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NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Level 4 Laboratory Report, Electronic Data Deliverable, SDG BSI11

Marine Corps Ballistics Base Barstow
Barstow, California

November 2019

APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED

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DoD Type I Data Package

Prepared for:

Gutierrez Canales Engineering
2655 Camino del Rio North
Suite 100
San Diego CA 92108

Project: Barstow Site Inspection
Soil Samples
Collected on 10/31/18

SDG# BSI11

GROUP	SAMPLE NUMBERS
2005701	9883380-9883389, 9883392-9883397

A2LA (DoD) Cert. # 0001.01
PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **01/22/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Lyssa Longenecker at (717) 556-7321.

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Sample Reference List for SDG Number BSI11
with a Data Package Type of I-DOD

43806 - Gutierrez Canales Engineering

Project: Barstow Site Inspection

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9883380	OU1-Bldg371-S-02-05	10/31/2018 12:13	11/02/2018 10:10
9883381	OU1-Bldg371-S-02-08	10/31/2018 12:25	11/02/2018 10:10
9883382	OU1-Bldg371-S-02-10	10/31/2018 12:50	11/02/2018 10:10
9883383	OU1-Bldg371-S-02-10 MS	10/31/2018 12:50	11/02/2018 10:10
9883384	OU1-Bldg371-S-02-10 MSD	10/31/2018 12:50	11/02/2018 10:10
9883385	OU1-Bldg371-S-02-12	10/31/2018 12:52	11/02/2018 10:10
9883386	OU1-Bldg371-S-03-01	10/31/2018 13:36	11/02/2018 10:10
9883387	OU1-Bldg371-S-03-03	10/31/2018 14:10	11/02/2018 10:10
9883388	OU1-Bldg371-S-03-05	10/31/2018 14:15	11/02/2018 10:10
9883389	OU1-Bldg371-S-03-08	10/31/2018 14:45	11/02/2018 10:10
9883392	OU1-Bldg371-S-04-01	10/31/2018 15:35	11/02/2018 10:10
9883393	OU1-Bldg371-S-04-03	10/31/2018 15:45	11/02/2018 10:10
9883394	OU1-Bldg371-S-04-06	10/31/2018 15:53	11/02/2018 10:10
9883395	OU1-Bldg371-S-04-08	10/31/2018 15:57	11/02/2018 10:10
9883396	OU1-Bldg371-S-04-10	10/31/2018 16:33	11/02/2018 10:10
9883397	OU1-Bldg371-S-04-12	10/31/2018 16:35	11/02/2018 10:10

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14478 PFAS in Soil by LC/MS/MS-DoD
14510 PFAS Solid Prep - DoD

A 1 gram sample of soil/sediment is sonicated with an acetonitrile/methanol solution followed by dispersive cleanup of the extract using graphitized carbon. The resultant extract is analyzed by LC/MS/MS in negative electrospray ionization (ESI) mode.

Reference: Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LCMSMS), EPA 537 Version 1.1, September 2009, Modified. Department of Defense Quality System Manual Version 5.1, Table B-15.

00111 Moisture
00118 Moisture
00121 Moisture Duplicate

A well-mixed sample is heated by reflected infrared in an aluminum pan and dried to a constant weight. The decrease in weight in weight after drying is calculated as the moisture content.

Reference: SM 2540 G-1997 %Moisture Calculation for Dry Weight Determination

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Gutierrez Canales Engineering
2655 Camino del Rio North
Suite 100
San Diego CA 92108

Report Date: January 18, 2019 14:18

Project: Barstow Site Inspection

Account #: 43806
Group Number: 2005701
SDG: BSI11
State of Sample Origin: CA

Electronic Copy To Gutierrez Canales Engineering Attn: Jesse MacNeill

Respectfully Submitted,

Lyssa M. Longenecker
Specialist

(717) 556-7321

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
OU1-Bldg371-S-02-05 Grab Soil	10/31/2018 12:13	9883380
OU1-Bldg371-S-02-08 Grab Soil	10/31/2018 12:25	9883381
OU1-Bldg371-S-02-10 Grab Soil	10/31/2018 12:50	9883382
OU1-Bldg371-S-02-10 MS Grab Soil	10/31/2018 12:50	9883383
OU1-Bldg371-S-02-10 MSD Grab Soil	10/31/2018 12:50	9883384
OU1-Bldg371-S-02-12 Grab Soil	10/31/2018 12:52	9883385
OU1-Bldg371-S-03-01 Grab Soil	10/31/2018 13:36	9883386
OU1-Bldg371-S-03-03 Grab Soil	10/31/2018 14:10	9883387
OU1-Bldg371-S-03-05 Grab Soil	10/31/2018 14:15	9883388
OU1-Bldg371-S-03-08 Grab Soil	10/31/2018 14:45	9883389
OU1-Bldg371-S-03-10 Grab Soil	10/31/2018 15:00	9883390
OU1-Bldg371-S-03-12 Grab Soil	10/31/2018 15:03	9883391
OU1-Bldg371-S-04-01 Grab Soil	10/31/2018 15:35	9883392
OU1-Bldg371-S-04-03 Grab Soil	10/31/2018 15:45	9883393
OU1-Bldg371-S-04-06 Grab Soil	10/31/2018 15:53	9883394
OU1-Bldg371-S-04-08 Grab Soil	10/31/2018 15:57	9883395
OU1-Bldg371-S-04-10 Grab Soil	10/31/2018 16:33	9883396
OU1-Bldg371-S-04-12 Grab Soil	10/31/2018 16:35	9883397

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: Barstow Site Inspection
ELLE Group #: 2005701

General Comments:

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.
Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Analysis Specific Comments:

EPA 537 mod QSM 5.1 table B-15, LC/MS/MS Miscellaneous

Sample #s: 9883381

The following analytes were manually integrated due to incorrect integrations:
Perfluoroheptanoic acid, Perfluorohexanesulfonate

Sample #s: 9883384

The following analytes were manually integrated due to incorrect integrations:
Perfluoroheptanoic acid, Perfluorohexanesulfonate, Perfluoro-octanesulfonate, NMeFOSAA

Sample #s: 9883382, 9883386, 9883387, 9883392

The following analytes were manually integrated due to incorrect integrations:
Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9883385

The following analytes were manually integrated due to incorrect integrations:
Perfluorohexanoic acid, Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9883388

The following analytes were manually integrated due to incorrect integrations:
Perfluorononanoic acid, Perfluoro-octanesulfonate

Sample #s: 9883383

The following analytes were manually integrated due to incorrect integrations:
Perfluoro-octanesulfonate, NMeFOSAA

Sample #s: 9883380

The following analytes were manually integrated due to incorrect integrations:
Perfluorooctanoic acid, Perfluorohexanesulfonate

Sample #s: 9883395

The following analytes were manually integrated due to incorrect integrations:
Perfluorooctanoic acid, Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9883393, 9883394

The following analytes were manually integrated due to incorrect integrations:
Perfluorooctanoic acid, Perfluorohexanoic acid, Perfluoroheptanoic acid, Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9883397

The recovery for several labeled compounds used as extraction standards is outside of QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method holding time and the recovery for several labeled compounds used as extraction standards is again outside of QC acceptance limits. The data is reported from the initial trial and both sets of data are included in the data package.

The following analytes were manually integrated due to incorrect integrations:
Perfluorooctanoic acid, Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9883396

The recovery for several labeled compounds used as extraction standards is outside of QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method holding time and the recovery for several labeled compounds used as extraction standards is again outside of QC acceptance limits. The data is reported from the initial trial and both sets of data are included in the data package.

The following analytes were manually integrated due to incorrect integrations:
Perfluorooctanoic acid, Perfluorohexanoic acid, Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Batch #: 18332003 (Sample number(s): 9883382-9883385, 9883396-9883397 UNSPK: 9883382)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Perfluoro-octanesulfonate

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:
Perfluorooctanoic acid, Perfluoro-octanesulfonate

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Perfluoro-octanesulfonate

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9883396, 9883397

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SM 2540 G-1997 %Moisture Calc, Wet Chemistry

Batch #: 18311820008B (Sample number(s): 9883380-9883381, 9883386-9883389, 9883392-9883395 BKG: 9883387)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Moisture

Sample Description: **OU1-Bldg371-S-02-05 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 12:13
SDG#: BSI11-01

Gutierrez Canales Engineering
ELLE Sample #: SW 9883380
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	0.28 J	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.99	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	1.4	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	2.8	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	2.4	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	0.40 J	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	0.85	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/09/2018 02:32	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820008B	11/07/2018 23:11	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-02-08 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 12:25
SDG#: BSI11-02

Gutierrez Canales Engineering
ELLE Sample #: SW 9883381
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	0.21 J	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.99	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	0.22 J	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	0.36 J	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	1.5	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	0.68	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/09/2018 02:41	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820008B	11/07/2018 23:11	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-02-10 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 12:50
SDG#: BSI11-03BKG

Gutierrez Canales Engineering
ELLE Sample #: SW 9883382
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.58	0.77	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.65	0.96	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.65	0.77	1
14478	Perfluoroheptanoic acid	375-85-9	0.43 J	0.19	0.65	0.77	1
14478	Perfluorohexanesulfonate	355-46-4	1.2	0.19	0.61	0.77	1
14478	Perfluorohexanoic acid	307-24-4	0.71 J	0.19	0.65	0.77	1
14478	Perfluorononanoic acid	375-95-1	0.52 J	0.19	0.65	0.77	1
14478	Perfluoro-octanesulfonate	1763-23-1	16	0.19	0.62	0.77	1
14478	Perfluorooctanoic acid	335-67-1	2.0	0.19	0.65	0.77	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.65	0.77	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.65	0.77	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.65	0.77	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	0.77	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/29/2018 18:40	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/28/2018 09:45	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18337820002B	12/03/2018 10:37	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-02-10 MS Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 12:50
SDG#: BSI11-03MS

Gutierrez Canales Engineering
ELLE Sample #: SW 9883383
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	1.0 J	0.46	1.8	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	0.88 J	0.46	1.8	2.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	1.1	0.18	0.55	0.73	1
14478	Perfluorodecanoic acid	335-76-2	1.3	0.27	0.62	0.92	1
14478	Perfluorododecanoic acid	307-55-1	1.1	0.18	0.62	0.73	1
14478	Perfluoroheptanoic acid	375-85-9	1.6	0.18	0.62	0.73	1
14478	Perfluorohexanesulfonate	355-46-4	2.7	0.18	0.59	0.73	1
14478	Perfluorohexanoic acid	307-24-4	1.8	0.18	0.62	0.73	1
14478	Perfluorononanoic acid	375-95-1	1.8	0.18	0.62	0.73	1
14478	Perfluoro-octanesulfonate	1763-23-1	20	0.18	0.60	0.73	1
14478	Perfluorooctanoic acid	335-67-1	3.3	0.18	0.62	0.73	1
14478	Perfluorotetradecanoic acid	376-06-7	1.1	0.18	0.62	0.73	1
14478	Perfluorotridecanoic acid	72629-94-8	1.3	0.18	0.62	0.73	1
14478	Perfluoroundecanoic acid	2058-94-8	1.2	0.18	0.62	0.73	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00118	Moisture	n.a.	0.77	0.50	0.50	0.50	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/29/2018 20:20	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/28/2018 09:45	Courtney J Fatta	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18337820002B	12/03/2018 10:37	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-02-10 MSD Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 12:50
SDG#: BSI11-03MSD

Gutierrez Canales Engineering
ELLE Sample #: SW 9883384
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	1.2 J	0.47	1.9	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	1.1 J	0.47	1.9	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	1.2	0.19	0.57	0.75	1
14478	Perfluorodecanoic acid	335-76-2	1.4	0.28	0.64	0.94	1
14478	Perfluorododecanoic acid	307-55-1	1.3	0.19	0.64	0.75	1
14478	Perfluoroheptanoic acid	375-85-9	1.6	0.19	0.64	0.75	1
14478	Perfluorohexanesulfonate	355-46-4	2.1	0.19	0.60	0.75	1
14478	Perfluorohexanoic acid	307-24-4	2.0	0.19	0.64	0.75	1
14478	Perfluorononanoic acid	375-95-1	1.6	0.19	0.64	0.75	1
14478	Perfluoro-octanesulfonate	1763-23-1	14	0.19	0.61	0.75	1
14478	Perfluorooctanoic acid	335-67-1	2.8	0.19	0.64	0.75	1
14478	Perfluorotetradecanoic acid	376-06-7	1.3	0.19	0.64	0.75	1
14478	Perfluorotridecanoic acid	72629-94-8	1.3	0.19	0.64	0.75	1
14478	Perfluoroundecanoic acid	2058-94-8	1.3	0.19	0.64	0.75	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00118	Moisture	n.a.	0.77	0.50	0.50	0.50	1
00121	Moisture Duplicate	n.a.	0.74	0.50	0.50	0.50	1
	The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/29/2018 20:29	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/28/2018 09:45	Courtney J Fatta	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18337820002B	12/03/2018 10:37	Larry E Bevins	1
00121	Moisture Duplicate	SM 2540 G-1997 %Moisture Calc	1	18337820002B	12/03/2018 10:37	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-02-12 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 12:52
SDG#: BSI11-04

Gutierrez Canales Engineering
ELLE Sample #: SW 9883385
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	0.20 J	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	0.72 J	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.2	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/29/2018 18:49	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/28/2018 09:45	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18337820002B	12/03/2018 10:37	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-03-01 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 13:36
SDG#: BSI11-05

Gutierrez Canales Engineering
ELLE Sample #: SW 9883386
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**		**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.		0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.							
14478	NMeFOSAA	2355-31-9	N.D.		0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.							
14478	Perfluorobutanesulfonate	375-73-5	N.D.		0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	1.7		0.30	0.68	0.99	1
14478	Perfluorododecanoic acid	307-55-1	N.D.		0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	0.36	J	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	0.81		0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	0.29	J	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	0.61	J	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	6.7		0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	0.30	J	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.		0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.		0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.		0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**		**%**	**%**	**%**	
00111	Moisture	n.a.	5.1		0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.							

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/09/2018 02:50	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820008B	11/07/2018 23:11	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-03-03 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 14:10
SDG#: BSI11-06

Gutierrez Canales Engineering
ELLE Sample #: SW 9883387
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	0.27 J	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	0.21 J	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	11	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	0.23 J	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.6	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/09/2018 02:59	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820008B	11/07/2018 23:11	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-03-05 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 14:15
SDG#: BSI11-07

Gutierrez Canales Engineering
ELLE Sample #: SW 9883388
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.67	0.98	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	0.28 J	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	22	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	0.29 J	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.2	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18314009	11/13/2018 03:26	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18314009	11/11/2018 16:30	Danielle D McCully	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820008B	11/07/2018 23:11	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-03-08 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 14:45
SDG#: BSI11-08

Gutierrez Canales Engineering
ELLE Sample #: SW 9883389
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.99	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.6	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18314009	11/13/2018 03:35	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18314009	11/11/2018 16:30	Danielle D McCully	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820008B	11/07/2018 23:11	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-03-10 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 15:00
SDG#: BSI11-09

Gutierrez Canales Engineering
ELLE Sample #: **SW 9883390**
ELLE Group #: **2005701**

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Sample Description: **OU1-Bldg371-S-03-12 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 15:03
SDG#: BSI11-10

Gutierrez Canales Engineering
ELLE Sample #: **SW 9883391**
ELLE Group #: **2005701**

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Sample Description: **OU1-Bldg371-S-04-01 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 15:35
SDG#: BSI11-11

Gutierrez Canales Engineering
ELLE Sample #: SW 9883392
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	0.62 J	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	22	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	0.92	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	0.30 J	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	28	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	13	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	0.87	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/09/2018 03:26	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820008B	11/07/2018 23:11	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-04-03 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 15:45
SDG#: BSI11-12

Gutierrez Canales Engineering
ELLE Sample #: SW 9883393
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	0.25 J	0.19	0.57	0.76	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.65	0.95	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoroheptanoic acid	375-85-9	0.56 J	0.19	0.65	0.76	1
14478	Perfluorohexanesulfonate	355-46-4	8.4	0.19	0.61	0.76	1
14478	Perfluorohexanoic acid	307-24-4	1.3	0.19	0.65	0.76	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.83	0.19	0.62	0.76	1
14478	Perfluorooctanoic acid	335-67-1	1.8	0.19	0.65	0.76	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.65	0.76	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.65	0.76	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.65	0.76	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.9	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18314009	11/13/2018 03:44	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18314009	11/11/2018 16:30	Danielle D McCully	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820008B	11/07/2018 23:11	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-04-06 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 15:53
SDG#: BSI11-13

Gutierrez Canales Engineering
ELLE Sample #: SW 9883394
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	0.31 J	0.19	0.57	0.76	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.65	0.96	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoroheptanoic acid	375-85-9	0.36 J	0.19	0.65	0.76	1
14478	Perfluorohexanesulfonate	355-46-4	2.9	0.19	0.61	0.76	1
14478	Perfluorohexanoic acid	307-24-4	1.3	0.19	0.65	0.76	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.39 J	0.19	0.62	0.76	1
14478	Perfluorooctanoic acid	335-67-1	0.88	0.19	0.65	0.76	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.65	0.76	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.65	0.76	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.65	0.76	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.3	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18314009	11/13/2018 03:53	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18314009	11/11/2018 16:30	Danielle D McCully	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820008B	11/07/2018 23:11	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-04-08 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 15:57
SDG#: BSI11-14

Gutierrez Canales Engineering
ELLE Sample #: SW 9883395
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	0.55 J	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.99	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	0.42 J	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	3.8	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	2.1	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.57 J	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	1.3	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	2.6	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/09/2018 03:53	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820008B	11/07/2018 23:11	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-04-10 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 16:33
SDG#: BSI11-15

Gutierrez Canales Engineering
ELLE Sample #: SW 9883396
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.57	0.76	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.65	0.95	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoroheptanoic acid	375-85-9	0.49 J	0.19	0.65	0.76	1
14478	Perfluorohexanesulfonate	355-46-4	17	0.19	0.61	0.76	1
14478	Perfluorohexanoic acid	307-24-4	0.77	0.19	0.65	0.76	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoro-octanesulfonate	1763-23-1	10	0.19	0.62	0.76	1
14478	Perfluorooctanoic acid	335-67-1	6.4	0.19	0.65	0.76	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.65	0.76	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.65	0.76	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.65	0.76	1

The recovery for several labeled compounds used as extraction standards is outside of QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method holding time and the recovery for several labeled compounds used as extraction standards is again outside of QC acceptance limits. The data is reported from the initial trial and both sets of data are included in the data package.

Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	N.D.	0.50	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-04-10 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 16:33
SDG#: BSI11-15

Gutierrez Canales Engineering
ELLE Sample #: SW 9883396
ELLE Group #: 2005701
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/29/2018 18:58	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/28/2018 09:45	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18337820002B	12/03/2018 10:37	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-04-12 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 16:35
SDG#: BSI11-16

Gutierrez Canales Engineering
ELLE Sample #: SW 9883397
ELLE Group #: 2005701
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.47	1.9	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.47	1.9	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.56	0.75	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.28	0.63	0.93	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.63	0.75	1
14478	Perfluoroheptanoic acid	375-85-9	0.47 J	0.19	0.63	0.75	1
14478	Perfluorohexanesulfonate	355-46-4	15	0.19	0.60	0.75	1
14478	Perfluorohexanoic acid	307-24-4	0.95	0.19	0.63	0.75	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.63	0.75	1
14478	Perfluoro-octanesulfonate	1763-23-1	9.9	0.19	0.61	0.75	1
14478	Perfluorooctanoic acid	335-67-1	6.1	0.19	0.63	0.75	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.63	0.75	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.63	0.75	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.63	0.75	1
	The recovery for several labeled compounds used as extraction standards is outside of QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside of the method holding time and the recovery for several labeled compounds used as extraction standards is again outside of QC acceptance limits. The data is reported from the initial trial and both sets of data are included in the data package.						
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	0.69	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792
The temperature of the temperature blank bottle(s) upon receipt at the lab was 7.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.2-11.0 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg371-S-04-12 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 16:35
SDG#: BSI11-16

Gutierrez Canales Engineering
ELLE Sample #: SW 9883397
ELLE Group #: 2005701
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/29/2018 19:07	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/28/2018 09:45	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18337820002B	12/03/2018 10:37	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Gutierrez Canales Engineering Group Number: 2005701
Reported: 01/18/2019 14:18

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	DL**	LOD	LOQ
	ng/g	ng/g	ng/g	ng/g
Batch number: 18311004	Sample number(s): 9883380-9883381,9883386-9883387,9883392,9883395			
NEtFOSAA	N.D.	0.50	2.0	3.0
NMeFOSAA	N.D.	0.50	2.0	3.0
Perfluorobutanesulfonate	N.D.	0.20	0.60	0.80
Perfluorodecanoic acid	N.D.	0.30	0.68	1.0
Perfluorododecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroheptanoic acid	N.D.	0.20	0.68	0.80
Perfluorohexanesulfonate	N.D.	0.20	0.64	0.80
Perfluorohexanoic acid	N.D.	0.20	0.68	0.80
Perfluorononanoic acid	N.D.	0.20	0.68	0.80
Perfluoro-octanesulfonate	N.D.	0.20	0.65	0.80
Perfluorooctanoic acid	N.D.	0.20	0.68	0.80
Perfluorotetradecanoic acid	N.D.	0.20	0.68	0.80
Perfluorotridecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroundecanoic acid	N.D.	0.20	0.68	0.80
Batch number: 18314009	Sample number(s): 9883388-9883389,9883393-9883394			
NEtFOSAA	N.D.	0.50	2.0	3.0
NMeFOSAA	N.D.	0.50	2.0	3.0
Perfluorobutanesulfonate	N.D.	0.20	0.60	0.80
Perfluorodecanoic acid	N.D.	0.30	0.68	1.0
Perfluorododecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroheptanoic acid	N.D.	0.20	0.68	0.80
Perfluorohexanesulfonate	N.D.	0.20	0.64	0.80
Perfluorohexanoic acid	N.D.	0.20	0.68	0.80
Perfluorononanoic acid	N.D.	0.20	0.68	0.80
Perfluoro-octanesulfonate	N.D.	0.20	0.65	0.80
Perfluorooctanoic acid	N.D.	0.20	0.68	0.80
Perfluorotetradecanoic acid	N.D.	0.20	0.68	0.80
Perfluorotridecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroundecanoic acid	N.D.	0.20	0.68	0.80
Batch number: 18332003	Sample number(s): 9883382-9883385,9883396-9883397			
NEtFOSAA	N.D.	0.50	2.0	3.0
NMeFOSAA	N.D.	0.50	2.0	3.0
Perfluorobutanesulfonate	N.D.	0.20	0.60	0.80
Perfluorodecanoic acid	N.D.	0.30	0.68	1.0
Perfluorododecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroheptanoic acid	N.D.	0.20	0.68	0.80
Perfluorohexanesulfonate	N.D.	0.20	0.64	0.80
Perfluorohexanoic acid	N.D.	0.20	0.68	0.80

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:18

Group Number: 2005701

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	ng/g	ng/g	ng/g	ng/g
Perfluorononanoic acid	N.D.	0.20	0.68	0.80
Perfluoro-octanesulfonate	N.D.	0.20	0.65	0.80
Perfluorooctanoic acid	N.D.	0.20	0.68	0.80
Perfluorotetradecanoic acid	N.D.	0.20	0.68	0.80
Perfluorotridecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroundecanoic acid	N.D.	0.20	0.68	0.80

LCS/LCSD

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18311004	Sample number(s): 9883380-9883381,9883386-9883387,9883392,9883395								
NEtFOSAA	1.36	1.40			103		70-130		
NMeFOSAA	1.36	1.03			76		70-130		
Perfluorobutanesulfonate	1.20	1.46			122		70-130		
Perfluorodecanoic acid	1.36	1.61			118		70-130		
Perfluorododecanoic acid	1.36	1.57			115		70-130		
Perfluoroheptanoic acid	1.36	1.69			125		70-130		
Perfluorohexanesulfonate	1.29	1.61			125		70-130		
Perfluorohexanoic acid	1.36	1.68			123		70-130		
Perfluorononanoic acid	1.36	1.60			118		70-130		
Perfluoro-octanesulfonate	1.30	1.51			116		70-130		
Perfluorooctanoic acid	1.36	1.60			118		70-130		
Perfluorotetradecanoic acid	1.36	1.62			119		70-130		
Perfluorotridecanoic acid	1.36	1.50			110		70-130		
Perfluoroundecanoic acid	1.36	1.71			126		70-130		
Batch number: 18314009	Sample number(s): 9883388-9883389,9883393-9883394								
NEtFOSAA	1.36	1.26	1.36	1.30	93	96	70-130	3	30
NMeFOSAA	1.36	1.07	1.36	1.29	79	95	70-130	19	30
Perfluorobutanesulfonate	1.20	1.14	1.20	1.12	95	93	70-130	2	30
Perfluorodecanoic acid	1.36	1.34	1.36	1.33	99	98	70-130	1	30
Perfluorododecanoic acid	1.36	1.25	1.36	1.30	92	96	70-130	4	30
Perfluoroheptanoic acid	1.36	1.41	1.36	1.36	104	100	70-130	3	30
Perfluorohexanesulfonate	1.29	1.23	1.29	1.16	96	90	70-130	6	30
Perfluorohexanoic acid	1.36	1.33	1.36	1.32	98	97	70-130	1	30
Perfluorononanoic acid	1.36	1.36	1.36	1.38	100	102	70-130	2	30
Perfluoro-octanesulfonate	1.30	1.15	1.30	1.20	89	92	70-130	4	30
Perfluorooctanoic acid	1.36	1.42	1.36	1.36	104	100	70-130	4	30
Perfluorotetradecanoic acid	1.36	1.37	1.36	1.37	101	101	70-130	0	30
Perfluorotridecanoic acid	1.36	1.35	1.36	1.34	99	98	70-130	1	30

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering Group Number: 2005701
Reported: 01/18/2019 14:18

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluoroundecanoic acid	1.36	1.34	1.36	1.19	98	87	70-130	12	30
Batch number: 18332003	Sample number(s): 9883382-9883385,9883396-9883397								
NEtFOSAA	1.36	1.24			91		70-130		
NMeFOSAA	1.36	1.13			83		70-130		
Perfluorobutanesulfonate	1.20	1.12			93		70-130		
Perfluorodecanoic acid	1.36	1.23			90		70-130		
Perfluorododecanoic acid	1.36	1.25			92		70-130		
Perfluoroheptanoic acid	1.36	1.28			94		70-130		
Perfluorohexanesulfonate	1.29	1.06			82		70-130		
Perfluorohexanoic acid	1.36	1.29			95		70-130		
Perfluorononanoic acid	1.36	1.31			97		70-130		
Perfluoro-octanesulfonate	1.30	0.910			70		70-130		
Perfluorooctanoic acid	1.36	1.15			85		70-130		
Perfluorotetradecanoic acid	1.36	1.26			93		70-130		
Perfluorotridecanoic acid	1.36	1.36			100		70-130		
Perfluoroundecanoic acid	1.36	1.35			100		70-130		
	%	%	%	%					
Batch number: 18311820008B	Sample number(s): 9883380-9883381,9883386-9883389,9883392-9883395								
Moisture	89.5	89.37			100		99-101		
Batch number: 18337820002B	Sample number(s): 9883382-9883385,9883396-9883397								
Moisture	89.5	89.37			100		99-101		
Moisture	89.5	89.37			100		99-101		
Moisture Duplicate	89.5	89.37			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18332003	Sample number(s): 9883382-9883385,9883396-9883397 UNSPK: 9883382									
NEtFOSAA	N.D.	1.24	1.03	1.27	1.16	83	91	70-130	12	30
NMeFOSAA	N.D.	1.24	0.874	1.27	1.13	71	89	70-130	25	30
Perfluorobutanesulfonate	N.D.	1.10	1.09	1.13	1.23	99	110	70-130	13	30
Perfluorodecanoic acid	N.D.	1.24	1.25	1.27	1.35	101	106	70-130	7	30
Perfluorododecanoic acid	N.D.	1.24	1.10	1.27	1.27	89	100	70-130	15	30
Perfluoroheptanoic acid	0.427	1.24	1.62	1.27	1.57	97	90	70-130	3	30
Perfluorohexanesulfonate	1.17	1.17	2.67	1.20	2.09	128	77	70-130	24	30

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Quality Control Summary

Client Name: Gutierrez Canales Engineering
Group Number: 2005701
Reported: 01/18/2019 14:18

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Perfluorohexanoic acid	0.703	1.24	1.77	1.27	1.96	87	99	70-130	10	30
Perfluorononanoic acid	0.521	1.24	1.80	1.27	1.56	103	82	70-130	14	30
Perfluoro-octanesulfonate	15.91	1.18	19.41	1.22	13.65	296 (2)	-185 (2)	70-130	35*	30
Perfluorooctanoic acid	1.96	1.24	3.27	1.27	2.76	106	63*	70-130	17	30
Perfluorotetradecanoic acid	N.D.	1.24	1.14	1.27	1.28	92	101	70-130	12	30
Perfluorotridecanoic acid	N.D.	1.24	1.24	1.27	1.29	101	101	70-130	3	30
Perfluoroundecanoic acid	N.D.	1.24	1.18	1.27	1.31	96	103	70-130	10	30

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 18311820008B	Sample number(s): 9883380-9883381,9883386-9883389,9883392-9883395 BKG: 9883387			
Moisture	1.59	1.82	13* (1)	5
Batch number: 18337820002B	Sample number(s): 9883382-9883385,9883396-9883397 BKG: 9883382			
Moisture	0.765	0.740	3 (1)	5
Moisture	0.765	0.740	3 (1)	5
Moisture Duplicate	0.765	0.740	3 (1)	5

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18311004

	13C3-PFBS		13C5-PFHxA		13C3-PFHxS		13C4-PFHpA		13C8-PFOA		13C8-PFOS	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9883380	65	0.59	72	0.39	72	0.59	68	0.59	74	0.59	75	0.88
9883381	71	0.59	70	0.39	73	0.59	70	0.59	74	0.59	77	0.88
9883386	63	0.57	73	0.38	69	0.57	73	0.57	75	0.57	70	0.85
9883387	67	0.59	77	0.39	75	0.59	72	0.59	79	0.59	72	0.88
9883392	73	0.59	80	0.40	82	0.59	80	0.59	82	0.59	63	0.89
9883395	62	0.58	72	0.38	73	0.58	72	0.58	74	0.58	63	0.87

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(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:18

Group Number: 2005701

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18311004

	13C3-PFBS		13C5-PFHxA		13C3-PFHxS		13C4-PFHpA		13C8-PFOA		13C8-PFOS	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
Blank	63	1.2	72	0.80	71	1.2	69	1.2	74	1.2	68	1.8
LCS	65	1.2	75	0.80	73	1.2	76	1.2	78	1.2	69	1.8
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C9-PFNA		13C6-PFDA		d3-NMeFOSAA		13C7-PFUnDA		d5-NEtFOSAA		13C2-PFDoDA	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9883380	71	0.39	74	0.59	63	0.88	75	0.59	66	0.88	76	0.59
9883381	75	0.39	78	0.59	76	0.88	77	0.59	71	0.88	75	0.59
9883386	68	0.38	70	0.57	57	0.85	69	0.57	52	0.85	68	0.57
9883387	69	0.39	78	0.59	55	0.88	81	0.59	57	0.88	74	0.59
9883392	67	0.40	80	0.59	51	0.89	87	0.59	52	0.89	77	0.59
9883395	67	0.38	74	0.58	54	0.87	76	0.58	53	0.87	72	0.58
Blank	68	0.80	72	1.2	72	1.8	77	1.2	66	1.8	69	1.2
LCS	73	0.80	71	1.2	75	1.8	68	1.2	65	1.8	70	1.2
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA	
	%Rec	LOD (ng/g)
9883380	69	0.59
9883381	71	0.59
9883386	64	0.57
9883387	67	0.59
9883392	73	0.59
9883395	65	0.58
Blank	62	1.2
LCS	62	1.2
Limits:	50-150	

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18314009

	13C3-PFBS		13C5-PFHxA		13C3-PFHxS		13C4-PFHpA		13C8-PFOA		13C8-PFOS	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9883388	92	0.58	103	0.39	93	0.58	98	0.58	102	0.58	96	0.87
9883389	91	0.58	93	0.39	90	0.58	92	0.58	97	0.58	97	0.87

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Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:18

Group Number: 2005701

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18314009

	13C3-PFBS %Rec	13C3-PFBS LOD (ng/g)	13C5-PFHxA %Rec	13C5-PFHxA LOD (ng/g)	13C3-PFHxS %Rec	13C3-PFHxS LOD (ng/g)	13C4-PFHpA %Rec	13C4-PFHpA LOD (ng/g)	13C8-PFOA %Rec	13C8-PFOA LOD (ng/g)	13C8-PFOS %Rec	13C8-PFOS LOD (ng/g)
9883393	94	0.56	96	0.37	97	0.56	98	0.56	99	0.56	99	0.84
9883394	119	0.57	121	0.38	114	0.57	116	0.57	124	0.57	127	0.85
Blank	92	1.2	100	0.80	95	1.2	96	1.2	98	1.2	98	1.8
LCS	97	1.2	108	0.80	104	1.2	106	1.2	108	1.2	97	1.8
LCSD	100	1.2	103	0.80	96	1.2	99	1.2	106	1.2	101	1.8
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C9-PFNA %Rec	13C9-PFNA LOD (ng/g)	13C6-PFDA %Rec	13C6-PFDA LOD (ng/g)	d3-NMeFOSAA %Rec	d3-NMeFOSAA LOD (ng/g)	13C7-PFUnDA %Rec	13C7-PFUnDA LOD (ng/g)	d5-NEtFOSAA %Rec	d5-NEtFOSAA LOD (ng/g)	13C2-PFDoDA %Rec	13C2-PFDoDA LOD (ng/g)
9883388	104	0.39	97	0.58	70	0.87	99	0.58	65	0.87	98	0.58
9883389	92	0.39	91	0.58	60	0.87	95	0.58	55	0.87	85	0.58
9883393	103	0.37	95	0.56	57	0.84	93	0.56	61	0.84	89	0.56
9883394	130	0.38	116	0.57	77	0.85	122	0.57	78	0.85	118	0.57
Blank	101	0.80	93	1.2	103	1.8	96	1.2	83	1.8	90	1.2
LCS	104	0.80	97	1.2	100	1.8	96	1.2	87	1.8	93	1.2
LCSD	106	0.80	96	1.2	99	1.8	100	1.2	89	1.8	99	1.2
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA %Rec	13C2-PFTeDA LOD (ng/g)
9883388	91	0.58
9883389	83	0.58
9883393	83	0.56
9883394	113	0.57
Blank	89	1.2
LCS	90	1.2
LCSD	91	1.2
Limits:	50-150	

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18332003

	13C3-PFBS %Rec	13C3-PFBS LOD (ng/g)	13C5-PFHxA %Rec	13C5-PFHxA LOD (ng/g)	13C3-PFHxS %Rec	13C3-PFHxS LOD (ng/g)	13C4-PFHpA %Rec	13C4-PFHpA LOD (ng/g)	13C8-PFOA %Rec	13C8-PFOA LOD (ng/g)	13C8-PFOS %Rec	13C8-PFOS LOD (ng/g)
9883382	82	0.57	83	0.38	98	0.57	84	0.57	92	0.57	82	0.86

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(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:18

Group Number: 2005701

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18332003

	13C3-PFBS		13C5-PFHxA		13C3-PFHxS		13C4-PFHpA		13C8-PFOA		13C8-PFOS	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9883383	79	0.55	85	0.36	92	0.55	83	0.55	90	0.55	83	0.82
9883384	74	0.56	77	0.37	85	0.56	77	0.56	81	0.56	82	0.84
9883385	80	0.59	80	0.40	93	0.59	91	0.59	94	0.59	83	0.89
9883396	82	0.57	82	0.38	90	0.57	85	0.57	85	0.57	83	0.86
9883397	80	0.56	84	0.37	93	0.56	89	0.56	88	0.56	86	0.83
Blank	94	1.2	102	0.80	111	1.2	100	1.2	105	1.2	97	1.8
LCS	79	1.2	82	0.80	94	1.2	82	1.2	91	1.2	85	1.8
MS	79	0.55	85	0.36	92	0.55	83	0.55	90	0.55	83	0.82
MSD	74	0.56	77	0.37	85	0.56	77	0.56	81	0.56	82	0.84
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C9-PFNA		13C6-PFDA		d3-NMeFOSAA		13C7-PFUnDA		d5-NEtFOSAA		13C2-PFDoDA	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9883382	78	0.38	90	0.57	88	0.86	88	0.57	76	0.86	85	0.57
9883383	76	0.36	86	0.55	79	0.82	81	0.55	77	0.82	81	0.55
9883384	78	0.37	79	0.56	81	0.84	79	0.56	73	0.84	84	0.56
9883385	76	0.40	80	0.59	88	0.89	84	0.59	77	0.89	79	0.59
9883396	77	0.38	82	0.57	34*	0.86	82	0.57	35*	0.86	83	0.57
9883397	82	0.37	79	0.56	34*	0.83	83	0.56	36*	0.83	79	0.56
Blank	91	0.80	103	1.2	131	1.8	104	1.2	104	1.8	103	1.2
LCS	74	0.80	85	1.2	106	1.8	88	1.2	94	1.8	84	1.2
MS	76	0.36	86	0.55	79	0.82	81	0.55	77	0.82	81	0.55
MSD	78	0.37	79	0.56	81	0.84	79	0.56	73	0.84	84	0.56
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA	
	%Rec	LOD (ng/g)
9883382	83	0.57
9883383	79	0.55
9883384	77	0.56
9883385	80	0.59
9883396	78	0.57
9883397	78	0.56
Blank	95	1.2
LCS	82	1.2
MS	79	0.55

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(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Group Number: 2005701
Reported: 01/18/2019 14:18

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18332003

	13C2-PFTeDA %Rec	LOD (ng/g)
MSD	77	0.56
Limits:	50-150	

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 43806 Group # 2005701 Sample # 9883380-97

COC # 568586

Client Information

Client: GCE	Acct. #:
Project Name/#: 146-6719 Barstow Site Inspection 006	PWSID #:
Project Manager: Eric Rider	P.O. #:
Sampler: Haydar Azzouz	Quote #:
State where samples were collected: CA	For Compliance: Yes ☐ No ☒

Matrix

Soil ☒ Sediment ☐ Tissue ☐ Water ☐ Potable ☒ Ground ☐ NPDES ☐ Surface ☐ Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PFAs (EPA 537 mod)	Remarks
OU1-Bldg 372-S-02-05	10/31/18	12:13	X		2	✓	
OU1-Bldg 371-S-02-08	10/31/18	12:25	X		2	✓	
OU1-Bldg 371-S-02-10	10/31/18	12:50	X		6	ARCHIVE	MS/MSD ARCHIVE
OU1-Bldg 371-S-02-12	10/31/18	12:52	X		2	ARCHIVE	ARCHIVE
OU1-Bldg 371-S-03-02	10/31/18	13:36	X		2	✓	
OU1-Bldg 371-S-03-03	10/31/18	14:10	X		2	✓	
OU1-Bldg 371-S-03-05	10/31/18	14:15	X		2	✓	
OU1-Bldg 371-S-03-08	10/31/18	14:46	X		2	✓	
OU1-Bldg 371-S-03-10	10/31/18	15:00	X		2	ARCHIVE	ARCHIVE
OU1-Bldg 371-S-03-12	10/31/18	15:03	X		2	ARCHIVE	ARCHIVE

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: jmacneill@neiaw.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	11/1/18	0740			

EDD Required? (Yes) No

If yes, format: NEBO, EDF

Site-Specific QC (MS/MSD/Dup)? (Yes) No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx ____ Other ____

Temperature upon receipt 0.5 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 43806 Group # 200570 Sample # 9883380-97

COC # 568585

Client Information

Client: GCE	Acct. #:
Project Name/#: Barstow Site Inspection 146-C719 006	PWSID #:
Project Manager: Eric Rider	P.O. #:
Sampler: Haydar Azzouz	Quote #:
State where samples were collected: CA	For Compliance: Yes ☐ No ☒

Matrix

Soil ☒ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ NPDES ☐ Surface | Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PFAS (EPA 537 Mod)	Remarks
OU1 - Bldg 371 - S - 04 - 01	10/31/18	15:35	X		2	✓	
OU1 - Bldg 371 - S - 04 - 03	10/31/18	15:45	X		2	✓	
OU1 - Bldg 371 - S - 04 - 06	10/31/18	15:53	X		2	✓	
OU1 - Bldg 371 - S - 04 - 08	10/31/18	15:57	X		2	✓	
OU1 - Bldg 371 - S - 04 - 10	10/31/18	16:33	X		2	ARCHIVE	ARCHIVE
OU1 - Bldg 371 - S - 04 - 12	10/31/18	16:35	X		2	ARCHIVE	ARCHIVE

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: jmacneill@neiaw.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	11/1/18	0740			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	11-1-18	1010

EDD Required? (Yes) No

If yes, format: NEBO, EDF

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx ____ Other ____

Temperature upon receipt 0.6-7.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 231984

Group Number(s): 2005701

Client: GCE

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/02/2018 10:10
Number of Packages:	6	Number of Projects:	7
State/Province of Origin:	CA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 20:43 on 11/02/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples Collected Same Day as Receipt?
1	DT131	5.5	DT	Wet	Y	Bagged	N	N
2	DT131	0.5	DT	Wet	Y	Bagged	N	N
3	DT131	5.8	DT	Wet	Y	Bagged	N	N
4	DT131	7.6	DT	Wet	Y	Bagged	Y	N
5	DT131	1.5	DT	Wet	Y	Bagged	N	N
6	DT131	0.5	DT	Wet	Y	Bagged	N	N

Elevated Temperature Details

All Temperatures in °C

Cooler #	Thermometer ID	Top Left Temp	Top Right Temp	Bottom Left Temp	Bottom Right Temp	Center Temp	Factors Contributing to Elevated Temp	Comments
4	32170023	10.2	8.2	9.4	11.0	8.3	Temp bottle wasn't touching ice bag.	

2425 New Holland Pike
Lancaster, PA 17601-5994
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Client: GCE

Samples In Elevated-Temperature Coolers

Cooler #	Sample ID
4	OU1-Bldg 371-S-03-10
4	OU1-Bldg 371-S-04-6
4	OU1-Bldg 371-S-04-03
4	OU1-Bldg 371-S-04-01
4	OU1-Bldg 371-S-03-03
4	OU1-Bldg 371-S-04-10
4	OU1-Bldg 371-S-03-08
4	OU1-Bldg 371-S-04-08
4	OU1-Bldg 371-S-04-12
4	OU1-Bldg 371-S-03-01
4	OU1-Bldg 371-S-03-05
4	OU1-Bldg 371-S-03-12

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

PFAS by LC/MS/MS Data

Case Narrative/Conformance Summary

PFAS by LC/MS/MS

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Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI11

PFAS Group

Fraction: PFAS by LC/MS/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9883380	OU1-Bldg371-S-02-05		X	1	
9883381	OU1-Bldg371-S-02-08		X	1	
9883382	OU1-Bldg371-S-02-10		X	1	Unspiked
9883383	OU1-Bldg371-S-02-10 MS		X	1	Matrix Spike
9883384	OU1-Bldg371-S-02-10 MSD		X	1	Matrix Spike Duplicate
9883385	OU1-Bldg371-S-02-12		X	1	
9883386	OU1-Bldg371-S-03-01		X	1	
9883387	OU1-Bldg371-S-03-03		X	1	
9883388	OU1-Bldg371-S-03-05		X	1	
9883389	OU1-Bldg371-S-03-08		X	1	
9883392	OU1-Bldg371-S-04-01		X	1	
9883393	OU1-Bldg371-S-04-03		X	1	
9883394	OU1-Bldg371-S-04-06		X	1	
9883395	OU1-Bldg371-S-04-08		X	1	
9883396	OU1-Bldg371-S-04-10		X	1	
9883397	OU1-Bldg371-S-04-12		X	1	

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

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Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI11

PFAS Group

Fraction: PFAS by LC/MS/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Batch#: 18332003 (Sample number(s): 9883382-9883385, 9883396-9883397, UNSPK: 9883382)
The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: Perfluoro-octanesulfonate
The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Perfluoro-octanesulfonate
The recovery(ies) for the following analyte(s) in the MSD were below the acceptance window: Perfluoro-octanesulfonate, Perfluorooctanoic acid

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Batch#: 18332003 (Sample number(s): 9883382-9883385, 9883396-9883397, UNSPK: 9883382)
The recovery(ies) for the following surrogate(s) were below the acceptance window: d3-NMeFOSAA (9883396, 9883397), d5-NEtFOSAA (9883396, 9883397)

(Sample number(s): 9883396-9883397: Analysis: 14478)
The recovery for several labeled compounds used as extraction standards is outside of QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside of the method holding time and the recovery for several labeled compounds used as extraction standards is again outside of QC acceptance limits. The data is reported from the initial trial and both sets of data are included in the data package.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

PFAS by LC/MS/MS

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Quality Control Reference List
PFAS Group

CLIENT: Gutierrez Canales Engineering
SDG: BSI11

Fraction: PFAS by LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
PFAS in Soil by LC/MS/MS-DoD	18311004	BLK311004B	11/09/2018 00:53
		LCS311004Q	11/09/2018 01:02
		9883380	11/09/2018 02:32
		9883381	11/09/2018 02:41
		9883386	11/09/2018 02:50
		9883387	11/09/2018 02:59
		9883392	11/09/2018 03:26
		9883395	11/09/2018 03:53
PFAS in Soil by LC/MS/MS-DoD	18314009	BLK314009B	11/13/2018 01:47
		LCS314009Q	11/13/2018 01:56
		LCSDAY	11/13/2018 02:05
		9883388	11/13/2018 03:26
		9883389	11/13/2018 03:35
		9883393	11/13/2018 03:44
		9883394	11/13/2018 03:53
PFAS in Soil by LC/MS/MS-DoD	18332003	BLK332003B	11/29/2018 18:04
		LCS332003Q	11/29/2018 18:13
		9883382 UNSPK	11/29/2018 18:40
		9883383 MS	11/29/2018 20:20
		9883384 MSD	11/29/2018 20:29
		9883385	11/29/2018 18:49
		9883396	11/29/2018 18:58
		9883397	11/29/2018 19:07
PFAS in Soil by LC/MS/MS-DoD	18338017	BLK338017B	12/05/2018 17:18
		LCS338017Q	12/05/2018 17:27
		LCSDAY	12/05/2018 17:36
		9883396	12/05/2018 17:45
		9883397	12/05/2018 17:54

Quality Control Summary
Method Blank
PFAS Group
SDG: BSI11
Matrix: SOLID

Fraction: PFAS by LC/MS/MS

18311004 / BLK311004B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/09/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/09/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/09/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/09/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/09/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/09/18	N.D.	ng/g	0.50	2.0	3.0

18314009 / BLK314009B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/13/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/13/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/13/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/13/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/13/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/13/18	N.D.	ng/g	0.50	2.0	3.0

18332003 / BLK332003B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/29/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/29/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/29/18	N.D.	ng/g	0.20	0.64	0.80

Quality Control Summary
Method Blank
PFAS Group
SDG: BSI11
Matrix: SOLID

Fraction: PFAS by LC/MS/MS

18332003 / BLK332003B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluoro-octanesulfonate	11/29/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/29/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/29/18	N.D.	ng/g	0.50	2.0	3.0

18338017 / BLK338017B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	12/05/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	12/05/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	12/05/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	12/05/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	12/05/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	12/05/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	12/05/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	12/05/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	12/05/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	12/05/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	12/05/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	12/05/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	12/05/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	12/05/18	N.D.	ng/g	0.50	2.0	3.0

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18338017		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK338017	12/05/18 17:18	75	68	63	76	79
LCS338017	12/05/18 17:27	75	66	64	84	82
LCSDA	12/05/18 17:36	89	81	73	90	94
9883396RE	12/05/18 17:45	75	69	67	87	85
9883397RE	12/05/18 17:54	75	69	66	84	79

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18338017		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK338017	12/05/18 17:18	76	75	85	79	86
LCS338017	12/05/18 17:27	86	76	85	84	83
LCSDA	12/05/18 17:36	91	88	99	91	92
9883396RE	12/05/18 17:45	86	79	87	84	82
9883397RE	12/05/18 17:54	82	78	88	84	83

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18338017		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK338017	12/05/18 17:18	84	101	85
LCS338017	12/05/18 17:27	87	100	79
LCSDA	12/05/18 17:36	92	127	98
9883396RE	12/05/18 17:45	86	26 *	31 *
9883397RE	12/05/18 17:54	82	37 *	39 *

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18311004		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK311004	11/09/18 00:53	69	62	63	71	69
LCS311004	11/09/18 01:02	70	62	65	73	76
9883380	11/09/18 02:32	76	69	65	72	68
9883381	11/09/18 02:41	75	71	71	73	70
9883386	11/09/18 02:50	68	64	63	69	73
9883387	11/09/18 02:59	74	67	67	75	72
9883392	11/09/18 03:26	77	73	73	82	80
9883395	11/09/18 03:53	72	65	62	73	72

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18311004		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK311004	11/09/18 00:53	72	72	77	74	68
LCS311004	11/09/18 01:02	75	71	68	78	69
9883380	11/09/18 02:32	72	74	75	74	75
9883381	11/09/18 02:41	70	78	77	74	77
9883386	11/09/18 02:50	73	70	69	75	70
9883387	11/09/18 02:59	77	78	81	79	72
9883392	11/09/18 03:26	80	80	87	82	63
9883395	11/09/18 03:53	72	74	76	74	63

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18311004		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK311004	11/09/18 00:53	68	72	66
LCS311004	11/09/18 01:02	73	75	65
9883380	11/09/18 02:32	71	63	66
9883381	11/09/18 02:41	75	76	71
9883386	11/09/18 02:50	68	57	52
9883387	11/09/18 02:59	69	55	57
9883392	11/09/18 03:26	67	51	52
9883395	11/09/18 03:53	67	54	53

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18314009		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK314009	11/13/18 01:47	90	89	92	95	96
LCS314009	11/13/18 01:56	93	90	97	104	106
LCSDA	11/13/18 02:05	99	91	100	96	99
9883388	11/13/18 03:26	98	91	92	93	98
9883389	11/13/18 03:35	85	83	91	90	92
9883393	11/13/18 03:44	89	83	94	97	98
9883394	11/13/18 03:53	118	113	119	114	116

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18314009		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK314009	11/13/18 01:47	100	93	96	98	98
LCS314009	11/13/18 01:56	108	97	96	108	97
LCSDA	11/13/18 02:05	103	96	100	106	101
9883388	11/13/18 03:26	103	97	99	102	96
9883389	11/13/18 03:35	93	91	95	97	97
9883393	11/13/18 03:44	96	95	93	99	99
9883394	11/13/18 03:53	121	116	122	124	127

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18314009		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK314009	11/13/18 01:47	101	103	83
LCS314009	11/13/18 01:56	104	100	87
LCSDA	11/13/18 02:05	106	99	89
9883388	11/13/18 03:26	104	70	65
9883389	11/13/18 03:35	92	60	55
9883393	11/13/18 03:44	103	57	61
9883394	11/13/18 03:53	130	77	78

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18332003		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK332003	11/29/18 18:04	103	95	94	111	100
LCS332003	11/29/18 18:13	84	82	79	94	82
9883382	11/29/18 18:40	85	83	82	98	84
9883385	11/29/18 18:49	79	80	80	93	91
9883396	11/29/18 18:58	83	78	82	90	85
9883397	11/29/18 19:07	79	78	80	93	89
9883383MS	11/29/18 20:20	81	79	79	92	83
9883384MSD	11/29/18 20:29	84	77	74	85	77

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18332003		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK332003	11/29/18 18:04	102	103	104	105	97
LCS332003	11/29/18 18:13	82	85	88	91	85
9883382	11/29/18 18:40	83	90	88	92	82
9883385	11/29/18 18:49	80	80	84	94	83
9883396	11/29/18 18:58	82	82	82	85	83
9883397	11/29/18 19:07	84	79	83	88	86
9883383MS	11/29/18 20:20	85	86	81	90	83
9883384MSD	11/29/18 20:29	77	79	79	81	82

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

18332003		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK332003	11/29/18 18:04	91	131	104
LCS332003	11/29/18 18:13	74	106	94
9883382	11/29/18 18:40	78	88	76
9883385	11/29/18 18:49	76	88	77
9883396	11/29/18 18:58	77	34 *	35 *
9883397	11/29/18 19:07	82	34 *	36 *
9883383MS	11/29/18 20:20	76	79	77
9883384MSD	11/29/18 20:29	78	81	73

* Outside QC Limits

PFAS Group

Fraction: PFAS by LC/MS/MS

UNSPK: 9883382 MS: 9883383 MSD: 9883384 **Analyte**	Batch: **18332003** (Sample number(s): 9883382-9883385, 9883396-9883397)								
	Spike Added ng/g MS/MSD	**Unspiked Conc ng/g**	**MS Conc ng/g**	**MSD Conc ng/g**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.24 / 1.27	1.96	3.27	2.76	106	63 *	70-130	17	30
Perfluorononanoic acid	1.24 / 1.27	0.521 J	1.80	1.56	103	82	70-130	14	30
Perfluorodecanoic acid	1.24 / 1.27	N.D.	1.25	1.35	101	106	70-130	7	30
Perfluoroundecanoic acid	1.24 / 1.27	N.D.	1.18	1.31	96	103	70-130	10	30
Perfluorododecanoic acid	1.24 / 1.27	N.D.	1.10	1.27	89	100	70-130	15	30
Perfluorotridecanoic acid	1.24 / 1.27	N.D.	1.24	1.29	101	101	70-130	3	30
Perfluorotetradecanoic acid	1.24 / 1.27	N.D.	1.14	1.28	92	101	70-130	12	30
Perfluorohexanoic acid	1.24 / 1.27	0.703 J	1.77	1.96	87	99	70-130	10	30
Perfluoroheptanoic acid	1.24 / 1.27	0.427 J	1.62	1.57	97	90	70-130	3	30
Perfluorobutanesulfonate	1.10 / 1.13	N.D.	1.09	1.23	99	110	70-130	13	30
Perfluorohexanesulfonate	1.17 / 1.20	1.17	2.67	2.09	128	77	70-130	24	30
Perfluoro-octanesulfonate	1.18 / 1.22	15.91	19.41	13.65	296 (2)	-185 (2)	70-130	35 *	30
NEtFOSAA	1.24 / 1.27	N.D.	1.03 J	1.16 J	83	91	70-130	12	30
NMeFOSAA	1.24 / 1.27	N.D.	0.874 J	1.13 J	71	89	70-130	25	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

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Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: BSI11
Matrix: SOLID

PFAS Group
Fraction: PFAS by LC/MS/MS

LCS: LCS311004Q	Batch: **18311004** (Sample number(s): 9883380-9883381, 9883386-9883387, 9883392, 9883395)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.36	1.60	NA	118	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.60	NA	118	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.61	NA	118	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.36	1.71	NA	126	NA	70-130	NA	NA
Perfluorododecanoic acid	1.36	1.57	NA	115	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.50	NA	110	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.62	NA	119	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.68	NA	123	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.69	NA	125	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.46	NA	122	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.61	NA	125	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	1.51	NA	116	NA	70-130	NA	NA
NEtFOSAA	1.36	1.40 J	NA	103	NA	70-130	NA	NA
NMeFOSAA	1.36	1.03 J	NA	76	NA	70-130	NA	NA

LCS: LCS314009Q LCSD: LCSDAY	Batch: **18314009** (Sample number(s): 9883388-9883389, 9883393-9883394)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.36	1.42	1.36	104	100	70-130	4	30
Perfluorononanoic acid	1.36	1.36	1.38	100	102	70-130	2	30
Perfluorodecanoic acid	1.36	1.34	1.33	99	98	70-130	1	30
Perfluoroundecanoic acid	1.36	1.34	1.19	98	87	70-130	12	30
Perfluorododecanoic acid	1.36	1.25	1.30	92	96	70-130	4	30
Perfluorotridecanoic acid	1.36	1.35	1.34	99	98	70-130	1	30
Perfluorotetradecanoic acid	1.36	1.37	1.37	101	101	70-130	0	30
Perfluorohexanoic acid	1.36	1.33	1.32	98	97	70-130	1	30
Perfluoroheptanoic acid	1.36	1.41	1.36	104	100	70-130	3	30
Perfluorobutanesulfonate	1.20	1.14	1.12	95	93	70-130	2	30
Perfluorohexanesulfonate	1.29	1.23	1.16	96	90	70-130	6	30
Perfluoro-octanesulfonate	1.30	1.15	1.20	89	92	70-130	4	30
NEtFOSAA	1.36	1.26 J	1.30 J	93	96	70-130	3	30
NMeFOSAA	1.36	1.07 J	1.29 J	79	95	70-130	19	30

LCS: LCS332003Q	Batch: **18332003** (Sample number(s): 9883382-9883385, 9883396-9883397)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.36	1.15	NA	85	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.31	NA	97	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.23	NA	90	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.36	1.35	NA	100	NA	70-130	NA	NA

PFAS Group

Fraction: PFAS by LC/MS/MS

LCS: LCS332003Q	Batch: **18332003** (Sample number(s): 9883382-9883385, 9883396-9883397)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorododecanoic acid	1.36	1.25	NA	92	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.36	NA	100	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.26	NA	93	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.29	NA	95	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.28	NA	94	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.12	NA	93	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.06	NA	82	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	0.910	NA	70	NA	70-130	NA	NA
NEtFOSAA	1.36	1.24 J	NA	91	NA	70-130	NA	NA
NMeFOSAA	1.36	1.13 J	NA	83	NA	70-130	NA	NA

LCS: LCS338017Q LCSD: LCSDAY	Batch: **18338017** (Sample number(s): 9883396-9883397)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.36	1.47	1.54	108	113	70-130	5	30
Perfluorononanoic acid	1.36	1.57	1.53	115	112	70-130	3	30
Perfluorodecanoic acid	1.36	1.52	1.63	112	120	70-130	7	30
Perfluoroundecanoic acid	1.36	1.39	1.48	102	109	70-130	6	30
Perfluorododecanoic acid	1.36	1.60	1.58	117	116	70-130	1	30
Perfluorotridecanoic acid	1.36	1.42	1.47	104	108	70-130	4	30
Perfluorotetradecanoic acid	1.36	1.57	1.60	116	118	70-130	2	30
Perfluorohexanoic acid	1.36	1.48	1.52	109	111	70-130	2	30
Perfluoroheptanoic acid	1.36	1.59	1.48	117	109	70-130	7	30
Perfluorobutanesulfonate	1.20	1.37	1.37	114	114	70-130	0	30
Perfluorohexanesulfonate	1.29	1.25	1.37	97	106	70-130	9	30
Perfluoro-octanesulfonate	1.30	1.29	1.26	100	97	70-130	3	30
NEtFOSAA	1.36	1.45 J	1.67 J	107	123	70-130	14	30
NMeFOSAA	1.36	1.22 J	1.25 J	90	92	70-130	3	30

Fraction: PFAS by LC/MS/MS

14478: PFAS in Soil by LC/MS/MS-DoD Analyte Name	Default DL	Default LOD	Default LOQ	Units
Perfluorooctanoic acid	.2	.68	0.80	ng/g
Perfluorononanoic acid	.2	.68	0.80	ng/g
Perfluorodecanoic acid	.3	.68	1.0	ng/g
Perfluoroundecanoic acid	.2	.68	0.80	ng/g
Perfluorododecanoic acid	.2	.68	0.80	ng/g
Perfluorotridecanoic acid	.2	.68	0.80	ng/g
Perfluorotetradecanoic acid	.2	.68	0.80	ng/g
Perfluorohexanoic acid	.2	.68	0.80	ng/g
Perfluoroheptanoic acid	.2	.68	0.80	ng/g
Perfluorobutanesulfonate	.2	.6	0.80	ng/g
Perfluorohexanesulfonate	.2	.64	0.80	ng/g
Perfluoro-octanesulfonate	.2	.65	0.80	ng/g
NEtFOSAA	.5	2	3.0	ng/g
NMeFOSAA	.5	2	3.0	ng/g

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 12/03/2018 17:34 12/03/2018 18:29
Lab File Names: CAL1= 18DEC03DCAL-10.WIFF; CAL2= 18DEC03DCAL-11.WIFF; CAL3= 18DEC03DCAL-12.WIFF;
CAL4= 18DEC03DCAL-13.WIFF; CAL5= 18DEC03DCAL-14.WIFF; CAL6= 18DEC03DCAL-15.WIFF;
CAL7= 18DEC03DCAL-16.WIFF; CAL8= ;

Perfluorobutanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.234	17.1	±30
CAL2	0.104	0.60	0.590	-1.6	±30
CAL3	0.412	2.00	2.332	16.6	±30
CAL4	1.467	8.00	8.311	3.9	±30
CAL5	3.825	20.00	21.661	8.3	±30
CAL6	8.929	50.00	50.567	1.1	±30
CAL7	17.147	100.00	97.106	-2.9	±30

Perfluoropentanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.047	0.20	0.236	18.2	±30
CAL2	0.111	0.60	0.556	-7.3	±30
CAL3	0.442	2.00	2.215	10.7	±30
CAL4	1.549	8.00	7.755	-3.1	±30
CAL5	4.034	20.00	20.198	1.0	±30
CAL6	9.953	50.00	49.840	-0.3	±30
CAL7	17.469	100.00	87.475	-12.5	±30

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.18	0.203	14.7	±30
CAL2	0.104	0.53	0.506	-4.7	±30
CAL3	0.399	1.77	1.944	9.8	±30
CAL4	1.440	7.08	7.023	-0.8	±30
CAL5	3.753	17.70	18.299	3.4	±30
CAL6	9.070	44.20	44.228	0.1	±30
CAL7	17.976	88.40	87.655	-0.8	±30

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.068	0.19	0.173	-7.6	±30
CAL2	0.201	0.56	0.508	-9.2	±30
CAL3	0.799	1.87	2.019	8.0	±30
CAL4	3.020	7.47	7.628	2.1	±30
CAL5	7.543	18.70	19.051	1.9	±30
CAL6	17.251	46.70	43.570	-6.7	±30
CAL7	37.986	93.40	95.938	2.7	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 12/03/2018 17:34 12/03/2018 18:29
Lab File Names: CAL1= 18DEC03DCAL-10.WIFF; CAL2= 18DEC03DCAL-11.WIFF; CAL3= 18DEC03DCAL-12.WIFF;
CAL4= 18DEC03DCAL-13.WIFF; CAL5= 18DEC03DCAL-14.WIFF; CAL6= 18DEC03DCAL-15.WIFF;
CAL7= 18DEC03DCAL-16.WIFF; CAL8= ;

Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.056	0.20	0.239	19.4	±30
CAL2	0.133	0.60	0.568	-5.3	±30
CAL3	0.542	2.00	2.312	15.6	±30
CAL4	1.976	8.00	8.421	5.3	±30
CAL5	5.078	20.00	21.644	8.2	±30
CAL6	11.172	50.00	47.617	-4.8	±30
CAL7	20.926	100.00	89.185	-10.8	±30

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.023	0.19	0.217	15.6	±30
CAL2	0.051	0.56	0.490	-12.9	±30
CAL3	0.209	1.88	2.010	6.9	±30
CAL4	0.743	7.50	7.132	-4.9	±30
CAL5	1.967	18.80	18.871	0.4	±30
CAL6	4.870	46.90	46.736	-0.4	±30
CAL7	9.814	93.80	94.175	0.4	±30

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.073	0.20	0.234	17.2	±30
CAL2	0.177	0.60	0.570	-5.0	±30
CAL3	0.706	2.00	2.277	13.9	±30
CAL4	2.525	8.00	8.148	1.8	±30
CAL5	6.065	20.00	19.571	-2.1	±30
CAL6	13.616	50.00	43.941	-12.1	±30
CAL7	25.265	100.00	81.531	-18.5	±30

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.18	0.196	7.6	±30
CAL2	0.099	0.55	0.465	-14.9	±30
CAL3	0.387	1.82	1.822	0.1	±30
CAL4	1.392	7.30	6.558	-10.2	±30
CAL5	3.712	18.20	17.488	-3.9	±30
CAL6	9.523	45.60	44.865	-1.6	±30
CAL7	19.837	91.20	93.456	2.5	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 12/03/2018 17:34 12/03/2018 18:29
Lab File Names: CAL1= 18DEC03DCAL-10.WIFF; CAL2= 18DEC03DCAL-11.WIFF; CAL3= 18DEC03DCAL-12.WIFF;
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CAL7= 18DEC03DCAL-16.WIFF; CAL8= ;

6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.079	0.19	0.192	1.2	±30
CAL2	0.244	0.57	0.593	4.2	±30
CAL3	0.943	1.90	2.287	20.4	±30
CAL4	3.282	7.58	7.960	5.0	±30
CAL5	8.266	19.00	20.045	5.5	±30
CAL6	18.788	47.40	45.562	-3.9	±30
CAL7	31.416	94.80	76.185	-19.6	±30

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.046	0.19	0.241	26.6	±30
CAL2	0.096	0.57	0.500	-12.4	±30
CAL3	0.390	1.90	2.028	6.7	±30
CAL4	1.416	7.61	7.369	-3.2	±30
CAL5	3.660	19.00	19.056	0.3	±30
CAL6	8.833	47.60	45.984	-3.4	±30
CAL7	18.612	95.20	96.894	1.8	±30

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.217	8.6	±30
CAL2	0.108	0.60	0.571	-4.8	±30
CAL3	0.427	2.00	2.258	12.9	±30
CAL4	1.522	8.00	8.054	0.7	±30
CAL5	4.086	20.00	21.630	8.2	±30
CAL6	9.533	50.00	50.457	0.9	±30
CAL7	18.442	100.00	97.612	-2.4	±30

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.047	0.19	0.200	7.8	±30
CAL2	0.113	0.56	0.478	-13.8	±30
CAL3	0.428	1.85	1.815	-1.9	±30
CAL4	1.632	7.40	6.915	-6.6	±30
CAL5	4.285	18.50	18.163	-1.8	±30
CAL6	10.534	46.30	44.647	-3.6	±30
CAL7	22.456	92.60	95.172	2.8	±30

FORM 06
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CAL7= 18DEC03DCAL-16.WIFF; CAL8= ;

Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.063	0.20	0.237	18.6	±30
CAL2	0.166	0.60	0.623	3.8	±30
CAL3	0.645	2.00	2.417	20.8	±30
CAL4	2.145	8.00	8.040	0.5	±30
CAL5	5.723	20.00	21.447	7.2	±30
CAL6	13.058	50.00	48.937	-2.1	±30
CAL7	26.442	100.00	99.099	-0.9	±30

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.036	0.19	0.241	25.4	±30
CAL2	0.073	0.58	0.495	-14.1	±30
CAL3	0.291	1.92	1.963	2.2	±30
CAL4	1.135	7.68	7.654	-0.3	±30
CAL5	2.923	19.20	19.709	2.7	±30
CAL6	6.662	48.00	44.928	-6.4	±30
CAL7	14.618	96.00	98.578	2.7	±30

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.218	8.8	±30
CAL2	0.111	0.60	0.611	1.9	±30
CAL3	0.417	2.00	2.285	14.2	±30
CAL4	1.514	8.00	8.302	3.8	±30
CAL5	3.771	20.00	20.683	3.4	±30
CAL6	9.288	50.00	50.941	1.9	±30
CAL7	17.825	100.00	97.761	-2.2	±30

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.091	0.19	0.196	2.1	±30
CAL2	0.248	0.58	0.534	-7.2	±30
CAL3	0.867	1.92	1.863	-3.0	±30
CAL4	3.740	7.66	8.033	4.9	±30
CAL5	9.354	19.20	20.089	4.6	±30
CAL6	21.760	47.90	46.733	-2.4	±30
CAL7	35.893	95.80	77.086	-19.5	±30

FORM 06
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CAL7= 18DEC03DCAL-16.WIFF; CAL8= ;

Perfluorooctanesulfonamide	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.038	0.20	0.198	-1.0	±30
CAL2	0.101	0.60	0.531	-11.6	±30
CAL3	0.440	2.00	2.303	15.1	±30
CAL4	1.541	8.00	8.073	0.9	±30
CAL5	4.088	20.00	21.411	7.1	±30
CAL6	9.933	50.00	52.019	4.0	±30
CAL7	18.381	100.00	96.266	-3.7	±30

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.028	0.20	0.186	-7.1	±30
CAL2	0.083	0.60	0.547	-8.8	±30
CAL3	0.386	2.00	2.553	27.6	±30
CAL4	1.270	8.00	8.408	5.1	±30
CAL5	3.314	20.00	21.935	9.7	±30
CAL6	6.978	50.00	46.181	-7.6	±30
CAL7	15.259	100.00	100.990	1.0	±30

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.023	0.19	0.193	0.1	±30
CAL2	0.054	0.58	0.466	-19.4	±30
CAL3	0.230	1.93	1.969	2.0	±30
CAL4	0.874	7.70	7.481	-2.8	±30
CAL5	2.356	19.30	20.169	4.5	±30
CAL6	5.598	48.20	47.936	-0.5	±30
CAL7	11.210	96.30	95.988	-0.3	±30

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.067	0.20	0.202	1.2	±30
CAL2	0.184	0.60	0.559	-6.8	±30
CAL3	0.689	2.00	2.099	4.9	±30
CAL4	2.684	8.00	8.172	2.1	±30
CAL5	6.768	20.00	20.606	3.0	±30
CAL6	17.218	50.00	52.425	4.9	±30
CAL7	31.772	100.00	96.736	-3.3	±30

FORM 06
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CAL7= 18DEC03DCAL-16.WIFF; CAL8= ;

NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.204	1.9	±30
CAL2	0.111	0.60	0.560	-6.6	±30
CAL3	0.352	2.00	1.778	-11.1	±30
CAL4	1.473	8.00	7.452	-6.8	±30
CAL5	3.881	20.00	19.627	-1.9	±30
CAL6	10.060	50.00	50.882	1.8	±30
CAL7	19.830	100.00	100.296	0.3	±30

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.044	0.20	0.254	26.8	±30
CAL2	0.102	0.60	0.584	-2.7	±30
CAL3	0.432	2.00	2.463	23.1	±30
CAL4	1.471	8.00	8.386	4.8	±30
CAL5	3.919	20.00	22.344	11.7	±30
CAL6	8.740	50.00	49.834	-0.3	±30
CAL7	17.001	100.00	96.936	-3.1	±30

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.112	0.19	0.278	44.0*	±30
CAL2	0.163	0.58	0.407	-29.5	±30
CAL3	0.683	1.93	1.702	-11.8	±30
CAL4	2.791	7.71	6.955	-9.8	±30
CAL5	8.175	19.30	20.369	5.5	±30
CAL6	20.553	48.20	51.210	6.2	±30
CAL7	32.699	96.40	81.473	-15.5	±30

NMePFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.060	0.20	0.253	26.4	±30
CAL2	0.121	0.60	0.513	-14.4	±30
CAL3	0.538	2.00	2.280	14.0	±30
CAL4	1.954	8.00	8.276	3.5	±30
CAL5	4.764	20.00	20.174	0.9	±30
CAL6	11.666	50.00	49.408	-1.2	±30
CAL7	23.587	100.00	99.895	-0.1	±30

FORM 06
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CAL7= 18DEC03DCAL-16.WIFF; CAL8= ;

NMePFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.239	19.3	±30
CAL2	0.099	0.60	0.521	-13.1	±30
CAL3	0.366	2.00	1.928	-3.6	±30
CAL4	1.485	8.00	7.833	-2.1	±30
CAL5	4.121	20.00	21.731	8.7	±30
CAL6	9.521	50.00	50.208	0.4	±30
CAL7	18.649	100.00	98.340	-1.7	±30

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.012	0.19	0.191	-1.7	±30
CAL2	0.031	0.58	0.488	-16.0	±30
CAL3	0.122	1.94	1.908	-1.6	±30
CAL4	0.446	7.74	6.988	-9.7	±30
CAL5	1.246	19.40	19.521	0.6	±30
CAL6	2.908	48.40	45.553	-5.9	±30
CAL7	6.410	96.80	100.406	3.7	±30

NEtPFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.20	0.246	22.9	±30
CAL2	0.168	0.60	0.580	-3.3	±30
CAL3	0.687	2.00	2.366	18.3	±30
CAL4	2.471	8.00	8.512	6.4	±30
CAL5	6.300	20.00	21.702	8.5	±30
CAL6	15.568	50.00	53.627	7.3	±30
CAL7	27.220	100.00	93.767	-6.2	±30

NEtPFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.053	0.20	0.248	24.0	±30
CAL2	0.111	0.60	0.518	-13.6	±30
CAL3	0.488	2.00	2.272	13.6	±30
CAL4	1.667	8.00	7.756	-3.0	±30
CAL5	4.488	20.00	20.885	4.4	±30
CAL6	10.761	50.00	50.079	0.2	±30
CAL7	21.281	100.00	99.040	-1.0	±30

FORM 06
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CAL7= 18DEC03DCAL-16.WIFF; CAL8= ;

Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.037	0.20	0.216	8.0	±30
CAL2	0.098	0.60	0.579	-3.5	±30
CAL3	0.389	2.00	2.292	14.6	±30
CAL4	1.355	8.00	7.979	-0.3	±30
CAL5	3.352	20.00	19.734	-1.3	±30
CAL6	7.278	50.00	42.847	-14.3	±30
CAL7	13.280	100.00	78.176	-21.8	±30

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.038	0.20	0.227	13.7	±30
CAL2	0.097	0.60	0.575	-4.2	±30
CAL3	0.419	2.00	2.479	24.0	±30
CAL4	1.401	8.00	8.295	3.7	±30
CAL5	3.466	20.00	20.518	2.6	±30
CAL6	8.729	50.00	51.669	3.3	±30
CAL7	16.394	100.00	97.036	-3.0	±30

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.019	0.20	0.240	19.9	±30
CAL2	0.047	0.60	0.599	-0.2	±30
CAL3	0.172	2.00	2.211	10.6	±30
CAL4	0.622	8.00	7.980	-0.3	±30
CAL5	1.502	20.00	19.279	-3.6	±30
CAL6	3.979	50.00	51.075	2.2	±30
CAL7	7.746	100.00	99.416	-0.6	±30

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.015	0.20	0.241	20.7	±30
CAL2	0.034	0.60	0.546	-9.0	±30
CAL3	0.136	2.00	2.160	8.0	±30
CAL4	0.484	8.00	7.681	-4.0	±30
CAL5	1.214	20.00	19.289	-3.6	±30
CAL6	3.200	50.00	50.829	1.7	±30
CAL7	6.299	100.00	100.053	0.1	±30

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CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorobutanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.238	19.1	±30
CAL2	0.093	0.50	0.545	9.0	±30
CAL3	0.362	2.00	2.120	6.0	±30
CAL4	1.495	8.00	8.747	9.3	±30
CAL5	3.745	20.00	21.919	9.6	±30
CAL6	8.813	50.00	51.576	3.2	±30
CAL7	16.327	100.00	95.554	-4.4	±30

Perfluoropentanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.234	16.8	±30
CAL2	0.090	0.50	0.533	6.6	±30
CAL3	0.345	2.00	2.052	2.6	±30
CAL4	1.413	8.00	8.399	5.0	±30
CAL5	3.658	20.00	21.739	8.7	±30
CAL6	8.578	50.00	50.979	2.0	±30
CAL7	16.282	100.00	96.765	-3.2	±30

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.17	0.213	25.6	±30
CAL2	0.093	0.44	0.470	6.7	±30
CAL3	0.345	1.77	1.740	-1.7	±30
CAL4	1.491	7.08	7.518	6.2	±30
CAL5	3.619	17.69	18.246	3.1	±30
CAL6	9.131	44.22	46.035	4.1	±30
CAL7	16.978	88.45	85.599	-3.2	±30

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.19	0.191	2.3	±30
CAL2	0.183	0.47	0.492	5.3	±30
CAL3	0.731	1.87	1.964	5.2	±30
CAL4	2.975	7.47	7.999	7.1	±30
CAL5	7.477	18.68	20.102	7.6	±30
CAL6	17.311	46.70	46.538	-0.3	±30
CAL7	34.031	93.40	91.487	-2.0	±30

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Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.055	0.20	0.235	17.4	±30
CAL2	0.123	0.50	0.529	5.8	±30
CAL3	0.498	2.00	2.137	6.9	±30
CAL4	2.041	8.00	8.751	9.4	±30
CAL5	5.013	20.00	21.499	7.5	±30
CAL6	11.088	50.00	47.549	-4.9	±30
CAL7	20.388	100.00	87.434	-12.6	±30

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.019	0.19	0.183	-3.7	±30
CAL2	0.047	0.47	0.465	-0.9	±30
CAL3	0.180	1.88	1.772	-5.7	±30
CAL4	0.803	7.50	7.922	5.6	±30
CAL5	1.911	18.76	18.849	0.5	±30
CAL6	4.746	46.90	46.806	-0.2	±30
CAL7	9.480	93.80	93.501	-0.3	±30

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.038	0.19	0.194	2.3	±30
CAL2	0.095	0.47	0.484	2.3	±30
CAL3	0.357	1.89	1.809	-4.3	±30
CAL4	1.514	7.56	7.676	1.5	±30
CAL5	3.791	18.91	19.215	1.6	±30
CAL6	9.344	47.28	47.360	0.2	±30
CAL7	18.567	94.55	94.113	-0.5	±30

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.065	0.20	0.220	9.9	±30
CAL2	0.160	0.50	0.539	7.8	±30
CAL3	0.636	2.00	2.139	6.9	±30
CAL4	2.500	8.00	8.409	5.1	±30
CAL5	6.316	20.00	21.243	6.2	±30
CAL6	14.317	50.00	48.150	-3.7	±30
CAL7	25.595	100.00	86.081	-13.9	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.058	0.19	0.146	-23.1	±30
CAL2	0.229	0.47	0.570	20.3	±30
CAL3	0.830	1.90	2.071	9.3	±30
CAL4	3.200	7.58	7.982	5.2	±30
CAL5	8.507	18.96	21.223	11.9	±30
CAL6	18.600	47.40	46.401	-2.1	±30
CAL7	37.244	94.80	92.910	-2.0	±30

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.19	0.207	8.9	±30
CAL2	0.091	0.48	0.476	0.0	±30
CAL3	0.359	1.90	1.877	-1.2	±30
CAL4	1.523	7.61	7.966	4.7	±30
CAL5	3.716	19.03	19.439	2.2	±30
CAL6	8.964	47.58	46.896	-1.4	±30
CAL7	18.173	95.15	95.074	-0.1	±30

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.218	9.1	±30
CAL2	0.097	0.50	0.547	9.5	±30
CAL3	0.378	2.00	2.131	6.5	±30
CAL4	1.592	8.00	8.963	12.0	±30
CAL5	3.824	20.00	21.532	7.7	±30
CAL6	9.132	50.00	51.417	2.8	±30
CAL7	17.031	100.00	95.892	-4.1	±30

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.19	0.206	8.2	±30
CAL2	0.100	0.48	0.517	8.1	±30
CAL3	0.375	1.91	1.943	1.7	±30
CAL4	1.534	7.65	7.953	4.0	±30
CAL5	3.719	19.12	19.287	0.9	±30
CAL6	9.270	47.80	48.067	0.6	±30
CAL7	18.277	95.60	94.776	-0.9	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.063	0.20	0.235	17.4	±30
CAL2	0.138	0.50	0.517	3.4	±30
CAL3	0.584	2.00	2.182	9.1	±30
CAL4	2.302	8.00	8.604	7.6	±30
CAL5	5.965	20.00	22.292	11.5	±30
CAL6	13.786	50.00	51.521	3.0	±30
CAL7	25.514	100.00	95.349	-4.7	±30

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.19	0.174	-8.3	±30
CAL2	0.061	0.48	0.485	1.1	±30
CAL3	0.245	1.92	1.946	1.3	±30
CAL4	1.045	7.68	8.284	7.9	±30
CAL5	2.423	19.20	19.215	0.1	±30
CAL6	6.277	48.00	49.770	3.7	±30
CAL7	11.805	96.00	93.596	-2.5	±30

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.216	7.8	±30
CAL2	0.095	0.50	0.520	4.0	±30
CAL3	0.383	2.00	2.107	5.3	±30
CAL4	1.568	8.00	8.626	7.8	±30
CAL5	4.015	20.00	22.091	10.5	±30
CAL6	9.247	50.00	50.875	1.7	±30
CAL7	17.498	100.00	96.265	-3.7	±30

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.104	0.19	0.235	22.5	±30
CAL2	0.251	0.48	0.567	18.3	±30
CAL3	0.845	1.92	1.904	-0.6	±30
CAL4	3.495	7.66	7.877	2.8	±30
CAL5	8.887	19.16	20.031	4.5	±30
CAL6	20.717	47.90	46.697	-2.5	±30
CAL7	38.137	95.80	85.963	-10.3	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorooctanesulfonamide	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.036	0.20	0.194	-3.1	±30
CAL2	0.098	0.50	0.529	5.8	±30
CAL3	0.386	2.00	2.084	4.2	±30
CAL4	1.581	8.00	8.545	6.8	±30
CAL5	3.322	20.00	17.959	-10.2	±30
CAL6	9.665	50.00	52.247	4.5	±30
CAL7	18.341	100.00	99.141	-0.9	±30

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.035	0.20	0.178	-10.8	±30
CAL2	0.118	0.50	0.607	21.4	±30
CAL3	0.396	2.00	2.039	2.0	±30
CAL4	1.685	8.00	8.670	8.4	±30
CAL5	4.175	20.00	21.482	7.4	±30
CAL6	9.476	50.00	48.760	-2.5	±30
CAL7	19.233	100.00	98.963	-1.0	±30

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.021	0.19	0.201	5.6	±30
CAL2	0.055	0.48	0.525	8.9	±30
CAL3	0.199	1.93	1.898	-1.6	±30
CAL4	0.859	7.70	8.210	6.6	±30
CAL5	2.032	19.26	19.412	0.8	±30
CAL6	4.983	48.15	47.605	-1.1	±30
CAL7	10.066	96.30	96.161	-0.1	±30

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.079	0.20	0.227	13.7	±30
CAL2	0.187	0.50	0.535	7.0	±30
CAL3	0.757	2.00	2.170	8.5	±30
CAL4	2.909	8.00	8.341	4.3	±30
CAL5	7.397	20.00	21.214	6.1	±30
CAL6	17.761	50.00	50.936	1.9	±30
CAL7	33.921	100.00	97.277	-2.7	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.183	-8.7	±30
CAL2	0.110	0.50	0.474	-5.3	±30
CAL3	0.441	2.00	1.896	-5.2	±30
CAL4	1.838	8.00	7.900	-1.3	±30
CAL5	5.175	20.00	22.240	11.2	±30
CAL6	11.319	50.00	48.645	-2.7	±30
CAL7	23.121	100.00	99.363	-0.6	±30

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.224	11.9	±30
CAL2	0.101	0.50	0.545	9.0	±30
CAL3	0.377	2.00	2.046	2.3	±30
CAL4	1.466	8.00	7.946	-0.7	±30
CAL5	3.887	20.00	21.067	5.3	±30
CAL6	9.018	50.00	48.873	-2.3	±30
CAL7	15.613	100.00	84.613	-15.4	±30

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.19	0.222	15.0	±30
CAL2	0.177	0.48	0.551	14.4	±30
CAL3	0.647	1.93	2.014	4.5	±30
CAL4	2.271	7.71	7.073	-8.3	±30
CAL5	6.446	19.28	20.071	4.1	±30
CAL6	15.876	48.20	49.437	2.6	±30
CAL7	30.453	96.40	94.827	-1.6	±30

NMePFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.054	0.20	0.244	22.1	±30
CAL2	0.124	0.50	0.555	11.0	±30
CAL3	0.453	2.00	2.029	1.5	±30
CAL4	1.959	8.00	8.781	9.8	±30
CAL5	4.923	20.00	22.062	10.3	±30
CAL6	11.752	50.00	52.660	5.3	±30
CAL7	21.059	100.00	94.369	-5.6	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
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SDG No.: BSI11

Instrument ID: 27631
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Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

NMePFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.036	0.20	0.201	0.6	±30
CAL2	0.101	0.50	0.568	13.6	±30
CAL3	0.375	2.00	2.101	5.1	±30
CAL4	1.368	8.00	7.657	-4.3	±30
CAL5	3.939	20.00	22.050	10.2	±30
CAL6	9.140	50.00	51.162	2.3	±30
CAL7	17.323	100.00	96.961	-3.0	±30

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.010	0.19	0.189	-0.3	±30
CAL2	0.025	0.48	0.487	0.7	±30
CAL3	0.108	1.94	2.084	7.4	±30
CAL4	0.416	7.74	8.039	3.9	±30
CAL5	0.991	19.36	19.132	-1.2	±30
CAL6	2.465	48.40	47.576	-1.7	±30
CAL7	5.047	96.80	97.407	0.6	±30

NEtPFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.074	0.20	0.237	18.5	±30
CAL2	0.181	0.50	0.579	15.9	±30
CAL3	0.650	2.00	2.083	4.2	±30
CAL4	2.703	8.00	8.666	8.3	±30
CAL5	6.965	20.00	22.328	11.6	±30
CAL6	16.033	50.00	51.396	2.8	±30
CAL7	29.763	100.00	95.411	-4.6	±30

NEtPFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.191	-4.7	±30
CAL2	0.096	0.50	0.424	-15.3	±30
CAL3	0.393	2.00	1.732	-13.4	±30
CAL4	1.711	8.00	7.534	-5.8	±30
CAL5	4.679	20.00	20.605	3.0	±30
CAL6	11.449	50.00	50.423	0.8	±30
CAL7	22.658	100.00	99.791	-0.2	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
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Instrument ID: 27631
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Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.250	25.1	±30
CAL2	0.082	0.50	0.519	3.9	±30
CAL3	0.337	2.00	2.128	6.4	±30
CAL4	1.306	8.00	8.235	2.9	±30
CAL5	3.375	20.00	21.280	6.4	±30
CAL6	7.657	50.00	48.287	-3.4	±30
CAL7	12.611	100.00	79.528	-20.5	±30

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.232	16.2	±30
CAL2	0.082	0.50	0.482	-3.6	±30
CAL3	0.358	2.00	2.103	5.1	±30
CAL4	1.428	8.00	8.383	4.8	±30
CAL5	3.558	20.00	20.892	4.5	±30
CAL6	8.573	50.00	50.344	0.7	±30
CAL7	16.733	100.00	98.263	-1.7	±30

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.019	0.20	0.236	17.9	±30
CAL2	0.042	0.50	0.524	4.8	±30
CAL3	0.167	2.00	2.078	3.9	±30
CAL4	0.673	8.00	8.351	4.4	±30
CAL5	1.699	20.00	21.085	5.4	±30
CAL6	3.954	50.00	49.083	-1.8	±30
CAL7	8.003	100.00	99.343	-0.7	±30

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.015	0.20	0.220	10.2	±30
CAL2	0.036	0.50	0.511	2.2	±30
CAL3	0.142	2.00	2.041	2.0	±30
CAL4	0.570	8.00	8.162	2.0	±30
CAL5	1.481	20.00	21.218	6.1	±30
CAL6	3.399	50.00	48.698	-2.6	±30
CAL7	6.970	100.00	99.849	-0.2	±30

* Outside QC Limits

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorobutanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.20	0.235	17.3	±30
CAL2	0.104	0.60	0.577	-3.8	±30
CAL3	0.413	2.00	2.291	14.5	±30
CAL4	1.471	8.00	8.148	1.9	±30
CAL5	3.863	20.00	21.403	7.0	±30
CAL6	9.099	50.00	50.404	0.8	±30
CAL7	17.644	100.00	97.743	-2.3	±30

Perfluoropentanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.20	0.245	22.5	±30
CAL2	0.114	0.60	0.661	10.2	±30
CAL3	0.421	2.00	2.435	21.8	±30
CAL4	1.502	8.00	8.694	8.7	±30
CAL5	3.622	20.00	20.969	4.8	±30
CAL6	8.759	50.00	50.702	1.4	±30
CAL7	16.773	100.00	97.094	-2.9	±30

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.18	0.192	8.5	±30
CAL2	0.107	0.53	0.510	-4.0	±30
CAL3	0.404	1.77	1.921	8.5	±30
CAL4	1.452	7.08	6.906	-2.5	±30
CAL5	3.809	17.70	18.121	2.4	±30
CAL6	9.475	44.20	45.072	2.0	±30
CAL7	18.318	88.40	87.136	-1.4	±30

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.19	0.192	2.5	±30
CAL2	0.191	0.56	0.518	-7.5	±30
CAL3	0.720	1.87	1.954	4.5	±30
CAL4	2.675	7.47	7.263	-2.8	±30
CAL5	6.655	18.70	18.070	-3.4	±30
CAL6	17.824	46.70	48.392	3.6	±30
CAL7	34.069	93.40	92.499	-1.0	±30

FORM 06
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SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.059	0.20	0.246	22.8	±30
CAL2	0.149	0.60	0.622	3.7	±30
CAL3	0.544	2.00	2.272	13.6	±30
CAL4	1.973	8.00	8.239	3.0	±30
CAL5	5.022	20.00	20.968	4.8	±30
CAL6	11.605	50.00	48.453	-3.1	±30
CAL7	21.693	100.00	90.577	-9.4	±30

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.19	0.209	11.4	±30
CAL2	0.048	0.56	0.470	-16.4	±30
CAL3	0.202	1.88	1.960	4.3	±30
CAL4	0.773	7.50	7.508	0.1	±30
CAL5	1.906	18.80	18.506	-1.6	±30
CAL6	4.880	46.90	47.375	1.0	±30
CAL7	9.641	93.80	93.602	-0.2	±30

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.20	0.235	17.7	±30
CAL2	0.178	0.60	0.591	-1.5	±30
CAL3	0.706	2.00	2.342	17.1	±30
CAL4	2.590	8.00	8.586	7.3	±30
CAL5	6.218	20.00	20.612	3.1	±30
CAL6	14.612	50.00	48.434	-3.1	±30
CAL7	27.372	100.00	90.732	-9.3	±30

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.18	0.190	4.5	±30
CAL2	0.097	0.55	0.470	-14.1	±30
CAL3	0.396	1.82	1.920	5.5	±30
CAL4	1.518	7.30	7.361	0.8	±30
CAL5	3.681	18.20	17.849	-1.9	±30
CAL6	9.372	45.60	45.444	-0.3	±30
CAL7	18.895	91.20	91.615	0.5	±30

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CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.076	0.19	0.183	-3.6	±30
CAL2	0.226	0.57	0.547	-3.8	±30
CAL3	0.886	1.90	2.143	12.8	±30
CAL4	3.371	7.58	8.157	7.6	±30
CAL5	8.392	19.00	20.308	6.9	±30
CAL6	18.720	47.40	45.301	-4.4	±30
CAL7	31.980	94.80	77.388	-18.4	±30

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.19	0.213	12.0	±30
CAL2	0.093	0.57	0.491	-14.0	±30
CAL3	0.397	1.90	2.089	10.0	±30
CAL4	1.378	7.61	7.252	-4.7	±30
CAL5	3.704	19.00	19.496	2.6	±30
CAL6	9.168	47.60	48.262	1.4	±30
CAL7	17.908	95.20	94.267	-1.0	±30

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.243	21.4	±30
CAL2	0.113	0.60	0.603	0.4	±30
CAL3	0.424	2.00	2.262	13.1	±30
CAL4	1.537	8.00	8.207	2.6	±30
CAL5	4.087	20.00	21.830	9.2	±30
CAL6	9.558	50.00	51.047	2.1	±30
CAL7	18.088	100.00	96.608	-3.4	±30

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.046	0.19	0.202	9.3	±30
CAL2	0.119	0.56	0.520	-6.4	±30
CAL3	0.430	1.85	1.881	1.7	±30
CAL4	1.679	7.40	7.341	-0.8	±30
CAL5	4.296	18.50	18.789	1.6	±30
CAL6	10.528	46.30	46.040	-0.6	±30
CAL7	21.179	92.60	92.617	0.0	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.062	0.20	0.223	11.4	±30
CAL2	0.179	0.60	0.644	7.4	±30
CAL3	0.663	2.00	2.391	19.5	±30
CAL4	2.279	8.00	8.218	2.7	±30
CAL5	6.168	20.00	22.243	11.2	±30
CAL6	14.066	50.00	50.720	1.4	±30
CAL7	26.723	100.00	96.360	-3.6	±30

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.024	0.19	0.169	-11.9	±30
CAL2	0.075	0.58	0.523	-9.2	±30
CAL3	0.271	1.92	1.893	-1.4	±30
CAL4	1.009	7.68	7.057	-8.1	±30
CAL5	2.715	19.20	18.997	-1.1	±30
CAL6	6.755	48.00	47.262	-1.5	±30
CAL7	13.960	96.00	97.666	1.7	±30

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.238	18.9	±30
CAL2	0.106	0.60	0.562	-6.3	±30
CAL3	0.415	2.00	2.198	9.9	±30
CAL4	1.539	8.00	8.159	2.0	±30
CAL5	3.946	20.00	20.920	4.6	±30
CAL6	9.190	50.00	48.722	-2.6	±30
CAL7	16.908	100.00	89.640	-10.4	±30

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.088	0.19	0.206	7.1	±30
CAL2	0.225	0.58	0.524	-8.8	±30
CAL3	0.899	1.92	2.096	9.2	±30
CAL4	2.969	7.66	6.923	-9.6	±30
CAL5	8.524	19.20	19.873	3.5	±30
CAL6	20.513	47.90	47.825	-0.2	±30
CAL7	35.402	95.80	82.540	-13.8	±30

FORM 06
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Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorooctanesulfonamide	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.217	8.7	±30
CAL2	0.112	0.60	0.545	-9.1	±30
CAL3	0.429	2.00	2.098	4.9	±30
CAL4	1.526	8.00	7.455	-6.8	±30
CAL5	4.189	20.00	20.460	2.3	±30
CAL6	10.242	50.00	50.024	0.0	±30
CAL7	18.353	100.00	89.642	-10.4	±30

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.027	0.20	0.150	-25.0	±30
CAL2	0.074	0.60	0.421	-29.9	±30
CAL3	0.351	2.00	1.983	-0.8	±30
CAL4	1.424	8.00	8.048	0.6	±30
CAL5	3.462	20.00	19.564	-2.2	±30
CAL6	8.928	50.00	50.461	0.9	±30
CAL7	17.725	100.00	100.173	0.2	±30

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.021	0.19	0.190	-1.3	±30
CAL2	0.060	0.58	0.543	-6.0	±30
CAL3	0.206	1.93	1.869	-3.2	±30
CAL4	0.838	7.70	7.592	-1.4	±30
CAL5	2.167	19.30	19.633	1.7	±30
CAL6	5.189	48.20	47.020	-2.4	±30
CAL7	10.744	96.30	97.353	1.1	±30

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.091	0.20	0.238	19.2	±30
CAL2	0.211	0.60	0.551	-8.1	±30
CAL3	0.810	2.00	2.119	5.9	±30
CAL4	3.310	8.00	8.654	8.2	±30
CAL5	7.672	20.00	20.055	0.3	±30
CAL6	18.813	50.00	49.183	-1.6	±30
CAL7	34.057	100.00	89.032	-11.0	±30

FORM 06
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CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.028	0.20	0.149	-25.7	±30
CAL2	0.121	0.60	0.636	6.0	±30
CAL3	0.461	2.00	2.418	20.9	±30
CAL4	1.449	8.00	7.596	-5.1	±30
CAL5	3.724	20.00	19.520	-2.4	±30
CAL6	9.630	50.00	50.481	1.0	±30
CAL7	18.030	100.00	94.517	-5.5	±30

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.207	3.4	±30
CAL2	0.112	0.60	0.571	-4.8	±30
CAL3	0.432	2.00	2.198	9.9	±30
CAL4	1.541	8.00	7.847	-1.9	±30
CAL5	4.136	20.00	21.062	5.3	±30
CAL6	9.606	50.00	48.914	-2.2	±30
CAL7	17.225	100.00	87.711	-12.3	±30

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.069	0.19	0.229	18.4	±30
CAL2	0.188	0.58	0.627	8.6	±30
CAL3	0.634	1.93	2.111	9.4	±30
CAL4	2.056	7.71	6.849	-11.2	±30
CAL5	6.339	19.30	21.113	9.4	±30
CAL6	15.209	48.20	50.658	5.1	±30
CAL7	27.838	96.40	92.724	-3.8	±30

NMePFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.051	0.20	0.214	7.1	±30
CAL2	0.133	0.60	0.554	-7.6	±30
CAL3	0.533	2.00	2.216	10.8	±30
CAL4	1.886	8.00	7.850	-1.9	±30
CAL5	5.021	20.00	20.896	4.5	±30
CAL6	12.781	50.00	53.193	6.4	±30
CAL7	23.037	100.00	95.876	-4.1	±30

FORM 06
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Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

NMePFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.030	0.20	0.150	-25.2	±30
CAL2	0.114	0.60	0.562	-6.3	±30
CAL3	0.390	2.00	1.923	-3.8	±30
CAL4	1.632	8.00	8.049	0.6	±30
CAL5	4.385	20.00	21.631	8.2	±30
CAL6	9.828	50.00	48.485	-3.0	±30
CAL7	17.679	100.00	87.214	-12.8	±30

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.012	0.19	0.218	12.3	±30
CAL2	0.033	0.58	0.580	-0.3	±30
CAL3	0.107	1.94	1.876	-3.3	±30
CAL4	0.440	7.74	7.707	-0.4	±30
CAL5	1.081	19.40	18.940	-2.4	±30
CAL6	2.811	48.40	49.234	1.7	±30
CAL7	5.510	96.80	96.500	-0.3	±30

NEtPFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.075	0.20	0.240	20.2	±30
CAL2	0.178	0.60	0.573	-4.6	±30
CAL3	0.687	2.00	2.204	10.2	±30
CAL4	2.595	8.00	8.324	4.0	±30
CAL5	6.492	20.00	20.830	4.1	±30
CAL6	15.157	50.00	48.629	-2.7	±30
CAL7	27.283	100.00	87.532	-12.5	±30

NEtPFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.207	3.7	±30
CAL2	0.139	0.60	0.637	6.1	±30
CAL3	0.463	2.00	2.124	6.2	±30
CAL4	1.801	8.00	8.269	3.4	±30
CAL5	4.664	20.00	21.421	7.1	±30
CAL6	10.701	50.00	49.142	-1.7	±30
CAL7	21.557	100.00	98.999	-1.0	±30

FORM 06
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Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.037	0.20	0.234	16.8	±30
CAL2	0.090	0.60	0.569	-5.1	±30
CAL3	0.335	2.00	2.117	5.8	±30
CAL4	1.293	8.00	8.159	2.0	±30
CAL5	3.309	20.00	20.884	4.4	±30
CAL6	7.738	50.00	48.838	-2.3	±30
CAL7	13.241	100.00	83.569	-16.4	±30

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.223	11.6	±30
CAL2	0.102	0.60	0.572	-4.6	±30
CAL3	0.398	2.00	2.228	11.4	±30
CAL4	1.458	8.00	8.171	2.1	±30
CAL5	3.737	20.00	20.945	4.7	±30
CAL6	8.923	50.00	50.021	0.0	±30
CAL7	17.596	100.00	98.638	-1.4	±30

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.019	0.20	0.231	15.7	±30
CAL2	0.048	0.60	0.575	-4.2	±30
CAL3	0.177	2.00	2.109	5.4	±30
CAL4	0.654	8.00	7.793	-2.6	±30
CAL5	1.653	20.00	19.691	-1.5	±30
CAL6	4.347	50.00	51.786	3.6	±30
CAL7	8.277	100.00	98.615	-1.4	±30

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.015	0.20	0.204	2.1	±30
CAL2	0.038	0.60	0.528	-11.9	±30
CAL3	0.147	2.00	2.045	2.3	±30
CAL4	0.559	8.00	7.786	-2.7	±30
CAL5	1.434	20.00	19.971	-0.1	±30
CAL6	3.601	50.00	50.157	0.3	±30
CAL7	7.188	100.00	100.107	0.1	±30

* Outside QC Limits

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
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SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorobutanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.237	18.4	±30
CAL2	0.107	0.60	0.584	-2.7	±30
CAL3	0.406	2.00	2.225	11.2	±30
CAL4	1.463	8.00	8.021	0.3	±30
CAL5	3.811	20.00	20.892	4.5	±30
CAL6	8.910	50.00	48.841	-2.3	±30
CAL7	15.845	100.00	86.862	-13.1	±30

Perfluoropentanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.046	0.20	0.225	12.5	±30
CAL2	0.103	0.60	0.505	-15.8	±30
CAL3	0.466	2.00	2.284	14.2	±30
CAL4	1.556	8.00	7.634	-4.6	±30
CAL5	4.107	20.00	20.152	0.8	±30
CAL6	9.020	50.00	44.258	-11.5	±30
CAL7	16.145	100.00	79.219	-20.8	±30

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.18	0.194	9.4	±30
CAL2	0.098	0.53	0.475	-10.6	±30
CAL3	0.401	1.77	1.948	10.1	±30
CAL4	1.393	7.08	6.761	-4.5	±30
CAL5	3.638	17.70	17.661	-0.2	±30
CAL6	9.036	44.20	43.864	-0.8	±30
CAL7	18.326	88.40	88.956	0.6	±30

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.075	0.19	0.200	6.8	±30
CAL2	0.202	0.56	0.540	-3.7	±30
CAL3	0.800	1.87	2.142	14.5	±30
CAL4	2.854	7.47	7.640	2.3	±30
CAL5	7.396	18.70	19.798	5.9	±30
CAL6	17.601	46.70	47.117	0.9	±30
CAL7	34.162	93.40	91.451	-2.1	±30

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CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.058	0.20	0.233	16.5	±30
CAL2	0.146	0.60	0.586	-2.4	±30
CAL3	0.551	2.00	2.211	10.5	±30
CAL4	2.004	8.00	8.042	0.5	±30
CAL5	4.915	20.00	19.728	-1.4	±30
CAL6	11.061	50.00	44.400	-11.2	±30
CAL7	20.035	100.00	80.421	-19.6	±30

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.020	0.19	0.207	10.1	±30
CAL2	0.054	0.56	0.549	-2.4	±30
CAL3	0.213	1.88	2.157	14.7	±30
CAL4	0.735	7.50	7.436	-0.9	±30
CAL5	1.909	18.80	19.314	2.7	±30
CAL6	4.502	46.90	45.538	-2.9	±30
CAL7	9.335	93.80	94.429	0.7	±30

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.078	0.20	0.240	19.9	±30
CAL2	0.184	0.60	0.567	-5.5	±30
CAL3	0.725	2.00	2.238	11.9	±30
CAL4	2.537	8.00	7.829	-2.1	±30
CAL5	6.457	20.00	19.926	-0.4	±30
CAL6	14.179	50.00	43.759	-12.5	±30
CAL7	23.161	100.00	71.480	-28.5	±30

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.18	0.181	-0.6	±30
CAL2	0.093	0.55	0.435	-20.6	±30
CAL3	0.391	1.82	1.831	0.6	±30
CAL4	1.405	7.30	6.580	-9.9	±30
CAL5	3.854	18.20	18.044	-0.9	±30
CAL6	9.382	45.60	43.929	-3.7	±30
CAL7	20.044	91.20	93.850	2.9	±30

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CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.087	0.19	0.226	18.9	±30
CAL2	0.227	0.57	0.591	3.9	±30
CAL3	0.823	1.90	2.149	13.1	±30
CAL4	3.275	7.58	8.546	12.7	±30
CAL5	7.342	19.00	19.156	0.8	±30
CAL6	17.619	47.40	45.972	-3.0	±30
CAL7	33.528	94.80	87.481	-7.7	±30

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.19	0.209	10.2	±30
CAL2	0.097	0.57	0.485	-15.1	±30
CAL3	0.396	1.90	1.976	4.0	±30
CAL4	1.490	7.61	7.439	-2.2	±30
CAL5	3.788	19.00	18.906	-0.5	±30
CAL6	9.599	47.60	47.909	0.6	±30
CAL7	19.064	95.20	95.147	-0.1	±30

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.213	6.6	±30
CAL2	0.103	0.60	0.533	-11.1	±30
CAL3	0.425	2.00	2.197	9.8	±30
CAL4	1.618	8.00	8.361	4.5	±30
CAL5	3.950	20.00	20.411	2.1	±30
CAL6	9.499	50.00	49.084	-1.8	±30
CAL7	17.301	100.00	89.401	-10.6	±30

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.19	0.172	-7.0	±30
CAL2	0.109	0.56	0.457	-17.6	±30
CAL3	0.450	1.85	1.888	2.1	±30
CAL4	1.627	7.40	6.826	-7.8	±30
CAL5	4.356	18.50	18.273	-1.2	±30
CAL6	10.840	46.30	45.472	-1.8	±30
CAL7	22.481	92.60	94.301	1.8	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.060	0.20	0.229	14.7	±30
CAL2	0.156	0.60	0.599	-0.1	±30
CAL3	0.588	2.00	2.253	12.6	±30
CAL4	2.104	8.00	8.064	0.8	±30
CAL5	5.611	20.00	21.504	7.5	±30
CAL6	12.565	50.00	48.151	-3.7	±30
CAL7	23.016	100.00	88.201	-11.8	±30

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.031	0.19	0.193	0.7	±30
CAL2	0.077	0.58	0.486	-15.7	±30
CAL3	0.295	1.92	1.864	-2.9	±30
CAL4	1.249	7.68	7.885	2.7	±30
CAL5	3.037	19.20	19.177	-0.1	±30
CAL6	7.581	48.00	47.867	-0.3	±30
CAL7	15.220	96.00	96.096	0.1	±30

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.222	11.2	±30
CAL2	0.108	0.60	0.612	2.0	±30
CAL3	0.417	2.00	2.360	18.0	±30
CAL4	1.454	8.00	8.227	2.8	±30
CAL5	3.687	20.00	20.868	4.3	±30
CAL6	8.633	50.00	48.868	-2.3	±30
CAL7	17.604	100.00	99.643	-0.4	±30

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.104	0.19	0.197	2.4	±30
CAL2	0.284	0.58	0.536	-6.9	±30
CAL3	1.067	1.92	2.011	4.8	±30
CAL4	3.846	7.66	7.253	-5.3	±30
CAL5	10.368	19.20	19.551	1.8	±30
CAL6	21.098	47.90	39.786	-16.9	±30
CAL7	39.430	95.80	74.355	-22.4	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorooctanesulfonamide	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.20	0.212	5.9	±30
CAL2	0.111	0.60	0.562	-6.3	±30
CAL3	0.420	2.00	2.128	6.4	±30
CAL4	1.562	8.00	7.914	-1.1	±30
CAL5	4.013	20.00	20.329	1.6	±30
CAL6	9.802	50.00	49.655	-0.7	±30
CAL7	17.627	100.00	89.294	-10.7	±30

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.030	0.20	0.193	-3.7	±30
CAL2	0.091	0.60	0.582	-3.0	±30
CAL3	0.348	2.00	2.220	11.0	±30
CAL4	1.243	8.00	7.928	-0.9	±30
CAL5	3.230	20.00	20.602	3.0	±30
CAL6	7.997	50.00	51.010	2.0	±30
CAL7	15.405	100.00	98.267	-1.7	±30

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.19	0.171	-11.6	±30
CAL2	0.059	0.58	0.471	-18.5	±30
CAL3	0.260	1.93	2.060	6.8	±30
CAL4	0.956	7.70	7.582	-1.5	±30
CAL5	2.461	19.30	19.512	1.1	±30
CAL6	5.967	48.20	47.309	-1.8	±30
CAL7	12.246	96.30	97.096	0.8	±30

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.062	0.20	0.222	10.9	±30
CAL2	0.157	0.60	0.563	-6.2	±30
CAL3	0.626	2.00	2.236	11.8	±30
CAL4	2.346	8.00	8.387	4.8	±30
CAL5	5.860	20.00	20.945	4.7	±30
CAL6	14.523	50.00	51.912	3.8	±30
CAL7	27.007	100.00	96.536	-3.5	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.194	-3.2	±30
CAL2	0.115	0.60	0.560	-6.7	±30
CAL3	0.407	2.00	1.980	-1.0	±30
CAL4	1.473	8.00	7.175	-10.3	±30
CAL5	4.109	20.00	20.014	0.1	±30
CAL6	10.300	50.00	50.166	0.3	±30
CAL7	20.679	100.00	100.712	0.7	±30

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.249	24.6	±30
CAL2	0.107	0.60	0.589	-1.9	±30
CAL3	0.446	2.00	2.442	22.1	±30
CAL4	1.434	8.00	7.854	-1.8	±30
CAL5	3.673	20.00	20.121	0.6	±30
CAL6	9.045	50.00	49.545	-0.9	±30
CAL7	16.657	100.00	91.243	-8.8	±30

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.097	0.19	0.214	10.9	±30
CAL2	0.277	0.58	0.610	5.6	±30
CAL3	1.087	1.93	2.396	24.1	±30
CAL4	3.492	7.71	7.701	-0.1	±30
CAL5	10.411	19.30	22.957	18.9	±30
CAL6	21.857	48.20	48.197	0.0	±30
CAL7	41.828	96.40	92.235	-4.3	±30

NMePFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.049	0.20	0.207	3.7	±30
CAL2	0.139	0.60	0.587	-2.2	±30
CAL3	0.532	2.00	2.239	12.0	±30
CAL4	1.893	8.00	7.968	-0.4	±30
CAL5	5.008	20.00	21.073	5.4	±30
CAL6	12.293	50.00	51.733	3.5	±30
CAL7	23.048	100.00	96.993	-3.0	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

NMePFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.038	0.20	0.203	1.3	±30
CAL2	0.108	0.60	0.575	-4.1	±30
CAL3	0.411	2.00	2.179	9.0	±30
CAL4	1.485	8.00	7.873	-1.6	±30
CAL5	3.882	20.00	20.577	2.9	±30
CAL6	9.378	50.00	49.716	-0.6	±30
CAL7	18.802	100.00	99.677	-0.3	±30

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.013	0.19	0.181	-6.8	±30
CAL2	0.037	0.58	0.531	-8.6	±30
CAL3	0.132	1.94	1.892	-2.5	±30
CAL4	0.539	7.74	7.744	0.0	±30
CAL5	1.303	19.40	18.718	-3.5	±30
CAL6	3.225	48.40	46.320	-4.3	±30
CAL7	6.940	96.80	99.670	3.0	±30

NEtPFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.068	0.20	0.245	22.4	±30
CAL2	0.166	0.60	0.596	-0.6	±30
CAL3	0.706	2.00	2.540	27.0	±30
CAL4	2.364	8.00	8.504	6.3	±30
CAL5	6.065	20.00	21.818	9.1	±30
CAL6	13.925	50.00	50.088	0.2	±30
CAL7	26.969	100.00	97.008	-3.0	±30

NEtPFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.048	0.20	0.217	8.3	±30
CAL2	0.118	0.60	0.530	-11.6	±30
CAL3	0.473	2.00	2.122	6.1	±30
CAL4	1.779	8.00	7.975	-0.3	±30
CAL5	4.417	20.00	19.796	-1.0	±30
CAL6	11.703	50.00	52.452	4.9	±30
CAL7	21.801	100.00	97.709	-2.3	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.249	24.7	±30
CAL2	0.103	0.60	0.621	3.5	±30
CAL3	0.427	2.00	2.576	28.8	±30
CAL4	1.410	8.00	8.500	6.2	±30
CAL5	3.304	20.00	19.916	-0.4	±30
CAL6	8.119	50.00	48.938	-2.1	±30
CAL7	14.467	100.00	87.197	-12.8	±30

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.221	10.5	±30
CAL2	0.103	0.60	0.583	-2.8	±30
CAL3	0.406	2.00	2.303	15.2	±30
CAL4	1.418	8.00	8.033	0.4	±30
CAL5	3.685	20.00	20.882	4.4	±30
CAL6	8.609	50.00	48.777	-2.4	±30
CAL7	15.696	100.00	88.936	-11.1	±30

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.20	0.251	25.6	±30
CAL2	0.051	0.60	0.588	-1.9	±30
CAL3	0.206	2.00	2.359	17.9	±30
CAL4	0.728	8.00	8.321	4.0	±30
CAL5	1.973	20.00	22.560	12.8	±30
CAL6	4.311	50.00	49.281	-1.4	±30
CAL7	8.524	100.00	97.440	-2.6	±30

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.016	0.20	0.219	9.6	±30
CAL2	0.042	0.60	0.565	-5.8	±30
CAL3	0.165	2.00	2.201	10.0	±30
CAL4	0.598	8.00	7.964	-0.4	±30
CAL5	1.619	20.00	21.571	7.9	±30
CAL6	3.728	50.00	49.663	-0.7	±30
CAL7	7.403	100.00	98.616	-1.4	±30

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FORM 06A DOD - EPA 537 mod QSM 5.1 table B-15
INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631

Init. Calib. Date/Times: 12/03/2018 17:34 12/03/2018 18:29

Lab File Names: CAL1=18DEC03DCAL-10.WIFF; CAL2=18DEC03DCAL-11.WIFF; CAL3=18DEC03DCAL-12.WIFF;
CAL4=18DEC03DCAL-13.WIFF; CAL5=18DEC03DCAL-14.WIFF; CAL6=18DEC03DCAL-15.WIFF;
CAL7=18DEC03DCAL-16.WIFF;

Analyte	RF							RF %RSD
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	
Perfluorobutanoic acid	1.034	0.869	1.029	0.917	0.956	0.893	0.857	7
Perfluoropentanoic acid	1.180	0.926	1.106	0.968	1.008	0.995	---	8
Perfluorobutanesulfonate	1.094	0.909	1.047	0.946	0.986	0.954	0.946	6
4:2 fluorotelomersulfonate	1.709	1.678	1.996	1.888	1.884	1.725	1.899	6
Perfluorohexanoic acid	1.401	1.111	1.356	1.235	1.270	1.117	---	9
Perfluoropentanesulfonate	0.560	0.422	0.518	0.461	0.486	0.483	0.487	8
Perfluoroheptanoic acid	1.817	1.473	1.764	1.578	1.516	---	---	8
Perfluorohexanesulfonate	1.080	0.854	1.005	0.902	0.965	0.988	1.029	7
6:2 fluorotelomersulfonate	1.983	2.041	2.358	2.057	2.066	1.883	---	7
Perfluoroheptanesulfonate	1.151	0.796	0.970	0.880	0.911	0.878	0.925	11
Perfluorooctanoic acid	1.026	0.899	1.067	0.951	1.022	0.953	0.922	6
Perfluoro-octanesulfonate	1.216	0.972	1.107	1.054	1.107	1.088	1.159	6
Perfluorononanoic acid	1.583	1.385	1.612	1.341	1.431	1.306	1.322	8
Perfluorononanesulfonate	0.889	0.609	0.725	0.706	0.728	0.663	0.728	11
Perfluorodecanoic acid	0.992	0.929	1.041	0.946	0.943	0.929	0.891	5
8:2 fluorotelomersulfonate	2.277	2.070	2.164	2.339	2.334	2.176	---	4
Perfluorooctanesulfonamide	0.945	0.844	1.099	0.963	1.022	0.993	0.919	8
NMeFOSAA	0.701	0.689	0.964	0.794	0.829	0.698	0.763	12
Perfluorodecanesulfonate	0.559	0.450	0.570	0.542	0.583	0.555	0.556	7
Perfluoroundecanoic acid	1.663	1.530	1.723	1.677	1.692	1.722	1.589	4
NEtFOSAA	1.007	0.923	0.879	0.921	0.970	1.006	0.992	5
Perfluorododecanoic acid	1.112	0.853	1.080	0.919	0.980	0.874	0.850	11
10:2-fluorotelomersulfonate	2.768	1.355	1.695	1.734	2.029	---	---	25 *
NMePFOSAE	1.492	1.010	1.346	1.221	1.191	1.167	1.179	11
NMePFOSA	1.131	0.824	0.914	0.928	1.030	0.952	0.932	9
Perfluorododecanesulfonate	0.300	0.256	0.300	0.275	0.307	0.287	0.317	7
NEtPFOSAE	1.784	1.404	1.717	1.544	1.575	1.557	1.361	9
NEtPFOSA	1.332	0.928	1.221	1.042	1.122	1.076	1.064	11
Perfluorotridecanoic acid	0.917	0.819	0.973	0.847	0.838	---	---	7
Perfluorotetradecanoic acid	0.961	0.809	1.047	0.876	0.867	0.873	0.820	9
Perfluorohexadecanoic acid	0.467	0.389	0.431	0.389	0.376	0.398	0.387	7
Perfluorooctadecanoic acid	0.380	0.287	0.340	0.302	0.304	0.320	0.315	9

--- Calibration point does not apply

* = % RSD > 20

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FORM 06A DOD - EPA 537 mod QSM 5.1 table B-15
INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Lab File Names: CAL1=18NOV07DCAL-10.WIFF; CAL2=18NOV07DCAL-11.WIFF; CAL3=18NOV07DCAL-12.WIFF;
CAL4=18NOV07DCAL-13.WIFF; CAL5=18NOV07DCAL-14.WIFF; CAL6=18NOV07DCAL-15.WIFF;
CAL7=18NOV07DCAL-16.WIFF;

Analyte	RF							RF %RSD
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	
Perfluorobutanoic acid	1.018	0.931	0.905	0.934	0.936	0.881	0.816	6
Perfluoropentanoic acid	0.983	0.897	0.863	0.883	0.914	0.858	0.814	6
Perfluorobutanesulfonate	1.158	0.984	0.907	0.979	0.951	0.960	0.893	8
4:2 fluorotelomersulfonate	1.777	1.830	1.827	1.860	1.869	1.731	1.702	3
Perfluorohexanoic acid	1.369	1.233	1.246	1.275	1.253	1.109	---	6
Perfluoropentanesulfonate	0.454	0.467	0.444	0.498	0.474	0.471	0.470	3
Perfluorohexanesulfonate	0.955	0.955	0.893	0.948	0.948	0.935	0.929	2
Perfluoroheptanoic acid	1.634	1.603	1.590	1.563	1.579	1.432	---	4
6:2 fluorotelomersulfonate	1.464	2.292	2.080	2.004	2.131	1.864	1.866	13
Perfluoroheptanesulfonate	0.984	0.904	0.893	0.946	0.924	0.891	0.903	3
Perfluorooctanoic acid	0.969	0.972	0.946	0.995	0.956	0.913	0.852	5
Perfluoro-octanesulfonate	0.998	0.997	0.938	0.958	0.930	0.927	0.914	3
Perfluorononanoic acid	1.571	1.383	1.459	1.439	1.491	1.379	1.276	6
Perfluorononanesulfonate	0.553	0.609	0.611	0.650	0.603	0.625	0.588	5
Perfluorodecanoic acid	0.980	0.945	0.957	0.980	1.004	0.925	0.875	4
8:2 fluorotelomersulfonate	2.603	2.513	2.112	2.184	2.222	2.072	---	9
Perfluorooctanesulfonamide	0.896	0.979	0.964	0.988	0.831	0.967	0.917	6
NMeFOSAA	0.867	1.180	0.991	1.053	1.044	0.948	0.962	9
Perfluorodecanesulfonate	0.528	0.545	0.492	0.534	0.504	0.495	0.500	4
Perfluoroundecanoic acid	1.982	1.865	1.891	1.818	1.849	1.776	1.696	5
NEtFOSAA	1.063	1.102	1.103	1.149	1.294	1.132	1.156	6
Perfluorododecanoic acid	1.032	1.006	0.944	0.916	0.972	0.902	---	5
10:2-fluorotelomersulfonate	1.769	1.760	1.607	1.411	1.601	1.578	1.513	7
NMePFOSAE	1.362	1.238	1.132	1.225	1.231	1.175	1.053	7
NMePFOSA	0.899	1.015	0.938	0.855	0.985	0.914	0.866	6
Perfluorododecanesulfonate	0.247	0.249	0.266	0.257	0.245	0.243	0.249	3
NEtPFOSAE	1.848	1.807	1.624	1.689	1.741	1.603	1.488	7
NEtPFOSA	1.082	0.962	0.983	1.069	1.170	1.145	1.133	7
Perfluorotridecanoic acid	0.992	0.824	0.844	0.816	0.844	0.766	---	8
Perfluorotetradecanoic acid	0.989	0.821	0.895	0.892	0.889	0.857	0.837	6
Perfluorohexadecanoic acid	0.475	0.422	0.418	0.420	0.425	0.395	0.400	6
Perfluorooctadecanoic acid	0.385	0.357	0.356	0.356	0.370	0.340	0.348	4

--- Calibration point does not apply

* = % RSD > 20

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FORM 06A DOD - EPA 537 mod QSM 5.1 table B-15
INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Lab File Names: CAL1=18NOV12DCAL-42.WIFF; CAL2=18NOV12DCAL-43.WIFF; CAL3=18NOV12DCAL-44.WIFF;
CAL4=18NOV12DCAL-45.WIFF; CAL5=18NOV12DCAL-46.WIFF; CAL6=18NOV12DCAL-47.WIFF;
CAL7=18NOV12DCAL-48.WIFF;

Analyte	RF							RF %RSD
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	
Perfluorobutanoic acid	1.059	0.868	1.034	0.919	0.966	0.910	0.882	7
Perfluoropentanoic acid	1.058	0.952	1.052	0.939	0.906	0.876	0.839	8
Perfluorobutanesulfonate	1.061	0.938	1.061	0.954	1.001	0.997	0.964	5
4:2 fluorotelomersulfonate	1.764	1.591	1.797	1.672	1.662	1.782	1.703	4
Perfluorohexanoic acid	1.470	1.241	1.361	1.233	1.255	1.160	---	8
Perfluoropentanesulfonate	0.534	0.400	0.499	0.479	0.471	0.484	0.478	8
Perfluoroheptanoic acid	1.776	1.486	1.766	1.619	1.555	1.461	---	8
Perfluorohexanesulfonate	1.019	0.838	1.029	0.984	0.957	0.972	0.980	6
6:2 fluorotelomersulfonate	1.892	1.888	2.214	2.112	2.098	1.876	---	7
Perfluoroheptanesulfonate	1.007	0.773	0.988	0.856	0.922	0.911	0.890	8
Perfluorooctanoic acid	1.136	0.940	1.059	0.960	1.022	0.956	0.904	7
Perfluoro-octanesulfonate	1.194	1.024	1.112	1.084	1.110	1.087	1.093	4
Perfluorononanoic acid	1.545	1.489	1.658	1.424	1.542	1.407	1.336	7
Perfluorononanesulfonate	0.602	0.621	0.674	0.628	0.676	0.673	0.695	5
Perfluorodecanoic acid	1.122	0.883	1.037	0.962	0.987	0.919	---	8
8:2 fluorotelomersulfonate	2.201	1.873	2.243	1.857	2.127	2.051	---	7
Perfluorooctanesulfonamide	1.113	0.931	1.074	0.954	1.047	1.024	---	6
NMeFOSAA	0.663	0.620	0.877	0.890	0.865	0.893	0.886	13
Perfluorodecanesulfonate	0.521	0.496	0.511	0.520	0.537	0.515	0.533	2
Perfluoroundecanoic acid	2.280	1.757	2.026	2.069	1.918	1.881	---	8
NEtFOSAA	0.709	1.011	1.153	0.906	0.931	0.963	---	14
Perfluorododecanoic acid	1.015	0.935	1.079	0.963	1.034	0.961	---	5
10:2-fluorotelomersulfonate	1.703	1.561	1.573	1.278	1.573	1.511	1.383	9
NMePFOSAE	1.287	1.110	1.331	1.179	1.255	1.278	1.152	6
NMePFOSA	0.758	0.950	0.975	1.020	1.096	0.983	---	11
Perfluorododecanesulfonate	0.306	0.272	0.264	0.272	0.266	0.278	0.272	5
NEtPFOSAE	1.873	1.487	1.717	1.622	1.623	1.516	---	8
NEtPFOSA	1.129	1.156	1.156	1.125	1.166	1.070	1.078	3
Perfluorotridecanoic acid	0.925	0.751	0.839	0.808	0.827	0.774	---	7
Perfluorotetradecanoic acid	0.996	0.851	0.994	0.911	0.934	0.892	0.880	6
Perfluorohexadecanoic acid	0.486	0.402	0.442	0.409	0.413	0.435	0.414	6
Perfluorooctadecanoic acid	0.367	0.316	0.367	0.349	0.358	0.360	0.359	5

--- Calibration point does not apply

* = % RSD > 20

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FORM 06A DOD - EPA 537 mod QSM 5.1 table B-15
INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Lab File Names: CAL1=18NOV28DCAL-06.WIFF; CAL2=18NOV28DCAL-07.WIFF; CAL3=18NOV28DCAL-08.WIFF;
CAL4=18NOV28DCAL-09.WIFF; CAL5=18NOV28DCAL-10.WIFF; CAL6=18NOV28DCAL-11.WIFF;
CAL7=18NOV28DCAL-12.WIFF;

Analyte	RF							RF %RSD
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	
Perfluorobutanoic acid	1.080	0.888	1.015	0.915	0.953	0.891	---	7
Perfluoropentanoic acid	1.146	0.858	1.164	0.972	1.027	---	---	11
Perfluorobutanesulfonate	1.048	0.856	1.054	0.915	0.956	0.951	0.964	7
4:2 fluorotelomersulfonate	1.863	1.681	1.998	1.784	1.847	1.760	1.708	6
Perfluorohexanoic acid	1.451	1.216	1.377	1.252	1.229	---	---	7
Perfluoropentanesulfonate	0.506	0.448	0.528	0.456	0.472	0.446	0.463	6
Perfluoroheptanoic acid	1.943	1.531	1.813	1.585	1.614	---	---	9
Perfluorohexanesulfonate	1.004	0.803	1.016	0.911	1.002	0.973	1.040	8
6:2 fluorotelomersulfonate	2.165	1.891	2.059	2.052	1.835	1.766	---	7
Perfluoroheptanesulfonate	1.044	0.805	0.986	0.926	0.943	0.954	0.947	7
Perfluorooctanoic acid	1.031	0.860	1.063	1.011	0.988	0.950	---	7
Perfluoro-octanesulfonate	1.059	0.938	1.163	1.051	1.126	1.119	1.160	7
Perfluorononanoic acid	1.496	1.303	1.470	1.315	1.403	1.256	---	6
Perfluorononanesulfonate	0.763	0.638	0.735	0.777	0.756	0.755	0.758	6
Perfluorodecanoic acid	0.983	0.901	1.042	0.908	0.922	0.863	0.880	6
8:2 fluorotelomersulfonate	2.600	2.366	2.661	2.405	2.587	---	---	5
Perfluorooctanesulfonamide	1.045	0.925	1.050	0.976	1.003	0.980	---	4
NMeFOSAA	0.755	0.760	0.870	0.777	0.807	0.800	0.770	5
Perfluorodecanesulfonate	0.533	0.491	0.644	0.594	0.609	0.592	0.608	8
Perfluoroundecanoic acid	1.551	1.312	1.564	1.466	1.465	1.452	1.350	6
NEtFOSAA	0.994	0.958	1.016	0.921	1.027	1.030	1.034	4
Perfluorododecanoic acid	1.137	0.896	1.115	0.896	0.918	0.904	---	11
10:2-fluorotelomersulfonate	2.409	2.294	2.697	2.170	2.584	2.172	2.078	9
NMePFOSAE	1.232	1.162	1.330	1.183	1.252	1.229	1.152	5
NMePFOSA	0.955	0.904	1.028	0.928	0.970	0.938	0.940	4
Perfluorododecanesulfonate	0.310	0.304	0.325	0.333	0.321	0.319	0.343	4
NEtPFOSAE	1.702	1.382	1.766	1.478	1.516	1.392	1.348	10
NEtPFOSA	1.208	0.986	1.184	1.112	1.104	1.170	1.090	6
Perfluorotridecanoic acid	1.034	0.859	1.068	0.881	0.826	0.812	---	11
Perfluorotetradecanoic acid	0.975	0.858	1.016	0.886	0.921	0.861	---	6
Perfluorohexadecanoic acid	0.549	0.429	0.516	0.455	0.493	0.431	0.426	10
Perfluorooctadecanoic acid	0.411	0.354	0.413	0.374	0.405	0.373	0.370	6

--- Calibration point does not apply

* = % RSD > 20

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18DEC03DCAL-20.WIFF

Date/Time Analyzed: 12/03/2018 19:05 Lab Sample ID: CCV1_CAL3

Init. Calib. Date/Times: 12/03/2018 17:34 12/03/2018 18:29

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.31	15.61	±30
Perfluoropentanoic acid	2.00	2.44	22.11	±30
Perfluorobutanesulfonate	1.77	1.97	11.14	±30
4:2 fluorotelomersulfonate	1.87	2.07	10.57	±30
Perfluorohexanoic acid	2.00	2.36	17.78	±30
Perfluoropentanesulfonate	1.88	1.98	5.19	±30
Perfluoroheptanoic acid	2.00	2.14	7.19	±30
Perfluorohexanesulfonate	1.82	1.84	1.06	±30
6:2 fluorotelomersulfonate	1.90	2.02	6.37	±30
Perfluoroheptanesulfonate	1.90	2.06	8.39	±30
Perfluorooctanoic acid	2.00	2.21	10.63	±30
Perfluoro-octanesulfonate	1.85	1.74	-6.16	±30
Perfluorononanoic acid	2.00	2.27	13.60	±30
Perfluorononanesulfonate	1.92	1.97	2.43	±30
Perfluorodecanoic acid	2.00	2.24	12.13	±30
8:2 fluorotelomersulfonate	1.92	2.07	7.78	±30
Perfluorooctanesulfonamide	2.00	2.26	13.04	±30
NMeFOSAA	2.00	2.37	18.46	±30
Perfluorodecanesulfonate	1.93	2.09	8.51	±30
Perfluoroundecanoic acid	2.00	2.16	8.22	±30
NEtFOSAA	2.00	1.81	-9.59	±30
Perfluorododecanoic acid	2.00	2.28	14.06	±30
10:2-fluorotelomersulfonate	1.93	1.95	0.83	±30
NMePFOSAE	2.00	2.37	18.63	±30
NMePFOSA	2.00	2.14	6.86	±30
Perfluorododecanesulfonate	1.94	1.93	-0.27	±30
NEtPFOSAE	2.00	2.32	16.16	±30
NEtPFOSA	2.00	2.21	10.33	±30
Perfluorotridecanoic acid	2.00	2.09	4.57	±30
Perfluorotetradecanoic acid	2.00	2.34	17.09	±30
Perfluorohexadecanoic acid	2.00	2.36	17.99	±30
Perfluorooctadecanoic acid	2.00	2.18	9.24	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18DEC05D-05.WIFF

Date/Time Analyzed: 12/05/2018 12:08 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 12/03/2018 17:34 12/03/2018 18:29

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.61	2.05	±30
Perfluoropentanoic acid	0.60	0.54	-10.73	±30
Perfluorobutanesulfonate	0.53	0.49	-8.44	±30
4:2 fluorotelomersulfonate	0.56	0.46	-18.52	±30
Perfluorohexanoic acid	0.60	0.58	-3.64	±30
Perfluoropentanesulfonate	0.56	0.54	-4.26	±30
Perfluoroheptanoic acid	0.60	0.58	-3.93	±30
Perfluorohexanesulfonate	0.55	0.44	-18.75	±30
6:2 fluorotelomersulfonate	0.57	0.57	-0.19	±30
Perfluoroheptanesulfonate	0.57	0.49	-13.65	±30
Perfluorooctanoic acid	0.60	0.55	-8.08	±30
Perfluoro-octanesulfonate	0.56	0.48	-13.84	±30
Perfluorononanoic acid	0.60	0.52	-14.02	±30
Perfluorononanesulfonate	0.58	0.50	-12.72	±30
Perfluorodecanoic acid	0.60	0.54	-9.70	±30
8:2 fluorotelomersulfonate	0.58	0.55	-3.71	±30
Perfluorooctanesulfonamide	0.60	0.55	-7.63	±30
NMeFOSAA	0.60	0.66	10.31	±30
Perfluorodecanesulfonate	0.58	0.54	-7.19	±30
Perfluoroundecanoic acid	0.60	0.51	-15.11	±30
NEtFOSAA	0.60	0.56	-5.93	±30
Perfluorododecanoic acid	0.60	0.62	3.62	±30
10:2-fluorotelomersulfonate	0.58	0.48	-16.79	±30
NMePFOSAE	0.60	0.52	-13.94	±30
NMePFOSA	0.60	0.72	19.41	±30
Perfluorododecanesulfonate	0.58	0.54	-6.43	±30
NEtPFOSAE	0.60	0.58	-3.89	±30
NEtPFOSA	0.60	0.51	-14.85	±30
Perfluorotridecanoic acid	0.60	0.55	-7.99	±30
Perfluorotetradecanoic acid	0.60	0.60	-0.77	±30
Perfluorohexadecanoic acid	0.60	0.62	3.05	±30
Perfluorooctadecanoic acid	0.60	0.57	-5.81	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18DEC05D-34.WIFF

Date/Time Analyzed: 12/05/2018 17:09 Lab Sample ID: CCV4_ISC_CAL2

Init. Calib. Date/Times: 12/03/2018 17:34 12/03/2018 18:29

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.60	-0.76	±30
Perfluoropentanoic acid	0.60	0.52	-12.52	±30
Perfluorobutanesulfonate	0.53	0.48	-9.75	±30
4:2 fluorotelomersulfonate	0.56	0.46	-17.77	±30
Perfluorohexanoic acid	0.60	0.58	-3.83	±30
Perfluoropentanesulfonate	0.56	0.52	-6.95	±30
Perfluoroheptanoic acid	0.60	0.57	-5.36	±30
Perfluorohexanesulfonate	0.55	0.46	-15.64	±30
6:2 fluorotelomersulfonate	0.57	0.49	-14.06	±30
Perfluoroheptanesulfonate	0.57	0.52	-9.11	±30
Perfluorooctanoic acid	0.60	0.56	-6.76	±30
Perfluoro-octanesulfonate	0.56	0.46	-16.65	±30
Perfluorononanoic acid	0.60	0.55	-7.70	±30
Perfluorononanesulfonate	0.58	0.57	-1.37	±30
Perfluorodecanoic acid	0.60	0.59	-1.18	±30
8:2 fluorotelomersulfonate	0.58	0.57	-1.27	±30
Perfluorooctanesulfonamide	0.60	0.55	-8.74	±30
NMeFOSAA	0.60	0.76	26.80	±30
Perfluorodecanesulfonate	0.58	0.45	-21.80	±30
Perfluoroundecanoic acid	0.60	0.59	-1.90	±30
NEtFOSAA	0.60	0.47	-21.27	±30
Perfluorododecanoic acid	0.60	0.59	-1.36	±30
10:2-fluorotelomersulfonate	0.58	0.45	-21.52	±30
NMePFOSAE	0.60	0.54	-10.52	±30
NMePFOSA	0.60	0.64	6.99	±30
Perfluorododecanesulfonate	0.58	0.46	-20.25	±30
NEtPFOSAE	0.60	0.58	-3.03	±30
NEtPFOSA	0.60	0.53	-12.19	±30
Perfluorotridecanoic acid	0.60	0.58	-4.01	±30
Perfluorotetradecanoic acid	0.60	0.59	-0.99	±30
Perfluorohexadecanoic acid	0.60	0.61	2.04	±30
Perfluorooctadecanoic acid	0.60	0.51	-15.07	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18DEC05D-45.WIFF

Date/Time Analyzed: 12/05/2018 18:48 Lab Sample ID: CCV5_CAL3

Init. Calib. Date/Times: 12/03/2018 17:34 12/03/2018 18:29

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.31	15.33	±30
Perfluoropentanoic acid	2.00	2.18	8.79	±30
Perfluorobutanesulfonate	1.77	1.97	11.19	±30
4:2 fluorotelomersulfonate	1.87	1.93	3.24	±30
Perfluorohexanoic acid	2.00	2.24	11.99	±30
Perfluoropentanesulfonate	1.88	2.01	6.95	±30
Perfluoroheptanoic acid	2.00	2.18	8.99	±30
Perfluorohexanesulfonate	1.82	1.86	2.38	±30
6:2 fluorotelomersulfonate	1.90	2.11	11.25	±30
Perfluoroheptanesulfonate	1.90	2.09	10.20	±30
Perfluorooctanoic acid	2.00	2.38	19.18	±30
Perfluoro-octanesulfonate	1.85	2.01	8.79	±30
Perfluorononanoic acid	2.00	2.27	13.42	±30
Perfluorononanesulfonate	1.92	2.13	10.94	±30
Perfluorodecanoic acid	2.00	2.35	17.70	±30
8:2 fluorotelomersulfonate	1.92	1.93	0.40	±30
Perfluorooctanesulfonamide	2.00	2.05	2.30	±30
NMeFOSAA	2.00	2.29	14.48	±30
Perfluorodecanesulfonate	1.93	2.14	11.06	±30
Perfluoroundecanoic acid	2.00	2.06	3.06	±30
NEtFOSAA	2.00	1.97	-1.69	±30
Perfluorododecanoic acid	2.00	2.44	21.82	±30
10:2-fluorotelomersulfonate	1.93	2.13	10.13	±30
NMePFOSAE	2.00	2.10	5.17	±30
NMePFOSA	2.00	2.26	13.12	±30
Perfluorododecanesulfonate	1.94	2.06	6.22	±30
NEtPFOSAE	2.00	2.42	21.20	±30
NEtPFOSA	2.00	2.28	13.96	±30
Perfluorotridecanoic acid	2.00	2.11	5.65	±30
Perfluorotetradecanoic acid	2.00	2.28	14.12	±30
Perfluorohexadecanoic acid	2.00	2.35	17.73	±30
Perfluorooctadecanoic acid	2.00	2.16	7.83	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV07DCAL-20.WIFF

Date/Time Analyzed: 11/07/2018 11:09 Lab Sample ID: CCV1_CAL3

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.09	4.37	±30
Perfluoropentanoic acid	2.00	2.08	4.09	±30
Perfluorobutanesulfonate	1.77	1.83	3.13	±30
4:2 fluorotelomersulfonate	1.98	2.11	6.41	±30
Perfluorohexanoic acid	2.00	2.25	12.42	±30
Perfluoropentanesulfonate	1.88	1.94	3.35	±30
Perfluorohexanesulfonate	1.89	1.93	1.87	±30
Perfluoroheptanoic acid	2.00	2.19	9.28	±30
6:2 fluorotelomersulfonate	2.09	1.92	-8.35	±30
Perfluoroheptanesulfonate	1.90	1.87	-1.62	±30
Perfluorooctanoic acid	2.00	2.15	7.42	±30
Perfluoro-octanesulfonate	1.91	2.09	9.36	±30
Perfluorononanoic acid	2.00	2.06	3.07	±30
Perfluorononanesulfonate	1.92	1.98	2.88	±30
Perfluorodecanoic acid	2.00	2.08	3.96	±30
8:2 fluorotelomersulfonate	2.11	2.09	-0.82	±30
Perfluorooctanesulfonamide	2.00	2.07	3.64	±30
NMeFOSAA	2.00	1.63	-18.67	±30
Perfluorodecanesulfonate	1.93	1.96	1.77	±30
Perfluoroundecanoic acid	2.00	2.16	8.03	±30
NEtFOSAA	2.00	1.95	-2.25	±30
Perfluorododecanoic acid	2.00	2.04	1.95	±30
10:2-fluorotelomersulfonate	2.12	1.64	-22.85	±30
NMePFOSAE	2.00	2.16	7.79	±30
NMePFOSA	2.00	2.14	6.78	±30
Perfluorododecanesulfonate	1.94	2.09	7.77	±30
NEtPFOSAE	2.00	2.19	9.62	±30
NEtPFOSA	2.00	1.79	-10.51	±30
Perfluorotridecanoic acid	2.00	2.06	2.83	±30
Perfluorotetradecanoic acid	2.00	2.10	4.78	±30
Perfluorohexadecanoic acid	2.00	2.06	2.88	±30
Perfluorooctadecanoic acid	2.00	2.01	0.72	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV08D-05.WIFF

Date/Time Analyzed: 11/08/2018 12:24 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.50	0.55	10.01	±30
Perfluoropentanoic acid	0.50	0.56	12.19	±30
Perfluorobutanesulfonate	0.44	0.44	0.21	±30
4:2 fluorotelomersulfonate	0.47	0.49	4.23	±30
Perfluorohexanoic acid	0.50	0.56	11.37	±30
Perfluoropentanesulfonate	0.47	0.50	6.68	±30
Perfluorohexanesulfonate	0.47	0.47	-0.75	±30
Perfluoroheptanoic acid	0.50	0.54	7.06	±30
6:2 fluorotelomersulfonate	0.47	0.55	16.56	±30
Perfluoroheptanesulfonate	0.48	0.48	1.26	±30
Perfluorooctanoic acid	0.50	0.52	3.35	±30
Perfluoro-octanesulfonate	0.48	0.51	6.67	±30
Perfluorononanoic acid	0.50	0.57	13.85	±30
Perfluorononanesulfonate	0.48	0.49	1.94	±30
Perfluorodecanoic acid	0.50	0.54	8.90	±30
8:2 fluorotelomersulfonate	0.48	0.49	1.38	±30
Perfluorooctanesulfonamide	0.50	0.53	6.66	±30
NMeFOSAA	0.50	0.56	11.14	±30
Perfluorodecanesulfonate	0.48	0.44	-8.46	±30
Perfluoroundecanoic acid	0.50	0.53	5.05	±30
NEtFOSAA	0.50	0.49	-2.83	±30
Perfluorododecanoic acid	0.50	0.57	13.47	±30
10:2-fluorotelomersulfonate	0.48	0.62	27.81	±30
NMePFOSAE	0.50	0.56	12.18	±30
NMePFOSA	0.50	0.60	20.48	±30
Perfluorododecanesulfonate	0.48	0.45	-6.81	±30
NEtPFOSAE	0.50	0.53	5.21	±30
NEtPFOSA	0.50	0.44	-11.15	±30
Perfluorotridecanoic acid	0.50	0.53	5.71	±30
Perfluorotetradecanoic acid	0.50	0.56	12.63	±30
Perfluorohexadecanoic acid	0.50	0.54	8.44	±30
Perfluorooctadecanoic acid	0.50	0.52	4.62	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV08D-86.WIFF

Date/Time Analyzed: 11/09/2018 00:35 Lab Sample ID: CCV8_CAL3

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.15	7.37	±30
Perfluoropentanoic acid	2.00	2.04	1.83	±30
Perfluorobutanesulfonate	1.77	1.82	2.75	±30
4:2 fluorotelomersulfonate	1.87	1.76	-5.94	±30
Perfluorohexanoic acid	2.00	2.11	5.48	±30
Perfluoropentanesulfonate	1.88	1.94	3.42	±30
Perfluorohexanesulfonate	1.89	1.87	-1.01	±30
Perfluoroheptanoic acid	2.00	2.14	6.97	±30
6:2 fluorotelomersulfonate	1.90	2.23	17.83	±30
Perfluoroheptanesulfonate	1.90	1.88	-0.89	±30
Perfluorooctanoic acid	2.00	2.11	5.48	±30
Perfluoro-octanesulfonate	1.91	1.99	4.35	±30
Perfluorononanoic acid	2.00	2.11	5.44	±30
Perfluorononanesulfonate	1.92	1.92	0.02	±30
Perfluorodecanoic acid	2.00	1.86	-6.94	±30
8:2 fluorotelomersulfonate	1.92	1.76	-8.08	±30
Perfluorooctanesulfonamide	2.00	2.09	4.53	±30
NMeFOSAA	2.00	2.09	4.31	±30
Perfluorodecanesulfonate	1.93	1.94	0.51	±30
Perfluoroundecanoic acid	2.00	2.00	-0.07	±30
NEtFOSAA	2.00	1.81	-9.31	±30
Perfluorododecanoic acid	2.00	2.03	1.60	±30
10:2-fluorotelomersulfonate	1.93	1.70	-11.65	±30
NMePFOSAE	2.00	2.06	2.76	±30
NMePFOSA	2.00	2.19	9.72	±30
Perfluorododecanesulfonate	1.94	1.83	-5.88	±30
NEtPFOSAE	2.00	2.13	6.33	±30
NEtPFOSA	2.00	1.69	-15.31	±30
Perfluorotridecanoic acid	2.00	1.97	-1.69	±30
Perfluorotetradecanoic acid	2.00	2.19	9.29	±30
Perfluorohexadecanoic acid	2.00	2.05	2.60	±30
Perfluorooctadecanoic acid	2.00	2.17	8.33	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV08D-98.WIFF

Date/Time Analyzed: 11/09/2018 02:23 Lab Sample ID: CCV9_CAL4

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.56	6.99	±30
Perfluoropentanoic acid	8.00	8.73	9.18	±30
Perfluorobutanesulfonate	7.08	7.57	6.96	±30
4:2 fluorotelomersulfonate	7.47	7.85	5.10	±30
Perfluorohexanoic acid	8.00	8.25	3.17	±30
Perfluoropentanesulfonate	7.50	7.69	2.56	±30
Perfluorohexanesulfonate	7.56	7.51	-0.62	±30
Perfluoroheptanoic acid	8.00	8.70	8.79	±30
6:2 fluorotelomersulfonate	7.58	9.21	21.41	±30
Perfluoroheptanesulfonate	7.61	7.57	-0.54	±30
Perfluorooctanoic acid	8.00	8.52	6.46	±30
Perfluoro-octanesulfonate	7.65	8.19	7.00	±30
Perfluorononanoic acid	8.00	8.20	2.55	±30
Perfluorononanesulfonate	7.68	8.25	7.38	±30
Perfluorodecanoic acid	8.00	8.27	3.40	±30
8:2 fluorotelomersulfonate	7.66	7.68	0.16	±30
Perfluorooctanesulfonamide	8.00	8.86	10.80	±30
NMeFOSAA	8.00	8.38	4.76	±30
Perfluorodecanesulfonate	7.70	7.76	0.75	±30
Perfluoroundecanoic acid	8.00	8.37	4.67	±30
NEtFOSAA	8.00	8.38	4.78	±30
Perfluorododecanoic acid	8.00	8.08	1.03	±30
10:2-fluorotelomersulfonate	7.71	7.66	-0.73	±30
NMePFOSAE	8.00	8.60	7.46	±30
NMePFOSA	8.00	9.06	13.29	±30
Perfluorododecanesulfonate	7.74	7.46	-3.63	±30
NEtPFOSAE	8.00	8.91	11.36	±30
NEtPFOSA	8.00	7.43	-7.07	±30
Perfluorotridecanoic acid	8.00	7.49	-6.43	±30
Perfluorotetradecanoic acid	8.00	8.72	9.02	±30
Perfluorohexadecanoic acid	8.00	8.83	10.35	±30
Perfluorooctadecanoic acid	8.00	8.80	10.00	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV08D-109.WIFF

Date/Time Analyzed: 11/09/2018 04:02 Lab Sample ID: CCV10_ISC_CAL2

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.50	0.54	8.97	±30
Perfluoropentanoic acid	0.50	0.56	11.94	±30
Perfluorobutanesulfonate	0.44	0.49	10.98	±30
4:2 fluorotelomersulfonate	0.47	0.50	7.80	±30
Perfluorohexanoic acid	0.50	0.56	11.25	±30
Perfluoropentanesulfonate	0.47	0.45	-3.90	±30
Perfluorohexanesulfonate	0.47	0.47	0.02	±30
Perfluoroheptanoic acid	0.50	0.58	15.43	±30
6:2 fluorotelomersulfonate	0.47	0.47	-0.84	±30
Perfluoroheptanesulfonate	0.48	0.45	-5.14	±30
Perfluorooctanoic acid	0.50	0.52	4.72	±30
Perfluoro-octanesulfonate	0.48	0.48	0.24	±30
Perfluorononanoic acid	0.50	0.57	13.08	±30
Perfluorononanesulfonate	0.48	0.51	6.51	±30
Perfluorodecanoic acid	0.50	0.52	3.86	±30
8:2 fluorotelomersulfonate	0.48	0.55	15.49	±30
Perfluorooctanesulfonamide	0.50	0.52	3.86	±30
NMeFOSAA	0.50	0.60	20.50	±30
Perfluorodecanesulfonate	0.48	0.54	11.42	±30
Perfluoroundecanoic acid	0.50	0.45	-9.11	±30
NEtFOSAA	0.50	0.48	-4.89	±30
Perfluorododecanoic acid	0.50	0.50	0.46	±30
10:2-fluorotelomersulfonate	0.48	0.56	15.89	±30
NMePFOSAE	0.50	0.57	13.80	±30
NMePFOSA	0.50	0.58	16.16	±30
Perfluorododecanesulfonate	0.48	0.45	-7.51	±30
NEtPFOSAE	0.50	0.53	6.43	±30
NEtPFOSA	0.50	0.49	-2.42	±30
Perfluorotridecanoic acid	0.50	0.52	3.99	±30
Perfluorotetradecanoic acid	0.50	0.54	8.98	±30
Perfluorohexadecanoic acid	0.50	0.55	9.67	±30
Perfluorooctadecanoic acid	0.50	0.54	8.49	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV12D-05.WIFF

Date/Time Analyzed: 11/12/2018 17:21 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.57	-4.52	±30
Perfluoropentanoic acid	0.60	0.62	3.21	±30
Perfluorobutanesulfonate	0.53	0.45	-14.70	±30
4:2 fluorotelomersulfonate	0.56	0.63	12.84	±30
Perfluorohexanoic acid	0.60	0.59	-1.34	±30
Perfluoropentanesulfonate	0.56	0.51	-9.18	±30
Perfluoroheptanoic acid	0.60	0.61	1.56	±30
Perfluorohexanesulfonate	0.55	0.48	-11.70	±30
6:2 fluorotelomersulfonate	0.57	0.53	-6.29	±30
Perfluoroheptanesulfonate	0.57	0.57	-0.94	±30
Perfluorooctanoic acid	0.60	0.57	-4.44	±30
Perfluoro-octanesulfonate	0.56	0.47	-15.84	±30
Perfluorononanoic acid	0.60	0.57	-4.62	±30
Perfluorononanesulfonate	0.58	0.55	-5.13	±30
Perfluorodecanoic acid	0.60	0.53	-12.39	±30
8:2 fluorotelomersulfonate	0.58	0.55	-4.16	±30
Perfluorooctanesulfonamide	0.60	0.54	-9.38	±30
NMeFOSAA	0.60	0.58	-3.02	±30
Perfluorodecanesulfonate	0.58	0.56	-2.98	±30
Perfluoroundecanoic acid	0.60	0.52	-13.54	±30
NEtFOSAA	0.60	0.52	-12.53	±30
Perfluorododecanoic acid	0.60	0.53	-12.36	±30
10:2-fluorotelomersulfonate	0.58	0.50	-13.27	±30
NMePFOSAE	0.60	0.61	2.31	±30
NMePFOSA	0.60	0.48	-19.71	±30
Perfluorododecanesulfonate	0.58	0.51	-13.00	±30
NEtPFOSAE	0.60	0.57	-4.26	±30
NEtPFOSA	0.60	0.57	-4.87	±30
Perfluorotridecanoic acid	0.60	0.55	-8.33	±30
Perfluorotetradecanoic acid	0.60	0.55	-7.70	±30
Perfluorohexadecanoic acid	0.60	0.61	1.72	±30
Perfluorooctadecanoic acid	0.60	0.54	-9.17	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV12D-58.WIFF

Date/Time Analyzed: 11/13/2018 01:20 Lab Sample ID: CCV6_CAL4

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.06	0.73	±30
Perfluoropentanoic acid	8.00	8.59	7.38	±30
Perfluorobutanesulfonate	7.08	6.93	-2.07	±30
4:2 fluorotelomersulfonate	7.47	7.43	-0.51	±30
Perfluorohexanoic acid	8.00	8.10	1.27	±30
Perfluoropentanesulfonate	7.50	6.94	-7.41	±30
Perfluoroheptanoic acid	8.00	8.47	5.91	±30
Perfluorohexanesulfonate	7.30	7.39	1.22	±30
6:2 fluorotelomersulfonate	7.58	8.17	7.83	±30
Perfluoroheptanesulfonate	7.61	7.25	-4.78	±30
Perfluorooctanoic acid	8.00	8.60	7.46	±30
Perfluoro-octanesulfonate	7.40	7.40	-0.06	±30
Perfluorononanoic acid	8.00	8.49	6.08	±30
Perfluorononanesulfonate	7.68	7.43	-3.28	±30
Perfluorodecanoic acid	8.00	7.87	-1.65	±30
8:2 fluorotelomersulfonate	7.66	8.83	15.34	±30
Perfluorooctanesulfonamide	8.00	7.68	-4.00	±30
NMeFOSAA	8.00	8.33	4.15	±30
Perfluorodecanesulfonate	7.70	7.34	-4.62	±30
Perfluoroundecanoic acid	8.00	7.88	-1.54	±30
NEtFOSAA	8.00	7.20	-9.95	±30
Perfluorododecanoic acid	8.00	8.15	1.93	±30
10:2-fluorotelomersulfonate	7.71	8.80	14.20	±30
NMePFOSAE	8.00	8.67	8.42	±30
NMePFOSA	8.00	7.71	-3.62	±30
Perfluorododecanesulfonate	7.74	7.31	-5.52	±30
NEtPFOSAE	8.00	7.80	-2.50	±30
NEtPFOSA	8.00	8.41	5.12	±30
Perfluorotridecanoic acid	8.00	8.67	8.37	±30
Perfluorotetradecanoic acid	8.00	8.25	3.18	±30
Perfluorohexadecanoic acid	8.00	8.58	7.25	±30
Perfluorooctadecanoic acid	8.00	8.57	7.11	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV12D-70.WIFF

Date/Time Analyzed: 11/13/2018 03:08 Lab Sample ID: CCV7_ISC_CAL2

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.59	-2.40	±30
Perfluoropentanoic acid	0.60	0.57	-5.27	±30
Perfluorobutanesulfonate	0.53	0.48	-9.96	±30
4:2 fluorotelomersulfonate	0.56	0.53	-4.59	±30
Perfluorohexanoic acid	0.60	0.57	-4.88	±30
Perfluoropentanesulfonate	0.56	0.48	-15.15	±30
Perfluoroheptanoic acid	0.60	0.57	-4.53	±30
Perfluorohexanesulfonate	0.55	0.47	-13.45	±30
6:2 fluorotelomersulfonate	0.57	0.60	5.55	±30
Perfluoroheptanesulfonate	0.57	0.49	-13.86	±30
Perfluorooctanoic acid	0.60	0.57	-4.43	±30
Perfluoro-octanesulfonate	0.56	0.48	-12.61	±30
Perfluorononanoic acid	0.60	0.59	-0.85	±30
Perfluorononanesulfonate	0.58	0.45	-22.51	±30
Perfluorodecanoic acid	0.60	0.57	-5.76	±30
8:2 fluorotelomersulfonate	0.58	0.56	-2.24	±30
Perfluorooctanesulfonamide	0.60	0.55	-8.75	±30
NMeFOSAA	0.60	0.63	4.51	±30
Perfluorodecanesulfonate	0.58	0.51	-11.11	±30
Perfluoroundecanoic acid	0.60	0.56	-5.92	±30
NEtFOSAA	0.60	0.44	-26.19	±30
Perfluorododecanoic acid	0.60	0.53	-11.69	±30
10:2-fluorotelomersulfonate	0.58	0.57	-1.47	±30
NMePFOSAE	0.60	0.61	1.05	±30
NMePFOSA	0.60	0.54	-10.45	±30
Perfluorododecanesulfonate	0.58	0.53	-9.07	±30
NEtPFOSAE	0.60	0.56	-6.81	±30
NEtPFOSA	0.60	0.68	12.57	±30
Perfluorotridecanoic acid	0.60	0.59	-2.20	±30
Perfluorotetradecanoic acid	0.60	0.52	-12.87	±30
Perfluorohexadecanoic acid	0.60	0.57	-5.14	±30
Perfluorooctadecanoic acid	0.60	0.53	-11.84	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV12D-82.WIFF

Date/Time Analyzed: 11/13/2018 04:56 Lab Sample ID: CCV8_CAL3

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.26	12.89	±30
Perfluoropentanoic acid	2.00	2.36	17.93	±30
Perfluorobutanesulfonate	1.77	1.94	9.66	±30
4:2 fluorotelomersulfonate	1.87	2.19	17.16	±30
Perfluorohexanoic acid	2.00	2.24	11.93	±30
Perfluoropentanesulfonate	1.88	1.97	5.05	±30
Perfluoroheptanoic acid	2.00	2.44	22.15	±30
Perfluorohexanesulfonate	1.82	1.87	2.59	±30
6:2 fluorotelomersulfonate	1.90	1.97	3.53	±30
Perfluoroheptanesulfonate	1.90	2.09	9.77	±30
Perfluorooctanoic acid	2.00	2.35	17.63	±30
Perfluoro-octanesulfonate	1.85	1.97	6.72	±30
Perfluorononanoic acid	2.00	2.31	15.67	±30
Perfluorononanesulfonate	1.92	1.90	-0.97	±30
Perfluorodecanoic acid	2.00	2.23	11.57	±30
8:2 fluorotelomersulfonate	1.92	2.24	16.80	±30
Perfluorooctanesulfonamide	2.00	2.09	4.71	±30
NMeFOSAA	2.00	2.15	7.43	±30
Perfluorodecanesulfonate	1.93	1.94	0.50	±30
Perfluoroundecanoic acid	2.00	2.17	8.27	±30
NEtFOSAA	2.00	2.07	3.69	±30
Perfluorododecanoic acid	2.00	2.37	18.41	±30
10:2-fluorotelomersulfonate	1.93	2.27	17.65	±30
NMePFOSAE	2.00	2.33	16.72	±30
NMePFOSA	2.00	2.19	9.72	±30
Perfluorododecanesulfonate	1.94	2.05	5.72	±30
NEtPFOSAE	2.00	2.32	16.11	±30
NEtPFOSA	2.00	2.11	5.68	±30
Perfluorotridecanoic acid	2.00	2.24	11.77	±30
Perfluorotetradecanoic acid	2.00	2.18	8.87	±30
Perfluorohexadecanoic acid	2.00	2.26	13.18	±30
Perfluorooctadecanoic acid	2.00	2.06	3.19	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV12DCAL-52.WIFF

Date/Time Analyzed: 11/12/2018 16:36 Lab Sample ID: CCV1_CAL3

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.29	14.39	±30
Perfluoropentanoic acid	2.00	2.35	17.52	±30
Perfluorobutanesulfonate	1.77	1.85	4.70	±30
4:2 fluorotelomersulfonate	1.87	1.97	5.23	±30
Perfluorohexanoic acid	2.00	2.37	18.39	±30
Perfluoropentanesulfonate	1.88	1.99	5.89	±30
Perfluoroheptanoic acid	2.00	2.33	16.60	±30
Perfluorohexanesulfonate	1.82	1.97	8.45	±30
6:2 fluorotelomersulfonate	1.90	2.38	25.21	±30
Perfluoroheptanesulfonate	1.90	2.05	7.87	±30
Perfluorooctanoic acid	2.00	2.34	17.00	±30
Perfluoro-octanesulfonate	1.85	2.05	10.87	±30
Perfluorononanoic acid	2.00	2.25	12.52	±30
Perfluorononanesulfonate	1.92	2.04	6.21	±30
Perfluorodecanoic acid	2.00	2.21	10.29	±30
8:2 fluorotelomersulfonate	1.92	1.86	-3.14	±30
Perfluorooctanesulfonamide	2.00	1.66	-17.08	±30
NMeFOSAA	2.00	2.20	10.04	±30
Perfluorodecanesulfonate	1.93	2.17	12.52	±30
Perfluoroundecanoic acid	2.00	2.13	6.44	±30
NEtFOSAA	2.00	1.83	-8.35	±30
Perfluorododecanoic acid	2.00	2.34	17.18	±30
10:2-fluorotelomersulfonate	1.93	1.71	-11.18	±30
NMePFOSAE	2.00	2.39	19.28	±30
NMePFOSA	2.00	2.07	3.39	±30
Perfluorododecanesulfonate	1.94	2.27	16.87	±30
NEtPFOSAE	2.00	2.32	15.96	±30
NEtPFOSA	2.00	2.04	2.16	±30
Perfluorotridecanoic acid	2.00	2.35	17.54	±30
Perfluorotetradecanoic acid	2.00	2.36	18.05	±30
Perfluorohexadecanoic acid	2.00	2.15	7.32	±30
Perfluorooctadecanoic acid	2.00	2.13	6.56	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV28DCAL-16.WIFF

Date/Time Analyzed: 11/28/2018 15:12 Lab Sample ID: CCV1_CAL3

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.29	14.50	±30
Perfluoropentanoic acid	2.00	2.15	7.30	±30
Perfluorobutanesulfonate	1.77	1.90	7.57	±30
4:2 fluorotelomersulfonate	1.87	2.10	12.26	±30
Perfluorohexanoic acid	2.00	2.32	16.20	±30
Perfluoropentanesulfonate	1.88	2.10	11.73	±30
Perfluoroheptanoic acid	2.00	2.13	6.53	±30
Perfluorohexanesulfonate	1.82	1.84	1.19	±30
6:2 fluorotelomersulfonate	1.90	2.35	23.67	±30
Perfluoroheptanesulfonate	1.90	2.07	8.75	±30
Perfluorooctanoic acid	2.00	2.15	7.45	±30
Perfluoro-octanesulfonate	1.85	1.89	2.39	±30
Perfluorononanoic acid	2.00	2.37	18.31	±30
Perfluorononanesulfonate	1.92	1.96	2.24	±30
Perfluorodecanoic acid	2.00	2.38	18.95	±30
8:2 fluorotelomersulfonate	1.92	1.87	-2.39	±30
Perfluorooctanesulfonamide	2.00	2.10	4.85	±30
NMeFOSAA	2.00	2.08	3.82	±30
Perfluorodecanesulfonate	1.93	2.07	7.49	±30
Perfluoroundecanoic acid	2.00	2.39	19.73	±30
NEtFOSAA	2.00	1.90	-5.08	±30
Perfluorododecanoic acid	2.00	2.49	24.44	±30
10:2-fluorotelomersulfonate	1.93	2.22	14.77	±30
NMePFOSAE	2.00	2.10	5.15	±30
NMePFOSA	2.00	2.11	5.69	±30
Perfluorododecanesulfonate	1.94	1.96	1.21	±30
NEtPFOSAE	2.00	2.30	14.93	±30
NEtPFOSA	2.00	2.22	10.99	±30
Perfluorotridecanoic acid	2.00	2.59	29.28	±30
Perfluorotetradecanoic acid	2.00	2.29	14.59	±30
Perfluorohexadecanoic acid	2.00	2.22	11.22	±30
Perfluorooctadecanoic acid	2.00	2.22	11.09	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV29D-05.WIFF

Date/Time Analyzed: 11/29/2018 10:33 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.59	-1.98	±30
Perfluoropentanoic acid	0.60	0.52	-14.14	±30
Perfluorobutanesulfonate	0.53	0.47	-10.86	±30
4:2 fluorotelomersulfonate	0.56	0.49	-13.37	±30
Perfluorohexanoic acid	0.60	0.58	-2.77	±30
Perfluoropentanesulfonate	0.56	0.57	0.99	±30
Perfluoroheptanoic acid	0.60	0.56	-6.28	±30
Perfluorohexanesulfonate	0.55	0.48	-12.13	±30
6:2 fluorotelomersulfonate	0.57	0.64	12.30	±30
Perfluoroheptanesulfonate	0.57	0.49	-14.63	±30
Perfluorooctanoic acid	0.60	0.53	-11.76	±30
Perfluoro-octanesulfonate	0.56	0.51	-8.84	±30
Perfluorononanoic acid	0.60	0.55	-7.57	±30
Perfluorononanesulfonate	0.58	0.45	-21.13	±30
Perfluorodecanoic acid	0.60	0.58	-4.04	±30
8:2 fluorotelomersulfonate	0.58	0.51	-11.58	±30
Perfluorooctanesulfonamide	0.60	0.53	-10.95	±30
NMeFOSAA	0.60	0.54	-9.99	±30
Perfluorodecanesulfonate	0.58	0.56	-3.35	±30
Perfluoroundecanoic acid	0.60	0.58	-3.79	±30
NEtFOSAA	0.60	0.52	-12.77	±30
Perfluorododecanoic acid	0.60	0.60	0.40	±30
10:2-fluorotelomersulfonate	0.58	0.59	1.43	±30
NMePFOSAE	0.60	0.59	-1.65	±30
NMePFOSA	0.60	0.52	-14.03	±30
Perfluorododecanesulfonate	0.58	0.49	-15.15	±30
NEtPFOSAE	0.60	0.58	-3.30	±30
NEtPFOSA	0.60	0.50	-17.33	±30
Perfluorotridecanoic acid	0.60	0.66	9.17	±30
Perfluorotetradecanoic acid	0.60	0.60	0.18	±30
Perfluorohexadecanoic acid	0.60	0.61	2.42	±30
Perfluorooctadecanoic acid	0.60	0.56	-5.99	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV29D-52.WIFF

Date/Time Analyzed: 11/29/2018 17:37 Lab Sample ID: CCV5_CAL3

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.24	12.08	±30
Perfluoropentanoic acid	2.00	2.10	5.00	±30
Perfluorobutanesulfonate	1.77	1.97	11.32	±30
4:2 fluorotelomersulfonate	1.87	2.13	14.12	±30
Perfluorohexanoic acid	2.00	2.37	18.38	±30
Perfluoropentanesulfonate	1.88	2.13	13.27	±30
Perfluoroheptanoic acid	2.00	2.24	11.85	±30
Perfluorohexanesulfonate	1.82	1.82	-0.10	±30
6:2 fluorotelomersulfonate	1.90	2.31	21.74	±30
Perfluoroheptanesulfonate	1.90	1.97	3.62	±30
Perfluorooctanoic acid	2.00	2.19	9.74	±30
Perfluoro-octanesulfonate	1.85	1.73	-6.32	±30
Perfluorononanoic acid	2.00	2.29	14.58	±30
Perfluorononanesulfonate	1.92	1.84	-3.91	±30
Perfluorodecanoic acid	2.00	2.26	13.23	±30
8:2 fluorotelomersulfonate	1.92	1.83	-4.47	±30
Perfluorooctanesulfonamide	2.00	2.11	5.65	±30
NMeFOSAA	2.00	2.25	12.29	±30
Perfluorodecanesulfonate	1.93	1.88	-2.44	±30
Perfluoroundecanoic acid	2.00	2.24	12.04	±30
NEtFOSAA	2.00	2.27	13.26	±30
Perfluorododecanoic acid	2.00	2.24	11.88	±30
10:2-fluorotelomersulfonate	1.93	2.14	10.97	±30
NMePFOSAE	2.00	2.24	11.91	±30
NMePFOSA	2.00	2.27	13.75	±30
Perfluorododecanesulfonate	1.94	1.84	-5.06	±30
NEtPFOSAE	2.00	2.43	21.53	±30
NEtPFOSA	2.00	2.13	6.63	±30
Perfluorotridecanoic acid	2.00	2.51	25.70	±30
Perfluorotetradecanoic acid	2.00	2.29	14.50	±30
Perfluorohexadecanoic acid	2.00	2.31	15.50	±30
Perfluorooctadecanoic acid	2.00	2.20	10.10	±30

* Outside QC Limits.

FORM 07 - EPA 537 mod QSM

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV29D-64.WIFF

Date/Time Analyzed: 11/29/2018 19:25 Lab Sample ID: CCV6_CAL4

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.16	2.03	±30
Perfluoropentanoic acid	8.00	7.11	-11.08	±30
Perfluorobutanesulfonate	7.08	7.07	-0.12	±30
4:2 fluorotelomersulfonate	7.47	7.32	-2.02	±30
Perfluorohexanoic acid	8.00	8.16	1.96	±30
Perfluoropentanesulfonate	7.50	7.77	3.53	±30
Perfluoroheptanoic acid	8.00	7.80	-2.52	±30
Perfluorohexanesulfonate	7.30	6.78	-7.11	±30
6:2 fluorotelomersulfonate	7.58	8.06	6.29	±30
Perfluoroheptanesulfonate	7.61	7.48	-1.72	±30
Perfluorooctanoic acid	8.00	8.14	1.75	±30
Perfluoro-octanesulfonate	7.40	6.68	-9.71	±30
Perfluorononanoic acid	8.00	7.92	-0.97	±30
Perfluorononanesulfonate	7.68	7.11	-7.42	±30
Perfluorodecanoic acid	8.00	8.89	11.08	±30
8:2 fluorotelomersulfonate	7.66	7.36	-3.88	±30
Perfluorooctanesulfonamide	8.00	7.93	-0.83	±30
NMeFOSAA	8.00	7.77	-2.92	±30
Perfluorodecanesulfonate	7.70	7.14	-7.33	±30
Perfluoroundecanoic acid	8.00	8.04	0.51	±30
NEtFOSAA	8.00	7.69	-3.84	±30
Perfluorododecanoic acid	8.00	8.51	6.41	±30
10:2-fluorotelomersulfonate	7.71	8.18	6.04	±30
NMePFOSAE	8.00	8.01	0.07	±30
NMePFOSA	8.00	8.07	0.88	±30
Perfluorododecanesulfonate	7.74	7.30	-5.64	±30
NEtPFOSAE	8.00	8.53	6.66	±30
NEtPFOSA	8.00	7.51	-6.10	±30
Perfluorotridecanoic acid	8.00	9.20	14.98	±30
Perfluorotetradecanoic acid	8.00	8.37	4.65	±30
Perfluorohexadecanoic acid	8.00	8.82	10.29	±30
Perfluorooctadecanoic acid	8.00	8.26	3.28	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI11

Instrument ID: 27631 Lab File ID: 18NOV29D-72.WIFF

Date/Time Analyzed: 11/29/2018 20:38 Lab Sample ID: CCV7_ISC_CAL2

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.58	-3.74	±30
Perfluoropentanoic acid	0.60	0.53	-12.23	±30
Perfluorobutanesulfonate	0.53	0.47	-10.95	±30
4:2 fluorotelomersulfonate	0.56	0.54	-3.07	±30
Perfluorohexanoic acid	0.60	0.58	-3.41	±30
Perfluoropentanesulfonate	0.56	0.51	-9.82	±30
Perfluoroheptanoic acid	0.60	0.59	-2.01	±30
Perfluorohexanesulfonate	0.55	0.43	-21.05	±30
6:2 fluorotelomersulfonate	0.57	0.66	15.67	±30
Perfluoroheptanesulfonate	0.57	0.51	-10.49	±30
Perfluorooctanoic acid	0.60	0.56	-6.71	±30
Perfluoro-octanesulfonate	0.56	0.47	-15.33	±30
Perfluorononanoic acid	0.60	0.61	1.85	±30
Perfluorononanesulfonate	0.58	0.51	-10.95	±30
Perfluorodecanoic acid	0.60	0.59	-1.84	±30
8:2 fluorotelomersulfonate	0.58	0.44	-23.93	±30
Perfluorooctanesulfonamide	0.60	0.52	-13.07	±30
NMeFOSAA	0.60	0.60	0.77	±30
Perfluorodecanesulfonate	0.58	0.51	-11.72	±30
Perfluoroundecanoic acid	0.60	0.57	-4.74	±30
NEtFOSAA	0.60	0.53	-11.48	±30
Perfluorododecanoic acid	0.60	0.55	-8.02	±30
10:2-fluorotelomersulfonate	0.58	0.51	-12.52	±30
NMePFOSAE	0.60	0.53	-11.19	±30
NMePFOSA	0.60	0.55	-8.90	±30
Perfluorododecanesulfonate	0.58	0.51	-12.78	±30
NEtPFOSAE	0.60	0.63	5.33	±30
NEtPFOSA	0.60	0.51	-15.34	±30
Perfluorotridecanoic acid	0.60	0.63	4.33	±30
Perfluorotetradecanoic acid	0.60	0.59	-1.38	±30
Perfluorohexadecanoic acid	0.60	0.60	0.60	±30
Perfluorooctadecanoic acid	0.60	0.56	-6.95	±30

* Outside QC Limits.

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

Batch: 18338017 File Name:18DEC05D-05.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		291184	429843	850136	272033
LOWER LIMIT		145592	214922	425068	136017
UPPER LIMIT		436776	644765	1275204	408050
LAB SAMPLE ID	**DATE ANALYZED**				
BLK338017	12/05/18 17:18	323657	491329	939383	295961
LCS338017	12/05/18 17:27	340565	468210	932897	298097
LCSDA	12/05/18 17:36	317203	478700	931065	307907
9883396RE	12/05/18 17:45	336897	458657	936852	301983
9883397RE	12/05/18 17:54	334767	470318	928390	300006

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

Batch: 18311004 File Name:18NOV08D-05.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		315408	491983	728840	255568
LOWER LIMIT		157704	245992	364420	127784
UPPER LIMIT		473112	737975	1093260	383352
LAB SAMPLE ID	**DATE ANALYZED**				
BLK311004	11/09/18 00:53	385800	611088	896331	350046
LCS311004	11/09/18 01:02	396694	606974	889938	335742
9883380	11/09/18 02:32	374523	649675	911847	338409
9883381	11/09/18 02:41	365081	638999	864388	332711
9883386	11/09/18 02:50	380070	605285	892529	343366
9883387	11/09/18 02:59	379304	612840	908961	346588
9883392	11/09/18 03:26	358032	582205	856668	373848
9883395	11/09/18 03:53	387092	633867	907516	375823

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

Batch: 18314009 File Name:18NOV12DCAL-44.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		278744	450220	659926	249206
LOWER LIMIT		139372	225110	329963	124603
UPPER LIMIT		418116	675330	989889	373809
LAB SAMPLE ID	**DATE ANALYZED**				
BLK314009	11/13/18 01:47	315320	496771	699270	262662
LCS314009	11/13/18 01:56	322354	471810	690128	270962
LCSDA	11/13/18 02:05	322064	503976	701271	264539
9883388	11/13/18 03:26	296482	487034	697888	259199
9883389	11/13/18 03:35	307794	491255	682416	267897
9883393	11/13/18 03:44	313316	488167	686341	256058
9883394	11/13/18 03:53	306153	507971	689242	252737

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI11
Matrix: SOIL

Batch: 18332003 File Name:18NOV29D-05.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		451203	495984	906425	296262
LOWER LIMIT		225602	247992	453213	148131
UPPER LIMIT		676805	743976	1359638	444393
LAB SAMPLE ID	**DATE ANALYZED**				
BLK332003	11/29/18 18:04	538786	583595	1052099	370221
LCS332003	11/29/18 18:13	557510	600874	1066377	371549
9883382	11/29/18 18:40	567587	604704	1072168	374610
9883385	11/29/18 18:49	583864	598774	1087147	368420
9883396	11/29/18 18:58	577742	605859	1066717	364447
9883397	11/29/18 19:07	589903	590368	1076204	355986
9883383MS	11/29/18 20:20	592357	597174	1082523	374961
9883384MSD	11/29/18 20:29	558074	613600	1055794	352306

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

Sample Data

PFAS by LC/MS/MS

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18311004 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9883380			**Data File:**		18NOV08D-99.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-02-05 Grab Soil			**Acquis Date:**		2018-11-09T02:32:44
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	39			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		JPT12262
Sample Wt.:	1.02000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	911846.9	728839.7	25	50	
13C2-PFOA	5.0	649674.7	491983.1	32	50	
13C4-PFOS	4.8	338408.8	255568.1	32	50	
13C2-PFDA	5.0	374523.1	315407.5	19	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	378133.3	13C3-PFBA	911846.9	0.415	9.118	5.968	65	50-150	
E13C5-PFHxA	632262.0	13C2-PFOA	649674.7	0.973	9.804	7.019	72	50-150	
E13C3-PFHxS	308398.3	13C2-PFOA	649674.7	0.475	9.275	6.682	72	50-150	
E13C4-PFHpA	485603.3	13C2-PFOA	649674.7	0.747	9.804	6.667	68	50-150	
E13C8-PFOA	861612.9	13C2-PFOA	649674.7	1.326	9.804	7.252	74	50-150	
E13C8-PFOS	275389.7	13C4-PFOS	338408.8	0.814	9.373	7.056	75	50-150	
E13C9-PFNA	442517.8	13C4-PFOS	338408.8	1.308	9.804	7.004	71	50-150	
E13C6-PFDA	550602.0	13C2-PFDA	374523.1	1.470	9.804	7.249	74	50-150	
Ed3-NMeFOSAA	63832.0	13C2-PFDA	374523.1	0.170	9.804	6.215	63	50-150	
E13C7-PFUnDA	242823.1	13C2-PFDA	374523.1	0.648	9.804	7.334	75	50-150	
Ed5-NEtFOSAA	53806.5	13C2-PFDA	374523.1	0.144	9.804	6.519	66	50-150	
E13C2-PFDoDA	530023.0	13C2-PFDA	374523.1	1.415	9.804	7.481	76	50-150	
E13C2-PFTeDA	359889.5	13C2-PFDA	374523.1	0.961	9.804	6.783	69	50-150	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

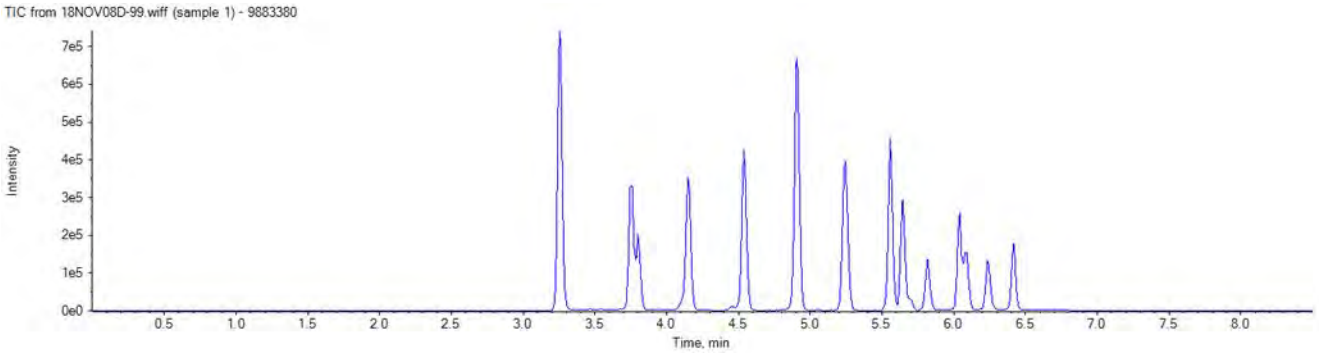
Analyte Quantitation Peak Table

Sample Name: 9883380 **Instrument Name:** LM27631 **File Name:** 18NOV08D-99.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.02000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.80	1.000	10540.7		A	13C3-PFBS	3.80	378133.3	0.028	0.276
PFHxA	4.15	1.000	176070.9		A	13C5-PFHxA	4.15	632262.0	0.278	2.342
PFHxS	4.54	1.000	84734.7		M	13C3-PFHxS	4.54	308398.3	0.275	2.731
PFHpA	4.54	1.000	99221.5		A	13C4-PFHpA	4.54	485603.3	0.204	1.347
PFOA	4.91	1.000	30731.8		M	13C8-PFOA	4.91	861612.9	0.036	0.394
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	275389.7	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	442517.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	550602.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	63832.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	242823.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	53806.5	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	530023.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	530023.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	359889.5	N/A	

Total Ion Chromatogram

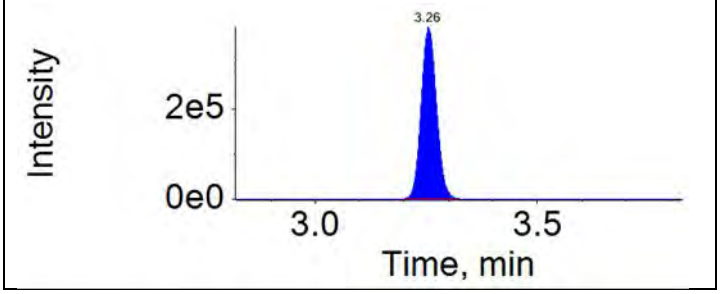


APPROVED
By JPT at 5:18 pm, 11/9/18

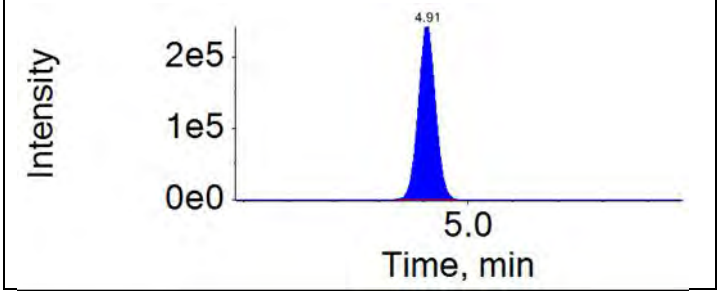
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

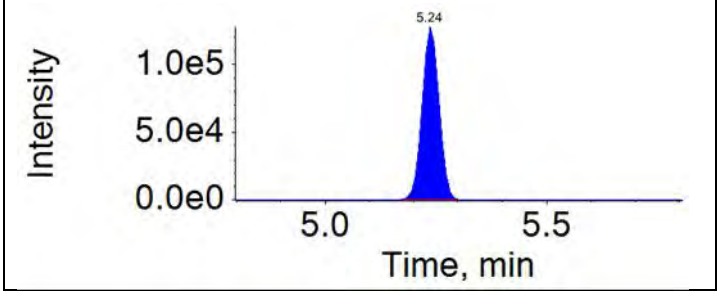
Injection Standard: 13C3-PFBA
216.0 / 172.0



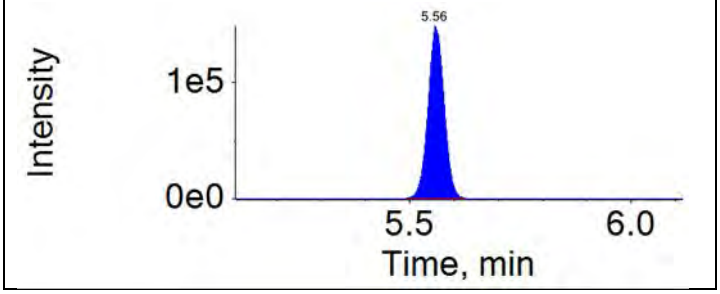
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



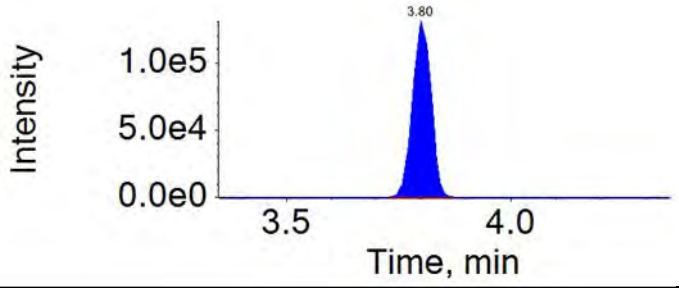
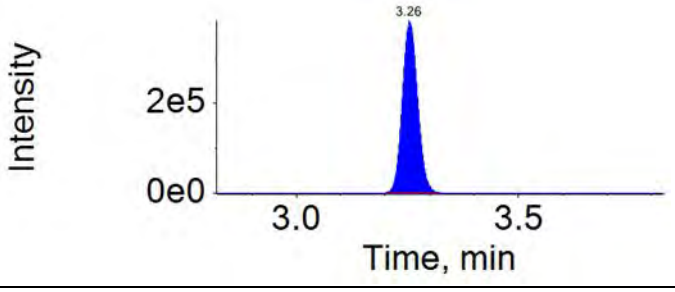
Injection Standard: 13C2-PFDA
515.0 / 470.0

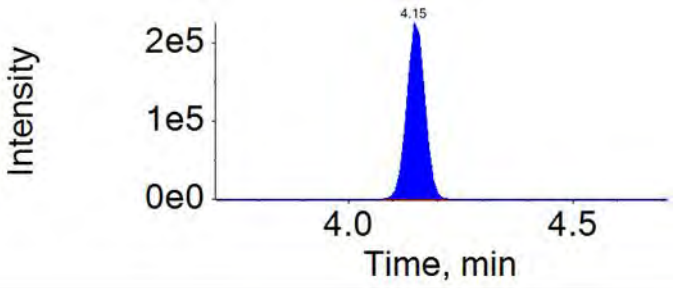
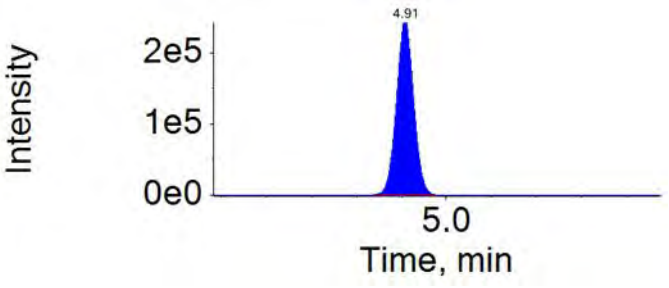


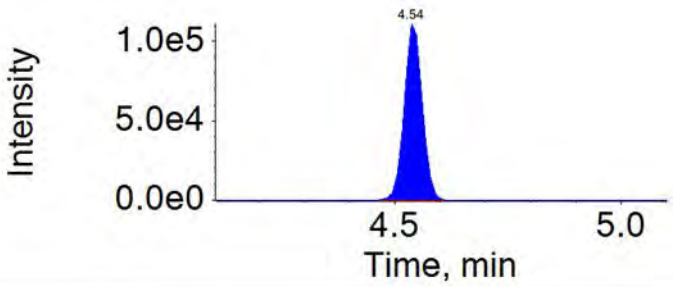
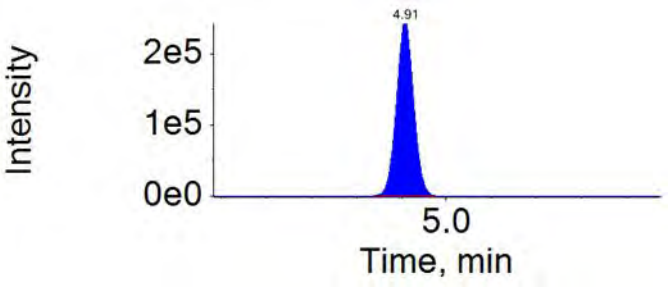
APPROVED
By JPT at 5:18 pm, 11/9/18

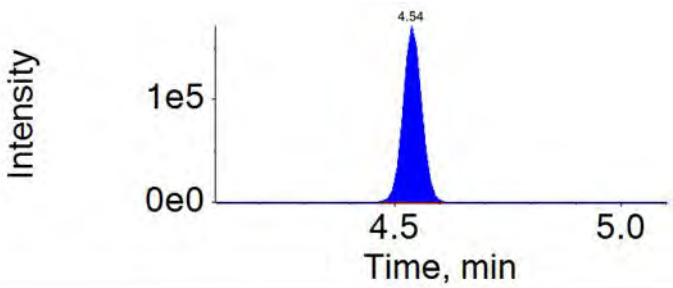
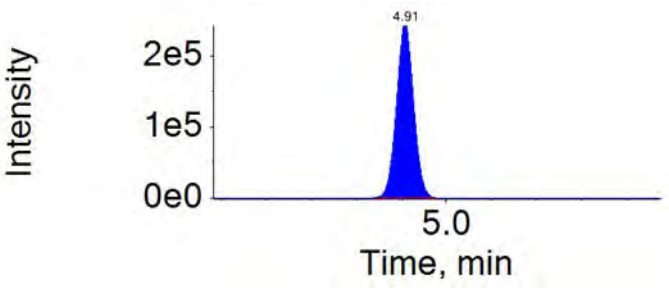
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

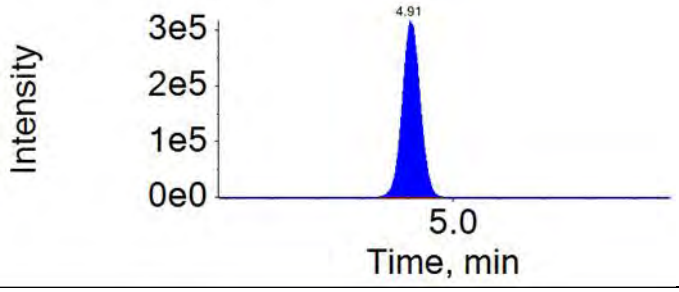
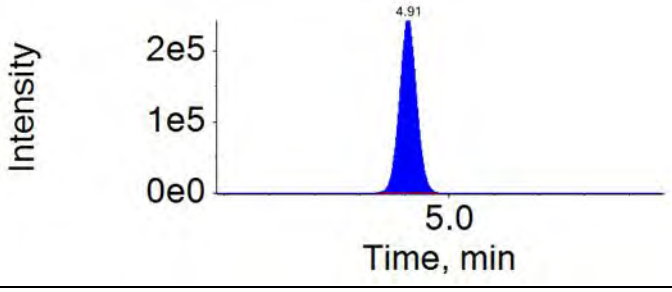
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

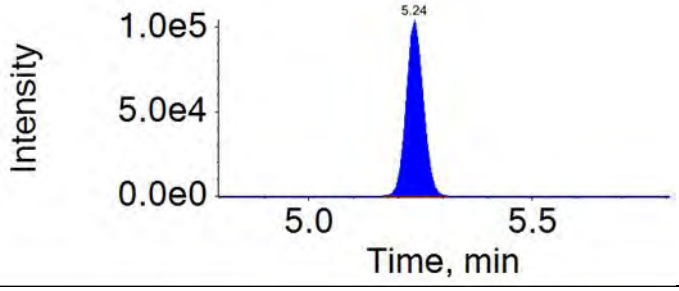
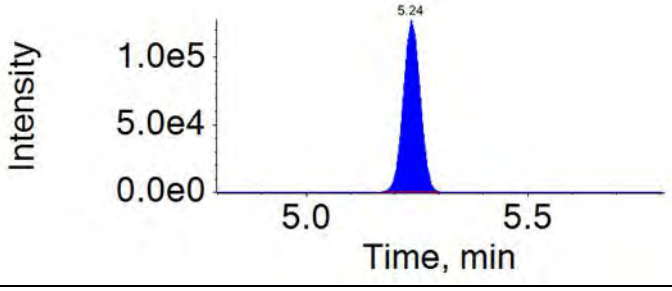
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

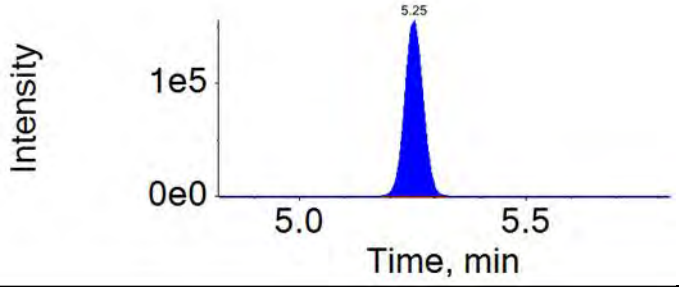
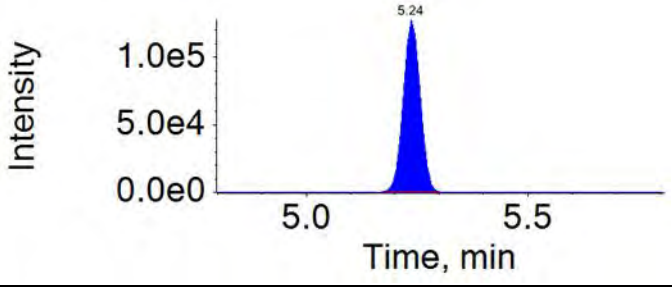
APPROVED
By JPT at 5:18 pm, 11/9/18

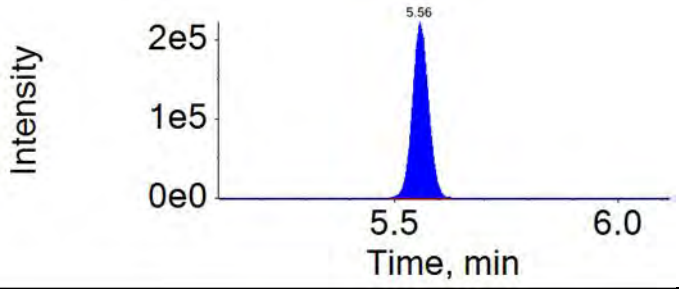
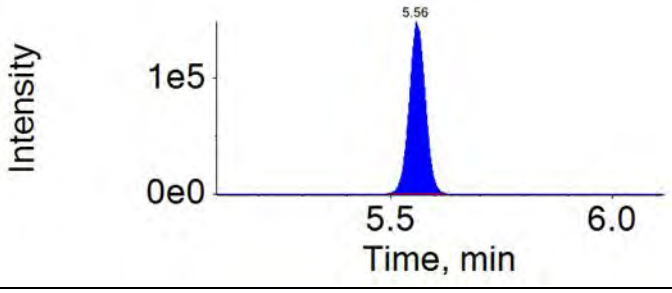
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

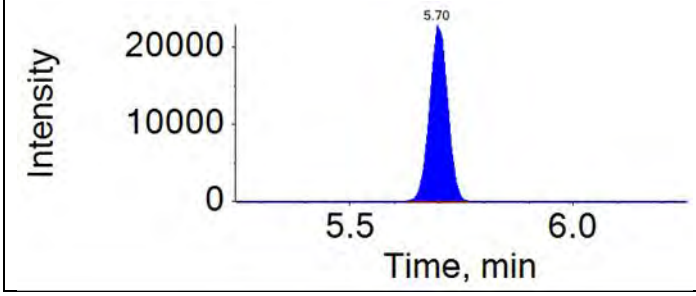
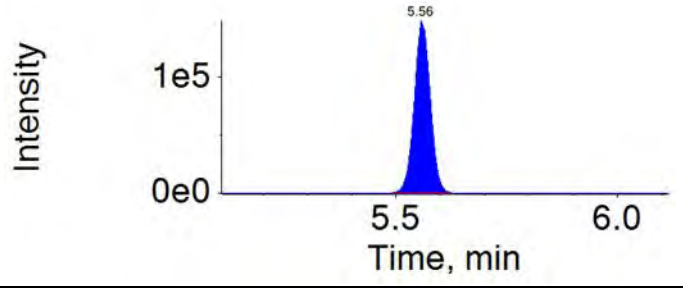
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

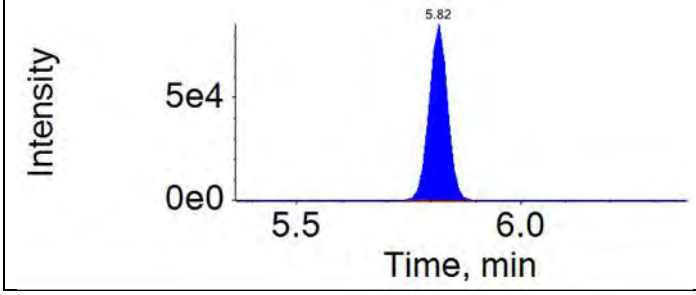
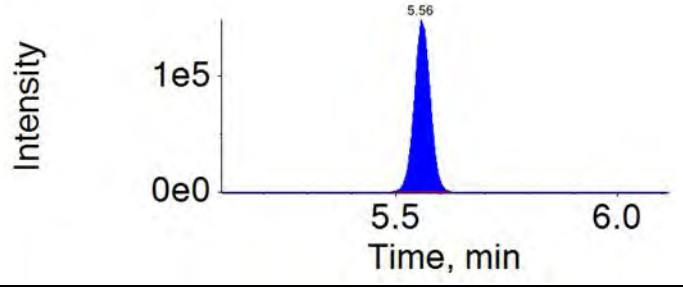
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

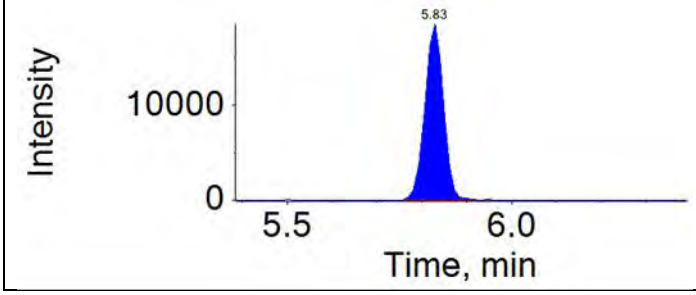
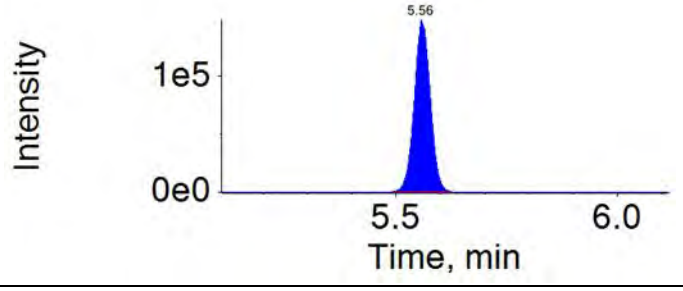
APPROVED
By JPT at 5:18 pm, 11/9/18

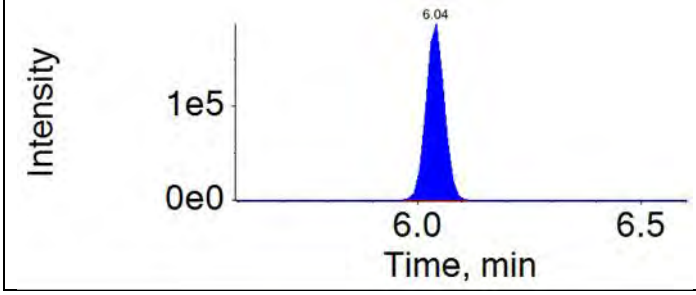
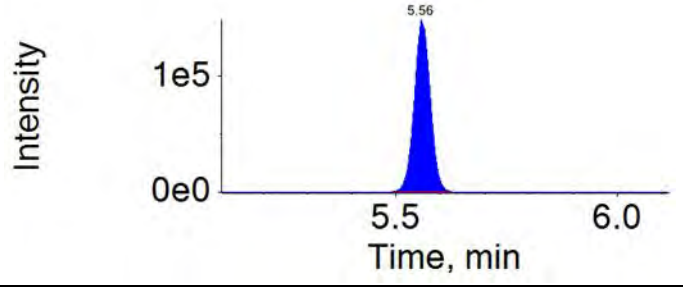
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

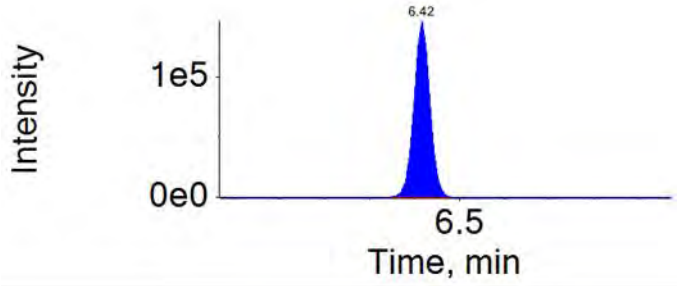
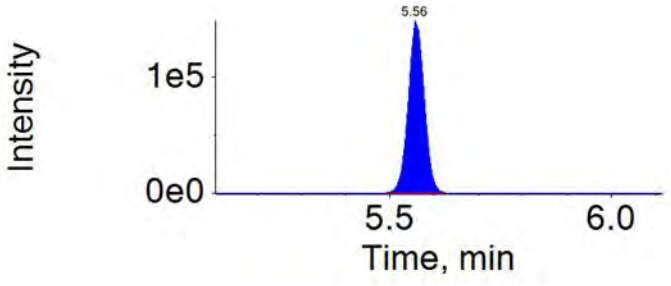
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

APPROVED
By JPT at 5:18 pm, 11/9/18

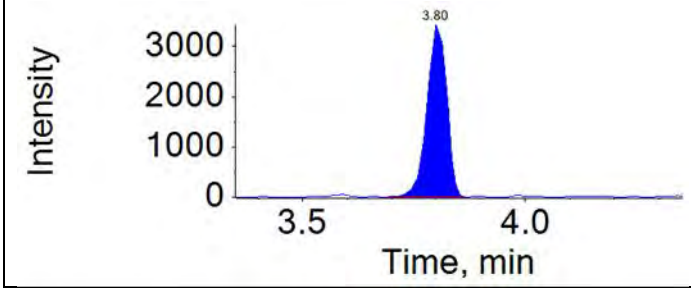
REVIEWED
By umar at 4:40 pm, 11/12/18

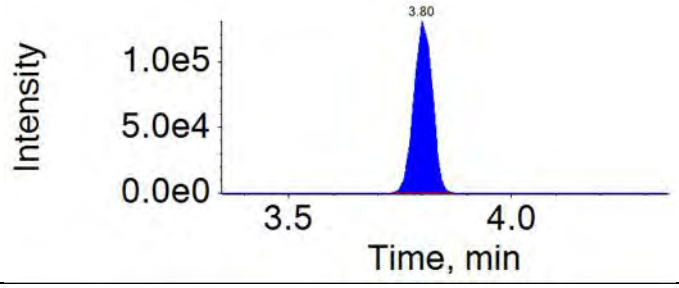
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

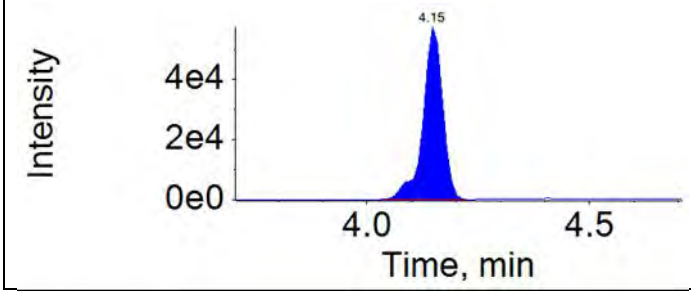
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

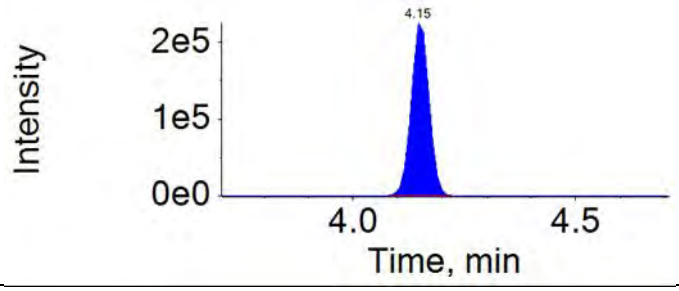
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



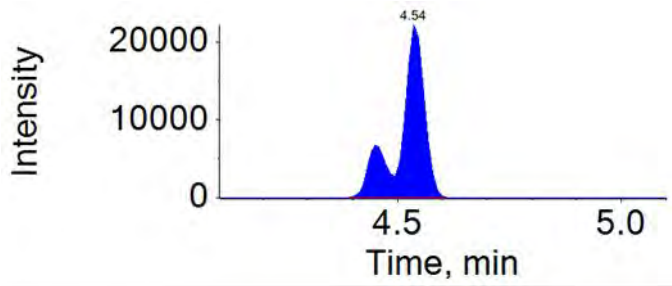


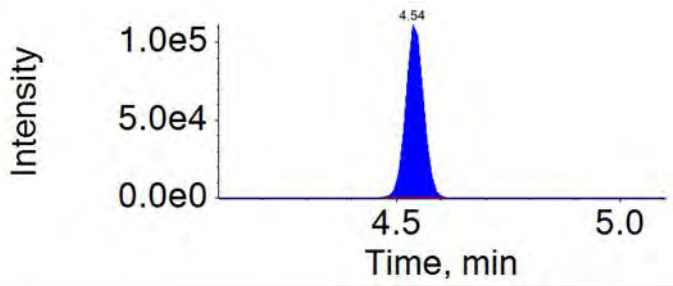
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



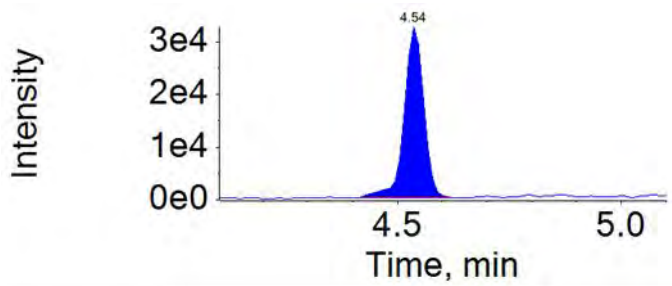


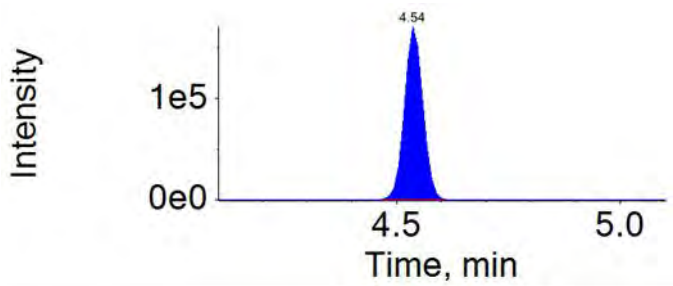
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



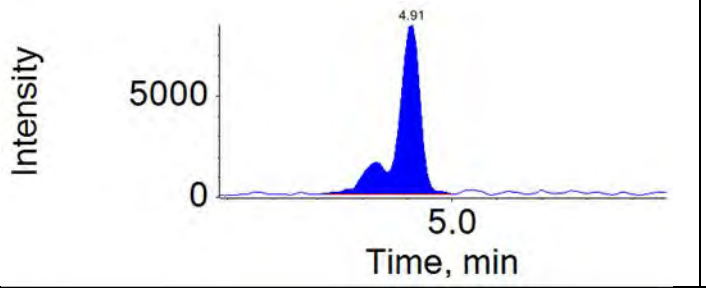


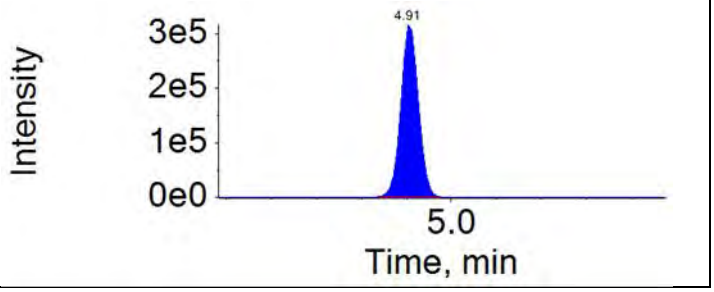
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

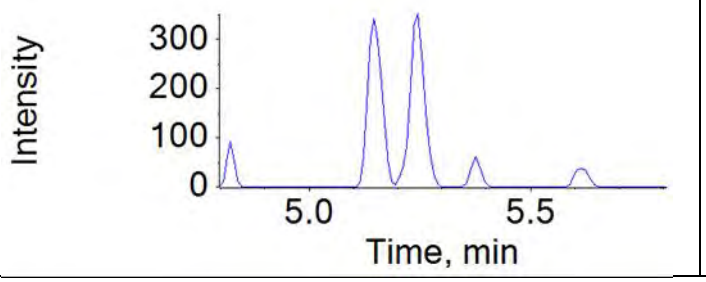
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

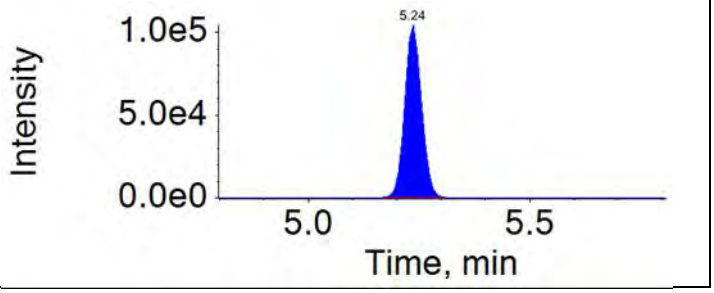
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



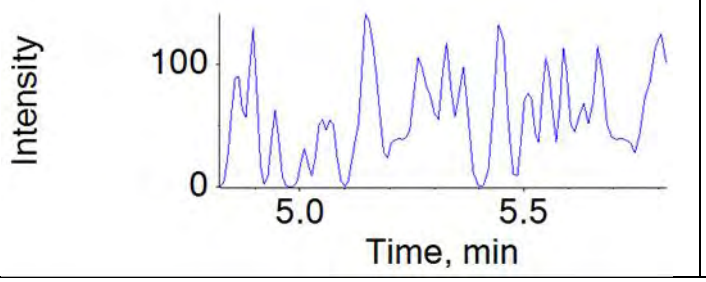


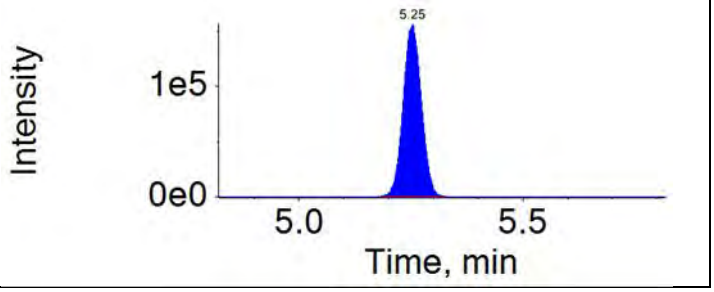
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



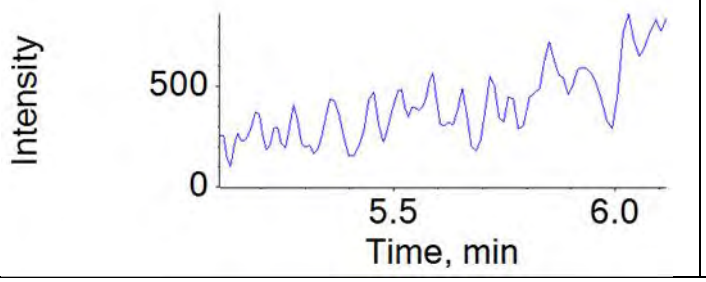


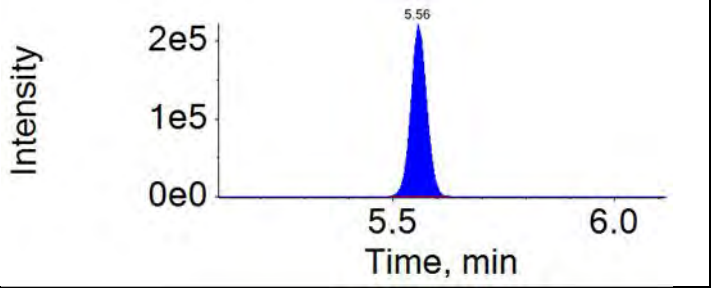
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0

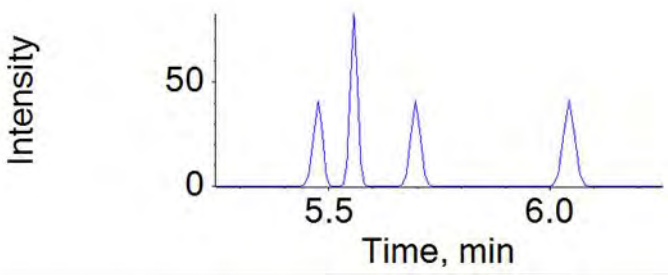
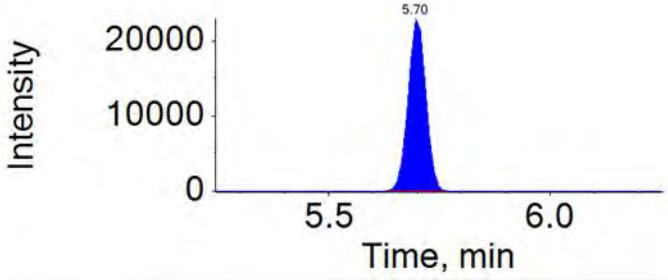


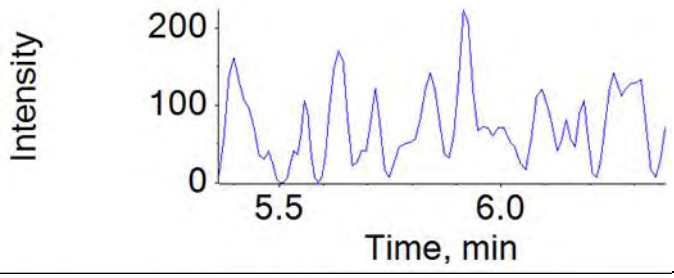
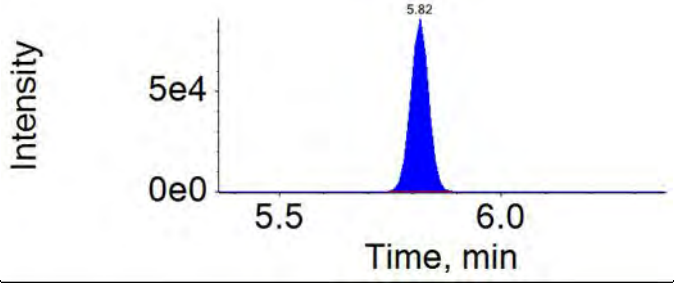


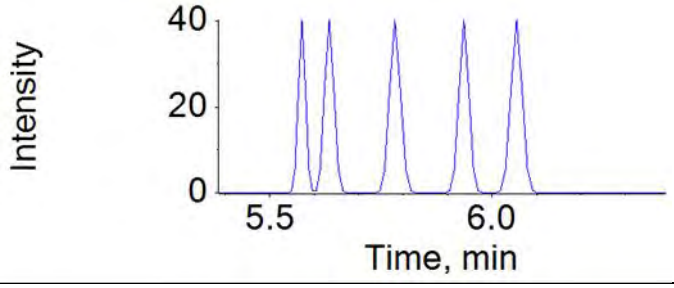
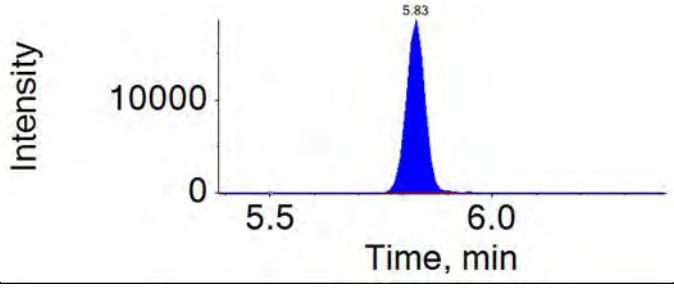
APPROVED
By JPT at 5:18 pm, 11/9/18

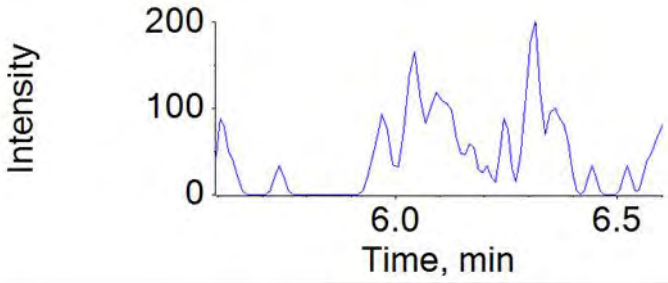
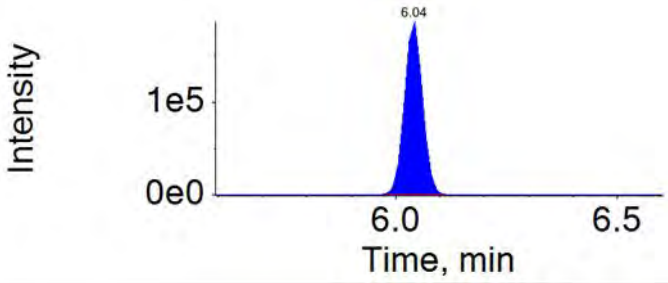
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

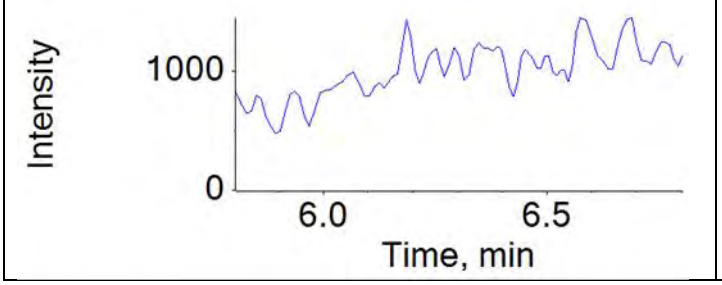
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

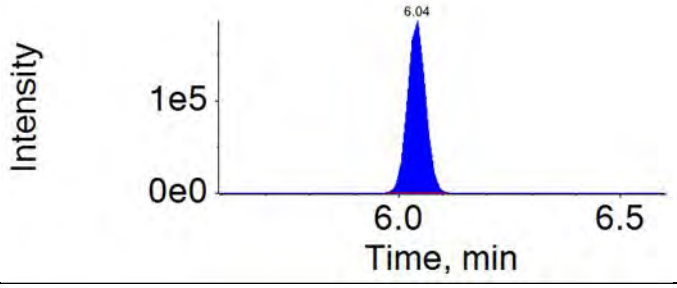
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

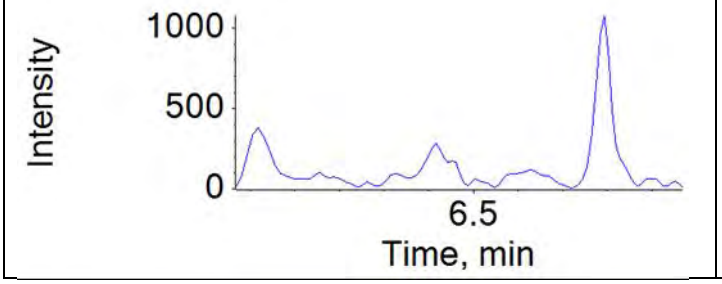
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

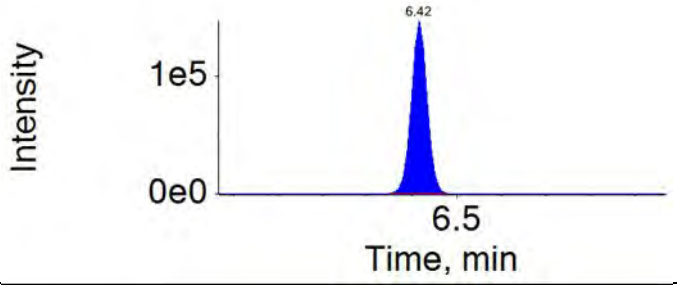
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



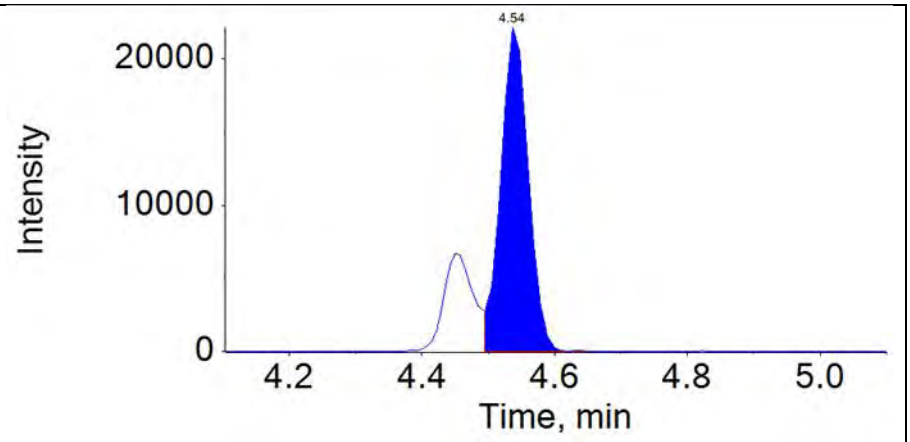


APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

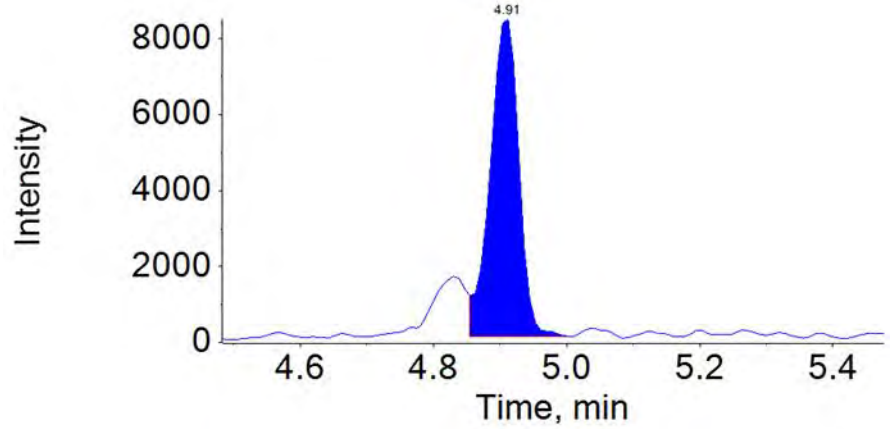
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
64008.7
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-99.wiff
Sample Name:
9883380



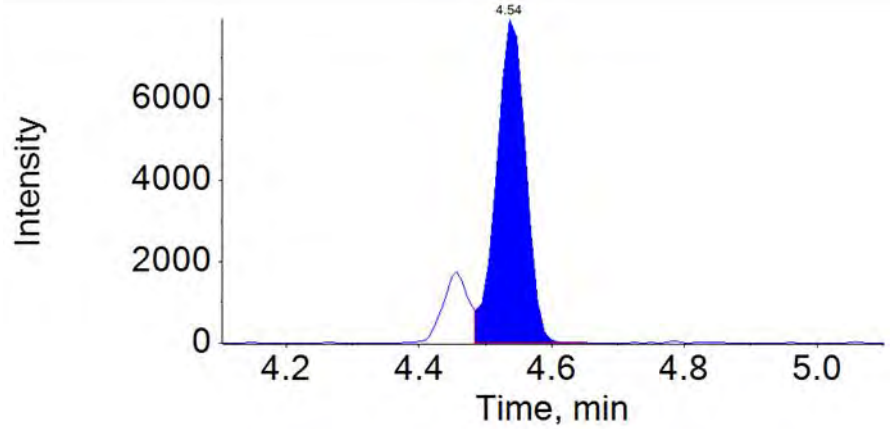
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
25053.3
Mass Range:
413.0 / 369.0
File Name:
18NOV08D-99.wiff
Sample Name:
9883380



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
24390.8
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-99.wiff
Sample Name:
9883380



Integration Comment: incorrect integration

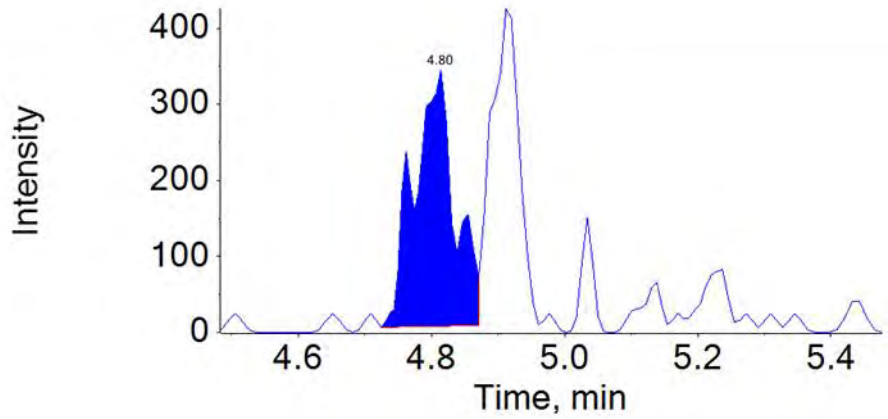
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOA_2
RT (min.):
4.80
Peak Area:
1448.3
Mass Range:
413.0 / 169.0
File Name:
18NOV08D-99.wiff
Sample Name:
9883380



Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Ion Ratio Report

Sample Name: 9883380 **Instrument Name:** LM27631 **File Name:** 18NOV08D-99.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	10540.7	A	N/A	1.0000			
PFBS_2	3.80	1.00	3064.1	A	N/A	0.2907	-19	50	
PFHxA	4.15	1.00	176070.9	A	N/A	1.0000			
PFHxA_2	4.15	1.00	2279.1	A	N/A	0.0129	13	50	
PFHxS	4.54	1.00	84734.7	M	N/A	1.0000			
PFHxS_2	4.54	1.00	28963.5	M	N/A	0.3418	-4	50	
PFHpA	4.54	1.00	99221.5	A	N/A	1.0000			
PFHpA_2	4.54	1.00	4821.9	A	N/A	0.0486	-16	50	
PFOA	4.91	1.00	30731.8	M	N/A	1.0000			
PFOA_2	4.87	0.99	2783.9	M	N/A	0.0906	43	50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	6.08	1.01	62.3	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

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By JPT at 5:18 pm, 11/9/18

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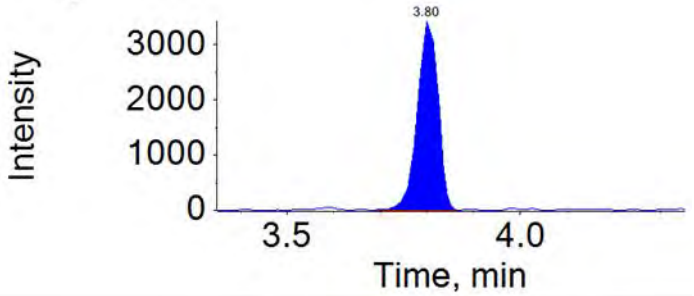
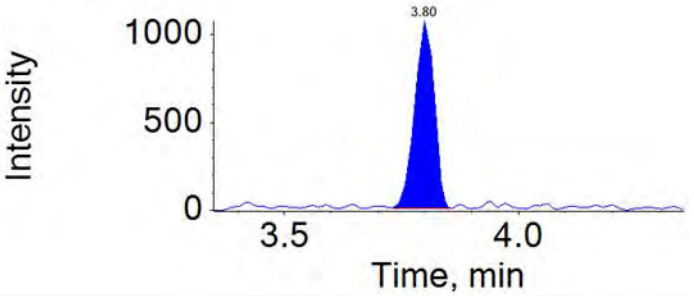
By umar at 4:40 pm, 11/12/18

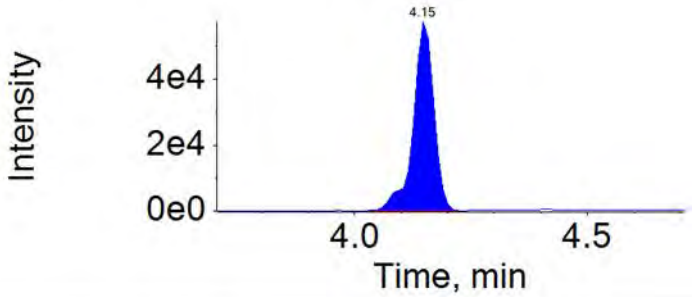
Component: PFBS
Primary Mass: 299.0 / 80.0



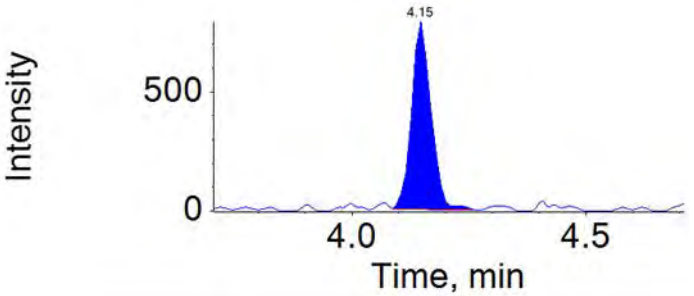
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



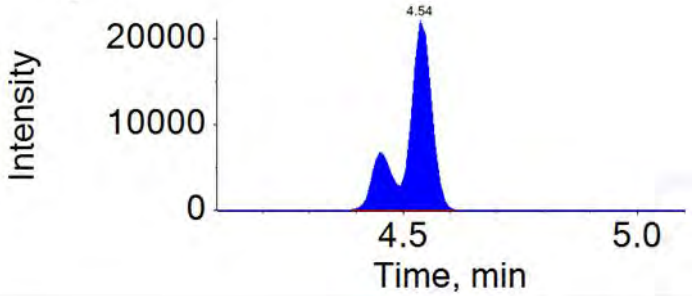
Component: PFHxA
Primary Mass: 313.0 / 269.0



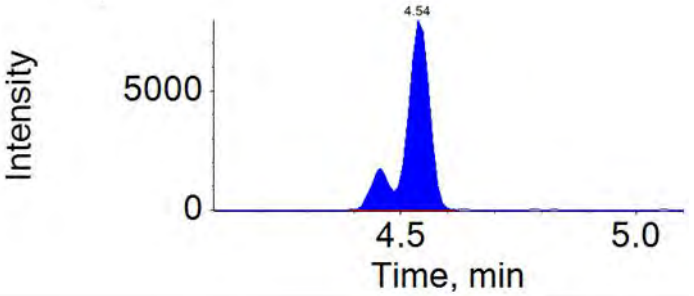
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



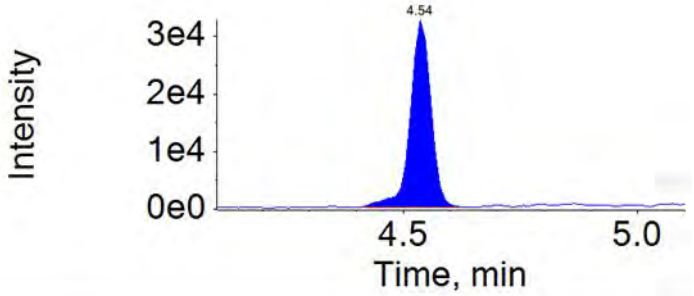
Component: PFHxS
Primary Mass: 399.0 / 80.0



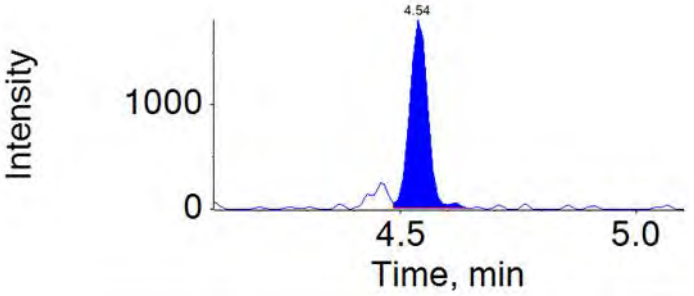
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



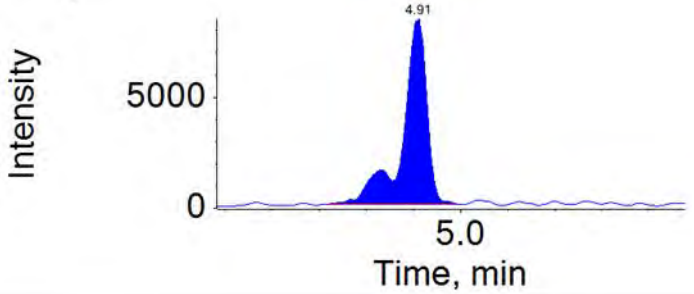
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



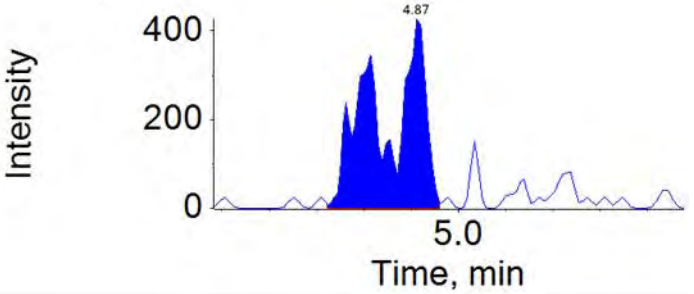
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

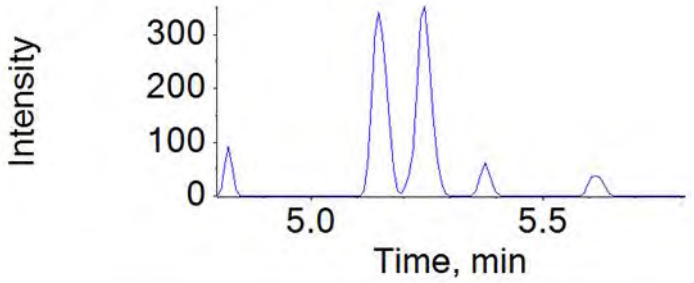
Component: PFOA
Primary Mass: 413.0 / 369.0



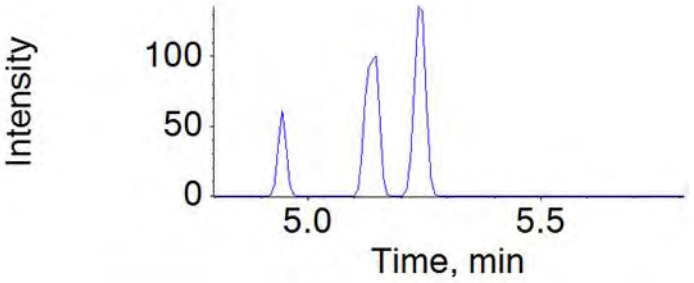
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



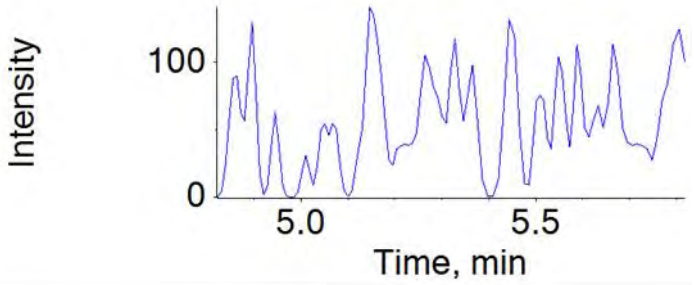
Component: PFOS
Primary Mass: 499.0 / 80.0



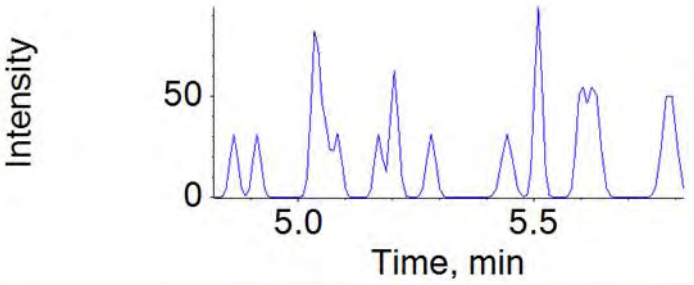
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



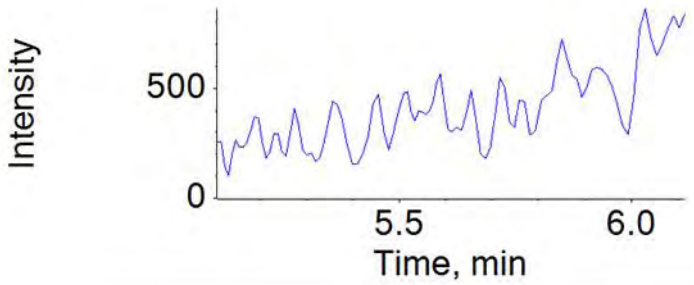
Component: PFNA
Primary Mass: 463.0 / 419.0



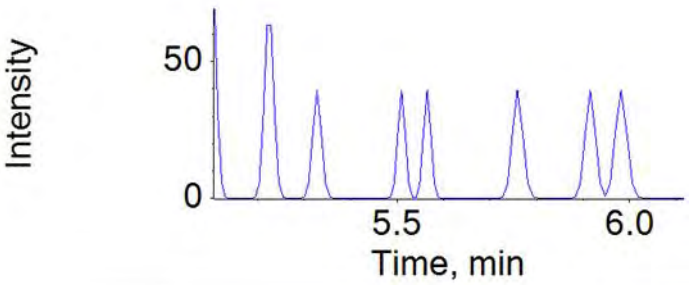
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



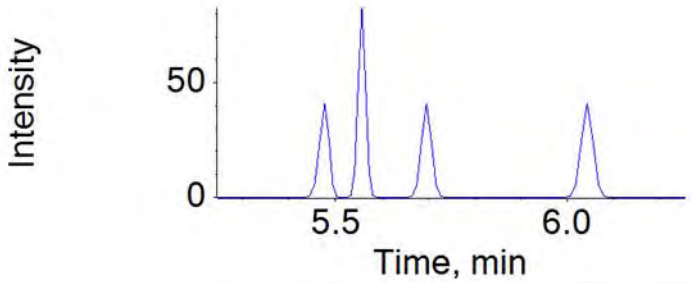
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



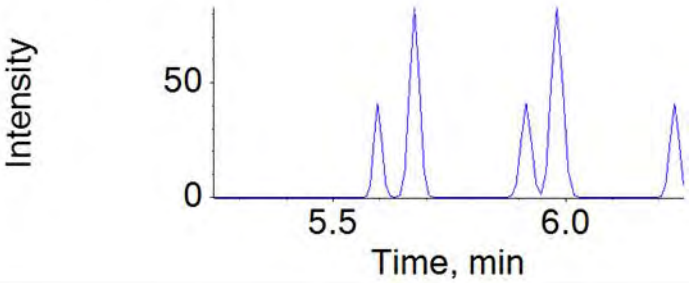
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

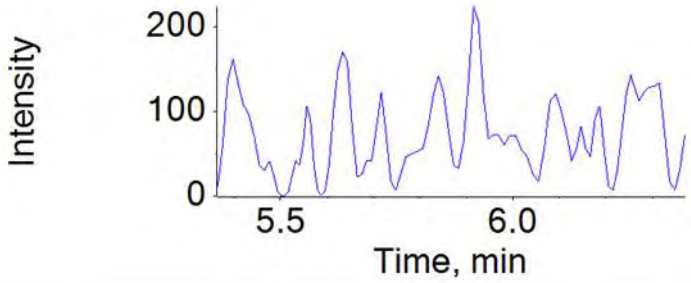
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



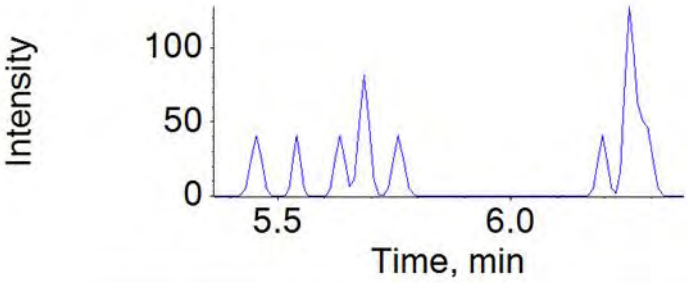
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



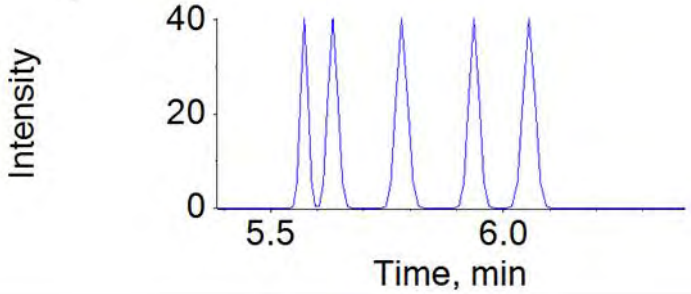
Component: PFUnDA
Primary Mass: 563.0 / 519.0



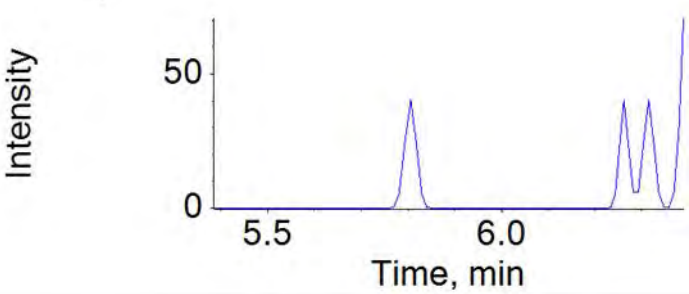
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



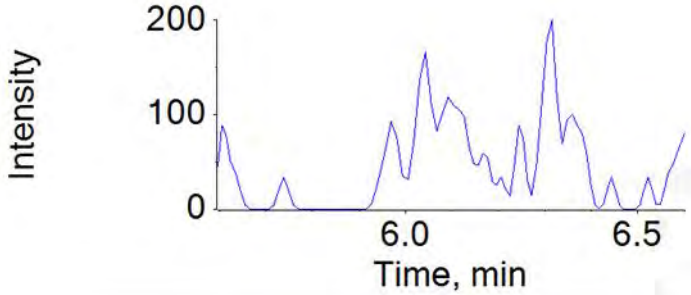
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



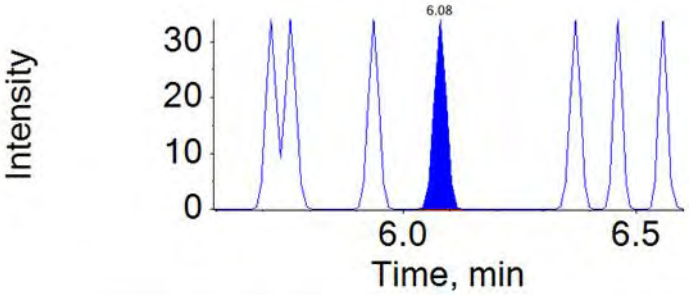
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



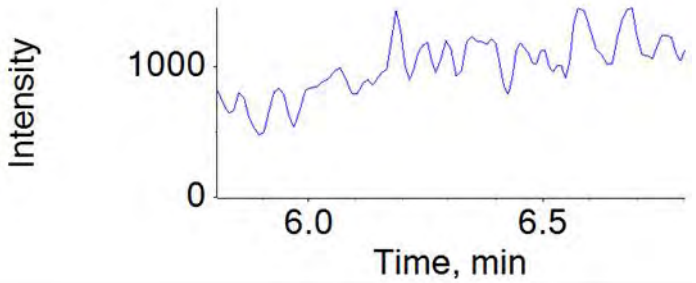
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



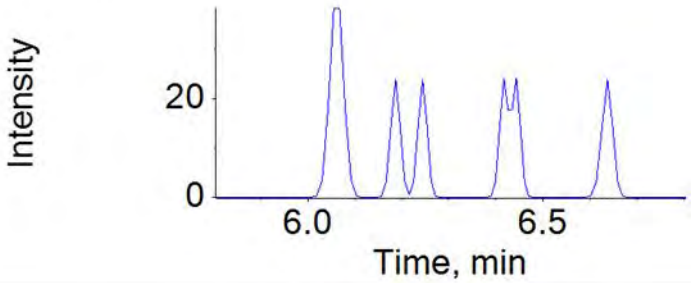
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

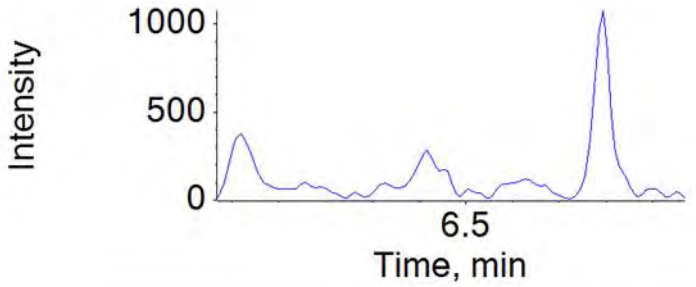
Component: PFTrDA
Primary Mass: 663.0 / 619.0



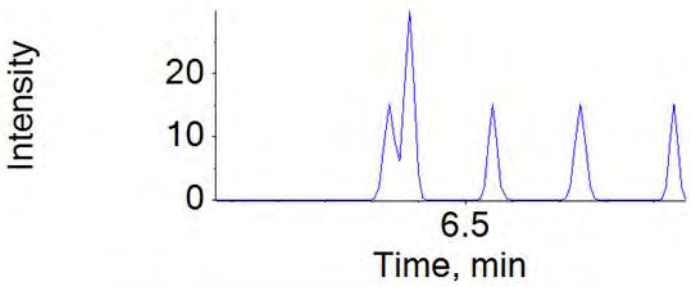
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883381			**Data File:**		18NOV08D-100.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-02-08 Grab Soil			**Acquis Date:**		2018-11-09T02:41:47
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	40			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		JPT12262
Sample Wt.:	1.02000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	864387.6	728839.7	19	50	
13C2-PFOA	5.0	638999.0	491983.1	30	50	
13C4-PFOS	4.8	332711.1	255568.1	30	50	
13C2-PFDA	5.0	365081.0	315407.5	16	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	388400.6	13C3-PFBA	864387.6	0.449	9.118	6.466	71	50-150	
E13C5-PFHxA	609488.6	13C2-PFOA	638999.0	0.954	9.804	6.880	70	50-150	
E13C3-PFHxS	308585.3	13C2-PFOA	638999.0	0.483	9.275	6.798	73	50-150	
E13C4-PFHpA	489059.5	13C2-PFOA	638999.0	0.765	9.804	6.827	70	50-150	
E13C8-PFOA	847286.9	13C2-PFOA	638999.0	1.326	9.804	7.250	74	50-150	
E13C8-PFOS	276083.5	13C4-PFOS	332711.1	0.830	9.373	7.195	77	50-150	
E13C9-PFNA	458748.5	13C4-PFOS	332711.1	1.379	9.804	7.385	75	50-150	
E13C6-PFDA	565441.9	13C2-PFDA	365081.0	1.549	9.804	7.637	78	50-150	
Ed3-NMeFOSAA	74151.8	13C2-PFDA	365081.0	0.203	9.804	7.406	76	50-150	
E13C7-PFUnDA	245189.8	13C2-PFDA	365081.0	0.672	9.804	7.597	77	50-150	
Ed5-NEtFOSAA	55930.5	13C2-PFDA	365081.0	0.153	9.804	6.952	71	50-150	
E13C2-PFDoDA	509377.1	13C2-PFDA	365081.0	1.395	9.804	7.375	75	50-150	
E13C2-PFTeDA	358501.3	13C2-PFDA	365081.0	0.982	9.804	6.932	71	50-150	

APPROVED
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REVIEWED
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ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

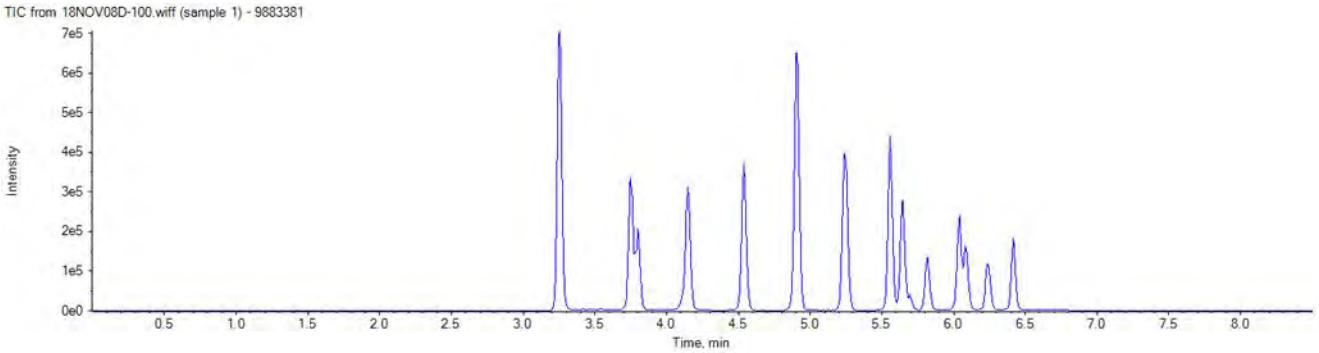
Analyte Quantitation Peak Table

Sample Name: 9883381 **Instrument Name:** LM27631 **File Name:** 18NOV08D-100.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.02000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.80	1.000	8273.7		A	13C3-PFBS	3.80	388400.6	0.021	0.211
PFHxA	4.15	1.000	109673.0		A	13C5-PFHxA	4.15	609488.6	0.180	1.513
PFHxS	4.54	1.000	11224.7		M	13C3-PFHxS	4.54	308585.3	0.036	0.362
PFHpA	4.54	1.000	16535.9		M	13C4-PFHpA	4.54	489059.5	0.034	0.223
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	847286.9	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	276083.5	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	458748.5	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	565441.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	74151.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	245189.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	55930.5	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	509377.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	509377.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	358501.3	N/A	

Total Ion Chromatogram

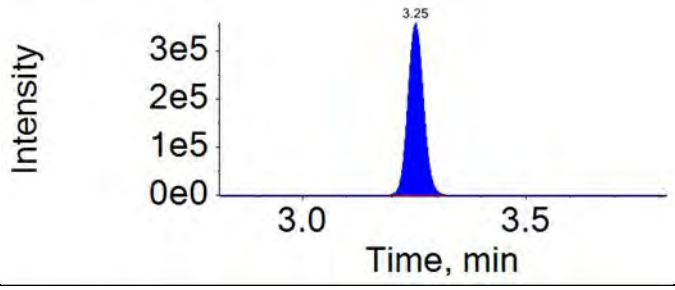


APPROVED
By JPT at 5:18 pm, 11/9/18

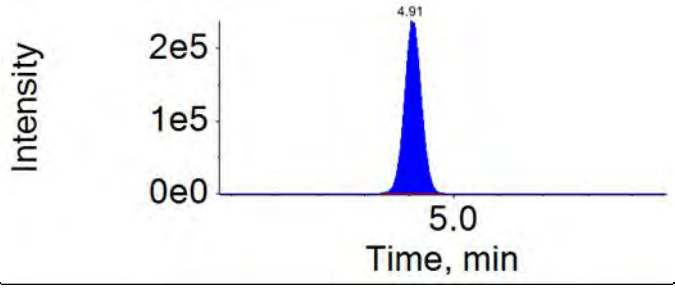
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

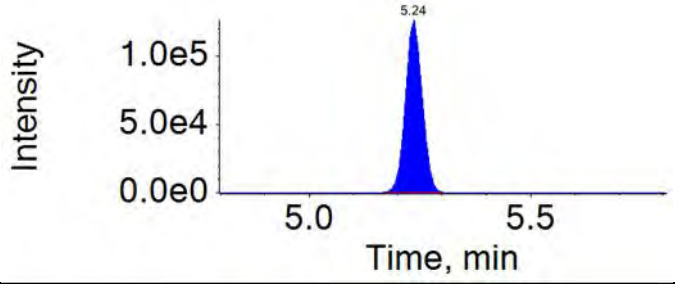
Injection Standard: 13C3-PFBA
216.0 / 172.0



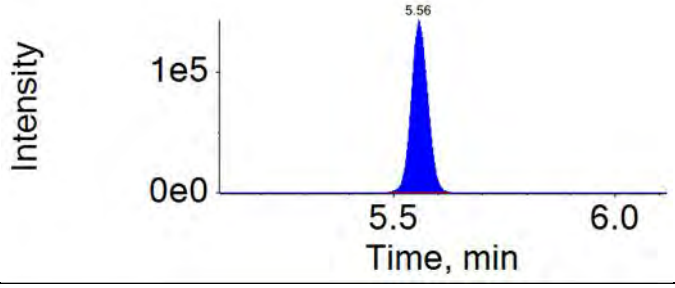
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

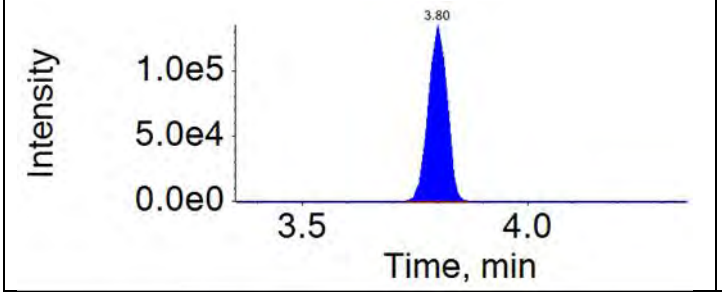


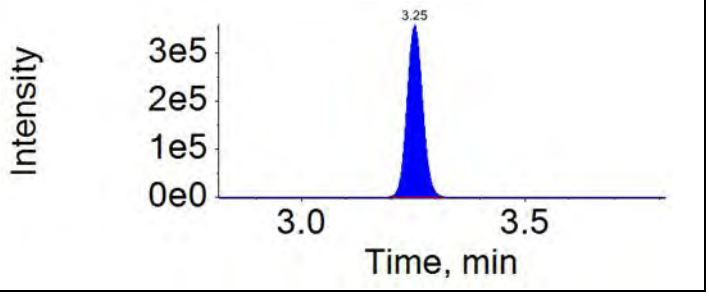
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

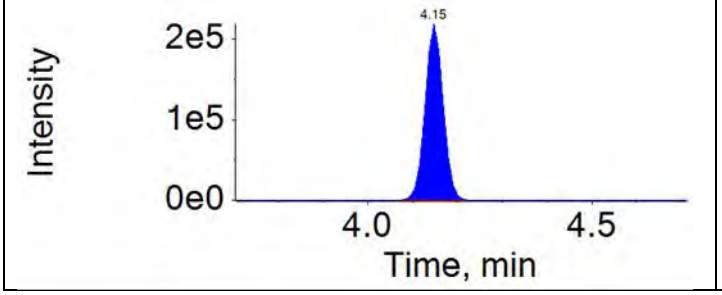
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

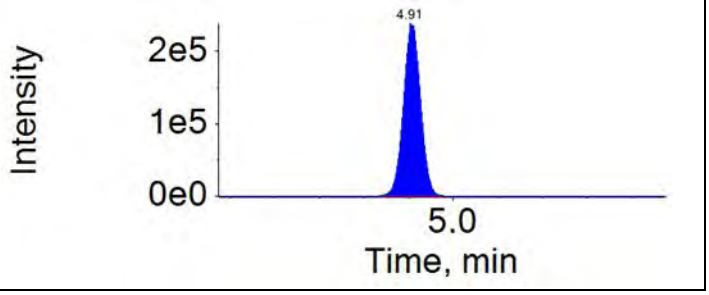
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



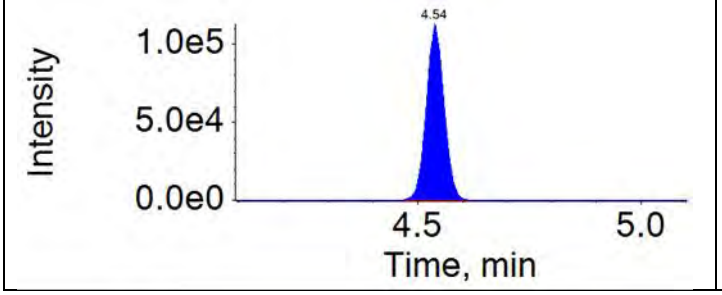


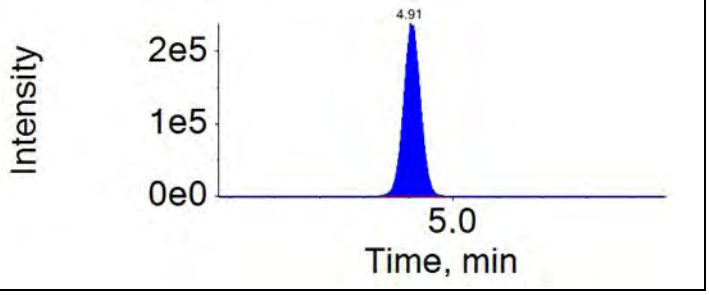
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



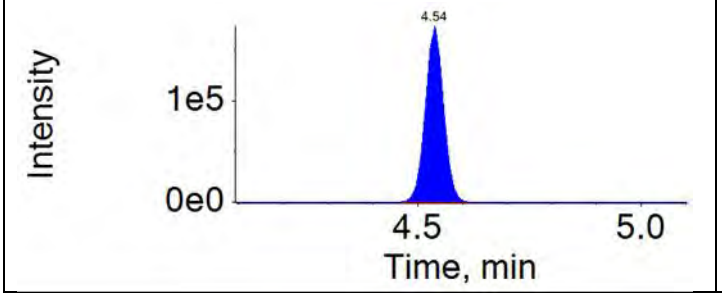


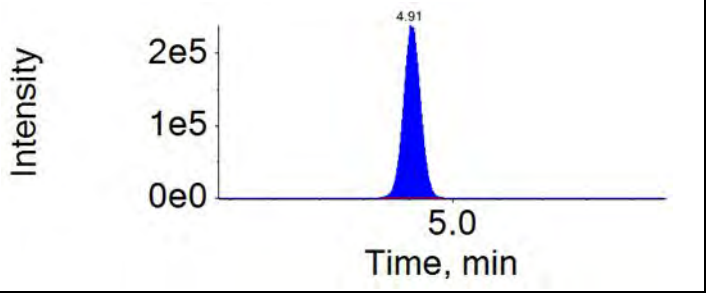
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

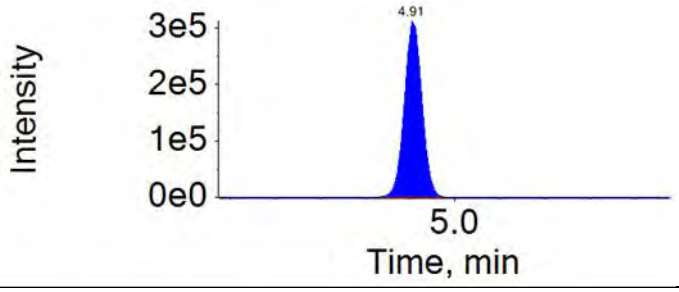
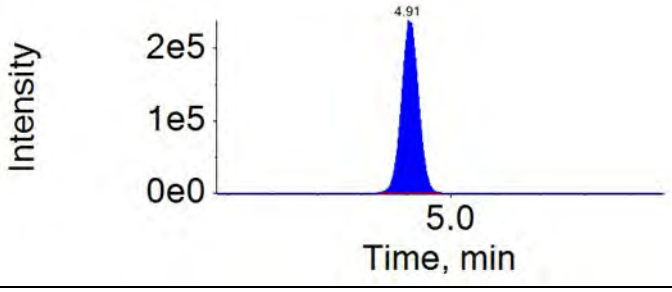


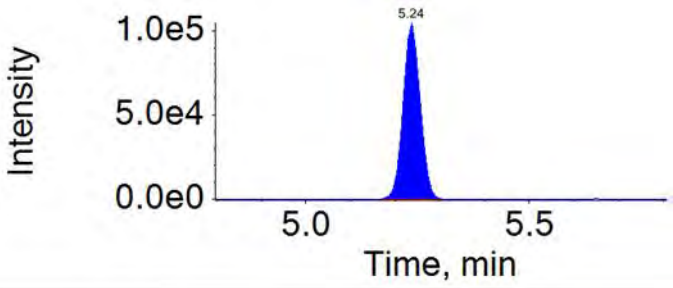
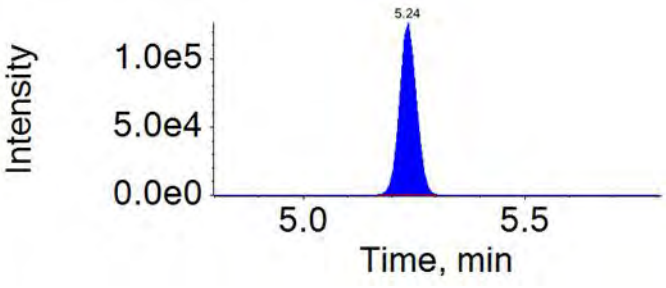


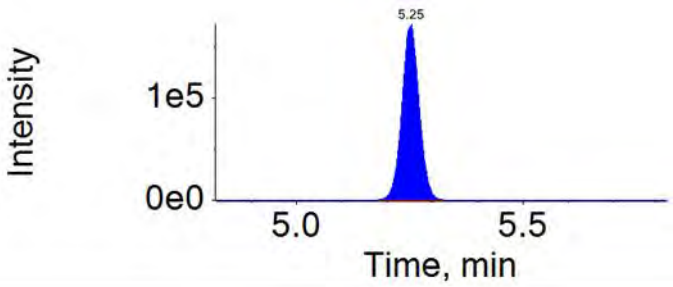
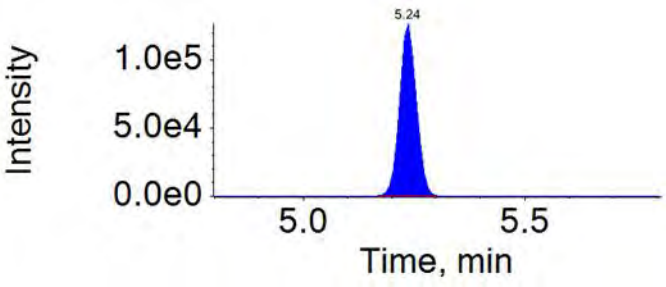
APPROVED
By JPT at 5:18 pm, 11/9/18

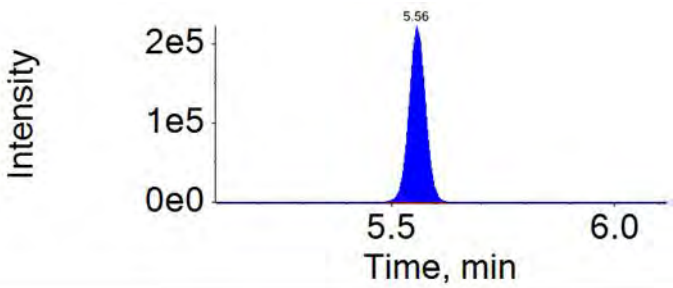
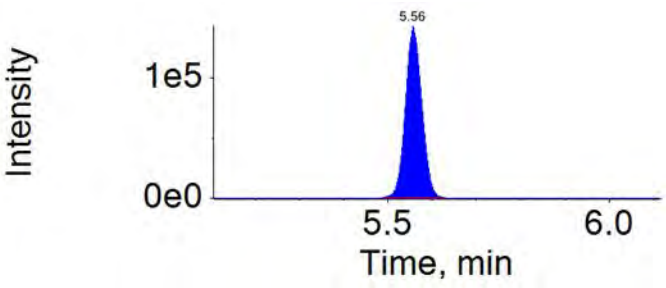
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

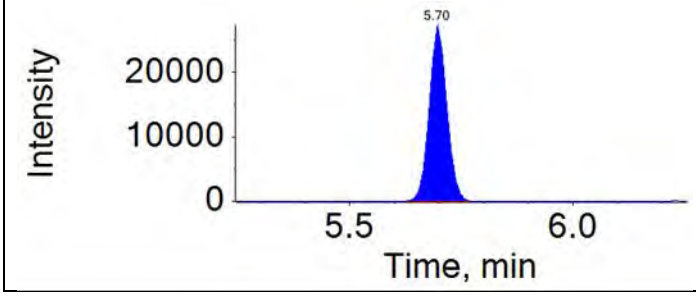
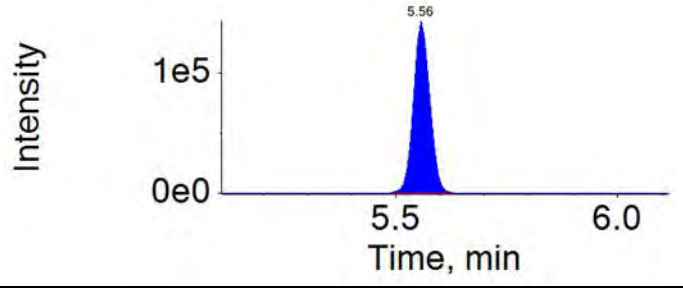
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

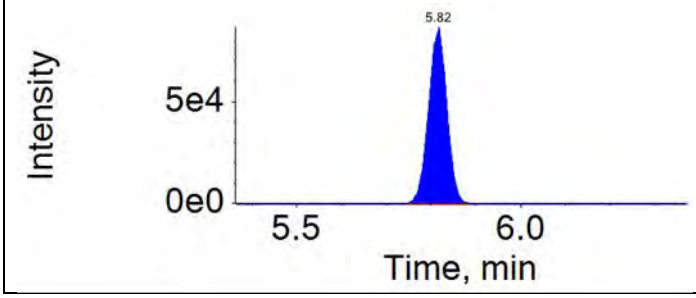
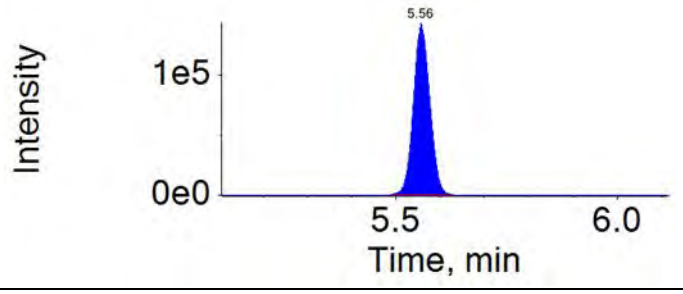
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

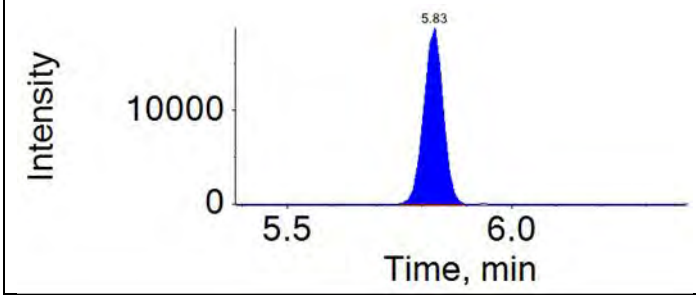
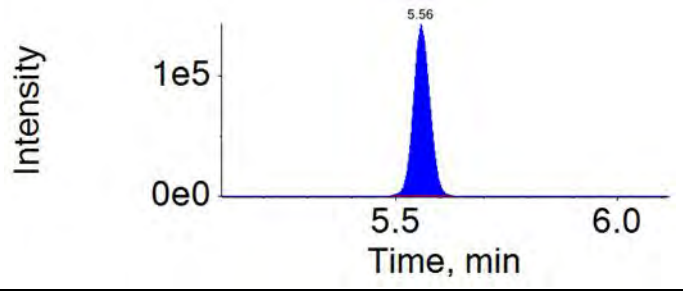
APPROVED
By JPT at 5:18 pm, 11/9/18

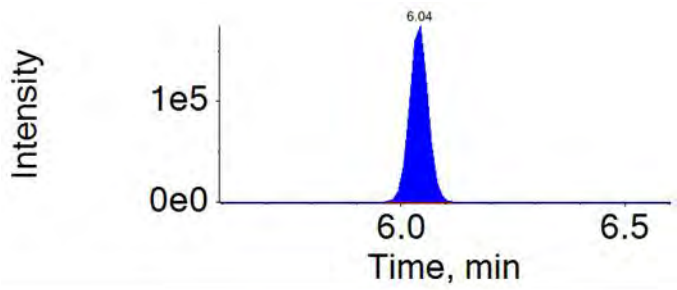
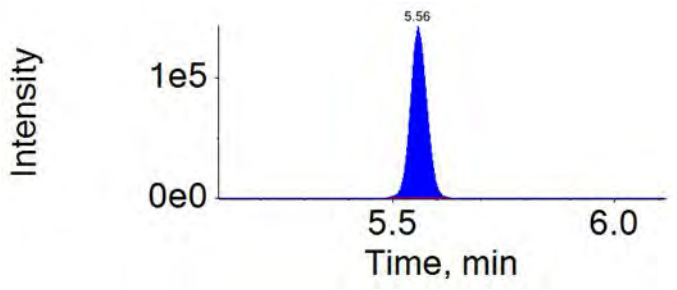
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

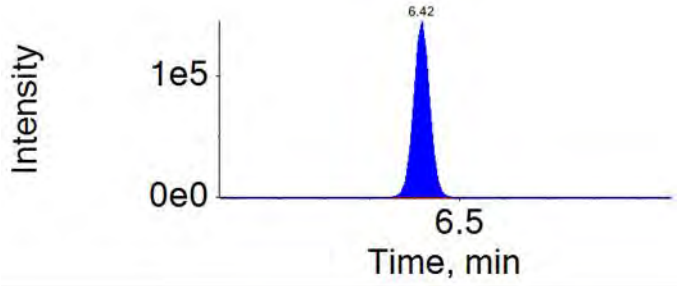
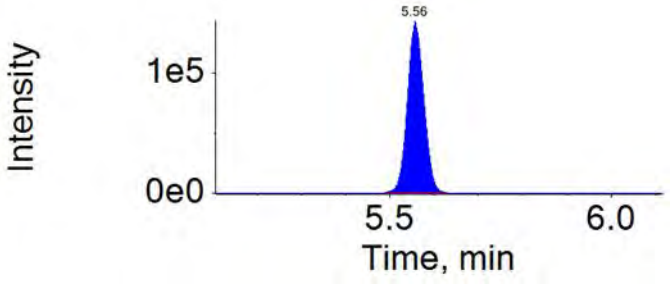
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

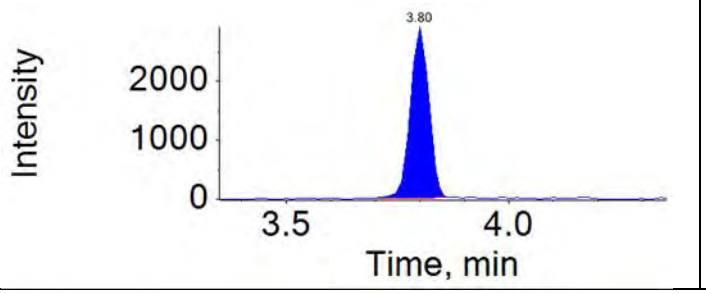
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

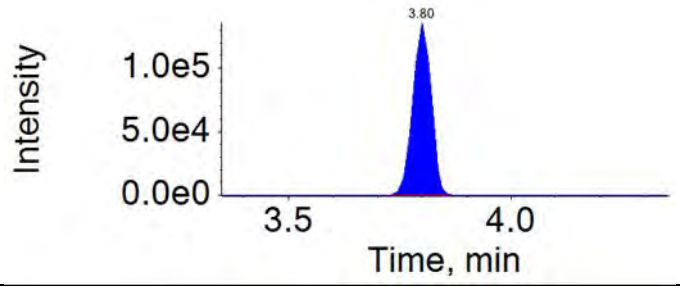
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

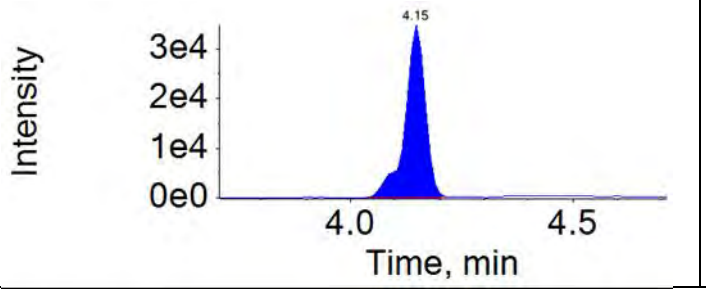
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

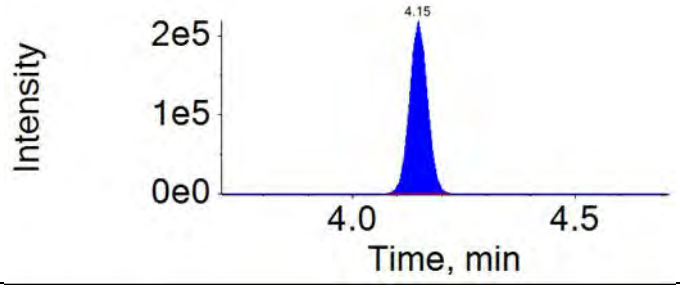
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



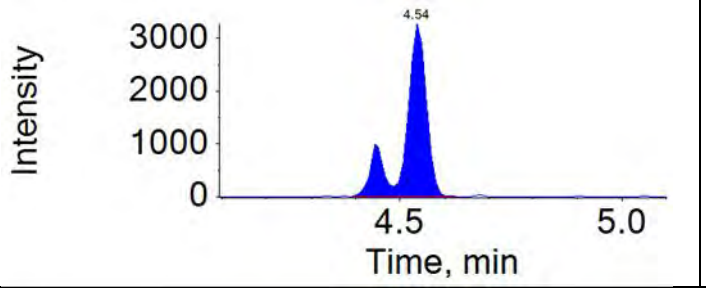


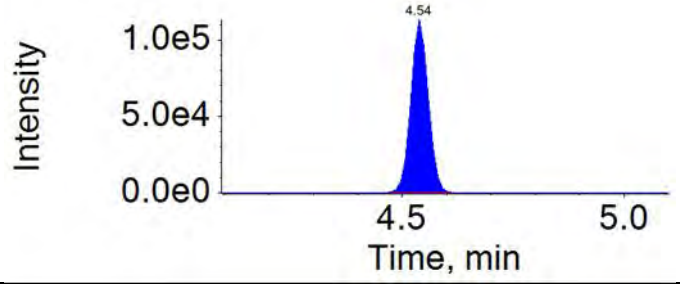
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



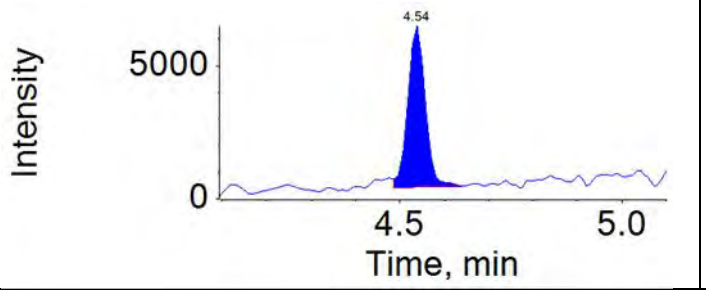


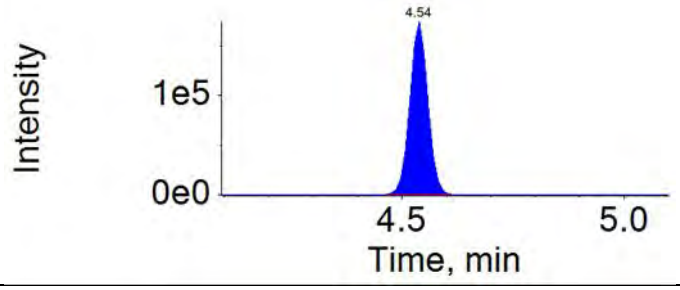
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



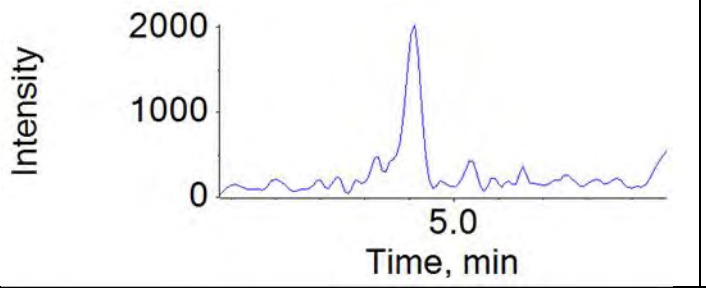


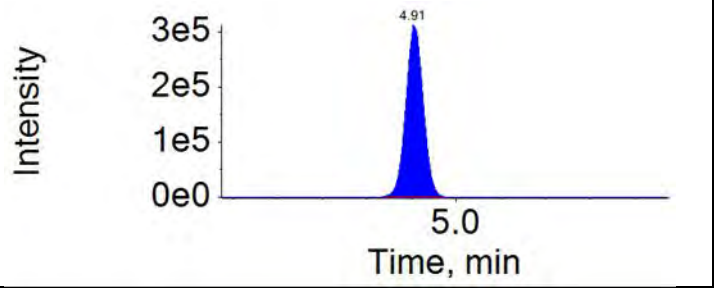
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

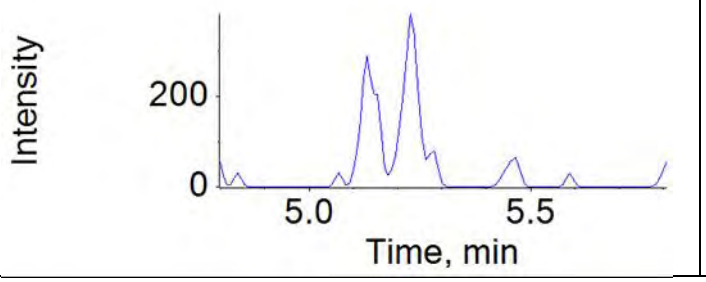
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

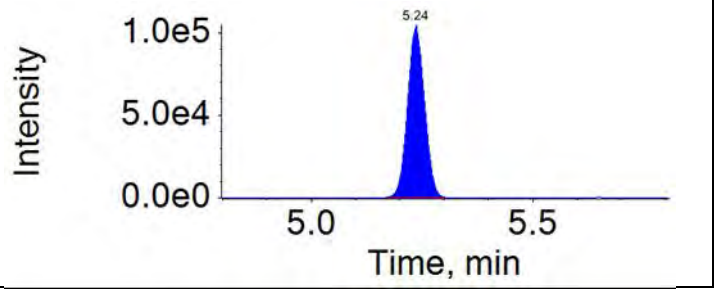
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



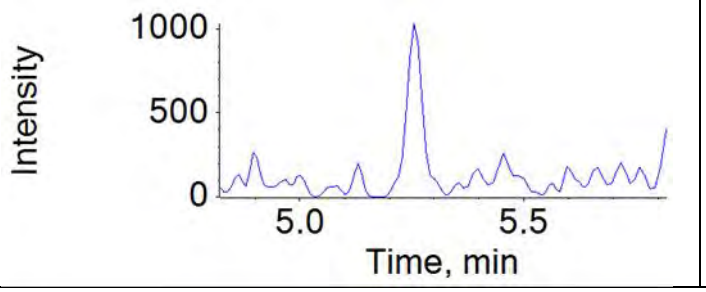


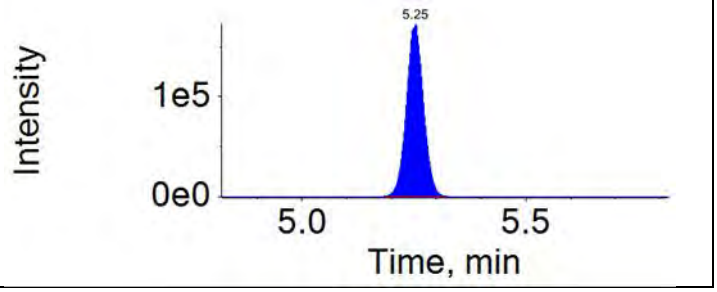
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



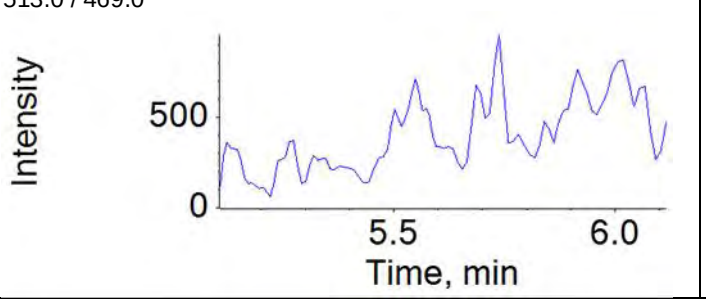


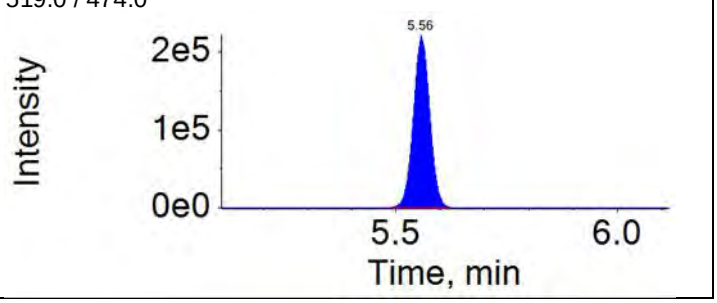
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0

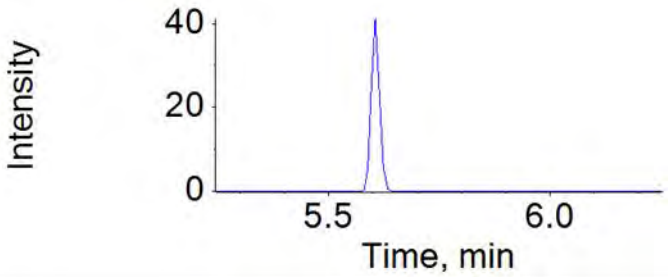
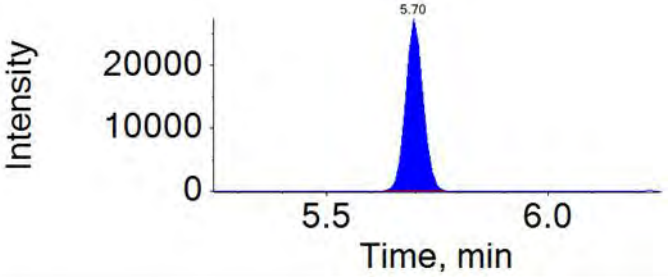


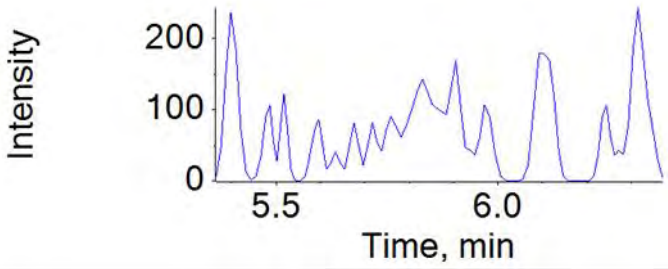
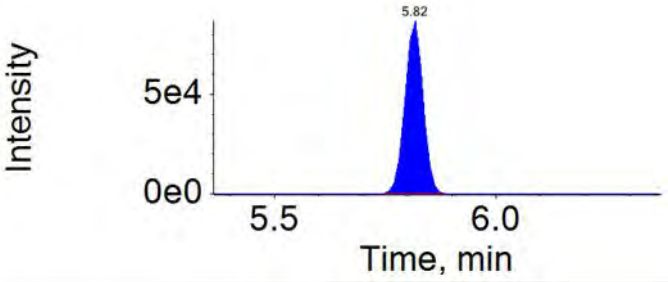


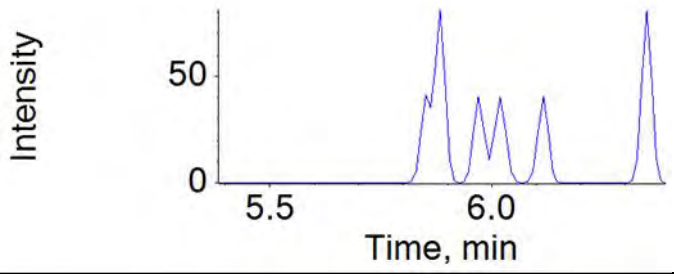
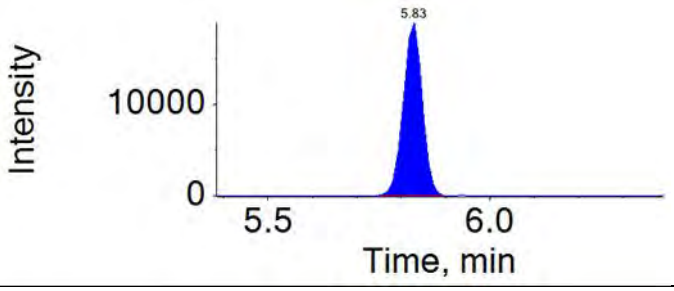
APPROVED
By JPT at 5:18 pm, 11/9/18

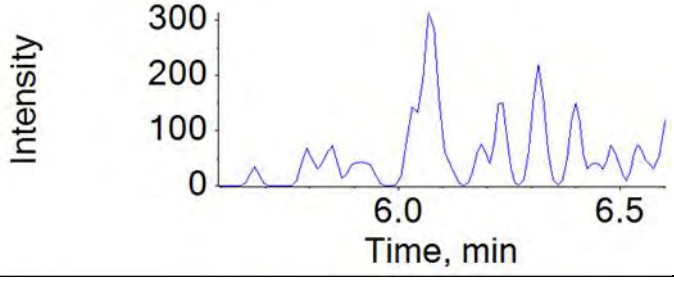
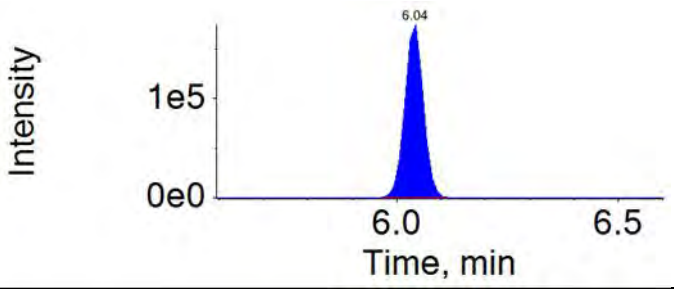
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

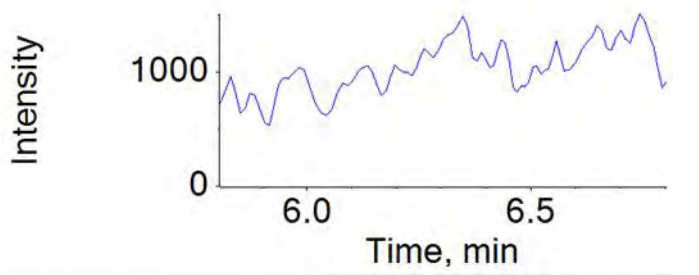
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

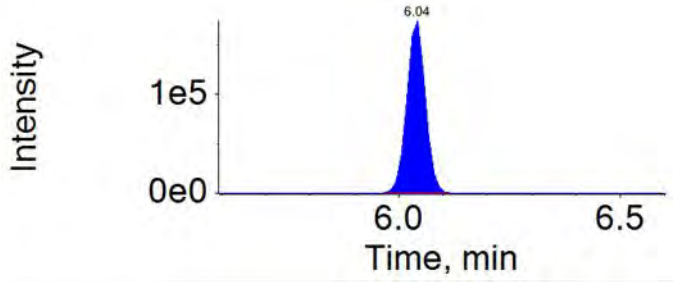
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

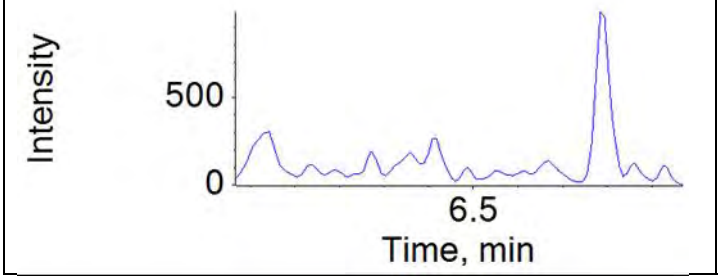
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

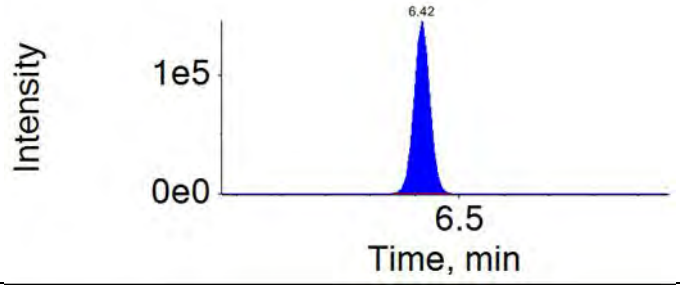
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





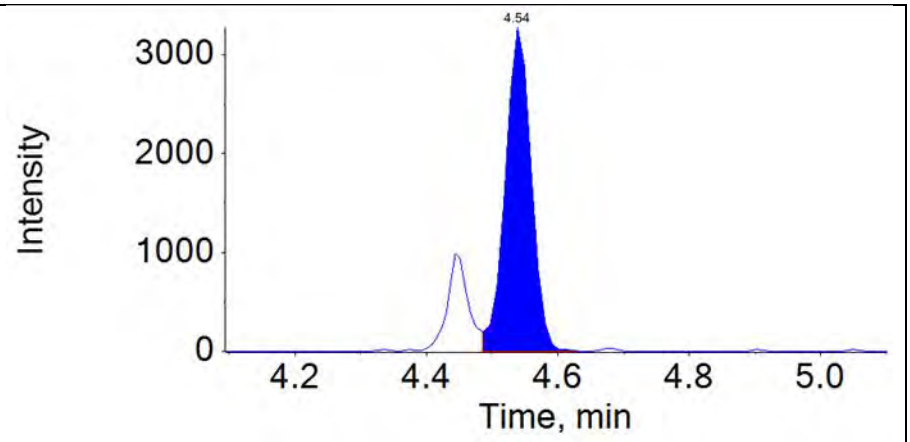
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

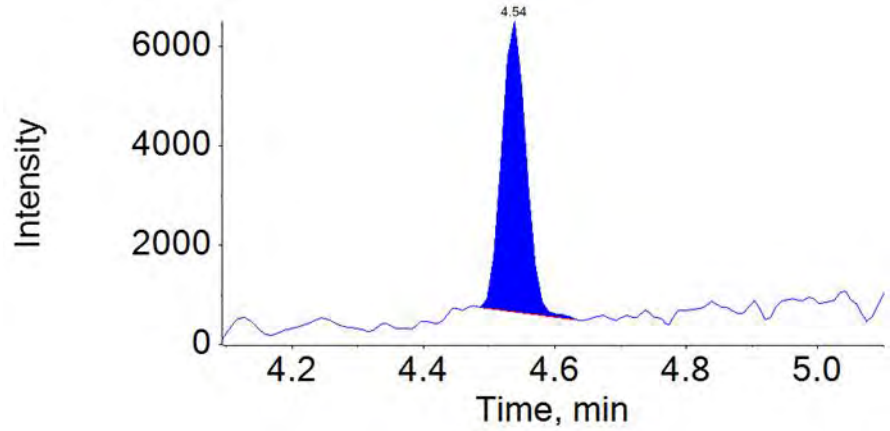
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
9013.9
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-100.wiff
Sample Name:
9883381



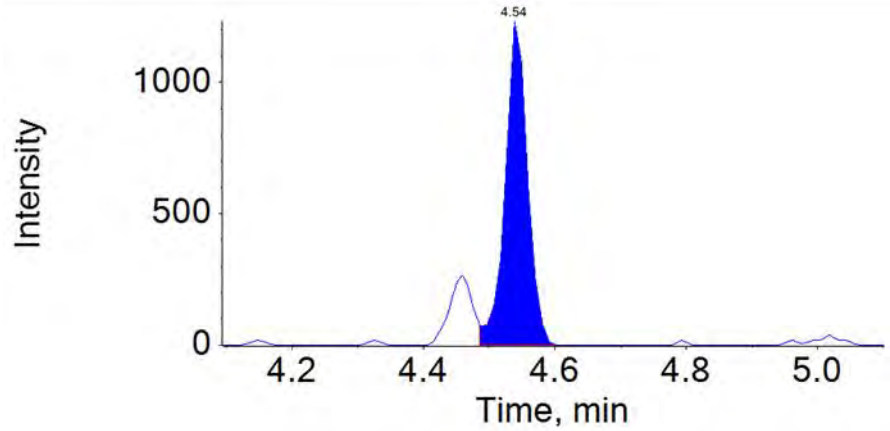
Integration Comment: incorrect integration

Component Name:
PFHpA
RT (min.):
4.54
Peak Area:
14979.6
Mass Range:
363.0 / 319.0
File Name:
18NOV08D-100.wiff
Sample Name:
9883381



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
2904.5
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-100.wiff
Sample Name:
9883381



Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Ion Ratio Report

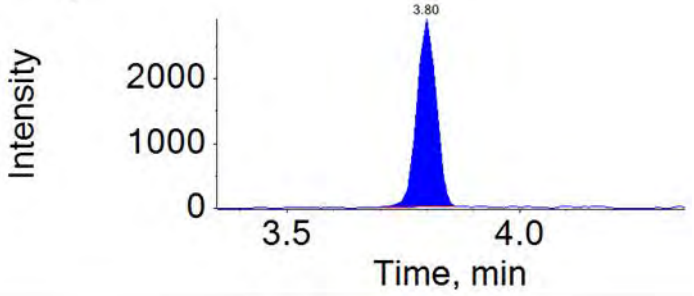
Sample Name: 9883381 **Instrument Name:** LM27631 **File Name:** 18NOV08D-100.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	8273.7	A	N/A	1.0000			
PFBS_2	3.80	1.00	3349.3	A	N/A	0.4048	13	50	
PFHxA	4.15	1.00	109673.0	A	N/A	1.0000			
PFHxA_2	4.15	1.00	1025.6	A	N/A	0.0094	-19	50	
PFHxS	4.54	1.00	11224.7	M	N/A	1.0000			
PFHxS_2	4.54	1.00	3549.7	M	N/A	0.3162	-11	50	
PFHpA	4.54	1.00	16535.9	M	N/A	1.0000			
PFHpA_2	4.54	1.00	830.0	A	N/A	0.0502	-13	50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	6.57	1.09	88.8	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

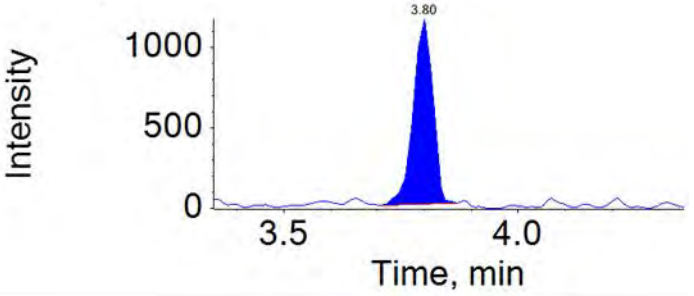
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

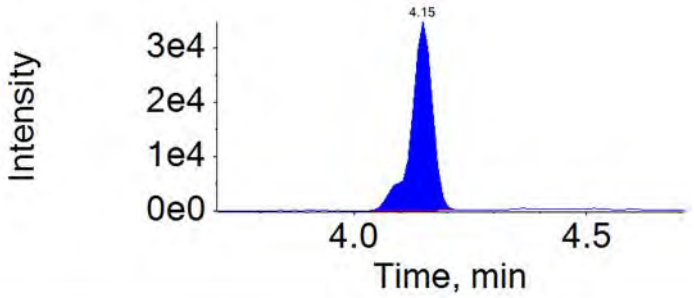
Component: PFBS
Primary Mass: 299.0 / 80.0



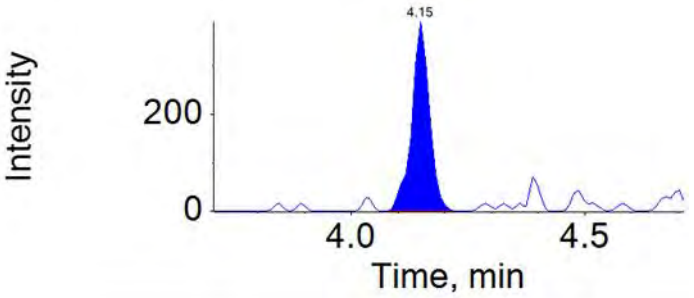
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



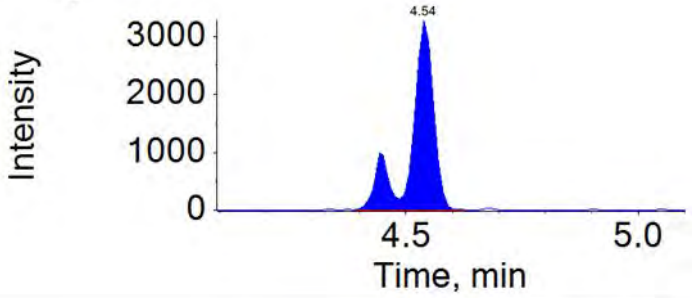
Component: PFHxA
Primary Mass: 313.0 / 269.0



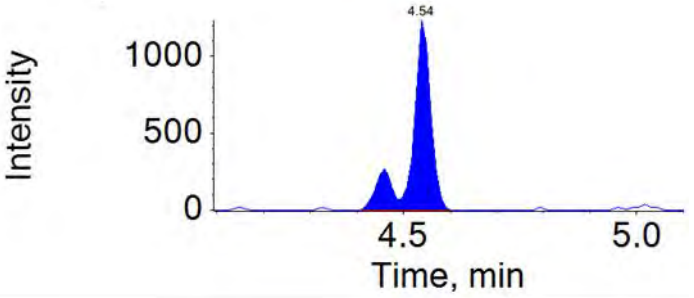
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



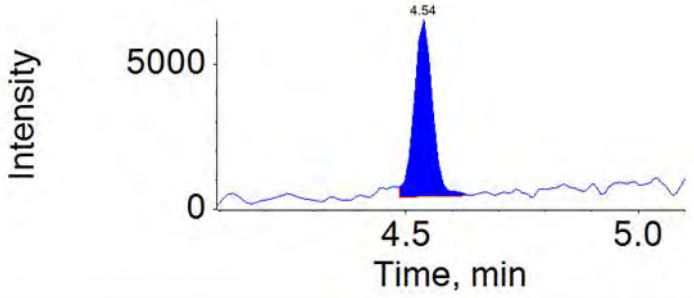
Component: PFHxS
Primary Mass: 399.0 / 80.0



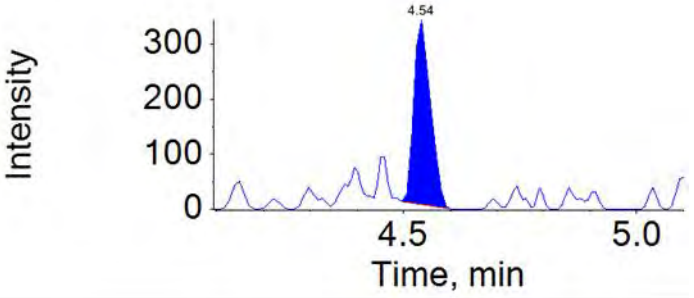
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



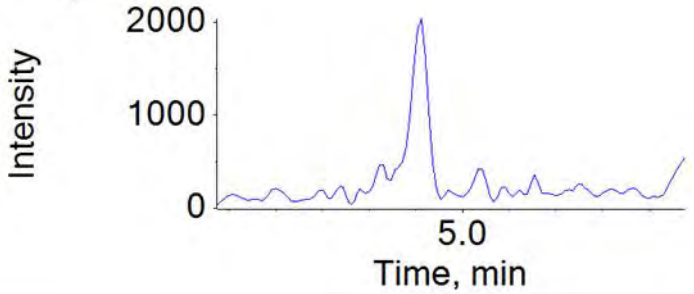
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



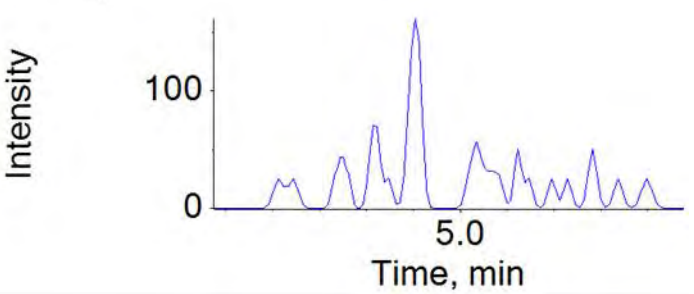
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

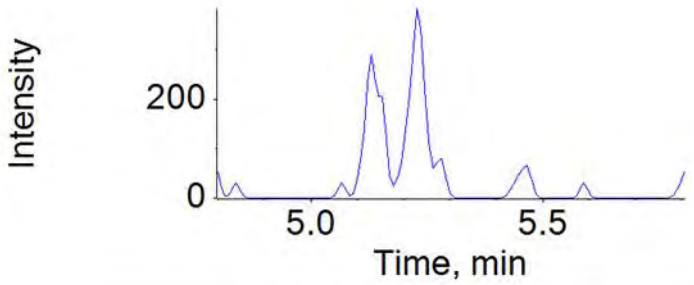
Component: PFOA
Primary Mass: 413.0 / 369.0



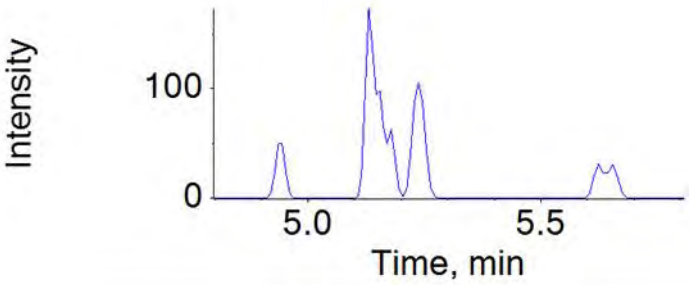
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



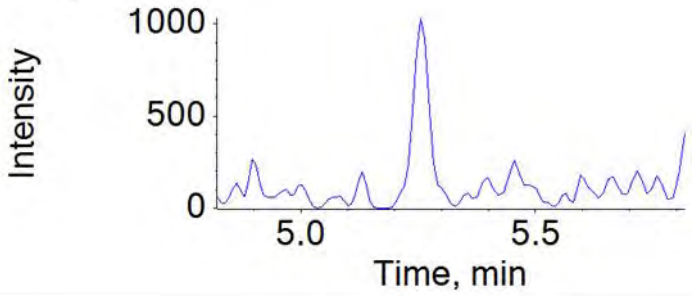
Component: PFOS
Primary Mass: 499.0 / 80.0



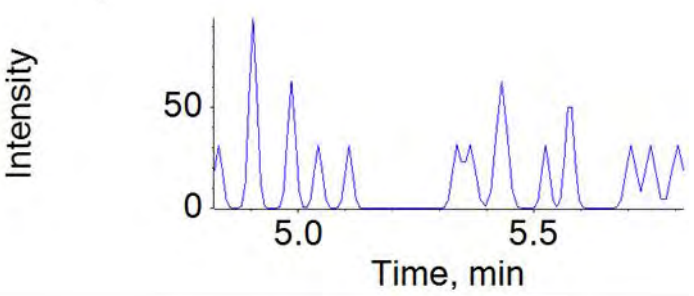
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



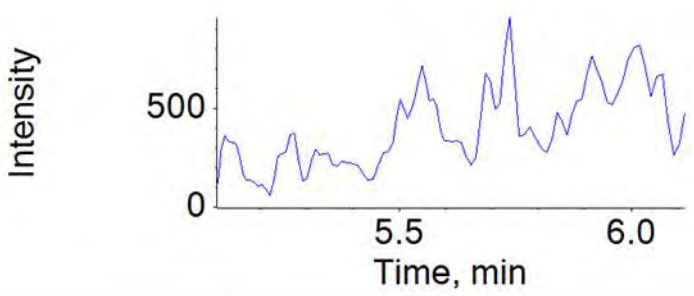
Component: PFNA
Primary Mass: 463.0 / 419.0



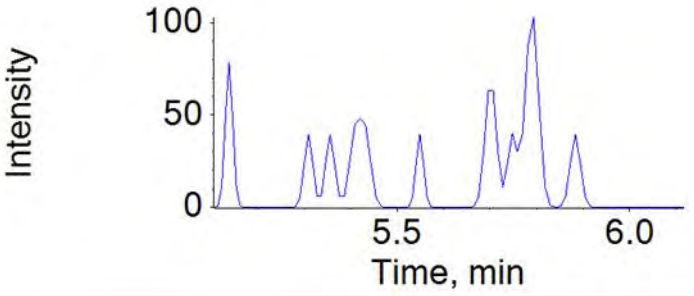
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



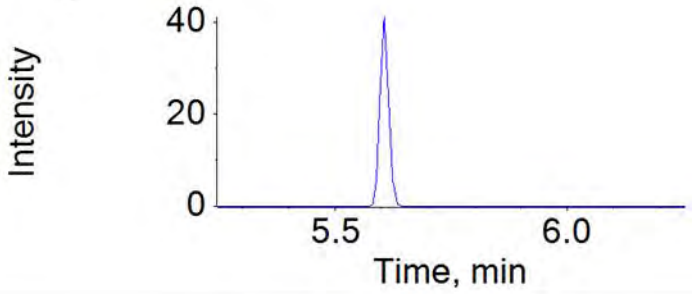
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



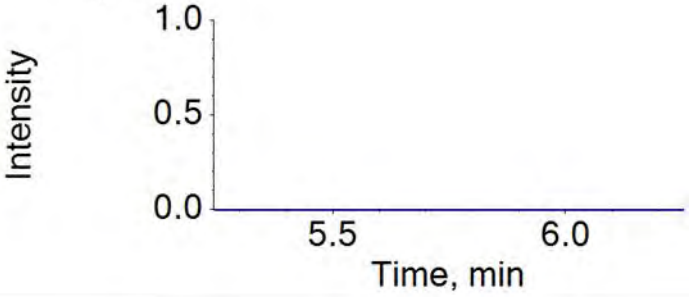
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

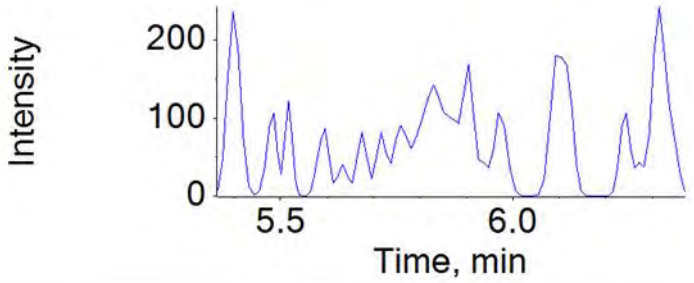
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



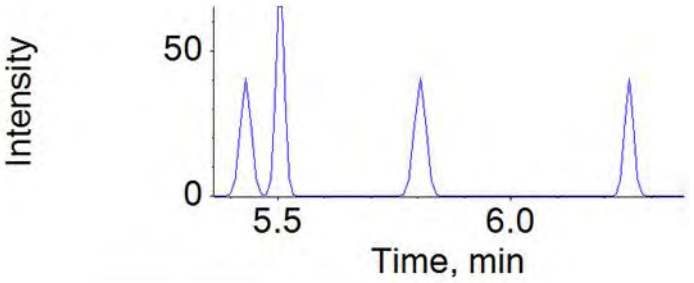
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



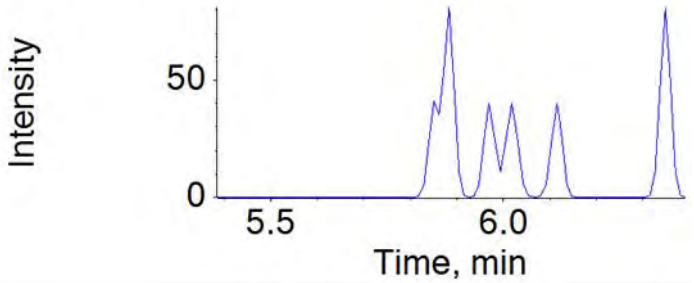
Component: PFUnDA
Primary Mass: 563.0 / 519.0



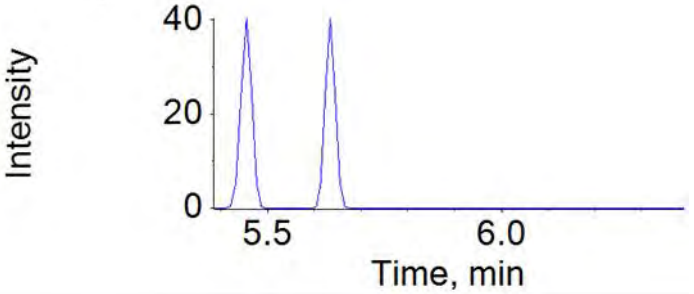
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



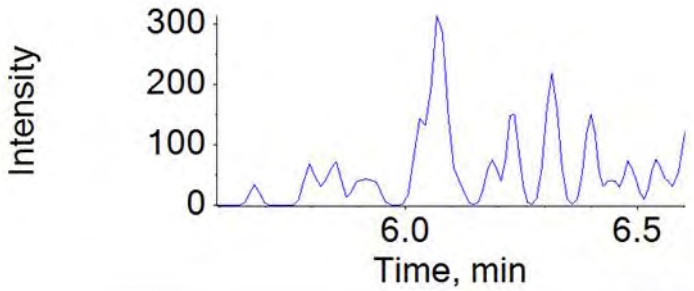
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



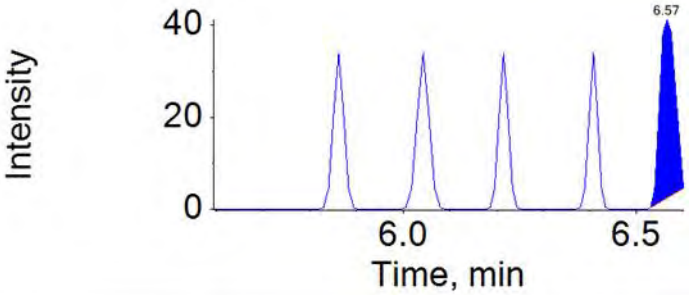
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



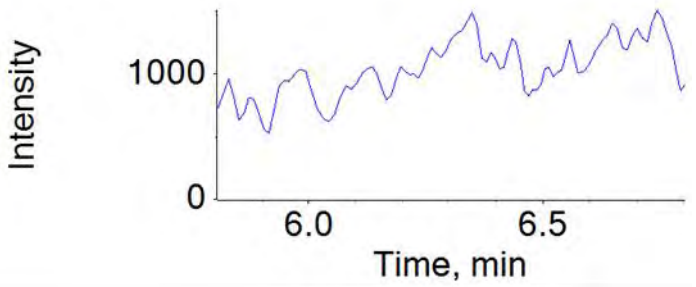
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



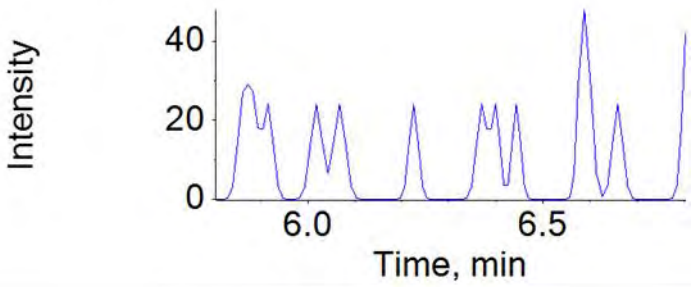
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

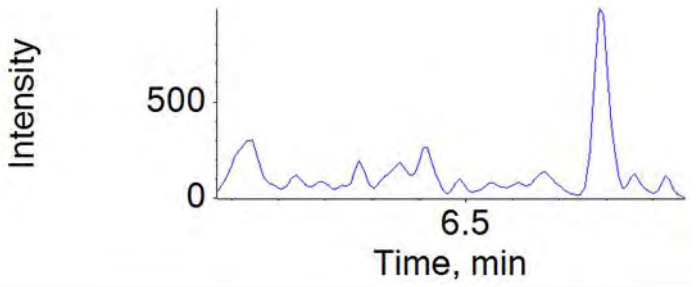
Component: PFTrDA
Primary Mass: 663.0 / 619.0



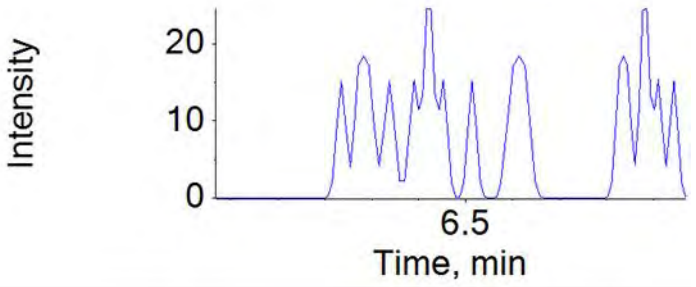
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883382BKG			**Data File:**		18NOV29D-59.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18332003 OU1-Bldg371-S-02-10 Grab Soil			**Acquis Date:**		2018-11-29T18:40:42
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	39			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18332003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18332003			**Operator:**		MCD7824
Sample Wt.:	1.05000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1072168.2	906425.4	18	50	
13C2-PFOA	5.0	604704.0	495984.0	22	50	
13C4-PFOS	4.8	374610.1	296261.8	26	50	
13C2-PFDA	5.0	567587.1	451203.0	26	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	425932.0	13C3-PFBA	1072168.3	0.397	8.857	7.219	82	50-150	
E13C5-PFHxA	686577.7	13C2-PFOA	604704.0	1.135	9.524	7.943	83	50-150	
E13C3-PFHxS	357456.6	13C2-PFOA	604704.0	0.591	9.010	8.825	98	50-150	
E13C4-PFHpA	551015.1	13C2-PFOA	604704.0	0.911	9.524	7.975	84	50-150	
E13C8-PFOA	1011479.4	13C2-PFOA	604704.0	1.673	9.524	8.770	92	50-150	
E13C8-PFOS	324159.6	13C4-PFOS	374610.1	0.865	9.105	7.440	82	50-150	
E13C9-PFNA	663575.9	13C4-PFOS	374610.1	1.771	9.524	7.411	78	50-150	
E13C6-PFDA	903992.5	13C2-PFDA	567587.1	1.593	9.524	8.553	90	50-150	
Ed3-NMeFOSAA	196327.6	13C2-PFDA	567587.1	0.346	9.524	8.365	88	50-150	
E13C7-PFUnDA	591195.9	13C2-PFDA	567587.1	1.042	9.524	8.385	88	50-150	
Ed5-NEtFOSAA	121800.0	13C2-PFDA	567587.1	0.215	9.524	7.282	76	50-150	
E13C2-PFDoDA	1145844.5	13C2-PFDA	567587.1	2.019	9.524	8.079	85	50-150	
E13C2-PFTeDA	848608.6	13C2-PFDA	567587.1	1.495	9.524	7.880	83	50-150	

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

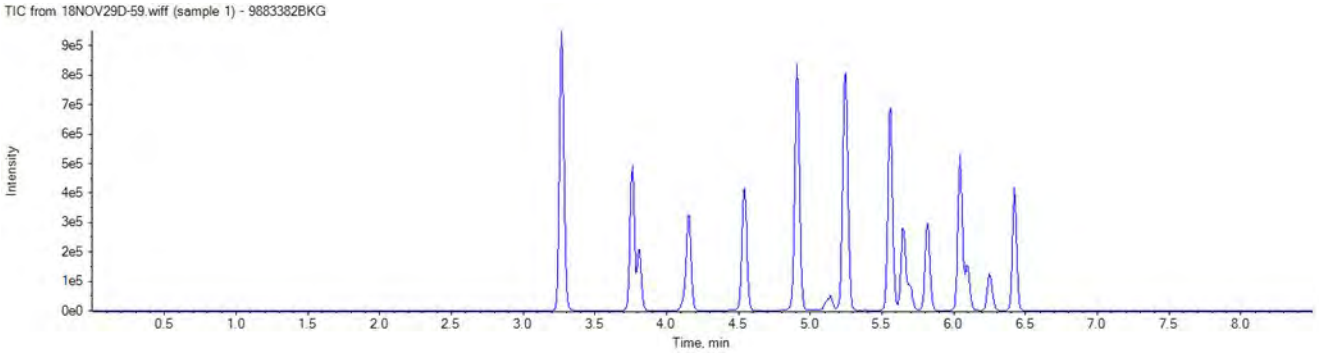
Analyte Quantitation Peak Table

Sample Name: 9883382BKG **Instrument Name:** LM27631 **File Name:** 18NOV29D-59.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.05000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	425932.0	N/A	
PFHxA	4.15	1.000	63151.4		A	13C5-PFHxA	4.15	686577.7	0.092	0.703
PFHpA	4.54	1.000	40002.4		A	13C4-PFHpA	4.54	551015.1	0.073	0.427
PFHxS	4.54	1.000	46710.8		M	13C3-PFHxS	4.54	357456.6	0.131	1.165
PFOA	4.91	1.000	200983.2		A	13C8-PFOA	4.91	1011479.4	0.199	1.956
PFOS	5.24	1.000	645548.0		M	13C8-PFOS	5.24	324159.6	1.991	15.912
PFNA	5.26	1.000	47354.2		A	13C9-PFNA	5.25	663575.9	0.071	0.521
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	903992.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	196327.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	591195.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	121800.0	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1145844.5	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1145844.5	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	848608.6	N/A	

Total Ion Chromatogram

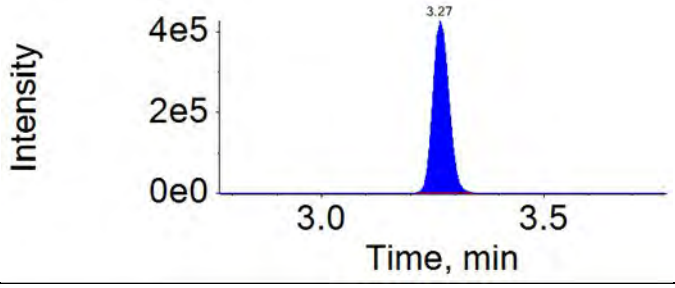


APPROVED
By MCD at 10:12 pm, 11/30/18

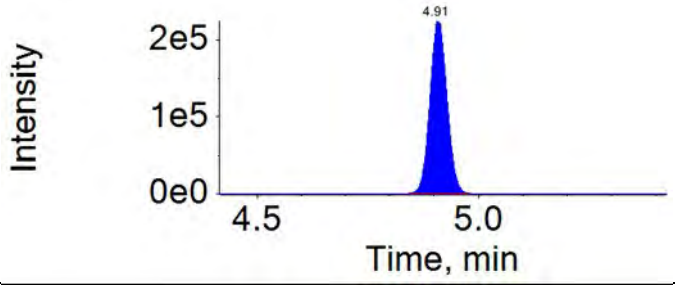
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

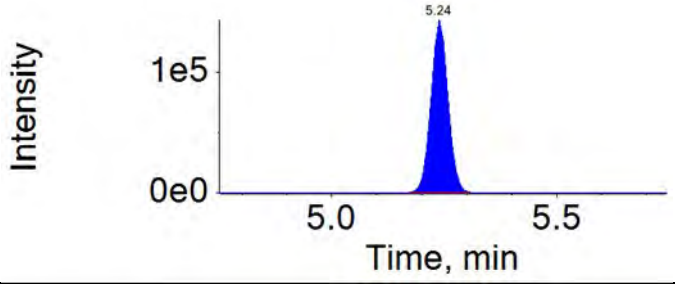
Injection Standard: 13C3-PFBA
216.0 / 172.0



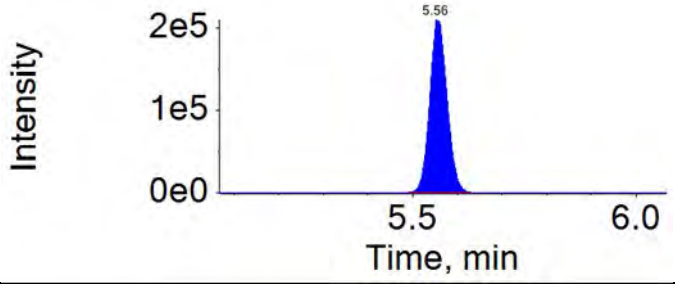
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



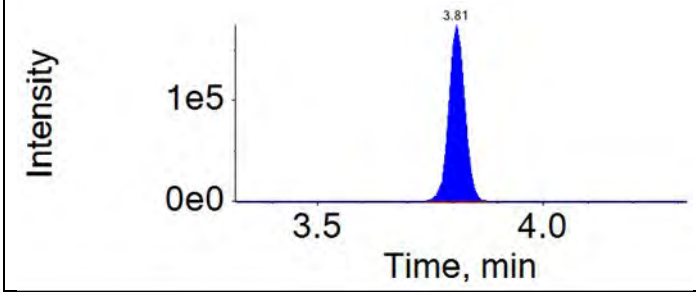
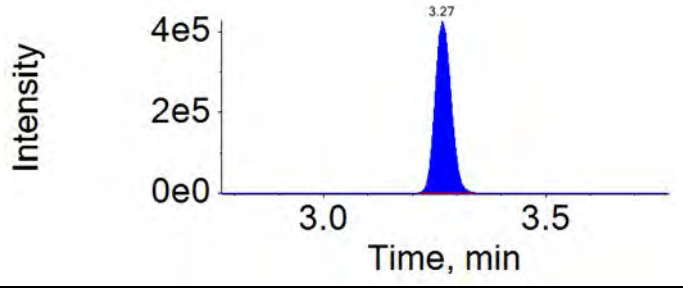
Injection Standard: 13C2-PFDA
515.0 / 470.0

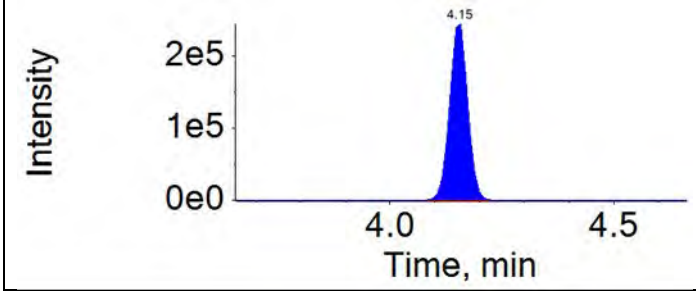
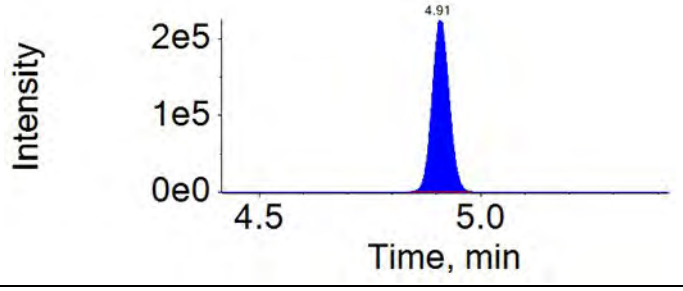


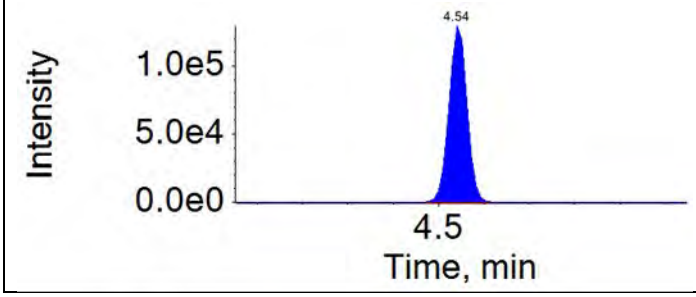
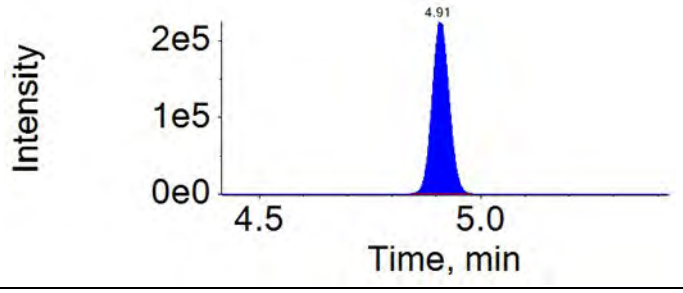
APPROVED
By MCD at 10:12 pm, 11/30/18

