N31260_000128
CHESAPEAKE_BEACH_NRL
SSIC 5000-33c

OFF-BASE DRINKING WATER SAMPLE RESULTS, LEVEL 2 LABORATORY REPORT, LEVEL 4 LABORATORY REPORT, ELECTRONIC DATA DELIVERABLE, DATA VALIDATION REPORT AND THE SAMPLE LOCATION FIGURE, SDG 1801868 NAVAL RESEARCH LABORATORY CHESAPEAKE BAY DETACHMENT NRL CHESAPEAKE BEACH MD

02/01/2019

NAVFAC

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Naval Facilities Engineering Command

Off-base Drinking Water Sample Results, Level 2 Laboratory Report, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Figure, SDG 1801868

Naval Research Laboratory – Chesapeake Bay Detachment
Chesapeake Beach, Maryland

February 2019

Approved for public release: distribution unlimited

July 30, 2018

Vista Work Order No. 1801868

Ms. Tiffany Hill
CH2M Hill
1100 NE Circle Blvd. Suite 300
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 21, 2018. This sample set was analyzed on a rush turn-around time, under your Project Name 'CTO-08 PFAS DW Investigation NRL CBD'.

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 Work Order No. 1801868
Case Narrative

Sample Condition on Receipt:

Twelve drinking 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:

EPA Method 537, Rev. 1.1

Sample "CBD-1RW34-0718" contained particulate and was centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of PFAS using EPA Method 537, Rev. 1.1.

Holding Times

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

Quality Control

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

Two Laboratory Fortified Blanks (LFB/LFBD) and a Laboratory Reagent Blank (LRB) were extracted and analyzed with the preparation batch. No analytes were detected in the Laboratory Reagent Blank above 1/2 the LOQ. The LFB/LFBD recoveries were within the method acceptance criteria.

The surrogate recoveries for all QC and field samples were within the acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1801868-01	CBD-1RW32-0718	19-Jul-18 15:03	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-02	CBD-1FB32-0718	19-Jul-18 15:05	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-03	CBD-1RW33-0718	20-Jul-18 12:00	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-04	CBD-1FB33-0718	20-Jul-18 12:02	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-05	CBD-1RW34-0718	20-Jul-18 13:30	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-06	CBD-1FB34-0718	20-Jul-18 13:32	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-07	CBD-1RW35-0718	20-Jul-18 13:49	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-08	CBD-1FB35-0718	20-Jul-18 13:51	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-09	CBD-1RW36-0718	20-Jul-18 15:48	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-10	CBD-1FB36-0718	20-Jul-18 15:50	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-11	CBD-1RW37-0718	20-Jul-18 16:02	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-12	CBD-1FB37-0718	20-Jul-18 16:04	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL

ANALYTICAL RESULTS

Sample ID: LRB

EPA Method 537

Client Data

Name: CH2M Hill
Matrix: Aqueous
Project: CTO-08 PFAS DW Investigation NRL CBD

Laboratory Data

Lab Sample: B8G0167-BLK1
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFHxA	307-24-4	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFHpA	375-85-9	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFHxS	355-46-4	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFOA	335-67-1	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFNA	375-95-1	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFOS	1763-23-1	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFDA	335-76-2	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
MeFOSAA	2355-31-9	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
EtFOSAA	2991-50-6	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFUnA	2058-94-8	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFDoA	307-55-1	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFTrDA	72629-94-8	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFTeDA	376-06-7	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	104	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
13C2-PFDA	SURR	103	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
d5-EtFOSAA	SURR	96.4	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

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

Sample ID: LFBD

EPA Method 537

Name:	CH2M Hill	Lab Sample:	B8G0167-BS1/B8G0167-BSD1		
Project:	CTO-08 PFAS DW Investigation NRL CBD	QC Batch:	B8G0167	Date Extracted:	24-Jul-18
Matrix:	Aqueous	Samp Size:	0.250/0.250 L	Column:	BEH C18

Analyte	CAS Number	LFB (ng/L)	LFB Spike Amt	LFB % Rec	LFB Quals	LFBD (ng/L)	LFBD Spike Amt	LFBD % Rec	RPD	LFBD Quals	%Rec Limits	RPD Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
PFBS	375-73-5	35.4	35.4	99.9		39.2	35.4	111	10.2		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFHxA	307-24-4	39.2	40.0	97.9		48.2	40.0	120	20.7		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFHpA	375-85-9	38.3	40.0	95.8		47.9	40.0	120	22.4		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFHxS	355-46-4	35.4	36.4	97.3		38.4	36.4	105	8.07		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFOA	335-67-1	34.9	40.0	87.2		47.0	40.0	117	29.5		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFNA	375-95-1	30.3	40.0	75.9		45.2	40.0	113	39.3		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFOS	1763-23-1	36.1	37.0	97.6		47.7	37.0	129	27.6		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFDA	335-76-2	30.4	40.0	75.9		43.2	40.0	108	34.9		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
MeFOSAA	2355-31-9	32.6	40.0	81.6		45.9	40.0	115	33.9		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
EtFOSAA	2991-50-6	36.7	40.0	91.8		45.9	40.0	115	22.3		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFUnA	2058-94-8	32.2	40.0	80.6		42.3	40.0	106	27.0		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFDoA	307-55-1	32.3	40.0	80.8		43.0	40.0	107	28.3		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFTrDA	72629-94-8	32.2	40.0	80.6		43.3	40.0	108	29.2		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFTeDA	376-06-7	31.1	40.0	77.8		41.0	40.0	102	27.4		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1

Labeled Standards	Type	LFB % Rec	LFB Quals	LFBD % Rec	LFBD Quals	Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
13C2-PFHxA	SURR	94.5		110		70-130	25-Jul-18 20:35	1	25-Jul-18 20:47	1
13C2-PFDA	SURR	77.0		98.3		70-130	25-Jul-18 20:35	1	25-Jul-18 20:47	1
d5-EtFOSAA	SURR	84.9		102		70-130	25-Jul-18 20:35	1	25-Jul-18 20:47	1

Sample ID: CBD-1RW32-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 19-Jul-18 15:03

Laboratory Data

Lab Sample: 1801868-01
Date Received: 21-Jul-18 09:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFHxA	307-24-4	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFHpA	375-85-9	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFHxS	355-46-4	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFOA	335-67-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFNA	375-95-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFOS	1763-23-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFDA	335-76-2	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
MeFOSAA	2355-31-9	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
EtFOSAA	2991-50-6	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFUnA	2058-94-8	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFDoA	307-55-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFTrDA	72629-94-8	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFTeDA	376-06-7	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	102	70 - 130		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
13C2-PFDA	SURR	96.0	70 - 130		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
d5-EtFOSAA	SURR	96.4	70 - 130		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

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

Sample ID: CBD-1FB32-0718

EPA Method 537

Client Data

Name: C2 HM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 19-Jul-18 15:05

Laboratory Data

Lab Sample: 1801868-0H
Date Received: H1-Jul-18 09:16
Column: BE2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	475-74-5	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PF2 xA	407-H -.	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PF2 pA	475-85-9	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PF2 xS	455-. 6-.	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFOA	445-67-1	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFNA	475-95-1	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFOS	1764-H4-1	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFDA	445-76-H	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
MeFOSAA	H455-41-9	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
EtFOSAA	H991-50-6	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFUnA	H058-9. -8	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFDoA	407-55-1	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFTrDA	7H6H9-9. -8	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFTeDA	476-06-7	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
14CH-PF2 xA	SURR	10.	70 - 140		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
14CH-PFDA	SURR	10H	70 - 140		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
d5-EtFOSAA	SURR	9930	70 - 140		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL3

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers3 Only the linear isomer is reported for all other analytes3

Sample ID: CBD-1RW33-0718

EPA Method 537

Client Data

Name: C2 uM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drin9ing Water
Date Collected: u0-JEl-18 1u:00

Laboratory Data

Lab Sample: 1801868-0H
Date Received: u1-JEl-18 05:16
ColEmn: Bk2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	H4. -4H-.	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PF2 xA	HD4-uG-G	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PF2 pA	H4. -8. -5	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PF2 xS	H . -C6-G	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFOA	HH -64-1	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFNA	H4. -5. -1	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFOS	146H-uH-1	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFDA	HH -46-u	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
MeFOSAA	uH . -Hl-5	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
ktFOSAA	u551-. 0-6	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFUnA	u0. 8-5G-8	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFDoA	HD4-. . -1	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFTrDA	4u6u5-5G-8	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFTeDA	H46-06-4	ND	HBl.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
1HCu-PF2 xA	SURR	10.	40 - 1HD		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
1HCu-PFDA	SURR	5u3	40 - 1HD		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
d. -ktFOSAA	SURR	543G	40 - 1HD		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of qEantitation

ResElts reported to the DL3

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and ktFOSAA inclEde both linear and branched isomers3 Only the linear isomer is reported for all other analytes3

Sample ID: CBD-1FB33-0718

EPA Method 537

Client Data

Name: C2 uM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drin9ing Water
Date Collected: u0-JEl-18 1u:0u

Laboratory Data

Lab Sample: 1801868-0H
Date Received: u1-JEl-18 05:16
ColEmn: Bk2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	374-73-4	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PF2 xA	307-uH-H	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PF2 pA	374-84-5	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PF2 xS	344-H6-H	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFOA	334-67-1	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFNA	374-54-1	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFOS	1763-u3-1	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFDA	334-76-u	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
MeFOSAA	u344-31-5	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
ktFOSAA	u551-40-6	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFUnA	u048-5H-8	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFDoA	307-44-1	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFTrDA	7u6u5-5H-8	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFTeDA	376-06-7	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SURR	54.H	70 - 130		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
13Cu-PFDA	SURR	5H7	70 - 130		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
d4-ktFOSAA	SURR	56.0	70 - 130		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of qEantitation

ResElts reported to the DL.

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and ktFOSAA inclEde both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: CBD-1RW34-0718

EPA Method 537

Client Data

Name: C2 uM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drin9ing Water
Date Collected: u0-JEl-18 15:50

Laboratory Data

Lab Sample: 1801868-0H
Date Received: u1-JEl-18 03:16
ColEmn: Bk2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	54H-45-H	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PF2 xA	504-uG-G	6.63	5.14	Hu1	10.G	J	B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PF2 pA	54H-8H-3	5.C6	5.14	Hu1	10.G	J	B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PF2 xS	5HH-C6-G	54.4	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFOA	55H-64-1	u5.8	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFNA	54H-3H-1	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFOS	1465-u5-1	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFDA	55H-46-u	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
MeFOSAA	u5HH-51-3	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
ktFOSAA	u331-H0-6	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFUnA	u0H8-3G-8	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFDoA	504-HH-1	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFTrDA	4u6u3-3G-8	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFTeDA	546-06-4	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
15Cu-PF2 xA	SURR	105	40 - 150		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
15Cu-PFDA	SURR	34.4	40 - 150		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
dH-ktFOSAA	SURR	85.4	40 - 150		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of qEantitation

ResElts reported to the DL.

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and ktFOSAA inclEde both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: CBD-1FB34-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-9ul-18 1J:J2

Laboratory Data

Lab Sample: 1801868-06
Date Received: 21-9ul-18 05:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	J7. -7J-.	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFHxA	J07-24-4	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFHpA	J7. -8. -5	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFHxS	J. . -46-4	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFOA	JJ. -67-1	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFNA	J7. -5. -1	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFOS	176J-2J-1	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFDA	JJ. -76-2	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
MeFOSAA	2J. . -J1-5	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
EtFOSAA	2551-. 0-6	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFUnA	20. 8-54-8	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFDoA	J07-. . -1	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFTrDA	72625-54-8	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFTeDA	J76-06-7	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
1JC2-PFHxA	SURR	5538	70 - 1J0		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
1JC2-PFDA	SURR	101	70 - 1J0		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
d. -EtFOSAA	SURR	5232	70 - 1J0		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL3

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers3 Only the linear isomer is reported for all other analytes3

Sample ID: CBD-1RW30-781L

PAMh etdr5 038

Client Data

Name: C2 uM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drin9ing Water
Date Collected: u0-JEl-18 15:3.

baoryatryE Data

Lab Sample: 1801868-0H
Date Received: u1-JEl-18 0. :16
ColEmn: Bk2 C18

MnalEte	CMS Numoey	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxtyacte5	Samp Size	MnalEze5	Dilutirn
PFBS	5HG-H5-G	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PF2 xA	50H-u3-3	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PF2 pA	5HG-8G-.	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PF2 xS	5CG-36-3	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFOA	55G-6H-1	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFNA	5HG-. G-1	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFOS	1H65-u5-1	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFDA	55G-H6-u	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
MeFOSAA	u5CG-51-.	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
ktFOSAA	u. . 1-C0-6	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFUnA	u0C8-. 3-8	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFDoA	50H-CG-1	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFTrDA	Hu6u. -. 3-8	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFTeDA	5H6-06-H	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1

baoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxtyacte5	Samp Size	MnalEze5	Dilutirn
15Cu-PF2 xA	SURR	10G	H0 - 150		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
15Cu-PFDA	SURR	. 548	H0 - 150		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
dG-ktFOSAA	SURR	10u	H0 - 150		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of qEantitation

ResElts reported to the DL4

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and ktFOSAA inclEde both linear and branched isomers4 Only the linear isomer is reported for all other analytes4

Sample ID: CBD-1FB30-781L

PAMh etdr5 038

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-9ul-18 1J:51

baoryatryE Data

Lab Sample: 1801868-08
Date Received: 21-9ul-18 03:16
Column: BEH C18

MnalEte	CMS Numoey	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxtyacte5	Samp Size	MnalEze5	Dilutirn
PFBS	J45-4J-5	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFHxA	J04-2G-G	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFHpA	J45-85-3	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFHxS	J55-C6-G	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFOA	JJ5-64-1	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFNA	J45-35-1	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFOS	146J-2J-1	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFDA	JJ5-46-2	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
MeFOSAA	2J55-J1-3	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
EtFOSAA	2331-50-6	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFUnA	2058-3G-8	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFDoA	J04-55-1	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFTrDA	42623-3G-8	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFTeDA	J46-06-4	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1

baoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxtyacte5	Samp Size	MnalEze5	Dilutirn
1JC2-PFHxA	SURR	10G	40 - 1J0		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
1JC2-PFDA	SURR	33.5	40 - 1J0		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
d5-EtFOSAA	SURR	102	40 - 1J0		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

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

Sample ID: CBD-1RW36-0718

EPA Method 537

Client Data

Name: C2 uM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drin9ing Water
Date Collected: u0-JEl-18 15:38

Laboratory Data

Lab Sample: 1801868-0H
Date Received: u1-JEl-18 0H16
ColEmn: Bk2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	. G5-G -5	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PF2 xA	. 0G-u3-3	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PF2 pA	. G5-85-H	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PF2 xS	. 55-36-3	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFOA	. . 5-6G-1	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFNA	. G5-H5-1	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFOS	1G6. -u. -1	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFDA	. . 5-G6-u	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
MeFOSAA	u. 55-. 1-H	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
ktFOSAA	uHHl-50-6	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFUnA	u058-HB-8	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFDoA	. 0G-55-1	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFTrDA	Gu6uH-HB-8	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFTeDA	. G6-06-G	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
1. Cu-PF2 xA	SURR	111	G0 - 1. 0		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
1. Cu-PFDA	SURR	Hu4u	G0 - 1. 0		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
d5-ktFOSAA	SURR	HB4u	G0 - 1. 0		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of qEantitation

ResElts reported to the DL4

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and ktFOSAA inclEde both linear and branched isomers4 Only the linear isomer is reported for all other analytes4

Sample ID: CBD-1FB36-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-9ul-18 1J:J0

Laboratory Data

Lab Sample: 1801868-10
Date Received: 21-9ul-18 05:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	37J-73-J	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFHxA	307-24-4	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFHpA	37J-8J-5	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFHxS	3JJ-46-4	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFOA	33J-67-1	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFNA	37J-5J-1	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFOS	1763-23-1	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFDA	33J-76-2	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
MeFOSAA	23JJ-31-5	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
EtFOSAA	2551-J0-6	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFUnA	20J8-54-8	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFDoA	307-JJ-1	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFTrDA	72625-54-8	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFTeDA	376-06-7	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	110	70 - 130		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
13C2-PFDA	SURR	5J.2	70 - 130		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
dJ-EtFOSAA	SURR	103	70 - 130		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

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

Sample ID: CBD-1RW30-7018

EPA Method 530

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-9ul-18 16:02

Laboratory Data

Lab Sample: 1801868-11
Date Received: 21-9ul-18 0J:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	5. 4-. 5-4	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFHxA	50. -2G-G	1830	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFHpA	5. 4-84-J	GBGG	531.	4325	103G	9	B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFHxS	544-G6-G	103J	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFOA	554-6. -1	5638	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFNA	5. 4-J4-1	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFOS	1. 65-25-1	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFDA	554-. 6-2	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
MeFOSAA	2544-51-J	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
EtFOSAA	2JJ1-40-6	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFUnA	2048-JG-8	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFDoA	50. -44-1	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFTrDA	. 262J-JG-8	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFTeDA	5. 6-06-.	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
15C2-PFHxA	SURR	104	. 0 - 150		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
15C2-PFDA	SURR	J. 3J	. 0 - 150		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
d4-EtFOSAA	SURR	J. 35	. 0 - 150		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL3

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers3 Only the linear isomer is reported for all other analytes3

Sample ID: CBD-1FB30-7018

EPA Method 530

Client Data

Name: C2 HM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: H0-9ul-18 16:0J

Laboratory Data

Lab Sample: 1801868-1H
Date Received: H1-9ul-18 05:16
Column: BE2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	374-73-4	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PF2 xA	307-HJ-J	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PF2 pA	374-84-5	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PF2 xS	344-J6-J	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFOA	334-67-1	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFNA	374-54-1	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFOS	1763-HB-1	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFDA	334-76-H	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
MeFOSAA	HB44-31-5	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
EtFOSAA	H551-40-6	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFUnA	HD48-5J-8	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFDoA	307-44-1	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFTrDA	7H6H5-5J-8	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFTeDA	376-06-7	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13CH-PF2 xA	SURR	5J.6	70 - 130		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
13CH-PFDA	SURR	5H5	70 - 130		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
d4-EtFOSAA	SURR	51.7	70 - 130		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and EtFOSAA 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**
Conc.	**Concentration**
D	**Dilution**
DL	**Detection limit**
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**
LOD	**Limits of Detection**
LOQ	**Limits of Quantitation**
M	**Estimated Maximum Possible Concentration (CA Region 2 projects only)**
NA	**Not applicable**
ND	**Not Detected**
Q	**Ion ratio outside of 70-130% of Standard Ratio. (DOD PFAS projects only)**
TEQ	**Toxic Equivalency**
U	**Not Detected (specific projects only)**
*****	**See Cover Letter**

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

CERTIFICATIONS

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
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	1322288
New Hampshire Environmental Accreditation Program	207717
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	014
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	9077
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.

Rev. Date: 06/27/2017

CTO-08 679580.14.F1.FS

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: 1801868 Temp: 0.2 °C
Storage ID: WR-2 Storage Secured: Yes ☑ No ☐

Project ID: CTO-08 NRL CBD PFAS DW INVESTIGATION PO#: 101001982 Sampler: R. McElhiney (name)

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

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
Tiffany Hill	CH2M	1100 NE Circle Blvd St 300	Corvallis	Oregon	541-768-3109	

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Mike Whitmer	7/20/18	1800	B. Benedict	07/21/18	0945
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: Martha Maier

Method of Shipment: FEDEX

Tracking No.:

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
CBD-1RW32-0718	7/19/18	1503		2	P	DW								X	
CBD-1FB32-0718	7/19/18	1505		2	P	DW								X	
CBD-1RW33-0718	7/20/18	1200		2	P	DW								X	
CBD-1FB33-0718		1202		2	P	DW								X	
CBD-1RW34-0718		1330		2	P	DW								X	
CBD-1FB34-0718		1332		2	P	DW								X	
CBD-1RW35-0718		1349		2	P	DW								X	
CBD-1FB35-0718		1351		2	P	DW								X	
CBD-1RW36-0718		1548		2	P	DW								X	
CBD-1FB36-0718		1550		2	P	DW								X	

Special Instructions/Comments: 7 DAY TAT
Analysis of DW samples for 14 PFAS compounds in method 537

SEND DOCUMENTATION AND RESULTS TO:
Name: Tiffany Hill
Company: CH2M Hill Inc
Address: 1100 NE Circle Blvd St. 300
City: Corvallis State: OR Zip: 97330
Phone: 541-768-3109 Fax:
Email: tiffany.hill@ch2m.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:

Rev. Date: 06/27/2017

CTO-08 679580.14.F1,F5

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: ~~1801868~~ 1801868 Temp: 0.2 °C
Storage ID: WR-2 Storage Secured: Yes ☑ No ☐

Project ID: CTO-08 NRL CBD PFAS DW INVESTIGATION PO#: 101001982 Sampler: R. McKinney (name)

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

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
Tiffany Hill	CH2M	1100 NE Circle Blvd Ste 300	Corvallis	Oregon	541-768-3109	

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Mike Witmer	7/20/18	1800	B Benedict	07/21/18	0945
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: Martha Maier

Method of Shipment: FEDEX

Tracking No.:

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
CBD-IRW37-0718	7/20/18	1602		2	P	DW								X	
CBD-IFB37-0718	7/20/18	1604		2	P	DW								X	

Special Instructions/Comments: 7 DAY TAT
Analysis of DW samples for 14 PFAS Compounds in method 537

SEND DOCUMENTATION AND RESULTS TO:
Name: Tiffany Hill
Company: CH2M Hill Inc
Address: 1100 NE Circle Blvd Ste 300
City: Corvallis State: OR Zip: 97330
Phone: 541-768-3109 Fax:
Email: Tiffany.Hill@ch2m.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 #: 1801868 TAT 7

Samples Arrival:	Date/Time 07/21/18 0916	Initials: BLB	Location: WR-2 Shelf/Rack: NA
Logged In:	Date/Time 07/21/18 1150	Initials: BLB	Location: WR-2 Shelf/Rack: E3/D6

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

Temp °C: 0.2 (uncorrected)	Time: 1000	Thermometer ID: DT-3
Temp °C: 0.2 (corrected)	Probe used: Yes☑ No☐	

	YES	NO	NA
Adequate Sample Volume Received?	BLB		
Holding Time Acceptable?	BLB		
Shipping Container(s) Intact?	BLB		
Shipping Custody Seals Intact?	BLB		
Shipping Documentation Present?	BLB		
Airbill — Trk # 7727 7565 8707	BLB		
Sample Container Intact?	BLB		
Sample Custody Seals Intact?		BLB	
Chain of Custody / Sample Documentation Present?	BLB		
COC Anomaly/Sample Acceptance Form completed?		BLB	

If Chlorinated or Drinking Water Samples, Acceptable Preservation?				BLB		
Preservation Documented:	$Na_2S_2O_3$	Trizma	None	Yes	No	NA
Shipping Container	Vista	Client	Retain	Return	Dispose	

Comments:

July 30, 2018

Vista Work Order No. 1801868

Ms. Tiffany Hill
CH2M Hill
1100 NE Circle Blvd. Suite 300
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 21, 2018. This sample set was analyzed on a rush turn-around time, under your Project Name 'CTO-08 PFAS DW Investigation NRL CBD'.

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

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

Sincerely,

Martha Maier
Laboratory Director

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

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

Vista Work Order No. 1801868
Case Narrative

Sample Condition on Receipt:

Twelve drinking 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:

EPA Method 537, Rev. 1.1

Sample "CBD-1RW34-0718" contained particulate and was centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of PFAS using EPA Method 537, Rev. 1.1.

Holding Times

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

Quality Control

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

Two Laboratory Fortified Blanks (LFB/LFBD) and a Laboratory Reagent Blank (LRB) were extracted and analyzed with the preparation batch. No analytes were detected in the Laboratory Reagent Blank above 1/2 the LOQ. The LFB/LFBD recoveries were within the method acceptance criteria.

The surrogate recoveries for all QC and field samples were within the acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1801868-01	CBD-1RW32-0718	19-Jul-18 15:03	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-02	CBD-1FB32-0718	19-Jul-18 15:05	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-03	CBD-1RW33-0718	20-Jul-18 12:00	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-04	CBD-1FB33-0718	20-Jul-18 12:02	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-05	CBD-1RW34-0718	20-Jul-18 13:30	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-06	CBD-1FB34-0718	20-Jul-18 13:32	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-07	CBD-1RW35-0718	20-Jul-18 13:49	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-08	CBD-1FB35-0718	20-Jul-18 13:51	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-09	CBD-1RW36-0718	20-Jul-18 15:48	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-10	CBD-1FB36-0718	20-Jul-18 15:50	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-11	CBD-1RW37-0718	20-Jul-18 16:02	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
1801868-12	CBD-1FB37-0718	20-Jul-18 16:04	21-Jul-18 09:16	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL

ANALYTICAL RESULTS

Sample ID: LRB

EPA Method 537

Client Data

Name: CH2M Hill
Matrix: Aqueous
Project: CTO-08 PFAS DW Investigation NRL CBD

Laboratory Data

Lab Sample: B8G0167-BLK1
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFHxA	307-24-4	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFHpA	375-85-9	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFHxS	355-46-4	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFOA	335-67-1	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFNA	375-95-1	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFOS	1763-23-1	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFDA	335-76-2	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
MeFOSAA	2355-31-9	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
EtFOSAA	2991-50-6	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFUnA	2058-94-8	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFDoA	307-55-1	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFTrDA	72629-94-8	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
PFTeDA	376-06-7	ND	3.04	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	104	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
13C2-PFDA	SURR	103	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1
d5-EtFOSAA	SURR	96.4	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 20:22	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

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

Sample ID: LFBD

EPA Method 537

Name:	CH2M Hill	Lab Sample:	B8G0167-BS1/B8G0167-BSD1		
Project:	CTO-08 PFAS DW Investigation NRL CBD	QC Batch:	B8G0167	Date Extracted:	24-Jul-18
Matrix:	Aqueous	Samp Size:	0.250/0.250 L	Column:	BEH C18

Analyte	CAS Number	LFB (ng/L)	LFB Spike Amt	LFB % Rec	LFB Quals	LFBD (ng/L)	LFBD Spike Amt	LFBD % Rec	RPD	LFBD Quals	%Rec Limits	RPD Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
PFBS	375-73-5	35.4	35.4	99.9		39.2	35.4	111	10.2		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFHxA	307-24-4	39.2	40.0	97.9		48.2	40.0	120	20.7		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFHpA	375-85-9	38.3	40.0	95.8		47.9	40.0	120	22.4		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFHxS	355-46-4	35.4	36.4	97.3		38.4	36.4	105	8.07		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFOA	335-67-1	34.9	40.0	87.2		47.0	40.0	117	29.5		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFNA	375-95-1	30.3	40.0	75.9		45.2	40.0	113	39.3		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFOS	1763-23-1	36.1	37.0	97.6		47.7	37.0	129	27.6		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFDA	335-76-2	30.4	40.0	75.9		43.2	40.0	108	34.9		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
MeFOSAA	2355-31-9	32.6	40.0	81.6		45.9	40.0	115	33.9		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
EtFOSAA	2991-50-6	36.7	40.0	91.8		45.9	40.0	115	22.3		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFUnA	2058-94-8	32.2	40.0	80.6		42.3	40.0	106	27.0		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFDoA	307-55-1	32.3	40.0	80.8		43.0	40.0	107	28.3		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFTrDA	72629-94-8	32.2	40.0	80.6		43.3	40.0	108	29.2		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1
PFTeDA	376-06-7	31.1	40.0	77.8		41.0	40.0	102	27.4		70-130		25-Jul-18 20:35	1	25-Jul-18 20:47	1

Labeled Standards	Type	LFB % Rec	LFB Quals	LFBD % Rec	LFBD Quals	Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
13C2-PFHxA	SURR	94.5		110		70-130	25-Jul-18 20:35	1	25-Jul-18 20:47	1
13C2-PFDA	SURR	77.0		98.3		70-130	25-Jul-18 20:35	1	25-Jul-18 20:47	1
d5-EtFOSAA	SURR	84.9		102		70-130	25-Jul-18 20:35	1	25-Jul-18 20:47	1

Sample ID: CBD-1RW32-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 19-Jul-18 15:03

Laboratory Data

Lab Sample: 1801868-01
Date Received: 21-Jul-18 09:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFHxA	307-24-4	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFHpA	375-85-9	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFHxS	355-46-4	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFOA	335-67-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFNA	375-95-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFOS	1763-23-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFDA	335-76-2	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
MeFOSAA	2355-31-9	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
EtFOSAA	2991-50-6	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFUnA	2058-94-8	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFDoA	307-55-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFTrDA	72629-94-8	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFTeDA	376-06-7	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	102	70 - 130		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
13C2-PFDA	SURR	96.0	70 - 130		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
d5-EtFOSAA	SURR	96.4	70 - 130		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

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

Sample ID: CBD-1FB32-0718

EPA Method 537

Client Data

Name: C2 HM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 19-Jul-18 15:05

Laboratory Data

Lab Sample: 1801868-0H
Date Received: H1-Jul-18 09:16
Column: BE2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	475-74-5	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PF2 xA	407-H -.	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PF2 pA	475-85-9	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PF2 xS	455-. 6-.	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFOA	445-67-1	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFNA	475-95-1	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFOS	1764-H4-1	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFDA	445-76-H	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
MeFOSAA	H455-41-9	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
EtFOSAA	H991-50-6	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFUnA	H058-9. -8	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFDoA	407-55-1	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFTrDA	7H6H9-9. -8	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
PFTeDA	476-06-7	ND	H9.	. 384	9366		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
14CH-PF2 xA	SURR	10.	70 - 140		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
14CH-PFDA	SURR	10H	70 - 140		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1
d5-EtFOSAA	SURR	9930	70 - 140		B8G0167	H -Jul-18	03H59 L	H5-Jul-18 H1:14	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL3

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers3 Only the linear isomer is reported for all other analytes3

Sample ID: CBD-1RW33-0718

EPA Method 537

Client Data

Name: C2 uM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drin9ing Water
Date Collected: u0-JEl-18 1u:00

Laboratory Data

Lab Sample: 1801868-0H
Date Received: u1-JEl-18 05:16
ColEmn: Bk2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	H4. -4H-.	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PF2 xA	H04-uG-G	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PF2 pA	H4. -8. -5	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PF2 xS	H . -C6-G	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFOA	HH -64-1	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFNA	H4. -5. -1	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFOS	146H-uH-1	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFDA	HH -46-u	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
MeFOSAA	uH . -Hl-5	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
ktFOSAA	u551-. 0-6	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFUnA	u0. 8-5G-8	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFDoA	H04-. . -1	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFTrDA	4u6u5-5G-8	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
PFTeDA	H46-06-4	ND	H3l.	. 3l4	103G		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
1HCu-PF2 xA	SURR	10.	40 - 1H0		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
1HCu-PFDA	SURR	5u3	40 - 1H0		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1
d. -ktFOSAA	SURR	543G	40 - 1H0		B87 0164	uG-JEl-18	03uGu L	u. -JEl-18 u1:u6	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of qEantitation

ResElts reported to the DL3

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and ktFOSAA inclEde both linear and branched isomers3 Only the linear isomer is reported for all other analytes3

Sample ID: CBD-1FB33-0718

EPA Method 537

Client Data

Name: C2 uM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drin9ing Water
Date Collected: u0-JEl-18 1u:0u

Laboratory Data

Lab Sample: 1801868-0H
Date Received: u1-JEl-18 05:16
ColEmn: Bk2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	374-73-4	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PF2 xA	307-uH-H	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PF2 pA	374-84-5	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PF2 xS	344-H6-H	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFOA	334-67-1	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFNA	374-54-1	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFOS	1763-u3-1	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFDA	334-76-u	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
MeFOSAA	u344-31-5	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
ktFOSAA	u551-40-6	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFUnA	u048-5H-8	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFDoA	307-44-1	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFTrDA	7u6u5-5H-8	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
PFTeDA	376-06-7	ND	3.04	4.0u	10.0		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SURR	54.H	70 - 130		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
13Cu-PFDA	SURR	5H7	70 - 130		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1
d4-ktFOSAA	SURR	56.0	70 - 130		B8G0167	uH-JEl-18	0.uH5 L	u4-JEl-18 u1:35	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of qEantitation

ResElts reported to the DL.

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and ktFOSAA inclEde both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: CBD-1RW34-0718

EPA Method 537

Client Data

Name: C2 uM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drin9ing Water
Date Collected: u0-JEl-18 15:50

Laboratory Data

Lab Sample: 1801868-0H
Date Received: u1-JEl-18 03:16
ColEmn: Bk2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	54H-45-H	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PF2 xA	504-uG-G	6.63	5.14	Hu1	10.G	J	B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PF2 pA	54H-8H-3	5.C6	5.14	Hu1	10.G	J	B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PF2 xS	5HH-C6-G	54.4	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFOA	55H-64-1	u5.8	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFNA	54H-3H-1	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFOS	1465-u5-1	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFDA	55H-46-u	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
MeFOSAA	u5HH-51-3	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
ktFOSAA	u331-H0-6	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFUnA	u0H8-3G-8	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFDoA	504-HH-1	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFTrDA	4u6u3-3G-8	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
PFTeDA	546-06-4	ND	5.14	Hu1	10.G		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
15Cu-PF2 xA	SURR	105	40 - 150		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
15Cu-PFDA	SURR	34.4	40 - 150		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1
dH-ktFOSAA	SURR	85.4	40 - 150		B87 0164	uG-JEl-18	0.uC0 L	uH-JEl-18 u1:Hl	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of qEantitation

ResElts reported to the DL.

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and ktFOSAA inclEde both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: CBD-1FB34-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-9ul-18 1J:J2

Laboratory Data

Lab Sample: 1801868-06
Date Received: 21-9ul-18 05:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	J7. -7J-.	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFHxA	J07-24-4	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFHpA	J7. -8. -5	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFHxS	J. . -46-4	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFOA	JJ. -67-1	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFNA	J7. -5. -1	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFOS	176J-2J-1	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFDA	JJ. -76-2	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
MeFOSAA	2J. . -J1-5	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
EtFOSAA	2551-. 0-6	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFUnA	20. 8-54-8	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFDoA	J07-. . -1	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFTrDA	72625-54-8	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
PFTeDA	J76-06-7	ND	J30J	. 300	5358		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
1JC2-PFHxA	SURR	5538	70 - 1J0		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
1JC2-PFDA	SURR	101	70 - 1J0		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1
d. -EtFOSAA	SURR	5232	70 - 1J0		B8G0167	24-9ul-18	032. 0 L	2. -9ul-18 22:04	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL3

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers3 Only the linear isomer is reported for all other analytes3

Sample ID: CBD-1RW30-781L

PAMh etdr5 038

Client Data

Name: C2 uM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drin9ing Water
Date Collected: u0-JEl-18 15:3.

baoryatryE Data

Lab Sample: 1801868-0H
Date Received: u1-JEl-18 0. :16
ColEmn: Bk2 C18

MnalEte	CMS Numoey	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxtyacte5	Samp Size	MnalEze5	Dilutirn
PFBS	5HG-H5-G	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PF2 xA	50H-u3-3	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PF2 pA	5HG-8G-.	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PF2 xS	5CG-36-3	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFOA	55G-6H-1	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFNA	5HG-. G-1	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFOS	1H65-u5-1	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFDA	55G-H6-u	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
MeFOSAA	u5CG-51-.	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
ktFOSAA	u. . 1-C0-6	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFUnA	u0C8-. 3-8	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFDoA	50H-CG-1	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFTrDA	Hu6u. -. 3-8	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
PFTeDA	5H6-06-H	ND	54u3	G453	104H		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1

baoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxtyacte5	Samp Size	MnalEze5	Dilutirn
15Cu-PF2 xA	SURR	10G	H0 - 150		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
15Cu-PFDA	SURR	. 548	H0 - 150		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1
dG-ktFOSAA	SURR	10u	H0 - 150		B87 016H	u3-JEl-18	04u53 L	uG-JEl-18 uu:1H	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of qEantitation

ResElts reported to the DL4

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and ktFOSAA inclEde both linear and branched isomers4 Only the linear isomer is reported for all other analytes4

Sample ID: CBD-1FB30-781L

PAMh etdr5 038

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-9ul-18 1J:51

baoryatryE Data

Lab Sample: 1801868-08
Date Received: 21-9ul-18 03:16
Column: BEH C18

MnalEte	CMS Numoey	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxtyacte5	Samp Size	MnalEze5	Dilutirn
PFBS	J45-4J-5	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFHxA	J04-2G-G	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFHpA	J45-85-3	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFHxS	J55-C6-G	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFOA	JJ5-64-1	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFNA	J45-35-1	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFOS	146J-2J-1	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFDA	JJ5-46-2	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
MeFOSAA	2J55-J1-3	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
EtFOSAA	2331-50-6	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFUnA	2058-3G-8	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFDoA	J04-55-1	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFTrDA	42623-3G-8	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
PFTeDA	J46-06-4	ND	2.34	G88	3.44		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1

baoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxtyacte5	Samp Size	MnalEze5	Dilutirn
1JC2-PFHxA	SURR	10G	40 - 1J0		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
1JC2-PFDA	SURR	33.5	40 - 1J0		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1
d5-EtFOSAA	SURR	102	40 - 1J0		B87 0164	2G-9ul-18	0.256 L	25-9ul-18 22:J0	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

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

Sample ID: CBD-1RW36-0718

EPA Method 537

Client Data

Name: C2 uM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drin9ing Water
Date Collected: u0-JEl-18 15:38

Laboratory Data

Lab Sample: 1801868-0H
Date Received: u1-JEl-18 0H16
ColEmn: Bk2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	. G5-G -5	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PF2 xA	. 0G-u3-3	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PF2 pA	. G5-85-H	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PF2 xS	. 55-36-3	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFOA	. . 5-6G-1	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFNA	. G5-H5-1	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFOS	1G6. -u. -1	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFDA	. . 5-G6-u	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
MeFOSAA	u. 55-. 1-H	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
ktFOSAA	uHHl-50-6	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFUnA	u058-HB-8	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFDoA	. 0G-55-1	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFTrDA	Gu6uH-HB-8	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
PFTeDA	. G6-06-G	ND	. 413	541G	104		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
1. Cu-PF2 xA	SURR	111	G0 - 1. 0		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
1. Cu-PFDA	SURR	Hu4u	G0 - 1. 0		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1
d5-ktFOSAA	SURR	H84u	G0 - 1. 0		B87 016G	u3-JEl-18	04u3u L	u5-JEl-18 uu:3.	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of qEantitation

ResElts reported to the DL4

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and ktFOSAA inclEde both linear and branched isomers4 Only the linear isomer is reported for all other analytes4

Sample ID: CBD-1FB36-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-9ul-18 1J:J0

Laboratory Data

Lab Sample: 1801868-10
Date Received: 21-9ul-18 05:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	37J-73-J	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFHxA	307-24-4	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFHpA	37J-8J-5	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFHxS	3JJ-46-4	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFOA	33J-67-1	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFNA	37J-5J-1	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFOS	1763-23-1	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFDA	33J-76-2	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
MeFOSAA	23JJ-31-5	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
EtFOSAA	2551-J0-6	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFUnA	20J8-54-8	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFDoA	307-JJ-1	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFTrDA	72625-54-8	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
PFTeDA	376-06-7	ND	3.00	4.52	5.8J		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	110	70 - 130		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
13C2-PFDA	SURR	5J.2	70 - 130		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1
dJ-EtFOSAA	SURR	103	70 - 130		B8G0167	24-9ul-18	0.2J4 L	2J-9ul-18 22:JJ	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

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

Sample ID: CBD-1RW30-7018

EPA Method 530

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-9ul-18 16:02

Laboratory Data

Lab Sample: 1801868-11
Date Received: 21-9ul-18 0J:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	5. 4-. 5-4	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFHxA	50. -2G-G	1830	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFHpA	5. 4-84-J	GBGG	531.	4325	103G	9	B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFHxS	544-C6-G	103J	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFOA	554-6. -1	5638	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFNA	5. 4-J4-1	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFOS	1. 65-25-1	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFDA	554-. 6-2	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
MeFOSAA	2544-51-J	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
EtFOSAA	2JJ1-40-6	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFUnA	2048-JG-8	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFDoA	50. -44-1	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFTrDA	. 262J-JG-8	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
PFTeDA	5. 6-06-.	ND	531.	4325	103G		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
15C2-PFHxA	SURR	104	. 0 - 150		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
15C2-PFDA	SURR	J. 3J	. 0 - 150		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1
d4-EtFOSAA	SURR	J. 35	. 0 - 150		B87 016.	2G-9ul-18	0325J L	24-9ul-18 25:08	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL3

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers3 Only the linear isomer is reported for all other analytes3

Sample ID: CBD-1FB30-7018

EPA Method 530

Client Data

Name: C2 HM 2 ill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: H0-9ul-18 16:0J

Laboratory Data

Lab Sample: 1801868-1H
Date Received: H1-9ul-18 05:16
Column: BE2 C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	374-73-4	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PF2 xA	307-HJ-J	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PF2 pA	374-84-5	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PF2 xS	344-J6-J	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFOA	334-67-1	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFNA	374-54-1	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFOS	1763-HB-1	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFDA	334-76-H	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
MeFOSAA	HB44-31-5	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
EtFOSAA	H551-40-6	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFUnA	HD48-5J-8	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFDoA	307-44-1	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFTrDA	7H6H5-5J-8	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
PFTeDA	376-06-7	ND	3.04	4.00	10.0		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13CH-PF2 xA	SURR	5J.6	70 - 130		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
13CH-PFDA	SURR	5H5	70 - 130		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1
d4-EtFOSAA	SURR	51.7	70 - 130		B8G0167	HJ-9ul-18	0.H40 L	H4-9ul-18 HB:H1	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PF2 xS, PFOA, PFOS, MeFOSAA and EtFOSAA 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**
Conc.	**Concentration**
D	**Dilution**
DL	**Detection limit**
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**
LOD	**Limits of Detection**
LOQ	**Limits of Quantitation**
M	**Estimated Maximum Possible Concentration (CA Region 2 projects only)**
NA	**Not applicable**
ND	**Not Detected**
Q	**Ion ratio outside of 70-130% of Standard Ratio. (DOD PFAS projects only)**
TEQ	**Toxic Equivalency**
U	**Not Detected (specific projects only)**
*****	**See Cover Letter**

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

CERTIFICATIONS

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
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	1322288
New Hampshire Environmental Accreditation Program	207717
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	014
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	9077
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.

Rev. Date: 06/27/2017

CTO-08 679580.14.F1.FS

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: 1801868 Temp: 0.2 °C
Storage ID: WR-2 Storage Secured: Yes ☑ No ☐

Project ID: CTO-08 NRL CBD PFAS DW INVESTIGATION PO#: 101001982 Sampler: R. McElhiney (name)

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

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
Tiffany Hill	CH2M	1100 NE Circle Blvd St 300	Corvallis	Oregon	541-768-3109	

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Mike Whitmer	7/20/18	1800	B. Benedict	07/21/18	0945
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: Martha Maier

Method of Shipment: FEDEX

Tracking No.:

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
CBD-1RW32-0718	7/19/18	1503		2	P	DW								X	
CBD-1FB32-0718	7/19/18	1505		2	P	DW								X	
CBD-1RW33-0718	7/20/18	1200		2	P	DW								X	
CBD-1FB33-0718		1202		2	P	DW								X	
CBD-1RW34-0718		1330		2	P	DW								X	
CBD-1FB34-0718		1332		2	P	DW								X	
CBD-1RW35-0718		1349		2	P	DW								X	
CBD-1FB35-0718		1351		2	P	DW								X	
CBD-1RW36-0718		1548		2	P	DW								X	
CBD-1FB36-0718		1550		2	P	DW								X	

Special Instructions/Comments: 7 DAY TAT
Analysis of DW samples for 14 PFAS compounds in method 537

SEND DOCUMENTATION AND RESULTS TO:
Name: Tiffany Hill
Company: CH2M Hill Inc
Address: 1100 NE Circle Blvd St. 300
City: Corvallis State: OR Zip: 97330
Phone: 541-768-3109 Fax:
Email: tiffany.hill@ch2m.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:

Rev. Date: 06/27/2017

CTO-08 679580.14.F1,F5

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: ~~1801868~~ 1801868 Temp: 0.2 °C
Storage ID: WR-2 Storage Secured: Yes ☑ No ☐

Project ID: CTO-08 NRL CBD PFAS DW INVESTIGATION PO#: 101001982 Sampler: R. McKinney (name)

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

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
Tiffany Hill	CH2M	1100 NE Circle Blvd Ste 300	Corvallis	Oregon	541-768-3109	

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Mike Witmer	7/20/18	1800	B Benedict	07/21/18	0945
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: Martha Maier

Method of Shipment: FEDEX

Tracking No.:

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
CBD-IRW37-0718	7/20/18	1602		2	P	DW								X	
CBD-IFB37-0718	7/20/18	1604		2	P	DW								X	

Special Instructions/Comments: 7 DAY TAT
Analysis of DW samples for 14 PFAS Compounds in method 537

SEND DOCUMENTATION AND RESULTS TO:
Name: Tiffany Hill
Company: CH2M Hill Inc
Address: 1100 NE Circle Blvd Ste 300
City: Corvallis State: OR Zip: 97330
Phone: 541-768-3109 Fax:
Email: Tiffany.Hill@ch2m.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 #: 1801868 TAT 7

Samples Arrival:	Date/Time 07/21/18 0916	Initials: BLB	Location: WR-2 Shelf/Rack: NA
Logged In:	Date/Time 07/21/18 1150	Initials: BLB	Location: WR-2 Shelf/Rack: E3/D6

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

Temp °C: 0.2 (uncorrected)	Time: 1000	Thermometer ID: DT-3
Temp °C: 0.2 (corrected)	Probe used: Yes☑ No☐	

	YES	NO	NA
Adequate Sample Volume Received?	BLB		
Holding Time Acceptable?	BLB		
Shipping Container(s) Intact?	BLB		
Shipping Custody Seals Intact?	BLB		
Shipping Documentation Present?	BLB		
Airbill — Trk # 7727 7565 8707	BLB		
Sample Container Intact?	BLB		
Sample Custody Seals Intact?		BLB	
Chain of Custody / Sample Documentation Present?	BLB		
COC Anomaly/Sample Acceptance Form completed?		BLB	

If Chlorinated or Drinking Water Samples, Acceptable Preservation?				BLB		
Preservation Documented:	$Na_2S_2O_3$	Trizma	None	Yes	No	NA
Shipping Container	Vista	Client	Retain	Return	Dispose	

Comments:

EXTRACTION INFORMATION

RUSH

Process Sheet

Workorder: 1801868

9-DAY TAT

Prep Expiration: 2018-Aug-02

Client: CH2M Hill

Workorder Due: 30-Jul-18 00:00

TAT: 9

Method: **537 PFAS DW DoD Unmodified**

Matrix: **Aqueous**

Prep Batch: BBG0167

Prep Data Entered: Dm for HN 7/20/18

Date and Initials

Version: 537 (14 Analytes)

DoD: DoD QSM 5.1

Initial Sequence:

LabSampID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
1801868-01	A	☑	☑	CBD-1RW32-0718		WR-2 E-3	HDPE Bottle, 250 mL
1801868-02		☑	☑	CBD-1FB32-0718		WR-2 E-3	HDPE Bottle, 250 mL
1801868-03		☑	☑	CBD-1RW33-0718		WR-2 E-3	HDPE Bottle, 250 mL
1801868-04		☑	☑	CBD-1FB33-0718		WR-2 E-3	HDPE Bottle, 250 mL
1801868-05		☑	☑	CBD-1RW34-0718		WR-2 E-3	HDPE Bottle, 250 mL
1801868-06		☑	☑	CBD-1FB34-0718		WR-2 E-3	HDPE Bottle, 250 mL
1801868-07		☑	☑	CBD-1RW35-0718		WR-2 E-3	HDPE Bottle, 250 mL
1801868-08		☑	☑	CBD-1FB35-0718		WR-2 E-3	HDPE Bottle, 250 mL
1801868-09		☑	☑	CBD-1RW36-0718		WR-2 E-3	HDPE Bottle, 250 mL
1801868-10		☑	☑	CBD-1FB36-0718		WR-2 E-3	HDPE Bottle, 250 mL
1801868-11		☑	☑	CBD-1RW37-0718		WR-2 E-3	HDPE Bottle, 250 mL
1801868-12		☑	☑	CBD-1FB37-0718		WR-2 E-3	HDPE Bottle, 250 mL

Pre-Prep Check Out: 7/23/18 ST

Pre-Prep Check In: 7/23/18 ST

Prep Check Out: 7R 7-24-18

Prep Check In: NA

Prep Reconciled Initals/Date: 7/25/18 ST

Spike Reconciled Initals/Date: 7R 7-24-18

VialBoxID: Purse

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS DW DoD Unmodified

B8G0167

Chemist: 7R

Prep Date: 7·24·18

Prep Time: 8:40

Prepared using: LCMS - SPE Extraction-LCMS

BalanceID: HRMS-8

Cen	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g) JR 7/25/18	Sample Amt. (L)	SS/NS CHEM/WIT DATE	SPE	IS CHEM/WIT DATE
☐	B8G0167-BLK1 (A)	N/A	N/A	(0.250)	7R AE 7·24·18	7R 7·24·18	HN AE 7/25/18
☐	B8G0167-BS1	↓	↓	(0.250)	↓	↓	↓
☐	B8G0167-BSD1	↓	↓	(0.250)	↓	↓	↓
☐	1801868-01	280.33	37.40	0.24293	↓	↓	↓
☐	1801868-02	296.18	37.50	0.25868 ✓	↓	↓	↓
☐	1801868-03	278.94	37.44	0.24150	↓	↓	↓
☐	1801868-04	286.15	37.70	0.24925	↓	↓	↓
☒	1801868-05	276.91	37.13	~~0.239.78~~ HN 7/25/18 0.23978	↓	↓	↓
☐	1801868-06	287.80	37.38	0.25042	↓	↓	↓
☐	1801868-07	271.66	37.37	0.23429	↓	↓	↓
☐	1801868-08	293.68	37.69	0.25599	↓	↓	↓
☐	1801868-09	279.54	37.37	0.24217	↓	↓	↓
☐	1801868-10	290.92	37.18	0.25374	↓	↓	↓
☐	1801868-11	276.66	37.28	0.23938	↓	↓	↓
☐	1801868-12	287.15	37.60	0.24955 ✓	↓	↓	↓

SS/IS: 18G0301, 20µL (V3)

NS: 18F2206, 10µL

IS/RS: 18G0302, 20µL (V3)

SPE Chem: Strata-X 33µm 500 mg / 6mL

Lot#: 517-005969

Ele SOLV: MeOH

Lot#: JB072509

Final Volume(s) 1mL

Notes: (A) 125µ of trizmer added to QC - 7/23/18 ST

Comments: Assume 1 g = 1 mL

Cen = Centrifuged

Batch: B8G0167

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1801868-01	0.24293 ✓	N/A	N/A	1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
1801868-02	0.25868 ✓			1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
1801868-03	0.2415 ✓			1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
1801868-04	0.24925 ✓			1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
1801868-05	0.23978 ✓			1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
1801868-06	0.25042 ✓			1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
1801868-07	0.23429 ✓			1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
1801868-08	0.25599 ✓			1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
1801868-09	0.24217 ✓			1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
1801868-10	0.25374 ✓			1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
1801868-11	0.23938 ✓			1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
1801868-12	0.24955 ✓			1000	24-Jul-18 08:40	FBR			Drinking Water	537 PFAS DW DoD Unmo
B8G0167-BLK1	0.25			1000	24-Jul-18 08:40	FBR				QC
B8G0167-BS1	0.25			1000	24-Jul-18 08:40	FBR	18F2206 ✓	10 ✓		QC
B8G0167-BSD1	0.25			1000	24-Jul-18 08:40	FBR	18F2206 ✓	10 ✓		QC

HN 7/25/18

Printed: 7/25/2018 11:53:54AM

SAMPLE DATA –EPA METHOD 537

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-56.qld

Last Altered: Saturday, July 28, 2018 19:59:25 Pacific Daylight Time
Printed: Saturday, July 28, 2018 19:59:33 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_56, Date: 25-Jul-2018, Time: 20:22:11, ID: B8G0167-BLK1 LRB 0.25, Description: LRB

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5		9.81e3	0.250		2.91				
2	2	PFHxA	312.7 > 268.8	1.83e1	6.54e3	0.250		3.28	3.28	0.0280	0.138	
3	3	PFHpA	362.7 > 318.8		6.54e3	0.250		3.82				
4	4	PFHxS	398.7 > 80.7		9.81e3	0.250		3.95				
5	5	PFOA	412.8 > 369.0		6.54e3	0.250		4.23				
6	6	PFNA	462.9 > 419.1		6.54e3	0.250		4.58				
7	7	PFOS	498.8 >80.7		9.81e3	0.250		4.64				
8	8	PFDA	512.8 > 469.0	2.79e1	6.54e3	0.250		4.88	4.90	0.0427	0.196	
9	9	N-MeFOSAA	569.7 > 419.0		1.02e4	0.250		5.00				
10	10	N-EtFOSAA	583.6 >419.1		1.02e4	0.250		5.12				
11	11	PFUnA	562.7 > 518.9		6.54e3	0.250		5.12				
12	12	PFDoA	612.5 > 319.0		6.54e3	0.250		5.37				
13	13	PFTrDA	662.4 > 618.7	4.74e0	6.54e3	0.250		5.57	5.58	0.00725	0.0322	
14	14	PFTeDA	712.2>668.4		6.54e3	0.250		5.75				
15	15	13C2-PFHxA	314.8 > 269.9	5.11e3	6.54e3	0.250	0.753	3.40	3.29	7.82	41.6	103.9
16	16	13C2-PFDA	514.8 > 470.0	6.85e3	6.54e3	0.250	1.023	4.83	4.88	10.5	41.0	102.6
17	17	d5-N-EtFOSAA	588.7> 419.1	1.24e4	1.02e4	0.250	1.264	4.99	5.12	48.8	154	96.4
18	18	13C2-PFOA	414.8 > 370.1	6.54e3	6.54e3	0.250	1.000	4.24	4.23	10.0	40.0	100.0
19	19	13C4-PFOS	502.8>80.7	9.81e3	9.81e3	0.250	1.000	4.64	4.64	28.7	115	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.02e4	1.02e4	0.250	1.000	4.99	4.99	40.0	160	100.0

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

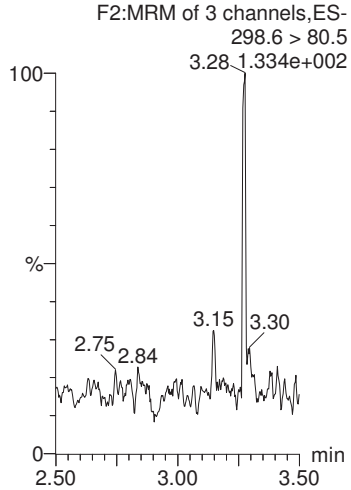
Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-56.qld

Last Altered: Saturday, July 28, 2018 19:59:25 Pacific Daylight Time
Printed: Saturday, July 28, 2018 19:59:33 Pacific Daylight Time

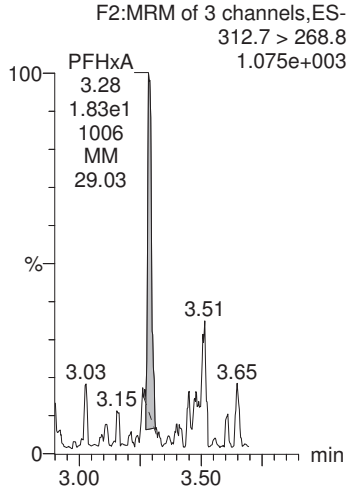
Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_56, Date: 25-Jul-2018, Time: 20:22:11, ID: B8G0167-BLK1 LRB 0.25, Description: LRB

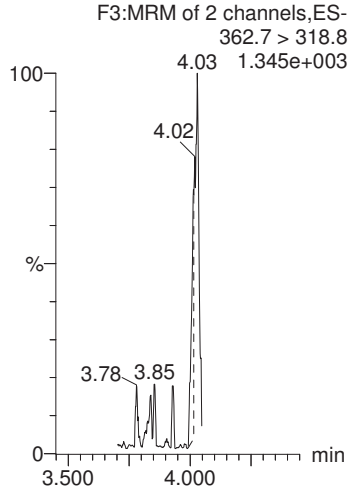
PFBS



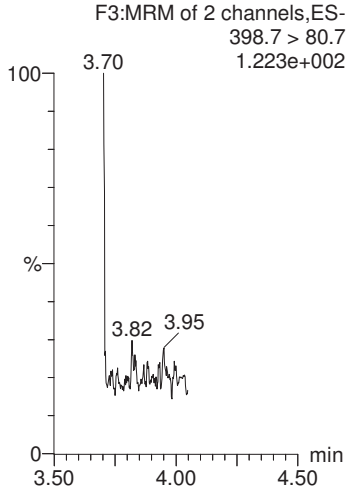
PFHxA



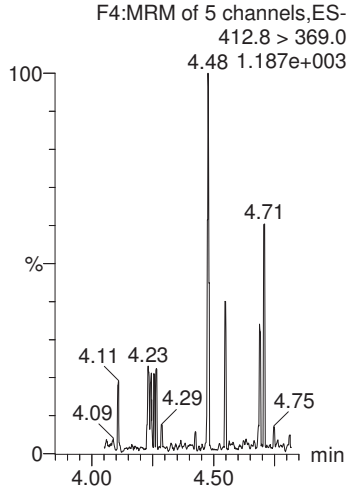
PFHpA



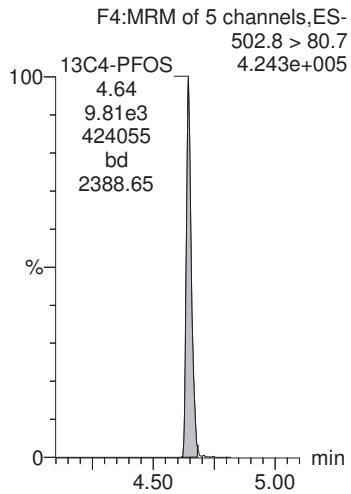
PFHxS



PFOA



13C4-PFOS



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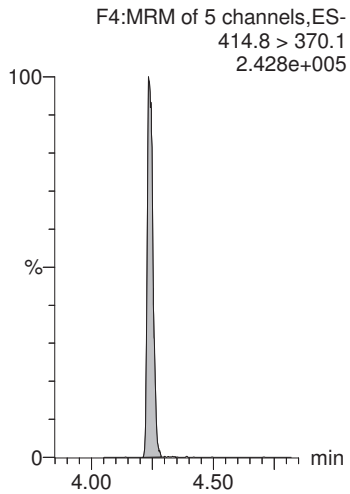

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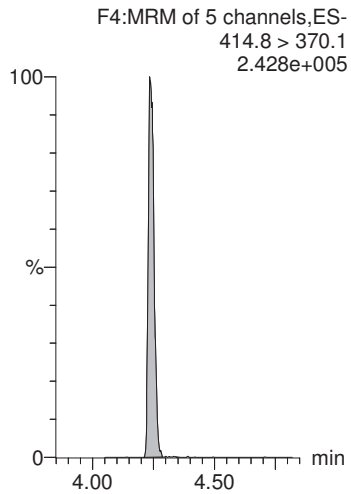

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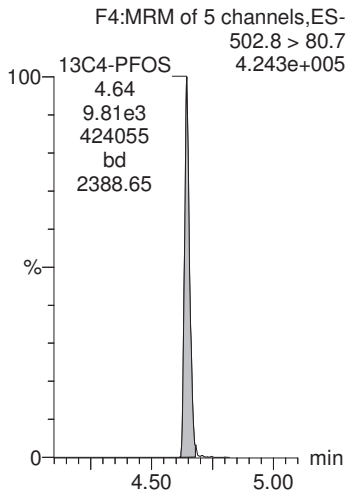

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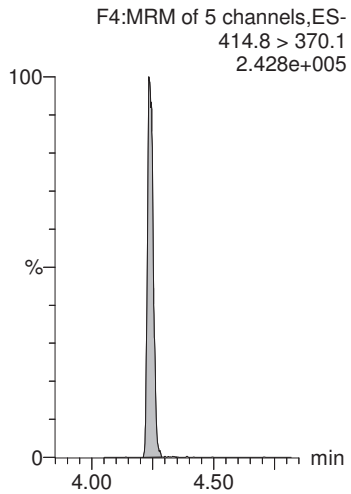

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-56.qld

Last Altered: Saturday, July 28, 2018 19:59:25 Pacific Daylight Time
Printed: Saturday, July 28, 2018 19:59:33 Pacific Daylight Time

Name: 180725G1_56, Date: 25-Jul-2018, Time: 20:22:11, ID: B8G0167-BLK1 LRB 0.25, Description: LRB

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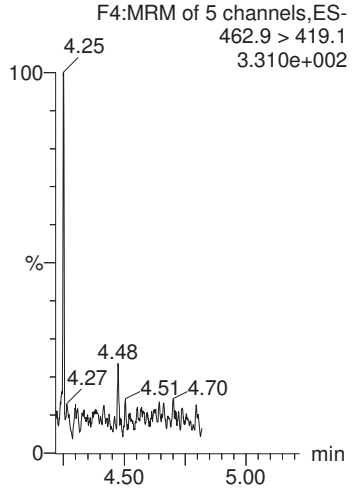

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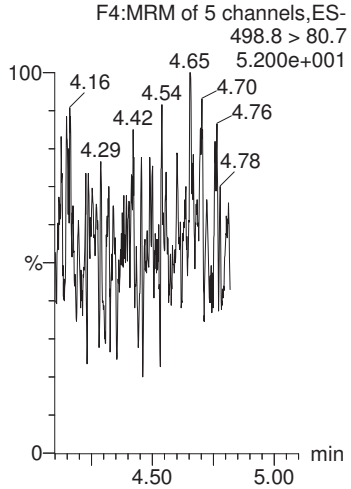

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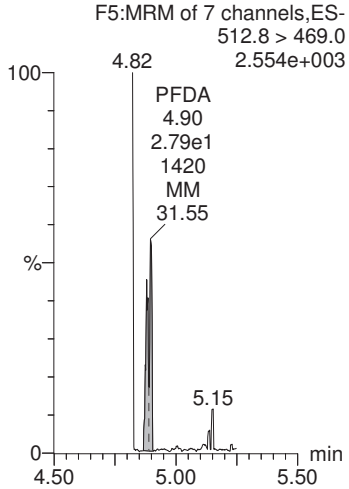

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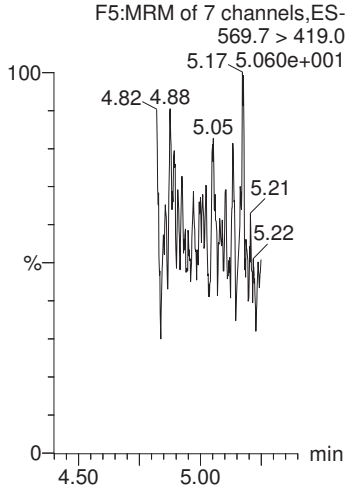

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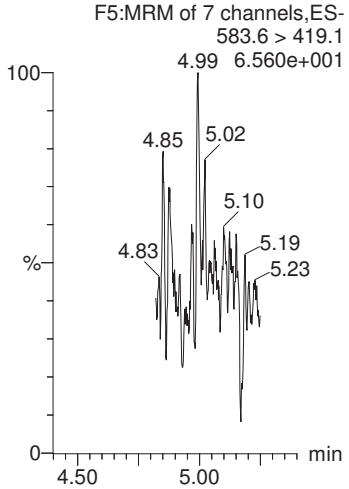

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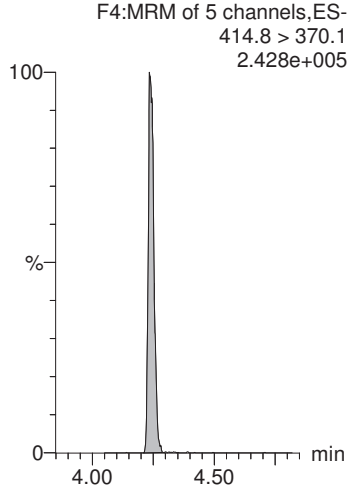

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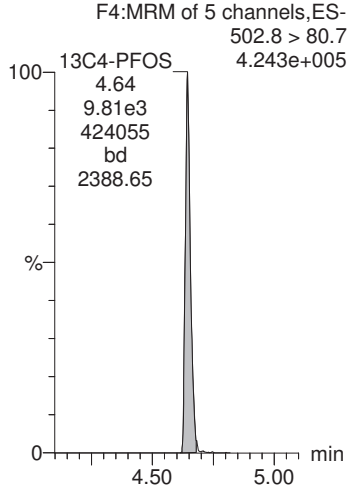

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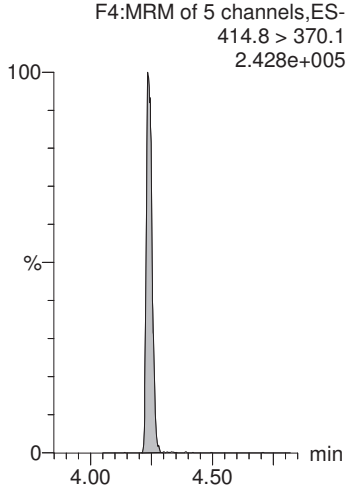

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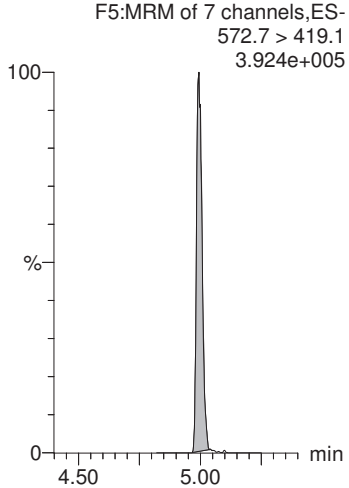

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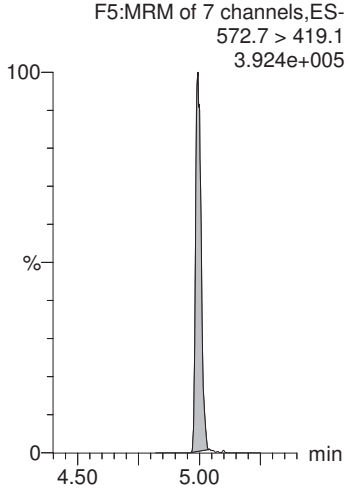

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-56.qld

Last Altered: Saturday, July 28, 2018 19:59:25 Pacific Daylight Time
Printed: Saturday, July 28, 2018 19:59:33 Pacific Daylight Time

Name: 180725G1_56, Date: 25-Jul-2018, Time: 20:22:11, ID: B8G0167-BLK1 LRB 0.25, Description: LRB

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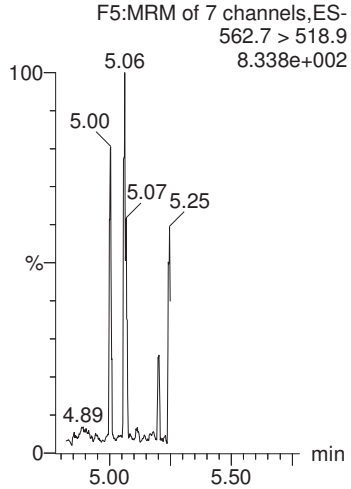

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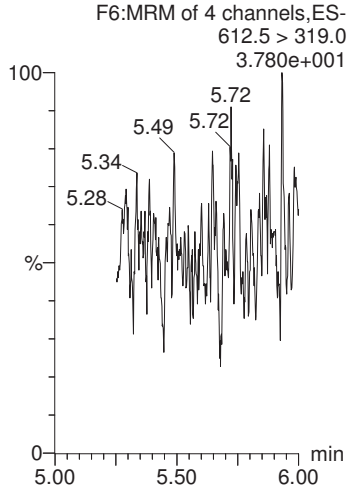

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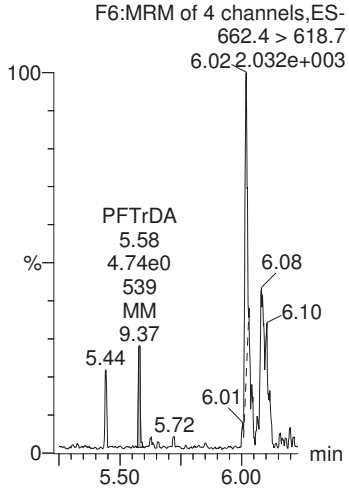

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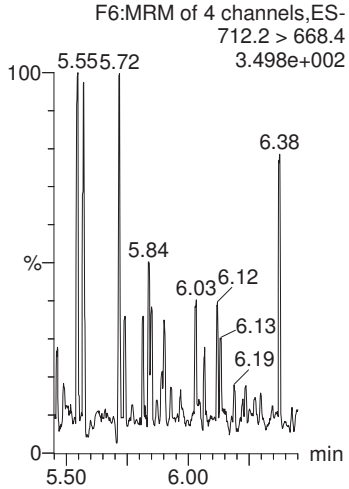

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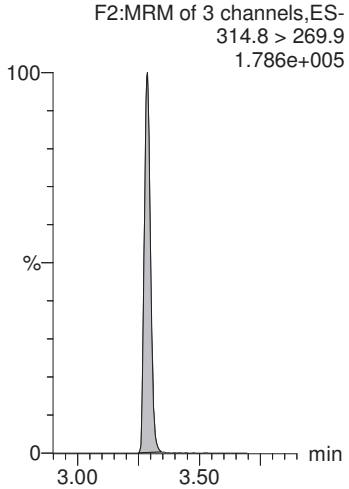

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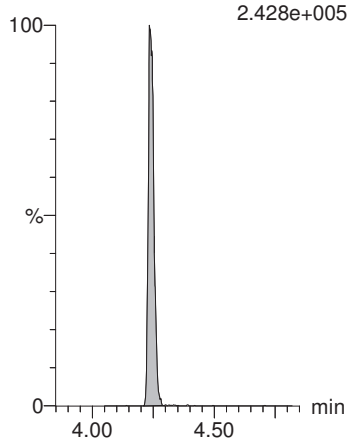

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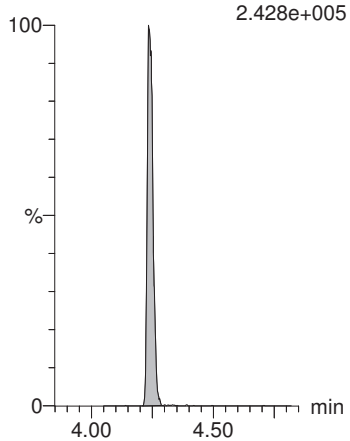

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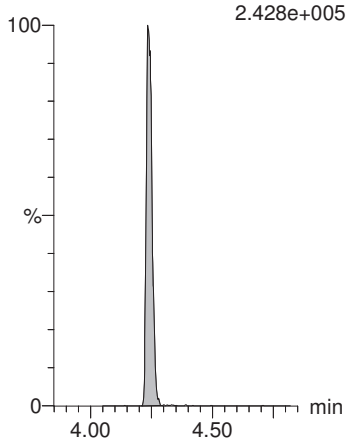

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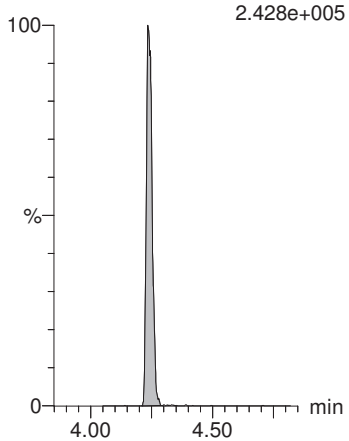

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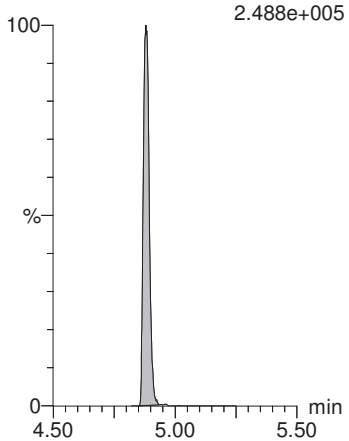


GM 7/28/2018

Vista Analytical Laboratory

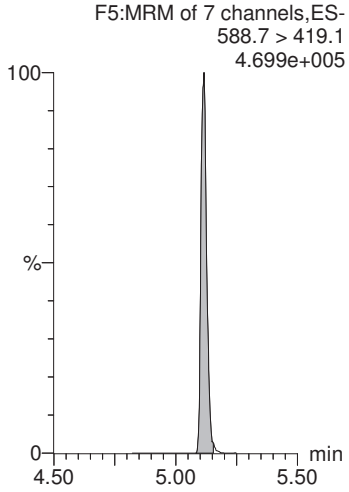
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-56.qld

Last Altered: Saturday, July 28, 2018 19:59:25 Pacific Daylight Time
Printed: Saturday, July 28, 2018 19:59:33 Pacific Daylight Time

Name: 180725G1_56, Date: 25-Jul-2018, Time: 20:22:11, ID: B8G0167-BLK1 LRB 0.25, Description: LRB

d5-N-EtFOSAA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-57.qld

Last Altered: Saturday, July 28, 2018 20:01:08 Pacific Daylight Time
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Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_57, Date: 25-Jul-2018, Time: 20:35:02, ID: B8G0167-BS1 LFB 0.25, Description: LFB

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5	3.18e3	1.09e4	0.250		2.91	2.91	8.41	35.4	100.0
2	2	PFHxA	312.7 > 268.8	5.75e3	7.22e3	0.250		3.28	3.29	7.96	39.2	97.9
3	3	PFHpA	362.7 > 318.8	6.06e3	7.22e3	0.250		3.82	3.82	8.39	38.3	95.8
4	4	PFHxS	398.7 > 80.7	3.78e3	1.09e4	0.250		3.95	3.95	9.99	35.4	97.0
5	5	PFOA	412.8 > 369.0	4.59e3	7.22e3	0.250		4.24	4.24	6.36	34.9	87.2
6	6	PFNA	462.9 > 419.1	4.77e3	7.22e3	0.250		4.58	4.58	6.61	30.3	75.9
7	7	PFOS	498.8 >80.7	1.26e3	1.09e4	0.250		4.64	4.64	3.34	36.1	97.7
8	8	PFDA	512.8 > 469.0	4.78e3	7.22e3	0.250		4.88	4.88	6.62	30.4	75.9
9	9	N-MeFOSAA	569.7 > 419.0	2.87e3	1.22e4	0.250		5.00	5.00	9.43	32.6	81.6
10	10	N-EtFOSAA	583.6 >419.1	2.79e3	1.22e4	0.250		5.13	5.13	9.15	36.7	91.8
11	11	PFUnA	562.7 > 518.9	5.59e3	7.22e3	0.250		5.12	5.12	7.74	32.2	80.6
12	12	PFDoA	612.5 > 319.0	8.58e2	7.22e3	0.250		5.37	5.37	1.19	32.3	80.8
13	13	PFTrDA	662.4 > 618.7	5.25e3	7.22e3	0.250		5.58	5.58	7.27	32.2	80.6
14	14	PFTeDA	712.2>668.4	5.20e3	7.22e3	0.250		5.76	5.76	7.20	31.1	77.8
15	15	13C2-PFHxA	314.8 > 269.9	5.14e3	7.22e3	0.250	0.753	3.40	3.28	7.11	37.8	94.5
16	16	13C2-PFDA	514.8 > 470.0	5.68e3	7.22e3	0.250	1.023	4.83	4.88	7.87	30.8	77.0
17	17	d5-N-EtFOSAA	588.7> 419.1	1.31e4	1.22e4	0.250	1.264	5.00	5.12	42.9	136	84.9
18	18	13C2-PFOA	414.8 > 370.1	7.22e3	7.22e3	0.250	1.000	4.24	4.24	10.0	40.0	100.0
19	19	13C4-PFOS	502.8>80.7	1.09e4	1.09e4	0.250	1.000	4.64	4.65	28.7	115	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.22e4	1.22e4	0.250	1.000	4.99	5.00	40.0	160	100.0

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Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-57.qld

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Name: 180725G1_57, Date: 25-Jul-2018, Time: 20:35:02, ID: B8G0167-BS1 LFB 0.25, Description: LFB

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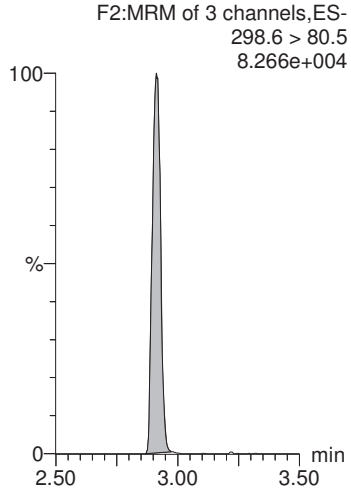

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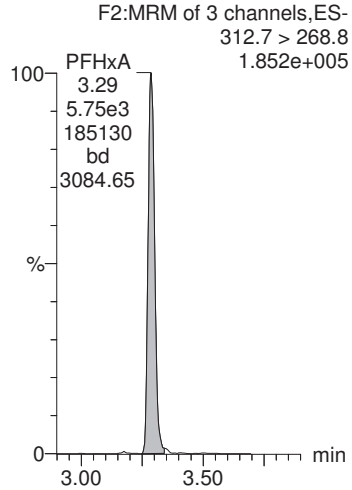

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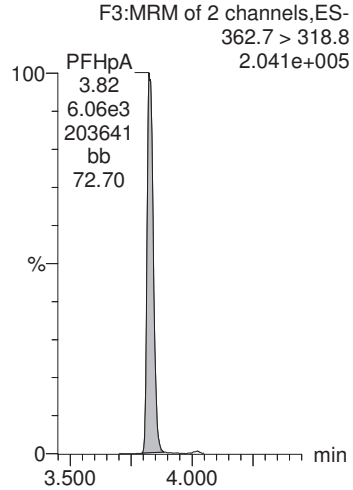

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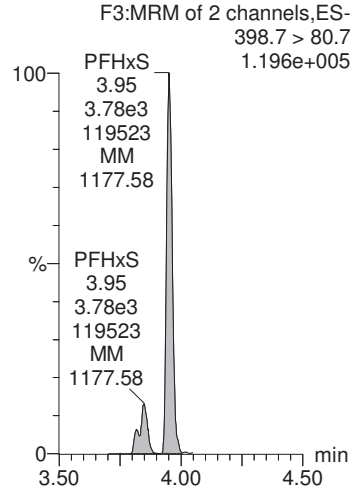
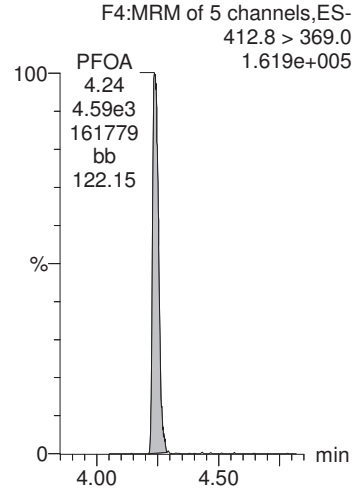


PFOA



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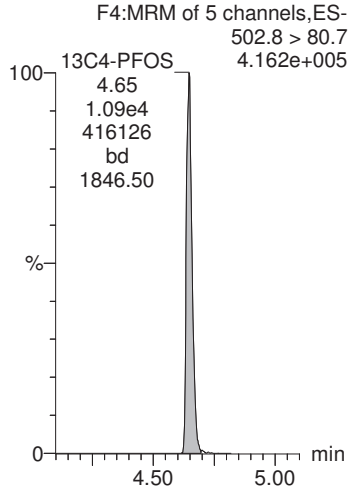

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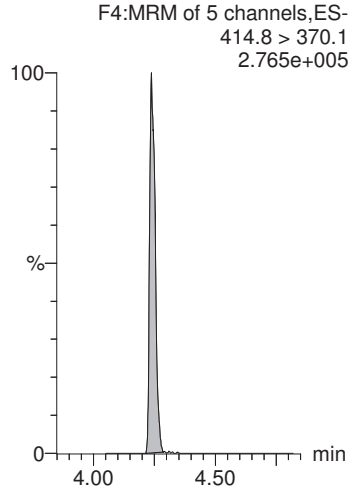

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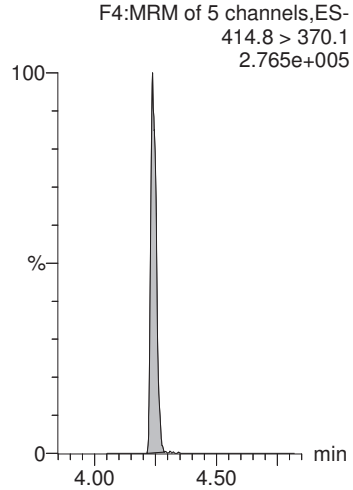

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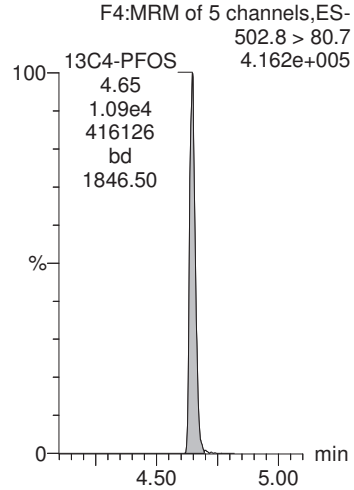

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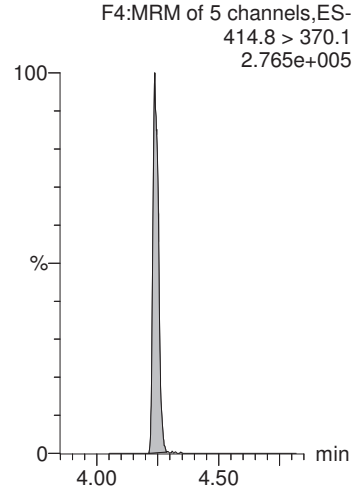

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-57.qld

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Name: 180725G1_57, Date: 25-Jul-2018, Time: 20:35:02, ID: B8G0167-BS1 LFB 0.25, Description: LFB

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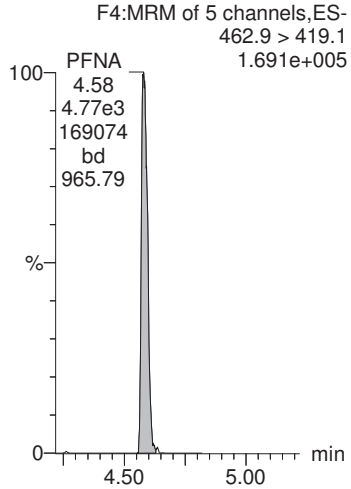

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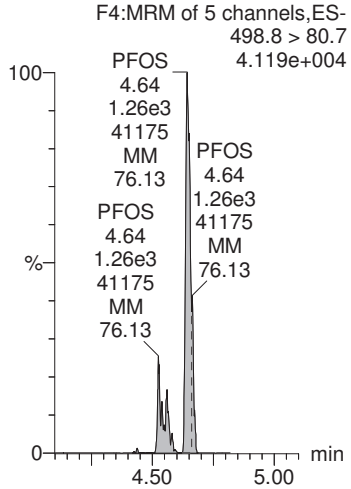

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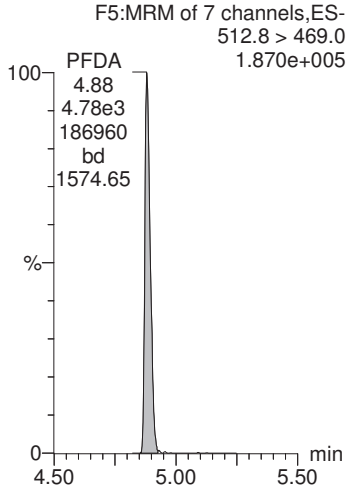

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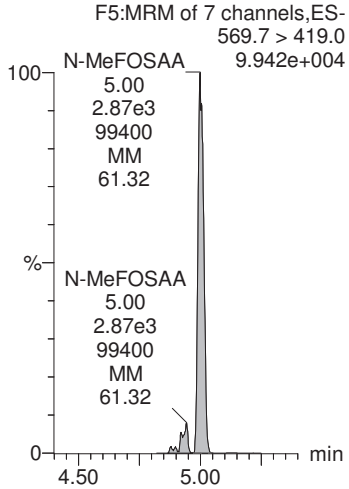

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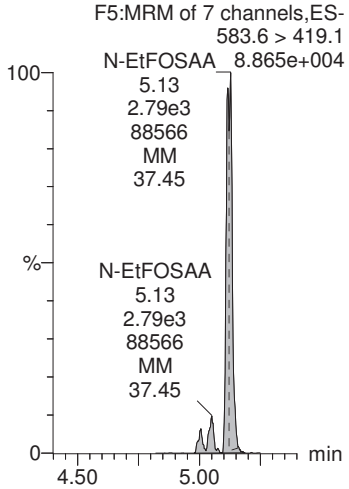

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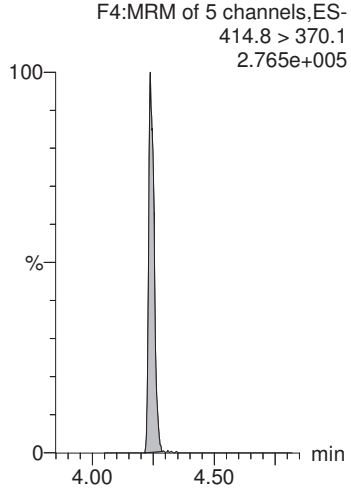

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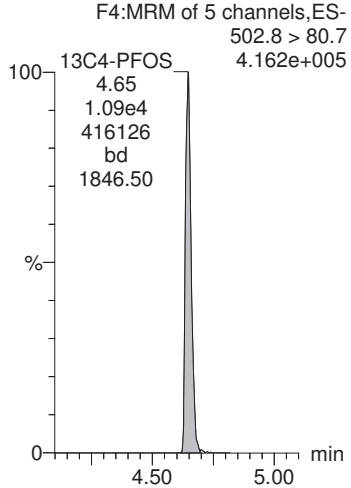

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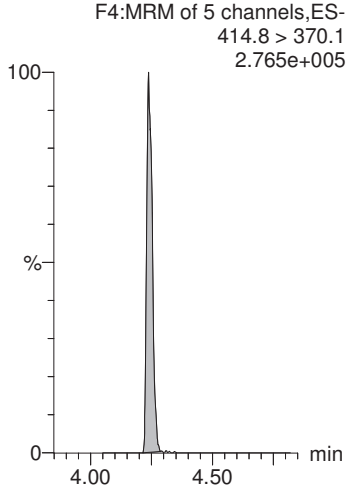

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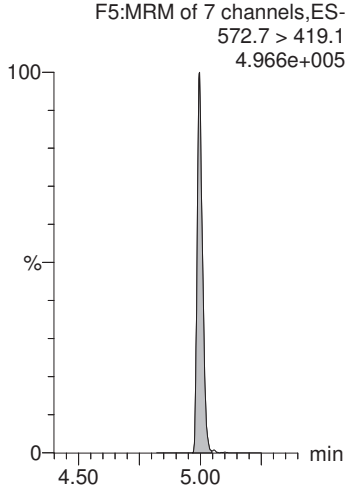

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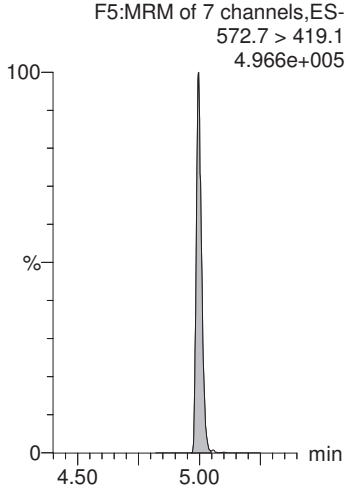

GM 7/28/2018

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-57.qld

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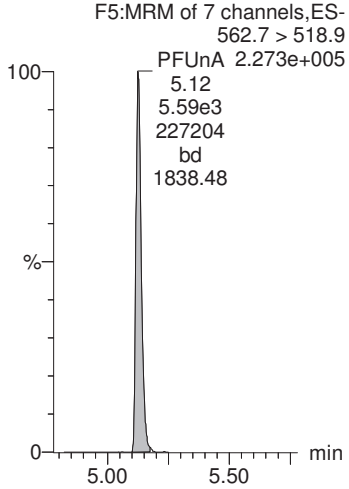
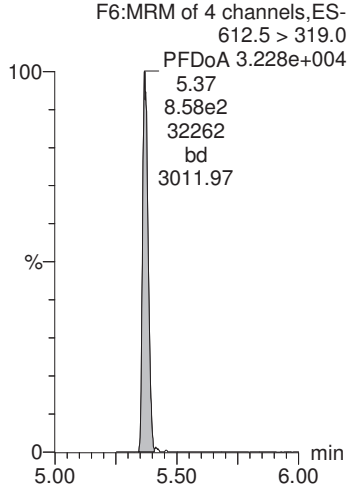
Name: 180725G1_57, Date: 25-Jul-2018, Time: 20:35:02, ID: B8G0167-BS1 LFB 0.25, Description: LFB

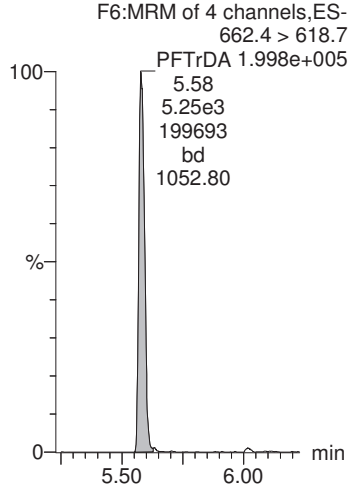
PFUnA



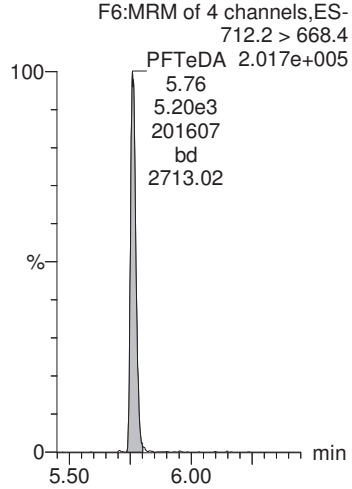
PFDoA



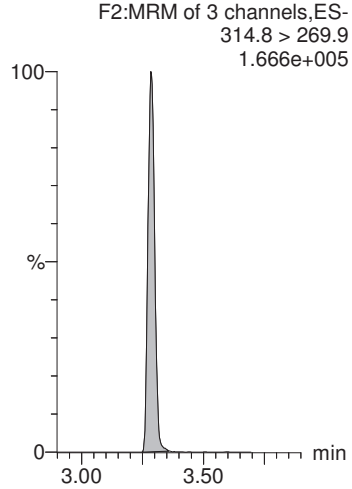
PFTrDA



PFTeDA



13C2-PFHxA



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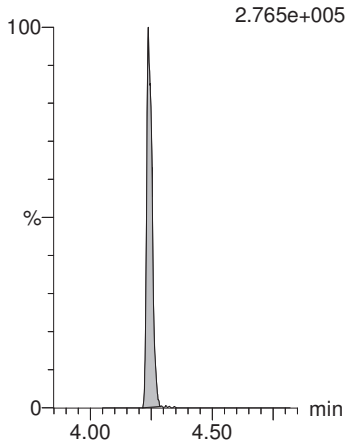

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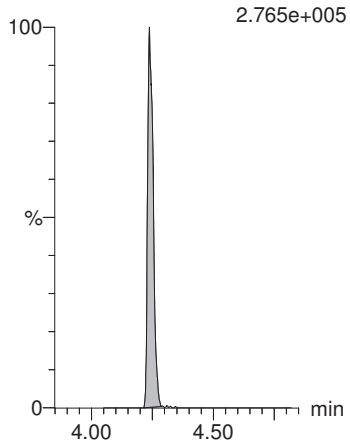

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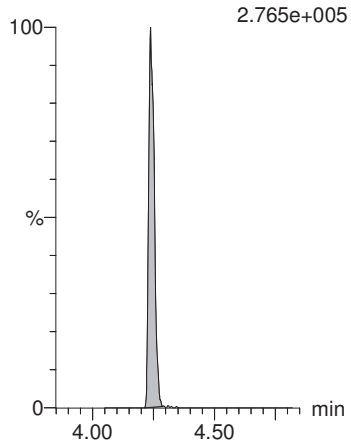

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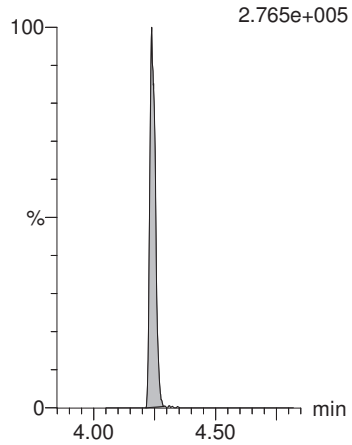
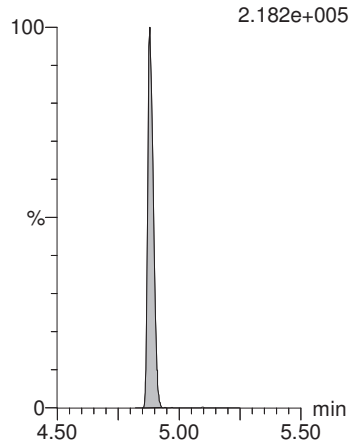


13C2-PFDA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-57.qld

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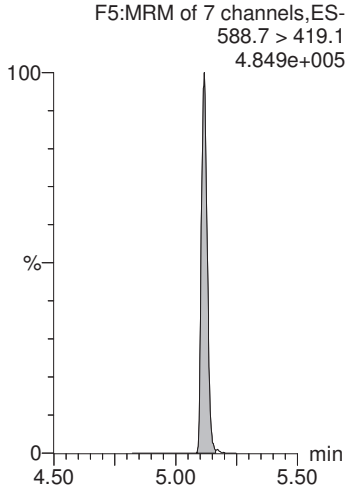
Printed: Saturday, July 28, 2018 20:01:26 Pacific Daylight Time

Name: 180725G1_57, Date: 25-Jul-2018, Time: 20:35:02, ID: B8G0167-BS1 LFB 0.25, Description: LFB

d5-N-EtFOSAA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-58.qld

Last Altered: Saturday, July 28, 2018 20:02:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:03:02 Pacific Daylight Time

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Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_58, Date: 25-Jul-2018, Time: 20:47:49, ID: B8G0167-BSD1 LFBD 0.25, Description: LFBD

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5	3.37e3	1.04e4	0.250		2.91	2.91	9.31	39.2	110.8
2	2	PFHxA	312.7 > 268.8	6.85e3	7.00e3	0.250		3.29	3.28	9.79	48.2	120.4
3	3	PFHpA	362.7 > 318.8	7.35e3	7.00e3	0.250		3.82	3.82	10.5	47.9	119.9
4	4	PFHxS	398.7 > 80.7	3.92e3	1.04e4	0.250		3.95	3.95	10.8	38.4	105.2
5	5	PFOA	412.8 > 369.0	5.99e3	7.00e3	0.250		4.24	4.24	8.56	47.0	117.4
6	6	PFNA	462.9 > 419.1	6.89e3	7.00e3	0.250		4.58	4.58	9.84	45.2	113.0
7	7	PFOS	498.8 >80.7	1.59e3	1.04e4	0.250		4.64	4.65	4.41	47.7	129.0
8	8	PFDA	512.8 > 469.0	6.59e3	7.00e3	0.250		4.88	4.88	9.42	43.2	108.0
9	9	N-MeFOSAA	569.7 > 419.0	3.68e3	1.11e4	0.250		5.00	5.00	13.3	45.9	114.8
10	10	N-EtFOSAA	583.6 >419.1	3.18e3	1.11e4	0.250		5.12	5.11	11.5	45.9	114.8
11	11	PFUnA	562.7 > 518.9	7.11e3	7.00e3	0.250		5.13	5.12	10.2	42.3	105.8
12	12	PFDoA	612.5 > 319.0	1.10e3	7.00e3	0.250		5.37	5.37	1.58	43.0	107.4
13	13	PFTrDA	662.4 > 618.7	6.83e3	7.00e3	0.250		5.58	5.57	9.76	43.3	108.2
14	14	PFTeDA	712.2>668.4	6.64e3	7.00e3	0.250		5.76	5.76	9.49	41.0	102.4
15	15	13C2-PFHxA	314.8 > 269.9	5.80e3	7.00e3	0.250	0.753	3.40	3.28	8.29	44.1	110.2
16	16	13C2-PFDA	514.8 > 470.0	7.03e3	7.00e3	0.250	1.023	4.83	4.88	10.1	39.3	98.3
17	17	d5-N-EtFOSAA	588.7> 419.1	1.43e4	1.11e4	0.250	1.264	4.99	5.11	51.4	163	101.7
18	18	13C2-PFOA	414.8 > 370.1	7.00e3	7.00e3	0.250	1.000	4.24	4.24	10.0	40.0	100.0
19	19	13C4-PFOS	502.8>80.7	1.04e4	1.04e4	0.250	1.000	4.64	4.64	28.7	115	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.11e4	1.11e4	0.250	1.000	4.99	4.99	40.0	160	100.0

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-58.qld

Last Altered: Saturday, July 28, 2018 20:02:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:03:02 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_58, Date: 25-Jul-2018, Time: 20:47:49, ID: B8G0167-BSD1 LFBD 0.25, Description: LFBD

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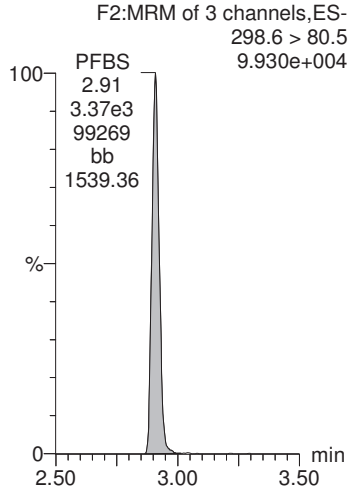
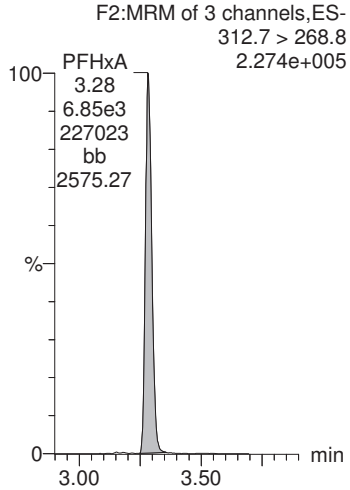
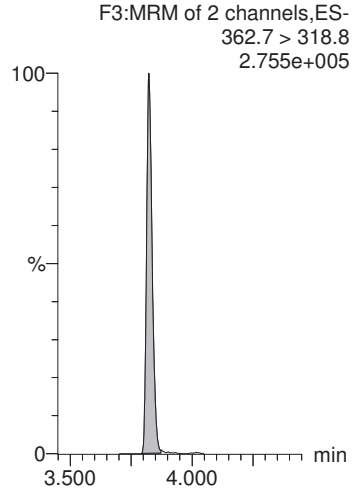


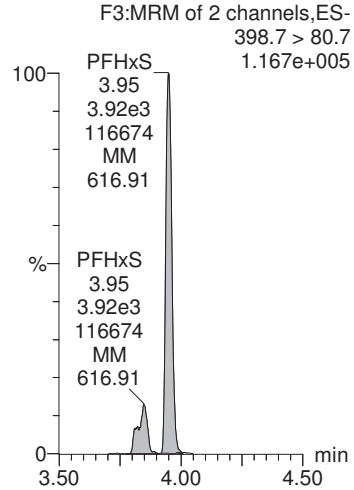
PFHxA



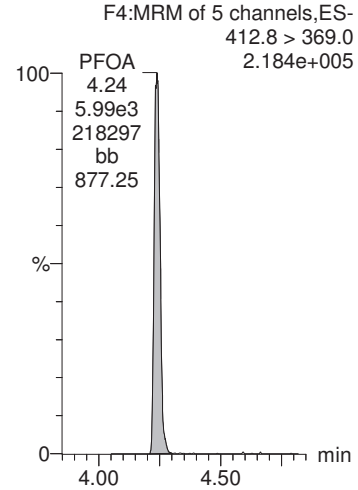
PFHpA



PFHxS



PFOA



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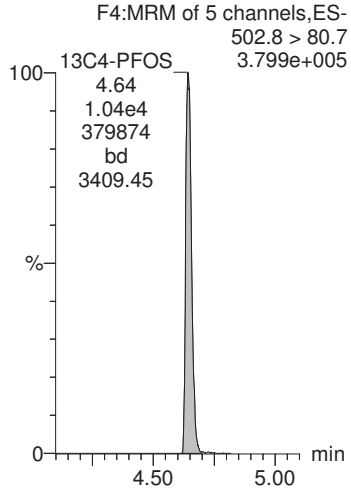

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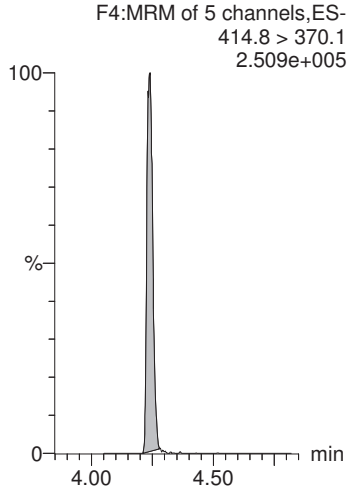

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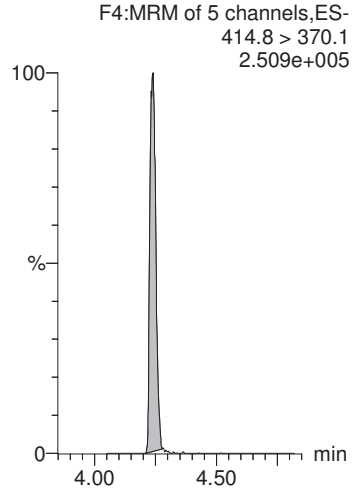

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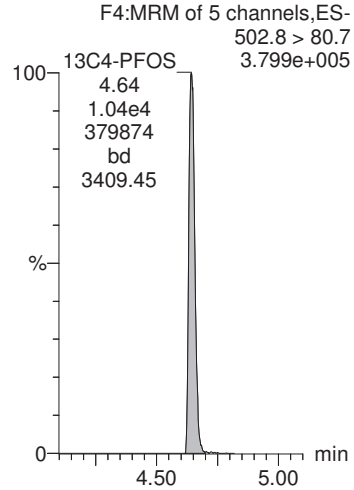

