 17H1105	PFC CS3 17H1105	1.0000	1:2	Standard
29	170811M2_29	---	IPA	IPA	1.0000	1:48	Blank
30	170811M2_30	---	1700925-03RE1 I001BC50S-170724 0.12135	I001BC50S-170724	0.1214	1:22	Analyte
31	170811M2_31	---	1700925-06RE1 EB01-170724 0.1185	EB01-170724	0.1185	1:23	Analyte
32	170811M2_32	---	1700929-01RE1 MATP01001 0.11834	MATP01001	0.1183	1:24	Analyte
33	170811M2_33	---	1700929-02RE1 MATP01002 0.1157	MATP01002	0.1157	1:25	Analyte
34	170811M2_34	---	1700938-01RE1 NORP08102 0.11844	NORP08102	0.1184	1:26	Analyte
35	170811M2_35	---	1700938-02RE1 NORP08103 0.12014	NORP08103	0.1201	1:27	Analyte
36	170811M2_36	---	1700938-03RE1 NORP08104 0.11247	NORP08104	0.1125	1:28	Analyte
37	170811M2_37	---	IPA	IPA	1.0000	1:48	Blank
38	170811M2_38	---	B7H0073-MS1@20X Matrix Spike 0.0005	Matrix Spike	0.0005	1:29	Analyte
39	170811M2_39	---	IPA	IPA	1.0000	1:48	Blank
40	170811M2_40	---	B7H0073-MSD1@20X Matrix Spike Dup 0.00139	Matrix Spike Dup	0.0014	1:30	Analyte

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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

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: 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

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: 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

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: 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

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: 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

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: 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

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: 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

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-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

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: 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

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: 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

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: 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

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-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

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: 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
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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

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

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
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

Quantify Totals Report MassLynx MassLynx V4.1 SCN945 SCN960
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

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

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:31:51 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 08:55:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999558
Calibration curve: -0.000132012 * x^2 + 1.09237 * x + 0.0597566
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

8/11/17

AM 8/11/17

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	170810M2_2	Standard	0.250	1.92	424.371	15542.773	0.341	0.3	3.1	NO	1.000	NO	bb
2	2	170810M2_3	Standard	0.500	1.92	754.429	15666.696	0.602	0.5	-0.7	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	1.92	1618.036	16473.561	1.228	1.1	6.9	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	1.92	2982.913	15767.530	2.365	2.1	5.5	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	1.91	7409.122	16464.104	5.625	5.1	2.0	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	1.91	14834.788	16369.950	11.328	10.3	3.3	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	1.92	71756.844	16361.661	54.821	50.4	0.9	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	1.91	168270.703	18859.416	111.530	103.3	3.3	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	1.91	386171.219	18778.650	257.055	242.4	-3.1	NO	1.000	NO	bb
10	10	170810M2_11	Standard	500.000	1.90	760893.688	18418.195	516.401	503.3	0.7	NO	1.000	NO	bb

Compound name: PFPeA
Correlation coefficient: r = 0.999003, r^2 = 0.998007
Calibration curve: 0.943317 * x + 0.117613
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	170810M2_2	Standard	0.250	2.95	653.409	27880.619	0.293	0.2	-25.7	NO	0.998	NO	bb
2	2	170810M2_3	Standard	0.500	2.96	1172.739	28322.555	0.518	0.4	-15.2	NO	0.998	NO	bb
3	3	170810M2_4	Standard	1.000	2.95	2464.434	28875.371	1.067	1.0	0.6	NO	0.998	NO	bb
4	4	170810M2_5	Standard	2.000	2.95	4911.096	27712.795	2.215	2.2	11.2	NO	0.998	NO	bb
5	5	170810M2_6	Standard	5.000	2.95	12193.369	29315.059	5.199	5.4	7.7	NO	0.998	NO	bb
6	6	170810M2_7	Standard	10.000	2.96	24281.596	29802.102	10.185	10.7	6.7	NO	0.998	NO	bb
7	7	170810M2_8	Standard	50.000	2.95	116934.664	28667.293	50.988	53.9	7.9	NO	0.998	NO	bb
8	8	170810M2_9	Standard	100.000	2.95	277388.313	33506.395	103.483	109.6	9.6	NO	0.998	NO	bb
9	9	170810M2_10	Standard	250.000	2.94	605455.688	32021.633	236.346	250.4	0.2	NO	0.998	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:31:51 Pacific Daylight Time

Compound name: PFPeA

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
10	10	170810M2_11	Standard	500.000	2.94	1128645.625	30833.635	457.555	484.9	-3.0	NO	0.998	NO	bb

Compound name: PFBS
Correlation coefficient: r = 0.999068, r^2 = 0.998137
Calibration curve: 1.7128 * x + 0.180452
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	170810M2_2	Standard	0.250	3.11	130.566	3242.905	0.503	0.2	-24.6	NO	0.998	NO	MM
2	2	170810M2_3	Standard	0.500	3.11	260.774	3291.404	0.990	0.5	-5.4	NO	0.998	NO	bb
3	3	170810M2_4	Standard	1.000	3.11	535.091	3435.015	1.947	1.0	3.1	NO	0.998	NO	bb
4	4	170810M2_5	Standard	2.000	3.12	1039.628	3373.359	3.852	2.1	7.2	NO	0.998	NO	bb
5	5	170810M2_6	Standard	5.000	3.12	2403.595	3305.415	9.090	5.2	4.0	NO	0.998	NO	bb
6	6	170810M2_7	Standard	10.000	3.12	5112.701	3622.048	17.644	10.2	2.0	NO	0.998	NO	bb
7	7	170810M2_8	Standard	50.000	3.11	25072.861	3433.760	91.273	53.2	6.4	NO	0.998	NO	bb
8	8	170810M2_9	Standard	100.000	3.11	56239.211	3757.638	187.083	109.1	9.1	NO	0.998	NO	bb
9	9	170810M2_10	Standard	250.000	3.10	124185.078	3568.171	435.045	253.9	1.6	NO	0.998	NO	bb
10	10	170810M2_11	Standard	500.000	3.10	218811.797	3303.260	828.015	483.3	-3.3	NO	0.998	NO	bb

Compound name: PFHxA
Correlation coefficient: r = 0.997990, r^2 = 0.995984
Calibration curve: 1.26213 * x + 0.638423
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	170810M2_2	Standard	0.250	3.32	973.456	11232.063	0.433			NO	0.996	NO	bbX!
2	2	170810M2_3	Standard	0.500	3.32	1845.170	11474.060	0.804	0.1	-73.8	NO	0.996	NO	bbX
3	3	170810M2_4	Standard	1.000	3.33	3912.146	12197.214	1.604	0.8	-23.5	NO	0.996	NO	bb
4	4	170810M2_5	Standard	2.000	3.32	7263.097	12310.407	2.950	1.8	-8.4	NO	0.996	NO	bb
5	5	170810M2_6	Standard	5.000	3.32	18200.357	12691.323	7.170	5.2	3.5	NO	0.996	NO	bb
6	6	170810M2_7	Standard	10.000	3.32	36521.176	13114.998	13.923	10.5	5.3	NO	0.996	NO	bb
7	7	170810M2_8	Standard	50.000	3.32	177809.250	12075.982	73.621	57.8	15.6	NO	0.996	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
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Compound name: PFHxA

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
8	8	170810M2_9	Standard	100.000	3.31	393866.563	14098.515	139.684	110.2	10.2	NO	0.996	NO	bb
9	9	170810M2_10	Standard	250.000	3.30	896249.938	13890.280	322.618	255.1	2.0	NO	0.996	NO	bb
10	10	170810M2_11	Standard	500.000	3.30	1694936.625	14073.479	602.174	476.6	-4.7	NO	0.996	NO	bb