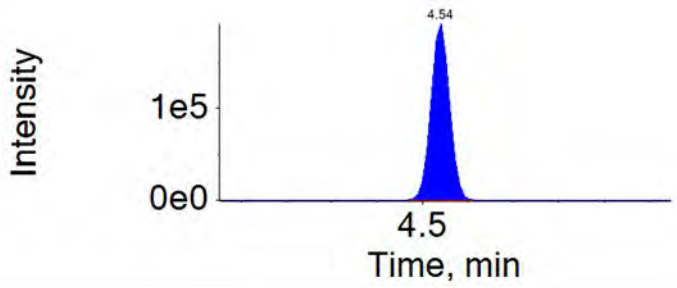
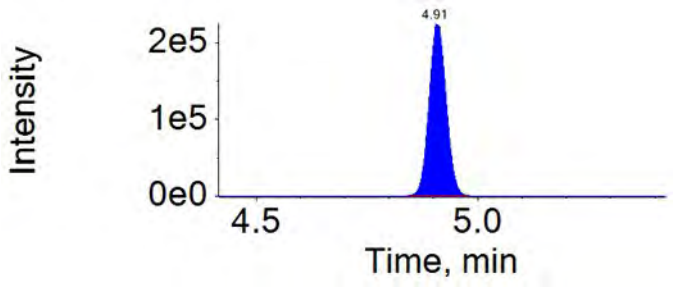
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

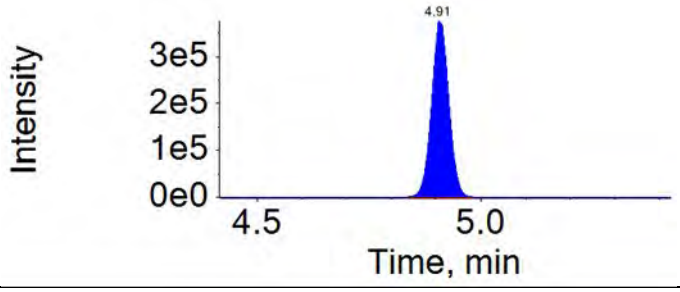
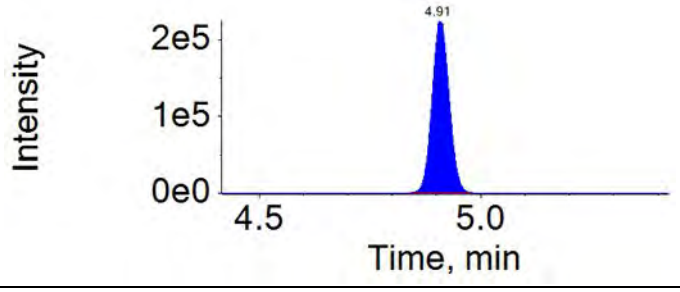
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

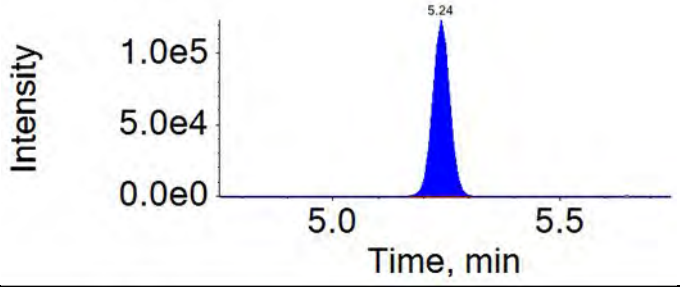
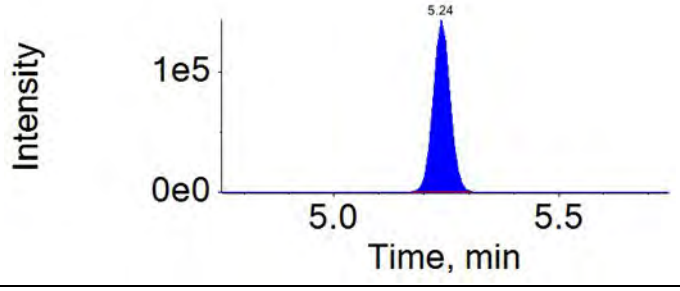
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

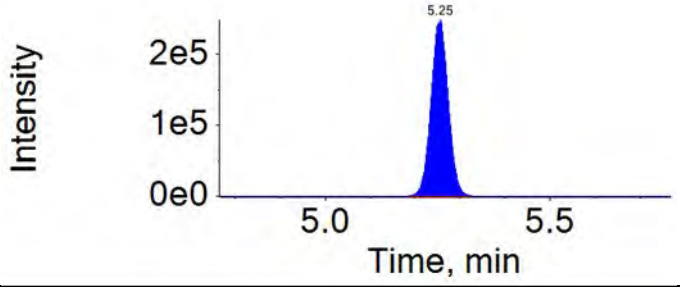
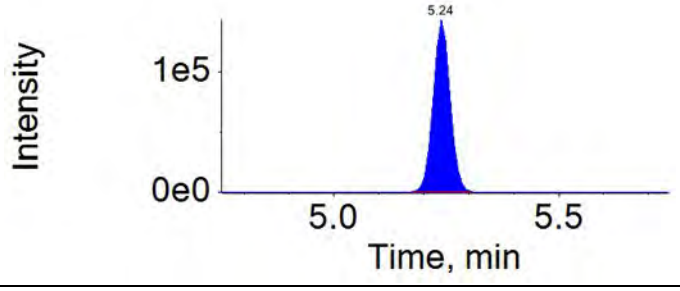
APPROVED
By MCD at 10:12 pm, 11/30/18

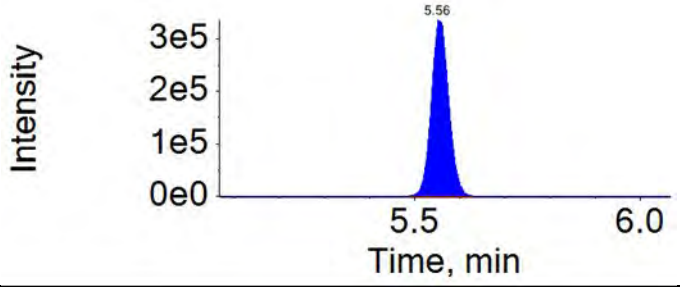
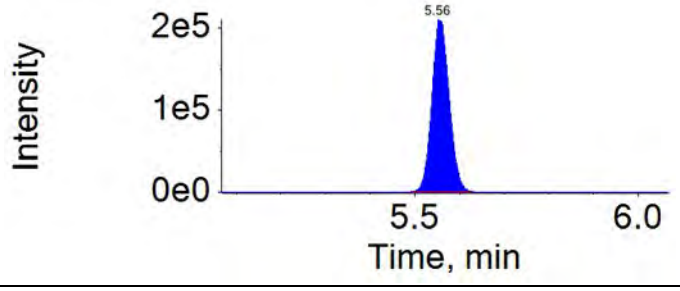
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

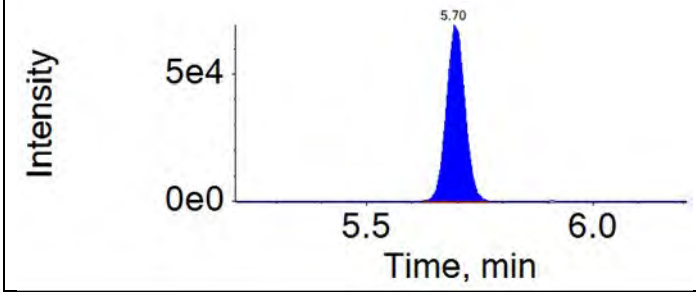
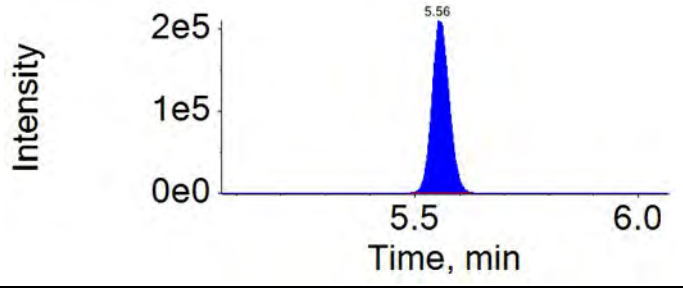
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

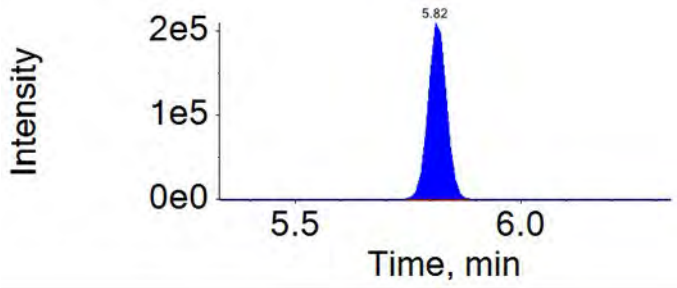
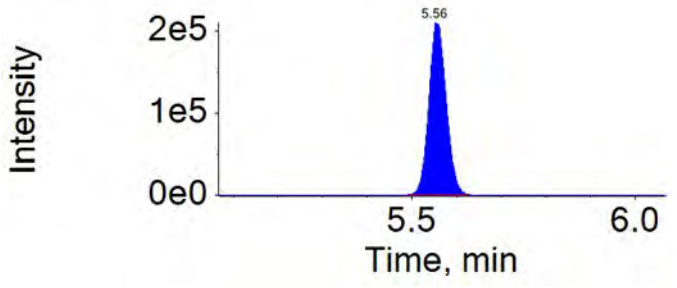
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

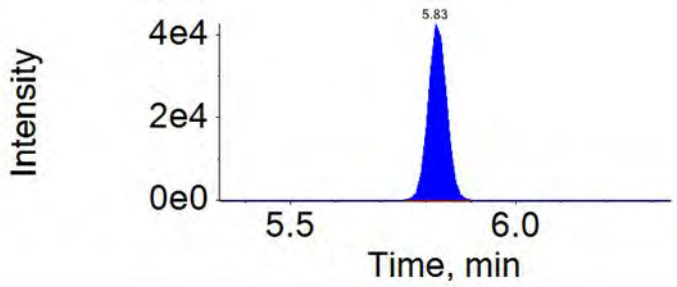
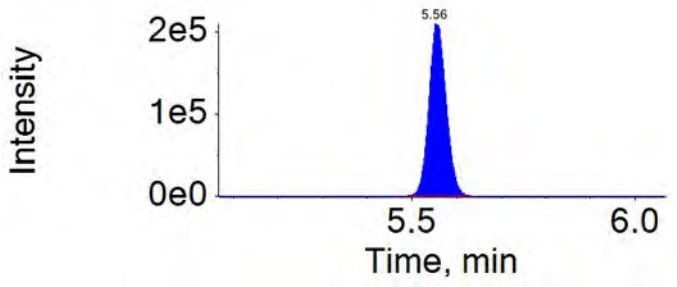
APPROVED
By MCD at 10:12 pm, 11/30/18

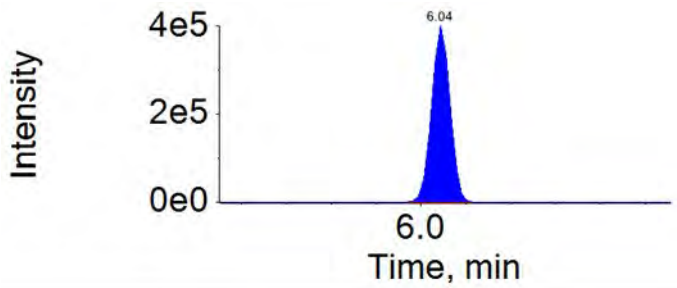
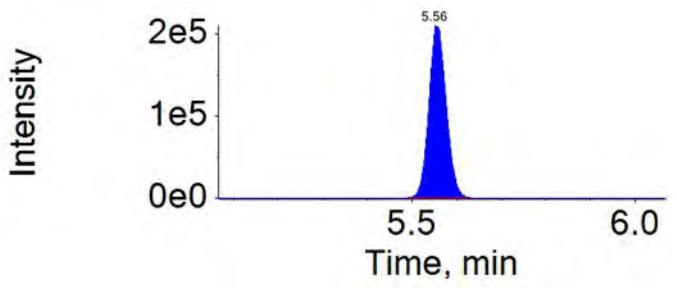
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

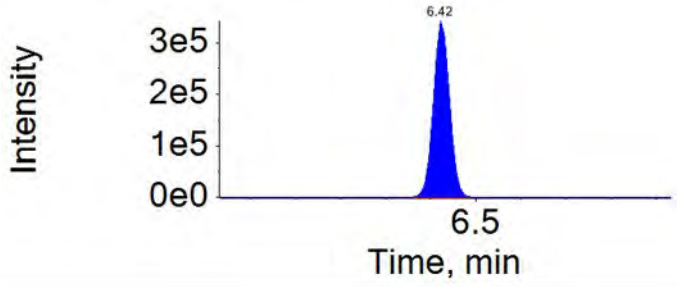
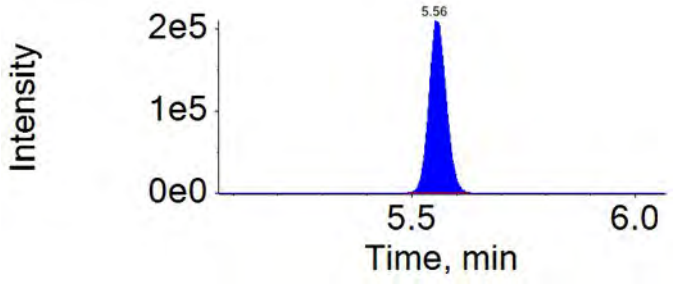
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

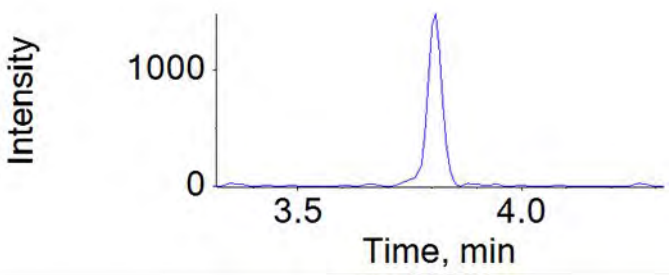
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

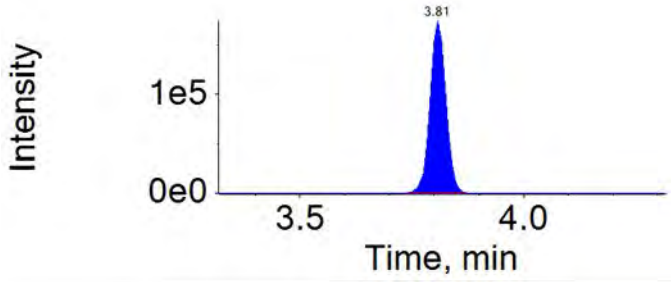
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

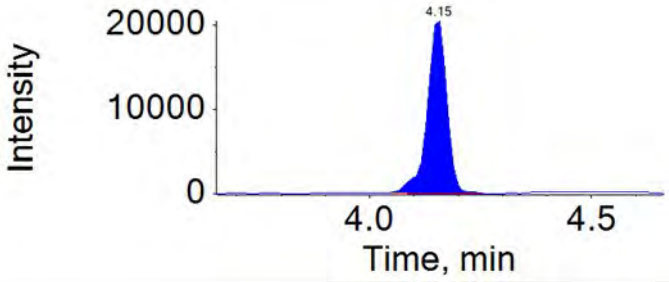
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

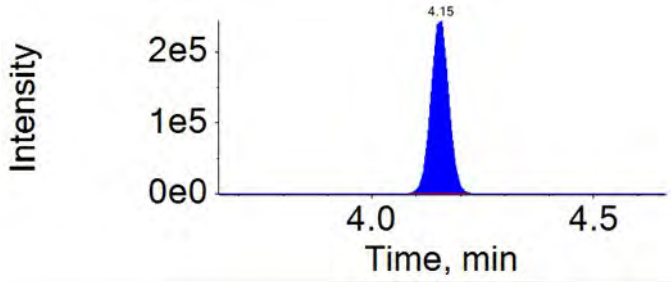
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



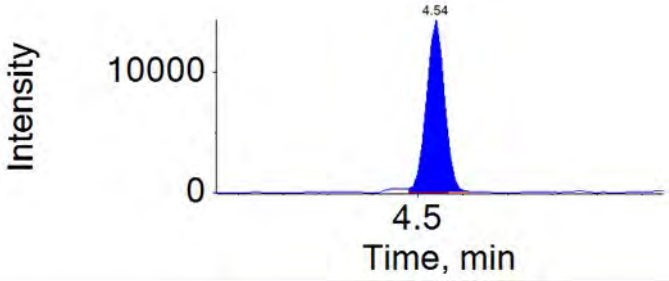


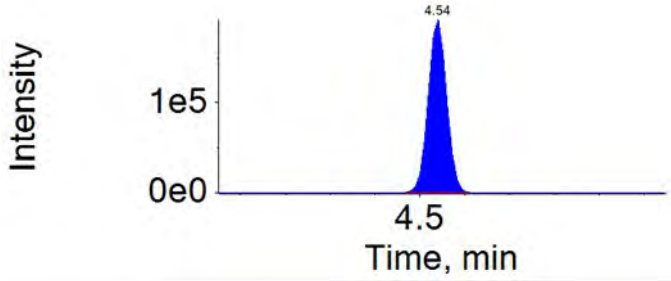
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



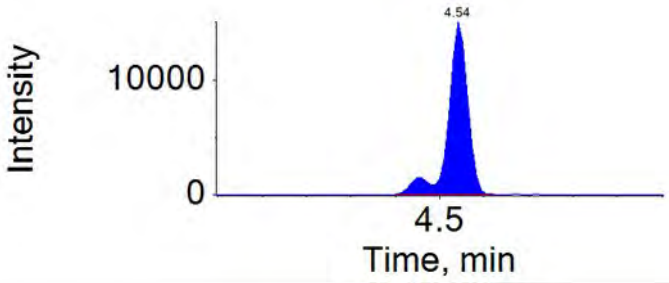


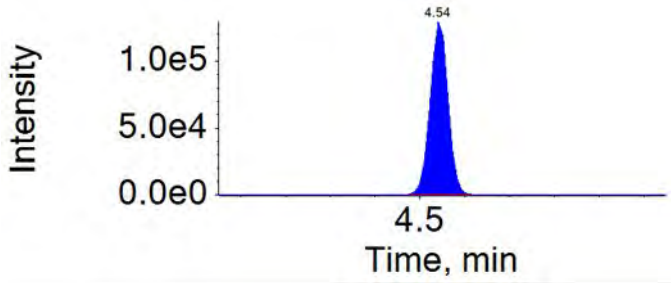
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

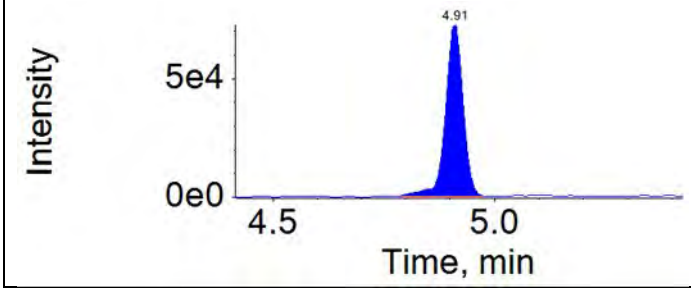
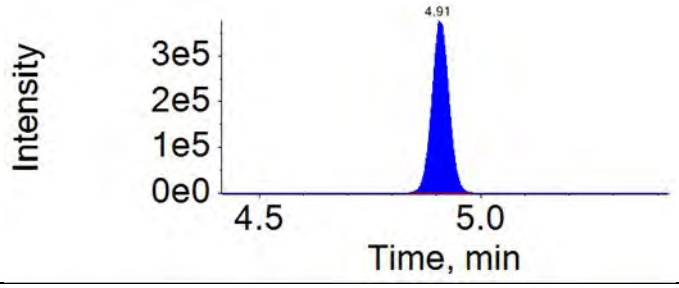


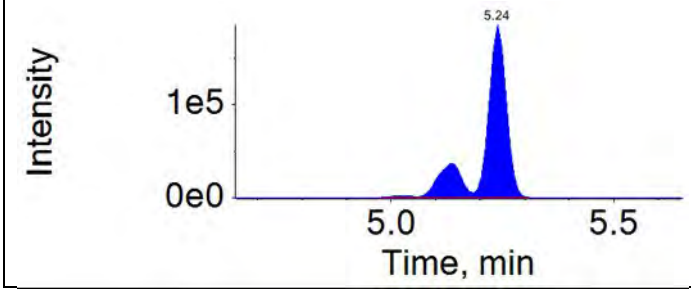
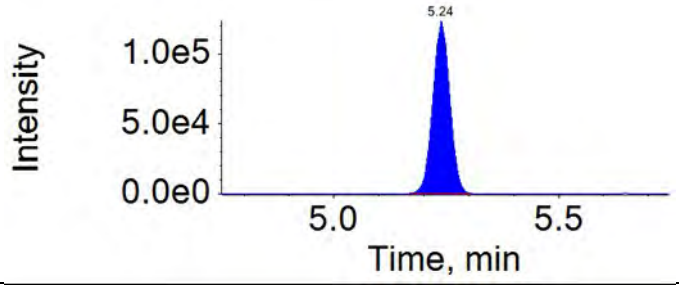


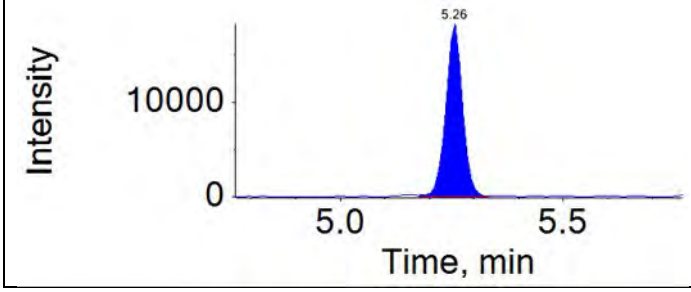
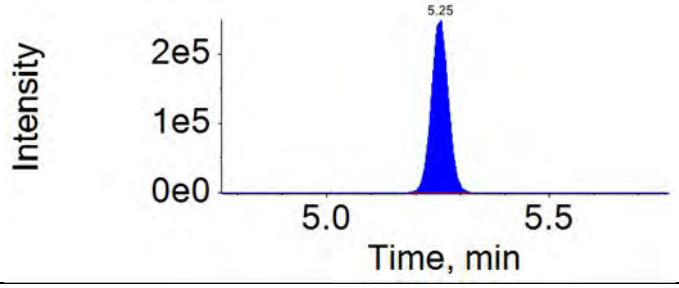
APPROVED
By MCD at 10:12 pm, 11/30/18

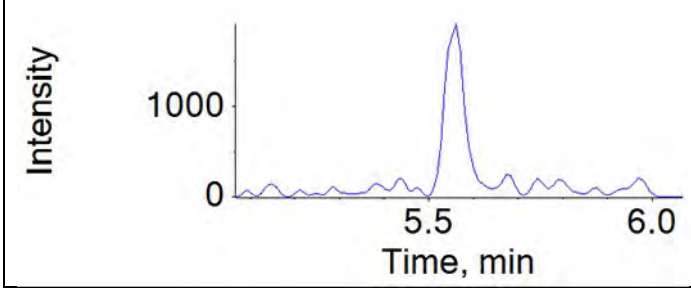
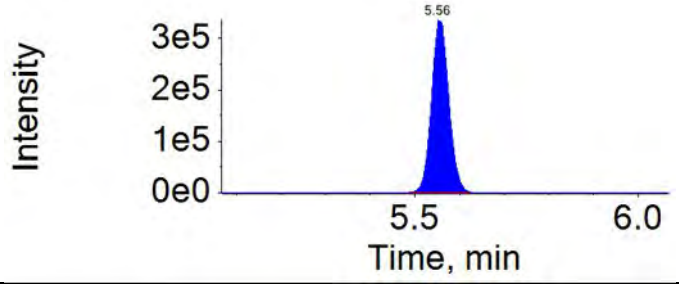
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

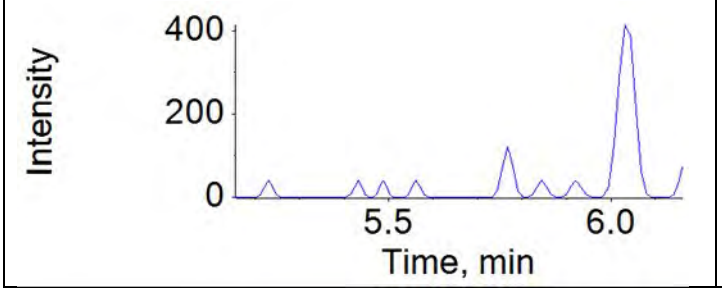
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

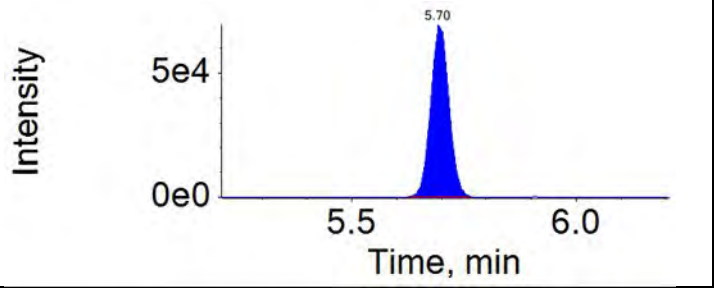
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

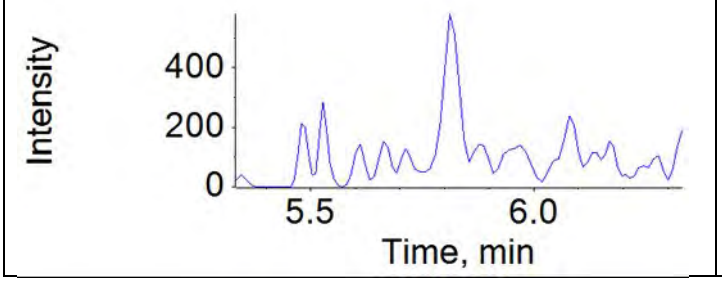
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

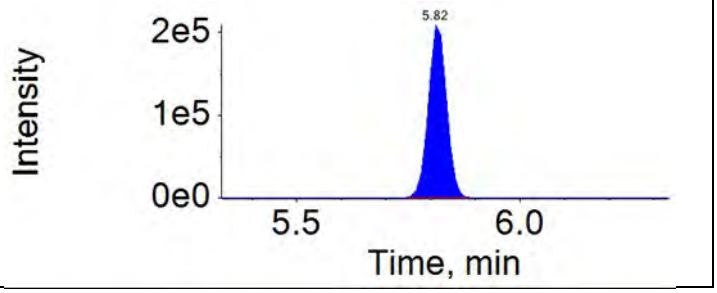
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



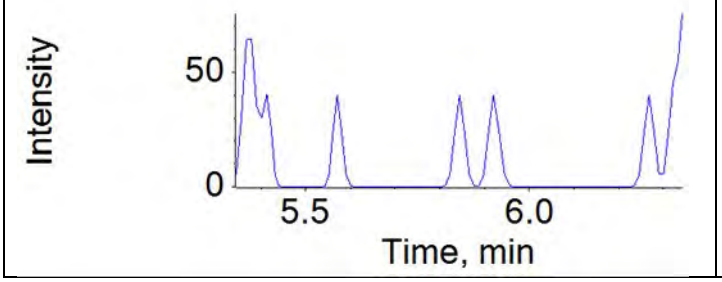


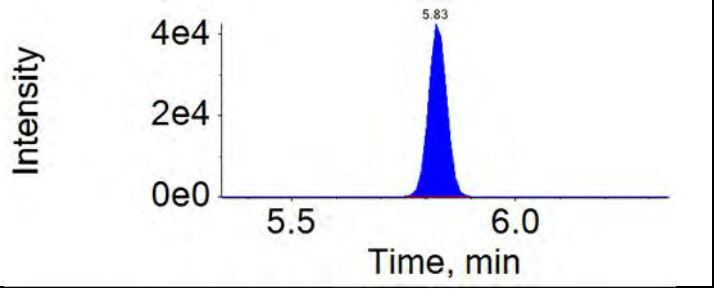
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



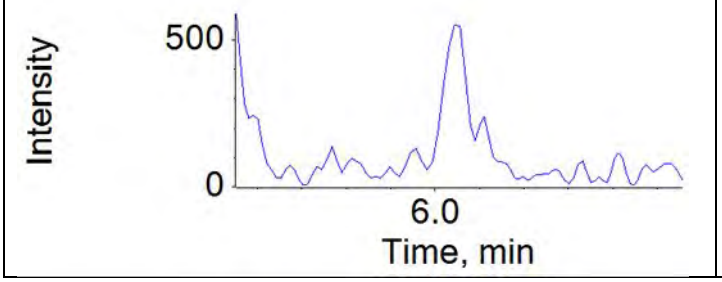


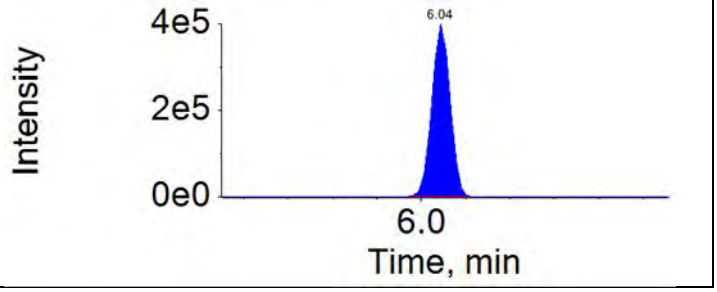
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



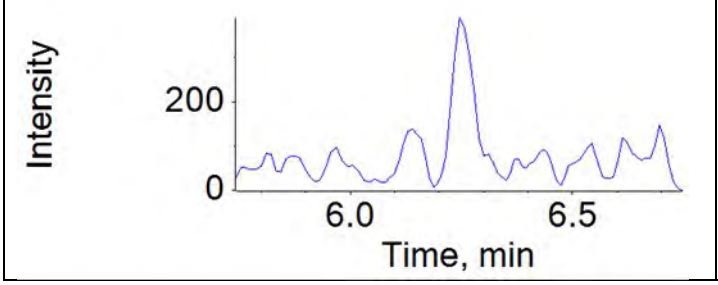


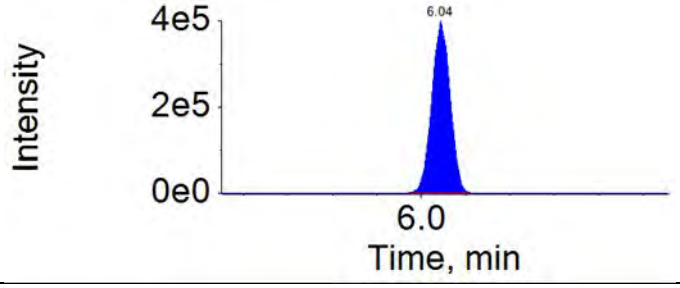
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

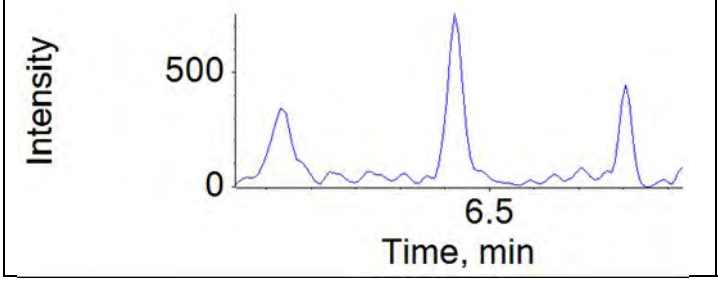
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

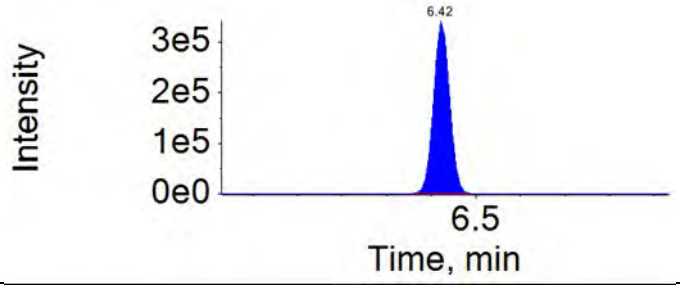
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



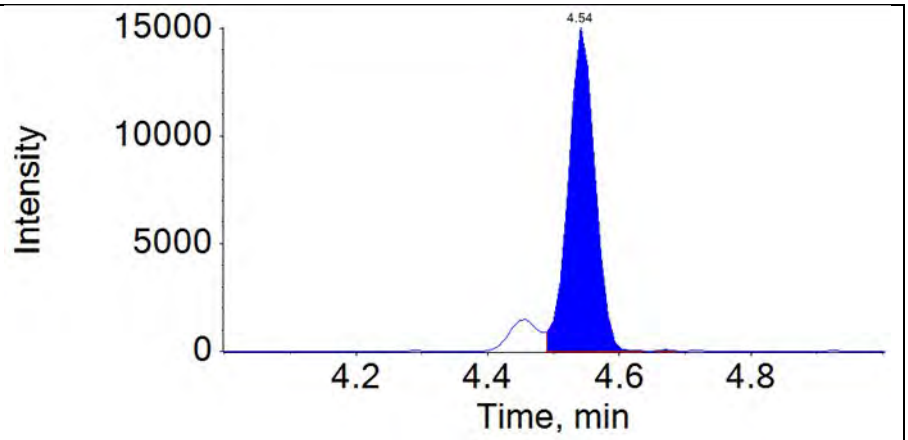


APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

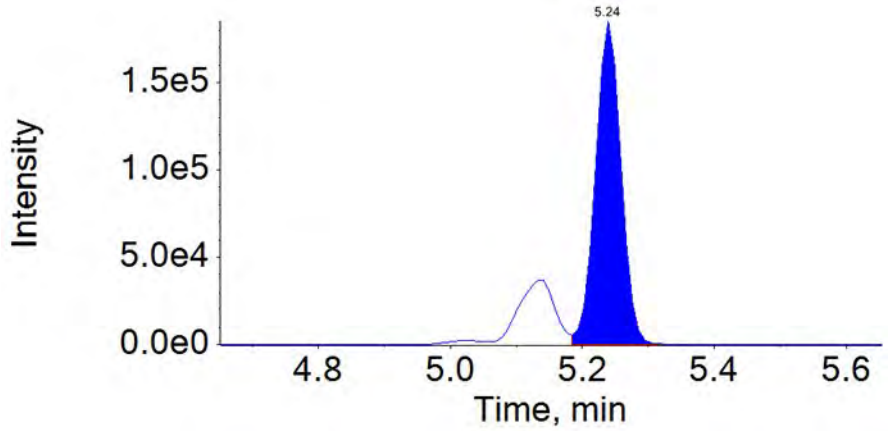
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
42045.1
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-59.wiff
Sample Name:
9883382BKG



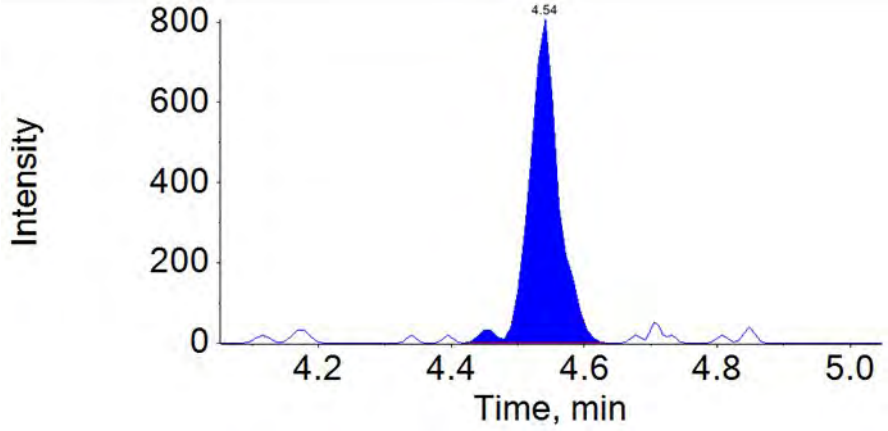
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
496855.2
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-59.wiff
Sample Name:
9883382BKG



Integration Comment: incorrect integration

Component Name:
PFHpA_2
RT (min.):
4.54
Peak Area:
2476.5
Mass Range:
363.0 / 169.0
File Name:
18NOV29D-59.wiff
Sample Name:
9883382BKG

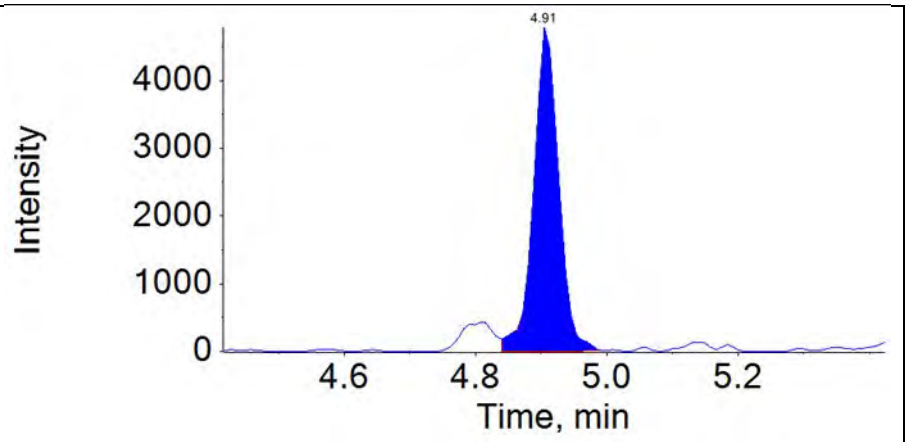


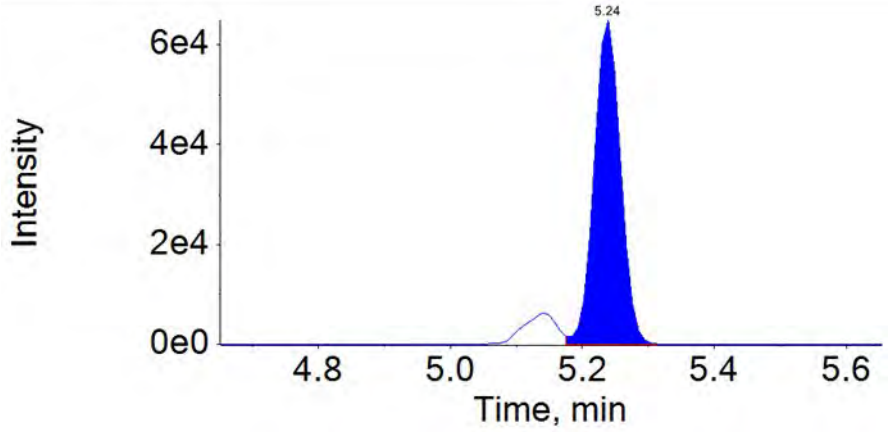
Integration Comment: incorrect integration

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOA_2 **RT (min.):** 4.91 **Peak Area:** 12757.8 **Mass Range:** 413.0 / 169.0 **File Name:** 18NOV29D-59.wiff **Sample Name:** 9883382BKG	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.24 **Peak Area:** 180895.6 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV29D-59.wiff **Sample Name:** 9883382BKG	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Ion Ratio Report

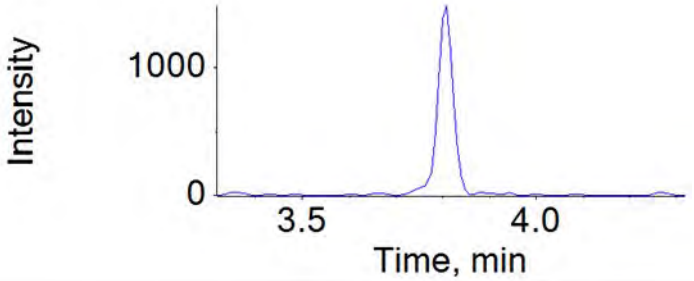
Sample Name: 9883382BKG **Instrument Name:** LM27631 **File Name:** 18NOV29D-59.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.15	1.00	63151.4	A	N/A	0.0105			
PFHxA_2	4.15	1.00	660.8	A	N/A	0.0105	1	50	
PFHpA	4.54	1.00	40002.4	A	N/A	0.0604			
PFHpA_2	4.54	1.00	2415.8	M	N/A	0.0604	8	50	
PFHxS	4.54	1.00	46710.8	M	N/A	0.4016			
PFHxS_2	4.54	1.00	18759.1	A	N/A	0.4016	9	50	
PFOA	4.91	1.00	200983.2	A	N/A	0.0711			
PFOA_2	4.91	1.00	14288.2	M	N/A	0.0711	24	50	
PFOS	5.24	1.00	645548.0	M	N/A	0.3138			
PFOS_2	5.24	1.00	202556.9	M	N/A	0.3138	6	50	
PFNA	5.26	1.00	47354.2	A	N/A	0.0250			
PFNA_2	5.26	1.00	1182.1	A	N/A	0.0250	24	50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

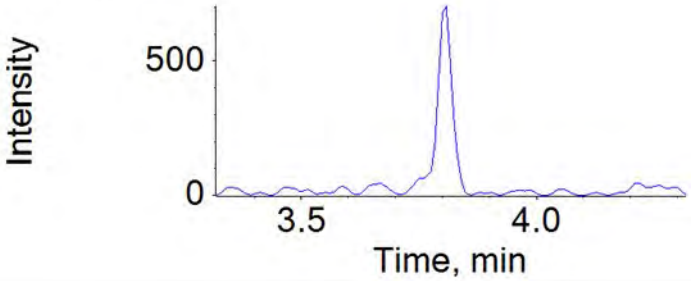
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

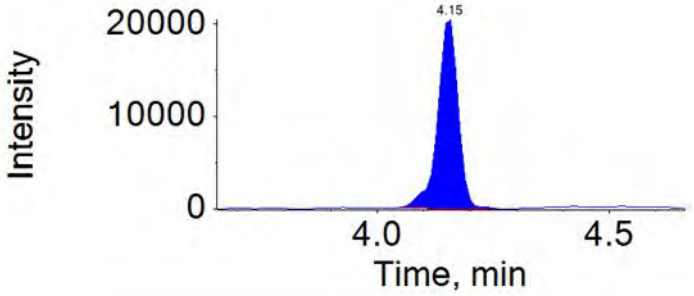
Component: PFBS
Primary Mass: 299.0 / 80.0



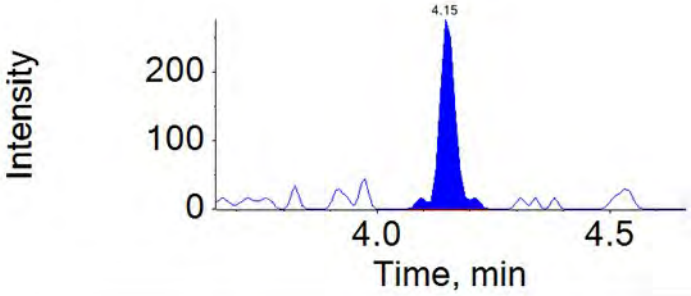
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



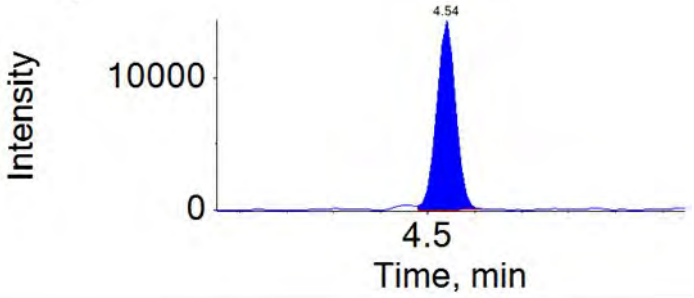
Component: PFHxA
Primary Mass: 313.0 / 269.0



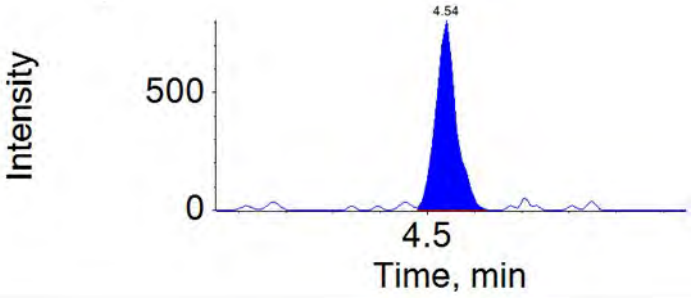
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



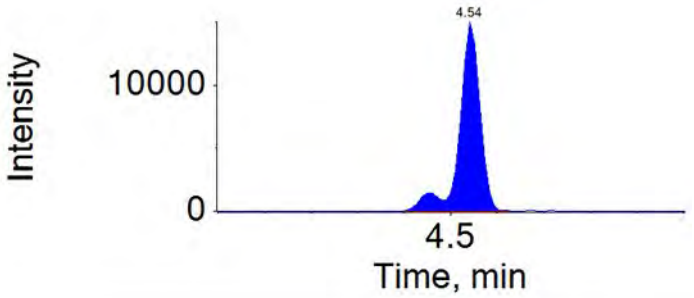
Component: PFHpA
Primary Mass: 363.0 / 319.0



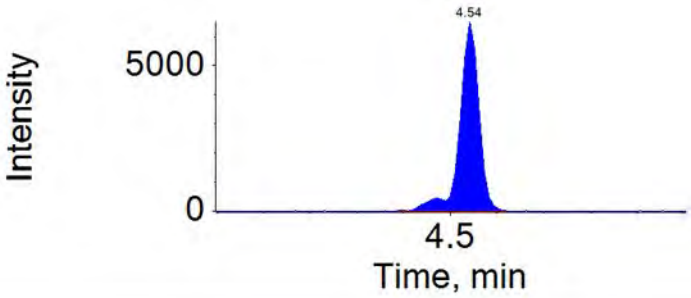
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



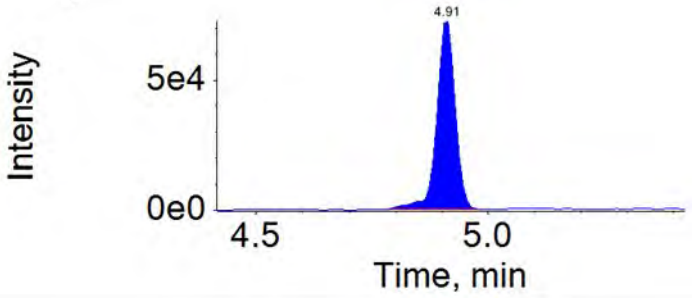
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



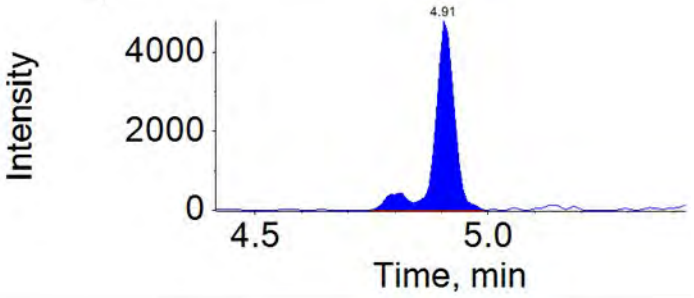
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

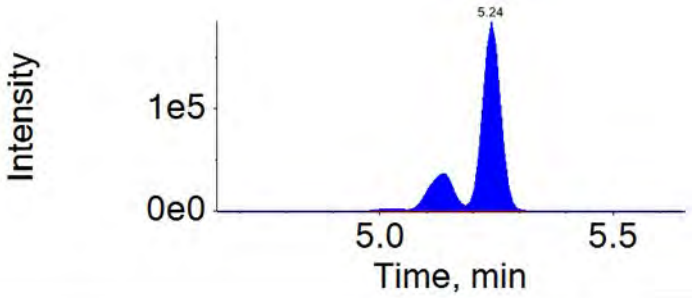
Component: PFOA
Primary Mass: 413.0 / 369.0



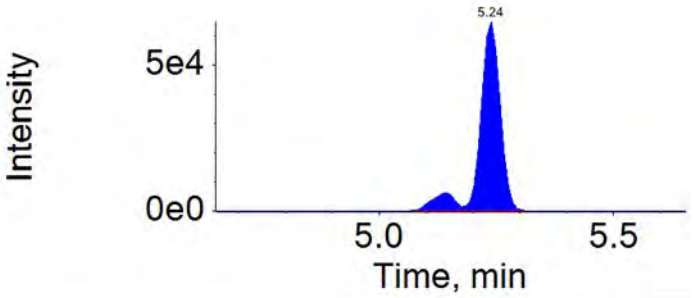
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



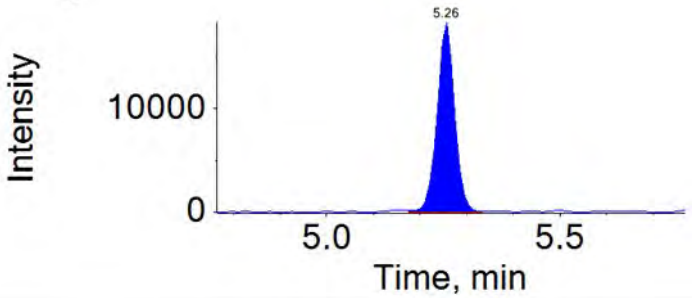
Component: PFOS
Primary Mass: 499.0 / 80.0



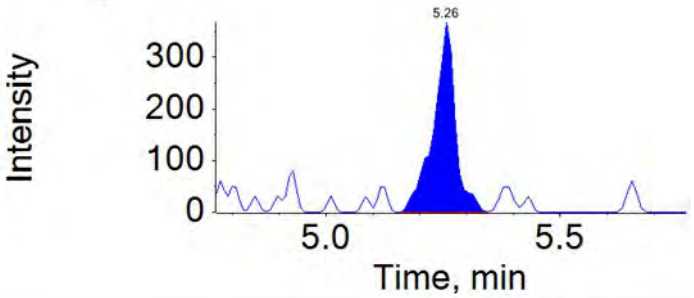
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



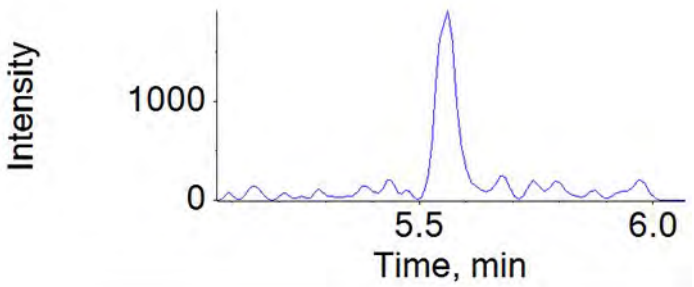
Component: PFNA
Primary Mass: 463.0 / 419.0



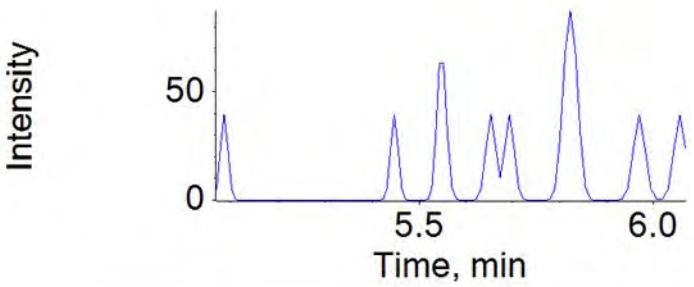
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



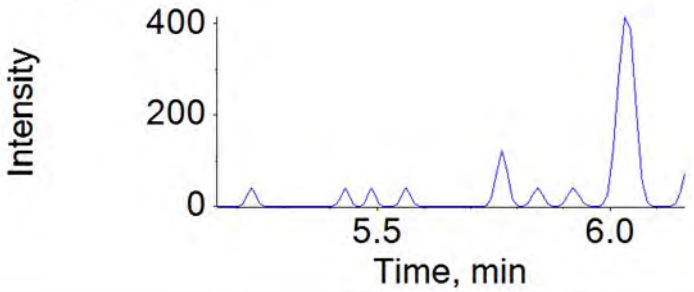
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



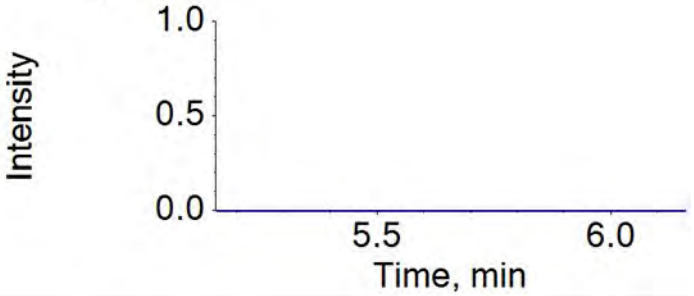
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

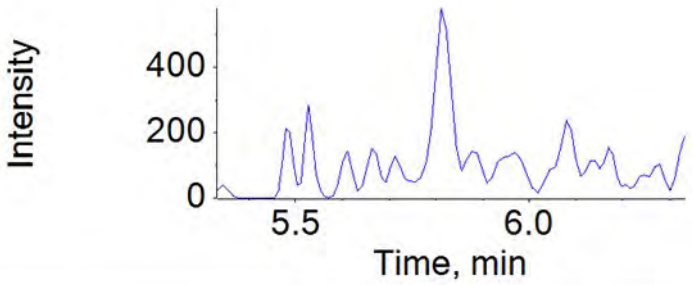
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



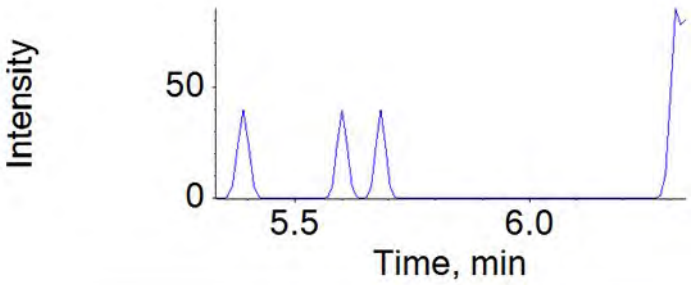
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



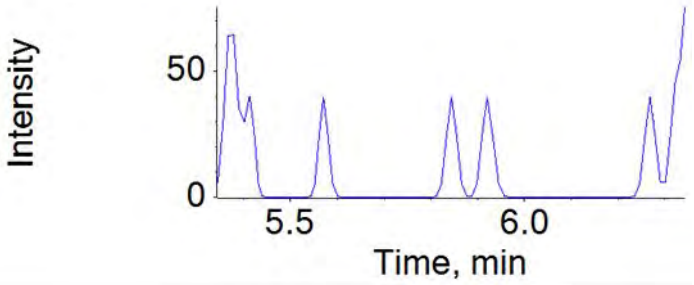
Component: PFUnDA
Primary Mass: 563.0 / 519.0



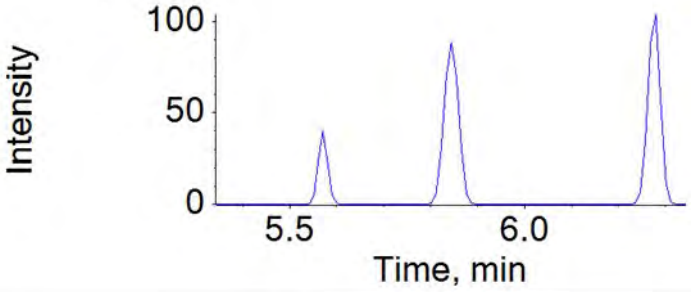
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



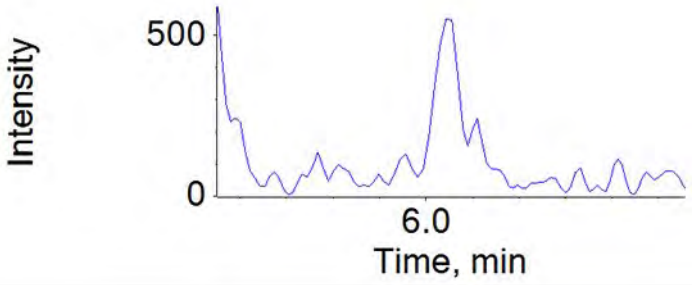
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



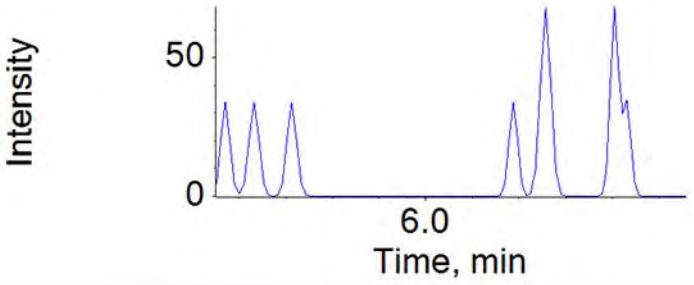
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



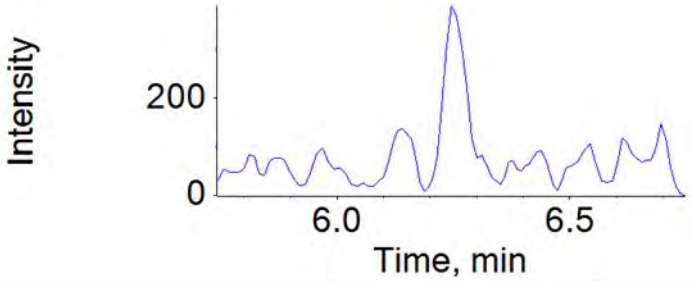
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



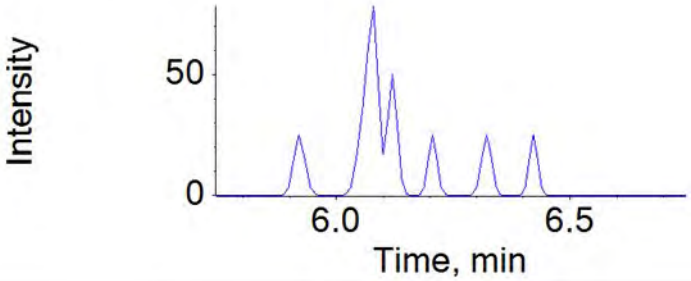
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

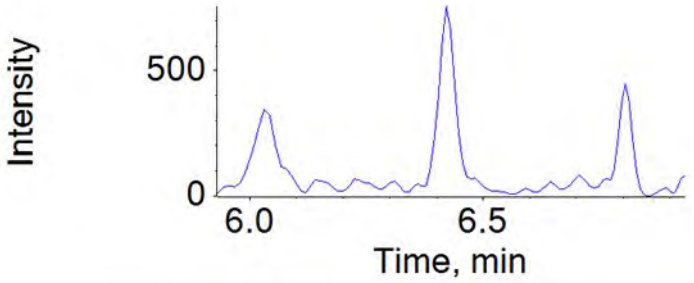
Component: PFTrDA
Primary Mass: 663.0 / 619.0



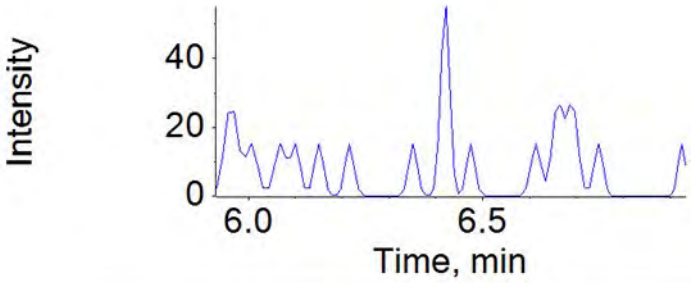
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883385			**Data File:**		18NOV29D-60.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18332003 OU1-Bldg371-S-02-12 Grab Soil			**Acquis Date:**		2018-11-29T18:49:45
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	40			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18332003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18332003			**Operator:**		MCD7824
Sample Wt.:	1.01000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1087147.2	906425.4	20	50	
13C2-PFOA	5.0	598774.1	495984.0	21	50	
13C4-PFOS	4.8	368420.2	296261.8	24	50	
13C2-PFDA	5.0	583864.0	451203.0	29	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	424648.9	13C3-PFBA	1087147.2	0.391	9.208	7.379	80	50-150	
E13C5-PFHxA	651340.4	13C2-PFOA	598774.1	1.088	9.901	7.912	80	50-150	
E13C3-PFHxS	334974.9	13C2-PFOA	598774.1	0.559	9.366	8.683	93	50-150	
E13C4-PFHpA	591186.1	13C2-PFOA	598774.1	0.987	9.901	8.983	91	50-150	
E13C8-PFOA	1023205.5	13C2-PFOA	598774.1	1.709	9.901	9.314	94	50-150	
E13C8-PFOS	324592.1	13C4-PFOS	368420.2	0.881	9.465	7.876	83	50-150	
E13C9-PFNA	641521.4	13C4-PFOS	368420.2	1.741	9.901	7.573	76	50-150	
E13C6-PFDA	823397.7	13C2-PFDA	583864.0	1.410	9.901	7.874	80	50-150	
Ed3-NMeFOSAA	203382.2	13C2-PFDA	583864.0	0.348	9.901	8.758	88	50-150	
E13C7-PFUnDA	581014.7	13C2-PFDA	583864.0	0.995	9.901	8.328	84	50-150	
Ed5-NEtFOSAA	126288.3	13C2-PFDA	583864.0	0.216	9.901	7.631	77	50-150	
E13C2-PFDoDA	1099448.3	13C2-PFDA	583864.0	1.883	9.901	7.834	79	50-150	
E13C2-PFTeDA	843244.4	13C2-PFDA	583864.0	1.444	9.901	7.914	80	50-150	

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

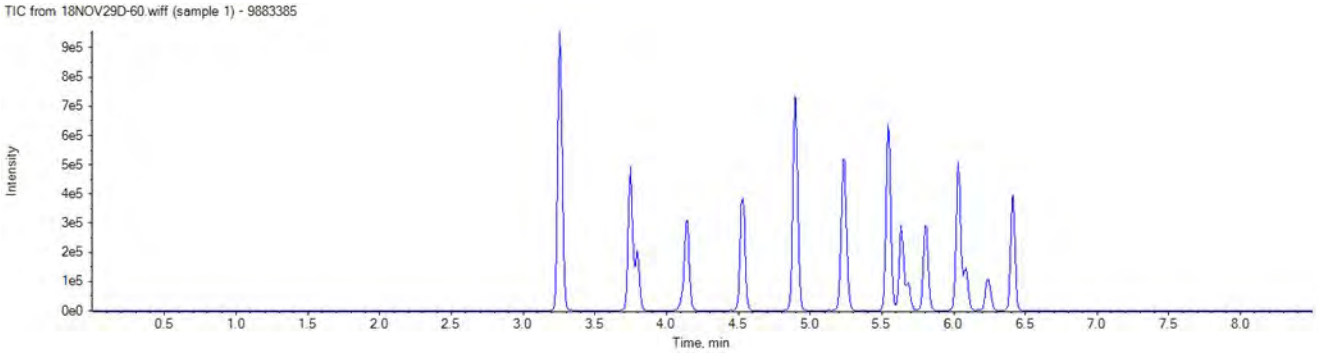
Analyte Quantitation Peak Table

Sample Name: 9883385 **Instrument Name:** LM27631 **File Name:** 18NOV29D-60.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.01000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.80	1.000	6541.9		A	13C3-PFBS	3.80	424648.9	0.015	0.148
PFHxA	4.14	1.000	58633.5		M	13C5-PFHxA	4.14	651340.4	0.090	0.716
PFHpA	4.53	1.000	12024.1		A	13C4-PFHpA	4.53	591186.1	0.020	0.124
PFHxS	4.53	1.000	7281.6		M	13C3-PFHxS	4.53	334974.9	0.022	0.202
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.90	1023205.5	N/A	
PFOS	5.23	1.000	4860.5		M	13C8-PFOS	5.23	324592.1	0.015	0.124
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.24	641521.4	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.54	823397.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.68	203382.2	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.80	581014.7	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	126288.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.03	1099448.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.03	1099448.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	843244.4	N/A	

Total Ion Chromatogram

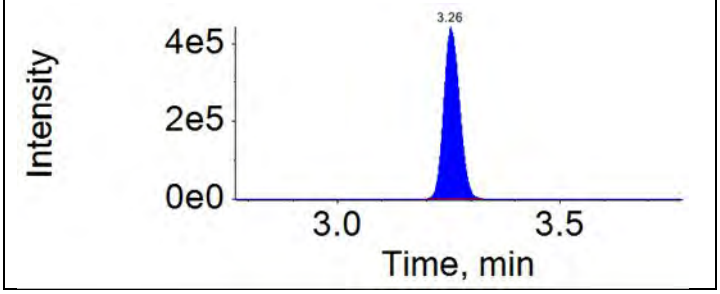


APPROVED
By MCD at 10:13 pm, 11/30/18

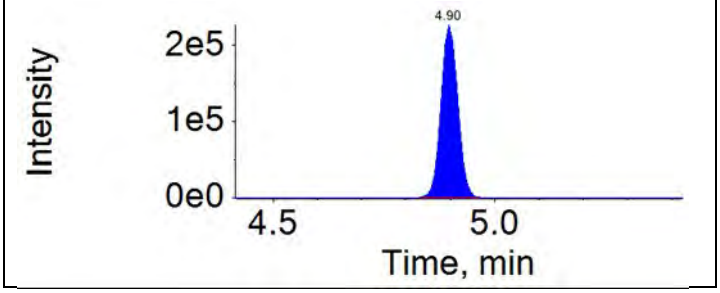
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

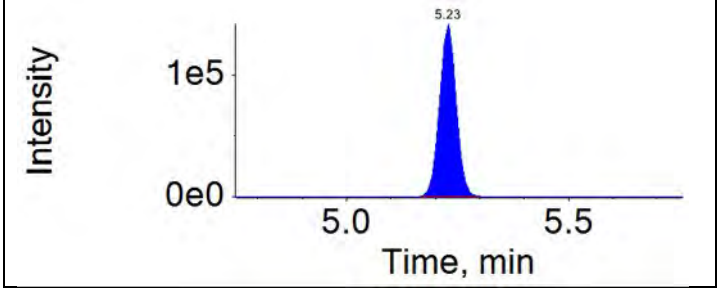
Injection Standard: 13C3-PFBA
216.0 / 172.0



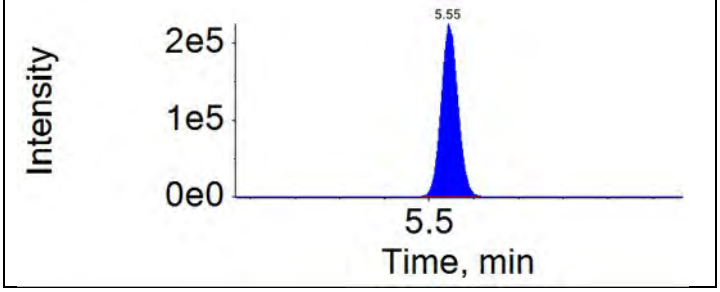
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

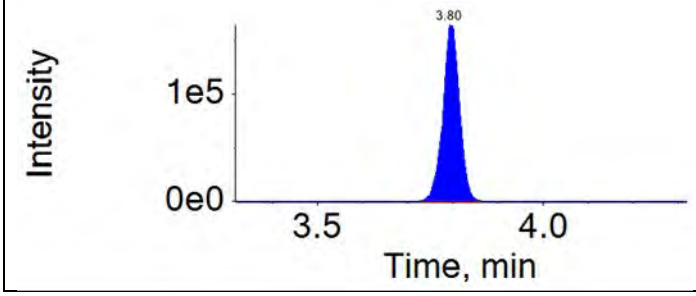


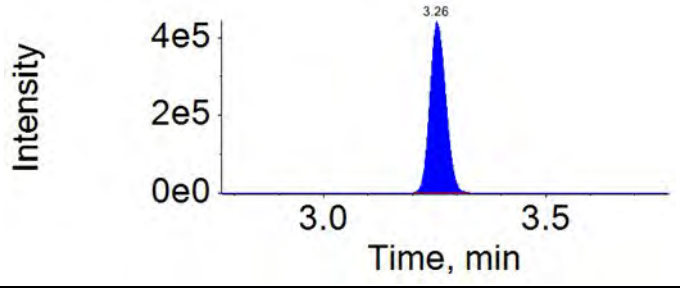
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

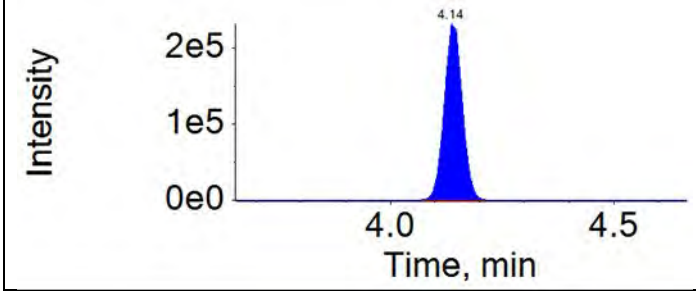
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

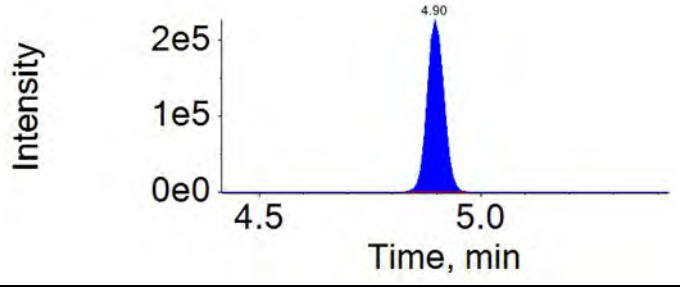
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



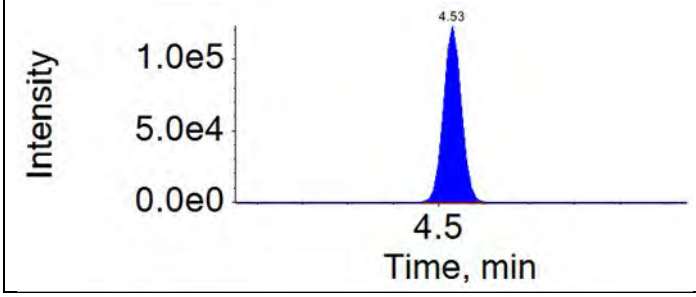


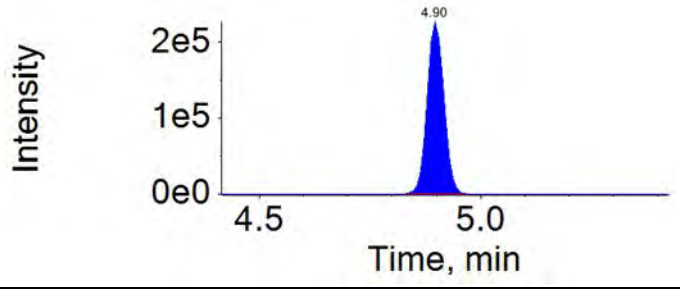
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



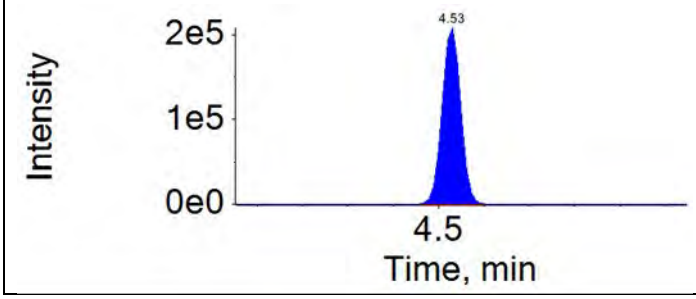


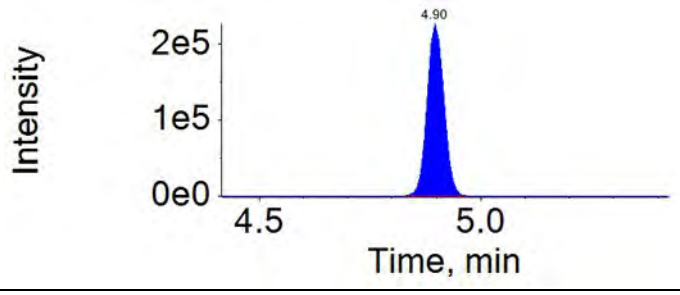
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

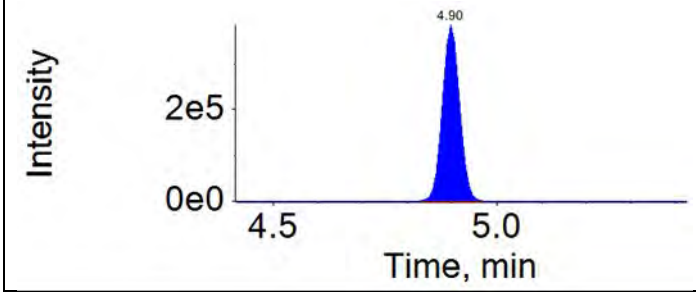
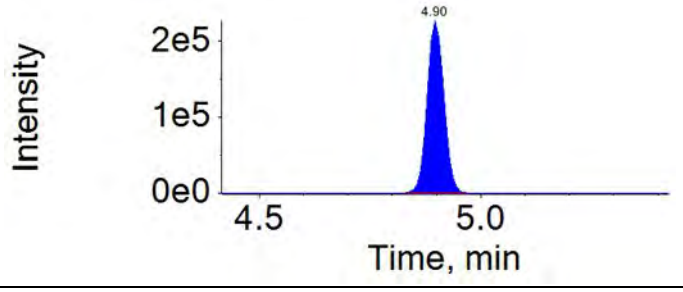


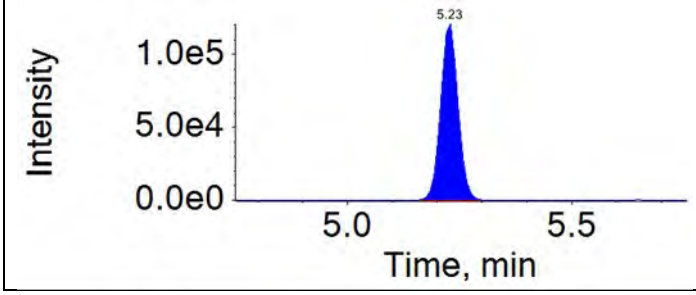
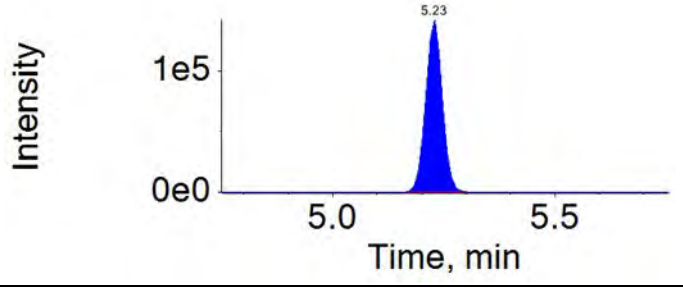


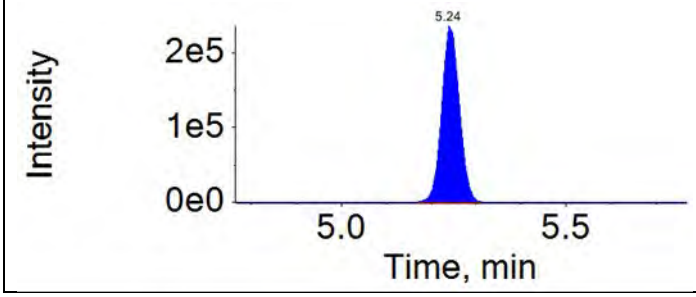
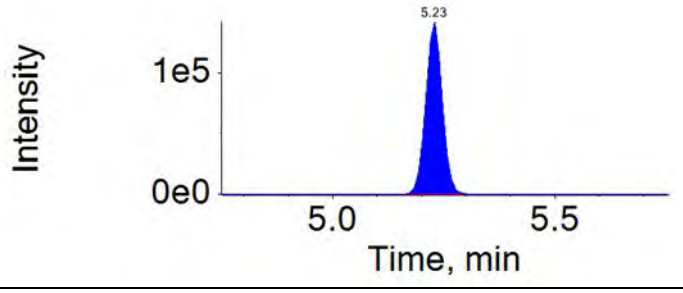
APPROVED
By MCD at 10:13 pm, 11/30/18

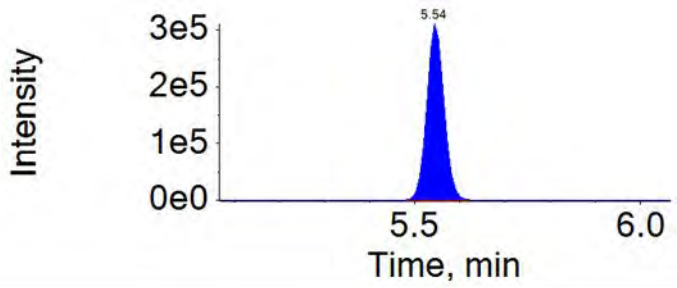
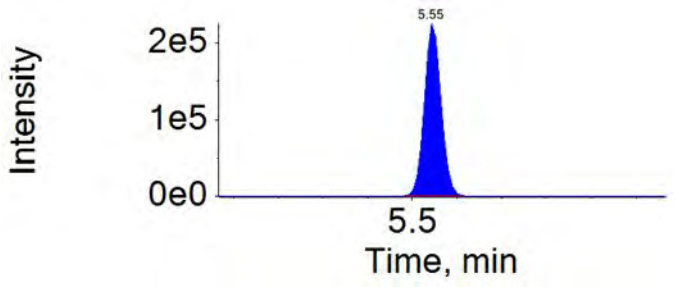
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

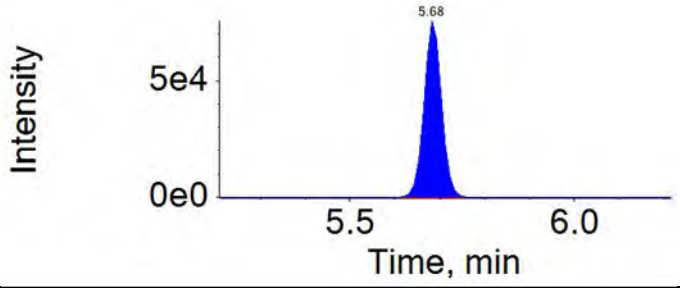
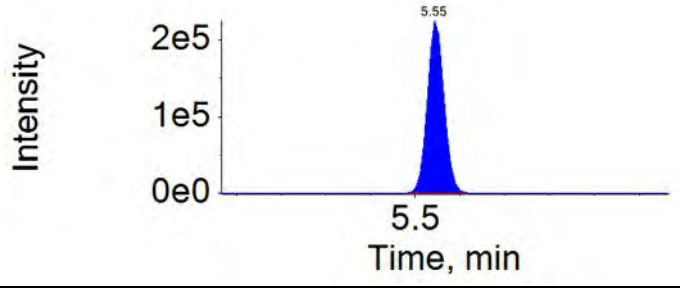
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

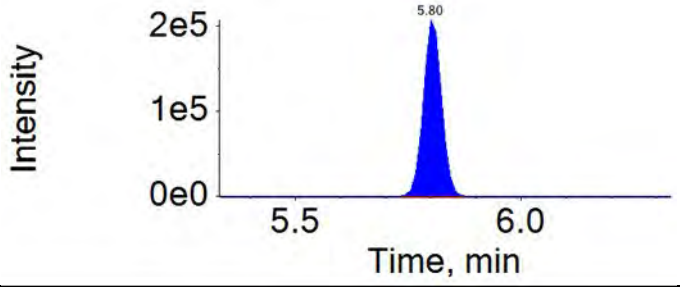
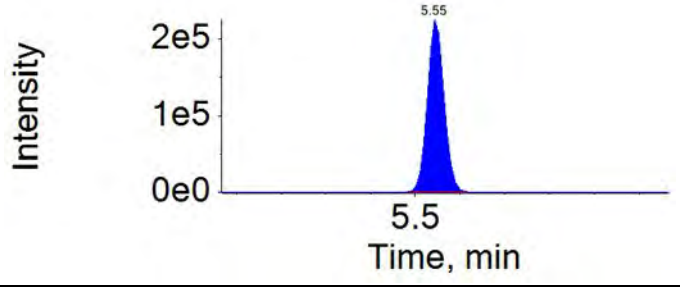
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

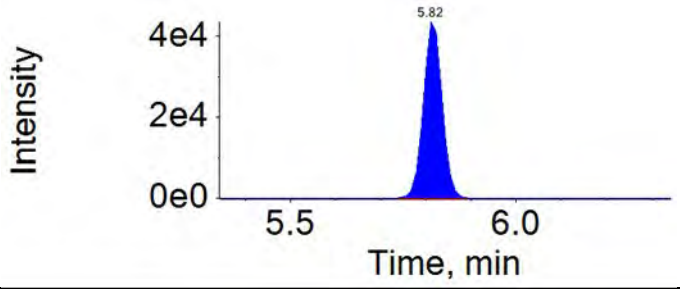
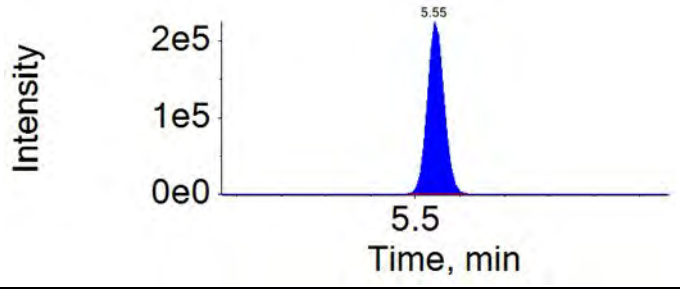
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

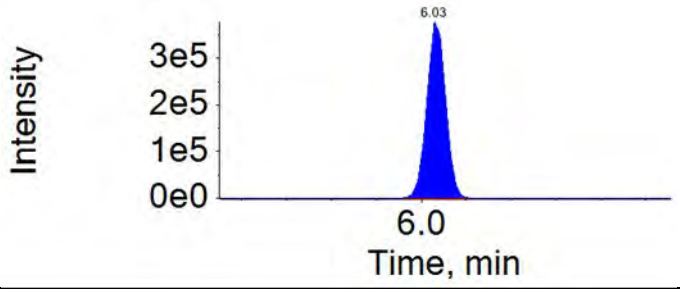
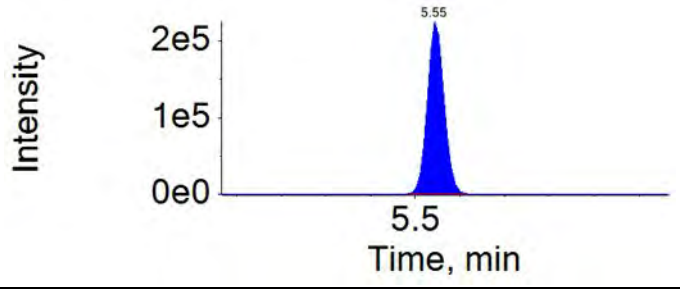
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

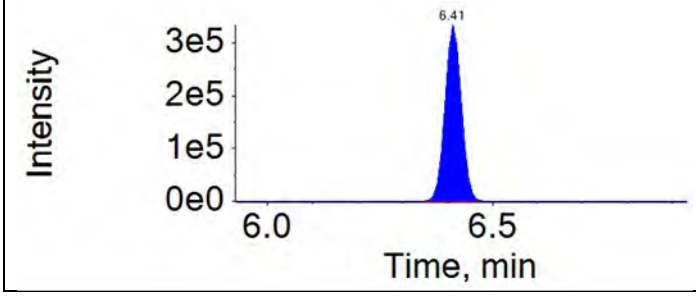
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

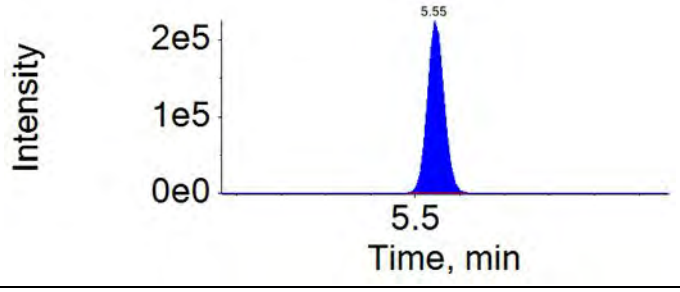
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



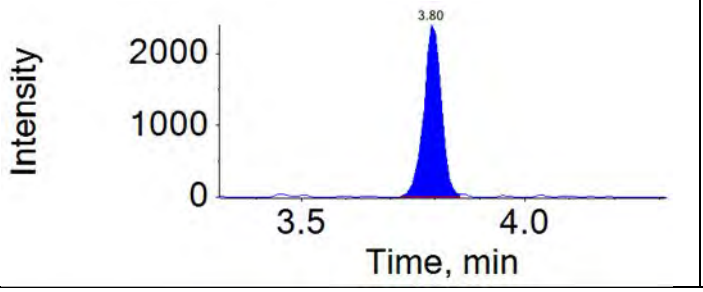


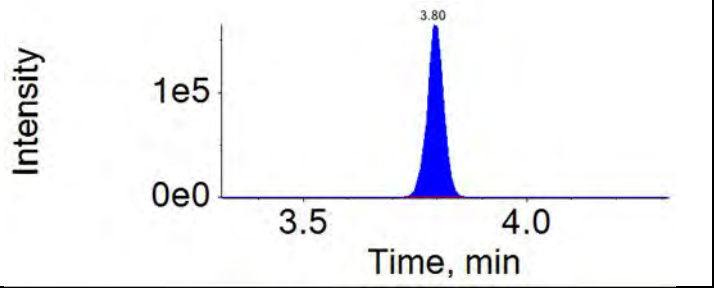
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

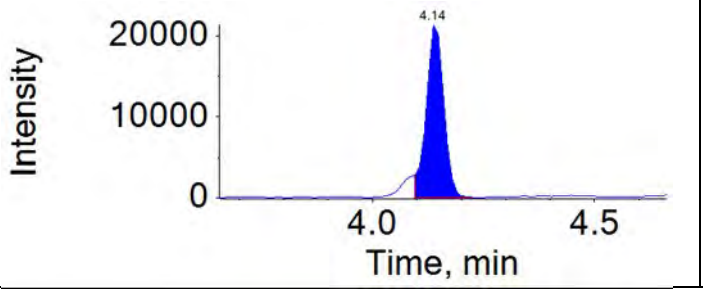
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

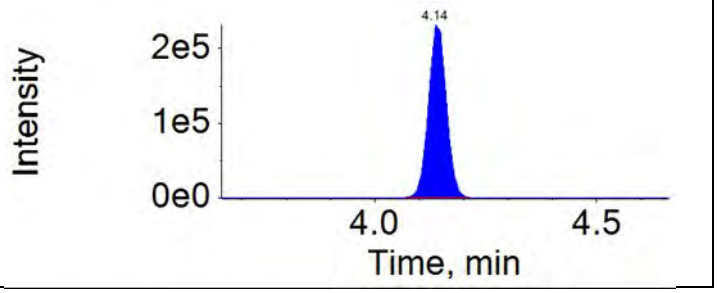
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



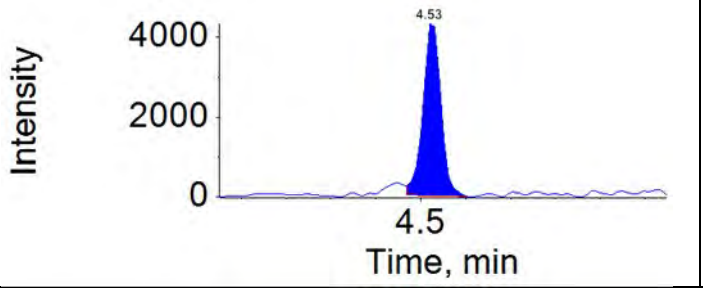


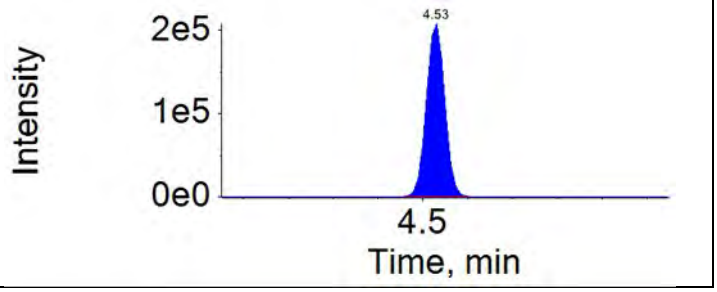
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



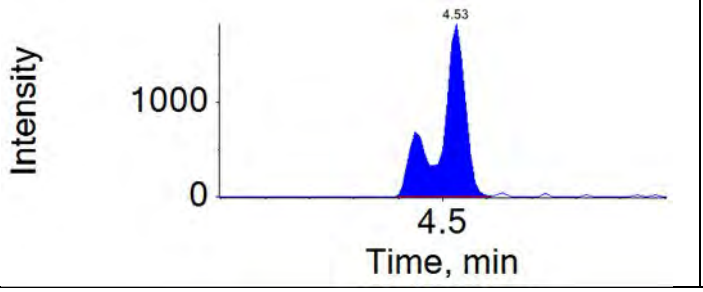


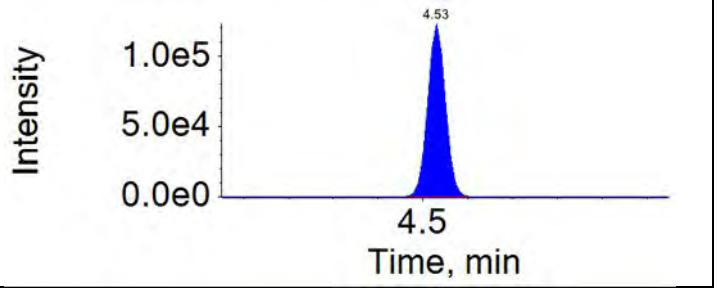
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



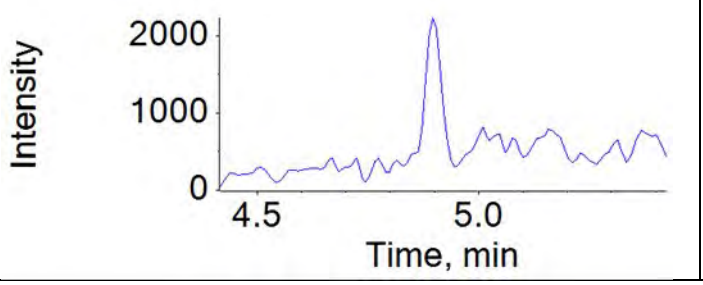


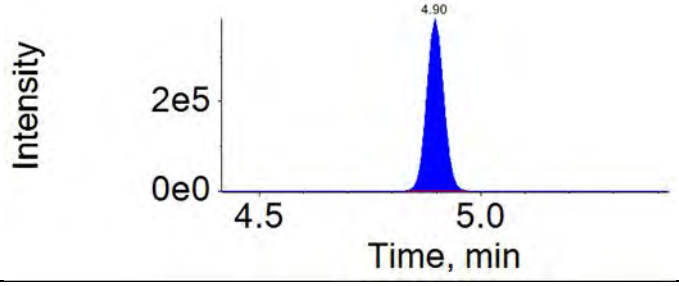
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

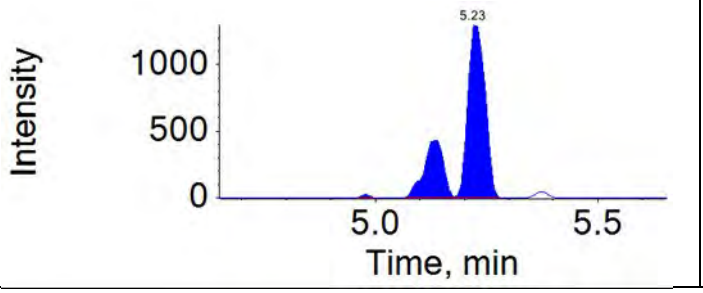
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

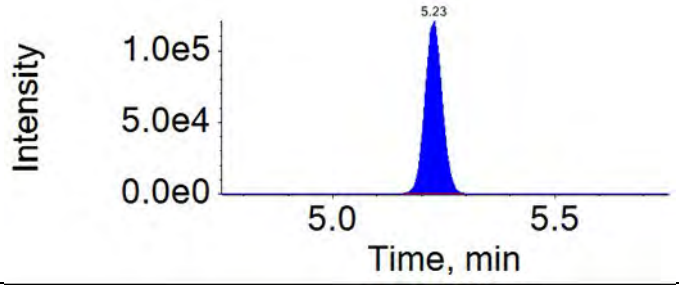
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



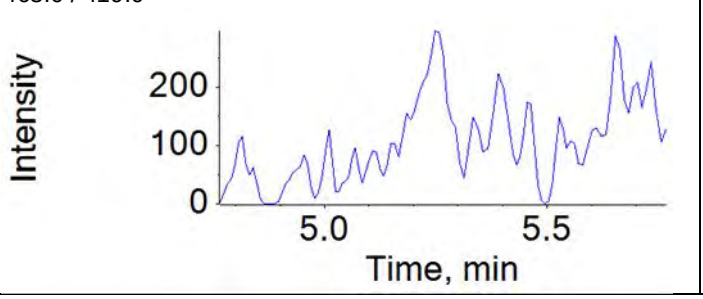


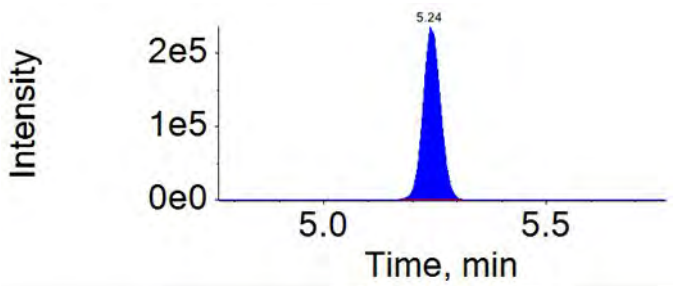
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



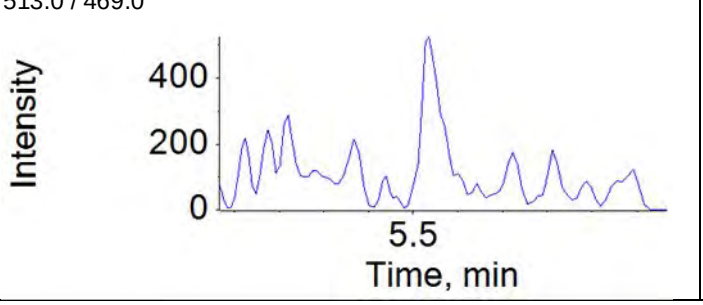


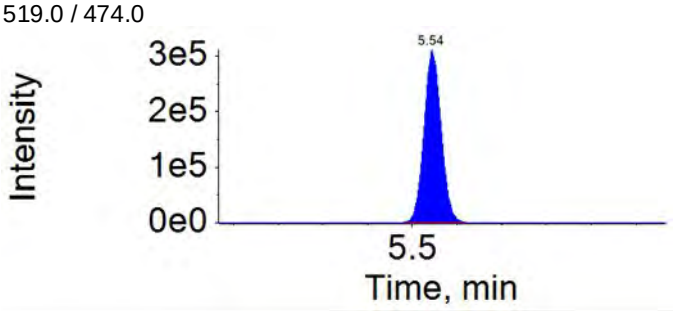
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



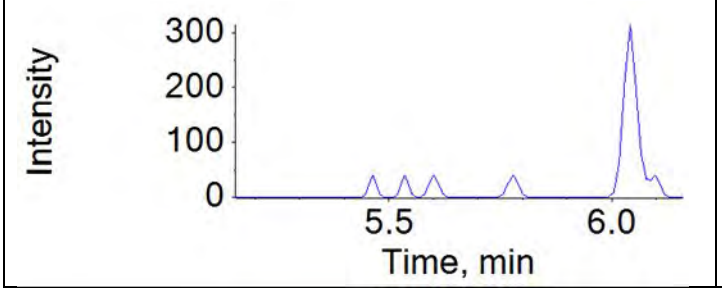


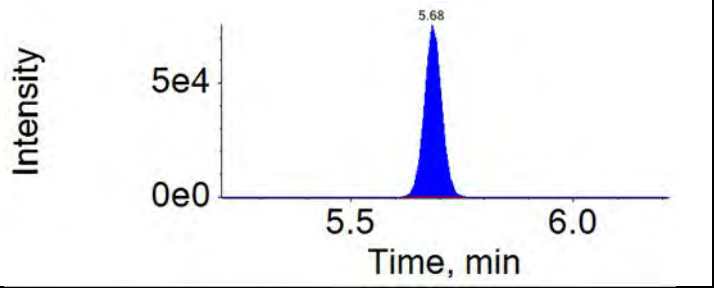
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

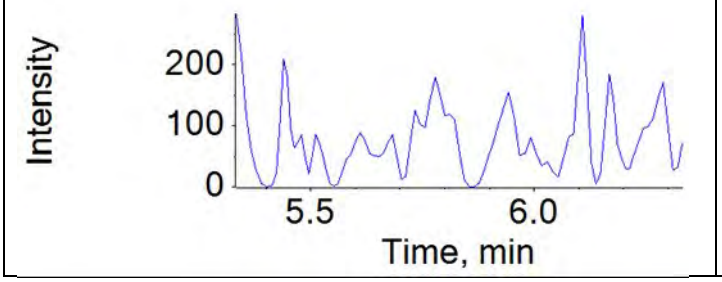
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

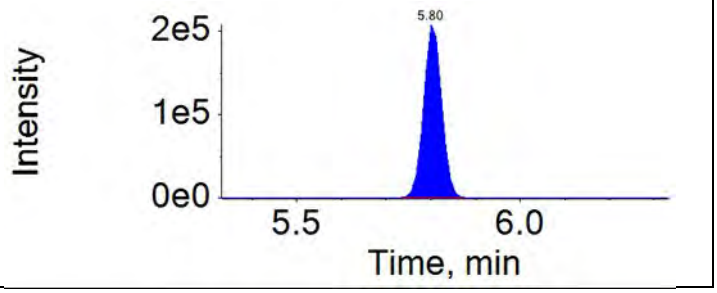
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



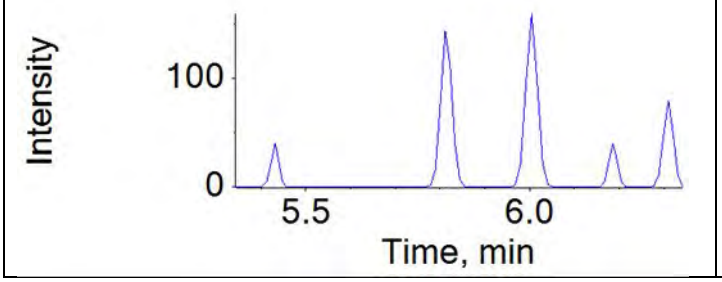


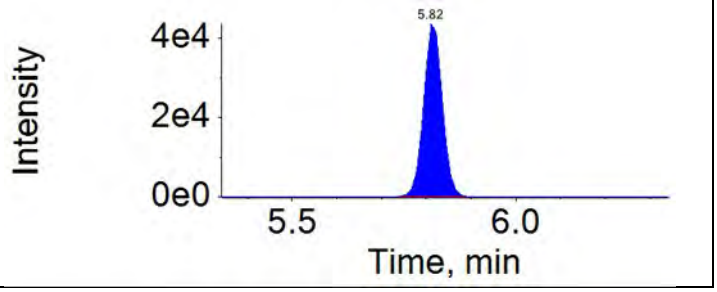
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



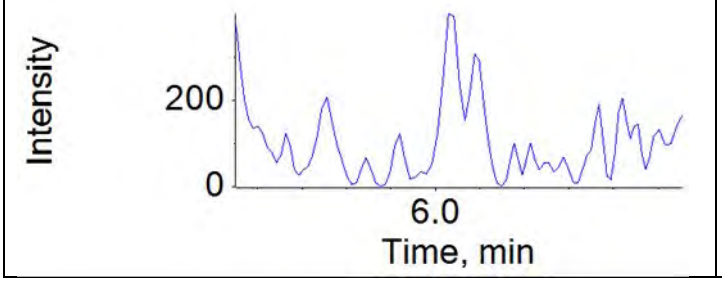


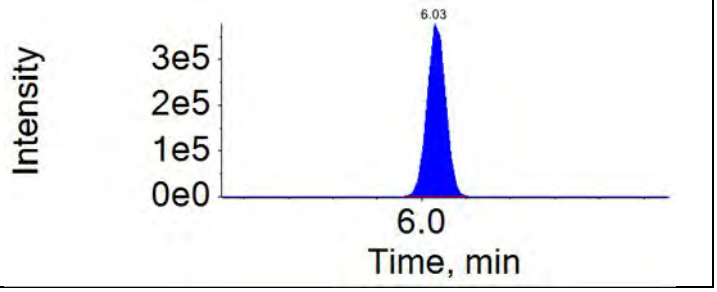
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



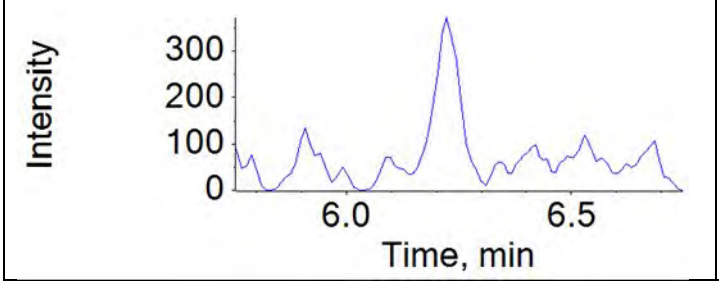


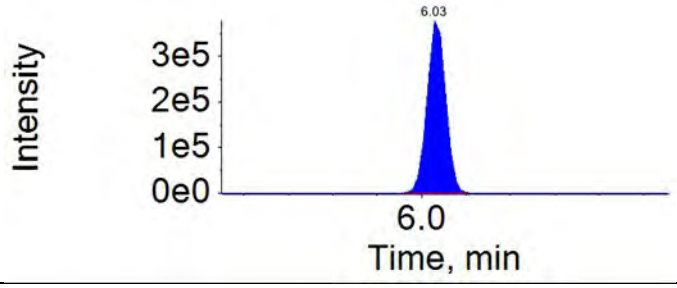
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

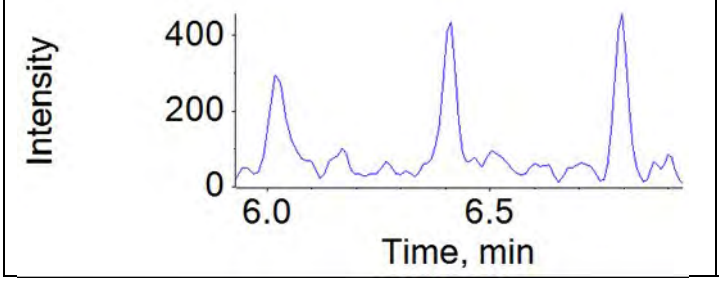
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

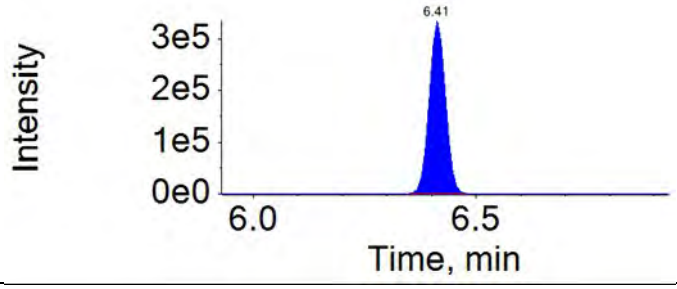
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



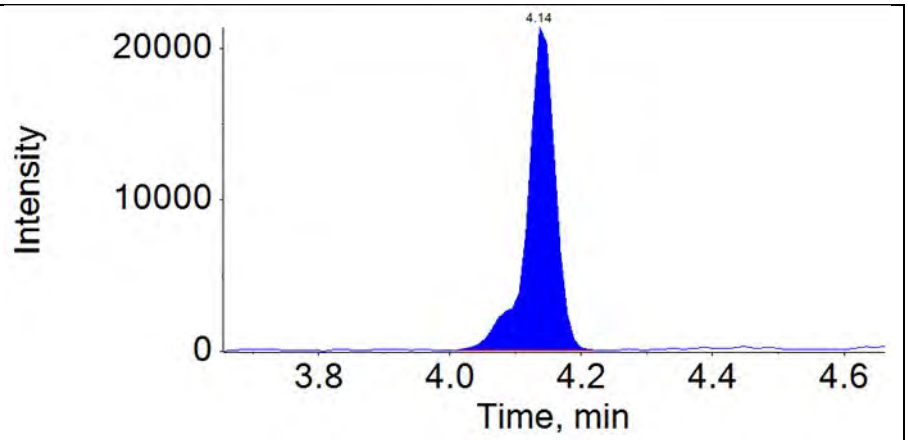


APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

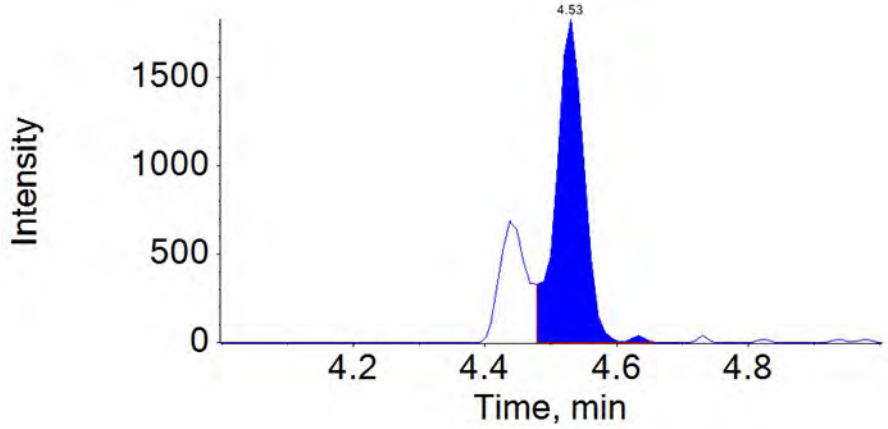
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxA
RT (min.):
4.14
Peak Area:
64288.3
Mass Range:
313.0 / 269.0
File Name:
18NOV29D-60.wiff
Sample Name:
9883385



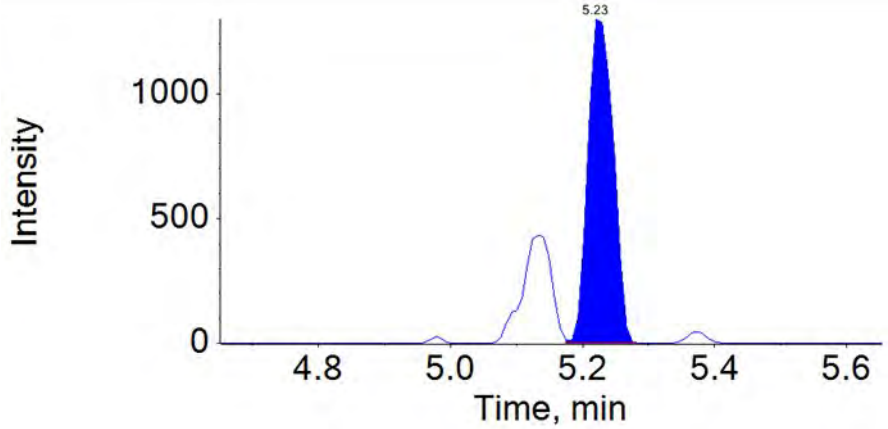
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.53
Peak Area:
5369.0
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-60.wiff
Sample Name:
9883385



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
3486.8
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-60.wiff
Sample Name:
9883385



Integration Comment: incorrect integration

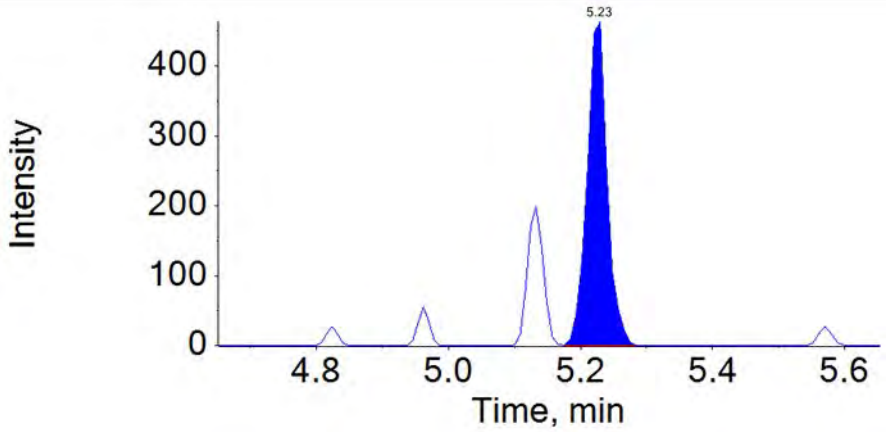
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.23
Peak Area:
984.7
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-60.wiff
Sample Name:
9883385



Integration Comment: incorrect integration

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Ion Ratio Report

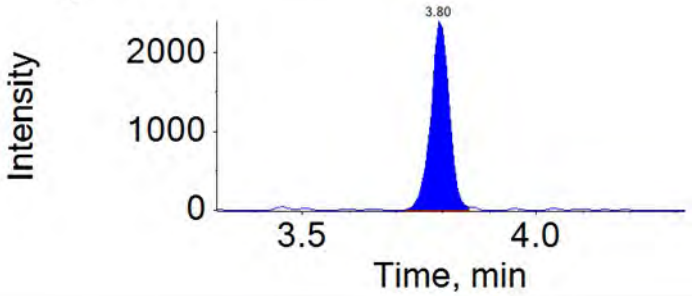
Sample Name: 9883385 **Instrument Name:** LM27631 **File Name:** 18NOV29D-60.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	6541.9	A	N/A	0.3078			
PFBS_2	3.80	1.00	2013.9	A	N/A	0.3078	-16	50	
PFHxA	4.14	1.00	58633.5	M	N/A	0.0126			
PFHxA_2	4.13	1.00	737.1	A	N/A	0.0126	22	50	
PFHpA	4.53	1.00	12024.1	A	N/A	0.0419			
PFHpA_2	4.52	1.00	503.5	A	N/A	0.0419	-25	50	
PFHxS	4.53	1.00	7281.6	M	N/A	0.3240			
PFHxS_2	4.53	1.00	2359.5	A	N/A	0.3240	-12	50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	5.23	1.00	4860.5	M	N/A	0.2710			
PFOS_2	5.23	1.00	1317.4	M	N/A	0.2710	-8	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

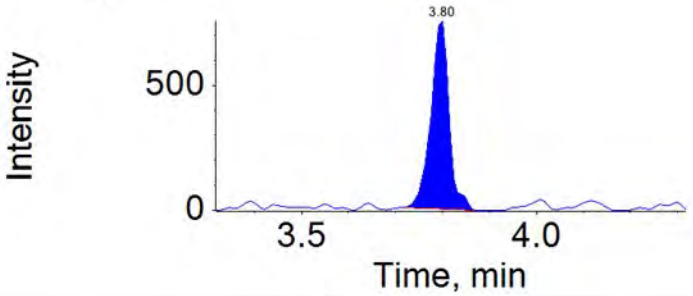
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

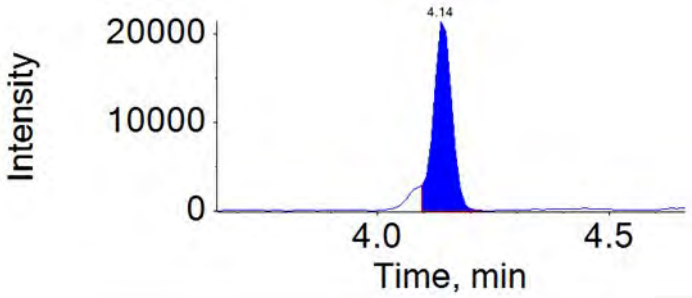
Component: PFBS
Primary Mass: 299.0 / 80.0



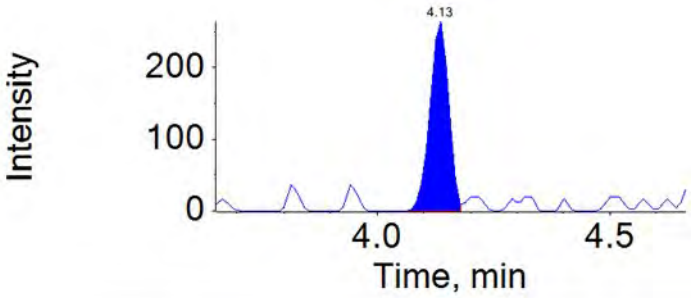
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



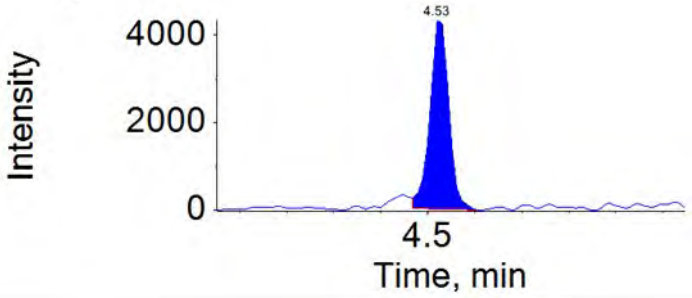
Component: PFHxA
Primary Mass: 313.0 / 269.0



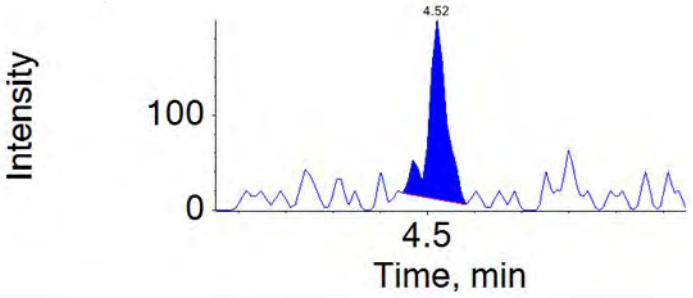
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



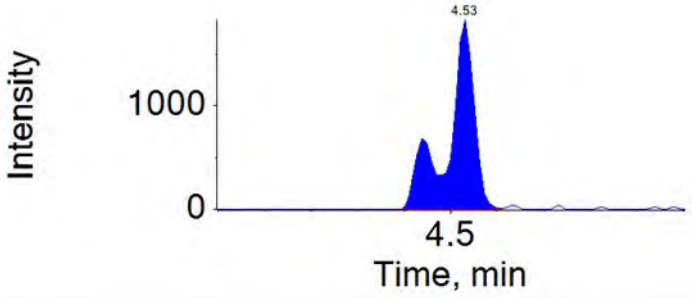
Component: PFHpA
Primary Mass: 363.0 / 319.0



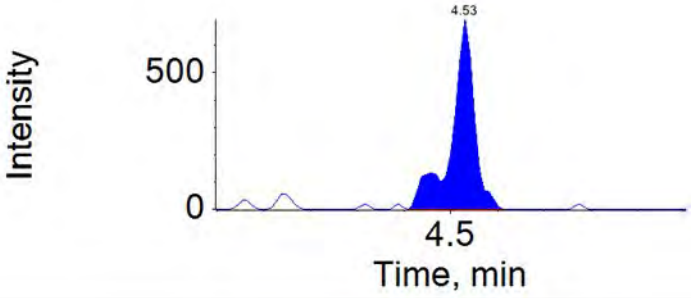
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



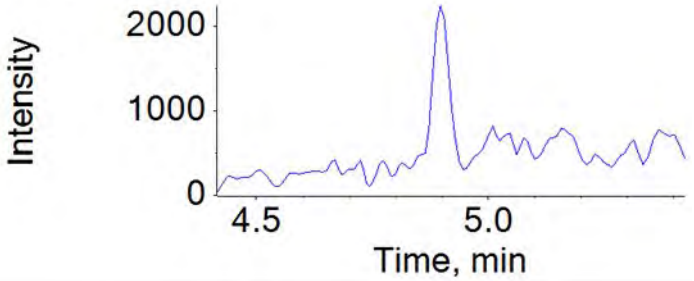
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



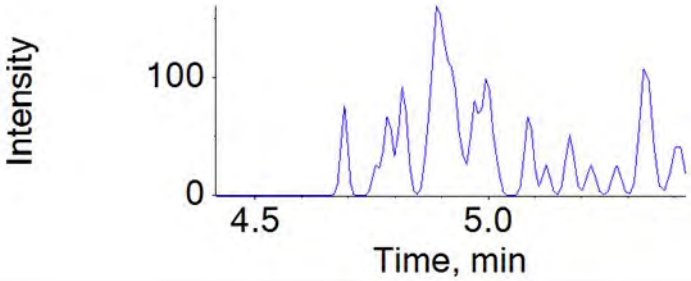
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

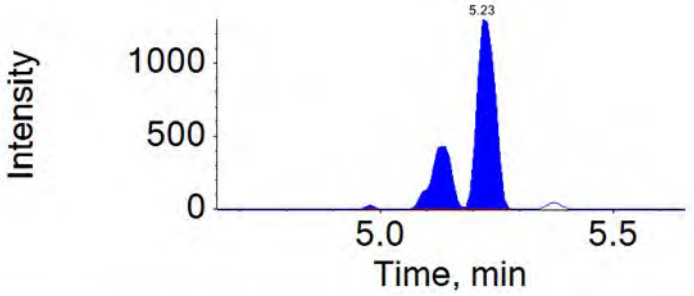
Component: PFOA
Primary Mass: 413.0 / 369.0



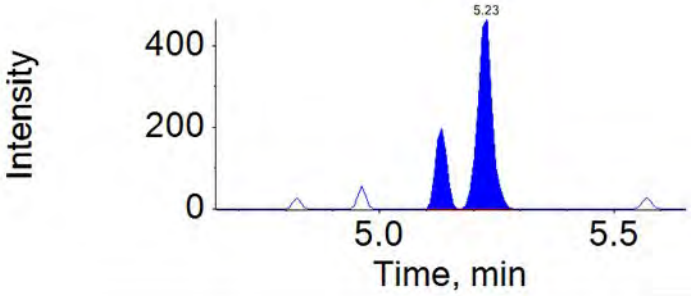
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



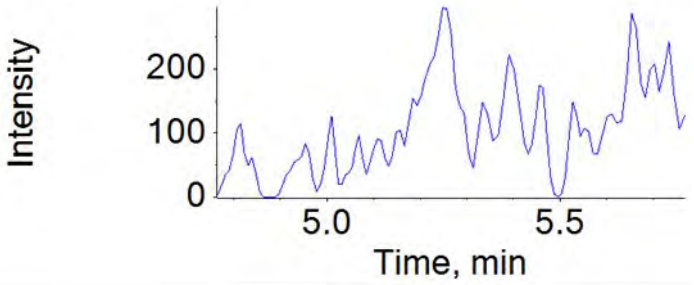
Component: PFOS
Primary Mass: 499.0 / 80.0



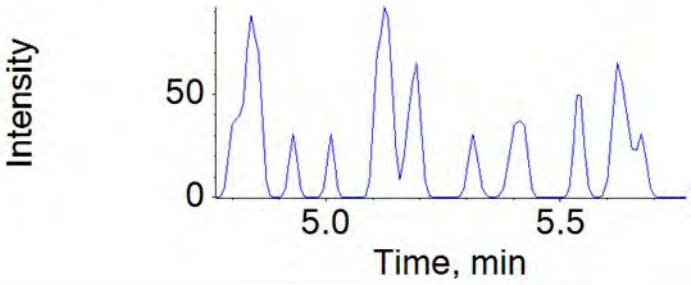
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



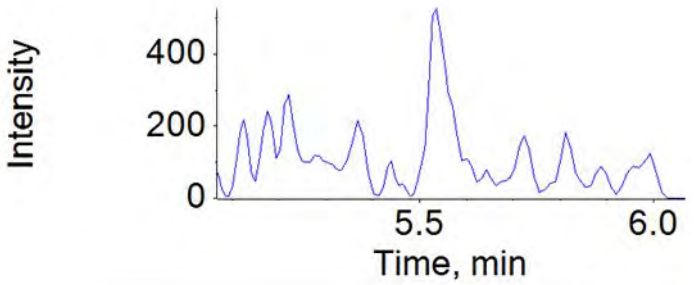
Component: PFNA
Primary Mass: 463.0 / 419.0



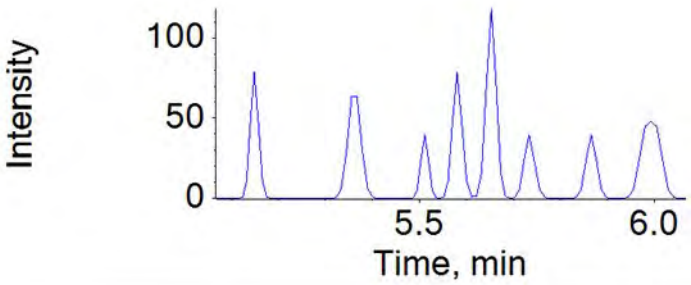
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



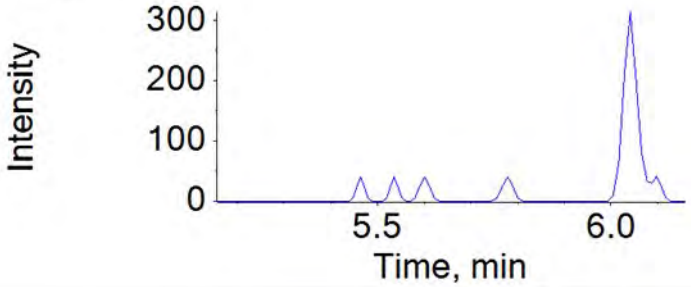
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



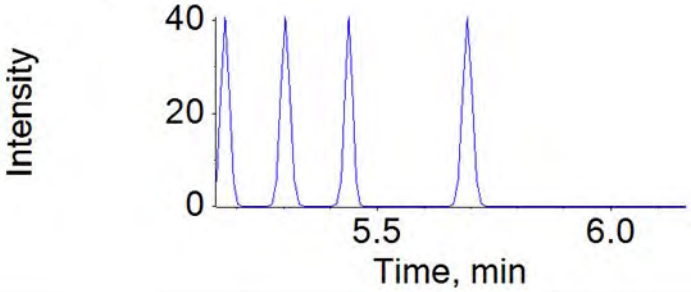
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

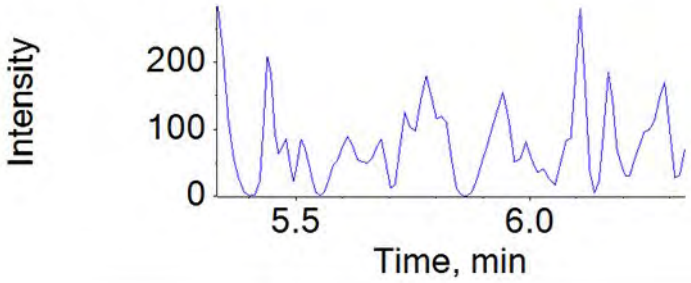
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



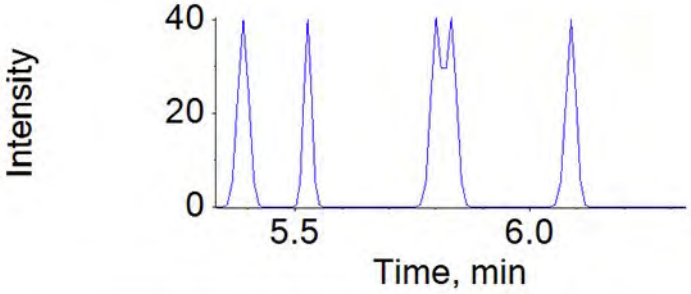
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



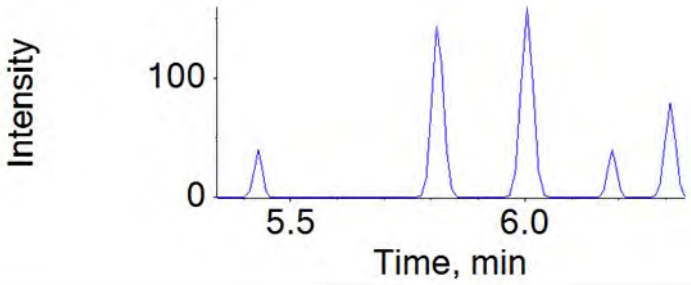
Component: PFUnDA
Primary Mass: 563.0 / 519.0



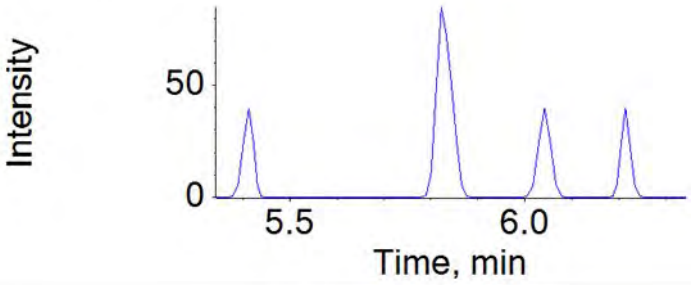
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



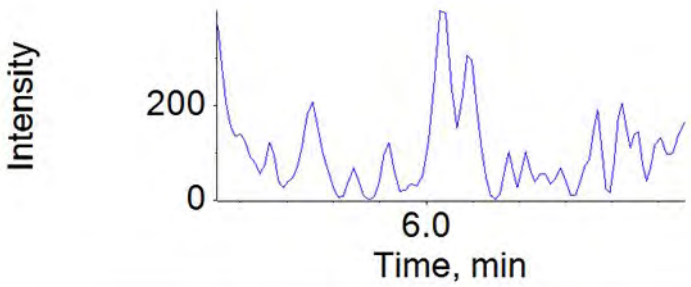
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



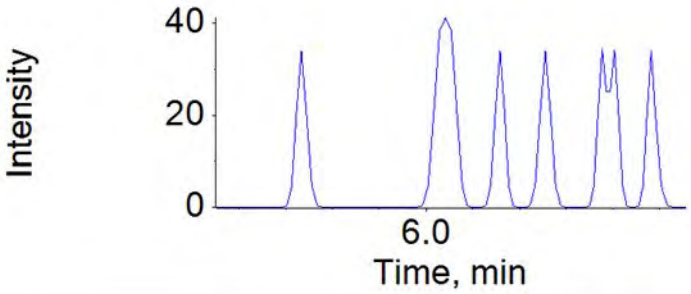
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



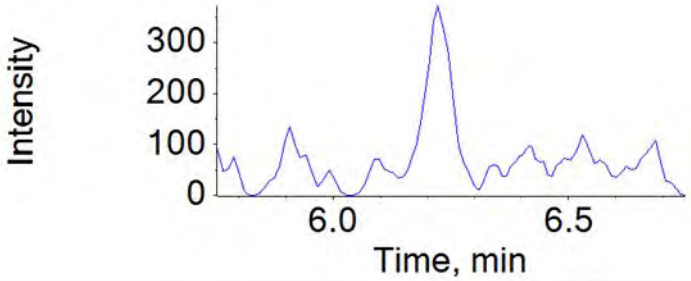
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



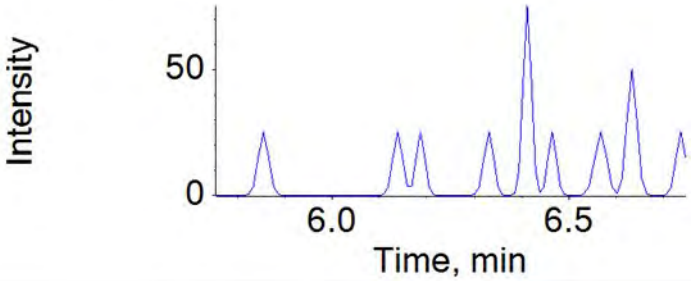
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

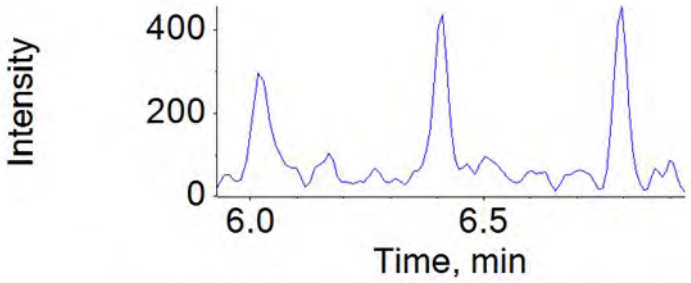
Component: PFTrDA
Primary Mass: 663.0 / 619.0



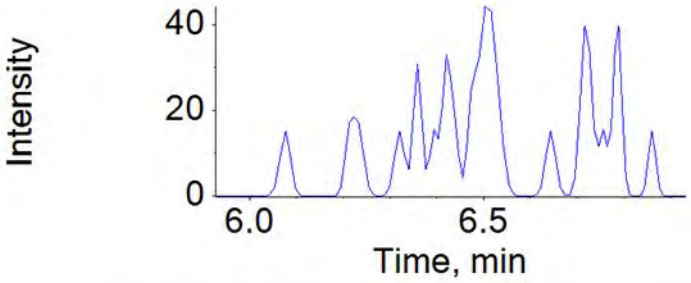
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18311004 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9883386			**Data File:**		18NOV08D-101.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-03-01 Grab Soil			**Acquis Date:**		2018-11-09T02:50:50
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	41			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		JPT12262
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	892528.6	728839.7	22	50	
13C2-PFOA	5.0	605284.9	491983.1	23	50	
13C4-PFOS	4.8	343365.8	255568.1	34	50	
13C2-PFDA	5.0	380070.5	315407.5	21	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	357361.1	13C3-PFBA	892528.6	0.400	8.774	5.544	63	50-150	
E13C5-PFHxA	599229.9	13C2-PFOA	605284.9	0.990	9.434	6.871	73	50-150	
E13C3-PFHxS	275410.5	13C2-PFOA	605284.9	0.455	8.925	6.163	69	50-150	
E13C4-PFHpA	486219.7	13C2-PFOA	605284.9	0.803	9.434	6.895	73	50-150	
E13C8-PFOA	811143.2	13C2-PFOA	605284.9	1.340	9.434	7.051	75	50-150	
E13C8-PFOS	258188.5	13C4-PFOS	343365.8	0.752	9.019	6.273	70	50-150	
E13C9-PFNA	424957.7	13C4-PFOS	343365.8	1.238	9.434	6.379	68	50-150	
E13C6-PFDA	530067.6	13C2-PFDA	380070.5	1.395	9.434	6.618	70	50-150	
Ed3-NMeFOSAA	58358.1	13C2-PFDA	380070.5	0.154	9.434	5.387	57	50-150	
E13C7-PFUnDA	227225.6	13C2-PFDA	380070.5	0.598	9.434	6.507	69	50-150	
Ed5-NEtFOSAA	42838.7	13C2-PFDA	380070.5	0.113	9.434	4.921	52	50-150	
E13C2-PFDoDA	482800.3	13C2-PFDA	380070.5	1.270	9.434	6.461	68	50-150	
E13C2-PFTeDA	337131.9	13C2-PFDA	380070.5	0.887	9.434	6.025	64	50-150	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

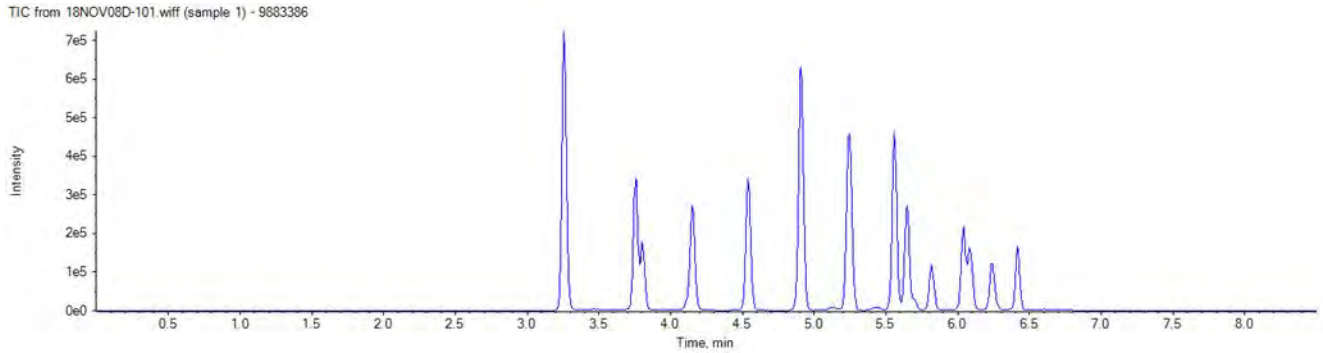
Analyte Quantitation Peak Table

Sample Name: 9883386 **Instrument Name:** LM27631 **File Name:** 18NOV08D-101.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	357361.1	N/A	
PFHxA	4.15	1.000	20206.6		A	13C5-PFHxA	4.15	599229.9	0.034	0.273
PFHxS	4.54	1.000	22097.6		M	13C3-PFHxS	4.54	275410.5	0.080	0.767
PFHpA	4.54	1.000	25889.0		A	13C4-PFHpA	4.54	486219.7	0.053	0.338
PFOA	4.91	1.000	21722.1		A	13C8-PFOA	4.91	811143.2	0.027	0.284
PFOS	5.24	1.000	167974.7		M	13C8-PFOS	5.24	258188.5	0.651	6.365
PFNA	5.25	1.000	34971.4		A	13C9-PFNA	5.25	424957.7	0.082	0.580
PFDA	5.56	1.000	84735.5		A	13C6-PFDA	5.56	530067.6	0.160	1.659
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	58358.1	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	227225.6	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	42838.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	482800.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	482800.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	337131.9	N/A	

Total Ion Chromatogram

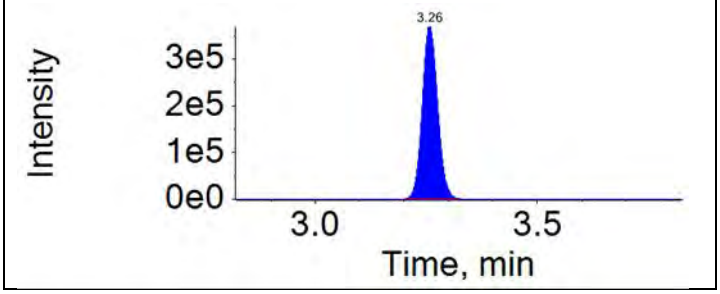


APPROVED
By JPT at 5:18 pm, 11/9/18

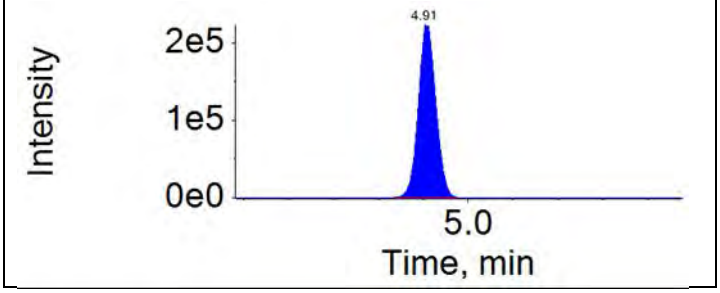
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

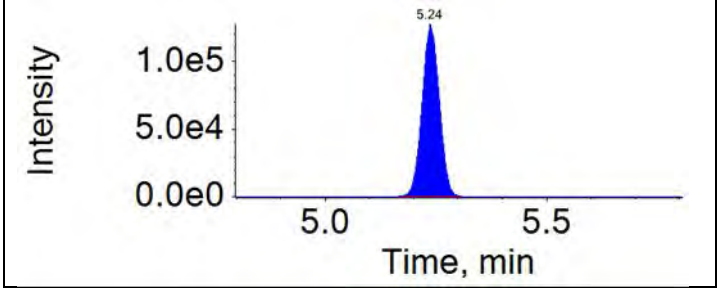
Injection Standard: 13C3-PFBA
216.0 / 172.0



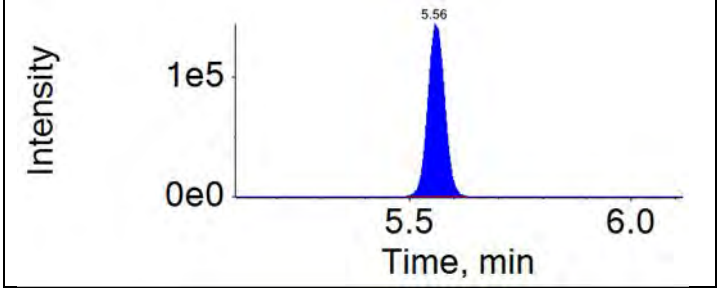
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

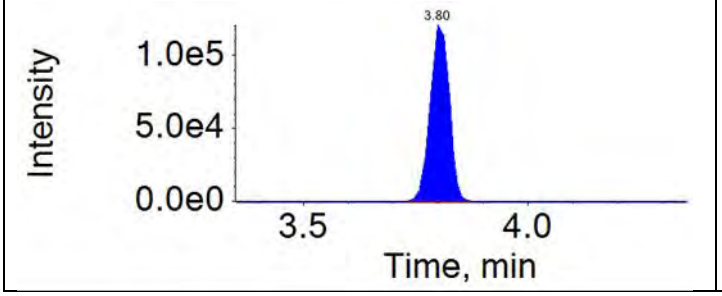


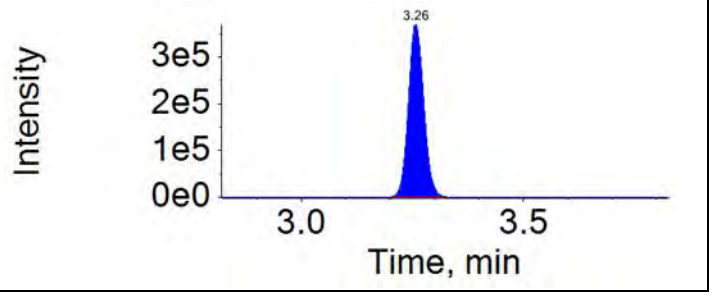
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

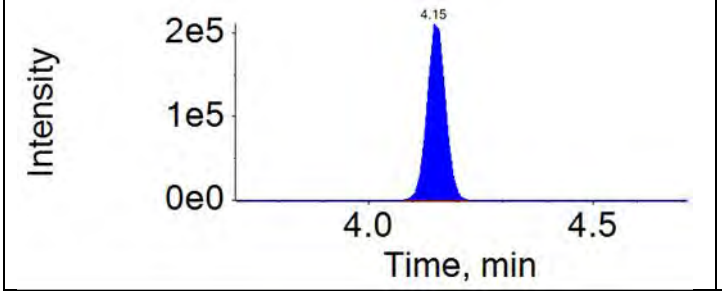
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

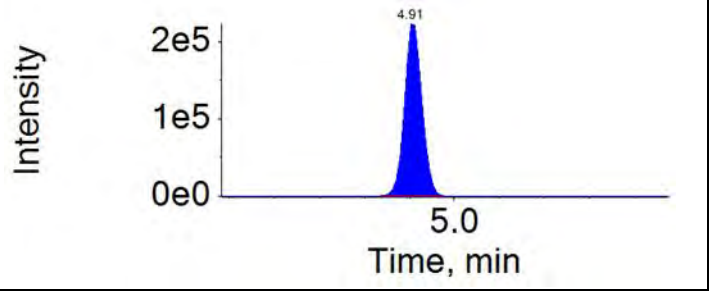
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



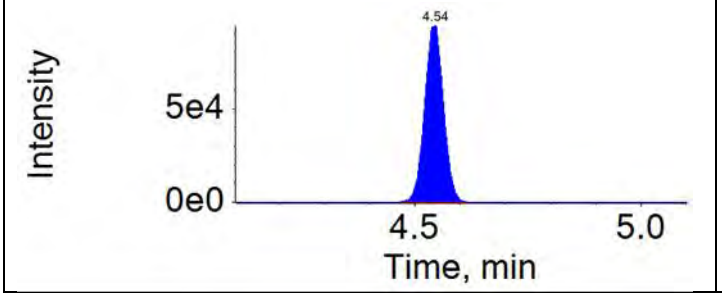


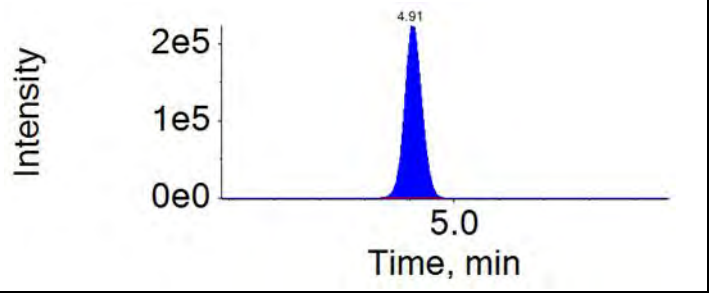
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



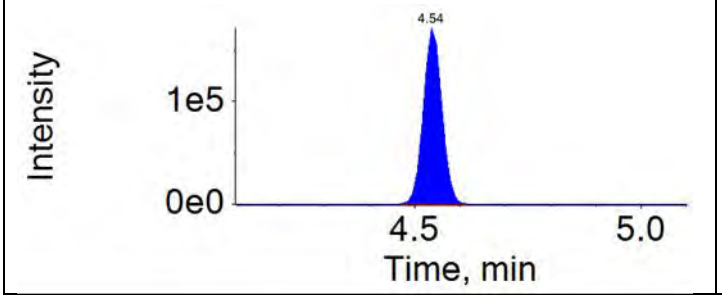


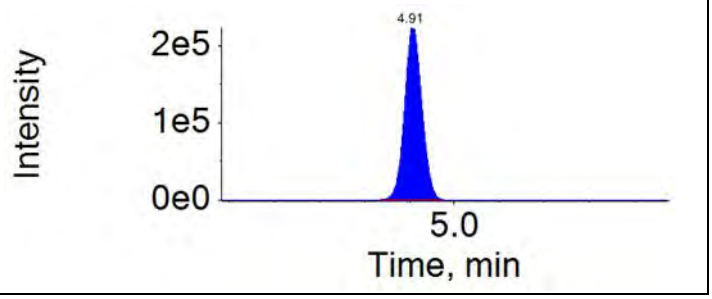
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

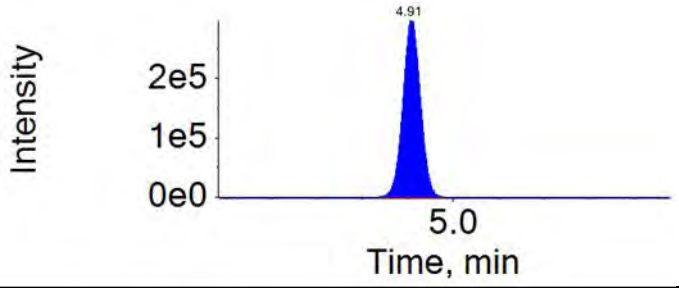
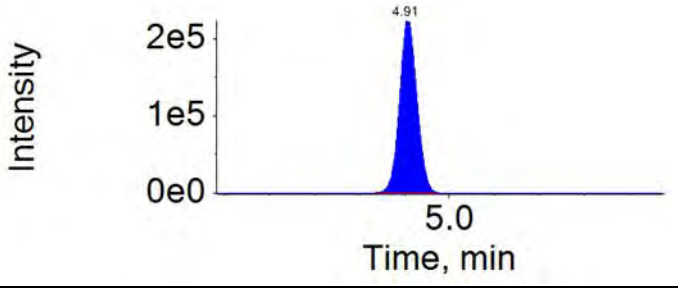


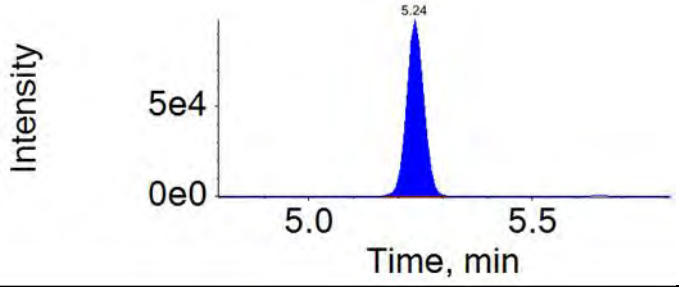
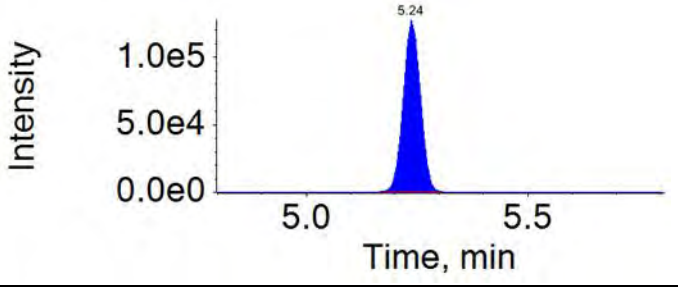


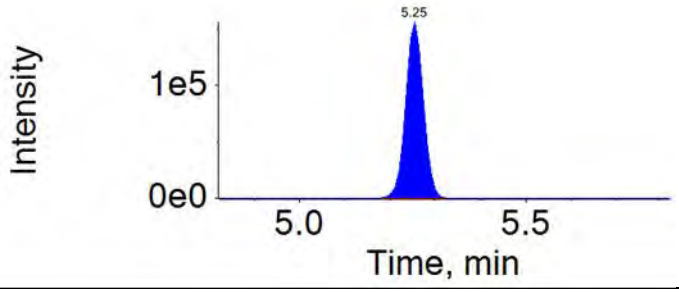
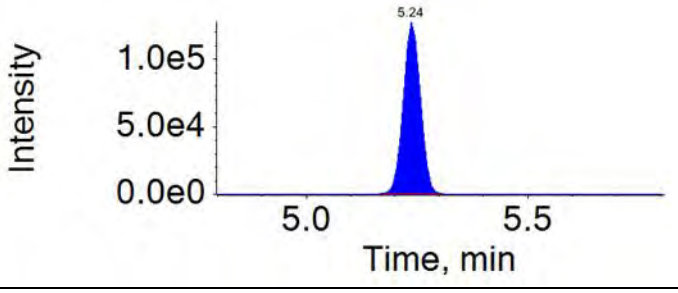
APPROVED
By JPT at 5:18 pm, 11/9/18

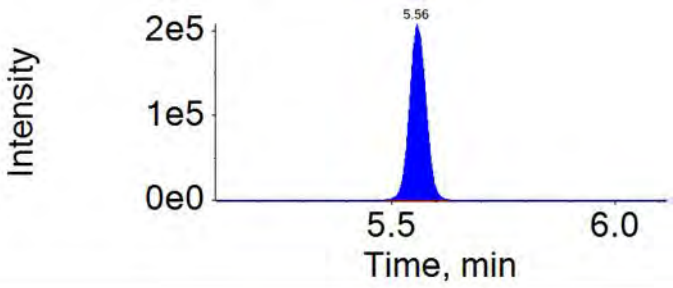
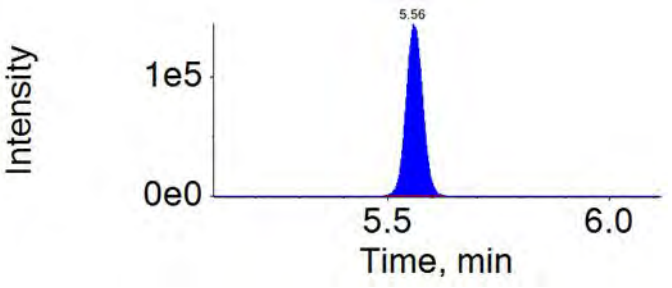
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

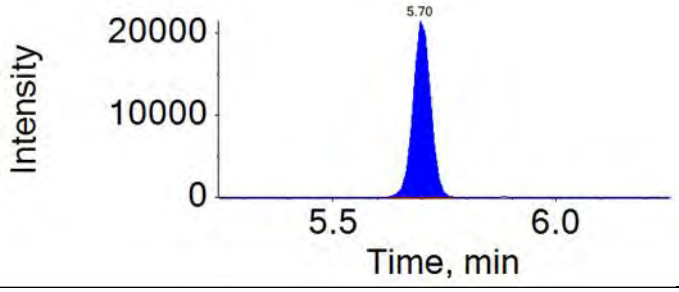
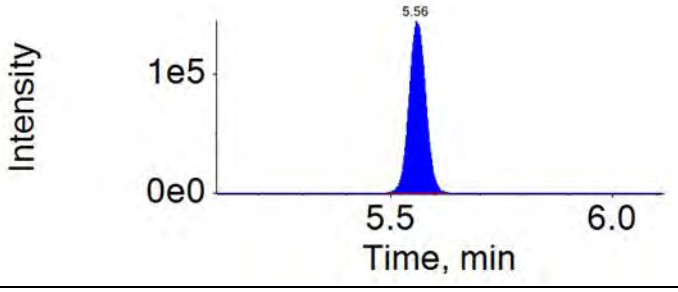
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

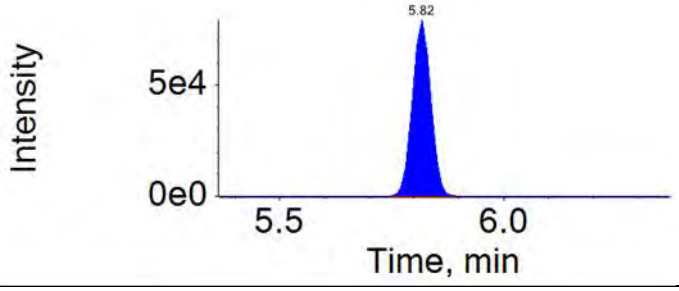
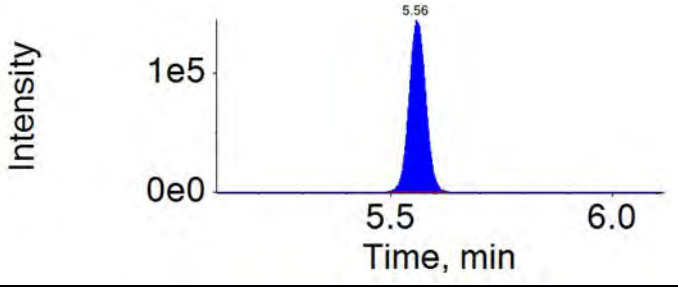
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

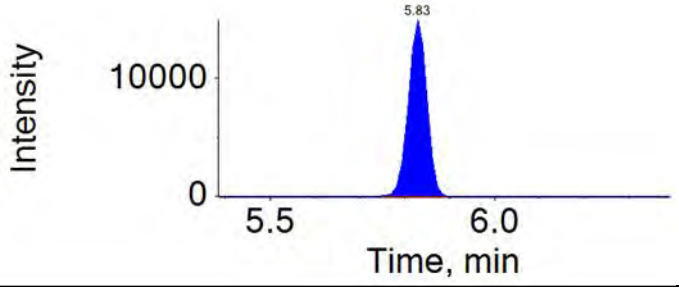
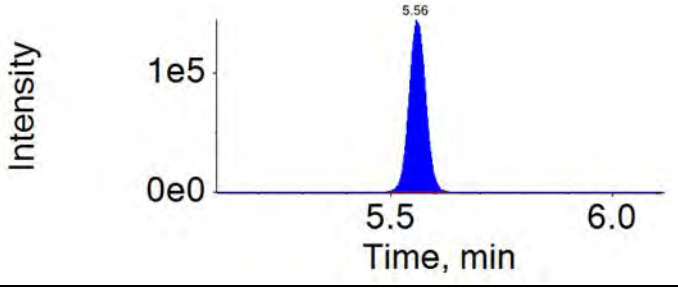
APPROVED
By JPT at 5:18 pm, 11/9/18

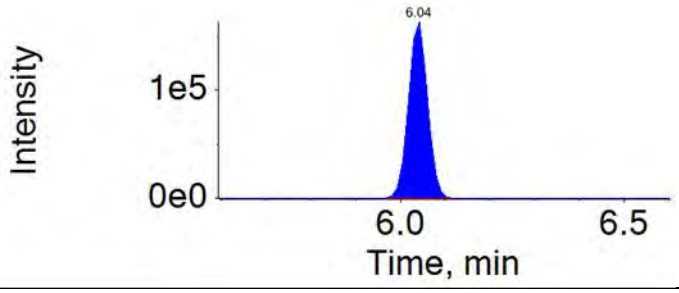
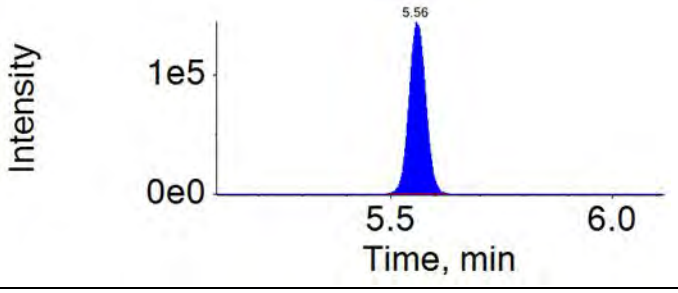
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

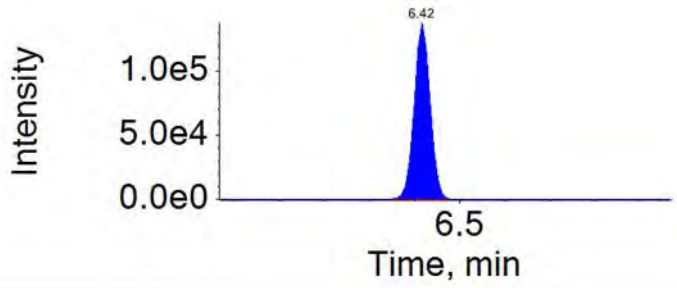
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

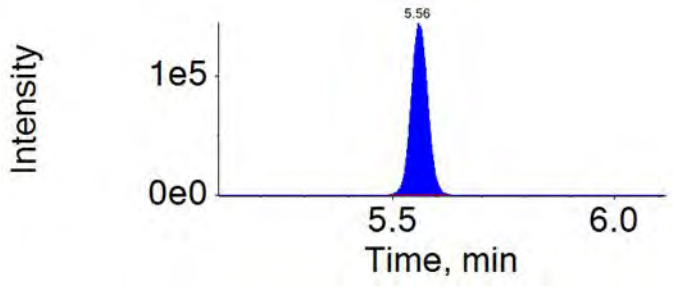
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



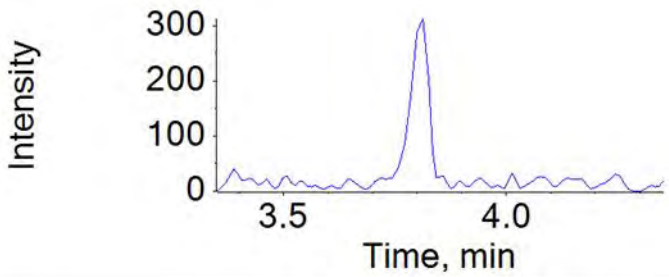


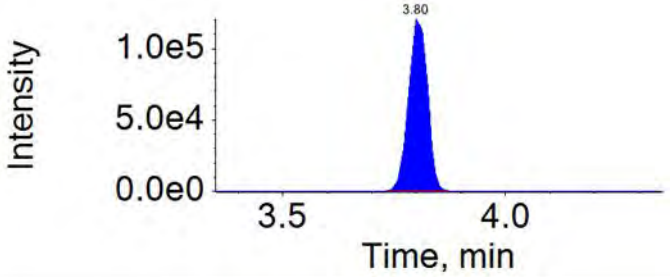
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

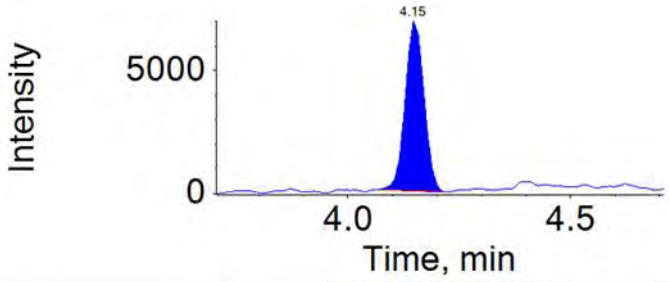
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

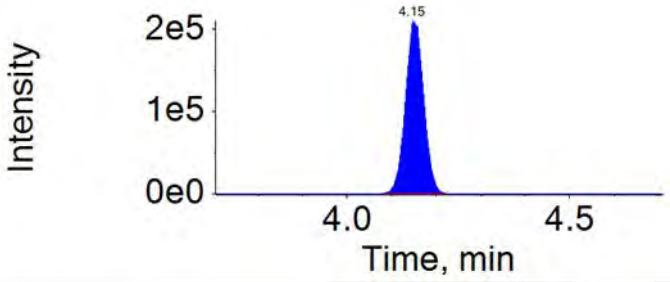
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



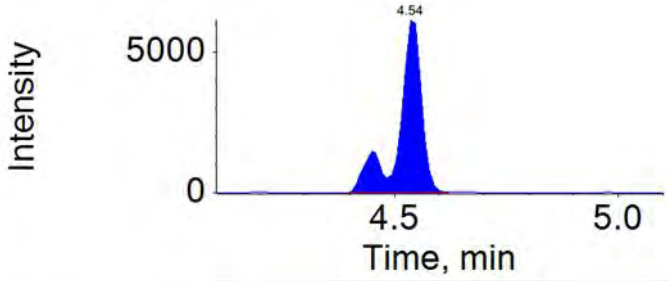


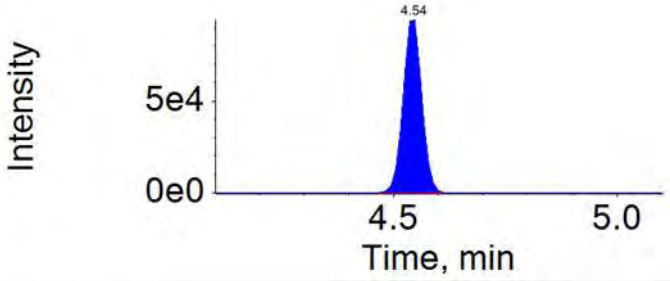
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



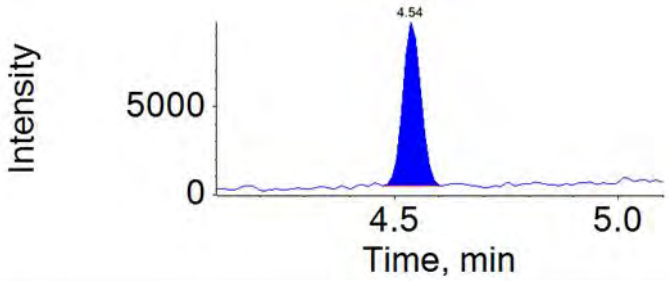


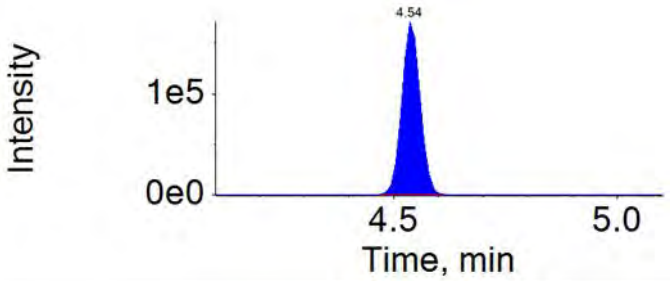
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



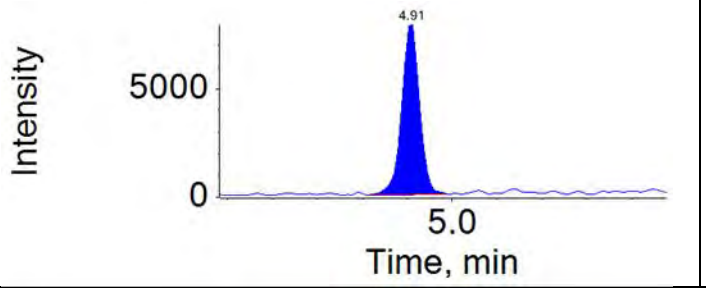


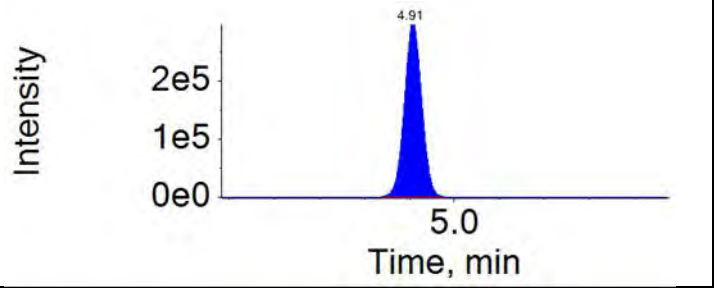
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

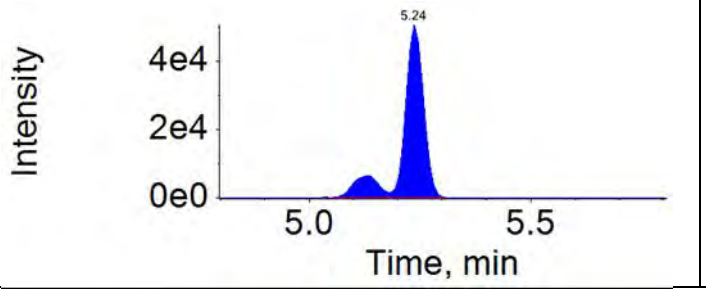
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

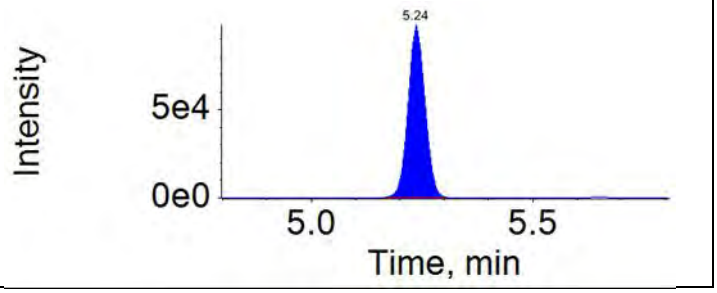
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



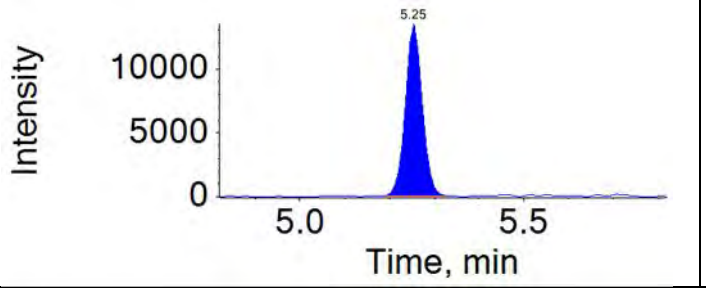


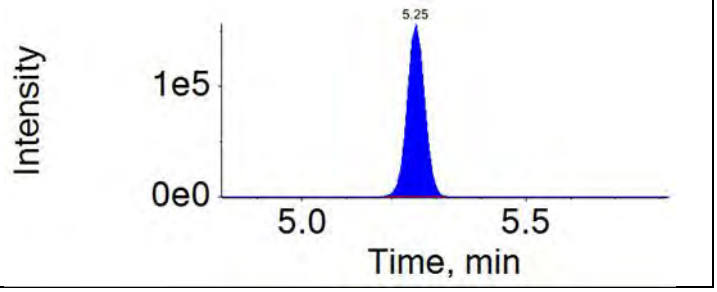
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



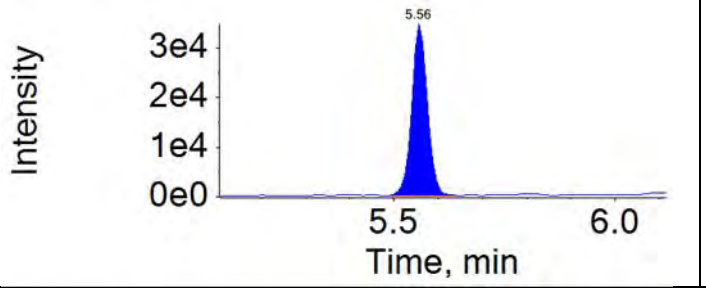


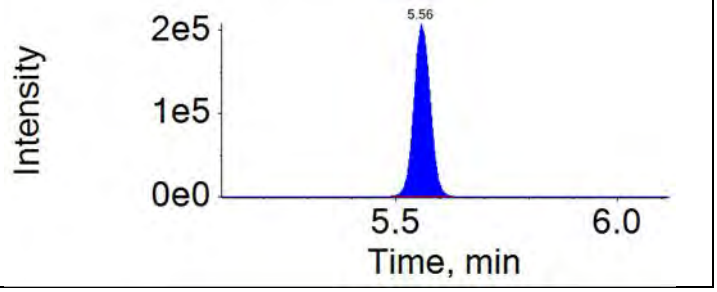
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



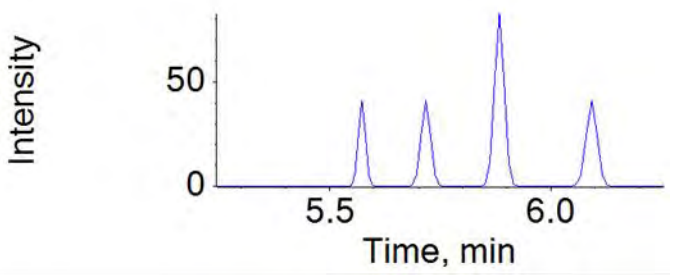


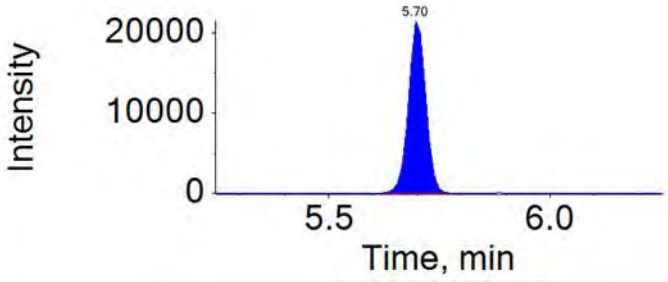
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

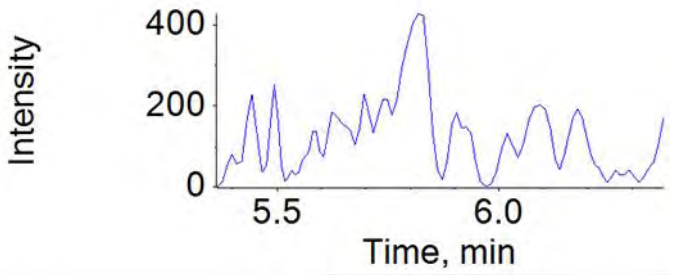
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

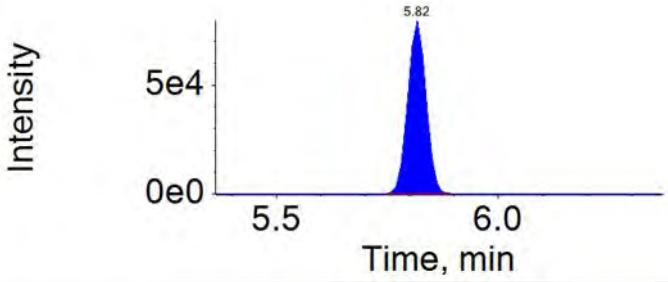
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



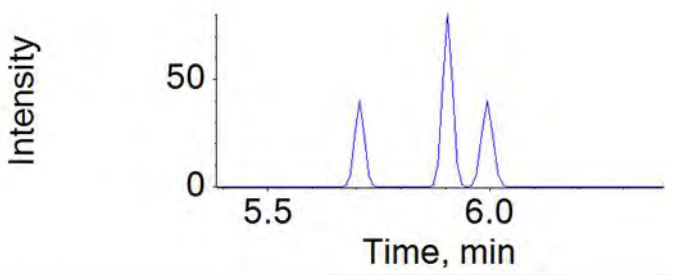


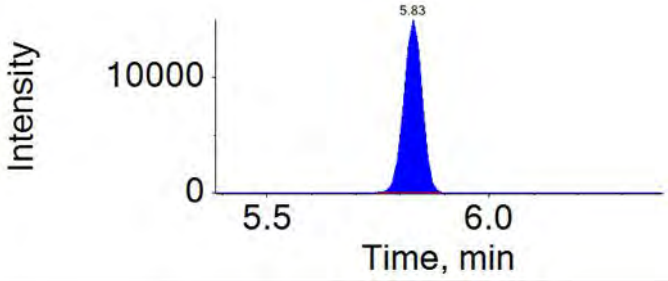
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



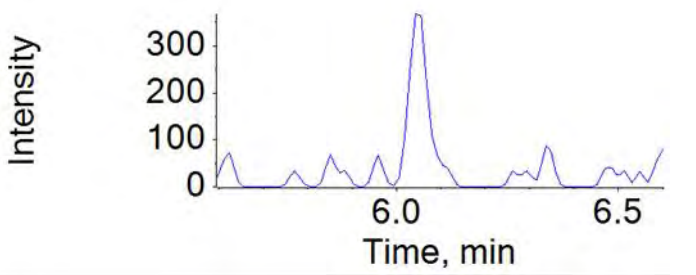


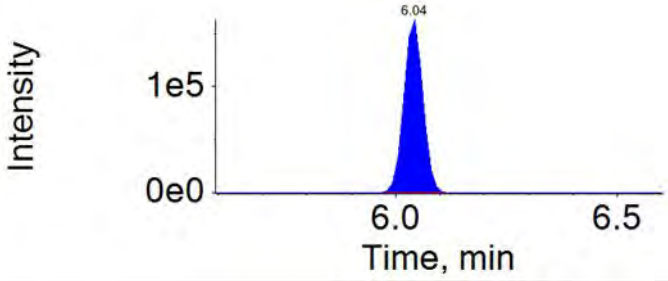
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



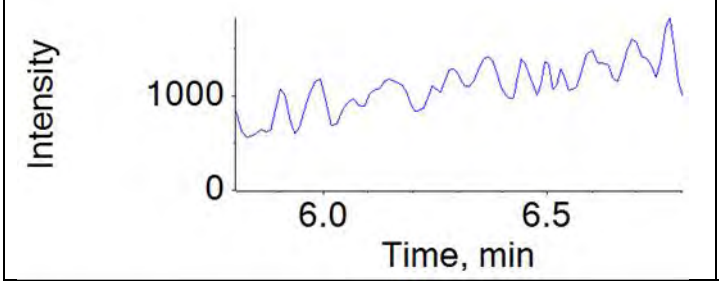


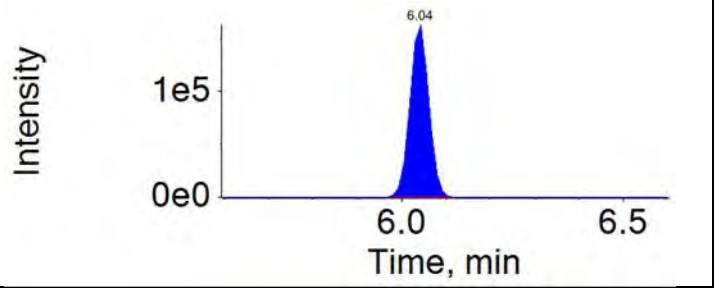
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

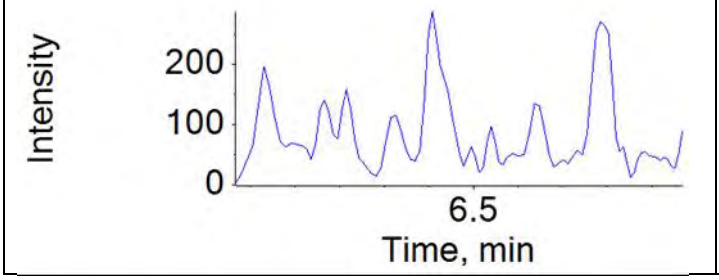
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

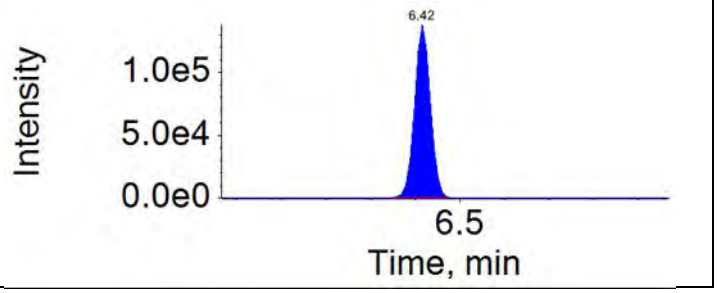
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



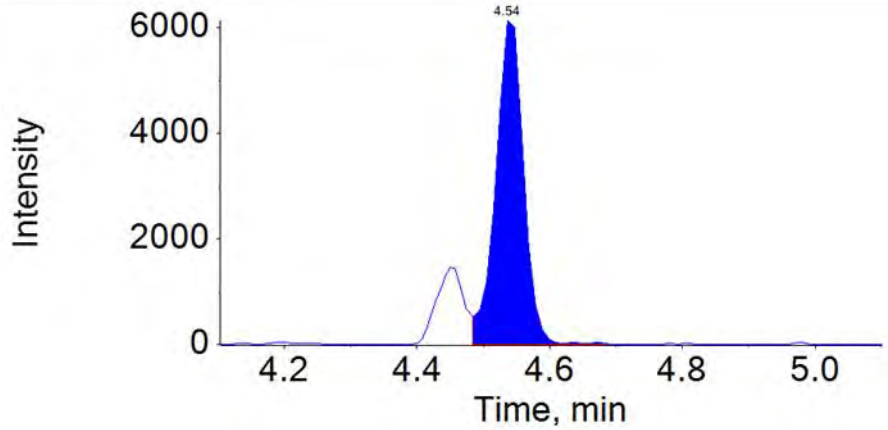


APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

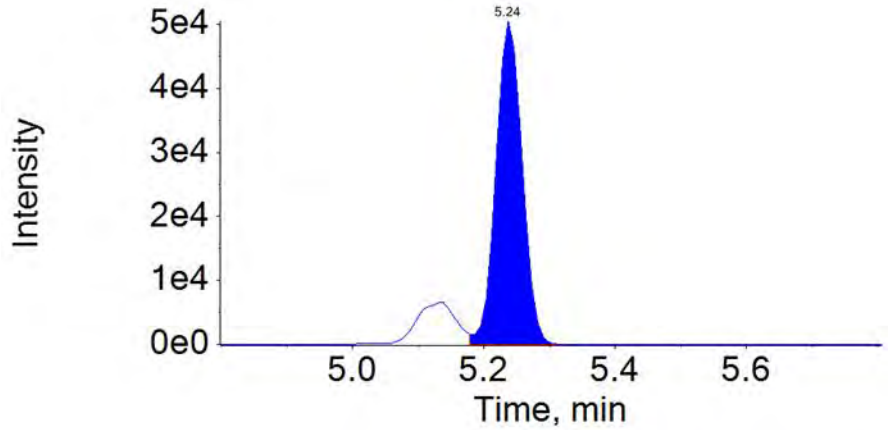
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
18028.2
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-101.wiff
Sample Name:
9883386



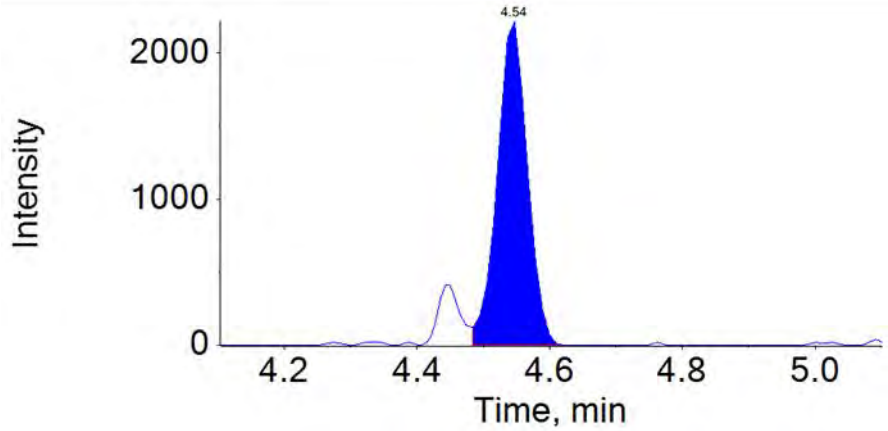
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
140526.4
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-101.wiff
Sample Name:
9883386



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
7006.6
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-101.wiff
Sample Name:
9883386



Integration Comment: incorrect integration

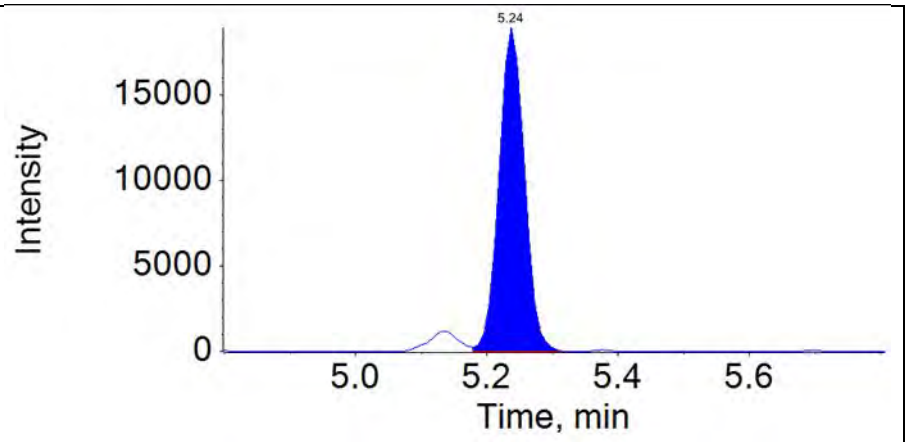
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
51095.2
Mass Range:
499.0 / 99.0
File Name:
18NOV08D-101.wiff
Sample Name:
9883386



Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Ion Ratio Report

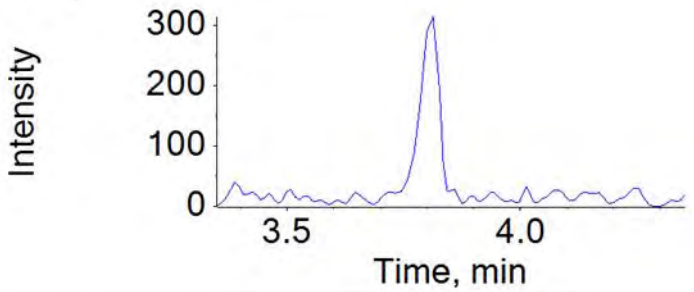
Sample Name: 9883386 **Instrument Name:** LM27631 **File Name:** 18NOV08D-101.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.15	1.00	20206.6	A	N/A	1.0000			
PFHxA_2	4.15	1.00	83.8	A	N/A	0.0041	-64	50	OOS
PFHxS	4.54	1.00	22097.6	M	N/A	1.0000			
PFHxS_2	4.54	1.00	7976.1	M	N/A	0.3609	1	50	
PFHpA	4.54	1.00	25889.0	A	N/A	1.0000			
PFHpA_2	4.54	1.00	1521.7	A	N/A	0.0588	2	50	
PFOA	4.91	1.00	21722.1	A	N/A	1.0000			
PFOA_2	4.91	1.00	1331.9	A	N/A	0.0613	-3	50	
PFOS	5.24	1.00	167974.7	M	N/A	1.0000			
PFOS_2	5.24	1.00	54860.0	M	N/A	0.3266	-7	50	
PFNA	5.25	1.00	34971.4	A	N/A	1.0000			
PFNA_2	5.25	1.00	493.7	A	N/A	0.0141	-32	50	
PFDA	5.56	1.00	84735.5	A	N/A	1.0000			
PFDA_2	5.57	1.00	392.3	A	N/A	0.0046	-18	50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	5.98	0.99	63.0	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

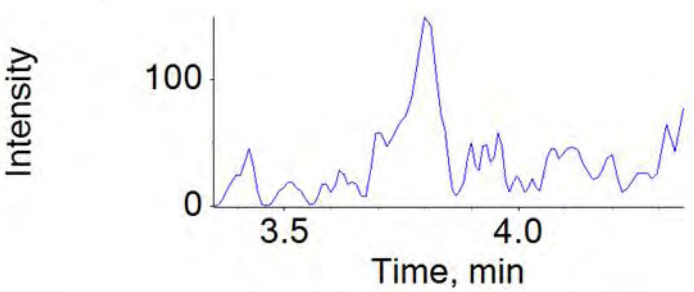
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

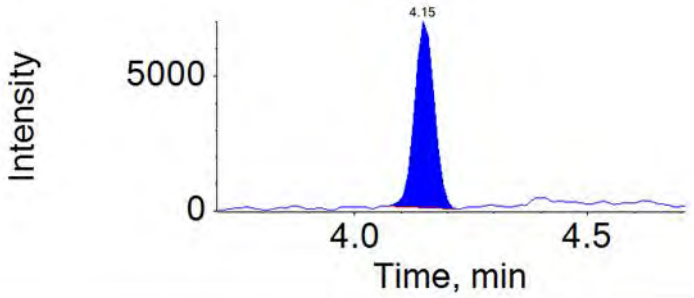
Component: PFBS
Primary Mass: 299.0 / 80.0



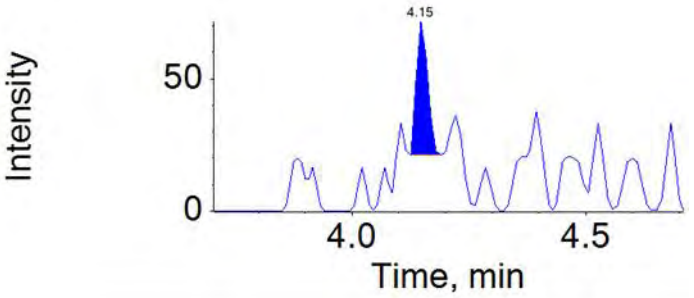
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



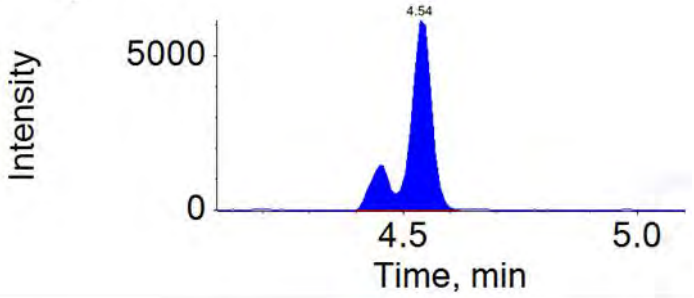
Component: PFHxA
Primary Mass: 313.0 / 269.0



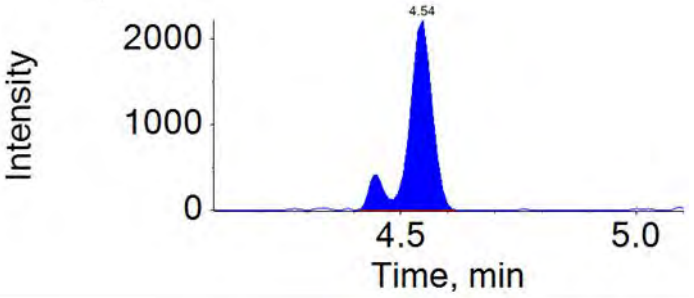
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



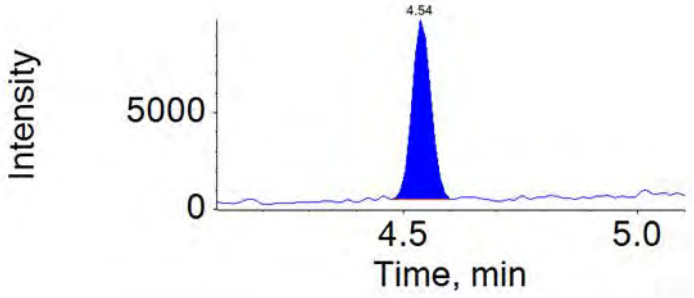
Component: PFHxS
Primary Mass: 399.0 / 80.0



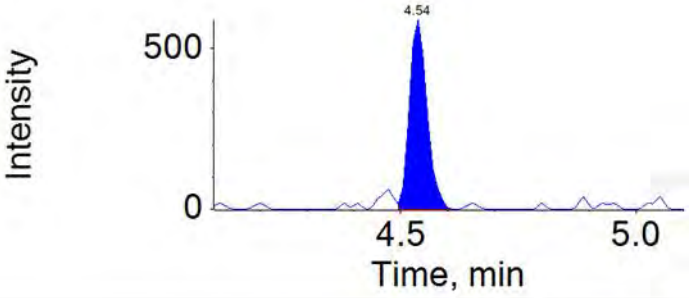
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



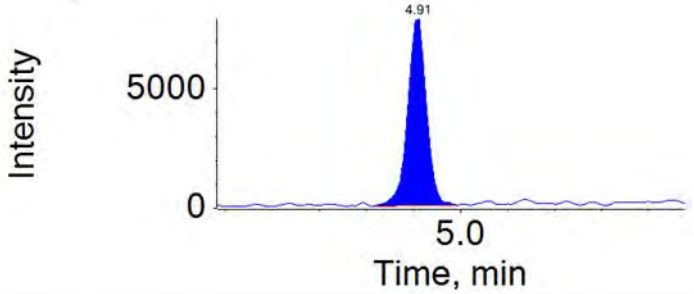
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



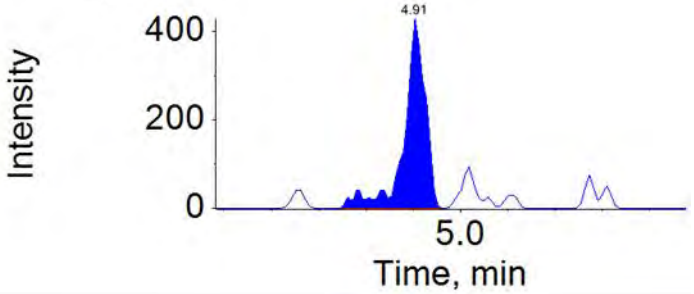
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

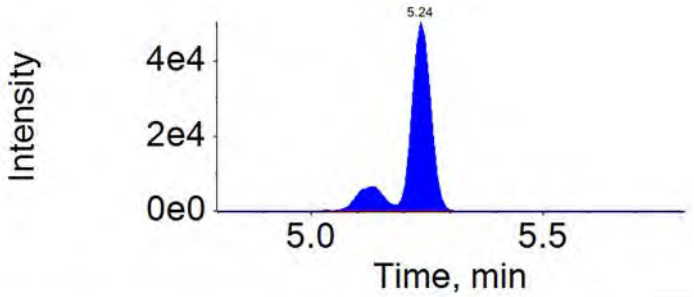
Component: PFOA
Primary Mass: 413.0 / 369.0



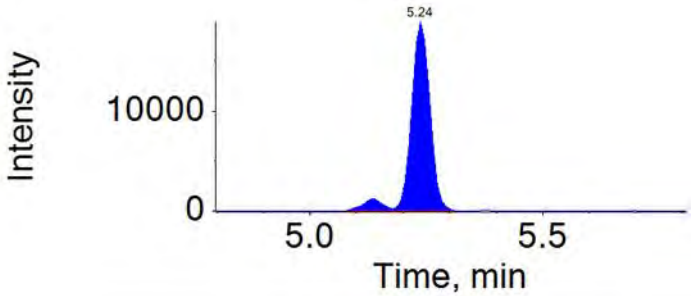
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



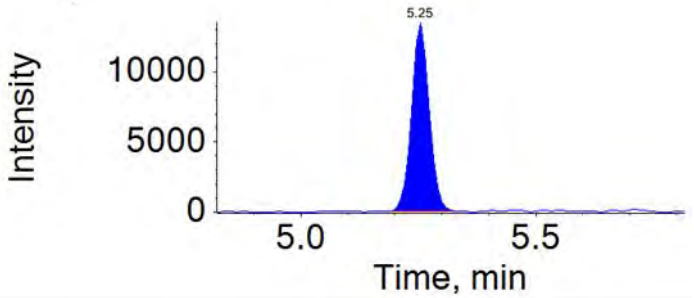
Component: PFOS
Primary Mass: 499.0 / 80.0



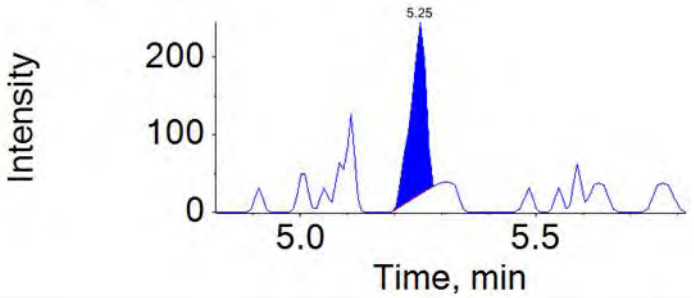
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



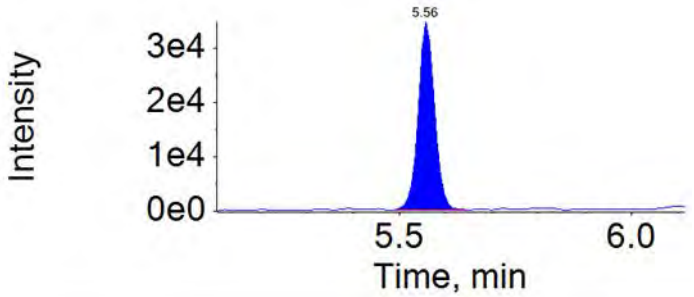
Component: PFNA
Primary Mass: 463.0 / 419.0



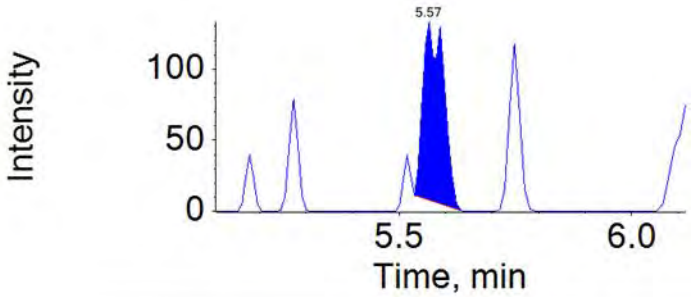
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



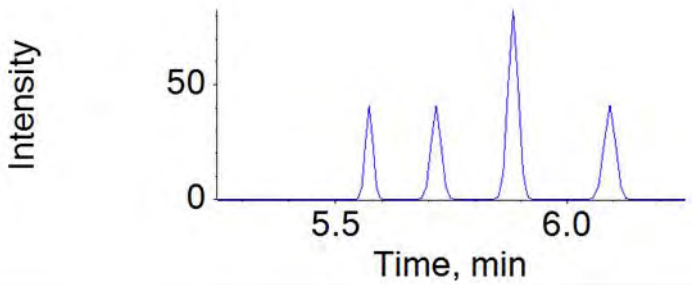
Component: PFDA
Primary Mass: 513.0 / 469.0



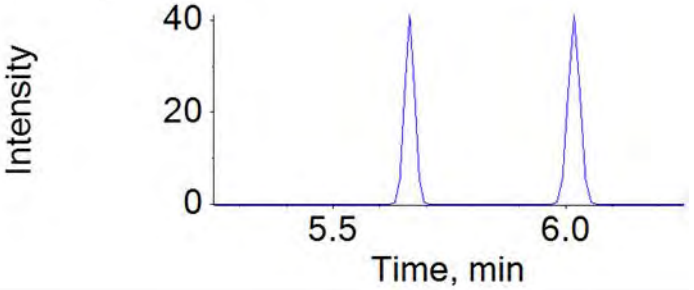
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



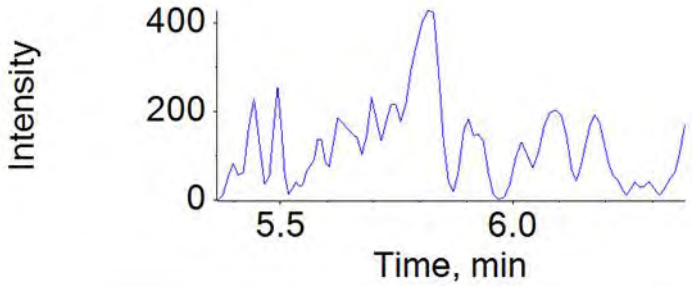
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



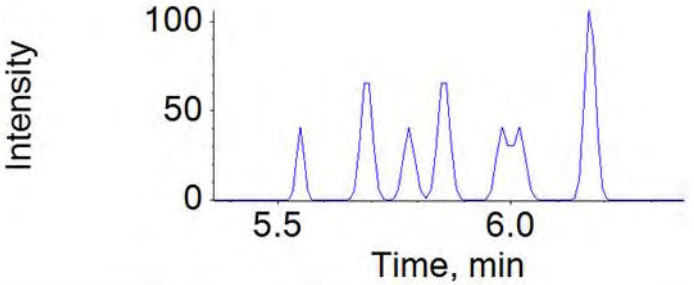
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



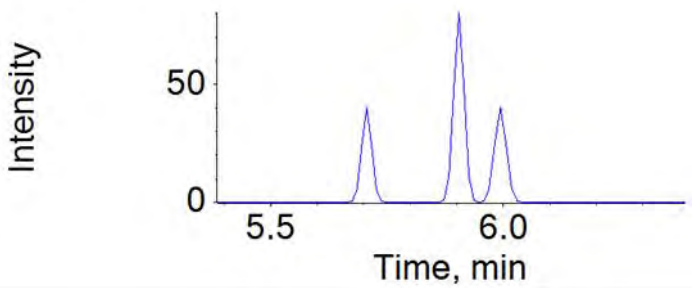
Component: PFUnDA
Primary Mass: 563.0 / 519.0



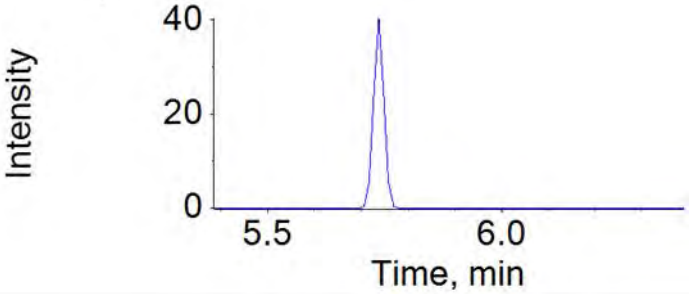
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



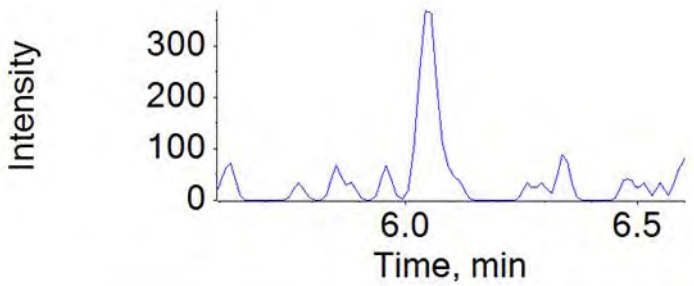
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



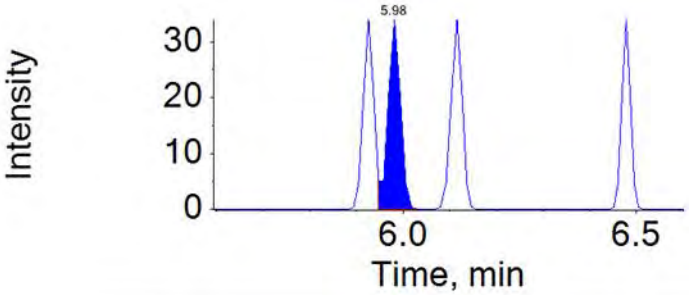
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



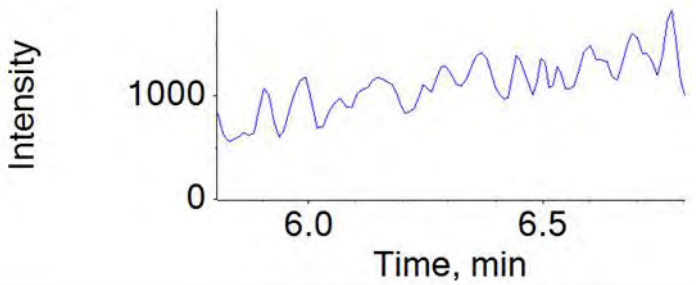
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



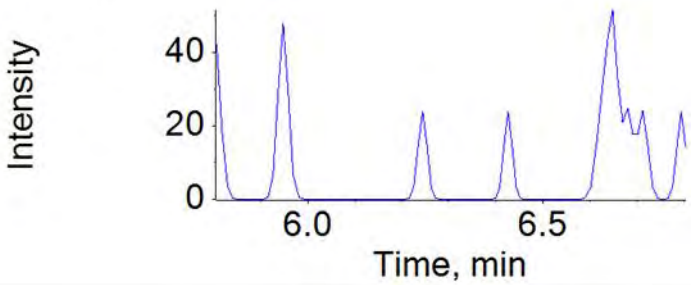
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

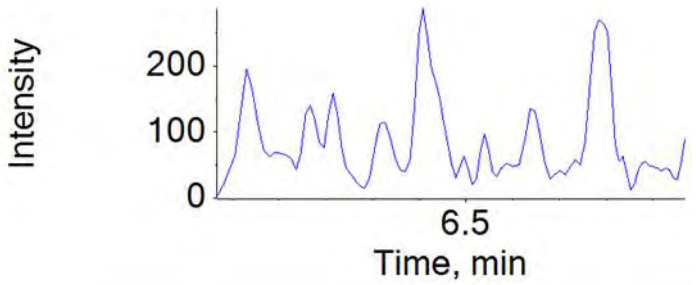
Component: PFTrDA
Primary Mass: 663.0 / 619.0



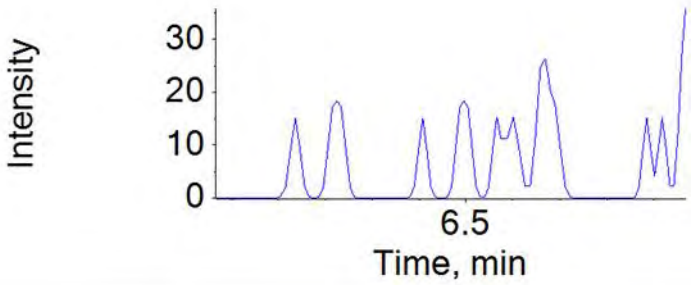
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18311004 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9883387			**Data File:**		18NOV08D-102.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-03-03 Grab Soil			**Acquis Date:**		2018-11-09T02:59:50
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	42			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		JPT12262
Sample Wt.:	1.02000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	908961.3	728839.7	25	50	
13C2-PFOA	5.0	612840.1	491983.1	25	50	
13C4-PFOS	4.8	346588.0	255568.1	36	50	
13C2-PFDA	5.0	379304.1	315407.5	20	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	384087.2	13C3-PFBA	908961.3	0.423	9.118	6.081	67	50-150	
E13C5-PFHxA	641090.4	13C2-PFOA	612840.1	1.046	9.804	7.545	77	50-150	
E13C3-PFHxS	301057.7	13C2-PFOA	612840.1	0.491	9.275	6.915	75	50-150	
E13C4-PFHpA	485571.1	13C2-PFOA	612840.1	0.792	9.804	7.067	72	50-150	
E13C8-PFOA	871106.2	13C2-PFOA	612840.1	1.421	9.804	7.772	79	50-150	
E13C8-PFOS	271447.6	13C4-PFOS	346588.0	0.783	9.373	6.791	72	50-150	
E13C9-PFNA	435964.0	13C4-PFOS	346588.0	1.258	9.804	6.737	69	50-150	
E13C6-PFDA	588933.5	13C2-PFDA	379304.1	1.553	9.804	7.656	78	50-150	
Ed3-NMeFOSAA	56072.5	13C2-PFDA	379304.1	0.148	9.804	5.390	55	50-150	
E13C7-PFUnDA	266957.0	13C2-PFDA	379304.1	0.704	9.804	7.961	81	50-150	
Ed5-NEtFOSAA	46336.2	13C2-PFDA	379304.1	0.122	9.804	5.543	57	50-150	
E13C2-PFDoDA	517085.9	13C2-PFDA	379304.1	1.363	9.804	7.206	74	50-150	
E13C2-PFTeDA	354483.4	13C2-PFDA	379304.1	0.935	9.804	6.597	67	50-150	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

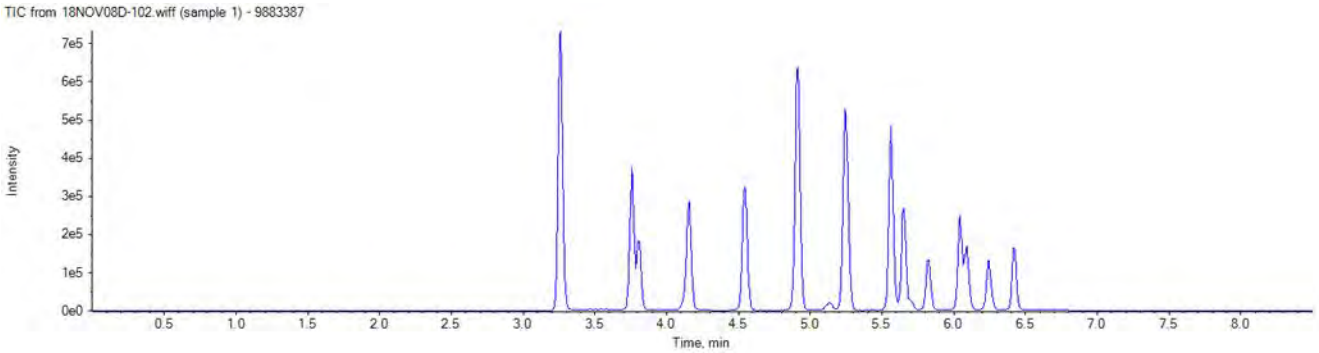
Analyte Quantitation Peak Table

Sample Name: 9883387 **Instrument Name:** LM27631 **File Name:** 18NOV08D-102.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.02000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	384087.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	641090.4	N/A	
PFHxS	4.55	1.000	8027.4		M	13C3-PFHxS	4.55	301057.7	0.027	0.265
PFHpA	4.54	1.000	8825.5		A	13C4-PFHpA	4.54	485571.1	0.018	0.120
PFOA	4.91	1.000	17664.4		A	13C8-PFOA	4.91	871106.2	0.020	0.224
PFOS	5.24	1.000	287372.1		M	13C8-PFOS	5.24	271447.6	1.059	10.764
PFNA	5.26	1.000	12191.0		A	13C9-PFNA	5.26	435964.0	0.028	0.205
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	588933.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	56072.5	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	266957.0	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	46336.2	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	517085.9	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	517085.9	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	354483.4	N/A	

Total Ion Chromatogram

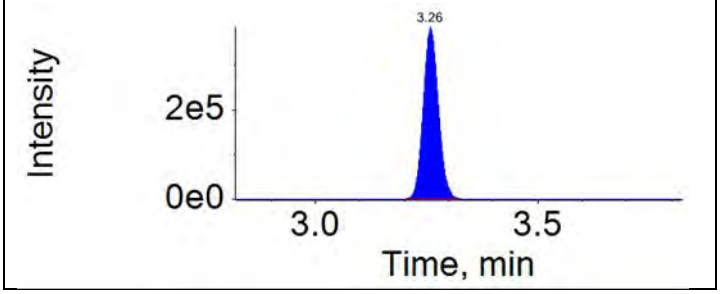


APPROVED
By JPT at 5:18 pm, 11/9/18

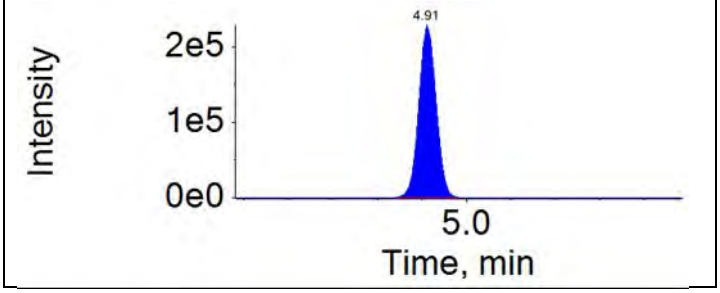
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

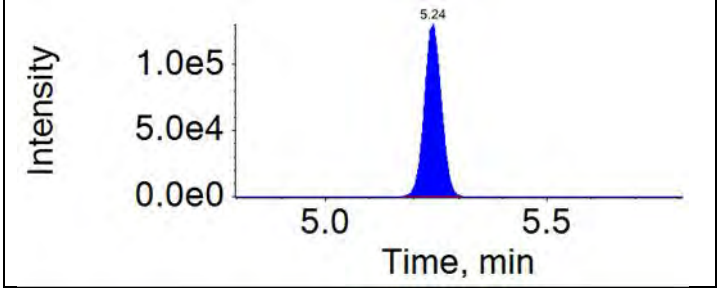
Injection Standard: 13C3-PFBA
216.0 / 172.0



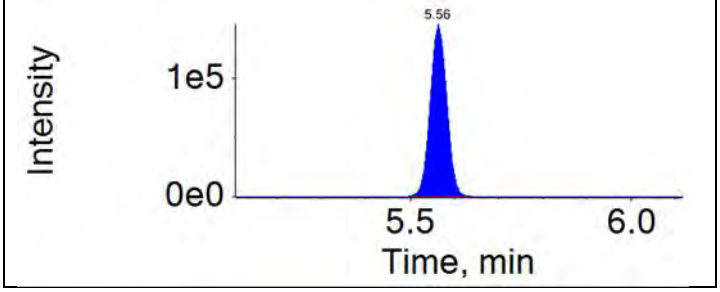
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

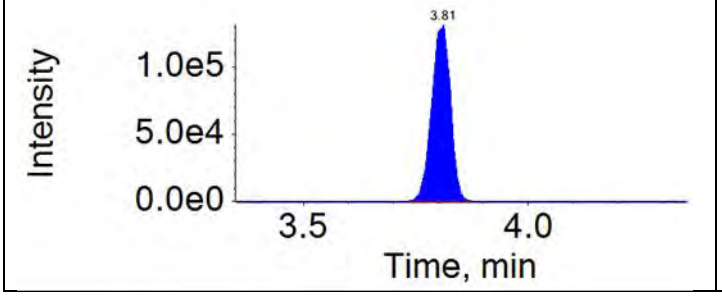


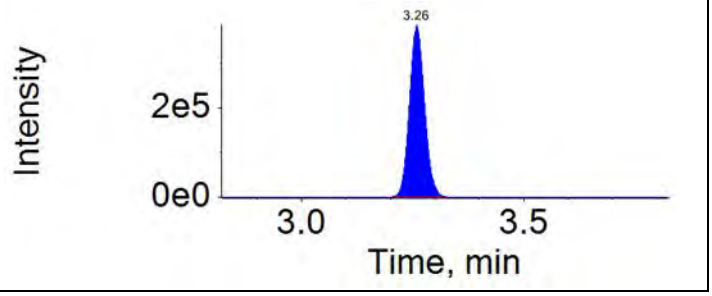
Injection Standard: 13C2-PFDA
515.0 / 470.0



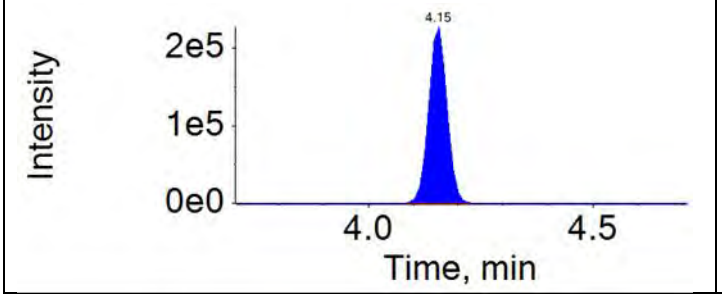
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

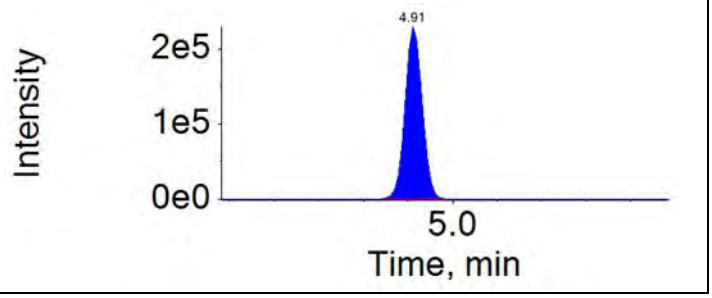
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



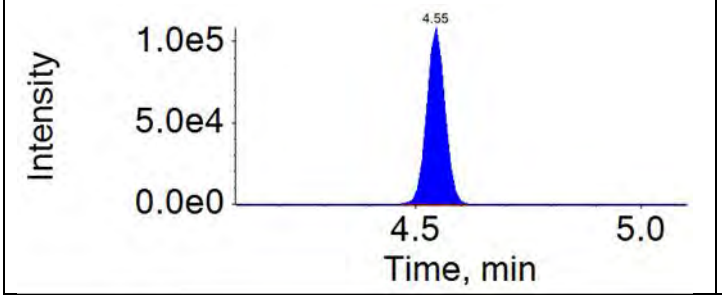


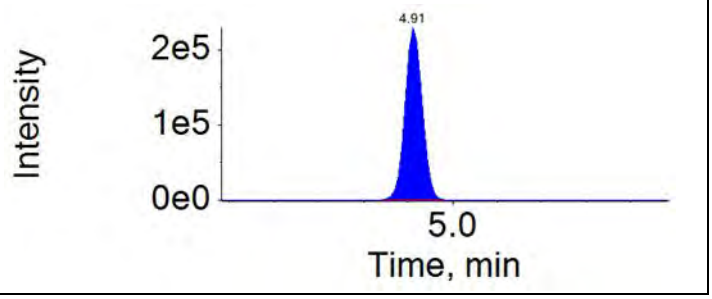
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



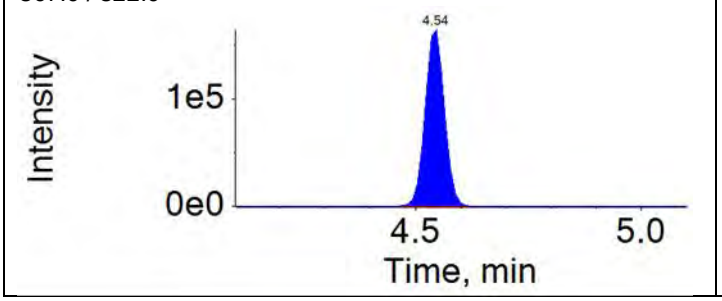


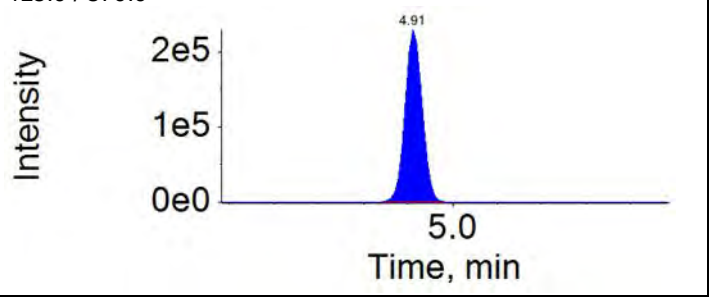
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

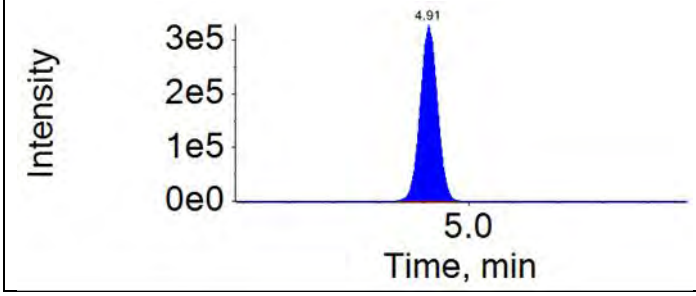
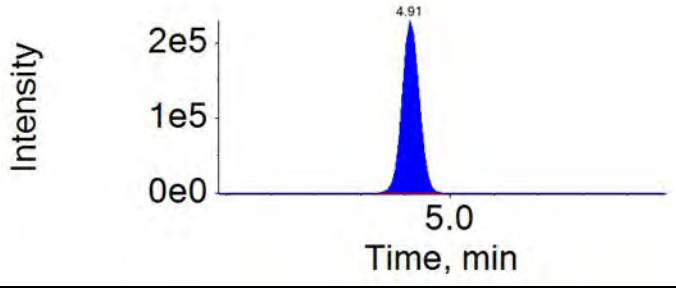


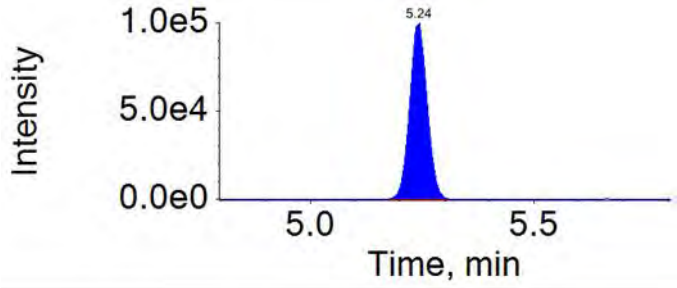
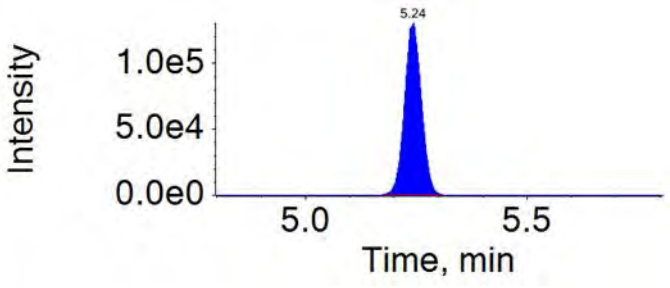


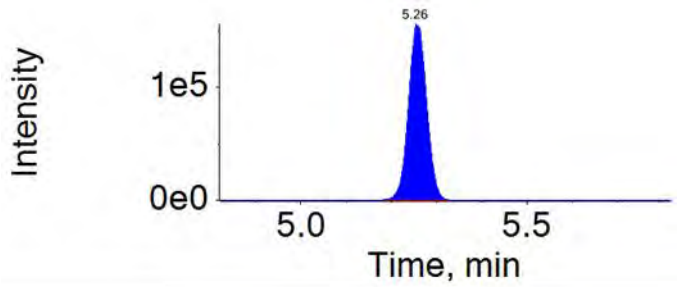
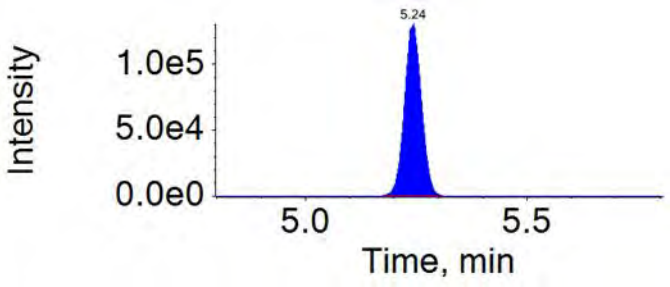
APPROVED
By JPT at 5:18 pm, 11/9/18

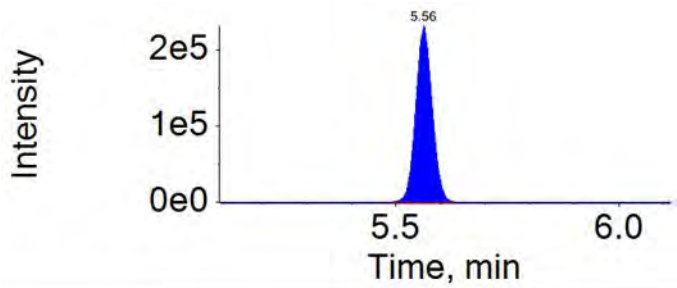
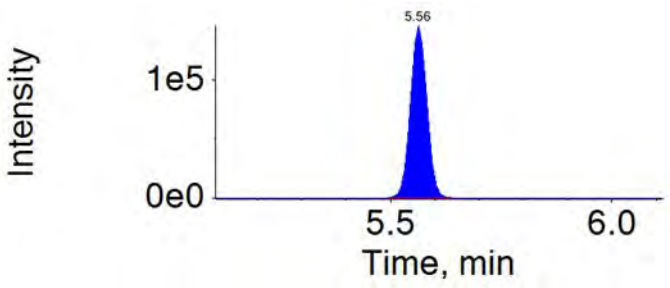
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

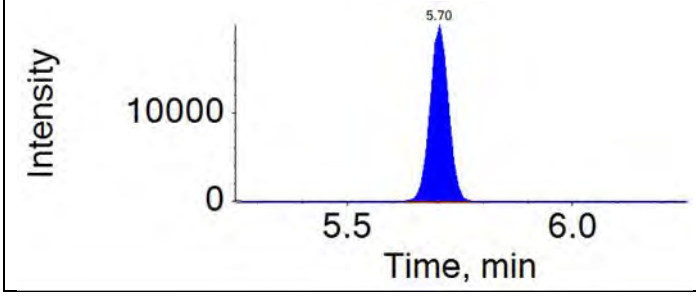
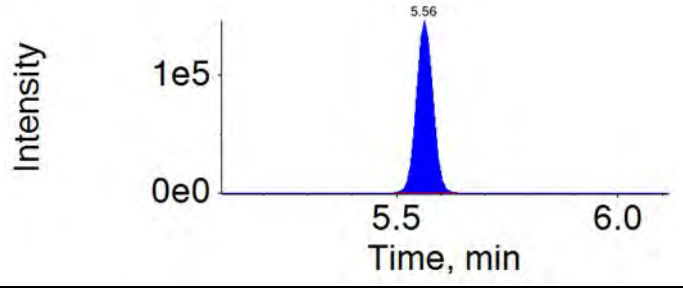
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

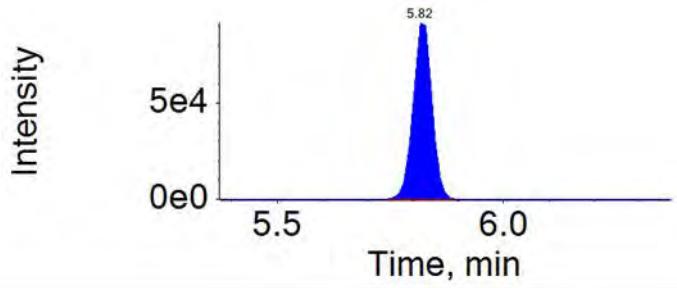
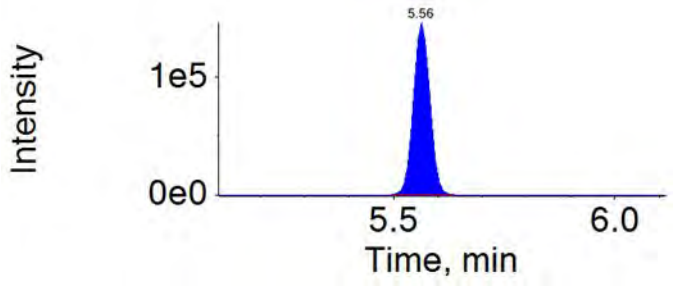
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

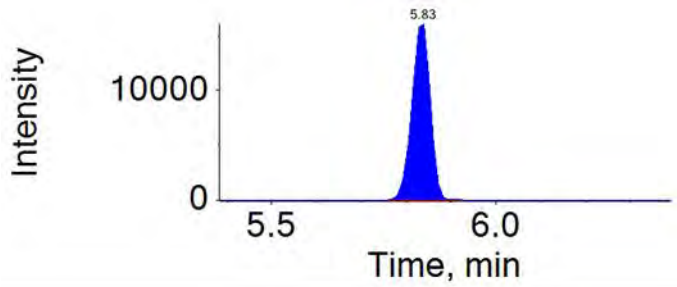
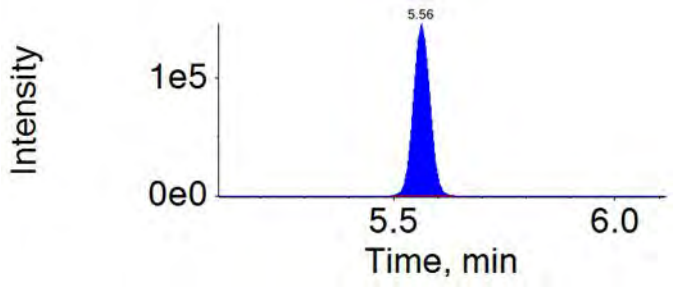
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

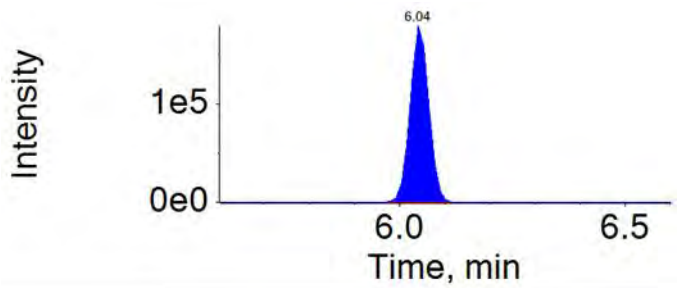
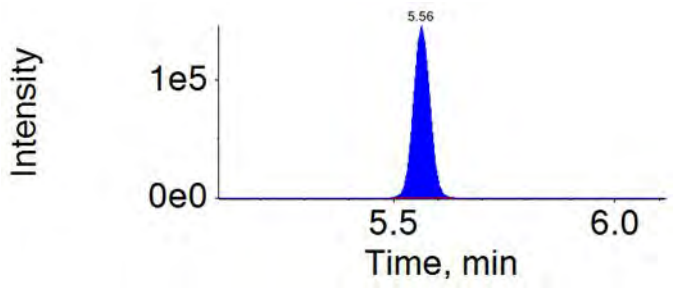
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

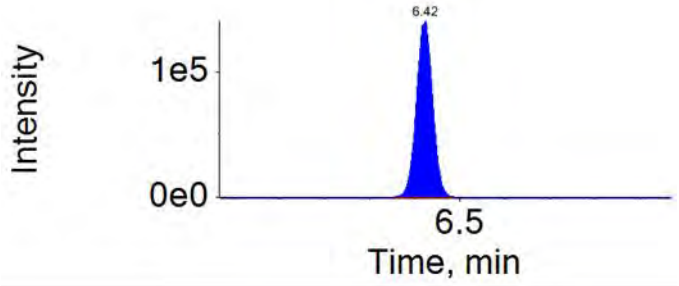
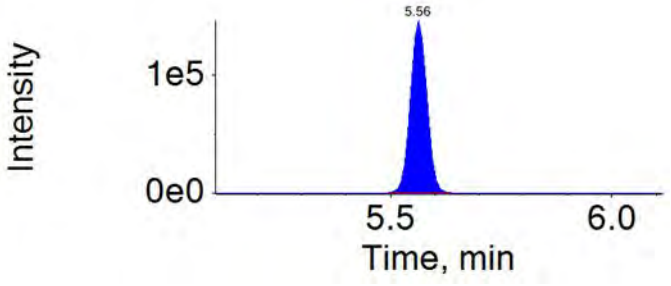
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

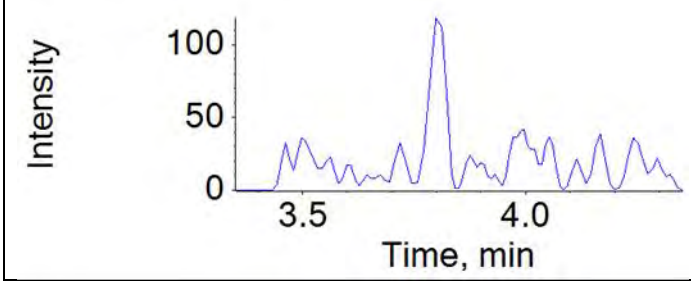
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

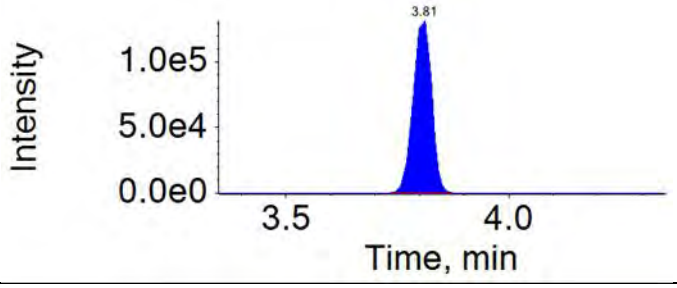
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

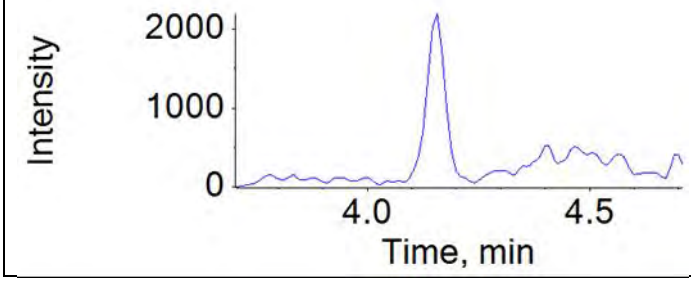
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

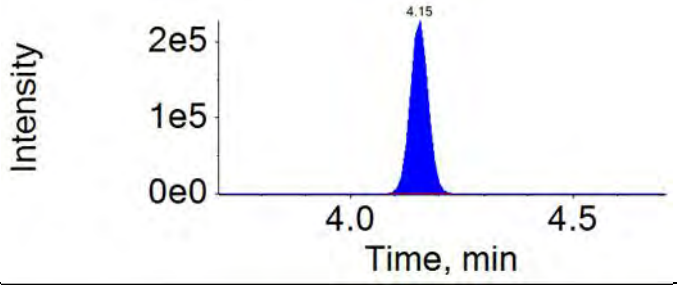
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



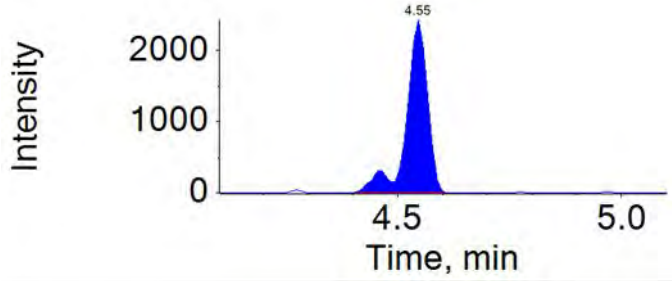


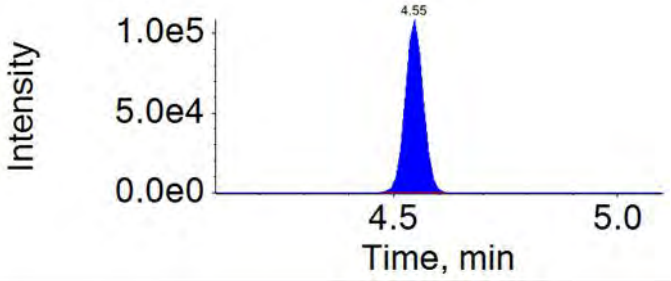
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



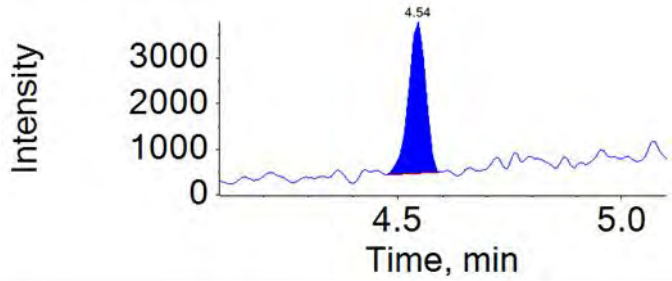


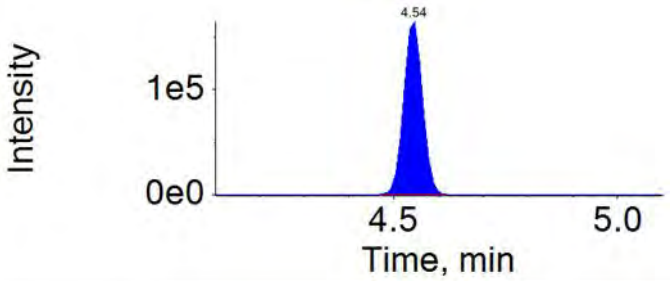
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



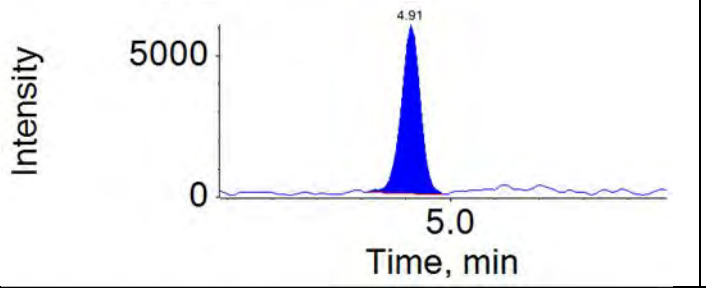


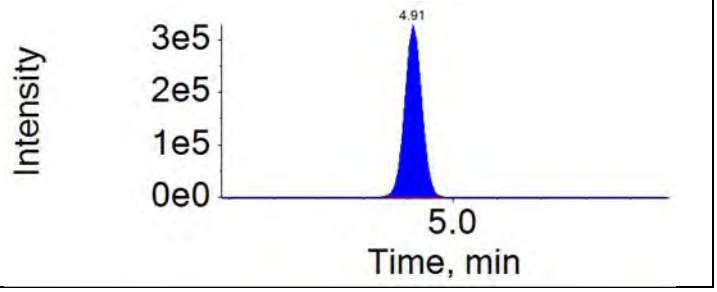
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

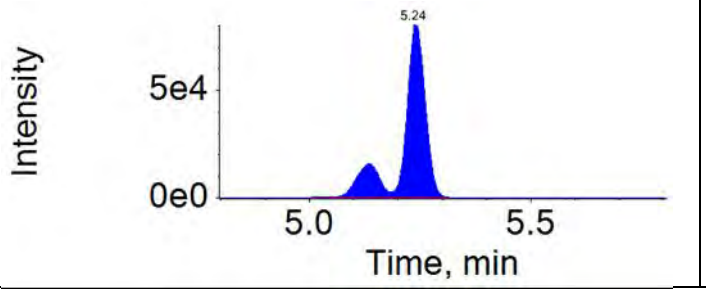
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

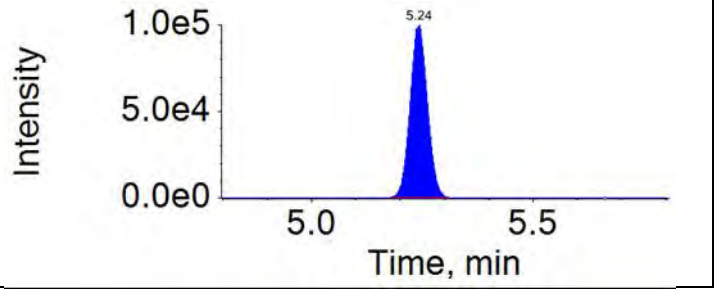
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



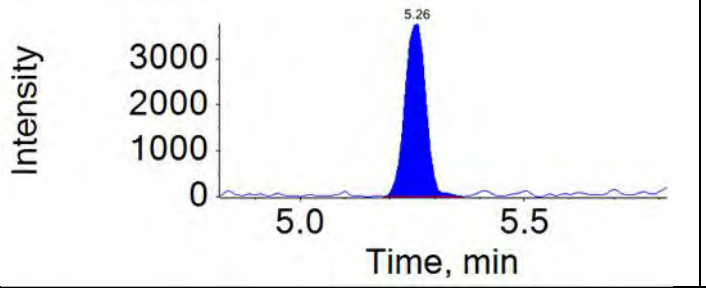


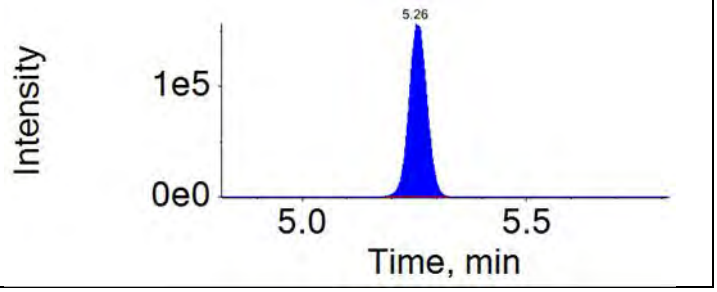
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



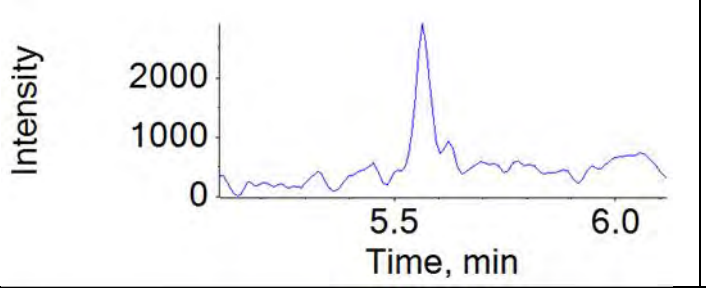


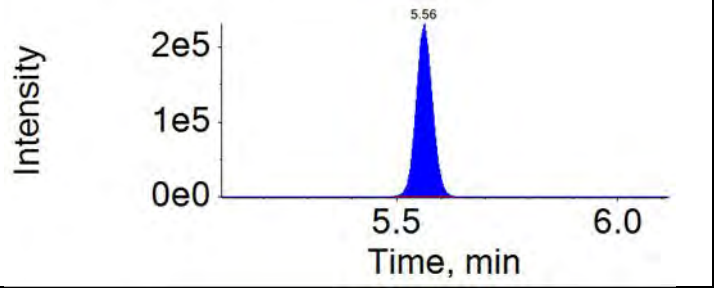
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



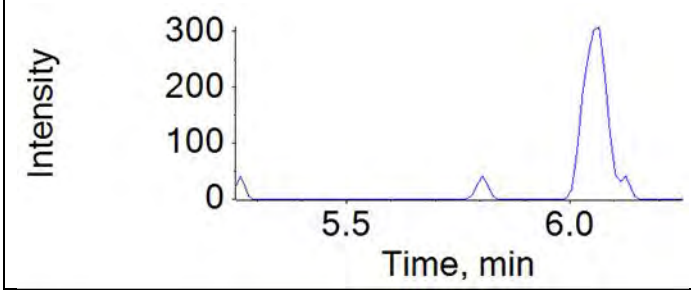


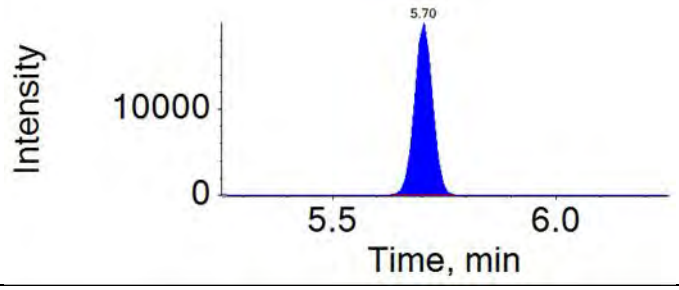
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

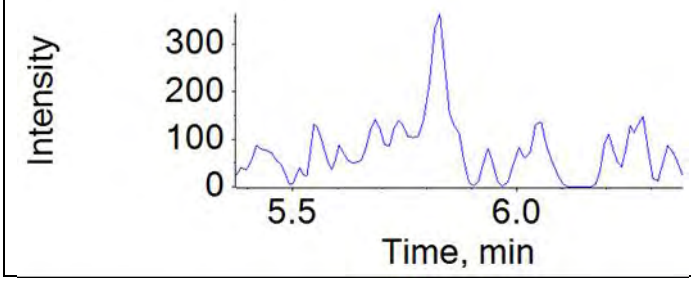
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

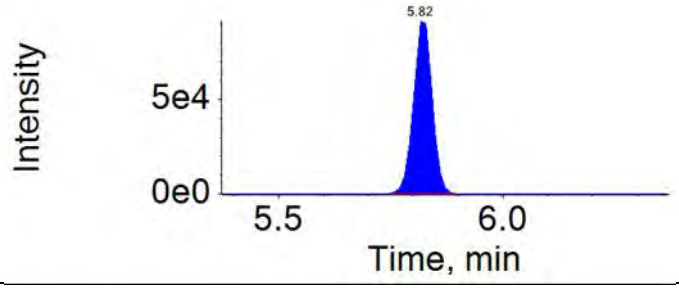
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



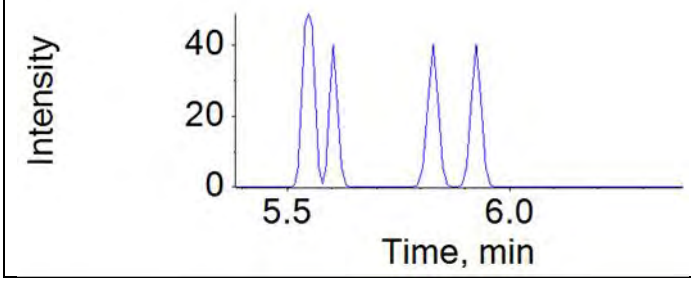


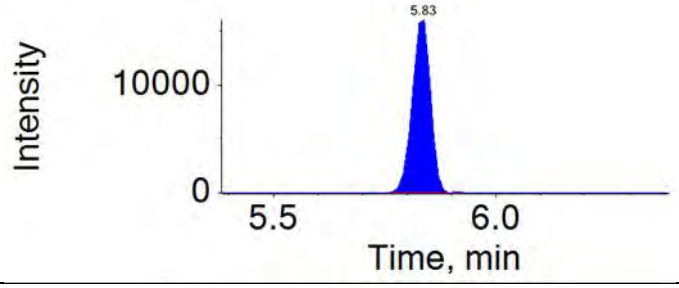
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



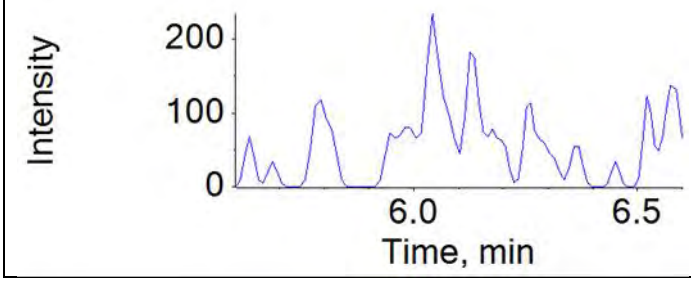


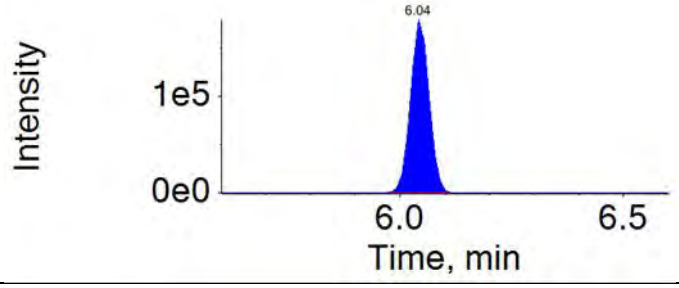
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



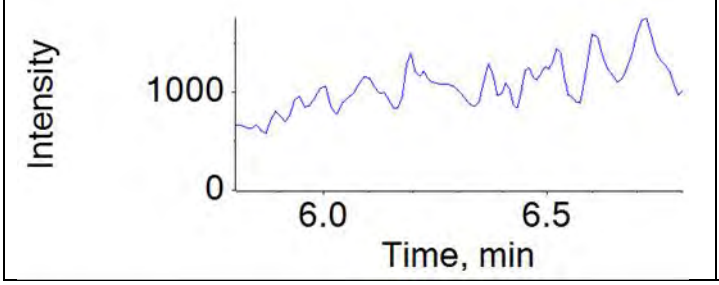


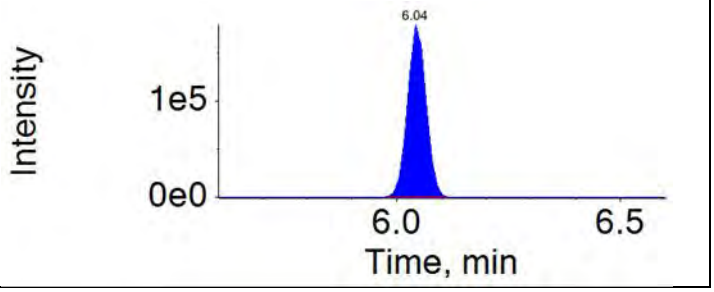
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

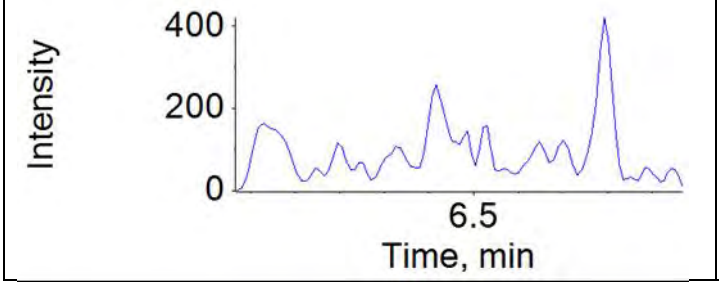
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

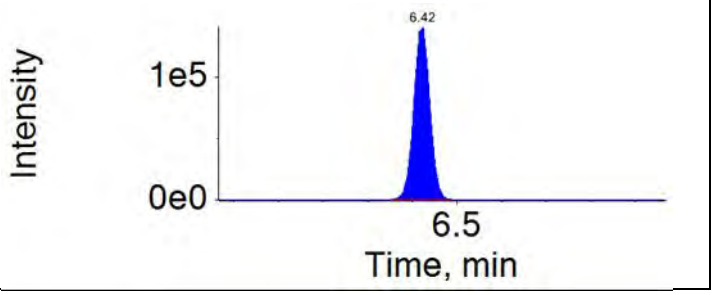
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



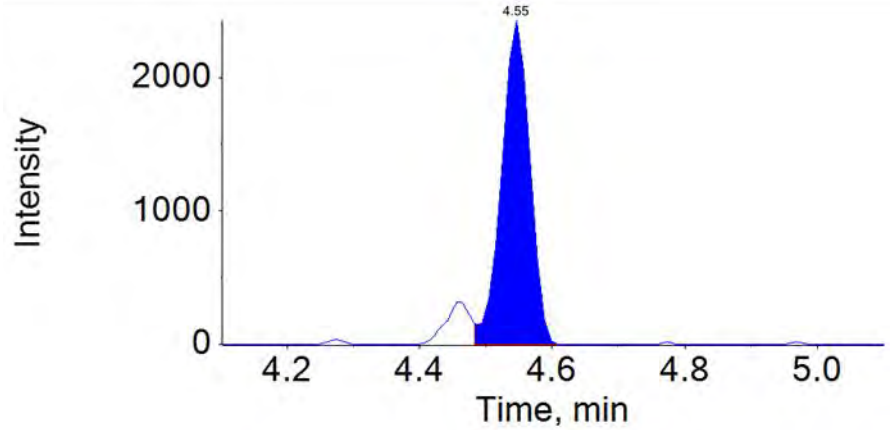


APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

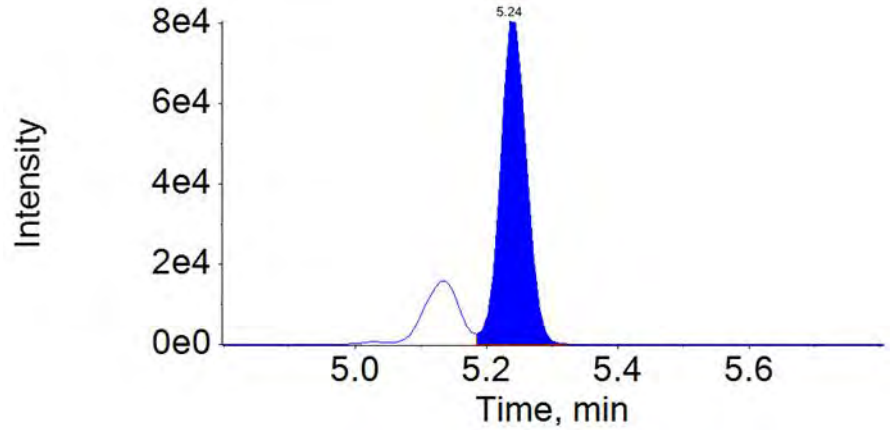
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
7209.4
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-102.wiff
Sample Name:
9883387



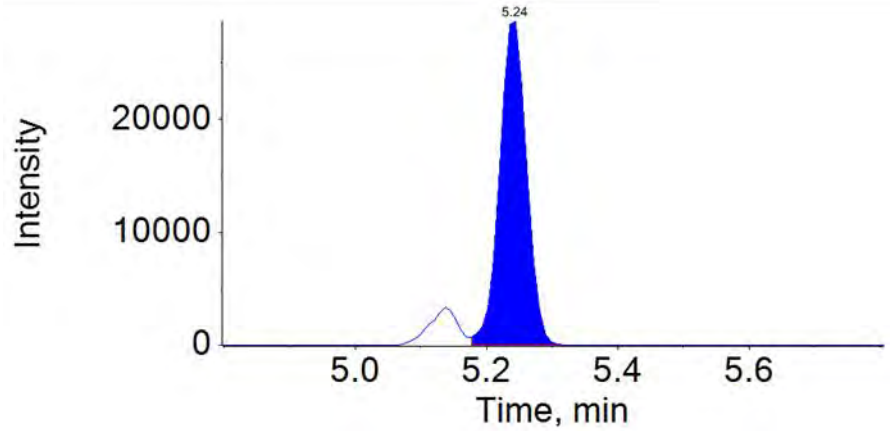
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
225649.9
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-102.wiff
Sample Name:
9883387



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
82580.6
Mass Range:
499.0 / 99.0
File Name:
18NOV08D-102.wiff
Sample Name:
9883387



Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Ion Ratio Report

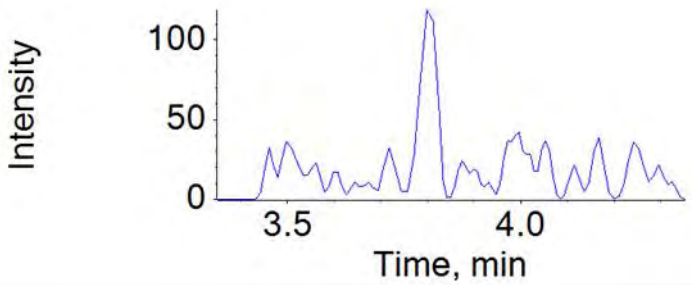
Sample Name: 9883387 **Instrument Name:** LM27631 **File Name:** 18NOV08D-102.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	4.55	1.00	8027.4	M	N/A	1.0000			
PFHxS_2	4.54	1.00	2819.1	A	N/A	0.3512	-2	50	
PFHpA	4.54	1.00	8825.5	A	N/A	1.0000			
PFHpA_2	4.54	1.00	630.9	A	N/A	0.0715	24	50	
PFOA	4.91	1.00	17664.4	A	N/A	1.0000			
PFOA_2	4.91	1.00	1174.5	A	N/A	0.0665	5	50	
PFOS	5.24	1.00	287372.1	M	N/A	1.0000			
PFOS_2	5.24	1.00	92858.2	M	N/A	0.3231	-8	50	
PFNA	5.26	1.00	12191.0	A	N/A	1.0000			
PFNA_2	5.25	1.00	121.2	A	N/A	0.0099	-52	50	OOS
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	5.87	0.97	109.4	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

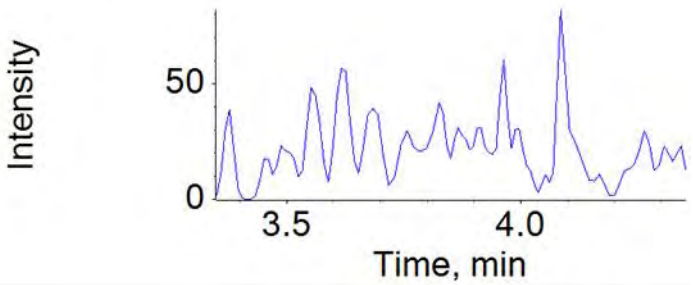
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

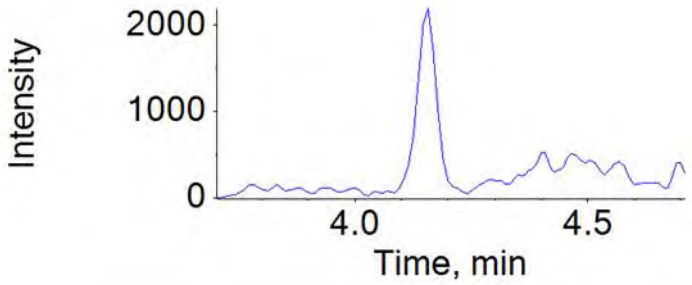
Component: PFBS
Primary Mass: 299.0 / 80.0



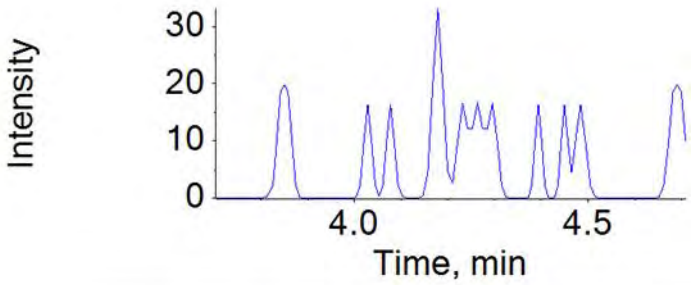
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



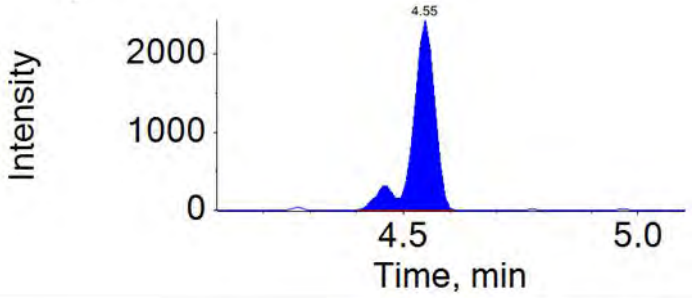
Component: PFHxA
Primary Mass: 313.0 / 269.0



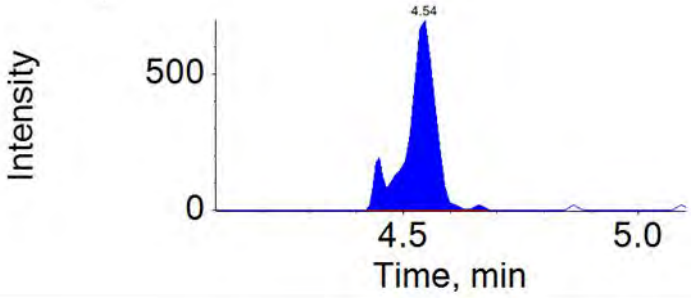
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



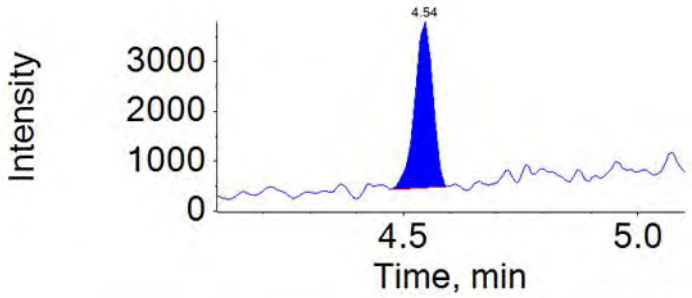
Component: PFHxS
Primary Mass: 399.0 / 80.0



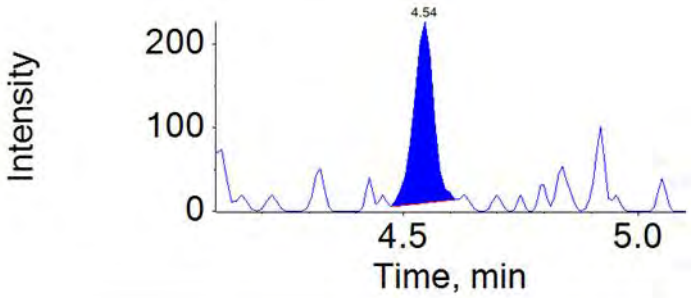
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



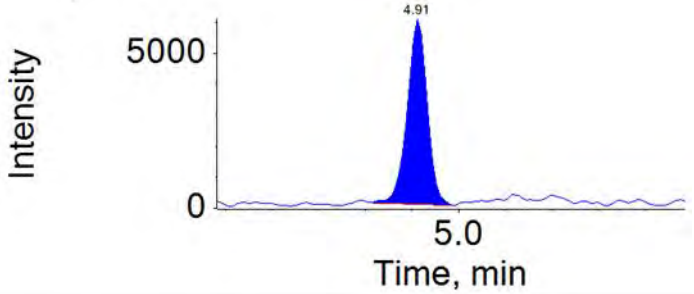
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



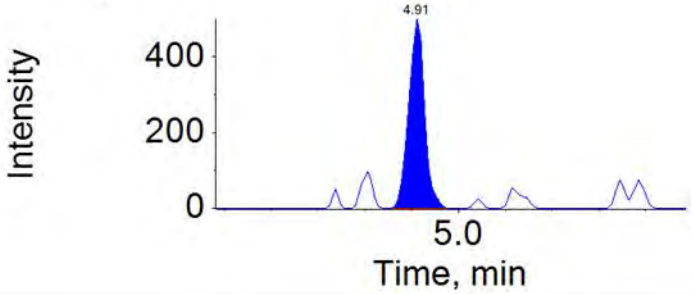
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

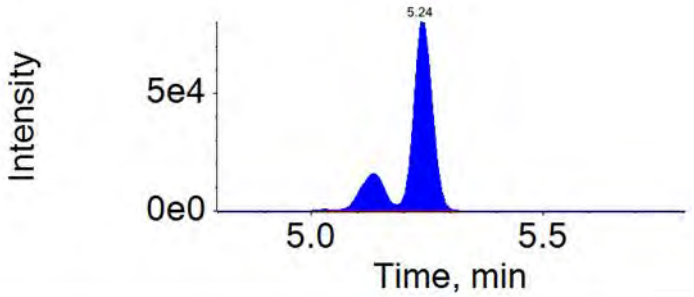
Component: PFOA
Primary Mass: 413.0 / 369.0



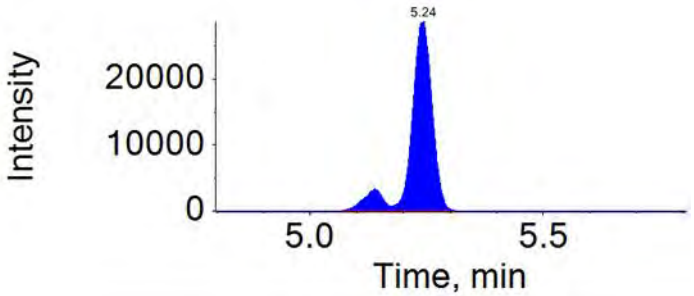
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



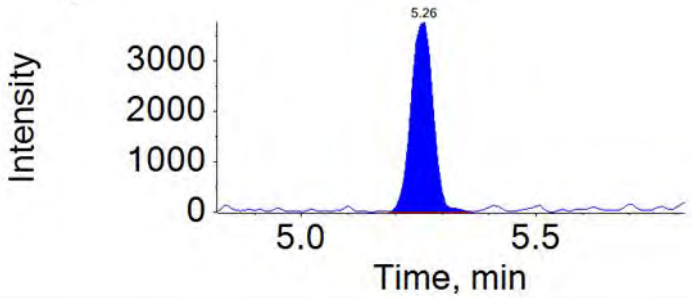
Component: PFOS
Primary Mass: 499.0 / 80.0



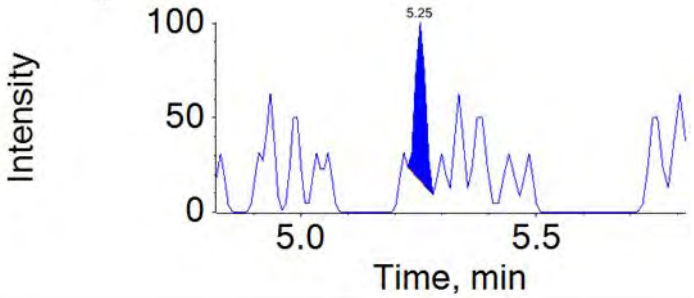
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



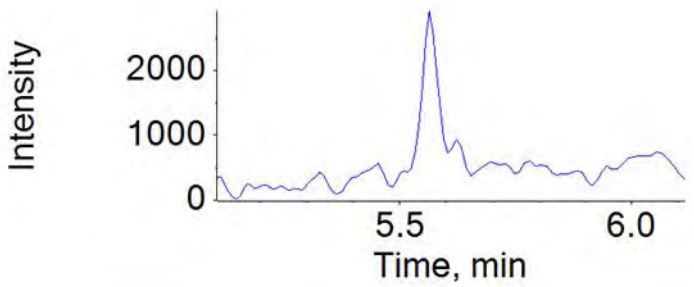
Component: PFNA
Primary Mass: 463.0 / 419.0



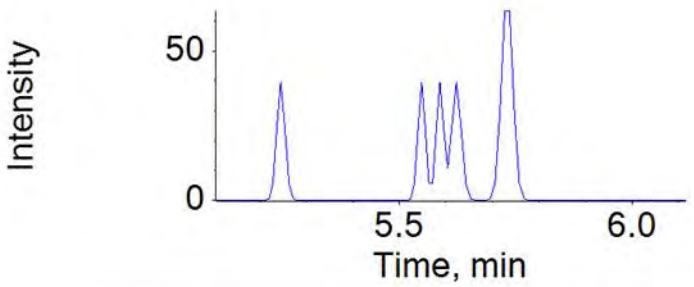
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



Component: PFDA_2
Secondary Mass: 513.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

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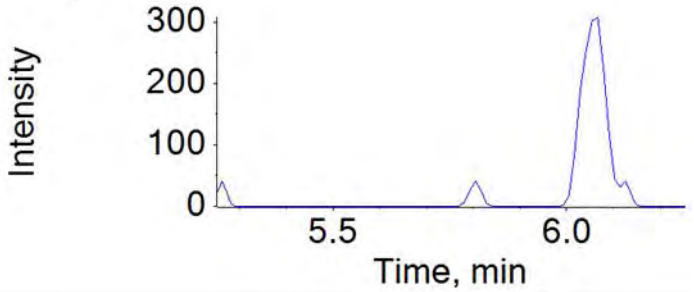
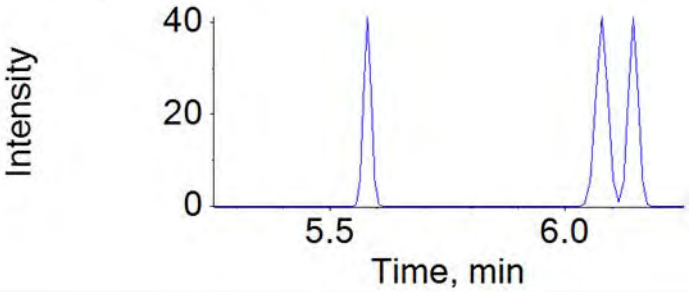
By umar at 4:40 pm, 11/12/18

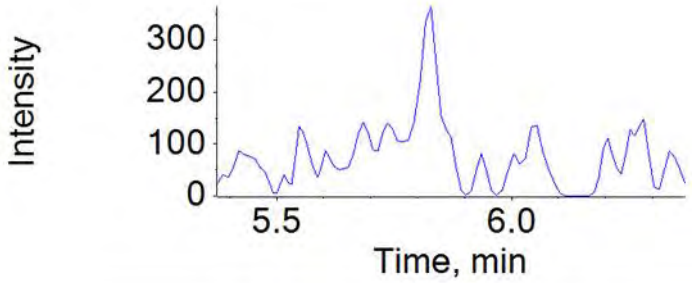
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



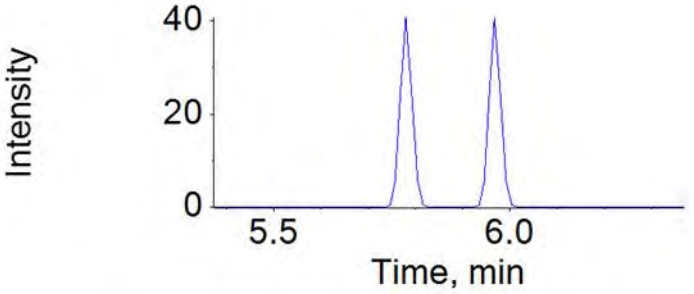
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



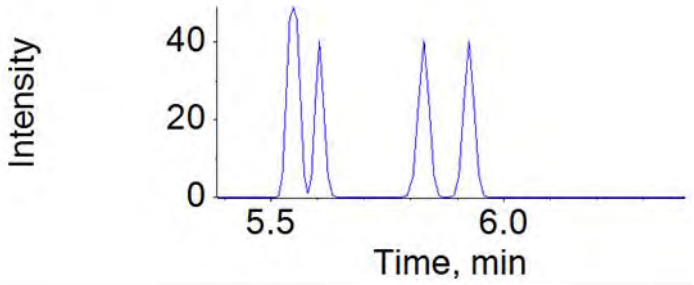
Component: PFUnDA
Primary Mass: 563.0 / 519.0



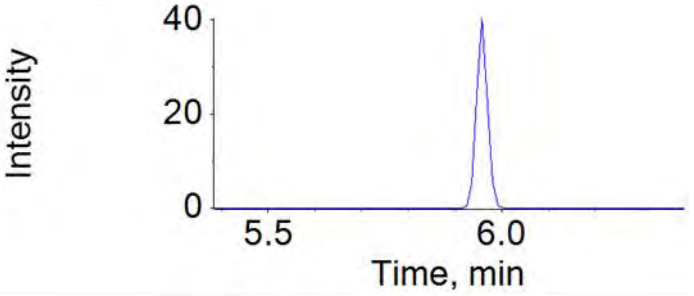
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



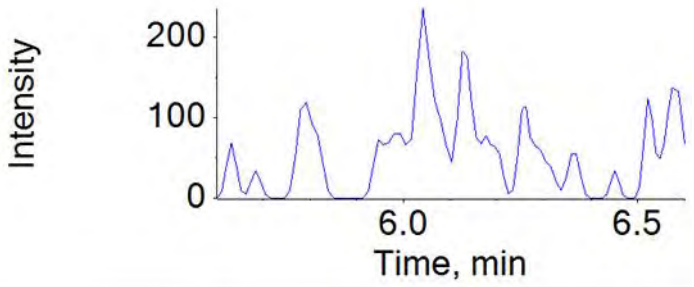
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



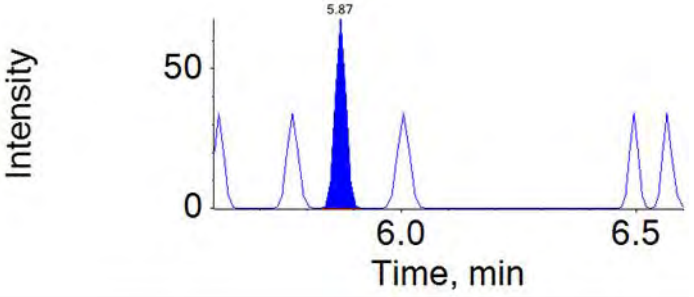
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



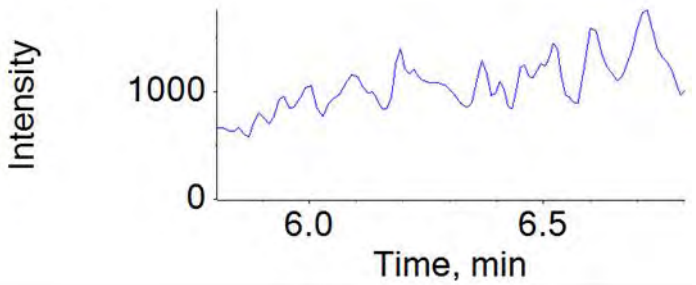
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



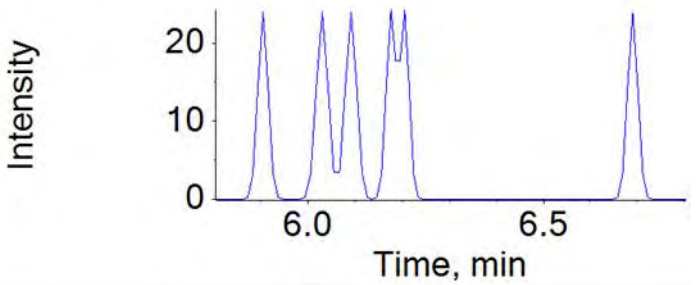
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

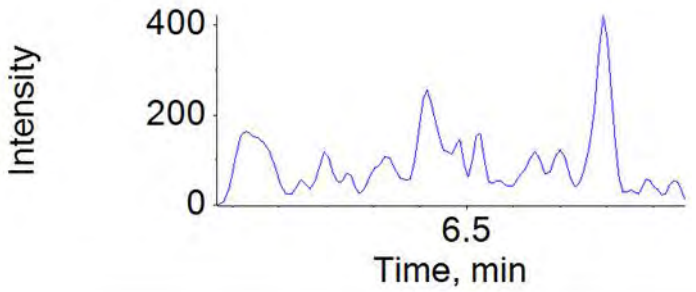
Component: PFTrDA
Primary Mass: 663.0 / 619.0



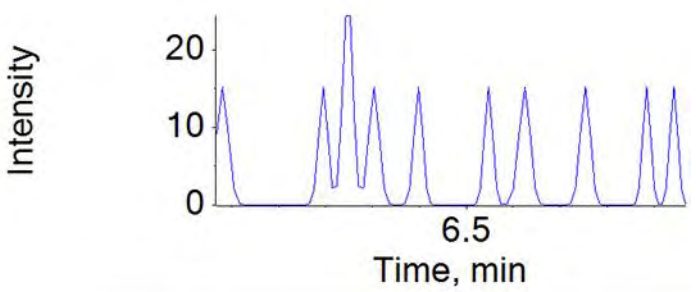
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883388			**Data File:**		18NOV12D-72.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18314009 OU1-Bldg371-S-03-05 Grab Soil			**Acquis Date:**		2018-11-13T03:26:33
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	96			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18314009
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18314009			**Operator:**		JPT12262
Sample Wt.:	1.03000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	697888.2	659926.2	6	50	
13C2-PFOA	5.0	487033.7	450219.7	8	50	
13C4-PFOS	4.8	259198.6	249205.8	4	50	
13C2-PFDA	5.0	296482.1	278743.9	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	420713.4	13C3-PFBA	697888.2	0.603	9.029	8.263	92	50-150	
E13C5-PFHxA	696001.7	13C2-PFOA	487033.7	1.429	9.709	10.024	103	50-150	
E13C3-PFHxS	312617.2	13C2-PFOA	487033.7	0.642	9.184	8.552	93	50-150	
E13C4-PFHpA	532308.8	13C2-PFOA	487033.7	1.093	9.709	9.561	98	50-150	
E13C8-PFOA	903880.0	13C2-PFOA	487033.7	1.856	9.709	9.929	102	50-150	
E13C8-PFOS	269043.0	13C4-PFOS	259198.6	1.038	9.282	8.930	96	50-150	
E13C9-PFNA	483654.0	13C4-PFOS	259198.6	1.866	9.709	10.102	104	50-150	
E13C6-PFDA	614119.5	13C2-PFDA	296482.1	2.071	9.709	9.386	97	50-150	
Ed3-NMeFOSAA	57492.4	13C2-PFDA	296482.1	0.194	9.709	6.797	70	50-150	
E13C7-PFUnDA	252377.3	13C2-PFDA	296482.1	0.851	9.709	9.597	99	50-150	
Ed5-NEtFOSAA	45361.8	13C2-PFDA	296482.1	0.153	9.709	6.285	65	50-150	
E13C2-PFDoDA	559057.9	13C2-PFDA	296482.1	1.886	9.709	9.506	98	50-150	
E13C2-PFTeDA	382291.8	13C2-PFDA	296482.1	1.289	9.709	8.790	91	50-150	

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

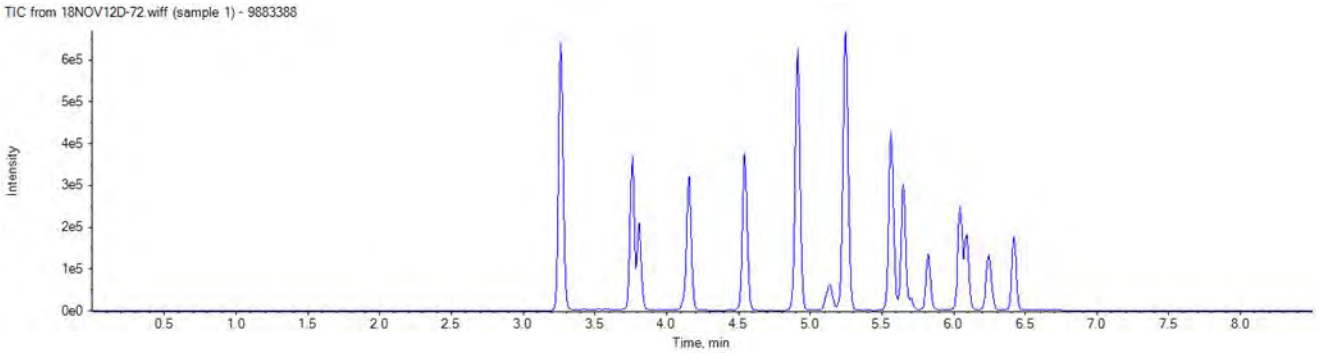
Analyte Quantitation Peak Table

Sample Name: 9883388 **Instrument Name:** LM27631 **File Name:** 18NOV12D-72.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.03000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	420713.4	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	696001.7	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	532308.8	N/A	
PFHxS	4.55	1.000	9253.8		A	13C3-PFHxS	4.55	312617.2	0.030	0.279
PFOA	4.91	1.000	24853.7		A	13C8-PFOA	4.91	903880.0	0.027	0.285
PFOS	5.24	1.000	680400.9		M	13C8-PFOS	5.24	269043.0	2.529	21.475
PFNA	5.26	1.000	11916.2		M	13C9-PFNA	5.26	483654.0	0.025	0.173
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	614119.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	57492.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	252377.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	45361.8	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	559057.9	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	559057.9	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	382291.8	N/A	

Total Ion Chromatogram

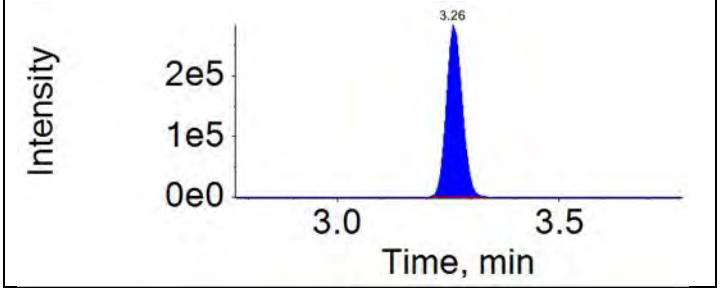


APPROVED
By JPT at 4:11 pm, 11/13/18

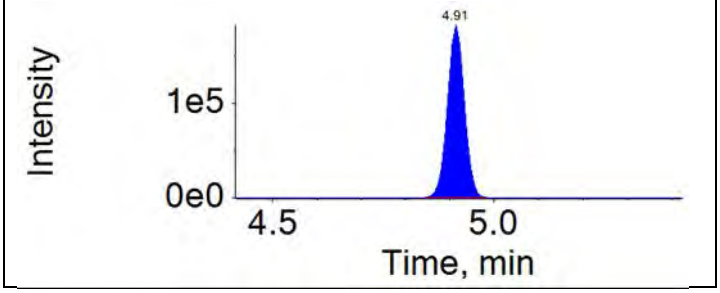
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

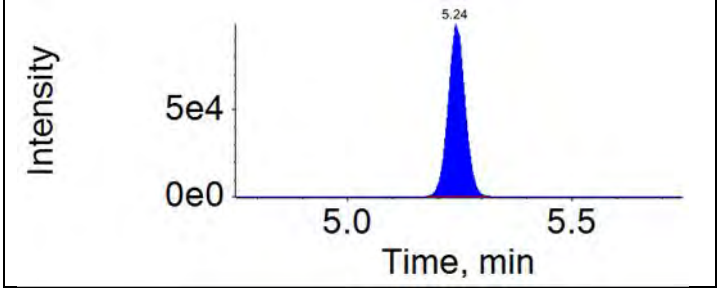
Injection Standard: 13C3-PFBA
216.0 / 172.0



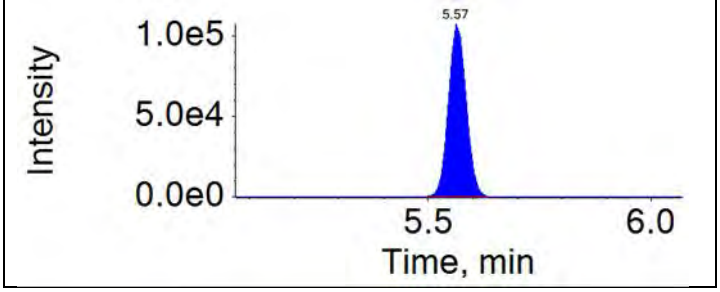
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

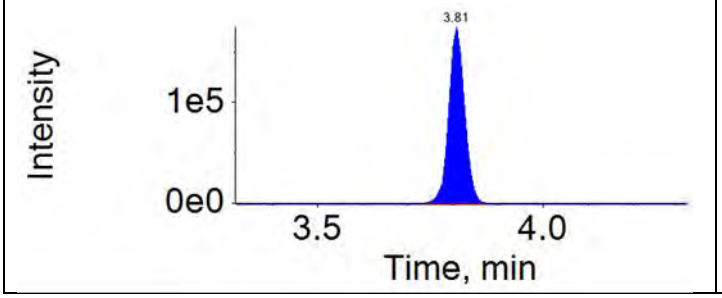


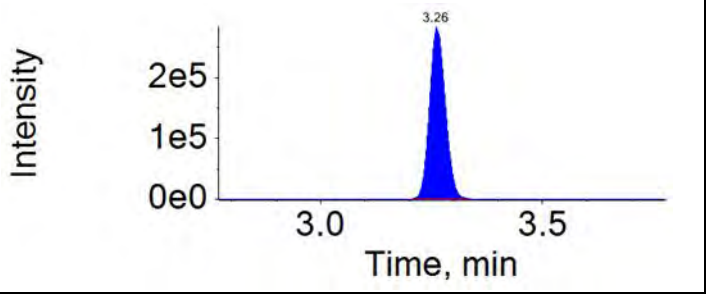
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

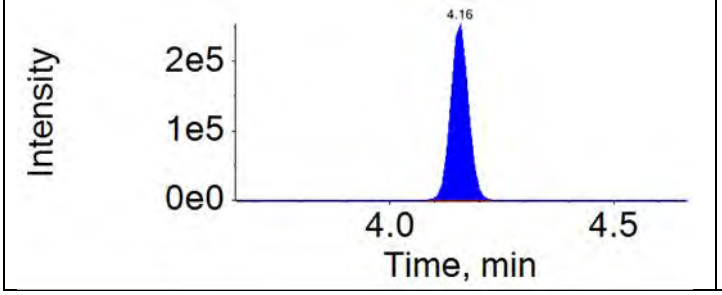
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

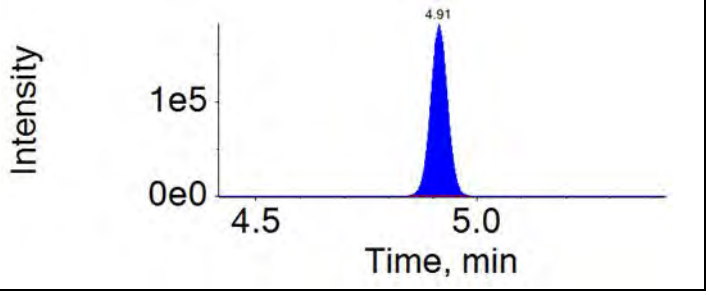
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



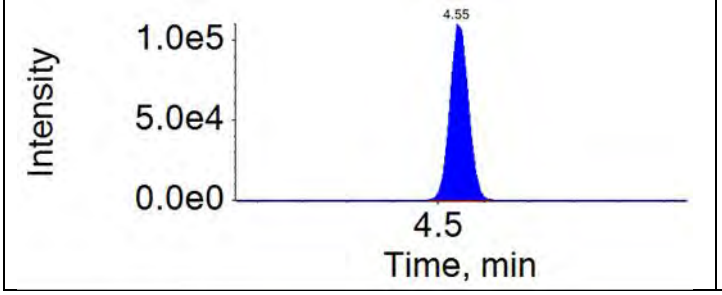


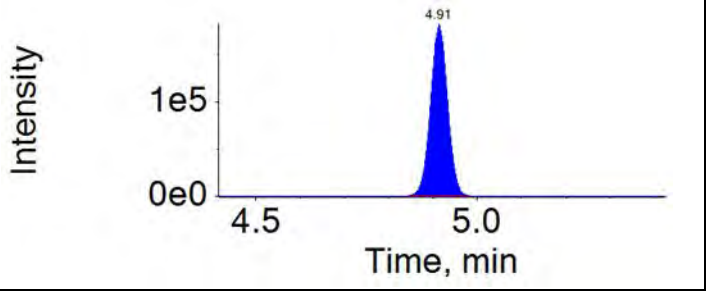
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



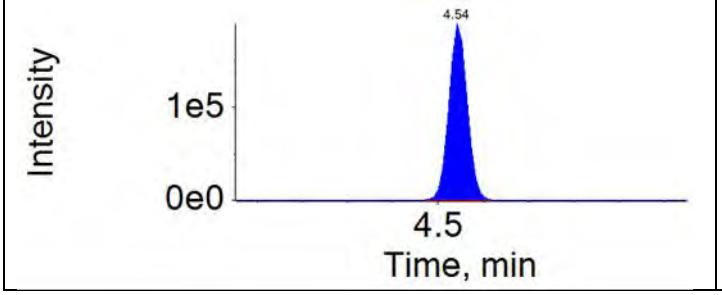


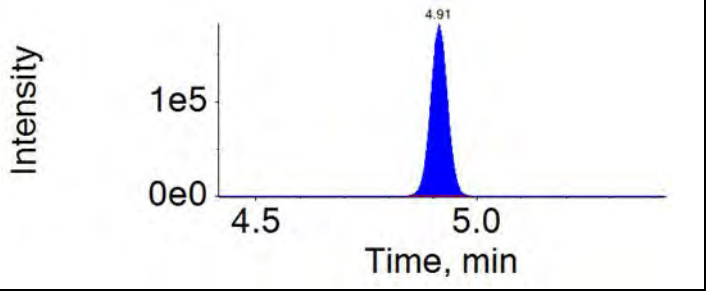
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

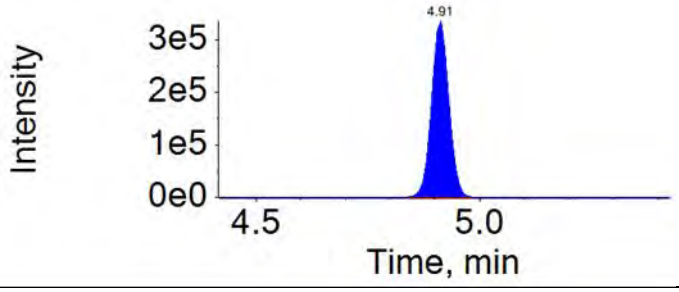
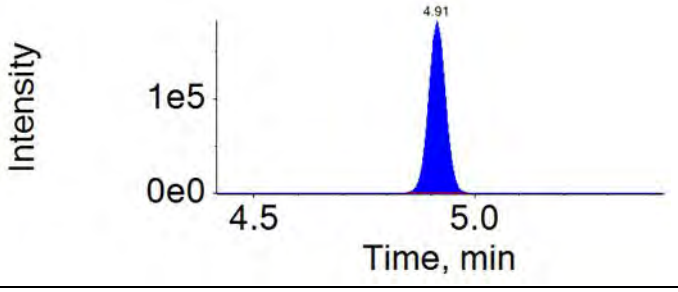


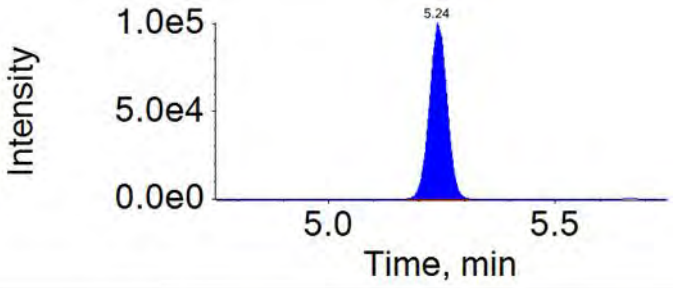
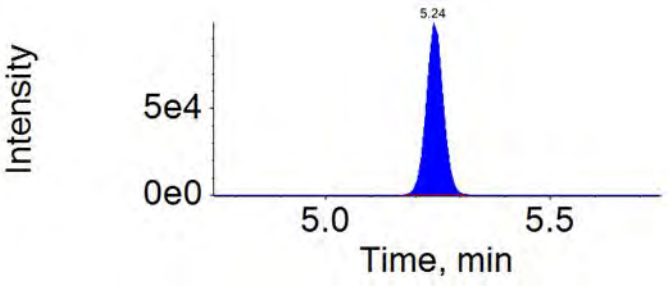


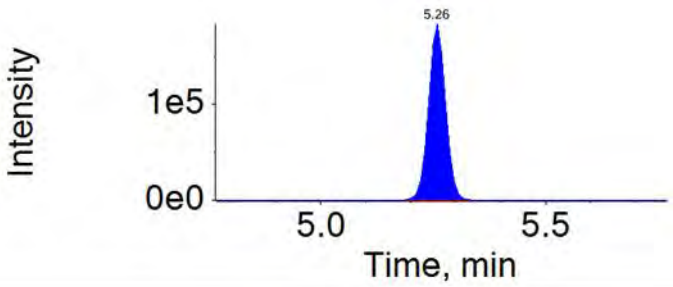
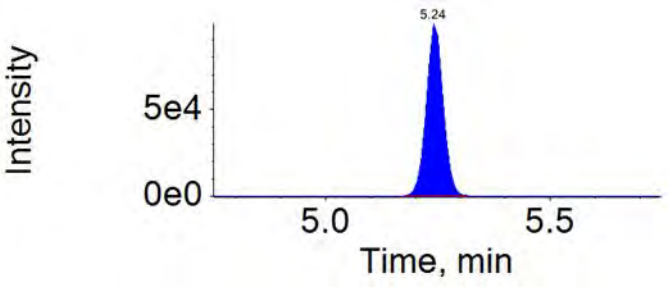
APPROVED
By JPT at 4:11 pm, 11/13/18

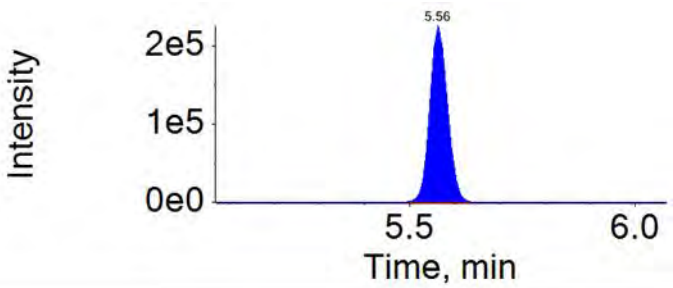
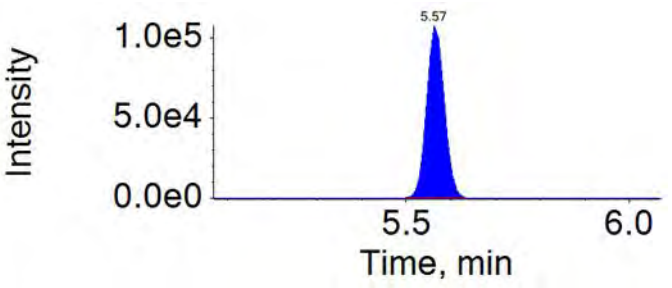
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

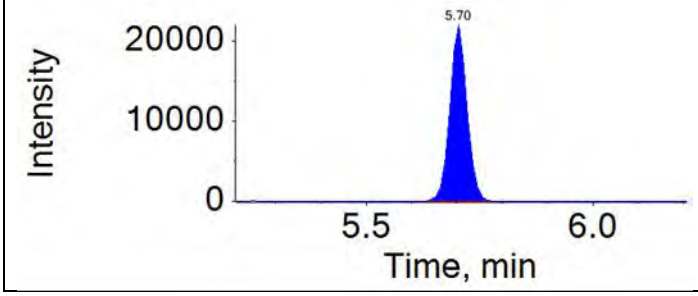
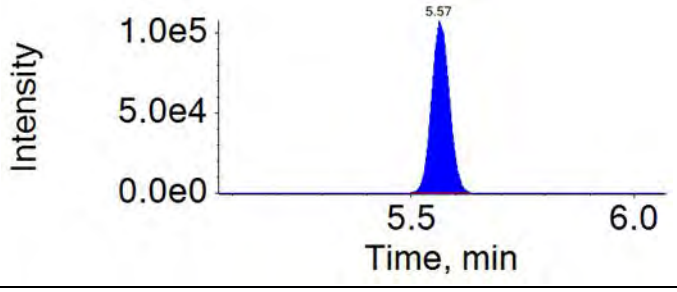
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

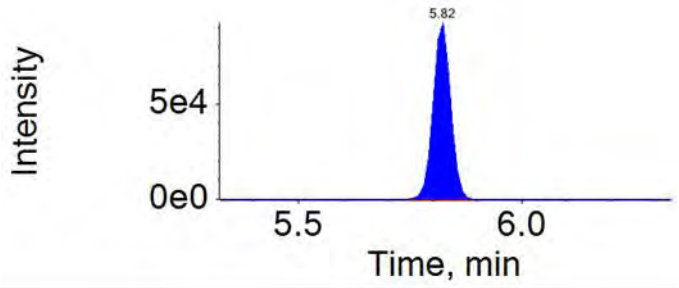
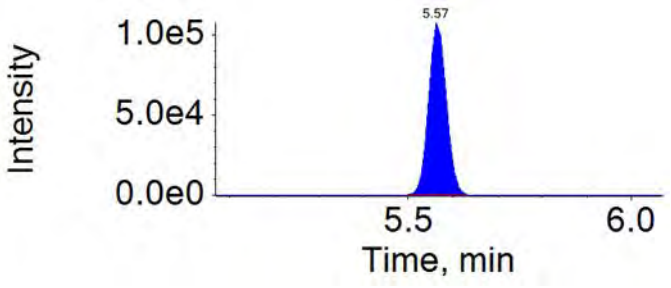
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

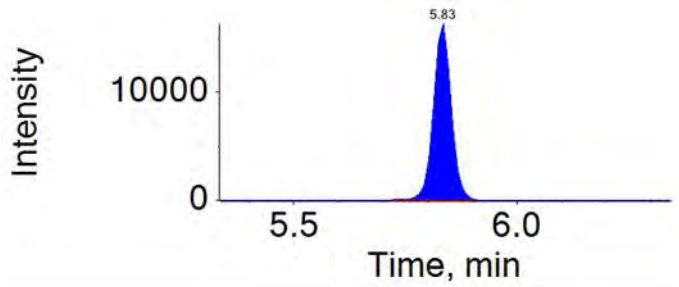
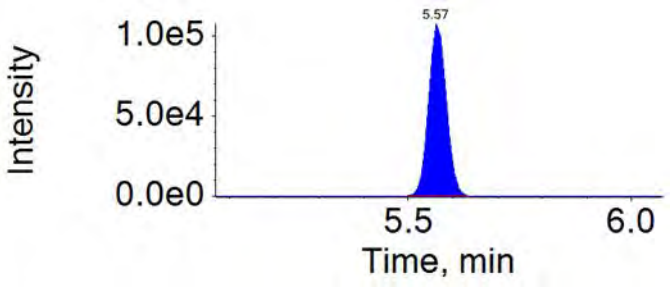
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

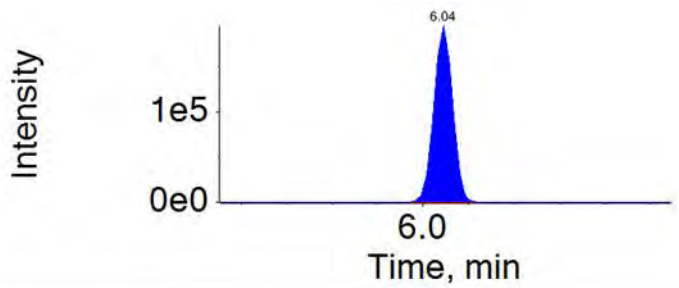
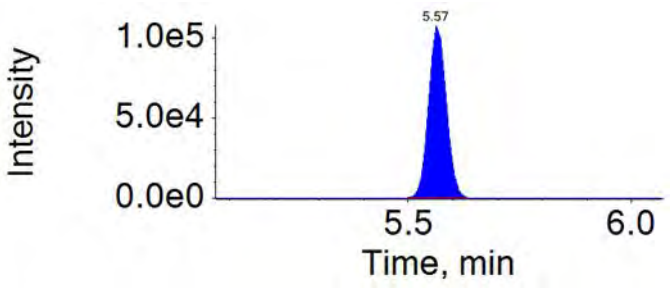
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

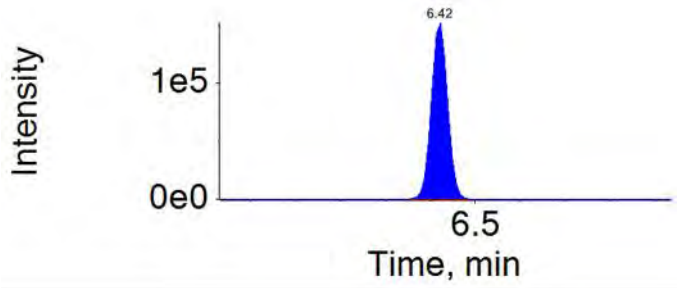
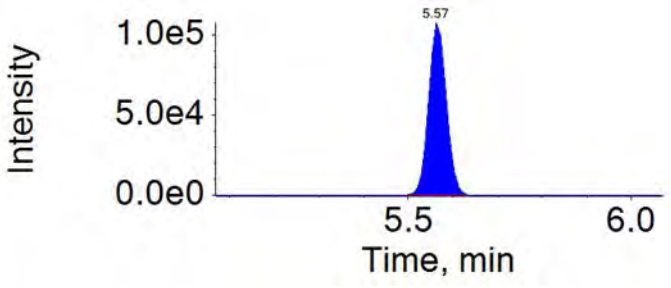
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

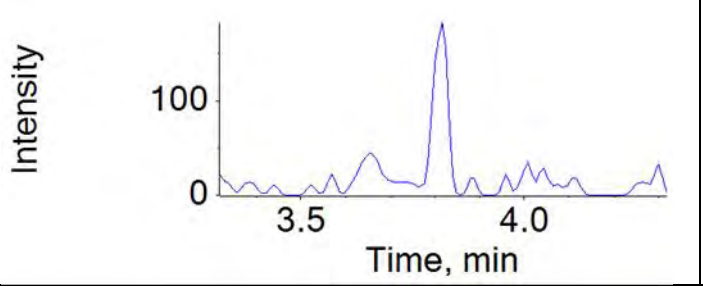
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

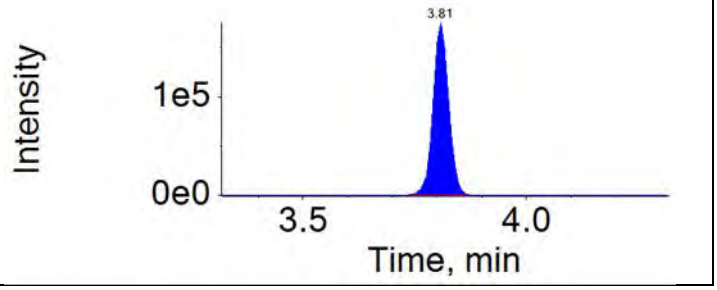
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

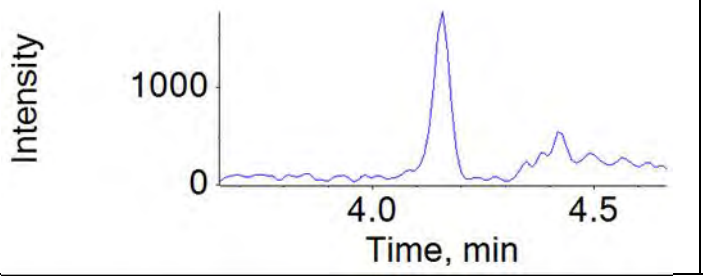
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

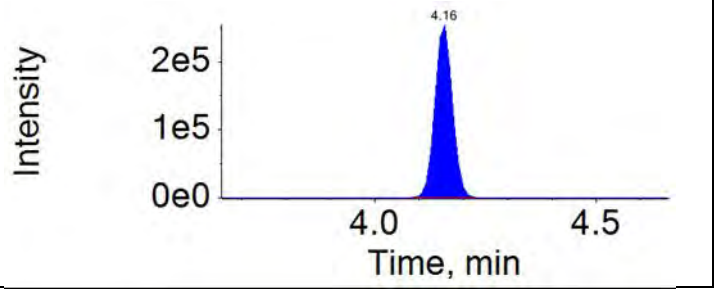
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



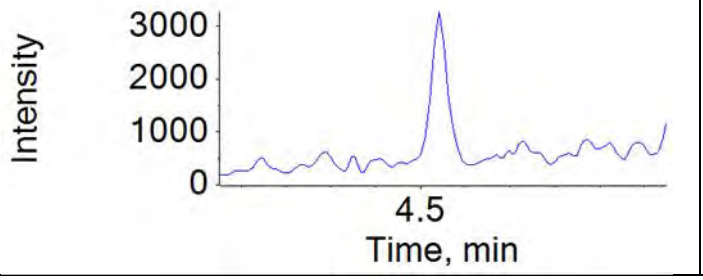


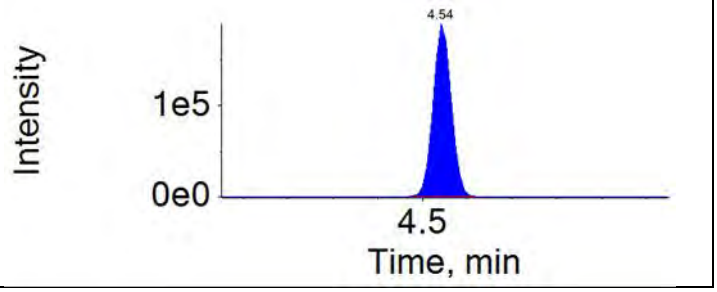
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



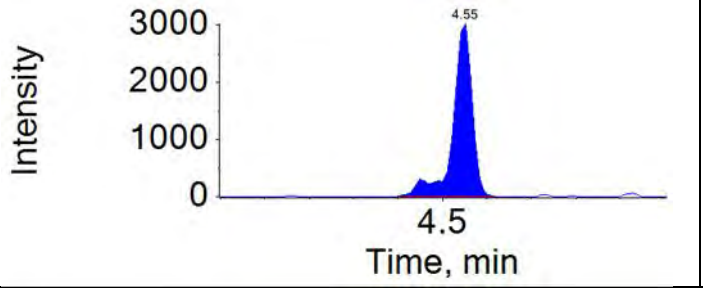


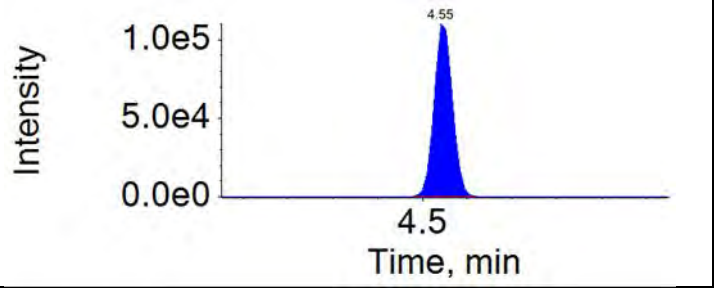
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

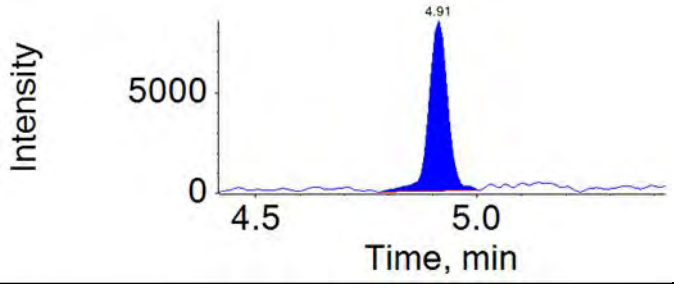
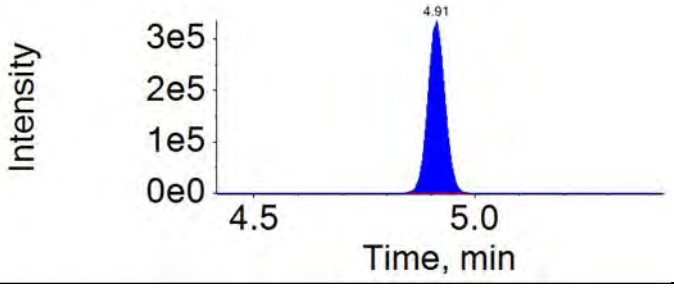


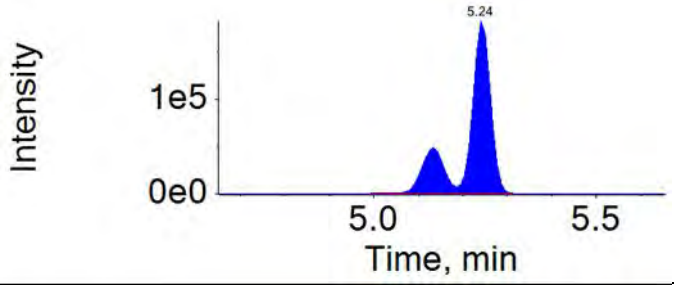
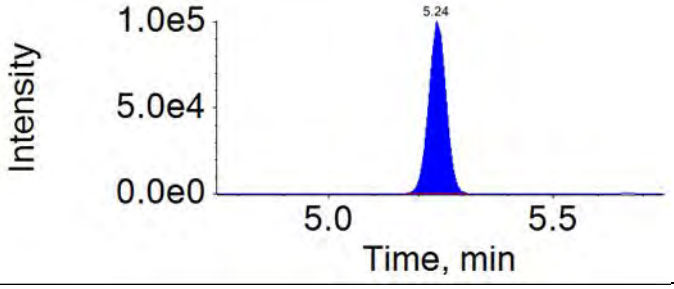


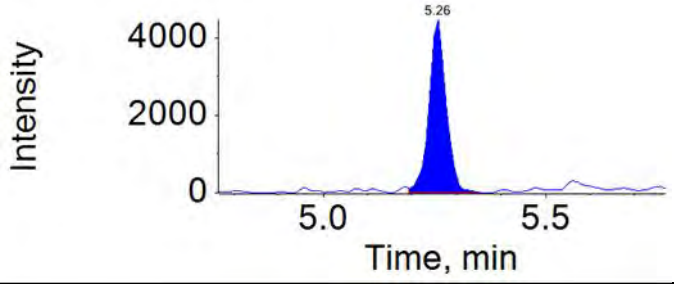
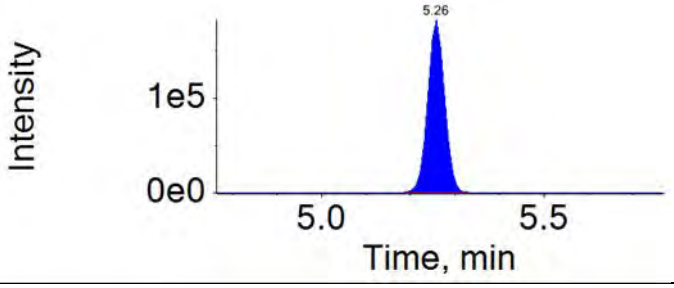
APPROVED
By JPT at 4:11 pm, 11/13/18

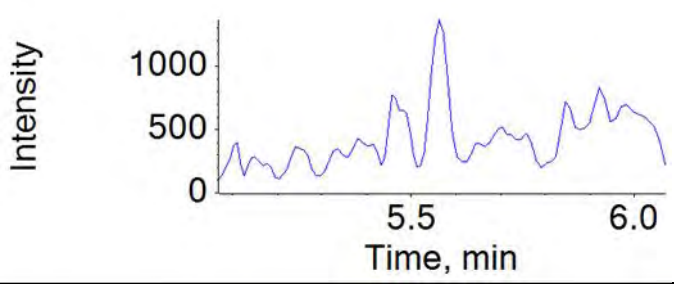
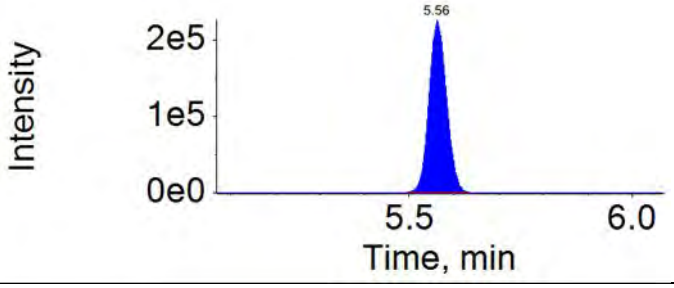
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

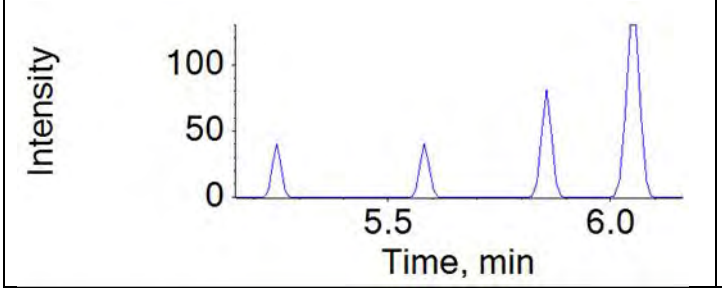
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

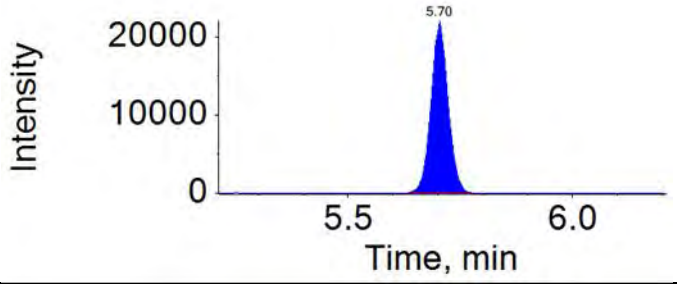
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

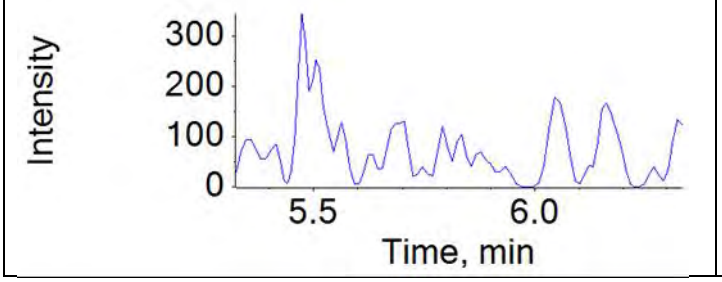
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

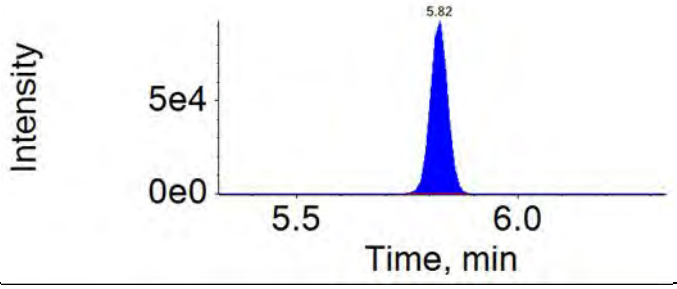
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



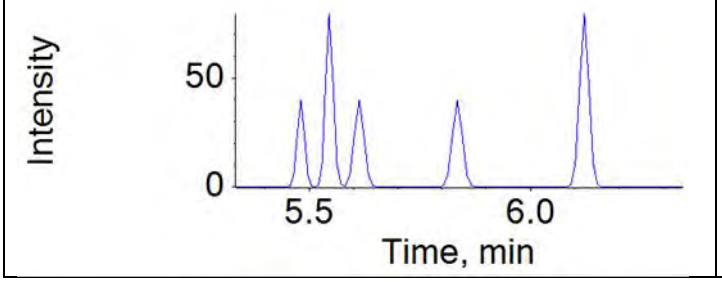


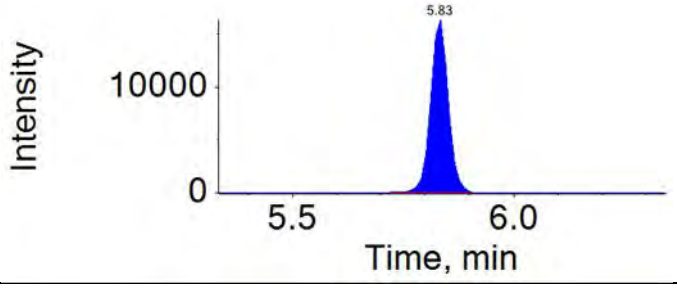
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



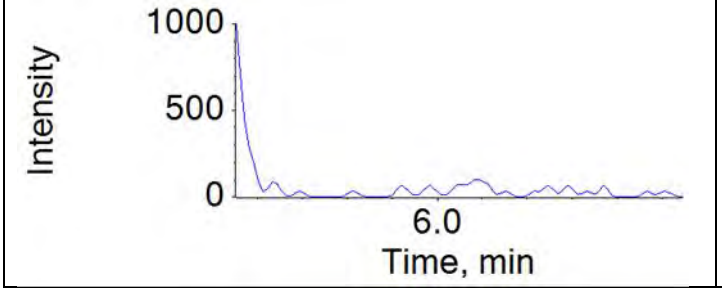


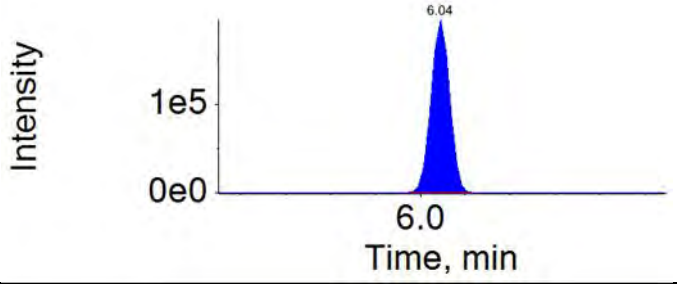
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



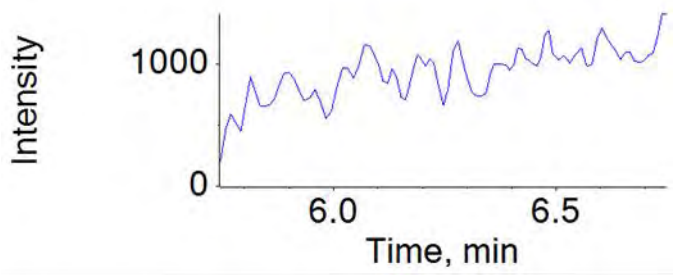


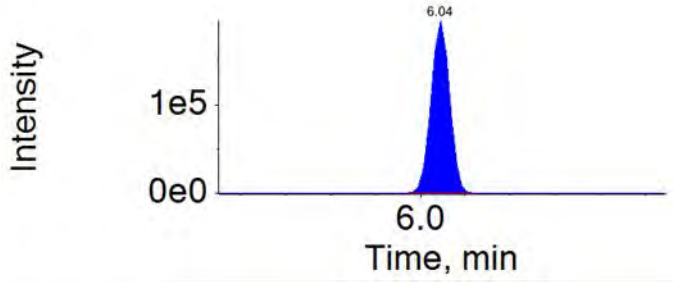
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

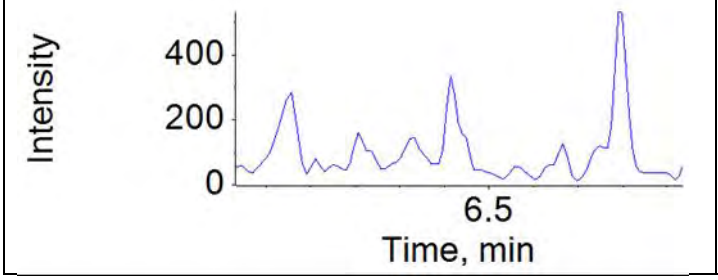
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

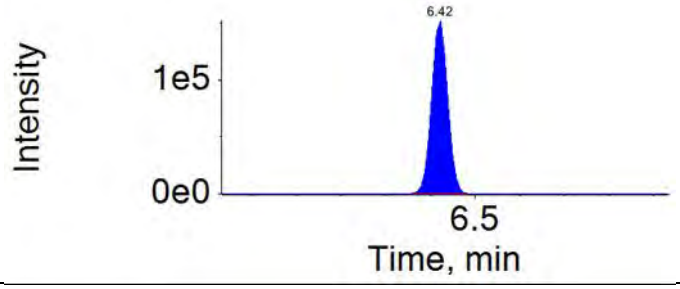
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



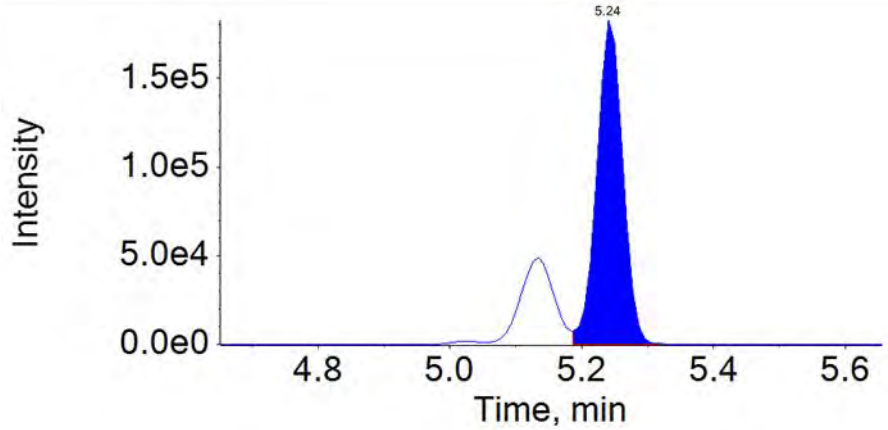


APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

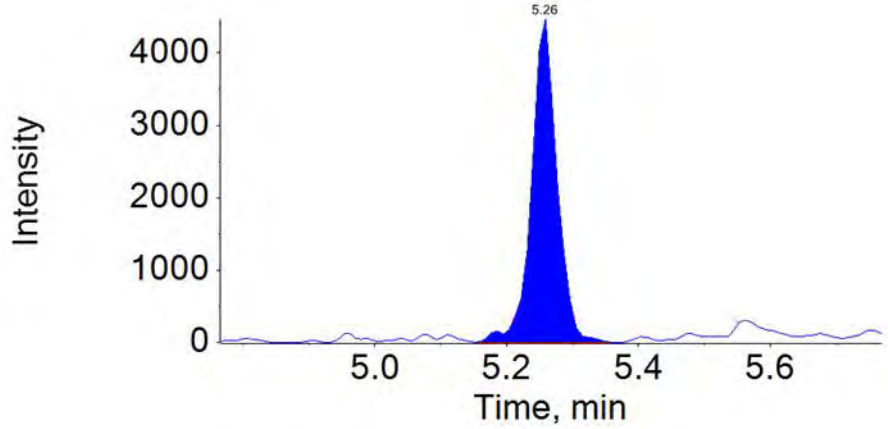
Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
502172.7
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-72.wiff
Sample Name:
9883388



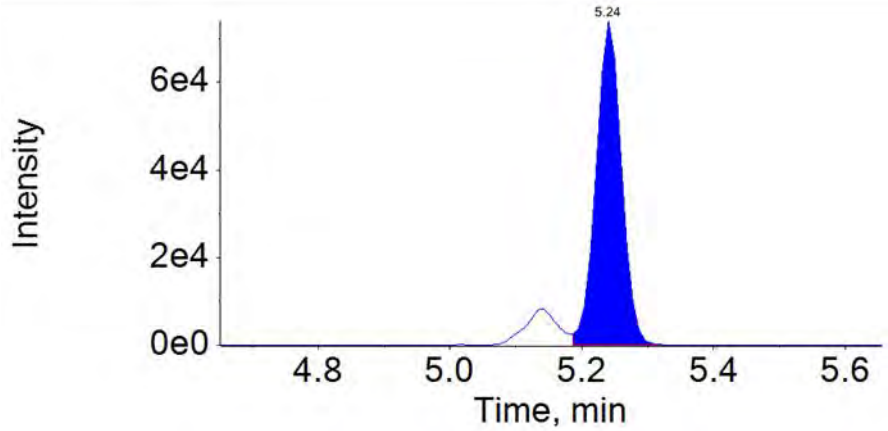
Integration Comment: incorrect integration

Component Name:
PFNA
RT (min.):
5.26
Peak Area:
12087.5
Mass Range:
463.0 / 419.0
File Name:
18NOV12D-72.wiff
Sample Name:
9883388



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
198210.9
Mass Range:
499.0 / 99.0
File Name:
18NOV12D-72.wiff
Sample Name:
9883388



Integration Comment: incorrect integration

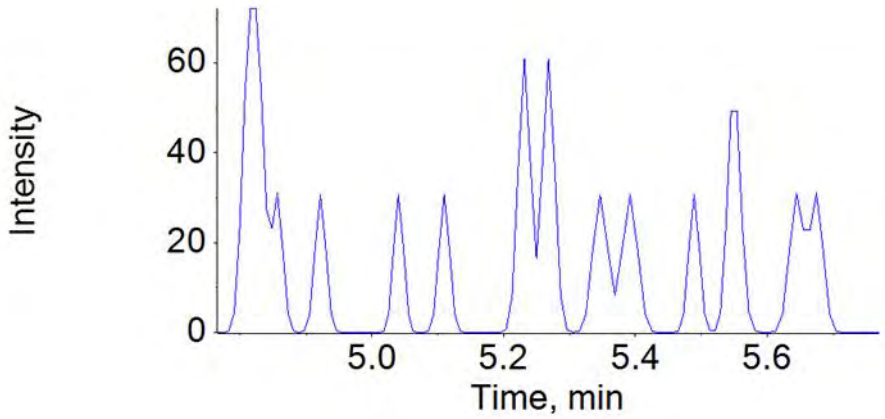
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFNA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
463.0 / 169.0
File Name:
18NOV12D-72.wiff
Sample Name:
9883388



Integration Comment: incorrect integration

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

Ion Ratio Report

Sample Name: 9883388 **Instrument Name:** LM27631 **File Name:** 18NOV12D-72.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	4.55	1.00	9253.8	A	N/A	1.0000			
PFHxS_2	4.55	1.00	2892.6	A	N/A	0.3126	3	50	
PFOA	4.91	1.00	24853.7	A	N/A	1.0000			
PFOA_2	4.91	1.00	1780.1	A	N/A	0.0716	26	50	
PFOS	5.24	1.00	680400.9	M	N/A	1.0000			
PFOS_2	5.24	1.00	227333.4	M	N/A	0.3341	29	50	
PFNA	5.26	1.00	11916.2	M	N/A	1.0000			
PFNA_2	5.25	1.00	168.8	M	N/A	0.0142	-38	50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

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By JPT at 4:11 pm, 11/13/18

REVIEWED
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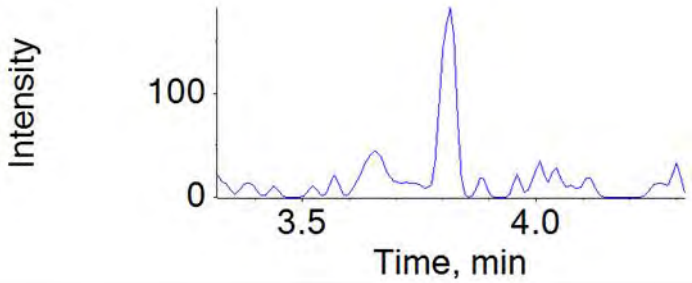
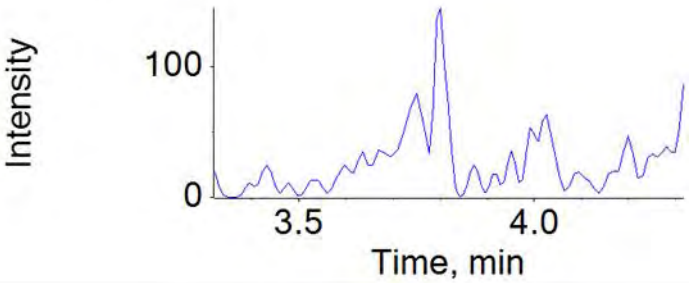
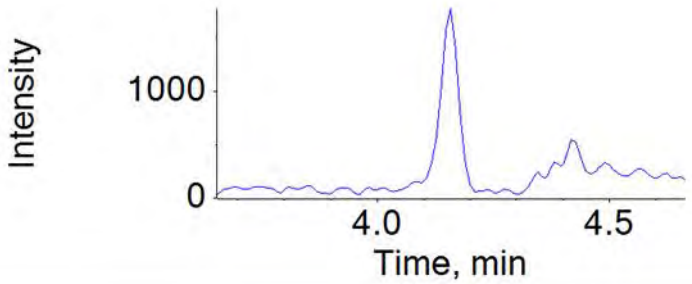
Component: PFBS
Primary Mass: 299.0 / 80.0



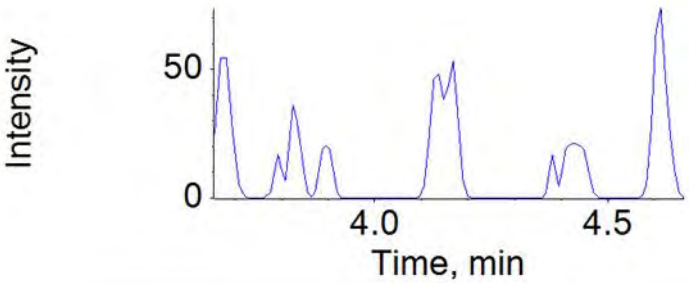
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



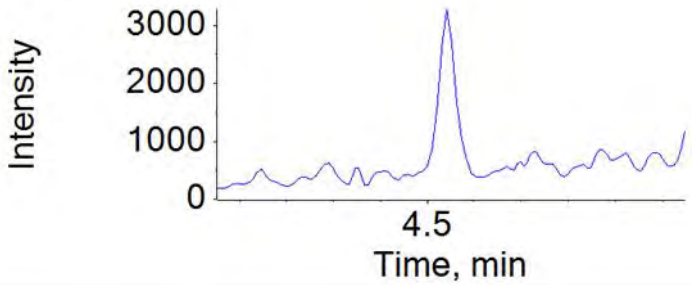
Component: PFHxA
Primary Mass: 313.0 / 269.0



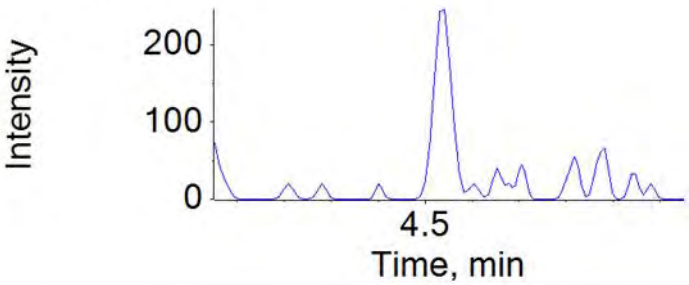
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