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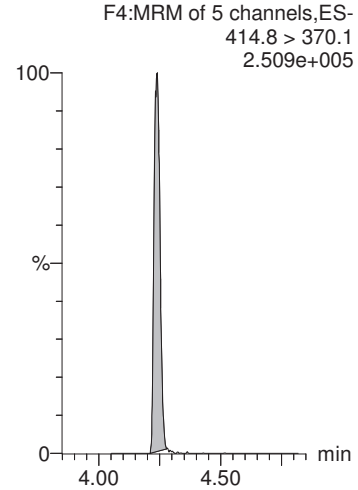

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-58.qld

Last Altered: Saturday, July 28, 2018 20:02:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:03:02 Pacific Daylight Time

Name: 180725G1_58, Date: 25-Jul-2018, Time: 20:47:49, ID: B8G0167-BSD1 LFBD 0.25, Description: LFBD

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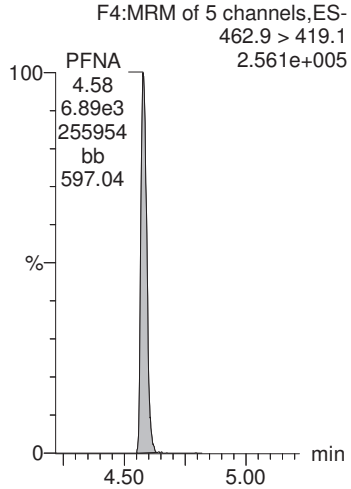
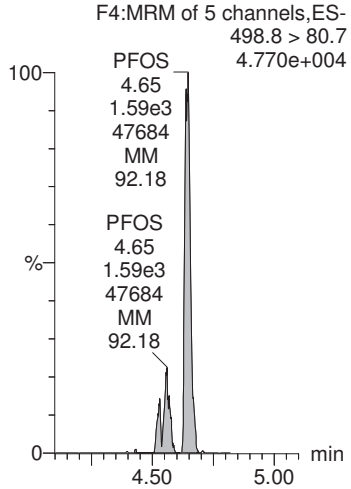
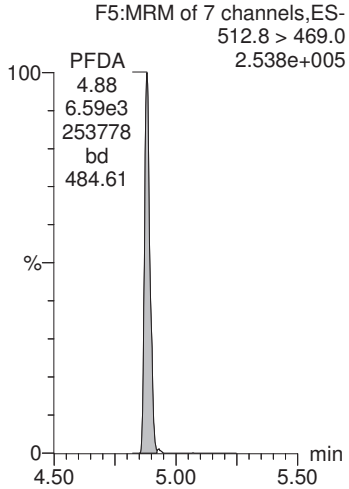


PFOS



PFDA



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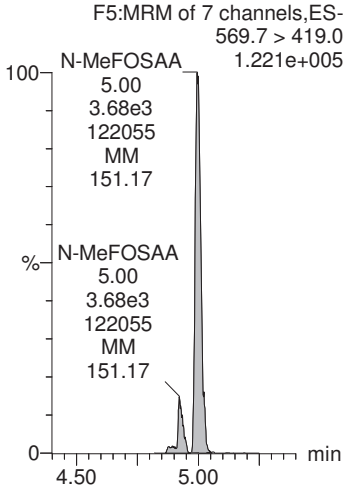

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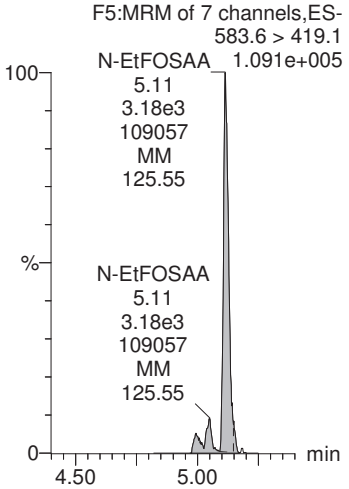

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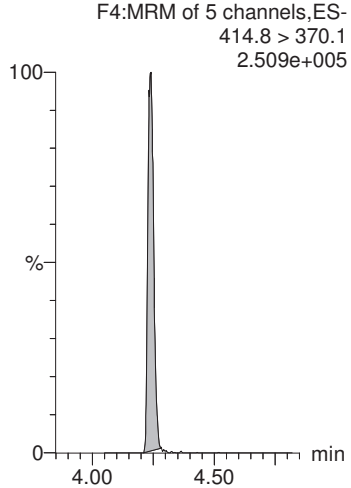

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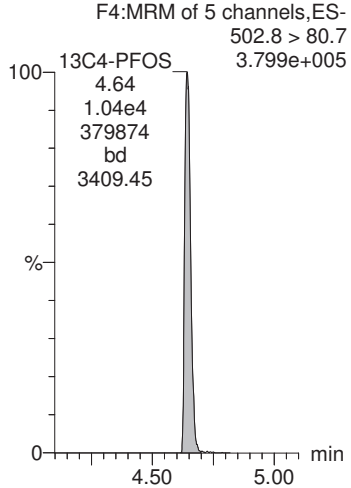

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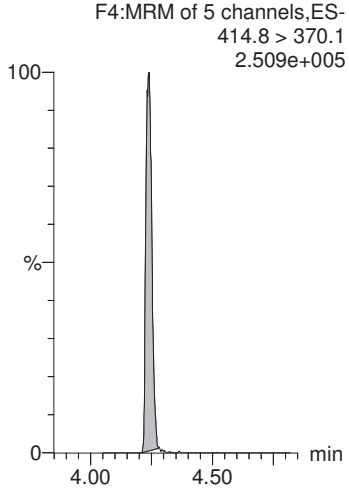

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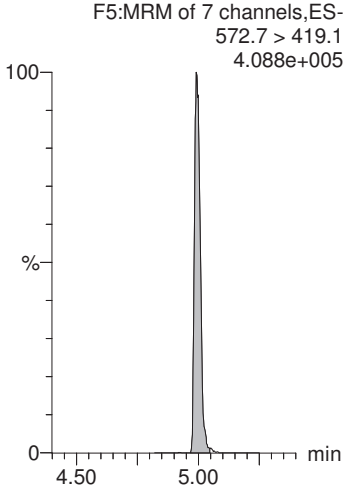

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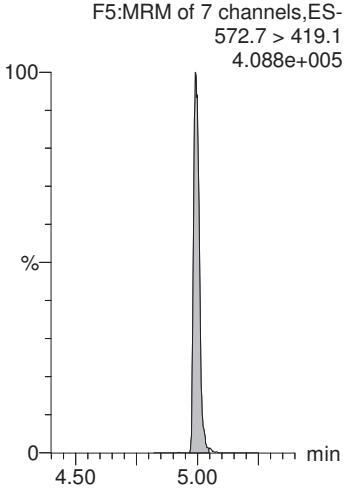


GM 7/28/2018

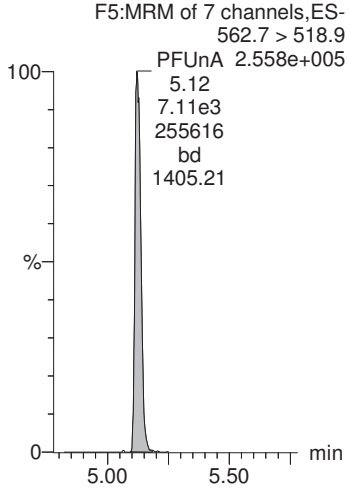
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-58.qld

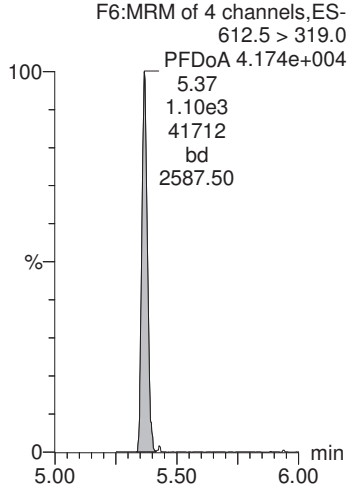
Last Altered: Saturday, July 28, 2018 20:02:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:03:02 Pacific Daylight Time

Name: 180725G1_58, Date: 25-Jul-2018, Time: 20:47:49, ID: B8G0167-BSD1 LFBD 0.25, Description: LFBD

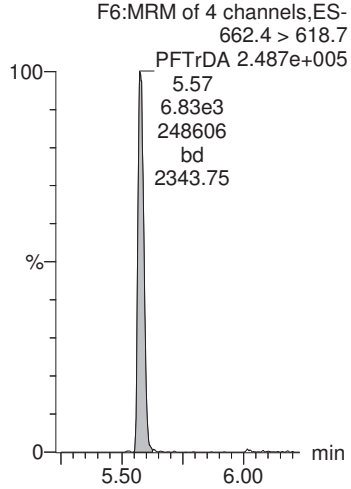
PFUnA



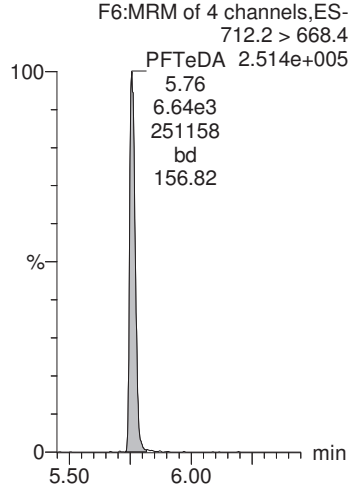
PFDoA



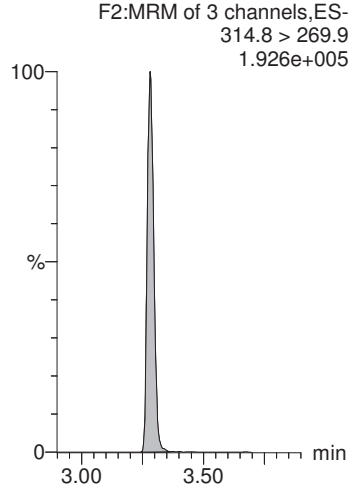
PFTrDA



PFTeDA



13C2-PFHxA



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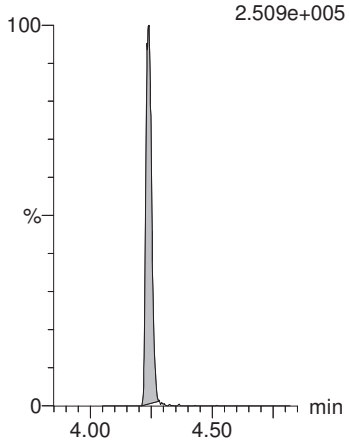
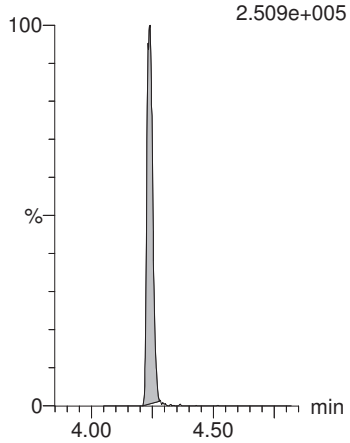


13C2-PFOA



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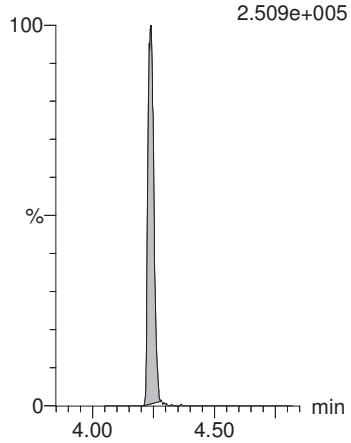

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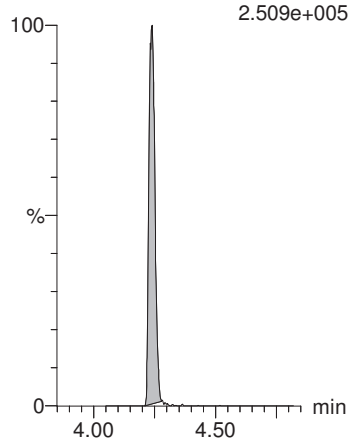

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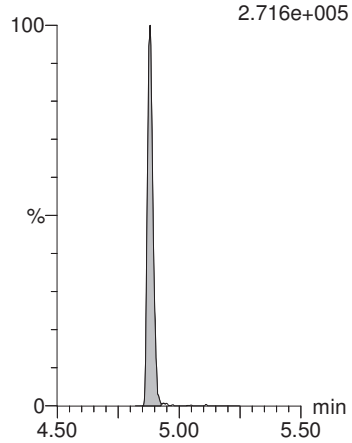


GM 7/28/2018

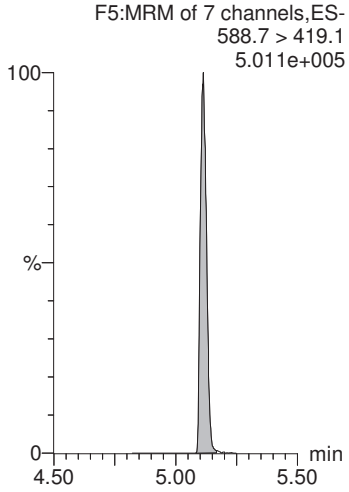
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-58.qld

Last Altered: Saturday, July 28, 2018 20:02:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:03:02 Pacific Daylight Time

Name: 180725G1_58, Date: 25-Jul-2018, Time: 20:47:49, ID: B8G0167-BSD1 LFBD 0.25, Description: LFBD

d5-N-EtFOSAA



GM 7/28/2018

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-59.qld

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Printed: Saturday, July 28, 2018 20:09:55 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_59, Date: 25-Jul-2018, Time: 21:00:39, ID: 1801868-01 CBD-1RW32-0718 0.24293, Description: CBD-1RW32-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5		9.60e3	0.243		2.90				
2	2	PFHxA	312.7 > 268.8		6.63e3	0.243		3.28				
3	3	PFHpA	362.7 > 318.8		6.63e3	0.243		3.82				
4	4	PFHxS	398.7 > 80.7		9.60e3	0.243		3.94				
5	5	PFOA	412.8 > 369.0	2.06e1	6.63e3	0.243		4.23	4.23	0.0310	0.175	
6	6	PFNA	462.9 > 419.1		6.63e3	0.243		4.58				
7	7	PFOS	498.8 >80.7		9.60e3	0.243		4.63				
8	8	PFDA	512.8 > 469.0	1.16e1	6.63e3	0.243		4.88	4.89	0.0174	0.0823	
9	9	N-MeFOSAA	569.7 > 419.0		1.00e4	0.243		5.00				
10	10	N-EtFOSAA	583.6 >419.1		1.00e4	0.243		5.13				
11	11	PFUnA	562.7 > 518.9		6.63e3	0.243		5.12				
12	12	PFDoA	612.5 > 319.0		6.63e3	0.243		5.37				
13	13	PFTrDA	662.4 > 618.7		6.63e3	0.243		5.57				
14	14	PFTeDA	712.2>668.4		6.63e3	0.243		5.75				
15	15	13C2-PFHxA	314.8 > 269.9	5.11e3	6.63e3	0.243	0.753	3.40	3.28	7.70	42.1	102.3
16	16	13C2-PFDA	514.8 > 470.0	6.51e3	6.63e3	0.243	1.023	4.83	4.88	9.82	39.5	96.0
17	17	d5-N-EtFOSAA	588.7> 419.1	1.22e4	1.00e4	0.243	1.264	5.00	5.11	48.7	159	96.4
18	18	13C2-PFOA	414.8 > 370.1	6.63e3	6.63e3	0.243	1.000	4.24	4.23	10.0	41.2	100.0
19	19	13C4-PFOS	502.8>80.7	9.60e3	9.60e3	0.243	1.000	4.64	4.64	28.7	118	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.00e4	1.00e4	0.243	1.000	4.99	5.00	40.0	165	100.0

GM 7/28/2018

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Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-59.qld

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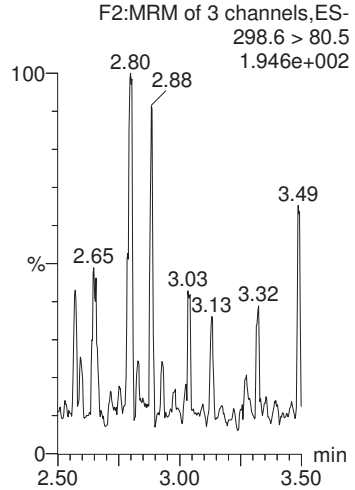
Printed: Saturday, July 28, 2018 20:09:55 Pacific Daylight Time

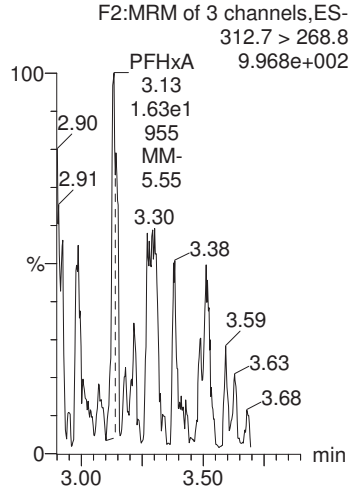
Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_59, Date: 25-Jul-2018, Time: 21:00:39, ID: 1801868-01 CBD-1RW32-0718 0.24293, Description: CBD-1RW32-0718

PFBS



PFHxA



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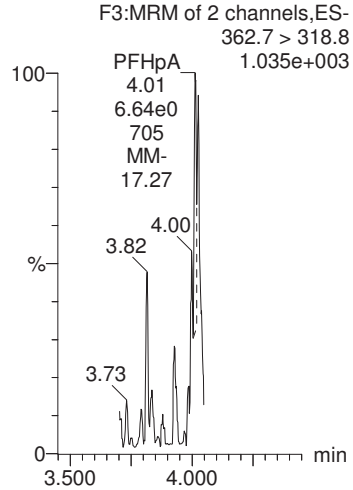
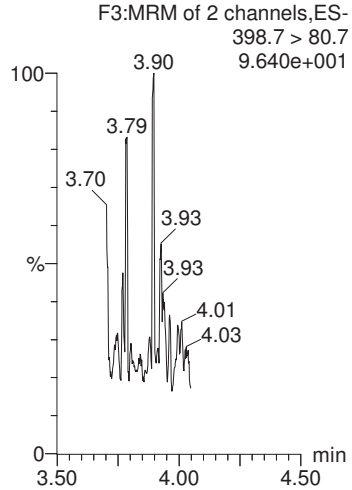
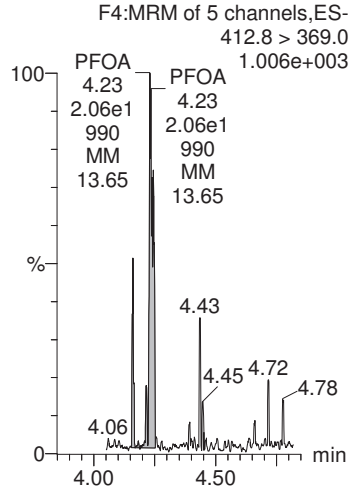


PFHxS



PFOA



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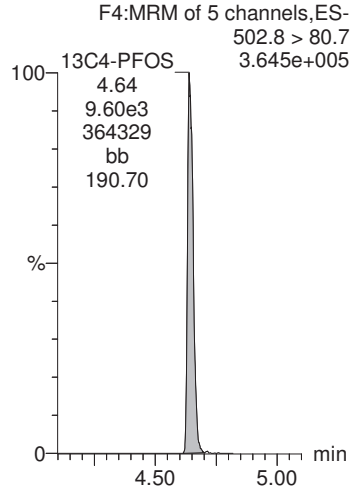

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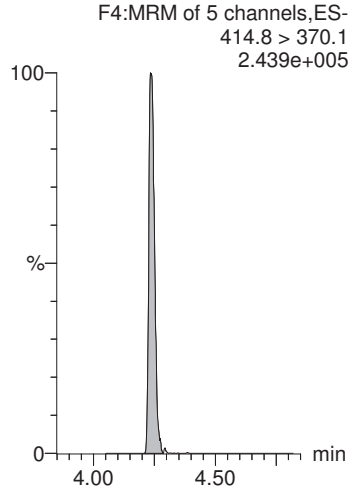

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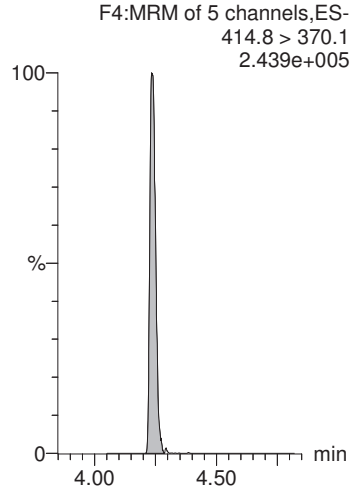

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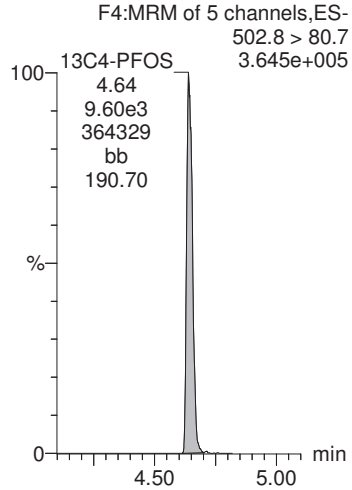

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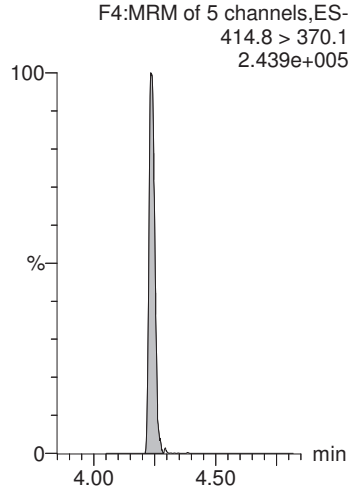


GM 7/28/2018

Vista Analytical Laboratory

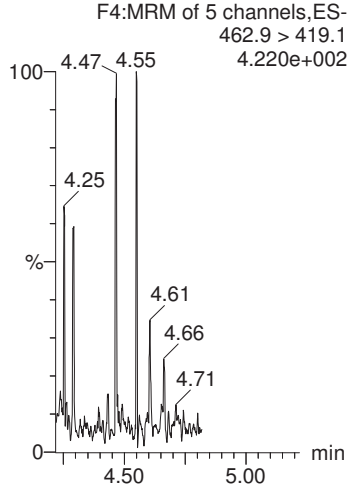
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-59.qld

Last Altered: Saturday, July 28, 2018 20:09:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:09:55 Pacific Daylight Time

Name: 180725G1_59, Date: 25-Jul-2018, Time: 21:00:39, ID: 1801868-01 CBD-1RW32-0718 0.24293, Description: CBD-1RW32-0718

PFNA



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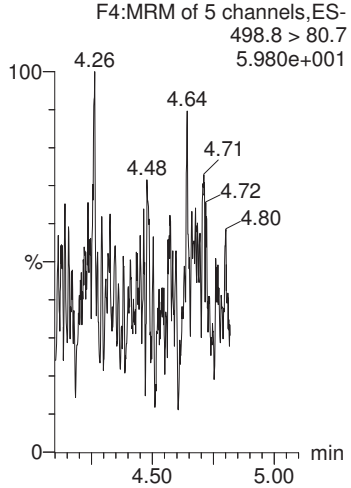

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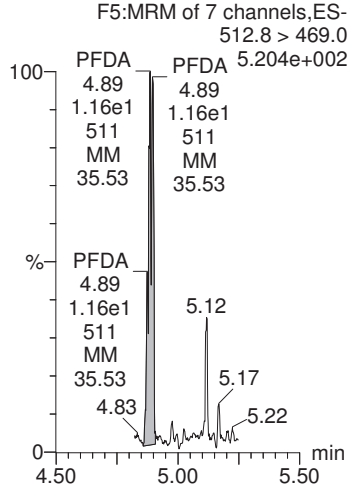
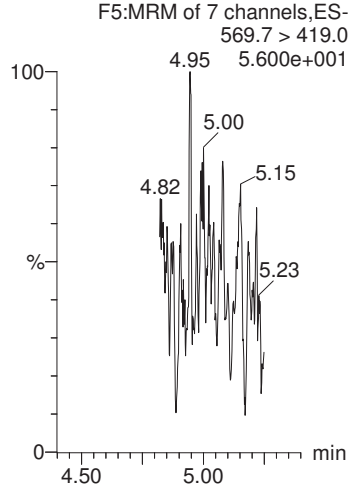
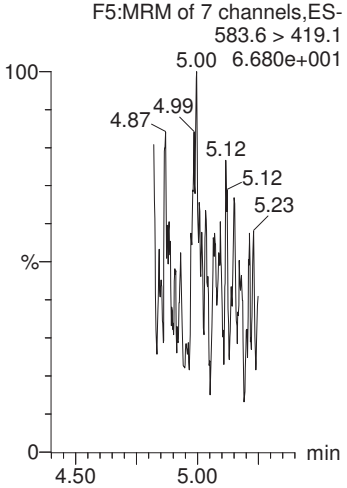


N-MeFOSAA



N-EtFOSAA



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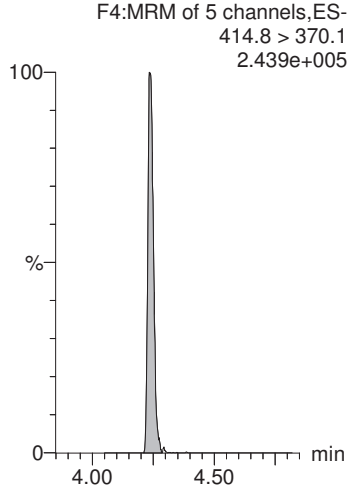

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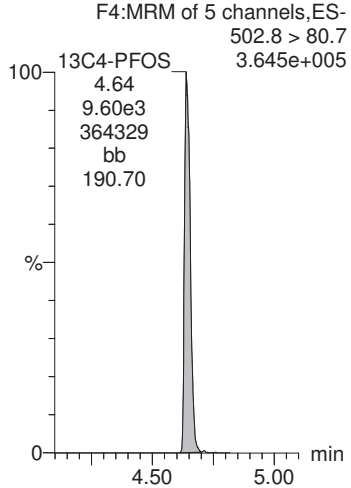

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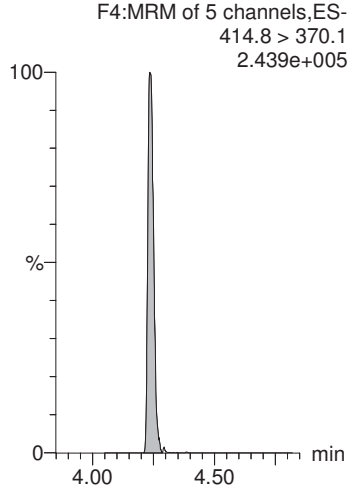

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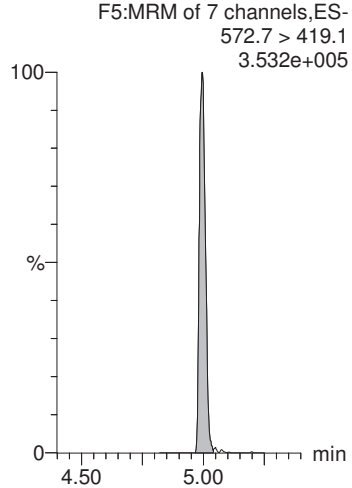

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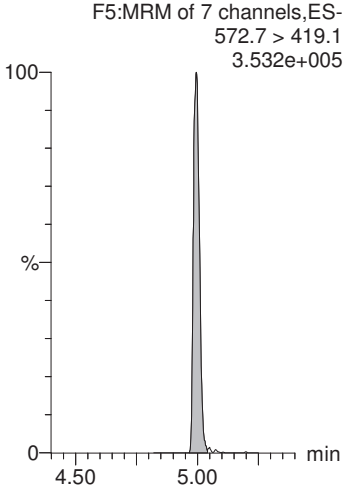


GM 7/28/2018

Vista Analytical Laboratory

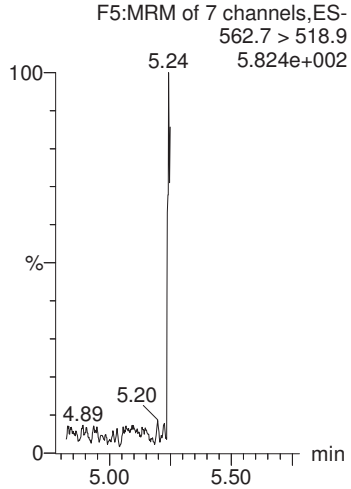
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-59.qld

Last Altered: Saturday, July 28, 2018 20:09:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:09:55 Pacific Daylight Time

Name: 180725G1_59, Date: 25-Jul-2018, Time: 21:00:39, ID: 1801868-01 CBD-1RW32-0718 0.24293, Description: CBD-1RW32-0718

PFUnA



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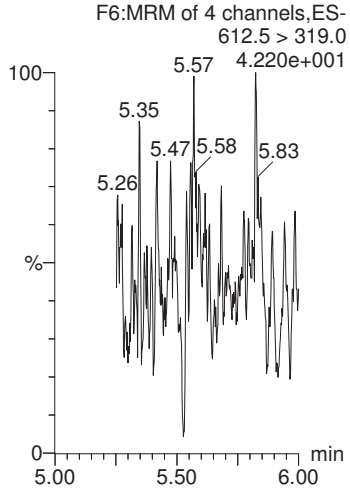

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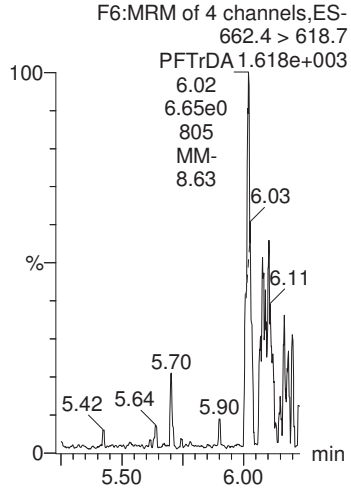
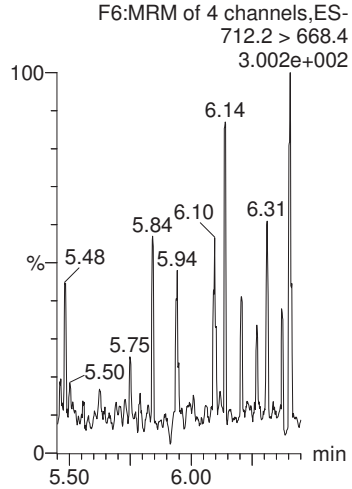


PFTeDA



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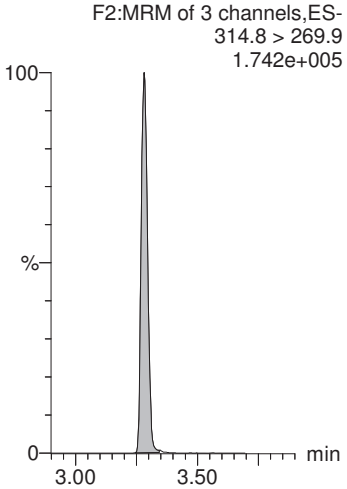

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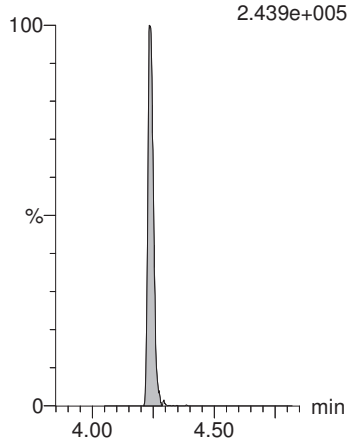

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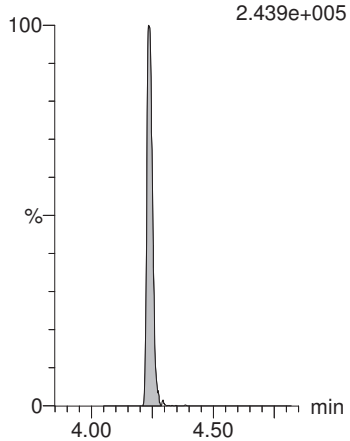

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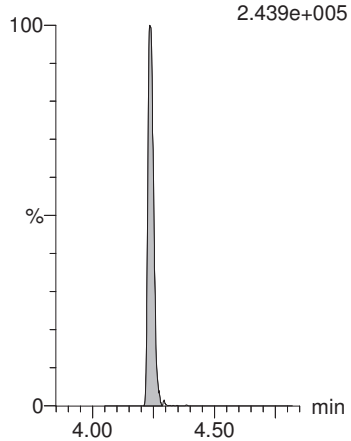

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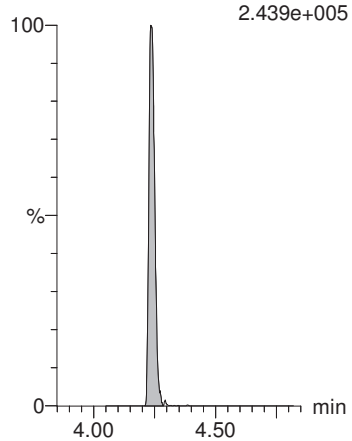

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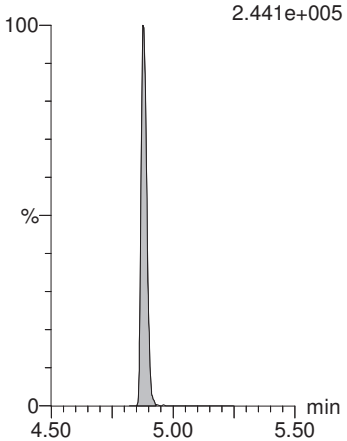


GM 7/28/2018

Vista Analytical Laboratory

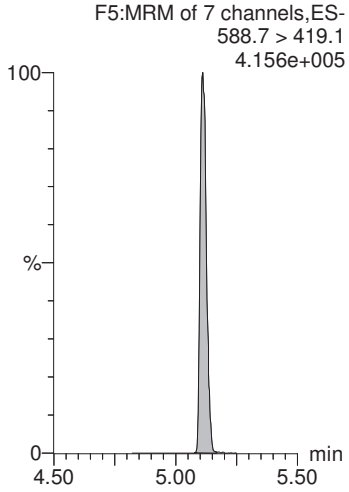
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-59.qld

Last Altered: Saturday, July 28, 2018 20:09:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:09:55 Pacific Daylight Time

Name: 180725G1_59, Date: 25-Jul-2018, Time: 21:00:39, ID: 1801868-01 CBD-1RW32-0718 0.24293, Description: CBD-1RW32-0718

d5-N-EtFOSAA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-60.qld

Last Altered: Saturday, July 28, 2018 20:11:03 Pacific Daylight Time
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Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_60, Date: 25-Jul-2018, Time: 21:13:28, ID: 1801868-02 CBD-1FB32-0718 0.25868, Description: CBD-1FB32-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5		1.05e4	0.259		2.90				
2	2	PFHxA	312.7 > 268.8	3.50e1	7.50e3	0.259		3.28	3.30	0.0466	0.222	
3	3	PFHpA	362.7 > 318.8		7.50e3	0.259		3.82				
4	4	PFHxS	398.7 > 80.7		1.05e4	0.259		3.95				
5	5	PFOA	412.8 > 369.0	1.67e1	7.50e3	0.259		4.23	4.24	0.0222	0.118	
6	6	PFNA	462.9 > 419.1		7.50e3	0.259		4.58				
7	7	PFOS	498.8 >80.7	2.43e0	1.05e4	0.259		4.64	4.64	0.00667	0.0697	
8	8	PFDA	512.8 > 469.0	2.35e1	7.50e3	0.259		4.88	4.89	0.0313	0.139	
9	9	N-MeFOSAA	569.7 > 419.0		1.16e4	0.259		5.00				
10	10	N-EtFOSAA	583.6 >419.1		1.16e4	0.259		5.12				
11	11	PFUnA	562.7 > 518.9		7.50e3	0.259		5.12				
12	12	PFDoA	612.5 > 319.0		7.50e3	0.259		5.37				
13	13	PFTrDA	662.4 > 618.7		7.50e3	0.259		5.57				
14	14	PFTeDA	712.2>668.4		7.50e3	0.259		5.75				
15	15	13C2-PFHxA	314.8 > 269.9	5.89e3	7.50e3	0.259	0.753	3.40	3.28	7.86	40.4	104.4
16	16	13C2-PFDA	514.8 > 470.0	7.79e3	7.50e3	0.259	1.023	4.83	4.88	10.4	39.2	101.5
17	17	d5-N-EtFOSAA	588.7> 419.1	1.45e4	1.16e4	0.259	1.264	4.99	5.11	50.0	153	99.0
18	18	13C2-PFOA	414.8 > 370.1	7.50e3	7.50e3	0.259	1.000	4.24	4.23	10.0	38.7	100.0
19	19	13C4-PFOS	502.8>80.7	1.05e4	1.05e4	0.259	1.000	4.64	4.64	28.7	111	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.16e4	1.16e4	0.259	1.000	4.99	4.99	40.0	155	100.0

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-60.qld

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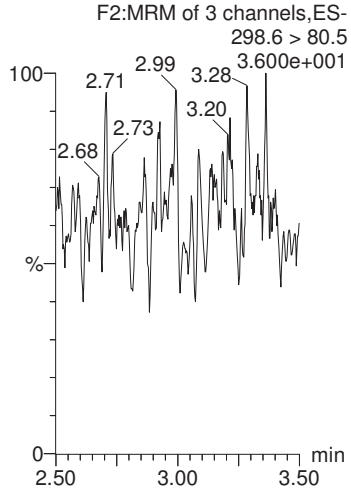
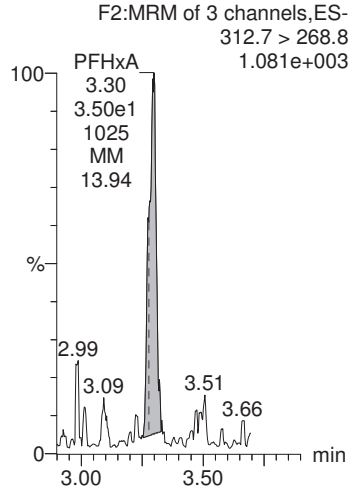
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_60, Date: 25-Jul-2018, Time: 21:13:28, ID: 1801868-02 CBD-1FB32-0718 0.25868, Description: CBD-1FB32-0718

PFBS



PFHxA



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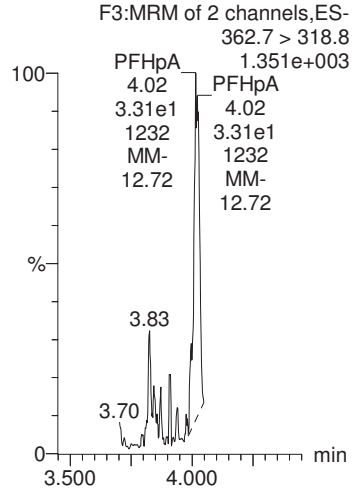

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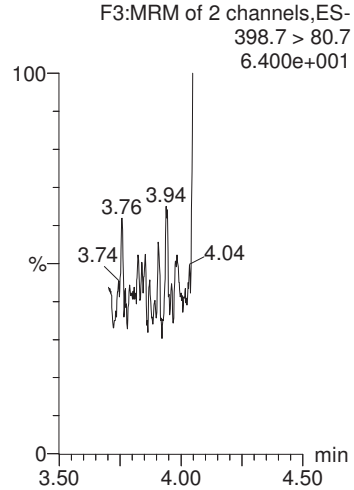

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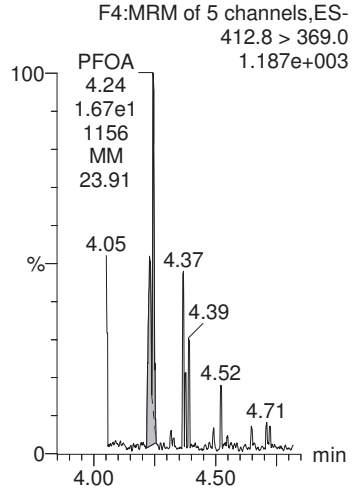
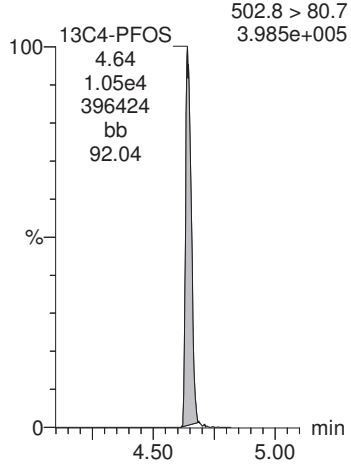


13C4-PFOS



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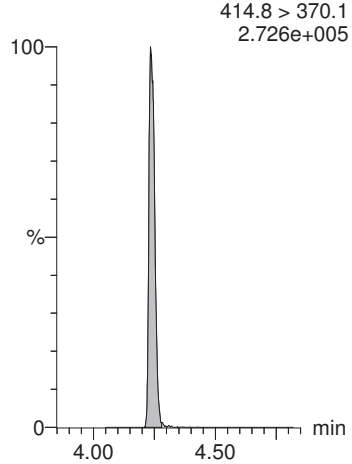

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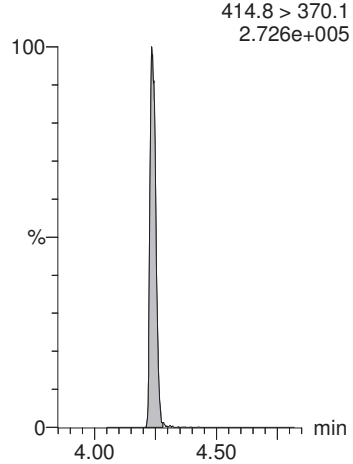

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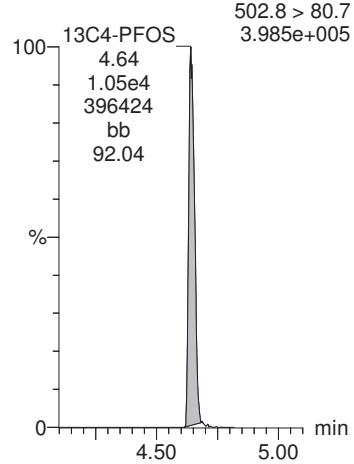

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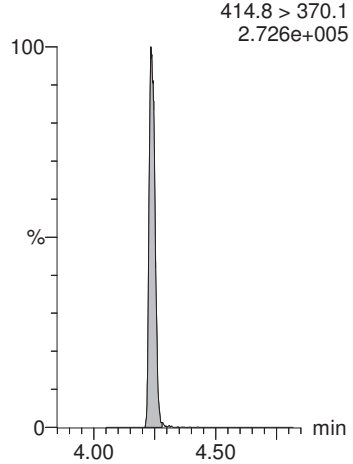

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-60.qld

Last Altered: Saturday, July 28, 2018 20:11:03 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:11:19 Pacific Daylight Time

Name: 180725G1_60, Date: 25-Jul-2018, Time: 21:13:28, ID: 1801868-02 CBD-1FB32-0718 0.25868, Description: CBD-1FB32-0718

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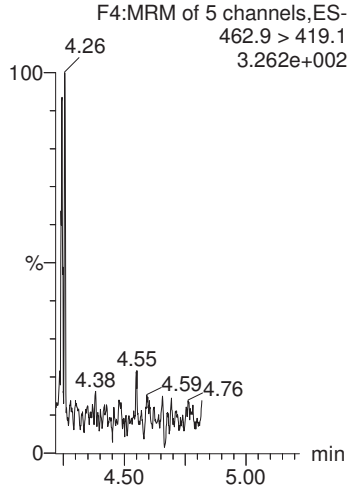

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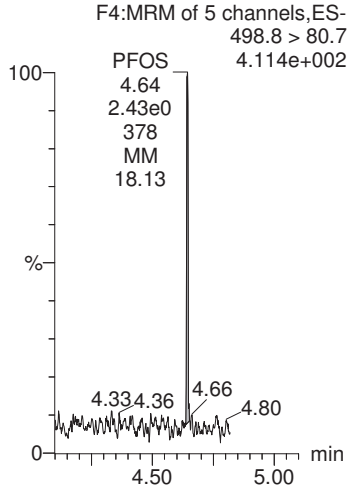

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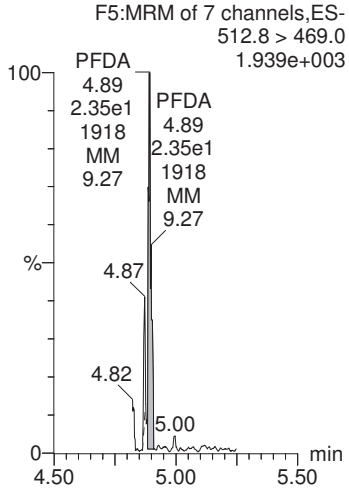

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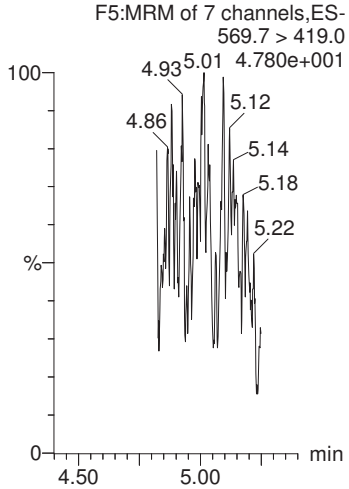

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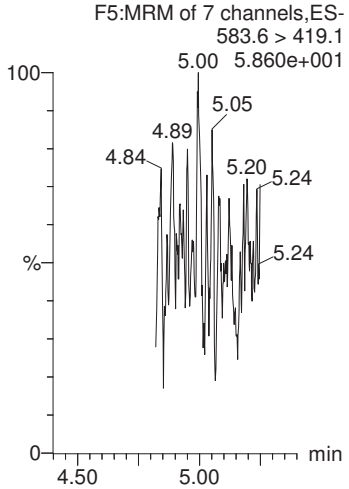

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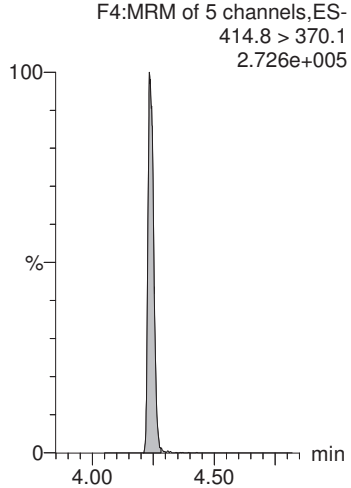

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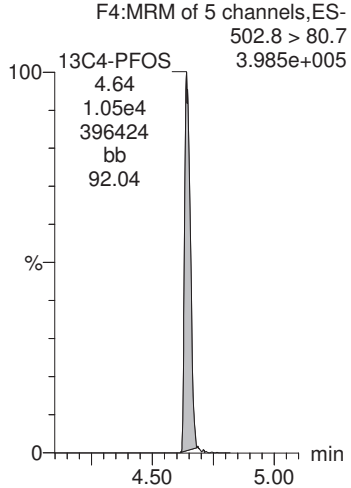

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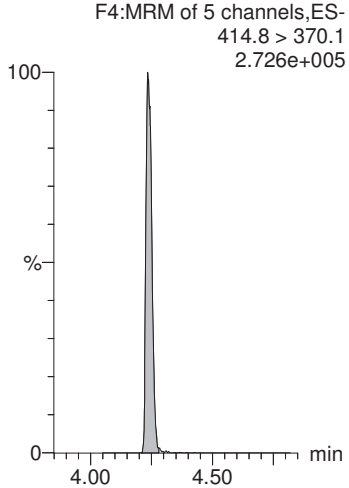

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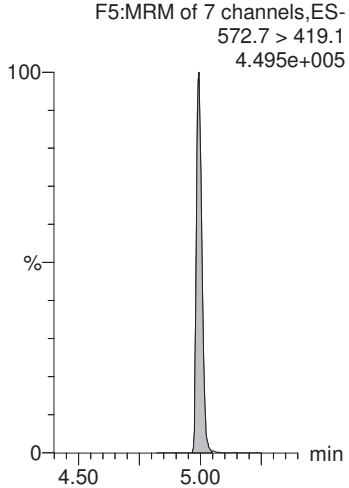

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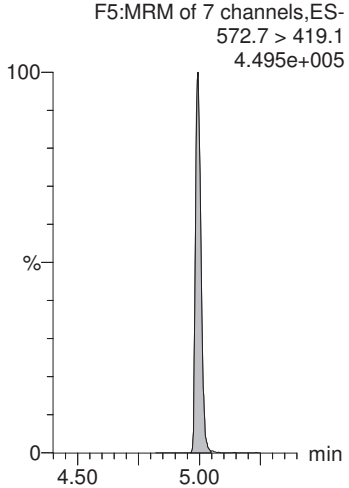

GM 7/28/2018

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-60.qld

Last Altered: Saturday, July 28, 2018 20:11:03 Pacific Daylight Time
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Name: 180725G1_60, Date: 25-Jul-2018, Time: 21:13:28, ID: 1801868-02 CBD-1FB32-0718 0.25868, Description: CBD-1FB32-0718

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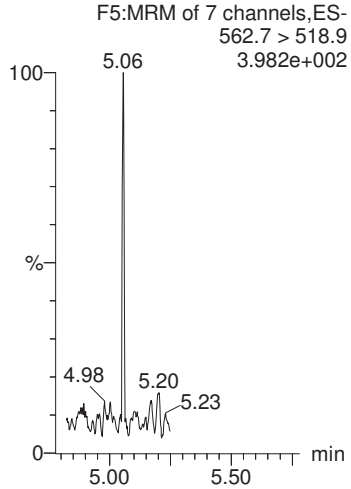

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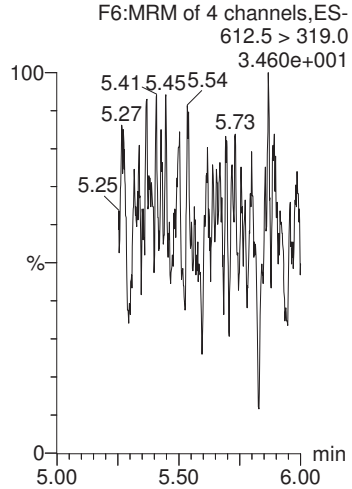

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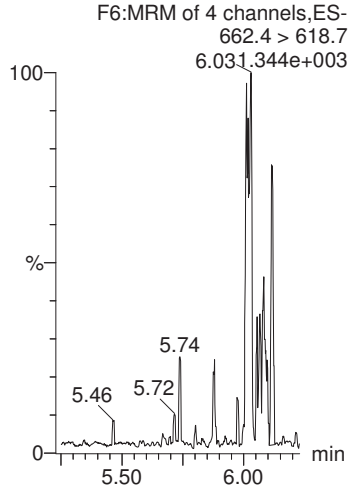

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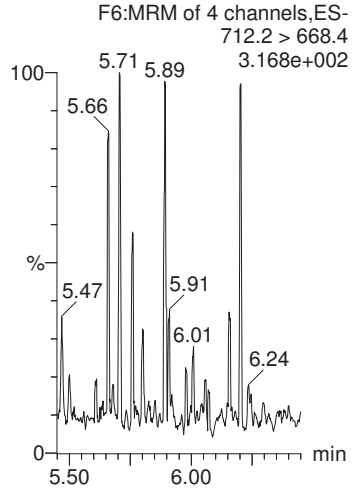

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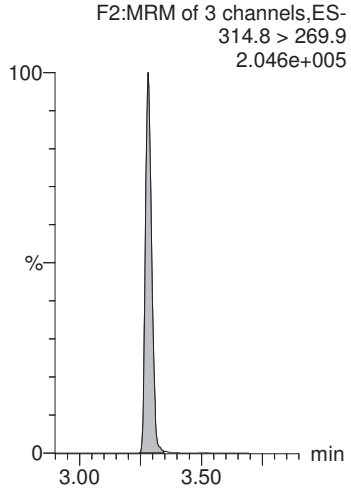

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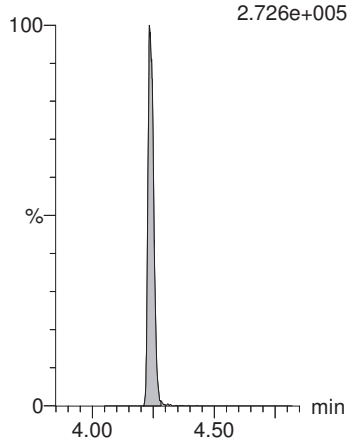

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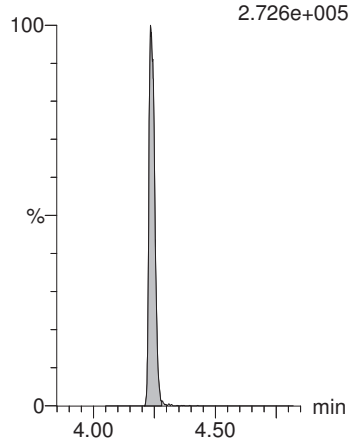

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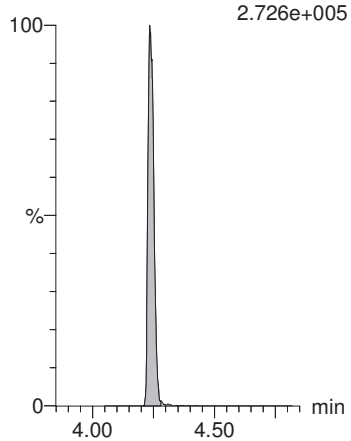

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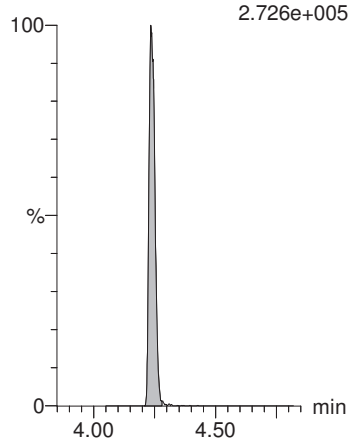

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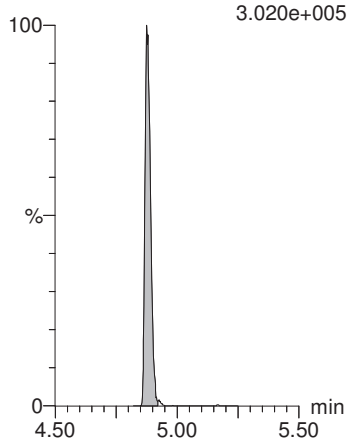


GM 7/28/2018

Vista Analytical Laboratory

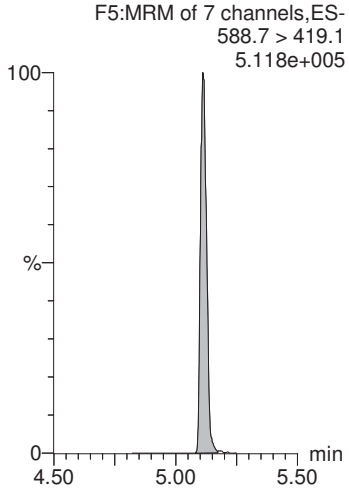
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-60.qld

Last Altered: Saturday, July 28, 2018 20:11:03 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:11:19 Pacific Daylight Time

Name: 180725G1_60, Date: 25-Jul-2018, Time: 21:13:28, ID: 1801868-02 CBD-1FB32-0718 0.25868, Description: CBD-1FB32-0718

d5-N-EtFOSAA



GM 7/28/2018

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-61.qld

Last Altered: Saturday, July 28, 2018 19:57:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 19:58:00 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_61, Date: 25-Jul-2018, Time: 21:26:18, ID: 1801868-03 CBD-1RW33-0718 0.2415, Description: CBD-1RW33-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5		1.05e4	0.241		2.91				
2	2	PFHxA	312.7 > 268.8		7.36e3	0.241		3.29				
3	3	PFHpA	362.7 > 318.8		7.36e3	0.241		3.82				
4	4	PFHxS	398.7 > 80.7		1.05e4	0.241		3.95				
5	5	PFOA	412.8 > 369.0	3.62e1	7.36e3	0.241		4.24	4.24	0.0491	0.279	
6	6	PFNA	462.9 > 419.1		7.36e3	0.241		4.58				
7	7	PFOS	498.8 >80.7		1.05e4	0.241		4.64				
8	8	PFDA	512.8 > 469.0		7.36e3	0.241		4.88				
9	9	N-MeFOSAA	569.7 > 419.0		1.12e4	0.241		5.00				
10	10	N-EtFOSAA	583.6 >419.1		1.12e4	0.241		5.13				
11	11	PFUnA	562.7 > 518.9		7.36e3	0.241		5.13				
12	12	PFDoA	612.5 > 319.0		7.36e3	0.241		5.38				
13	13	PFTrDA	662.4 > 618.7		7.36e3	0.241		5.58				
14	14	PFTeDA	712.2>668.4		7.36e3	0.241		5.76				
15	15	13C2-PFHxA	314.8 > 269.9	5.83e3	7.36e3	0.241	0.753	3.40	3.28	7.92	43.6	105.2
16	16	13C2-PFDA	514.8 > 470.0	6.97e3	7.36e3	0.241	1.023	4.84	4.88	9.46	38.3	92.5
17	17	d5-N-EtFOSAA	588.7> 419.1	1.39e4	1.12e4	0.241	1.264	5.00	5.11	49.3	161	97.4
18	18	13C2-PFOA	414.8 > 370.1	7.36e3	7.36e3	0.241	1.000	4.24	4.24	10.0	41.4	100.0
19	19	13C4-PFOS	502.8>80.7	1.05e4	1.05e4	0.241	1.000	4.64	4.65	28.7	119	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.12e4	1.12e4	0.241	1.000	4.99	5.00	40.0	166	100.0

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-61.qld

Last Altered: Saturday, July 28, 2018 19:57:36 Pacific Daylight Time
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Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_61, Date: 25-Jul-2018, Time: 21:26:18, ID: 1801868-03 CBD-1RW33-0718 0.2415, Description: CBD-1RW33-0718

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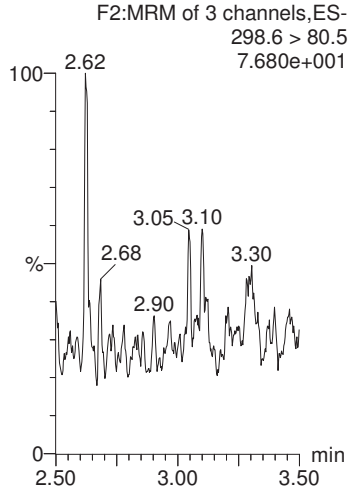

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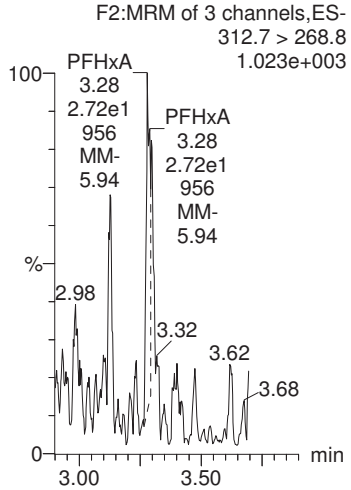

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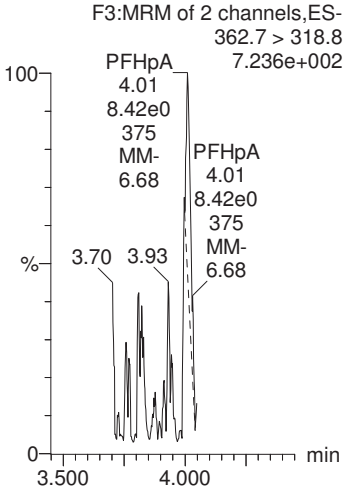

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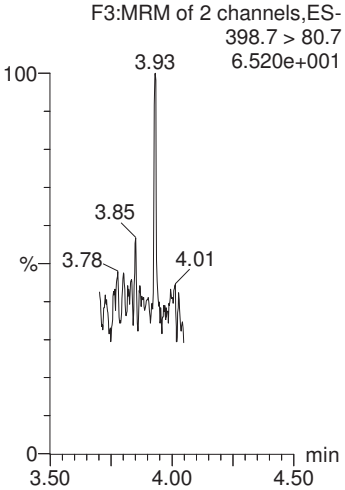

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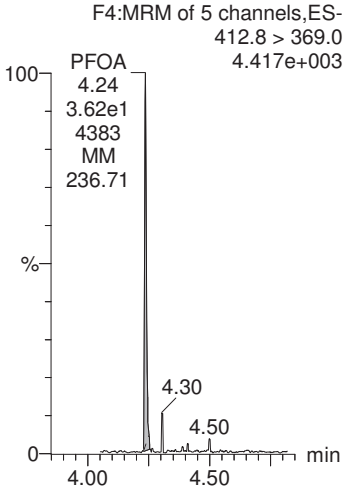

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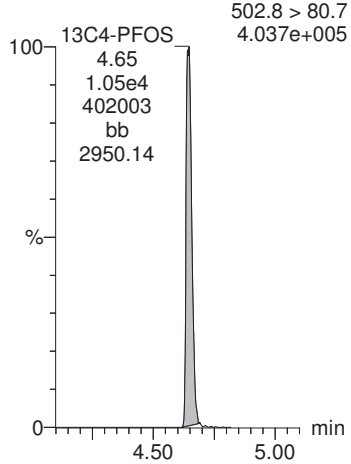

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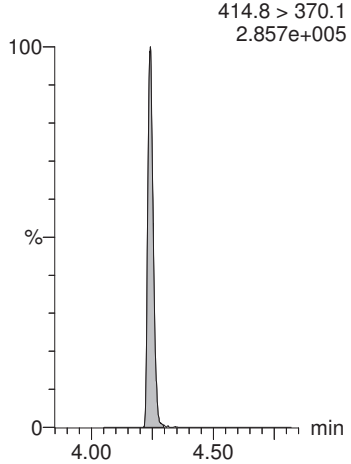

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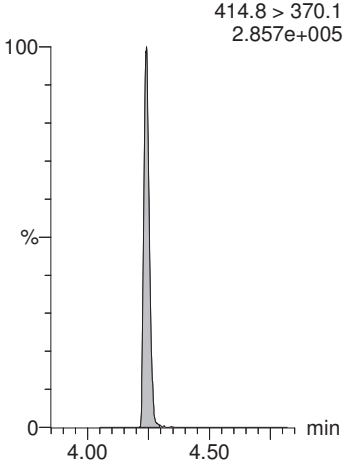

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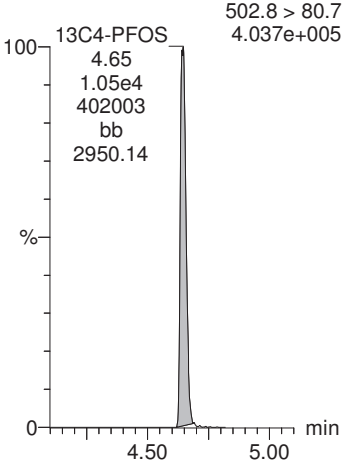

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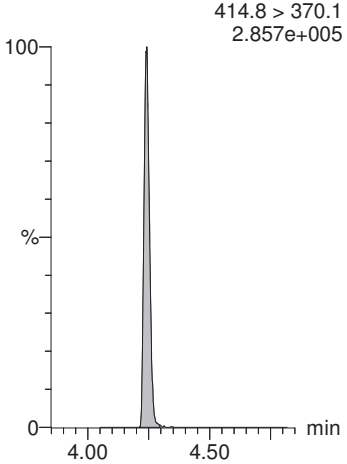

GM 7/28/2018

MMM 7/30/2018

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Name: 180725G1_61, Date: 25-Jul-2018, Time: 21:26:18, ID: 1801868-03 CBD-1RW33-0718 0.2415, Description: CBD-1RW33-0718

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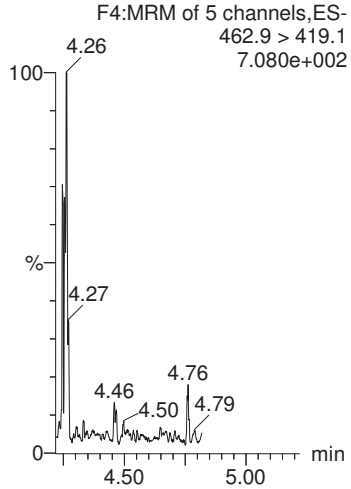

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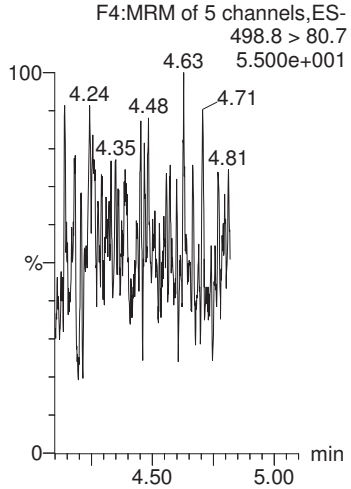

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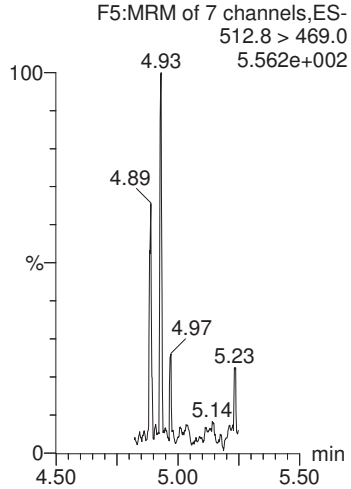

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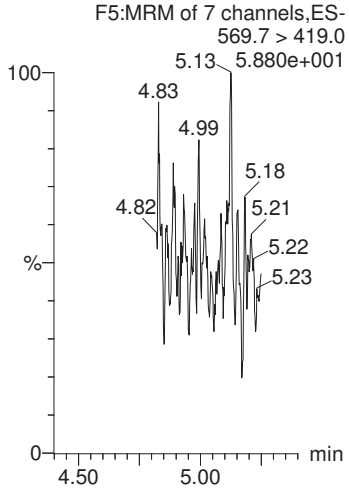

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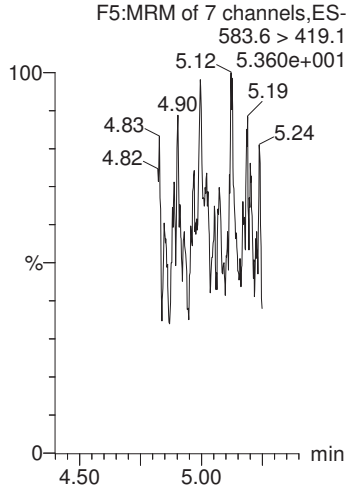

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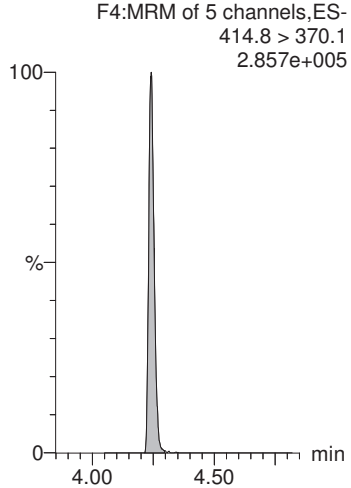

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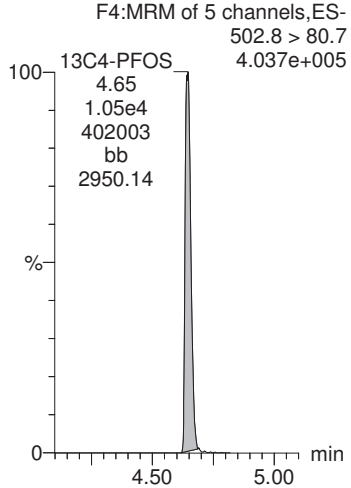

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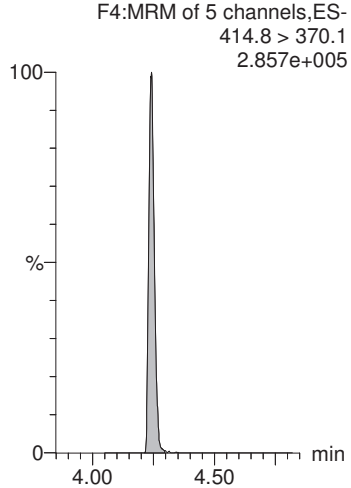
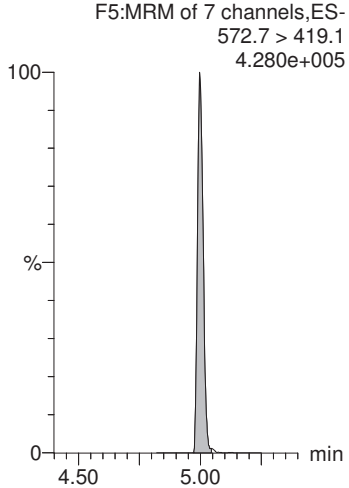


d3-N-MeFOSAA



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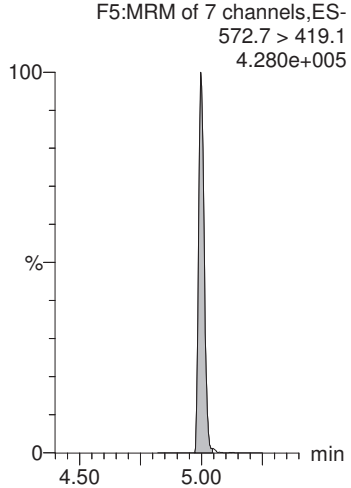

GM 7/28/2018

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-61.qld

Last Altered: Saturday, July 28, 2018 19:57:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 19:58:00 Pacific Daylight Time

Name: 180725G1_61, Date: 25-Jul-2018, Time: 21:26:18, ID: 1801868-03 CBD-1RW33-0718 0.2415, Description: CBD-1RW33-0718

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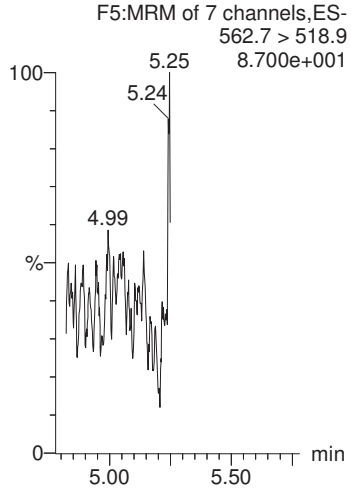

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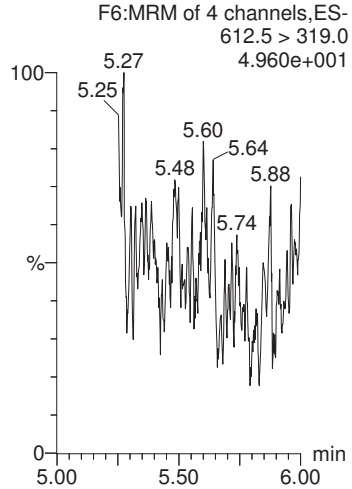

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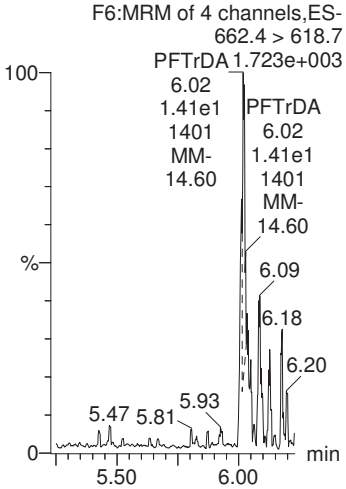
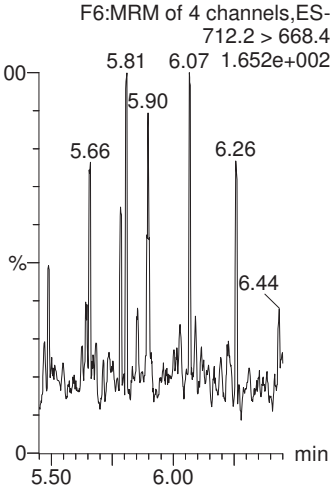
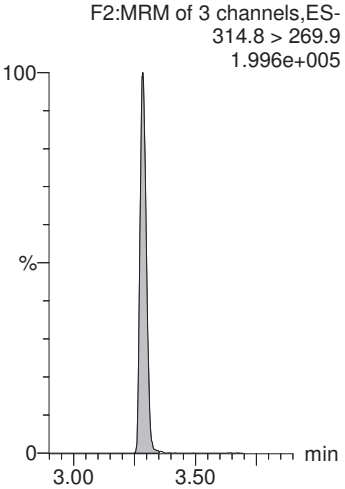


PFTeDA



13C2-PFHxA



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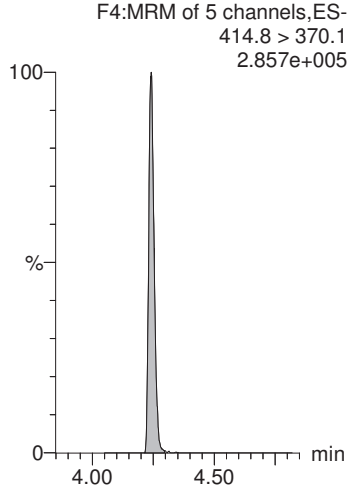

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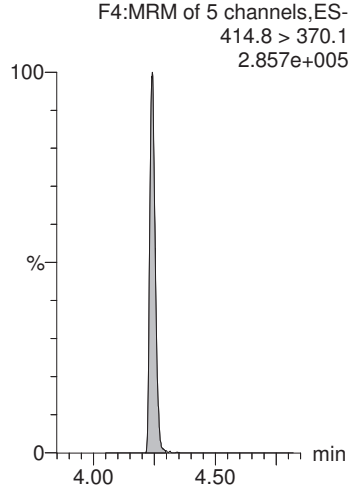

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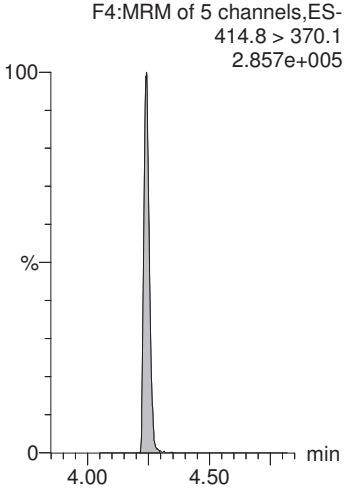

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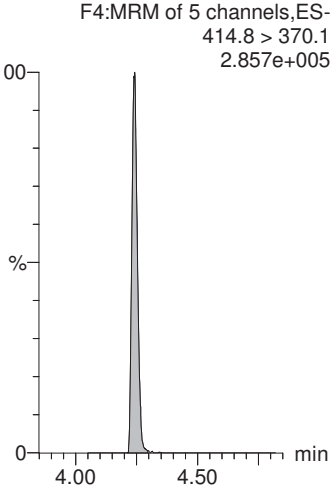

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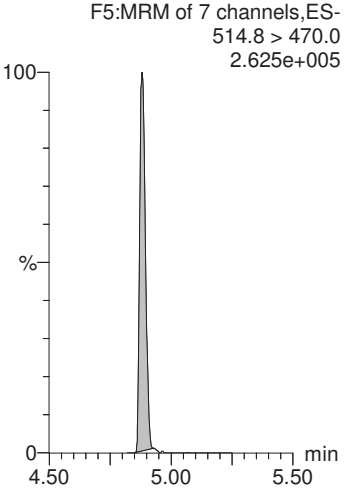


GM 7/28/2018

Vista Analytical Laboratory

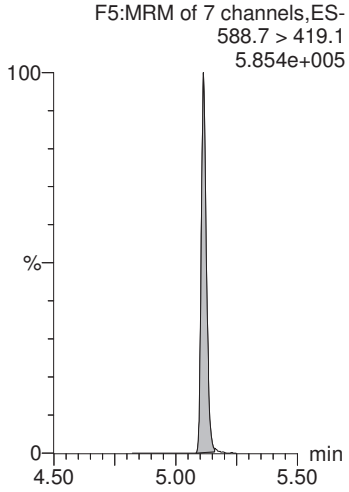
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-61.qld

Last Altered: Saturday, July 28, 2018 19:57:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 19:58:00 Pacific Daylight Time

Name: 180725G1_61, Date: 25-Jul-2018, Time: 21:26:18, ID: 1801868-03 CBD-1RW33-0718 0.2415, Description: CBD-1RW33-0718

d5-N-EtFOSAA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-62.qld

Last Altered: Saturday, July 28, 2018 20:12:47 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:13:03 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_62, Date: 25-Jul-2018, Time: 21:39:07, ID: 1801868-04 CBD-1FB33-0718 0.24925, Description: CBD-1FB33-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5		1.06e4	0.249		2.91				
2	2	PFHxA	312.7 > 268.8	1.98e1	7.80e3	0.249		3.29	3.28	0.0254	0.125	
3	3	PFHpA	362.7 > 318.8		7.80e3	0.249		3.82				
4	4	PFHxS	398.7 > 80.7		1.06e4	0.249		3.95				
5	5	PFOA	412.8 > 369.0	1.17e1	7.80e3	0.249		4.24	4.25	0.0149	0.0822	
6	6	PFNA	462.9 > 419.1		7.80e3	0.249		4.58				
7	7	PFOS	498.8 >80.7		1.06e4	0.249		4.64				
8	8	PFDA	512.8 > 469.0	2.71e1	7.80e3	0.249		4.88	4.87	0.0348	0.160	
9	9	N-MeFOSAA	569.7 > 419.0		1.22e4	0.249		5.00				
10	10	N-EtFOSAA	583.6 >419.1		1.22e4	0.249		5.12				
11	11	PFUnA	562.7 > 518.9		7.80e3	0.249		5.13				
12	12	PFDoA	612.5 > 319.0		7.80e3	0.249		5.38				
13	13	PFTrDA	662.4 > 618.7		7.80e3	0.249		5.58				
14	14	PFTeDA	712.2>668.4		7.80e3	0.249		5.76				
15	15	13C2-PFHxA	314.8 > 269.9	5.59e3	7.80e3	0.249	0.753	3.40	3.28	7.18	38.3	95.4
16	16	13C2-PFDA	514.8 > 470.0	7.55e3	7.80e3	0.249	1.023	4.84	4.88	9.68	38.0	94.7
17	17	d5-N-EtFOSAA	588.7> 419.1	1.48e4	1.22e4	0.249	1.264	4.99	5.12	48.6	154	96.0
18	18	13C2-PFOA	414.8 > 370.1	7.80e3	7.80e3	0.249	1.000	4.24	4.24	10.0	40.1	100.0
19	19	13C4-PFOS	502.8>80.7	1.06e4	1.06e4	0.249	1.000	4.64	4.64	28.7	115	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.22e4	1.22e4	0.249	1.000	4.99	4.99	40.0	160	100.0

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

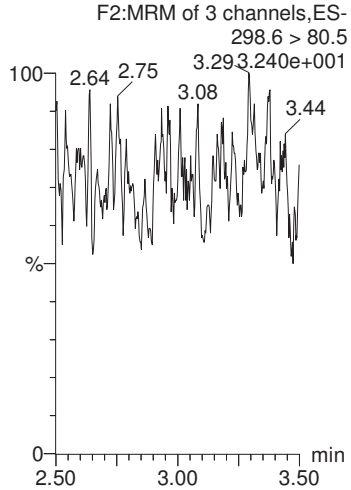
Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-62.qld

Last Altered: Saturday, July 28, 2018 20:12:47 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:13:03 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_62, Date: 25-Jul-2018, Time: 21:39:07, ID: 1801868-04 CBD-1FB33-0718 0.24925, Description: CBD-1FB33-0718

PFBS



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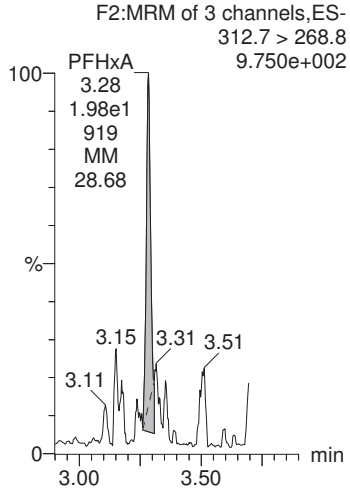

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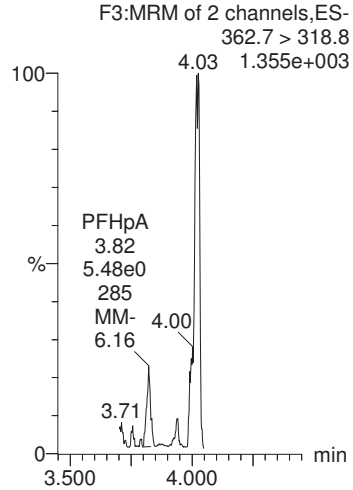

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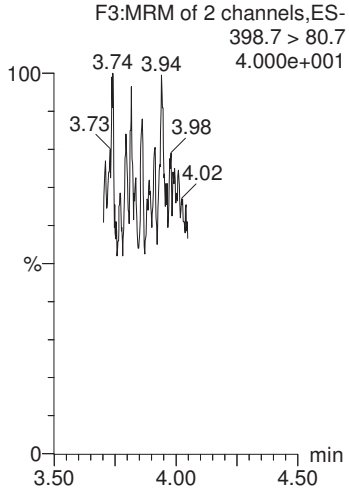
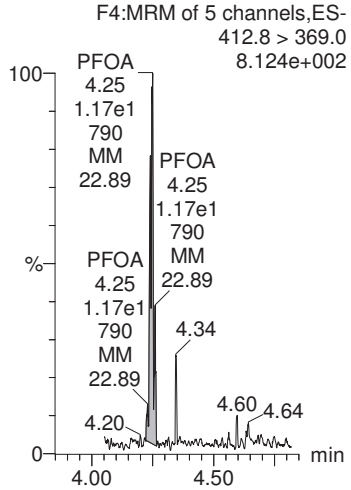


PFOA



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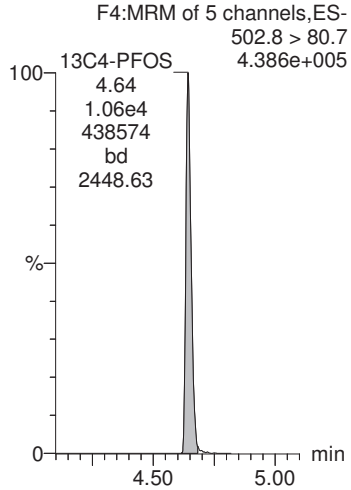

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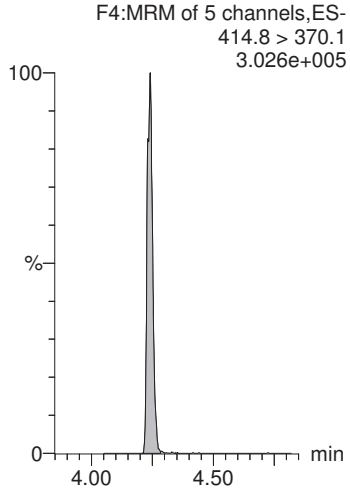

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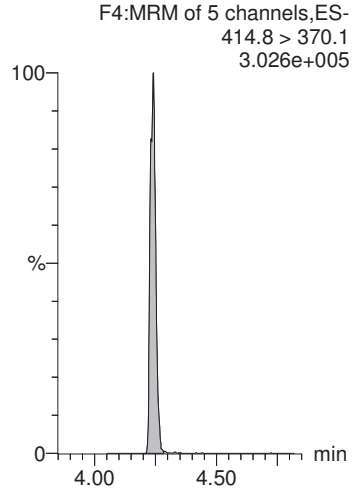

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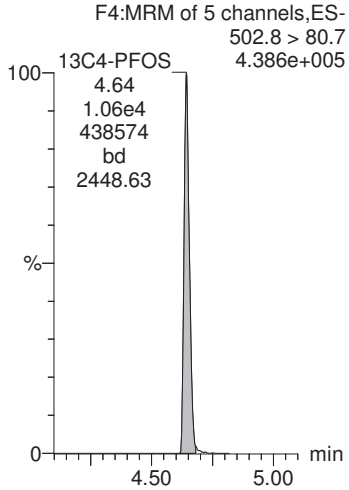

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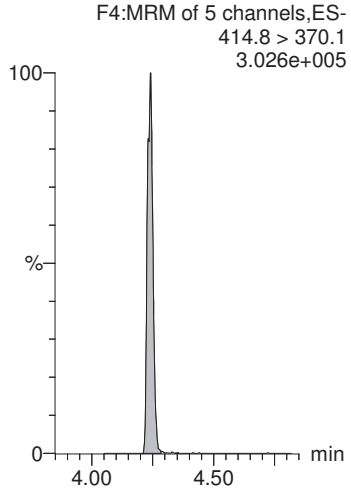

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-62.qld

Last Altered: Saturday, July 28, 2018 20:12:47 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:13:03 Pacific Daylight Time

Name: 180725G1_62, Date: 25-Jul-2018, Time: 21:39:07, ID: 1801868-04 CBD-1FB33-0718 0.24925, Description: CBD-1FB33-0718

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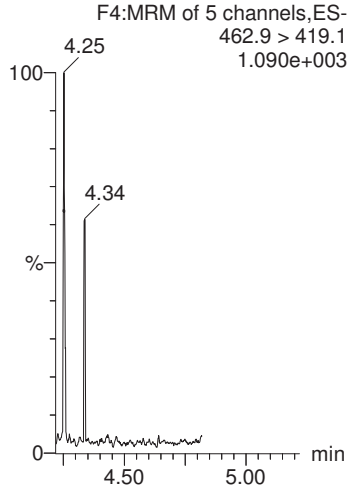
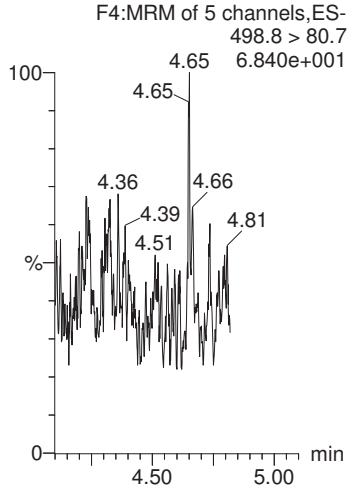


PFOS



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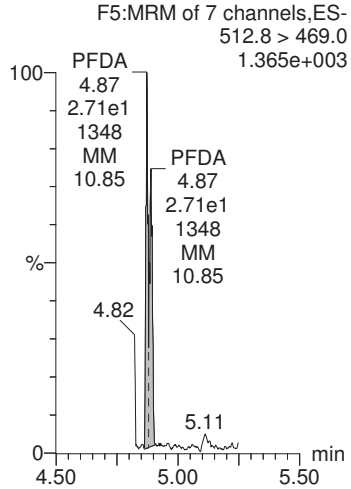

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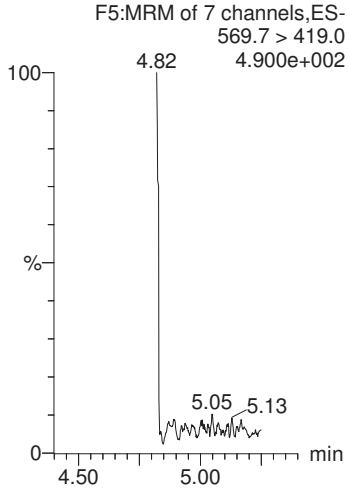

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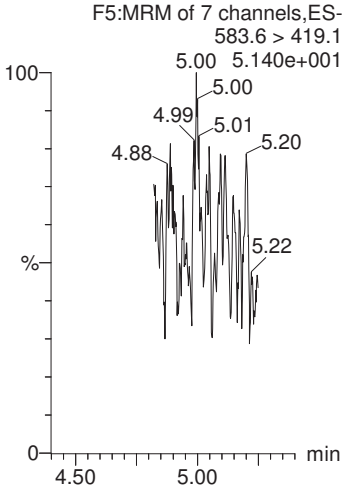

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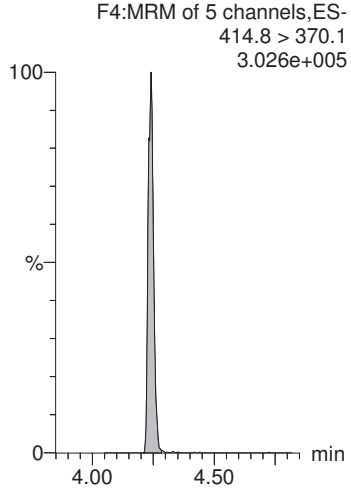

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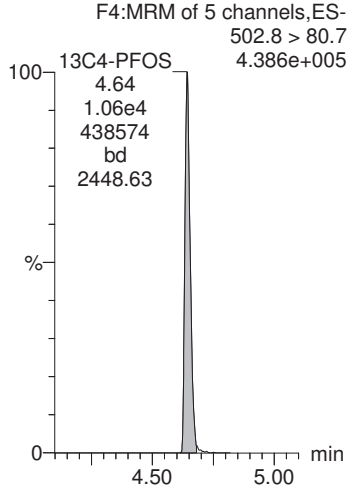

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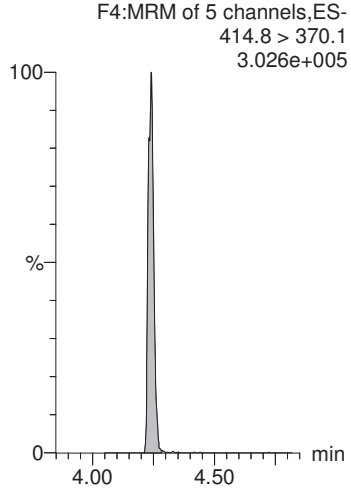

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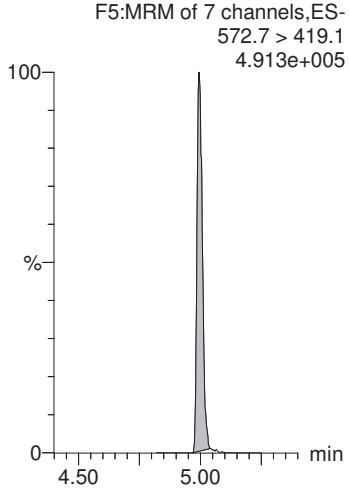

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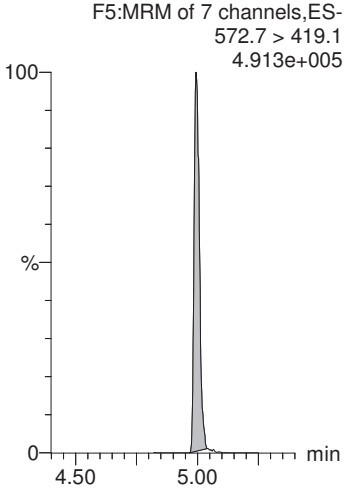

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-62.qld

Last Altered: Saturday, July 28, 2018 20:12:47 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:13:03 Pacific Daylight Time

Name: 180725G1_62, Date: 25-Jul-2018, Time: 21:39:07, ID: 1801868-04 CBD-1FB33-0718 0.24925, Description: CBD-1FB33-0718

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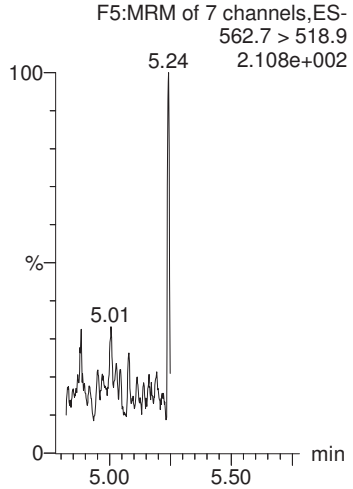

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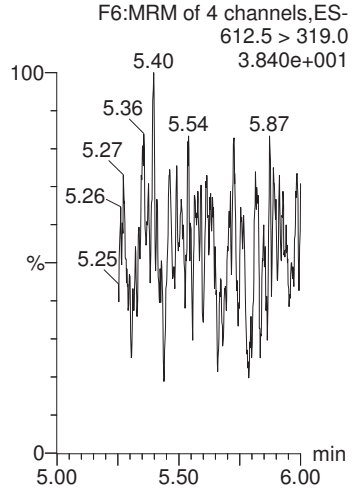

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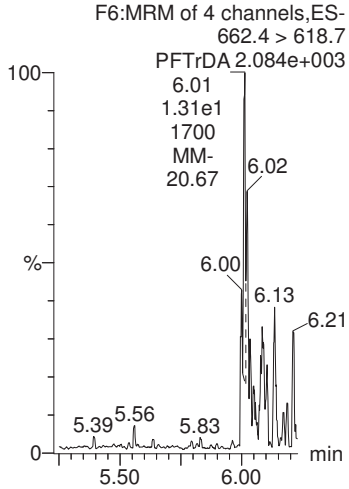

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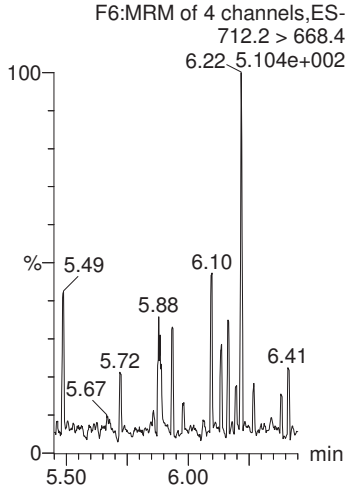

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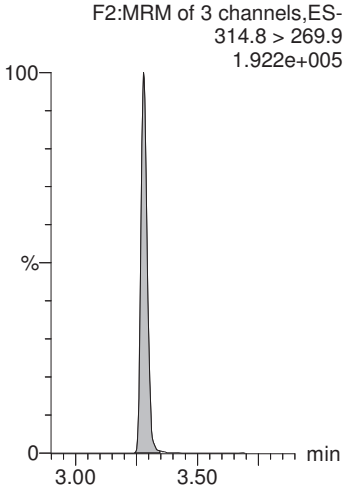

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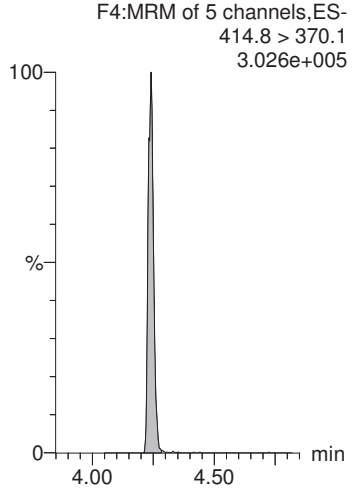

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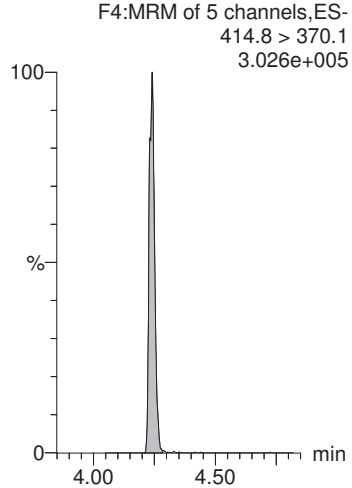

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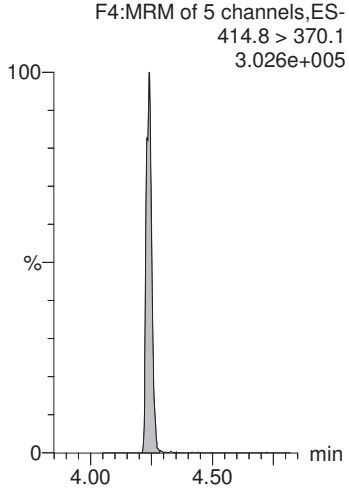

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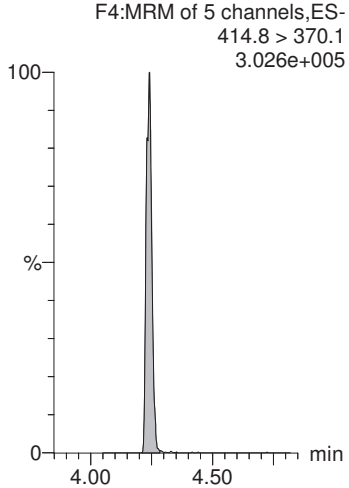

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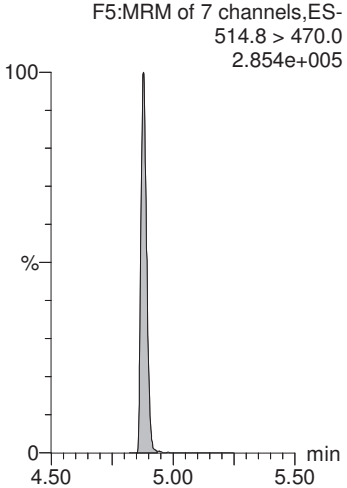

GM 7/28/2018

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-62.qld

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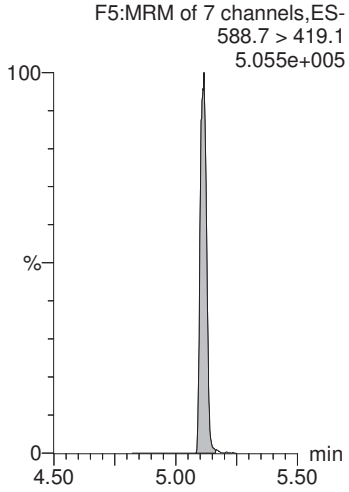
Name: 180725G1_62, Date: 25-Jul-2018, Time: 21:39:07, ID: 1801868-04 CBD-1FB33-0718 0.24925, Description: CBD-1FB33-0718

d5-N-EtFOSAA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-63.qld

Last Altered: Saturday, July 28, 2018 20:20:09 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:20:29 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_63, Date: 25-Jul-2018, Time: 21:51:57, ID: 1801868-05 CBD-1RW34-0718 0.23978, Description: CBD-1RW34-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5	2.29e2	1.05e4	0.240		2.91	2.92	0.627	2.75	
2	2	PFHxA	312.7 > 268.8	9.12e2	6.99e3	0.240		3.29	3.28	1.30	6.69	
3	3	PFHpA	362.7 > 318.8	5.08e2	6.99e3	0.240		3.82	3.82	0.726	3.46	
4	4	PFHxS	398.7 > 80.7	3.73e3	1.05e4	0.240		3.95	3.95	10.2	37.7	
5	5	PFOA	412.8 > 369.0	2.91e3	6.99e3	0.240		4.24	4.24	4.15	23.8	
6	6	PFNA	462.9 > 419.1	5.91e0	6.99e3	0.240		4.58	4.59	0.00845	0.0405	
7	7	PFOS	498.8 >80.7	2.81e1	1.05e4	0.240		4.64	4.65	0.0768	0.866	
8	8	PFDA	512.8 > 469.0	3.69e1	6.99e3	0.240		4.88	4.88	0.0528	0.253	
9	9	N-MeFOSAA	569.7 > 419.0		1.08e4	0.240		5.00				
10	10	N-EtFOSAA	583.6 >419.1		1.08e4	0.240		5.13				
11	11	PFUnA	562.7 > 518.9		6.99e3	0.240		5.13				
12	12	PFDoA	612.5 > 319.0		6.99e3	0.240		5.37				
13	13	PFTrDA	662.4 > 618.7		6.99e3	0.240		5.58				
14	14	PFTeDA	712.2>668.4		6.99e3	0.240		5.76				
15	15	13C2-PFHxA	314.8 > 269.9	5.40e3	6.99e3	0.240	0.753	3.40	3.28	7.72	42.8	102.6
16	16	13C2-PFDA	514.8 > 470.0	6.99e3	6.99e3	0.240	1.023	4.83	4.88	9.99	40.8	97.7
17	17	d5-N-EtFOSAA	588.7> 419.1	1.14e4	1.08e4	0.240	1.264	5.00	5.11	42.3	140	83.7
18	18	13C2-PFOA	414.8 > 370.1	6.99e3	6.99e3	0.240	1.000	4.24	4.24	10.0	41.7	100.0
19	19	13C4-PFOS	502.8>80.7	1.05e4	1.05e4	0.240	1.000	4.64	4.65	28.7	120	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.08e4	1.08e4	0.240	1.000	4.99	5.00	40.0	167	100.0

GM 7/28/2018

Vista Analytical Laboratory

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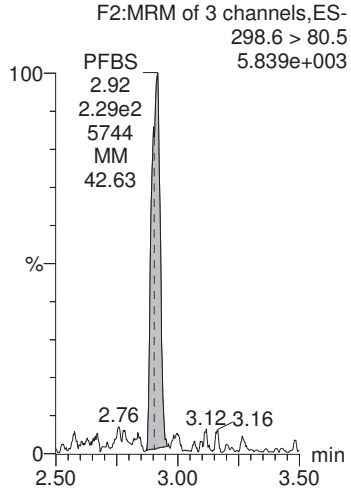
Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-63.qld

Last Altered: Saturday, July 28, 2018 20:20:09 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:20:29 Pacific Daylight Time

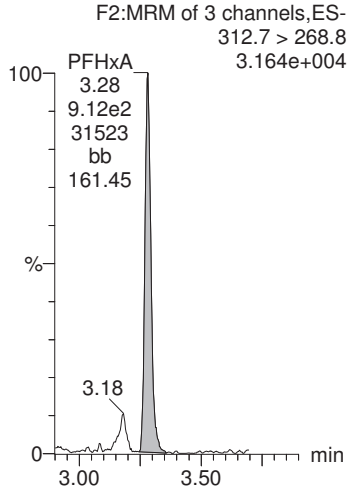
Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_63, Date: 25-Jul-2018, Time: 21:51:57, ID: 1801868-05 CBD-1RW34-0718 0.23978, Description: CBD-1RW34-0718

PFBS



PFHxA



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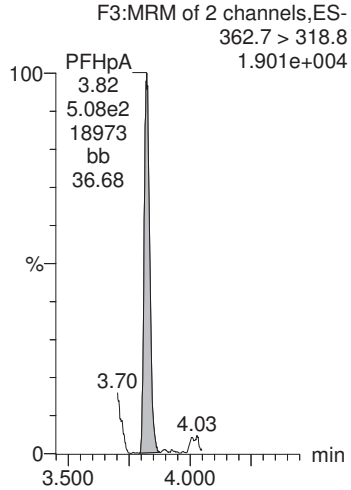
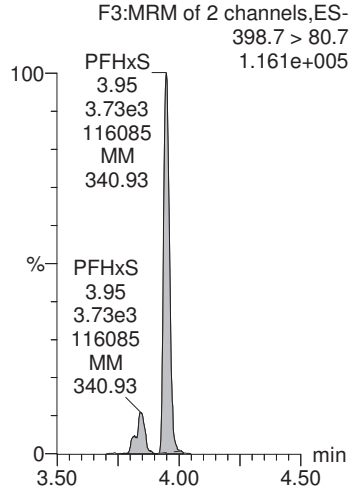
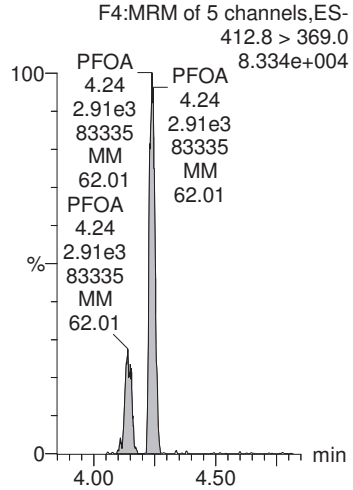