Compound name: PFHpA
Correlation coefficient: r = 0.998520, r^2 = 0.997041
Calibration curve: 1.13042 * x + 0.520352
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	170810M2_2	Standard	0.250	3.57	1021.577	32744.631	0.390			NO	0.997	NO	bbXI
2	2	170810M2_3	Standard	0.500	3.57	2115.316	37927.195	0.697	0.2	-68.7	NO	0.997	NO	bbX
3	3	170810M2_4	Standard	1.000	3.58	4504.139	40517.414	1.390	0.8	-23.1	NO	0.997	NO	bb
4	4	170810M2_5	Standard	2.000	3.57	8848.725	40261.074	2.747	2.0	-1.5	NO	0.997	NO	bb
5	5	170810M2_6	Standard	5.000	3.57	20480.195	40307.914	6.351	5.2	3.2	NO	0.997	NO	bb
6	6	170810M2_7	Standard	10.000	3.57	39021.555	40487.199	12.047	10.2	2.0	NO	0.997	NO	bb
7	7	170810M2_8	Standard	50.000	3.57	204471.547	40139.113	63.676	55.9	11.7	NO	0.997	NO	bb
8	8	170810M2_9	Standard	100.000	3.56	439243.500	43301.590	126.798	111.7	11.7	NO	0.997	NO	bb
9	9	170810M2_10	Standard	250.000	3.55	986020.313	43919.035	280.636	247.8	-0.9	NO	0.997	NO	bb
10	10	170810M2_11	Standard	500.000	3.55	1853039.250	42249.473	548.243	484.5	-3.1	NO	0.997	NO	bb

Compound name: PFHxS
Coefficient of Determination: R^2 = 0.999727
Calibration curve: -0.00059344 * x^2 + 1.77788 * x + -0.123769
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	170810M2_2	Standard	0.250	3.64	104.558	2973.079	0.440	0.3	26.8	NO	1.000	NO	MM
2	2	170810M2_3	Standard	0.500	3.66	147.156	3418.749	0.538	0.4	-25.5	NO	1.000	NO	MM
3	3	170810M2_4	Standard	1.000	3.65	505.877	3603.866	1.755	1.1	5.7	NO	1.000	NO	MM
4	4	170810M2_5	Standard	2.000	3.64	970.668	3657.688	3.317	1.9	-3.2	NO	1.000	NO	MM
5	5	170810M2_6	Standard	5.000	3.64	2611.106	3713.872	8.788	5.0	0.4	NO	1.000	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:29:36 Pacific Daylight Time
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Compound name: PFHxS

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
6	6	170810M2_7	Standard	10.000	3.64	5130.715	3730.608	17.191	9.8	-2.3	NO	1.000	NO	MM
7	7	170810M2_8	Standard	50.000	3.64	24993.557	3648.731	85.624	49.0	-1.9	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	3.63	53419.980	3949.262	169.082	98.4	-1.6	NO	1.000	NO	MM
9	9	170810M2_10	Standard	250.000	3.63	117028.563	3521.197	415.443	255.5	2.2	NO	1.000	NO	db
10	10	170810M2_11	Standard	500.000	3.62	217790.609	3693.524	737.069	497.1	-0.6	NO	1.000	NO	db

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.998948
Calibration curve: -0.00172688 * x^2 + 0.945449 * x + 0.0555048
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	170810M2_2	Standard	0.250	3.75	200.187	10827.486	0.231	0.2	-25.7	NO	0.999	NO	bb
2	2	170810M2_3	Standard	0.500	3.77	486.104	10909.211	0.557	0.5	6.2	NO	0.999	NO	bb
3	3	170810M2_4	Standard	1.000	3.77	883.831	10654.119	1.037	1.0	4.0	NO	0.999	NO	bb
4	4	170810M2_5	Standard	2.000	3.76	1608.501	10669.914	1.884	1.9	-2.9	NO	0.999	NO	bb
5	5	170810M2_6	Standard	5.000	3.77	4302.423	10053.431	5.349	5.7	13.2	NO	0.999	NO	bb
6	6	170810M2_7	Standard	10.000	3.77	8047.447	10016.485	10.043	10.8	7.8	NO	0.999	NO	bb
7	7	170810M2_8	Standard	50.000	3.76	39191.262	11428.154	42.867	49.8	-0.4	NO	0.999	NO	bb
8	8	170810M2_9	Standard	100.000	3.75	85670.922	14187.794	75.479	96.9	-3.1	NO	0.999	NO	bb
9	9	170810M2_10	Standard	250.000	3.74	179225.031	17337.529	129.218	261.9	4.7	NO	0.999	NO	bb
10	10	170810M2_11	Standard	500.000	3.74	272261.250	19594.984	173.680			NO	0.999	NO	bbXI

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
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Compound name: PFOA
Correlation coefficient: r = 0.999304, r^2 = 0.998608
Calibration curve: 0.980416 * x + 0.151461
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	170810M2_2	Standard	0.250	3.78	1692.874	61642.953	0.343	0.2	-21.7	NO	0.999	NO	bb
2	2	170810M2_3	Standard	0.500	3.78	3289.689	67663.805	0.608	0.5	-6.9	NO	0.999	NO	bb
3	3	170810M2_4	Standard	1.000	3.78	6109.179	67625.266	1.129	1.0	-0.3	NO	0.999	NO	bb
4	4	170810M2_5	Standard	2.000	3.78	12862.762	69456.469	2.315	2.2	10.3	NO	0.999	NO	bb
5	5	170810M2_6	Standard	5.000	3.78	26522.385	61218.832	5.415	5.4	7.4	NO	0.999	NO	bb
6	6	170810M2_7	Standard	10.000	3.78	54100.707	64709.793	10.451	10.5	5.0	NO	0.999	NO	db
7	7	170810M2_8	Standard	50.000	3.78	248422.766	59761.141	51.962	52.8	5.7	NO	0.999	NO	bb
8	8	170810M2_9	Standard	100.000	3.77	559988.438	68978.094	101.479	103.4	3.4	NO	0.999	NO	bb
9	9	170810M2_10	Standard	250.000	3.76	1313767.500	68939.547	238.210	242.8	-2.9	NO	0.999	NO	bb
10	10	170810M2_11	Standard	500.000	3.75	2233816.250	64044.930	435.986	444.5	-11.1	NO	0.999	NO	bbX

Compound name: PFHpS
Correlation coefficient: r = 0.995991, r^2 = 0.991997
Calibration curve: 0.0786311 * x + 0.00779766
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	170810M2_2	Standard	0.250	3.84	115.389	61642.953	0.023	0.2	-20.6	NO	0.992	NO	bb
2	2	170810M2_3	Standard	0.500	3.85	247.359	67663.805	0.046	0.5	-3.6	NO	0.992	NO	bb
3	3	170810M2_4	Standard	1.000	3.85	467.065	67625.266	0.086	1.0	-0.1	NO	0.992	NO	bb
4	4	170810M2_5	Standard	2.000	3.85	1021.924	69456.469	0.184	2.2	12.0	NO	0.992	NO	bb
5	5	170810M2_6	Standard	5.000	3.85	2169.387	61218.832	0.443	5.5	10.7	NO	0.992	NO	bb
6	6	170810M2_7	Standard	10.000	3.84	4681.044	64709.793	0.904	11.4	14.0	NO	0.992	NO	bb
7	7	170810M2_8	Standard	50.000	3.84	21604.721	59761.141	4.519	57.4	14.7	NO	0.992	NO	bb
8	8	170810M2_9	Standard	100.000	3.83	49713.887	68978.094	9.009	114.5	14.5	NO	0.992	NO	bb
9	9	170810M2_10	Standard	250.000	3.82	114797.594	68939.547	20.815	264.6	5.8	NO	0.992	NO	bb
10	10	170810M2_11	Standard	500.000	3.82	185939.734	64044.930	36.291	461.4	-7.7	NO	0.992	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: PFNA
Correlation coefficient: r = 0.998366, r^2 = 0.996735
Calibration curve: 0.979826 * x + 0.513479
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	170810M2_2	Standard	0.250	3.97	1700.456	62033.051	0.343			NO	0.997	NO	bbXI
2	2	170810M2_3	Standard	0.500	3.98	2793.827	56715.289	0.616	0.1	-79.1	NO	0.997	NO	bbX
3	3	170810M2_4	Standard	1.000	3.98	6302.374	60834.914	1.295	0.8	-20.2	NO	0.997	NO	bb
4	4	170810M2_5	Standard	2.000	3.97	11665.123	61086.734	2.387	1.9	-4.4	NO	0.997	NO	bb
5	5	170810M2_6	Standard	5.000	3.97	26210.676	58121.105	5.637	5.2	4.6	NO	0.997	NO	bb
6	6	170810M2_7	Standard	10.000	3.97	54617.367	63817.566	10.698	10.4	3.9	NO	0.997	NO	bb
7	7	170810M2_8	Standard	50.000	3.97	241126.203	57678.809	52.256	52.8	5.6	NO	0.997	NO	bb
8	8	170810M2_9	Standard	100.000	3.96	570147.125	64540.883	110.424	112.2	12.2	NO	0.997	NO	bb
9	9	170810M2_10	Standard	250.000	3.96	1276250.000	63239.992	252.263	256.9	2.8	NO	0.997	NO	bb
10	10	170810M2_11	Standard	500.000	3.95	2011288.625	53648.328	468.628	477.8	-4.4	NO	0.997	NO	bb