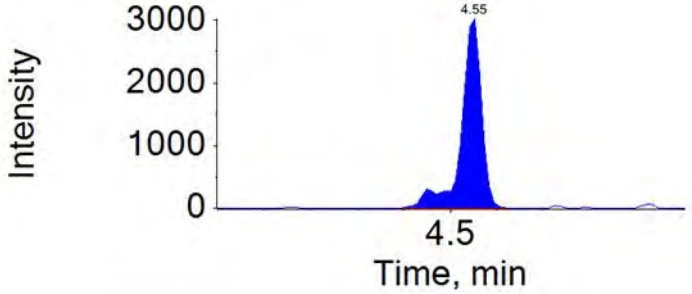
Component: PFHpA
Primary Mass: 363.0 / 319.0



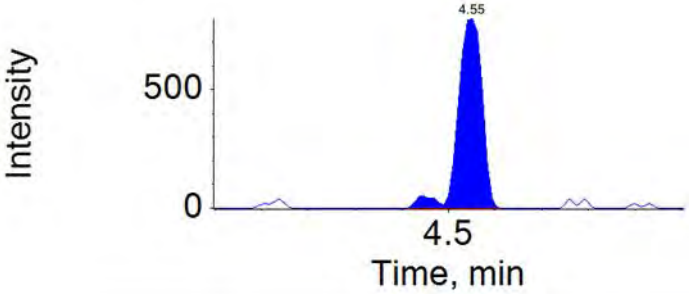
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



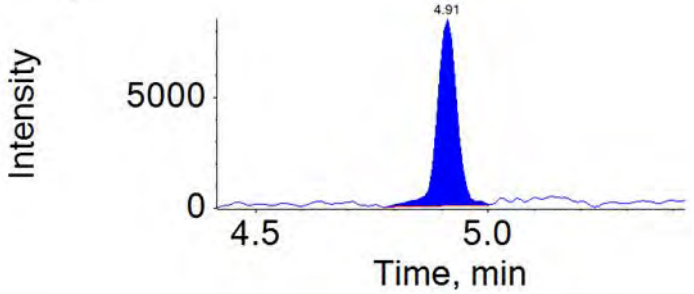
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



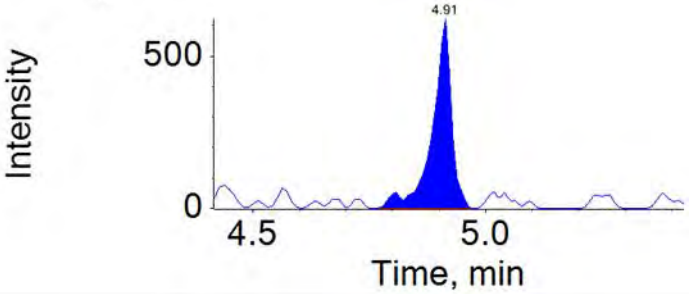
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

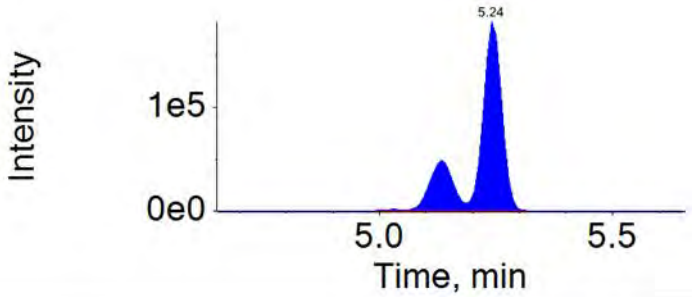
Component: PFOA
Primary Mass: 413.0 / 369.0



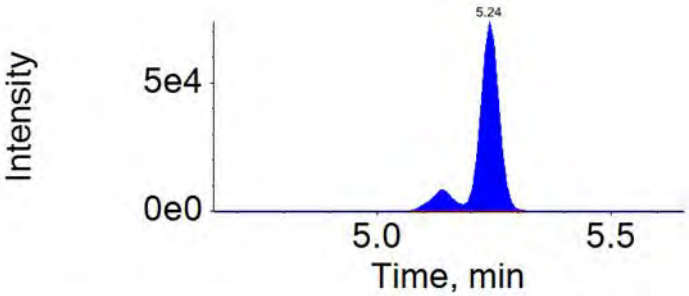
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



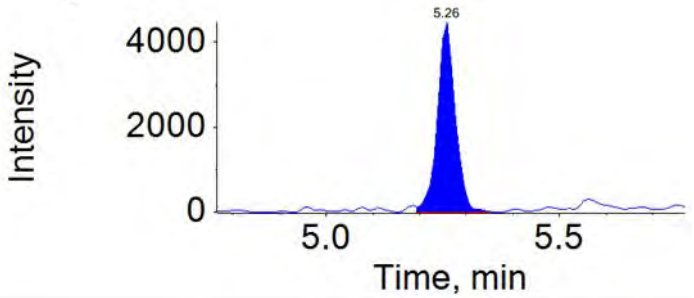
Component: PFOS
Primary Mass: 499.0 / 80.0



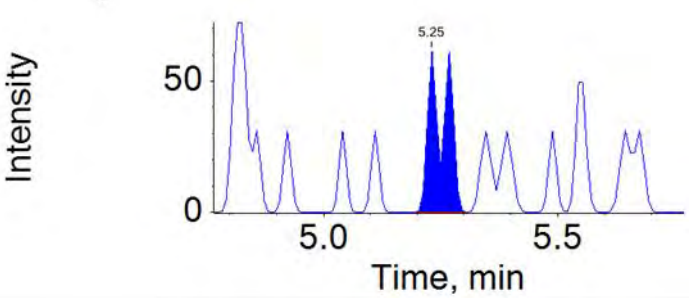
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



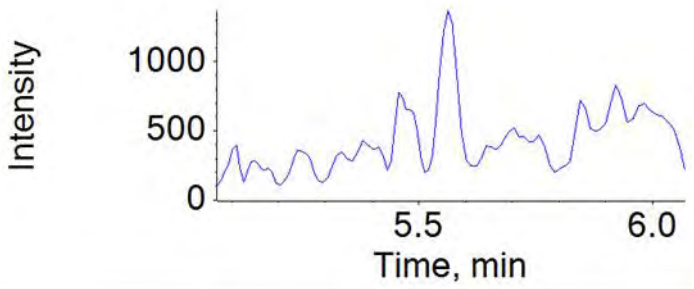
Component: PFNA
Primary Mass: 463.0 / 419.0



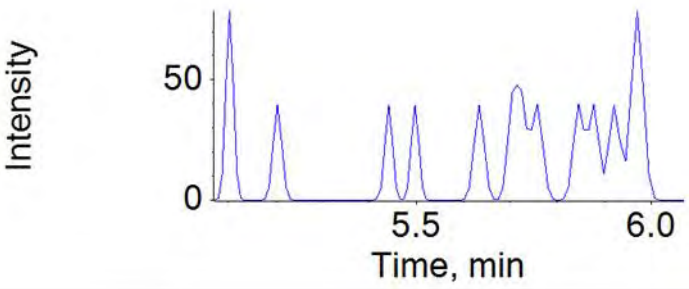
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



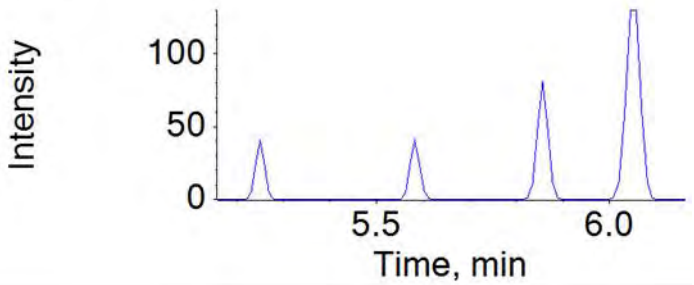
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



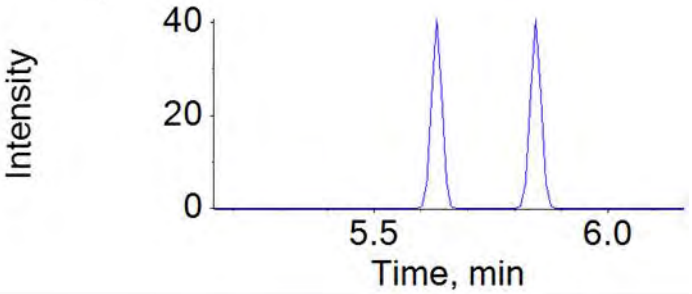
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

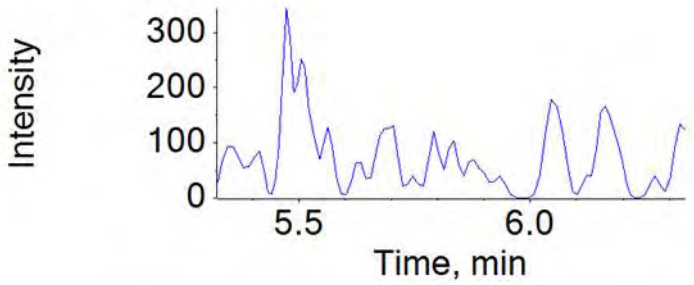
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



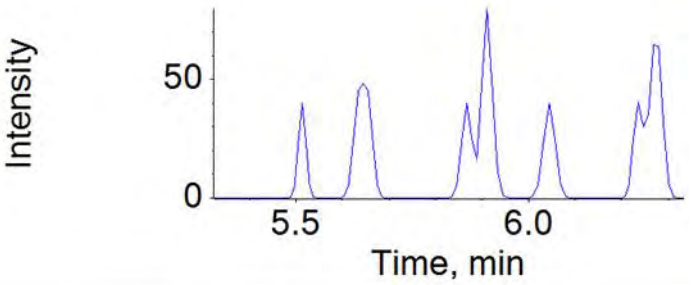
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



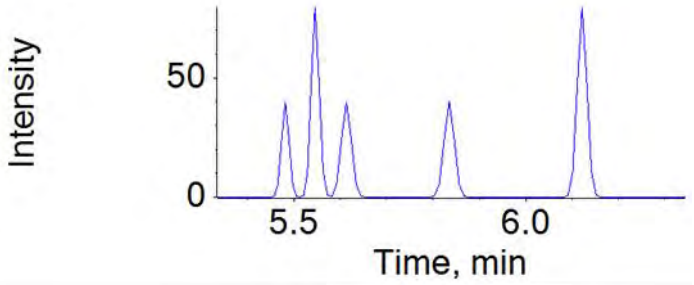
Component: PFUnDA
Primary Mass: 563.0 / 519.0



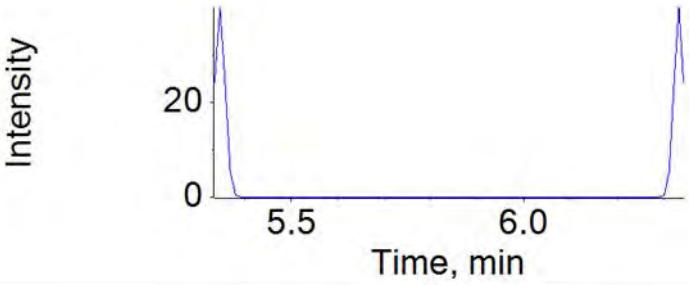
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



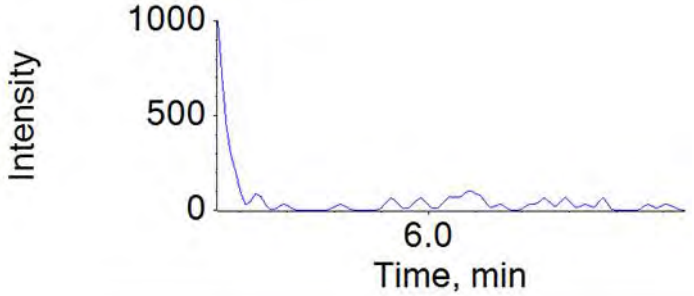
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



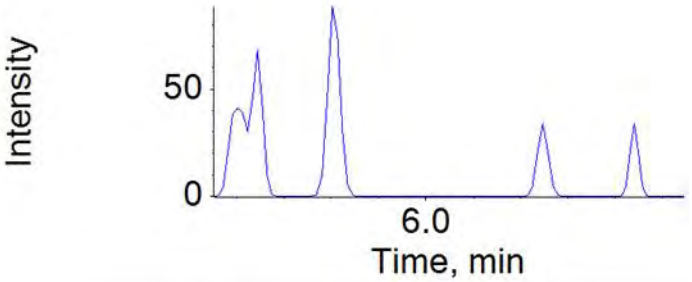
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



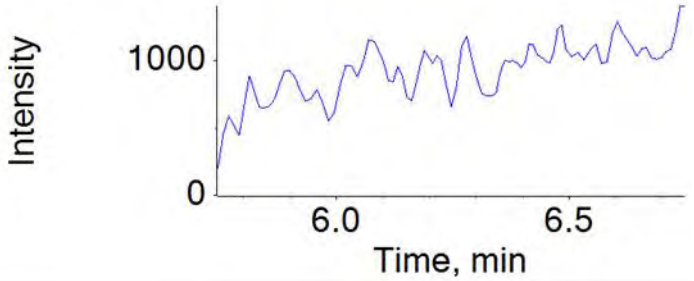
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



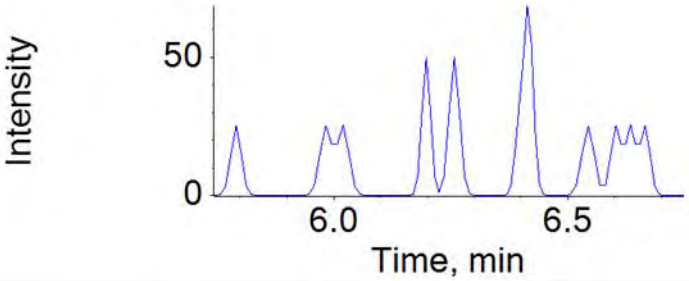
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

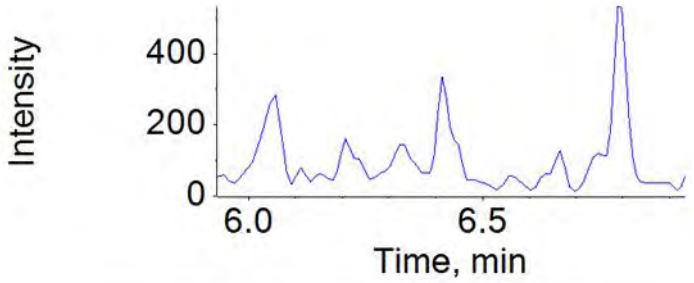
Component: PFTrDA
Primary Mass: 663.0 / 619.0



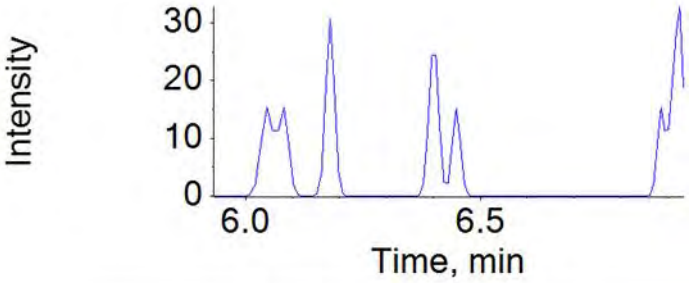
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883389			**Data File:**		18NOV12D-73.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18314009 OU1-Bldg371-S-03-08 Grab Soil			**Acquis Date:**		2018-11-13T03:35:33
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	97			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18314009
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18314009			**Operator:**		JPT12262
Sample Wt.:	1.03000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	682415.8	659926.2	3	50	
13C2-PFOA	5.0	491254.9	450219.7	9	50	
13C4-PFOS	4.8	267897.5	249205.8	8	50	
13C2-PFDA	5.0	307794.2	278743.9	10	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	407864.4	13C3-PFBA	682415.8	0.598	9.029	8.192	91	50-150	
E13C5-PFHxA	631413.4	13C2-PFOA	491254.9	1.285	9.709	9.015	93	50-150	
E13C3-PFHxS	304197.8	13C2-PFOA	491254.9	0.619	9.184	8.251	90	50-150	
E13C4-PFHpA	501621.9	13C2-PFOA	491254.9	1.021	9.709	8.932	92	50-150	
E13C8-PFOA	862779.7	13C2-PFOA	491254.9	1.756	9.709	9.396	97	50-150	
E13C8-PFOS	278952.8	13C4-PFOS	267897.5	1.041	9.282	8.959	97	50-150	
E13C9-PFNA	442861.1	13C4-PFOS	267897.5	1.653	9.709	8.950	92	50-150	
E13C6-PFDA	596876.0	13C2-PFDA	307794.2	1.939	9.709	8.787	91	50-150	
Ed3-NMeFOSAA	50979.6	13C2-PFDA	307794.2	0.166	9.709	5.805	60	50-150	
E13C7-PFUnDA	252555.8	13C2-PFDA	307794.2	0.821	9.709	9.250	95	50-150	
Ed5-NEtFOSAA	40166.9	13C2-PFDA	307794.2	0.130	9.709	5.361	55	50-150	
E13C2-PFDoDA	505281.5	13C2-PFDA	307794.2	1.642	9.709	8.276	85	50-150	
E13C2-PFTeDA	364070.1	13C2-PFDA	307794.2	1.183	9.709	8.063	83	50-150	

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

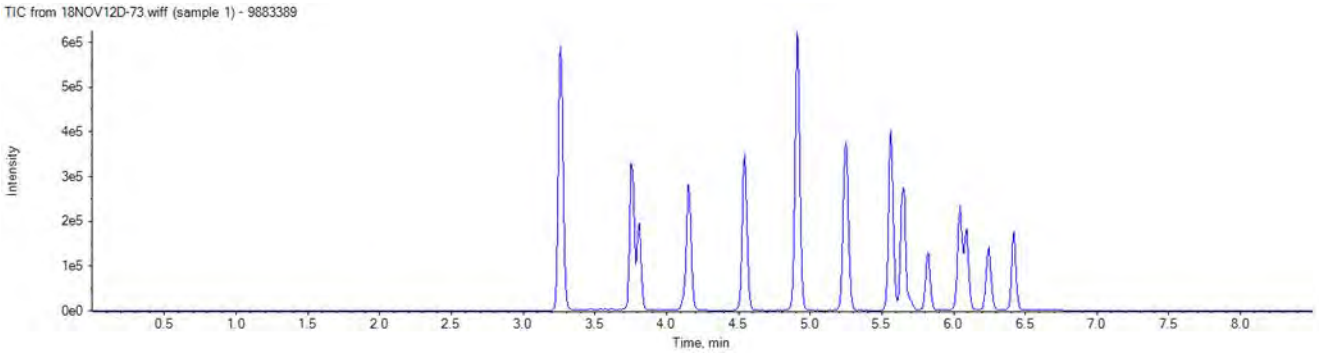
Analyte Quantitation Peak Table

Sample Name: 9883389 **Instrument Name:** LM27631 **File Name:** 18NOV12D-73.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.03000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	407864.4	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	631413.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	501621.9	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	304197.8	N/A	
PFOA	4.91	1.000	12872.8		A	13C8-PFOA	4.91	862779.7	0.015	0.155
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	278952.8	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	442861.1	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	596876.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	50979.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	252555.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	40166.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	505281.5	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	505281.5	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	364070.1	N/A	

Total Ion Chromatogram

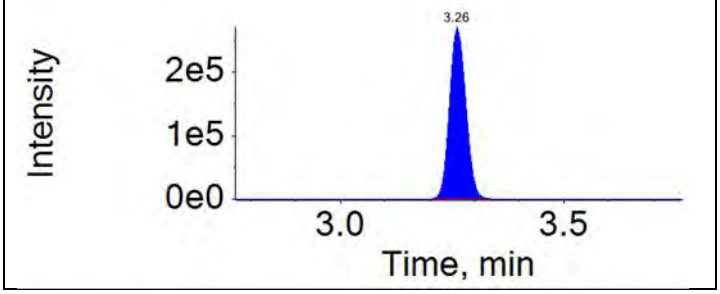


APPROVED
By JPT at 4:11 pm, 11/13/18

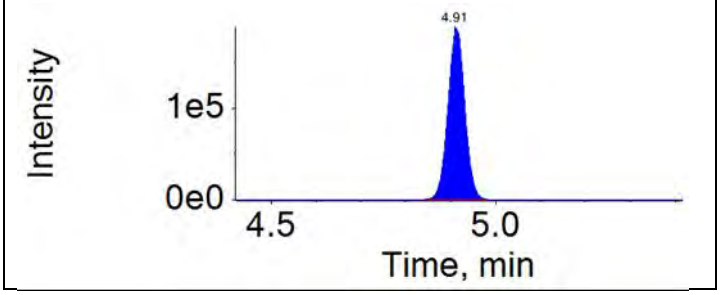
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

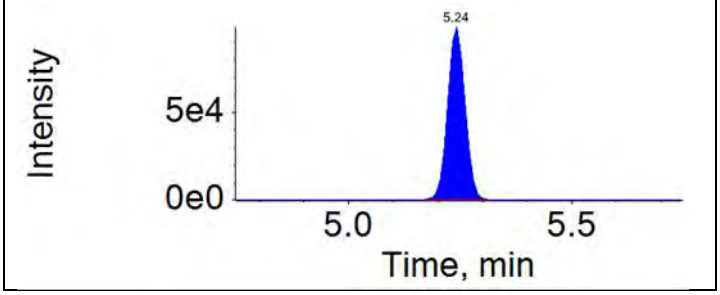
Injection Standard: 13C3-PFBA
216.0 / 172.0



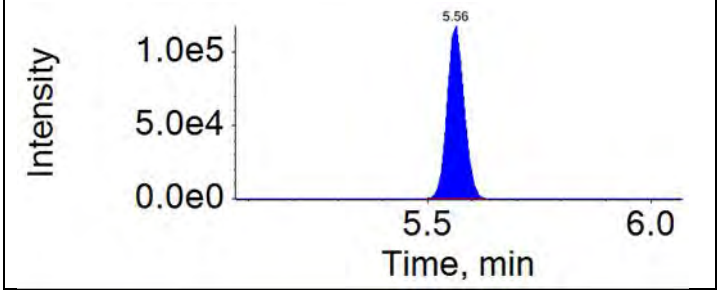
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

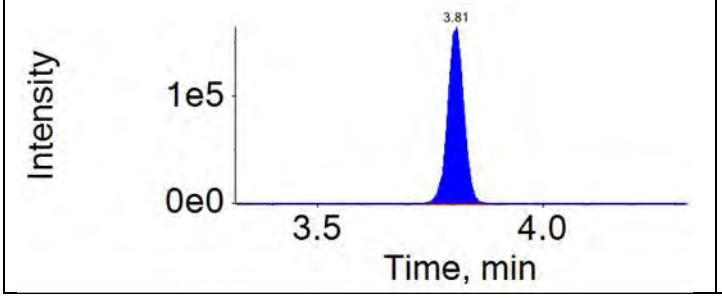


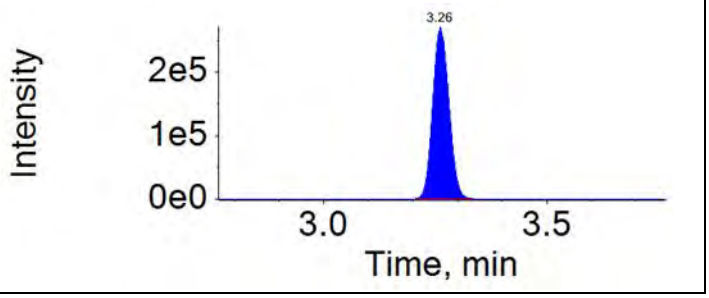
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

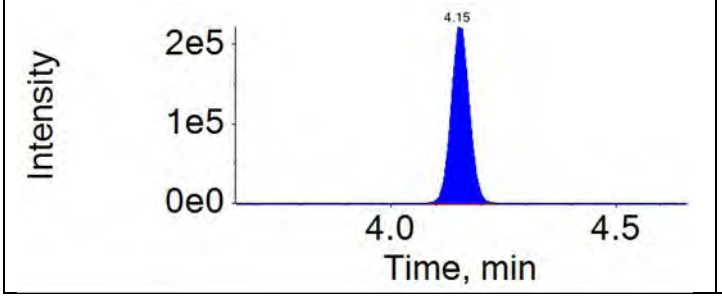
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

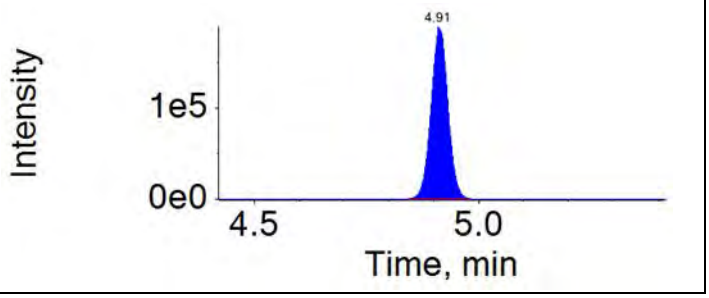
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



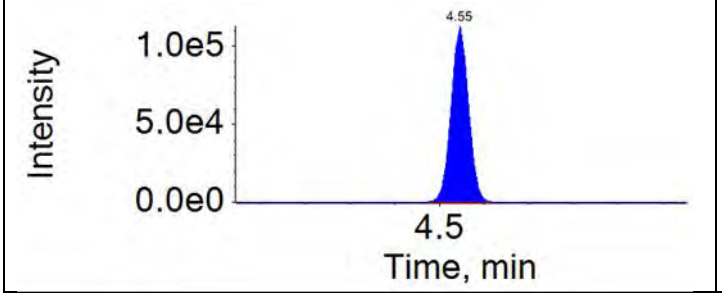


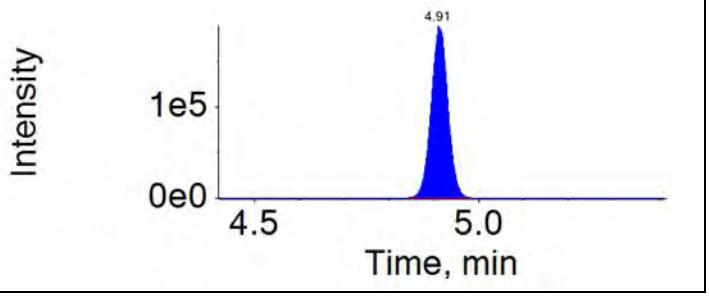
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



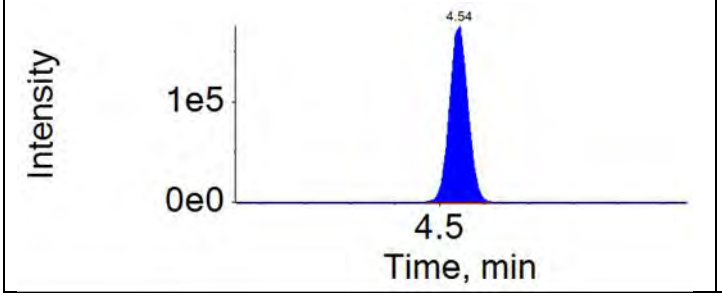


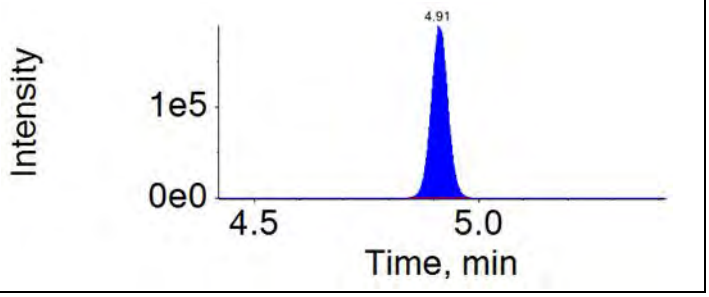
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

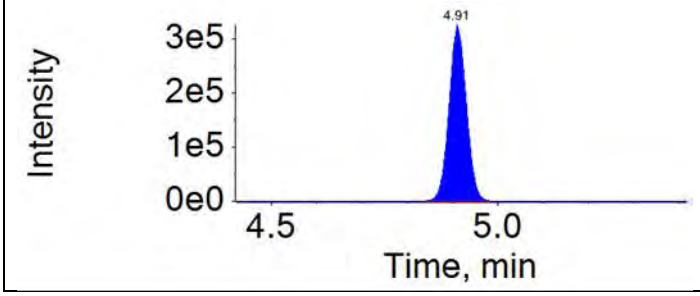
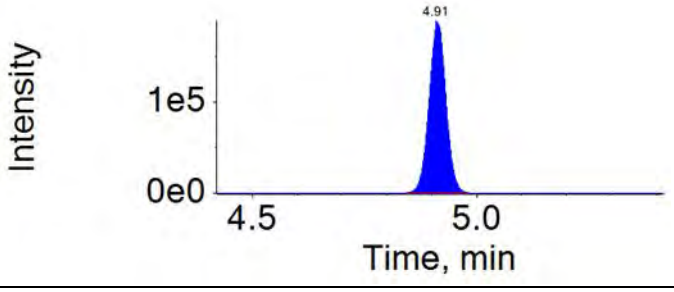


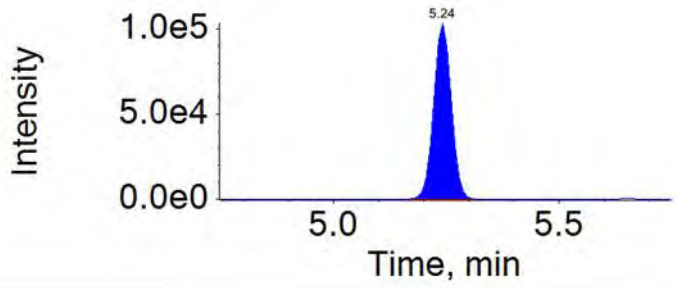
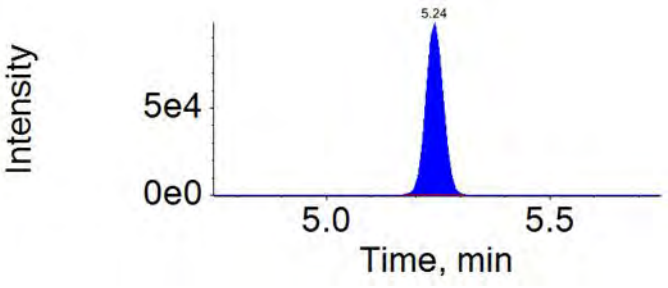


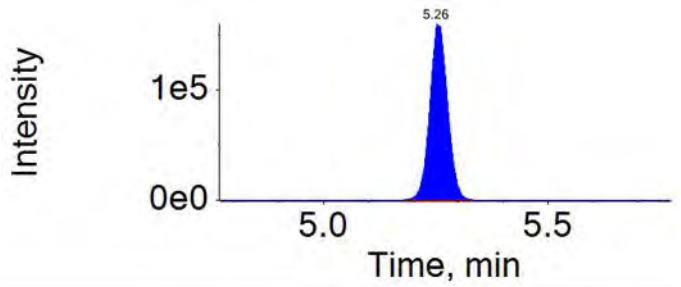
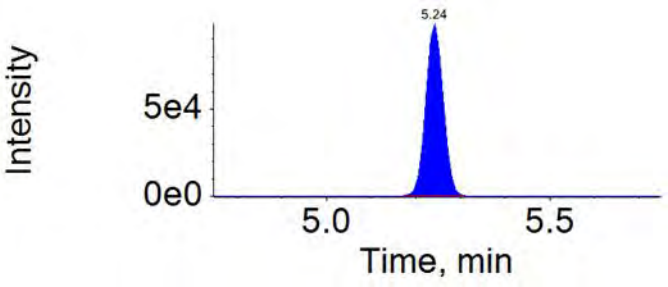
APPROVED
By JPT at 4:11 pm, 11/13/18

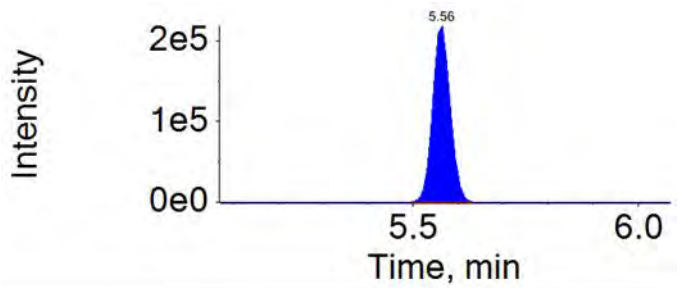
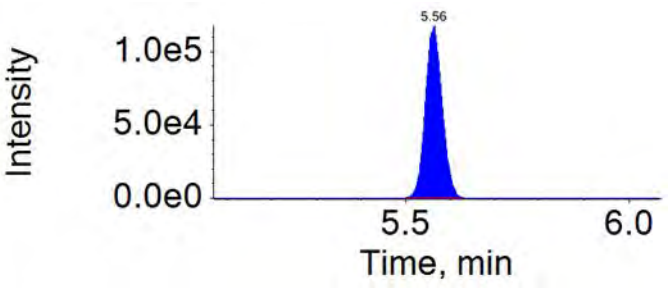
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

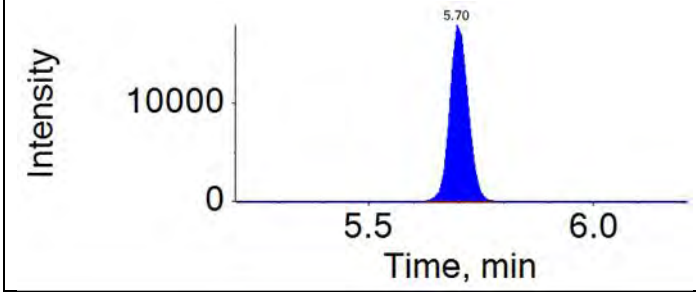
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

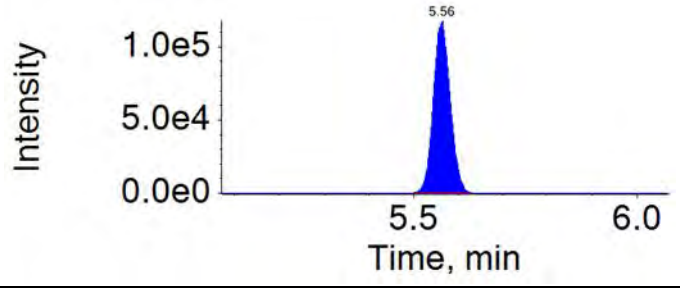
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

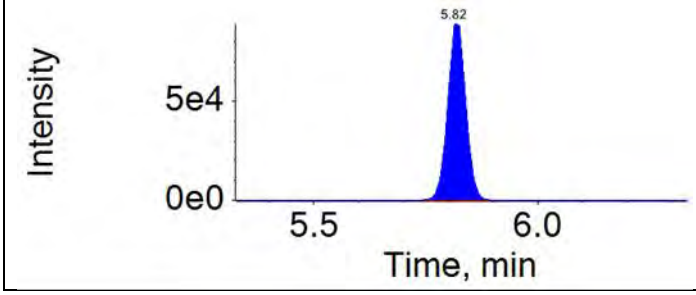
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

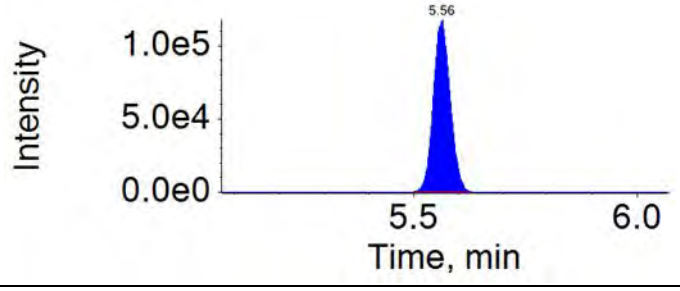
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



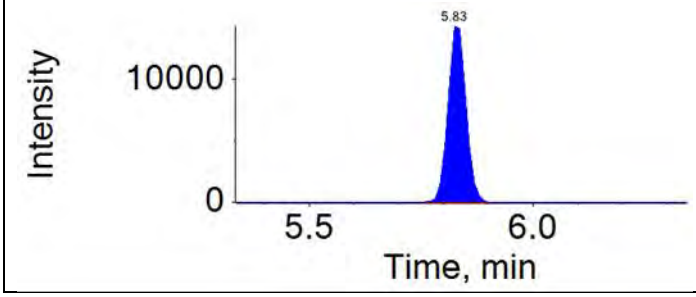


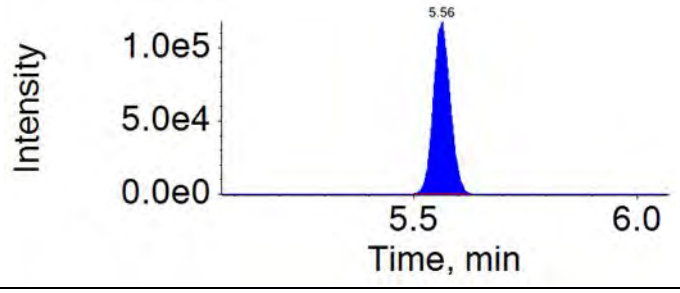
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



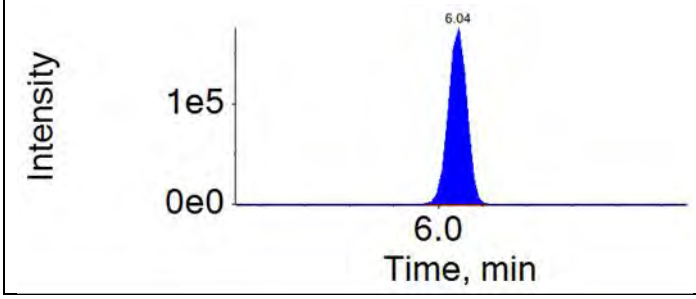


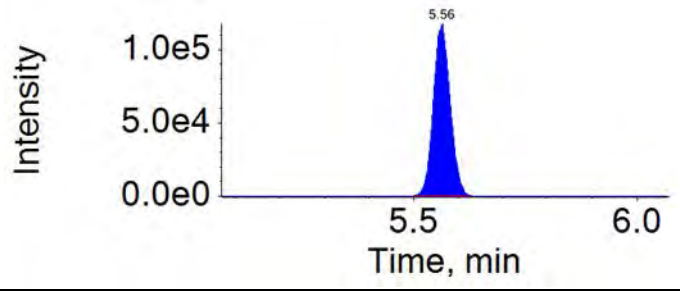
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0

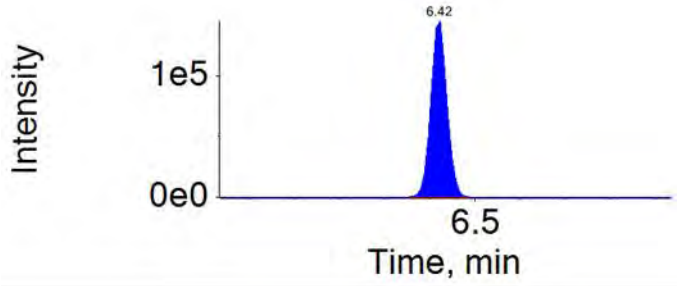
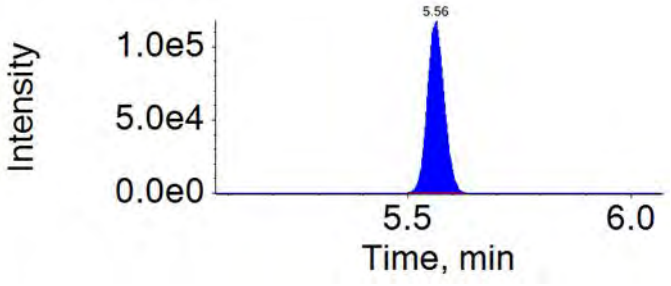




APPROVED
By JPT at 4:11 pm, 11/13/18

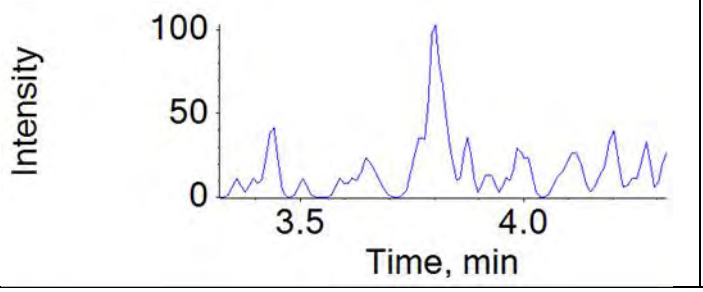
REVIEWED
By umar at 5:37 pm, 11/13/18

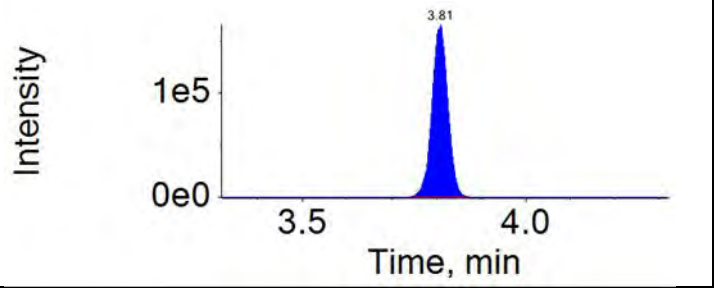
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

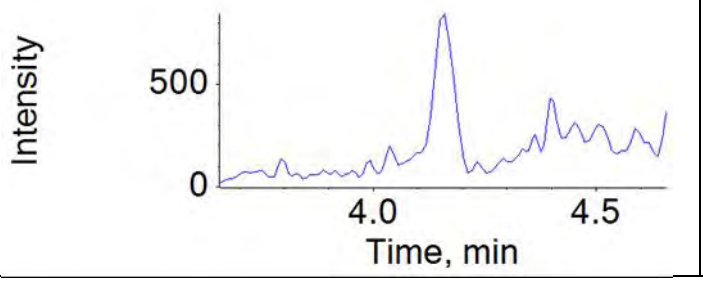
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

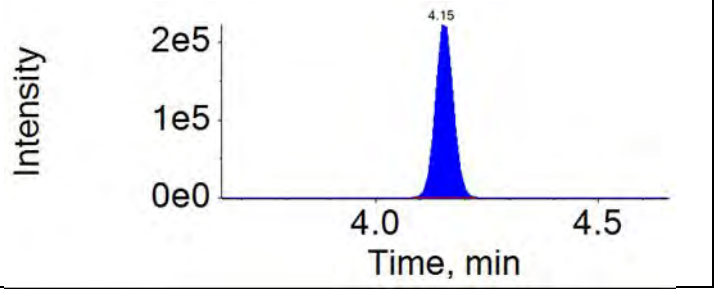
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



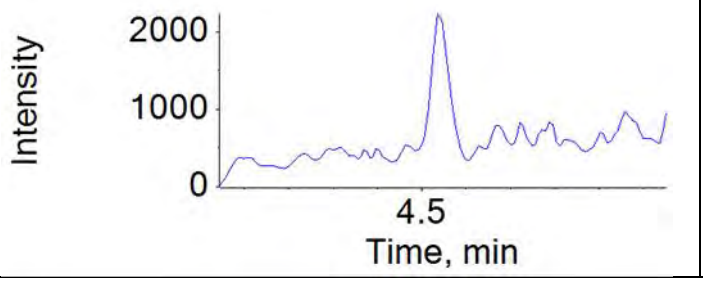


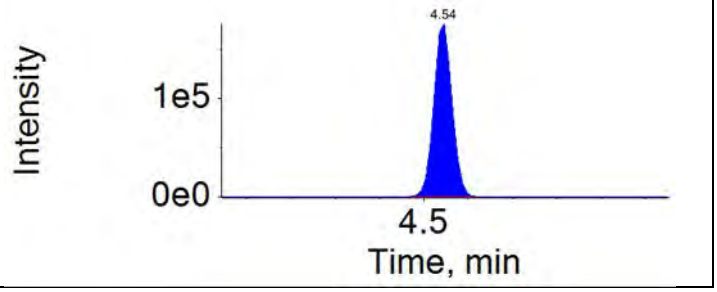
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



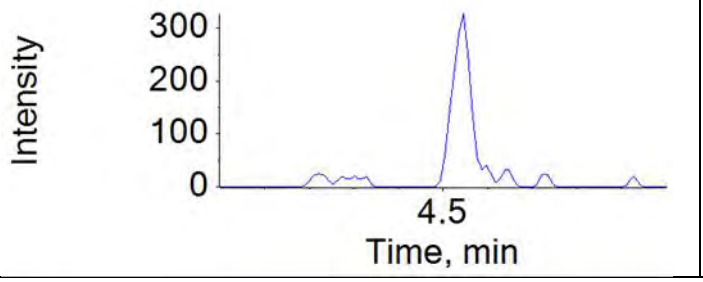


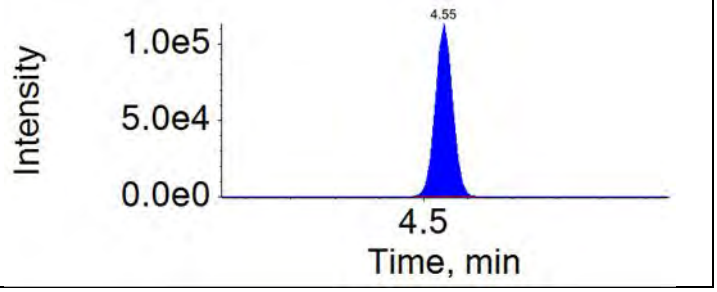
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





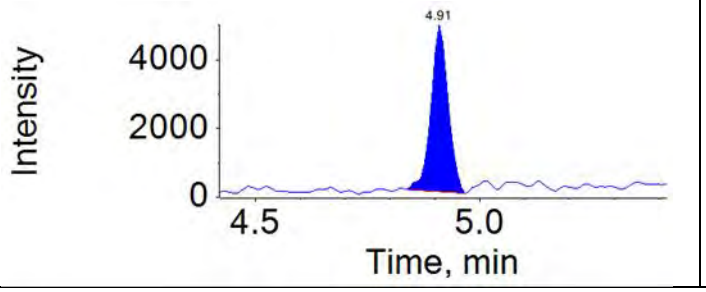
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

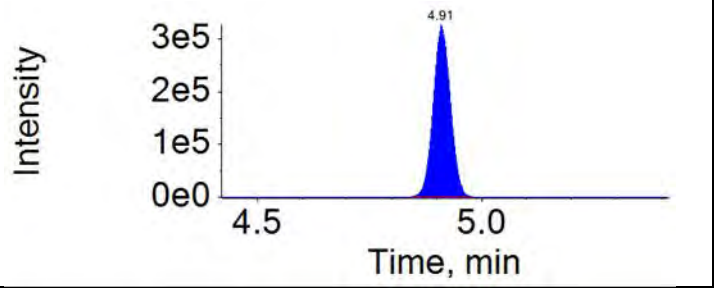




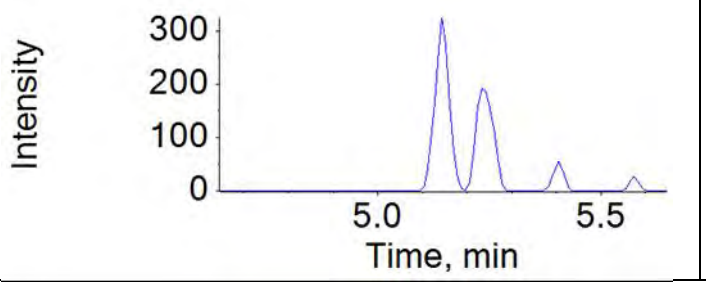
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

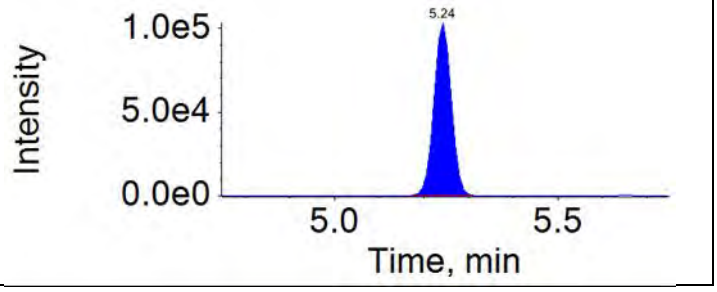
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



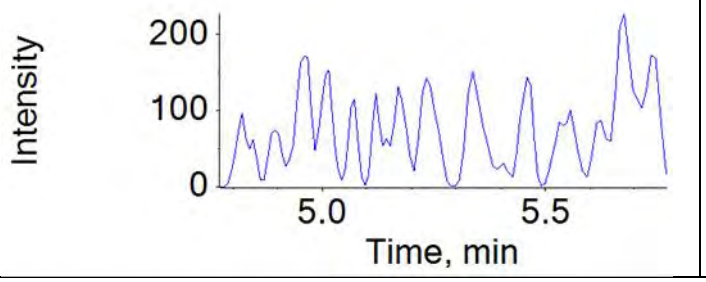


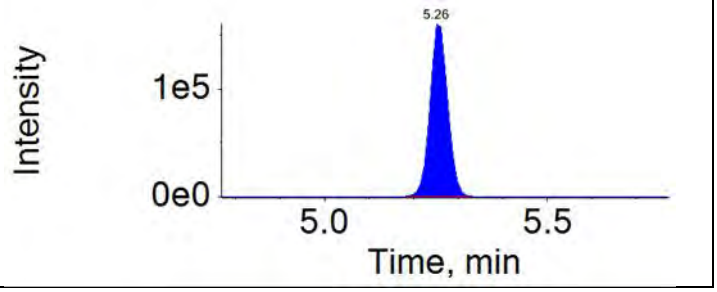
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



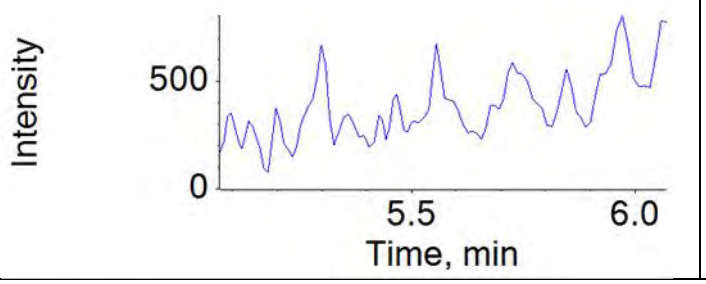


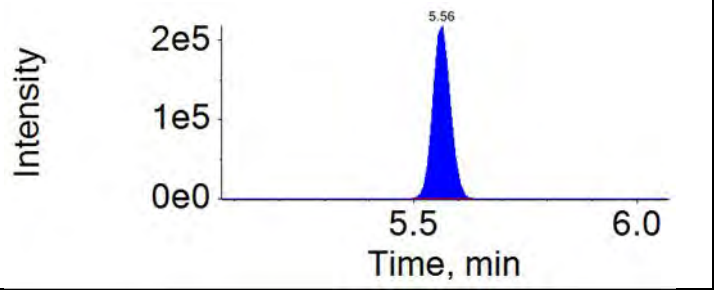
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



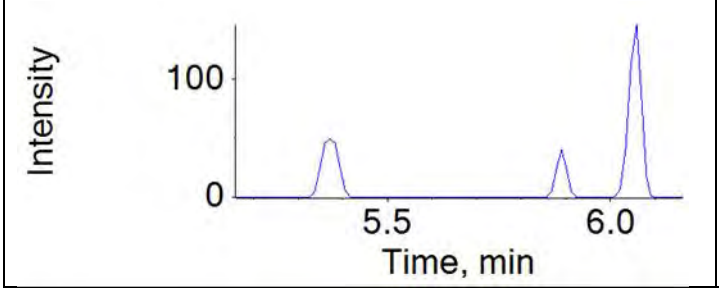


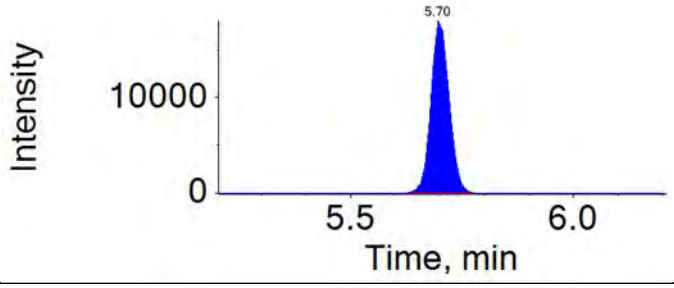
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

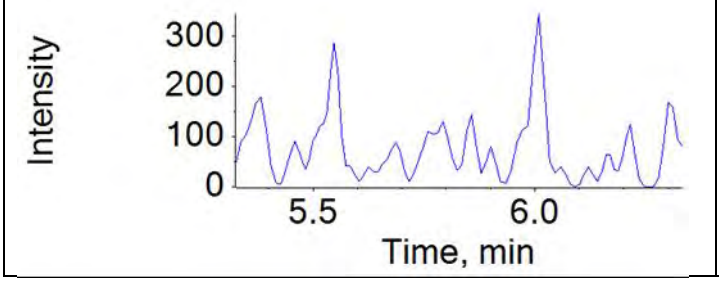
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

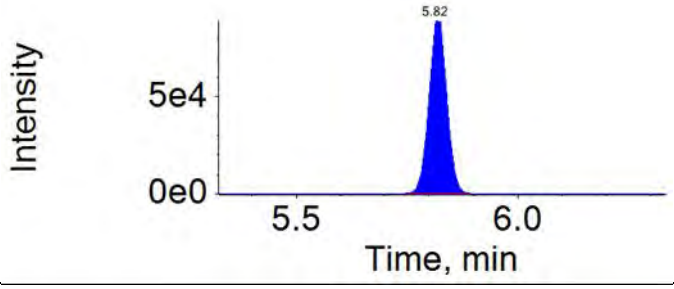
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



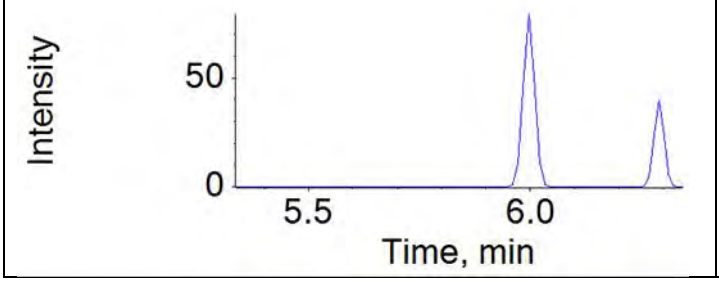


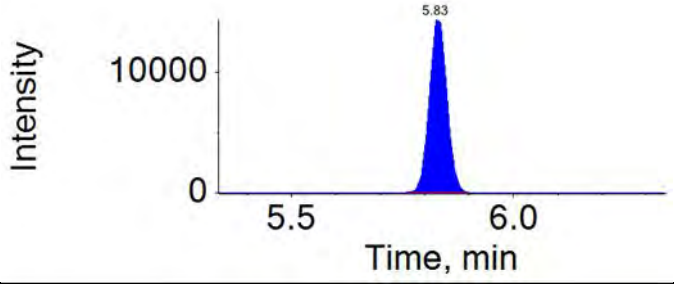
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



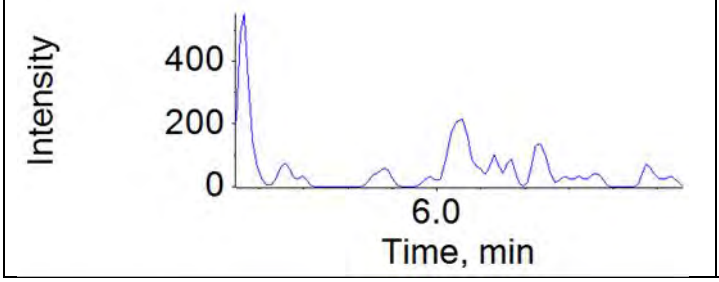


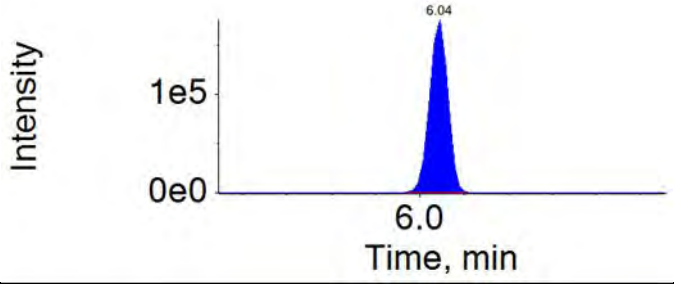
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



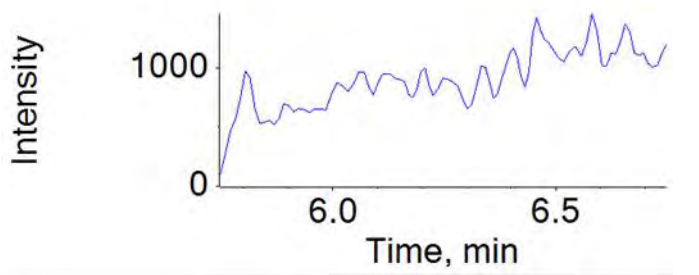


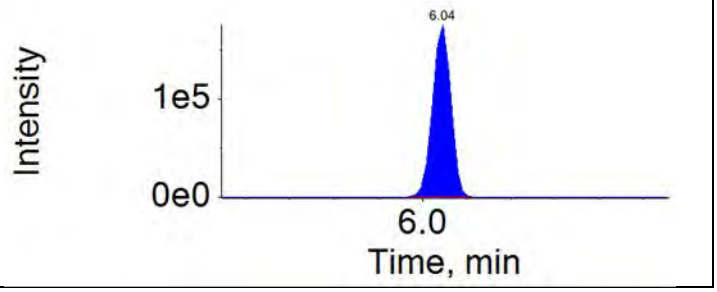
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

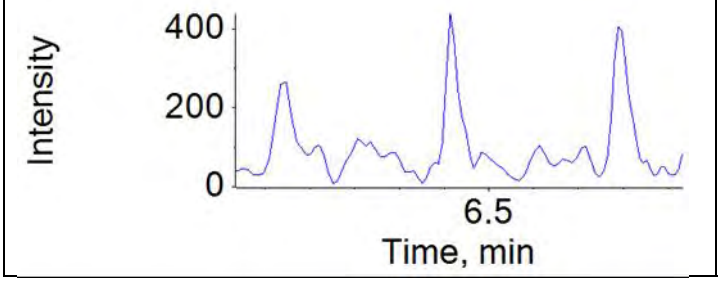
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

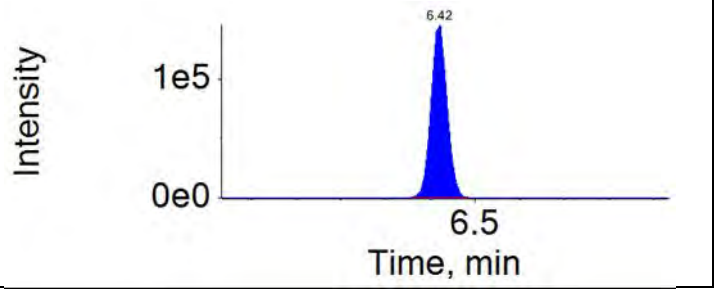
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

Ion Ratio Report

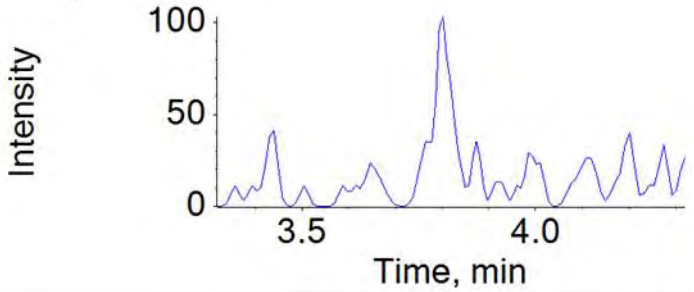
Sample Name: 9883389 **Instrument Name:** LM27631 **File Name:** 18NOV12D-73.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.91	1.00	12872.8	A	N/A	1.0000			
PFOA_2	4.91	1.00	747.8	A	N/A	0.0581	2	50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

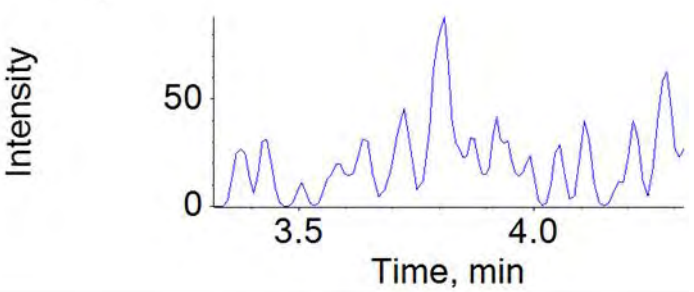
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

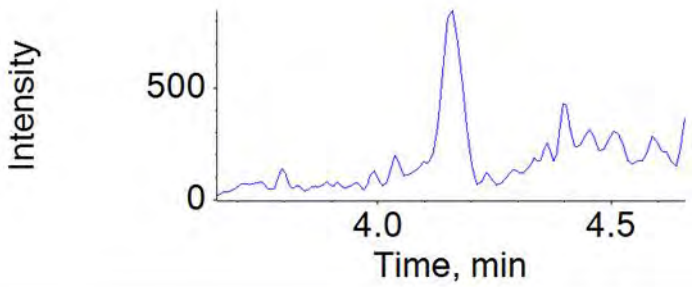
Component: PFBS
Primary Mass: 299.0 / 80.0



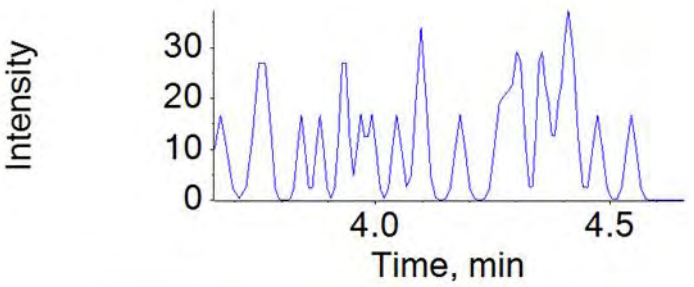
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



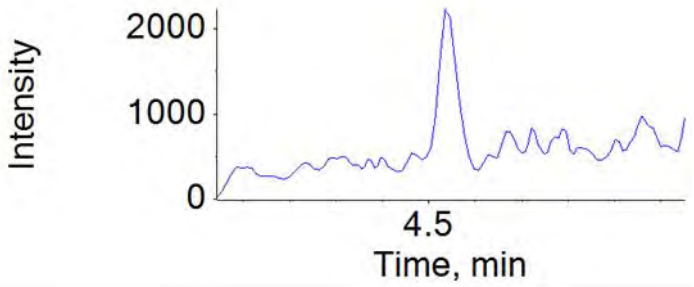
Component: PFHxA
Primary Mass: 313.0 / 269.0



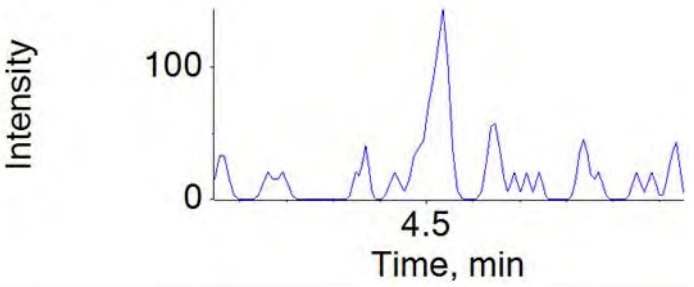
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



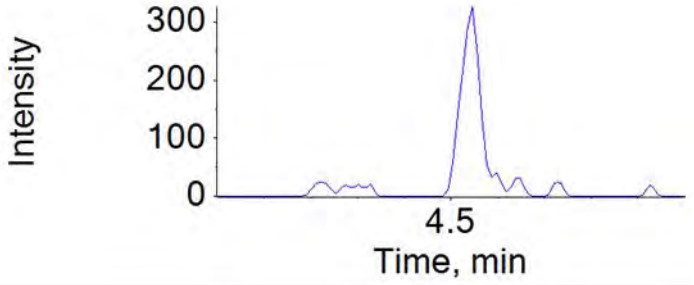
Component: PFHpA
Primary Mass: 363.0 / 319.0



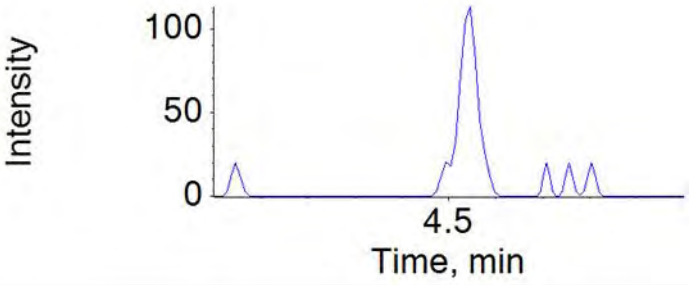
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



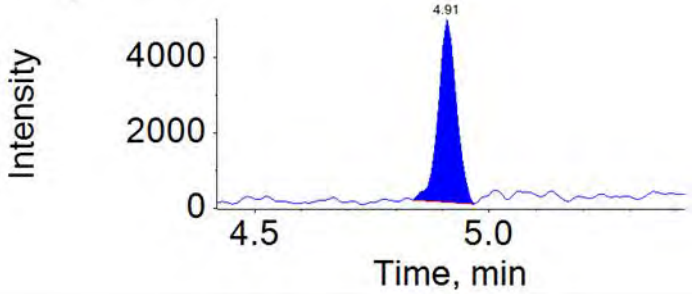
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



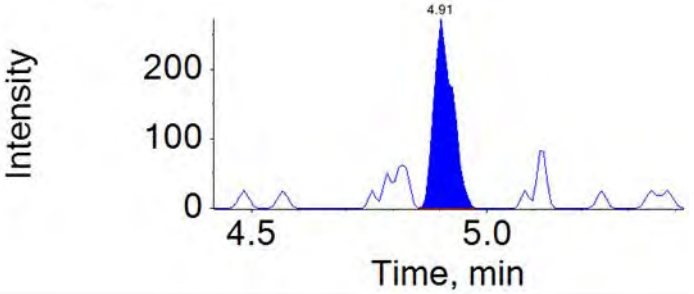
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

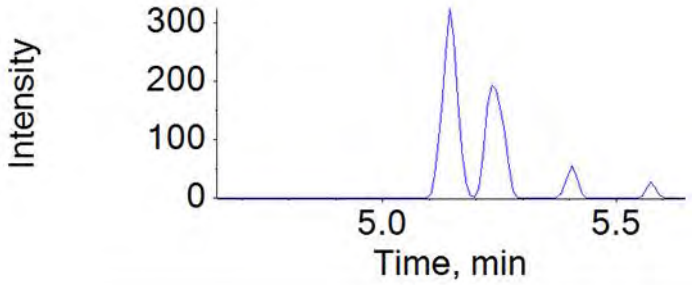
Component: PFOA
Primary Mass: 413.0 / 369.0



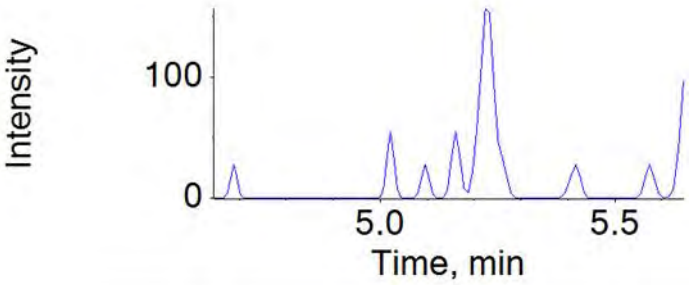
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



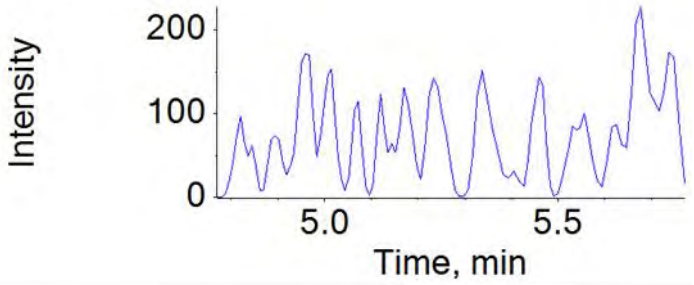
Component: PFOS
Primary Mass: 499.0 / 80.0



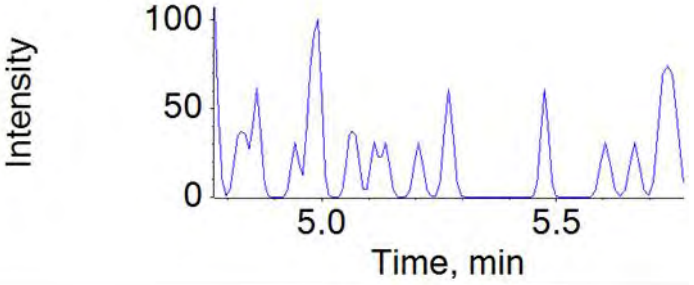
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



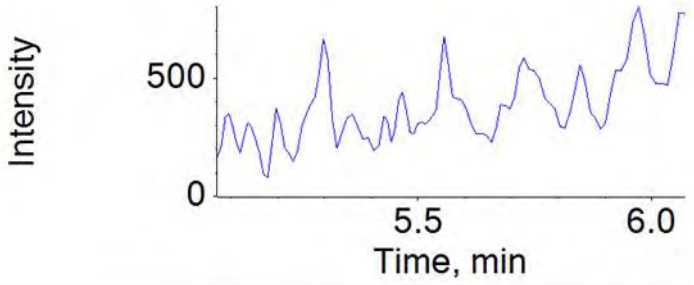
Component: PFNA
Primary Mass: 463.0 / 419.0



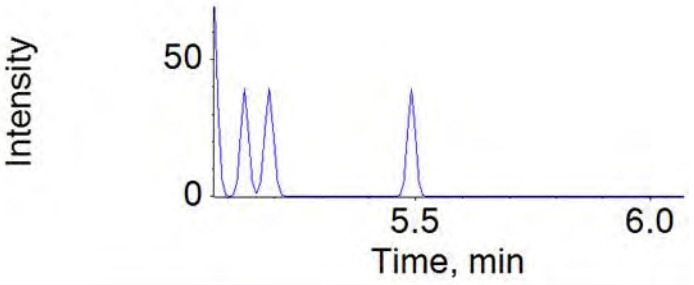
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



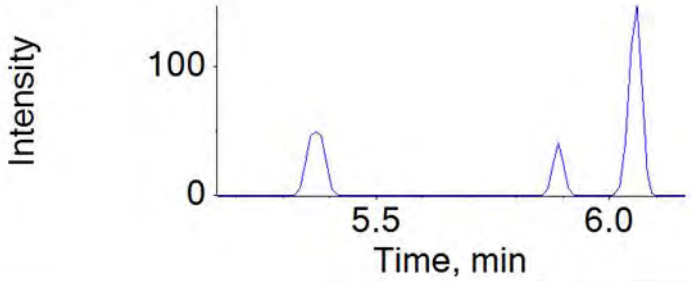
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



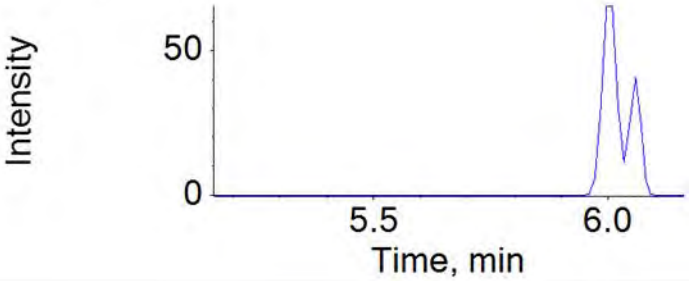
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

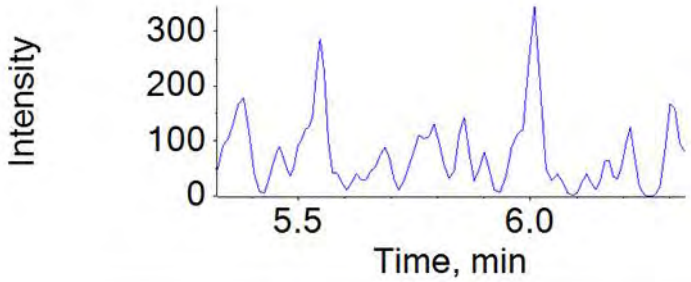
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



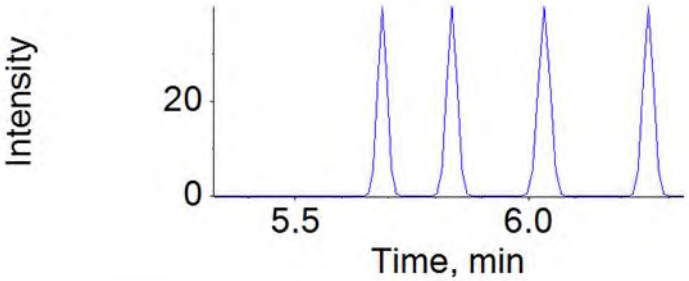
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



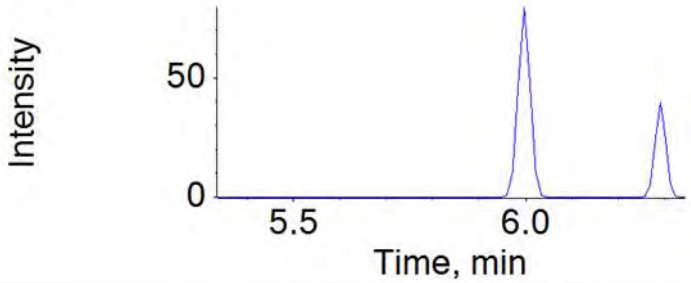
Component: PFUnDA
Primary Mass: 563.0 / 519.0



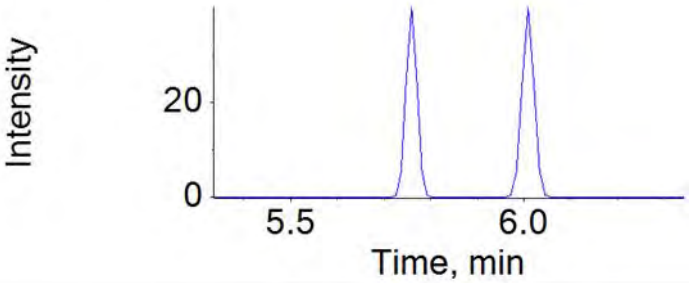
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



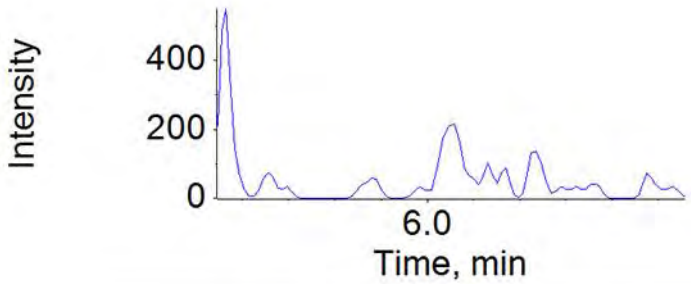
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



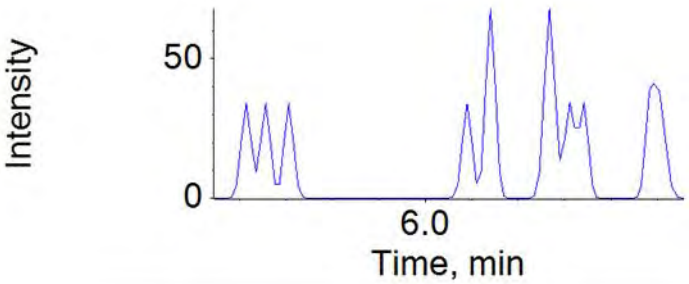
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



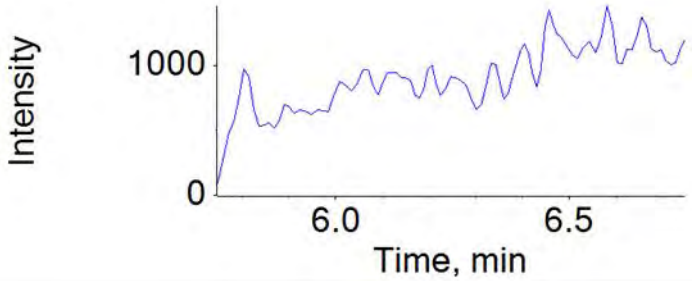
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



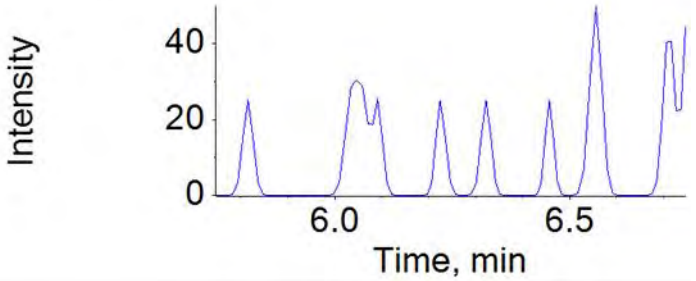
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

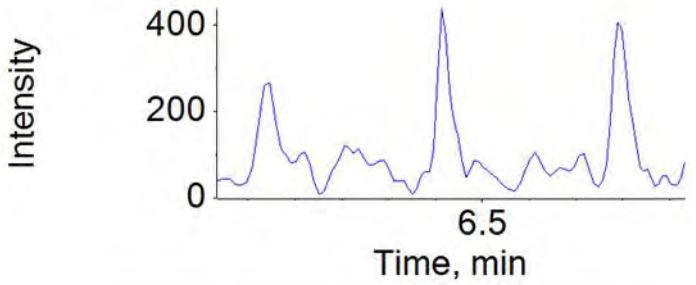
Component: PFTrDA
Primary Mass: 663.0 / 619.0



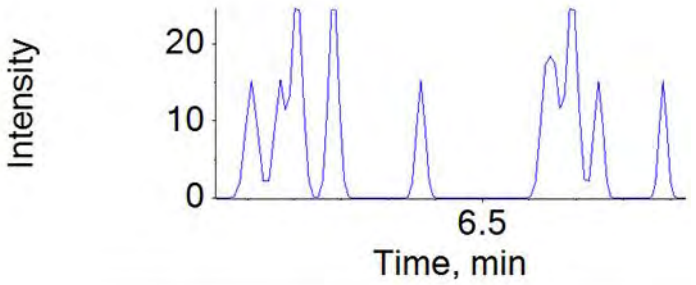
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18311004 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9883392			**Data File:**		18NOV08D-105.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-04-01 Grab Soil			**Acquis Date:**		2018-11-09T03:26:56
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	45			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		JPT12262
Sample Wt.:	1.01000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	856667.7	728839.7	18	50	
13C2-PFOA	5.0	582205.1	491983.1	18	50	
13C4-PFOS	4.8	373847.6	255568.1	46	50	
13C2-PFDA	5.0	358032.1	315407.5	14	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	397200.1	13C3-PFBA	856667.7	0.464	9.208	6.738	73	50-150	
E13C5-PFHxA	631551.2	13C2-PFOA	582205.1	1.085	9.901	7.901	80	50-150	
E13C3-PFHxS	312896.8	13C2-PFOA	582205.1	0.537	9.366	7.640	82	50-150	
E13C4-PFHpA	514489.0	13C2-PFOA	582205.1	0.884	9.901	7.960	80	50-150	
E13C8-PFOA	853990.7	13C2-PFOA	582205.1	1.467	9.901	8.100	82	50-150	
E13C8-PFOS	256101.0	13C4-PFOS	373847.6	0.685	9.465	5.998	63	50-150	
E13C9-PFNA	460560.3	13C4-PFOS	373847.6	1.232	9.901	6.664	67	50-150	
E13C6-PFDA	566233.1	13C2-PFDA	358032.1	1.582	9.901	7.876	80	50-150	
Ed3-NMeFOSAA	48749.8	13C2-PFDA	358032.1	0.136	9.901	5.014	51	50-150	
E13C7-PFUnDA	268887.8	13C2-PFDA	358032.1	0.751	9.901	8.579	87	50-150	
Ed5-NEtFOSAA	40415.9	13C2-PFDA	358032.1	0.113	9.901	5.173	52	50-150	
E13C2-PFDoDA	513402.1	13C2-PFDA	358032.1	1.434	9.901	7.655	77	50-150	
E13C2-PFTeDA	361900.6	13C2-PFDA	358032.1	1.011	9.901	7.206	73	50-150	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

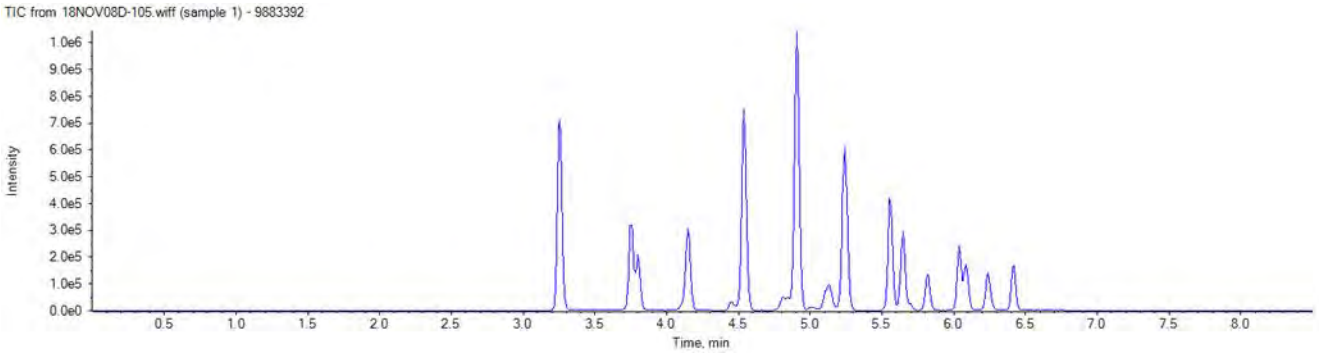
Analyte Quantitation Peak Table

Sample Name: 9883392 **Instrument Name:** LM27631 **File Name:** 18NOV08D-105.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.01000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.80	1.000	5745.2		A	13C3-PFBS	3.80	397200.1	0.014	0.144
PFHxA	4.15	1.000	67873.5		A	13C5-PFHxA	4.15	631551.2	0.107	0.913
PFHxS	4.54	1.000	694066.7		M	13C3-PFHxS	4.54	312896.8	2.218	22.264
PFHpA	4.54	1.000	47778.4		A	13C4-PFHpA	4.54	514489.0	0.093	0.618
PFOA	4.91	1.000	1015068.1		A	13C8-PFOA	4.91	853990.7	1.189	13.253
PFOS	5.22	1.000	689442.8		M	13C8-PFOS	5.24	256101.0	2.692	27.643
PFNA	5.25	1.000	18369.9		A	13C9-PFNA	5.25	460560.3	0.040	0.295
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	566233.1	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	48749.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	268887.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	40415.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	513402.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	513402.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	361900.6	N/A	

Total Ion Chromatogram

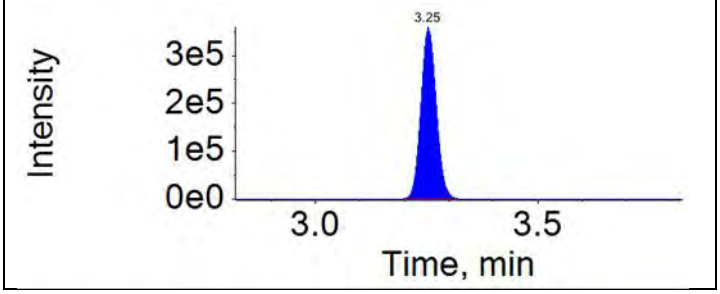


APPROVED
By JPT at 5:18 pm, 11/9/18

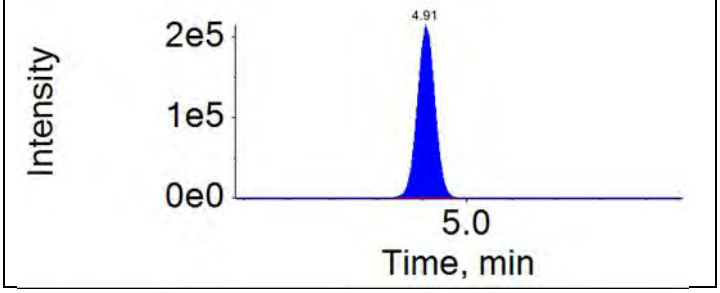
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

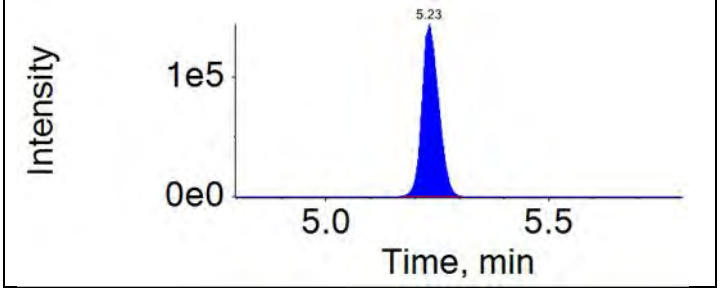
Injection Standard: 13C3-PFBA
216.0 / 172.0



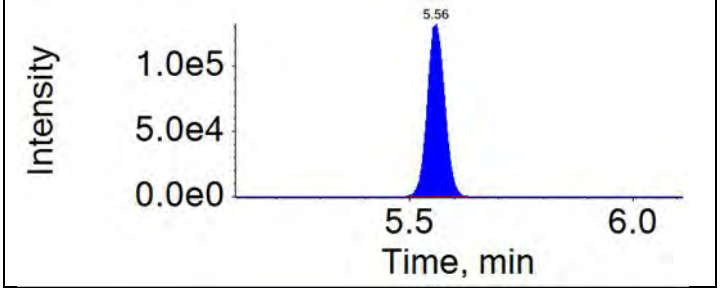
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

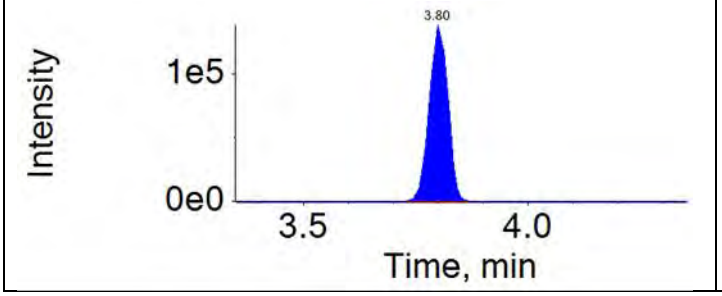


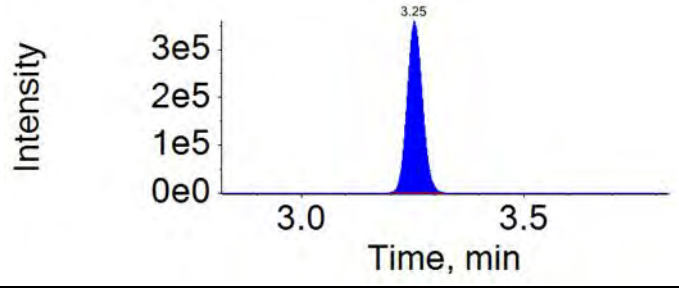
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

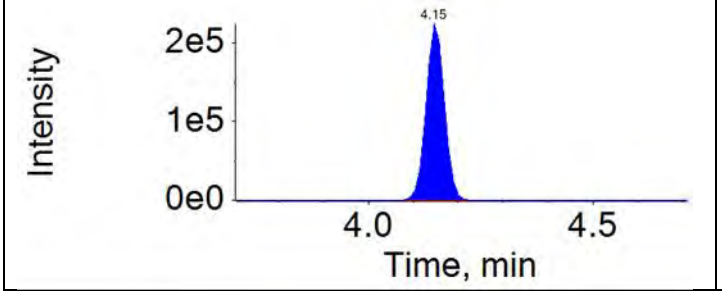
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

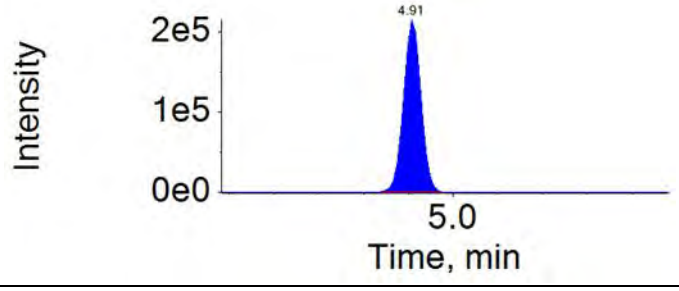
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



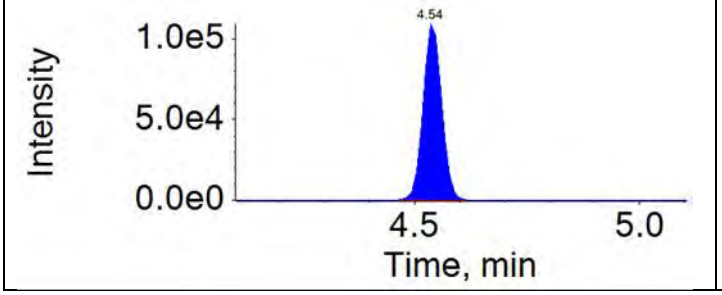


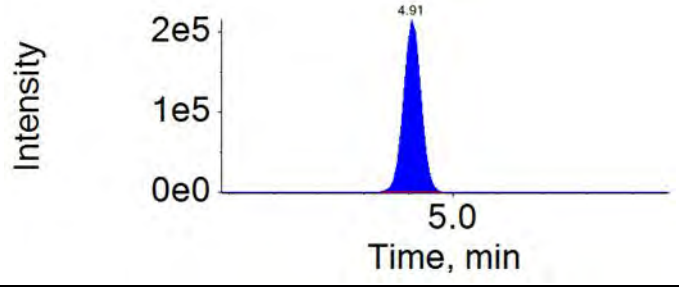
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



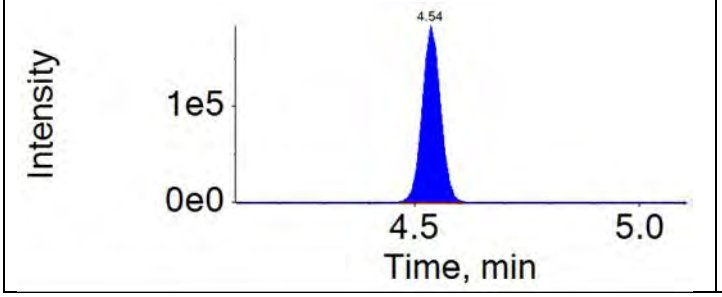


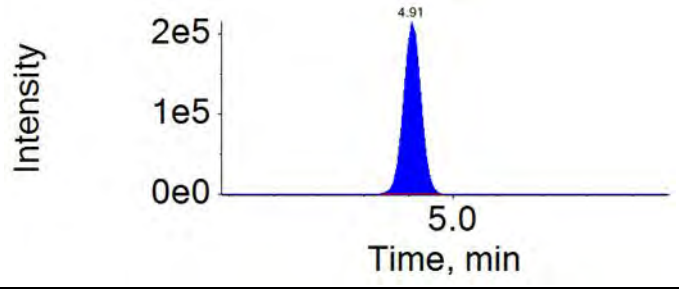
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

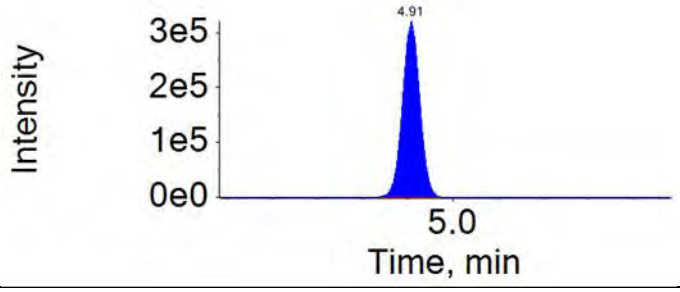
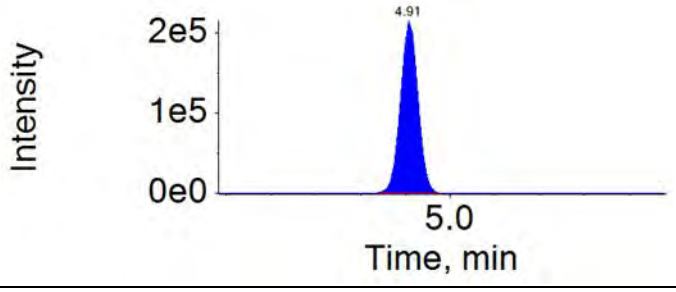


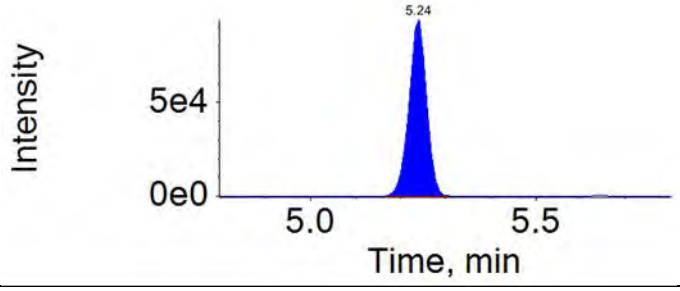
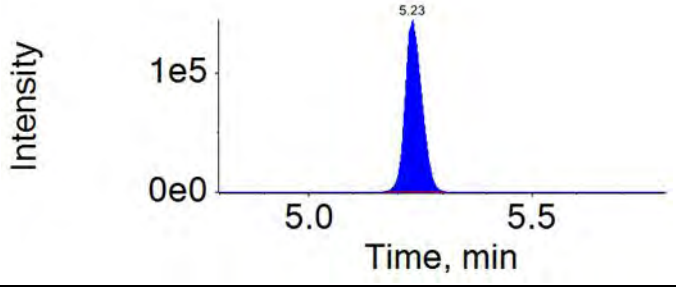


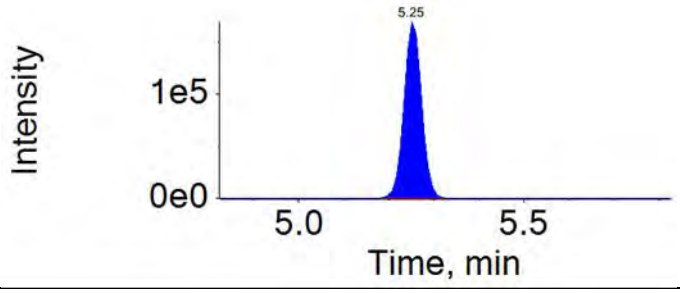
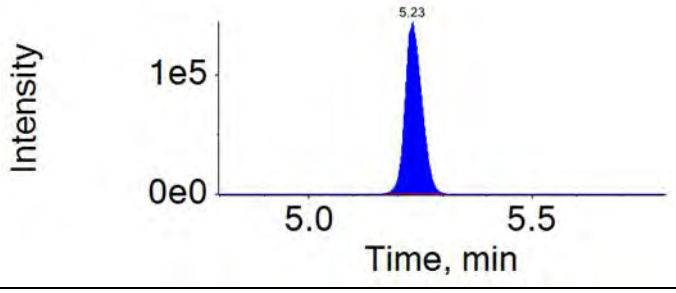
APPROVED
By JPT at 5:18 pm, 11/9/18

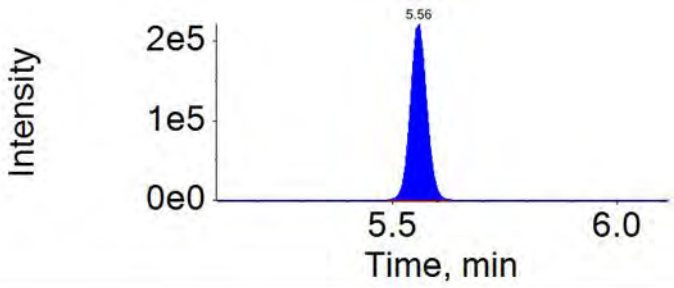
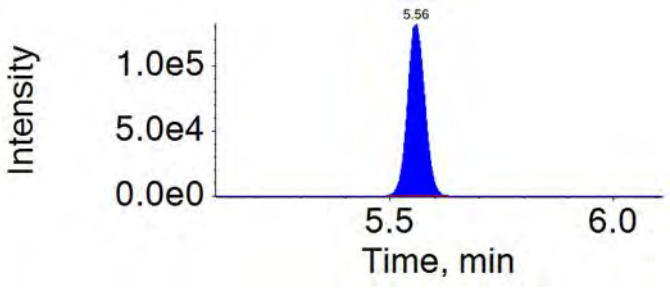
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

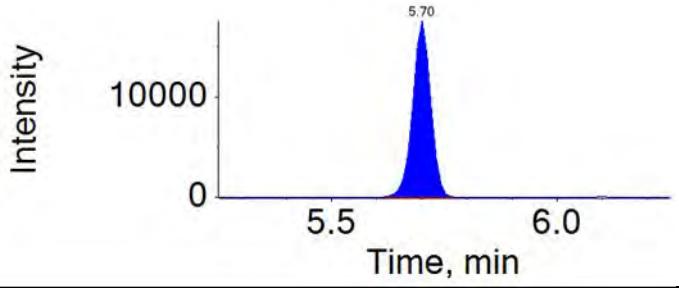
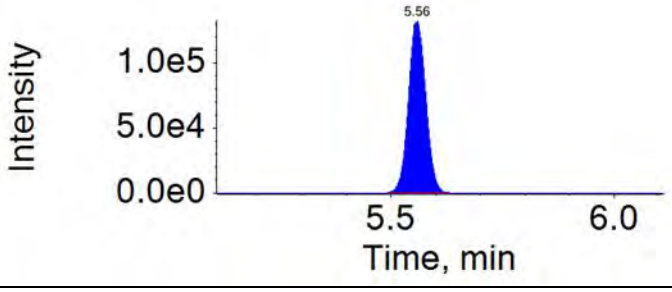
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

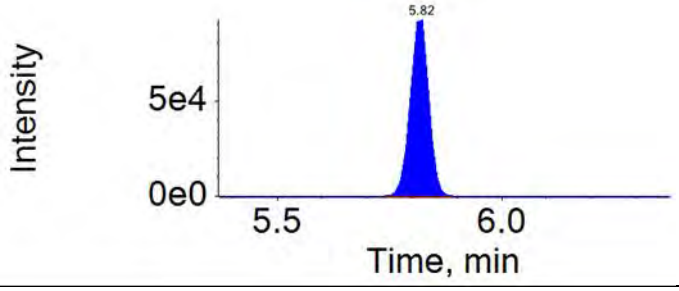
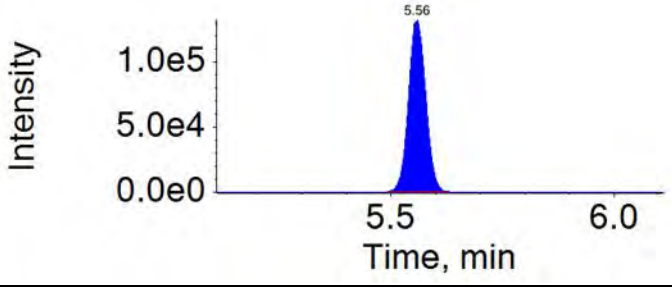
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

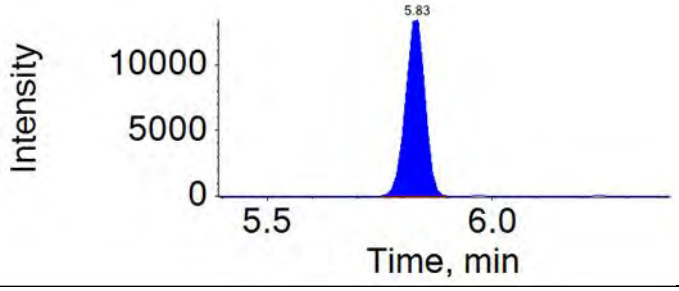
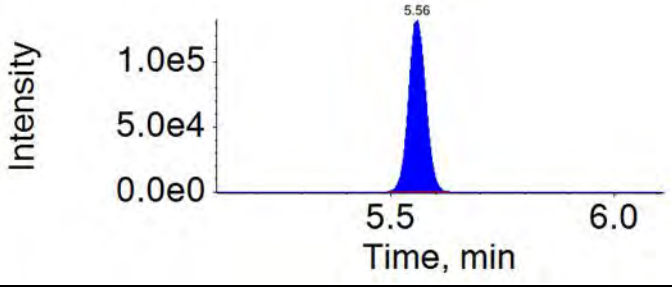
APPROVED
By JPT at 5:18 pm, 11/9/18

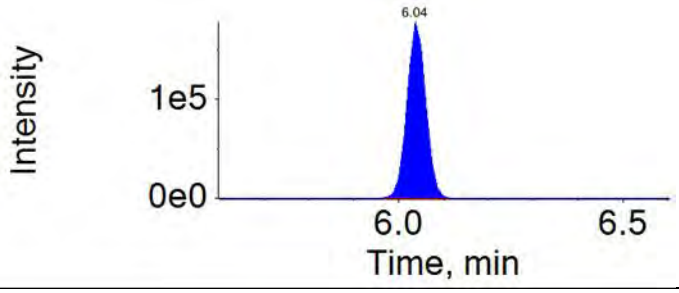
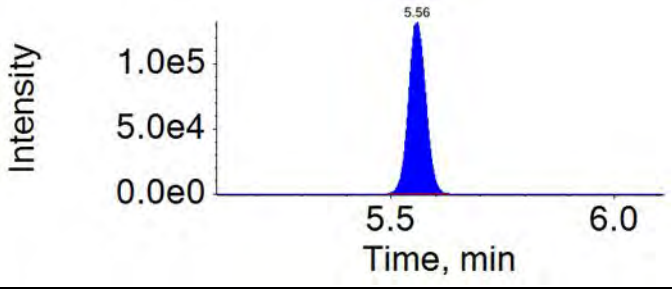
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

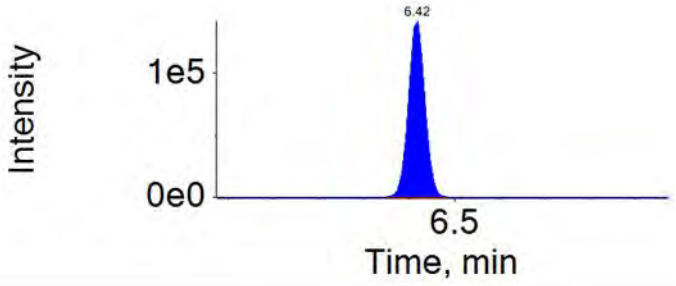
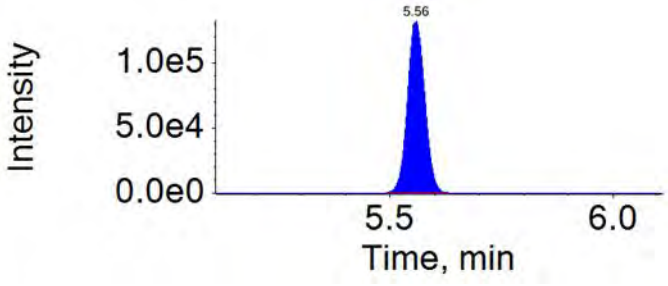
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

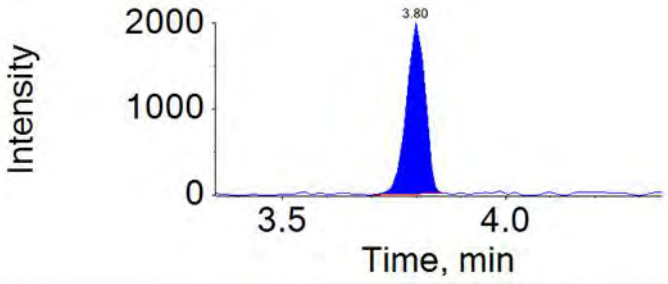
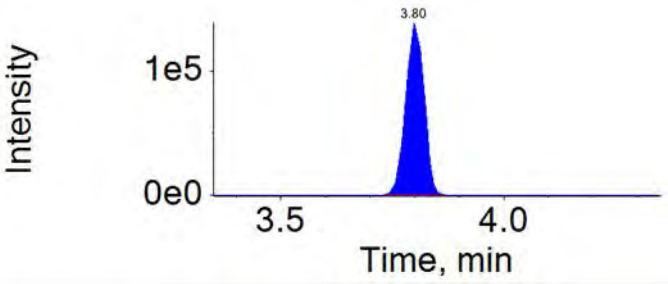
APPROVED
By JPT at 5:18 pm, 11/9/18

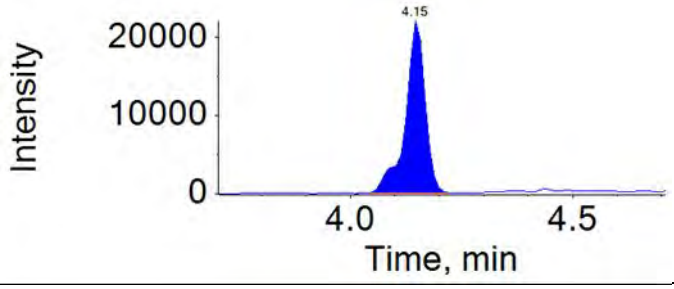
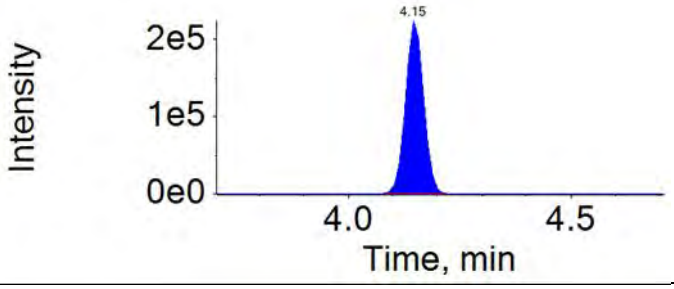
REVIEWED
By umar at 4:40 pm, 11/12/18

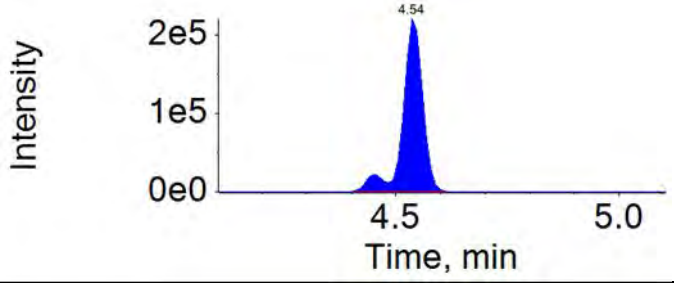
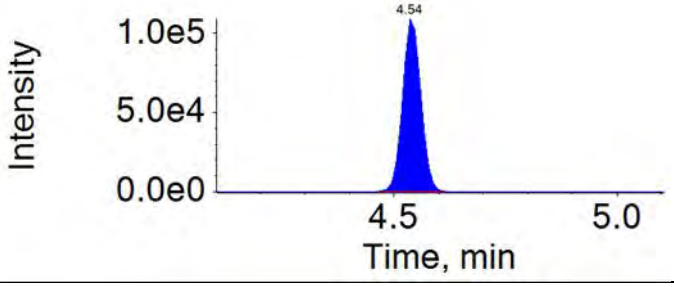
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

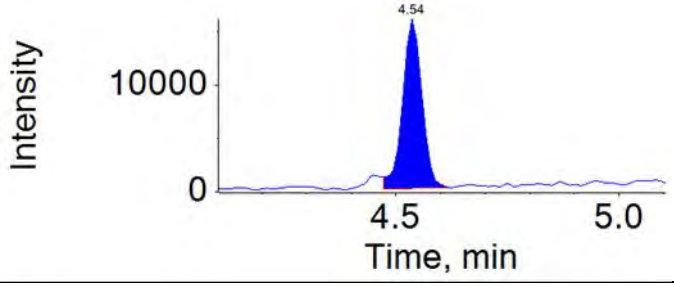
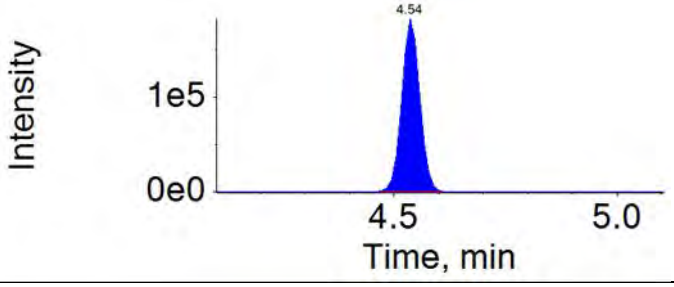
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

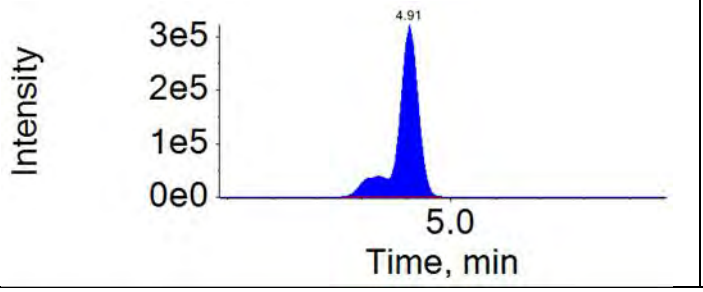
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

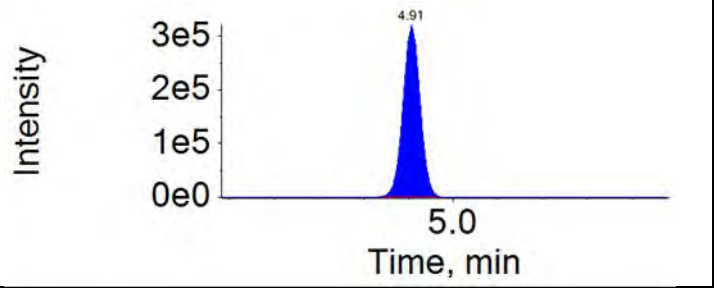
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

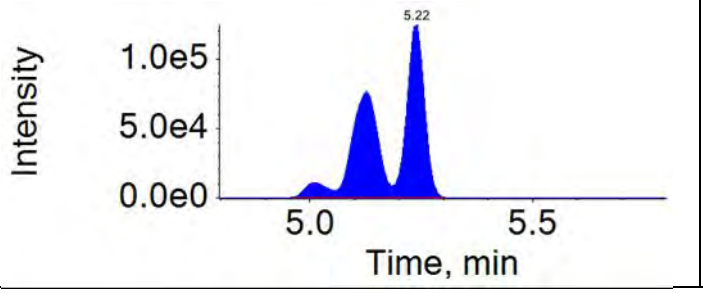
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

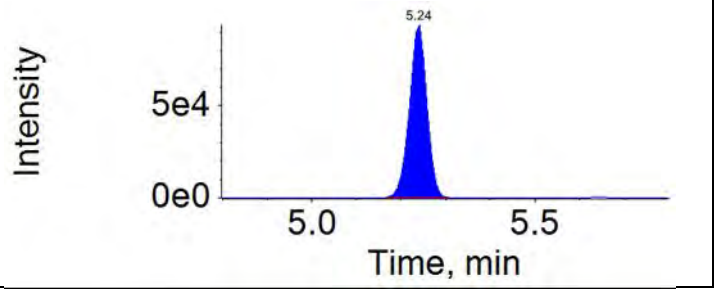
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



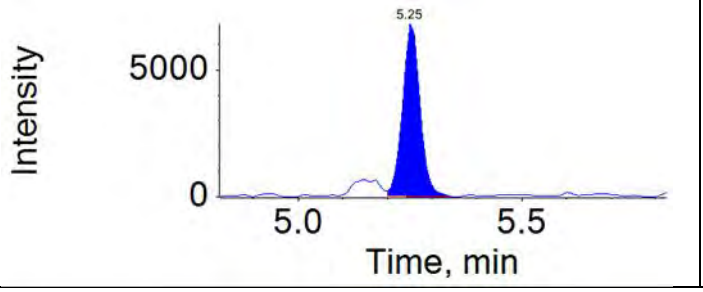


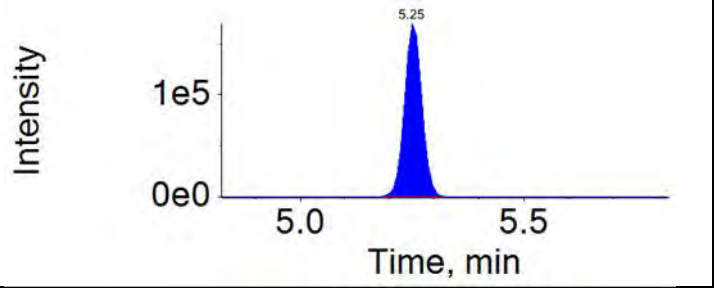
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



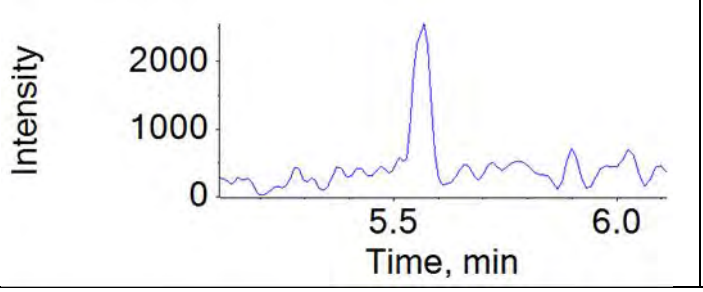


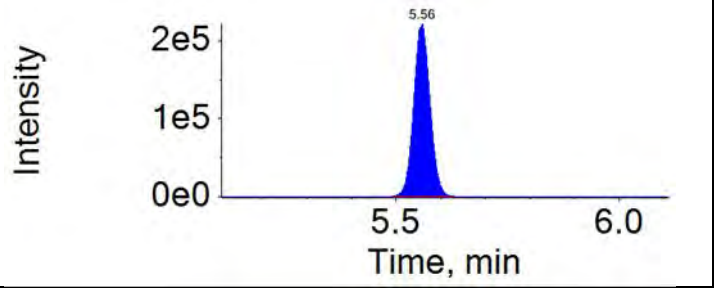
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



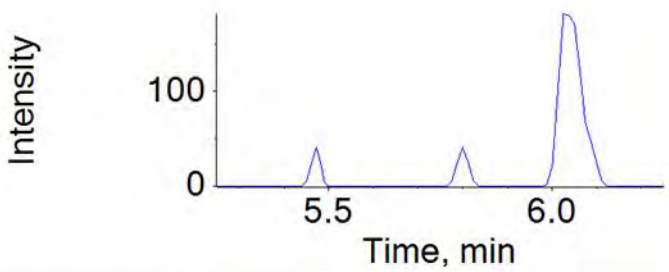


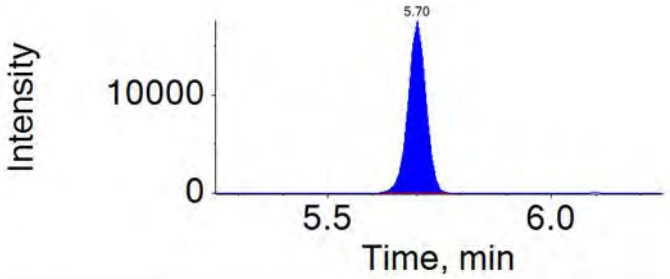
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

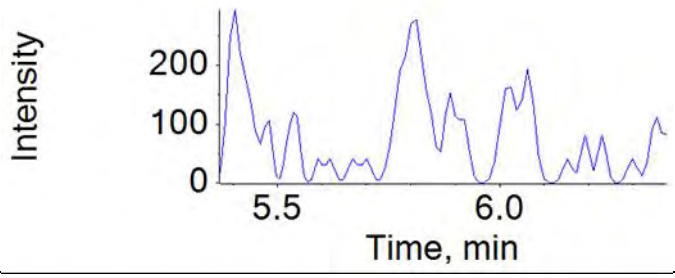
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

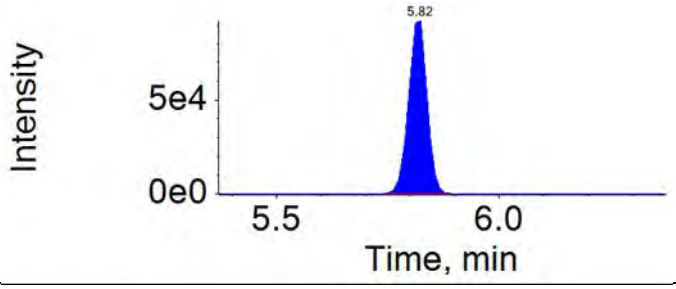
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



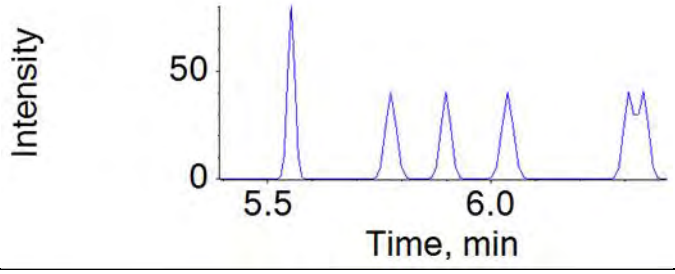


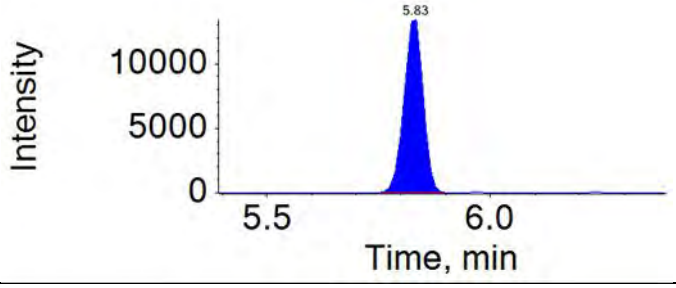
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



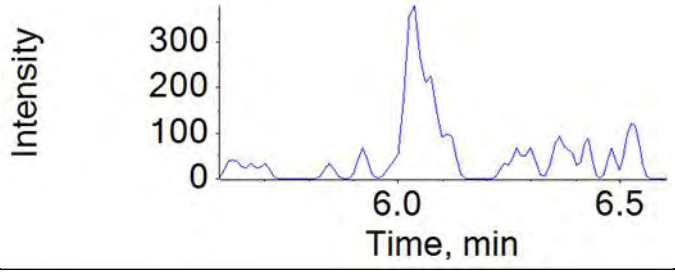


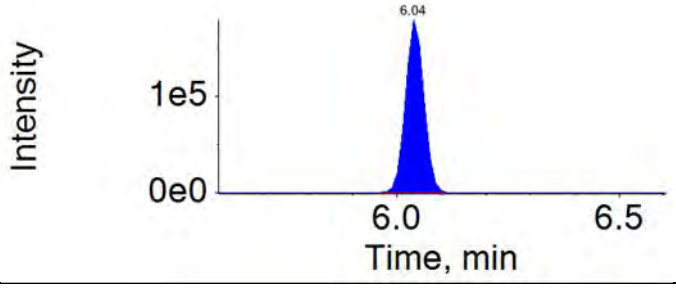
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0

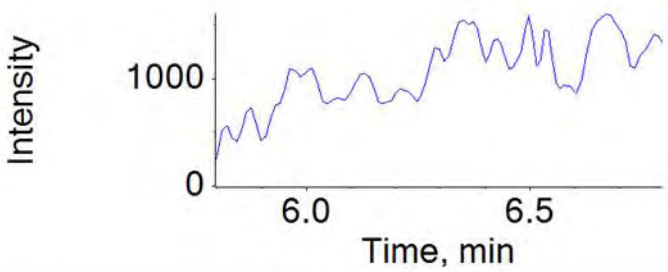
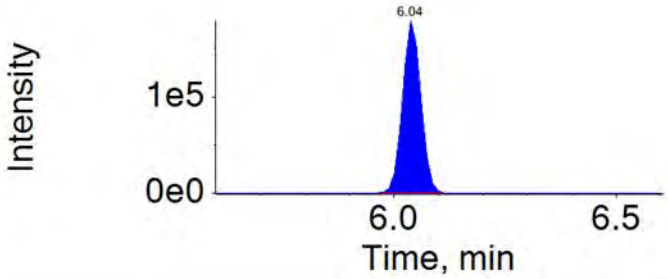


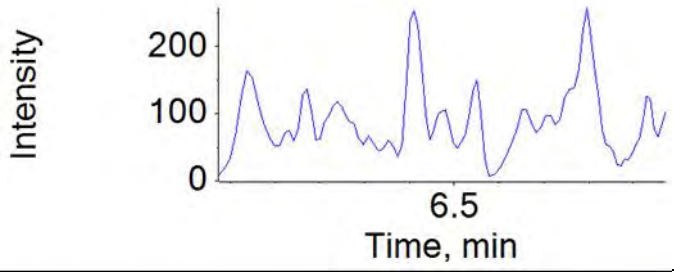
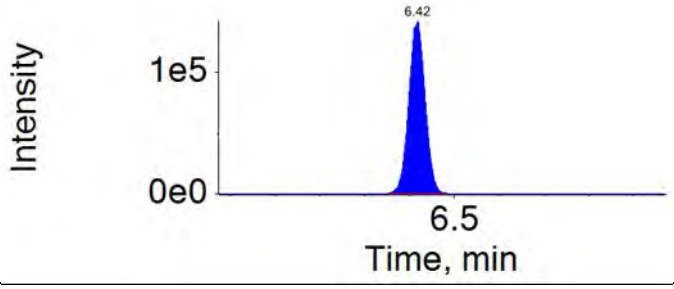


APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

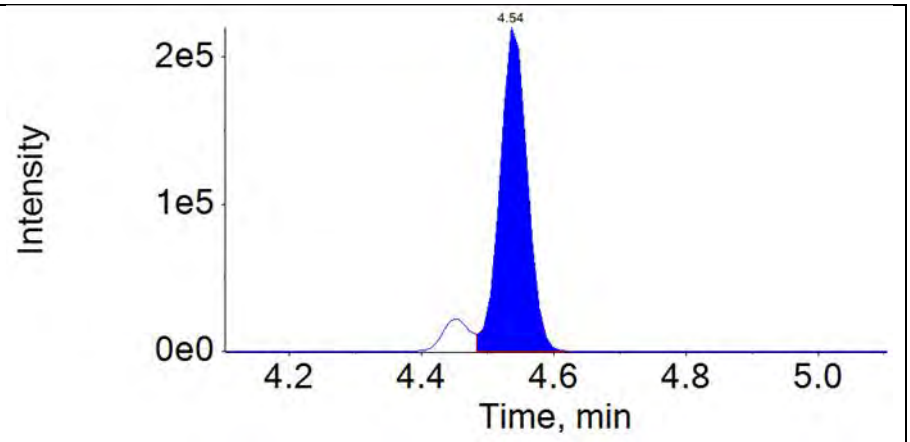
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

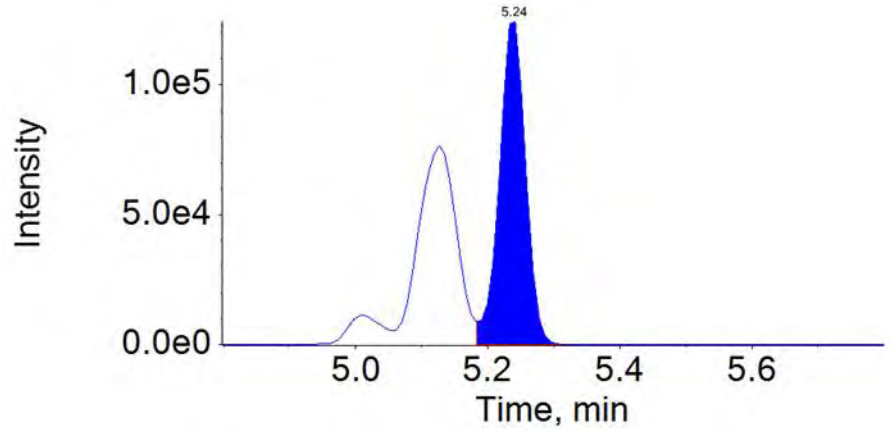
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
631762.4
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-105.wiff
Sample Name:
9883392



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
345684.8
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-105.wiff
Sample Name:
9883392



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
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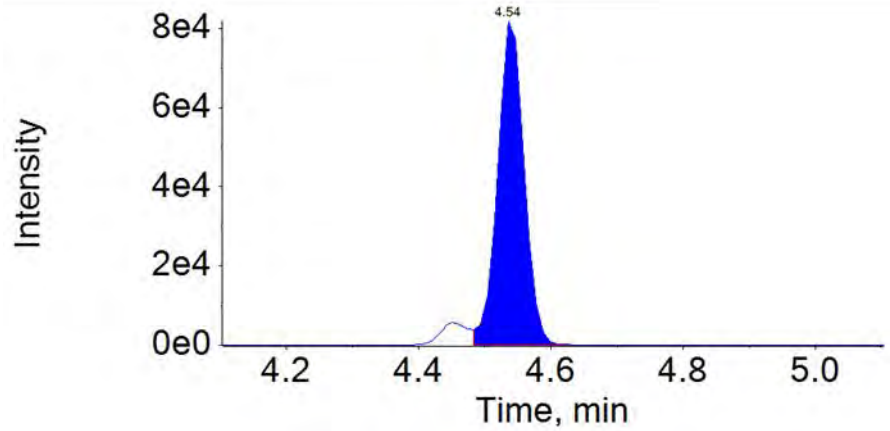
228393.8
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-105.wiff
Sample Name:
9883392

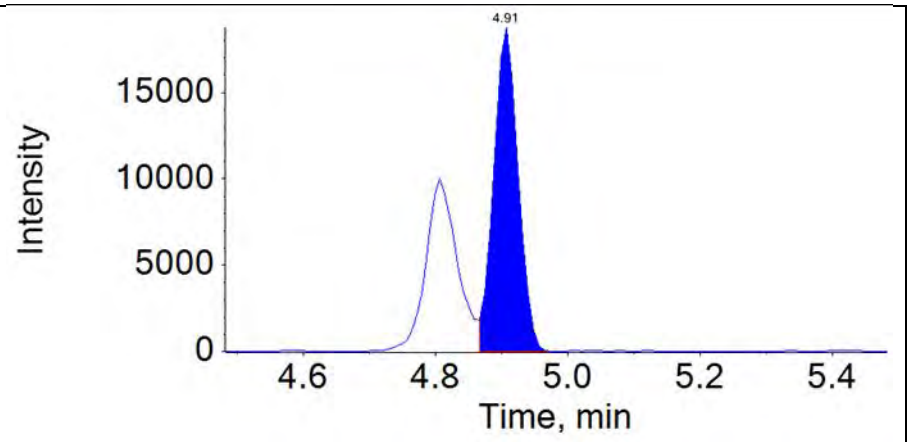


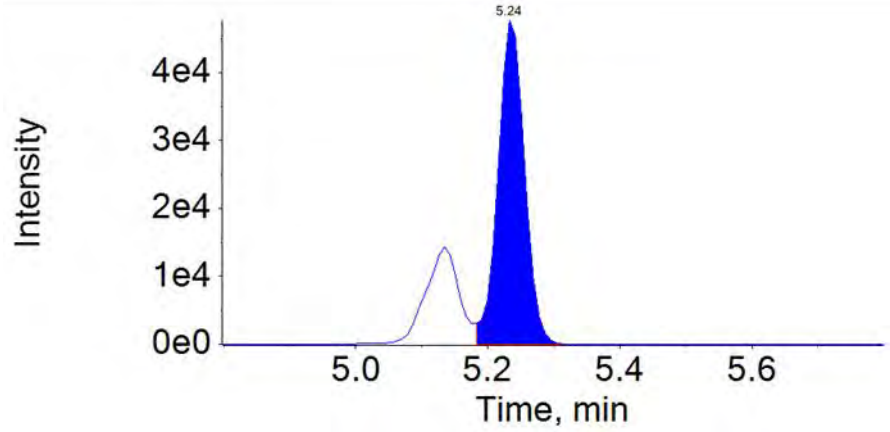
Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: PFOA_2 **RT (min.):** 4.91 **Peak Area:** 47930.8 **Mass Range:** 413.0 / 169.0 **File Name:** 18NOV08D-105.wiff **Sample Name:** 9883392	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.24 **Peak Area:** 133230.6 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV08D-105.wiff **Sample Name:** 9883392	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Ion Ratio Report

Sample Name: 9883392 **Instrument Name:** LM27631 **File Name:** 18NOV08D-105.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	5745.2	A	N/A	1.0000			
PFBS_2	3.80	1.00	1915.8	A	N/A	0.3335	-7	50	
PFHxA	4.15	1.00	67873.5	A	N/A	1.0000			
PFHxA_2	4.15	1.00	502.0	A	N/A	0.0074	-36	50	
PFHxS	4.54	1.00	694066.7	M	N/A	1.0000			
PFHxS_2	4.54	1.00	245404.1	M	N/A	0.3536	-1	50	
PFHpA	4.54	1.00	47778.4	A	N/A	1.0000			
PFHpA_2	4.54	1.00	2336.3	A	N/A	0.0489	-15	50	
PFOA	4.91	1.00	1015068.1	A	N/A	1.0000			
PFOA_2	4.90	1.00	81222.0	M	N/A	0.0800	26	50	
PFOS	5.22	1.00	689442.8	M	N/A	1.0000			
PFOS_2	5.24	1.00	183800.9	M	N/A	0.2666	-24	50	
PFNA	5.25	1.00	18369.9	A	N/A	1.0000			
PFNA_2	5.25	1.00	180.8	A	N/A	0.0098	-52	50	OOS
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	6.18	1.02	150.3	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

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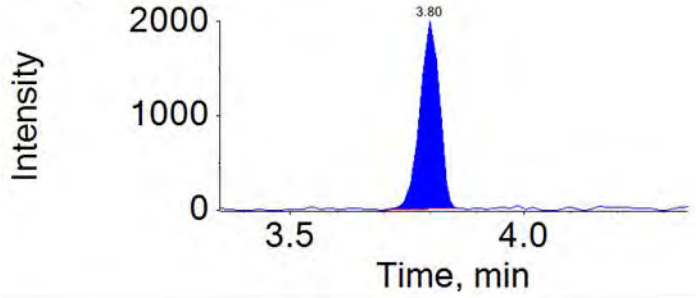
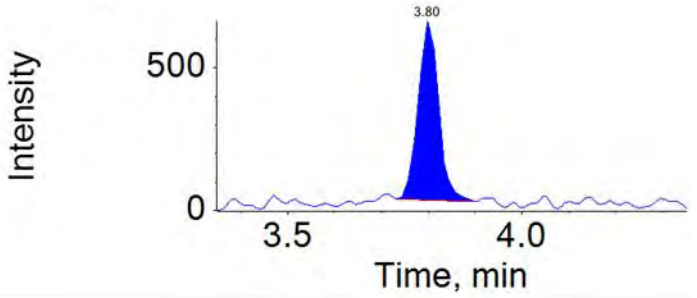
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

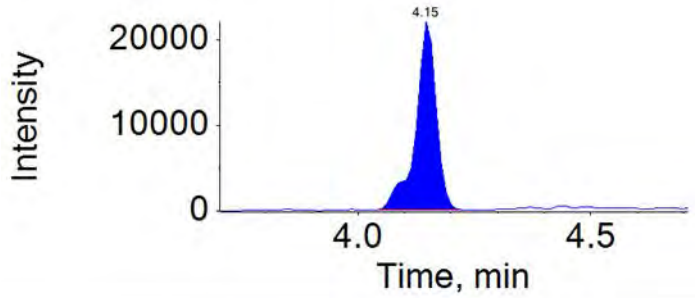
Component: PFBS
Primary Mass: 299.0 / 80.0



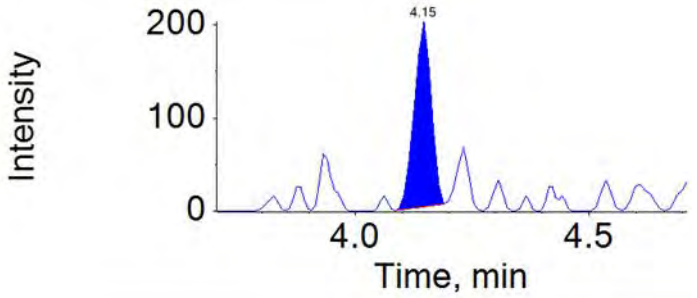
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



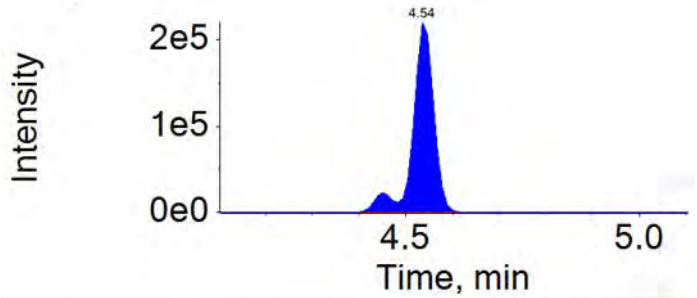
Component: PFHxA
Primary Mass: 313.0 / 269.0



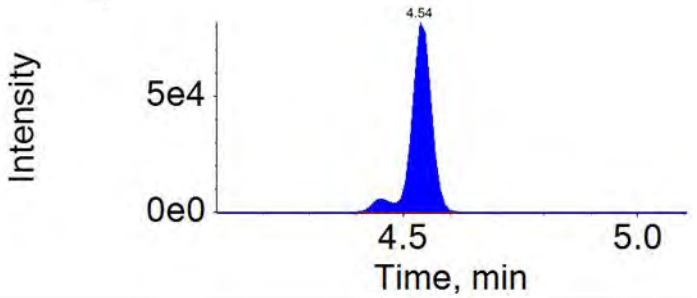
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



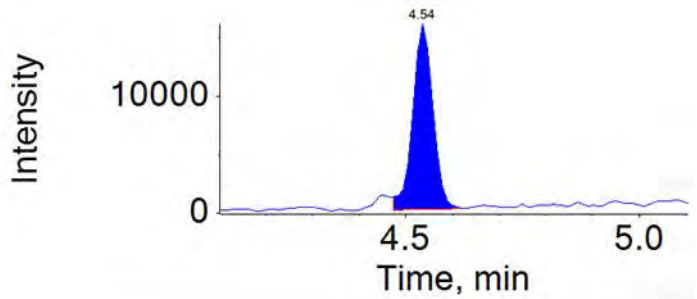
Component: PFHxS
Primary Mass: 399.0 / 80.0



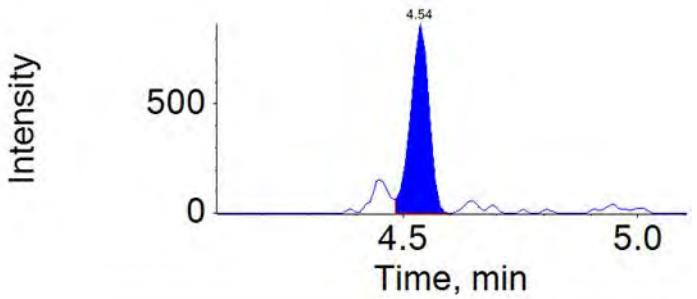
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



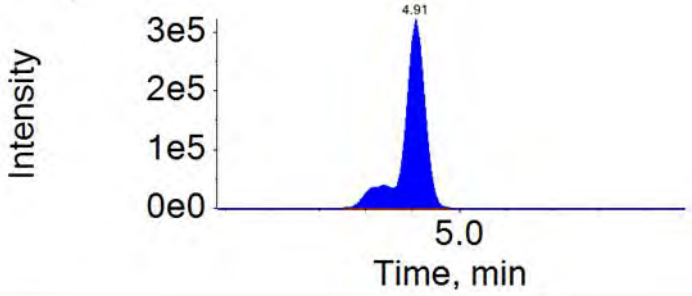
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



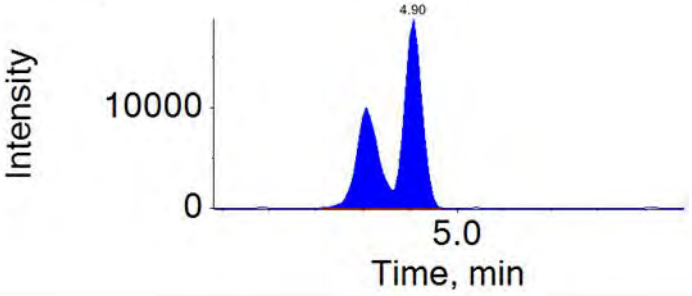
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

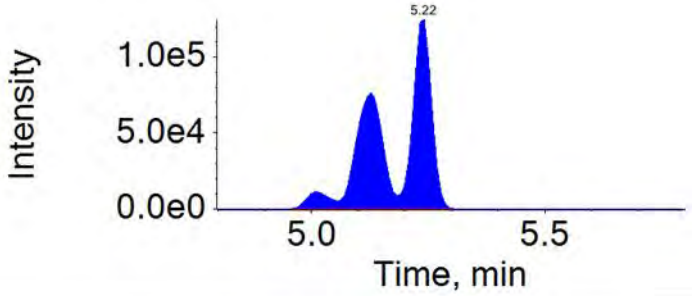
Component: PFOA
Primary Mass: 413.0 / 369.0



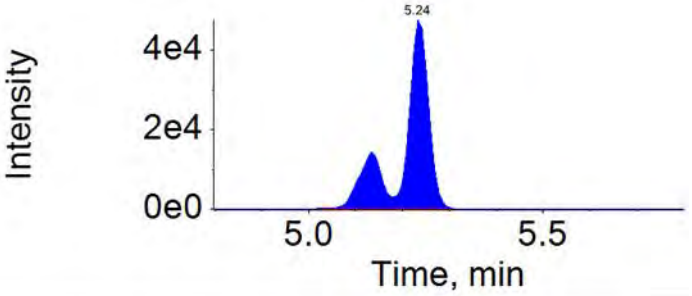
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



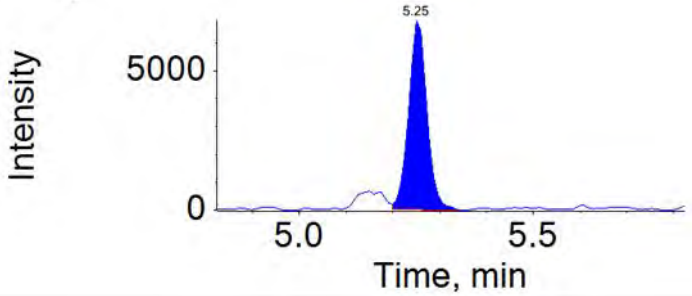
Component: PFOS
Primary Mass: 499.0 / 80.0



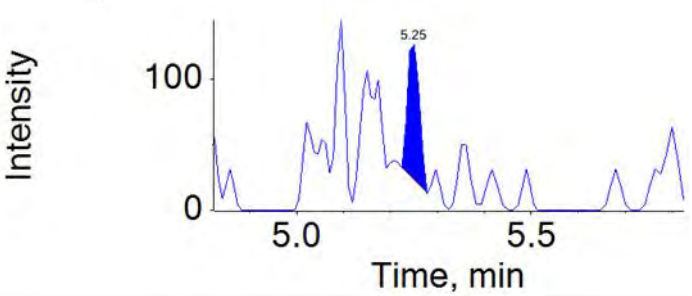
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



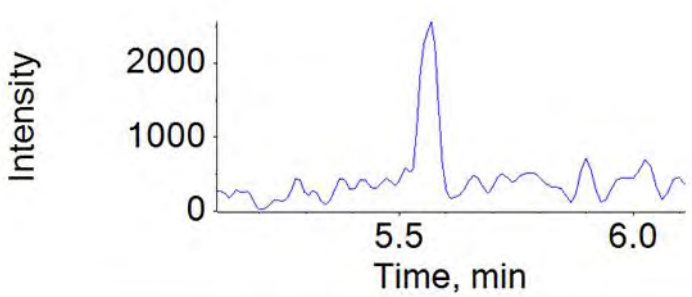
Component: PFNA
Primary Mass: 463.0 / 419.0



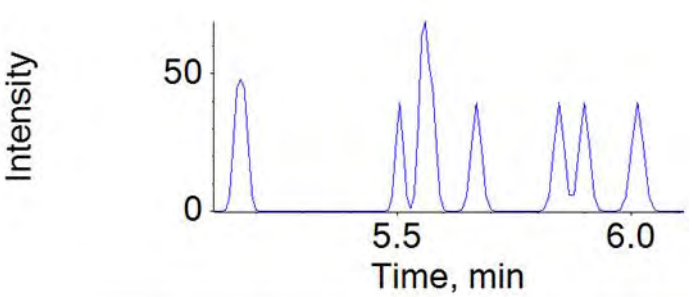
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



Component: PFDA_2
Secondary Mass: 513.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

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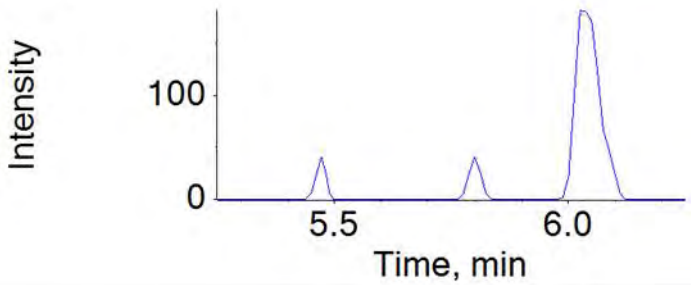
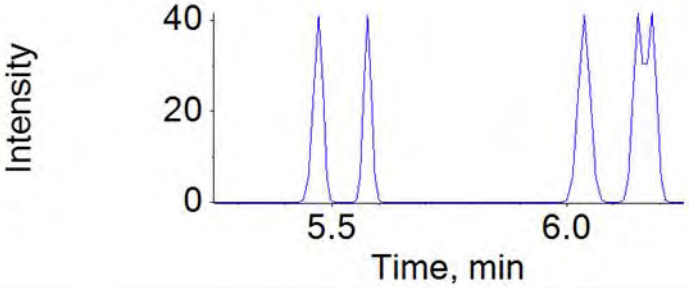
By umar at 4:40 pm, 11/12/18

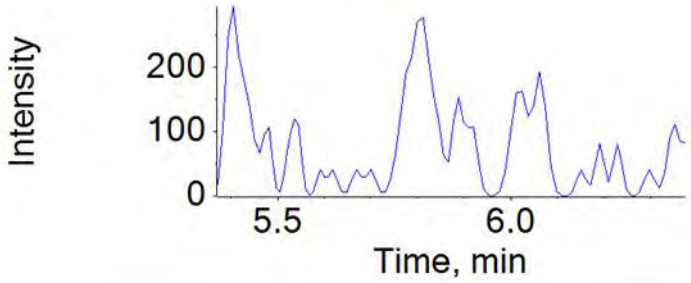
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



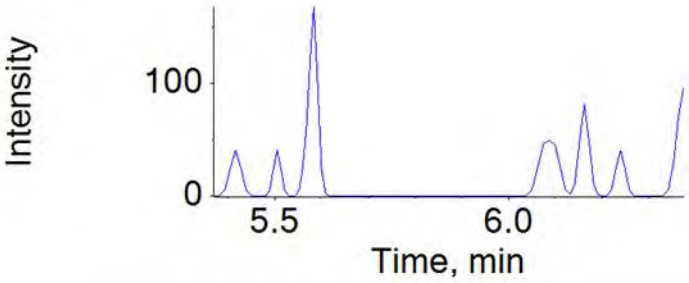
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



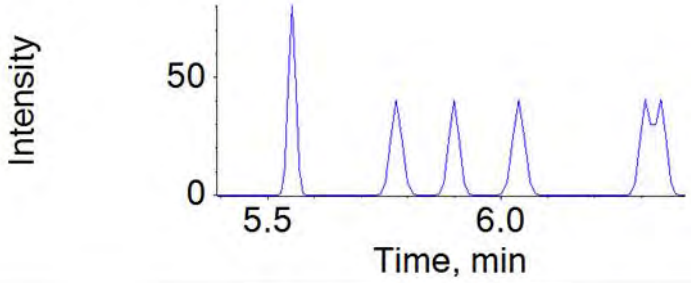
Component: PFUnDA
Primary Mass: 563.0 / 519.0



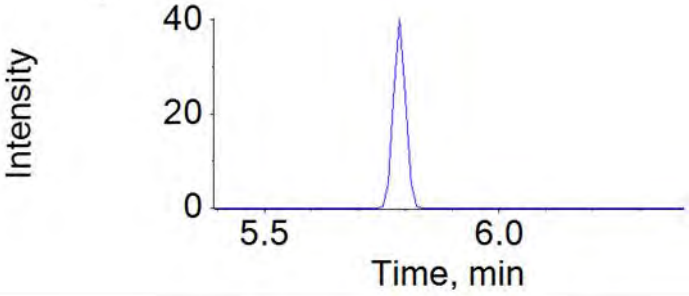
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



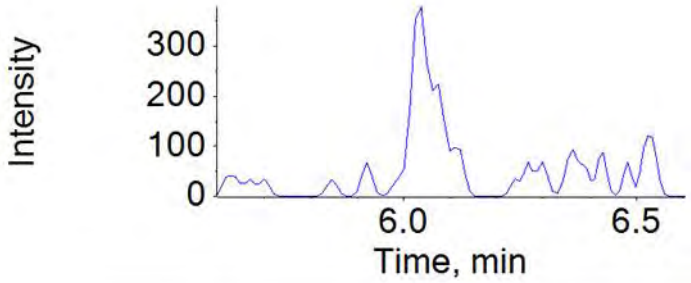
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



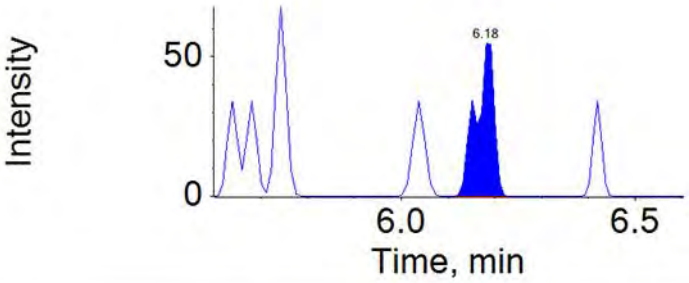
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



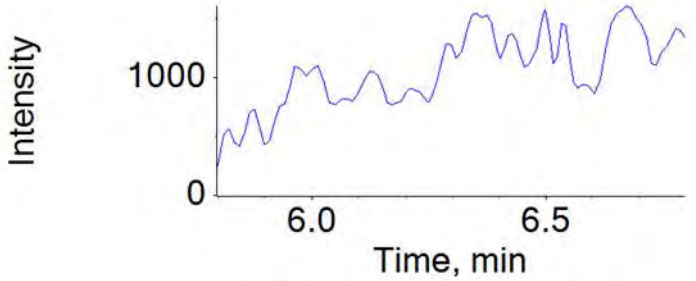
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



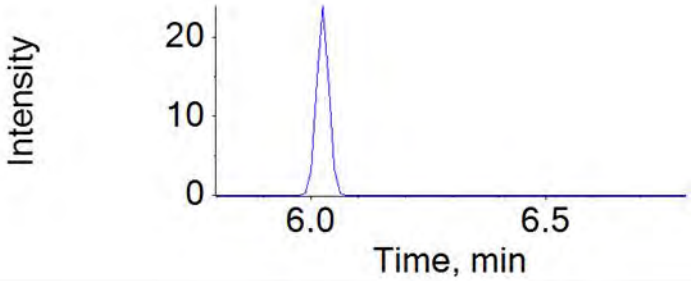
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

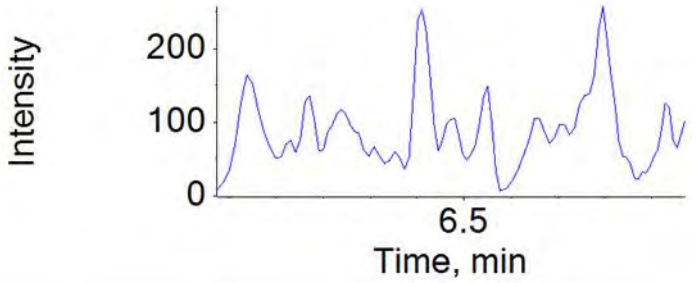
Component: PFTrDA
Primary Mass: 663.0 / 619.0



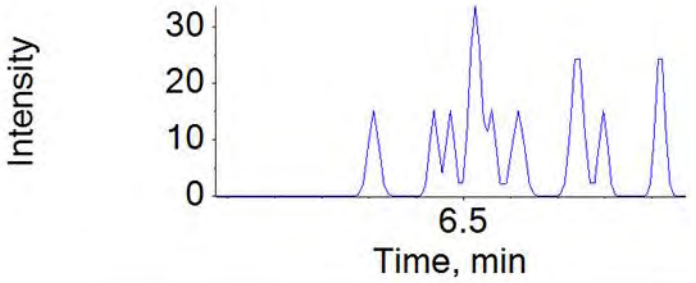
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883393			**Data File:**		18NOV12D-74.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18314009 OU1-Bldg371-S-04-03 Grab Soil			**Acquis Date:**		2018-11-13T03:44:36
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	98			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18314009
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18314009			**Operator:**		JPT12262
Sample Wt.:	1.07000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	686340.8	659926.2	4	50	
13C2-PFOA	5.0	488166.6	450219.7	8	50	
13C4-PFOS	4.8	256058.0	249205.8	3	50	
13C2-PFDA	5.0	313316.0	278743.9	12	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	423947.6	13C3-PFBA	686340.8	0.618	8.692	8.150	94	50-150	
E13C5-PFHxA	650824.7	13C2-PFOA	488166.6	1.333	9.346	9.002	96	50-150	
E13C3-PFHxS	327236.9	13C2-PFOA	488166.6	0.670	8.841	8.598	97	50-150	
E13C4-PFHpA	532062.1	13C2-PFOA	488166.6	1.090	9.346	9.178	98	50-150	
E13C8-PFOA	879010.5	13C2-PFOA	488166.6	1.801	9.346	9.273	99	50-150	
E13C8-PFOS	274635.5	13C4-PFOS	256058.0	1.073	8.935	8.883	99	50-150	
E13C9-PFNA	473303.7	13C4-PFOS	256058.0	1.848	9.346	9.633	103	50-150	
E13C6-PFDA	636453.4	13C2-PFDA	313316.0	2.031	9.346	8.860	95	50-150	
Ed3-NMeFOSAA	49498.6	13C2-PFDA	313316.0	0.158	9.346	5.330	57	50-150	
E13C7-PFUnDA	251867.3	13C2-PFDA	313316.0	0.804	9.346	8.724	93	50-150	
Ed5-NEtFOSAA	45283.2	13C2-PFDA	313316.0	0.145	9.346	5.715	61	50-150	
E13C2-PFDoDA	538693.0	13C2-PFDA	313316.0	1.719	9.346	8.344	89	50-150	
E13C2-PFTeDA	371778.0	13C2-PFDA	313316.0	1.187	9.346	7.786	83	50-150	

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

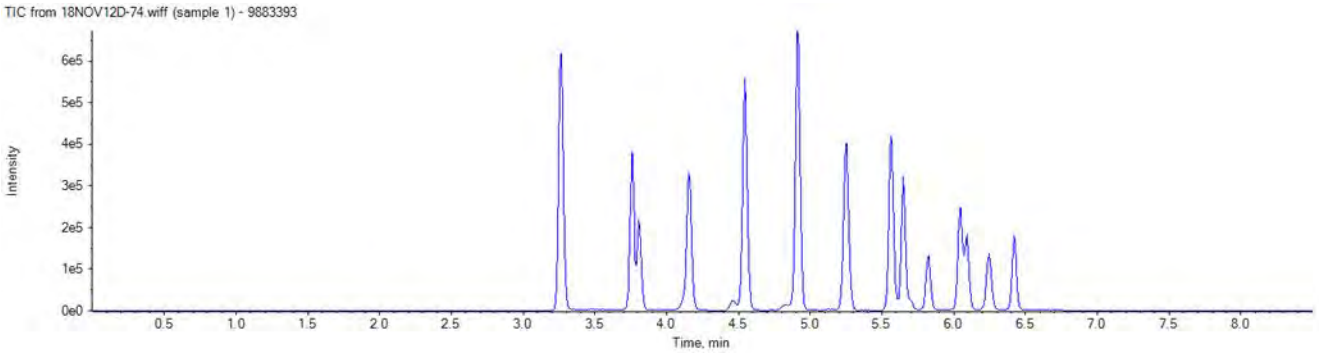
Analyte Quantitation Peak Table

Sample Name: 9883393 **Instrument Name:** LM27631 **File Name:** 18NOV12D-74.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.07000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.81	1.000	11731.0		A	13C3-PFBS	3.81	423947.6	0.028	0.246
PFHxA	4.16	1.000	104761.0		M	13C5-PFHxA	4.16	650824.7	0.161	1.256
PFHpA	4.54	1.000	47259.1		M	13C4-PFHpA	4.54	532062.1	0.089	0.550
PFHxS	4.55	1.000	298682.2		M	13C3-PFHxS	4.55	327236.9	0.913	8.272
PFOA	4.91	1.000	158490.8		M	13C8-PFOA	4.91	879010.5	0.180	1.800
PFOS	5.25	1.000	27395.2		M	13C8-PFOS	5.24	274635.5	0.100	0.815
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	473303.7	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	636453.4	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	49498.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	251867.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	45283.2	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	538693.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	538693.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	371778.0	N/A	

Total Ion Chromatogram

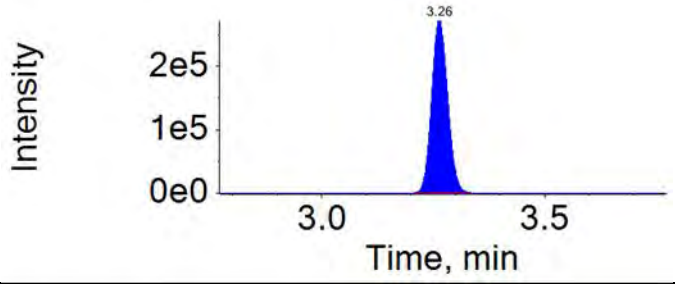


APPROVED
By JPT at 4:11 pm, 11/13/18

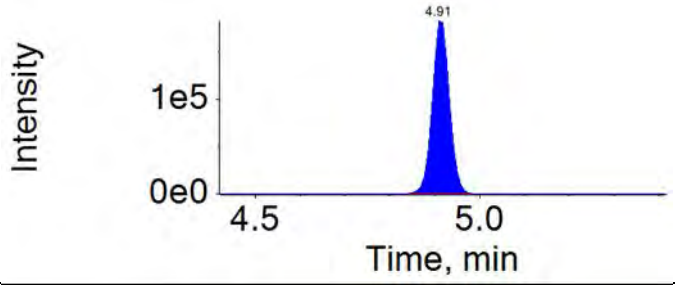
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

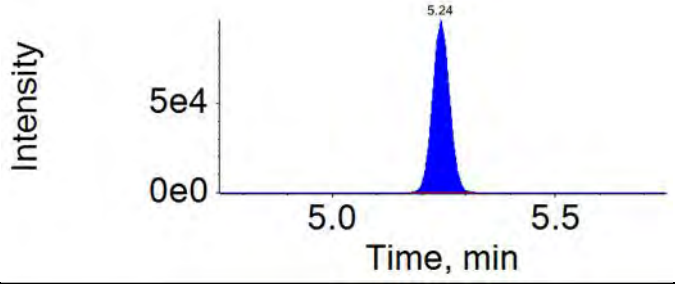
Injection Standard: 13C3-PFBA
216.0 / 172.0



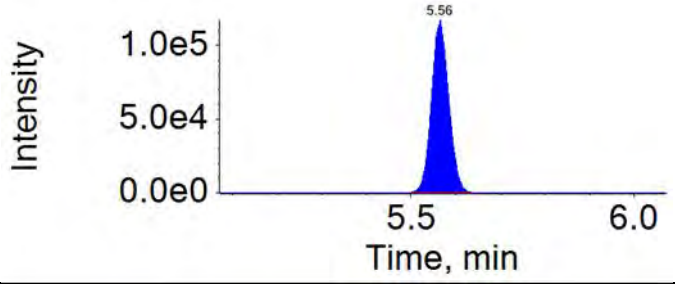
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

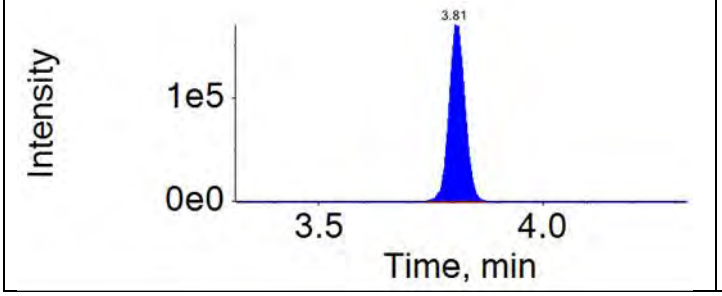


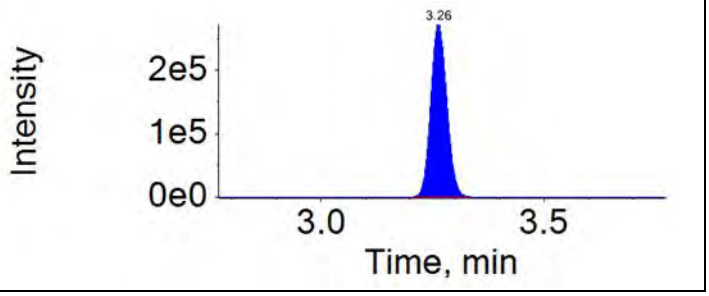
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

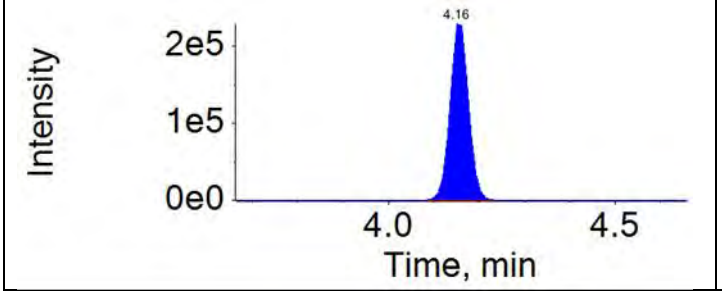
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

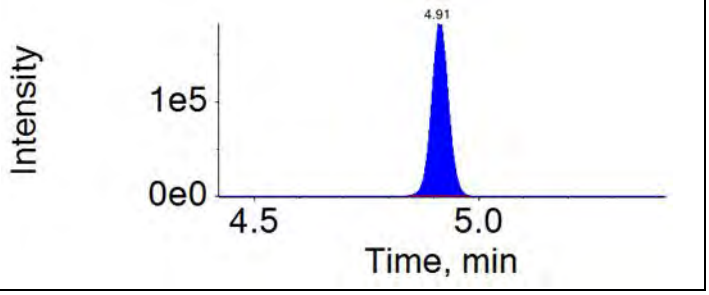
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



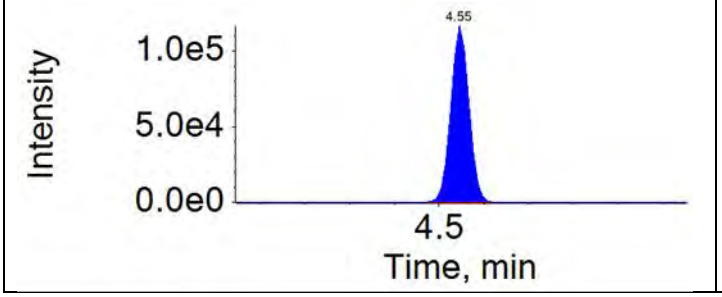


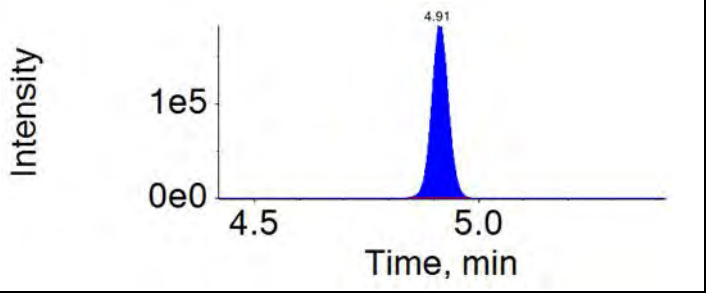
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



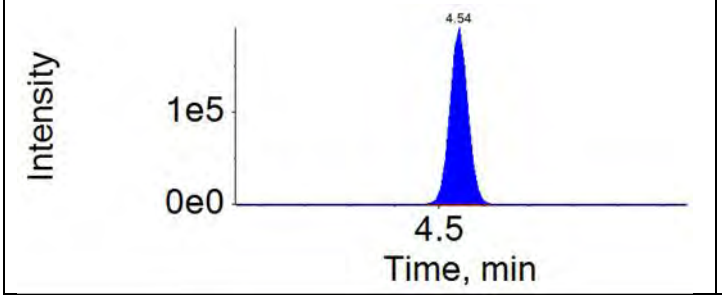


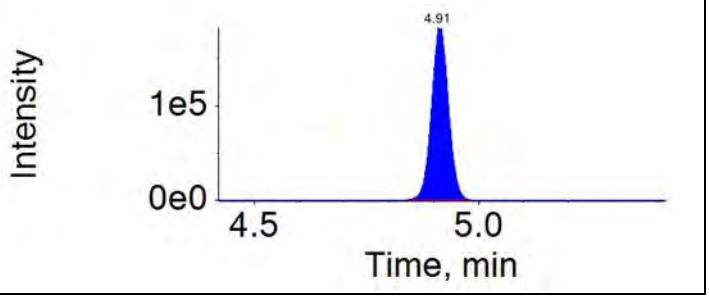
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

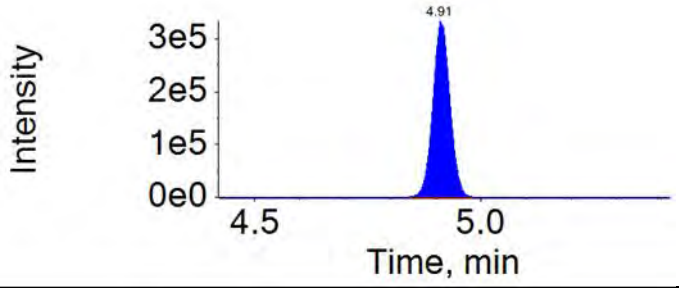
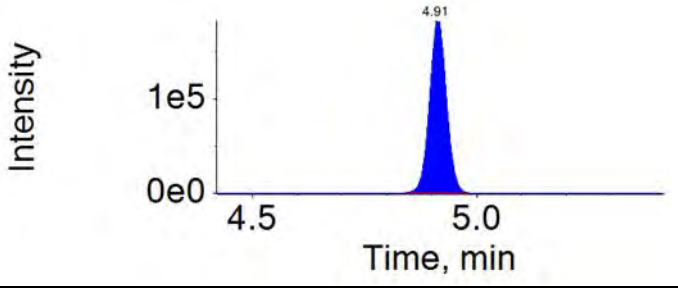


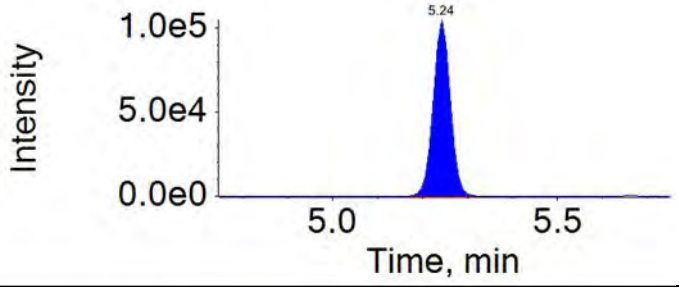
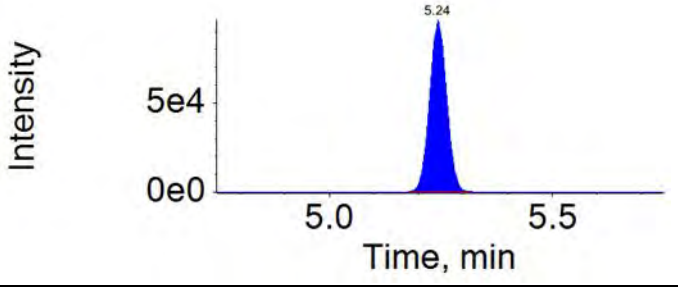


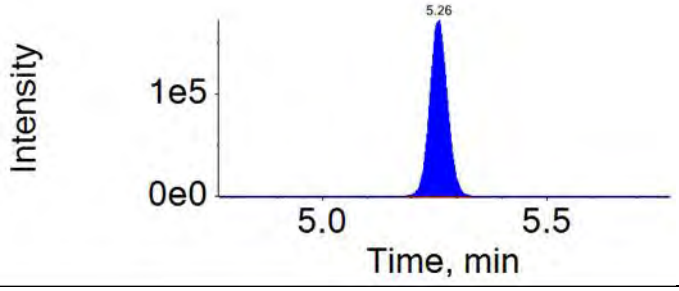
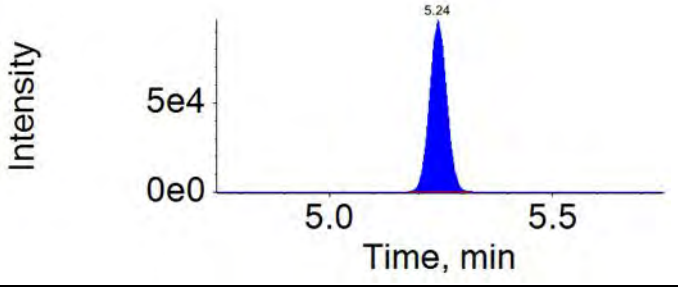
APPROVED
By JPT at 4:11 pm, 11/13/18

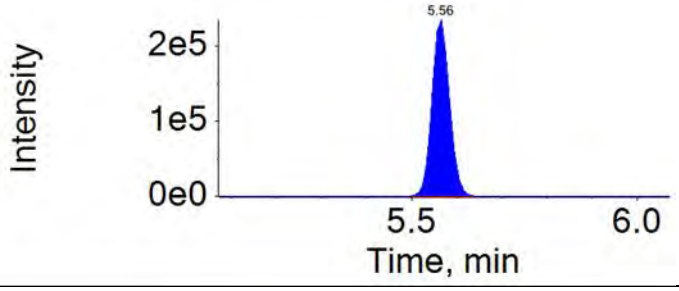
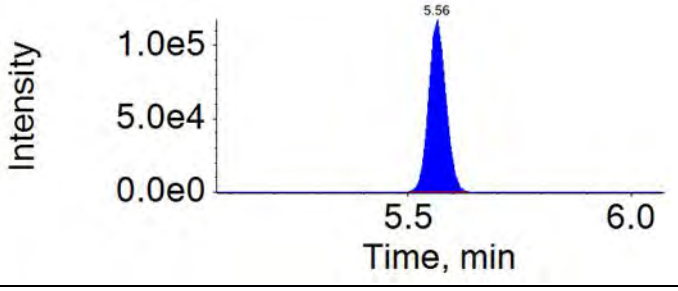
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

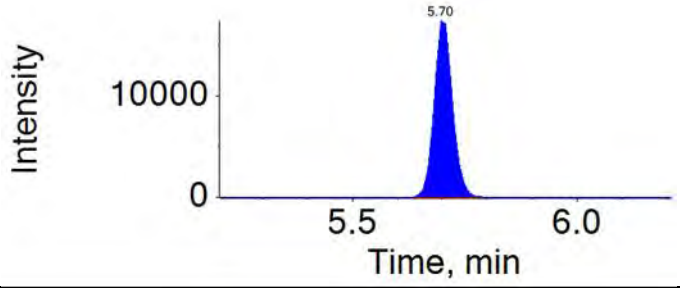
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

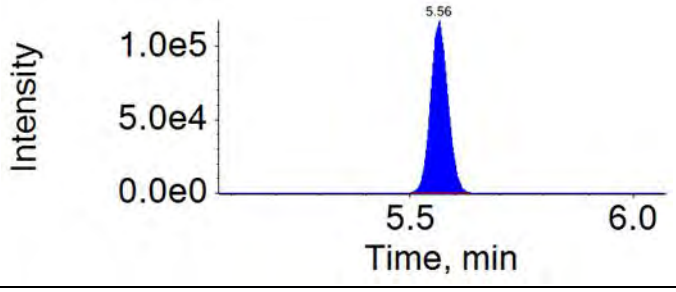
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

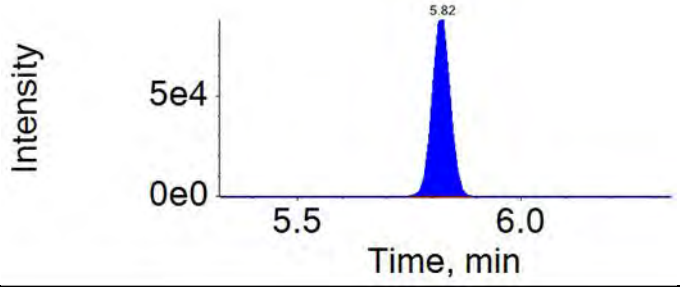
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

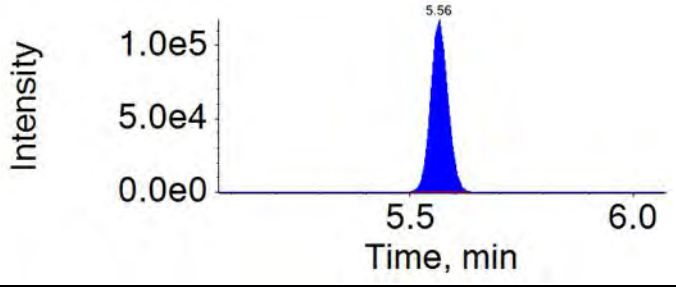
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



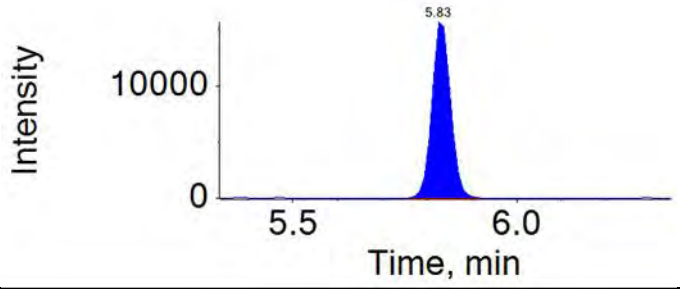


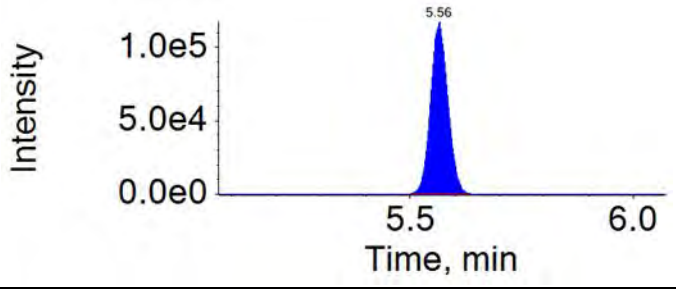
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



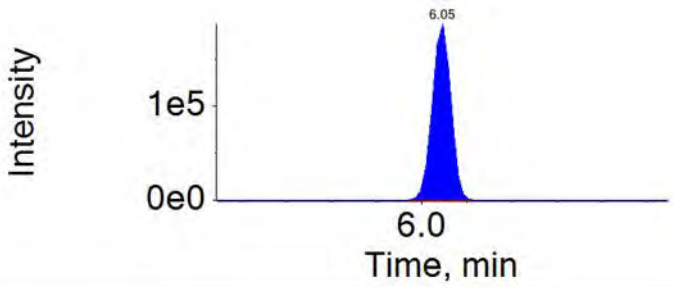


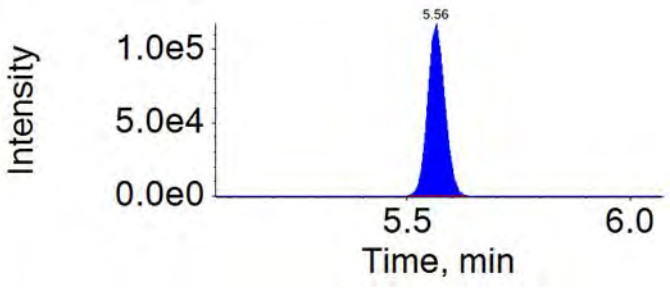
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



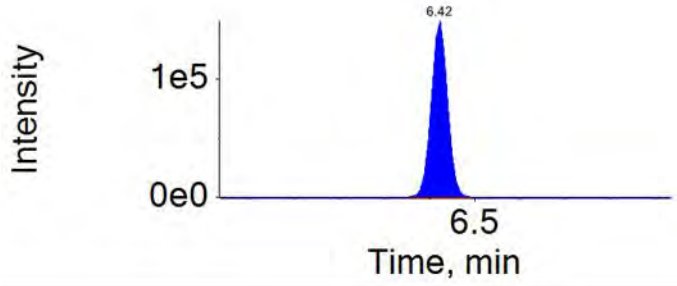
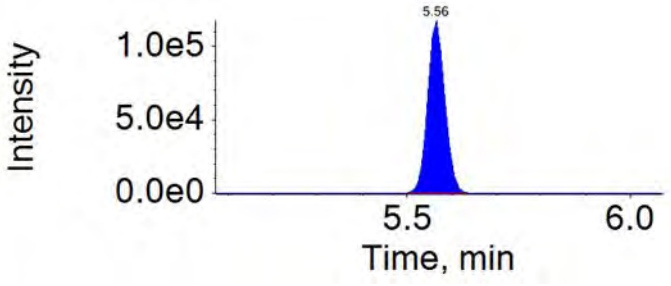


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0





ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

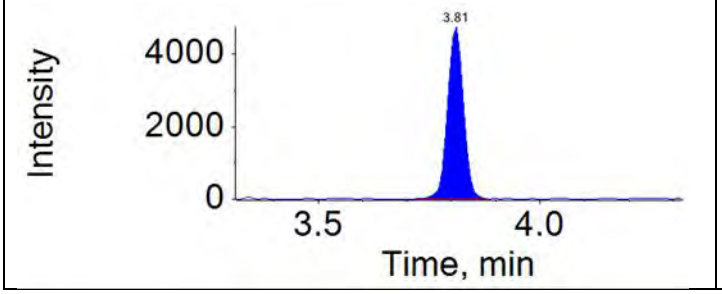
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

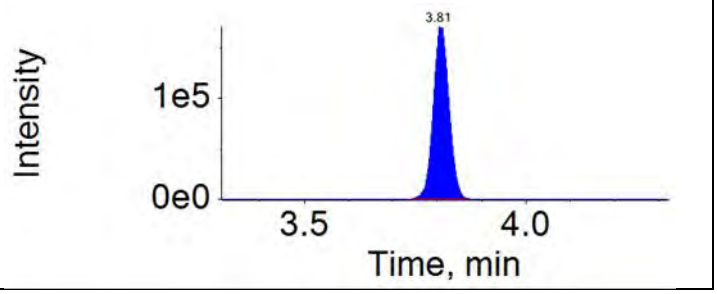
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

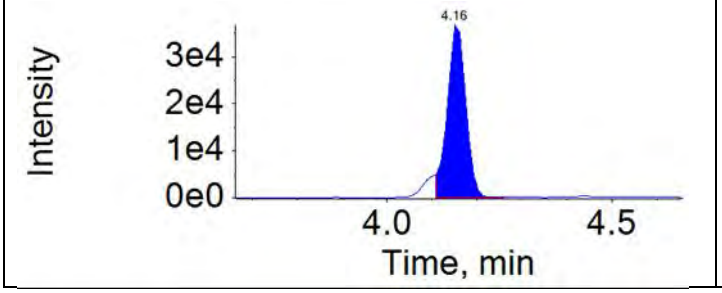
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

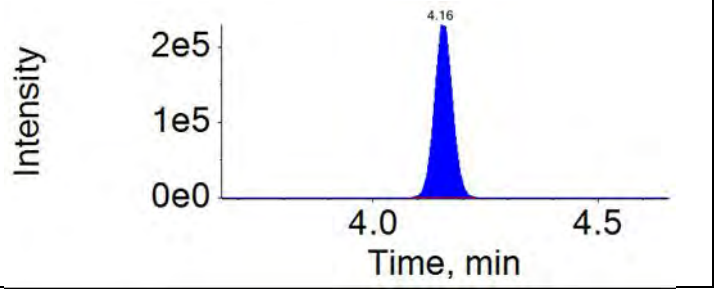
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



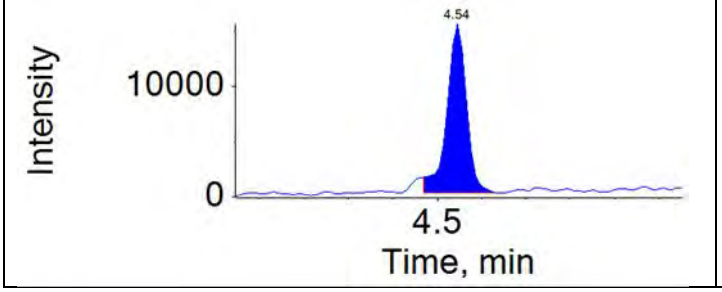


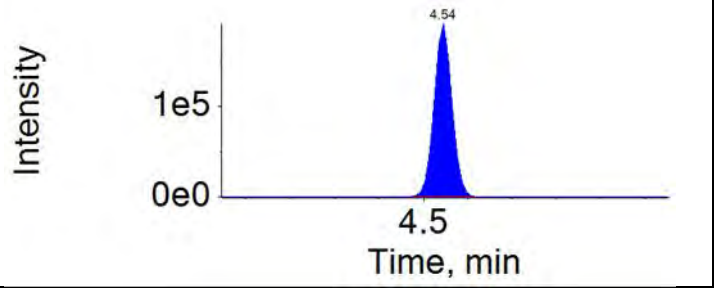
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



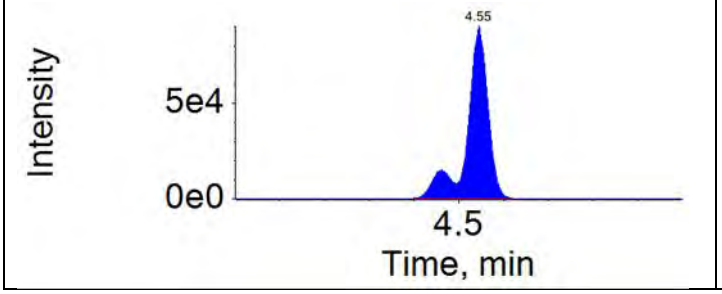


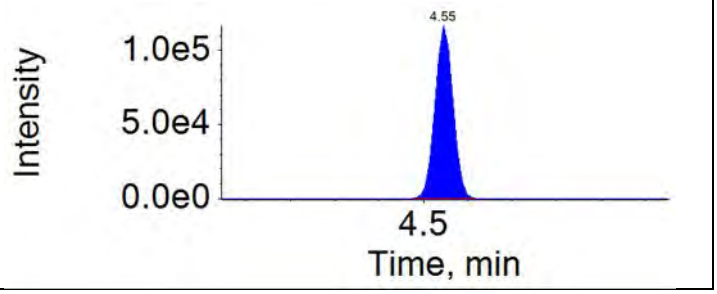
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



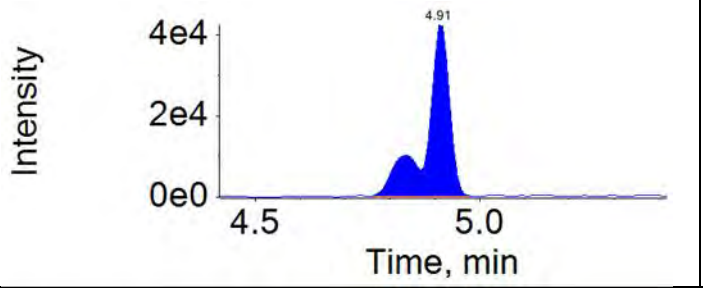


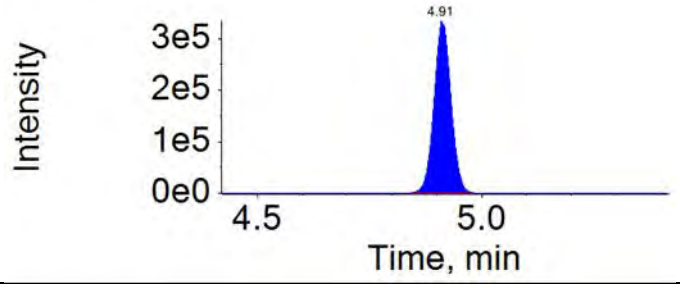
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

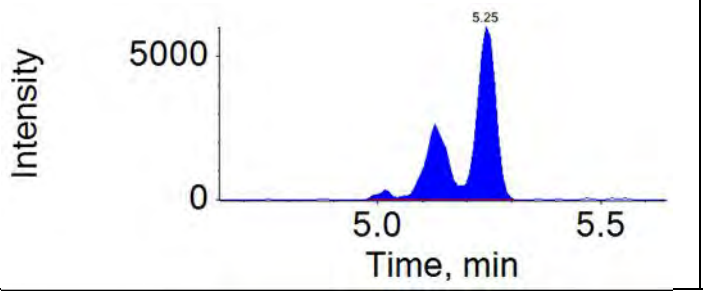
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

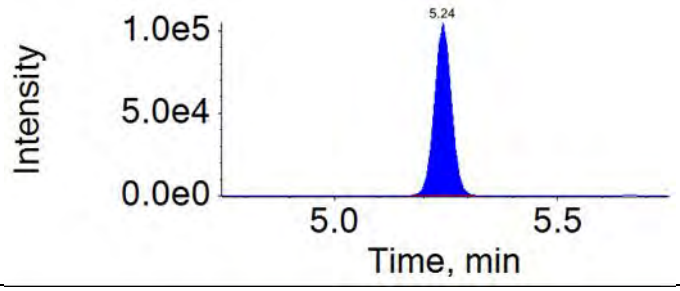
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



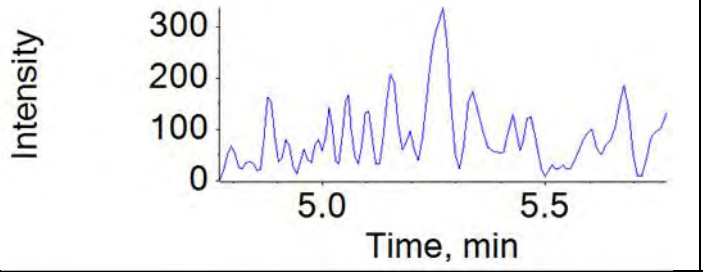


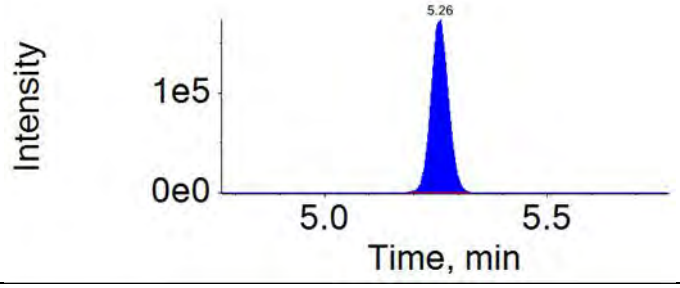
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



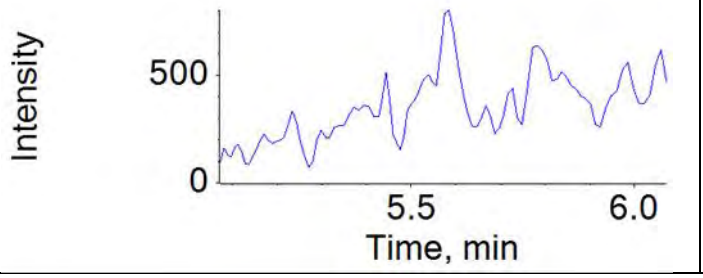


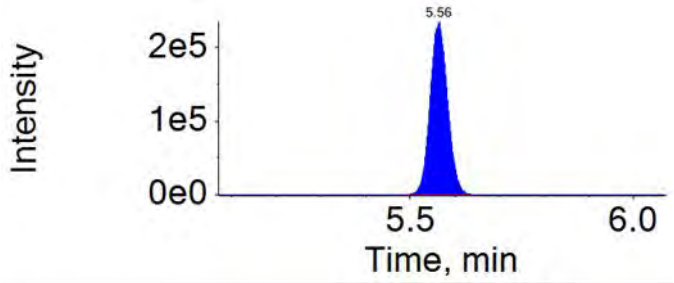
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



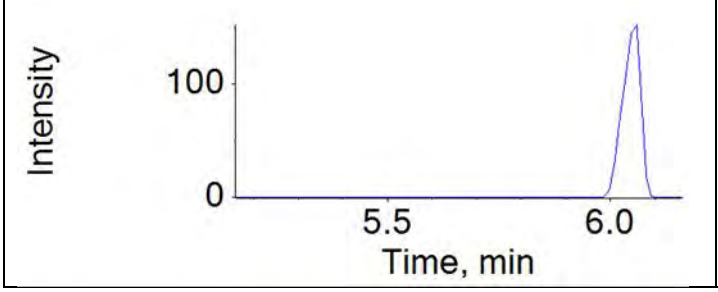


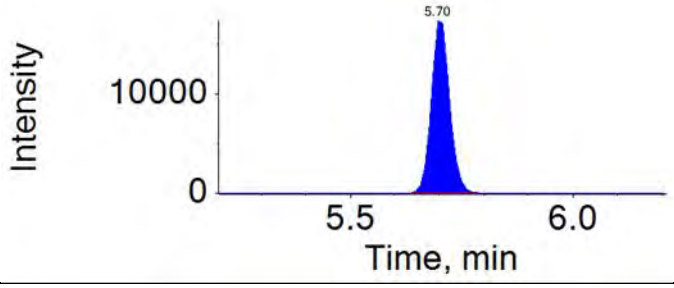
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

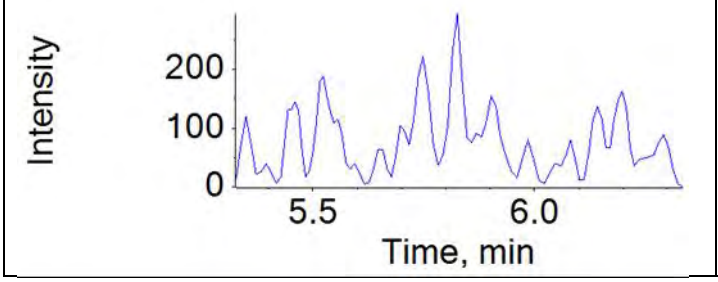
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

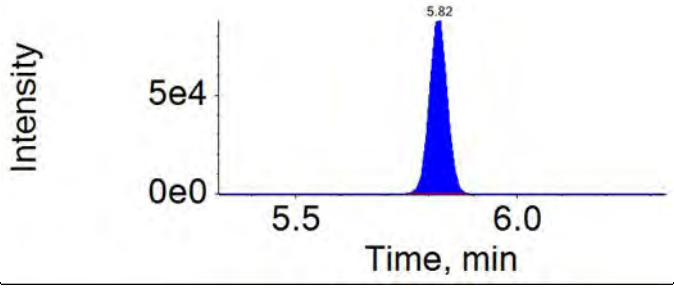
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



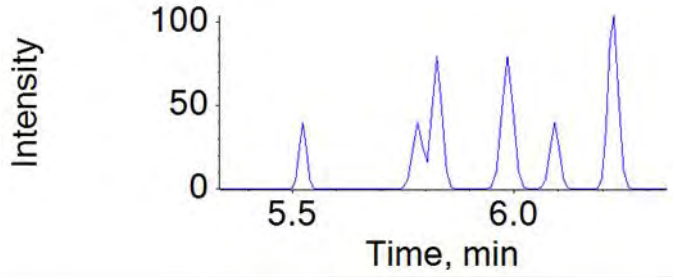


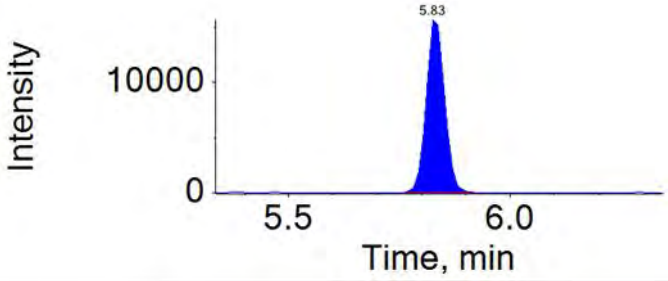
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



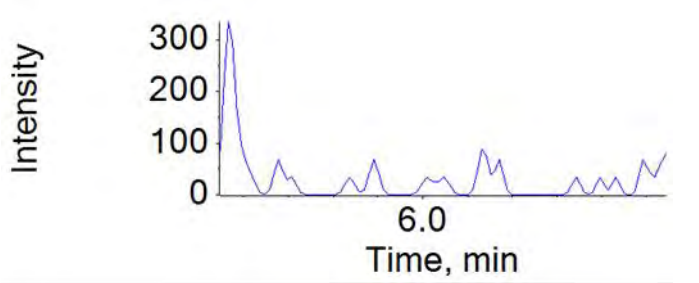


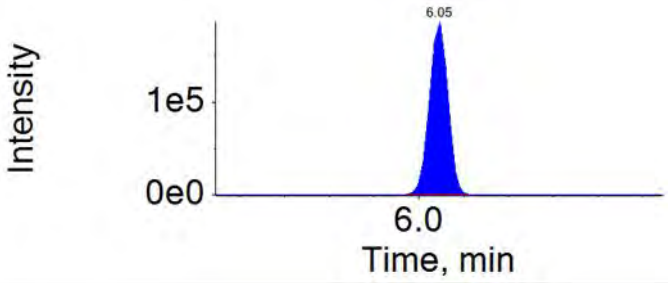
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



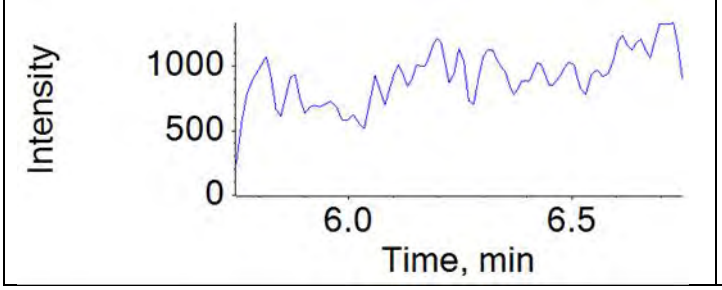


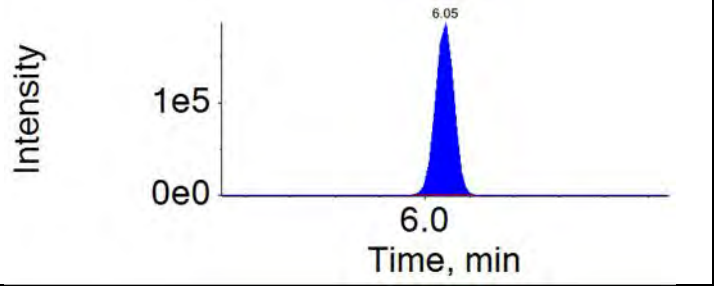
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

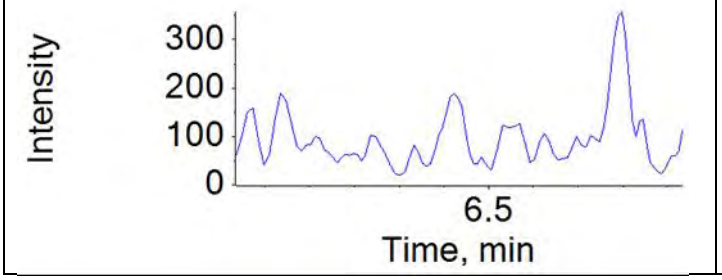
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

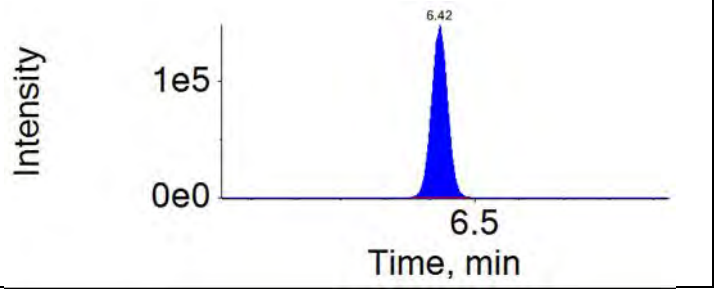
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





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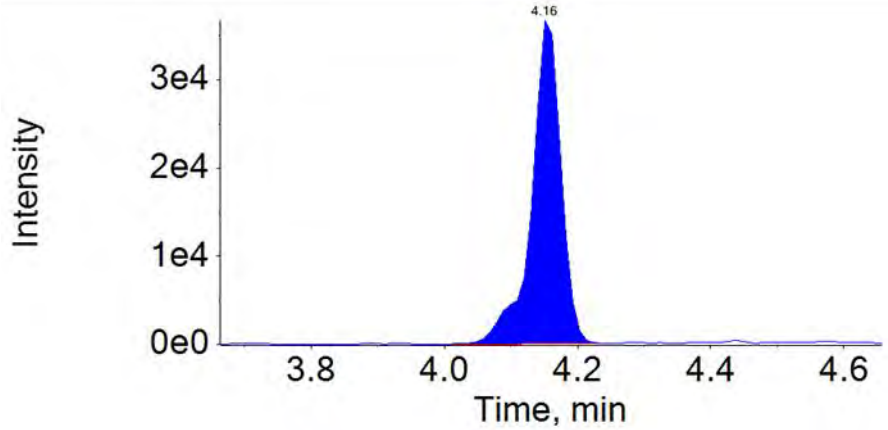
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

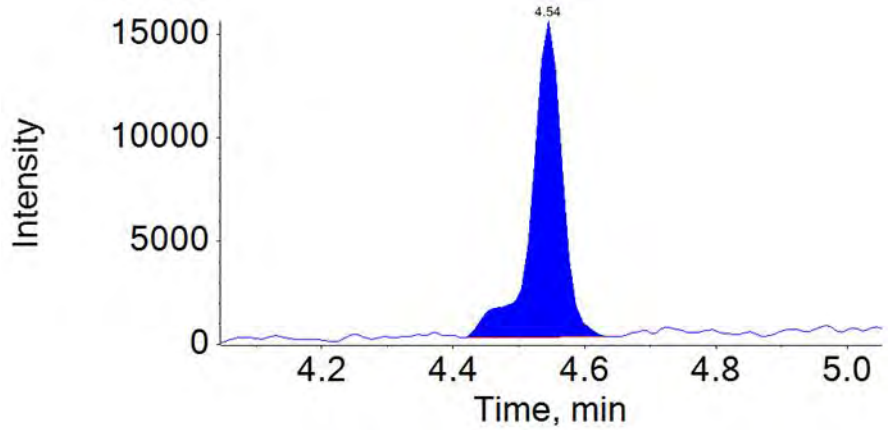
Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxA
RT (min.):
4.16
Peak Area:
113598.1
Mass Range:
313.0 / 269.0
File Name:
18NOV12D-74.wiff
Sample Name:
9883393



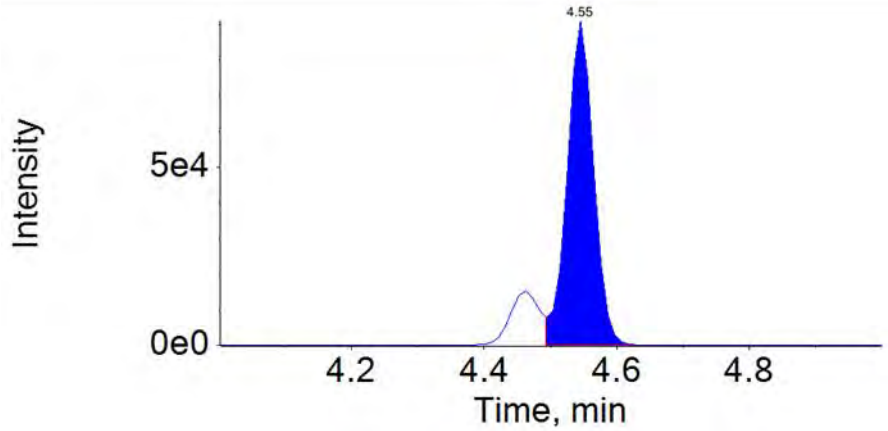
Integration Comment: incorrect integration

Component Name:
PFHpA
RT (min.):
4.54
Peak Area:
49797.3
Mass Range:
363.0 / 319.0
File Name:
18NOV12D-74.wiff
Sample Name:
9883393



Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
252402.7
Mass Range:
399.0 / 80.0
File Name:
18NOV12D-74.wiff
Sample Name:
9883393



Integration Comment: incorrect integration

APPROVED
By JPT at 4:11 pm, 11/13/18

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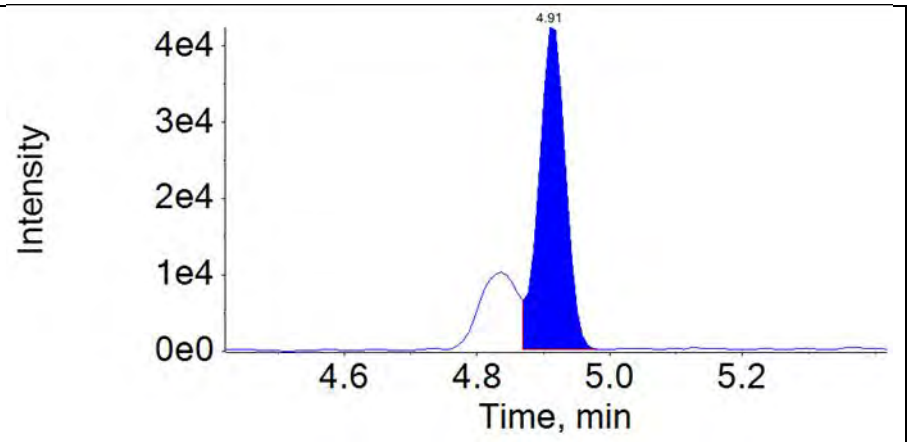
By umar at 5:37 pm, 11/13/18

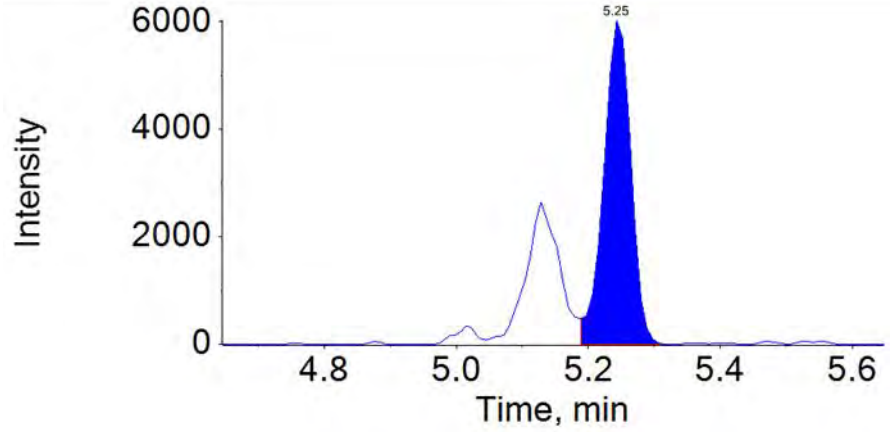
Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
117757.9
Mass Range:
413.0 / 369.0
File Name:
18NOV12D-74.wiff
Sample Name:
9883393



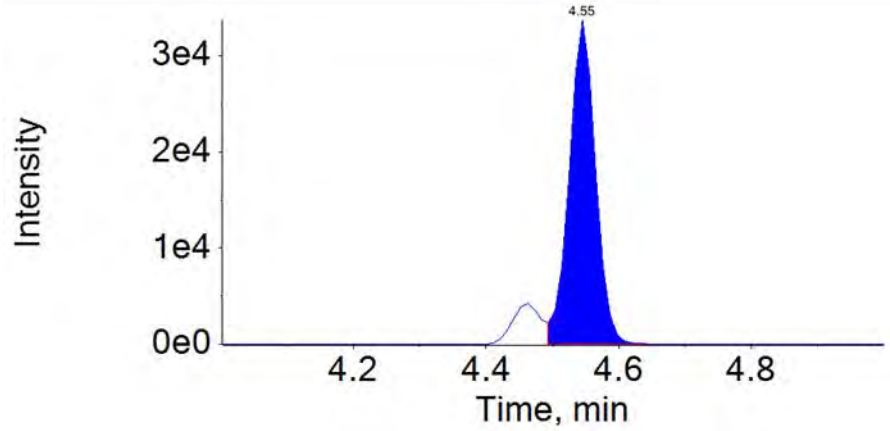
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
17274.6
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-74.wiff
Sample Name:
9883393



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
93127.6
Mass Range:
399.0 / 99.0
File Name:
18NOV12D-74.wiff
Sample Name:
9883393

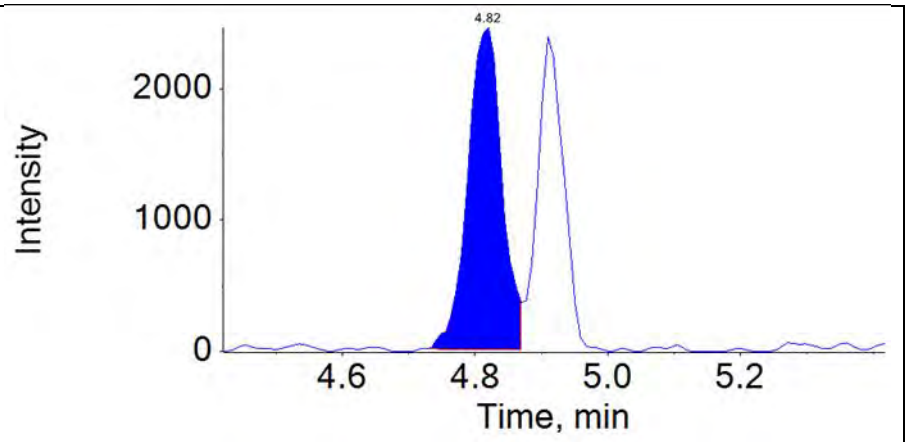


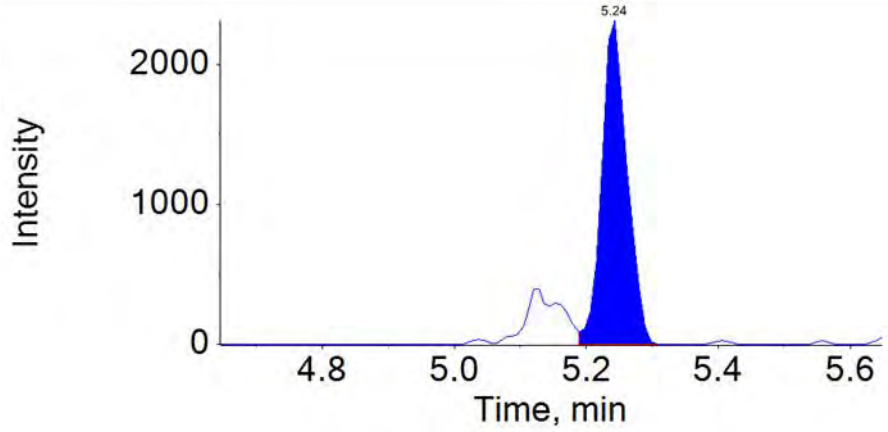
Integration Comment: incorrect integration

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOA_2 **RT (min.):** 4.82 **Peak Area:** 8811.0 **Mass Range:** 413.0 / 169.0 **File Name:** 18NOV12D-74.wiff **Sample Name:** 9883393	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.24 **Peak Area:** 6183.0 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12D-74.wiff **Sample Name:** 9883393	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

Ion Ratio Report

Sample Name: 9883393 **Instrument Name:** LM27631 **File Name:** 18NOV12D-74.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	11731.0	A	N/A	1.0000			
PFBS_2	3.81	1.00	3755.3	A	N/A	0.3201	-12	50	
PFHxA	4.16	1.00	104761.0	M	N/A	1.0000			
PFHxA_2	4.16	1.00	1609.5	A	N/A	0.0154	31	50	
PFHpA	4.54	1.00	47259.1	M	N/A	1.0000			
PFHpA_2	4.54	1.00	2311.6	A	N/A	0.0489	-13	50	
PFHxS	4.55	1.00	298682.2	M	N/A	1.0000			
PFHxS_2	4.55	1.00	105752.9	M	N/A	0.3541	16	50	
PFOA	4.91	1.00	158490.8	M	N/A	1.0000			
PFOA_2	4.85	0.99	15568.4	M	N/A	0.0982	73	50	OOS
PFOS	5.25	1.00	27395.2	M	N/A	1.0000			
PFOS_2	5.24	1.00	7711.7	M	N/A	0.2815	9	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

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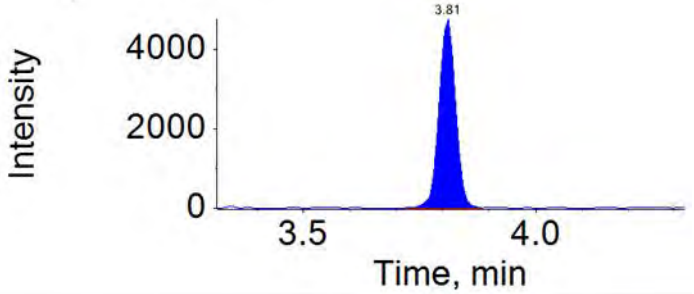
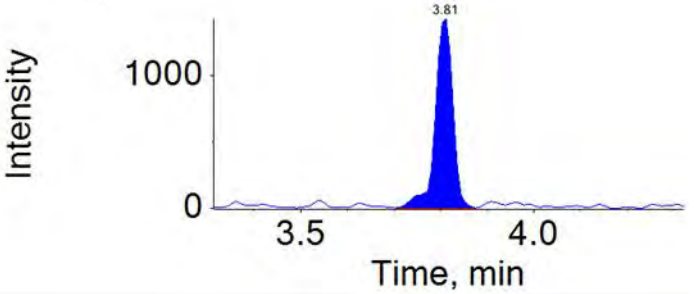
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

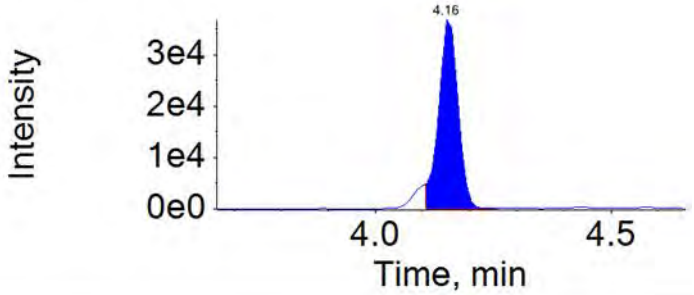
Component: PFBS
Primary Mass: 299.0 / 80.0



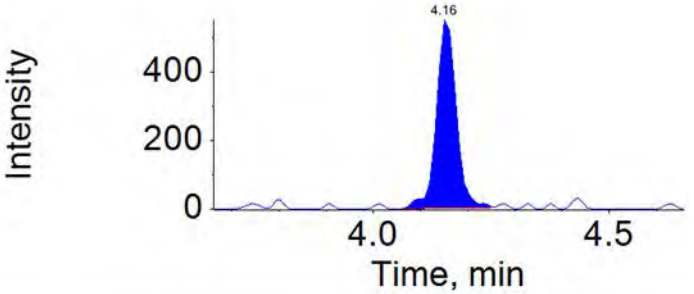
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



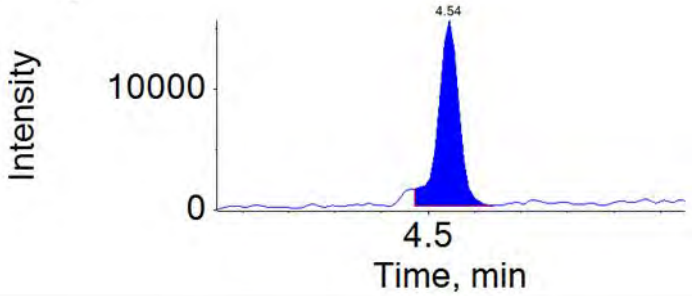
Component: PFHxA
Primary Mass: 313.0 / 269.0



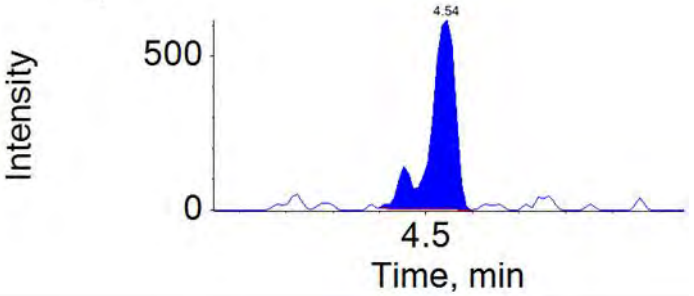
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



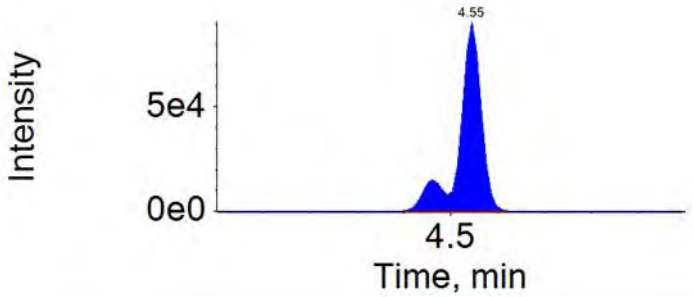
Component: PFHpA
Primary Mass: 363.0 / 319.0



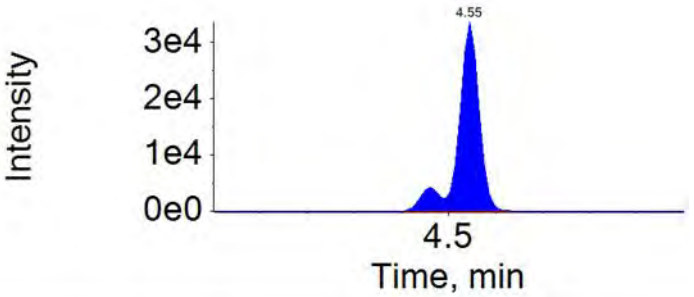
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



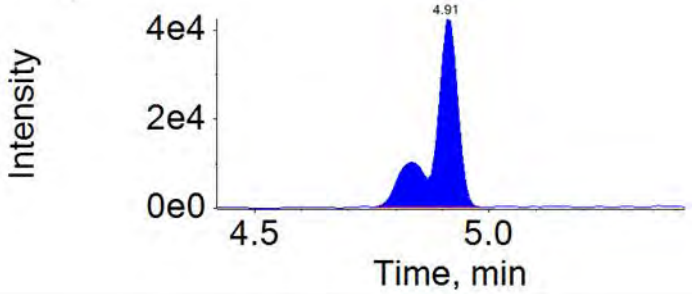
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



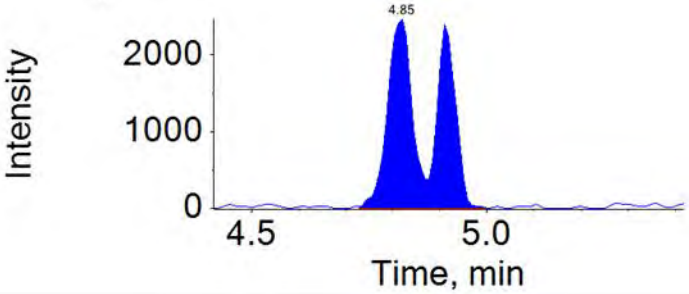
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

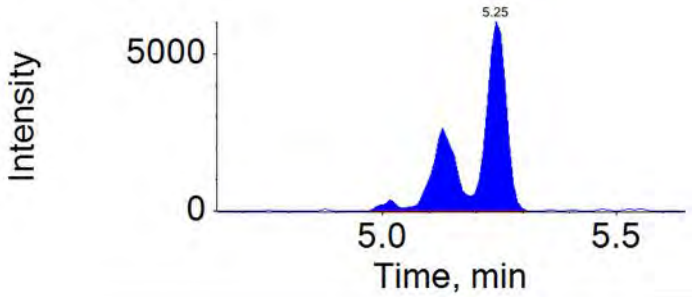
Component: PFOA
Primary Mass: 413.0 / 369.0



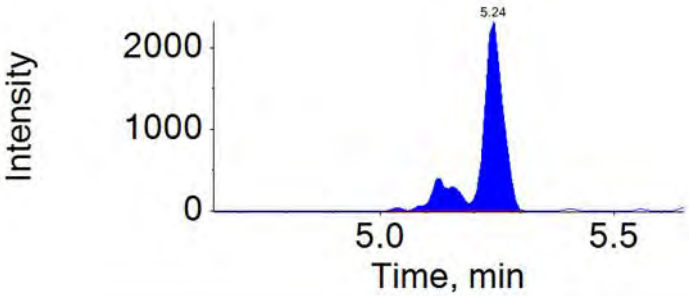
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



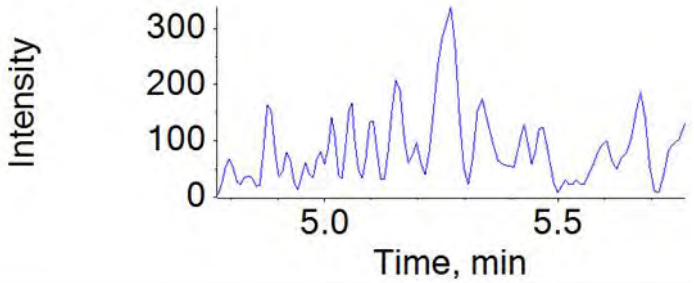
Component: PFOS
Primary Mass: 499.0 / 80.0



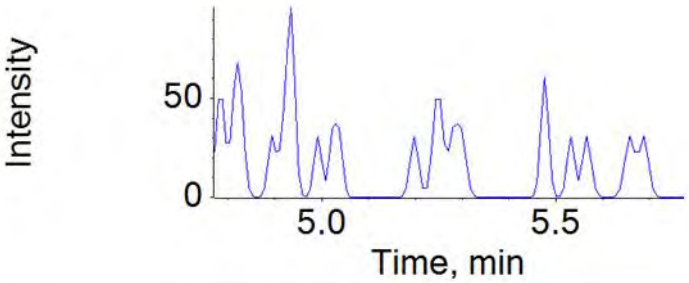
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



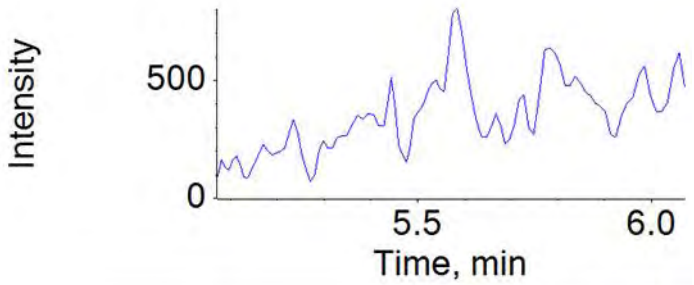
Component: PFNA
Primary Mass: 463.0 / 419.0



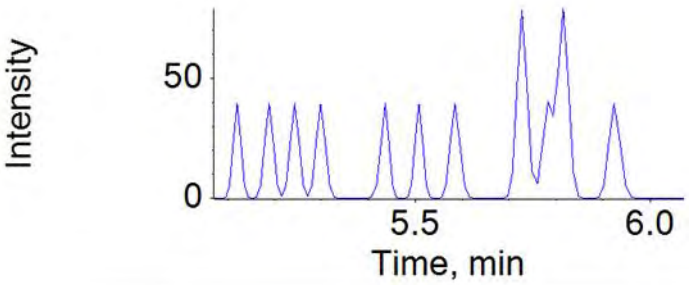
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



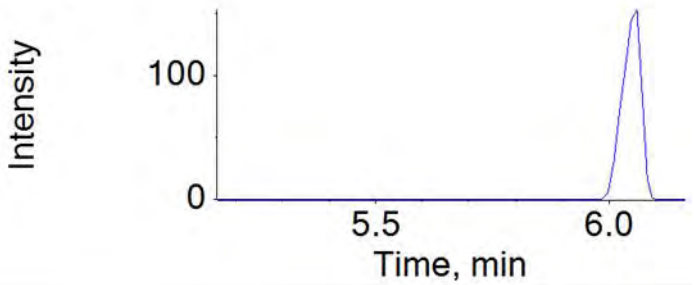
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



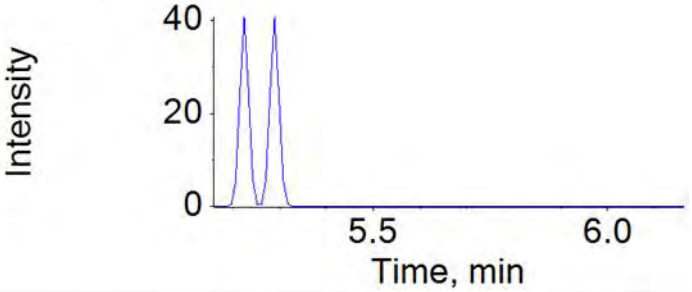
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

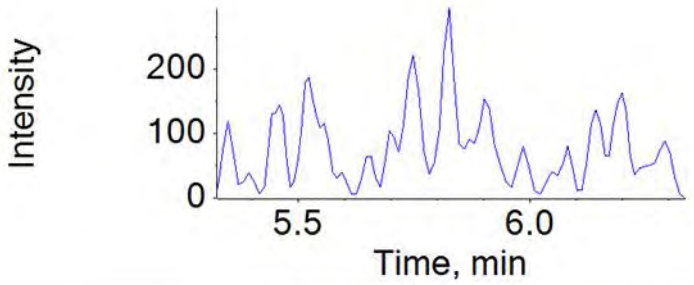
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



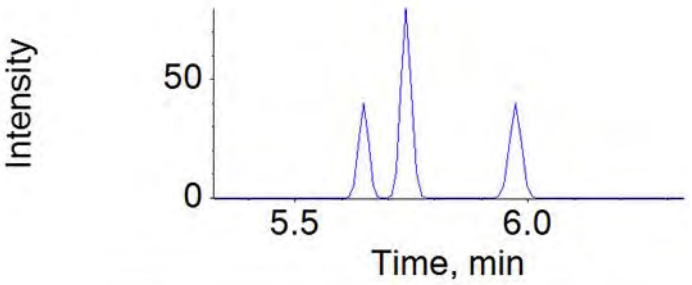
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



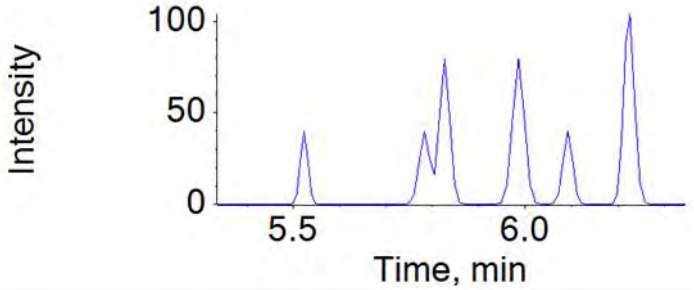
Component: PFUnDA
Primary Mass: 563.0 / 519.0



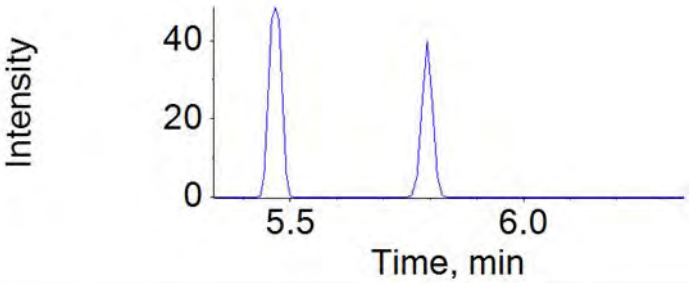
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



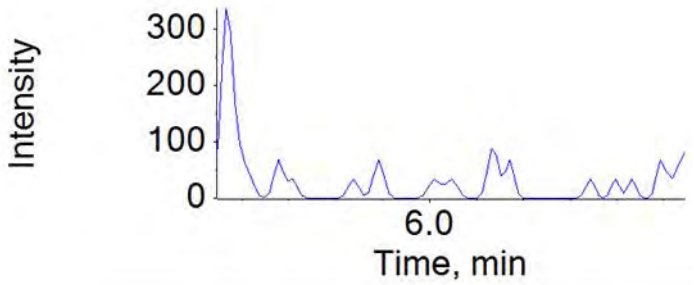
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



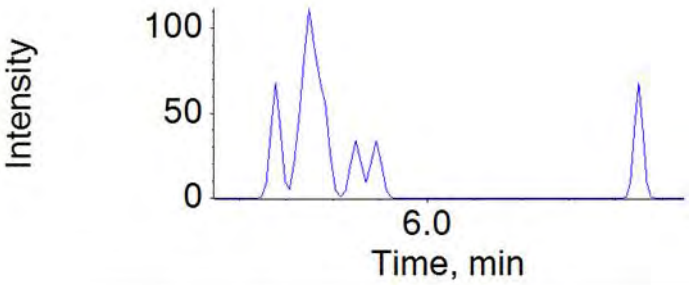
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



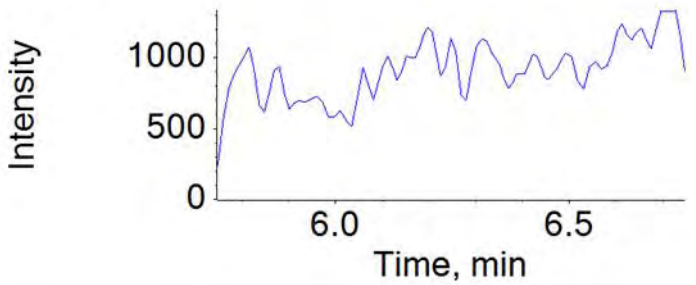
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



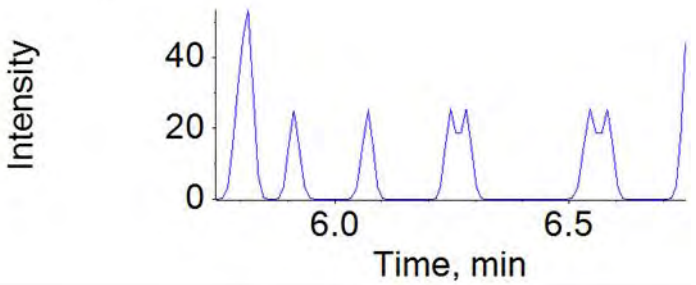
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

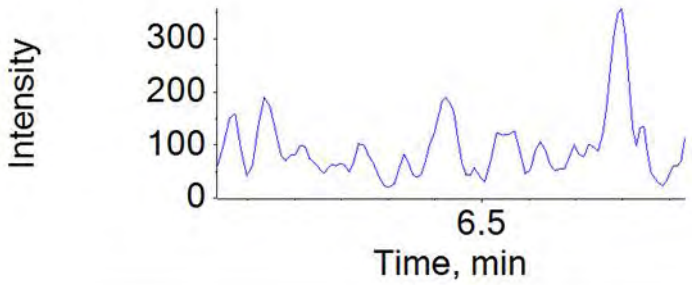
Component: PFTrDA
Primary Mass: 663.0 / 619.0



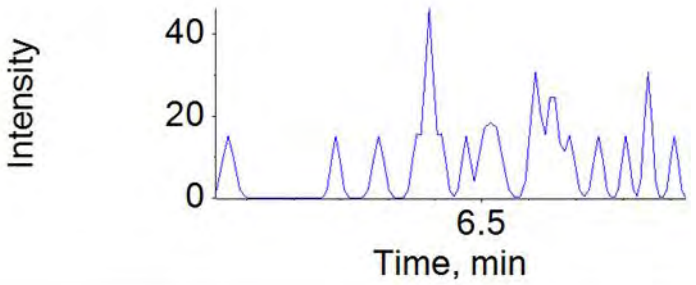
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883394			**Data File:**		18NOV12D-75.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18314009 OU1-Bldg371-S-04-06 Grab Soil			**Acquis Date:**		2018-11-13T03:53:39
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	99			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18314009
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18314009			**Operator:**		JPT12262
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	689241.7	659926.2	4	50	
13C2-PFOA	5.0	507970.9	450219.7	13	50	
13C4-PFOS	4.8	252737.4	249205.8	1	50	
13C2-PFDA	5.0	306152.8	278743.9	10	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	538457.4	13C3-PFBA	689241.7	0.781	8.774	10.405	119	50-150	
E13C5-PFHxA	850621.5	13C2-PFOA	507970.9	1.675	9.434	11.413	121	50-150	
E13C3-PFHxS	398292.9	13C2-PFOA	507970.9	0.784	8.925	10.151	114	50-150	
E13C4-PFHpA	651444.2	13C2-PFOA	507970.9	1.282	9.434	10.901	116	50-150	
E13C8-PFOA	1144453.6	13C2-PFOA	507970.9	2.253	9.434	11.712	124	50-150	
E13C8-PFOS	346688.4	13C4-PFOS	252737.4	1.372	9.019	11.468	127	50-150	
E13C9-PFNA	587398.8	13C4-PFOS	252737.4	2.324	9.434	12.227	130	50-150	
E13C6-PFDA	763861.0	13C2-PFDA	306152.8	2.495	9.434	10.986	116	50-150	
Ed3-NMeFOSAA	65481.4	13C2-PFDA	306152.8	0.214	9.434	7.284	77	50-150	
E13C7-PFUnDA	321224.6	13C2-PFDA	306152.8	1.049	9.434	11.494	122	50-150	
Ed5-NEtFOSAA	56608.0	13C2-PFDA	306152.8	0.185	9.434	7.381	78	50-150	
E13C2-PFDoDA	696123.6	13C2-PFDA	306152.8	2.274	9.434	11.139	118	50-150	
E13C2-PFTeDA	492158.9	13C2-PFDA	306152.8	1.608	9.434	10.648	113	50-150	

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

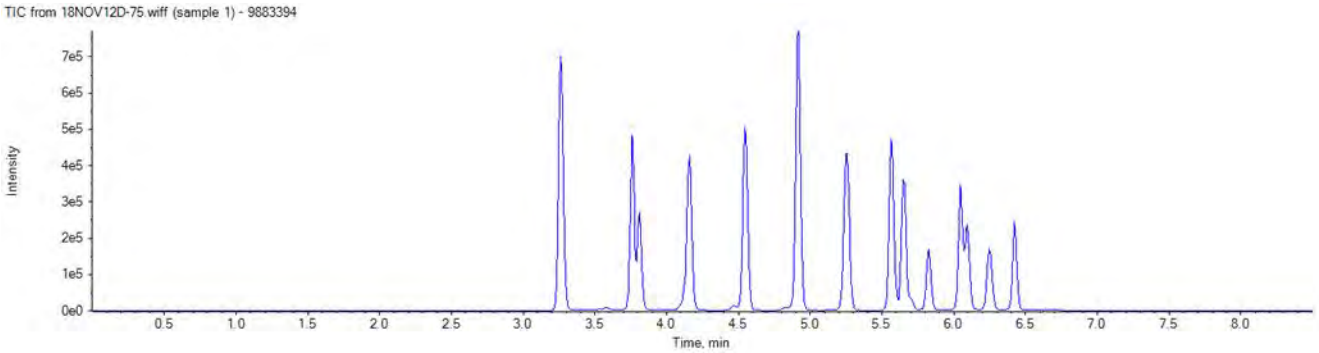
Analyte Quantitation Peak Table

Sample Name: 9883394 **Instrument Name:** LM27631 **File Name:** 18NOV12D-75.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.81	1.000	18147.9		A	13C3-PFBS	3.81	538457.4	0.034	0.302
PFHxA	4.16	1.000	141790.2		M	13C5-PFHxA	4.16	850621.5	0.167	1.313
PFHpA	4.55	1.000	36626.0		M	13C4-PFHpA	4.55	651444.2	0.056	0.352
PFHxS	4.55	1.000	122990.7		M	13C3-PFHxS	4.55	398292.9	0.309	2.825
PFOA	4.91	1.000	98289.4		M	13C8-PFOA	4.91	1144453.6	0.086	0.865
PFOS	5.25	1.000	16330.4		M	13C8-PFOS	5.25	346688.4	0.047	0.389
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	587398.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	763861.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	65481.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	321224.6	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	56608.0	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	696123.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	696123.6	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	492158.9	N/A	

Total Ion Chromatogram

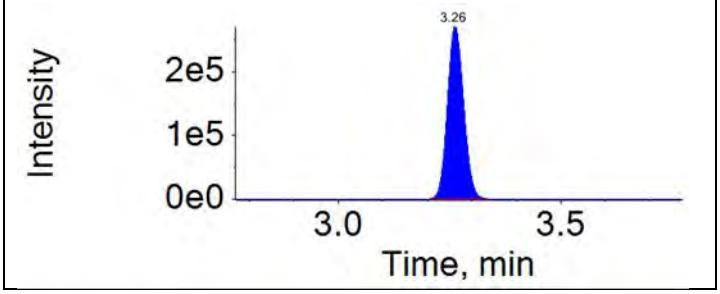


APPROVED
By JPT at 4:11 pm, 11/13/18

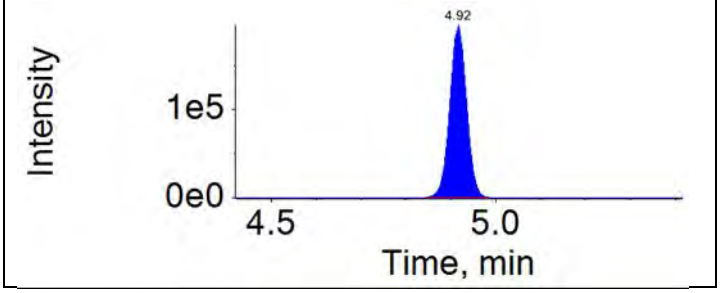
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

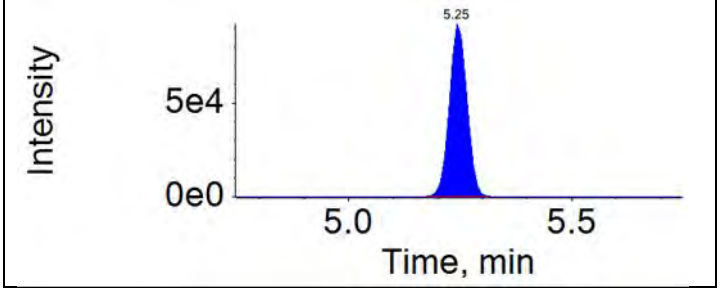
Injection Standard: 13C3-PFBA
216.0 / 172.0



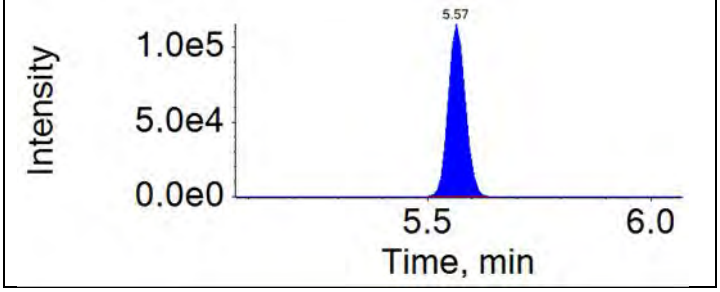
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



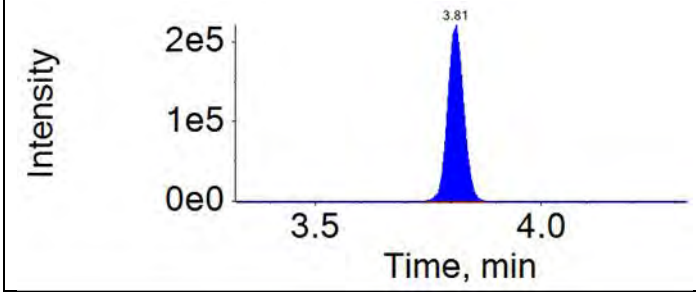
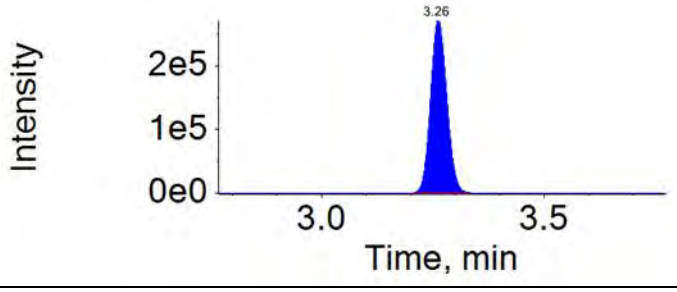
Injection Standard: 13C2-PFDA
515.0 / 470.0

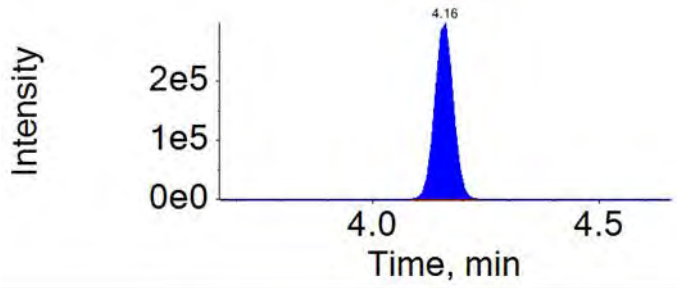
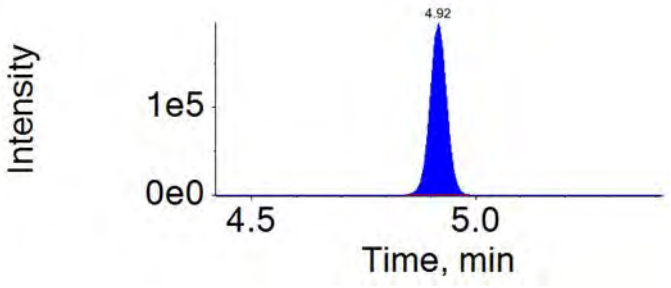


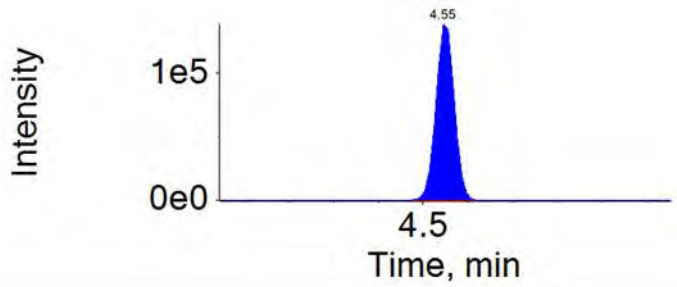
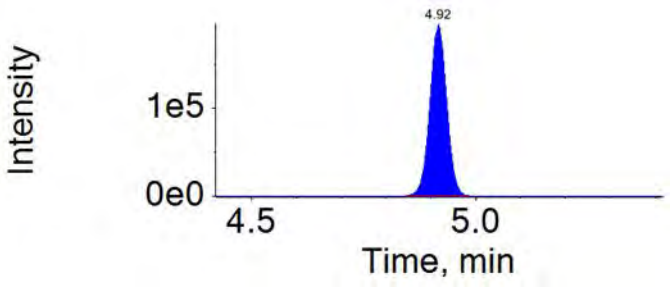
APPROVED
By JPT at 4:11 pm, 11/13/18

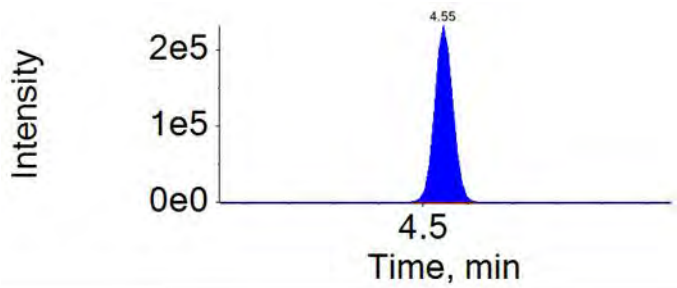
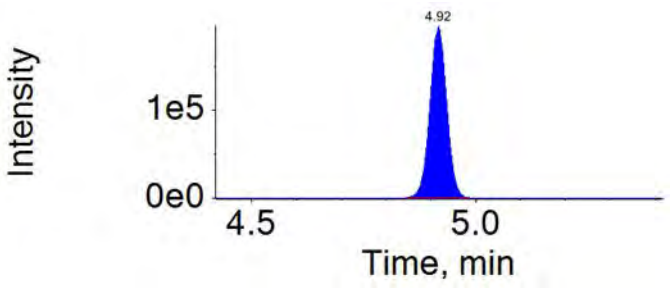
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

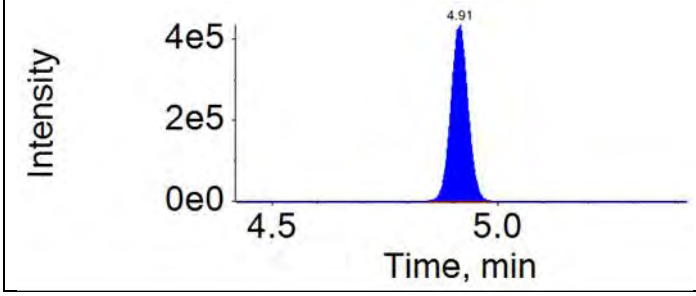
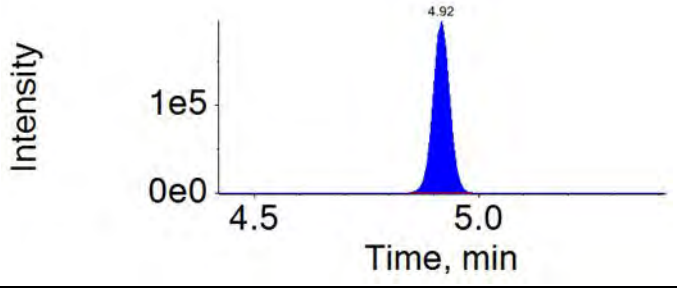
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

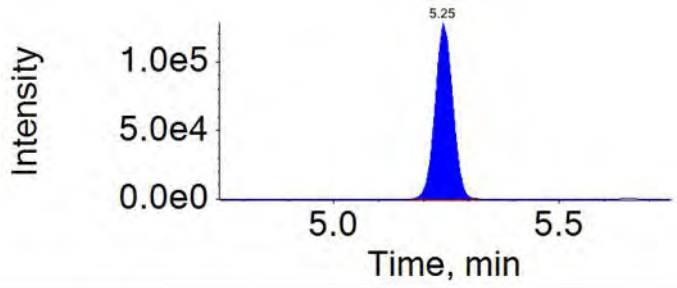
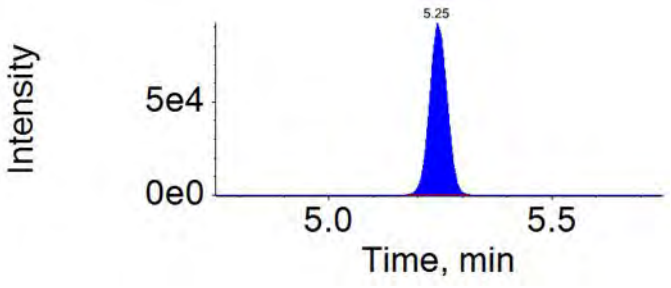
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

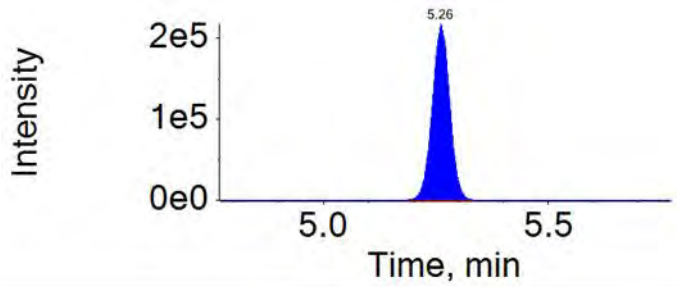
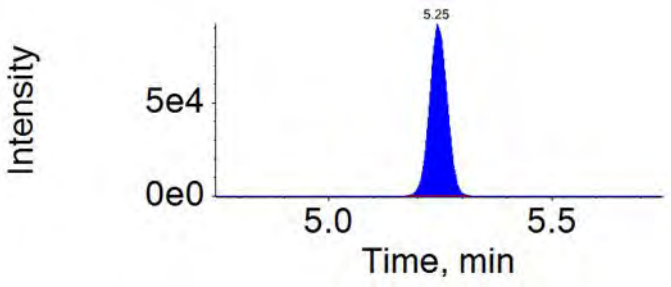
APPROVED
By JPT at 4:11 pm, 11/13/18

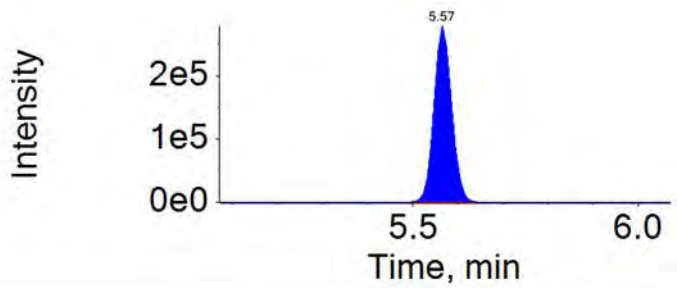
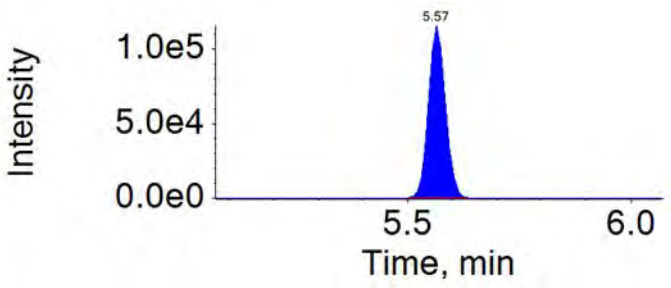
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

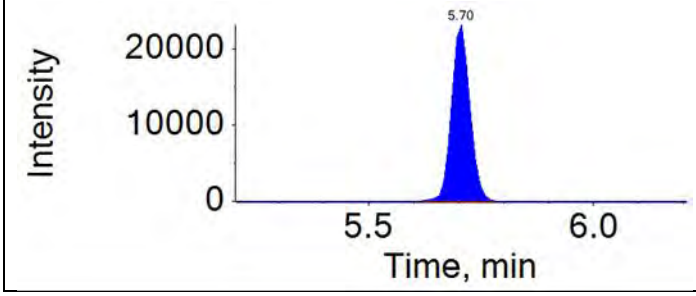
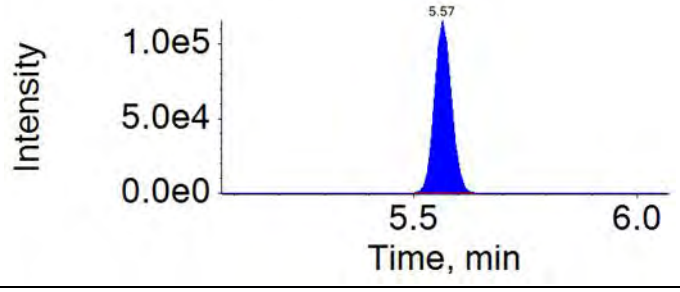
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

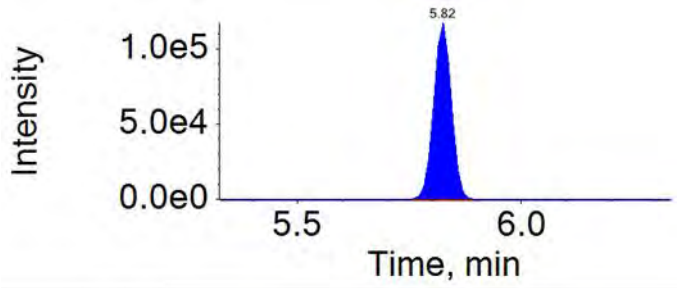
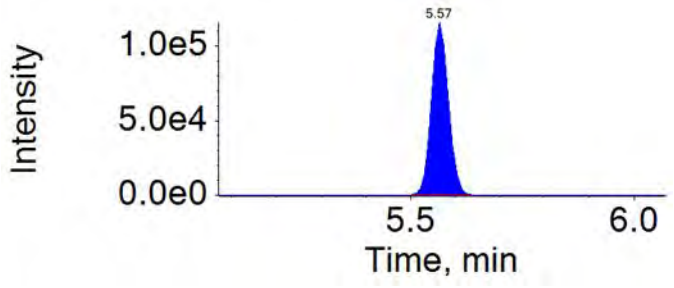
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

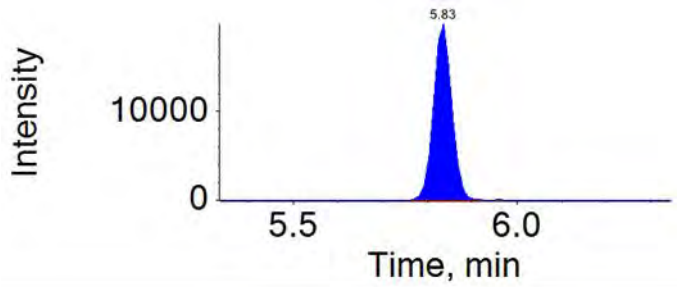
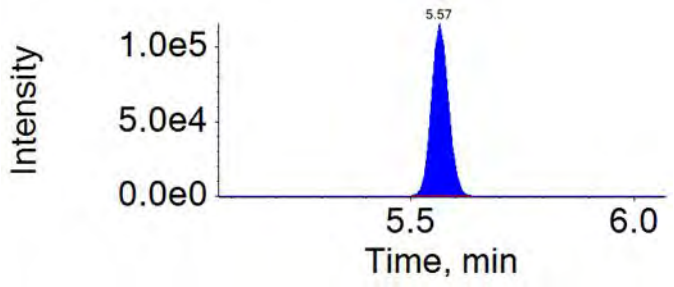
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

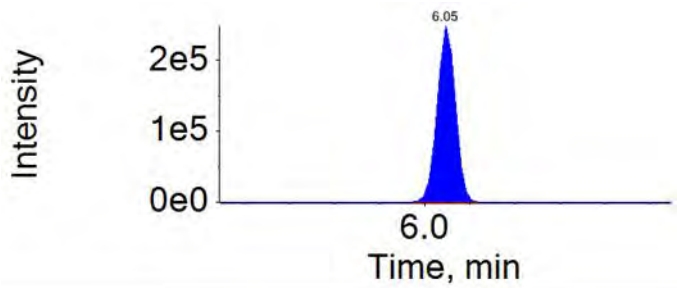
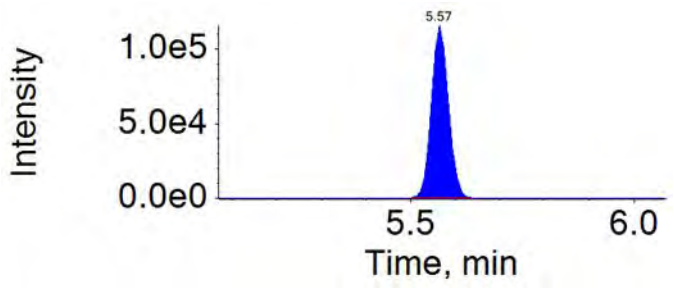
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

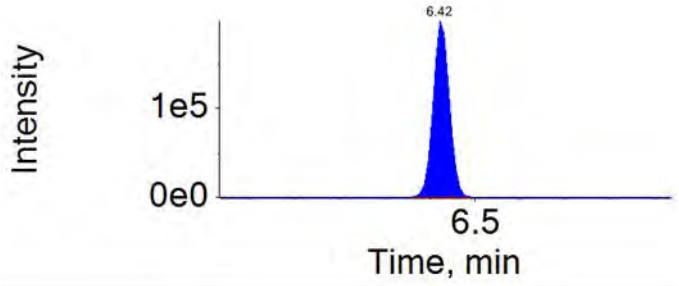
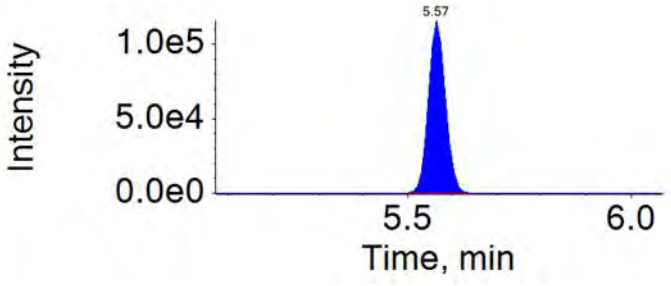
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

APPROVED
By JPT at 4:11 pm, 11/13/18

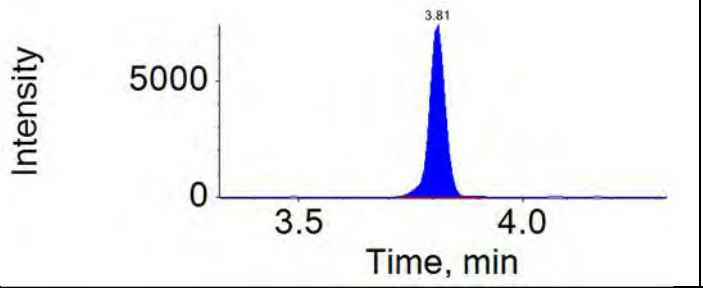
REVIEWED
By umar at 5:37 pm, 11/13/18

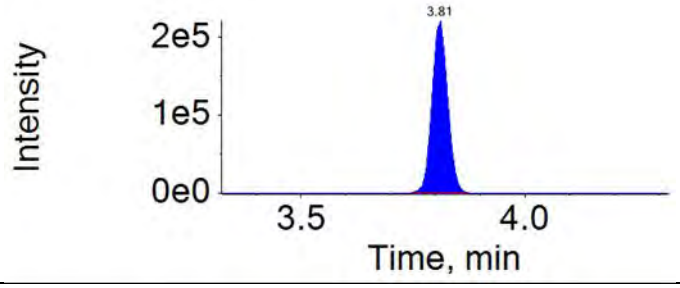
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

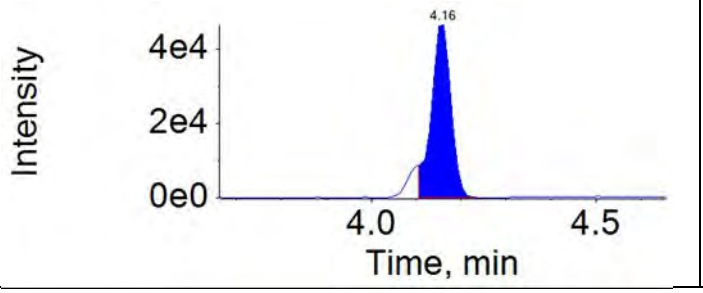
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

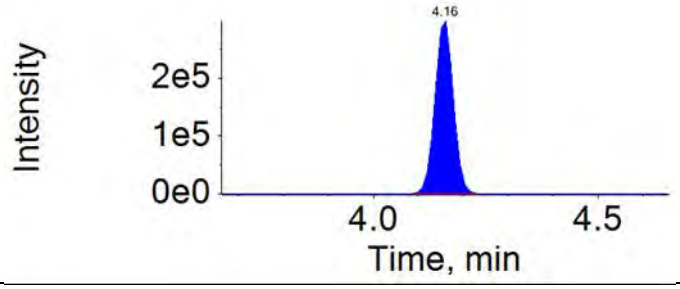
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



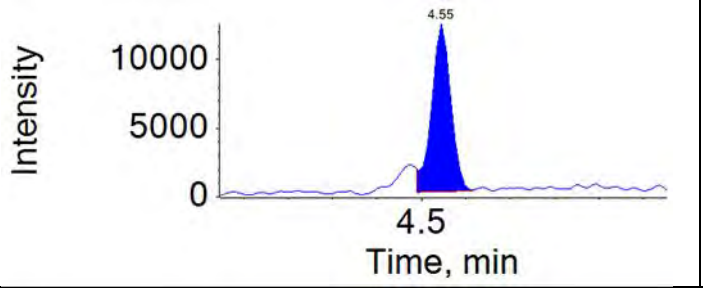


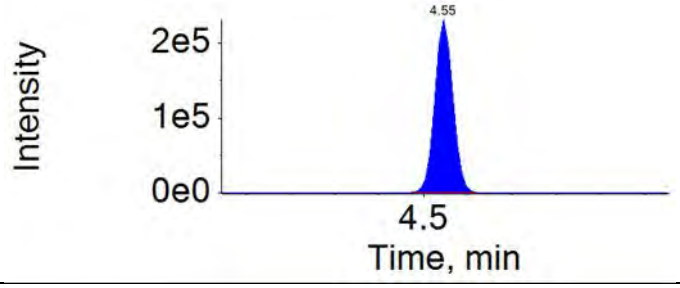
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



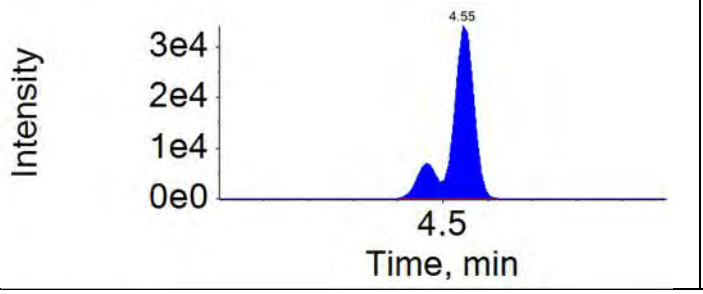


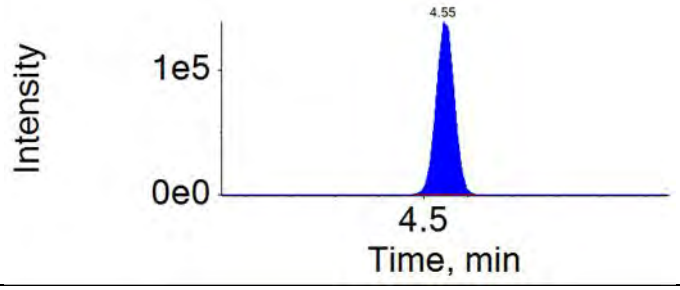
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



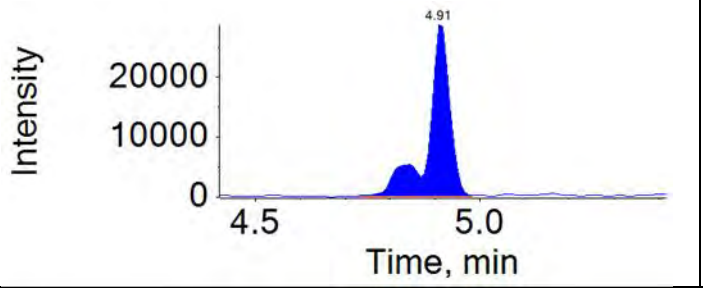


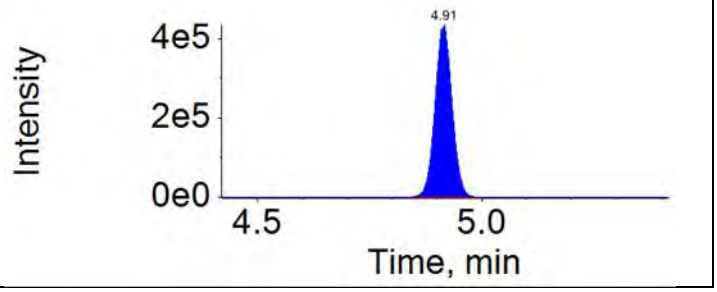
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

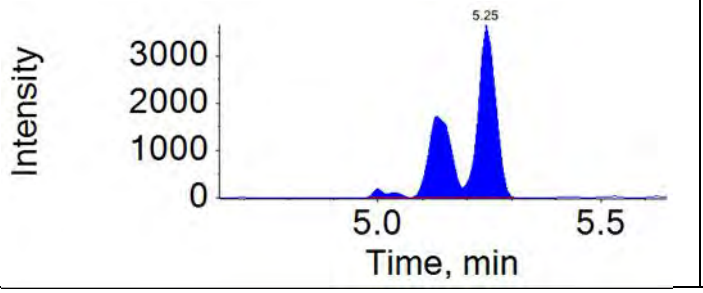
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

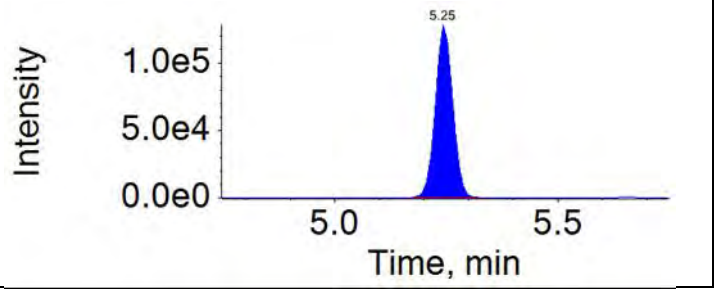
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



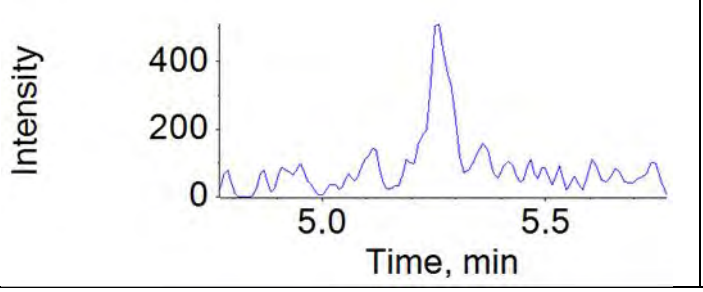


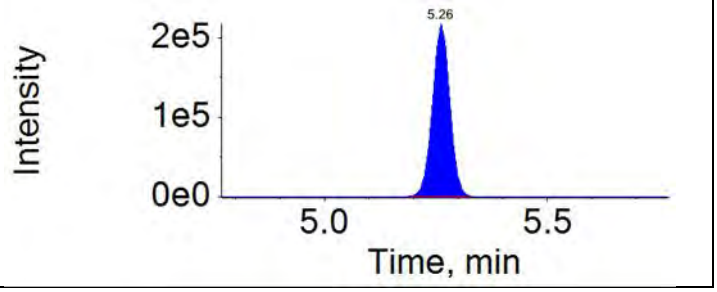
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



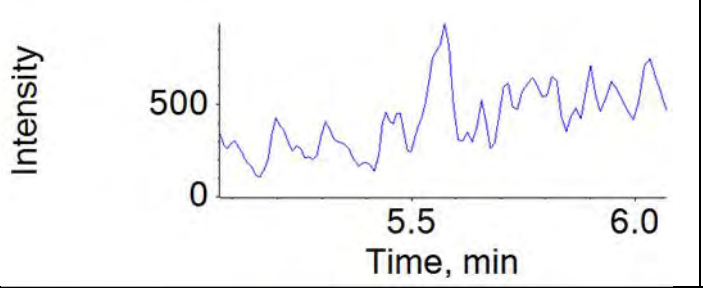


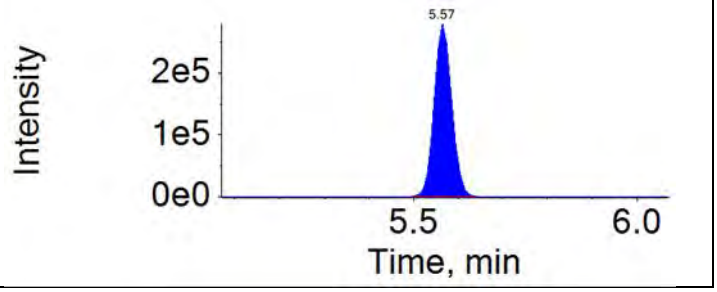
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



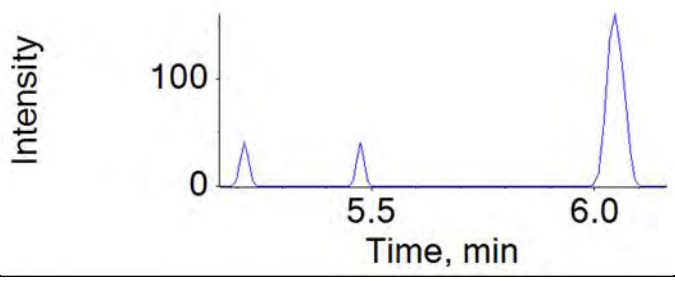


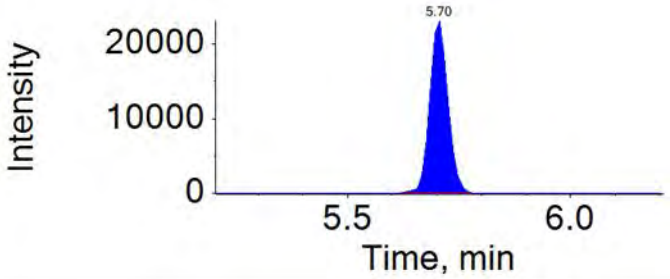
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

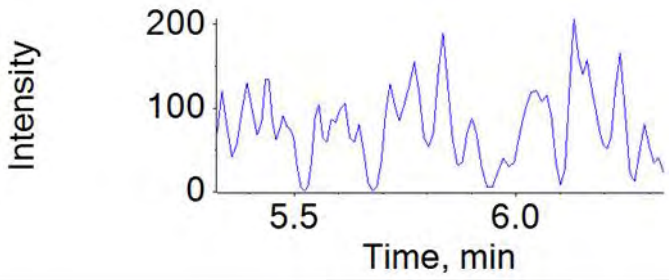
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

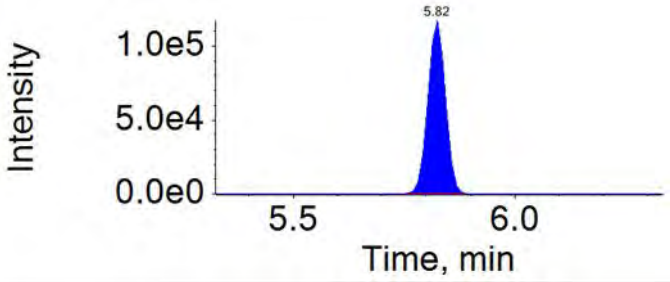
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



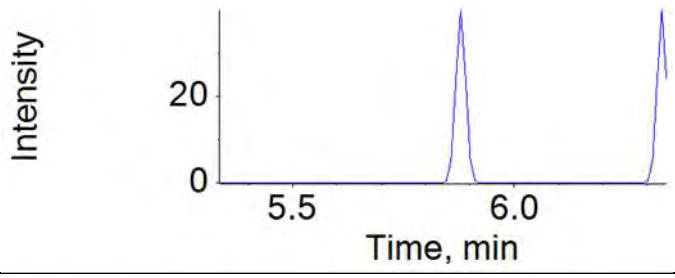


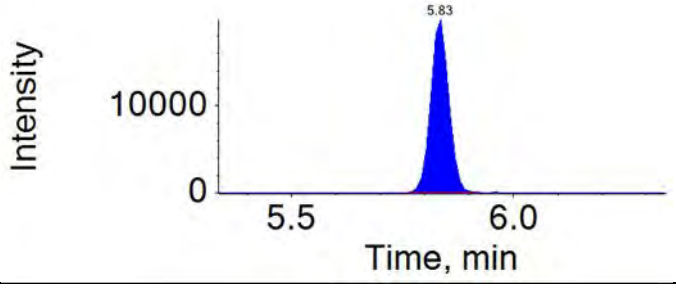
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



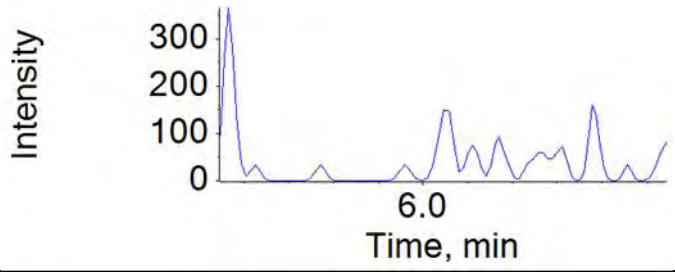


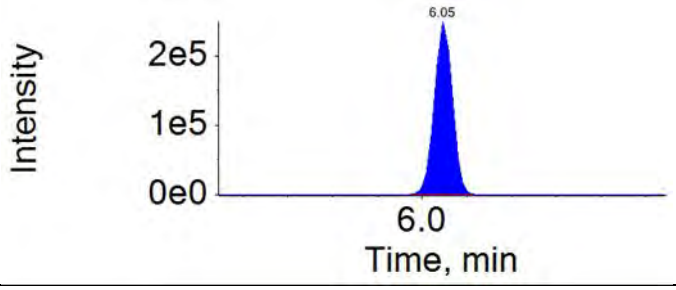
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



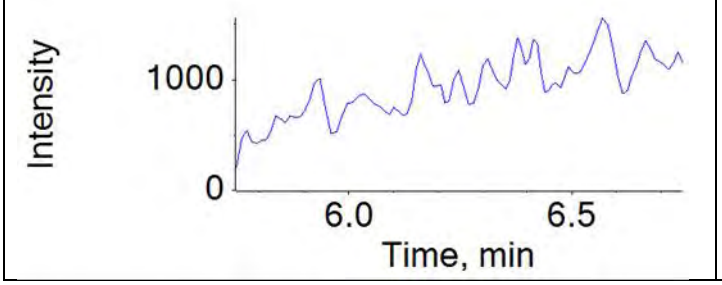


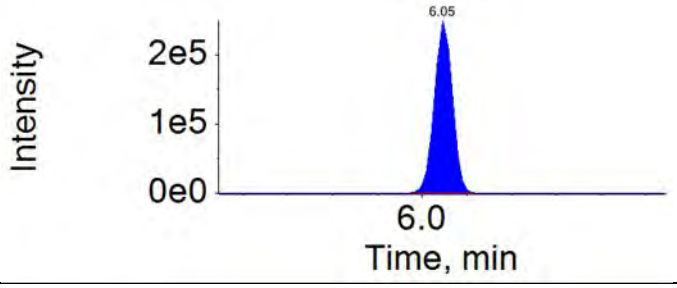
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

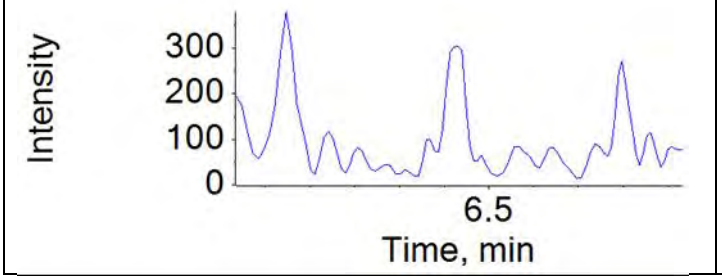
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

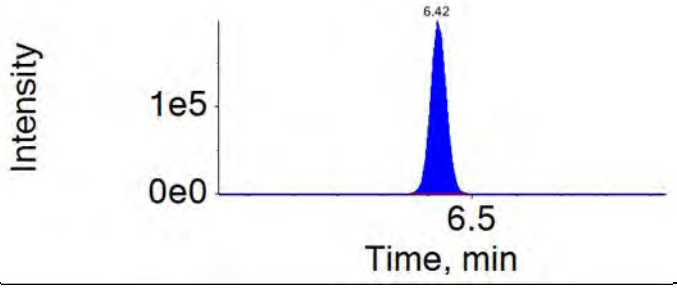
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





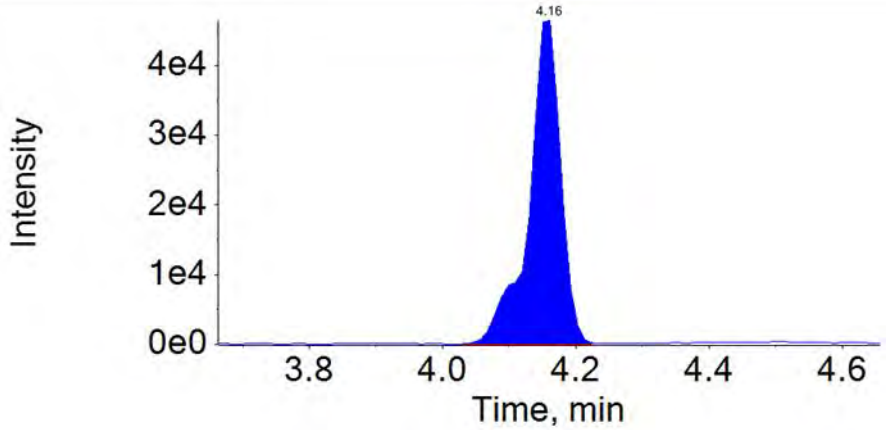
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





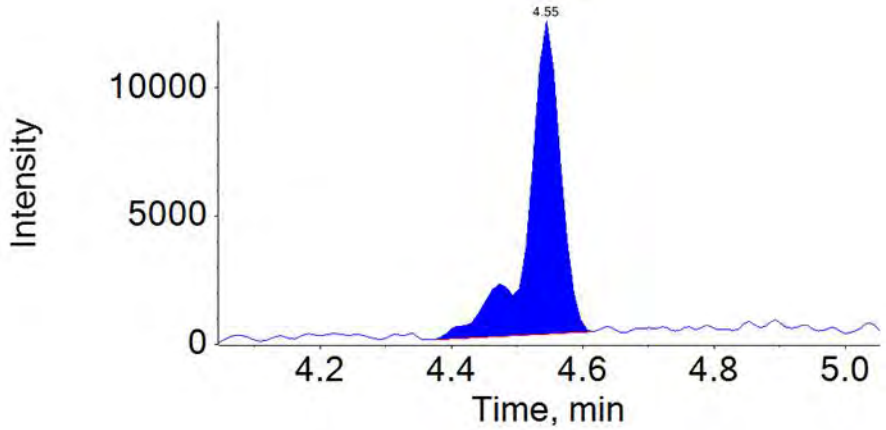
Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxA
RT (min.):
4.16
Peak Area:
156313.8
Mass Range:
313.0 / 269.0
File Name:
18NOV12D-75.wiff
Sample Name:
9883394



Integration Comment: incorrect integration

Component Name:
PFHpA
RT (min.):
4.55
Peak Area:
42871.4
Mass Range:
363.0 / 319.0
File Name:
18NOV12D-75.wiff
Sample Name:
9883394



Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
102086.4
Mass Range:
399.0 / 80.0
File Name:
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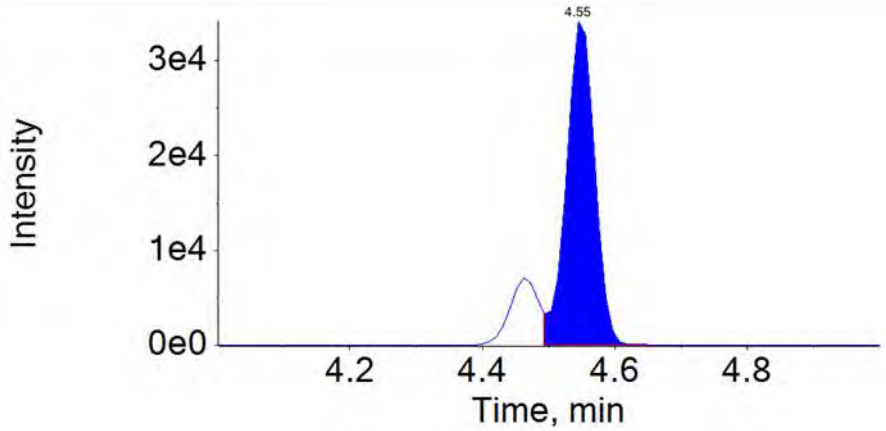
Sample Name:
9883394



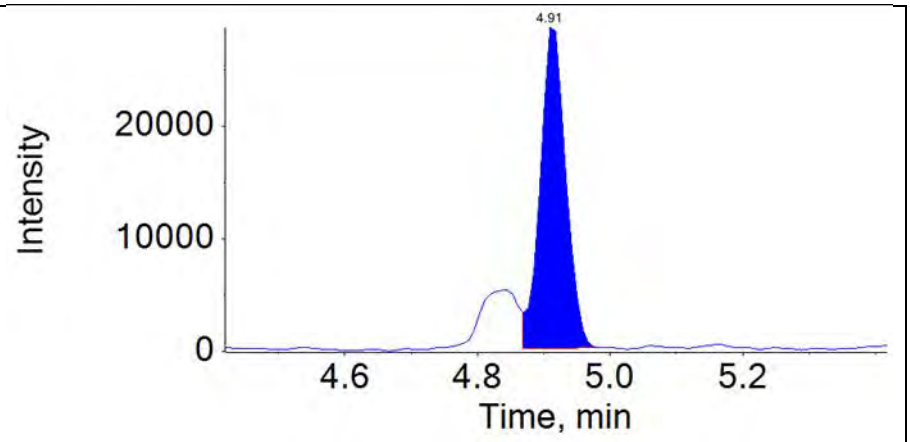
Integration Comment: incorrect integration

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

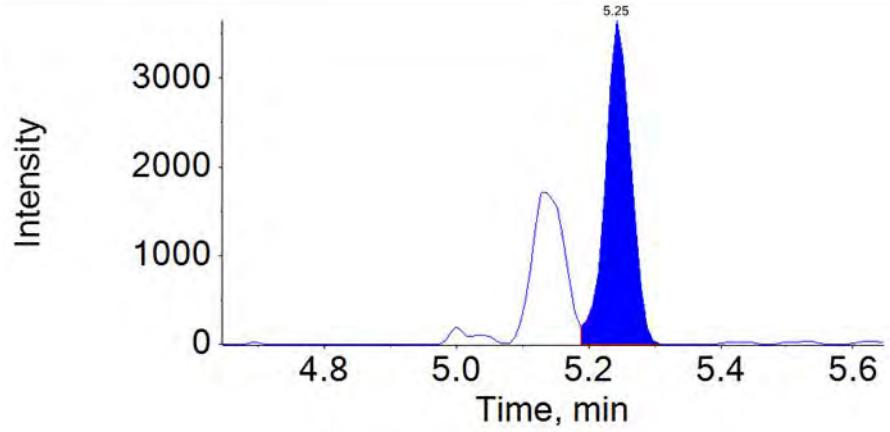
Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
76410.9
Mass Range:
413.0 / 369.0
File Name:
18NOV12D-75.wiff
Sample Name:
9883394



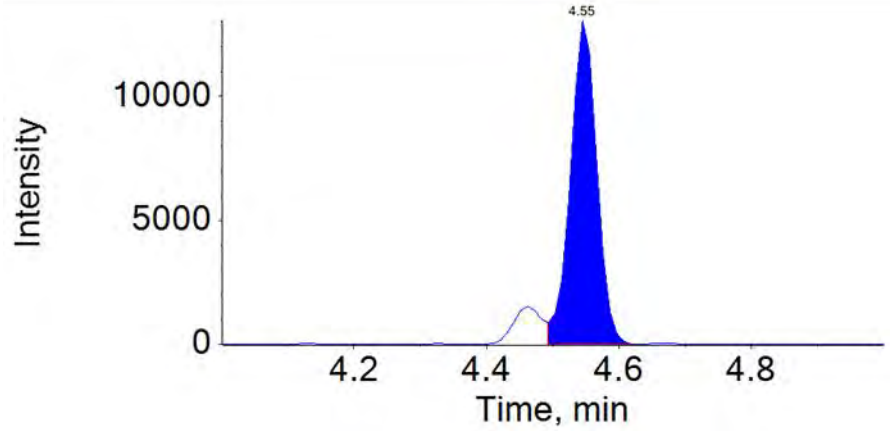
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
9811.4
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-75.wiff
Sample Name:
9883394



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
36139.4
Mass Range:
399.0 / 99.0
File Name:
18NOV12D-75.wiff
Sample Name:
9883394



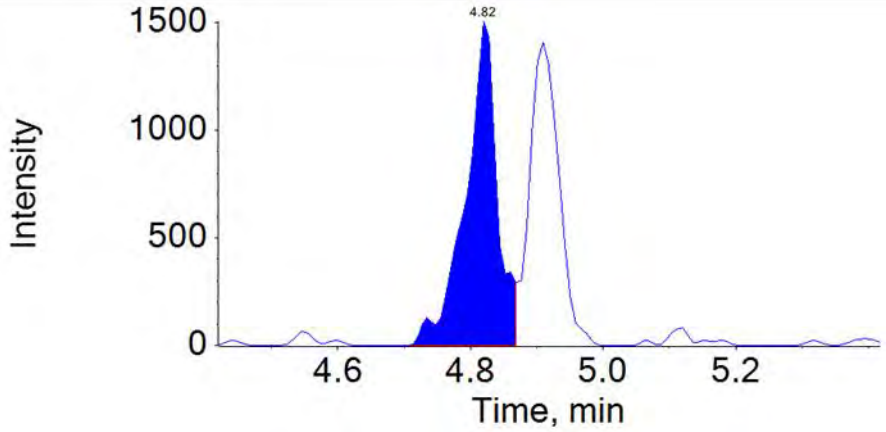
Integration Comment: incorrect integration

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

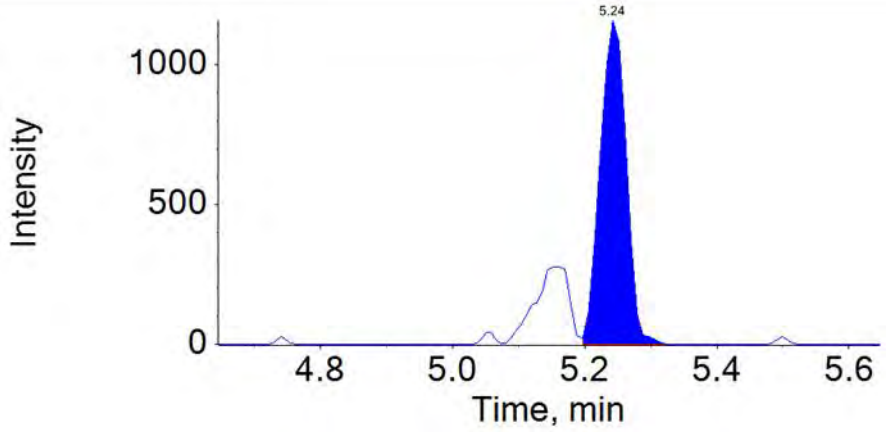
Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOA_2
RT (min.):
4.82
Peak Area:
4966.8
Mass Range:
413.0 / 169.0
File Name:
18NOV12D-75.wiff
Sample Name:
9883394



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
3180.0
Mass Range:
499.0 / 99.0
File Name:
18NOV12D-75.wiff
Sample Name:
9883394



Integration Comment: incorrect integration

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

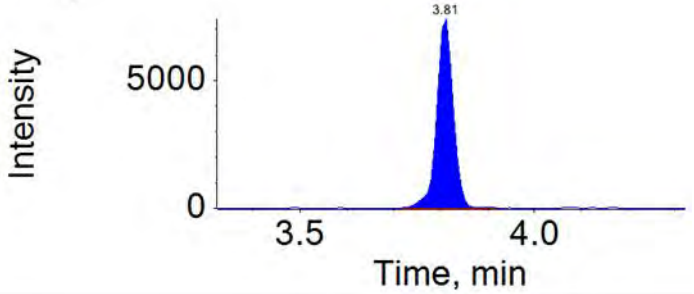
Sample Name: 9883394 **Instrument Name:** LM27631 **File Name:** 18NOV12D-75.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	18147.9	A	N/A	1.0000			
PFBS_2	3.81	1.00	5530.3	A	N/A	0.3047	-16	50	
PFHxA	4.16	1.00	141790.2	M	N/A	1.0000			
PFHxA_2	4.15	1.00	1582.7	A	N/A	0.0112	-5	50	
PFHpA	4.55	1.00	36626.0	M	N/A	1.0000			
PFHpA_2	4.55	1.00	1864.4	A	N/A	0.0509	-10	50	
PFHxS	4.55	1.00	122990.7	M	N/A	1.0000			
PFHxS_2	4.55	1.00	40698.5	M	N/A	0.3309	9	50	
PFOA	4.91	1.00	98289.4	M	N/A	1.0000			
PFOA_2	4.87	0.99	9272.4	M	N/A	0.0943	66	50	OOS
PFOS	5.25	1.00	16330.4	M	N/A	1.0000			
PFOS_2	5.24	1.00	4250.2	M	N/A	0.2603	1	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

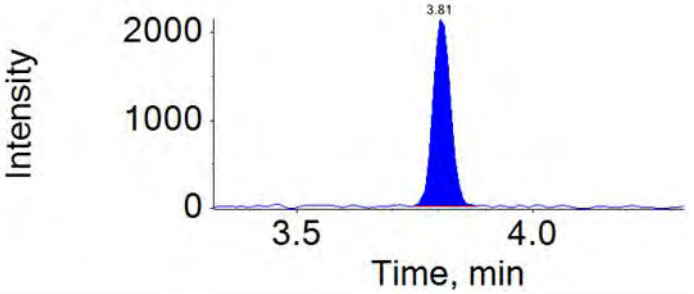
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

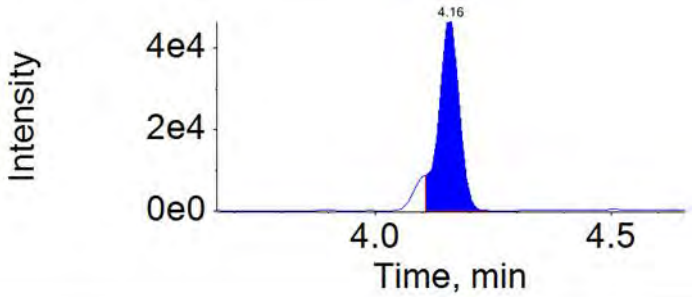
Component: PFBS
Primary Mass: 299.0 / 80.0



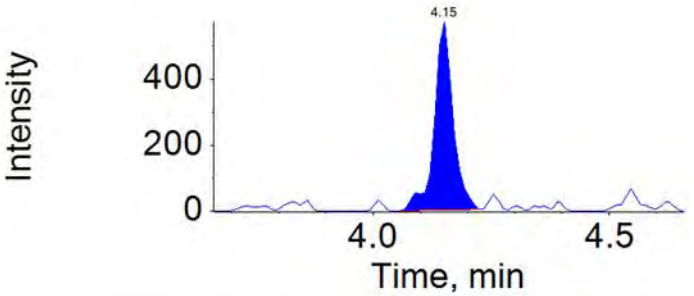
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



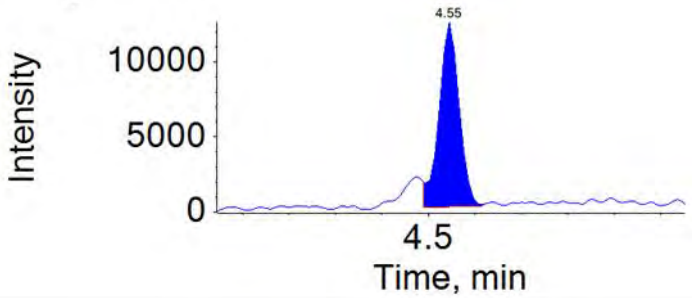
Component: PFHxA
Primary Mass: 313.0 / 269.0



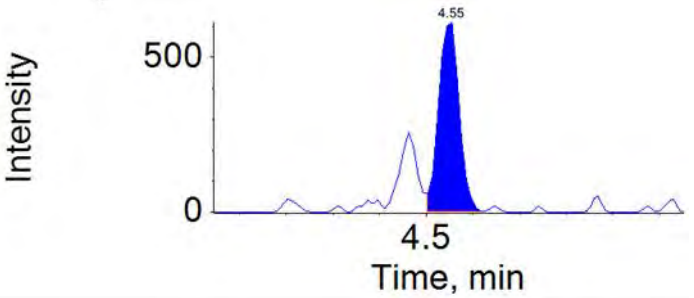
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



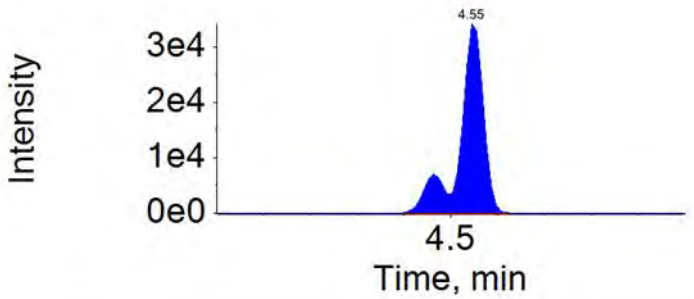
Component: PFHpA
Primary Mass: 363.0 / 319.0



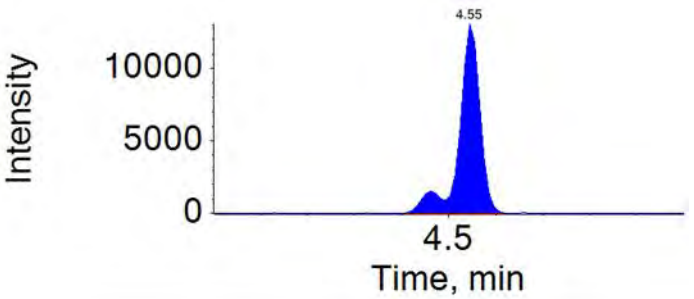
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



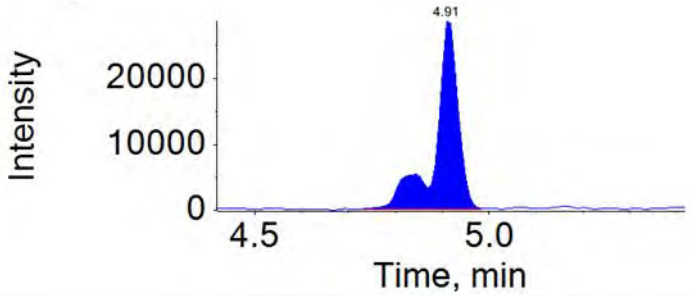
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



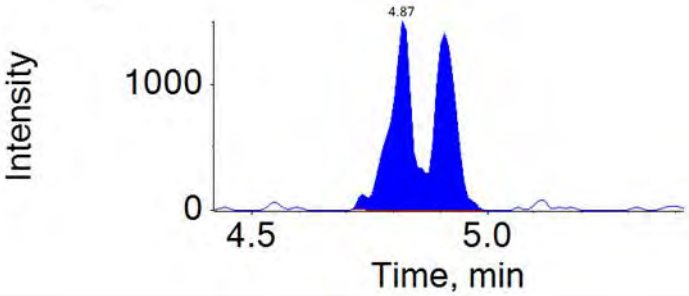
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

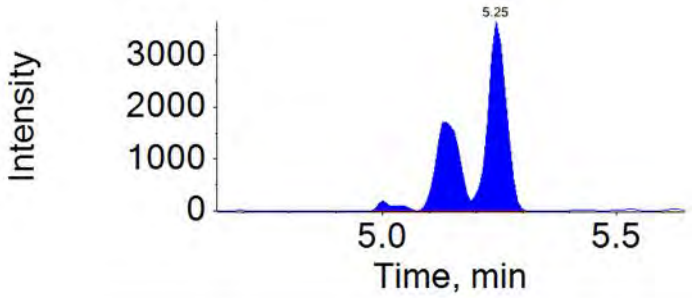
Component: PFOA
Primary Mass: 413.0 / 369.0



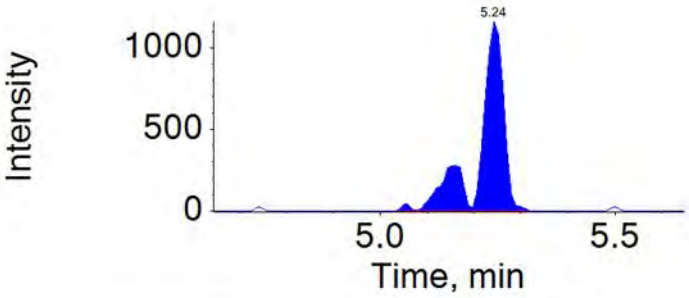
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



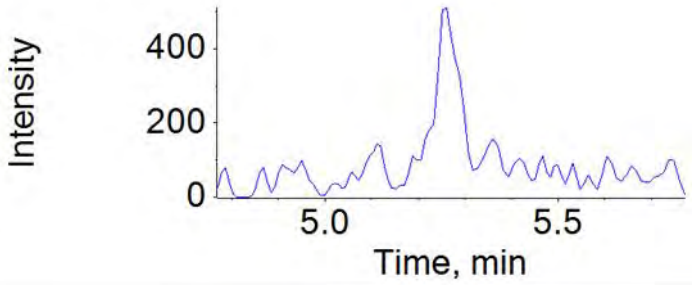
Component: PFOS
Primary Mass: 499.0 / 80.0



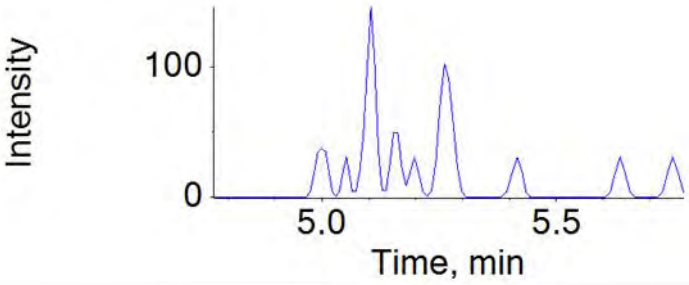
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



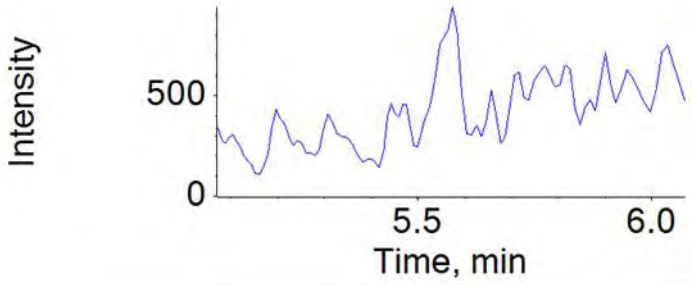
Component: PFNA
Primary Mass: 463.0 / 419.0



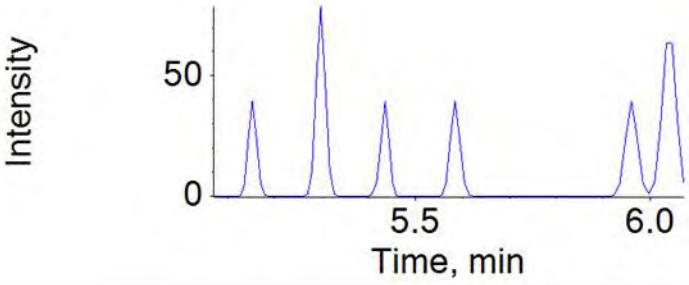
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



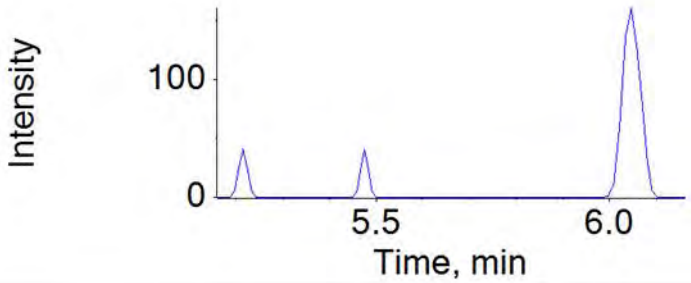
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



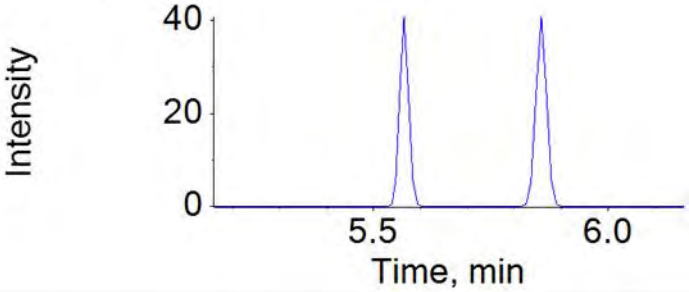
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

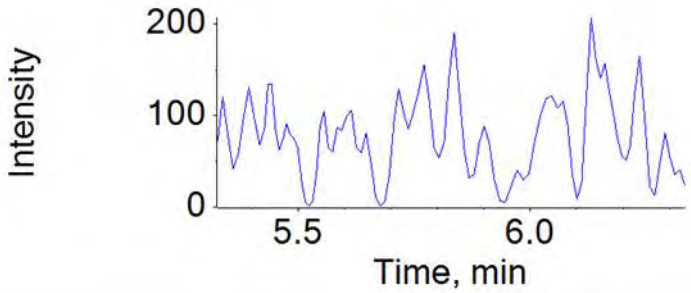
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



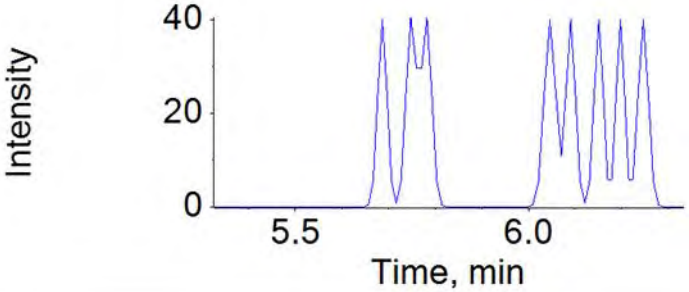
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



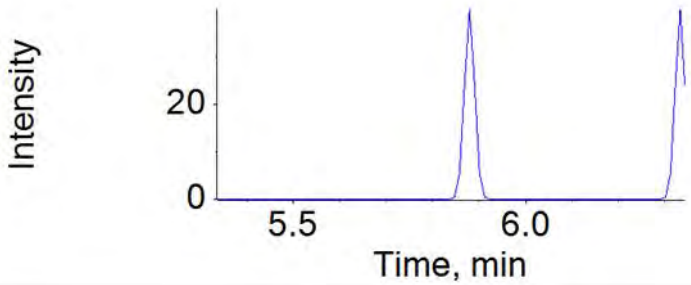
Component: PFUnDA
Primary Mass: 563.0 / 519.0



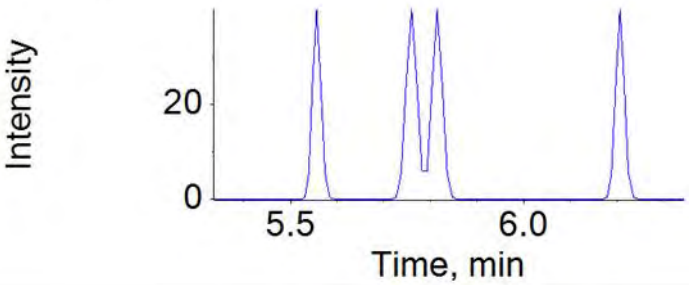
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



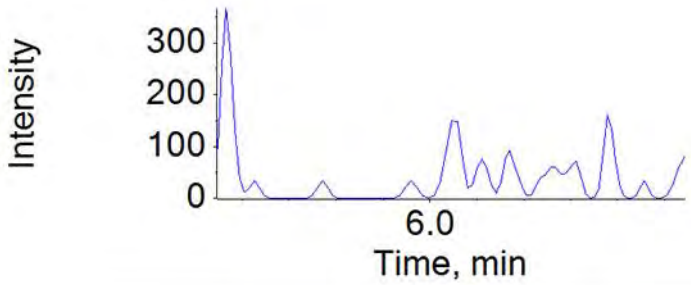
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



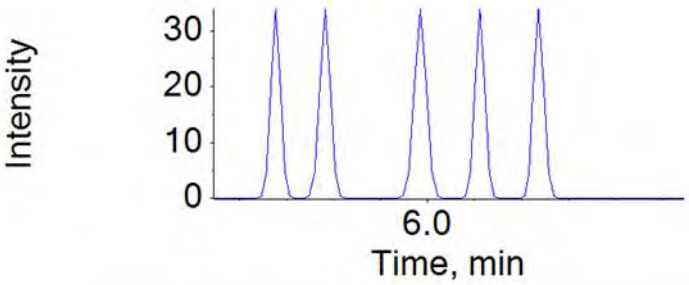
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



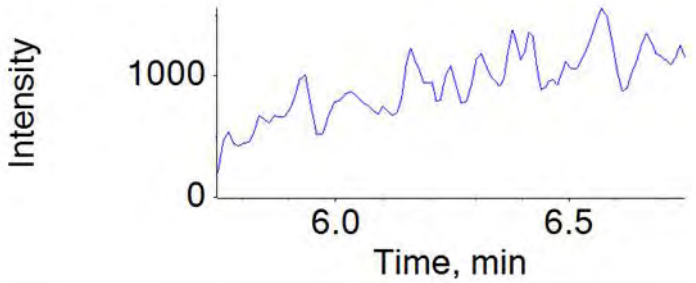
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



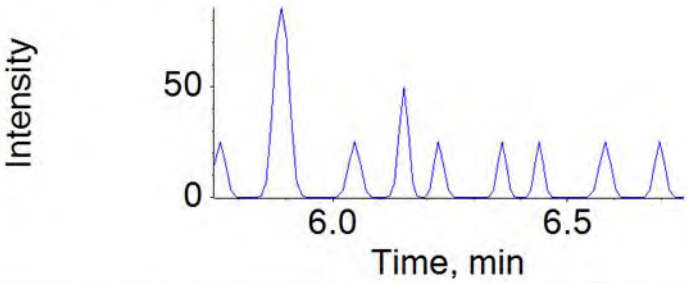
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

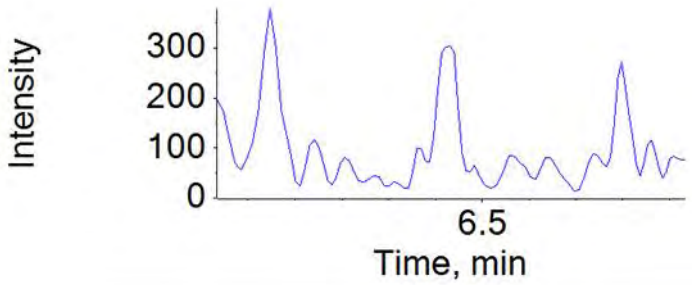
Component: PFTrDA
Primary Mass: 663.0 / 619.0



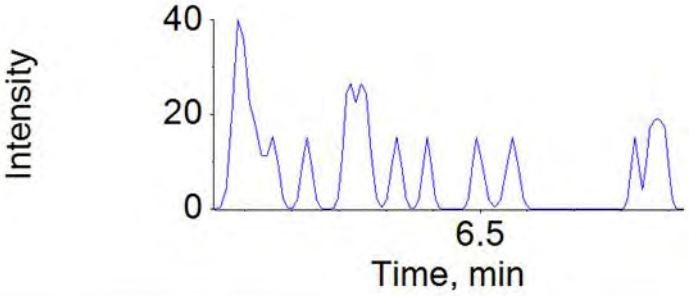
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883395			**Data File:**		18NOV08D-108.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-04-08 Grab Soil			**Acquis Date:**		2018-11-09T03:53:59
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	48			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		JPT12262
Sample Wt.:	1.04000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	907515.5	728839.7	25	50	
13C2-PFOA	5.0	633866.8	491983.1	29	50	
13C4-PFOS	4.8	375823.3	255568.1	47	50	
13C2-PFDA	5.0	387091.7	315407.5	23	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	359216.7	13C3-PFBA	907515.5	0.396	8.942	5.587	62	50-150	
E13C5-PFHxA	621994.5	13C2-PFOA	633866.8	0.981	9.615	6.941	72	50-150	
E13C3-PFHxS	305275.9	13C2-PFOA	633866.8	0.482	9.096	6.649	73	50-150	
E13C4-PFHpA	503632.1	13C2-PFOA	633866.8	0.795	9.615	6.951	72	50-150	
E13C8-PFOA	838334.1	13C2-PFOA	633866.8	1.323	9.615	7.093	74	50-150	
E13C8-PFOS	255404.3	13C4-PFOS	375823.3	0.680	9.192	5.779	63	50-150	
E13C9-PFNA	462126.6	13C4-PFOS	375823.3	1.230	9.615	6.459	67	50-150	
E13C6-PFDA	567777.9	13C2-PFDA	387091.7	1.467	9.615	7.094	74	50-150	
Ed3-NMeFOSAA	56644.3	13C2-PFDA	387091.7	0.146	9.615	5.233	54	50-150	
E13C7-PFUnDA	254086.2	13C2-PFDA	387091.7	0.656	9.615	7.282	76	50-150	
Ed5-NEtFOSAA	44662.2	13C2-PFDA	387091.7	0.115	9.615	5.135	53	50-150	
E13C2-PFDoDA	514559.2	13C2-PFDA	387091.7	1.329	9.615	6.891	72	50-150	
E13C2-PFTeDA	351242.9	13C2-PFDA	387091.7	0.907	9.615	6.282	65	50-150	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

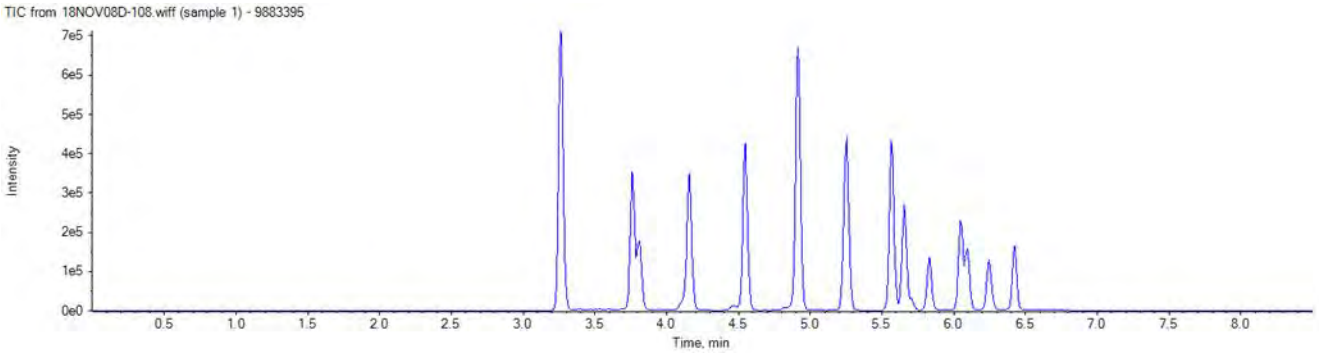
Analyte Quantitation Peak Table

Sample Name: 9883395 **Instrument Name:** LM27631 **File Name:** 18NOV08D-108.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.04000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.81	1.000	19954.8		A	13C3-PFBS	3.81	359216.7	0.056	0.539
PFHxA	4.16	1.000	151910.5		M	13C5-PFHxA	4.16	621994.5	0.244	2.014
PFHxS	4.55	1.000	116959.6		M	13C3-PFHxS	4.55	305275.9	0.383	3.735
PFHpA	4.54	1.000	31598.8		A	13C4-PFHpA	4.55	503632.1	0.063	0.406
PFOA	4.91	1.000	96600.2		M	13C8-PFOA	4.91	838334.1	0.115	1.248
PFOS	5.23	1.000	14106.9		M	13C8-PFOS	5.24	255404.3	0.055	0.551
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	462126.6	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	567777.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	56644.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	254086.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	44662.2	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	514559.2	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	514559.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	351242.9	N/A	

Total Ion Chromatogram

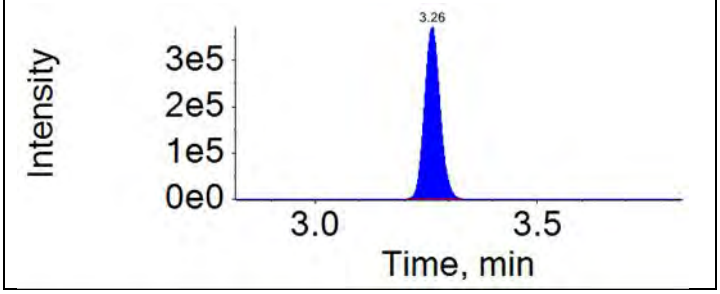


APPROVED
By JPT at 5:18 pm, 11/9/18

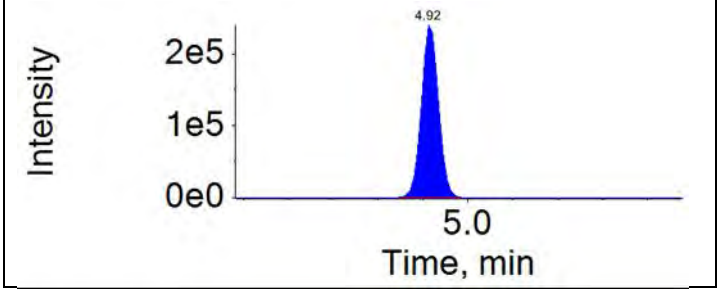
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

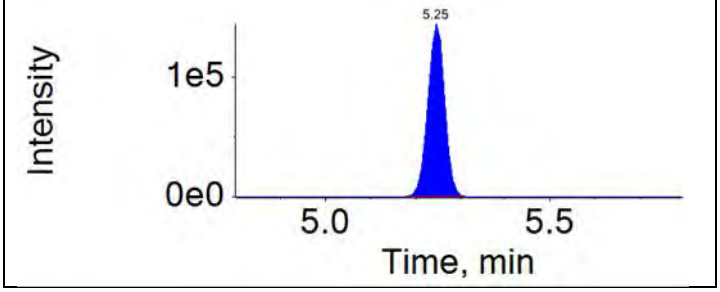
Injection Standard: 13C3-PFBA
216.0 / 172.0



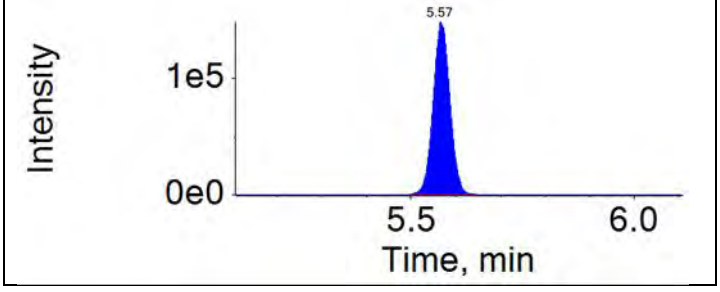
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

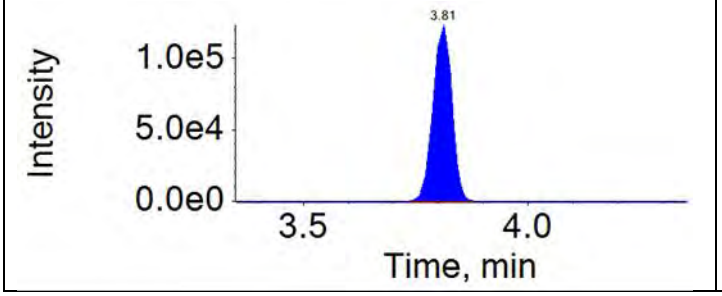


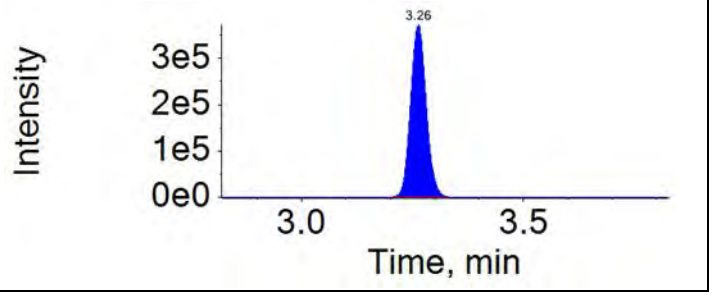
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

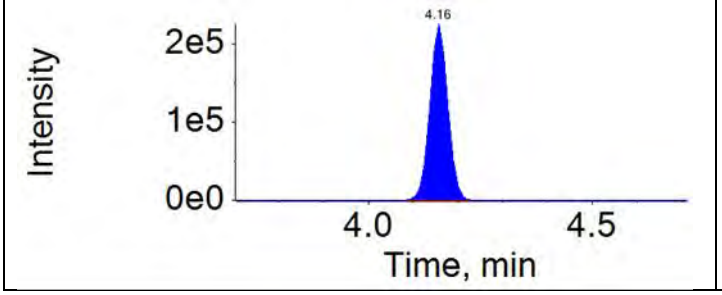
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

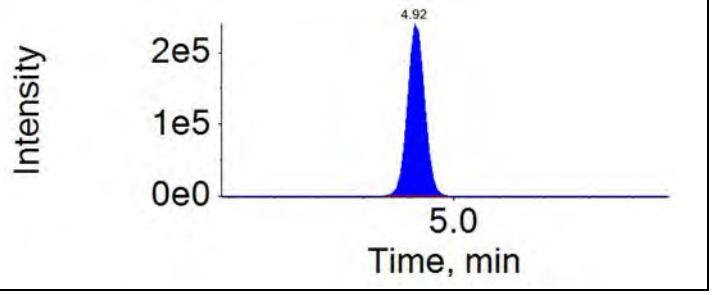
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



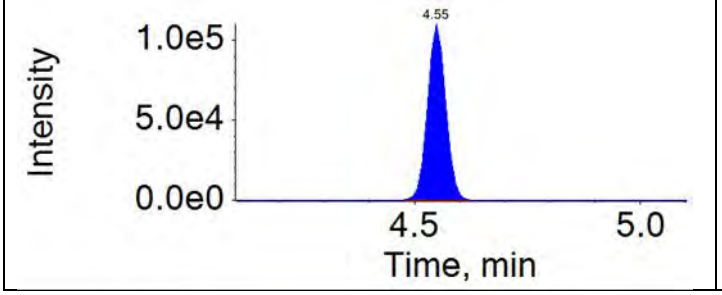


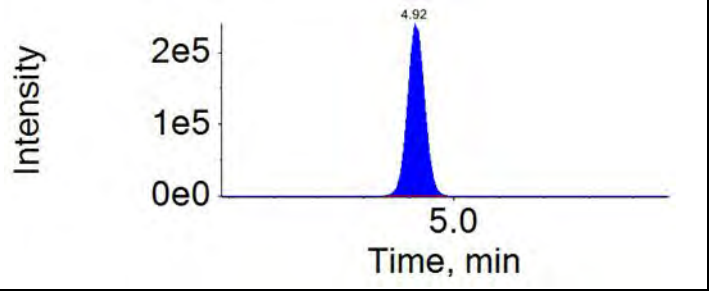
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



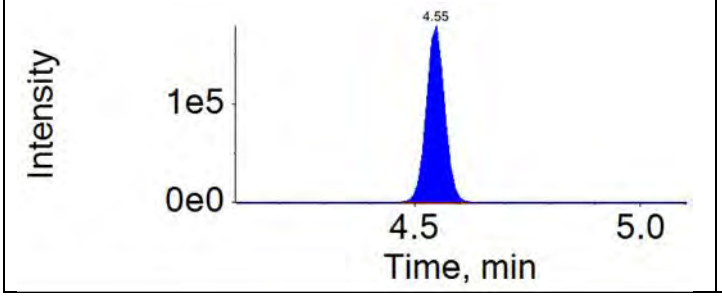


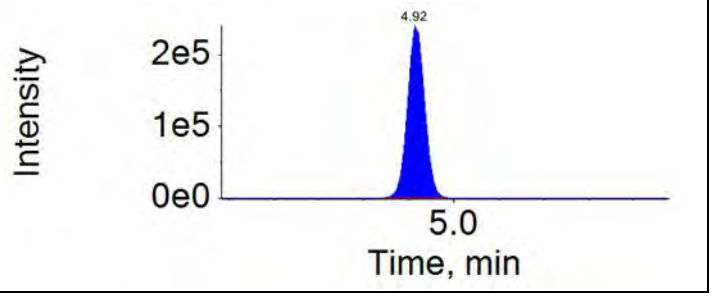
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

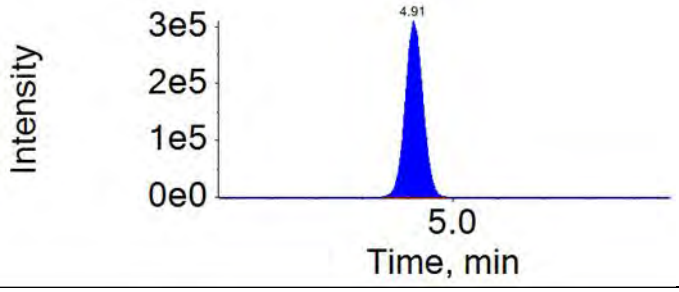
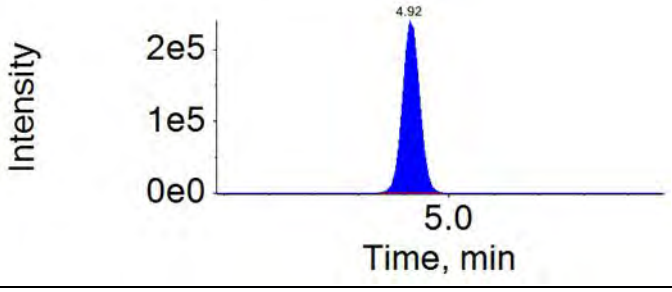


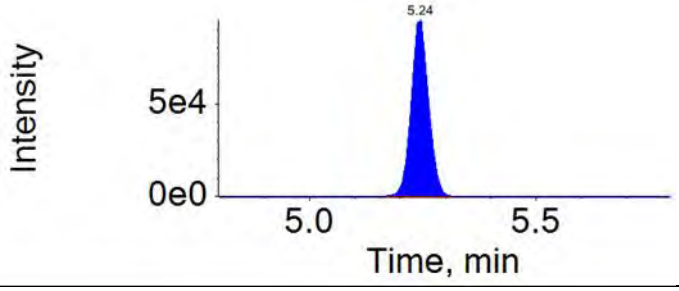
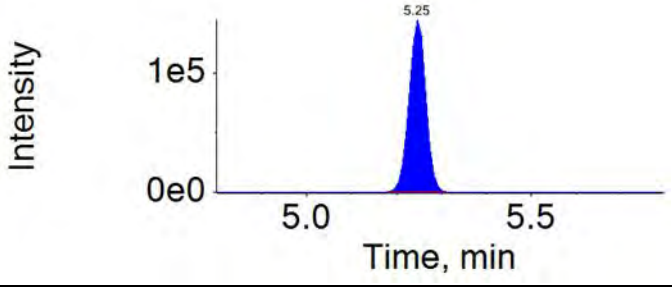


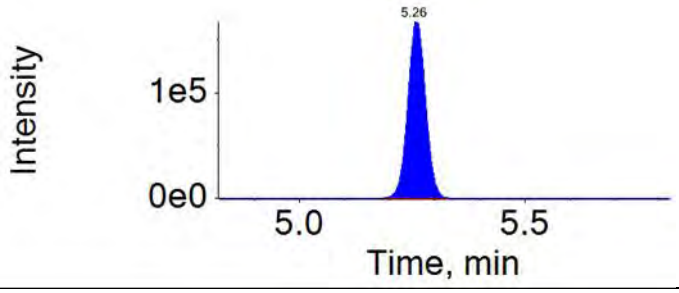
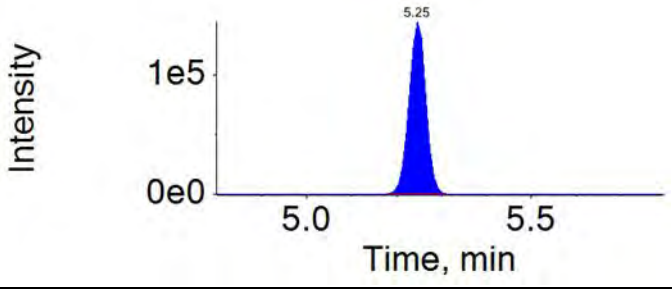
APPROVED
By JPT at 5:18 pm, 11/9/18

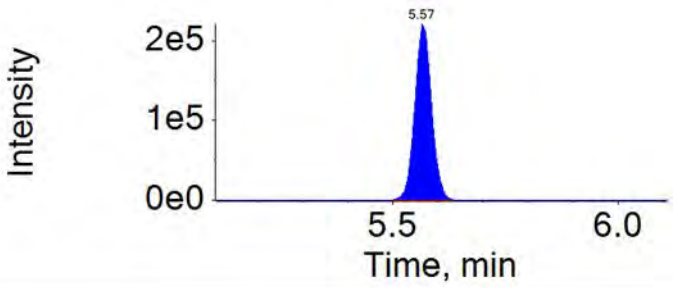
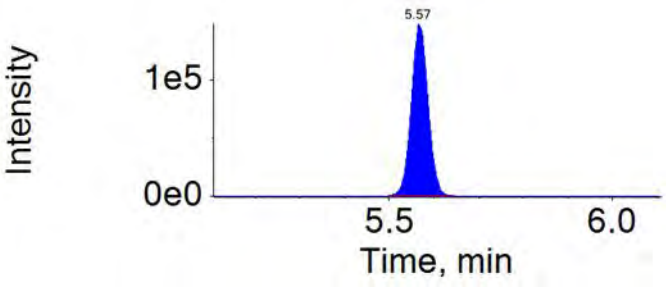
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

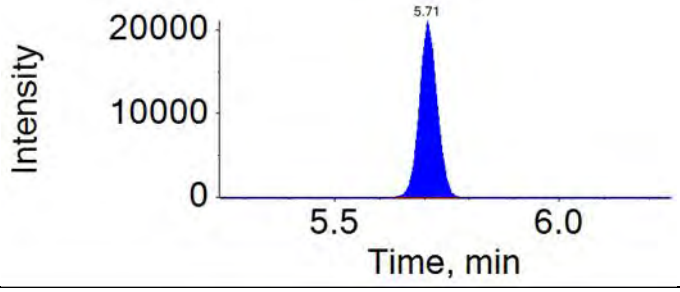
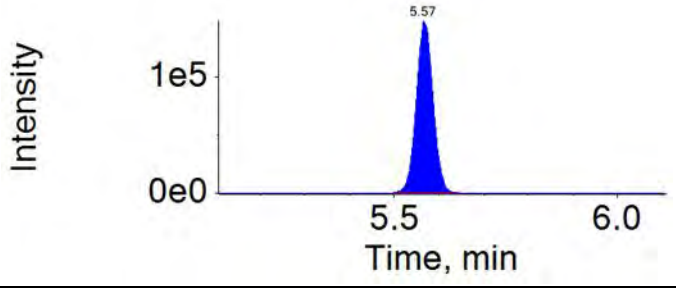
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

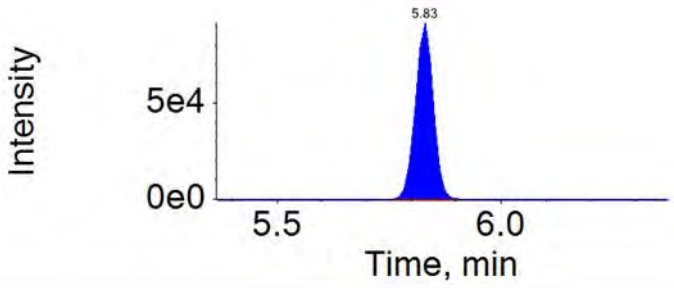
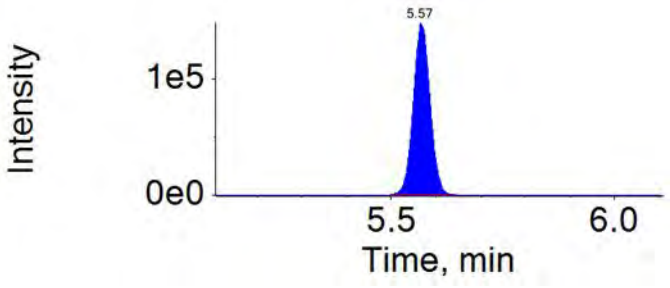
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

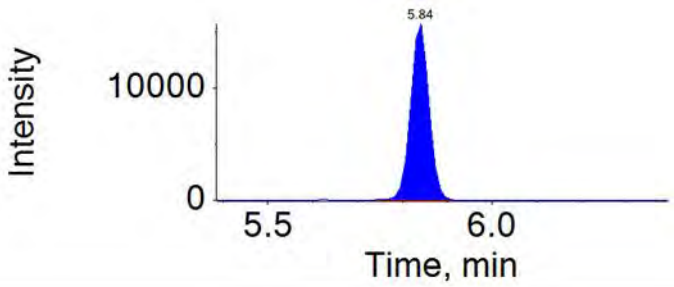
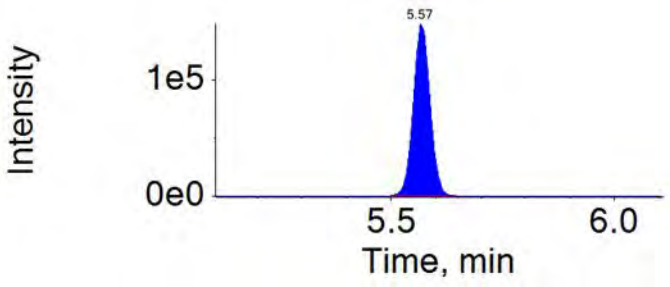
APPROVED
By JPT at 5:18 pm, 11/9/18