PFHxS



PFOA



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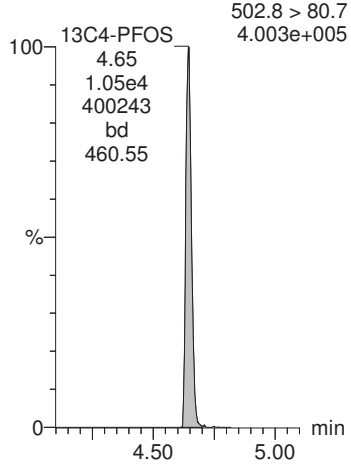

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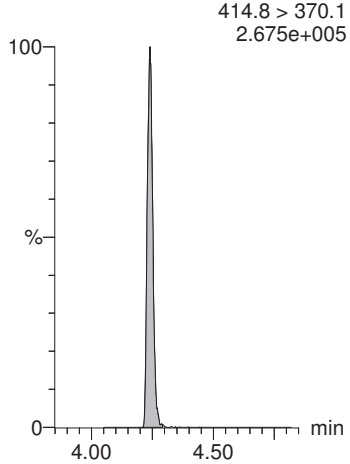

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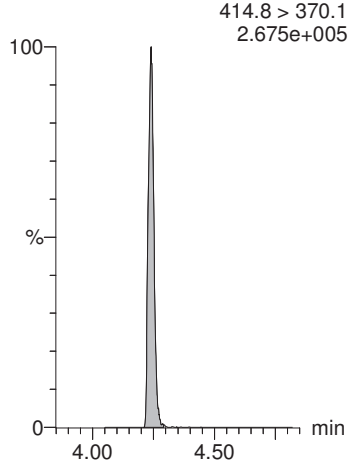

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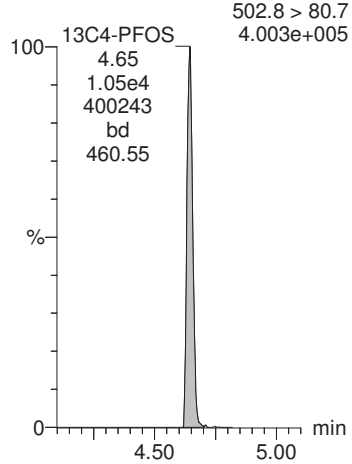

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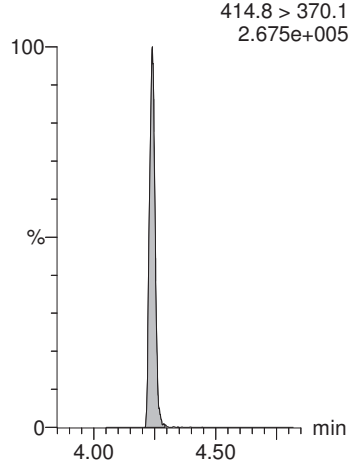

GM 7/28/2018

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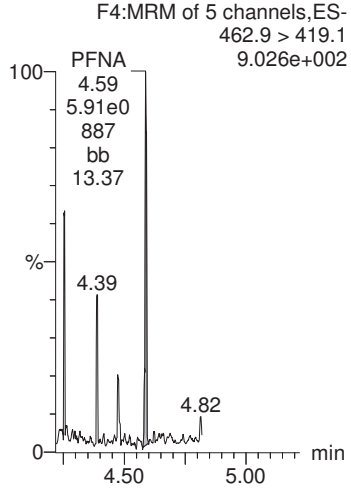
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-63.qld

Last Altered: Saturday, July 28, 2018 20:20:09 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:20:29 Pacific Daylight Time

Name: 180725G1_63, Date: 25-Jul-2018, Time: 21:51:57, ID: 1801868-05 CBD-1RW34-0718 0.23978, Description: CBD-1RW34-0718

PFNA



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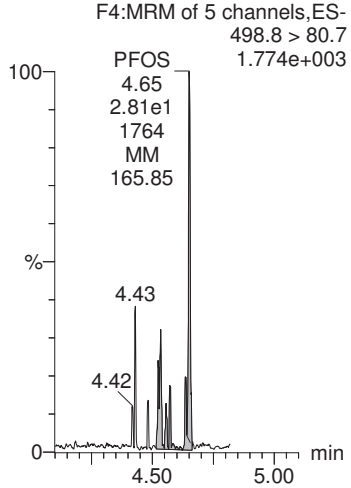

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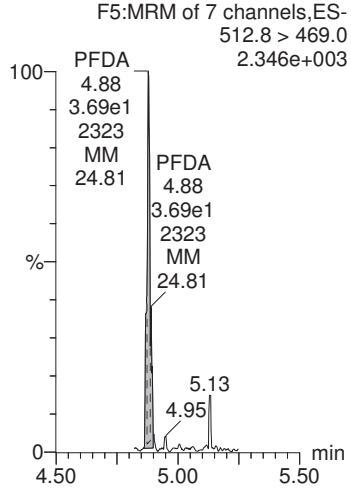

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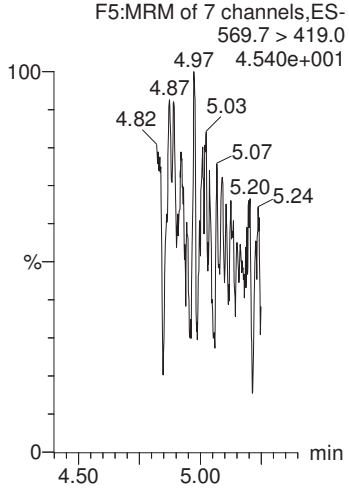

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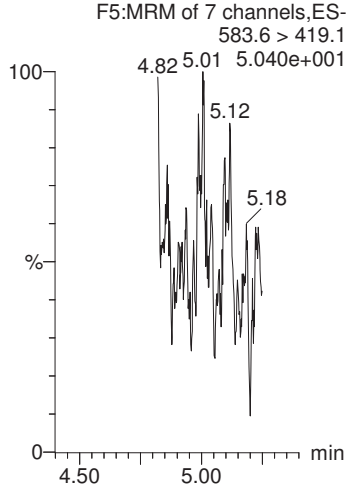

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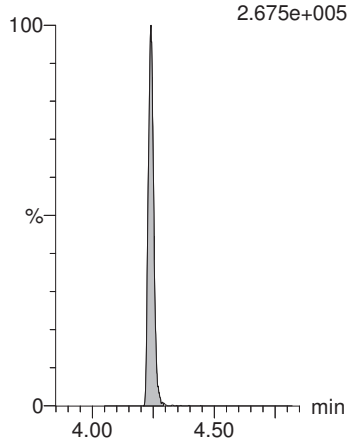

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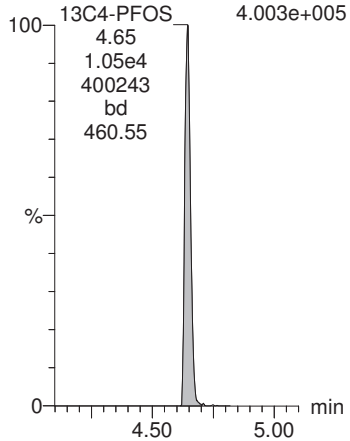

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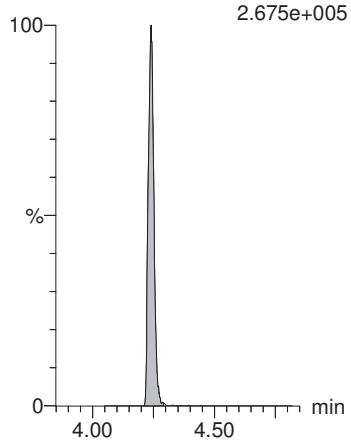

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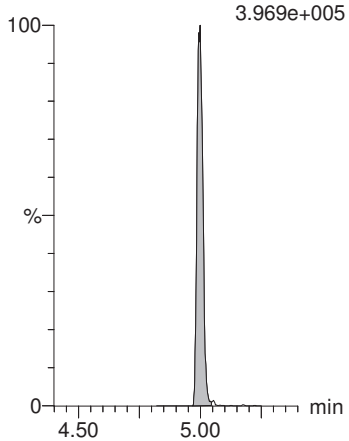

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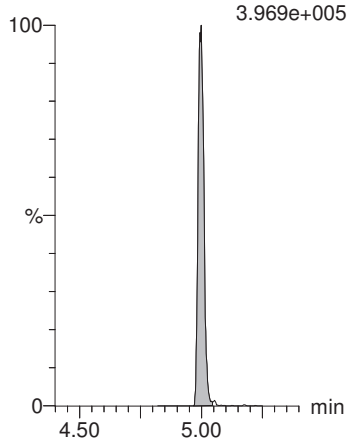


GM 7/28/2018

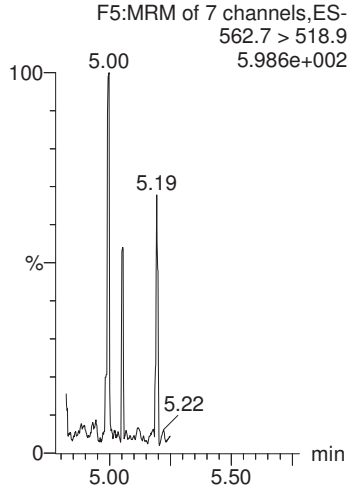
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-63.qld

Last Altered: Saturday, July 28, 2018 20:20:09 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:20:29 Pacific Daylight Time

Name: 180725G1_63, Date: 25-Jul-2018, Time: 21:51:57, ID: 1801868-05 CBD-1RW34-0718 0.23978, Description: CBD-1RW34-0718

PFUnA



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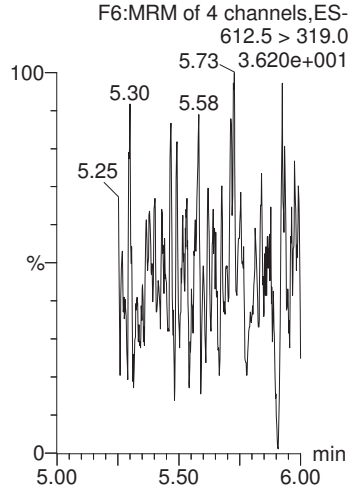

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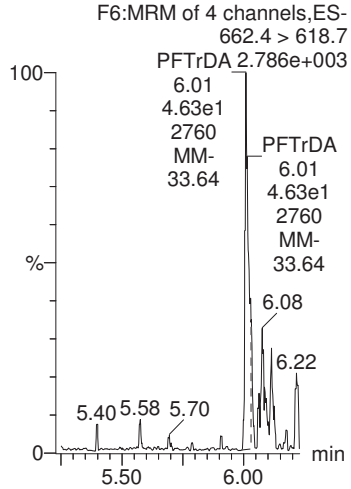

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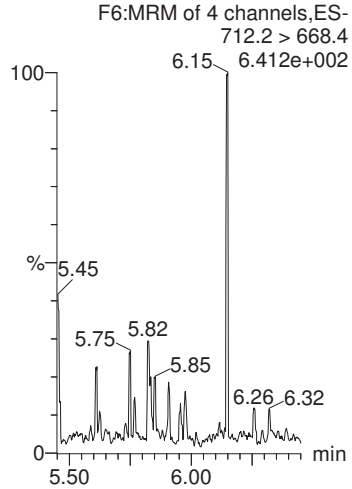

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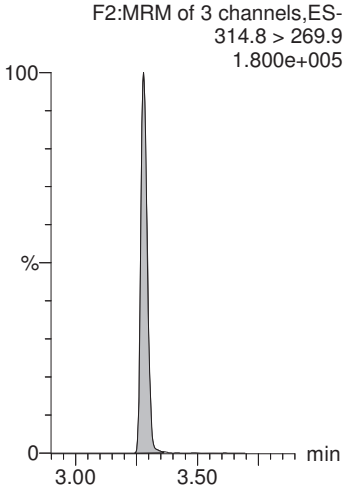

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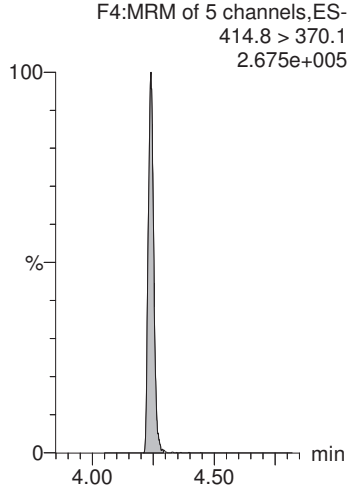

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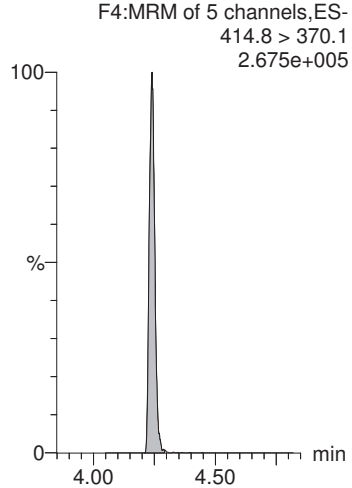

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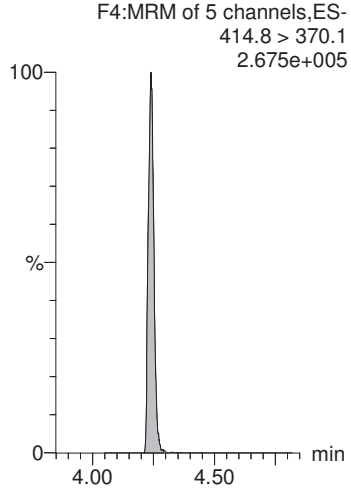

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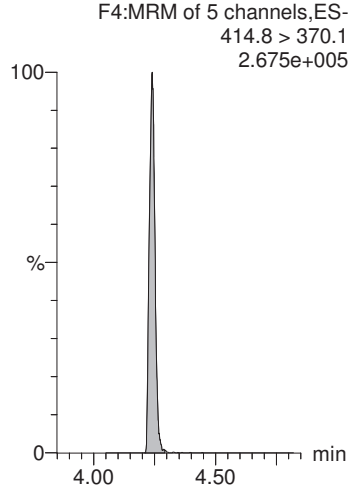

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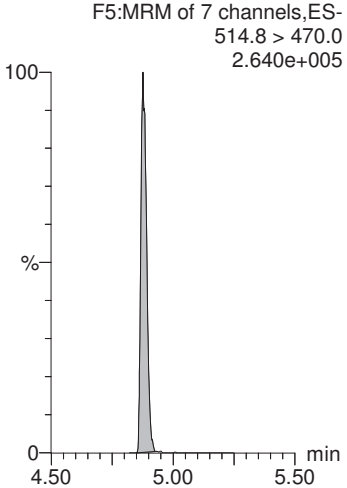

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-63.qld

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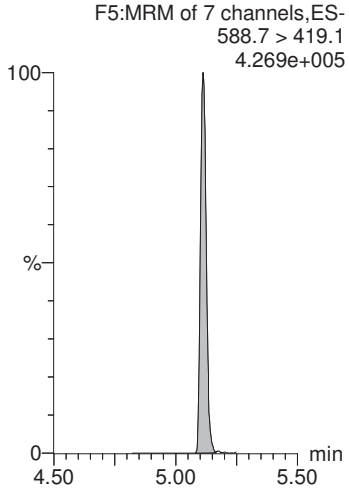
Printed: Saturday, July 28, 2018 20:20:29 Pacific Daylight Time

Name: 180725G1_63, Date: 25-Jul-2018, Time: 21:51:57, ID: 1801868-05 CBD-1RW34-0718 0.23978, Description: CBD-1RW34-0718

d5-N-EtFOSAA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-64.qld

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Printed: Saturday, July 28, 2018 20:23:03 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_64, Date: 25-Jul-2018, Time: 22:04:46, ID: 1801868-06 CBD-1FB34-0718 0.25042, Description: CBD-1FB34-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5		1.05e4	0.250		2.91				
2	2	PFHxA	312.7 > 268.8	3.43e1	7.40e3	0.250		3.28	3.27	0.0463	0.227	
3	3	PFHpA	362.7 > 318.8		7.40e3	0.250		3.82				
4	4	PFHxS	398.7 > 80.7		1.05e4	0.250		3.95				
5	5	PFOA	412.8 > 369.0		7.40e3	0.250		4.23				
6	6	PFNA	462.9 > 419.1		7.40e3	0.250		4.58				
7	7	PFOS	498.8 >80.7	5.89e0	1.05e4	0.250		4.64	4.65	0.0160	0.173	
8	8	PFDA	512.8 > 469.0	2.71e1	7.40e3	0.250		4.88	4.88	0.0366	0.168	
9	9	N-MeFOSAA	569.7 > 419.0		1.21e4	0.250		5.00				
10	10	N-EtFOSAA	583.6 >419.1		1.21e4	0.250		5.13				
11	11	PFUnA	562.7 > 518.9		7.40e3	0.250		5.12				
12	12	PFDoA	612.5 > 319.0		7.40e3	0.250		5.37				
13	13	PFTrDA	662.4 > 618.7		7.40e3	0.250		5.58				
14	14	PFTeDA	712.2>668.4		7.40e3	0.250		5.76				
15	15	13C2-PFHxA	314.8 > 269.9	5.55e3	7.40e3	0.250	0.753	3.40	3.28	7.51	39.9	99.8
16	16	13C2-PFDA	514.8 > 470.0	7.63e3	7.40e3	0.250	1.023	4.83	4.88	10.3	40.3	100.9
17	17	d5-N-EtFOSAA	588.7> 419.1	1.41e4	1.21e4	0.250	1.264	5.00	5.11	46.6	147	92.2
18	18	13C2-PFOA	414.8 > 370.1	7.40e3	7.40e3	0.250	1.000	4.24	4.24	10.0	39.9	100.0
19	19	13C4-PFOS	502.8>80.7	1.05e4	1.05e4	0.250	1.000	4.64	4.65	28.7	115	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.21e4	1.21e4	0.250	1.000	4.99	5.00	40.0	160	100.0

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-64.qld

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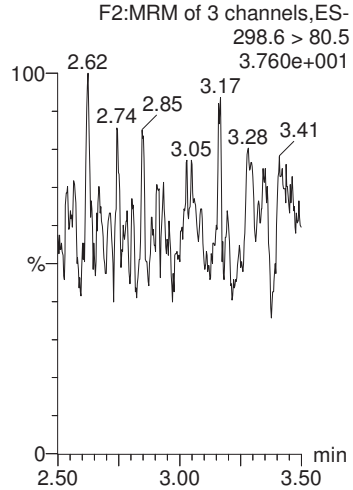
Name: 180725G1_64, Date: 25-Jul-2018, Time: 22:04:46, ID: 1801868-06 CBD-1FB34-0718 0.25042, Description: CBD-1FB34-0718

PFBS



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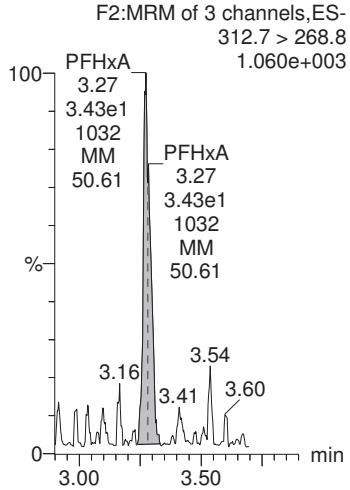
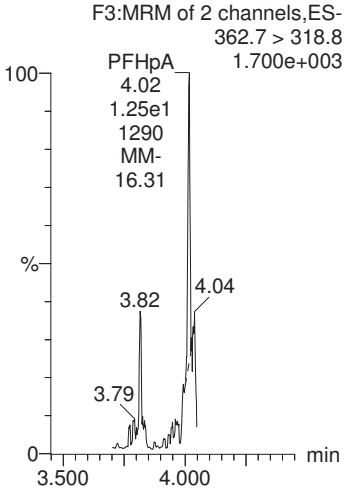
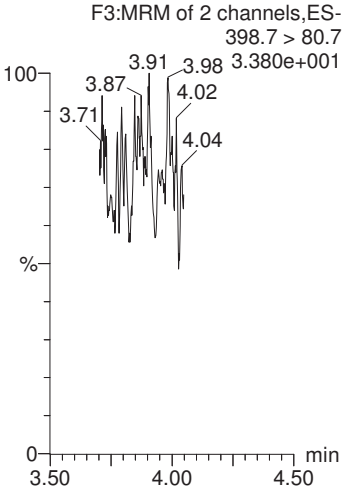


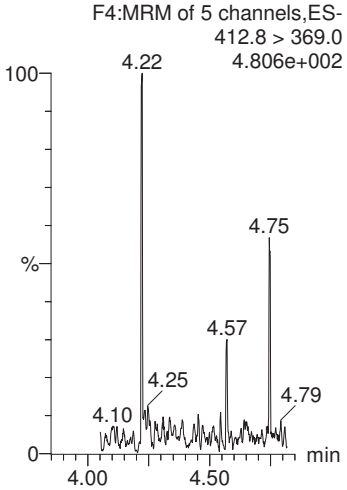
PFHpA



PFHxS



PFOA



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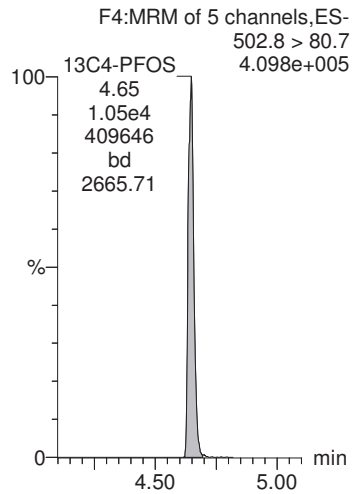

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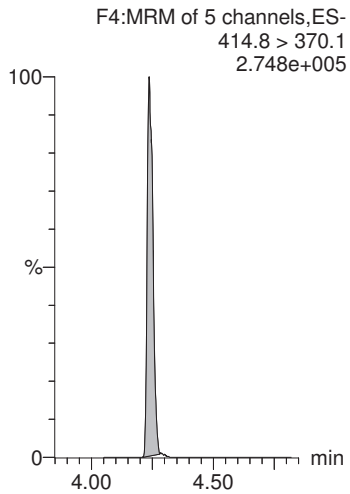

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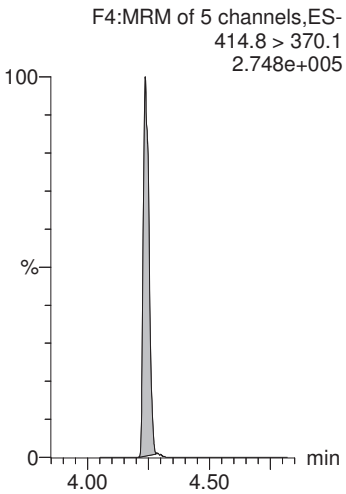

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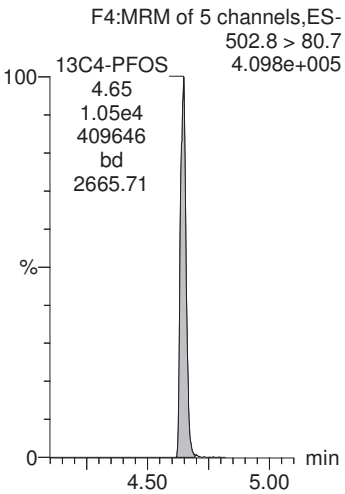

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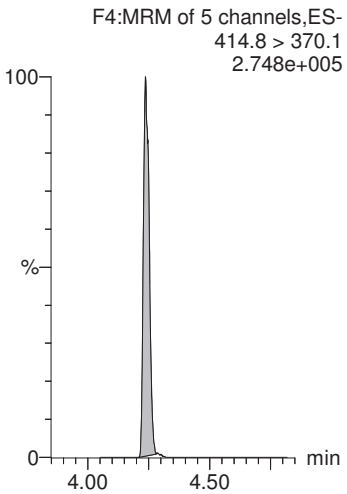

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-64.qld

Last Altered: Saturday, July 28, 2018 20:21:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:23:03 Pacific Daylight Time

Name: 180725G1_64, Date: 25-Jul-2018, Time: 22:04:46, ID: 1801868-06 CBD-1FB34-0718 0.25042, Description: CBD-1FB34-0718

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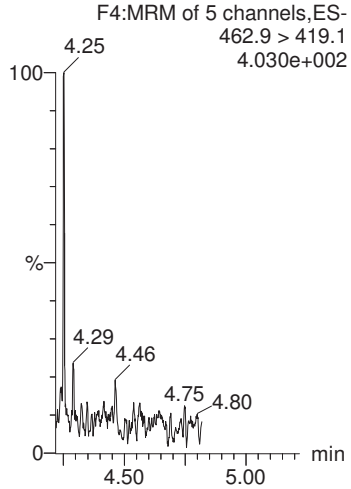

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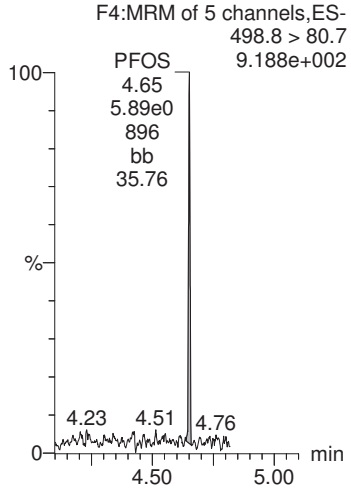

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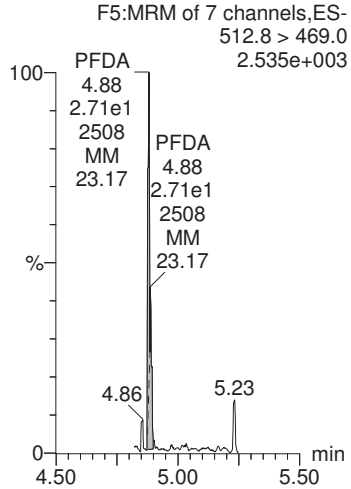
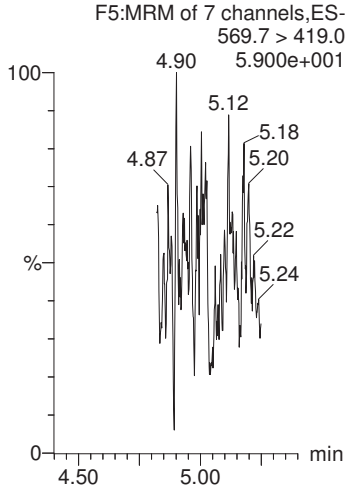


N-MeFOSAA



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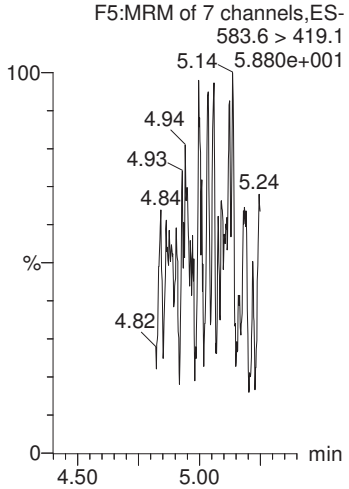

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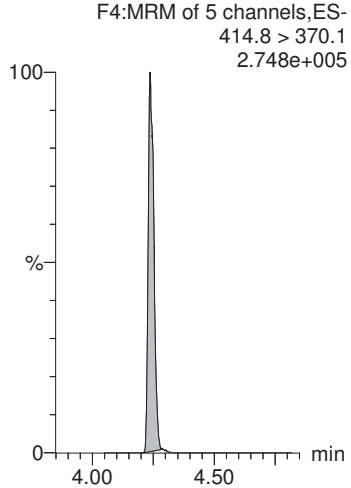

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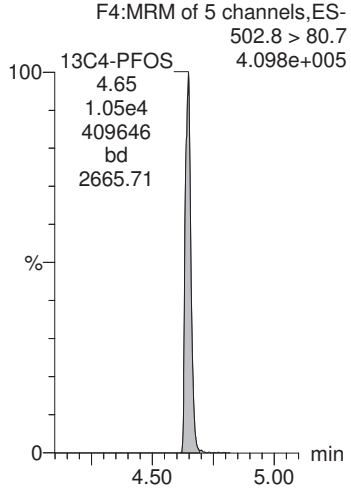

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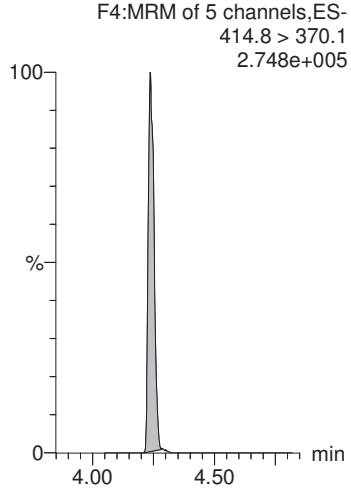

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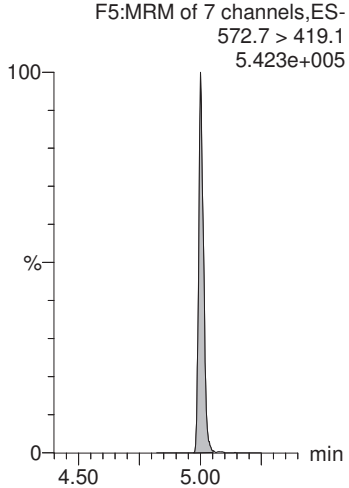

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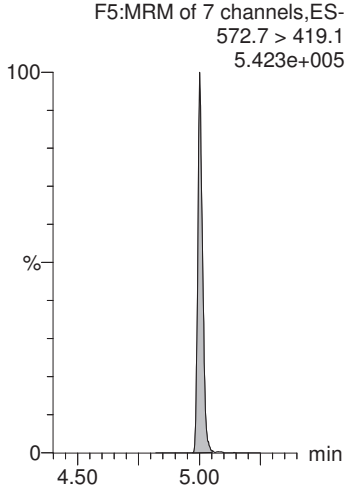

GM 7/28/2018

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-64.qld

Last Altered: Saturday, July 28, 2018 20:21:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:23:03 Pacific Daylight Time

Name: 180725G1_64, Date: 25-Jul-2018, Time: 22:04:46, ID: 1801868-06 CBD-1FB34-0718 0.25042, Description: CBD-1FB34-0718

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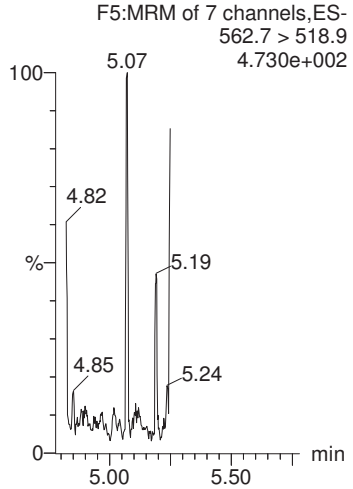

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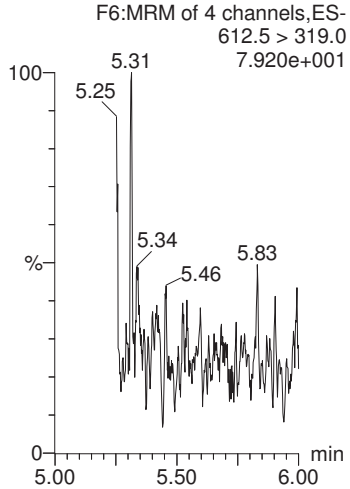

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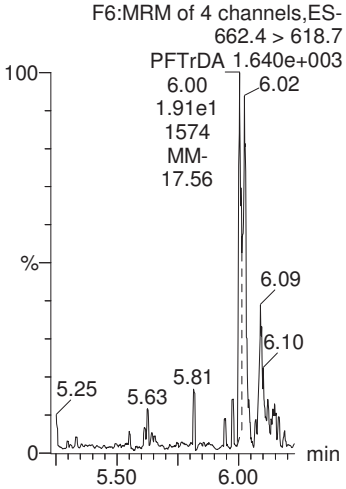

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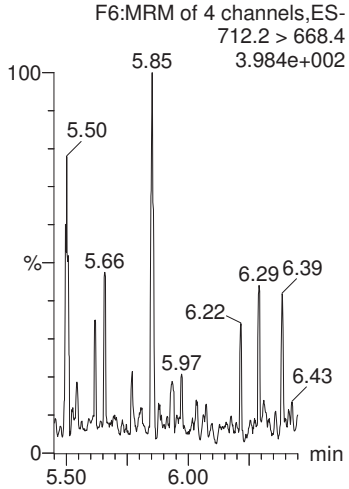

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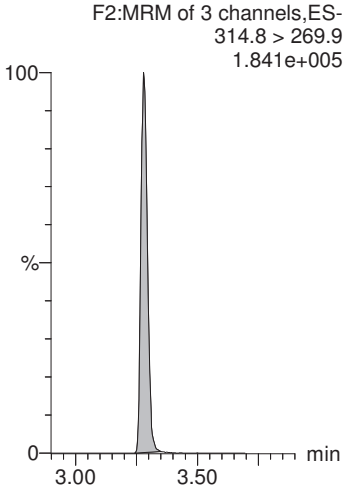

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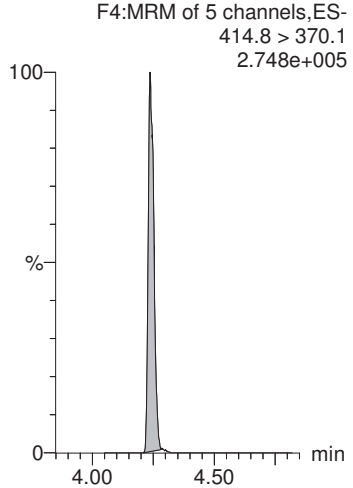

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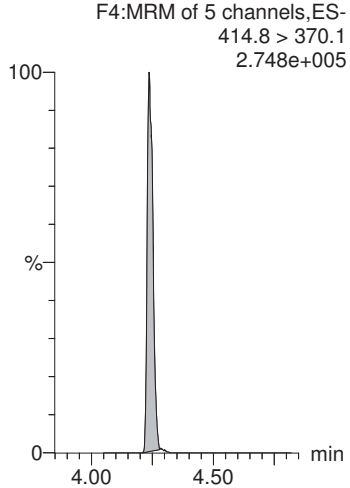

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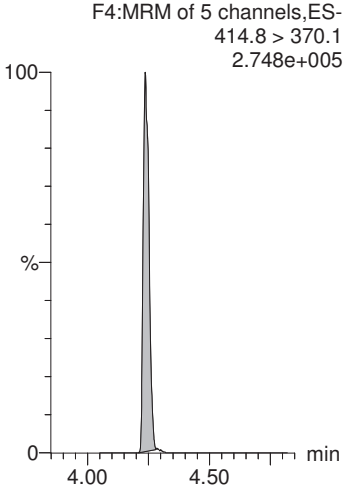

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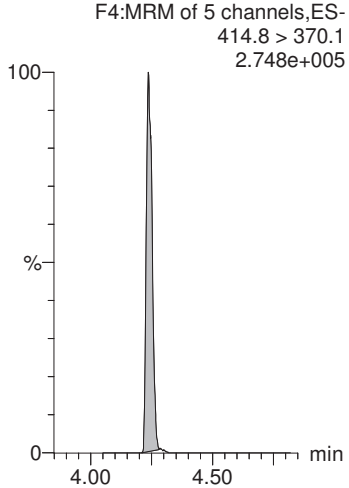

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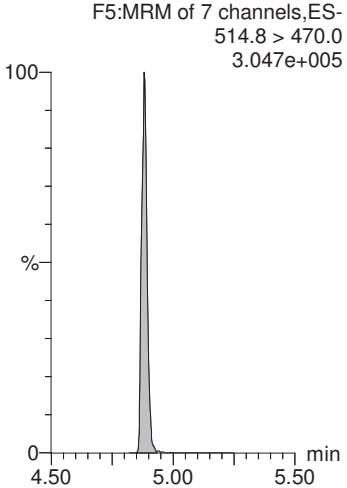


GM 7/28/2018

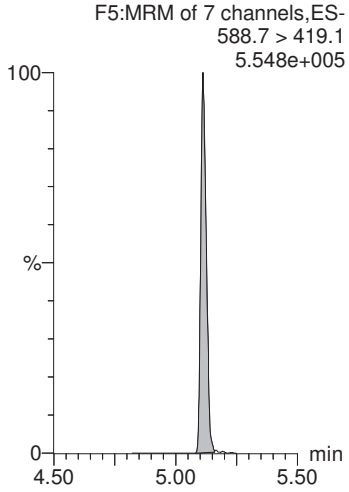
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-64.qld

Last Altered: Saturday, July 28, 2018 20:21:36 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:23:03 Pacific Daylight Time

Name: 180725G1_64, Date: 25-Jul-2018, Time: 22:04:46, ID: 1801868-06 CBD-1FB34-0718 0.25042, Description: CBD-1FB34-0718

d5-N-EtFOSAA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-65.qld

Last Altered: Saturday, July 28, 2018 20:28:15 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:28:34 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_65, Date: 25-Jul-2018, Time: 22:17:36, ID: 1801868-07 CBD-1RW35-0718 0.23429, Description: CBD-1RW35-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5		1.09e4	0.234		2.91				
2	2	PFHxA	312.7 > 268.8	4.63e1	7.36e3	0.234		3.28	3.28	0.0629	0.330	
3	3	PFHpA	362.7 > 318.8		7.36e3	0.234		3.82				
4	4	PFHxS	398.7 > 80.7		1.09e4	0.234		3.95				
5	5	PFOA	412.8 > 369.0	1.65e1	7.36e3	0.234		4.24	4.23	0.0224	0.131	
6	6	PFNA	462.9 > 419.1		7.36e3	0.234		4.58				
7	7	PFOS	498.8 >80.7		1.09e4	0.234		4.64				
8	8	PFDA	512.8 > 469.0	1.06e1	7.36e3	0.234		4.88	4.89	0.0144	0.0703	
9	9	N-MeFOSAA	569.7 > 419.0		1.11e4	0.234		5.01				
10	10	N-EtFOSAA	583.6 >419.1		1.11e4	0.234		5.13				
11	11	PFUnA	562.7 > 518.9		7.36e3	0.234		5.13				
12	12	PFDoA	612.5 > 319.0		7.36e3	0.234		5.37				
13	13	PFTrDA	662.4 > 618.7		7.36e3	0.234		5.58				
14	14	PFTeDA	712.2>668.4		7.36e3	0.234		5.76				
15	15	13C2-PFHxA	314.8 > 269.9	5.83e3	7.36e3	0.234	0.753	3.40	3.28	7.92	44.9	105.2
16	16	13C2-PFDA	514.8 > 470.0	7.07e3	7.36e3	0.234	1.023	4.83	4.88	9.60	40.1	93.8
17	17	d5-N-EtFOSAA	588.7> 419.1	1.43e4	1.11e4	0.234	1.264	5.00	5.11	51.6	174	102.1
18	18	13C2-PFOA	414.8 > 370.1	7.36e3	7.36e3	0.234	1.000	4.24	4.24	10.0	42.7	100.0
19	19	13C4-PFOS	502.8>80.7	1.09e4	1.09e4	0.234	1.000	4.64	4.64	28.7	122	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.11e4	1.11e4	0.234	1.000	4.99	5.00	40.0	171	100.0

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Vista Analytical Laboratory

MMM 7/30/2018

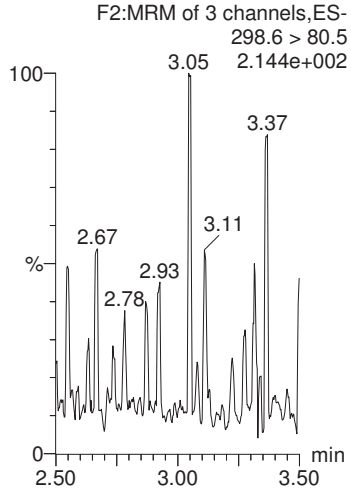
Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-65.qld

Last Altered: Saturday, July 28, 2018 20:28:15 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:28:34 Pacific Daylight Time

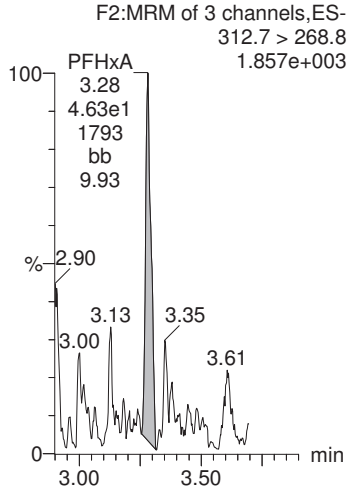
Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_65, Date: 25-Jul-2018, Time: 22:17:36, ID: 1801868-07 CBD-1RW35-0718 0.23429, Description: CBD-1RW35-0718

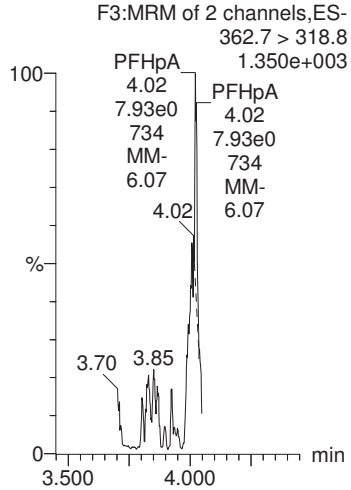
PFBS



PFHxA



PFHpA



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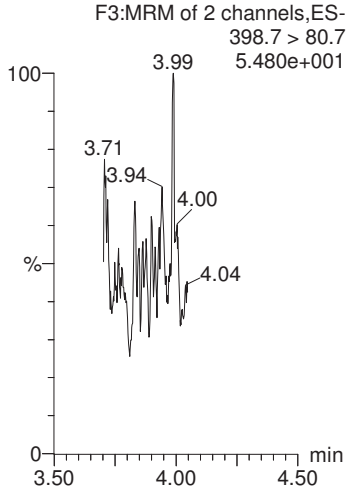

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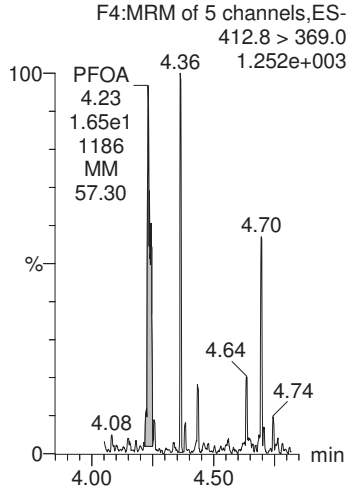

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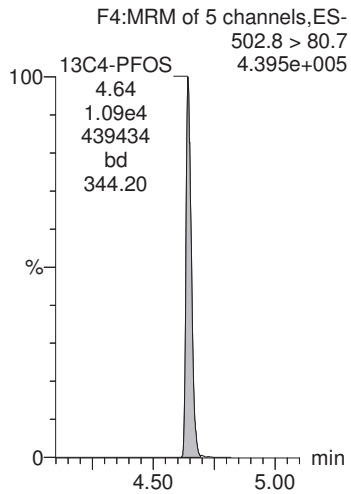

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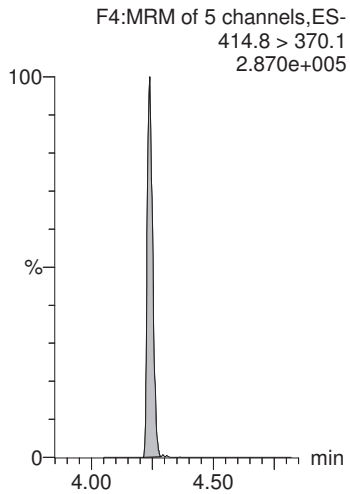

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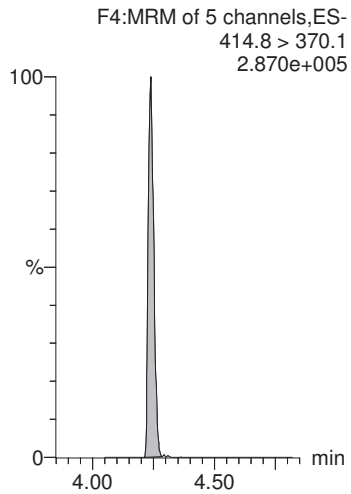

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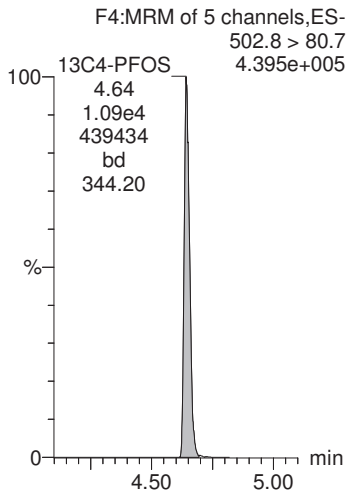

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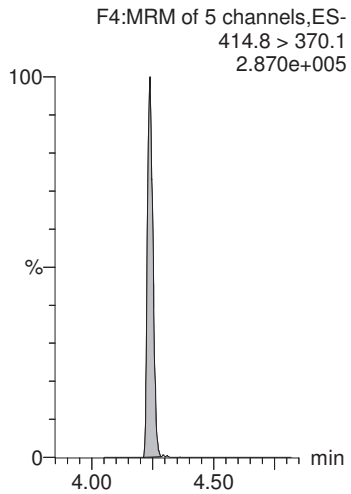

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-65.qld

Last Altered: Saturday, July 28, 2018 20:28:15 Pacific Daylight Time
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Name: 180725G1_65, Date: 25-Jul-2018, Time: 22:17:36, ID: 1801868-07 CBD-1RW35-0718 0.23429, Description: CBD-1RW35-0718

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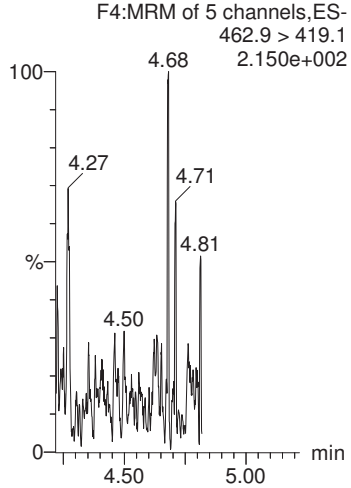

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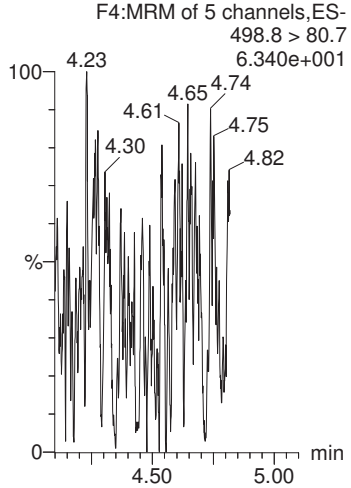

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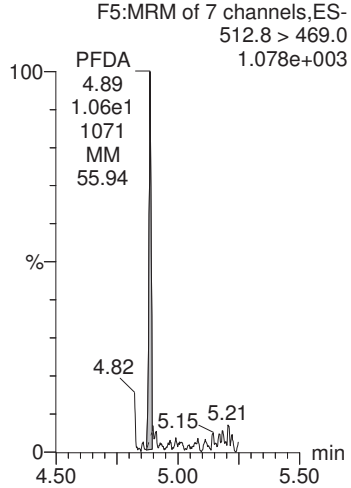

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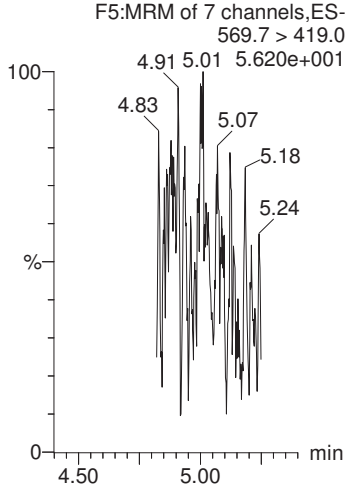

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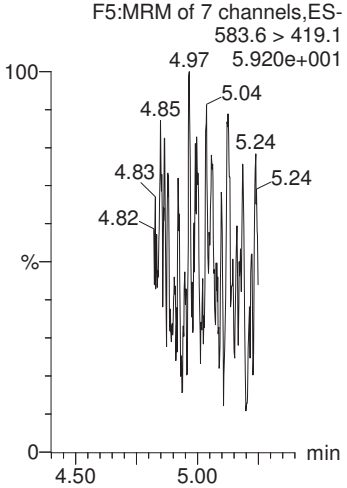

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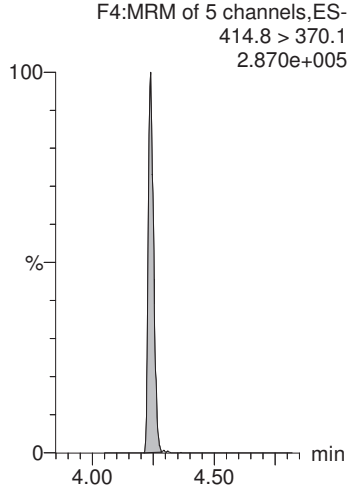
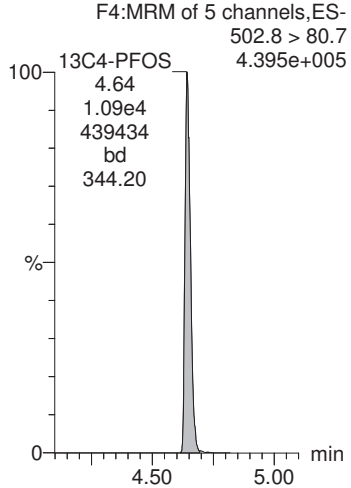


13C4-PFOS



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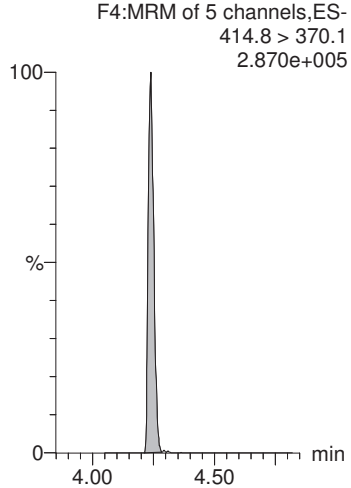
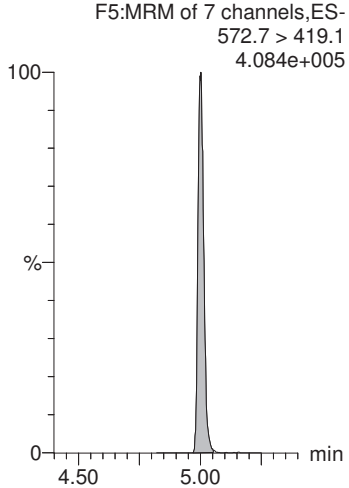


d3-N-MeFOSAA



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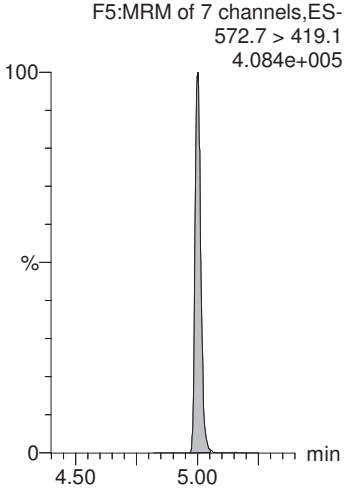

GM 7/28/2018

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-65.qld

Last Altered: Saturday, July 28, 2018 20:28:15 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:28:34 Pacific Daylight Time

Name: 180725G1_65, Date: 25-Jul-2018, Time: 22:17:36, ID: 1801868-07 CBD-1RW35-0718 0.23429, Description: CBD-1RW35-0718

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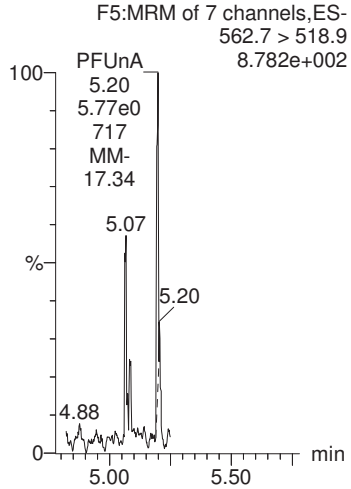

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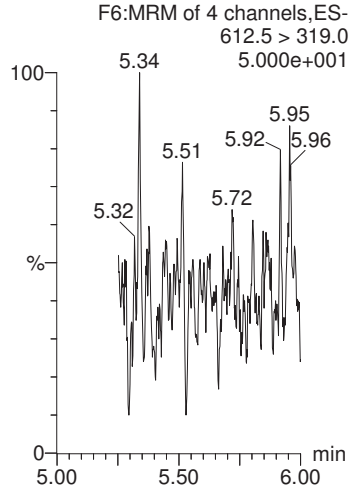
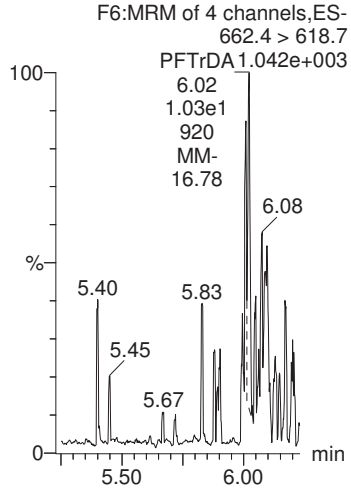


PFTrDA



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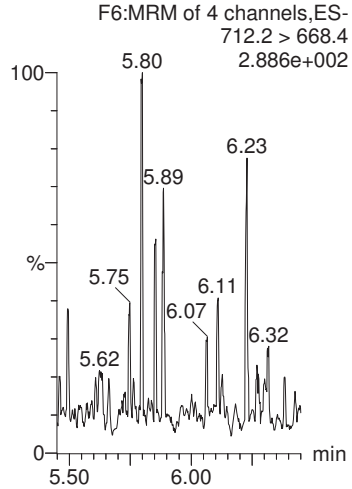

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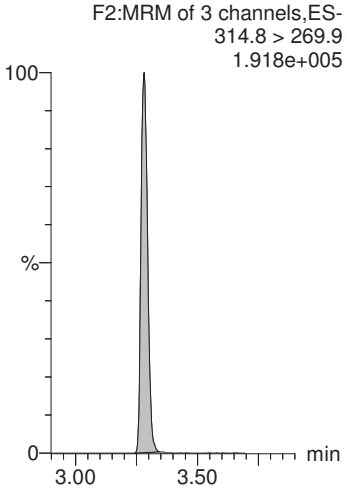

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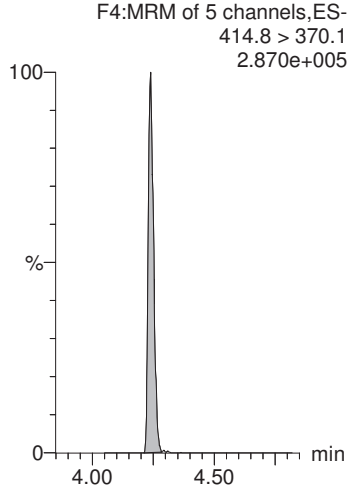

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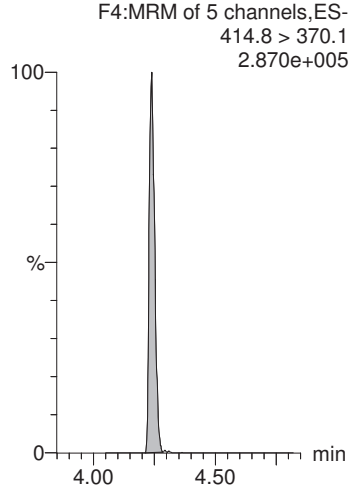

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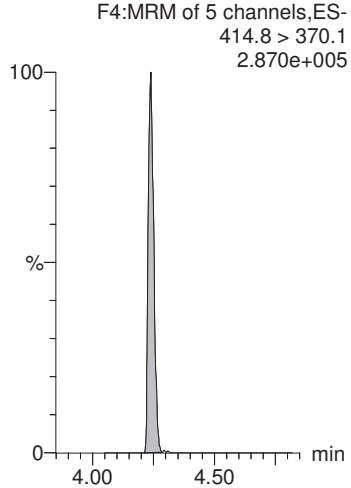

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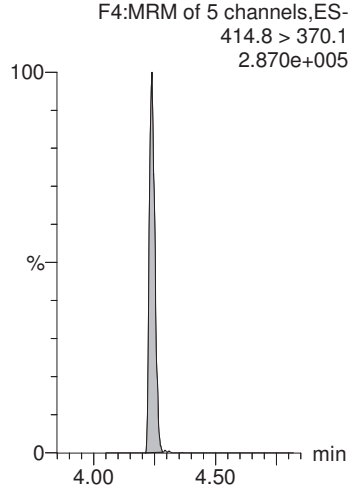

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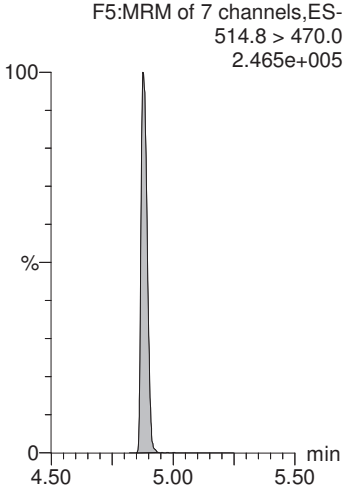


GM 7/28/2018

Vista Analytical Laboratory

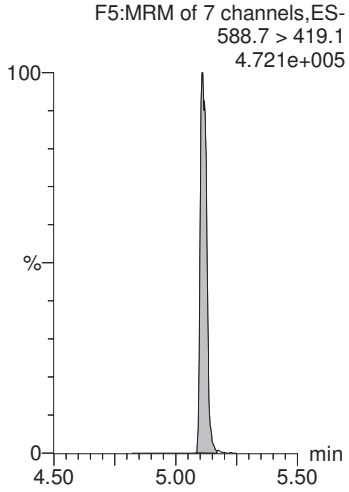
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-65.qld

Last Altered: Saturday, July 28, 2018 20:28:15 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:28:34 Pacific Daylight Time

Name: 180725G1_65, Date: 25-Jul-2018, Time: 22:17:36, ID: 1801868-07 CBD-1RW35-0718 0.23429, Description: CBD-1RW35-0718

d5-N-EtFOSAA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-66.qld

Last Altered: Saturday, July 28, 2018 20:29:29 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:29:46 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_66, Date: 25-Jul-2018, Time: 22:30:21, ID: 1801868-08 CBD-1FB35-0718 0.25599, Description: CBD-1FB35-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5		9.63e3	0.256		2.91				
2	2	PFHxA	312.7 > 268.8	4.57e1	6.53e3	0.256		3.28	3.28	0.0700	0.336	
3	3	PFHpA	362.7 > 318.8		6.53e3	0.256		3.82				
4	4	PFHxS	398.7 > 80.7		9.63e3	0.256		3.95				
5	5	PFOA	412.8 > 369.0	1.39e1	6.53e3	0.256		4.24	4.24	0.0213	0.114	
6	6	PFNA	462.9 > 419.1		6.53e3	0.256		4.58				
7	7	PFOS	498.8 >80.7		9.63e3	0.256		4.64				
8	8	PFDA	512.8 > 469.0	2.03e1	6.53e3	0.256		4.88	4.88	0.0310	0.139	
9	9	N-MeFOSAA	569.7 > 419.0	3.18e0	9.81e3	0.256		5.01	5.00	0.0130	0.0438	
10	10	N-EtFOSAA	583.6 >419.1		9.81e3	0.256		5.14				
11	11	PFUnA	562.7 > 518.9		6.53e3	0.256		5.12				
12	12	PFDoA	612.5 > 319.0		6.53e3	0.256		5.37				
13	13	PFTrDA	662.4 > 618.7		6.53e3	0.256		5.58				
14	14	PFTeDA	712.2>668.4		6.53e3	0.256		5.76				
15	15	13C2-PFHxA	314.8 > 269.9	5.12e3	6.53e3	0.256	0.753	3.40	3.28	7.84	40.7	104.2
16	16	13C2-PFDA	514.8 > 470.0	6.65e3	6.53e3	0.256	1.023	4.83	4.88	10.2	38.9	99.5
17	17	d5-N-EtFOSAA	588.7> 419.1	1.26e4	9.81e3	0.256	1.264	5.01	5.11	51.3	159	101.5
18	18	13C2-PFOA	414.8 > 370.1	6.53e3	6.53e3	0.256	1.000	4.24	4.24	10.0	39.1	100.0
19	19	13C4-PFOS	502.8>80.7	9.63e3	9.63e3	0.256	1.000	4.64	4.64	28.7	112	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	9.81e3	9.81e3	0.256	1.000	4.99	5.01	40.0	156	100.0

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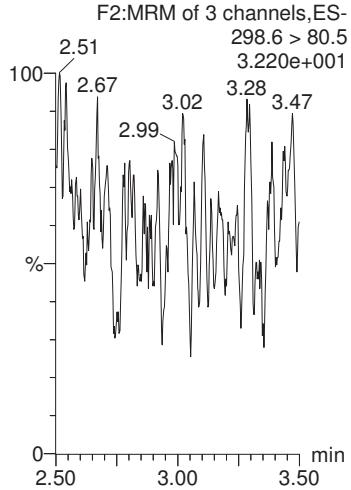
Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-66.qld

Last Altered: Saturday, July 28, 2018 20:29:29 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:29:46 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_66, Date: 25-Jul-2018, Time: 22:30:21, ID: 1801868-08 CBD-1FB35-0718 0.25599, Description: CBD-1FB35-0718

PFBS



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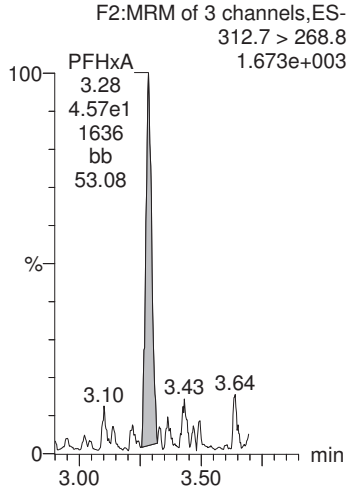

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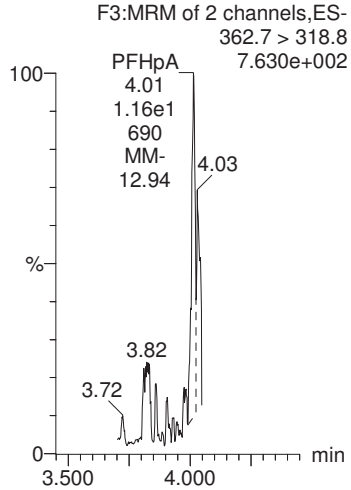
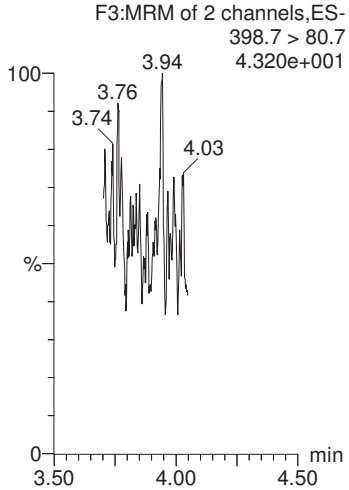
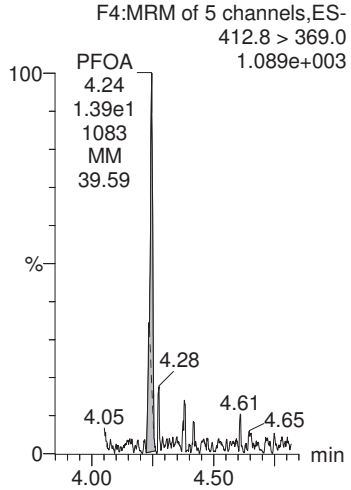


PFHxS



PFOA



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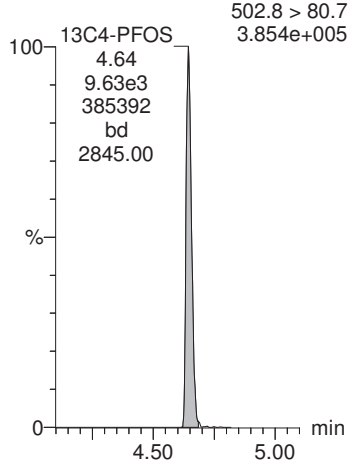

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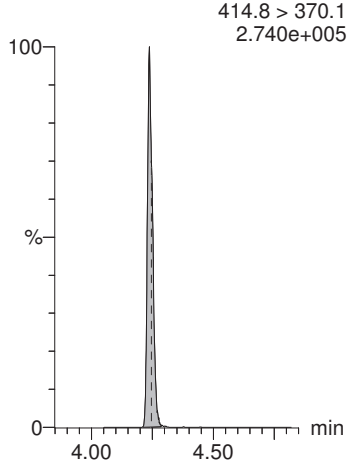

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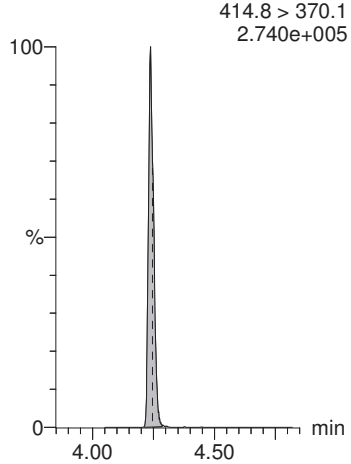

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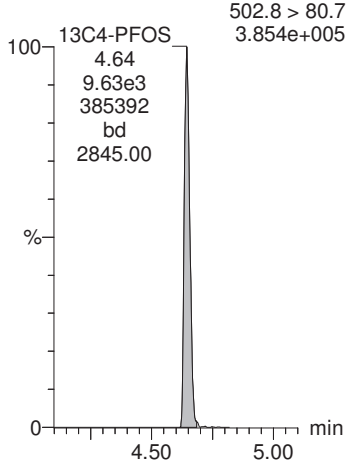

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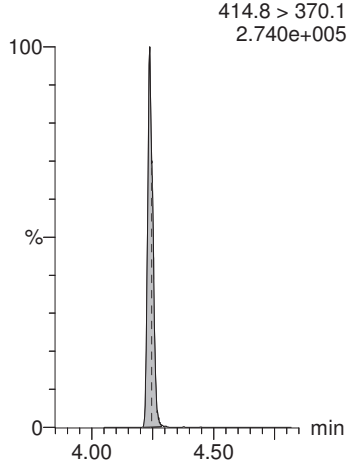

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-66.qld

Last Altered: Saturday, July 28, 2018 20:29:29 Pacific Daylight Time
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Name: 180725G1_66, Date: 25-Jul-2018, Time: 22:30:21, ID: 1801868-08 CBD-1FB35-0718 0.25599, Description: CBD-1FB35-0718

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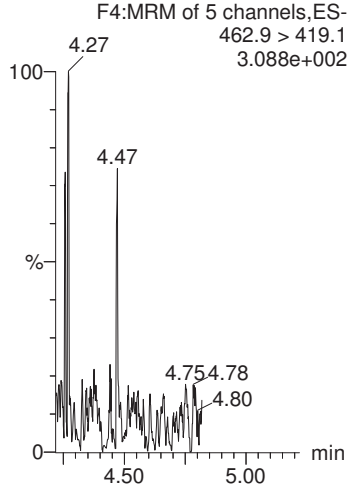

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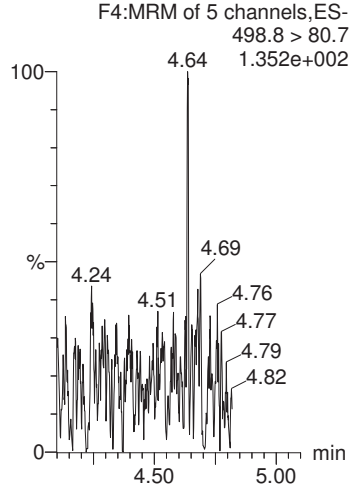

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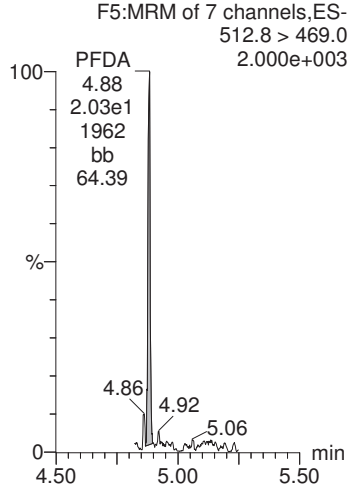

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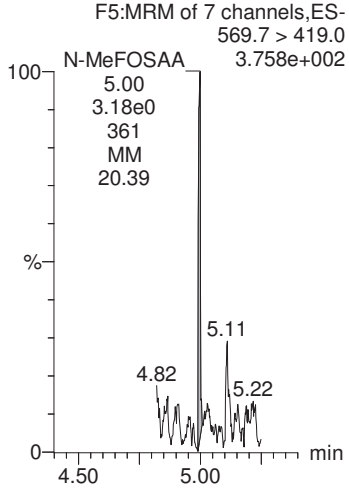

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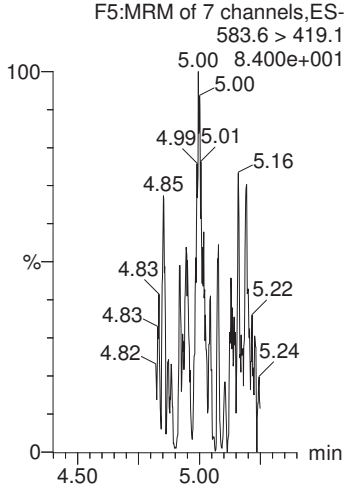

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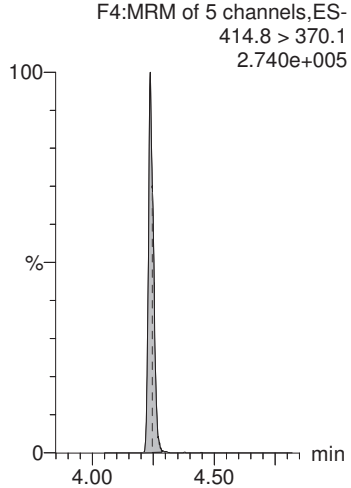

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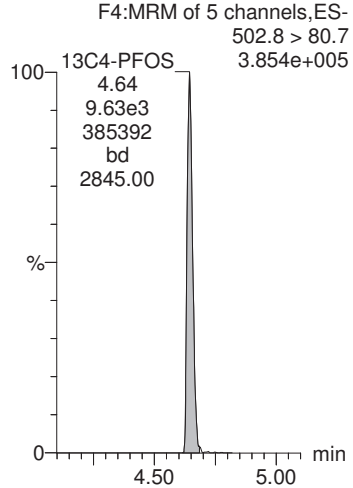

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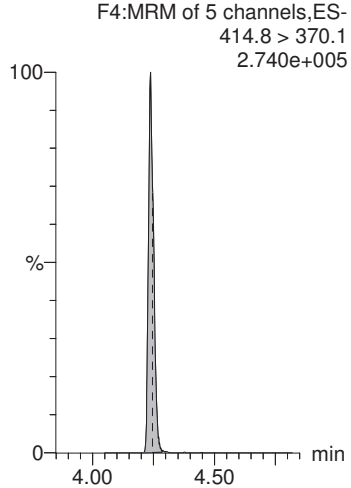

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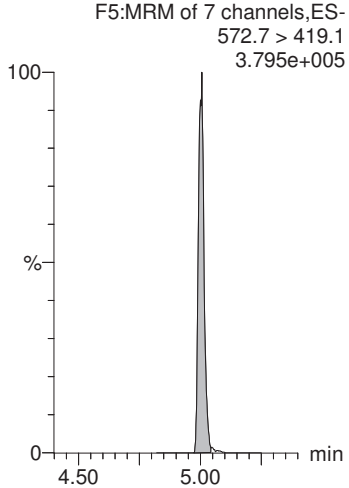

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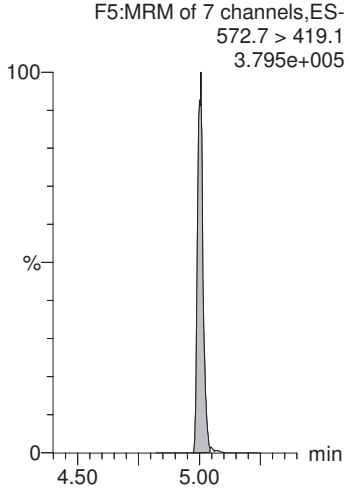

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-66.qld

Last Altered: Saturday, July 28, 2018 20:29:29 Pacific Daylight Time
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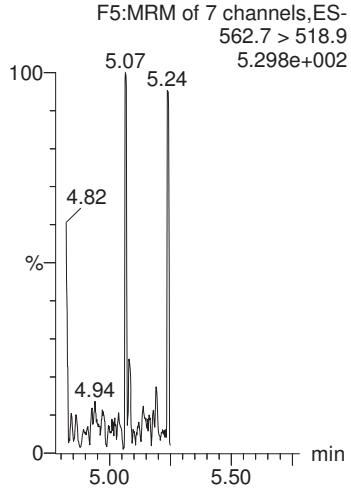
Name: 180725G1_66, Date: 25-Jul-2018, Time: 22:30:21, ID: 1801868-08 CBD-1FB35-0718 0.25599, Description: CBD-1FB35-0718

PFUnA



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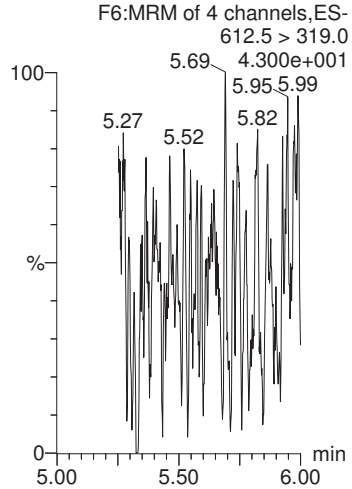

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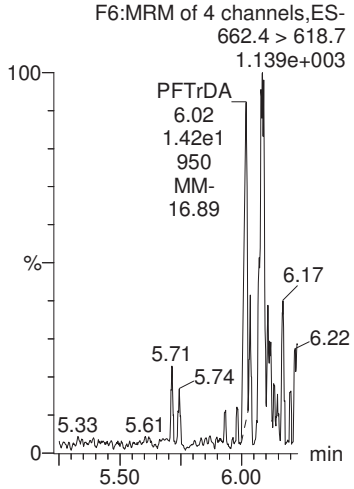

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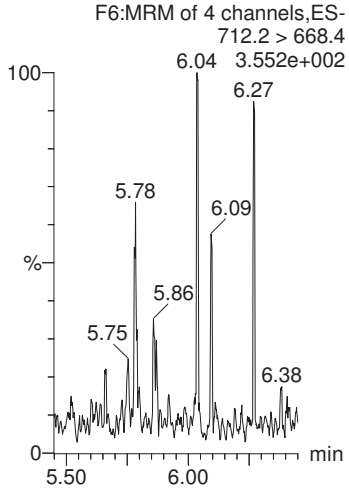

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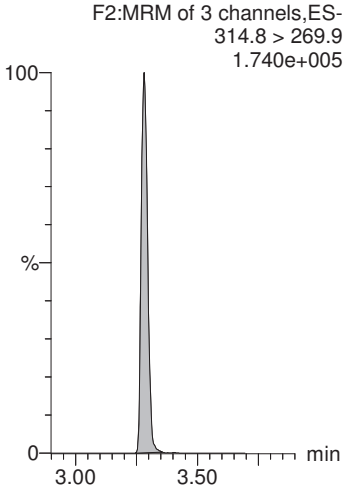

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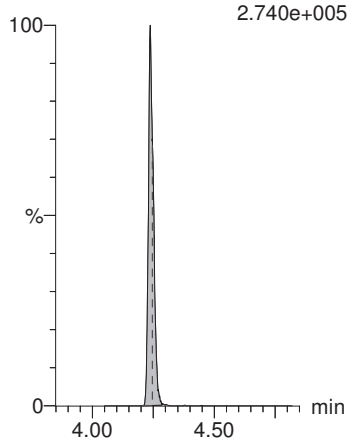

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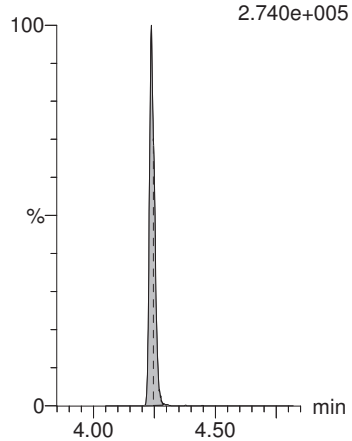

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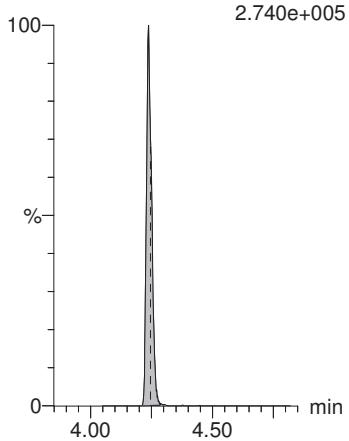

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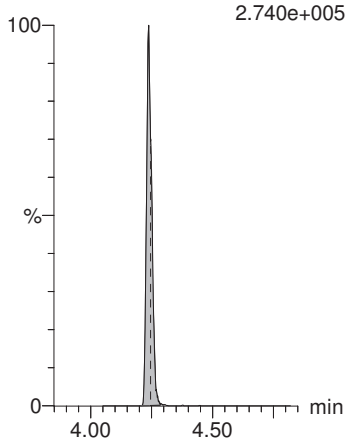
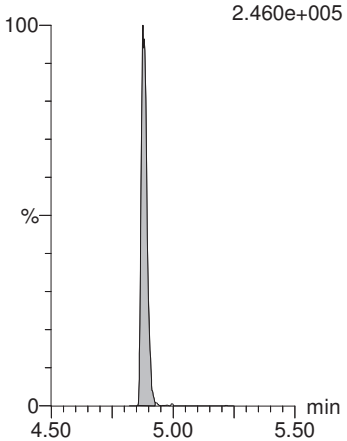


13C2-PFDA



GM 7/28/2018

Vista Analytical Laboratory

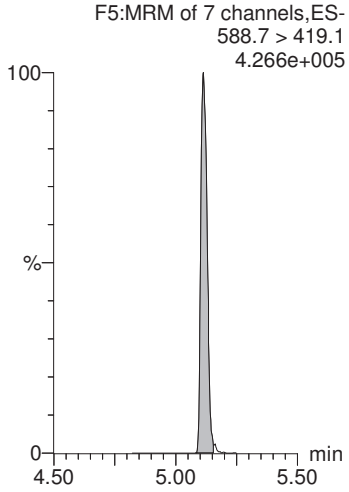
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-66.qld

Last Altered: Saturday, July 28, 2018 20:29:29 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:29:46 Pacific Daylight Time

Name: 180725G1_66, Date: 25-Jul-2018, Time: 22:30:21, ID: 1801868-08 CBD-1FB35-0718 0.25599, Description: CBD-1FB35-0718

d5-N-EtFOSAA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-67.qld

Last Altered: Saturday, July 28, 2018 20:33:02 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:33:10 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_67, Date: 25-Jul-2018, Time: 22:43:13, ID: 1801868-09 CBD-1RW36-0718 0.24217, Description: CBD-1RW36-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5		1.07e4	0.242		2.91				
2	2	PFHxA	312.7 > 268.8	8.96e1	7.13e3	0.242		3.29	3.28	0.126	0.638	
3	3	PFHpA	362.7 > 318.8		7.13e3	0.242		3.82				
4	4	PFHxS	398.7 > 80.7	3.76e1	1.07e4	0.242		3.95	3.96	0.100	0.367	
5	5	PFOA	412.8 > 369.0	9.68e1	7.13e3	0.242		4.24	4.24	0.136	0.768	
6	6	PFNA	462.9 > 419.1		7.13e3	0.242		4.58				
7	7	PFOS	498.8 >80.7		1.07e4	0.242		4.64				
8	8	PFDA	512.8 > 469.0	4.72e1	7.13e3	0.242		4.88	4.88	0.0662	0.314	
9	9	N-MeFOSAA	569.7 > 419.0		1.09e4	0.242		5.01				
10	10	N-EtFOSAA	583.6 >419.1		1.09e4	0.242		5.13				
11	11	PFUnA	562.7 > 518.9		7.13e3	0.242		5.13				
12	12	PFDoA	612.5 > 319.0		7.13e3	0.242		5.38				
13	13	PFTrDA	662.4 > 618.7		7.13e3	0.242		5.58				
14	14	PFTeDA	712.2>668.4		7.13e3	0.242		5.76				
15	15	13C2-PFHxA	314.8 > 269.9	5.94e3	7.13e3	0.242	0.753	3.40	3.28	8.33	45.7	110.7
16	16	13C2-PFDA	514.8 > 470.0	6.73e3	7.13e3	0.242	1.023	4.84	4.88	9.43	38.1	92.2
17	17	d5-N-EtFOSAA	588.7> 419.1	1.36e4	1.09e4	0.242	1.264	5.00	5.11	49.7	162	98.2
18	18	13C2-PFOA	414.8 > 370.1	7.13e3	7.13e3	0.242	1.000	4.24	4.24	10.0	41.3	100.0
19	19	13C4-PFOS	502.8>80.7	1.07e4	1.07e4	0.242	1.000	4.64	4.65	28.7	119	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.09e4	1.09e4	0.242	1.000	4.99	5.00	40.0	165	100.0

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

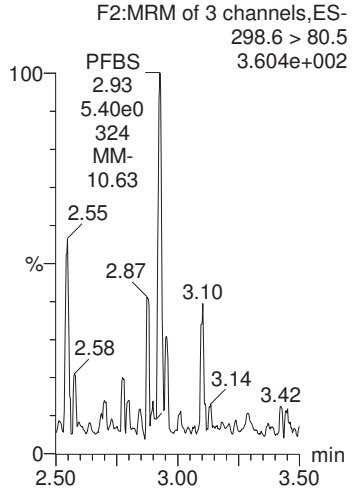
Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-67.qld

Last Altered: Saturday, July 28, 2018 20:33:02 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:33:10 Pacific Daylight Time

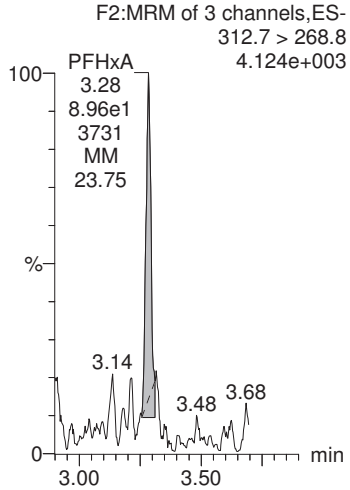
Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_67, Date: 25-Jul-2018, Time: 22:43:13, ID: 1801868-09 CBD-1RW36-0718 0.24217, Description: CBD-1RW36-0718

PFBS



PFHxA



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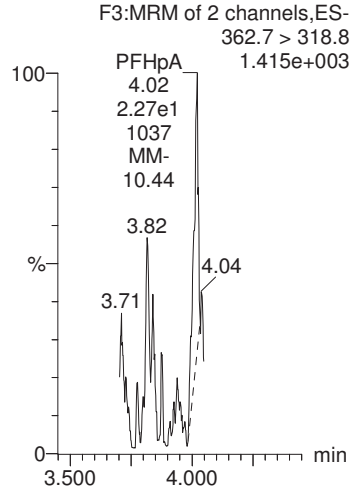
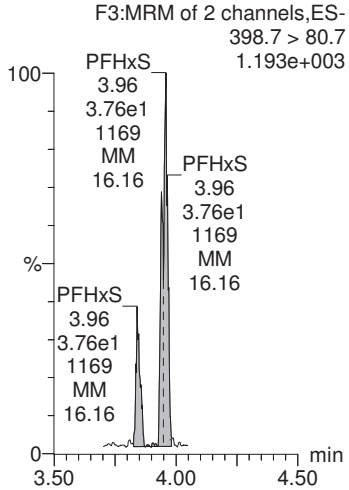
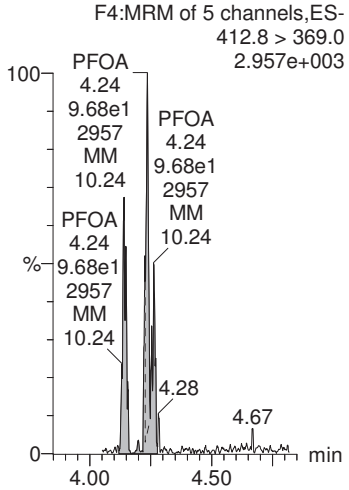


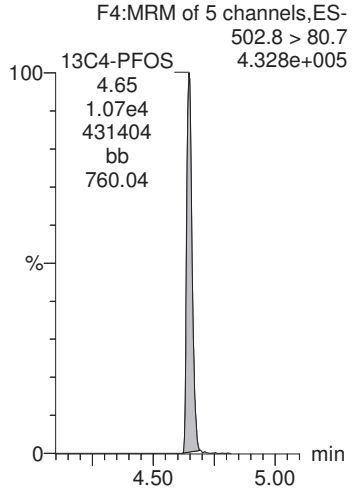
PFHxS



PFOA



13C4-PFOS



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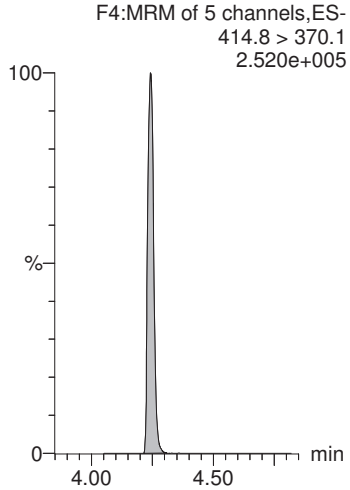

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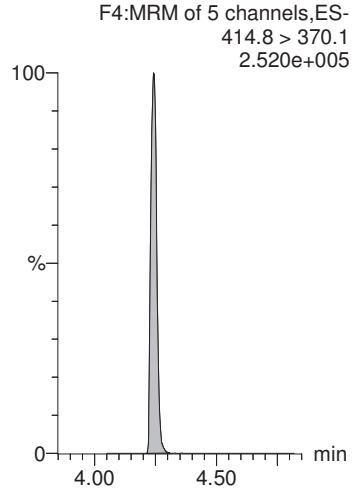

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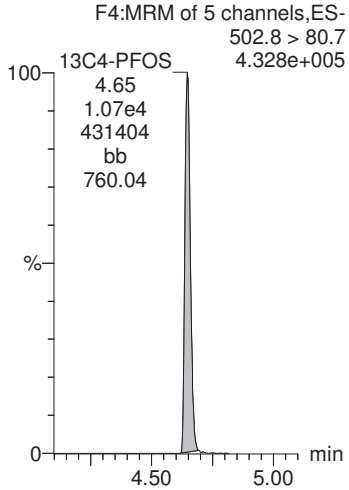

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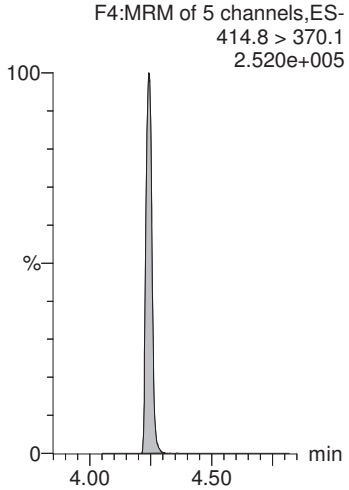


GM 7/28/2018

Vista Analytical Laboratory

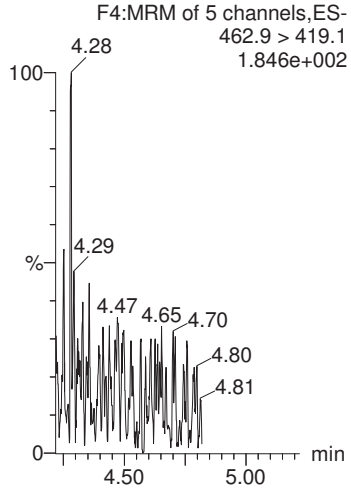
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-67.qld

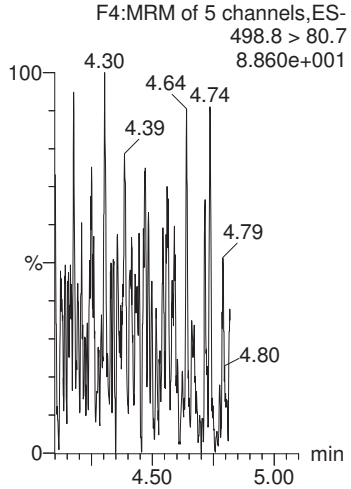
Last Altered: Saturday, July 28, 2018 20:33:02 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:33:10 Pacific Daylight Time

Name: 180725G1_67, Date: 25-Jul-2018, Time: 22:43:13, ID: 1801868-09 CBD-1RW36-0718 0.24217, Description: CBD-1RW36-0718

PFNA



PFOS



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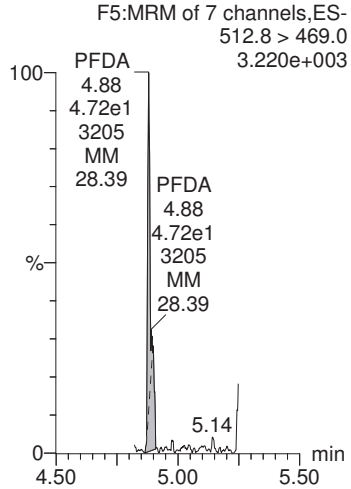
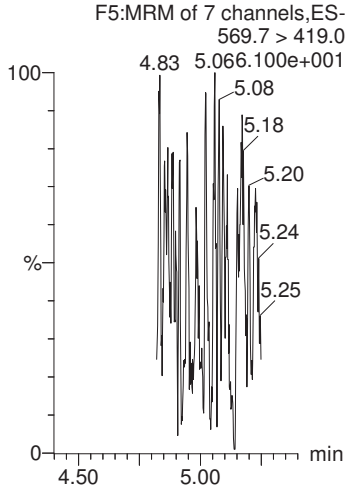
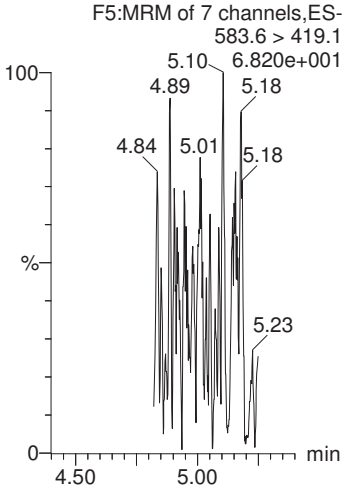


N-MeFOSAA



N-EtFOSAA



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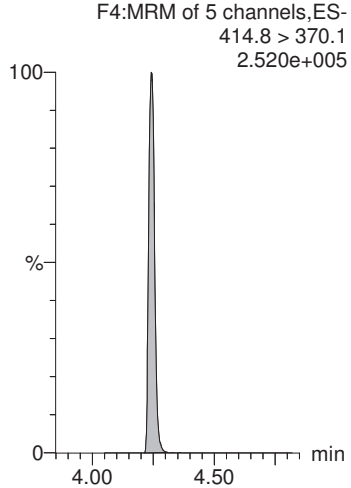

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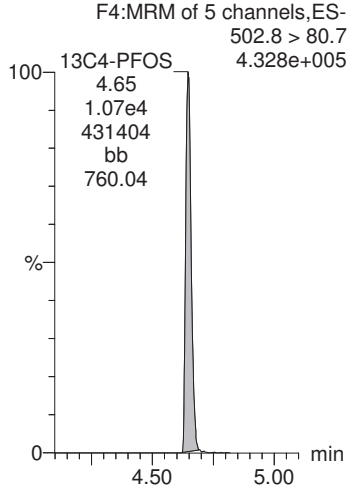

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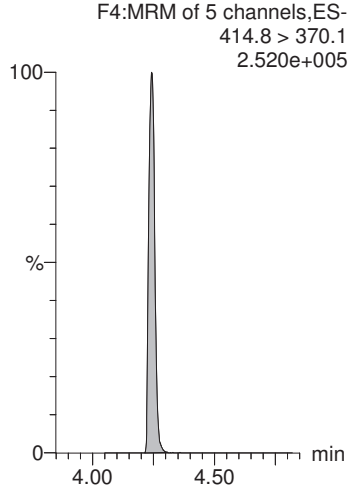

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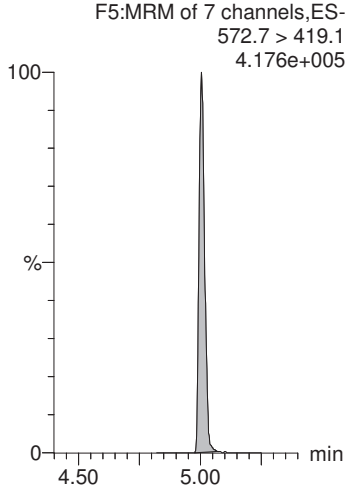

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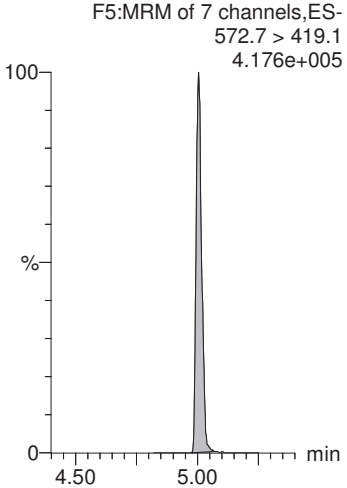


GM 7/28/2018

Vista Analytical Laboratory

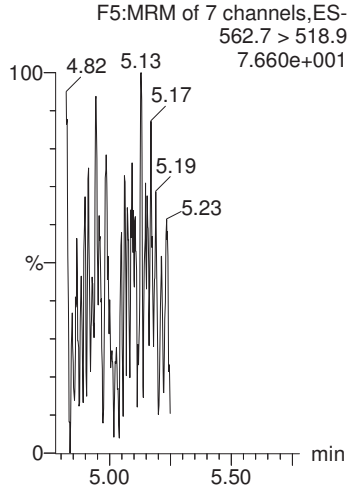
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-67.qld

Last Altered: Saturday, July 28, 2018 20:33:02 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:33:10 Pacific Daylight Time

Name: 180725G1_67, Date: 25-Jul-2018, Time: 22:43:13, ID: 1801868-09 CBD-1RW36-0718 0.24217, Description: CBD-1RW36-0718

PFUnA



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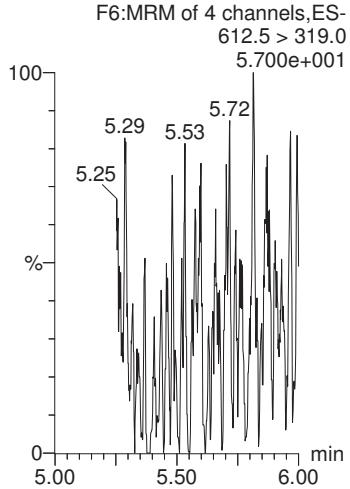

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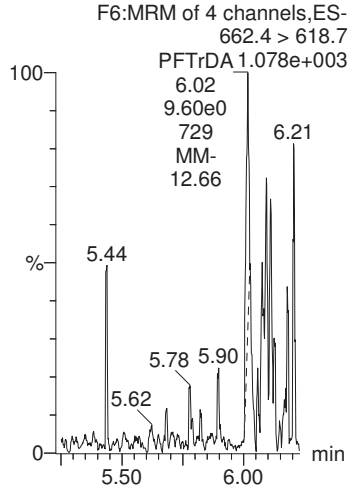
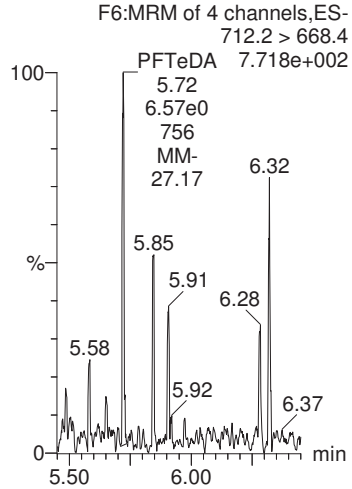
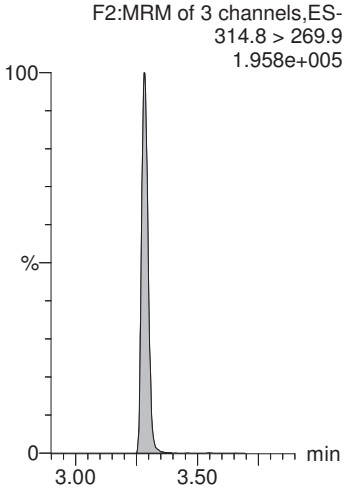


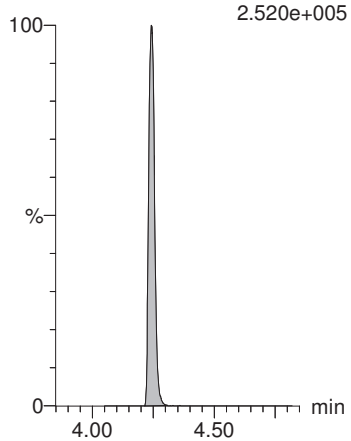
PFTeDA



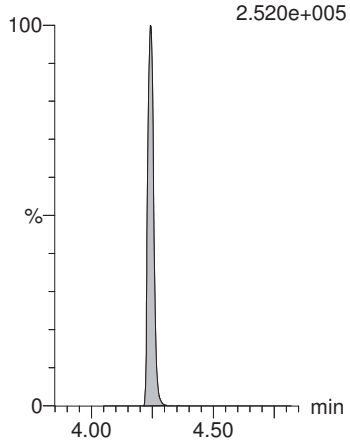
13C2-PFHxA



13C2-PFOA



13C2-PFOA



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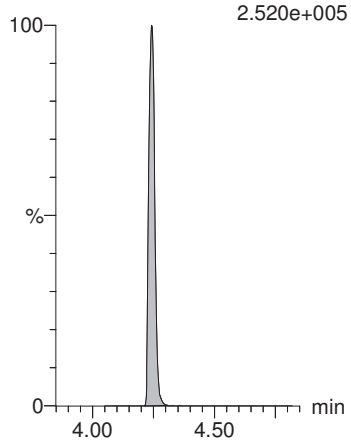

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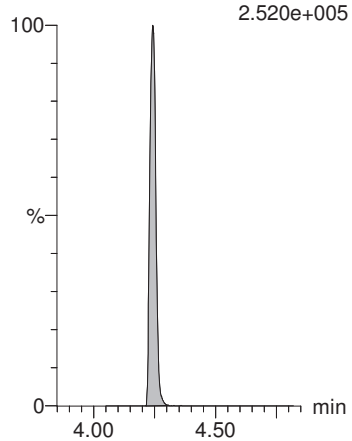

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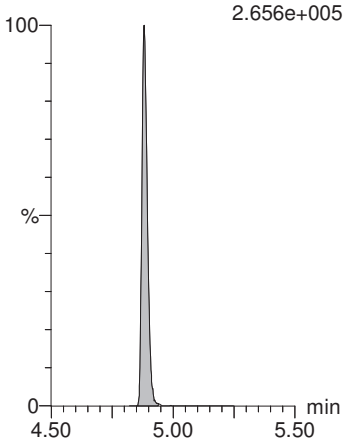


GM 7/28/2018

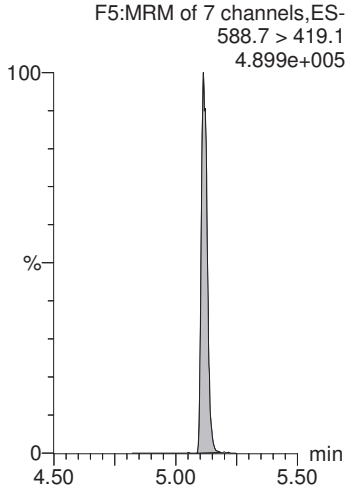
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-67.qld

Last Altered: Saturday, July 28, 2018 20:33:02 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:33:10 Pacific Daylight Time

Name: 180725G1_67, Date: 25-Jul-2018, Time: 22:43:13, ID: 1801868-09 CBD-1RW36-0718 0.24217, Description: CBD-1RW36-0718

d5-N-EtFOSAA



GM 7/28/2018

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-68.qld

Last Altered: Saturday, July 28, 2018 20:34:18 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:34:34 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_68, Date: 25-Jul-2018, Time: 22:55:59, ID: 1801868-10 CBD-1FB36-0718 0.25374, Description: CBD-1FB36-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5		1.03e4	0.254		2.91				
2	2	PFHxA	312.7 > 268.8	4.52e1	7.11e3	0.254		3.28	3.28	0.0636	0.308	
3	3	PFHpA	362.7 > 318.8		7.11e3	0.254		3.82				
4	4	PFHxS	398.7 > 80.7		1.03e4	0.254		3.95				
5	5	PFOA	412.8 > 369.0	5.81e0	7.11e3	0.254		4.24	4.24	0.00816	0.0441	
6	6	PFNA	462.9 > 419.1		7.11e3	0.254		4.58				
7	7	PFOS	498.8 >80.7		1.03e4	0.254		4.64				
8	8	PFDA	512.8 > 469.0	1.58e1	7.11e3	0.254		4.88	4.88	0.0222	0.100	
9	9	N-MeFOSAA	569.7 > 419.0		1.09e4	0.254		5.01				
10	10	N-EtFOSAA	583.6 >419.1		1.09e4	0.254		5.13				
11	11	PFUnA	562.7 > 518.9		7.11e3	0.254		5.13				
12	12	PFDoA	612.5 > 319.0		7.11e3	0.254		5.37				
13	13	PFTrDA	662.4 > 618.7		7.11e3	0.254		5.58				
14	14	PFTeDA	712.2>668.4		7.11e3	0.254		5.76				
15	15	13C2-PFHxA	314.8 > 269.9	5.87e3	7.11e3	0.254	0.753	3.40	3.28	8.26	43.2	109.7
16	16	13C2-PFDA	514.8 > 470.0	6.92e3	7.11e3	0.254	1.023	4.83	4.88	9.73	37.5	95.2
17	17	d5-N-EtFOSAA	588.7> 419.1	1.42e4	1.09e4	0.254	1.264	5.00	5.11	52.2	163	103.3
18	18	13C2-PFOA	414.8 > 370.1	7.11e3	7.11e3	0.254	1.000	4.24	4.24	10.0	39.4	100.0
19	19	13C4-PFOS	502.8>80.7	1.03e4	1.03e4	0.254	1.000	4.64	4.64	28.7	113	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.09e4	1.09e4	0.254	1.000	4.99	5.00	40.0	158	100.0