Compound name: PFOSA
Correlation coefficient: r = 0.999155, r^2 = 0.998311
Calibration curve: 1.04987 * x + 0.0313857
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	170810M2_2	Standard	0.250	3.99	140.984	6459.227	0.273	0.2	-8.0	NO	0.998	NO	bb
2	2	170810M2_3	Standard	0.500	4.00	317.971	6795.560	0.585	0.5	5.4	NO	0.998	NO	bb
3	3	170810M2_4	Standard	1.000	3.99	679.323	7247.529	1.172	1.1	8.6	NO	0.998	NO	bb
4	4	170810M2_5	Standard	2.000	3.98	1225.911	6795.770	2.255	2.1	5.9	NO	0.998	NO	bb
5	5	170810M2_6	Standard	5.000	3.99	2957.377	7263.316	5.090	4.8	-3.6	NO	0.998	NO	bb
6	6	170810M2_7	Standard	10.000	3.99	6346.346	7321.714	10.835	10.3	2.9	NO	0.998	NO	bb
7	7	170810M2_8	Standard	50.000	3.98	29107.096	7239.874	50.255	47.8	-4.3	NO	0.998	NO	bb
8	8	170810M2_9	Standard	100.000	3.97	63806.832	8149.971	97.864	93.2	-6.8	NO	0.998	NO	bb
9	9	170810M2_10	Standard	250.000	3.96	141035.125	6965.660	253.090	241.0	-3.6	NO	0.998	NO	bb
10	10	170810M2_11	Standard	500.000	3.96	220683.688	5075.854	543.464	517.6	3.5	NO	0.998	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: PFOS
Coefficient of Determination: R^2 = 0.999791
Calibration curve: -0.000252174 * x^2 + 1.06922 * x + -0.0396957
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	170810M2_2	Standard	0.250	4.03	202.820	10626.669	0.239	0.3	4.1	NO	1.000	NO	MM
2	2	170810M2_3	Standard	0.500	4.04	413.253	11363.964	0.455	0.5	-7.5	NO	1.000	NO	MM
3	3	170810M2_4	Standard	1.000	4.03	862.786	10971.130	0.983	1.0	-4.3	NO	1.000	NO	MM
4	4	170810M2_5	Standard	2.000	4.03	1937.711	11205.850	2.161	2.1	3.0	NO	1.000	NO	MM
5	5	170810M2_6	Standard	5.000	4.03	4462.908	11041.968	5.052	4.8	-4.6	NO	1.000	NO	MM
6	6	170810M2_7	Standard	10.000	4.03	8765.405	11122.137	9.851	9.3	-7.3	NO	1.000	NO	MM
7	7	170810M2_8	Standard	50.000	4.03	43448.457	10002.095	54.299	51.4	2.9	NO	1.000	NO	MM
8	8	170810M2_9	Standard	100.000	4.02	95483.617	11632.687	102.603	98.3	-1.7	NO	1.000	NO	MM
9	9	170810M2_10	Standard	250.000	4.01	215446.594	10617.809	253.638	252.3	0.9	NO	1.000	NO	MM
10	10	170810M2_11	Standard	500.000	4.01	348312.906	9250.272	470.679	499.0	-0.2	NO	1.000	NO	MM

Compound name: PFDA
Correlation coefficient: r = 0.999612, r^2 = 0.999225
Calibration curve: 1.13105 * x + 0.115427
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	170810M2_2	Standard	0.250	4.15	1467.511	55995.238	0.328	0.2	-25.0	NO	0.999	NO	bb
2	2	170810M2_3	Standard	0.500	4.16	2956.190	55977.539	0.660	0.5	-3.7	NO	0.999	NO	bb
3	3	170810M2_4	Standard	1.000	4.16	6754.155	58804.391	1.436	1.2	16.7	NO	0.999	NO	bb
4	4	170810M2_5	Standard	2.000	4.15	10501.298	50928.629	2.577	2.2	8.8	NO	0.999	NO	bb
5	5	170810M2_6	Standard	5.000	4.16	26044.916	56490.598	5.763	5.0	-0.1	NO	0.999	NO	bb
6	6	170810M2_7	Standard	10.000	4.16	53593.426	59644.734	11.232	9.8	-1.7	NO	0.999	NO	bb
7	7	170810M2_8	Standard	50.000	4.16	238216.063	50433.004	59.043	52.1	4.2	NO	0.999	NO	bb
8	8	170810M2_9	Standard	100.000	4.14	591185.688	63572.438	116.243	102.7	2.7	NO	0.999	NO	bb
9	9	170810M2_10	Standard	250.000	4.13	1293616.750	58295.023	277.386	245.1	-1.9	NO	0.999	NO	bb
10	10	170810M2_11	Standard	500.000	4.13	1924513.000	52405.832	459.041	405.8	-18.8	NO	0.999	NO	bbX

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.997950
Calibration curve: -0.00480406 * x^2 + 1.4337 * x + -0.0133124
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	170810M2_2	Standard	0.250	4.15	222.118	7665.451	0.362	0.3	4.9	NO	0.998	NO	bb
2	2	170810M2_3	Standard	0.500	4.16	397.530	7353.410	0.676	0.5	-3.7	NO	0.998	NO	bb
3	3	170810M2_4	Standard	1.000	4.15	986.639	7736.133	1.594	1.1	12.5	NO	0.998	NO	bb
4	4	170810M2_5	Standard	2.000	4.15	1700.260	7913.699	2.686	1.9	-5.3	NO	0.998	NO	bb
5	5	170810M2_6	Standard	5.000	4.15	3979.425	7743.167	6.424	4.6	-8.8	NO	0.998	NO	bb
6	6	170810M2_7	Standard	10.000	4.15	7871.591	7632.894	12.891	9.3	-7.1	NO	0.998	NO	bb
7	7	170810M2_8	Standard	50.000	4.15	36677.406	7336.241	62.494	53.0	6.0	NO	0.998	NO	bb
8	8	170810M2_9	Standard	100.000	4.14	73436.234	9762.668	94.027	97.3	-2.7	NO	0.998	NO	bb
9	9	170810M2_10	Standard	250.000	4.13	154924.188	11954.295	161.996			NO	0.998	NO	bbXI
10	10	170810M2_11	Standard	500.000	4.12	222765.531	13632.657	204.257			NO	0.998	NO	bbXI

Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.999893
Calibration curve: -0.00750568 * x^2 + 19.4398 * x + -0.45786
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	170810M2_2	Standard	0.250	4.17	319.184	13096.980	3.960	0.2	-9.1	NO	1.000	NO	bb
2	2	170810M2_3	Standard	0.500	4.19	832.861	13619.695	9.937	0.5	7.0	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	4.19	1638.138	13420.139	19.836	1.0	4.4	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	4.18	3473.874	14342.013	39.360	2.0	2.5	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	4.18	7888.805	14009.009	91.508	4.7	-5.2	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	4.19	15596.266	13329.100	190.140	9.8	-1.6	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	4.18	74786.219	12505.077	971.826	51.0	2.0	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	4.17	166516.688	14369.895	1883.031	100.8	0.8	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	4.16	363121.188	13581.694	4344.612	247.1	-1.2	NO	1.000	NO	bb
10	10	170810M2_11	Standard	500.000	4.16	577726.813	11942.306	7861.179	501.5	0.3	NO	1.000	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.999638
Calibration curve: -0.00353476 * x^2 + 15.6313 * x + 0.651764
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	170810M2_2	Standard	0.250	4.26	313.074	13212.761	3.850	0.2	-18.1	NO	1.000	NO	bb
2	2	170810M2_3	Standard	0.500	4.26	835.143	13188.293	10.290	0.6	23.3	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	4.26	1459.771	13739.960	17.264	1.1	6.3	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	4.25	2723.785	13472.679	32.853	2.1	3.0	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	4.25	6536.180	13386.724	79.342	5.0	0.8	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	4.25	13418.110	14147.375	154.123	9.8	-1.6	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	4.25	64230.766	13121.947	795.423	51.4	2.9	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	4.24	148325.734	15456.478	1559.406	102.1	2.1	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	4.23	327290.563	14790.417	3595.890	243.4	-2.6	NO	1.000	NO	bb
10	10	170810M2_11	Standard	500.000	4.23	562908.563	13123.576	6970.100	503.1	0.6	NO	1.000	NO	bb