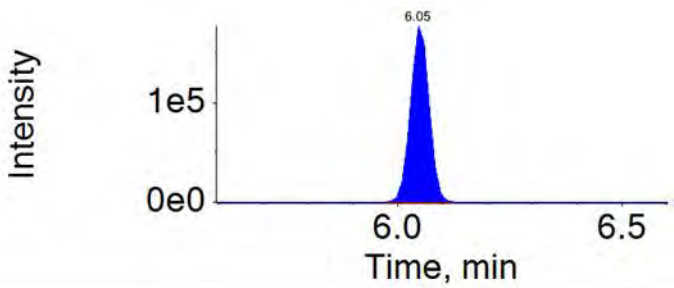
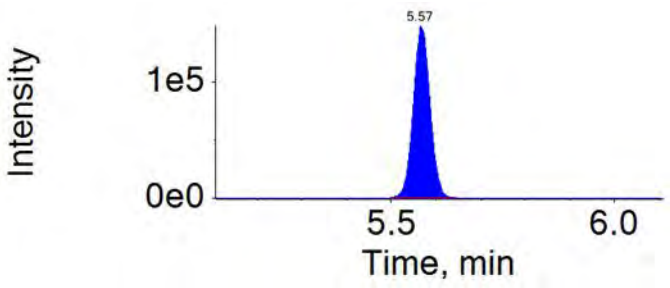
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

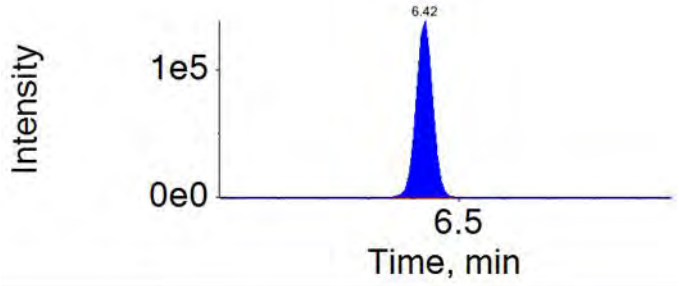
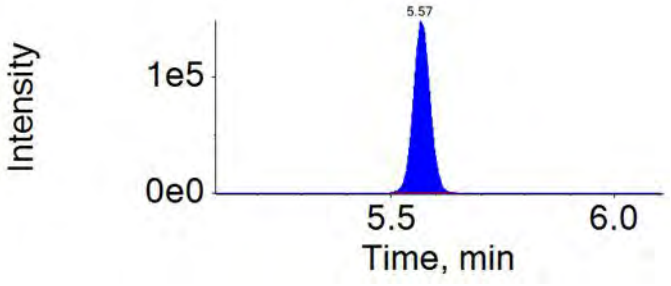
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

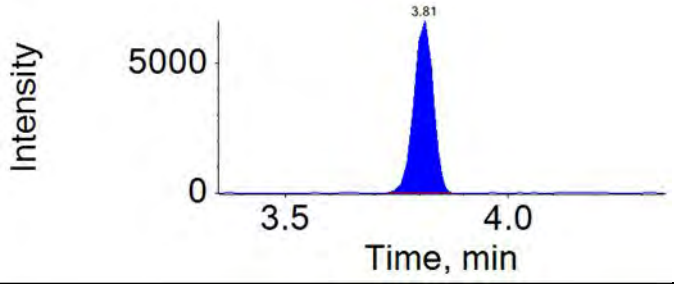
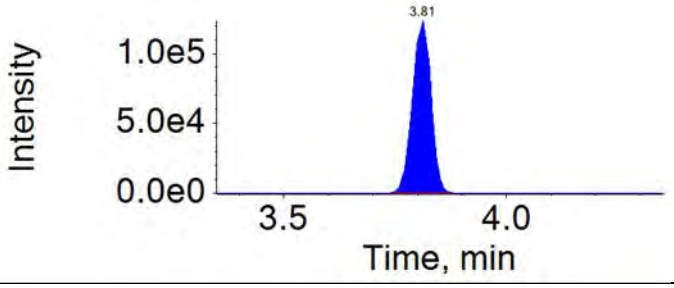
APPROVED
By JPT at 5:18 pm, 11/9/18

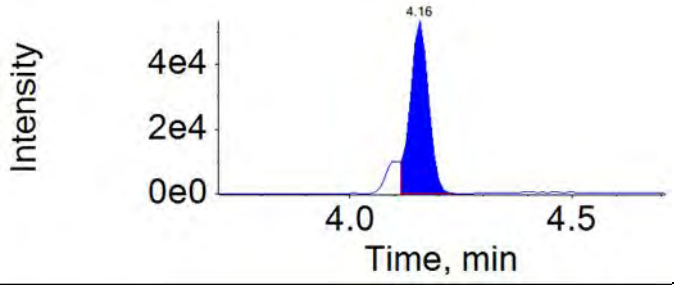
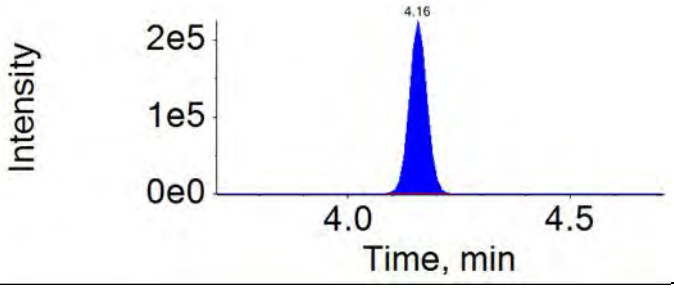
REVIEWED
By umar at 4:40 pm, 11/12/18

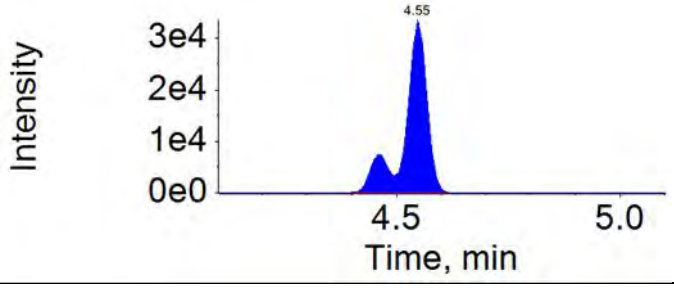
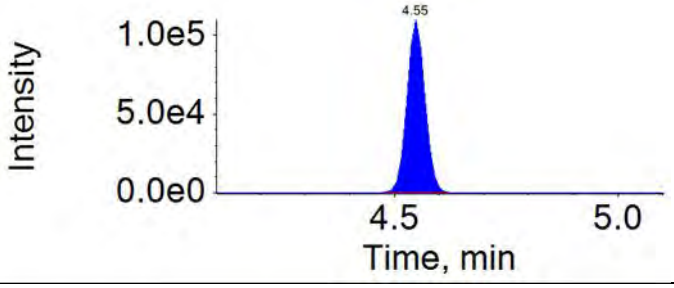
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

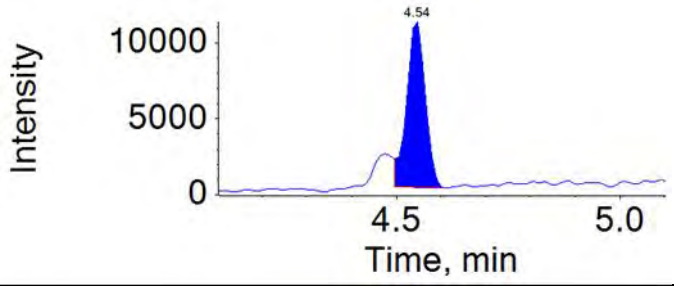
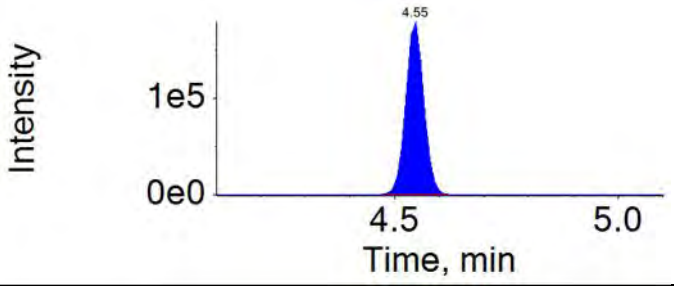
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

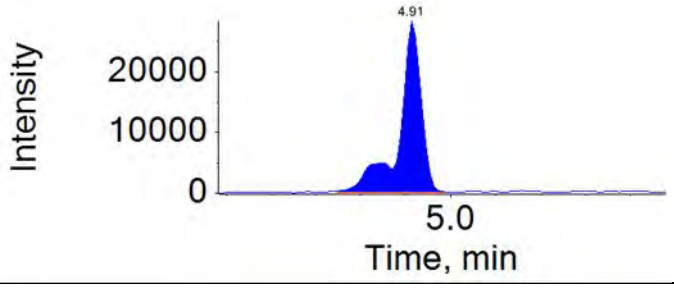
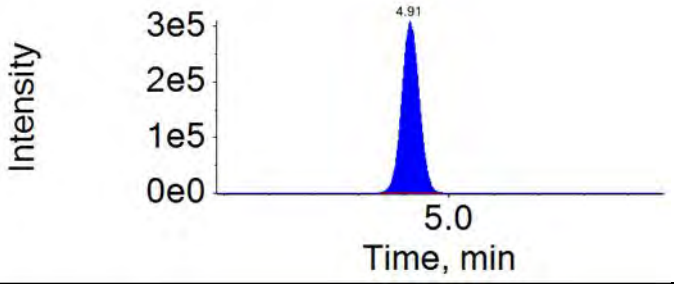
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

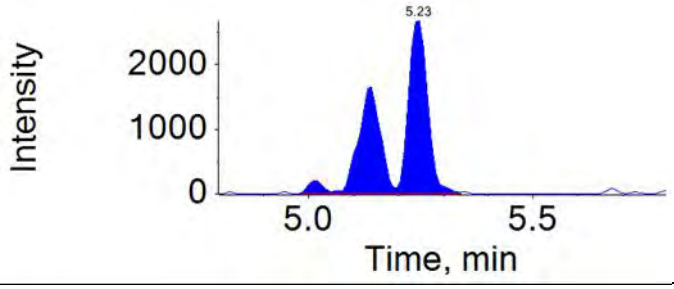
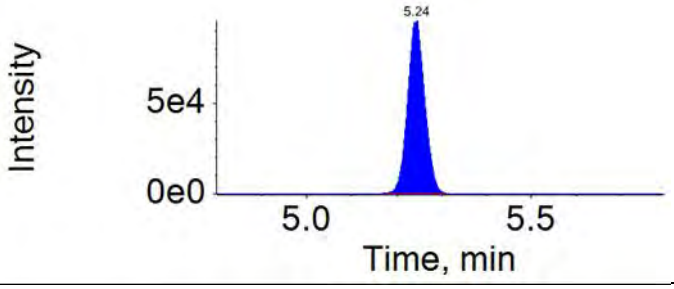
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

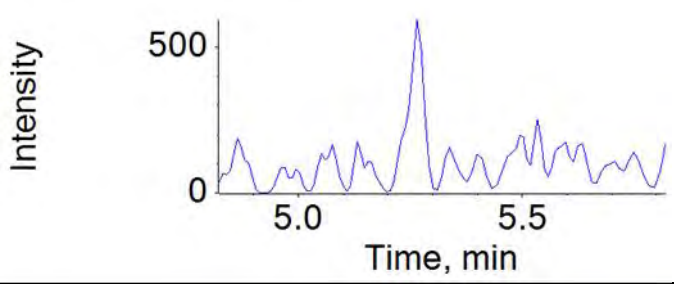
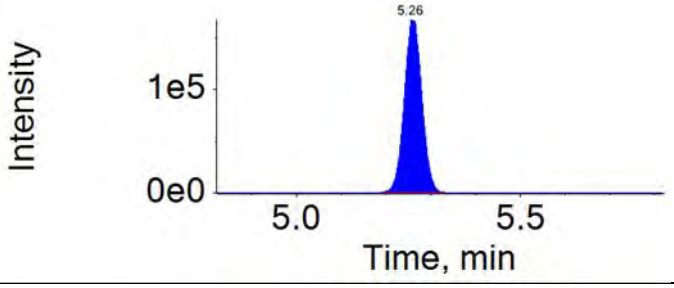
APPROVED
By JPT at 5:18 pm, 11/9/18

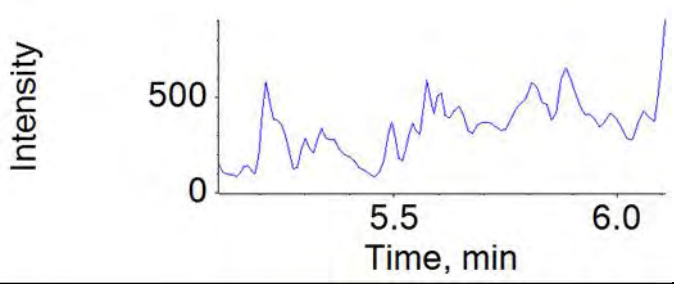
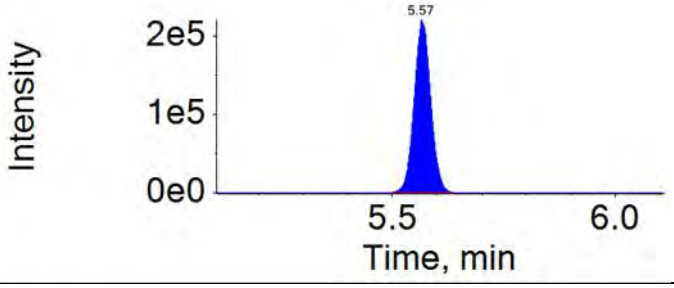
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

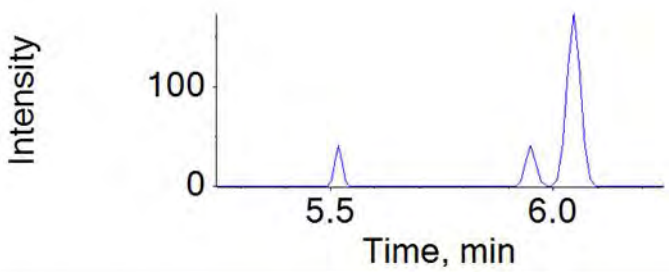
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

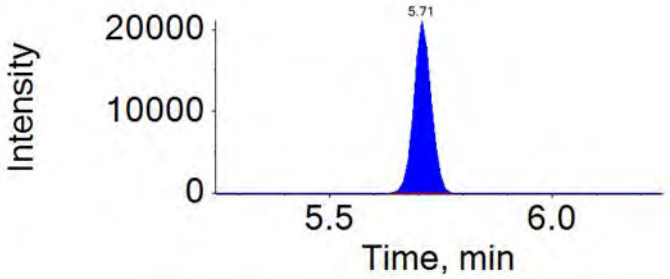
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

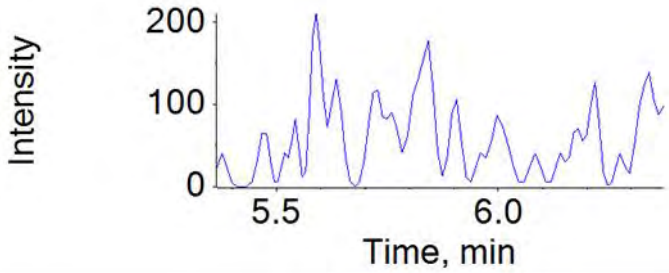
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

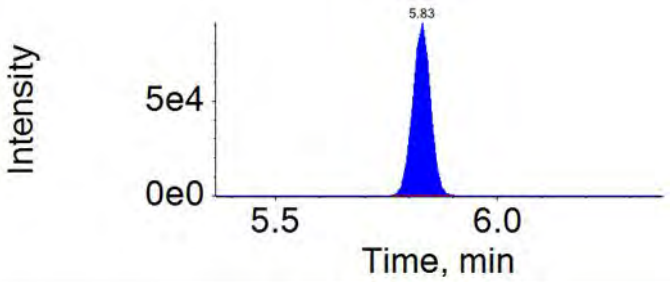
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



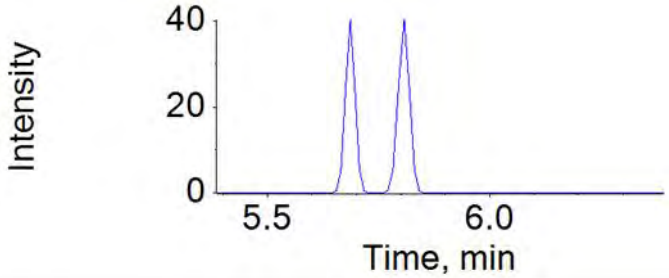


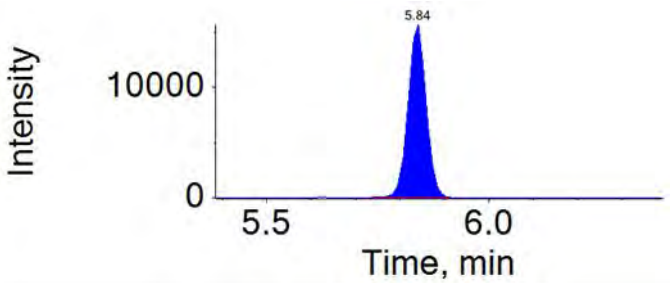
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



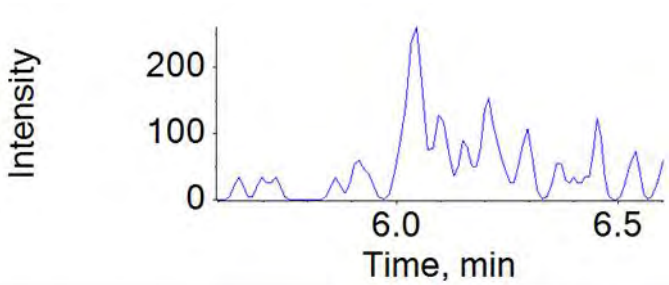


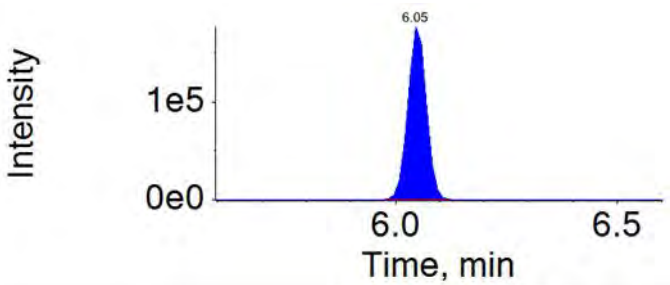
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0

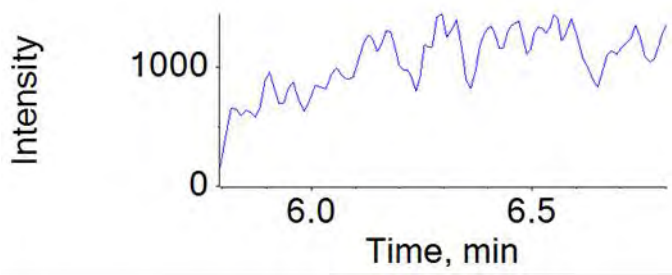
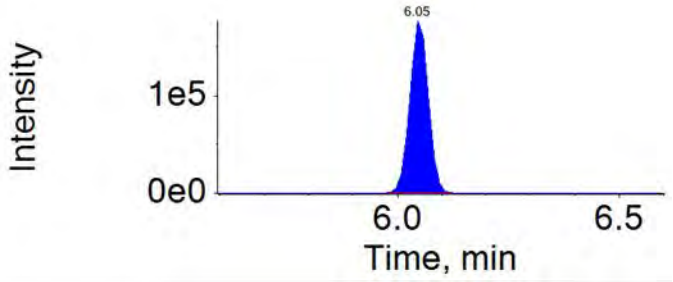


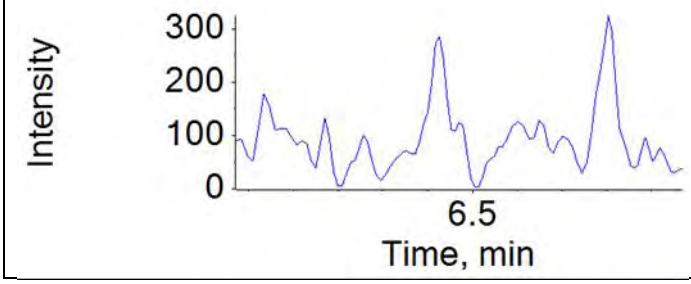
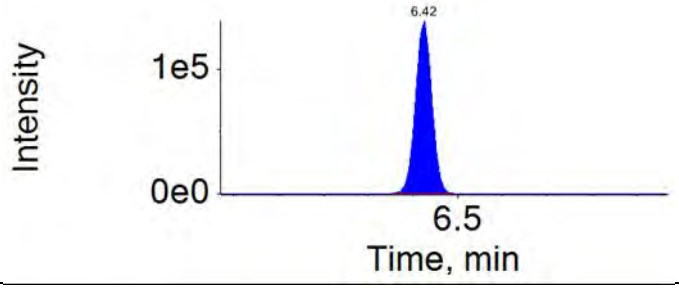


APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

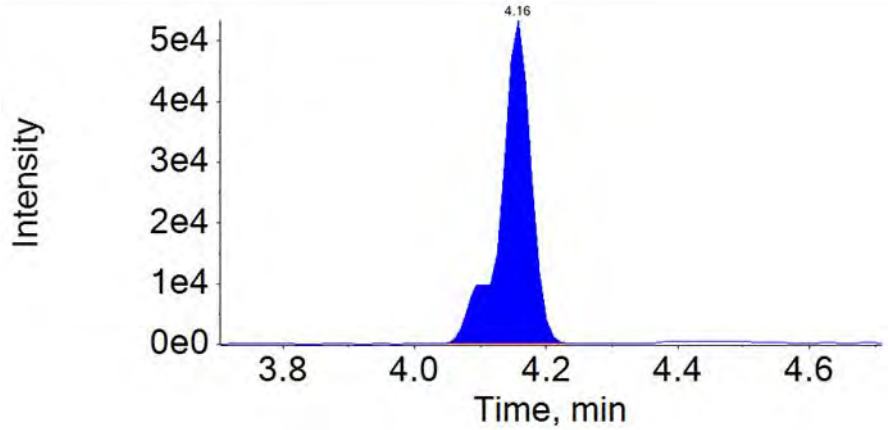
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

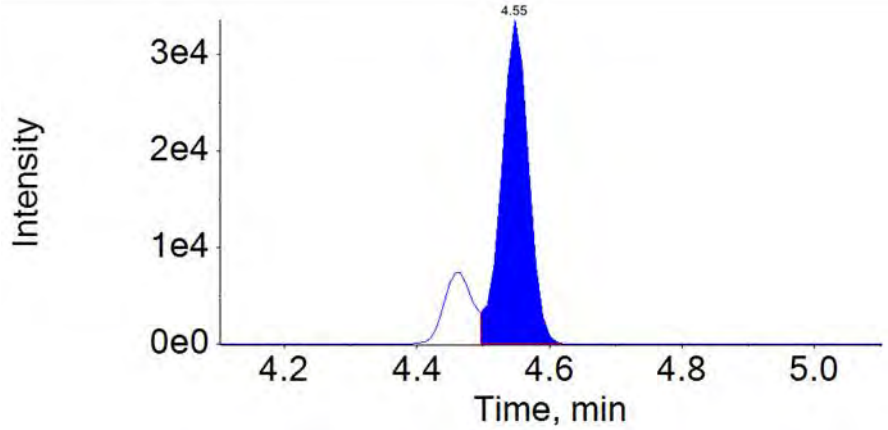
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxA
RT (min.):
4.16
Peak Area:
172919.3
Mass Range:
313.0 / 269.0
File Name:
18NOV08D-108.wiff
Sample Name:
9883395



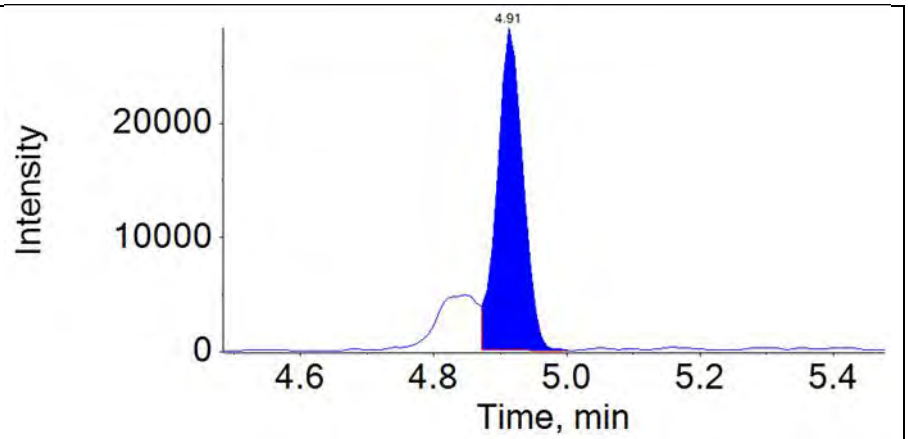
Integration Comment:

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
95080.7
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-108.wiff
Sample Name:
9883395



Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
75749.3
Mass Range:
413.0 / 369.0
File Name:
18NOV08D-108.wiff
Sample Name:
9883395



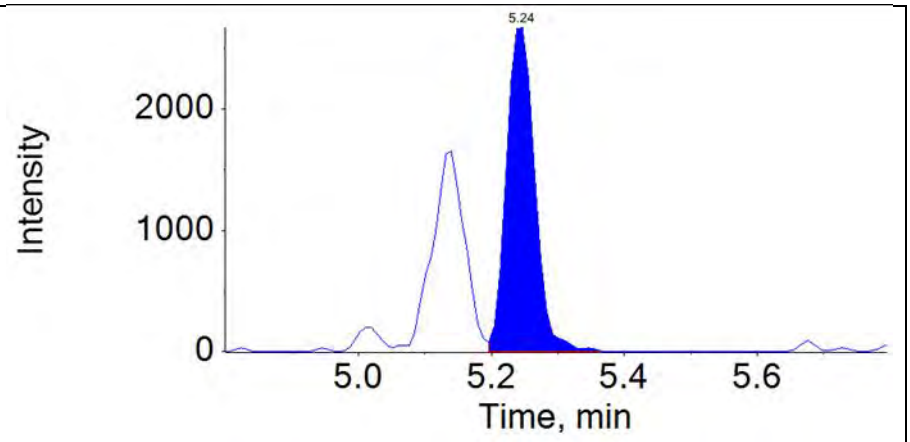
Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

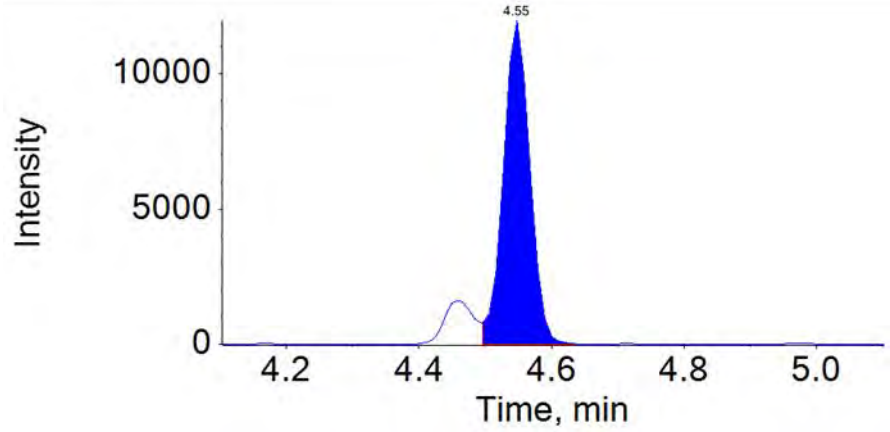
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
7990.6
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-108.wiff
Sample Name:
9883395



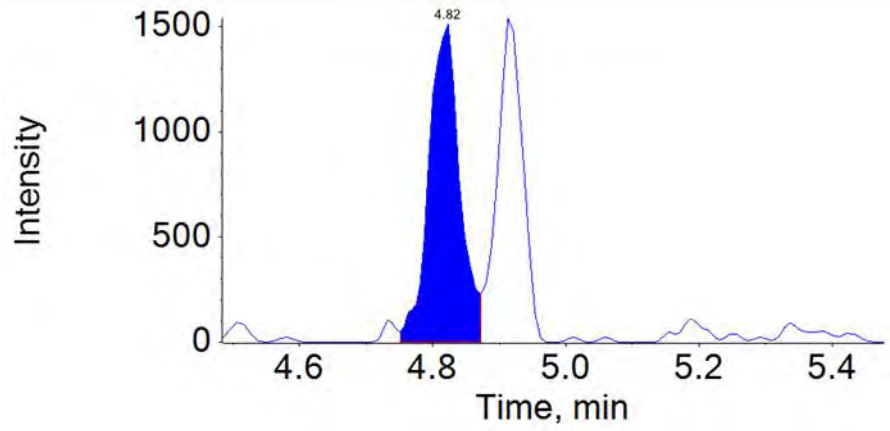
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
33363.2
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-108.wiff
Sample Name:
9883395



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.82
Peak Area:
4915.0
Mass Range:
413.0 / 169.0
File Name:
18NOV08D-108.wiff
Sample Name:
9883395



Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Ion Ratio Report

Sample Name: 9883395 **Instrument Name:** LM27631 **File Name:** 18NOV08D-108.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	19954.8	A	N/A	1.0000			
PFBS_2	3.81	1.00	6856.3	A	N/A	0.3436	-4	50	
PFHxA	4.16	1.00	151910.5	M	N/A	1.0000			
PFHxA_2	4.16	1.00	1865.5	A	N/A	0.0123	7	50	
PFHxS	4.55	1.00	116959.6	M	N/A	1.0000			
PFHxS_2	4.55	1.00	38378.4	M	N/A	0.3281	-8	50	
PFHpA	4.54	1.00	31598.8	A	N/A	1.0000			
PFHpA_2	4.55	1.00	1985.9	A	N/A	0.0628	9	50	
PFOA	4.91	1.00	96600.2	M	N/A	1.0000			
PFOA_2	4.86	0.99	9024.4	M	N/A	0.0934	47	50	
PFOS	5.23	1.00	14106.9	M	N/A	1.0000			
PFOS_2	5.25	1.00	3417.1	A	N/A	0.2422	-31	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	6.12	1.01	112.1	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

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By JPT at 5:18 pm, 11/9/18

REVIEWED
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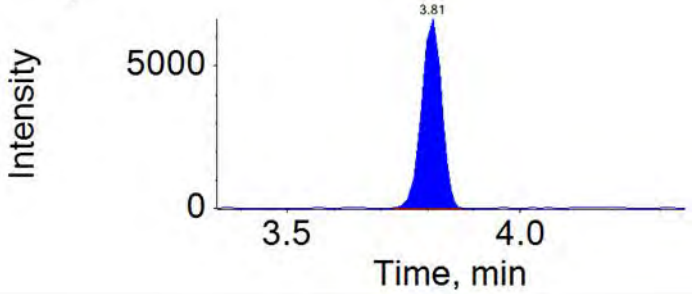
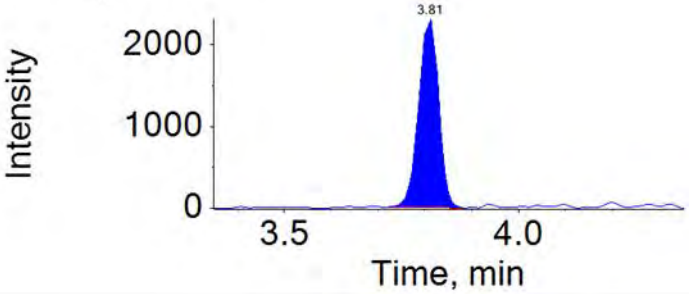
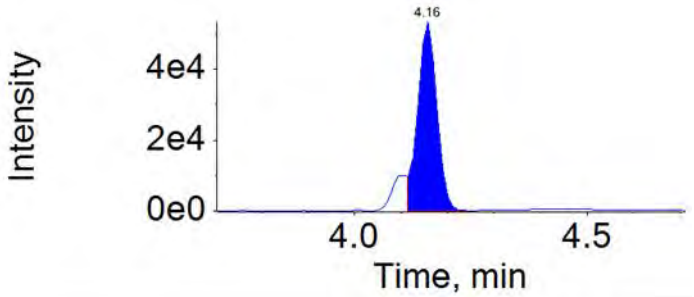
Component: PFBS
Primary Mass: 299.0 / 80.0



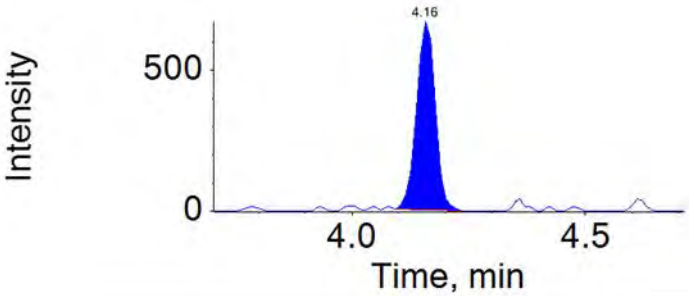
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



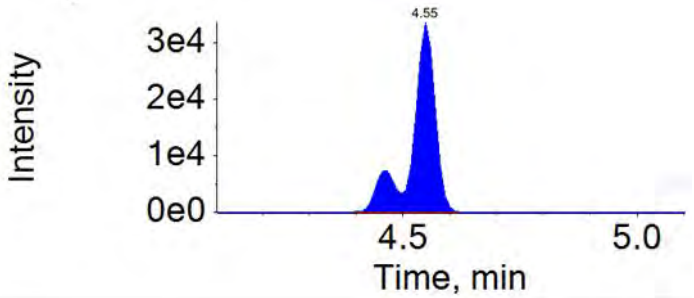
Component: PFHxA
Primary Mass: 313.0 / 269.0



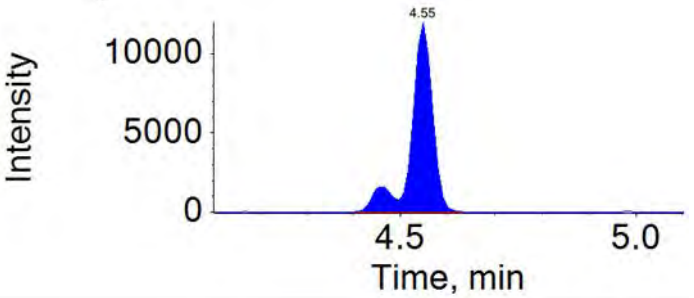
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



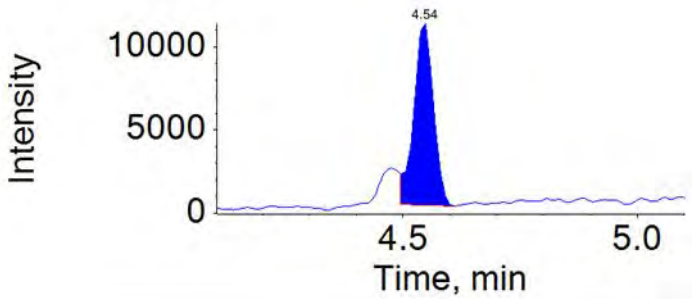
Component: PFHxS
Primary Mass: 399.0 / 80.0



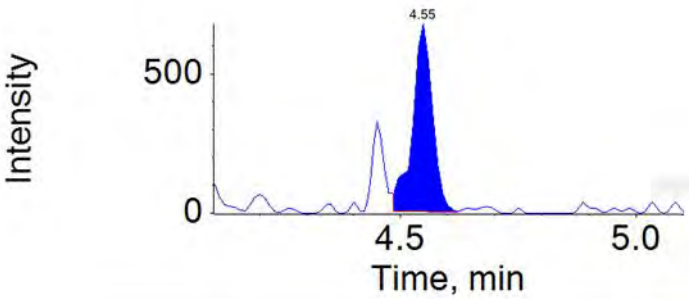
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



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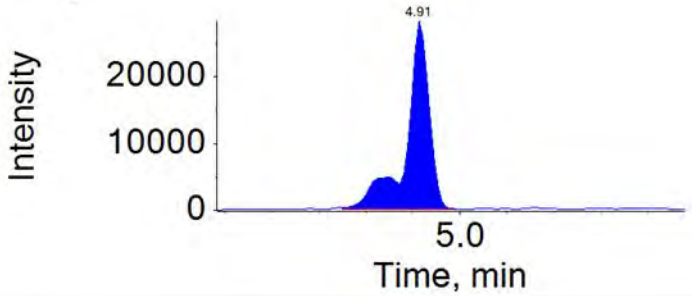
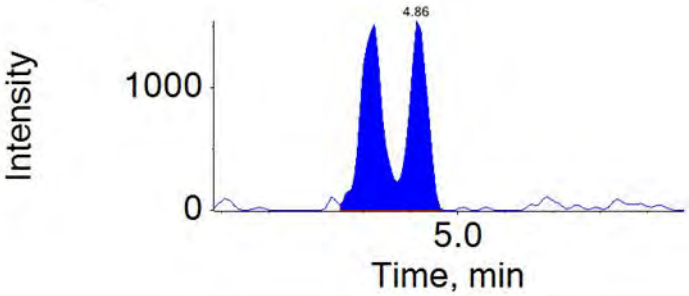
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

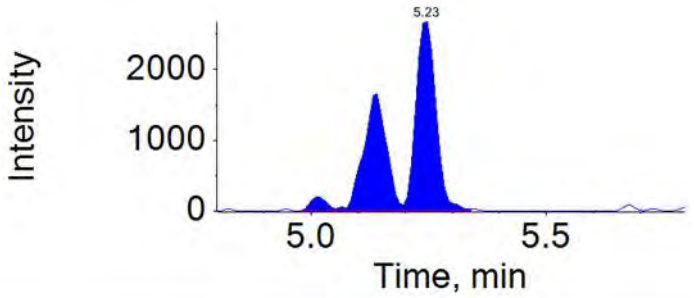
Component: PFOA
Primary Mass: 413.0 / 369.0



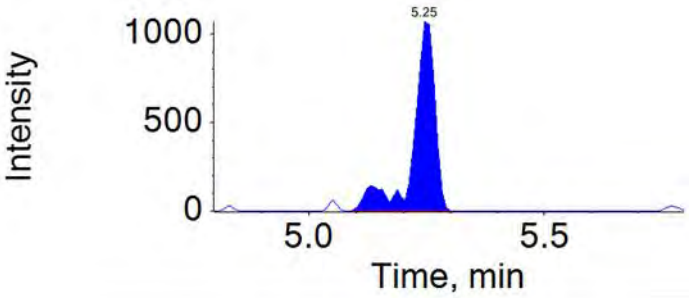
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



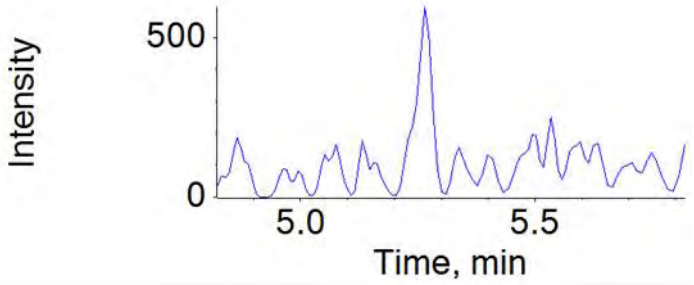
Component: PFOS
Primary Mass: 499.0 / 80.0



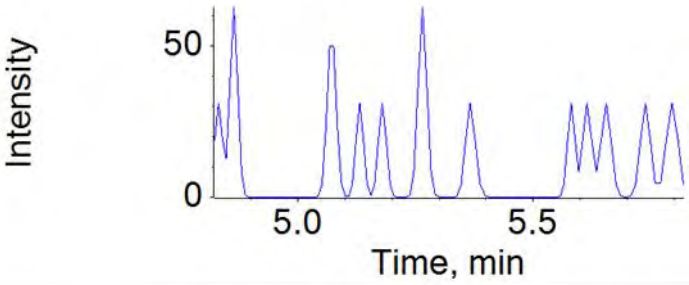
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



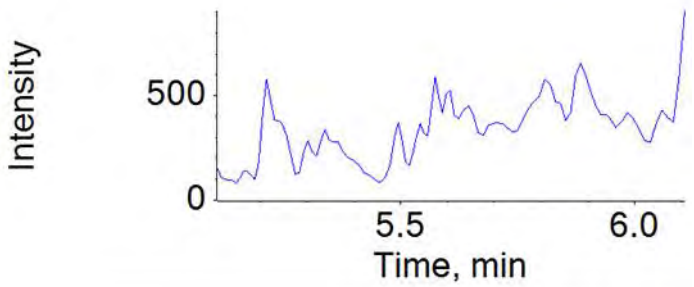
Component: PFNA
Primary Mass: 463.0 / 419.0



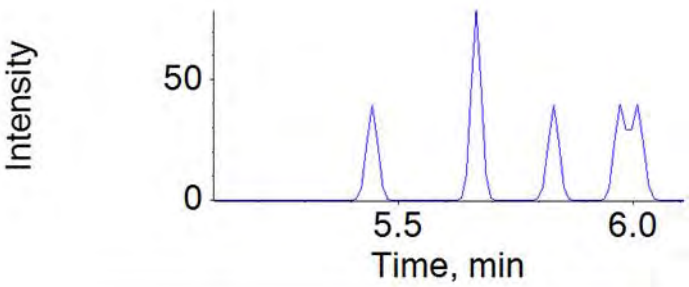
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



Component: PFDA_2
Secondary Mass: 513.0 / 169.0



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By JPT at 5:18 pm, 11/9/18

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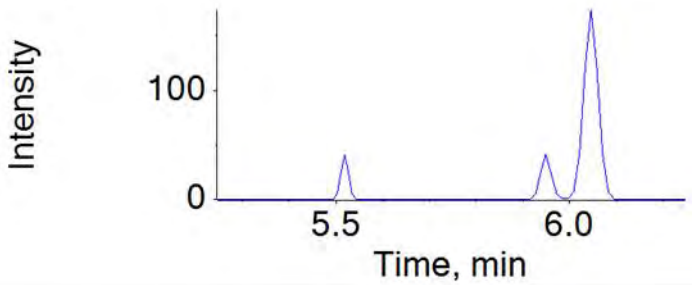
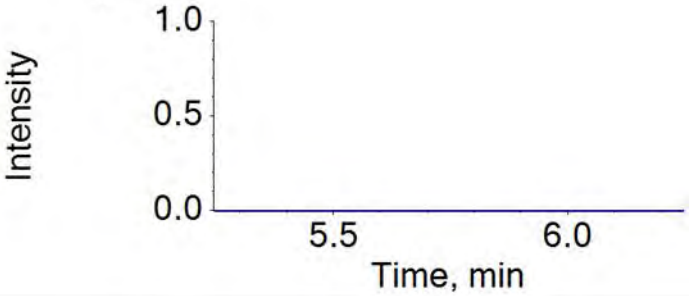
By umar at 4:40 pm, 11/12/18

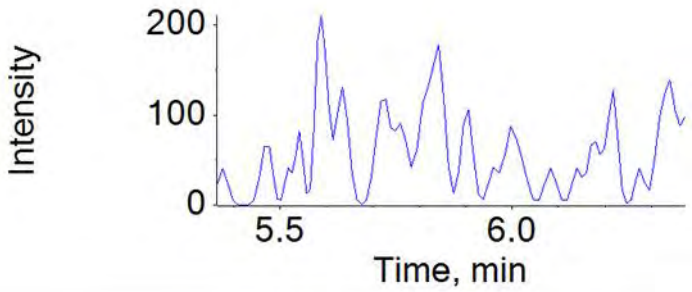
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



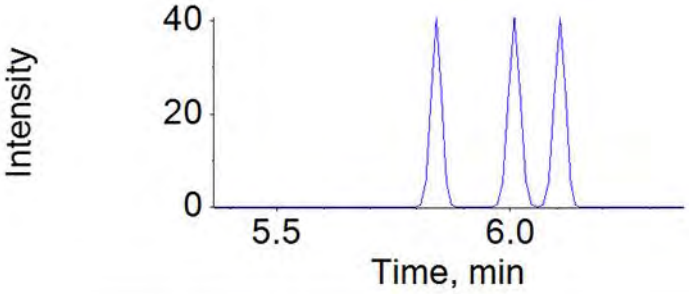
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



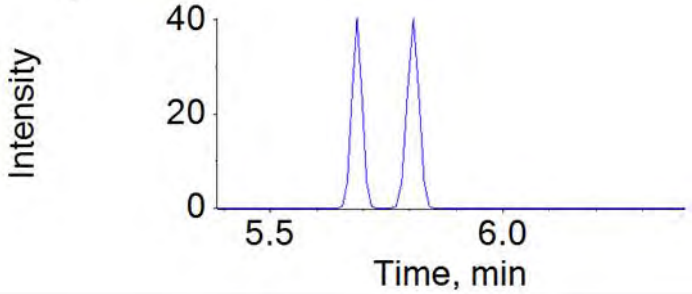
Component: PFUnDA
Primary Mass: 563.0 / 519.0



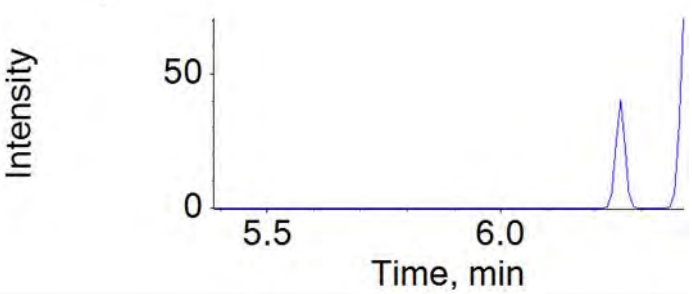
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



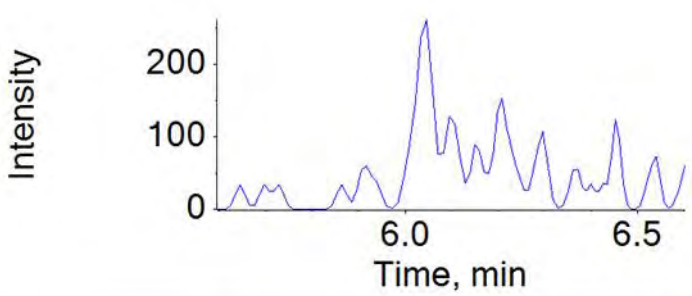
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



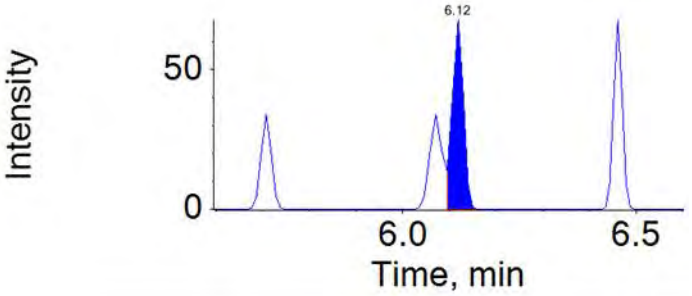
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



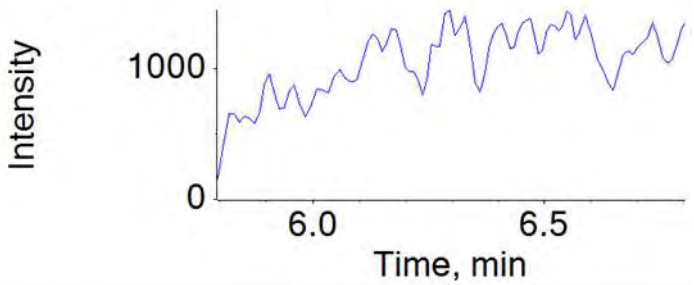
Component: PFDoDA
Primary Mass: 613.0 / 569.0



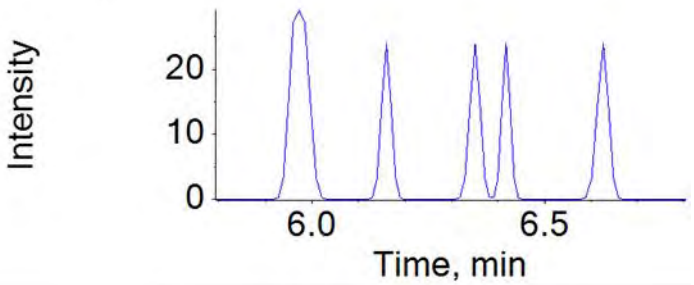
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



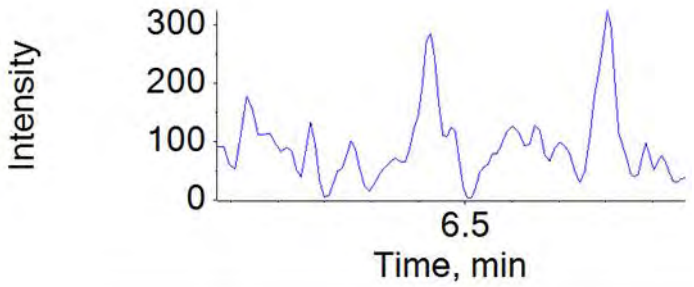
Component: PFTrDA
Primary Mass: 663.0 / 619.0



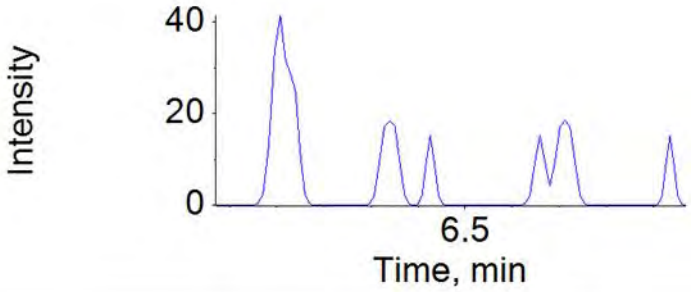
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883396			**Data File:**		18NOV29D-61.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18332003 OU1-Bldg371-S-04-10 Grab Soil			**Acquis Date:**		2018-11-29T18:58:45
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	41			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18332003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18332003			**Operator:**		MCD7824
Sample Wt.:	1.05000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1066716.6	906425.4	18	50	
13C2-PFOA	5.0	605859.0	495984.0	22	50	
13C4-PFOS	4.8	364446.9	296261.8	23	50	
13C2-PFDA	5.0	577742.0	451203.0	28	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	426446.2	13C3-PFBA	1066716.6	0.400	8.857	7.265	82	50-150	
E13C5-PFHxA	679216.0	13C2-PFOA	605859.0	1.121	9.524	7.843	82	50-150	
E13C3-PFHxS	329232.4	13C2-PFOA	605859.0	0.543	9.010	8.113	90	50-150	
E13C4-PFHpA	559104.9	13C2-PFOA	605859.0	0.923	9.524	8.077	85	50-150	
E13C8-PFOA	936921.7	13C2-PFOA	605859.0	1.546	9.524	8.108	85	50-150	
E13C8-PFOS	321612.8	13C4-PFOS	364446.9	0.882	9.105	7.588	83	50-150	
E13C9-PFNA	634712.5	13C4-PFOS	364446.9	1.742	9.524	7.286	77	50-150	
E13C6-PFDA	839810.1	13C2-PFDA	577742.0	1.454	9.524	7.807	82	50-150	
Ed3-NMeFOSAA	78116.9	13C2-PFDA	577742.0	0.135	9.524	3.270	34	50-150	OOS
E13C7-PFUnDA	558639.1	13C2-PFDA	577742.0	0.967	9.524	7.784	82	50-150	
Ed5-NEtFOSAA	57388.7	13C2-PFDA	577742.0	0.099	9.524	3.371	35	50-150	OOS
E13C2-PFDoDA	1144251.0	13C2-PFDA	577742.0	1.981	9.524	7.926	83	50-150	
E13C2-PFTeDA	810333.6	13C2-PFDA	577742.0	1.403	9.524	7.393	78	50-150	

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

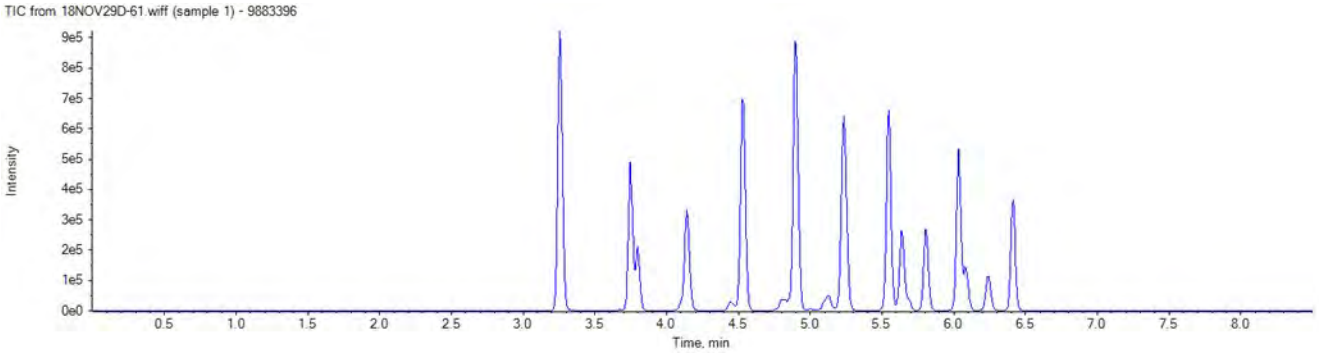
Analyte Quantitation Peak Table

Sample Name: 9883396 **Instrument Name:** LM27631 **File Name:** 18NOV29D-61.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.05000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.80	1.000	5516.6		A	13C3-PFBS	3.80	426446.2	0.013	0.120
PFHxA	4.14	1.000	68281.2		M	13C5-PFHxA	4.14	679216.0	0.101	0.769
PFHpA	4.53	1.000	46282.5		A	13C4-PFHpA	4.53	559104.9	0.083	0.487
PFHxS	4.53	1.000	611016.6		M	13C3-PFHxS	4.53	329232.4	1.856	16.552
PFOA	4.90	1.000	612187.5		M	13C8-PFOA	4.90	936921.7	0.653	6.431
PFOS	5.23	1.000	416621.7		M	13C8-PFOS	5.23	321612.8	1.295	10.350
PFNA	5.25	1.000	11742.7		A	13C9-PFNA	5.25	634712.5	0.019	0.135
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	839810.1	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	78116.9	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	558639.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	57388.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.03	1144251.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.03	1144251.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	810333.6	N/A	

Total Ion Chromatogram

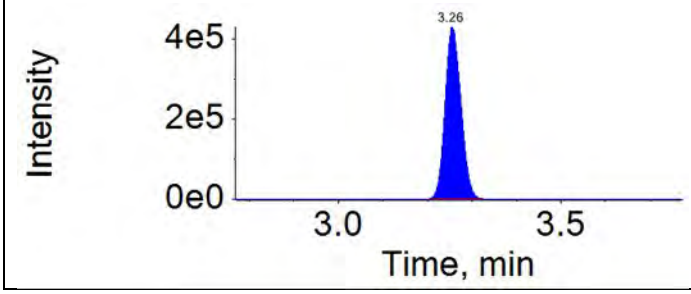


APPROVED
By MCD at 10:13 pm, 11/30/18

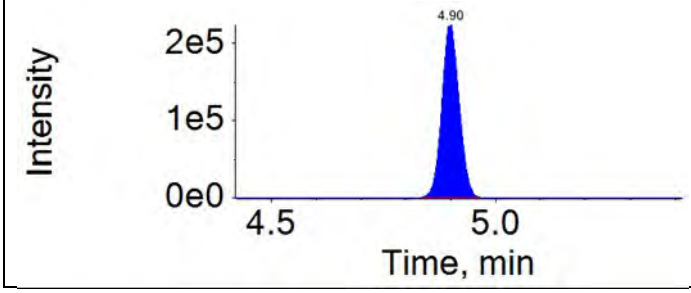
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

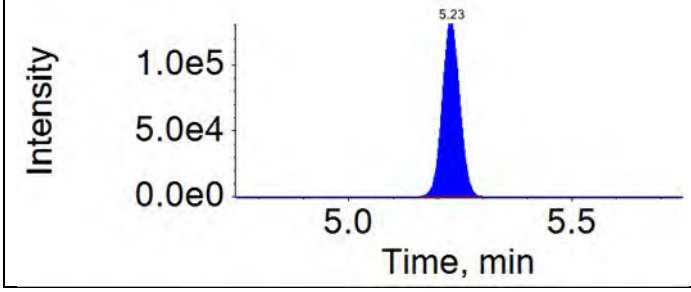
Injection Standard: 13C3-PFBA
216.0 / 172.0



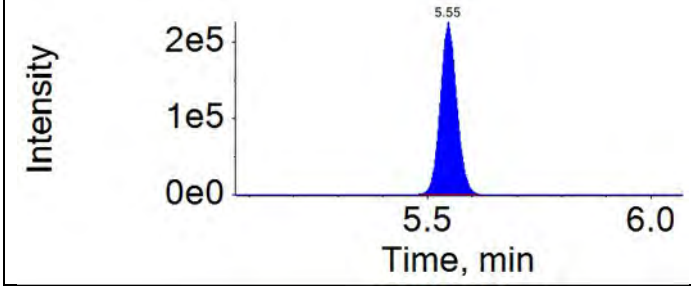
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

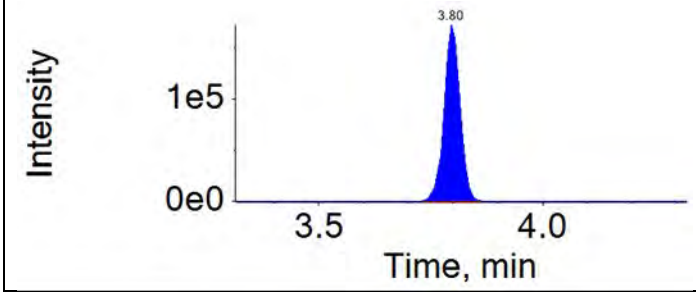


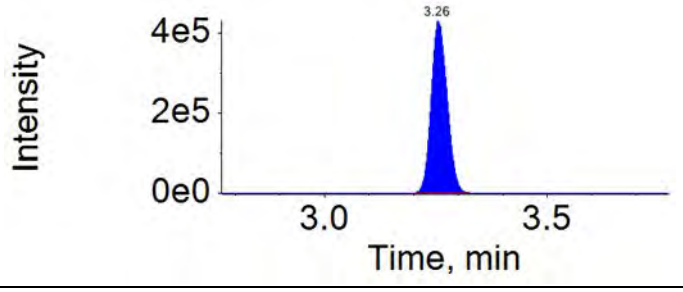
Injection Standard: 13C2-PFDA
515.0 / 470.0



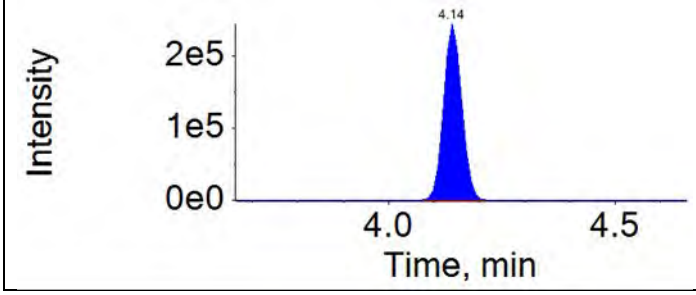
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

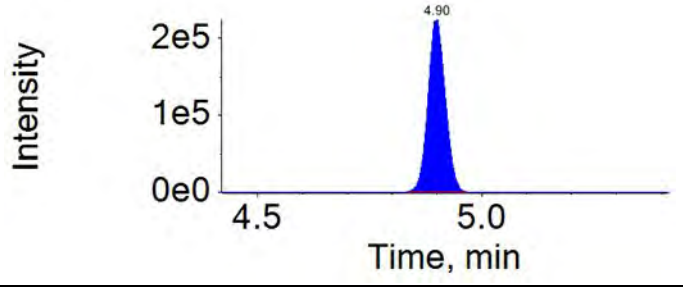
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



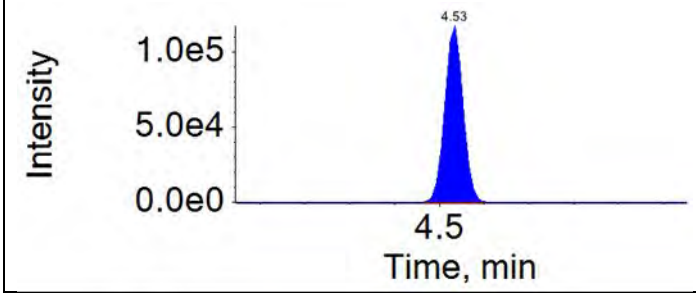


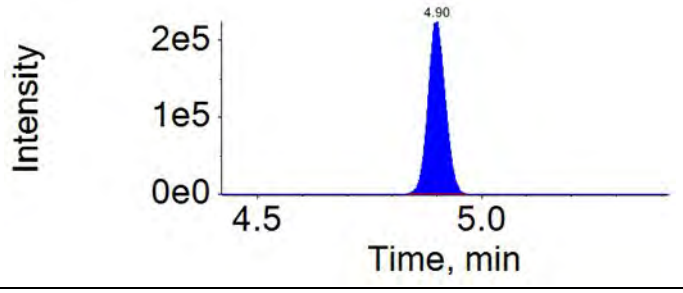
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



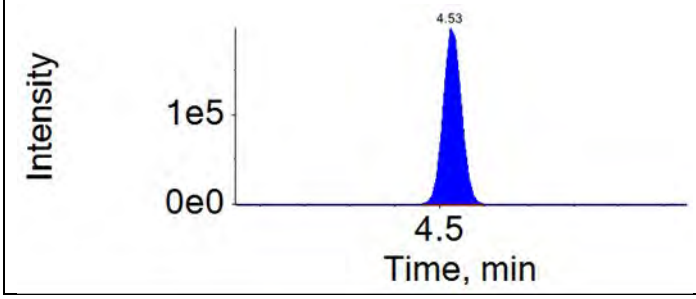


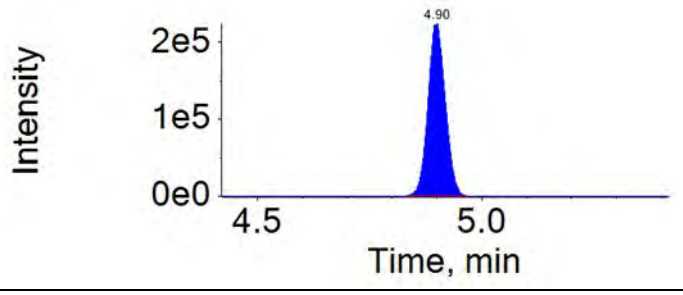
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

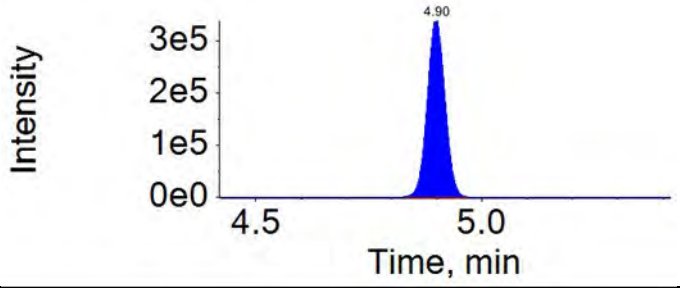
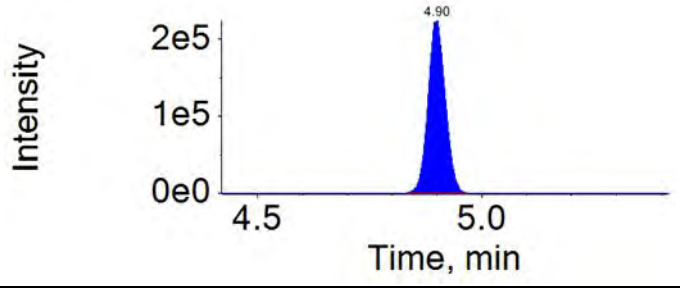


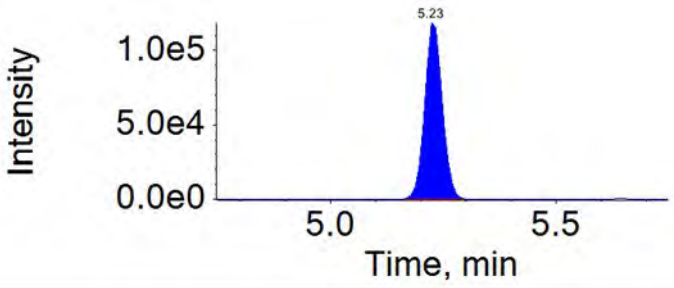
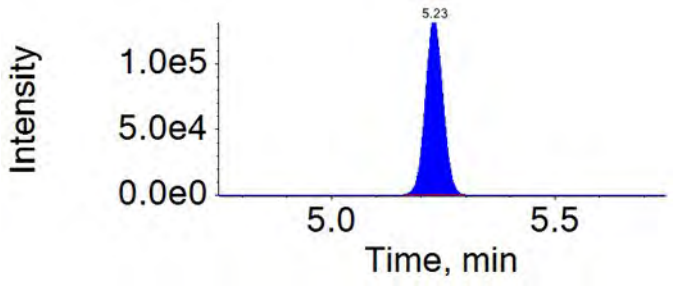


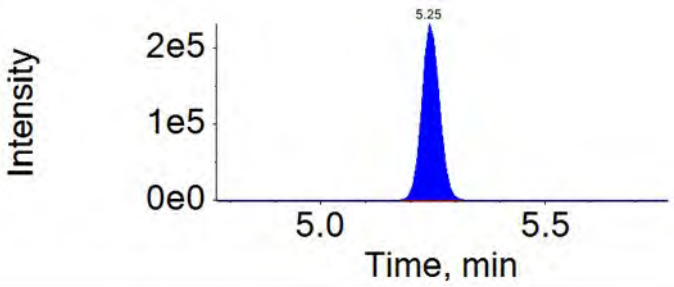
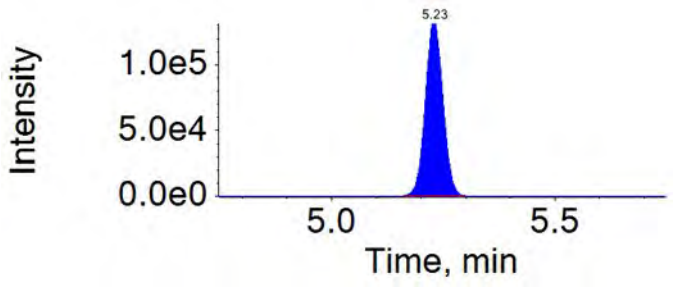
APPROVED
By MCD at 10:13 pm, 11/30/18

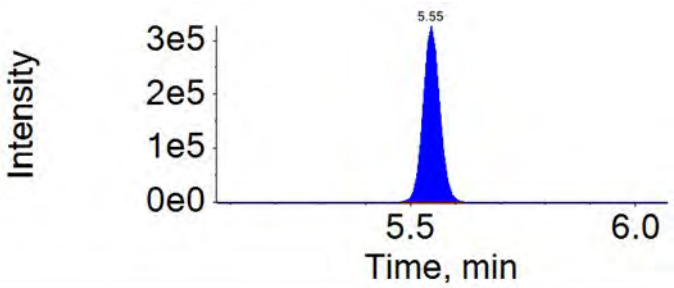
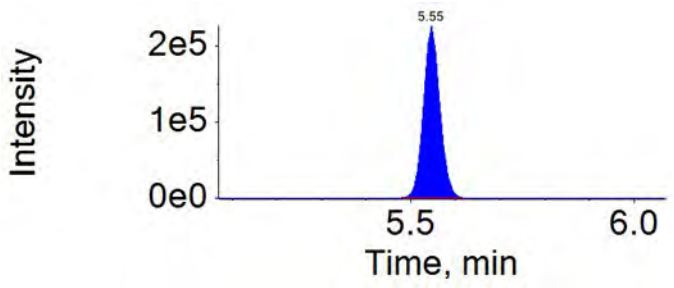
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

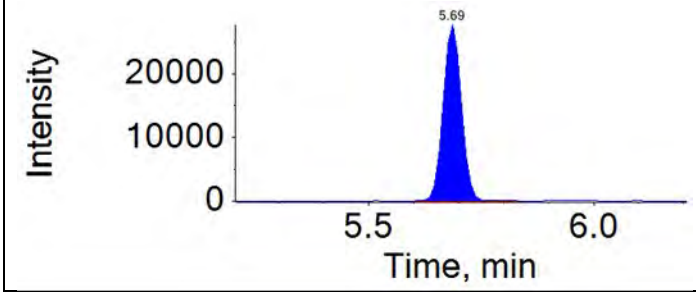
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

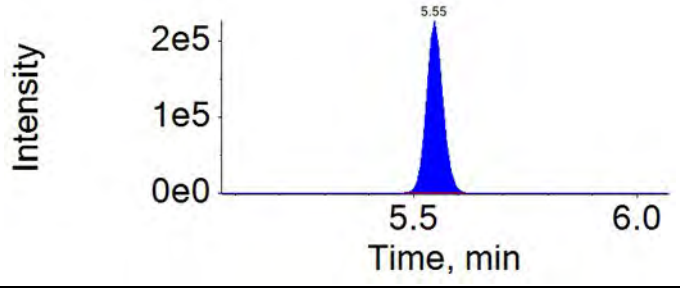
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

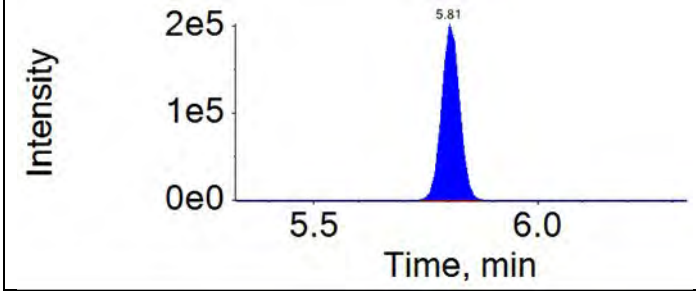
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

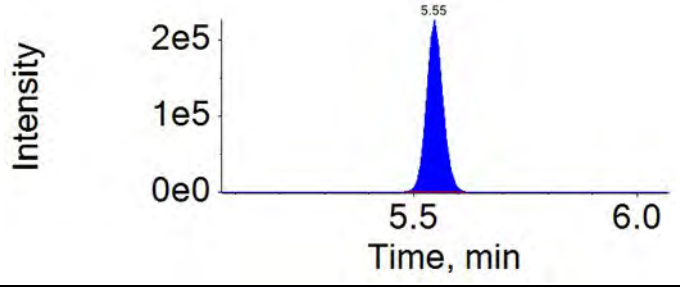
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



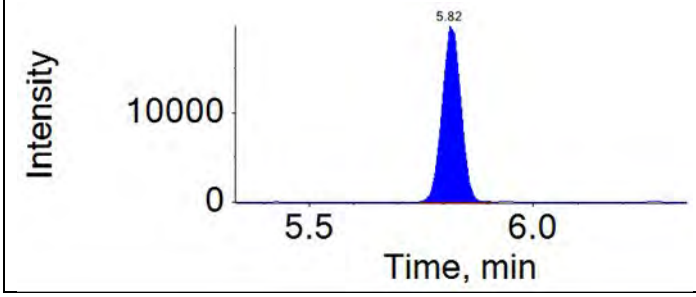


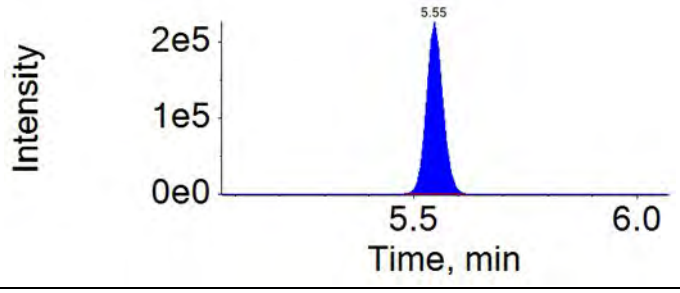
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



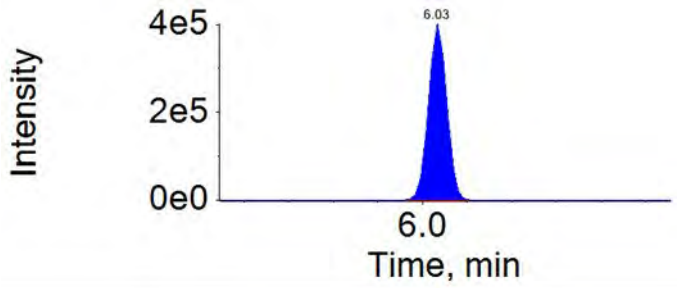


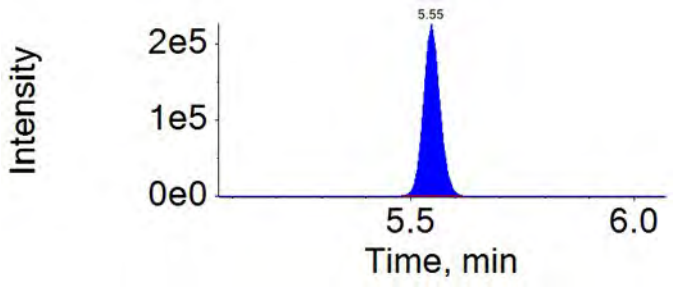
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0

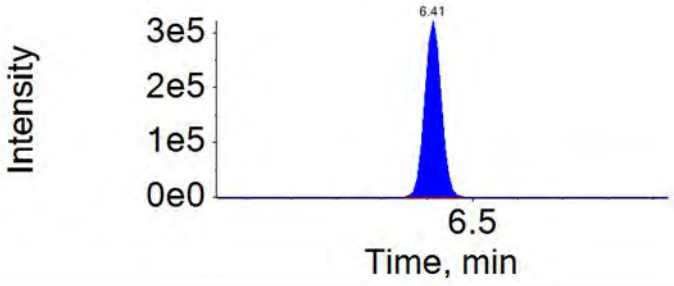
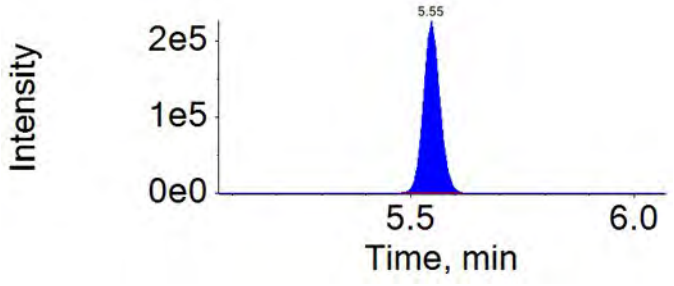




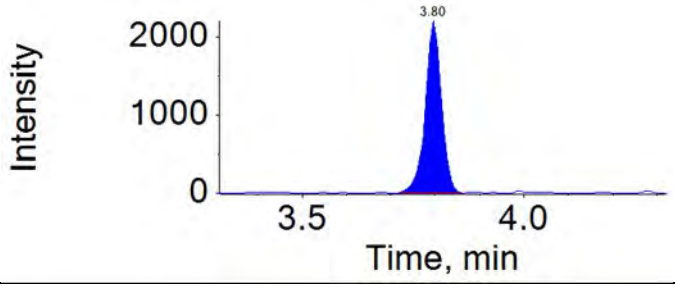
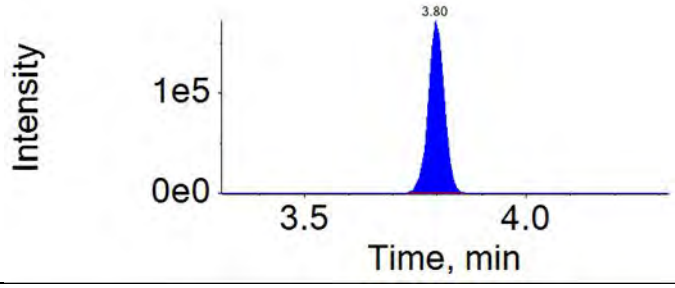
APPROVED
By MCD at 10:13 pm, 11/30/18

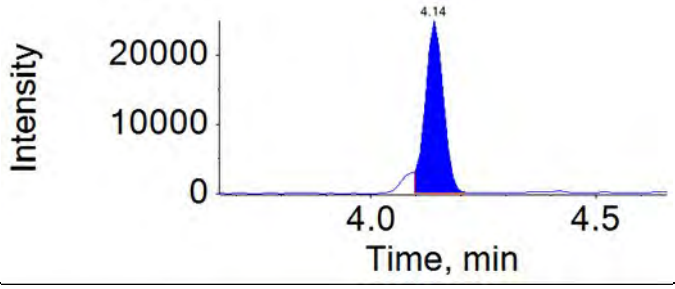
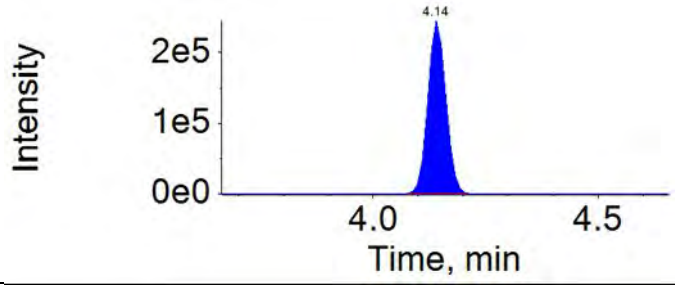
REVIEWED
By HMK at 2:26 pm, 12/6/18

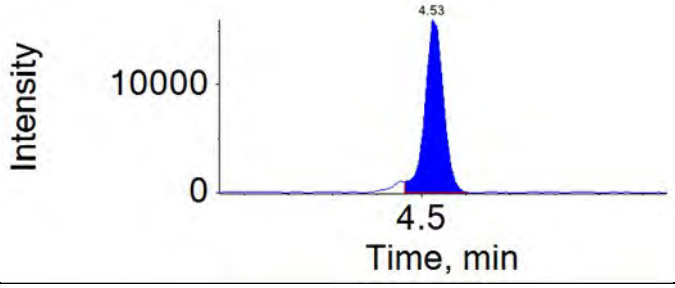
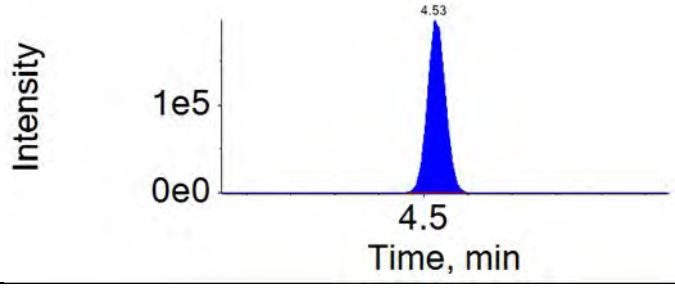
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

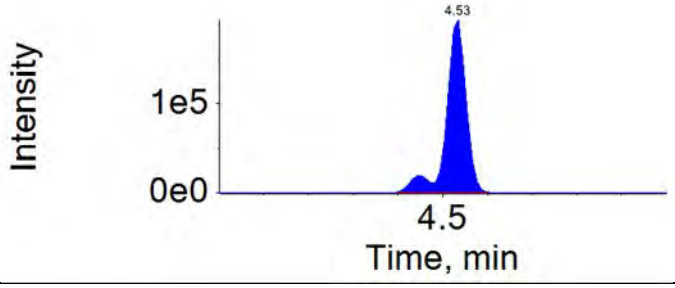
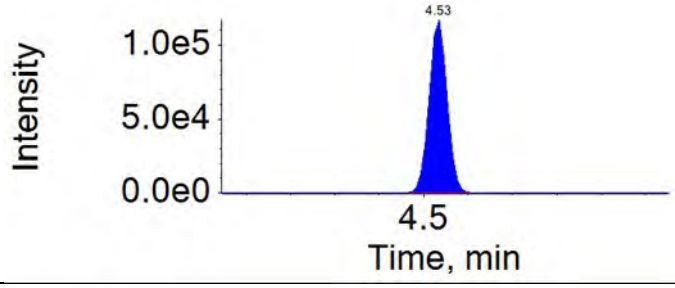
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

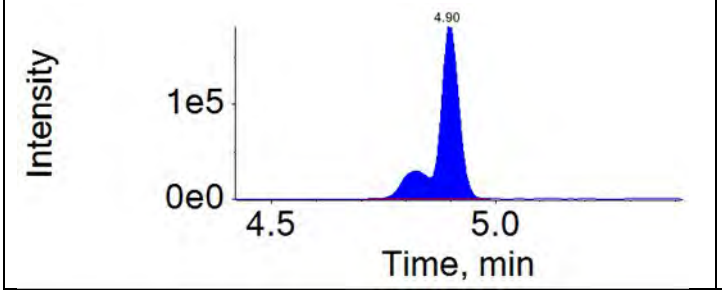
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

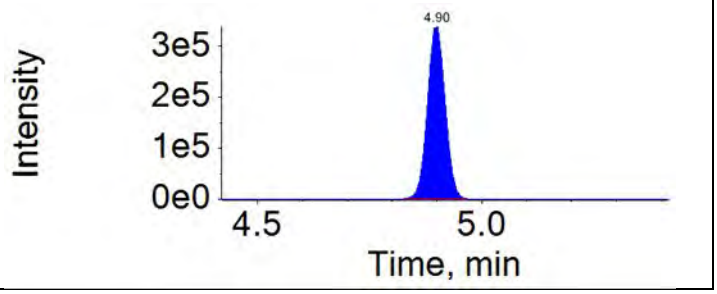
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

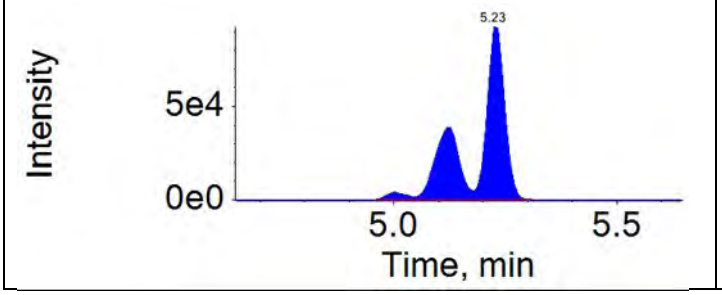
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

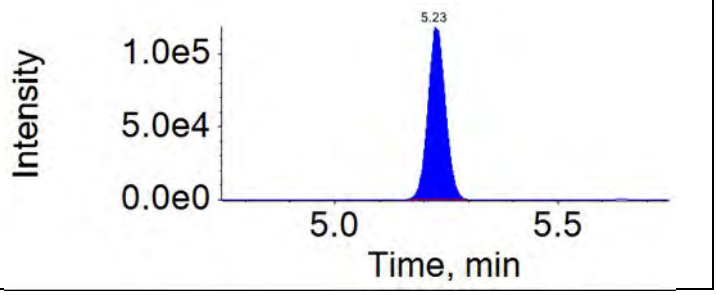
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



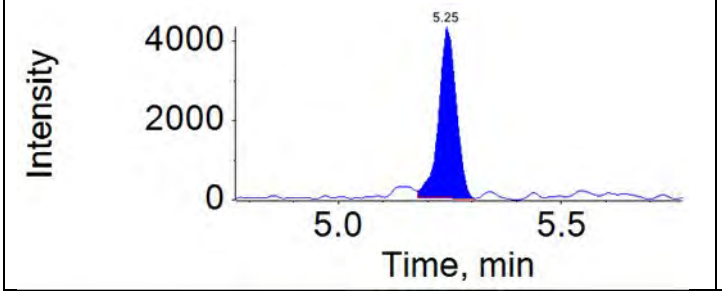


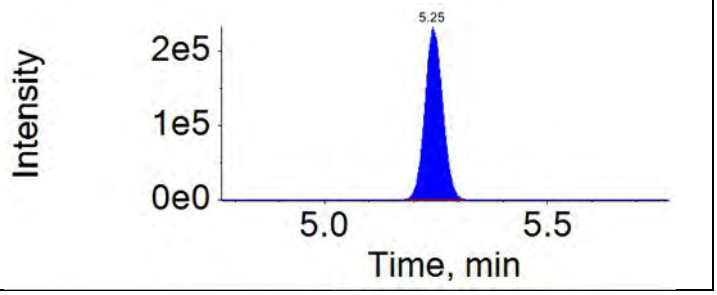
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



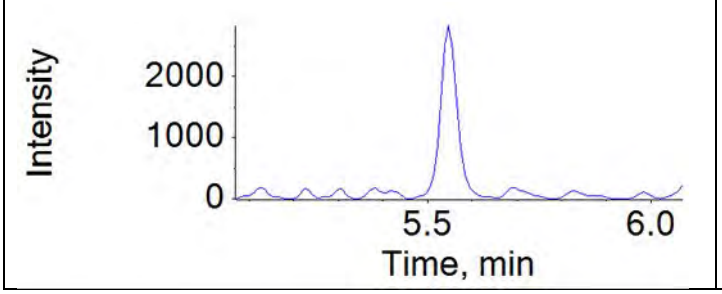


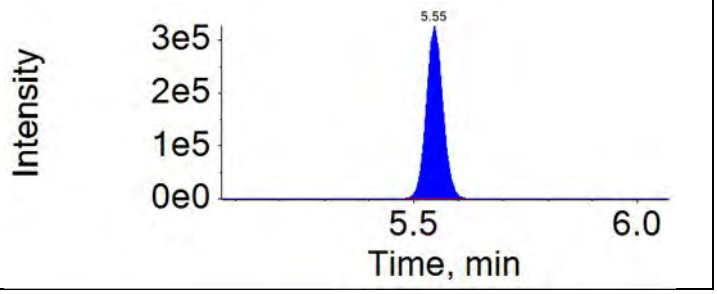
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



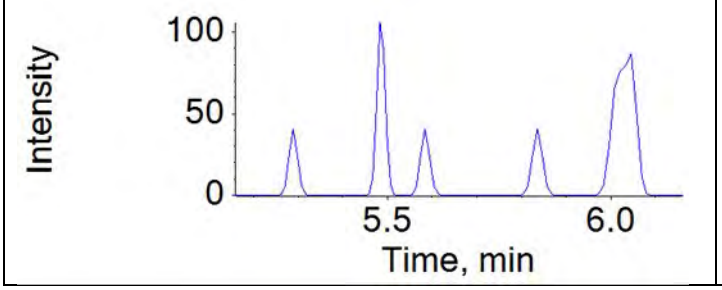


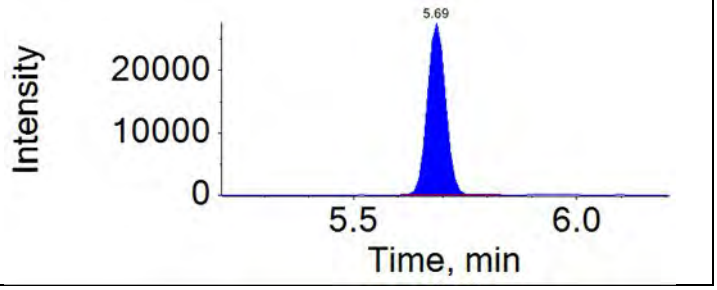
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

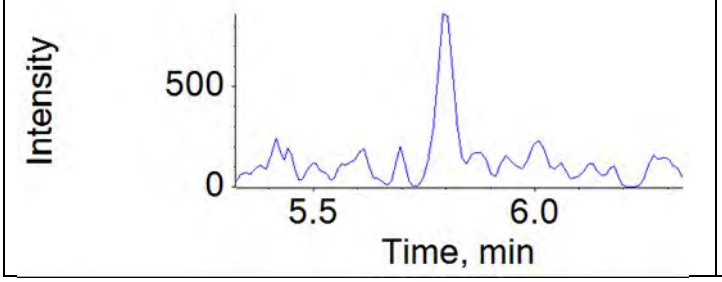
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

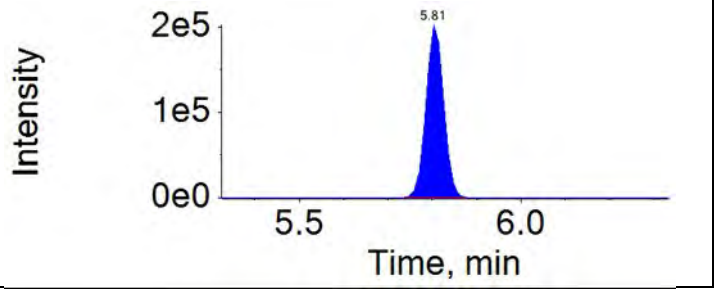
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



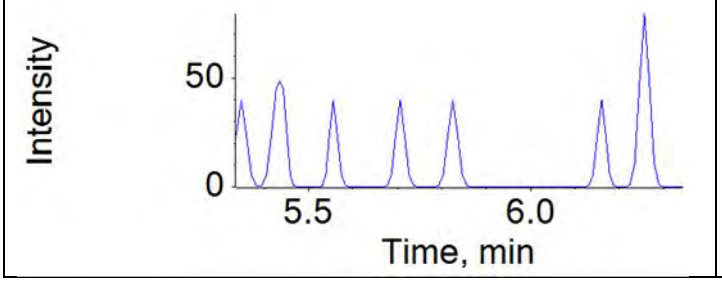


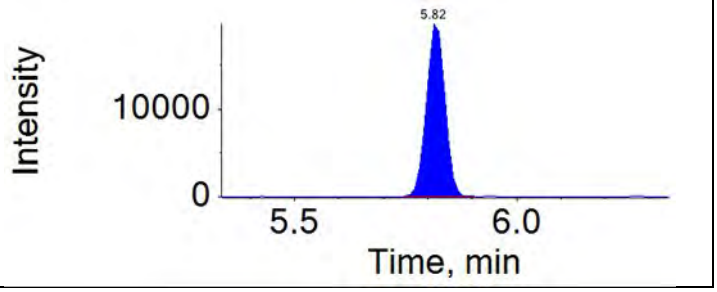
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



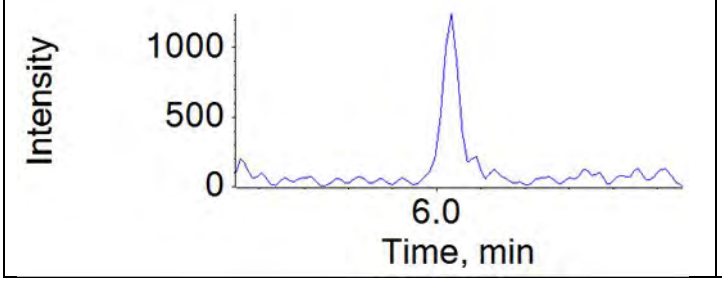


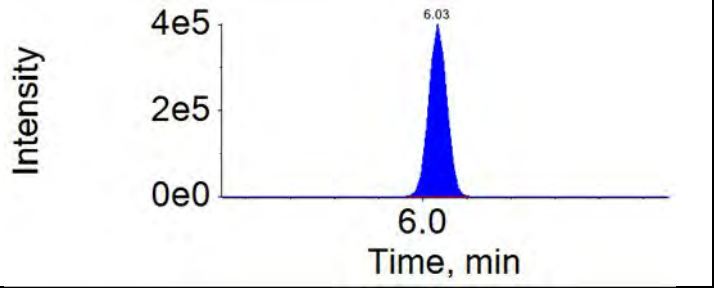
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



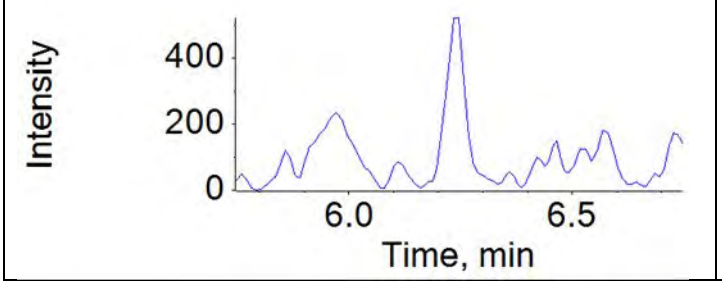


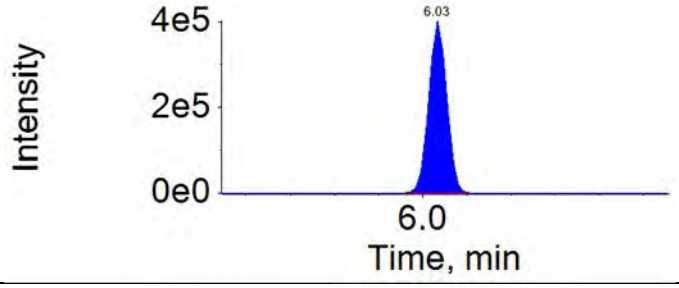
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

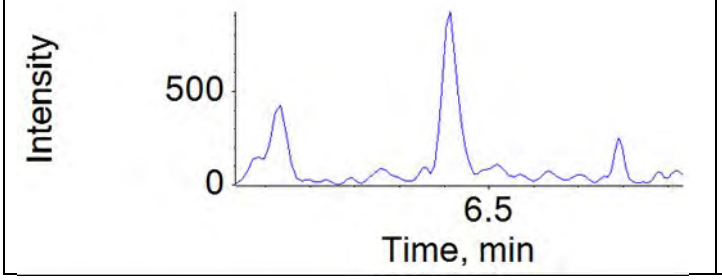
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

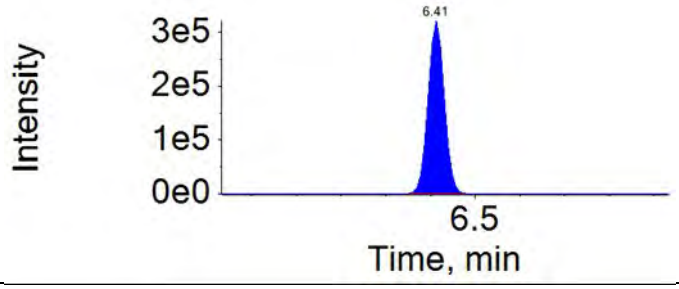
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



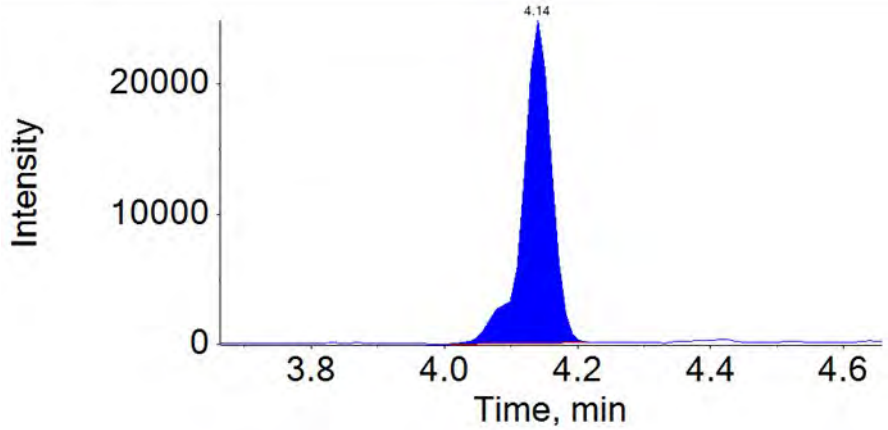


APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

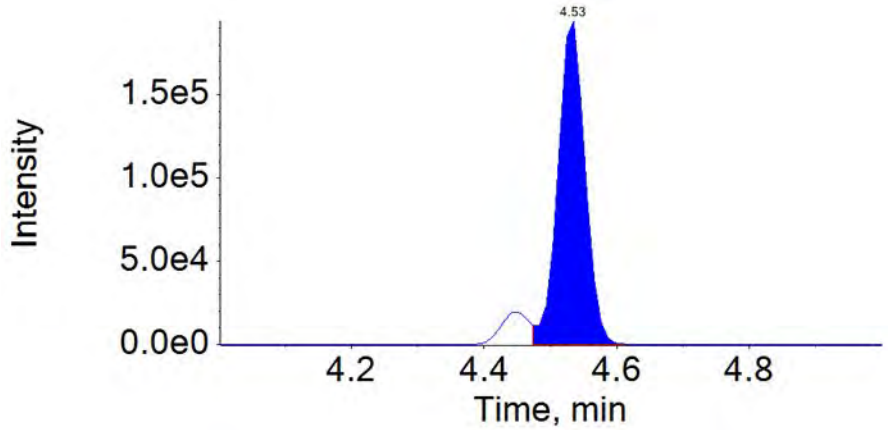
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxA
RT (min.):
4.14
Peak Area:
74918.1
Mass Range:
313.0 / 269.0
File Name:
18NOV29D-61.wiff
Sample Name:
9883396



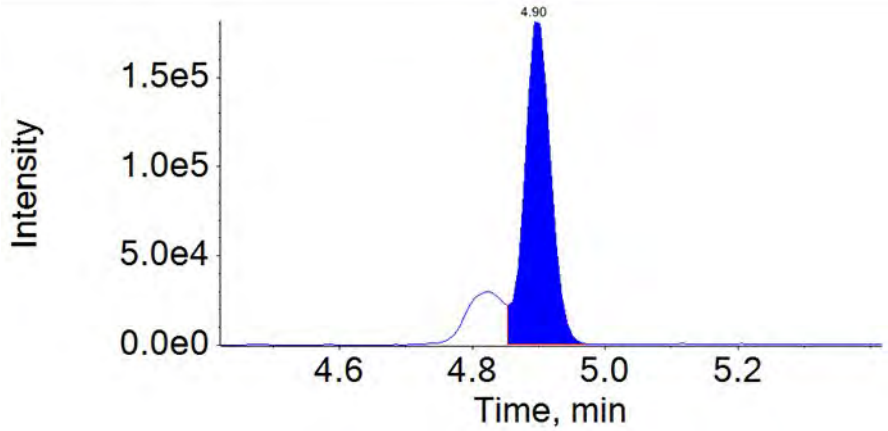
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.53
Peak Area:
555332.2
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-61.wiff
Sample Name:
9883396



Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.90
Peak Area:
494826.8
Mass Range:
413.0 / 369.0
File Name:
18NOV29D-61.wiff
Sample Name:
9883396



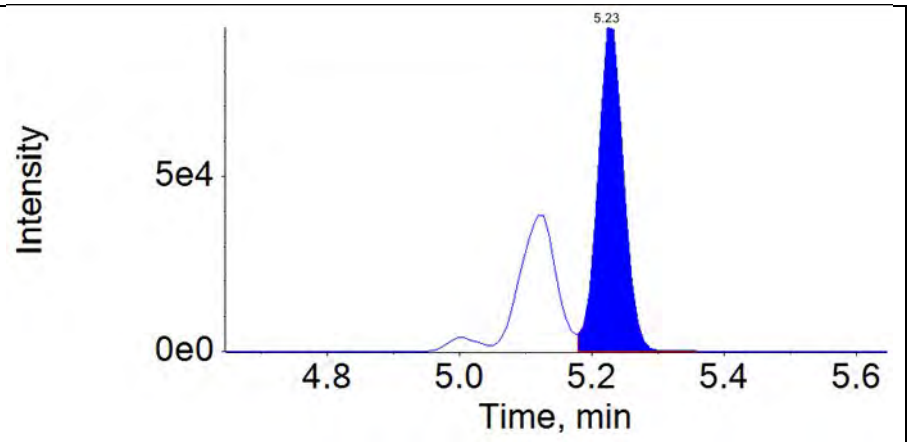
Integration Comment: incorrect integration

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

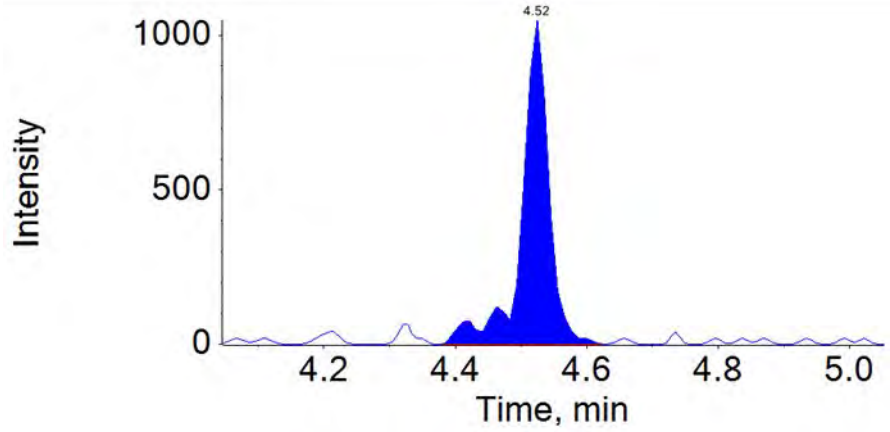
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
253894.4
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-61.wiff
Sample Name:
9883396



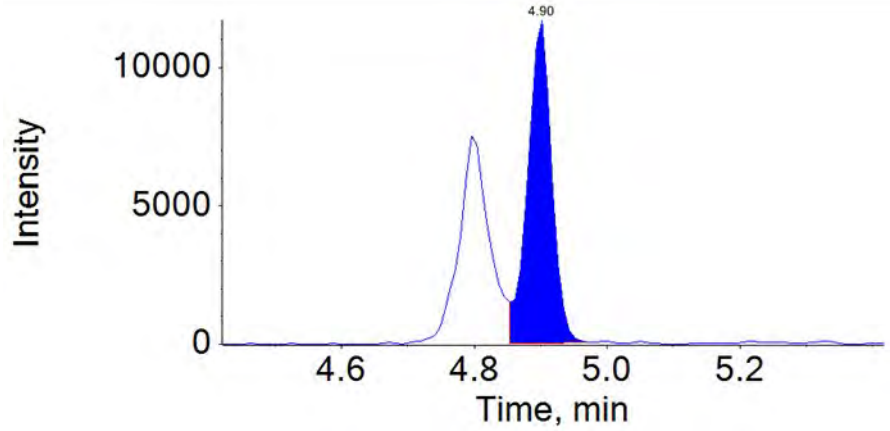
Integration Comment: incorrect integration

Component Name:
PFHpA_2
RT (min.):
4.52
Peak Area:
3048.4
Mass Range:
363.0 / 169.0
File Name:
18NOV29D-61.wiff
Sample Name:
9883396



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.90
Peak Area:
29248.6
Mass Range:
413.0 / 169.0
File Name:
18NOV29D-61.wiff
Sample Name:
9883396

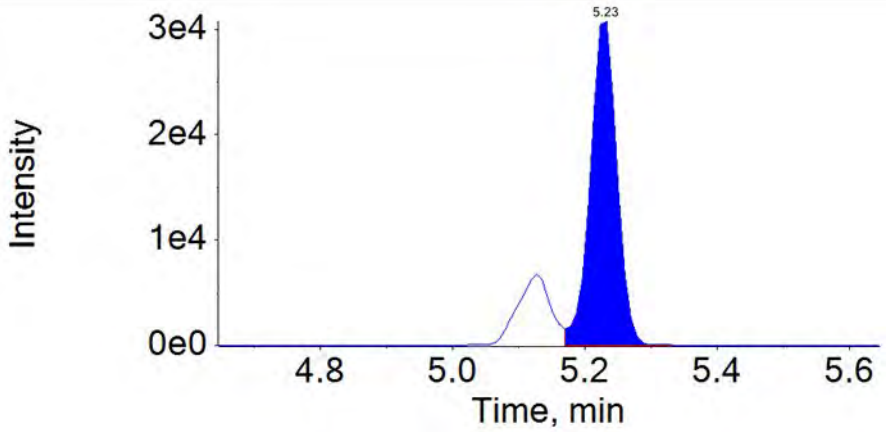


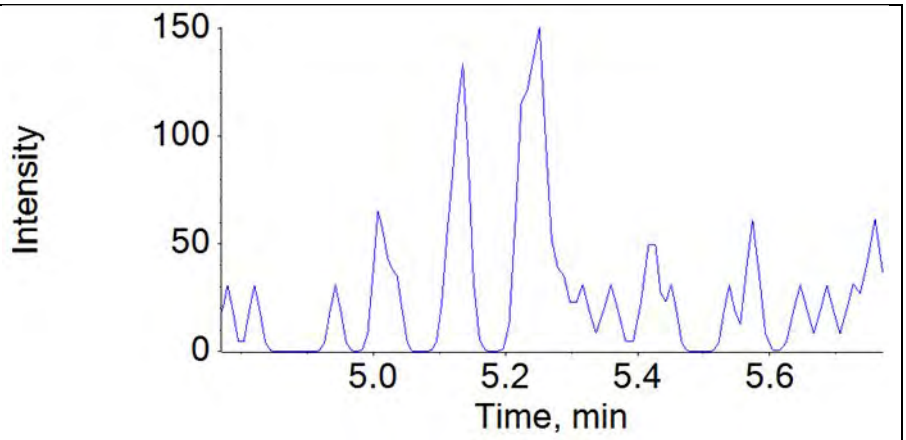
Integration Comment: incorrect integration

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOS_2 **RT (min.):** 5.23 **Peak Area:** 86854.6 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV29D-61.wiff **Sample Name:** 9883396	 **Integration Comment:** incorrect integration

Component Name: PFNA_2 **RT (min.):** N/A **Peak Area:** N/A **Mass Range:** 463.0 / 169.0 **File Name:** 18NOV29D-61.wiff **Sample Name:** 9883396	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Ion Ratio Report

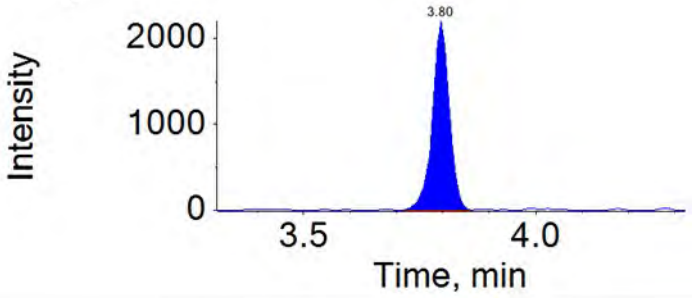
Sample Name: 9883396 **Instrument Name:** LM27631 **File Name:** 18NOV29D-61.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	5516.6	A	N/A	0.3692			
PFBS_2	3.80	1.00	2036.5	A	N/A	0.3692	1	50	
PFHxA	4.14	1.00	68281.2	M	N/A	0.0093			
PFHxA_2	4.14	1.00	633.2	A	N/A	0.0093	-10	50	
PFHpA	4.53	1.00	46282.5	A	N/A	0.0623			
PFHpA_2	4.52	1.00	2882.2	M	N/A	0.0623	12	50	
PFHxS	4.53	1.00	611016.6	M	N/A	0.3480			
PFHxS_2	4.53	1.00	212635.6	A	N/A	0.3480	-6	50	
PFOA	4.90	1.00	612187.5	M	N/A	0.0876			
PFOA_2	4.88	1.00	53606.5	M	N/A	0.0876	53	50	OOS
PFOS	5.23	1.00	416621.7	M	N/A	0.2651			
PFOS_2	5.23	1.00	110448.7	M	N/A	0.2651	-10	50	
PFNA	5.25	1.00	11742.7	A	N/A	0.0405			
PFNA_2	5.24	1.00	475.0	M	N/A	0.0405	101	50	OOS
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

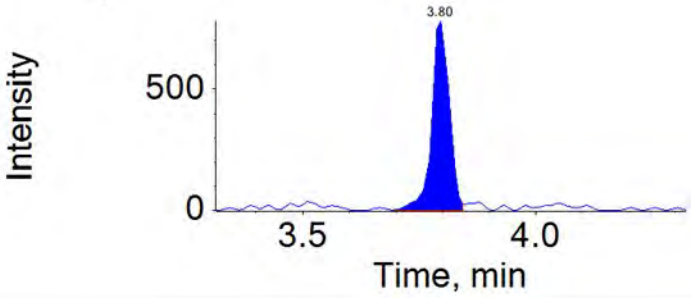
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

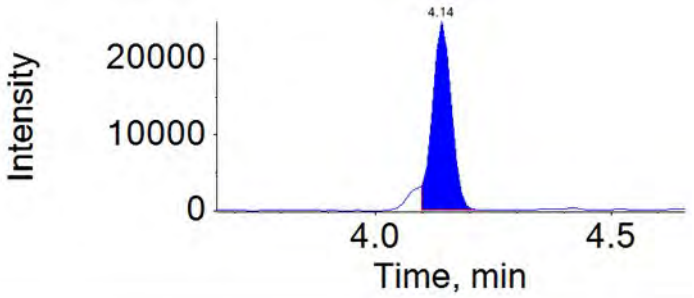
Component: PFBS
Primary Mass: 299.0 / 80.0



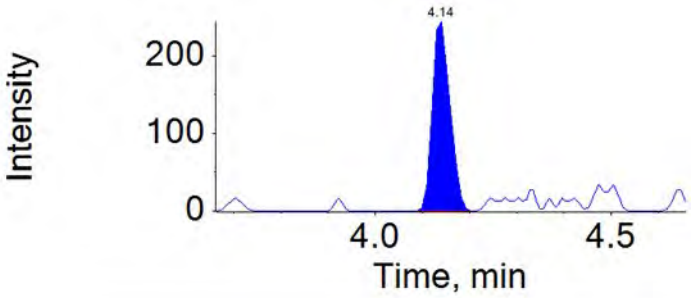
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



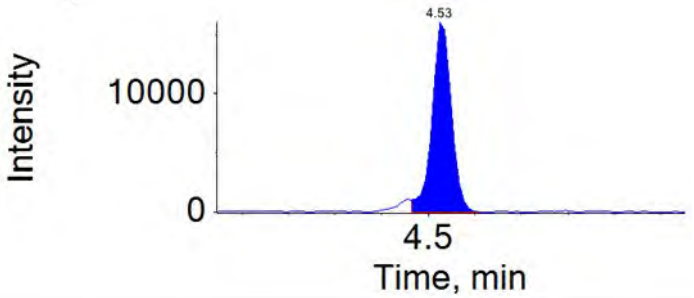
Component: PFHxA
Primary Mass: 313.0 / 269.0



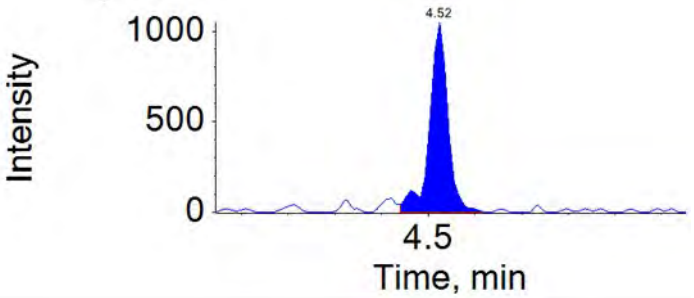
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



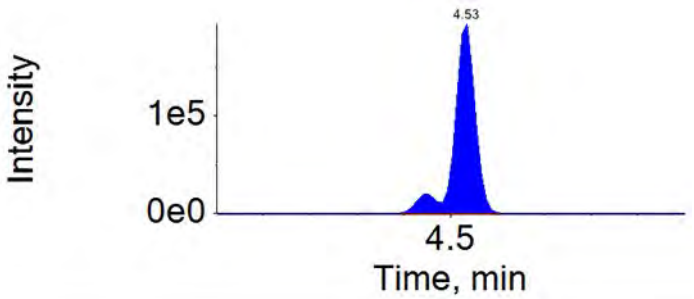
Component: PFHpA
Primary Mass: 363.0 / 319.0



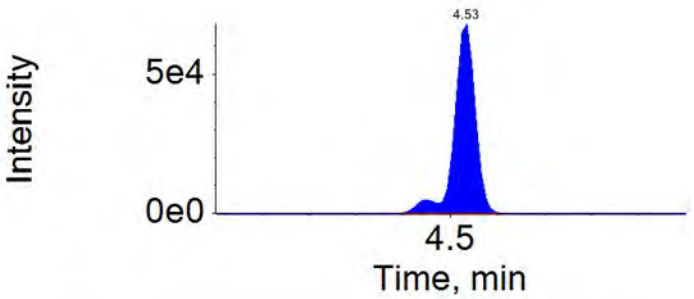
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



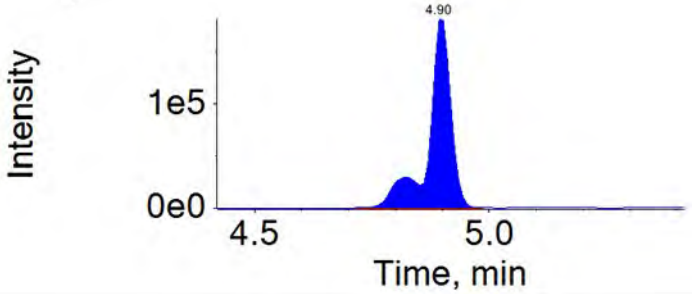
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



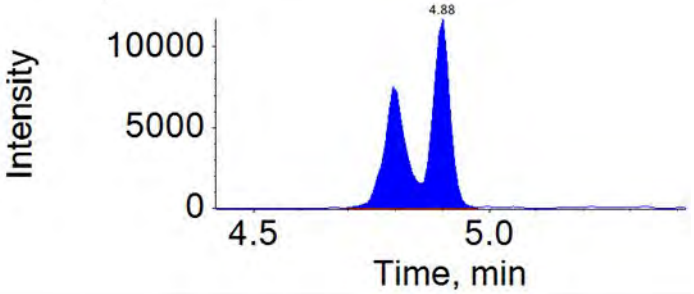
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

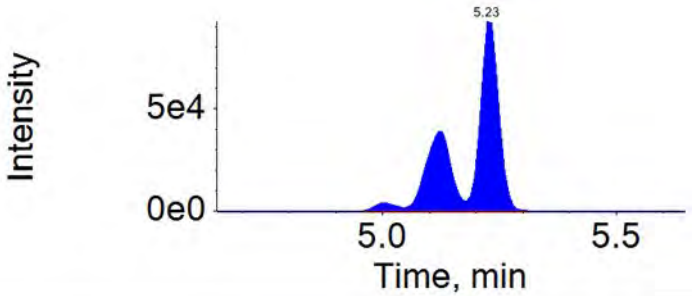
Component: PFOA
Primary Mass: 413.0 / 369.0



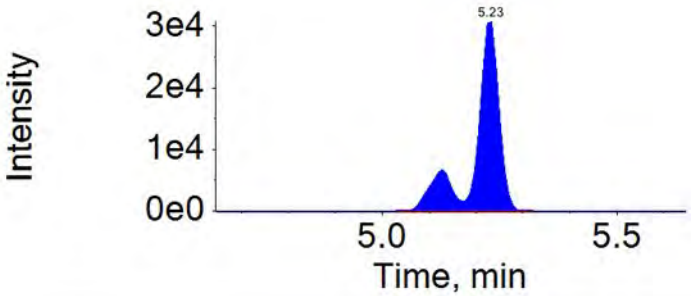
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



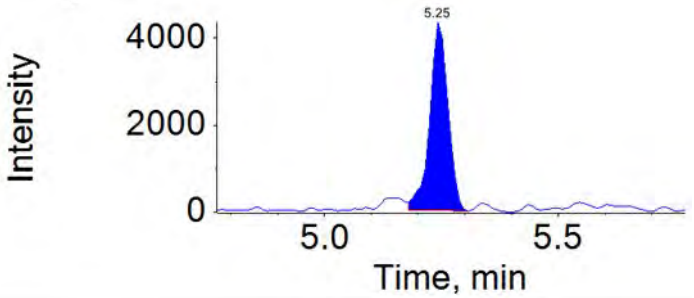
Component: PFOS
Primary Mass: 499.0 / 80.0



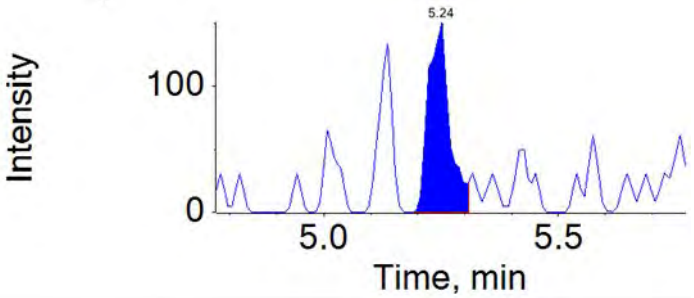
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



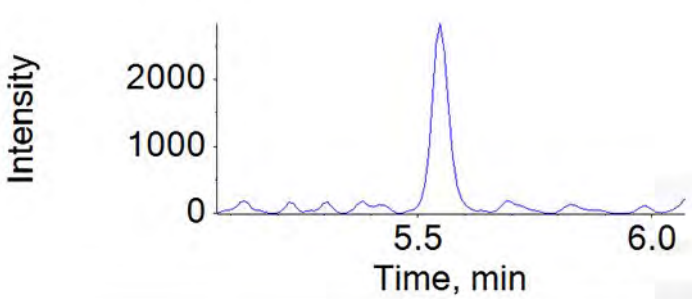
Component: PFNA
Primary Mass: 463.0 / 419.0



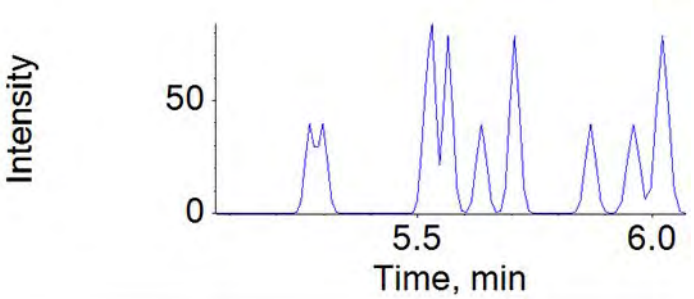
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



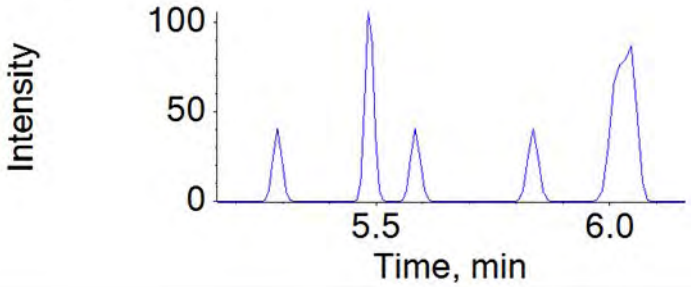
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



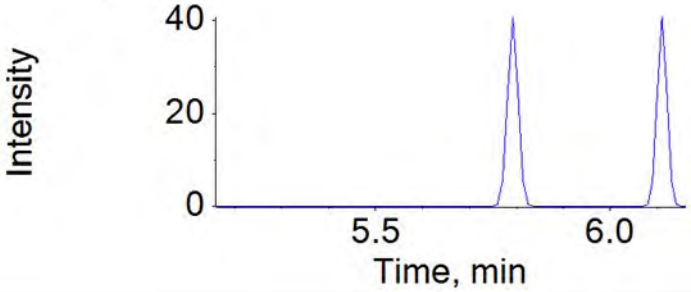
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

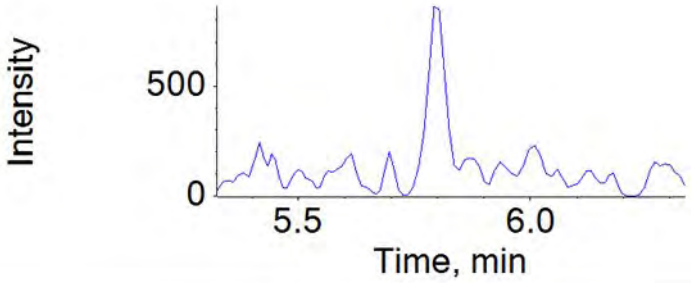
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



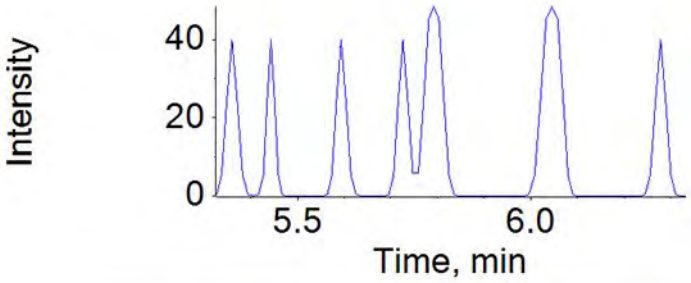
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



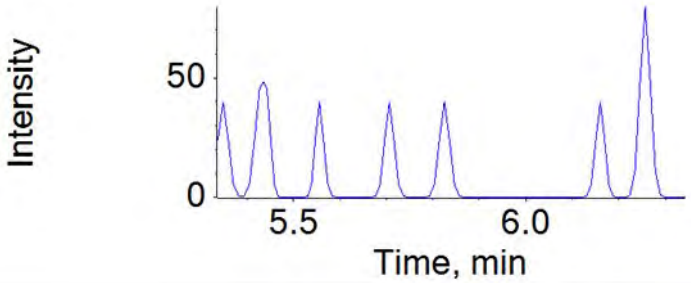
Component: PFUnDA
Primary Mass: 563.0 / 519.0



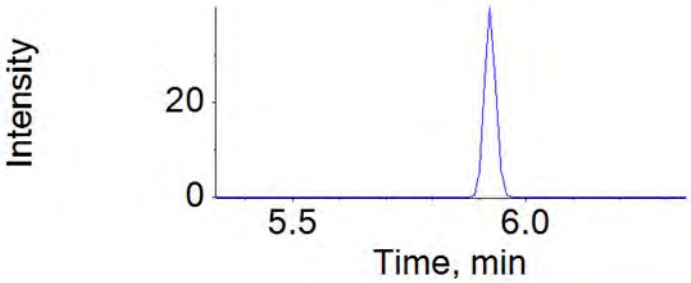
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



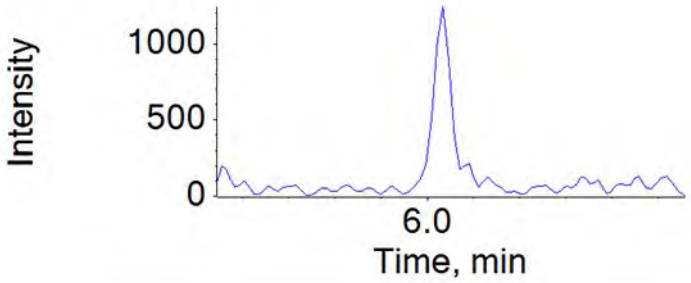
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



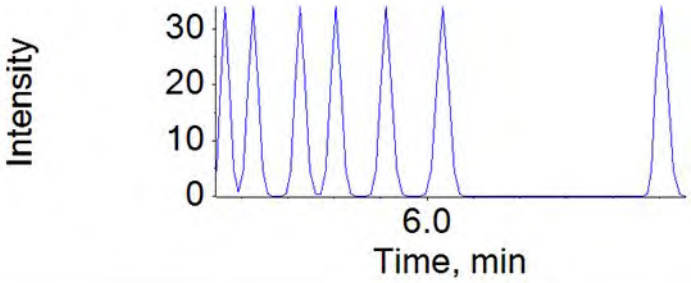
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



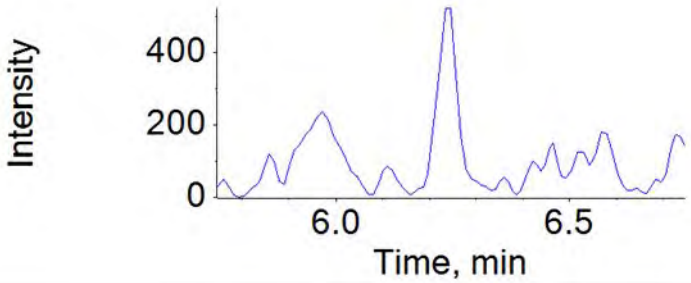
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



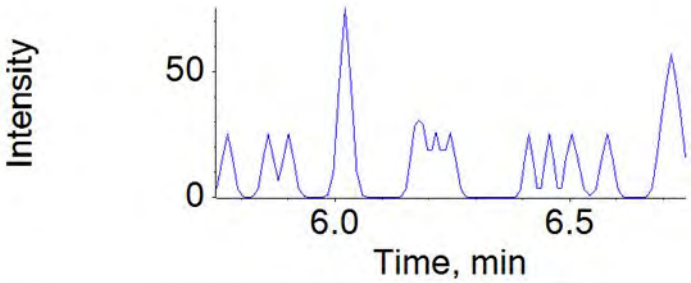
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

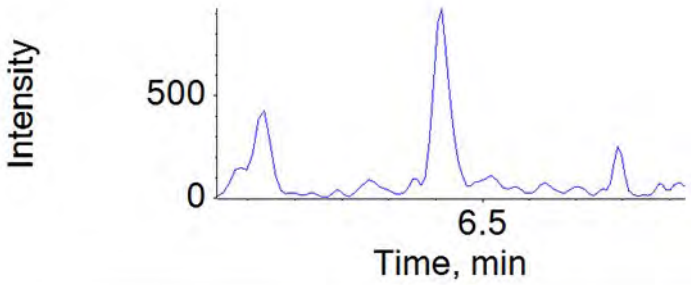
Component: PFTrDA
Primary Mass: 663.0 / 619.0



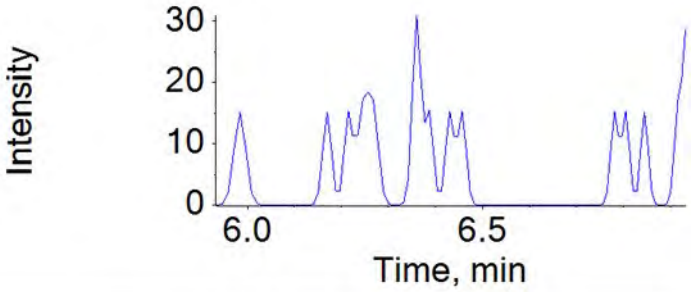
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883396RE			**Data File:**		18DEC05D-38.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18338017 OU1-Bldg371-S-04-10 Grab Soil			**Acquis Date:**		2018-12-05T17:45:20
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	27			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18338017
QMethod File:	18AUG20QM			**ICAL Name:**		18DEC03DCAL
Batch Number:	18338017			**Operator:**		MCD7824
Sample Wt.:	1.08000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18DEC05D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	936852.1	850136.0	10	50	
13C2-PFOA	5.0	458657.0	429843.2	7	50	
13C4-PFOS	4.8	301983.2	272032.6	11	50	
13C2-PFDA	5.0	336896.9	291183.9	16	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	372089.5	13C3-PFBA	936852.1	0.397	8.611	5.732	67	50-150	
E13C5-PFHxA	579236.6	13C2-PFOA	458657.0	1.263	9.259	7.920	86	50-150	
E13C3-PFHxS	297080.0	13C2-PFOA	458657.0	0.648	8.759	7.583	87	50-150	
E13C4-PFHpA	447739.9	13C2-PFOA	458657.0	0.976	9.259	7.887	85	50-150	
E13C8-PFOA	692921.0	13C2-PFOA	458657.0	1.511	9.259	7.777	84	50-150	
E13C8-PFOS	265568.3	13C4-PFOS	301983.2	0.879	8.852	7.233	82	50-150	
E13C9-PFNA	445401.3	13C4-PFOS	301983.2	1.475	9.259	7.994	86	50-150	
E13C6-PFDA	508785.9	13C2-PFDA	336896.9	1.510	9.259	7.274	79	50-150	
Ed3-NMeFOSAA	25119.8	13C2-PFDA	336896.9	0.075	9.259	2.412	26	50-150	OOS
E13C7-PFUnDA	295455.3	13C2-PFDA	336896.9	0.877	9.259	8.089	87	50-150	
Ed5-NEtFOSAA	22965.0	13C2-PFDA	336896.9	0.068	9.259	2.880	31	50-150	OOS
E13C2-PFDoDA	591607.6	13C2-PFDA	336896.9	1.756	9.259	6.963	75	50-150	
E13C2-PFTeDA	414945.6	13C2-PFDA	336896.9	1.232	9.259	6.429	69	50-150	

APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

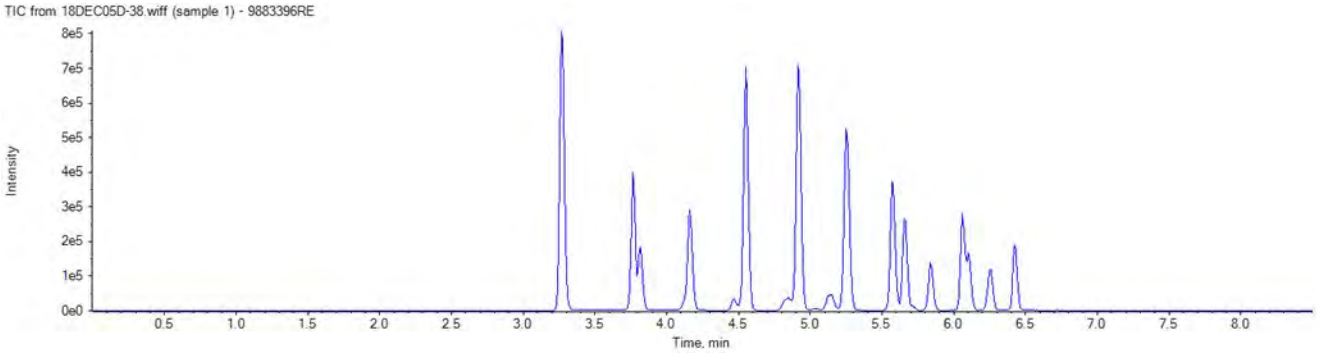
Analyte Quantitation Peak Table

Sample Name: 9883396RE **Instrument Name:** LM27631 **File Name:** 18DEC05D-38.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.08000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.82	1.000	5641.0		A	13C3-PFBS	3.82	372089.5	0.015	0.137
PFHxA	4.16	1.000	67090.2		M	13C5-PFHxA	4.16	579236.6	0.116	0.914
PFHpA	4.55	1.000	42276.3		A	13C4-PFHpA	4.55	447739.9	0.094	0.564
PFHxS	4.55	1.000	659581.7		M	13C3-PFHxS	4.55	297080.0	2.220	19.370
PFOA	4.92	1.000	572687.7		M	13C8-PFOA	4.92	692921.0	0.826	8.101
PFOS	5.25	1.000	419031.4		M	13C8-PFOS	5.25	265568.3	1.578	12.384
PFNA	5.27	1.000	8671.9		A	13C9-PFNA	5.26	445401.3	0.019	0.135
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	508785.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	25119.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.84	295455.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.85	22965.0	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	591607.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	591607.6	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	414945.6	N/A	

Total Ion Chromatogram

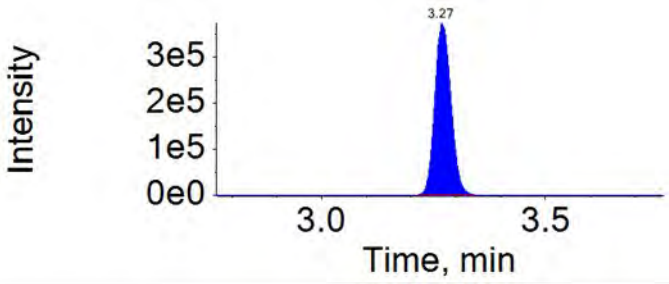


APPROVED
By MCD at 4:12 pm, 12/6/18

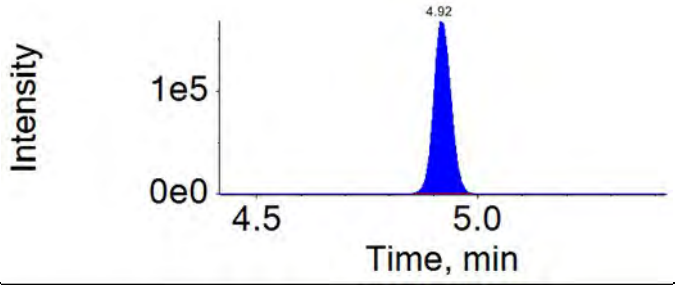
REVIEWED
By HMK at 8:35 am, 12/10/18

ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

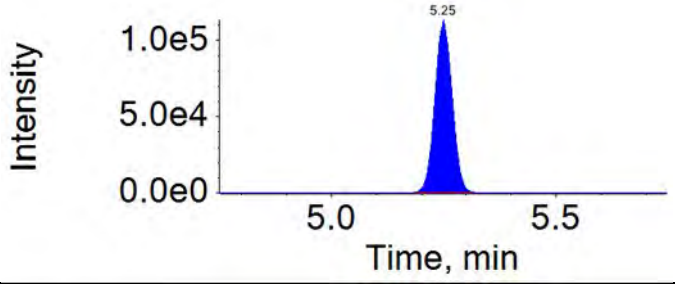
Injection Standard: 13C3-PFBA
216.0 / 172.0



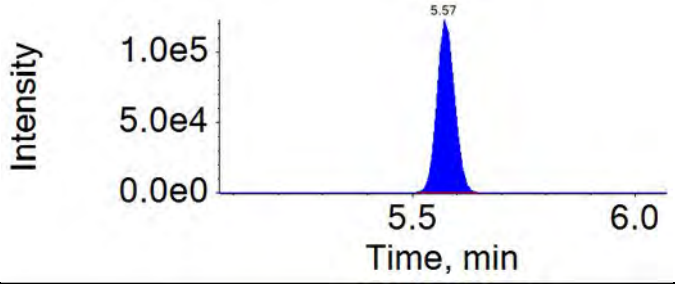
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



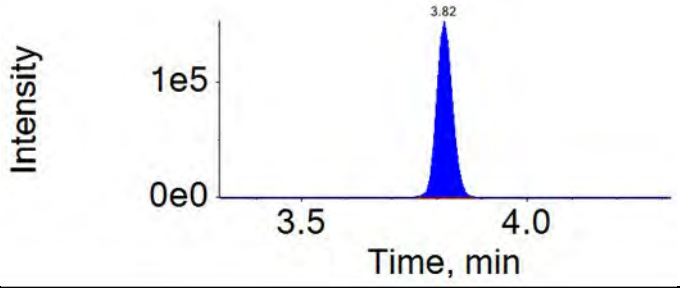
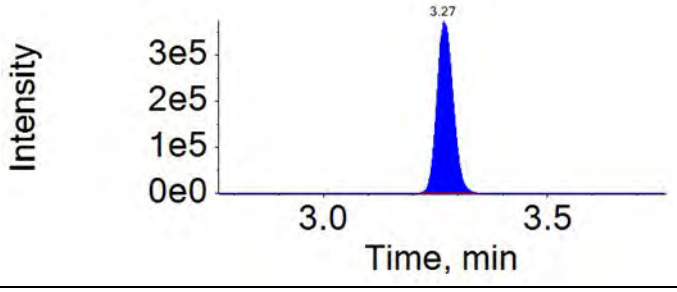
Injection Standard: 13C2-PFDA
515.0 / 470.0

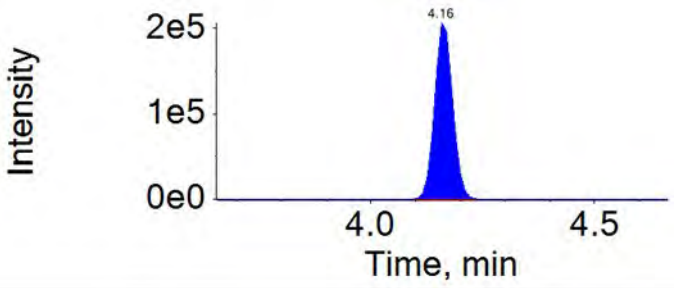
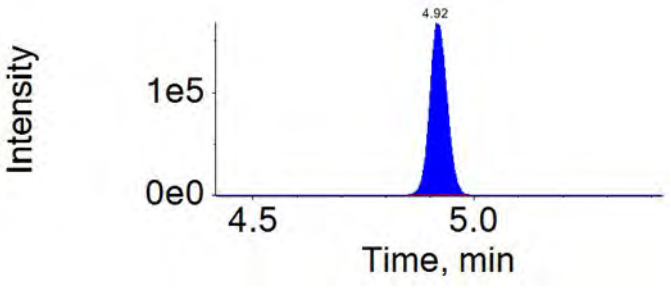


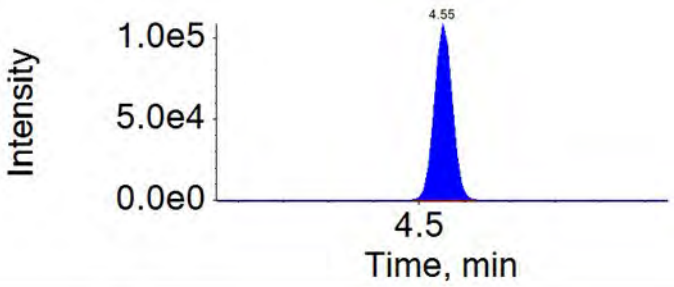
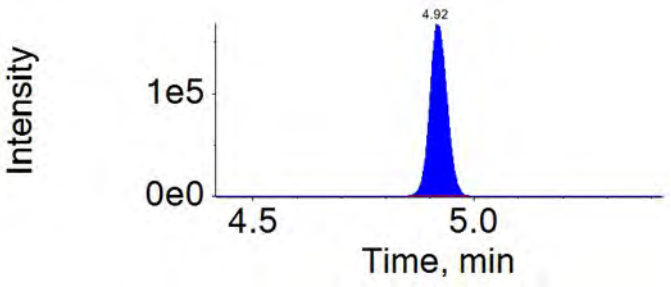
APPROVED
By MCD at 4:12 pm, 12/6/18

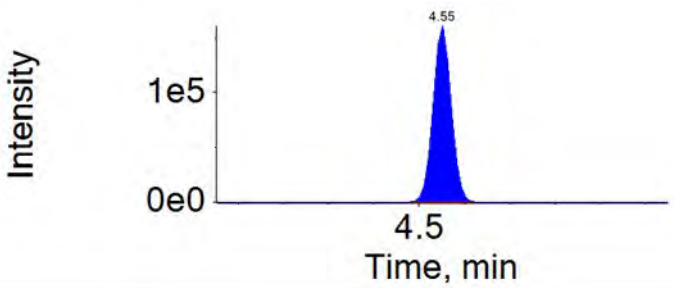
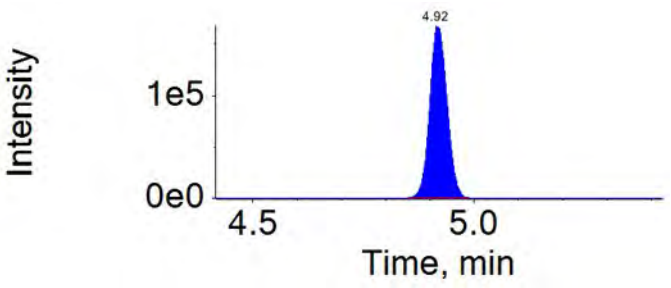
REVIEWED
By HMK at 8:35 am, 12/10/18

ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

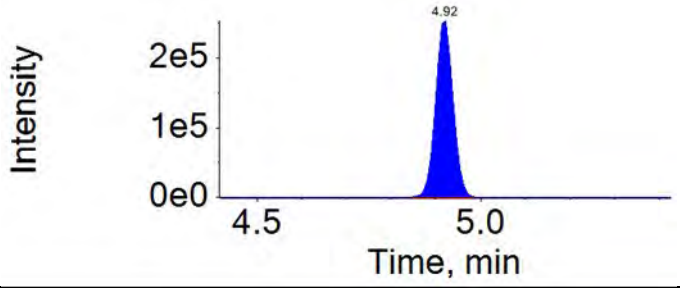
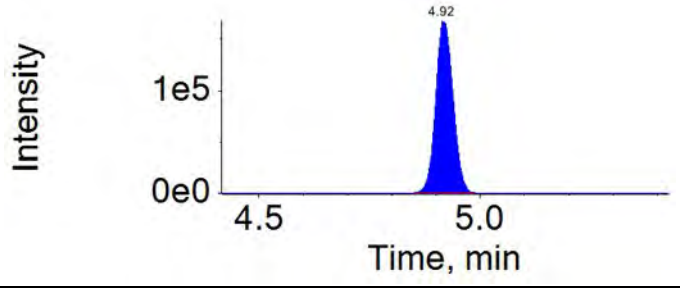
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

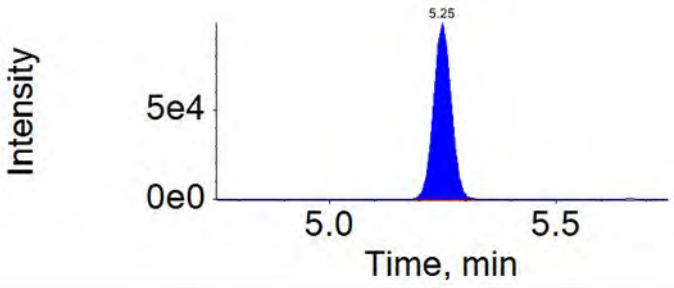
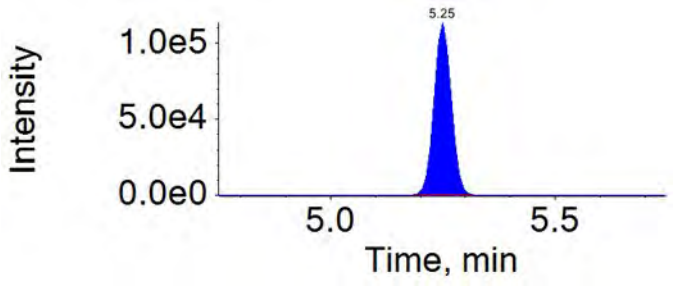
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

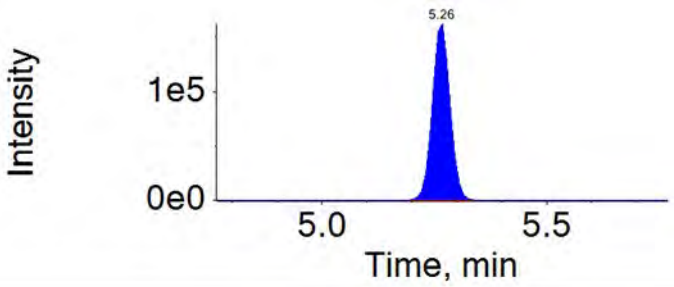
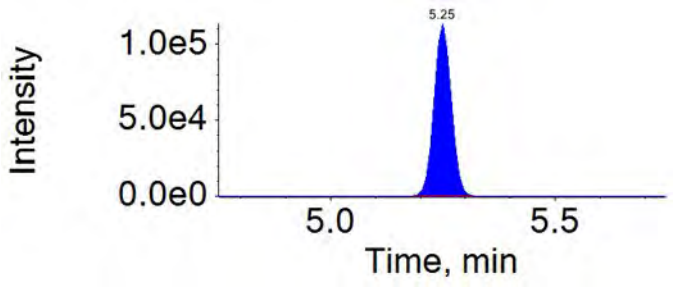
APPROVED
By MCD at 4:12 pm, 12/6/18

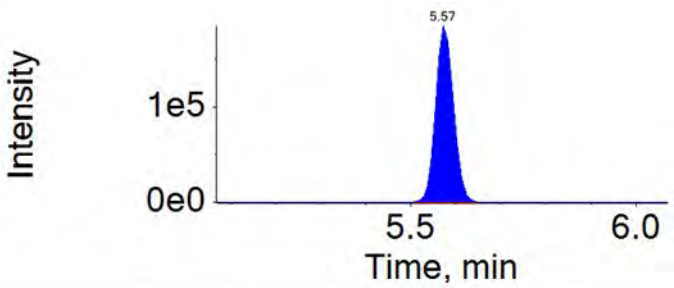
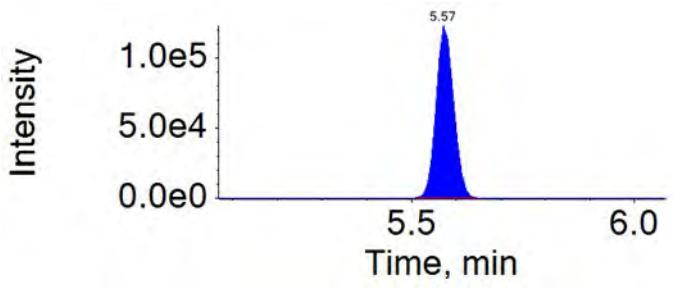
REVIEWED
By HMK at 8:35 am, 12/10/18

ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

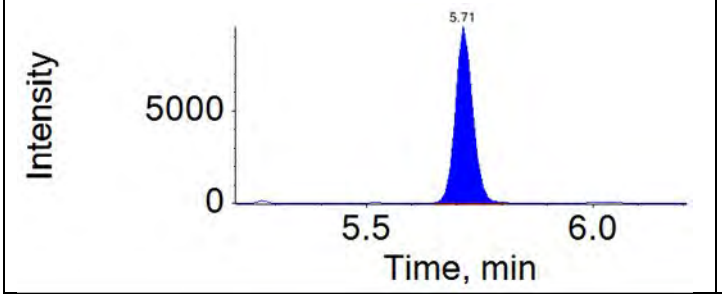
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

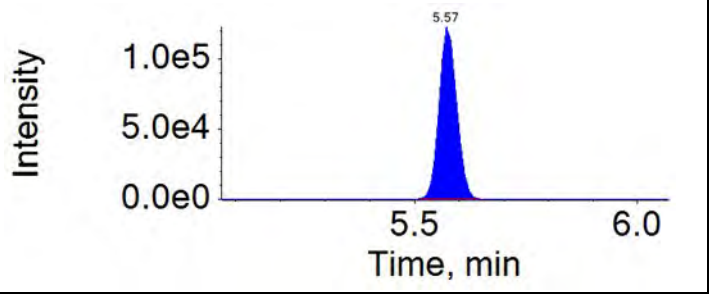
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

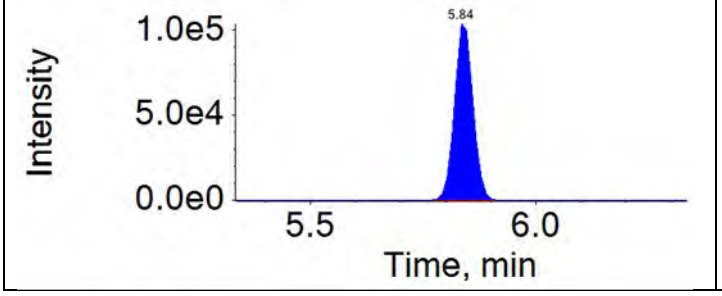
ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

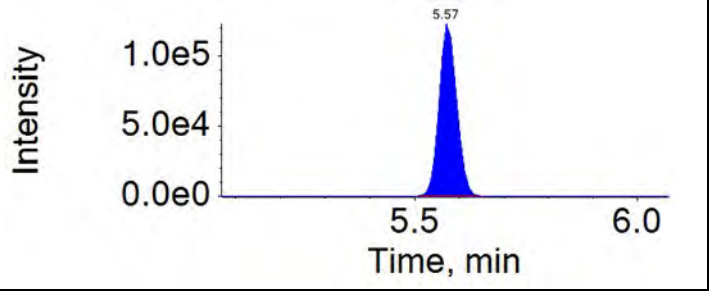
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



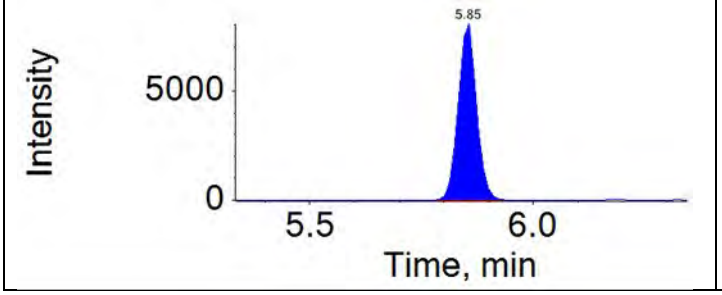


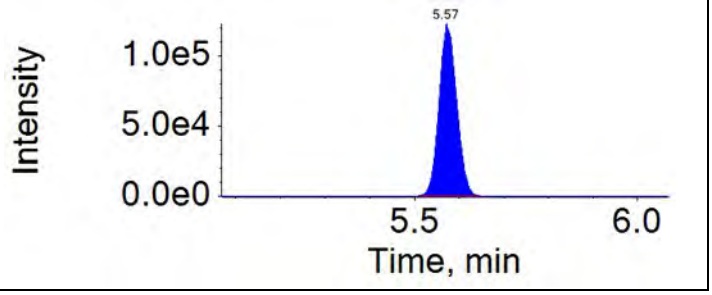
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



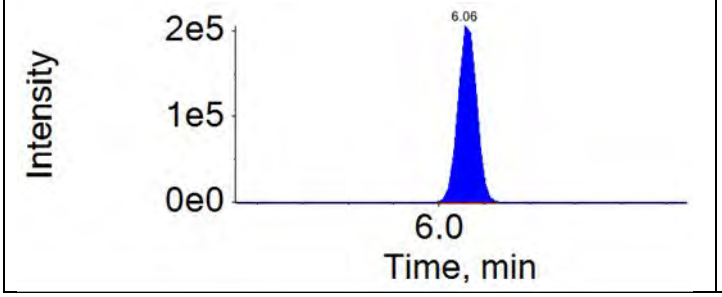


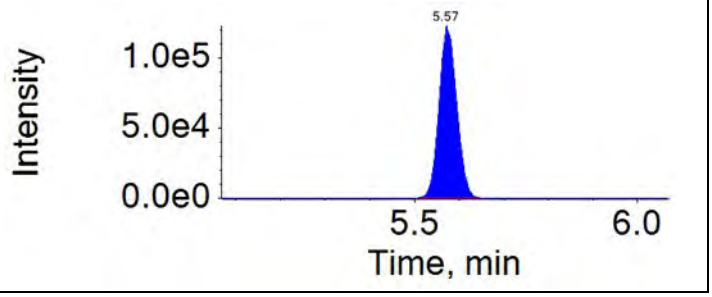
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0

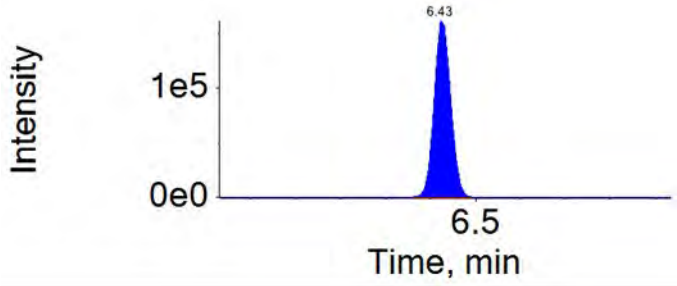
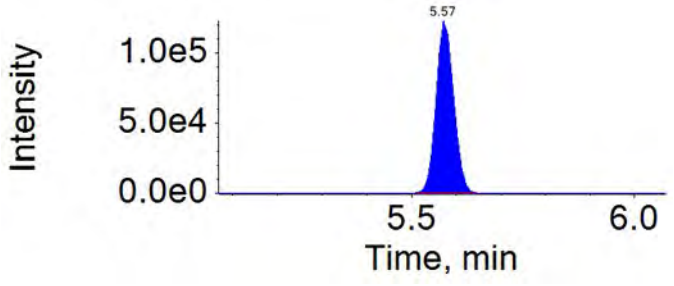




APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

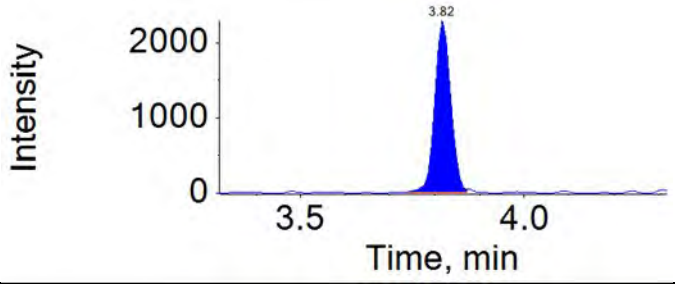
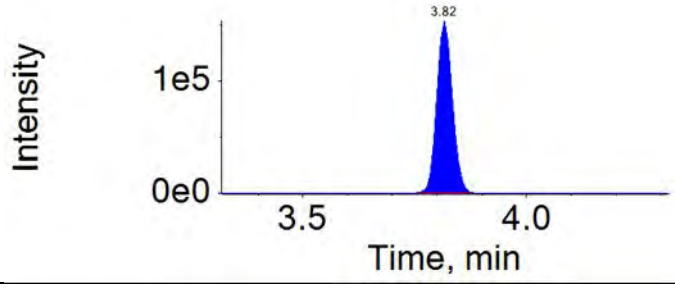
ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

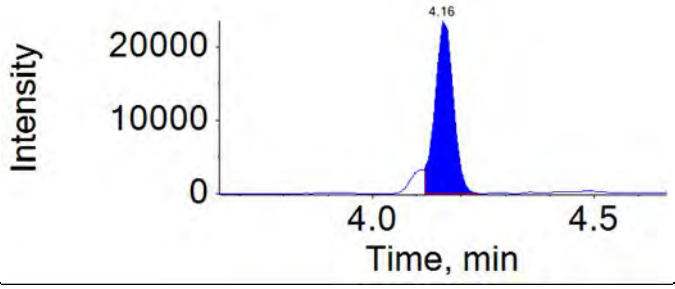
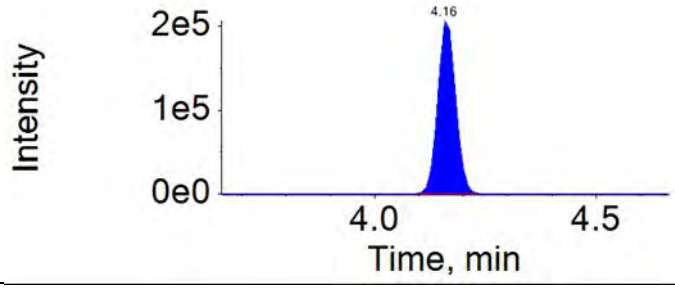
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

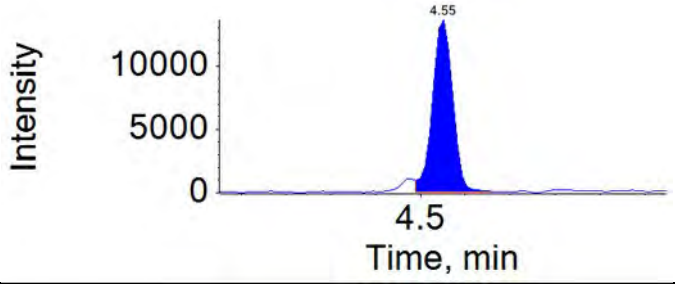
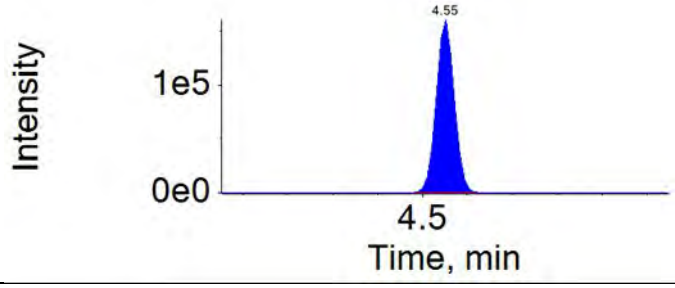
APPROVED
By MCD at 4:12 pm, 12/6/18

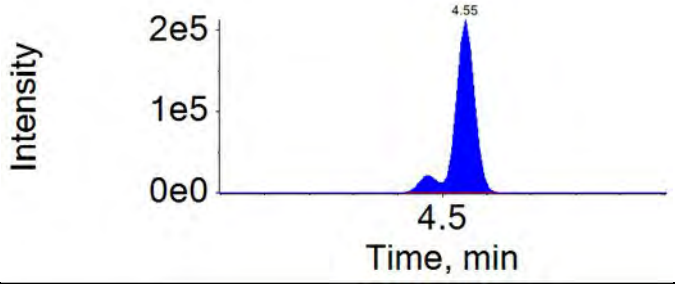
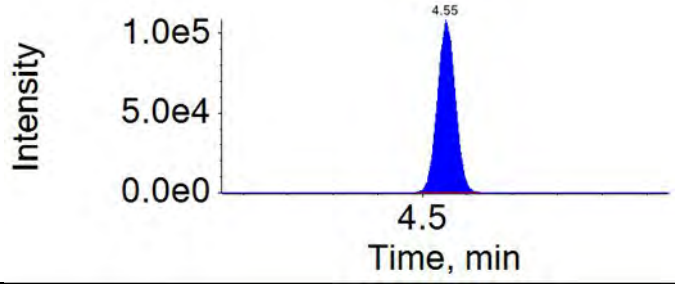
REVIEWED
By HMK at 8:35 am, 12/10/18

ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

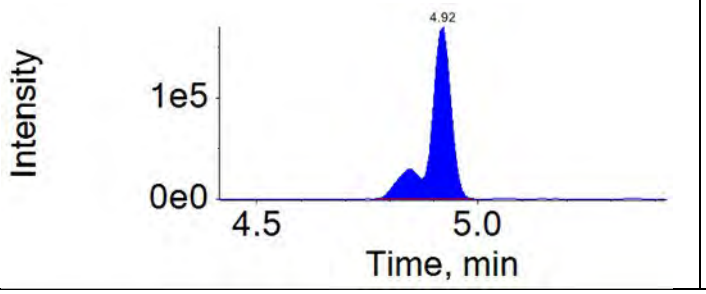
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

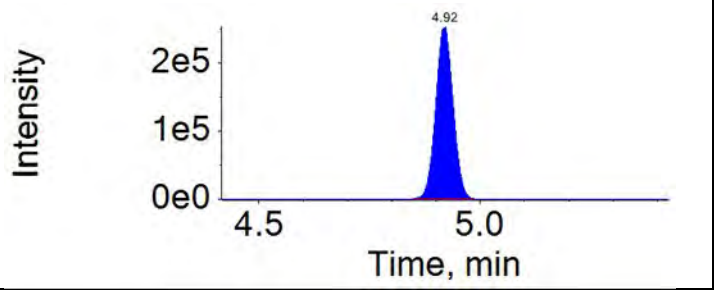
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

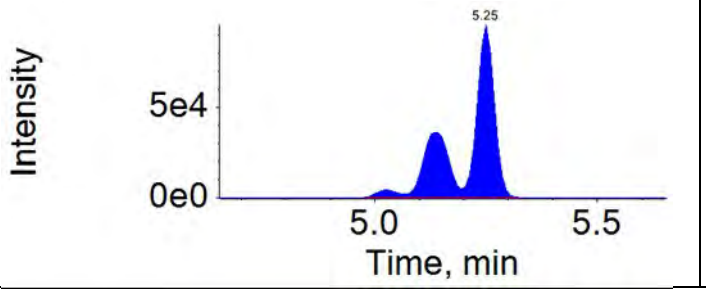
ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

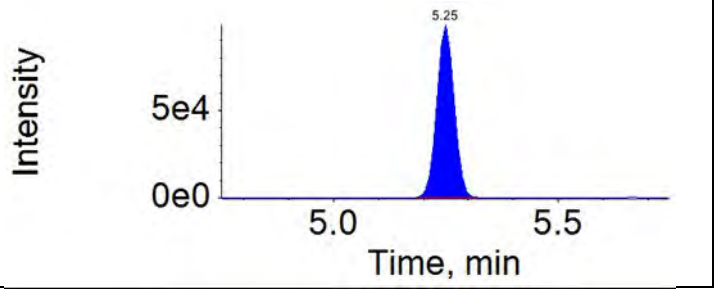
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



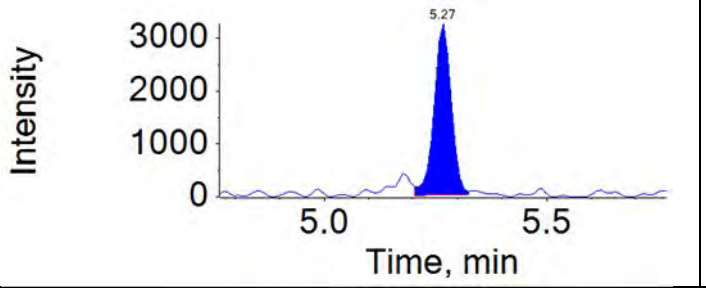


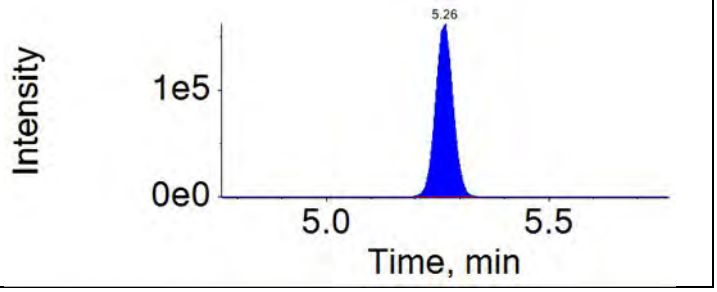
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



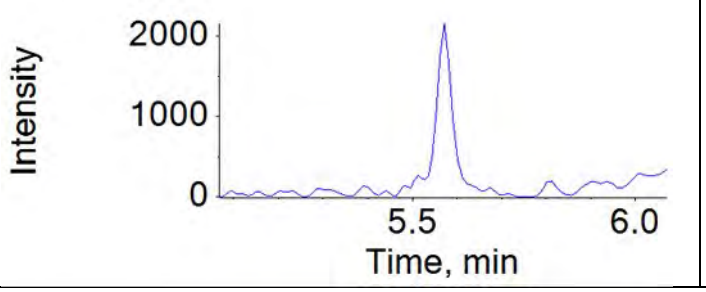


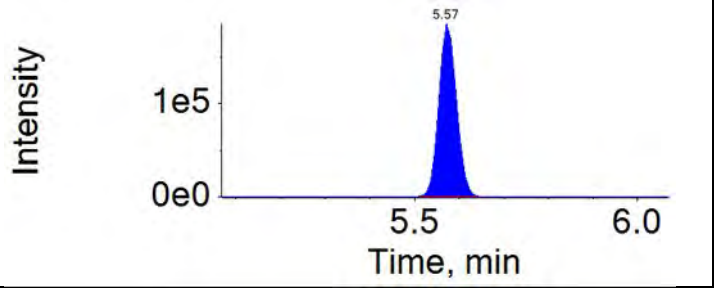
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



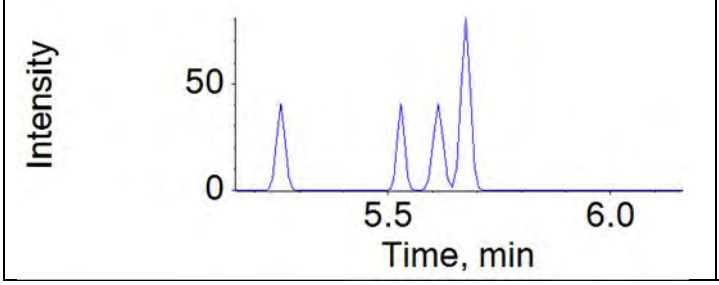


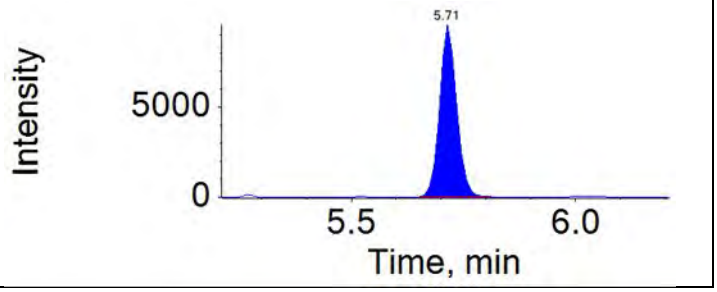
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

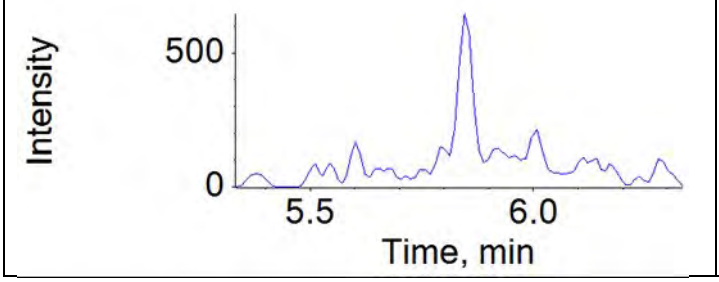
ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

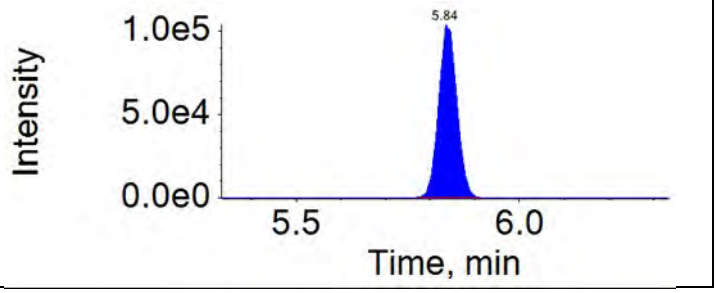
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



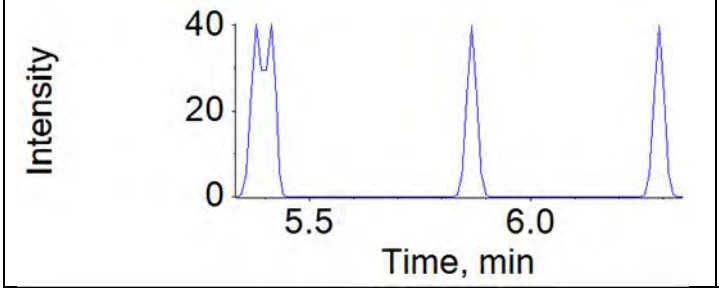


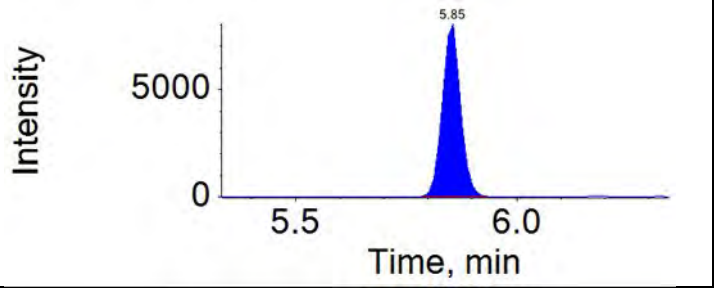
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



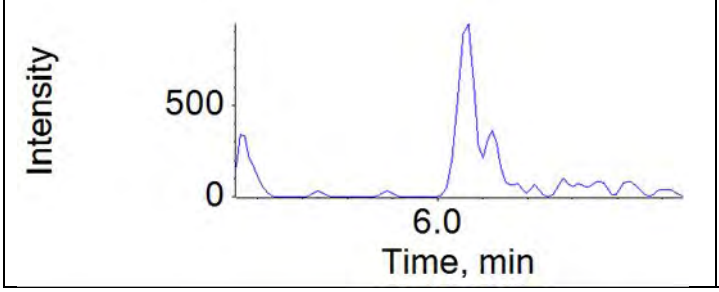


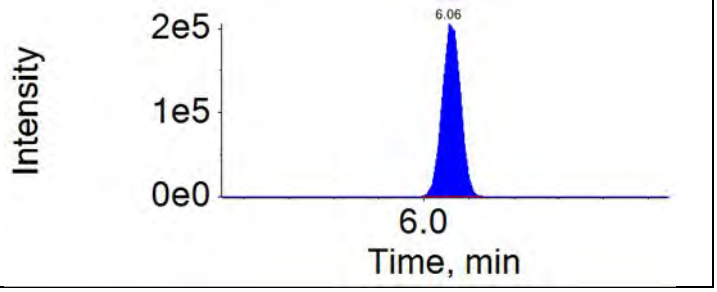
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



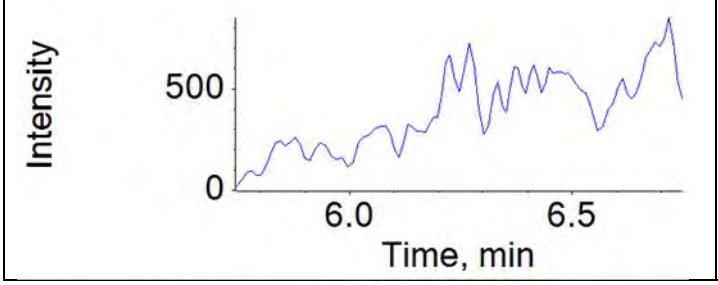


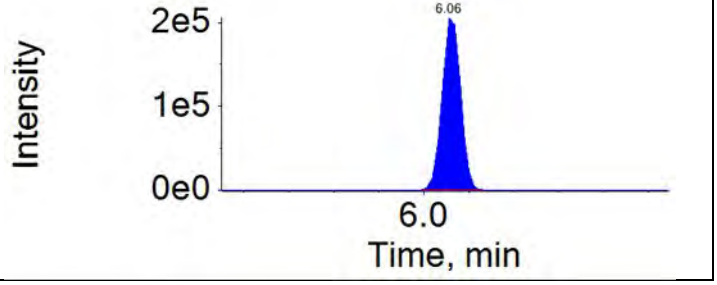
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

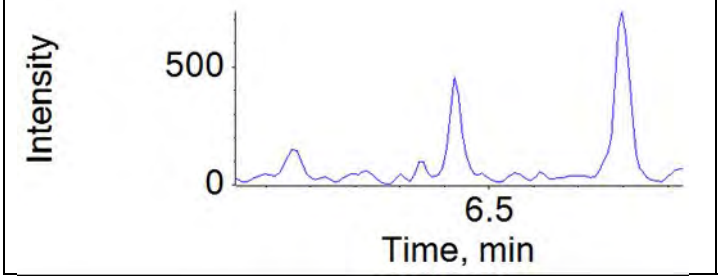
ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

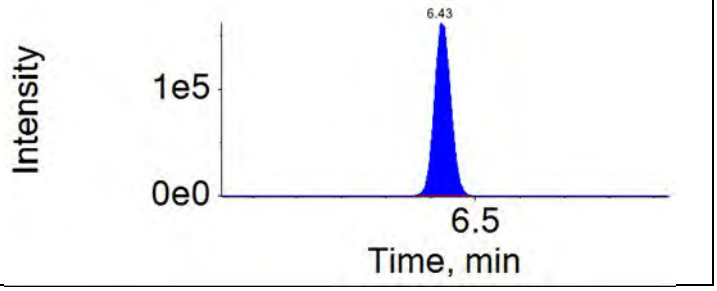
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



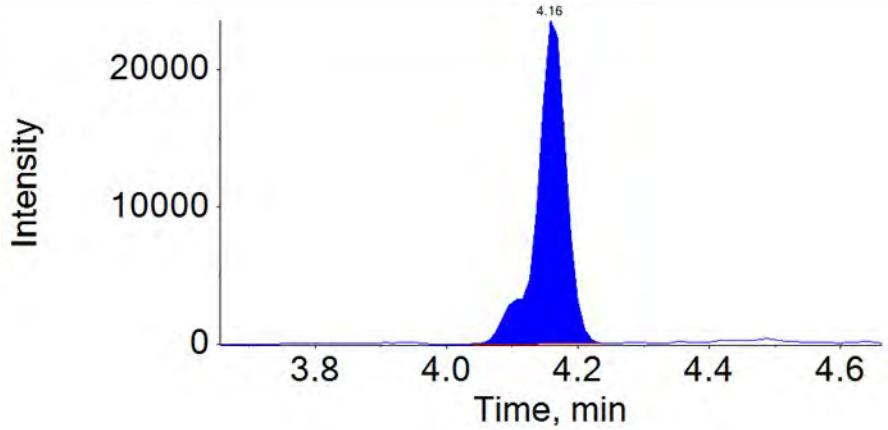


APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

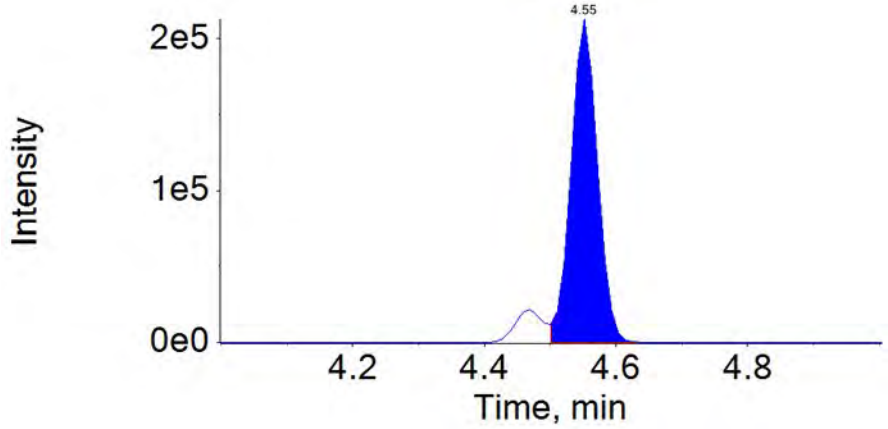
Results Table Name: 18338017
Results Table Date: 12/6/2018 3:58:49 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxA
RT (min.):
4.16
Peak Area:
73977.2
Mass Range:
313.0 / 269.0
File Name:
18DEC05D-38.wiff
Sample Name:
9883396RE



Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
595641.8
Mass Range:
399.0 / 80.0
File Name:
18DEC05D-38.wiff
Sample Name:
9883396RE



Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.92
Peak Area:
468306.1
Mass Range:
413.0 / 369.0
File Name:
18DEC05D-38.wiff
Sample Name:
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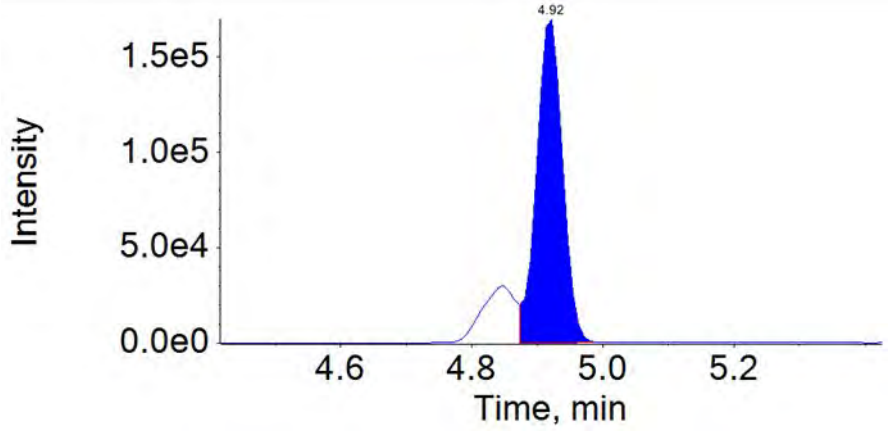


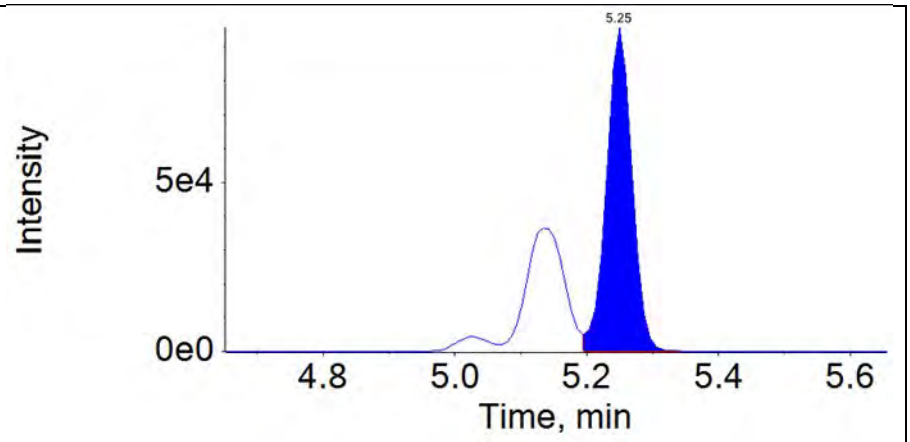
Integration Comment: incorrect integration

APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

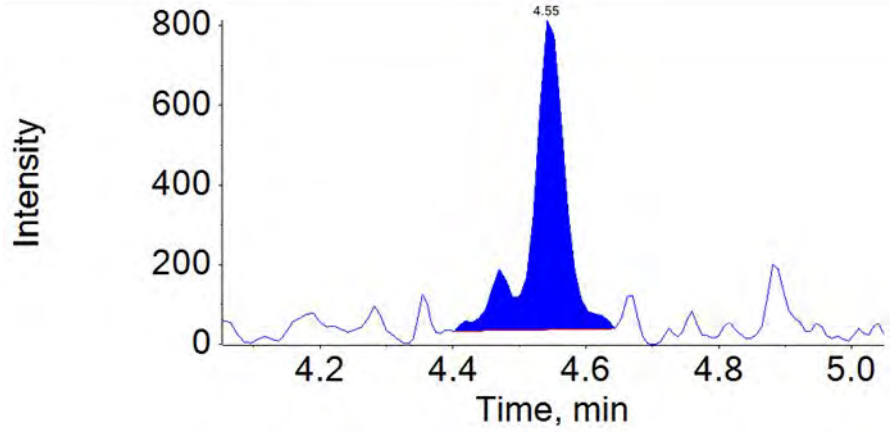
Results Table Name: 18338017
Results Table Date: 12/6/2018 3:58:49 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
257543.2
Mass Range:
499.0 / 80.0
File Name:
18DEC05D-38.wiff
Sample Name:
9883396RE



Integration Comment: incorrect integration

Component Name:
PFHpA_2
RT (min.):
4.55
Peak Area:
2713.4
Mass Range:
363.0 / 169.0
File Name:
18DEC05D-38.wiff
Sample Name:
9883396RE



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
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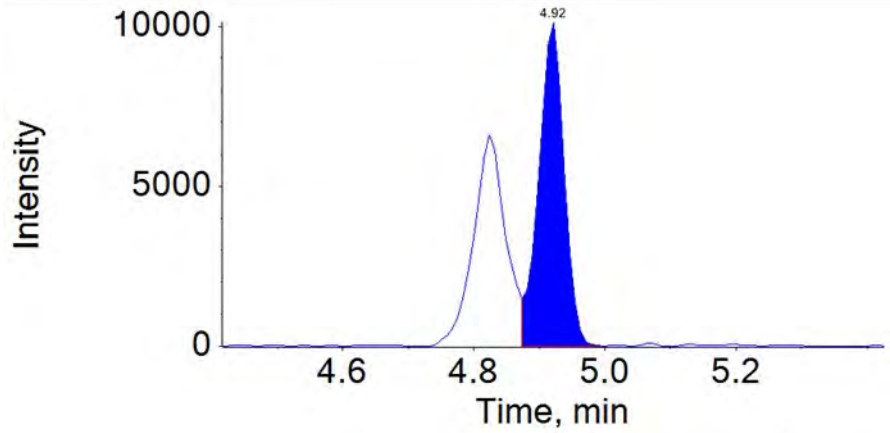
Peak Area:
27202.4
Mass Range:
413.0 / 169.0
File Name:
18DEC05D-38.wiff
Sample Name:
9883396RE



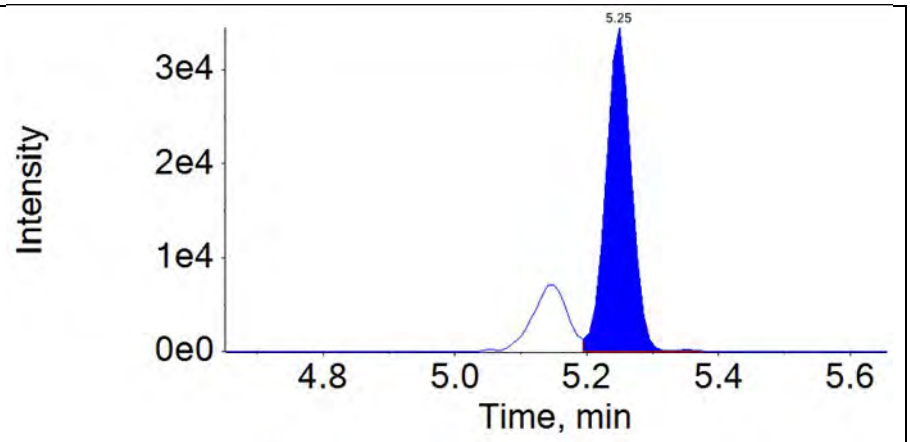
Integration Comment: incorrect integration

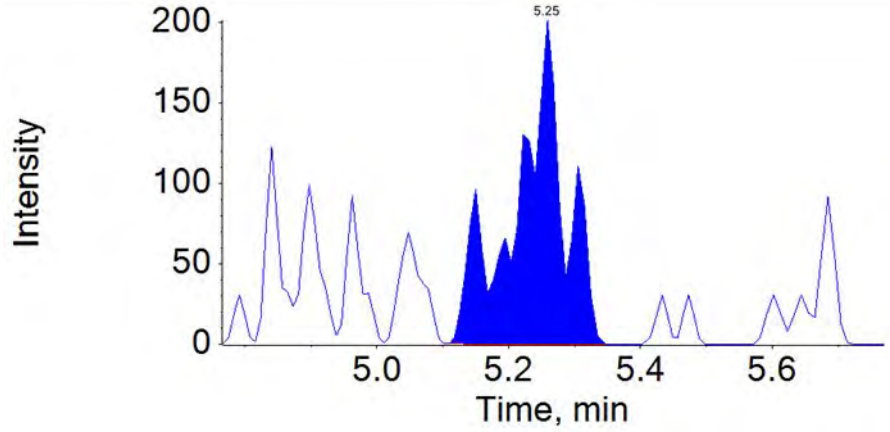
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

Results Table Name: 18338017
Results Table Date: 12/6/2018 3:58:49 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOS_2 **RT (min.):** 5.25 **Peak Area:** 92564.2 **Mass Range:** 499.0 / 99.0 **File Name:** 18DEC05D-38.wiff **Sample Name:** 9883396RE	 **Integration Comment:** incorrect integration

Component Name: PFNA_2 **RT (min.):** 5.25 **Peak Area:** 1047.2 **Mass Range:** 463.0 / 169.0 **File Name:** 18DEC05D-38.wiff **Sample Name:** 9883396RE	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

Results Table Name: 18338017
Results Table Date: 12/6/2018 3:58:49 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

Ion Ratio Report

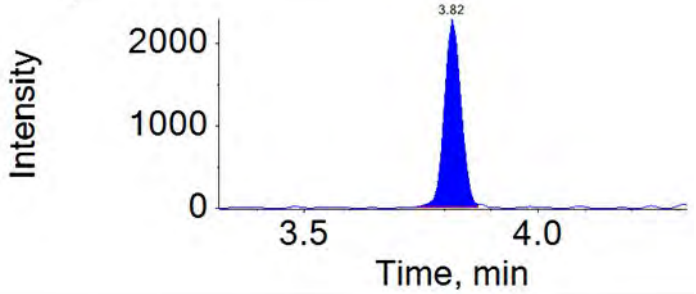
Sample Name: 9883396RE **Instrument Name:** LM27631 **File Name:** 18DEC05D-38.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	5641.0	A	N/A	0.3915			
PFBS_2	3.82	1.00	2208.6	A	N/A	0.3915	6	50	
PFHxA	4.16	1.00	67090.2	M	N/A	0.0067			
PFHxA_2	4.17	1.00	448.7	A	N/A	0.0067	-42	50	
PFHpA	4.55	1.00	42276.3	A	N/A	0.0563			
PFHpA_2	4.55	1.00	2379.1	M	N/A	0.0563	11	50	
PFHxS	4.55	1.00	659581.7	M	N/A	0.3456			
PFHxS_2	4.55	1.00	227961.5	A	N/A	0.3456	-6	50	
PFOA	4.92	1.00	572687.7	M	N/A	0.0868			
PFOA_2	4.90	1.00	49702.7	M	N/A	0.0868	40	50	
PFOS	5.25	1.00	419031.4	M	N/A	0.2833			
PFOS_2	5.25	1.00	118706.5	M	N/A	0.2833	-3	50	
PFNA	5.27	1.00	8671.9	A	N/A	0.0707			
PFNA_2	5.25	1.00	613.0	M	N/A	0.0707	268	50	OOS
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

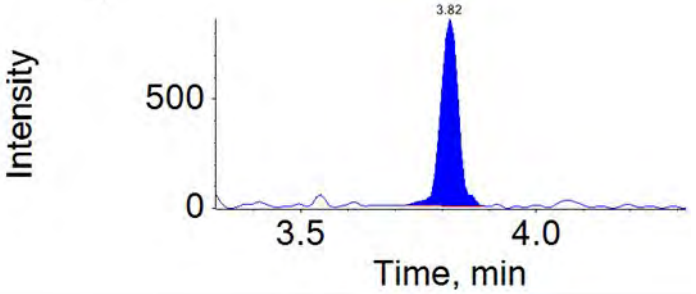
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

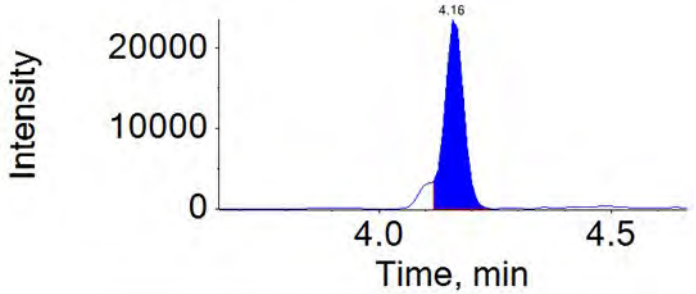
Component: PFBS
Primary Mass: 299.0 / 80.0



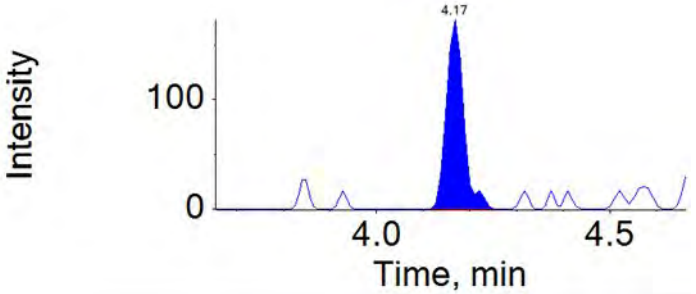
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



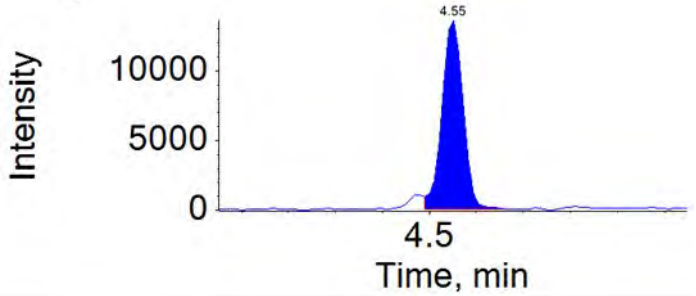
Component: PFHxA
Primary Mass: 313.0 / 269.0



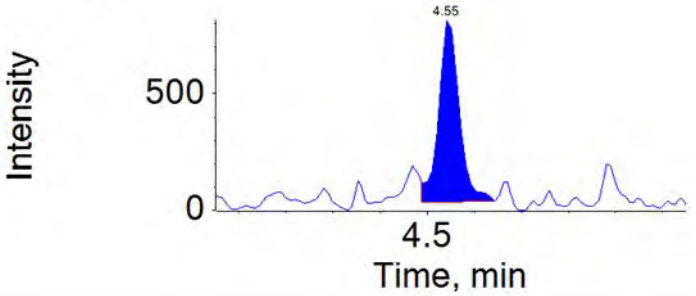
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



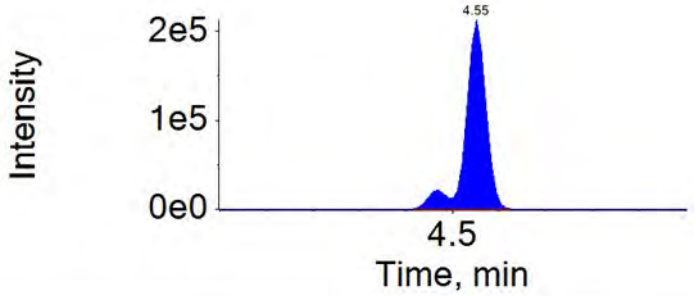
Component: PFHpA
Primary Mass: 363.0 / 319.0



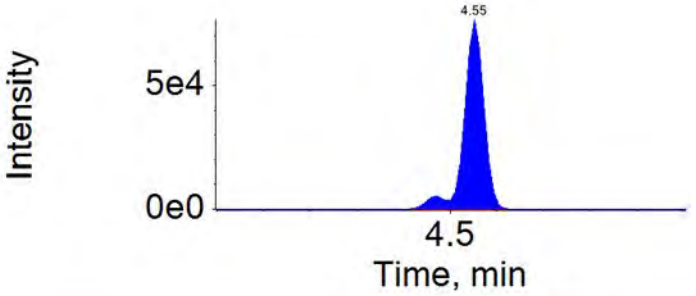
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



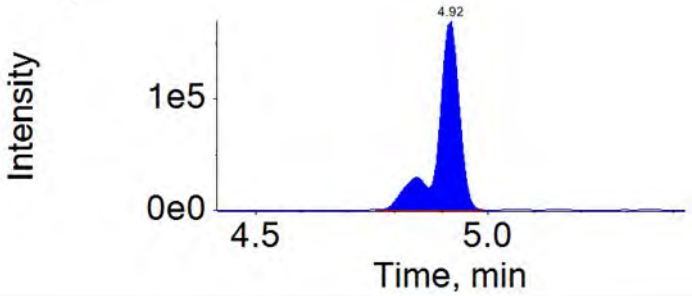
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



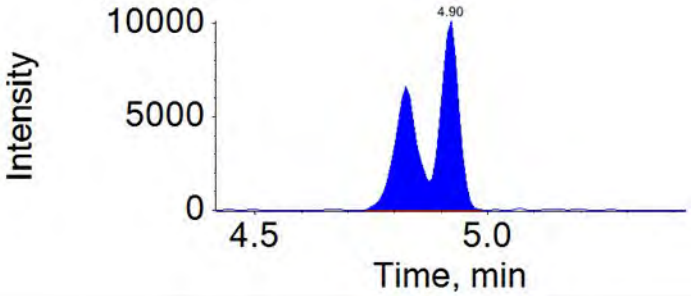
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

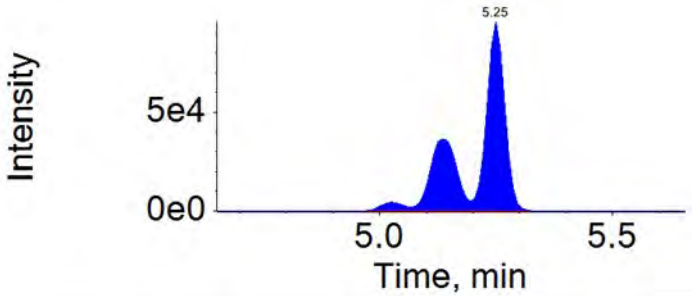
Component: PFOA
Primary Mass: 413.0 / 369.0



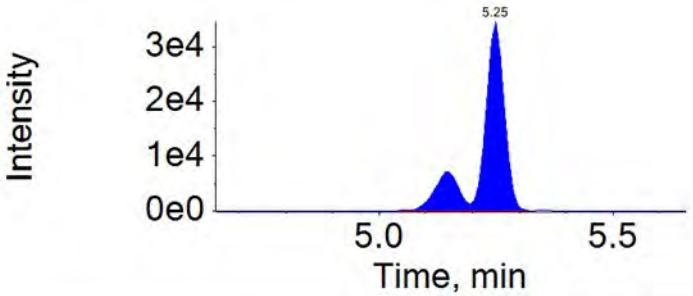
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



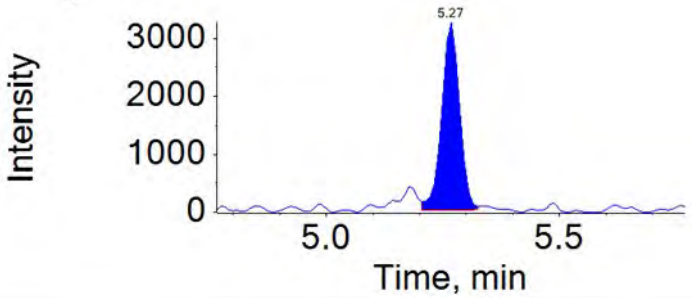
Component: PFOS
Primary Mass: 499.0 / 80.0



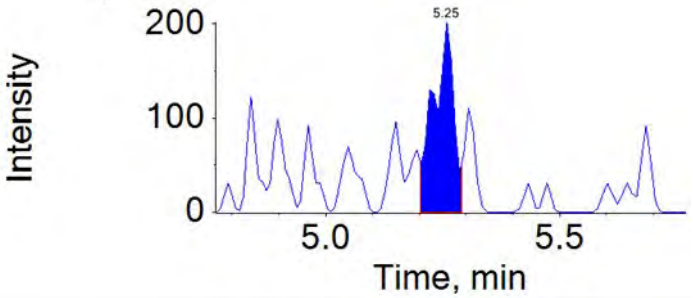
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



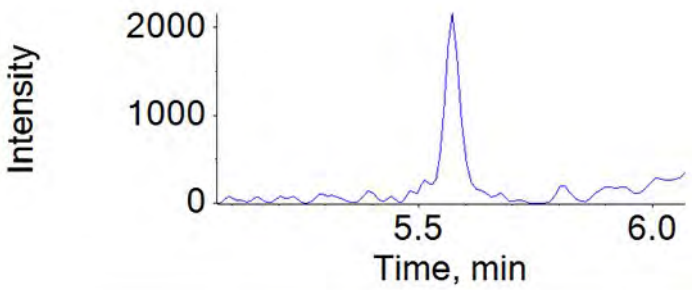
Component: PFNA
Primary Mass: 463.0 / 419.0



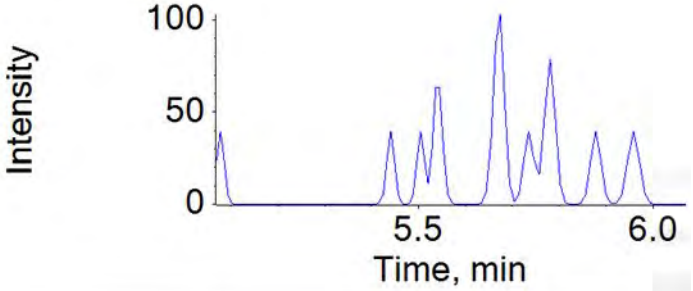
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



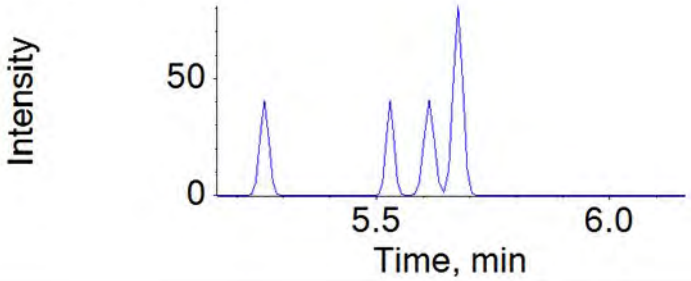
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



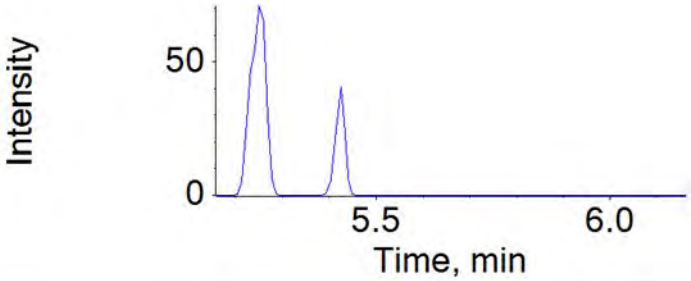
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

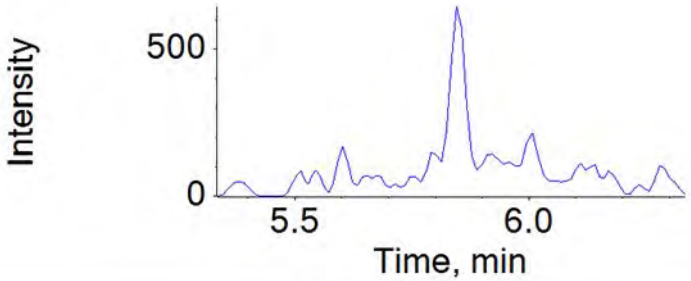
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



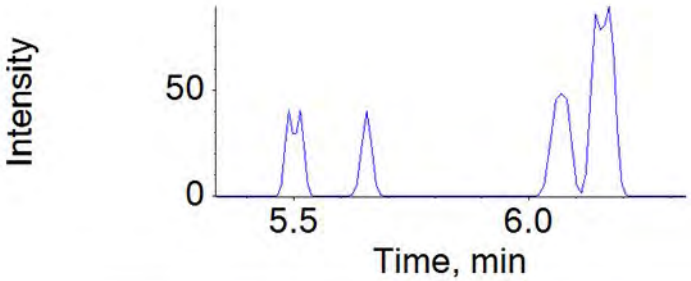
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



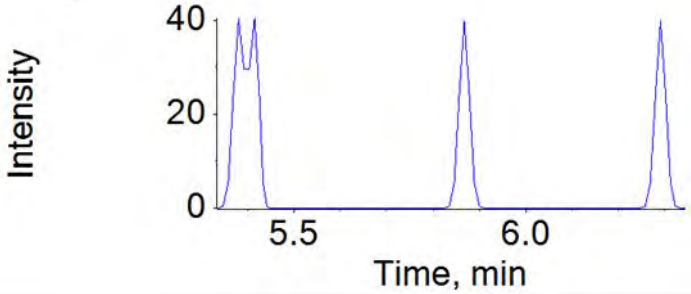
Component: PFUnDA
Primary Mass: 563.0 / 519.0



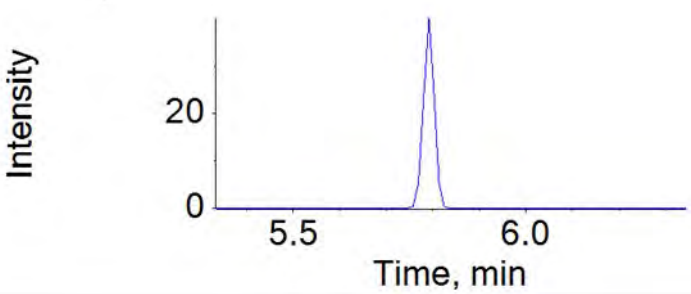
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



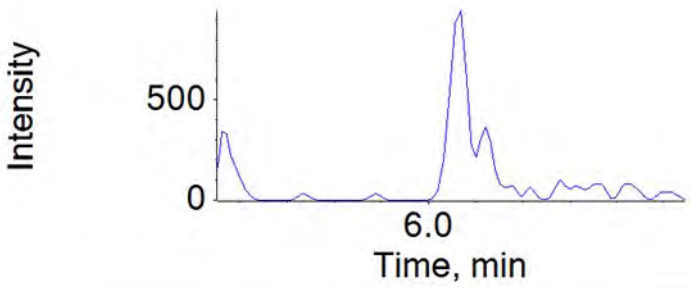
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



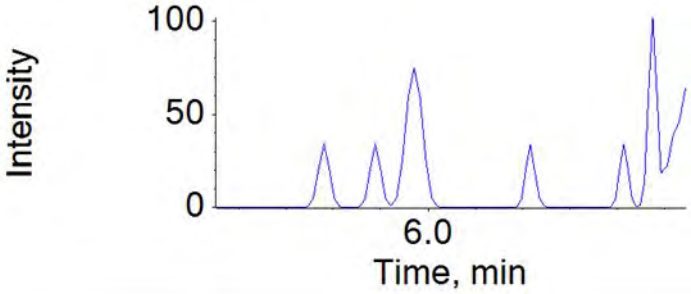
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



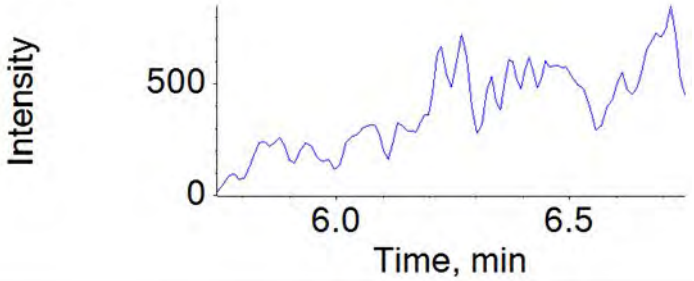
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



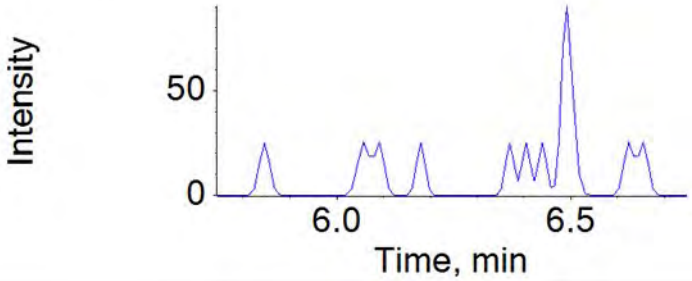
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

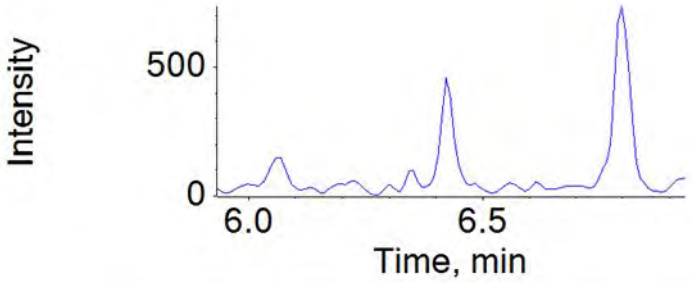
Component: PFTrDA
Primary Mass: 663.0 / 619.0



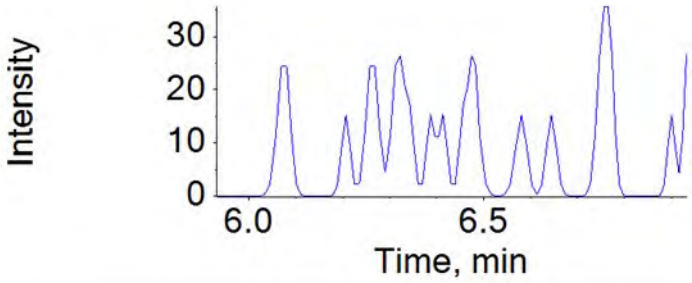
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883397			**Data File:**		18NOV29D-62.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18332003 OU1-Bldg371-S-04-12 Grab Soil			**Acquis Date:**		2018-11-29T19:07:45
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	42			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18332003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18332003			**Operator:**		MCD7824
Sample Wt.:	1.08000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1076204.0	906425.4	19	50	
13C2-PFOA	5.0	590367.8	495984.0	19	50	
13C4-PFOS	4.8	355985.7	296261.8	20	50	
13C2-PFDA	5.0	589902.9	451203.0	31	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	418956.3	13C3-PFBA	1076204.0	0.389	8.611	6.878	80	50-150	
E13C5-PFHxA	678840.3	13C2-PFOA	590367.8	1.150	9.259	7.821	84	50-150	
E13C3-PFHxS	329560.2	13C2-PFOA	590367.8	0.558	8.759	8.102	93	50-150	
E13C4-PFHpA	574479.9	13C2-PFOA	590367.8	0.973	9.259	8.280	89	50-150	
E13C8-PFOA	938964.7	13C2-PFOA	590367.8	1.590	9.259	8.107	88	50-150	
E13C8-PFOS	325705.2	13C4-PFOS	355985.7	0.915	8.852	7.649	86	50-150	
E13C9-PFNA	666545.6	13C4-PFOS	355985.7	1.872	9.259	7.616	82	50-150	
E13C6-PFDA	822586.6	13C2-PFDA	589902.9	1.394	9.259	7.281	79	50-150	
Ed3-NMeFOSAA	78056.1	13C2-PFDA	589902.9	0.132	9.259	3.111	34	50-150	OOS
E13C7-PFUnDA	582387.7	13C2-PFDA	589902.9	0.987	9.259	7.727	83	50-150	
Ed5-NEtFOSAA	59323.9	13C2-PFDA	589902.9	0.101	9.259	3.318	36	50-150	OOS
E13C2-PFDoDA	1113251.3	13C2-PFDA	589902.9	1.887	9.259	7.343	79	50-150	
E13C2-PFTeDA	833299.3	13C2-PFDA	589902.9	1.413	9.259	7.239	78	50-150	

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

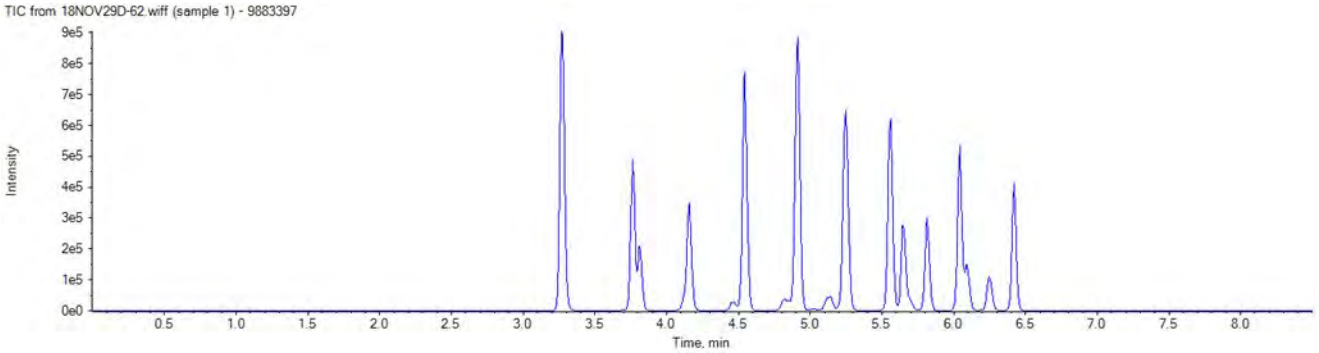
Analyte Quantitation Peak Table

Sample Name: 9883397 **Instrument Name:** LM27631 **File Name:** 18NOV29D-62.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.08000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.81	1.000	7440.1		A	13C3-PFBS	3.81	418956.3	0.018	0.160
PFHxA	4.16	1.000	86411.2		A	13C5-PFHxA	4.16	678840.3	0.127	0.946
PFHpA	4.54	1.000	47194.8		A	13C4-PFHpA	4.54	574479.9	0.082	0.470
PFHxS	4.55	1.000	583652.3		M	13C3-PFHxS	4.55	329560.2	1.771	15.356
PFOA	4.91	1.000	598749.7		M	13C8-PFOA	4.91	938964.7	0.638	6.102
PFOS	5.24	1.000	411550.8		M	13C8-PFOS	5.24	325705.2	1.264	9.815
PFNA	5.26	1.000	9942.7		A	13C9-PFNA	5.26	666545.6	0.015	0.106
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	822586.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	78056.1	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	582387.7	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	59323.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1113251.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1113251.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	833299.3	N/A	

Total Ion Chromatogram

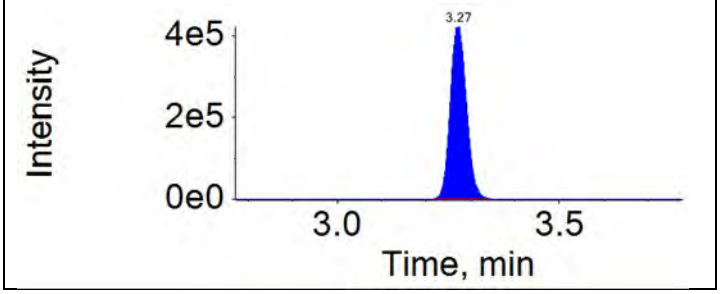


APPROVED
By MCD at 10:13 pm, 11/30/18

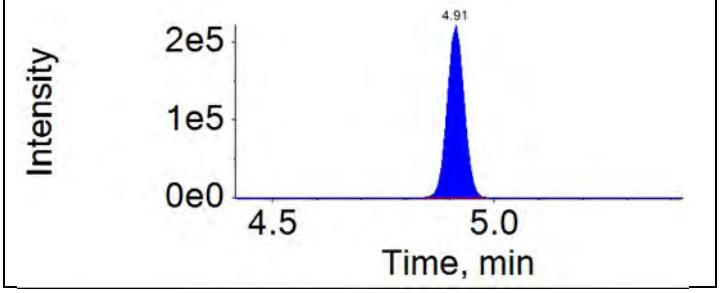
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

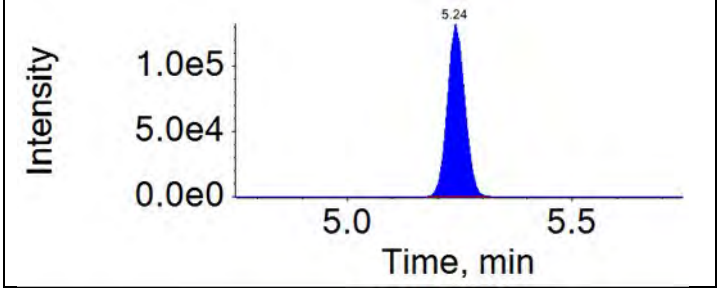
Injection Standard: 13C3-PFBA
216.0 / 172.0



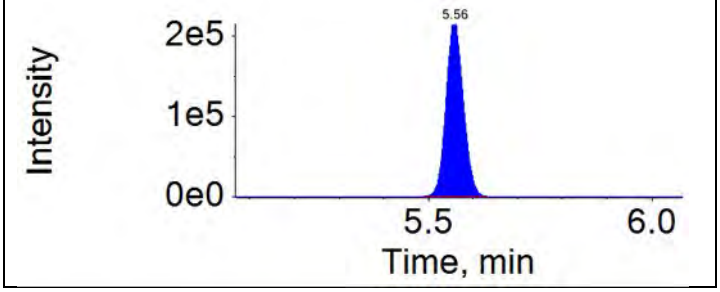
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

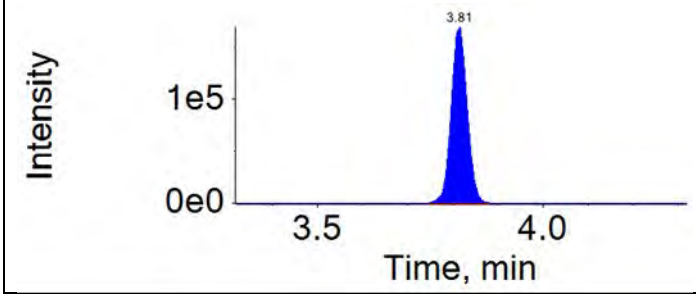


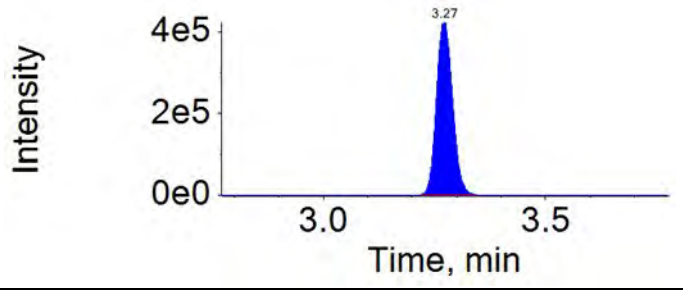
Injection Standard: 13C2-PFDA
515.0 / 470.0



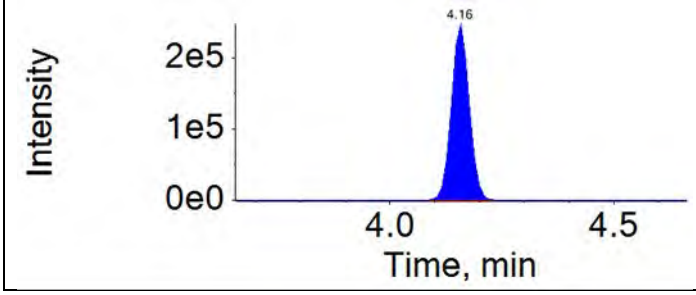
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

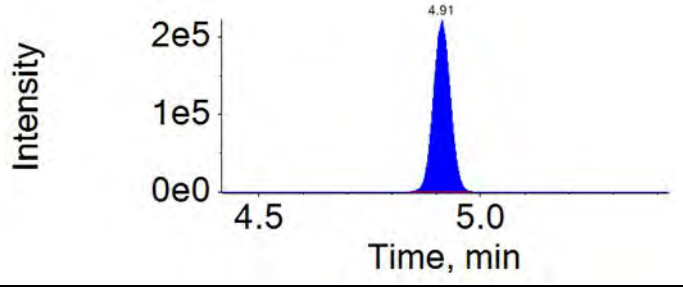
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



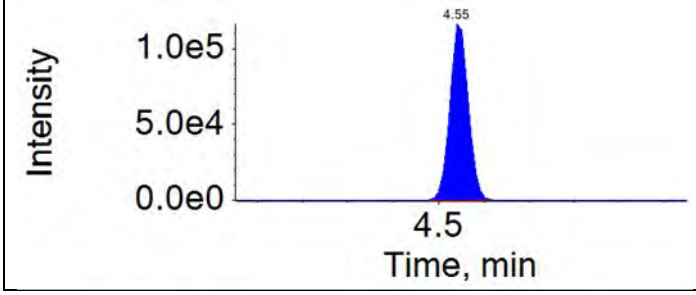


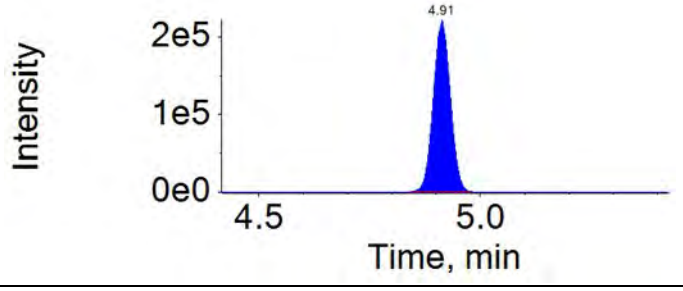
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



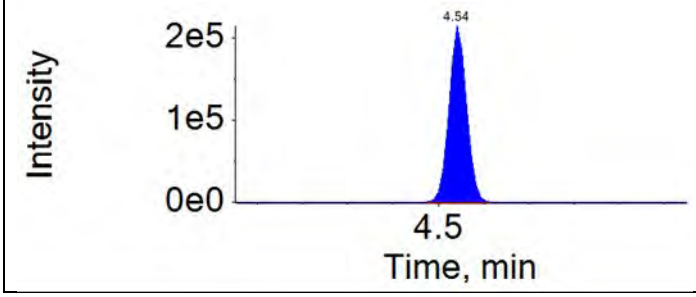


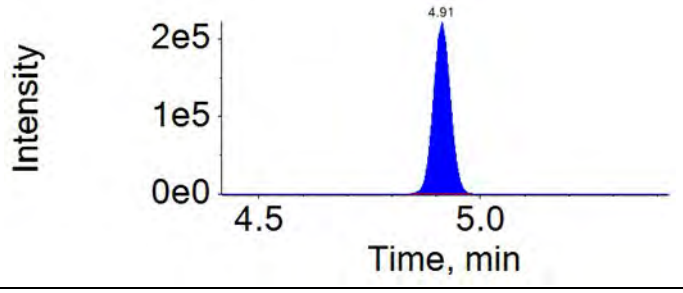
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

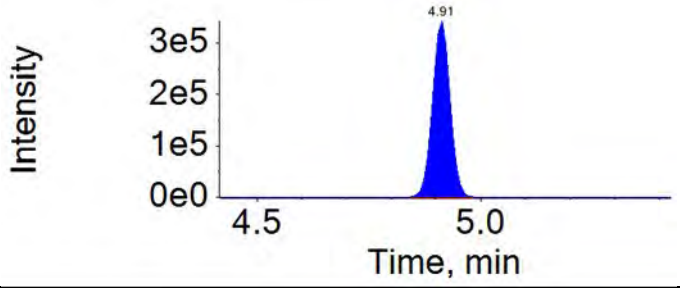
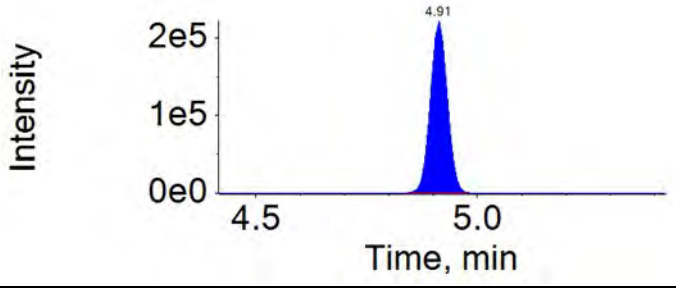


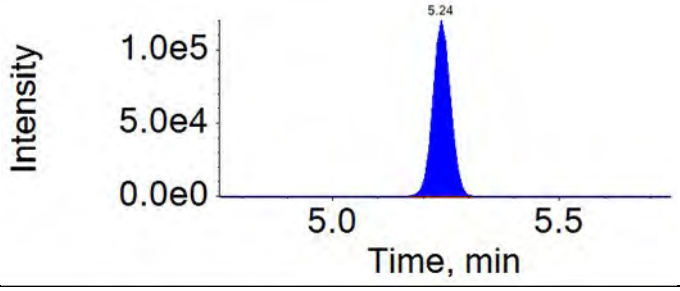
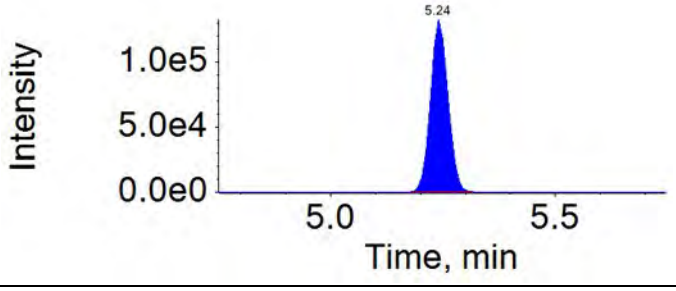


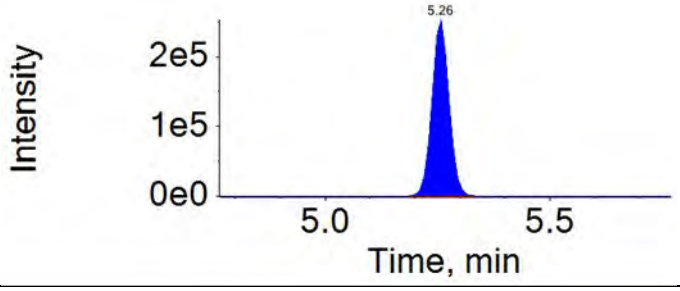
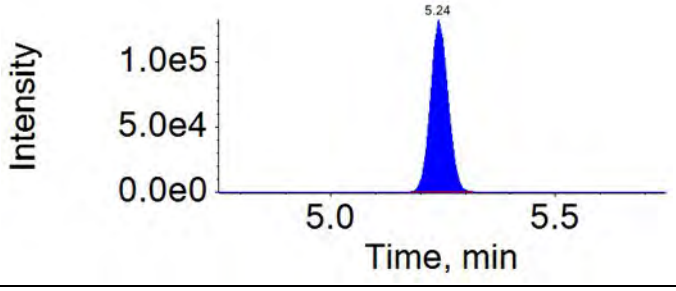
APPROVED
By MCD at 10:13 pm, 11/30/18

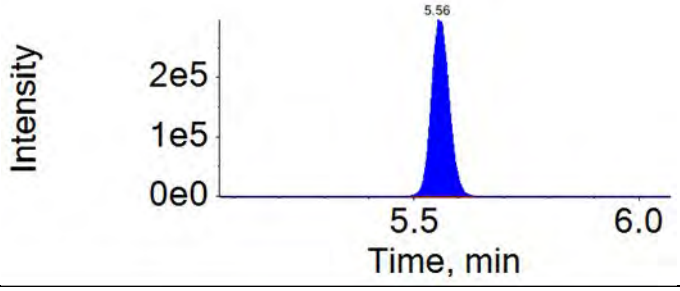
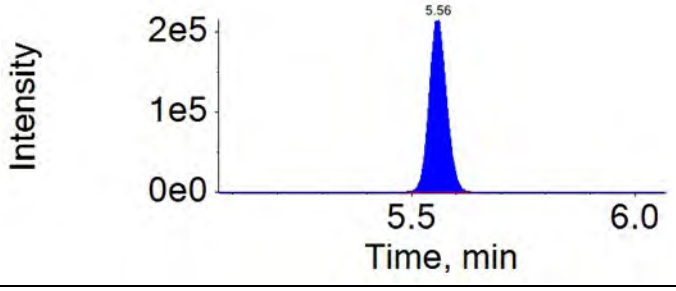
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

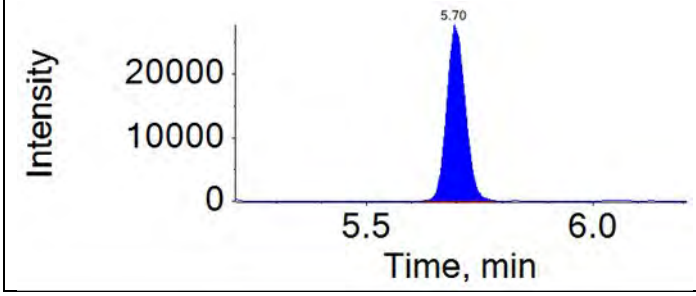
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

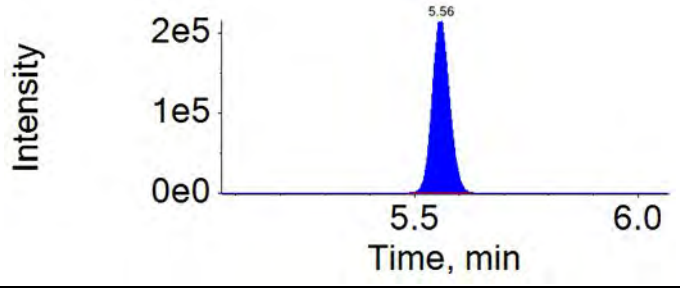
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

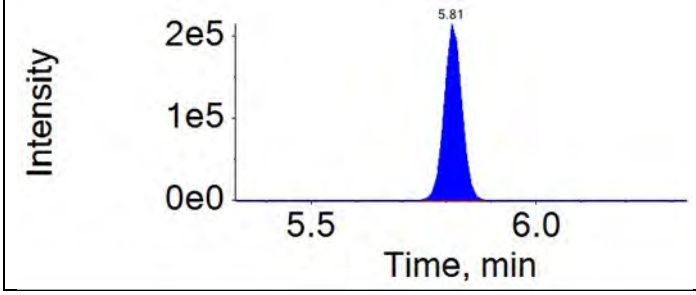
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

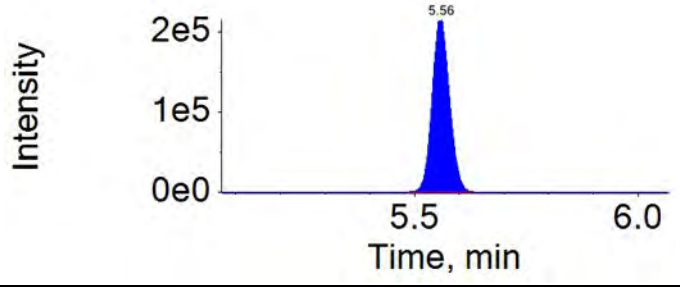
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



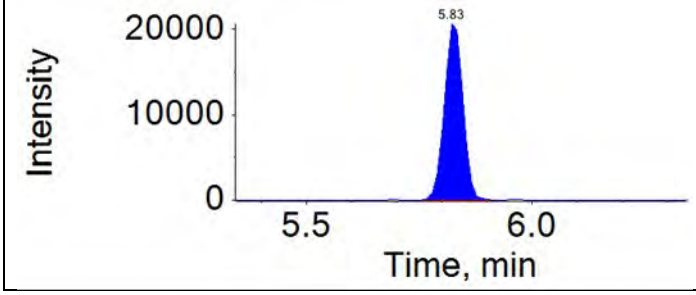


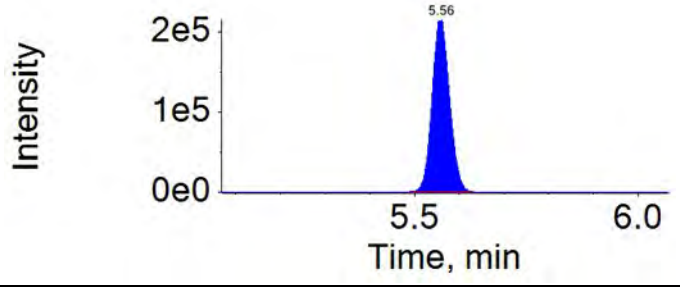
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



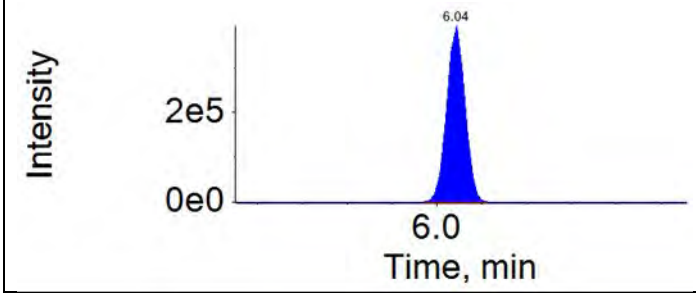


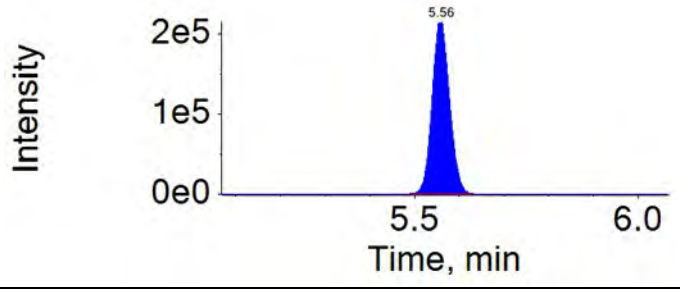
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0

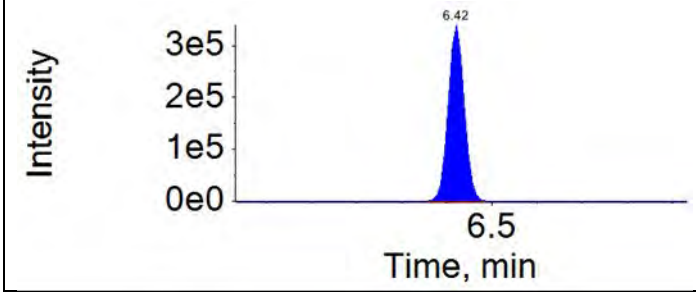
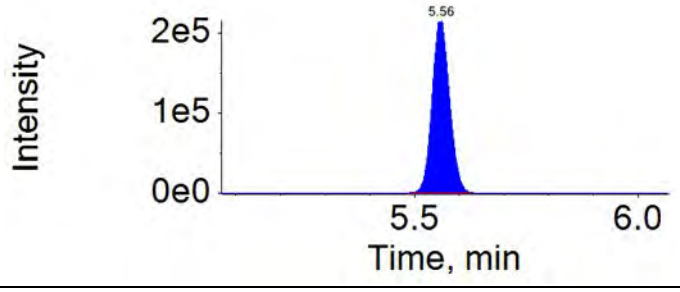




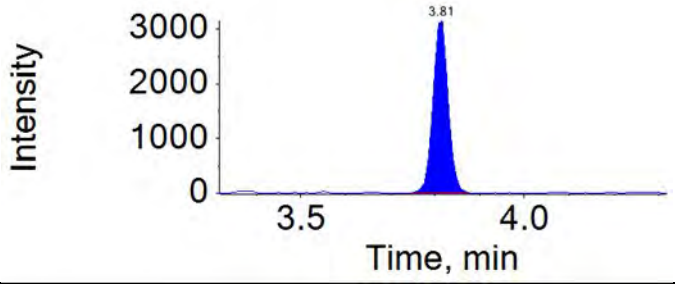
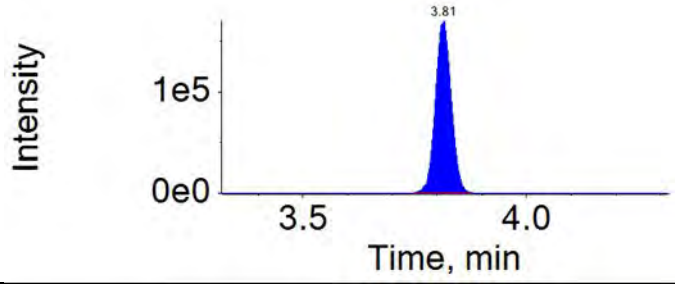
APPROVED
By MCD at 10:13 pm, 11/30/18

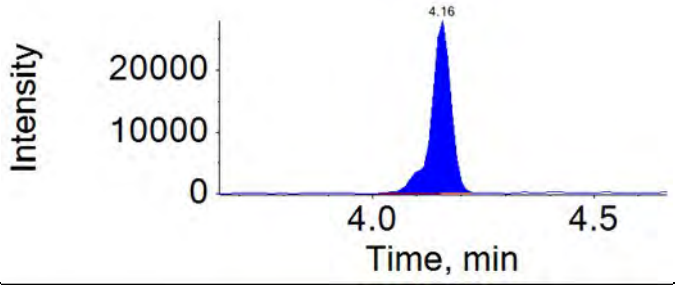
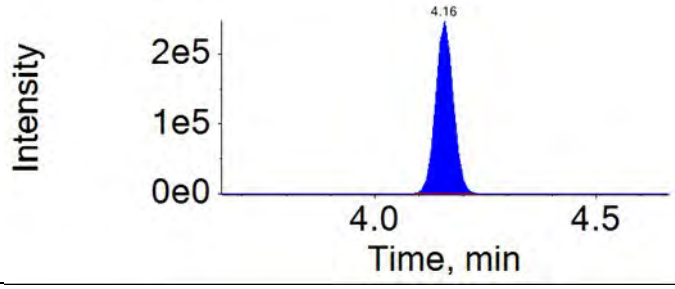
REVIEWED
By HMK at 2:26 pm, 12/6/18

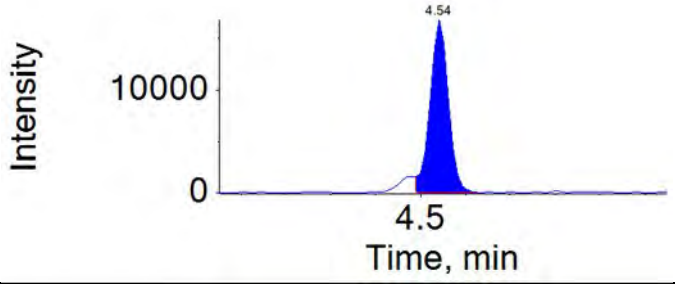
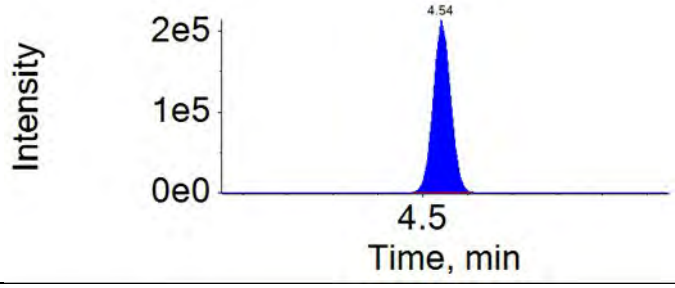
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

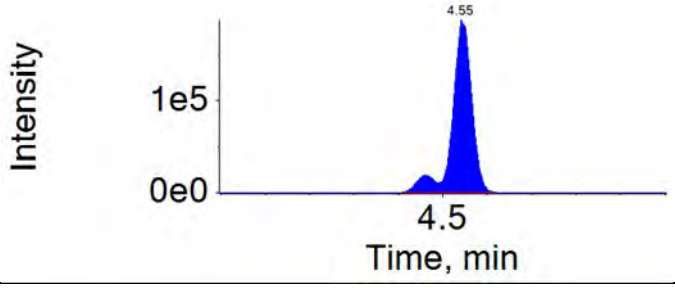
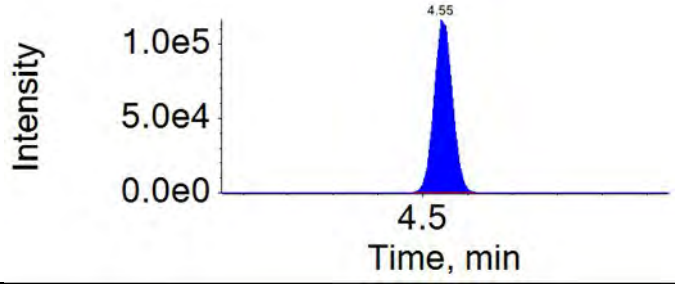
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

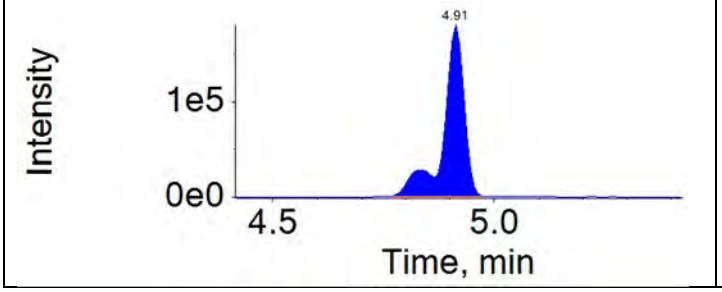
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

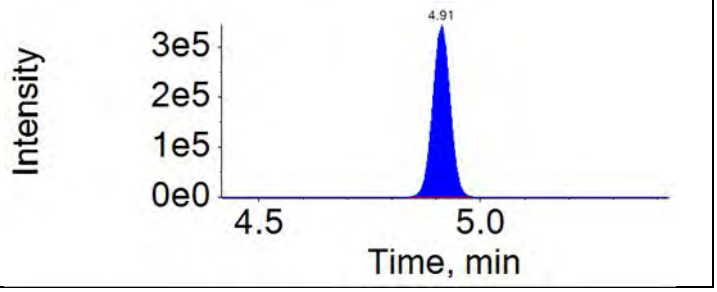
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

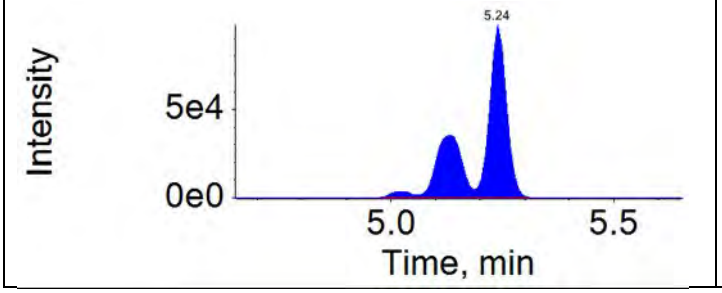
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

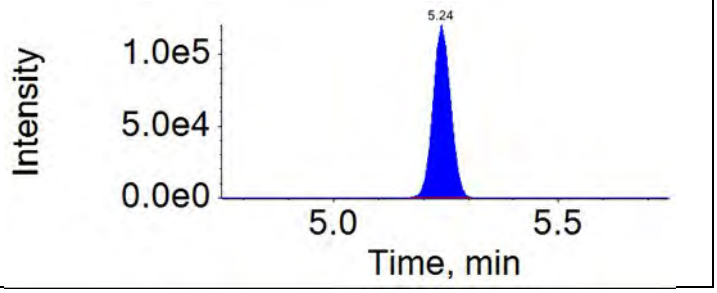
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



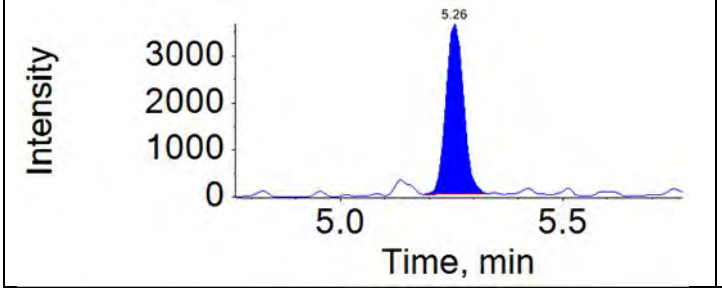


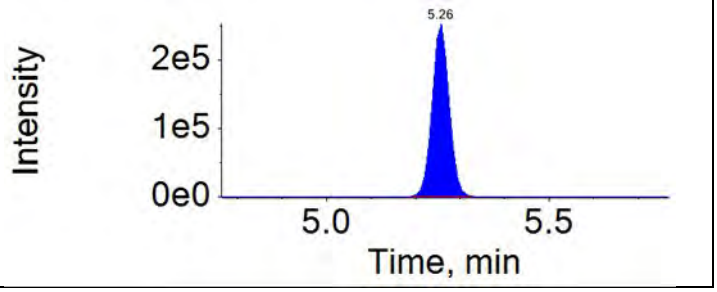
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



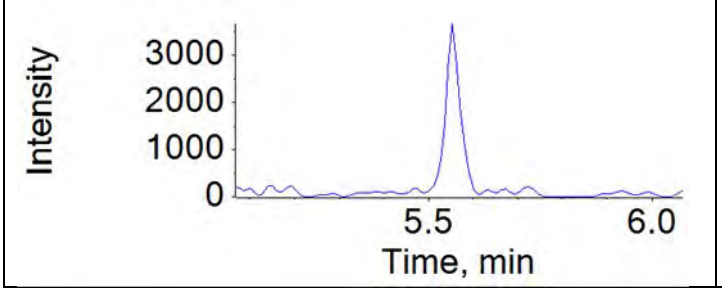


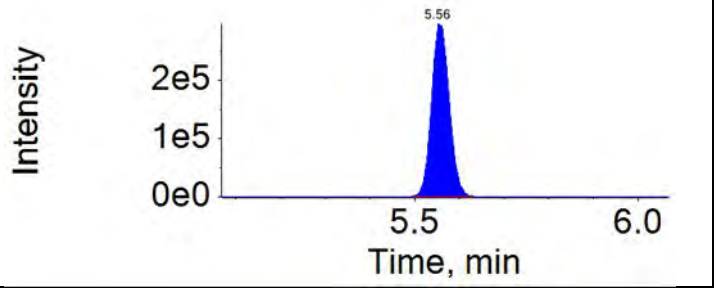
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



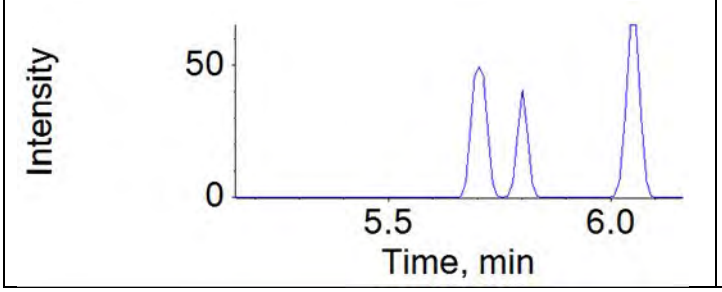


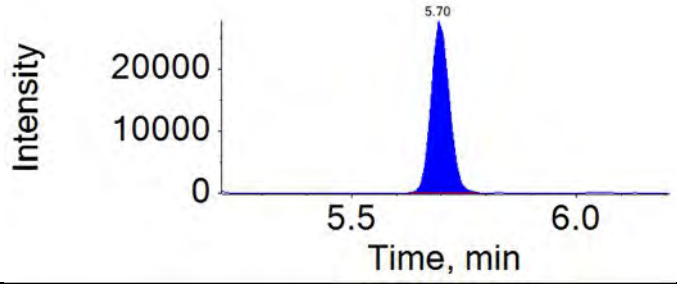
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

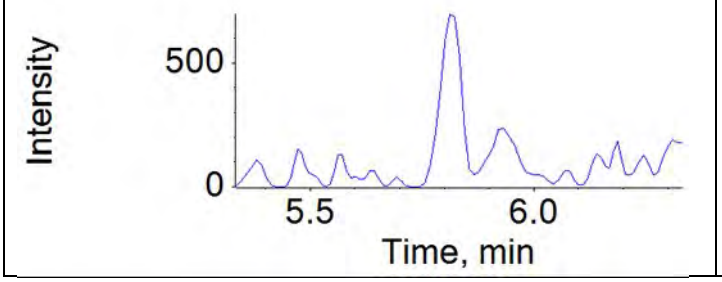
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

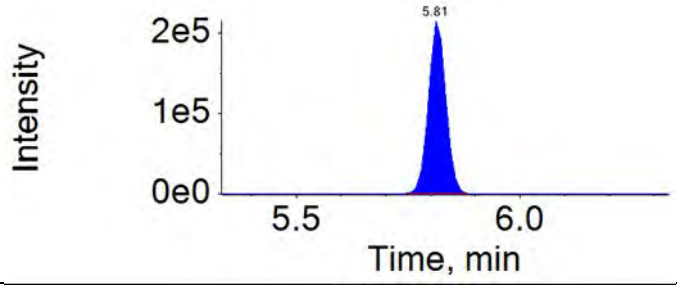
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



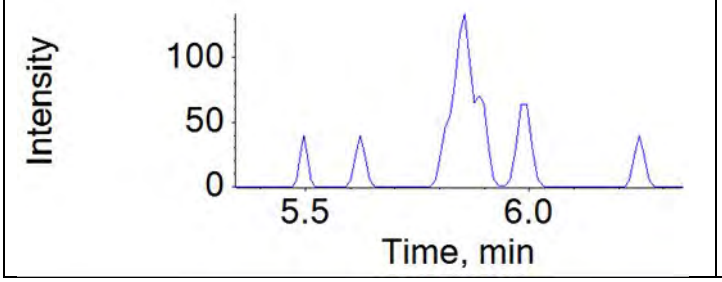


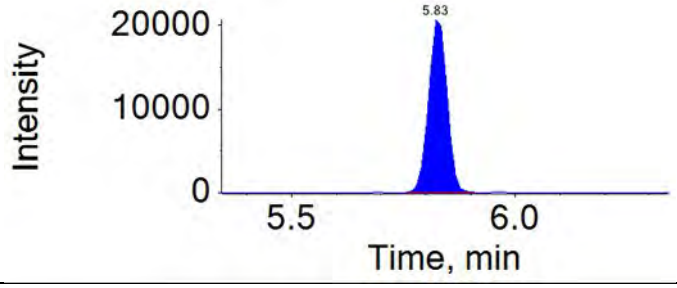
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



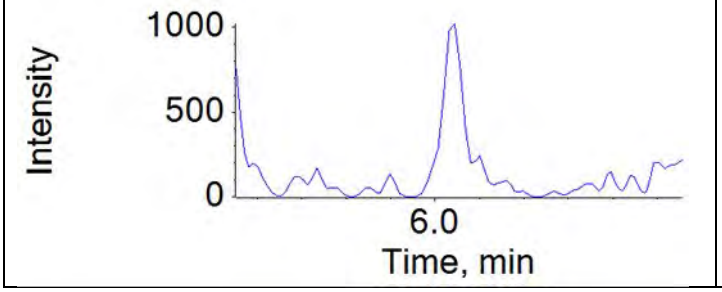


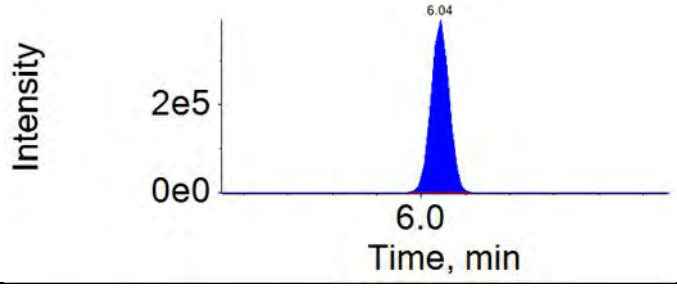
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



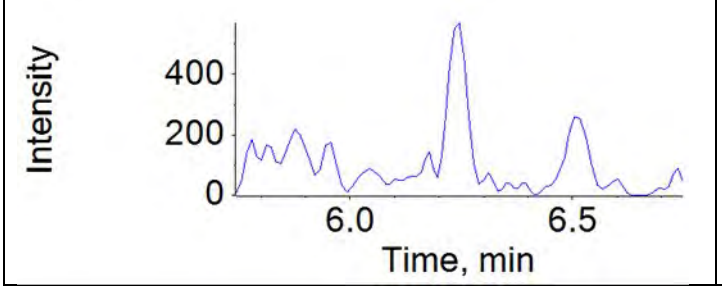


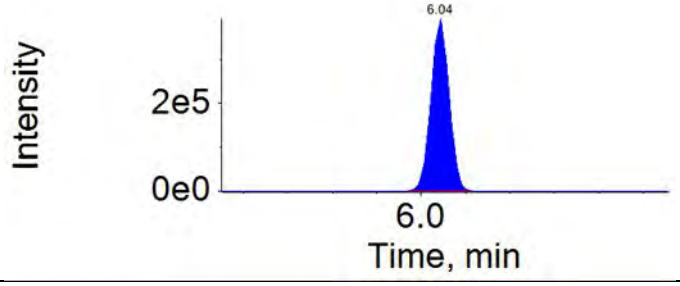
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

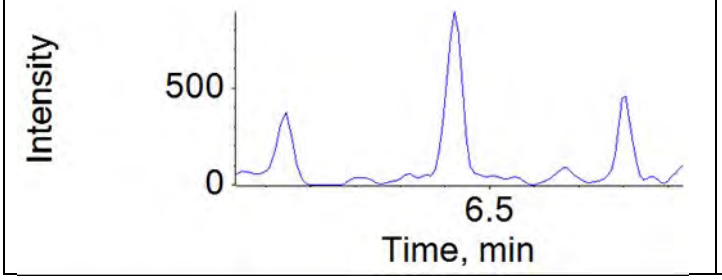
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

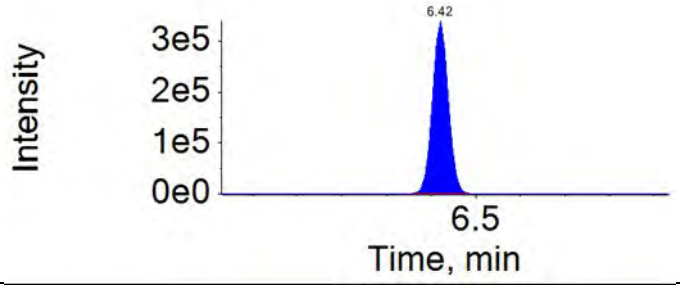
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



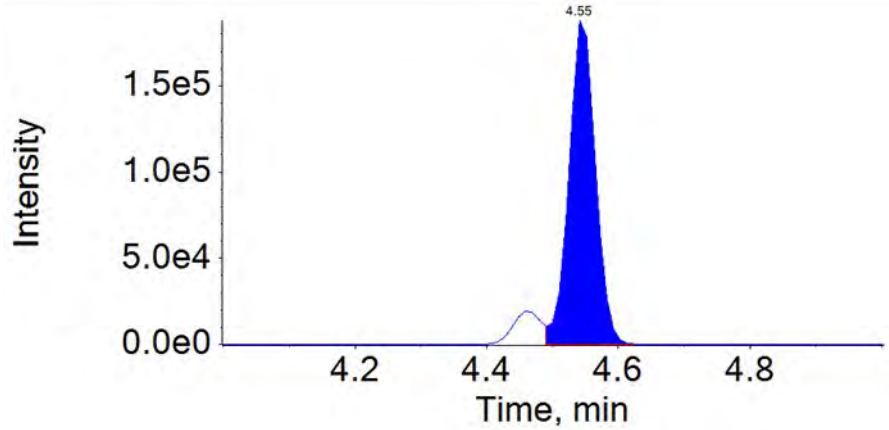


APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

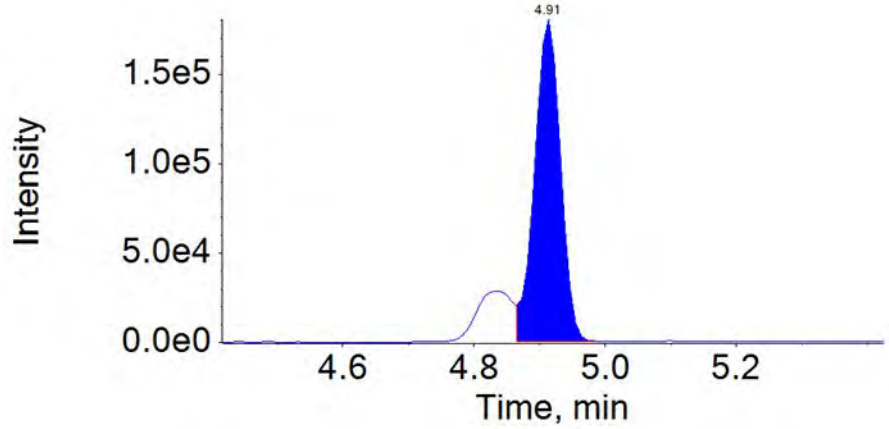
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
527851.8
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-62.wiff
Sample Name:
9883397



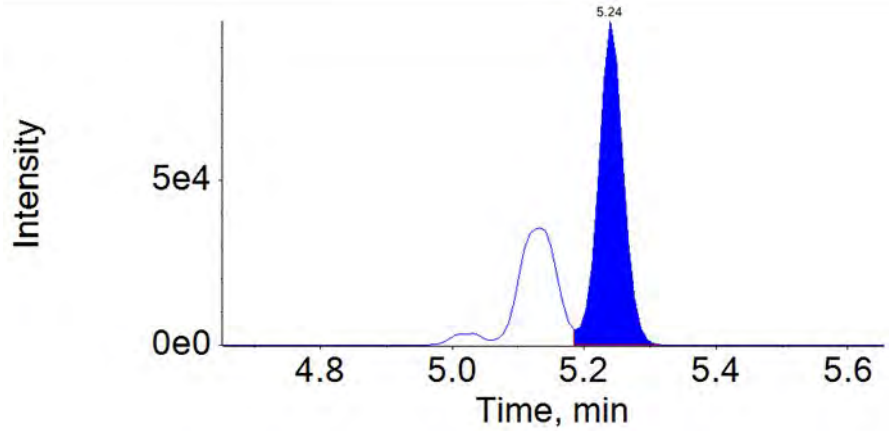
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
494608.8
Mass Range:
413.0 / 369.0
File Name:
18NOV29D-62.wiff
Sample Name:
9883397



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
257134.7
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-62.wiff
Sample Name:
9883397



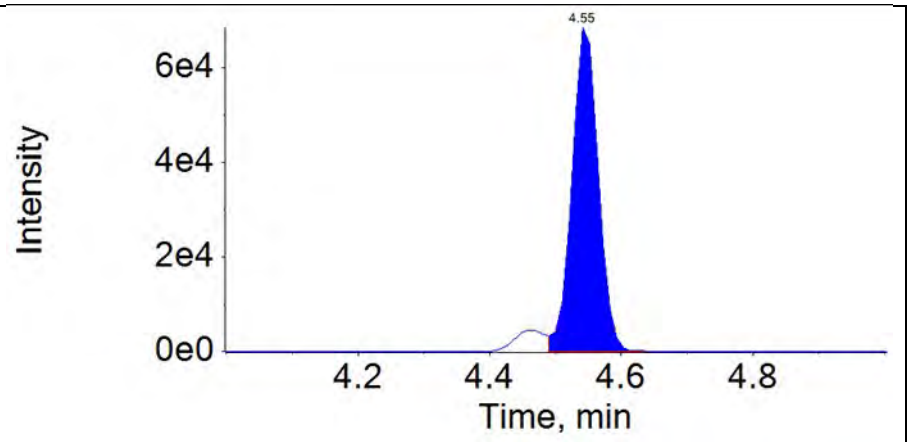
Integration Comment: incorrect integration

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

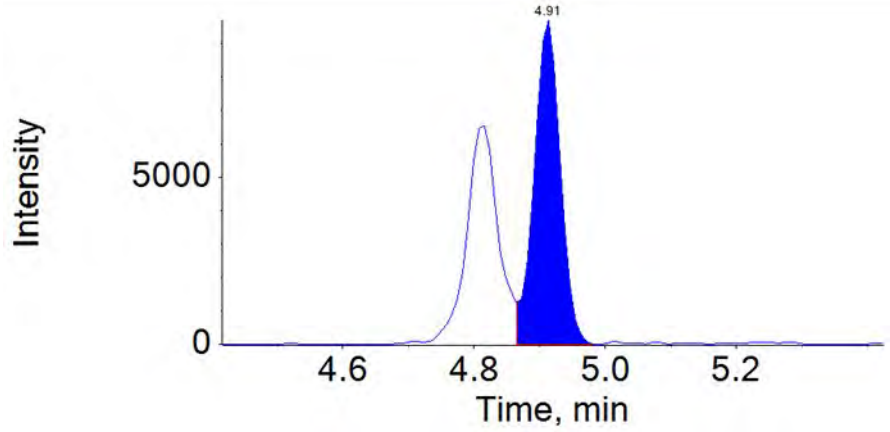
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
190965.9
Mass Range:
399.0 / 99.0
File Name:
18NOV29D-62.wiff
Sample Name:
9883397



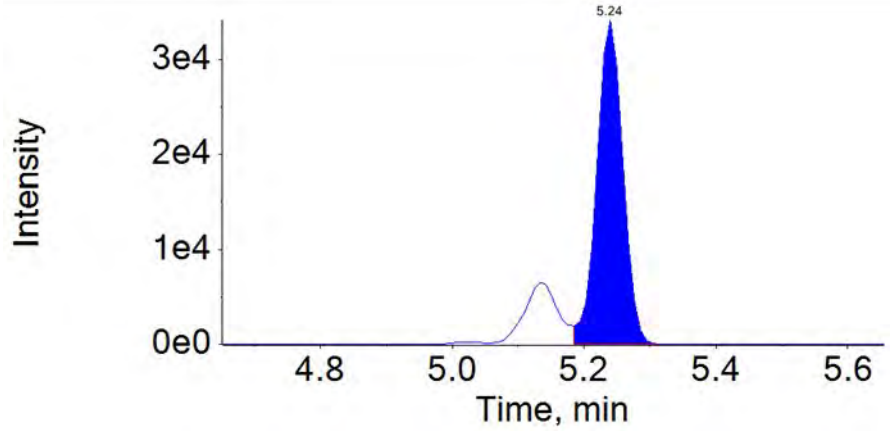
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
27022.1
Mass Range:
413.0 / 169.0
File Name:
18NOV29D-62.wiff
Sample Name:
9883397



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
93718.0
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-62.wiff
Sample Name:
9883397



Integration Comment: incorrect integration

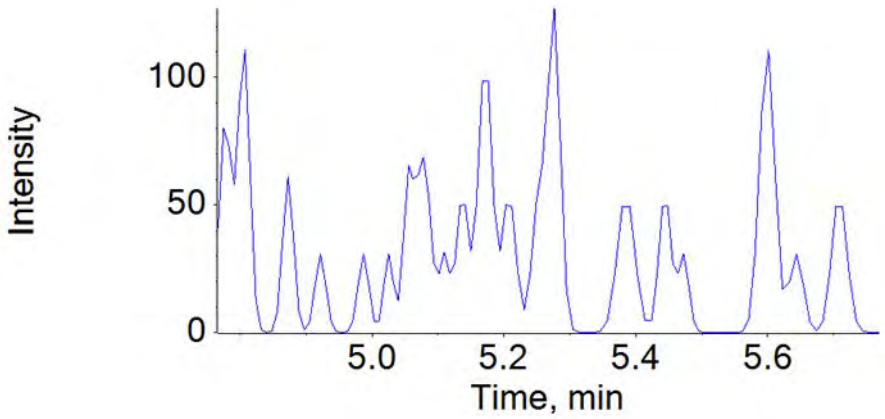
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFNA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
463.0 / 169.0
File Name:
18NOV29D-62.wiff
Sample Name:
9883397



Integration Comment: incorrect integration

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Ion Ratio Report

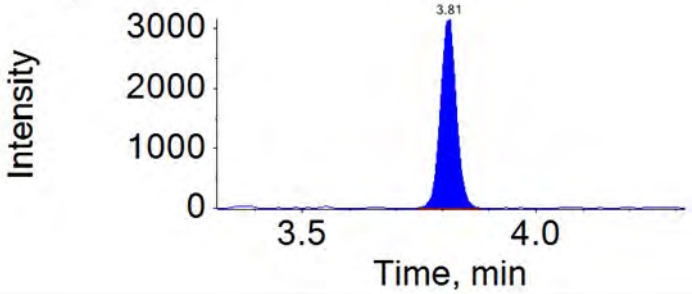
Sample Name: 9883397 **Instrument Name:** LM27631 **File Name:** 18NOV29D-62.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	7440.1	A	N/A	0.4074			
PFBS_2	3.81	1.00	3031.2	A	N/A	0.4074	11	50	
PFHxA	4.16	1.00	86411.2	A	N/A	0.0099			
PFHxA_2	4.15	1.00	858.5	A	N/A	0.0099	-4	50	
PFHpA	4.54	1.00	47194.8	A	N/A	0.0476			
PFHpA_2	4.54	1.00	2246.9	A	N/A	0.0476	-14	50	
PFHxS	4.55	1.00	583652.3	M	N/A	0.3519			
PFHxS_2	4.55	1.00	205397.1	M	N/A	0.3519	-5	50	
PFOA	4.91	1.00	598749.7	M	N/A	0.0822			
PFOA_2	4.89	1.00	49240.3	M	N/A	0.0822	44	50	
PFOS	5.24	1.00	411550.8	M	N/A	0.2861			
PFOS_2	5.24	1.00	117758.8	M	N/A	0.2861	-3	50	
PFNA	5.26	1.00	9942.7	A	N/A	0.0258			
PFNA_2	5.27	1.00	256.3	M	N/A	0.0258	28	50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

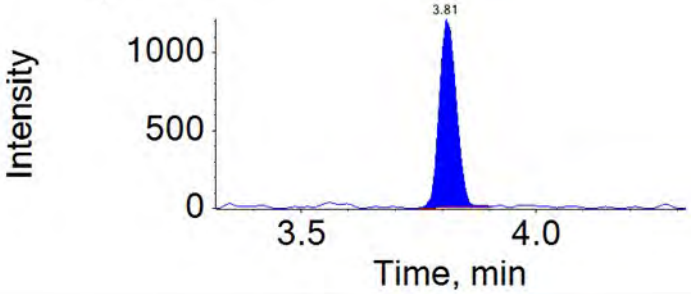
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

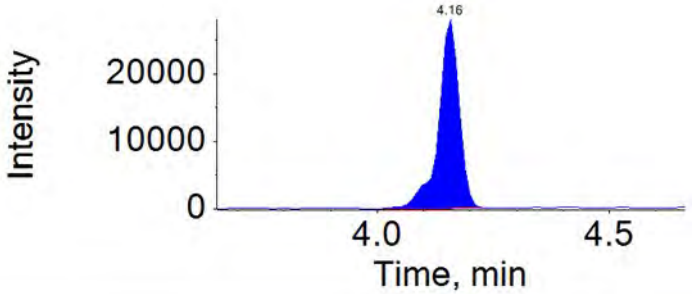
Component: PFBS
Primary Mass: 299.0 / 80.0



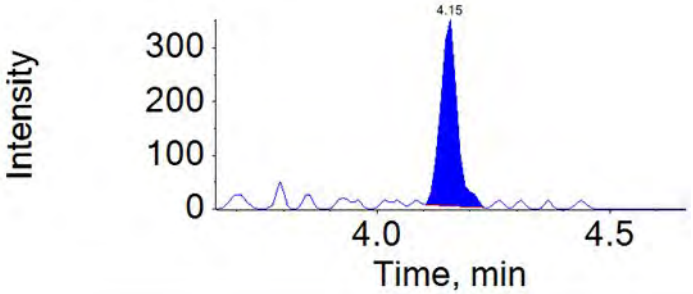
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



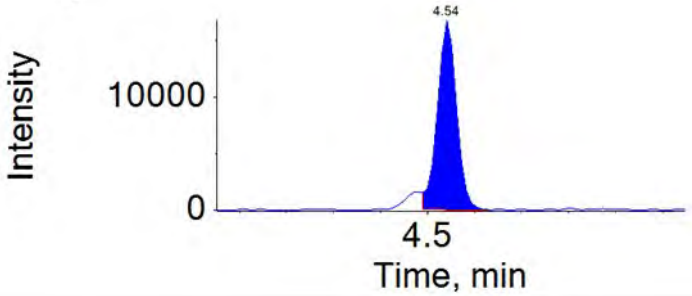
Component: PFHxA
Primary Mass: 313.0 / 269.0



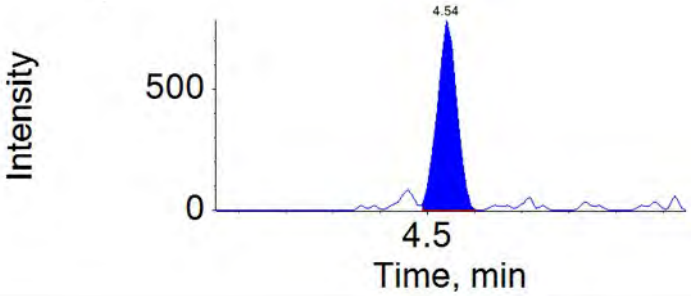
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



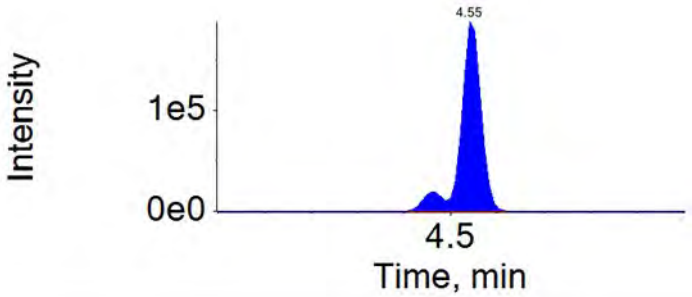
Component: PFHpA
Primary Mass: 363.0 / 319.0



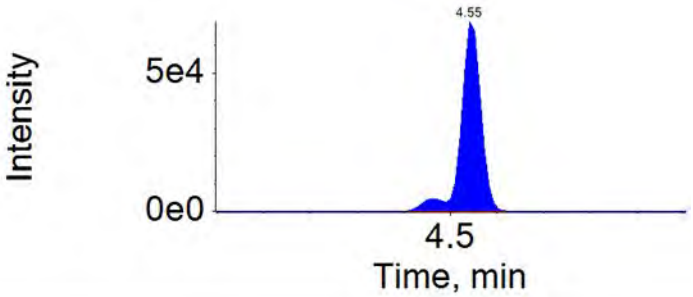
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



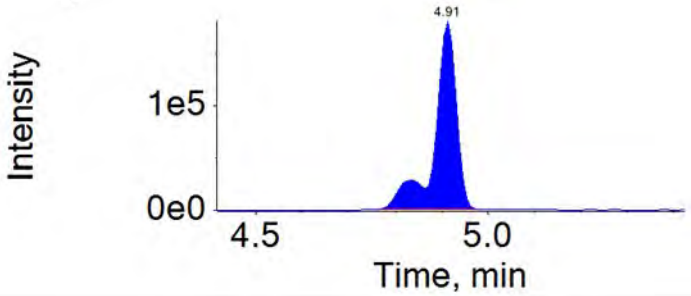
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



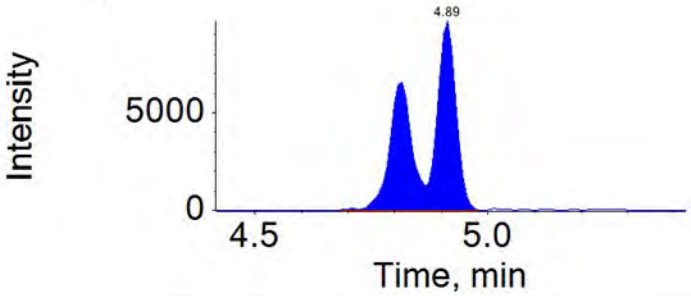
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

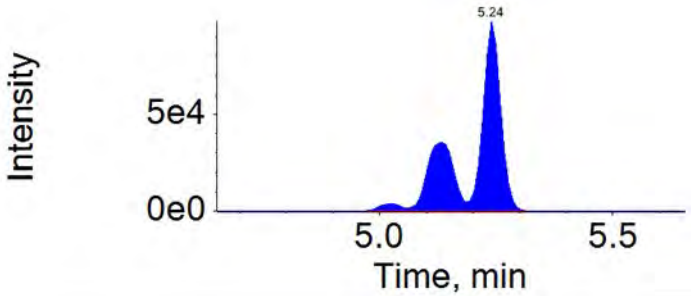
Component: PFOA
Primary Mass: 413.0 / 369.0



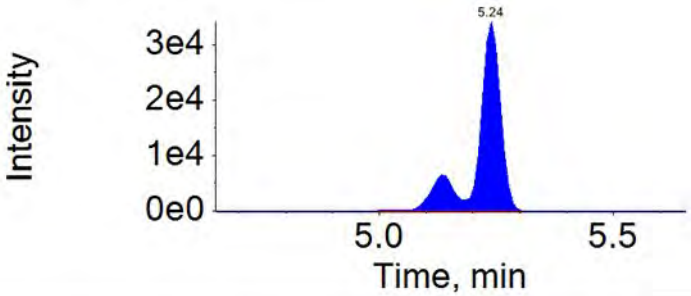
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



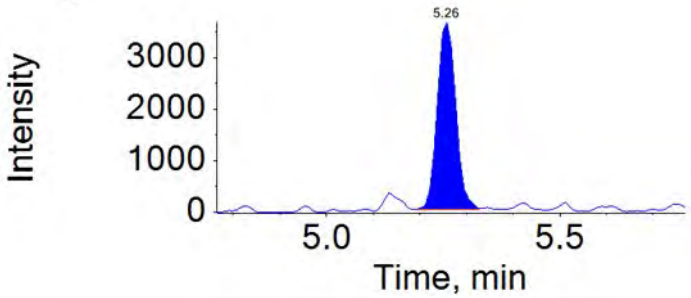
Component: PFOS
Primary Mass: 499.0 / 80.0



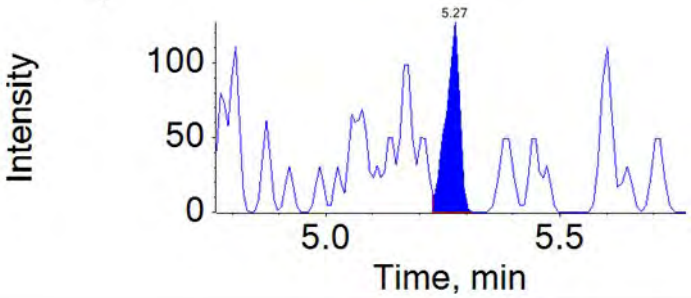
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



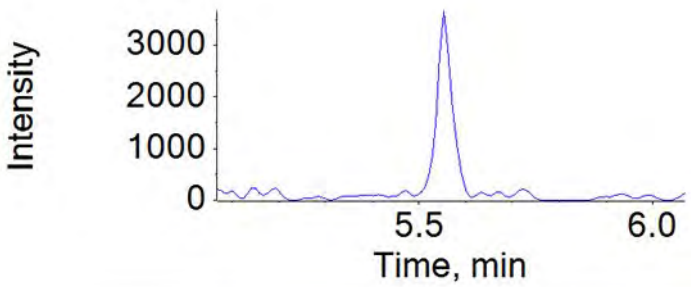
Component: PFNA
Primary Mass: 463.0 / 419.0



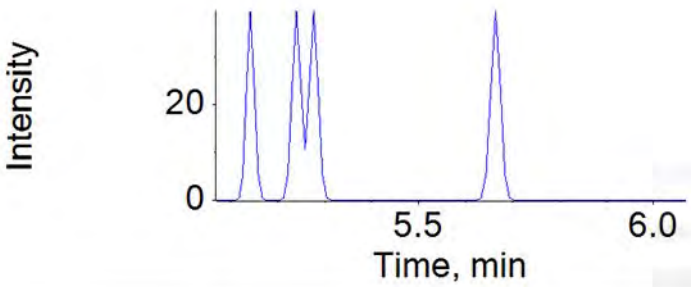
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



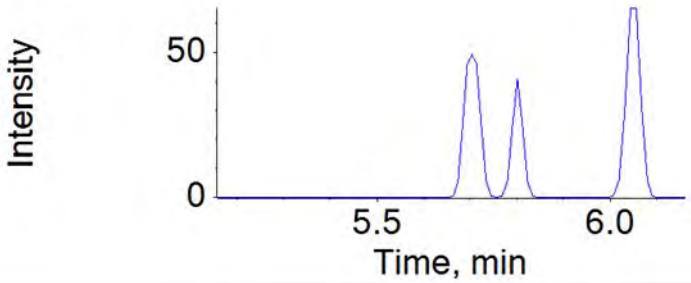
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



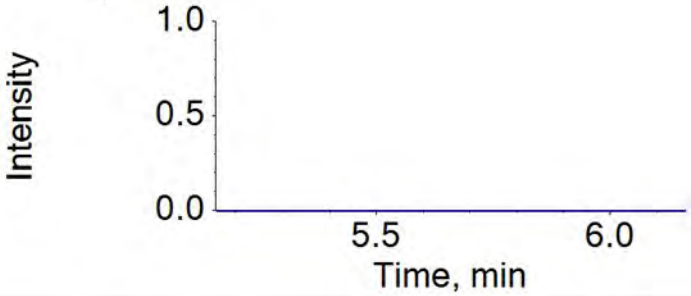
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

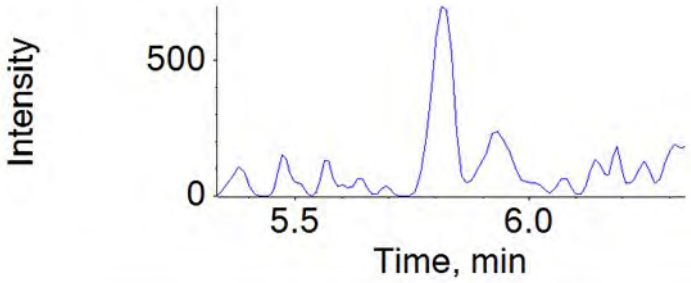
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



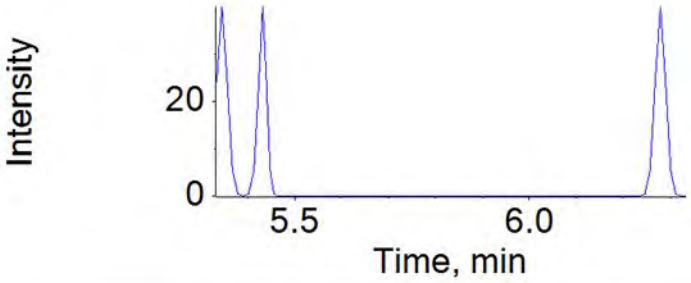
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



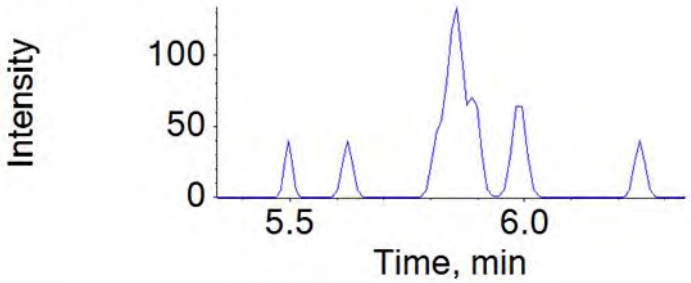
Component: PFUnDA
Primary Mass: 563.0 / 519.0



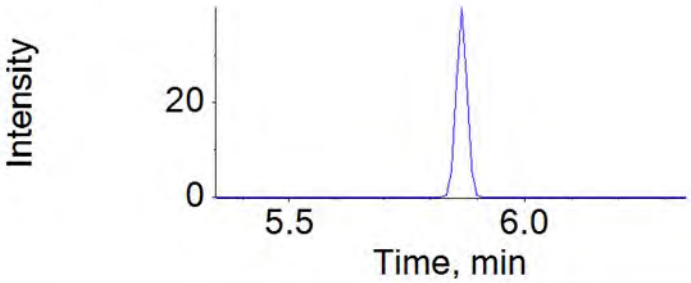
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



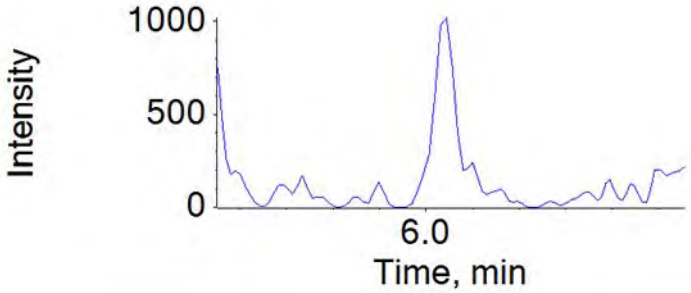
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



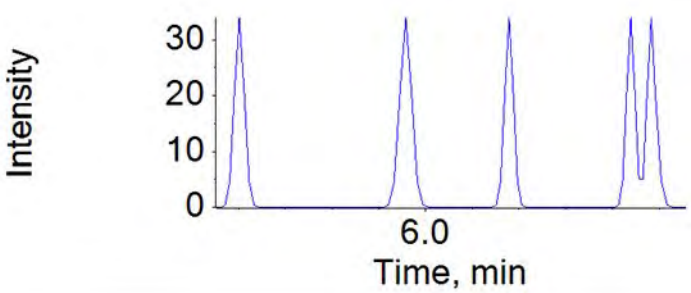
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



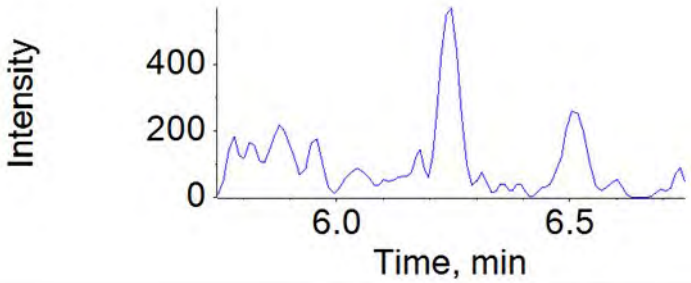
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



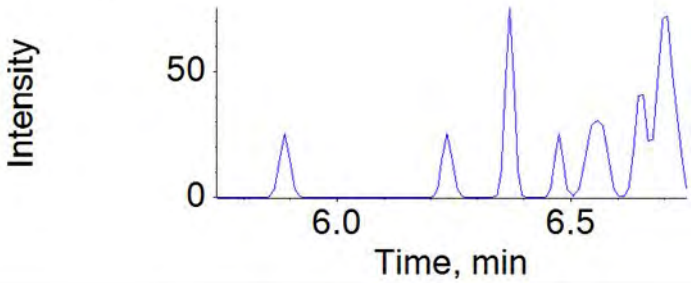
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

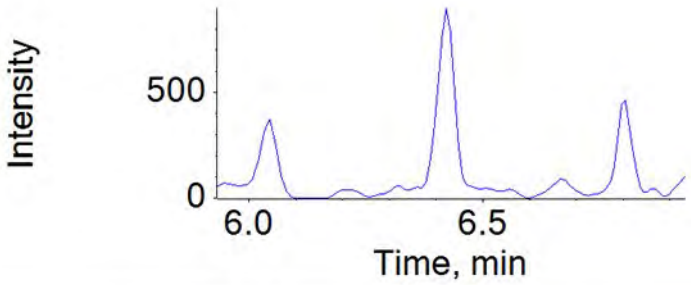
Component: PFTrDA
Primary Mass: 663.0 / 619.0



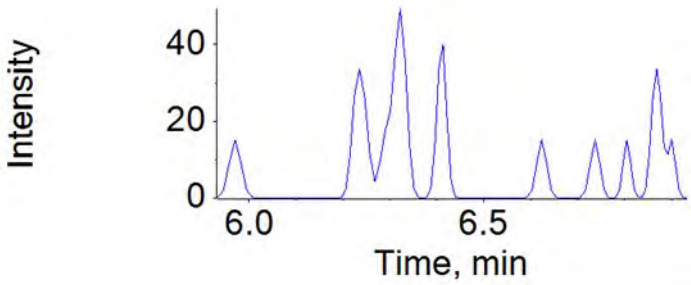
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9883397RE			**Data File:**		18DEC05D-39.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18338017 OU1-Bldg371-S-04-12 Grab Soil			**Acquis Date:**		2018-12-05T17:54:23
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	28			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18338017
QMethod File:	18AUG20QM			**ICAL Name:**		18DEC03DCAL
Batch Number:	18338017			**Operator:**		MCD7824
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18DEC05D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	928390.2	850136.0	9	50	
13C2-PFOA	5.0	470317.8	429843.2	9	50	
13C4-PFOS	4.8	300005.5	272032.6	10	50	
13C2-PFDA	5.0	334767.3	291183.9	15	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	366229.6	13C3-PFBA	928390.2	0.394	8.774	5.800	66	50-150	
E13C5-PFHxA	566397.4	13C2-PFOA	470317.8	1.204	9.434	7.695	82	50-150	
E13C3-PFHxS	295418.1	13C2-PFOA	470317.8	0.628	8.925	7.493	84	50-150	
E13C4-PFHpA	425637.3	13C2-PFOA	470317.8	0.905	9.434	7.450	79	50-150	
E13C8-PFOA	711109.4	13C2-PFOA	470317.8	1.512	9.434	7.930	84	50-150	
E13C8-PFOS	268186.5	13C4-PFOS	300005.5	0.894	9.019	7.491	83	50-150	
E13C9-PFNA	421690.2	13C4-PFOS	300005.5	1.406	9.434	7.762	82	50-150	
E13C6-PFDA	501451.2	13C2-PFDA	334767.3	1.498	9.434	7.351	78	50-150	
Ed3-NMeFOSAA	35191.1	13C2-PFDA	334767.3	0.105	9.434	3.465	37	50-150	OOS
E13C7-PFUnDA	295534.2	13C2-PFDA	334767.3	0.883	9.434	8.296	88	50-150	
Ed5-NEtFOSAA	28977.1	13C2-PFDA	334767.3	0.087	9.434	3.726	39	50-150	OOS
E13C2-PFDoDA	588350.8	13C2-PFDA	334767.3	1.757	9.434	7.100	75	50-150	
E13C2-PFTeDA	412449.7	13C2-PFDA	334767.3	1.232	9.434	6.553	69	50-150	

APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

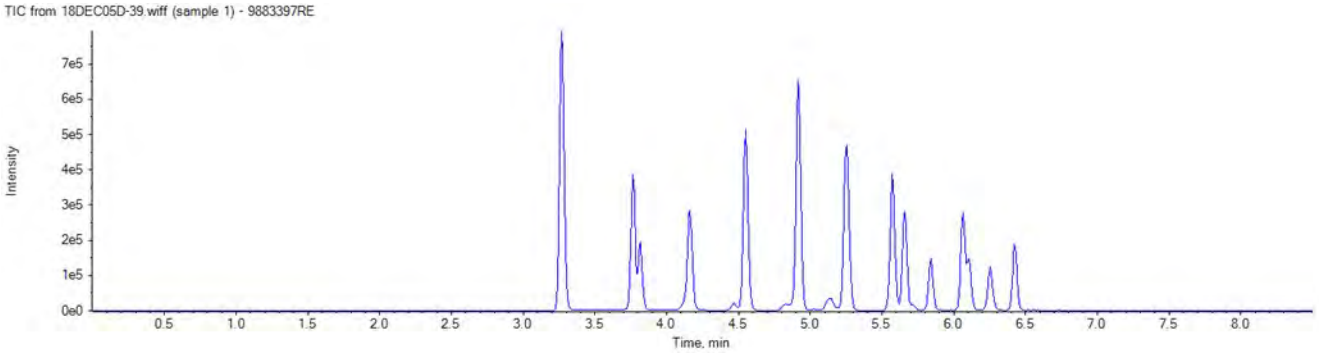
Analyte Quantitation Peak Table

Sample Name: 9883397RE **Instrument Name:** LM27631 **File Name:** 18DEC05D-39.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.81	1.000	8798.2		A	13C3-PFBS	3.82	366229.6	0.024	0.221
PFHxA	4.16	1.000	76746.5		A	13C5-PFHxA	4.16	566397.4	0.135	1.090
PFHpA	4.55	1.000	33010.9		A	13C4-PFHpA	4.55	425637.3	0.078	0.472
PFHxS	4.55	1.000	359694.7		M	13C3-PFHxS	4.55	295418.1	1.218	10.823
PFOA	4.92	1.000	322559.1		M	13C8-PFOA	4.92	711109.4	0.454	4.530
PFOS	5.25	1.000	309445.6		M	13C8-PFOS	5.25	268186.5	1.154	9.227
PFNA	5.26	1.000	6792.1		A	13C9-PFNA	5.26	421690.2	0.016	0.114
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	501451.2	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.72	35191.1	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.84	295534.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.85	28977.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	588350.8	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	588350.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	412449.7	N/A	

Total Ion Chromatogram

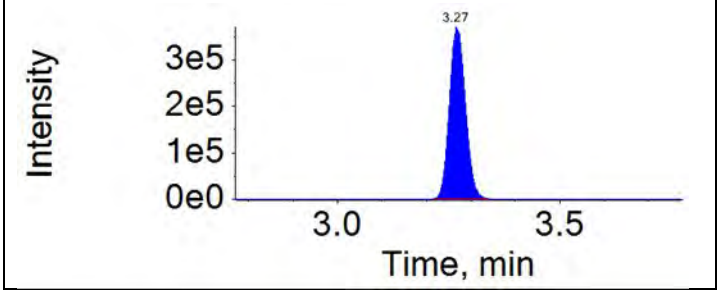


APPROVED
By MCD at 4:12 pm, 12/6/18

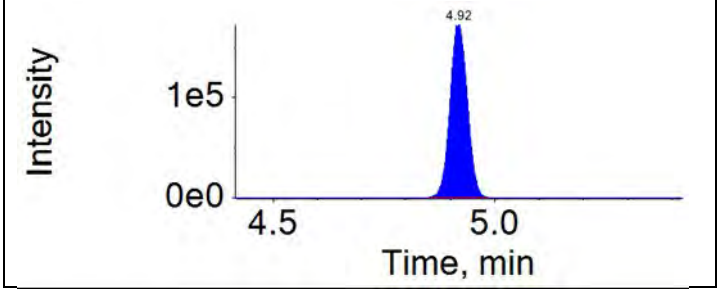
REVIEWED
By HMK at 8:35 am, 12/10/18

ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

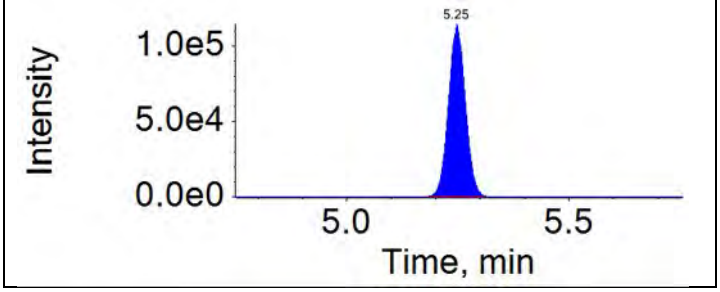
Injection Standard: 13C3-PFBA
216.0 / 172.0



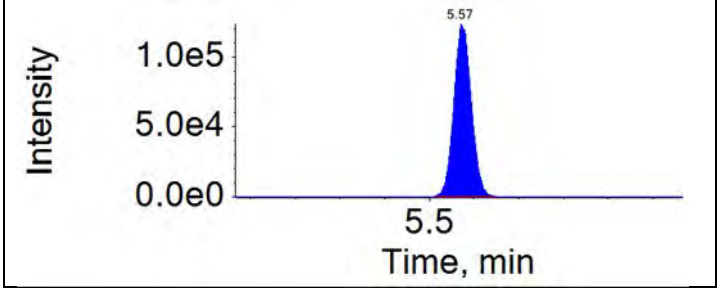
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

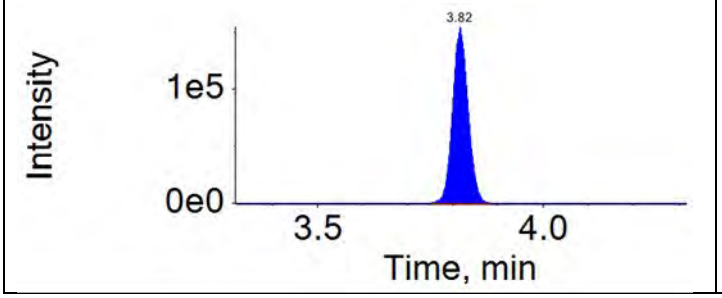


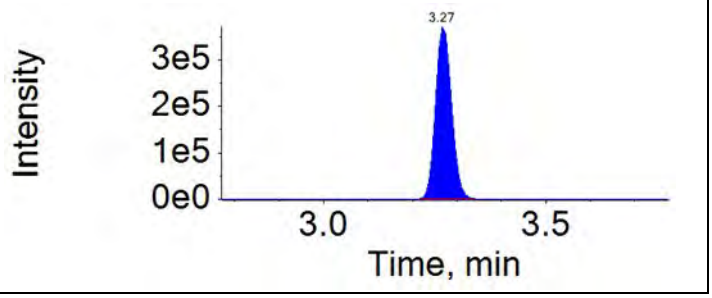
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

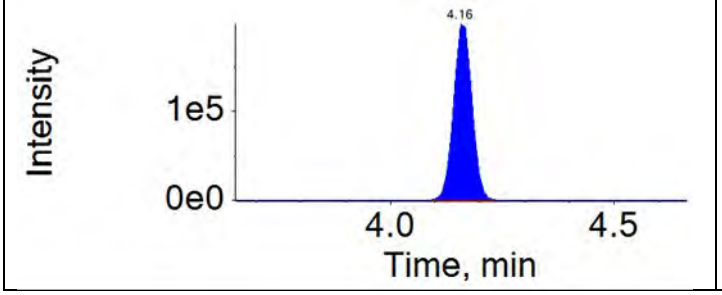
ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

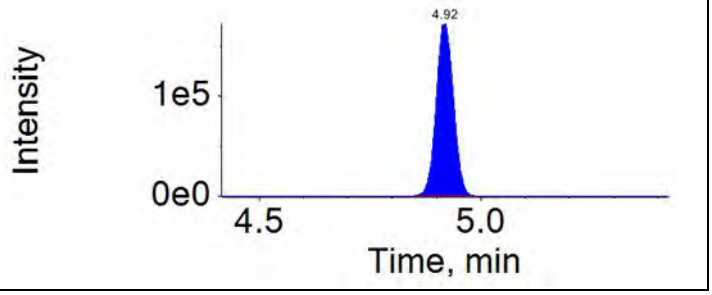
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



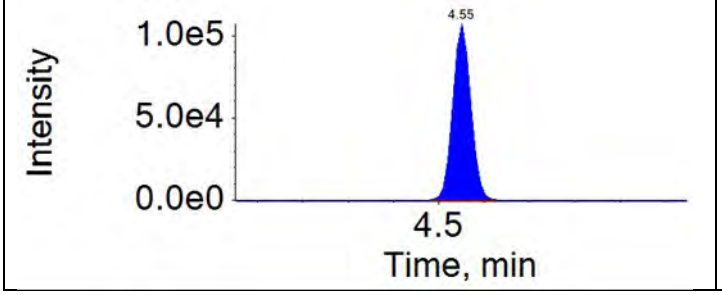


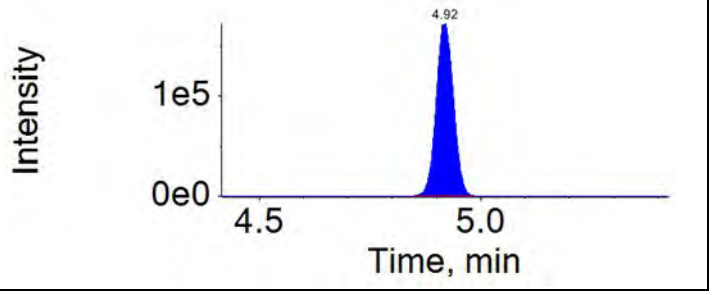
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



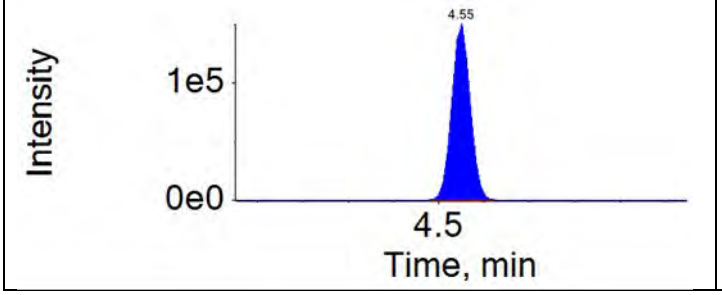


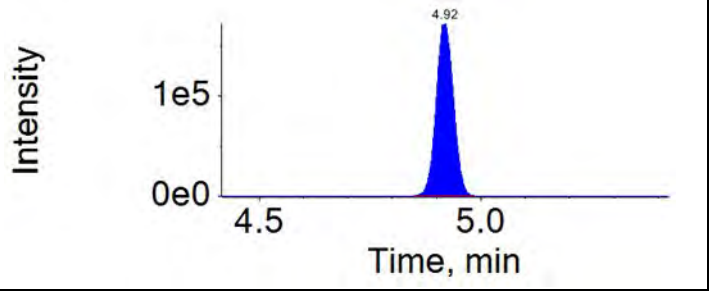
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

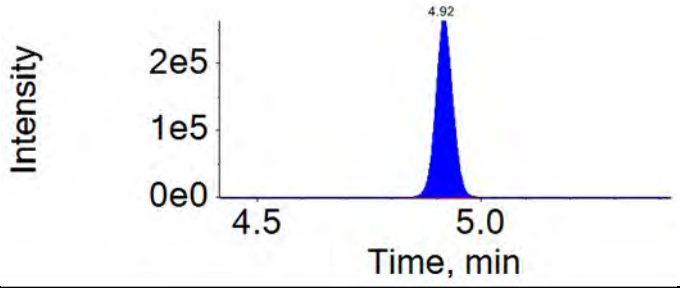
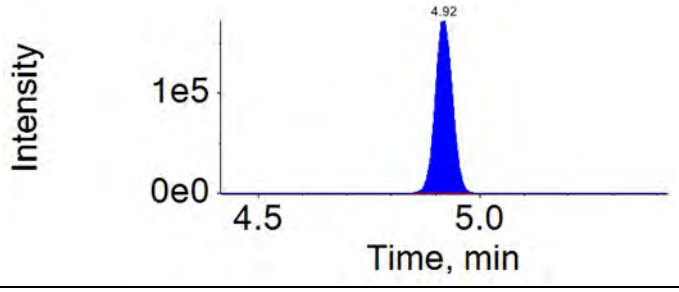


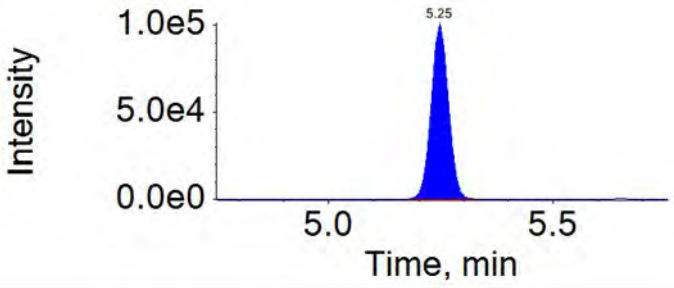
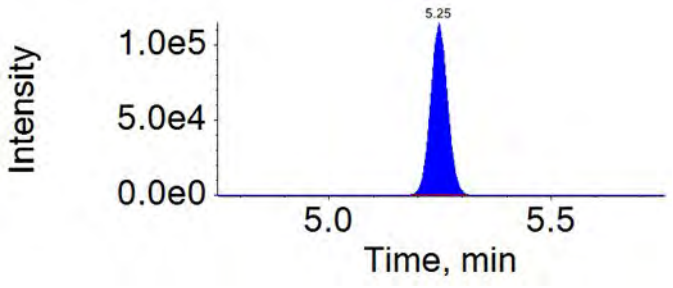


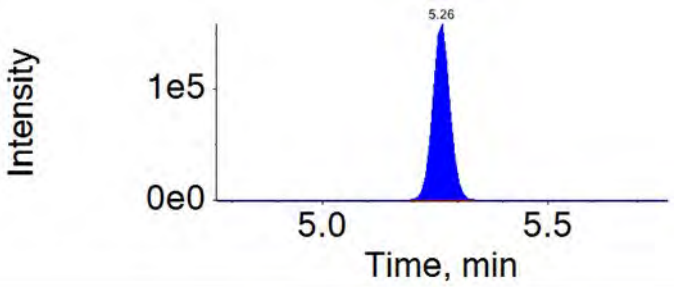
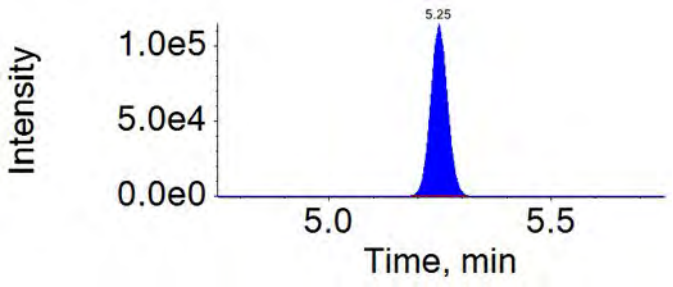
APPROVED
By MCD at 4:12 pm, 12/6/18

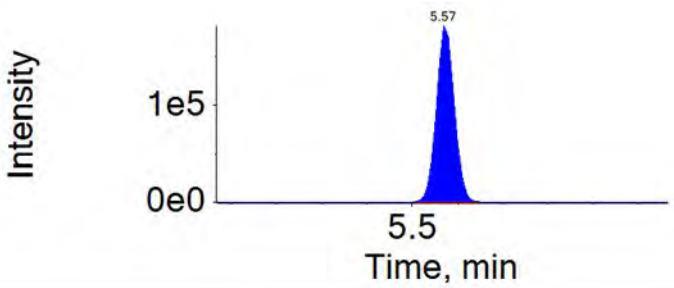
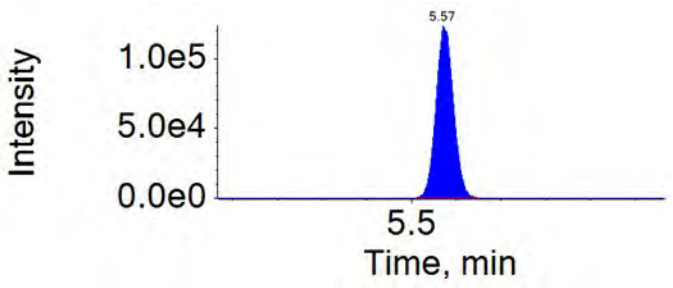
REVIEWED
By HMK at 8:35 am, 12/10/18

ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

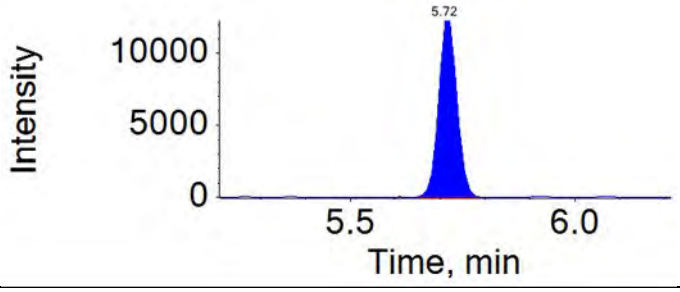
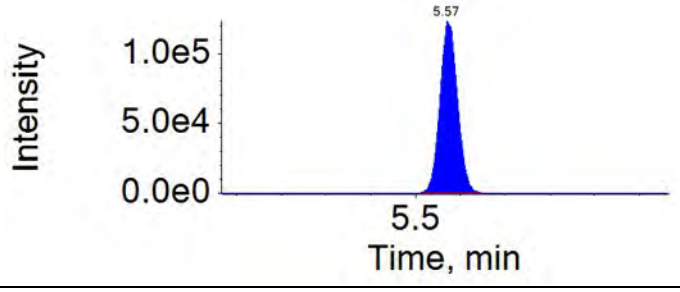
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

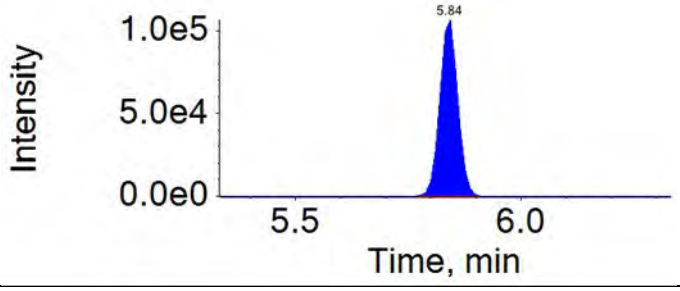
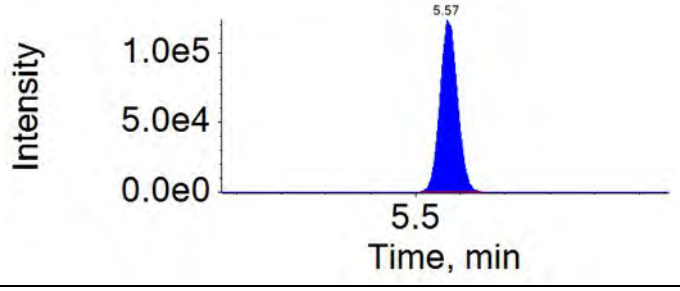
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

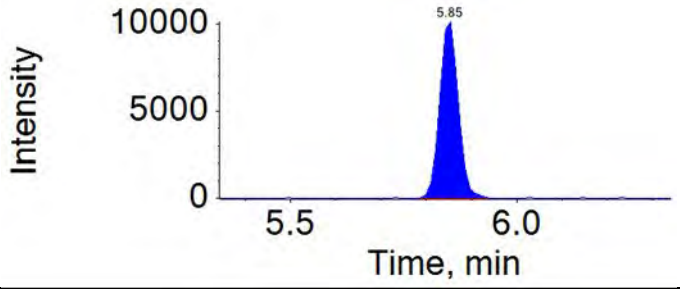
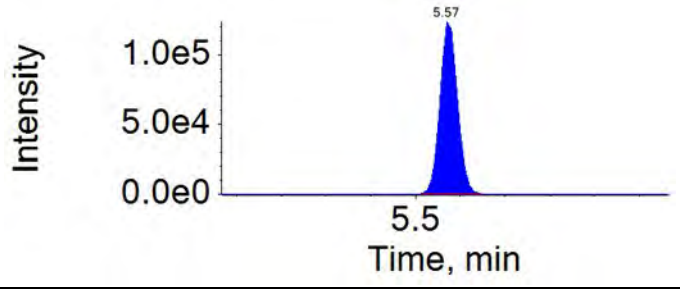
APPROVED
By MCD at 4:12 pm, 12/6/18

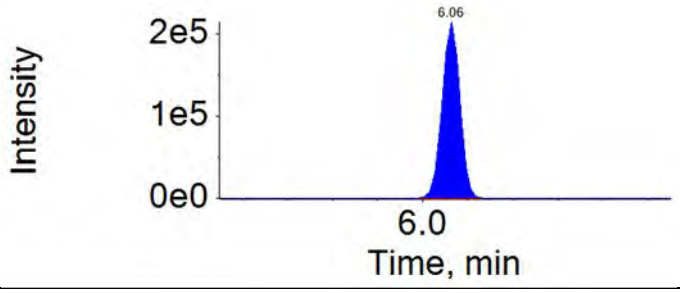
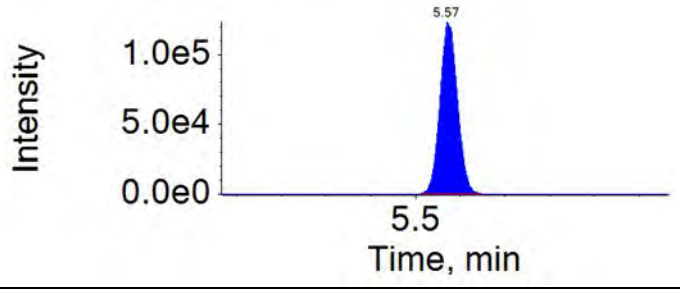
REVIEWED
By HMK at 8:35 am, 12/10/18

ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

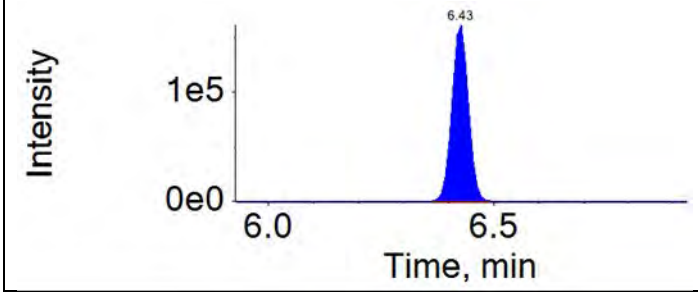
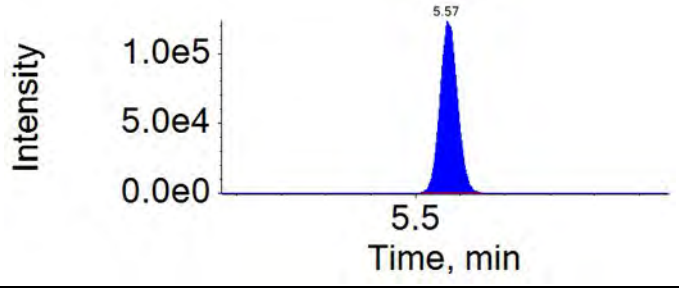
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

APPROVED
By MCD at 4:12 pm, 12/6/18

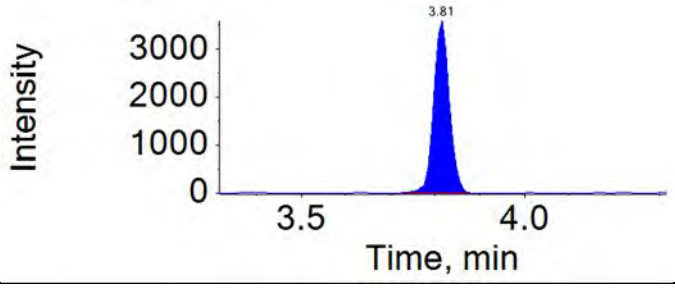
REVIEWED
By HMK at 8:35 am, 12/10/18

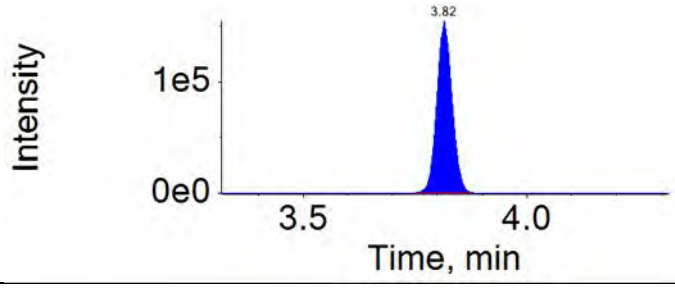
ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

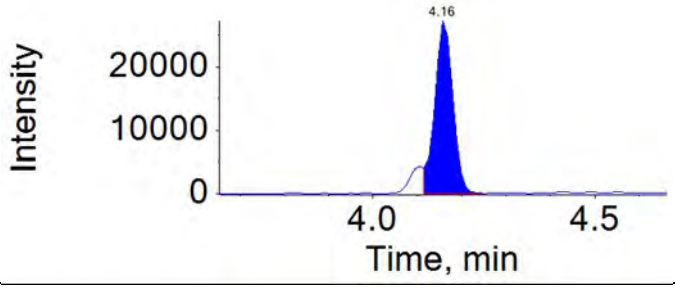
ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

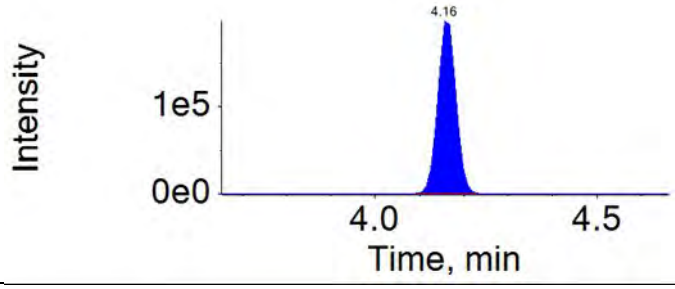
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



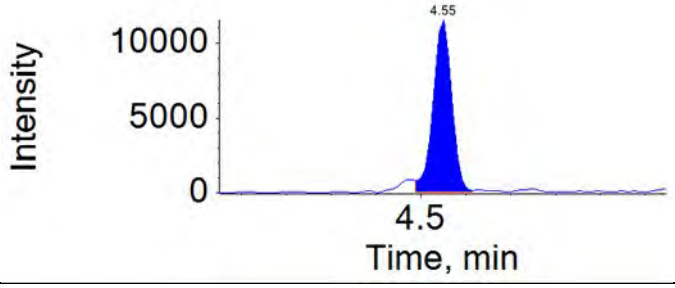


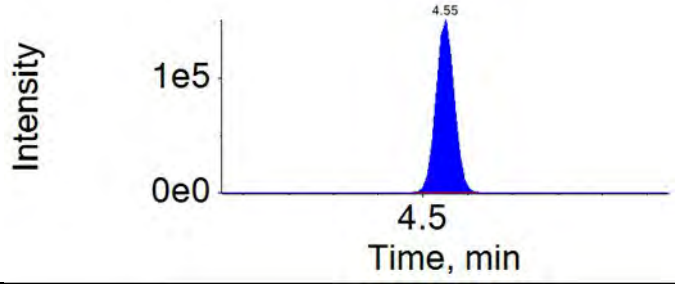
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



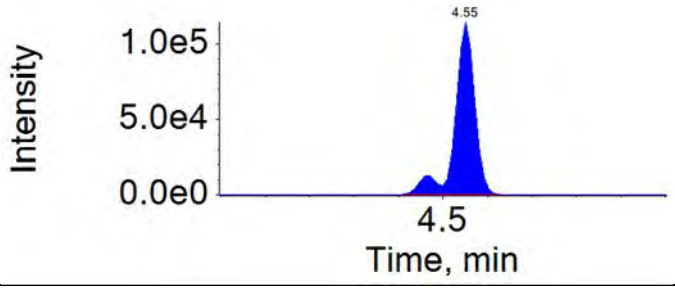


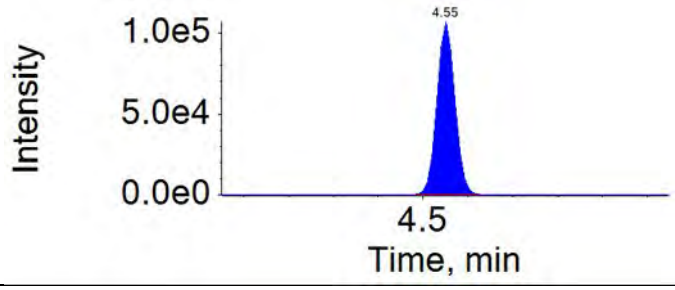
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



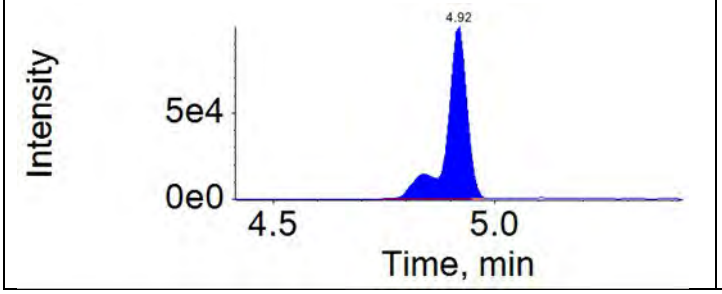


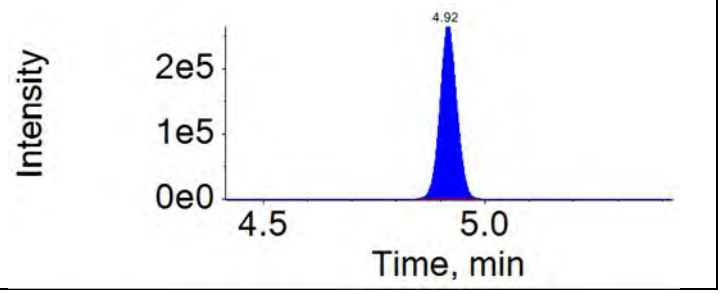
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

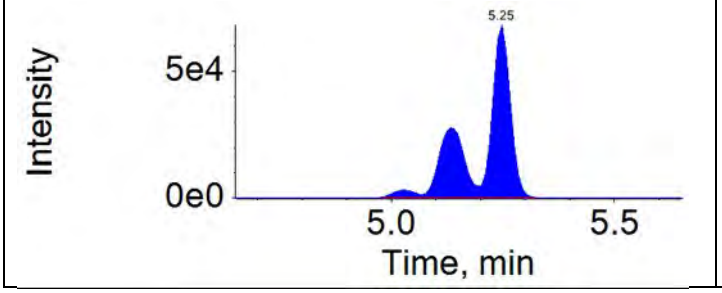
ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

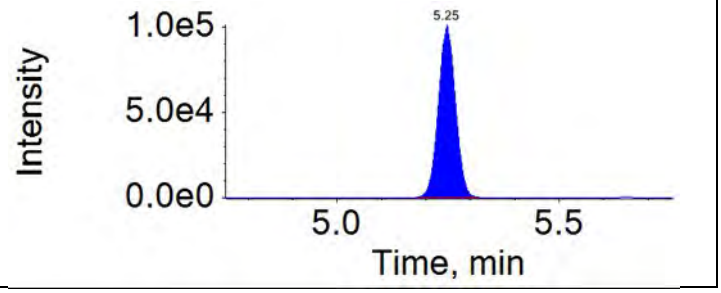
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



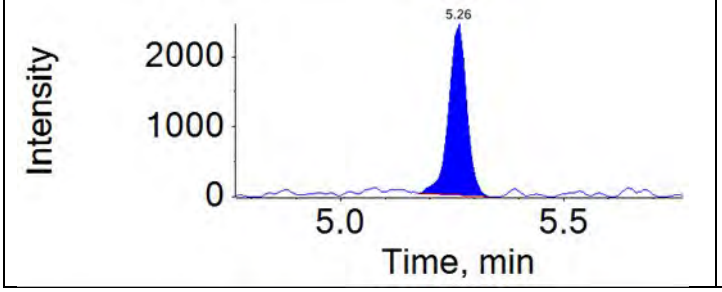


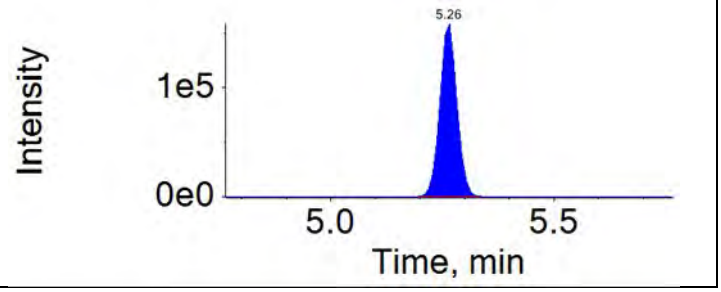
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



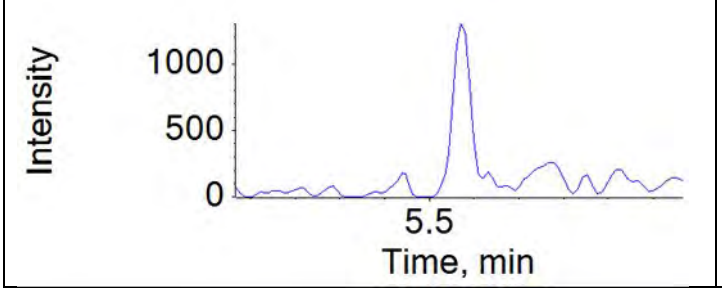


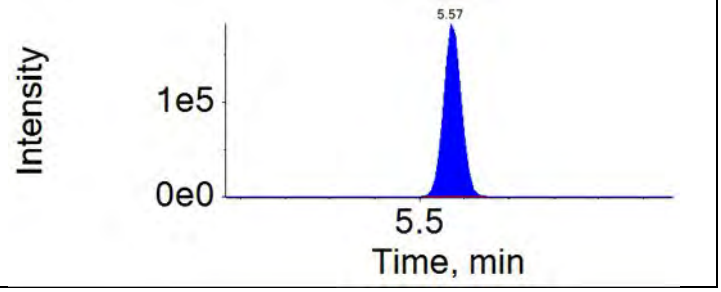
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



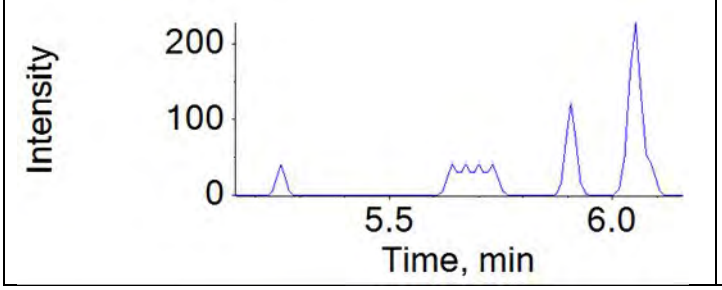


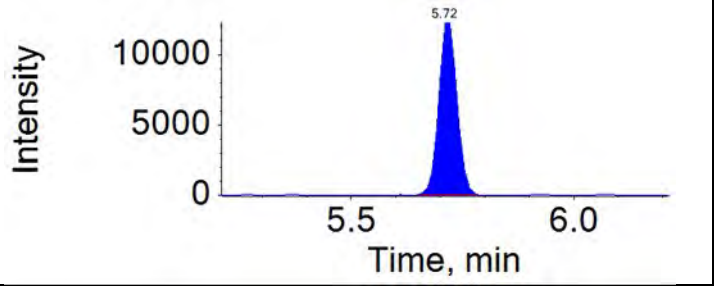
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

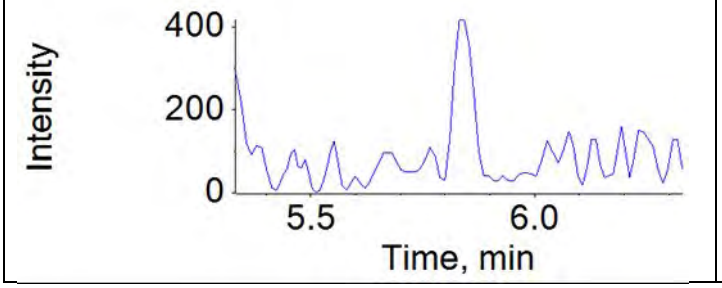
ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

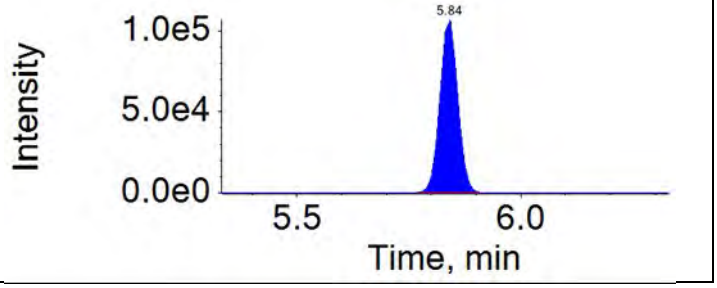
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



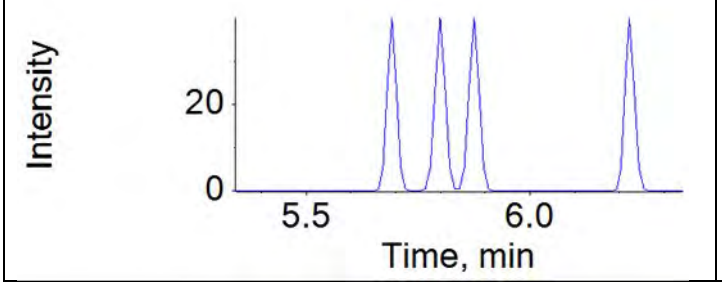


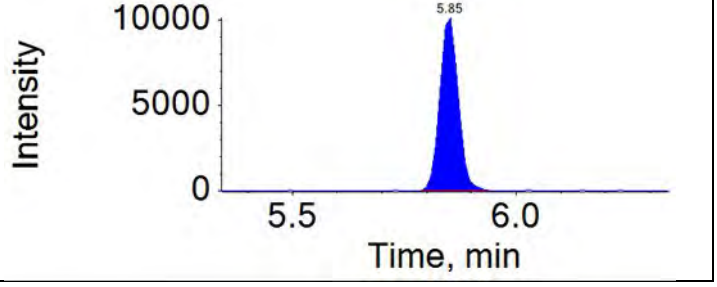
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



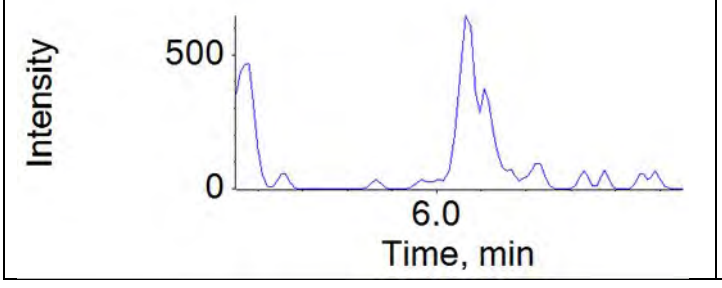


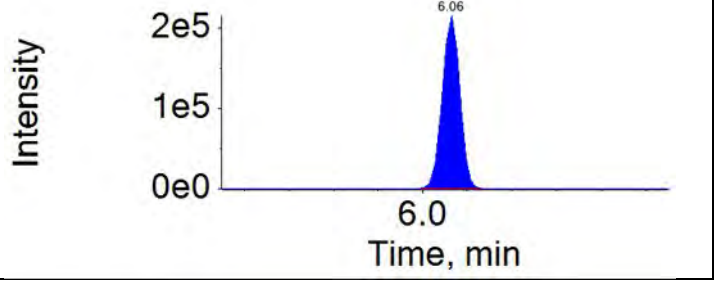
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



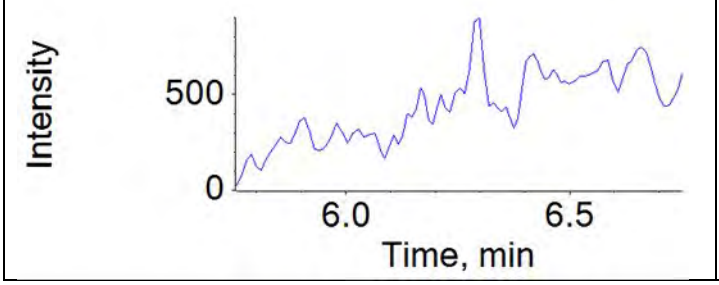


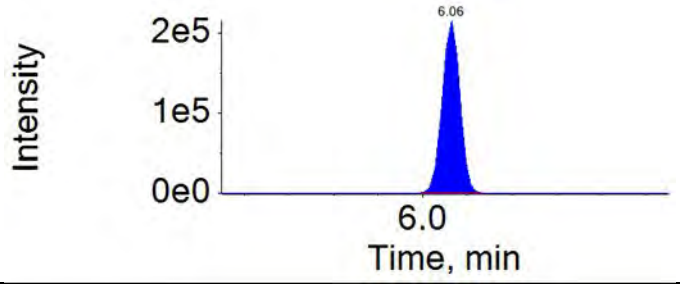
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

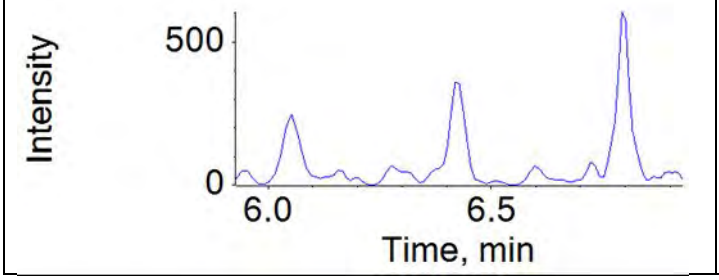
ICAL Name: 18DEC03DCAL **Result Table:** 18338017 12/6/2018 3:58:49 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

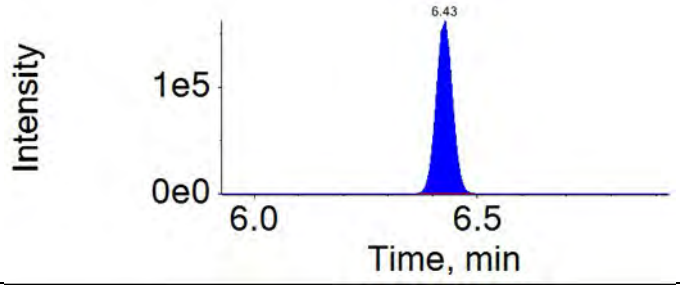
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