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-68.qld

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Printed: Saturday, July 28, 2018 20:34:34 Pacific Daylight Time

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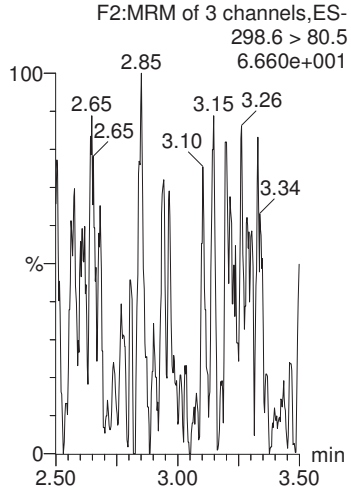
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_68, Date: 25-Jul-2018, Time: 22:55:59, ID: 1801868-10 CBD-1FB36-0718 0.25374, Description: CBD-1FB36-0718

PFBS



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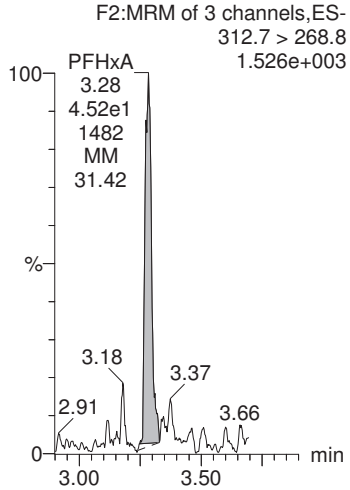

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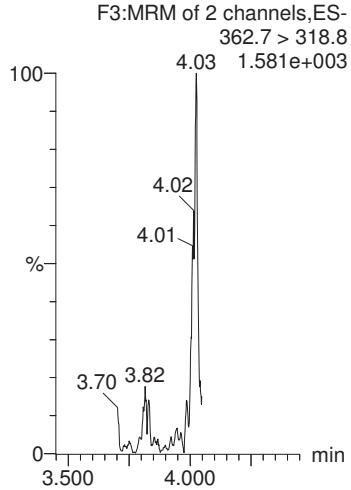

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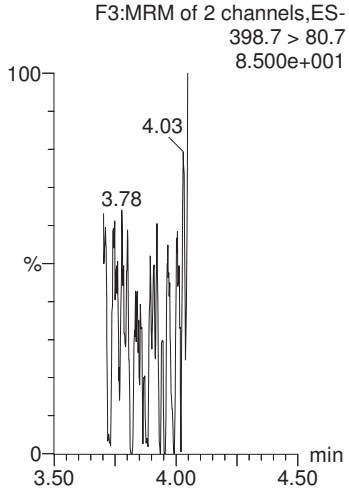

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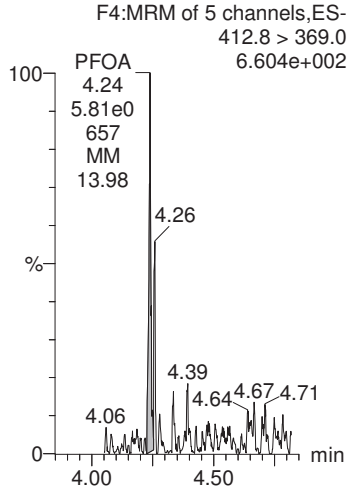

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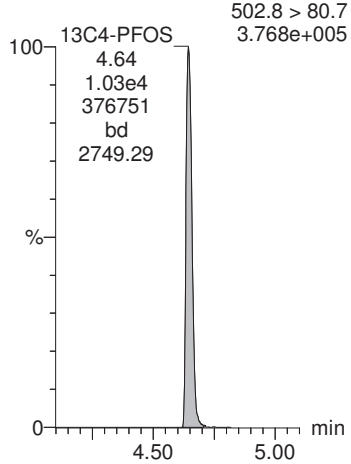

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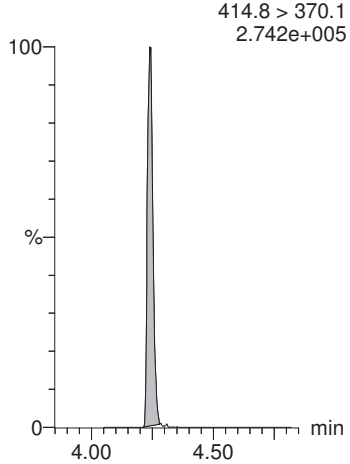

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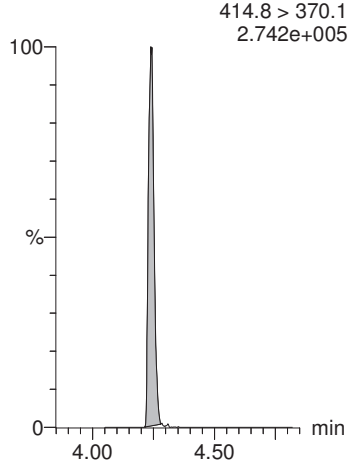

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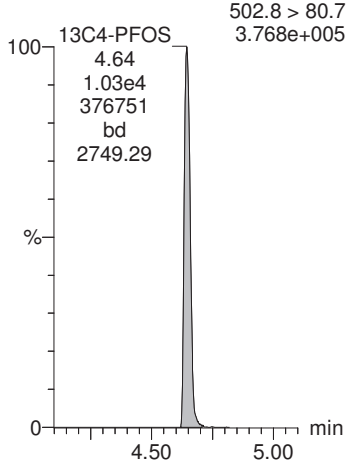

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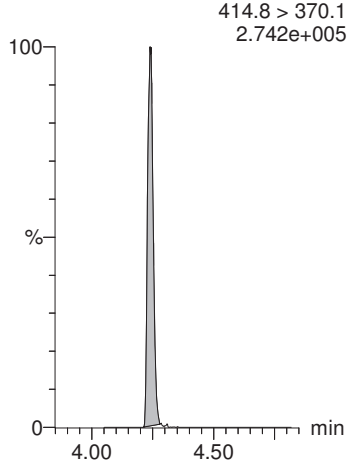

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-68.qld

Last Altered: Saturday, July 28, 2018 20:34:18 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:34:34 Pacific Daylight Time

Name: 180725G1_68, Date: 25-Jul-2018, Time: 22:55:59, ID: 1801868-10 CBD-1FB36-0718 0.25374, Description: CBD-1FB36-0718

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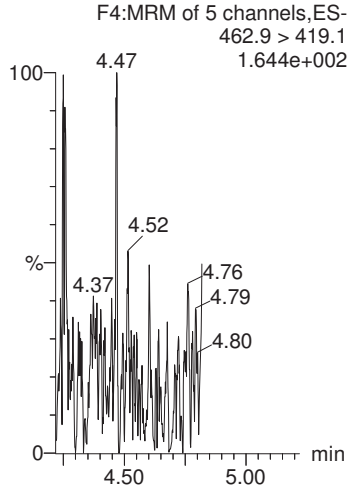

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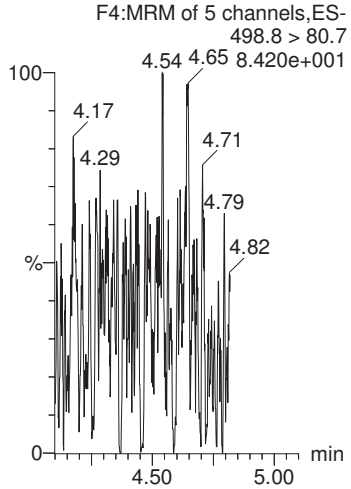

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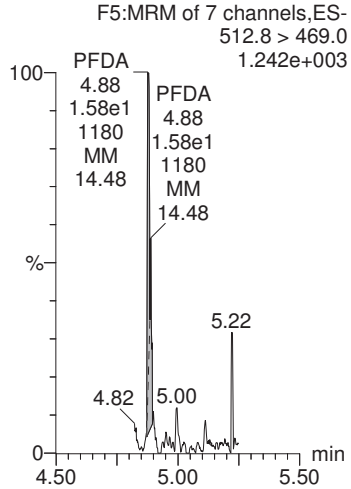

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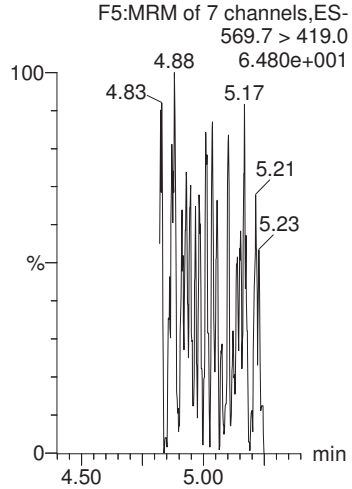

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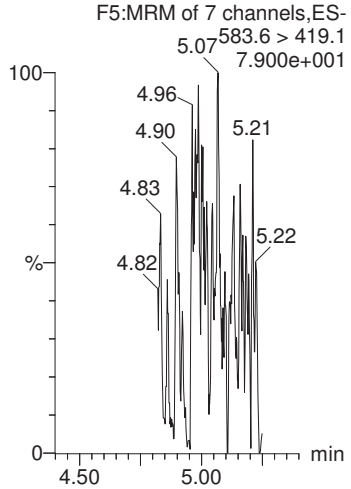

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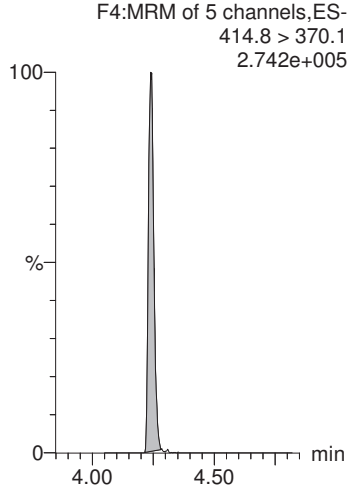

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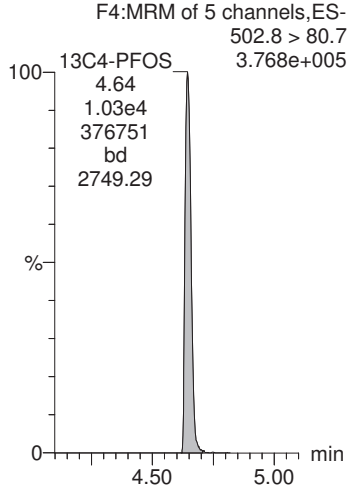

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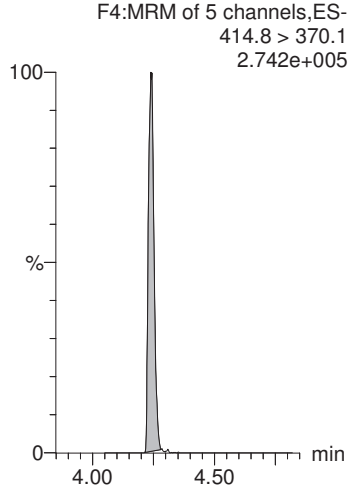

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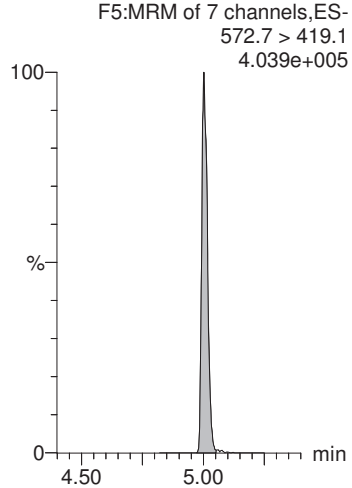

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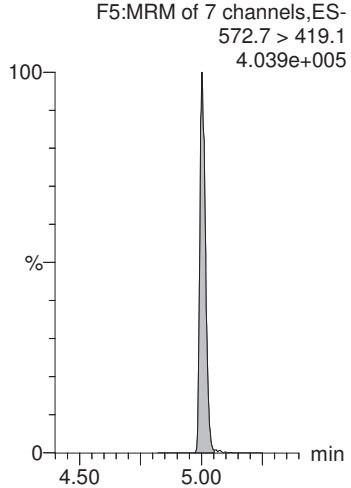

GM 7/28/2018

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-68.qld

Last Altered: Saturday, July 28, 2018 20:34:18 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:34:34 Pacific Daylight Time

Name: 180725G1_68, Date: 25-Jul-2018, Time: 22:55:59, ID: 1801868-10 CBD-1FB36-0718 0.25374, Description: CBD-1FB36-0718

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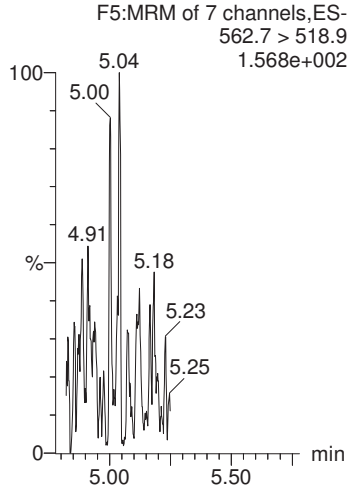

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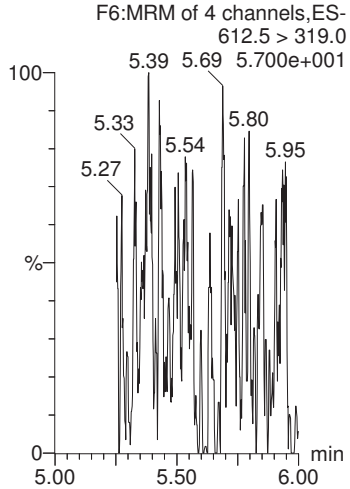

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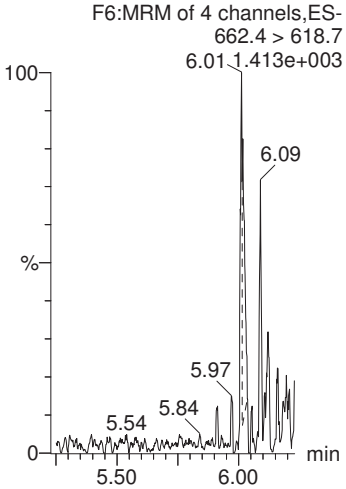

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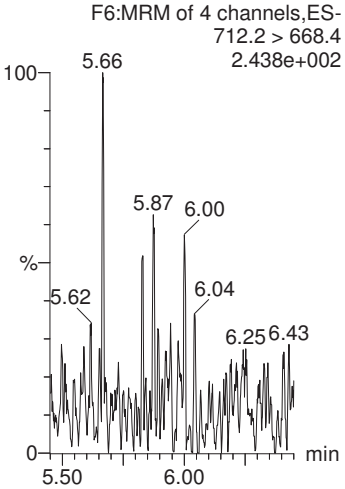

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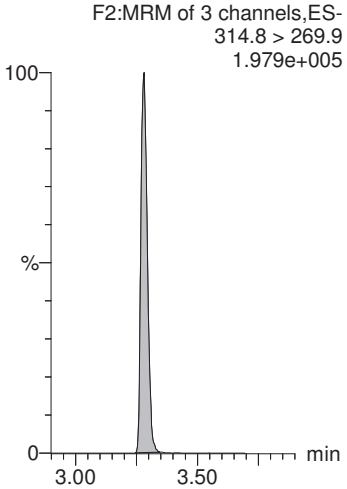

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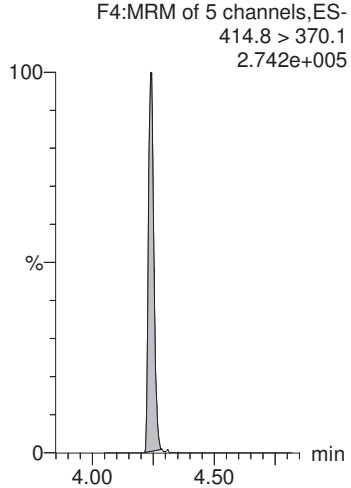

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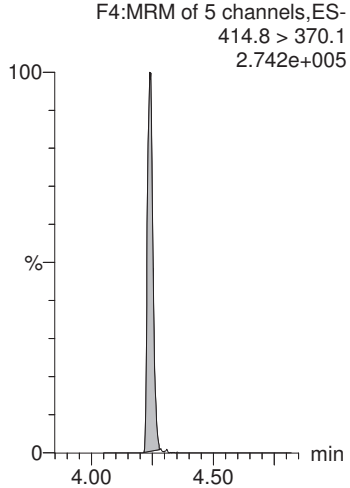

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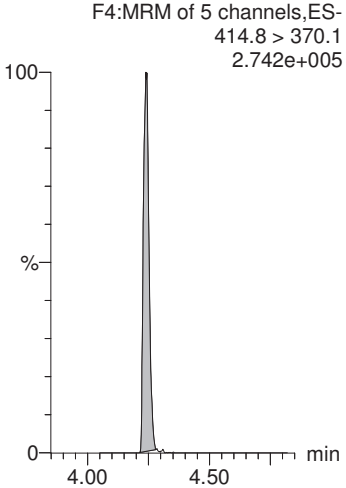

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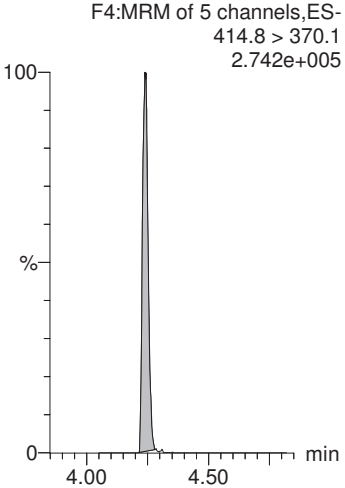

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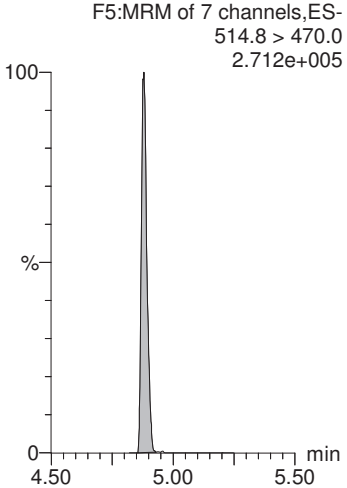


GM 7/28/2018

Vista Analytical Laboratory

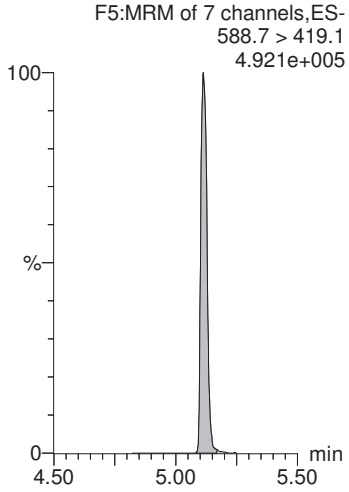
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-68.qld

Last Altered: Saturday, July 28, 2018 20:34:18 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:34:34 Pacific Daylight Time

Name: 180725G1_68, Date: 25-Jul-2018, Time: 22:55:59, ID: 1801868-10 CBD-1FB36-0718 0.25374, Description: CBD-1FB36-0718

d5-N-EtFOSAA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-69.qld

Last Altered: Saturday, July 28, 2018 20:36:35 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:37:02 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_69, Date: 25-Jul-2018, Time: 23:08:48, ID: 1801868-11 CBD-1RW37-0718 0.23938, Description: CBD-1RW37-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5	1.17e2	1.00e4	0.239		2.91	2.92	0.336	1.47	
2	2	PFHxA	312.7 > 268.8	2.28e3	6.52e3	0.239		3.28	3.28	3.51	18.0	
3	3	PFHpA	362.7 > 318.8	6.07e2	6.52e3	0.239		3.82	3.83	0.931	4.44	
4	4	PFHxS	398.7 > 80.7	1.03e3	1.00e4	0.239		3.95	3.94	2.94	10.9	
5	5	PFOA	412.8 > 369.0	4.19e3	6.52e3	0.239		4.24	4.24	6.42	36.8	
6	6	PFNA	462.9 > 419.1	1.60e1	6.52e3	0.239		4.58	4.59	0.0245	0.118	
7	7	PFOS	498.8 >80.7	5.15e0	1.00e4	0.239		4.64	4.64	0.0147	0.167	
8	8	PFDA	512.8 > 469.0	1.24e1	6.52e3	0.239		4.88	4.89	0.0190	0.0909	
9	9	N-MeFOSAA	569.7 > 419.0		9.94e3	0.239		5.00				
10	10	N-EtFOSAA	583.6 >419.1		9.94e3	0.239		5.13				
11	11	PFUnA	562.7 > 518.9		6.52e3	0.239		5.13				
12	12	PFDoA	612.5 > 319.0		6.52e3	0.239		5.37				
13	13	PFTrDA	662.4 > 618.7		6.52e3	0.239		5.58				
14	14	PFTeDA	712.2>668.4		6.52e3	0.239		5.76				
15	15	13C2-PFHxA	314.8 > 269.9	5.13e3	6.52e3	0.239	0.753	3.40	3.28	7.88	43.7	104.7
16	16	13C2-PFDA	514.8 > 470.0	6.52e3	6.52e3	0.239	1.023	4.83	4.88	10.0	40.9	97.9
17	17	d5-N-EtFOSAA	588.7> 419.1	1.22e4	9.94e3	0.239	1.264	5.00	5.12	49.2	163	97.3
18	18	13C2-PFOA	414.8 > 370.1	6.52e3	6.52e3	0.239	1.000	4.24	4.24	10.0	41.8	100.0
19	19	13C4-PFOS	502.8>80.7	1.00e4	1.00e4	0.239	1.000	4.64	4.64	28.7	120	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	9.94e3	9.94e3	0.239	1.000	4.99	5.00	40.0	167	100.0

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Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-69.qld

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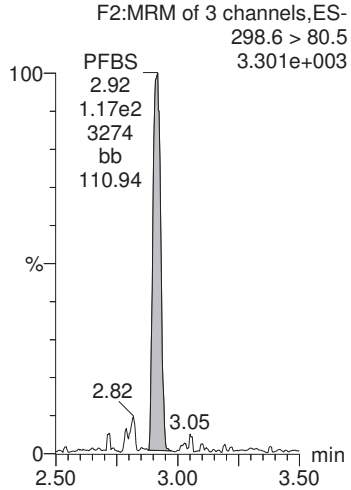
Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_69, Date: 25-Jul-2018, Time: 23:08:48, ID: 1801868-11 CBD-1RW37-0718 0.23938, Description: CBD-1RW37-0718

PFBS



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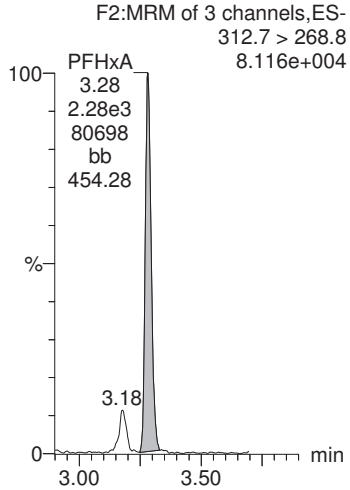

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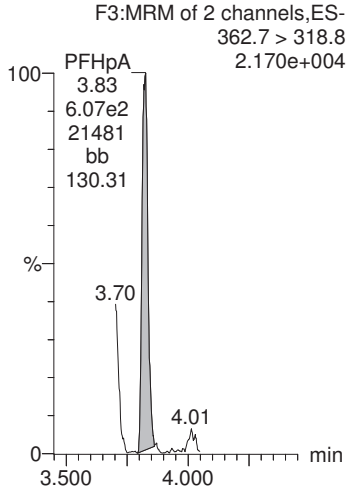

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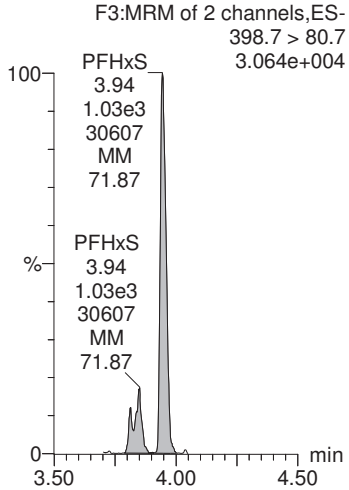

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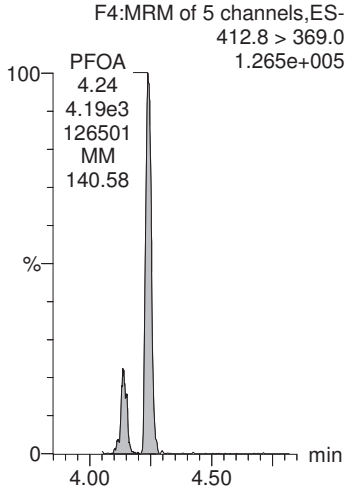

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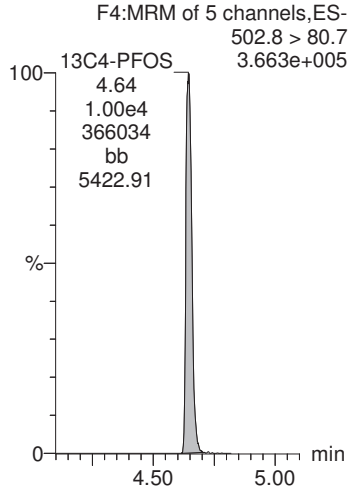

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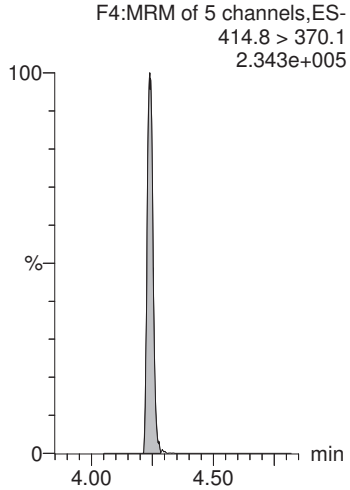

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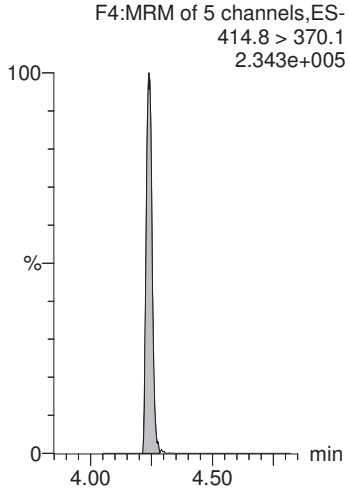

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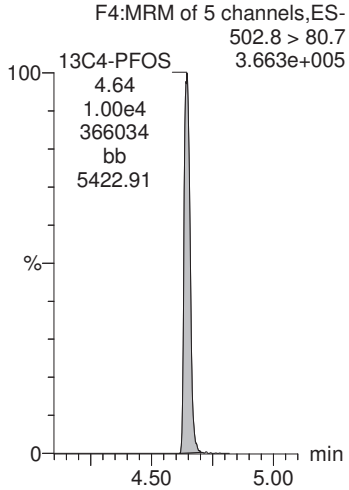

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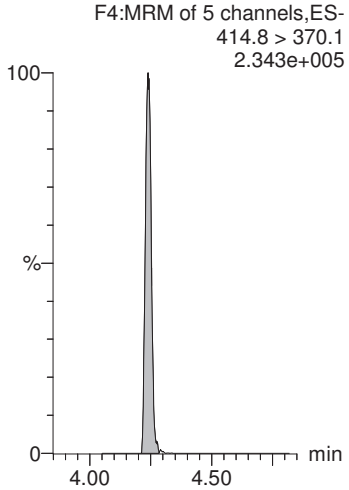

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

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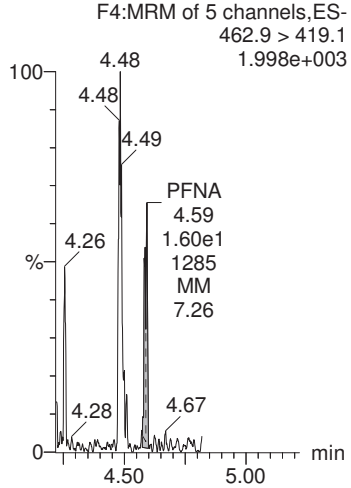

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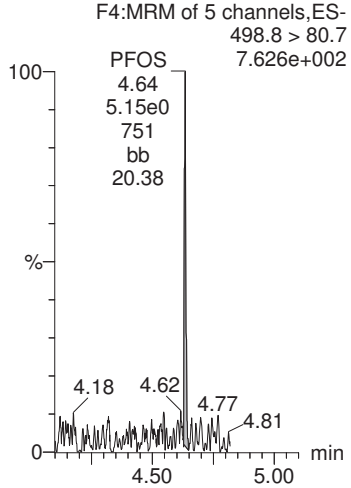

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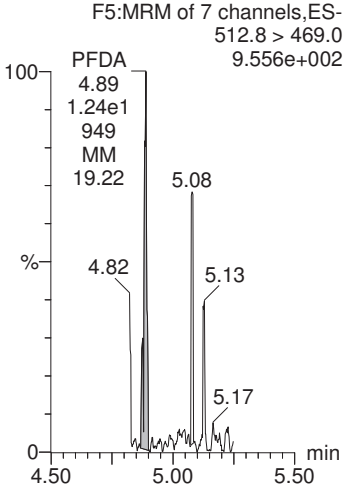
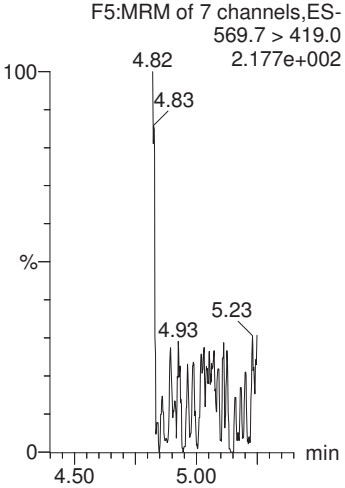


N-MeFOSAA



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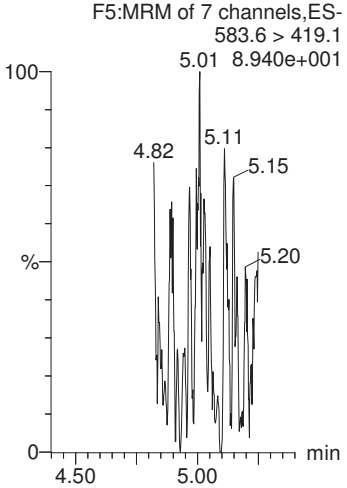
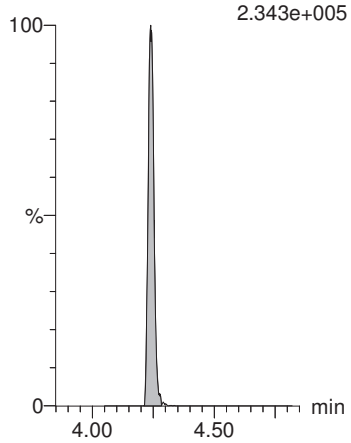
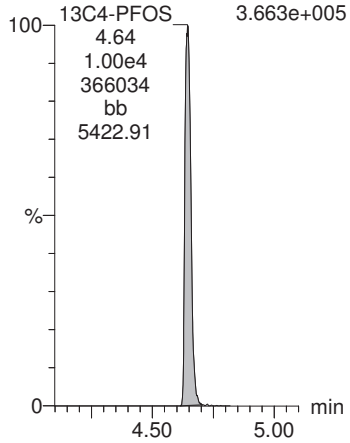


13C2-PFOA



13C4-PFOS



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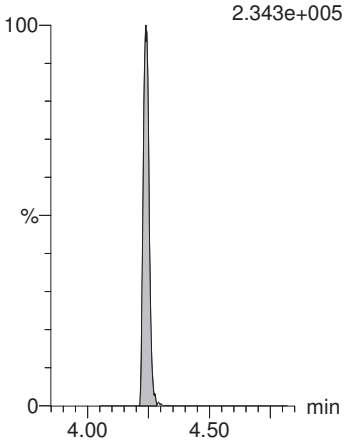

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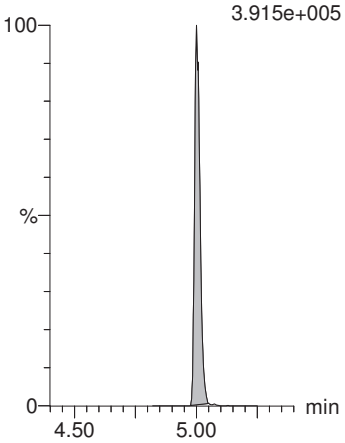

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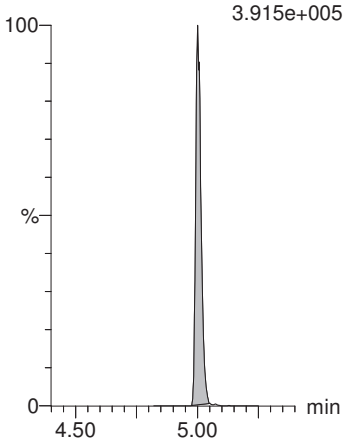

GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-69.qld

Last Altered: Saturday, July 28, 2018 20:36:35 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:37:02 Pacific Daylight Time

Name: 180725G1_69, Date: 25-Jul-2018, Time: 23:08:48, ID: 1801868-11 CBD-1RW37-0718 0.23938, Description: CBD-1RW37-0718

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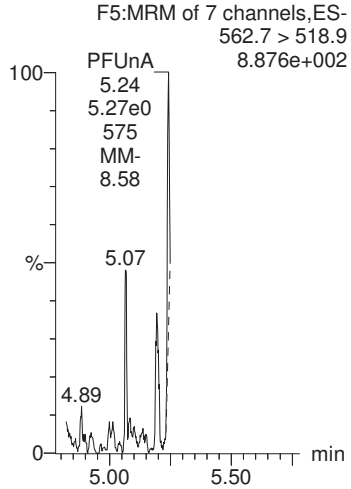

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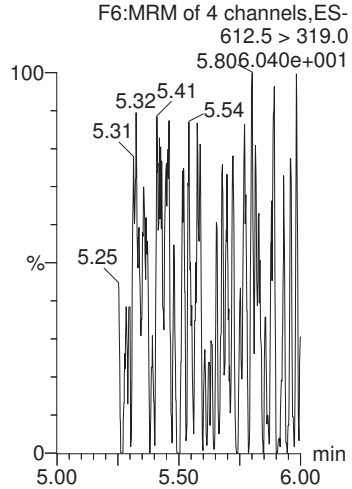

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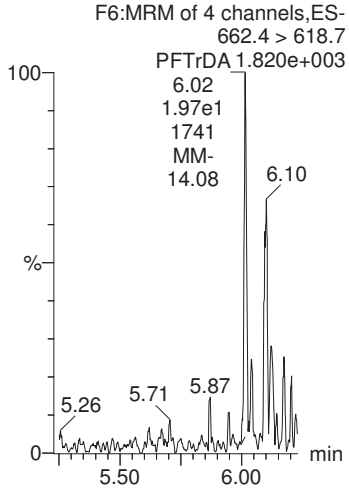
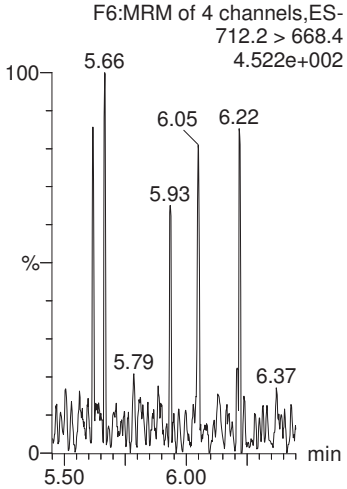


PFTeDA



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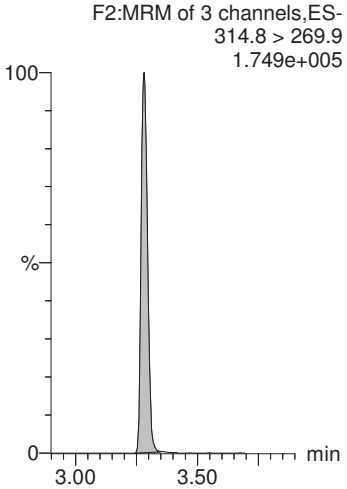

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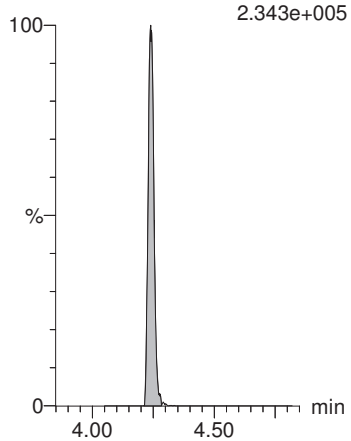

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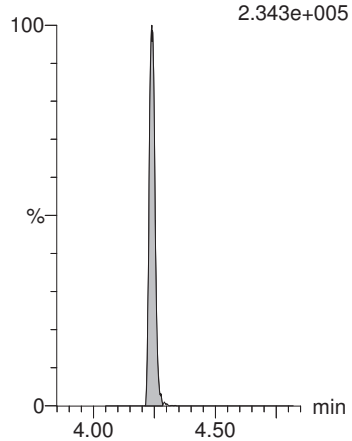

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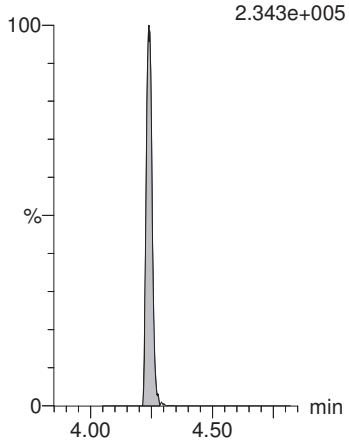

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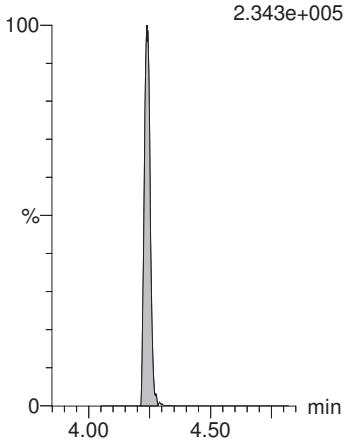

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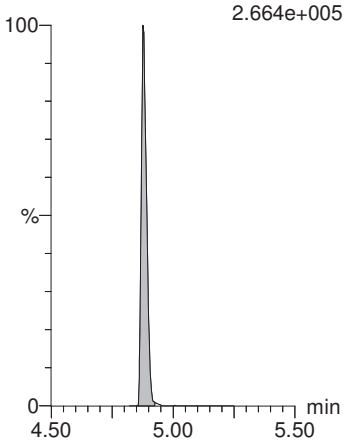


GM 7/28/2018

Vista Analytical Laboratory

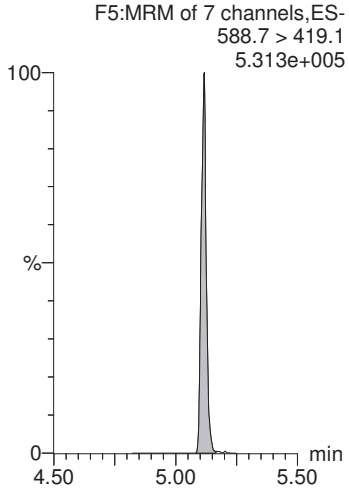
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-69.qld

Last Altered: Saturday, July 28, 2018 20:36:35 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:37:02 Pacific Daylight Time

Name: 180725G1_69, Date: 25-Jul-2018, Time: 23:08:48, ID: 1801868-11 CBD-1RW37-0718 0.23938, Description: CBD-1RW37-0718

d5-N-EtFOSAA



GM 7/28/2018

Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-70.qld

Last Altered: Saturday, July 28, 2018 20:38:00 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:38:23 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_70, Date: 25-Jul-2018, Time: 23:21:38, ID: 1801868-12 CBD-1FB37-0718 0.24955, Description: CBD-1FB37-0718

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5		1.07e4	0.250		2.91				
2	2	PFHxA	312.7 > 268.8	4.18e1	8.01e3	0.250		3.28	3.28	0.0522	0.257	
3	3	PFHpA	362.7 > 318.8		8.01e3	0.250		3.82				
4	4	PFHxS	398.7 > 80.7		1.07e4	0.250		3.95				
5	5	PFOA	412.8 > 369.0	1.71e1	8.01e3	0.250		4.24	4.23	0.0213	0.117	
6	6	PFNA	462.9 > 419.1		8.01e3	0.250		4.58				
7	7	PFOS	498.8 >80.7		1.07e4	0.250		4.64				
8	8	PFDA	512.8 > 469.0	2.80e1	8.01e3	0.250		4.88	4.89	0.0349	0.161	
9	9	N-MeFOSAA	569.7 > 419.0		1.21e4	0.250		5.01				
10	10	N-EtFOSAA	583.6 >419.1		1.21e4	0.250		5.14				
11	11	PFUnA	562.7 > 518.9		8.01e3	0.250		5.13				
12	12	PFDoA	612.5 > 319.0		8.01e3	0.250		5.37				
13	13	PFTrDA	662.4 > 618.7		8.01e3	0.250		5.58				
14	14	PFTeDA	712.2>668.4		8.01e3	0.250		5.76				
15	15	13C2-PFHxA	314.8 > 269.9	5.70e3	8.01e3	0.250	0.753	3.40	3.28	7.12	37.9	94.6
16	16	13C2-PFDA	514.8 > 470.0	7.61e3	8.01e3	0.250	1.023	4.83	4.88	9.50	37.2	92.9
17	17	d5-N-EtFOSAA	588.7> 419.1	1.40e4	1.21e4	0.250	1.264	5.01	5.11	46.4	147	91.7
18	18	13C2-PFOA	414.8 > 370.1	8.01e3	8.01e3	0.250	1.000	4.24	4.24	10.0	40.1	100.0
19	19	13C4-PFOS	502.8>80.7	1.07e4	1.07e4	0.250	1.000	4.64	4.65	28.7	115	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.21e4	1.21e4	0.250	1.000	4.99	5.01	40.0	160	100.0

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Vista Analytical Laboratory

MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-70.qld

Last Altered: Saturday, July 28, 2018 20:38:00 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:38:23 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_70, Date: 25-Jul-2018, Time: 23:21:38, ID: 1801868-12 CBD-1FB37-0718 0.24955, Description: CBD-1FB37-0718

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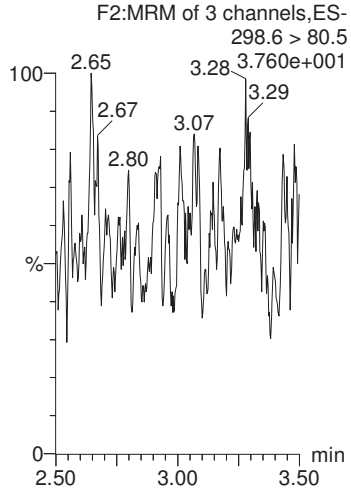
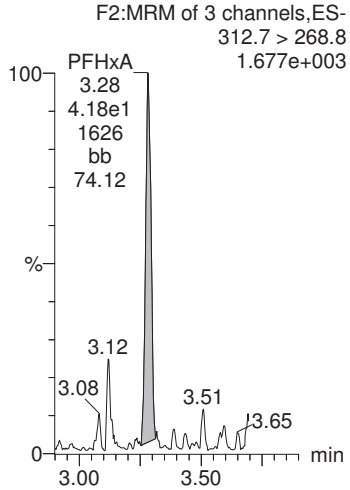
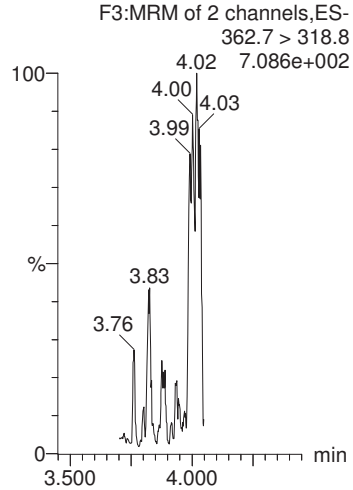


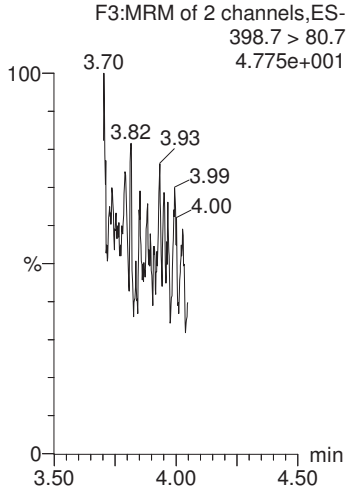
PFHxA



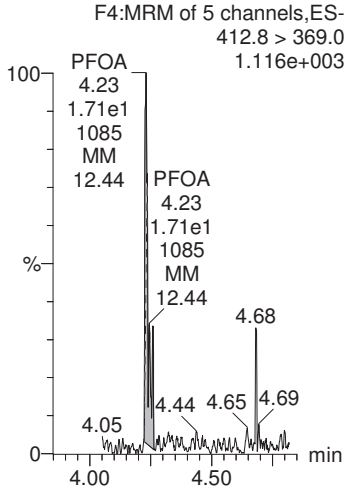
PFHpA



PFHxS



PFOA



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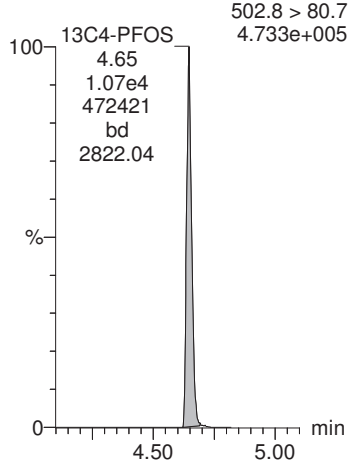

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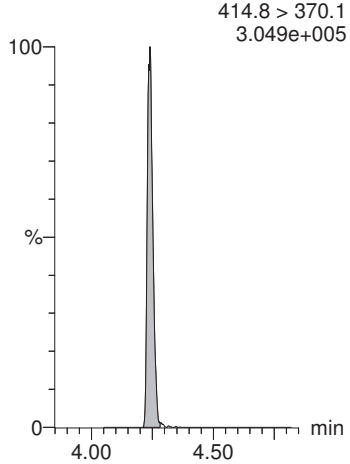

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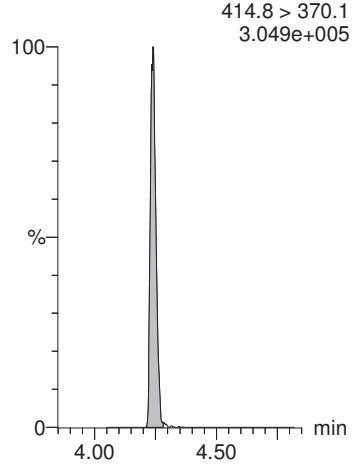

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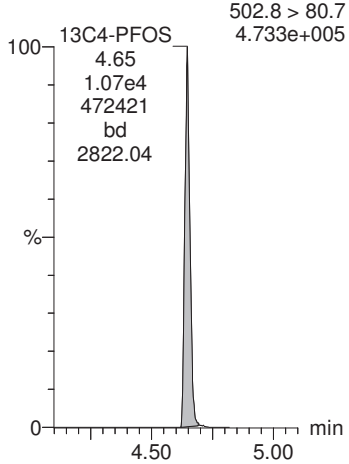

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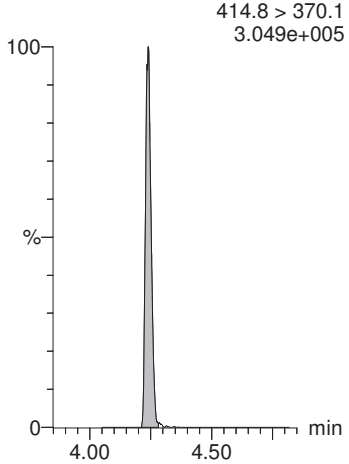


GM 7/28/2018

Vista Analytical Laboratory

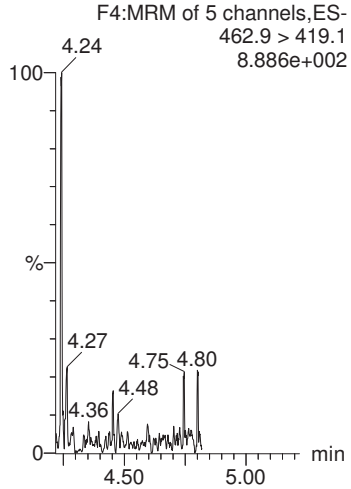
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-70.qld

Last Altered: Saturday, July 28, 2018 20:38:00 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:38:23 Pacific Daylight Time

Name: 180725G1_70, Date: 25-Jul-2018, Time: 23:21:38, ID: 1801868-12 CBD-1FB37-0718 0.24955, Description: CBD-1FB37-0718

PFNA



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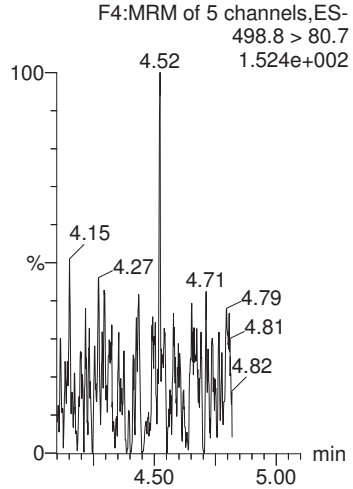

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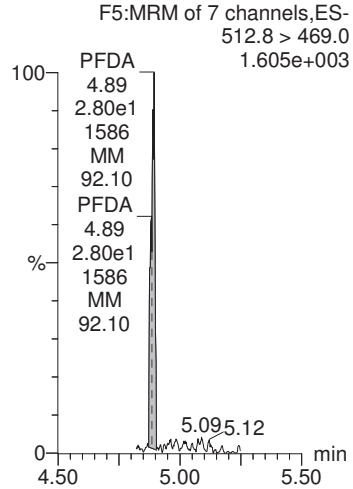

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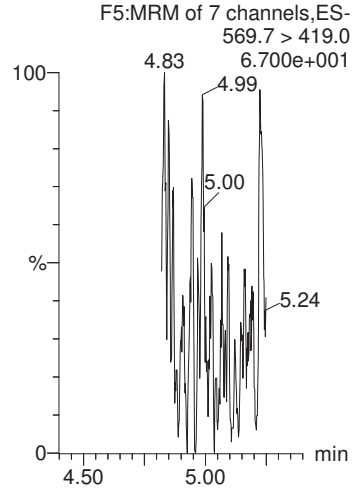

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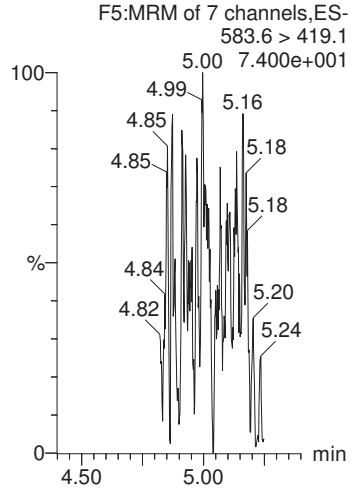

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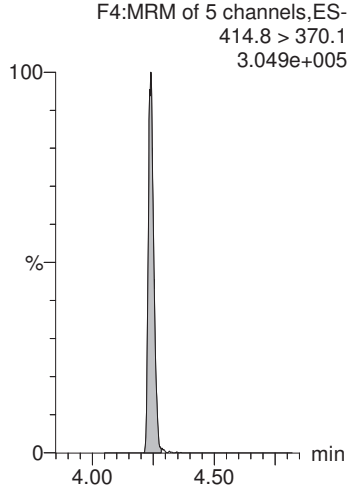

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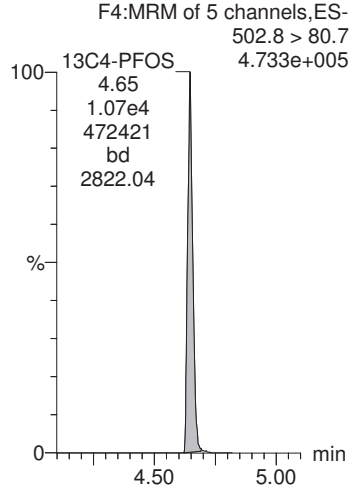

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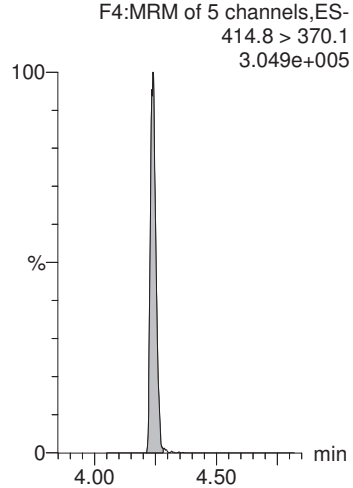

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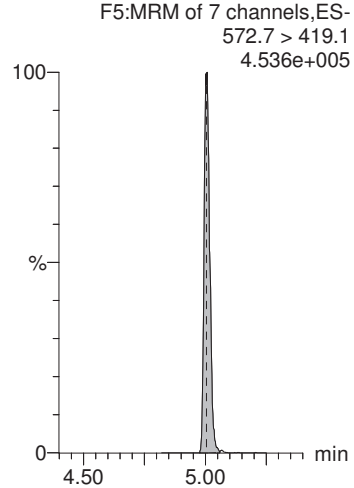

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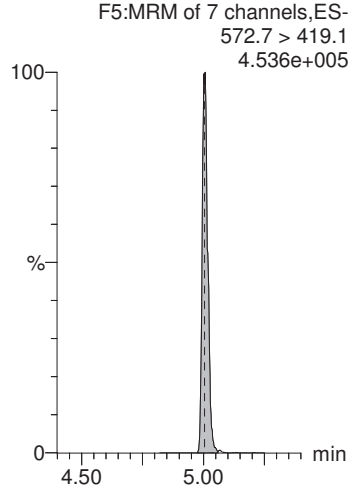


GM 7/28/2018

Vista Analytical Laboratory

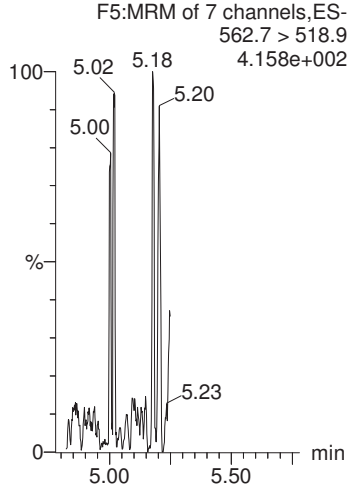
MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-70.qld

Last Altered: Saturday, July 28, 2018 20:38:00 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:38:23 Pacific Daylight Time

Name: 180725G1_70, Date: 25-Jul-2018, Time: 23:21:38, ID: 1801868-12 CBD-1FB37-0718 0.24955, Description: CBD-1FB37-0718

PFUnA



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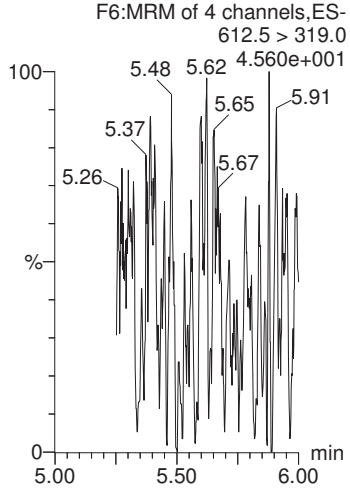
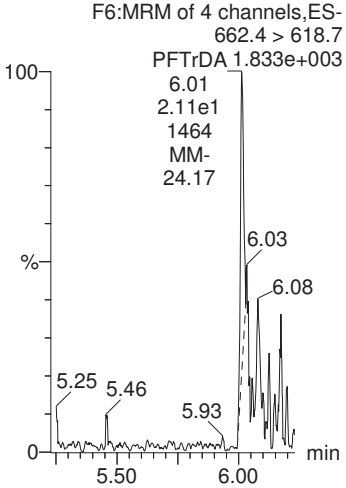
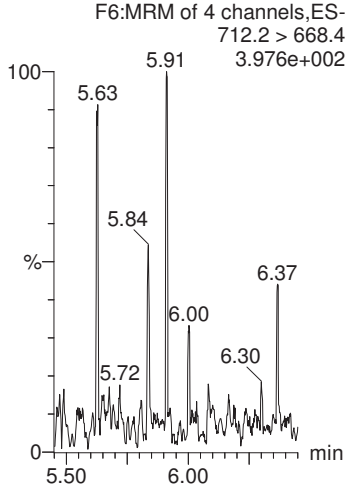


PFTrDA



PFTeDA



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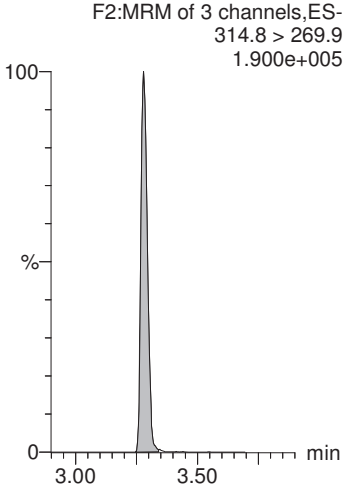

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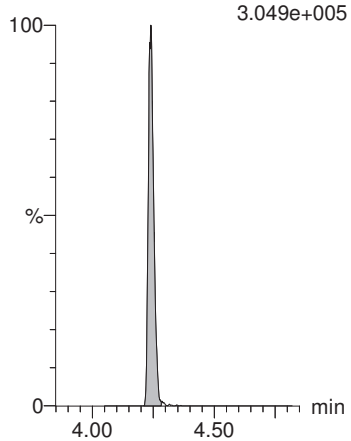
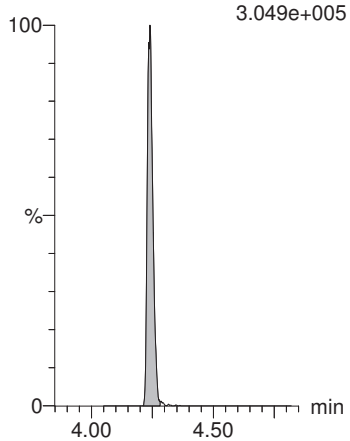


13C2-PFOA



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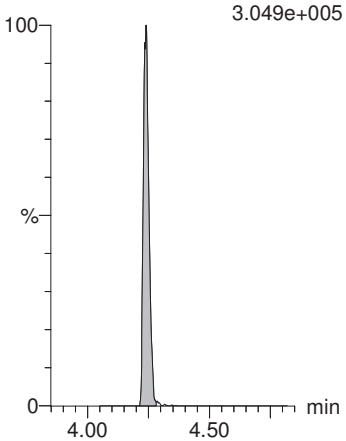
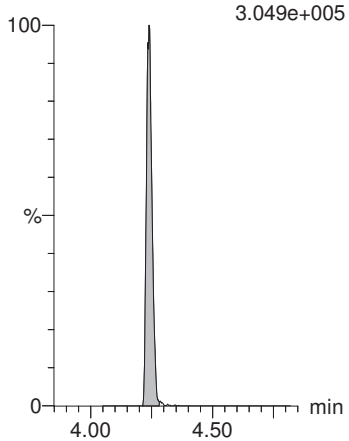


13C2-PFOA



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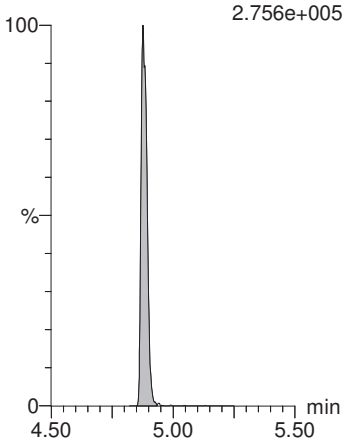

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MMM 7/30/2018

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-70.qld

Last Altered: Saturday, July 28, 2018 20:38:00 Pacific Daylight Time
Printed: Saturday, July 28, 2018 20:38:23 Pacific Daylight Time

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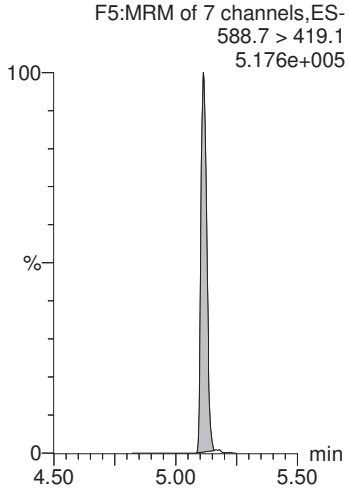
d5-N-EtFOSAA



GM 7/28/2018

INJECTION INTERNAL STANDARD (IIS) AREAS,

AND

CONTINUTING CALIBRATION VERIFICATIONS CCV)

ICAL

50-150%

Compound 18: 13C2-PFOA

	ID	Name	Type	Std. Conc	RT	Area	ICAL AREA	%AREA
1	IPA	180725G1_1	Analyte	10			9398.72	0.00
2	ST180725G1-1 PFC CS-2 537 18G1803	180725G1_2	Analyte	10	4.24	6693.43	9398.72	71.22
3	IPA	180725G1_3	Analyte	10			9398.72	0.00
4	1801824-05 CBD-1RW25-0718 0.24505	180725G1_4	Analyte	10	4.24	6200.45	9398.72	65.97
5	1801824-06 CBD-1FB25-0718 0.25439	180725G1_5	Analyte	10	4.24	6160.89	9398.72	65.55
6	1801824-07 CBD-1RW26-0718 0.25368	180725G1_6	Analyte	10	4.24	5895.82	9398.72	62.73
7	1801824-08 CBD-1FB26-0718 0.24525	180725G1_7	Analyte	10	4.23	6738.82	9398.72	71.70
8	1801824-09 CBD-1RW27-0718 0.25251	180725G1_8	Analyte	10	4.23	6129.03	9398.72	65.21
9	1801824-10 CBD-1FB27-0718 0.25608	180725G1_9	Analyte	10	4.24	7670.96	9398.72	81.62
10	1801824-11 CBD-1RW28-0718 0.25482	180725G1_10	Analyte	10	4.23	6724.71	9398.72	71.55
11	1801824-12 CBD-1FB28-0718 0.25788	180725G1_11	Analyte	10	4.23	6780.80	9398.72	72.15
12	1801824-13 CBD-1RW29-0718 0.25606	180725G1_12	Analyte	10	4.23	6808.51	9398.72	72.44
13	1801824-14 CBD-1FB29-0718 0.25267	180725G1_13	Analyte	10	4.24	6398.88	9398.72	68.08
14	1801824-15 CBD-1RW30-0718 0.25164	180725G1_14	Analyte	10	4.23	6639.73	9398.72	70.65
15	1801824-16 CBD-1FB30-0718 0.25136	180725G1_15	Analyte	10	4.24	7073.85	9398.72	75.26
16	1801824-17 CBD-1RW31-0718 0.25381	180725G1_16	Analyte	10	4.23	6395.60	9398.72	68.05
17	1801824-18 CBD-1FB31-0718 0.25806	180725G1_17	Analyte	10	4.23	6859.30	9398.72	72.98
20	ST180725G1-2 PFC CS2 537 18G1807	180725G1_20	Analyte	10	4.24	6727.08	9398.72	71.57
22	B8G0128-BLK1 Method Blank 0.005	180725G1_22	Analyte	10	4.24	6125.34	9398.72	65.17
23	B8G0128-BS1 OPR 0.005	180725G1_23	Analyte	10	4.23	6066.55	9398.72	64.55
24	1801716-01 Milk 0.005	180725G1_24	Analyte	10	4.24	7443.78	9398.72	79.20
25	B8G0162-BLK1 LRB 0.25	180725G1_25	Analyte	10	4.23	7876.84	9398.72	83.81
26	B8G0162-BS1 LFB 0.25	180725G1_26	Analyte	10	4.23	7253.43	9398.72	77.17
27	B8G0162-BSD1 LFBD 0.25	180725G1_27	Analyte	10	4.24	7907.98	9398.72	84.14
28	1801860-01 WT1807190850MK 0.2497	180725G1_28	Analyte	10	4.24	7228.70	9398.72	76.91
29	1801860-02 FB1807190855MK 0.24944	180725G1_29	Analyte	10	4.23	6729.46	9398.72	71.60
30	1801864-01 GWEF1807190835MK 0.24775	180725G1_30	Analyte	10	4.23	7493.73	9398.72	79.73
31	B8G0095-BLK1 LRB 0.25	180725G1_31	Analyte	10	4.24	7117.90	9398.72	75.73

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32	B8G0095-BS1 LFB 0.25	180725G1_32	Analyte	10	4.23	6840.02	9398.72	72.78
33	B8G0095-MS1 LFSM 0.25019	180725G1_33	Analyte	10	4.23	6445.07	9398.72	68.57
34	B8G0095-MSD1 LFSMD 0.26415	180725G1_34	Analyte	10	4.24	6901.98	9398.72	73.44
35	1801637-01 GWNT1807050810KER 0.24753	180725G1_35	Analyte	10	4.24	7567.20	9398.72	80.51
36	1801638-01 GWNT1807060930GGA 0.25629	180725G1_36	Analyte	10	4.23	7512.02	9398.72	79.93
37	1801638-02 GWNT1807060945GGA 0.24935	180725G1_37	Analyte	10	4.23	6874.07	9398.72	73.14
39	ST180725G1-3 PFC CS4 537 18G1809	180725G1_39	Analyte	10	4.23	6190.31	9398.72	65.86
41	1801638-03 GWNT1807060950GGA 0.25092	180725G1_41	Analyte	10	4.23	6334.54	9398.72	67.40
42	1801638-04 GWNT1807061030GGA 0.24268	180725G1_42	Analyte	10	4.24	6770.11	9398.72	72.03
43	1801638-05 GWNT1807061035GGA 0.25257	180725G1_43	Analyte	10	4.24	7490.55	9398.72	79.70
44	1801639-01 GWEF1807061110GGA 0.2486	180725G1_44	Analyte	10	4.24	6474.07	9398.72	68.88
45	1801640-01 GWIN1807050850KER 0.25071	180725G1_45	Analyte	10	4.24	8177.18	9398.72	87.00
46	1801640-02 GWEF1807050900KER 0.2548	180725G1_46	Analyte	10	4.24	6970.43	9398.72	74.16
47	1801641-01 GWEF1807061150GGA 0.26097	180725G1_47	Analyte	10	4.24	6473.52	9398.72	68.88
48	1801642-01 GWEF1807061215GGA-FD 0.2456	180725G1_48	Analyte	10	4.24	8055.13	9398.72	85.70
49	1801642-02 GWEF1807061220GGA 0.25561	180725G1_49	Analyte	10	4.24	7612.72	9398.72	81.00
50	1801642-03 FB1807061225GGA 0.25525	180725G1_50	Analyte	10	4.24	6749.73	9398.72	71.82
51	1801643-01 GWEF1807051045KER 0.24379	180725G1_51	Analyte	10	4.24	8215.91	9398.72	87.42
53	ST180725G1-4 PFC CS-2 537 18G1803	180725G1_53	Analyte	10	4.24	7397.57	9398.72	78.71
55	1801644-01 GWEF1807051200KER 0.248	180725G1_55	Analyte	10	4.24	6901.97	9398.72	73.44
56	B8G0167-BLK1 LRB 0.25	180725G1_56	Analyte	10	4.23	6536.00	9398.72	69.54
57	B8G0167-BS1 LFB 0.25	180725G1_57	Analyte	10	4.24	7222.33	9398.72	76.84
58	B8G0167-BSD1 LFBD 0.25	180725G1_58	Analyte	10	4.24	6995.15	9398.72	74.43
59	1801868-01 CBD-1RW32-0718 0.24293	180725G1_59	Analyte	10	4.23	6633.46	9398.72	70.58
60	1801868-02 CBD-1FB32-0718 0.25868	180725G1_60	Analyte	10	4.23	7500.12	9398.72	79.80
61	1801868-03 CBD-1RW33-0718 0.2415	180725G1_61	Analyte	10	4.24	7362.24	9398.72	78.33
62	1801868-04 CBD-1FB33-0718 0.24925	180725G1_62	Analyte	10	4.24	7795.44	9398.72	82.94
63	1801868-05 CBD-1RW34-0718 0.23978	180725G1_63	Analyte	10	4.24	6993.06	9398.72	74.40
64	1801868-06 CBD-1FB34-0718 0.25042	180725G1_64	Analyte	10	4.24	7395.27	9398.72	78.68
65	1801868-07 CBD-1RW35-0718 0.23429	180725G1_65	Analyte	10	4.24	7362.24	9398.72	78.33
66	1801868-08 CBD-1FB35-0718 0.25599	180725G1_66	Analyte	10	4.24	6548.23	9398.72	69.67
67	1801868-09 CBD-1RW36-0718 0.24217	180725G1_67	Analyte	10	4.24	7133.78	9398.72	75.90
68	1801868-10 CBD-1FB36-0718 0.25374	180725G1_68	Analyte	10	4.24	7114.54	9398.72	75.70
69	1801868-11 CBD-1RW37-0718 0.23938	180725G1_69	Analyte	10	4.24	6517.56	9398.72	69.35
70	1801868-12 CBD-1FB37-0718 0.24955	180725G1_70	Analyte	10	4.24	8010.98	9398.72	85.23
71	1801616-01 GWIN1807021305GSC 0.26798	180725G1_71	Analyte	10	4.24	7328.09	9398.72	77.97

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73	ST180725G1-5 PFC CS2 537 18G1807	180725G1_73	Analyte	10	4.24	6484.07	9398.72	68.99

Compound 19: 13C4-PFOS

	ID	Name	Type	Std. Conc	RT	Area	ICAL AREA	%AREA
2	ST180725G1-1 PFC CS-2 537 18G1803	180725G1_2	Analyte	28.7	4.64	10942.16	12778.71	85.63
4	1801824-05 CBD-1RW25-0718 0.24505	180725G1_4	Analyte	28.7	4.64	10555.58	12778.71	82.60
5	1801824-06 CBD-1FB25-0718 0.25439	180725G1_5	Analyte	28.7	4.64	10411.62	12778.71	81.48
6	1801824-07 CBD-1RW26-0718 0.25368	180725G1_6	Analyte	28.7	4.64	9600.90	12778.71	75.13
7	1801824-08 CBD-1FB26-0718 0.24525	180725G1_7	Analyte	28.7	4.64	10372.81	12778.71	81.17
8	1801824-09 CBD-1RW27-0718 0.25251	180725G1_8	Analyte	28.7	4.64	9137.90	12778.71	71.51
9	1801824-10 CBD-1FB27-0718 0.25608	180725G1_9	Analyte	28.7	4.64	12194.67	12778.71	95.43
10	1801824-11 CBD-1RW28-0718 0.25482	180725G1_10	Analyte	28.7	4.64	10421.63	12778.71	81.55
11	1801824-12 CBD-1FB28-0718 0.25788	180725G1_11	Analyte	28.7	4.64	10243.22	12778.71	80.16
12	1801824-13 CBD-1RW29-0718 0.25606	180725G1_12	Analyte	28.7	4.64	10372.78	12778.71	81.17
13	1801824-14 CBD-1FB29-0718 0.25267	180725G1_13	Analyte	28.7	4.64	10467.69	12778.71	81.92
14	1801824-15 CBD-1RW30-0718 0.25164	180725G1_14	Analyte	28.7	4.64	10137.60	12778.71	79.33
15	1801824-16 CBD-1FB30-0718 0.25136	180725G1_15	Analyte	28.7	4.64	10985.08	12778.71	85.96
16	1801824-17 CBD-1RW31-0718 0.25381	180725G1_16	Analyte	28.7	4.64	10446.88	12778.71	81.75
17	1801824-18 CBD-1FB31-0718 0.25806	180725G1_17	Analyte	28.7	4.64	10769.89	12778.71	84.28
18	1801616-01 GWIN1807021305GSC 0.26798	180725G1_18	Analyte	28.7			12778.71	0.00
20	ST180725G1-2 PFC CS2 537 18G1807	180725G1_20	Analyte	28.7	4.64	10955.51	12778.71	85.73
21	IPA	180725G1_21	Analyte	28.7			12778.71	0.00
22	B8G0128-BLK1 Method Blank 0.005	180725G1_22	Analyte	28.7	4.64	3512.60	12778.71	27.49
23	B8G0128-BS1 OPR 0.005	180725G1_23	Analyte	28.7	4.64	3282.03	12778.71	25.68
24	1801716-01 Milk 0.005	180725G1_24	Analyte	28.7	4.64	3940.77	12778.71	30.84
25	B8G0162-BLK1 LRB 0.25	180725G1_25	Analyte	28.7	4.64	12149.89	12778.71	95.08
26	B8G0162-BS1 LFB 0.25	180725G1_26	Analyte	28.7	4.64	11235.60	12778.71	87.92
27	B8G0162-BSD1 LFBD 0.25	180725G1_27	Analyte	28.7	4.64	12707.66	12778.71	99.44
28	1801860-01 WT1807190850MK 0.2497	180725G1_28	Analyte	28.7	4.64	11516.46	12778.71	90.12
29	1801860-02 FB1807190855MK 0.24944	180725G1_29	Analyte	28.7	4.64	10064.75	12778.71	78.76
30	1801864-01 GWEF1807190835MK 0.24775	180725G1_30	Analyte	28.7	4.64	11272.64	12778.71	88.21
31	B8G0095-BLK1 LRB 0.25	180725G1_31	Analyte	28.7	4.64	11869.09	12778.71	92.88
32	B8G0095-BS1 LFB 0.25	180725G1_32	Analyte	28.7	4.64	10856.97	12778.71	84.96

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33	B8G0095-MS1 LFSM 0.25019	180725G1_33	Analyte	28.7	4.64	10211.98	12778.71	79.91
34	B8G0095-MSD1 LFSMD 0.26415	180725G1_34	Analyte	28.7	4.64	10634.42	12778.71	83.22
35	1801637-01 GWNT1807050810KER 0.24753	180725G1_35	Analyte	28.7	4.64	11259.41	12778.71	88.11
36	1801638-01 GWNT1807060930GGA 0.25629	180725G1_36	Analyte	28.7	4.64	11237.94	12778.71	87.94
37	1801638-02 GWNT1807060945GGA 0.24935	180725G1_37	Analyte	28.7	4.64	10096.18	12778.71	79.01
39	ST180725G1-3 PFC CS4 537 18G1809	180725G1_39	Analyte	28.7	4.64	9412.82	12778.71	73.66
41	1801638-03 GWNT1807060950GGA 0.25092	180725G1_41	Analyte	28.7	4.64	10333.13	12778.71	80.86
42	1801638-04 GWNT1807061030GGA 0.24268	180725G1_42	Analyte	28.7	4.64	10540.96	12778.71	82.49
43	1801638-05 GWNT1807061035GGA 0.25257	180725G1_43	Analyte	28.7	4.64	11587.57	12778.71	90.68
44	1801639-01 GWEF1807061110GGA 0.2486	180725G1_44	Analyte	28.7	4.64	10292.35	12778.71	80.54
45	1801640-01 GWIN1807050850KER 0.25071	180725G1_45	Analyte	28.7	4.64	11537.19	12778.71	90.28
46	1801640-02 GWEF1807050900KER 0.2548	180725G1_46	Analyte	28.7	4.64	9887.22	12778.71	77.37
47	1801641-01 GWEF1807061150GGA 0.26097	180725G1_47	Analyte	28.7	4.64	10447.84	12778.71	81.76
48	1801642-01 GWEF1807061215GGA-FD 0.2456	180725G1_48	Analyte	28.7	4.64	11235.62	12778.71	87.92
49	1801642-02 GWEF1807061220GGA 0.25561	180725G1_49	Analyte	28.7	4.64	11412.47	12778.71	89.31
50	1801642-03 FB1807061225GGA 0.25525	180725G1_50	Analyte	28.7	4.64	10574.53	12778.71	82.75
51	1801643-01 GWEF1807051045KER 0.24379	180725G1_51	Analyte	28.7	4.64	11967.88	12778.71	93.65
53	ST180725G1-4 PFC CS-2 537 18G1803	180725G1_53	Analyte	28.7	4.64	10843.43	12778.71	84.86
55	1801644-01 GWEF1807051200KER 0.248	180725G1_55	Analyte	28.7	4.64	10522.05	12778.71	82.34
56	B8G0167-BLK1 LRB 0.25	180725G1_56	Analyte	28.7	4.64	9811.81	12778.71	76.78
57	B8G0167-BS1 LFB 0.25	180725G1_57	Analyte	28.7	4.65	10853.51	12778.71	84.93
58	B8G0167-BSD1 LFBD 0.25	180725G1_58	Analyte	28.7	4.64	10385.66	12778.71	81.27
59	1801868-01 CBD-1RW32-0718 0.24293	180725G1_59	Analyte	28.7	4.64	9603.53	12778.71	75.15
60	1801868-02 CBD-1FB32-0718 0.25868	180725G1_60	Analyte	28.7	4.64	10467.75	12778.71	81.92
61	1801868-03 CBD-1RW33-0718 0.2415	180725G1_61	Analyte	28.7	4.65	10491.14	12778.71	82.10
62	1801868-04 CBD-1FB33-0718 0.24925	180725G1_62	Analyte	28.7	4.64	10617.07	12778.71	83.08
63	1801868-05 CBD-1RW34-0718 0.23978	180725G1_63	Analyte	28.7	4.65	10489.15	12778.71	82.08
64	1801868-06 CBD-1FB34-0718 0.25042	180725G1_64	Analyte	28.7	4.65	10542.84	12778.71	82.50
65	1801868-07 CBD-1RW35-0718 0.23429	180725G1_65	Analyte	28.7	4.64	10850.89	12778.71	84.91
66	1801868-08 CBD-1FB35-0718 0.25599	180725G1_66	Analyte	28.7	4.64	9632.31	12778.71	75.38
67	1801868-09 CBD-1RW36-0718 0.24217	180725G1_67	Analyte	28.7	4.65	10746.55	12778.71	84.10
68	1801868-10 CBD-1FB36-0718 0.25374	180725G1_68	Analyte	28.7	4.64	10343.44	12778.71	80.94
69	1801868-11 CBD-1RW37-0718 0.23938	180725G1_69	Analyte	28.7	4.64	10037.60	12778.71	78.55
70	1801868-12 CBD-1FB37-0718 0.24955	180725G1_70	Analyte	28.7	4.65	10698.26	12778.71	83.72
71	1801616-01 GWIN1807021305GSC 0.26798	180725G1_71	Analyte	28.7	4.64	10233.17	12778.71	80.08
73	ST180725G1-5 PFC CS2 537 18G1807	180725G1_73	Analyte	28.7	4.64	9589.71	12778.71	75.04

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Compound 20: d3-N-MeFOSAA

	ID	Name	Type	Std. Conc	RT	Area	ICAL AREA	%AREA
2	ST180725G1-1 PFC CS-2 537 18G1803	180725G1_2	Analyte	40	4.99	10192.81	15301.08	66.61
4	1801824-05 CBD-1RW25-0718 0.24505	180725G1_4	Analyte	40	4.99	10094.29	15301.08	65.97
5	1801824-06 CBD-1FB25-0718 0.25439	180725G1_5	Analyte	40	4.98	10269.84	15301.08	67.12
6	1801824-07 CBD-1RW26-0718 0.25368	180725G1_6	Analyte	40	4.98	10005.71	15301.08	65.39
7	1801824-08 CBD-1FB26-0718 0.24525	180725G1_7	Analyte	40	4.99	10522.98	15301.08	68.77
8	1801824-09 CBD-1RW27-0718 0.25251	180725G1_8	Analyte	40	4.98	8763.73	15301.08	57.28
9	1801824-10 CBD-1FB27-0718 0.25608	180725G1_9	Analyte	40	4.99	11979.89	15301.08	78.29
10	1801824-11 CBD-1RW28-0718 0.25482	180725G1_10	Analyte	40	4.99	9243.06	15301.08	60.41
11	1801824-12 CBD-1FB28-0718 0.25788	180725G1_11	Analyte	40	4.99	11192.84	15301.08	73.15
12	1801824-13 CBD-1RW29-0718 0.25606	180725G1_12	Analyte	40	4.99	9600.73	15301.08	62.75
13	1801824-14 CBD-1FB29-0718 0.25267	180725G1_13	Analyte	40	4.99	9517.66	15301.08	62.20
14	1801824-15 CBD-1RW30-0718 0.25164	180725G1_14	Analyte	40	4.99	10753.06	15301.08	70.28
15	1801824-16 CBD-1FB30-0718 0.25136	180725G1_15	Analyte	40	4.99	10458.23	15301.08	68.35
16	1801824-17 CBD-1RW31-0718 0.25381	180725G1_16	Analyte	40	4.99	10880.90	15301.08	71.11
17	1801824-18 CBD-1FB31-0718 0.25806	180725G1_17	Analyte	40	4.99	10336.59	15301.08	67.55
18	1801616-01 GWIN1807021305GSC 0.26798	180725G1_18	Analyte	40			15301.08	0.00
20	ST180725G1-2 PFC CS2 537 18G1807	180725G1_20	Analyte	40	4.99	11521.86	15301.08	75.30
22	B8G0128-BLK1 Method Blank 0.005	180725G1_22	Analyte	40	5.00	623.57	15301.08	4.08
23	B8G0128-BS1 OPR 0.005	180725G1_23	Analyte	40	4.98	426.89	15301.08	2.79
24	1801716-01 Milk 0.005	180725G1_24	Analyte	40	4.99	1318.62	15301.08	8.62
25	B8G0162-BLK1 LRB 0.25	180725G1_25	Analyte	40	4.99	11651.85	15301.08	76.15
26	B8G0162-BS1 LFB 0.25	180725G1_26	Analyte	40	4.98	11733.43	15301.08	76.68
27	B8G0162-BSD1 LFBD 0.25	180725G1_27	Analyte	40	4.99	12459.24	15301.08	81.43
28	1801860-01 WT1807190850MK 0.2497	180725G1_28	Analyte	40	4.99	9199.73	15301.08	60.12
29	1801860-02 FB1807190855MK 0.24944	180725G1_29	Analyte	40	4.99	10506.05	15301.08	68.66
30	1801864-01 GWEF1807190835MK 0.24775	180725G1_30	Analyte	40	4.99	11445.47	15301.08	74.80
31	B8G0095-BLK1 LRB 0.25	180725G1_31	Analyte	40	4.99	12250.24	15301.08	80.06
32	B8G0095-BS1 LFB 0.25	180725G1_32	Analyte	40	4.99	10974.93	15301.08	71.73
33	B8G0095-MS1 LFSM 0.25019	180725G1_33	Analyte	40	4.99	11433.54	15301.08	74.72
34	B8G0095-MSD1 LFSMD 0.26415	180725G1_34	Analyte	40	4.99	11641.21	15301.08	76.08

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35	1801637-01 GWNT1807050810KER 0.24753	180725G1_35	Analyte	40	4.99	12554.83	15301.08	82.05
36	1801638-01 GWNT1807060930GGA 0.25629	180725G1_36	Analyte	40	4.99	10974.73	15301.08	71.73
37	1801638-02 GWNT1807060945GGA 0.24935	180725G1_37	Analyte	40	5.00	11357.80	15301.08	74.23
39	ST180725G1-3 PFC CS4 537 18G1809	180725G1_39	Analyte	40	4.99	10630.07	15301.08	69.47
41	1801638-03 GWNT1807060950GGA 0.25092	180725G1_41	Analyte	40	4.99	9671.97	15301.08	63.21
42	1801638-04 GWNT1807061030GGA 0.24268	180725G1_42	Analyte	40	4.99	11208.58	15301.08	73.25
43	1801638-05 GWNT1807061035GGA 0.25257	180725G1_43	Analyte	40	4.99	12714.09	15301.08	83.09
44	1801639-01 GWEF1807061110GGA 0.2486	180725G1_44	Analyte	40	4.99	10749.00	15301.08	70.25
45	1801640-01 GWIN1807050850KER 0.25071	180725G1_45	Analyte	40	4.99	12589.14	15301.08	82.28
46	1801640-02 GWEF1807050900KER 0.2548	180725G1_46	Analyte	40	5.00	11203.83	15301.08	73.22
47	1801641-01 GWEF1807061150GGA 0.26097	180725G1_47	Analyte	40	5.00	10861.29	15301.08	70.98
48	1801642-01 GWEF1807061215GGA-FD 0.2456	180725G1_48	Analyte	40	4.99	13191.68	15301.08	86.21
49	1801642-02 GWEF1807061220GGA 0.25561	180725G1_49	Analyte	40	5.00	12271.40	15301.08	80.20
50	1801642-03 FB1807061225GGA 0.25525	180725G1_50	Analyte	40	4.99	11772.42	15301.08	76.94
51	1801643-01 GWEF1807051045KER 0.24379	180725G1_51	Analyte	40	4.99	12170.27	15301.08	79.54
53	ST180725G1-4 PFC CS-2 537 18G1803	180725G1_53	Analyte	40	4.99	11765.88	15301.08	76.90
55	1801644-01 GWEF1807051200KER 0.248	180725G1_55	Analyte	40	4.99	12065.88	15301.08	78.86
56	B8G0167-BLK1 LRB 0.25	180725G1_56	Analyte	40	4.99	10160.40	15301.08	66.40
57	B8G0167-BS1 LFB 0.25	180725G1_57	Analyte	40	5.00	12184.51	15301.08	79.63
58	B8G0167-BSD1 LFBD 0.25	180725G1_58	Analyte	40	4.99	11097.10	15301.08	72.52
59	1801868-01 CBD-1RW32-0718 0.24293	180725G1_59	Analyte	40	5.00	10019.50	15301.08	65.48
60	1801868-02 CBD-1FB32-0718 0.25868	180725G1_60	Analyte	40	4.99	11579.26	15301.08	75.68
61	1801868-03 CBD-1RW33-0718 0.2415	180725G1_61	Analyte	40	5.00	11248.87	15301.08	73.52
62	1801868-04 CBD-1FB33-0718 0.24925	180725G1_62	Analyte	40	4.99	12210.18	15301.08	79.80
63	1801868-05 CBD-1RW34-0718 0.23978	180725G1_63	Analyte	40	5.00	10819.27	15301.08	70.71
64	1801868-06 CBD-1FB34-0718 0.25042	180725G1_64	Analyte	40	5.00	12087.44	15301.08	79.00
65	1801868-07 CBD-1RW35-0718 0.23429	180725G1_65	Analyte	40	5.00	11055.35	15301.08	72.25
66	1801868-08 CBD-1FB35-0718 0.25599	180725G1_66	Analyte	40	5.01	9808.59	15301.08	64.10
67	1801868-09 CBD-1RW36-0718 0.24217	180725G1_67	Analyte	40	5.00	10929.52	15301.08	71.43
68	1801868-10 CBD-1FB36-0718 0.25374	180725G1_68	Analyte	40	5.00	10858.46	15301.08	70.97
69	1801868-11 CBD-1RW37-0718 0.23938	180725G1_69	Analyte	40	5.00	9935.02	15301.08	64.93
70	1801868-12 CBD-1FB37-0718 0.24955	180725G1_70	Analyte	40	5.01	12088.82	15301.08	79.01
71	1801616-01 GWIN1807021305GSC 0.26798	180725G1_71	Analyte	40	5.00	11032.77	15301.08	72.10
73	ST180725G1-5 PFC CS2 537 18G1807	180725G1_73	Analyte	40	5.01	9540.73	15301.08	62.35

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CCAL

Compound 18: 13C2-PFOA

ST180725G1-1 PFC CS-2 537 18G1803

	ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
2	ST180725G1-1 PFC CS-2 537 18G1803	180725G1_2	Analyte	10	4.24	6693.43	6693.43	100.00
4	1801824-05 CBD-1RW25-0718 0.24505	180725G1_4	Analyte	10	4.24	6200.45	6693.43	92.63
5	1801824-06 CBD-1FB25-0718 0.25439	180725G1_5	Analyte	10	4.24	6160.89	6693.43	92.04
6	1801824-07 CBD-1RW26-0718 0.25368	180725G1_6	Analyte	10	4.24	5895.82	6693.43	88.08
7	1801824-08 CBD-1FB26-0718 0.24525	180725G1_7	Analyte	10	4.23	6738.82	6693.43	100.68
8	1801824-09 CBD-1RW27-0718 0.25251	180725G1_8	Analyte	10	4.23	6129.03	6693.43	91.57
9	1801824-10 CBD-1FB27-0718 0.25608	180725G1_9	Analyte	10	4.24	7670.96	6693.43	114.60
10	1801824-11 CBD-1RW28-0718 0.25482	180725G1_10	Analyte	10	4.23	6724.71	6693.43	100.47
11	1801824-12 CBD-1FB28-0718 0.25788	180725G1_11	Analyte	10	4.23	6780.80	6693.43	101.31
12	1801824-13 CBD-1RW29-0718 0.25606	180725G1_12	Analyte	10	4.23	6808.51	6693.43	101.72
13	1801824-14 CBD-1FB29-0718 0.25267	180725G1_13	Analyte	10	4.24	6398.88	6693.43	95.60
14	1801824-15 CBD-1RW30-0718 0.25164	180725G1_14	Analyte	10	4.23	6639.73	6693.43	99.20
15	1801824-16 CBD-1FB30-0718 0.25136	180725G1_15	Analyte	10	4.24	7073.85	6693.43	105.68
16	1801824-17 CBD-1RW31-0718 0.25381	180725G1_16	Analyte	10	4.23	6395.60	6693.43	95.55
17	1801824-18 CBD-1FB31-0718 0.25806	180725G1_17	Analyte	10	4.23	6859.30	6693.43	102.48
18	1801616-01 GWIN1807021305GSC 0.26798	180725G1_18	Analyte	10			6693.43	0.00
19	IPA	180725G1_19	Analyte	10			6693.43	0.00
20	ST180725G1-2 PFC CS2 537 18G1807	180725G1_20	Analyte	10	4.24	6727.08	6693.43	100.50

ST180725G1-2 PFC CS2 537 18G1807

	ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
20	ST180725G1-2 PFC CS2 537 18G1807	180725G1_20	Analyte	10	4.24	6727.08	6727.08	100.00
22	B8G0128-BLK1 Method Blank 0.005	180725G1_22	Analyte	10	4.24	6125.34	6727.08	91.05
23	B8G0128-BS1 OPR 0.005	180725G1_23	Analyte	10	4.23	6066.55	6727.08	90.18
24	1801716-01 Milk 0.005	180725G1_24	Analyte	10	4.24	7443.78	6727.08	110.65
25	B8G0162-BLK1 LRB 0.25	180725G1_25	Analyte	10	4.23	7876.84	6727.08	117.09
26	B8G0162-BS1 LFB 0.25	180725G1_26	Analyte	10	4.23	7253.43	6727.08	107.82
27	B8G0162-BSD1 LFBD 0.25	180725G1_27	Analyte	10	4.24	7907.98	6727.08	117.55
28	1801860-01 WT1807190850MK 0.2497	180725G1_28	Analyte	10	4.24	7228.70	6727.08	107.46

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29	1801860-02 FB1807190855MK 0.24944	180725G1_29	Analyte	10	4.23	6729.46	6727.08	100.04
30	1801864-01 GWEF1807190835MK 0.24775	180725G1_30	Analyte	10	4.23	7493.73	6727.08	111.40
31	B8G0095-BLK1 LRB 0.25	180725G1_31	Analyte	10	4.24	7117.90	6727.08	105.81
32	B8G0095-BS1 LFB 0.25	180725G1_32	Analyte	10	4.23	6840.02	6727.08	101.68
33	B8G0095-MS1 LFSM 0.25019	180725G1_33	Analyte	10	4.23	6445.07	6727.08	95.81
34	B8G0095-MSD1 LFSMD 0.26415	180725G1_34	Analyte	10	4.24	6901.98	6727.08	102.60
35	1801637-01 GWNT1807050810KER 0.24753	180725G1_35	Analyte	10	4.24	7567.20	6727.08	112.49
36	1801638-01 GWNT1807060930GGA 0.25629	180725G1_36	Analyte	10	4.23	7512.02	6727.08	111.67
37	1801638-02 GWNT1807060945GGA 0.24935	180725G1_37	Analyte	10	4.23	6874.07	6727.08	102.19
39	ST180725G1-3 PFC CS4 537 18G1809	180725G1_39	Analyte	10	4.23	6190.31	6727.08	92.02

ST180725G1-3 PFC CS4 537 18G1809

ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
39 ST180725G1-3 PFC CS4 537 18G1809	180725G1_39	Analyte	10	4.23	6190.31	6190.31	100.00
41 1801638-03 GWNT1807060950GGA 0.25092	180725G1_41	Analyte	10	4.23	6334.54	6190.31	102.33
42 1801638-04 GWNT1807061030GGA 0.24268	180725G1_42	Analyte	10	4.24	6770.11	6190.31	109.37
43 1801638-05 GWNT1807061035GGA 0.25257	180725G1_43	Analyte	10	4.24	7490.55	6190.31	121.00
44 1801639-01 GWEF1807061110GGA 0.2486	180725G1_44	Analyte	10	4.24	6474.07	6190.31	104.58
45 1801640-01 GWIN1807050850KER 0.25071	180725G1_45	Analyte	10	4.24	8177.18	6190.31	132.10
46 1801640-02 GWEF1807050900KER 0.2548	180725G1_46	Analyte	10	4.24	6970.43	6190.31	112.60
47 1801641-01 GWEF1807061150GGA 0.26097	180725G1_47	Analyte	10	4.24	6473.52	6190.31	104.57
48 1801642-01 GWEF1807061215GGA-FD 0.2456	180725G1_48	Analyte	10	4.24	8055.13	6190.31	130.12
49 1801642-02 GWEF1807061220GGA 0.25561	180725G1_49	Analyte	10	4.24	7612.72	6190.31	122.98
50 1801642-03 FB1807061225GGA 0.25525	180725G1_50	Analyte	10	4.24	6749.73	6190.31	109.04
51 1801643-01 GWEF1807051045KER 0.24379	180725G1_51	Analyte	10	4.24	8215.91	6190.31	132.72
52 IPA	180725G1_52	Analyte	10			6190.31	0.00
53 ST180725G1-4 PFC CS-2 537 18G1803	180725G1_53	Analyte	10	4.24	7397.57	6190.31	119.50

ST180725G1-4 PFC CS-2 537 18G1803

ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
53 ST180725G1-4 PFC CS-2 537 18G1803	180725G1_53	Analyte	10	4.24	7397.57	7397.57	100.00
55 1801644-01 GWEF1807051200KER 0.248	180725G1_55	Analyte	10	4.24	6901.97	7397.57	93.30
56 B8G0167-BLK1 LRB 0.25	180725G1_56	Analyte	10	4.23	6536.00	7397.57	88.35

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57	B8G0167-BS1 LFB 0.25	180725G1_57	Analyte	10	4.24	7222.33	7397.57	97.63
58	B8G0167-BSD1 LFBD 0.25	180725G1_58	Analyte	10	4.24	6995.15	7397.57	94.56
59	1801868-01 CBD-1RW32-0718 0.24293	180725G1_59	Analyte	10	4.23	6633.46	7397.57	89.67
60	1801868-02 CBD-1FB32-0718 0.25868	180725G1_60	Analyte	10	4.23	7500.12	7397.57	101.39
61	1801868-03 CBD-1RW33-0718 0.2415	180725G1_61	Analyte	10	4.24	7362.24	7397.57	99.52
62	1801868-04 CBD-1FB33-0718 0.24925	180725G1_62	Analyte	10	4.24	7795.44	7397.57	105.38
63	1801868-05 CBD-1RW34-0718 0.23978	180725G1_63	Analyte	10	4.24	6993.06	7397.57	94.53
64	1801868-06 CBD-1FB34-0718 0.25042	180725G1_64	Analyte	10	4.24	7395.27	7397.57	99.97
65	1801868-07 CBD-1RW35-0718 0.23429	180725G1_65	Analyte	10	4.24	7362.24	7397.57	99.52
66	1801868-08 CBD-1FB35-0718 0.25599	180725G1_66	Analyte	10	4.24	6548.23	7397.57	88.52
67	1801868-09 CBD-1RW36-0718 0.24217	180725G1_67	Analyte	10	4.24	7133.78	7397.57	96.43
68	1801868-10 CBD-1FB36-0718 0.25374	180725G1_68	Analyte	10	4.24	7114.54	7397.57	96.17
69	1801868-11 CBD-1RW37-0718 0.23938	180725G1_69	Analyte	10	4.24	6517.56	7397.57	88.10
70	1801868-12 CBD-1FB37-0718 0.24955	180725G1_70	Analyte	10	4.24	8010.98	7397.57	108.29
71	1801616-01 GWIN1807021305GSC 0.26798	180725G1_71	Analyte	10	4.24	7328.09	7397.57	99.06
73	ST180725G1-5 PFC CS2 537 18G1807	180725G1_73	Analyte	10	4.24	6484.07	7397.57	87.65

Compound 19: 13C4-PFOS

ST180723G2-1 PFC CS-1 537 18G1804

ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
2	ST180725G1-1 PFC CS-2 537 18G1803	180725G1_2	Analyte	28.7	4.64	10942.16	10942.16	100.00
4	1801824-05 CBD-1RW25-0718 0.24505	180725G1_4	Analyte	28.7	4.64	10555.58	10942.16	96.47
5	1801824-06 CBD-1FB25-0718 0.25439	180725G1_5	Analyte	28.7	4.64	10411.62	10942.16	95.15
6	1801824-07 CBD-1RW26-0718 0.25368	180725G1_6	Analyte	28.7	4.64	9600.90	10942.16	87.74
7	1801824-08 CBD-1FB26-0718 0.24525	180725G1_7	Analyte	28.7	4.64	10372.81	10942.16	94.80
8	1801824-09 CBD-1RW27-0718 0.25251	180725G1_8	Analyte	28.7	4.64	9137.90	10942.16	83.51
9	1801824-10 CBD-1FB27-0718 0.25608	180725G1_9	Analyte	28.7	4.64	12194.67	10942.16	111.45
10	1801824-11 CBD-1RW28-0718 0.25482	180725G1_10	Analyte	28.7	4.64	10421.63	10942.16	95.24
11	1801824-12 CBD-1FB28-0718 0.25788	180725G1_11	Analyte	28.7	4.64	10243.22	10942.16	93.61
12	1801824-13 CBD-1RW29-0718 0.25606	180725G1_12	Analyte	28.7	4.64	10372.78	10942.16	94.80
13	1801824-14 CBD-1FB29-0718 0.25267	180725G1_13	Analyte	28.7	4.64	10467.69	10942.16	95.66
14	1801824-15 CBD-1RW30-0718 0.25164	180725G1_14	Analyte	28.7	4.64	10137.60	10942.16	92.65
15	1801824-16 CBD-1FB30-0718 0.25136	180725G1_15	Analyte	28.7	4.64	10985.08	10942.16	100.39
16	1801824-17 CBD-1RW31-0718 0.25381	180725G1_16	Analyte	28.7	4.64	10446.88	10942.16	95.47

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17	1801824-18 CBD-1FB31-0718 0.25806	180725G1_17	Analyte	28.7	4.64	10769.89	10942.16	98.43
18	1801616-01 GWIN1807021305GSC 0.26798	180725G1_18	Analyte	28.7			10942.16	0.00
20	ST180725G1-2 PFC CS2 537 18G1807	180725G1_20	Analyte	28.7	4.64	10955.51	10942.16	100.12

ST180725G1-2 PFC CS2 537 18G1807

	ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
20	ST180725G1-2 PFC CS2 537 18G1807	180725G1_20	Analyte	28.7	4.64	10955.51	10955.51	100.00
21	IPA	180725G1_21	Analyte	28.7			10955.51	0.00
22	B8G0128-BLK1 Method Blank 0.005	180725G1_22	Analyte	28.7	4.64	3512.60	10955.51	32.06
23	B8G0128-BS1 OPR 0.005	180725G1_23	Analyte	28.7	4.64	3282.03	10955.51	29.96
24	1801716-01 Milk 0.005	180725G1_24	Analyte	28.7	4.64	3940.77	10955.51	35.97
25	B8G0162-BLK1 LRB 0.25	180725G1_25	Analyte	28.7	4.64	12149.89	10955.51	110.90
26	B8G0162-BS1 LFB 0.25	180725G1_26	Analyte	28.7	4.64	11235.60	10955.51	102.56
27	B8G0162-BSD1 LFBD 0.25	180725G1_27	Analyte	28.7	4.64	12707.66	10955.51	115.99
28	1801860-01 WT1807190850MK 0.2497	180725G1_28	Analyte	28.7	4.64	11516.46	10955.51	105.12
29	1801860-02 FB1807190855MK 0.24944	180725G1_29	Analyte	28.7	4.64	10064.75	10955.51	91.87
30	1801864-01 GWEF1807190835MK 0.24775	180725G1_30	Analyte	28.7	4.64	11272.64	10955.51	102.89
31	B8G0095-BLK1 LRB 0.25	180725G1_31	Analyte	28.7	4.64	11869.09	10955.51	108.34
32	B8G0095-BS1 LFB 0.25	180725G1_32	Analyte	28.7	4.64	10856.97	10955.51	99.10
33	B8G0095-MS1 LFSM 0.25019	180725G1_33	Analyte	28.7	4.64	10211.98	10955.51	93.21
34	B8G0095-MSD1 LFSMD 0.26415	180725G1_34	Analyte	28.7	4.64	10634.42	10955.51	97.07
35	1801637-01 GWNT1807050810KER 0.24753	180725G1_35	Analyte	28.7	4.64	11259.41	10955.51	102.77
36	1801638-01 GWNT1807060930GGA 0.25629	180725G1_36	Analyte	28.7	4.64	11237.94	10955.51	102.58
37	1801638-02 GWNT1807060945GGA 0.24935	180725G1_37	Analyte	28.7	4.64	10096.18	10955.51	92.16
39	ST180725G1-3 PFC CS4 537 18G1809	180725G1_39	Analyte	28.7	4.64	9412.82	10955.51	85.92

ST180725G1-3 PFC CS4 537 18G1809

	ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
39	ST180725G1-3 PFC CS4 537 18G1809	180725G1_39	Analyte	28.7	4.64	9412.82	9412.82	100.00
41	1801638-03 GWNT1807060950GGA 0.25092	180725G1_41	Analyte	28.7	4.64	10333.13	9412.82	109.78
42	1801638-04 GWNT1807061030GGA 0.24268	180725G1_42	Analyte	28.7	4.64	10540.96	9412.82	111.99
43	1801638-05 GWNT1807061035GGA 0.25257	180725G1_43	Analyte	28.7	4.64	11587.57	9412.82	123.10
44	1801639-01 GWEF1807061110GGA 0.2486	180725G1_44	Analyte	28.7	4.64	10292.35	9412.82	109.34
45	1801640-01 GWIN1807050850KER 0.25071	180725G1_45	Analyte	28.7	4.64	11537.19	9412.82	122.57