Compound name: PFUnA
Coefficient of Determination: R^2 = 0.995537
Calibration curve: -0.000304422 * x^2 + 0.810482 * x + 0.0887281
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	170810M2_2	Standard	0.250	4.33	1082.861	57444.809	0.236	0.2	-27.5	NO	0.996	NO	bb
2	2	170810M2_3	Standard	0.500	4.34	2396.822	62078.648	0.483	0.5	-2.8	NO	0.996	NO	bb
3	3	170810M2_4	Standard	1.000	4.34	4977.892	64503.668	0.965	1.1	8.1	NO	0.996	NO	bb
4	4	170810M2_5	Standard	2.000	4.33	9185.262	59270.816	1.937	2.3	14.1	NO	0.996	NO	bb
5	5	170810M2_6	Standard	5.000	4.33	21770.973	69700.664	3.904	4.7	-5.7	NO	0.996	NO	bb
6	6	170810M2_7	Standard	10.000	4.33	40820.391	61611.820	8.282	10.1	1.5	NO	0.996	NO	bb
7	7	170810M2_8	Standard	50.000	4.33	192810.016	52882.594	45.575	57.4	14.7	NO	0.996	NO	bb
8	8	170810M2_9	Standard	100.000	4.31	448601.406	68600.250	81.742	104.9	4.9	NO	0.996	NO	bb
9	9	170810M2_10	Standard	250.000	4.30	1001369.188	74813.570	167.311	225.4	-9.8	NO	0.996	NO	bb
10	10	170810M2_11	Standard	500.000	4.30	1654232.125	61521.715	336.107	513.7	2.7	NO	0.996	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: PFDS
Coefficient of Determination: R^2 = 0.992589
Calibration curve: -4.87611e-005 * x^2 + 0.0819404 * x + 0.0113831
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	170810M2_2	Standard	0.250	4.38	50.134	57444.809	0.011			NO	0.993	NO	MMXI
2	2	170810M2_3	Standard	0.500	4.39	251.218	62078.648	0.051	0.5	-4.3	NO	0.993	NO	bb
3	3	170810M2_4	Standard	1.000	4.39	485.986	64503.668	0.094	1.0	1.1	NO	0.993	NO	bb
4	4	170810M2_5	Standard	2.000	4.38	806.569	59270.816	0.170	1.9	-3.0	NO	0.993	NO	bb
5	5	170810M2_6	Standard	5.000	4.38	2118.120	69700.664	0.380	4.5	-9.8	NO	0.993	NO	bb
6	6	170810M2_7	Standard	10.000	4.38	4130.849	61611.820	0.838	10.2	1.5	NO	0.993	NO	bb
7	7	170810M2_8	Standard	50.000	4.38	19476.701	52882.594	4.604	58.1	16.1	NO	0.993	NO	bb
8	8	170810M2_9	Standard	100.000	4.36	45542.465	68600.250	8.299	108.1	8.1	NO	0.993	NO	bb
9	9	170810M2_10	Standard	250.000	4.36	92623.195	74813.570	15.476	216.7	-13.3	NO	0.993	NO	bb
10	10	170810M2_11	Standard	500.000	4.35	145684.594	61521.715	29.600	525.3	5.1	NO	0.993	NO	bb

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999746
Calibration curve: -0.000238279 * x^2 + 0.835861 * x + 0.0431344
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	170810M2_2	Standard	0.250	4.51	126.520	6520.931	0.243	0.2	-4.6	NO	1.000	NO	bb
2	2	170810M2_3	Standard	0.500	4.53	246.742	7169.665	0.430	0.5	-7.4	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	4.52	609.030	7950.386	0.958	1.1	9.4	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	4.51	1069.381	7572.749	1.765	2.1	3.1	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	4.51	2402.908	6676.272	4.499	5.3	6.8	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	4.51	4358.342	7074.396	7.701	9.2	-8.1	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	4.51	21732.080	6639.138	40.917	49.6	-0.8	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	4.49	51974.469	7805.791	83.231	102.5	2.5	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	4.48	109401.664	7118.316	192.113	247.2	-1.1	NO	1.000	NO	bb
10	10	170810M2_11	Standard	500.000	4.48	198369.359	6906.029	359.051	501.1	0.2	NO	1.000	NO	bb

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: N-MeFOSA
Correlation coefficient: r = 0.995786, r^2 = 0.991590
Calibration curve: 0.878916 * x + 0.777845
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	170810M2_2	Standard	1.250	4.55	296.818	27716.932	1.606	0.9	-24.6	NO	0.992	NO	bb
2	2	170810M2_3	Standard	2.500	4.56	506.989	27527.555	2.763	2.3	-9.7	NO	0.992	NO	bb
3	3	170810M2_4	Standard	5.000	4.56	1040.113	27554.281	5.662	5.6	11.1	NO	0.992	NO	bb
4	4	170810M2_5	Standard	10.000	4.56	2132.267	27954.211	11.442	12.1	21.3	NO	0.992	NO	bb
5	5	170810M2_6	Standard	25.000	4.55	4991.766	26972.852	27.760	30.7	22.8	NO	0.992	NO	bb
6	6	170810M2_7	Standard	50.000	4.54	10478.551	29265.723	53.707	60.2	20.4	NO	0.992	NO	bb
7	7	170810M2_8	Standard	250.000	4.53	50625.969	29202.176	260.046	295.0	18.0	NO	0.992	NO	db
8	8	170810M2_9	Standard	500.000	4.51	118740.742	35066.203	507.928	577.0	15.4	NO	0.992	NO	bb
9	9	170810M2_10	Standard	1250.000	4.50	273392.375	36176.391	1133.581	1288.9	3.1	NO	0.992	NO	bb
10	10	170810M2_11	Standard	2500.000	4.50	473733.750	34819.609	2040.806	2321.1	-7.2	NO	0.992	NO	db

Compound name: PFTrDA
Correlation coefficient: r = 0.999754, r^2 = 0.999507
Calibration curve: 10.0213 * x + 1.2331
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	170810M2_2	Standard	0.250	4.70	1808.306	6520.931	3.466	0.2	-10.9	NO	1.000	NO	MM
2	2	170810M2_3	Standard	0.500	4.71	3277.177	7169.665	5.714	0.4	-10.6	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	4.71	7157.351	7950.386	11.253	1.0	-0.0	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	4.70	13517.759	7572.749	22.313	2.1	5.2	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	4.70	29636.258	6676.272	55.488	5.4	8.3	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	4.70	60225.457	7074.396	106.414	10.5	5.0	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	4.70	275791.281	6639.138	519.253	51.7	3.4	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	4.68	633892.563	7805.791	1015.100	101.2	1.2	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	4.67	1405725.625	7118.316	2468.501	246.2	-1.5	NO	1.000	NO	bb
10	10	170810M2_11	Standard	500.000	4.67	2233990.500	6906.029	4043.551	403.4	-19.3	NO	1.000	NO	bbX