Results Table Name: 18338017
Results Table Date: 12/6/2018 3:58:49 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
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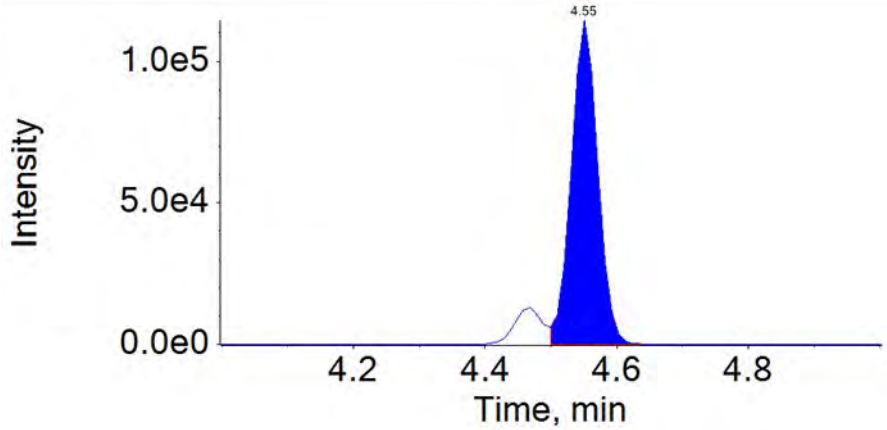
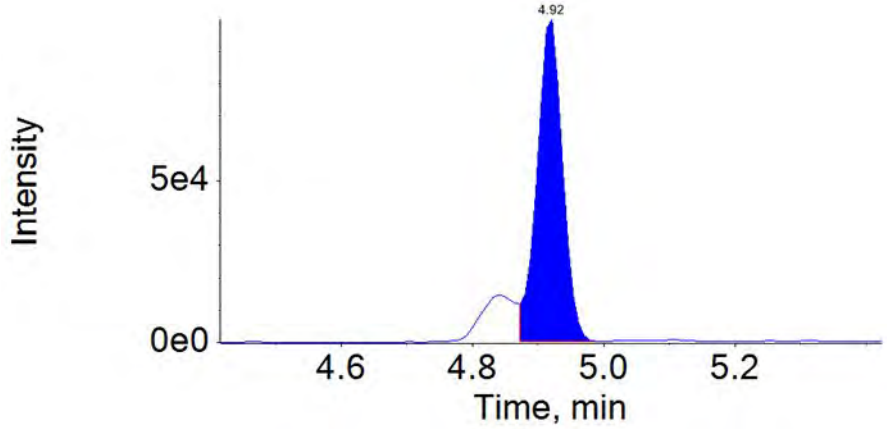
321450.1
Mass Range:
399.0 / 80.0
File Name:
18DEC05D-39.wiff
Sample Name:
9883397RE



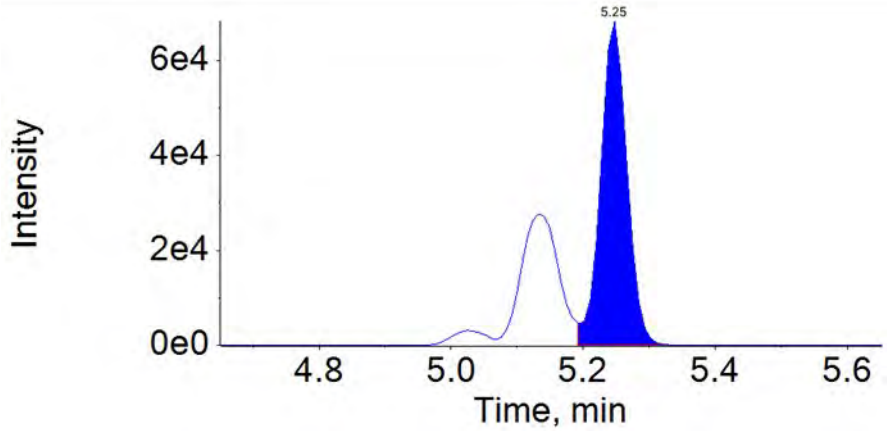
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.92
Peak Area:
269016.8
Mass Range:
413.0 / 369.0
File Name:
18DEC05D-39.wiff
Sample Name:
9883397RE



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
189094.5
Mass Range:
499.0 / 80.0
File Name:
18DEC05D-39.wiff
Sample Name:
9883397RE



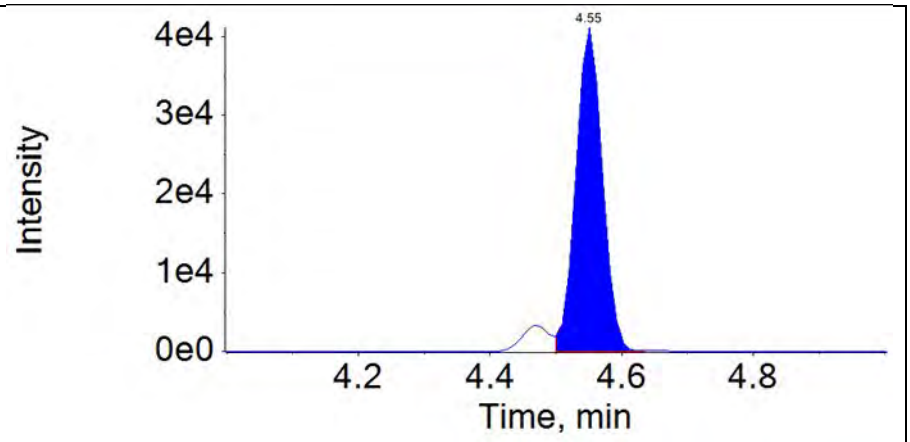
Integration Comment: incorrect integration

APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

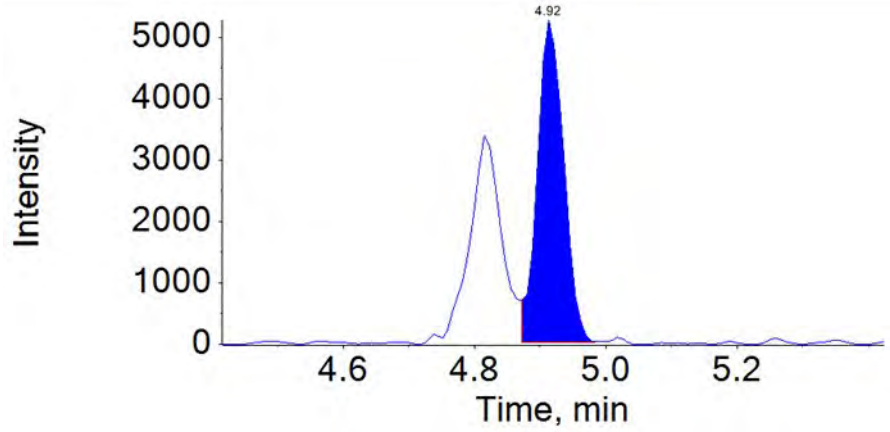
Results Table Name: 18338017
Results Table Date: 12/6/2018 3:58:49 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
115108.4
Mass Range:
399.0 / 99.0
File Name:
18DEC05D-39.wiff
Sample Name:
9883397RE



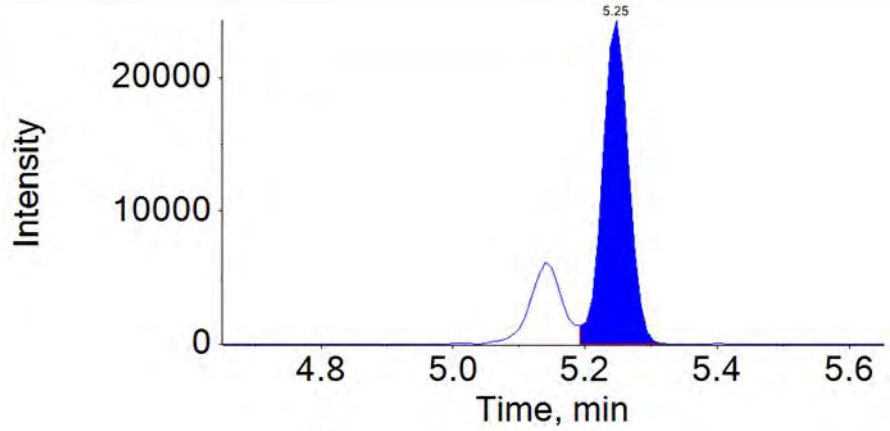
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
14670.3
Mass Range:
413.0 / 169.0
File Name:
18DEC05D-39.wiff
Sample Name:
9883397RE



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
66802.3
Mass Range:
499.0 / 99.0
File Name:
18DEC05D-39.wiff
Sample Name:
9883397RE



Integration Comment: incorrect integration

APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

Results Table Name: 18338017
Results Table Date: 12/6/2018 3:58:49 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

Ion Ratio Report

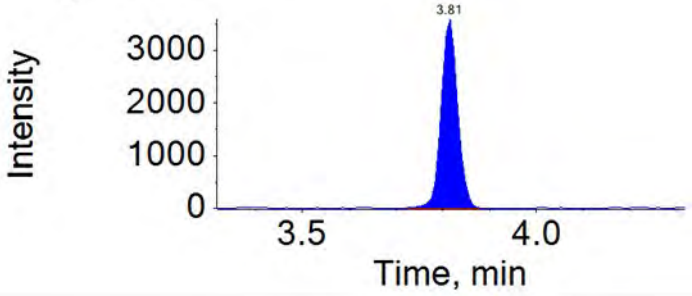
Sample Name: 9883397RE **Instrument Name:** LM27631 **File Name:** 18DEC05D-39.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	8798.2	A	N/A	0.3597			
PFBS_2	3.82	1.00	3164.3	A	N/A	0.3597	-3	50	
PFHxA	4.16	1.00	76746.5	A	N/A	0.0103			
PFHxA_2	4.17	1.00	793.1	A	N/A	0.0103	-10	50	
PFHpA	4.55	1.00	33010.9	A	N/A	0.0536			
PFHpA_2	4.55	1.00	1768.4	A	N/A	0.0536	6	50	
PFHxS	4.55	1.00	359694.7	M	N/A	0.3467			
PFHxS_2	4.55	1.00	124692.7	M	N/A	0.3467	-6	50	
PFOA	4.92	1.00	322559.1	M	N/A	0.0819			
PFOA_2	4.90	1.00	26430.7	M	N/A	0.0819	32	50	
PFOS	5.25	1.00	309445.6	M	N/A	0.2845			
PFOS_2	5.25	1.00	88023.9	M	N/A	0.2845	-2	50	
PFNA	5.26	1.00	6792.1	A	N/A	0.0540			
PFNA_2	5.27	1.00	366.9	A	N/A	0.0540	181	50	OOS
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

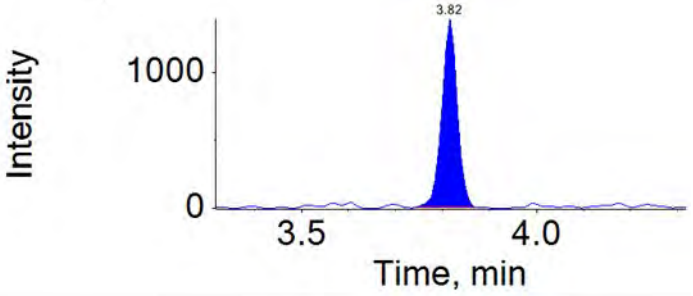
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

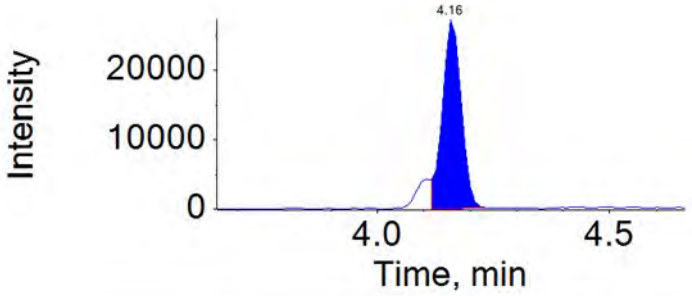
Component: PFBS
Primary Mass: 299.0 / 80.0



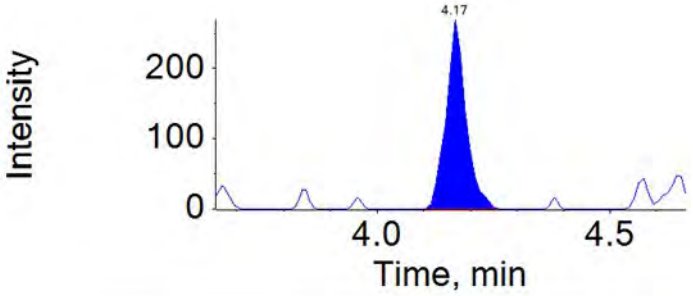
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



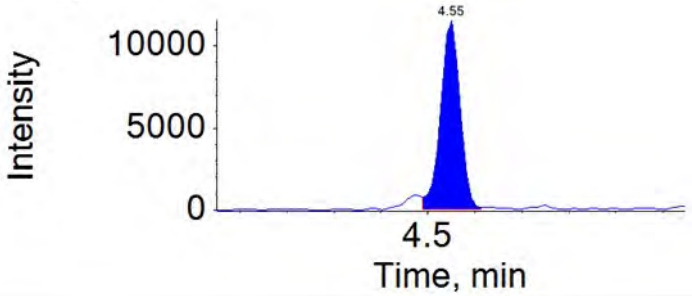
Component: PFHxA
Primary Mass: 313.0 / 269.0



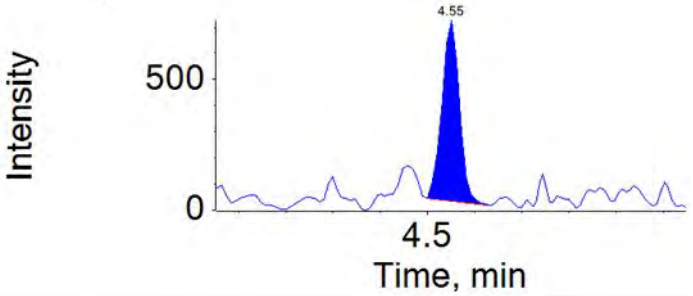
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



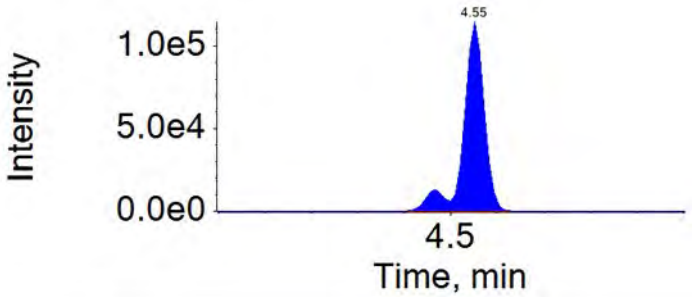
Component: PFHpA
Primary Mass: 363.0 / 319.0



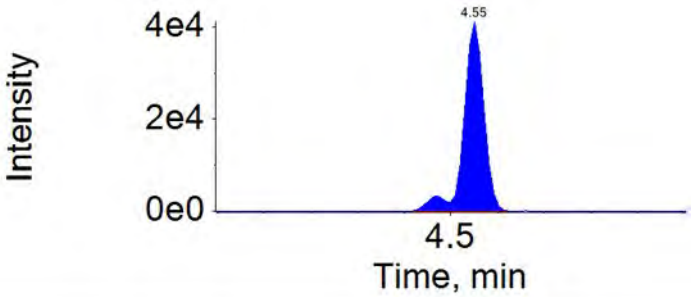
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



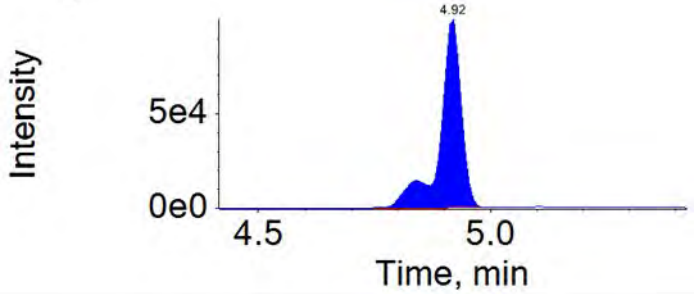
Component: PFHxS
Primary Mass: 399.0 / 80.0



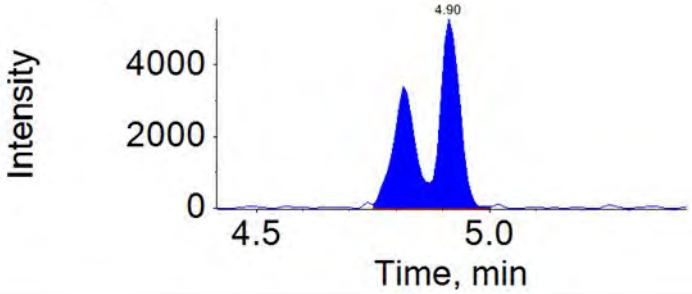
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



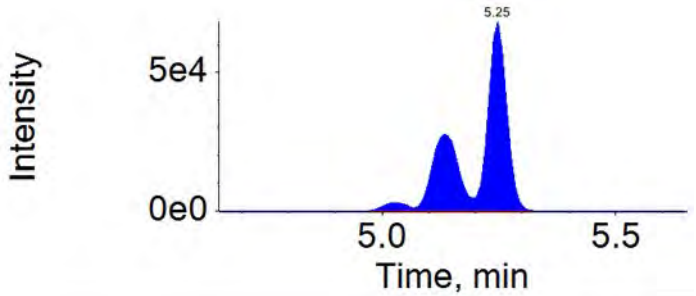
Component: PFOA
Primary Mass: 413.0 / 369.0



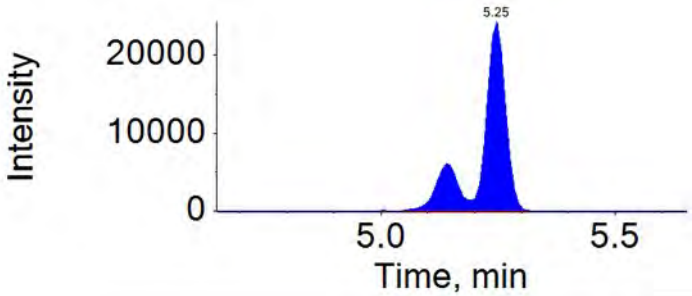
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



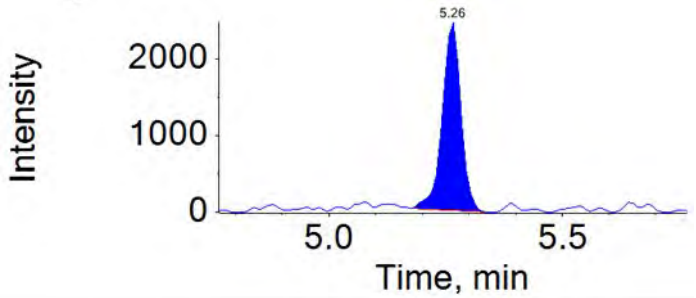
Component: PFOS
Primary Mass: 499.0 / 80.0



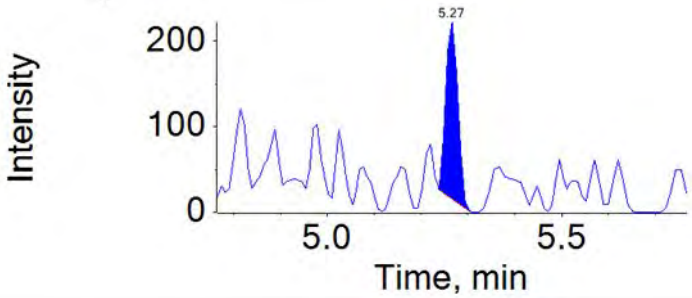
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



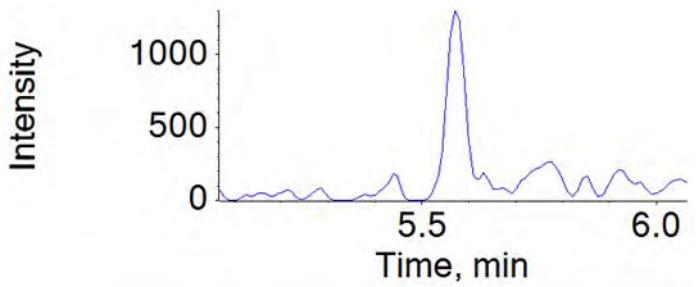
Component: PFNA
Primary Mass: 463.0 / 419.0



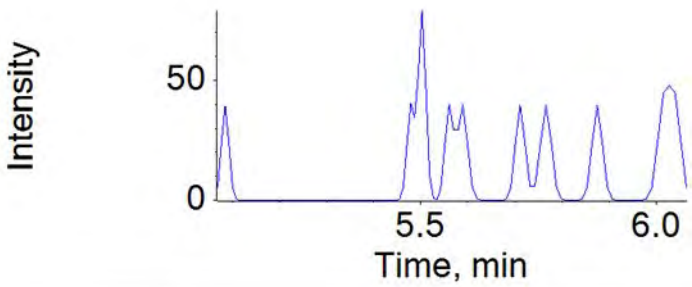
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



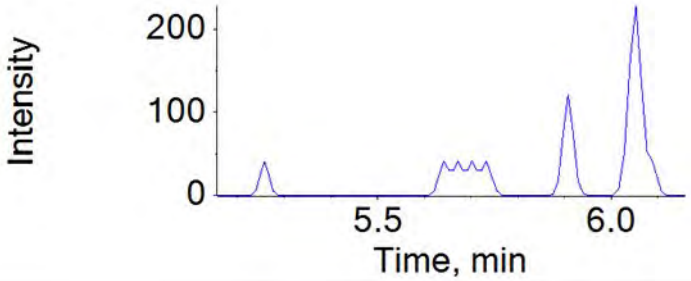
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



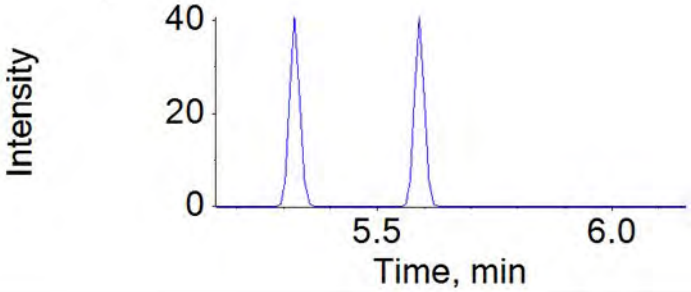
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

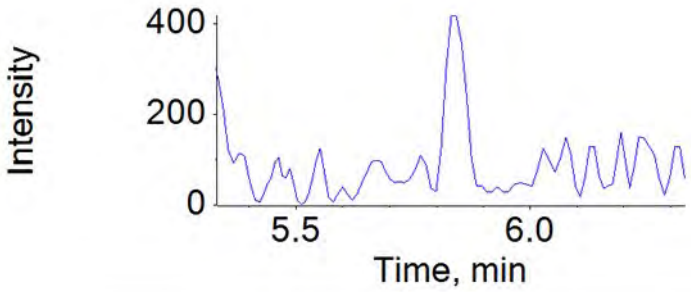
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



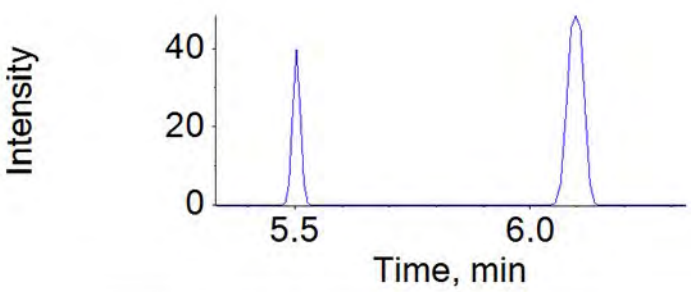
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



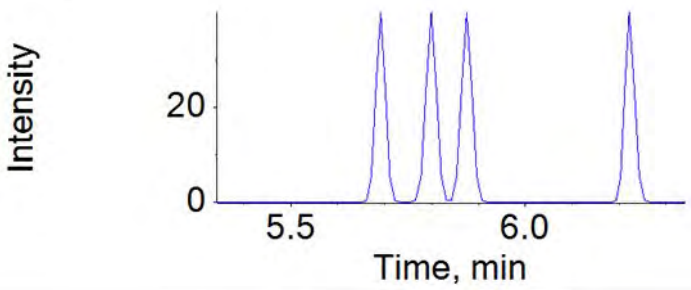
Component: PFUnDA
Primary Mass: 563.0 / 519.0



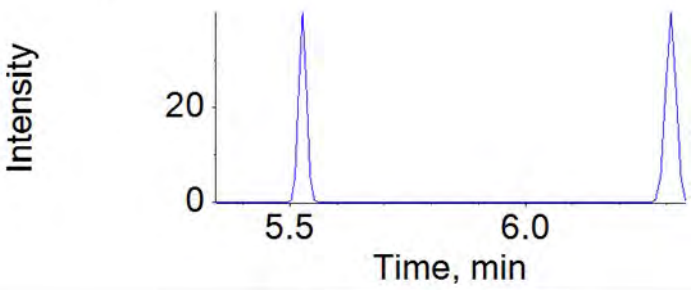
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



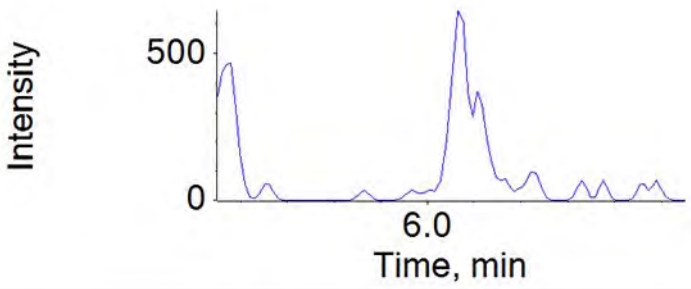
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



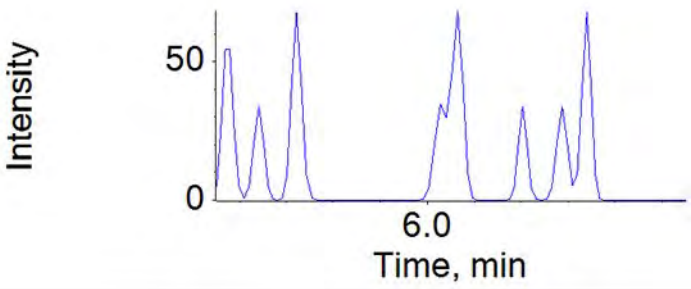
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



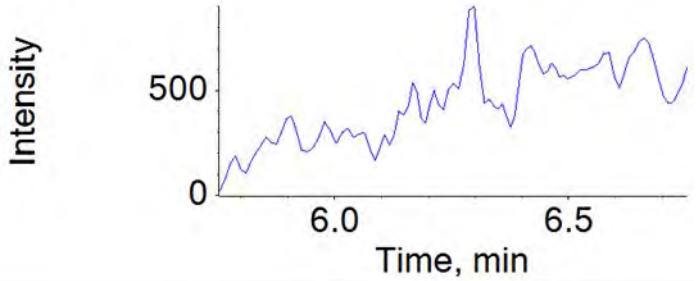
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



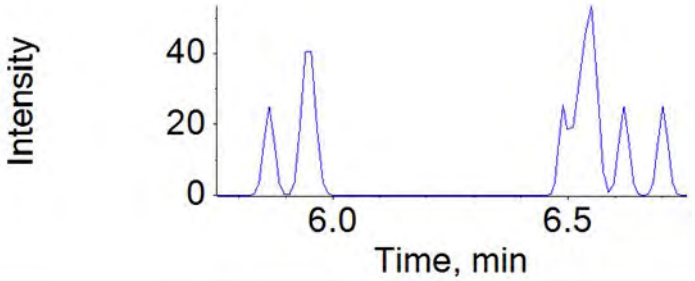
APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

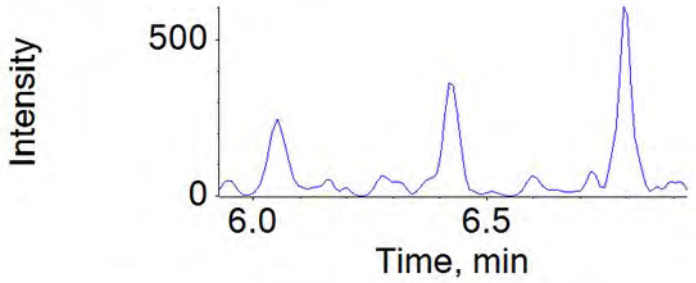
Component: PFTrDA
Primary Mass: 663.0 / 619.0



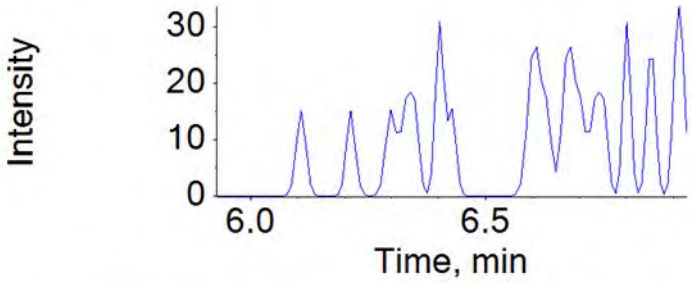
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:12 pm, 12/6/18

REVIEWED
By HMK at 8:35 am, 12/10/18

Standards Data

PFAS by LC/MS/MS

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
18NOV07DCAL-09.wiff	MDL	N/A	11/7/2018 9:30:56 AM
18NOV07DCAL-10.wiff	CAL1	N/A	11/7/2018 9:39:56 AM
18NOV07DCAL-11.wiff	CAL2	N/A	11/7/2018 9:48:56 AM
18NOV07DCAL-12.wiff	CAL3	N/A	11/7/2018 9:57:56 AM
18NOV07DCAL-13.wiff	CAL4	N/A	11/7/2018 10:06:59 AM
18NOV07DCAL-14.wiff	CAL5	N/A	11/7/2018 10:15:59 AM
18NOV07DCAL-15.wiff	CAL6	N/A	11/7/2018 10:24:59 AM
18NOV07DCAL-16.wiff	CAL7	N/A	11/7/2018 10:33:59 AM
18NOV07DCAL-17.wiff	Instrument Blank	N/A	11/7/2018 10:42:59 AM
18NOV07DCAL-18.wiff	ICV	N/A	11/7/2018 10:51:59 AM
18NOV07DCAL-19.wiff	L+B CAL3	N/A	11/7/2018 11:00:59 AM
18NOV07DCAL-20.wiff	CCV1_CAL3	N/A	11/7/2018 11:09:59 AM
18NOV08D-01.wiff	solvent	N/A	11/8/2018 11:48:33 AM
18NOV08D-02.wiff	solvent	N/A	11/8/2018 11:57:34 AM
18NOV08D-03.wiff	solvent	N/A	11/8/2018 12:06:37 PM
18NOV08D-04.wiff	solvent	N/A	11/8/2018 12:15:40 PM
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18NOV08D-11.wiff	9881951	18309005	11/8/2018 1:18:46 PM
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18NOV08D-16.wiff	9881958	18309005	11/8/2018 2:03:52 PM
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18NOV08D-18.wiff	9881931	18309011	11/8/2018 2:21:52 PM
18NOV08D-19.wiff	9881936	18309011	11/8/2018 2:30:55 PM
18NOV08D-20.wiff	9881937	18309011	11/8/2018 2:39:58 PM
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18NOV08D-24.wiff	9881926	18310003	11/8/2018 3:16:01 PM
18NOV08D-25.wiff	9881927	18310003	11/8/2018 3:25:01 PM
18NOV08D-26.wiff	9881928BKG	18310003	11/8/2018 3:34:01 PM
18NOV08D-27.wiff	9881929MS	18310003	11/8/2018 3:43:04 PM
18NOV08D-28.wiff	9881930MSD	18310003	11/8/2018 3:52:04 PM
18NOV08D-29.wiff	CCV3_CAL4	N/A	11/8/2018 4:01:07 PM
18NOV08D-30.wiff	9881963	18310003	11/8/2018 4:10:10 PM
18NOV08D-31.wiff	9881964	18310003	11/8/2018 4:19:13 PM
18NOV08D-32.wiff	9881967	18310003	11/8/2018 4:28:13 PM
18NOV08D-33.wiff	9881968	18310003	11/8/2018 4:37:16 PM
18NOV08D-34.wiff	9881969	18310003	11/8/2018 4:46:19 PM
18NOV08D-35.wiff	9881970	18310003	11/8/2018 4:55:19 PM
18NOV08D-36.wiff	9881973	18310003	11/8/2018 5:04:22 PM
18NOV08D-37.wiff	9881974	18310003	11/8/2018 5:13:22 PM
18NOV08D-38.wiff	9881975	18310003	11/8/2018 5:22:23 PM
18NOV08D-39.wiff	9881976	18310003	11/8/2018 5:31:22 PM
18NOV08D-40.wiff	CCV4_ISC_CAL2	N/A	11/8/2018 5:40:25 PM
18NOV08D-41.wiff	solvent	N/A	11/8/2018 5:49:25 PM
18NOV08D-42.wiff	BLK311003	18311003	11/8/2018 5:58:28 PM
18NOV08D-43.wiff	LCS311003	18311003	11/8/2018 6:07:28 PM
18NOV08D-44.wiff	9881573	18311003	11/8/2018 6:16:28 PM
18NOV08D-45.wiff	9881574	18311003	11/8/2018 6:25:28 PM

APPROVED
By MCD at 7:07 pm, 11/13/18

Instrument Name: LM27631

18NOV08D-46.wiff	9881575	18311003	11/8/2018 6:34:31 PM
18NOV08D-47.wiff	9881576	18311003	11/8/2018 6:43:31 PM
18NOV08D-48.wiff	9881581	18311003	11/8/2018 6:52:32 PM
18NOV08D-49.wiff	9881582	18311003	11/8/2018 7:01:34 PM
18NOV08D-50.wiff	9881583BKG	18311003	11/8/2018 7:10:34 PM
18NOV08D-51.wiff	9881584MS	18311003	11/8/2018 7:19:34 PM
18NOV08D-52.wiff	CCV5_CAL3	N/A	11/8/2018 7:28:37 PM
18NOV08D-53.wiff	9881585MSD	18311003	11/8/2018 7:37:37 PM
18NOV08D-54.wiff	9881586	18311003	11/8/2018 7:46:40 PM
18NOV08D-55.wiff	9881589	18311003	11/8/2018 7:55:43 PM
18NOV08D-56.wiff	9881590	18311003	11/8/2018 8:04:46 PM
18NOV08D-57.wiff	9881591	18311003	11/8/2018 8:13:46 PM
18NOV08D-58.wiff	9881592	18311003	11/8/2018 8:22:46 PM
18NOV08D-59.wiff	9881594	18311003	11/8/2018 8:31:46 PM
18NOV08D-60.wiff	9881595	18311003	11/8/2018 8:40:46 PM
18NOV08D-61.wiff	9881596	18311003	11/8/2018 8:49:46 PM
18NOV08D-62.wiff	CCV6_CAL4	N/A	11/8/2018 8:58:46 PM
18NOV08D-63.wiff	9885111	18311003	11/8/2018 9:07:46 PM
18NOV08D-64.wiff	9885112	18311003	11/8/2018 9:16:46 PM
18NOV08D-65.wiff	9885113	18311003	11/8/2018 9:25:49 PM
18NOV08D-66.wiff	solvent	N/A	11/8/2018 9:34:50 PM
18NOV08D-67.wiff	9878747DL	18308002	11/8/2018 9:43:53 PM
18NOV08D-68.wiff	solvent	N/A	11/8/2018 9:52:55 PM
18NOV08D-69.wiff	BLK310012	18310012	11/8/2018 10:01:55 PM
18NOV08D-70.wiff	LCS310012	18310012	11/8/2018 10:10:58 PM
18NOV08D-71.wiff	9881902	18310012	11/8/2018 10:20:02 PM
18NOV08D-72.wiff	9881903	18310012	11/8/2018 10:29:05 PM
18NOV08D-73.wiff	9881904	18310012	11/8/2018 10:38:07 PM
18NOV08D-74.wiff	9881907BKG	18310012	11/8/2018 10:47:07 PM
18NOV08D-75.wiff	CCV7_ISC_CAL2	N/A	11/8/2018 10:56:07 PM
18NOV08D-76.wiff	Instrument Blank	N/A	11/8/2018 11:05:11 PM
18NOV08D-77.wiff	9881908MS	18310012	11/8/2018 11:14:11 PM
18NOV08D-78.wiff	9881909MSD	18310012	11/8/2018 11:23:13 PM
18NOV08D-79.wiff	9881910	18310012	11/8/2018 11:32:16 PM
18NOV08D-80.wiff	9881911	18310012	11/8/2018 11:41:16 PM
18NOV08D-81.wiff	9881912	18310012	11/8/2018 11:50:20 PM
18NOV08D-82.wiff	9881915	18310012	11/8/2018 11:59:23 PM
18NOV08D-83.wiff	9881916	18310012	11/9/2018 12:08:25 AM
18NOV08D-84.wiff	9881917	18310012	11/9/2018 12:17:25 AM
18NOV08D-85.wiff	9881918	18310012	11/9/2018 12:26:28 AM
18NOV08D-86.wiff	CCV8_CAL3	N/A	11/9/2018 12:35:31 AM
18NOV08D-87.wiff	solvent	N/A	11/9/2018 12:44:31 AM
18NOV08D-88.wiff	BLK311004	18311004	11/9/2018 12:53:31 AM
18NOV08D-89.wiff	LCS311004	18311004	11/9/2018 1:02:32 AM
18NOV08D-90.wiff	9881536	18311004	11/9/2018 1:11:34 AM
18NOV08D-91.wiff	9881537BKG	18311004	11/9/2018 1:20:35 AM
18NOV08D-92.wiff	9881538MS	18311004	11/9/2018 1:29:35 AM
18NOV08D-93.wiff	9881539MSD	18311004	11/9/2018 1:38:35 AM
18NOV08D-94.wiff	9881540	18311004	11/9/2018 1:47:35 AM
18NOV08D-95.wiff	9881541	18311004	11/9/2018 1:56:35 AM
18NOV08D-96.wiff	9881544	18311004	11/9/2018 2:05:35 AM
18NOV08D-97.wiff	9881545	18311004	11/9/2018 2:14:38 AM
18NOV08D-98.wiff	CCV9_CAL4	N/A	11/9/2018 2:23:41 AM
18NOV08D-99.wiff	9883380	18311004	11/9/2018 2:32:44 AM
18NOV08D-100.wiff	9883381	18311004	11/9/2018 2:41:47 AM
18NOV08D-101.wiff	9883386	18311004	11/9/2018 2:50:50 AM
18NOV08D-102.wiff	9883387	18311004	11/9/2018 2:59:50 AM
18NOV08D-103.wiff	9883388	18311004	11/9/2018 3:08:53 AM

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Instrument Name: LM27631

18NOV08D-104.wiff	9883389	18311004	11/9/2018 3:17:53 AM
18NOV08D-105.wiff	9883392	18311004	11/9/2018 3:26:56 AM
18NOV08D-106.wiff	9883393	18311004	11/9/2018 3:35:56 AM
18NOV08D-107.wiff	9883394	18311004	11/9/2018 3:44:56 AM
18NOV08D-108.wiff	9883395	18311004	11/9/2018 3:53:59 AM
18NOV08D-109.wiff	CCV10_ISC_CAL2	N/A	11/9/2018 4:02:59 AM
18NOV08D-110.wiff	9885114	18311004	11/9/2018 4:11:59 AM
18NOV08D-111.wiff	9885117	18311004	11/9/2018 4:20:59 AM
18NOV08D-112.wiff	CCV11_CAL3	N/A	11/9/2018 4:29:59 AM

20 mM Ammonium Acetate in H2O: 782411021833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 782411021833B

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LC-MS/MS
Sample Run Log

Printed: 11/13/2018 9:27:00 PM
Template: Sample Run Log-17JUL05.docx

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
18NOV12DCAL-41.wiff	MDL	N\A	11/12/2018 2:56:51 PM
18NOV12DCAL-42.wiff	CAL1	N\A	11/12/2018 3:05:54 PM
18NOV12DCAL-43.wiff	CAL2	N\A	11/12/2018 3:15:03 PM
18NOV12DCAL-44.wiff	CAL3	N\A	11/12/2018 3:24:03 PM
18NOV12DCAL-45.wiff	CAL4	N\A	11/12/2018 3:33:03 PM
18NOV12DCAL-46.wiff	CAL5	N\A	11/12/2018 3:42:06 PM
18NOV12DCAL-47.wiff	CAL6	N\A	11/12/2018 3:51:06 PM
18NOV12DCAL-48.wiff	CAL7	N\A	11/12/2018 4:00:06 PM
18NOV12DCAL-49.wiff	solvent	N\A	11/12/2018 4:09:09 PM
18NOV12DCAL-50.wiff	ICV	N\A	11/12/2018 4:18:11 PM
18NOV12DCAL-51.wiff	L+B CAL3	N\A	11/12/2018 4:27:15 PM
18NOV12DCAL-52.wiff	CCV1_CAL3	N\A	11/12/2018 4:36:17 PM
18NOV12D-01.wiff	solvent	N\A	11/12/2018 4:45:21 PM
18NOV12D-02.wiff	solvent	N\A	11/12/2018 4:54:24 PM
18NOV12D-03.wiff	solvent	N\A	11/12/2018 5:03:30 PM
18NOV12D-04.wiff	solvent	N\A	11/12/2018 5:12:33 PM
18NOV12D-05.wiff	CCV1_ISC_CAL2	N/A	11/12/2018 5:21:36 PM
18NOV12D-06.wiff	Instrument Blank	N/A	11/12/2018 5:30:36 PM
18NOV12D-07.wiff	BLK312009	18312009	11/12/2018 5:39:36 PM
18NOV12D-08.wiff	LCS312009	18312009	11/12/2018 5:48:39 PM
18NOV12D-09.wiff	9888754BKG	18312009	11/12/2018 5:57:42 PM
18NOV12D-10.wiff	9888799	18312009	11/12/2018 6:06:45 PM
18NOV12D-11.wiff	9888800	18312009	11/12/2018 6:15:48 PM
18NOV12D-12.wiff	9888801	18312009	11/12/2018 6:24:51 PM
18NOV12D-13.wiff	9888755MS	18312009	11/12/2018 6:33:51 PM
18NOV12D-14.wiff	9888756MSD	18312009	11/12/2018 6:42:51 PM
18NOV12D-15.wiff	CCV2_CAL3	N/A	11/12/2018 6:51:51 PM
18NOV12D-16.wiff	BLK313005	18313005	11/12/2018 7:00:51 PM
18NOV12D-17.wiff	LCS313005	18313005	11/12/2018 7:09:51 PM
18NOV12D-18.wiff	9881926	18313005	11/12/2018 7:18:51 PM
18NOV12D-19.wiff	9881927	18313005	11/12/2018 7:27:54 PM
18NOV12D-20.wiff	9881928BKG	18313005	11/12/2018 7:36:54 PM
18NOV12D-21.wiff	9881940	18313005	11/12/2018 7:45:57 PM
18NOV12D-22.wiff	9881963	18313005	11/12/2018 7:54:57 PM
18NOV12D-23.wiff	9881964	18313005	11/12/2018 8:04:00 PM
18NOV12D-24.wiff	CCV3_CAL4	N/A	11/12/2018 8:13:03 PM
18NOV12D-25.wiff	9881967	18313005	11/12/2018 8:22:06 PM
18NOV12D-26.wiff	9881968	18313005	11/12/2018 8:31:09 PM
18NOV12D-27.wiff	9881969	18313005	11/12/2018 8:40:12 PM
18NOV12D-28.wiff	9881970	18313005	11/12/2018 8:49:15 PM
18NOV12D-29.wiff	9881973	18313005	11/12/2018 8:58:18 PM
18NOV12D-30.wiff	9881974	18313005	11/12/2018 9:07:21 PM
18NOV12D-31.wiff	9881975	18313005	11/12/2018 9:16:24 PM
18NOV12D-32.wiff	9881976	18313005	11/12/2018 9:25:24 PM
18NOV12D-33.wiff	9881929MS	18313005	11/12/2018 9:34:27 PM
18NOV12D-34.wiff	9881930MSD	18313005	11/12/2018 9:43:27 PM
18NOV12D-35.wiff	CCV4_ISC_CAL2	N/A	11/12/2018 9:52:30 PM
18NOV12D-36.wiff	9881926DL	18313005	11/12/2018 10:01:33 PM
18NOV12D-37.wiff	9881927DL	18313005	11/12/2018 10:10:36 PM
18NOV12D-38.wiff	9881928BKGDL	18313005	11/12/2018 10:19:36 PM
18NOV12D-39.wiff	solvent	N/A	11/12/2018 10:28:39 PM
18NOV12D-40.wiff	BLK314006	18314006	11/12/2018 10:37:42 PM
18NOV12D-41.wiff	LCS314006	18314006	11/12/2018 10:46:42 PM
18NOV12D-42.wiff	9881534	18314006	11/12/2018 10:55:42 PM
18NOV12D-43.wiff	9881535	18314006	11/12/2018 11:04:42 PM
18NOV12D-44.wiff	9881579	18314006	11/12/2018 11:13:42 PM
18NOV12D-45.wiff	9881580	18314006	11/12/2018 11:22:45 PM

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Instrument Name: LM27631

18NOV12D-46.wiff	9881925	18314006	11/12/2018 11:31:48 PM
18NOV12D-47.wiff	CCV5_CAL3	N/A	11/12/2018 11:40:51 PM
18NOV12D-48.wiff	9881942	18314006	11/12/2018 11:49:51 PM
18NOV12D-49.wiff	9881979	18314006	11/12/2018 11:58:54 PM
18NOV12D-50.wiff	9881980	18314006	11/13/2018 12:07:57 AM
18NOV12D-51.wiff	9893164	18314006	11/13/2018 12:16:57 AM
18NOV12D-52.wiff	9893165	18314006	11/13/2018 12:25:57 AM
18NOV12D-53.wiff	9893166	18314006	11/13/2018 12:35:00 AM
18NOV12D-54.wiff	9893167	18314006	11/13/2018 12:44:03 AM
18NOV12D-55.wiff	9893169BKG	18314006	11/13/2018 12:53:06 AM
18NOV12D-56.wiff	9893176	18314006	11/13/2018 1:02:06 AM
18NOV12D-57.wiff	9893170MS	18314006	11/13/2018 1:11:07 AM
18NOV12D-58.wiff	CCV6_CAL4	N/A	11/13/2018 1:20:06 AM
18NOV12D-59.wiff	9893171MSD	18314006	11/13/2018 1:29:06 AM
18NOV12D-60.wiff	solvent	N/A	11/13/2018 1:38:09 AM
18NOV12D-61.wiff	BLK314009	18314009	11/13/2018 1:47:15 AM
18NOV12D-62.wiff	LCS314009	18314009	11/13/2018 1:56:15 AM
18NOV12D-63.wiff	LCSDA	18314009	11/13/2018 2:05:18 AM
18NOV12D-64.wiff	9881540BKG	18314009	11/13/2018 2:14:21 AM
18NOV12D-65.wiff	9881573	18314009	11/13/2018 2:23:27 AM
18NOV12D-66.wiff	9881575	18314009	11/13/2018 2:32:27 AM
18NOV12D-67.wiff	9881576	18314009	11/13/2018 2:41:30 AM
18NOV12D-68.wiff	9881589	18314009	11/13/2018 2:50:33 AM
18NOV12D-69.wiff	9881595	18314009	11/13/2018 2:59:33 AM
18NOV12D-70.wiff	CCV7_ISC_CAL2	N/A	11/13/2018 3:08:33 AM
18NOV12D-71.wiff	Instrument Blank	N/A	11/13/2018 3:17:33 AM
18NOV12D-72.wiff	9883388	18314009	11/13/2018 3:26:33 AM
18NOV12D-73.wiff	9883389	18314009	11/13/2018 3:35:33 AM
18NOV12D-74.wiff	9883393	18314009	11/13/2018 3:44:36 AM
18NOV12D-75.wiff	9883394	18314009	11/13/2018 3:53:39 AM
18NOV12D-76.wiff	9885112	18314009	11/13/2018 4:02:39 AM
18NOV12D-77.wiff	9885113	18314009	11/13/2018 4:11:42 AM
18NOV12D-78.wiff	9885131	18314009	11/13/2018 4:20:42 AM
18NOV12D-79.wiff	9885137	18314009	11/13/2018 4:29:42 AM
18NOV12D-80.wiff	9885138	18314009	11/13/2018 4:38:45 AM
18NOV12D-81.wiff	9881540MS	18314009	11/13/2018 4:47:45 AM
18NOV12D-82.wiff	CCV8_CAL3	N/A	11/13/2018 4:56:45 AM
18NOV12D-83.wiff	BLK313002	18313002	11/13/2018 5:05:49 AM
18NOV12D-84.wiff	LCS313002	18313002	11/13/2018 5:14:51 AM
18NOV12D-85.wiff	9889418	18313002	11/13/2018 5:23:54 AM
18NOV12D-86.wiff	9889419	18313002	11/13/2018 5:32:56 AM
18NOV12D-87.wiff	9889420	18313002	11/13/2018 5:41:59 AM
18NOV12D-88.wiff	9889421	18313002	11/13/2018 5:51:02 AM
18NOV12D-89.wiff	9889422	18313002	11/13/2018 6:00:08 AM
18NOV12D-90.wiff	9889423BKG	18313002	11/13/2018 6:09:11 AM
18NOV12D-91.wiff	9889426	18313002	11/13/2018 6:18:14 AM
18NOV12D-92.wiff	9889427	18313002	11/13/2018 6:27:17 AM
18NOV12D-93.wiff	CCV9_CAL4	N/A	11/13/2018 6:36:17 AM
18NOV12D-94.wiff	9889424MS	18313002	11/13/2018 6:45:17 AM
18NOV12D-95.wiff	9889425MSD	18313002	11/13/2018 6:54:17 AM
18NOV12D-96.wiff	CCV10_ISC_CAL2	N/A	11/13/2018 7:03:17 AM
18NOV12D-97.wiff	BLK309009	18309009	11/13/2018 7:12:17 AM
18NOV12D-98.wiff	IDOC1	18309009	11/13/2018 7:21:20 AM
18NOV12D-99.wiff	IDOC2	18309009	11/13/2018 7:30:23 AM
18NOV12D-100.wiff	IDOC3	18309009	11/13/2018 7:39:23 AM
18NOV12D-101.wiff	IDOC4	18309009	11/13/2018 7:48:26 AM
18NOV12D-102.wiff	solvent	N/A	11/13/2018 7:57:26 AM
18NOV12D-103.wiff	BLK306011	18306011	11/13/2018 8:06:26 AM

APPROVED
By MCD at 9:27 pm, 11/13/18

Instrument Name: LM27631

18NOV12D-104.wiff	18306011 MDL2	18306011	11/13/2018 8:15:29 AM
18NOV12D-105.wiff	BLK306012	18306012	11/13/2018 8:24:32 AM
18NOV12D-106.wiff	18306012 MDL2	18306012	11/13/2018 8:33:35 AM
18NOV12D-107.wiff	CCV11_CAL3	N/A	11/13/2018 8:42:38 AM

20 mM Ammonium Acetate in H2O: 782411091833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 782411091833B

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
18NOV28DCAL-05.wiff	MDL	N/A	11/28/2018 1:33:07 PM
18NOV28DCAL-06.wiff	CAL1	N/A	11/28/2018 1:42:10 PM
18NOV28DCAL-07.wiff	CAL2	N/A	11/28/2018 1:51:13 PM
18NOV28DCAL-08.wiff	CAL3	N/A	11/28/2018 2:00:13 PM
18NOV28DCAL-09.wiff	CAL4	N/A	11/28/2018 2:09:13 PM
18NOV28DCAL-10.wiff	CAL5	N/A	11/28/2018 2:18:16 PM
18NOV28DCAL-11.wiff	CAL6	N/A	11/28/2018 2:27:16 PM
18NOV28DCAL-12.wiff	CAL7	N/A	11/28/2018 2:36:16 PM
18NOV28DCAL-13.wiff	Instrument Blank	N/A	11/28/2018 2:45:19 PM
18NOV28DCAL-14.wiff	ICV	N/A	11/28/2018 2:54:22 PM
18NOV28DCAL-15.wiff	L+B CAL3	N/A	11/28/2018 3:03:22 PM
18NOV28DCAL-16.wiff	CCV1_CAL3	N/A	11/28/2018 3:12:25 PM
18NOV29D-01.wiff	solvent	N/A	11/29/2018 9:57:32 AM
18NOV29D-02.wiff	solvent	N/A	11/29/2018 10:06:32 AM
18NOV29D-03.wiff	solvent	N/A	11/29/2018 10:15:35 AM
18NOV29D-04.wiff	solvent	N/A	11/29/2018 10:24:35 AM
18NOV29D-05.wiff	CCV1_ISC_CAL2	N/A	11/29/2018 10:33:38 AM
18NOV29D-06.wiff	Instrument Blank	N/A	11/29/2018 10:42:38 AM
18NOV29D-07.wiff	BLK331005	18331005	11/29/2018 10:51:41 AM
18NOV29D-08.wiff	LCS331005	18331005	11/29/2018 11:00:41 AM
18NOV29D-09.wiff	9911369	18331005	11/29/2018 11:09:41 AM
18NOV29D-10.wiff	9911370	18331005	11/29/2018 11:18:41 AM
18NOV29D-11.wiff	9911371	18331005	11/29/2018 11:27:41 AM
18NOV29D-12.wiff	9911372	18331005	11/29/2018 11:36:41 AM
18NOV29D-13.wiff	9911373BKG	18331005	11/29/2018 11:45:44 AM
18NOV29D-14.wiff	9911376	18331005	11/29/2018 11:54:47 AM
18NOV29D-15.wiff	9911377	18331005	11/29/2018 12:03:47 PM
18NOV29D-16.wiff	9911378	18331005	11/29/2018 12:12:50 PM
18NOV29D-17.wiff	CCV2_CAL3	N/A	11/29/2018 12:21:50 PM
18NOV29D-18.wiff	solvent	N/A	11/29/2018 12:30:50 PM
18NOV29D-19.wiff	BLK331006	18331006	11/29/2018 12:39:54 PM
18NOV29D-20.wiff	LCS331006	18331006	11/29/2018 12:48:53 PM
18NOV29D-21.wiff	9911416	18331006	11/29/2018 12:57:56 PM
18NOV29D-22.wiff	9911417	18331006	11/29/2018 1:06:56 PM
18NOV29D-23.wiff	9911418	18331006	11/29/2018 1:15:56 PM
18NOV29D-24.wiff	9911419	18331006	11/29/2018 1:24:56 PM
18NOV29D-25.wiff	9911420BKG	18331006	11/29/2018 1:33:59 PM
18NOV29D-26.wiff	9911423	18331006	11/29/2018 1:42:59 PM
18NOV29D-27.wiff	9911424	18331006	11/29/2018 1:51:59 PM
18NOV29D-28.wiff	9911425	18331006	11/29/2018 2:01:02 PM
18NOV29D-29.wiff	CCV3_CAL4	N/A	11/29/2018 2:10:02 PM
18NOV29D-30.wiff	9911426	18331006	11/29/2018 2:19:02 PM
18NOV29D-31.wiff	9911427	18331006	11/29/2018 2:28:02 PM
18NOV29D-32.wiff	9911428	18331006	11/29/2018 2:37:02 PM
18NOV29D-33.wiff	9911429	18331006	11/29/2018 2:46:03 PM
18NOV29D-34.wiff	9911430	18331006	11/29/2018 2:55:03 PM
18NOV29D-35.wiff	9911431	18331006	11/29/2018 3:04:03 PM
18NOV29D-36.wiff	9911432	18331006	11/29/2018 3:13:03 PM
18NOV29D-37.wiff	9911433	18331006	11/29/2018 3:22:03 PM
18NOV29D-38.wiff	9911434	18331006	11/29/2018 3:31:06 PM
18NOV29D-39.wiff	9911421MS	18331006	11/29/2018 3:40:06 PM
18NOV29D-40.wiff	CCV4_ISC_CAL2	N/A	11/29/2018 3:49:06 PM
18NOV29D-41.wiff	9911422MSD	18331006	11/29/2018 3:58:06 PM
18NOV29D-42.wiff	solvent	N/A	11/29/2018 4:07:08 PM
18NOV29D-43.wiff	BLK331014	18331014	11/29/2018 4:16:09 PM
18NOV29D-44.wiff	LCS331014	18331014	11/29/2018 4:25:12 PM
18NOV29D-45.wiff	LCSDA	18331014	11/29/2018 4:34:15 PM

APPROVED
By MCD at 11:04 pm, 11/30/18

Instrument Name: LM27631

18NOV29D-46.wiff	9881899	18331014	11/29/2018 4:43:18 PM
18NOV29D-47.wiff	9881900	18331014	11/29/2018 4:52:21 PM
18NOV29D-48.wiff	9881932	18331014	11/29/2018 5:01:24 PM
18NOV29D-49.wiff	9881933BKG	18331014	11/29/2018 5:10:27 PM
18NOV29D-50.wiff	9881947	18331014	11/29/2018 5:19:30 PM
18NOV29D-51.wiff	9881948	18331014	11/29/2018 5:28:33 PM
18NOV29D-52.wiff	CCV5_CAL3	N/A	11/29/2018 5:37:36 PM
18NOV29D-53.wiff	9881899MS	18331014	11/29/2018 5:46:36 PM
18NOV29D-54.wiff	solvent	N/A	11/29/2018 5:55:39 PM
18NOV29D-55.wiff	BLK332003	18332003	11/29/2018 6:04:39 PM
18NOV29D-56.wiff	LCS332003	18332003	11/29/2018 6:13:39 PM
18NOV29D-57.wiff	9881542	18332003	11/29/2018 6:22:39 PM
18NOV29D-58.wiff	9881543	18332003	11/29/2018 6:31:39 PM
18NOV29D-59.wiff	9883382BKG	18332003	11/29/2018 6:40:42 PM
18NOV29D-60.wiff	9883385	18332003	11/29/2018 6:49:45 PM
18NOV29D-61.wiff	9883396	18332003	11/29/2018 6:58:45 PM
18NOV29D-62.wiff	9883397	18332003	11/29/2018 7:07:45 PM
18NOV29D-63.wiff	9885076	18332003	11/29/2018 7:16:48 PM
18NOV29D-64.wiff	CCV6_CAL4	N/A	11/29/2018 7:25:48 PM
18NOV29D-65.wiff	9885077	18332003	11/29/2018 7:34:51 PM
18NOV29D-66.wiff	9885091	18332003	11/29/2018 7:43:54 PM
18NOV29D-67.wiff	9885133	18332003	11/29/2018 7:52:57 PM
18NOV29D-68.wiff	9885134	18332003	11/29/2018 8:02:00 PM
18NOV29D-69.wiff	9885151	18332003	11/29/2018 8:11:03 PM
18NOV29D-70.wiff	9883383MS	18332003	11/29/2018 8:20:03 PM
18NOV29D-71.wiff	9883384MSD	18332003	11/29/2018 8:29:03 PM
18NOV29D-72.wiff	CCV7_ISC_CAL2	N/A	11/29/2018 8:38:03 PM
18NOV29D-73.wiff	Instrument Blank	N/A	11/29/2018 8:47:06 PM
18NOV29D-74.wiff	9911358	18330003	11/29/2018 8:56:09 PM
18NOV29D-75.wiff	9911366	18330003	11/29/2018 9:05:09 PM
18NOV29D-76.wiff	9911367	18330003	11/29/2018 9:14:09 PM
18NOV29D-77.wiff	9909757	18330013	11/29/2018 9:23:09 PM
18NOV29D-78.wiff	9909762	18330013	11/29/2018 9:32:09 PM
18NOV29D-79.wiff	CCV8_CAL3	N/A	11/29/2018 9:41:09 PM
18NOV29D-80.wiff	BLK332013	18332013	11/29/2018 9:50:12 PM
18NOV29D-81.wiff	LCS332013	18332013	11/29/2018 9:59:15 PM
18NOV29D-82.wiff	9909732	18332013	11/29/2018 10:08:18 PM
18NOV29D-83.wiff	9909733	18332013	11/29/2018 10:17:21 PM
18NOV29D-84.wiff	9909734BKG	18332013	11/29/2018 10:26:24 PM
18NOV29D-85.wiff	9909735	18332013	11/29/2018 10:35:27 PM
18NOV29D-86.wiff	9909736	18332013	11/29/2018 10:44:30 PM
18NOV29D-87.wiff	9909737	18332013	11/29/2018 10:53:33 PM
18NOV29D-88.wiff	9909738	18332013	11/29/2018 11:02:33 PM
18NOV29D-89.wiff	9909739	18332013	11/29/2018 11:11:36 PM
18NOV29D-90.wiff	CCV9_CAL4	N/A	11/29/2018 11:20:36 PM
18NOV29D-91.wiff	9909740	18332013	11/29/2018 11:29:36 PM
18NOV29D-92.wiff	9909741	18332013	11/29/2018 11:38:36 PM
18NOV29D-93.wiff	9909742	18332013	11/29/2018 11:47:36 PM
18NOV29D-94.wiff	9909743MS	18332013	11/29/2018 11:56:36 PM
18NOV29D-95.wiff	9909744MSD	18332013	11/30/2018 12:05:36 AM

20 mM Ammonium Acetate in H2O: 2615711261833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 2615711261833B

APPROVED
By MCD at 11:04 pm, 11/30/18

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LC-MS/MS
Sample Run Log

Printed: 12/6/2018 5:35:00 PM
Template: Sample Run Log-17JUL05.docx

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
18DEC03DCAL-09.wiff	MDL	N/A	12/3/2018 5:25:59 PM
18DEC03DCAL-10.wiff	CAL1	N/A	12/3/2018 5:34:59 PM
18DEC03DCAL-11.wiff	CAL2	N/A	12/3/2018 5:44:08 PM
18DEC03DCAL-12.wiff	CAL3	N/A	12/3/2018 5:53:11 PM
18DEC03DCAL-13.wiff	CAL4	N/A	12/3/2018 6:02:14 PM
18DEC03DCAL-14.wiff	CAL5	N/A	12/3/2018 6:11:14 PM
18DEC03DCAL-15.wiff	CAL6	N/A	12/3/2018 6:20:14 PM
18DEC03DCAL-16.wiff	CAL7	N/A	12/3/2018 6:29:14 PM
18DEC03DCAL-17.wiff	Instrument Blank	N/A	12/3/2018 6:38:14 PM
18DEC03DCAL-18.wiff	ICV	N/A	12/3/2018 6:47:17 PM
18DEC03DCAL-19.wiff	L+B CAL3	N/A	12/3/2018 6:56:20 PM
18DEC03DCAL-20.wiff	CCV1_CAL3	N/A	12/3/2018 7:05:23 PM
18DEC05D-01.wiff	solvent	N/A	12/5/2018 11:32:11 AM
18DEC05D-02.wiff	solvent	N/A	12/5/2018 11:41:14 AM
18DEC05D-03.wiff	solvent	N/A	12/5/2018 11:50:17 AM
18DEC05D-04.wiff	solvent	N/A	12/5/2018 11:59:20 AM
18DEC05D-05.wiff	CCV1_ISC_CAL2	N/A	12/5/2018 12:08:23 PM
18DEC05D-06.wiff	Instrument Blank	N/A	12/5/2018 12:17:26 PM
18DEC05D-07.wiff	BLK338011	18338011	12/5/2018 12:26:29 PM
18DEC05D-08.wiff	LCS338011	18338011	12/5/2018 12:35:32 PM
18DEC05D-09.wiff	LCSDA	18338011	12/5/2018 12:44:32 PM
18DEC05D-10.wiff	9911520RE	18338011	12/5/2018 12:53:35 PM
18DEC05D-11.wiff	9911524RE	18338011	12/5/2018 1:02:38 PM
18DEC05D-12.wiff	9911525RE	18338011	12/5/2018 1:11:38 PM
18DEC05D-13.wiff	9911526RE	18338011	12/5/2018 1:20:38 PM
18DEC05D-14.wiff	9911527RE	18338011	12/5/2018 1:29:38 PM
18DEC05D-15.wiff	CCV2_CAL3	N/A	12/5/2018 1:38:38 PM
18DEC05D-16.wiff	9911528RE	18338011	12/5/2018 1:47:41 PM
18DEC05D-17.wiff	9911529RE	18338011	12/5/2018 1:56:44 PM
18DEC05D-18.wiff	9911533RE	18338011	12/5/2018 2:05:44 PM
18DEC05D-19.wiff	9911535RE	18338011	12/5/2018 2:14:47 PM
18DEC05D-20.wiff	9911536RE	18338011	12/5/2018 2:23:50 PM
18DEC05D-21.wiff	9911537RE	18338011	12/5/2018 2:32:50 PM
18DEC05D-22.wiff	9911538RE	18338011	12/5/2018 2:41:50 PM
18DEC05D-23.wiff	9911540RE	18338011	12/5/2018 2:50:53 PM
18DEC05D-24.wiff	9911541RE	18338011	12/5/2018 2:59:53 PM
18DEC05D-25.wiff	CCV3_CAL4	N/A	12/5/2018 3:08:53 PM
18DEC05D-26.wiff	solvent	N/A	12/5/2018 3:56:56 PM
18DEC05D-27.wiff	solvent	N/A	12/5/2018 4:05:59 PM
18DEC05D-28.wiff	BLK339003	18339003	12/5/2018 4:14:59 PM
18DEC05D-29.wiff	LCS339003	18339003	12/5/2018 4:23:59 PM
18DEC05D-30.wiff	LCSDA	18339003	12/5/2018 4:33:02 PM
18DEC05D-31.wiff	9911387RE	18339003	12/5/2018 4:42:05 PM
18DEC05D-32.wiff	9922711BKG	18339003	12/5/2018 4:51:08 PM
18DEC05D-33.wiff	9922711MS	18339003	12/5/2018 5:00:11 PM
18DEC05D-34.wiff	CCV4_ISC_CAL2	N/A	12/5/2018 5:09:11 PM
18DEC05D-35.wiff	BLK338017	18338017	12/5/2018 5:18:14 PM
18DEC05D-36.wiff	LCS338017	18338017	12/5/2018 5:27:14 PM
18DEC05D-37.wiff	LCSDA	18338017	12/5/2018 5:36:17 PM
18DEC05D-38.wiff	9883396RE	18338017	12/5/2018 5:45:20 PM
18DEC05D-39.wiff	9883397RE	18338017	12/5/2018 5:54:23 PM
18DEC05D-40.wiff	9918958BKG	18338017	12/5/2018 6:03:26 PM
18DEC05D-41.wiff	9918959	18338017	12/5/2018 6:12:29 PM
18DEC05D-42.wiff	9918960	18338017	12/5/2018 6:21:32 PM
18DEC05D-43.wiff	9918961	18338017	12/5/2018 6:30:32 PM
18DEC05D-44.wiff	9918962	18338017	12/5/2018 6:39:35 PM
18DEC05D-45.wiff	CCV5_CAL3	N/A	12/5/2018 6:48:38 PM

APPROVED
By MCD at 5:35 pm, 12/6/18

Instrument Name: LM27631

18DEC05D-46.wiff	9918963	18338017	12/5/2018 6:57:41 PM
18DEC05D-47.wiff	9918964	18338017	12/5/2018 7:06:41 PM
18DEC05D-48.wiff	9918965	18338017	12/5/2018 7:15:44 PM
18DEC05D-49.wiff	9918966	18338017	12/5/2018 7:24:44 PM
18DEC05D-50.wiff	9918967	18338017	12/5/2018 7:33:44 PM
18DEC05D-51.wiff	9918968	18338017	12/5/2018 7:42:47 PM
18DEC05D-52.wiff	9918969	18338017	12/5/2018 7:51:50 PM
18DEC05D-53.wiff	9920476	18338017	12/5/2018 8:00:53 PM
18DEC05D-54.wiff	9918958MS	18338017	12/5/2018 8:09:56 PM
18DEC05D-55.wiff	CCV6_CAL4	N/A	12/5/2018 8:18:59 PM
18DEC05D-56.wiff	BLK338020	18338020	12/5/2018 8:27:59 PM
18DEC05D-57.wiff	LCS338020	18338020	12/5/2018 8:37:02 PM
18DEC05D-58.wiff	9916992	18338020	12/5/2018 8:46:02 PM
18DEC05D-59.wiff	9916993	18338020	12/5/2018 8:55:02 PM
18DEC05D-60.wiff	9916994	18338020	12/5/2018 9:04:03 PM
18DEC05D-61.wiff	9916995	18338020	12/5/2018 9:13:05 PM
18DEC05D-62.wiff	9916996	18338020	12/5/2018 9:22:08 PM
18DEC05D-63.wiff	9916997	18338020	12/5/2018 9:31:11 PM
18DEC05D-64.wiff	9922157	18338020	12/5/2018 9:40:15 PM
18DEC05D-65.wiff	9922158	18338020	12/5/2018 9:49:14 PM
18DEC05D-66.wiff	CCV7_ISC_CAL2	N/A	12/5/2018 9:58:15 PM
18DEC05D-67.wiff	Instrument Blank	N/A	12/5/2018 10:07:14 PM
18DEC05D-68.wiff	9922159	18338020	12/5/2018 10:16:14 PM
18DEC05D-69.wiff	9922160BKG	18338020	12/5/2018 10:25:15 PM
18DEC05D-70.wiff	9922163	18338020	12/5/2018 10:34:17 PM
18DEC05D-71.wiff	9922161MS	18338020	12/5/2018 10:43:20 PM
18DEC05D-72.wiff	9922162MSD	18338020	12/5/2018 10:52:20 PM
18DEC05D-73.wiff	9918950DL	18337003	12/5/2018 11:01:24 PM
18DEC05D-74.wiff	CCV8_CAL3	N/A	12/5/2018 11:10:27 PM
18DEC05D-75.wiff	solvent	N/A	12/5/2018 11:19:27 PM
18DEC05D-76.wiff	solvent	N/A	12/5/2018 11:28:29 PM

20 mM Ammonium Acetate in H2O: 1226212031833A+1226212041833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 1226212031833B

APPROVED
By MCD at 5:35 pm, 12/6/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
18NOV07DCAL-10.wiff	11/7/2018 9:39:56 AM	CALMOD11833G	CAL1
18NOV07DCAL-11.wiff	11/7/2018 9:48:56 AM	CALMOD21833F	CAL2
18NOV07DCAL-12.wiff	11/7/2018 9:57:56 AM	CALMOD31833F	CAL3
18NOV07DCAL-13.wiff	11/7/2018 10:06:59 AM	CALMOD41833F	CAL4
18NOV07DCAL-14.wiff	11/7/2018 10:15:59 AM	CALMOD51833F	CAL5
18NOV07DCAL-15.wiff	11/7/2018 10:24:59 AM	CALMOD61833E	CAL6
18NOV07DCAL-16.wiff	11/7/2018 10:33:59 AM	CALMOD71833E	CAL7

CAL3 Injection Standard Areas

Sample Name	Injection Std Name	Injection Std Area
CAL3	13C3-PFBA	730410.6
CAL3	13C2-PFOA	524423.6
CAL3	13C4-PFOS	274061.7
CAL3	13C2-PFDA	311442.1

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Response Factor Table

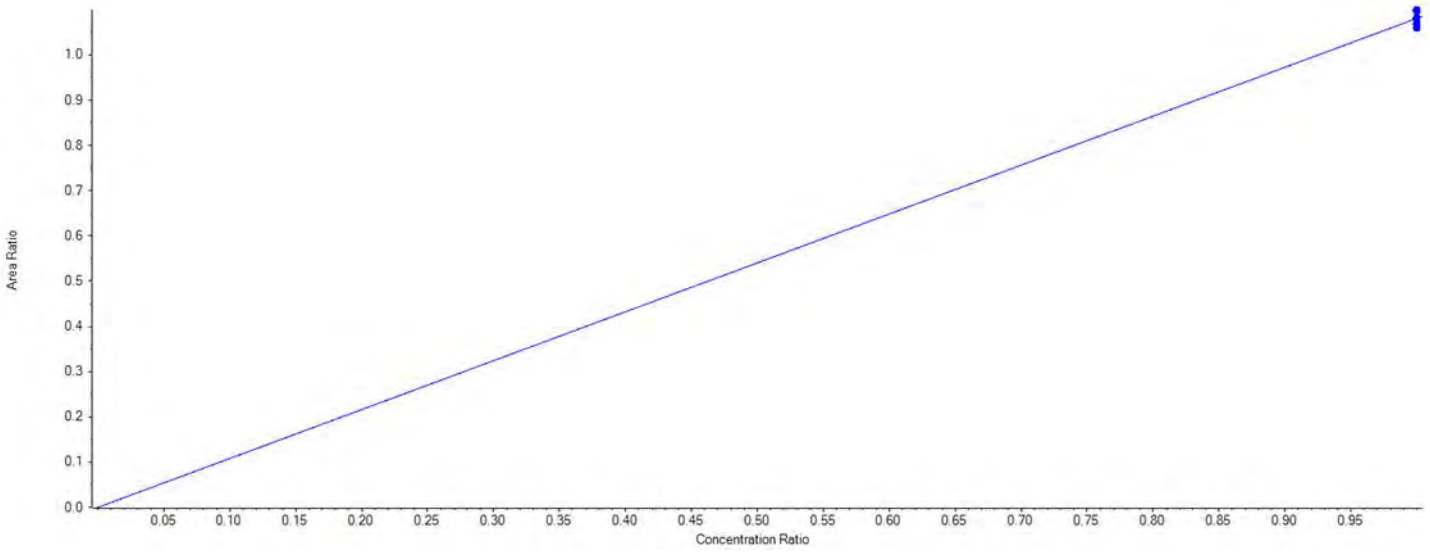
Analyte Name	CAL 1	CAL 2	CAL 3	CAL 4	CAL 5	CAL 6	CAL 7	%RSD	Limit	OOS	r^2	OOS
PFBA	1.018	0.931	0.905	0.934	0.936	0.881	0.816	6	20		0.997	
PFPeA	0.983	0.897	0.863	0.883	0.914	0.858	0.814	6	20		0.998	
PFBS	1.158	0.984	0.907	0.979	0.951	0.960	0.893	8	20		0.999	
4:2-FTS	1.777	1.830	1.827	1.860	1.869	1.731	1.702	3	20		0.999	
PFHxA	1.369	1.233	1.246	1.275	1.253	1.109	N/A	6	20		0.996	
PFPeS	0.454	0.467	0.444	0.498	0.474	0.471	0.470	3	20		1.000	
PFHxS	0.955	0.955	0.893	0.948	0.948	0.935	0.929	2	20		1.000	
PFHpA	1.634	1.603	1.590	1.563	1.579	1.432	N/A	4	20		0.998	
6:2-FTS	1.464	2.292	2.080	2.004	2.131	1.864	1.866	13	20		0.998	
PFHpS	0.984	0.904	0.893	0.946	0.924	0.891	0.903	3	20		1.000	
PFOA	0.969	0.972	0.946	0.995	0.956	0.913	0.852	5	20		0.998	
PFOS	0.998	0.997	0.938	0.958	0.930	0.927	0.914	3	20		1.000	
PFNA	1.571	1.383	1.459	1.439	1.491	1.379	1.276	6	20		0.997	
PFNS	0.553	0.609	0.611	0.650	0.603	0.625	0.588	5	20		0.999	
PFDA	0.980	0.945	0.957	0.980	1.004	0.925	0.875	4	20		0.998	
8:2-FTS	2.603	2.513	2.112	2.184	2.222	2.072	N/A	9	20		0.999	
PFOSA	0.896	0.979	0.964	0.988	0.831	0.967	0.917	6	20		0.998	
NMeFOSAA	0.867	1.180	0.991	1.053	1.044	0.948	0.962	9	20		0.999	
PFDS	0.528	0.545	0.492	0.534	0.504	0.495	0.500	4	20		1.000	
PFUnDA	1.982	1.865	1.891	1.818	1.849	1.776	1.696	5	20		0.999	
NEtFOSAA	1.063	1.102	1.103	1.149	1.294	1.132	1.156	6	20		0.998	
PFDoDA	1.032	1.006	0.944	0.916	0.972	0.902	N/A	5	20		0.999	
10:2-FTS	1.769	1.760	1.607	1.411	1.601	1.578	1.513	7	20		0.999	
NMePFOSAE	1.362	1.238	1.132	1.225	1.231	1.175	1.053	7	20		0.996	
NMePFOSA	0.899	1.015	0.938	0.855	0.985	0.914	0.866	6	20		0.998	
PFDoS	0.247	0.249	0.266	0.257	0.245	0.243	0.249	3	20		1.000	
NEtPFOSAE	1.848	1.807	1.624	1.689	1.741	1.603	1.488	7	20		0.997	
NEtPFOSA	1.082	0.962	0.983	1.069	1.170	1.145	1.133	7	20		1.000	
PFTrDA	0.992	0.824	0.844	0.816	0.844	0.766	N/A	8	20		0.998	
PFTeDA	0.989	0.821	0.895	0.892	0.889	0.857	0.837	6	20		0.999	
PFHxDA	0.475	0.422	0.418	0.420	0.425	0.395	0.400	6	20		0.999	
PFODA	0.385	0.357	0.356	0.356	0.370	0.340	0.348	4	20		0.999	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFBA

y = 1.08045 x (std. dev. = 0.01457) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFBA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	794718.9	750779.984	True	5.00	1.059	3.27	1.000	5.000	4.899	-2	30	
CAL2	782732.8	723209.911	True	5.00	1.082	3.27	1.000	5.000	5.009	0	30	
CAL3	787180.2	730410.641	True	5.00	1.078	3.27	1.000	5.000	4.987	0	30	
CAL4	771359.1	721806.781	True	5.00	1.069	3.27	1.000	5.000	4.945	-1	30	
CAL5	728925.1	664213.611	True	5.00	1.097	3.27	1.000	5.000	5.079	2	30	
CAL6	647849.6	600246.701	True	5.00	1.079	3.26	1.000	5.000	4.995	0	30	
CAL7	609686.1	554647.432	True	5.00	1.099	3.26	1.000	5.000	5.087	2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

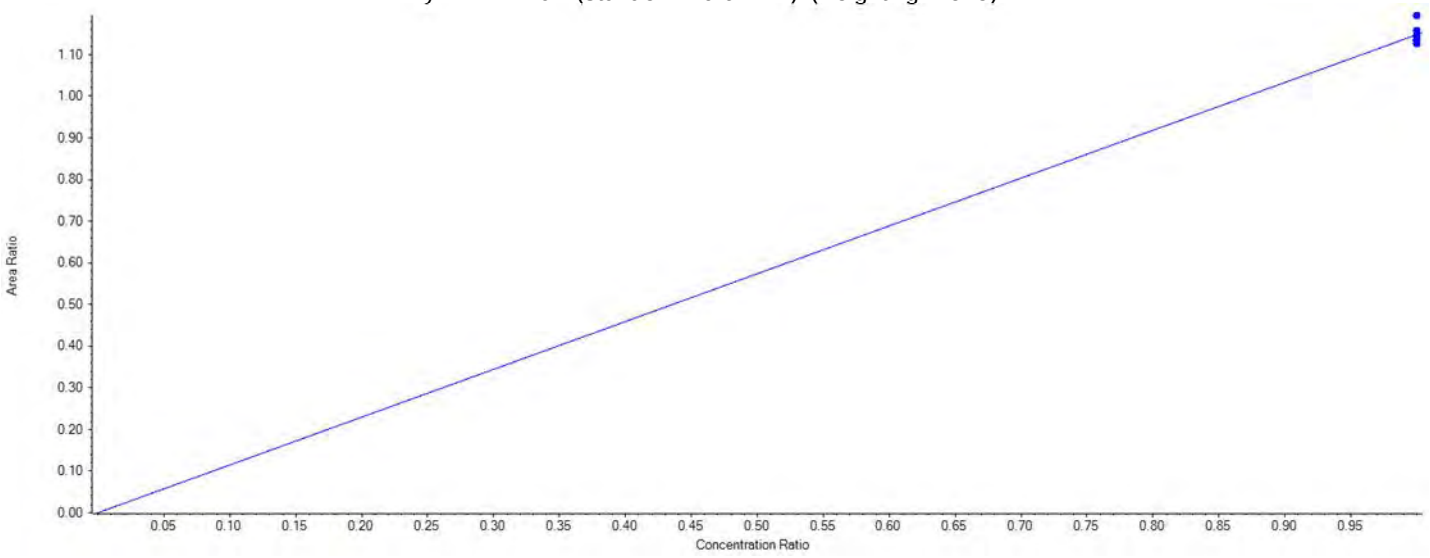
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFPeA

y = 1.14776 x (std. dev. = 0.02271) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFPeA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	844850.2	750779.984	True	5.00	1.125	3.77	1.150	5.000	4.902	-2	30	
CAL2	863262.8	723209.911	True	5.00	1.194	3.77	1.150	5.000	5.200	4	30	
CAL3	829978.5	730410.641	True	5.00	1.136	3.77	1.150	5.000	4.950	-1	30	
CAL4	824842.8	721806.781	True	5.00	1.143	3.77	1.150	5.000	4.978	0	30	
CAL5	768958.1	664213.611	True	5.00	1.158	3.77	1.150	5.000	5.043	1	30	
CAL6	687796.7	600246.701	True	5.00	1.146	3.76	1.150	5.000	4.992	0	30	
CAL7	628265.5	554647.432	True	5.00	1.133	3.76	1.150	5.000	4.935	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

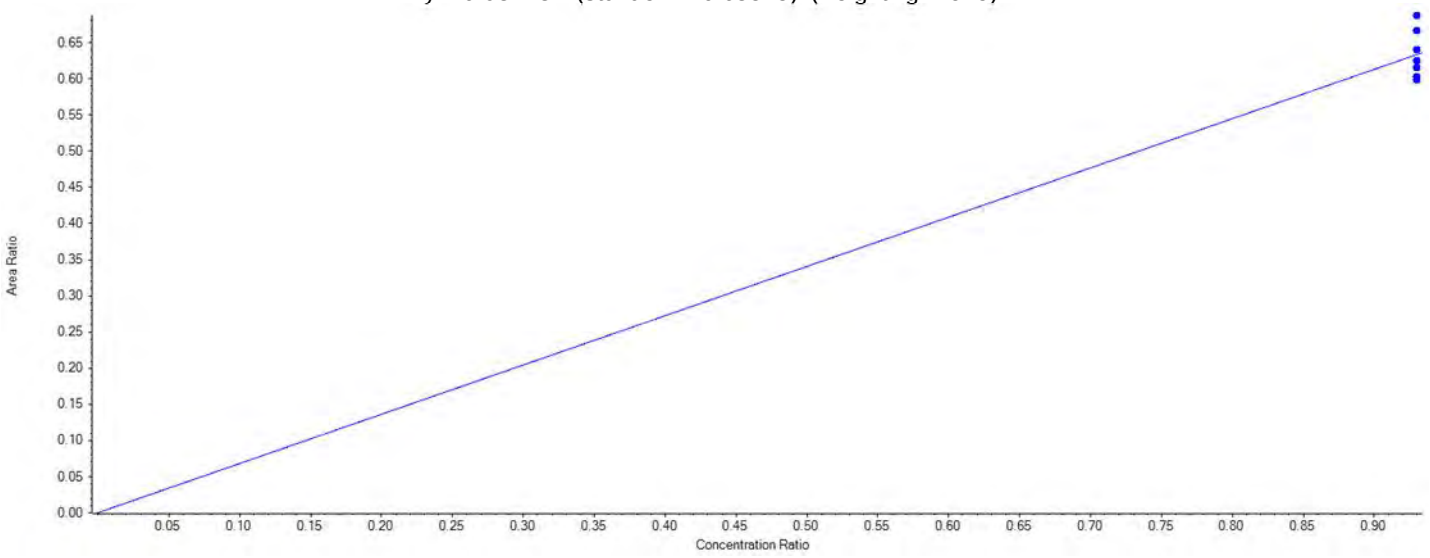
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFBS

y = 0.68128 x (std. dev. = 0.03575) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C3-PFBS Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	449266.3	750779.984	True	5.00	0.598	3.82	1.170	4.650	4.392	-6	30	
CAL2	444721.3	723209.911	True	5.00	0.615	3.82	1.170	4.650	4.513	-3	30	
CAL3	456815.2	730410.641	True	5.00	0.625	3.82	1.170	4.650	4.590	-1	30	
CAL4	434938.9	721806.781	True	5.00	0.603	3.81	1.170	4.650	4.422	-5	30	
CAL5	442479.7	664213.611	True	5.00	0.666	3.82	1.170	4.650	4.889	5	30	
CAL6	384220.8	600246.701	True	5.00	0.640	3.81	1.170	4.650	4.698	1	30	
CAL7	381345.5	554647.432	True	5.00	0.688	3.81	1.170	4.650	5.046	9	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

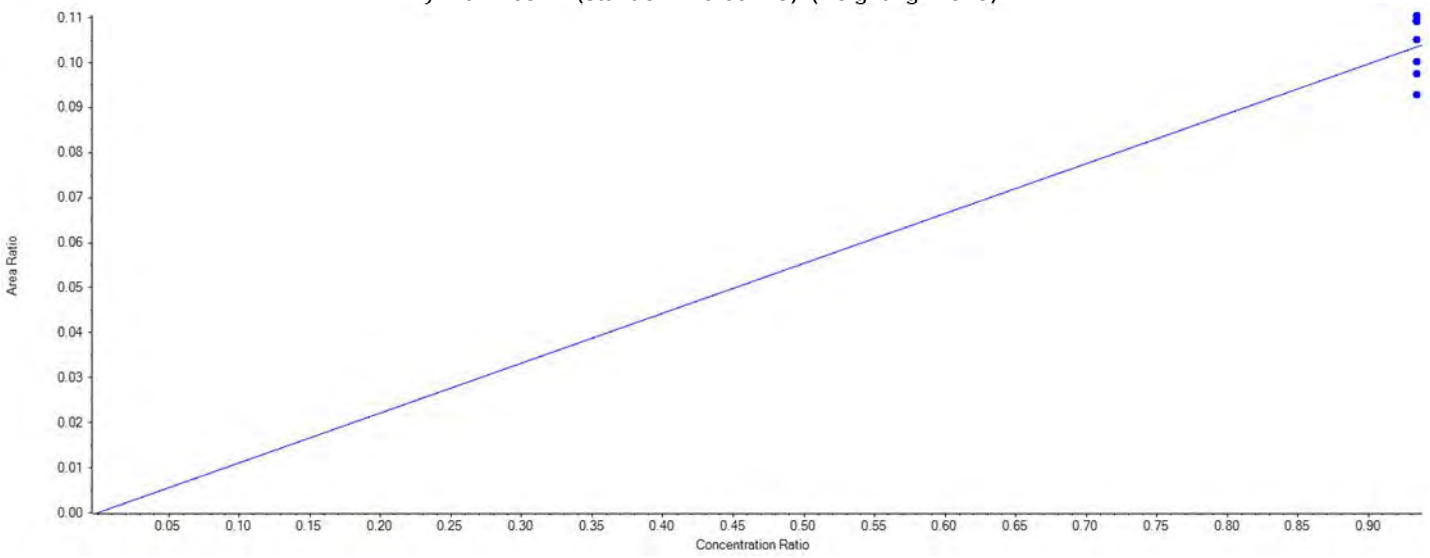
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-4:2-FTS

y = 0.11081 x (std. dev. = 0.00728) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-4:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	58330.9	534171.859	True	5.00	0.109	4.13	0.840	4.670	4.927	6	30	
CAL2	54234.1	516360.932	True	5.00	0.105	4.13	0.840	4.670	4.739	1	30	
CAL3	48706.0	524423.602	True	5.00	0.093	4.13	0.840	4.670	4.191	-10	30	
CAL4	51520.6	528557.819	True	5.00	0.097	4.13	0.840	4.670	4.398	-6	30	
CAL5	48869.9	488019.600	True	5.00	0.100	4.13	0.840	4.670	4.519	-3	30	
CAL6	50041.3	457854.860	True	5.00	0.109	4.12	0.840	4.670	4.932	6	30	
CAL7	46334.2	419465.882	True	5.00	0.110	4.13	0.840	4.670	4.984	7	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

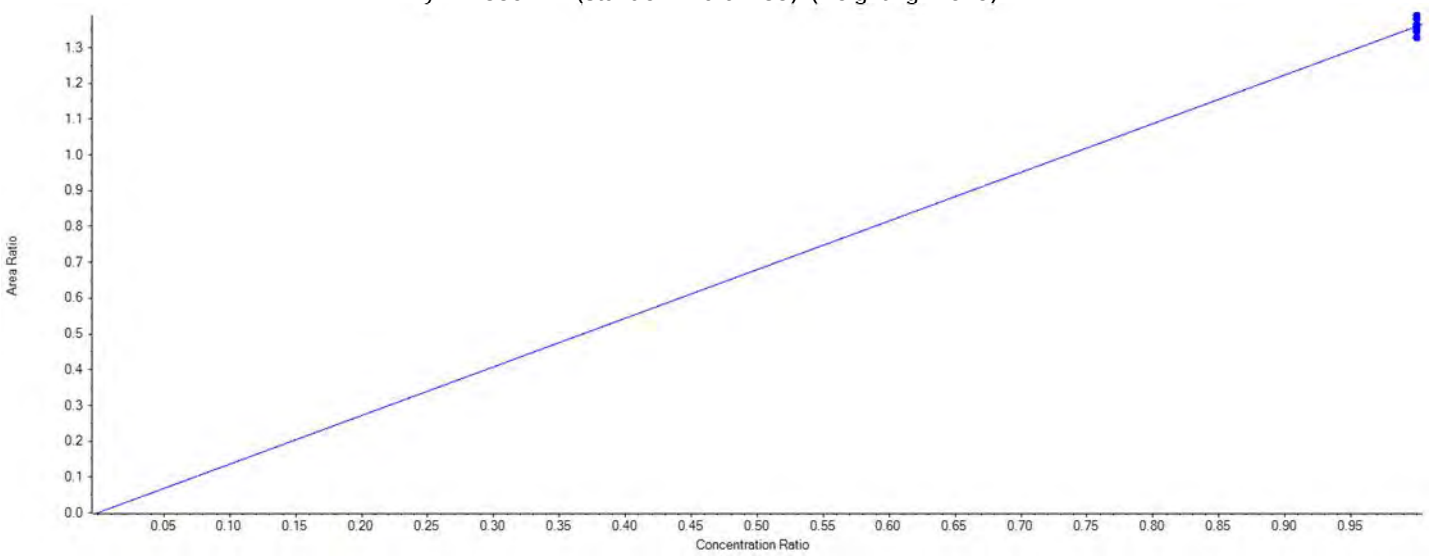
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFHxA

y = 1.35927 x (std. dev. = 0.02135) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFHxA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	725432.0	534171.859	True	5.00	1.358	4.17	0.850	5.000	4.996	0	30	
CAL2	717434.9	516360.932	True	5.00	1.389	4.17	0.850	5.000	5.111	2	30	
CAL3	705369.0	524423.602	True	5.00	1.345	4.17	0.850	5.000	4.948	-1	30	
CAL4	713446.3	528557.819	True	5.00	1.350	4.16	0.850	5.000	4.965	-1	30	
CAL5	674375.4	488019.600	True	5.00	1.382	4.17	0.850	5.000	5.083	2	30	
CAL6	607820.1	457854.860	True	5.00	1.328	4.16	0.850	5.000	4.883	-2	30	
CAL7	571807.5	419465.882	True	5.00	1.363	4.16	0.850	5.000	5.014	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

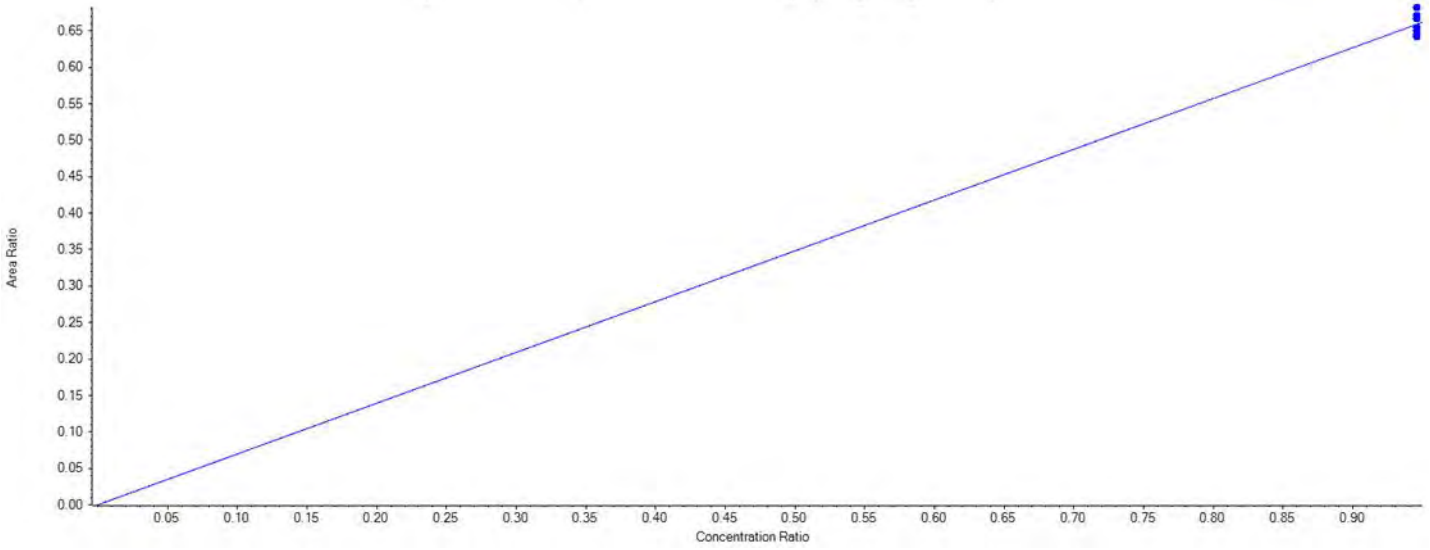
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFHxS

y = 0.69649 x (std. dev. = 0.01583) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C3-PFHxS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	358771.3	534171.859	True	5.00	0.672	4.56	0.930	4.730	4.822	2	30	
CAL2	335732.1	516360.932	True	5.00	0.650	4.56	0.920	4.730	4.668	-1	30	
CAL3	343139.5	524423.602	True	5.00	0.654	4.56	0.930	4.730	4.697	-1	30	
CAL4	339090.5	528557.819	True	5.00	0.642	4.55	0.930	4.730	4.606	-3	30	
CAL5	332808.5	488019.600	True	5.00	0.682	4.55	0.920	4.730	4.896	4	30	
CAL6	295466.2	457854.860	True	5.00	0.645	4.55	0.920	4.730	4.633	-2	30	
CAL7	279859.6	419465.882	True	5.00	0.667	4.55	0.930	4.730	4.790	1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

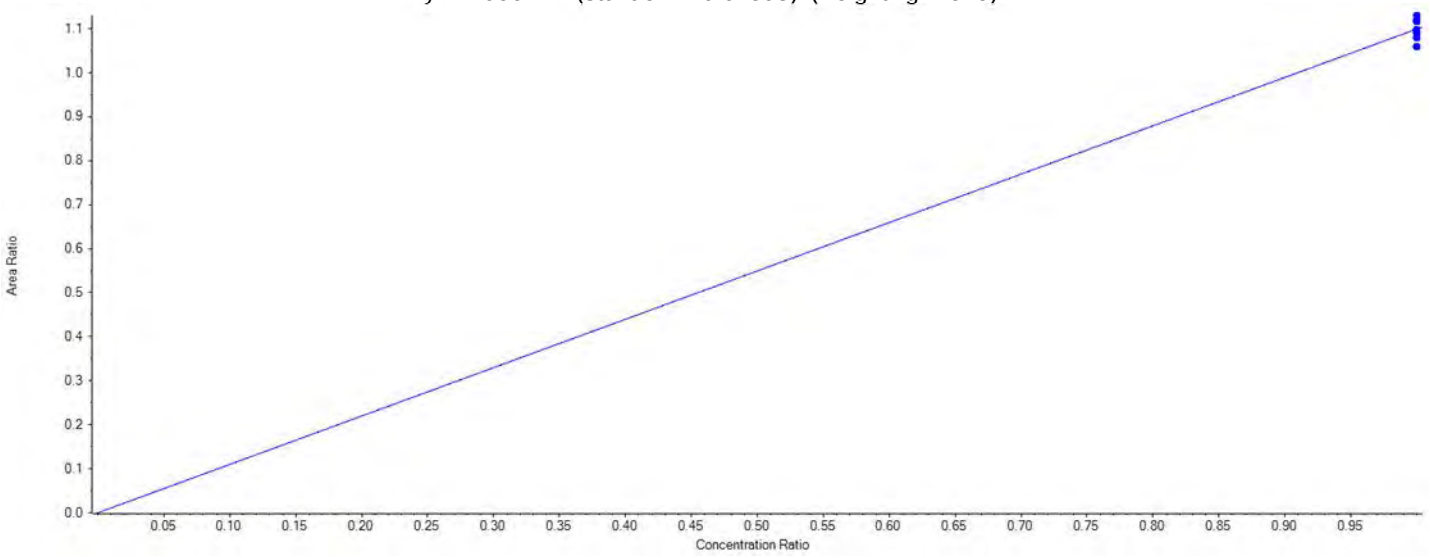
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFHpA

y = 1.09911 x (std. dev. = 0.02508) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFHpA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	586580.3	534171.859	True	5.00	1.098	4.56	0.930	5.000	4.995	0	30	
CAL2	583342.8	516360.932	True	5.00	1.130	4.55	0.920	5.000	5.139	3	30	
CAL3	566495.6	524423.602	True	5.00	1.080	4.56	0.930	5.000	4.914	-2	30	
CAL4	592497.9	528557.819	True	5.00	1.121	4.55	0.920	5.000	5.099	2	30	
CAL5	544681.1	488019.600	True	5.00	1.116	4.55	0.920	5.000	5.077	2	30	
CAL6	484763.2	457854.860	True	5.00	1.059	4.55	0.920	5.000	4.816	-4	30	
CAL7	457160.4	419465.882	True	5.00	1.090	4.55	0.920	5.000	4.958	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

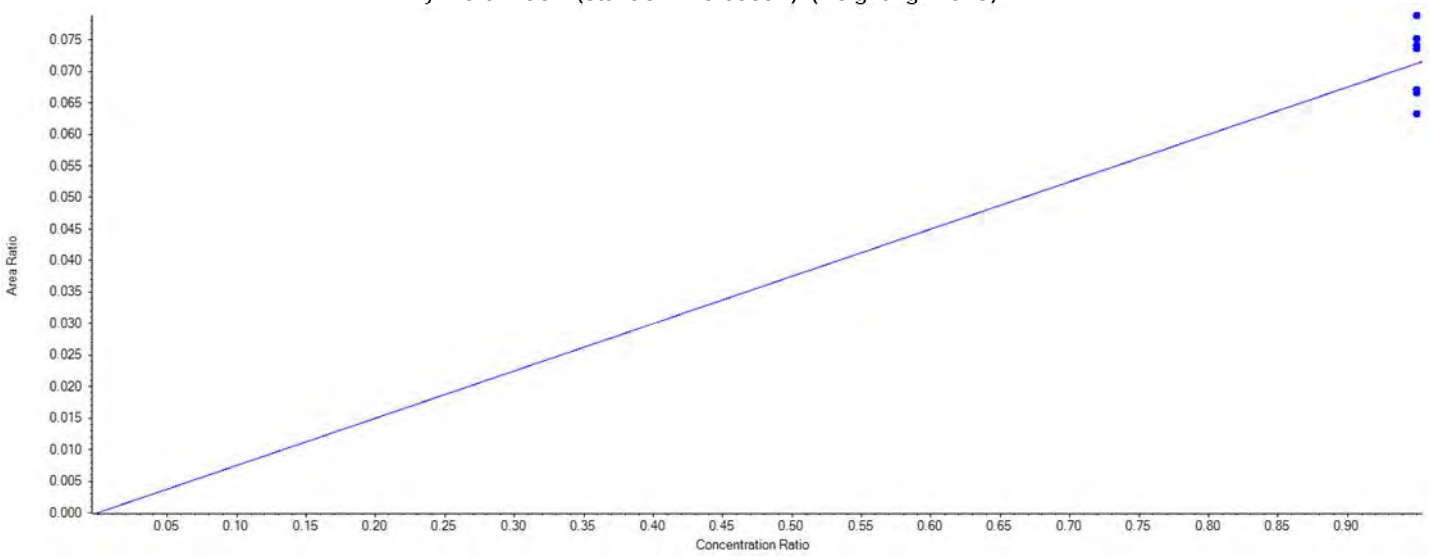
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-6:2-FTS

y = 0.07498 x (std. dev. = 0.00592) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-6:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	42112.8	534171.859	True	5.00	0.079	4.91	1.000	4.750	5.257	11	30	
CAL2	38849.6	516360.932	True	5.00	0.075	4.91	1.000	4.750	5.017	6	30	
CAL3	38605.5	524423.602	True	5.00	0.074	4.91	1.000	4.750	4.909	3	30	
CAL4	39121.7	528557.819	True	5.00	0.074	4.91	1.000	4.750	4.936	4	30	
CAL5	32735.6	488019.600	True	5.00	0.067	4.91	1.000	4.750	4.473	-6	30	
CAL6	30466.8	457854.860	True	5.00	0.067	4.90	1.000	4.750	4.437	-7	30	
CAL7	26549.1	419465.882	True	5.00	0.063	4.91	1.000	4.750	4.221	-11	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

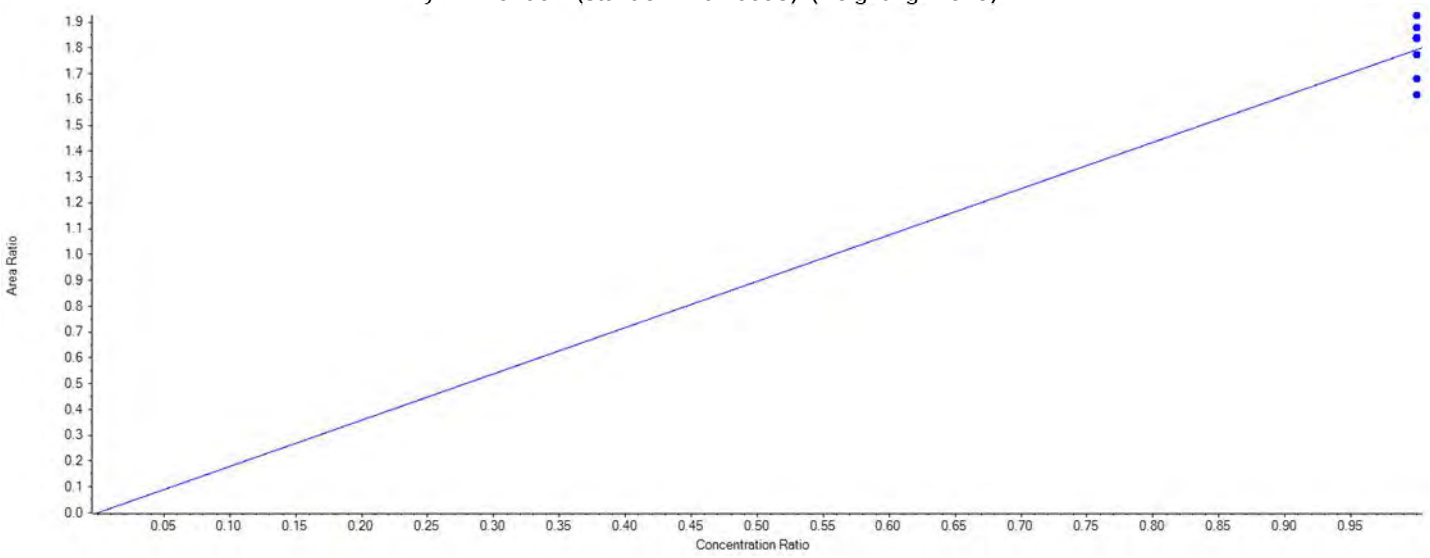
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOA

y = 1.79299 x (std. dev. = 0.10993) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1028414.9	534171.859	True	5.00	1.925	4.93	1.000	5.000	5.369	7	30	
CAL2	970523.2	516360.932	True	5.00	1.880	4.92	1.000	5.000	5.241	5	30	
CAL3	964414.6	524423.602	True	5.00	1.839	4.93	1.000	5.000	5.128	3	30	
CAL4	937287.5	528557.819	True	5.00	1.773	4.92	1.000	5.000	4.945	-1	30	
CAL5	895692.2	488019.600	True	5.00	1.835	4.92	1.000	5.000	5.118	2	30	
CAL6	769164.4	457854.860	True	5.00	1.680	4.92	1.000	5.000	4.685	-6	30	
CAL7	678914.6	419465.882	True	5.00	1.619	4.92	1.000	5.000	4.513	-10	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

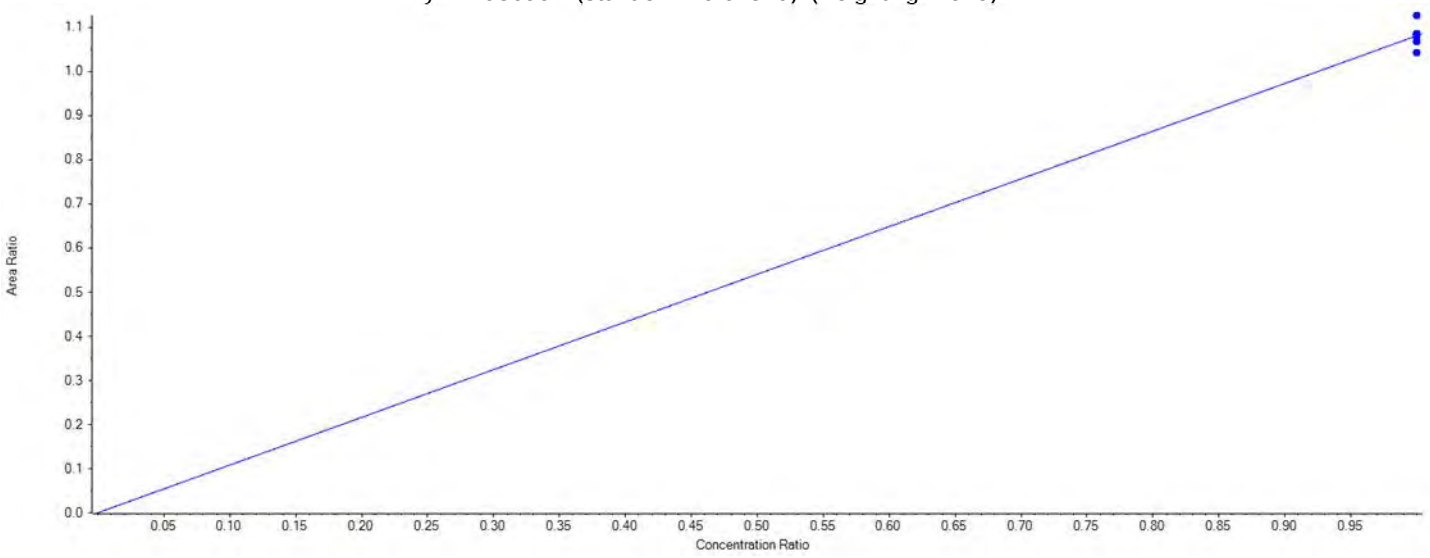
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOS

y = 1.08099 x (std. dev. = 0.02540) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOS Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	307224.3	272674.740	True	4.78	1.127	5.25	1.000	4.780	4.982	4	30	
CAL2	286174.8	263756.990	True	4.78	1.085	5.25	1.000	4.780	4.798	0	30	
CAL3	297259.7	274061.672	True	4.78	1.085	5.25	1.000	4.780	4.796	0	30	
CAL4	291941.6	270733.913	True	4.78	1.078	5.25	1.000	4.780	4.768	0	30	
CAL5	297995.6	275029.173	True	4.78	1.084	5.25	1.000	4.780	4.791	0	30	
CAL6	268369.0	251499.907	True	4.78	1.067	5.24	1.000	4.780	4.718	-1	30	
CAL7	264295.9	253720.801	True	4.78	1.042	5.24	1.000	4.780	4.606	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

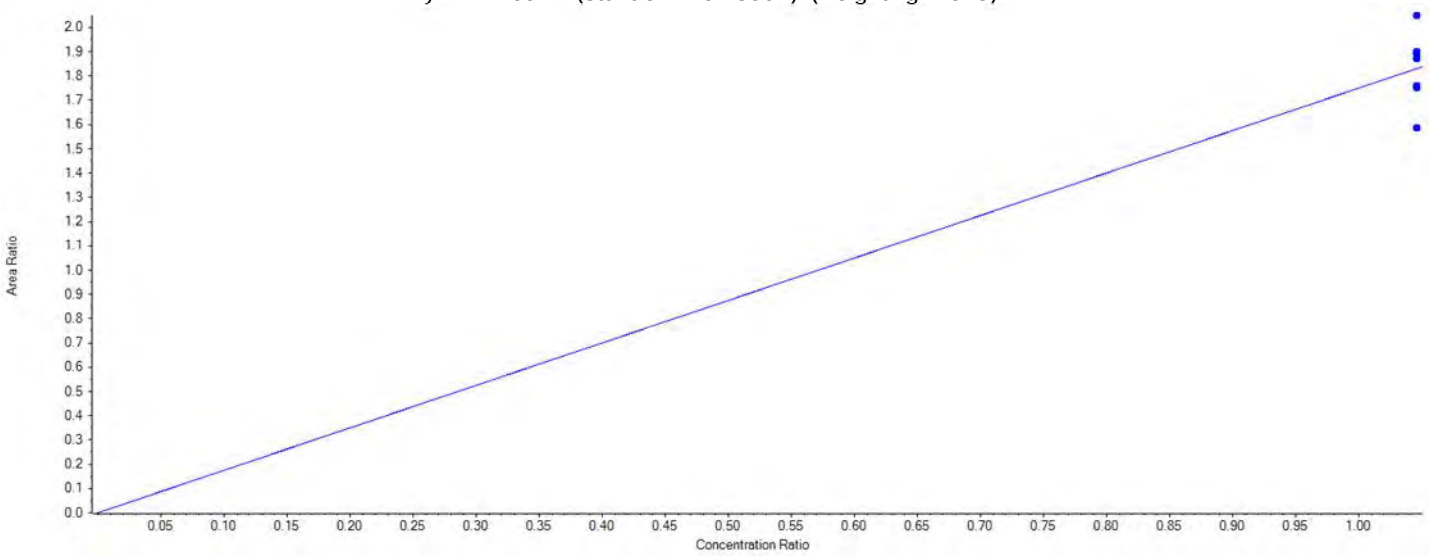
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C9-PFNA

y = 1.74992 x (std. dev. = 0.13964) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C9-PFNA Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	518118.7	272674.740	True	4.78	1.900	5.27	1.000	5.000	5.190	4	30	
CAL2	540435.4	263756.990	True	4.78	2.049	5.27	1.000	5.000	5.597	12	30	
CAL3	513116.0	274061.672	True	4.78	1.872	5.27	1.000	5.000	5.114	2	30	
CAL4	512147.4	270733.913	True	4.78	1.892	5.26	1.000	5.000	5.167	3	30	
CAL5	484419.3	275029.173	True	4.78	1.761	5.27	1.000	5.000	4.811	-4	30	
CAL6	440319.0	251499.907	True	4.78	1.751	5.26	1.000	5.000	4.782	-4	30	
CAL7	402916.7	253720.801	True	4.78	1.588	5.26	1.000	5.000	4.338	-13	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

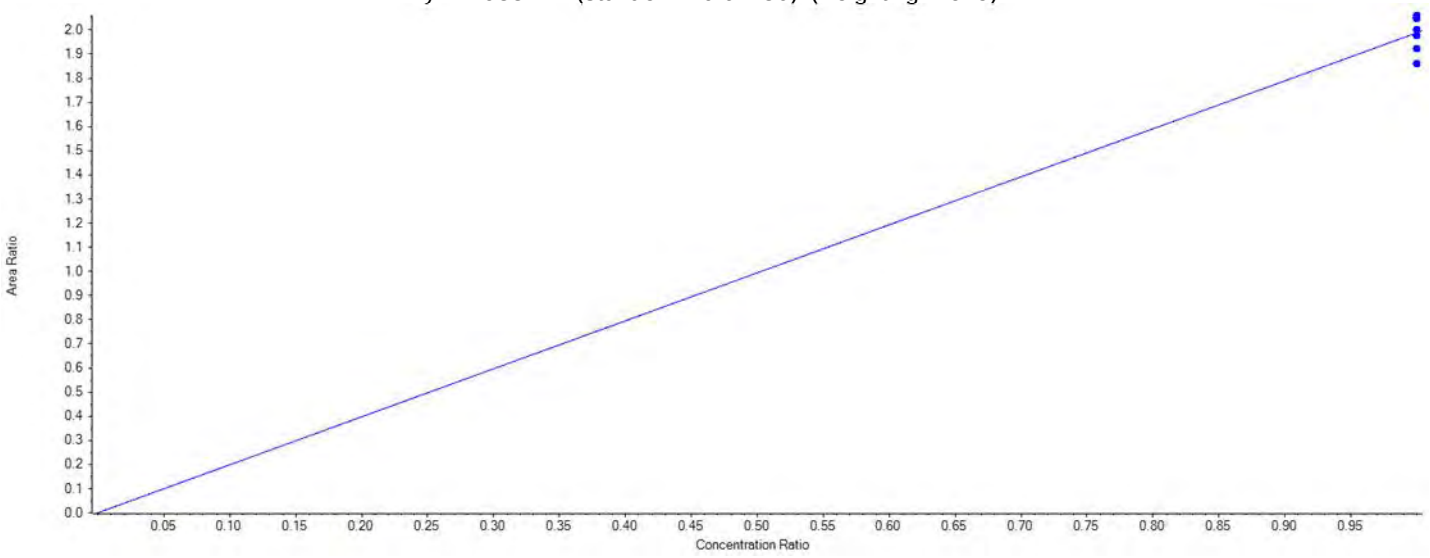
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C6-PFDA

y = 1.98822 x (std. dev. = 0.07436) (weighting: None)



Extraction Standard Calibration Verification

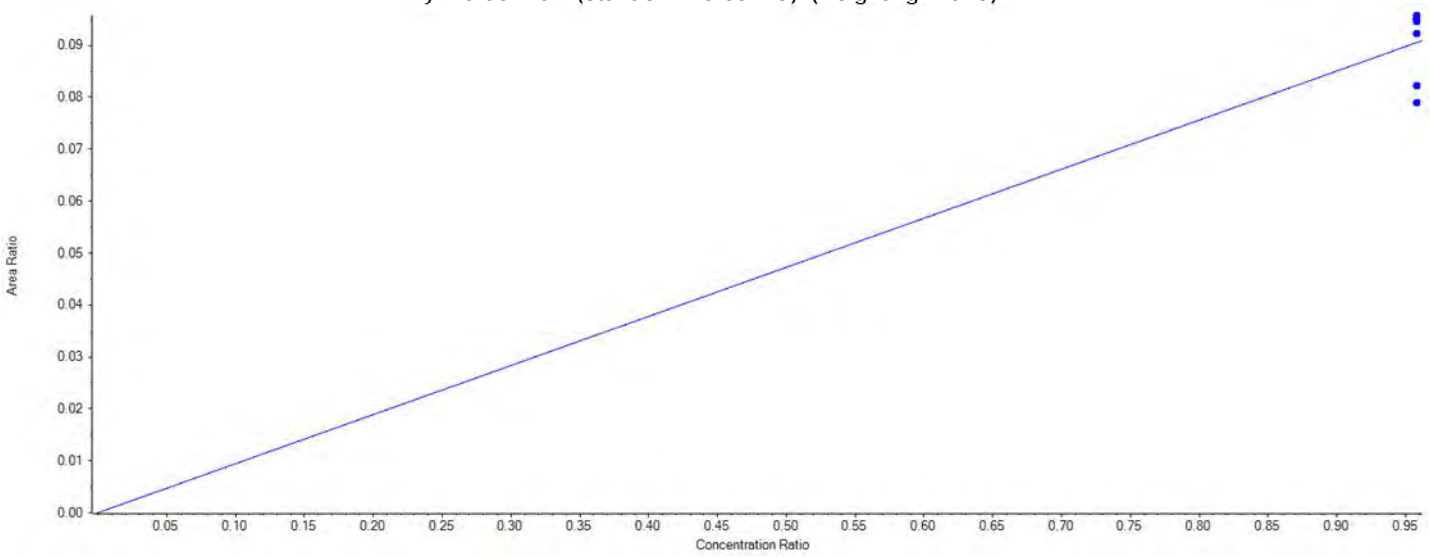
Sample Name	E13C6-PFDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	651348.0	338833.714	True	5.00	1.922	5.57	1.000	5.000	4.834	-3	30	
CAL2	661423.8	334958.441	True	5.00	1.975	5.57	1.000	5.000	4.966	-1	30	
CAL3	639022.8	311442.089	True	5.00	2.052	5.57	1.000	5.000	5.160	3	30	
CAL4	656868.3	320985.487	True	5.00	2.046	5.56	1.000	5.000	5.146	3	30	
CAL5	598009.7	298912.145	True	5.00	2.001	5.57	1.000	5.000	5.031	1	30	
CAL6	536626.2	260528.967	True	5.00	2.060	5.56	1.000	5.000	5.180	4	30	
CAL7	480927.9	258292.235	True	5.00	1.862	5.56	1.000	5.000	4.682	-6	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-8:2-FTS

y = 0.09449 x (std. dev. = 0.00729) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-8:2-FTS Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	26730.2	338833.714	True	5.00	0.079	5.57	1.000	4.790	4.174	-13	30	
CAL2	27523.0	334958.441	True	5.00	0.082	5.57	1.000	4.790	4.348	-9	30	
CAL3	29468.3	311442.089	True	5.00	0.095	5.57	1.000	4.790	5.007	5	30	
CAL4	30500.3	320985.487	True	5.00	0.095	5.57	1.000	4.790	5.028	5	30	
CAL5	27554.0	298912.145	True	5.00	0.092	5.57	1.000	4.790	4.878	2	30	
CAL6	24938.2	260528.967	True	5.00	0.096	5.56	1.000	4.790	5.065	6	30	
CAL7	24555.7	258292.235	True	5.00	0.095	5.57	1.000	4.790	5.031	5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

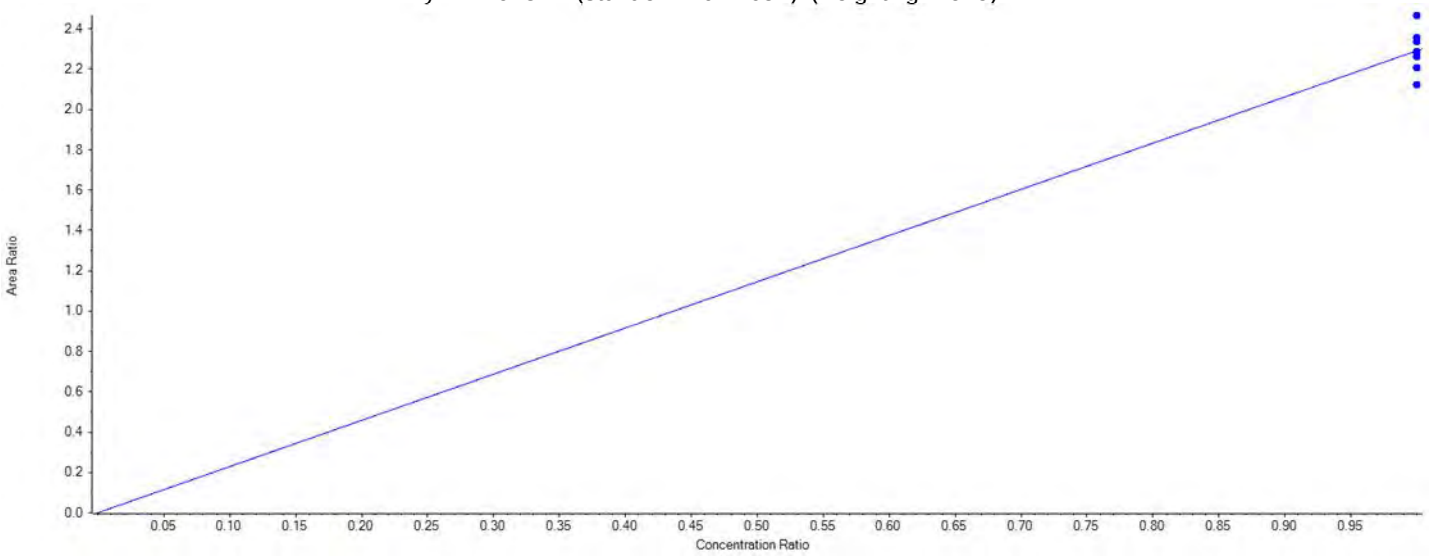
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOSA

y = 2.29132 x (std. dev. = 0.11051) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	774962.8	338833.714	True	5.00	2.287	5.64	1.010	5.000	4.991	0	30	
CAL2	711032.2	334958.441	True	5.00	2.123	5.64	1.010	5.000	4.632	-7	30	
CAL3	704745.5	311442.089	True	5.00	2.263	5.64	1.010	5.000	4.938	-1	30	
CAL4	708330.5	320985.487	True	5.00	2.207	5.64	1.010	5.000	4.815	-4	30	
CAL5	737038.5	298912.145	True	5.00	2.466	5.64	1.010	5.000	5.381	8	30	
CAL6	614406.4	260528.967	True	5.00	2.358	5.64	1.010	5.000	5.146	3	30	
CAL7	603296.1	258292.235	True	5.00	2.336	5.64	1.010	5.000	5.097	2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

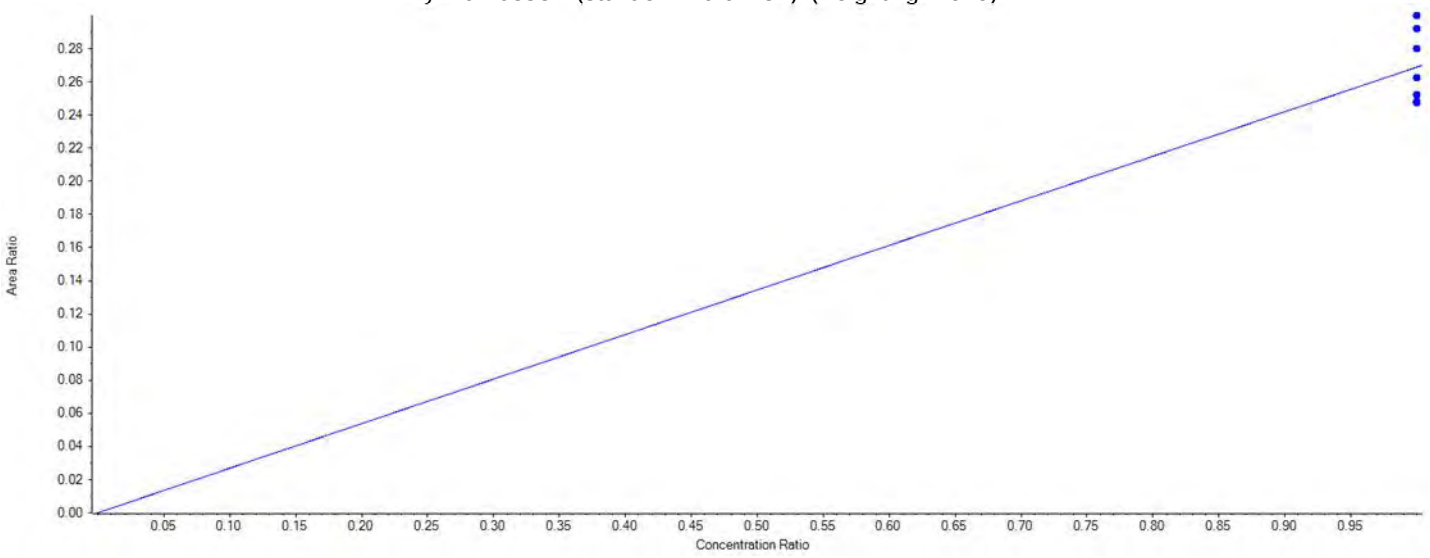
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMeFOSAA

y = 0.26888 x (std. dev. = 0.02181) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMeFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	94967.0	338833.714	True	5.00	0.280	5.71	1.030	5.000	5.212	4	30	
CAL2	83112.2	334958.441	True	5.00	0.248	5.71	1.020	5.000	4.614	-8	30	
CAL3	81763.3	311442.089	True	5.00	0.263	5.71	1.030	5.000	4.882	-2	30	
CAL4	80900.1	320985.487	True	5.00	0.252	5.70	1.030	5.000	4.687	-6	30	
CAL5	73896.1	298912.145	True	5.00	0.247	5.71	1.020	5.000	4.597	-8	30	
CAL6	78158.0	260528.967	True	5.00	0.300	5.70	1.020	5.000	5.579	12	30	
CAL7	75408.7	258292.235	True	5.00	0.292	5.70	1.020	5.000	5.429	9	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

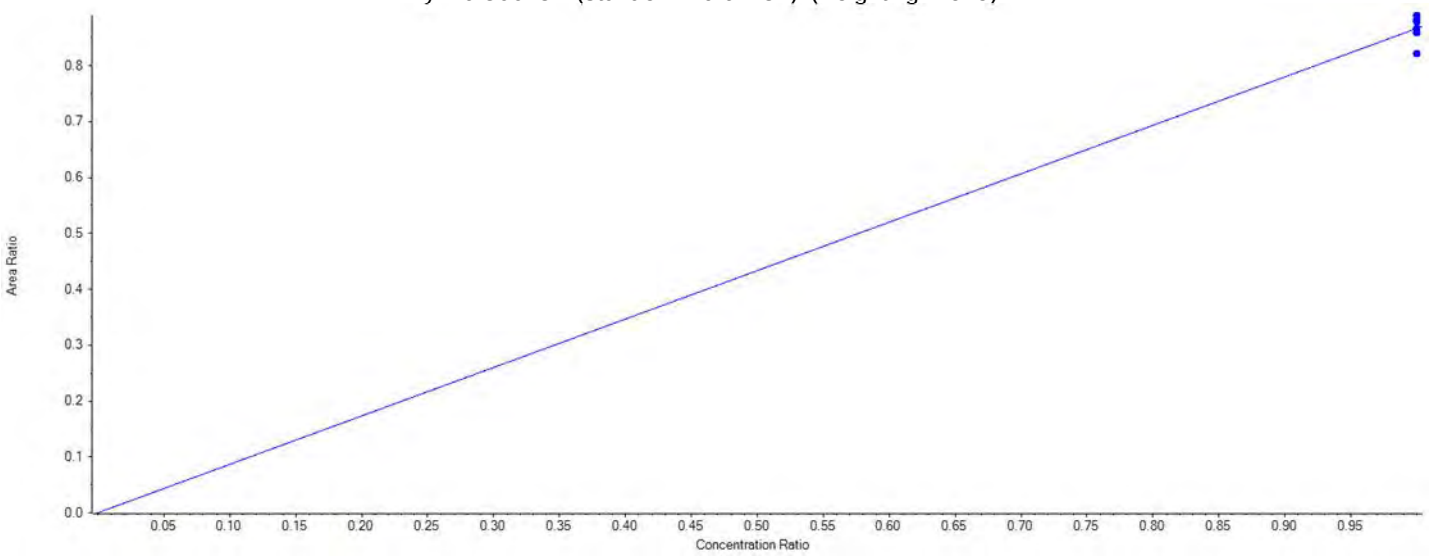
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C7-PFUnDA

y = 0.86673 x (std. dev. = 0.02232) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C7-PFUnDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	293658.7	338833.714	True	5.00	0.867	5.83	1.050	5.000	5.000	0	30	
CAL2	289985.1	334958.441	True	5.00	0.866	5.83	1.050	5.000	4.994	0	30	
CAL3	277115.5	311442.089	True	5.00	0.890	5.83	1.050	5.000	5.133	3	30	
CAL4	275977.2	320985.487	True	5.00	0.860	5.83	1.050	5.000	4.960	-1	30	
CAL5	263924.7	298912.145	True	5.00	0.883	5.83	1.050	5.000	5.094	2	30	
CAL6	229237.1	260528.967	True	5.00	0.880	5.82	1.050	5.000	5.076	2	30	
CAL7	212399.8	258292.235	True	5.00	0.822	5.82	1.050	5.000	4.744	-5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

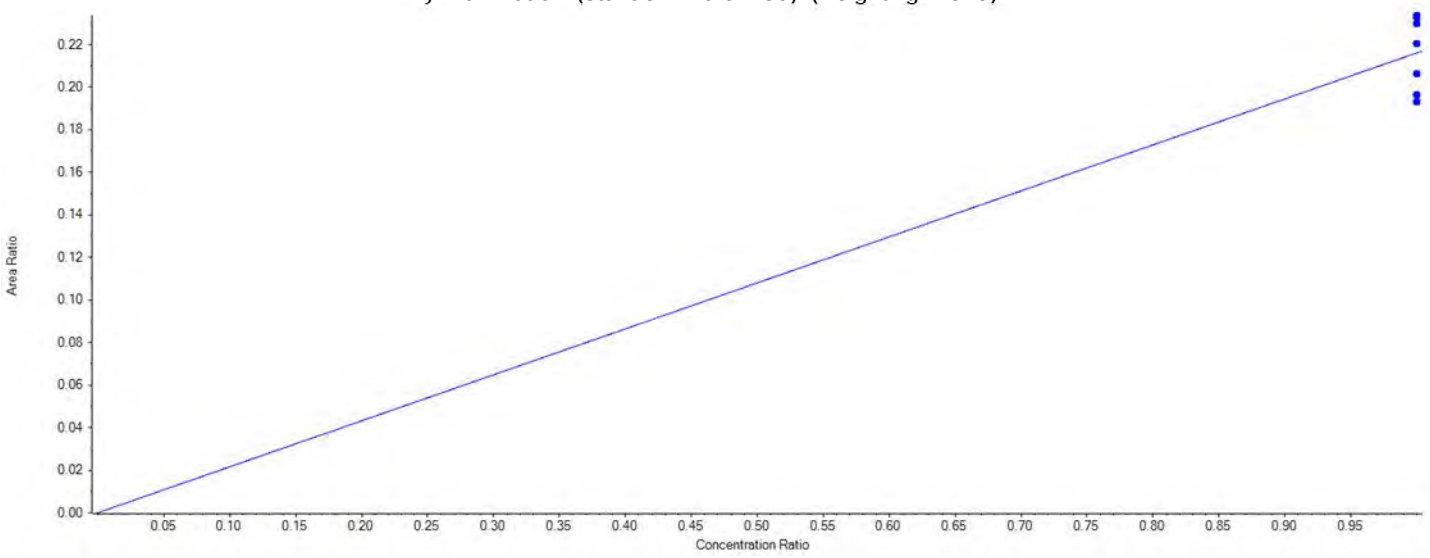
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtFOSAA

y = 0.21606 x (std. dev. = 0.01730) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	77938.3	338833.714	True	5.00	0.230	5.84	1.050	5.000	5.323	6	30	
CAL2	65815.9	334958.441	True	5.00	0.196	5.84	1.050	5.000	4.547	-9	30	
CAL3	72755.7	311442.089	True	5.00	0.234	5.84	1.050	5.000	5.406	8	30	
CAL4	66162.4	320985.487	True	5.00	0.206	5.84	1.050	5.000	4.770	-5	30	
CAL5	57745.7	298912.145	True	5.00	0.193	5.84	1.050	5.000	4.471	-11	30	
CAL6	60556.6	260528.967	True	5.00	0.232	5.83	1.050	5.000	5.379	8	30	
CAL7	56963.1	258292.235	True	5.00	0.221	5.84	1.050	5.000	5.104	2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

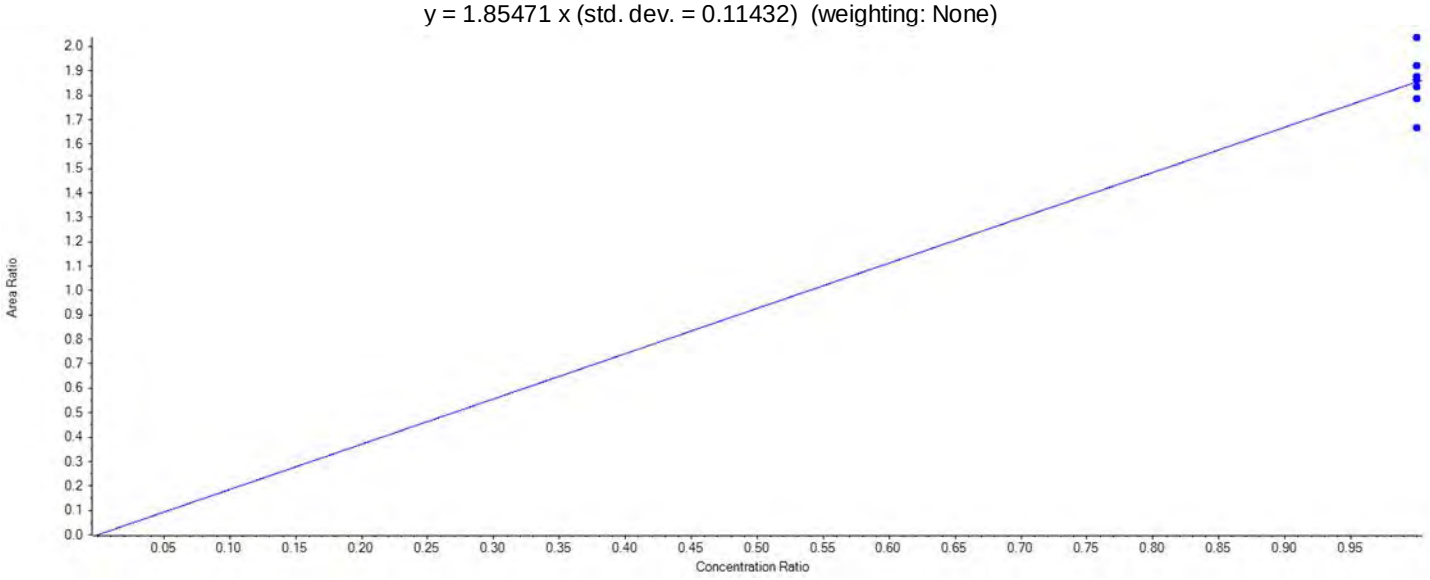
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFDoDA

y = 1.85471 x (std. dev. = 0.11432) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-PFDoDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	564794.9	338833.714	True	5.00	1.667	6.06	1.090	5.000	4.494	-10	30	
CAL2	597616.3	334958.441	True	5.00	1.784	6.06	1.090	5.000	4.810	-4	30	
CAL3	584631.5	311442.089	True	5.00	1.877	6.06	1.090	5.000	5.061	1	30	
CAL4	598287.4	320985.487	True	5.00	1.864	6.05	1.090	5.000	5.025	0	30	
CAL5	548536.0	298912.145	True	5.00	1.835	6.06	1.090	5.000	4.947	-1	30	
CAL6	500065.3	260528.967	True	5.00	1.919	6.05	1.090	5.000	5.174	3	30	
CAL7	525971.8	258292.235	True	5.00	2.036	6.05	1.090	5.000	5.490	10	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

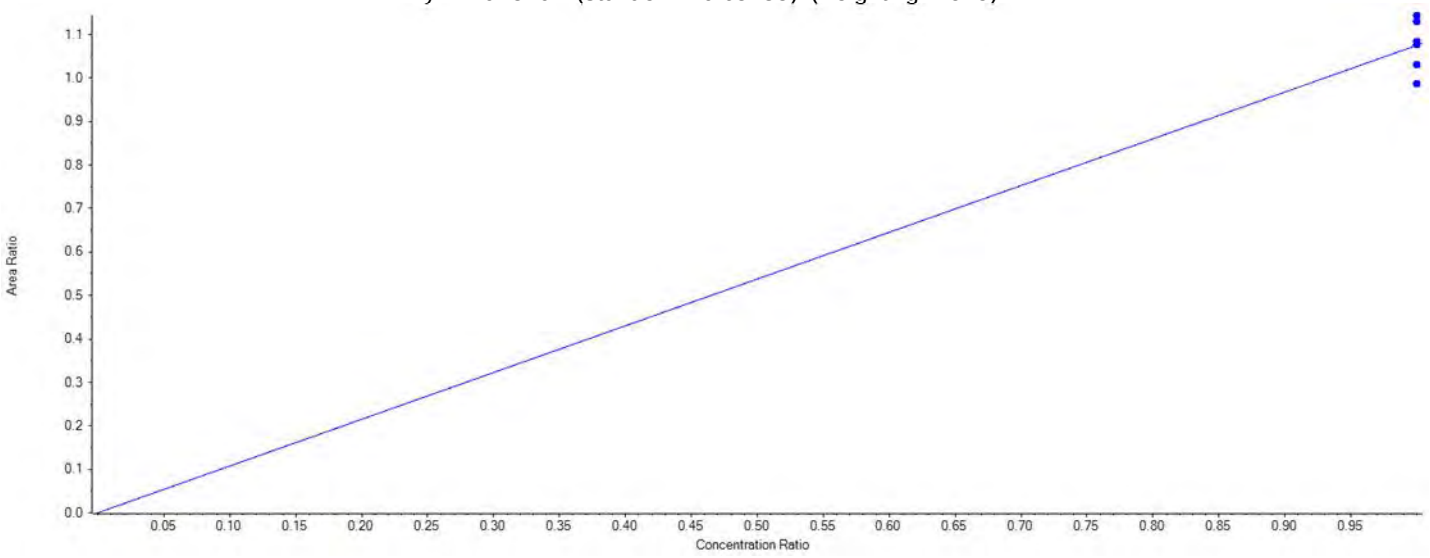
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed7-NMePFOSAE

y = 1.07520 x (std. dev. = 0.05435) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed7-NMePFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	366847.7	338833.714	True	5.00	1.083	6.09	1.090	5.000	5.035	1	30	
CAL2	330298.6	334958.441	True	5.00	0.986	6.09	1.090	5.000	4.586	-8	30	
CAL3	335206.8	311442.089	True	5.00	1.076	6.09	1.090	5.000	5.005	0	30	
CAL4	330968.7	320985.487	True	5.00	1.031	6.08	1.090	5.000	4.795	-4	30	
CAL5	321549.5	298912.145	True	5.00	1.076	6.09	1.090	5.000	5.002	0	30	
CAL6	294617.6	260528.967	True	5.00	1.131	6.08	1.090	5.000	5.259	5	30	
CAL7	295395.3	258292.235	True	5.00	1.144	6.08	1.090	5.000	5.318	6	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

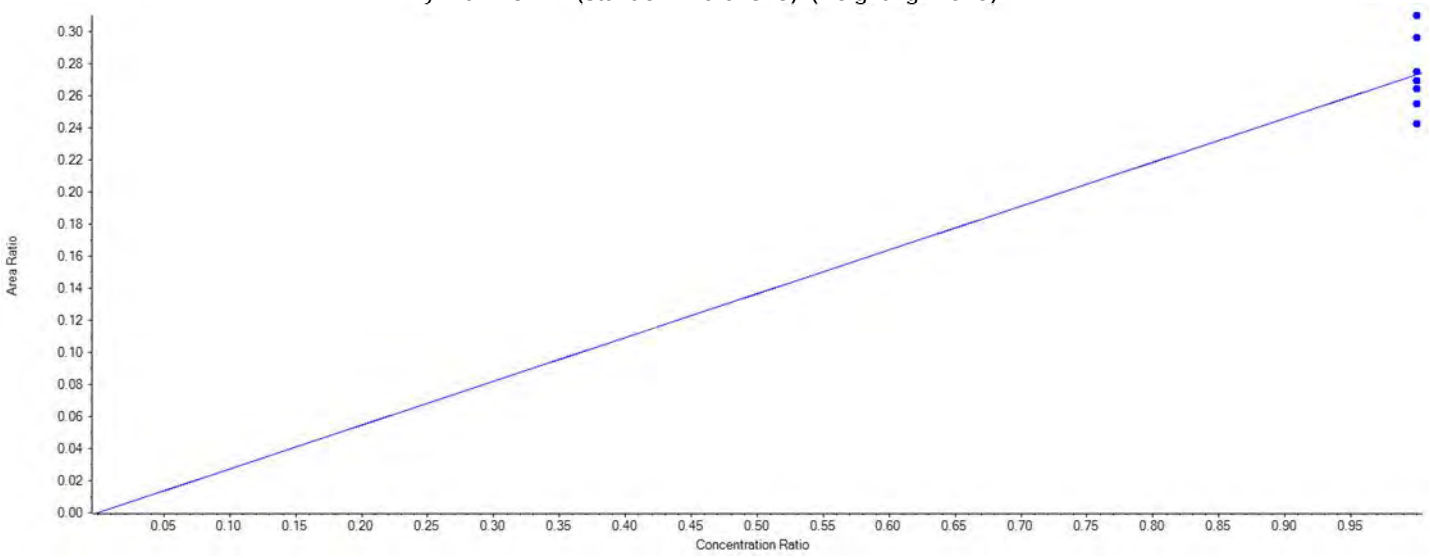
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMePFOSA

y = 0.27311 x (std. dev. = 0.02323) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMePFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	89511.9	338833.714	True	5.00	0.264	6.10	1.100	5.000	4.836	-3	30	
CAL2	81301.2	334958.441	True	5.00	0.243	6.10	1.100	5.000	4.444	-11	30	
CAL3	79381.7	311442.089	True	5.00	0.255	6.10	1.100	5.000	4.666	-7	30	
CAL4	86399.4	320985.487	True	5.00	0.269	6.10	1.100	5.000	4.928	-1	30	
CAL5	82137.6	298912.145	True	5.00	0.275	6.10	1.100	5.000	5.031	1	30	
CAL6	77146.9	260528.967	True	5.00	0.296	6.09	1.100	5.000	5.421	8	30	
CAL7	80053.2	258292.235	True	5.00	0.310	6.10	1.100	5.000	5.674	13	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

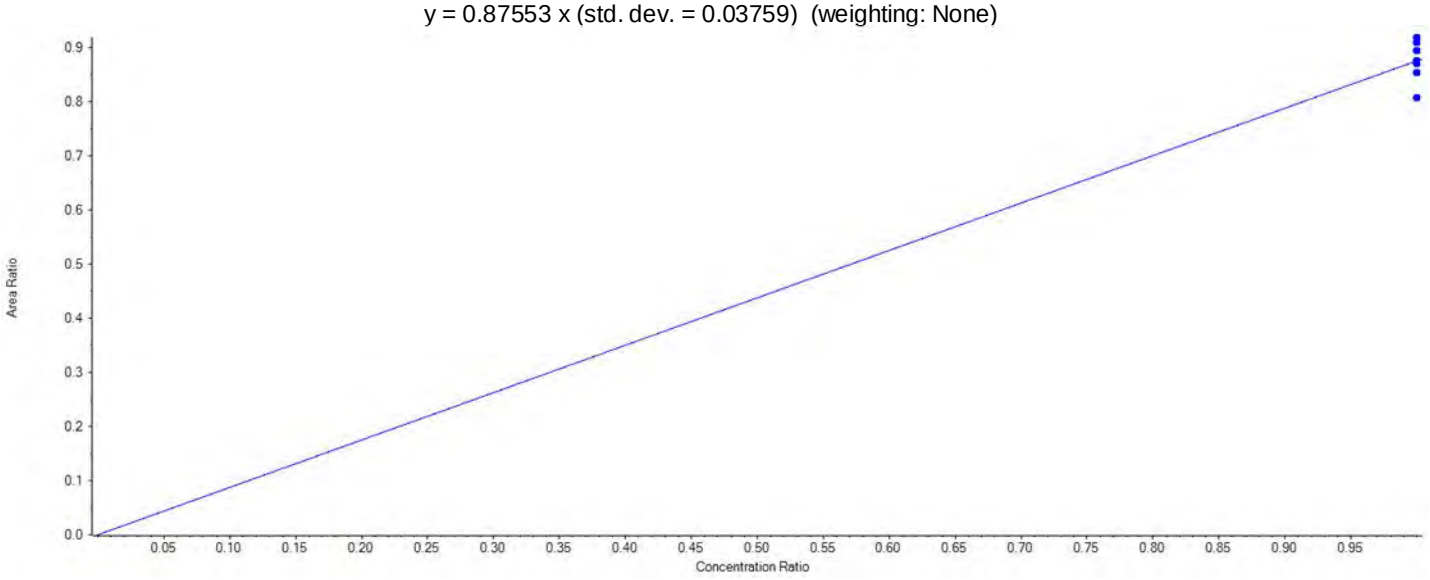
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed9-NEtPFOSAE

y = 0.87553 x (std. dev. = 0.03759) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed9-NEtPFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	296629.3	338833.714	True	5.00	0.875	6.24	1.120	5.000	5.000	0	30	
CAL2	270607.6	334958.441	True	5.00	0.808	6.24	1.120	5.000	4.614	-8	30	
CAL3	278375.1	311442.089	True	5.00	0.894	6.24	1.120	5.000	5.104	2	30	
CAL4	273909.1	320985.487	True	5.00	0.853	6.24	1.120	5.000	4.873	-3	30	
CAL5	259950.9	298912.145	True	5.00	0.870	6.24	1.120	5.000	4.966	-1	30	
CAL6	239317.0	260528.967	True	5.00	0.919	6.23	1.120	5.000	5.246	5	30	
CAL7	235038.0	258292.235	True	5.00	0.910	6.24	1.120	5.000	5.197	4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

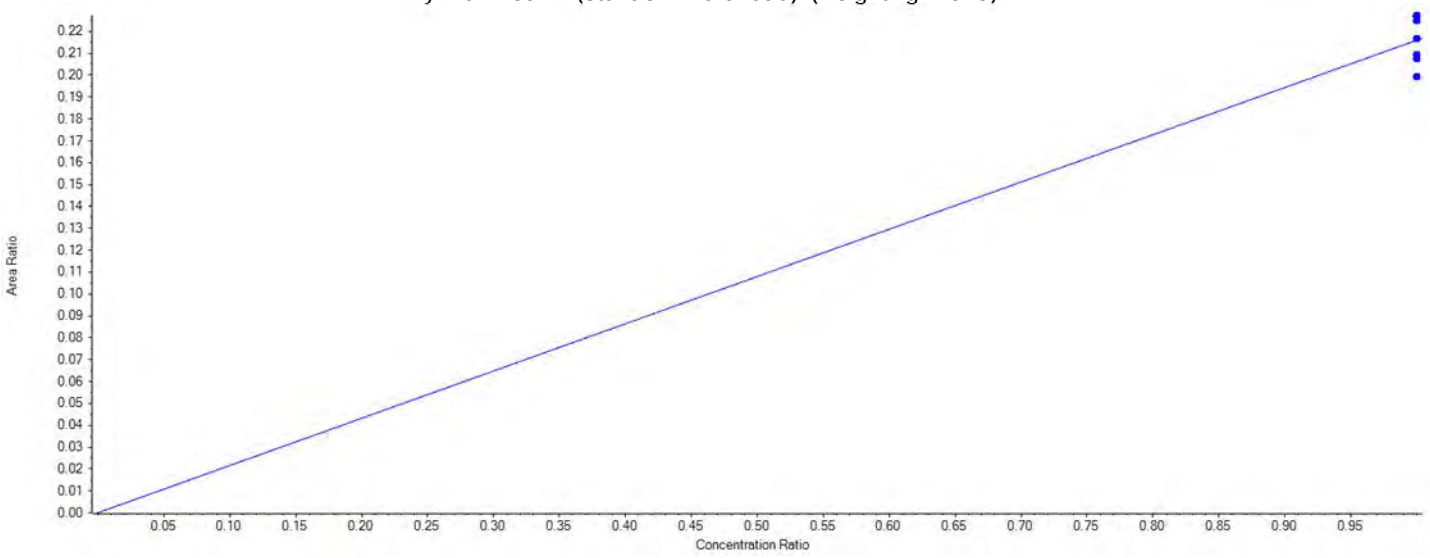
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtPFOSA

y = 0.21594 x (std. dev. = 0.01096) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtPFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	70926.7	338833.714	True	5.00	0.209	6.26	1.120	5.000	4.847	-3	30	
CAL2	66745.4	334958.441	True	5.00	0.199	6.26	1.120	5.000	4.614	-8	30	
CAL3	67444.3	311442.089	True	5.00	0.217	6.26	1.120	5.000	5.014	0	30	
CAL4	72258.7	320985.487	True	5.00	0.225	6.26	1.120	5.000	5.212	4	30	
CAL5	62005.6	298912.145	True	5.00	0.207	6.26	1.120	5.000	4.803	-4	30	
CAL6	59054.4	260528.967	True	5.00	0.227	6.25	1.120	5.000	5.248	5	30	
CAL7	58686.1	258292.235	True	5.00	0.227	6.26	1.120	5.000	5.261	5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

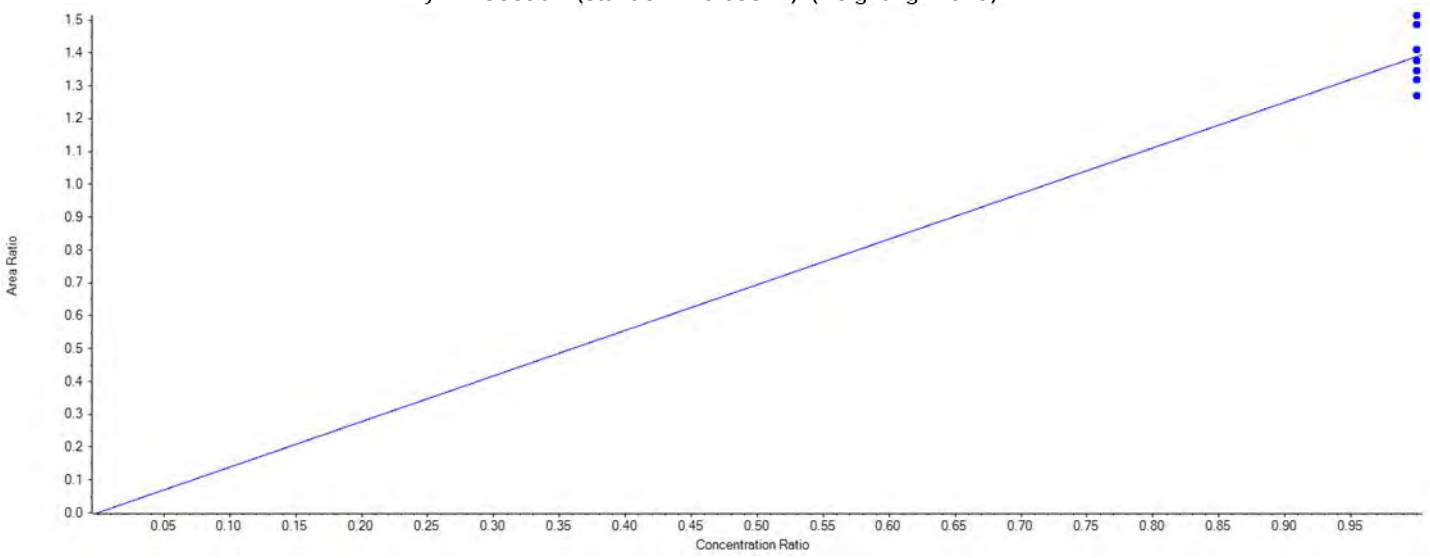
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFTeDA

y = 1.38890 x (std. dev. = 0.08847) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-PFTeDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	430341.3	338833.714	True	5.00	1.270	6.43	1.160	5.000	4.572	-9	30	
CAL2	441206.9	334958.441	True	5.00	1.317	6.43	1.160	5.000	4.742	-5	30	
CAL3	419341.7	311442.089	True	5.00	1.346	6.43	1.160	5.000	4.847	-3	30	
CAL4	441858.1	320985.487	True	5.00	1.377	6.43	1.160	5.000	4.956	-1	30	
CAL5	421798.8	298912.145	True	5.00	1.411	6.43	1.160	5.000	5.080	2	30	
CAL6	394433.9	260528.967	True	5.00	1.514	6.43	1.160	5.000	5.450	9	30	
CAL7	384058.1	258292.235	True	5.00	1.487	6.43	1.160	5.000	5.353	7	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

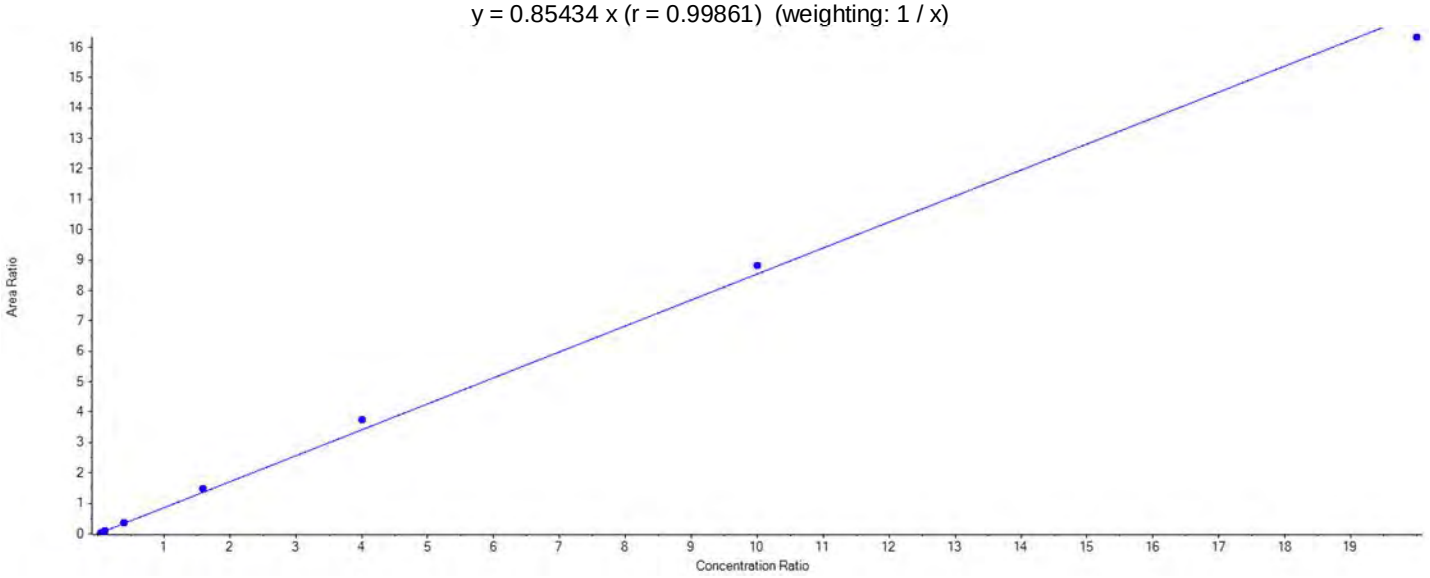
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBA

y = 0.85434 x (r = 0.99861) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBA Area	S/N	13C4-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32354.4	146.4	794718.852	True	5.00	0.041	3.27	1.000	0.200	0.238	19	30	
CAL2	72868.6	212.8	782732.821	True	5.00	0.093	3.27	1.000	0.500	0.545	9	30	
CAL3	285113.3	434.5	787180.244	True	5.00	0.362	3.27	1.000	2.000	2.120	6	30	
CAL4	1152870.9	735.9	771359.129	True	5.00	1.495	3.27	1.000	8.000	8.747	9	30	
CAL5	2730076.0	1045.3	728925.112	True	5.00	3.745	3.27	1.000	20.000	21.919	10	30	
CAL6	5709364.6	1410.1	647849.559	True	5.00	8.813	3.26	1.000	50.000	51.576	3	30	
CAL7	9954520.3	1648.1	609686.139	True	5.00	16.327	3.26	1.000	100.000	95.554	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

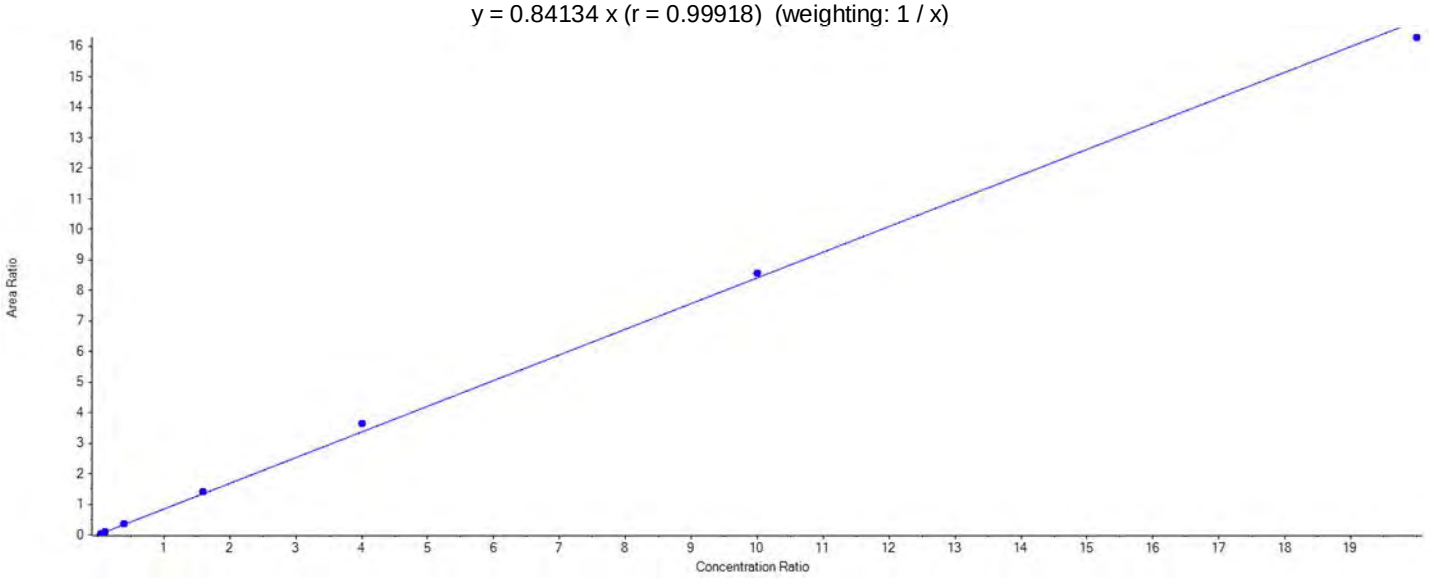
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeA

y = 0.84134 x (r = 0.99918) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeA Area	S/N	13C5-PFPeA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	33205.5	67.0	844850.159	True	5.00	0.039	3.77	1.000	0.200	0.234	17	30	
CAL2	77403.9	97.9	863262.811	True	5.00	0.090	3.77	1.000	0.500	0.533	7	30	
CAL3	286630.7	271.7	829978.484	True	5.00	0.345	3.77	1.000	2.000	2.052	3	30	
CAL4	1165758.7	263.0	824842.795	True	5.00	1.413	3.76	1.000	8.000	8.399	5	30	
CAL5	2812772.2	497.5	768958.133	True	5.00	3.658	3.77	1.000	20.000	21.739	9	30	
CAL6	5899932.2	954.6	687796.699	True	5.00	8.578	3.76	1.000	50.000	50.979	2	30	
CAL7	10229627.8	783.9	628265.483	True	5.00	16.282	3.76	1.000	100.000	96.765	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

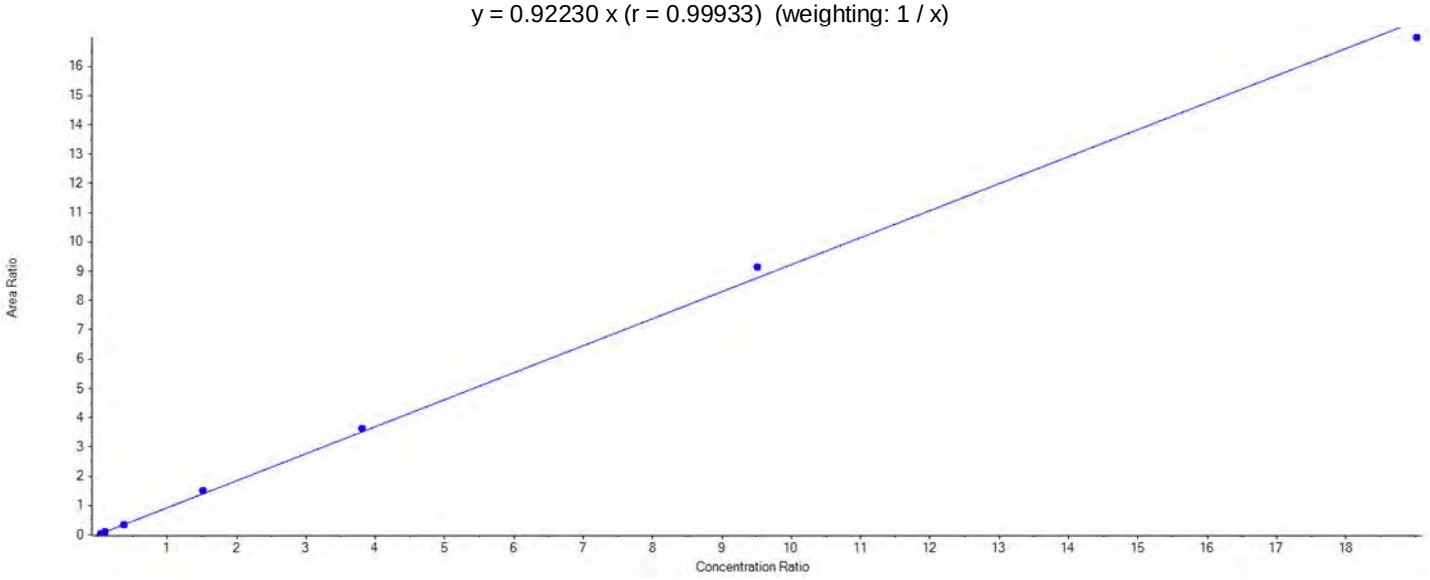
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBS

y = 0.92230 x (r = 0.99933) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	19024.1	393.3	449266.276	True	4.65	0.042	3.82	1.000	0.170	0.213	26	30	
CAL2	41415.1	562.8	444721.279	True	4.65	0.093	3.82	1.000	0.440	0.470	7	30	
CAL3	157656.3	933.8	456815.174	True	4.65	0.345	3.82	1.000	1.770	1.740	-2	30	
CAL4	648524.4	1539.0	434938.872	True	4.65	1.491	3.81	1.000	7.080	7.518	6	30	
CAL5	1601296.4	1306.5	442479.717	True	4.65	3.619	3.82	1.000	17.690	18.246	3	30	
CAL6	3508201.1	1595.6	384220.795	True	4.65	9.131	3.81	1.000	44.220	46.035	4	30	
CAL7	6474525.0	1528.4	381345.498	True	4.65	16.978	3.81	1.000	88.450	85.599	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

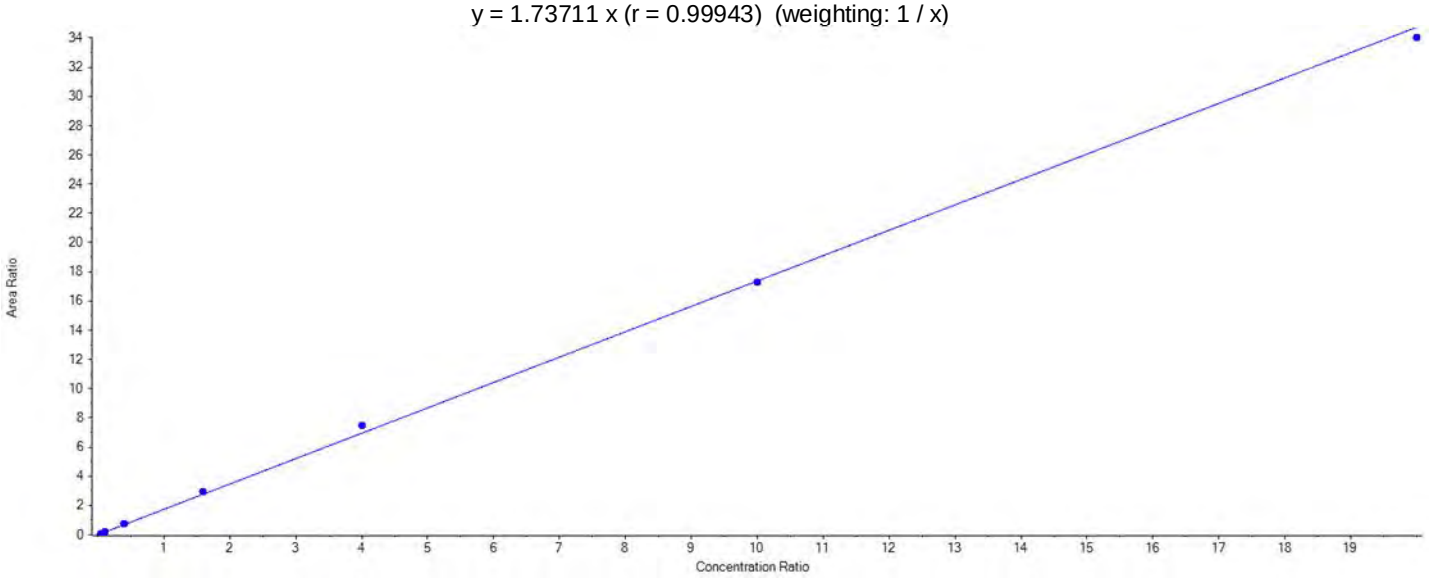
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

4:2-FTS

y = 1.73711 x (r = 0.99943) (weighting: 1 / x)



Component Calibration Verification

Sample Name	4:2-FTS Area	S/N	13C2-4:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	4145.4	132.5	58330.929	True	4.67	0.071	4.13	1.000	0.187	0.191	2	30	
CAL2	9924.9	268.5	54234.136	True	4.67	0.183	4.13	1.000	0.467	0.492	5	30	
CAL3	35586.2	540.9	48706.042	True	4.67	0.731	4.14	1.000	1.868	1.964	5	30	
CAL4	153295.4	973.4	51520.627	True	4.67	2.975	4.13	1.000	7.472	7.999	7	30	
CAL5	365423.8	1181.5	48869.851	True	4.67	7.477	4.13	1.000	18.680	20.102	8	30	
CAL6	866263.6	1274.7	50041.324	True	4.67	17.311	4.12	1.000	46.700	46.538	0	30	
CAL7	1576786.3	1225.2	46334.175	True	4.67	34.031	4.13	1.000	93.400	91.487	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

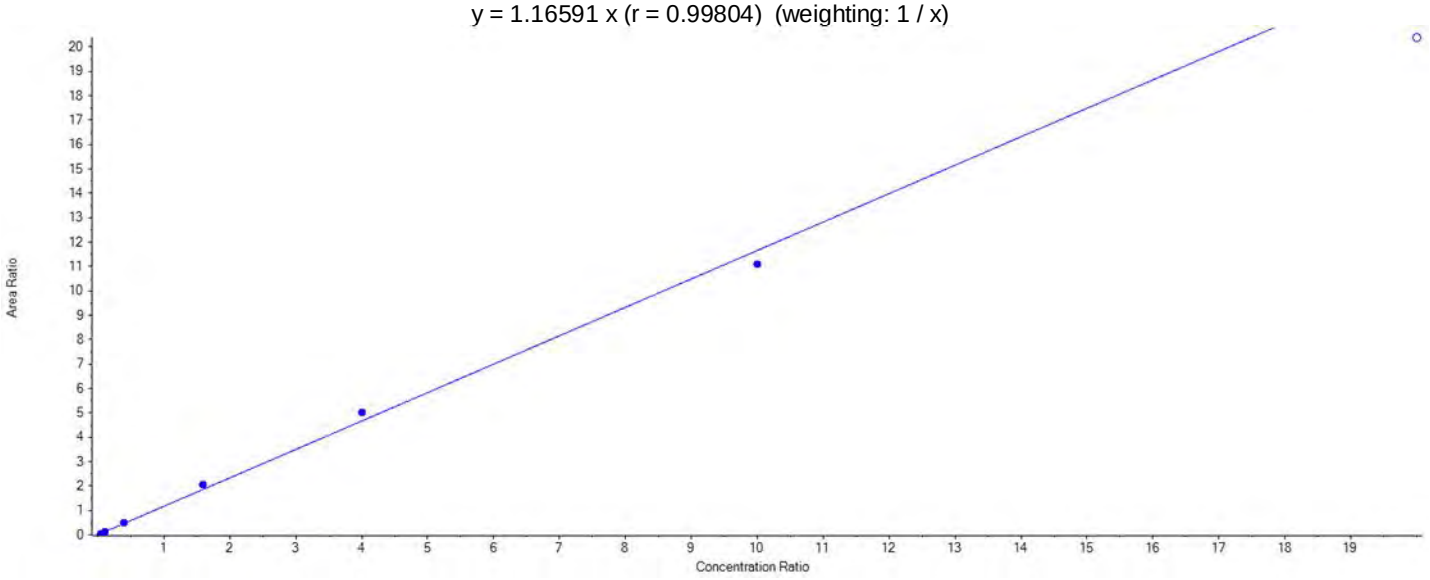
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxA

y = 1.16591 x (r = 0.99804) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxA Area	S/N	13C5-PFHxA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39732.2	173.4	725432.031	True	5.00	0.055	4.17	1.000	0.200	0.235	17	30	
CAL2	88469.9	273.6	717434.931	True	5.00	0.123	4.17	1.000	0.500	0.529	6	30	
CAL3	351503.9	491.3	705369.014	True	5.00	0.498	4.17	1.000	2.000	2.137	7	30	
CAL4	1455862.5	897.7	713446.262	True	5.00	2.041	4.16	1.000	8.000	8.751	9	30	
CAL5	3380716.3	1094.5	674375.429	True	5.00	5.013	4.16	1.000	20.000	21.499	7	30	
CAL6	6739327.9	1094.4	607820.088	True	5.00	11.088	4.16	1.000	50.000	47.549	-5	30	
CAL7	11658104.6	1005.0	571807.508	False	5.00	20.388	4.16	1.000	100.000	87.434	-13	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

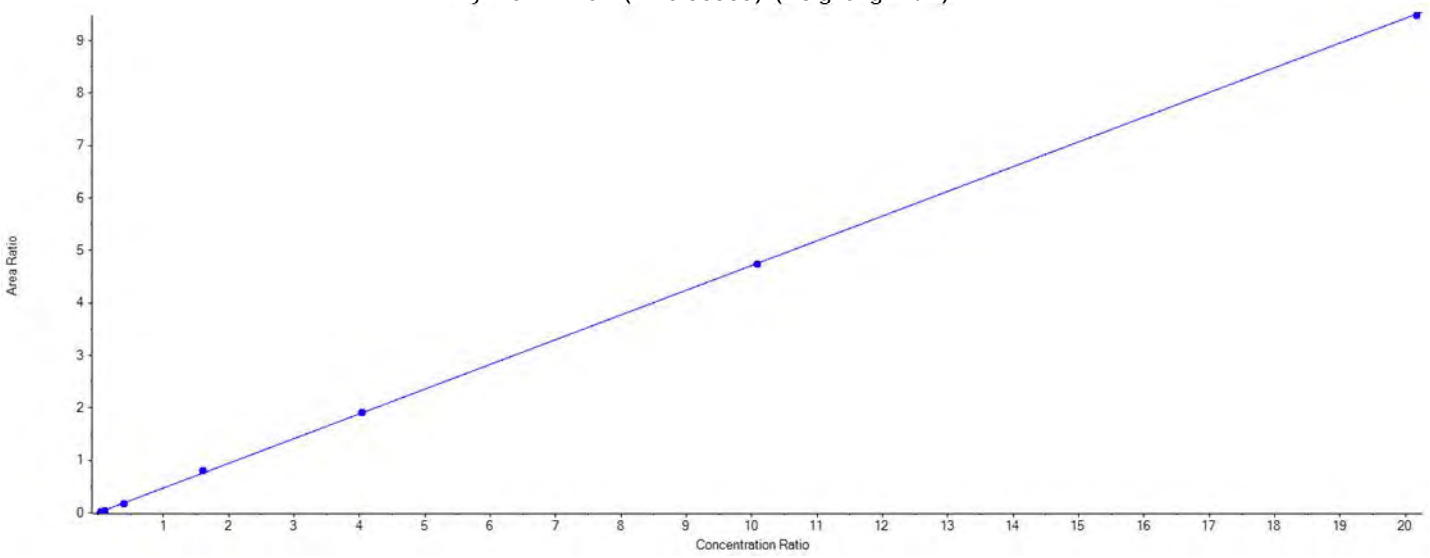
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeS

y = 0.47146 x (r = 0.99990) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8335.4	274.6	449266.276	True	4.65	0.019	4.18	1.100	0.190	0.183	-4	30	
CAL2	20956.8	449.7	444721.279	True	4.65	0.047	4.19	1.100	0.469	0.465	-1	30	
CAL3	82090.1	729.5	456815.174	True	4.65	0.180	4.19	1.100	1.880	1.772	-6	30	
CAL4	349358.3	1303.9	434938.872	True	4.65	0.803	4.18	1.100	7.500	7.922	6	30	
CAL5	845636.3	1195.3	442479.717	True	4.65	1.911	4.18	1.100	18.760	18.849	0	30	
CAL6	1823355.9	1852.0	384220.795	True	4.65	4.746	4.18	1.100	46.900	46.806	0	30	
CAL7	3615170.2	1352.9	381345.498	True	4.65	9.480	4.18	1.100	93.800	93.501	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

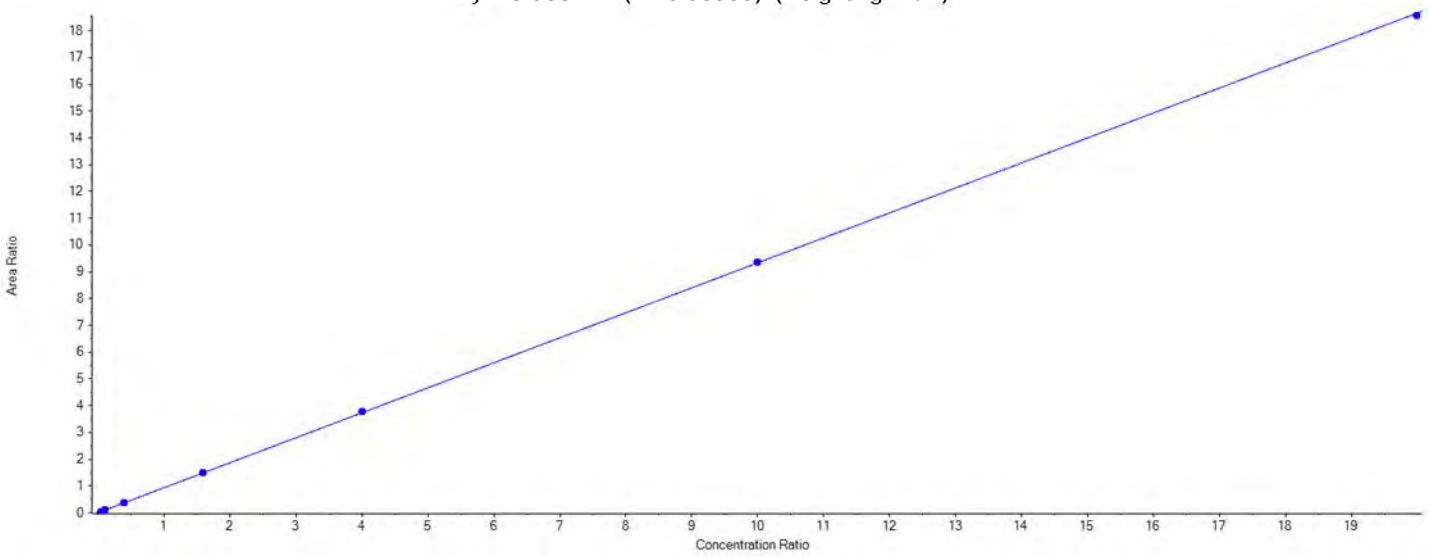
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxS

y = 0.93317 x (r = 0.99996) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13762.6	1166.5	358771.251	True	4.73	0.038	4.56	1.000	0.190	0.194	2	30	
CAL2	32061.0	6549.5	335732.100	True	4.73	0.095	4.56	1.000	0.473	0.484	2	30	
CAL3	122477.7	1994.1	343139.549	True	4.73	0.357	4.56	1.000	1.890	1.809	-4	30	
CAL4	513536.6	3164.6	339090.468	True	4.73	1.514	4.55	1.000	7.560	7.676	2	30	
CAL5	1261633.0	4348.9	332808.457	True	4.73	3.791	4.55	1.000	18.910	19.215	2	30	
CAL6	2760712.8	3934.3	295466.243	True	4.73	9.344	4.55	1.000	47.280	47.360	0	30	
CAL7	5196245.3	3688.8	279859.575	True	4.73	18.567	4.55	1.000	94.550	94.113	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

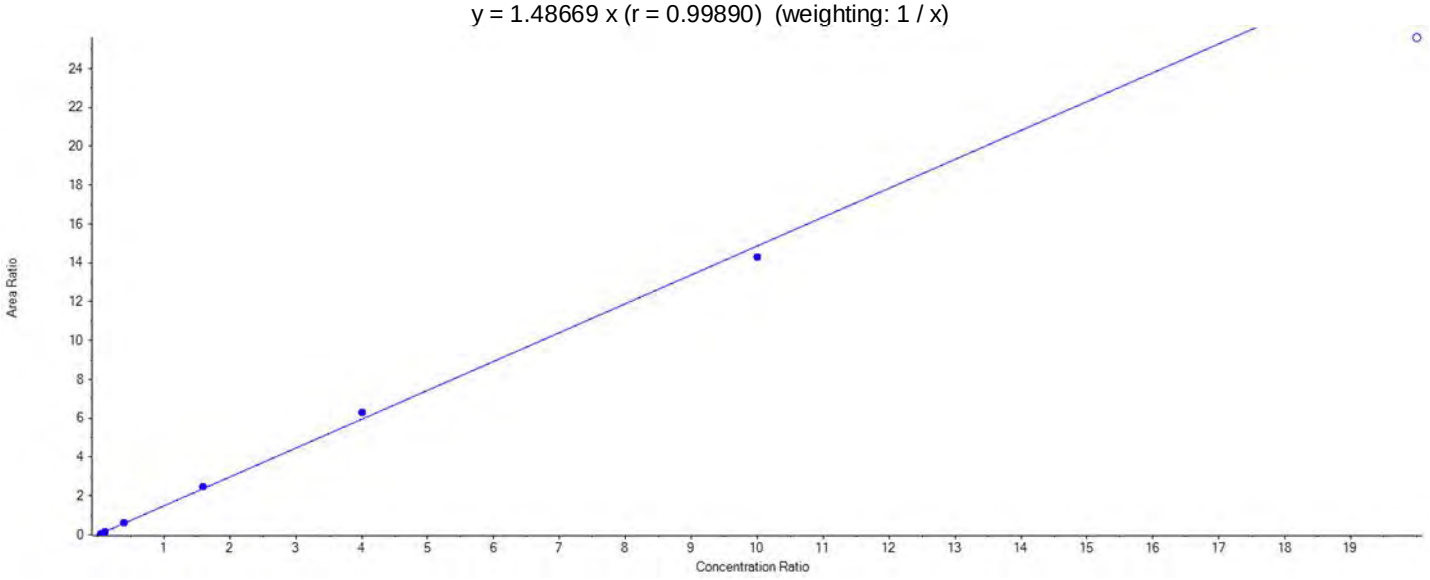
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpA

y = 1.48669 x (r = 0.99890) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpA Area	S/N	13C4-PFHpA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	38331.9	115.7	586580.259	True	5.00	0.065	4.55	1.000	0.200	0.220	10	30	
CAL2	93502.9	220.2	583342.783	True	5.00	0.160	4.56	1.000	0.500	0.539	8	30	
CAL3	360280.4	493.2	566495.562	True	5.00	0.636	4.56	1.000	2.000	2.139	7	30	
CAL4	1481489.5	591.4	592497.863	True	5.00	2.500	4.55	1.000	8.000	8.409	5	30	
CAL5	3440372.8	967.5	544681.071	True	5.00	6.316	4.55	1.000	20.000	21.243	6	30	
CAL6	6940304.7	1231.7	484763.199	True	5.00	14.317	4.55	1.000	50.000	48.150	-4	30	
CAL7	11701142.2	1512.0	457160.435	False	5.00	25.595	4.55	1.000	100.000	86.081	-14	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

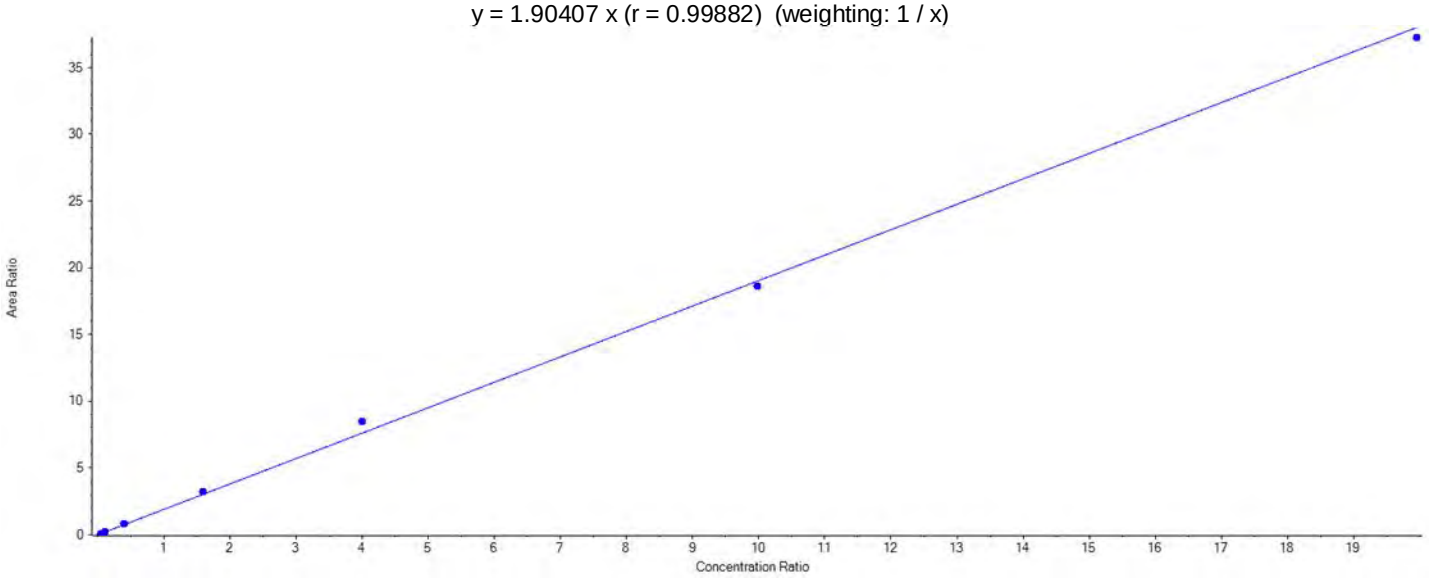
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

6:2-FTS

y = 1.90407 x (r = 0.99882) (weighting: 1 / x)



Component Calibration Verification

Sample Name	6:2-FTS Area	S/N	13C2-6:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2460.6	100.5	42112.811	True	4.75	0.058	4.91	1.000	0.190	0.146	-23	30	
CAL2	8883.8	317.6	38849.605	True	4.75	0.229	4.91	1.000	0.474	0.570	20	30	
CAL3	32056.4	598.2	38605.475	True	4.75	0.830	4.92	1.000	1.896	2.071	9	30	
CAL4	125170.2	897.1	39121.731	True	4.75	3.200	4.91	1.000	7.584	7.982	5	30	
CAL5	278493.0	1000.7	32735.591	True	4.75	8.507	4.91	1.000	18.960	21.223	12	30	
CAL6	566692.8	797.2	30466.848	True	4.75	18.600	4.90	1.000	47.400	46.401	-2	30	
CAL7	988785.9	901.9	26549.079	True	4.75	37.244	4.90	1.000	94.800	92.910	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

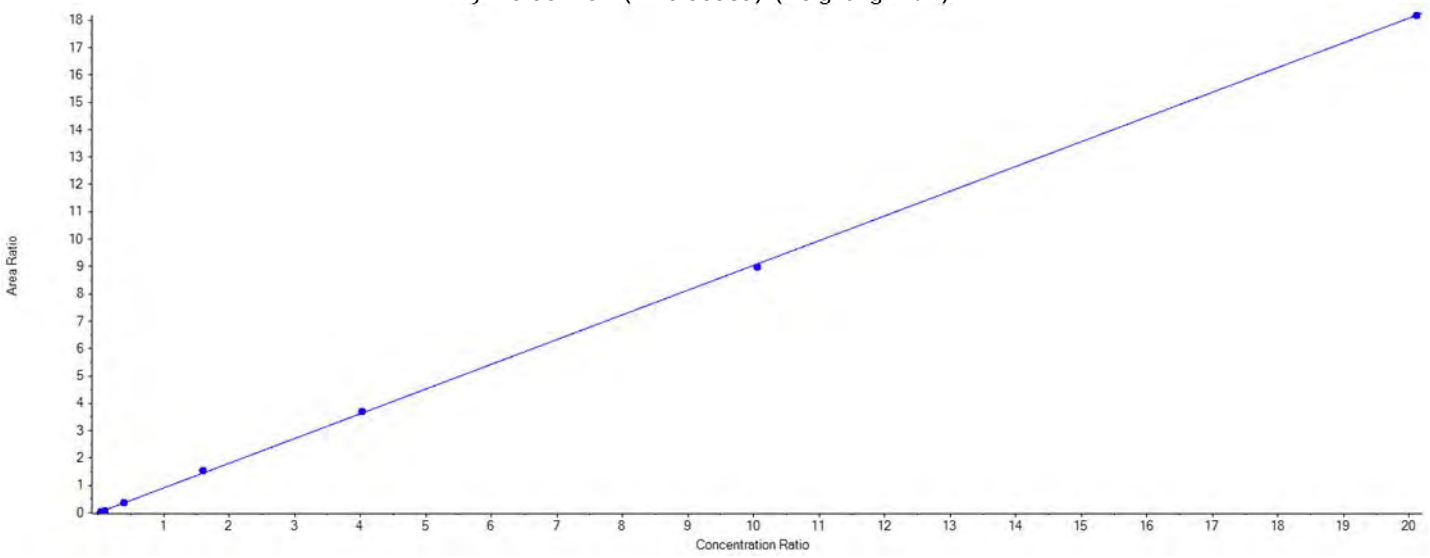
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpS

y = 0.90410 x (r = 0.99989) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	14183.4	333.2	358771.251	True	4.73	0.040	4.91	1.080	0.190	0.207	9	30	
CAL2	30553.2	575.9	335732.100	True	4.73	0.091	4.92	1.080	0.476	0.476	0	30	
CAL3	123126.9	881.8	343139.549	True	4.73	0.359	4.92	1.080	1.900	1.877	-1	30	
CAL4	516333.1	1178.7	339090.468	True	4.73	1.523	4.91	1.080	7.610	7.966	5	30	
CAL5	1236603.7	1092.5	332808.457	True	4.73	3.716	4.92	1.080	19.030	19.439	2	30	
CAL6	2648512.9	1087.8	295466.243	True	4.73	8.964	4.91	1.080	47.580	46.896	-1	30	
CAL7	5085803.6	1089.6	279859.575	True	4.73	18.173	4.91	1.080	95.150	95.074	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

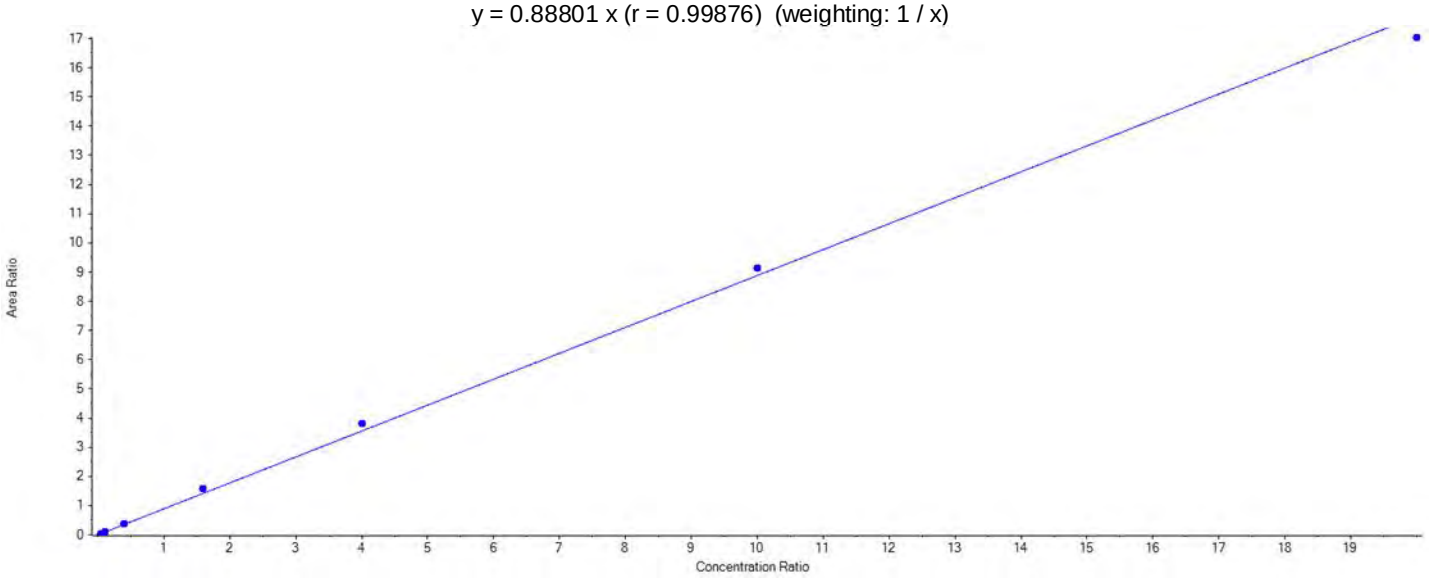
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOA

y = 0.88801 x (r = 0.99876) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOA Area	S/N	13C8-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39843.5	233.7	1028414.921	True	5.00	0.039	4.93	1.000	0.200	0.218	9	30	
CAL2	94348.1	430.7	970523.191	True	5.00	0.097	4.93	1.000	0.500	0.547	9	30	
CAL3	364943.1	791.6	964414.633	True	5.00	0.378	4.93	1.000	2.000	2.131	7	30	
CAL4	1491946.3	1207.0	937287.469	True	5.00	1.592	4.92	1.000	8.000	8.963	12	30	
CAL5	3425279.8	1901.2	895692.173	True	5.00	3.824	4.92	1.000	20.000	21.532	8	30	
CAL6	7023921.1	2522.0	769164.416	True	5.00	9.132	4.92	1.000	50.000	51.417	3	30	
CAL7	11562348.7	2334.2	678914.551	True	5.00	17.031	4.92	1.000	100.000	95.892	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

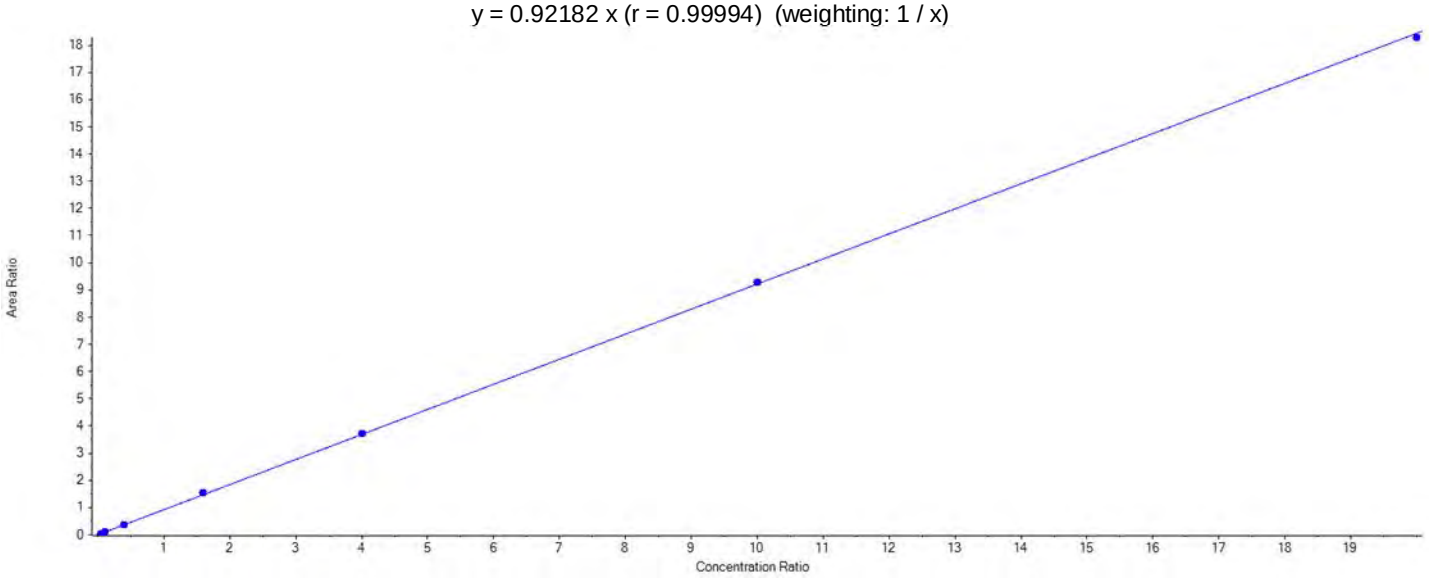
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOS

y = 0.92182 x (r = 0.99994) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	12181.7	1599.7	307224.329	True	4.78	0.040	5.25	1.000	0.190	0.206	8	30	
CAL2	28529.2	1301.4	286174.783	True	4.78	0.100	5.25	1.000	0.478	0.517	8	30	
CAL3	111397.7	2913.4	297259.750	True	4.78	0.375	5.25	1.000	1.910	1.943	2	30	
CAL4	447769.0	1957.6	291941.558	True	4.78	1.534	5.25	1.000	7.650	7.953	4	30	
CAL5	1108359.9	3249.6	297995.609	True	4.78	3.719	5.25	1.000	19.120	19.287	1	30	
CAL6	2487687.4	4656.8	268368.993	True	4.78	9.270	5.24	1.000	47.800	48.067	1	30	
CAL7	4830627.6	3150.6	264295.900	True	4.78	18.277	5.25	1.000	95.600	94.776	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

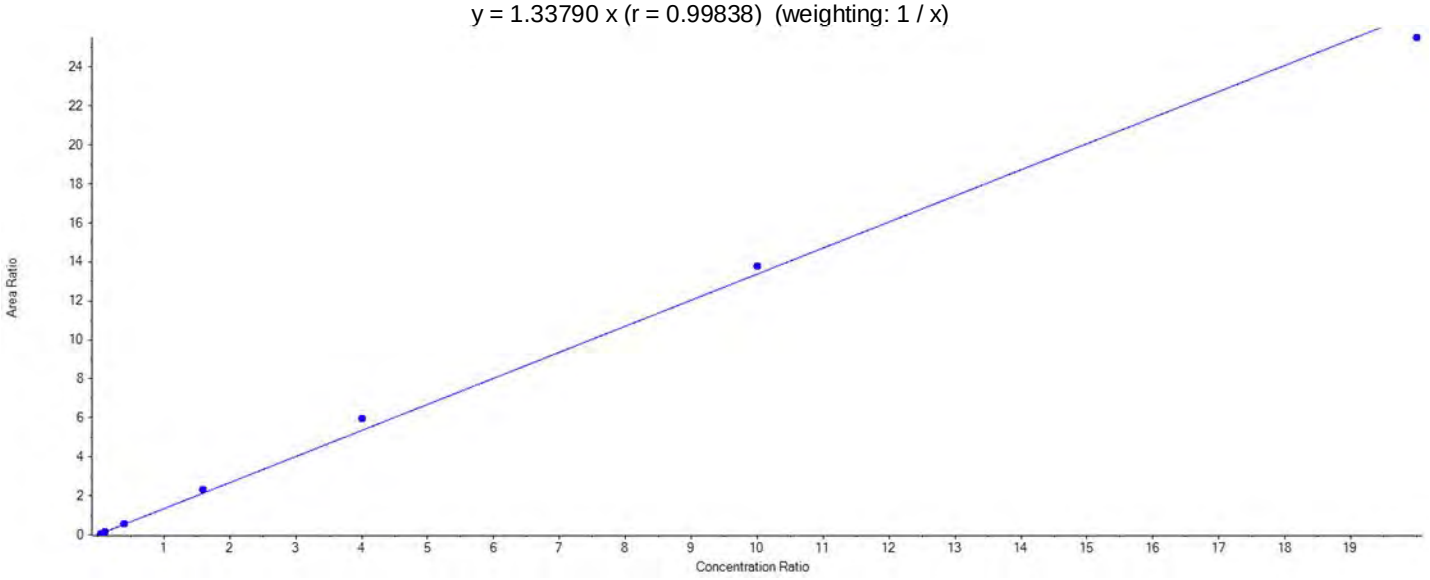
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNA

y = 1.33790 x (r = 0.99838) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNA Area	S/N	13C9-PFNA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32563.3	212.6	518118.657	True	5.00	0.063	5.27	1.000	0.200	0.235	17	30	
CAL2	74743.9	385.8	540435.380	True	5.00	0.138	5.27	1.000	0.500	0.517	3	30	
CAL3	299530.4	891.6	513115.984	True	5.00	0.584	5.27	1.000	2.000	2.182	9	30	
CAL4	1179151.8	1096.7	512147.381	True	5.00	2.302	5.27	1.000	8.000	8.604	8	30	
CAL5	2889454.7	1462.7	484419.266	True	5.00	5.965	5.27	1.000	20.000	22.292	11	30	
CAL6	6070259.1	1061.5	440319.007	True	5.00	13.786	5.26	1.000	50.000	51.521	3	30	
CAL7	10279837.9	1111.6	402916.669	True	5.00	25.514	5.27	1.000	100.000	95.349	-5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

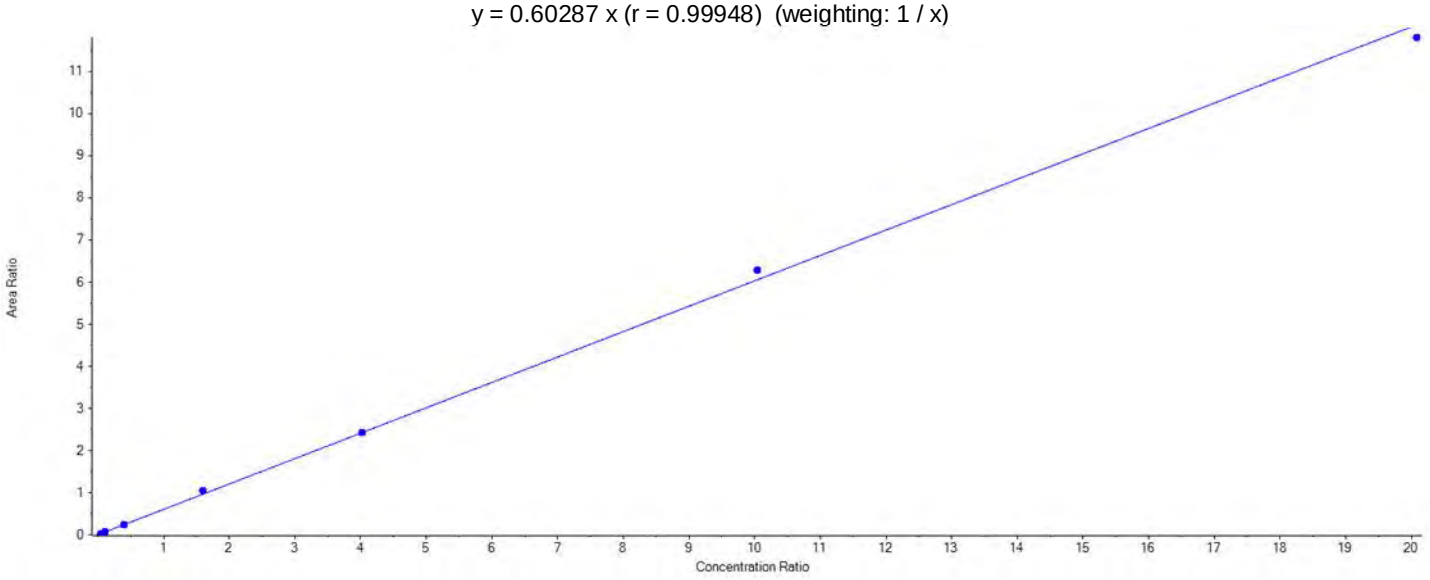
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNS

y = 0.60287 x (r = 0.99948) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6748.5	139.2	307224.329	True	4.78	0.022	5.55	1.060	0.190	0.174	-8	30	
CAL2	17507.8	298.5	286174.783	True	4.78	0.061	5.55	1.060	0.480	0.485	1	30	
CAL3	72940.0	700.2	297259.750	True	4.78	0.245	5.55	1.060	1.920	1.946	1	30	
CAL4	305013.7	830.3	291941.558	True	4.78	1.045	5.54	1.060	7.680	8.284	8	30	
CAL5	722178.3	1119.3	297995.609	True	4.78	2.423	5.54	1.060	19.200	19.215	0	30	
CAL6	1684601.2	897.8	268368.993	True	4.78	6.277	5.54	1.060	48.000	49.770	4	30	
CAL7	3119908.2	856.2	264295.900	True	4.78	11.805	5.54	1.060	96.000	93.596	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

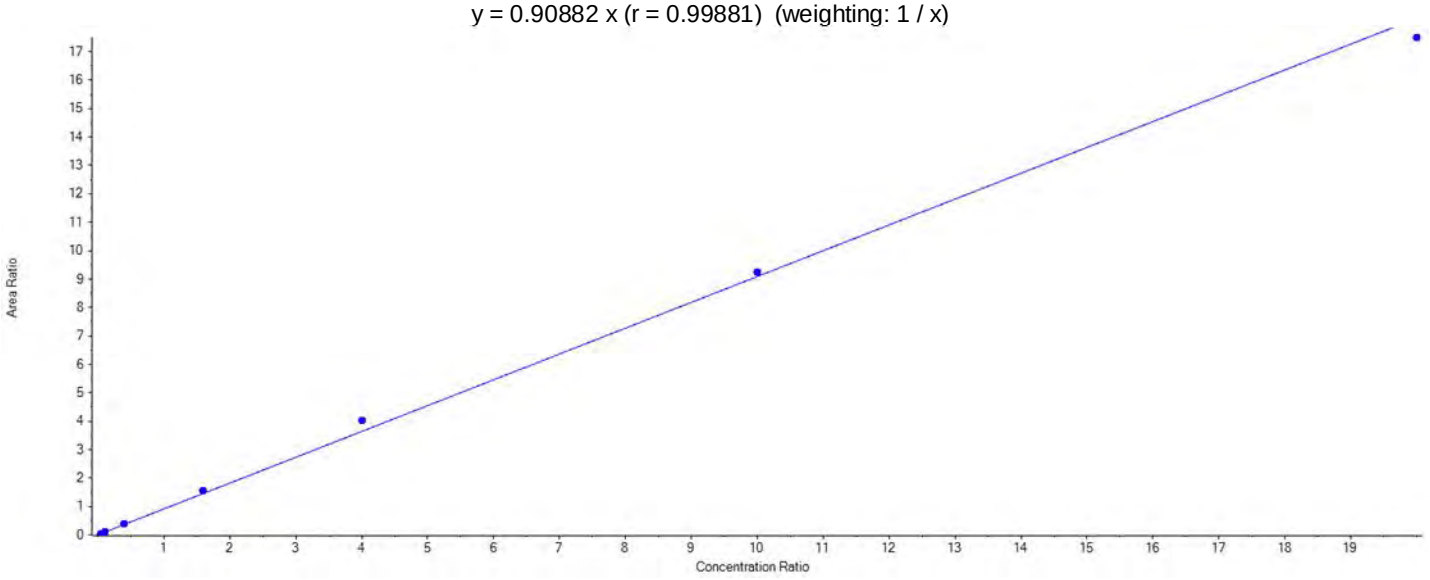
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDA

y = 0.90882 x (r = 0.99881) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDA Area	S/N	13C6-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	25530.0	80.6	651347.959	True	5.00	0.039	5.57	1.000	0.200	0.216	8	30	
CAL2	62530.6	137.6	661423.810	True	5.00	0.095	5.57	1.000	0.500	0.520	4	30	
CAL3	244693.9	357.4	639022.779	True	5.00	0.383	5.57	1.000	2.000	2.107	5	30	
CAL4	1029893.8	556.8	656868.302	True	5.00	1.568	5.56	1.000	8.000	8.626	8	30	
CAL5	2401274.2	683.6	598009.725	True	5.00	4.015	5.57	1.000	20.000	22.091	10	30	
CAL6	4962332.7	791.5	536626.204	True	5.00	9.247	5.56	1.000	50.000	50.875	2	30	
CAL7	8415098.4	928.9	480927.883	True	5.00	17.498	5.56	1.000	100.000	96.265	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

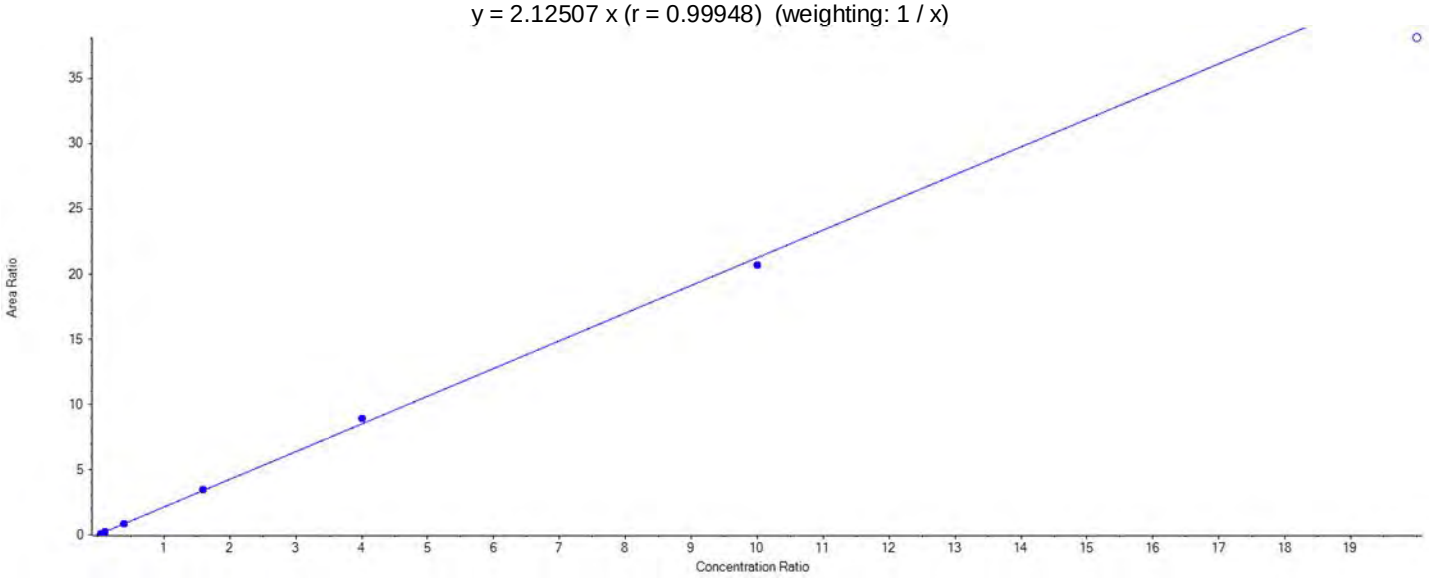
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

8:2-FTS

y = 2.12507 x (r = 0.99948) (weighting: 1 / x)



Component Calibration Verification

Sample Name	8:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2783.3	121.0	26730.160	True	4.79	0.104	5.58	1.000	0.192	0.235	22	30	
CAL2	6917.6	207.6	27523.013	True	4.79	0.251	5.57	1.000	0.479	0.567	18	30	
CAL3	24892.6	1018.5	29468.270	True	4.79	0.845	5.57	1.000	1.916	1.904	-1	30	
CAL4	106591.3	873.6	30500.264	True	4.79	3.495	5.57	1.000	7.664	7.877	3	30	
CAL5	244867.6	996.2	27553.973	True	4.79	8.887	5.57	1.000	19.160	20.031	5	30	
CAL6	516640.5	1051.6	24938.159	True	4.79	20.717	5.56	1.000	47.900	46.697	-3	30	
CAL7	936483.2	582.0	24555.696	False	4.79	38.137	5.57	1.000	95.800	85.963	-10	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

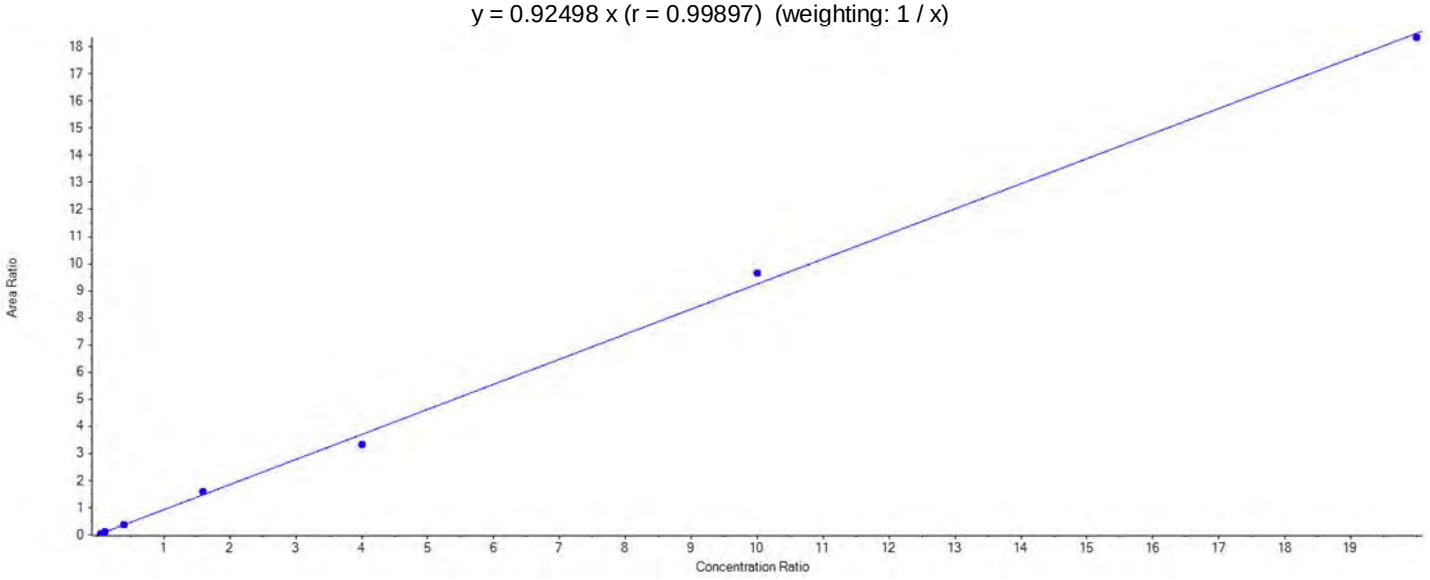
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOSA

y = 0.92498 x (r = 0.99897) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOSA Area	S/N	13C8-PFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	27779.6	365.6	774962.773	True	5.00	0.036	5.64	1.000	0.200	0.194	-3	30	
CAL2	69586.0	485.9	711032.158	True	5.00	0.098	5.64	1.000	0.500	0.529	6	30	
CAL3	271753.2	606.8	704745.507	True	5.00	0.386	5.64	1.000	2.000	2.084	4	30	
CAL4	1119770.1	706.4	708330.461	True	5.00	1.581	5.64	1.000	8.000	8.545	7	30	
CAL5	2448684.3	761.3	737038.484	True	5.00	3.322	5.64	1.000	20.000	17.959	-10	30	
CAL6	5938541.7	607.4	614406.373	True	5.00	9.665	5.64	1.000	50.000	52.247	4	30	
CAL7	11064835.5	659.2	603296.116	True	5.00	18.341	5.64	1.000	100.000	99.141	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

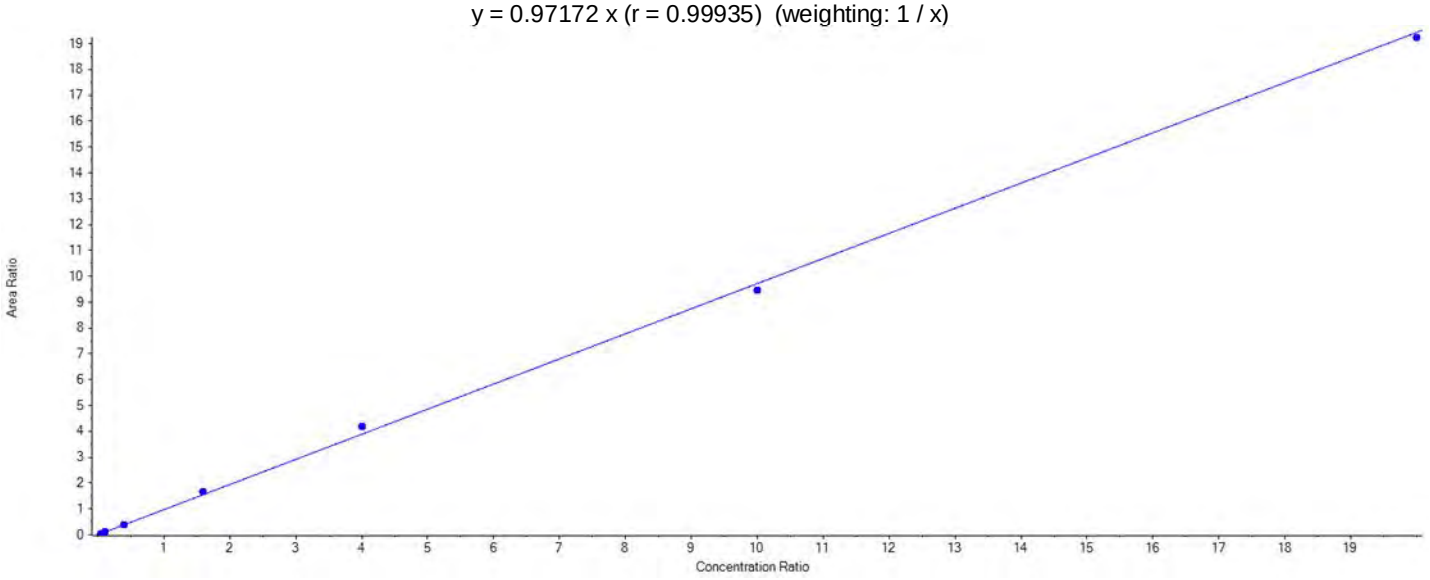
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NMeFOSAA

y = 0.97172 x (r = 0.99935) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMeFOSAA Area	S/N	d3-NMeFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3293.8	523.5	94966.986	True	5.00	0.035	5.71	1.000	0.200	0.178	-11	30	
CAL2	9807.4	1757.7	83112.192	True	5.00	0.118	5.71	1.000	0.500	0.607	21	30	
CAL3	32400.4	714.3	81763.338	True	5.00	0.396	5.71	1.000	2.000	2.039	2	30	
CAL4	136316.9	1055.9	80900.105	True	5.00	1.685	5.71	1.000	8.000	8.670	8	30	
CAL5	308507.7	1864.0	73896.081	True	5.00	4.175	5.71	1.000	20.000	21.482	7	30	
CAL6	740651.6	2592.1	78157.968	True	5.00	9.476	5.70	1.000	50.000	48.760	-2	30	
CAL7	1450331.2	3029.7	75408.724	True	5.00	19.233	5.70	1.000	100.000	98.963	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

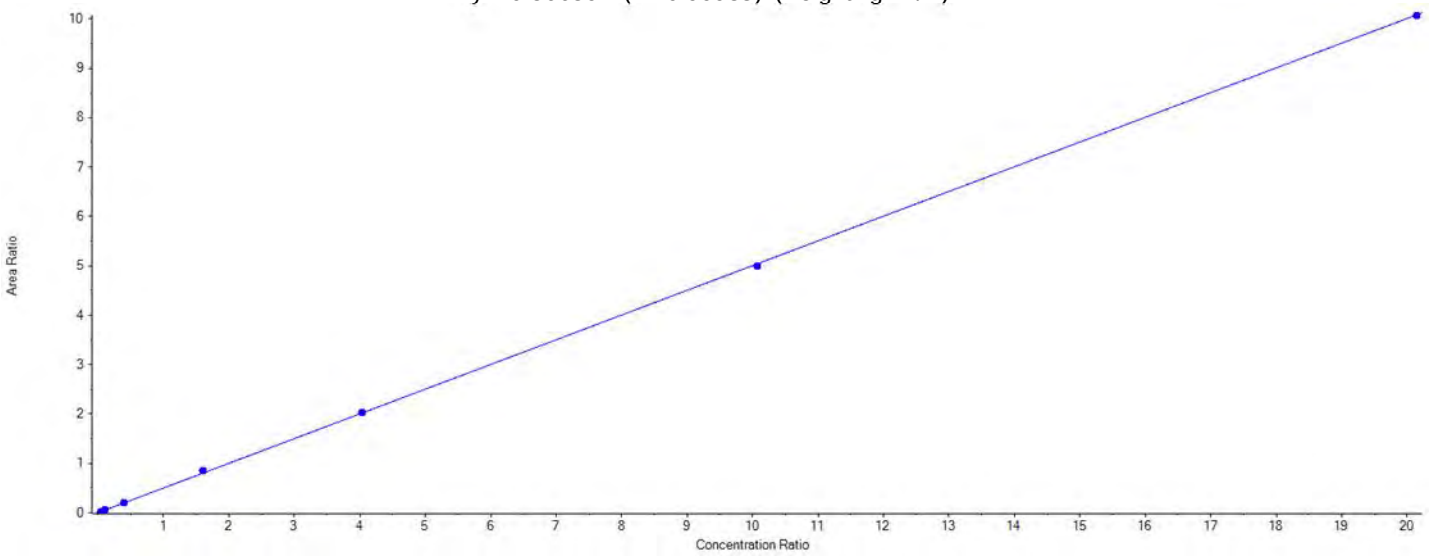
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDS

y = 0.50039 x (r = 0.99988) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6453.6	144.3	307224.329	True	4.78	0.021	5.80	1.100	0.190	0.201	6	30	
CAL2	15726.3	346.3	286174.783	True	4.78	0.055	5.80	1.110	0.482	0.525	9	30	
CAL3	59073.9	499.2	297259.750	True	4.78	0.199	5.80	1.100	1.930	1.898	-2	30	
CAL4	250911.0	762.1	291941.558	True	4.78	0.859	5.80	1.110	7.700	8.210	7	30	
CAL5	605559.3	1144.8	297995.609	True	4.78	2.032	5.80	1.110	19.260	19.412	1	30	
CAL6	1337416.6	1228.3	268368.993	True	4.78	4.983	5.79	1.110	48.150	47.605	-1	30	
CAL7	2660525.2	1099.2	264295.900	True	4.78	10.066	5.80	1.110	96.300	96.161	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

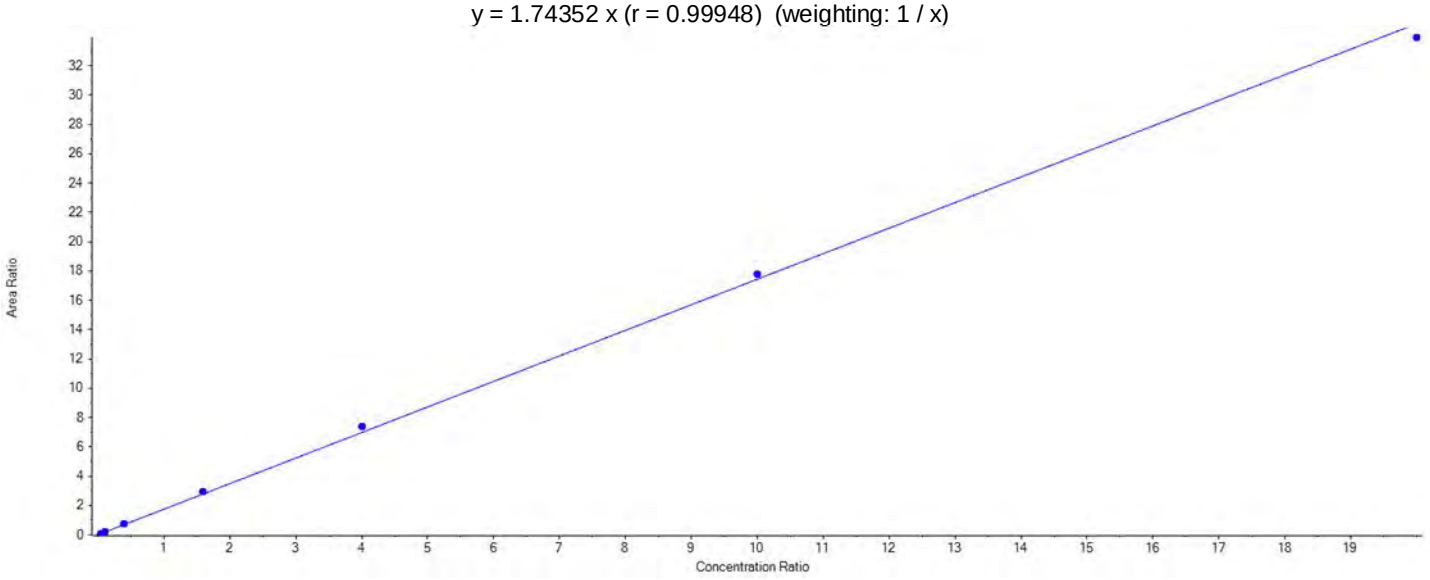
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFUnDA

y = 1.74352 x (r = 0.99948) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFUnDA Area	S/N	13C7-PFUnDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	23275.5	123.3	293658.674	True	5.00	0.079	5.83	1.000	0.200	0.227	14	30	
CAL2	54085.5	306.2	289985.074	True	5.00	0.187	5.83	1.000	0.500	0.535	7	30	
CAL3	209644.8	492.6	277115.542	True	5.00	0.757	5.83	1.000	2.000	2.170	8	30	
CAL4	802732.3	974.7	275977.201	True	5.00	2.909	5.83	1.000	8.000	8.341	4	30	
CAL5	1952356.4	1160.8	263924.687	True	5.00	7.397	5.83	1.000	20.000	21.214	6	30	
CAL6	4071590.3	1109.0	229237.069	True	5.00	17.761	5.82	1.000	50.000	50.936	2	30	
CAL7	7204782.9	1154.1	212399.757	True	5.00	33.921	5.82	1.000	100.000	97.277	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

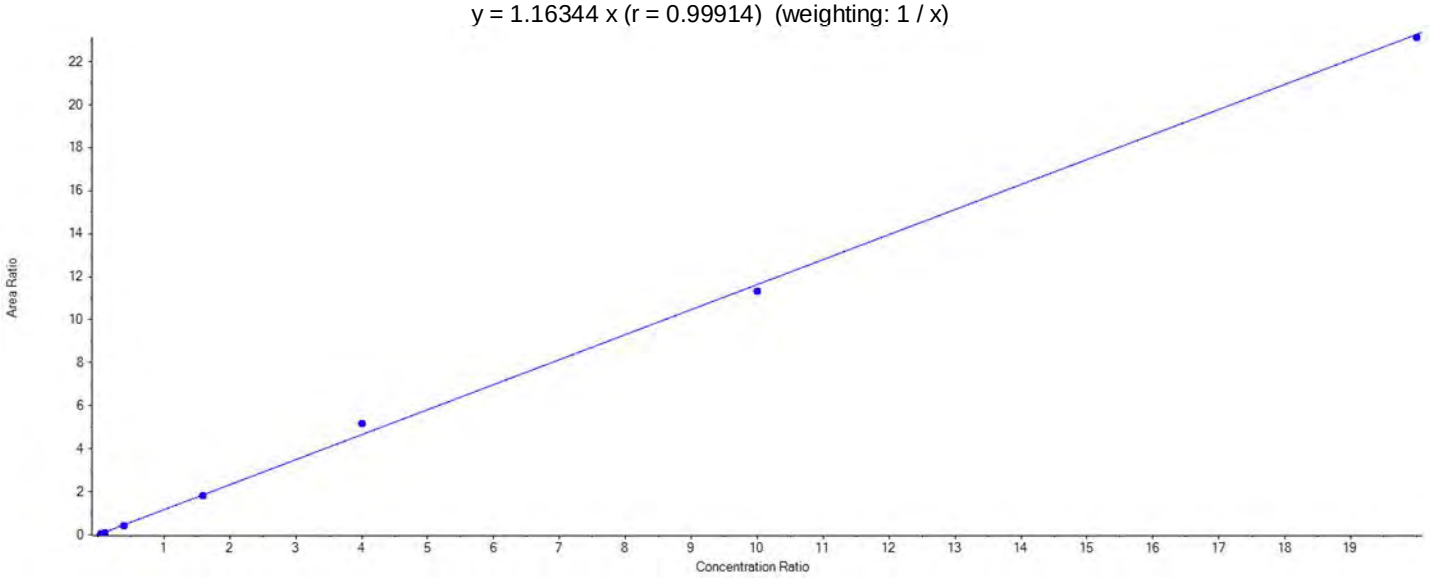
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtFOSAA

y = 1.16344 x (r = 0.99914) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtFOSAA Area	S/N	d5-NEtFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3313.0	102.1	77938.309	True	5.00	0.043	5.84	1.000	0.200	0.183	-9	30	
CAL2	7253.7	357.6	65815.920	True	5.00	0.110	5.84	1.000	0.500	0.474	-5	30	
CAL3	32100.8	3488.9	72755.747	True	5.00	0.441	5.85	1.000	2.000	1.896	-5	30	
CAL4	121615.1	1770.9	66162.445	True	5.00	1.838	5.84	1.000	8.000	7.900	-1	30	
CAL5	298834.2	3536.0	57745.714	True	5.00	5.175	5.85	1.000	20.000	22.240	11	30	
CAL6	685447.7	2450.9	60556.615	True	5.00	11.319	5.84	1.000	50.000	48.645	-3	30	
CAL7	1317020.6	2554.3	56963.053	True	5.00	23.121	5.84	1.000	100.000	99.363	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

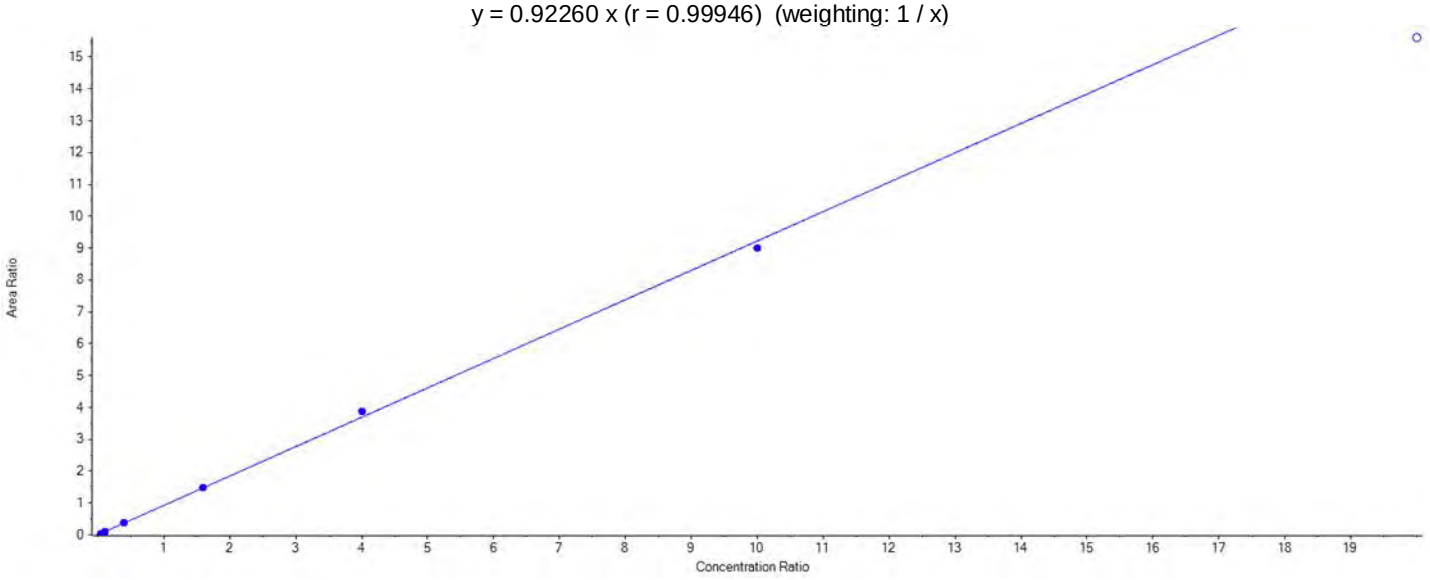
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoDA

y = 0.92260 x (r = 0.99946) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	23314.2	211.1	564794.852	True	5.00	0.041	6.06	1.000	0.200	0.224	12	30	
CAL2	60098.0	579.3	597616.302	True	5.00	0.101	6.06	1.000	0.500	0.545	9	30	
CAL3	220663.6	750.3	584631.538	True	5.00	0.377	6.06	1.000	2.000	2.046	2	30	
CAL4	877242.2	1049.4	598287.433	True	5.00	1.466	6.05	1.000	8.000	7.946	-1	30	
CAL5	2132260.7	1239.0	548536.046	True	5.00	3.887	6.06	1.000	20.000	21.067	5	30	
CAL6	4509578.7	1127.0	500065.276	True	5.00	9.018	6.05	1.000	50.000	48.873	-2	30	
CAL7	8211828.8	1159.6	525971.755	False	5.00	15.613	6.05	1.000	100.000	84.613	-15	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

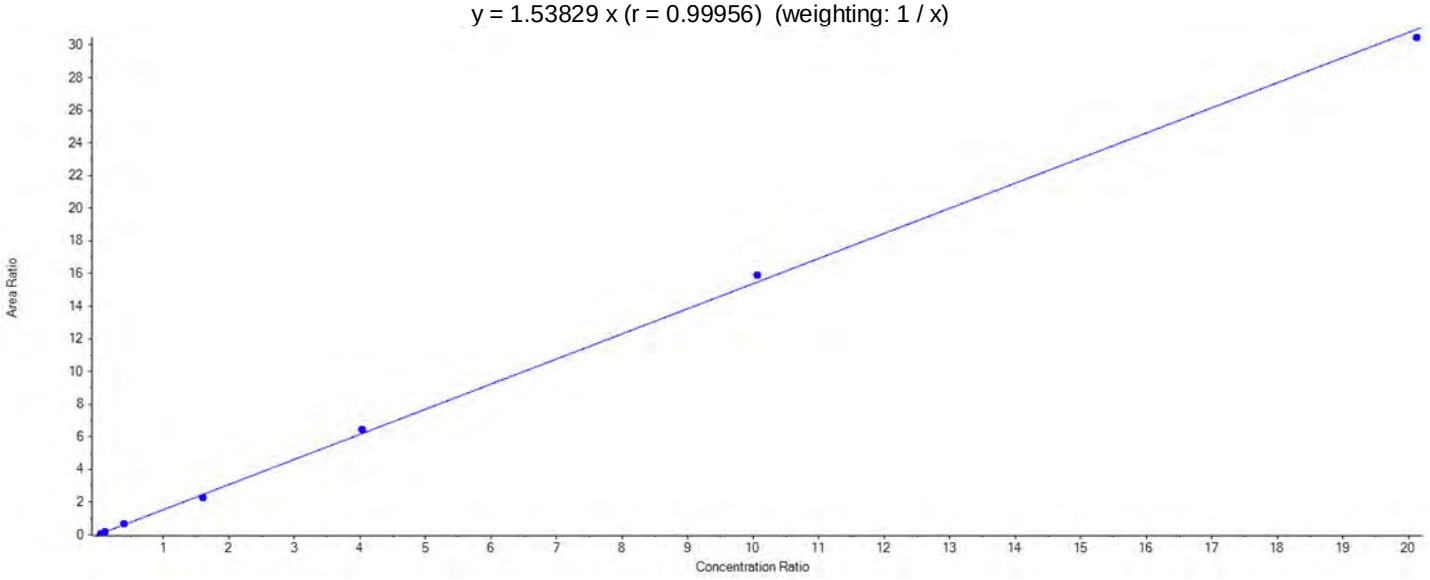
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

10:2-FTS

y = 1.53829 x (r = 0.99956) (weighting: 1 / x)



Component Calibration Verification

Sample Name	10:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1903.7	172.7	26730.160	True	4.79	0.071	6.07	1.090	0.193	0.222	15	30	
CAL2	4874.3	125.8	27523.013	True	4.79	0.177	6.07	1.090	0.482	0.551	14	30	
CAL3	19060.5	262.9	29468.270	True	4.79	0.647	6.07	1.090	1.928	2.014	4	30	
CAL4	69275.8	544.3	30500.264	True	4.79	2.271	6.07	1.090	7.712	7.073	-8	30	
CAL5	177607.5	693.3	27553.973	True	4.79	6.446	6.07	1.090	19.280	20.071	4	30	
CAL6	395929.8	1104.6	24938.159	True	4.79	15.876	6.07	1.090	48.200	49.437	3	30	
CAL7	747804.5	1151.9	24555.696	True	4.79	30.453	6.07	1.090	96.400	94.827	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

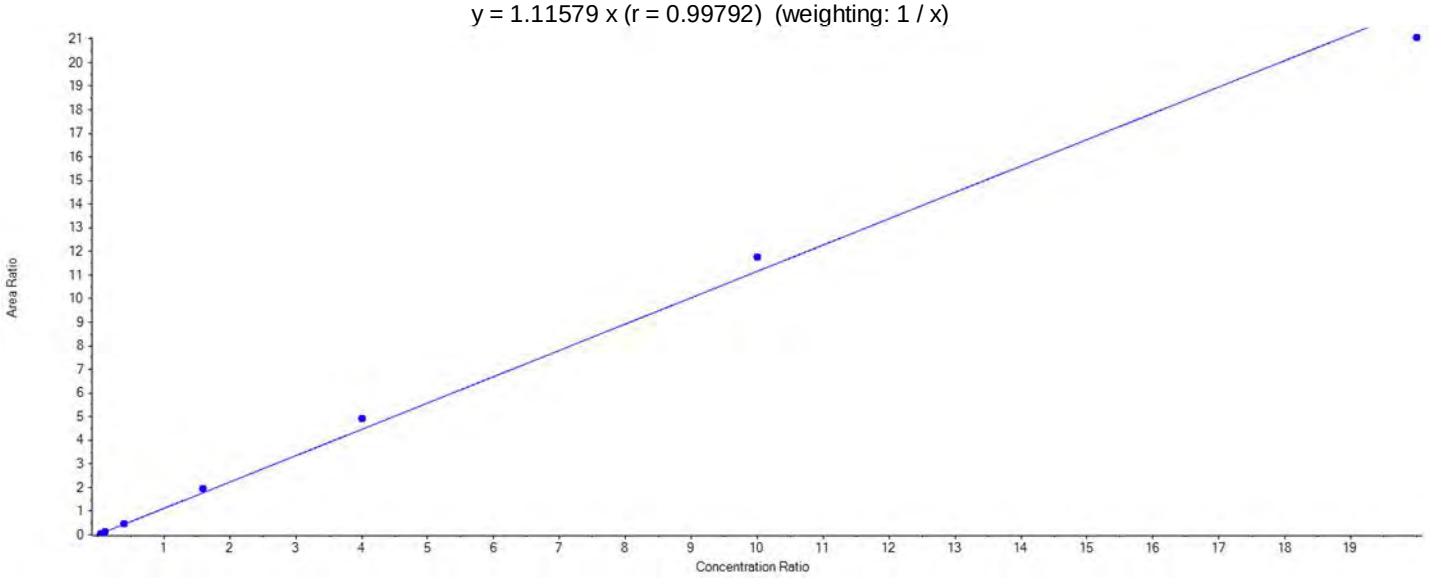
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSAE

y = 1.11579 x (r = 0.99792) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSAE Area	S/N	d7-NMePFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	19989.4	87.7	366847.670	True	5.00	0.054	6.10	1.000	0.200	0.244	22	30	
CAL2	40902.1	140.8	330298.603	True	5.00	0.124	6.10	1.000	0.500	0.555	11	30	
CAL3	151795.0	297.4	335206.816	True	5.00	0.453	6.10	1.000	2.000	2.029	1	30	
CAL4	648523.4	496.3	330968.748	True	5.00	1.959	6.09	1.000	8.000	8.781	10	30	
CAL5	1583085.5	689.6	321549.477	True	5.00	4.923	6.10	1.000	20.000	22.062	10	30	
CAL6	3462215.2	801.3	294617.585	True	5.00	11.752	6.09	1.000	50.000	52.660	5	30	
CAL7	6220772.1	824.6	295395.339	True	5.00	21.059	6.09	1.000	100.000	94.369	-6	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

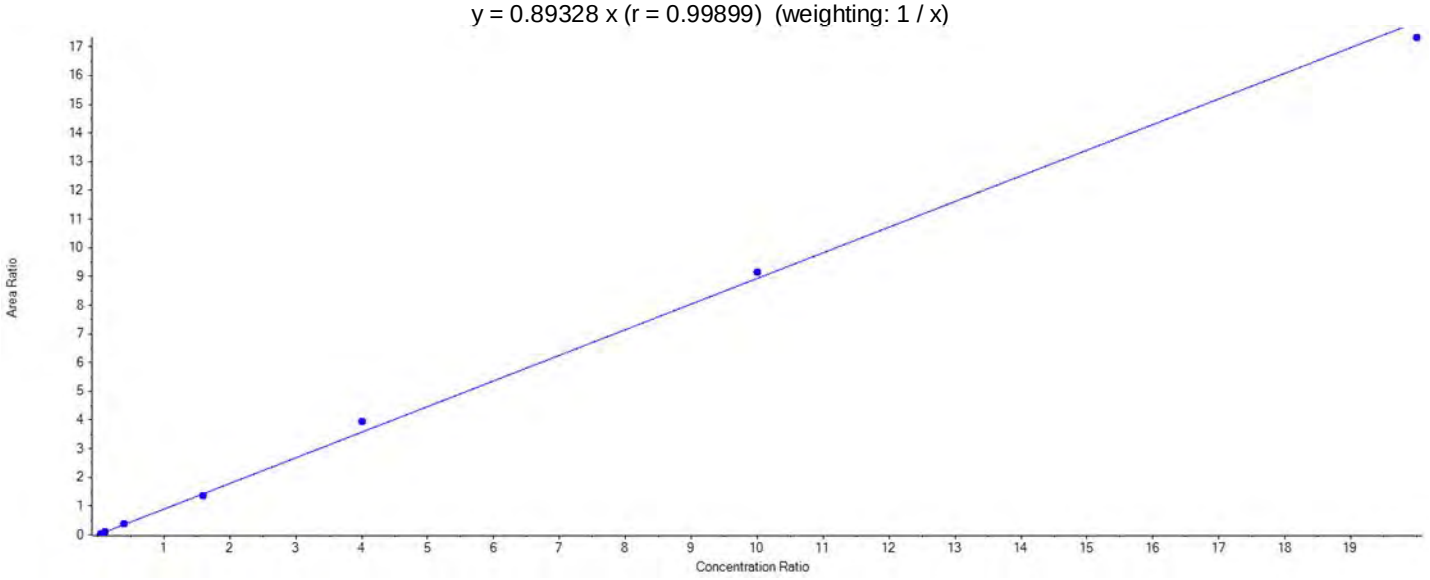
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSA

y = 0.89328 x (r = 0.99899) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSA Area	S/N	d3-NMePFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3218.9	123.4	89511.926	True	5.00	0.036	6.10	1.000	0.200	0.201	1	30	
CAL2	8251.9	123.5	81301.239	True	5.00	0.101	6.10	1.000	0.500	0.568	14	30	
CAL3	29797.4	354.6	79381.682	True	5.00	0.375	6.10	1.000	2.000	2.101	5	30	
CAL4	118194.2	528.2	86399.425	True	5.00	1.368	6.10	1.000	8.000	7.657	-4	30	
CAL5	323567.0	708.0	82137.635	True	5.00	3.939	6.10	1.000	20.000	22.050	10	30	
CAL6	705149.2	546.6	77146.949	True	5.00	9.140	6.10	1.000	50.000	51.162	2	30	
CAL7	1386738.5	563.9	80053.250	True	5.00	17.323	6.10	1.000	100.000	96.961	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

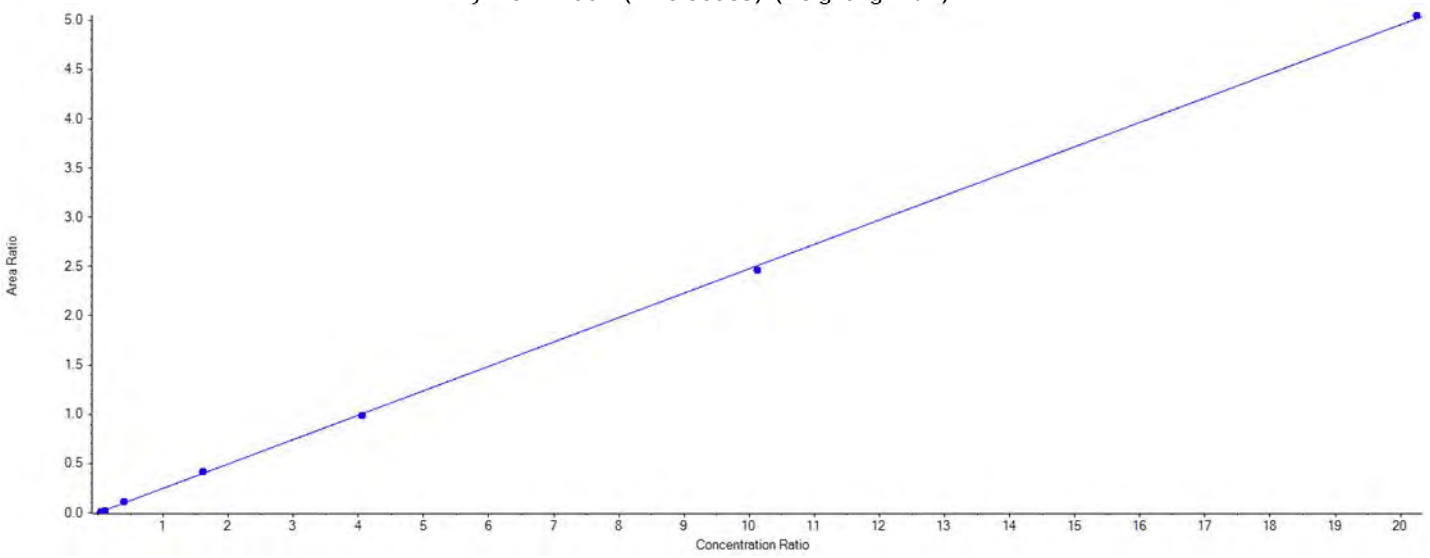
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoS

y = 0.24766 x (r = 0.99988) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3016.1	142.5	307224.329	True	4.78	0.010	6.22	1.190	0.190	0.189	0	30	
CAL2	7227.2	251.5	286174.783	True	4.78	0.025	6.23	1.190	0.484	0.487	1	30	
CAL3	32096.3	376.5	297259.750	True	4.78	0.108	6.22	1.190	1.940	2.084	7	30	
CAL4	121590.1	703.3	291941.558	True	4.78	0.416	6.22	1.190	7.740	8.039	4	30	
CAL5	295383.8	738.2	297995.609	True	4.78	0.991	6.22	1.190	19.360	19.132	-1	30	
CAL6	661528.1	1015.3	268368.993	True	4.78	2.465	6.22	1.190	48.400	47.576	-2	30	
CAL7	1333847.1	1122.7	264295.900	True	4.78	5.047	6.22	1.190	96.800	97.407	1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

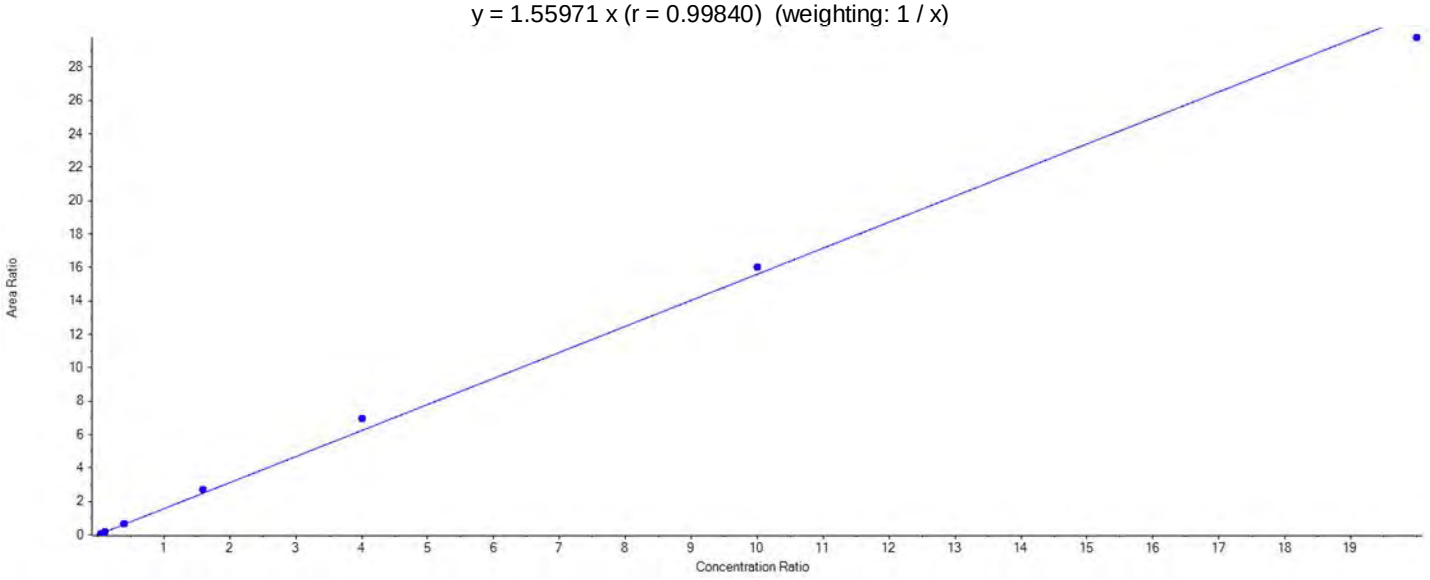
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSAE

y = 1.55971 x (r = 0.99840) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSAE Area	S/N	d9-NEtPFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	21922.0	86.9	296629.265	True	5.00	0.074	6.25	1.000	0.200	0.237	18	30	
CAL2	48905.8	147.7	270607.582	True	5.00	0.181	6.25	1.000	0.500	0.579	16	30	
CAL3	180884.6	310.2	278375.126	True	5.00	0.650	6.25	1.000	2.000	2.083	4	30	
CAL4	740427.4	562.5	273909.084	True	5.00	2.703	6.25	1.000	8.000	8.666	8	30	
CAL5	1810587.6	560.5	259950.874	True	5.00	6.965	6.25	1.000	20.000	22.328	12	30	
CAL6	3836850.8	823.2	239316.963	True	5.00	16.033	6.25	1.000	50.000	51.396	3	30	
CAL7	6995371.5	738.3	235038.050	True	5.00	29.763	6.25	1.000	100.000	95.411	-5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

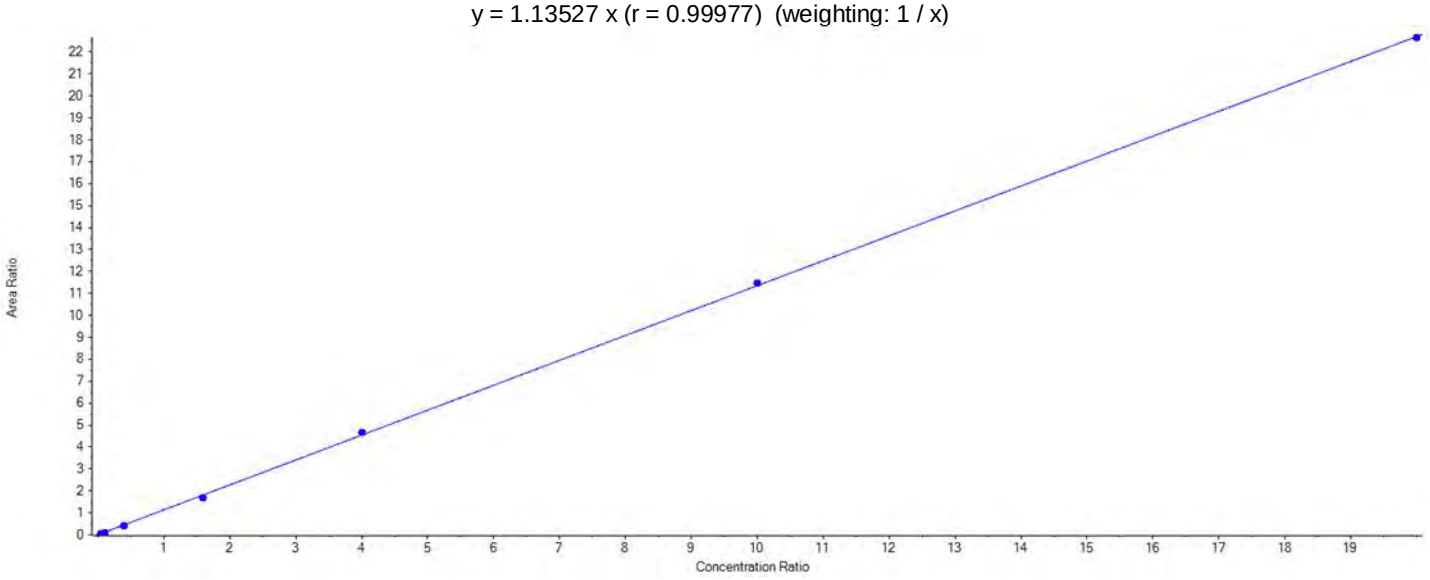
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSA

y = 1.13527 x (r = 0.99977) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSA Area	S/N	d5-NEtPFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3068.5	69.6	70926.726	True	5.00	0.043	6.26	1.000	0.200	0.191	-5	30	
CAL2	6419.4	198.8	66745.434	True	5.00	0.096	6.26	1.000	0.500	0.424	-15	30	
CAL3	26524.6	267.9	67444.318	True	5.00	0.393	6.27	1.000	2.000	1.732	-13	30	
CAL4	123609.2	637.6	72258.683	True	5.00	1.711	6.26	1.000	8.000	7.534	-6	30	
CAL5	290096.1	630.6	62005.585	True	5.00	4.679	6.27	1.000	20.000	20.605	3	30	
CAL6	676107.2	667.5	59054.389	True	5.00	11.449	6.26	1.000	50.000	50.423	1	30	
CAL7	1329706.9	655.7	58686.052	True	5.00	22.658	6.26	1.000	100.000	99.791	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

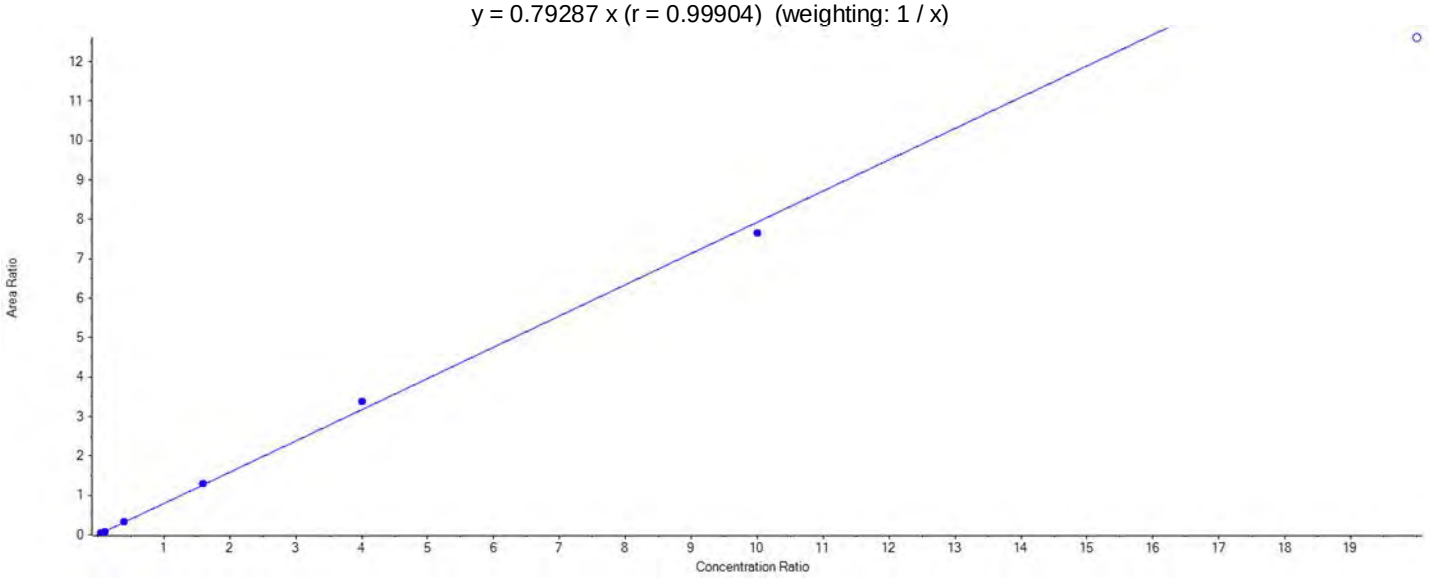
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTrDA

y = 0.79287 x (r = 0.99904) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTrDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	22403.2	67.6	564794.852	True	5.00	0.040	6.25	1.030	0.200	0.250	25	30	
CAL2	49218.5	108.1	597616.302	True	5.00	0.082	6.25	1.030	0.500	0.519	4	30	
CAL3	197290.7	195.6	584631.538	True	5.00	0.337	6.25	1.030	2.000	2.128	6	30	
CAL4	781283.7	366.6	598287.433	True	5.00	1.306	6.25	1.030	8.000	8.235	3	30	
CAL5	1851055.0	610.7	548536.046	True	5.00	3.375	6.25	1.030	20.000	21.280	6	30	
CAL6	3829048.4	757.6	500065.276	True	5.00	7.657	6.25	1.030	50.000	48.287	-3	30	
CAL7	6633128.3	811.0	525971.755	False	5.00	12.611	6.25	1.030	100.000	79.528	-20	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

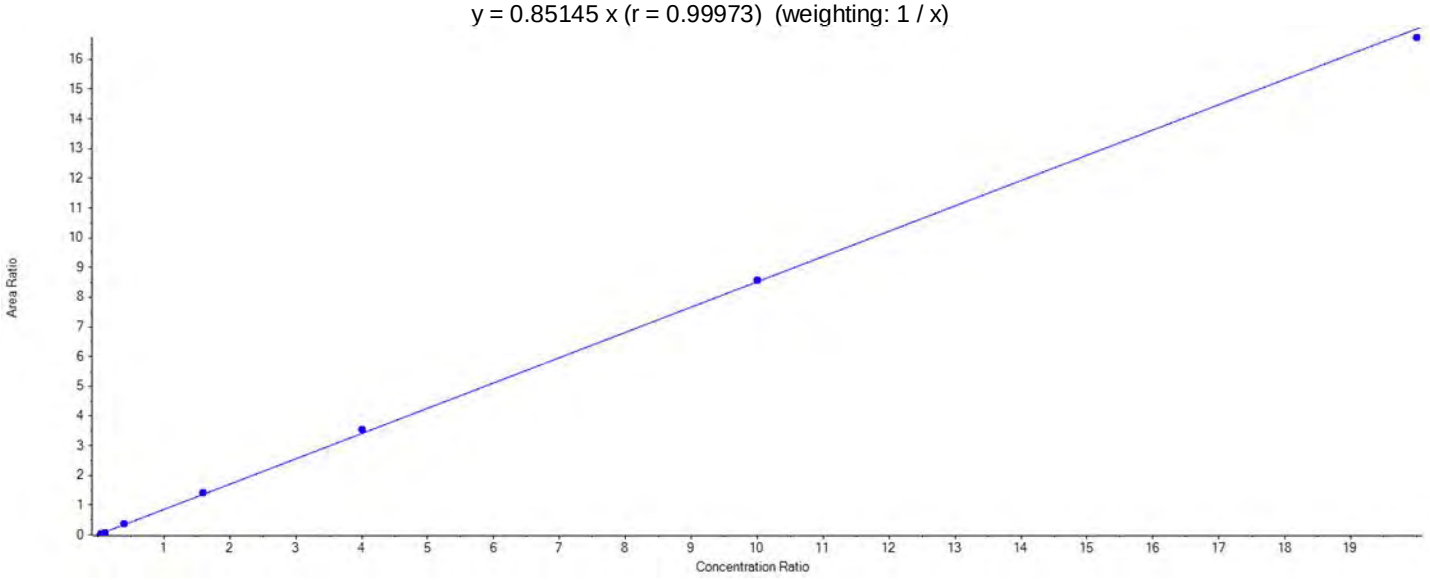
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA

y = 0.85145 x (r = 0.99973) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTeDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	17031.0	49.1	430341.267	True	5.00	0.040	6.43	1.000	0.200	0.232	16	30	
CAL2	36223.2	102.6	441206.866	True	5.00	0.082	6.43	1.000	0.500	0.482	-4	30	
CAL3	150162.8	175.3	419341.711	True	5.00	0.358	6.43	1.000	2.000	2.103	5	30	
CAL4	630801.4	309.8	441858.057	True	5.00	1.428	6.43	1.000	8.000	8.383	5	30	
CAL5	1500655.1	416.1	421798.801	True	5.00	3.558	6.43	1.000	20.000	20.892	4	30	
CAL6	3381511.1	591.7	394433.888	True	5.00	8.573	6.42	1.000	50.000	50.344	1	30	
CAL7	6426587.4	783.6	384058.101	True	5.00	16.733	6.43	1.000	100.000	98.263	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

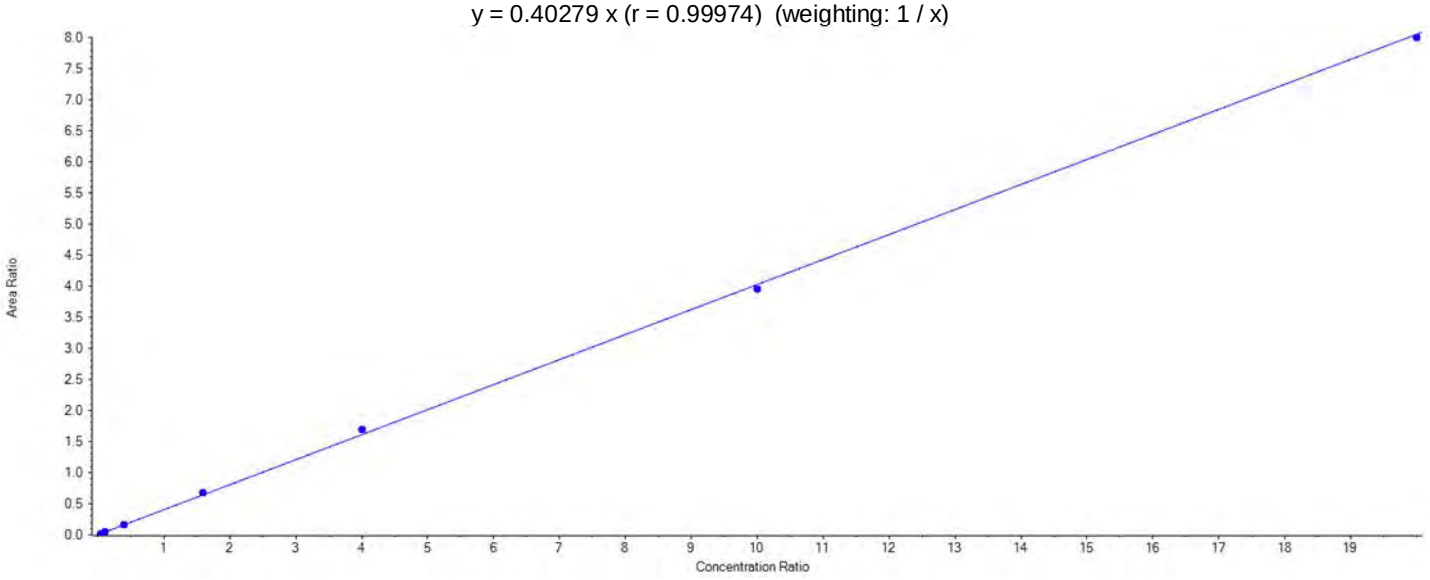
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxDA

y = 0.40279 x (r = 0.99974) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8175.1	231.4	430341.267	True	5.00	0.019	6.74	1.050	0.200	0.236	18	30	
CAL2	18619.3	372.3	441206.866	True	5.00	0.042	6.74	1.050	0.500	0.524	5	30	
CAL3	70193.5	676.5	419341.711	True	5.00	0.167	6.74	1.050	2.000	2.078	4	30	
CAL4	297242.6	1318.1	441858.057	True	5.00	0.673	6.73	1.050	8.000	8.351	4	30	
CAL5	716467.3	1493.6	421798.801	True	5.00	1.699	6.73	1.050	20.000	21.085	5	30	
CAL6	1559604.6	1330.2	394433.888	True	5.00	3.954	6.73	1.050	50.000	49.083	-2	30	
CAL7	3073572.7	1322.0	384058.101	True	5.00	8.003	6.73	1.050	100.000	99.343	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

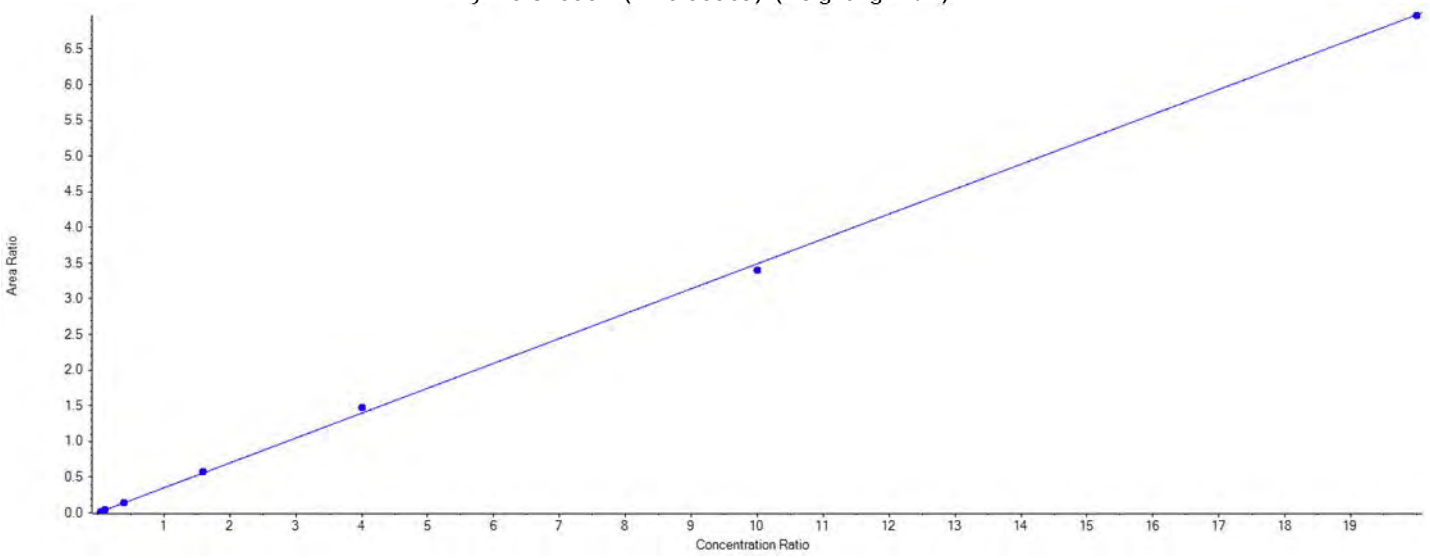
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFODA

y = 0.34900 x (r = 0.99969) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFODA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6622.6	295.7	430341.267	True	5.00	0.015	7.00	1.090	0.200	0.220	10	30	
CAL2	15742.1	618.0	441206.866	True	5.00	0.036	7.00	1.090	0.500	0.511	2	30	
CAL3	59736.9	980.9	419341.711	True	5.00	0.142	7.00	1.090	2.000	2.041	2	30	
CAL4	251726.5	1475.1	441858.057	True	5.00	0.570	7.00	1.090	8.000	8.162	2	30	
CAL5	624697.0	1672.6	421798.801	True	5.00	1.481	7.00	1.090	20.000	21.218	6	30	
CAL6	1340733.9	1995.4	394433.888	True	5.00	3.399	6.99	1.090	50.000	48.698	-3	30	
CAL7	2676698.5	2398.9	384058.101	True	5.00	6.970	6.99	1.090	100.000	99.849	0	30	

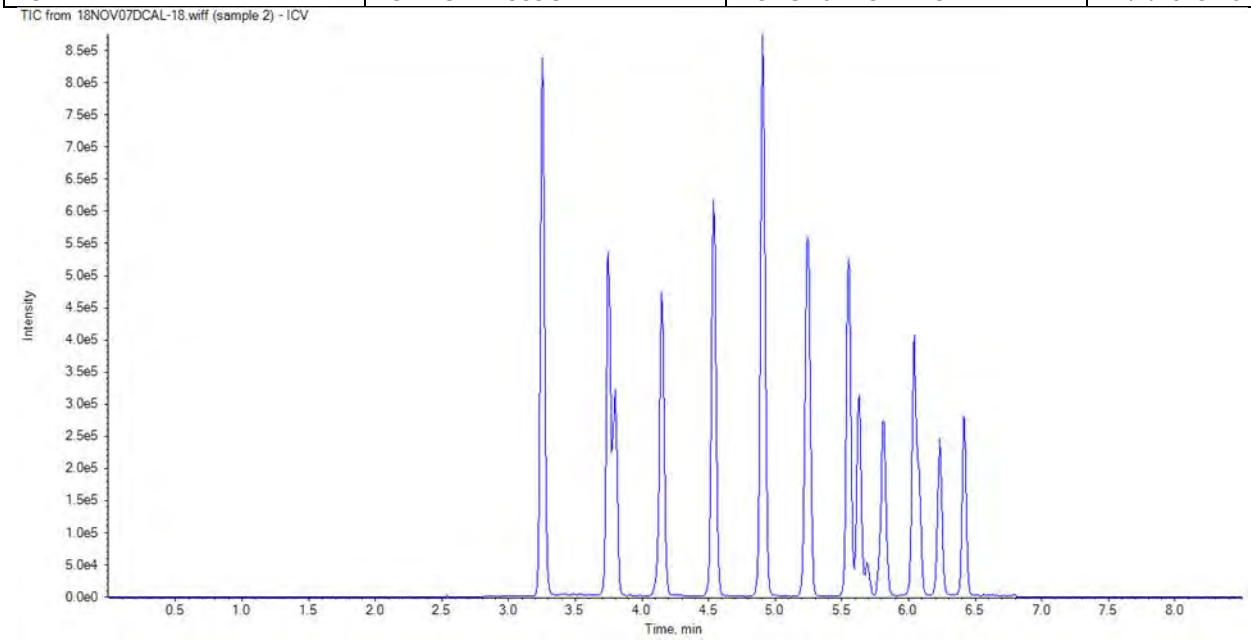
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV07DCAL-18.wiff	11/7/2018 10:51:59 AM



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	CAL3 Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.000	748799.9	730410.6	2.5	50	
13C2-PFOA	5.000	501855.0	524423.6	-4.3	50	
13C4-PFOS	4.780	265586.7	274061.7	-3.1	50	
13C2-PFDA	5.000	309656.0	311442.1	-0.6	50	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV07DCAL-18.wiff	11/7/2018 10:51:59 AM

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	307777.1	13C4-PFBA	809267.460	5.00	0.380	3.25	1.00	2.000	2.226	11	30	
PFPeA	325574.9	13C5-PFPeA	881218.236	5.00	0.369	3.75	1.00	2.000	2.196	10	30	
PFBS	159719.5	13C3-PFBS	459507.471	4.65	0.348	3.80	1.00	1.770	1.752	-1	30	
4:2-FTS	N/A	13C2-4:2-FTS	53451.954	4.67	N/A	N/A	N/A	0.000	N/A		30	
PFHxA	397434.6	13C5-PFHxA	721013.613	5.00	0.551	4.15	1.00	2.000	2.364	18	30	
PFPeS	N/A	13C3-PFBS	459507.471	4.65	N/A	N/A	N/A	0.000	N/A		30	
PFHxS	126635.3	13C3-PFHxS	351165.975	4.73	0.361	4.54	1.00	1.890	1.828	-3	30	
PFHpA	390197.1	13C4-PFHpA	564695.352	5.00	0.691	4.54	1.00	2.000	2.324	16	30	
6:2-FTS	N/A	13C2-6:2-FTS	37550.072	4.75	N/A	N/A	N/A	0.000	N/A		30	
PFHpS	126812.1	13C3-PFHxS	351165.975	4.73	0.361	4.90	1.08	1.900	1.889	-1	30	
PFOA	387215.1	13C8-PFOA	985027.092	5.00	0.393	4.91	1.00	2.000	2.213	11	30	
PFOS	114911.8	13C8-PFOS	289450.121	4.78	0.397	5.23	1.00	1.910	2.059	8	30	
PFNA	329644.4	13C9-PFNA	531663.026	5.00	0.620	5.25	1.00	2.000	2.317	16	30	
PFNS	N/A	13C8-PFOS	289450.121	4.78	N/A	N/A	N/A	0.000	N/A		30	
PFDA	262760.0	13C6-PFDA	669137.111	5.00	0.393	5.55	1.00	2.000	2.160	8	30	
8:2-FTS	N/A	13C2-8:2-FTS	27983.400	4.79	N/A	N/A	N/A	0.000	N/A		30	
PFOSA	N/A	13C8-PFOSA	741232.186	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMeFOSAA	33916.6	d3-NMeFOSAA	76665.384	5.00	0.442	5.69	1.00	2.000	2.276	14	30	
PFDS	65962.5	13C8-PFOS	289450.121	4.78	0.228	5.79	1.11	1.930	2.177	13	30	
PFUnDA	225137.5	13C7-PFUnDA	292761.511	5.00	0.769	5.81	1.00	2.000	2.205	10	30	
NEtFOSAA	29687.2	d5-NEtFOSAA	78938.706	5.00	0.376	5.83	1.00	2.000	1.616	-19	30	
PFDoDA	232949.2	13C2-PFDoDA	580675.056	5.00	0.401	6.04	1.00	2.000	2.174	9	30	
10:2-FTS	N/A	13C2-8:2-FTS	27983.400	4.79	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSAE	N/A	d7-NMePFOSAE	334001.430	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSA	N/A	d3-NMePFOSA	79719.053	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFDoS	N/A	13C8-PFOS	289450.121	4.78	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSAE	N/A	d9-NEtPFOSAE	293829.693	5.00	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSA	N/A	d5-NEtPFOSA	65412.861	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFTrDA	206908.4	13C2-PFDoDA	580675.056	5.00	0.356	6.24	1.03	2.000	2.247	12	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA	157975.3	13C2-PFTeDA	427601.643	5.00	0.369	6.42	1.00	2.000	2.169	8	30	
PFHxDA	N/A	13C2-PFTeDA	427601.643	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFODA	N/A	13C2-PFTeDA	427601.643	5.00	N/A	N/A	N/A	0.000	N/A		30	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL1			**Data File:**		18NOV07DCAL-10.wiff
Sample ID:	CALMOD11833G			**Acquis Date:**		2018-11-07T09:39:56
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	3			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	750780.0	730410.6	3	50	
13C2-PFOA	5.0	534171.9	524423.6	2	50	
13C4-PFOS	4.8	272674.7	274061.7	-1	50	
13C2-PFDA	5.0	338833.7	311442.1	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	794718.9	13C3-PFBA	750780.0	1.059	5.000	4.899	98	70-130	
E13C5-PFPeA	844850.2	13C3-PFBA	750780.0	1.125	5.000	4.902	98	70-130	
E13C3-PFBS	449266.3	13C3-PFBA	750780.0	0.598	4.650	4.392	94	70-130	
E13C2-4:2-FTS	58330.9	13C2-PFOA	534171.9	0.109	4.670	4.927	106	70-130	
E13C5-PFHxA	725432.0	13C2-PFOA	534171.9	1.358	5.000	4.996	100	70-130	
E13C3-PFHxS	358771.3	13C2-PFOA	534171.9	0.672	4.730	4.822	102	70-130	
E13C4-PFHpA	586580.3	13C2-PFOA	534171.9	1.098	5.000	4.995	100	70-130	
E13C2-6:2-FTS	42112.8	13C2-PFOA	534171.9	0.079	4.750	5.257	111	70-130	
E13C8-PFOA	1028414.9	13C2-PFOA	534171.9	1.925	5.000	5.369	107	70-130	
E13C8-PFOS	307224.3	13C4-PFOS	272674.7	1.127	4.780	4.982	104	70-130	
E13C9-PFNA	518118.7	13C4-PFOS	272674.7	1.900	5.000	5.190	104	70-130	
E13C6-PFDA	651348.0	13C2-PFDA	338833.7	1.922	5.000	4.834	97	70-130	
E13C2-8:2-FTS	26730.2	13C2-PFDA	338833.7	0.079	4.790	4.174	87	70-130	
E13C8-PFOSA	774962.8	13C2-PFDA	338833.7	2.287	5.000	4.991	100	70-130	
Ed3-NMeFOSAA	94967.0	13C2-PFDA	338833.7	0.280	5.000	5.212	104	70-130	
E13C7-PFUnDA	293658.7	13C2-PFDA	338833.7	0.867	5.000	5.000	100	70-130	
Ed5-NEtFOSAA	77938.3	13C2-PFDA	338833.7	0.230	5.000	5.323	106	70-130	
E13C2-PFDoDA	564794.9	13C2-PFDA	338833.7	1.667	5.000	4.494	90	70-130	
Ed7-NMePFOSAE	366847.7	13C2-PFDA	338833.7	1.083	5.000	5.035	101	70-130	
Ed3-NMePFOSA	89511.9	13C2-PFDA	338833.7	0.264	5.000	4.836	97	70-130	
Ed9-NEtPFOSAE	296629.3	13C2-PFDA	338833.7	0.875	5.000	5.000	100	70-130	
Ed5-NEtPFOSA	70926.7	13C2-PFDA	338833.7	0.209	5.000	4.847	97	70-130	
E13C2-PFTeDA	430341.3	13C2-PFDA	338833.7	1.270	5.000	4.572	91	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

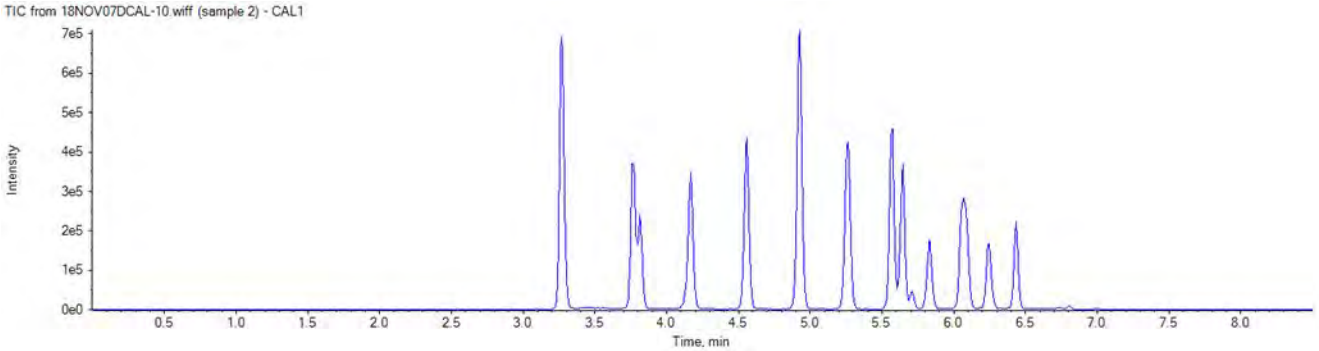
Analyte Quantitation Peak Table

Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-10.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	32354.4		A	13C4-PFBA	3.27	794718.9	0.041	0.238
PFPeA	3.77	1.000	33205.5		A	13C5-PFPeA	3.77	844850.2	0.039	0.234
PFBS	3.82	1.000	19024.1		A	13C3-PFBS	3.82	449266.3	0.042	0.213
4:2-FTS	4.13	1.000	4145.4		M	13C2-4:2-FTS	4.13	58330.9	0.071	0.191
PFHxA	4.17	1.000	39732.2		A	13C5-PFHxA	4.17	725432.0	0.055	0.235
PFPeS	4.18	1.100	8335.4		A	13C3-PFBS	3.82	449266.3	0.019	0.183
PFHxS	4.56	1.000	13762.6		M	13C3-PFHxS	4.56	358771.3	0.038	0.194
PFHpA	4.55	1.000	38331.9		M	13C4-PFHpA	4.56	586580.3	0.065	0.220
6:2-FTS	4.91	1.000	2460.6		A	13C2-6:2-FTS	4.91	42112.8	0.058	0.146
PFHpS	4.91	1.080	14183.4		M	13C3-PFHxS	4.56	358771.3	0.040	0.207
PFOA	4.93	1.000	39843.5		A	13C8-PFOA	4.93	1028414.9	0.039	0.218
PFOS	5.25	1.000	12181.7		A	13C8-PFOS	5.25	307224.3	0.040	0.206
PFNA	5.27	1.000	32563.3		M	13C9-PFNA	5.27	518118.7	0.063	0.235
PFNS	5.55	1.060	6748.5		A	13C8-PFOS	5.25	307224.3	0.022	0.174
PFDA	5.57	1.000	25530.0		A	13C6-PFDA	5.57	651348.0	0.039	0.216
8:2-FTS	5.58	1.000	2783.3		M	13C2-8:2-FTS	5.57	26730.2	0.104	0.235
PFOSA	5.64	1.000	27779.6		A	13C8-PFOSA	5.64	774962.8	0.036	0.194
NMeFOSAA	5.71	1.000	3293.8		M	d3-NMeFOSAA	5.71	94967.0	0.035	0.178
PFDS	5.80	1.100	6453.6		A	13C8-PFOS	5.25	307224.3	0.021	0.201
PFUnDA	5.83	1.000	23275.5		M	13C7-PFUnDA	5.83	293658.7	0.079	0.227
NEtFOSAA	5.84	1.000	3313.0		A	d5-NEtFOSAA	5.84	77938.3	0.043	0.183
PFDoDA	6.06	1.000	23314.2		M	13C2-PFDoDA	6.06	564794.9	0.041	0.224
10:2-FTS	6.07	1.090	1903.7		A	13C2-8:2-FTS	5.57	26730.2	0.071	0.222
NMePFOSAE	6.10	1.000	19989.4		A	d7-NMePFOSAE	6.09	366847.7	0.054	0.244
NMePFOSA	6.10	1.000	3218.9		M	d3-NMePFOSA	6.10	89511.9	0.036	0.201
PFDoS	6.22	1.190	3016.1		M	13C8-PFOS	5.25	307224.3	0.010	0.189
NEtPFOSAE	6.25	1.000	21922.0		A	d9-NEtPFOSAE	6.24	296629.3	0.074	0.237
NEtPFOSA	6.26	1.000	3068.5		M	d5-NEtPFOSA	6.26	70926.7	0.043	0.191
PFTrDA	6.25	1.030	22403.2		A	13C2-PFDoDA	6.06	564794.9	0.040	0.250
PFTeDA	6.43	1.000	17031.0		A	13C2-PFTeDA	6.43	430341.3	0.040	0.232
PFHxDA	6.74	1.050	8175.1		A	13C2-PFTeDA	6.43	430341.3	0.019	0.236
PFODA	7.00	1.090	6622.6		A	13C2-PFTeDA	6.43	430341.3	0.015	0.220

Total Ion Chromatogram

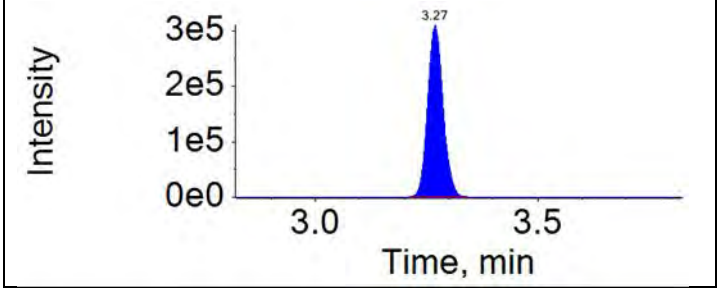


APPROVED
By JPT at 2:53 pm, 11/7/18

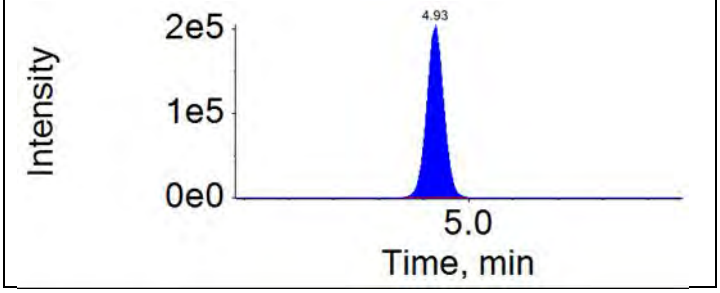
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

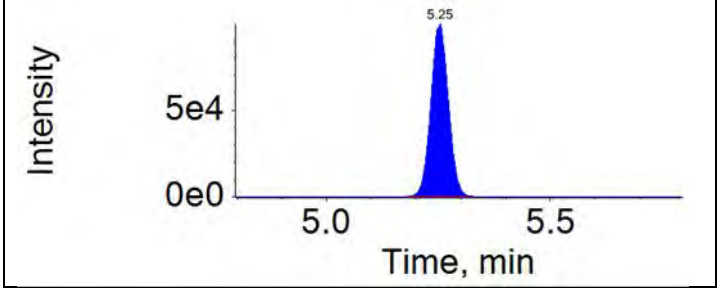
Injection Standard: 13C3-PFBA
216.0 / 172.0



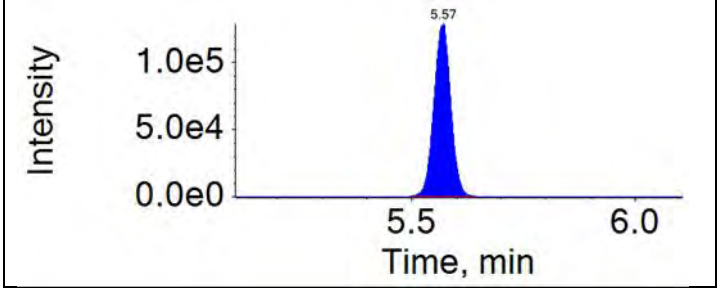
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

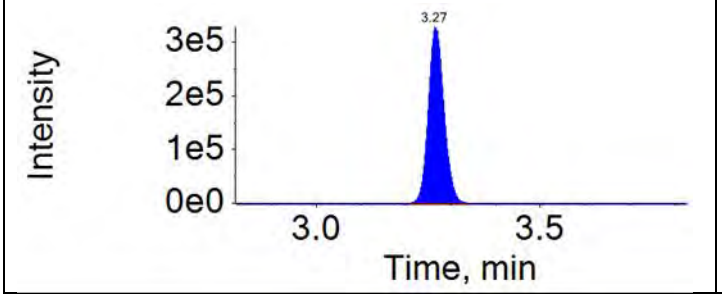


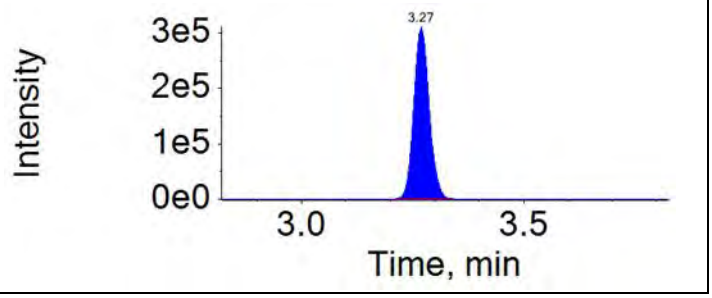
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

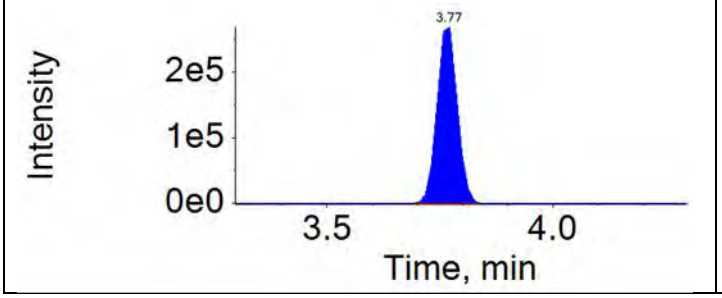
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

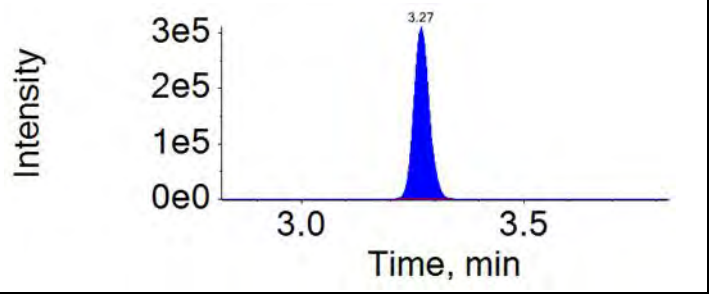
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



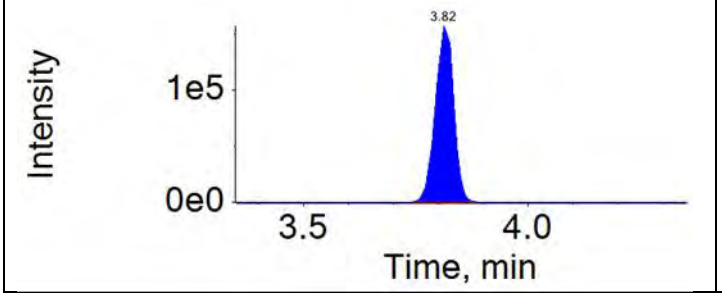


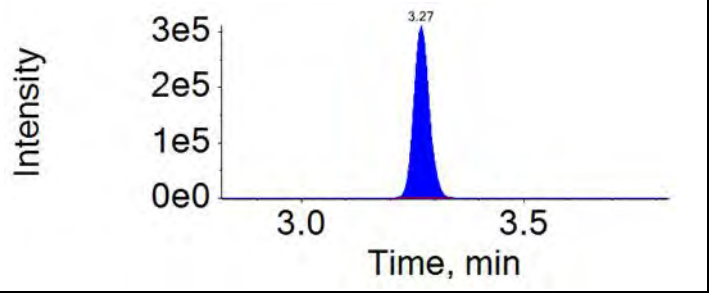
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



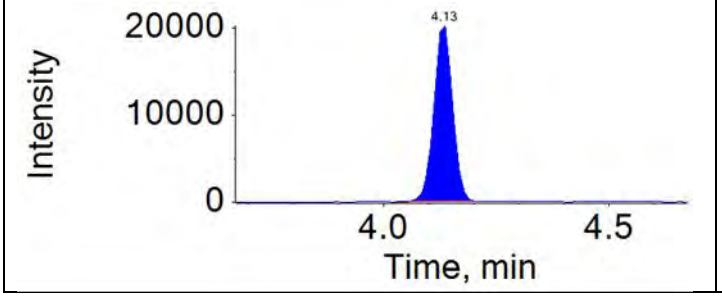


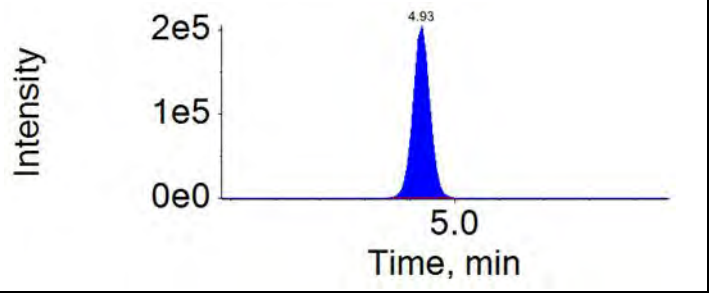
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



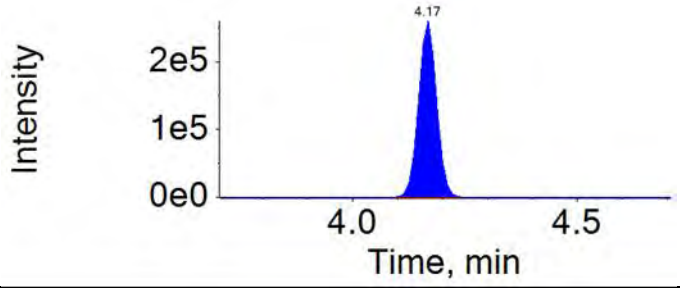
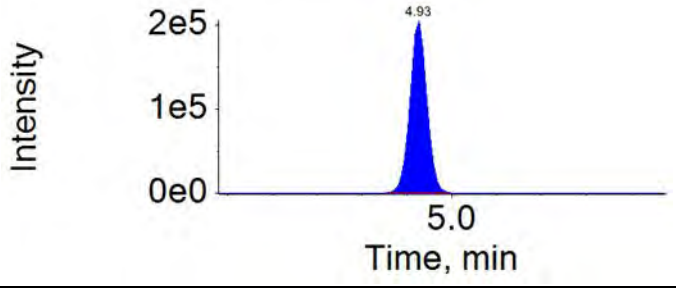


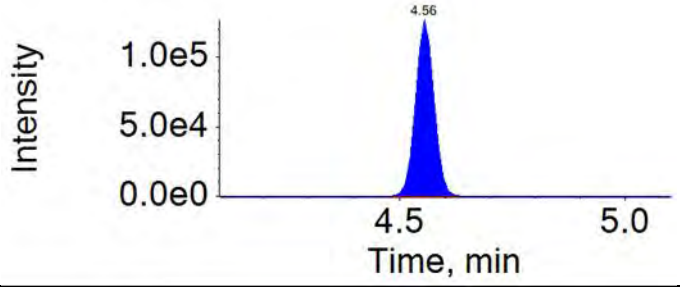
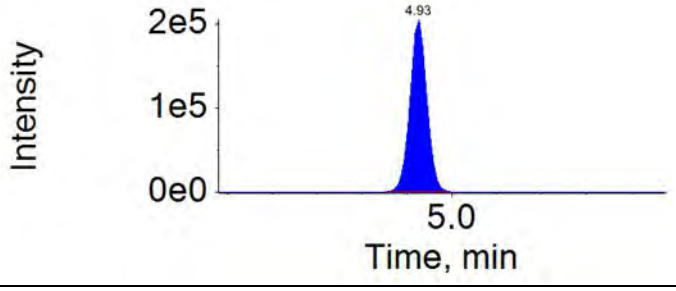
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

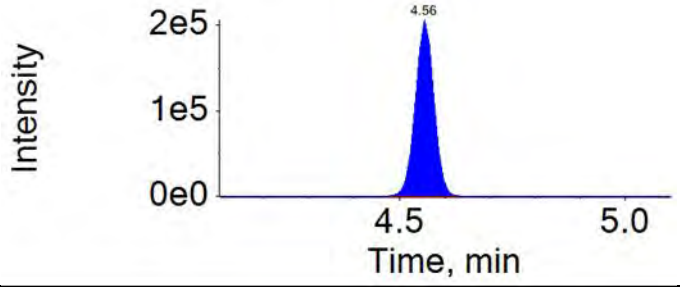
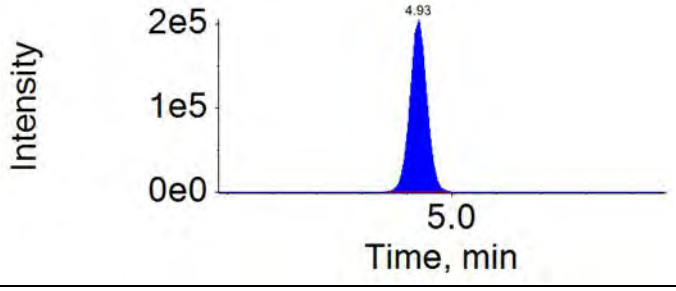


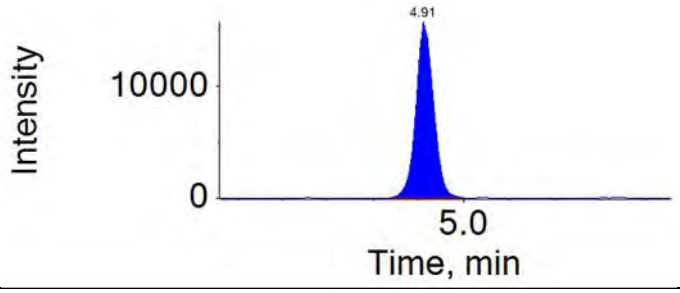
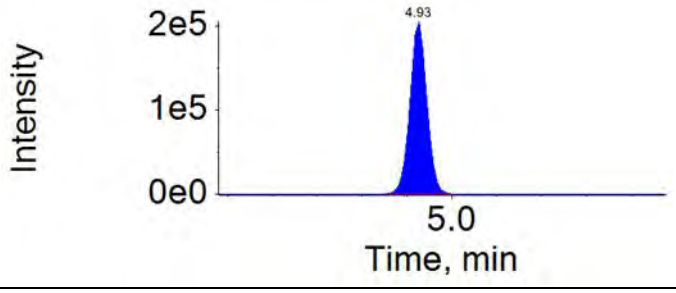


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

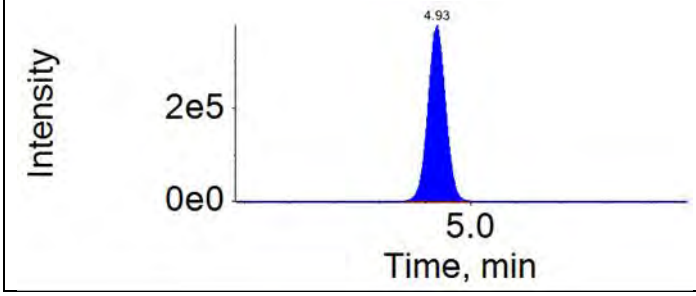
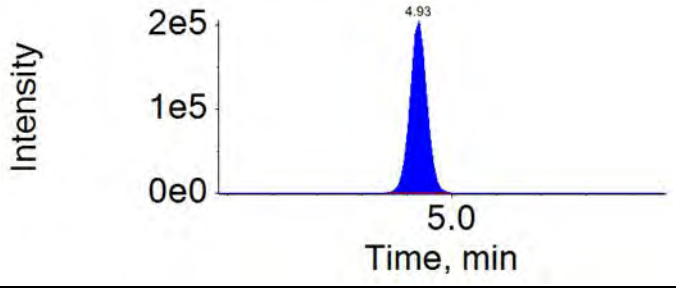
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

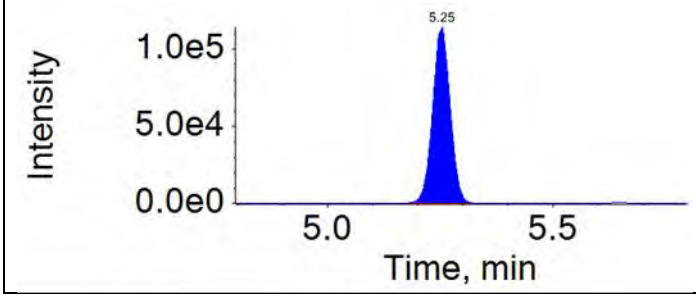
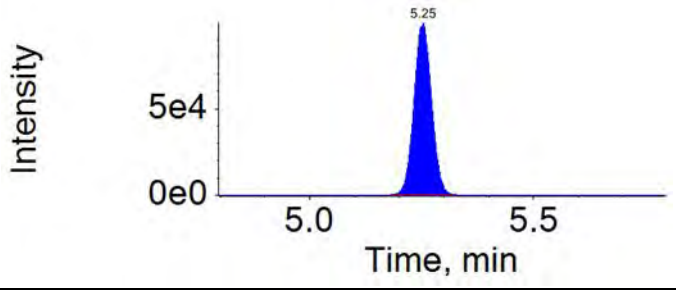
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

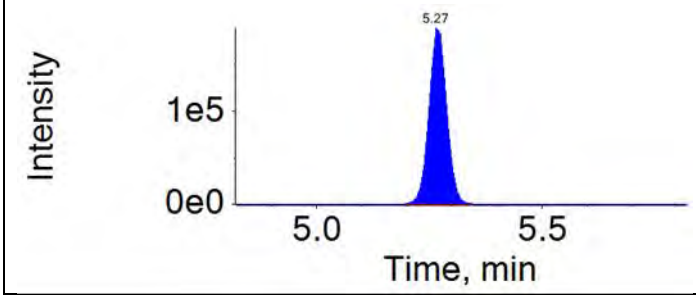
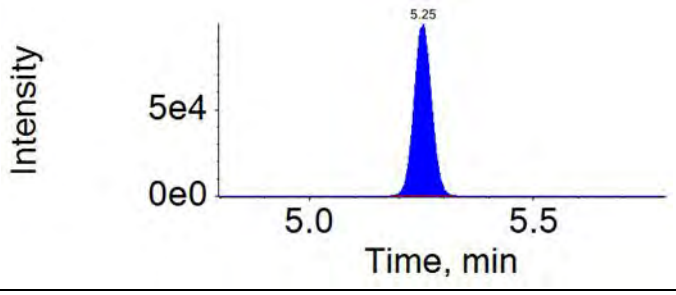
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

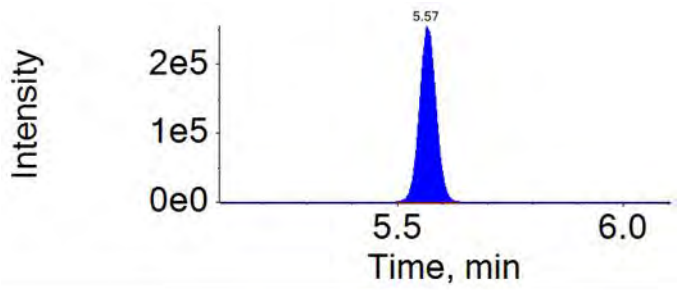
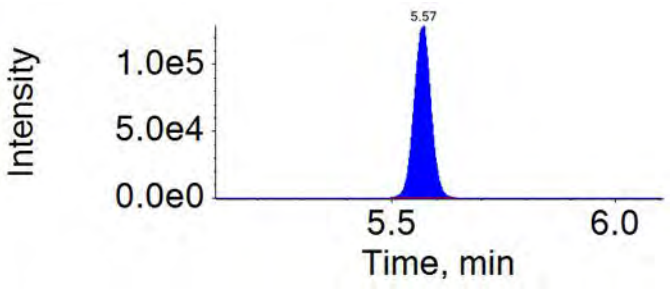
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

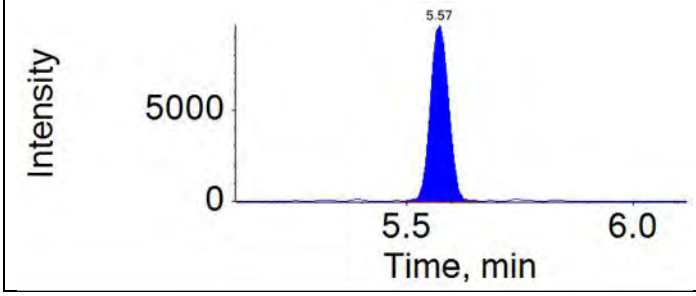
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

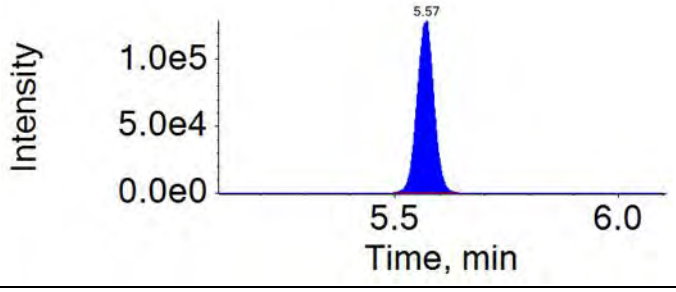
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

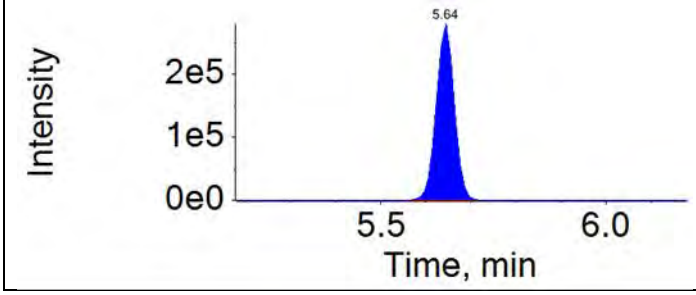
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

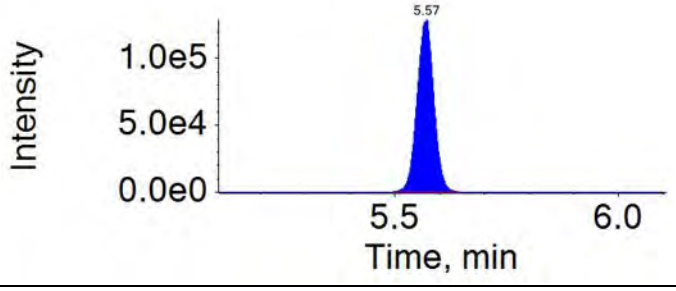
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



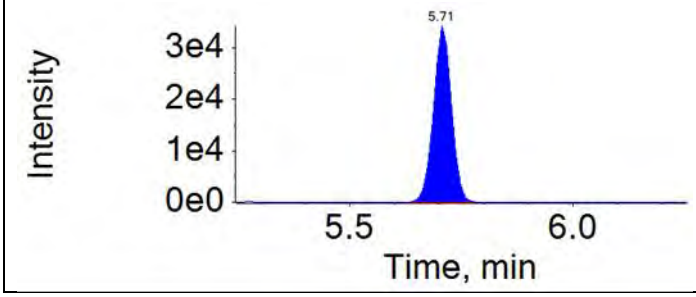


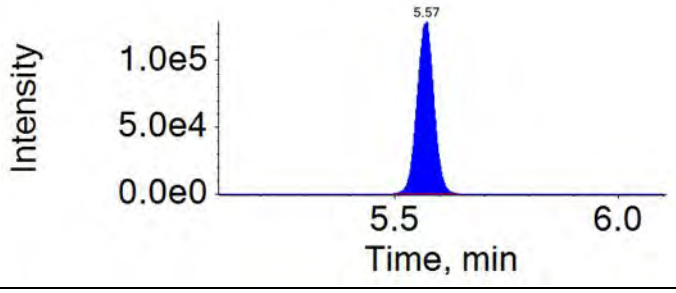
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



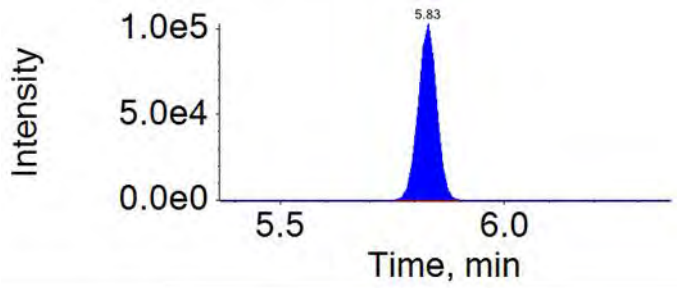


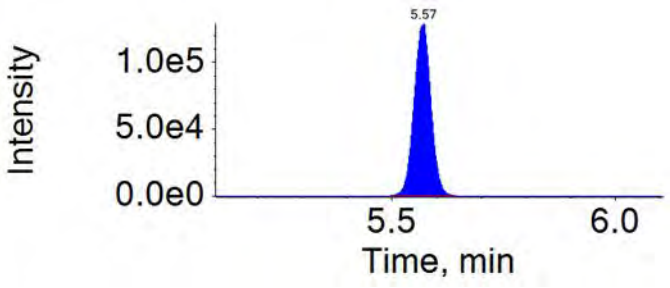
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

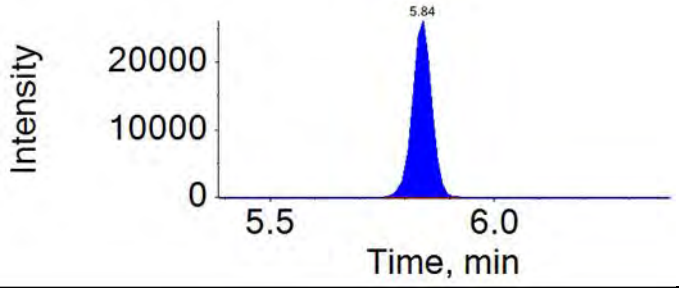
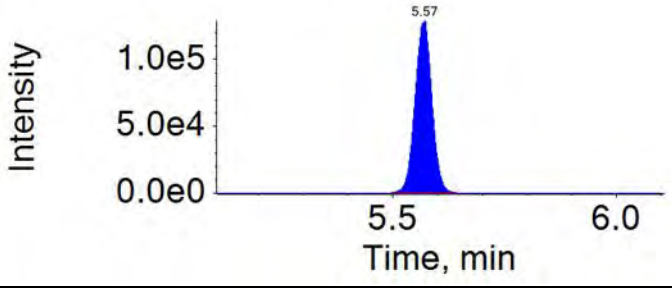


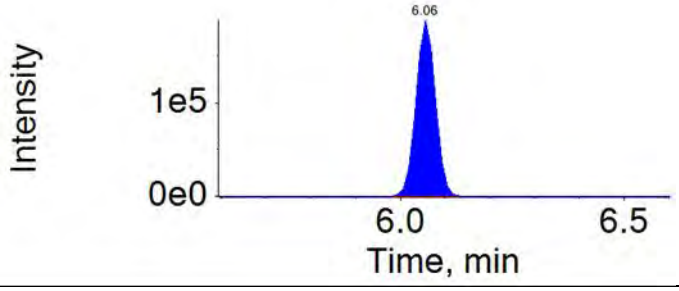
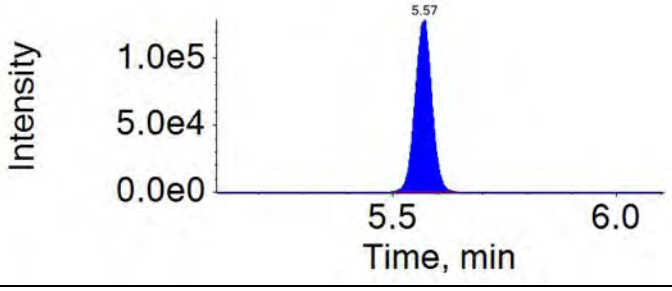


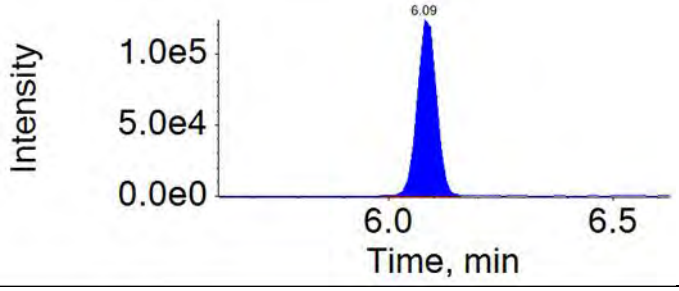
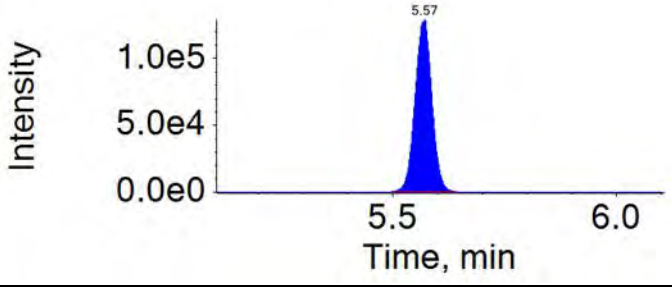
APPROVED
By JPT at 2:53 pm, 11/7/18

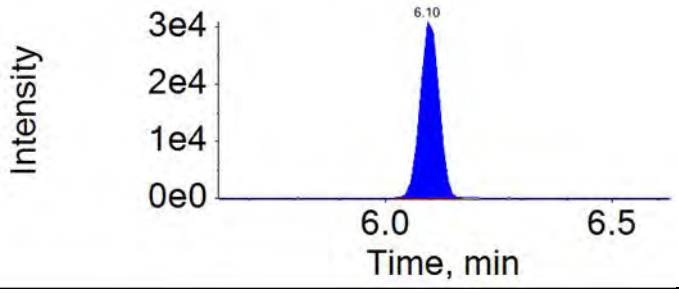
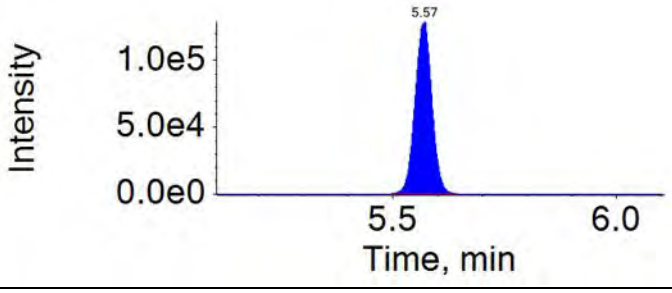
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

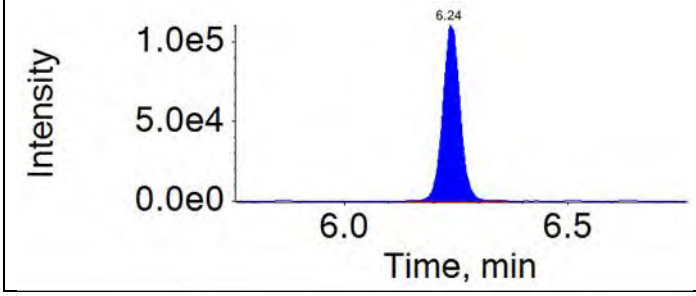
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

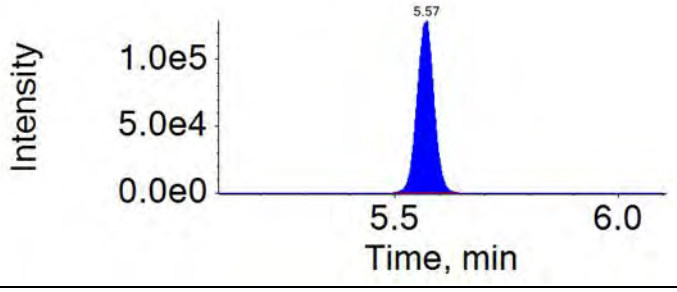
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

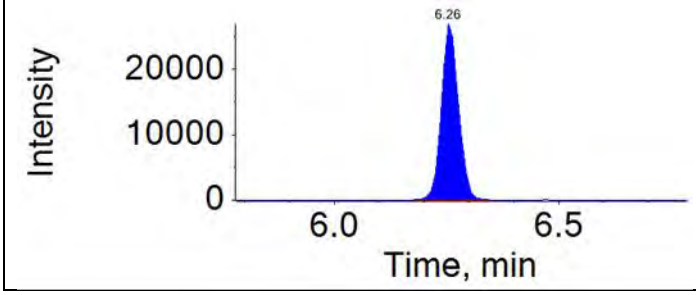
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

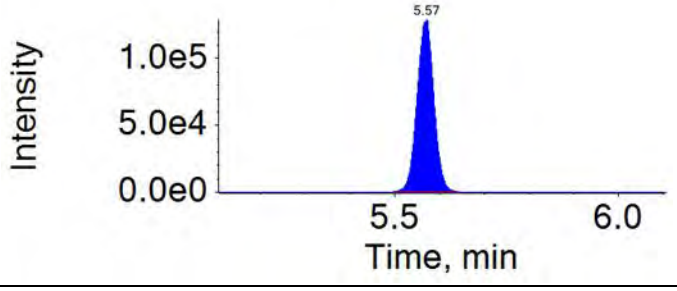
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



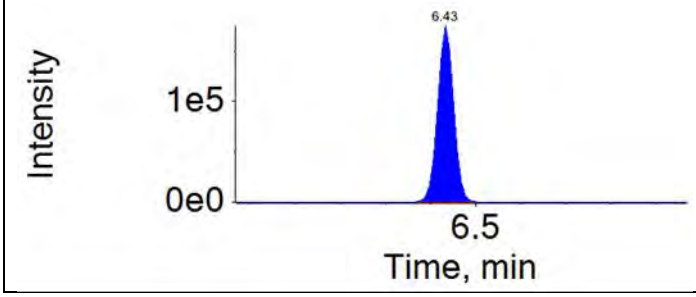


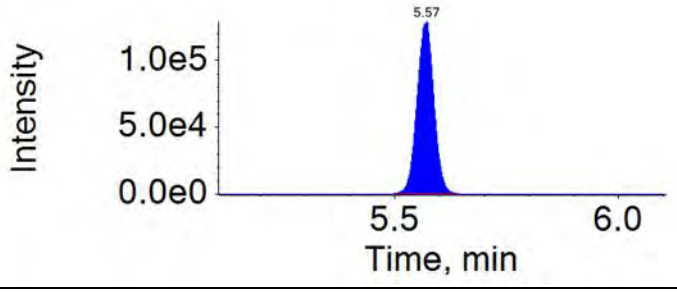
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

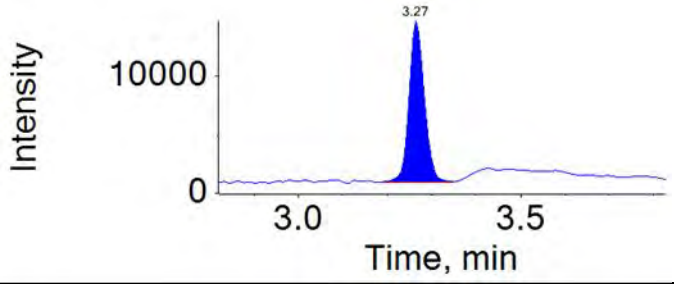
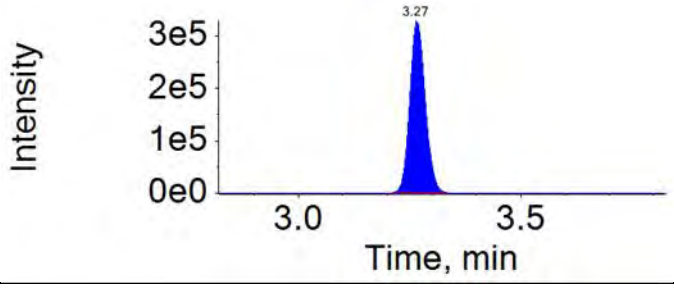


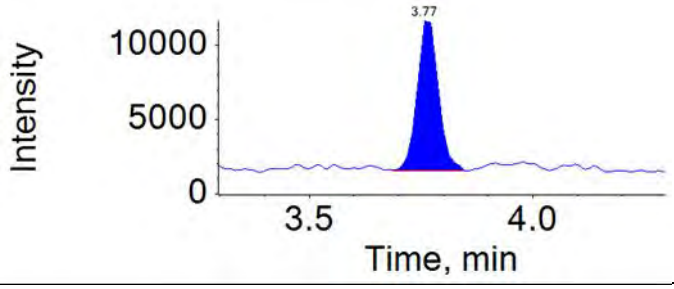
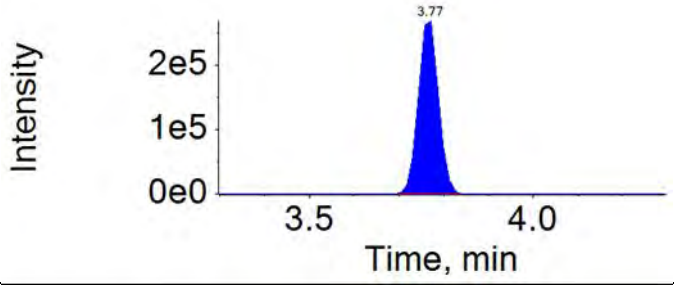


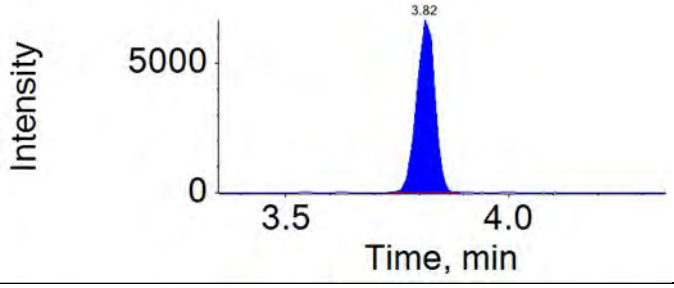
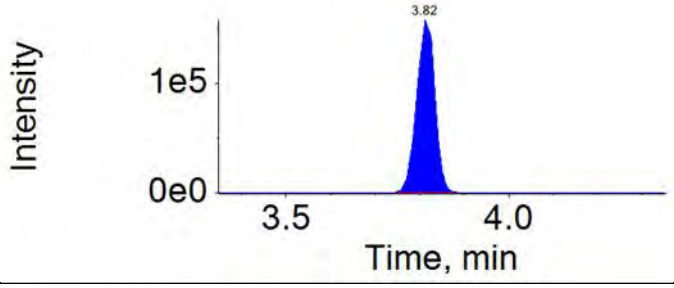
APPROVED
By JPT at 2:53 pm, 11/7/18

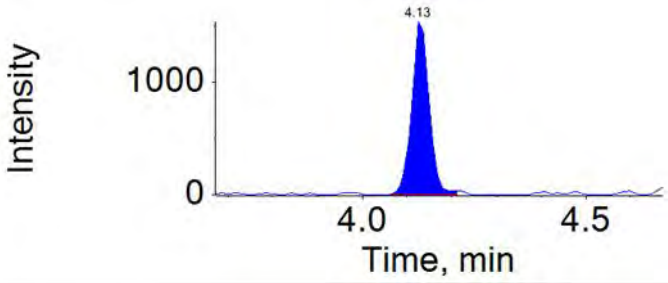
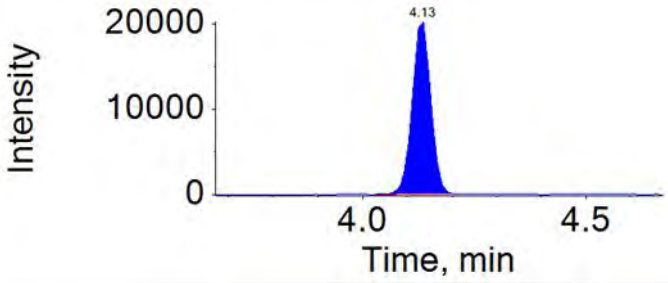
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

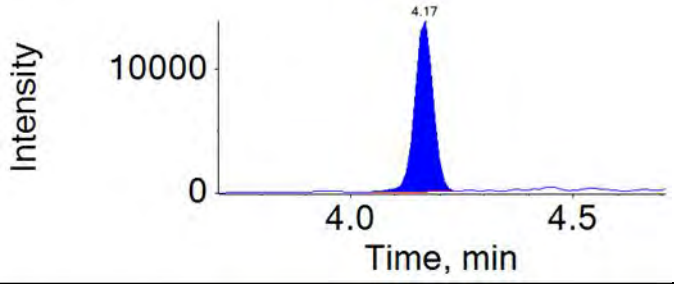
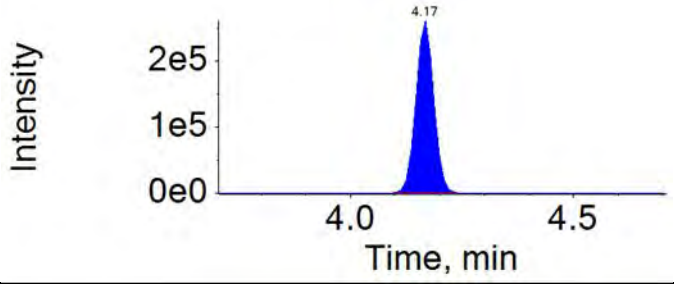
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

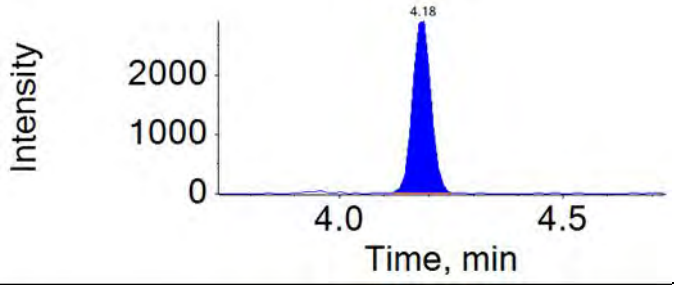
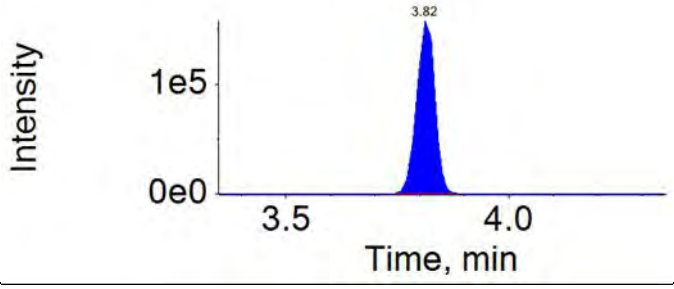
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