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46	1801640-02 GWEF1807050900KER 0.2548	180725G1_46	Analyte	28.7	4.64	9887.22	9412.82	105.04
47	1801641-01 GWEF1807061150GGA 0.26097	180725G1_47	Analyte	28.7	4.64	10447.84	9412.82	111.00
48	1801642-01 GWEF1807061215GGA-FD 0.2456	180725G1_48	Analyte	28.7	4.64	11235.62	9412.82	119.37
49	1801642-02 GWEF1807061220GGA 0.25561	180725G1_49	Analyte	28.7	4.64	11412.47	9412.82	121.24
50	1801642-03 FB1807061225GGA 0.25525	180725G1_50	Analyte	28.7	4.64	10574.53	9412.82	112.34
51	1801643-01 GWEF1807051045KER 0.24379	180725G1_51	Analyte	28.7	4.64	11967.88	9412.82	127.14
53	ST180725G1-4 PFC CS-2 537 18G1803	180725G1_53	Analyte	28.7	4.64	10843.43	9412.82	115.20

ST180725G1-4 PFC CS-2 537 18G1803

ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
53 ST180725G1-4 PFC CS-2 537 18G1803	180725G1_53	Analyte	28.7	4.64	10843.43	10843.43	100.00
55 1801644-01 GWEF1807051200KER 0.248	180725G1_55	Analyte	28.7	4.64	10522.05	10843.43	97.04
56 B8G0167-BLK1 LRB 0.25	180725G1_56	Analyte	28.7	4.64	9811.81	10843.43	90.49
57 B8G0167-BS1 LFB 0.25	180725G1_57	Analyte	28.7	4.65	10853.51	10843.43	100.09
58 B8G0167-BSD1 LFBD 0.25	180725G1_58	Analyte	28.7	4.64	10385.66	10843.43	95.78
59 1801868-01 CBD-1RW32-0718 0.24293	180725G1_59	Analyte	28.7	4.64	9603.53	10843.43	88.57
60 1801868-02 CBD-1FB32-0718 0.25868	180725G1_60	Analyte	28.7	4.64	10467.75	10843.43	96.54
61 1801868-03 CBD-1RW33-0718 0.2415	180725G1_61	Analyte	28.7	4.65	10491.14	10843.43	96.75
62 1801868-04 CBD-1FB33-0718 0.24925	180725G1_62	Analyte	28.7	4.64	10617.07	10843.43	97.91
63 1801868-05 CBD-1RW34-0718 0.23978	180725G1_63	Analyte	28.7	4.65	10489.15	10843.43	96.73
64 1801868-06 CBD-1FB34-0718 0.25042	180725G1_64	Analyte	28.7	4.65	10542.84	10843.43	97.23
65 1801868-07 CBD-1RW35-0718 0.23429	180725G1_65	Analyte	28.7	4.64	10850.89	10843.43	100.07
66 1801868-08 CBD-1FB35-0718 0.25599	180725G1_66	Analyte	28.7	4.64	9632.31	10843.43	88.83
67 1801868-09 CBD-1RW36-0718 0.24217	180725G1_67	Analyte	28.7	4.65	10746.55	10843.43	99.11
68 1801868-10 CBD-1FB36-0718 0.25374	180725G1_68	Analyte	28.7	4.64	10343.44	10843.43	95.39
69 1801868-11 CBD-1RW37-0718 0.23938	180725G1_69	Analyte	28.7	4.64	10037.60	10843.43	92.57
70 1801868-12 CBD-1FB37-0718 0.24955	180725G1_70	Analyte	28.7	4.65	10698.26	10843.43	98.66
71 1801616-01 GWIN1807021305GSC 0.26798	180725G1_71	Analyte	28.7	4.64	10233.17	10843.43	94.37
73 ST180725G1-5 PFC CS2 537 18G1807	180725G1_73	Analyte	28.7	4.64	9589.71	10843.43	88.44

Compound 20: d3-N-MeFOSAA

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ST180725G1-1 PFC CS-2 537 18G1803

	ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
2	ST180725G1-1 PFC CS-2 537 18G1803	180725G1_2	Analyte	40	4.99	10192.81	10192.81	100.00
4	1801824-05 CBD-1RW25-0718 0.24505	180725G1_4	Analyte	40	4.99	10094.29	10192.81	99.03
5	1801824-06 CBD-1FB25-0718 0.25439	180725G1_5	Analyte	40	4.98	10269.84	10192.81	100.76
6	1801824-07 CBD-1RW26-0718 0.25368	180725G1_6	Analyte	40	4.98	10005.71	10192.81	98.16
7	1801824-08 CBD-1FB26-0718 0.24525	180725G1_7	Analyte	40	4.99	10522.98	10192.81	103.24
8	1801824-09 CBD-1RW27-0718 0.25251	180725G1_8	Analyte	40	4.98	8763.73	10192.81	85.98
9	1801824-10 CBD-1FB27-0718 0.25608	180725G1_9	Analyte	40	4.99	11979.89	10192.81	117.53
10	1801824-11 CBD-1RW28-0718 0.25482	180725G1_10	Analyte	40	4.99	9243.06	10192.81	90.68
11	1801824-12 CBD-1FB28-0718 0.25788	180725G1_11	Analyte	40	4.99	11192.84	10192.81	109.81
12	1801824-13 CBD-1RW29-0718 0.25606	180725G1_12	Analyte	40	4.99	9600.73	10192.81	94.19
13	1801824-14 CBD-1FB29-0718 0.25267	180725G1_13	Analyte	40	4.99	9517.66	10192.81	93.38
14	1801824-15 CBD-1RW30-0718 0.25164	180725G1_14	Analyte	40	4.99	10753.06	10192.81	105.50
15	1801824-16 CBD-1FB30-0718 0.25136	180725G1_15	Analyte	40	4.99	10458.23	10192.81	102.60
16	1801824-17 CBD-1RW31-0718 0.25381	180725G1_16	Analyte	40	4.99	10880.90	10192.81	
17	1801824-18 CBD-1FB31-0718 0.25806	180725G1_17	Analyte	40	4.99	10336.59	10192.81	
18	1801616-01 GWIN1807021305GSC 0.26798	180725G1_18	Analyte	40			10192.81	
19	IPA	180725G1_19	Analyte	40			10192.81	
20	ST180725G1-2 PFC CS2 537 18G1807	180725G1_20	Analyte	40	4.99	11521.86	10192.81	

ST180725G1-2 PFC CS2 537 18G1807

	ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
20	ST180725G1-2 PFC CS2 537 18G1807	180725G1_20	Analyte	40	4.99	11521.86	11521.86	100.00
21	IPA	180725G1_21	Analyte	40			11521.86	0.00
22	B8G0128-BLK1 Method Blank 0.005	180725G1_22	Analyte	40	5.00	623.57	11521.86	5.41
23	B8G0128-BS1 OPR 0.005	180725G1_23	Analyte	40	4.98	426.89	11521.86	3.71
24	1801716-01 Milk 0.005	180725G1_24	Analyte	40	4.99	1318.62	11521.86	11.44
25	B8G0162-BLK1 LRB 0.25	180725G1_25	Analyte	40	4.99	11651.85	11521.86	101.13
26	B8G0162-BS1 LFB 0.25	180725G1_26	Analyte	40	4.98	11733.43	11521.86	101.84
27	B8G0162-BSD1 LFBD 0.25	180725G1_27	Analyte	40	4.99	12459.24	11521.86	108.14
28	1801860-01 WT1807190850MK 0.2497	180725G1_28	Analyte	40	4.99	9199.73	11521.86	79.85
29	1801860-02 FB1807190855MK 0.24944	180725G1_29	Analyte	40	4.99	10506.05	11521.86	91.18
30	1801864-01 GWEF1807190835MK 0.24775	180725G1_30	Analyte	40	4.99	11445.47	11521.86	99.34
31	B8G0095-BLK1 LRB 0.25	180725G1_31	Analyte	40	4.99	12250.24	11521.86	106.32

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32	B8G0095-BS1 LFB 0.25	180725G1_32	Analyte	40	4.99	10974.93	11521.86	95.25
33	B8G0095-MS1 LFSM 0.25019	180725G1_33	Analyte	40	4.99	11433.54	11521.86	99.23
34	B8G0095-MSD1 LFSMD 0.26415	180725G1_34	Analyte	40	4.99	11641.21	11521.86	101.04
35	1801637-01 GWNT1807050810KER 0.24753	180725G1_35	Analyte	40	4.99	12554.83	11521.86	108.97
36	1801638-01 GWNT1807060930GGA 0.25629	180725G1_36	Analyte	40	4.99	10974.73	11521.86	95.25
37	1801638-02 GWNT1807060945GGA 0.24935	180725G1_37	Analyte	40	5.00	11357.80	11521.86	98.58
39	ST180725G1-3 PFC CS4 537 18G1809	180725G1_39	Analyte	40	4.99	10630.07	11521.86	92.26

ST180725G1-3 PFC CS4 537 18G1809

	ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
39	ST180725G1-3 PFC CS4 537 18G1809	180725G1_39	Analyte	40	4.99	10630.07	10630.07	100.00
41	1801638-03 GWNT1807060950GGA 0.25092	180725G1_41	Analyte	40	4.99	9671.97	10630.07	90.99
42	1801638-04 GWNT1807061030GGA 0.24268	180725G1_42	Analyte	40	4.99	11208.58	10630.07	105.44
43	1801638-05 GWNT1807061035GGA 0.25257	180725G1_43	Analyte	40	4.99	12714.09	10630.07	119.60
44	1801639-01 GWEF1807061110GGA 0.2486	180725G1_44	Analyte	40	4.99	10749.00	10630.07	101.12
45	1801640-01 GWIN1807050850KER 0.25071	180725G1_45	Analyte	40	4.99	12589.14	10630.07	118.43
46	1801640-02 GWEF1807050900KER 0.2548	180725G1_46	Analyte	40	5.00	11203.83	10630.07	105.40
47	1801641-01 GWEF1807061150GGA 0.26097	180725G1_47	Analyte	40	5.00	10861.29	10630.07	102.18
48	1801642-01 GWEF1807061215GGA-FD 0.2456	180725G1_48	Analyte	40	4.99	13191.68	10630.07	124.10
49	1801642-02 GWEF1807061220GGA 0.25561	180725G1_49	Analyte	40	5.00	12271.40	10630.07	115.44
50	1801642-03 FB1807061225GGA 0.25525	180725G1_50	Analyte	40	4.99	11772.42	10630.07	110.75
51	1801643-01 GWEF1807051045KER 0.24379	180725G1_51	Analyte	40	4.99	12170.27	10630.07	114.49
53	ST180725G1-4 PFC CS-2 537 18G1803	180725G1_53	Analyte	40	4.99	11765.88	10630.07	110.68

ST180725G1-4 PFC CS-2 537 18G1803

	ID	Name	Type	Std. Conc	RT	Area	CCAL AREA	% AREA
53	ST180725G1-4 PFC CS-2 537 18G1803	180725G1_53	Analyte	40	4.99	11765.88	11765.88	100.00
55	1801644-01 GWEF1807051200KER 0.248	180725G1_55	Analyte	40	4.99	12065.88	11765.88	102.55
56	B8G0167-BLK1 LRB 0.25	180725G1_56	Analyte	40	4.99	10160.40	11765.88	86.35
57	B8G0167-BS1 LFB 0.25	180725G1_57	Analyte	40	5.00	12184.51	11765.88	103.56
58	B8G0167-BSD1 LFBD 0.25	180725G1_58	Analyte	40	4.99	11097.10	11765.88	94.32
59	1801868-01 CBD-1RW32-0718 0.24293	180725G1_59	Analyte	40	5.00	10019.50	11765.88	85.16
60	1801868-02 CBD-1FB32-0718 0.25868	180725G1_60	Analyte	40	4.99	11579.26	11765.88	98.41

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61	1801868-03 CBD-1RW33-0718 0.2415	180725G1_61	Analyte	40	5.00	11248.87	11765.88	95.61
62	1801868-04 CBD-1FB33-0718 0.24925	180725G1_62	Analyte	40	4.99	12210.18	11765.88	103.78
63	1801868-05 CBD-1RW34-0718 0.23978	180725G1_63	Analyte	40	5.00	10819.27	11765.88	91.95
64	1801868-06 CBD-1FB34-0718 0.25042	180725G1_64	Analyte	40	5.00	12087.44	11765.88	102.73
65	1801868-07 CBD-1RW35-0718 0.23429	180725G1_65	Analyte	40	5.00	11055.35	11765.88	93.96
66	1801868-08 CBD-1FB35-0718 0.25599	180725G1_66	Analyte	40	5.01	9808.59	11765.88	83.36
67	1801868-09 CBD-1RW36-0718 0.24217	180725G1_67	Analyte	40	5.00	10929.52	11765.88	92.89
68	1801868-10 CBD-1FB36-0718 0.25374	180725G1_68	Analyte	40	5.00	10858.46	11765.88	92.29
69	1801868-11 CBD-1RW37-0718 0.23938	180725G1_69	Analyte	40	5.00	9935.02	11765.88	84.44
70	1801868-12 CBD-1FB37-0718 0.24955	180725G1_70	Analyte	40	5.01	12088.82	11765.88	102.74
71	1801616-01 GWIN1807021305GSC 0.26798	180725G1_71	Analyte	40	5.00	11032.77	11765.88	93.77
73	ST180725G1-5 PFC CS2 537 18G1807	180725G1_73	Analyte	40	5.01	9540.73	11765.88	81.09

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Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-53.qld

Last Altered: Thursday, July 26, 2018 15:15:01 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:15:37 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.pro\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

NJT 7/26/18

Name: 180725G1_53, Date: 25-Jul-2018, Time: 19:43:48, ID: ST180725G1-4 PFC CS-2 537 18G1803, Description: PFC CS-2 537 18G1803

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5	3.09e2	1.08e4	1.00		2.91	2.91	0.819	0.861	97.0
2	2	PFHxA	312.7 > 268.8	5.82e2	7.40e3	1.00		3.28	3.28	0.787	0.967	96.7
3	3	PFHpA	362.7 > 318.8	6.48e2	7.40e3	1.00		3.82	3.82	0.876	0.999	99.9
4	4	PFHxS	398.7 > 80.7	3.35e2	1.08e4	1.00		3.95	3.95	0.887	0.786	86.1
5	5	PFOA	412.8 > 369.0	4.03e2	7.40e3	1.00		4.24	4.24	0.545	0.747	74.7
6	6	PFNA	462.9 > 419.1	6.12e2	7.40e3	1.00		4.58	4.58	0.827	0.949	94.9
7	7	PFOS	498.8 >80.7	9.50e1	1.08e4	1.00		4.64	4.64	0.251	0.680	73.3
8	8	PFDA	512.8 > 469.0	5.44e2	7.40e3	1.00		4.88	4.88	0.735	0.844	84.4
9	9	N-MeFOSAA	569.7 > 419.0	2.58e2	1.18e4	1.00		5.00	5.00	0.878	0.759	75.9
10	10	N-EtFOSAA	583.6 >419.1	1.81e2	1.18e4	1.00		5.12	5.12	0.614	0.616	61.6
11	11	PFUnA	562.7 > 518.9	6.62e2	7.40e3	1.00		5.13	5.13	0.895	0.931	93.1
12	12	PFDoA	612.5 > 319.0	7.62e1	7.40e3	1.00		5.37	5.37	0.103	0.701	70.1
13	13	PFTrDA	662.4 > 618.7	5.96e2	7.40e3	1.00		5.58	5.58	0.806	0.894	89.4
14	14	PFTeDA	712.2>668.4	6.53e2	7.40e3	1.00		5.76	5.76	0.883	0.954	95.4
15	15	13C2-PFHxA	314.8 > 269.9	5.72e3	7.40e3	1.00	0.753	3.40	3.28	7.73	10.3	102.7
16	16	13C2-PFDA	514.8 > 470.0	7.48e3	7.40e3	1.00	1.023	4.83	4.88	10.1	9.88	98.8
17	17	d5-N-EtFOSAA	588.7> 419.1	1.43e4	1.18e4	1.00	1.264	4.99	5.11	48.5	38.4	95.9
18	18	13C2-PFOA	414.8 > 370.1	7.40e3	7.40e3	1.00	1.000	4.24	4.24	10.0	10.0	100.0
19	19	13C4-PFOS	502.8>80.7	1.08e4	1.08e4	1.00	1.000	4.64	4.64	28.7	28.7	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.18e4	1.18e4	1.00	1.000	4.99	4.99	40.0	40.0	100.0

CCilt 7/26/18

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 26, 2018 15:20:15 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:21:02 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.pro\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Compound name: PFBS

	#	Name	ID	Acq.Date	Acq.Time
1	1	180725G1_1	IPA	25-Jul-18	08:13:40
2	2	180725G1_2	ST180725G1-1 PFC CS-2 537 18G1803	25-Jul-18	08:25:47
3	3	180725G1_3	IPA	25-Jul-18	08:38:36
4	4	180725G1_4	1801824-05 CBD-1RW25-0718 0.24505	25-Jul-18	08:54:08
5	5	180725G1_5	1801824-06 CBD-1FB25-0718 0.25439	25-Jul-18	09:06:11
6	6	180725G1_6	1801824-07 CBD-1RW26-0718 0.25368	25-Jul-18	09:19:03
7	7	180725G1_7	1801824-08 CBD-1FB26-0718 0.24525	25-Jul-18	09:31:53
8	8	180725G1_8	1801824-09 CBD-1RW27-0718 0.25251	25-Jul-18	09:44:42
9	9	180725G1_9	1801824-10 CBD-1FB27-0718 0.25608	25-Jul-18	09:57:31
10	10	180725G1_10	1801824-11 CBD-1RW28-0718 0.25482	25-Jul-18	10:10:21
11	11	180725G1_11	1801824-12 CBD-1FB28-0718 0.25788	25-Jul-18	10:23:10
12	12	180725G1_12	1801824-13 CBD-1RW29-0718 0.25606	25-Jul-18	10:36:00
13	13	180725G1_13	1801824-14 CBD-1FB29-0718 0.25267	25-Jul-18	10:48:45
14	14	180725G1_14	1801824-15 CBD-1RW30-0718 0.25164	25-Jul-18	11:01:35
15	15	180725G1_15	1801824-16 CBD-1FB30-0718 0.25136	25-Jul-18	11:14:23
16	16	180725G1_16	1801824-17 CBD-1RW31-0718 0.25381	25-Jul-18	11:27:13
17	17	180725G1_17	1801824-18 CBD-1FB31-0718 0.25806	25-Jul-18	11:40:03
18	18	180725G1_18	1801616-01 GWIN1807021305GSC 0....		
19	19	180725G1_19	IPA	25-Jul-18	11:55:46
20	20	180725G1_20	ST180725G1-2 PFC CS2 537 18G1807	25-Jul-18	12:07:51
21	21	180725G1_21	IPA	25-Jul-18	12:20:39
22	22	180725G1_22	B8G0128-BLK1 Method Blank 0.005	25-Jul-18	13:07:16
23	23	180725G1_23	B8G0128-BS1 OPR 0.005	25-Jul-18	13:19:23
24	24	180725G1_24	1801716-01 Milk 0.005	25-Jul-18	13:32:06
25	25	180725G1_25	B8G0162-BLK1 LRB 0.25	25-Jul-18	13:44:55
26	26	180725G1_26	B8G0162-BS1 LFB 0.25	25-Jul-18	13:57:45
27	27	180725G1_27	B8G0162-BSD1 LFBD 0.25	25-Jul-18	14:10:35
28	28	180725G1_28	1801860-01 WT1807190850MK 0.2497	25-Jul-18	14:23:24
29	29	180725G1_29	1801860-02 FB1807190855MK 0.24944	25-Jul-18	14:36:13
30	30	180725G1_30	1801864-01 GWEF1807190835MK 0.2...	25-Jul-18	14:49:03
31	31	180725G1_31	B8G0095-BLK1 LRB 0.25	25-Jul-18	15:01:52
32	32	180725G1_32	B8G0095-BS1 LFB 0.25	25-Jul-18	15:14:38

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 26, 2018 15:20:15 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:21:02 Pacific Daylight Time

Compound name: PFBS

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35	35	180725G1_35	1801637-01 GWNT1807050810KER 0....	25-Jul-18	15:53:05
36	36	180725G1_36	1801638-01 GWNT1807060930GGA 0....	25-Jul-18	16:05:55
37	37	180725G1_37	1801638-02 GWNT1807060945GGA 0....	25-Jul-18	16:18:44
38	38	180725G1_38	IPA	25-Jul-18	16:31:34
39	39	180725G1_39	ST180725G1-3 PFC CS4 537 18G1809	25-Jul-18	16:44:23
40	40	180725G1_40	IPA	25-Jul-18	16:57:12
41	41	180725G1_41	1801638-03 GWNT1807060950GGA 0....	25-Jul-18	17:10:01
42	42	180725G1_42	1801638-04 GWNT1807061030GGA 0....	25-Jul-18	17:22:50
43	43	180725G1_43	1801638-05 GWNT1807061035GGA 0....	25-Jul-18	17:35:35
44	44	180725G1_44	1801639-01 GWEF1807061110GGA 0....	25-Jul-18	17:48:24
45	45	180725G1_45	1801640-01 GWIN1807050850KER 0.2...	25-Jul-18	18:01:13
46	46	180725G1_46	1801640-02 GWEF1807050900KER 0....	25-Jul-18	18:14:03
47	47	180725G1_47	1801641-01 GWEF1807061150GGA 0....	25-Jul-18	18:26:53
48	48	180725G1_48	1801642-01 GWEF1807061215GGA-F...	25-Jul-18	18:39:42
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52	52	180725G1_52	IPA	25-Jul-18	19:30:56
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54	54	180725G1_54	IPA	25-Jul-18	19:56:35
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58	58	180725G1_58	B8G0167-BSD1 LFBD 0.25	25-Jul-18	20:47:49
59	59	180725G1_59	1801868-01 CBD-1RW32-0718 0.24293	25-Jul-18	21:00:39
60	60	180725G1_60	1801868-02 CBD-1FB32-0718 0.25868	25-Jul-18	21:13:28
61	61	180725G1_61	1801868-03 CBD-1RW33-0718 0.2415	25-Jul-18	21:26:18
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67	67	180725G1_67	1801868-09 CBD-1RW36-0718 0.24217	25-Jul-18	22:43:13
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Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 26, 2018 15:20:15 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:21:02 Pacific Daylight Time

Compound name: PFBS

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71	71 180725G1_71	1801616-01 GWIN1807021305GSC 0....	25-Jul-18	23:34:28
72	72 180725G1_72	IPA	25-Jul-18	23:47:17
73	73 180725G1_73	ST180725G1-5 PFC CS2 537 18G1807	26-Jul-18	00:00:06
74	74 180725G1_74	IPA	26-Jul-18	00:12:54

Quantify Sample Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

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Printed: Thursday, July 26, 2018 15:15:37 Pacific Daylight Time

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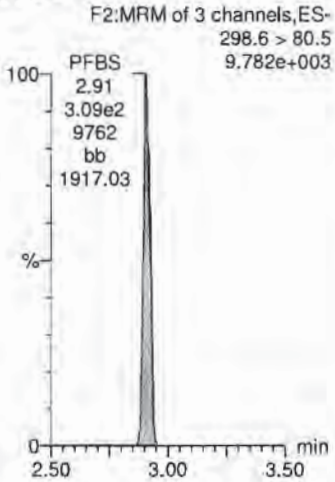
Calibration: X:\G1.pro\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_53, Date: 25-Jul-2018, Time: 19:43:48, ID: ST180725G1-4 PFC CS-2 537 18G1803, Description: PFC CS-2 537 18G1803

PFBS



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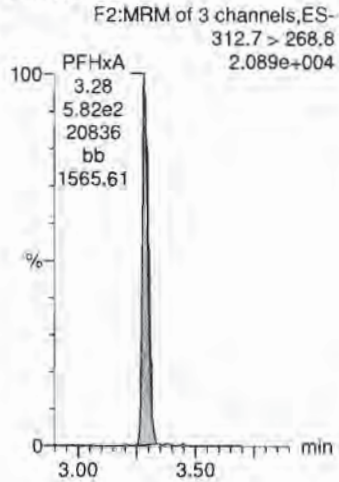

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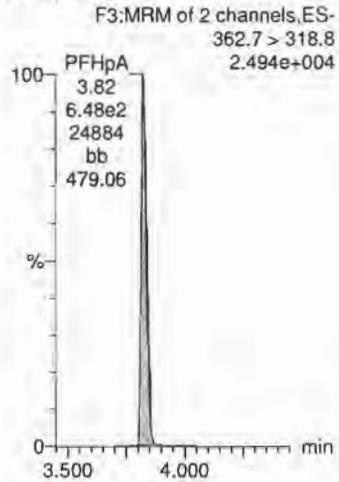

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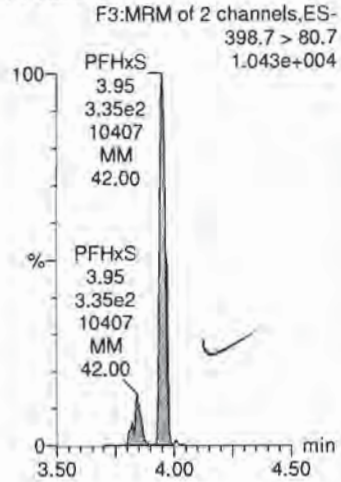

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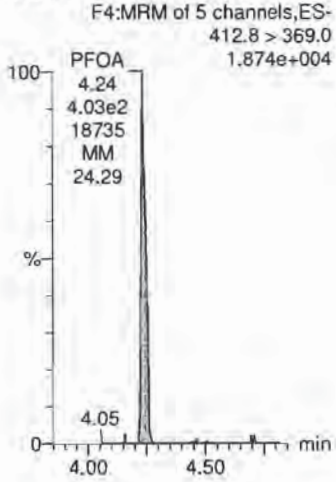

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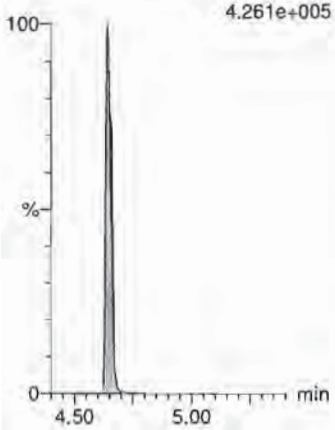

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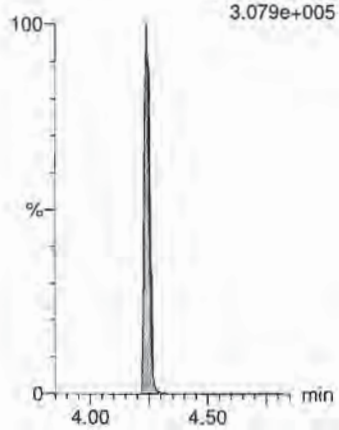

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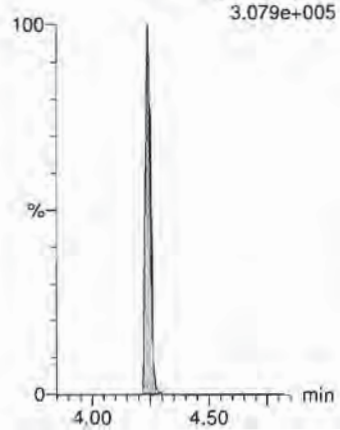

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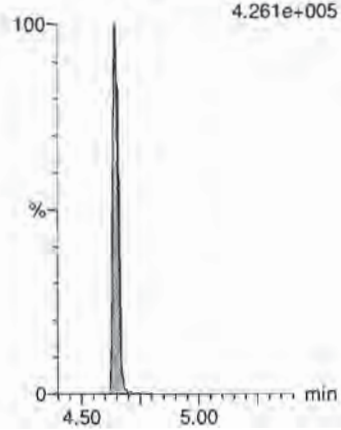

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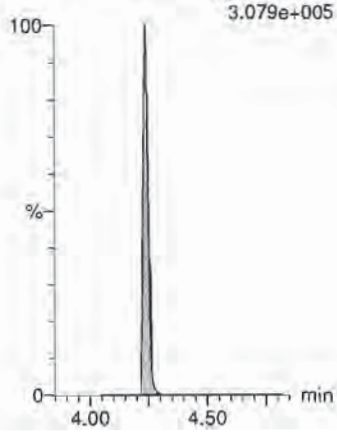

Vista Analytical Laboratory

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Last Altered: Thursday, July 26, 2018 15:15:01 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:15:37 Pacific Daylight Time

Name: 180725G1_53, Date: 25-Jul-2018, Time: 19:43:48, ID: ST180725G1-4 PFC CS-2 537 18G1803, Description: PFC CS-2 537 18G1803

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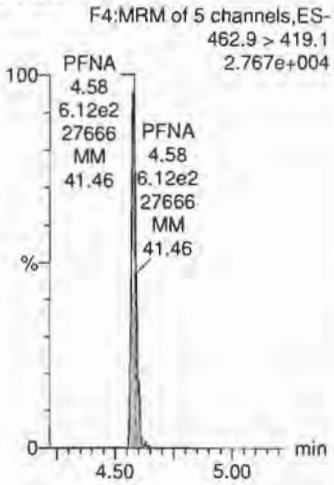

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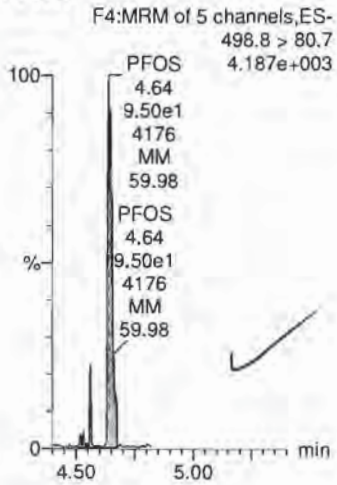

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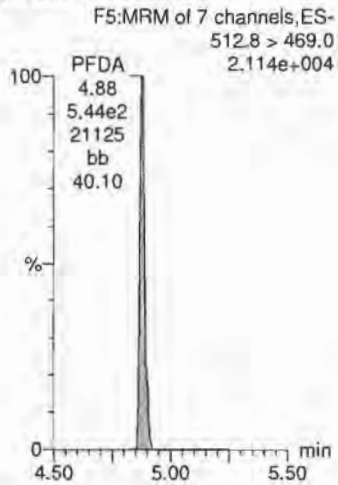

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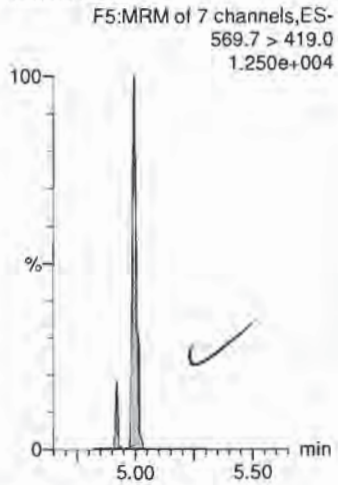

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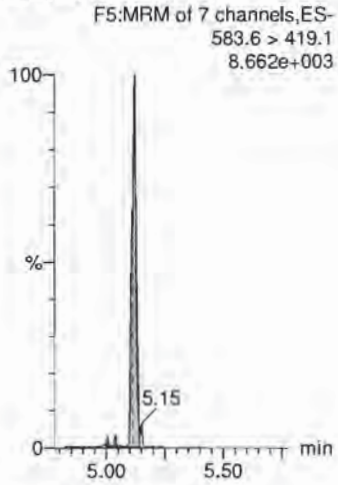

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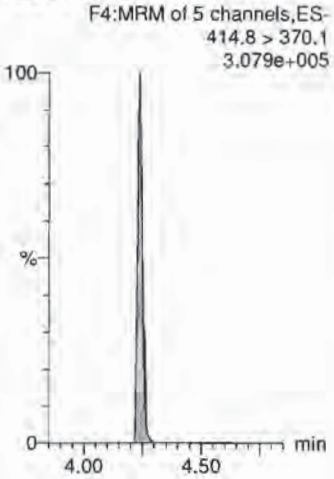

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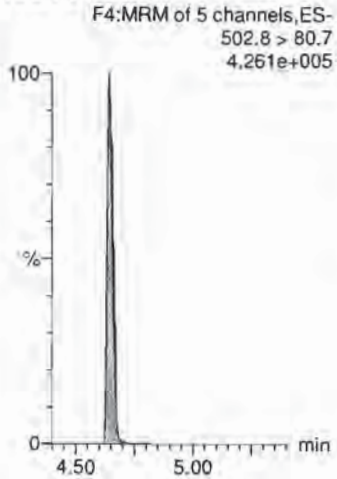

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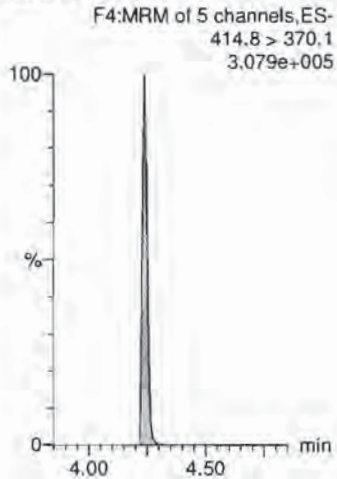

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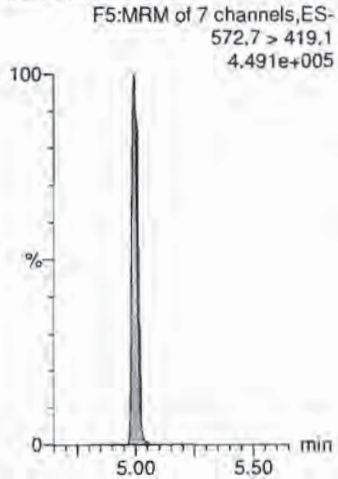

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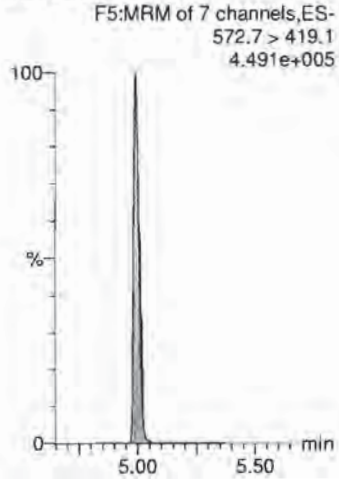

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Last Altered: Thursday, July 26, 2018 15:15:01 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:15:37 Pacific Daylight Time

Name: 180725G1_53, Date: 25-Jul-2018, Time: 19:43:48, ID: ST180725G1-4 PFC CS-2 537 18G1803, Description: PFC CS-2 537 18G1803

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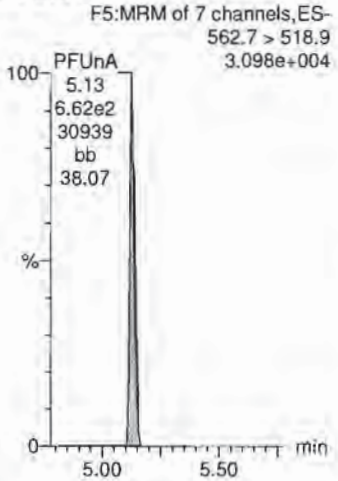

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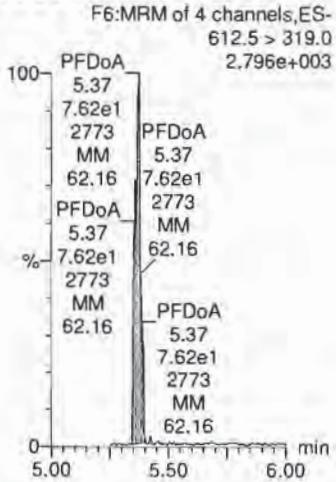

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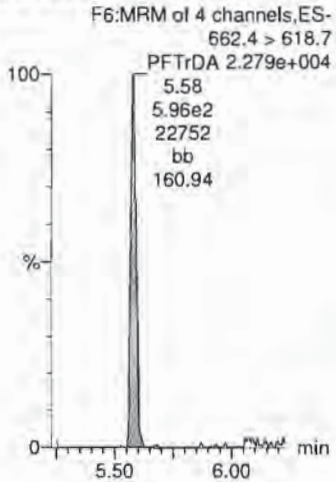

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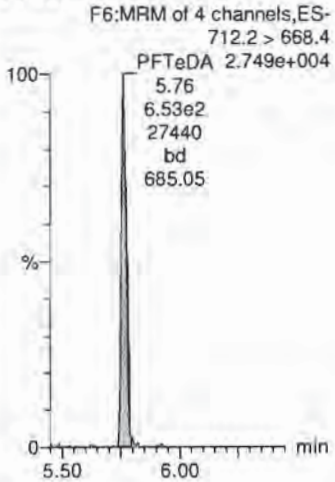

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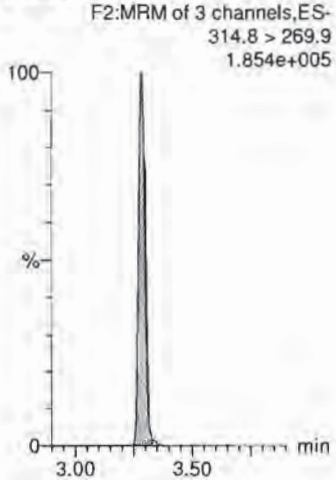

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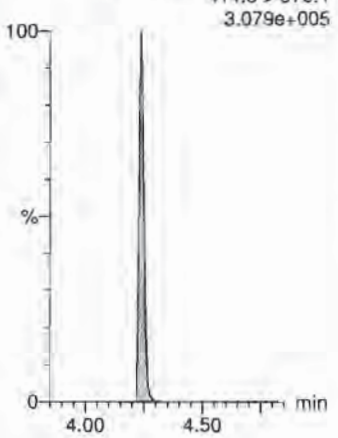

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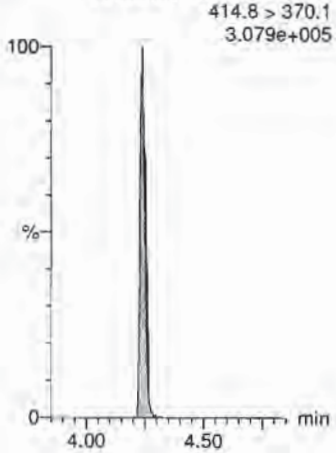

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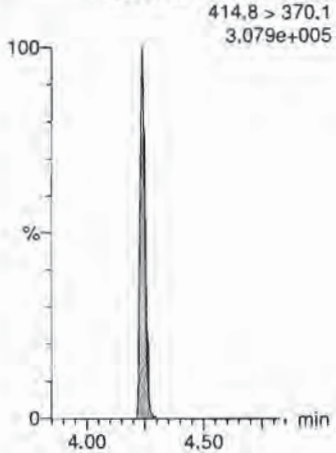

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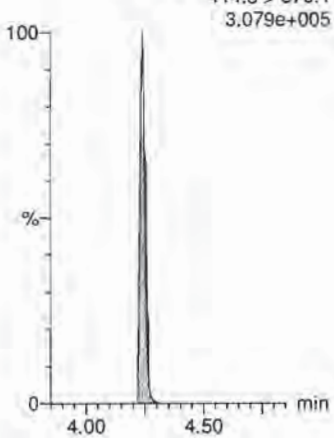

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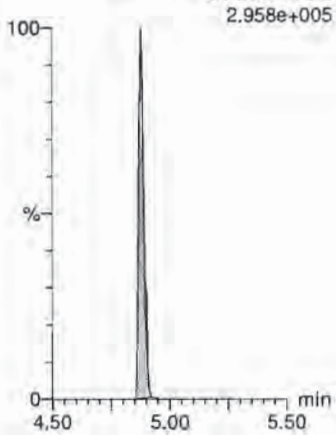

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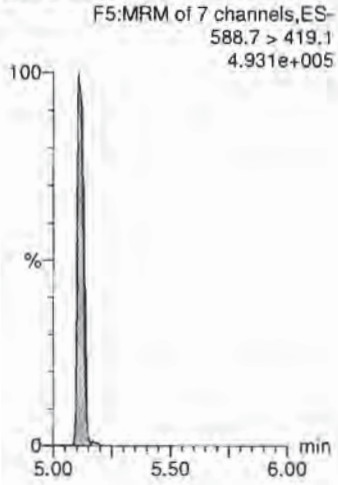
Printed: Thursday, July 26, 2018 15:15:37 Pacific Daylight Time

Name: 180725G1_53, Date: 25-Jul-2018, Time: 19:43:48, ID: ST180725G1-4 PFC CS-2 537 18G1803, Description: PFC CS-2 537 18G1803

d5-N-EtFOSAA



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-73.qld

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MJT 7/26/18

Name: 180725G1_73, Date: 26-Jul-2018, Time: 00:00:06, ID: ST180725G1-5 PFC CS2 537 18G1807, Description: PFC CS2 537 18G1807

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.6> 80.5	6.99e3	9.59e3	1.00		2.91	2.91	20.9	22.0	99.6
2	2 PFHxA	312.7 > 268.8	1.45e4	6.48e3	1.00		3.29	3.28	22.3	27.5	109.8
3	3 PFHpA	362.7 > 318.8	1.55e4	6.48e3	1.00		3.82	3.82	23.9	27.2	108.9
4	4 PFHxS	398.7 > 80.7	7.85e3	9.59e3	1.00		3.95	3.95	23.5	20.8	91.2
5	5 PFOA	412.8 > 369.0	1.10e4	6.48e3	1.00		4.24	4.24	17.0	23.3	93.2
6	6 PFNA	462.9 > 419.1	1.39e4	6.48e3	1.00		4.58	4.59	21.4	24.5	98.1
7	7 PFOS	498.8 >80.7	3.11e3	9.59e3	1.00		4.64	4.65	9.31	25.2	109.0
8	8 PFDA	512.8 > 469.0	1.36e4	6.48e3	1.00		4.88	4.88	21.0	24.1	96.6
9	9 N-MeFOSAA	569.7 > 419.0	8.00e3	9.54e3	1.00		5.01	5.01	33.5	29.0	116.0
10	10 N-EtFOSAA	583.6 >419.1	5.85e3	9.54e3	1.00		5.14	5.12	24.5	24.6	98.4
11	11 PFUnA	562.7 > 518.9	1.65e4	6.48e3	1.00		5.13	5.12	25.4	26.4	105.6
12	12 PFDoA	612.5 > 319.0	2.42e3	6.48e3	1.00		5.38	5.36	3.73	25.4	101.4
13	13 PFTrDA	662.4 > 618.7	1.38e4	6.48e3	1.00		5.58	5.57	21.3	23.6	94.3
14	14 PFTeDA	712.2>668.4	1.49e4	6.48e3	1.00		5.76	5.76	22.9	24.8	99.0
15	15 13C2-PFHxA	314.8 > 269.9	5.03e3	6.48e3	1.00	0.753	3.40	3.28	7.76	10.3	103.1
16	16 13C2-PFDA	514.8 > 470.0	6.75e3	6.48e3	1.00	1.023	4.84	4.88	10.4	10.2	101.8
17	17 d5-N-EtFOSAA	588.7> 419.1	1.32e4	9.54e3	1.00	1.264	5.01	5.12	55.3	43.8	109.4
18	18 13C2-PFOA	414.8 > 370.1	6.48e3	6.48e3	1.00	1.000	4.24	4.24	10.0	10.0	100.0
19	19 13C4-PFOS	502.8>80.7	9.59e3	9.59e3	1.00	1.000	4.64	4.64	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	572.7 > 419.1	9.54e3	9.54e3	1.00	1.000	4.99	5.01	40.0	40.0	100.0

CGH 7/26/18

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 26, 2018 15:20:15 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:21:02 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0725.mdb 26 Jul 2018 10:05:34
Calibration: X:\G1.pro\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Compound name: PFBS

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1	1	180725G1_1	IPA	25-Jul-18	08:13:40
2	2	180725G1_2	ST180725G1-1 PFC CS-2 537 18G1803	25-Jul-18	08:25:47
3	3	180725G1_3	IPA	25-Jul-18	08:38:36
4	4	180725G1_4	1801824-05 CBD-1RW25-0718 0.24505	25-Jul-18	08:54:08
5	5	180725G1_5	1801824-06 CBD-1FB25-0718 0.25439	25-Jul-18	09:06:11
6	6	180725G1_6	1801824-07 CBD-1RW26-0718 0.25368	25-Jul-18	09:19:03
7	7	180725G1_7	1801824-08 CBD-1FB26-0718 0.24525	25-Jul-18	09:31:53
8	8	180725G1_8	1801824-09 CBD-1RW27-0718 0.25251	25-Jul-18	09:44:42
9	9	180725G1_9	1801824-10 CBD-1FB27-0718 0.25608	25-Jul-18	09:57:31
10	10	180725G1_10	1801824-11 CBD-1RW28-0718 0.25482	25-Jul-18	10:10:21
11	11	180725G1_11	1801824-12 CBD-1FB28-0718 0.25788	25-Jul-18	10:23:10
12	12	180725G1_12	1801824-13 CBD-1RW29-0718 0.25606	25-Jul-18	10:36:00
13	13	180725G1_13	1801824-14 CBD-1FB29-0718 0.25267	25-Jul-18	10:48:45
14	14	180725G1_14	1801824-15 CBD-1RW30-0718 0.25164	25-Jul-18	11:01:35
15	15	180725G1_15	1801824-16 CBD-1FB30-0718 0.25136	25-Jul-18	11:14:23
16	16	180725G1_16	1801824-17 CBD-1RW31-0718 0.25381	25-Jul-18	11:27:13
17	17	180725G1_17	1801824-18 CBD-1FB31-0718 0.25806	25-Jul-18	11:40:03
18	18	180725G1_18	1801616-01 GWIN1807021305GSC 0....		
19	19	180725G1_19	IPA	25-Jul-18	11:55:46
20	20	180725G1_20	ST180725G1-2 PFC CS2 537 18G1807	25-Jul-18	12:07:51
21	21	180725G1_21	IPA	25-Jul-18	12:20:39
22	22	180725G1_22	B8G0128-BLK1 Method Blank 0.005	25-Jul-18	13:07:16
23	23	180725G1_23	B8G0128-BS1 OPR 0.005	25-Jul-18	13:19:23
24	24	180725G1_24	1801716-01 Milk 0.005	25-Jul-18	13:32:06
25	25	180725G1_25	B8G0162-BLK1 LRB 0.25	25-Jul-18	13:44:55
26	26	180725G1_26	B8G0162-BS1 LFB 0.25	25-Jul-18	13:57:45
27	27	180725G1_27	B8G0162-BSD1 LFBD 0.25	25-Jul-18	14:10:35
28	28	180725G1_28	1801860-01 WT1807190850MK 0.2497	25-Jul-18	14:23:24
29	29	180725G1_29	1801860-02 FB1807190855MK 0.24944	25-Jul-18	14:36:13
30	30	180725G1_30	1801864-01 GWEF1807190835MK 0.2...	25-Jul-18	14:49:03
31	31	180725G1_31	B8G0095-BLK1 LRB 0.25	25-Jul-18	15:01:52
32	32	180725G1_32	B8G0095-BS1 LFB 0.25	25-Jul-18	15:14:38

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 26, 2018 15:20:15 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:21:02 Pacific Daylight Time

Compound name: PFBS

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33	33 180725G1_33	B8G0095-MS1 LFSM 0.25019	25-Jul-18	15:27:27
34	34 180725G1_34	B8G0095-MSD1 LFSMD 0.26415	25-Jul-18	15:40:15
35	35 180725G1_35	1801637-01 GWNT1807050810KER 0....	25-Jul-18	15:53:05
36	36 180725G1_36	1801638-01 GWNT1807060930GGA 0....	25-Jul-18	16:05:55
37	37 180725G1_37	1801638-02 GWNT1807060945GGA 0....	25-Jul-18	16:18:44
38	38 180725G1_38	IPA	25-Jul-18	16:31:34
39	39 180725G1_39	ST180725G1-3 PFC CS4 537 18G1809	25-Jul-18	16:44:23
40	40 180725G1_40	IPA	25-Jul-18	16:57:12
41	41 180725G1_41	1801638-03 GWNT1807060950GGA 0....	25-Jul-18	17:10:01
42	42 180725G1_42	1801638-04 GWNT1807061030GGA 0....	25-Jul-18	17:22:50
43	43 180725G1_43	1801638-05 GWNT1807061035GGA 0....	25-Jul-18	17:35:35
44	44 180725G1_44	1801639-01 GWEF1807061110GGA 0....	25-Jul-18	17:48:24
45	45 180725G1_45	1801640-01 GWIN1807050850KER 0.2...	25-Jul-18	18:01:13
46	46 180725G1_46	1801640-02 GWEF1807050900KER 0....	25-Jul-18	18:14:03
47	47 180725G1_47	1801641-01 GWEF1807061150GGA 0....	25-Jul-18	18:26:53
48	48 180725G1_48	1801642-01 GWEF1807061215GGA-F...	25-Jul-18	18:39:42
49	49 180725G1_49	1801642-02 GWEF1807061220GGA 0....	25-Jul-18	18:52:38
50	50 180725G1_50	1801642-03 FB1807061225GGA 0.25525	25-Jul-18	19:05:21
51	51 180725G1_51	1801643-01 GWEF1807051045KER 0....	25-Jul-18	19:18:07
52	52 180725G1_52	IPA	25-Jul-18	19:30:56
53	53 180725G1_53	ST180725G1-4 PFC CS-2 537 18G1803	25-Jul-18	19:43:48
54	54 180725G1_54	IPA	25-Jul-18	19:56:35
55	55 180725G1_55	1801644-01 GWEF1807051200KER 0....	25-Jul-18	20:09:25
56	56 180725G1_56	B8G0167-BLK1 LRB 0.25	25-Jul-18	20:22:11
57	57 180725G1_57	B8G0167-BS1 LFB 0.25	25-Jul-18	20:35:02
58	58 180725G1_58	B8G0167-BSD1 LFBD 0.25	25-Jul-18	20:47:49
59	59 180725G1_59	1801868-01 CBD-1RW32-0718 0.24293	25-Jul-18	21:00:39
60	60 180725G1_60	1801868-02 CBD-1FB32-0718 0.25868	25-Jul-18	21:13:28
61	61 180725G1_61	1801868-03 CBD-1RW33-0718 0.2415	25-Jul-18	21:26:18
62	62 180725G1_62	1801868-04 CBD-1FB33-0718 0.24925	25-Jul-18	21:39:07
63	63 180725G1_63	1801868-05 CBD-1RW34-0718 0.23978	25-Jul-18	21:51:57
64	64 180725G1_64	1801868-06 CBD-1FB34-0718 0.25042	25-Jul-18	22:04:46
65	65 180725G1_65	1801868-07 CBD-1RW35-0718 0.23429	25-Jul-18	22:17:36
66	66 180725G1_66	1801868-08 CBD-1FB35-0718 0.25599	25-Jul-18	22:30:21
67	67 180725G1_67	1801868-09 CBD-1RW36-0718 0.24217	25-Jul-18	22:43:13
68	68 180725G1_68	1801868-10 CBD-1FB36-0718 0.25374	25-Jul-18	22:55:59

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 26, 2018 15:20:15 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:21:02 Pacific Daylight Time

Compound name: PFBS

	#	Name	ID	Acq.Date	Acq.Time
69	69	180725G1_69	1801868-11 CBD-1RW37-0718 0.23938	25-Jul-18	23:08:48
70	70	180725G1_70	1801868-12 CBD-1FB37-0718 0.24955	25-Jul-18	23:21:38
71	71	180725G1_71	1801616-01 GWIN1807021305GSC 0....	25-Jul-18	23:34:28
72	72	180725G1_72	IPA	25-Jul-18	23:47:17
73	73	180725G1_73	ST180725G1-5 PFC CS2 537 18G1807	26-Jul-18	00:00:06
74	74	180725G1_74	IPA	26-Jul-18	00:12:54

Quantify Sample Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-73.qld

Last Altered: Thursday, July 26, 2018 15:17:52 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:18:27 Pacific Daylight Time

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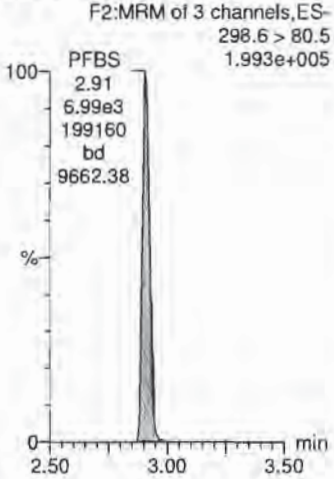
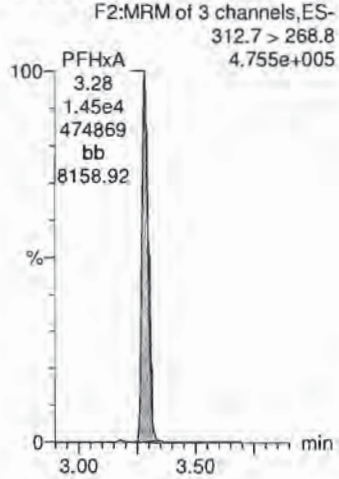
Calibration: X:\G1.pro\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180725G1_73, Date: 26-Jul-2018, Time: 00:00:06, ID: ST180725G1-5 PFC CS2 537 18G1807, Description: PFC CS2 537 18G1807

PFBS



PFHxA



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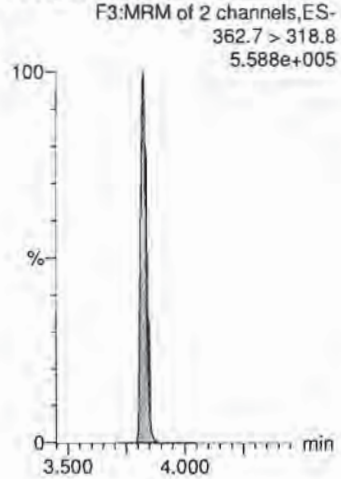

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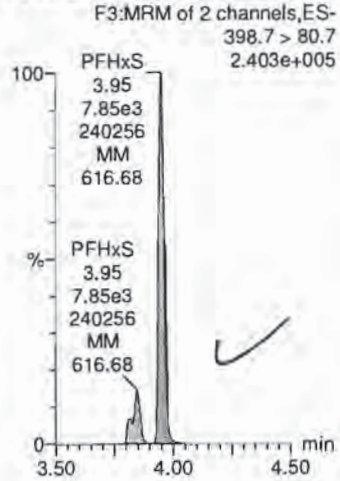

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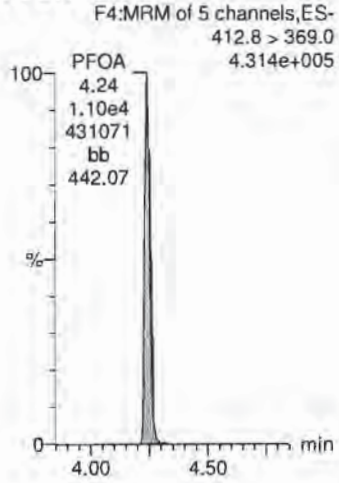

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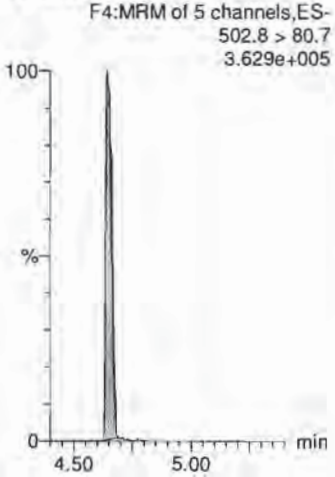

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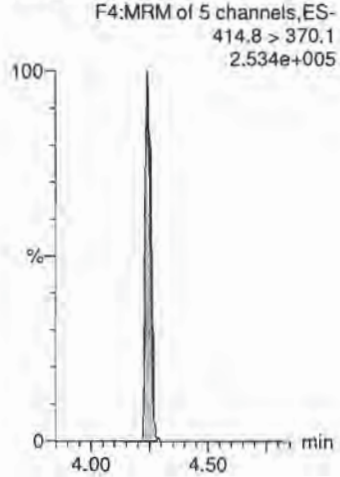

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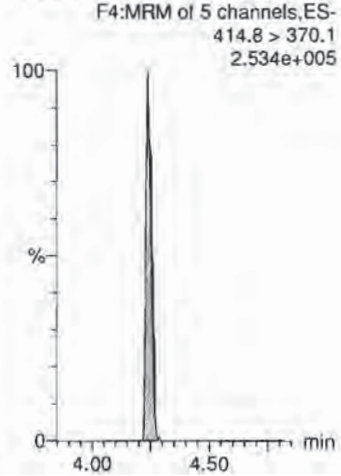

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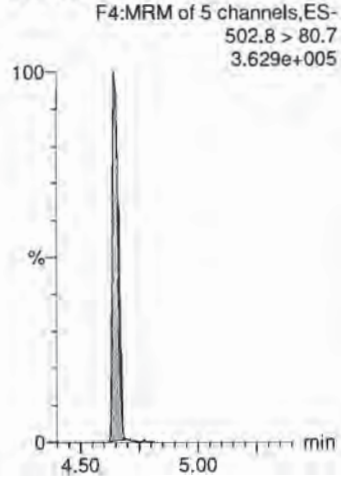

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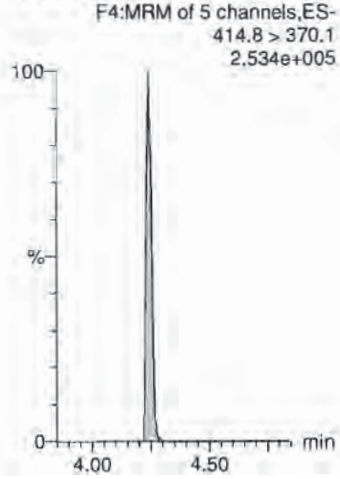

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Last Altered: Thursday, July 26, 2018 15:17:52 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:18:27 Pacific Daylight Time

Name: 180725G1_73, Date: 26-Jul-2018, Time: 00:00:06, ID: ST180725G1-5 PFC CS2 537 18G1807, Description: PFC CS2 537 18G1807

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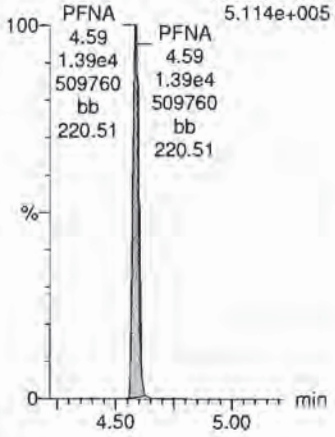

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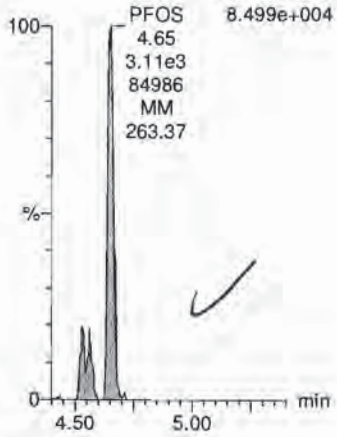

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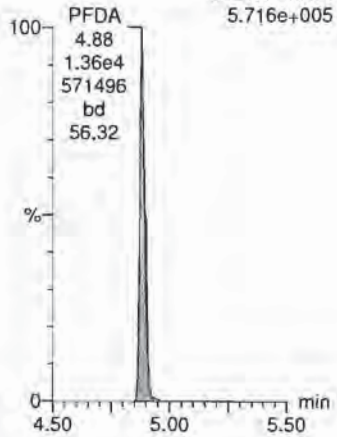

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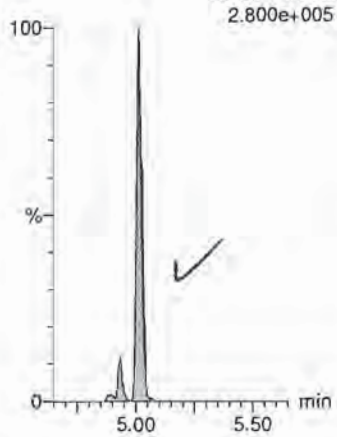

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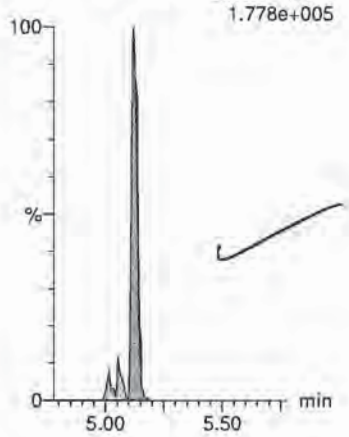

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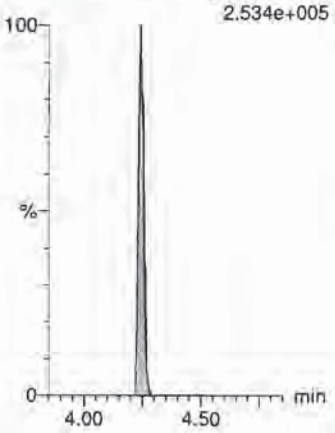

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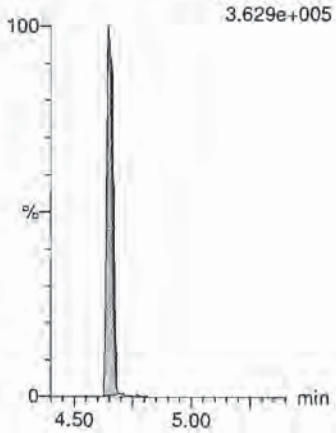

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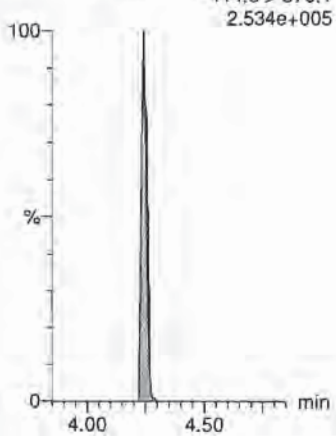

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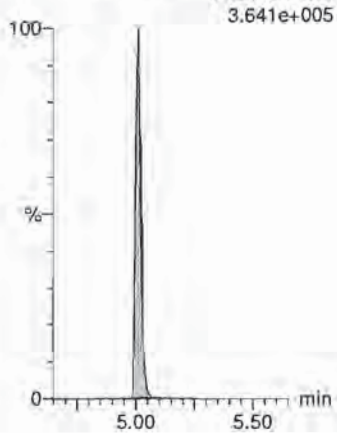

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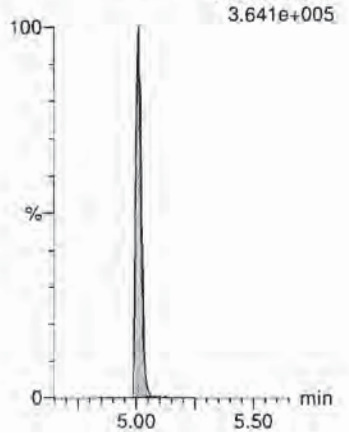

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Last Altered: Thursday, July 26, 2018 15:17:52 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:18:27 Pacific Daylight Time

Name: 180725G1_73, Date: 26-Jul-2018, Time: 00:00:06, ID: ST180725G1-5 PFC CS2 537 18G1807, Description: PFC CS2 537 18G1807

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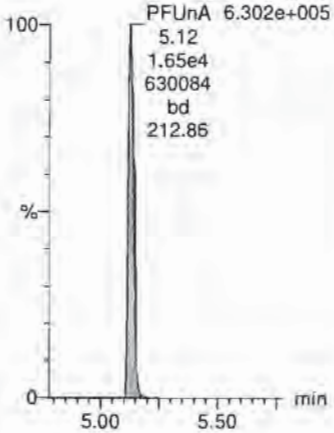

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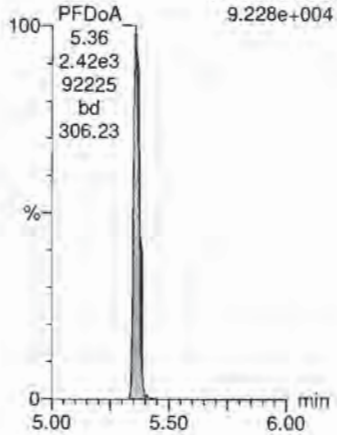

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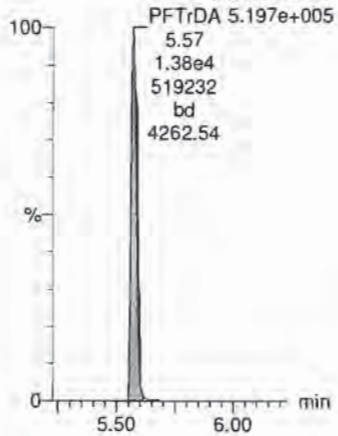
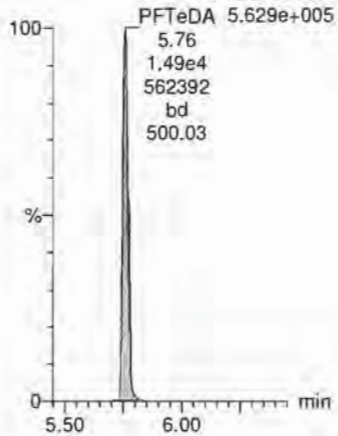
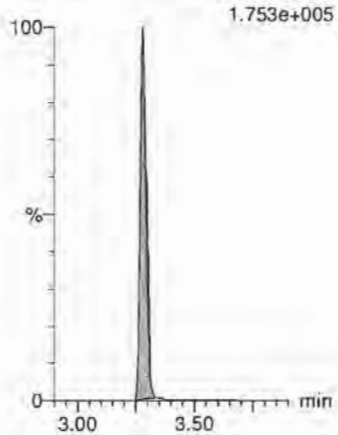


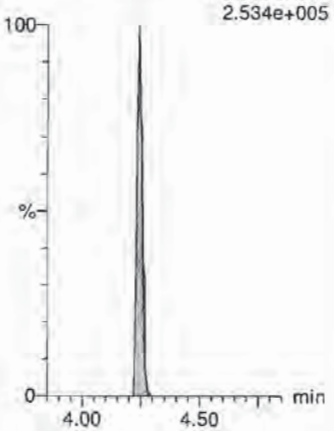
PFTeDA



13C2-PFHxA



13C2-PFOA



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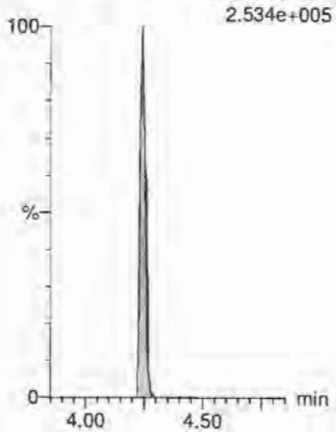
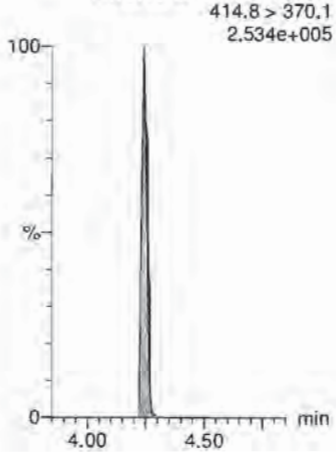


13C2-PFOA



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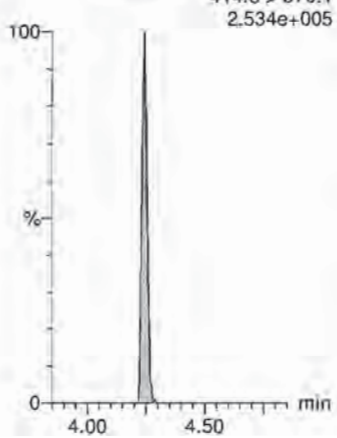

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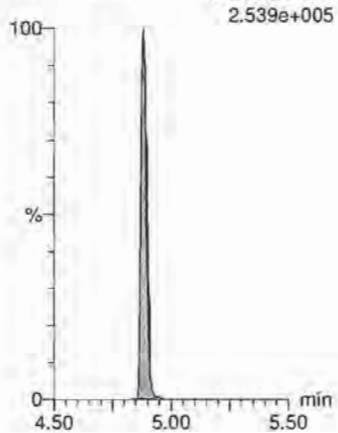
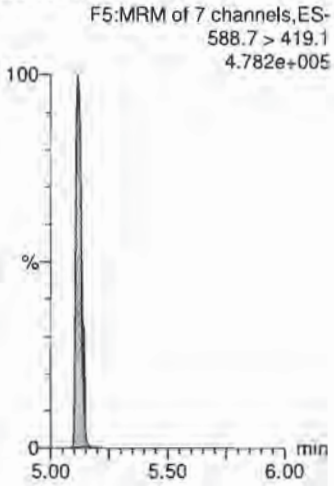


Dataset: X:\G1.PRO\Results\2018\180725G1\180725G1-73.qld

Last Altered: Thursday, July 26, 2018 15:17:52 Pacific Daylight Time
Printed: Thursday, July 26, 2018 15:18:27 Pacific Daylight Time

Name: 180725G1_73, Date: 26-Jul-2018, Time: 00:00:06, ID: ST180725G1-5 PFC CS2 537 18G1807, Description: PFC CS2 537 18G1807

d5-N-EtFOSAA



INITIAL CALIBRATION (ICAL)

INCLUDING ASSOCIATED

INITIAL CALIBRATION VERIFICATION (ICV)

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Low pt.
MeFOSAA ≈ 0.5
PFDoA ↓
EtFOSAA = 1

Dataset: X:\G1.PRO\Results\2018\180719G3\180719G3-CRV.qld

Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
Printed: Friday, July 20, 2018 12:39:31 Pacific Daylight Time

VAD 7/20/18

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0719.mdb 20 Jul 2018 10:54:08
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Compound name: PFBS
Coefficient of Determination: R^2 = 0.999254
Calibration curve: 0.950953 * x
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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	180719G3_2	Standard	0.222	2.98	79.078	12524.291	0.181	0.2	-14.2	NO	0.999	NO	MM
2	2	180719G3_3	Standard	0.444	2.96	189.547	13531.768	0.402	0.4	-4.8	NO	0.999	NO	bb
3	3	180719G3_4	Standard	0.888	2.97	364.822	13253.347	0.790	0.8	-6.4	NO	0.999	NO	bb
4	4	180719G3_5	Standard	1.780	2.97	720.599	13367.935	1.547	1.6	-8.6	NO	0.999	NO	bb
5	5	180719G3_6	Standard	4.440	2.97	1837.066	13104.011	4.023	4.2	-4.7	NO	0.999	NO	bb
6	6	180719G3_7	Standard	8.840	2.97	3401.218	12817.154	7.616	8.0	-9.4	NO	0.999	NO	bd
7	7	180719G3_8	Standard	22.100	2.97	9191.506	13057.182	20.203	21.2	-3.9	NO	0.999	NO	bb
8	8	180719G3_9	Standard	44.200	2.97	18480.521	12535.142	42.312	44.5	0.7	NO	0.999	NO	bb
9	9	180719G3_10	Standard	66.400	2.97	26316.469	11870.359	63.628	66.9	0.8	NO	0.999	NO	bb
10	10	180719G3_11	Standard	88.500	2.97	34910.867	11725.865	85.447	89.9	1.5	NO	0.999	NO	bb

Compound name: PFHxA
Coefficient of Determination: R^2 = 0.998365
Calibration curve: 0.813355 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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	180719G3_2	Standard	0.250	3.35	216.445	9607.558	0.225	0.3	10.8	NO	0.998	NO	MM
2	2	180719G3_3	Standard	0.500	3.35	379.840	10003.517	0.380	0.5	-6.6	NO	0.998	NO	MM
3	3	180719G3_4	Standard	1.000	3.35	727.371	9809.153	0.742	0.9	-8.8	NO	0.998	NO	bb
4	4	180719G3_5	Standard	2.000	3.35	1515.859	9349.009	1.621	2.0	-0.3	NO	0.998	NO	bb
5	5	180719G3_6	Standard	5.000	3.35	3877.906	10233.146	3.790	4.7	-6.8	NO	0.998	NO	MM
6	6	180719G3_7	Standard	10.000	3.35	7255.813	8950.334	8.107	10.0	-0.3	NO	0.998	NO	bd
7	7	180719G3_8	Standard	25.000	3.35	19145.990	9857.262	19.423	23.9	-4.5	NO	0.998	NO	bd
8	8	180719G3_9	Standard	50.000	3.35	37287.813	8593.062	43.393	53.4	6.7	NO	0.998	NO	bd
9	9	180719G3_10	Standard	75.000	3.35	52640.691	8955.572	58.780	72.3	-3.6	NO	0.998	NO	bd
10	10	180719G3_11	Standard	100.000	3.35	71689.805	8728.923	82.129	101.0	1.0	NO	0.998	NO	MM

CAH 7/20/18

Dataset: X:\G1.PRO\Results\2018\180719G3\180719G3-CRV.qld

Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
Printed: Friday, July 20, 2018 12:39:31 Pacific Daylight Time

Compound name: PFHpA
Coefficient of Determination: R^2 = 0.998925
Calibration curve: 0.876694 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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	180719G3_2	Standard	0.250	3.86	187.909	9607.558	0.196	0.2	-10.8	NO	0.999	NO	MM
2	2	180719G3_3	Standard	0.500	3.86	396.545	10003.517	0.396	0.5	-9.6	NO	0.999	NO	MM
3	3	180719G3_4	Standard	1.000	3.86	776.772	9809.153	0.792	0.9	-9.7	NO	0.999	NO	bb
4	4	180719G3_5	Standard	2.000	3.87	1557.671	9349.009	1.666	1.9	-5.0	NO	0.999	NO	MM
5	5	180719G3_6	Standard	5.000	3.86	4098.867	10233.146	4.005	4.6	-8.6	NO	0.999	NO	bb
6	6	180719G3_7	Standard	10.000	3.86	7904.910	8950.334	8.832	10.1	0.7	NO	0.999	NO	bb
7	7	180719G3_8	Standard	25.000	3.86	20082.256	9857.262	20.373	23.2	-7.0	NO	0.999	NO	bb
8	8	180719G3_9	Standard	50.000	3.86	39159.559	8593.062	45.571	52.0	4.0	NO	0.999	NO	bb
9	9	180719G3_10	Standard	75.000	3.86	58417.047	8955.572	65.230	74.4	-0.8	NO	0.999	NO	bd
10	10	180719G3_11	Standard	100.000	3.86	77294.531	8728.923	88.550	101.0	1.0	NO	0.999	NO	bb

Compound name: PFHxS
Coefficient of Determination: R^2 = 0.999072
Calibration curve: 1.12898 * x
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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	180719G3_2	Standard	0.228	3.98	95.875	12524.291	0.220	0.2	-14.6	NO	0.999	NO	MM
2	2	180719G3_3	Standard	0.456	3.99	229.626	13531.768	0.487	0.4	-5.4	NO	0.999	NO	MM
3	3	180719G3_4	Standard	0.912	3.98	401.635	13253.347	0.870	0.8	-15.5	NO	0.999	NO	MM
4	4	180719G3_5	Standard	1.820	3.99	833.141	13367.935	1.789	1.6	-12.9	NO	0.999	NO	MM
5	5	180719G3_6	Standard	4.560	3.99	2239.804	13104.011	4.906	4.3	-4.7	NO	0.999	NO	MM
6	6	180719G3_7	Standard	9.120	3.99	4365.842	12817.154	9.776	8.7	-5.1	NO	0.999	NO	MM
7	7	180719G3_8	Standard	22.800	3.98	11084.256	13057.182	24.363	21.6	-5.4	NO	0.999	NO	MM
8	8	180719G3_9	Standard	45.500	3.99	22376.348	12535.142	51.232	45.4	-0.3	NO	0.999	NO	MM
9	9	180719G3_10	Standard	68.200	3.98	32770.844	11870.359	79.233	70.2	2.9	NO	0.999	NO	MM
10	10	180719G3_11	Standard	91.000	3.99	42192.352	11725.865	103.269	91.5	0.5	NO	0.999	NO	MM

Vista Analytical Laboratory

Dataset: X:\G1.PRO\Results\2018\180719G3\180719G3-CRV.qld

Last Altered: Friday, July 20, 2018 13:11:24 Pacific Daylight Time
Printed: Friday, July 20, 2018 13:11:52 Pacific Daylight Time

Compound name: PFOA
Coefficient of Determination: R^2 = 0.998834
Calibration curve: 0.729381 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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	180719G3_2	Standard	0.250	4.29	181.478	9607.558	0.189	0.3	3.6	NO	0.999	NO	MM
2	2	180719G3_3	Standard	0.500	4.28	345.007	10003.517	0.345	0.5	-5.4	NO	0.999	NO	MM
3	3	180719G3_4	Standard	1.000	4.28	639.844	9809.153	0.652	0.9	-10.6	NO	0.999	NO	MM
4	4	180719G3_5	Standard	2.000	4.29	1299.033	9349.009	1.389	1.9	-4.7	NO	0.999	NO	bb
5	5	180719G3_6	Standard	5.000	4.29	3271.357	10233.146	3.197	4.4	-12.3	NO	0.999	NO	bb
6	6	180719G3_7	Standard	10.000	4.28	6557.385	8950.334	7.326	10.0	0.4	NO	0.999	NO	bd
7	7	180719G3_8	Standard	25.000	4.29	16890.068	9857.262	17.135	23.5	-6.0	NO	0.999	NO	bd
8	8	180719G3_9	Standard	50.000	4.28	32798.785	8593.062	38.169	52.3	4.7	NO	0.999	NO	bd
9	9	180719G3_10	Standard	75.000	4.28	48639.875	8955.572	54.312	74.5	-0.7	NO	0.999	NO	bb
10	10	180719G3_11	Standard	100.000	4.28	63988.535	8728.923	73.306	100.5	0.5	NO	0.999	NO	bb

Compound name: PFNA
Coefficient of Determination: R^2 = 0.998143
Calibration curve: 0.871051 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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	180719G3_2	Standard	0.250	4.63	162.474	9607.558	0.169	0.2	-22.3	NO	0.998	NO	MM
2	2	180719G3_3	Standard	0.500	4.65	391.919	10003.517	0.392	0.4	-10.0	NO	0.998	NO	MM
3	3	180719G3_4	Standard	1.000	4.65	782.808	9809.153	0.798	0.9	-8.4	NO	0.998	NO	MM
4	4	180719G3_5	Standard	2.000	4.64	1517.712	9349.009	1.623	1.9	-6.8	NO	0.998	NO	MM
5	5	180719G3_6	Standard	5.000	4.64	4229.869	10233.146	4.133	4.7	-5.1	NO	0.998	NO	bb
6	6	180719G3_7	Standard	10.000	4.64	8167.393	8950.334	9.125	10.5	4.8	NO	0.998	NO	bb
7	7	180719G3_8	Standard	25.000	4.64	19446.463	9857.262	19.728	22.6	-9.4	NO	0.998	NO	bd
8	8	180719G3_9	Standard	50.000	4.64	39672.789	8593.062	46.168	53.0	6.0	NO	0.998	NO	bd
9	9	180719G3_10	Standard	75.000	4.64	58721.949	8955.572	65.570	75.3	0.4	NO	0.998	NO	bd
10	10	180719G3_11	Standard	100.000	4.64	75406.766	8728.923	86.387	99.2	-0.8	NO	0.998	NO	bd

Dataset: X:\G1.PRO\Results\2018\180719G3\180719G3-CRV.qld

Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
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Compound name: PFOS
Coefficient of Determination: R^2 = 0.996082
Calibration curve: 0.369565 * x
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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	180719G3_2	Standard	0.232	4.72	12.458	12524.291	0.029	0.1	-66.7	NO	0.996	NO	MMX
2	2	180719G3_3	Standard	0.464	4.70	43.853	13531.768	0.093	0.3	-45.8	NO	0.996	NO	MM
3	3	180719G3_4	Standard	0.928	4.71	116.958	13253.347	0.253	0.7	-26.2	NO	0.996	NO	MM
4	4	180719G3_5	Standard	1.860	4.70	225.042	13367.935	0.483	1.3	-29.7	NO	0.996	NO	MM
5	5	180719G3_6	Standard	4.640	4.71	708.145	13104.011	1.551	4.2	-9.6	NO	0.996	NO	MM
6	6	180719G3_7	Standard	9.240	4.71	1384.264	12817.154	3.100	8.4	-9.2	NO	0.996	NO	MM
7	7	180719G3_8	Standard	23.100	4.71	3532.127	13057.182	7.764	21.0	-9.1	NO	0.996	NO	MM
8	8	180719G3_9	Standard	46.200	4.71	7234.786	12535.142	16.564	44.8	-3.0	NO	0.996	NO	MM
9	9	180719G3_10	Standard	69.400	4.71	10799.025	11870.359	26.110	70.6	1.8	NO	0.996	NO	MM
10	10	180719G3_11	Standard	92.500	4.71	14649.923	11725.865	35.857	97.0	4.9	NO	0.996	NO	MM

Compound name: PFDA
Coefficient of Determination: R^2 = 0.997051
Calibration curve: 0.871492 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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	180719G3_2	Standard	0.250	4.93	246.374	9607.558	0.256	0.3	17.7	NO	0.997	NO	bb
2	2	180719G3_3	Standard	0.500	4.93	446.883	10003.517	0.447	0.5	2.5	NO	0.997	NO	MM
3	3	180719G3_4	Standard	1.000	4.93	805.683	9809.153	0.821	0.9	-5.8	NO	0.997	NO	MM
4	4	180719G3_5	Standard	2.000	4.94	1452.820	9349.009	1.554	1.8	-10.8	NO	0.997	NO	MM
5	5	180719G3_6	Standard	5.000	4.93	4209.125	10233.146	4.113	4.7	-5.6	NO	0.997	NO	bd
6	6	180719G3_7	Standard	10.000	4.93	7819.442	8950.334	8.736	10.0	0.2	NO	0.997	NO	MM
7	7	180719G3_8	Standard	25.000	4.93	19695.555	9857.262	19.981	22.9	-8.3	NO	0.997	NO	bb
8	8	180719G3_9	Standard	50.000	4.94	40205.723	8593.062	46.789	53.7	7.4	NO	0.997	NO	bb
9	9	180719G3_10	Standard	75.000	4.93	55569.367	8955.572	62.050	71.2	-5.1	NO	0.997	NO	bb
10	10	180719G3_11	Standard	100.000	4.93	78094.141	8728.923	89.466	102.7	2.7	NO	0.997	NO	bb

Dataset: X:\G1.PRO\Results\2018\180719G3\180719G3-CRV.qld

Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
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Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.998142
Calibration curve: 1.15659 * x
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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 180719G3_2	Standard	0.250	5.05	76.018	14900.215	0.204	0.2	-29.4	NO	0.998	NO	MMX
2	2 180719G3_3	Standard	0.500	5.05	206.538	14917.943	0.554	0.5	-4.2	NO	0.998	NO	MM
3	3 180719G3_4	Standard	1.000	5.05	459.121	15115.812	1.215	1.1	5.0	NO	0.998	NO	MM
4	4 180719G3_5	Standard	2.000	5.04	758.691	16168.233	1.877	1.6	-18.9	NO	0.998	NO	MM
5	5 180719G3_6	Standard	5.000	5.05	2024.494	15822.617	5.118	4.4	-11.5	NO	0.998	NO	MM
6	6 180719G3_7	Standard	10.000	5.05	4261.750	16013.813	10.645	9.2	-8.0	NO	0.998	NO	MM
7	7 180719G3_8	Standard	25.000	5.05	11640.010	15282.137	30.467	26.3	5.4	NO	0.998	NO	MM
8	8 180719G3_9	Standard	50.000	5.05	20775.996	13850.654	60.000	51.9	3.8	NO	0.998	NO	MM
9	9 180719G3_10	Standard	75.000	5.05	33719.148	15249.671	88.446	76.5	2.0	NO	0.998	NO	MM
10	10 180719G3_11	Standard	100.000	5.05	44018.918	15689.659	112.224	97.0	-3.0	NO	0.998	NO	MM

Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.994002
Calibration curve: 0.997342 * x
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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 180719G3_2	Standard	0.250	5.17	74.608	14900.215	0.200	0.2	-19.7	NO	0.994	NO	MMX
2	2 180719G3_3	Standard	0.500	5.17	165.411	14917.943	0.444	0.4	-11.1	NO	0.994	NO	bbX
3	3 180719G3_4	Standard	1.000	5.17	233.848	15115.812	0.619	0.6	-38.0	NO	0.994	NO	MM
4	4 180719G3_5	Standard	2.000	5.17	681.068	16168.233	1.685	1.7	-15.5	NO	0.994	NO	MM
5	5 180719G3_6	Standard	5.000	5.17	2023.786	15822.617	5.116	5.1	2.6	NO	0.994	NO	MM
6	6 180719G3_7	Standard	10.000	5.17	3527.098	16013.813	8.810	8.8	-11.7	NO	0.994	NO	MM
7	7 180719G3_8	Standard	25.000	5.17	9761.256	15282.137	25.549	25.6	2.5	NO	0.994	NO	MM
8	8 180719G3_9	Standard	50.000	5.17	19588.977	13850.654	56.572	56.7	13.4	NO	0.994	NO	MM
9	9 180719G3_10	Standard	75.000	5.17	27387.066	15249.671	71.836	72.0	-4.0	NO	0.994	NO	MM
10	10 180719G3_11	Standard	100.000	5.17	38086.531	15689.659	97.100	97.4	-2.6	NO	0.994	NO	MM

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Compound name: PFUnA
Coefficient of Determination: R^2 = 0.998638
Calibration curve: 0.960831 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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 180719G3_2	Standard	0.250	5.18	153.971	9607.558	0.160	0.2	-33.3	NO	0.999	NO	MM
2	2 180719G3_3	Standard	0.500	5.17	427.723	10003.517	0.428	0.4	-11.0	NO	0.999	NO	MM
3	3 180719G3_4	Standard	1.000	5.18	971.202	9809.153	0.990	1.0	3.0	NO	0.999	NO	MM
4	4 180719G3_5	Standard	2.000	5.18	1726.699	9349.009	1.847	1.9	-3.9	NO	0.999	NO	bb
5	5 180719G3_6	Standard	5.000	5.18	4548.829	10233.146	4.445	4.6	-7.5	NO	0.999	NO	MM
6	6 180719G3_7	Standard	10.000	5.18	8827.076	8950.334	9.862	10.3	2.6	NO	0.999	NO	bd
7	7 180719G3_8	Standard	25.000	5.18	22062.658	9857.262	22.382	23.3	-6.8	NO	0.999	NO	bb
8	8 180719G3_9	Standard	50.000	5.18	43424.051	8593.062	50.534	52.6	5.2	NO	0.999	NO	bd
9	9 180719G3_10	Standard	75.000	5.17	63418.094	8955.572	70.814	73.7	-1.7	NO	0.999	NO	bb
10	10 180719G3_11	Standard	100.000	5.17	84461.789	8728.923	96.761	100.7	0.7	NO	0.999	NO	bb

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.998142
Calibration curve: 0.146969 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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 180719G3_2	Standard	0.250	5.40	13.889	9607.558	0.014	0.1	-60.7	NO	0.998	NO	MMX
2	2 180719G3_3	Standard	0.500	5.41	73.771	10003.517	0.074	0.5	0.4	NO	0.998	NO	MM
3	3 180719G3_4	Standard	1.000	5.42	115.337	9809.153	0.118	0.8	-20.0	NO	0.998	NO	bb
4	4 180719G3_5	Standard	2.000	5.41	279.361	9349.009	0.299	2.0	1.7	NO	0.998	NO	bb
5	5 180719G3_6	Standard	5.000	5.41	669.160	10233.146	0.654	4.4	-11.0	NO	0.998	NO	MM
6	6 180719G3_7	Standard	10.000	5.41	1424.345	8950.334	1.591	10.8	8.3	NO	0.998	NO	bb
7	7 180719G3_8	Standard	25.000	5.41	3396.192	9857.262	3.445	23.4	-6.2	NO	0.998	NO	bd
8	8 180719G3_9	Standard	50.000	5.40	6682.467	8593.062	7.777	52.9	5.8	NO	0.998	NO	bb
9	9 180719G3_10	Standard	75.000	5.41	9891.307	8955.572	11.045	75.2	0.2	NO	0.998	NO	bd
10	10 180719G3_11	Standard	100.000	5.41	12621.056	8728.923	14.459	98.4	-1.6	NO	0.998	NO	bd

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Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.998349
Calibration curve: 0.90204 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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 180719G3_2	Standard	0.250	5.61	191.945	9607.558	0.200	0.2	-11.4	NO	0.998	NO	bb
2	2 180719G3_3	Standard	0.500	5.62	387.261	10003.517	0.387	0.4	-14.2	NO	0.998	NO	bb
3	3 180719G3_4	Standard	1.000	5.62	810.357	9809.153	0.826	0.9	-8.4	NO	0.998	NO	bd
4	4 180719G3_5	Standard	2.000	5.62	1478.241	9349.009	1.581	1.8	-12.4	NO	0.998	NO	bd
5	5 180719G3_6	Standard	5.000	5.62	4290.086	10233.146	4.192	4.6	-7.0	NO	0.998	NO	bd
6	6 180719G3_7	Standard	10.000	5.62	8479.044	8950.334	9.473	10.5	5.0	NO	0.998	NO	bb
7	7 180719G3_8	Standard	25.000	5.62	20581.932	9857.262	20.880	23.1	-7.4	NO	0.998	NO	bd
8	8 180719G3_9	Standard	50.000	5.62	40755.762	8593.062	47.429	52.6	5.2	NO	0.998	NO	bd
9	9 180719G3_10	Standard	75.000	5.62	59213.352	8955.572	66.119	73.3	-2.3	NO	0.998	NO	bd
10	10 180719G3_11	Standard	100.000	5.62	79726.117	8728.923	91.336	101.3	1.3	NO	0.998	NO	bb

Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.997347
Calibration curve: 0.926257 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, 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 180719G3_2	Standard	0.250	5.80	218.061	9607.558	0.227	0.2	-2.0	NO	0.997	NO	MM
2	2 180719G3_3	Standard	0.500	5.80	387.098	10003.517	0.387	0.4	-16.4	NO	0.997	NO	bb
3	3 180719G3_4	Standard	1.000	5.80	812.033	9809.153	0.828	0.9	-10.6	NO	0.997	NO	bd
4	4 180719G3_5	Standard	2.000	5.80	1446.245	9349.009	1.547	1.7	-16.5	NO	0.997	NO	bb
5	5 180719G3_6	Standard	5.000	5.81	4341.288	10233.146	4.242	4.6	-8.4	NO	0.997	NO	bd
6	6 180719G3_7	Standard	10.000	5.81	8295.102	8950.334	9.268	10.0	0.1	NO	0.997	NO	bd
7	7 180719G3_8	Standard	25.000	5.81	20309.916	9857.262	20.604	22.2	-11.0	NO	0.997	NO	bb
8	8 180719G3_9	Standard	50.000	5.81	42703.285	8593.062	49.695	53.7	7.3	NO	0.997	NO	bd
9	9 180719G3_10	Standard	75.000	5.80	62209.750	8955.572	69.465	75.0	-0.0	NO	0.997	NO	bd
10	10 180719G3_11	Standard	100.000	5.81	80889.742	8728.923	92.669	100.0	0.0	NO	0.997	NO	bb

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Compound name: 13C2-PFHxA
Response Factor: 0.752548
RRF SD: 0.0282691, Relative SD: 3.75644
Response type: Internal Std (Ref 18), 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	180719G3_2	Standard	10.000	3.34	7295.154	9607.558	7.593	10.1	0.9	NO		NO	bb
2	2	180719G3_3	Standard	10.000	3.34	7414.530	10003.517	7.412	9.8	-1.5	NO		NO	bd
3	3	180719G3_4	Standard	10.000	3.35	6825.012	9809.153	6.958	9.2	-7.5	NO		NO	bb
4	4	180719G3_5	Standard	10.000	3.35	7061.073	9349.009	7.553	10.0	0.4	NO		NO	bd
5	5	180719G3_6	Standard	10.000	3.35	7502.231	10233.146	7.331	9.7	-2.6	NO		NO	bb
6	6	180719G3_7	Standard	10.000	3.35	7030.619	8950.334	7.855	10.4	4.4	NO		NO	bd
7	7	180719G3_8	Standard	10.000	3.35	7291.253	9857.262	7.397	9.8	-1.7	NO		NO	bb
8	8	180719G3_9	Standard	10.000	3.35	6842.353	8593.062	7.963	10.6	5.8	NO		NO	bb
9	9	180719G3_10	Standard	10.000	3.34	6726.779	8955.572	7.511	10.0	-0.2	NO		NO	bd
10	10	180719G3_11	Standard	10.000	3.35	6705.550	8728.923	7.682	10.2	2.1	NO		NO	bb

Compound name: 13C2-PFDA
Response Factor: 1.02262
RRF SD: 0.0455983, Relative SD: 4.45898
Response type: Internal Std (Ref 18), 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	180719G3_2	Standard	10.000	4.94	10188.513	9607.558	10.605	10.4	3.7	NO		NO	bd
2	2	180719G3_3	Standard	10.000	4.93	10494.740	10003.517	10.491	10.3	2.6	NO		NO	bd
3	3	180719G3_4	Standard	10.000	4.93	10018.575	9809.153	10.213	10.0	-0.1	NO		NO	bd
4	4	180719G3_5	Standard	10.000	4.93	9721.604	9349.009	10.399	10.2	1.7	NO		NO	bb
5	5	180719G3_6	Standard	10.000	4.93	9540.815	10233.146	9.323	9.1	-8.8	NO		NO	bb
6	6	180719G3_7	Standard	10.000	4.93	9415.412	8950.334	10.520	10.3	2.9	NO		NO	bd
7	7	180719G3_8	Standard	10.000	4.93	9558.210	9857.262	9.697	9.5	-5.2	NO		NO	bd
8	8	180719G3_9	Standard	10.000	4.93	9224.771	8593.062	10.735	10.5	5.0	NO		NO	bd
9	9	180719G3_10	Standard	10.000	4.93	8817.560	8955.572	9.846	9.6	-3.7	NO		NO	bb
10	10	180719G3_11	Standard	10.000	4.93	9107.061	8728.923	10.433	10.2	2.0	NO		NO	bd

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Compound name: d5-N-EtFOSAA
Response Factor: 1.2642
RRF SD: 0.0944702, Relative SD: 7.47271
Response type: Internal Std (Ref 20), 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	180719G3_2	Standard	40.000	5.17	19521.926	14900.215	52.407	41.5	3.6	NO		NO	bd
2	2	180719G3_3	Standard	40.000	5.16	20995.799	14917.943	56.297	44.5	11.3	NO		NO	MM
3	3	180719G3_4	Standard	40.000	5.16	20424.537	15115.812	54.048	42.8	6.9	NO		NO	bb
4	4	180719G3_5	Standard	40.000	5.17	19734.184	16168.233	48.822	38.6	-3.5	NO		NO	bb
5	5	180719G3_6	Standard	40.000	5.16	18281.092	15822.617	46.215	36.6	-8.6	NO		NO	MM
6	6	180719G3_7	Standard	40.000	5.17	20019.535	16013.813	50.006	39.6	-1.1	NO		NO	bd
7	7	180719G3_8	Standard	40.000	5.17	20064.123	15282.137	52.517	41.5	3.9	NO		NO	bb
8	8	180719G3_9	Standard	40.000	5.16	18369.805	13850.654	53.051	42.0	4.9	NO		NO	bd
9	9	180719G3_10	Standard	40.000	5.16	18409.029	15249.671	48.287	38.2	-4.5	NO		NO	bb
10	10	180719G3_11	Standard	40.000	5.16	17271.014	15689.659	44.032	34.8	-12.9	NO		NO	bd

Compound name: 13C2-PFOA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 18), 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	180719G3_2	Standard	10.000	4.28	9607.558	9607.558	10.000	10.0	0.0	NO		NO	bd
2	2	180719G3_3	Standard	10.000	4.28	10003.517	10003.517	10.000	10.0	0.0	NO		NO	bb
3	3	180719G3_4	Standard	10.000	4.28	9809.153	9809.153	10.000	10.0	0.0	NO		NO	MM
4	4	180719G3_5	Standard	10.000	4.28	9349.009	9349.009	10.000	10.0	0.0	NO		NO	MM
5	5	180719G3_6	Standard	10.000	4.29	10233.146	10233.146	10.000	10.0	0.0	NO		NO	bd
6	6	180719G3_7	Standard	10.000	4.28	8950.334	8950.334	10.000	10.0	0.0	NO		NO	bd
7	7	180719G3_8	Standard	10.000	4.29	9857.262	9857.262	10.000	10.0	0.0	NO		NO	bb
8	8	180719G3_9	Standard	10.000	4.28	8593.062	8593.062	10.000	10.0	0.0	NO		NO	bb
9	9	180719G3_10	Standard	10.000	4.28	8955.572	8955.572	10.000	10.0	0.0	NO		NO	bd
10	10	180719G3_11	Standard	10.000	4.28	8728.923	8728.923	10.000	10.0	0.0	NO		NO	bd

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Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 19), 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	180719G3_2	Standard	28.700	4.71	12524.291	12524.291	28.700	28.7	0.0	NO		NO	bd
2	2	180719G3_3	Standard	28.700	4.71	13531.768	13531.768	28.700	28.7	0.0	NO		NO	bb
3	3	180719G3_4	Standard	28.700	4.71	13253.347	13253.347	28.700	28.7	0.0	NO		NO	bb
4	4	180719G3_5	Standard	28.700	4.71	13367.935	13367.935	28.700	28.7	0.0	NO		NO	bb
5	5	180719G3_6	Standard	28.700	4.71	13104.011	13104.011	28.700	28.7	0.0	NO		NO	bd
6	6	180719G3_7	Standard	28.700	4.71	12817.154	12817.154	28.700	28.7	0.0	NO		NO	bd
7	7	180719G3_8	Standard	28.700	4.71	13057.182	13057.182	28.700	28.7	0.0	NO		NO	bb
8	8	180719G3_9	Standard	28.700	4.71	12535.142	12535.142	28.700	28.7	0.0	NO		NO	bd
9	9	180719G3_10	Standard	28.700	4.71	11870.359	11870.359	28.700	28.7	0.0	NO		NO	bd
10	10	180719G3_11	Standard	28.700	4.71	11725.865	11725.865	28.700	28.7	0.0	NO		NO	bd

Compound name: d3-N-MeFOSAA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 20), 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	180719G3_2	Standard	40.000	5.04	14900.215	14900.215	40.000	40.0	0.0	NO		NO	bb
2	2	180719G3_3	Standard	40.000	5.04	14917.943	14917.943	40.000	40.0	0.0	NO		NO	bb
3	3	180719G3_4	Standard	40.000	5.04	15115.812	15115.812	40.000	40.0	0.0	NO		NO	bd
4	4	180719G3_5	Standard	40.000	5.04	16168.233	16168.233	40.000	40.0	0.0	NO		NO	bd
5	5	180719G3_6	Standard	40.000	5.04	15822.617	15822.617	40.000	40.0	0.0	NO		NO	bd
6	6	180719G3_7	Standard	40.000	5.04	16013.813	16013.813	40.000	40.0	0.0	NO		NO	bd
7	7	180719G3_8	Standard	40.000	5.04	15282.137	15282.137	40.000	40.0	0.0	NO		NO	bd
8	8	180719G3_9	Standard	40.000	5.05	13850.654	13850.654	40.000	40.0	0.0	NO		NO	bd
9	9	180719G3_10	Standard	40.000	5.04	15249.671	15249.671	40.000	40.0	0.0	NO		NO	bd
10	10	180719G3_11	Standard	40.000	5.04	15689.659	15689.659	40.000	40.0	0.0	NO		NO	bb

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN 945**
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Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0719.mdb 20 Jul 2018 10:54:08
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180719G3_2, Date: 19-Jul-2018, Time: 15:03:28, ID: ST180719G3-1 PFC CS-4 537 18G1801, Description: PFC CS-4 537 18G1801

	#	Name	IS#	CoD	CoD Flag	%RSD
1	1	PFBS	19	0.9993	NO	
2	2	PFHxA	18	0.9984	NO	
3	3	PFHpA	18	0.9989	NO	
4	4	PFHxS	19	0.9991	NO	
5	5	PFOA	18	0.9988	NO	
6	6	PFNA	18	0.9981	NO	
7	7	PFOS	19	0.9961	NO	
8	8	PFDA	18	0.9971	NO	
9	9	N-MeFOSAA	20	0.9981	NO	
10	10	N-EtFOSAA	20	0.9940	NO	
11	11	PFUnA	18	0.9986	NO	
12	12	PFDoA	18	0.9981	NO	
13	13	PFTrDA	18	0.9983	NO	
14	14	PFTeDA	18	0.9973	NO	
15	15	13C2-PFHxA	18		NO	3.756
16	16	13C2-PFDA	18		NO	4.459
17	17	d5-N-EtFOSAA	20		NO	7.473
18	18	13C2-PFOA	18		NO	0.000
19	19	13C4-PFOS	19		NO	0.000
20	20	d3-N-MeFOSAA	20		NO	0.000

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 20, 2018 11:22:13 Pacific Daylight Time
Printed: Friday, July 20, 2018 11:23:00 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0719.mdb 20 Jul 2018 10:54:08
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 10:51:38

Compound name: PFBS

	# Name	ID	Acq.Date	Acq.Time
1	1 180719G3_1	IPA	19-Jul-18	14:50:42
2	2 180719G3_2	ST180719G3-1 PFC CS-4 537 18G1801	19-Jul-18	15:03:28
3	3 180719G3_3	ST180719G3-2 PFC CS-3 537 18G1802	19-Jul-18	15:16:17
4	4 180719G3_4	ST180719G3-3 PFC CS-2 537 18G1803	19-Jul-18	15:29:06
5	5 180719G3_5	ST180719G3-4 PFC CS-1 537 18G1804	19-Jul-18	15:41:56
6	6 180719G3_6	ST180719G3-5 PFC CS0 537 18G1805	19-Jul-18	15:54:41
7	7 180719G3_7	ST180719G3-6 PFC CS1 537 18G1806	19-Jul-18	16:07:29
8	8 180719G3_8	ST180719G3-7 PFC CS2 537 18G1807	19-Jul-18	16:20:19
9	9 180719G3_9	ST180719G3-8 PFC CS3 537 18G1808	19-Jul-18	16:33:10
10	10 180719G3_10	ST180719G3-9 PFC CS4 537 18G1809	19-Jul-18	16:45:58
11	11 180719G3_11	ST180719G3-10 PFC CS5 537 18G1810	19-Jul-18	16:58:48
12	12 180719G3_12	IPA	19-Jul-18	17:11:52
13	13 180719G3_13	ST180719G3-1 PFC ICV 537 18G1811	19-Jul-18	17:24:26
14	14 180719G3_14	IPA	19-Jul-18	17:37:16