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999640
Calibration curve: -0.000533447 * x^2 + 1.13867 * x + 0.107998
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	170810M2_2	Standard	0.250	4.90	1296.794	43934.512	0.369	0.2	-8.3	NO	1.000	NO	bb
2	2	170810M2_3	Standard	0.500	4.91	2459.198	44478.961	0.691	0.5	2.4	NO	1.000	NO	bb
3	3	170810M2_4	Standard	1.000	4.91	4822.091	48823.219	1.235	1.0	-1.0	NO	1.000	NO	bb
4	4	170810M2_5	Standard	2.000	4.90	9330.564	47903.941	2.435	2.0	2.3	NO	1.000	NO	bb
5	5	170810M2_6	Standard	5.000	4.90	20629.588	43352.480	5.948	5.1	2.8	NO	1.000	NO	bb
6	6	170810M2_7	Standard	10.000	4.90	41831.395	45414.316	11.514	10.1	0.6	NO	1.000	NO	bb
7	7	170810M2_8	Standard	50.000	4.90	191464.297	43089.582	55.543	49.8	-0.3	NO	1.000	NO	bb
8	8	170810M2_9	Standard	100.000	4.87	448893.063	49984.359	112.258	103.5	3.5	NO	1.000	NO	bb
9	9	170810M2_10	Standard	250.000	4.87	983211.563	50076.543	245.427	243.1	-2.7	NO	1.000	NO	MM
10	10	170810M2_11	Standard	500.000	4.86	1620744.750	46214.285	438.378	503.8	0.8	NO	1.000	NO	MM

Compound name: N-EtFOSA
Correlation coefficient: r = 0.998278, r^2 = 0.996558
Calibration curve: 0.877827 * x + 0.460454
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	170810M2_2	Standard	1.250	5.00	300.846	35807.328	1.260	0.9	-27.1	NO	0.997	NO	bb
2	2	170810M2_3	Standard	2.500	5.01	616.719	35651.246	2.595	2.4	-2.7	NO	0.997	NO	bb
3	3	170810M2_4	Standard	5.000	5.00	1224.420	36907.691	4.976	5.1	2.9	NO	0.997	NO	bb
4	4	170810M2_5	Standard	10.000	5.00	2355.630	37358.246	9.458	10.3	2.5	NO	0.997	NO	bb
5	5	170810M2_6	Standard	25.000	5.00	5722.799	34930.285	24.575	27.5	9.9	NO	0.997	NO	bb
6	6	170810M2_7	Standard	50.000	4.98	11801.225	38343.563	46.166	52.1	4.1	NO	0.997	NO	bb
7	7	170810M2_8	Standard	250.000	4.97	58068.348	36419.504	239.164	271.9	8.8	NO	0.997	NO	db
8	8	170810M2_9	Standard	500.000	4.95	136462.141	43820.121	467.122	531.6	6.3	NO	0.997	NO	db
9	9	170810M2_10	Standard	1250.000	4.94	323008.469	46286.176	1046.776	1191.9	-4.6	NO	0.997	NO	bb
10	10	170810M2_11	Standard	2500.000	4.94	574823.688	43106.852	2000.228	2278.1	-8.9	NO	0.997	NO	bbX

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999241
Calibration curve: -0.00134262 * x^2 + 1.44391 * x + 0.187386
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	170810M2_2	Standard	0.250	5.29	2439.806	20425.877	0.597	0.3	13.6	NO	0.999	NO	bd
2	2	170810M2_3	Standard	0.500	5.30	3560.579	20498.971	0.868	0.5	-5.6	NO	0.999	NO	bb
3	3	170810M2_4	Standard	1.000	5.30	6815.783	21206.127	1.607	1.0	-1.6	NO	0.999	NO	bb
4	4	170810M2_5	Standard	2.000	5.29	13956.986	22826.240	3.057	2.0	-0.4	NO	0.999	NO	bb
5	5	170810M2_6	Standard	5.000	5.28	30517.473	20867.588	7.312	5.0	-0.9	NO	0.999	NO	bb
6	6	170810M2_7	Standard	10.000	5.29	57583.516	21425.330	13.438	9.3	-7.4	NO	0.999	NO	bb
7	7	170810M2_8	Standard	50.000	5.28	276492.656	19445.941	71.093	51.6	3.2	NO	0.999	NO	bb
8	8	170810M2_9	Standard	100.000	5.26	606868.313	23300.309	130.228	99.2	-0.8	NO	0.999	NO	MM
9	9	170810M2_10	Standard	250.000	5.25	897246.125	15976.768	280.797	254.6	1.9	NO	0.999	NO	bbX
10	10	170810M2_11	Standard	500.000	5.24	1213814.625	11401.953	532.284			NO	0.999	NO	bbXl

Compound name: PFODA
Correlation coefficient: r = 0.999467, r^2 = 0.998934
Calibration curve: 1.27081 * x + 0.103615
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	170810M2_2	Standard	0.250	5.66	1714.516	20425.877	0.420	0.2	-0.5	NO	0.999	NO	bb
2	2	170810M2_3	Standard	0.500	5.66	3188.736	20498.971	0.778	0.5	6.1	NO	0.999	NO	bb
3	3	170810M2_4	Standard	1.000	5.66	6602.740	21206.127	1.557	1.1	14.4	NO	0.999	NO	bb
4	4	170810M2_5	Standard	2.000	5.66	12914.733	22826.240	2.829	2.1	7.2	NO	0.999	NO	bb
5	5	170810M2_6	Standard	5.000	5.66	27537.434	20867.588	6.598	5.1	2.2	NO	0.999	NO	bb
6	6	170810M2_7	Standard	10.000	5.66	56117.164	21425.330	13.096	10.2	2.2	NO	0.999	NO	bb
7	7	170810M2_8	Standard	50.000	5.65	255676.906	19445.941	65.740	51.6	3.3	NO	0.999	NO	bb
8	8	170810M2_9	Standard	100.000	5.62	579058.625	23300.309	124.260	97.7	-2.3	NO	0.999	NO	bb
9	9	170810M2_10	Standard	250.000	5.61	1368190.375	15976.768	428.181	336.9	34.7	NO	0.999	NO	bbX
10	10	170810M2_11	Standard	500.000	5.60	2323741.500	11401.953	1019.010	801.8	60.4	NO	0.999	NO	bbX

Dataset: U:\Q4.PRO\results\170810M1\170810M2-CRV.qld

Last Altered: Friday, August 11, 2017 09:12:09 Pacific Daylight Time
Printed: Friday, August 11, 2017 09:12:47 Pacific Daylight Time

Compound name: N-MeFOSE
Correlation coefficient: r = 0.998979, r^2 = 0.997958
Calibration curve: 0.913987 * x + 0.914175
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	170810M2_2	Standard	1.250	5.28	449.666	37456.684	1.801	1.0	-22.4	NO	0.998	NO	bb
2	2	170810M2_3	Standard	2.500	5.29	709.438	37182.391	2.862	2.1	-14.8	NO	0.998	NO	bb
3	3	170810M2_4	Standard	5.000	5.29	1441.188	38748.840	5.579	5.1	2.1	NO	0.998	NO	bb
4	4	170810M2_5	Standard	10.000	5.28	2749.127	38784.367	10.632	10.6	6.3	NO	0.998	NO	bb
5	5	170810M2_6	Standard	25.000	5.28	6369.167	37768.906	25.295	26.7	6.7	NO	0.998	NO	bb
6	6	170810M2_7	Standard	50.000	5.28	13694.196	41681.102	49.282	52.9	5.8	NO	0.998	NO	bb
7	7	170810M2_8	Standard	250.000	5.28	68194.742	40391.512	253.252	276.1	10.4	NO	0.998	NO	bb
8	8	170810M2_9	Standard	500.000	5.26	159694.672	48233.188	496.633	542.4	8.5	NO	0.998	NO	bb
9	9	170810M2_10	Standard	1250.000	5.25	369344.906	48233.070	1148.626	1255.7	0.5	NO	0.998	NO	bb
10	10	170810M2_11	Standard	2500.000	5.25	687202.625	46562.453	2213.809	2421.1	-3.2	NO	0.998	NO	bb