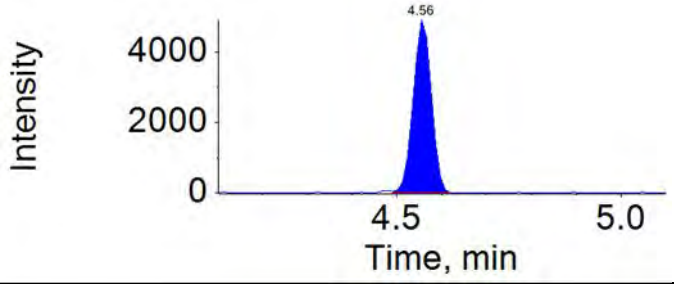
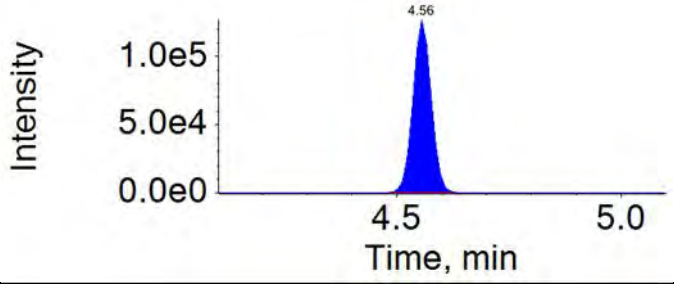
APPROVED
By JPT at 2:53 pm, 11/7/18

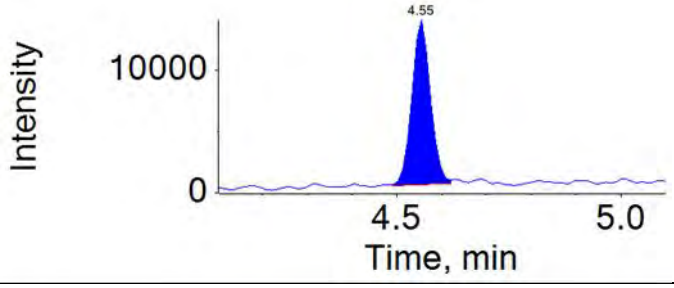
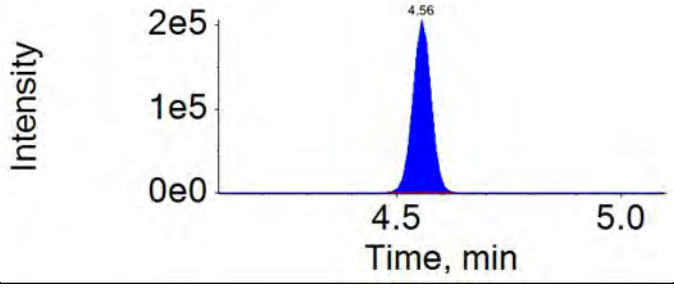
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

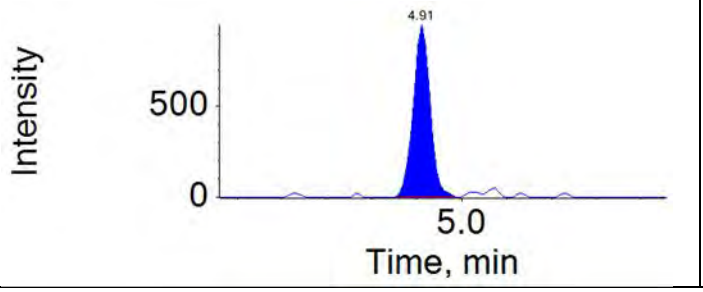
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

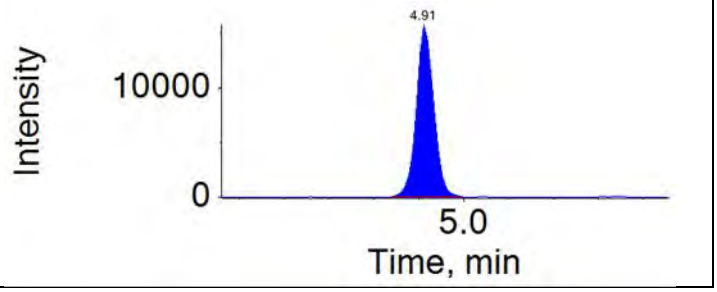
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

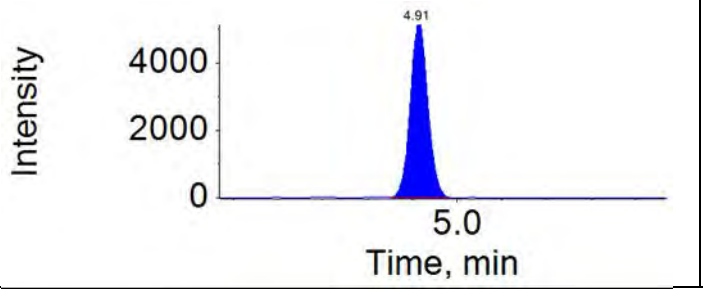
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

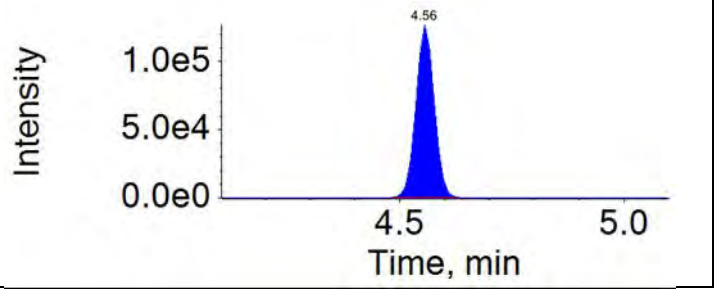
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



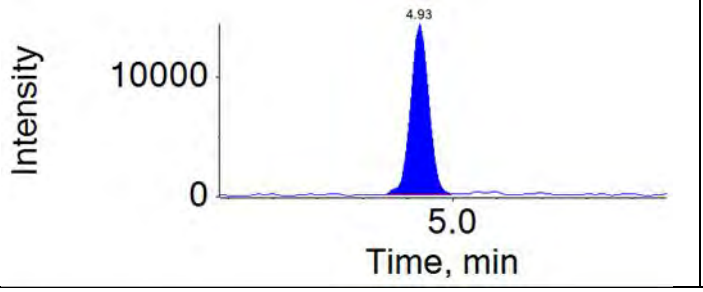


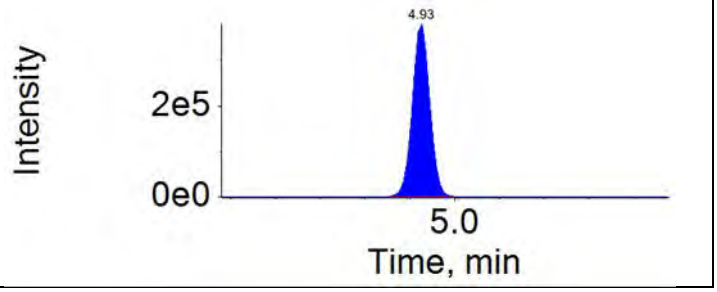
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



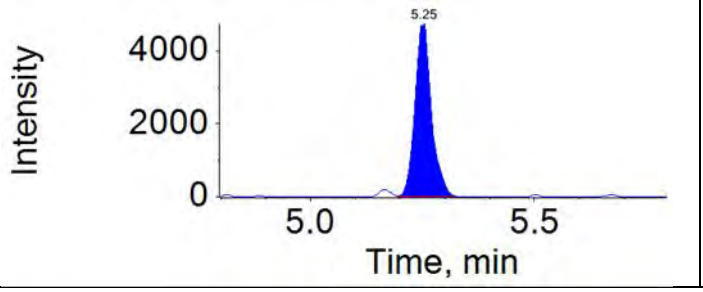


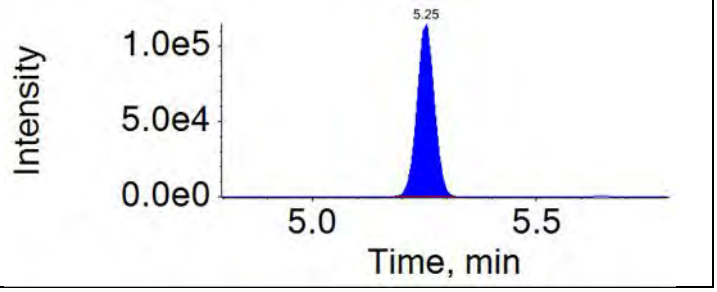
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

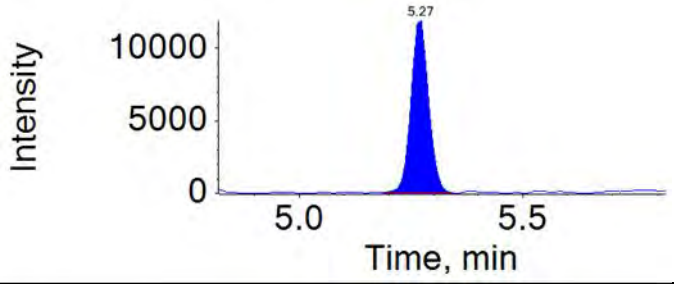
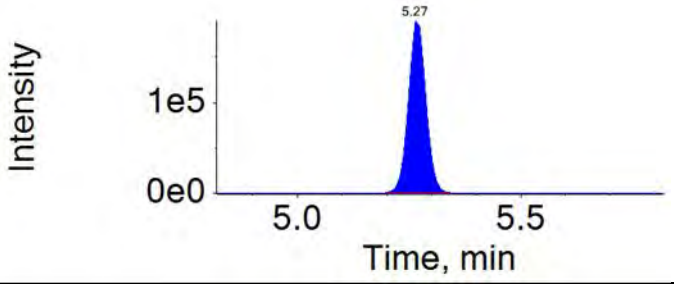


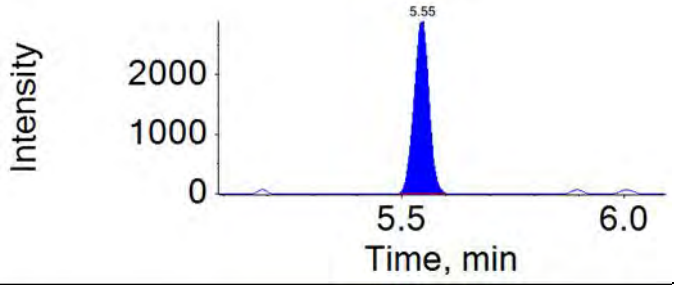
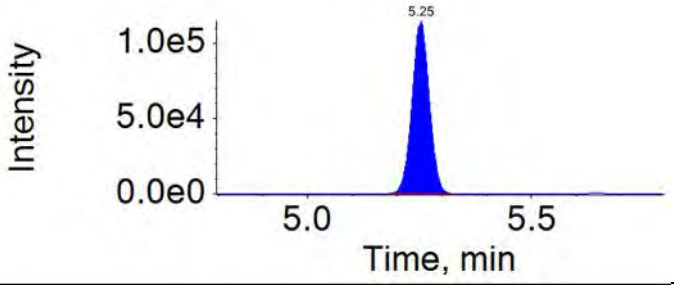


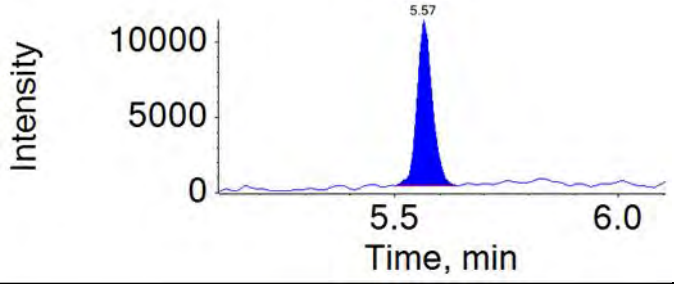
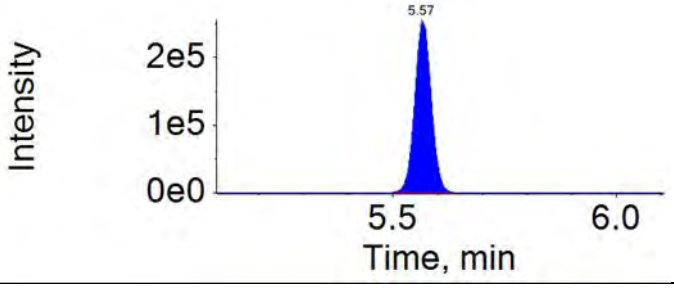
APPROVED
By JPT at 2:53 pm, 11/7/18

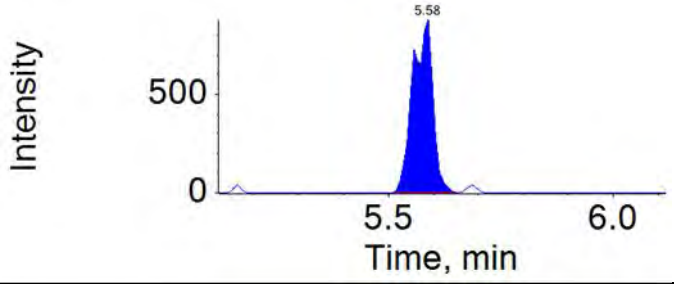
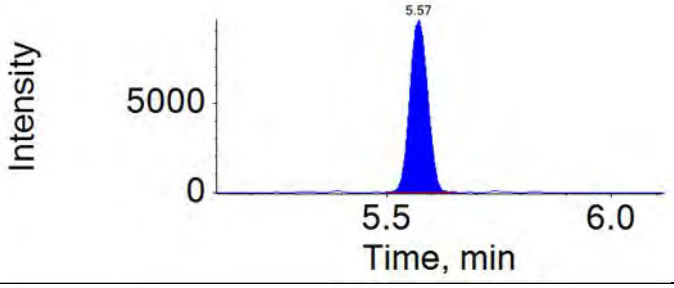
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

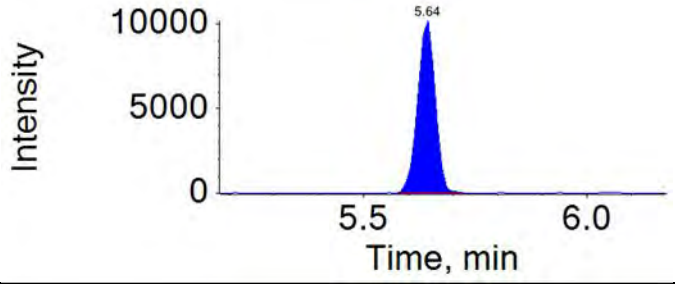
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

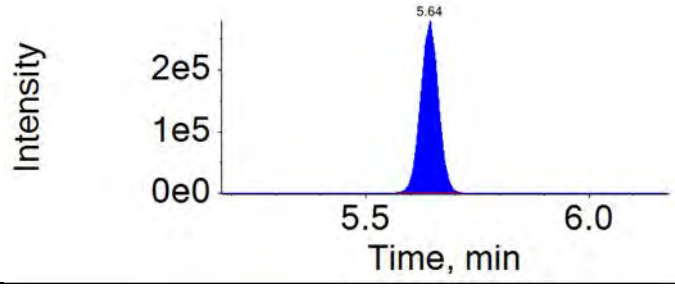
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

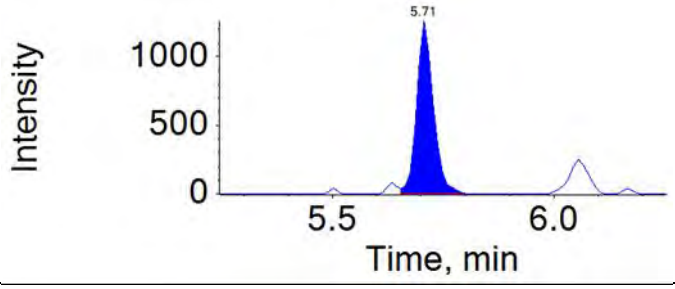
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

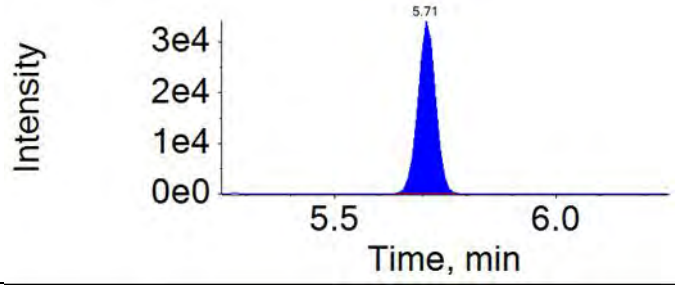
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



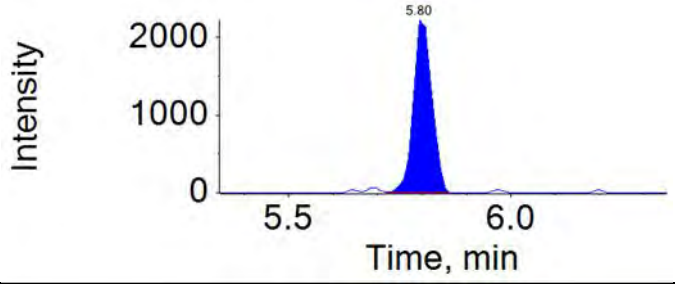


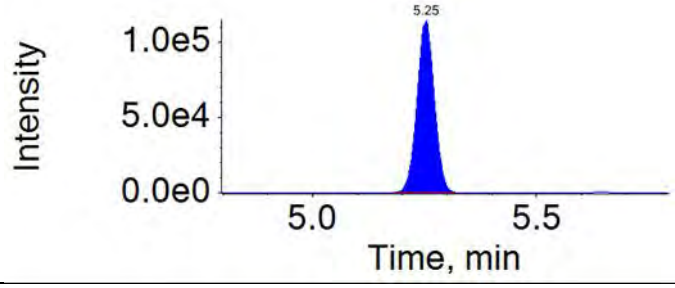
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



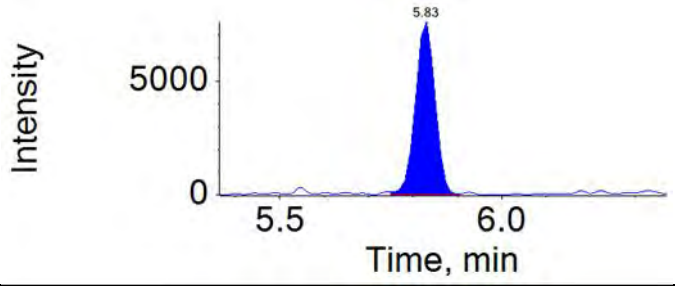


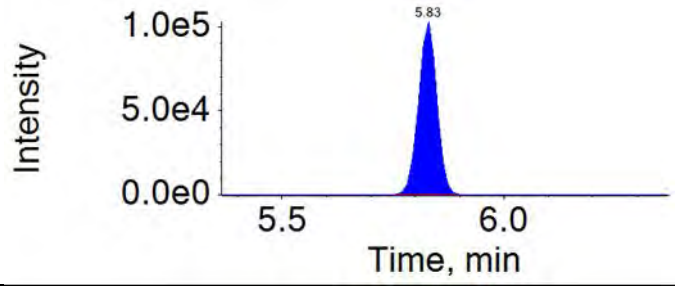
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



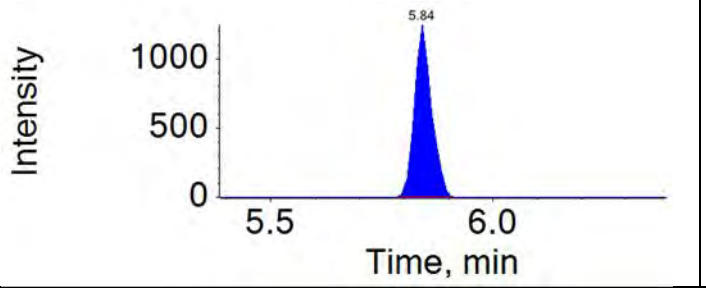


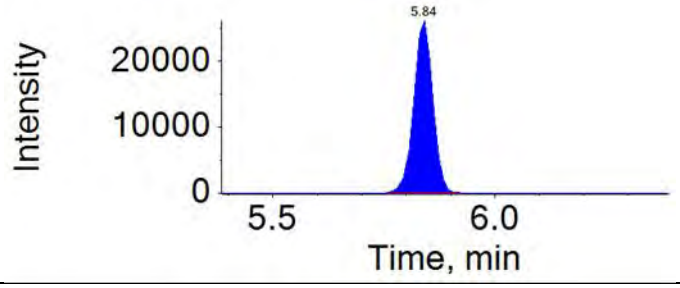
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

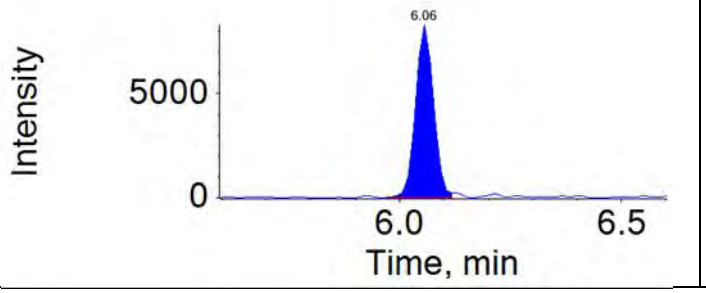
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

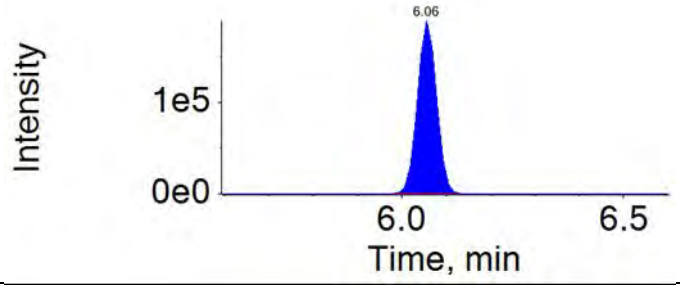
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



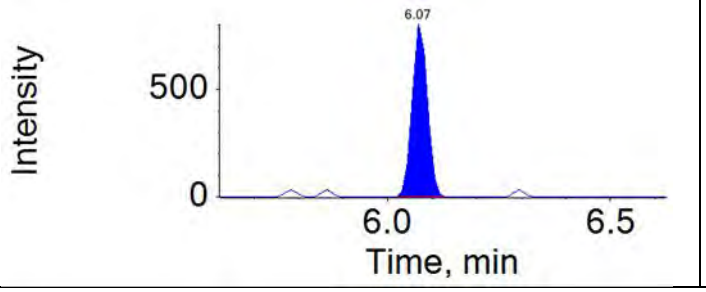


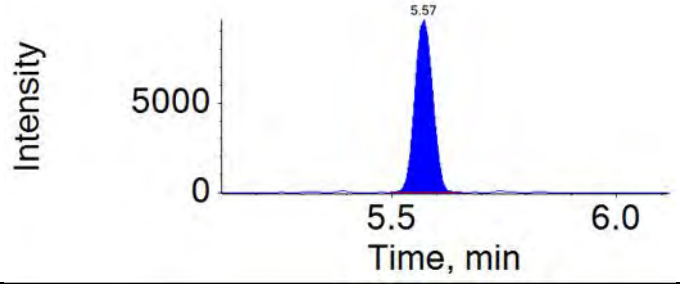
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



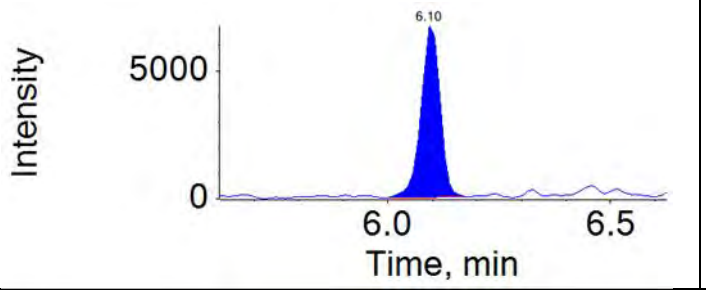


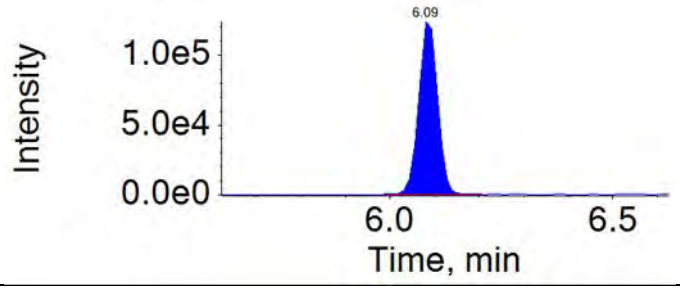
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



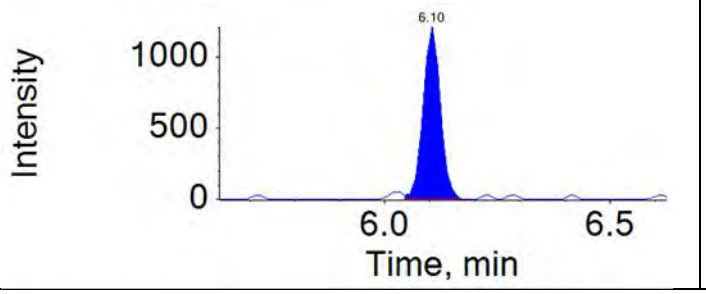


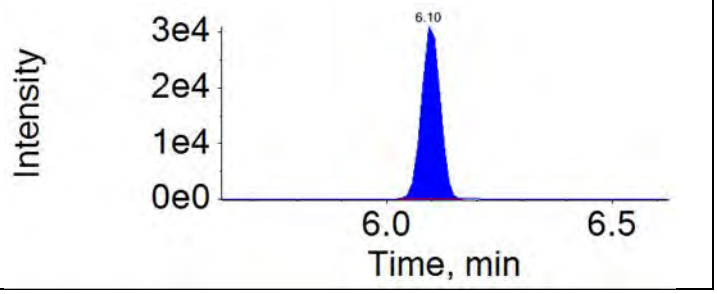
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

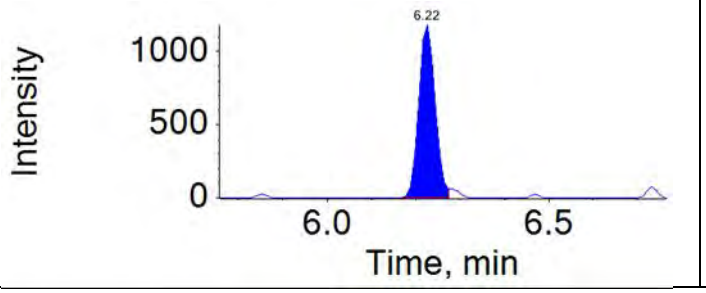
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

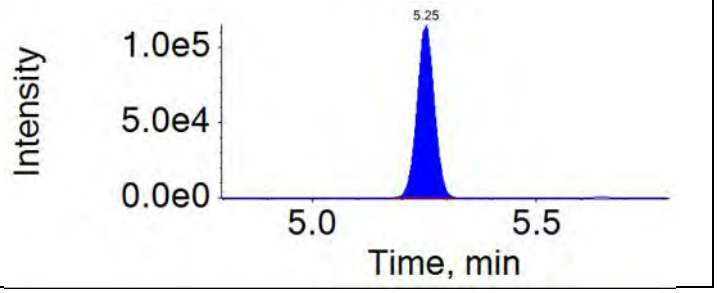
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



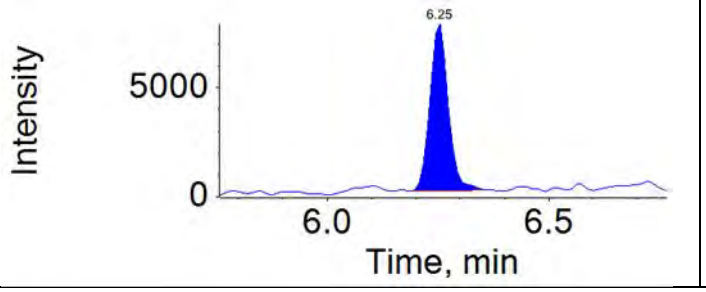


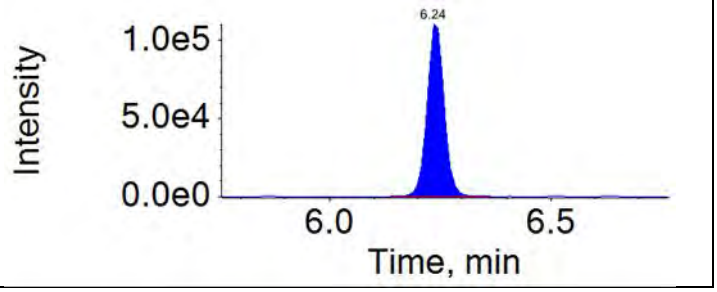
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



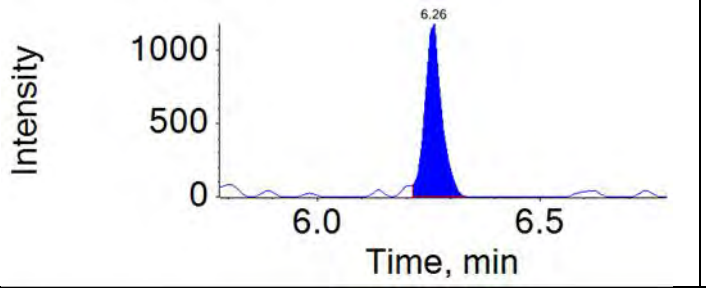


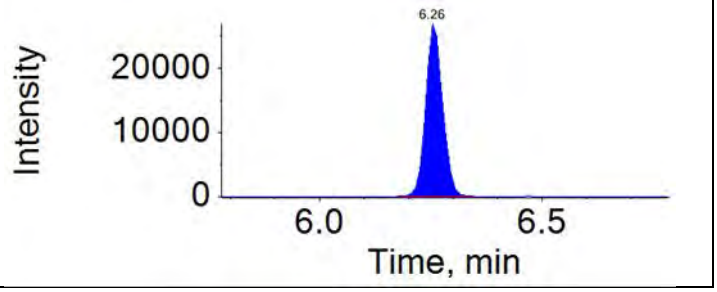
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



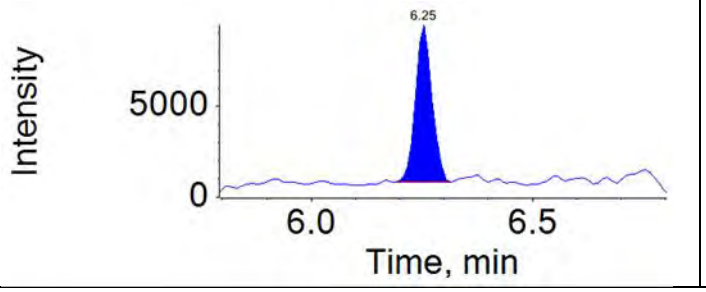


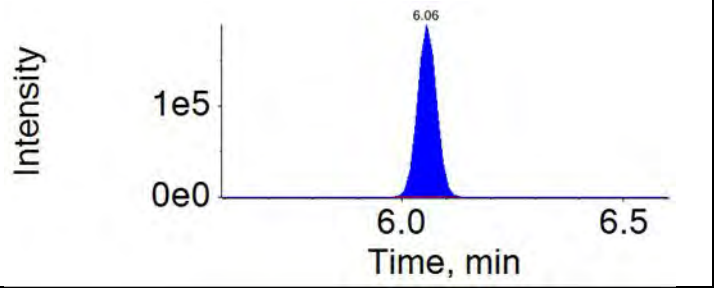
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

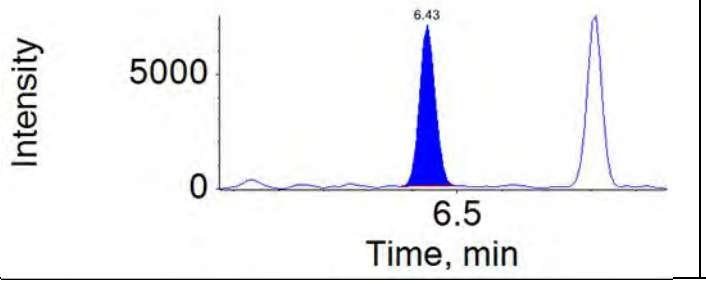
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

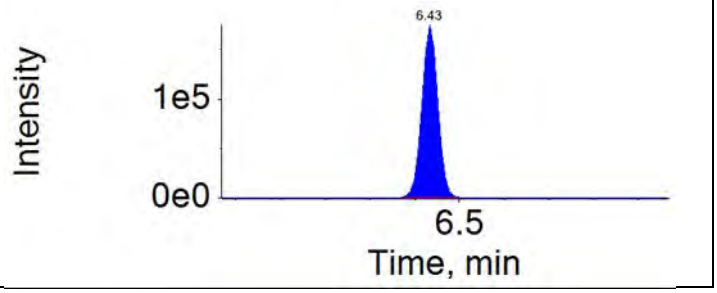
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



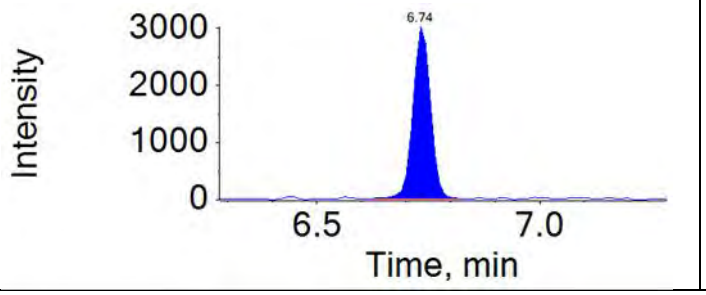


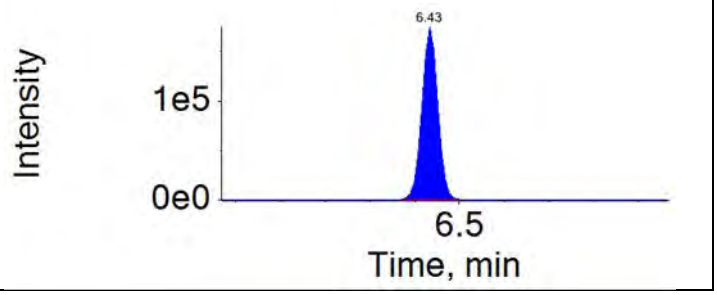
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



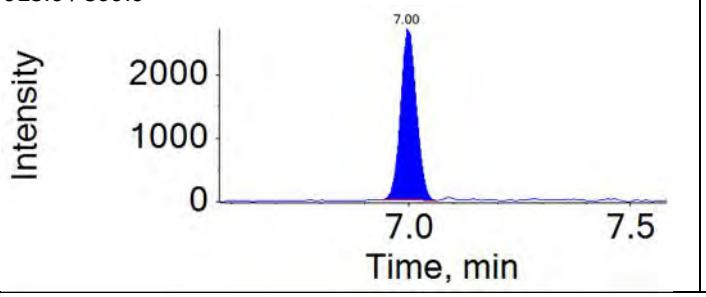


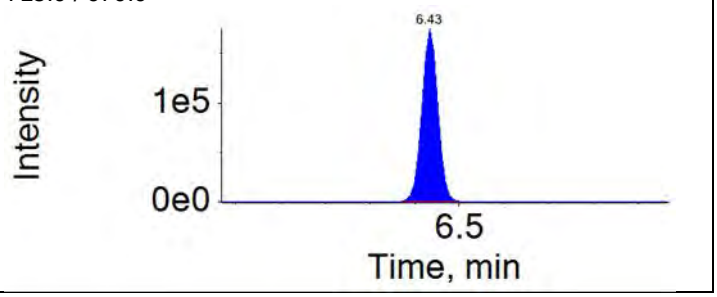
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





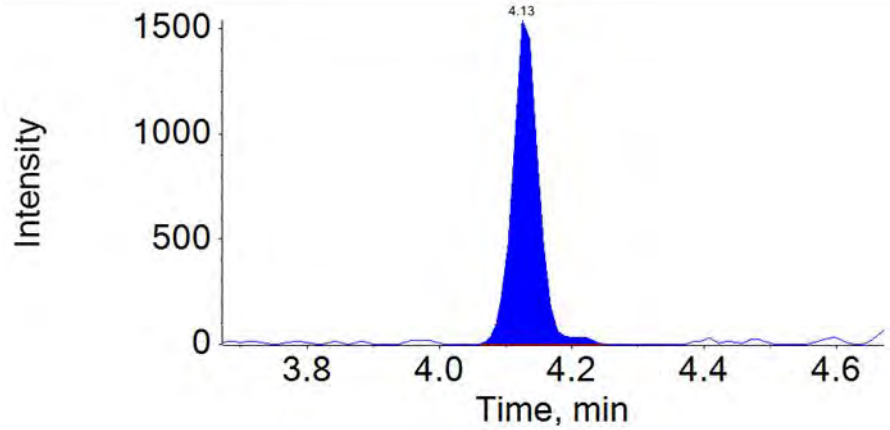
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

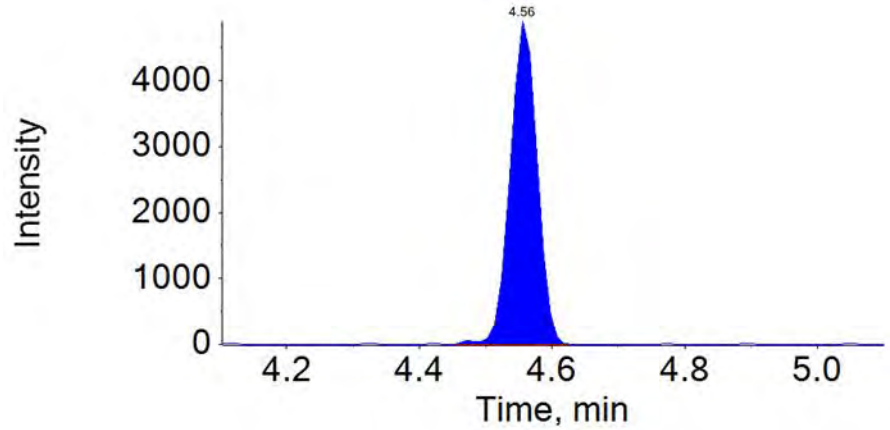
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
4:2-FTS
RT (min.):
4.13
Peak Area:
4195.6
Mass Range:
327.0 / 307.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



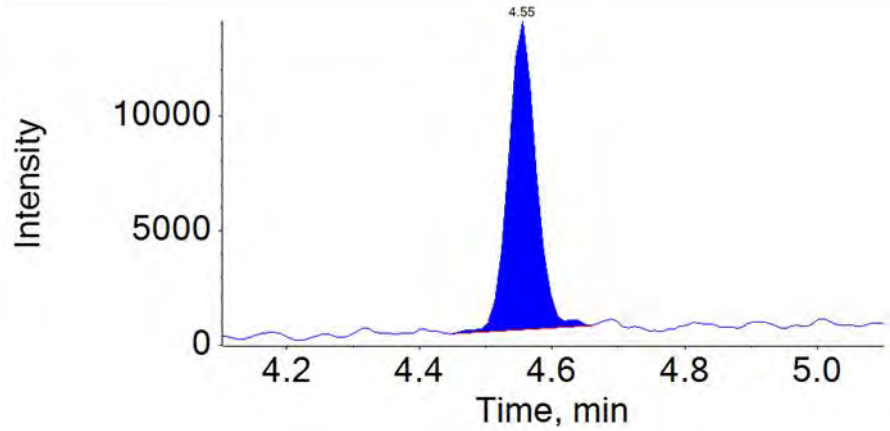
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
13860.4
Mass Range:
399.0 / 80.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFHpA
RT (min.):
4.55
Peak Area:
38996.9
Mass Range:
363.0 / 319.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



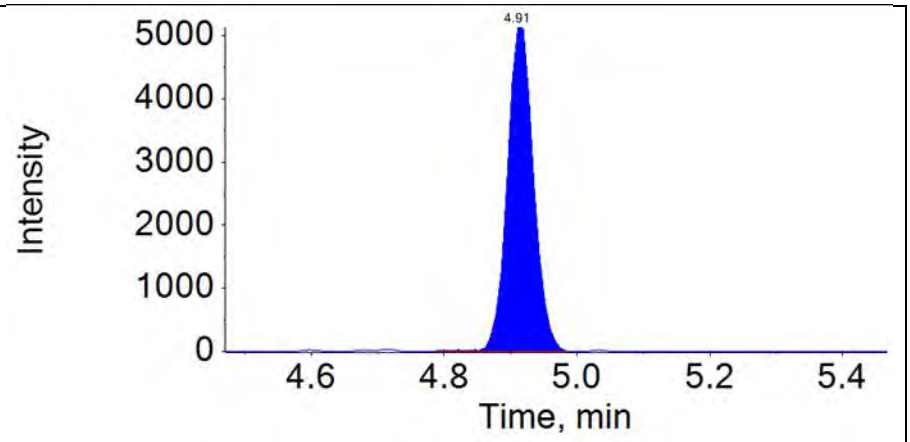
Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

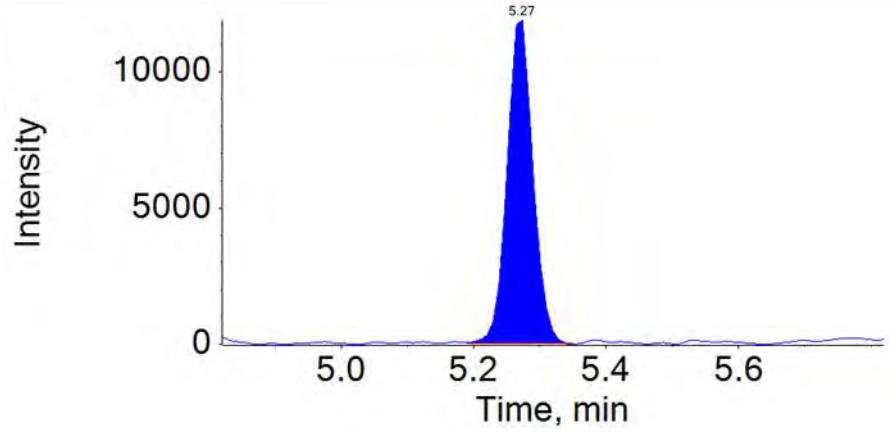
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHpS
RT (min.):
4.91
Peak Area:
14266.0
Mass Range:
449.0 / 80.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



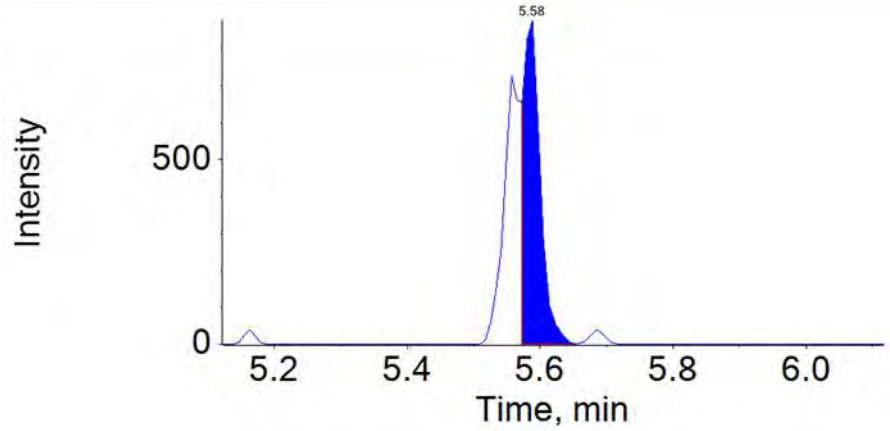
Integration Comment: incorrect integration

Component Name:
PFNA
RT (min.):
5.27
Peak Area:
32355.6
Mass Range:
463.0 / 419.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
8:2-FTS
RT (min.):
5.58
Peak Area:
1513.1
Mass Range:
527.0 / 507.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



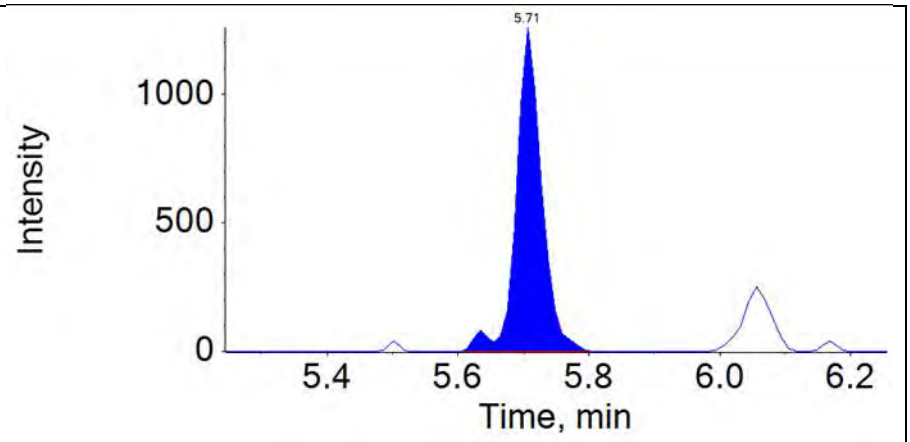
Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

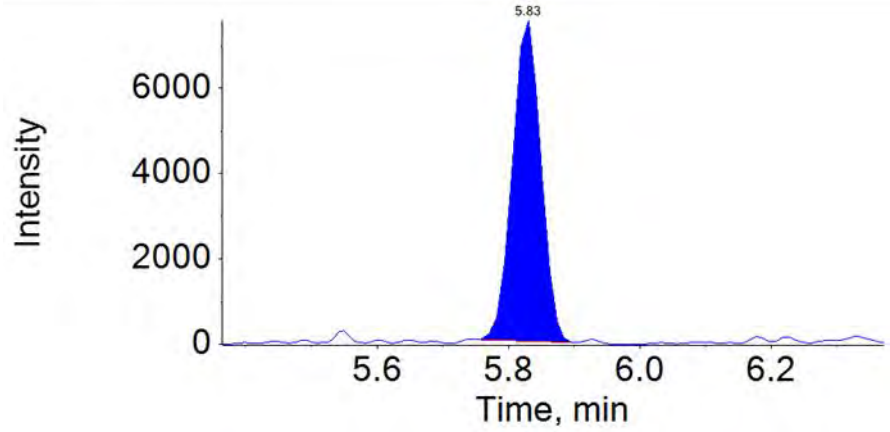
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: NMeFOSAA
RT (min.): 5.71
Peak Area: 3425.3
Mass Range: 570.0 / 419.0
File Name: 18NOV07DCAL-10.wiff
Sample Name: CAL1



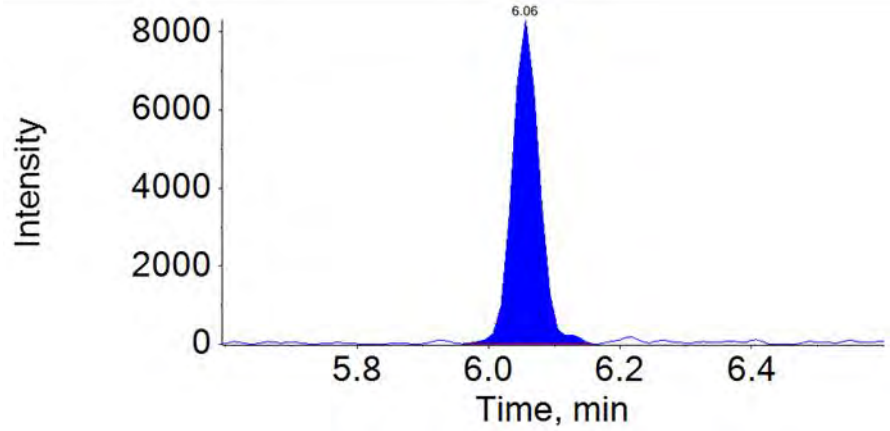
Integration Comment: incorrect integration

Component Name: PFUnDA
RT (min.): 5.83
Peak Area: 22631.3
Mass Range: 563.0 / 519.0
File Name: 18NOV07DCAL-10.wiff
Sample Name: CAL1



Integration Comment: incorrect integration

Component Name: PFDoDA
RT (min.): 6.06
Peak Area: 23623.5
Mass Range: 613.0 / 569.0
File Name: 18NOV07DCAL-10.wiff
Sample Name: CAL1



Integration Comment: incorrect integration

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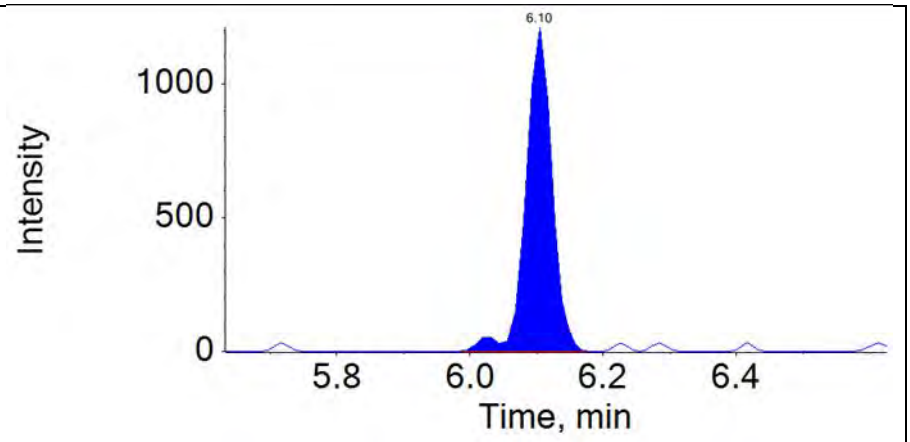
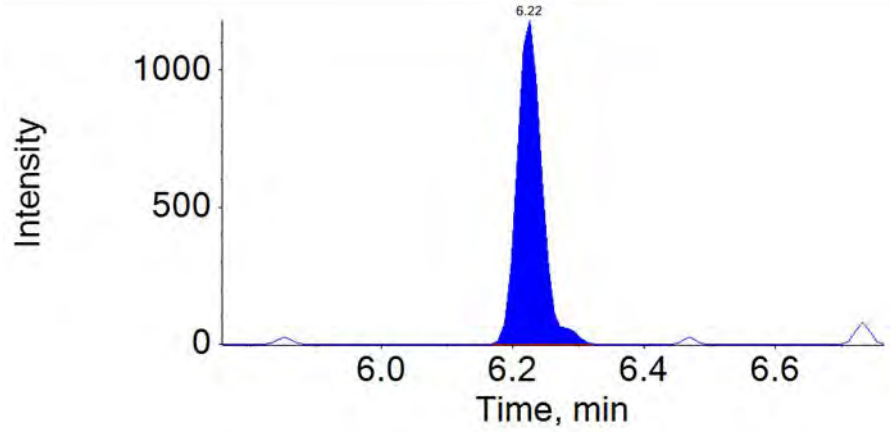
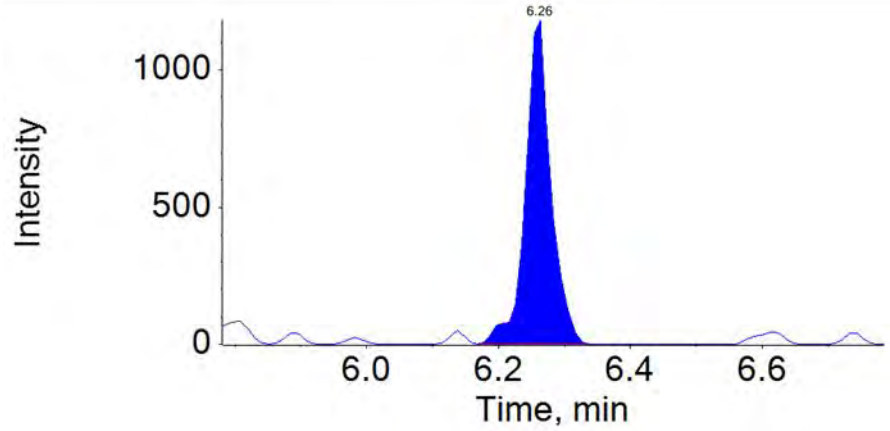
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: NMePFOSA **RT (min.):** 6.10 **Peak Area:** 3327.7 **Mass Range:** 512.0 / 169.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

Component Name: PFDoS **RT (min.):** 6.22 **Peak Area:** 3114.4 **Mass Range:** 699.0 / 80.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

Component Name: NEtPFOSA **RT (min.):** 6.26 **Peak Area:** 3185.1 **Mass Range:** 526.0 / 169.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

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Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

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By JPT at 2:53 pm, 11/7/18

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By umar at 5:23 pm, 11/9/18

Ion Ratio Report

Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-10.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	19024.1	A	1.0000	1.0000			
PFBS_2	3.82	1.00	5667.0	A	0.3576	0.2979	-17	50	
4:2-FTS	4.13	1.00	4145.4	M	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	3113.1	A	0.6359	0.7510	18	50	
PFHxA	4.17	1.00	39732.2	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	426.0	A	0.0115	0.0107	-7	50	
PFPeS	4.18	1.10	8335.4	A	1.0000	1.0000			
PFPeS_2	4.19	1.10	4437.8	A	0.5384	0.5324	-1	50	
PFHxS	4.56	1.00	13762.6	M	1.0000	1.0000			
PFHxS_2	4.55	1.00	4694.9	A	0.3569	0.3411	-4	50	
PFHpA	4.55	1.00	38331.9	M	1.0000	1.0000			
PFHpA_2	4.56	1.00	2299.9	A	0.0577	0.0600	4	50	
6:2-FTS	4.91	1.00	2460.6	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	2419.1	A	0.6752	0.9832	46	50	
PFHpS	4.91	1.08	14183.4	M	1.0000	1.0000			
PFHpS_2	4.92	1.08	4803.7	A	0.3950	0.3387	-14	50	
PFOA	4.93	1.00	39843.5	A	1.0000	1.0000			
PFOA_2	4.92	1.00	2905.3	A	0.0635	0.0729	15	50	
PFOS	5.25	1.00	12181.7	A	1.0000	1.0000			
PFOS_2	5.25	1.00	4968.4	A	0.3494	0.4079	17	50	
PFNA	5.27	1.00	32563.3	M	1.0000	1.0000			
PFNA_2	5.29	1.00	475.0	A	0.0207	0.0146	-29	50	
PFNS	5.55	1.06	6748.5	A	1.0000	1.0000			
PFNS_2	5.55	1.06	3646.4	A	0.4890	0.5403	10	50	
PFDA	5.57	1.00	25530.0	A	1.0000	1.0000			
PFDA_2	5.55	1.00	33.4	A	0.0057	0.0013	-77	50	OOS
8:2-FTS	5.58	1.00	2783.3	M	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	2168.5	A	0.6169	0.7791	26	50	
NMeFOSAA	5.71	1.00	3293.8	M	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	644.8	A	0.2206	0.1958	-11	50	
PFDS	5.80	1.10	6453.6	A	1.0000	1.0000			
PFDS_2	5.82	1.11	1756.6	A	0.4648	0.2722	-41	50	
PFUnDA	5.83	1.00	23275.5	M	1.0000	1.0000			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	5.84	1.00	3313.0	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	1807.4	A	0.6082	0.5455	-10	50	
PFDoDA	6.06	1.00	23314.2	M	1.0000	1.0000			
PFDoDA_2	6.06	1.00	62.7	A	0.0109	0.0027	-75	50	OOS
10:2-FTS	6.07	1.09	1903.7	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	1472.7	A	0.7082	0.7736	9	50	
PFTrDA	6.25	1.03	22403.2	A	1.0000	1.0000			
PFTrDA_2	6.26	1.03	178.7	A	0.0096	0.0080	-17	50	
PFTeDA	6.43	1.00	17031.0	A	1.0000	1.0000			
PFTeDA_2	6.48	1.01	40.0	A	0.0055	0.0023	-58	50	OOS
PFHxDA	6.74	1.05	8175.1	A	1.0000	1.0000			
PFHxDA_2	6.74	1.05	437.4	A	0.0596	0.0535	-10	50	
PFODA	7.00	1.09	6622.6	A	1.0000	1.0000			
PFODA_2	6.99	1.09	171.3	A	0.0257	0.0259	1	50	

APPROVED
By JPT at 2:53 pm, 11/7/18

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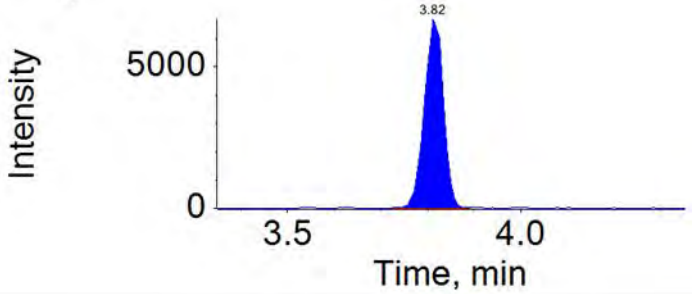
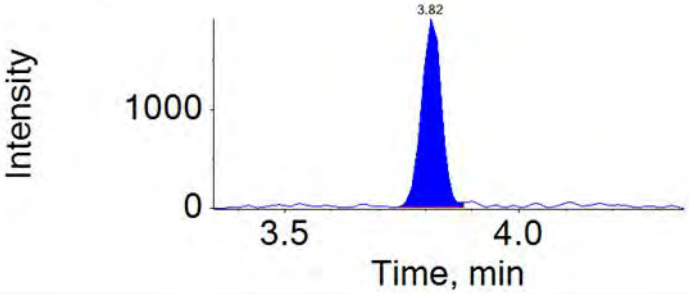
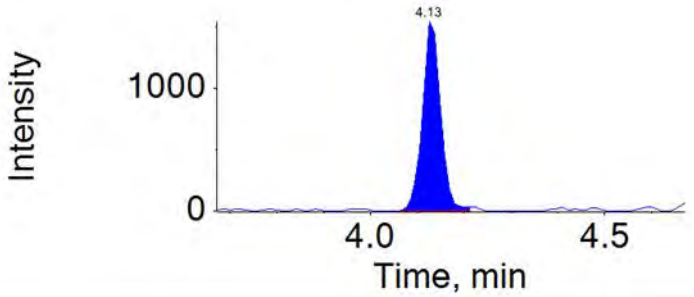
Component: PFBS
Primary Mass: 299.0 / 80.0



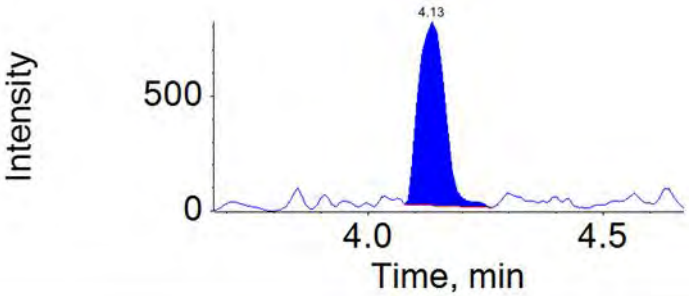
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



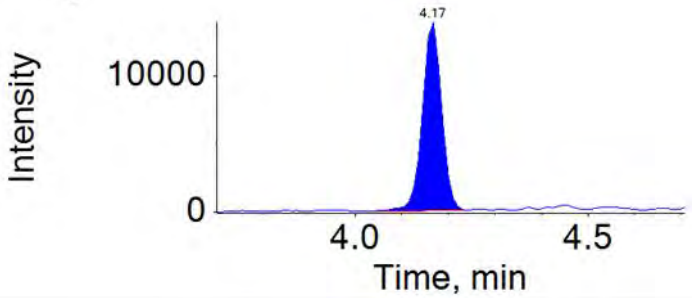
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



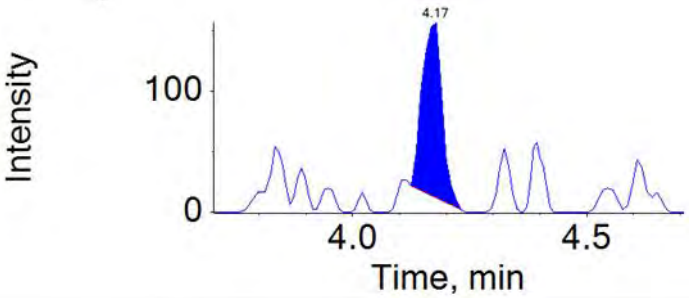
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



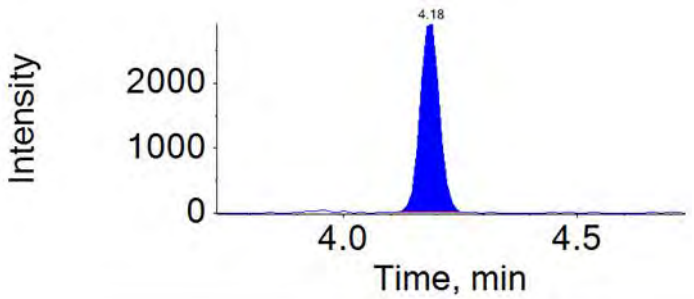
Component: PFHxA
Primary Mass: 313.0 / 269.0



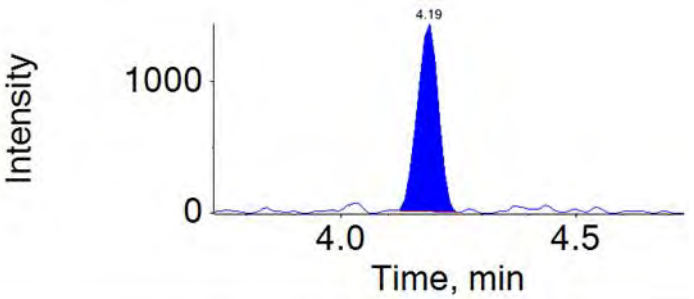
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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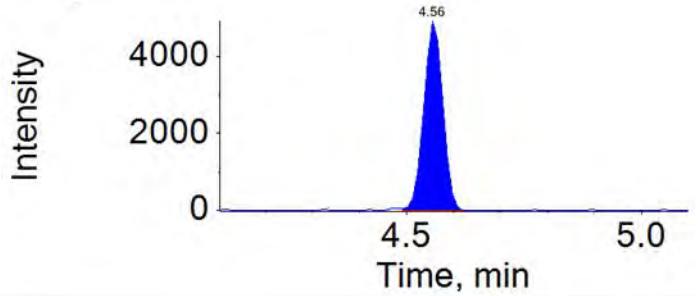
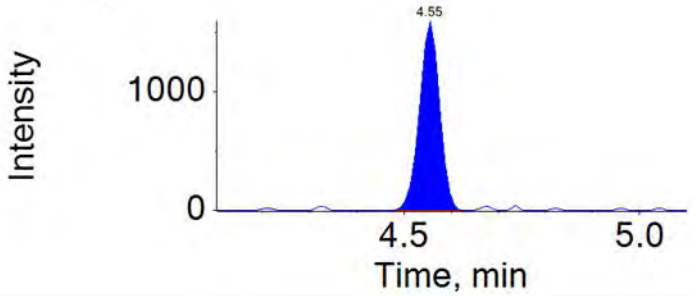
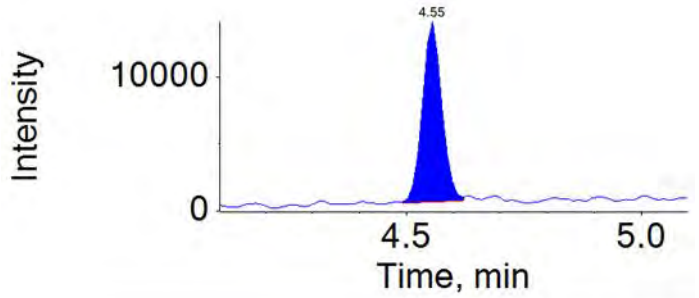
Component: PFHxS
Primary Mass: 399.0 / 80.0



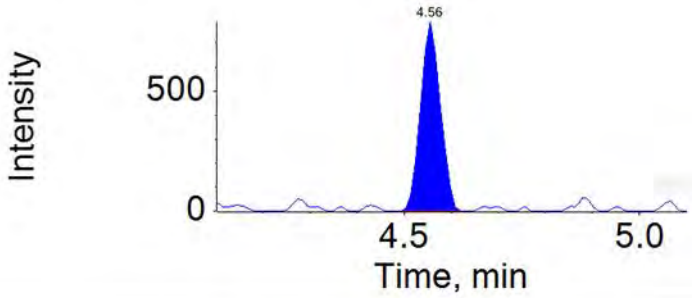
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



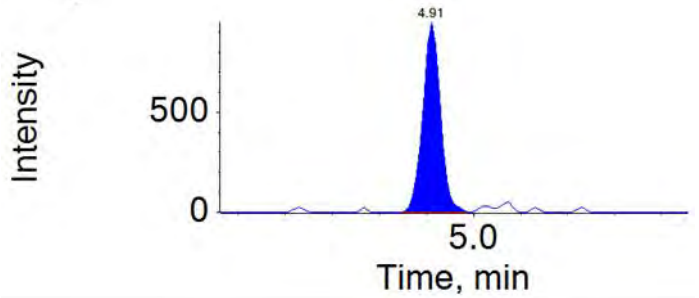
Component: PFHpA
Primary Mass: 363.0 / 319.0



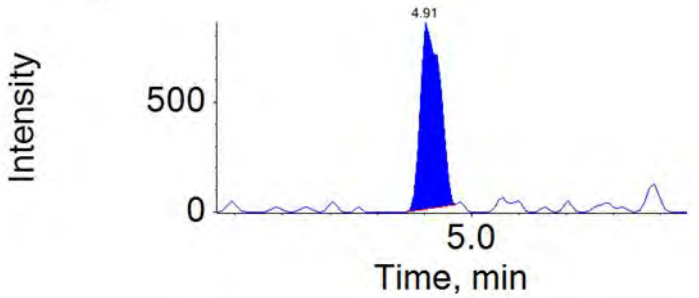
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



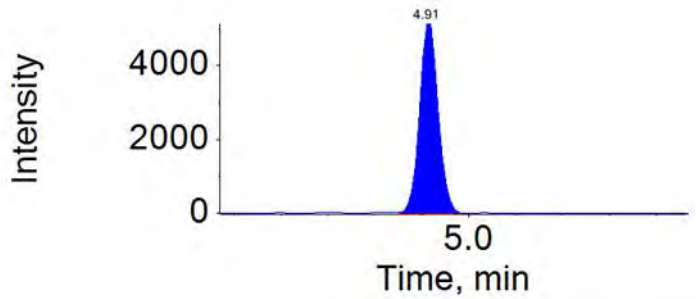
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



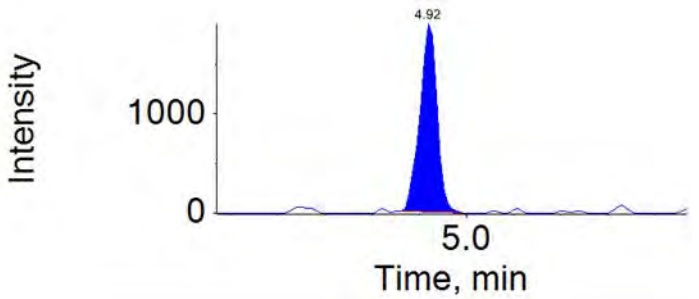
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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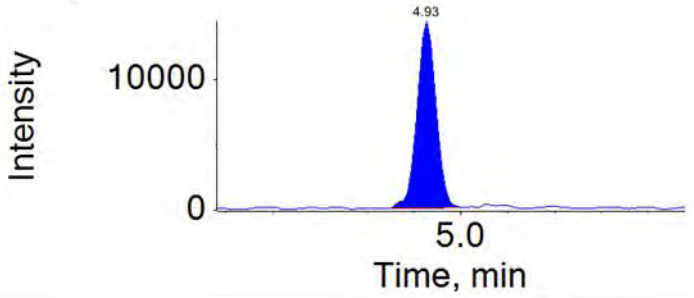
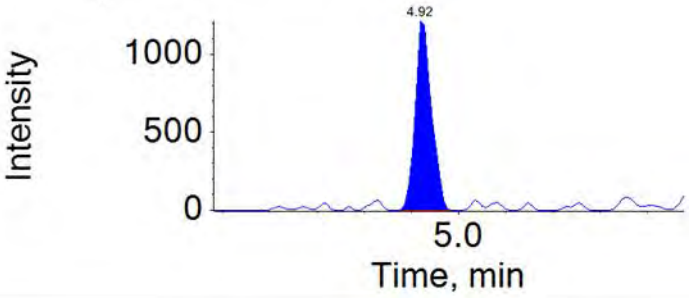
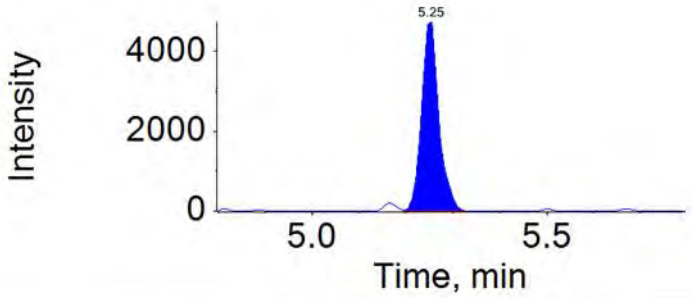
Component: PFOA
Primary Mass: 413.0 / 369.0



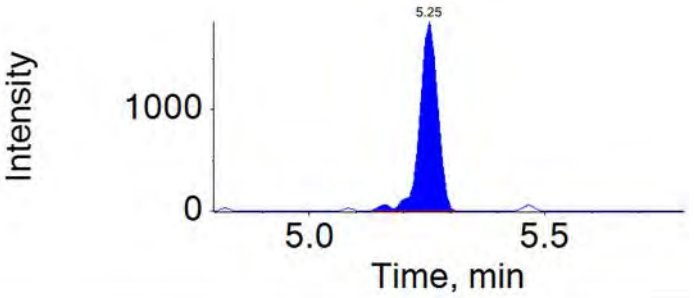
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



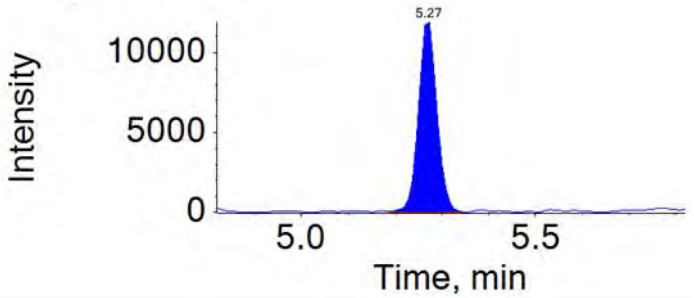
Component: PFOS
Primary Mass: 499.0 / 80.0



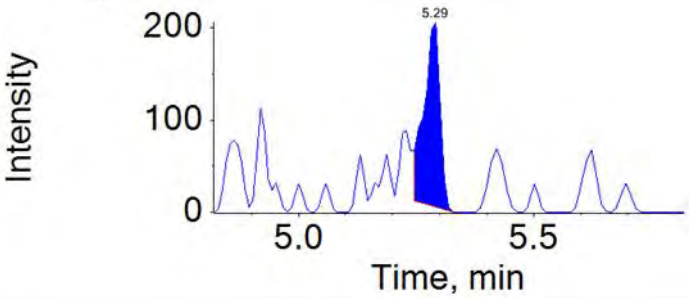
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



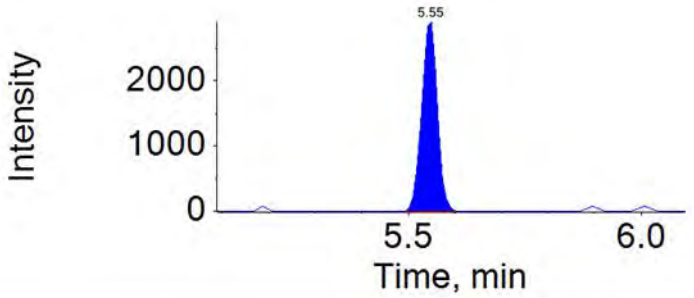
Component: PFNA
Primary Mass: 463.0 / 419.0



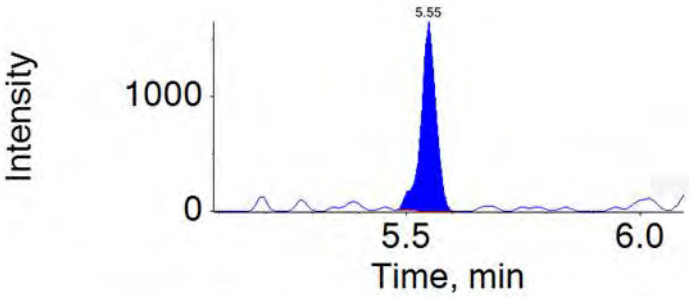
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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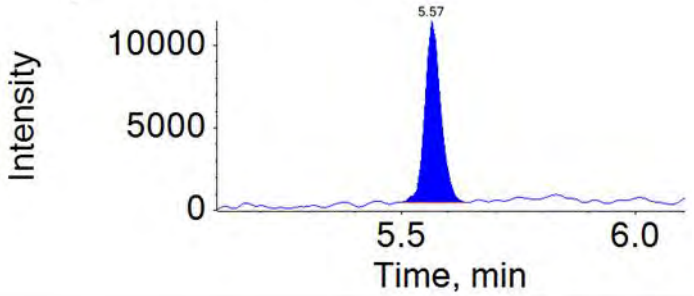
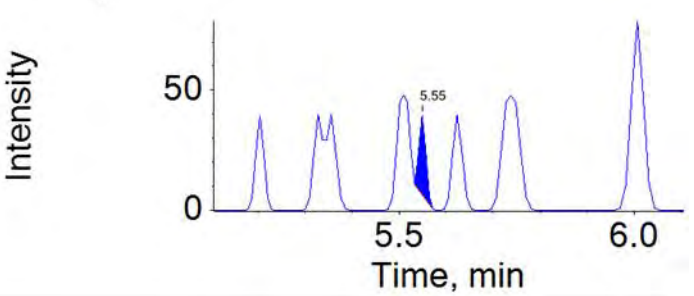
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

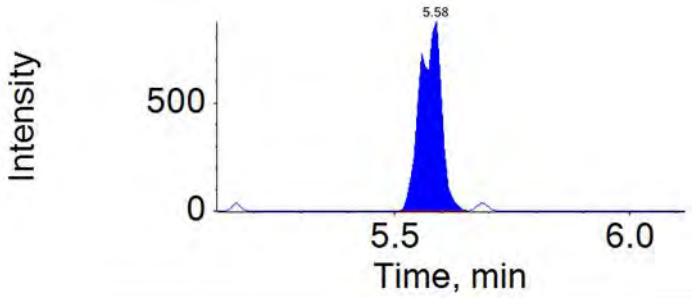
Component: PFDA
Primary Mass: 513.0 / 469.0



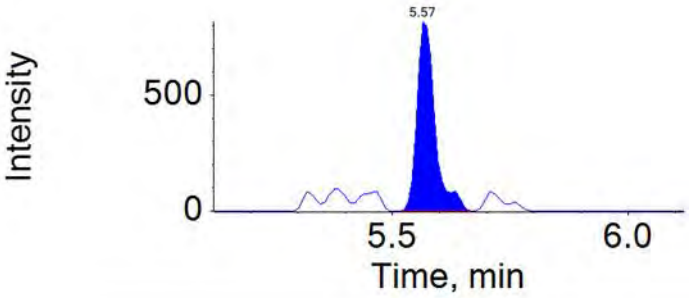
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



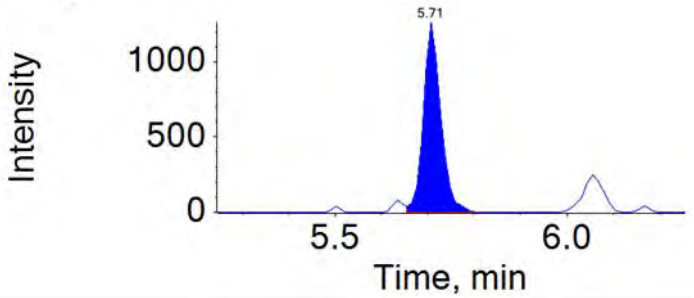
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



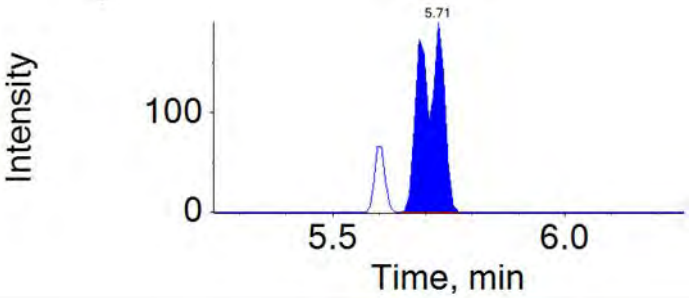
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



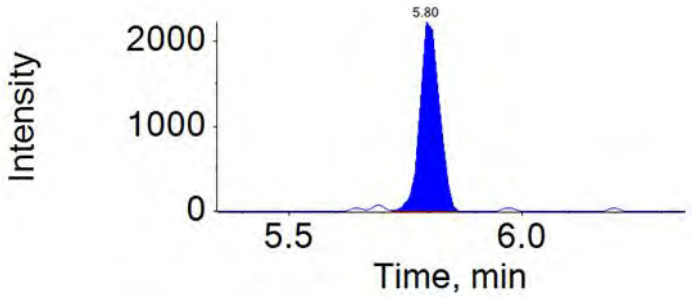
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



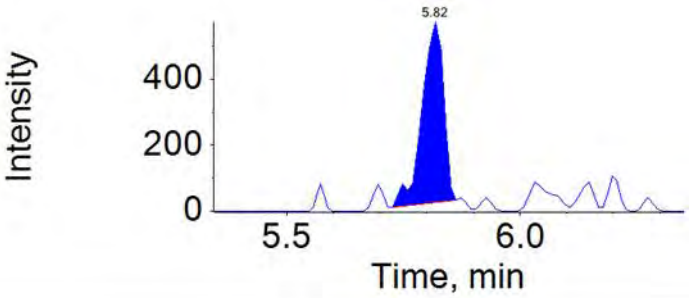
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



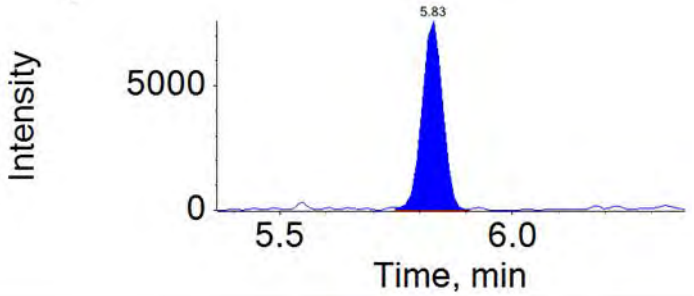
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



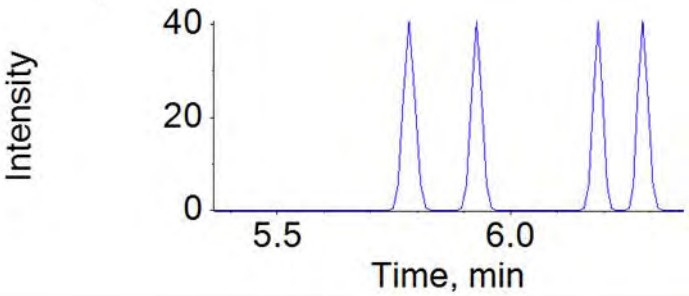
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

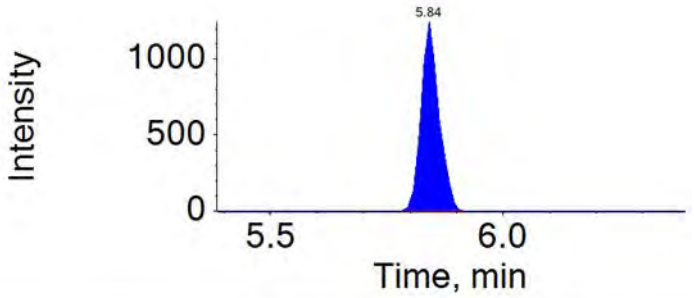
Component: PFUnDA
Primary Mass: 563.0 / 519.0



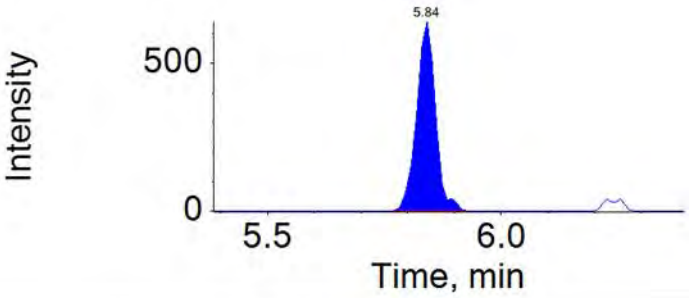
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



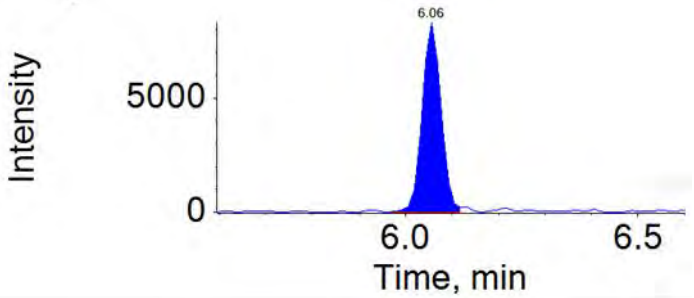
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



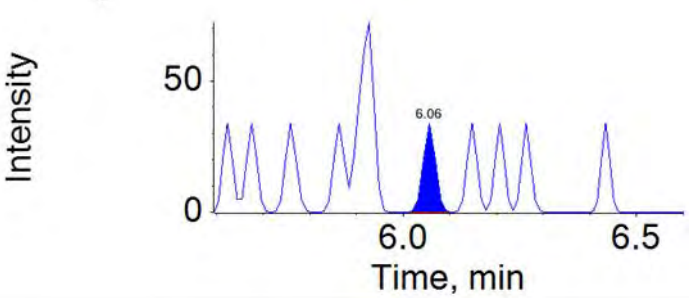
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



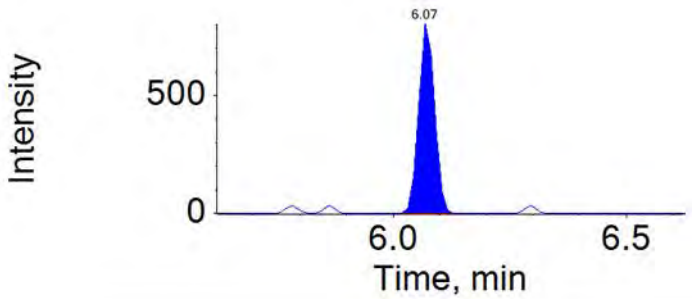
Component: PFDoDA
Primary Mass: 613.0 / 569.0



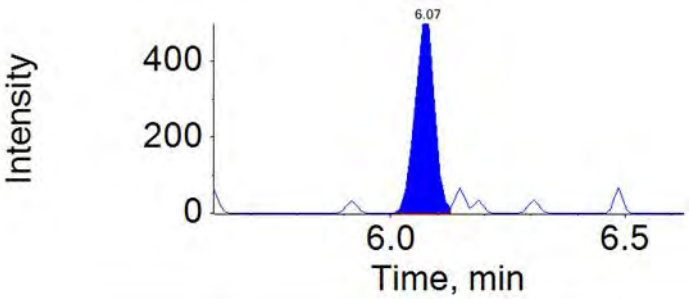
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



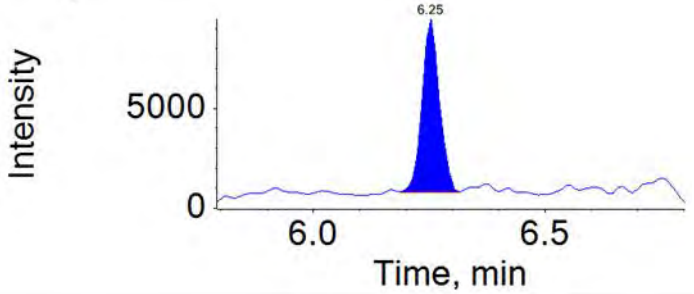
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



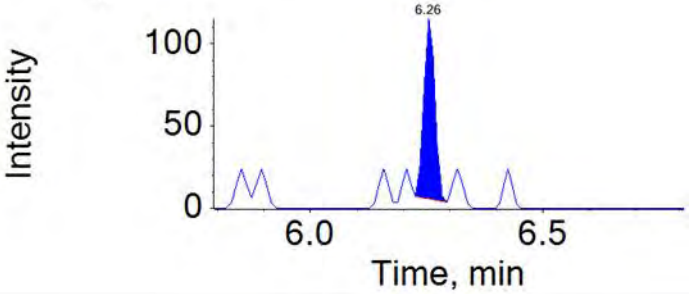
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



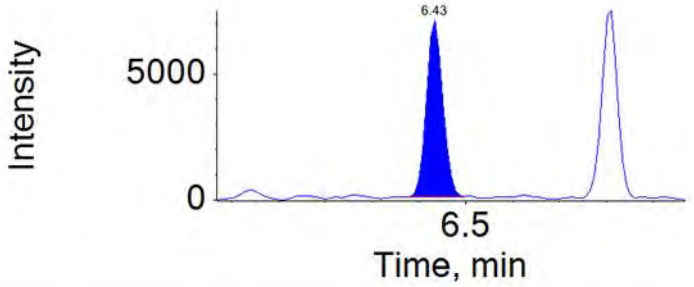
Component: PFTrDA
Primary Mass: 663.0 / 619.0



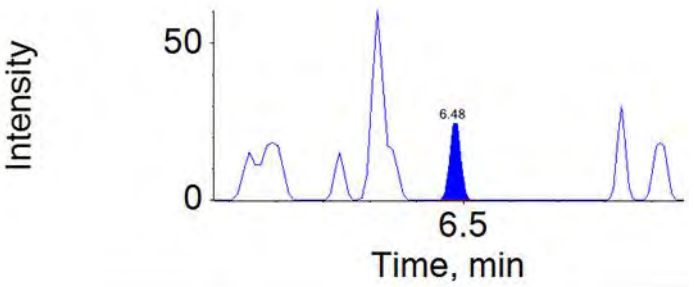
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



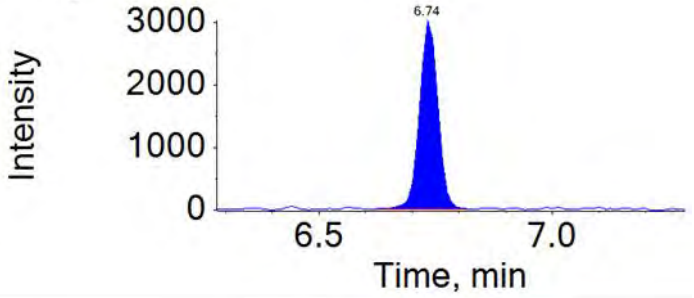
Component: PFTeDA
Primary Mass: 713.0 / 669.0



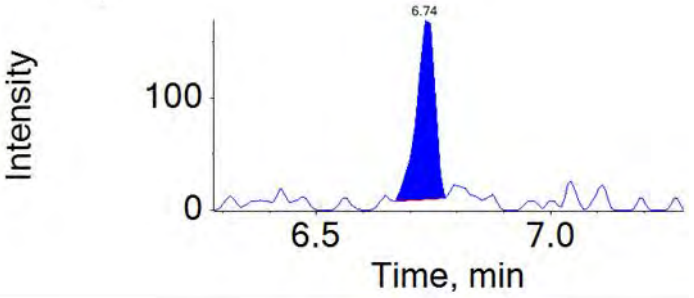
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



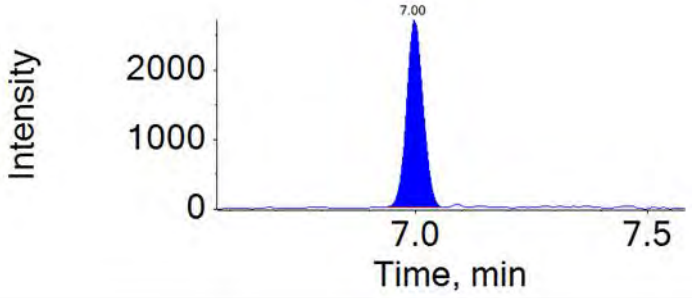
Component: PFHxDA
Primary Mass: 813.0 / 769.0



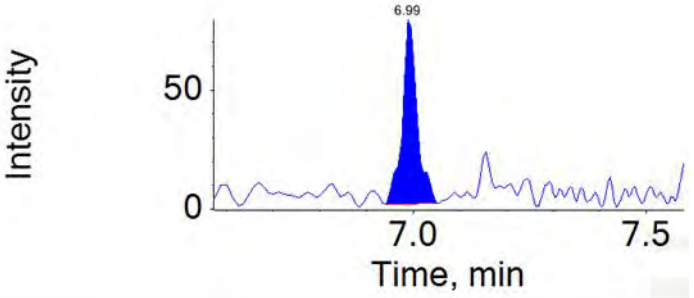
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL2			**Data File:**		18NOV07DCAL-11.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-07T09:48:56
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	723209.9	730410.6	-1	50	
13C2-PFOA	5.0	516360.9	524423.6	-2	50	
13C4-PFOS	4.8	263757.0	274061.7	-4	50	
13C2-PFDA	5.0	334958.4	311442.1	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	782732.8	13C3-PFBA	723209.9	1.082	5.000	5.009	100	70-130	
E13C5-PFPeA	863262.8	13C3-PFBA	723209.9	1.194	5.000	5.200	104	70-130	
E13C3-PFBS	444721.3	13C3-PFBA	723209.9	0.615	4.650	4.513	97	70-130	
E13C2-4:2-FTS	54234.1	13C2-PFOA	516360.9	0.105	4.670	4.739	101	70-130	
E13C5-PFHxA	717434.9	13C2-PFOA	516360.9	1.389	5.000	5.111	102	70-130	
E13C3-PFHxS	335732.1	13C2-PFOA	516360.9	0.650	4.730	4.668	99	70-130	
E13C4-PFHpA	583342.8	13C2-PFOA	516360.9	1.130	5.000	5.139	103	70-130	
E13C2-6:2-FTS	38849.6	13C2-PFOA	516360.9	0.075	4.750	5.017	106	70-130	
E13C8-PFOA	970523.2	13C2-PFOA	516360.9	1.880	5.000	5.241	105	70-130	
E13C8-PFOS	286174.8	13C4-PFOS	263757.0	1.085	4.780	4.798	100	70-130	
E13C9-PFNA	540435.4	13C4-PFOS	263757.0	2.049	5.000	5.597	112	70-130	
E13C6-PFDA	661423.8	13C2-PFDA	334958.4	1.975	5.000	4.966	99	70-130	
E13C2-8:2-FTS	27523.0	13C2-PFDA	334958.4	0.082	4.790	4.348	91	70-130	
E13C8-PFOSA	711032.2	13C2-PFDA	334958.4	2.123	5.000	4.632	93	70-130	
Ed3-NMeFOSAA	83112.2	13C2-PFDA	334958.4	0.248	5.000	4.614	92	70-130	
E13C7-PFUnDA	289985.1	13C2-PFDA	334958.4	0.866	5.000	4.994	100	70-130	
Ed5-NEtFOSAA	65815.9	13C2-PFDA	334958.4	0.196	5.000	4.547	91	70-130	
E13C2-PFDoDA	597616.3	13C2-PFDA	334958.4	1.784	5.000	4.810	96	70-130	
Ed7-NMePFOSAE	330298.6	13C2-PFDA	334958.4	0.986	5.000	4.586	92	70-130	
Ed3-NMePFOSA	81301.2	13C2-PFDA	334958.4	0.243	5.000	4.444	89	70-130	
Ed9-NEtPFOSAE	270607.6	13C2-PFDA	334958.4	0.808	5.000	4.614	92	70-130	
Ed5-NEtPFOSA	66745.4	13C2-PFDA	334958.4	0.199	5.000	4.614	92	70-130	
E13C2-PFTeDA	441206.9	13C2-PFDA	334958.4	1.317	5.000	4.742	95	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

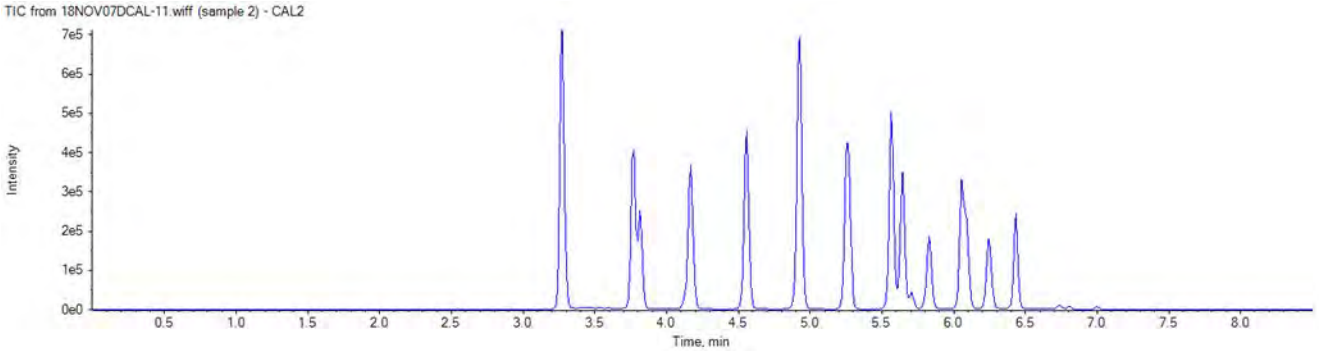
Analyte Quantitation Peak Table

Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-11.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	72868.6		A	13C4-PFBA	3.27	782732.8	0.093	0.545
PFPeA	3.77	1.000	77403.9		A	13C5-PFPeA	3.77	863262.8	0.090	0.533
PFBS	3.82	1.000	41415.1		A	13C3-PFBS	3.82	444721.3	0.093	0.470
4:2-FTS	4.13	1.000	9924.9		M	13C2-4:2-FTS	4.13	54234.1	0.183	0.492
PFHxA	4.17	1.000	88469.9		A	13C5-PFHxA	4.17	717434.9	0.123	0.529
PFPeS	4.19	1.100	20956.8		A	13C3-PFBS	3.82	444721.3	0.047	0.465
PFHxS	4.56	1.000	32061.0		M	13C3-PFHxS	4.56	335732.1	0.095	0.484
PFHpA	4.56	1.000	93502.9		A	13C4-PFHpA	4.55	583342.8	0.160	0.539
6:2-FTS	4.91	1.000	8883.8		A	13C2-6:2-FTS	4.91	38849.6	0.229	0.570
PFHpS	4.92	1.080	30553.2		A	13C3-PFHxS	4.56	335732.1	0.091	0.476
PFOA	4.93	1.000	94348.1		A	13C8-PFOA	4.92	970523.2	0.097	0.547
PFOS	5.25	1.000	28529.2		M	13C8-PFOS	5.25	286174.8	0.100	0.517
PFNA	5.27	1.000	74743.9		A	13C9-PFNA	5.27	540435.4	0.138	0.517
PFNS	5.55	1.060	17507.8		A	13C8-PFOS	5.25	286174.8	0.061	0.485
PFDA	5.57	1.000	62530.6		A	13C6-PFDA	5.57	661423.8	0.095	0.520
8:2-FTS	5.57	1.000	6917.6		A	13C2-8:2-FTS	5.57	27523.0	0.251	0.567
PFOSA	5.64	1.000	69586.0		A	13C8-PFOSA	5.64	711032.2	0.098	0.529
NMeFOSAA	5.71	1.000	9807.4		A	d3-NMeFOSAA	5.71	83112.2	0.118	0.607
PFDS	5.80	1.110	15726.3		A	13C8-PFOS	5.25	286174.8	0.055	0.525
PFUnDA	5.83	1.000	54085.5		A	13C7-PFUnDA	5.83	289985.1	0.187	0.535
NEtFOSAA	5.84	1.000	7253.7		A	d5-NEtFOSAA	5.84	65815.9	0.110	0.474
PFDoDA	6.06	1.000	60098.0		A	13C2-PFDoDA	6.06	597616.3	0.101	0.545
10:2-FTS	6.07	1.090	4874.3		A	13C2-8:2-FTS	5.57	27523.0	0.177	0.551
NMePFOSAE	6.10	1.000	40902.1		A	d7-NMePFOSAE	6.09	330298.6	0.124	0.555
NMePFOSA	6.10	1.000	8251.9		A	d3-NMePFOSA	6.10	81301.2	0.101	0.568
PFDoS	6.23	1.190	7227.2		A	13C8-PFOS	5.25	286174.8	0.025	0.487
NEtPFOSAE	6.25	1.000	48905.8		A	d9-NEtPFOSAE	6.24	270607.6	0.181	0.579
NEtPFOSA	6.26	1.000	6419.4		A	d5-NEtPFOSA	6.26	66745.4	0.096	0.424
PFTrDA	6.25	1.030	49218.5		A	13C2-PFDoDA	6.06	597616.3	0.082	0.519
PFTeDA	6.43	1.000	36223.2		A	13C2-PFTeDA	6.43	441206.9	0.082	0.482
PFHxDA	6.74	1.050	18619.3		A	13C2-PFTeDA	6.43	441206.9	0.042	0.524
PFODA	7.00	1.090	15742.1		A	13C2-PFTeDA	6.43	441206.9	0.036	0.511

Total Ion Chromatogram

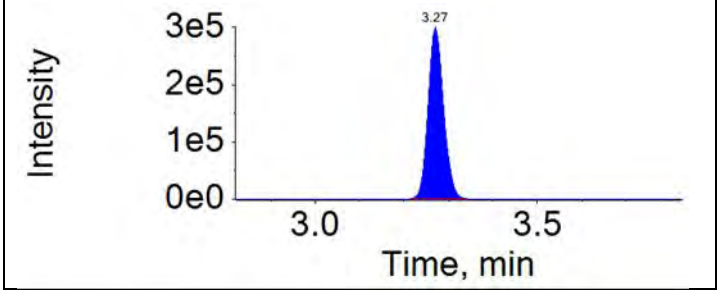


APPROVED
By JPT at 2:53 pm, 11/7/18

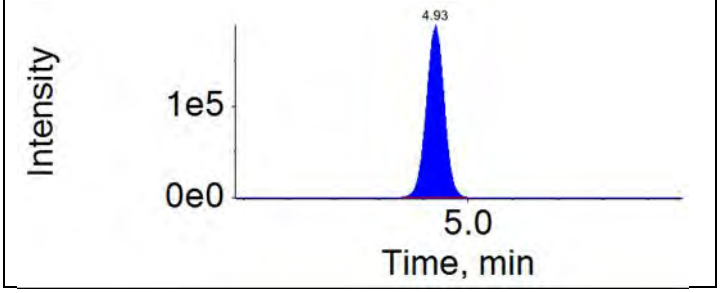
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

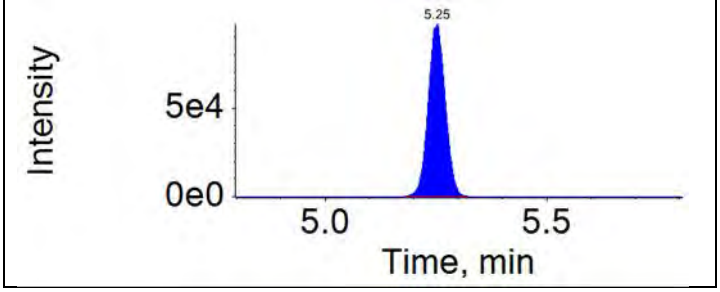
Injection Standard: 13C3-PFBA
216.0 / 172.0



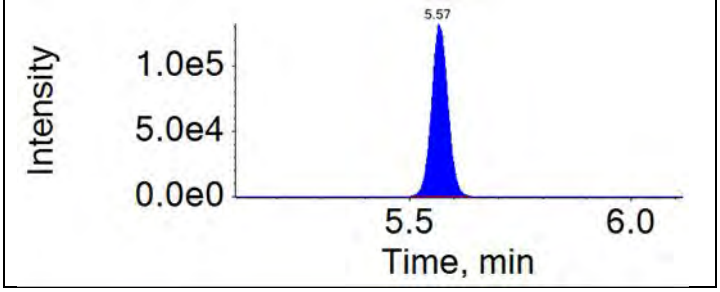
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

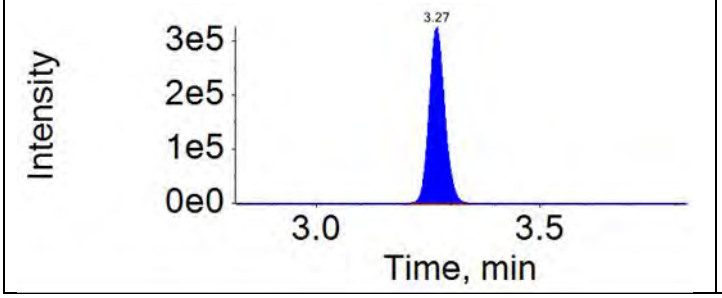


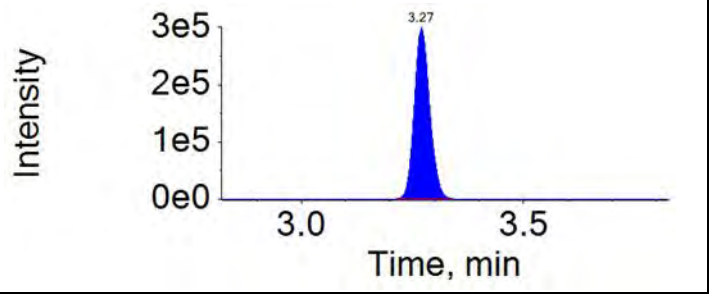
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

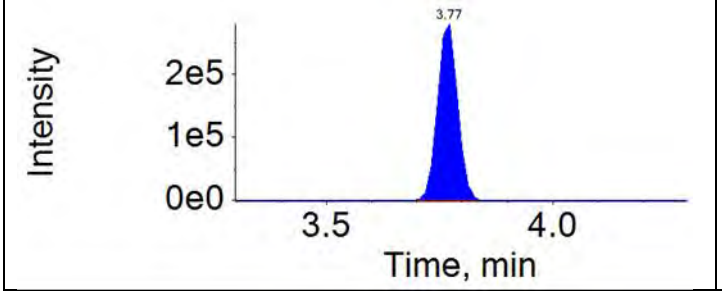
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

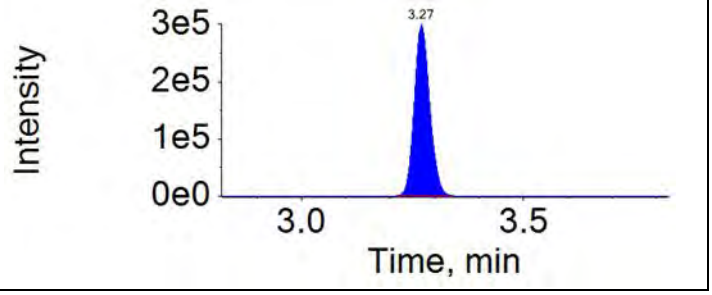
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



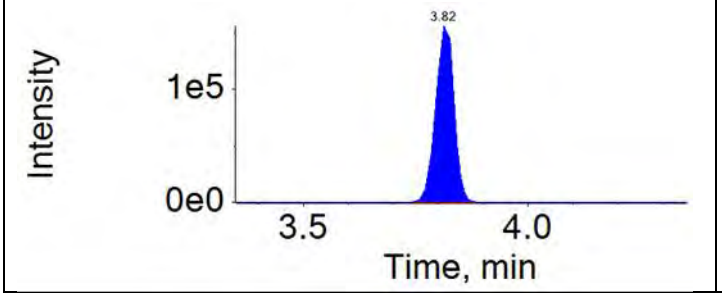


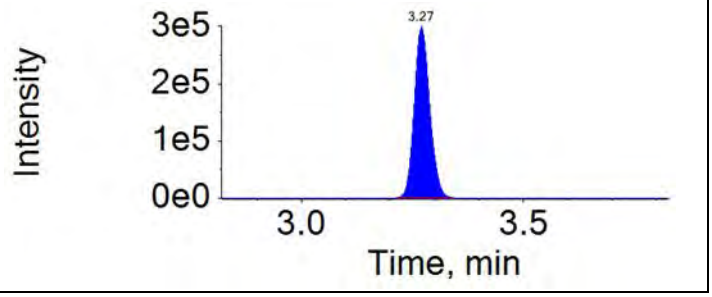
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



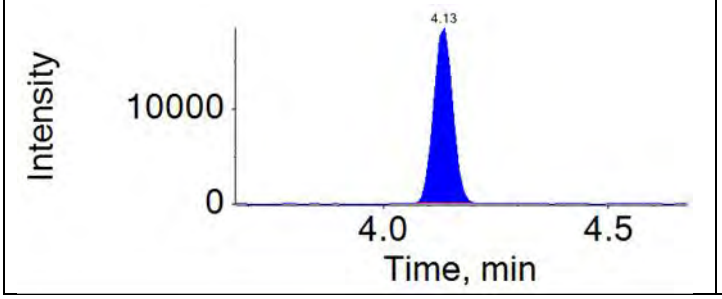


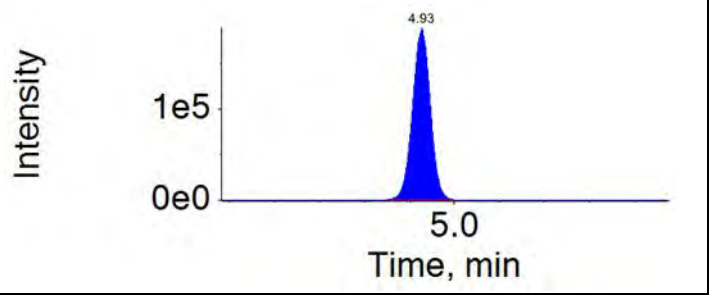
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



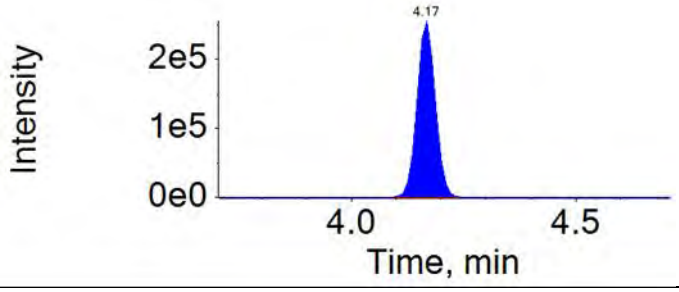
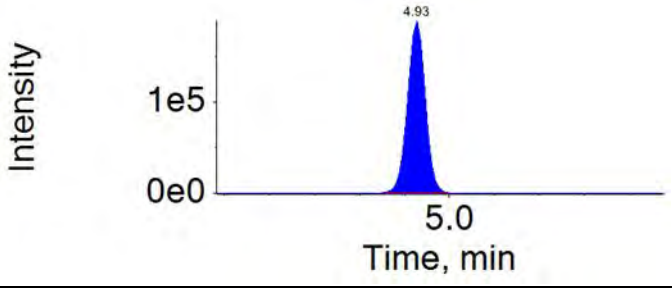


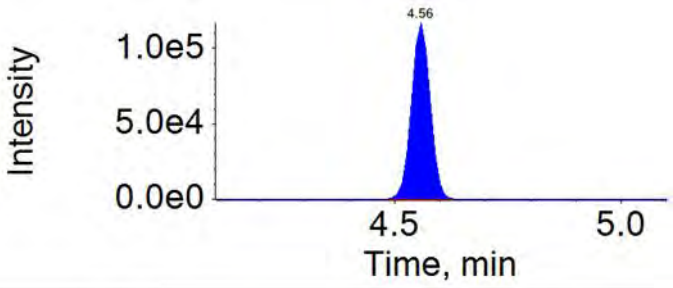
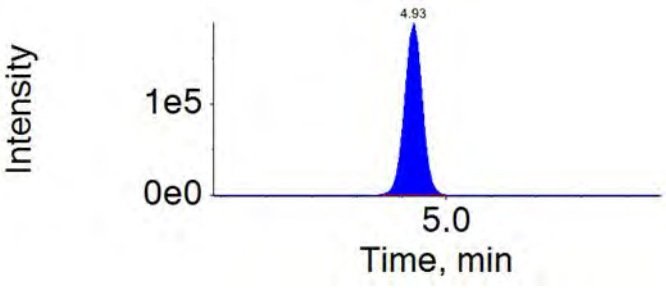
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

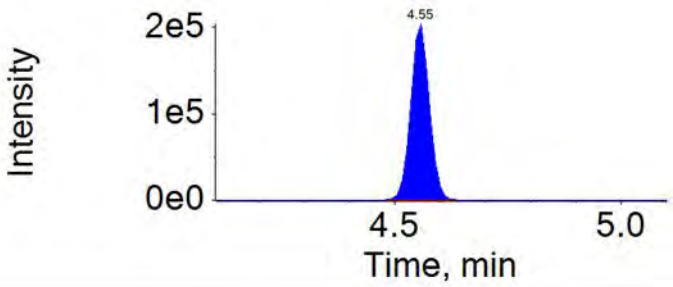
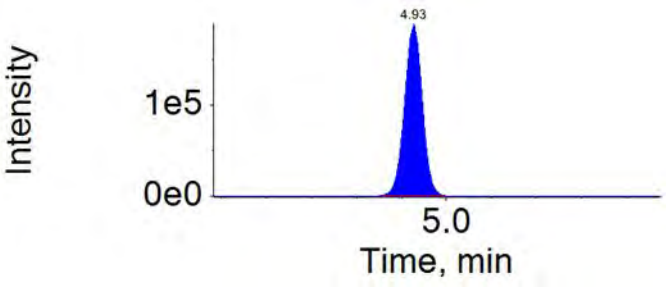


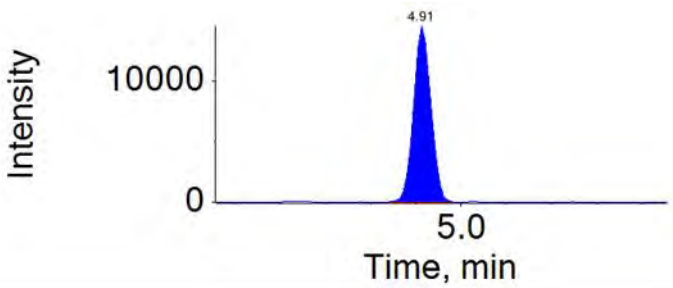
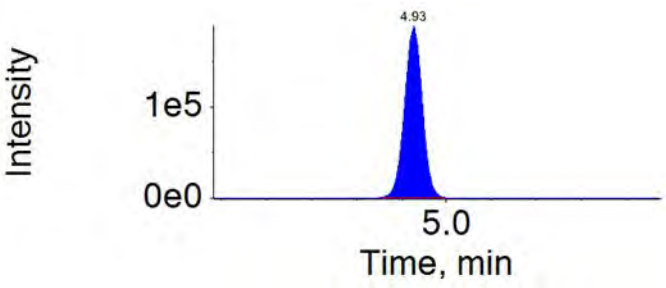


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

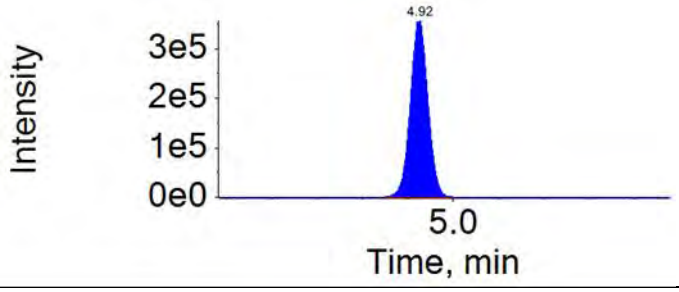
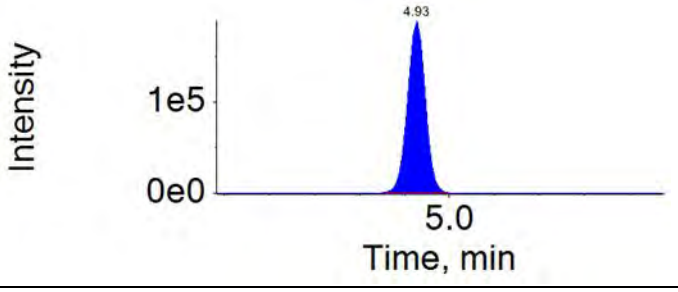
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

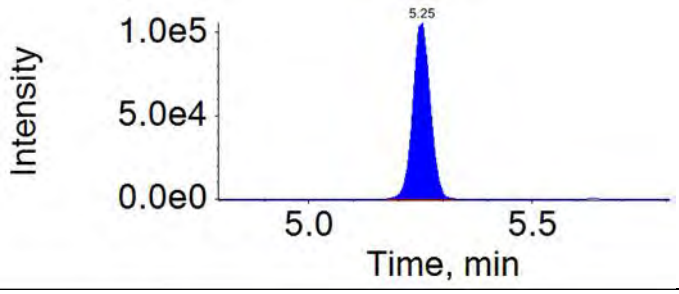
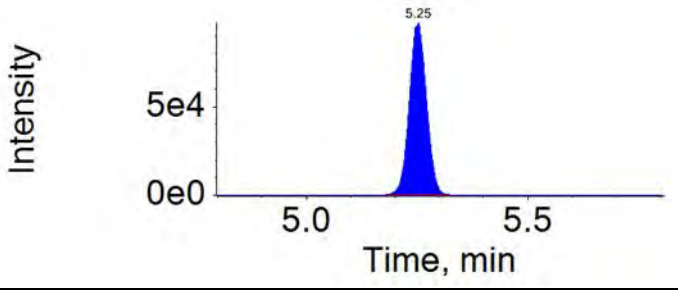
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

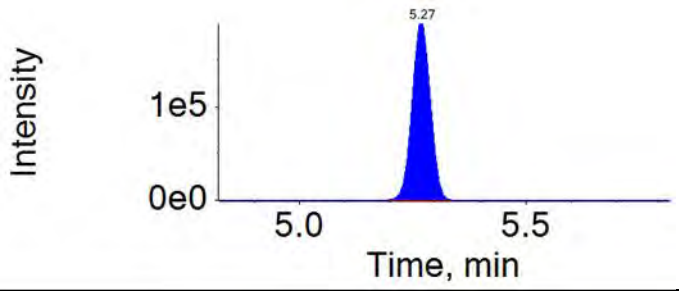
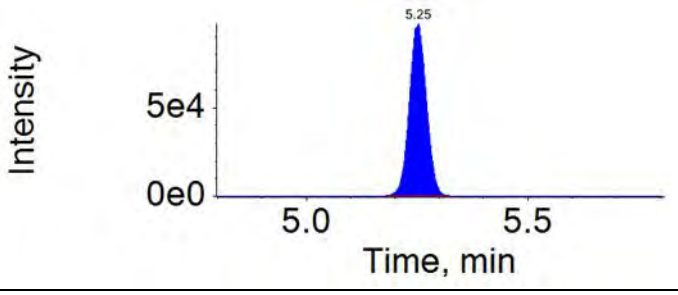
APPROVED
By JPT at 2:53 pm, 11/7/18

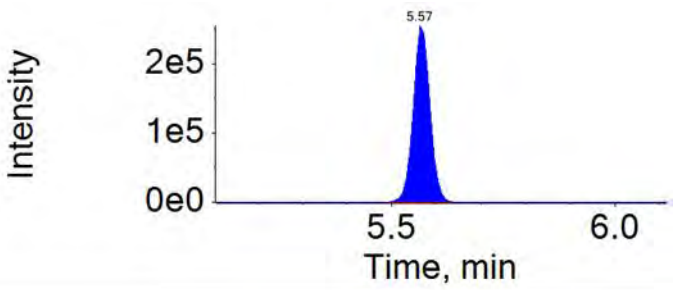
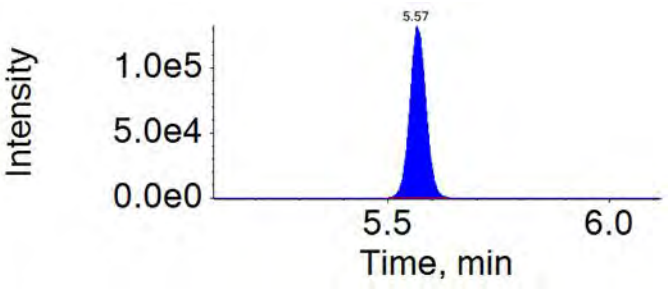
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

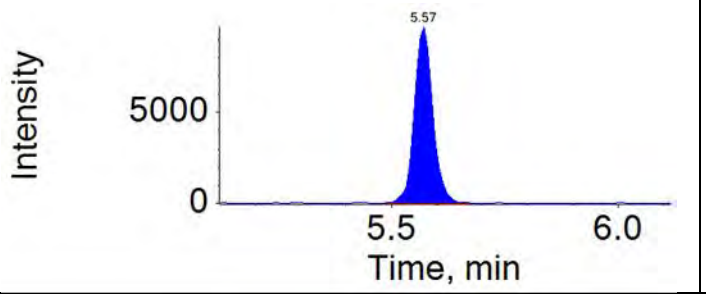
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

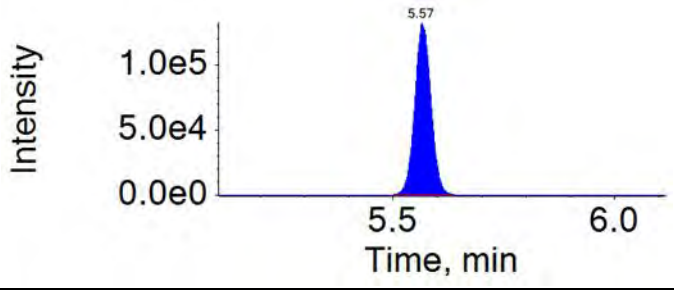
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

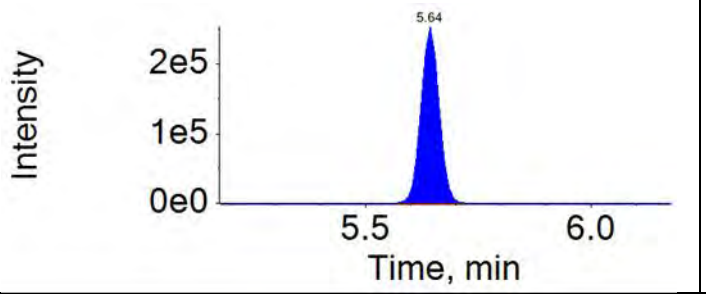
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

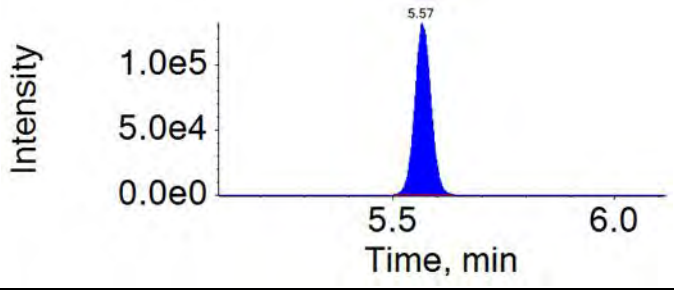
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



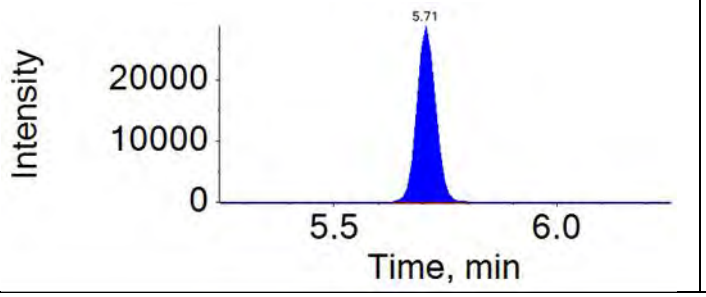


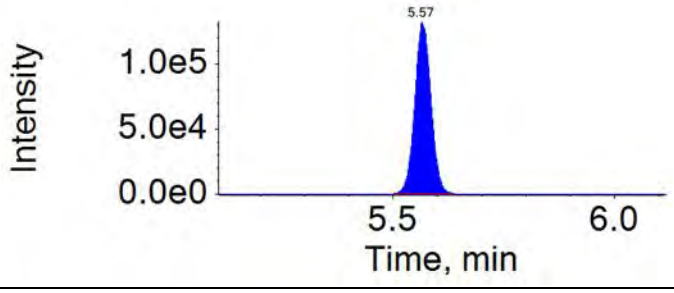
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



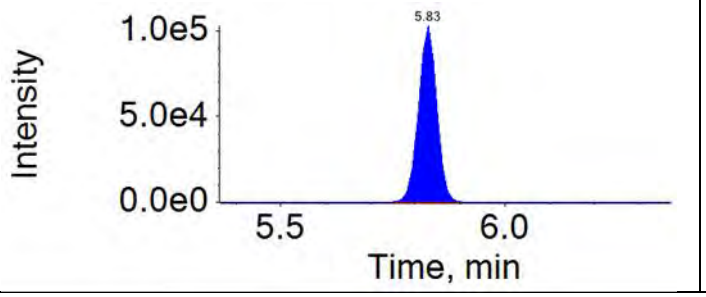


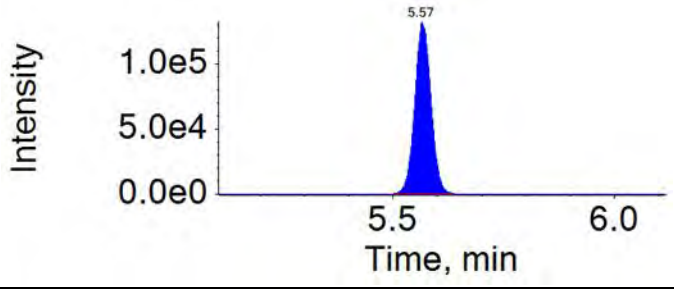
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



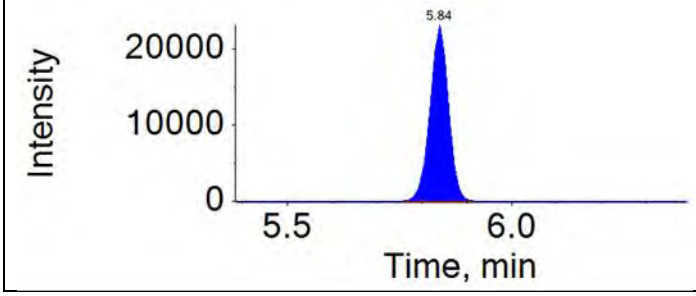


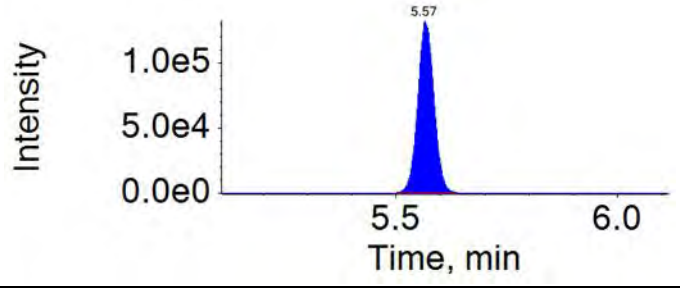
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

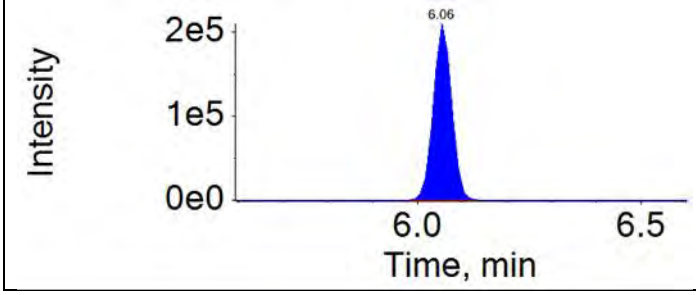
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

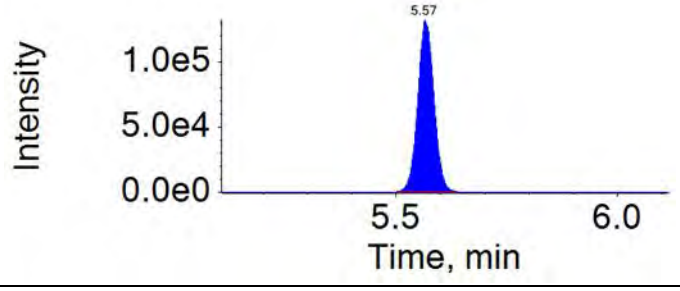
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



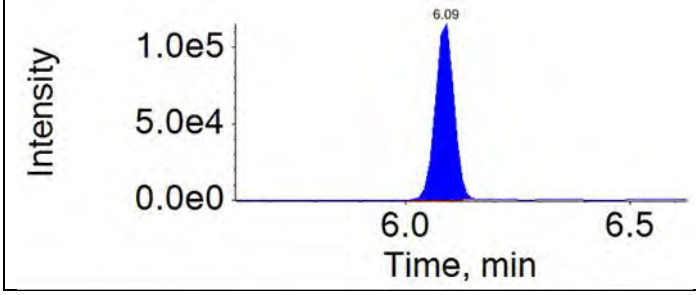


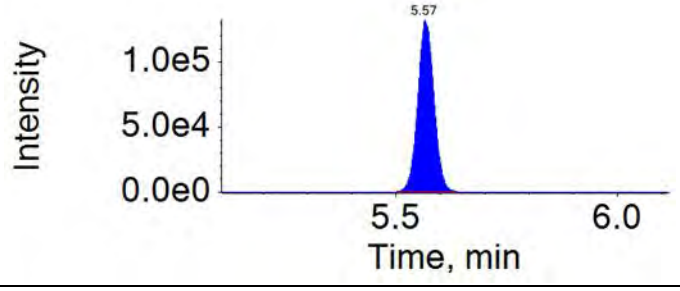
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



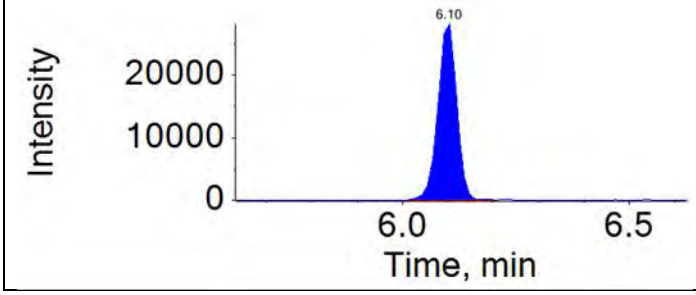


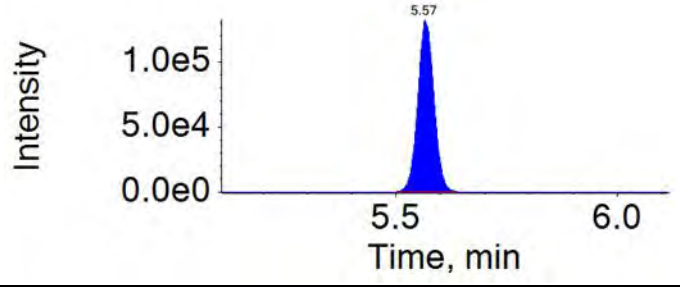
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



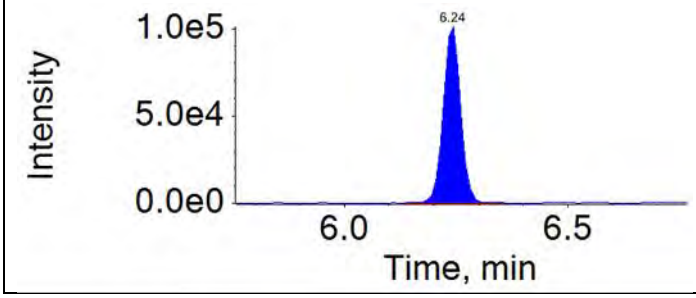


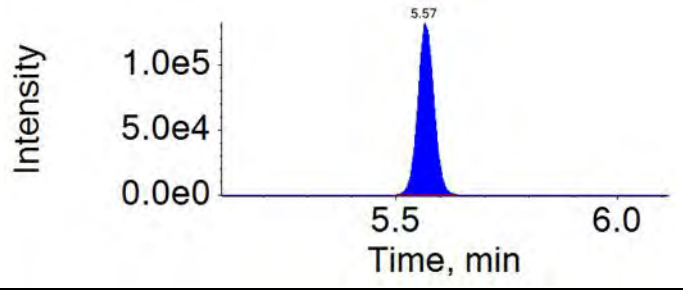
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

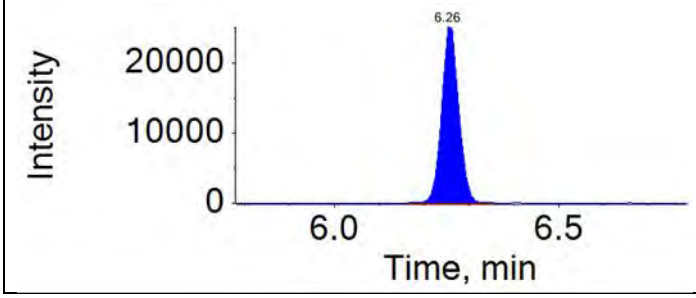
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

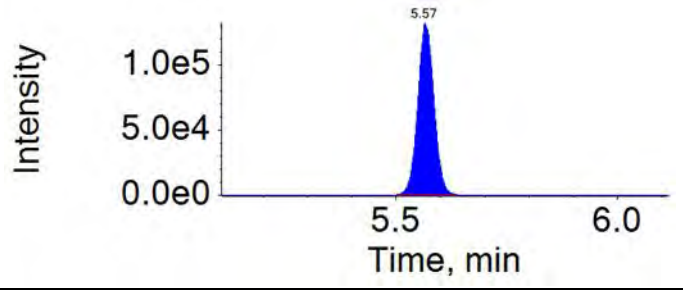
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



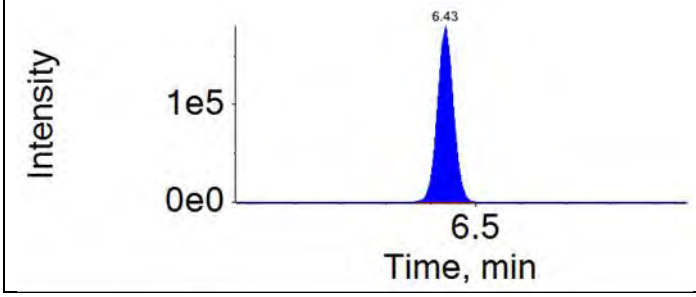


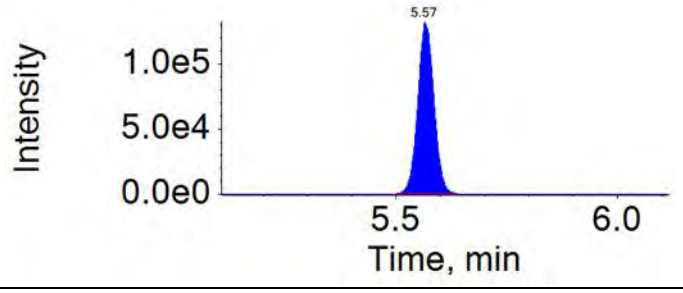
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



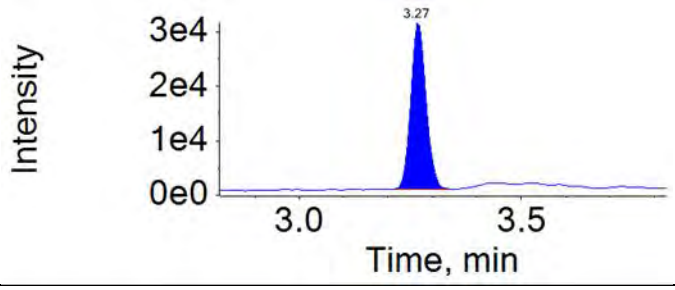


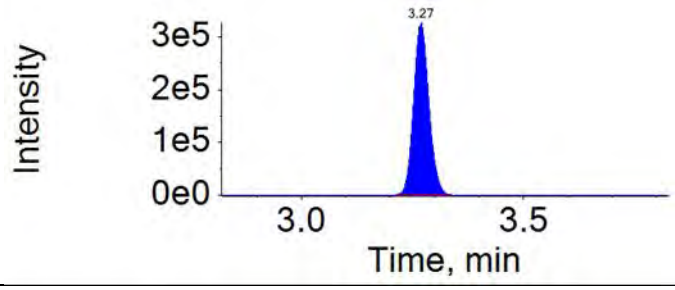
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

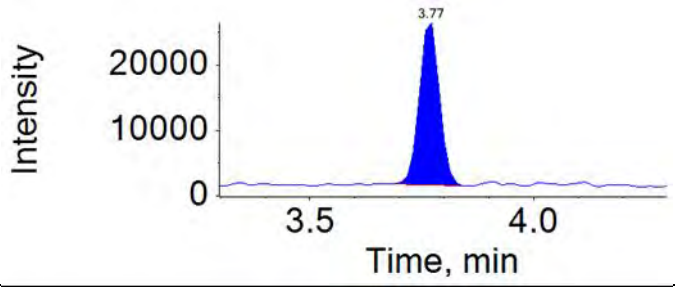
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

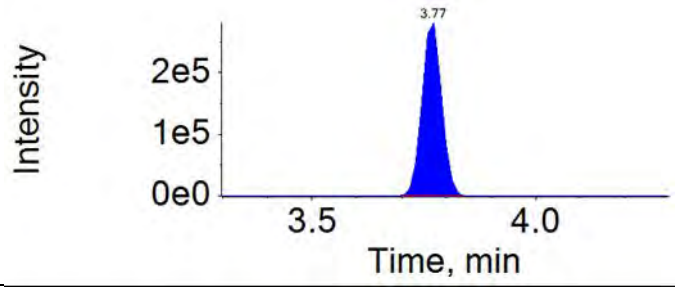
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



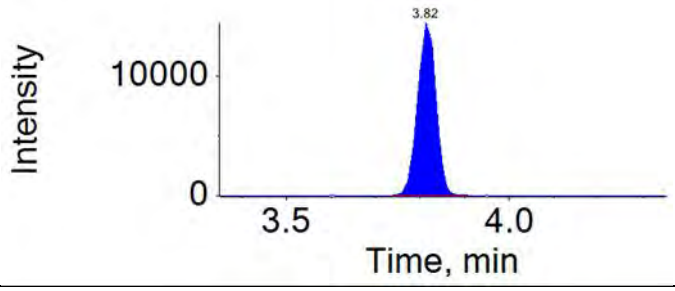


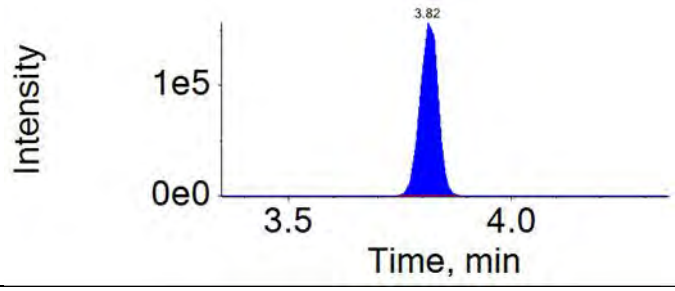
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



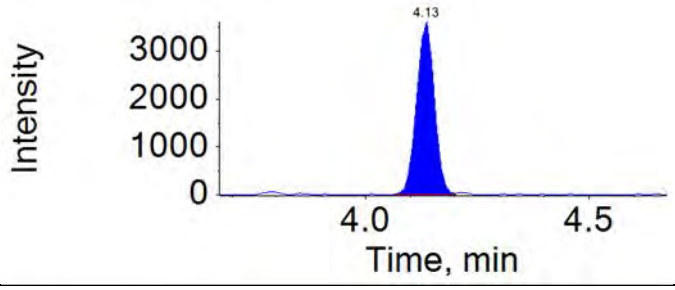


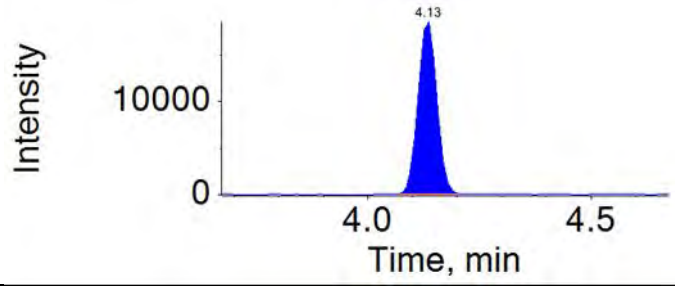
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

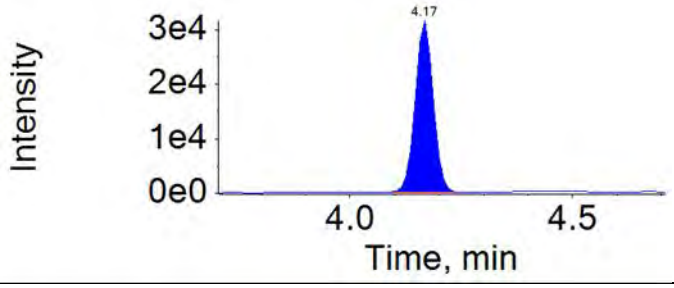
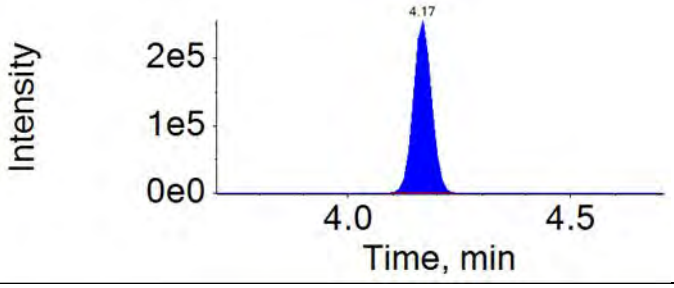


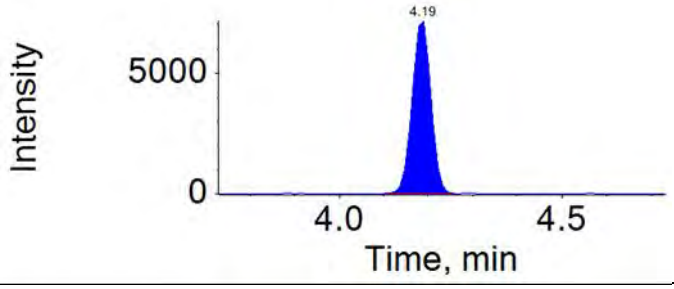
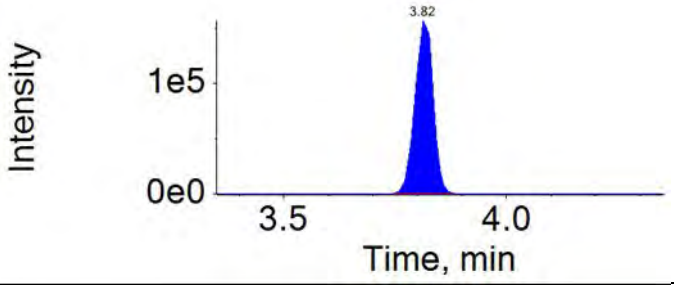


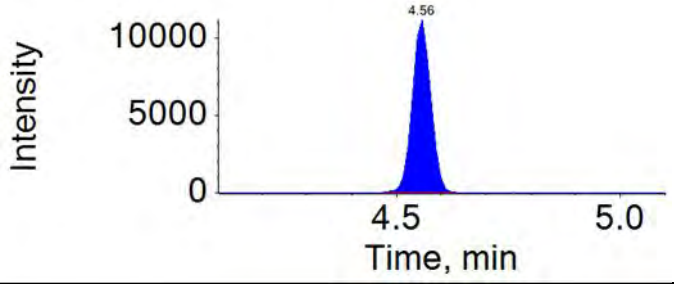
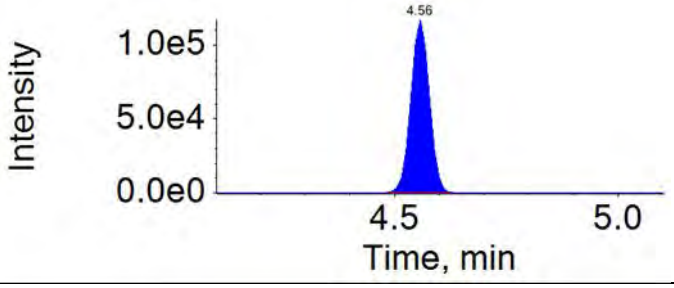
APPROVED
By JPT at 2:53 pm, 11/7/18

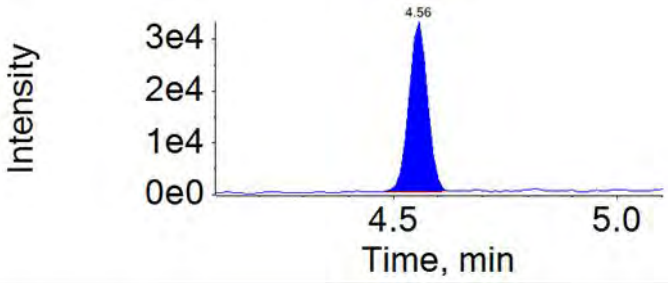
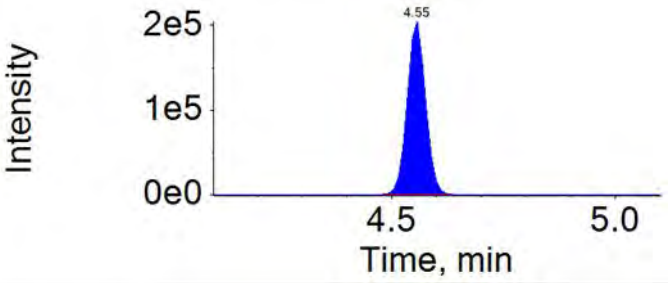
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

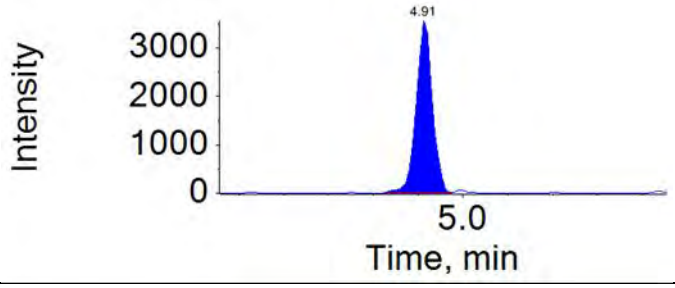
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

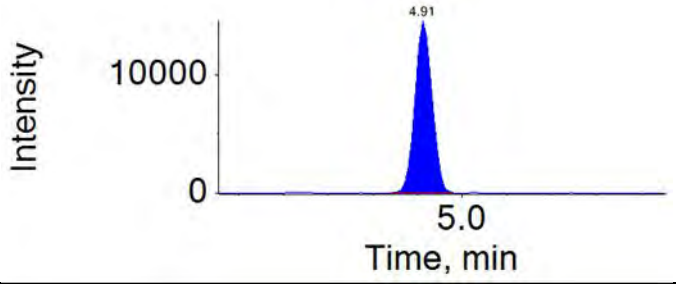
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

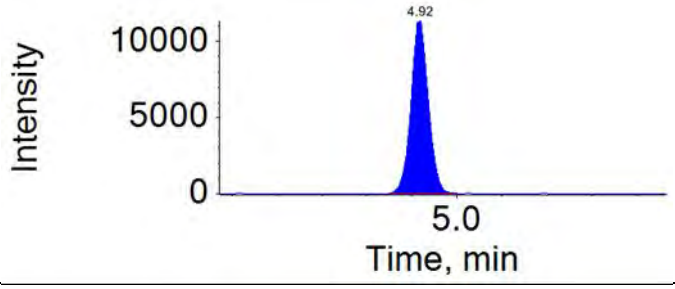
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

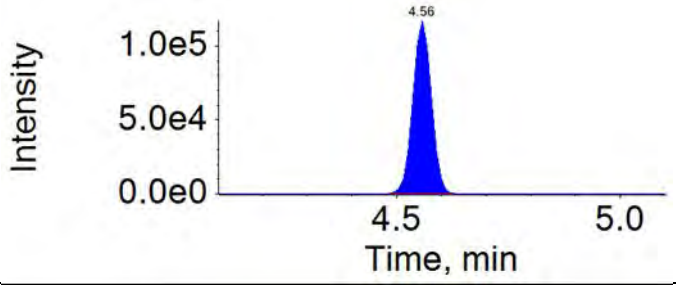
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



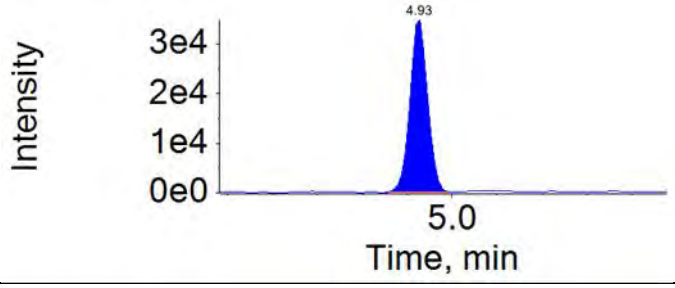


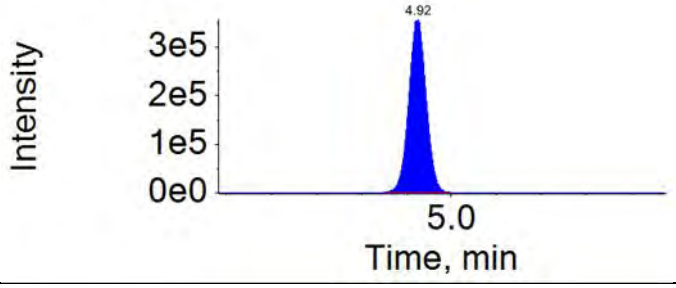
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



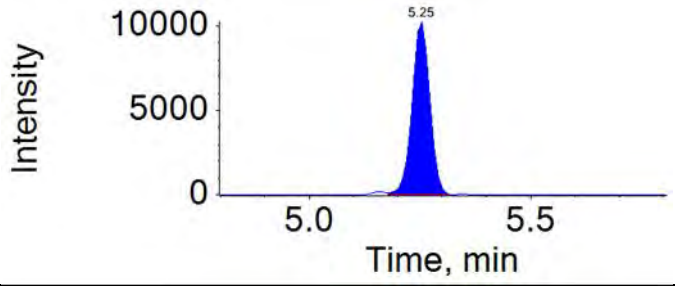


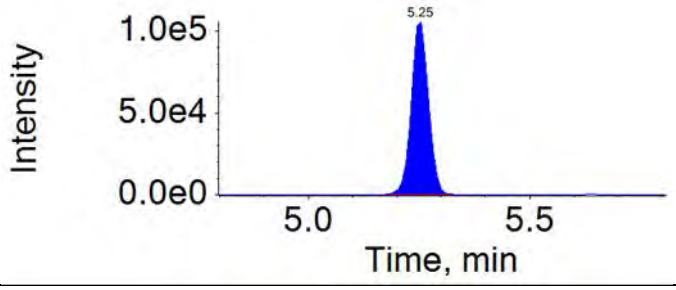
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



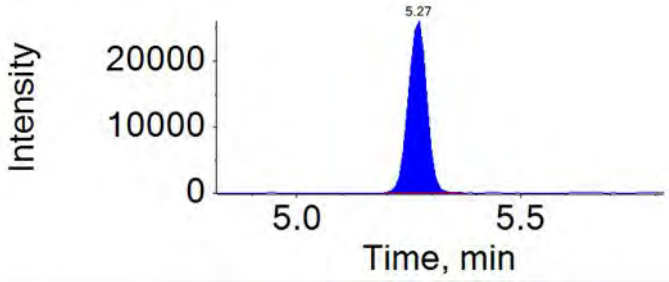


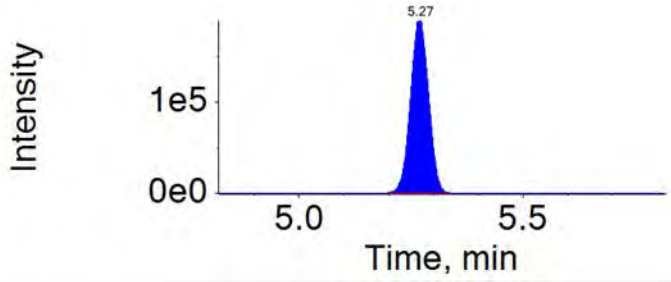
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

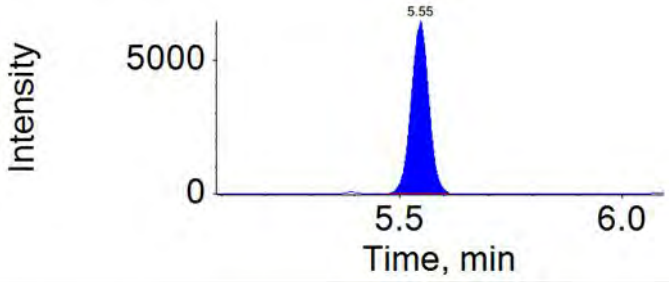
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

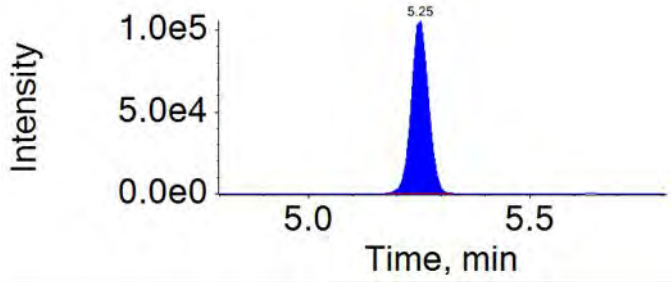
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



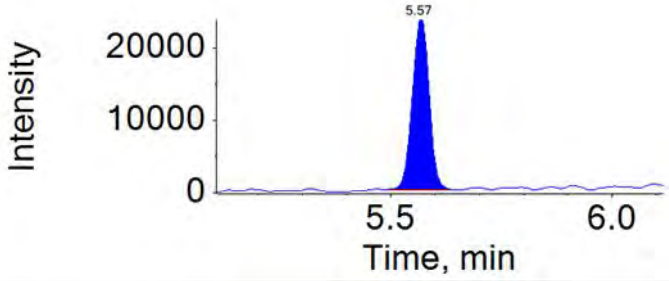


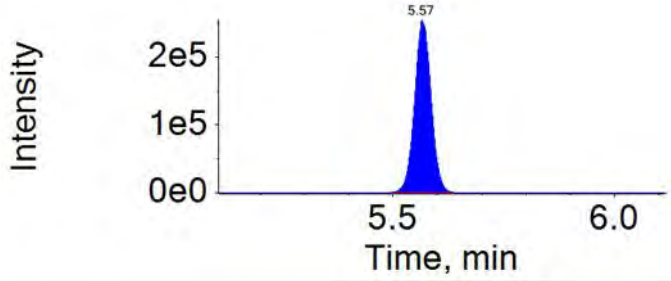
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



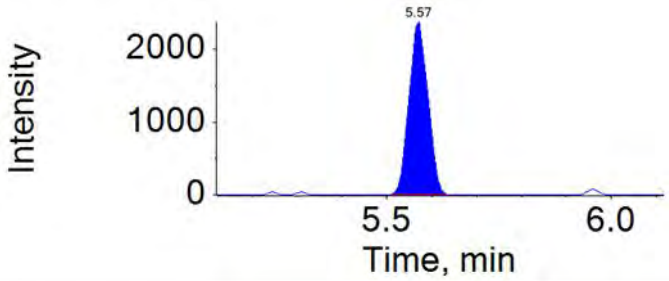


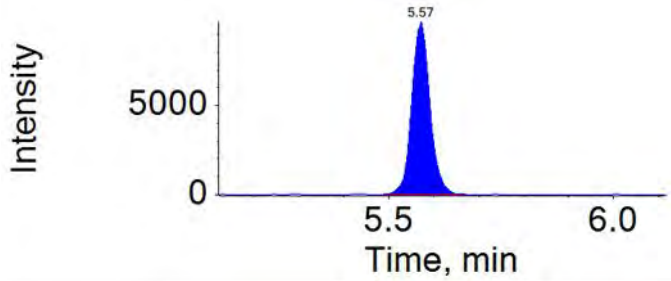
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

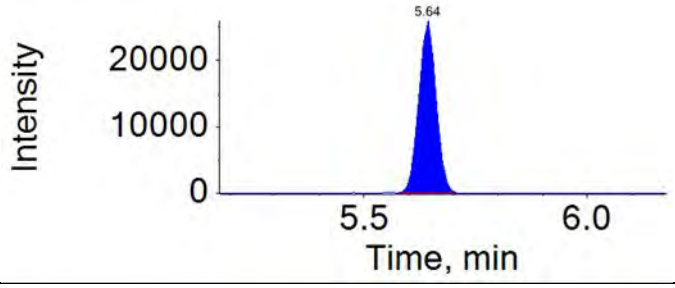
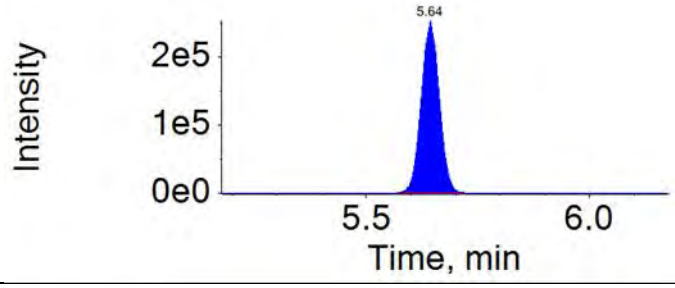


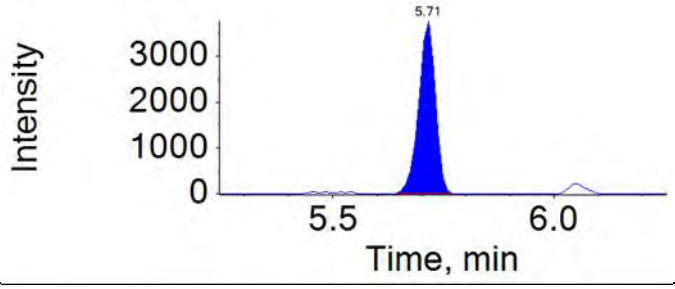
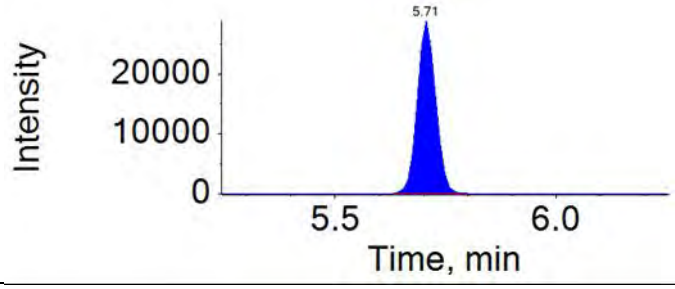


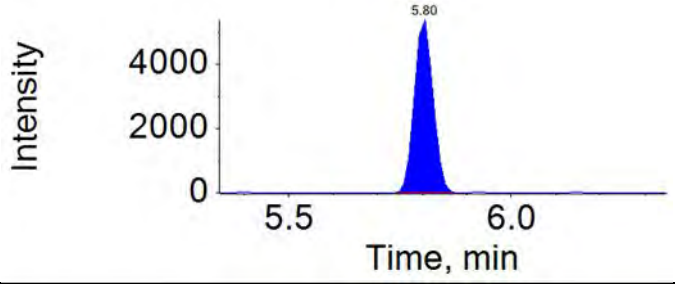
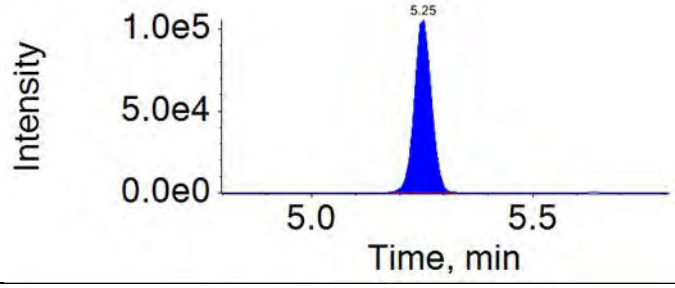
APPROVED
By JPT at 2:53 pm, 11/7/18

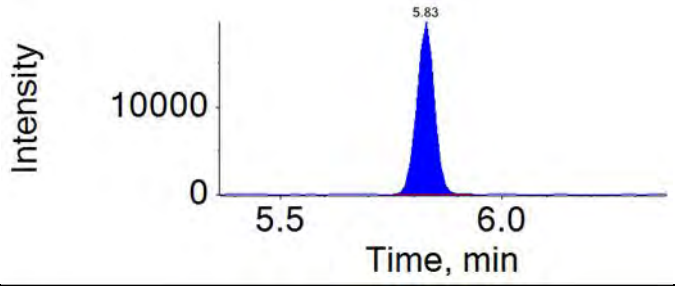
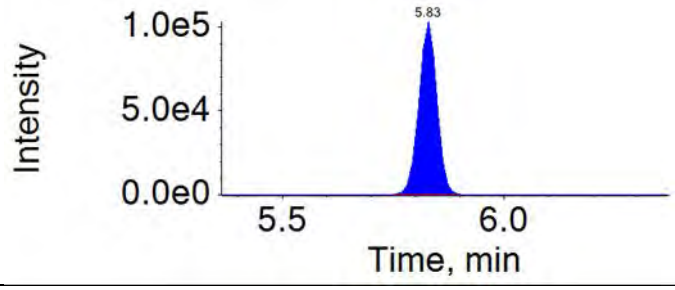
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

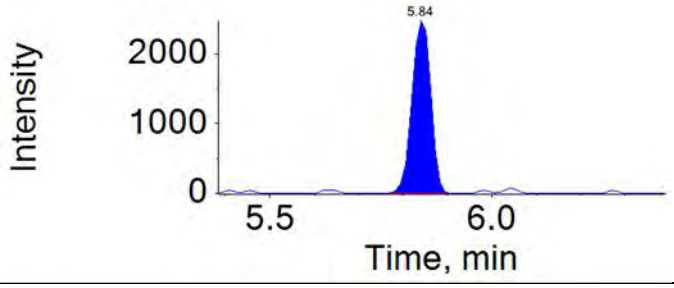
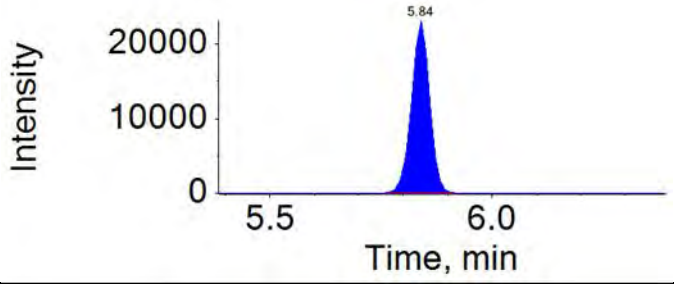
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

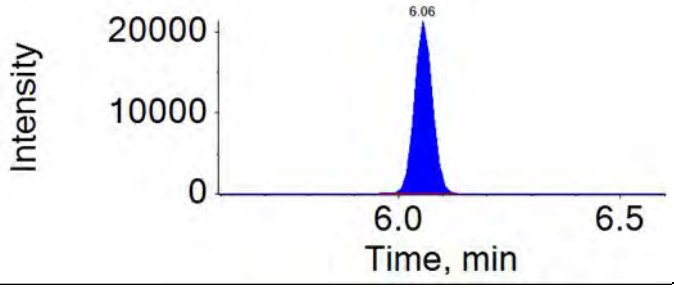
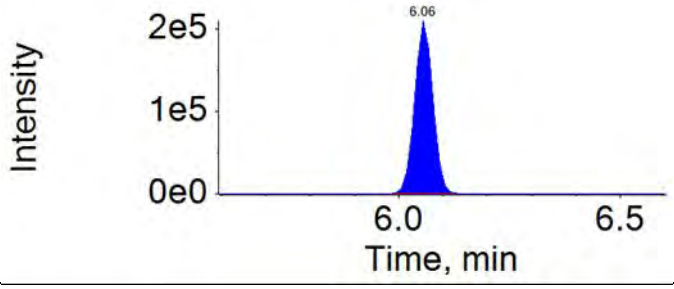
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

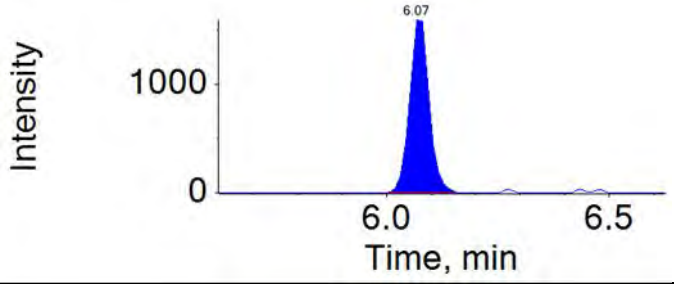
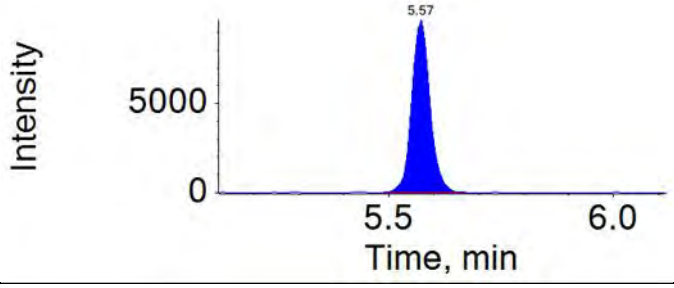
APPROVED
By JPT at 2:53 pm, 11/7/18

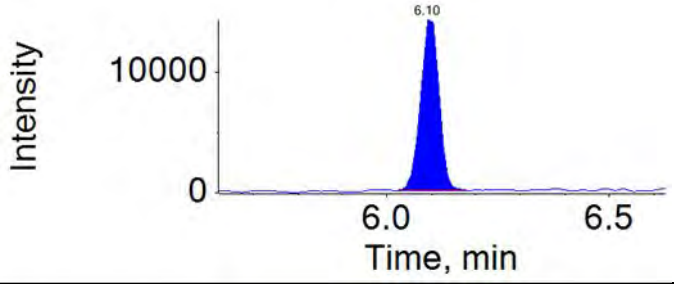
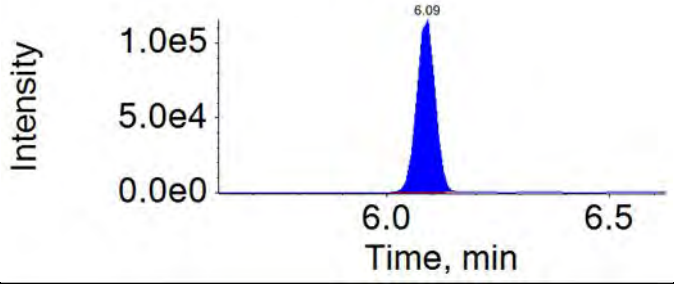
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

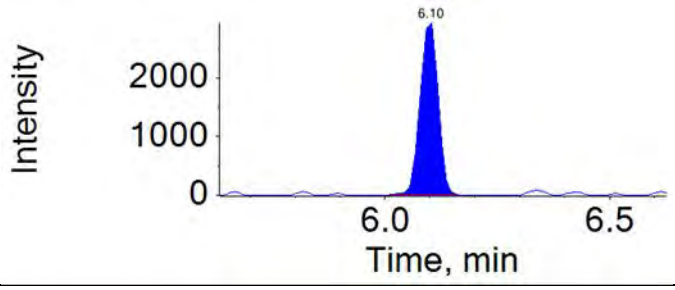
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

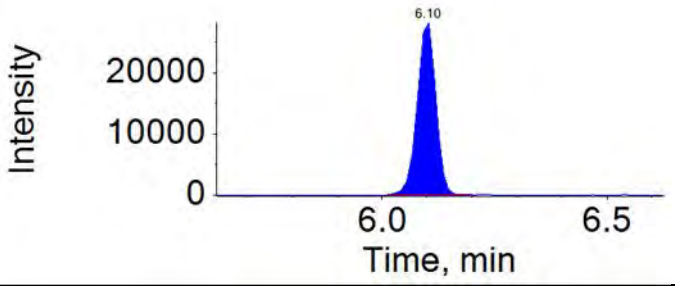
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

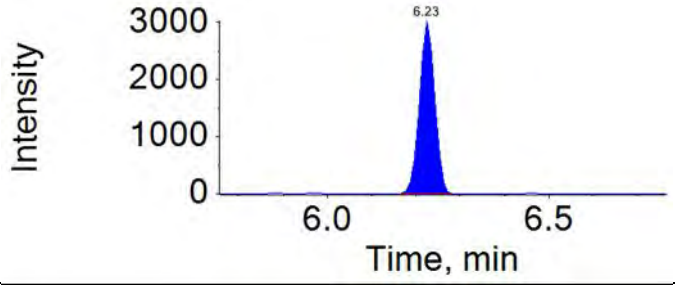
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

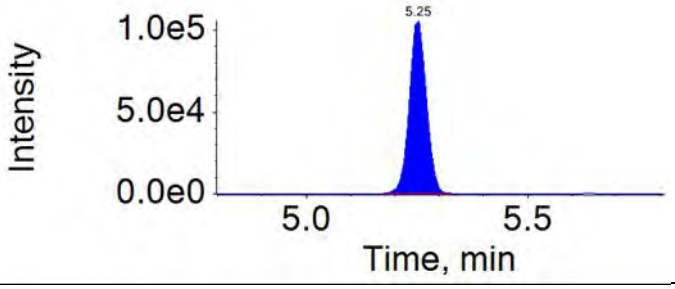
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



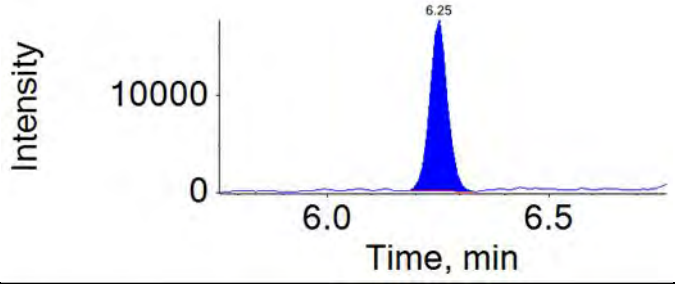


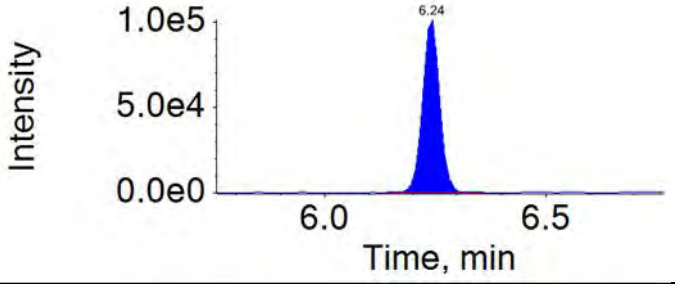
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



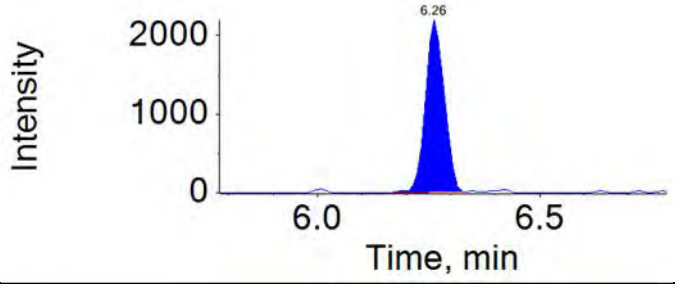


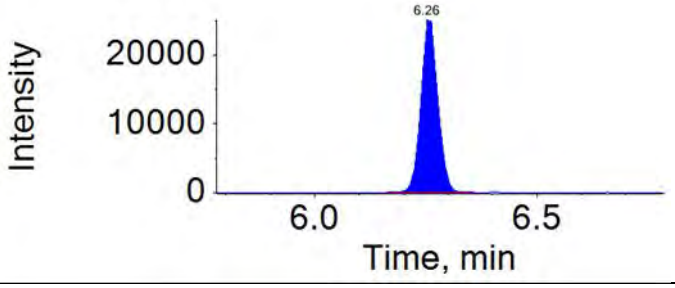
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



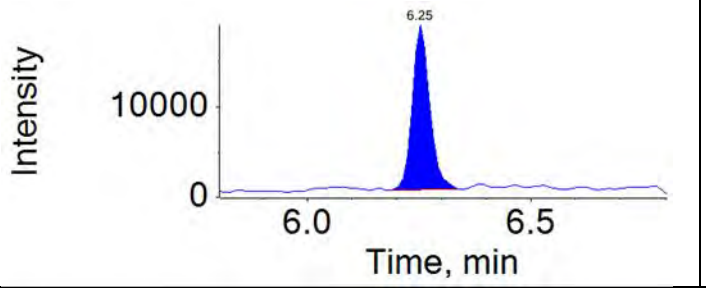


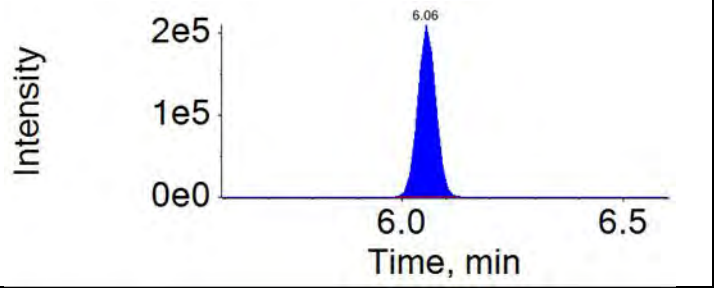
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

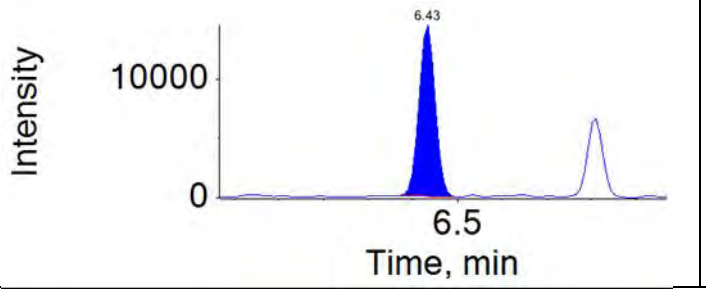
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

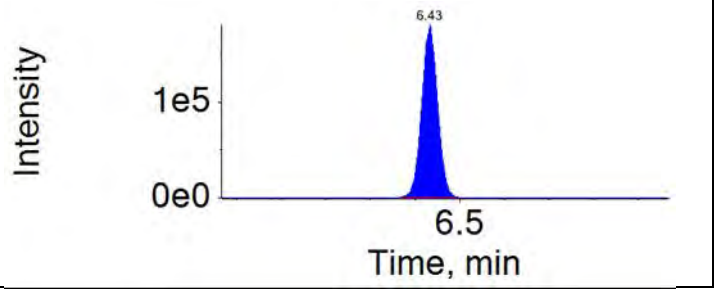
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



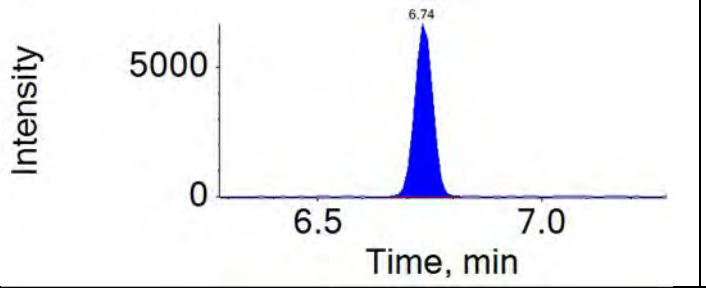


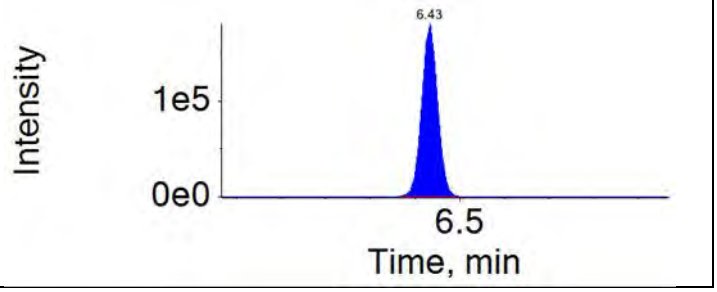
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



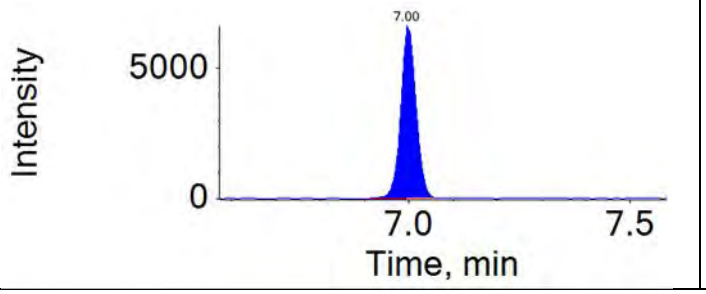


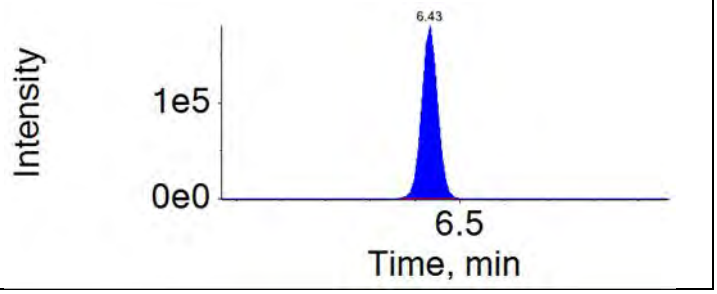
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



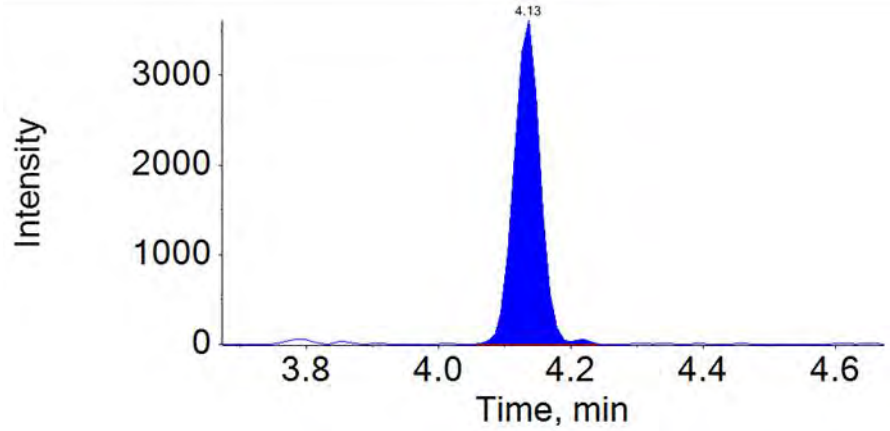


APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

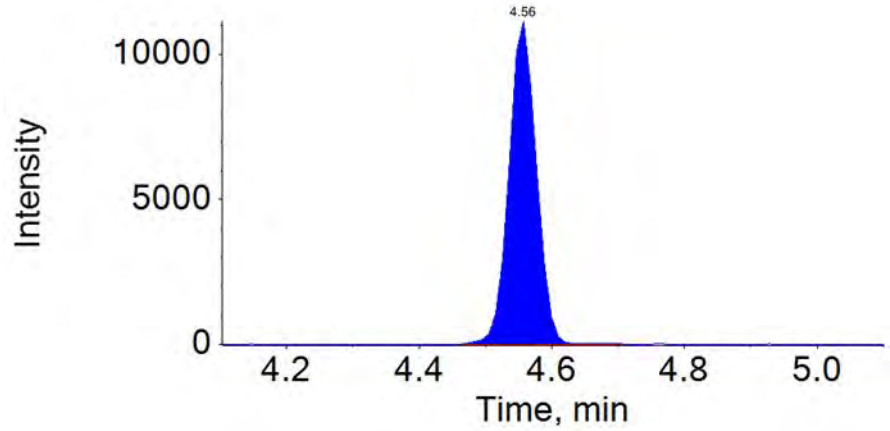
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
4:2-FTS
RT (min.):
4.13
Peak Area:
10015.5
Mass Range:
327.0 / 307.0
File Name:
18NOV07DCAL-11.wiff
Sample Name:
CAL2



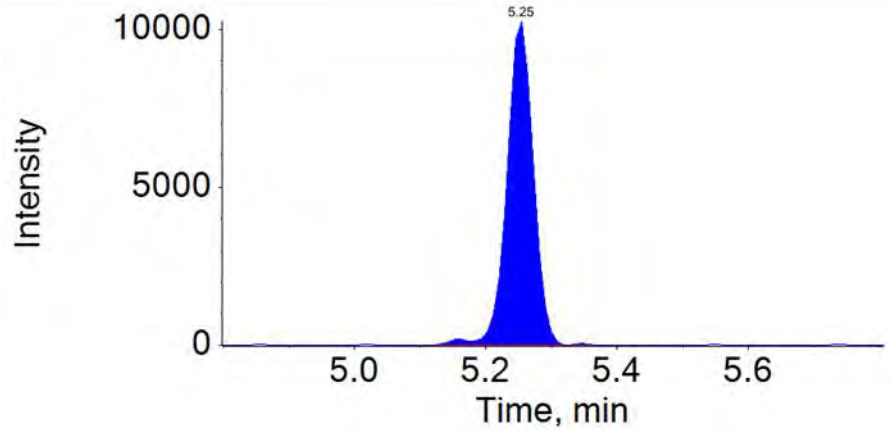
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
32165.6
Mass Range:
399.0 / 80.0
File Name:
18NOV07DCAL-11.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
29015.4
Mass Range:
499.0 / 80.0
File Name:
18NOV07DCAL-11.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

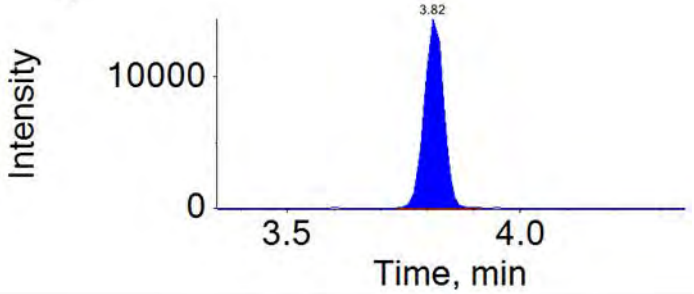
Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-11.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	41415.1	A	1.0000	1.0000			
PFBS_2	3.82	1.00	14355.0	A	0.3576	0.3466	-3	50	
4:2-FTS	4.13	1.00	9924.9	M	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	6720.6	A	0.6359	0.6771	6	50	
PFHxA	4.17	1.00	88469.9	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	1053.3	A	0.0115	0.0119	4	50	
PFPeS	4.19	1.10	20956.8	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	12018.2	A	0.5384	0.5735	7	50	
PFHxS	4.56	1.00	32061.0	M	1.0000	1.0000			
PFHxS_2	4.56	1.00	11356.8	A	0.3569	0.3542	-1	50	
PFHpA	4.56	1.00	93502.9	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	5694.0	A	0.0577	0.0609	6	50	
6:2-FTS	4.91	1.00	8883.8	A	1.0000	1.0000			
6:2-FTS_2	4.92	1.00	4933.5	A	0.6752	0.5553	-18	50	
PFHpS	4.92	1.08	30553.2	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	12511.0	A	0.3950	0.4095	4	50	
PFOA	4.93	1.00	94348.1	A	1.0000	1.0000			
PFOA_2	4.92	1.00	6706.8	A	0.0635	0.0711	12	50	
PFOS	5.25	1.00	28529.2	M	1.0000	1.0000			
PFOS_2	5.25	1.00	9986.4	A	0.3494	0.3500	0	50	
PFNA	5.27	1.00	74743.9	A	1.0000	1.0000			
PFNA_2	5.27	1.00	2006.2	A	0.0207	0.0268	30	50	
PFNS	5.55	1.06	17507.8	A	1.0000	1.0000			
PFNS_2	5.54	1.06	9005.6	A	0.4890	0.5144	5	50	
PFDA	5.57	1.00	62530.6	A	1.0000	1.0000			
PFDA_2	5.57	1.00	229.8	A	0.0057	0.0037	-35	50	
8:2-FTS	5.57	1.00	6917.6	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	4092.7	A	0.6169	0.5916	-4	50	
NMeFOSAA	5.71	1.00	9807.4	A	1.0000	1.0000			
NMeFOSAA_2	5.72	1.00	1815.6	A	0.2206	0.1851	-16	50	
PFDS	5.80	1.11	15726.3	A	1.0000	1.0000			
PFDS_2	5.79	1.10	7422.2	A	0.4648	0.4720	2	50	
PFUnDA	5.83	1.00	54085.5	A	1.0000	1.0000			
PFUnDA_2	5.83	1.00	55.5	A	0.0031	0.0010	-67	50	OOS
NEtFOSAA	5.84	1.00	7253.7	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	4097.5	A	0.6082	0.5649	-7	50	
PFDoDA	6.06	1.00	60098.0	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	610.7	A	0.0109	0.0102	-7	50	
10:2-FTS	6.07	1.09	4874.3	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	3667.0	A	0.7082	0.7523	6	50	
PFTrDA	6.25	1.03	49218.5	A	1.0000	1.0000			
PFTrDA_2	6.26	1.03	479.8	A	0.0096	0.0097	1	50	
PFTeDA	6.43	1.00	36223.2	A	1.0000	1.0000			
PFTeDA_2	6.44	1.00	219.8	A	0.0055	0.0061	10	50	
PFHxDA	6.74	1.05	18619.3	A	1.0000	1.0000			
PFHxDA_2	6.74	1.05	1073.0	A	0.0596	0.0576	-3	50	
PFODA	7.00	1.09	15742.1	A	1.0000	1.0000			
PFODA_2	7.00	1.09	416.9	A	0.0257	0.0265	3	50	

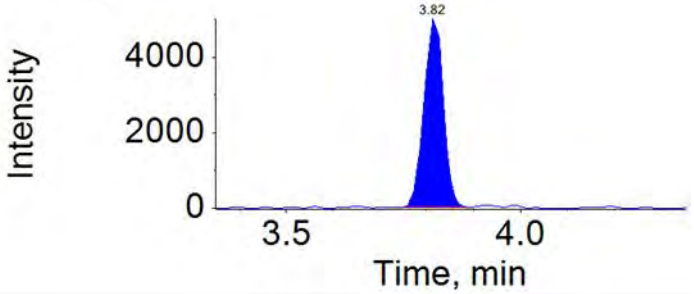
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

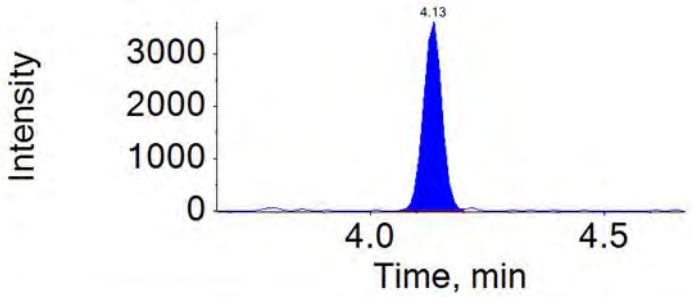
Component: PFBS
Primary Mass: 299.0 / 80.0



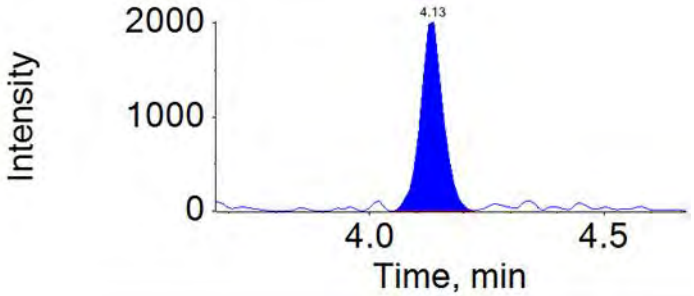
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



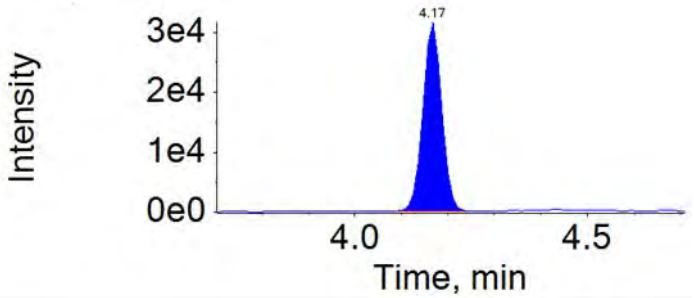
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



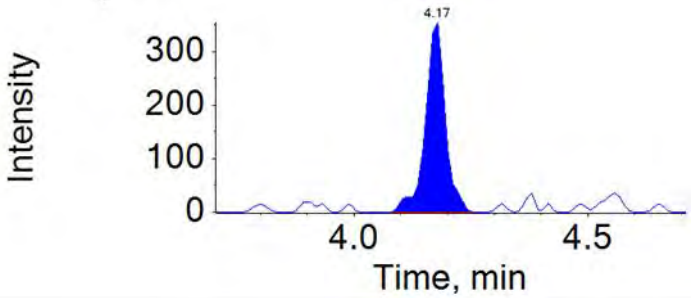
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



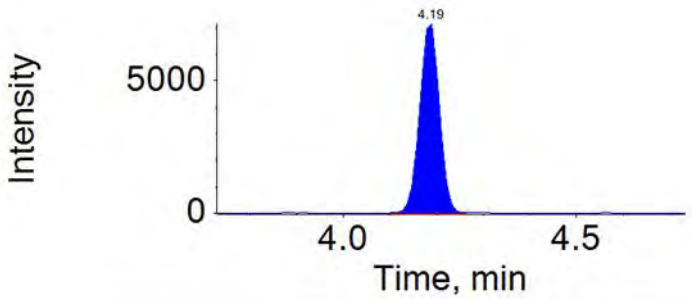
Component: PFHxA
Primary Mass: 313.0 / 269.0



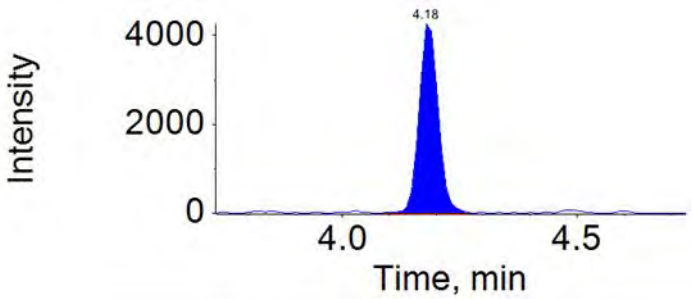
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



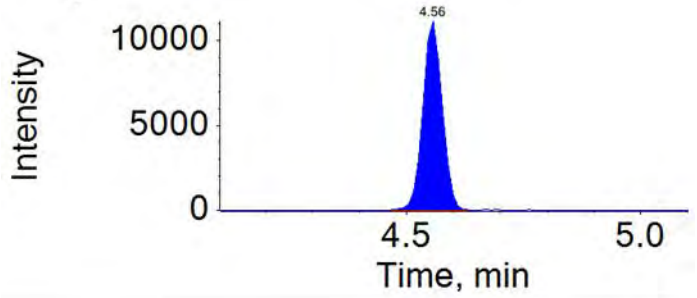
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



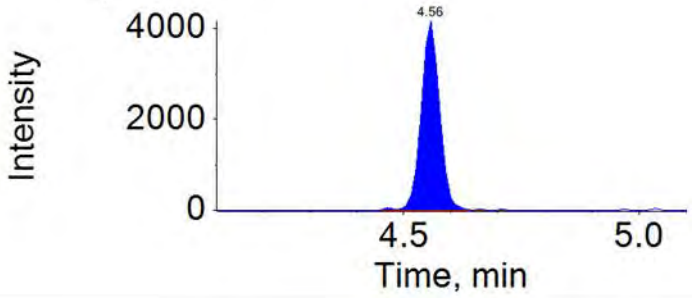
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

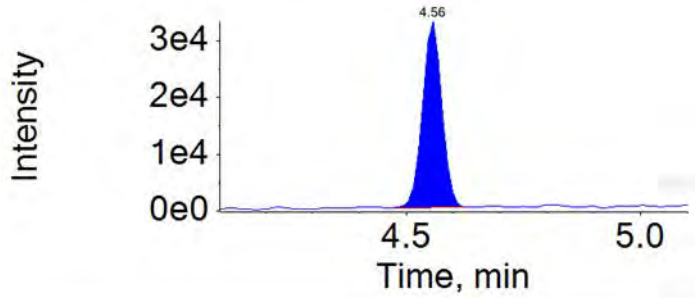
Component: PFHxS
Primary Mass: 399.0 / 80.0



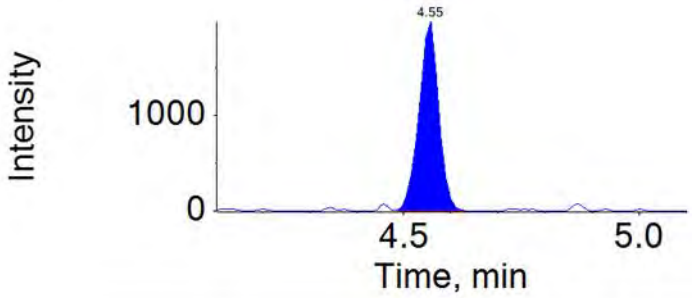
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



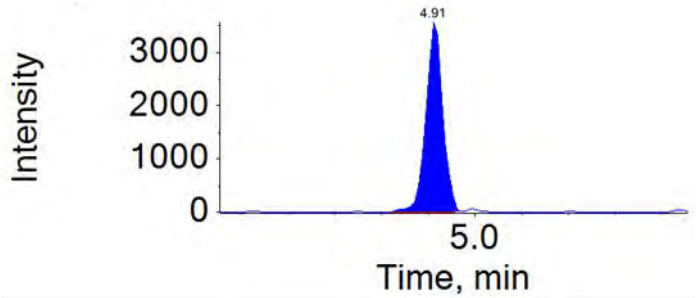
Component: PFHpA
Primary Mass: 363.0 / 319.0



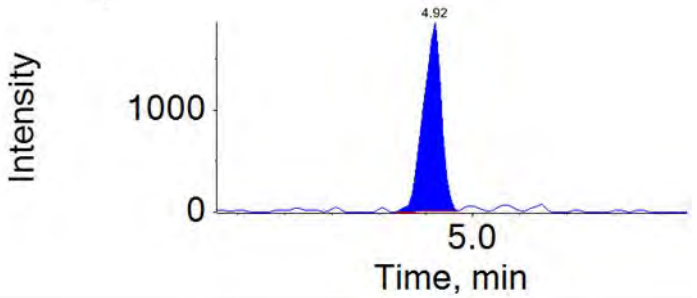
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



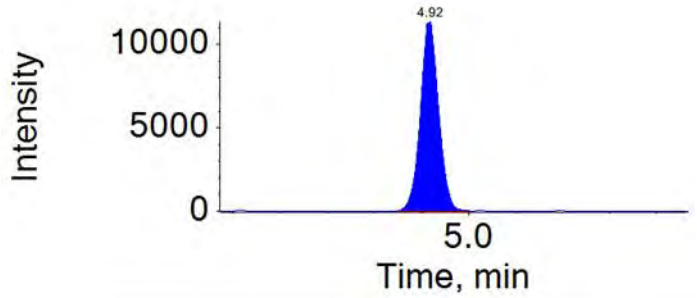
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



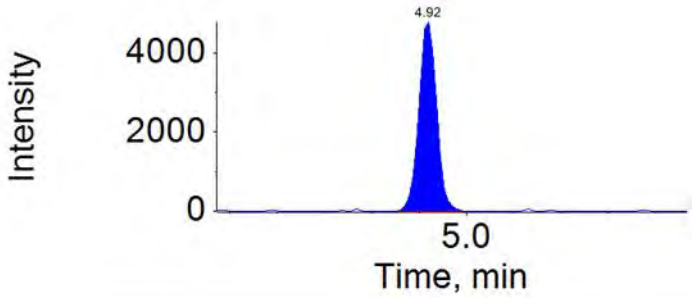
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



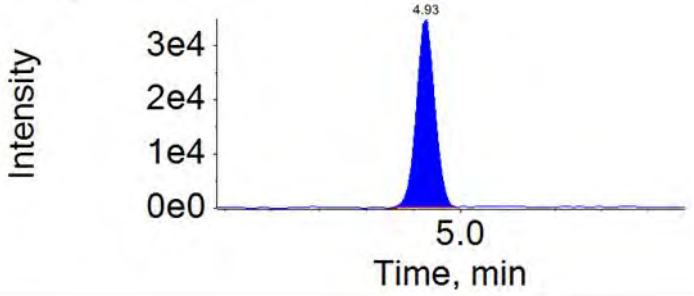
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



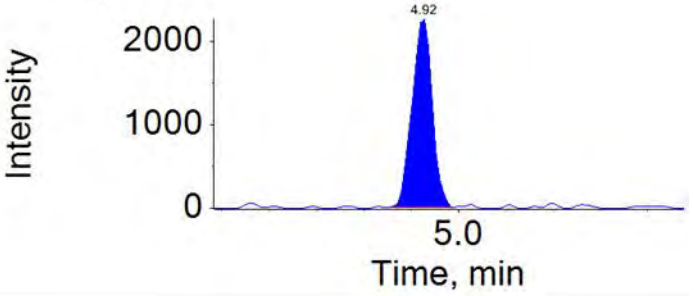
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

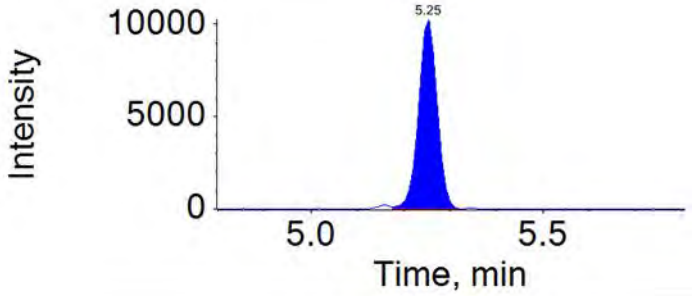
Component: PFOA
Primary Mass: 413.0 / 369.0



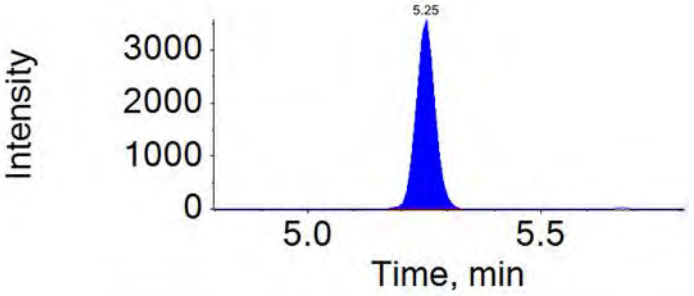
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



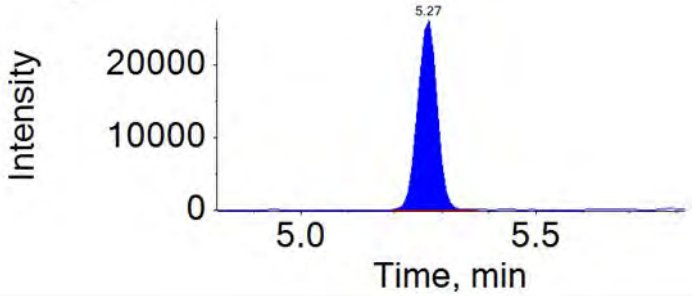
Component: PFOS
Primary Mass: 499.0 / 80.0



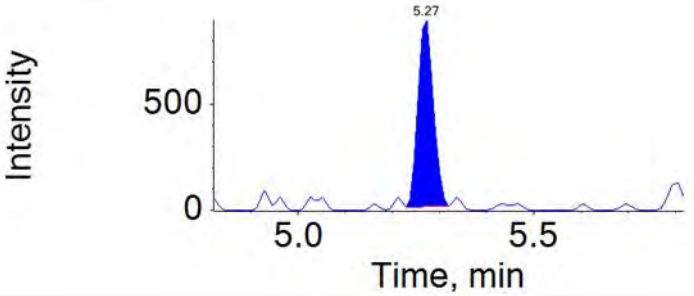
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



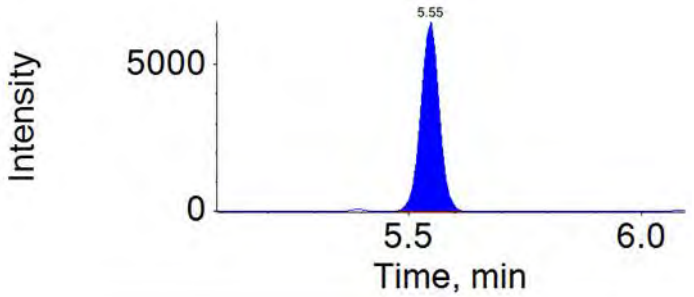
Component: PFNA
Primary Mass: 463.0 / 419.0



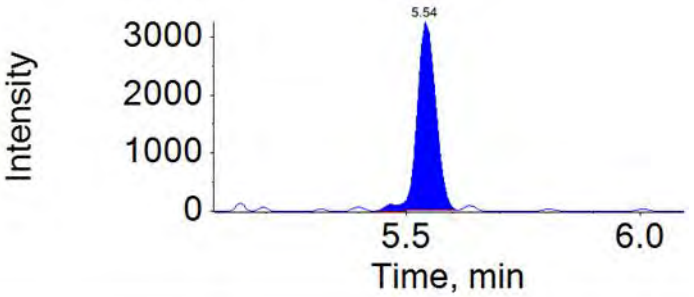
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



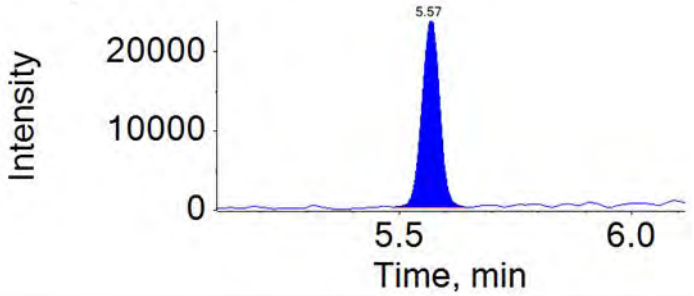
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



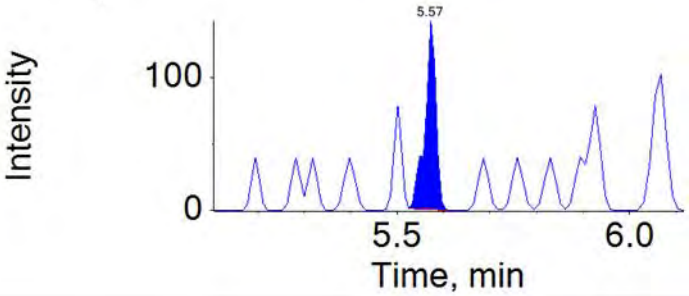
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

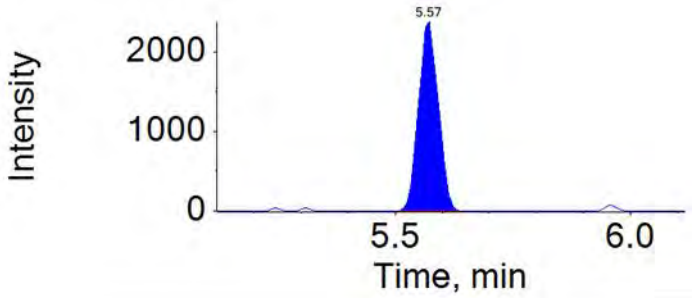
Component: PFDA
Primary Mass: 513.0 / 469.0



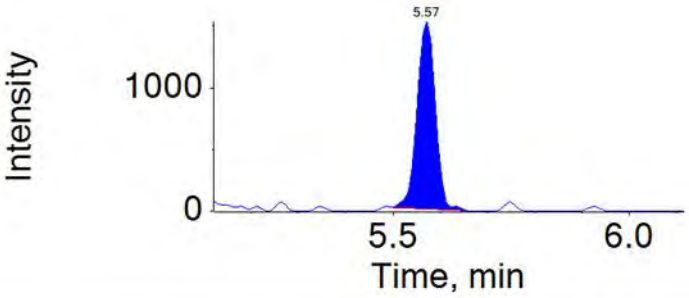
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



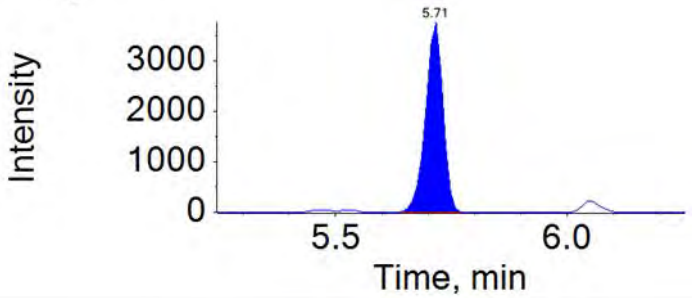
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



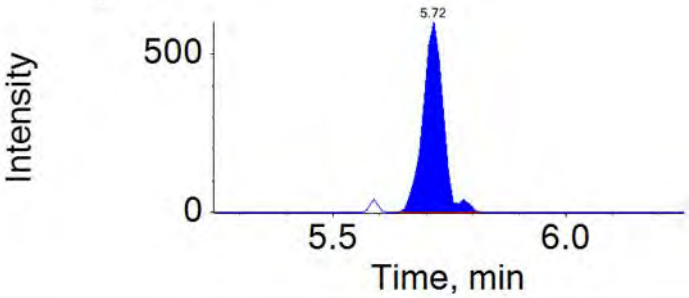
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



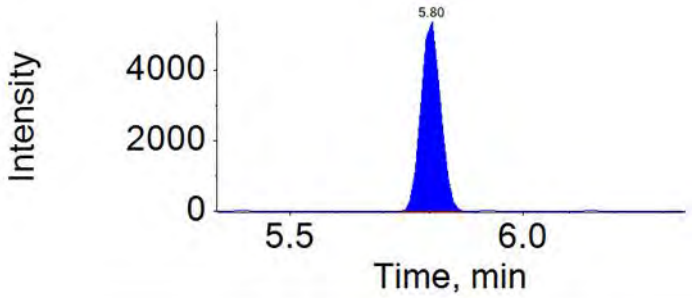
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



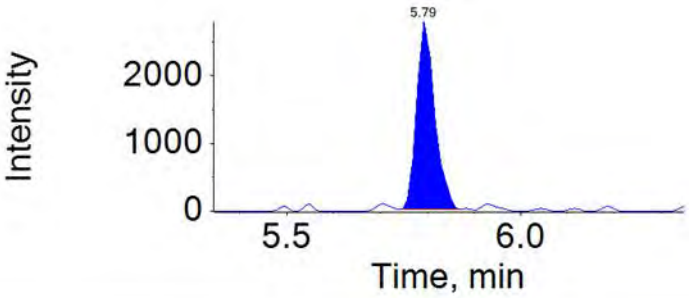
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



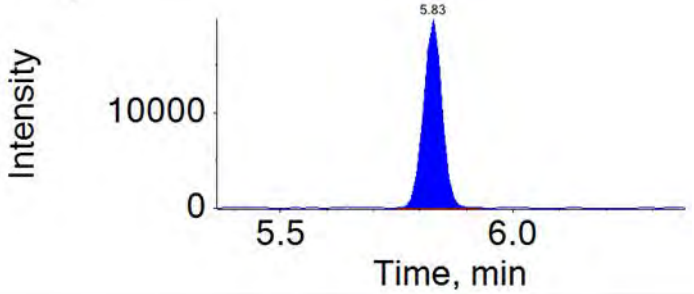
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



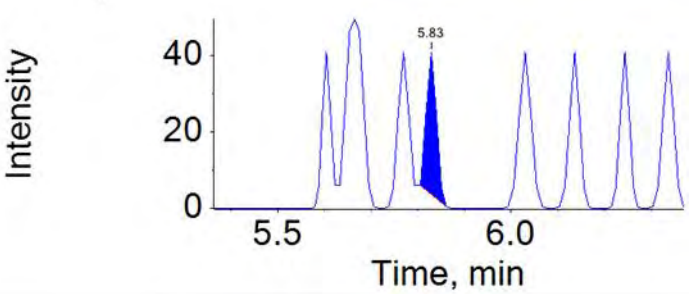
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

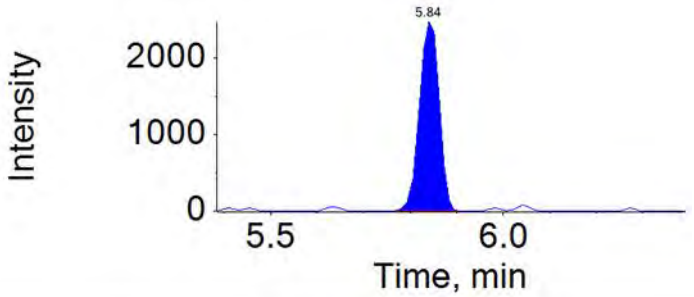
Component: PFUnDA
Primary Mass: 563.0 / 519.0



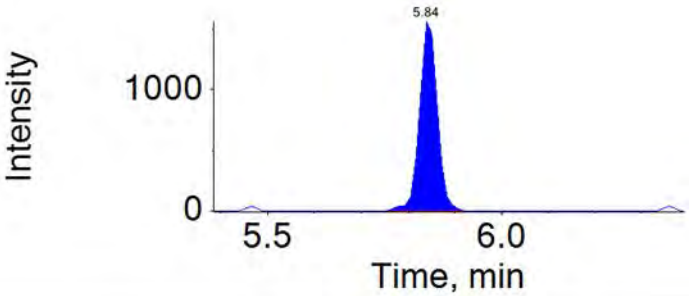
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



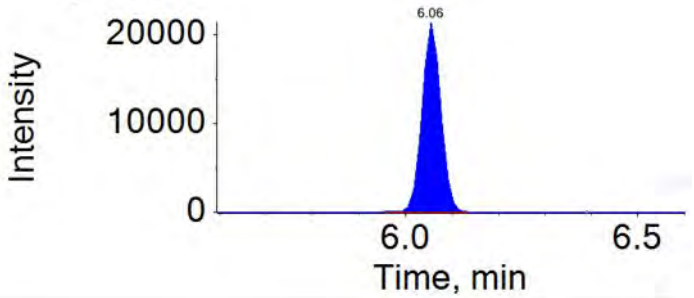
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



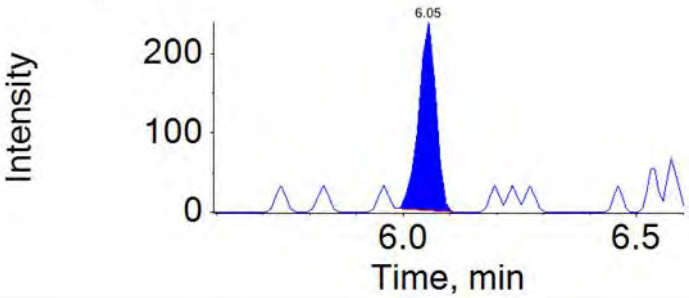
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



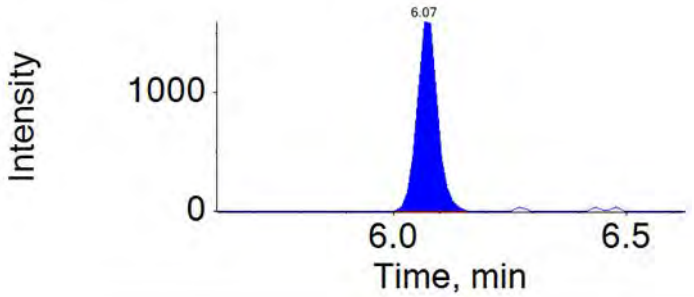
Component: PFDoDA
Primary Mass: 613.0 / 569.0



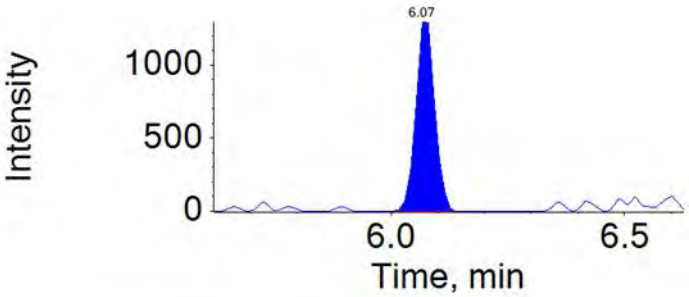
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



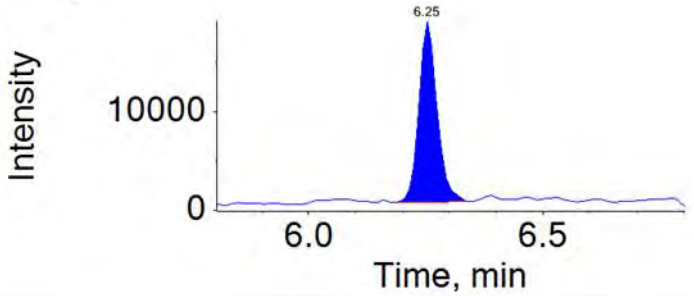
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



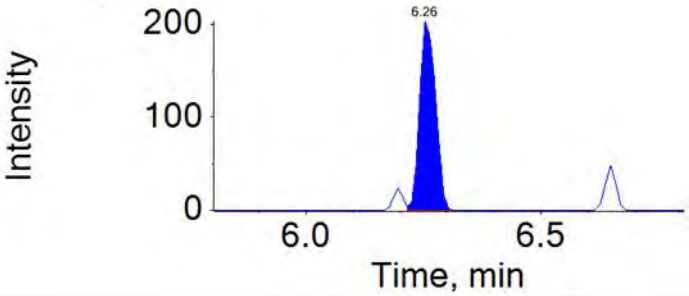
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

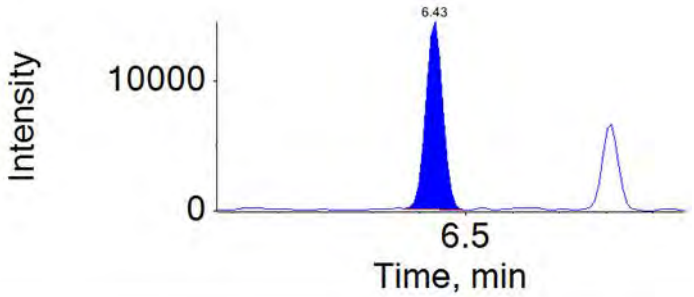
Component: PFTrDA
Primary Mass: 663.0 / 619.0



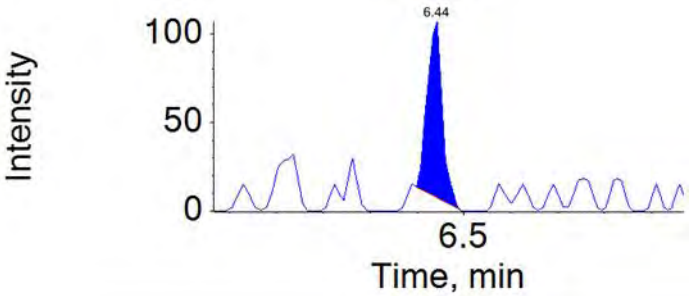
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



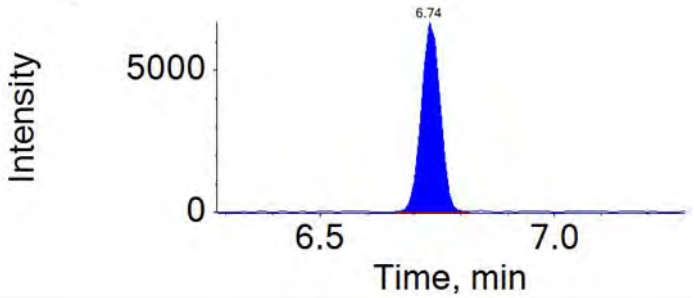
Component: PFTeDA
Primary Mass: 713.0 / 669.0



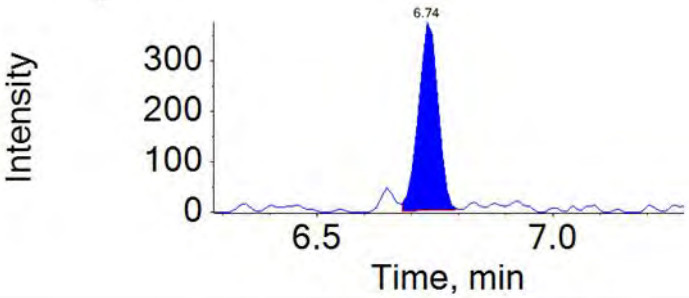
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



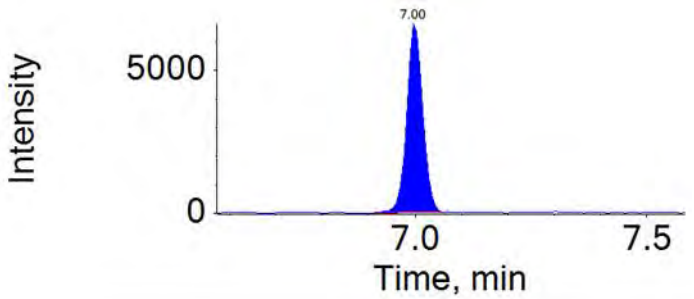
Component: PFHxDA
Primary Mass: 813.0 / 769.0



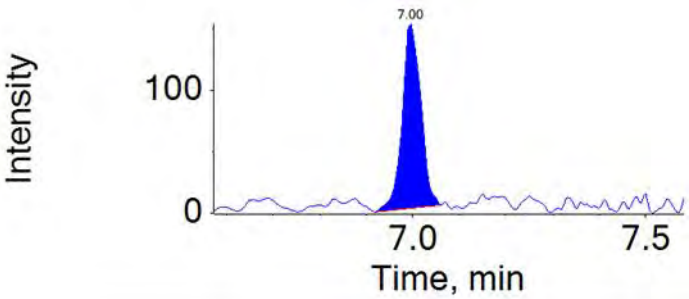
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL3			**Data File:**		18NOV07DCAL-12.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-07T09:57:56
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	730410.6	730410.6	0	50	
13C2-PFOA	5.0	524423.6	524423.6	0	50	
13C4-PFOS	4.8	274061.7	274061.7	0	50	
13C2-PFDA	5.0	311442.1	311442.1	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	787180.2	13C3-PFBA	730410.6	1.078	5.000	4.987	100	70-130	
E13C5-PFPeA	829978.5	13C3-PFBA	730410.6	1.136	5.000	4.950	99	70-130	
E13C3-PFBS	456815.2	13C3-PFBA	730410.6	0.625	4.650	4.590	99	70-130	
E13C2-4:2-FTS	48706.0	13C2-PFOA	524423.6	0.093	4.670	4.191	90	70-130	
E13C5-PFHxA	705369.0	13C2-PFOA	524423.6	1.345	5.000	4.948	99	70-130	
E13C3-PFHxS	343139.5	13C2-PFOA	524423.6	0.654	4.730	4.697	99	70-130	
E13C4-PFHpA	566495.6	13C2-PFOA	524423.6	1.080	5.000	4.914	98	70-130	
E13C2-6:2-FTS	38605.5	13C2-PFOA	524423.6	0.074	4.750	4.909	103	70-130	
E13C8-PFOA	964414.6	13C2-PFOA	524423.6	1.839	5.000	5.128	103	70-130	
E13C8-PFOS	297259.7	13C4-PFOS	274061.7	1.085	4.780	4.796	100	70-130	
E13C9-PFNA	513116.0	13C4-PFOS	274061.7	1.872	5.000	5.114	102	70-130	
E13C6-PFDA	639022.8	13C2-PFDA	311442.1	2.052	5.000	5.160	103	70-130	
E13C2-8:2-FTS	29468.3	13C2-PFDA	311442.1	0.095	4.790	5.007	105	70-130	
E13C8-PFOSA	704745.5	13C2-PFDA	311442.1	2.263	5.000	4.938	99	70-130	
Ed3-NMeFOSAA	81763.3	13C2-PFDA	311442.1	0.263	5.000	4.882	98	70-130	
E13C7-PFUnDA	277115.5	13C2-PFDA	311442.1	0.890	5.000	5.133	103	70-130	
Ed5-NEtFOSAA	72755.7	13C2-PFDA	311442.1	0.234	5.000	5.406	108	70-130	
E13C2-PFDoDA	584631.5	13C2-PFDA	311442.1	1.877	5.000	5.061	101	70-130	
Ed7-NMePFOSAE	335206.8	13C2-PFDA	311442.1	1.076	5.000	5.005	100	70-130	
Ed3-NMePFOSA	79381.7	13C2-PFDA	311442.1	0.255	5.000	4.666	93	70-130	
Ed9-NEtPFOSAE	278375.1	13C2-PFDA	311442.1	0.894	5.000	5.104	102	70-130	
Ed5-NEtPFOSA	67444.3	13C2-PFDA	311442.1	0.217	5.000	5.014	100	70-130	
E13C2-PFTeDA	419341.7	13C2-PFDA	311442.1	1.346	5.000	4.847	97	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

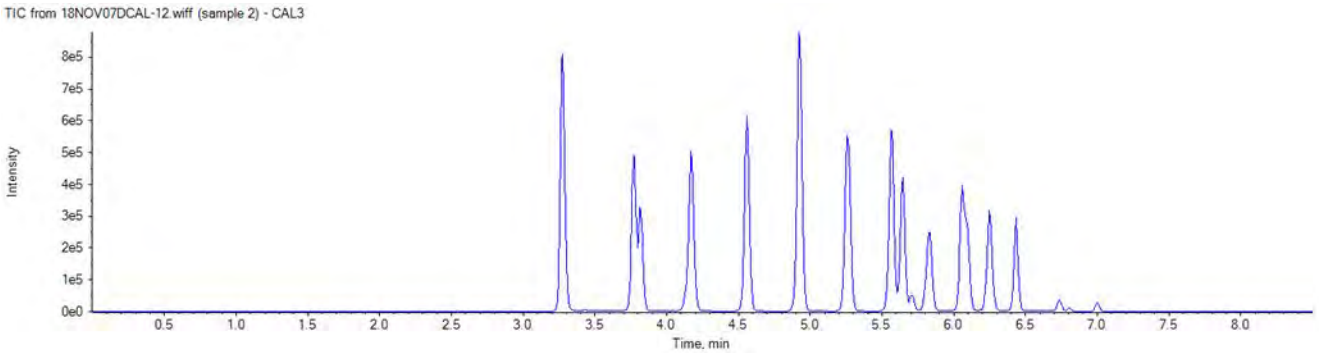
Analyte Quantitation Peak Table

Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-12.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	285113.3		A	13C4-PFBA	3.27	787180.2	0.362	2.120
PFPeA	3.77	1.000	286630.7		A	13C5-PFPeA	3.77	829978.5	0.345	2.052
PFBS	3.82	1.000	157656.3		A	13C3-PFBS	3.82	456815.2	0.345	1.740
4:2-FTS	4.14	1.000	35586.2		A	13C2-4:2-FTS	4.13	48706.0	0.731	1.964
PFHxA	4.17	1.000	351503.9		A	13C5-PFHxA	4.17	705369.0	0.498	2.137
PFPeS	4.19	1.100	82090.1		A	13C3-PFBS	3.82	456815.2	0.180	1.772
PFHxS	4.56	1.000	122477.7		A	13C3-PFHxS	4.56	343139.5	0.357	1.809
PFHpA	4.56	1.000	360280.4		A	13C4-PFHpA	4.56	566495.6	0.636	2.139
6:2-FTS	4.92	1.000	32056.4		A	13C2-6:2-FTS	4.91	38605.5	0.830	2.071
PFHpS	4.92	1.080	123126.9		A	13C3-PFHxS	4.56	343139.5	0.359	1.877
PFOA	4.93	1.000	364943.1		A	13C8-PFOA	4.93	964414.6	0.378	2.131
PFOS	5.25	1.000	111397.7		A	13C8-PFOS	5.25	297259.8	0.375	1.943
PFNA	5.27	1.000	299530.4		A	13C9-PFNA	5.27	513116.0	0.584	2.182
PFNS	5.55	1.060	72940.0		A	13C8-PFOS	5.25	297259.8	0.245	1.946
PFDA	5.57	1.000	244693.9		A	13C6-PFDA	5.57	639022.8	0.383	2.107
8:2-FTS	5.57	1.000	24892.6		A	13C2-8:2-FTS	5.57	29468.3	0.845	1.904
PFOSA	5.64	1.000	271753.2		A	13C8-PFOSA	5.64	704745.5	0.386	2.084
NMeFOSAA	5.71	1.000	32400.4		A	d3-NMeFOSAA	5.71	81763.3	0.396	2.039
PFDS	5.80	1.100	59073.9		A	13C8-PFOS	5.25	297259.8	0.199	1.898
PFUnDA	5.83	1.000	209644.8		A	13C7-PFUnDA	5.83	277115.5	0.757	2.170
NEtFOSAA	5.85	1.000	32100.8		A	d5-NEtFOSAA	5.84	72755.7	0.441	1.896
PFDoDA	6.06	1.000	220663.6		A	13C2-PFDoDA	6.06	584631.5	0.377	2.046
10:2-FTS	6.07	1.090	19060.5		A	13C2-8:2-FTS	5.57	29468.3	0.647	2.014
NMePFOSAE	6.10	1.000	151795.0		A	d7-NMePFOSAE	6.09	335206.8	0.453	2.029
NMePFOSA	6.10	1.000	29797.4		A	d3-NMePFOSA	6.10	79381.7	0.375	2.101
PFDoS	6.22	1.190	32096.3		A	13C8-PFOS	5.25	297259.8	0.108	2.084
NEtPFOSAE	6.25	1.000	180884.6		A	d9-NEtPFOSAE	6.24	278375.1	0.650	2.083
NEtPFOSA	6.27	1.000	26524.6		A	d5-NEtPFOSA	6.26	67444.3	0.393	1.732
PFTrDA	6.25	1.030	197290.7		A	13C2-PFDoDA	6.06	584631.5	0.337	2.128
PFTeDA	6.43	1.000	150162.8		A	13C2-PFTeDA	6.43	419341.7	0.358	2.103
PFHxDA	6.74	1.050	70193.5		A	13C2-PFTeDA	6.43	419341.7	0.167	2.078
PFODA	7.00	1.090	59736.9		A	13C2-PFTeDA	6.43	419341.7	0.142	2.041

Total Ion Chromatogram

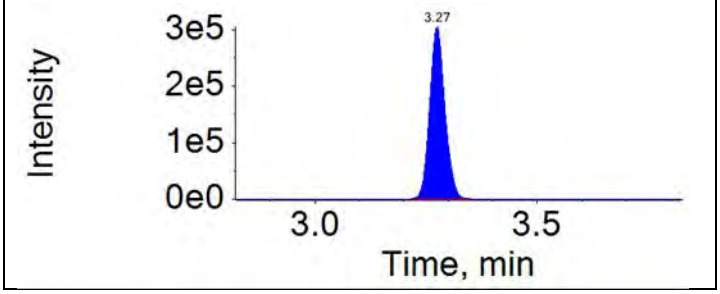


APPROVED
By JPT at 2:53 pm, 11/7/18

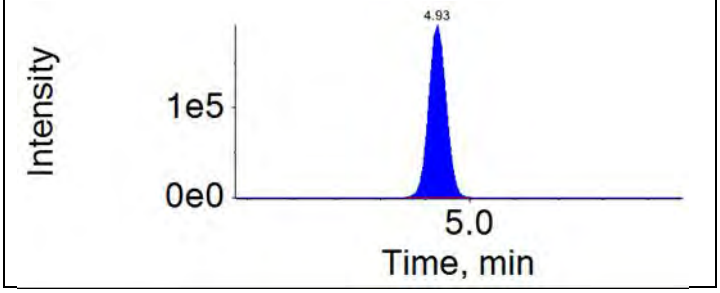
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

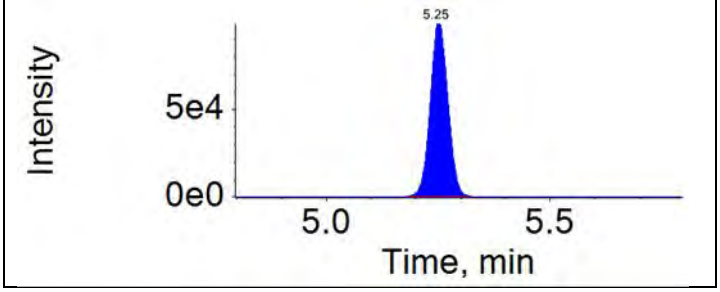
Injection Standard: 13C3-PFBA
216.0 / 172.0



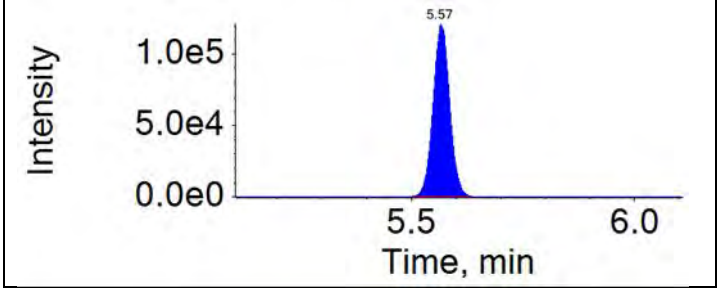
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



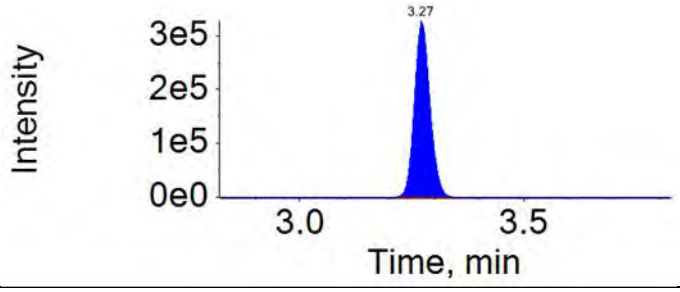
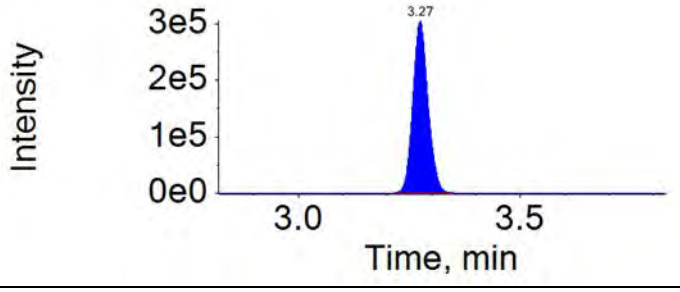
Injection Standard: 13C2-PFDA
515.0 / 470.0

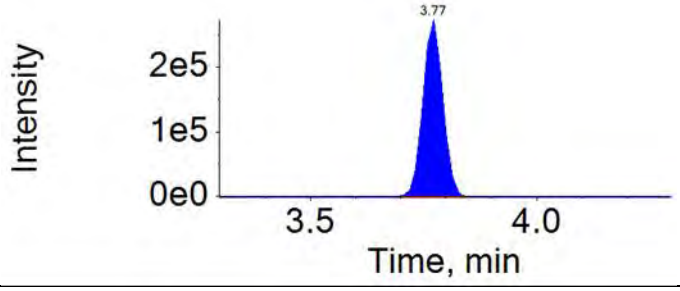
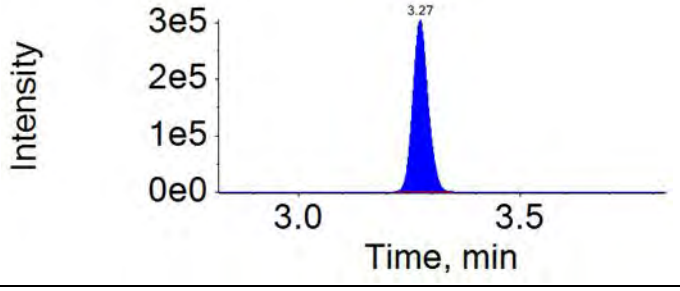


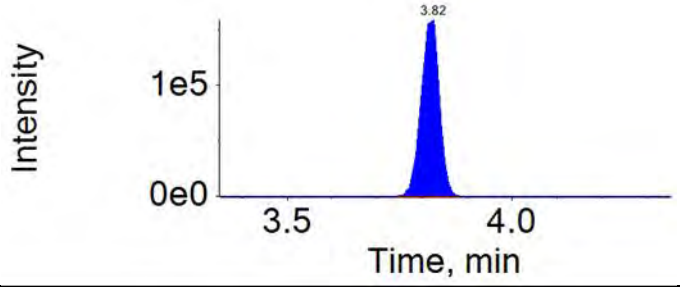
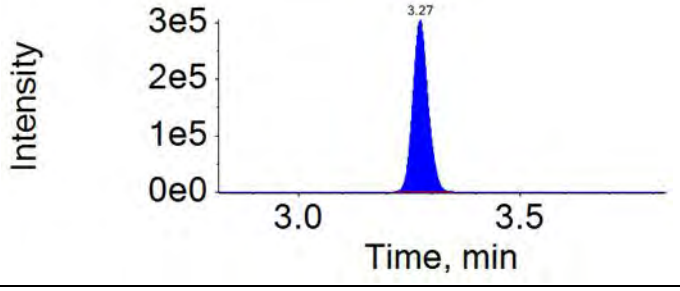
APPROVED
By JPT at 2:53 pm, 11/7/18

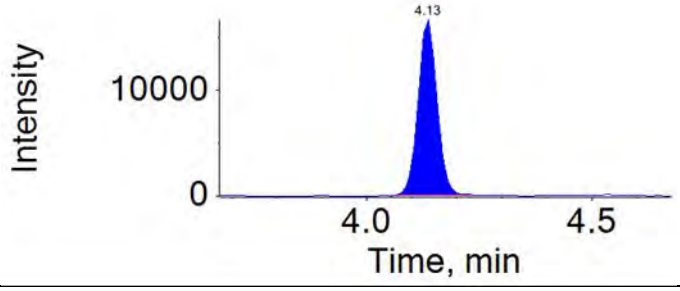
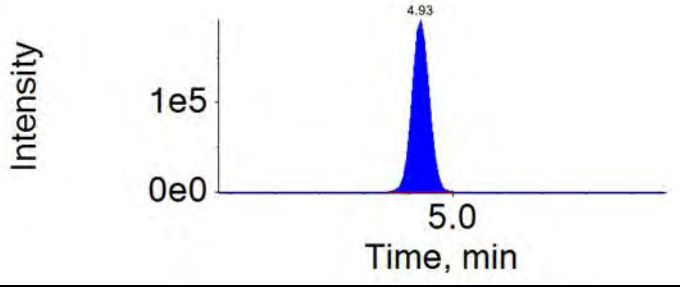
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

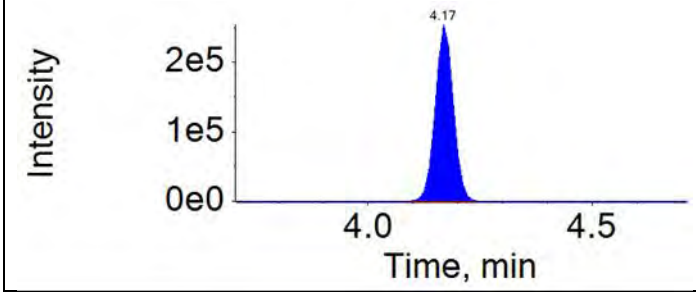
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

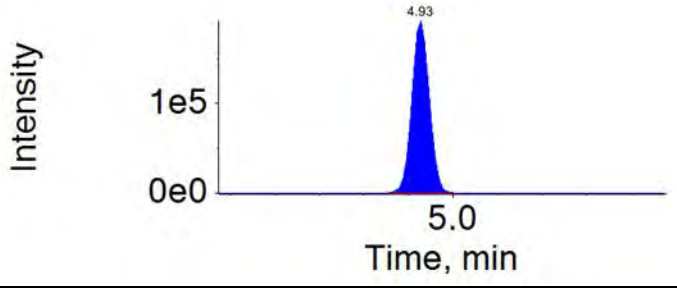
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

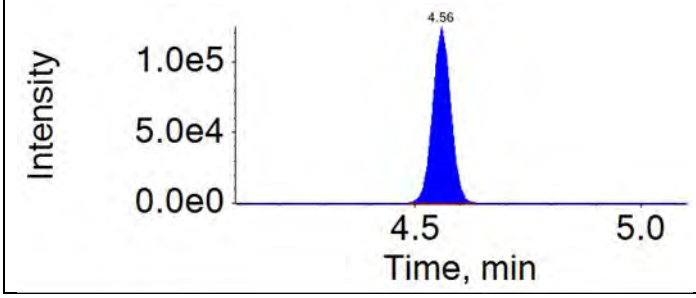
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

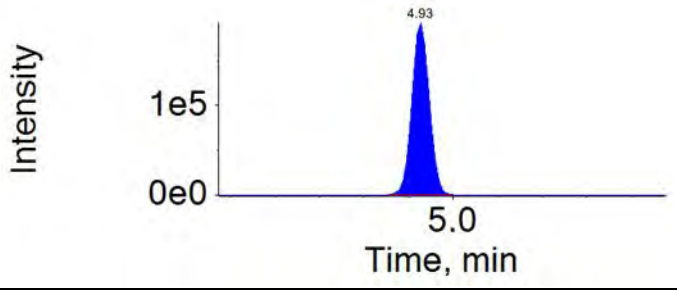
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



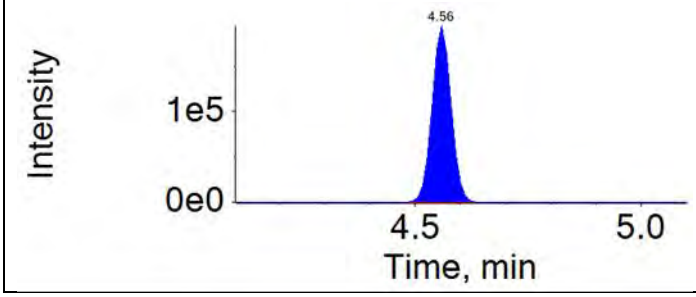


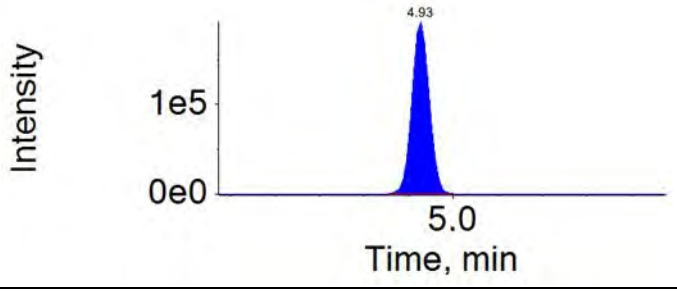
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



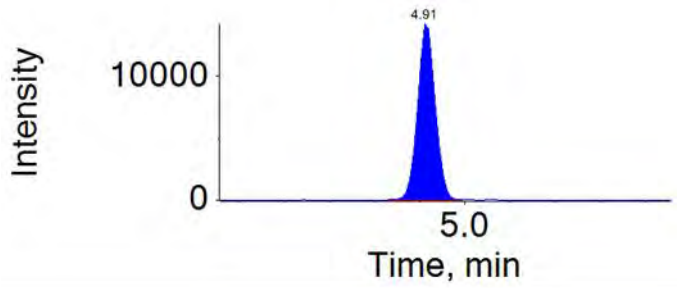


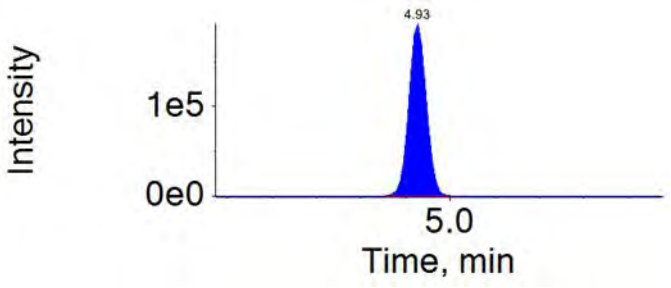
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



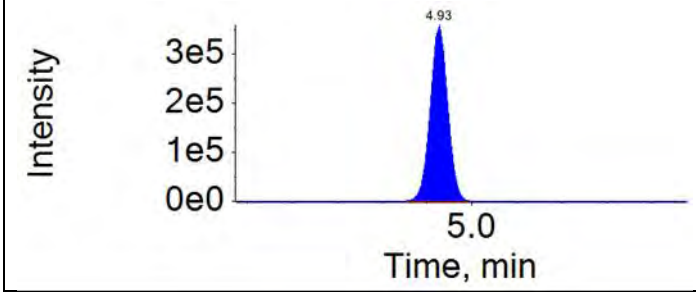
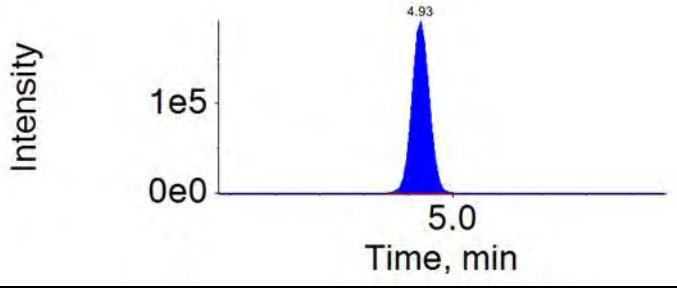


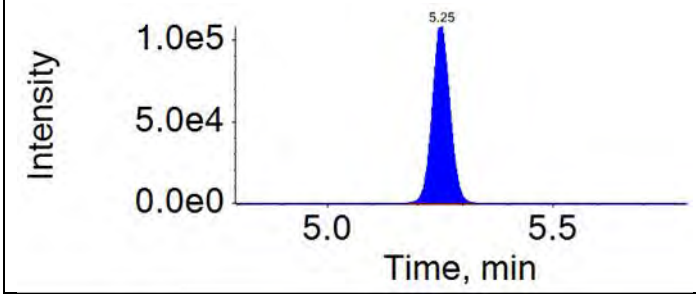
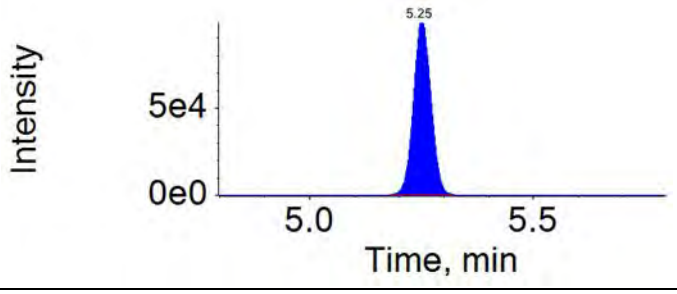
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

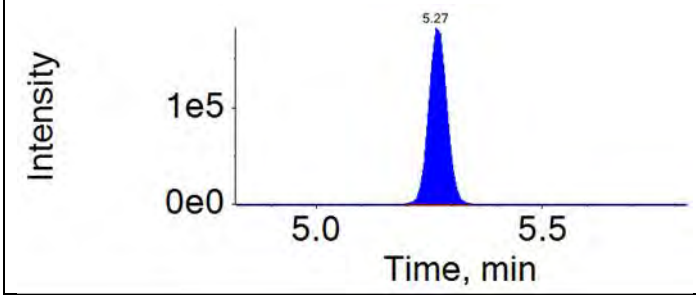
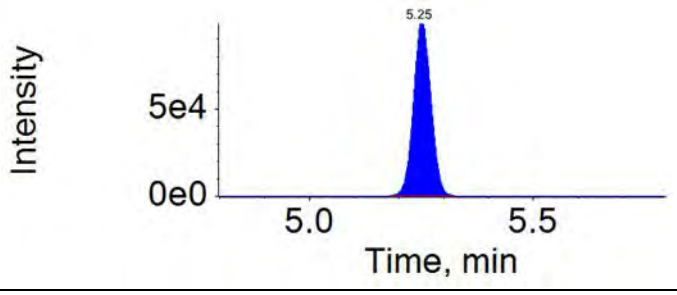


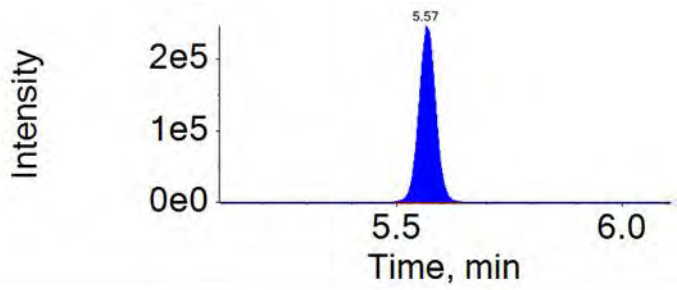
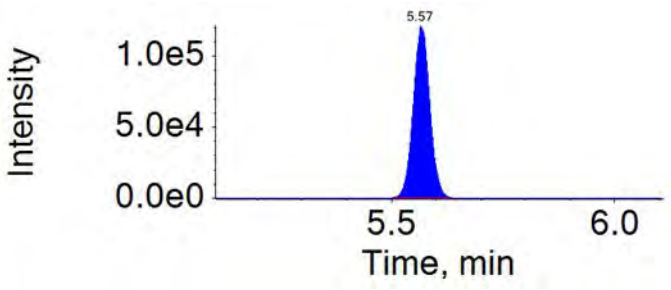


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

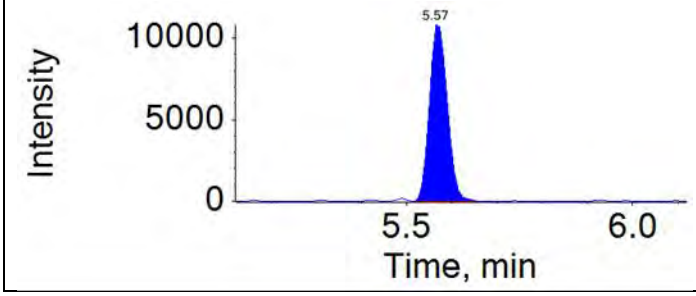
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

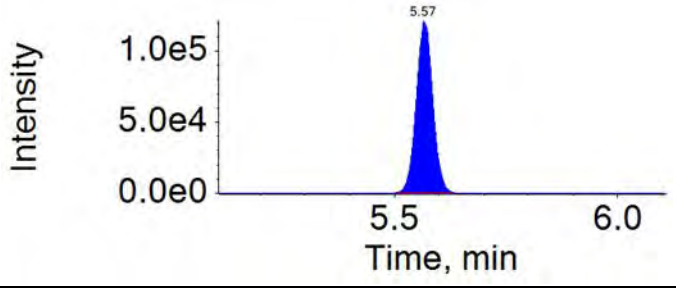
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

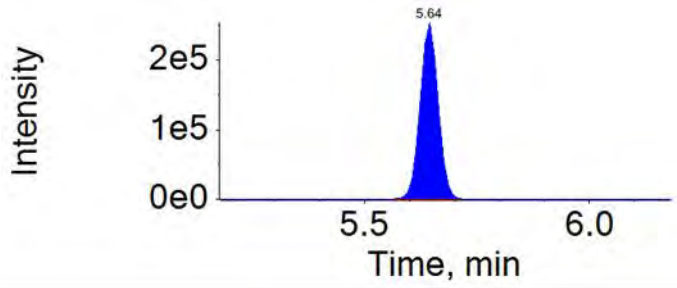
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

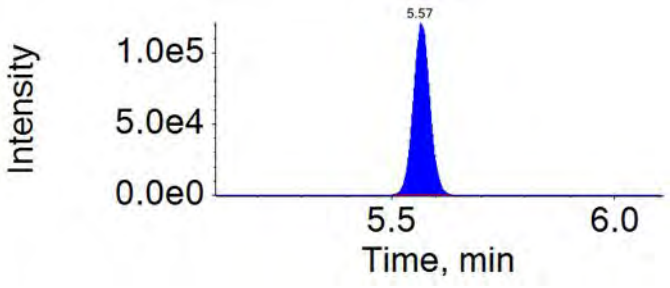
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



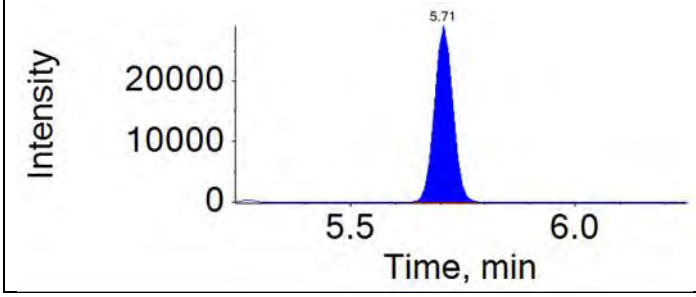


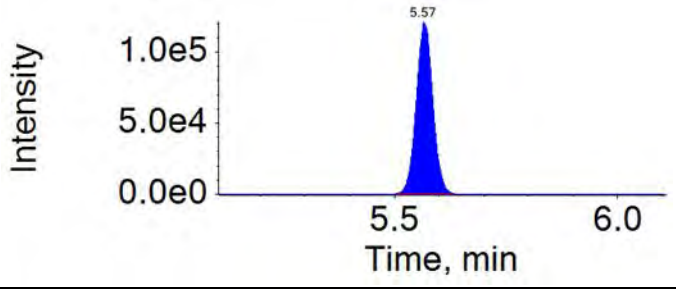
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



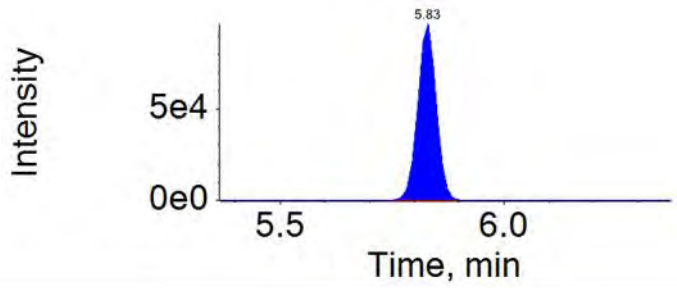


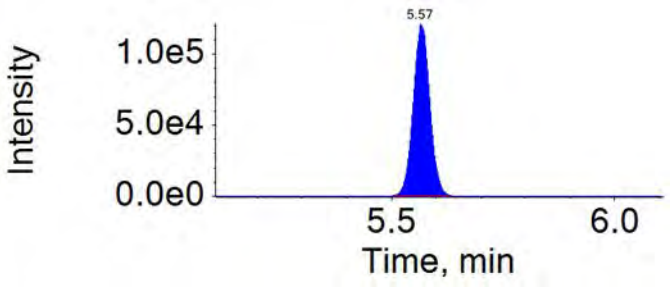
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

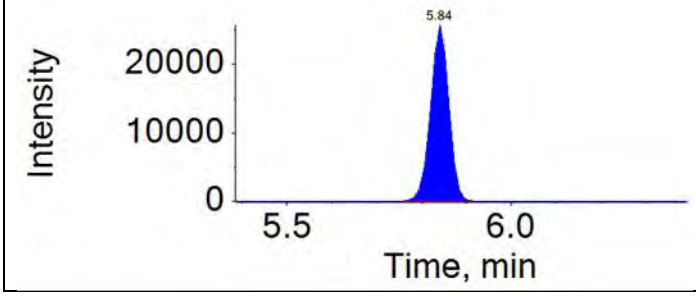
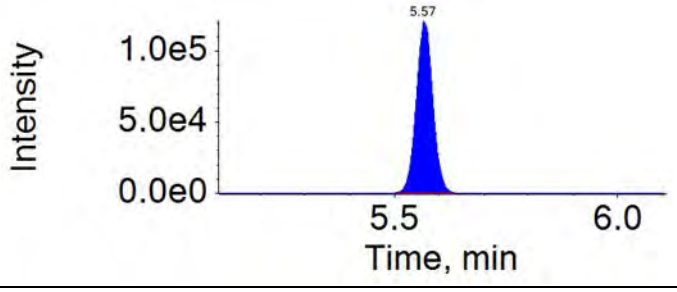


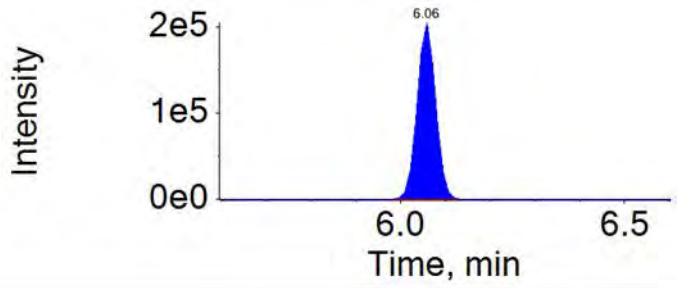
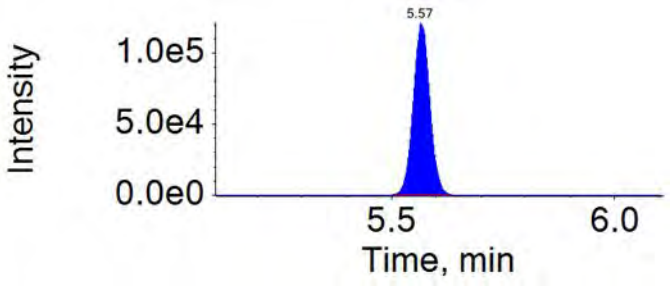


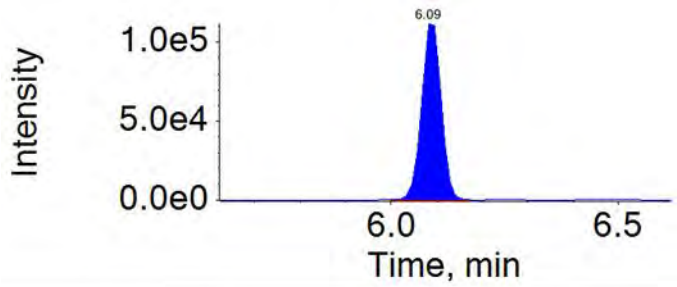
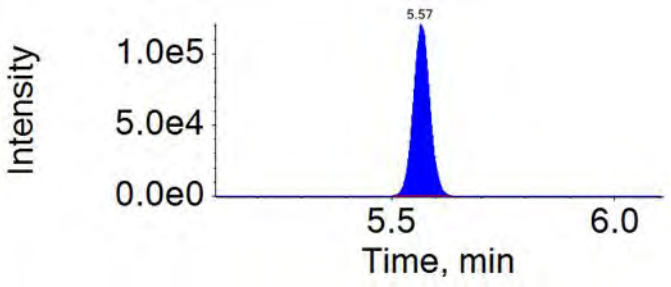
APPROVED
By JPT at 2:53 pm, 11/7/18

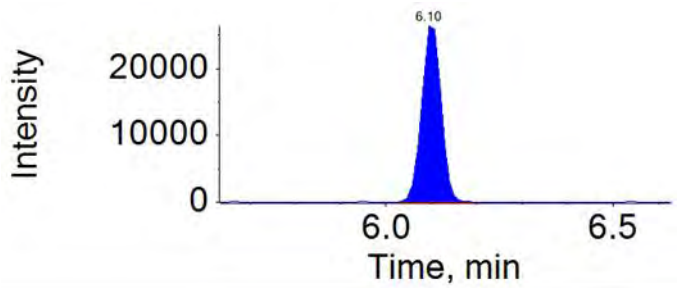
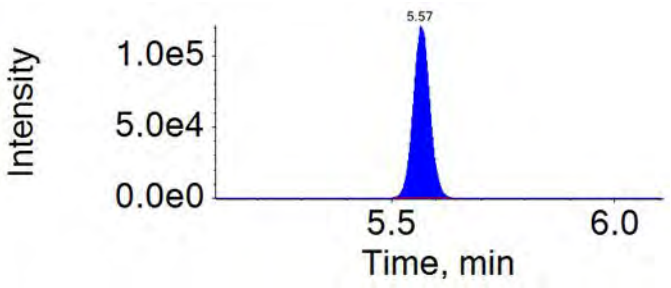
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

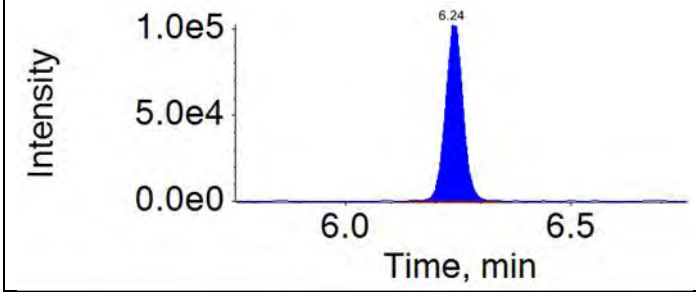
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

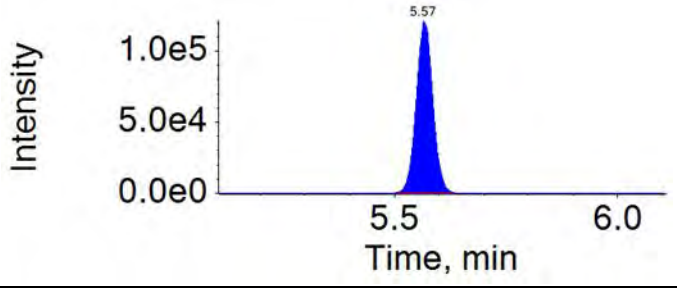
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

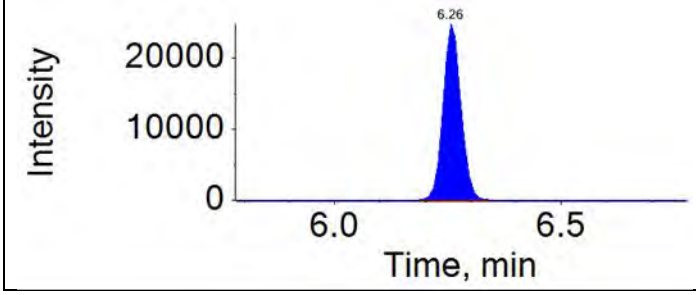
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

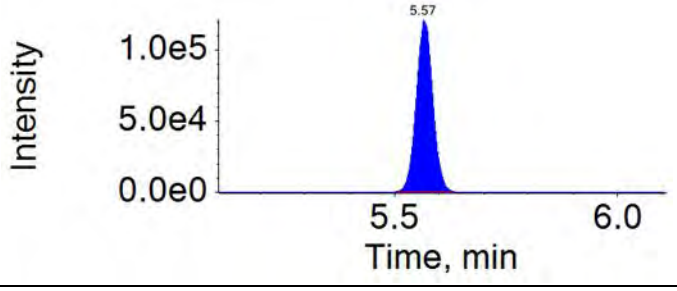
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



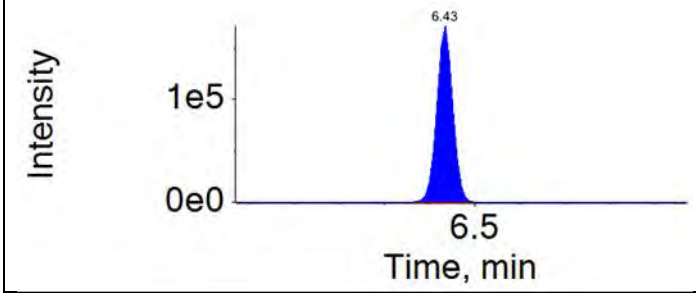


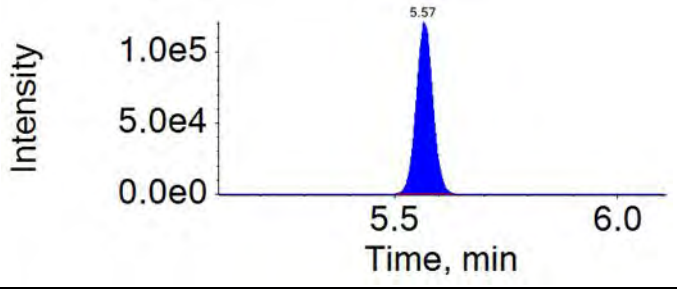
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



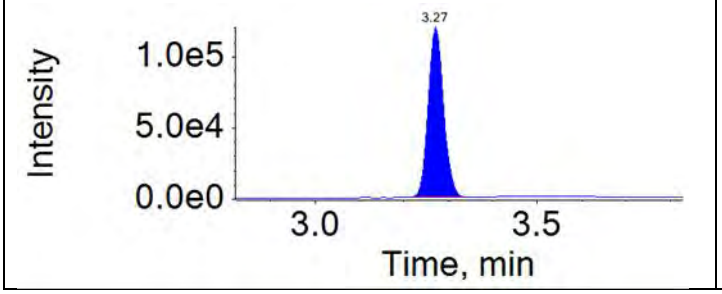


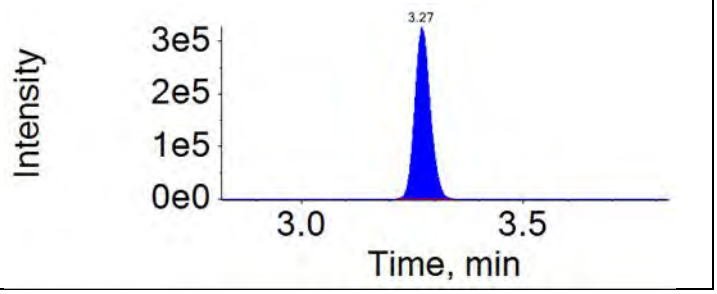
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

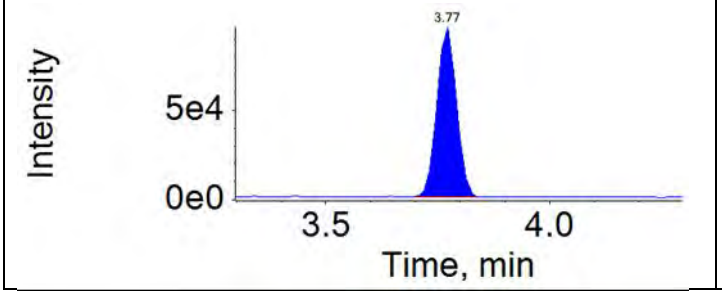
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

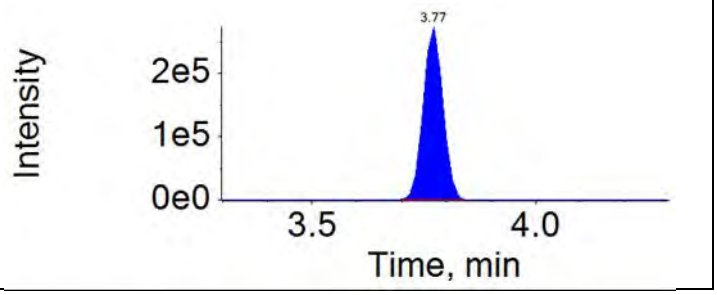
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



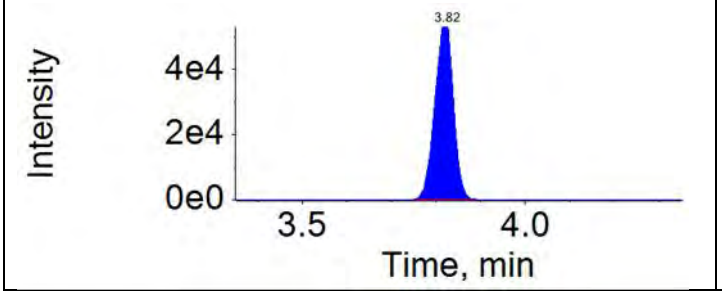


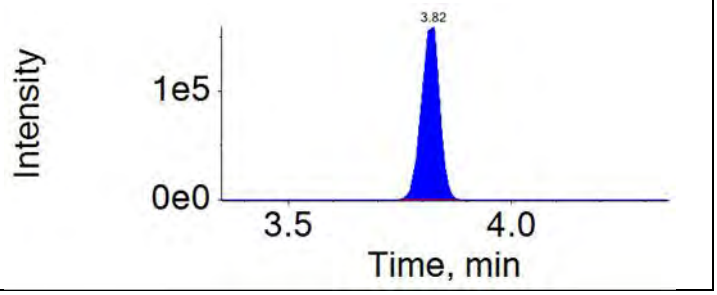
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



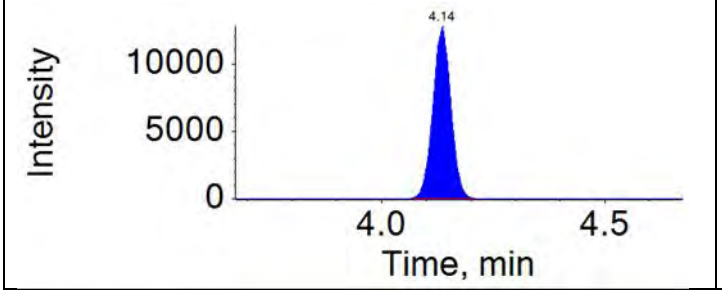


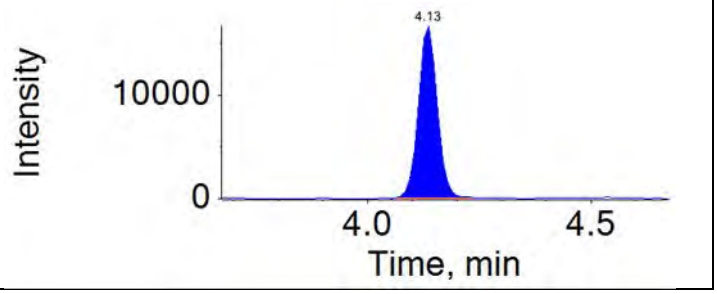
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

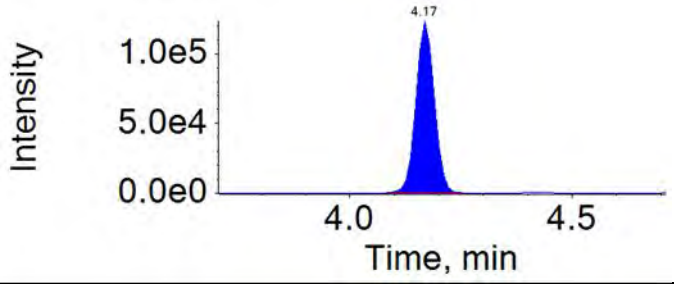
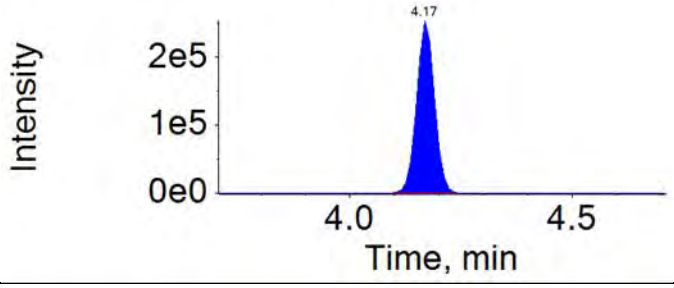


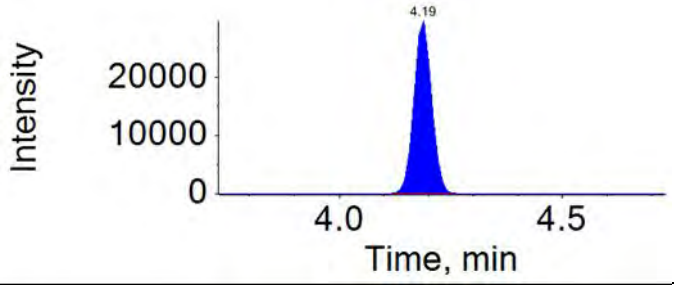
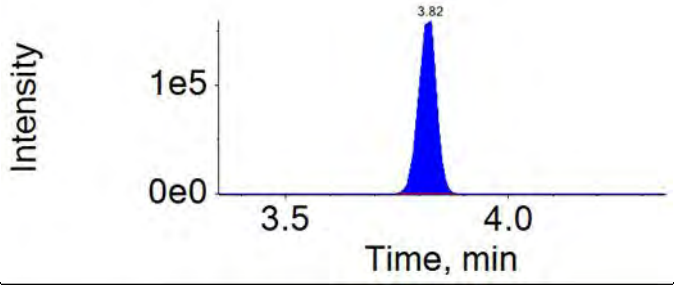


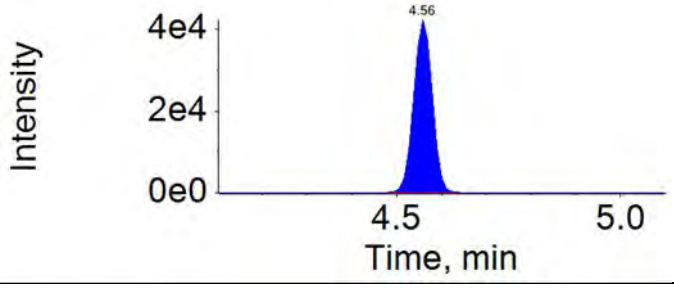
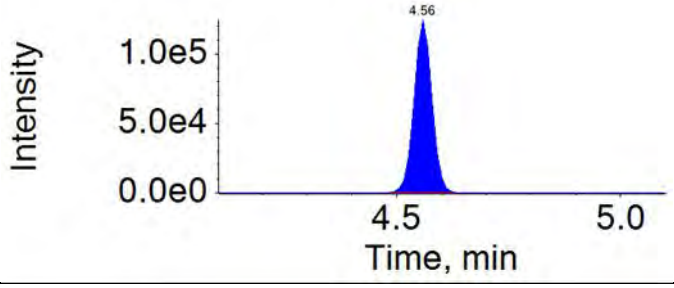
APPROVED
By JPT at 2:53 pm, 11/7/18

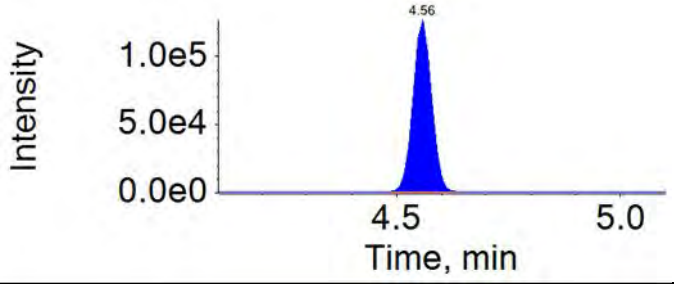
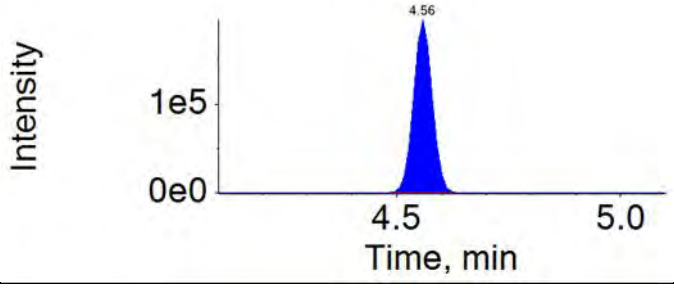
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

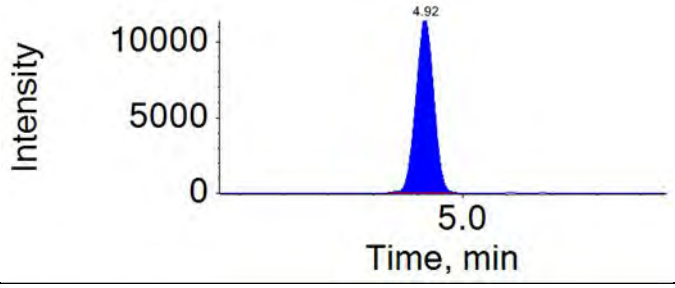
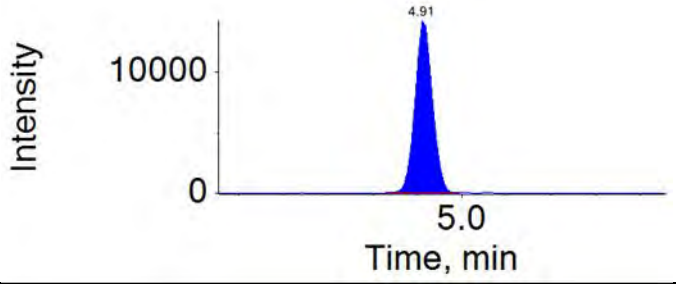
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

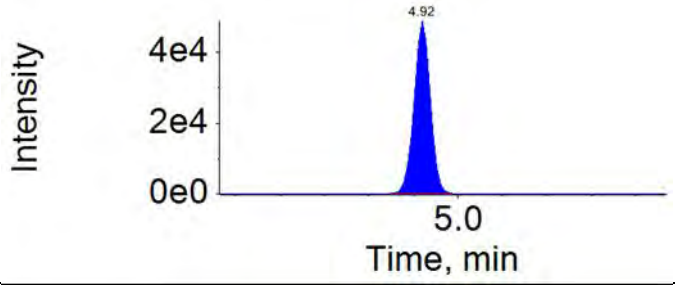
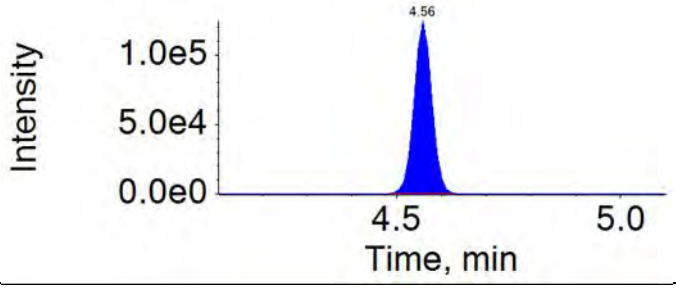
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

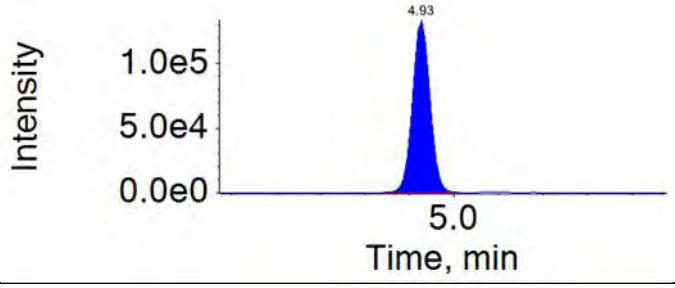
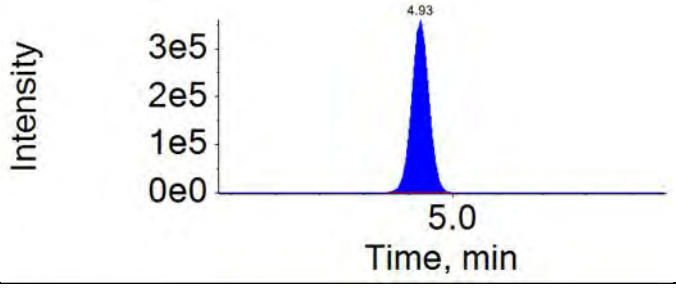
APPROVED
By JPT at 2:53 pm, 11/7/18

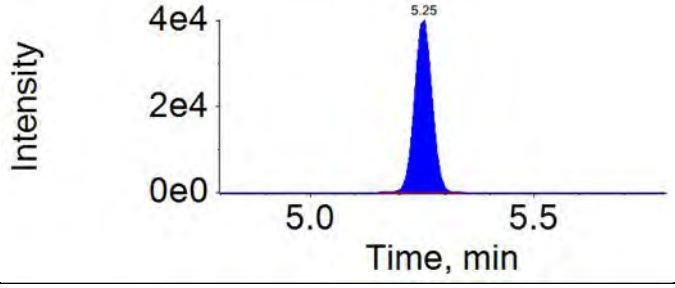
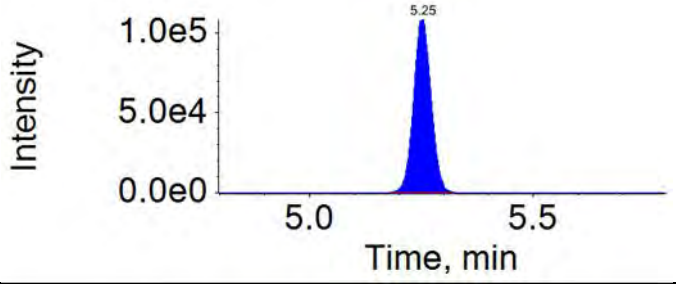
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

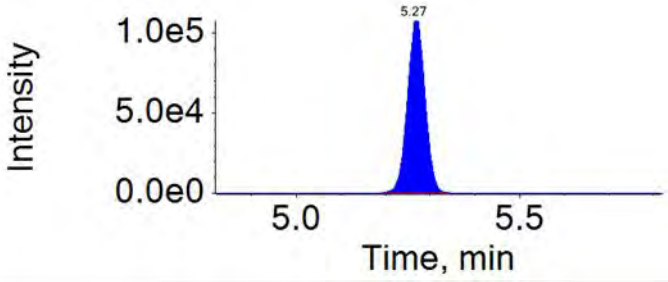
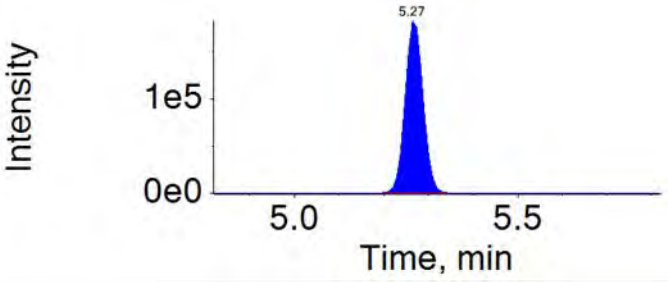
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

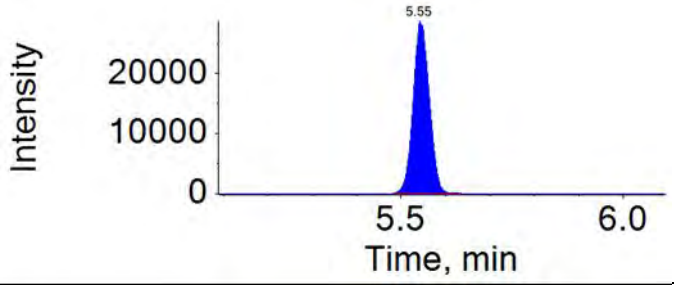
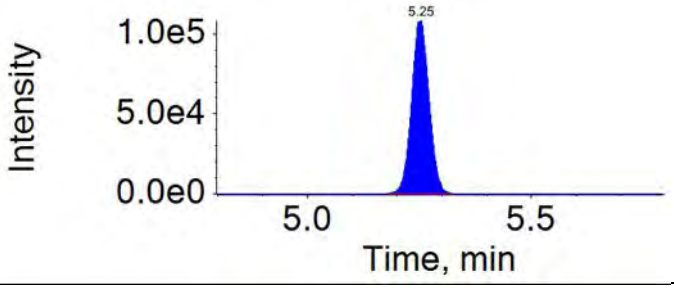
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

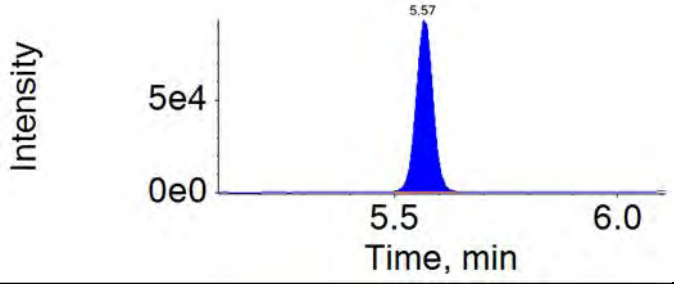
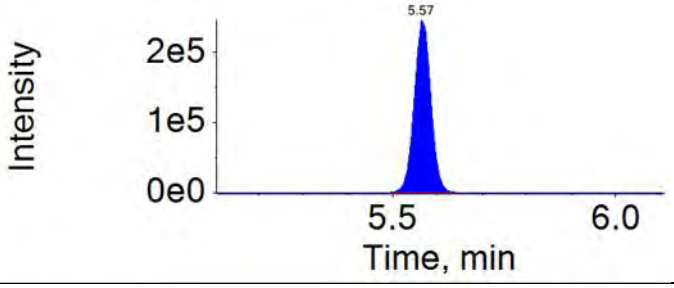
APPROVED
By JPT at 2:53 pm, 11/7/18

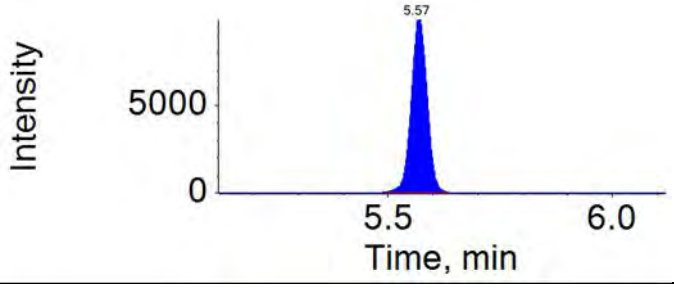
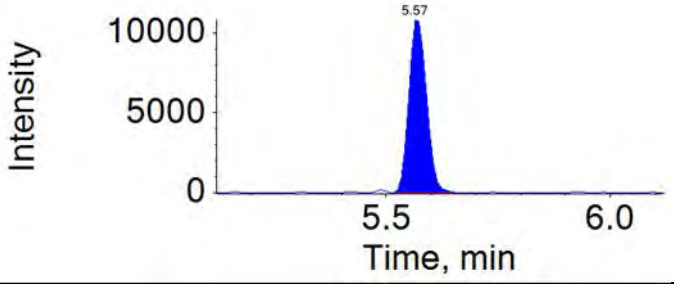
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

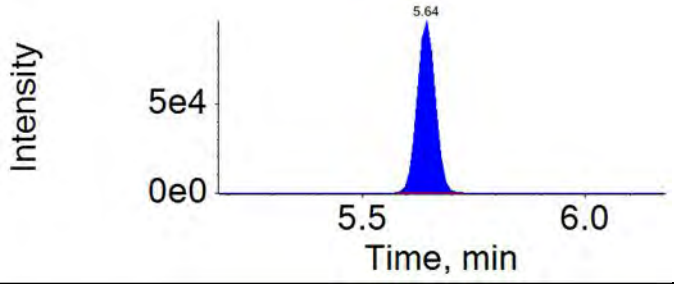
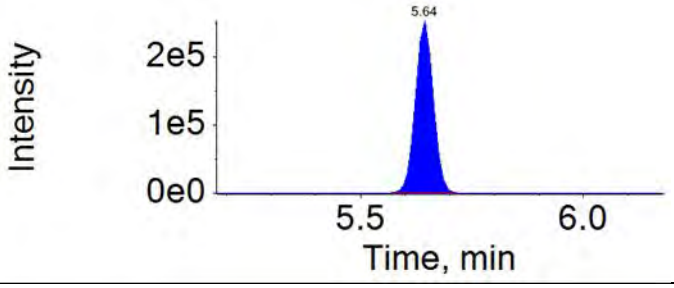
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

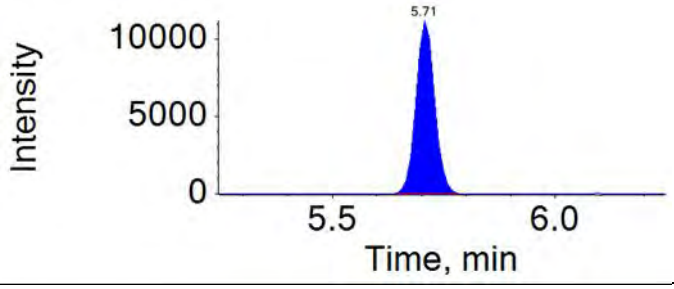
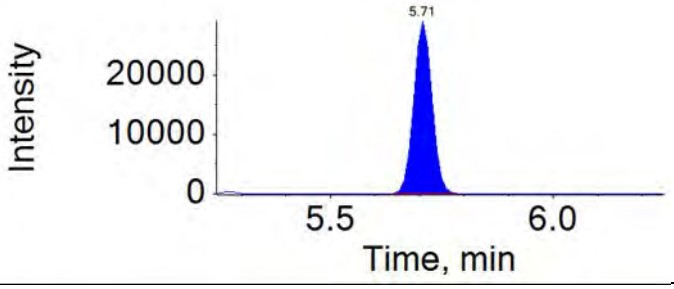
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

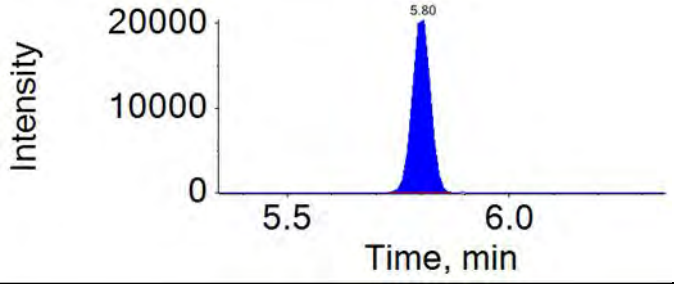
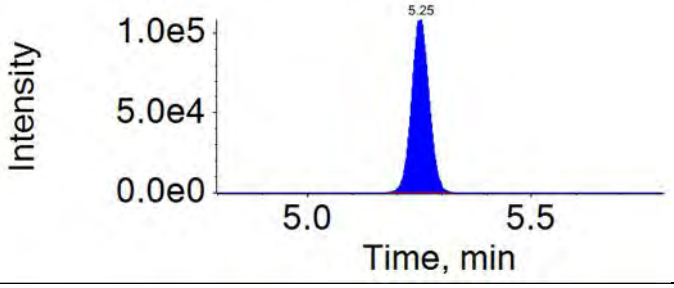
APPROVED
By JPT at 2:53 pm, 11/7/18

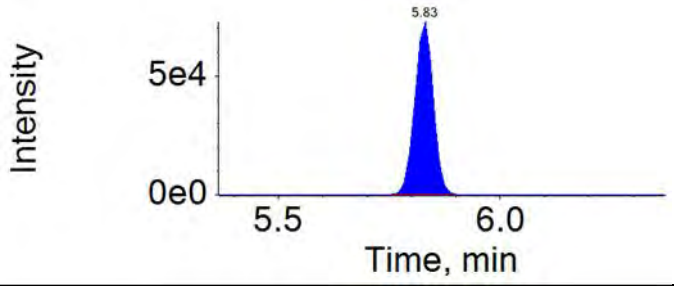
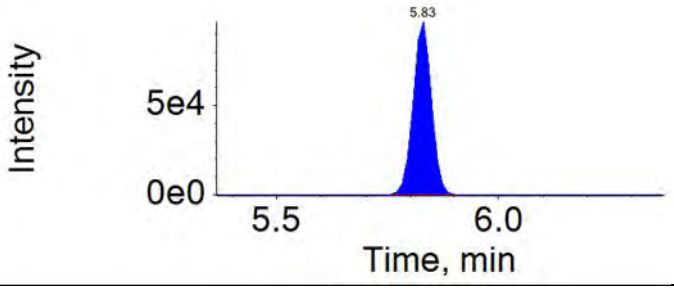
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

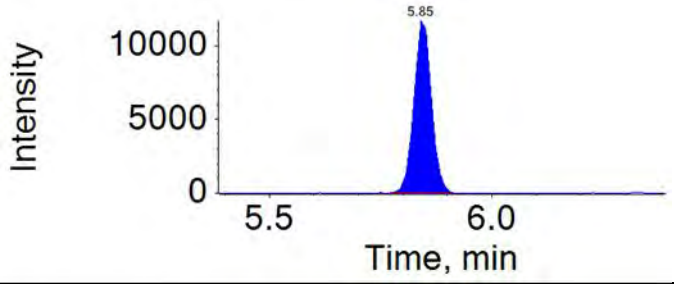
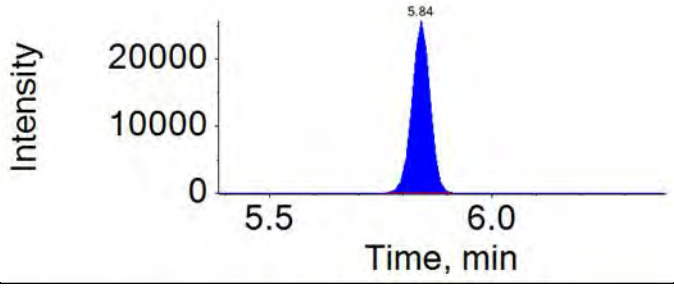
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

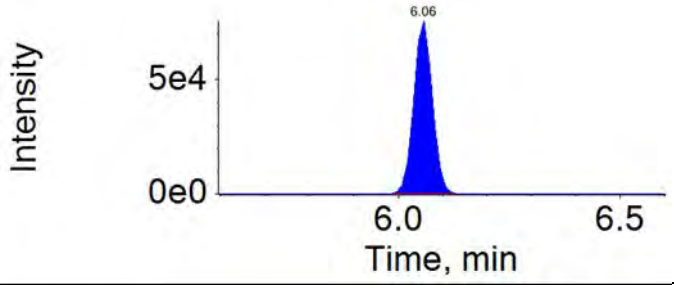
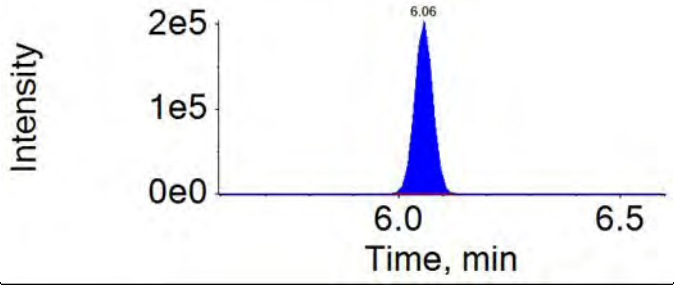
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

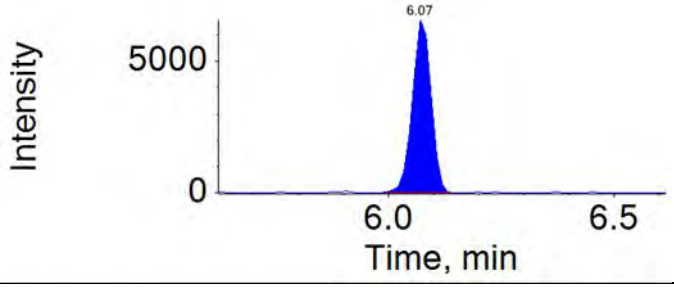
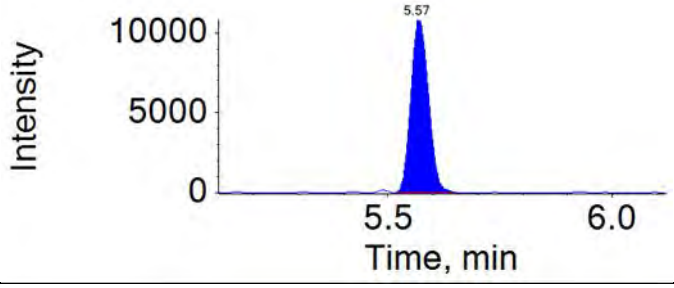
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

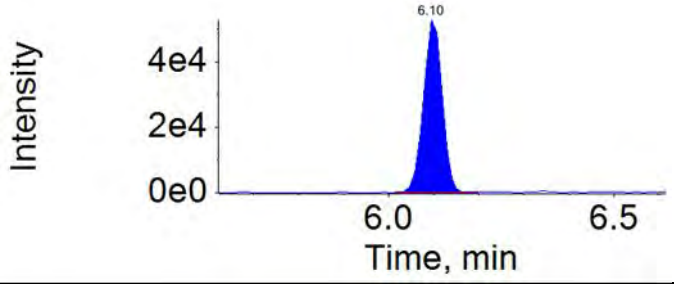
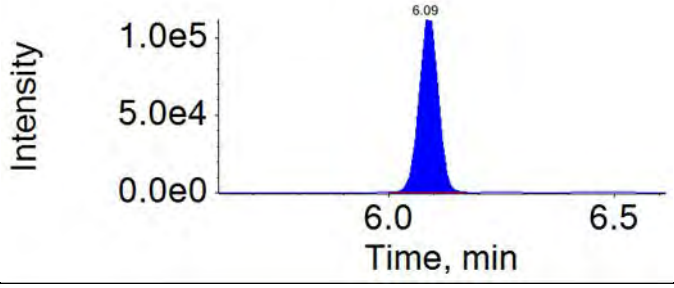
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

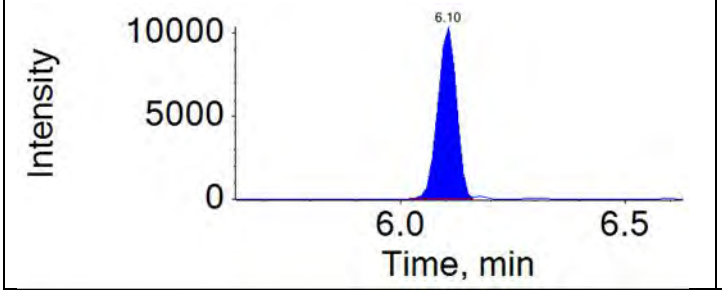
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

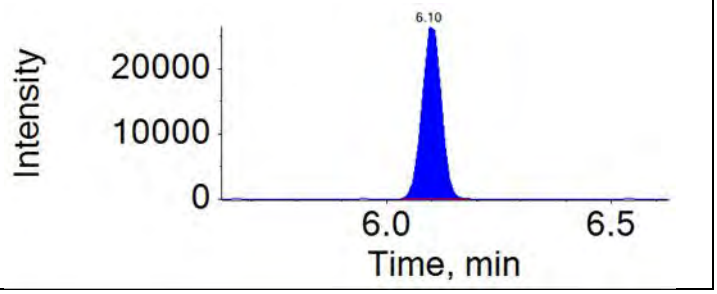
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

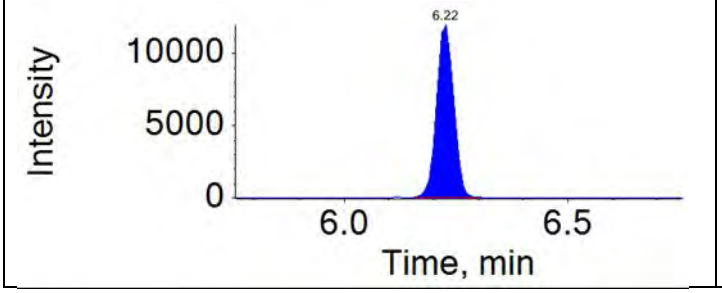
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

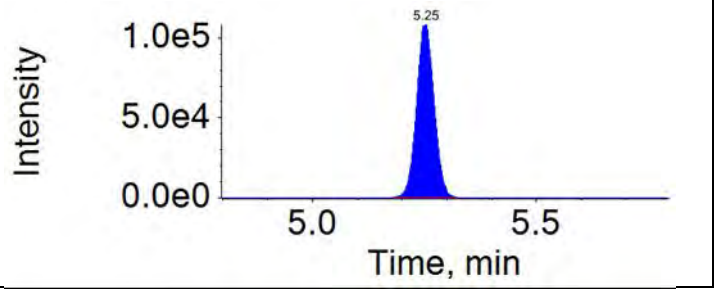
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



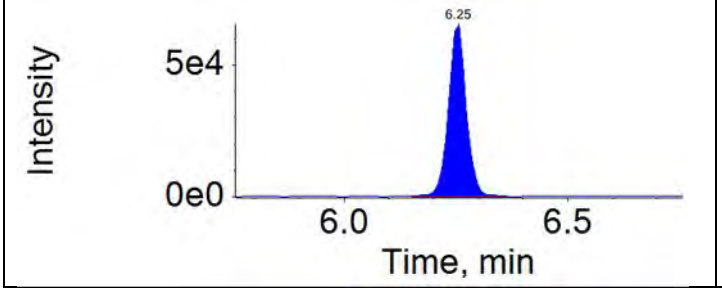


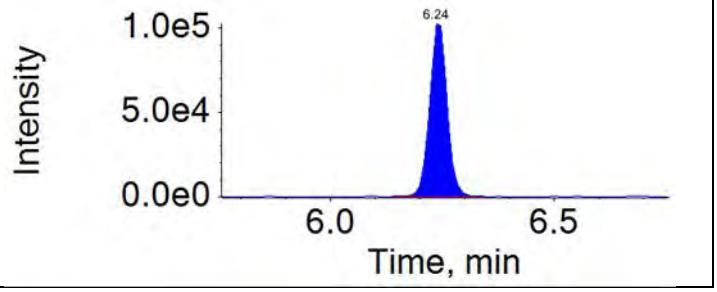
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



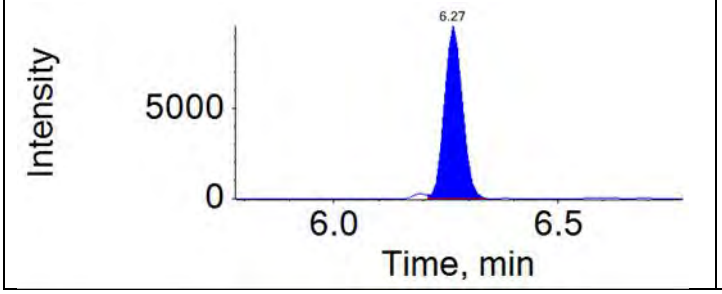


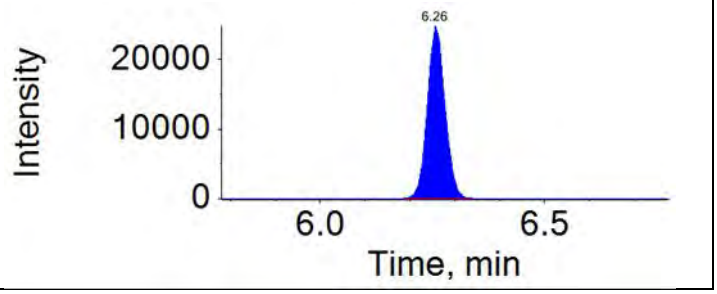
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



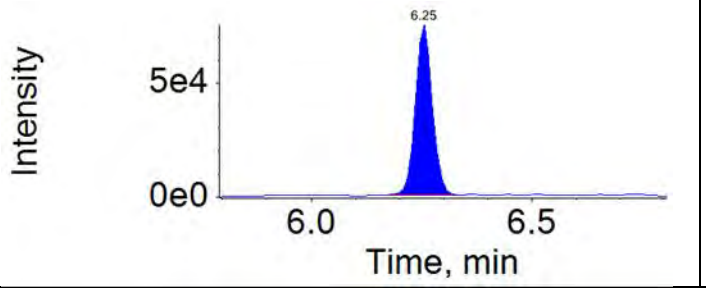


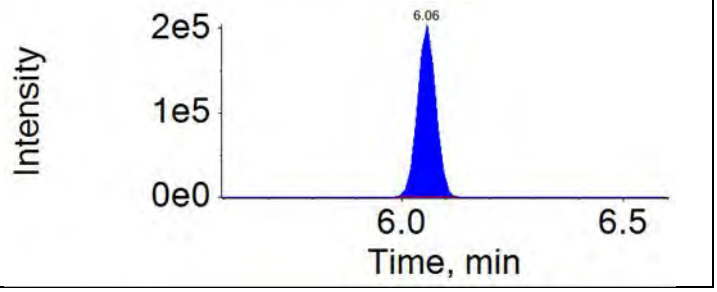
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

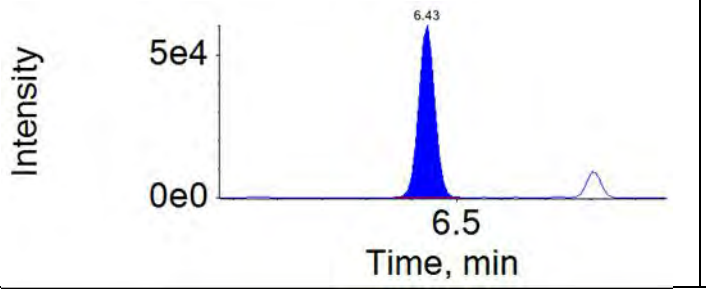
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

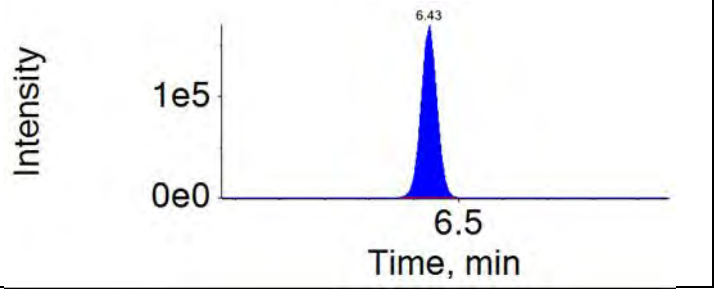
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



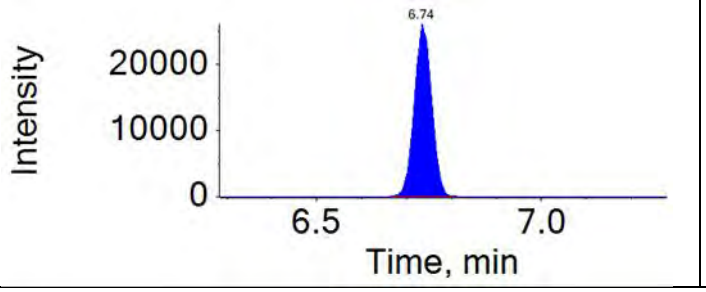


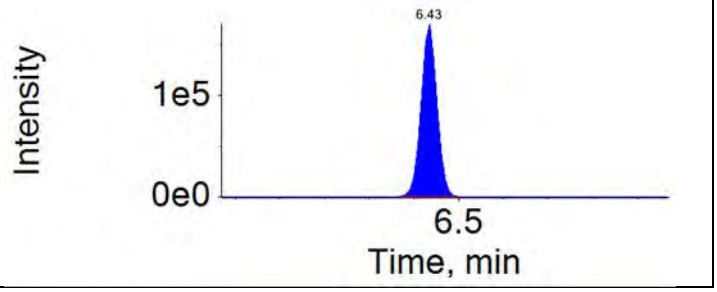
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



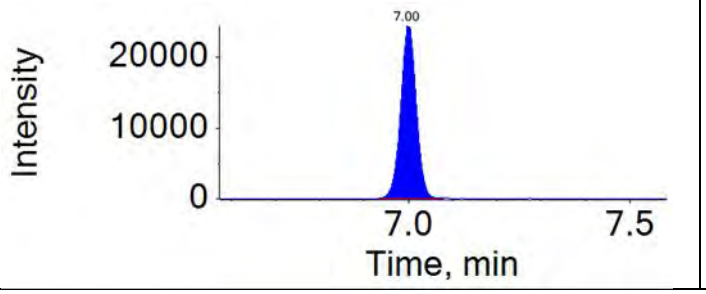


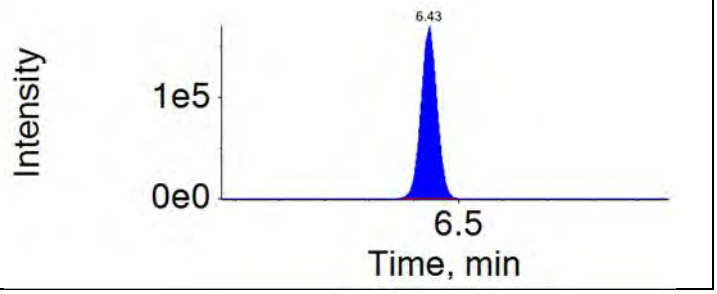
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

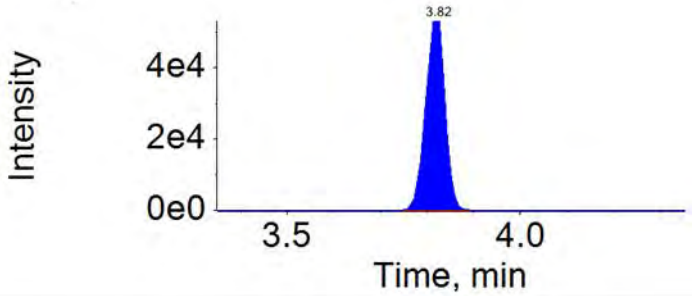
Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-12.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	157656.3	A	1.0000	1.0000			
PFBS_2	3.82	1.00	57942.5	A	0.3576	0.3675	3	50	
4:2-FTS	4.14	1.00	35586.2	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	22248.8	A	0.6359	0.6252	-2	50	
PFHxA	4.17	1.00	351503.9	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	3580.7	A	0.0115	0.0102	-11	50	
PFPeS	4.19	1.10	82090.1	A	1.0000	1.0000			
PFPeS_2	4.19	1.10	44176.0	A	0.5384	0.5381	0	50	
PFHxS	4.56	1.00	122477.7	A	1.0000	1.0000			
PFHxS_2	4.56	1.00	45270.2	A	0.3569	0.3696	4	50	
PFHpA	4.56	1.00	360280.4	A	1.0000	1.0000			
PFHpA_2	4.56	1.00	20898.8	A	0.0577	0.0580	1	50	
6:2-FTS	4.92	1.00	32056.4	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	19790.8	A	0.6752	0.6174	-9	50	
PFHpS	4.92	1.08	123126.9	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	49357.0	A	0.3950	0.4009	1	50	
PFOA	4.93	1.00	364943.1	A	1.0000	1.0000			
PFOA_2	4.92	1.00	23223.3	A	0.0635	0.0636	0	50	
PFOS	5.25	1.00	111397.7	A	1.0000	1.0000			
PFOS_2	5.25	1.00	35008.5	A	0.3494	0.3143	-10	50	
PFNA	5.27	1.00	299530.4	A	1.0000	1.0000			
PFNA_2	5.27	1.00	6077.4	A	0.0207	0.0203	-2	50	
PFNS	5.55	1.06	72940.0	A	1.0000	1.0000			
PFNS_2	5.54	1.06	34560.8	A	0.4890	0.4738	-3	50	
PFDA	5.57	1.00	244693.9	A	1.0000	1.0000			
PFDA_2	5.57	1.00	1604.2	A	0.0057	0.0066	16	50	
8:2-FTS	5.57	1.00	24892.6	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	15231.3	A	0.6169	0.6119	-1	50	
NMeFOSAA	5.71	1.00	32400.4	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	7101.6	A	0.2206	0.2192	-1	50	
PFDS	5.80	1.10	59073.9	A	1.0000	1.0000			
PFDS_2	5.80	1.11	31660.9	A	0.4648	0.5360	15	50	
PFUnDA	5.83	1.00	209644.8	A	1.0000	1.0000			
PFUnDA_2	5.84	1.00	267.4	A	0.0031	0.0013	-59	50	OOS
NEtFOSAA	5.85	1.00	32100.8	A	1.0000	1.0000			
NEtFOSAA_2	5.85	1.00	21563.1	A	0.6082	0.6717	10	50	
PFDoDA	6.06	1.00	220663.6	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	2566.4	A	0.0109	0.0116	6	50	
10:2-FTS	6.07	1.09	19060.5	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	13428.2	A	0.7082	0.7045	-1	50	
PFTrDA	6.25	1.03	197290.7	A	1.0000	1.0000			
PFTrDA_2	6.26	1.03	2128.7	A	0.0096	0.0108	12	50	
PFTeDA	6.43	1.00	150162.8	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	849.9	A	0.0055	0.0057	2	50	
PFHxDA	6.74	1.05	70193.5	A	1.0000	1.0000			
PFHxDA_2	6.74	1.05	4327.4	A	0.0596	0.0616	3	50	
PFODA	7.00	1.09	59736.9	A	1.0000	1.0000			
PFODA_2	7.00	1.09	1504.6	A	0.0257	0.0252	-2	50	

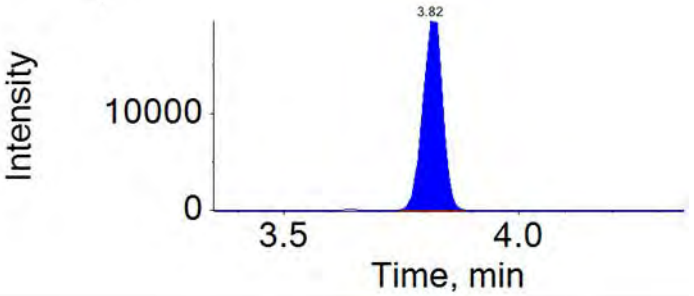
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

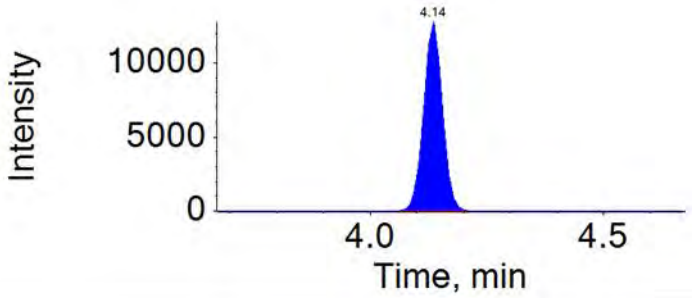
Component: PFBS
Primary Mass: 299.0 / 80.0



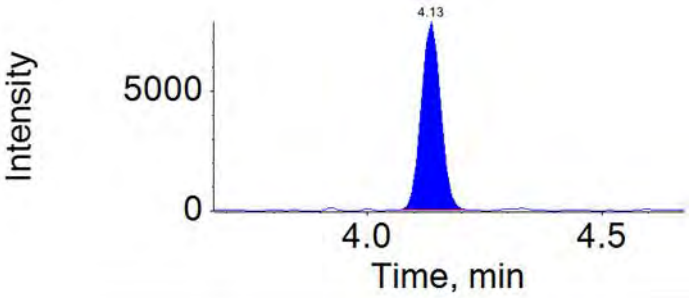
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



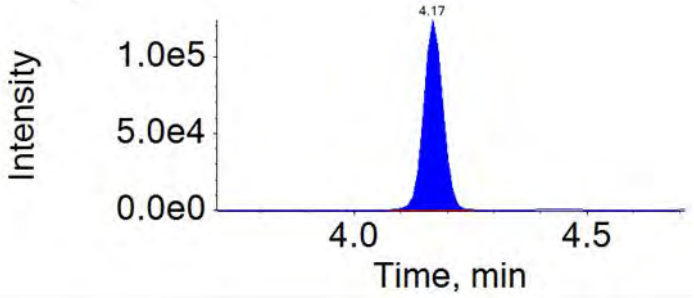
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



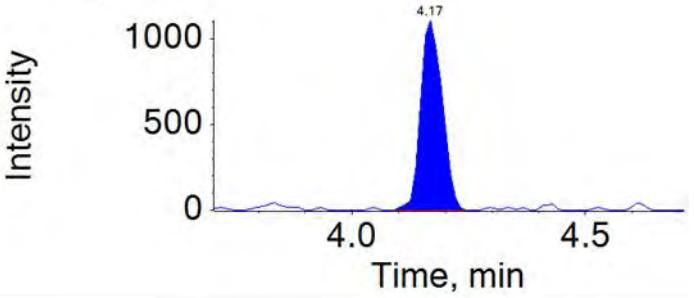
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



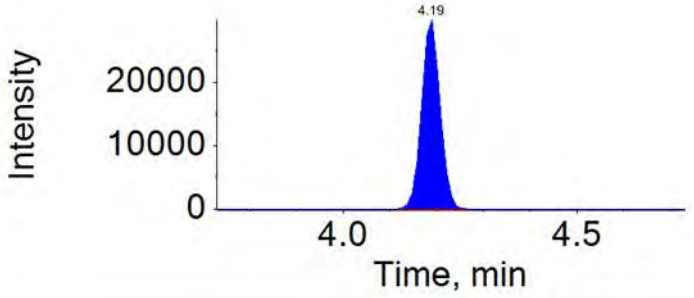
Component: PFHxA
Primary Mass: 313.0 / 269.0



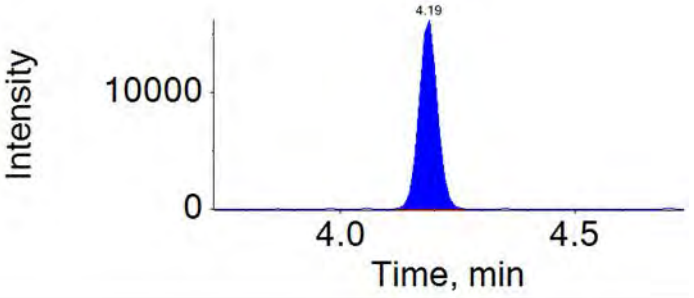
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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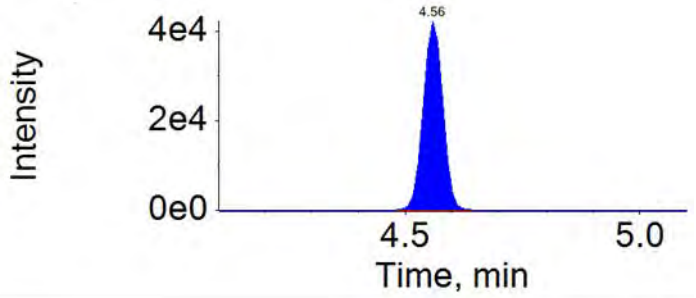
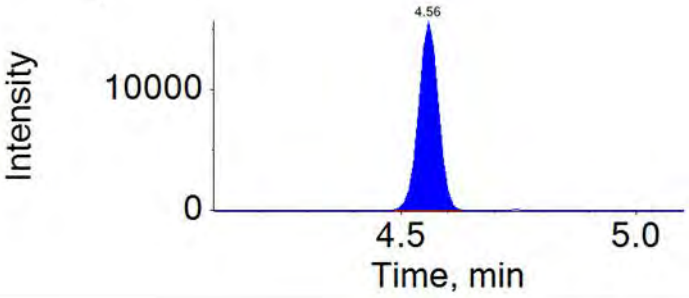
By umar at 5:23 pm, 11/9/18

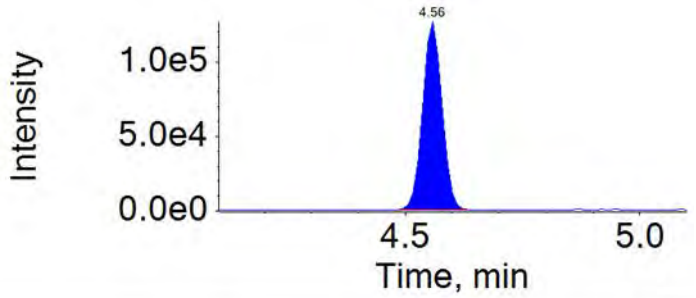
Component: PFHxS
Primary Mass: 399.0 / 80.0



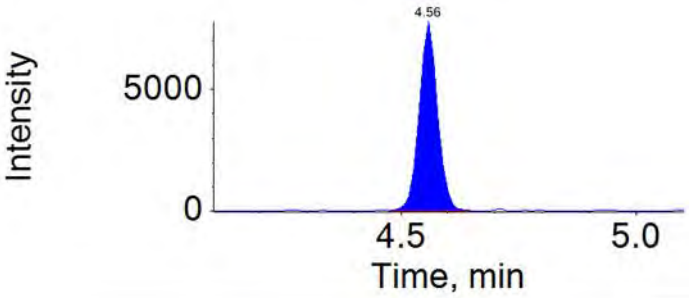
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



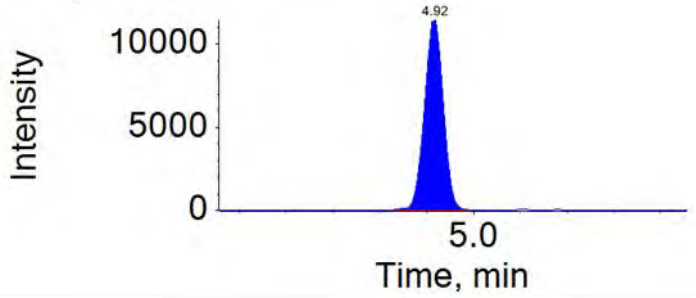
Component: PFHpA
Primary Mass: 363.0 / 319.0



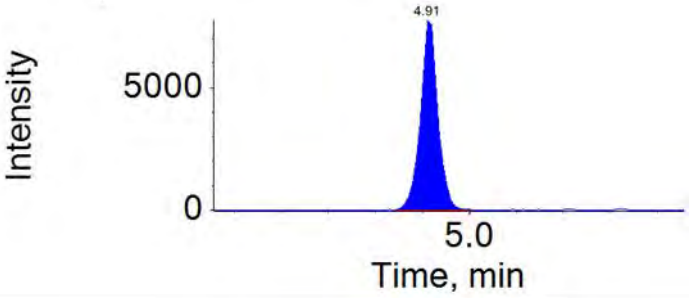
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



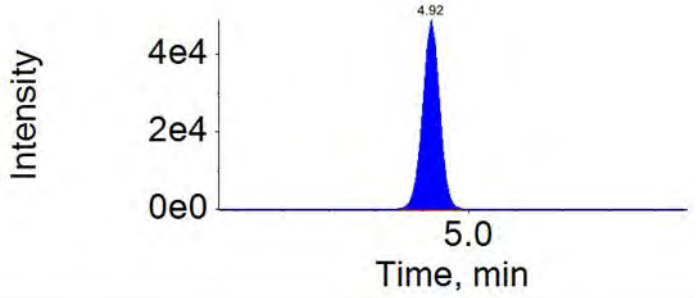
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



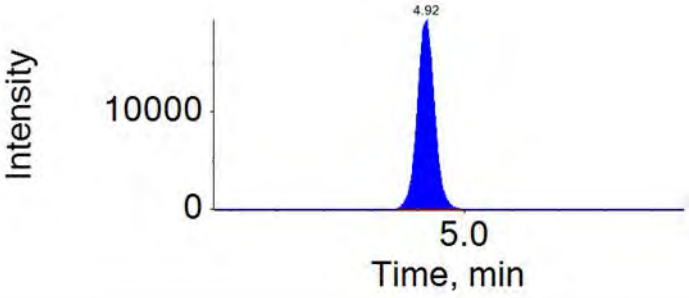
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



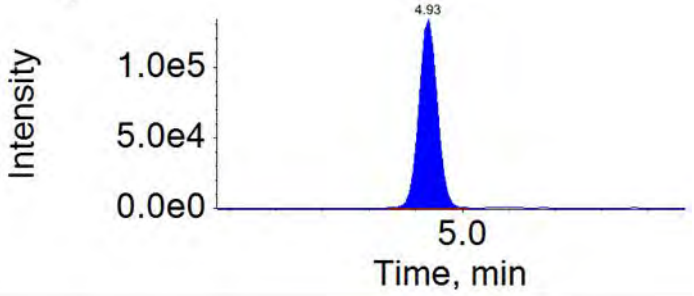
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



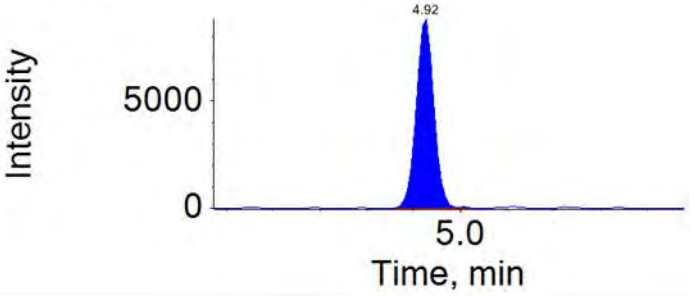
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

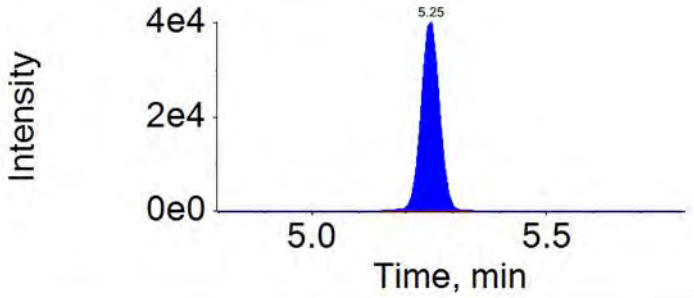
Component: PFOA
Primary Mass: 413.0 / 369.0



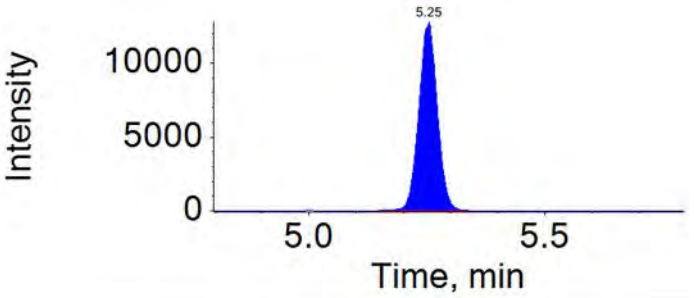
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



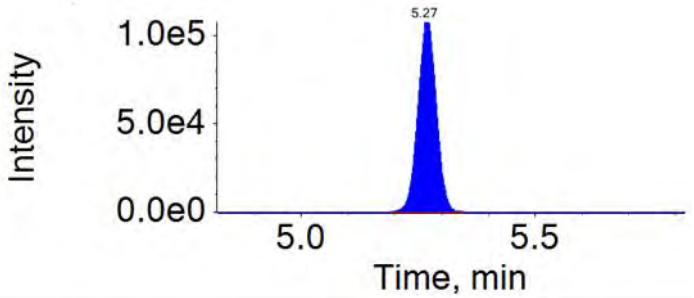
Component: PFOS
Primary Mass: 499.0 / 80.0



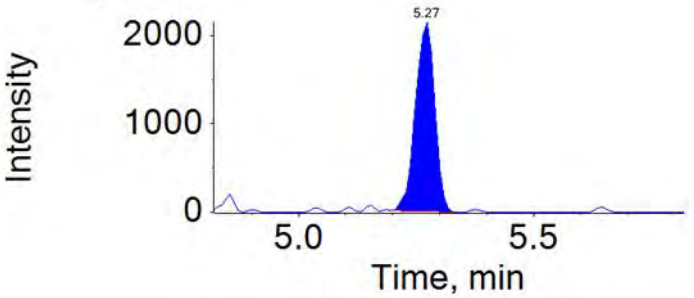
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



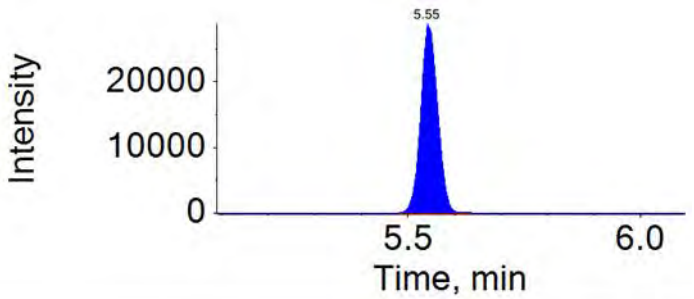
Component: PFNA
Primary Mass: 463.0 / 419.0



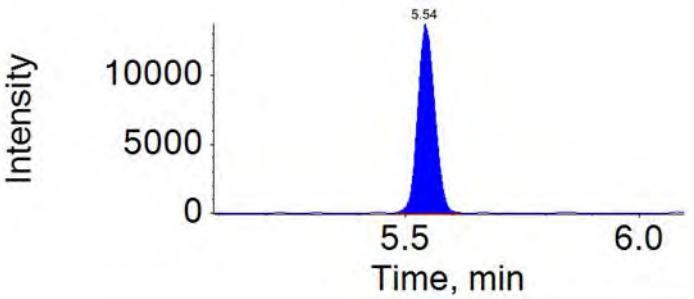
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



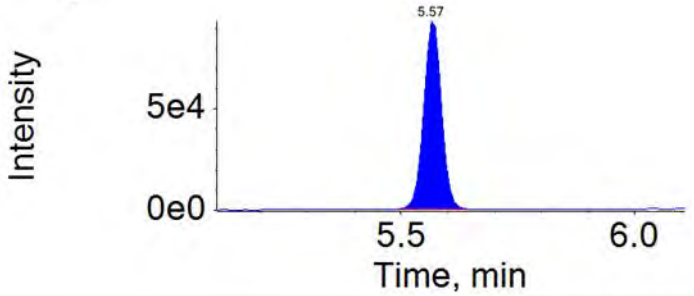
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



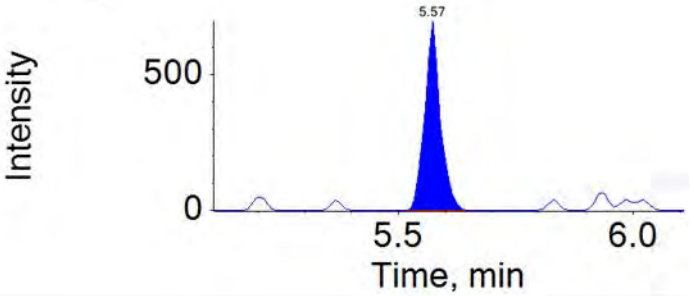
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

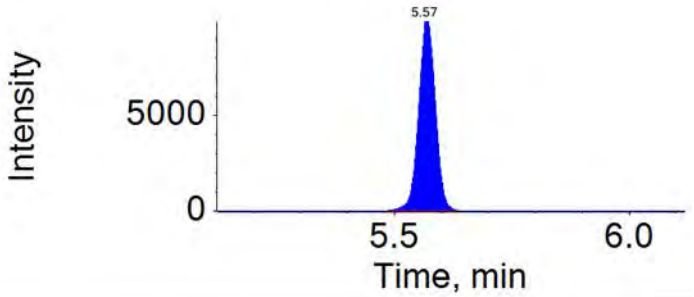
Component: PFDA
Primary Mass: 513.0 / 469.0