ICAL

Compound 18: 13C2-PFOA

high	10233.15	RPD
low	8593.062	17.42

	ID	Name	Type	Std. Cor RT		Area	IS Area	Response	Primary Flags
1	ST180719G3-1 PFC CS-4 537 18G1801	180719G3_2	Standard	10	4.28	9607.558	9607.558	10	MM
2	ST180719G3-2 PFC CS-3 537 18G1802	180719G3_3	Standard	10	4.28	10003.52	10003.52	10	MM
3	ST180719G3-3 PFC CS-2 537 18G1803	180719G3_4	Standard	10	4.28	9767.989	9767.989	10	MM
4	ST180719G3-4 PFC CS-1 537 18G1804	180719G3_5	Standard	10	4.28	9289.855	9289.855	10	MM
5	ST180719G3-5 PFC CS0 537 18G1805	180719G3_6	Standard	10	4.29	10233.15	10233.15	10	MM
6	ST180719G3-6 PFC CS1 537 18G1806	180719G3_7	Standard	10	4.28	8950.334	8950.334	10	MM
7	ST180719G3-7 PFC CS2 537 18G1807	180719G3_8	Standard	10	4.29	9857.262	9857.262	10	MM
8	ST180719G3-8 PFC CS3 537 18G1808	180719G3_9	Standard	10	4.28	8593.062	8593.062	10	MM
9	ST180719G3-9 PFC CS4 537 18G1809	180719G3_10	Standard	10	4.28	8955.572	8955.572	10	MM
10	ST180719G3-10 PFC CS5 537 18G1810	180719G3_11	Standard	10	4.28	8728.923	8728.923	10	MM
							average		
							9398.72		

Compound 19: 13C4-PFOS

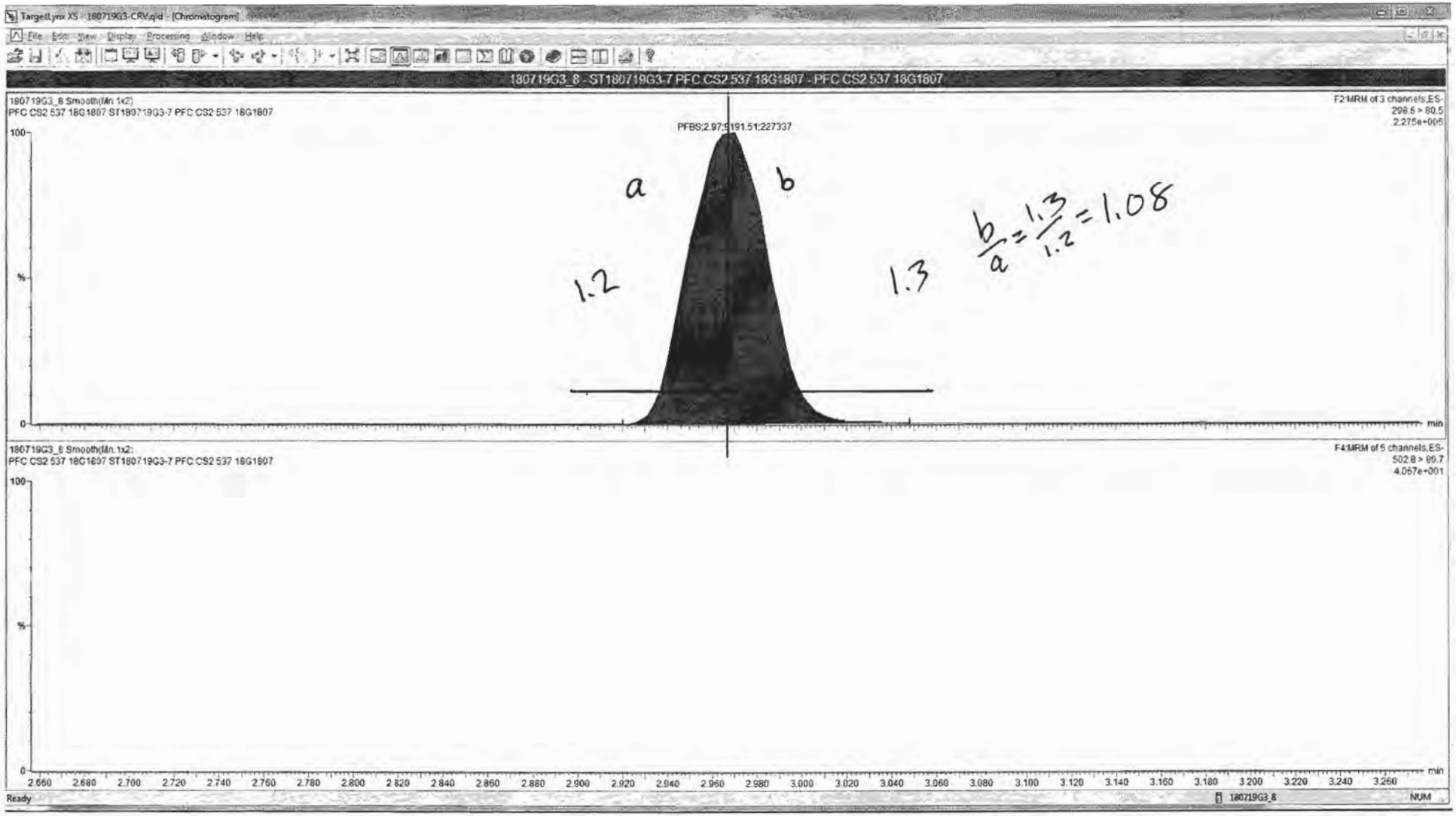
high	13531.77	RPD
low	11725.87	14.30

	ID	Name	Type	Std. Cor RT		Area	IS Area	Response	Primary Flags
1	ST180719G3-1 PFC CS-4 537 18G1801	180719G3_2	Standard	28.7	4.71	12524.29	12524.29	28.7	bd
2	ST180719G3-2 PFC CS-3 537 18G1802	180719G3_3	Standard	28.7	4.71	13531.77	13531.77	28.7	bb
3	ST180719G3-3 PFC CS-2 537 18G1803	180719G3_4	Standard	28.7	4.71	13253.35	13253.35	28.7	bb
4	ST180719G3-4 PFC CS-1 537 18G1804	180719G3_5	Standard	28.7	4.71	13367.94	13367.94	28.7	bb
5	ST180719G3-5 PFC CS0 537 18G1805	180719G3_6	Standard	28.7	4.71	13104.01	13104.01	28.7	bd
6	ST180719G3-6 PFC CS1 537 18G1806	180719G3_7	Standard	28.7	4.71	12817.15	12817.15	28.7	bd
7	ST180719G3-7 PFC CS2 537 18G1807	180719G3_8	Standard	28.7	4.71	13057.18	13057.18	28.7	bb
8	ST180719G3-8 PFC CS3 537 18G1808	180719G3_9	Standard	28.7	4.71	12535.14	12535.14	28.7	bd
9	ST180719G3-9 PFC CS4 537 18G1809	180719G3_10	Standard	28.7	4.71	11870.36	11870.36	28.7	bd
10	ST180719G3-10 PFC CS5 537 18G1810	180719G3_11	Standard	28.7	4.71	11725.87	11725.87	28.7	bd
							average		
							12778.71		

Compound 20: d3-N-MeFOSAA

high	16168.23	RPD
low	13850.65	15.44

	ID	Name	Type	Std. Cor RT		Area	IS Area	Response	Primary Flags
1	ST180719G3-1 PFC CS-4 537 18G1801	180719G3_2	Standard	40	5.04	14900.22	14900.22	40	bb
2	ST180719G3-2 PFC CS-3 537 18G1802	180719G3_3	Standard	40	5.04	14917.94	14917.94	40	bb
3	ST180719G3-3 PFC CS-2 537 18G1803	180719G3_4	Standard	40	5.04	15115.81	15115.81	40	bd
4	ST180719G3-4 PFC CS-1 537 18G1804	180719G3_5	Standard	40	5.04	16168.23	16168.23	40	bd
5	ST180719G3-5 PFC CS0 537 18G1805	180719G3_6	Standard	40	5.04	15822.62	15822.62	40	bd
6	ST180719G3-6 PFC CS1 537 18G1806	180719G3_7	Standard	40	5.04	16013.81	16013.81	40	bd
7	ST180719G3-7 PFC CS2 537 18G1807	180719G3_8	Standard	40	5.04	15282.14	15282.14	40	bd
8	ST180719G3-8 PFC CS3 537 18G1808	180719G3_9	Standard	40	5.05	13850.65	13850.65	40	bd
9	ST180719G3-9 PFC CS4 537 18G1809	180719G3_10	Standard	40	5.04	15249.67	15249.67	40	bd
10	ST180719G3-10 PFC CS5 537 18G1810	180719G3_11	Standard	40	5.04	15689.66	15689.66	40	bb
							average		
							15301.08		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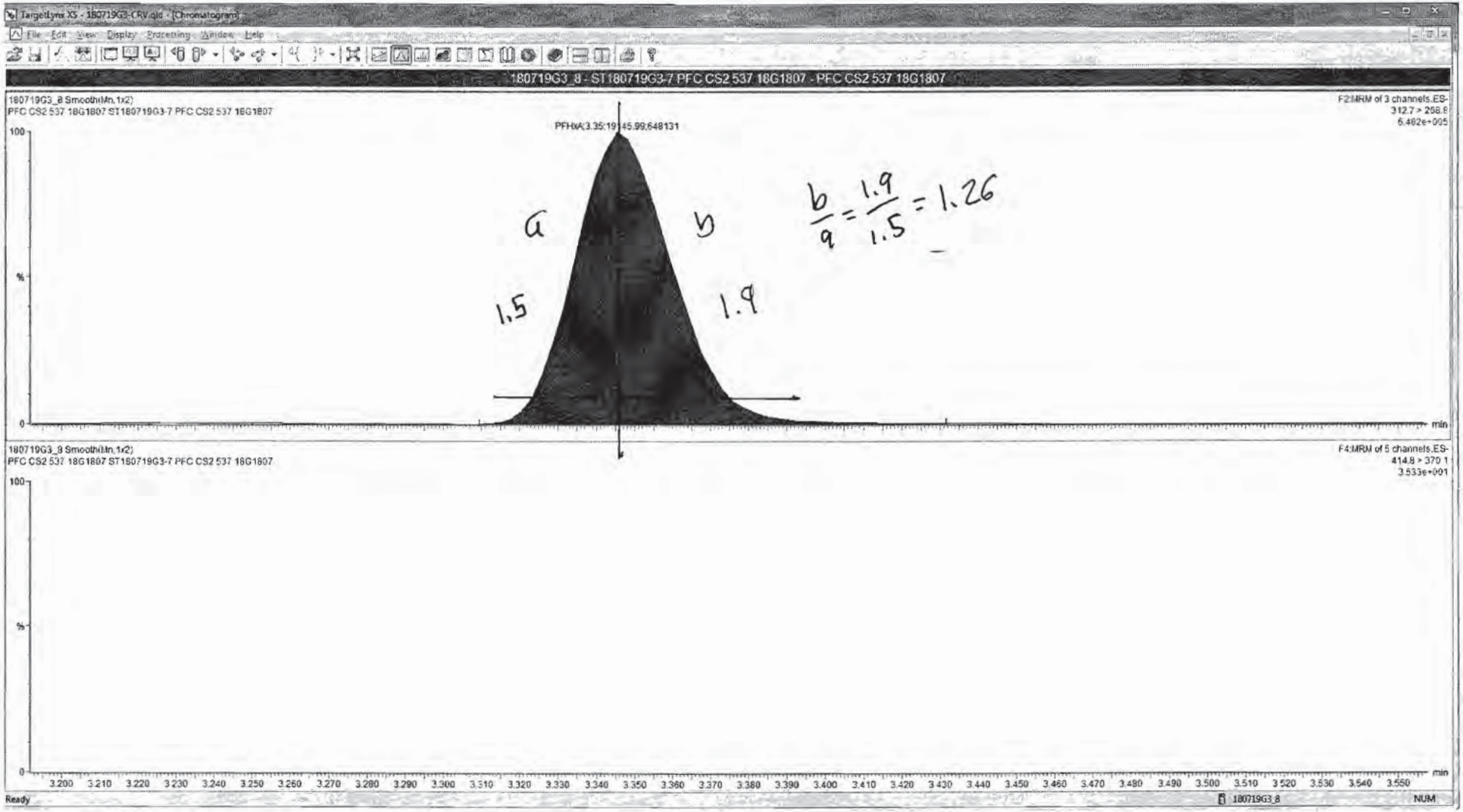
File Edit View Display Processing Window Help
180719G3_8 - ST180719G3-7 PFC CS2 537 18G1807 - PFC CS2 537 18G1807
180719G3_8 Smooth(Mn,1x2)
PFC CS2 537 18G1807 ST180719G3-7 PFC CS2 537 18G1807
F2:MRM of 3 channels,ES-
298.6 > 80.5
2.275e+005
PFBS;2.97;9191.51;227337
a
b
1.2
1.3
b/a = 1.3/1.2 = 1.08
100
%
0
min
180719G3_8 Smooth(Mn,1x2)
PFC CS2 537 18G1807 ST180719G3-7 PFC CS2 537 18G1807
F4:MRM of 5 channels,ES-
502.8 > 99.7
4.067e+001
2.660 2.680 2.700 2.720 2.740 2.760 2.780 2.800 2.820 2.840 2.860 2.880 2.900 2.920 2.940 2.960 2.980 3.000 3.020 3.040 3.060 3.080 3.100 3.120 3.140 3.160 3.180 3.200 3.220 3.240 3.260
Ready
180719G3_8
NUM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File Edit View Display Processing Window Help
180719G3_8 - ST180719G3-7 PFC CS2 537 18G1807 - PFC CS2 537 18G1807
180719G3_8 Smooth(Mn,1x2)
PFC CS2 537 18G1807 ST180719G3-7 PFC CS2 537 18G1807
F2:MRM of 3 channels,ES-
312.7 > 258.8
6.482e+005
PFHxA(3.35:19:45.99,648131
a
b
1.5
1.9
b/a = 1.9/1.5 = 1.26
F4:MRM of 5 channels,ES-
414.8 > 370.1
3.533e+001
Ready
180719G3_8
NUM

Dataset: X:\G1.PRO\Results\2018\180719G3\180719G3-CRV.qld

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Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

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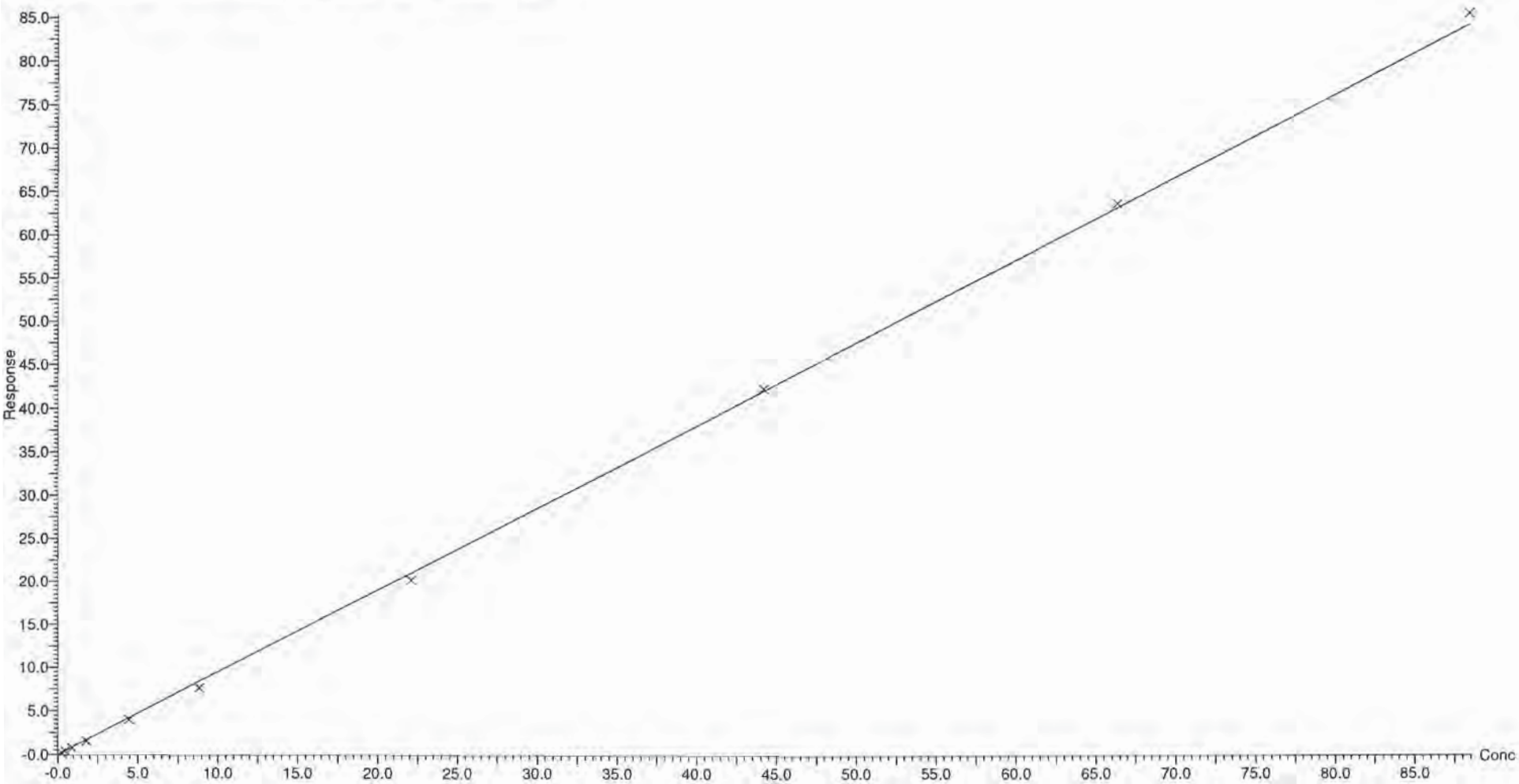
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Compound name: PFBS
Coefficient of Determination: R^2 = 0.999254
Calibration curve: 0.950953 * x
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



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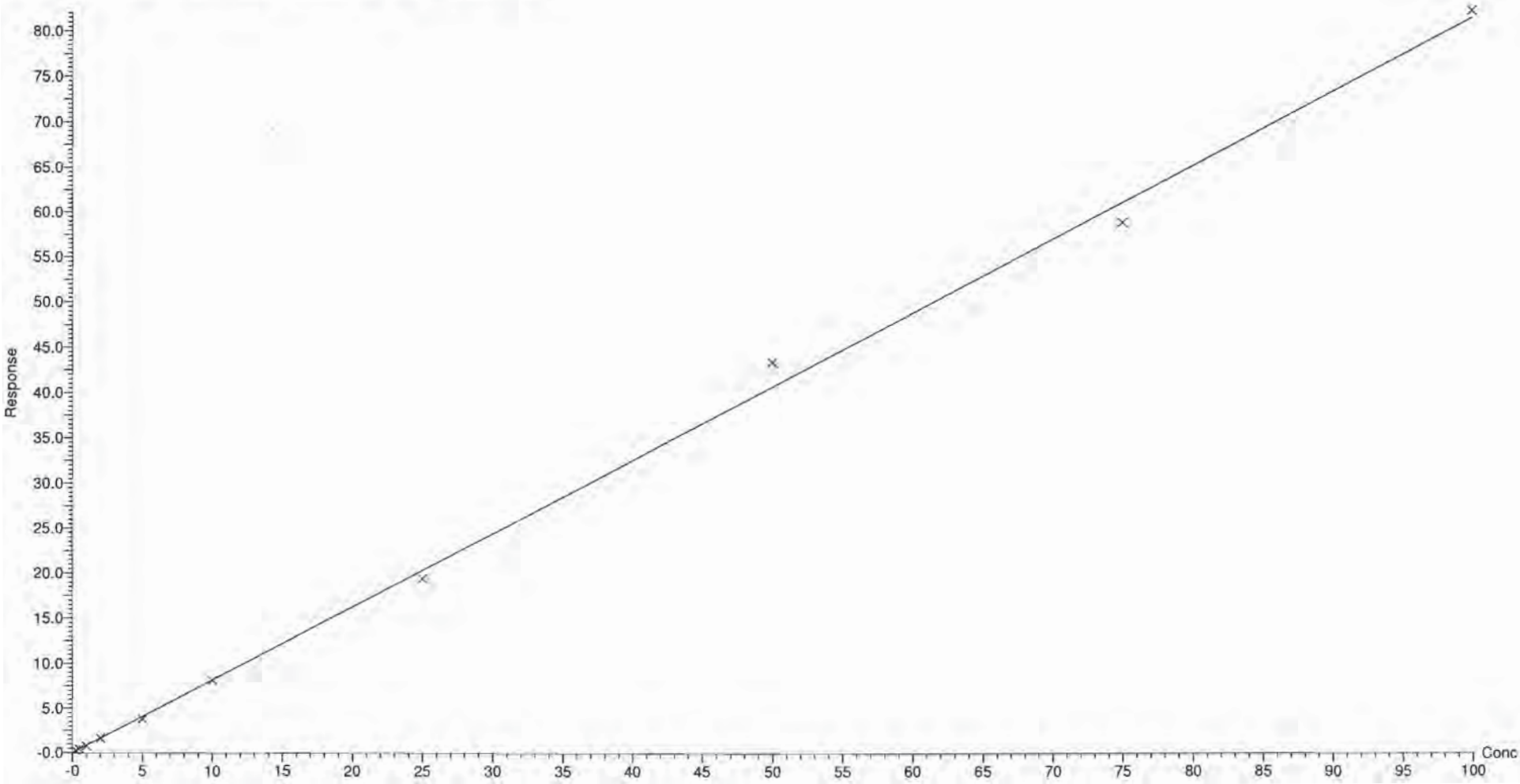
Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

Compound name: PFHxA
Coefficient of Determination: R^2 = 0.998365
Calibration curve: 0.813355 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



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Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
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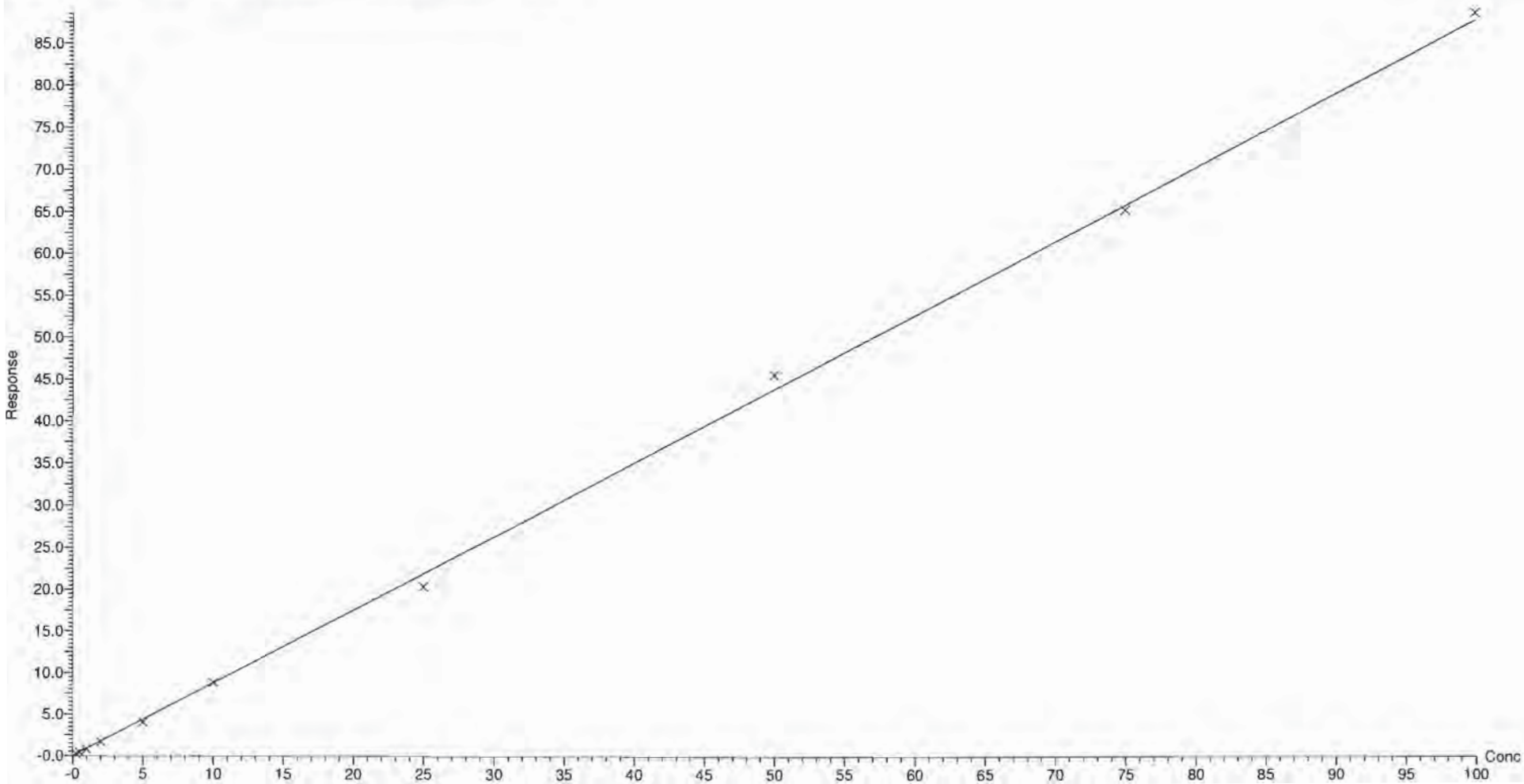
Compound name: PFHpA
Coefficient of Determination: R^2 = 0.998925
Calibration curve: 0.876694 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



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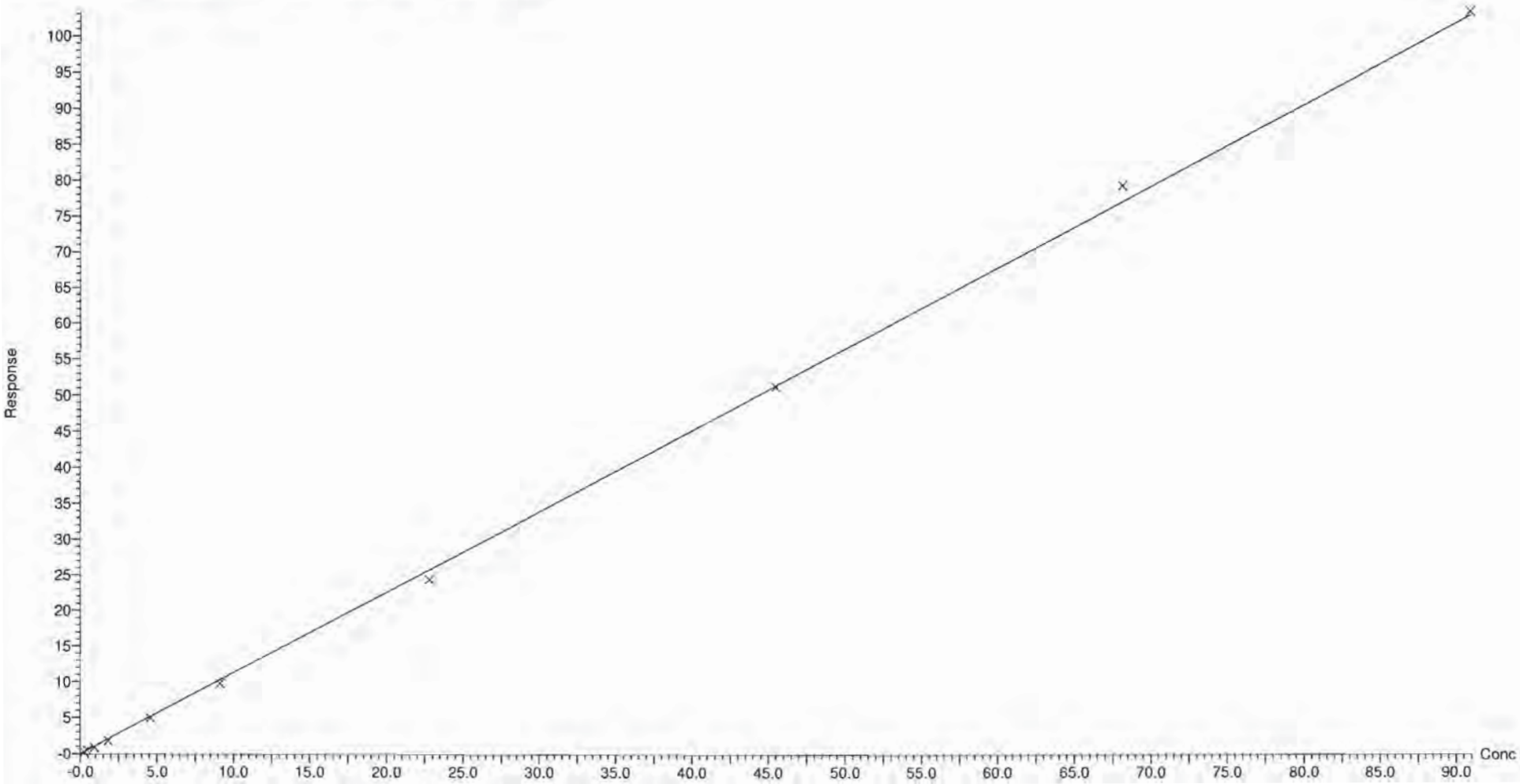
Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

Compound name: PFHxS
Coefficient of Determination: R^2 = 0.999072
Calibration curve: 1.12898 * x
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



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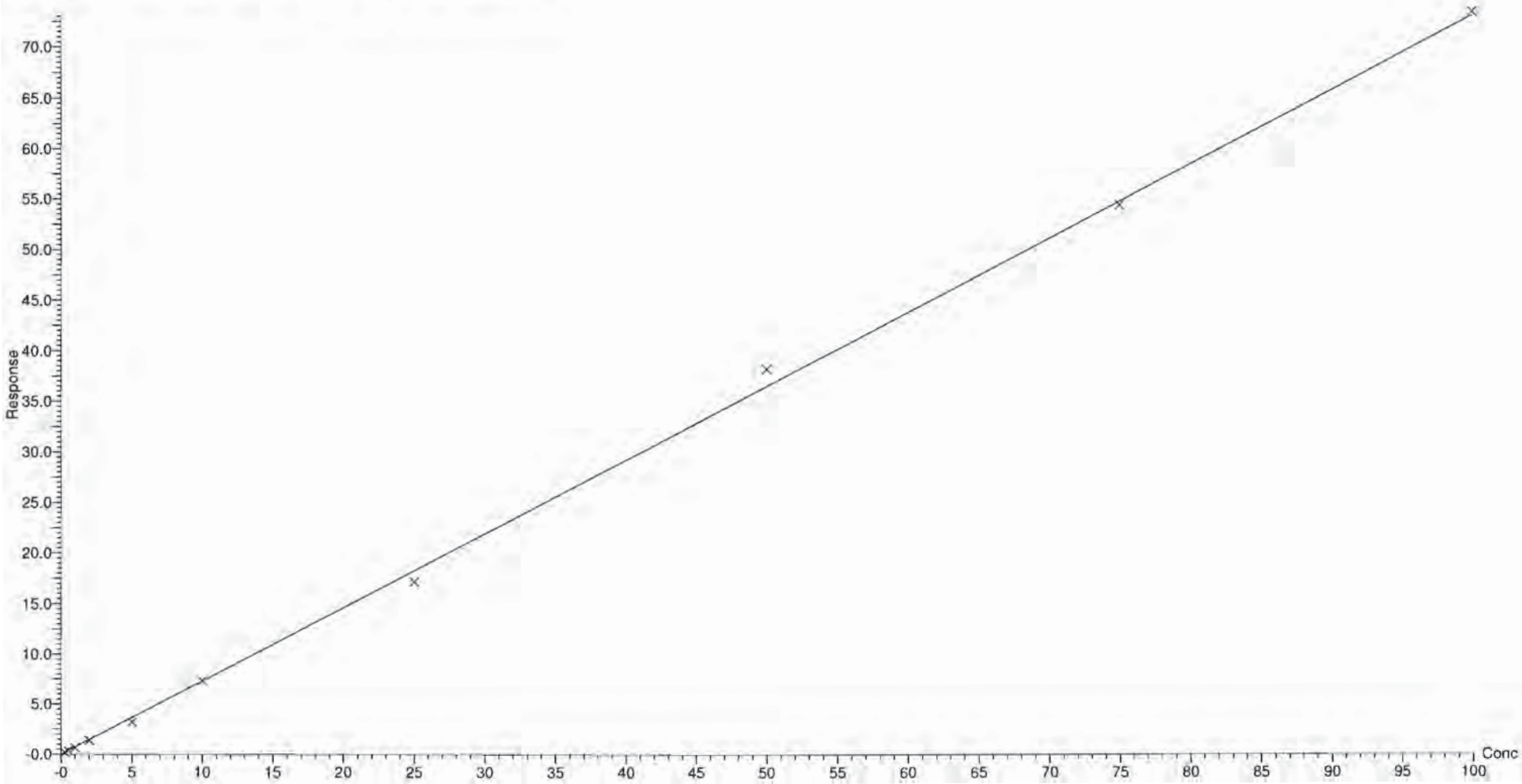
Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

Compound name: PFOA
Coefficient of Determination: R^2 = 0.998834
Calibration curve: 0.729381 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



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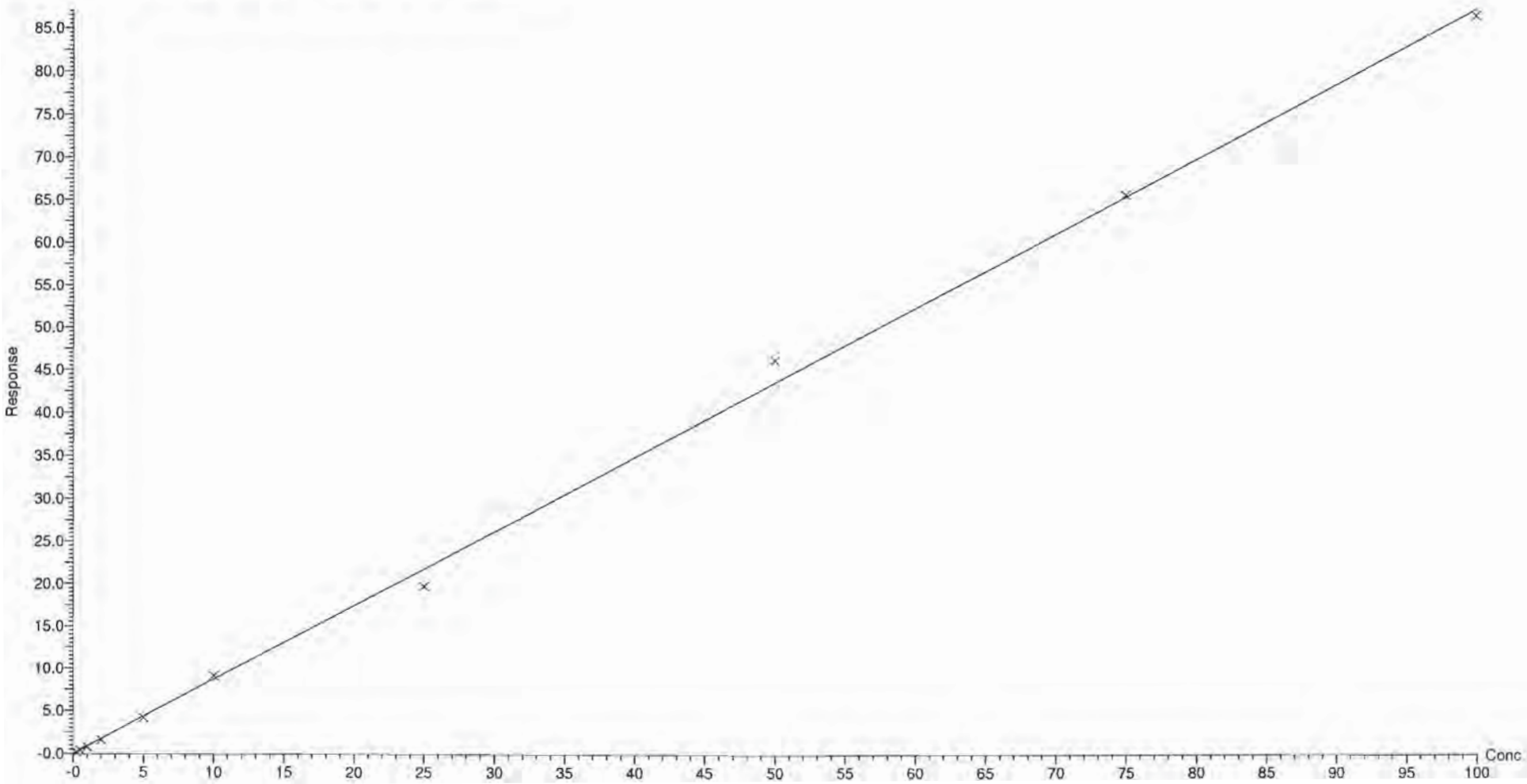
Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

Compound name: PFNA
Coefficient of Determination: R^2 = 0.998143
Calibration curve: 0.871051 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



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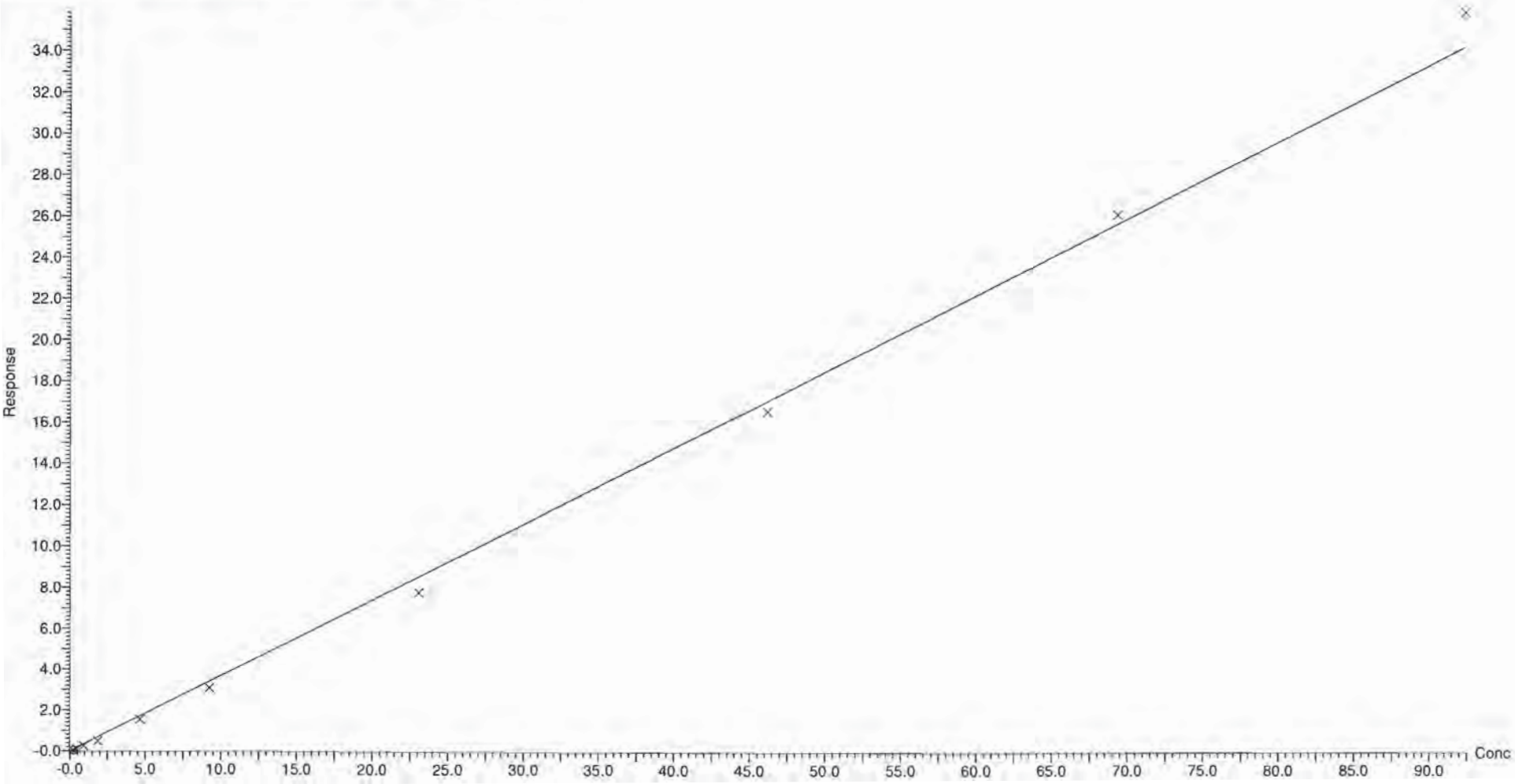
Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

Compound name: PFOS
Coefficient of Determination: R^2 = 0.996082
Calibration curve: 0.369565 * x
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



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Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

Compound name: PFDA
Coefficient of Determination: R^2 = 0.997051
Calibration curve: 0.871492 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
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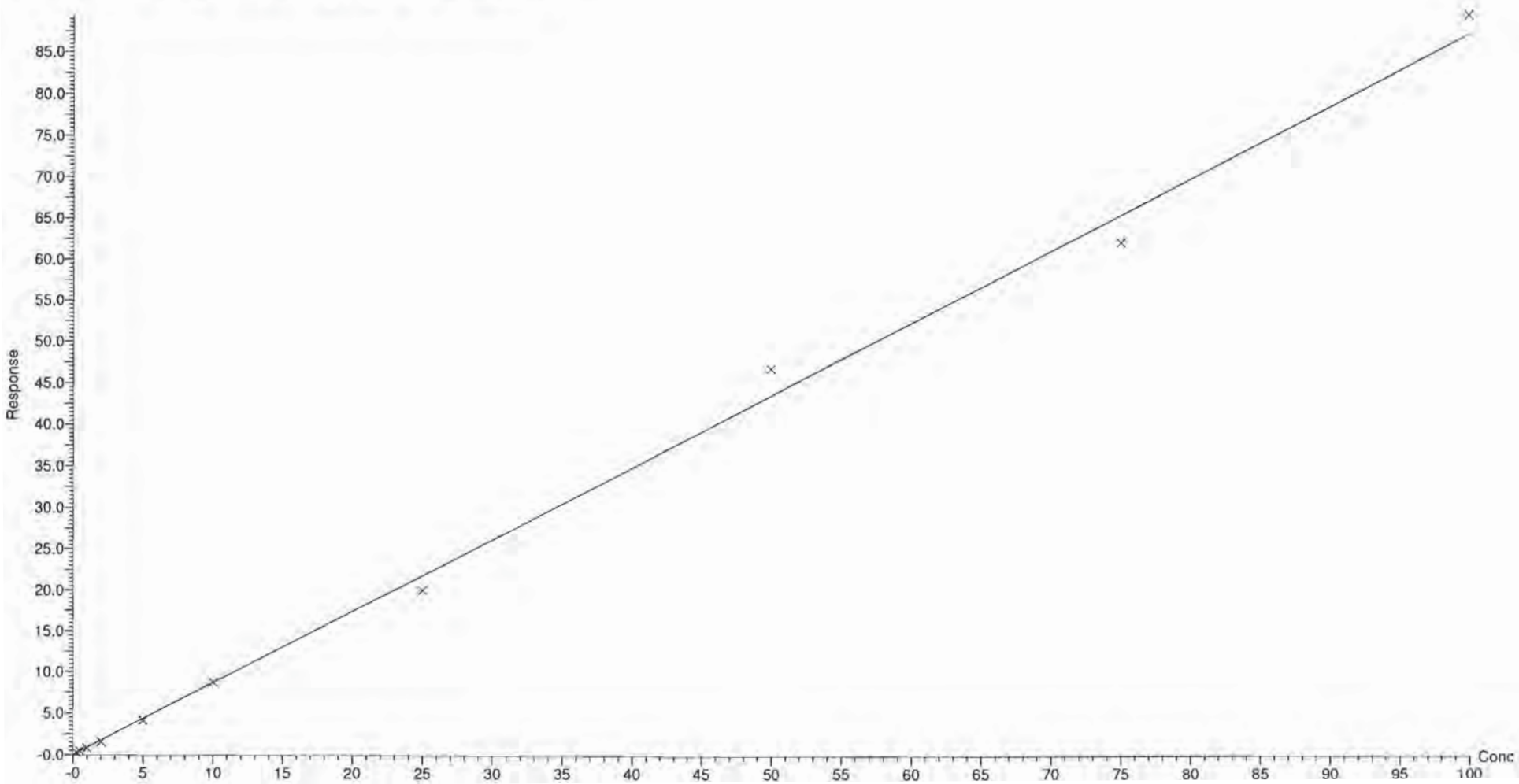

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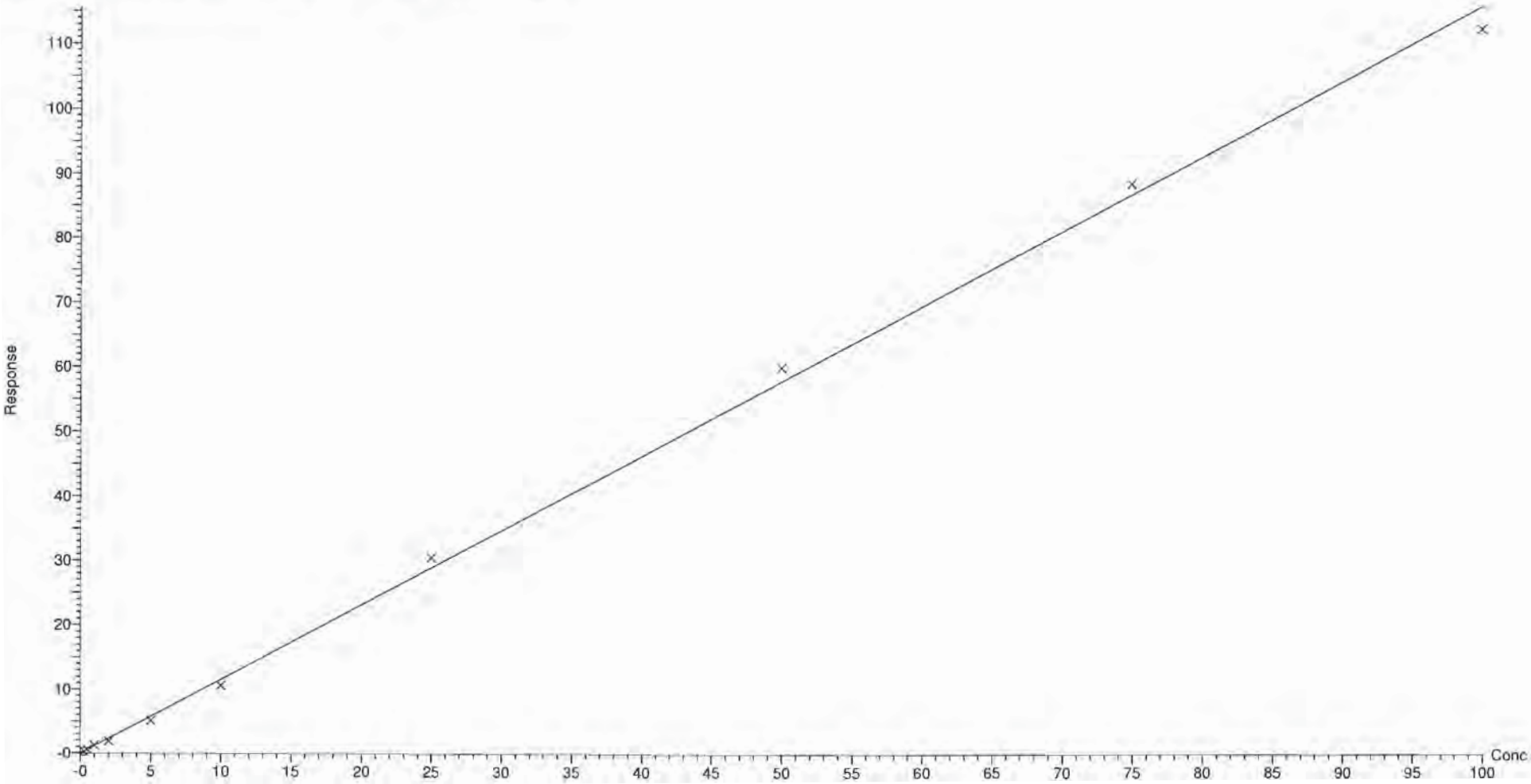
Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

Compound name: N-MeFOSAA
Coefficient of Determination: R^2 = 0.998142
Calibration curve: 1.15659 * x
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



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Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

Compound name: N-EtFOSAA
Coefficient of Determination: R^2 = 0.994002
Calibration curve: 0.997342 * x
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
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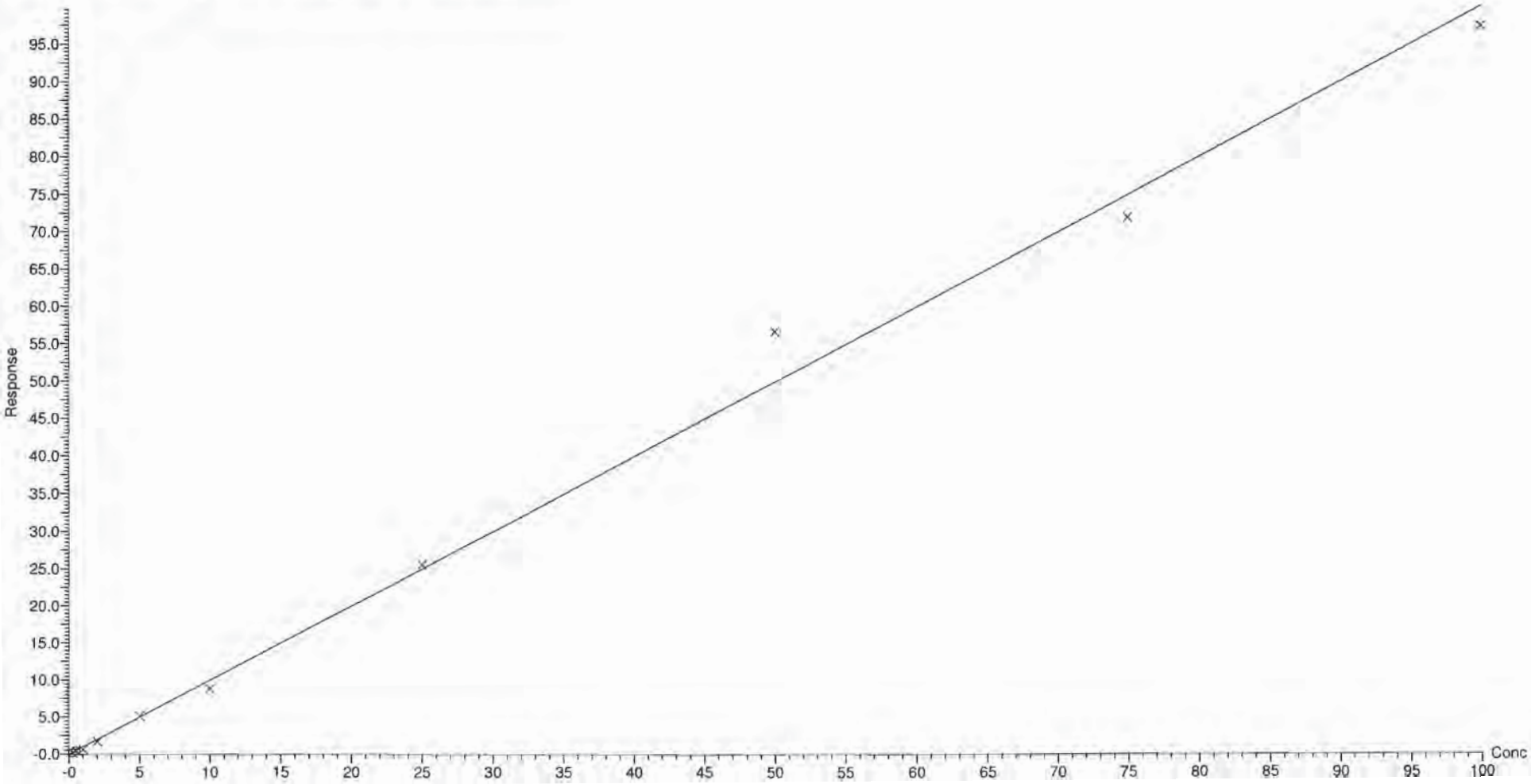

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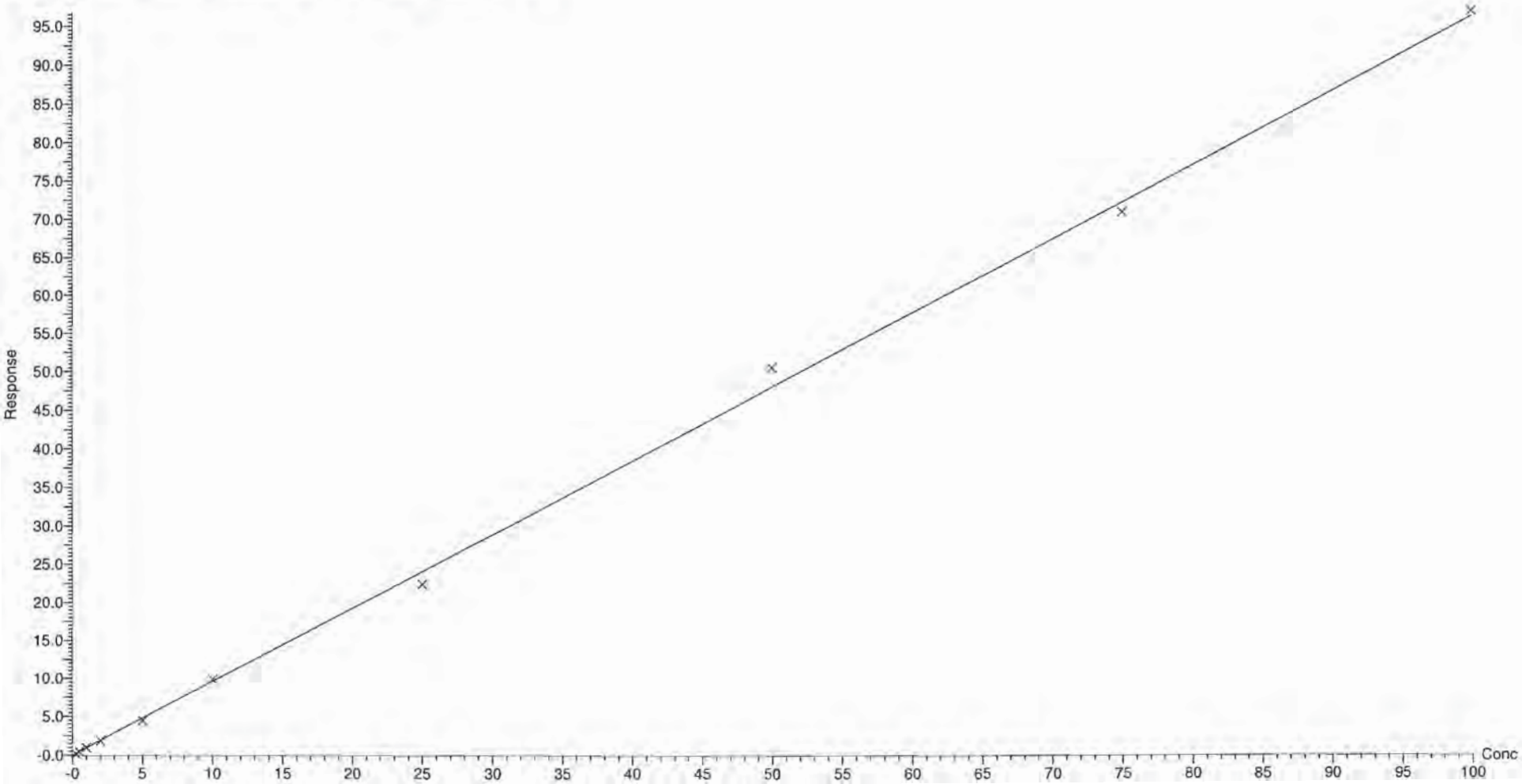
Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

Compound name: PFUnA
Coefficient of Determination: R^2 = 0.998638
Calibration curve: 0.960831 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



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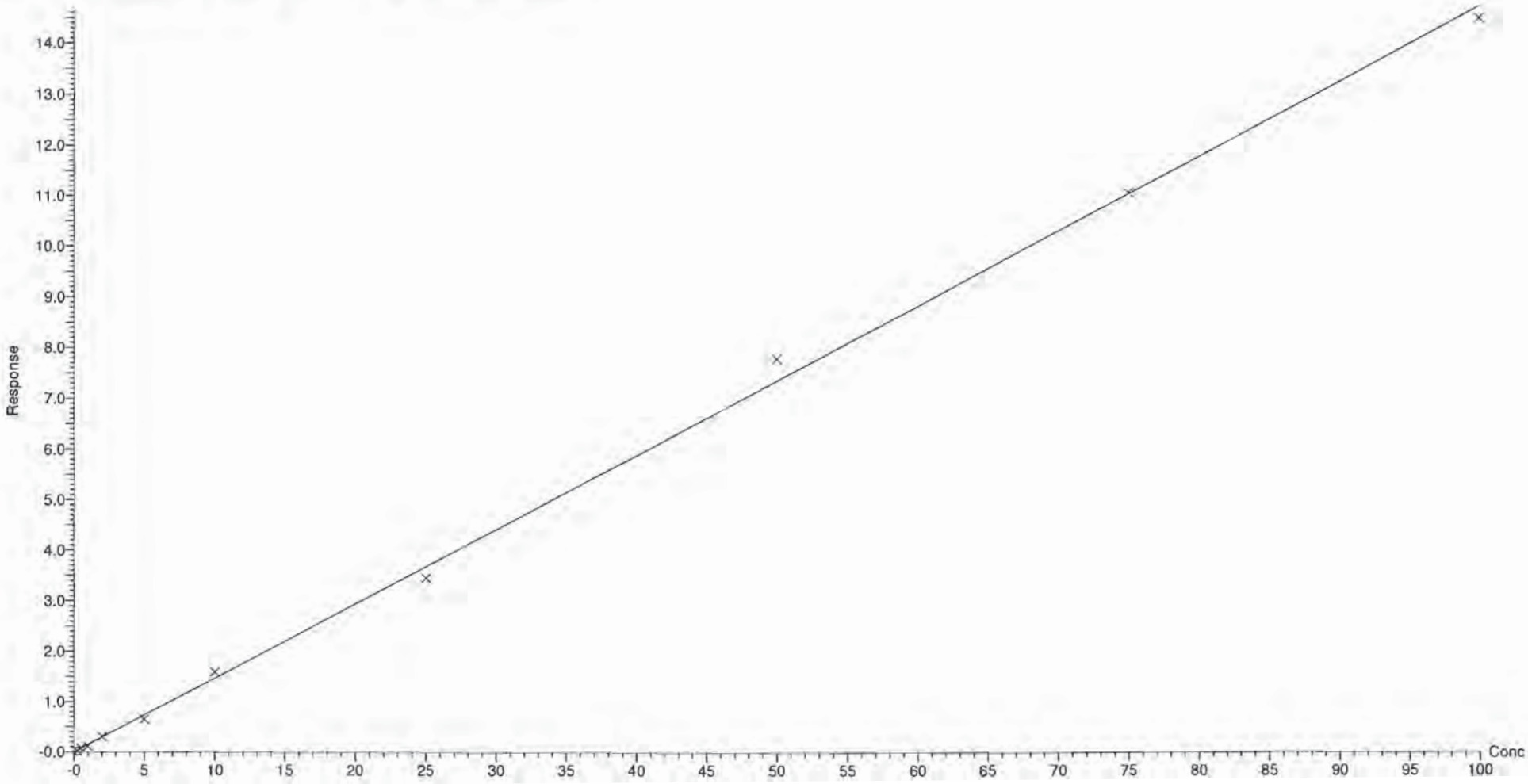
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.998142
Calibration curve: 0.146969 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



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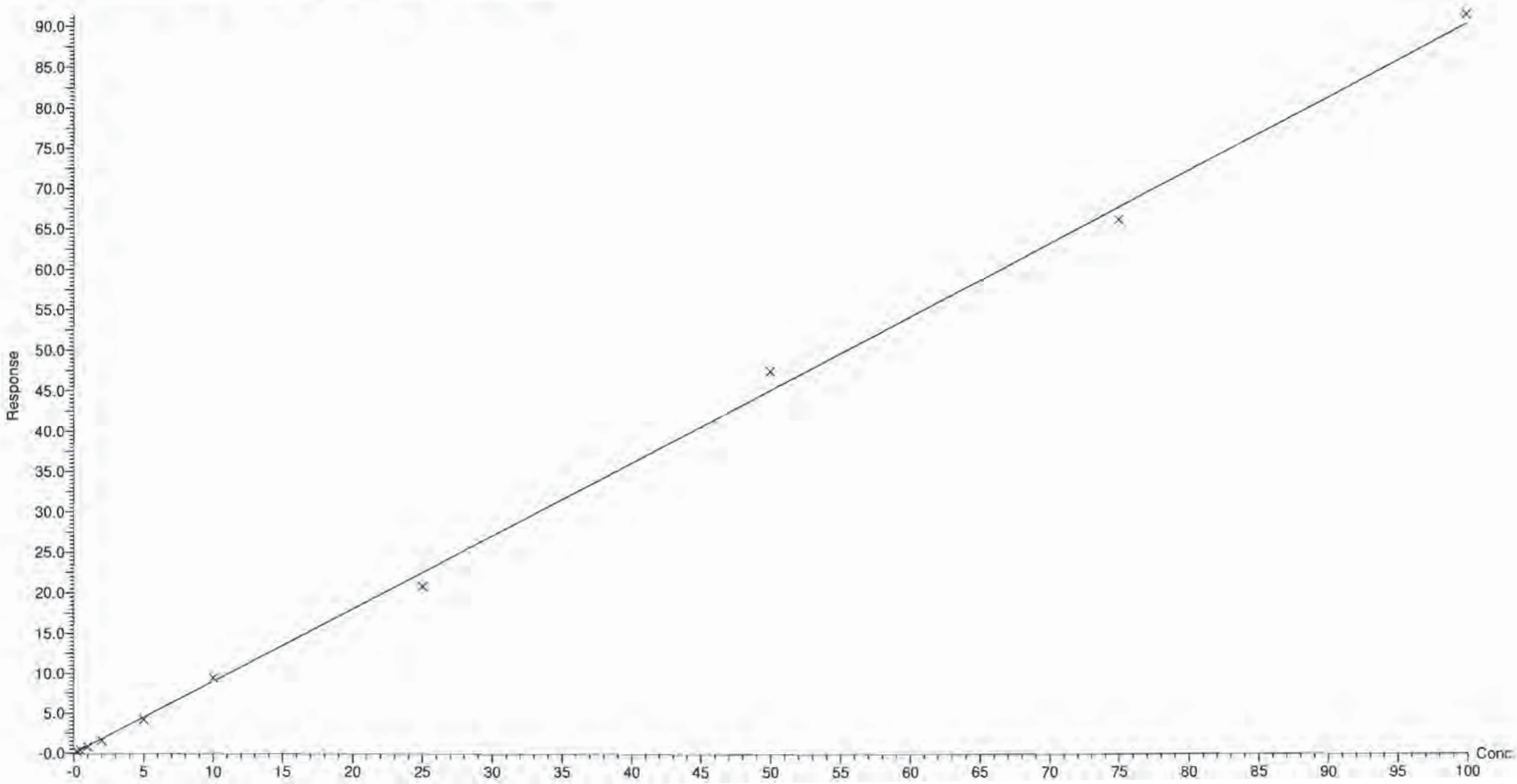
Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.998349
Calibration curve: 0.90204 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



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Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
Printed: Friday, July 20, 2018 12:38:26 Pacific Daylight Time

Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.997347
Calibration curve: 0.926257 * x
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
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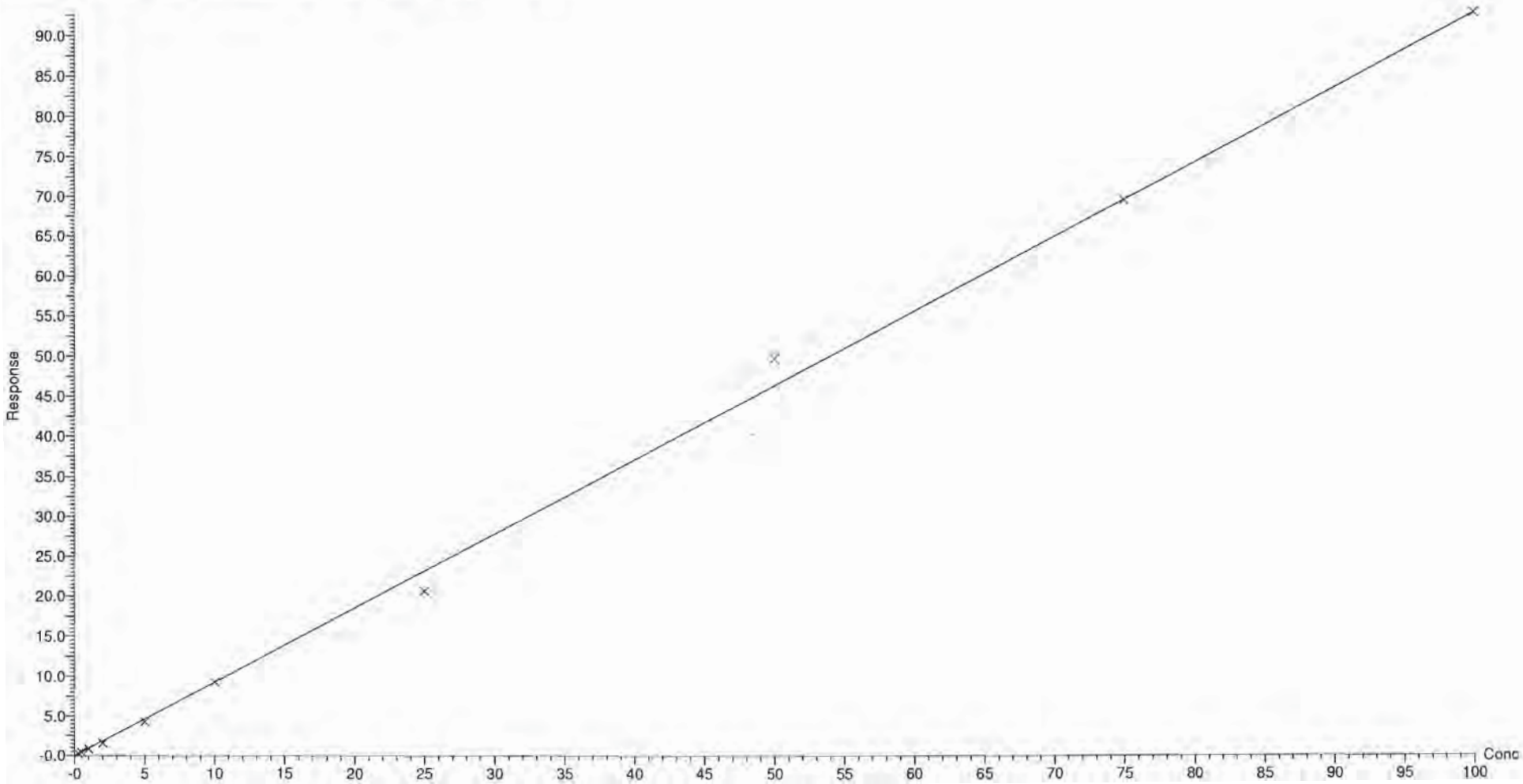

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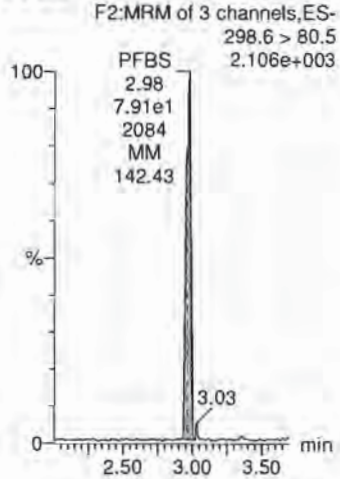
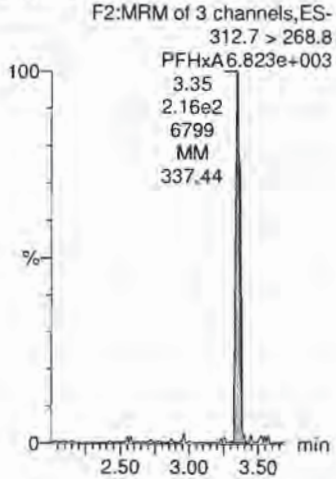
Name: 180719G3_2, Date: 19-Jul-2018, Time: 15:03:28, ID: ST180719G3-1 PFC CS-4 537 18G1801, Description: PFC CS-4 537 18G1801

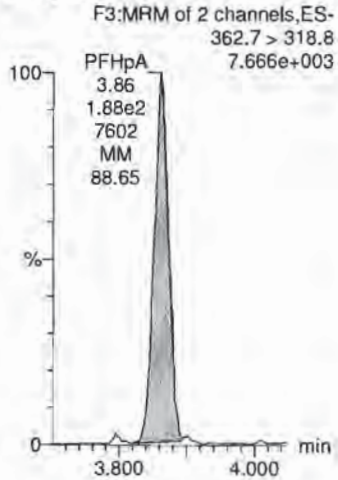
PFBS



PFHxA



PFHpA



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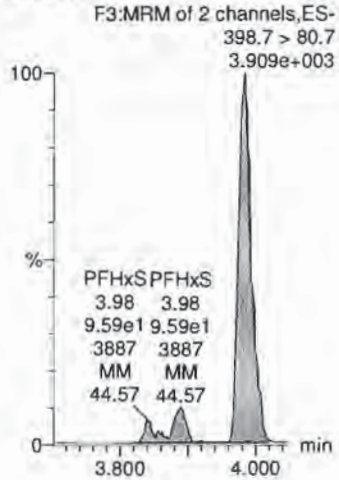

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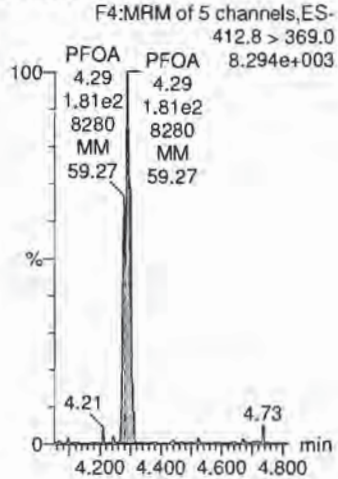

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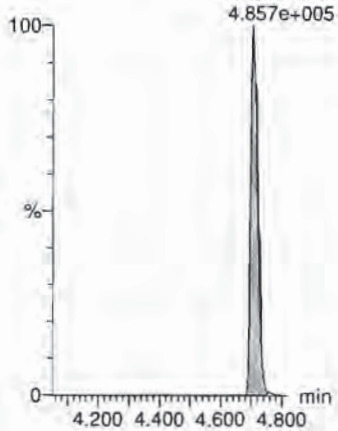

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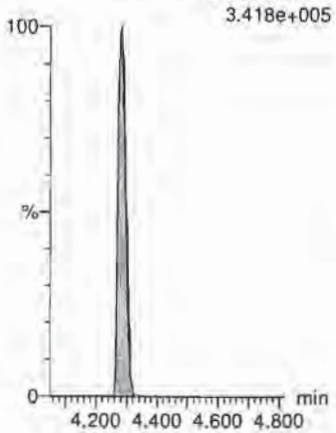

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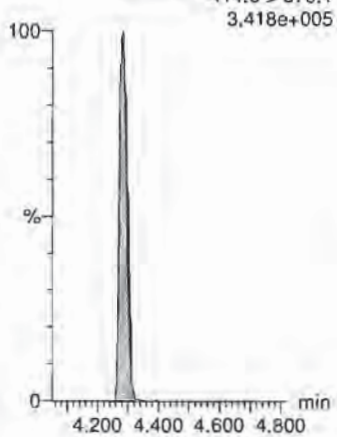

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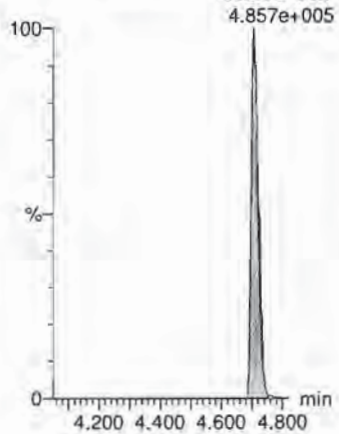

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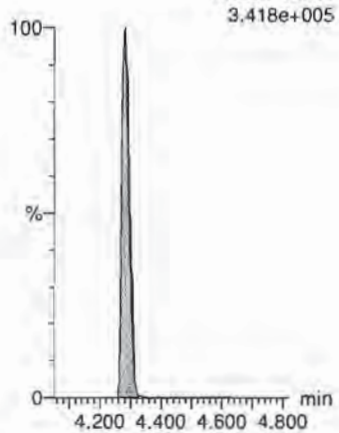

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_2, Date: 19-Jul-2018, Time: 15:03:28, ID: ST180719G3-1 PFC CS-4 537 18G1801, Description: PFC CS-4 537 18G1801

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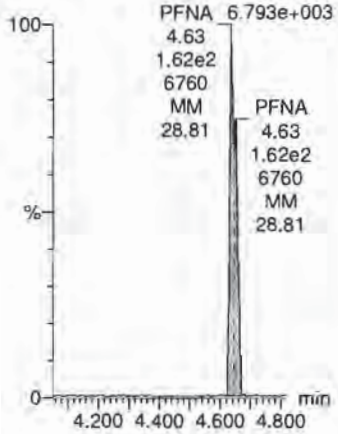

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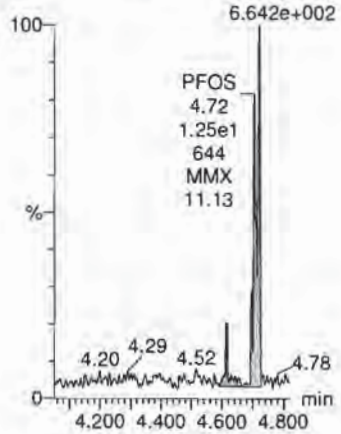

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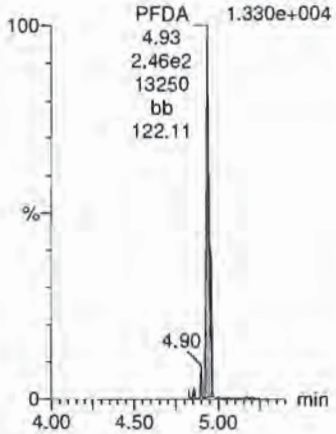

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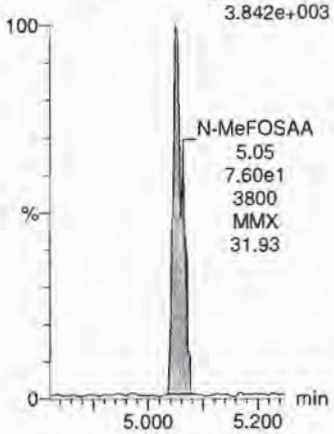

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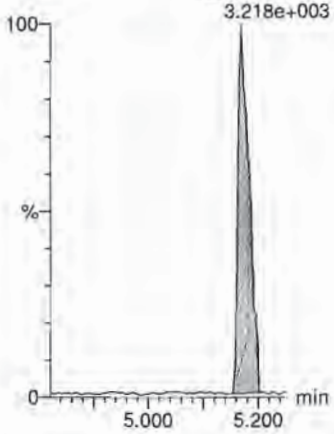

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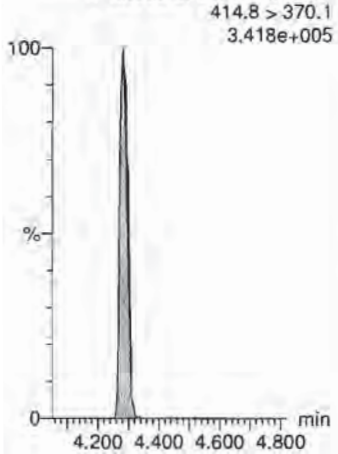

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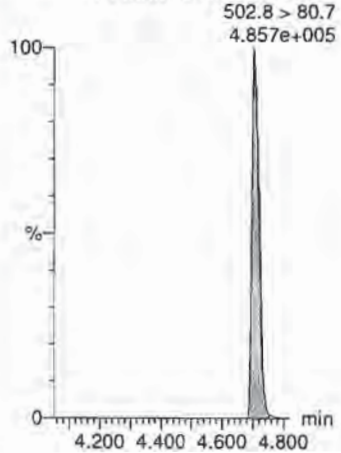

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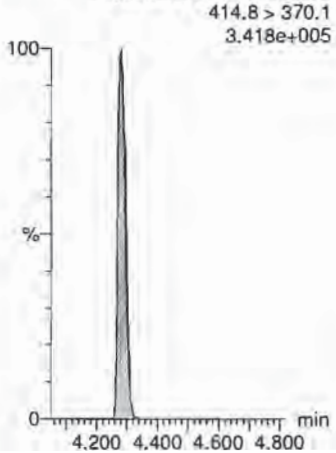

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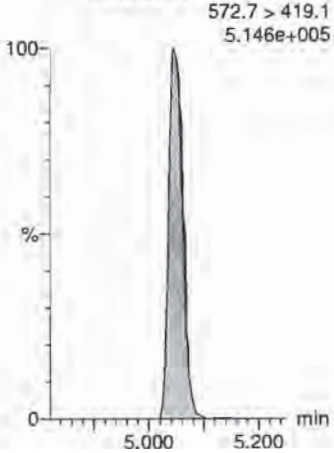

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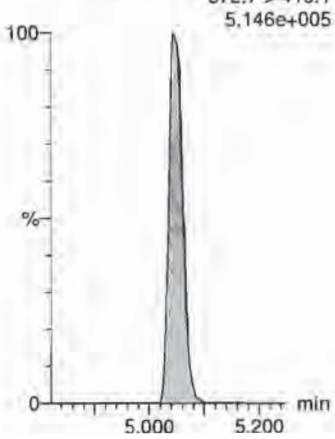

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_2, Date: 19-Jul-2018, Time: 15:03:28, ID: ST180719G3-1 PFC CS-4 537 18G1801, Description: PFC CS-4 537 18G1801

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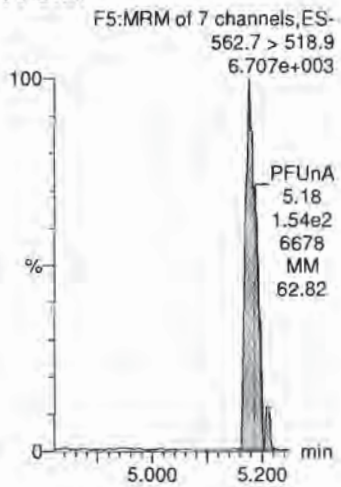

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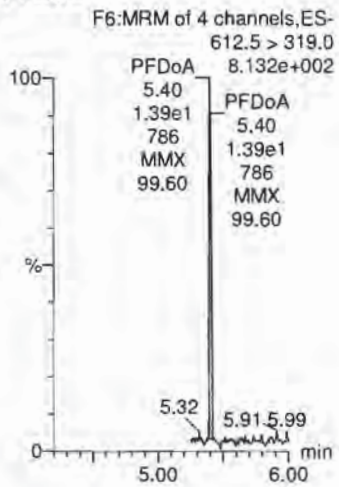

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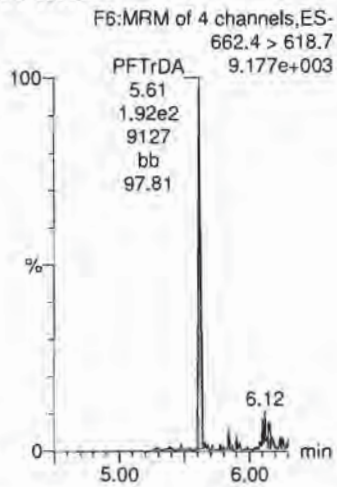

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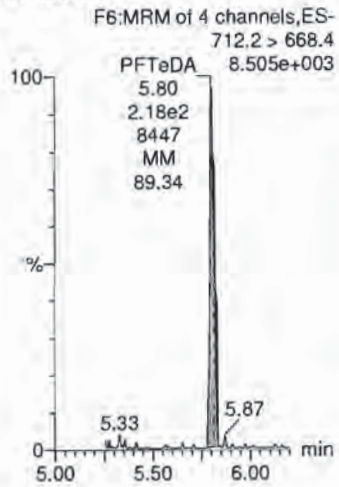

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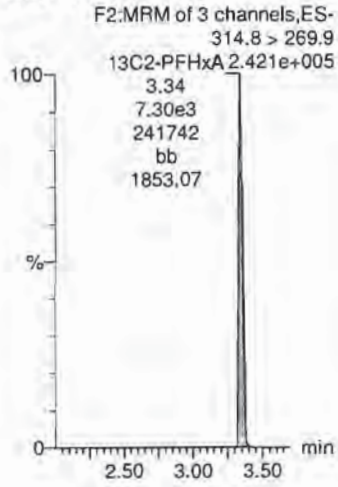

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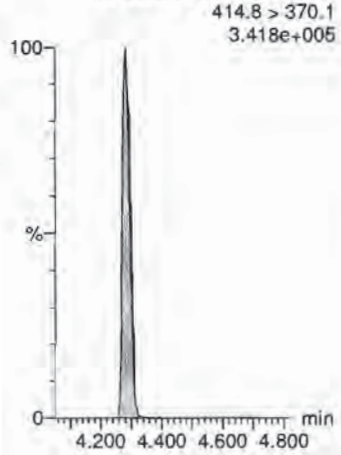

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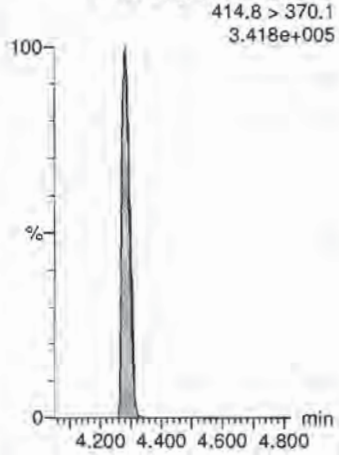

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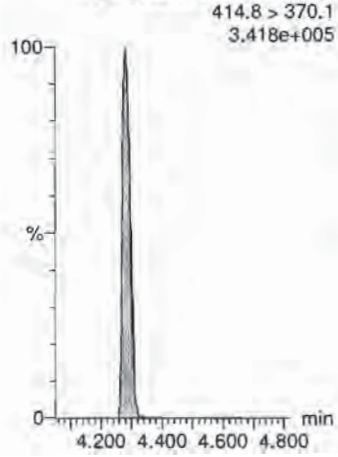

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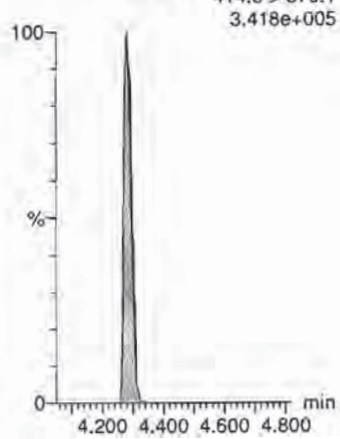

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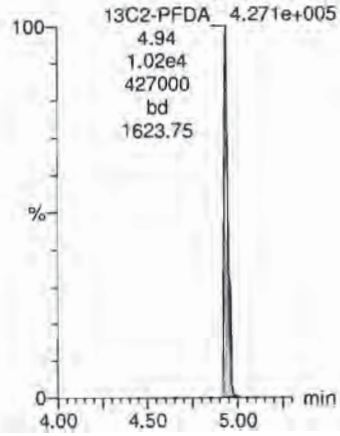

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_2, Date: 19-Jul-2018, Time: 15:03:28, ID: ST180719G3-1 PFC CS-4 537 18G1801, Description: PFC CS-4 537 18G1801

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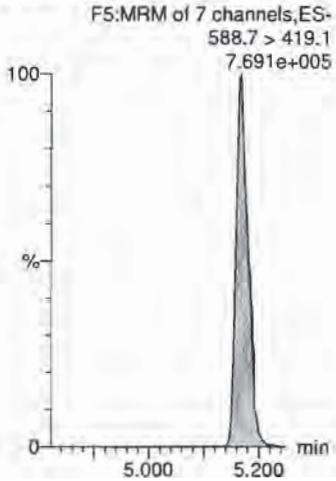

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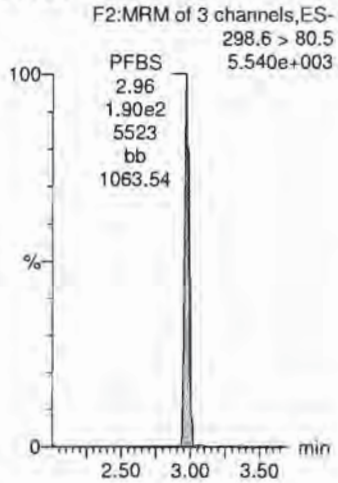

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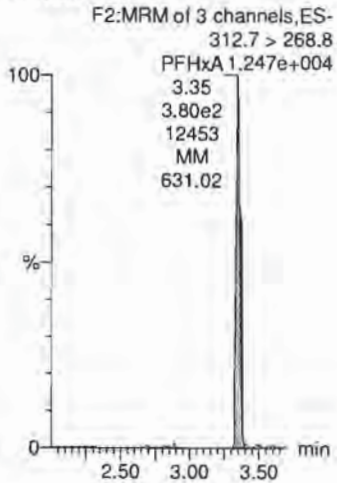

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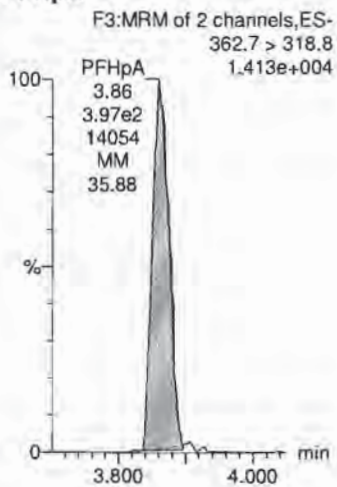

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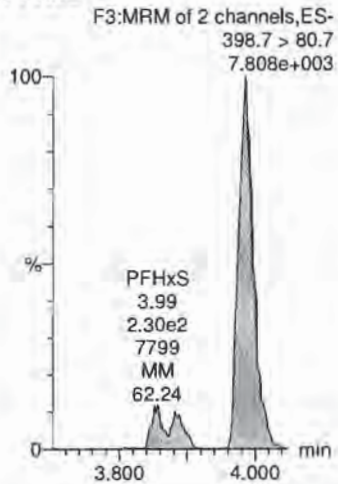

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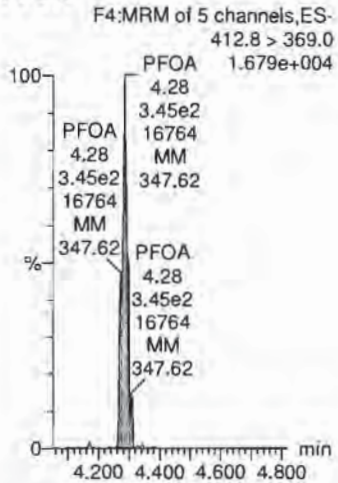

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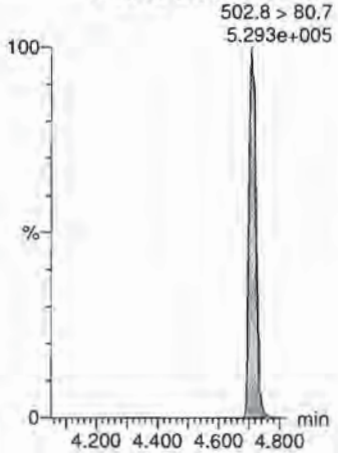

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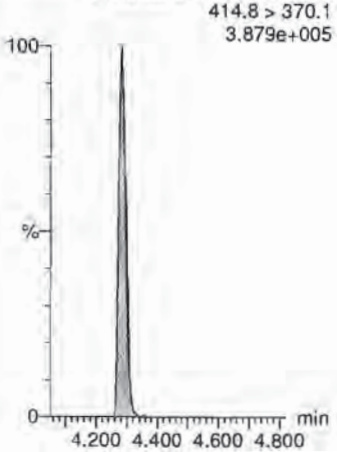

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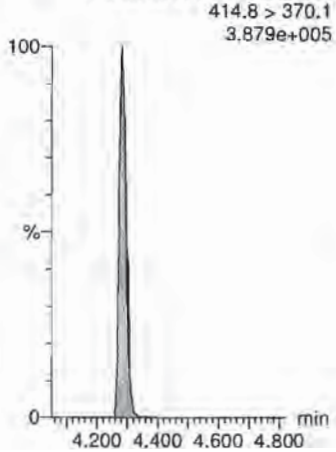

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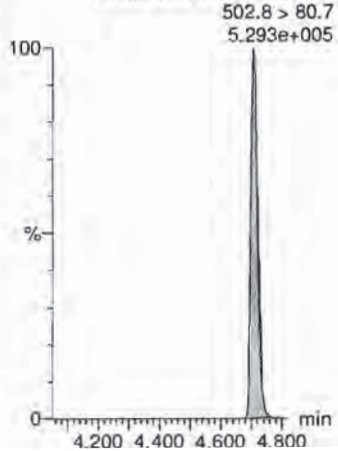

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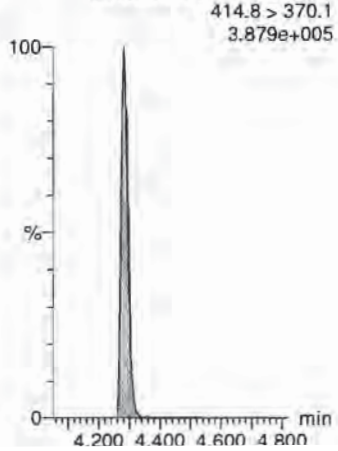

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Name: 180719G3_3, Date: 19-Jul-2018, Time: 15:16:17, ID: ST180719G3-2 PFC CS-3 537 18G1802, Description: PFC CS-3 537 18G1802

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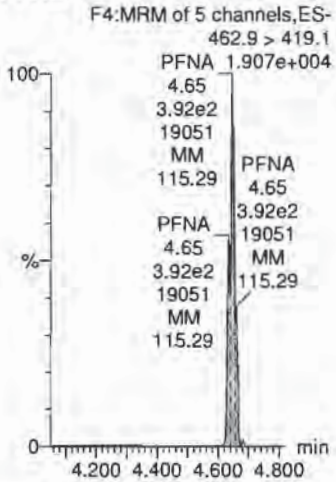

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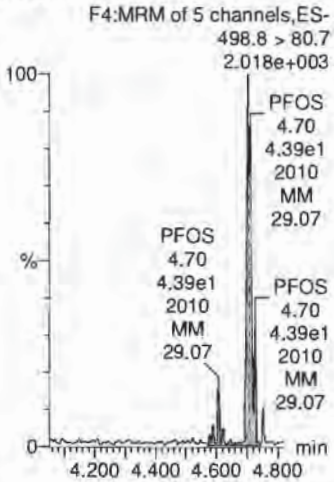

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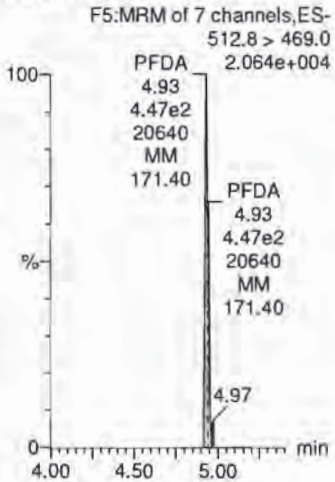

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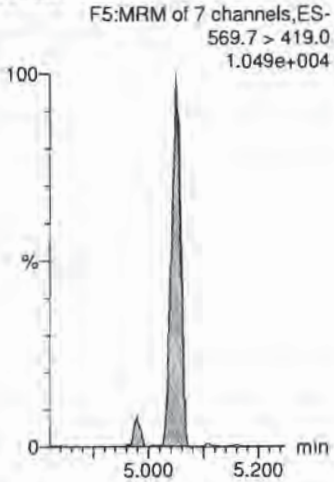

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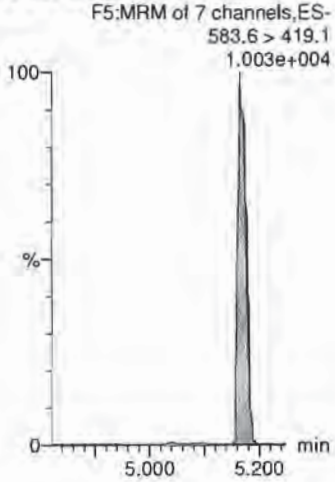

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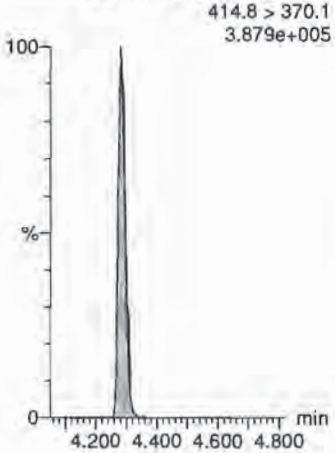

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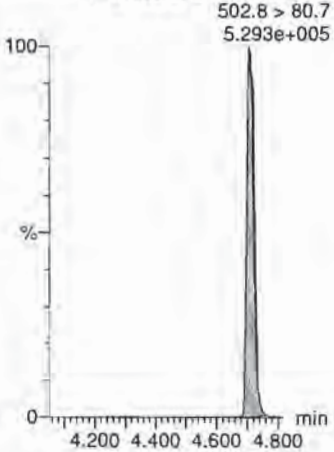

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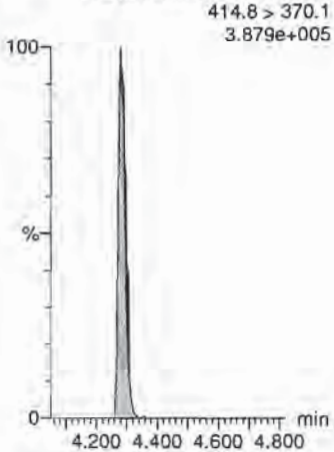

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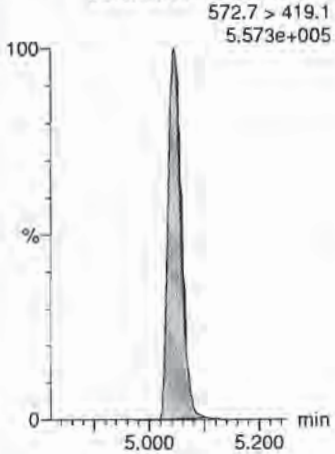

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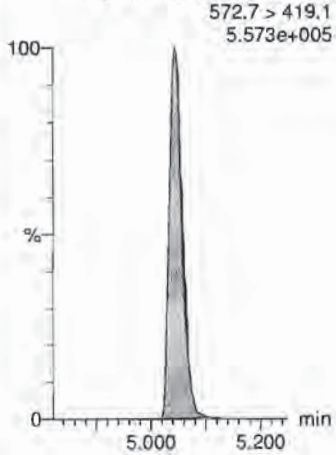

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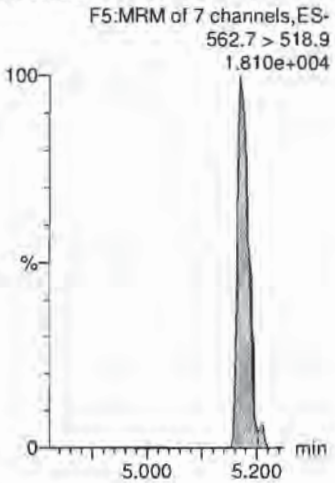

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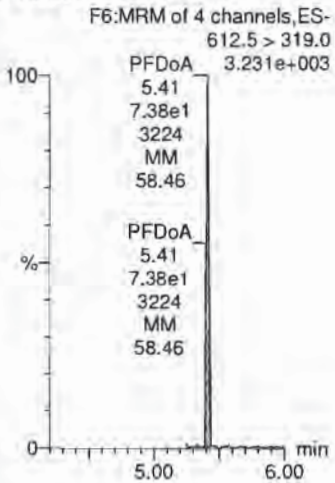

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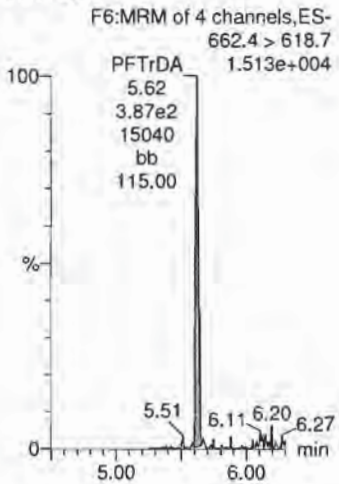

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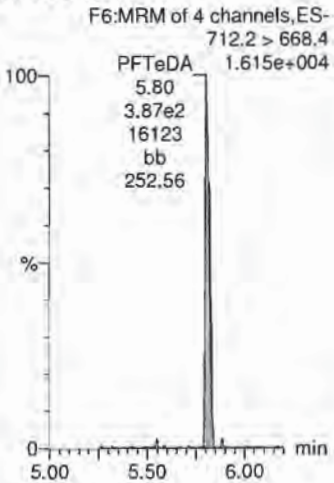

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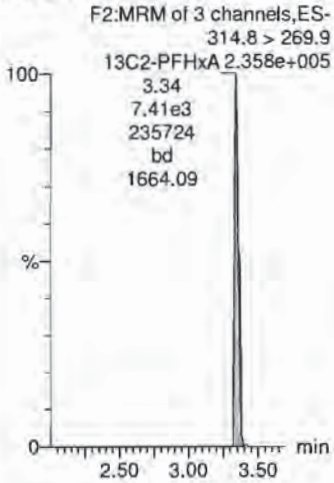

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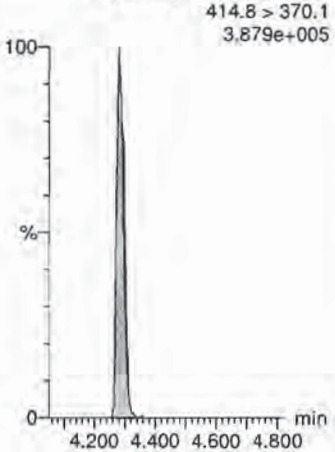

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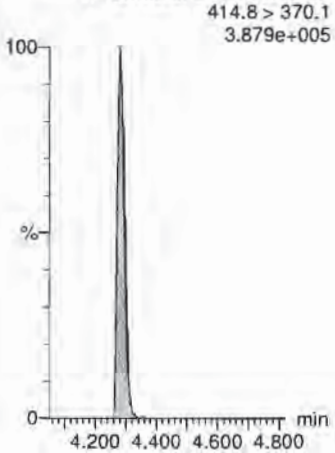

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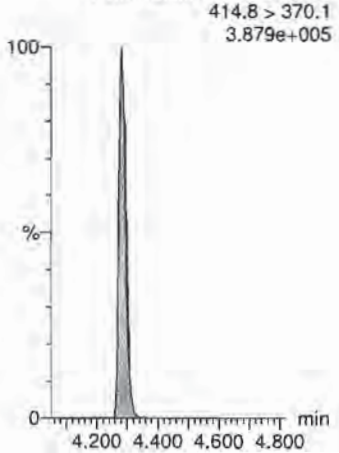

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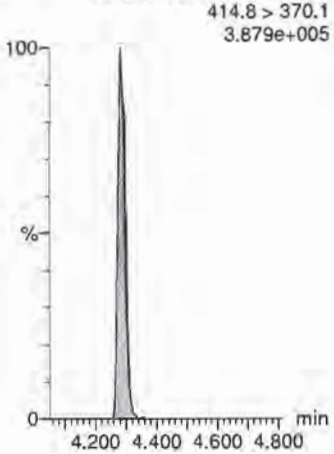

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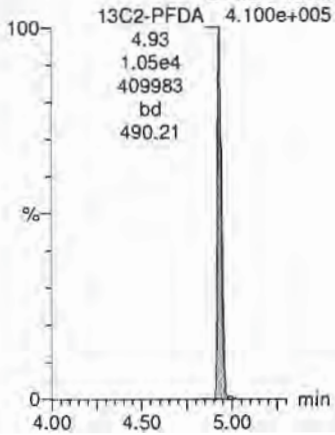

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_3, Date: 19-Jul-2018, Time: 15:16:17, ID: ST180719G3-2 PFC CS-3 537 18G1802, Description: PFC CS-3 537 18G1802

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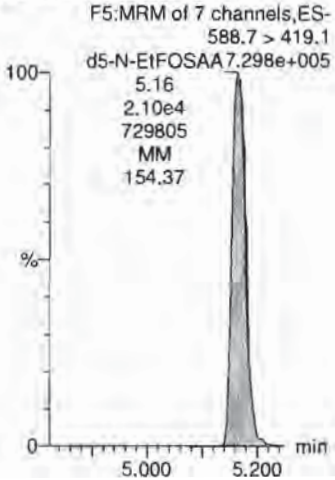

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_4, Date: 19-Jul-2018, Time: 15:29:06, ID: ST180719G3-3 PFC CS-2 537 18G1803, Description: PFC CS-2 537 18G1803

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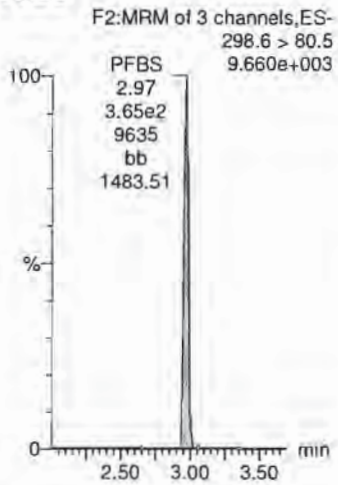

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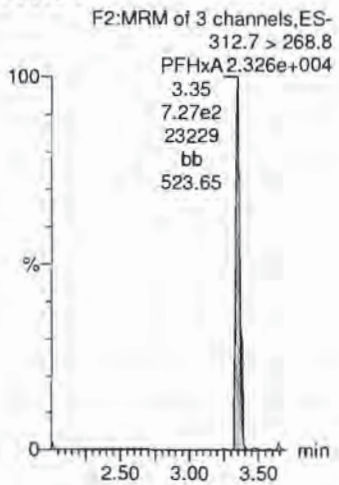