Compound name: N-EtFOSE
Correlation coefficient: r = 0.998468, r^2 = 0.996938
Calibration curve: 1.01573 * x + 2.54785
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	170810M2_2	Standard	1.250	5.45	431.103	36366.551	1.778			NO	0.997	NO	bbXI
2	2	170810M2_3	Standard	2.500	5.46	845.634	37921.910	3.345	0.8	-68.6	NO	0.997	NO	bbX
3	3	170810M2_4	Standard	5.000	5.46	1629.428	37938.703	6.442	3.8	-23.3	NO	0.997	NO	bb
4	4	170810M2_5	Standard	10.000	5.45	3162.947	39692.059	11.953	9.3	-7.4	NO	0.997	NO	bb
5	5	170810M2_6	Standard	25.000	5.45	7056.696	37298.547	28.379	25.4	1.7	NO	0.997	NO	bb
6	6	170810M2_7	Standard	50.000	5.45	15470.291	39826.883	58.266	54.9	9.7	NO	0.997	NO	bb
7	7	170810M2_8	Standard	250.000	5.45	75266.070	39464.043	286.081	279.1	11.7	NO	0.997	NO	bb
8	8	170810M2_9	Standard	500.000	5.43	181684.203	48142.445	566.083	554.8	11.0	NO	0.997	NO	bb
9	9	170810M2_10	Standard	1250.000	5.42	430891.406	50641.645	1276.296	1254.0	0.3	NO	0.997	NO	bb
10	10	170810M2_11	Standard	2500.000	5.42	790079.563	48390.172	2449.091	2408.7	-3.7	NO	0.997	NO	bb

Sample List Report **MassLynx MassLynx V4.1 SCN945 SCN960**

Sample List: U:\Q4.PRO\SampleDB\170810M2.SPL
Last Modified: Thursday, August 10, 2017 20:07:32 Pacific Daylight Time
Printed: Thursday, August 10, 2017 20:46:13 Pacific Daylight Time

Page Position (1, 1)

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
1	170810M2_1	---	IPA	IPA	1.0000	1:48	Blank
2	170810M2_2	---	ST170810M2-1 PFC CS-2 17H1015	PFC CS-2 17H1015	1.0000	1:1	Standard
3	170810M2_3	---	ST170810M2-2 PFC CS-1 17H1003	PFC CS-1 17H1003	1.0000	1:2	Standard
4	170810M2_4	---	ST170810M2-3 PFC CS0 17H1004	PFC CS0 17H1004	1.0000	1:3	Standard
5	170810M2_5	---	ST170810M2-4 PFC CS1 17H1016	PFC CS1 17H1016	1.0000	1:4	Standard
6	170810M2_6	---	ST170810M2-5 PFC CS2 17H1017	PFC CS2 17H1017	1.0000	1:5	Standard
7	170810M2_7	---	ST170810M2-6 PFC CS3 17H1005	PFC CS3 17H1005	1.0000	1:6	Standard
8	170810M2_8	---	ST170810M2-7 PFC CS4 17H1018	PFC CS4 17H1018	1.0000	1:7	Standard
9	170810M2_9	---	ST170810M2-8 PFC CS5 17H1019	PFC CS5 17H1019	1.0000	1:8	Standard
10	170810M2_10	---	ST170810M2-9 PFC CS6 17H1013	PFC CS6 17H1013	1.0000	1:9	Standard
11	170810M2_11	---	ST170810M2-10 PFC CS7 17H1012	PFC CS7 17H1012	1.0000	1:10	Analyte
12	170810M2_12	---	IPA	IPA	1.0000	1:48	Blank
13	170810M2_13	---	SS170810M2-1 PFC SSS 17H1020	PFC SSS 17H1020	1.0000	1:11	Analyte
14	170810M2_14	---	IPA	IPA	1.0000	1:48	Blank
15	170810M2_15	O	1700946-05RE1 MATP05077 1.06	MATP05077	1.0233	1:12	Analyte
16	170810M2_16	---	IPA	IPA	1.0000	1:48	Blank
17	170810M2_17	O	1700946-05RE1@5X MATP05077 1.06	MATP05077	1.0233	1:13	Analyte
18	170810M2_18	---	IPA	IPA	1.0000	1:48	Blank
19	170810M2_19	X	B7H0026-BS1 OPR 1	OPR	1.0000	1:14	Analyte
20	170810M2_20	---	IPA	IPA	1.0000	1:48	Blank
21	170810M2_21	X	B7H0026-BLK1 Method Blank 1	Method Blank	1.0000	1:15	Analyte
22	170810M2_22	---	IPA	IPA	1.0000	1:48	Blank
23	170810M2_23	X	1700946-01 MATP05073 1	MATP05073	1.0000	1:16	Analyte
24	170810M2_24	X	1700946-02 MATP05074 1	MATP05074	1.0000	1:17	Analyte
25	170810M2_25	X	1700946-03 MATP05075 1	MATP05075	1.0000	1:18	Analyte
26	170810M2_26	---	1700946-05 MATP05077 1	MATP05077	1.0000	1:19	Analyte
27	170810M2_27	---	IPA	IPA	1.0000	1:48	Blank
28	170810M2_28	X	1700946-04 MATP05076 1	MATP05076	1.0000	1:20	Analyte
29	170810M2_29	---	IPA	IPA	1.0000	1:48	Blank
30	170810M2_30	---	1700946-05@10X MATP05077 1	MATP05077	1.0000	1:22	Analyte
31	170810M2_31	---	IPA	IPA	1.0000	1:48	Blank
32	170810M2_32	X	1700946-04@10X MATP05076 1	MATP05076	1.0000	1:23	Analyte
33	170810M2_33	---	IPA	IPA	1.0000	1:48	Blank
34	170810M2_34	---	B7H0037-BS1 OPR 0.125	OPR	0.2500	1:24	Analyte
35	170810M2_35	---	IPA	IPA	1.0000	1:48	Blank
36	170810M2_36	X	1701010-02@10X VEL-FOAM-080317 0.125	VEL-FOAM-080317	0.0065	1:25	Analyte
37	170810M2_37	---	IPA	IPA	1.0000	1:48	Blank
38	170810M2_38	---	ST170810M2-11 PFC CS3 17H1005	PFC CS3 17H1005	1.0000	1:6	Standard
39	170810M2_39	---	IPA	IPA	1.0000	1:48	Blank
40	170810M2_40	X	1701010-02 VEL-FOAM-080317 0.125	VEL-FOAM-080317	0.1250	1:26	Analyte

(A) Column was changed, new curve run due to slight shifts in RT. OM 8/11/17 OM 8/10/17