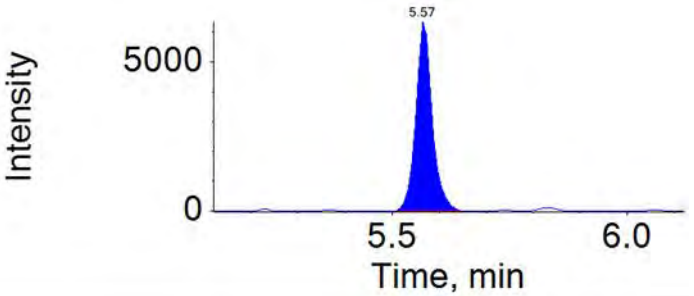
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



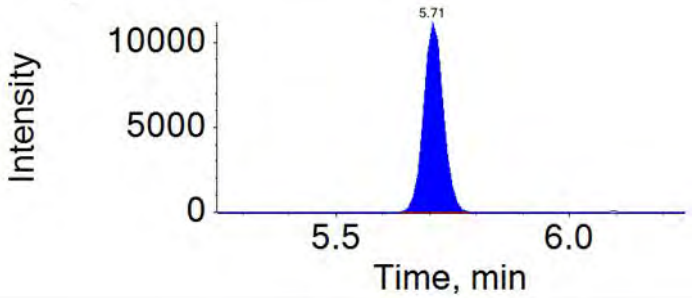
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



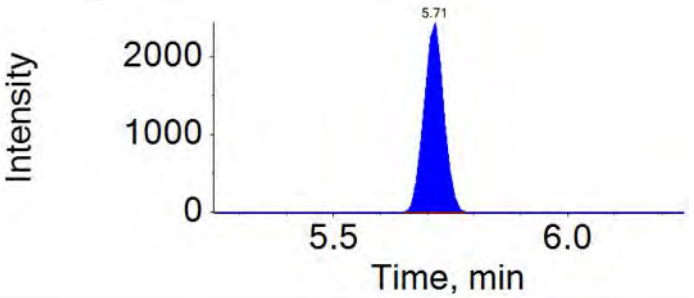
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



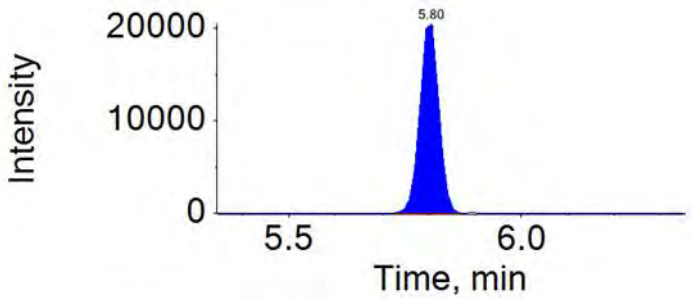
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



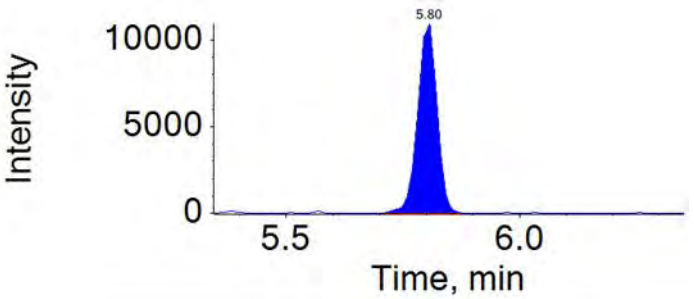
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



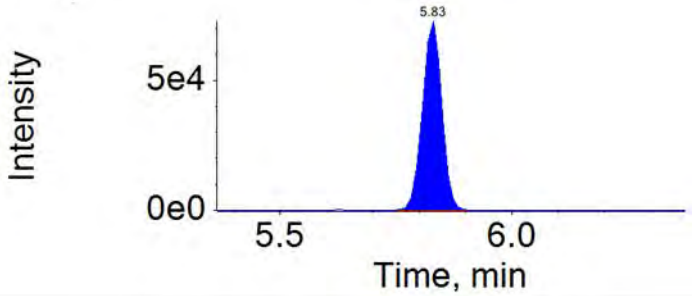
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



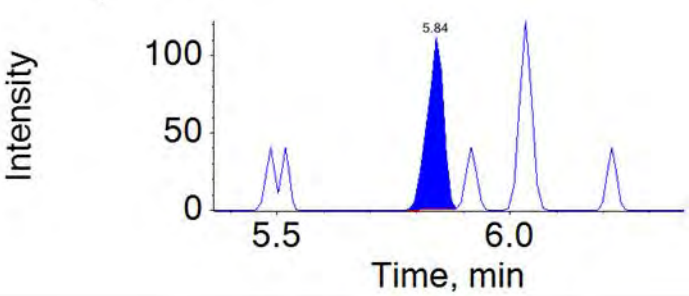
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

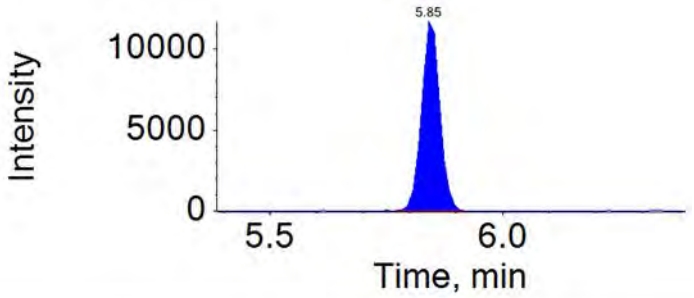
Component: PFUnDA
Primary Mass: 563.0 / 519.0



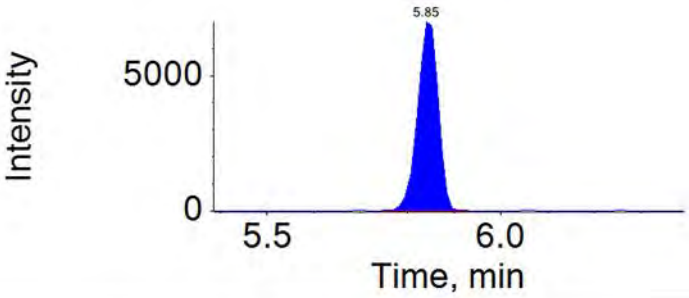
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



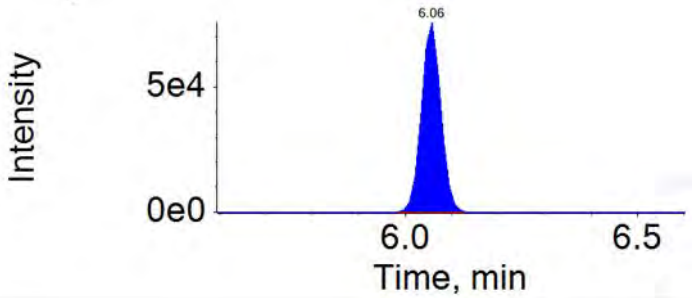
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



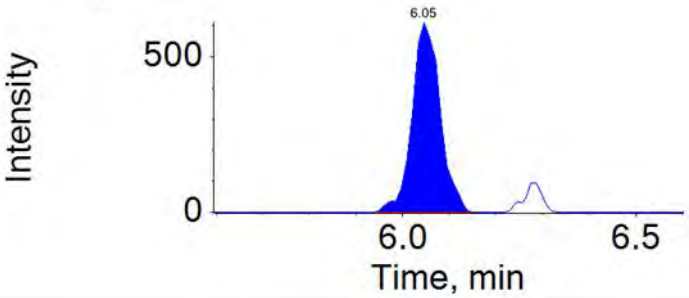
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



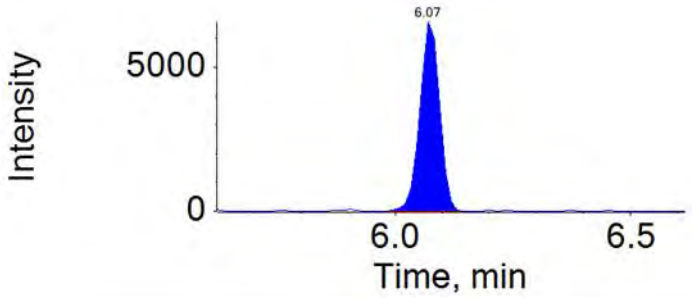
Component: PFDoDA
Primary Mass: 613.0 / 569.0



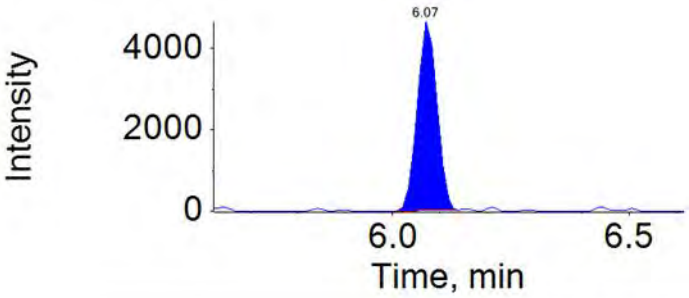
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



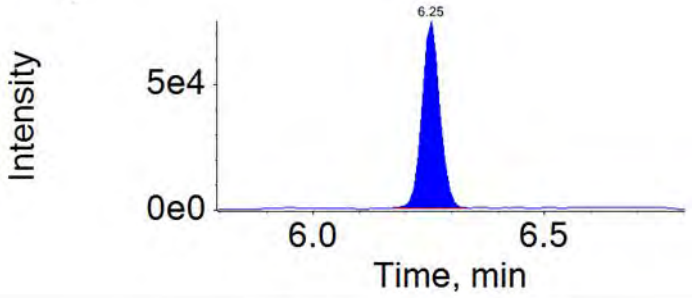
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



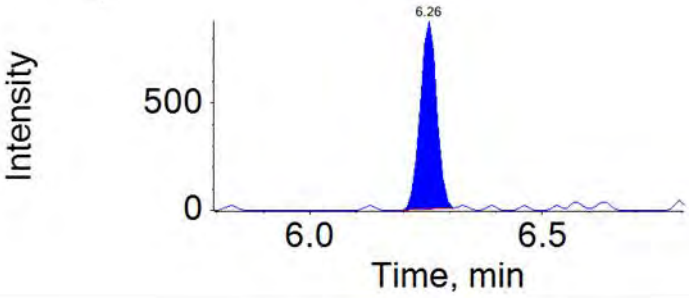
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

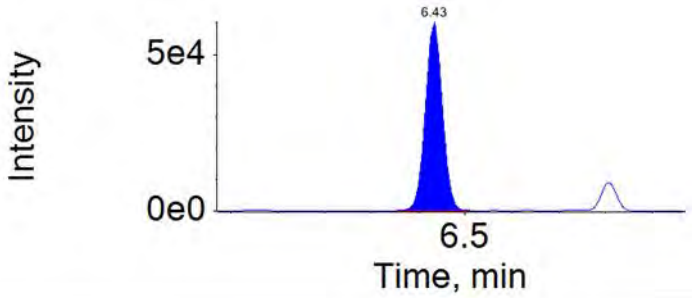
Component: PFTrDA
Primary Mass: 663.0 / 619.0



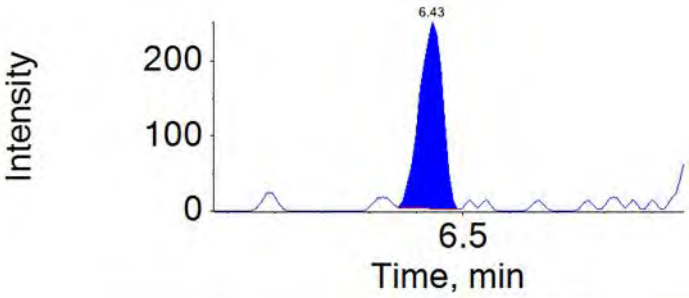
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



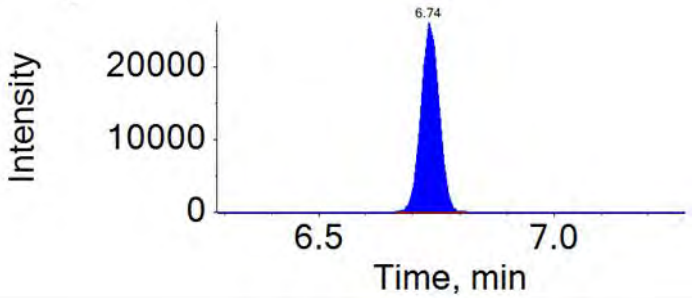
Component: PFTeDA
Primary Mass: 713.0 / 669.0



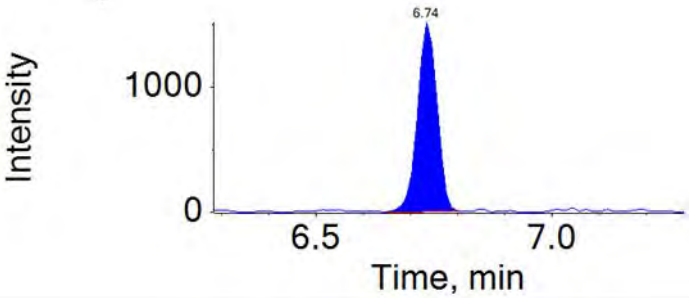
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



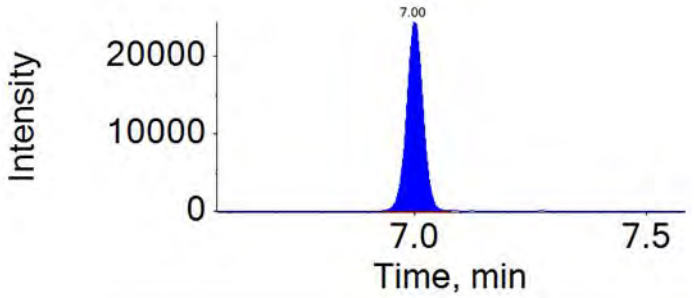
Component: PFHxDA
Primary Mass: 813.0 / 769.0



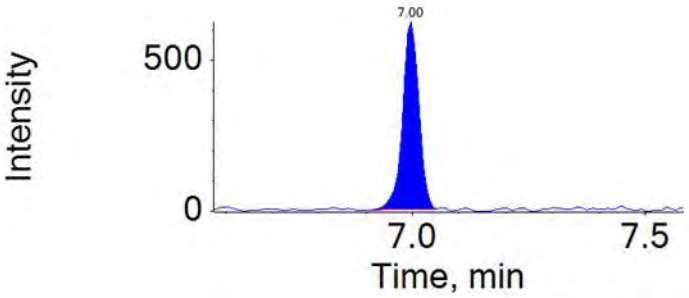
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL4			**Data File:**		18NOV07DCAL-13.wiff
Sample ID:	CALMOD41833F			**Acquis Date:**		2018-11-07T10:06:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	721806.8	730410.6	-1	50	
13C2-PFOA	5.0	528557.8	524423.6	1	50	
13C4-PFOS	4.8	270733.9	274061.7	-1	50	
13C2-PFDA	5.0	320985.5	311442.1	3	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	771359.1	13C3-PFBA	721806.8	1.069	5.000	4.945	99	70-130	
E13C5-PFPeA	824842.8	13C3-PFBA	721806.8	1.143	5.000	4.978	100	70-130	
E13C3-PFBS	434938.9	13C3-PFBA	721806.8	0.603	4.650	4.422	95	70-130	
E13C2-4:2-FTS	51520.6	13C2-PFOA	528557.8	0.097	4.670	4.398	94	70-130	
E13C5-PFHxA	713446.3	13C2-PFOA	528557.8	1.350	5.000	4.965	99	70-130	
E13C3-PFHxS	339090.5	13C2-PFOA	528557.8	0.642	4.730	4.606	97	70-130	
E13C4-PFHpA	592497.9	13C2-PFOA	528557.8	1.121	5.000	5.099	102	70-130	
E13C2-6:2-FTS	39121.7	13C2-PFOA	528557.8	0.074	4.750	4.936	104	70-130	
E13C8-PFOA	937287.5	13C2-PFOA	528557.8	1.773	5.000	4.945	99	70-130	
E13C8-PFOS	291941.6	13C4-PFOS	270733.9	1.078	4.780	4.768	100	70-130	
E13C9-PFNA	512147.4	13C4-PFOS	270733.9	1.892	5.000	5.167	103	70-130	
E13C6-PFDA	656868.3	13C2-PFDA	320985.5	2.046	5.000	5.146	103	70-130	
E13C2-8:2-FTS	30500.3	13C2-PFDA	320985.5	0.095	4.790	5.028	105	70-130	
E13C8-PFOSA	708330.5	13C2-PFDA	320985.5	2.207	5.000	4.815	96	70-130	
Ed3-NMeFOSAA	80900.1	13C2-PFDA	320985.5	0.252	5.000	4.687	94	70-130	
E13C7-PFUnDA	275977.2	13C2-PFDA	320985.5	0.860	5.000	4.960	99	70-130	
Ed5-NEtFOSAA	66162.4	13C2-PFDA	320985.5	0.206	5.000	4.770	95	70-130	
E13C2-PFDoDA	598287.4	13C2-PFDA	320985.5	1.864	5.000	5.025	100	70-130	
Ed7-NMePFOSAE	330968.7	13C2-PFDA	320985.5	1.031	5.000	4.795	96	70-130	
Ed3-NMePFOSA	86399.4	13C2-PFDA	320985.5	0.269	5.000	4.928	99	70-130	
Ed9-NEtPFOSAE	273909.1	13C2-PFDA	320985.5	0.853	5.000	4.873	97	70-130	
Ed5-NEtPFOSA	72258.7	13C2-PFDA	320985.5	0.225	5.000	5.212	104	70-130	
E13C2-PFTeDA	441858.1	13C2-PFDA	320985.5	1.377	5.000	4.956	99	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

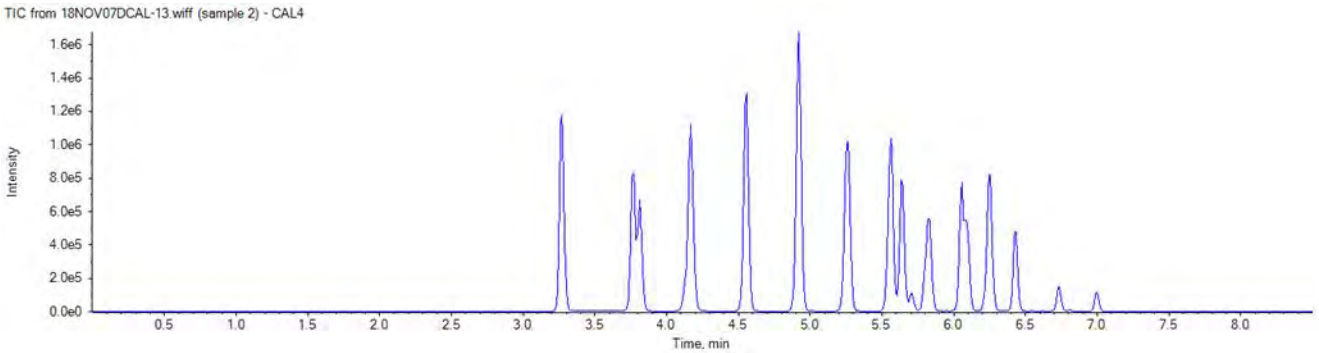
Analyte Quantitation Peak Table

Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-13.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	1152870.9		A	13C4-PFBA	3.27	771359.1	1.495	8.747
PFPeA	3.76	1.000	1165758.7		A	13C5-PFPeA	3.77	824842.8	1.413	8.399
PFBS	3.81	1.000	648524.4		A	13C3-PFBS	3.81	434938.9	1.491	7.518
4:2-FTS	4.13	1.000	153295.4		A	13C2-4:2-FTS	4.13	51520.6	2.975	7.999
PFHxA	4.16	1.000	1455862.5		A	13C5-PFHxA	4.16	713446.3	2.041	8.751
PFPeS	4.18	1.100	349358.3		A	13C3-PFBS	3.81	434938.9	0.803	7.922
PFHxS	4.55	1.000	513536.6		A	13C3-PFHxS	4.55	339090.5	1.514	7.676
PFHpA	4.55	1.000	1481489.5		A	13C4-PFHpA	4.55	592497.9	2.500	8.409
6:2-FTS	4.91	1.000	125170.2		A	13C2-6:2-FTS	4.91	39121.7	3.200	7.982
PFHpS	4.91	1.080	516333.1		A	13C3-PFHxS	4.55	339090.5	1.523	7.966
PFOA	4.92	1.000	1491946.3		A	13C8-PFOA	4.92	937287.5	1.592	8.963
PFOS	5.25	1.000	447769.0		A	13C8-PFOS	5.25	291941.6	1.534	7.953
PFNA	5.27	1.000	1179151.8		A	13C9-PFNA	5.26	512147.4	2.302	8.604
PFNS	5.54	1.060	305013.7		A	13C8-PFOS	5.25	291941.6	1.045	8.284
PFDA	5.56	1.000	1029893.8		A	13C6-PFDA	5.56	656868.3	1.568	8.626
8:2-FTS	5.57	1.000	106591.3		A	13C2-8:2-FTS	5.57	30500.3	3.495	7.877
PFOSA	5.64	1.000	1119770.1		A	13C8-PFOSA	5.64	708330.5	1.581	8.545
NMeFOSAA	5.71	1.000	136316.9		A	d3-NMeFOSAA	5.70	80900.1	1.685	8.670
PFDS	5.80	1.110	250911.0		A	13C8-PFOS	5.25	291941.6	0.859	8.210
PFUnDA	5.83	1.000	802732.3		A	13C7-PFUnDA	5.83	275977.2	2.909	8.341
NEtFOSAA	5.84	1.000	121615.1		A	d5-NEtFOSAA	5.84	66162.4	1.838	7.900
PFDoDA	6.05	1.000	877242.2		A	13C2-PFDoDA	6.05	598287.4	1.466	7.946
10:2-FTS	6.07	1.090	69275.8		A	13C2-8:2-FTS	5.57	30500.3	2.271	7.073
NMePFOSAE	6.09	1.000	648523.4		A	d7-NMePFOSAE	6.08	330968.7	1.959	8.781
NMePFOSA	6.10	1.000	118194.2		A	d3-NMePFOSA	6.10	86399.4	1.368	7.657
PFDoS	6.22	1.190	121590.1		A	13C8-PFOS	5.25	291941.6	0.416	8.039
NEtPFOSAE	6.25	1.000	740427.4		A	d9-NEtPFOSAE	6.24	273909.1	2.703	8.666
NEtPFOSA	6.26	1.000	123609.2		A	d5-NEtPFOSA	6.26	72258.7	1.711	7.534
PFTrDA	6.25	1.030	781283.7		A	13C2-PFDoDA	6.05	598287.4	1.306	8.235
PFTeDA	6.43	1.000	630801.4		A	13C2-PFTeDA	6.43	441858.1	1.428	8.383
PFHxDA	6.73	1.050	297242.6		A	13C2-PFTeDA	6.43	441858.1	0.673	8.351
PFODA	7.00	1.090	251726.5		A	13C2-PFTeDA	6.43	441858.1	0.570	8.162

Total Ion Chromatogram

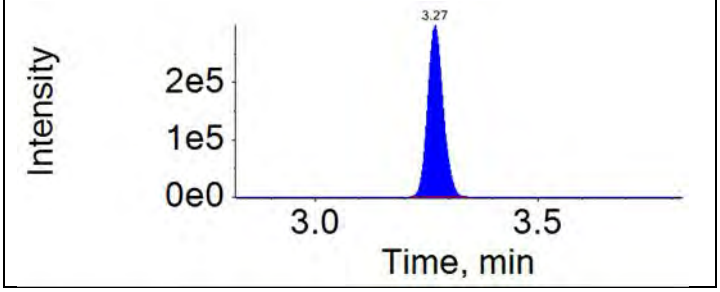


APPROVED
By JPT at 2:53 pm, 11/7/18

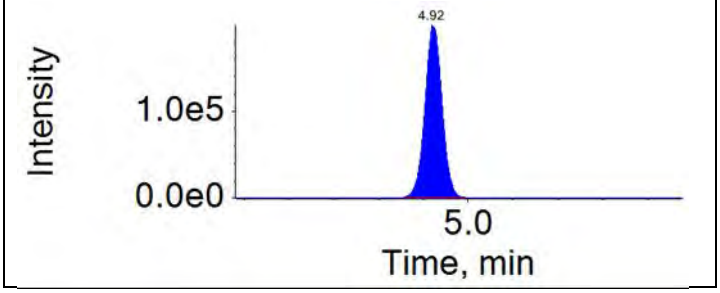
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

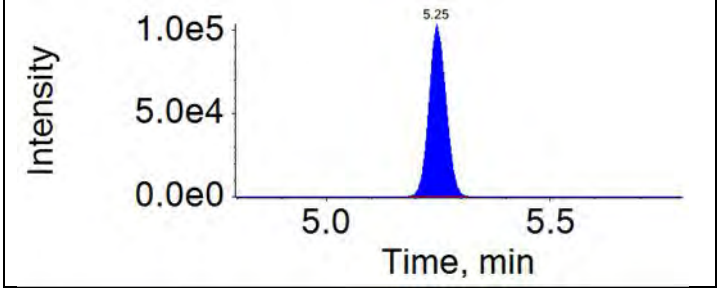
Injection Standard: 13C3-PFBA
216.0 / 172.0



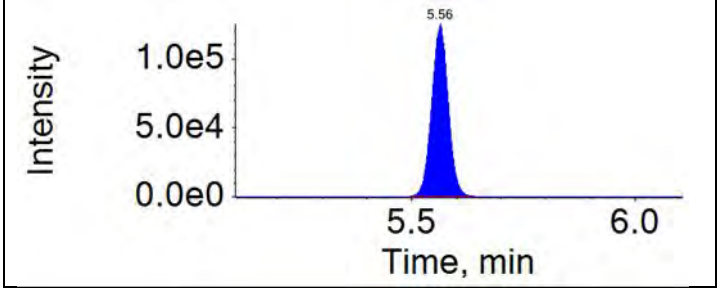
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

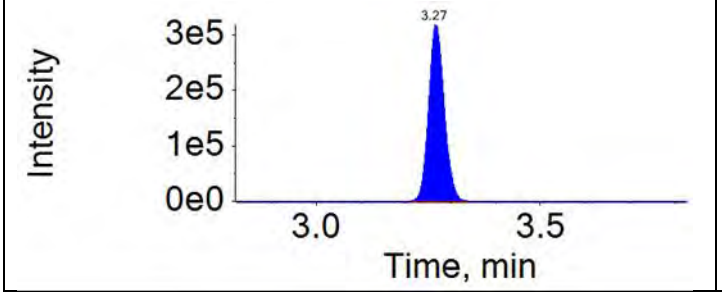


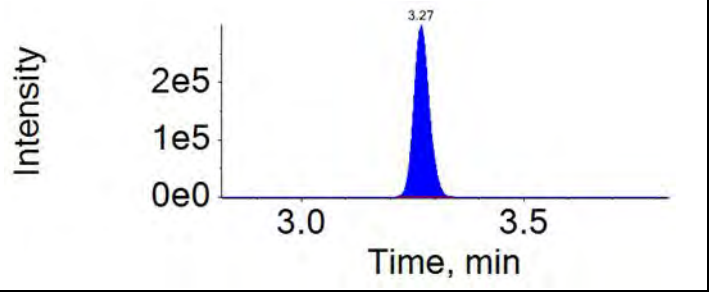
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

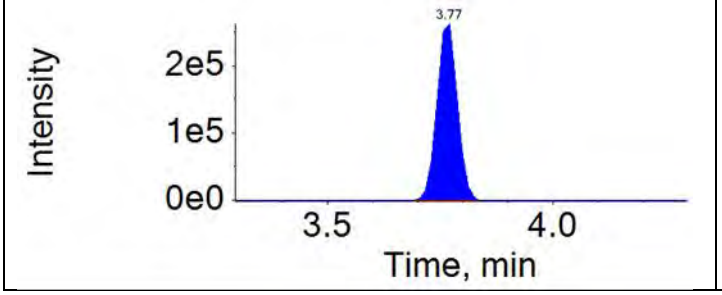
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

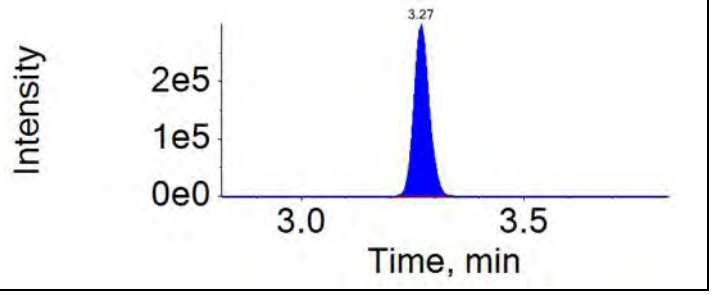
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



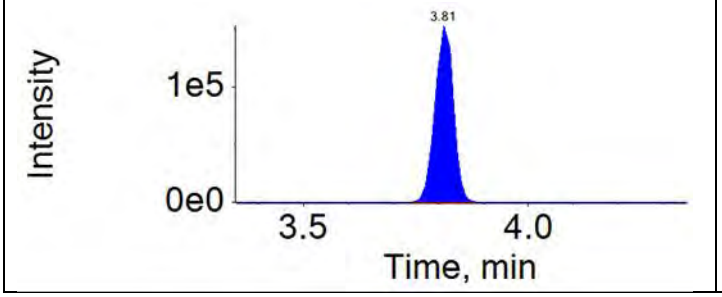


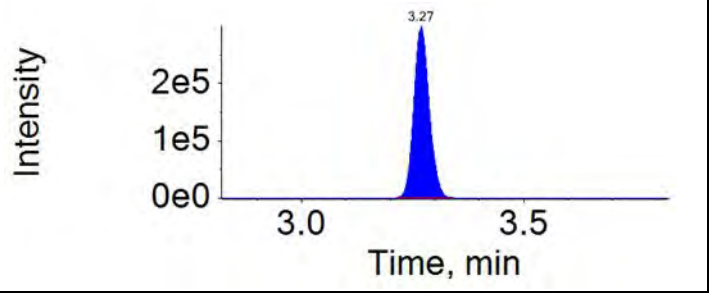
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



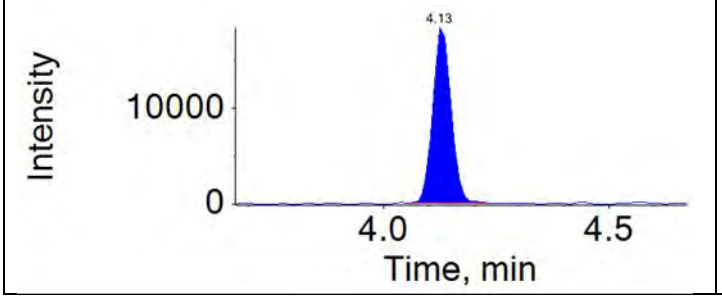


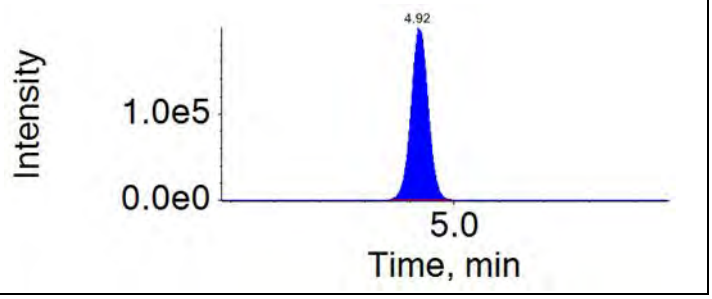
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



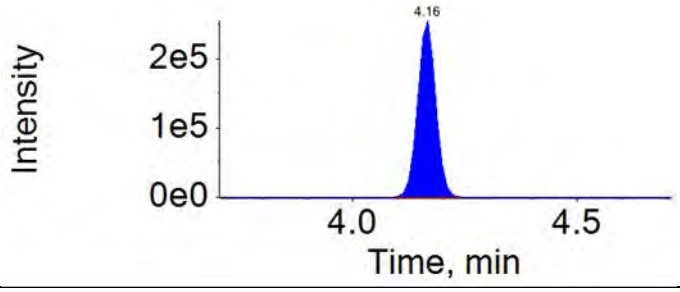
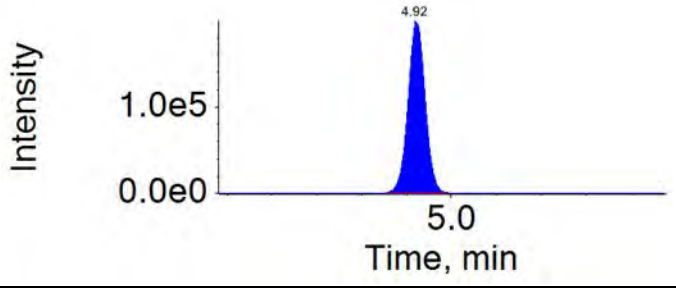


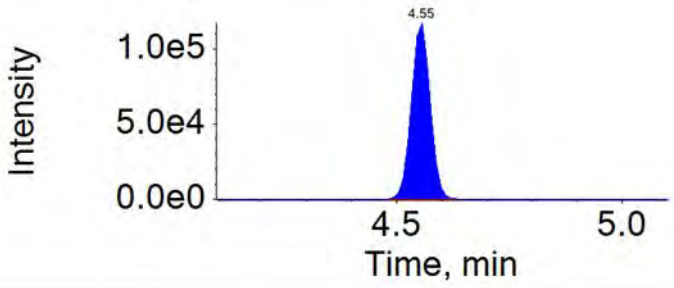
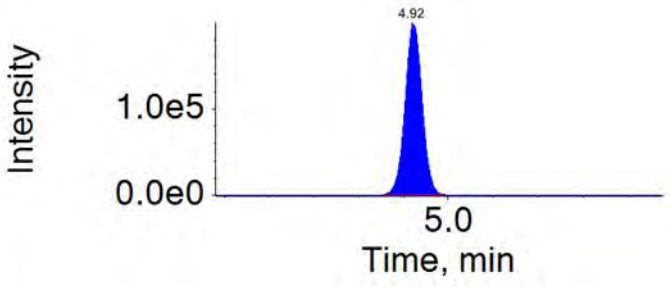
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

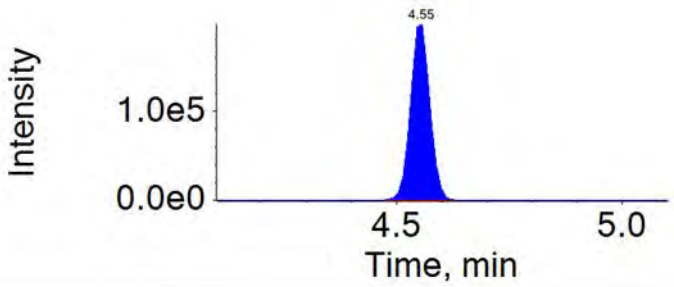
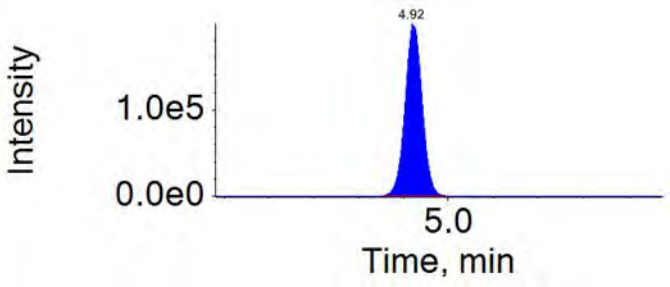


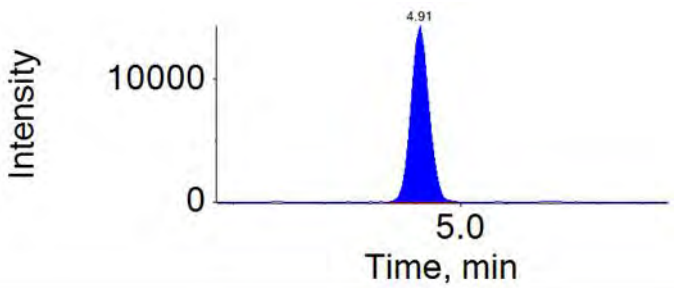
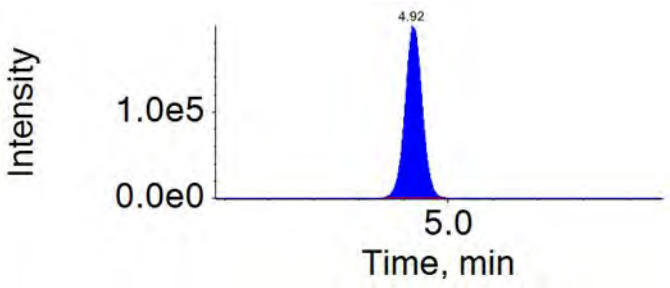


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

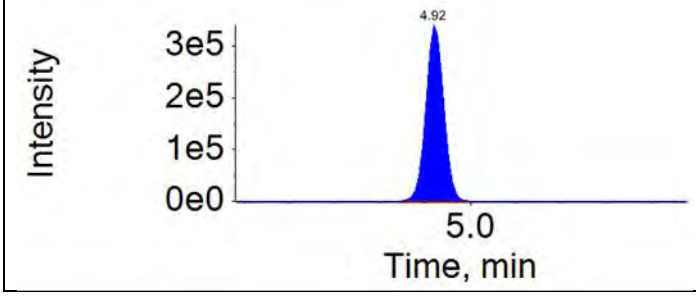
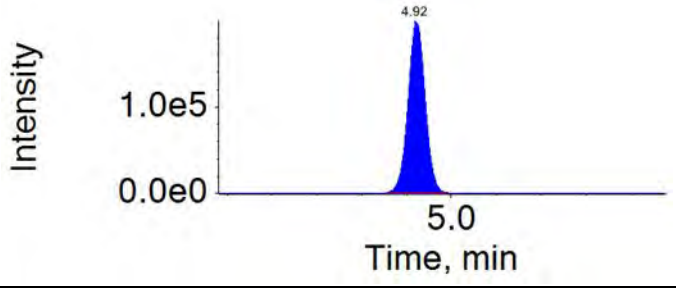
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

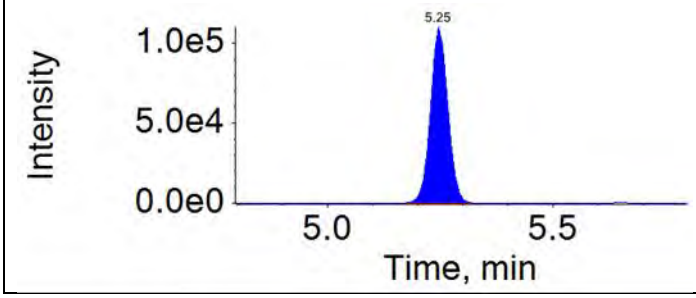
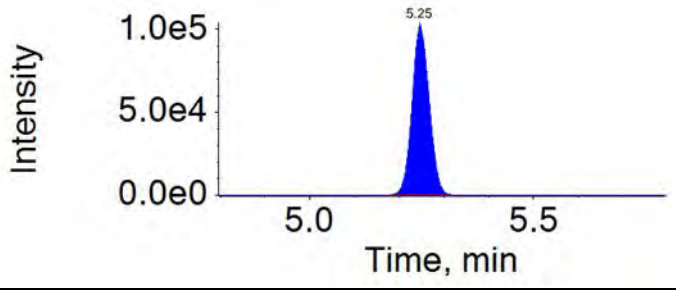
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

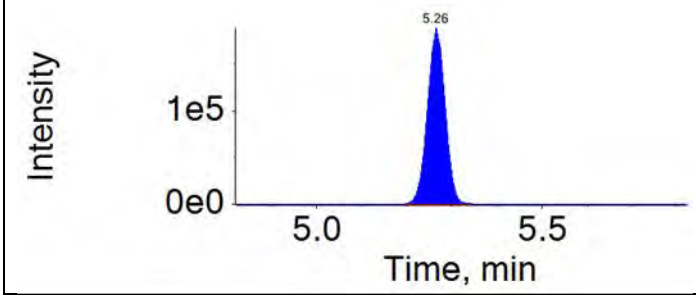
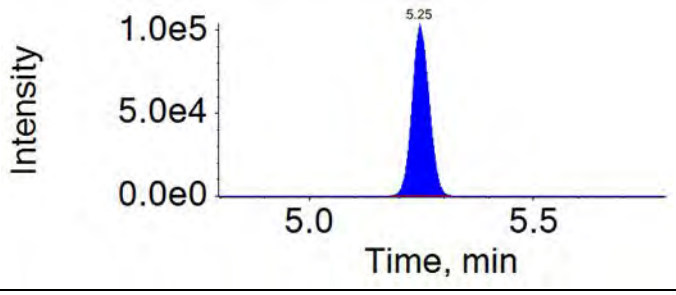
APPROVED
By JPT at 2:53 pm, 11/7/18

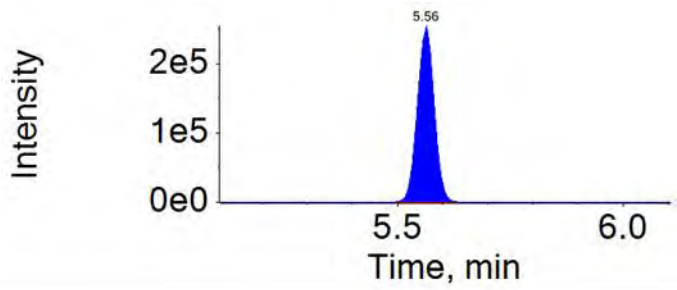
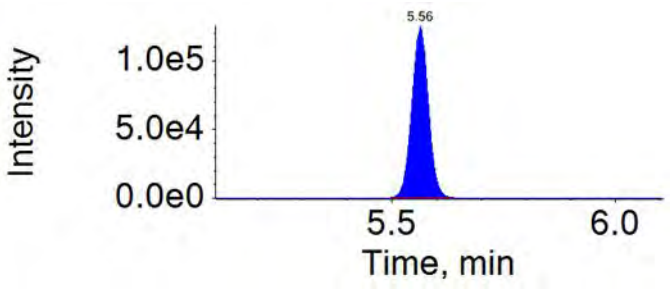
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

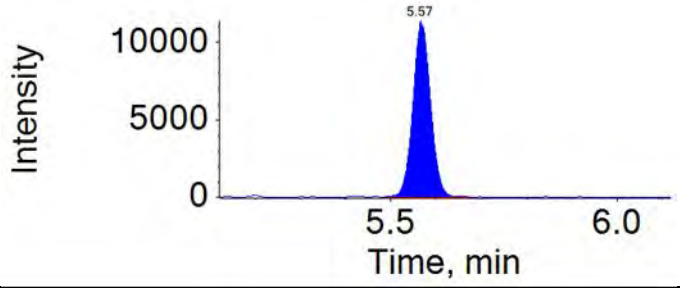
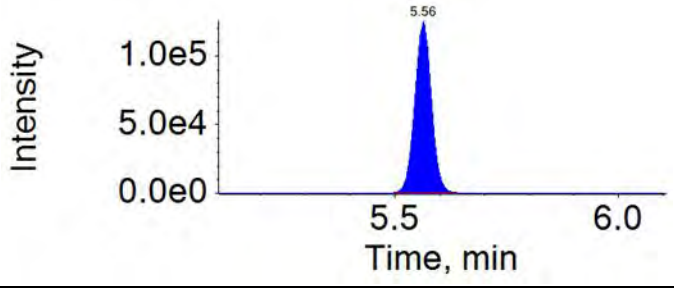
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

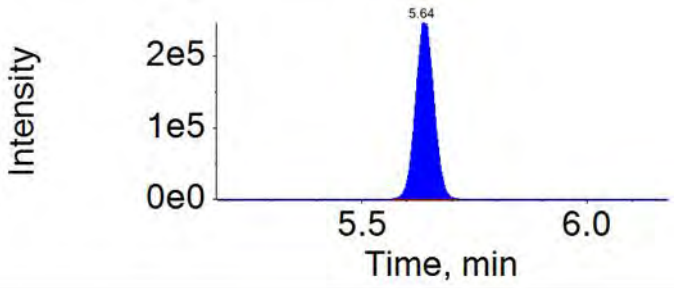
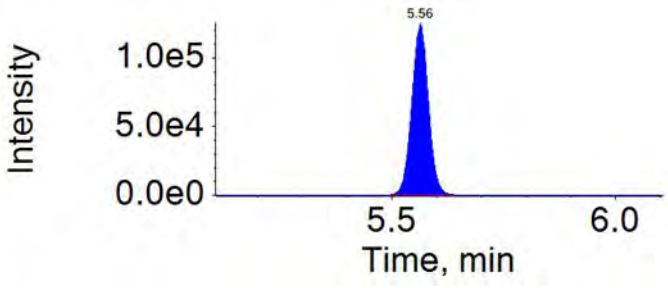
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

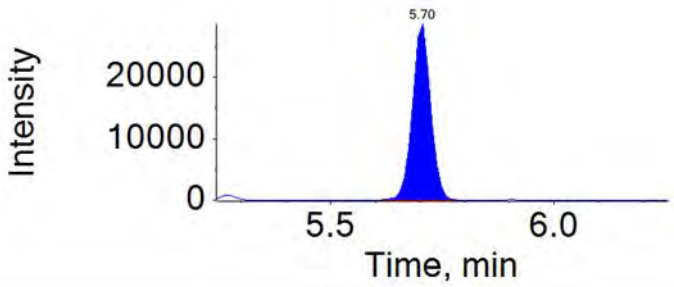
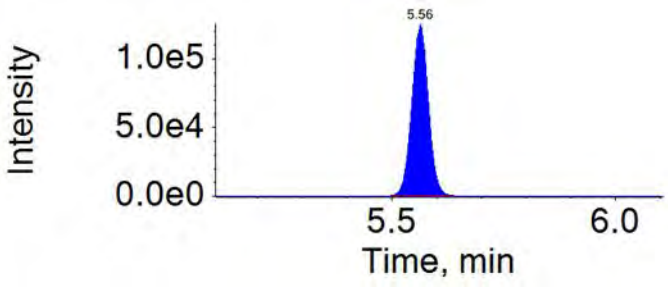
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

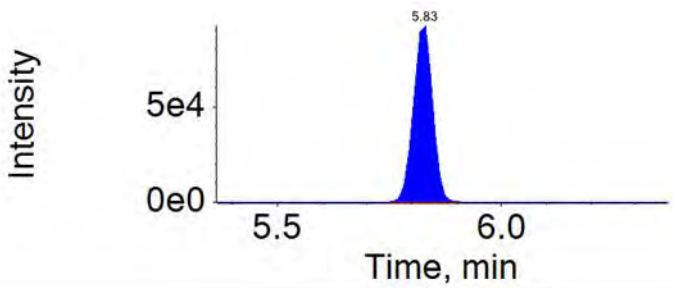
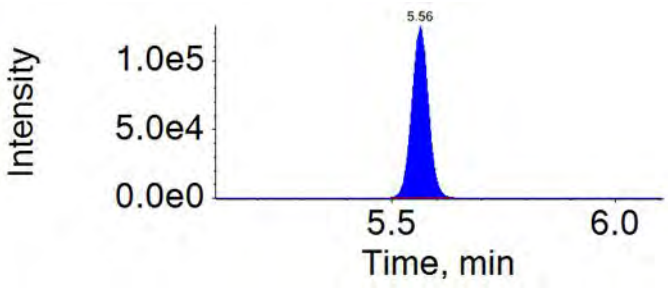
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

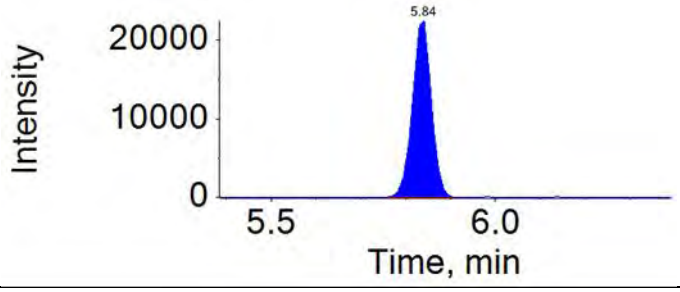
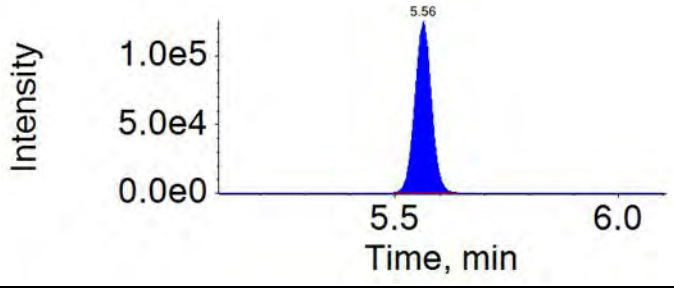
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

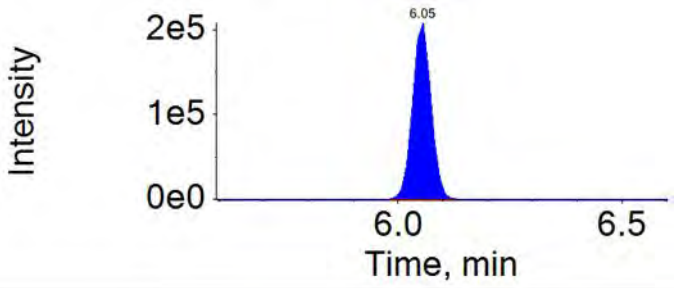
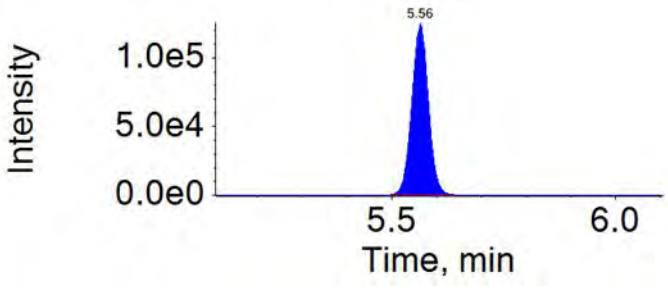
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

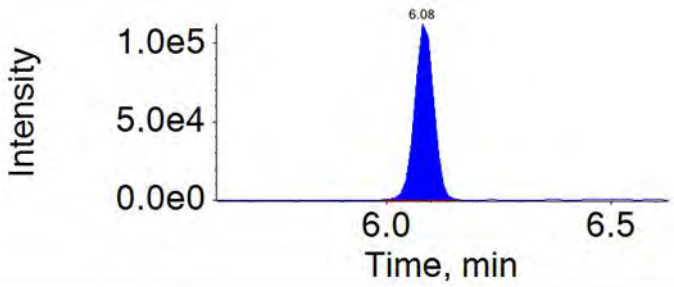
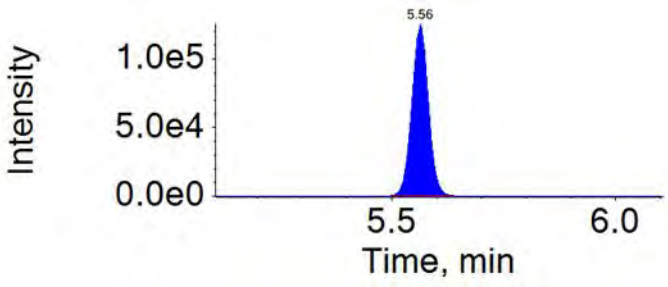
APPROVED
By JPT at 2:53 pm, 11/7/18

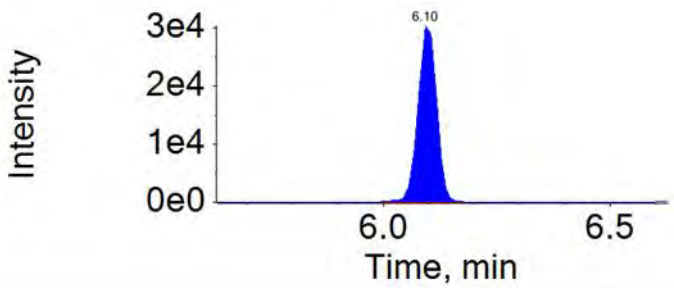
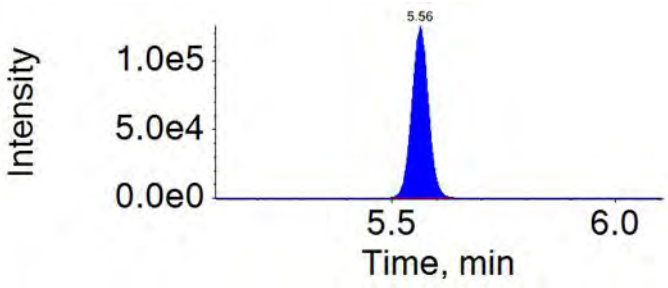
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

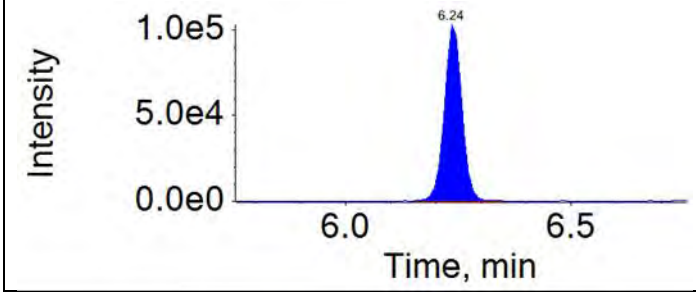
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

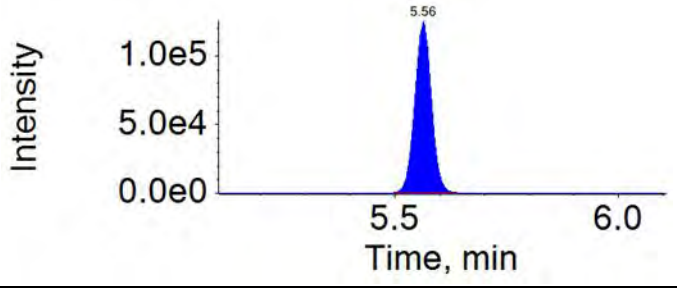
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

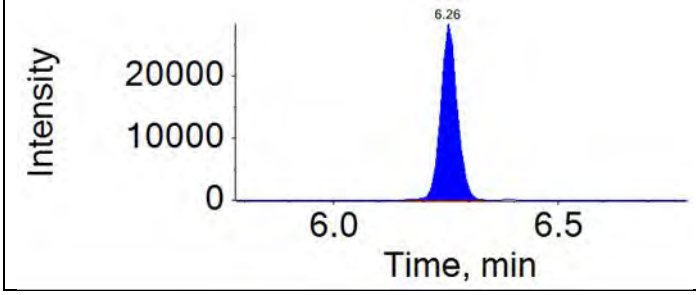
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

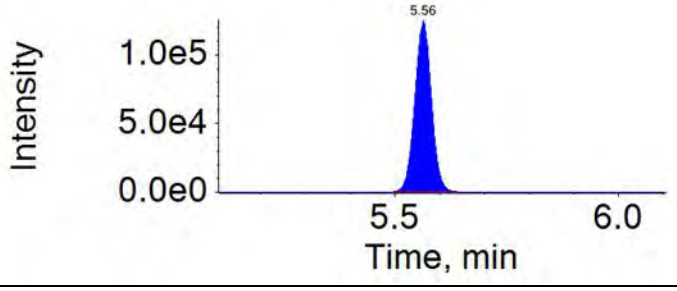
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



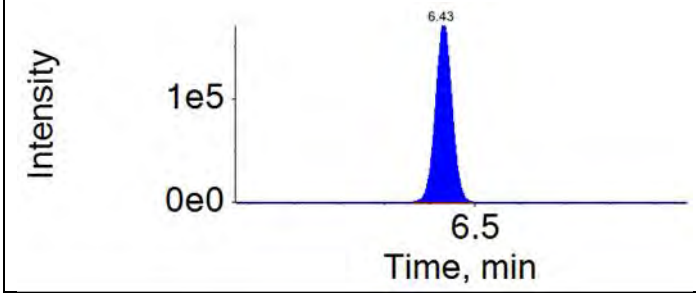


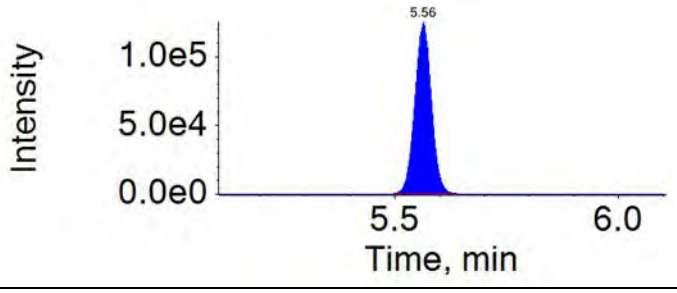
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

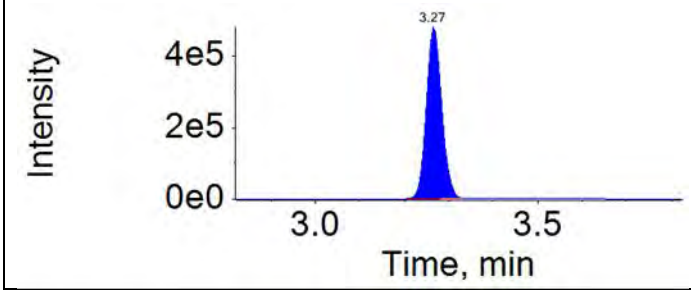
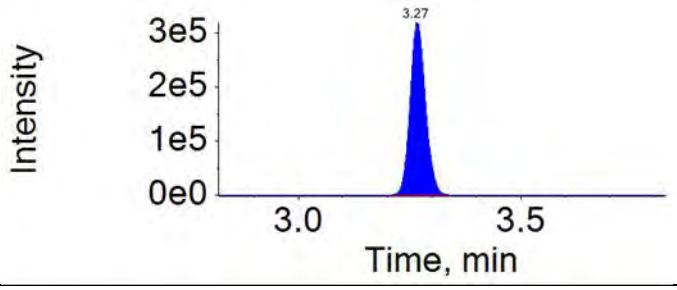


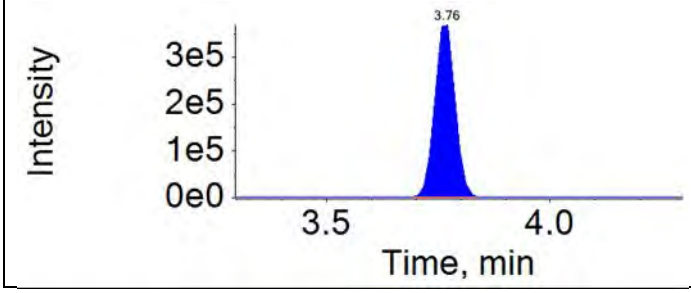
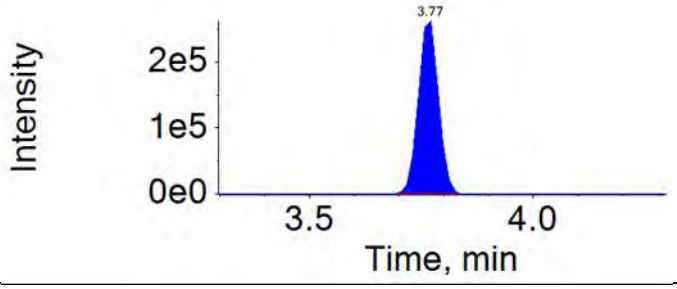


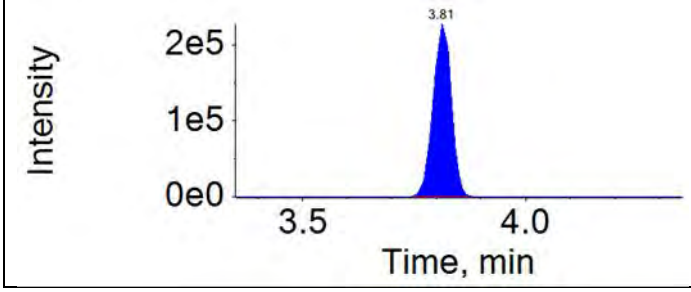
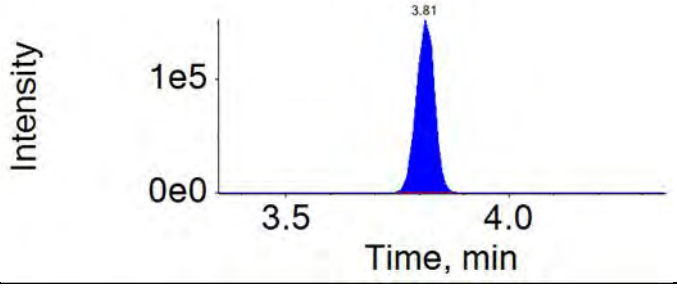
APPROVED
By JPT at 2:53 pm, 11/7/18

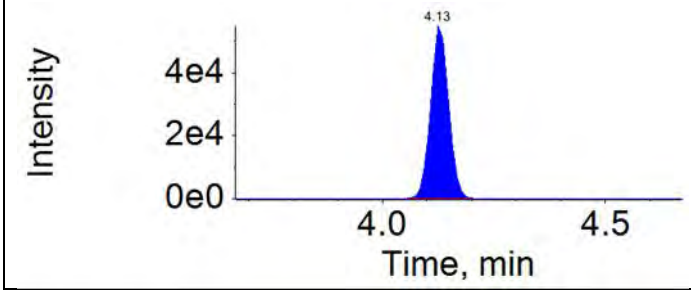
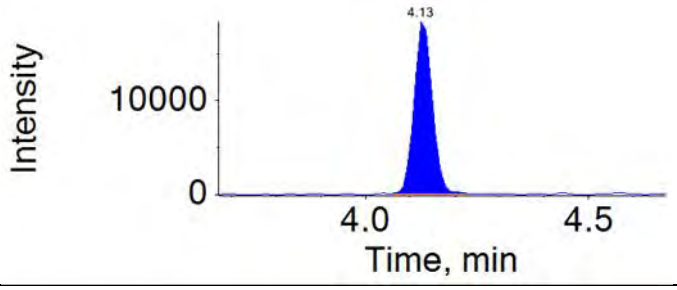
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

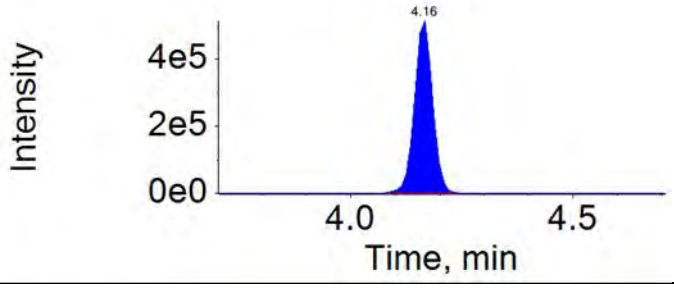
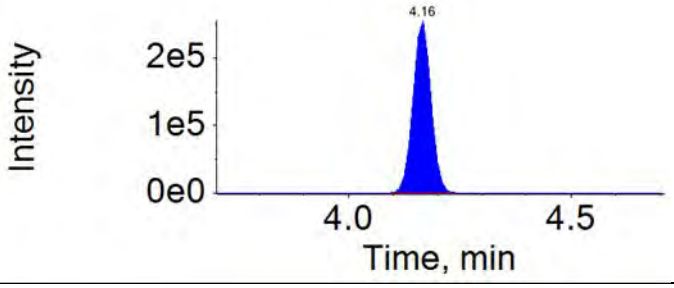
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

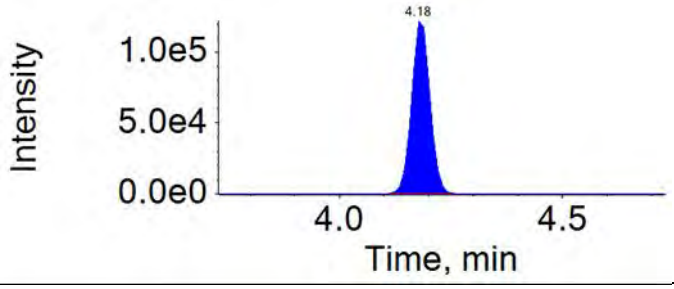
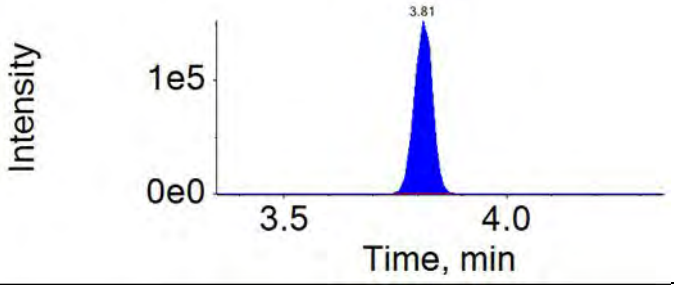
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

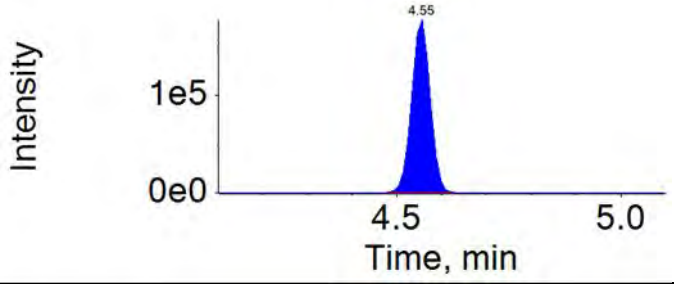
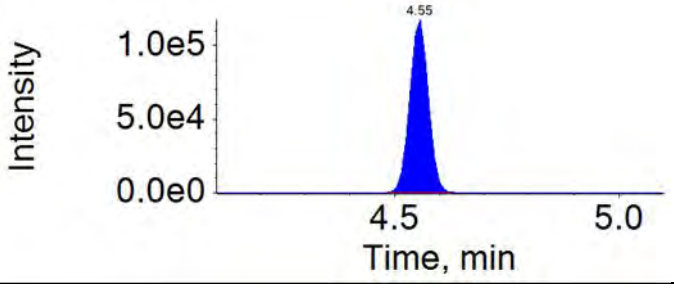
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

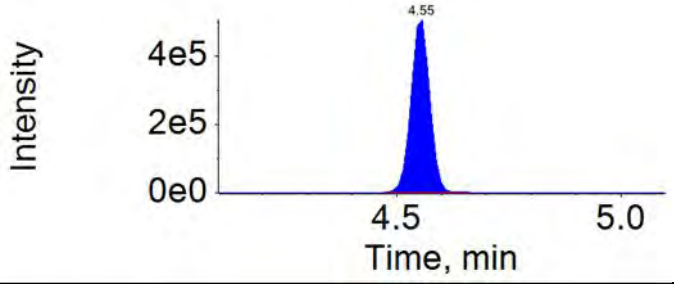
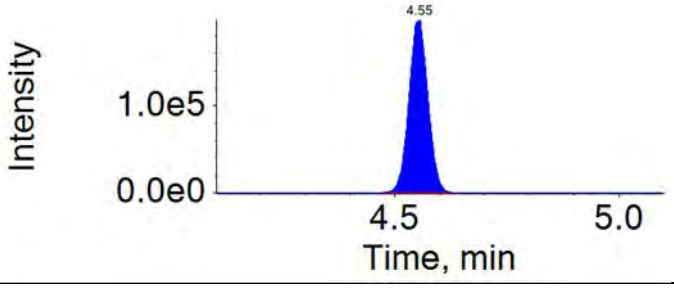
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

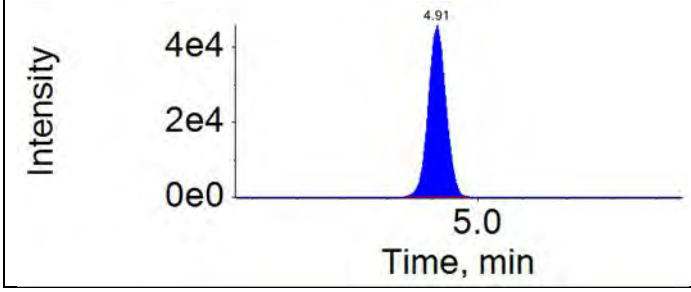
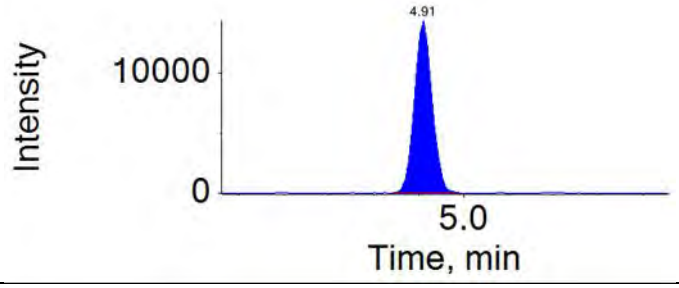
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

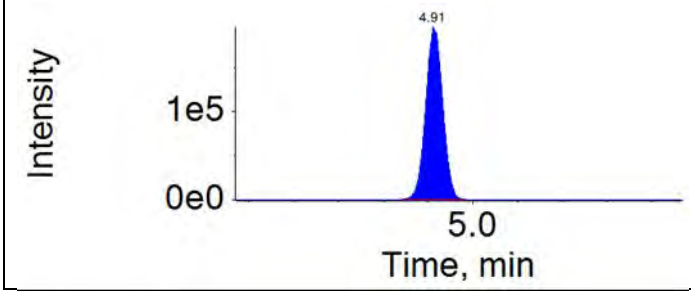
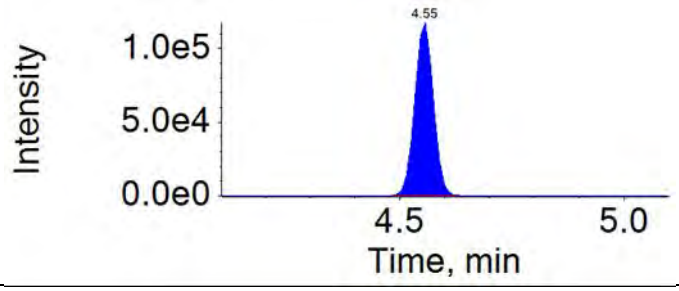
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

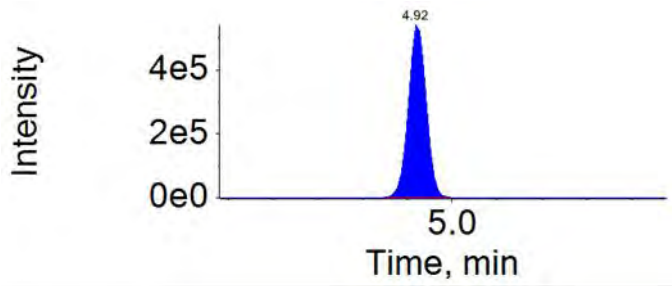
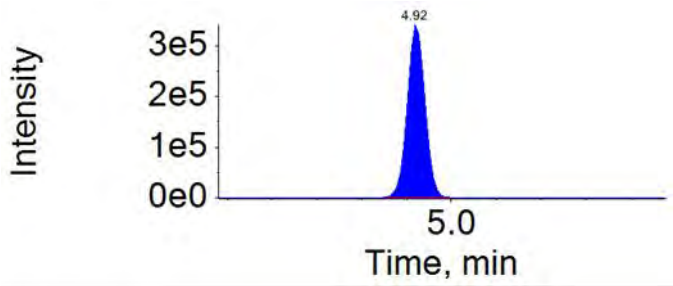
APPROVED
By JPT at 2:53 pm, 11/7/18

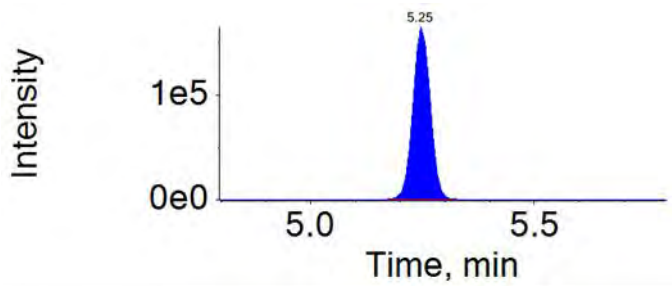
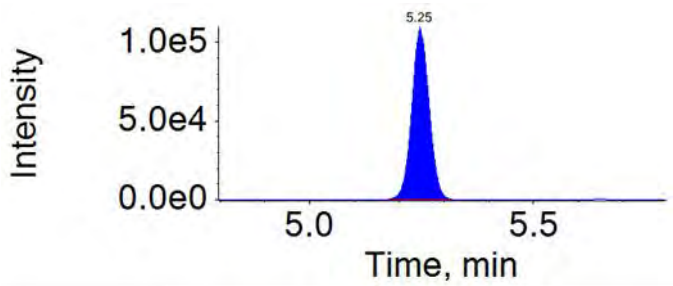
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

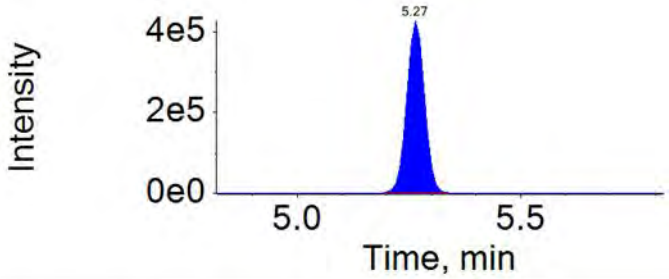
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

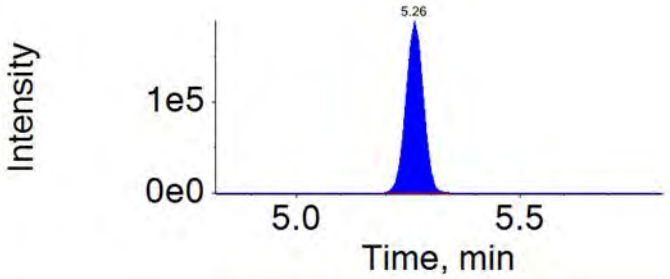
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

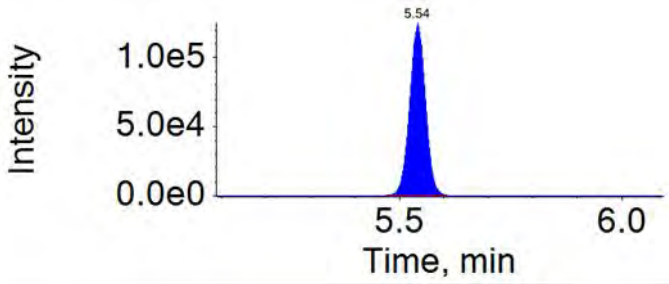
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

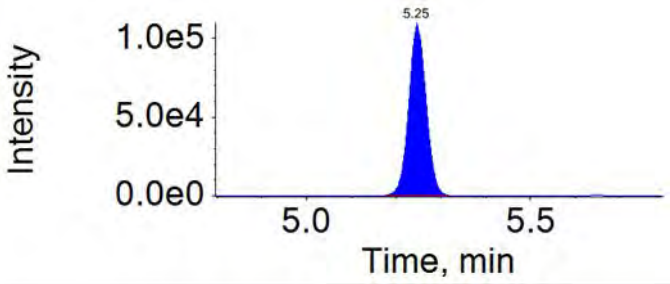
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



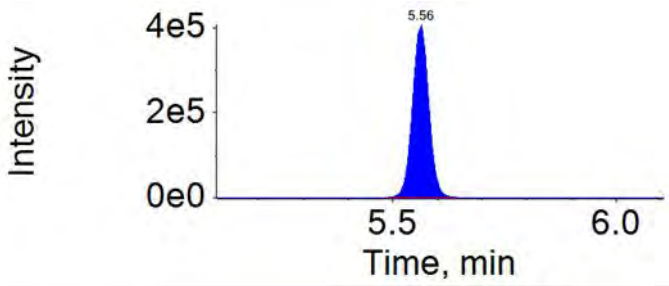


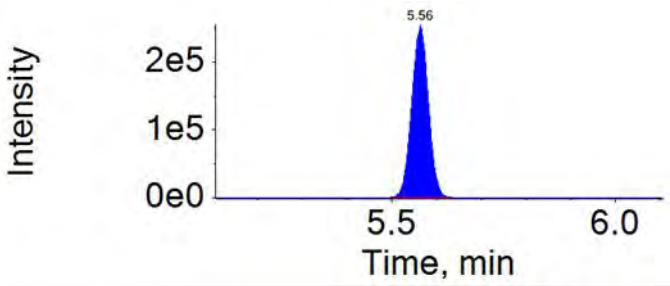
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



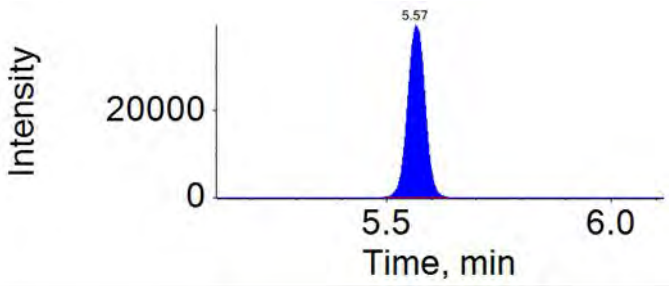


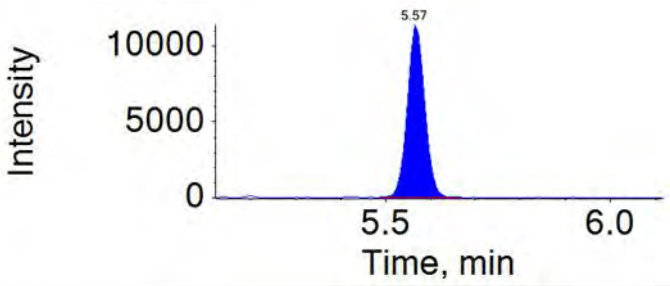
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

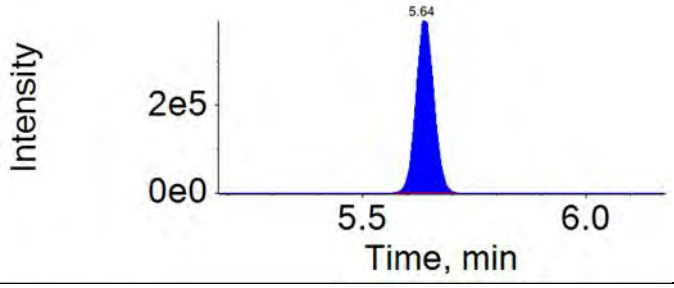
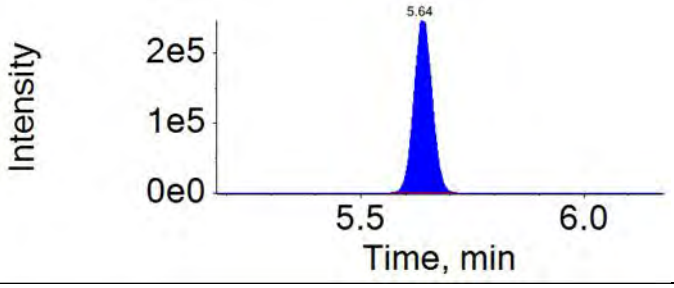


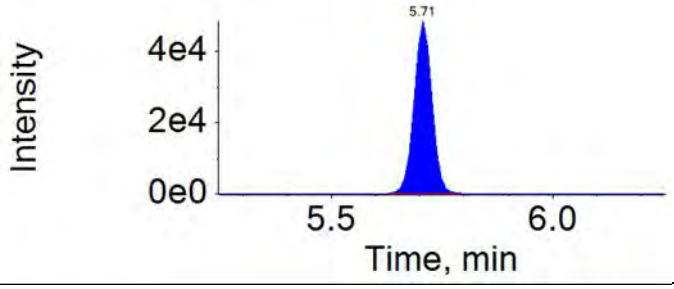
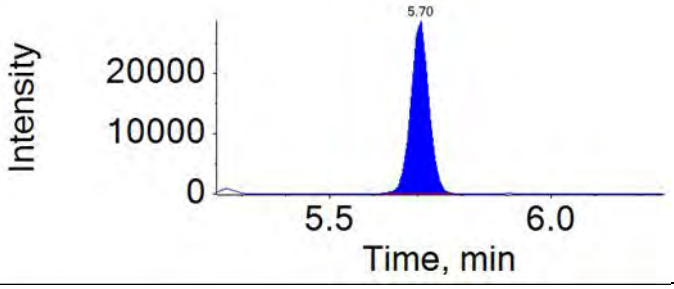


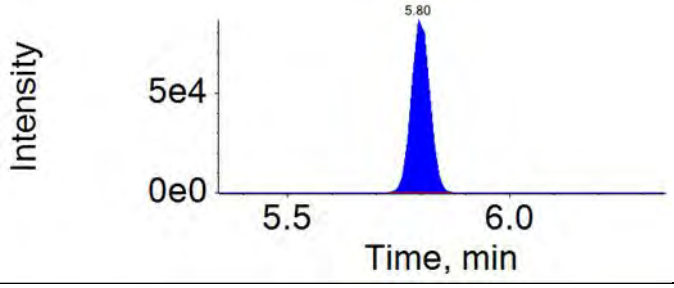
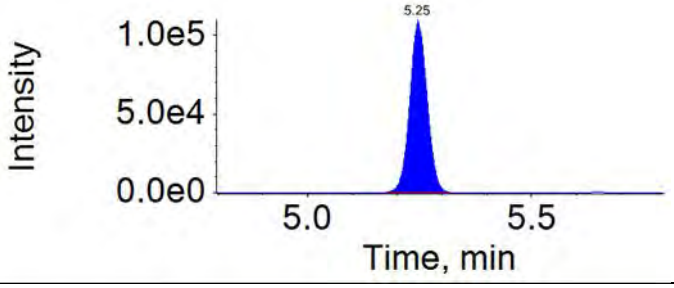
APPROVED
By JPT at 2:53 pm, 11/7/18

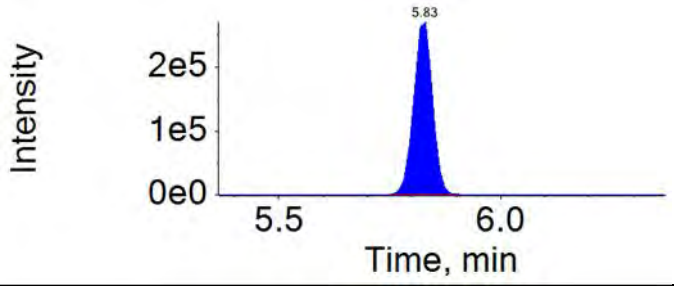
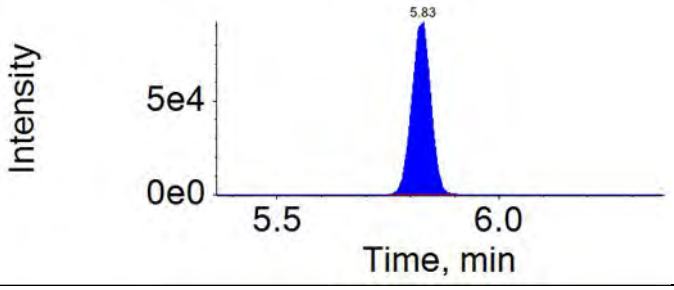
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

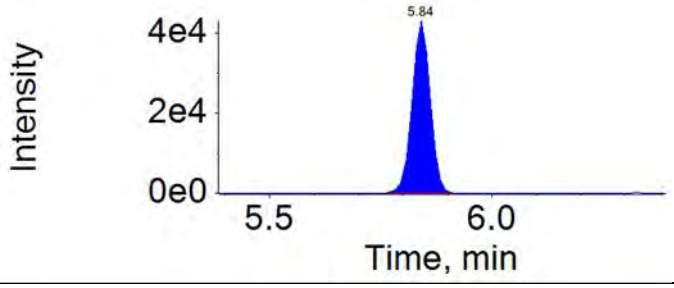
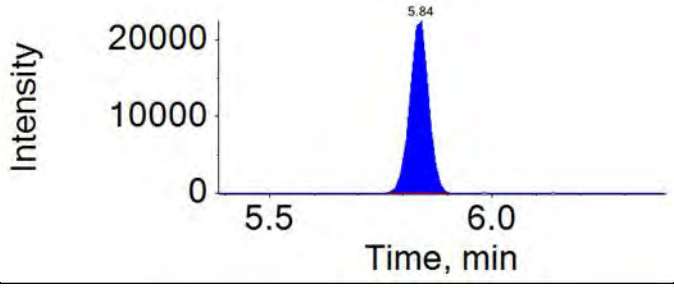
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

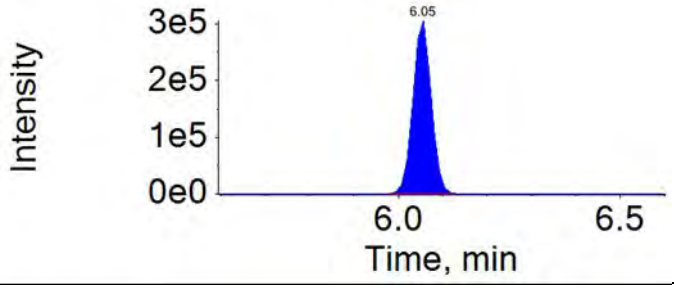
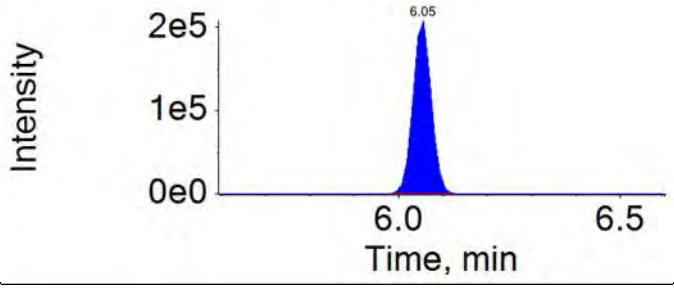
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

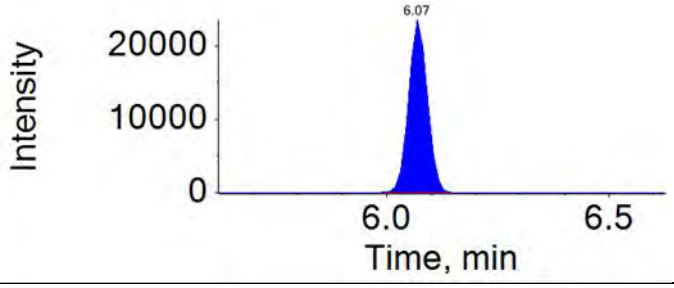
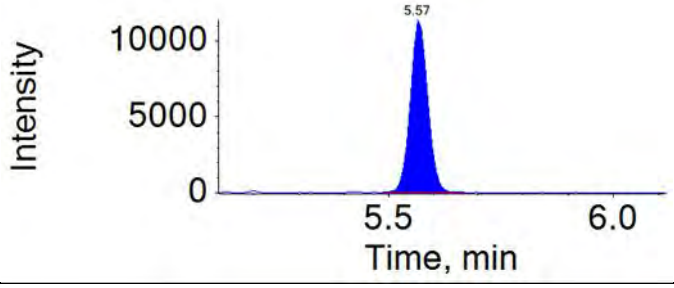
APPROVED
By JPT at 2:53 pm, 11/7/18

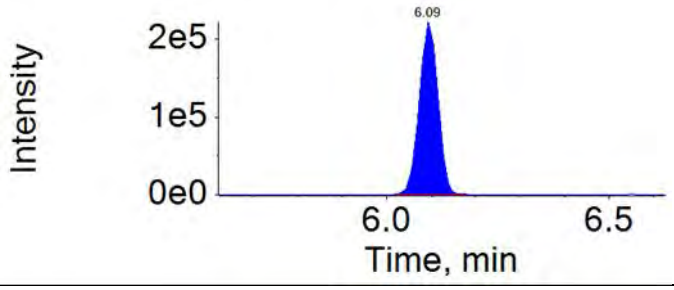
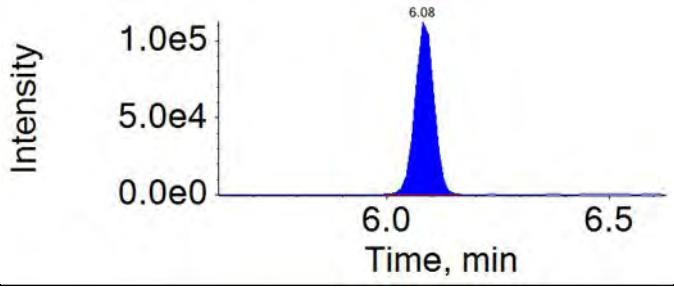
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

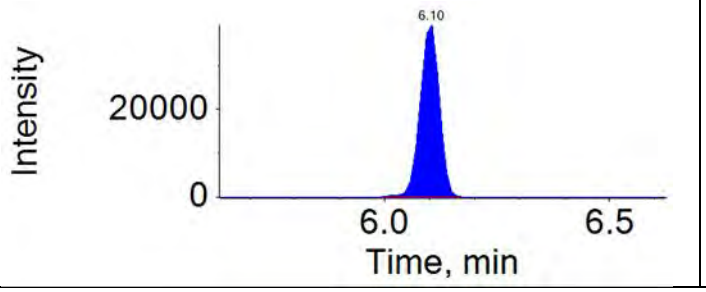
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

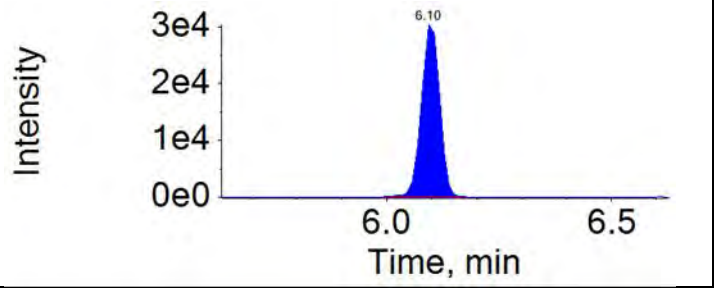
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

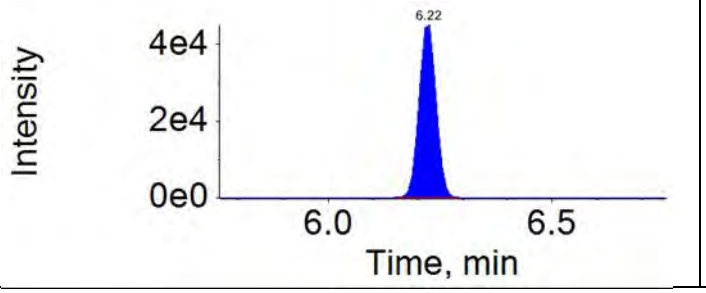
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

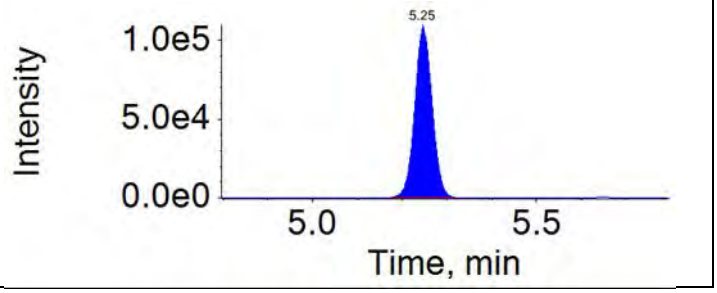
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



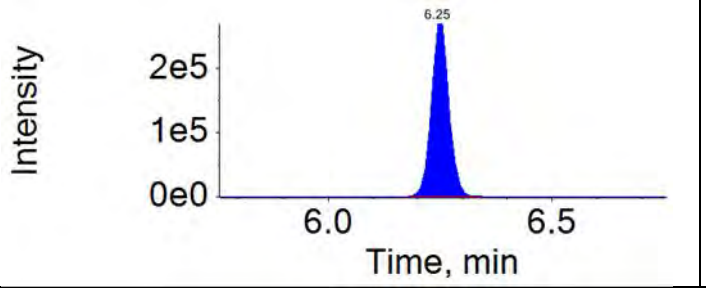


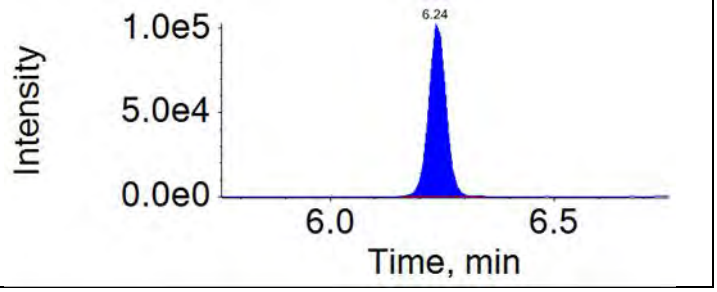
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



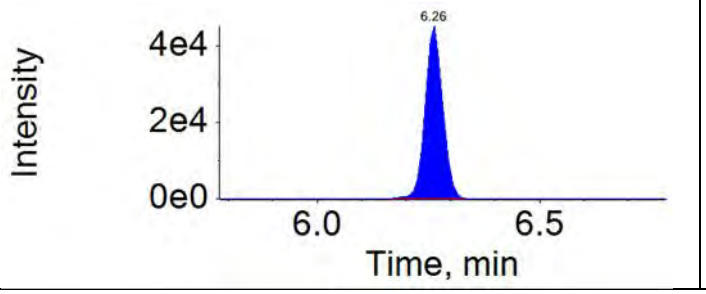


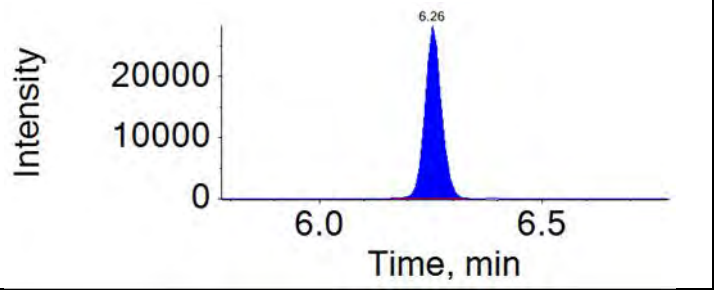
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

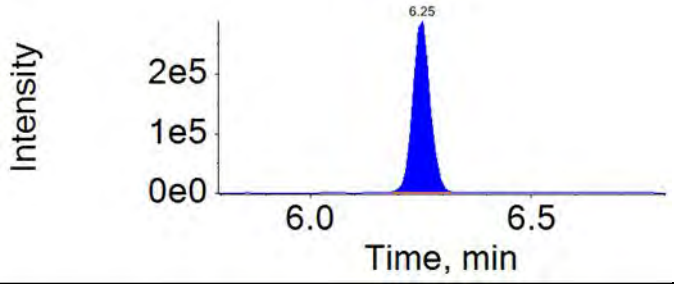
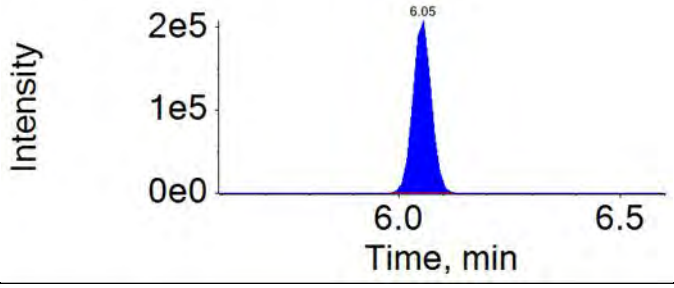


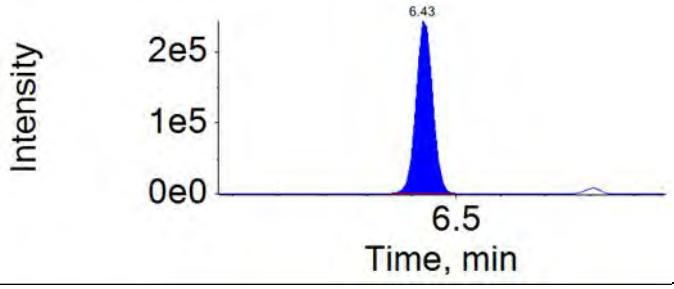
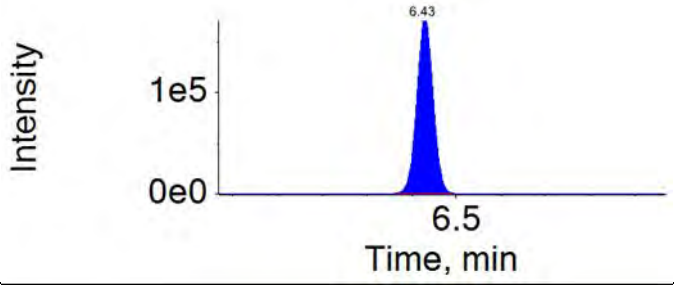


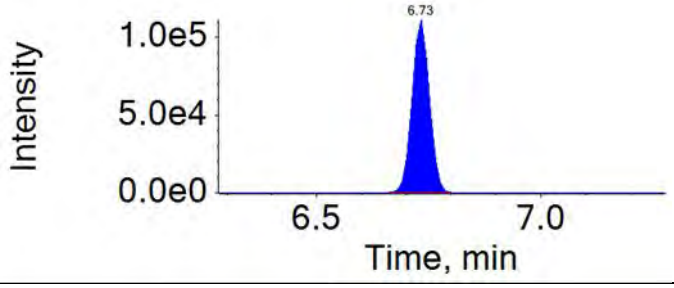
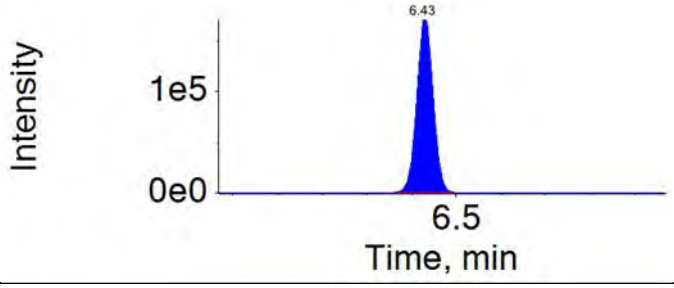
APPROVED
By JPT at 2:53 pm, 11/7/18

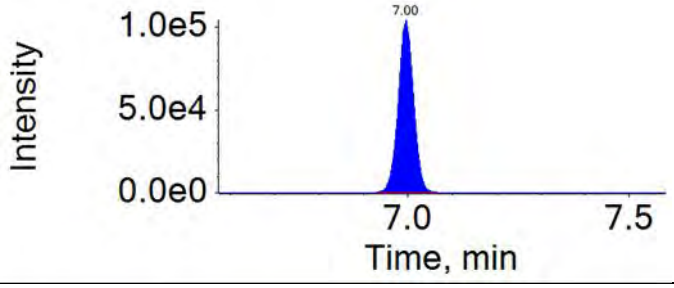
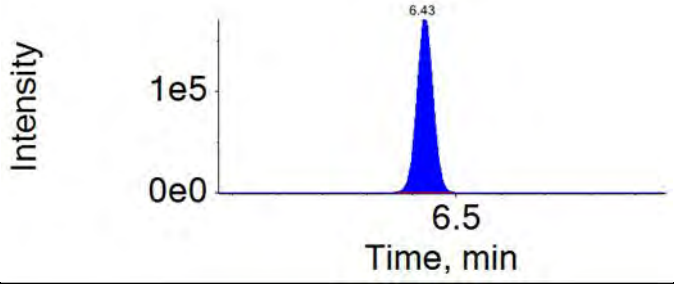
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

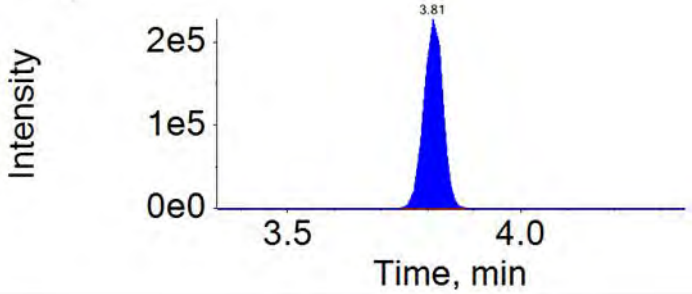
Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-13.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	648524.4	A	1.0000	1.0000			
PFBS_2	3.81	1.00	251751.9	A	0.3576	0.3882	9	50	
4:2-FTS	4.13	1.00	153295.4	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	92676.3	A	0.6359	0.6046	-5	50	
PFHxA	4.16	1.00	1455862.5	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	17238.3	A	0.0115	0.0118	3	50	
PFPeS	4.18	1.10	349358.3	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	186638.0	A	0.5384	0.5342	-1	50	
PFHxS	4.55	1.00	513536.6	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	191630.2	A	0.3569	0.3732	5	50	
PFHpA	4.55	1.00	1481489.5	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	81361.9	A	0.0577	0.0549	-5	50	
6:2-FTS	4.91	1.00	125170.2	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	79402.5	A	0.6752	0.6344	-6	50	
PFHpS	4.91	1.08	516333.1	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	209566.6	A	0.3950	0.4059	3	50	
PFOA	4.92	1.00	1491946.3	A	1.0000	1.0000			
PFOA_2	4.92	1.00	87116.1	A	0.0635	0.0584	-8	50	
PFOS	5.25	1.00	447769.0	A	1.0000	1.0000			
PFOS_2	5.25	1.00	153925.0	A	0.3494	0.3438	-2	50	
PFNA	5.27	1.00	1179151.8	A	1.0000	1.0000			
PFNA_2	5.26	1.00	25252.4	A	0.0207	0.0214	4	50	
PFNS	5.54	1.06	305013.7	A	1.0000	1.0000			
PFNS_2	5.54	1.06	144136.3	A	0.4890	0.4726	-3	50	
PFDA	5.56	1.00	1029893.8	A	1.0000	1.0000			
PFDA_2	5.56	1.00	7604.6	A	0.0057	0.0074	31	50	
8:2-FTS	5.57	1.00	106591.3	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	64856.7	A	0.6169	0.6085	-1	50	
NMeFOSAA	5.71	1.00	136316.9	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	30839.5	A	0.2206	0.2262	3	50	
PFDS	5.80	1.11	250911.0	A	1.0000	1.0000			
PFDS_2	5.80	1.11	110579.9	A	0.4648	0.4407	-5	50	
PFUnDA	5.83	1.00	802732.3	A	1.0000	1.0000			
PFUnDA_2	5.83	1.00	3336.4	A	0.0031	0.0042	32	50	
NEtFOSAA	5.84	1.00	121615.1	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	75878.8	A	0.6082	0.6239	3	50	
PFDoDA	6.05	1.00	877242.2	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	11649.3	A	0.0109	0.0133	21	50	
10:2-FTS	6.07	1.09	69275.8	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	48328.6	A	0.7082	0.6976	-2	50	
PFTrDA	6.25	1.03	781283.7	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	8100.4	A	0.0096	0.0104	8	50	
PFTeDA	6.43	1.00	630801.4	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	3863.1	A	0.0055	0.0061	11	50	
PFHxDA	6.73	1.05	297242.6	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	17318.1	A	0.0596	0.0583	-2	50	
PFODA	7.00	1.09	251726.5	A	1.0000	1.0000			
PFODA_2	6.99	1.09	6453.4	A	0.0257	0.0256	0	50	

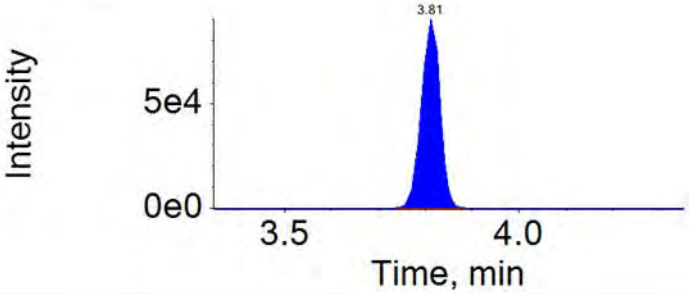
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

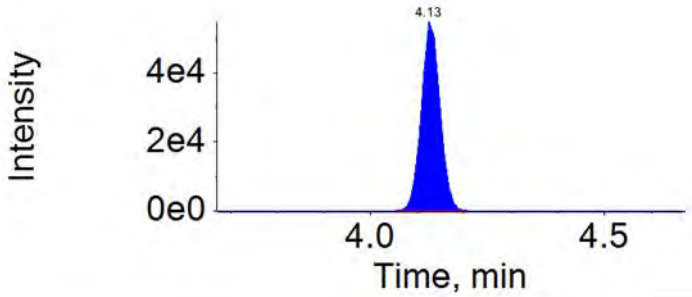
Component: PFBS
Primary Mass: 299.0 / 80.0



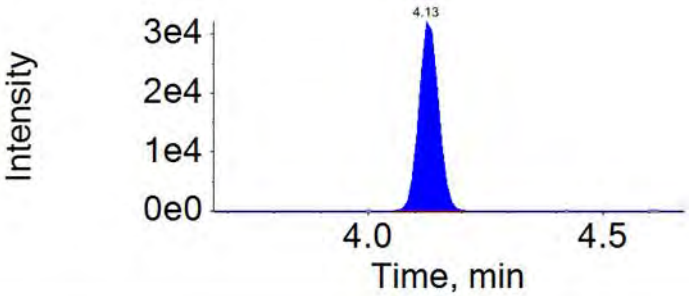
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



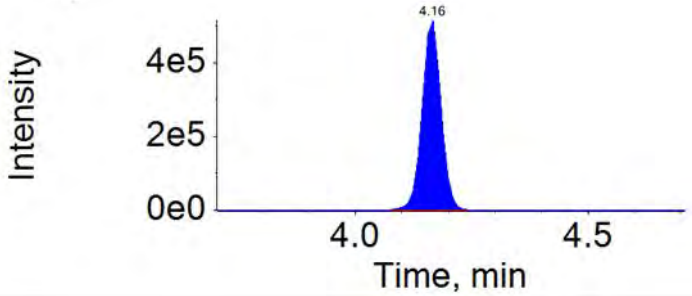
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



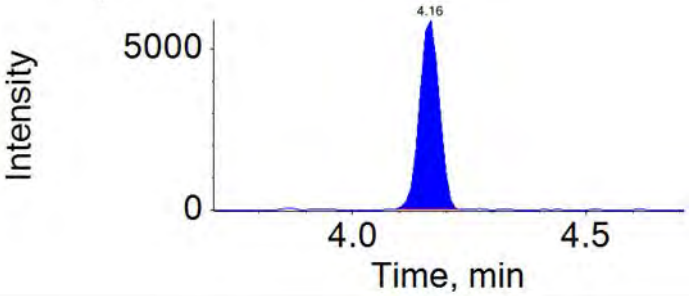
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



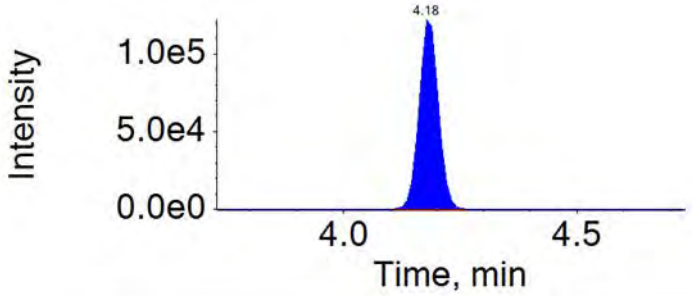
Component: PFHxA
Primary Mass: 313.0 / 269.0



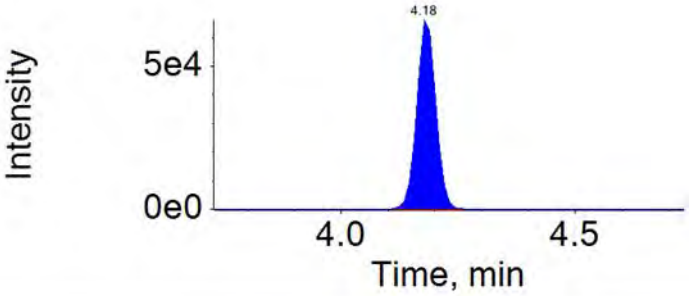
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



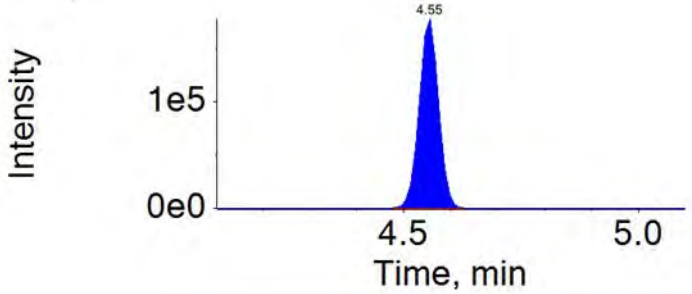
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



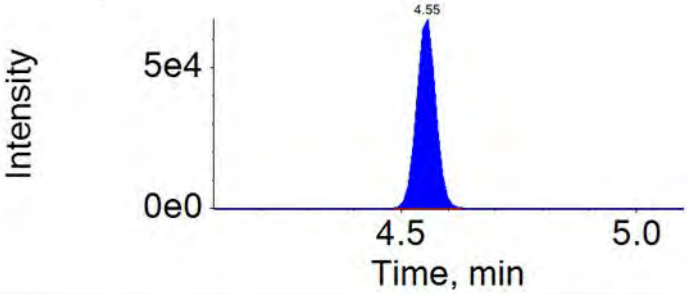
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

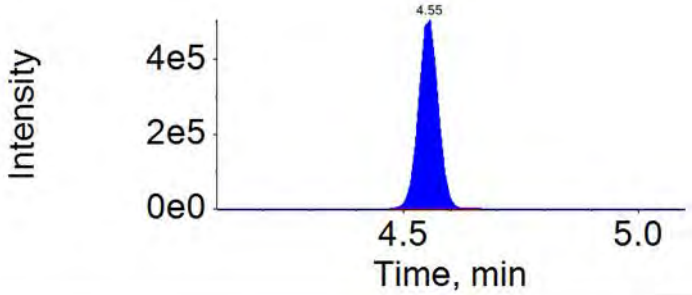
Component: PFHxS
Primary Mass: 399.0 / 80.0



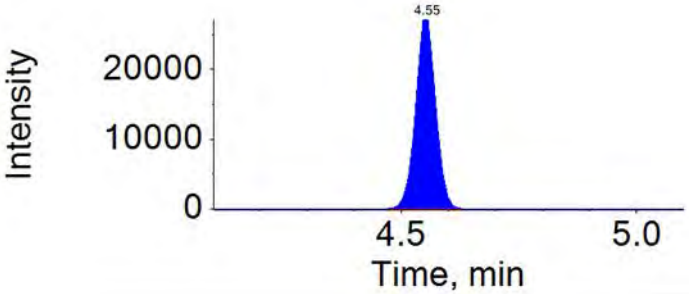
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



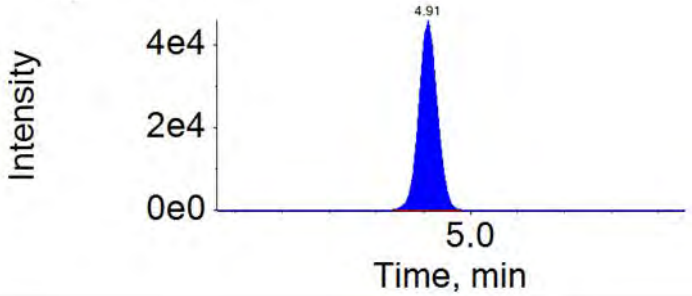
Component: PFHpA
Primary Mass: 363.0 / 319.0



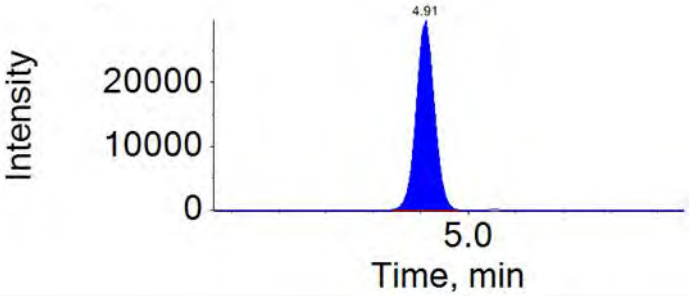
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



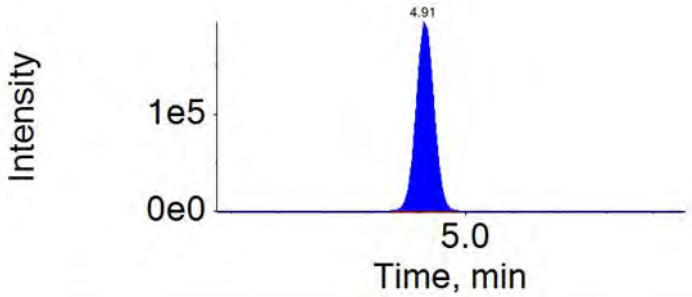
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



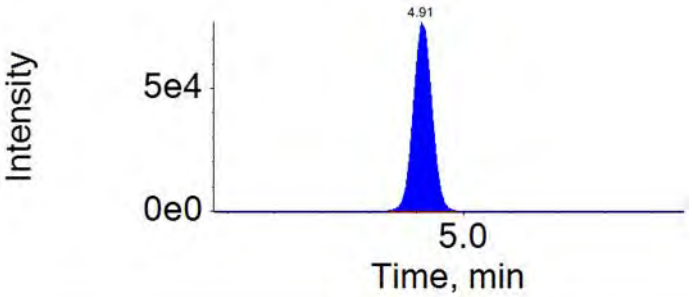
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



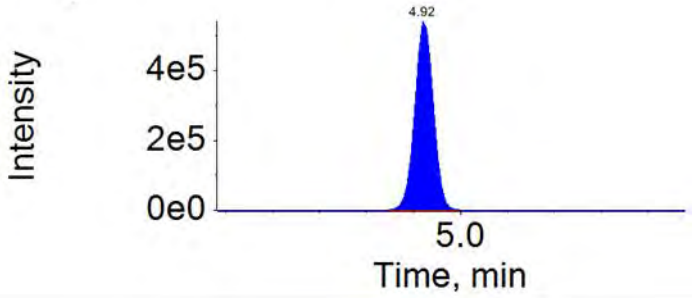
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



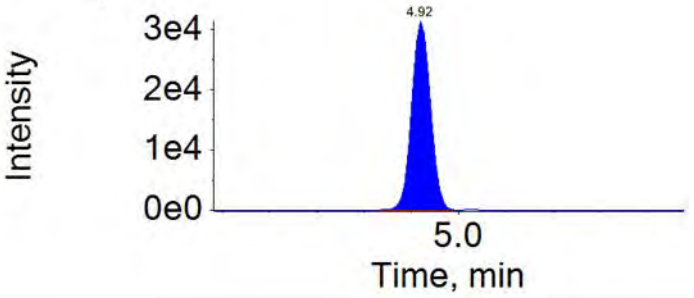
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

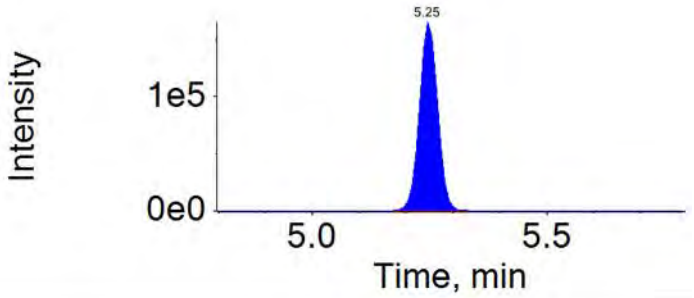
Component: PFOA
Primary Mass: 413.0 / 369.0



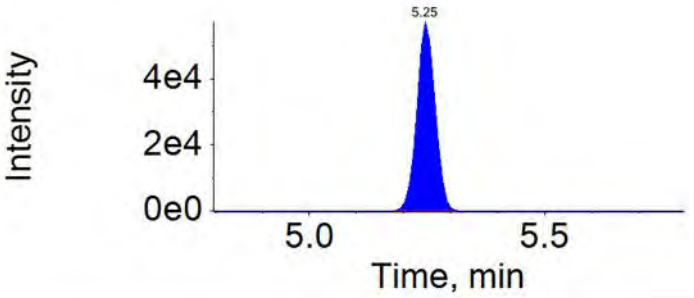
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



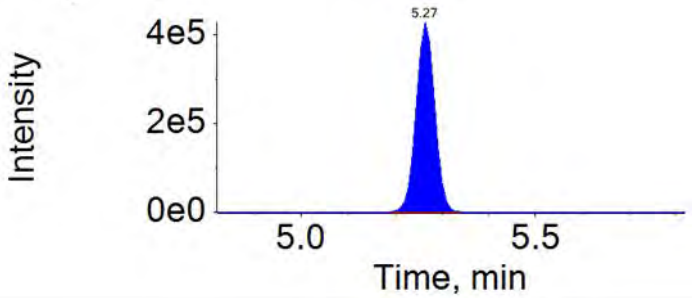
Component: PFOS
Primary Mass: 499.0 / 80.0



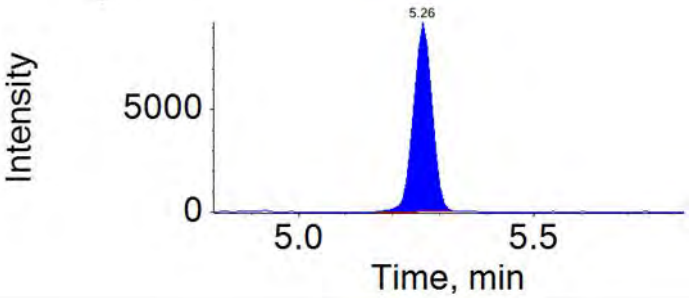
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



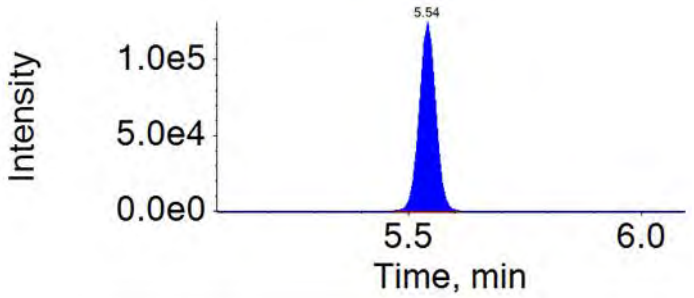
Component: PFNA
Primary Mass: 463.0 / 419.0



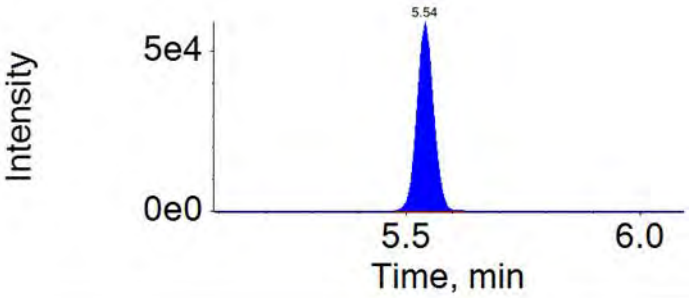
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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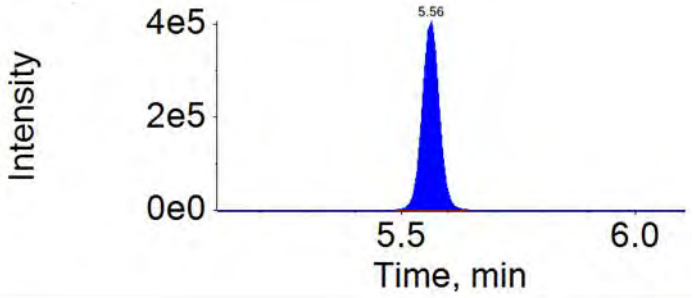
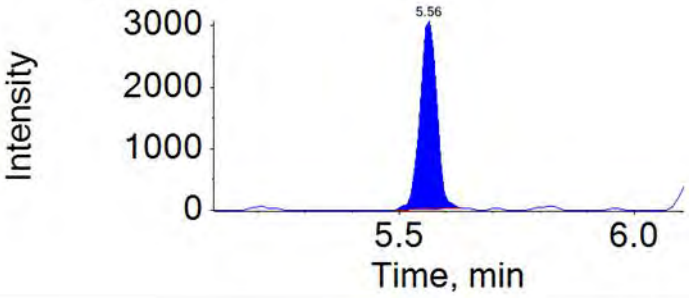
By umar at 5:23 pm, 11/9/18

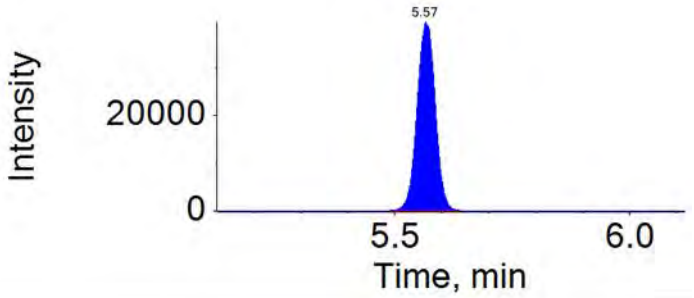
Component: PFDA
Primary Mass: 513.0 / 469.0



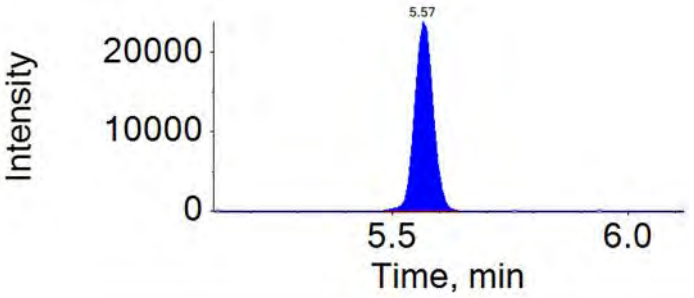
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



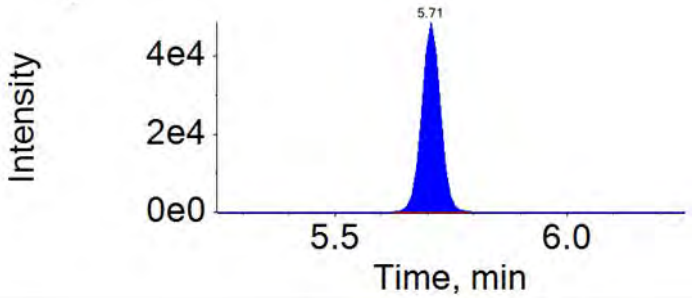
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



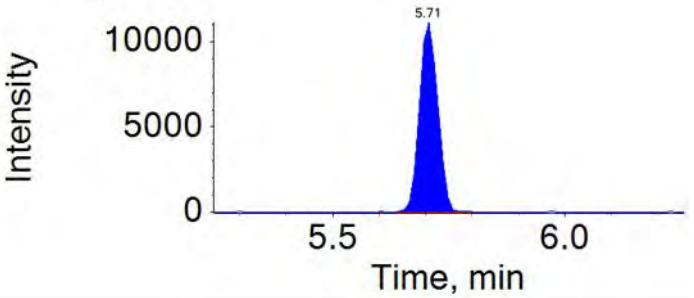
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



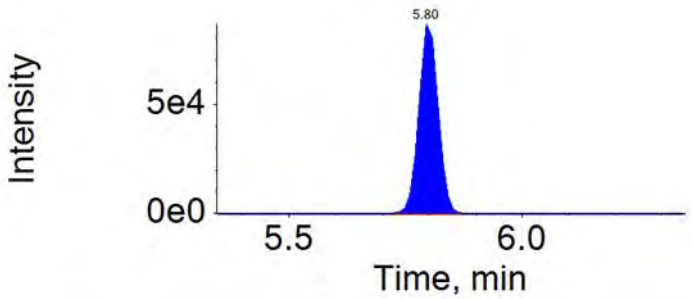
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



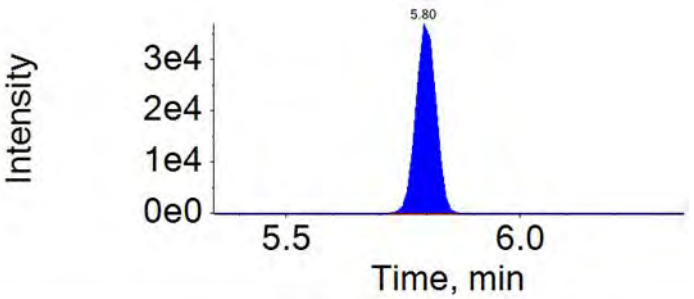
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



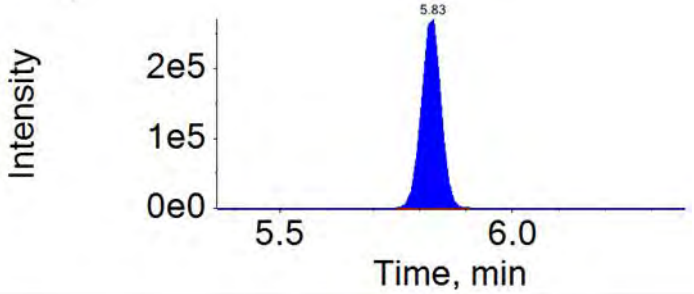
Component: PFDS
Primary Mass: 599.0 / 80.0



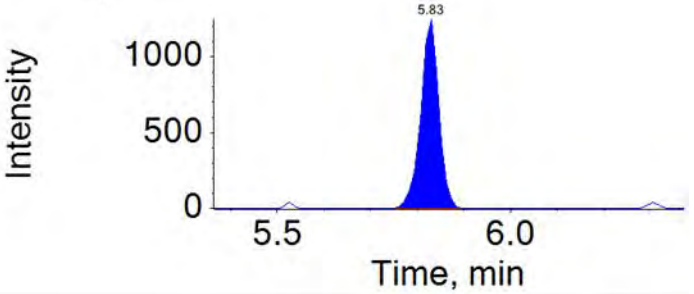
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



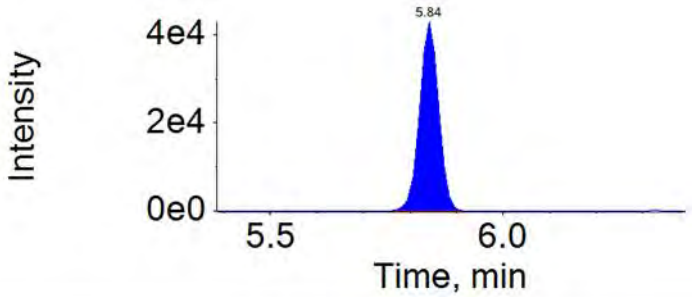
Component: PFUnDA
Primary Mass: 563.0 / 519.0



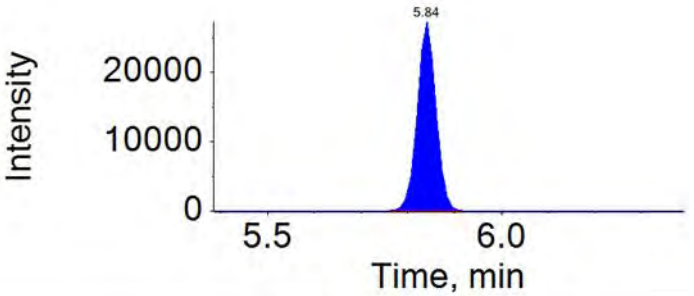
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



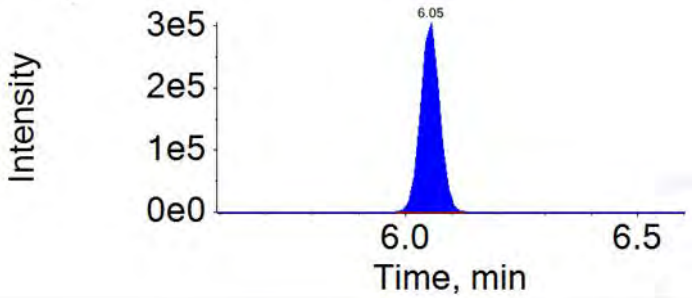
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



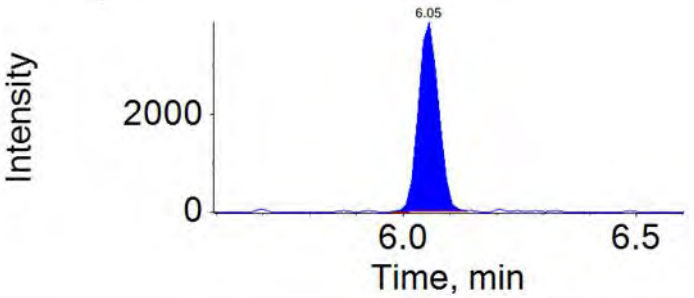
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



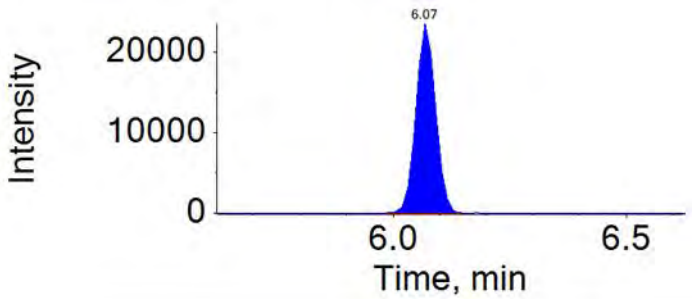
Component: PFDoDA
Primary Mass: 613.0 / 569.0



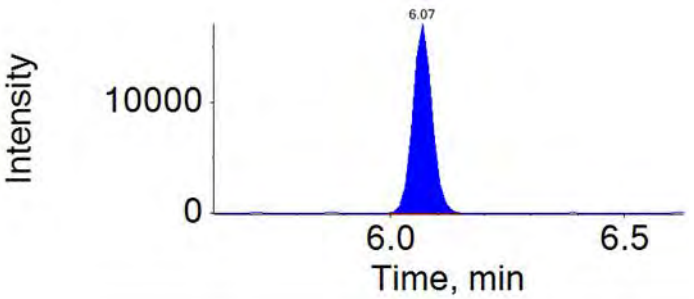
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



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By JPT at 2:53 pm, 11/7/18

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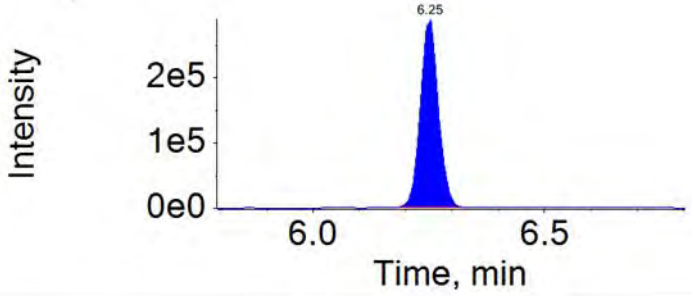
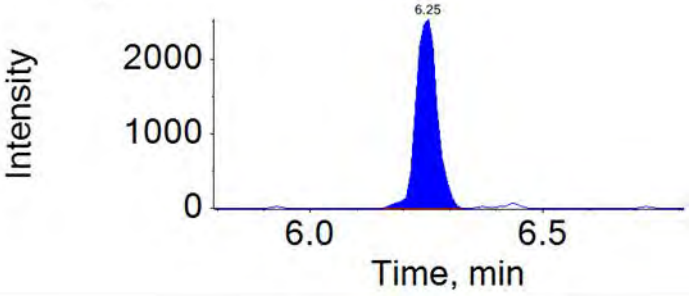
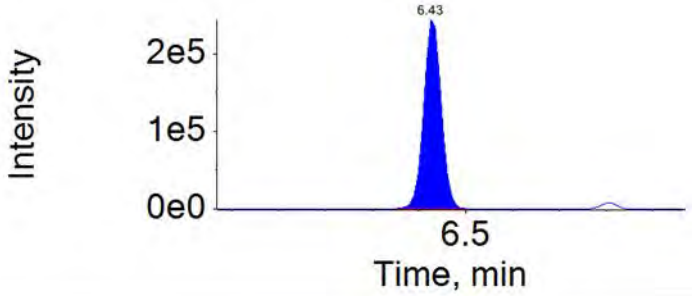
Component: PFTrDA
Primary Mass: 663.0 / 619.0



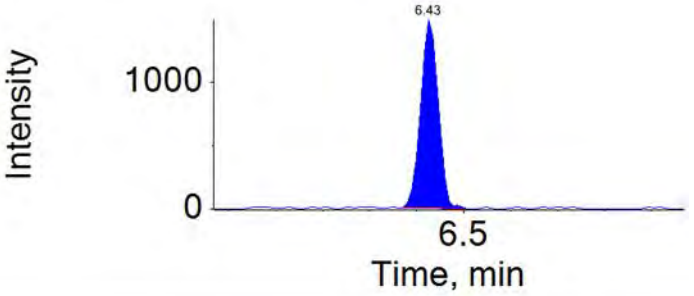
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



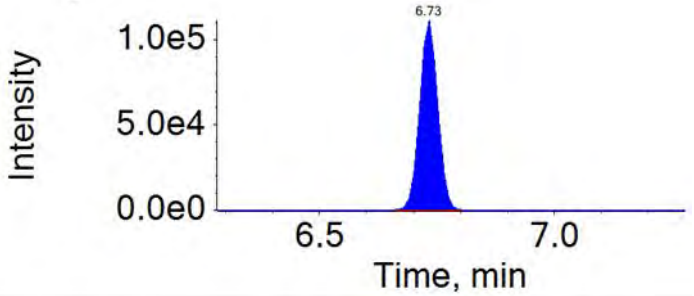
Component: PFTeDA
Primary Mass: 713.0 / 669.0



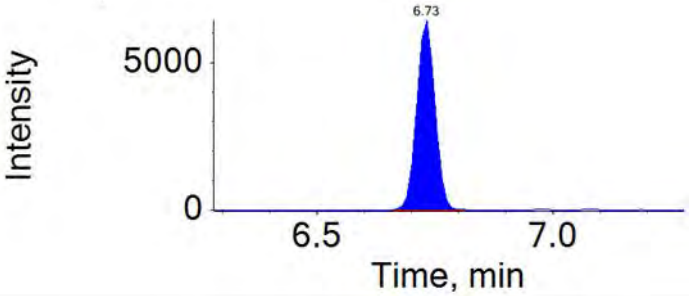
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



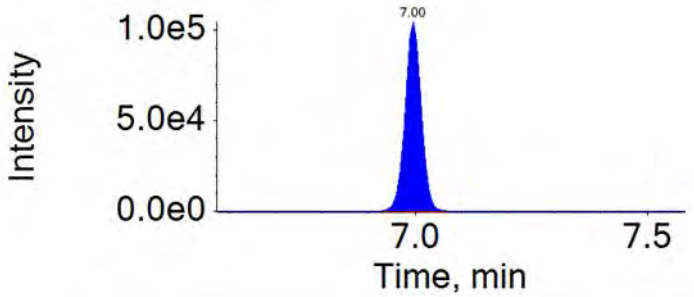
Component: PFHxDA
Primary Mass: 813.0 / 769.0



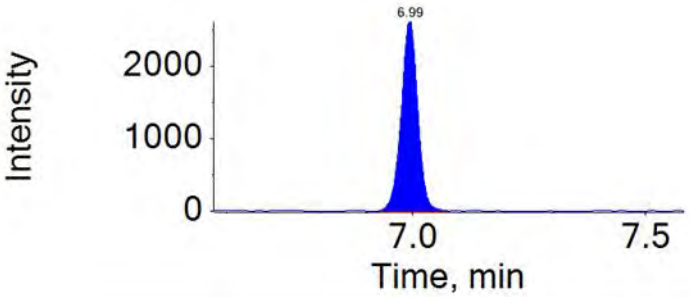
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL5			**Data File:**		18NOV07DCAL-14.wiff
Sample ID:	CALMOD51833F			**Acquis Date:**		2018-11-07T10:15:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	7			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664213.6	730410.6	-9	50	
13C2-PFOA	5.0	488019.6	524423.6	-7	50	
13C4-PFOS	4.8	275029.2	274061.7	0	50	
13C2-PFDA	5.0	298912.1	311442.1	-4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	728925.1	13C3-PFBA	664213.6	1.097	5.000	5.079	102	70-130	
E13C5-PFPeA	768958.1	13C3-PFBA	664213.6	1.158	5.000	5.043	101	70-130	
E13C3-PFBS	442479.7	13C3-PFBA	664213.6	0.666	4.650	4.889	105	70-130	
E13C2-4:2-FTS	48869.9	13C2-PFOA	488019.6	0.100	4.670	4.519	97	70-130	
E13C5-PFHxA	674375.4	13C2-PFOA	488019.6	1.382	5.000	5.083	102	70-130	
E13C3-PFHxS	332808.5	13C2-PFOA	488019.6	0.682	4.730	4.896	104	70-130	
E13C4-PFHpA	544681.1	13C2-PFOA	488019.6	1.116	5.000	5.077	102	70-130	
E13C2-6:2-FTS	32735.6	13C2-PFOA	488019.6	0.067	4.750	4.473	94	70-130	
E13C8-PFOA	895692.2	13C2-PFOA	488019.6	1.835	5.000	5.118	102	70-130	
E13C8-PFOS	297995.6	13C4-PFOS	275029.2	1.084	4.780	4.791	100	70-130	
E13C9-PFNA	484419.3	13C4-PFOS	275029.2	1.761	5.000	4.811	96	70-130	
E13C6-PFDA	598009.7	13C2-PFDA	298912.1	2.001	5.000	5.031	101	70-130	
E13C2-8:2-FTS	27554.0	13C2-PFDA	298912.1	0.092	4.790	4.878	102	70-130	
E13C8-PFOSA	737038.5	13C2-PFDA	298912.1	2.466	5.000	5.381	108	70-130	
Ed3-NMeFOSAA	73896.1	13C2-PFDA	298912.1	0.247	5.000	4.597	92	70-130	
E13C7-PFUnDA	263924.7	13C2-PFDA	298912.1	0.883	5.000	5.094	102	70-130	
Ed5-NEtFOSAA	57745.7	13C2-PFDA	298912.1	0.193	5.000	4.471	89	70-130	
E13C2-PFDoDA	548536.0	13C2-PFDA	298912.1	1.835	5.000	4.947	99	70-130	
Ed7-NMePFOSAE	321549.5	13C2-PFDA	298912.1	1.076	5.000	5.002	100	70-130	
Ed3-NMePFOSA	82137.6	13C2-PFDA	298912.1	0.275	5.000	5.031	101	70-130	
Ed9-NEtPFOSAE	259950.9	13C2-PFDA	298912.1	0.870	5.000	4.966	99	70-130	
Ed5-NEtPFOSA	62005.6	13C2-PFDA	298912.1	0.207	5.000	4.803	96	70-130	
E13C2-PFTeDA	421798.8	13C2-PFDA	298912.1	1.411	5.000	5.080	102	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

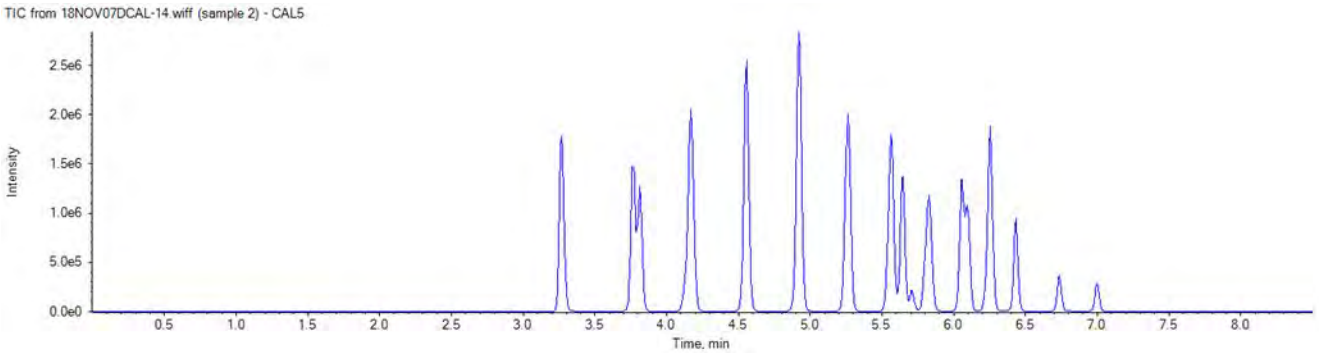
Analyte Quantitation Peak Table

Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-14.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	2730076.0		A	13C4-PFBA	3.27	728925.1	3.745	21.919
PFPeA	3.77	1.000	2812772.2		A	13C5-PFPeA	3.77	768958.1	3.658	21.739
PFBS	3.82	1.000	1601296.4		A	13C3-PFBS	3.82	442479.7	3.619	18.246
4:2-FTS	4.13	1.000	365423.8		A	13C2-4:2-FTS	4.13	48869.9	7.477	20.102
PFHxA	4.16	1.000	3380716.3		A	13C5-PFHxA	4.17	674375.4	5.013	21.499
PFPeS	4.18	1.100	845636.3		A	13C3-PFBS	3.82	442479.7	1.911	18.849
PFHxS	4.55	1.000	1261633.0		A	13C3-PFHxS	4.55	332808.5	3.791	19.215
PFHpA	4.55	1.000	3440372.8		A	13C4-PFHpA	4.55	544681.1	6.316	21.243
6:2-FTS	4.91	1.000	278493.0		A	13C2-6:2-FTS	4.91	32735.6	8.507	21.223
PFHpS	4.92	1.080	1236603.7		A	13C3-PFHxS	4.55	332808.5	3.716	19.439
PFOA	4.92	1.000	3425279.8		A	13C8-PFOA	4.92	895692.2	3.824	21.532
PFOS	5.25	1.000	1108359.9		A	13C8-PFOS	5.25	297995.6	3.719	19.287
PFNA	5.27	1.000	2889454.7		A	13C9-PFNA	5.27	484419.3	5.965	22.292
PFNS	5.54	1.060	722178.3		A	13C8-PFOS	5.25	297995.6	2.423	19.215
PFDA	5.57	1.000	2401274.2		A	13C6-PFDA	5.57	598009.7	4.015	22.091
8:2-FTS	5.57	1.000	244867.6		A	13C2-8:2-FTS	5.57	27554.0	8.887	20.031
PFOSA	5.64	1.000	2448684.3		A	13C8-PFOSA	5.64	737038.5	3.322	17.959
NMeFOSAA	5.71	1.000	308507.7		A	d3-NMeFOSAA	5.71	73896.1	4.175	21.482
PFDS	5.80	1.110	605559.3		A	13C8-PFOS	5.25	297995.6	2.032	19.412
PFUnDA	5.83	1.000	1952356.4		A	13C7-PFUnDA	5.83	263924.7	7.397	21.214
NEtFOSAA	5.85	1.000	298834.2		A	d5-NEtFOSAA	5.84	57745.7	5.175	22.240
PFDoDA	6.06	1.000	2132260.7		A	13C2-PFDoDA	6.06	548536.0	3.887	21.067
10:2-FTS	6.07	1.090	177607.5		A	13C2-8:2-FTS	5.57	27554.0	6.446	20.071
NMePFOSAE	6.10	1.000	1583085.5		A	d7-NMePFOSAE	6.09	321549.5	4.923	22.062
NMePFOSA	6.10	1.000	323567.0		A	d3-NMePFOSA	6.10	82137.6	3.939	22.050
PFDoS	6.22	1.190	295383.8		A	13C8-PFOS	5.25	297995.6	0.991	19.132
NEtPFOSAE	6.25	1.000	1810587.6		A	d9-NEtPFOSAE	6.24	259950.9	6.965	22.328
NEtPFOSA	6.27	1.000	290096.1		A	d5-NEtPFOSA	6.26	62005.6	4.679	20.605
PFTrDA	6.25	1.030	1851055.0		A	13C2-PFDoDA	6.06	548536.0	3.375	21.280
PFTeDA	6.43	1.000	1500655.1		A	13C2-PFTeDA	6.43	421798.8	3.558	20.892
PFHxDA	6.73	1.050	716467.3		A	13C2-PFTeDA	6.43	421798.8	1.699	21.085
PFODA	7.00	1.090	624697.0		A	13C2-PFTeDA	6.43	421798.8	1.481	21.218

Total Ion Chromatogram

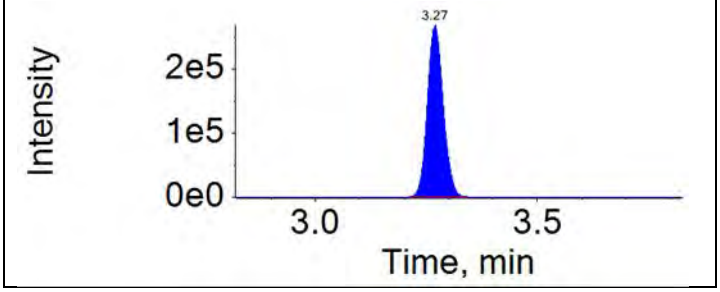


APPROVED
By JPT at 2:53 pm, 11/7/18

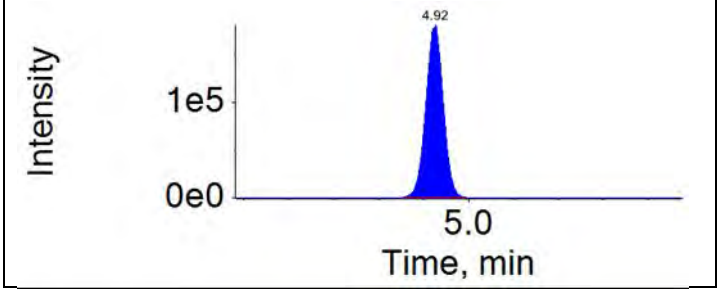
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

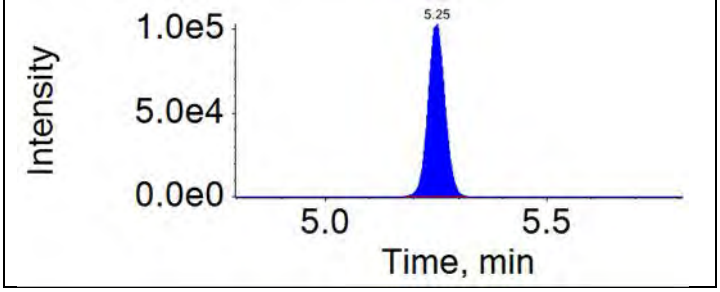
Injection Standard: 13C3-PFBA
216.0 / 172.0



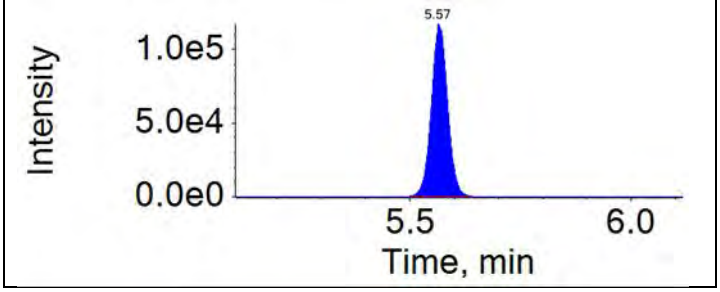
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

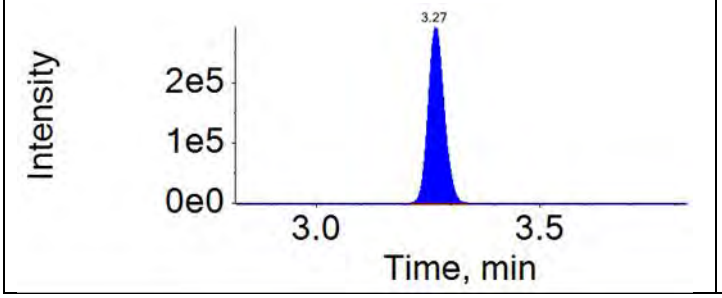


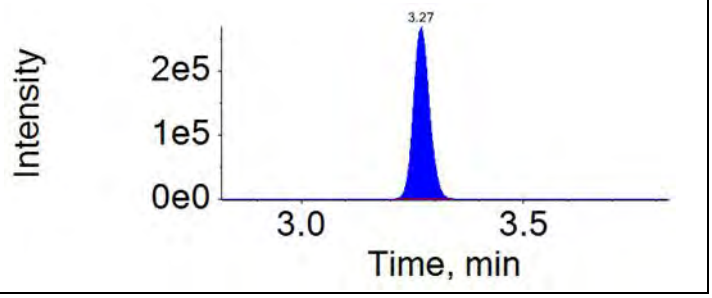
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

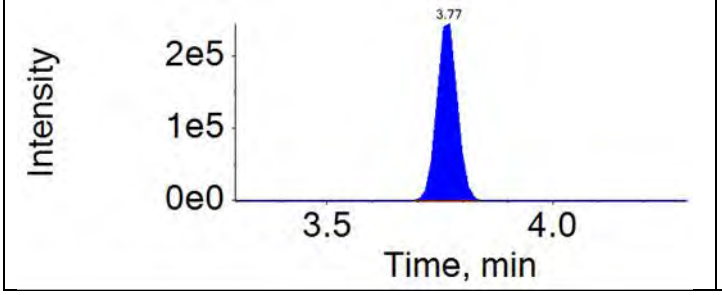
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

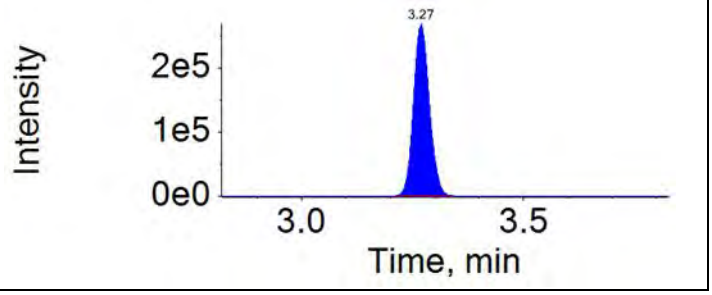
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



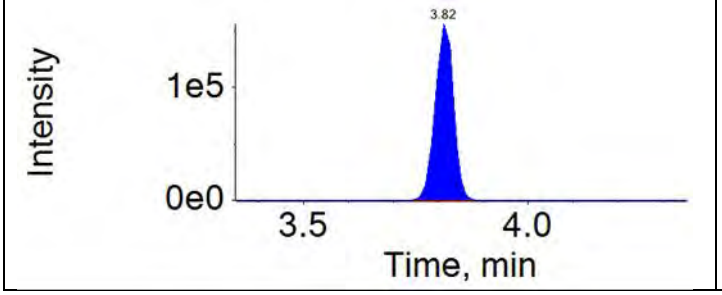


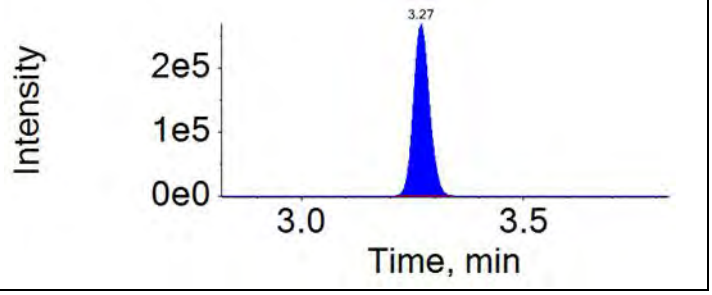
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



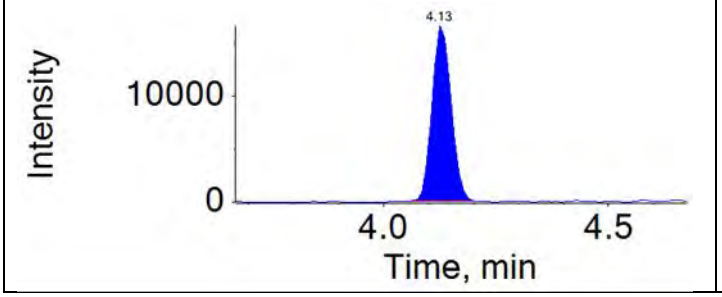


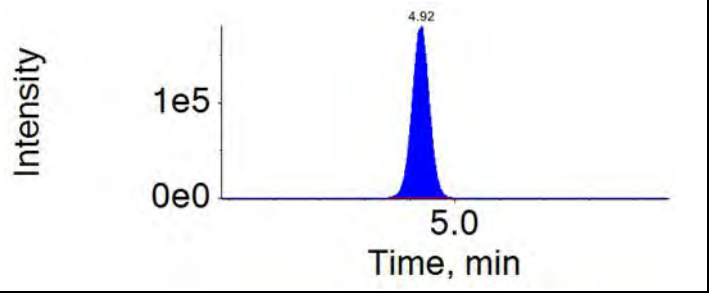
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



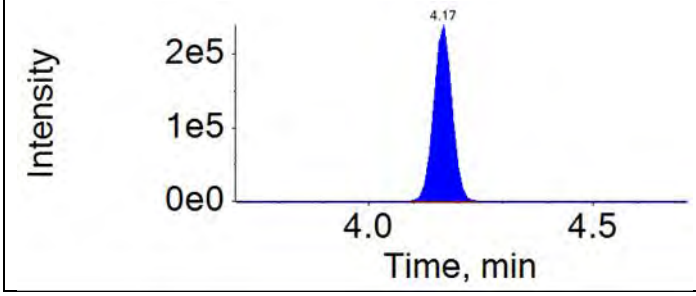
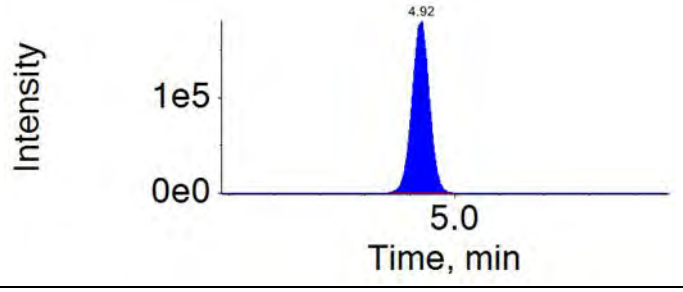


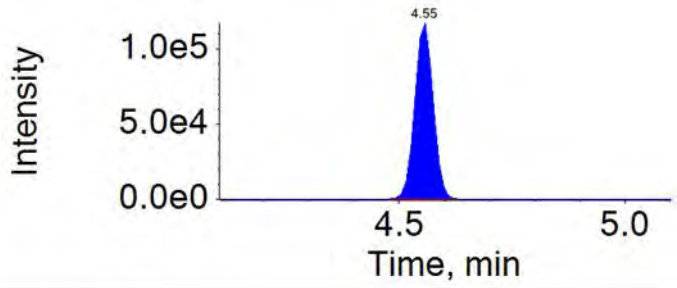
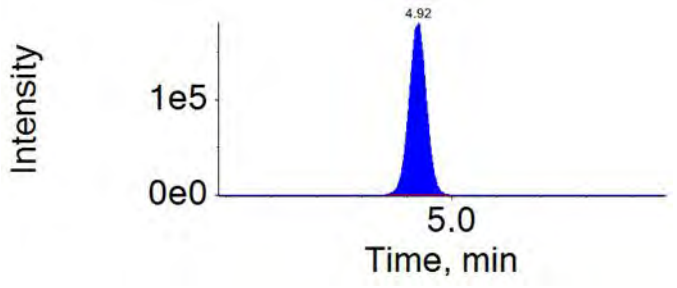
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

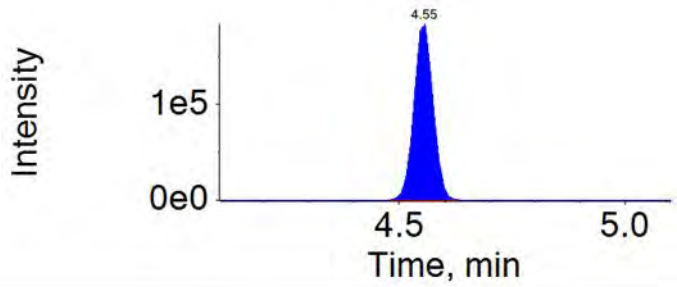
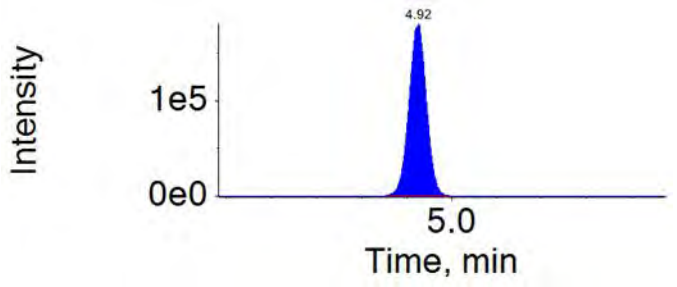


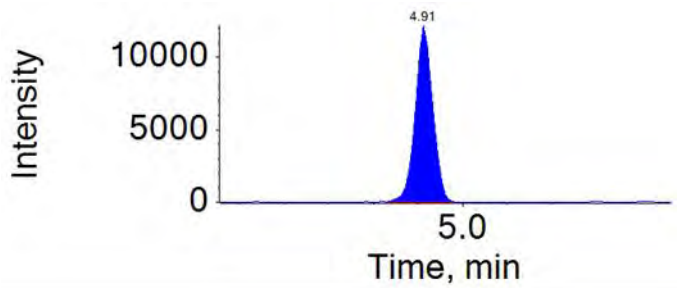
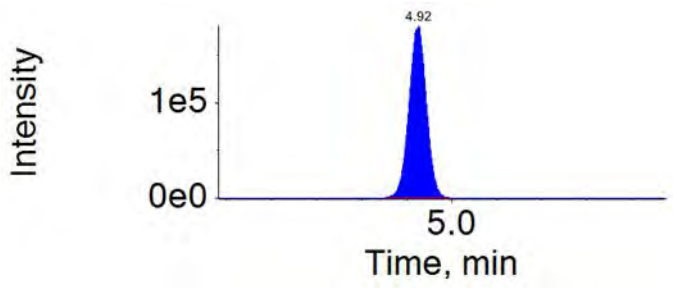


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

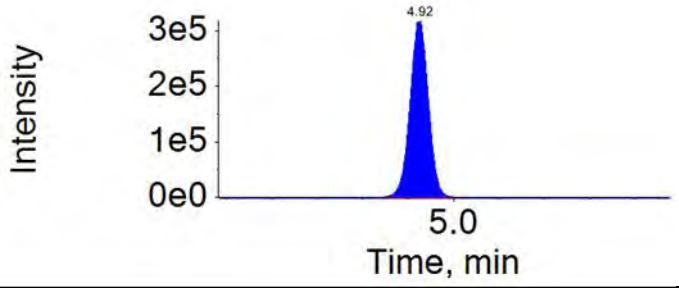
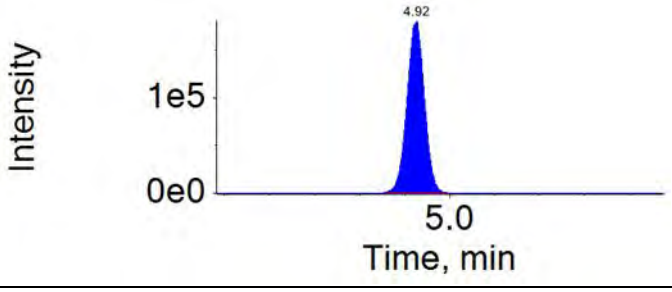
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

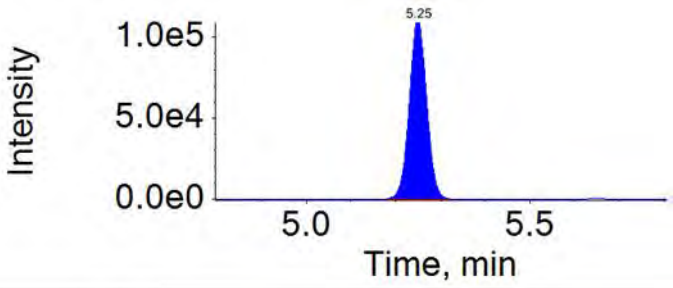
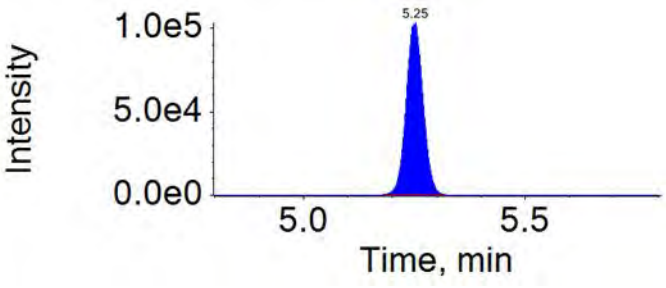
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

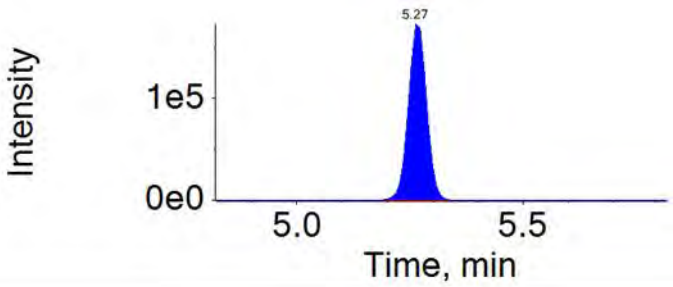
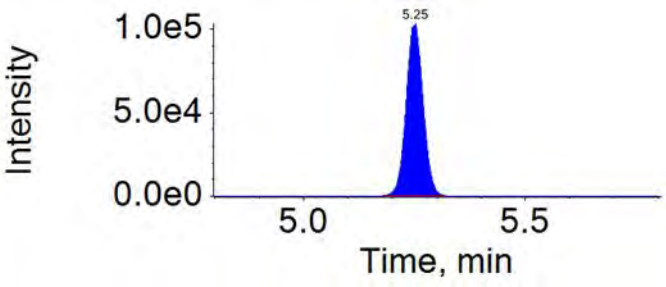
APPROVED
By JPT at 2:53 pm, 11/7/18

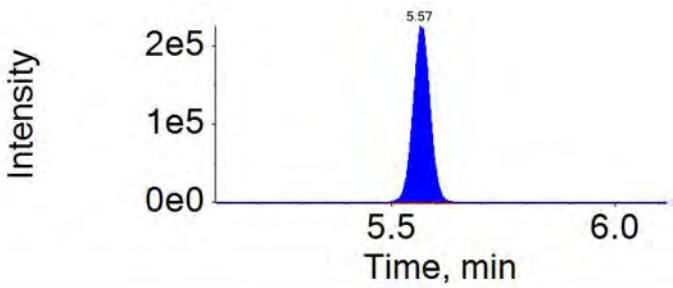
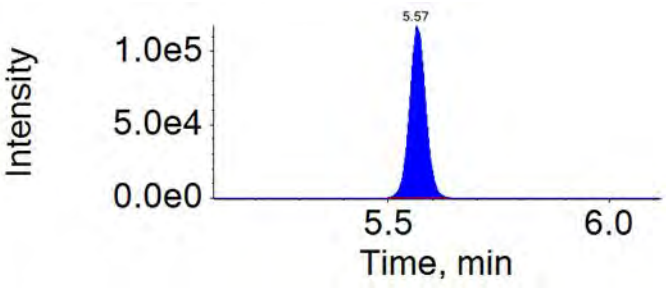
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

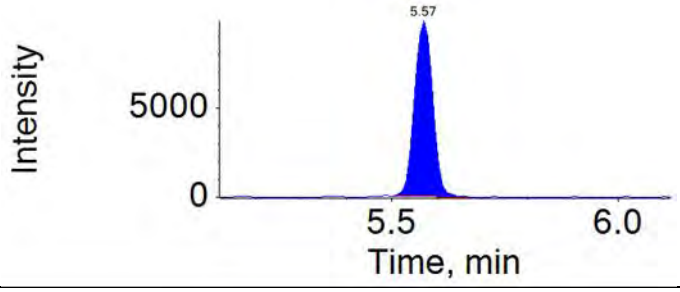
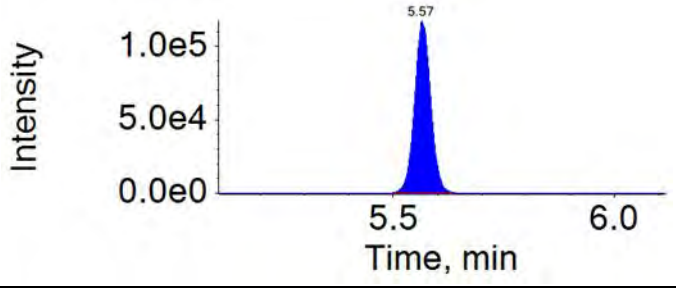
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

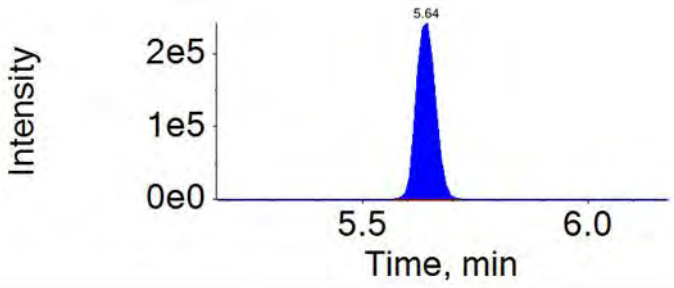
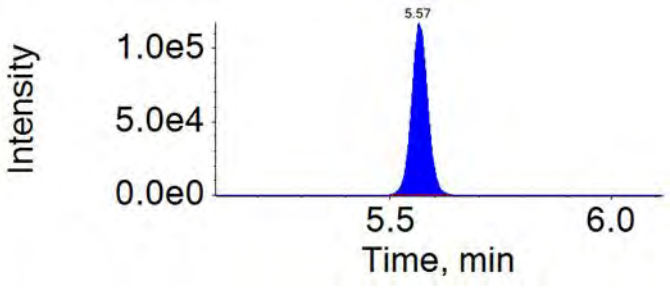
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

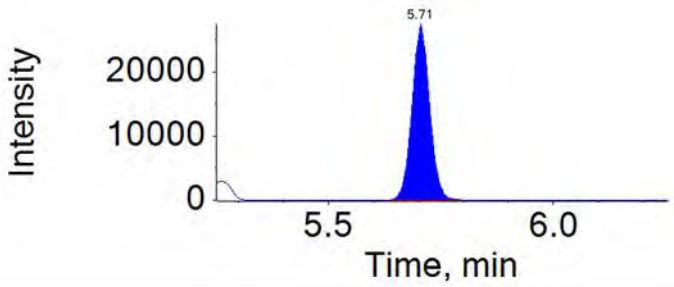
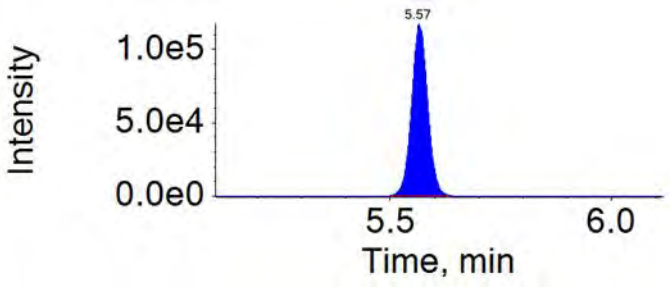
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

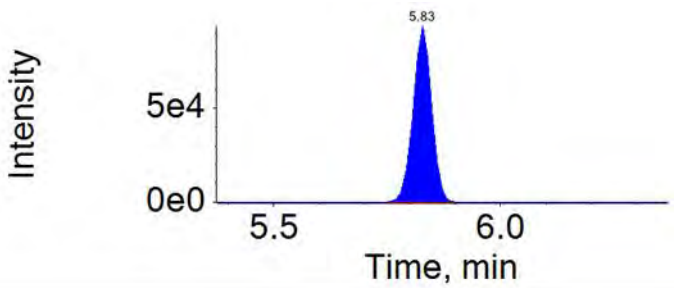
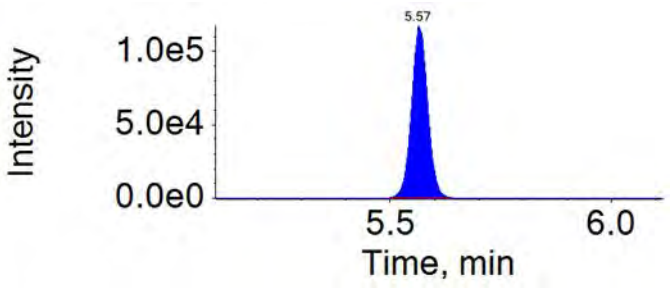
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

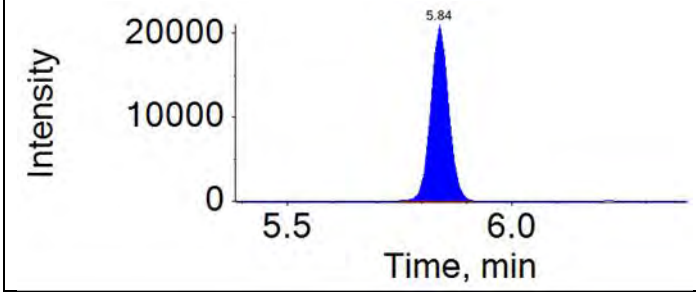
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

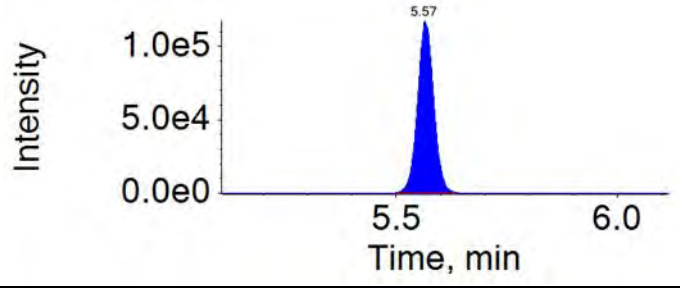
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

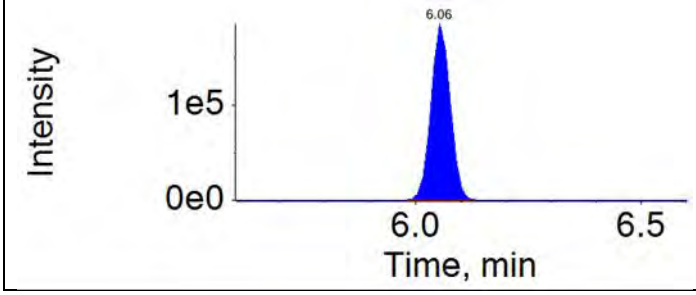
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

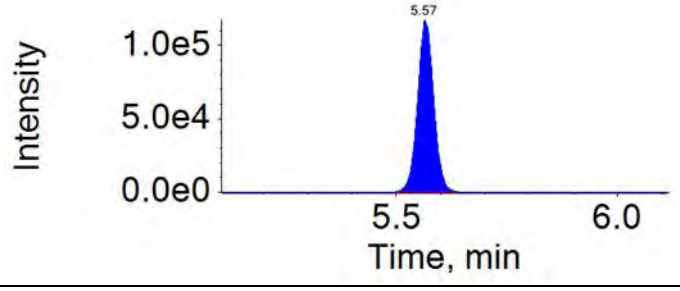
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



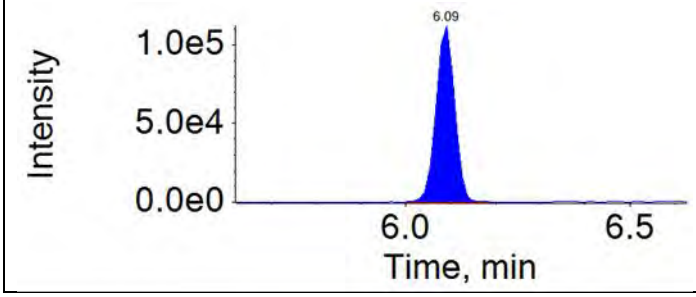


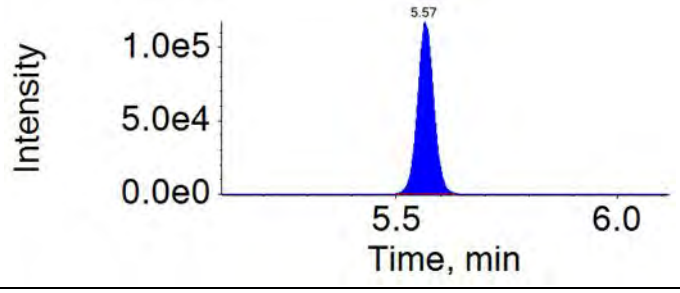
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



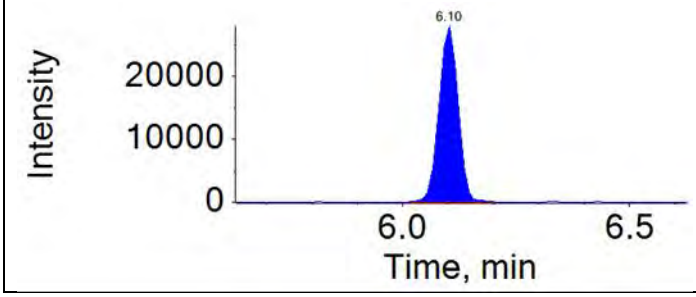


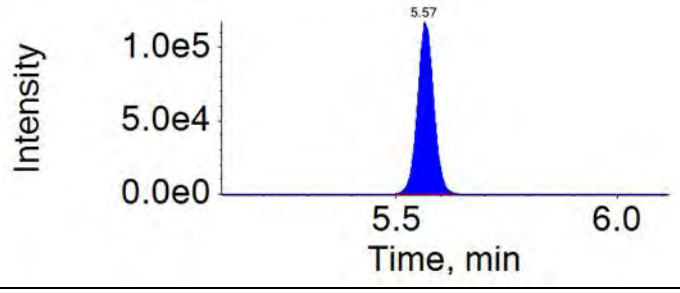
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



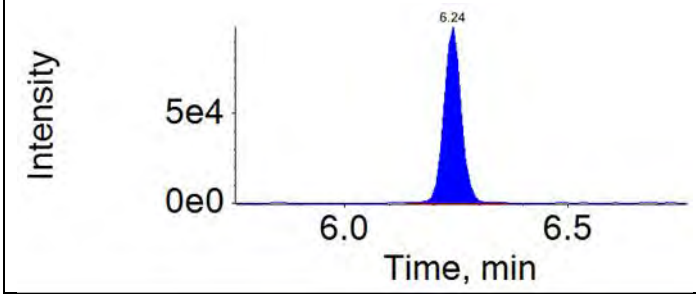


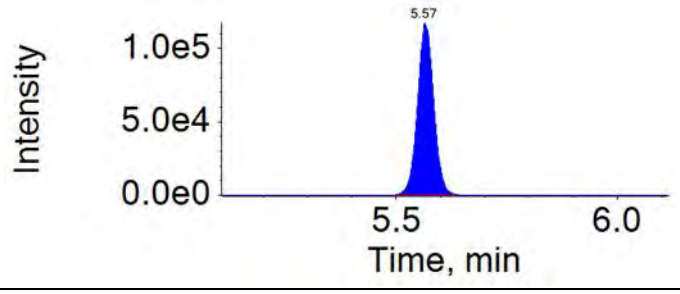
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

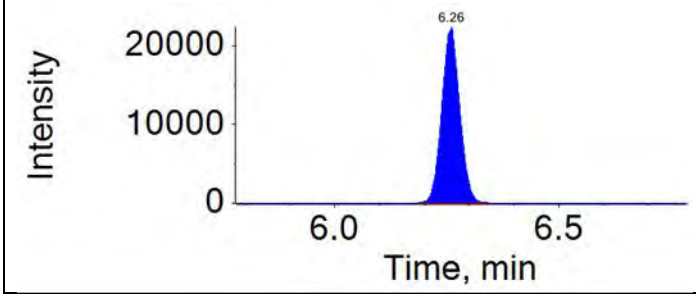
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

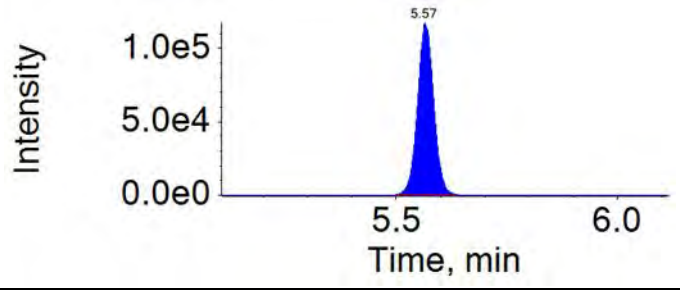
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



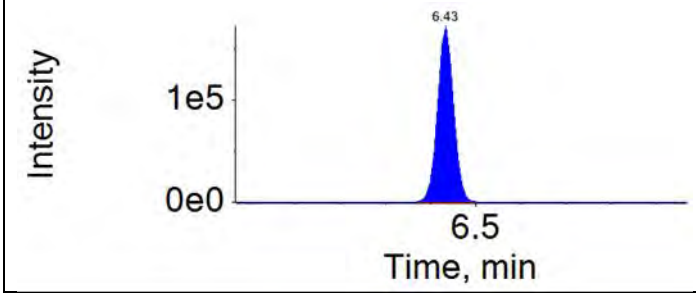


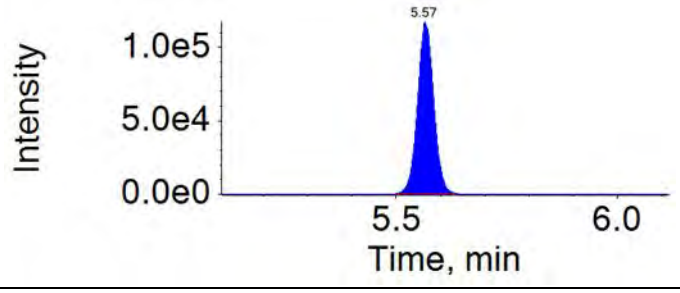
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

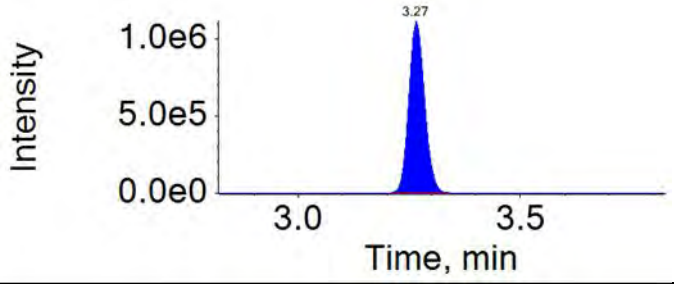
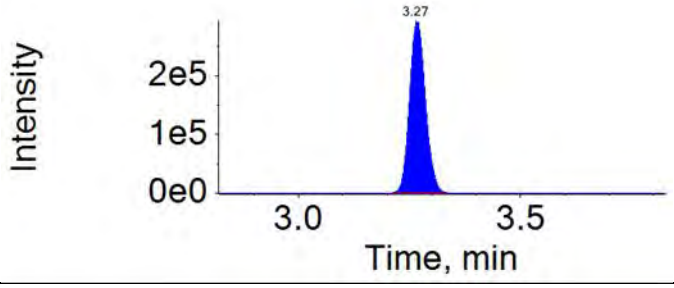


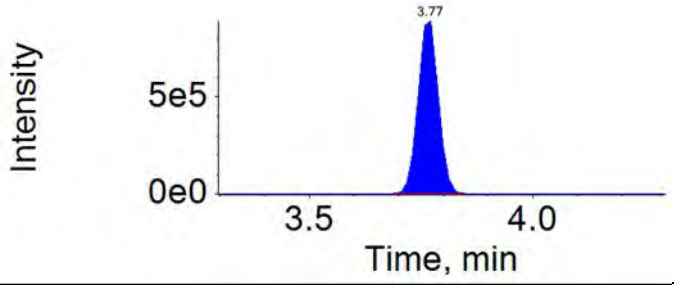
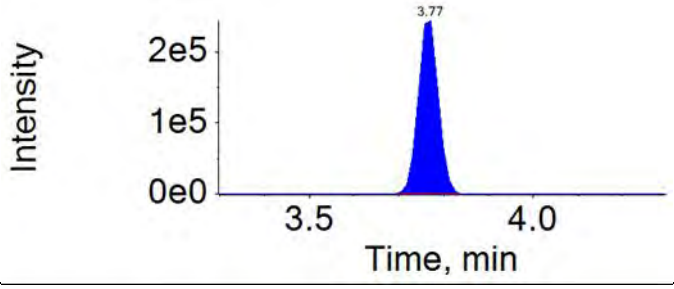


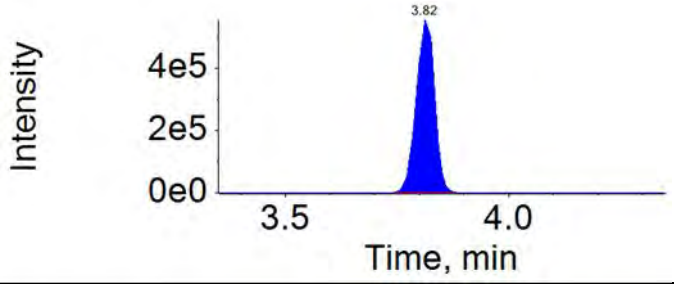
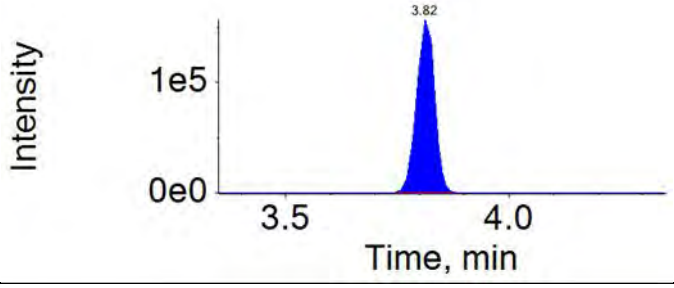
APPROVED
By JPT at 2:53 pm, 11/7/18

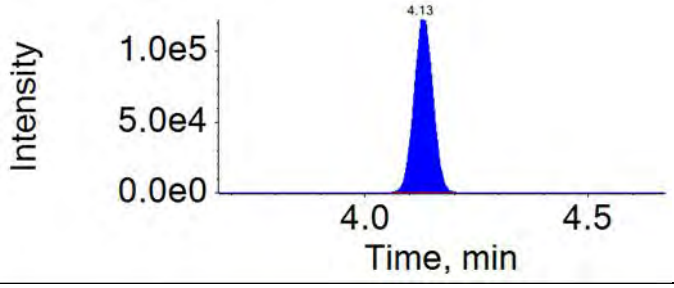
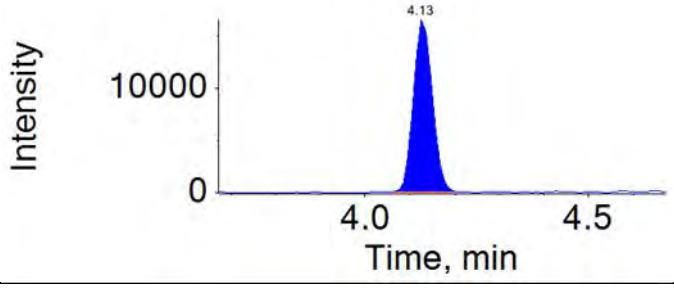
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

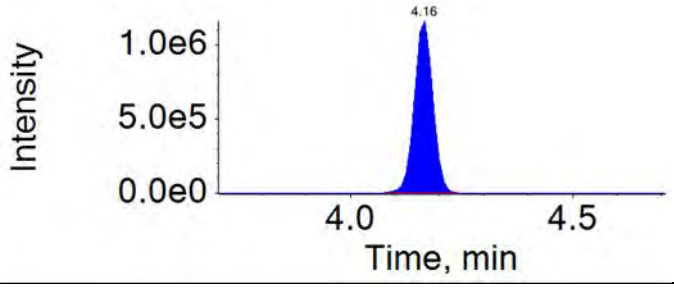
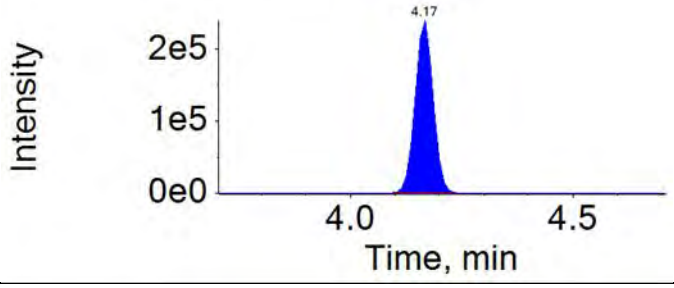
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

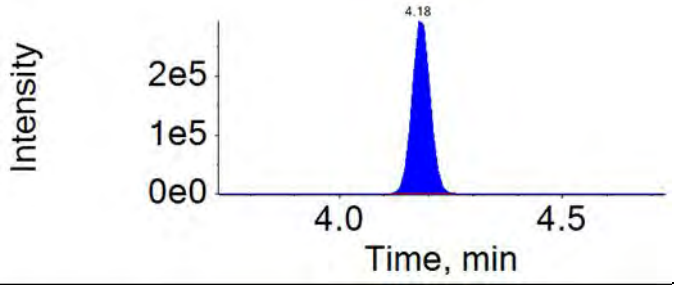
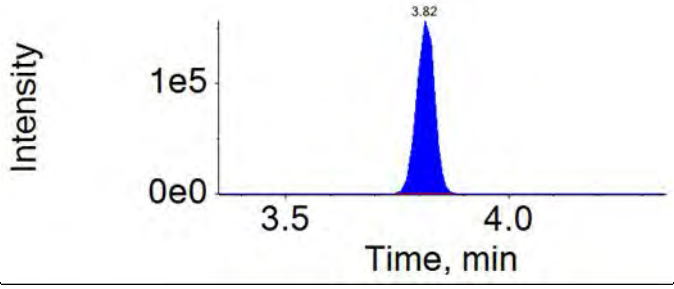
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

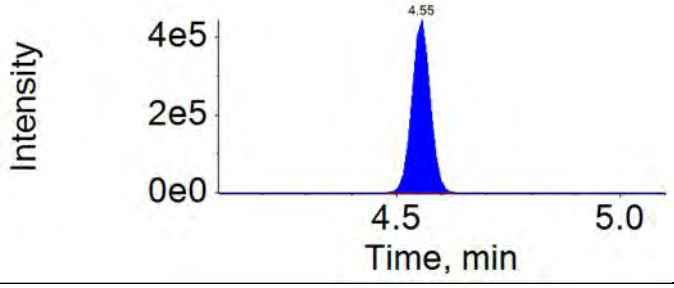
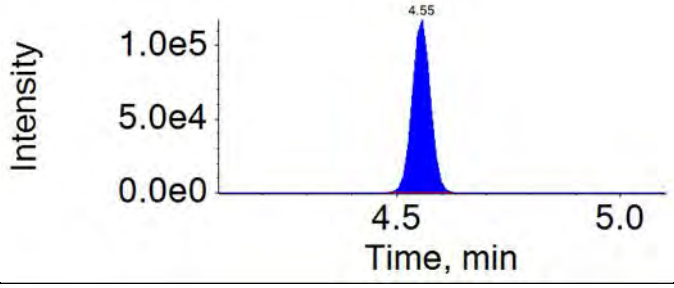
APPROVED
By JPT at 2:53 pm, 11/7/18

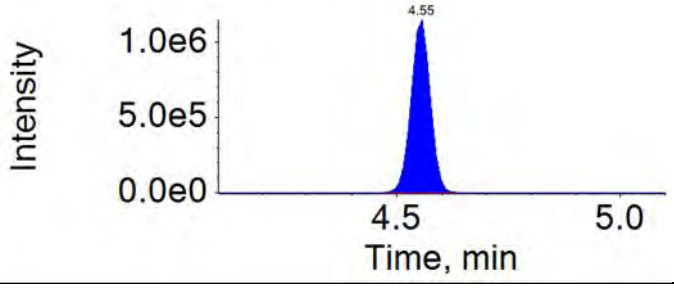
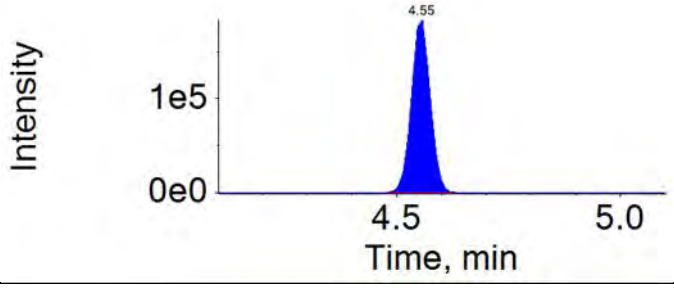
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

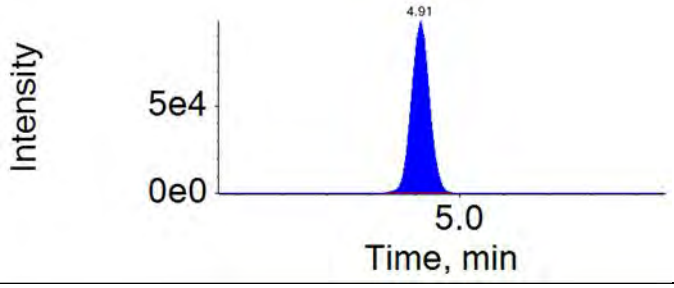
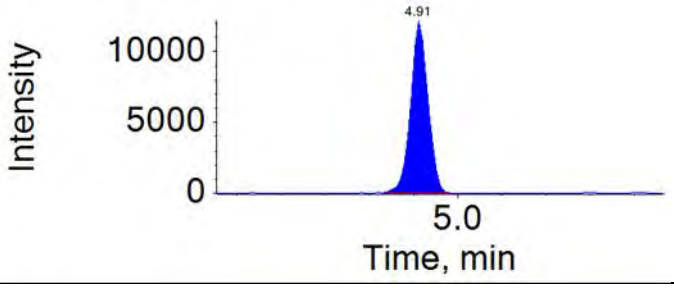
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

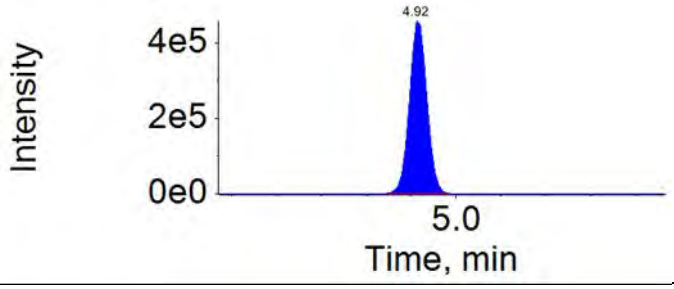
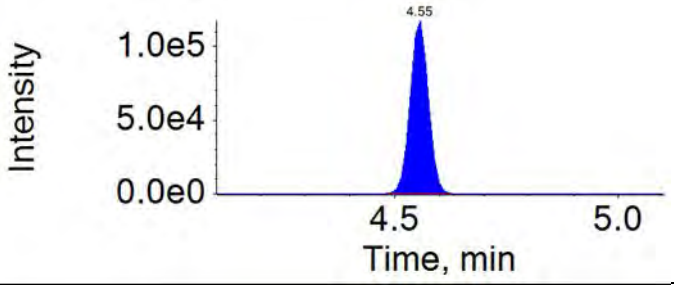
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

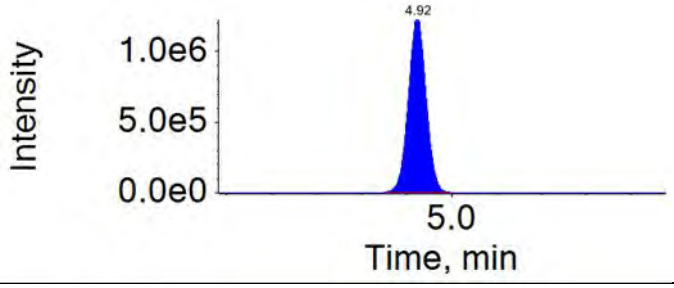
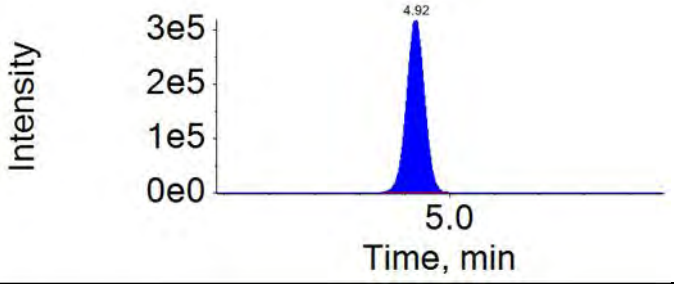
APPROVED
By JPT at 2:53 pm, 11/7/18

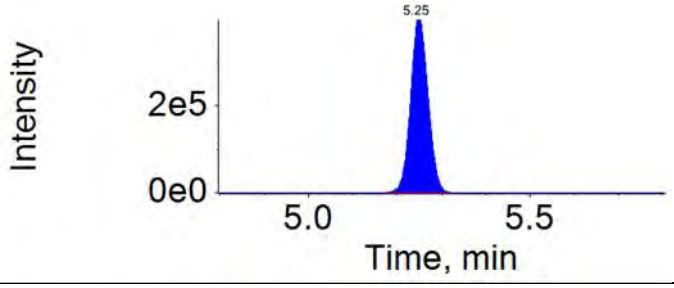
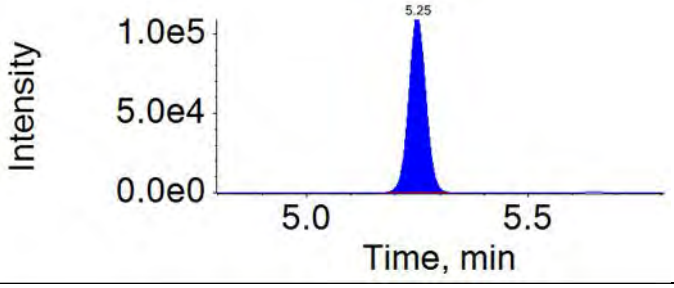
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

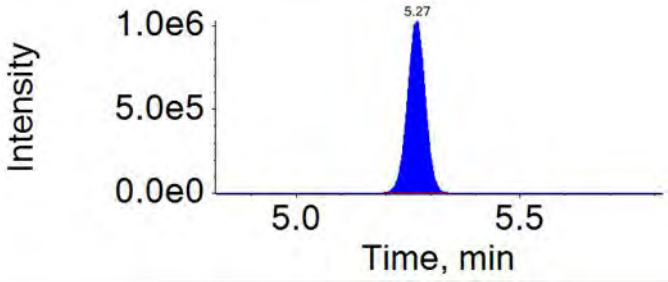
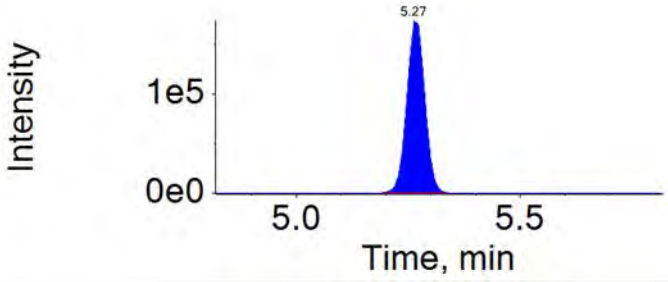
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

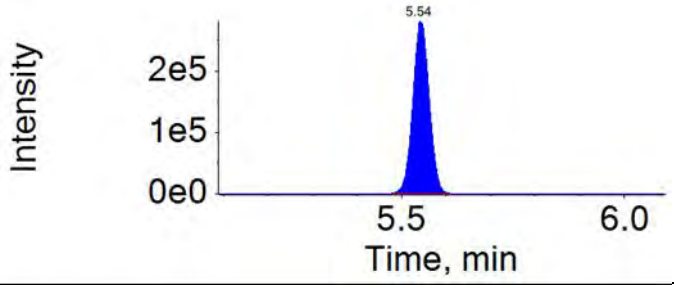
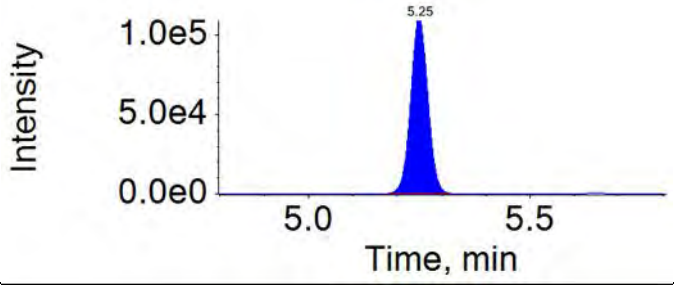
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

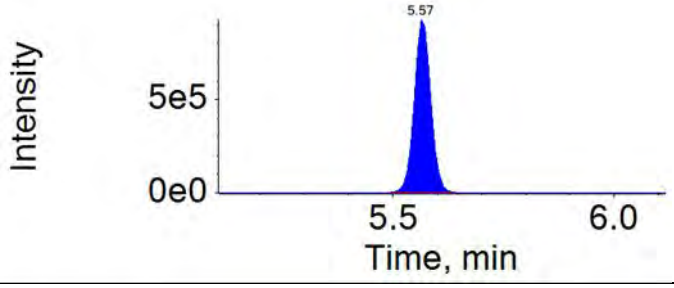
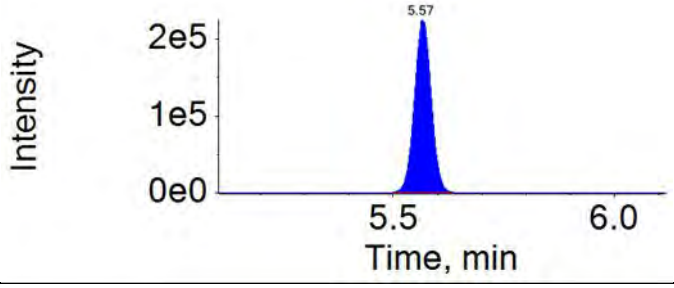
APPROVED
By JPT at 2:53 pm, 11/7/18

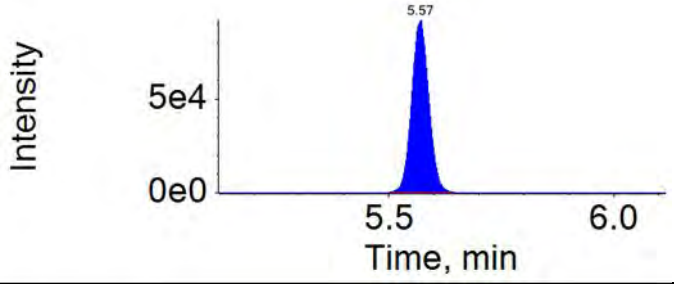
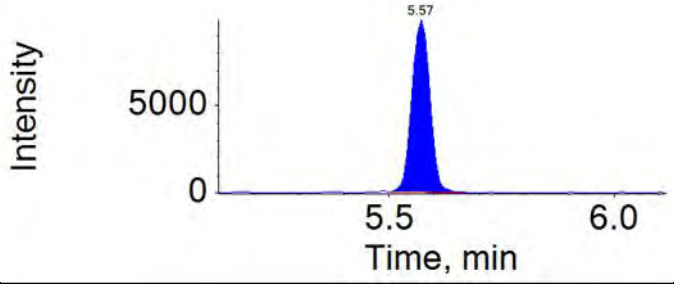
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

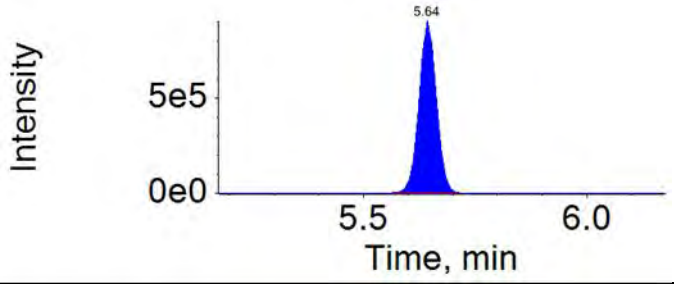
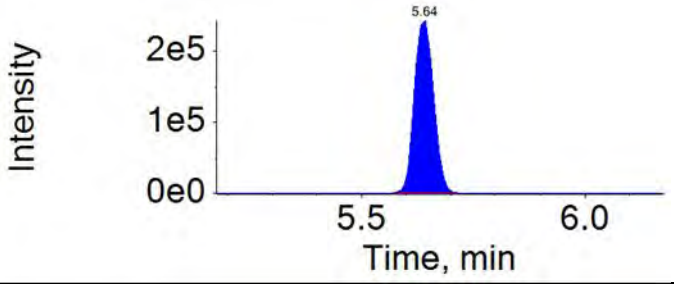
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

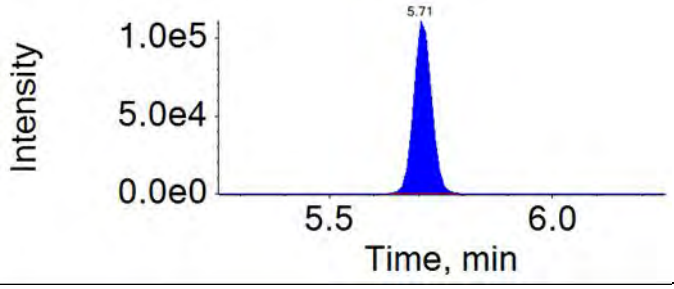
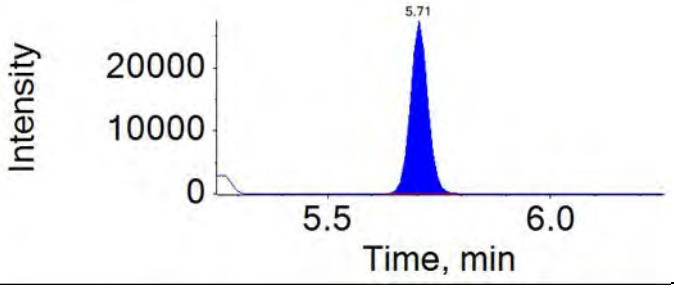
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

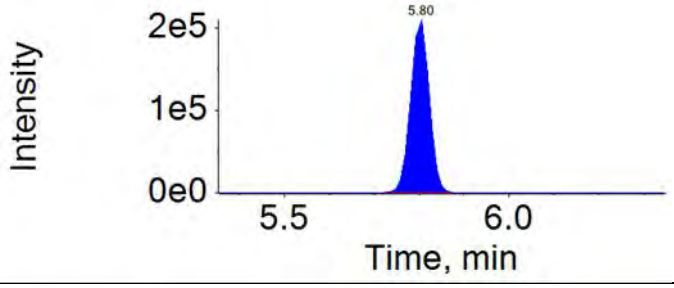
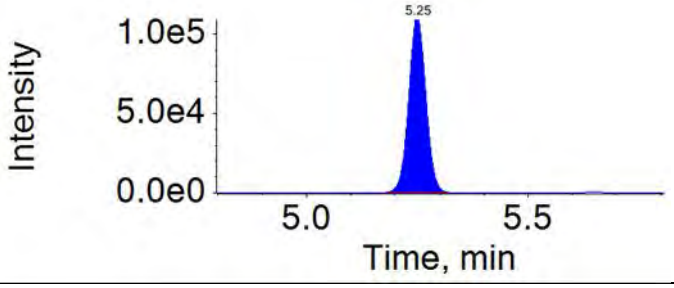
APPROVED
By JPT at 2:53 pm, 11/7/18

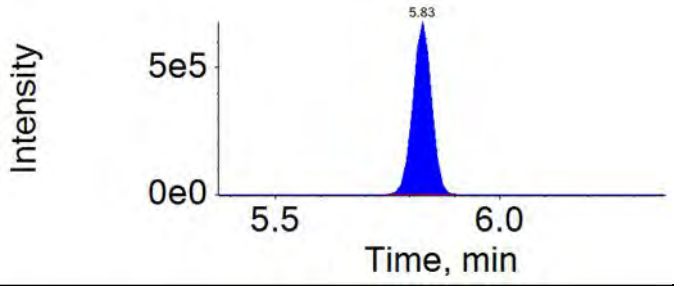
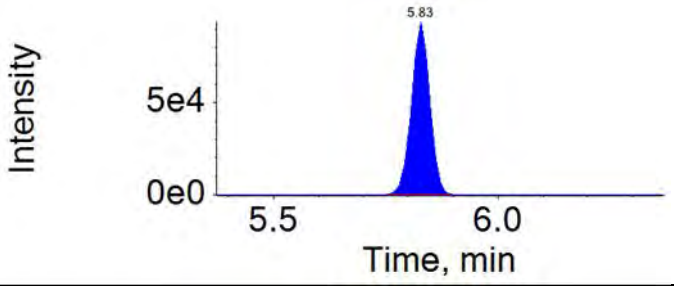
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

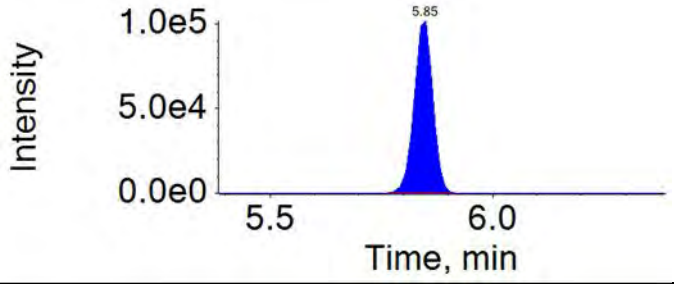
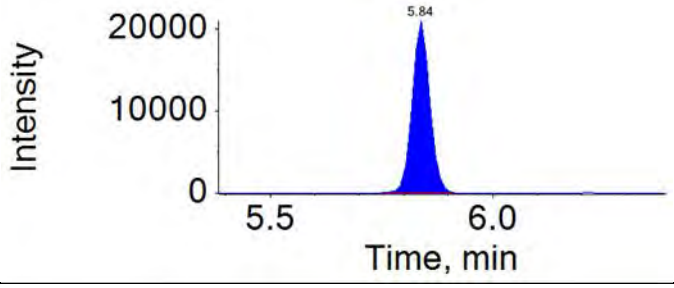
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

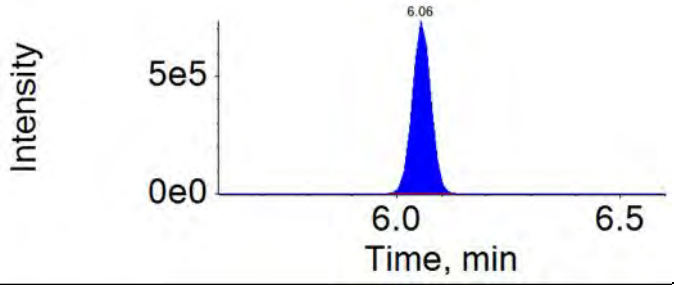
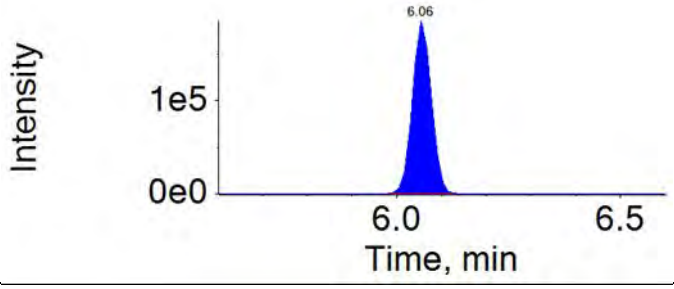
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

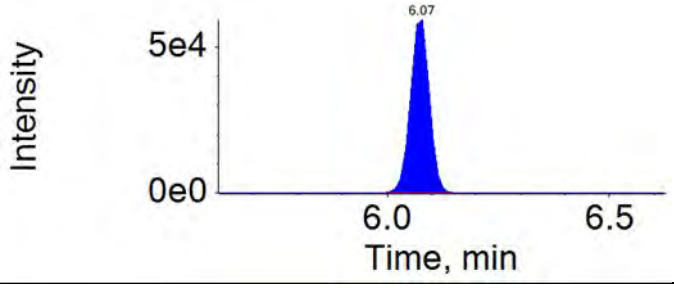
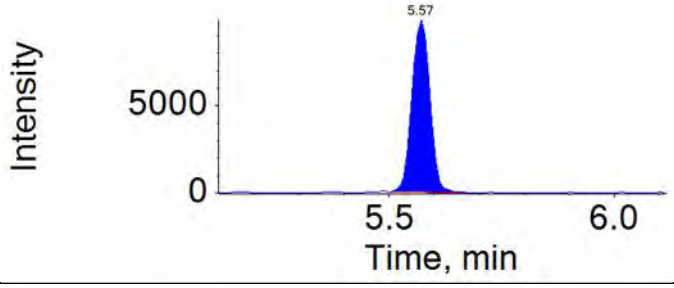
APPROVED
By JPT at 2:53 pm, 11/7/18

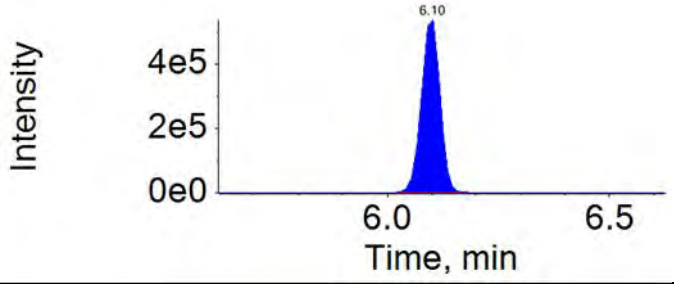
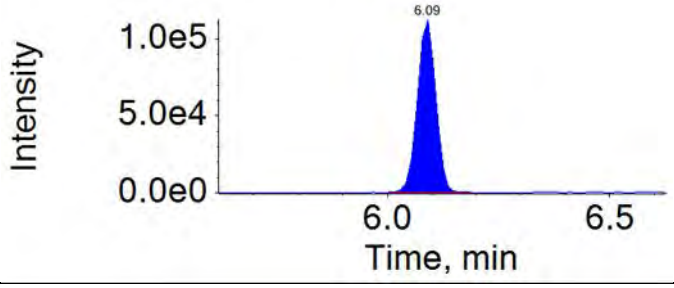
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

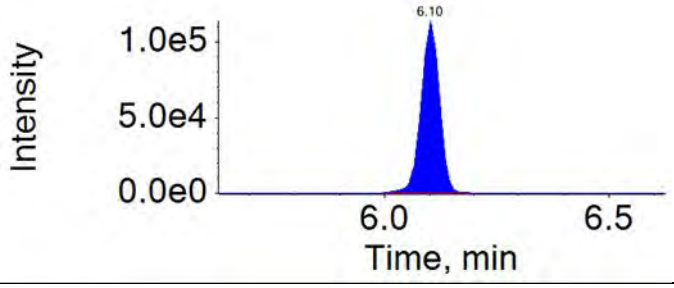
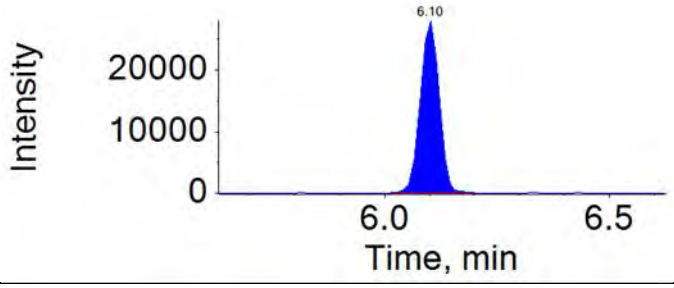
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

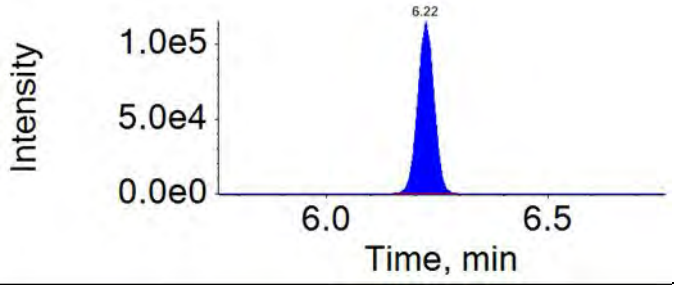
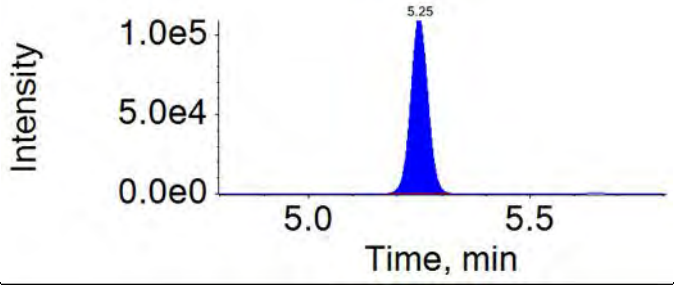
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

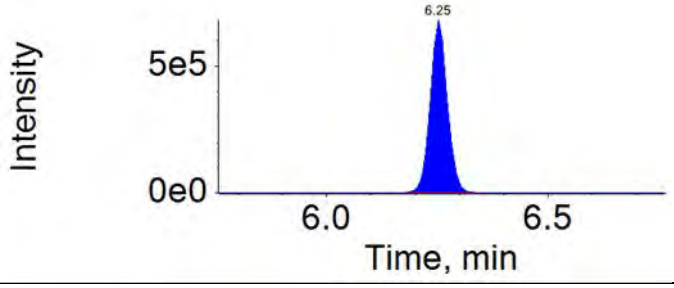
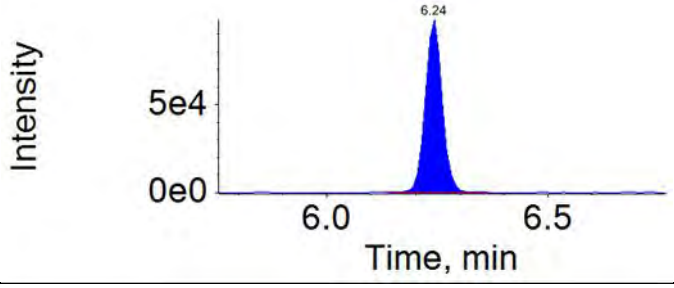
APPROVED
By JPT at 2:53 pm, 11/7/18

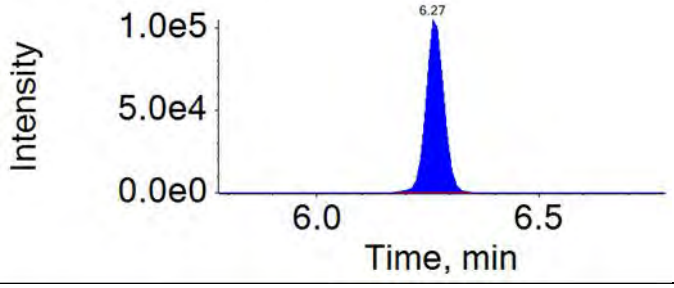
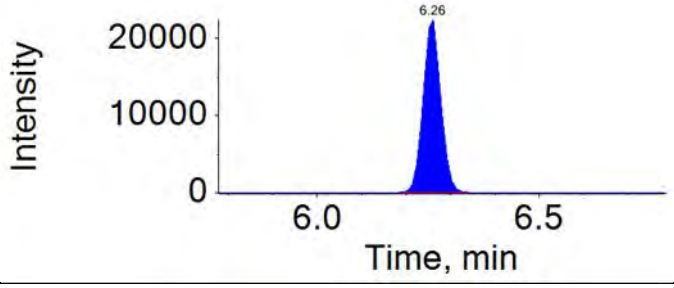
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0
	

Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0
	

Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0
	

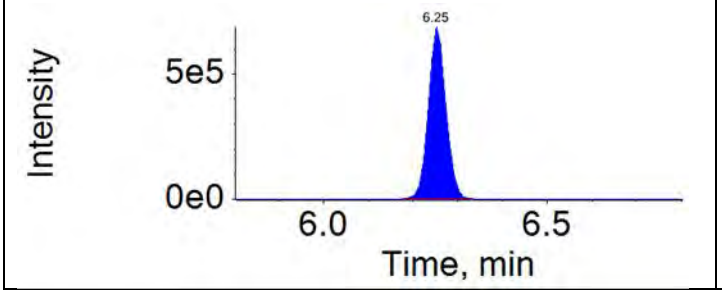
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0
	

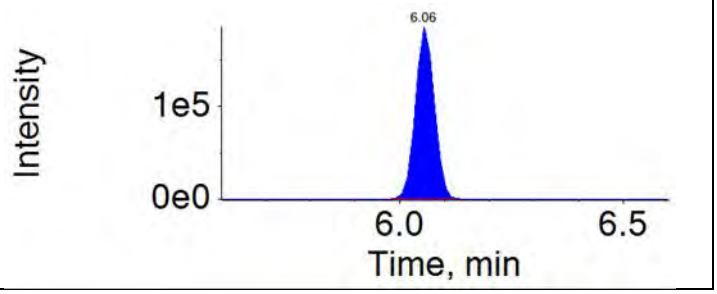
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

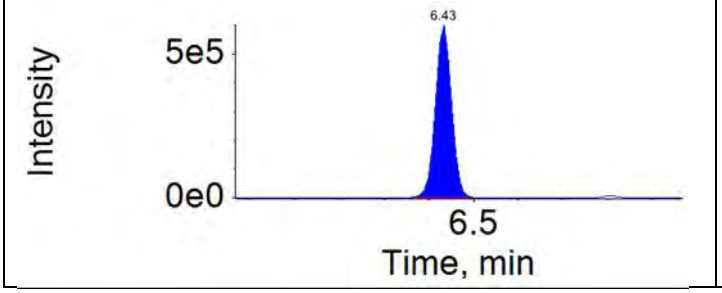
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

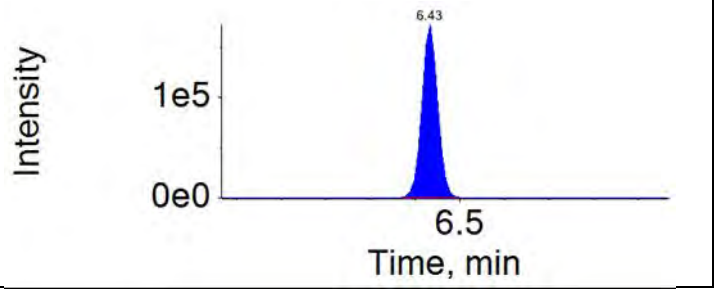
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



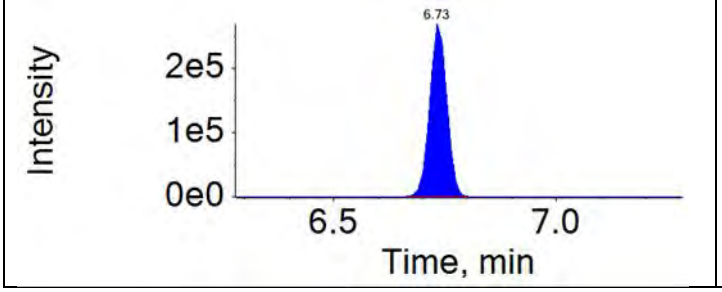


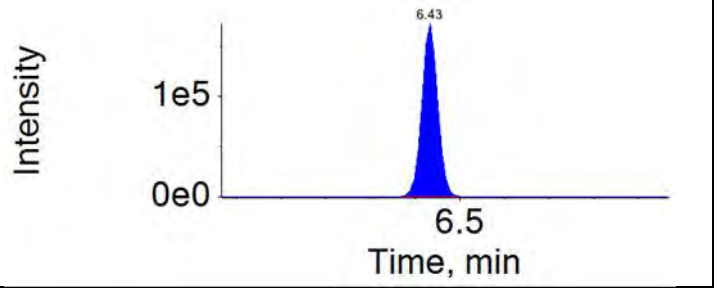
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



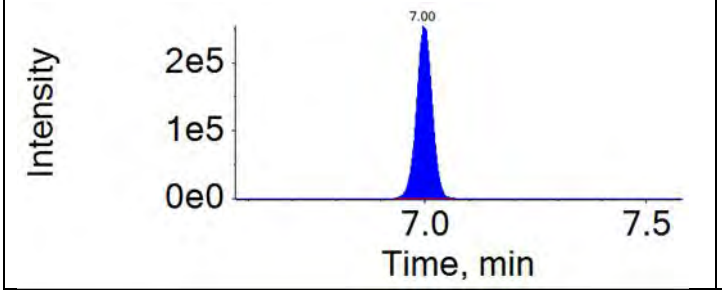


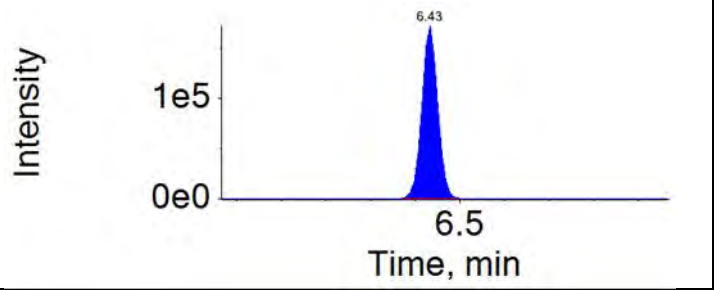
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

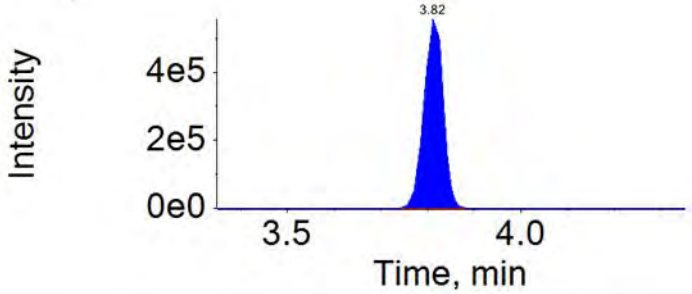
Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-14.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	1601296.4	A	1.0000	1.0000			
PFBS_2	3.81	1.00	589199.3	A	0.3576	0.3680	3	50	
4:2-FTS	4.13	1.00	365423.8	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	215025.0	A	0.6359	0.5884	-7	50	
PFHxA	4.16	1.00	3380716.3	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	39429.8	A	0.0115	0.0117	2	50	
PFPeS	4.18	1.10	845636.3	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	449010.4	A	0.5384	0.5310	-1	50	
PFHxS	4.55	1.00	1261633.0	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	452452.3	A	0.3569	0.3586	0	50	
PFHpA	4.55	1.00	3440372.8	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	189560.1	A	0.0577	0.0551	-4	50	
6:2-FTS	4.91	1.00	278493.0	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	181363.3	A	0.6752	0.6512	-4	50	
PFHpS	4.92	1.08	1236603.7	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	499368.1	A	0.3950	0.4038	2	50	
PFOA	4.92	1.00	3425279.8	A	1.0000	1.0000			
PFOA_2	4.92	1.00	194621.3	A	0.0635	0.0568	-10	50	
PFOS	5.25	1.00	1108359.9	A	1.0000	1.0000			
PFOS_2	5.25	1.00	389460.8	A	0.3494	0.3514	1	50	
PFNA	5.27	1.00	2889454.7	A	1.0000	1.0000			
PFNA_2	5.27	1.00	55493.0	A	0.0207	0.0192	-7	50	
PFNS	5.54	1.06	722178.3	A	1.0000	1.0000			
PFNS_2	5.54	1.06	336998.4	A	0.4890	0.4666	-5	50	
PFDA	5.57	1.00	2401274.2	A	1.0000	1.0000			
PFDA_2	5.57	1.00	16983.6	A	0.0057	0.0071	25	50	
8:2-FTS	5.57	1.00	244867.6	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	133528.0	A	0.6169	0.5453	-12	50	
NMeFOSAA	5.71	1.00	308507.7	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	75576.5	A	0.2206	0.2450	11	50	
PFDS	5.80	1.11	605559.3	A	1.0000	1.0000			
PFDS_2	5.80	1.11	310462.1	A	0.4648	0.5127	10	50	
PFUnDA	5.83	1.00	1952356.4	A	1.0000	1.0000			
PFUnDA_2	5.83	1.00	9988.0	A	0.0031	0.0051	62	50	OOS
NEtFOSAA	5.85	1.00	298834.2	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	185748.9	A	0.6082	0.6216	2	50	
PFDoDA	6.06	1.00	2132260.7	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	26780.3	A	0.0109	0.0126	15	50	
10:2-FTS	6.07	1.09	177607.5	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	115093.0	A	0.7082	0.6480	-9	50	
PFTrDA	6.25	1.03	1851055.0	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	17056.8	A	0.0096	0.0092	-4	50	
PFTeDA	6.43	1.00	1500655.1	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	8887.6	A	0.0055	0.0059	7	50	
PFHxDA	6.73	1.05	716467.3	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	43825.8	A	0.0596	0.0612	3	50	
PFODA	7.00	1.09	624697.0	A	1.0000	1.0000			
PFODA_2	7.00	1.09	15544.4	A	0.0257	0.0249	-3	50	

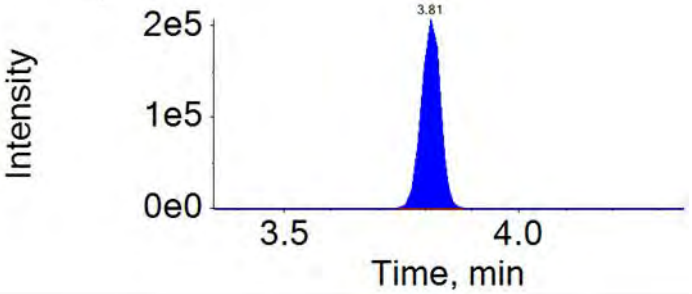
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

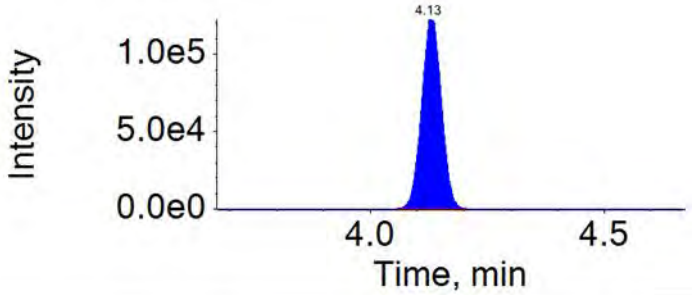
Component: PFBS
Primary Mass: 299.0 / 80.0



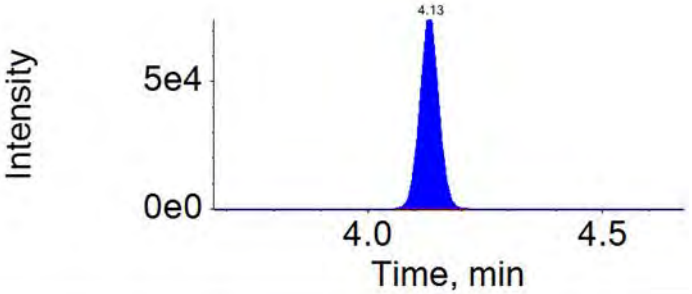
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



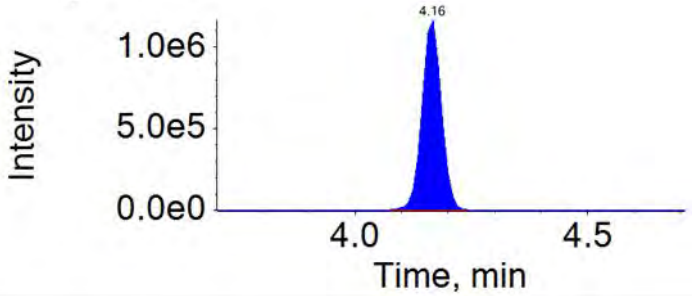
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



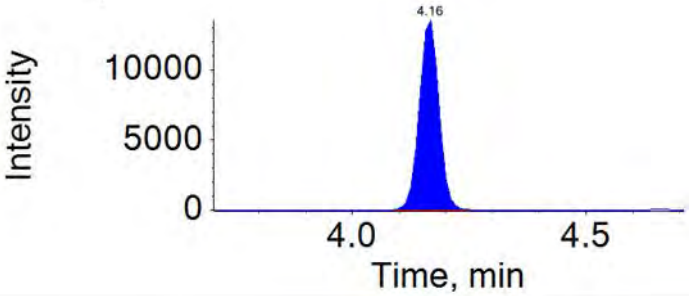
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



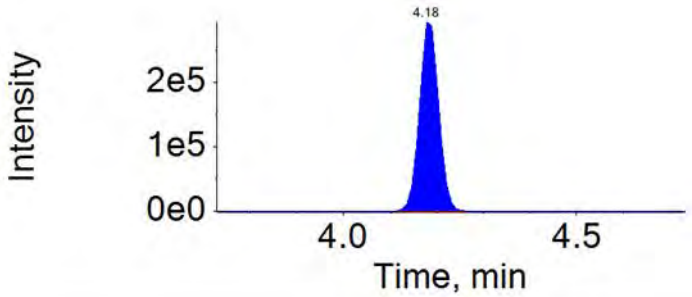
Component: PFHxA
Primary Mass: 313.0 / 269.0



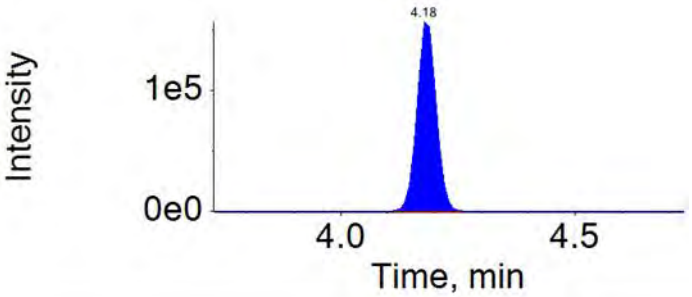
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



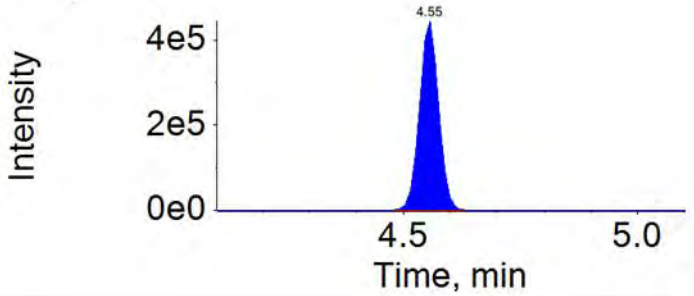
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



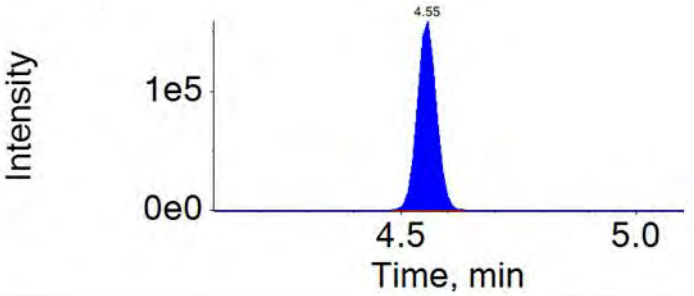
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

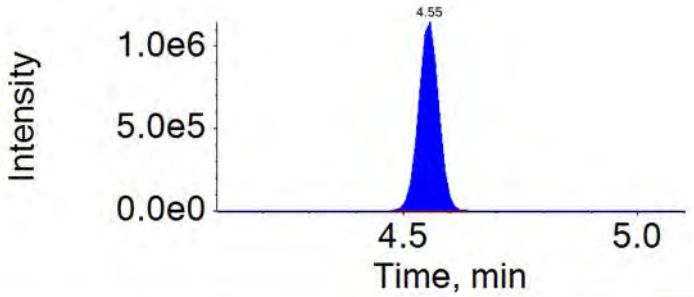
Component: PFHxS
Primary Mass: 399.0 / 80.0



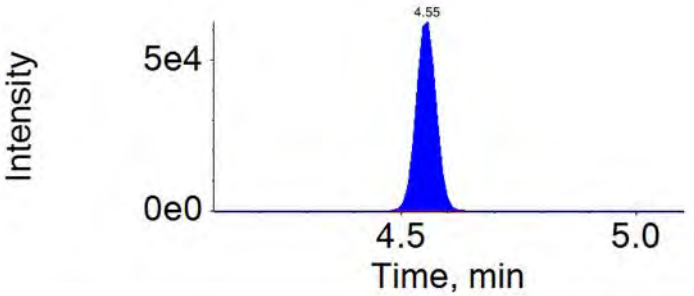
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



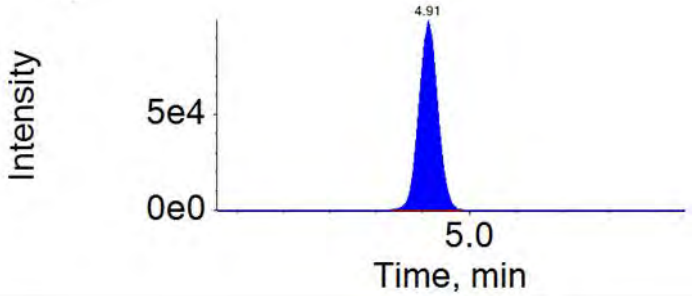
Component: PFHpA
Primary Mass: 363.0 / 319.0



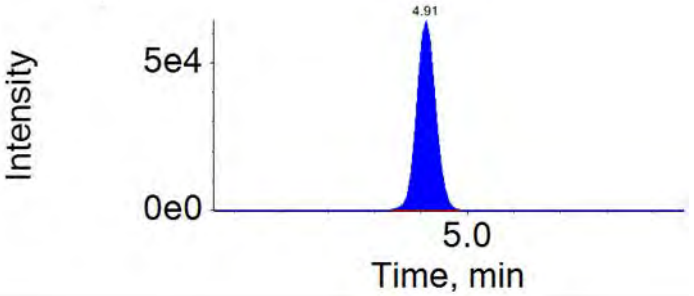
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



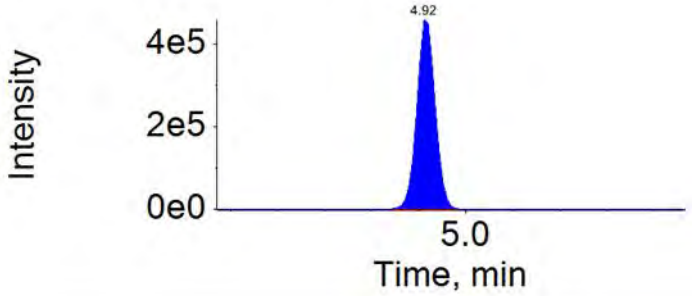
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



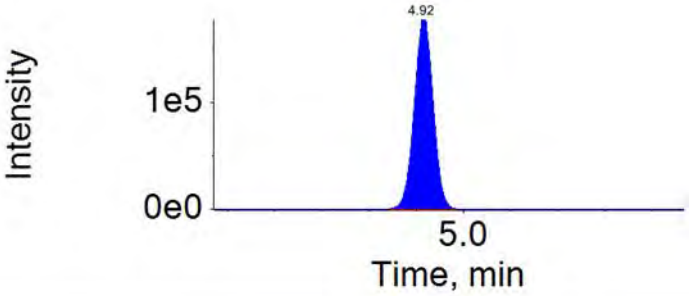
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



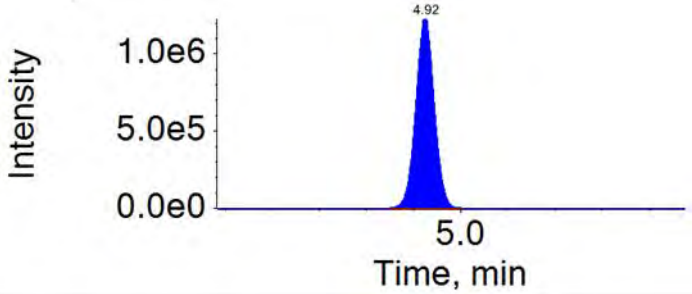
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



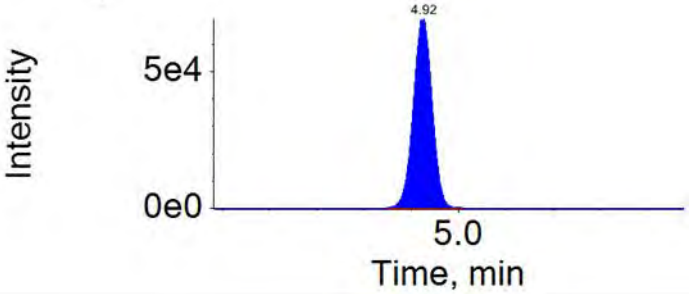
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

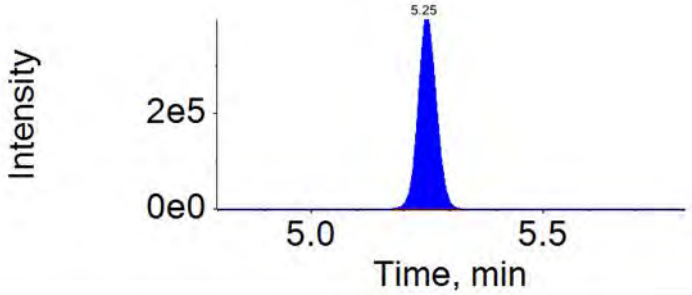
Component: PFOA
Primary Mass: 413.0 / 369.0



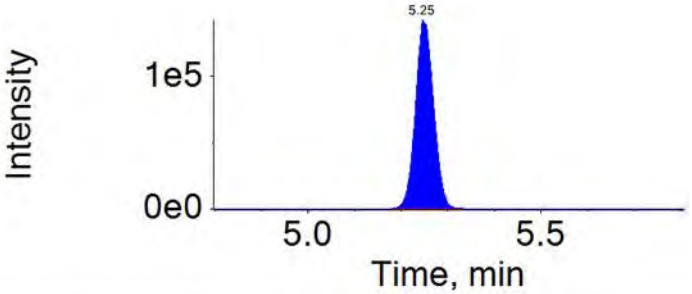
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



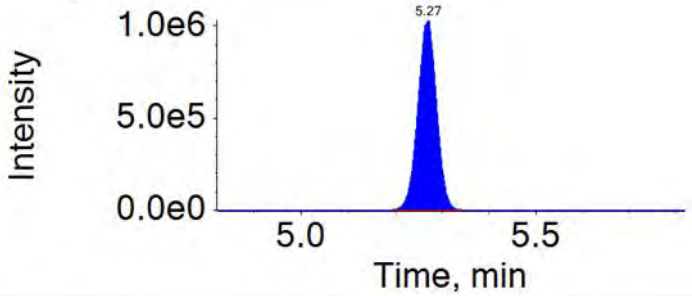
Component: PFOS
Primary Mass: 499.0 / 80.0



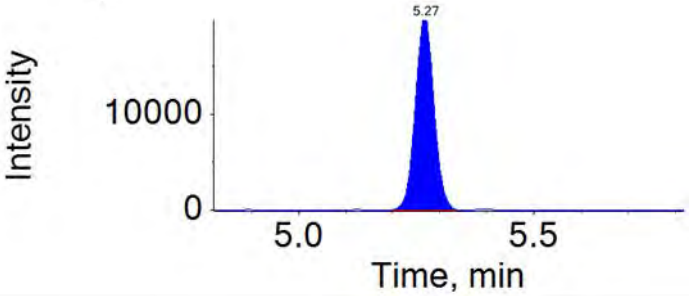
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



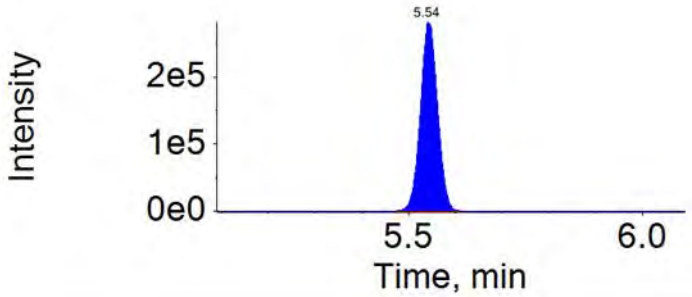
Component: PFNA
Primary Mass: 463.0 / 419.0



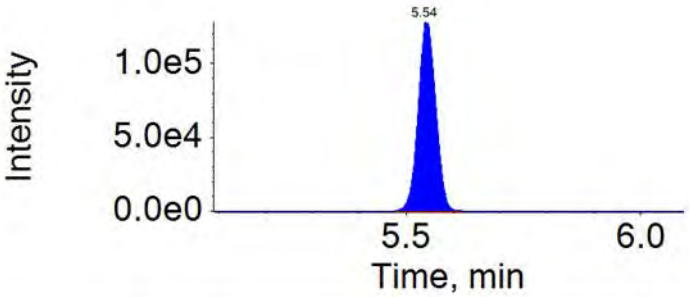
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



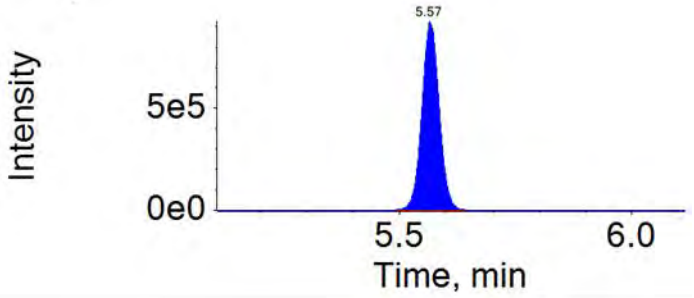
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



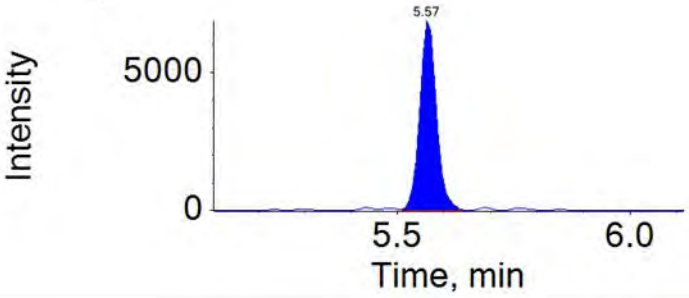
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

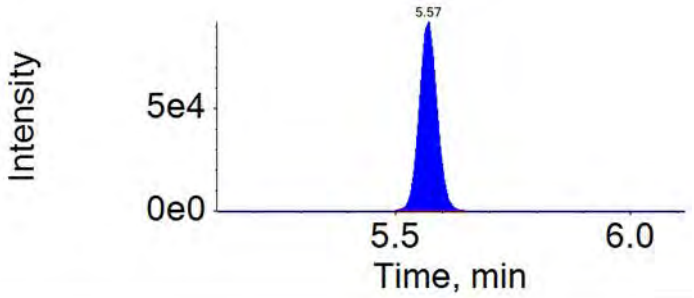
Component: PFDA
Primary Mass: 513.0 / 469.0



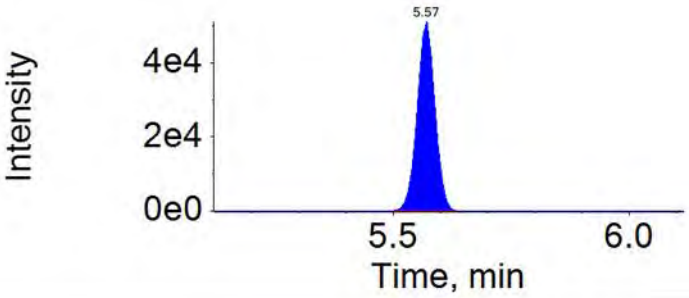
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



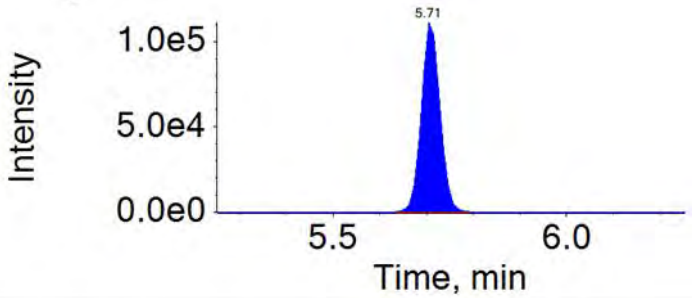
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



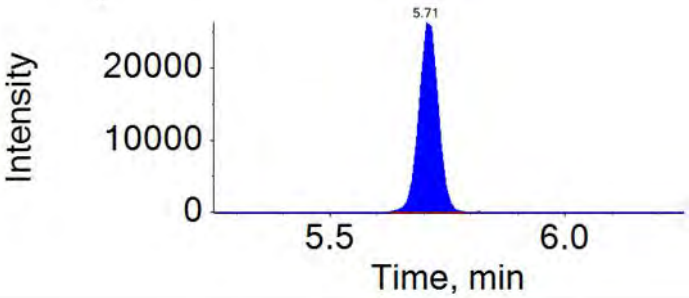
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



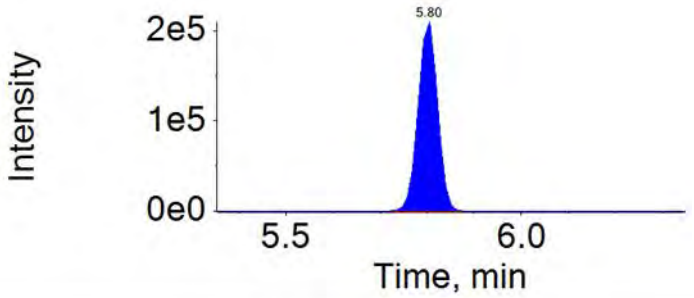
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



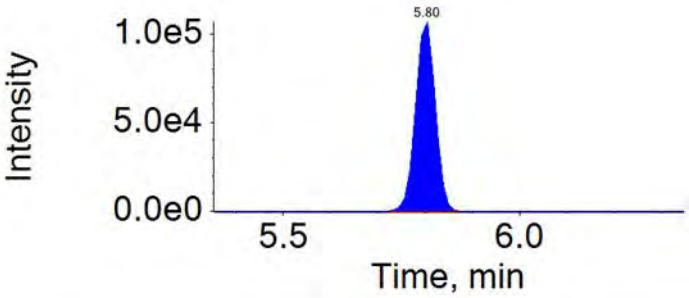
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



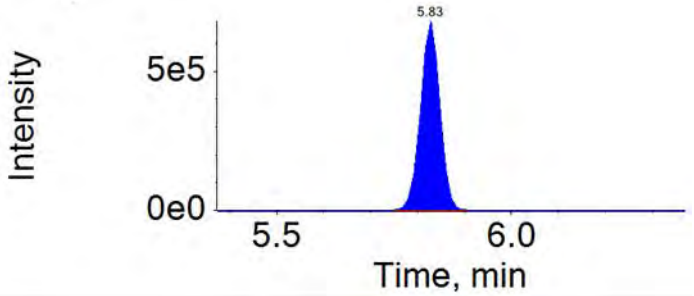
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



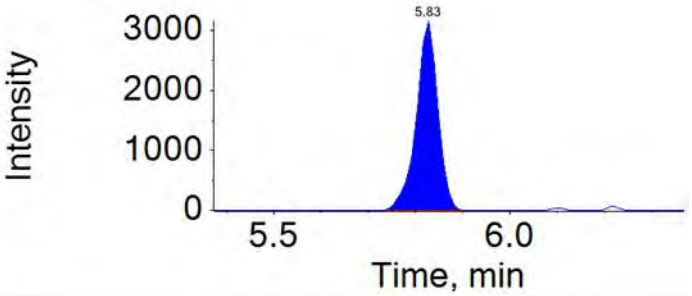
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

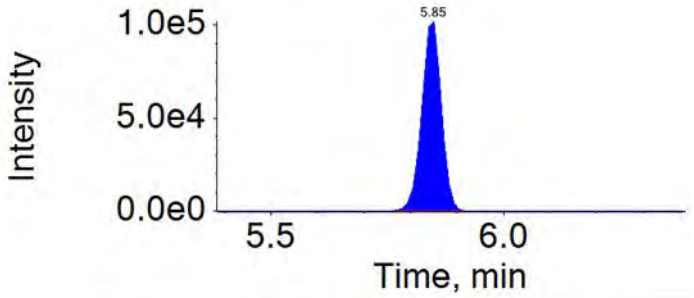
Component: PFUnDA
Primary Mass: 563.0 / 519.0



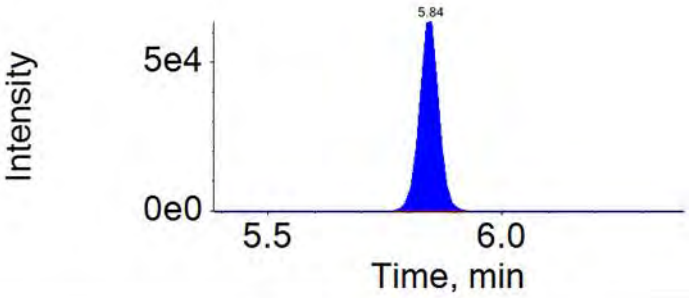
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



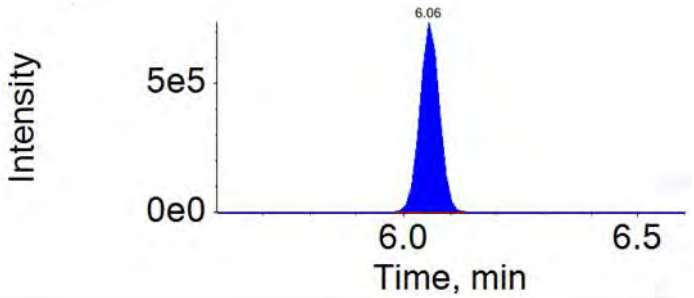
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



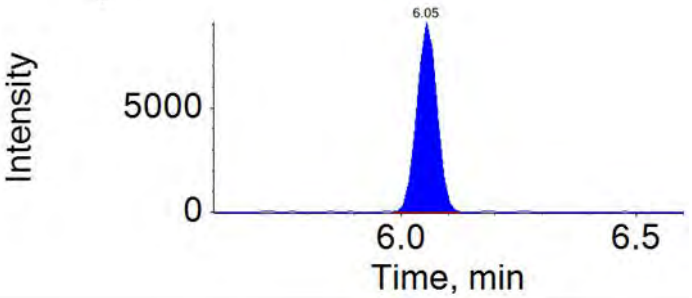
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



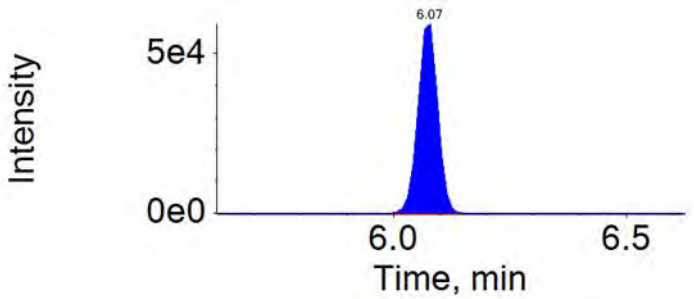
Component: PFDoDA
Primary Mass: 613.0 / 569.0



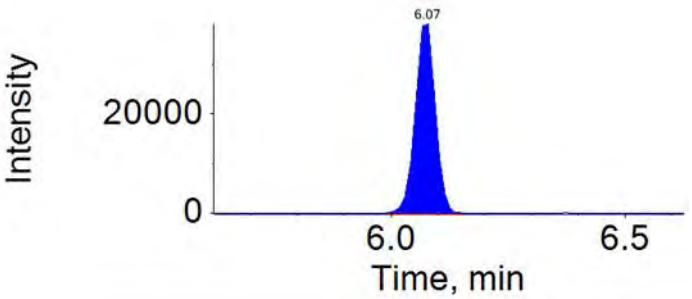
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



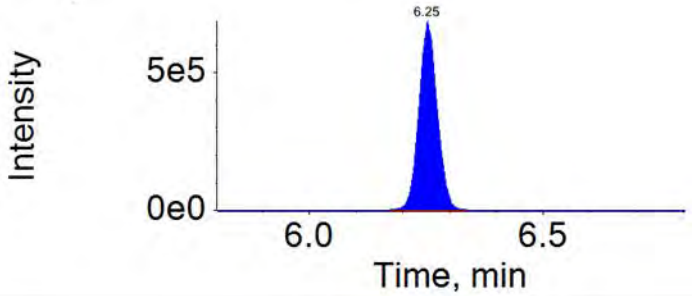
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



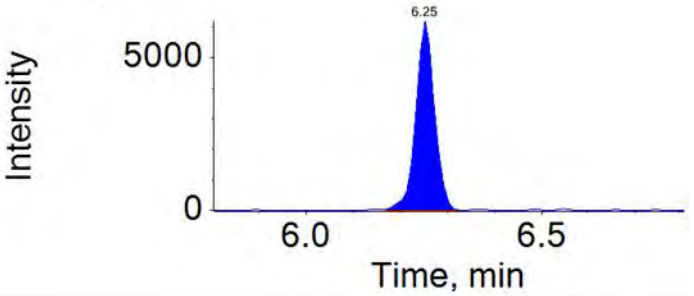
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

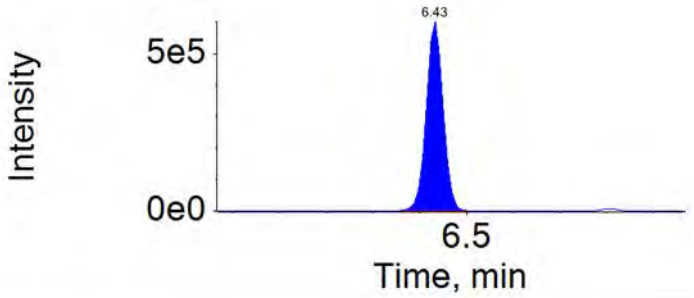
Component: PFTrDA
Primary Mass: 663.0 / 619.0



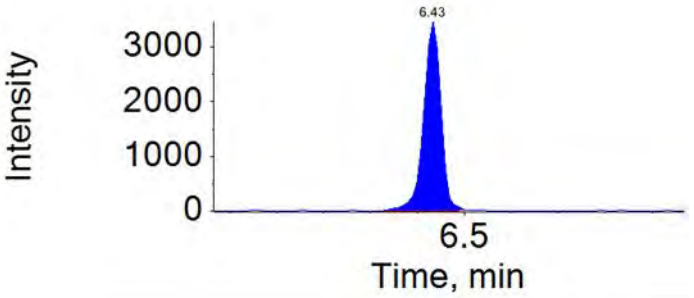
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



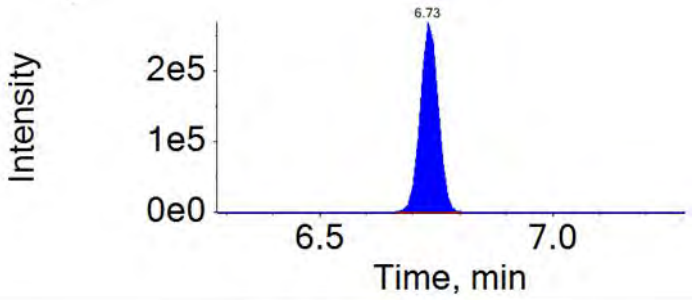
Component: PFTeDA
Primary Mass: 713.0 / 669.0



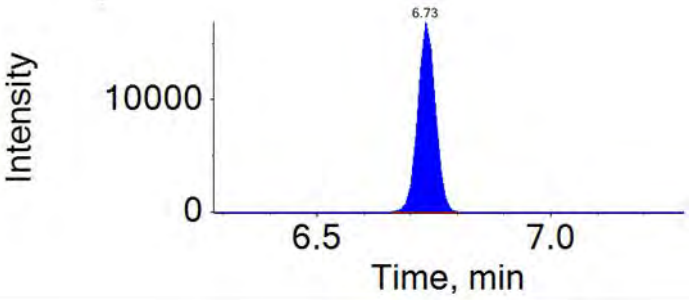
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



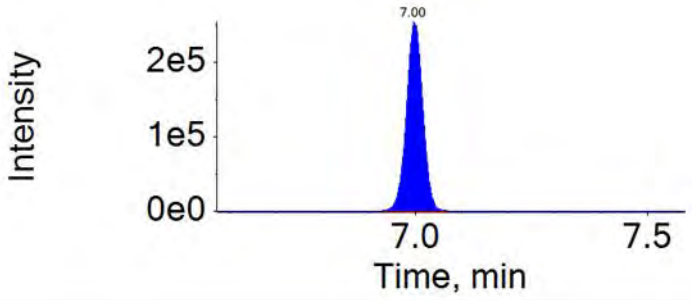
Component: PFHxDA
Primary Mass: 813.0 / 769.0



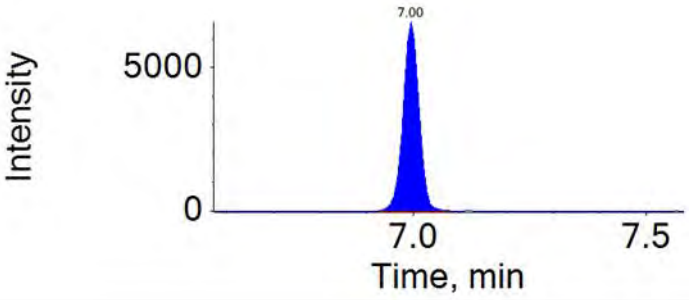
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL6			**Data File:**		18NOV07DCAL-15.wiff
Sample ID:	CALMOD61833E			**Acquis Date:**		2018-11-07T10:24:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	8			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	600246.7	730410.6	-18	50	
13C2-PFOA	5.0	457854.9	524423.6	-13	50	
13C4-PFOS	4.8	251499.9	274061.7	-8	50	
13C2-PFDA	5.0	260529.0	311442.1	-16	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	647849.6	13C3-PFBA	600246.7	1.079	5.000	4.995	100	70-130	
E13C5-PFPeA	687796.7	13C3-PFBA	600246.7	1.146	5.000	4.992	100	70-130	
E13C3-PFBS	384220.8	13C3-PFBA	600246.7	0.640	4.650	4.698	101	70-130	
E13C2-4:2-FTS	50041.3	13C2-PFOA	457854.9	0.109	4.670	4.932	106	70-130	
E13C5-PFHxA	607820.1	13C2-PFOA	457854.9	1.328	5.000	4.883	98	70-130	
E13C3-PFHxS	295466.2	13C2-PFOA	457854.9	0.645	4.730	4.633	98	70-130	
E13C4-PFHpA	484763.2	13C2-PFOA	457854.9	1.059	5.000	4.816	96	70-130	
E13C2-6:2-FTS	30466.8	13C2-PFOA	457854.9	0.067	4.750	4.437	93	70-130	
E13C8-PFOA	769164.4	13C2-PFOA	457854.9	1.680	5.000	4.685	94	70-130	
E13C8-PFOS	268369.0	13C4-PFOS	251499.9	1.067	4.780	4.718	99	70-130	
E13C9-PFNA	440319.0	13C4-PFOS	251499.9	1.751	5.000	4.782	96	70-130	
E13C6-PFDA	536626.2	13C2-PFDA	260529.0	2.060	5.000	5.180	104	70-130	
E13C2-8:2-FTS	24938.2	13C2-PFDA	260529.0	0.096	4.790	5.065	106	70-130	
E13C8-PFOSA	614406.4	13C2-PFDA	260529.0	2.358	5.000	5.146	103	70-130	
Ed3-NMeFOSAA	78158.0	13C2-PFDA	260529.0	0.300	5.000	5.579	112	70-130	
E13C7-PFUnDA	229237.1	13C2-PFDA	260529.0	0.880	5.000	5.076	102	70-130	
Ed5-NEtFOSAA	60556.6	13C2-PFDA	260529.0	0.232	5.000	5.379	108	70-130	
E13C2-PFDoDA	500065.3	13C2-PFDA	260529.0	1.919	5.000	5.174	103	70-130	
Ed7-NMePFOSAE	294617.6	13C2-PFDA	260529.0	1.131	5.000	5.259	105	70-130	
Ed3-NMePFOSA	77146.9	13C2-PFDA	260529.0	0.296	5.000	5.421	108	70-130	
Ed9-NEtPFOSAE	239317.0	13C2-PFDA	260529.0	0.919	5.000	5.246	105	70-130	
Ed5-NEtPFOSA	59054.4	13C2-PFDA	260529.0	0.227	5.000	5.248	105	70-130	
E13C2-PFTeDA	394433.9	13C2-PFDA	260529.0	1.514	5.000	5.450	109	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

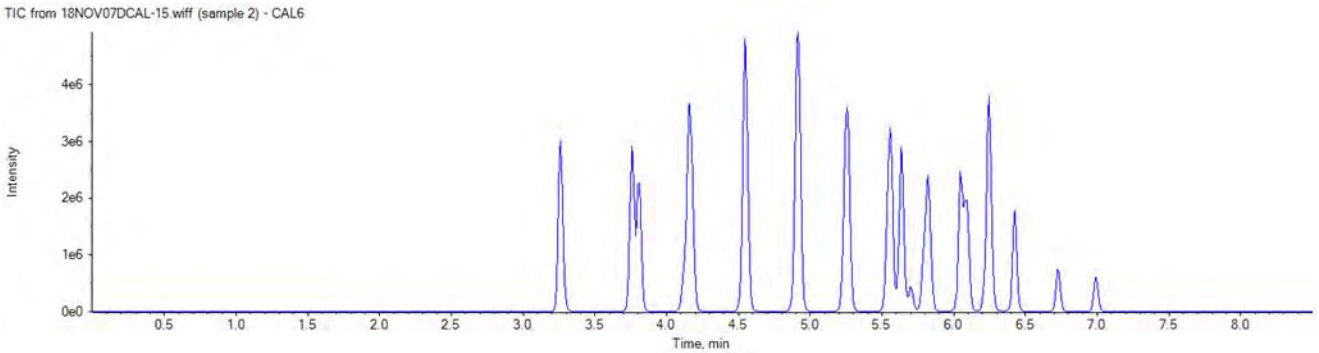
Analyte Quantitation Peak Table

Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-15.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	5709364.6		A	13C4-PFBA	3.26	647849.6	8.813	51.576
PFPeA	3.76	1.000	5899932.2		A	13C5-PFPeA	3.76	687796.7	8.578	50.979
PFBS	3.81	1.000	3508201.1		A	13C3-PFBS	3.81	384220.8	9.131	46.035
4:2-FTS	4.12	1.000	866263.6		A	13C2-4:2-FTS	4.12	50041.3	17.311	46.538
PFHxA	4.16	1.000	6739327.9		A	13C5-PFHxA	4.16	607820.1	11.088	47.549
PFPeS	4.18	1.100	1823355.9		A	13C3-PFBS	3.81	384220.8	4.746	46.806
PFHxS	4.55	1.000	2760712.8		A	13C3-PFHxS	4.55	295466.2	9.344	47.360
PFHpA	4.55	1.000	6940304.7		A	13C4-PFHpA	4.55	484763.2	14.317	48.150
6:2-FTS	4.90	1.000	566692.8		A	13C2-6:2-FTS	4.90	30466.8	18.600	46.401
PFHpS	4.91	1.080	2648512.9		A	13C3-PFHxS	4.55	295466.2	8.964	46.896
PFOA	4.92	1.000	7023921.1		A	13C8-PFOA	4.92	769164.4	9.132	51.417
PFOS	5.24	1.000	2487687.4		A	13C8-PFOS	5.24	268369.0	9.270	48.067
PFNA	5.26	1.000	6070259.1		A	13C9-PFNA	5.26	440319.0	13.786	51.521
PFNS	5.54	1.060	1684601.2		A	13C8-PFOS	5.24	268369.0	6.277	49.770
PFDA	5.56	1.000	4962332.7		A	13C6-PFDA	5.56	536626.2	9.247	50.875
8:2-FTS	5.56	1.000	516640.5		A	13C2-8:2-FTS	5.56	24938.2	20.717	46.697
PFOSA	5.64	1.000	5938541.7		A	13C8-PFOSA	5.64	614406.4	9.665	52.247
NMeFOSAA	5.70	1.000	740651.6		A	d3-NMeFOSAA	5.70	78158.0	9.476	48.760
PFDS	5.79	1.110	1337416.6		A	13C8-PFOS	5.24	268369.0	4.983	47.605
PFUnDA	5.82	1.000	4071590.3		A	13C7-PFUnDA	5.82	229237.1	17.761	50.936
NEtFOSAA	5.84	1.000	685447.7		A	d5-NEtFOSAA	5.83	60556.6	11.319	48.645
PFDoDA	6.05	1.000	4509578.7		A	13C2-PFDoDA	6.05	500065.3	9.018	48.873
10:2-FTS	6.07	1.090	395929.8		A	13C2-8:2-FTS	5.56	24938.2	15.876	49.437
NMePFOSAE	6.09	1.000	3462215.2		A	d7-NMePFOSAE	6.08	294617.6	11.752	52.660
NMePFOSA	6.10	1.000	705149.2		A	d3-NMePFOSA	6.09	77146.9	9.140	51.162
PFDoS	6.22	1.190	661528.1		A	13C8-PFOS	5.24	268369.0	2.465	47.576
NEtPFOSAE	6.25	1.000	3836850.8		A	d9-NEtPFOSAE	6.23	239317.0	16.033	51.396
NEtPFOSA	6.26	1.000	676107.2		A	d5-NEtPFOSA	6.25	59054.4	11.449	50.423
PFTrDA	6.25	1.030	3829048.4		A	13C2-PFDoDA	6.05	500065.3	7.657	48.287
PFTeDA	6.42	1.000	3381511.1		A	13C2-PFTeDA	6.43	394433.9	8.573	50.344
PFHxDA	6.73	1.050	1559604.6		A	13C2-PFTeDA	6.43	394433.9	3.954	49.083
PFODA	6.99	1.090	1340733.9		A	13C2-PFTeDA	6.43	394433.9	3.399	48.698

Total Ion Chromatogram

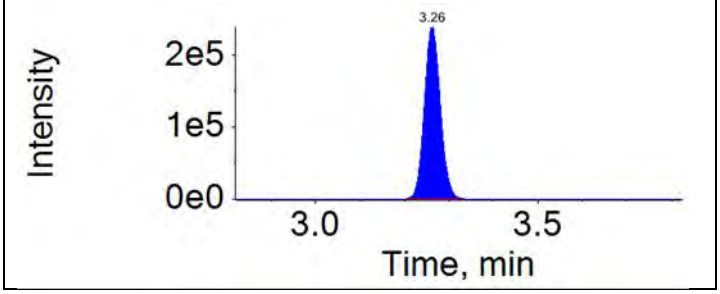


APPROVED
By JPT at 2:53 pm, 11/7/18

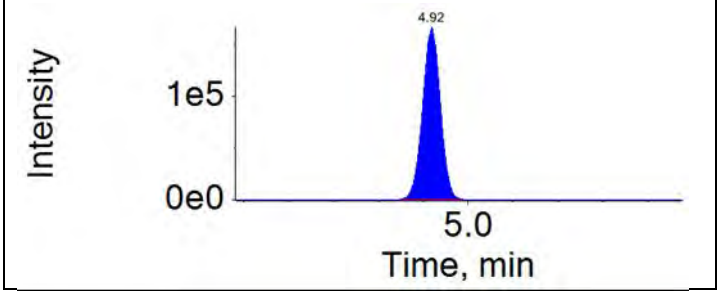
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

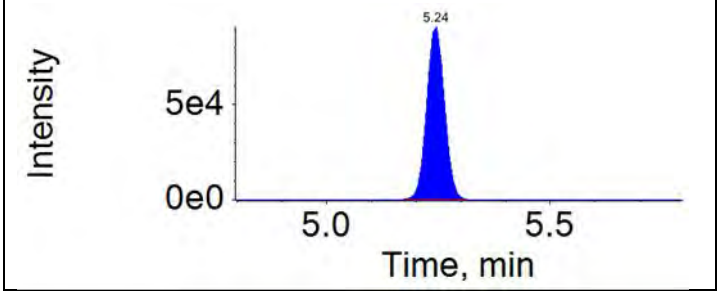
Injection Standard: 13C3-PFBA
216.0 / 172.0



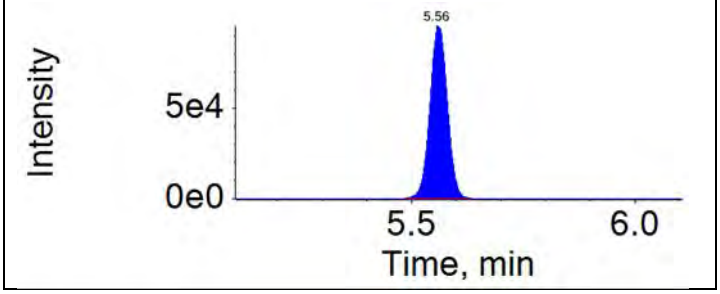
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



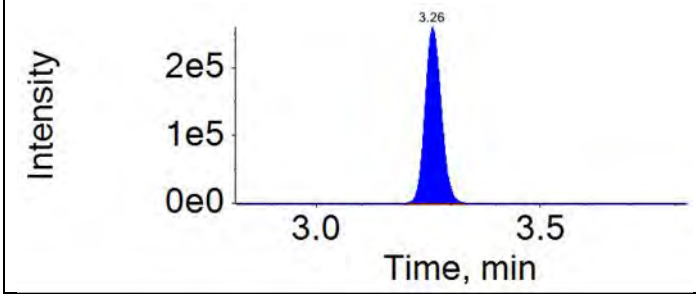
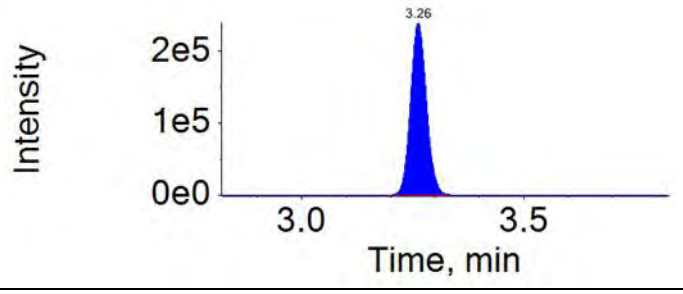
Injection Standard: 13C2-PFDA
515.0 / 470.0

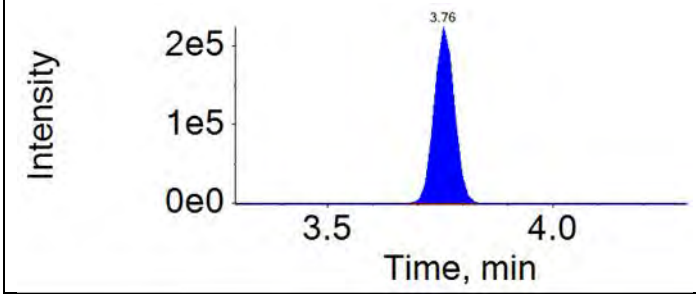
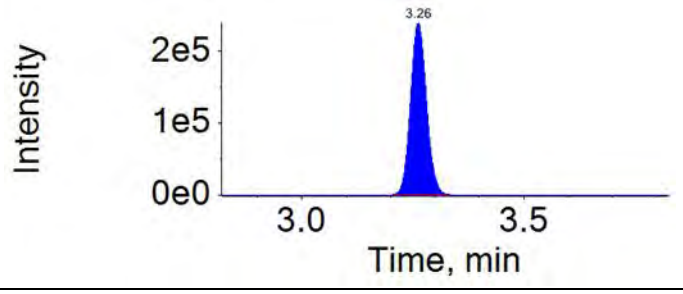


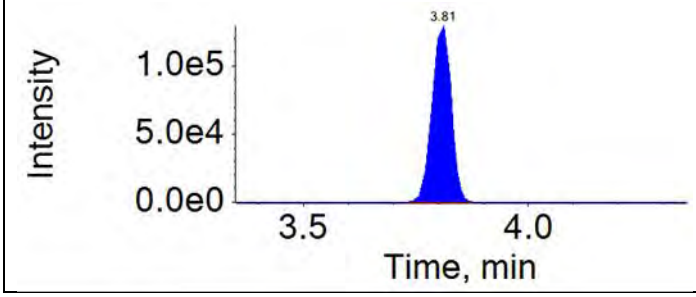
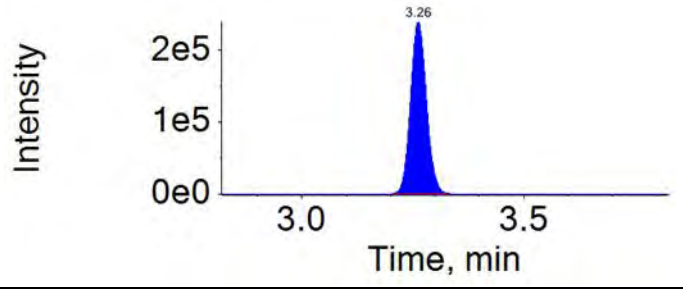
APPROVED
By JPT at 2:53 pm, 11/7/18

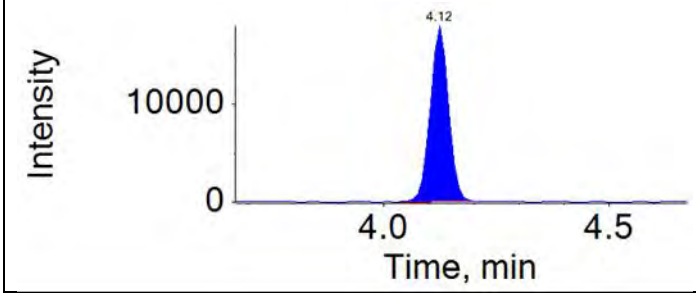
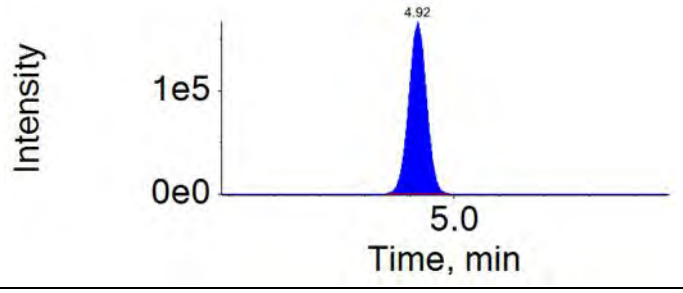
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

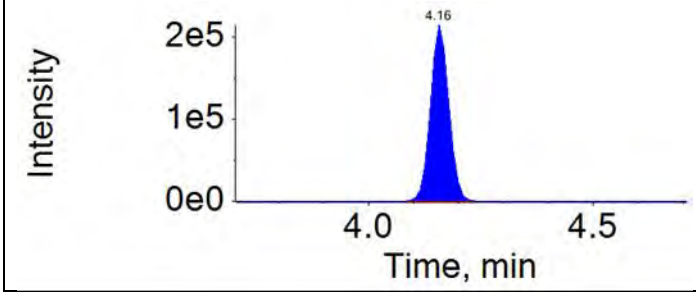
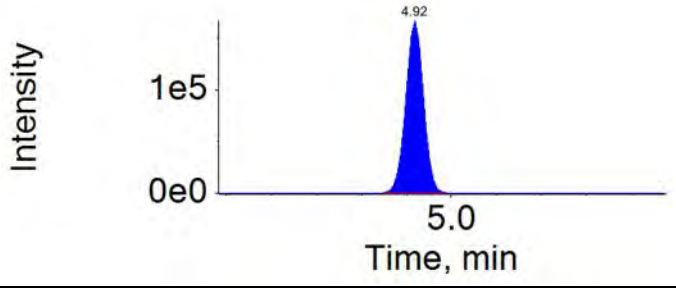
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

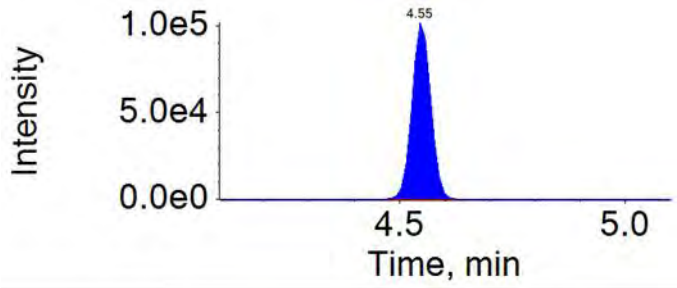
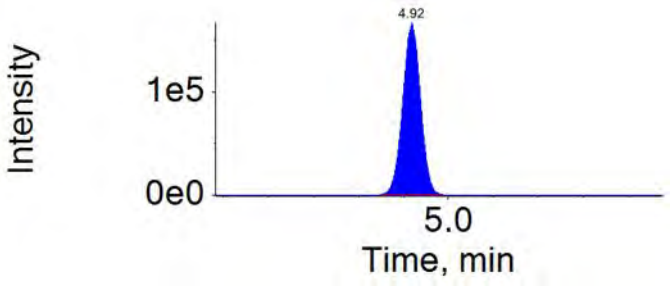
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

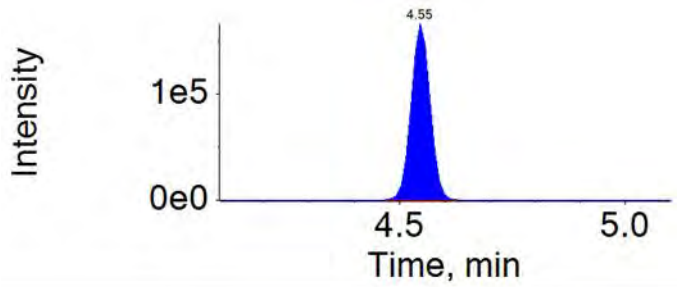
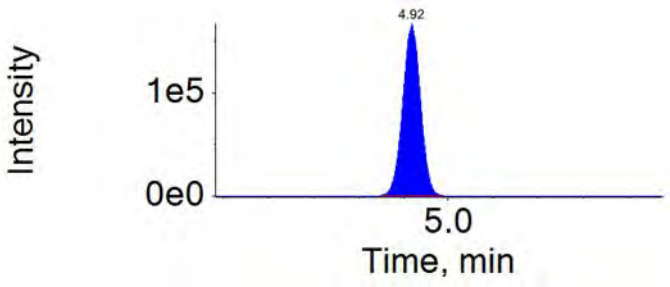
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

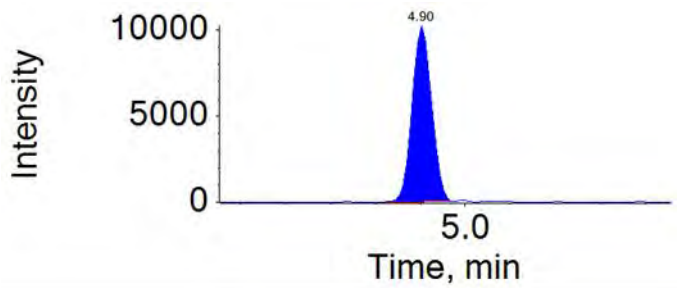
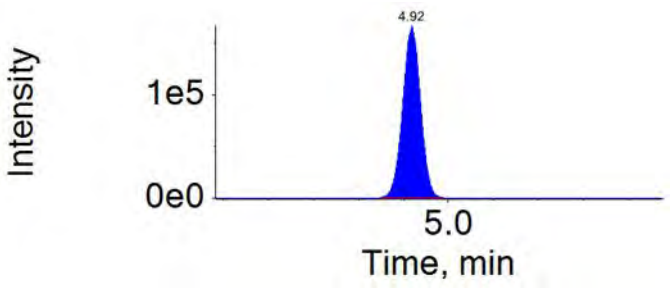
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

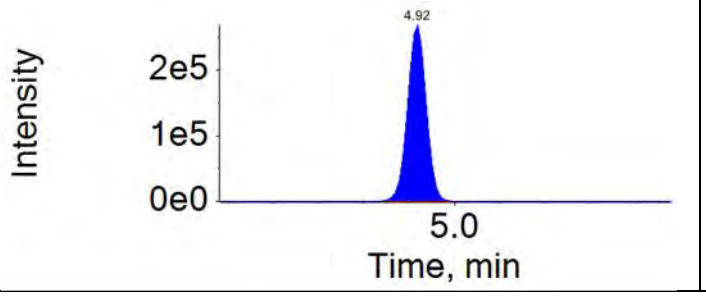
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

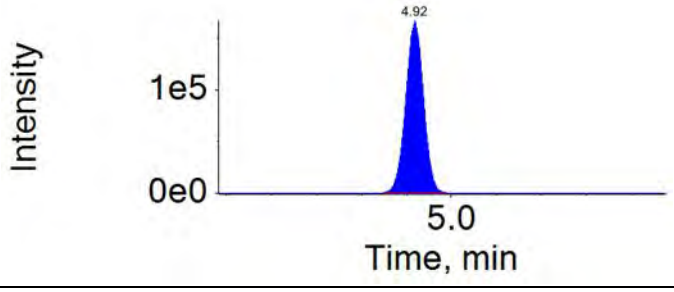
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

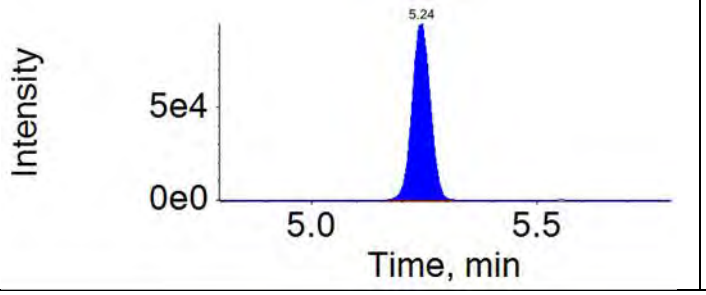
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

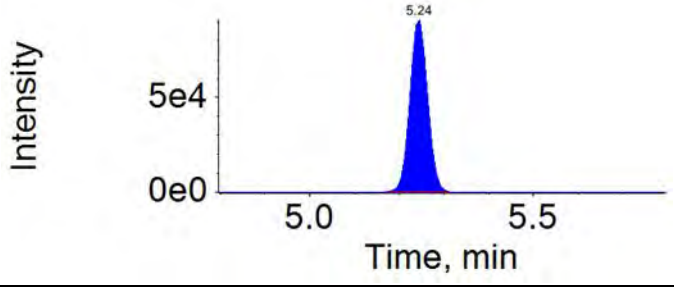
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



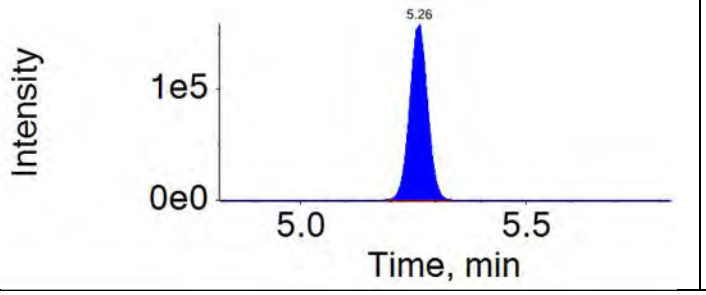


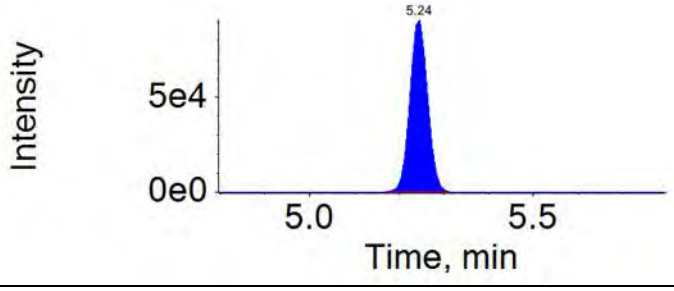
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



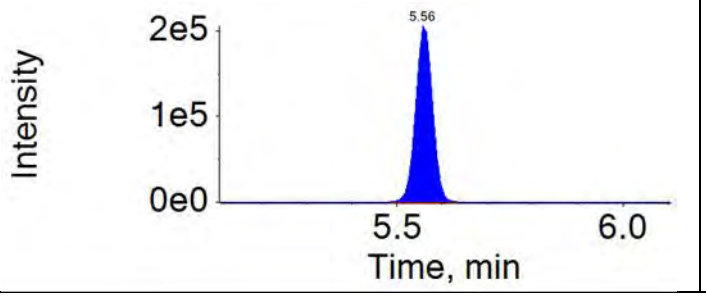


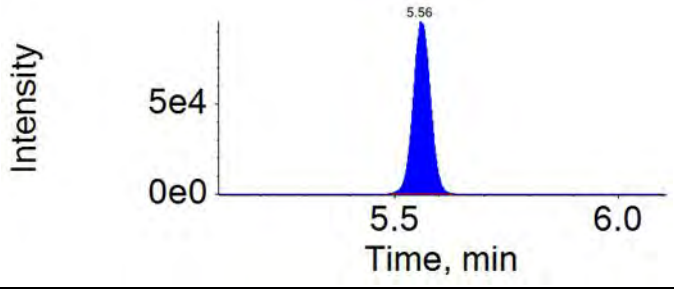
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

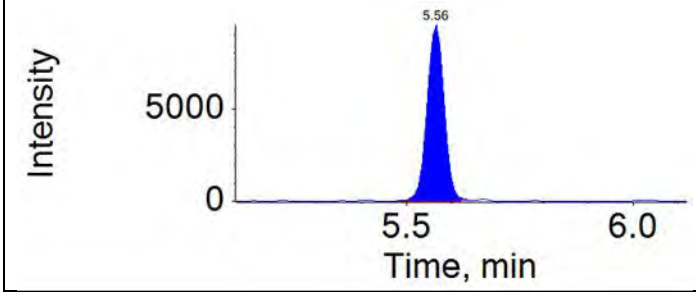
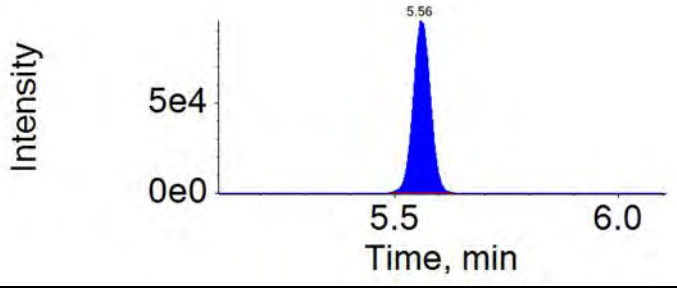


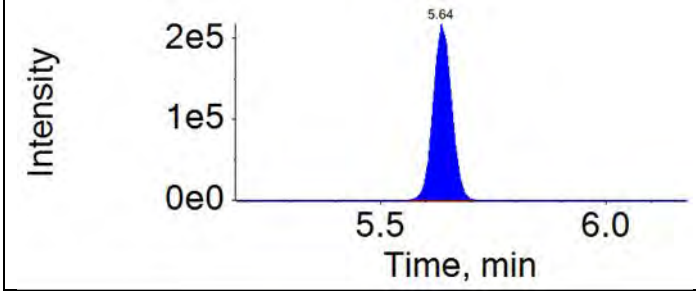
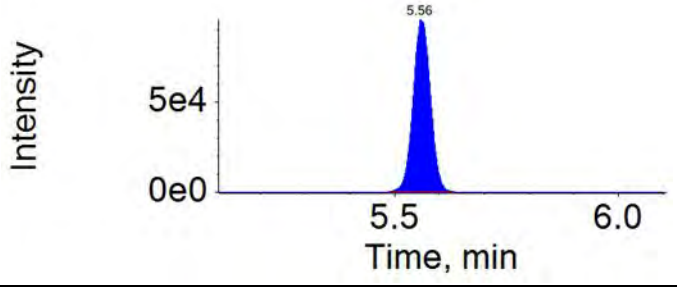


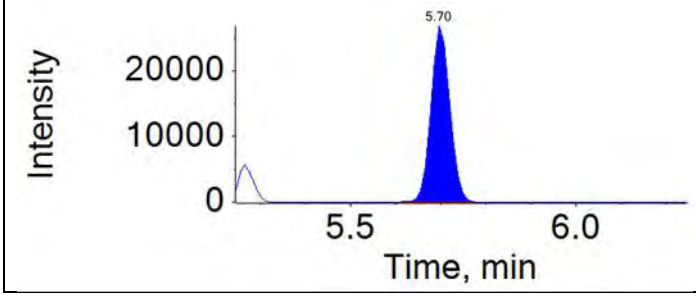
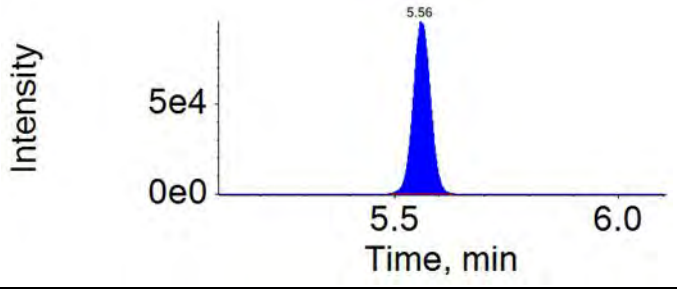
APPROVED
By JPT at 2:53 pm, 11/7/18

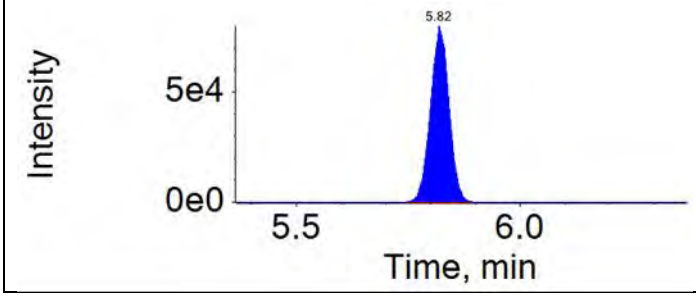
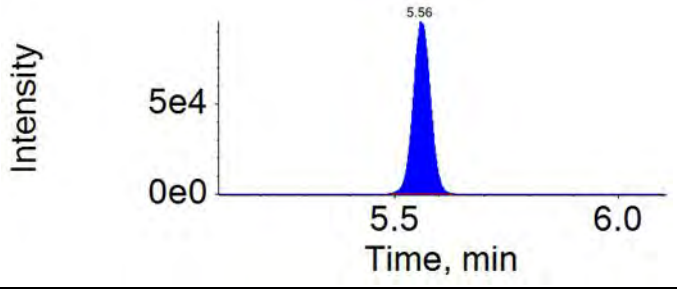
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

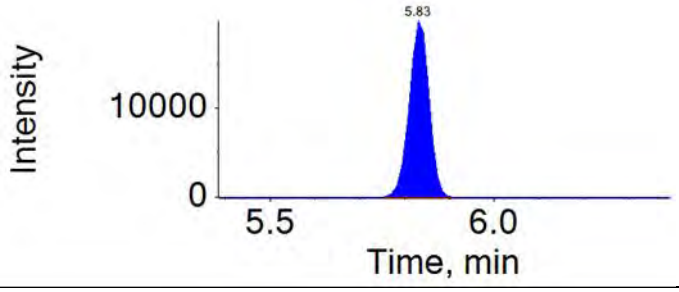
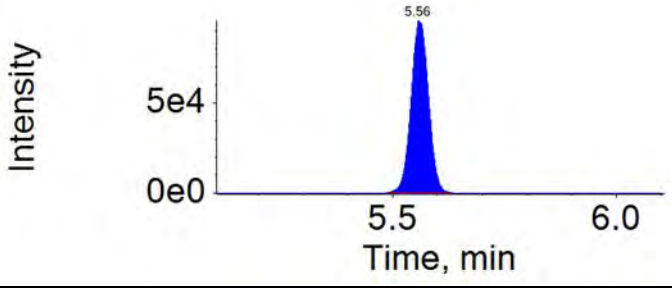
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

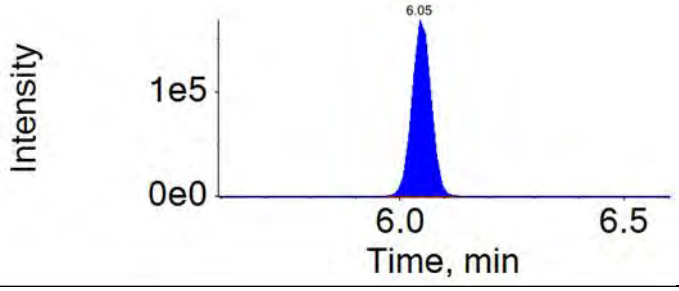
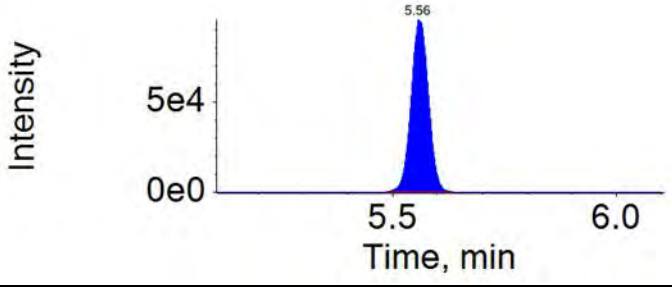
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

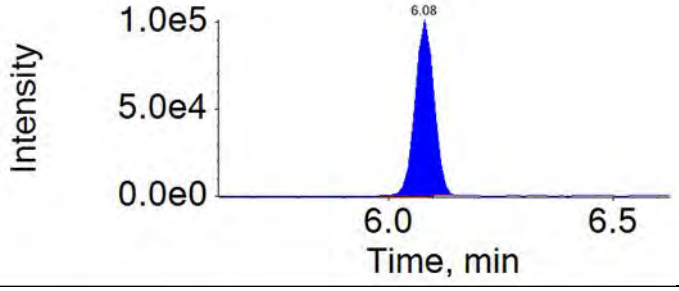
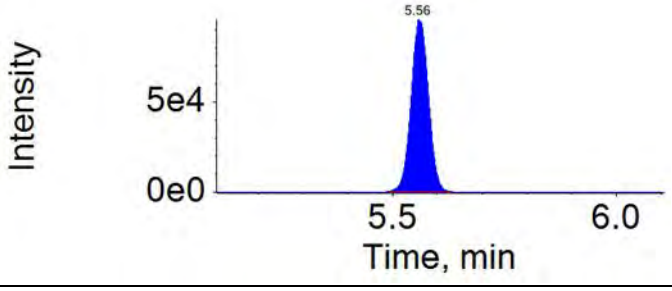
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

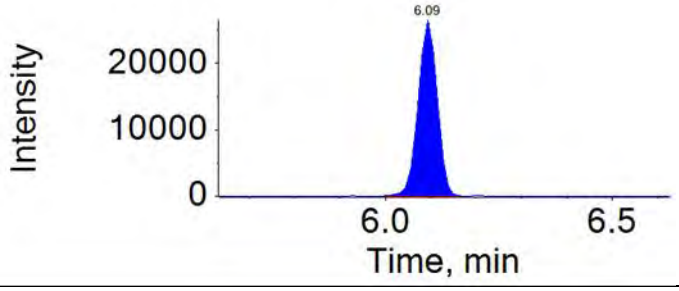
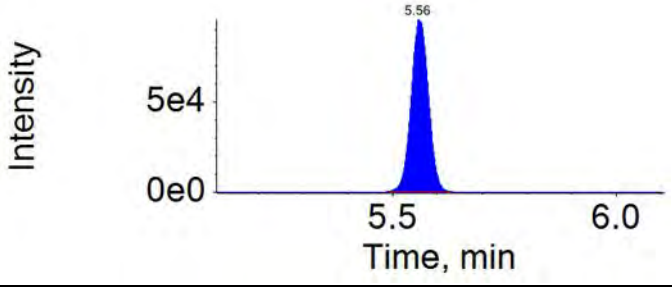
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

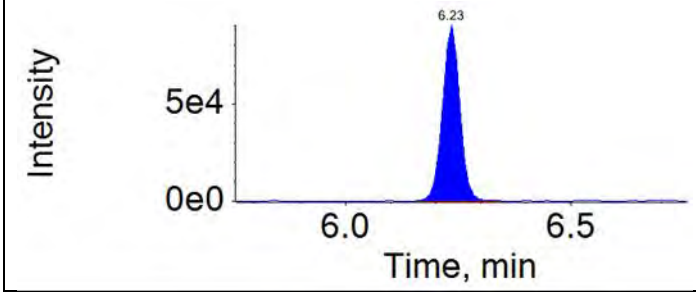
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

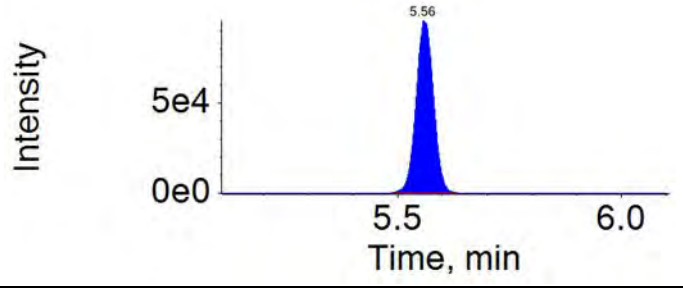
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

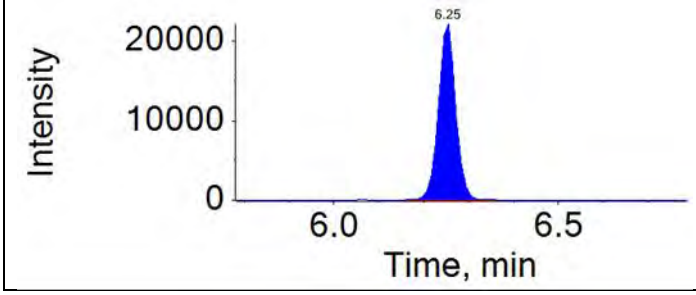
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

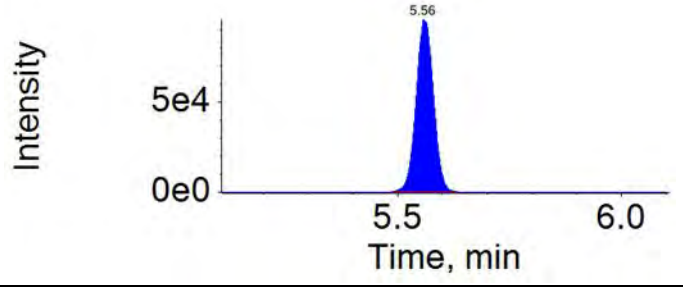
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



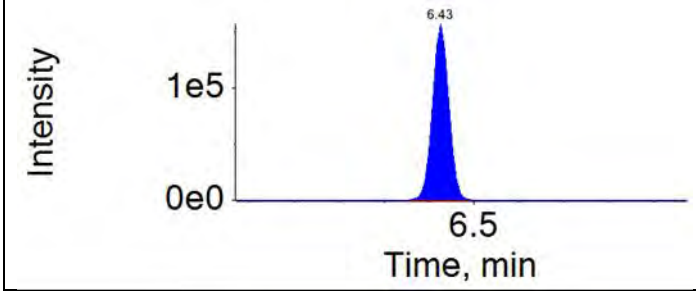


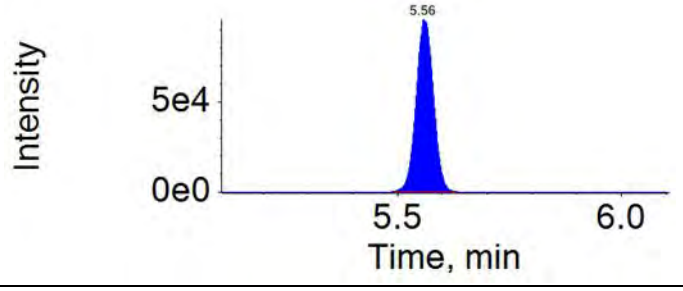
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



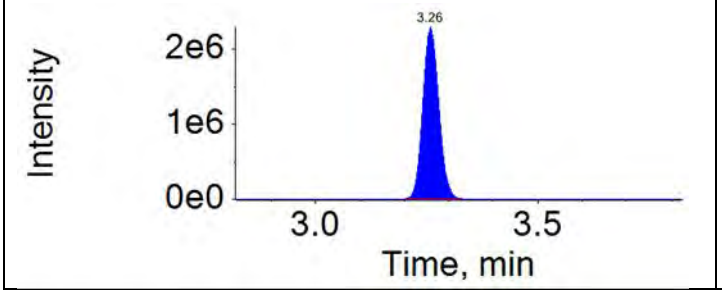


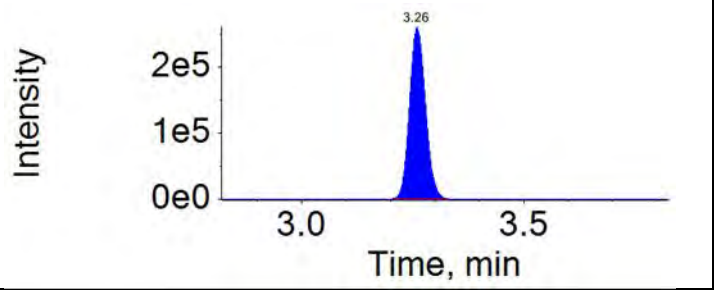
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

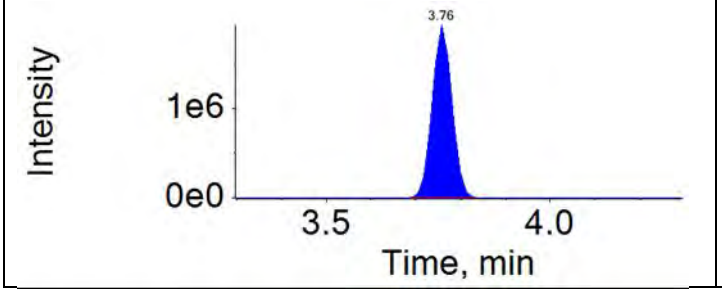
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

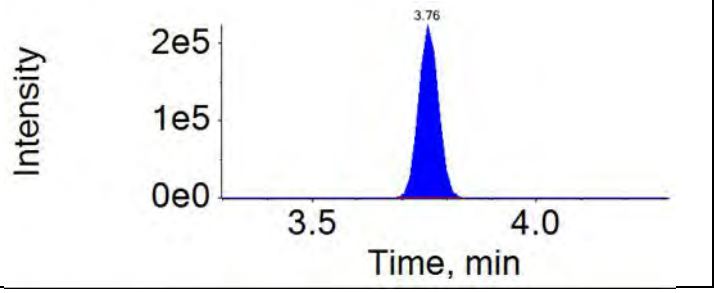
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



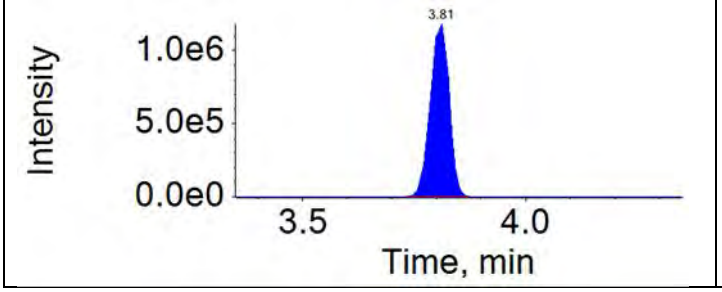


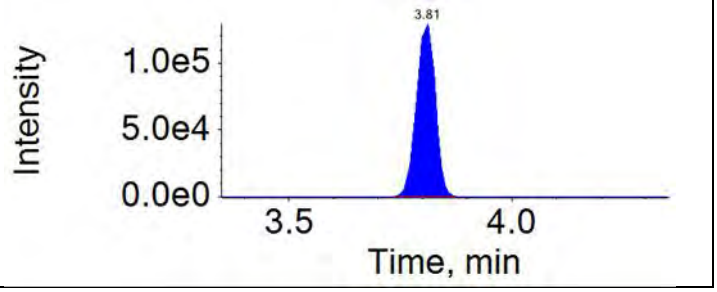
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



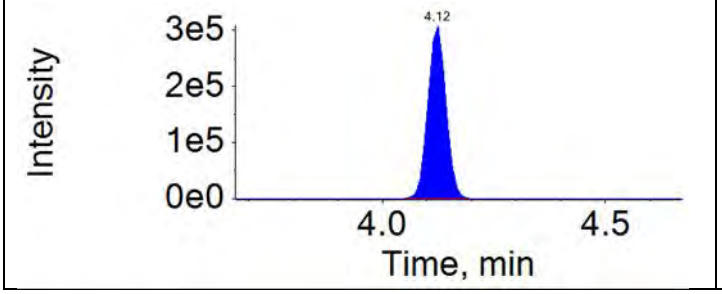


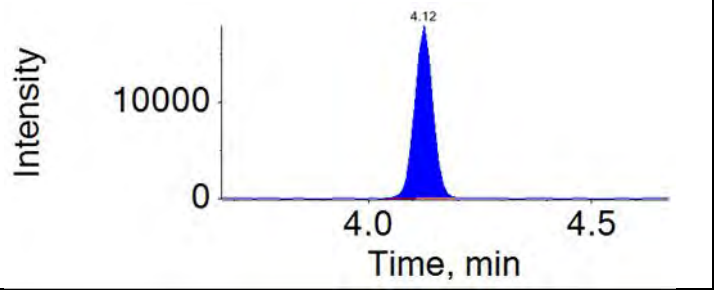
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

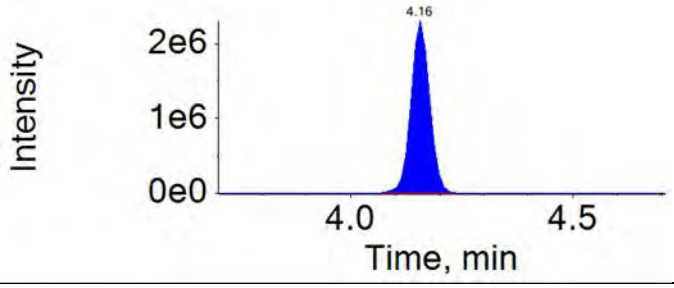
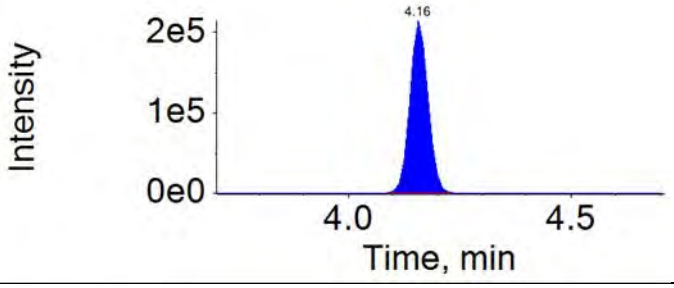


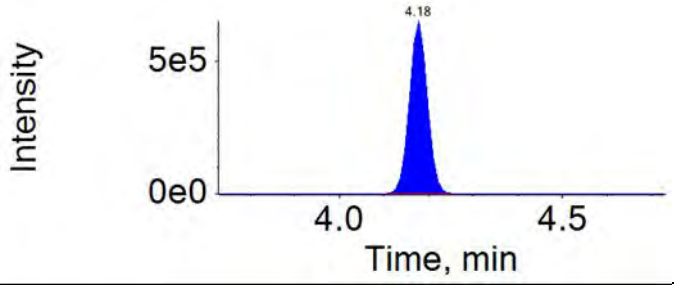
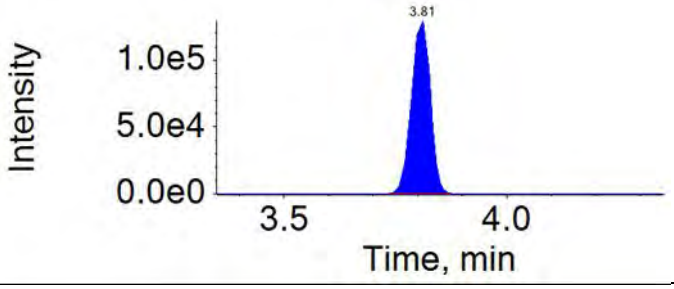


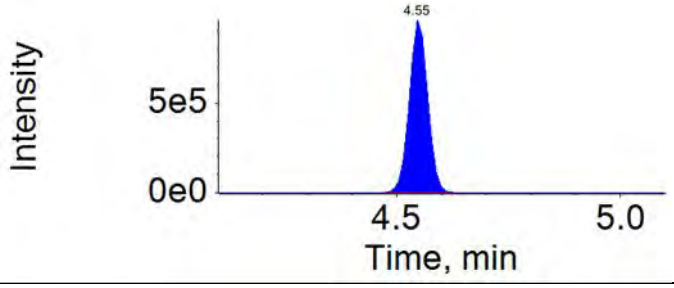
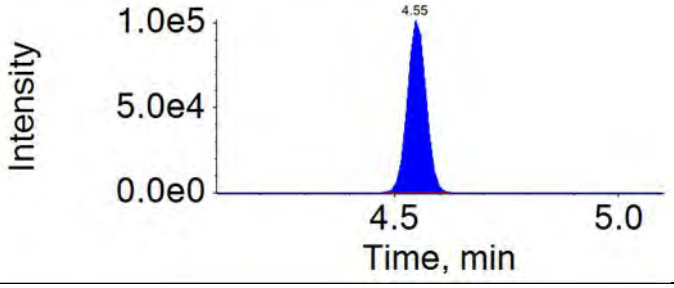
APPROVED
By JPT at 2:53 pm, 11/7/18

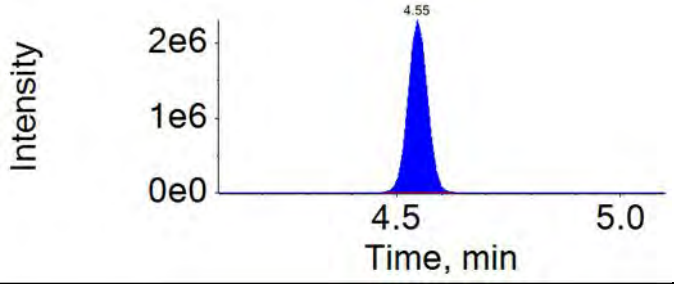
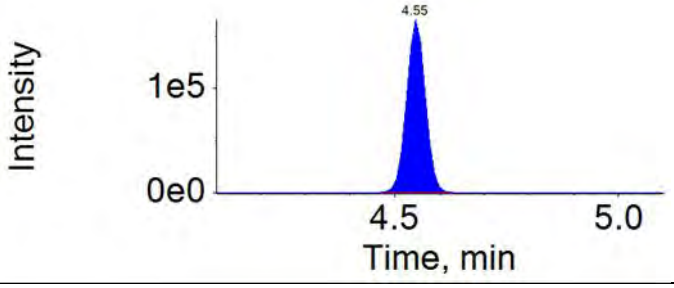
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

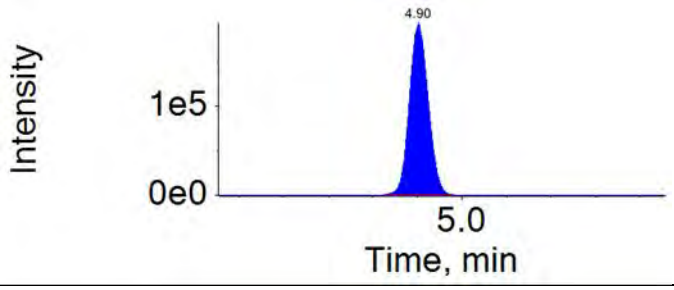
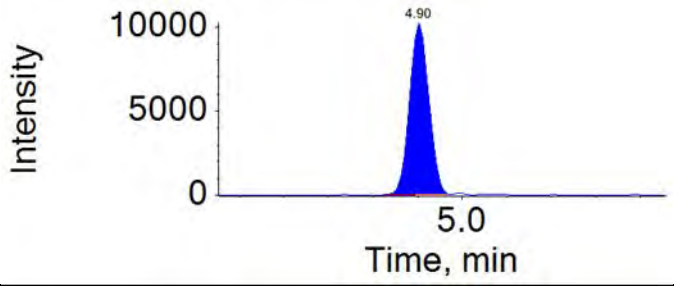
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

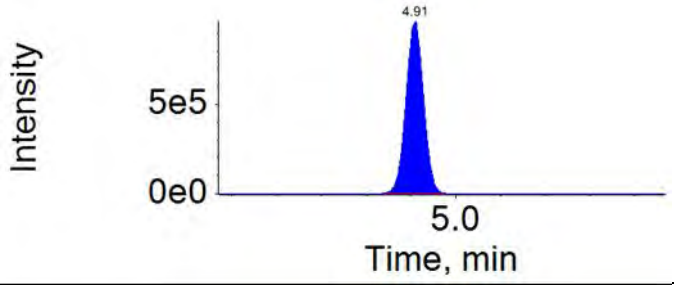
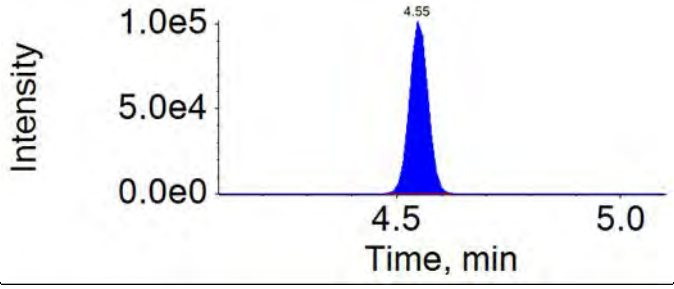
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

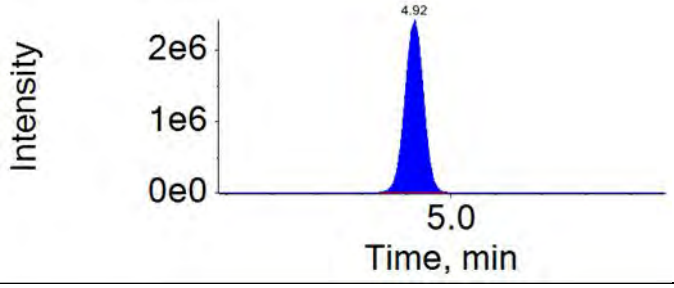
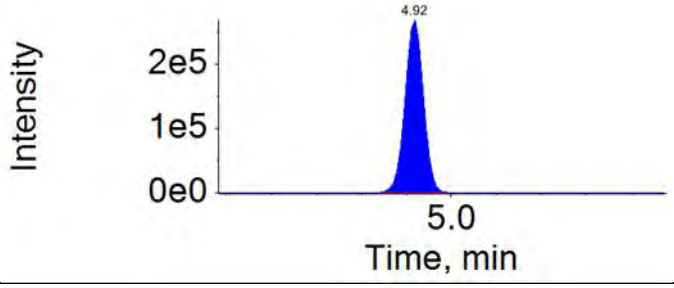
APPROVED
By JPT at 2:53 pm, 11/7/18

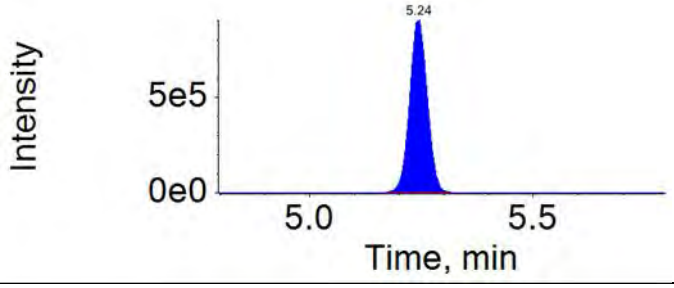
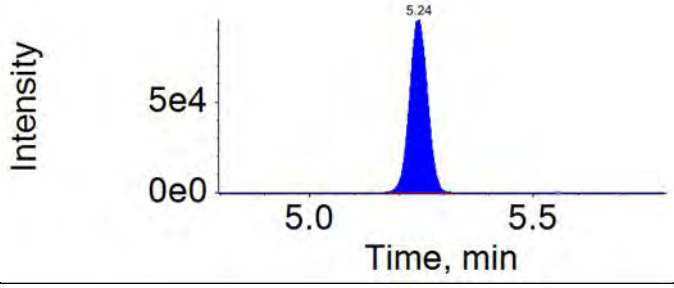
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

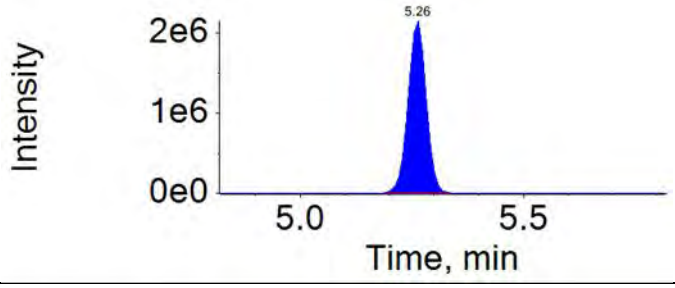
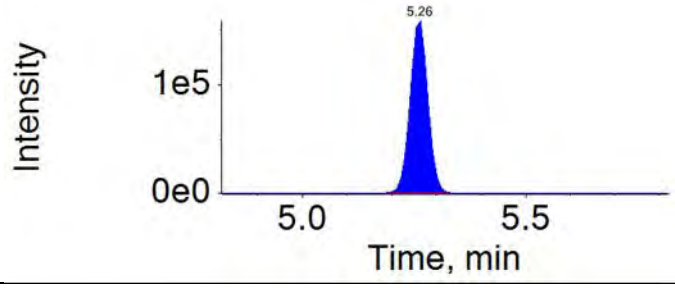
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

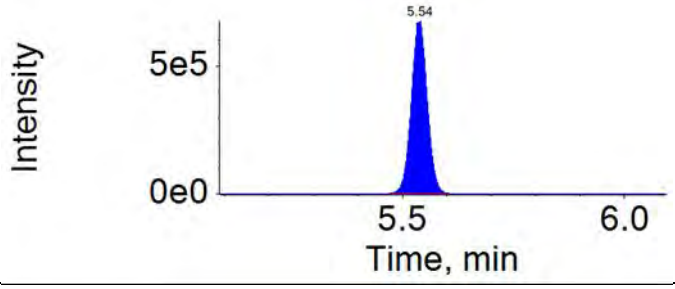
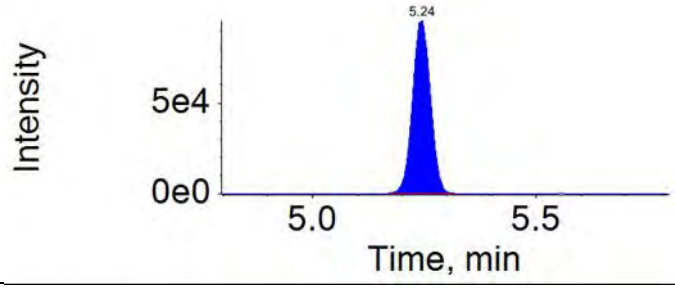
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

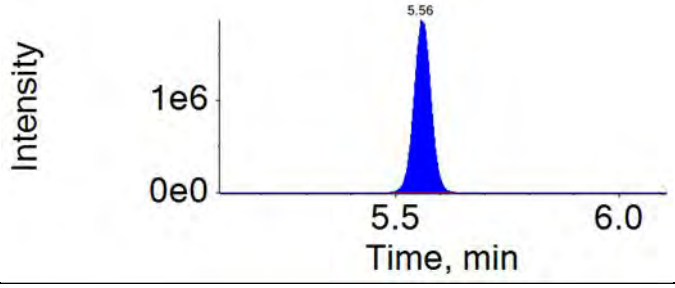
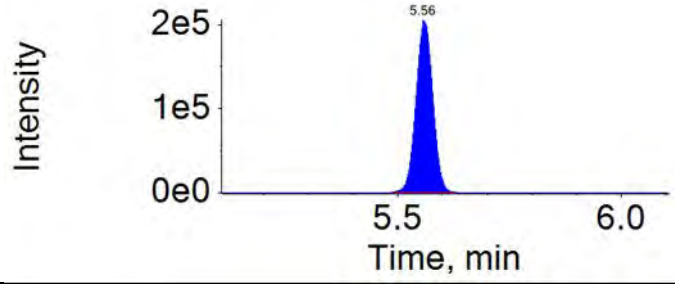
APPROVED
By JPT at 2:53 pm, 11/7/18

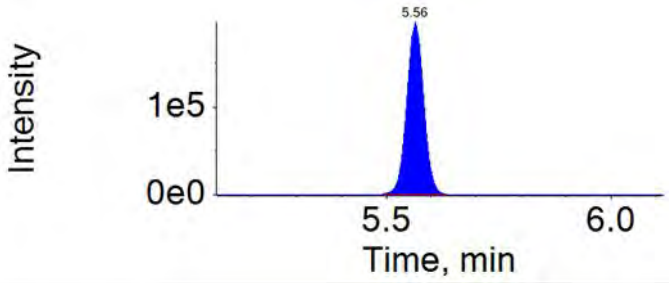
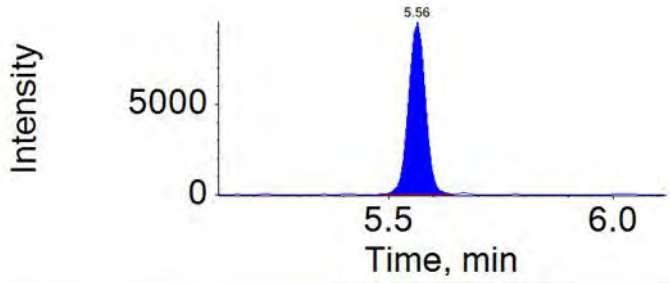
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