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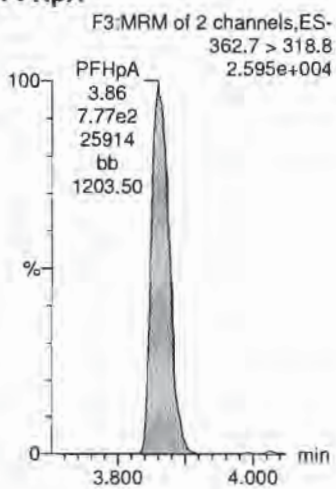

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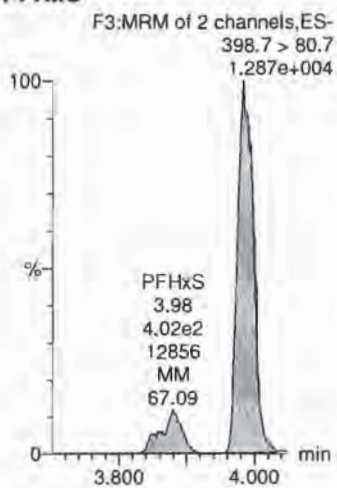

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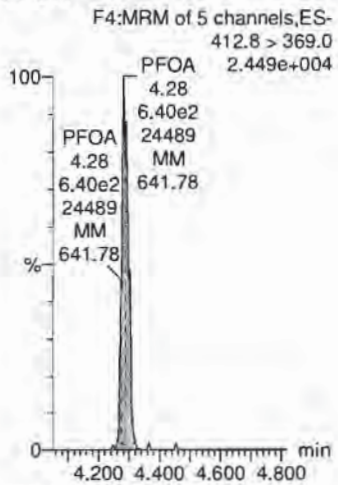

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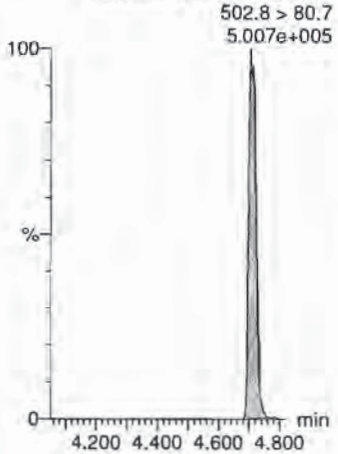

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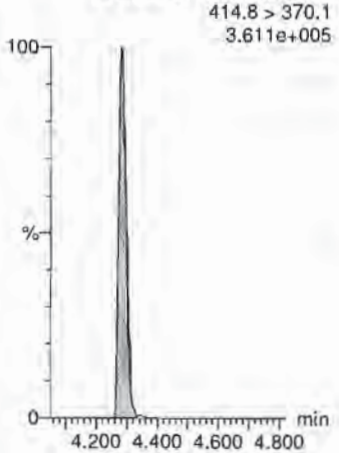

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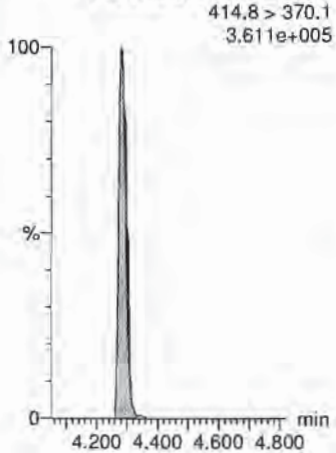

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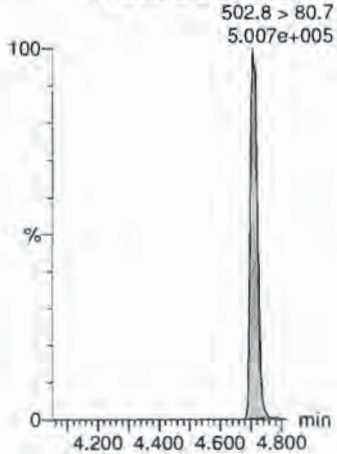

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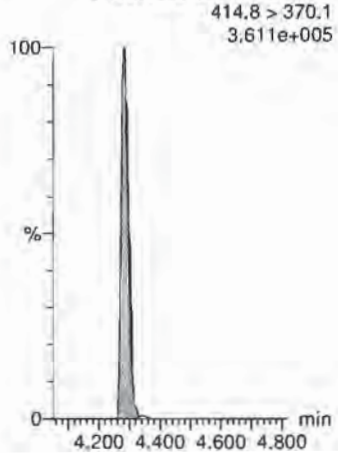

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_4, Date: 19-Jul-2018, Time: 15:29:06, ID: ST180719G3-3 PFC CS-2 537 18G1803, Description: PFC CS-2 537 18G1803

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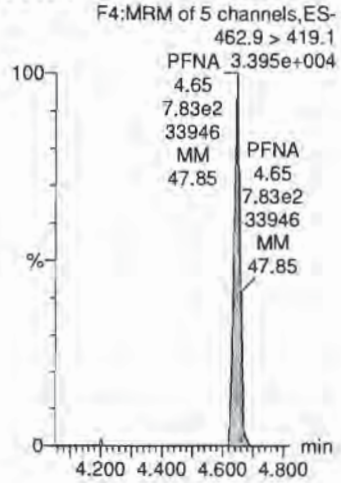

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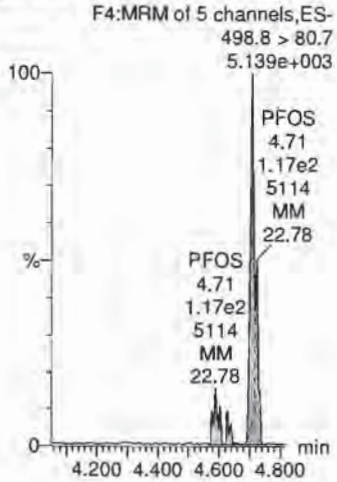

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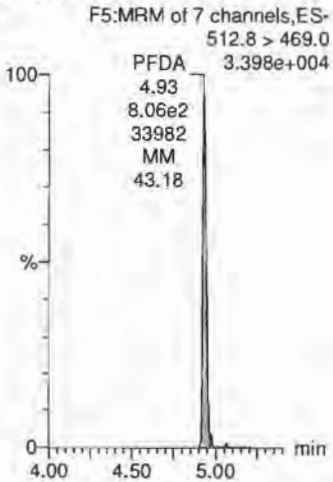

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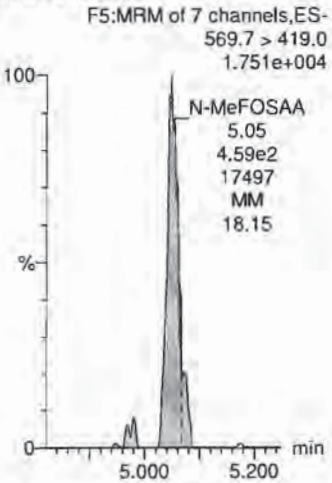

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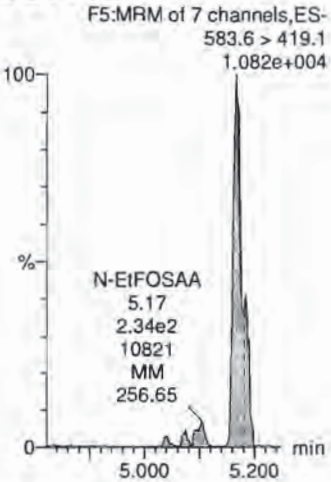

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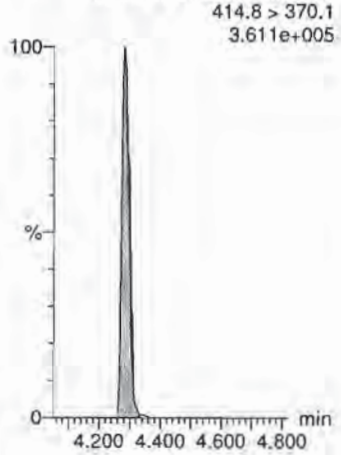

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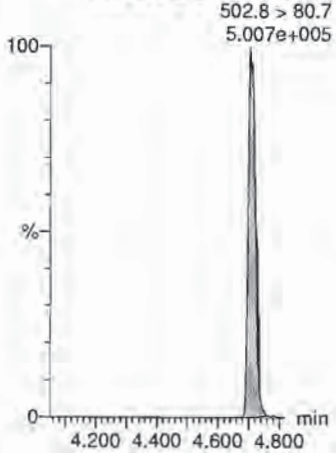

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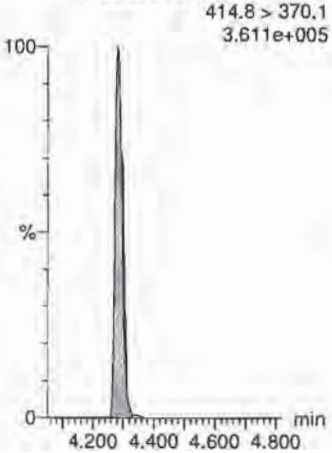

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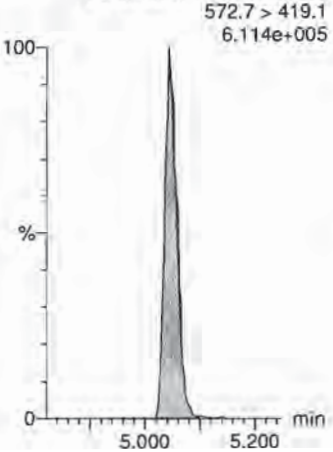

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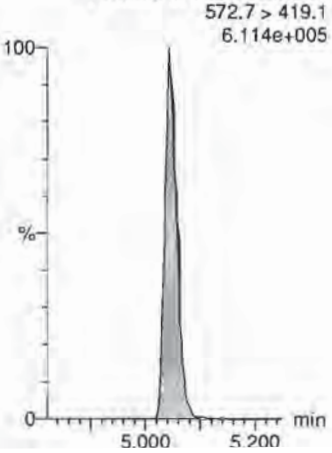

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Name: 180719G3_4, Date: 19-Jul-2018, Time: 15:29:06, ID: ST180719G3-3 PFC CS-2 537 18G1803, Description: PFC CS-2 537 18G1803

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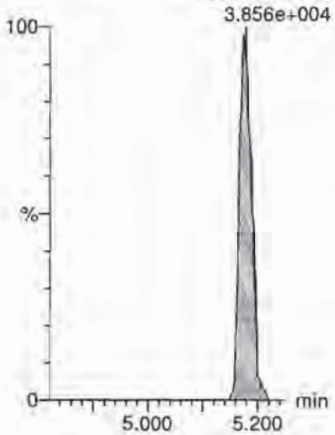

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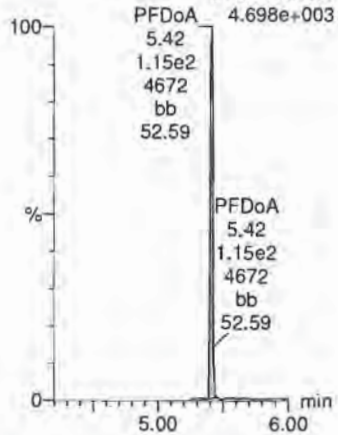

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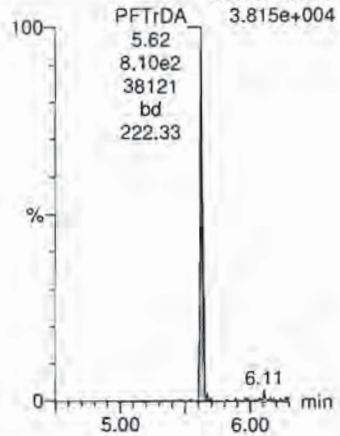

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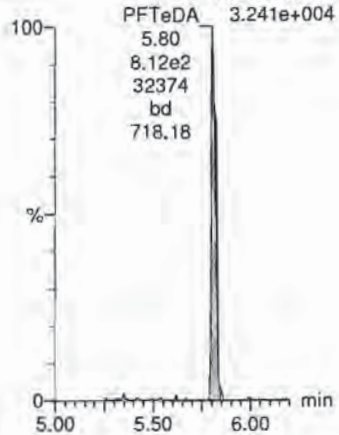

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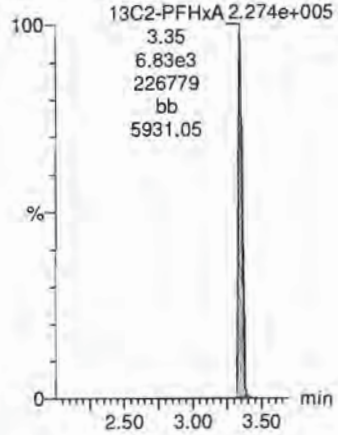

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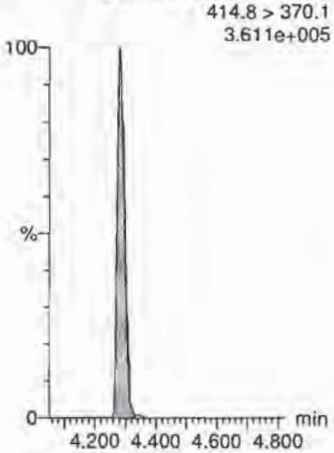

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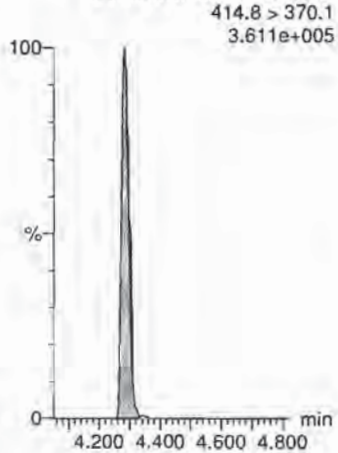

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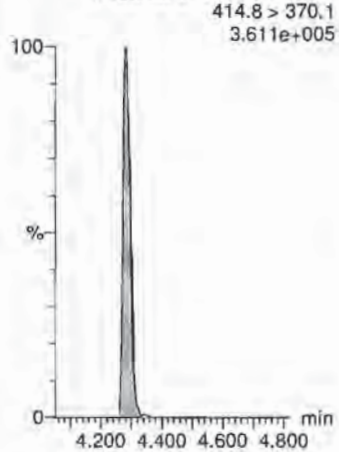

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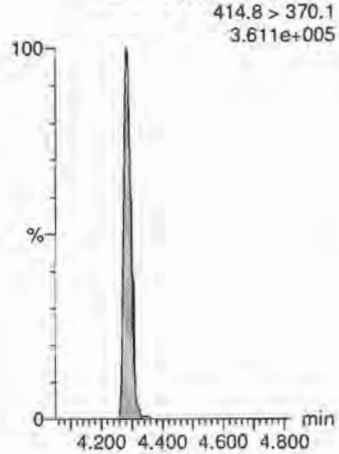

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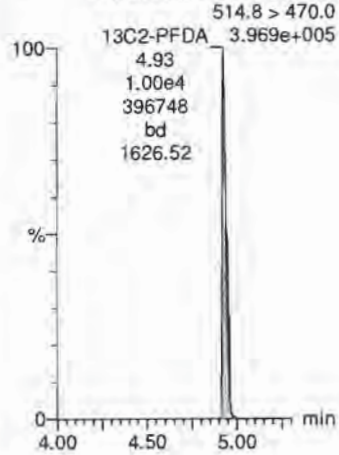

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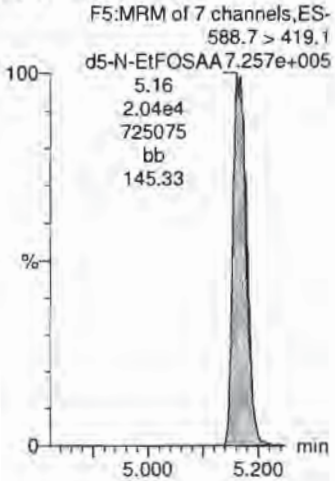
Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_4, Date: 19-Jul-2018, Time: 15:29:06, ID: ST180719G3-3 PFC CS-2 537 18G1803, Description: PFC CS-2 537 18G1803

d5-N-EtFOSAA



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Name: 180719G3_5, Date: 19-Jul-2018, Time: 15:41:56, ID: ST180719G3-4 PFC CS-1 537 18G1804, Description: PFC CS-1 537 18G1804

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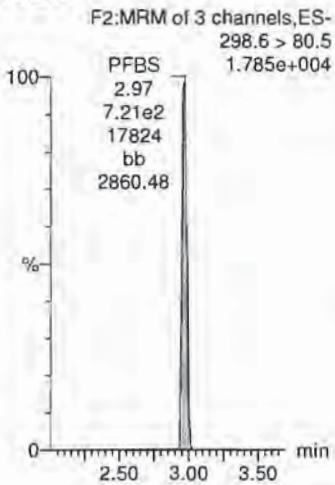

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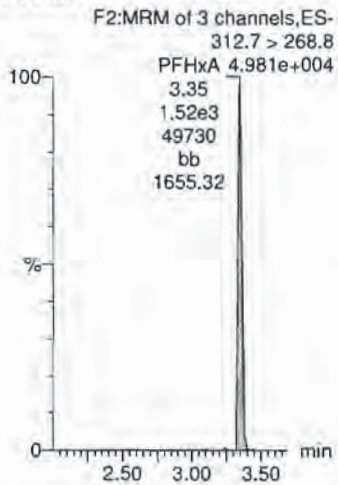

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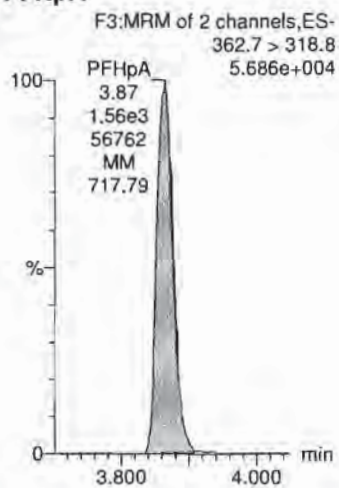

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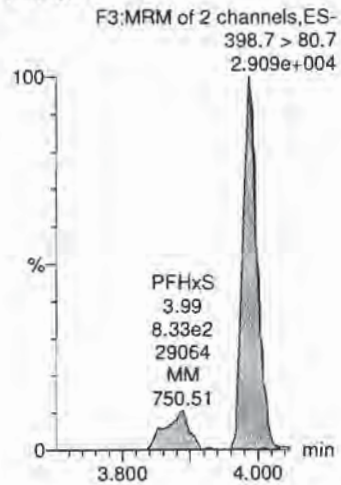

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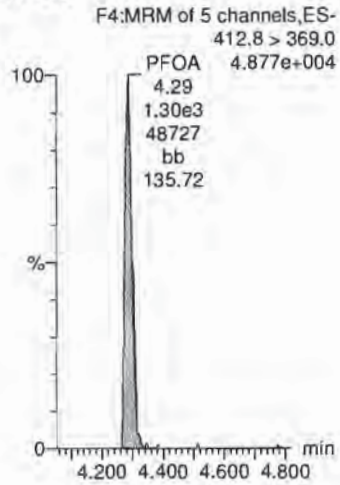

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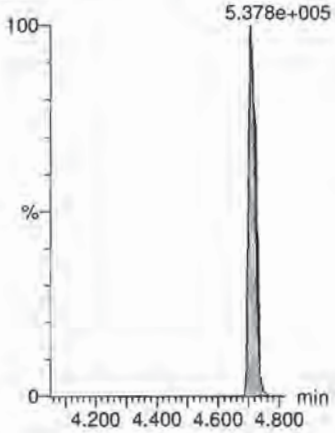

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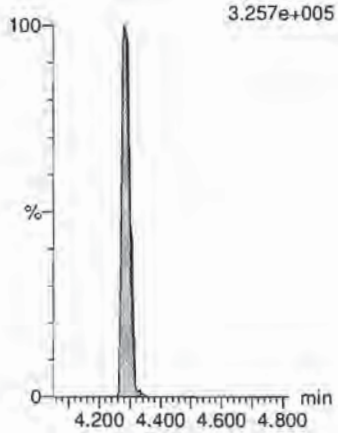

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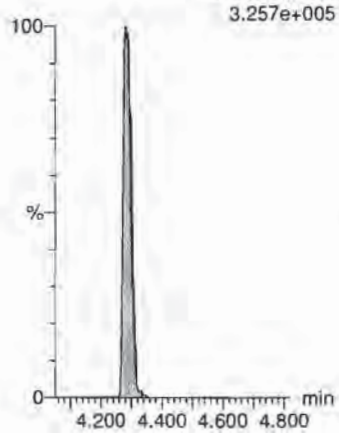

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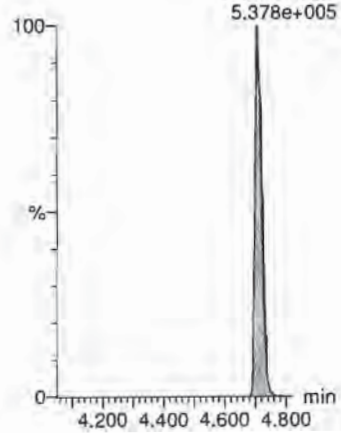

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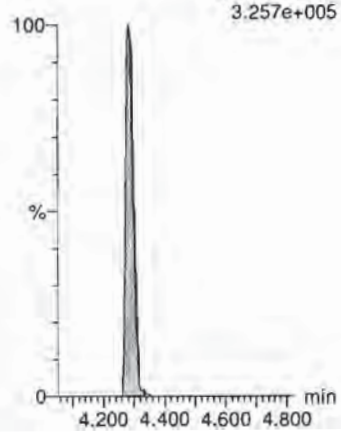

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Name: 180719G3_5, Date: 19-Jul-2018, Time: 15:41:56, ID: ST180719G3-4 PFC CS-1 537 18G1804, Description: PFC CS-1 537 18G1804

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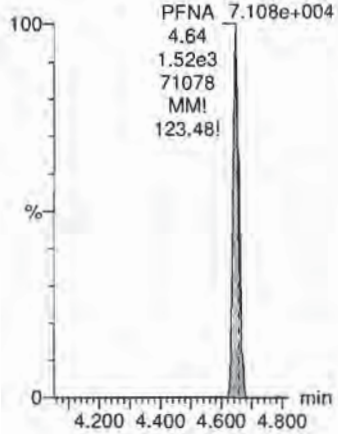

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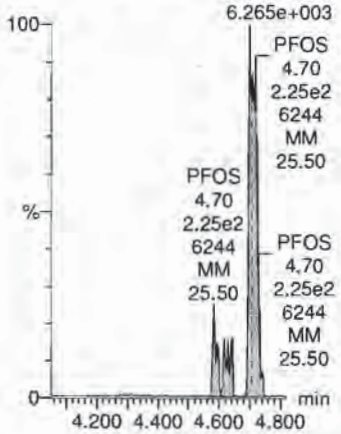

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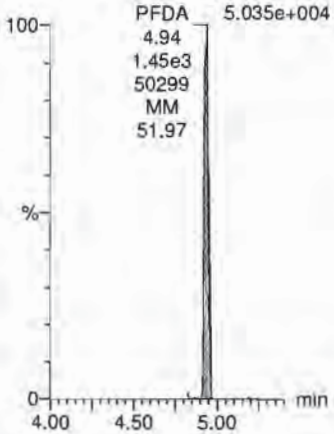

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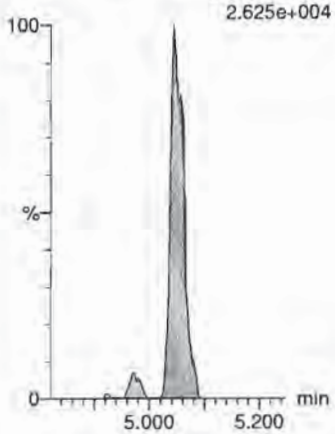

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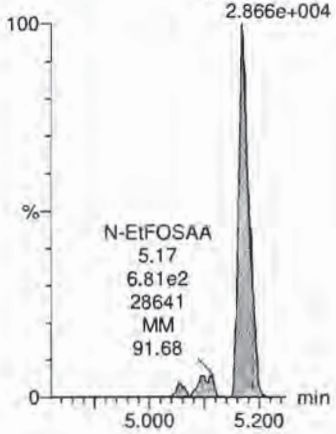

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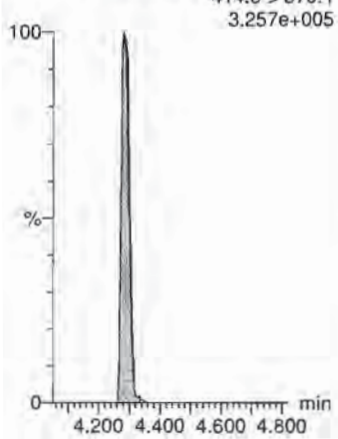

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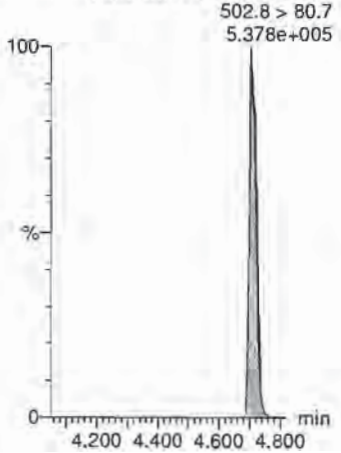

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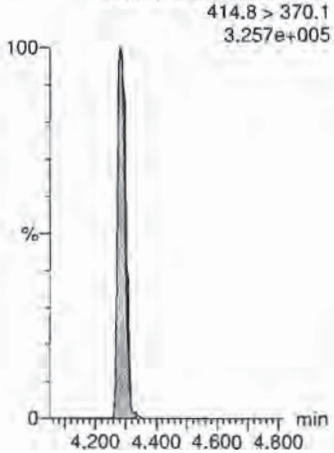

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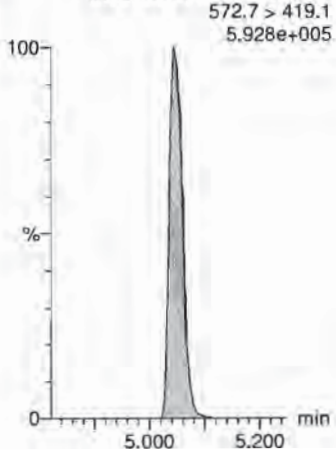

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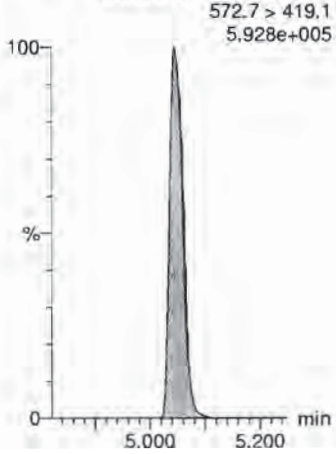

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_5, Date: 19-Jul-2018, Time: 15:41:56, ID: ST180719G3-4 PFC CS-1 537 18G1804, Description: PFC CS-1 537 18G1804

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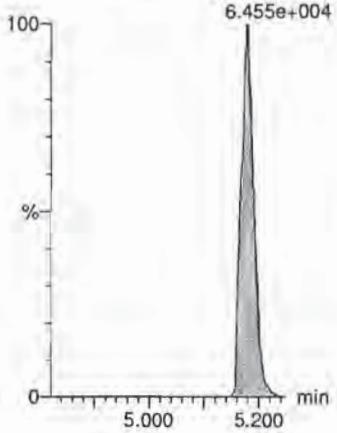

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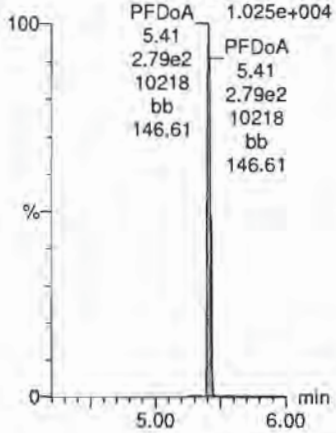

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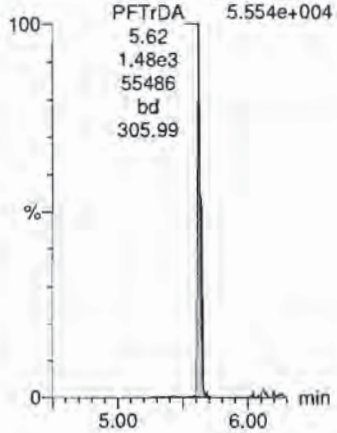

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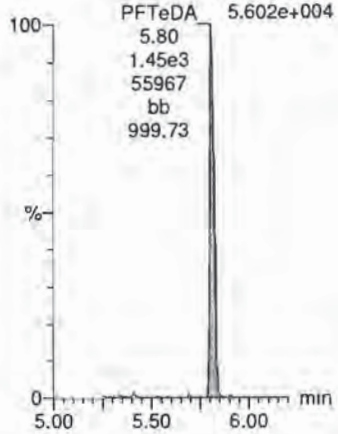

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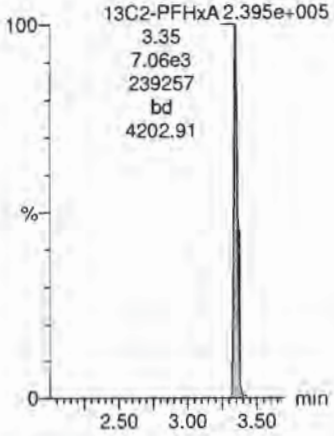

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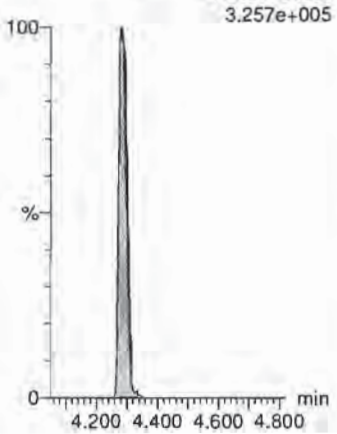

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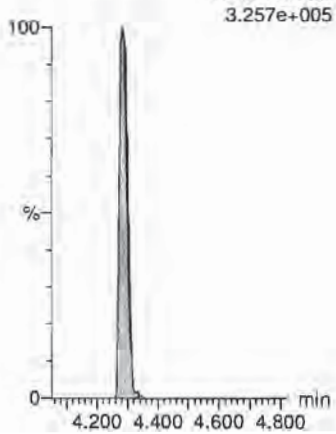

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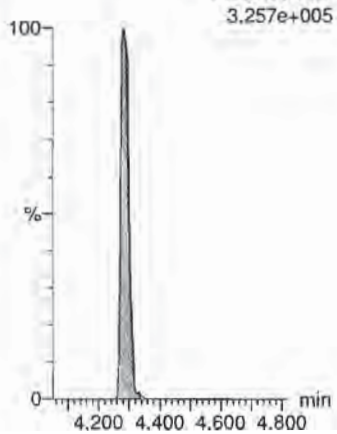

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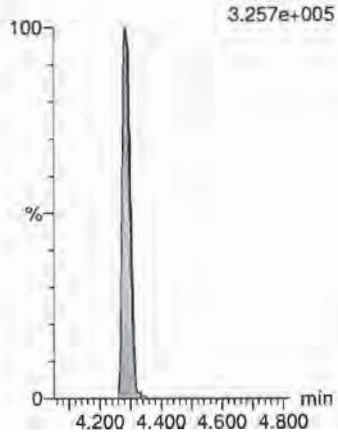

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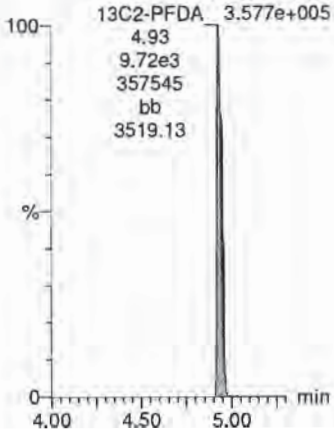

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_5, Date: 19-Jul-2018, Time: 15:41:56, ID: ST180719G3-4 PFC CS-1 537 18G1804, Description: PFC CS-1 537 18G1804

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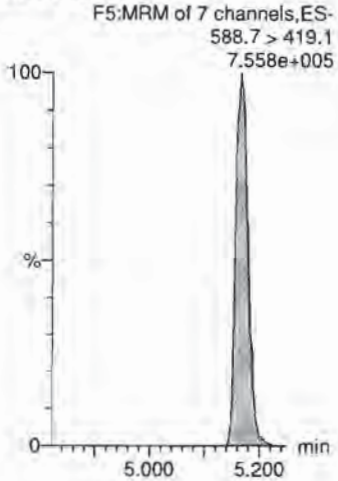

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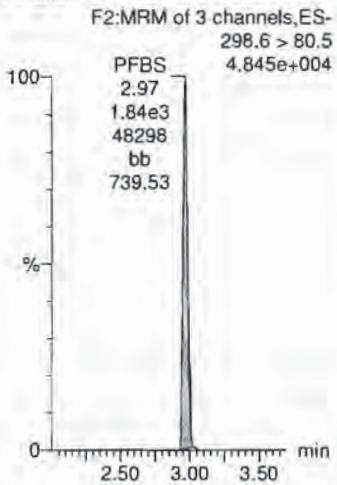

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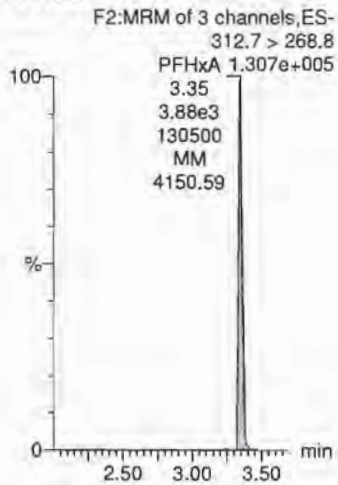

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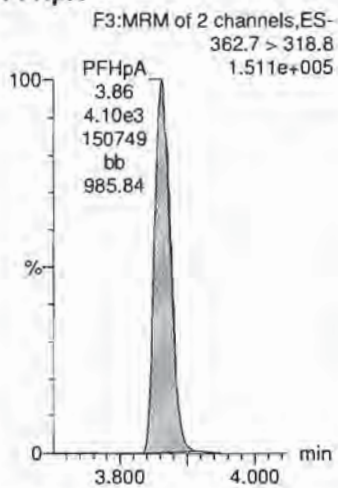

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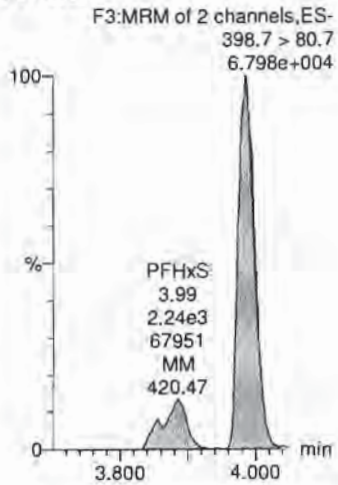

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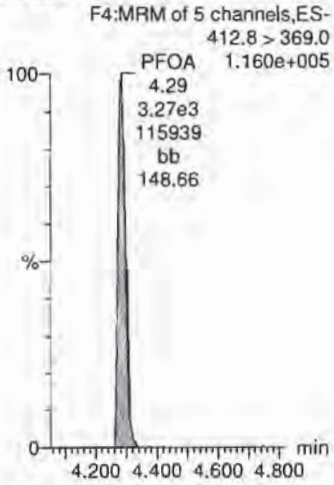

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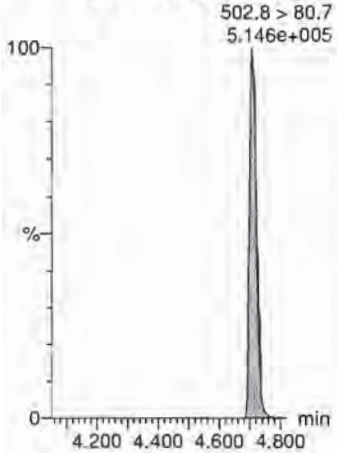

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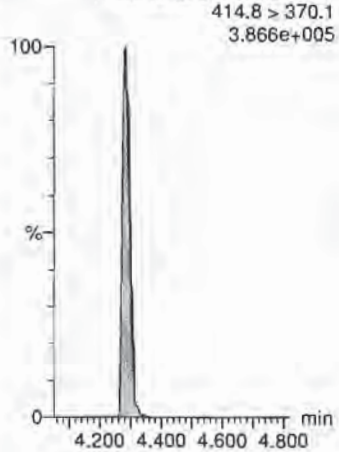

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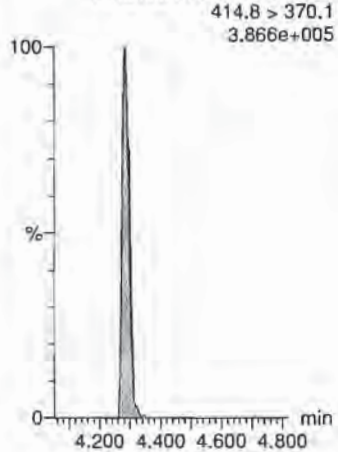

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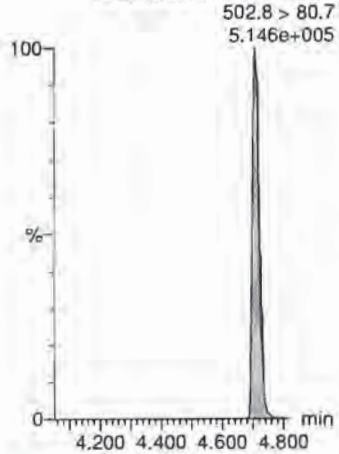

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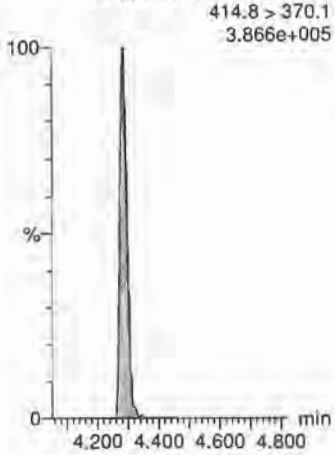

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Name: 180719G3_6, Date: 19-Jul-2018, Time: 15:54:41, ID: ST180719G3-5 PFC CS0 537 18G1805, Description: PFC CS0 537 18G1805

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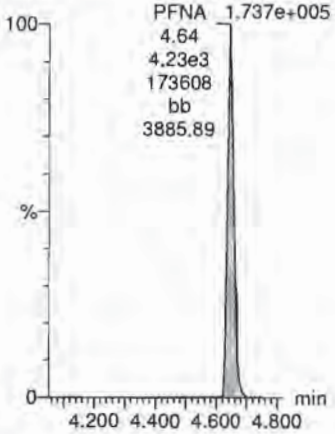

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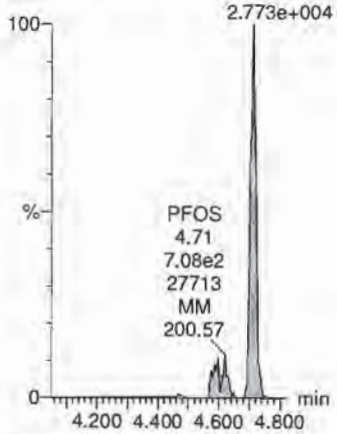

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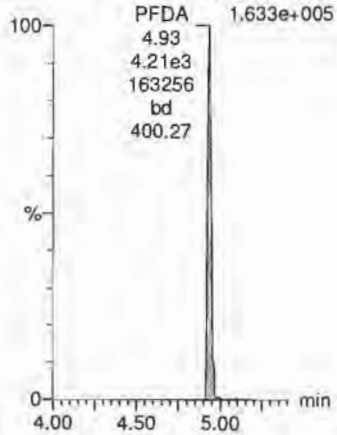

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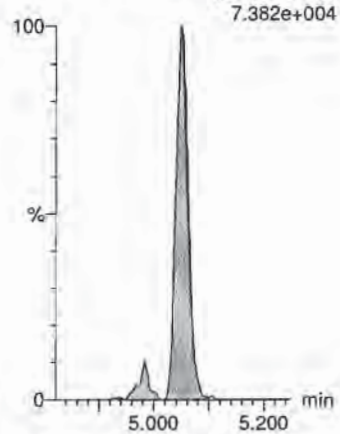

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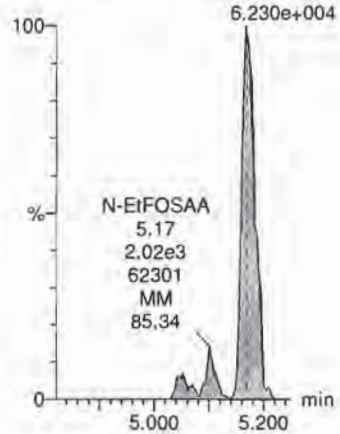

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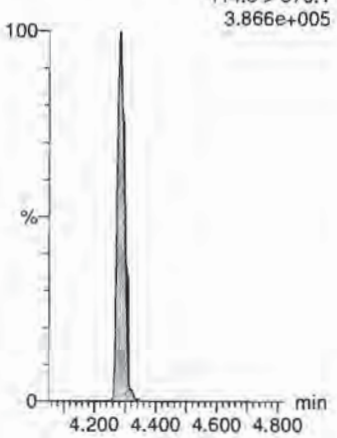

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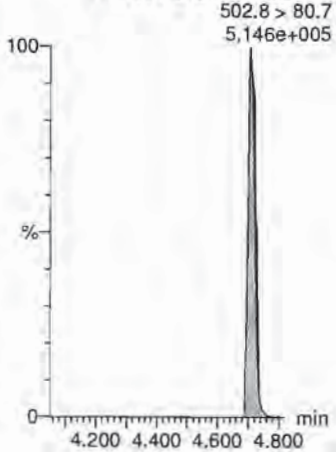

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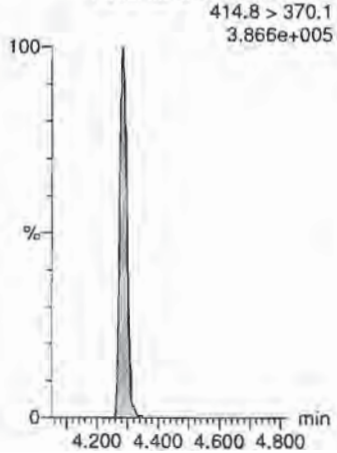

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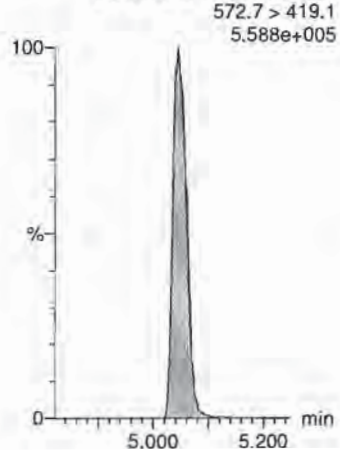

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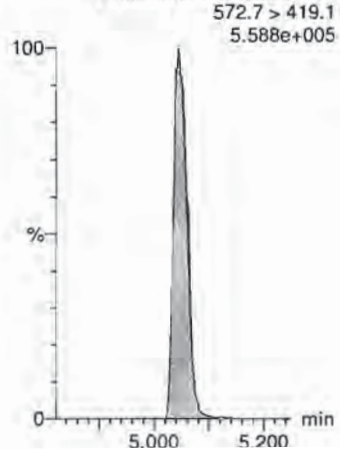

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Name: 180719G3_6, Date: 19-Jul-2018, Time: 15:54:41, ID: ST180719G3-5 PFC CS0 537 18G1805, Description: PFC CS0 537 18G1805

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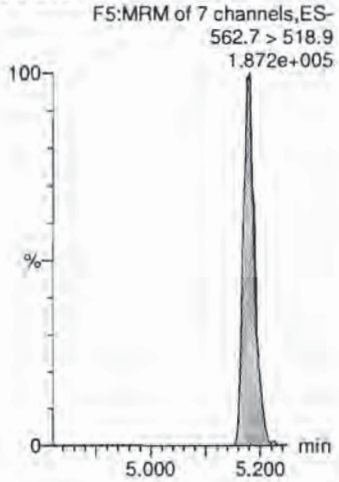

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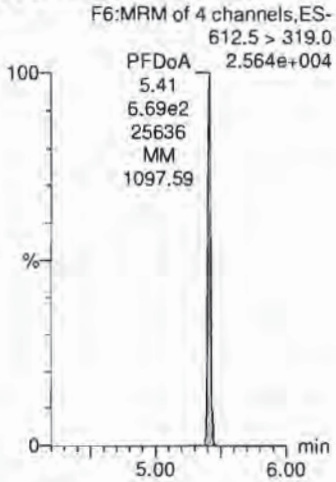

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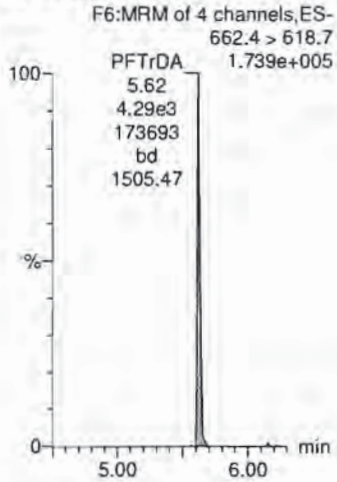

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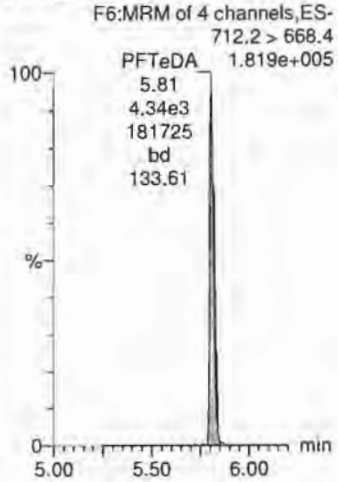

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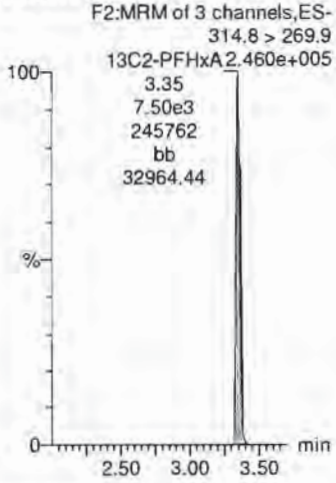

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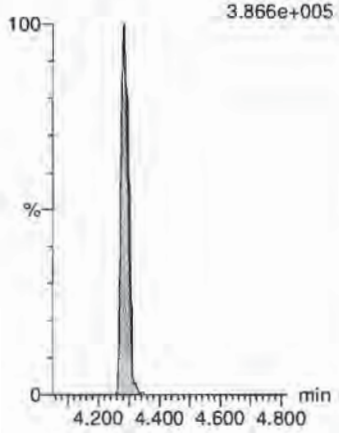

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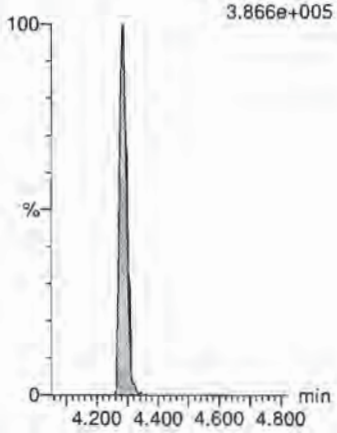

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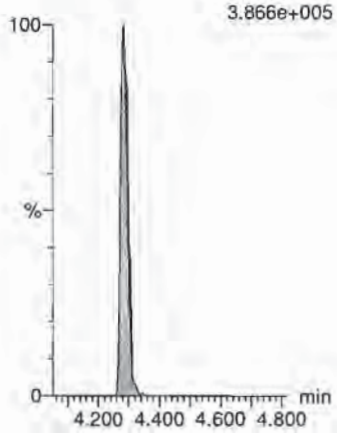

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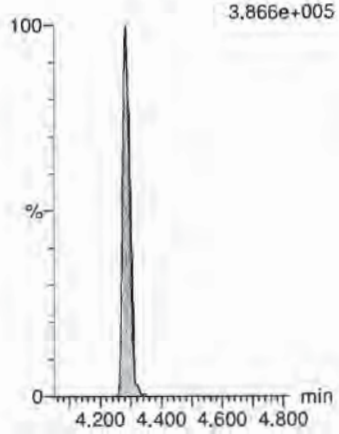

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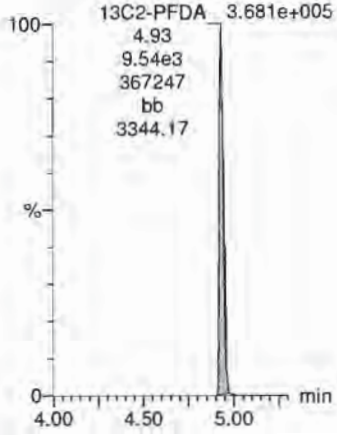

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Name: 180719G3_6, Date: 19-Jul-2018, Time: 15:54:41, ID: ST180719G3-5 PFC CS0 537 18G1805, Description: PFC CS0 537 18G1805

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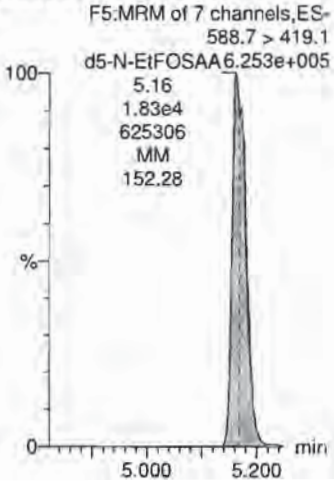

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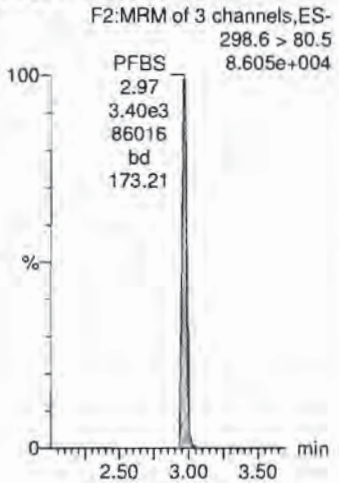

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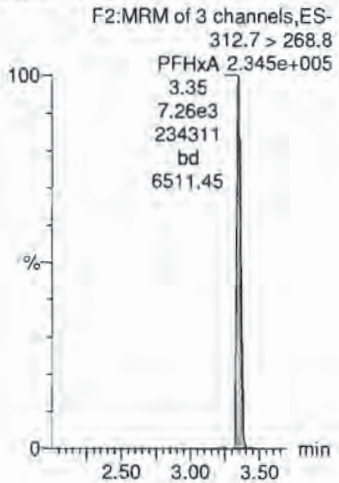

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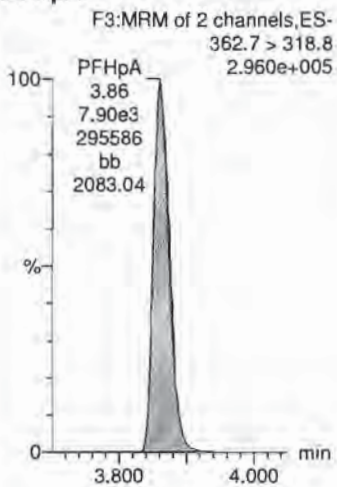

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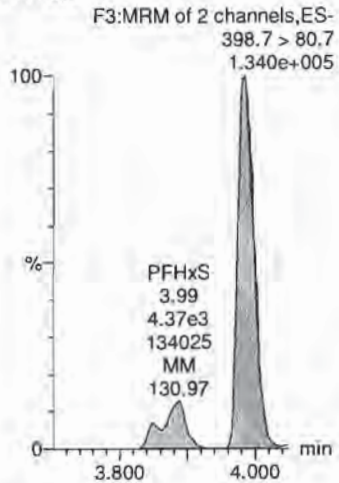
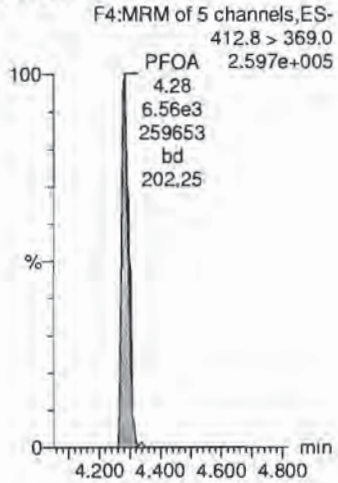


PFOA



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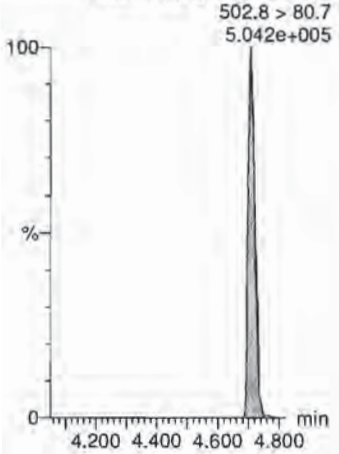

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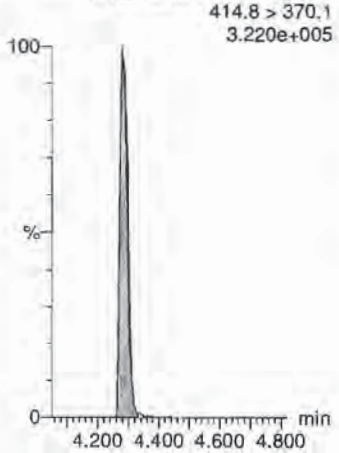

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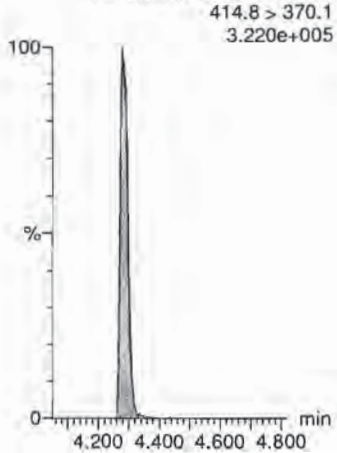

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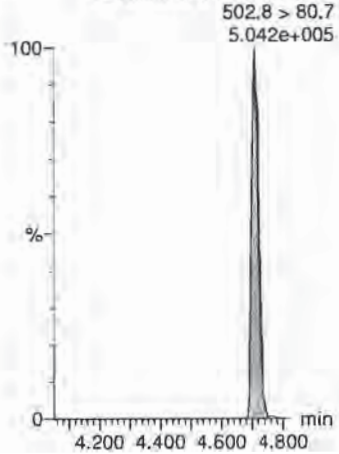

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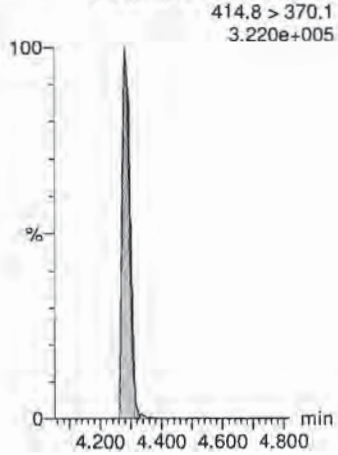

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_7, Date: 19-Jul-2018, Time: 16:07:29, ID: ST180719G3-6 PFC CS1 537 18G1806, Description: PFC CS1 537 18G1806

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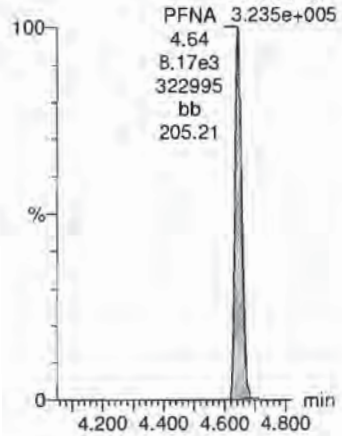

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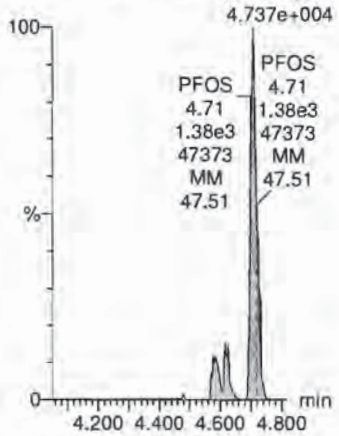

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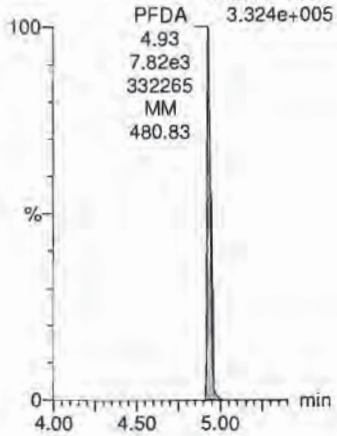

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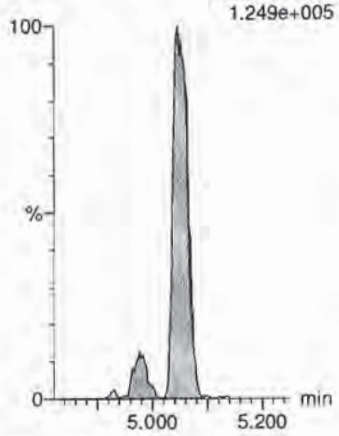

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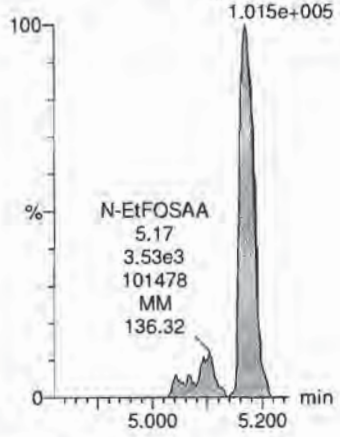

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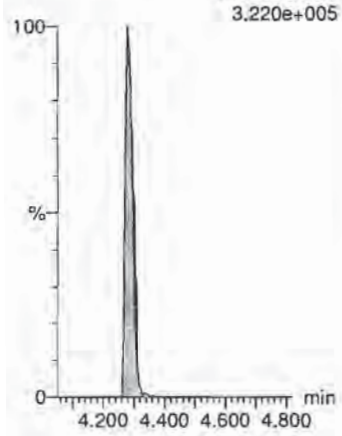

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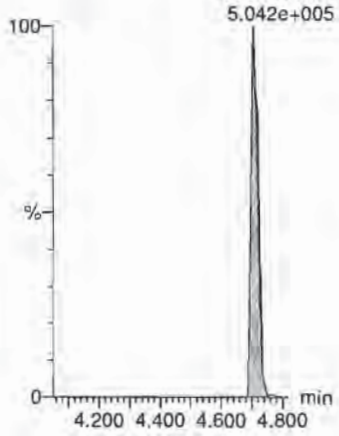

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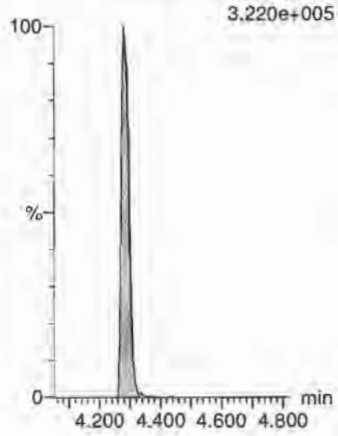

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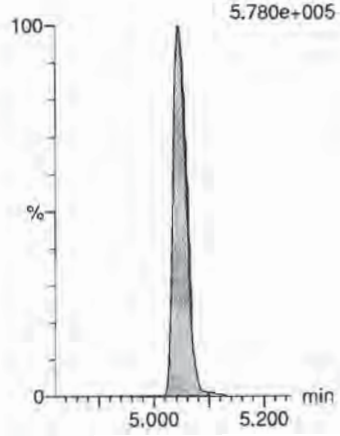

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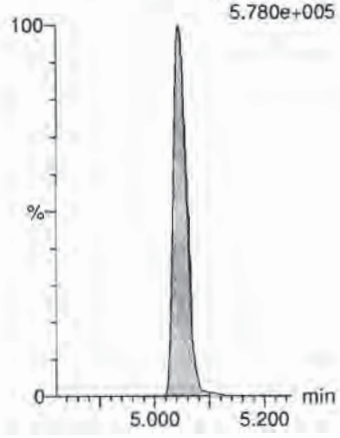

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_7, Date: 19-Jul-2018, Time: 16:07:29, ID: ST180719G3-6 PFC CS1 537 18G1806, Description: PFC CS1 537 18G1806

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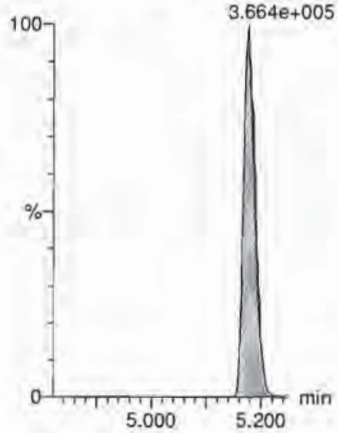

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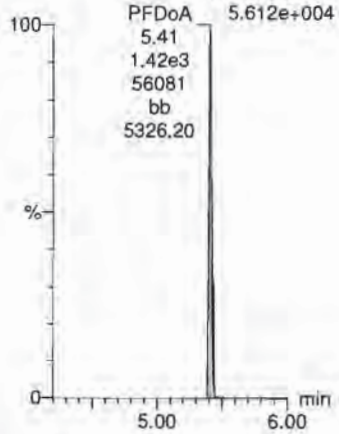

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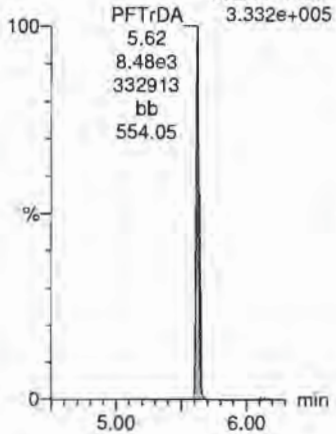

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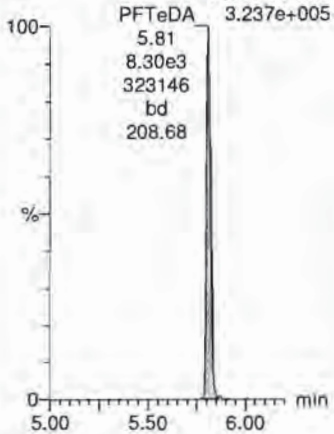

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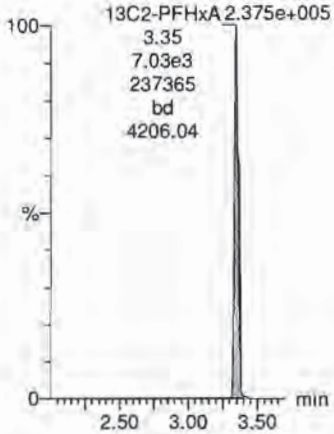

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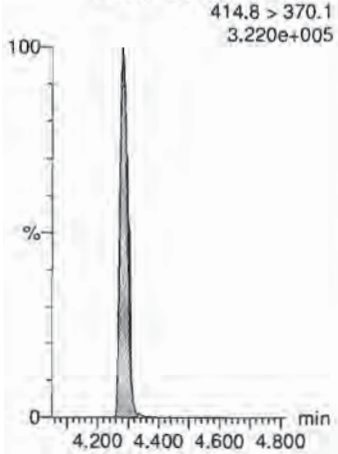

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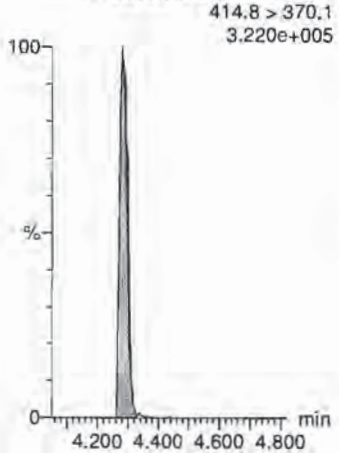

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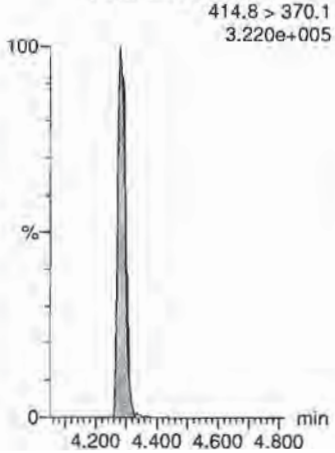

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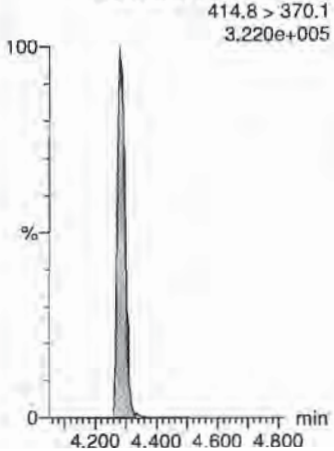

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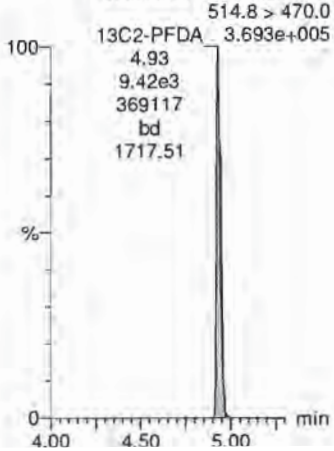

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_7, Date: 19-Jul-2018, Time: 16:07:29, ID: ST180719G3-6 PFC CS1 537 18G1806, Description: PFC CS1 537 18G1806

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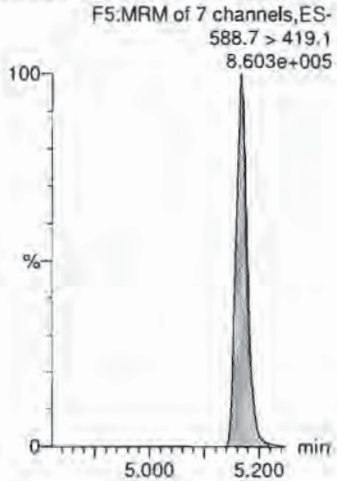

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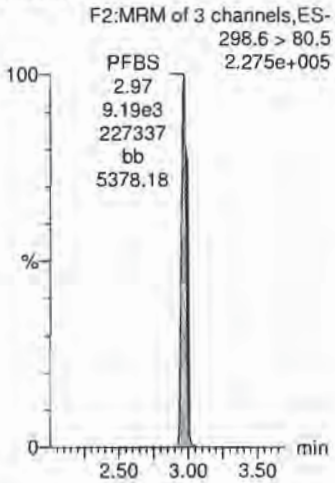

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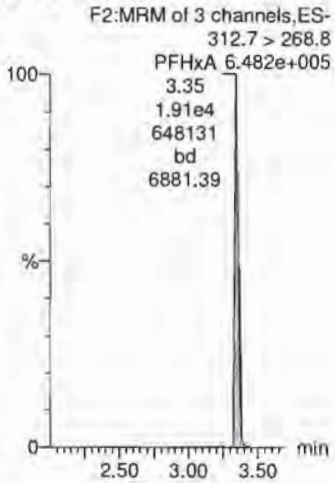

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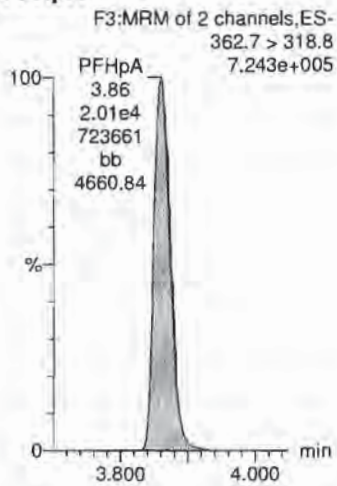

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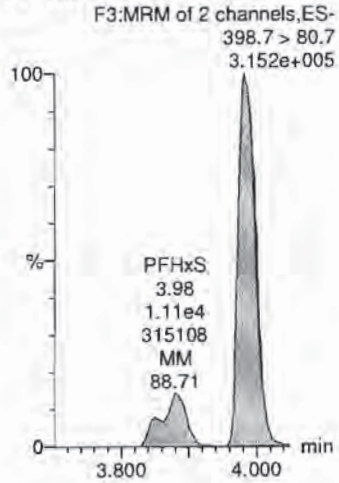

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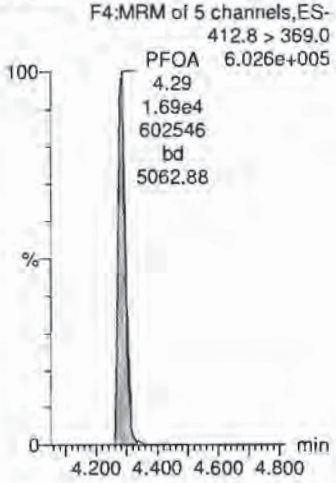

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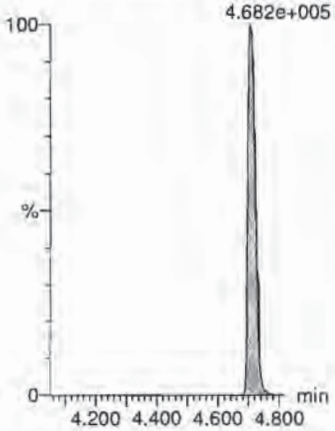

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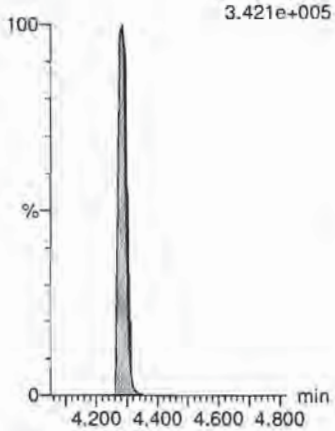

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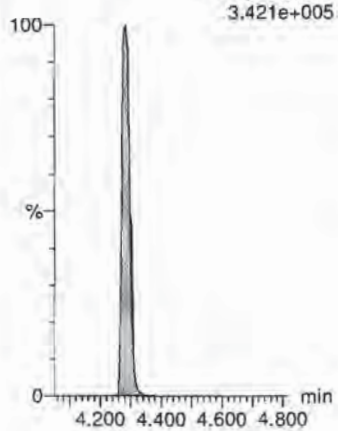

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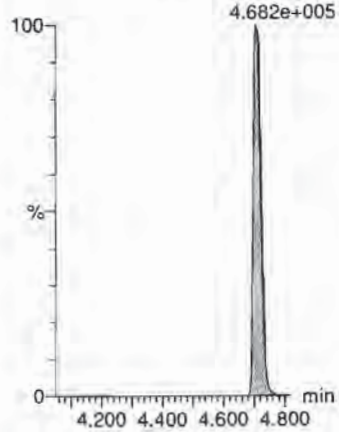

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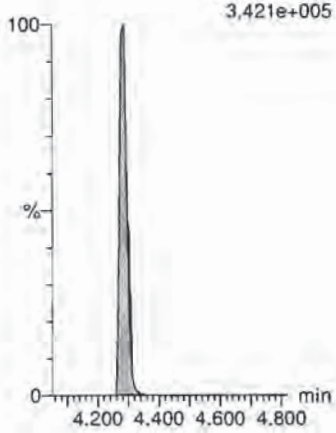

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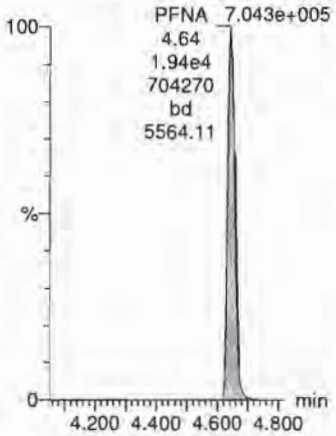

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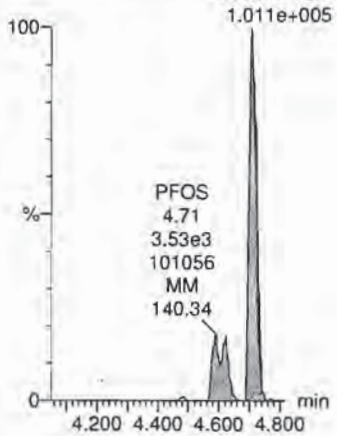

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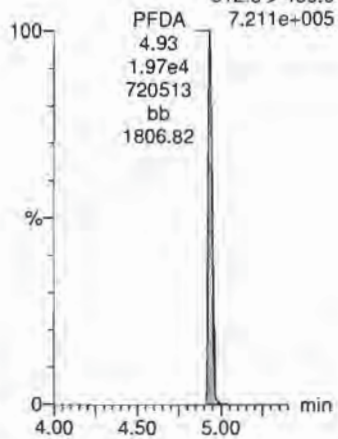

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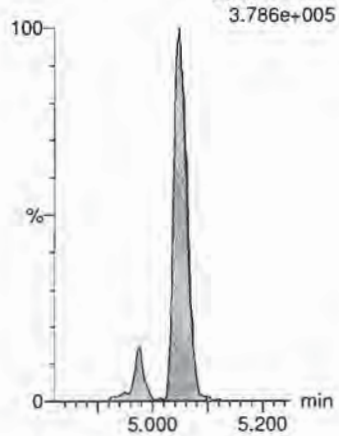

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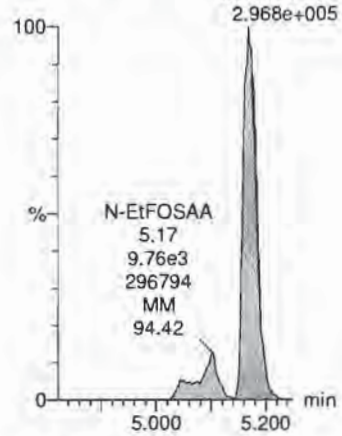

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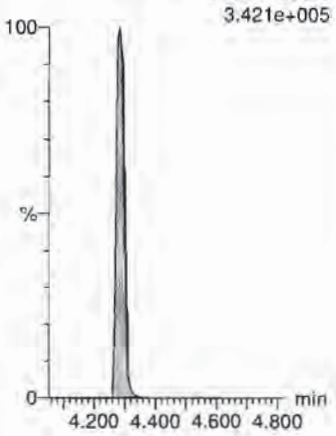

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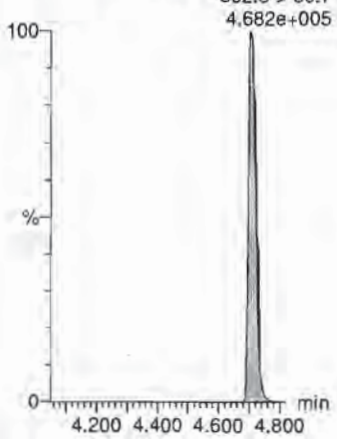

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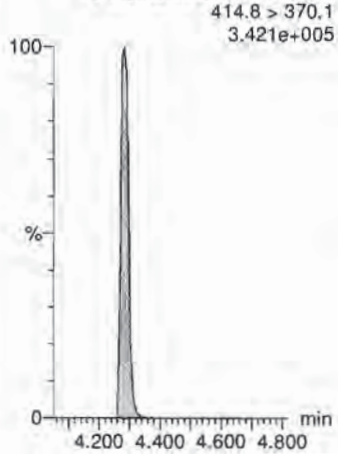

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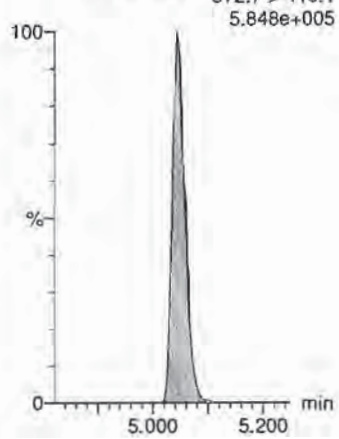

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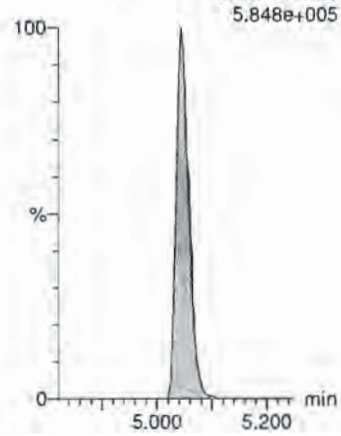

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Name: 180719G3_8, Date: 19-Jul-2018, Time: 16:20:19, ID: ST180719G3-7 PFC CS2 537 18G1807, Description: PFC CS2 537 18G1807

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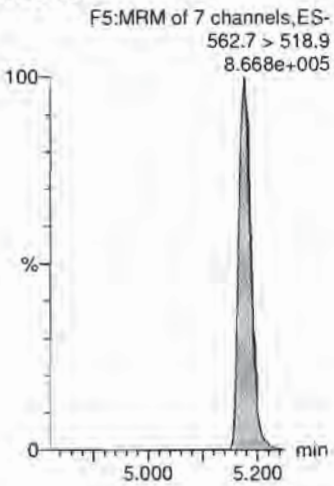

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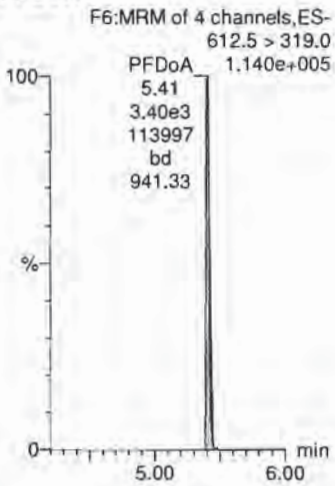

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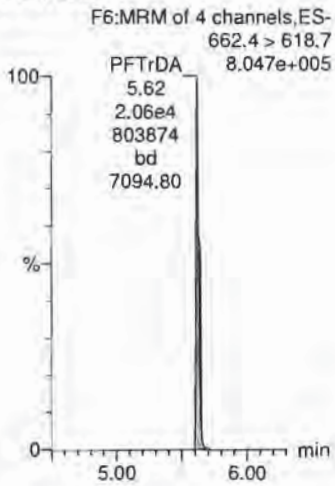

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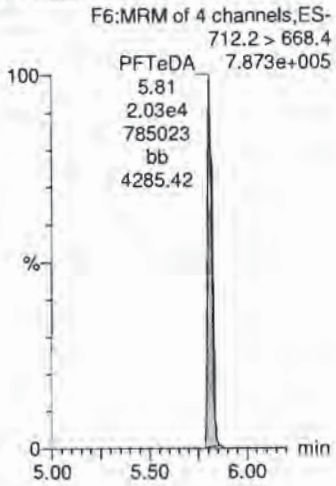

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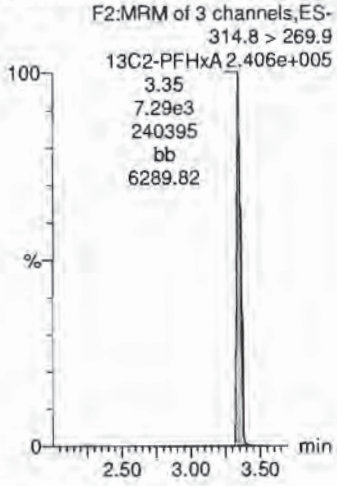

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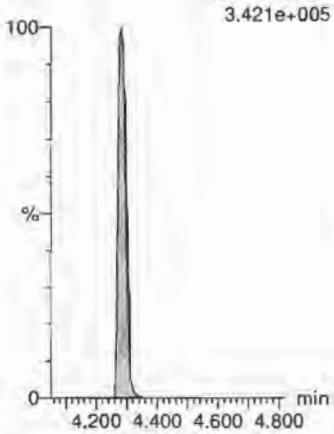

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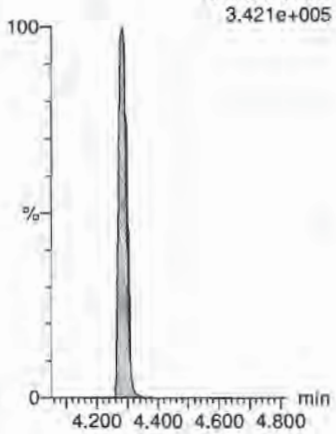

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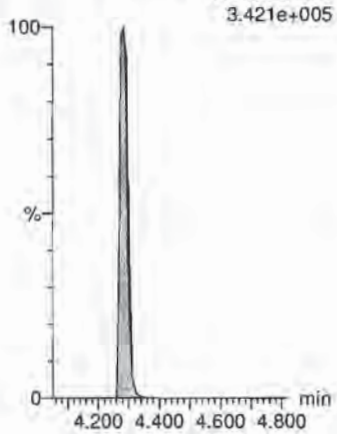

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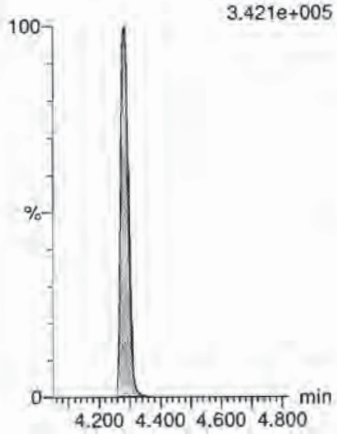

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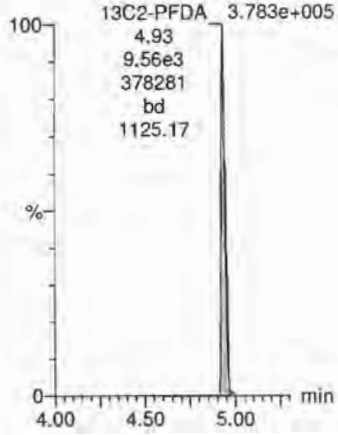

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_8, Date: 19-Jul-2018, Time: 16:20:19, ID: ST180719G3-7 PFC CS2 537 18G1807, Description: PFC CS2 537 18G1807

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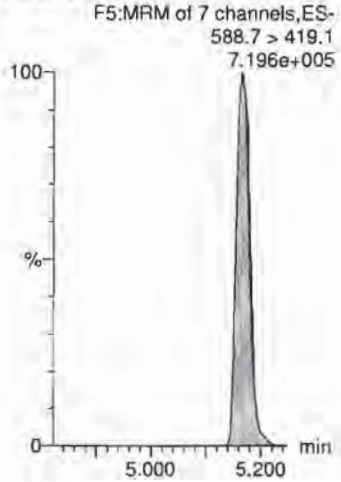

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_9, Date: 19-Jul-2018, Time: 16:33:10, ID: ST180719G3-8 PFC CS3 537 18G1808, Description: PFC CS3 537 18G1808

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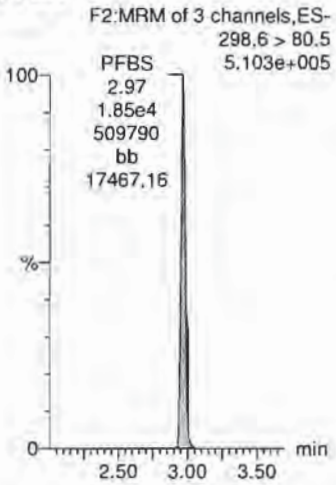

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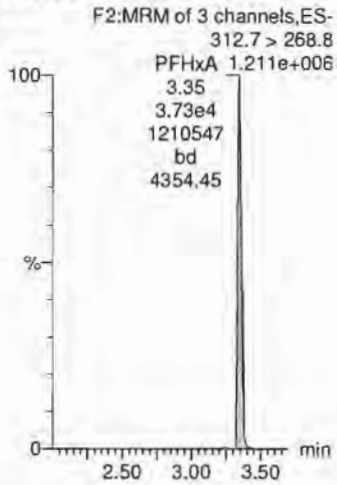

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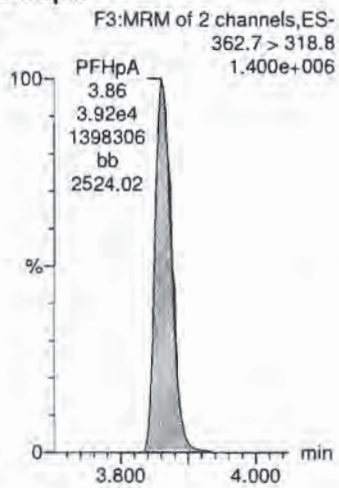

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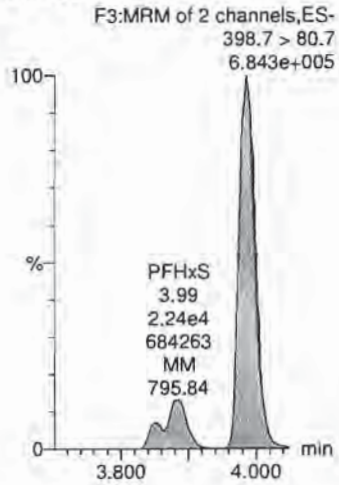

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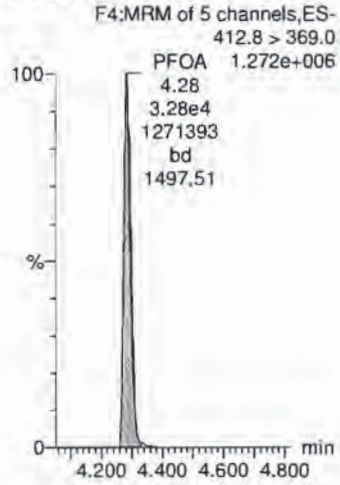

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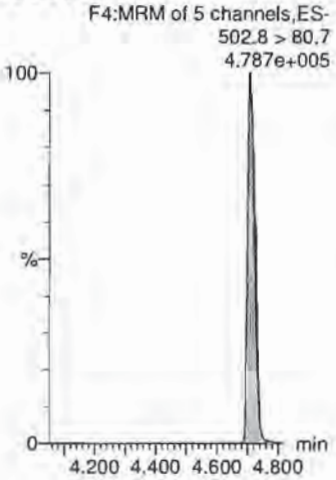

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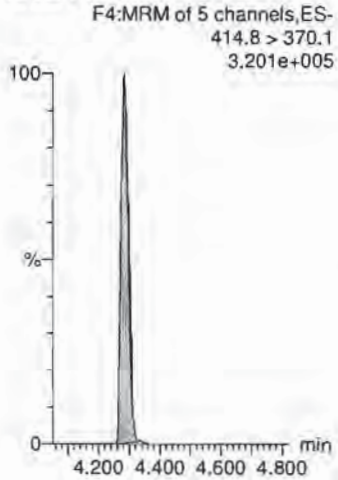

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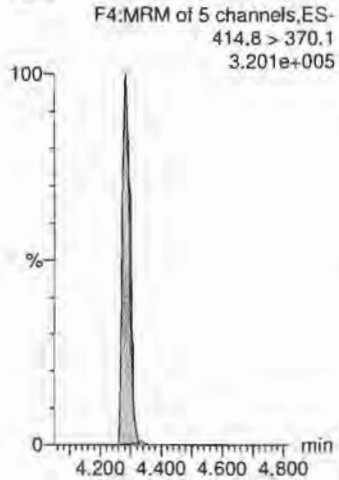

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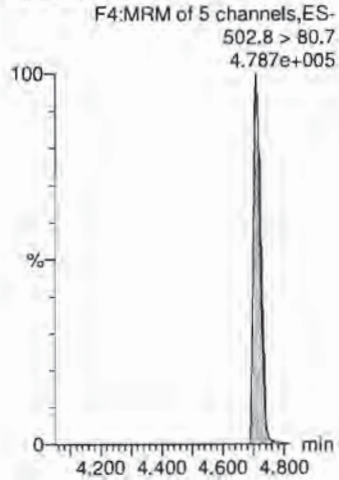

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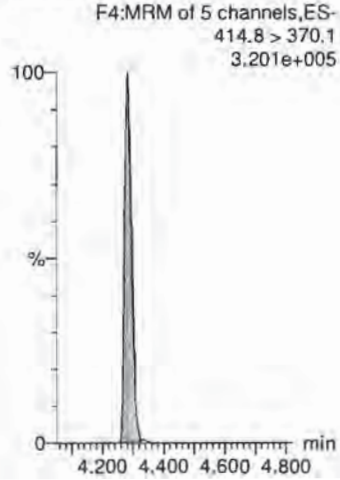

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_9, Date: 19-Jul-2018, Time: 16:33:10, ID: ST180719G3-8 PFC CS3 537 18G1808, Description: PFC CS3 537 18G1808

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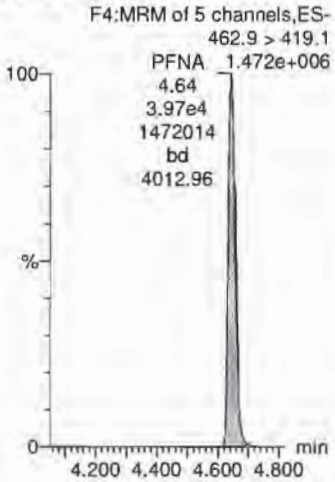

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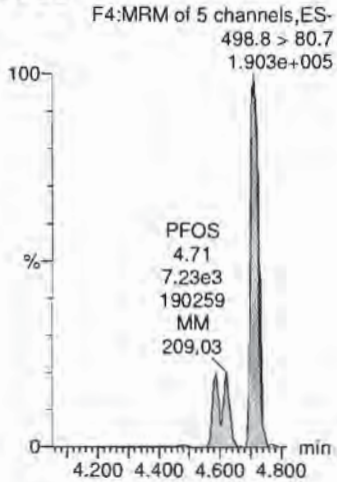

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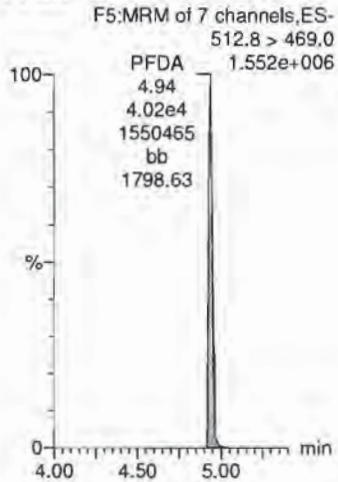

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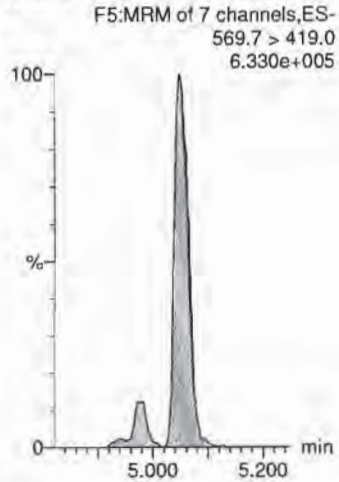

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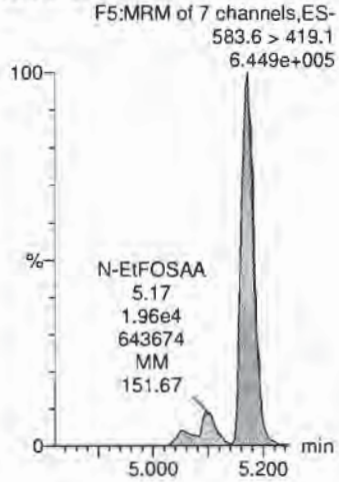

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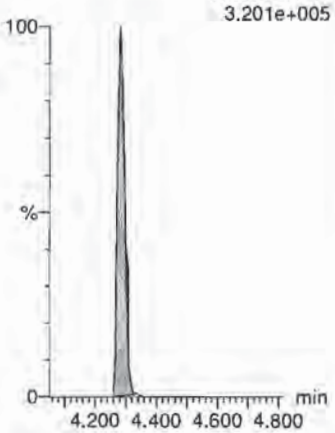

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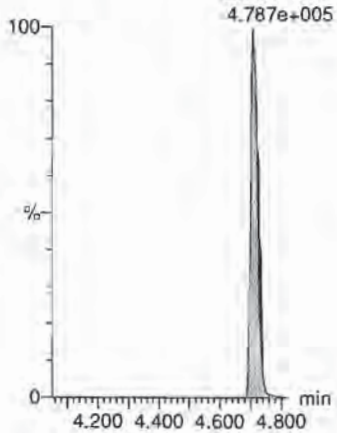

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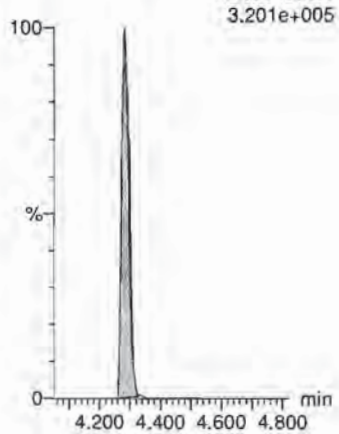

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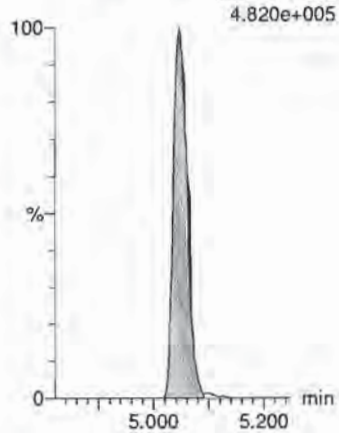

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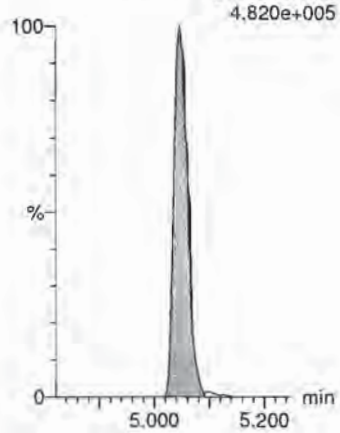

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Name: 180719G3_9, Date: 19-Jul-2018, Time: 16:33:10, ID: ST180719G3-8 PFC CS3 537 18G1808, Description: PFC CS3 537 18G1808

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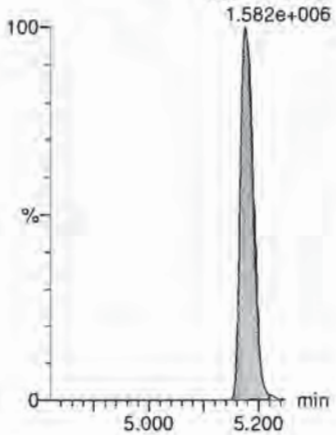

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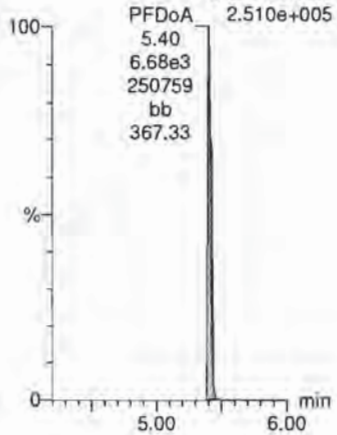

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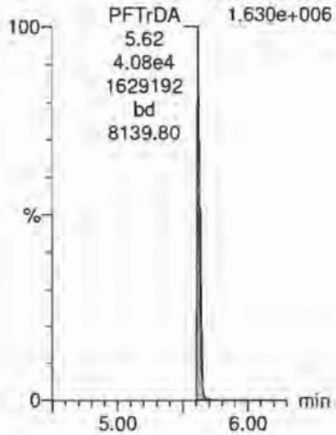

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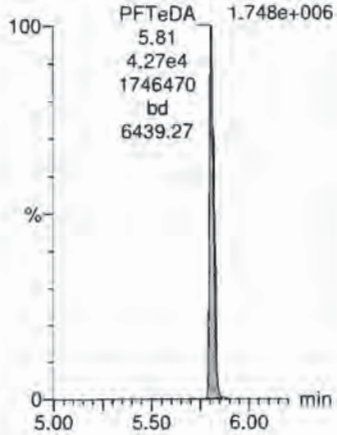

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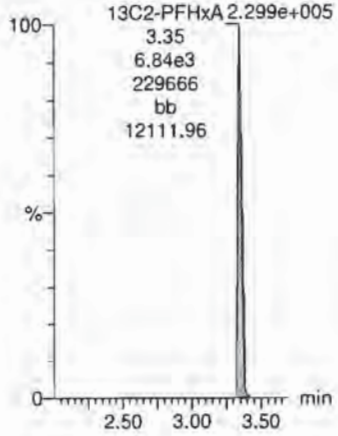

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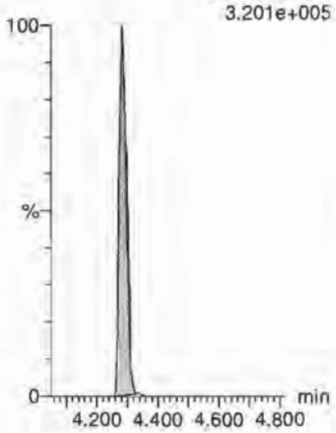

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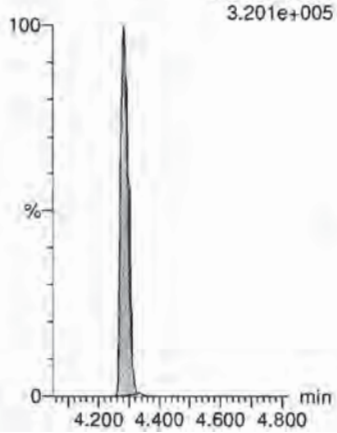

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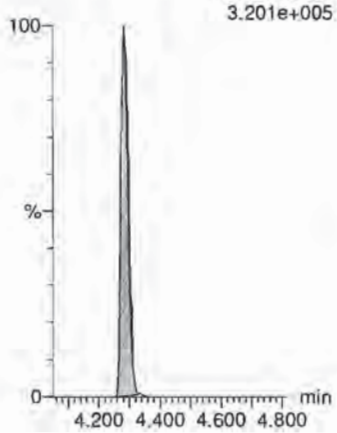

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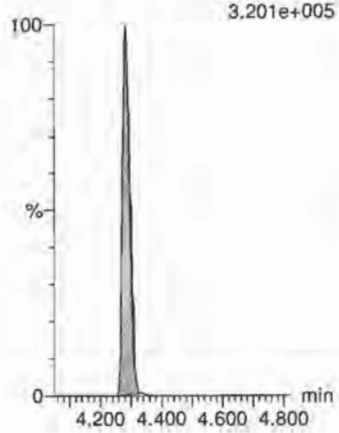

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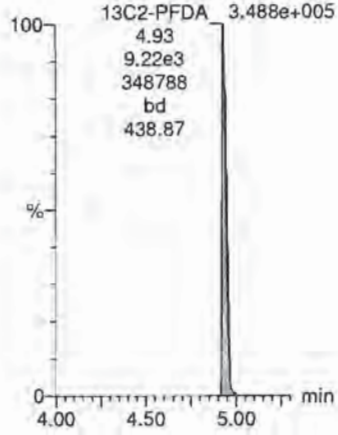

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Name: 180719G3_9, Date: 19-Jul-2018, Time: 16:33:10, ID: ST180719G3-8 PFC CS3 537 18G1808, Description: PFC CS3 537 18G1808

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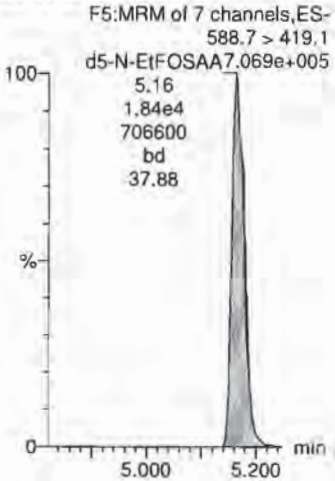

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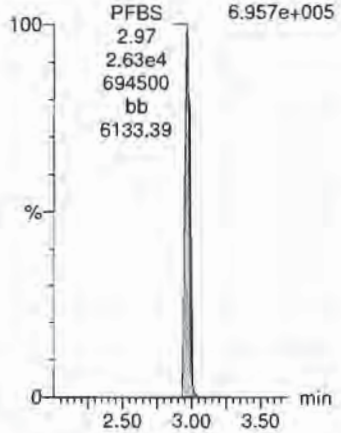

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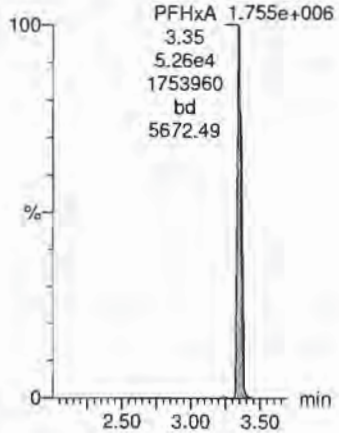

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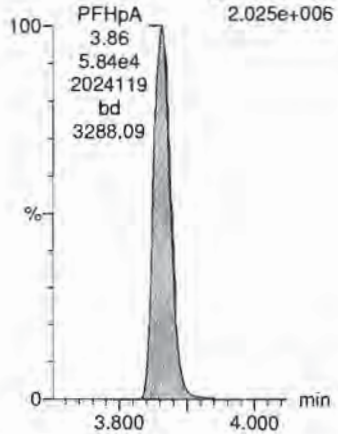

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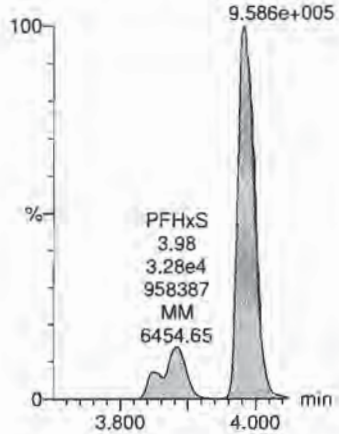

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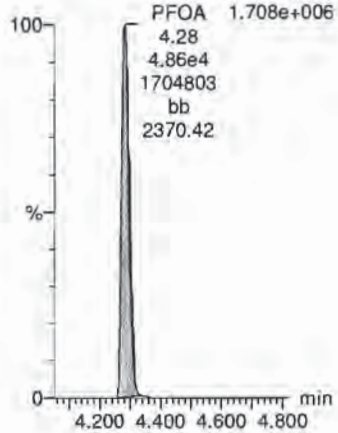

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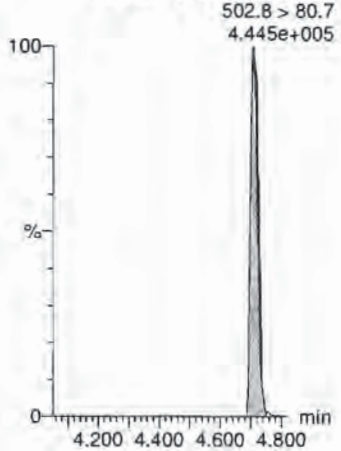