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
41	170810M2_41	---	IPA	IPA	1.0000	1:48	Blank
42	170810M2_42	---	B7H0060-BS1 OPR 2.5	OPR	2.5000	1:27	Analyte
43	170810M2_43	---	B7H0073-BS1 OPR 0.125	OPR	0.1250	1:28	Analyte
44	170810M2_44	---	B7H0074-BS1 OPR 0.125	OPR	0.1250	1:29	Analyte
45	170810M2_45	---	B7H0060-BLK1 Method Blank 2.5	Method Blank	2.5000	1:30	Analyte
46	170810M2_46	---	B7H0073-BLK1 Method Blank 0.125	Method Blank	0.1250	1:31	Analyte
47	170810M2_47	---	B7H0074-BLK1 Method Blank 0.125	Method Blank	0.1250	1:32	Analyte
48	170810M2_48	---	B7H0073-MS1 Matrix Spike 0.0005	Matrix Spike	0.0005	1:33	Analyte
49	170810M2_49	---	IPA	IPA	1.0000	1:48	Blank
50	170810M2_50	---	B7H0073-MSD1 Matrix Spike Dup 0.00139	Matrix Spike Dup	0.0014	1:34	Analyte
51	170810M2_51	---	IPA	IPA	1.0000	1:48	Blank
52	170810M2_52	---	B7H0074-MS1 Matrix Spike 0.125	Matrix Spike	0.1250	1:35	Analyte
53	170810M2_53	---	B7H0074-MSD1 Matrix Spike Dup 0.125	Matrix Spike Dup	0.1250	1:36	Analyte
54	170810M2_54	---	1700819-01RE1 QPFD-14 2.5	QPFD-14	2.5000	1:37	Analyte
55	170810M2_55	---	1700819-02RE1 QPFD-15 2.5	QPFD-15	2.5000	1:38	Analyte
56	170810M2_56	---	IPA	IPA	1.0000	1:48	Blank
57	170810M2_57	---	1700819-03RE1 QPFD-16 2.5	QPFD-16	2.5000	1:39	Analyte
58	170810M2_58	---	1700819-04RE1 QPFD-17 2	QPFD-17	2.0000	1:40	Analyte
59	170810M2_59	---	1700819-05RE1 QPFD-18 2.5	QPFD-18	2.5000	1:41	Analyte
60	170810M2_60	---	1700819-06RE1 QPFD-19 2.5	QPFD-19	2.5000	1:42	Analyte
61	170810M2_61	---	1700819-07RE1 QPFD-20 2.5	QPFD-20	2.5000	1:43	Analyte
62	170810M2_62	---	1700819-08RE1 QPFD-21 2.5	QPFD-21	2.5000	1:44	Analyte
63	170810M2_63	---	1700819-09RE1 QPFD-22 2.5	QPFD-22	2.5000	1:45	Analyte
64	170810M2_64	---	1700819-10RE1 QPFD-23 2.5	QPFD-23	2.5000	1:46	Analyte
65	170810M2_65	---	IPA	IPA	1.0000	1:48	Blank
66	170810M2_66	---	ST170810M2-12 PFC CS0 17H1004	PFC CS0 17H1004	1.0000	1:3	Standard
67	170810M2_67	---	IPA	IPA	1.0000	1:48	Blank
68	170810M2_68	---	1700819-11RE1 QPFD-24 2.5	QPFD-24	2.5000	1:47	Analyte
69	170810M2_69	---	1700819-12RE1 QPFD-25 2.5	QPFD-25	2.5000	2:1	Analyte
70	170810M2_70	---	1700819-13RE1 QPFD-26 2.5	QPFD-26	2.5000	2:2	Analyte
71	170810M2_71	---	1700925-04RE2 I001MW52S-170724 0.00122	I001MW52S-170724	0.0012	2:3	Analyte
72	170810M2_72	---	IPA	IPA	1.0000	1:48	Blank
73	170810M2_73	---	1700925-05RE2 I001MW52X-170724 0.00133	I001MW52X-170724	0.0013	2:4	Analyte
74	170810M2_74	---	IPA	IPA	1.0000	1:48	Blank
75	170810M2_75	---	1700922-01RE1 MH-L103-20170721 0.10565	MH-L103-20170721	0.1056	2:5	Analyte
76	170810M2_76	---	1700922-02RE1 MH-N104-20170721 0.11025	MH-N104-20170721	0.1103	2:6	Analyte
77	170810M2_77	---	1700922-03RE1 Upstream-Culvert-109-20170721 0.1185	Upstream-Culvert-109-20170721	0.1185	2:7	Analyte
78	170810M2_78	---	1700922-04RE1 FRB03-20170721 0.11017	FRB03-20170721	0.1102	2:8	Analyte
79	170810M2_79	---	1700922-05RE1 RB08-20170720 0.11893	RB08-20170720	0.1189	2:9	Analyte
80	170810M2_80	---	IPA	IPA	1.0000	1:48	Blank

	File Name	RS OK=X	Sample ID	File Text	User Divisor 1	Bottle	Sample Type
		am 8/4/17	(A) (B) am 8/4/17				
81	170810M2_81	X	ST170810M2-13 PFC CS3 17H1005	PFC CS3 17H1005	1.0000	1:6	Analyte
82	170810M2_82	---	IPA	IPA	1.0000	1:48	Blank
83	170810M2_83	---	(B) 1700922-06RE1 RB09-20170721 0.11676	RB09-20170721	0.1168	2:10	Analyte
84	170810M2_84	---	1700925-01RE1 I001BC43S-170724 0.12112	I001BC43S-170724	0.1211	2:11	Analyte
85	170810M2_85	---	1700925-02RE1 SB01-170724 0.12178	SB01-170724	0.1218	2:12	Analyte
86	170810M2_86	---	1700925-03RE1 I001BC50S-170724 0.12135	I001BC50S-170724	0.1214	2:13	Analyte
87	170810M2_87	---	1700925-06RE1 EB01-170724 0.1185	EB01-170724	0.1185	2:14	Analyte
88	170810M2_88	---	1700929-01RE1 MATP01001 0.11834	MATP01001	0.1183	2:15	Analyte
89	170810M2_89	---	1700929-02RE1 MATP01002 0.1157	MATP01002	0.1157	2:16	Analyte
90	170810M2_90	---	1700938-01RE1 NORP08102 0.11844	NORP08102	0.1184	2:17	Analyte
91	170810M2_91	---	1700938-02RE1 NORP08103 0.12014	NORP08103	0.1201	2:18	Analyte
92	170810M2_92	---	1700938-03RE1 NORP08104 0.11247	NORP08104	0.1125	2:19	Analyte
93	170810M2_93	---	IPA	IPA	1.0000	1:48	Blank
94	170810M2_94	---	ST170810M2-14 PFC CS3 17H1005	PFC CS3 17H1005	1.0000	1:6	Standard
95	170810M2_95	---	IPA	IPA	1.0000	1:48	Blank
96	170810M2_96	---	1700819-02RE1 QPFD-15 2.5 (2.5X)	QPFD-15	2.5000	1:21	Analyte
97	170810M2_97	---	IPA	IPA	1.0000	1:48	Blank
98	170810M2_98	---	B7H0073-MS1@20X Matrix Spike 0.0005	Matrix Spike	0.0005	2:20	Analyte
99	170810M2_99	---	IPA	IPA	1.0000	1:48	Blank
100	170810M2_100	---	B7H0073-MSD1@20X Matrix Spike Dup 0.00139	Matrix Spike Dup	0.0014	2:21	Analyte
101	170810M2_101	---	IPA	IPA	1.0000	1:48	Blank
102	170810M2_102	---	1700925-04RE2 I001MW52S-170724 0.00122	I001MW52S-170724	0.0012	2:22	Analyte
103	170810M2_103	---	IPA	IPA	1.0000	1:48	Blank
104	170810M2_104	---	1700925-05RE2 I001MW52X-170724 0.00133	I001MW52X-170724	0.0013	2:23	Analyte
105	170810M2_105	---	IPA	IPA	1.0000	1:48	Blank
106	170810M2_106	X	ST170810M2-15 PFC CS3 17H1005	PFC CS3 17H1005	1.0000	1:6	Analyte
107	170810M2_107	---	IPA	IPA	1.0000	1:48	Blank

(B) PFDoA, PFTrDA, PFTeDA, PFODA, & PFHxDA shifted out of window, samples not injected. am 8/4/17

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

Dataset: U:\Q4.PRO\results\170810M1\170810M2-13.qld

Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_8-10-17.mdb 11 Aug 2017 08:55:25
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_8-10-17-FULL.cdb 11 Aug 2017 09:29:36

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBA	213.0 > 168.8	1.58e4	1.65e4		1.90	1.90	11.9	10.9	108.9
2	2	PFPeA	263.1 > 218.9	2.50e4	3.00e4		3.00	2.93	10.4	10.9	109.1
3	3	PFBS	299 > 79.7	4.94e3	3.50e3		3.16	3.10	17.6	10.2	102.0
4	4	PFHxA	313.2 > 268.9	3.88e4	1.21e4		3.35	3.30	16.1	12.2	122.4
5	5	PFHpA	363 > 318.9	4.45e4	4.43e4		3.61	3.55	12.6	10.7	106.6
6	6	PFHxS	398.9 > 79.6	5.19e3	3.78e3		3.65	3.62	17.2	9.76	97.6
7	7	6:2 FTS	427.1 > 407	8.64e3	1.08e4		3.80	3.74	10.0	10.7	107.4
8	8	PFOA	413 > 368.7	5.53e4	6.29e4		3.82	3.75	11.0	11.1	110.5
9	9	PFHpS	448.9 > 98.8	4.60e3	6.29e4		3.80	3.82	0.914	11.5	115.2
10	10	PFNA	462.9 > 418.8	5.12e4	5.49e4		4.02	3.95	11.7	11.4	113.9
11	11	PFOSA	498.1 > 77.8	6.91e3	7.39e3		4.05	3.96	11.7	11.1	111.0
12	12	PFOS	499 > 79.9	9.36e3	1.10e4		4.07	4.01	10.6	9.98	99.8
13	13	PFDA	513 > 468.8	5.63e4	5.29e4		4.21	4.13	13.3	11.7	116.5
14	14	8:2 FTS	527 > 506.9	9.04e3	7.56e3		4.20	4.12	14.9	10.8	108.3
15	15	N-MeFOSAA	570.1 > 419	1.62e4	1.27e4		4.23	4.16	208	10.8	107.7
16	16	N-EtFOSAA	584.2 > 419	1.43e4	1.37e4		4.30	4.23	170	10.8	108.4
17	17	PFUnA	562.9 > 518.9	4.38e4	6.22e4		4.38	4.30	8.80	10.8	107.9
18	18	PFDS	598.9 > 98.7	4.05e3	6.22e4		4.40	4.35	0.815	9.87	98.7
19	19	PFDoA	612.9 > 318.8	4.95e3	6.76e3		4.58	4.48	9.16	10.9	109.4
20	20	N-MeFOSA	512.1 > 168.9		3.08e4		4.56			(A)	
21	21	PFTrDA	662.9 > 618.9	6.41e4	6.76e3		4.78	4.66	118	11.7	117.0
22	22	PFTeDA	712.9 > 668.8	4.52e4	4.45e4		4.97	4.86	12.7	11.1	110.9
23	23	N-EtFOSA	526.1 > 168.9		3.80e4		5.03			(A)	
24	24	PFHxDA	812.8 > 768.9	2.74e2	2.09e4		5.37	5.24	0.0656		
25	25	PFODA	912.8 > 868.8	3.35e2	2.09e4		5.60	5.60	0.0800		
26	26	N-MeFOSE	616.1 > 58.9		4.35e4		5.30				
27	27	N-EtFOSE	630.1 > 58.9		4.17e4		5.40				
28	28	13C3-PFBA	216.1 > 171.8	1.65e4	1.87e4	0.906	1.90	1.90	11.1	12.2	97.6
29	29	13C3-PFPeA	266 > 221.8	3.00e4	4.18e4	0.284	2.99	2.94	3.59	12.6	101.1
30	30	13C3-PFBS	302 > 98.8	3.50e3	4.18e4	0.033	3.15	3.10	0.418	12.7	101.8
31	31	13C2-PFHxA	315 > 269.8	1.21e4	4.18e4	0.304	3.35	3.30	1.44	4.75	94.9

70-130

50-150

QM 8/11/17

(A) Not present in ICV standard. QM 8/11/17

Dataset: U:\Q4.PRO\results\170810M1\170810M2-13.qld

Last Altered: Friday, August 11, 2017 10:32:47 Pacific Daylight Time
Printed: Friday, August 11, 2017 10:35:02 Pacific Daylight Time

Name: 170810M2_13, Date: 10-Aug-2017, Time: 22:30:29, ID: ICV170810M2-1 PFC ICV 17H1020, Description: PFC ICV 17H1020

	#	Name	Trace	Area	IS Area	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
32	32	13C4-PFHpA	367.2 > 321.8	4.43e4	4.18e4	0.384	3.61	3.55	5.29	13.8	110.2
33	33	18O2-PFHxS	403 > 102.6	3.78e3	8.56e3	0.417	3.68	3.62	5.52	13.2	105.8
34	34	13C2-6:2 FTS	429.1 > 408.9	1.08e4	6.07e4	0.202	3.80	3.75	2.22	11.0	88.1
35	35	13C2-PFOA	414.9 > 369.7	6.29e4	6.07e4	1.132	3.82	3.75	12.9	11.4	91.5
36	36	13C5-PFNA	468.2 > 422.9	5.49e4	6.37e4	0.946	4.02	3.95	10.8	11.4	91.0
37	37	13C8-PFOSA	506.1 > 77.7	7.39e3	6.42e4	0.119	4.08	3.96	1.44	12.0	96.4
38	38	13C8-PFOS	507 > 79.9	1.10e4	1.05e4	1.040	4.07	4.01	13.1	12.6	101.1
39	39	13C2-PFDA	515.1 > 469.9	5.29e4	5.81e4	0.971	4.21	4.13	11.4	11.7	93.9
40	40	13C2-8:2 FTS	529.1 > 508.7	7.56e3	5.81e4	0.140	4.20	4.12	1.63	11.6	92.8
41	41	d3-N-MeFOSAA	573.3 > 419	1.27e4	6.42e4	0.018	4.23	4.16	2.47	139	85.4
42	42	d5-N-EtFOSAA	589.3 > 419	1.37e4	6.42e4	0.018	4.30	4.22	2.67	146	90.1
43	43	13C2-PFUnA	565 > 519.8	6.22e4	6.42e4	1.085	4.38	4.30	12.1	11.1	89.2
44	44	13C2-PFDoA	615 > 569.7	6.76e3	6.42e4	0.123	4.58	4.48	1.32	10.7	85.5
45	45	d3-N-MeFOSA	515.2 > 168.9	3.08e4	6.42e4	0.043	4.56	4.53	5.99	138	92.3
46	46	13C2-PFTeDA	714.8 > 669.6	4.45e4	6.42e4	0.798	4.97	4.86	8.67	10.9	86.9
47	47	d5-N-ETFOSA	531.1 > 168.9	3.80e4	6.42e4	0.056	5.03	4.97	7.40	133	88.6
48	48	13C2-PFHxDA	815 > 769.7	2.09e4	6.42e4	0.926	5.37	5.24	4.07	4.40	87.9
49	49	d7-N-MeFOSE	623.1 > 58.9	4.35e4	6.42e4	0.059	5.30	5.24	8.46	142	94.9
50	50	d9-N-EtFOSE	639.2 > 58.8	4.17e4	6.42e4	0.059	5.40	5.41	8.12	137	91.1
51	51	13C4-PFBA	217 > 171.8	1.87e4	1.87e4	1.000	1.90	1.90	12.5	12.5	100.0
52	52	13C5-PFHxA	318 > 272.9	4.18e4	4.18e4	1.000	3.35	3.30	5.00	5.00	100.0
53	53	13C3-PFHxS	401.9 > 79.9	8.56e3	8.56e3	1.000	3.68	3.62	12.5	12.5	100.0
54	54	13C8-PFOA	421.3 > 376	6.07e4	6.07e4	1.000	3.82	3.76	12.5	12.5	100.0
55	55	13C9-PFNA	472.2 > 426.9	6.37e4	6.37e4	1.000	4.02	3.95	12.5	12.5	100.0
56	56	13C4-PFOS	503 > 79.9	1.05e4	1.05e4	1.000	4.07	4.01	12.5	12.5	100.0
57	57	13C6-PFDA	519.1 > 473.7	5.81e4	5.81e4	1.000	4.21	4.13	12.5	12.5	100.0
58	58	13C7-PFUnA	570.1 > 524.8	6.42e4	6.42e4	1.000	4.38	4.30	12.5	12.5	100.0

80-150

(B) out of window, not used. ah 8/11/17

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	1700922	EBS PHASE2	EBS PHASE2	UPSTREAM_CULVERT_109	Surface water body - nonspecific	405934.404	523191.8916	N6247016D9008	WE08	TETRA TECH, INC.	UPSTREAM-CULVERT-109-20170721	Surface water	Normal (Regular)	21-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700922							N6247016D9008	WE08	TETRA TECH, INC.	FRB-03-20170721	Water for QC samples	Field Reagent Blank	21-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700922	EBS PHASE2	EBS PHASE2	MH-L103	Manhole/Catch basin	405690.946	523163.8811	N6247016D9008	WE08	TETRA TECH, INC.	MH-L103-20170721	Surface water	Normal (Regular)	21-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700922							N6247016D9008	WE08	TETRA TECH, INC.	RB08-20170720	Water for QC samples	Equipment blank	20-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700922	EBS PHASE2	EBS PHASE2	MH-N104	Manhole/Catch basin	405707.5693	523189.8583	N6247016D9008	WE08	TETRA TECH, INC.	MH-N104-20170721	Surface water	Normal (Regular)	21-Jul-17	537	Perfluoroalkyl Compounds
MID_ATLANTIC	TRENTON_NAWC	1700922							N6247016D9008	WE08	TETRA TECH, INC.	RB09-20170721	Water for QC samples	Equipment blank	21-Jul-17	537	Perfluoroalkyl Compounds