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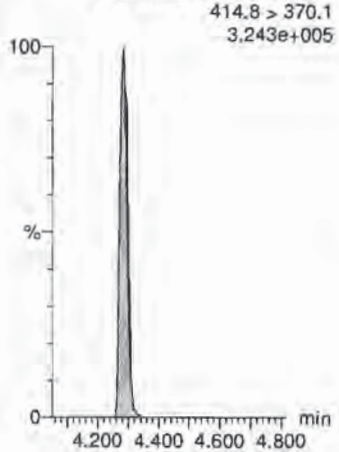

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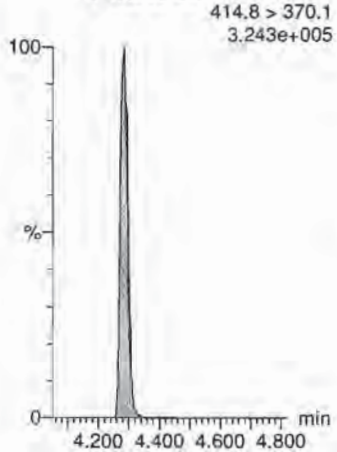

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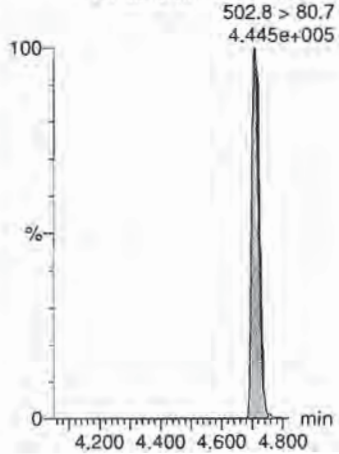

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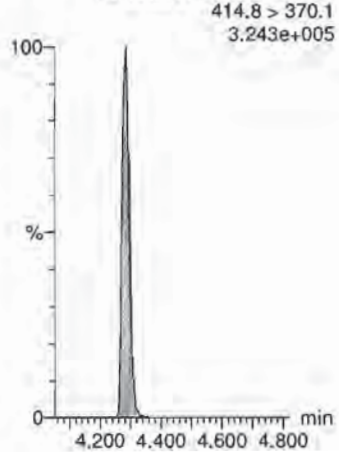

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Name: 180719G3_10, Date: 19-Jul-2018, Time: 16:45:58, ID: ST180719G3-9 PFC CS4 537 18G1809, Description: PFC CS4 537 18G1809

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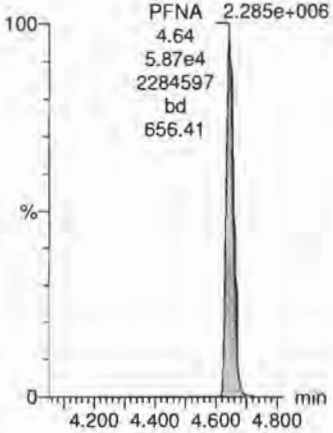

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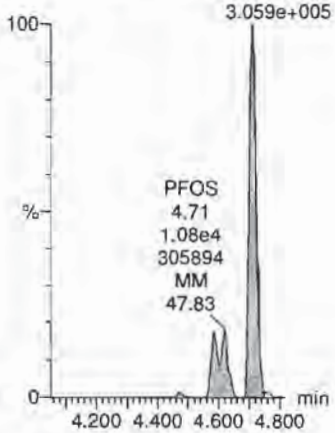

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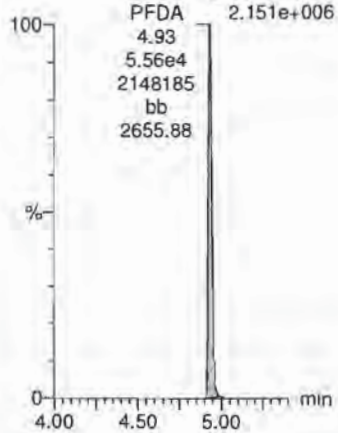

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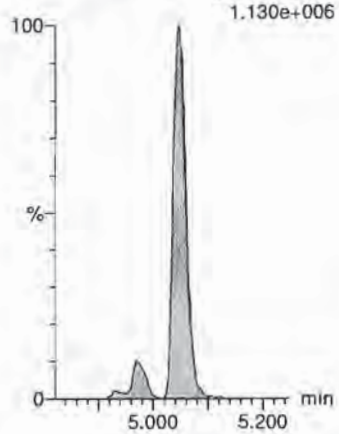

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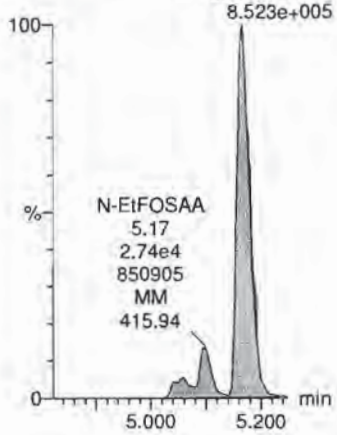

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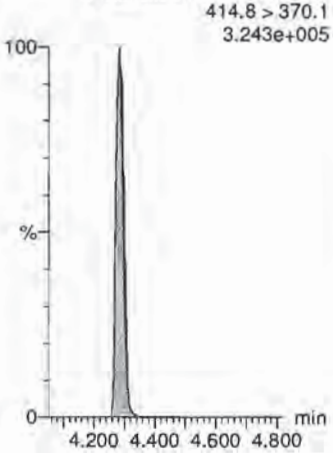
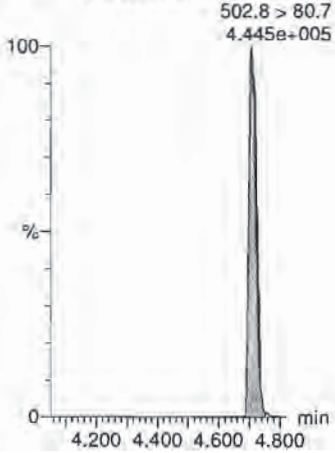


13C4-PFOS



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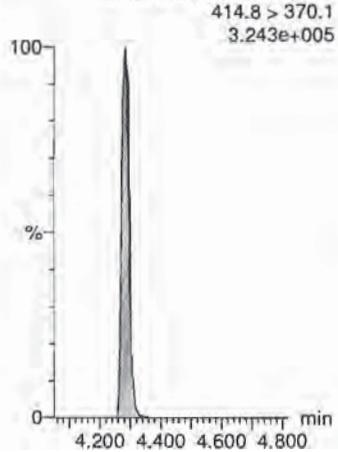

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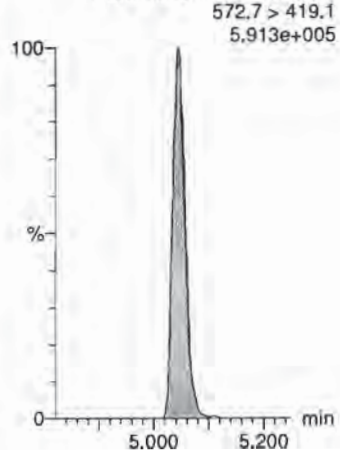

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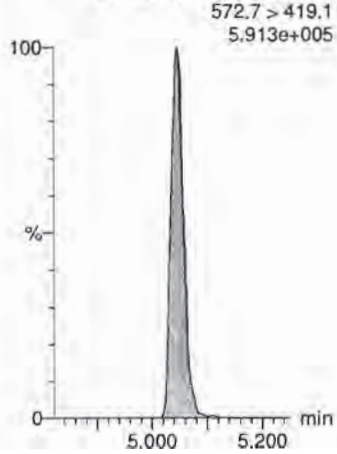

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_10, Date: 19-Jul-2018, Time: 16:45:58, ID: ST180719G3-9 PFC CS4 537 18G1809, Description: PFC CS4 537 18G1809

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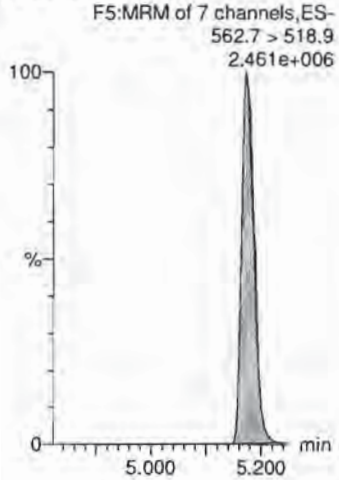

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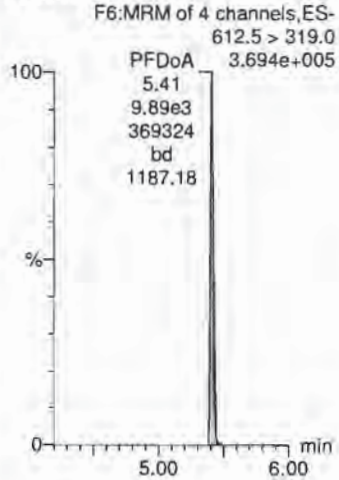

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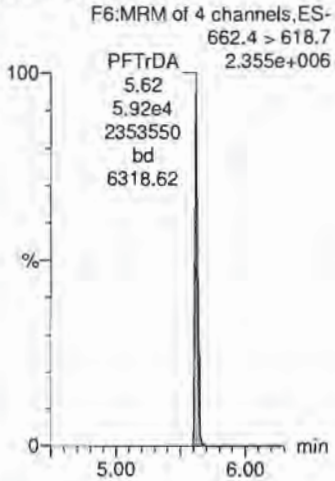

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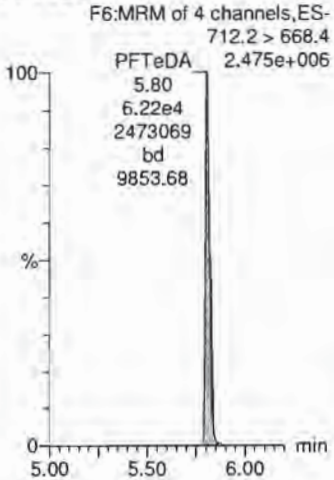

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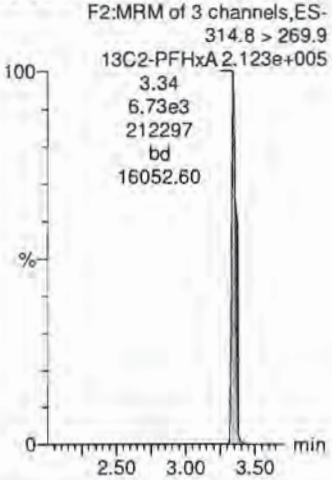

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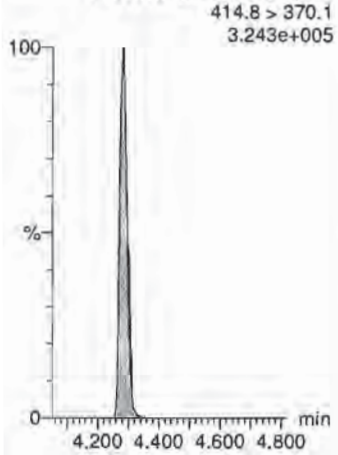

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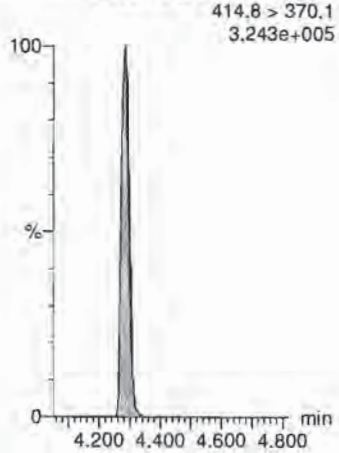

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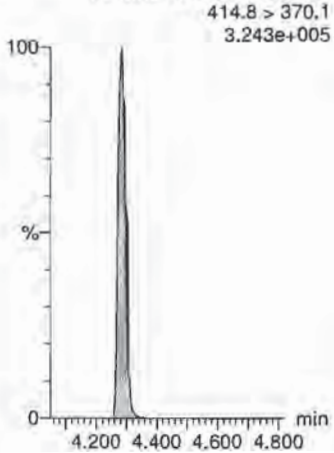

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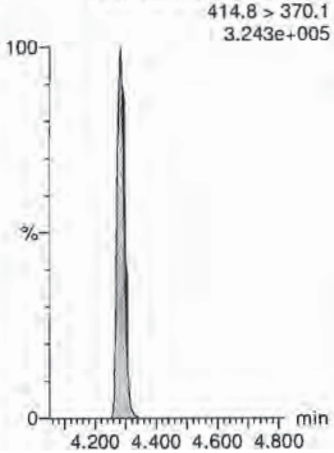

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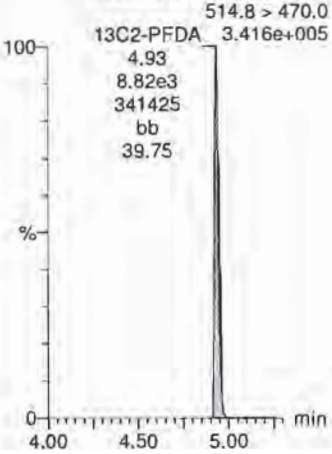

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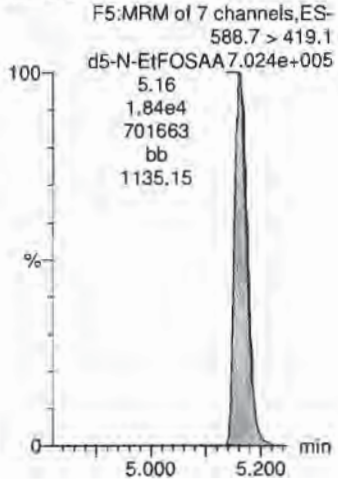
Last Altered: Friday, July 20, 2018 12:31:35 Pacific Daylight Time
Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_10, Date: 19-Jul-2018, Time: 16:45:58, ID: ST180719G3-9 PFC CS4 537 18G1809, Description: PFC CS4 537 18G1809

d5-N-EtFOSAA



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Name: 180719G3_11, Date: 19-Jul-2018, Time: 16:58:48, ID: ST180719G3-10 PFC CS5 537 18G1810, Description: PFC CS5 537 18G1810

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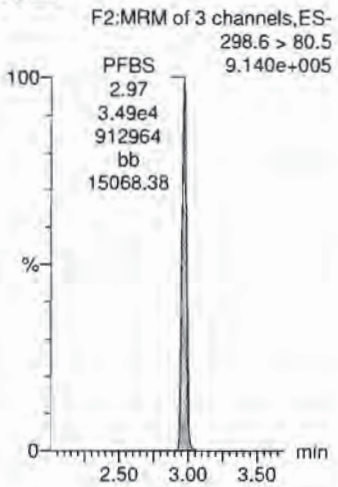

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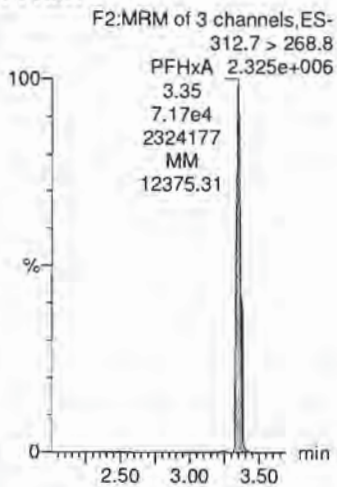

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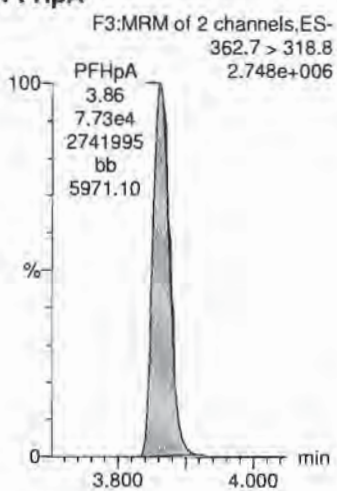

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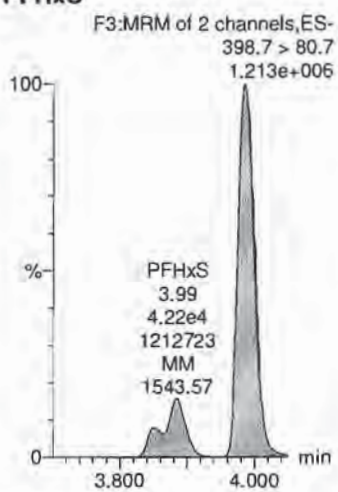

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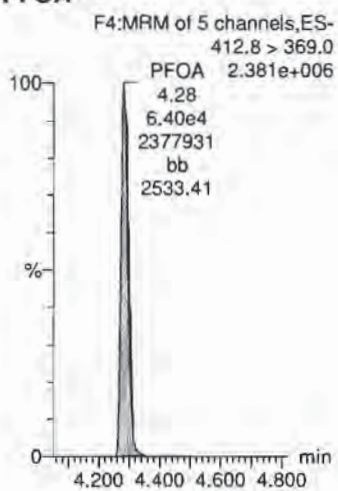

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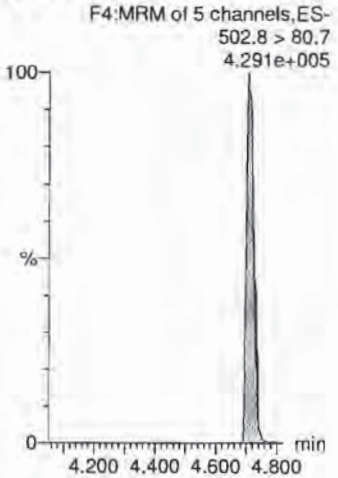

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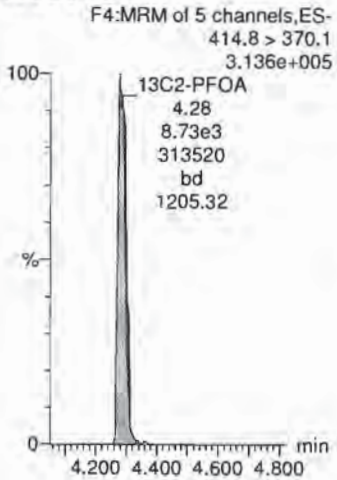

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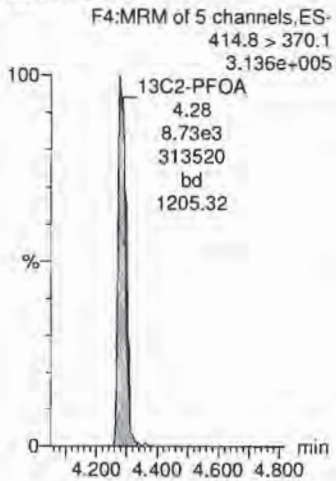

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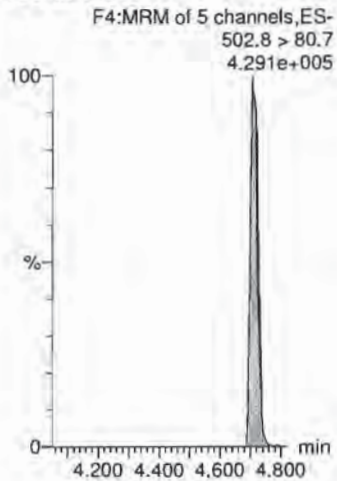

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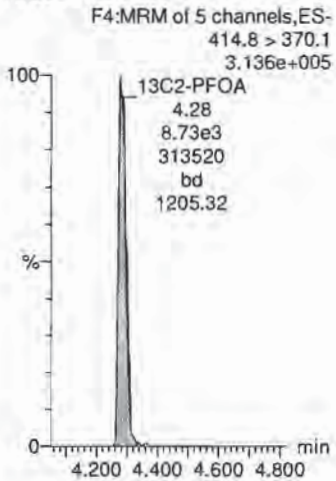

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Printed: Friday, July 20, 2018 12:40:57 Pacific Daylight Time

Name: 180719G3_11, Date: 19-Jul-2018, Time: 16:58:48, ID: ST180719G3-10 PFC CS5 537 18G1810, Description: PFC CS5 537 18G1810

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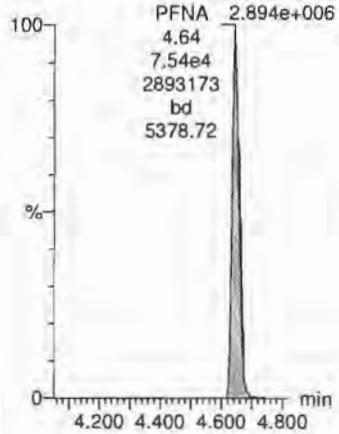

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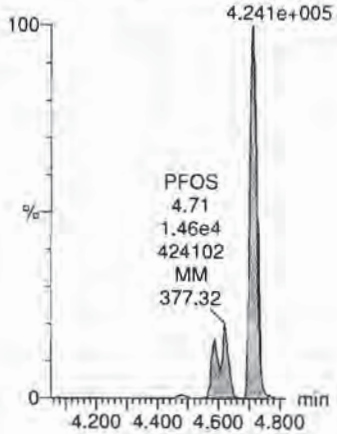

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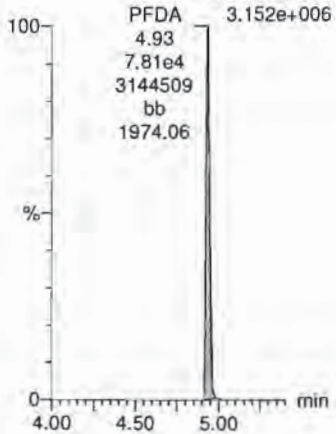

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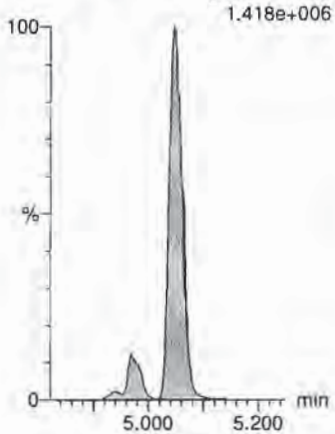

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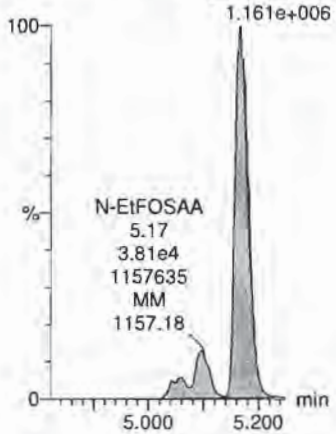

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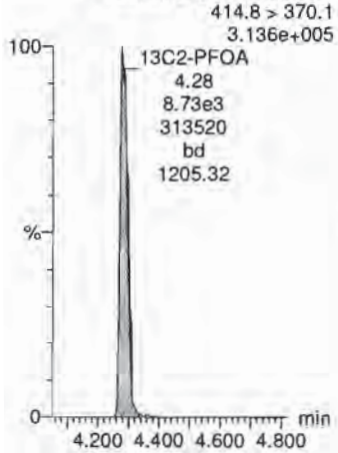

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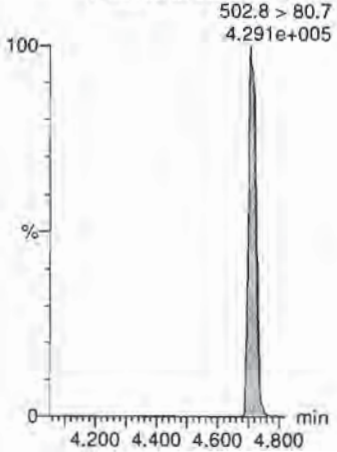

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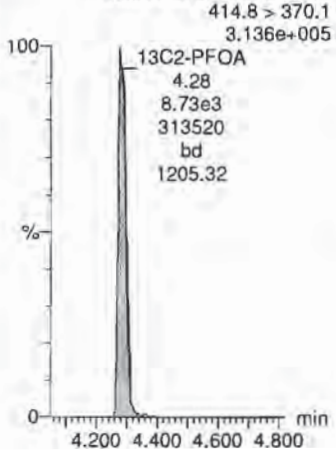

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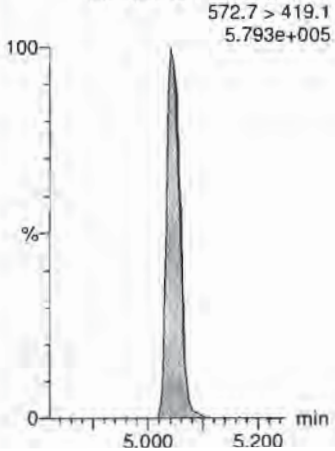

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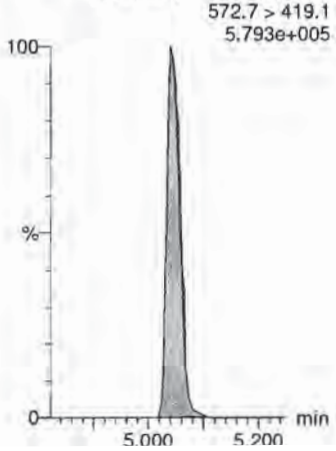

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Name: 180719G3_11, Date: 19-Jul-2018, Time: 16:58:48, ID: ST180719G3-10 PFC CS5 537 18G1810, Description: PFC CS5 537 18G1810

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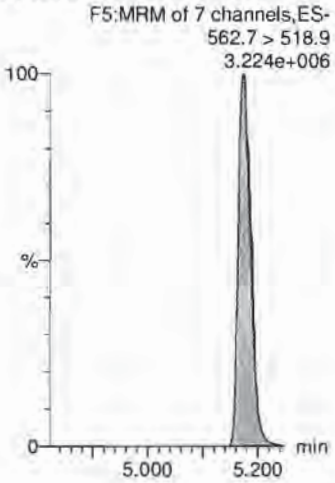

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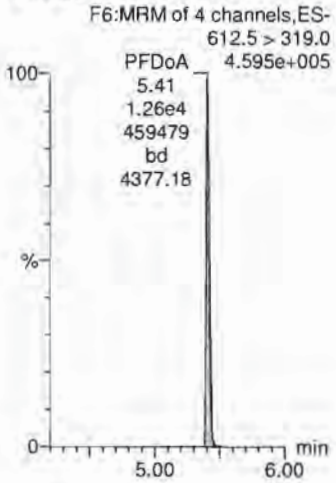

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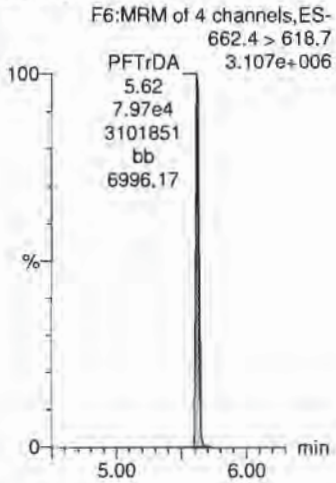

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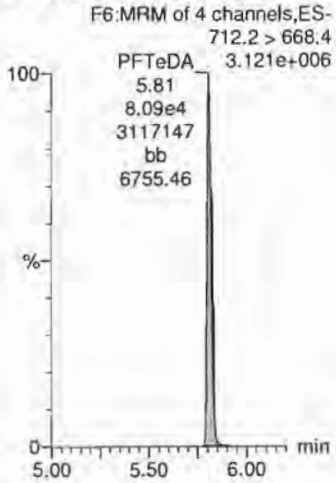

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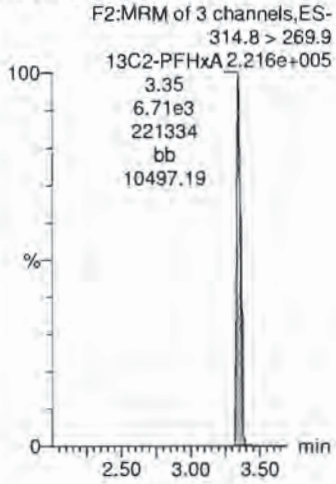

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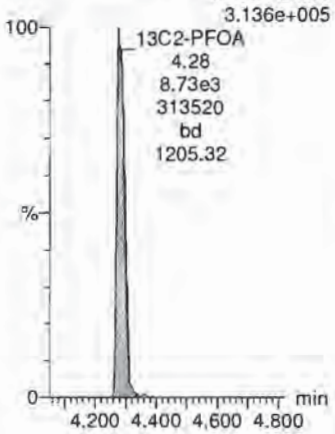

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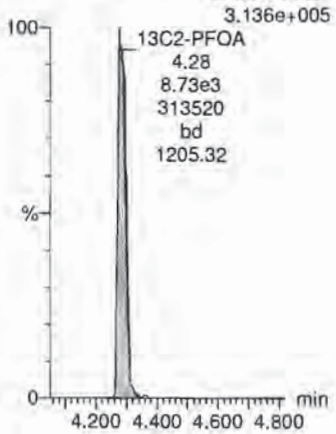

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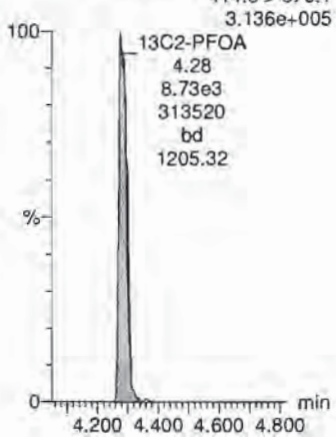

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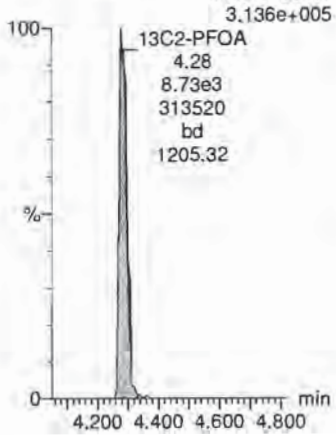

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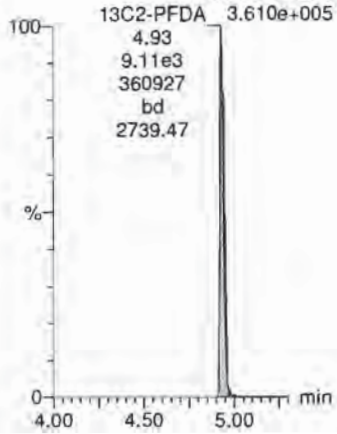

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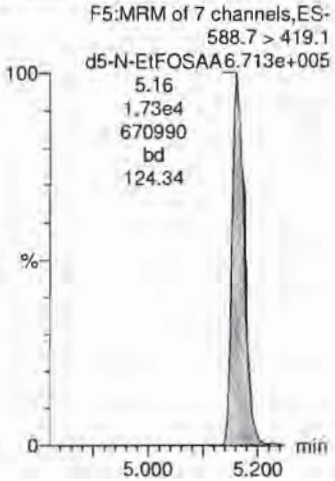
Name: 180719G3_11, Date: 19-Jul-2018, Time: 16:58:48, ID: ST180719G3-10 PFC CS5 537 18G1810, Description: PFC CS5 537 18G1810

d5-N-EtFOSAA



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Dataset: X:\G1.PRO\Results\2018\180719G3\180719G3-ICV.qld

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JAD 7/20/18

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0719.mdb 20 Jul 2018 10:54:08
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Name: 180719G3_13, Date: 19-Jul-2018, Time: 17:24:26, ID: ST180719G3-1 PFC ICV 537 18G1811, Description: PFC ICV 537 18G1811

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	298.6> 80.5	4.66e3	1.35e4	1.00		2.96	2.97	9.90	10.4	104.1
2	2	PFHxA	312.7 > 268.8	8.30e3	1.01e4	1.00		3.35	3.35	8.23	10.1	101.2
3	3	PFHpA	362.7 > 318.8	9.01e3	1.01e4	1.00		3.86	3.86	8.93	10.2	101.8
4	4	PFHxS	398.7 > 80.7	5.35e3	1.35e4	1.00		3.98	3.99	11.3	10.1	100.5
5	5	PFOA	412.8 > 369.0	7.22e3	1.01e4	1.00		4.29	4.28	7.16	9.81	98.1
6	6	PFNA	462.9 > 419.1	9.36e3	1.01e4	1.00		4.65	4.64	9.27	10.6	106.5
7	7	PFOS	498.8 >80.7	1.61e3	1.35e4	1.00		4.70	4.71	3.43	9.27	92.7
8	8	PFDA	512.8 > 469.0	8.59e3	1.01e4	1.00		4.93	4.93	8.52	9.77	97.7
9	9	N-MeFOSAA	569.7 > 419.0	4.79e3	1.68e4	1.00		5.05	5.04	11.4	9.83	98.3
10	10	N-EtFOSAA	583.6 >419.1	4.15e3	1.68e4	1.00		5.17	5.17	9.85	9.88	98.8
11	11	PFUnA	562.7 > 518.9	9.54e3	1.01e4	1.00		5.17	5.17	9.46	9.84	98.4
12	12	PFDoA	612.5 > 319.0	1.56e3	1.01e4	1.00		5.41	5.41	1.55	10.5	105.2
13	13	PFTrDA	662.4 > 618.7	8.72e3	1.01e4	1.00		5.62	5.62	8.64	9.58	95.8
14	14	PFTeDA	712.2>668.4	9.24e3	1.01e4	1.00		5.81	5.81	9.16	9.89	98.9
15	15	13C2-PFHxA	314.8 > 269.9	7.91e3	1.01e4	1.00	0.753	3.44	3.34	7.84	10.4	104.2
16	16	13C2-PFDA	514.8 > 470.0	1.02e4	1.01e4	1.00	1.023	4.88	4.93	10.1	9.92	99.2
17	17	d5-N-EtFOSAA	588.7> 419.1	2.14e4	1.68e4	1.00	1.264	5.05	5.16	50.9	40.3	100.7
18	18	13C2-PFOA	414.8 > 370.1	1.01e4	1.01e4	1.00	1.000	4.28	4.28	10.0	10.0	100.0
19	19	13C4-PFOS	502.8>80.7	1.35e4	1.35e4	1.00	1.000	4.71	4.71	28.7	28.7	100.0
20	20	d3-N-MeFOSAA	572.7 > 419.1	1.68e4	1.68e4	1.00	1.000	5.04	5.05	40.0	40.0	100.0

Cal 7/20/18

Quantify Sample Report **MassLynx MassLynx V4.1 SCN 945**
Vista Analytical Laboratory

Dataset: X:\G1.PRO\Results\2018\180719G3\180719G3-ICV.qld

Last Altered: Friday, July 20, 2018 12:49:13 Pacific Daylight Time
Printed: Friday, July 20, 2018 12:50:06 Pacific Daylight Time

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Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 12:31:35

Name: 180719G3_13, Date: 19-Jul-2018, Time: 17:24:26, ID: ST180719G3-1 PFC ICV 537 18G1811, Description: PFC ICV 537 18G1811

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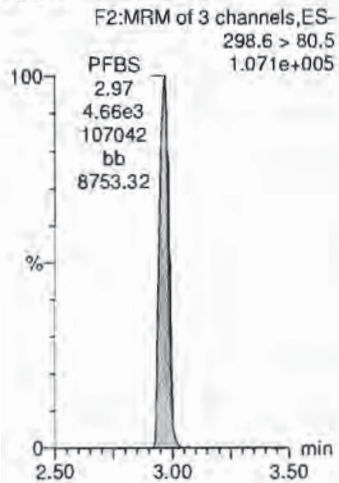
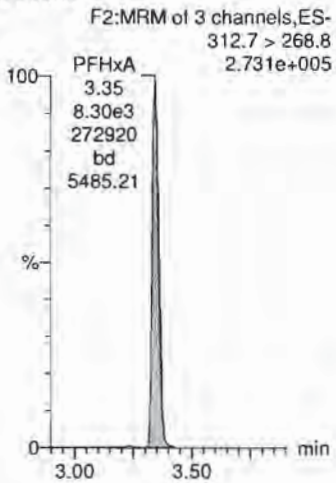
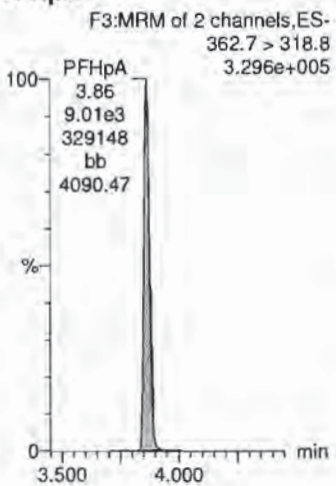


PFHxA



PFHpA



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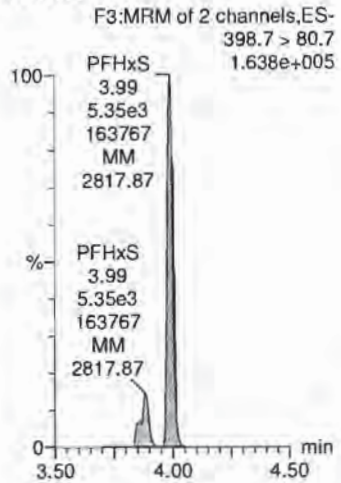
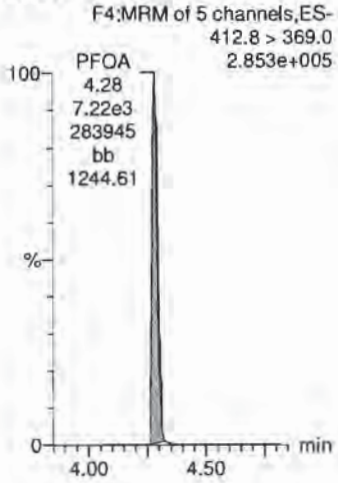


PFOA



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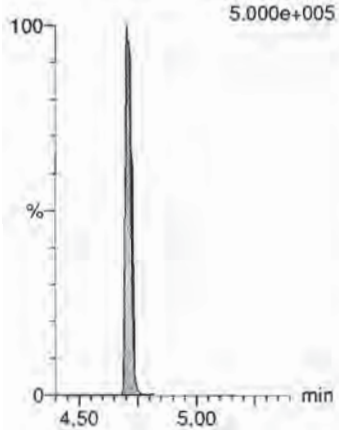

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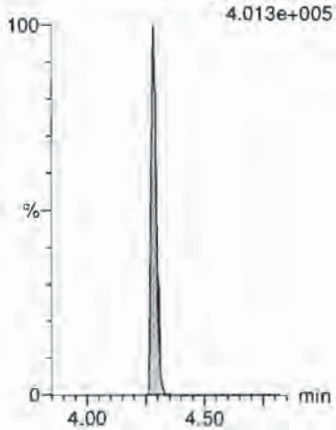

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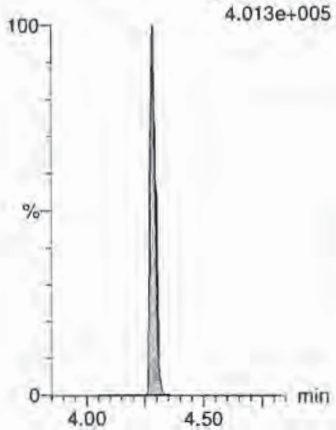

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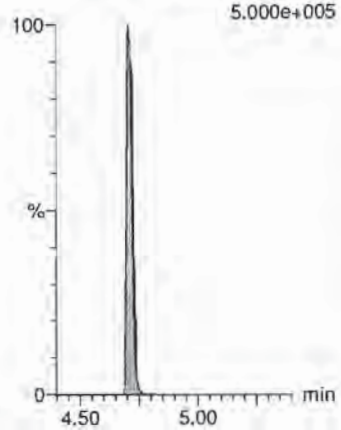

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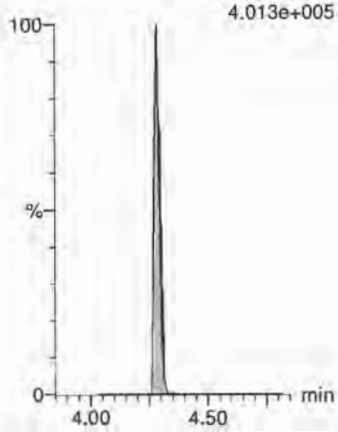

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Printed: Friday, July 20, 2018 12:50:06 Pacific Daylight Time

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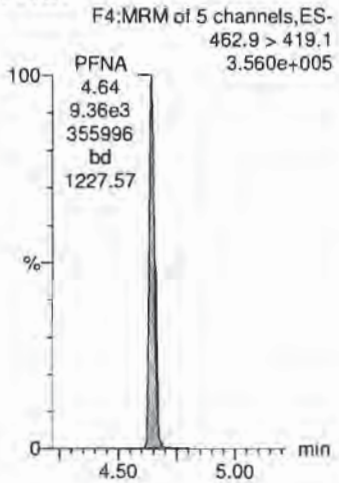

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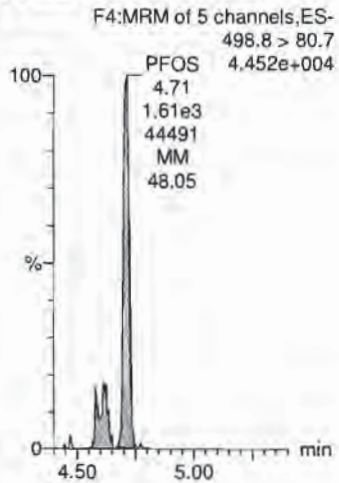

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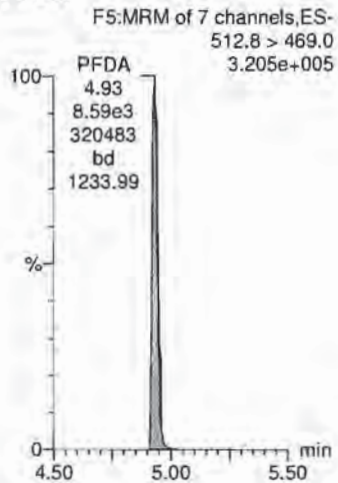

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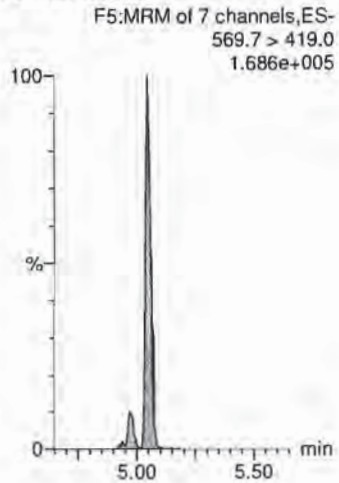

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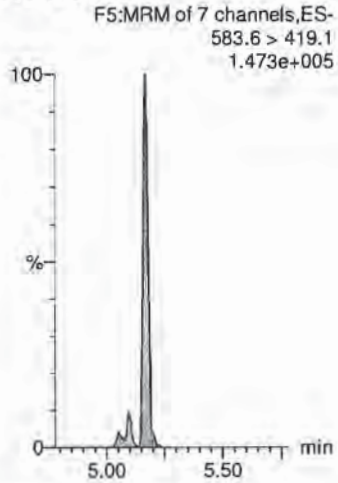

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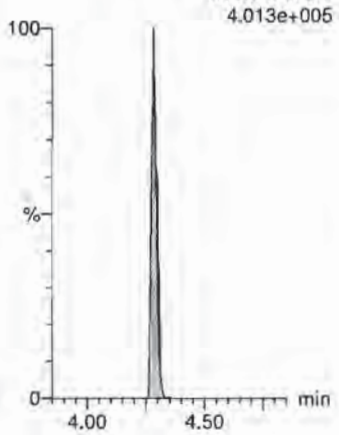

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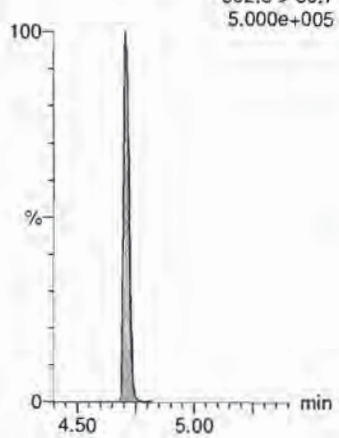

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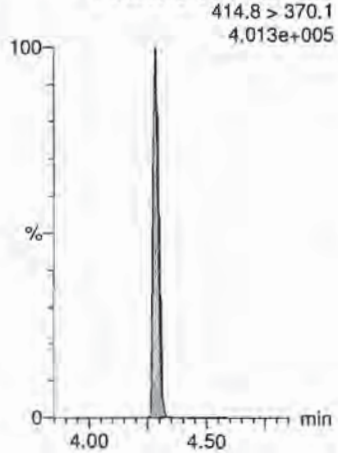

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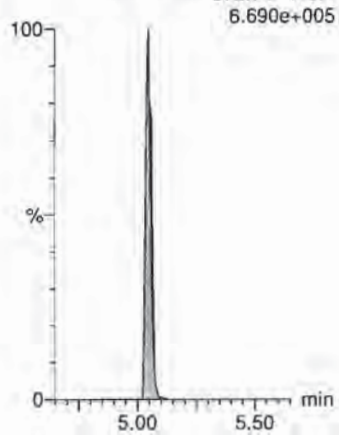

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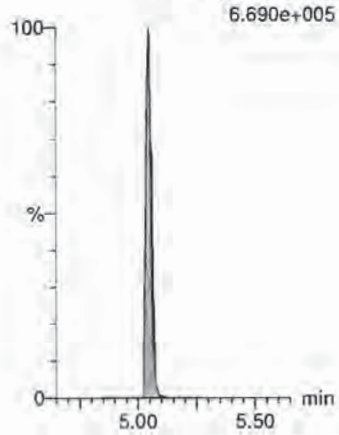

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Printed: Friday, July 20, 2018 12:50:06 Pacific Daylight Time

Name: 180719G3_13, Date: 19-Jul-2018, Time: 17:24:26, ID: ST180719G3-1 PFC ICV 537 18G1811, Description: PFC ICV 537 18G1811

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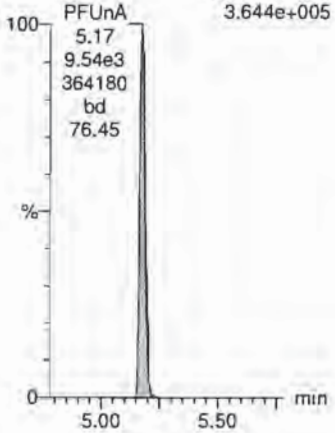

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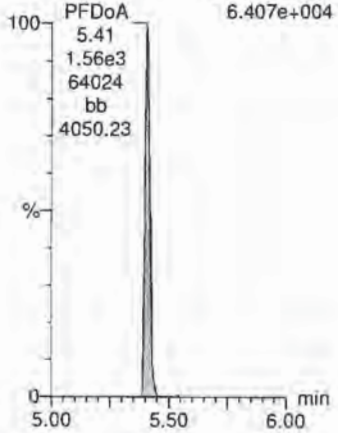

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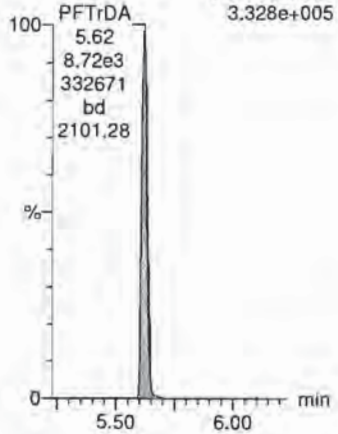

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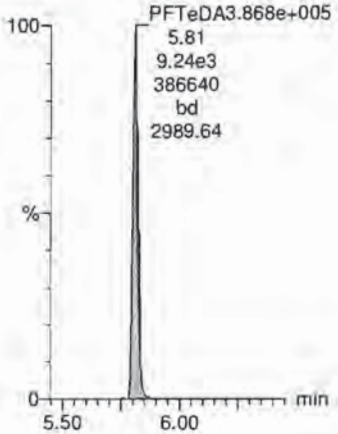

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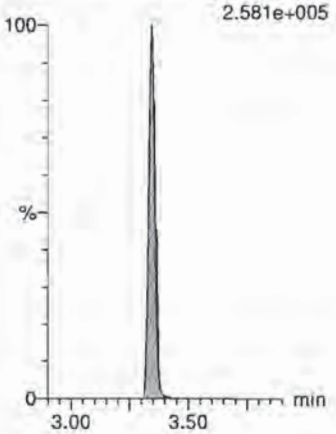

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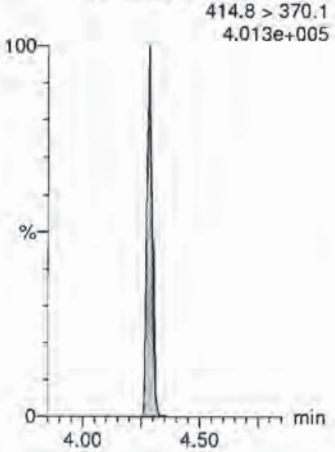

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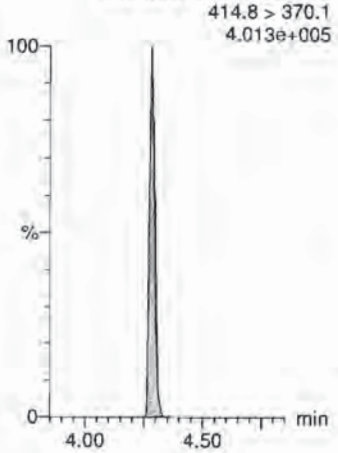

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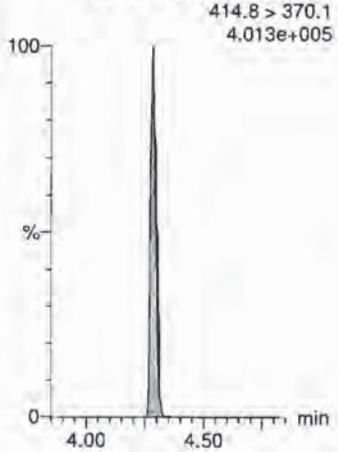

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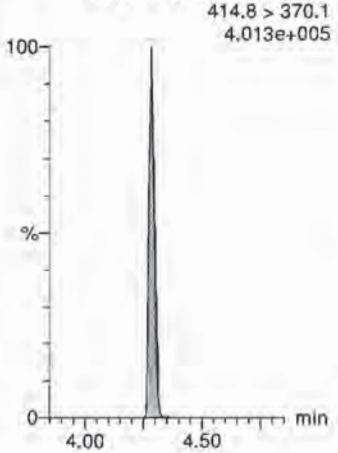

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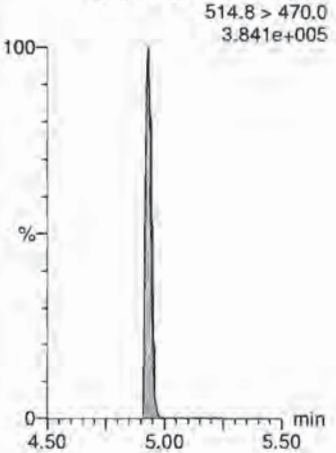

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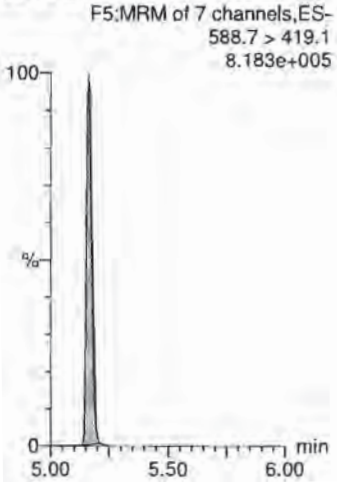
Printed: Friday, July 20, 2018 12:50:06 Pacific Daylight Time

Name: 180719G3_13, Date: 19-Jul-2018, Time: 17:24:26, ID: ST180719G3-1 PFC ICV 537 18G1811, Description: PFC ICV 537 18G1811

d5-N-EtFOSAA



Vista Analytical Laboratory

Dataset: Untitled

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Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_07-19-18_L14.cdb 20 Jul 2018 10:51:38

Name: 180719G3_12, Date: 19-Jul-2018, Time: 17:11:52, ID: IPA, Description: IPA

PFBS
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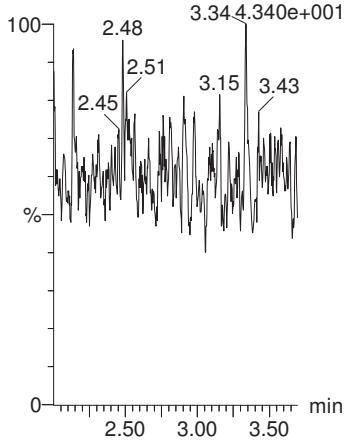
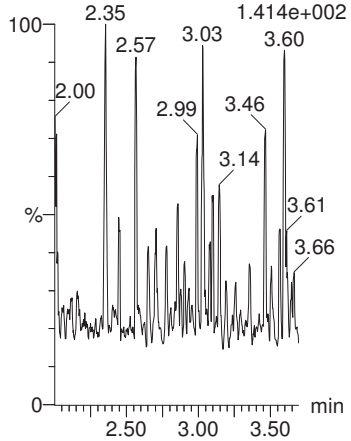
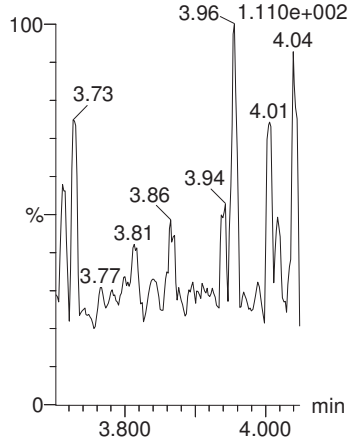
298.6 > 80.5
3.34 4.340e+001



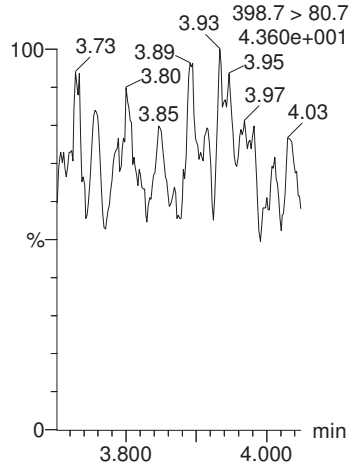
PFHxA
IPA IPA F2:MRM of 3 channels,ES-
312.7 > 268.8
1.414e+002



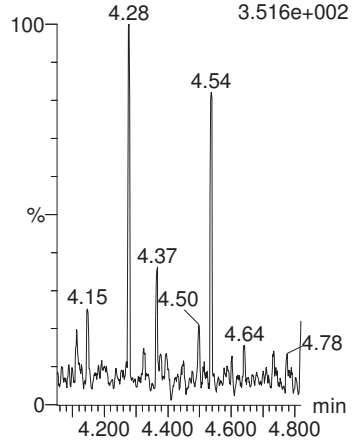
PFHpA
IPA IPA F3:MRM of 2 channels,ES-
362.7 > 318.8
3.96 1.110e+002



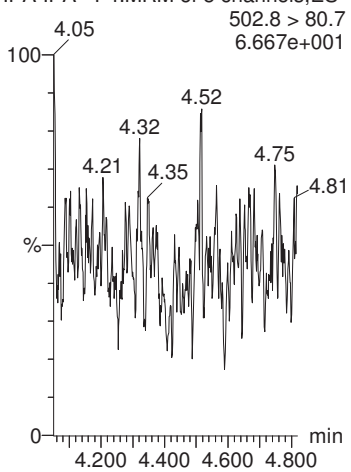
PFHxS
IPA IPA F3:MRM of 2 channels,ES-
398.7 > 80.7
4.360e+001



PFOA
IPA IPA F4:MRM of 5 channels,ES-
412.8 > 369.0
3.516e+002



13C4-PFOS
IPA IPA F4:MRM of 5 channels,ES-
502.8 > 80.7
6.667e+001



13C2-PFOA
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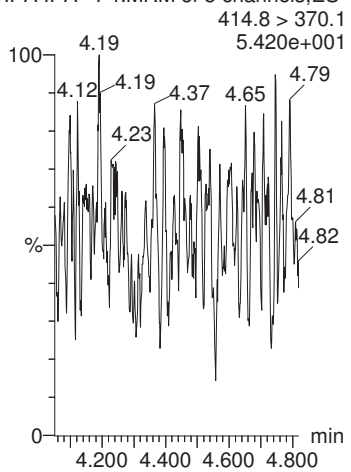
414.8 > 370.1
5.420e+001



13C2-PFOA
IPA IPA F4:MRM of 5 channels,ES-
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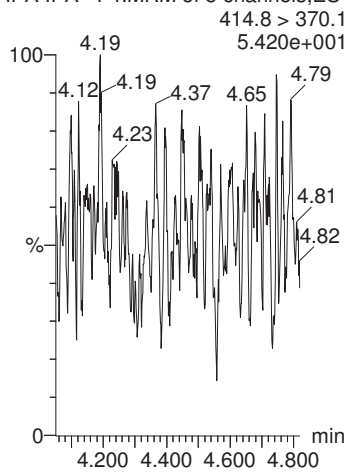
5.420e+001



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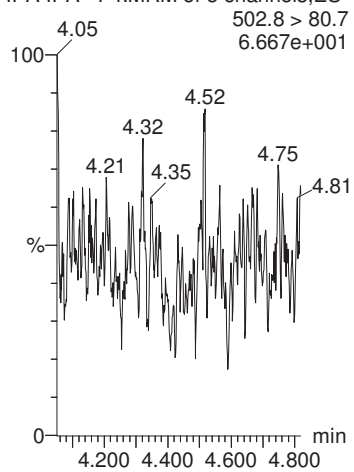
6.667e+001



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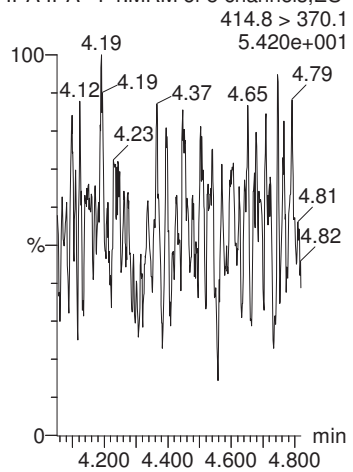
5.420e+001



Vista Analytical Laboratory

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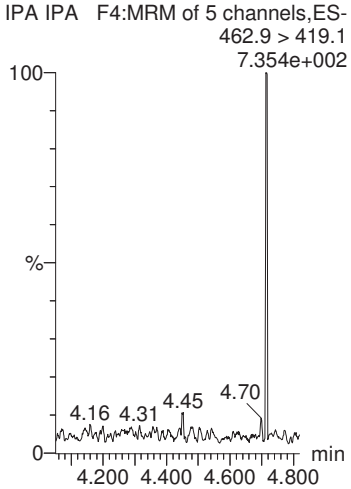
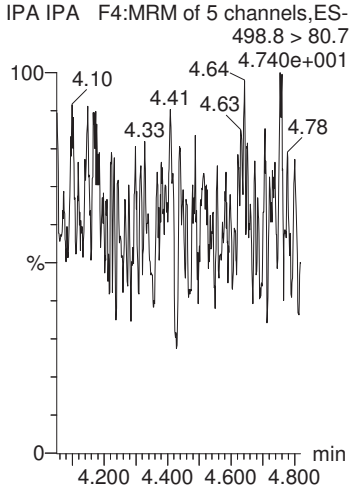
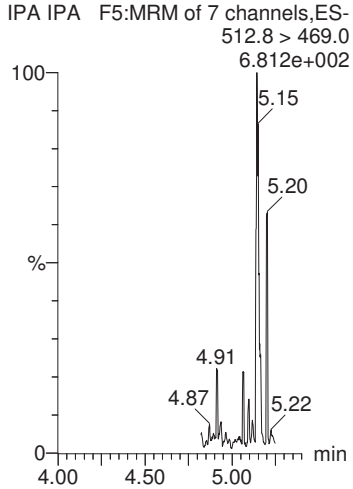


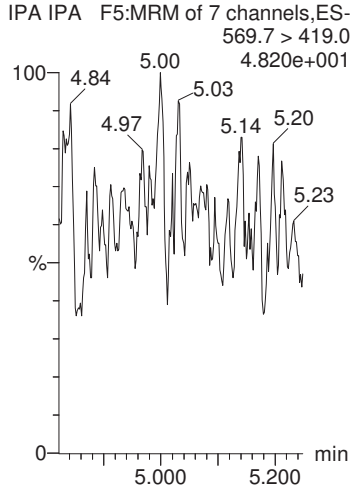
PFOS



PFDA



N-MeFOSAA



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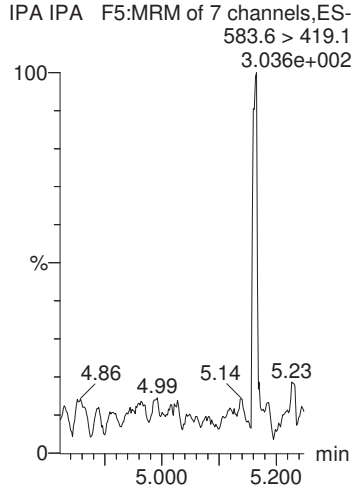
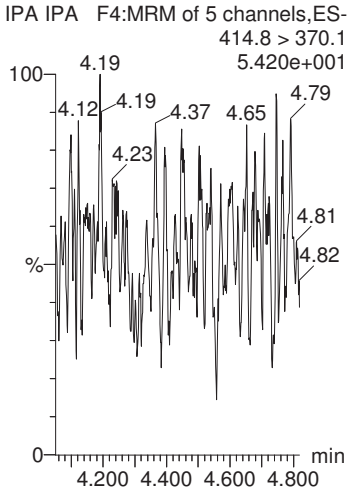


13C2-PFOA



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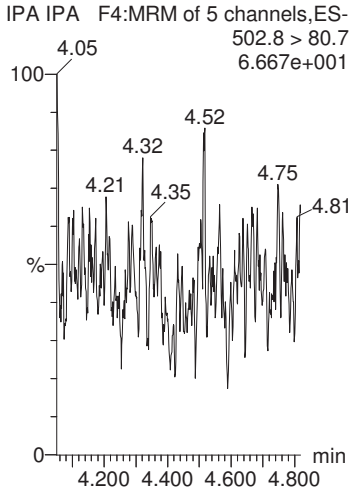

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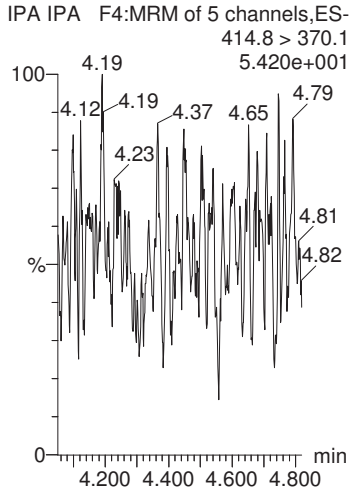

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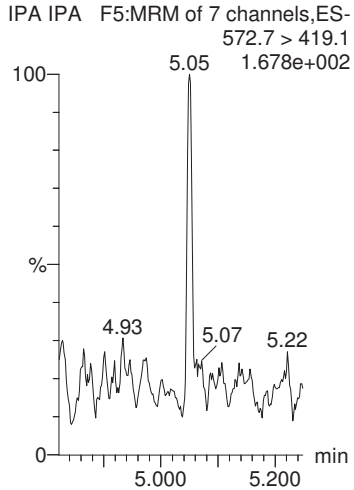

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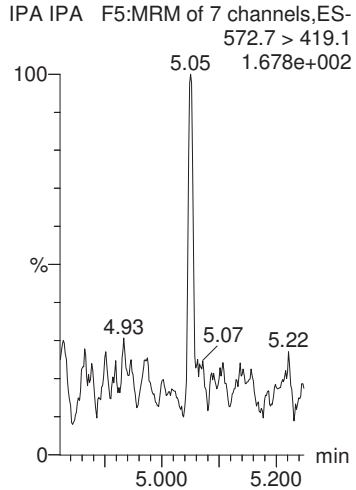

Vista Analytical Laboratory

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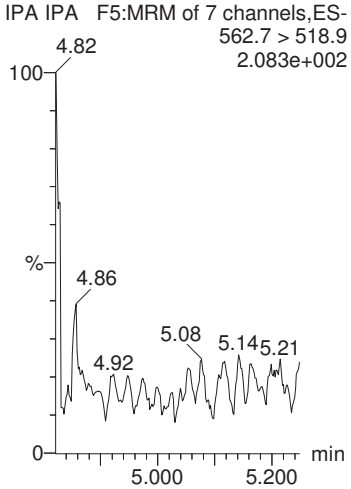

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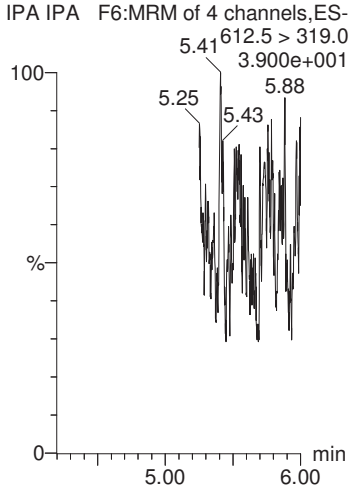

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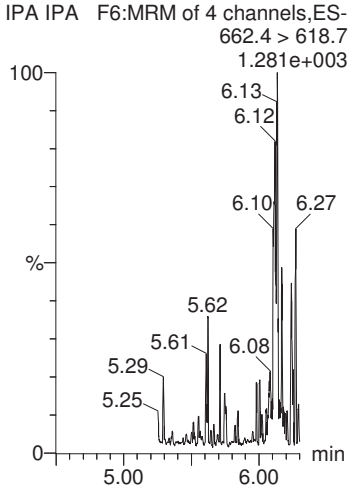

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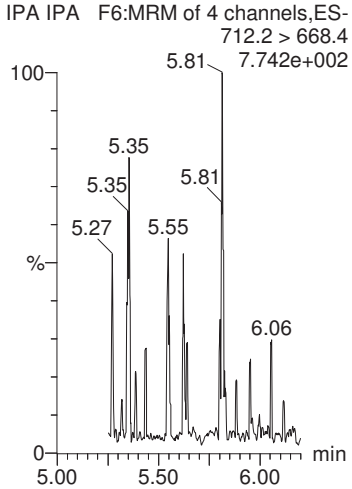

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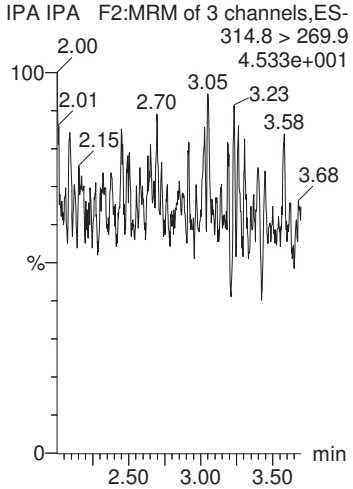

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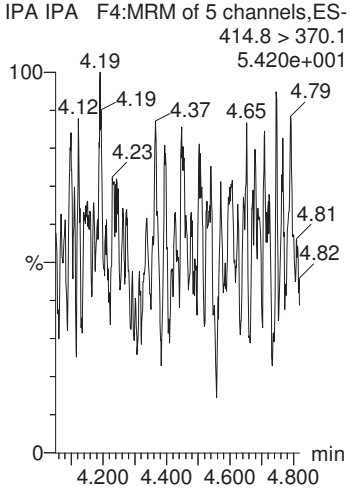

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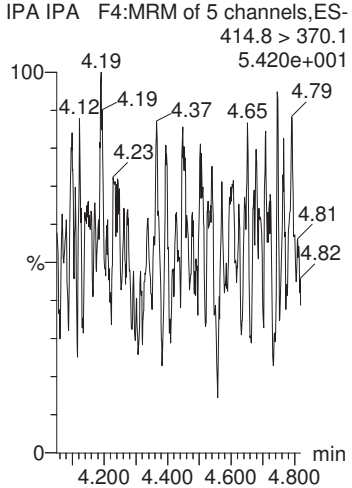

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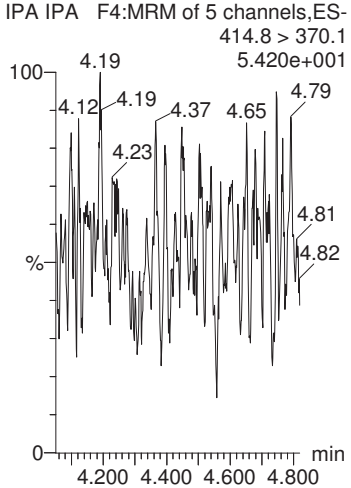

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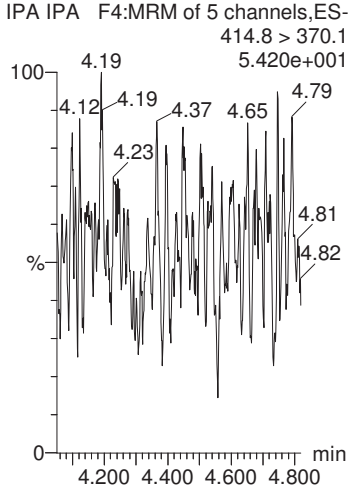

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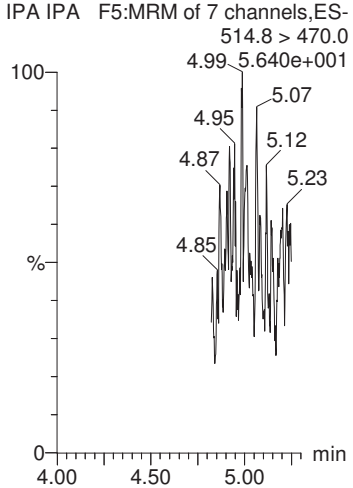

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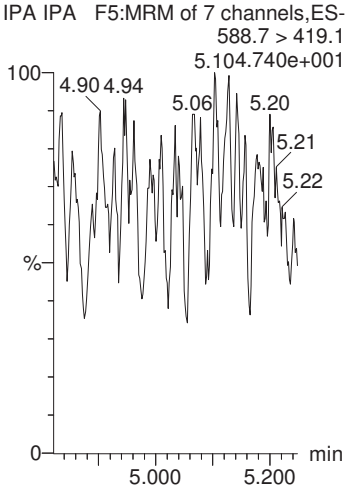

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N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:30	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:30	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:30	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:30	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:30	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:30	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:30	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:30	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:30	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:30	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:30	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:32	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:49	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:49	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:49	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:49	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:49	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:49	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:49	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:49	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:49	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:49	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:49	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 13:51	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	CH2M_ Code	Analysis_ Group	Analytical_ Method	PRC_Code	Lab_Code	Lab_Name	Leachate_ Method	Sample_ Basis	Extraction_ Method	Result_ Type	Lab_QC_ Type	Sample_ Medium	QC_Level	DateTime_Collected	Date_Received	Leachate_ Date	Leachate_ Time
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:48	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 15:50	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:02	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:02	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:02	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:02	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:02	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:02	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:02	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:02	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:02	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:02	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:02	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	07/20/2018 16:04	07/21/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	CH2M_ Code	Analysis_ Group	Analytical_ Method	PRC_Code	Lab_Code	Lab_Name	Leachate_ Method	Sample_ Basis	Extraction_ Method	Result_ Type	Lab_QC_ Type	Sample_ Medium	QC_Level	DateTime_Collected	Date_Received	Leachate_ Date	Leachate_ Time
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	07/24/2018 08:40	07/24/2018		

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	Extraction_ Date	Extraction_ Time	Analysis_D ate	Analysis_ Time	Lab_Sample_ ID	Dilution	Run_ Number	Percent_ Moisture	Percent_ Lipid	Chem_Name	Analyte_ID	Analyte_ Value	Original_ Analyte_ Value	Result_ Units	Lab_ Qualifier	Validator_ Qualifier
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		5.14	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			13C2-PFHxA	13C2-PFHxA		102	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			13C2-PFDA	13C2-PFDA		96.0	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	20180724	08:40:00	20180725	21:00:00	1801868-01	1	-999			d5-EtFOSAA	d5-EtFOSAA		96.4	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		4.83	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			13C2-PFHxA	13C2-PFHxA		104	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			13C2-PFDA	13C2-PFDA		102	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	20180724	08:40:00	20180725	21:13:00	1801868-02	1	-999			d5-EtFOSAA	d5-EtFOSAA		99.0	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			13C2-PFHxA	13C2-PFHxA		105	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			13C2-PFDA	13C2-PFDA		92.5	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	20180724	08:40:00	20180725	21:26:00	1801868-03	1	-999			d5-EtFOSAA	d5-EtFOSAA		97.4	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		5.02	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			13C2-PFHxA	13C2-PFHxA		95.4	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			13C2-PFDA	13C2-PFDA		94.7	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	20180724	08:40:00	20180725	21:39:00	1801868-04	1	-999			d5-EtFOSAA	d5-EtFOSAA		96.0	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.21	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		6.69	NG_L	J	

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	Extraction_ Date	Extraction_ Time	Analysis_D ate	Analysis_ Time	Lab_Sample_ ID	Dilution	Run_ Number	Percent_ Moisture	Percent_ Lipid	Chem_Name	Analyte_ID	Analyte_ Value	Original_ Analyte_ Value	Result_ Units	Lab_ Qualifier	Validator_ Qualifier
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		3.46	NG_L	J	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		37.7	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		23.8	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		5.21	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.21	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		5.21	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		5.21	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		5.21	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		5.21	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		5.21	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		5.21	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		5.21	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			13C2-PFHxA	13C2-PFHxA		103	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			13C2-PFDA	13C2-PFDA		97.7	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	20180724	08:40:00	20180725	21:51:00	1801868-05	1	-999			d5-EtFOSAA	d5-EtFOSAA		83.7	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			13C2-PFHxA	13C2-PFHxA		99.8	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			13C2-PFDA	13C2-PFDA		101	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	20180724	08:40:00	20180725	22:04:00	1801868-06	1	-999			d5-EtFOSAA	d5-EtFOSAA		92.2	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		5.34	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			13C2-PFHxA	13C2-PFHxA		105	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			13C2-PFDA	13C2-PFDA		93.8	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	20180724	08:40:00	20180725	22:17:00	1801868-07	1	-999			d5-EtFOSAA	d5-EtFOSAA		102	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		4.88	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			13C2-PFHxA	13C2-PFHxA		104	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			13C2-PFDA	13C2-PFDA		99.5	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	20180724	08:40:00	20180725	22:30:00	1801868-08	1	-999			d5-EtFOSAA	d5-EtFOSAA		102	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		5.17	NG_L	U	

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	Extraction_ Date	Extraction_ Time	Analysis_D ate	Analysis_ Time	Lab_Sample_ ID	Dilution	Run_ Number	Percent_ Moisture	Percent_ Lipid	Chem_Name	Analyte_ID	Analyte_ Value	Original_ Analyte_ Value	Result_ Units	Lab_ Qualifier	Validator_ Qualifier
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		5.17	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			13C2-PFHxA	13C2-PFHxA		111	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			13C2-PFDA	13C2-PFDA		92.2	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	20180724	08:40:00	20180725	22:43:00	1801868-09	1	-999			d5-EtFOSAA	d5-EtFOSAA		98.2	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		4.92	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			13C2-PFHxA	13C2-PFHxA		110	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			13C2-PFDA	13C2-PFDA		95.2	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	20180724	08:40:00	20180725	22:55:00	1801868-10	1	-999			d5-EtFOSAA	d5-EtFOSAA		103	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.23	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		18.0	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		4.44	NG_L	J	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		10.9	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		36.8	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		5.23	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.23	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		5.23	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		5.23	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		5.23	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		5.23	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		5.23	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		5.23	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		5.23	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			13C2-PFHxA	13C2-PFHxA		105	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			13C2-PFDA	13C2-PFDA		97.9	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	20180724	08:40:00	20180725	23:08:00	1801868-11	1	-999			d5-EtFOSAA	d5-EtFOSAA		97.3	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			13C2-PFHxA	13C2-PFHxA		94.6	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			13C2-PFDA	13C2-PFDA		92.9	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	20180724	08:40:00	20180725	23:21:00	1801868-12	1	-999			d5-EtFOSAA	d5-EtFOSAA		91.7	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		5.00	NG_L	U	

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	Extraction_ Date	Extraction_ Time	Analysis_D ate	Analysis_ Time	Lab_Sample_ ID	Dilution	Run_ Number	Percent_ Moisture	Percent_ Lipid	Chem_Name	Analyte_ID	Analyte_ Value	Original_ Analyte_ Value	Result_ Units	Lab_ Qualifier	Validator_ Qualifier
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		5.00	NG_L	U	
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			13C2-PFHxA	13C2-PFHxA		104	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			13C2-PFDA	13C2-PFDA		103	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	20180724	08:40:00	20180725	20:22:00	B8G0167-BLK1	1	-999			d5-EtFOSAA	d5-EtFOSAA		96.4	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		35.4	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		39.2	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		38.3	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		35.4	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		34.9	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		30.3	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		36.1	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		30.4	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		32.6	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		36.7	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		32.2	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		32.3	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		32.2	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		31.1	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			13C2-PFHxA	13C2-PFHxA		94.5	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			13C2-PFDA	13C2-PFDA		77.0	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	20180724	08:40:00	20180725	20:35:00	B8G0167-BS1	1	-999			d5-EtFOSAA	d5-EtFOSAA		84.9	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		39.2	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluorohexanoic Acid (PFHxA)	307-24-4		48.2	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		47.9	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		38.4	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		47.0	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		45.2	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		47.7	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluorodecanoic Acid (PFDA)	335-76-2		43.2	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		45.9	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		45.9	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		42.3	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluorododecanoic Acid (PFDoA)	307-55-1		43.0	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		43.3	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		41.0	NG_L		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			13C2-PFHxA	13C2-PFHxA		110	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			13C2-PFDA	13C2-PFDA		98.3	PCT_REC		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	20180724	08:40:00	20180725	20:47:00	B8G0167-BSD1	1	-999			d5-EtFOSAA	d5-EtFOSAA		102	PCT_REC		

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	GC_ Column_ Type	Analysis_ Result_ Type	Result_ Narrative	QC_Control_ Limit_Code	QC_Accuracy_ Upper	QC_Accuracy_ Lower	Control_ Limit_ Date	QC_ Narrative	MDL	Detection_ Limit	QSM_ Version	DL	LOD	LOQ	SDG	Analysis_ Batch	Validator_ Name	Val_Date
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	TRG									5.1	3.13	5.14	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW32-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	TRG									5.1	2.94	4.83	9.66	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	TRG									5.1	2.94	4.83	9.66	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	TRG									5.1	2.94	4.83	9.66	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	TRG									5.1	2.94	4.83	9.66	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	TRG									5.1	2.94	4.83	9.66	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	TRG									5.1	2.94	4.83	9.66	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	TRG									5.1	2.94	4.83	9.66	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	TRG									5.1	2.94	4.83	9.66	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	TRG									5.1	2.94	4.83	9.66	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	TRG									5.1	2.94	4.83	9.66	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	TRG									5.1	2.94	4.83	9.66	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB32-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	TRG									5.1	3.15	5.17	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	TRG									5.1	3.15	5.17	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	TRG									5.1	3.15	5.17	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	TRG									5.1	3.15	5.17	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	TRG									5.1	3.15	5.17	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	TRG									5.1	3.15	5.17	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	TRG									5.1	3.15	5.17	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	TRG									5.1	3.15	5.17	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	TRG									5.1	3.15	5.17	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	TRG									5.1	3.15	5.17	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	TRG									5.1	3.15	5.17	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW33-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	TRG									5.1	3.05	5.02	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	TRG									5.1	3.05	5.02	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	TRG									5.1	3.05	5.02	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	TRG									5.1	3.05	5.02	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	TRG									5.1	3.05	5.02	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	TRG									5.1	3.05	5.02	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	TRG									5.1	3.05	5.02	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	TRG									5.1	3.05	5.02	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	TRG									5.1	3.05	5.02	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	TRG									5.1	3.05	5.02	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB33-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	GC_ Column_ Type	Analysis_ Result_ Type	Result_ Narrative	QC_Control_ Limit_Code	QC_Accuracy_ Upper	QC_Accuracy_ Lower	Control_ Limit_ Date	QC_ Narrative	MDL	Detection_ Limit	QSM_ Version	DL	LOD	LOQ	SDG	Analysis_ Batch	Validator_ Name	Val_Date
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	TRG									5.1	3.17	5.21	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW34-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	TRG									5.1	3.03	5.00	9.98	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	TRG									5.1	3.03	5.00	9.98	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	TRG									5.1	3.03	5.00	9.98	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	TRG									5.1	3.03	5.00	9.98	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	TRG									5.1	3.03	5.00	9.98	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	TRG									5.1	3.03	5.00	9.98	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	TRG									5.1	3.03	5.00	9.98	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	TRG									5.1	3.03	5.00	9.98	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	TRG									5.1	3.03	5.00	9.98	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	TRG									5.1	3.03	5.00	9.98	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB34-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	TRG									5.1	3.24	5.34	10.7	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	TRG									5.1	3.24	5.34	10.7	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	TRG									5.1	3.24	5.34	10.7	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	TRG									5.1	3.24	5.34	10.7	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	TRG									5.1	3.24	5.34	10.7	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	TRG									5.1	3.24	5.34	10.7	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	TRG									5.1	3.24	5.34	10.7	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	TRG									5.1	3.24	5.34	10.7	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	TRG									5.1	3.24	5.34	10.7	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	TRG									5.1	3.24	5.34	10.7	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW35-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	TRG									5.1	2.97	4.88	9.77	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	TRG									5.1	2.97	4.88	9.77	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	TRG									5.1	2.97	4.88	9.77	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	TRG									5.1	2.97	4.88	9.77	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	TRG									5.1	2.97	4.88	9.77	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	TRG									5.1	2.97	4.88	9.77	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	TRG									5.1	2.97	4.88	9.77	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	TRG									5.1	2.97	4.88	9.77	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	TRG									5.1	2.97	4.88	9.77	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	TRG									5.1	2.97	4.88	9.77	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB35-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	GC_ Column_ Type	Analysis_ Result_ Type	Result_ Narrative	QC_Control_ Limit_Code	QC_Accuracy_ Upper	QC_Accuracy_ Lower	Control_ Limit_ Date	QC_ Narrative	MDL	Detection_ Limit	QSM_ Version	DL	LOD	LOQ	SDG	Analysis_ Batch	Validator_ Name	Val_Date
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	TRG									5.1	3.14	5.17	10.3	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW36-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	TRG									5.1	3.00	4.92	9.85	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	TRG									5.1	3.00	4.92	9.85	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	TRG									5.1	3.00	4.92	9.85	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	TRG									5.1	3.00	4.92	9.85	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	TRG									5.1	3.00	4.92	9.85	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	TRG									5.1	3.00	4.92	9.85	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	TRG									5.1	3.00	4.92	9.85	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	TRG									5.1	3.00	4.92	9.85	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	TRG									5.1	3.00	4.92	9.85	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	TRG									5.1	3.00	4.92	9.85	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	TRG									5.1	3.00	4.92	9.85	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB36-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	TRG									5.1	3.17	5.23	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	TRG									5.1	3.17	5.23	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	TRG									5.1	3.17	5.23	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	TRG									5.1	3.17	5.23	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	TRG									5.1	3.17	5.23	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	TRG									5.1	3.17	5.23	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	TRG									5.1	3.17	5.23	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	TRG									5.1	3.17	5.23	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	TRG									5.1	3.17	5.23	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	TRG									5.1	3.17	5.23	10.4	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1RW37-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	TRG									5.1	3.05	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	TRG									5.1	3.05	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	TRG									5.1	3.05	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	TRG									5.1	3.05	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	TRG									5.1	3.05	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	TRG									5.1	3.05	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	TRG									5.1	3.05	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	TRG									5.1	3.05	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	TRG									5.1	3.05	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	TRG									5.1	3.05	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	CBD-1FB37-0718	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	GC_ Column_ Type	Analysis_ Result_ Type	Result_ Narrative	QC_Control_ Limit_Code	QC_Accuracy_ Upper	QC_Accuracy_ Lower	Control_ Limit_ Date	QC_ Narrative	MDL	Detection_ Limit	QSM_ Version	DL	LOD	LOQ	SDG	Analysis_ Batch	Validator_ Name	Val_Date
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	TRG									5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	Blank	PR	SURR		SLSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	SURR		LSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	SURR		LSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS	PR	SURR		LSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	SURR		LSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	SURR		LSA	130	70					5.1				1801868	S8G0076		
N6247016D9000	0008		CHESAPEAKE_NSGA	LCS Dup	PR	SURR		LSA	130	70					5.1				1801868	S8G0076		

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
NRL-CBD, MARYLAND

Client: CH2M HILL, Inc., Corvallis, Oregon
SDG: 1801868
Laboratory: Vista Analytical Laboratory, El Dorado Hills, California
Site: NRL-CBD, CTO-0008, Maryland
Date: August 13, 2018

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	CBD-1RW32-0718	1801868-01	Water
2	CBD-1FB32-0718	1801868-02	Water
3	CBD-1RW33-0718	1801868-03	Water
4	CBD-1FB33-0718	1801868-04	Water
5	CBD-1RW34-0718	1801868-05	Water
6	CBD-1FB34-0718	1801868-06	Water
7	CBD-1RW35-0718	1801868-07	Water
8	CBD-1FB35-0718	1801868-08	Water
9	CBD-1RW36-0718	1801868-09	Water
10	CBD-1FB36-0718	1801868-10	Water
11	CBD-1RW37-0718	1801868-11	Water
12	CBD-1FB37-0718	1801868-12	Water

A full data validation was performed on the analytical data for six water samples and six aqueous field blank samples collected on July 19-20, 2018 by CH2M HILL at the NRL-CBD site in Maryland. The samples were analyzed under the EPA Method "Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)".

Specific method references are as follows:

Analysis	*Method References*
PFCs	USEPA Method 537, Rev 1.1

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM), Version 5.1 (2017) and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Organic Superfund Methods Data Review," January 2017;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Liquid Chromatography/Mass Spectrometry (LC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A full (Level IV) data validation was performed with this review including a recalculation of 10% of the detected results in the samples.

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes. There were no qualifications.

Perfluorinated Compounds (PFCs)

Data Completeness, Case Narrative & Custody Documentation

- The case narrative and chain-of-custody documentation were included in the data package as required. All criteria were met.

Holding Times

- All samples were extracted within 14 days for water samples and analyzed within 28 days.

LC/MS Tuning

- All criteria were met.

Initial Calibration

- All relative standard deviation (%RSD) and/or correlation coefficients criteria were met.

Continuing Calibration

- All percent recovery (%R) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were free of contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
CBD-1FB32-0718	None - ND	-	-	-
CBD-1FB33-0718	None - ND	-	-	-
CBD-1FB34-0718	None - ND	-	-	-
CBD-1FB35-0718	None - ND	-	-	-
CBD-1FB36-0718	None - ND	-	-	-
CBD-1FB37-0718	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- MS/MSD samples were not analyzed.

Laboratory Control Samples/Laboratory Control Sample Duplicates

- The LCS/LCSD samples exhibited acceptable percent recoveries (%R) and RPD values.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/13/18

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Vista Analytical Laboratory

Sample ID: CBD-1RW32-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 19-Jul-18 15:03

Laboratory Data

Lab Sample: 1801868-01
Date Received: 21-Jul-18 09:16
Column: BEH C18

1

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFHxA	307-24-4	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFHpA	375-85-9	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFHxS	355-46-4	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFOA	335-67-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFNA	375-95-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFOS	1763-23-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFDA	335-76-2	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
MeFOSAA	2355-31-9	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
EtFOSAA	2991-50-6	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFUnA	2058-94-8	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFDoA	307-55-1	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFTrDA	72629-94-8	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
PFTeDA	376-06-7	ND	3.13	5.14	10.3		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	102	70 - 130		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
13C2-PFDA	SURR	96.0	70 - 130		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1
d5-EtFOSAA	SURR	96.4	70 - 130		B8G0167	24-Jul-18	0.243 L	25-Jul-18 21:00	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

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

NW 8/13/18

Vista Analytical Laboratory

Sample ID: CBD-1FB32-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 19-Jul-18 15:05

Laboratory Data

Lab Sample: 1801868-02
Date Received: 21-Jul-18 09:16
Column: BEH C18

2

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
PFHxA	307-24-4	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
PFHpA	375-85-9	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
PFHxS	355-46-4	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
PFOA	335-67-1	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
PFNA	375-95-1	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
PFOS	1763-23-1	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
PFDA	335-76-2	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
MeFOSAA	2355-31-9	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
EtFOSAA	2991-50-6	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
PFUnA	2058-94-8	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
PFDoA	307-55-1	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
PFTrDA	72629-94-8	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
PFTeDA	376-06-7	ND	2.94	4.83	9.66		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	104	70 - 130		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
13C2-PFDA	SURR	102	70 - 130		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1
d5-EtFOSAA	SURR	99.0	70 - 130		B8G0167	24-Jul-18	0.259 L	25-Jul-18 21:13	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

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

8/13/18

Vista Analytical Laboratory

Sample ID: CBD-1RW33-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-Jul-18 12:00

Laboratory Data

Lab Sample: 1801868-03
Date Received: 21-Jul-18 09:16
Column: BEH C18

3

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
PFHxA	307-24-4	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
PFHpA	375-85-9	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
PFHxS	355-46-4	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
PFOA	335-67-1	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
PFNA	375-95-1	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
PFOS	1763-23-1	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
PFDA	335-76-2	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
MeFOSAA	2355-31-9	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
EtFOSAA	2991-50-6	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
PFUnA	2058-94-8	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
PFDoA	307-55-1	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
PFTrDA	72629-94-8	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
PFTeDA	376-06-7	ND	3.15	5.17	10.4		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	105	70 - 130		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
13C2-PFDA	SURR	92.5	70 - 130		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1
d5-EtFOSAA	SURR	97.4	70 - 130		B8G0167	24-Jul-18	0.242 L	25-Jul-18 21:26	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL
When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes

Nw 8/13/18

Vista Analytical Laboratory

Sample ID: CBD-1FB33-0718

EPA Method 537

4

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-Jul-18 12:02

Laboratory Data

Lab Sample: 1801868-04
Date Received: 21-Jul-18 09:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
PFHxA	307-24-4	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
PFHpA	375-85-9	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
PFHxS	355-46-4	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
PFOA	335-67-1	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
PFNA	375-95-1	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
PFOS	1763-23-1	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
PFDA	335-76-2	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
MeFOSAA	2355-31-9	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
EtFOSAA	2991-50-6	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
PFUnA	2058-94-8	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
PFDoA	307-55-1	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
PFTrDA	72629-94-8	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
PFTeDA	376-06-7	ND	3.05	5.02	10.0		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	95.4	70 - 130		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
13C2-PFDA	SURR	94.7	70 - 130		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1
d5-EtFOSAA	SURR	96.0	70 - 130		B8G0167	24-Jul-18	0.249 L	25-Jul-18 21:39	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

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

nw 8/13/18

Vista Analytical Laboratory

Sample ID: CBD-1RW34-0718

EPA Method 537

5

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-Jul-18 13:30

Laboratory Data

Lab Sample: 1801868-05
Date Received: 21-Jul-18 09:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
PFHxA	307-24-4	6.69	3.17	5.21	10.4	J	B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
PFHpA	375-85-9	3.46	3.17	5.21	10.4	J	B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
PFHxS	355-46-4	37.7	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
PFOA	335-67-1	23.8	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
PFNA	375-95-1	ND	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
PFOS	1763-23-1	ND	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
PFDA	335-76-2	ND	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
MeFOSAA	2355-31-9	ND	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
EtFOSAA	2991-50-6	ND	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
PFUnA	2058-94-8	ND	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
PFDoA	307-55-1	ND	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
PFTrDA	72629-94-8	ND	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
PFTeDA	376-06-7	ND	3.17	5.21	10.4		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	103	70 - 130		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
13C2-PFDA	SURR	97.7	70 - 130		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1
d5-EtFOSAA	SURR	83.7	70 - 130		B8G0167	24-Jul-18	0.240 L	25-Jul-18 21:51	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

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

NW 8/13/18

Vista Analytical Laboratory

Sample ID: CBD-1FB34-0718 **EPA Method 537**

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-Jul-18 13:32

Laboratory Data

Lab Sample: 1801868-06
Date Received: 21-Jul-18 09:16
Column: BEH C18

6

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
PFHxA	307-24-4	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
PFHpA	375-85-9	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
PFHxS	355-46-4	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
PFOA	335-67-1	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
PFNA	375-95-1	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
PFOS	1763-23-1	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
PFDA	335-76-2	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
MeFOSAA	2355-31-9	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
EtFOSAA	2991-50-6	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
PFUnA	2058-94-8	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
PFDoA	307-55-1	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
PFTrDA	72629-94-8	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
PFTeDA	376-06-7	ND	3.03	5.00	9.98		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	99.8	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
13C2-PFDA	SURR	101	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1
d5-EtFOSAA	SURR	92.2	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 22:04	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

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

NW 8/13/18

Vista Analytical Laboratory

Sample ID: CBD-1RW35-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-Jul-18 13:49

Laboratory Data

Lab Sample: 1801868-07
Date Received: 21-Jul-18 09:16
Column: BEH C18

7

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
PFHxA	307-24-4	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
PFHpA	375-85-9	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
PFHxS	355-46-4	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
PFOA	335-67-1	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
PFNA	375-95-1	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
PFOS	1763-23-1	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
PFDA	335-76-2	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
MeFOSAA	2355-31-9	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
EtFOSAA	2991-50-6	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
PFUnA	2058-94-8	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
PFDoA	307-55-1	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
PFTrDA	72629-94-8	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
PFTeDA	376-06-7	ND	3.24	5.34	10.7		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	105	70 - 130		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
13C2-PFDA	SURR	93.8	70 - 130		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1
d5-EtFOSAA	SURR	102	70 - 130		B8G0167	24-Jul-18	0.234 L	25-Jul-18 22:17	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

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

MW 8/13/18

Vista Analytical Laboratory

Sample ID: CBD-1FB35-0718

EPA Method 537

8

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-Jul-18 13:51

Laboratory Data

Lab Sample: 1801868-08
Date Received: 21-Jul-18 09:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
PFHxA	307-24-4	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
PFHpA	375-85-9	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
PFHxS	355-46-4	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
PFOA	335-67-1	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
PFNA	375-95-1	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
PFOS	1763-23-1	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
PFDA	335-76-2	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
MeFOSAA	2355-31-9	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
EtFOSAA	2991-50-6	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
PFUnA	2058-94-8	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
PFDoA	307-55-1	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
PFTrDA	72629-94-8	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
PFTeDA	376-06-7	ND	2.97	4.88	9.77		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	104	70 - 130		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
13C2-PFDA	SURR	99.5	70 - 130		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1
d5-EtFOSAA	SURR	102	70 - 130		B8G0167	24-Jul-18	0.256 L	25-Jul-18 22:30	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

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

MW 8/13/18

Vista Analytical Laboratory

Sample ID: CBD-1RW36-0718 **EPA Method 537**

9

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-Jul-18 15:48

Laboratory Data

Lab Sample: 1801868-09
Date Received: 21-Jul-18 09:16
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
PFHxA	307-24-4	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
PFHpA	375-85-9	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
PFHxS	355-46-4	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
PFOA	335-67-1	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
PFNA	375-95-1	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
PFOS	1763-23-1	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
PFDA	335-76-2	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
MeFOSAA	2355-31-9	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
EtFOSAA	2991-50-6	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
PFUnA	2058-94-8	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
PFDoA	307-55-1	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
PFTrDA	72629-94-8	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
PFTeDA	376-06-7	ND	3.14	5.17	10.3		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	111	70 - 130		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
13C2-PFDA	SURR	92.2	70 - 130		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1
d5-EtFOSAA	SURR	98.2	70 - 130		B8G0167	24-Jul-18	0.242 L	25-Jul-18 22:43	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

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

MW 8/13/18

Vista Analytical Laboratory

Sample ID: CBD-1FB36-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-Jul-18 15:50

Laboratory Data

Lab Sample: 1801868-10
Date Received: 21-Jul-18 09:16
Column: BEH C18

10

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
PFHxA	307-24-4	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
PFHpA	375-85-9	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
PFHxS	355-46-4	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
PFOA	335-67-1	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
PFNA	375-95-1	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
PFOS	1763-23-1	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
PFDA	335-76-2	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
MeFOSAA	2355-31-9	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
EtFOSAA	2991-50-6	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
PFUnA	2058-94-8	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
PFDoA	307-55-1	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
PFTrDA	72629-94-8	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
PFTeDA	376-06-7	ND	3.00	4.92	9.85		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	110	70 - 130		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
13C2-PFDA	SURR	95.2	70 - 130		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1
d5-EtFOSAA	SURR	103	70 - 130		B8G0167	24-Jul-18	0.254 L	25-Jul-18 22:55	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

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

NW 8/13/18

Vista Analytical Laboratory

Sample ID: CBD-1RW37-0718

EPA Method 537

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-Jul-18 16:02

Laboratory Data

Lab Sample: 1801868-11
Date Received: 21-Jul-18 09:16
Column: BEH C18

11

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
PFHxA	307-24-4	18.0	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
PFHpA	375-85-9	4.44	3.17	5.23	10.4	J	B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
PFHxS	355-46-4	10.9	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
PFOA	335-67-1	36.8	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
PFNA	375-95-1	ND	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
PFOS	1763-23-1	ND	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
PFDA	335-76-2	ND	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
MeFOSAA	2355-31-9	ND	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
EtFOSAA	2991-50-6	ND	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
PFUnA	2058-94-8	ND	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
PFDoA	307-55-1	ND	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
PFTrDA	72629-94-8	ND	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
PFTeDA	376-06-7	ND	3.17	5.23	10.4		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	105	70 - 130		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
13C2-PFDA	SURR	97.9	70 - 130		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1
d5-EtFOSAA	SURR	97.3	70 - 130		B8G0167	24-Jul-18	0.239 L	25-Jul-18 23:08	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL.
When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

ne 8/13/18

Vista Analytical Laboratory

Sample ID: CBD-1FB37-0718 **EPA Method 537**

Client Data

Name: CH2M Hill
Project: CTO-08 PFAS DW Investigation NRL CBD
Matrix: Drinking Water
Date Collected: 20-Jul-18 16:04

Laboratory Data

Lab Sample: 1801868-12
Date Received: 21-Jul-18 09:16
Column: BEH C18

12

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
PFHxA	307-24-4	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
PFHpA	375-85-9	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
PFHxS	355-46-4	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
PFOA	335-67-1	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
PFNA	375-95-1	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
PFOS	1763-23-1	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
PFDA	335-76-2	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
MeFOSAA	2355-31-9	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
EtFOSAA	2991-50-6	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
PFUnA	2058-94-8	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
PFDoA	307-55-1	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
PFTrDA	72629-94-8	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
PFTeDA	376-06-7	ND	3.05	5.00	10.0		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	94.6	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
13C2-PFDA	SURR	92.9	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1
d5-EtFOSAA	SURR	91.7	70 - 130		B8G0167	24-Jul-18	0.250 L	25-Jul-18 23:21	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

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

NW 8/13/18

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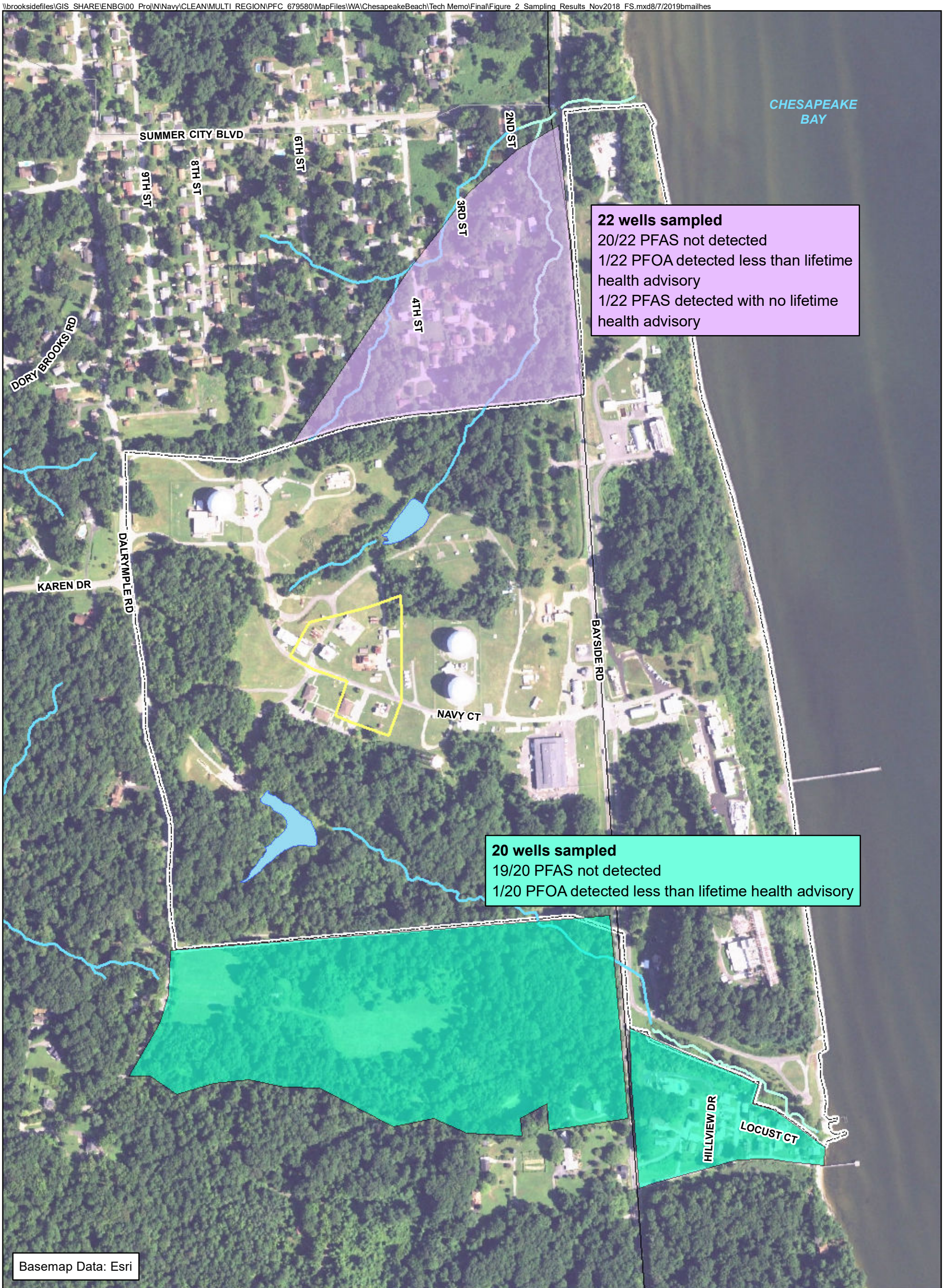

Legend

- Sampling Area
- Sampling Area
- Fire Testing Area (suspected source)
- Base Boundary
- Surface Water
- Assumed Stream Channel
- Stream

N

0 200 400 Feet

1 inch equals 400 feet

Figure 2
Off-Base Drinking Water Sampling Results through November 2018
NRL-Chesapeake Bay Detachment
Chesapeake Beach, Maryland