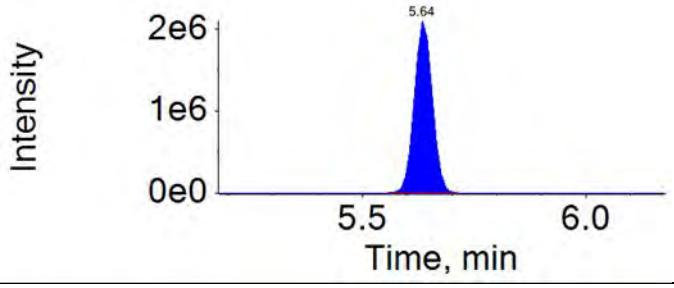
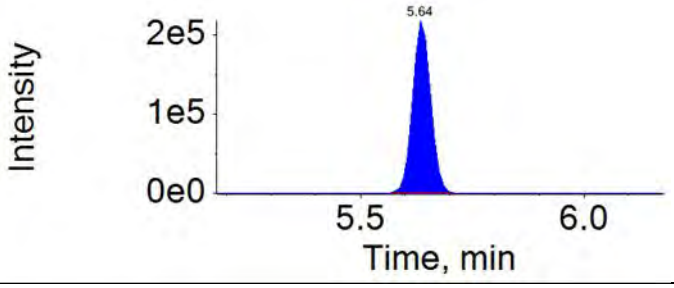
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

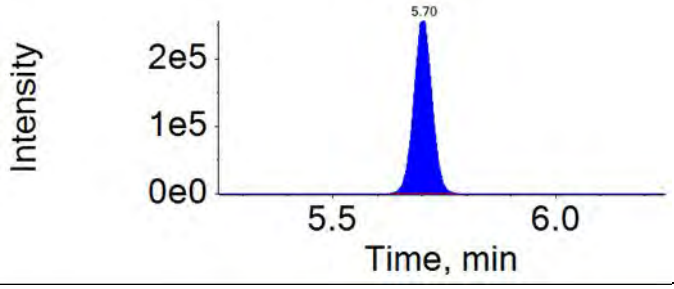
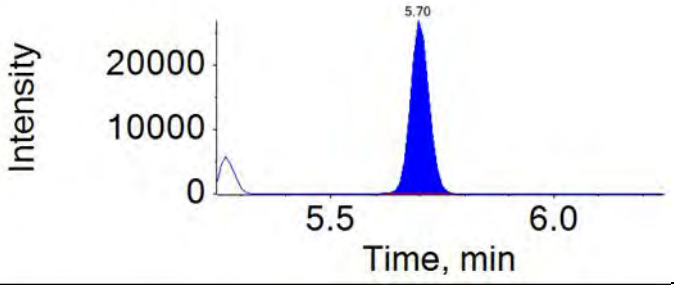
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

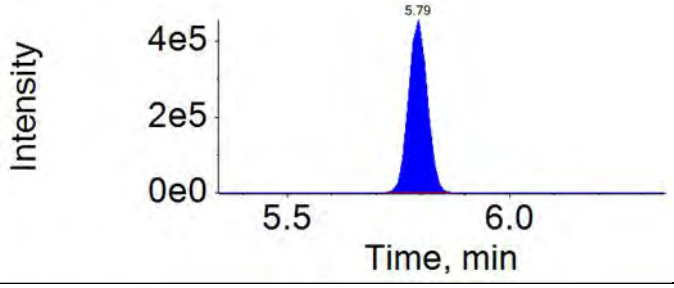
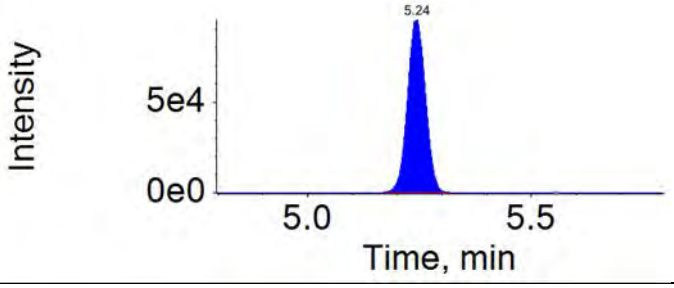
APPROVED
By JPT at 2:53 pm, 11/7/18

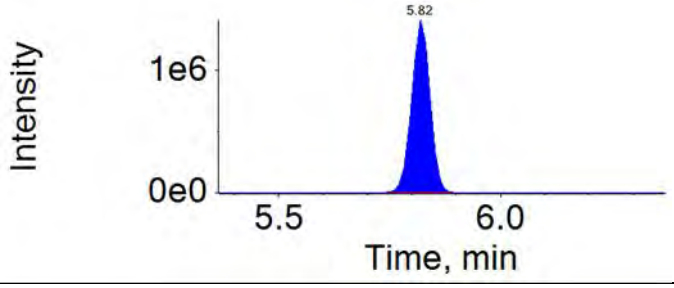
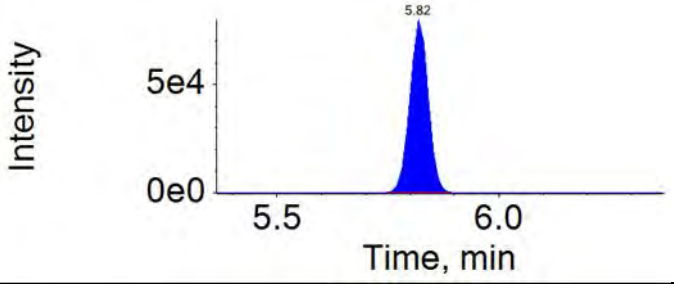
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

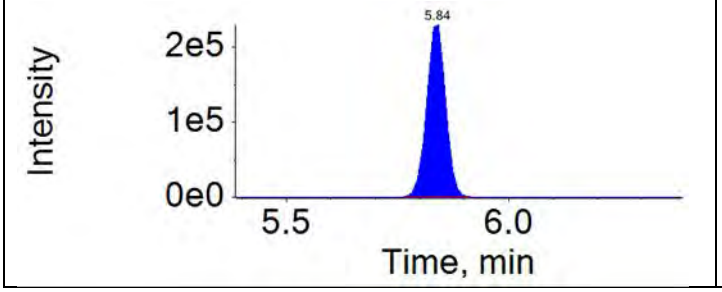
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

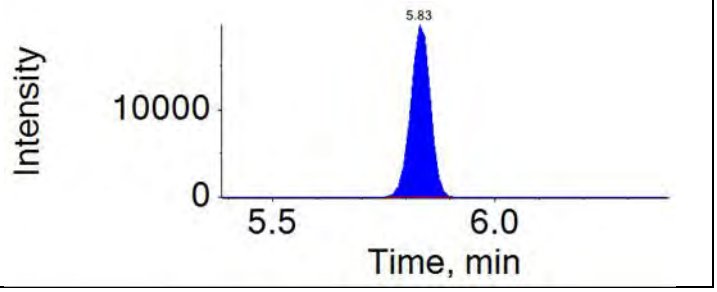
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

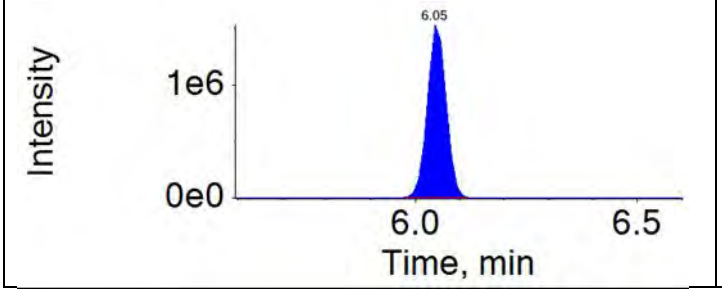
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

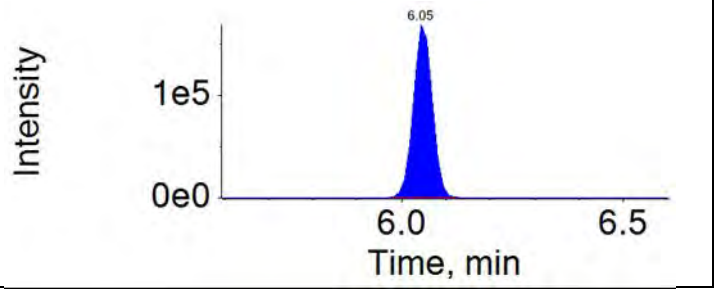
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



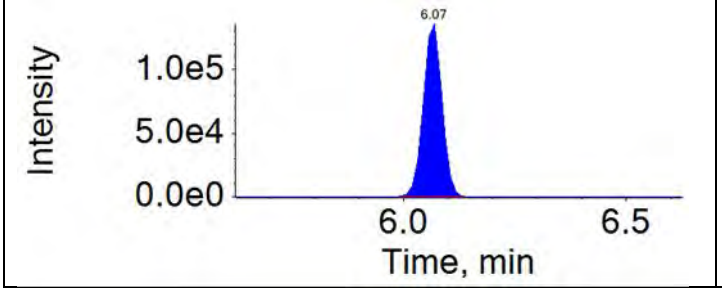


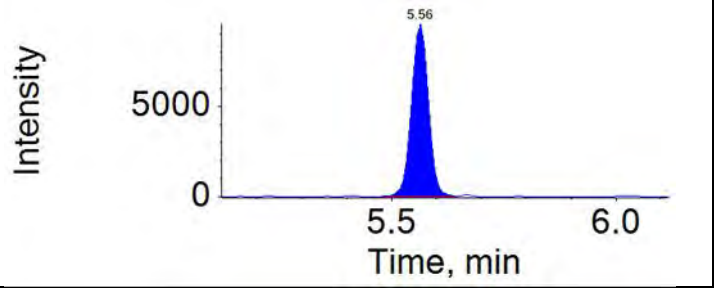
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



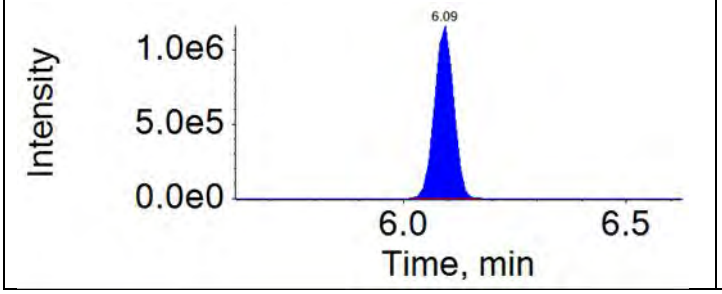


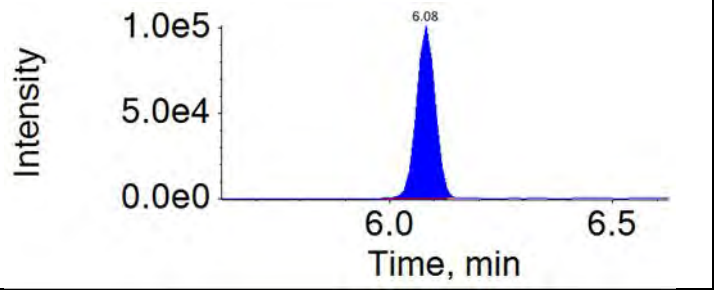
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



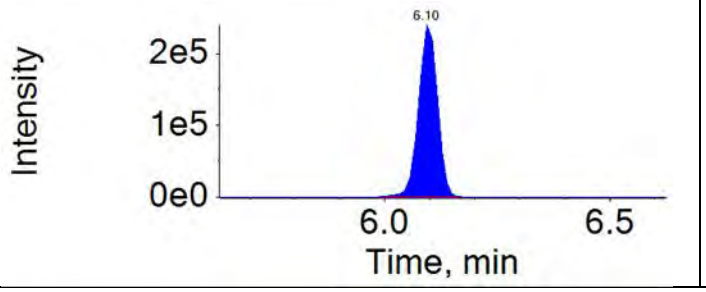


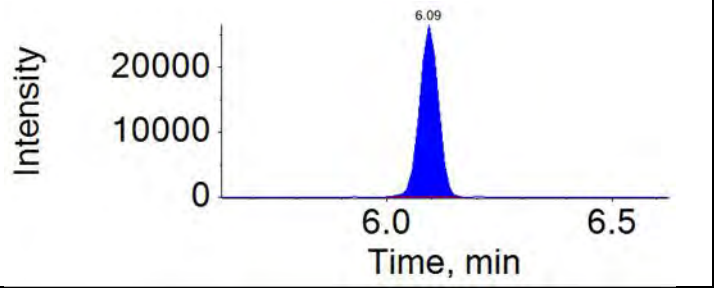
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

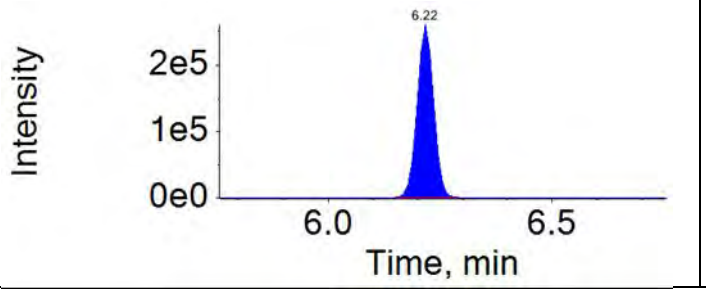
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

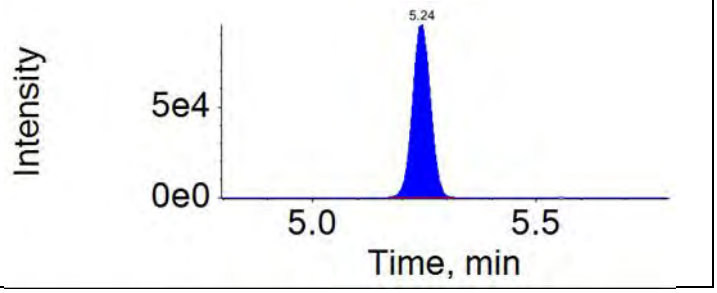
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



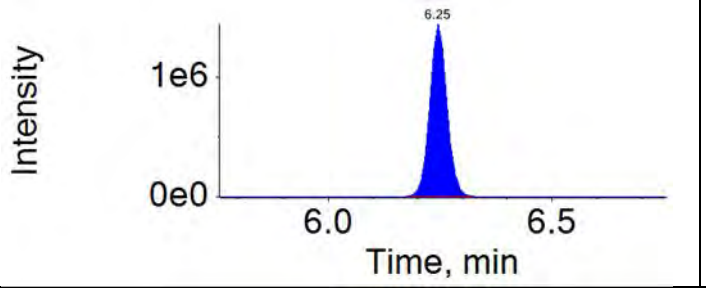


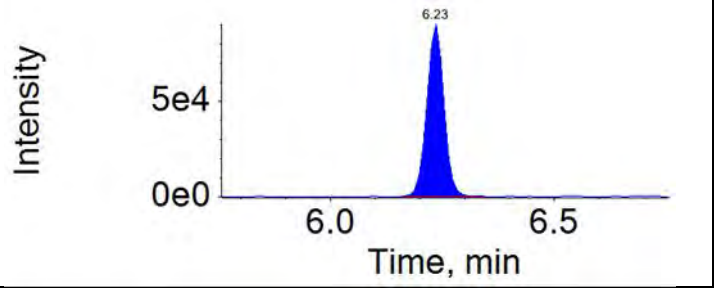
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



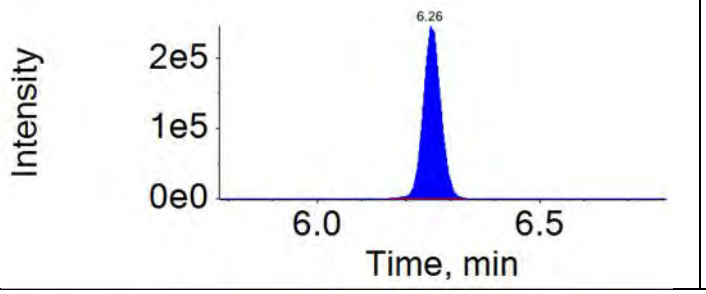


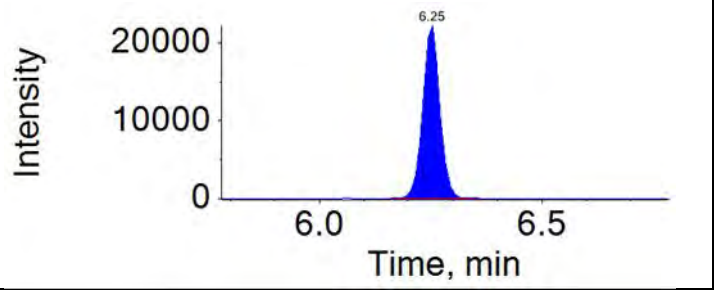
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

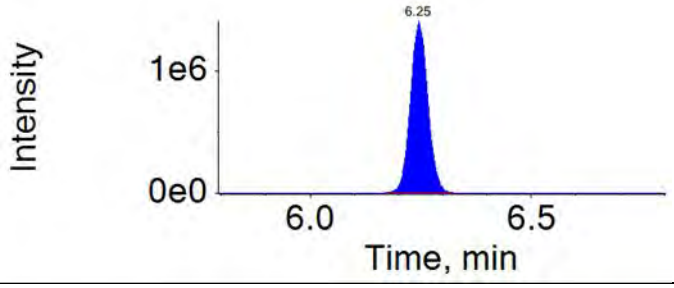
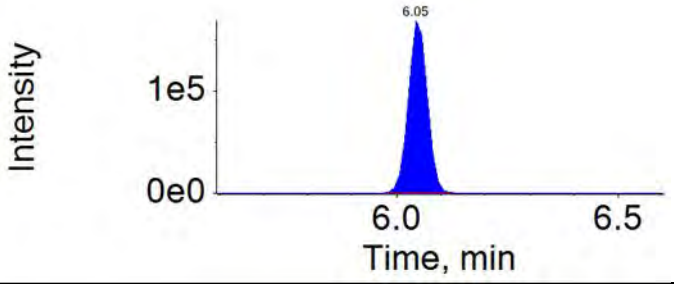


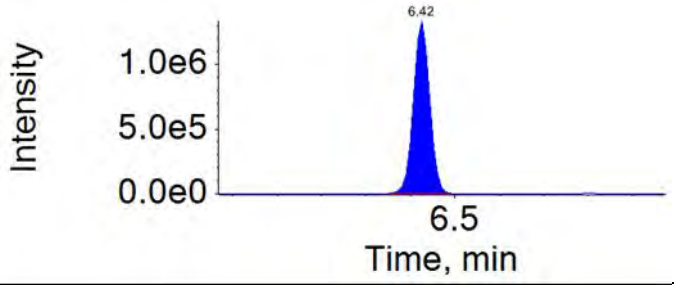
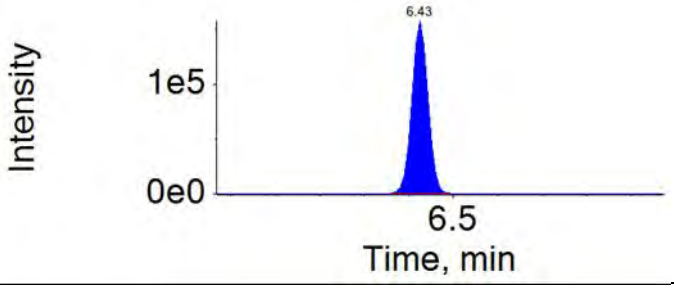


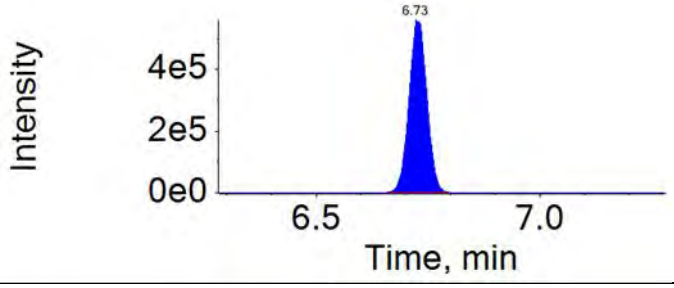
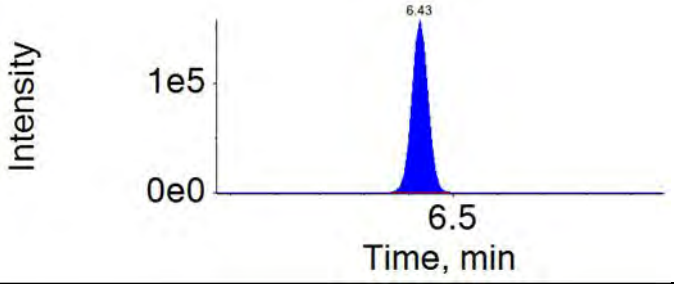
APPROVED
By JPT at 2:53 pm, 11/7/18

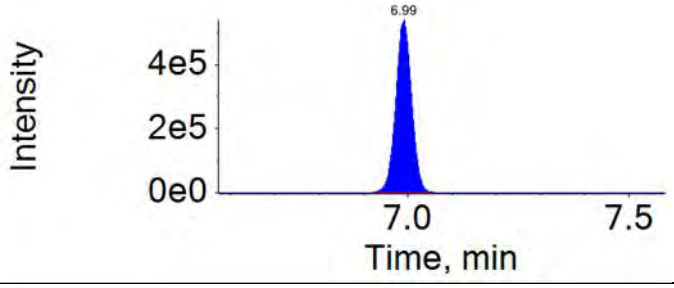
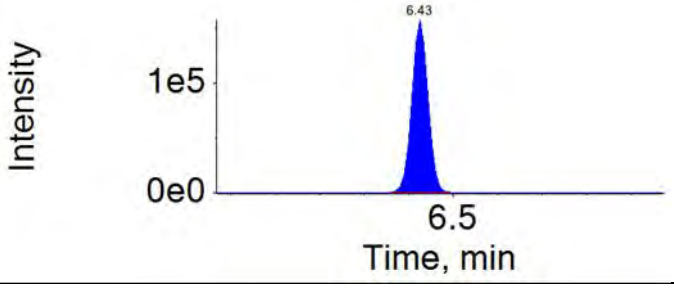
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

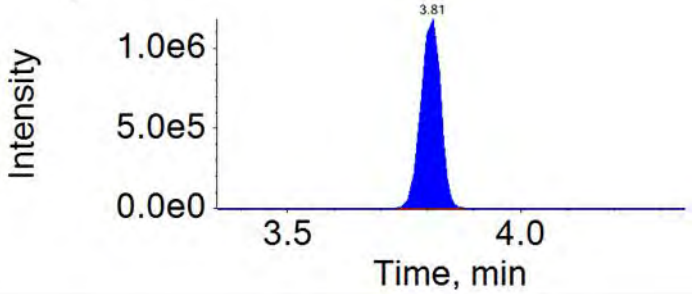
Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-15.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	3508201.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	1286846.1	A	0.3576	0.3668	3	50	
4:2-FTS	4.12	1.00	866263.6	A	1.0000	1.0000			
4:2-FTS_2	4.12	1.00	524123.7	A	0.6359	0.6050	-5	50	
PFHxA	4.16	1.00	6739327.9	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	77061.9	A	0.0115	0.0114	0	50	
PFPeS	4.18	1.10	1823355.9	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	993764.2	A	0.5384	0.5450	1	50	
PFHxS	4.55	1.00	2760712.8	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	964116.9	A	0.3569	0.3492	-2	50	
PFHpA	4.55	1.00	6940304.7	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	395462.8	A	0.0577	0.0570	-1	50	
6:2-FTS	4.90	1.00	566692.8	A	1.0000	1.0000			
6:2-FTS_2	4.90	1.00	369783.6	A	0.6752	0.6525	-3	50	
PFHpS	4.91	1.08	2648512.9	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	1077513.1	A	0.3950	0.4068	3	50	
PFOA	4.92	1.00	7023921.1	A	1.0000	1.0000			
PFOA_2	4.92	1.00	420903.3	A	0.0635	0.0599	-6	50	
PFOS	5.24	1.00	2487687.4	A	1.0000	1.0000			
PFOS_2	5.24	1.00	854704.9	A	0.3494	0.3436	-2	50	
PFNA	5.26	1.00	6070259.1	A	1.0000	1.0000			
PFNA_2	5.26	1.00	127695.8	A	0.0207	0.0210	2	50	
PFNS	5.54	1.06	1684601.2	A	1.0000	1.0000			
PFNS_2	5.54	1.06	776478.1	A	0.4890	0.4609	-6	50	
PFDA	5.56	1.00	4962332.7	A	1.0000	1.0000			
PFDA_2	5.56	1.00	33135.1	A	0.0057	0.0067	18	50	
8:2-FTS	5.56	1.00	516640.5	A	1.0000	1.0000			
8:2-FTS_2	5.56	1.00	308500.7	A	0.6169	0.5971	-3	50	
NMeFOSAA	5.70	1.00	740651.6	A	1.0000	1.0000			
NMeFOSAA_2	5.70	1.00	170978.8	A	0.2206	0.2308	5	50	
PFDS	5.79	1.11	1337416.6	A	1.0000	1.0000			
PFDS_2	5.79	1.10	697007.4	A	0.4648	0.5212	12	50	
PFUnDA	5.82	1.00	4071590.3	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	14961.6	A	0.0031	0.0037	17	50	
NEtFOSAA	5.84	1.00	685447.7	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	416391.3	A	0.6082	0.6075	0	50	
PFDoDA	6.05	1.00	4509578.7	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	57065.9	A	0.0109	0.0127	16	50	
10:2-FTS	6.07	1.09	395929.8	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	276017.2	A	0.7082	0.6971	-2	50	
PFTrDA	6.25	1.03	3829048.4	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	35358.1	A	0.0096	0.0092	-4	50	
PFTeDA	6.42	1.00	3381511.1	A	1.0000	1.0000			
PFTeDA_2	6.42	1.00	21143.9	A	0.0055	0.0063	13	50	
PFHxDA	6.73	1.05	1559604.6	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	97226.7	A	0.0596	0.0623	5	50	
PFODA	6.99	1.09	1340733.9	A	1.0000	1.0000			
PFODA_2	6.99	1.09	34220.3	A	0.0257	0.0255	-1	50	

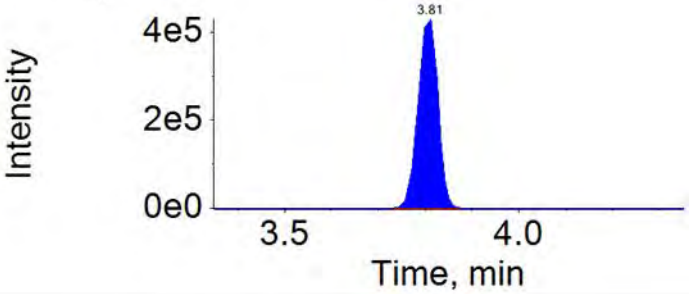
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

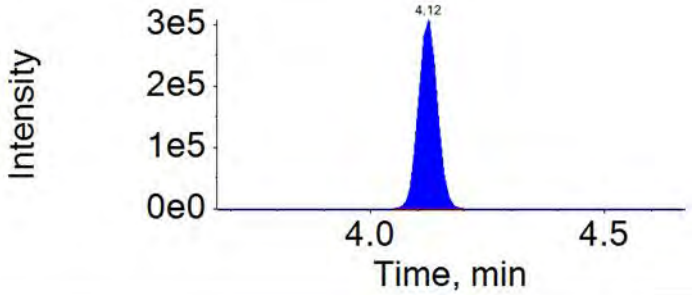
Component: PFBS
Primary Mass: 299.0 / 80.0



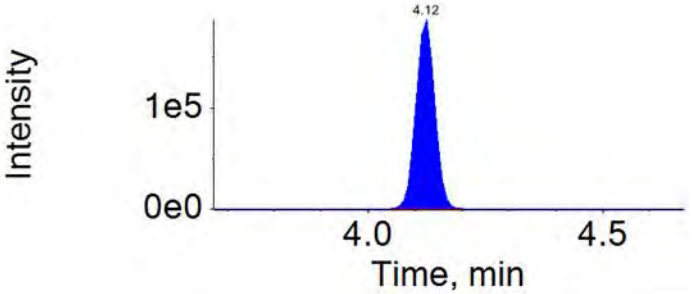
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



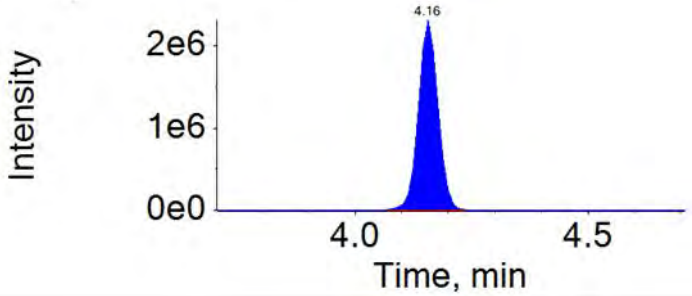
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



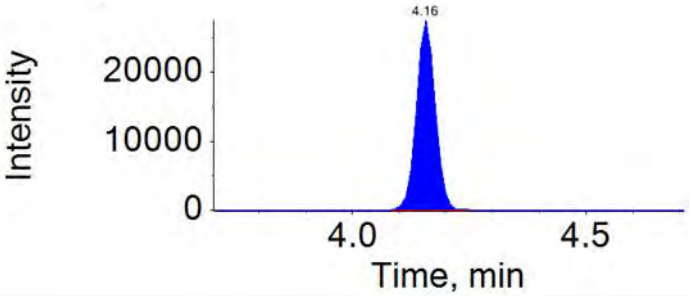
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



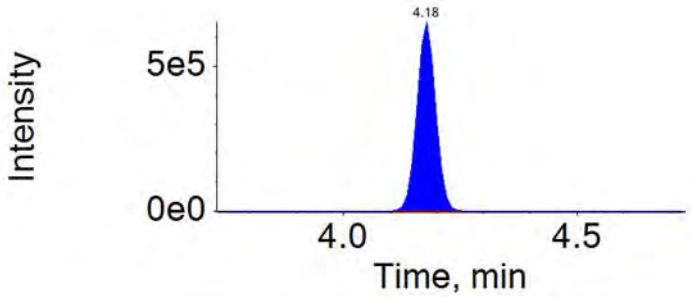
Component: PFHxA
Primary Mass: 313.0 / 269.0



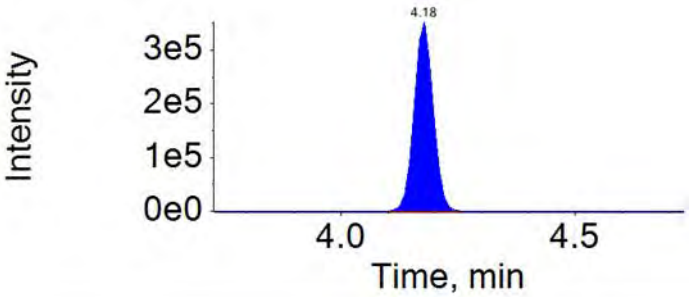
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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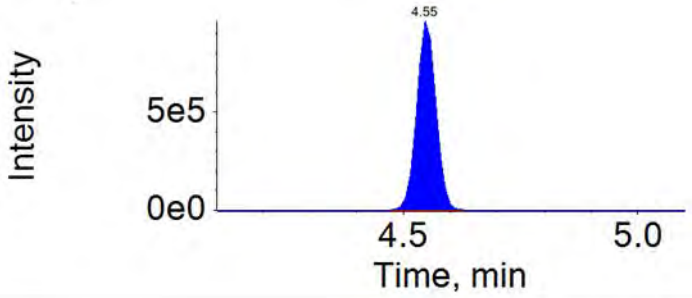
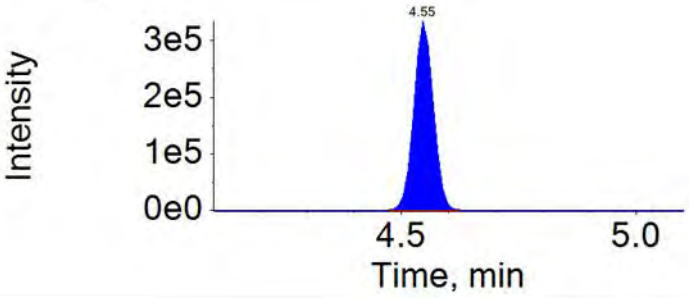
By umar at 5:23 pm, 11/9/18

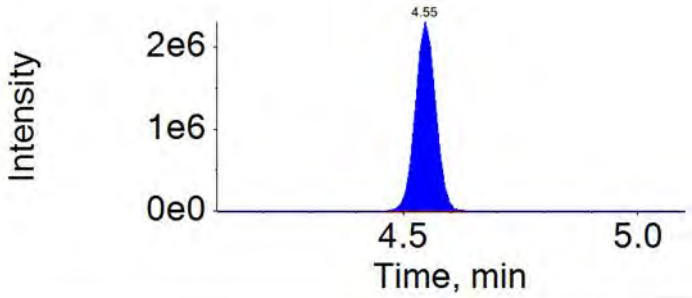
Component: PFHxS
Primary Mass: 399.0 / 80.0



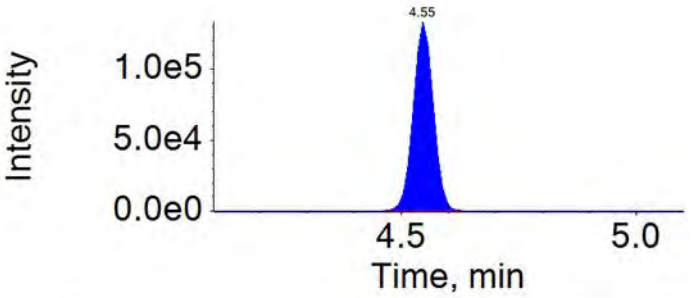
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



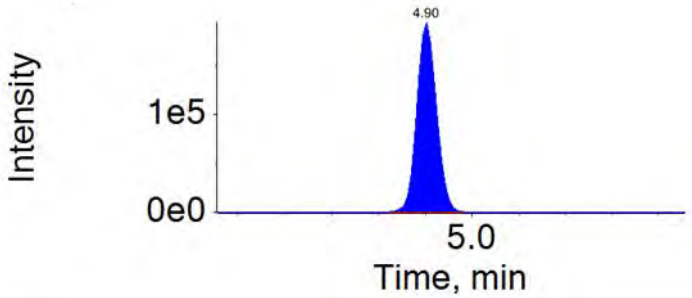
Component: PFHpA
Primary Mass: 363.0 / 319.0



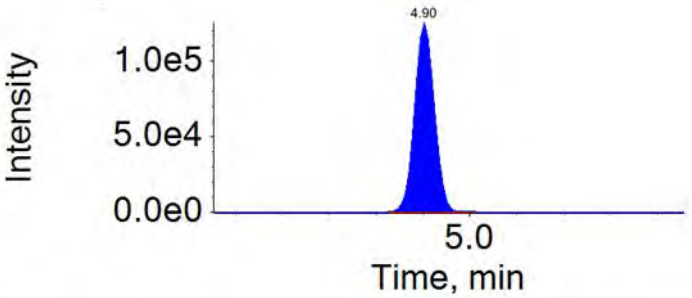
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



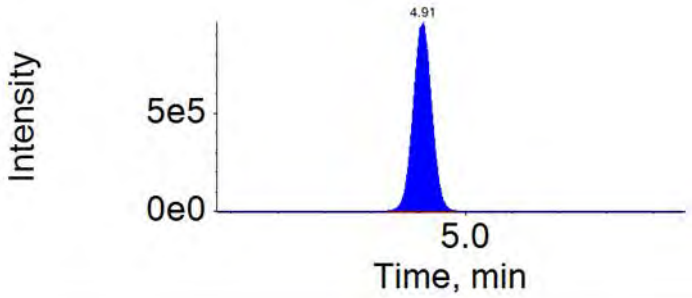
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



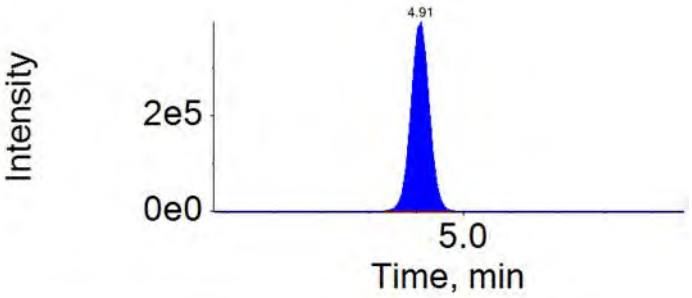
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



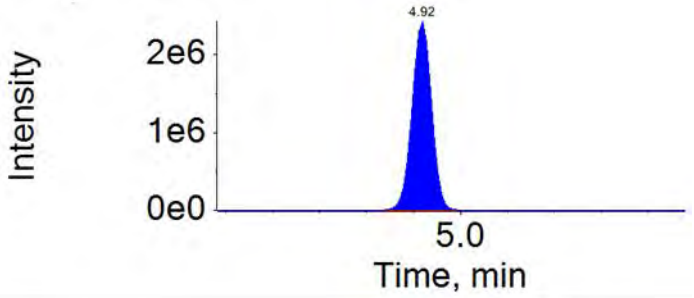
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



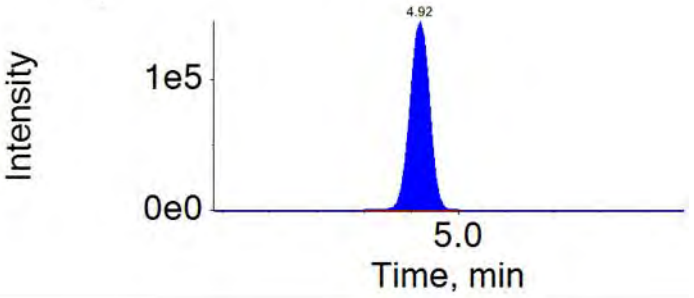
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

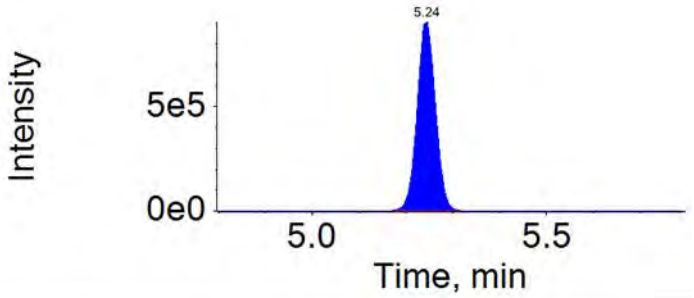
Component: PFOA
Primary Mass: 413.0 / 369.0



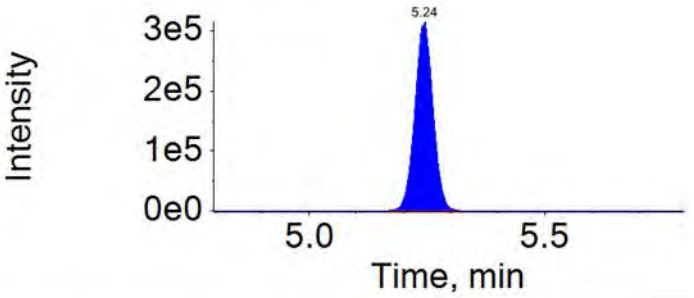
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



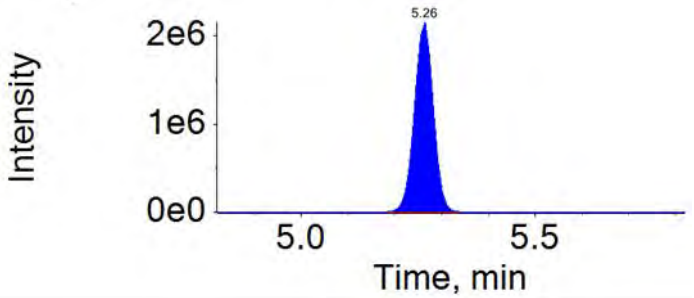
Component: PFOS
Primary Mass: 499.0 / 80.0



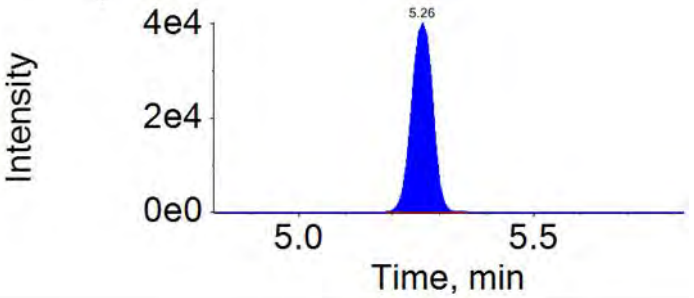
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



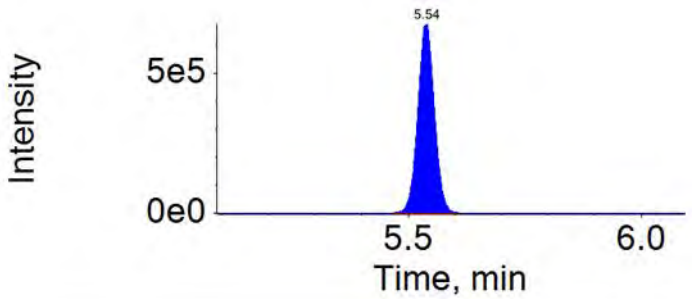
Component: PFNA
Primary Mass: 463.0 / 419.0



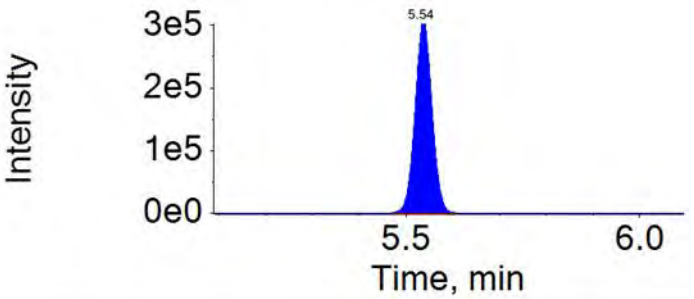
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



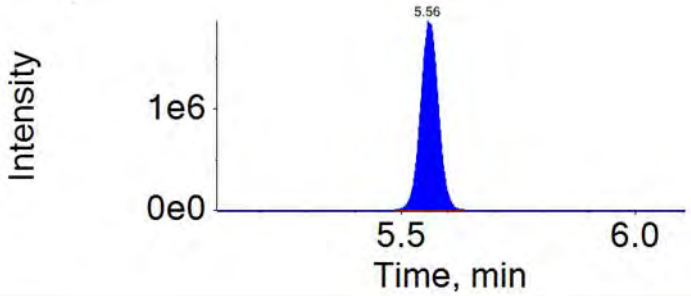
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



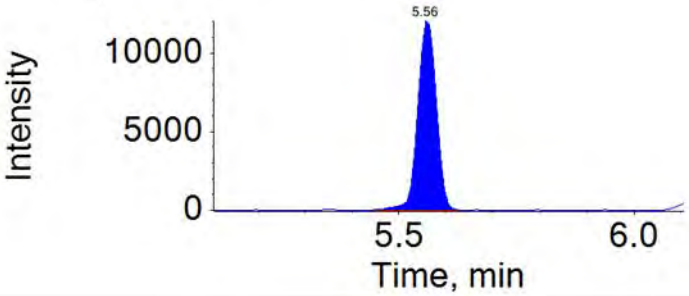
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

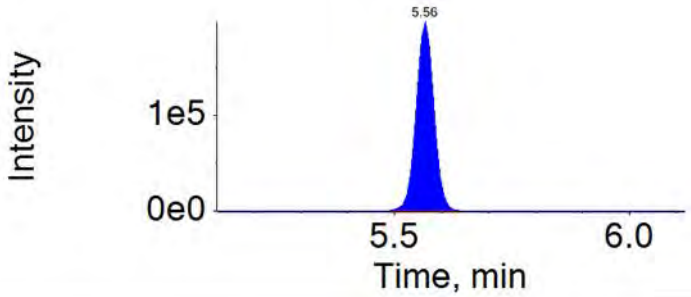
Component: PFDA
Primary Mass: 513.0 / 469.0



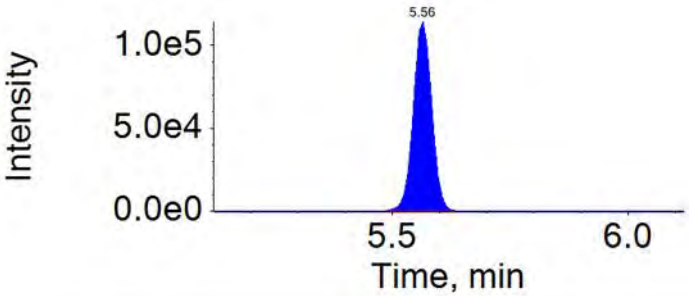
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



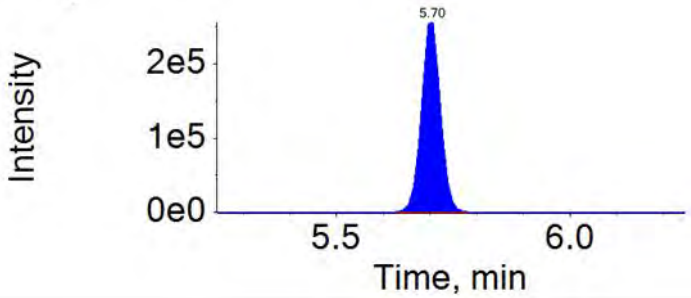
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



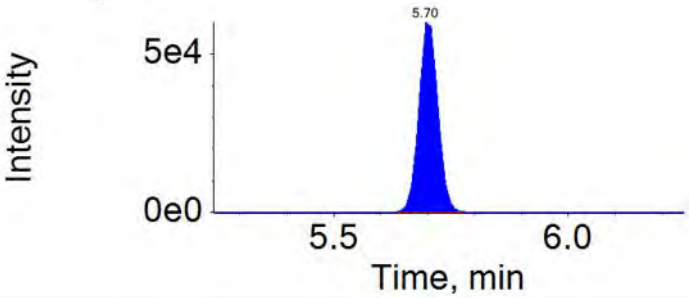
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



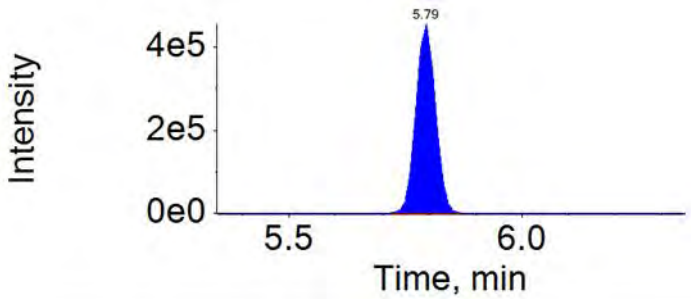
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



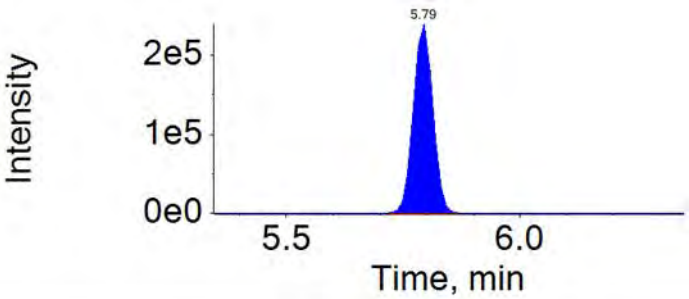
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



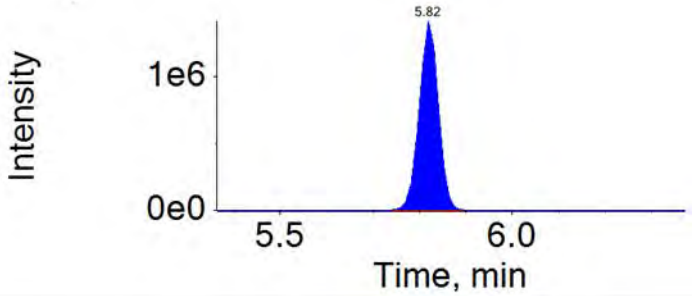
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



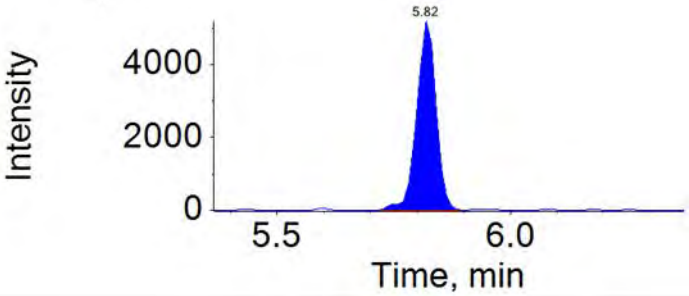
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

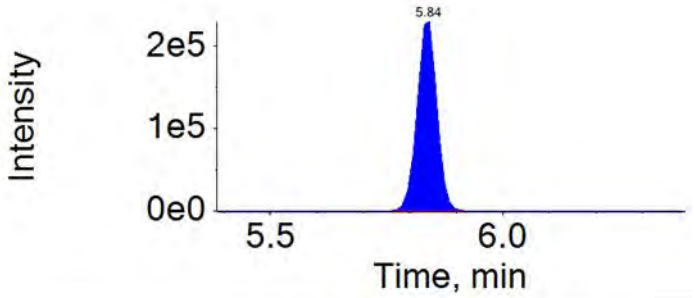
Component: PFUnDA
Primary Mass: 563.0 / 519.0



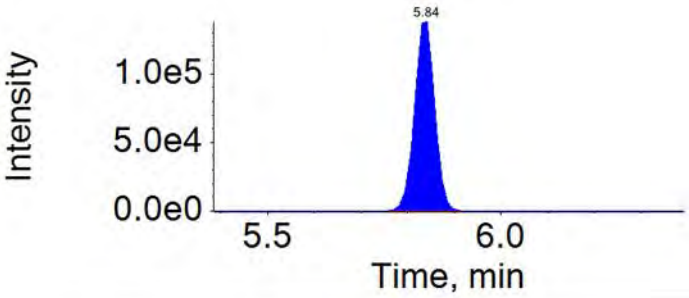
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



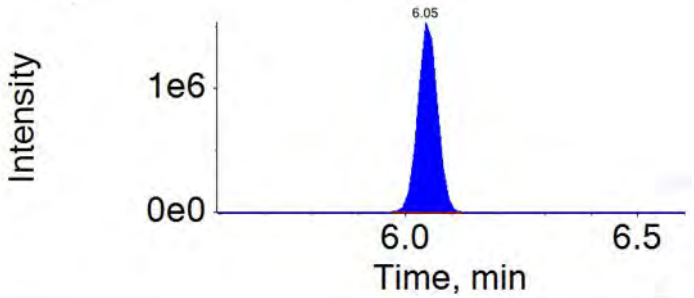
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



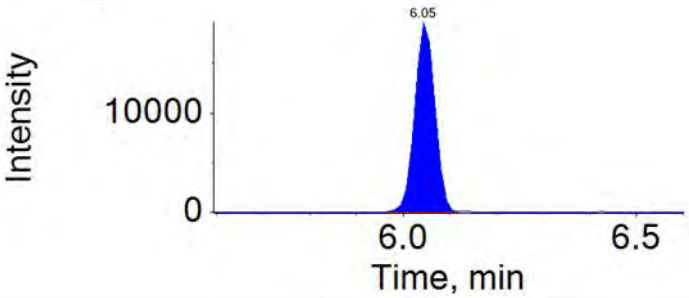
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



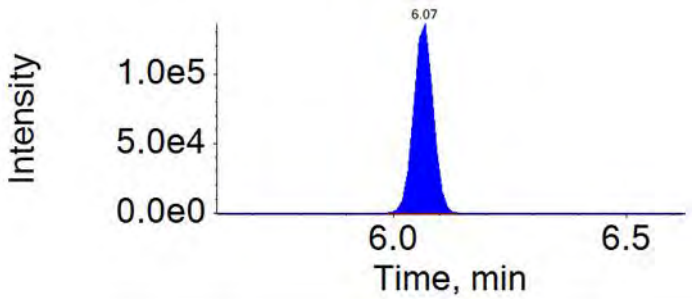
Component: PFDoDA
Primary Mass: 613.0 / 569.0



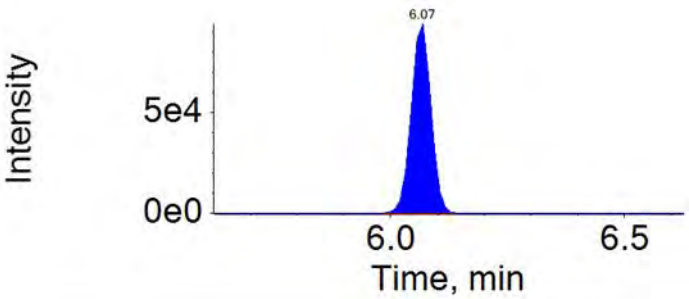
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



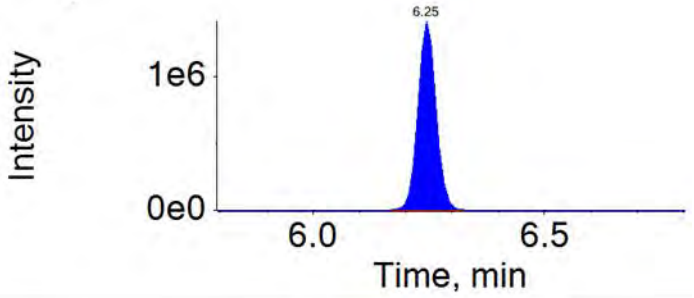
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



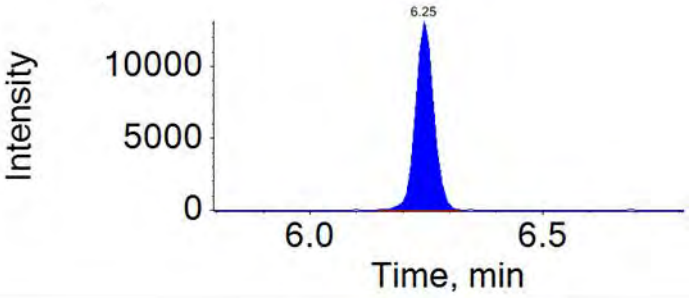
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

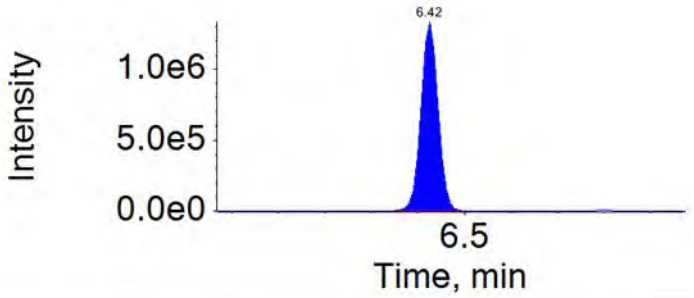
Component: PFTrDA
Primary Mass: 663.0 / 619.0



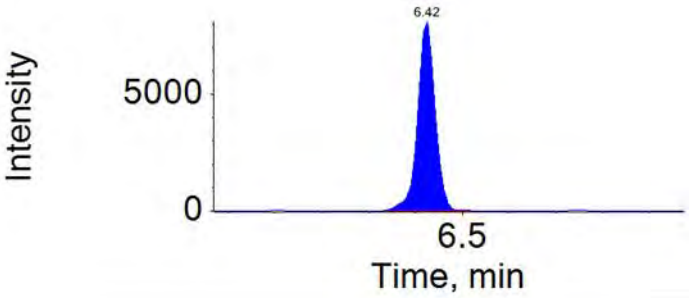
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



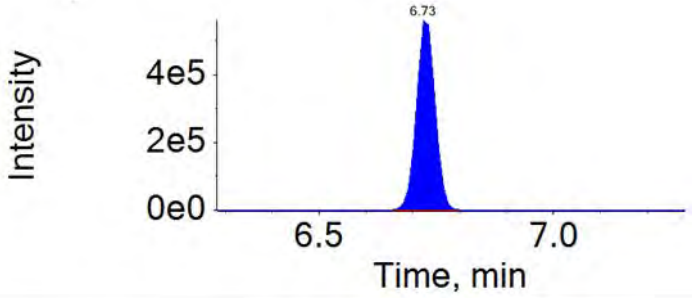
Component: PFTeDA
Primary Mass: 713.0 / 669.0



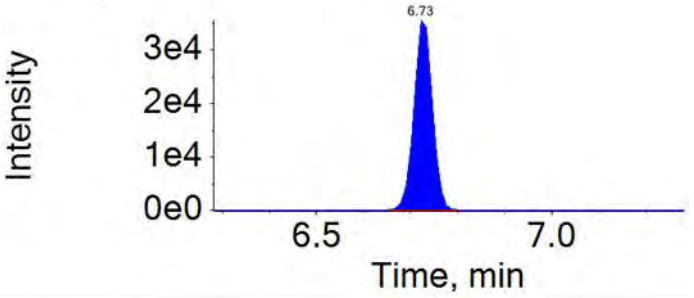
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



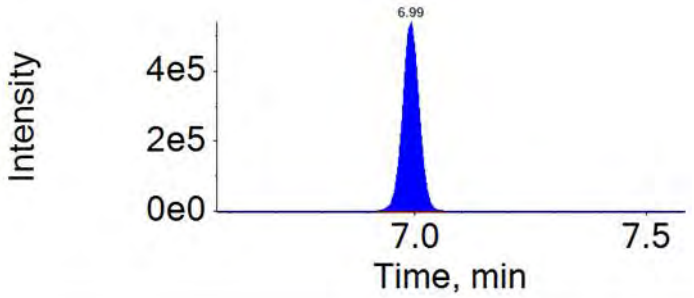
Component: PFHxDA
Primary Mass: 813.0 / 769.0



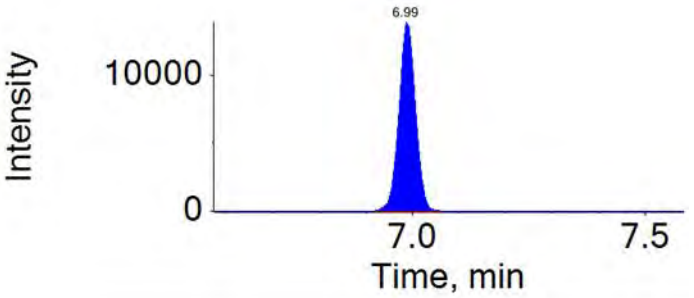
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL7			**Data File:**		18NOV07DCAL-16.wiff
Sample ID:	CALMOD71833E			**Acquis Date:**		2018-11-07T10:33:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	9			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	554647.4	730410.6	-24	50	
13C2-PFOA	5.0	419465.9	524423.6	-20	50	
13C4-PFOS	4.8	253720.8	274061.7	-7	50	
13C2-PFDA	5.0	258292.2	311442.1	-17	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	609686.1	13C3-PFBA	554647.4	1.099	5.000	5.087	102	70-130	
E13C5-PFPeA	628265.5	13C3-PFBA	554647.4	1.133	5.000	4.935	99	70-130	
E13C3-PFBS	381345.5	13C3-PFBA	554647.4	0.688	4.650	5.046	109	70-130	
E13C2-4:2-FTS	46334.2	13C2-PFOA	419465.9	0.110	4.670	4.984	107	70-130	
E13C5-PFHxA	571807.5	13C2-PFOA	419465.9	1.363	5.000	5.014	100	70-130	
E13C3-PFHxS	279859.6	13C2-PFOA	419465.9	0.667	4.730	4.790	101	70-130	
E13C4-PFHpA	457160.4	13C2-PFOA	419465.9	1.090	5.000	4.958	99	70-130	
E13C2-6:2-FTS	26549.1	13C2-PFOA	419465.9	0.063	4.750	4.221	89	70-130	
E13C8-PFOA	678914.6	13C2-PFOA	419465.9	1.619	5.000	4.513	90	70-130	
E13C8-PFOS	264295.9	13C4-PFOS	253720.8	1.042	4.780	4.606	96	70-130	
E13C9-PFNA	402916.7	13C4-PFOS	253720.8	1.588	5.000	4.338	87	70-130	
E13C6-PFDA	480927.9	13C2-PFDA	258292.2	1.862	5.000	4.682	94	70-130	
E13C2-8:2-FTS	24555.7	13C2-PFDA	258292.2	0.095	4.790	5.031	105	70-130	
E13C8-PFOSA	603296.1	13C2-PFDA	258292.2	2.336	5.000	5.097	102	70-130	
Ed3-NMeFOSAA	75408.7	13C2-PFDA	258292.2	0.292	5.000	5.429	109	70-130	
E13C7-PFUnDA	212399.8	13C2-PFDA	258292.2	0.822	5.000	4.744	95	70-130	
Ed5-NEtFOSAA	56963.1	13C2-PFDA	258292.2	0.221	5.000	5.104	102	70-130	
E13C2-PFDoDA	525971.8	13C2-PFDA	258292.2	2.036	5.000	5.490	110	70-130	
Ed7-NMePFOSAE	295395.3	13C2-PFDA	258292.2	1.144	5.000	5.318	106	70-130	
Ed3-NMePFOSA	80053.2	13C2-PFDA	258292.2	0.310	5.000	5.674	113	70-130	
Ed9-NEtPFOSAE	235038.0	13C2-PFDA	258292.2	0.910	5.000	5.197	104	70-130	
Ed5-NEtPFOSA	58686.1	13C2-PFDA	258292.2	0.227	5.000	5.261	105	70-130	
E13C2-PFTeDA	384058.1	13C2-PFDA	258292.2	1.487	5.000	5.353	107	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

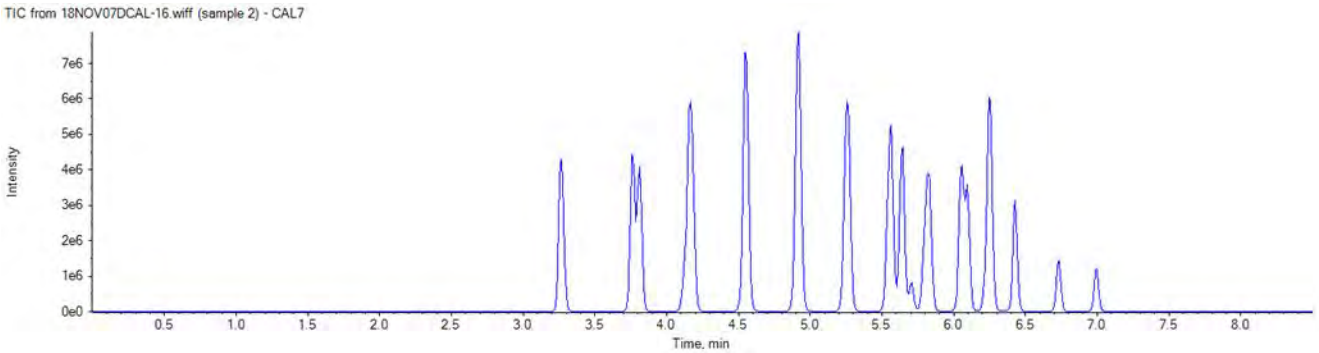
Analyte Quantitation Peak Table

Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-16.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	9954520.3		A	13C4-PFBA	3.26	609686.1	16.327	95.554
PFPeA	3.76	1.000	10229627.8		A	13C5-PFPeA	3.76	628265.5	16.282	96.765
PFBS	3.81	1.000	6474525.0		A	13C3-PFBS	3.81	381345.5	16.978	85.599
4:2-FTS	4.13	1.000	1576786.3		A	13C2-4:2-FTS	4.13	46334.2	34.031	91.487
PFHxA	4.16	1.000	11658104.6		A	13C5-PFHxA	4.16	571807.5	20.388	87.434
PFPeS	4.18	1.100	3615170.2		A	13C3-PFBS	3.81	381345.5	9.480	93.501
PFHxS	4.55	1.000	5196245.3		A	13C3-PFHxS	4.55	279859.6	18.567	94.113
PFHpA	4.55	1.000	11701142.2		A	13C4-PFHpA	4.55	457160.4	25.595	86.081
6:2-FTS	4.90	1.000	988785.9		A	13C2-6:2-FTS	4.91	26549.1	37.244	92.910
PFHpS	4.91	1.080	5085803.6		A	13C3-PFHxS	4.55	279859.6	18.173	95.074
PFOA	4.92	1.000	11562348.7		A	13C8-PFOA	4.92	678914.6	17.031	95.892
PFOS	5.25	1.000	4830627.6		A	13C8-PFOS	5.24	264295.9	18.277	94.776
PFNA	5.27	1.000	10279837.9		A	13C9-PFNA	5.26	402916.7	25.514	95.349
PFNS	5.54	1.060	3119908.2		A	13C8-PFOS	5.24	264295.9	11.805	93.596
PFDA	5.56	1.000	8415098.4		A	13C6-PFDA	5.56	480927.9	17.498	96.265
8:2-FTS	5.57	1.000	936483.2		A	13C2-8:2-FTS	5.57	24555.7	38.137	85.963
PFOSA	5.64	1.000	11064835.5		A	13C8-PFOSA	5.64	603296.1	18.341	99.141
NMeFOSAA	5.70	1.000	1450331.2		A	d3-NMeFOSAA	5.70	75408.7	19.233	98.963
PFDS	5.80	1.110	2660525.2		A	13C8-PFOS	5.24	264295.9	10.066	96.161
PFUnDA	5.82	1.000	7204782.9		A	13C7-PFUnDA	5.82	212399.8	33.921	97.277
NEtFOSAA	5.84	1.000	1317020.6		A	d5-NEtFOSAA	5.84	56963.1	23.121	99.363
PFDoDA	6.05	1.000	8211828.8		A	13C2-PFDoDA	6.05	525971.8	15.613	84.613
10:2-FTS	6.07	1.090	747804.5		A	13C2-8:2-FTS	5.57	24555.7	30.453	94.827
NMePFOSAE	6.09	1.000	6220772.1		A	d7-NMePFOSAE	6.08	295395.3	21.059	94.369
NMePFOSA	6.10	1.000	1386738.5		A	d3-NMePFOSA	6.10	80053.3	17.323	96.961
PFDoS	6.22	1.190	1333847.1		A	13C8-PFOS	5.24	264295.9	5.047	97.407
NEtPFOSAE	6.25	1.000	6995371.5		A	d9-NEtPFOSAE	6.24	235038.1	29.763	95.411
NEtPFOSA	6.26	1.000	1329706.9		A	d5-NEtPFOSA	6.26	58686.1	22.658	99.791
PFTrDA	6.25	1.030	6633128.3		A	13C2-PFDoDA	6.05	525971.8	12.611	79.528
PFTeDA	6.43	1.000	6426587.4		A	13C2-PFTeDA	6.43	384058.1	16.733	98.263
PFHxDA	6.73	1.050	3073572.7		A	13C2-PFTeDA	6.43	384058.1	8.003	99.343
PFODA	6.99	1.090	2676698.5		A	13C2-PFTeDA	6.43	384058.1	6.970	99.849

Total Ion Chromatogram

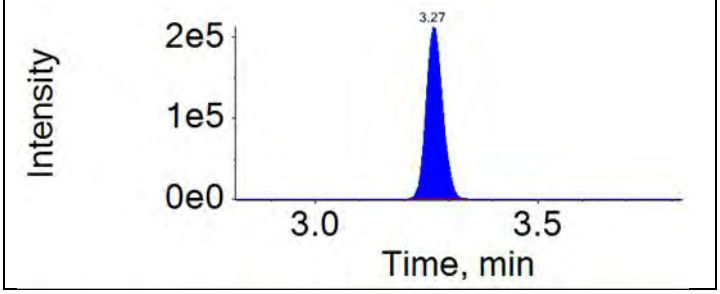


APPROVED
By JPT at 2:53 pm, 11/7/18

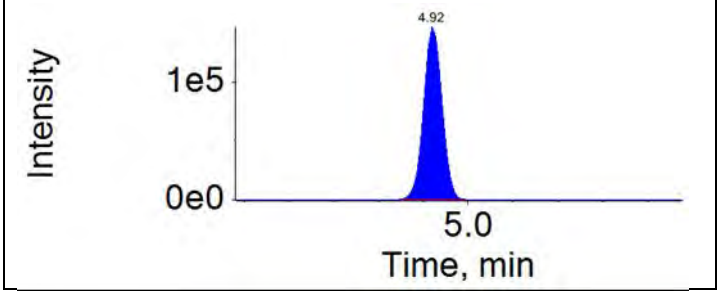
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

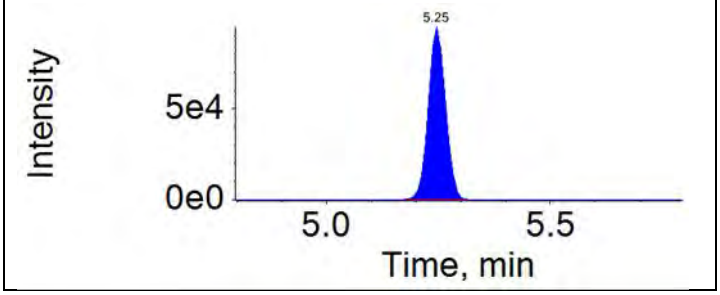
Injection Standard: 13C3-PFBA
216.0 / 172.0



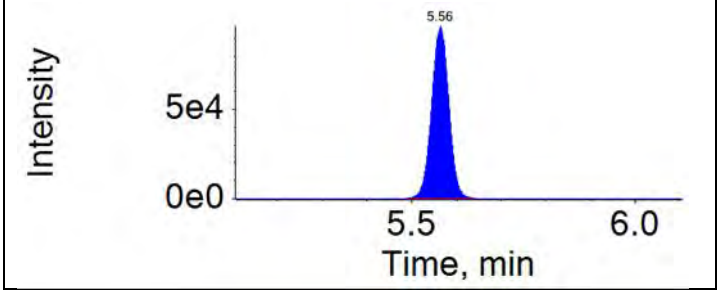
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

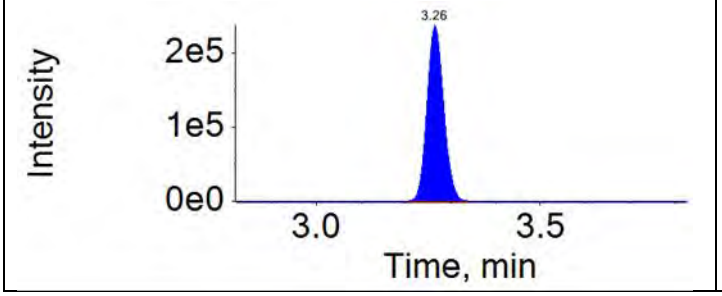


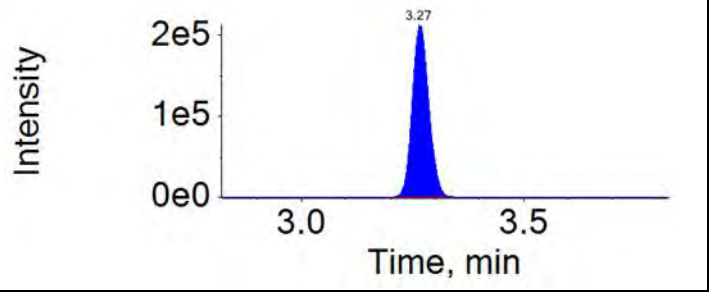
Injection Standard: 13C2-PFDA
515.0 / 470.0



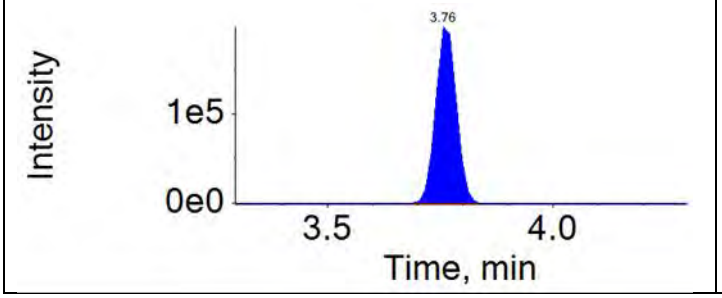
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

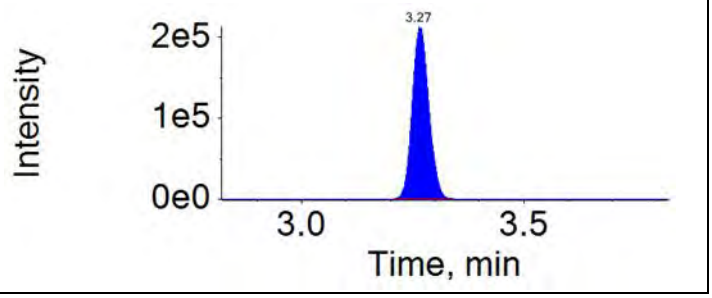
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



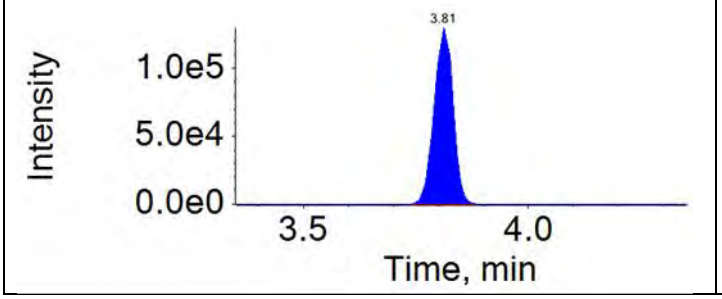


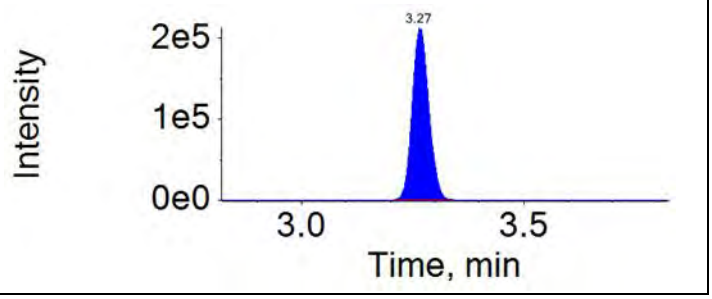
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



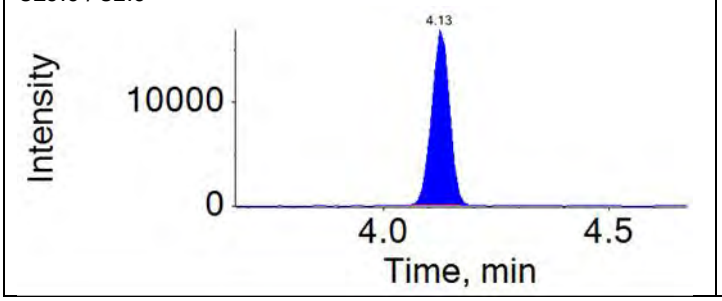


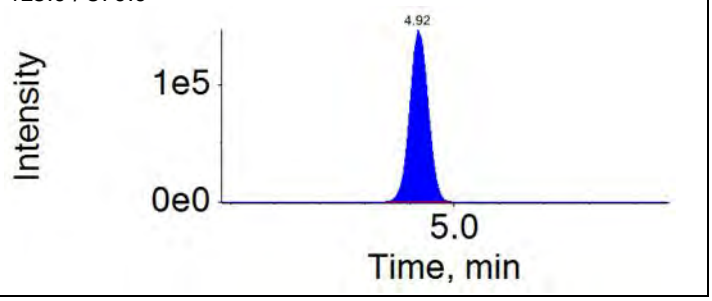
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



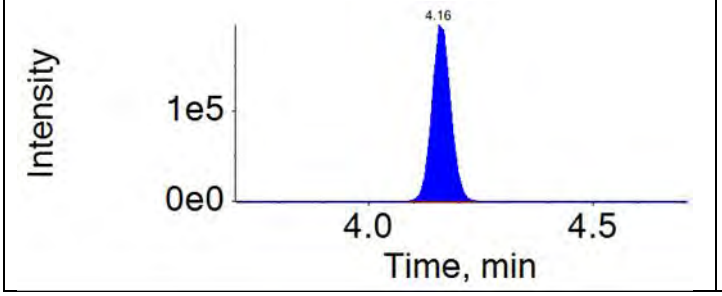


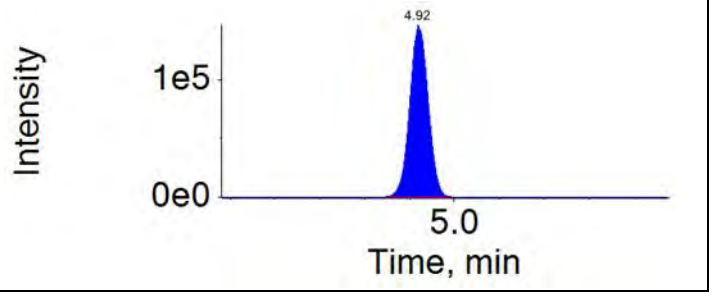
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

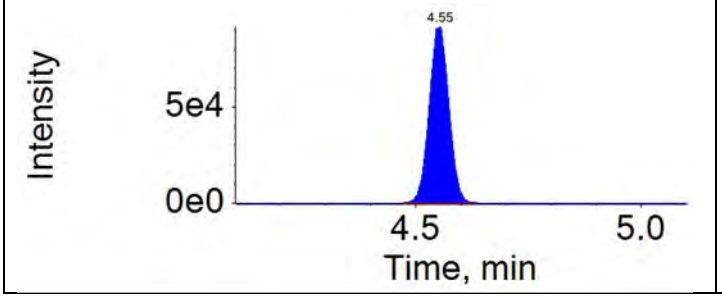
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

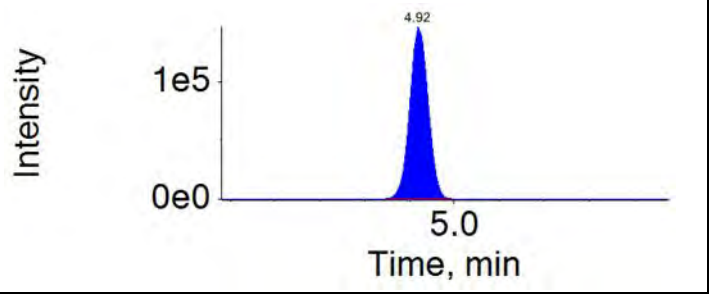
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



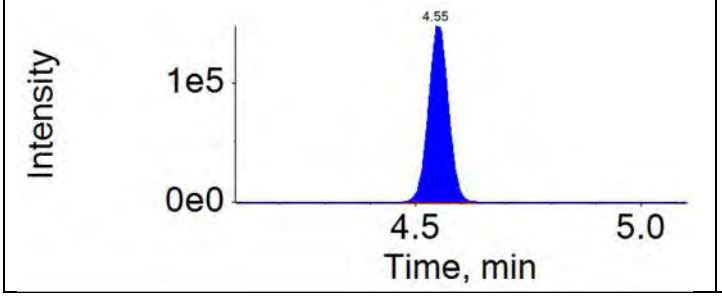


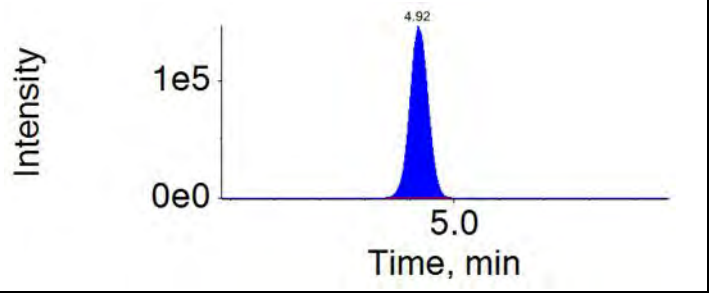
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



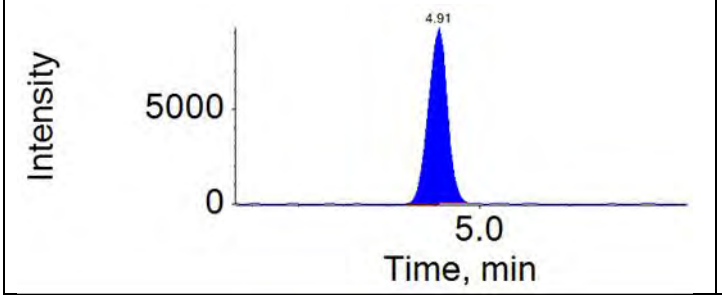


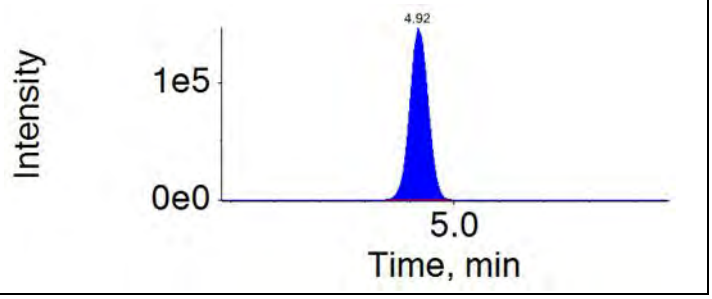
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

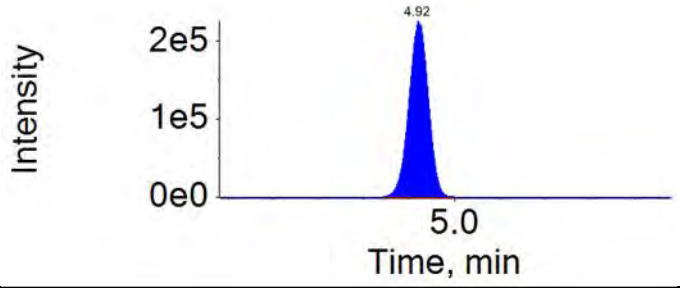
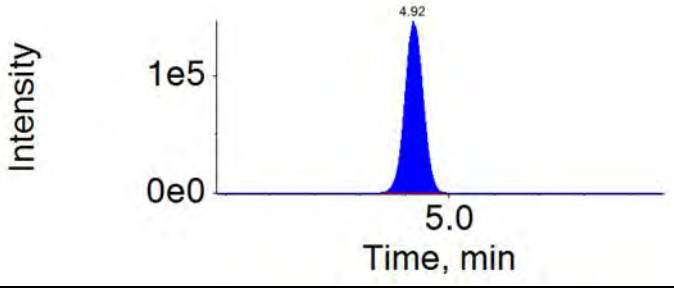


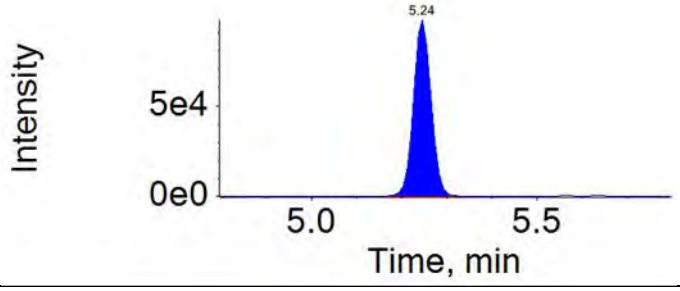
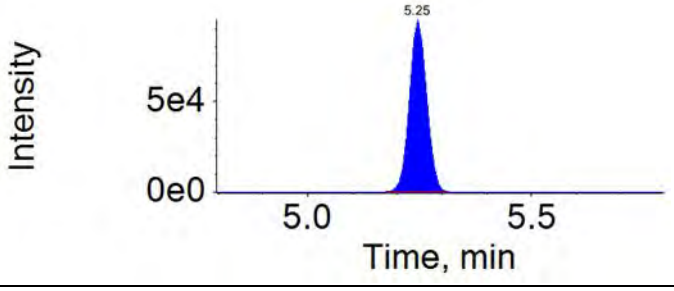


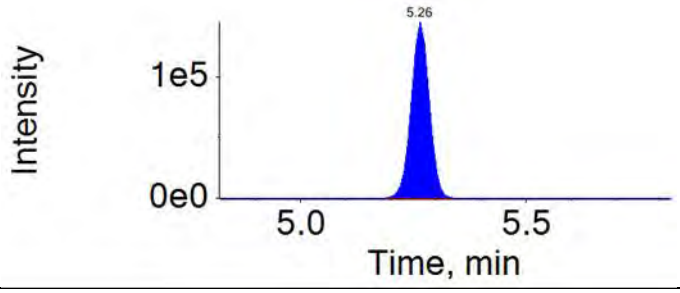
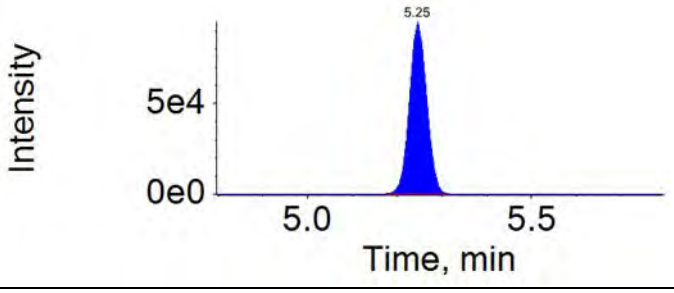
APPROVED
By JPT at 2:53 pm, 11/7/18

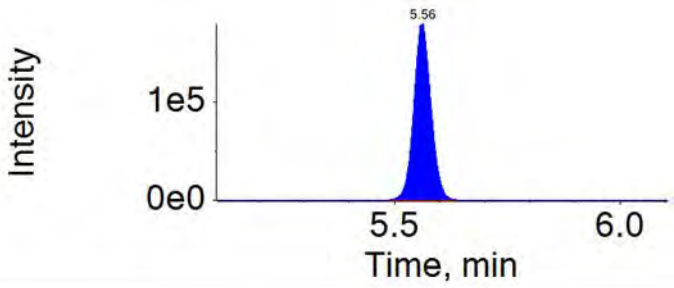
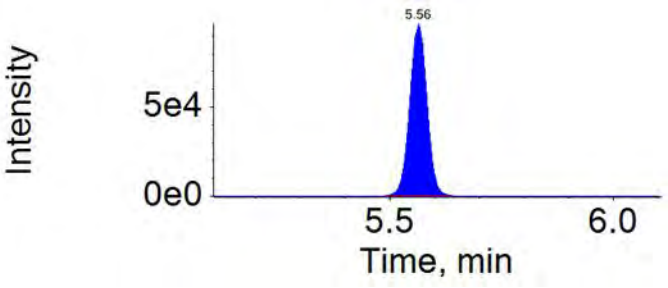
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

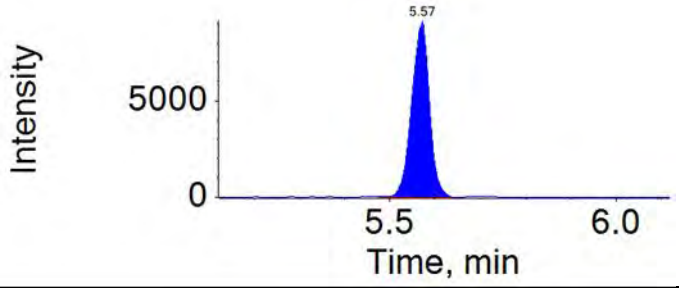
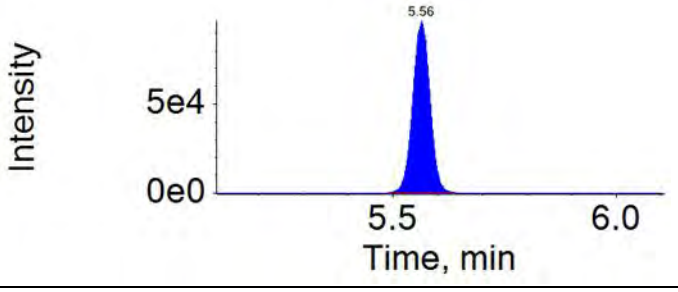
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

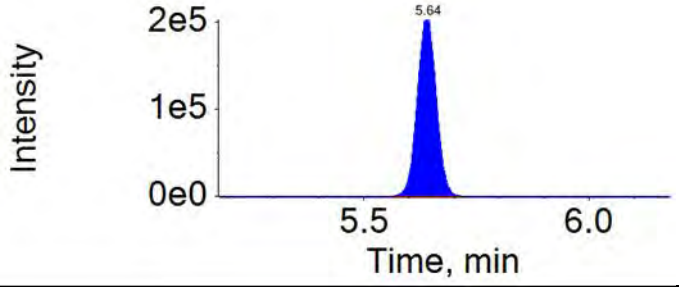
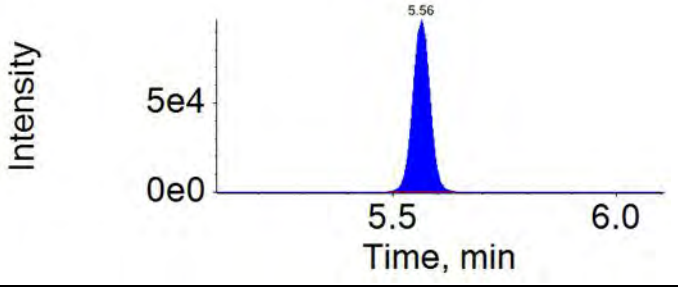
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

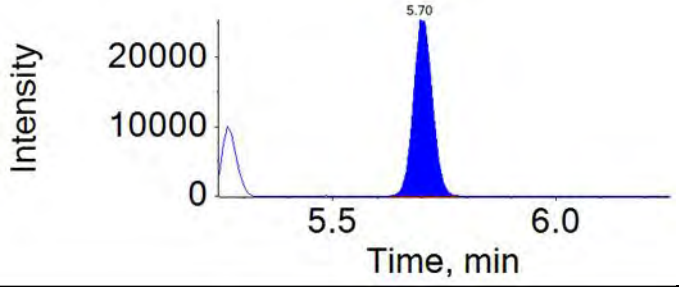
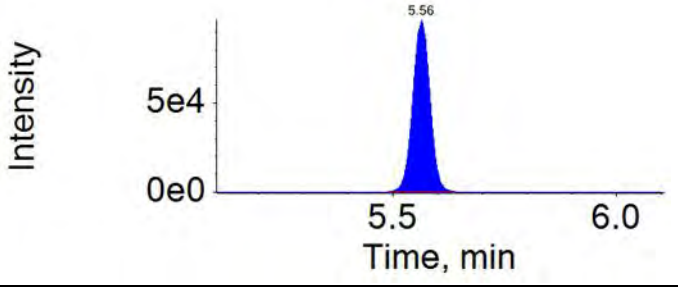
APPROVED
By JPT at 2:53 pm, 11/7/18

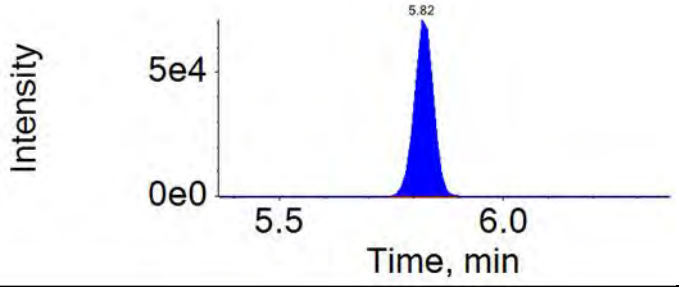
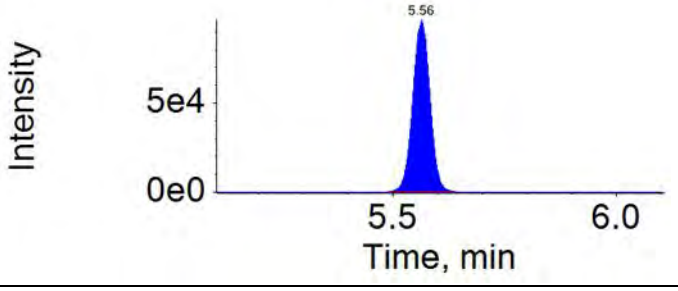
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

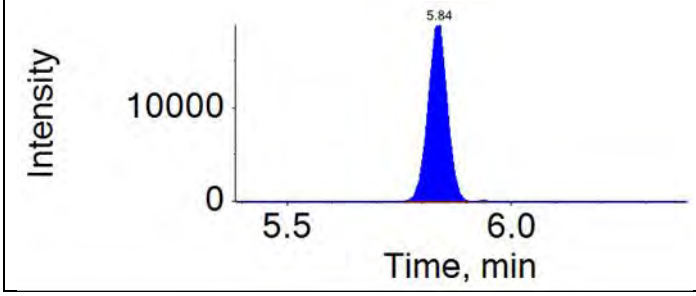
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

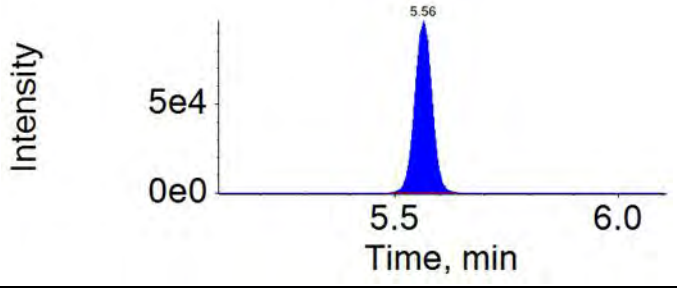
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

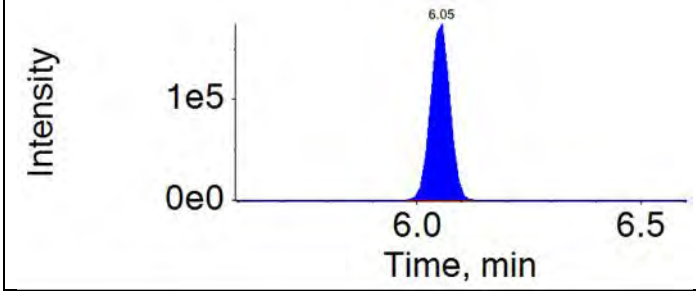
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

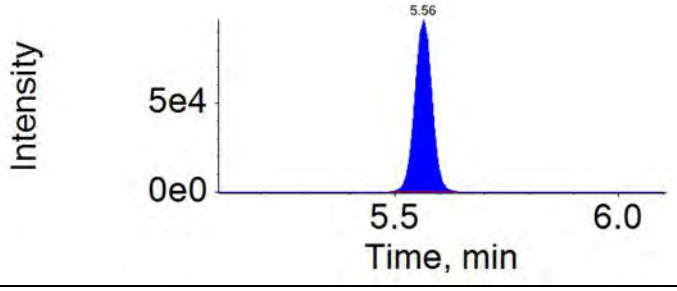
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



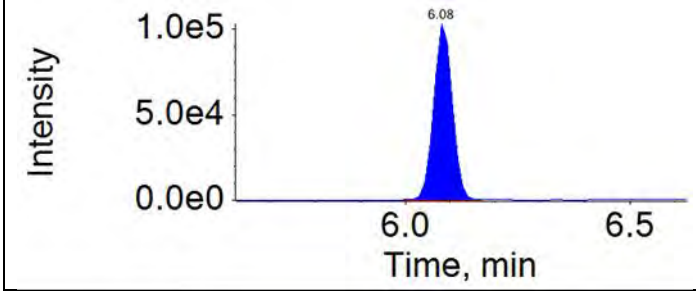


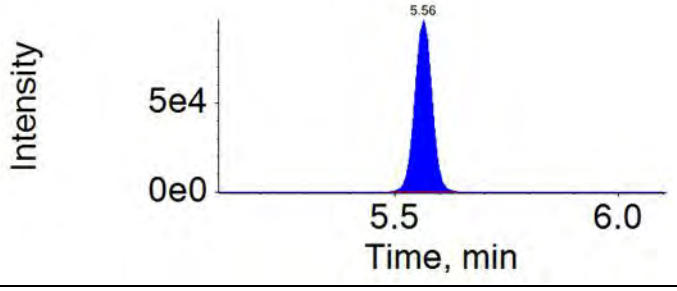
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



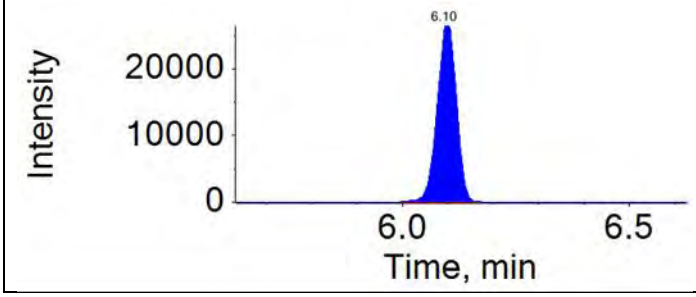


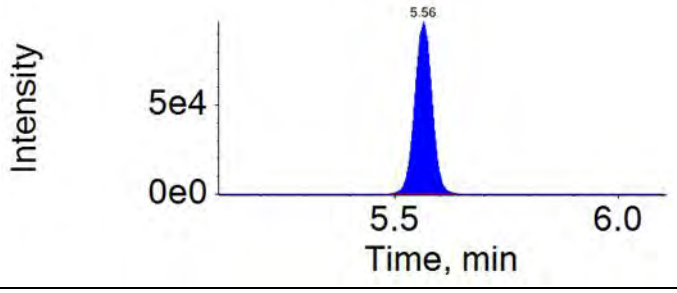
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



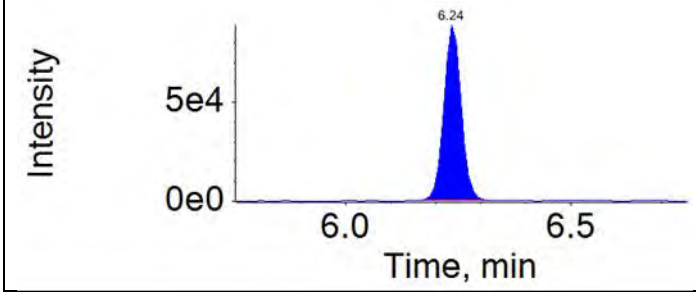


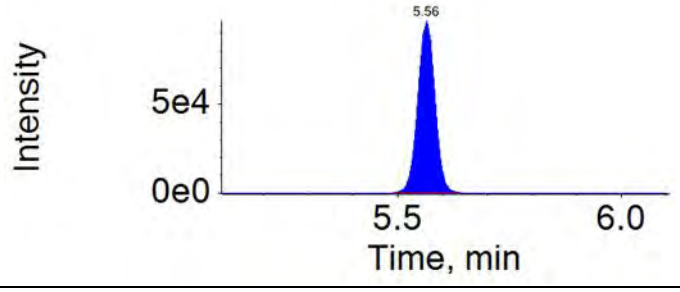
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

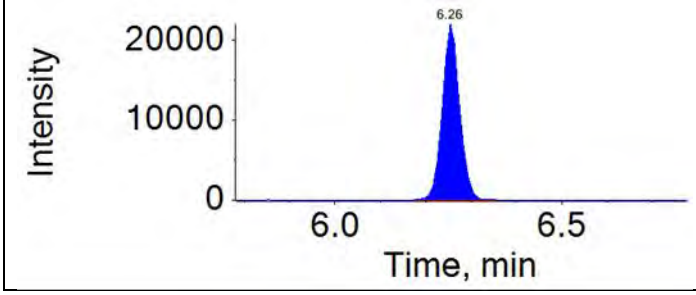
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

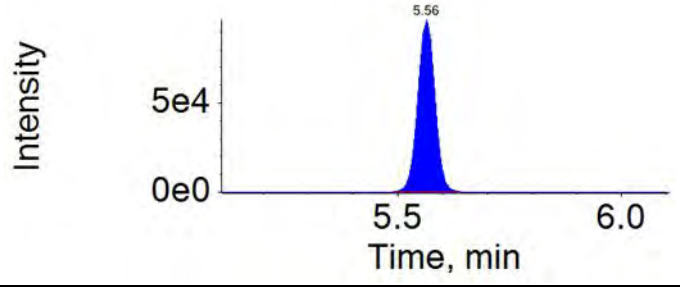
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



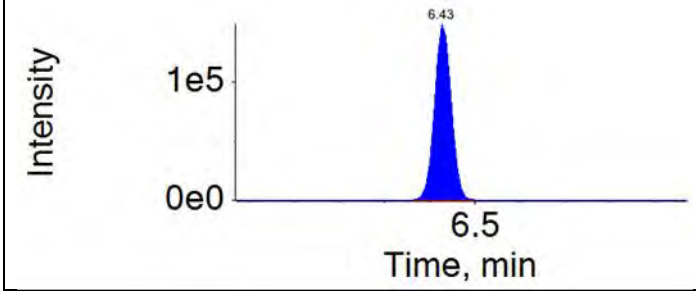


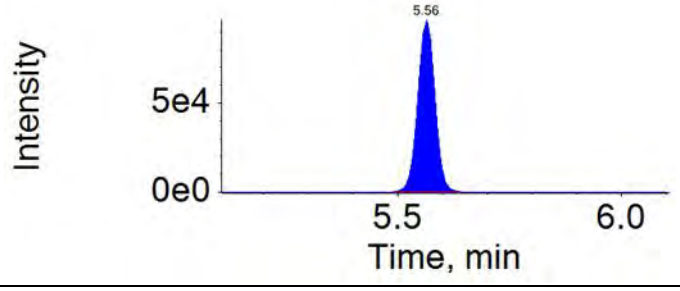
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



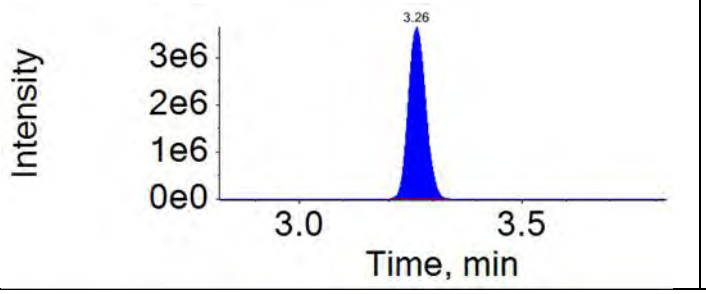


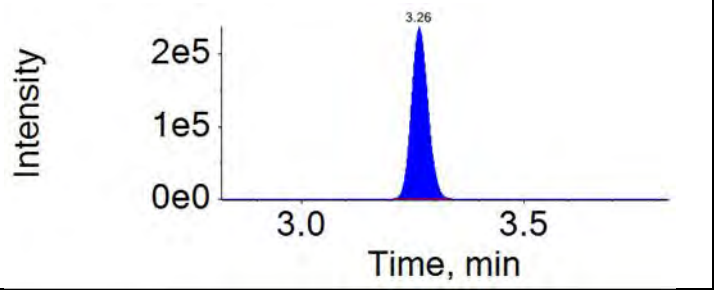
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

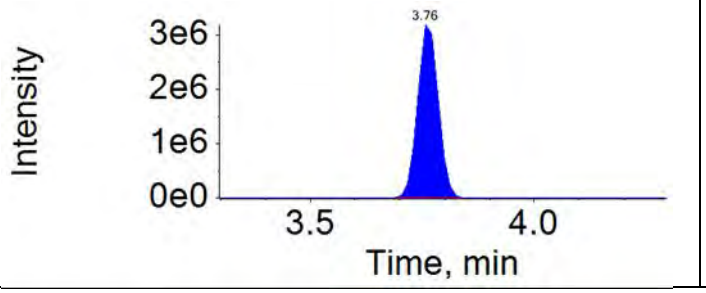
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

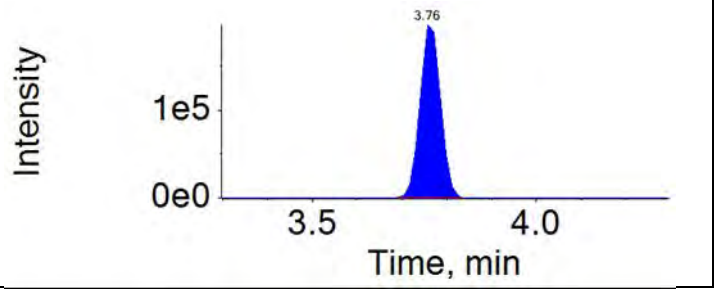
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



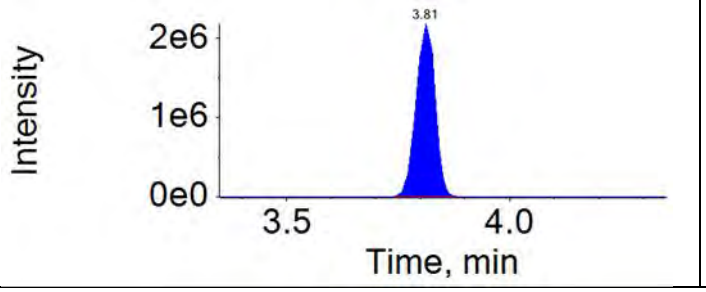


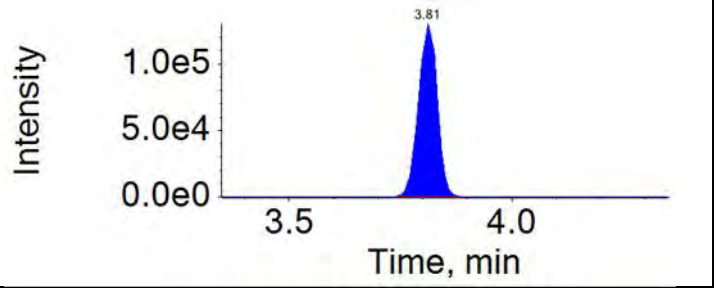
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



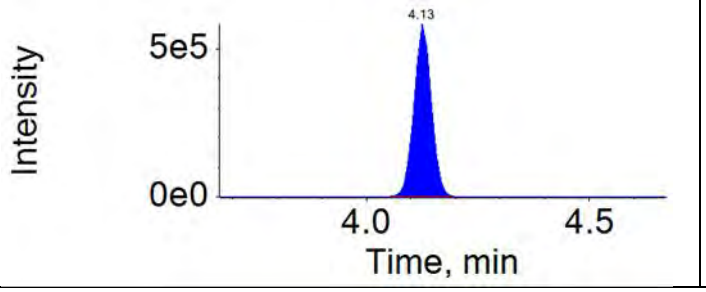


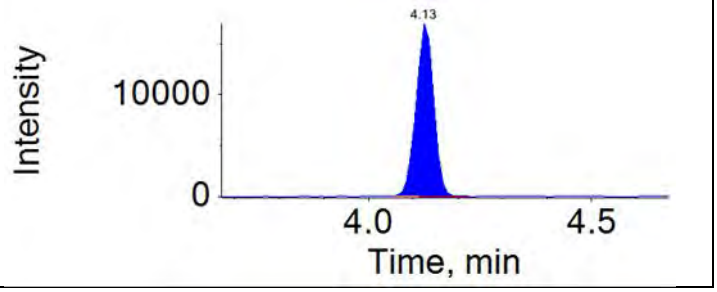
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

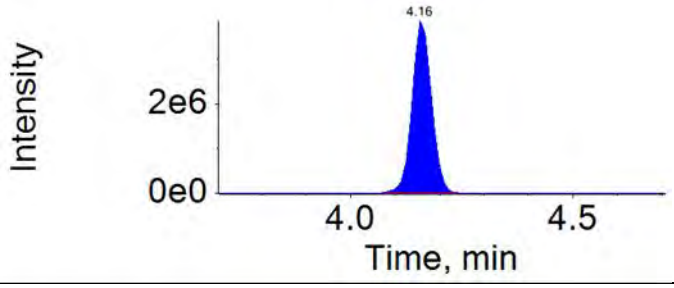
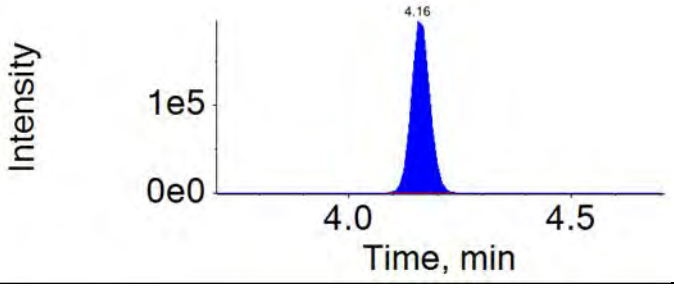


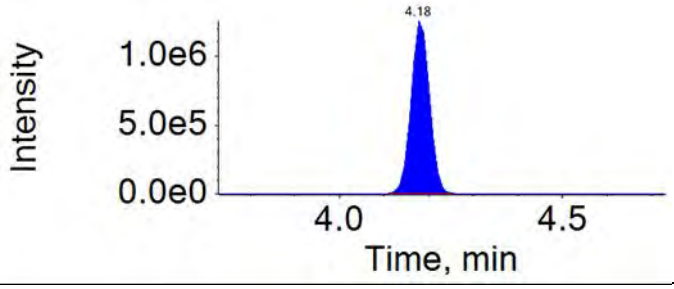
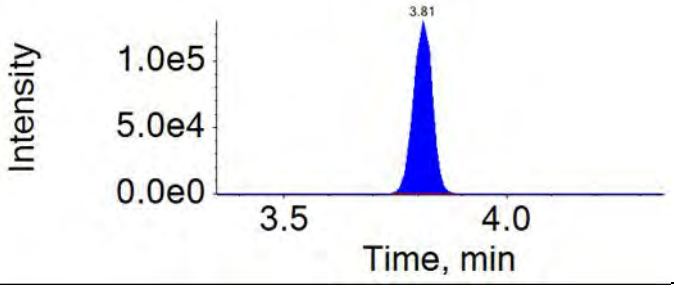


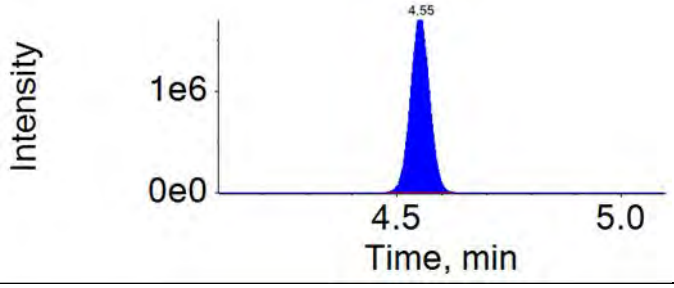
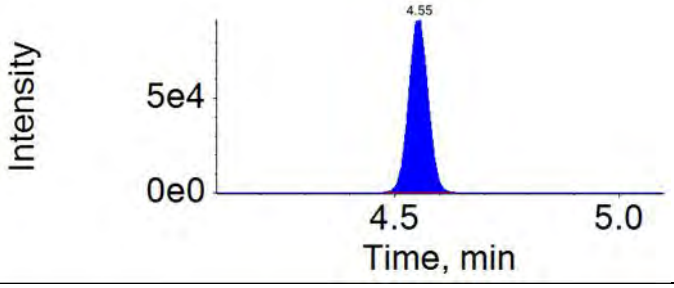
APPROVED
By JPT at 2:53 pm, 11/7/18

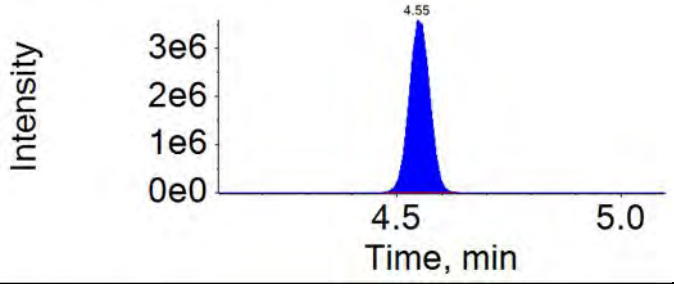
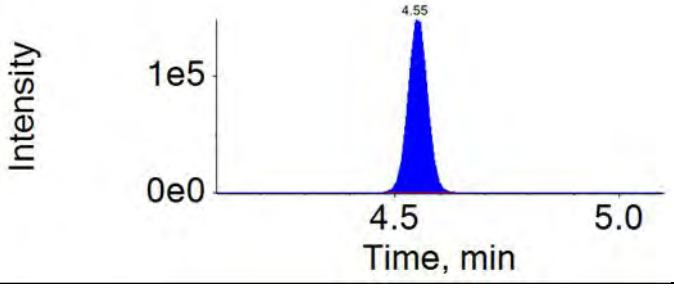
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

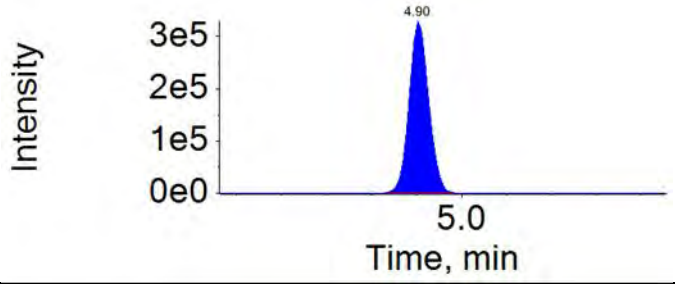
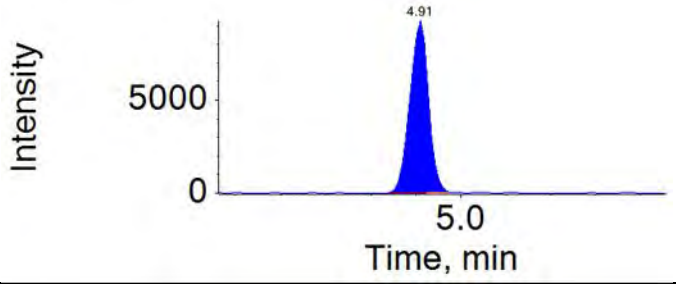
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

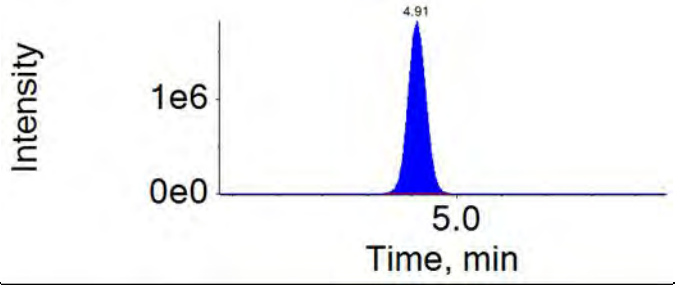
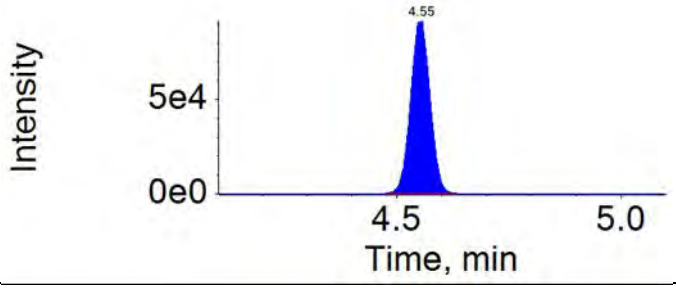
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

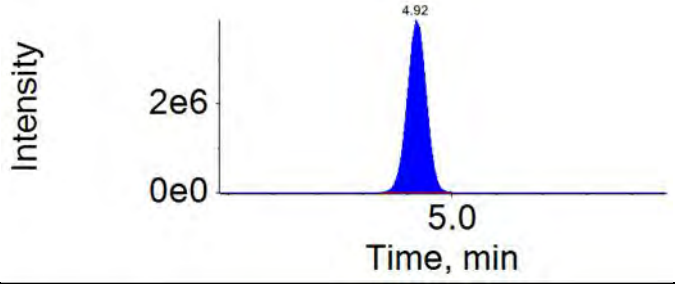
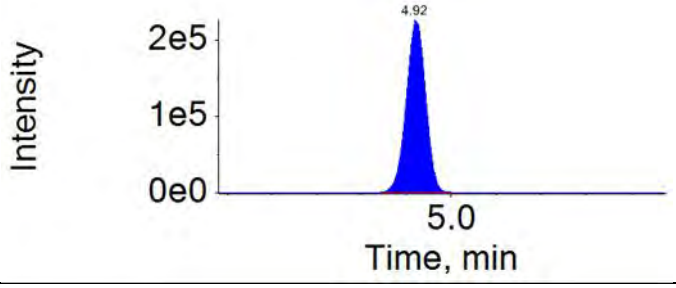
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

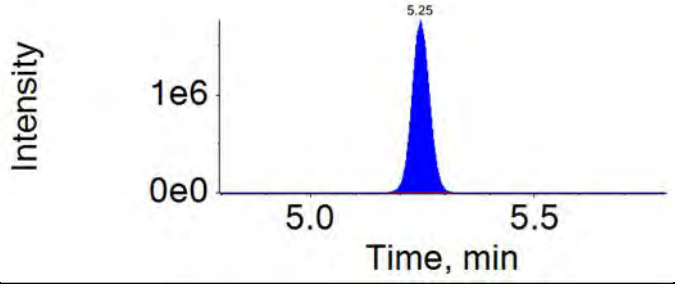
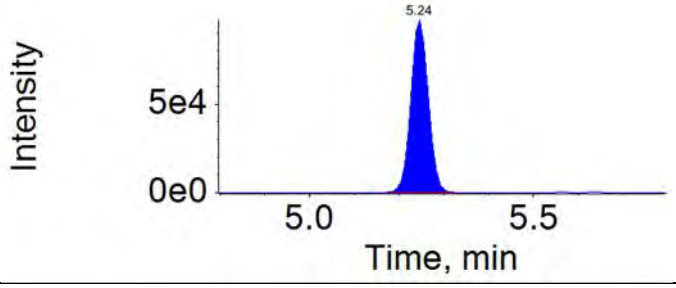
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

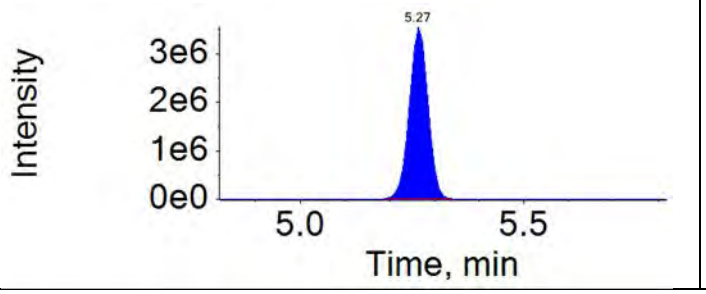
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

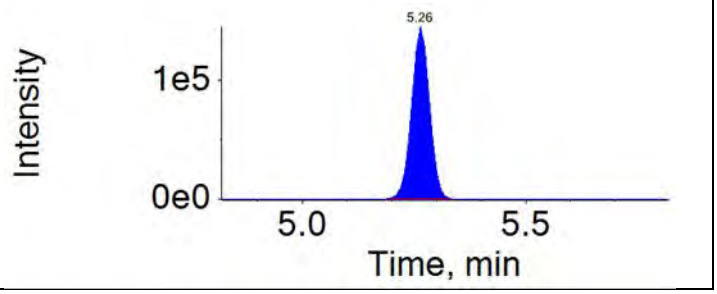
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

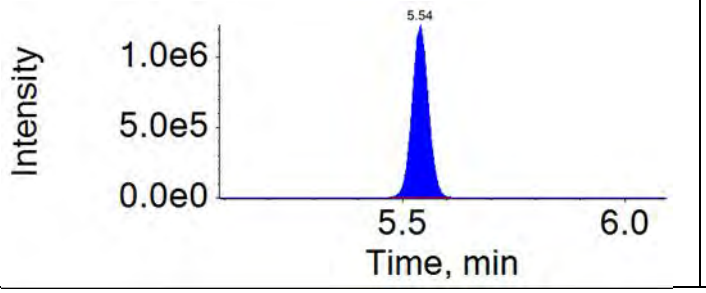
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

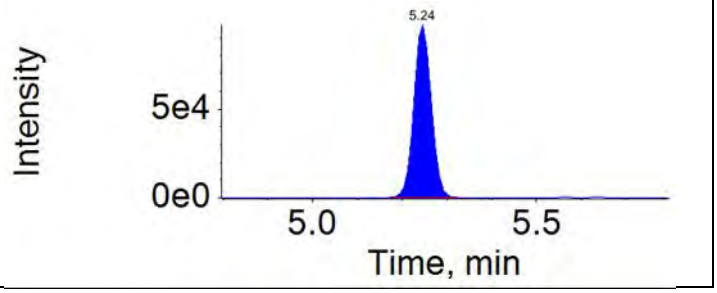
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



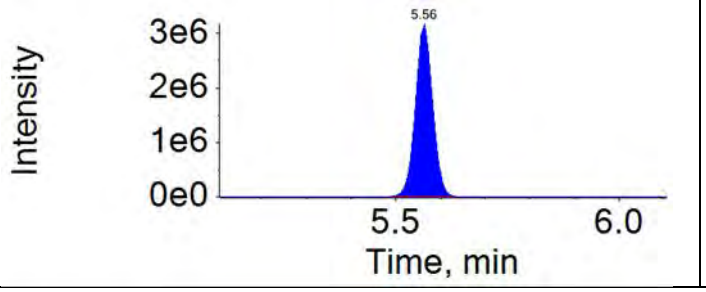


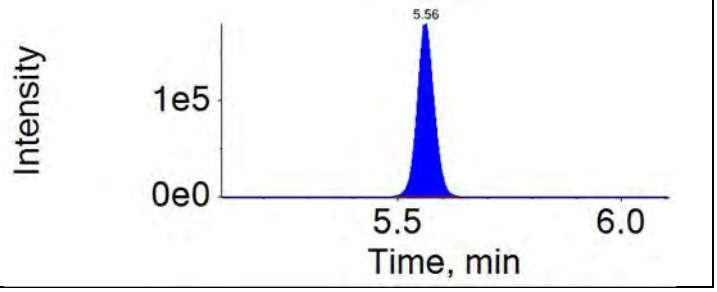
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



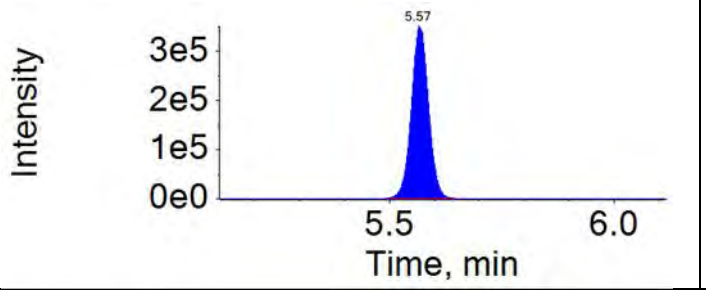


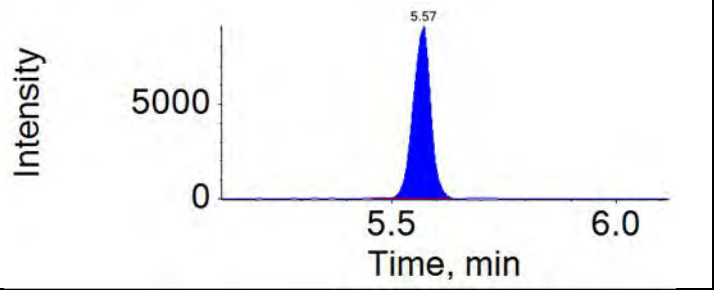
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

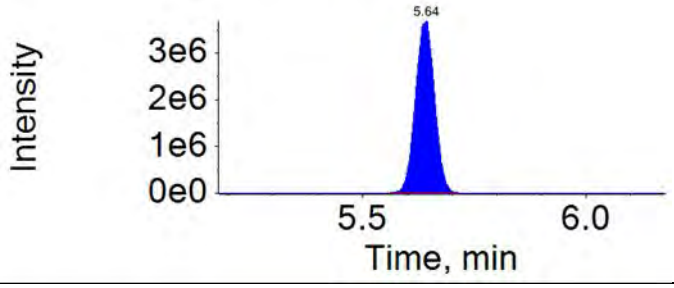
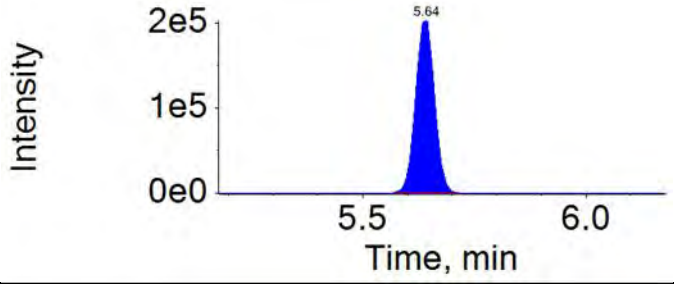


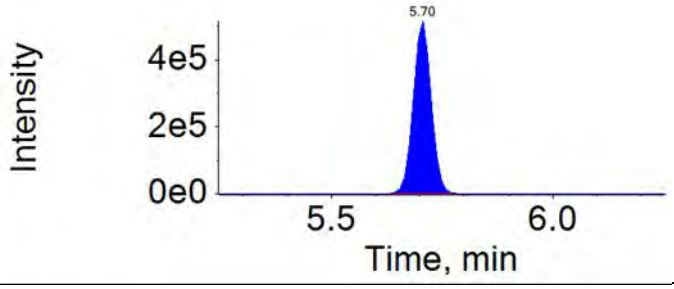
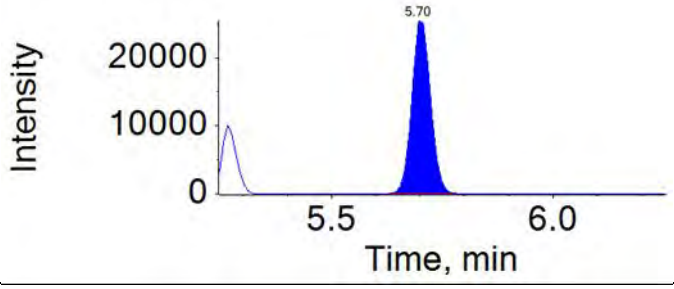


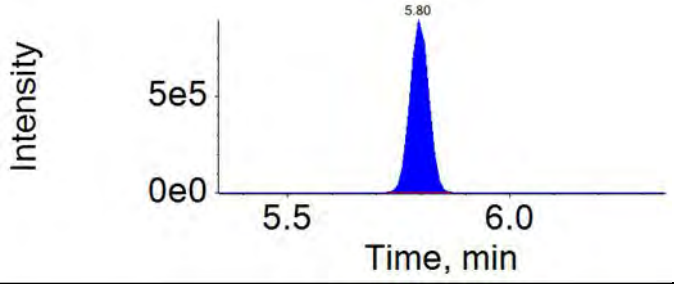
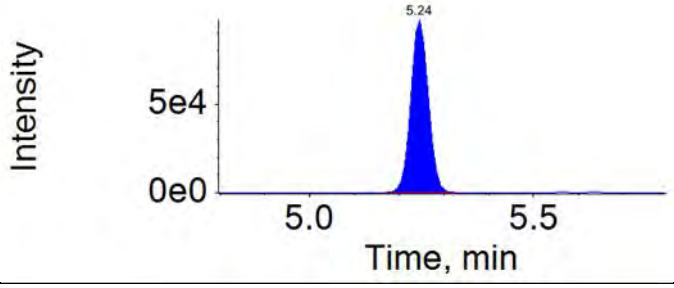
APPROVED
By JPT at 2:53 pm, 11/7/18

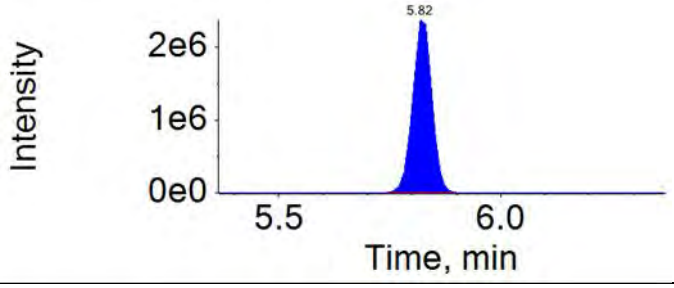
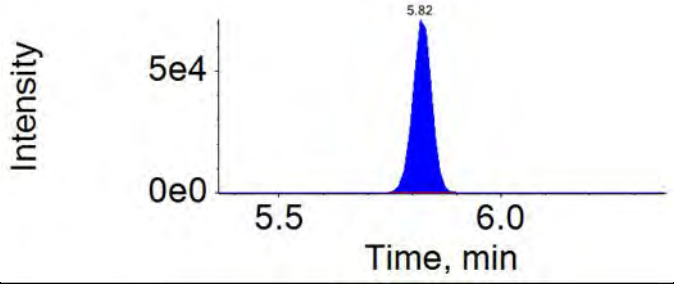
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

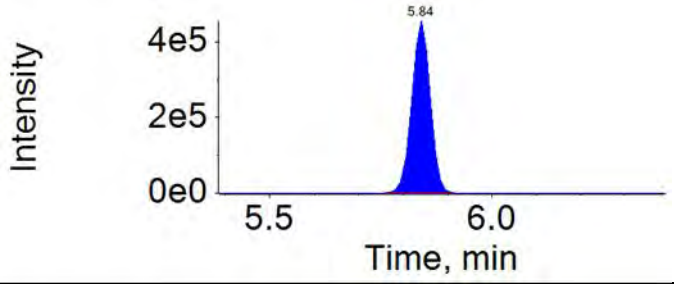
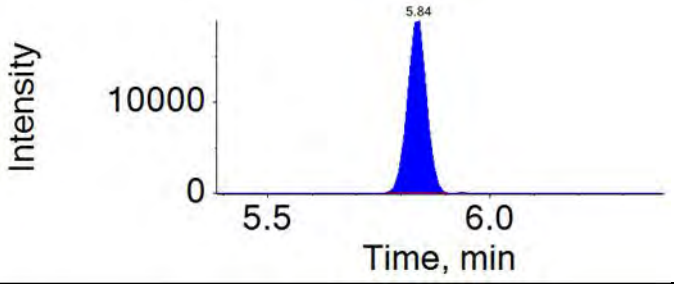
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

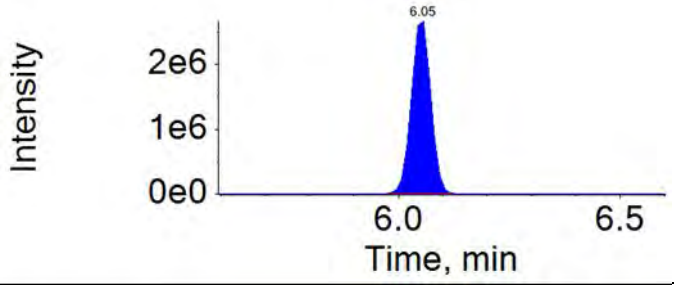
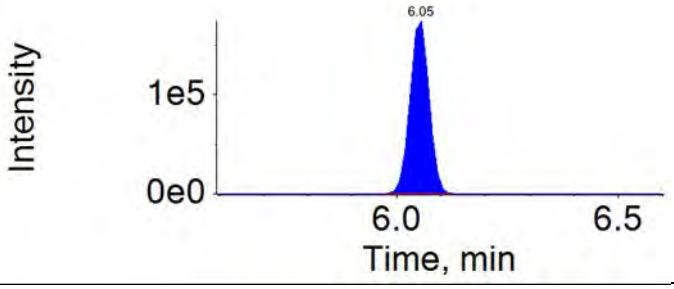
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

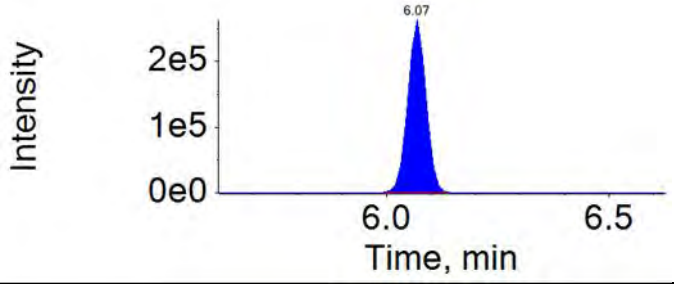
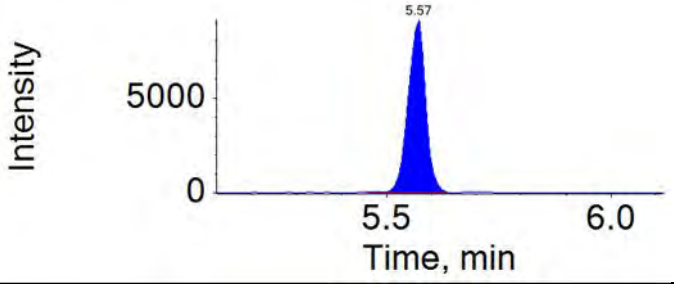
APPROVED
By JPT at 2:53 pm, 11/7/18

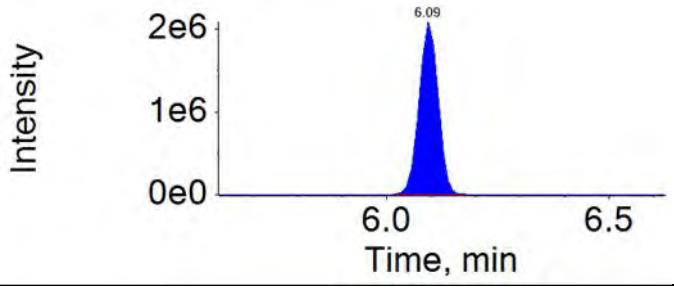
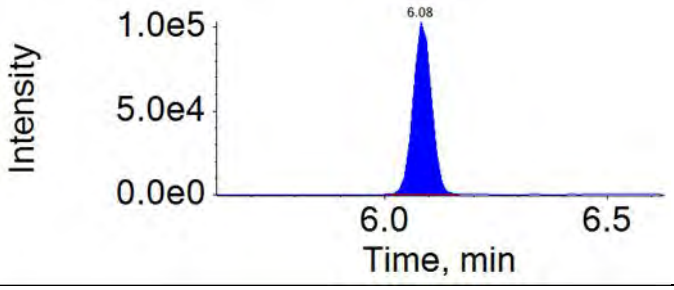
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

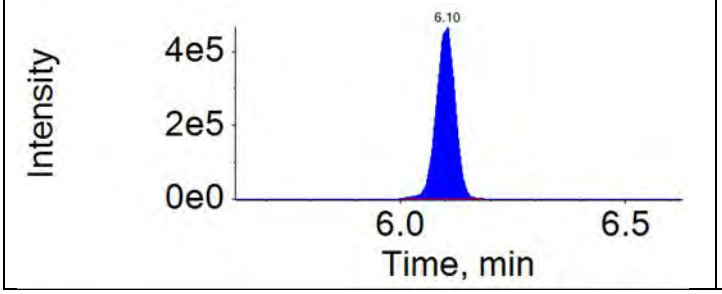
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

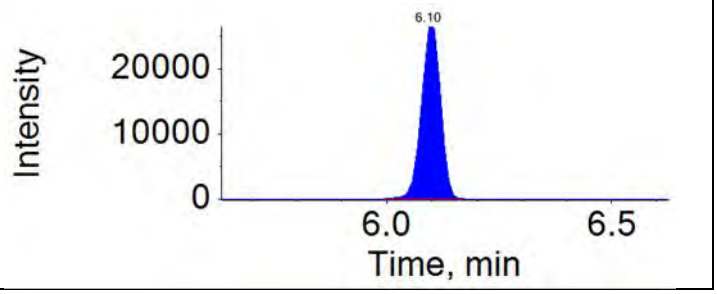
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

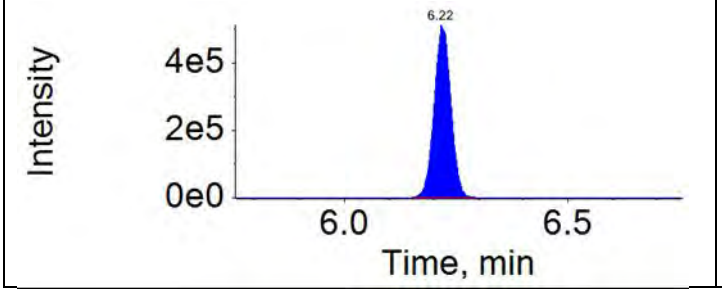
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

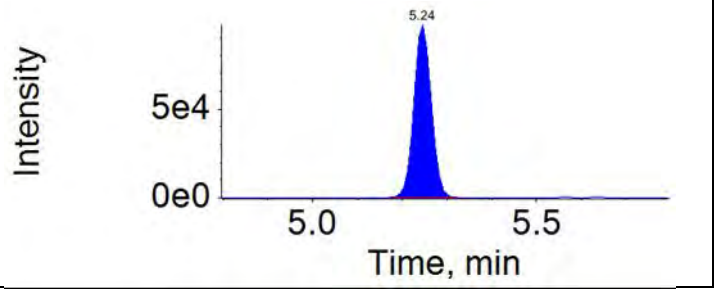
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



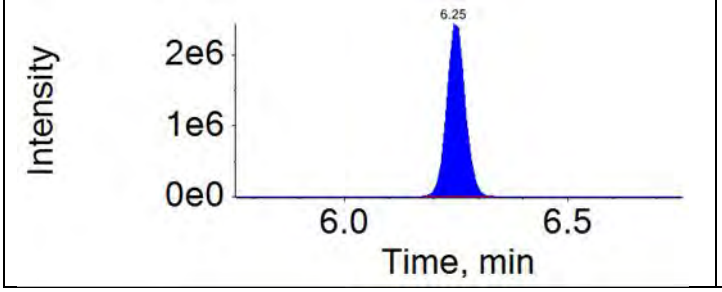


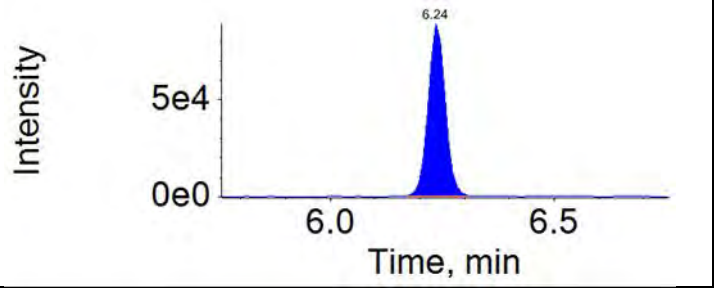
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



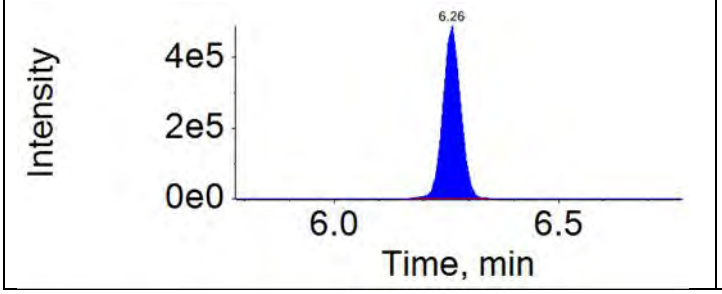


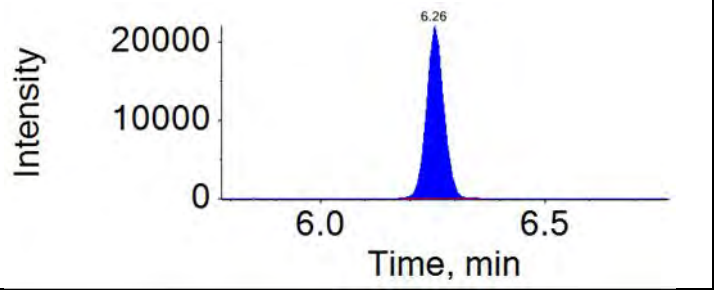
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

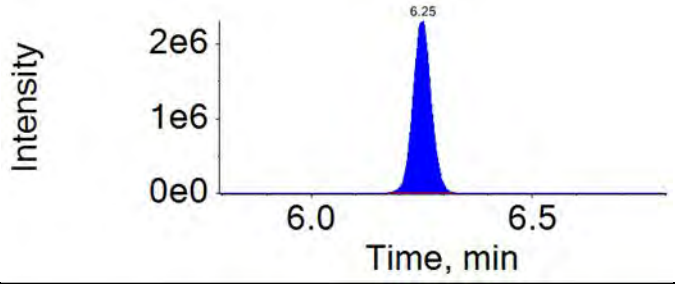
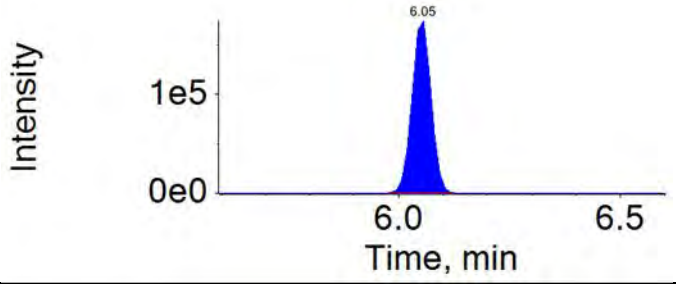


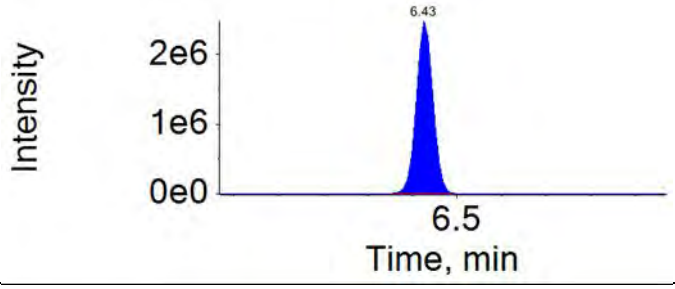
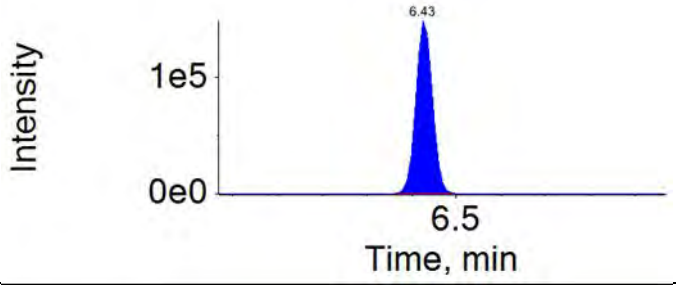


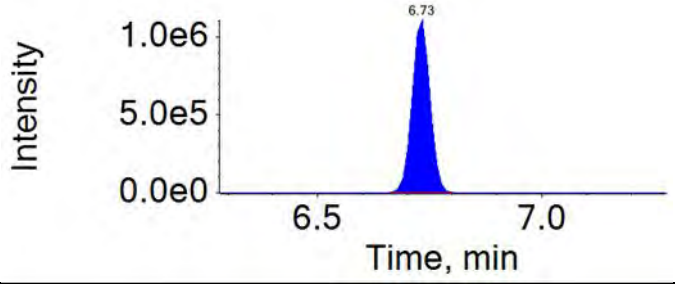
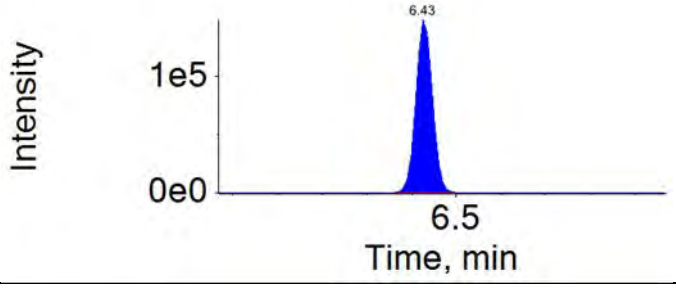
APPROVED
By JPT at 2:53 pm, 11/7/18

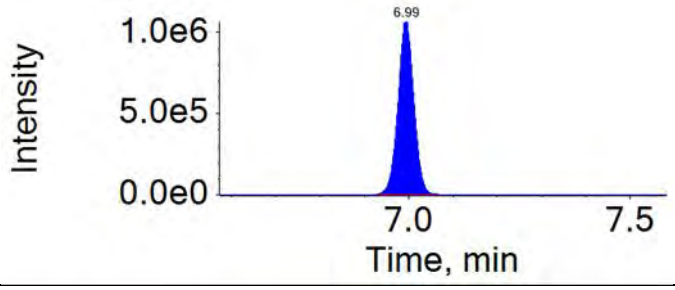
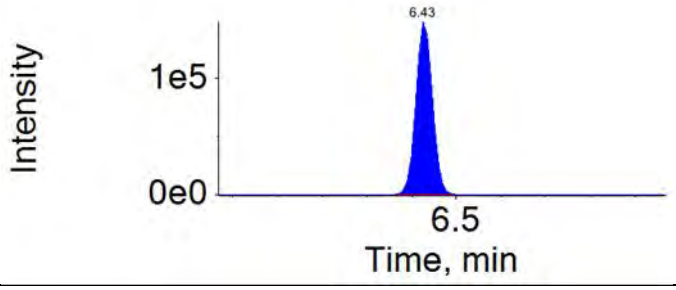
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

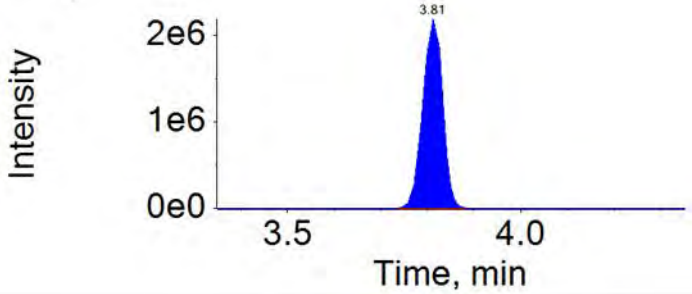
Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-16.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	6474525.0	A	1.0000	1.0000			
PFBS_2	3.81	1.00	2381935.1	A	0.3576	0.3679	3	50	
4:2-FTS	4.13	1.00	1576786.3	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	946320.6	A	0.6359	0.6002	-6	50	
PFHxA	4.16	1.00	11658104.6	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	146733.2	A	0.0115	0.0126	10	50	
PFPeS	4.18	1.10	3615170.2	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	1859405.8	A	0.5384	0.5143	-4	50	
PFHxS	4.55	1.00	5196245.3	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	1830260.3	A	0.3569	0.3522	-1	50	
PFHpA	4.55	1.00	11701142.2	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	676550.1	A	0.0577	0.0578	0	50	
6:2-FTS	4.90	1.00	988785.9	A	1.0000	1.0000			
6:2-FTS_2	4.90	1.00	625214.8	A	0.6752	0.6323	-6	50	
PFHpS	4.91	1.08	5085803.6	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	2031737.5	A	0.3950	0.3995	1	50	
PFOA	4.92	1.00	11562348.7	A	1.0000	1.0000			
PFOA_2	4.92	1.00	711843.9	A	0.0635	0.0616	-3	50	
PFOS	5.25	1.00	4830627.6	A	1.0000	1.0000			
PFOS_2	5.24	1.00	1617879.0	A	0.3494	0.3349	-4	50	
PFNA	5.27	1.00	10279837.9	A	1.0000	1.0000			
PFNA_2	5.27	1.00	219746.5	A	0.0207	0.0214	3	50	
PFNS	5.54	1.06	3119908.2	A	1.0000	1.0000			
PFNS_2	5.54	1.06	1542771.9	A	0.4890	0.4945	1	50	
PFDA	5.56	1.00	8415098.4	A	1.0000	1.0000			
PFDA_2	5.56	1.00	58233.7	A	0.0057	0.0069	22	50	
8:2-FTS	5.57	1.00	936483.2	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	547919.5	A	0.6169	0.5851	-5	50	
NMeFOSAA	5.70	1.00	1450331.2	A	1.0000	1.0000			
NMeFOSAA_2	5.70	1.00	350791.8	A	0.2206	0.2419	10	50	
PFDS	5.80	1.11	2660525.2	A	1.0000	1.0000			
PFDS_2	5.80	1.11	1326713.6	A	0.4648	0.4987	7	50	
PFUnDA	5.82	1.00	7204782.9	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	26281.4	A	0.0031	0.0036	16	50	
NEtFOSAA	5.84	1.00	1317020.6	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	819492.6	A	0.6082	0.6222	2	50	
PFDoDA	6.05	1.00	8211828.8	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	111190.9	A	0.0109	0.0135	24	50	
10:2-FTS	6.07	1.09	747804.5	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	511885.1	A	0.7082	0.6845	-3	50	
PFTrDA	6.25	1.03	6633128.3	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	66200.2	A	0.0096	0.0100	4	50	
PFTeDA	6.43	1.00	6426587.4	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	41133.5	A	0.0055	0.0064	16	50	
PFHxDA	6.73	1.05	3073572.7	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	192350.4	A	0.0596	0.0626	5	50	
PFODA	6.99	1.09	2676698.5	A	1.0000	1.0000			
PFODA_2	6.99	1.09	70338.4	A	0.0257	0.0263	2	50	

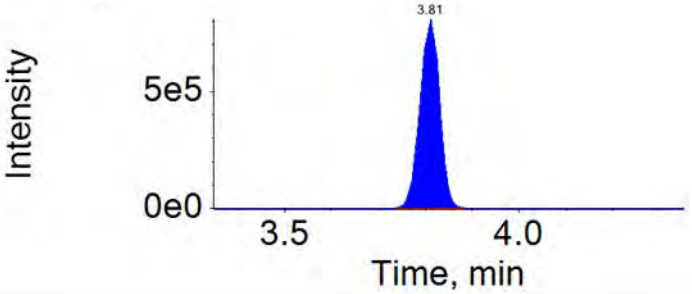
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

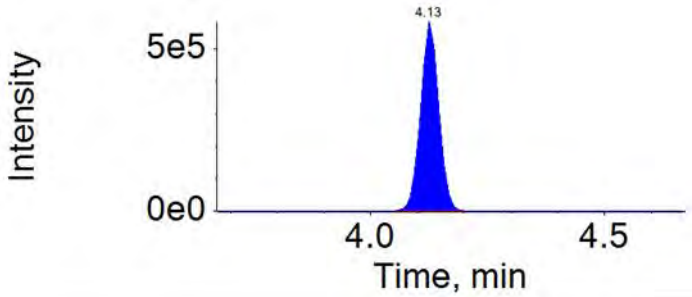
Component: PFBS
Primary Mass: 299.0 / 80.0



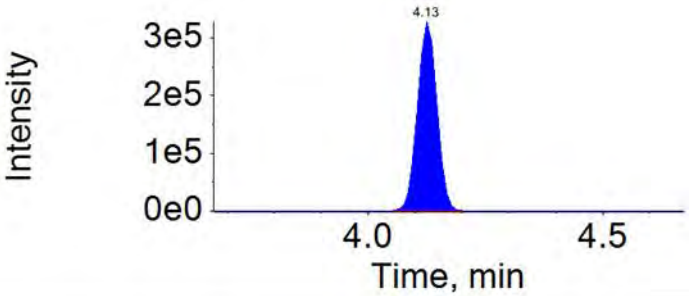
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



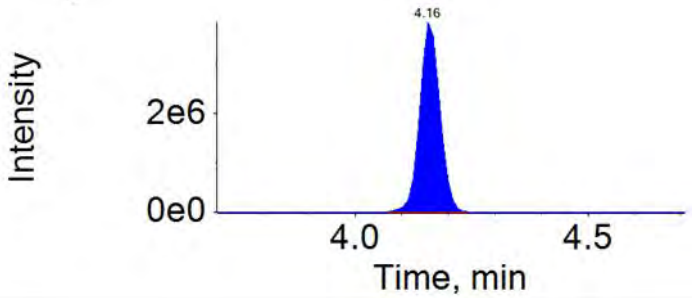
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



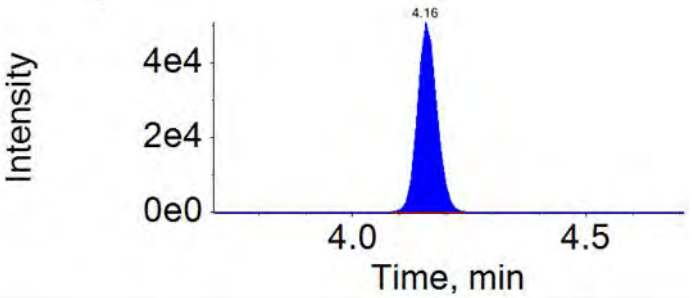
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



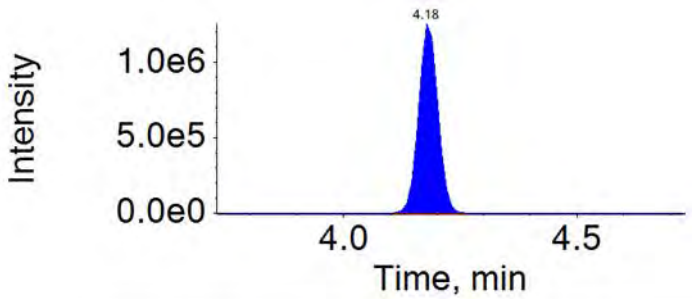
Component: PFHxA
Primary Mass: 313.0 / 269.0



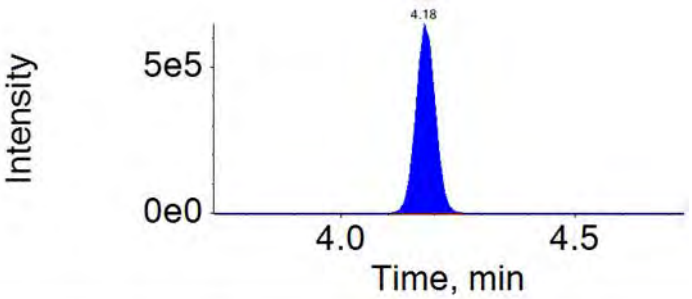
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



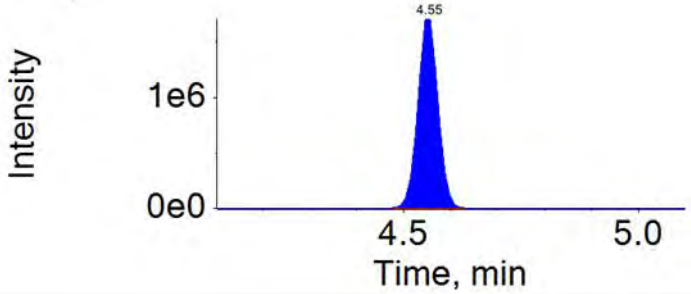
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



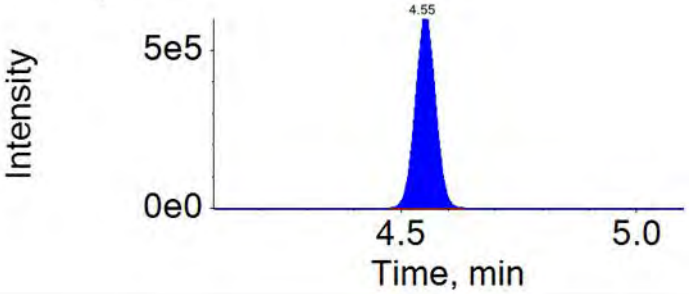
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

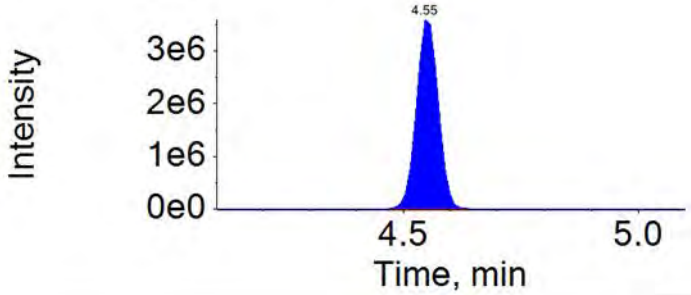
Component: PFHxS
Primary Mass: 399.0 / 80.0



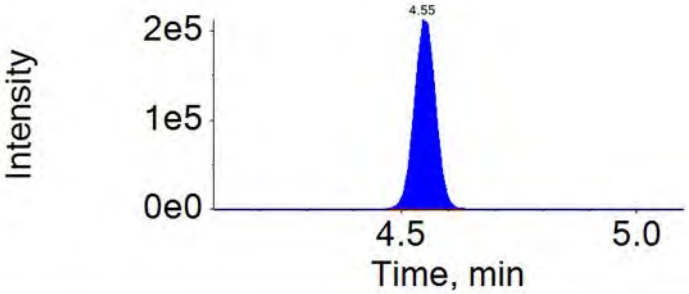
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



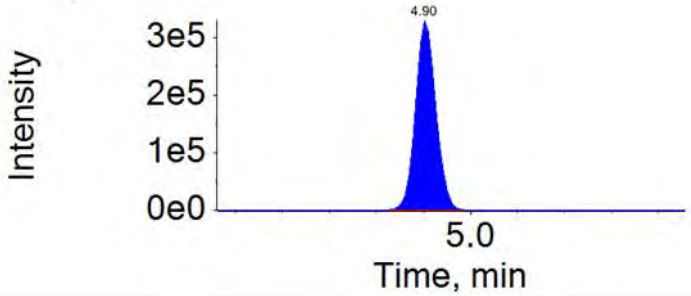
Component: PFHpA
Primary Mass: 363.0 / 319.0



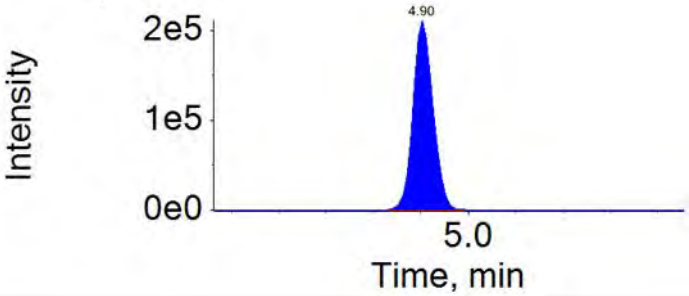
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



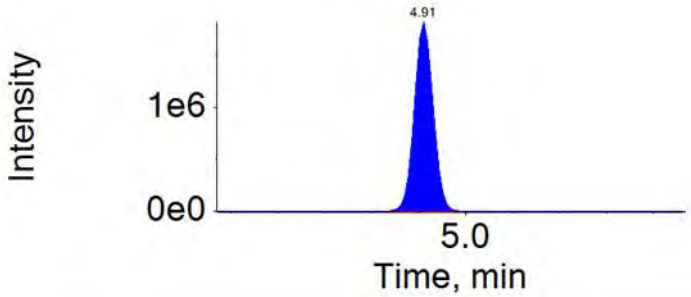
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



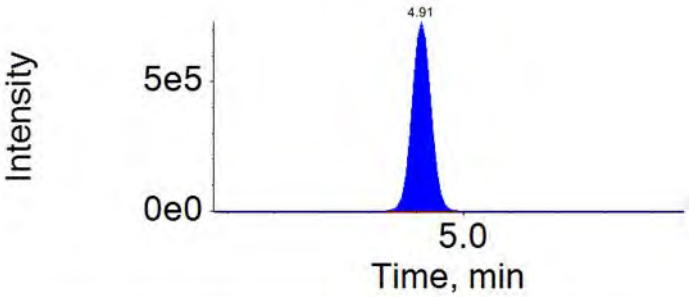
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



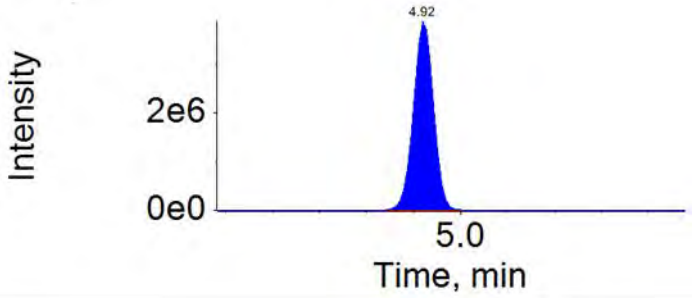
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



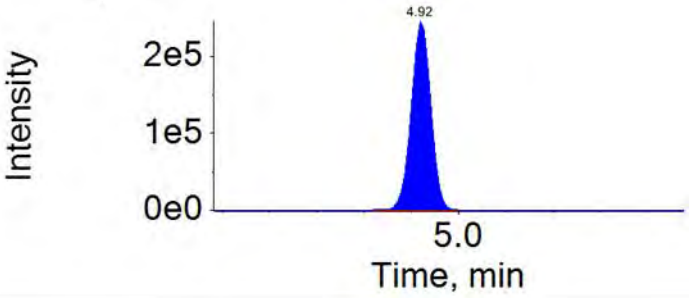
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

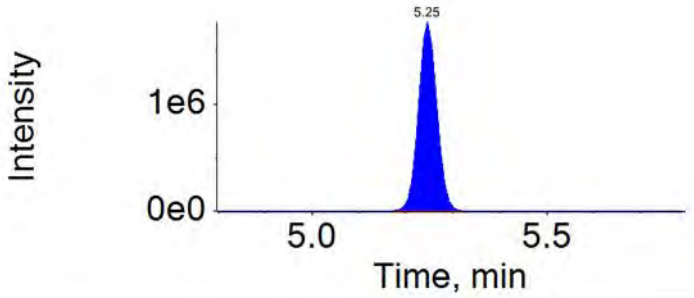
Component: PFOA
Primary Mass: 413.0 / 369.0



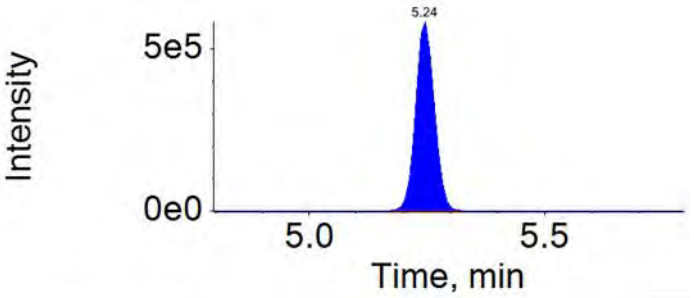
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



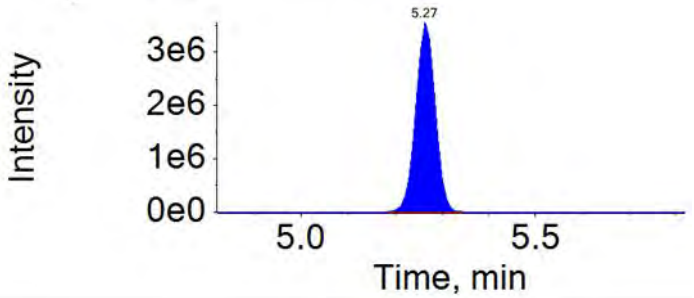
Component: PFOS
Primary Mass: 499.0 / 80.0



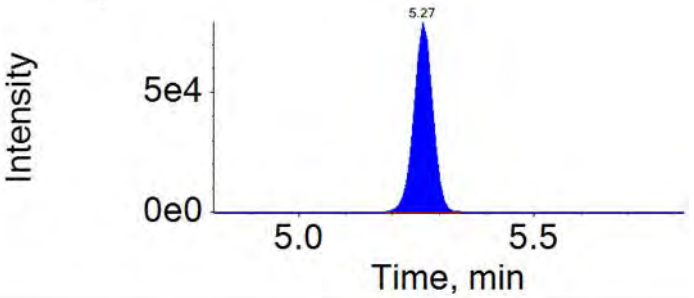
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



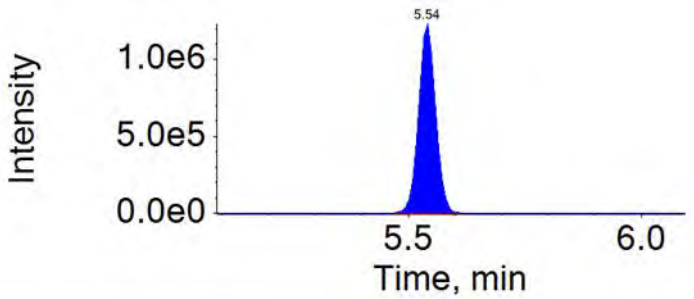
Component: PFNA
Primary Mass: 463.0 / 419.0



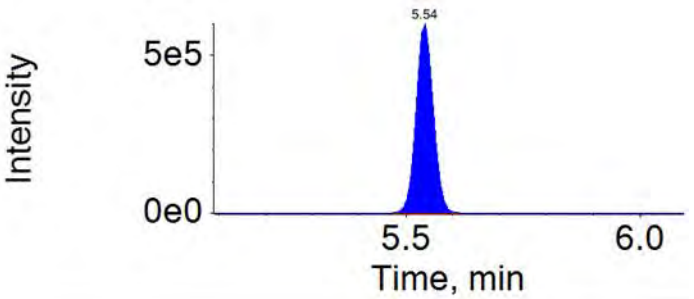
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



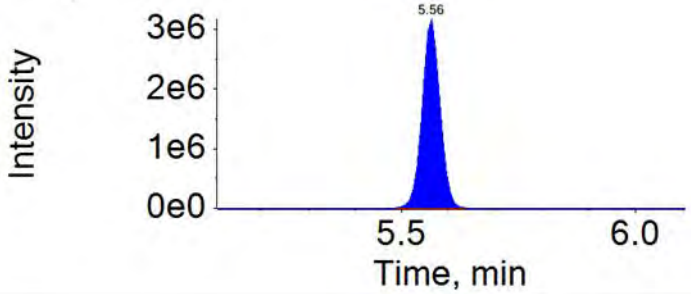
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



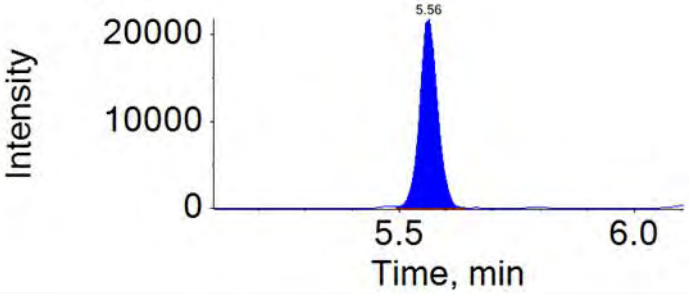
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

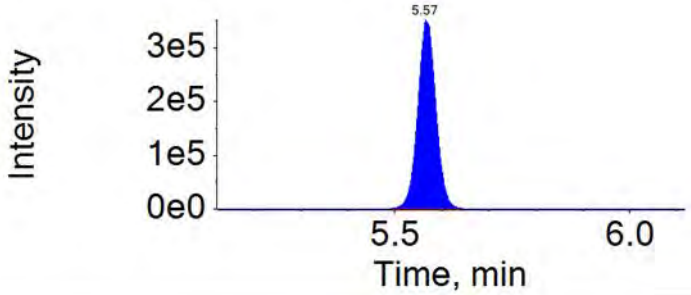
Component: PFDA
Primary Mass: 513.0 / 469.0



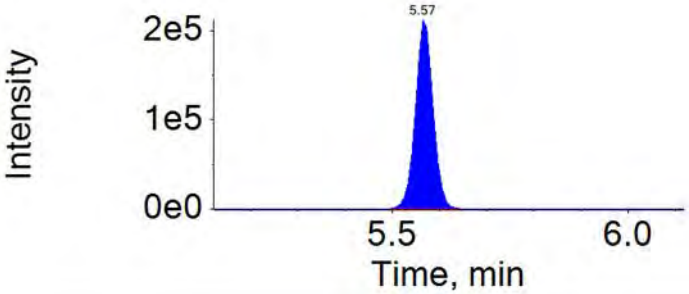
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



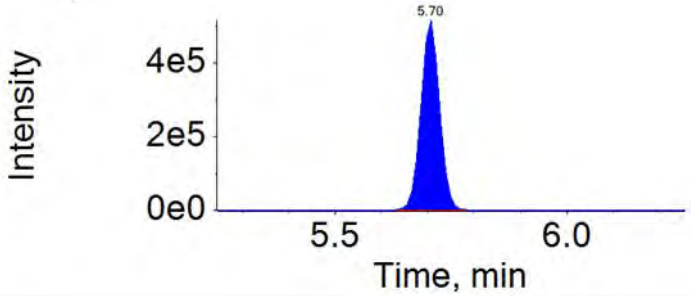
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



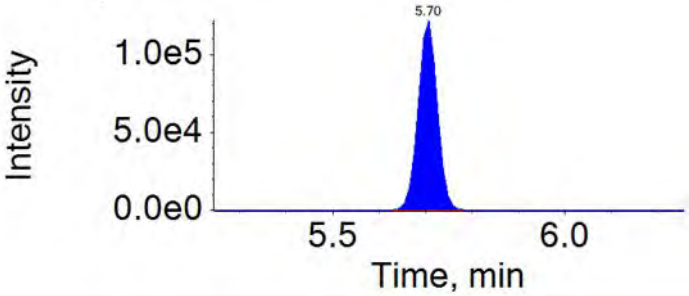
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



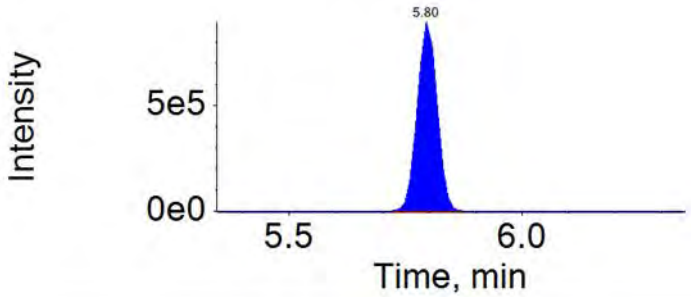
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



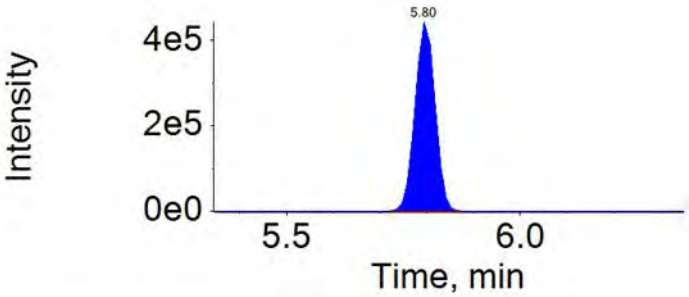
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



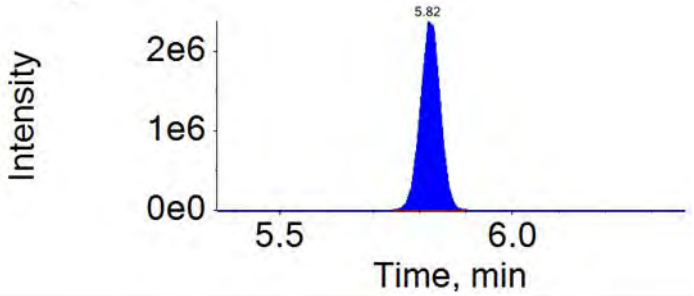
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



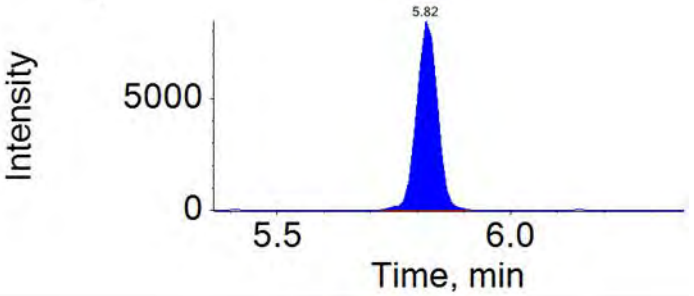
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

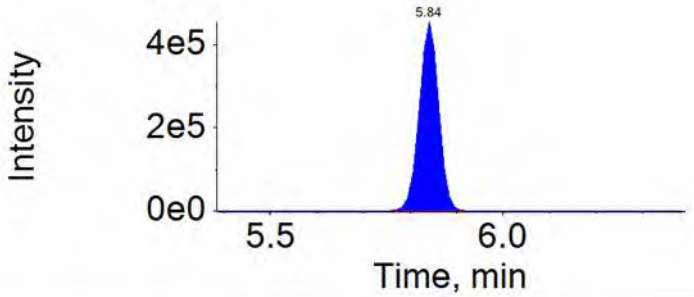
Component: PFUnDA
Primary Mass: 563.0 / 519.0



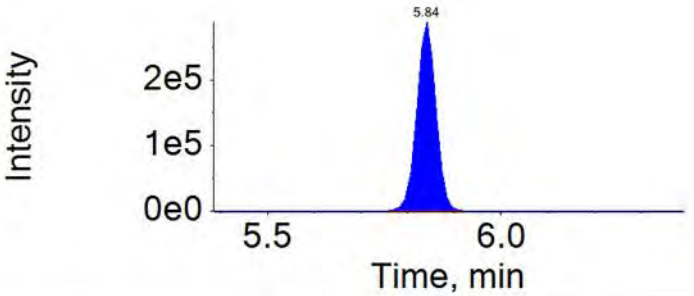
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



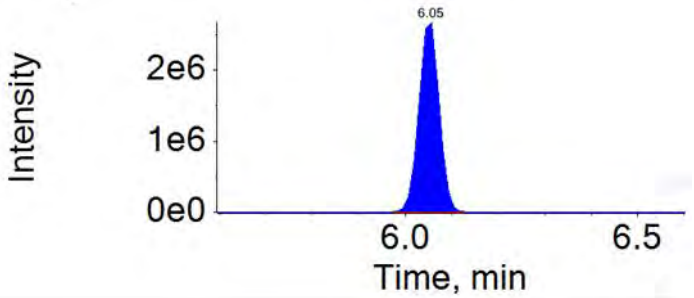
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



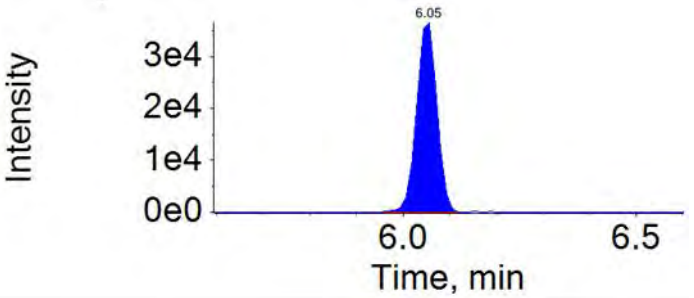
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



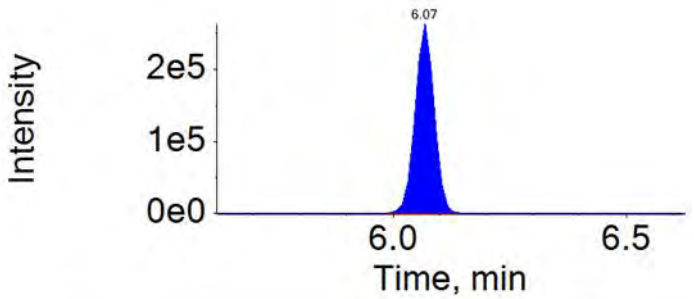
Component: PFDoDA
Primary Mass: 613.0 / 569.0



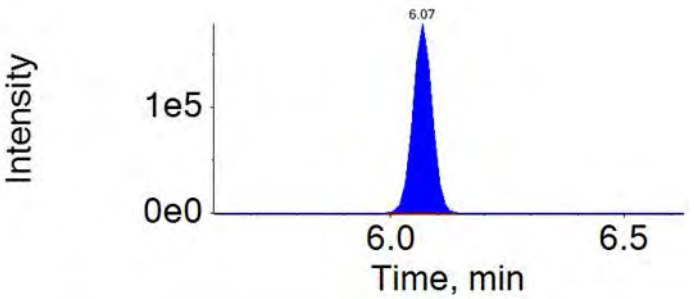
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



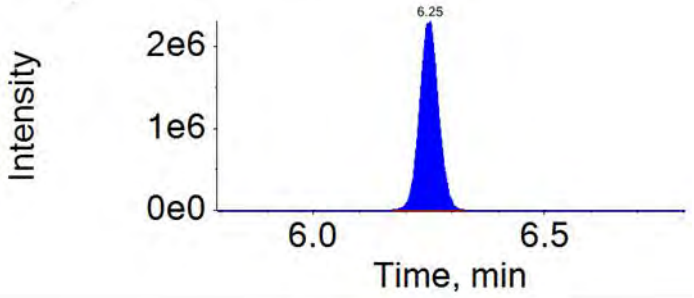
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



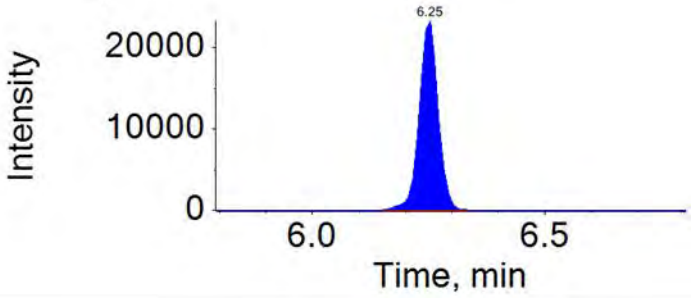
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

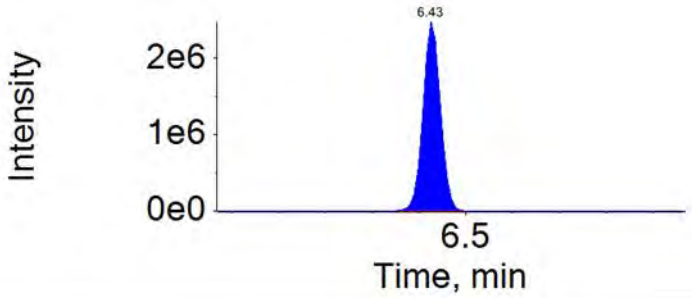
Component: PFTrDA
Primary Mass: 663.0 / 619.0



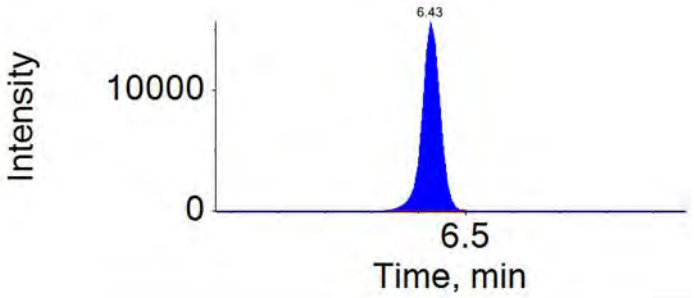
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



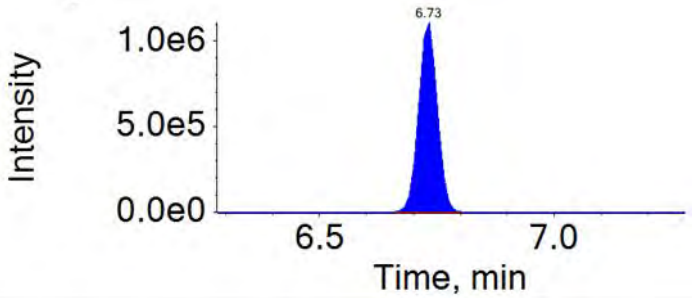
Component: PFTeDA
Primary Mass: 713.0 / 669.0



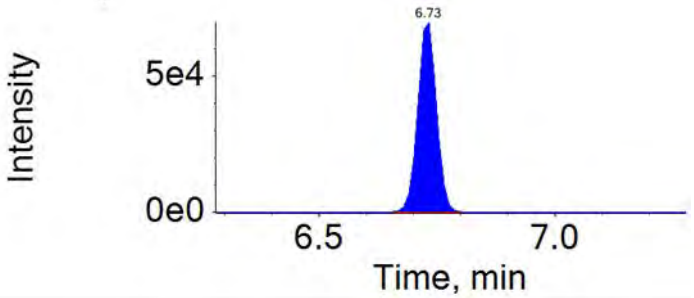
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



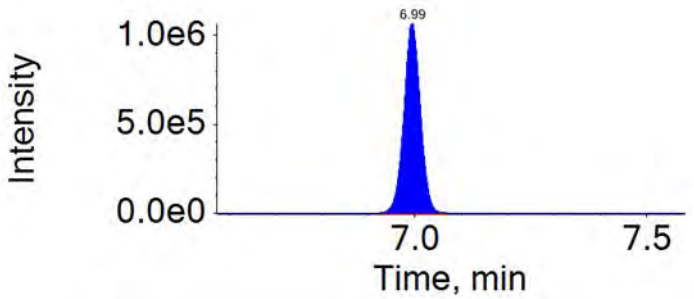
Component: PFHxDA
Primary Mass: 813.0 / 769.0



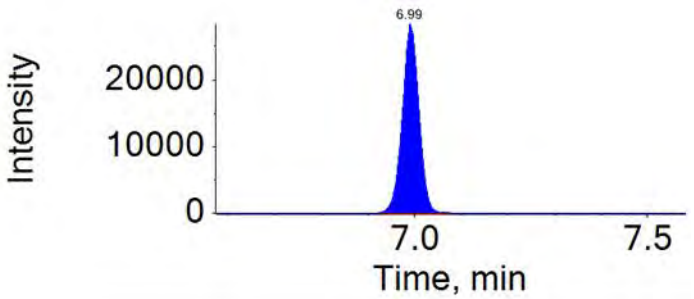
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	MDL			**Data File:**		18NOV07DCAL-09.wiff
Sample ID:	MDLMODX1833E			**Acquis Date:**		2018-11-07T09:30:56
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	2			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	727406.8	730410.6	0	50	
13C2-PFOA	5.0	526479.1	524423.6	0	50	
13C4-PFOS	4.8	275181.3	274061.7	0	50	
13C2-PFDA	5.0	315732.1	311442.1	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	807312.5	13C3-PFBA	727406.8	1.110	5.000	5.136	103	70-130	
E13C5-PFPeA	823702.7	13C3-PFBA	727406.8	1.132	5.000	4.933	99	70-130	
E13C3-PFBS	442660.1	13C3-PFBA	727406.8	0.609	4.650	4.466	96	70-130	
E13C2-4:2-FTS	52398.7	13C2-PFOA	526479.1	0.100	4.670	4.491	96	70-130	
E13C5-PFHxA	716268.2	13C2-PFOA	526479.1	1.360	5.000	5.004	100	70-130	
E13C3-PFHxS	335727.6	13C2-PFOA	526479.1	0.638	4.730	4.578	97	70-130	
E13C4-PFHpA	575860.3	13C2-PFOA	526479.1	1.094	5.000	4.976	100	70-130	
E13C2-6:2-FTS	41140.3	13C2-PFOA	526479.1	0.078	4.750	5.211	110	70-130	
E13C8-PFOA	972540.0	13C2-PFOA	526479.1	1.847	5.000	5.151	103	70-130	
E13C8-PFOS	290003.4	13C4-PFOS	275181.3	1.054	4.780	4.660	97	70-130	
E13C9-PFNA	494088.2	13C4-PFOS	275181.3	1.796	5.000	4.905	98	70-130	
E13C6-PFDA	660922.5	13C2-PFDA	315732.1	2.093	5.000	5.264	105	70-130	
E13C2-8:2-FTS	30155.0	13C2-PFDA	315732.1	0.096	4.790	5.054	106	70-130	
E13C8-PFOSA	682695.0	13C2-PFDA	315732.1	2.162	5.000	4.718	94	70-130	
Ed3-NMeFOSAA	79243.0	13C2-PFDA	315732.1	0.251	5.000	4.667	93	70-130	
E13C7-PFUnDA	280781.9	13C2-PFDA	315732.1	0.889	5.000	5.130	103	70-130	
Ed5-NEtFOSAA	64527.2	13C2-PFDA	315732.1	0.204	5.000	4.730	95	70-130	
E13C2-PFDoDA	600395.5	13C2-PFDA	315732.1	1.902	5.000	5.126	103	70-130	
Ed7-NMePFOSAE	326457.3	13C2-PFDA	315732.1	1.034	5.000	4.808	96	70-130	
Ed3-NMePFOSA	82534.2	13C2-PFDA	315732.1	0.261	5.000	4.786	96	70-130	
Ed9-NEtPFOSAE	271491.0	13C2-PFDA	315732.1	0.860	5.000	4.911	98	70-130	
Ed5-NEtPFOSA	69328.7	13C2-PFDA	315732.1	0.220	5.000	5.084	102	70-130	
E13C2-PFTeDA	418605.6	13C2-PFDA	315732.1	1.326	5.000	4.773	95	70-130	

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

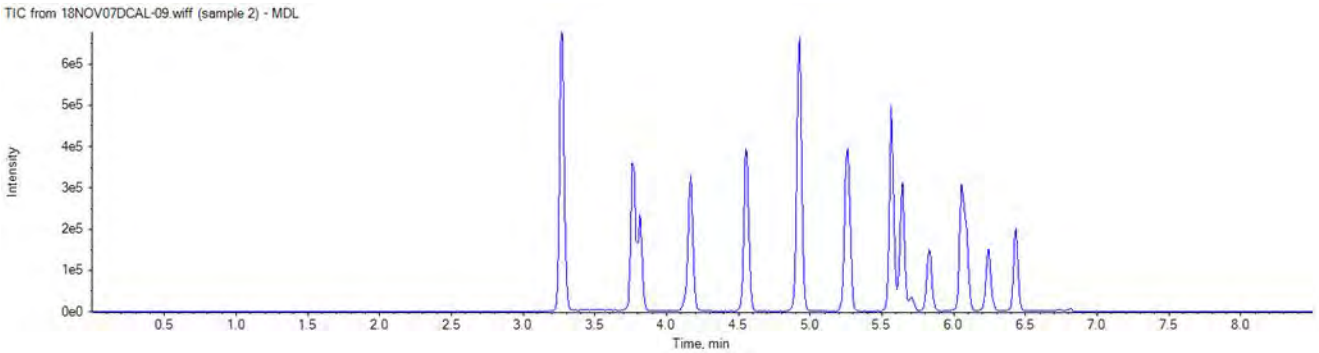
Analyte Quantitation Peak Table

Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-09.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	15305.2		A	13C4-PFBA	3.27	807312.5	0.019	0.111
PFPeA	3.76	1.000	17527.3		A	13C5-PFPeA	3.77	823702.7	0.021	0.126
PFBS	3.81	1.000	8179.1		A	13C3-PFBS	3.82	442660.1	0.018	0.093
4:2-FTS	4.14	1.000	2516.6		A	13C2-4:2-FTS	4.13	52398.7	0.048	0.129
PFHxA	4.16	1.000	19041.3		A	13C5-PFHxA	4.17	716268.2	0.027	0.114
PFPeS	4.18	1.100	4553.9		A	13C3-PFBS	3.82	442660.1	0.010	0.101
PFHxS	4.55	1.000	5720.4		A	13C3-PFHxS	4.55	335727.6	0.017	0.086
PFHpA	4.55	1.000	20611.7		A	13C4-PFHpA	4.55	575860.3	0.036	0.120
6:2-FTS	4.92	1.000	1337.7		A	13C2-6:2-FTS	4.91	41140.3	0.033	0.081
PFHpS	4.92	1.080	5811.8		A	13C3-PFHxS	4.55	335727.6	0.017	0.091
PFOA	4.92	1.000	21714.7		A	13C8-PFOA	4.92	972540.0	0.022	0.126
PFOS	5.25	1.000	7067.6		A	13C8-PFOS	5.25	290003.4	0.024	0.126
PFNA	5.27	1.000	14036.5		M	13C9-PFNA	5.27	494088.2	0.028	0.106
PFNS	5.54	1.060	4370.5		A	13C8-PFOS	5.25	290003.4	0.015	0.119
PFDA	5.57	1.000	13448.9		A	13C6-PFDA	5.57	660922.5	0.020	0.112
8:2-FTS	5.57	1.000	1277.3		A	13C2-8:2-FTS	5.57	30155.0	0.042	0.095
PFOSA	5.64	1.000	12732.2		A	13C8-PFOSA	5.64	682695.0	0.019	0.101
NMeFOSAA	5.71	1.000	1352.6		M	d3-NMeFOSAA	5.71	79243.0	0.017	0.088
PFDS	5.80	1.110	2949.3		A	13C8-PFOS	5.25	290003.4	0.010	0.097
PFUnDA	5.83	1.000	13003.8		A	13C7-PFUnDA	5.83	280781.9	0.046	0.133
NEtFOSAA	5.84	1.000	1823.4		A	d5-NEtFOSAA	5.84	64527.2	0.028	0.121
PFDoDA	6.05	1.000	12755.8		A	13C2-PFDoDA	6.05	600395.5	0.021	0.115
10:2-FTS	6.07	1.090	1033.2		A	13C2-8:2-FTS	5.57	30155.0	0.034	0.107
NMePFOSAE	6.10	1.000	8309.5		A	d7-NMePFOSAE	6.08	326457.3	0.025	0.114
NMePFOSA	6.10	1.000	1429.6		M	d3-NMePFOSA	6.10	82534.2	0.017	0.097
PFDoS	6.22	1.190	1360.5		A	13C8-PFOS	5.25	290003.4	0.005	0.091
NEtPFOSAE	6.25	1.000	9821.0		A	d9-NEtPFOSAE	6.24	271491.0	0.036	0.116
NEtPFOSA	6.26	1.000	1542.4		A	d5-NEtPFOSA	6.26	69328.7	0.022	0.098
PFTrDA	6.26	1.030	10576.8		M	13C2-PFDoDA	6.05	600395.5	0.018	0.111
PFTeDA	6.43	1.000	7741.6		A	13C2-PFTeDA	6.43	418605.6	0.018	0.109
PFHxDA	6.73	1.050	5030.0		A	13C2-PFTeDA	6.43	418605.6	0.012	0.149
PFODA	7.00	1.090	3044.8		A	13C2-PFTeDA	6.43	418605.6	0.007	0.104

Total Ion Chromatogram

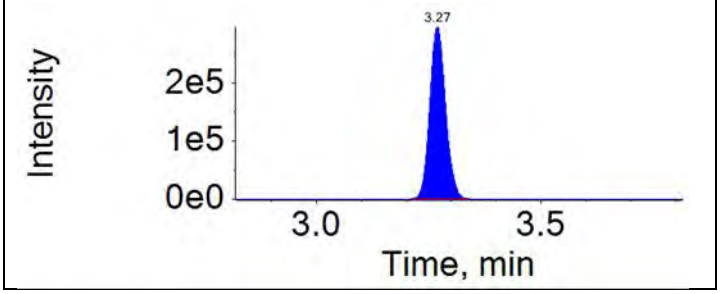


APPROVED
By JPT at 2:54 pm, 11/7/18

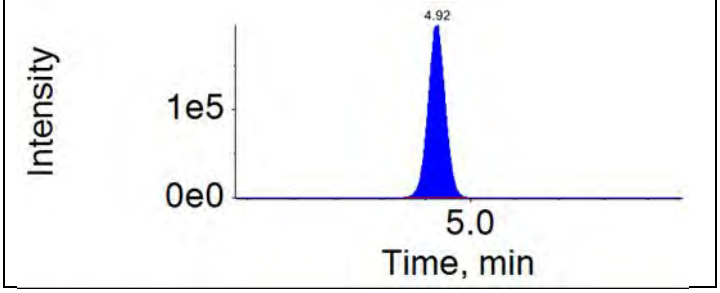
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

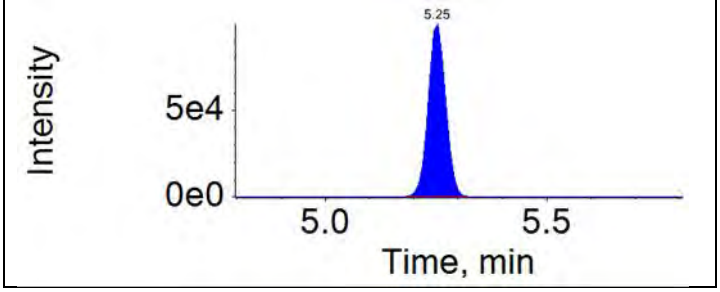
Injection Standard: 13C3-PFBA
216.0 / 172.0



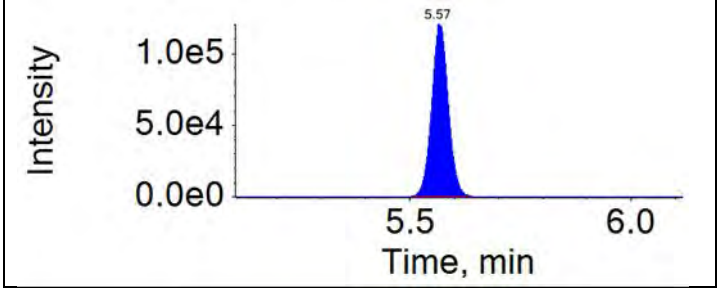
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



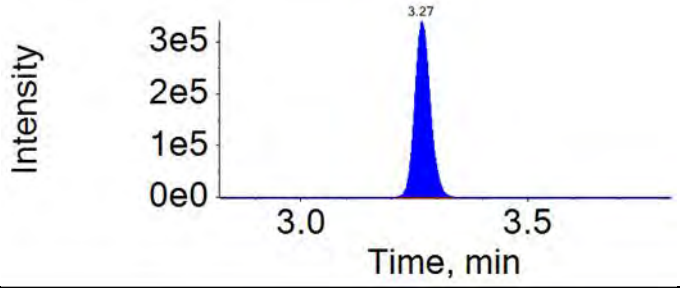
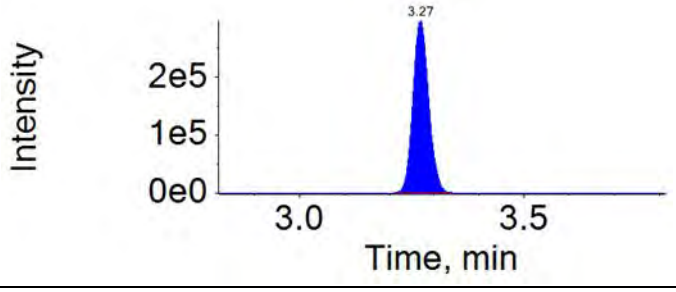
Injection Standard: 13C2-PFDA
515.0 / 470.0

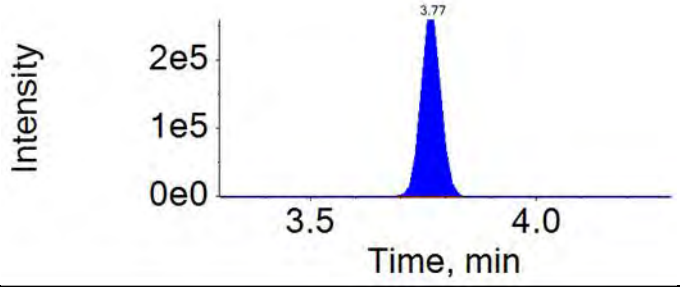
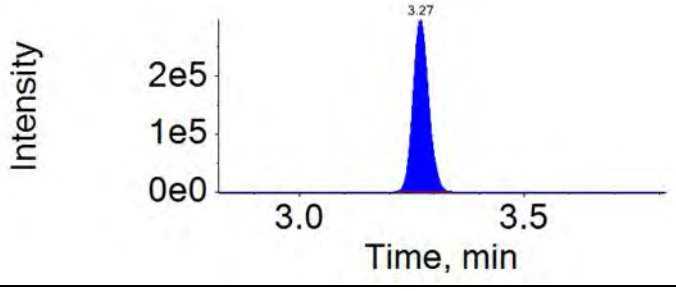


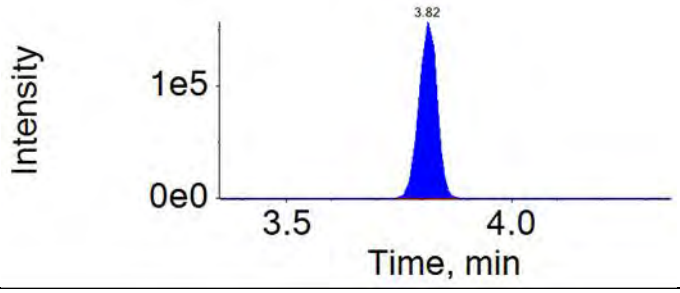
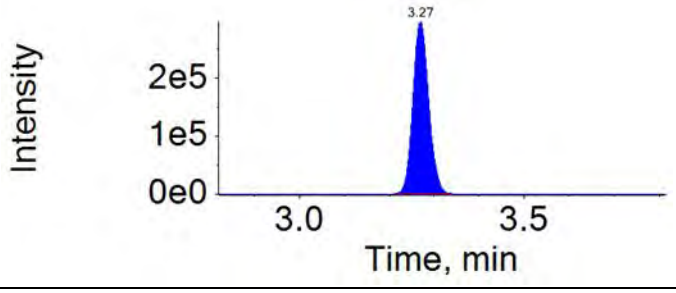
APPROVED
By JPT at 2:54 pm, 11/7/18

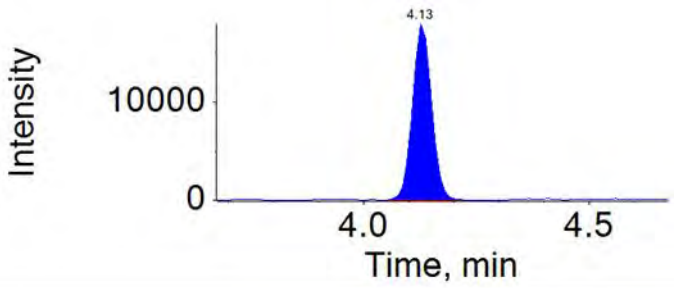
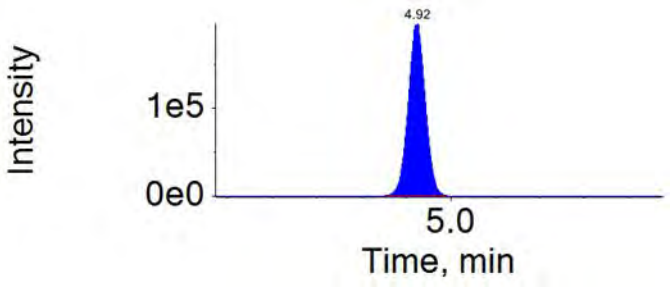
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

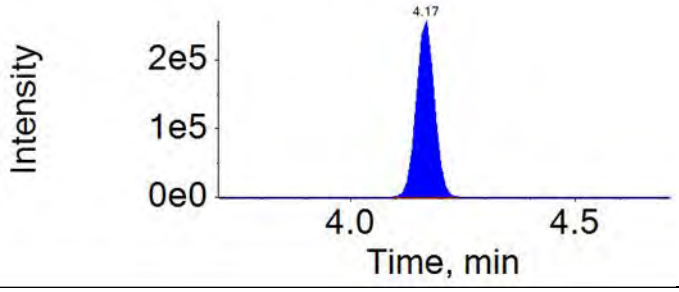
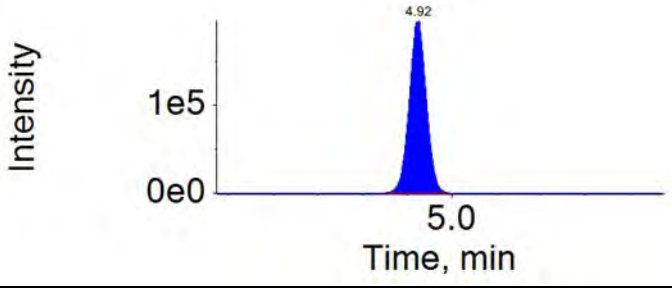
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

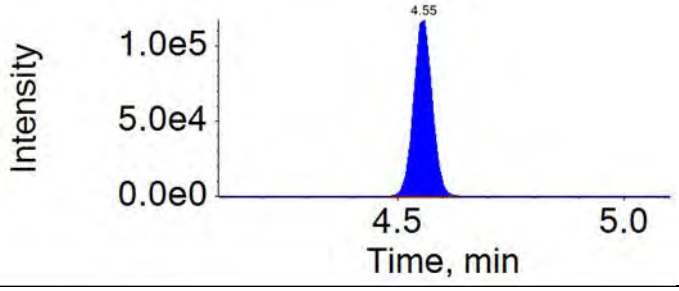
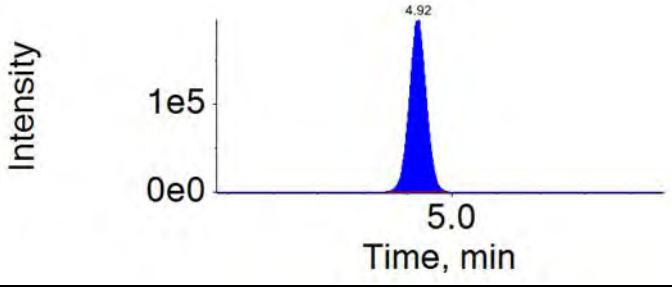
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

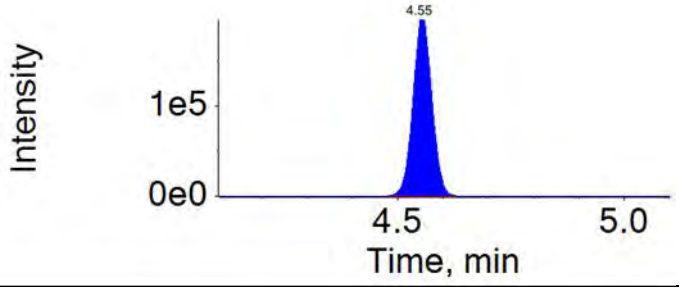
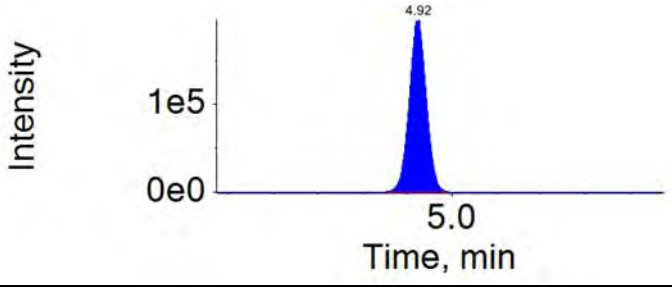
APPROVED
By JPT at 2:54 pm, 11/7/18

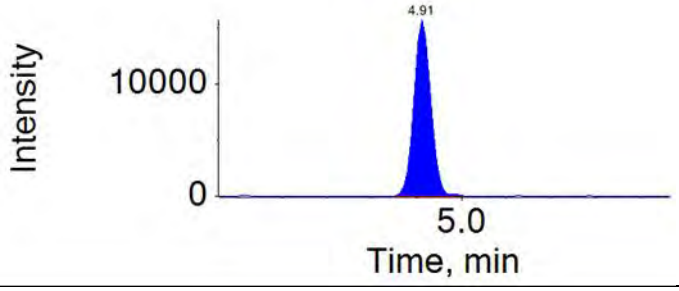
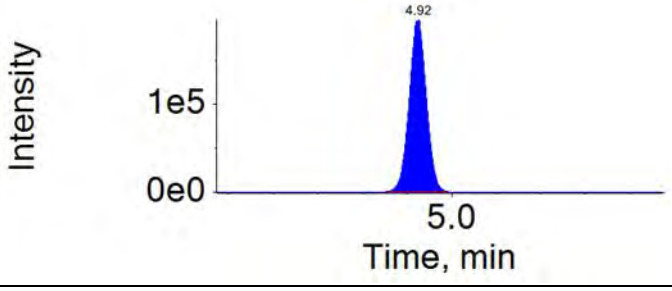
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

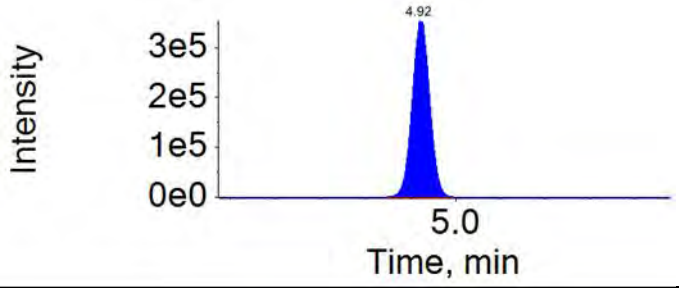
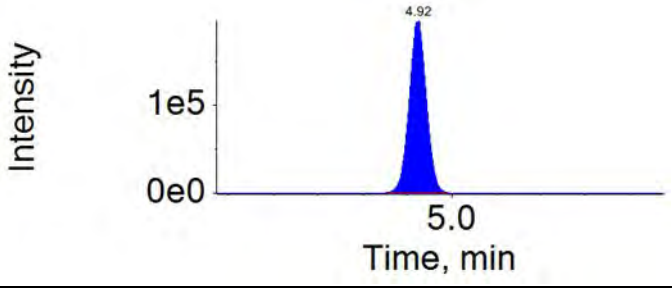
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

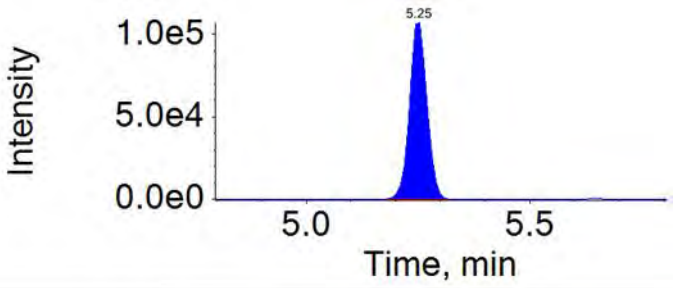
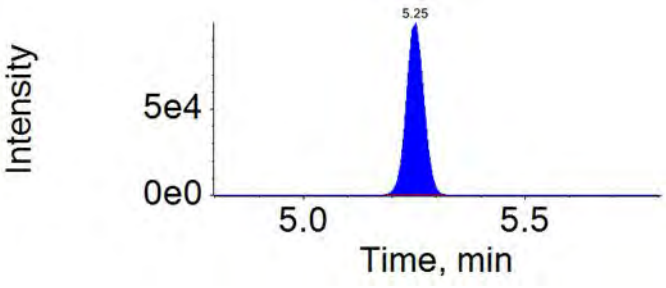
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

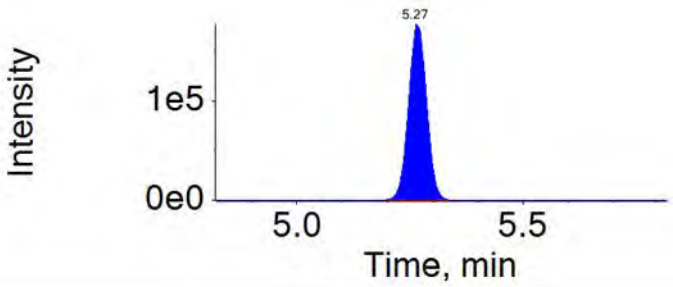
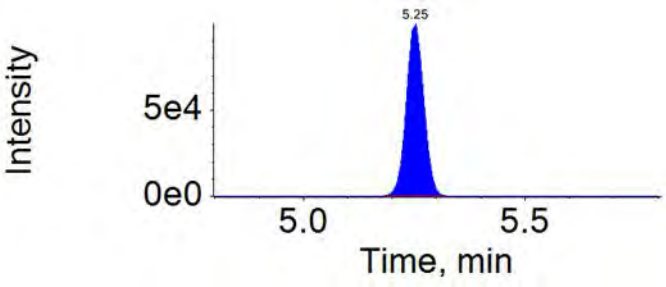
APPROVED
By JPT at 2:54 pm, 11/7/18

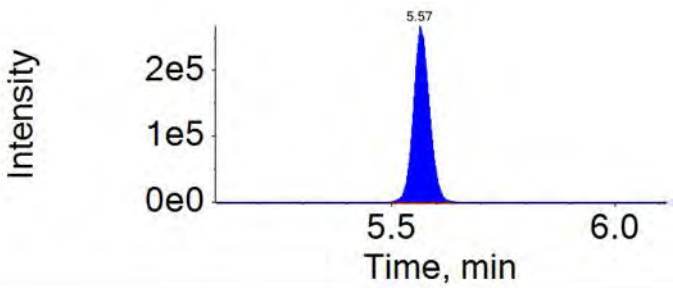
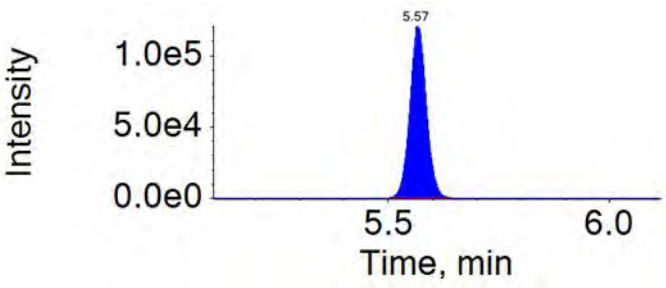
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

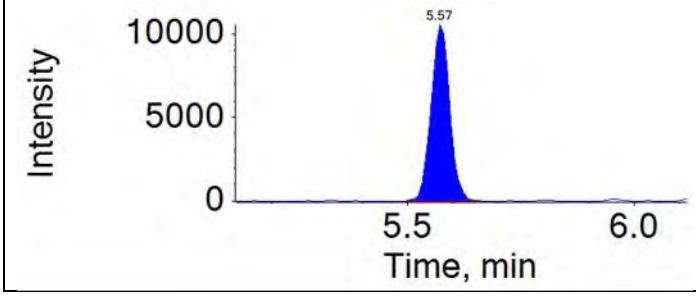
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

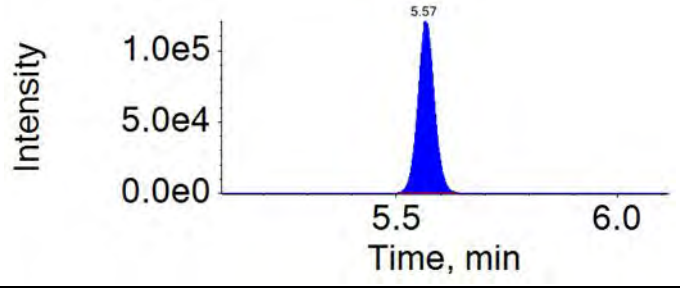
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

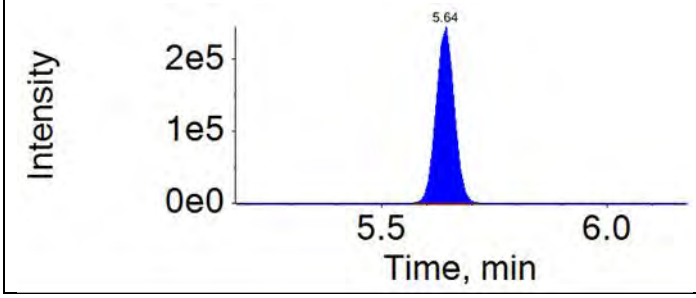
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

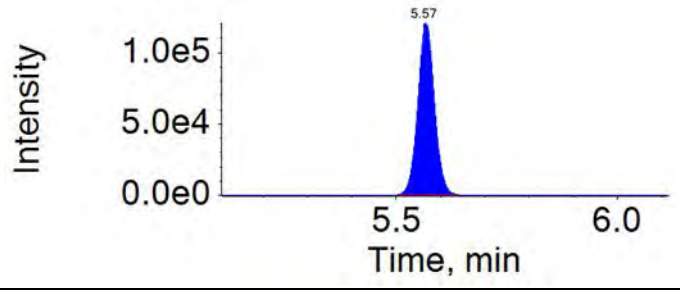
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



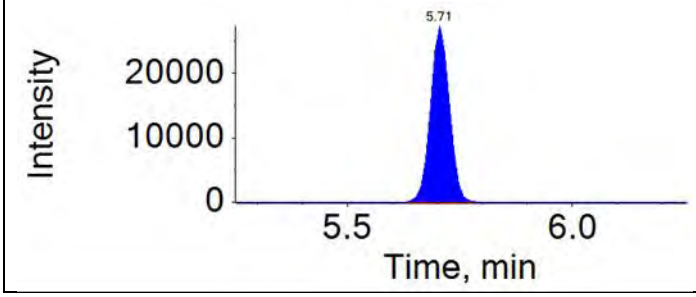


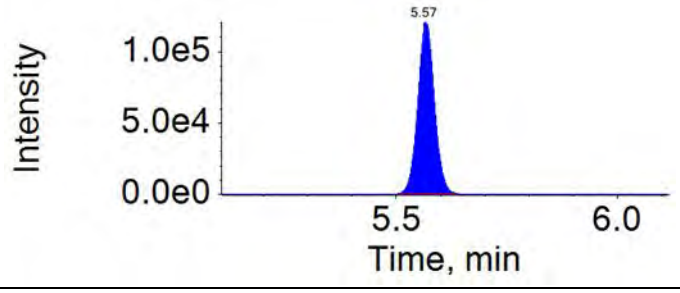
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



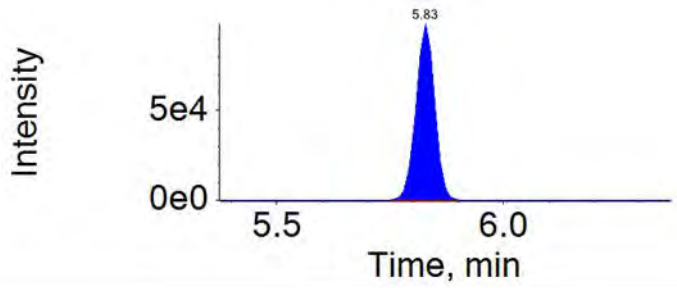


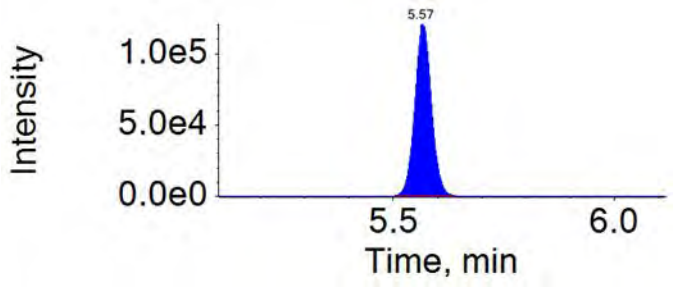
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



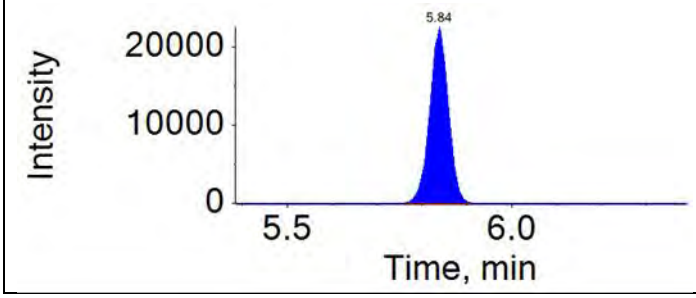


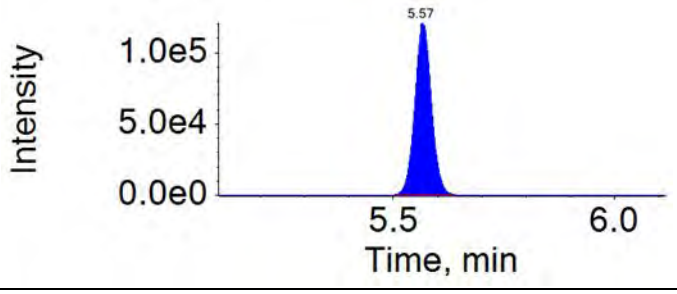
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

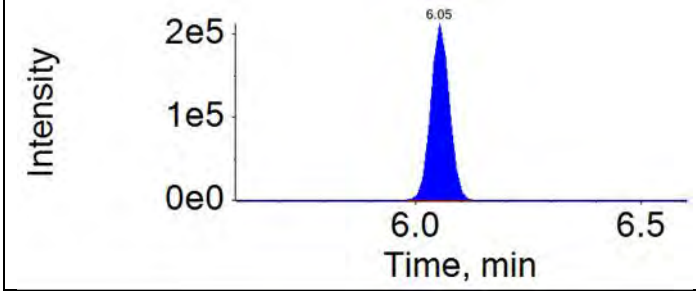
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

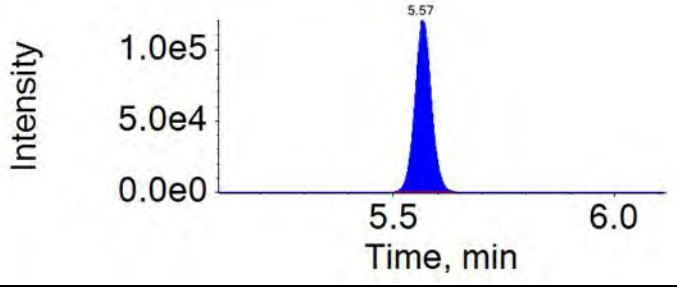
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



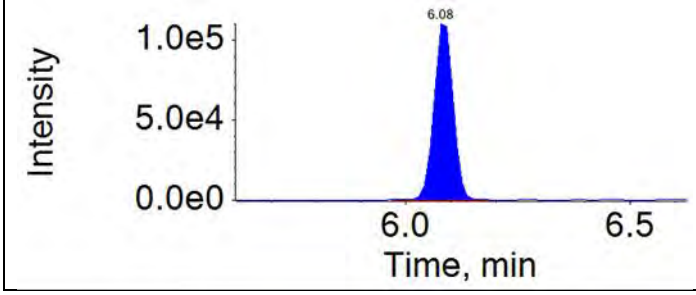


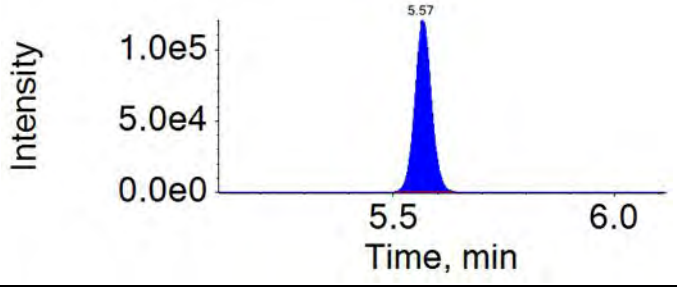
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



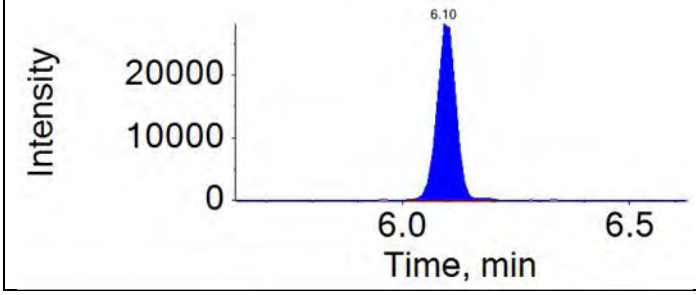


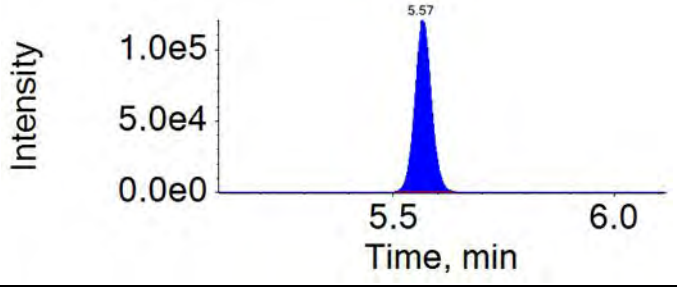
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



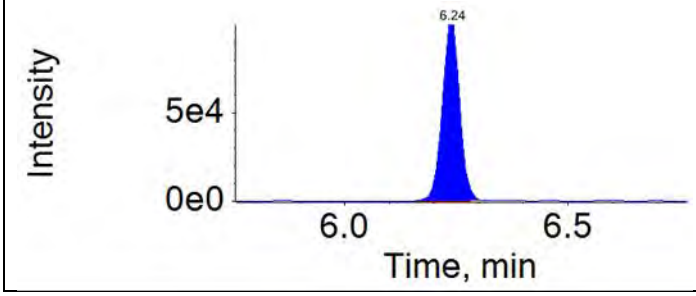


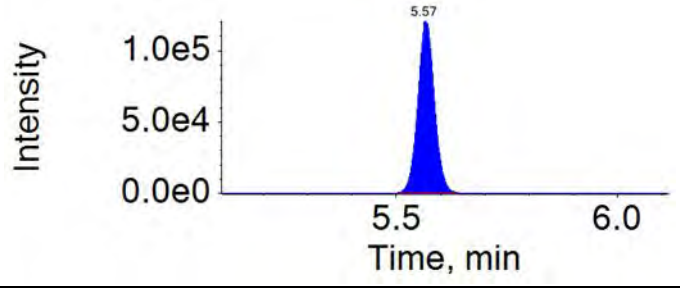
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

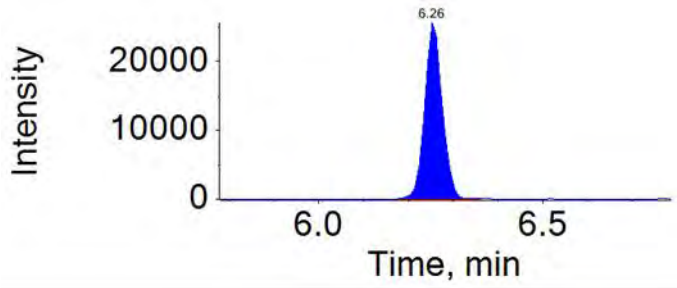
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

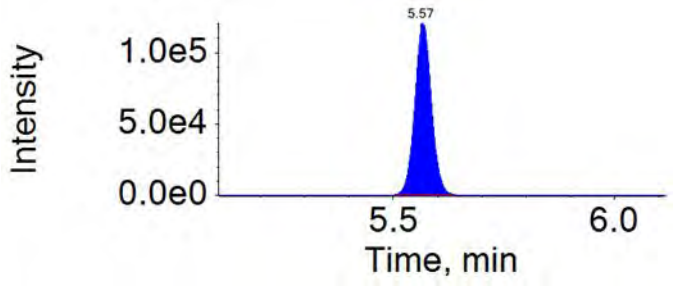
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



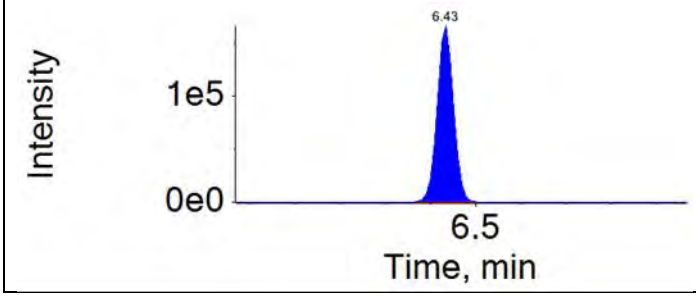


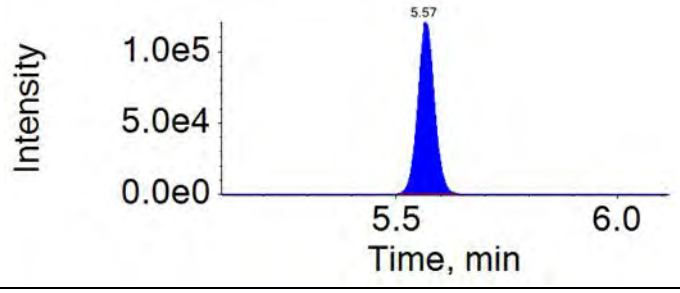
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



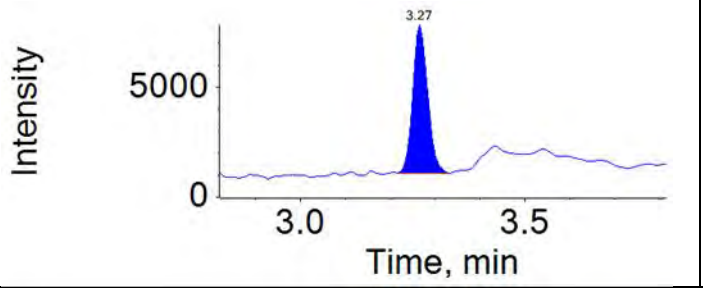


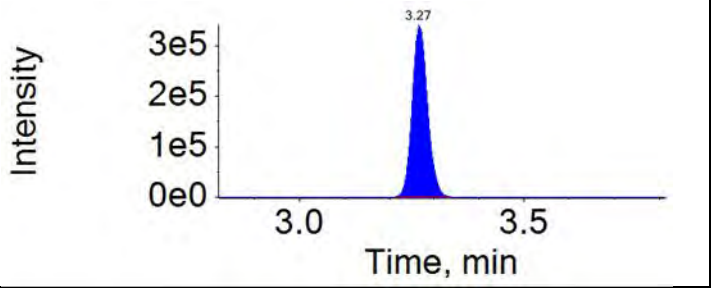
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

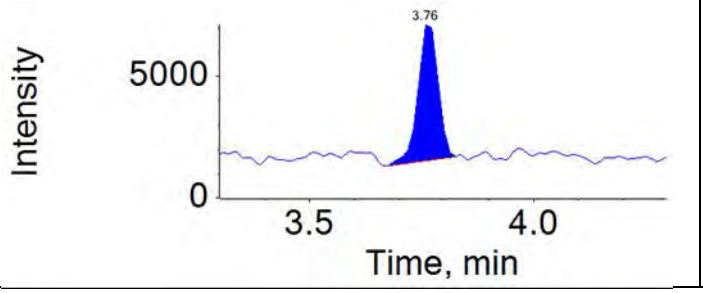
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

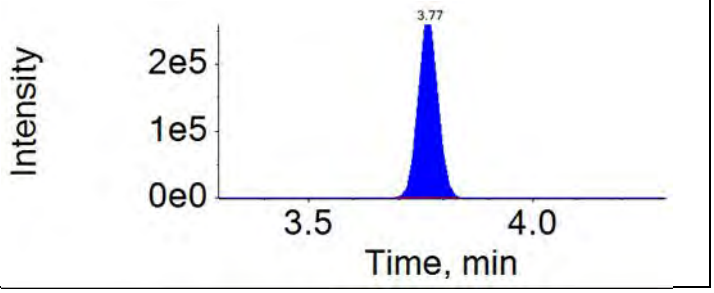
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



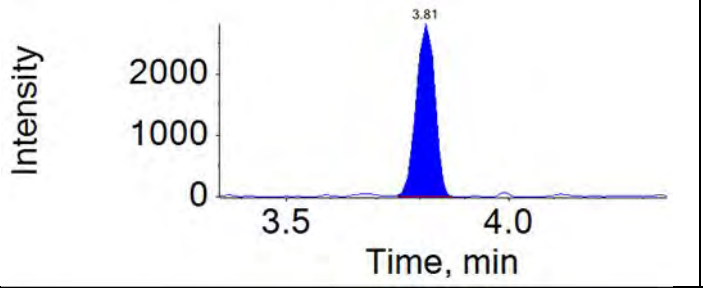


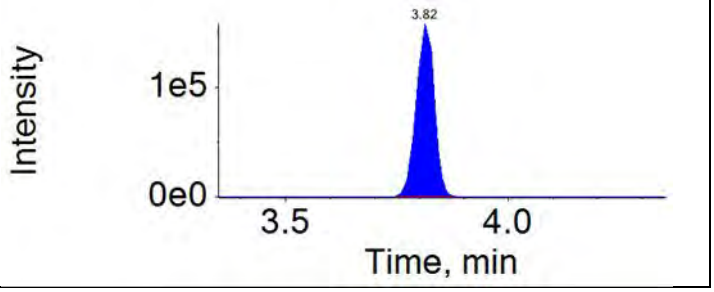
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



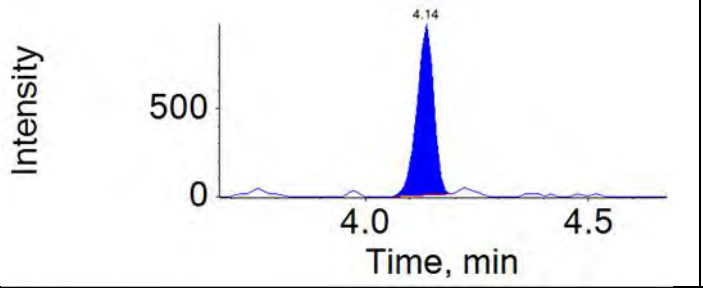


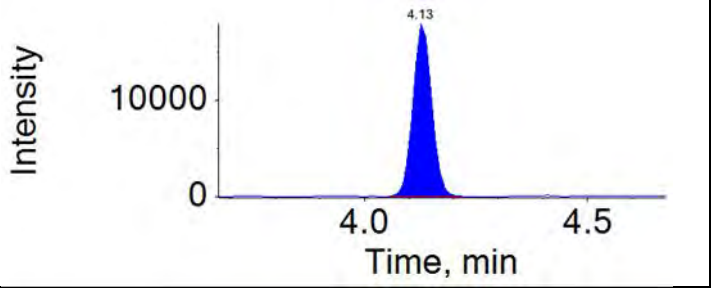
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

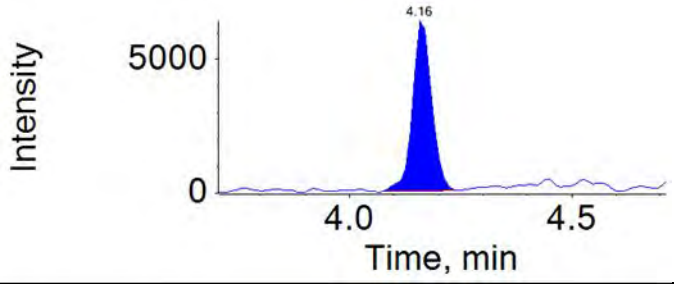
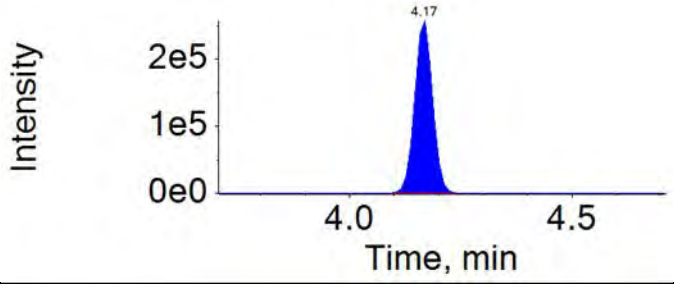


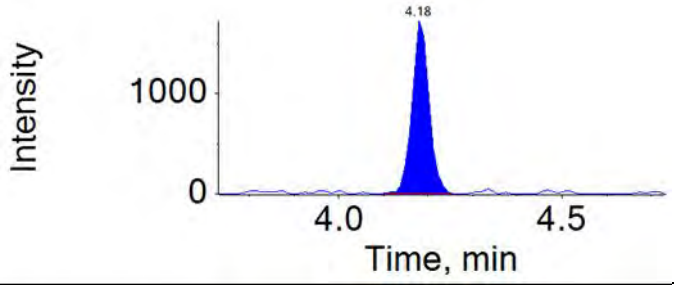
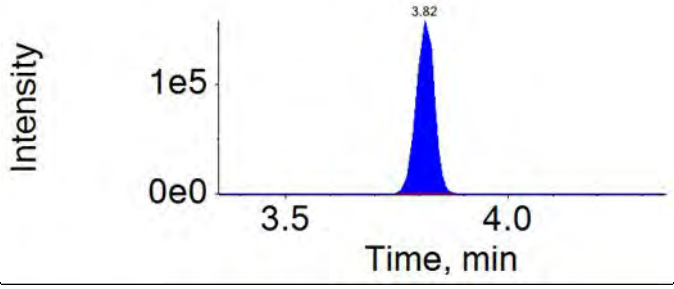


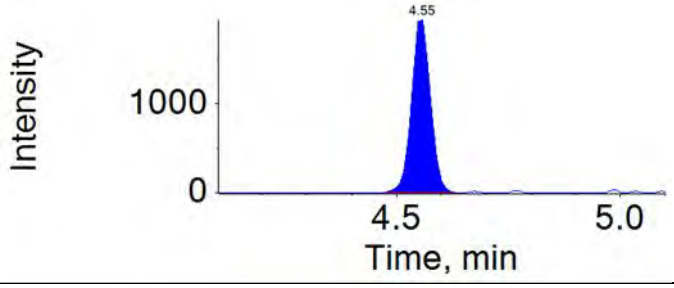
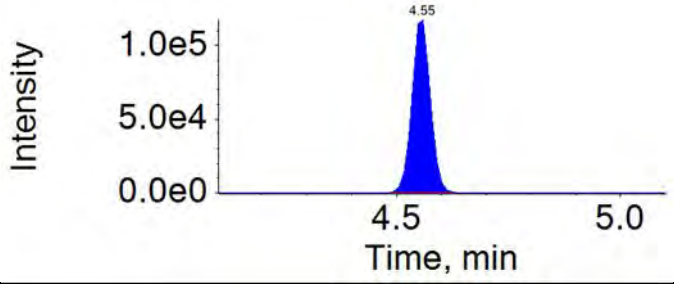
APPROVED
By JPT at 2:54 pm, 11/7/18

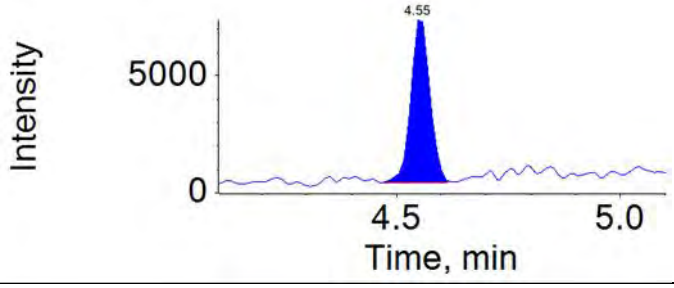
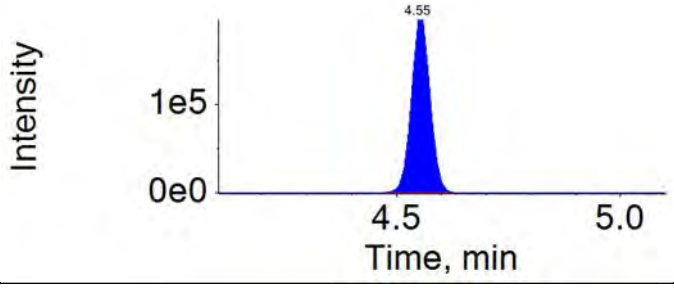
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

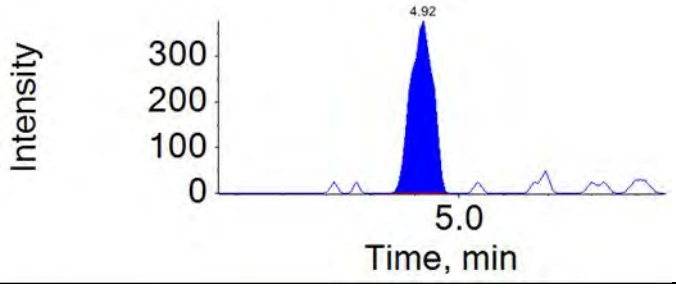
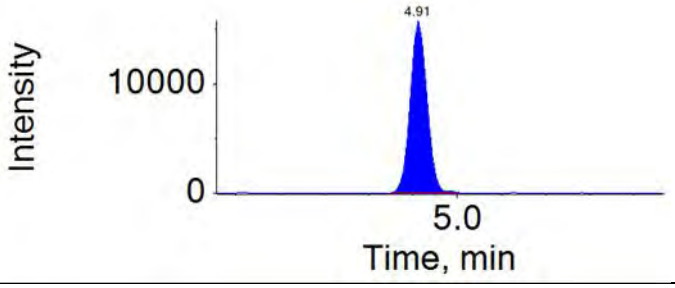
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

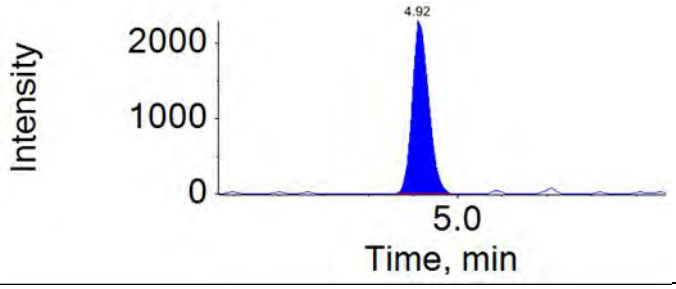
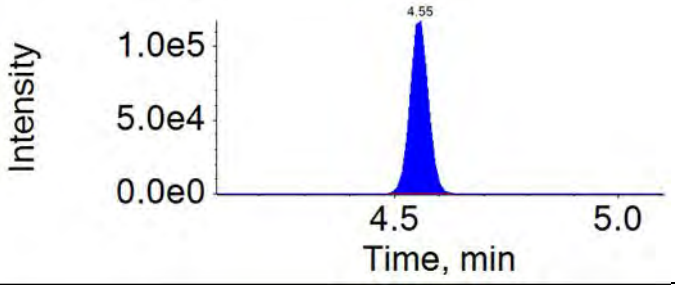
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

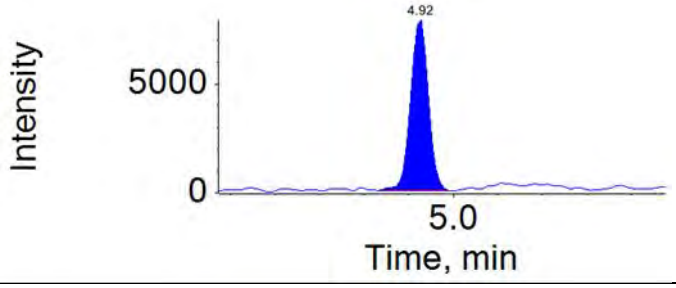
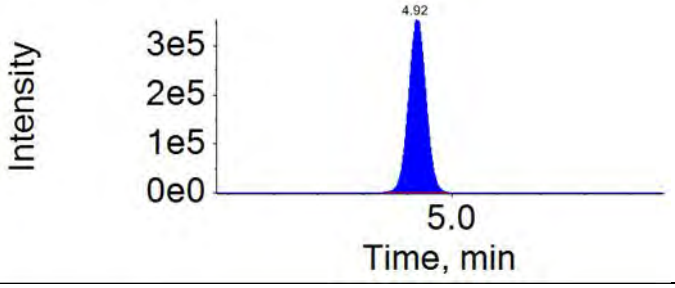
APPROVED
By JPT at 2:54 pm, 11/7/18

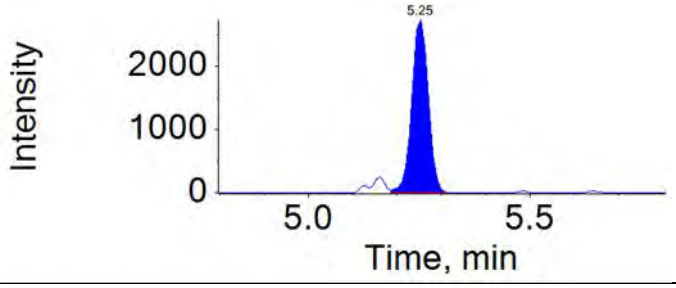
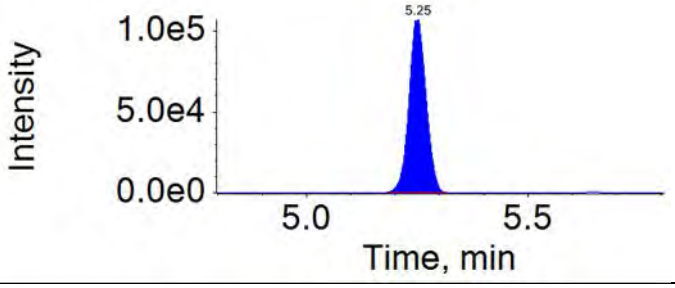
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

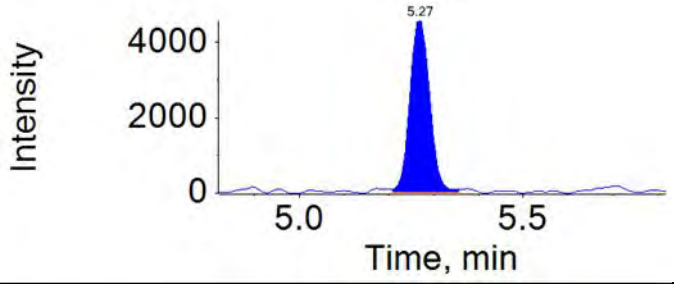
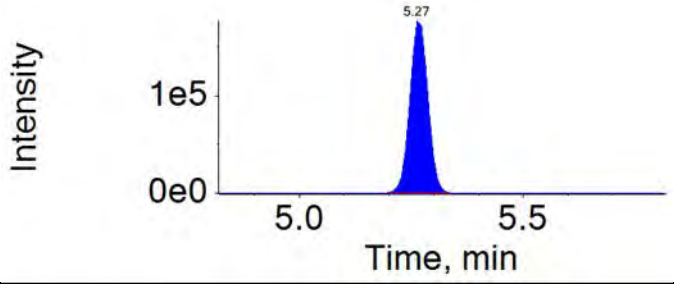
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

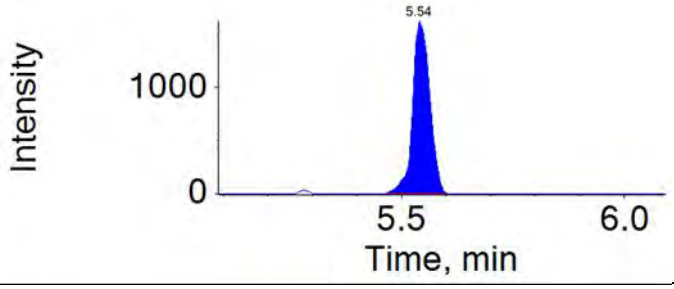
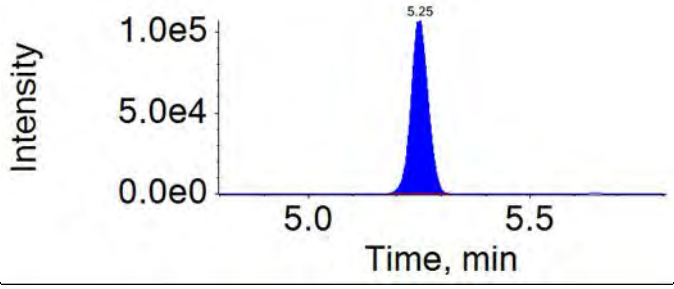
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

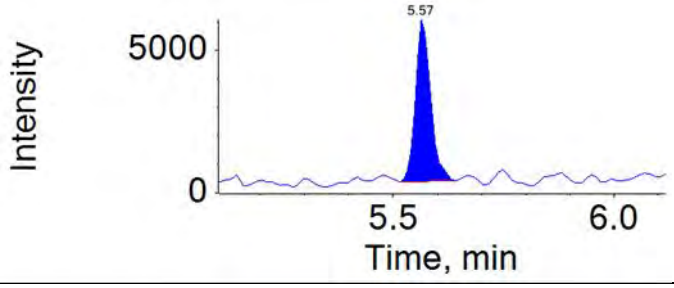
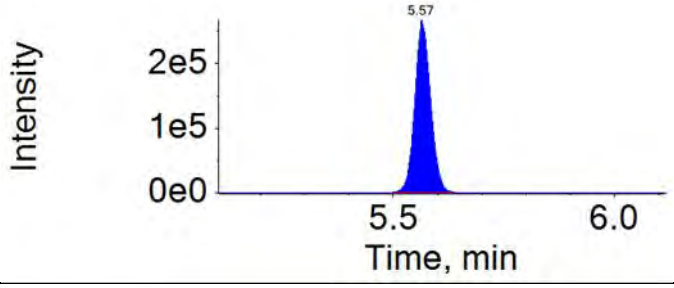
APPROVED
By JPT at 2:54 pm, 11/7/18

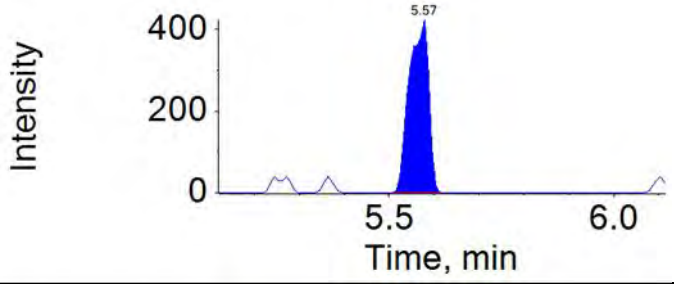
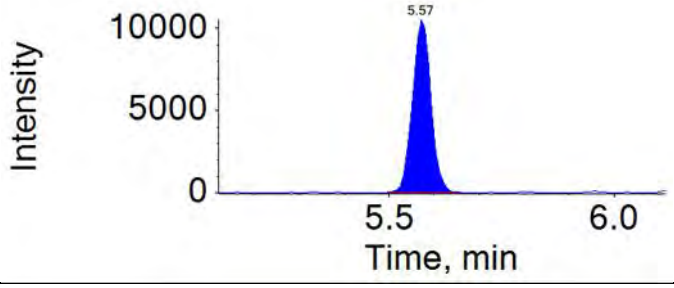
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

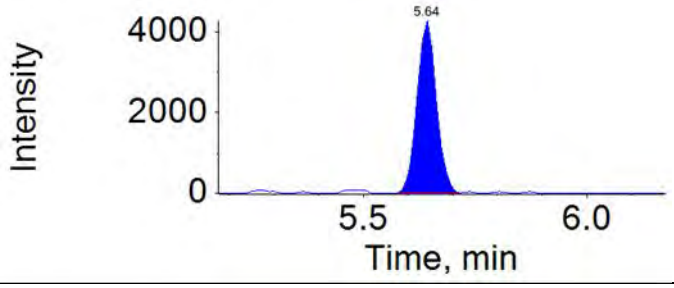
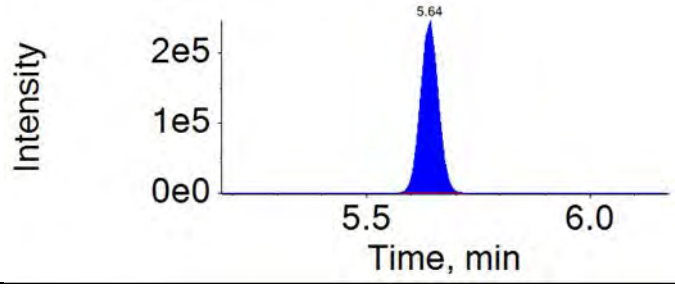
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

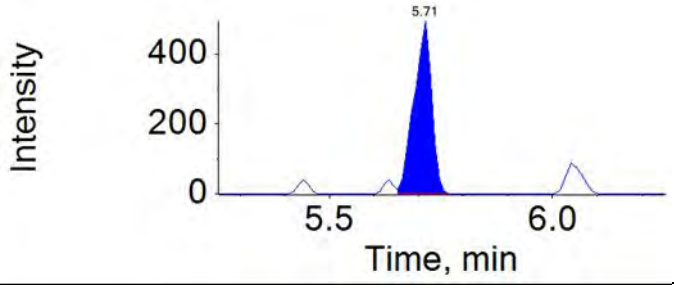
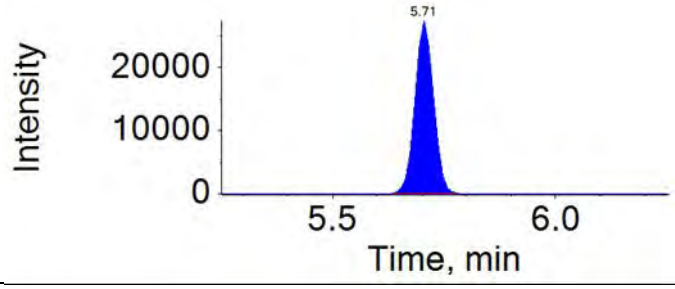
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

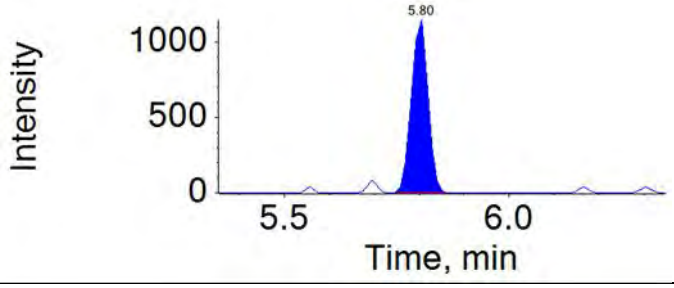
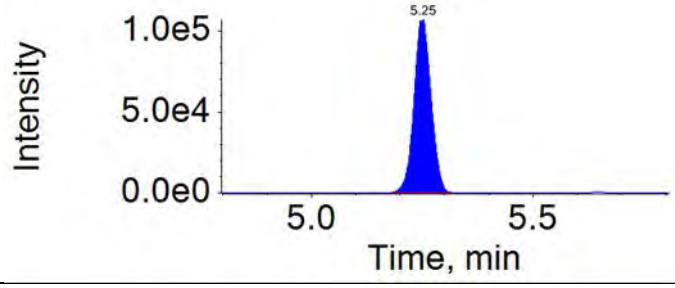
APPROVED
By JPT at 2:54 pm, 11/7/18

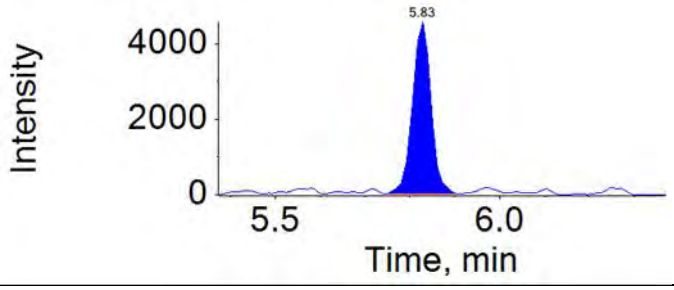
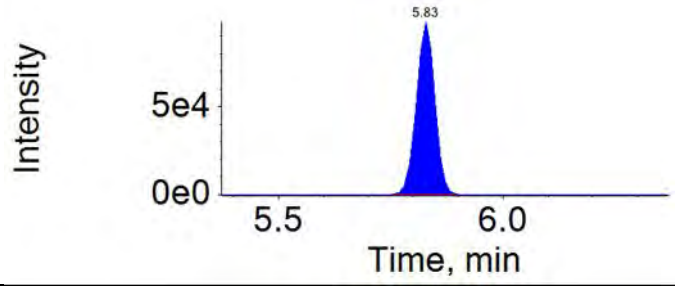
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

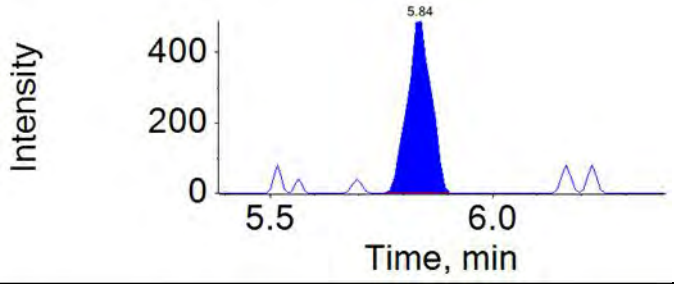
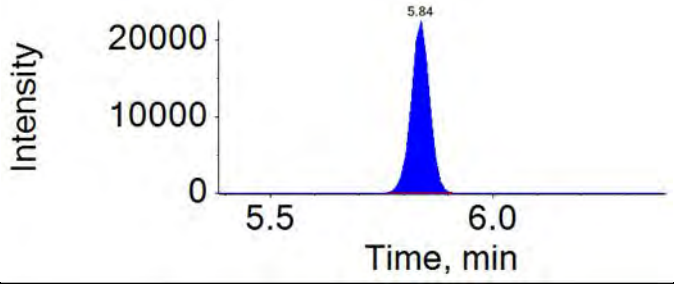
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

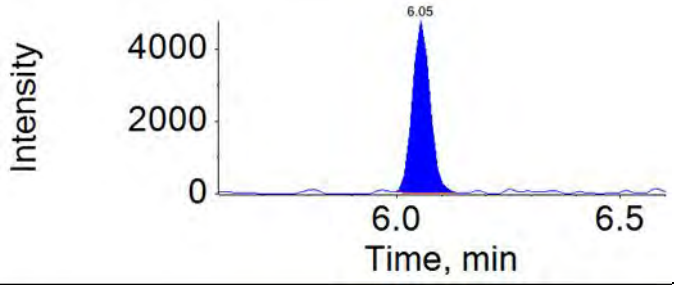
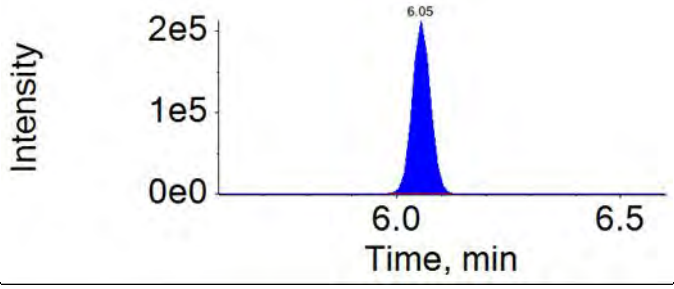
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

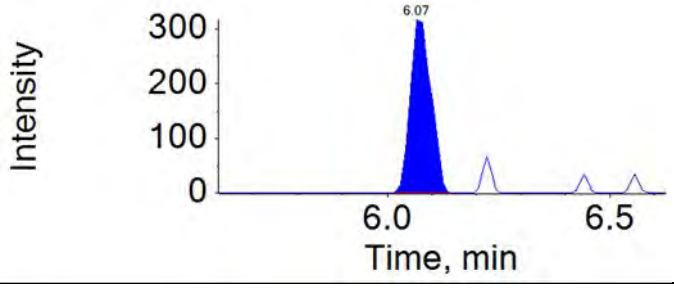
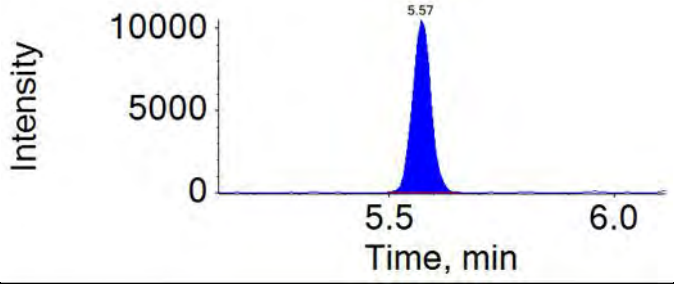
APPROVED
By JPT at 2:54 pm, 11/7/18

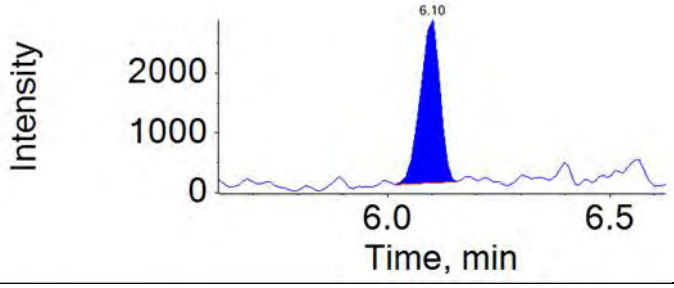
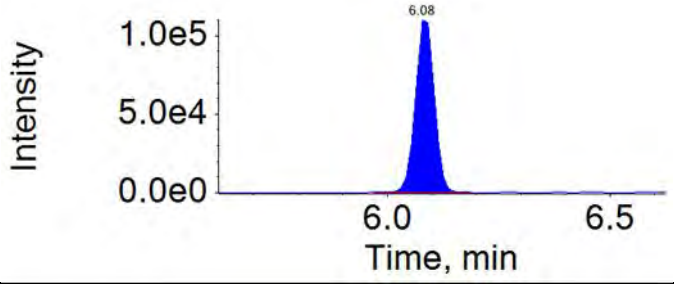
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

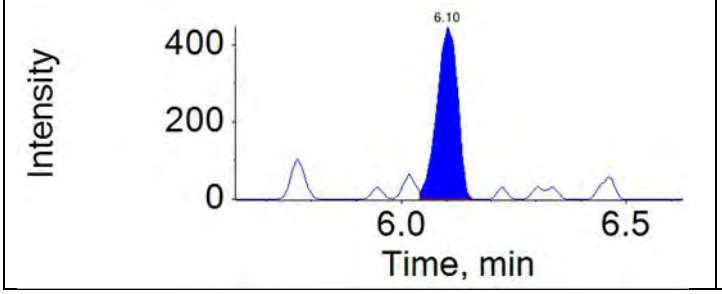
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

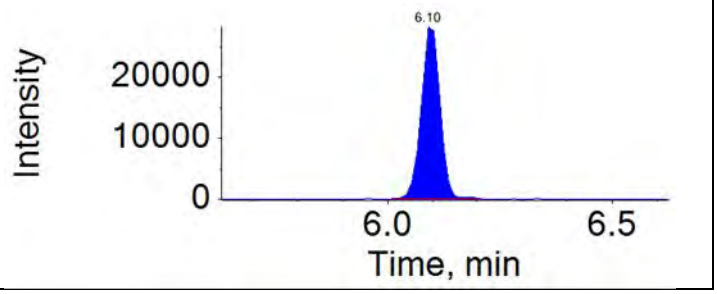
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

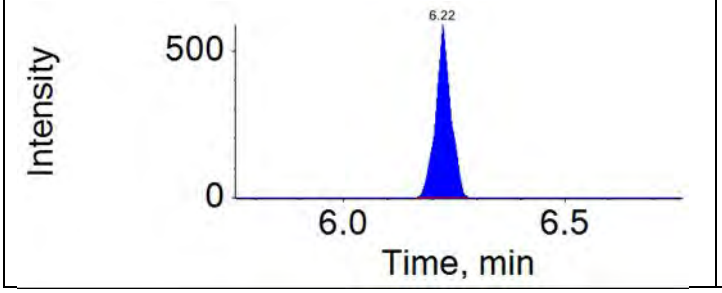
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

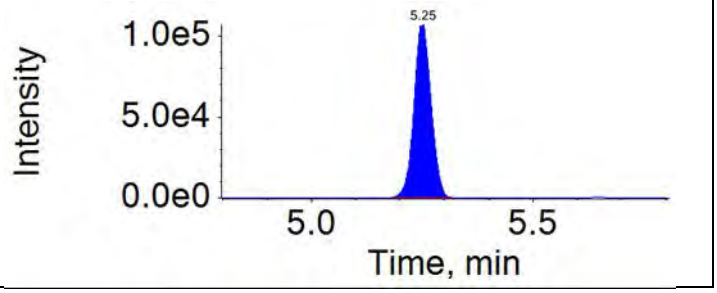
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



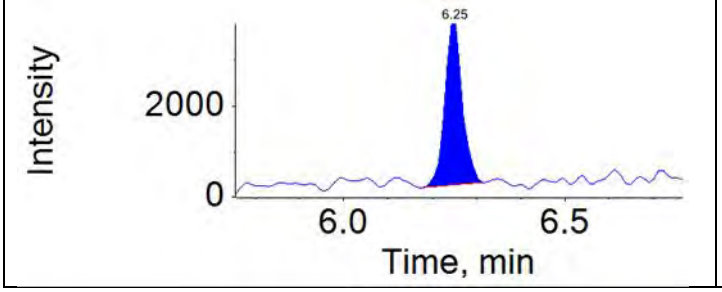


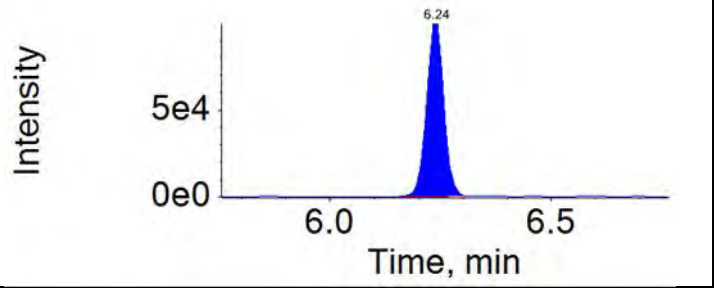
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



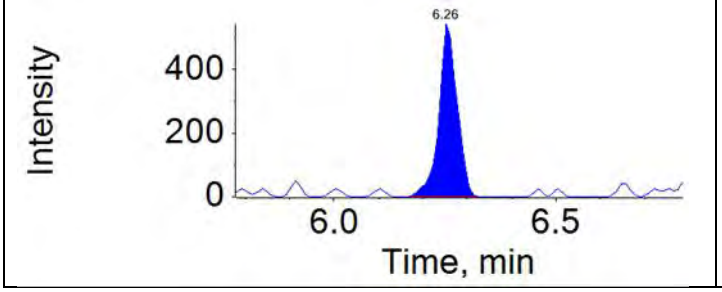


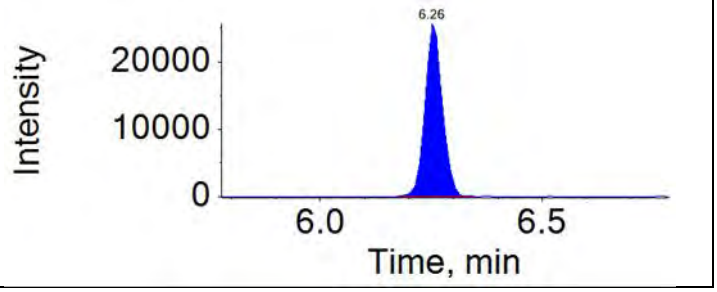
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



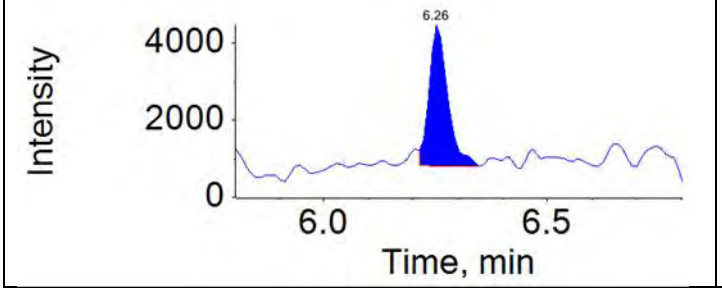


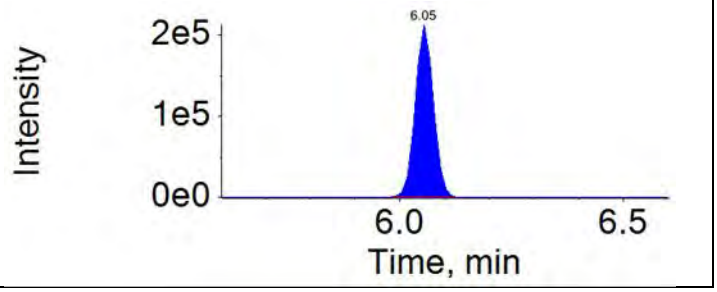
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

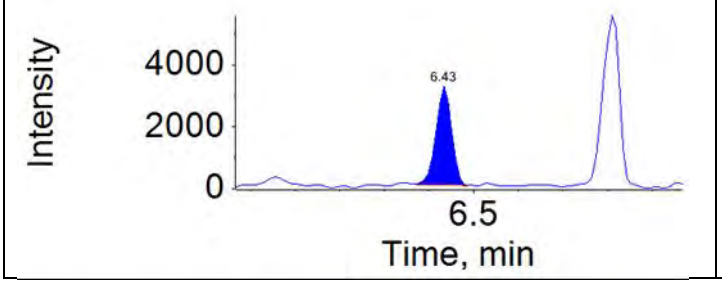
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

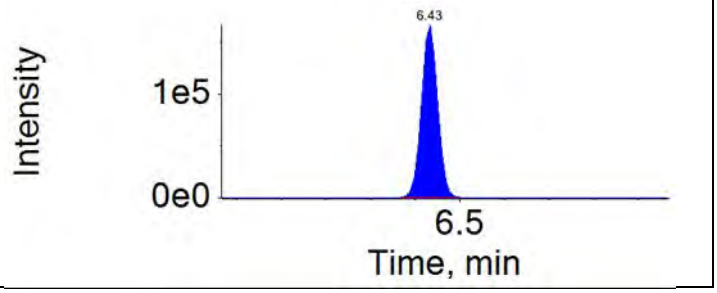
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



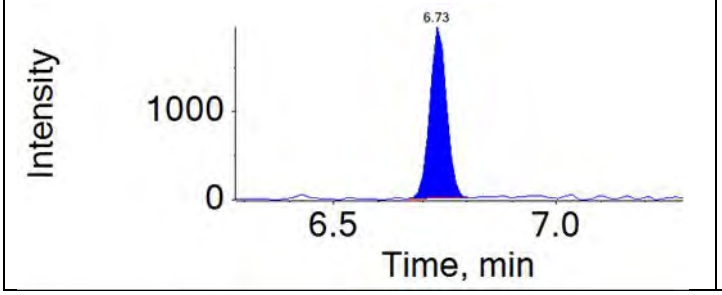


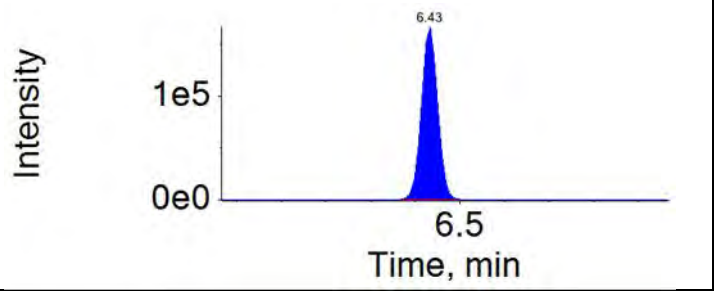
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



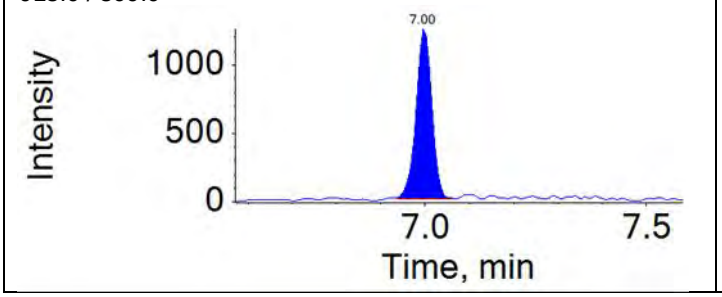


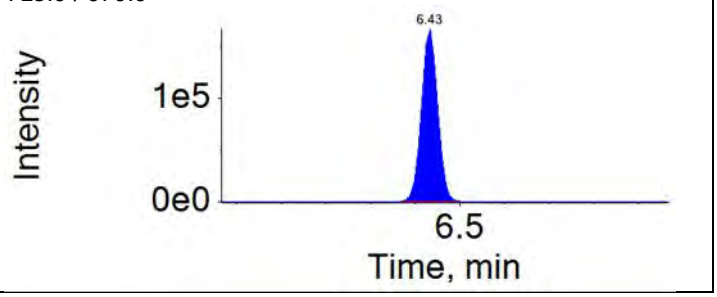
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



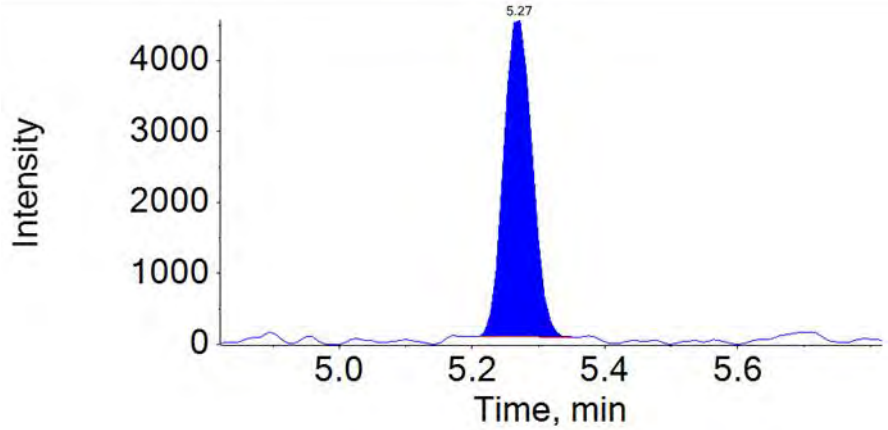


APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

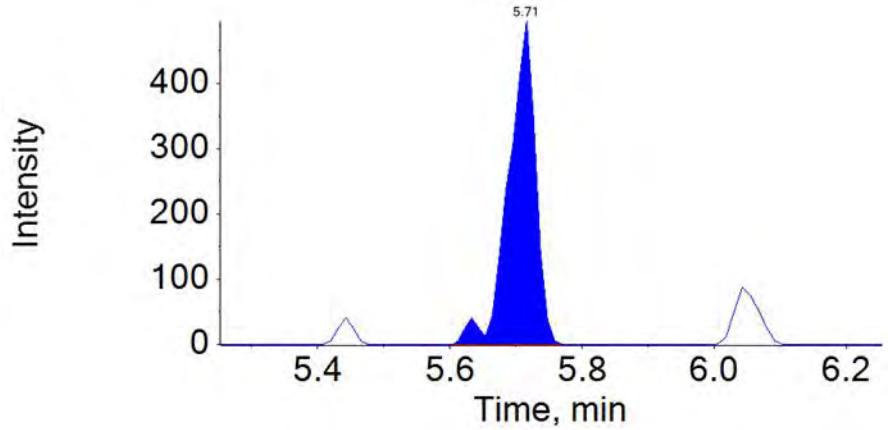
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFNA
RT (min.):
5.27
Peak Area:
13308.8
Mass Range:
463.0 / 419.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



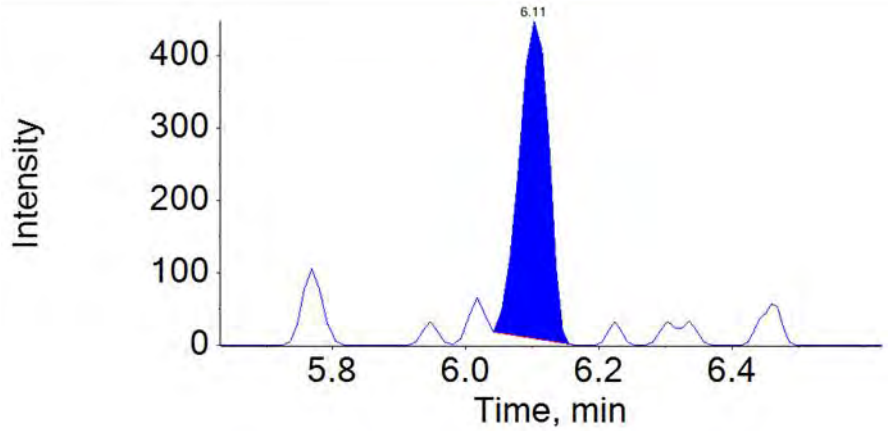
Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
1418.1
Mass Range:
570.0 / 419.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.11
Peak Area:
1361.1
Mass Range:
512.0 / 169.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

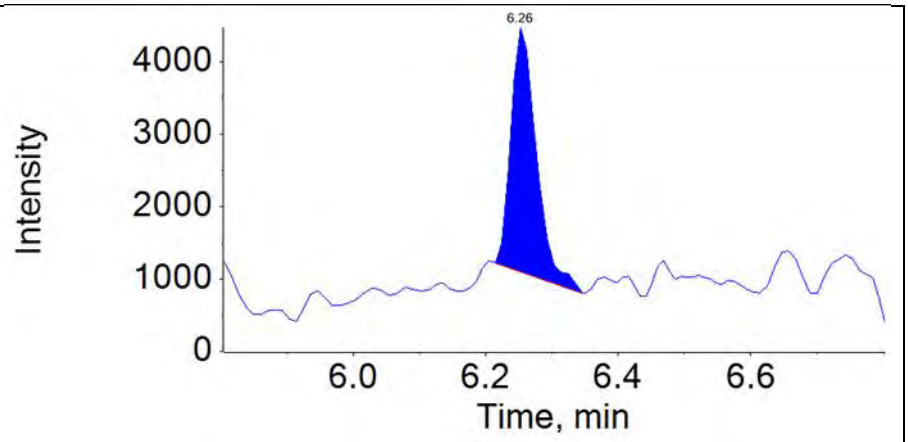
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFTrDA
RT (min.):
6.26
Peak Area:
8999.3
Mass Range:
663.0 / 619.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Ion Ratio Report

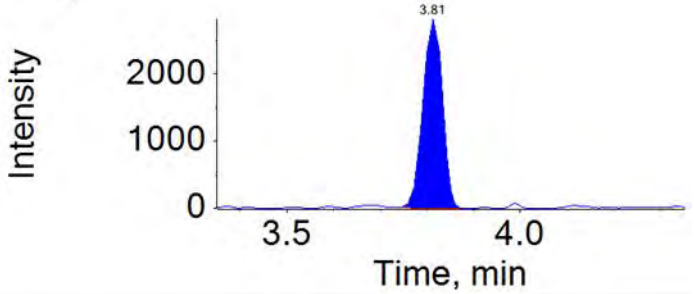
Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-09.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	8179.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	3067.3	A	0.3576	0.3750	5	50	
4:2-FTS	4.14	1.00	2516.6	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	1184.6	A	0.6359	0.4707	-26	50	
PFHxA	4.16	1.00	19041.3	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	272.1	A	0.0115	0.0143	25	50	
PFPeS	4.18	1.10	4553.9	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	2517.9	A	0.5384	0.5529	3	50	
PFHxS	4.55	1.00	5720.4	A	1.0000	1.0000			
PFHxS_2	4.56	1.00	2255.5	A	0.3569	0.3943	10	50	
PFHpA	4.55	1.00	20611.7	A	1.0000	1.0000			
PFHpA_2	4.56	1.00	1062.3	A	0.0577	0.0515	-11	50	
6:2-FTS	4.92	1.00	1337.7	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	1232.9	A	0.6752	0.9217	37	50	
PFHpS	4.92	1.08	5811.8	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	2272.0	A	0.3950	0.3909	-1	50	
PFOA	4.92	1.00	21714.7	A	1.0000	1.0000			
PFOA_2	4.92	1.00	1080.5	A	0.0635	0.0498	-22	50	
PFOS	5.25	1.00	7067.6	A	1.0000	1.0000			
PFOS_2	5.26	1.00	1948.3	A	0.3494	0.2757	-21	50	
PFNA	5.27	1.00	14036.5	M	1.0000	1.0000			
PFNA_2	5.25	1.00	631.4	A	0.0207	0.0450	118	50	OOS
PFNS	5.54	1.06	4370.5	A	1.0000	1.0000			
PFNS_2	5.54	1.06	1979.5	A	0.4890	0.4529	-7	50	
PFDA	5.57	1.00	13448.9	A	1.0000	1.0000			
PFDA_2	5.56	1.00	136.4	A	0.0057	0.0101	79	50	OOS
8:2-FTS	5.57	1.00	1277.3	A	1.0000	1.0000			
8:2-FTS_2	5.58	1.00	851.4	A	0.6169	0.6666	8	50	
NMeFOSAA	5.71	1.00	1352.6	M	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	451.3	A	0.2206	0.3336	51	50	OOS
PFDS	5.80	1.11	2949.3	A	1.0000	1.0000			
PFDS_2	5.80	1.11	1315.3	A	0.4648	0.4460	-4	50	
PFUnDA	5.83	1.00	13003.8	A	1.0000	1.0000			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	5.84	1.00	1823.4	A	1.0000	1.0000			
NEtFOSAA_2	5.83	1.00	670.0	A	0.6082	0.3675	-40	50	
PFDoDA	6.05	1.00	12755.8	A	1.0000	1.0000			
PFDoDA_2	6.07	1.00	250.5	A	0.0109	0.0196	80	50	OOS
10:2-FTS	6.07	1.09	1033.2	A	1.0000	1.0000			
10:2-FTS_2	6.08	1.09	898.7	A	0.7082	0.8698	23	50	
PFTrDA	6.26	1.03	10576.8	M	1.0000	1.0000			
PFTrDA_2	6.24	1.03	127.3	A	0.0096	0.0120	25	50	
PFTeDA	6.43	1.00	7741.6	A	1.0000	1.0000			
PFTeDA_2	6.42	1.00	40.1	A	0.0055	0.0052	-7	50	
PFHxDA	6.73	1.05	5030.0	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	165.8	A	0.0596	0.0330	-45	50	
PFODA	7.00	1.09	3044.8	A	1.0000	1.0000			
PFODA_2	7.00	1.09	76.0	A	0.0257	0.0250	-3	50	

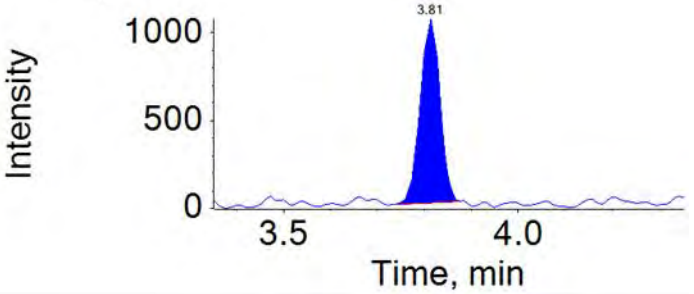
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

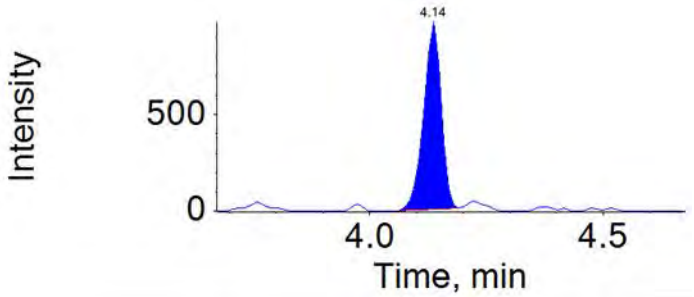
Component: PFBS
Primary Mass: 299.0 / 80.0



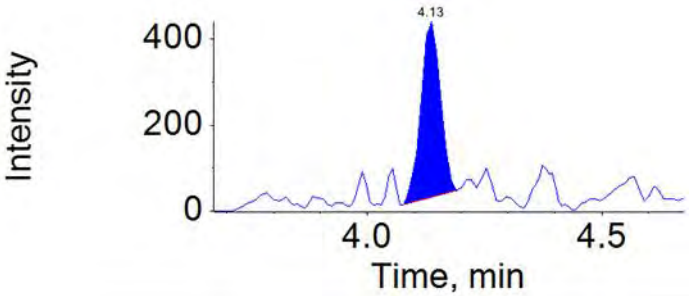
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



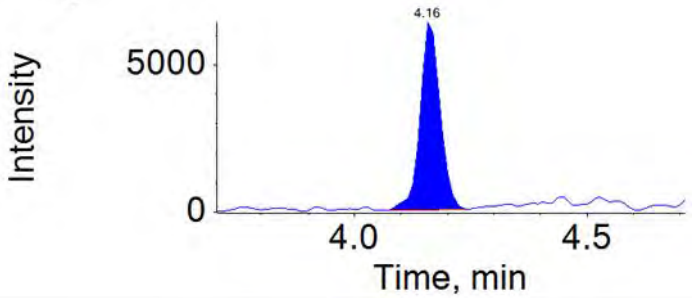
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



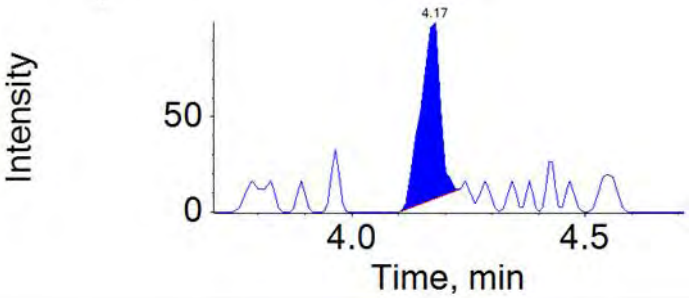
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



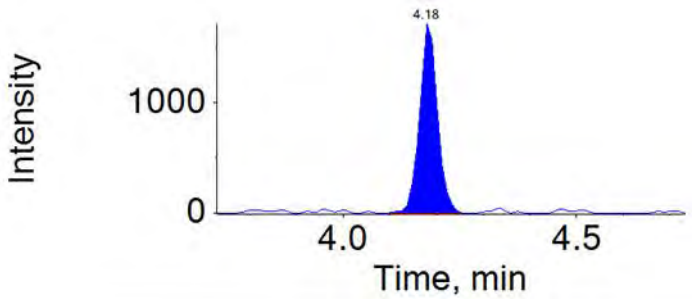
Component: PFHxA
Primary Mass: 313.0 / 269.0



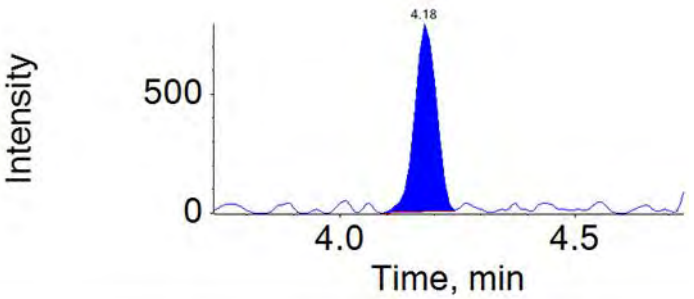
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



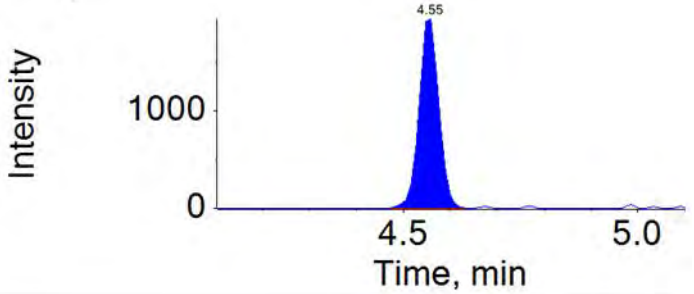
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



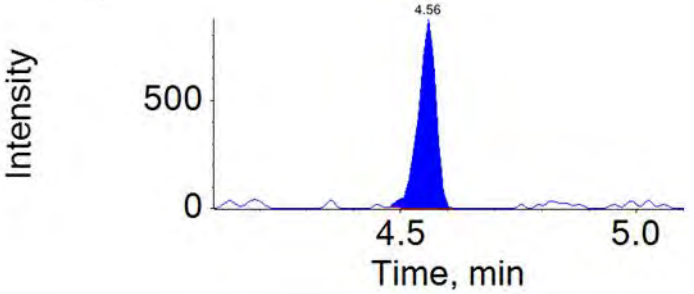
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

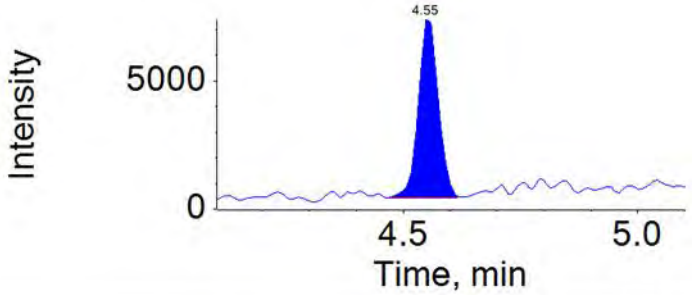
Component: PFHxS
Primary Mass: 399.0 / 80.0



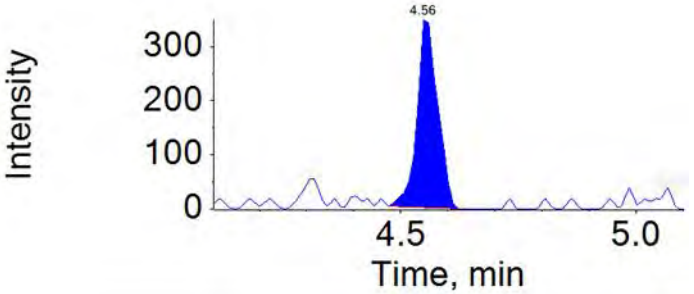
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



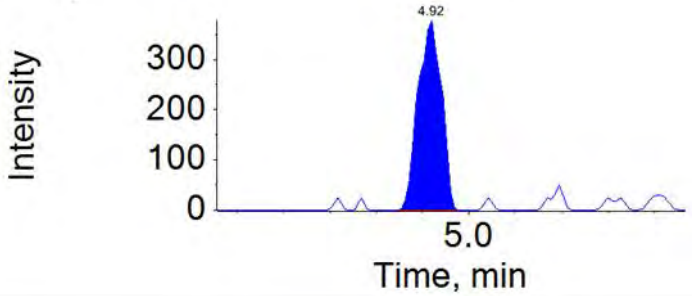
Component: PFHpA
Primary Mass: 363.0 / 319.0



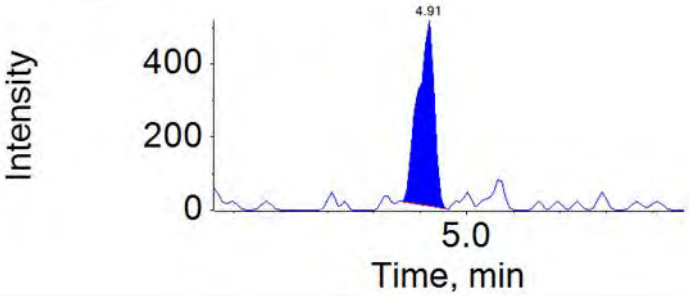
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



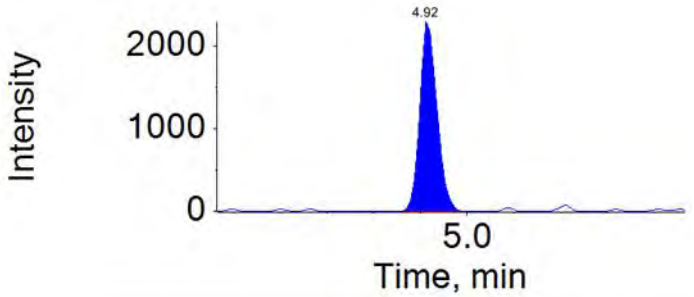
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



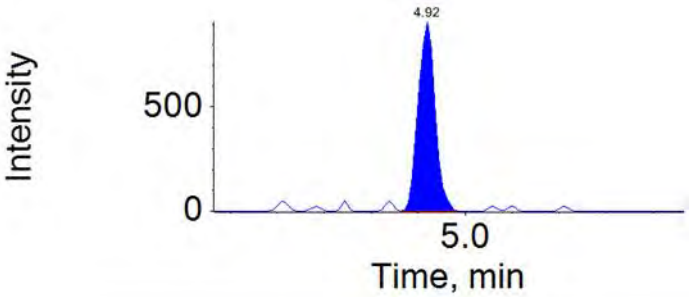
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



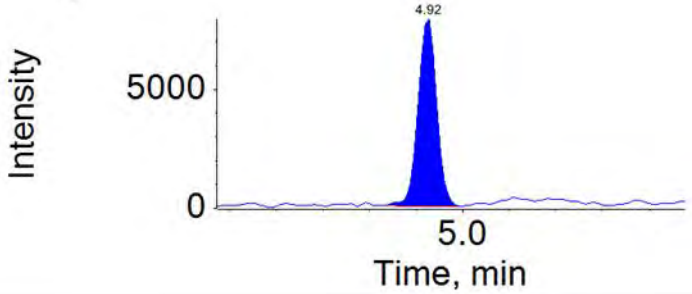
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



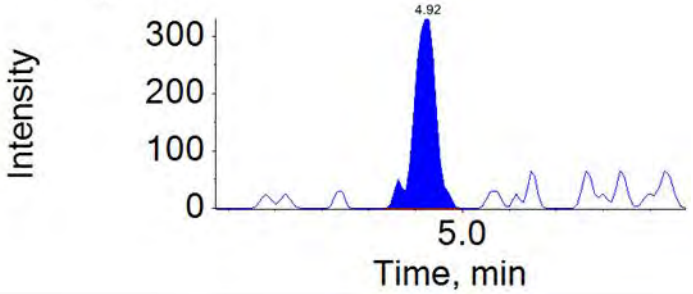
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

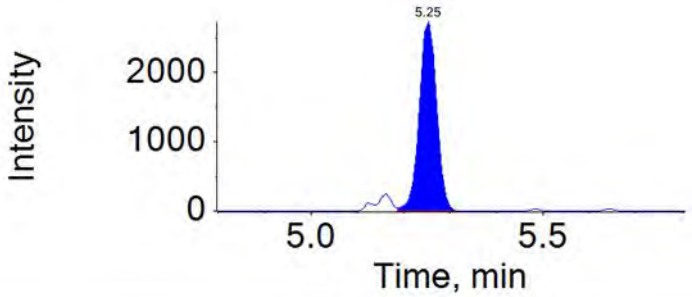
Component: PFOA
Primary Mass: 413.0 / 369.0



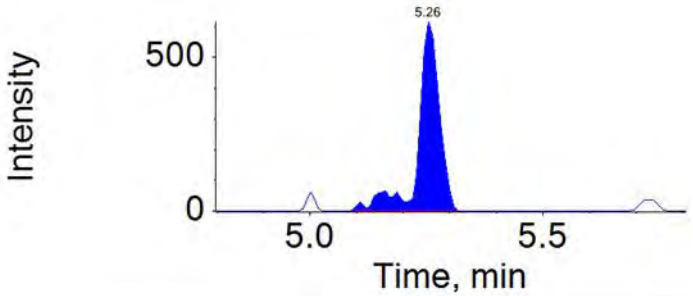
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



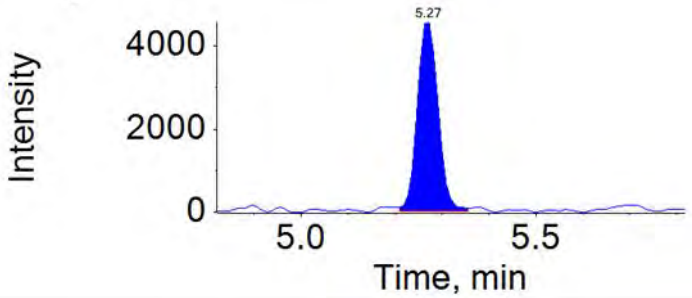
Component: PFOS
Primary Mass: 499.0 / 80.0



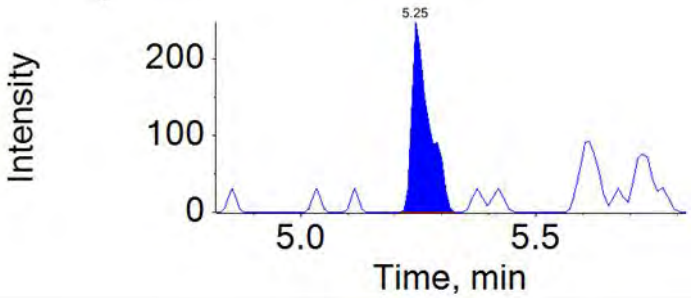
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



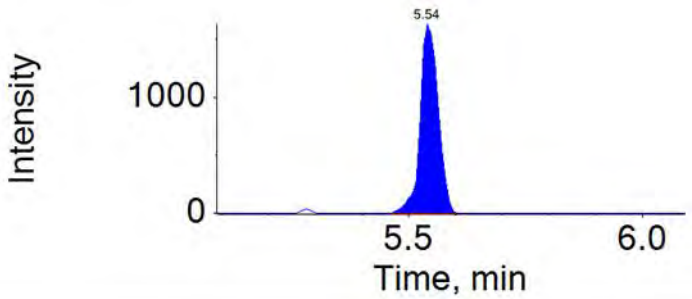
Component: PFNA
Primary Mass: 463.0 / 419.0



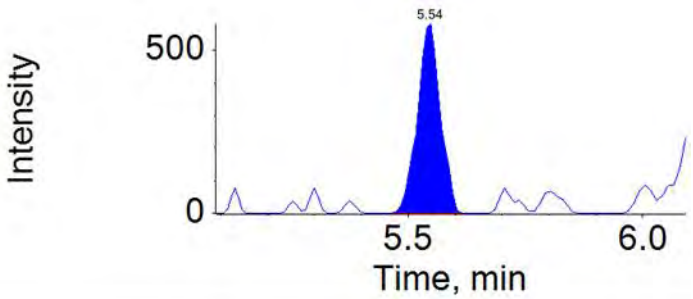
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



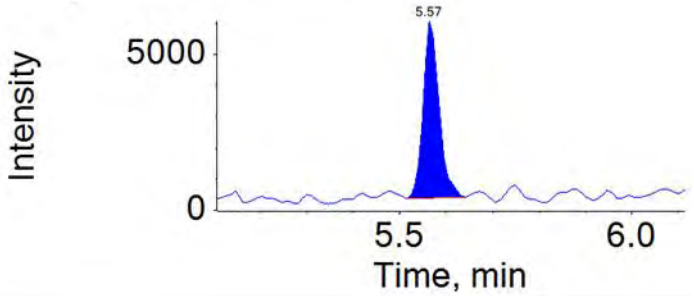
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



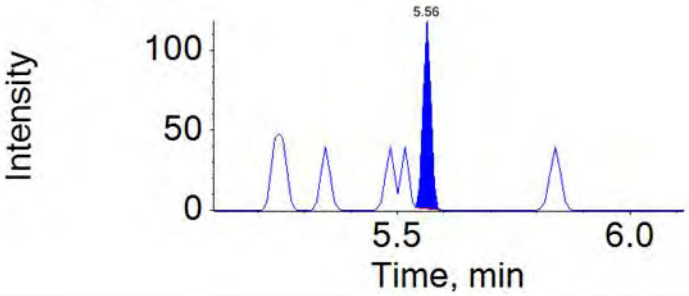
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

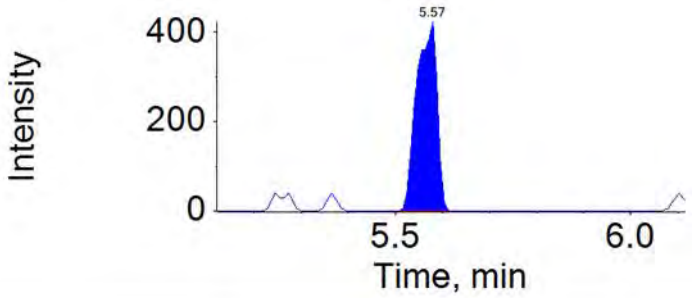
Component: PFDA
Primary Mass: 513.0 / 469.0



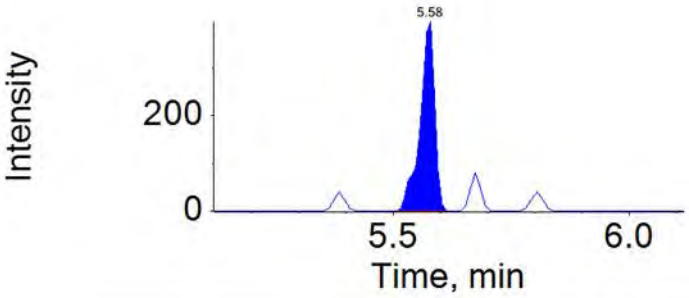
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



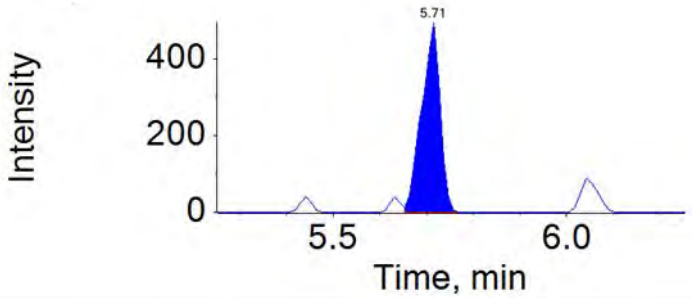
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



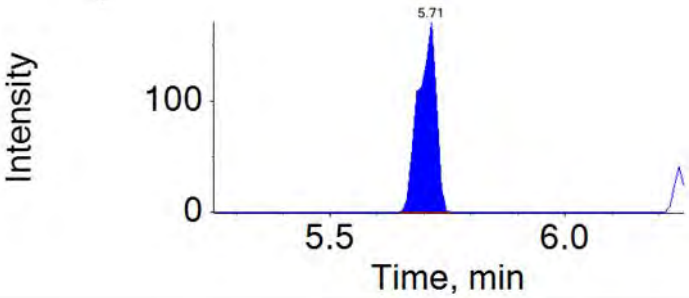
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



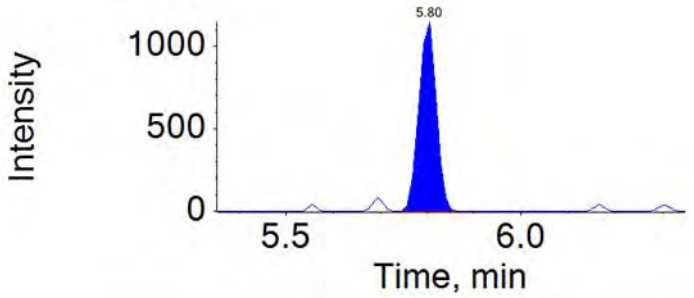
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



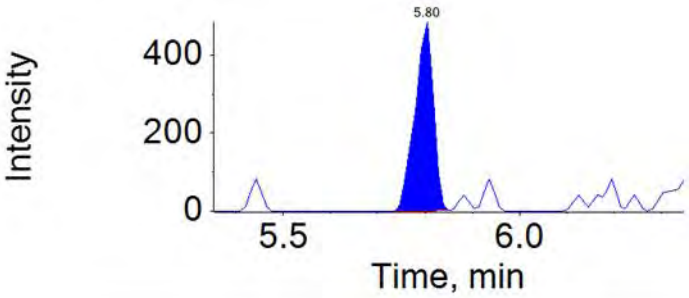
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



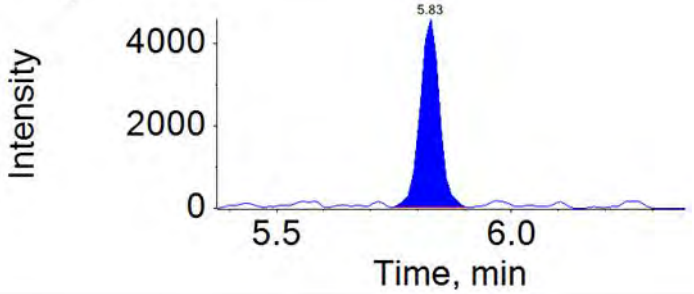
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



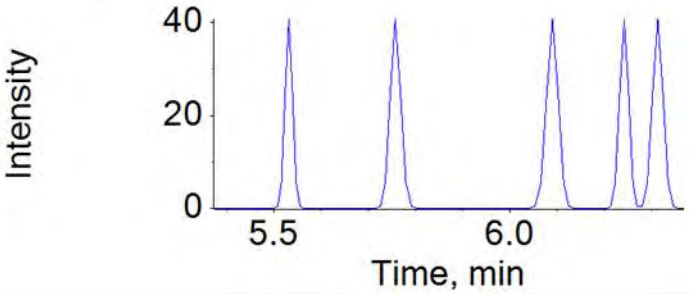
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

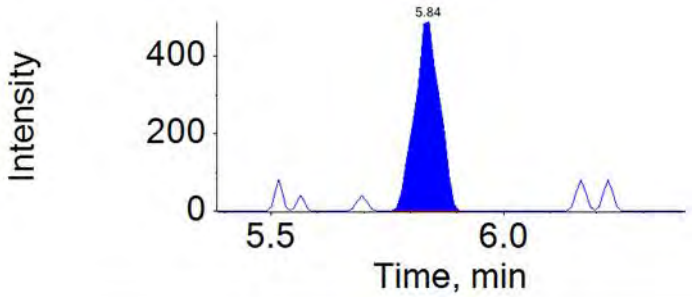
Component: PFUnDA
Primary Mass: 563.0 / 519.0



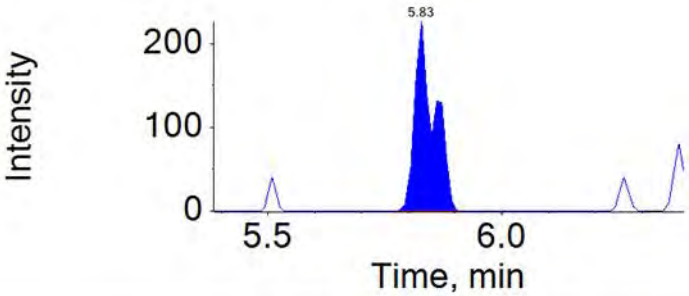
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



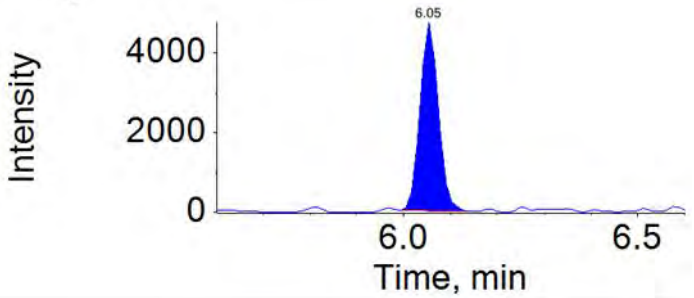
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



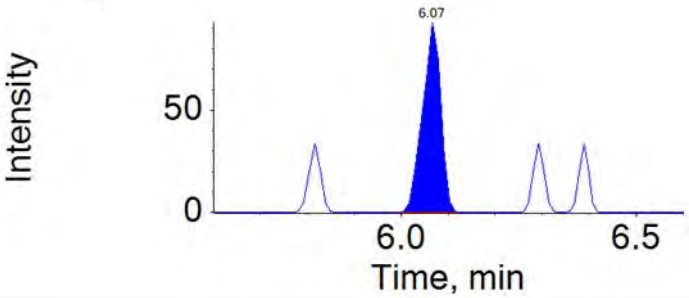
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



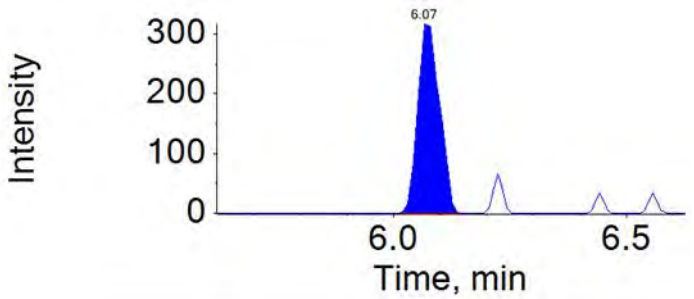
Component: PFDoDA
Primary Mass: 613.0 / 569.0



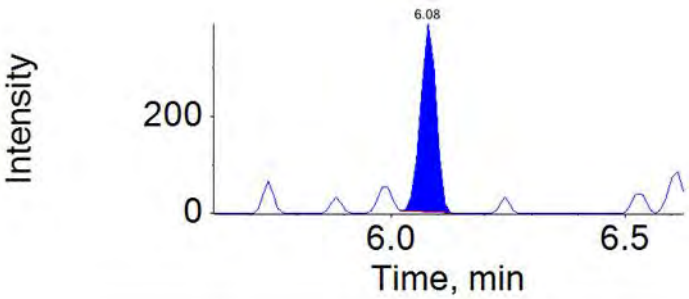
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



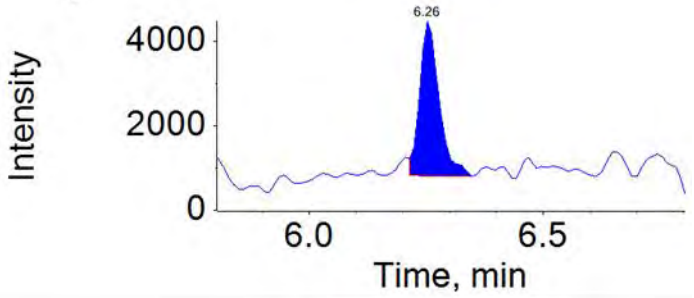
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



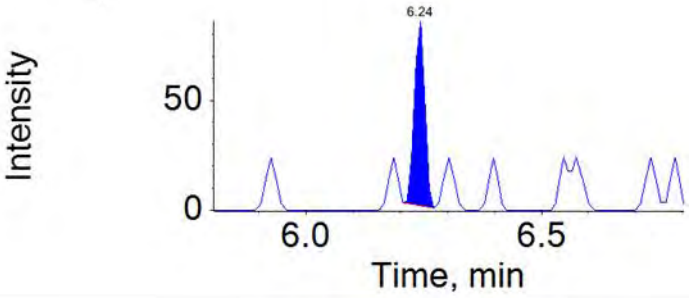
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

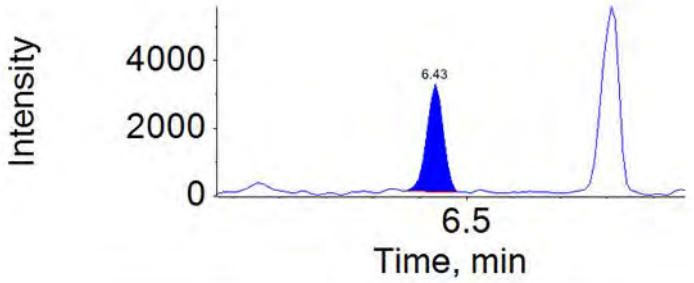
Component: PFTrDA
Primary Mass: 663.0 / 619.0



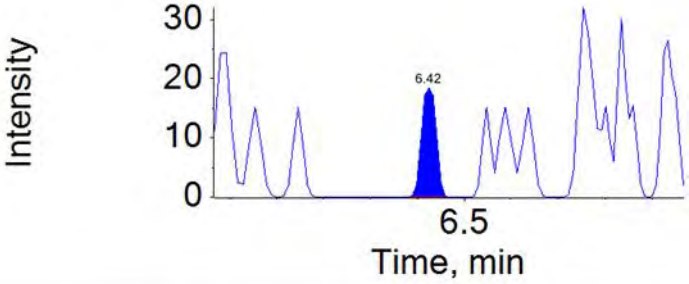
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



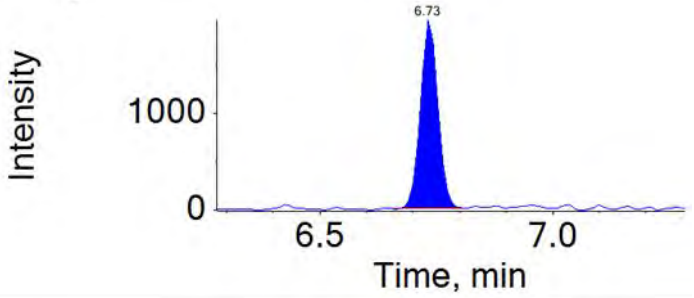
Component: PFTeDA
Primary Mass: 713.0 / 669.0



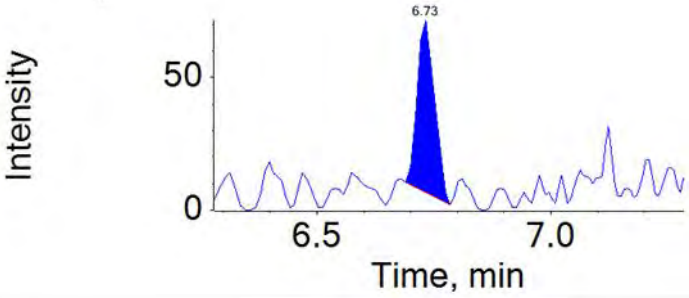
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



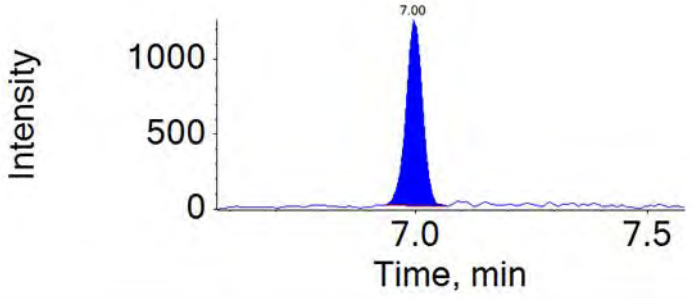
Component: PFHxDA
Primary Mass: 813.0 / 769.0



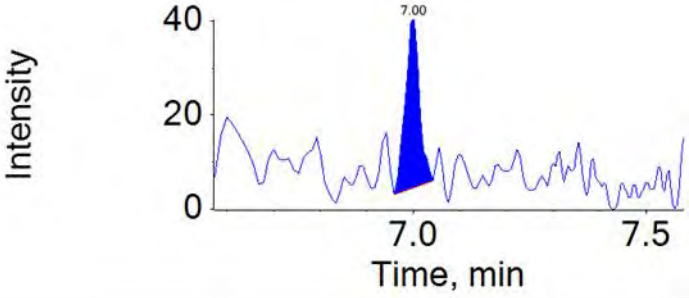
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV07DCAL-17.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-07T10:42:59
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	735610.3	730410.6	1	50	
13C2-PFOA	5.0	545052.0	524423.6	4	50	
13C4-PFOS	4.8	294815.1	274061.7	8	50	
13C2-PFDA	5.0	340045.1	311442.1	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	825928.3	13C3-PFBA	735610.3	1.123	5.000	5.196	104	70-130	
E13C5-PFPeA	881634.8	13C3-PFBA	735610.3	1.199	5.000	5.221	104	70-130	
E13C3-PFBS	456572.3	13C3-PFBA	735610.3	0.621	4.650	4.555	98	70-130	
E13C2-4:2-FTS	56024.0	13C2-PFOA	545052.0	0.103	4.670	4.638	99	70-130	
E13C5-PFHxA	745299.1	13C2-PFOA	545052.0	1.367	5.000	5.030	101	70-130	
E13C3-PFHxS	363559.9	13C2-PFOA	545052.0	0.667	4.730	4.788	101	70-130	
E13C4-PFHpA	680947.9	13C2-PFOA	545052.0	1.249	5.000	5.683	114	70-130	
E13C2-6:2-FTS	40789.9	13C2-PFOA	545052.0	0.075	4.750	4.990	105	70-130	
E13C8-PFOA	1030720.3	13C2-PFOA	545052.0	1.891	5.000	5.273	105	70-130	
E13C8-PFOS	325503.0	13C4-PFOS	294815.1	1.104	4.780	4.882	102	70-130	
E13C9-PFNA	562782.6	13C4-PFOS	294815.1	1.909	5.000	5.214	104	70-130	
E13C6-PFDA	680228.7	13C2-PFDA	340045.1	2.000	5.000	5.031	101	70-130	
E13C2-8:2-FTS	29365.3	13C2-PFDA	340045.1	0.086	4.790	4.570	95	70-130	
E13C8-PFOSA	750773.0	13C2-PFDA	340045.1	2.208	5.000	4.818	96	70-130	
Ed3-NMeFOSAA	84635.6	13C2-PFDA	340045.1	0.249	5.000	4.628	93	70-130	
E13C7-PFUnDA	301084.0	13C2-PFDA	340045.1	0.885	5.000	5.108	102	70-130	
Ed5-NEtFOSAA	71817.7	13C2-PFDA	340045.1	0.211	5.000	4.888	98	70-130	
E13C2-PFDoDA	636951.8	13C2-PFDA	340045.1	1.873	5.000	5.050	101	70-130	
Ed7-NMePFOSAE	359644.6	13C2-PFDA	340045.1	1.058	5.000	4.918	98	70-130	
Ed3-NMePFOSA	81798.8	13C2-PFDA	340045.1	0.241	5.000	4.404	88	70-130	
Ed9-NEtPFOSAE	287361.1	13C2-PFDA	340045.1	0.845	5.000	4.826	97	70-130	
Ed5-NEtPFOSA	66311.5	13C2-PFDA	340045.1	0.195	5.000	4.515	90	70-130	
E13C2-PFTeDA	458986.1	13C2-PFDA	340045.1	1.350	5.000	4.859	97	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

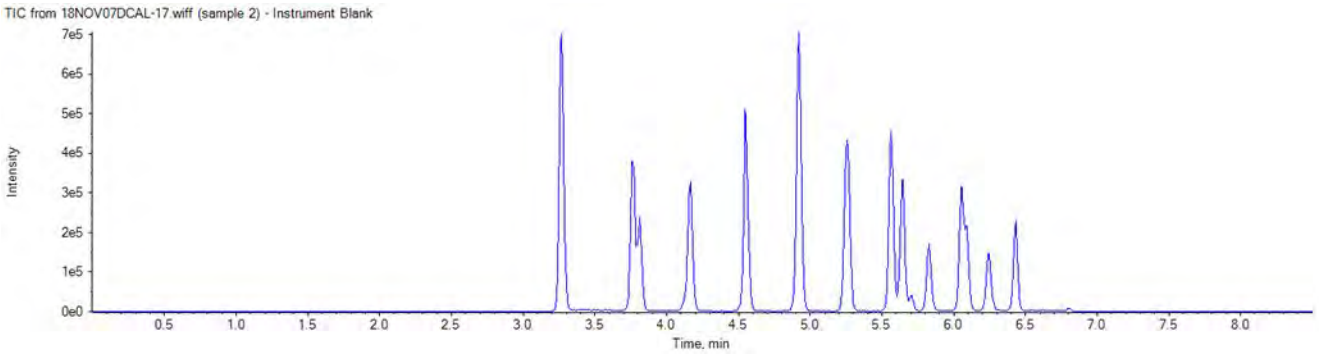
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-17.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	825928.3	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	881634.8	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456572.3	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	56024.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	745299.1	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456572.3	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	363559.9	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	680947.9	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	40789.9	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	363559.9	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	1030720.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	562782.6	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	680228.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29365.3	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	750773.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	84635.6	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	301084.0	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	71817.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	636951.8	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29365.3	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	359644.6	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	81798.8	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	287361.1	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	66311.5	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	636951.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458986.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458986.1	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458986.1	N/A	

Total Ion Chromatogram

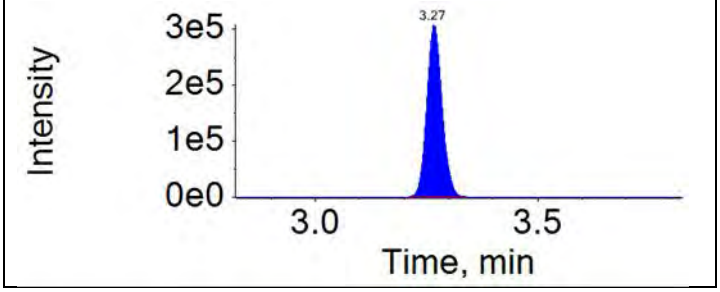


APPROVED
By JPT at 2:53 pm, 11/7/18

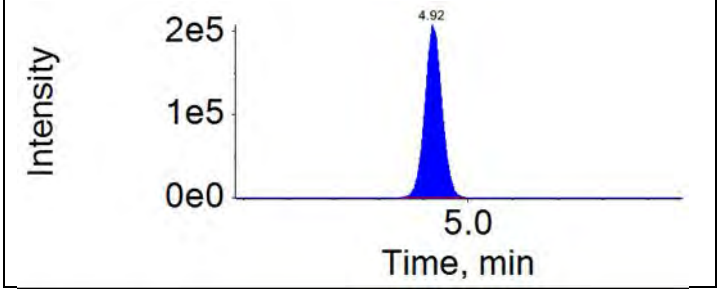
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

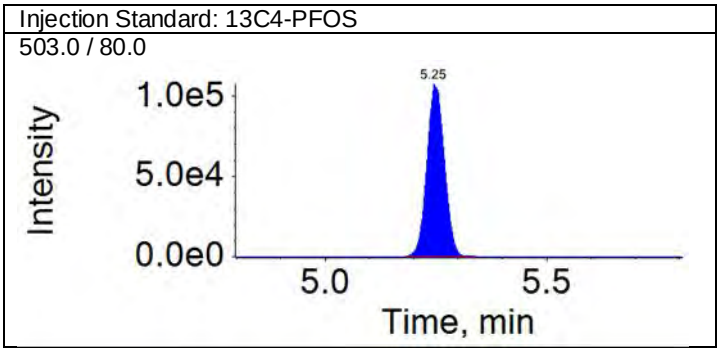
Injection Standard: 13C3-PFBA
216.0 / 172.0



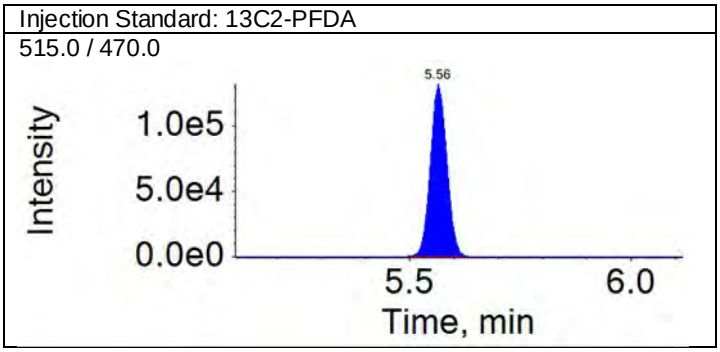
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



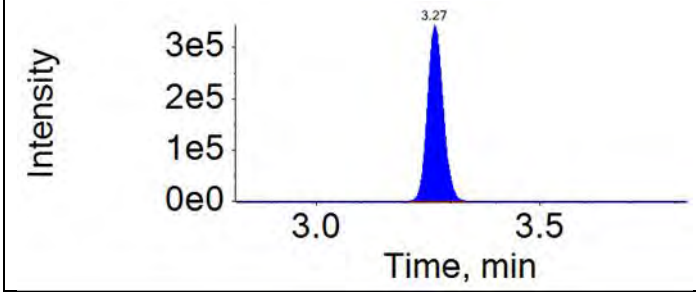
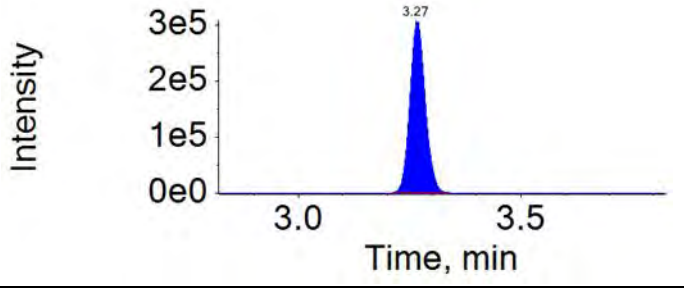
Injection Standard: 13C2-PFDA
515.0 / 470.0

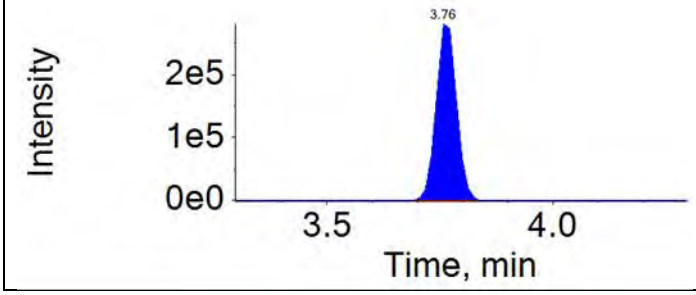
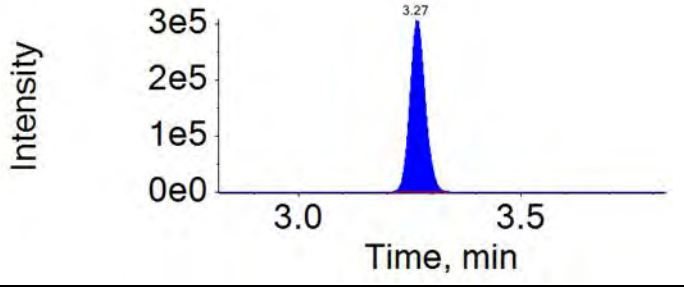


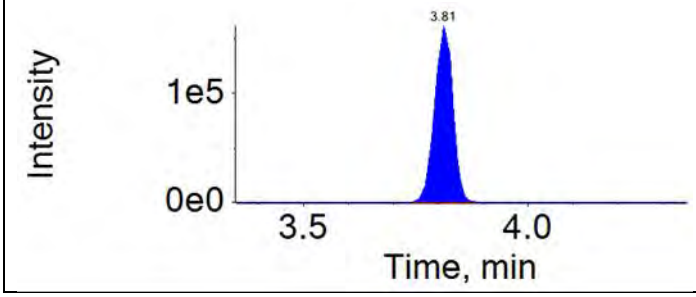
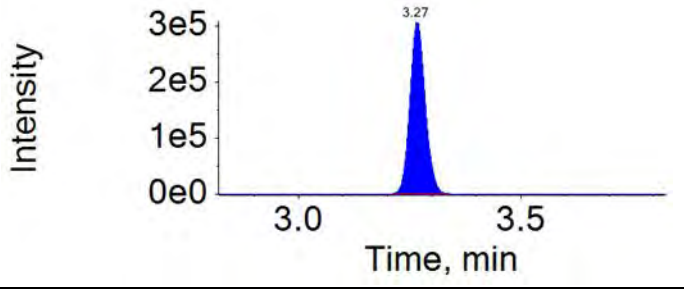
APPROVED
By JPT at 2:53 pm, 11/7/18

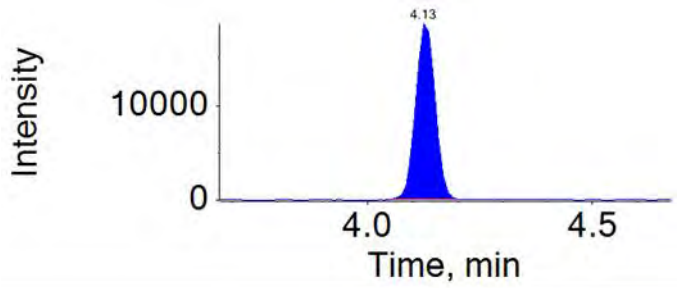
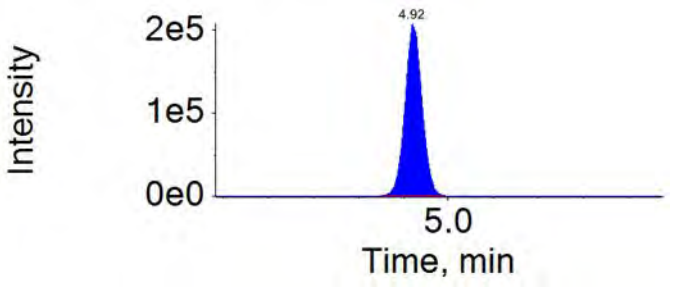
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

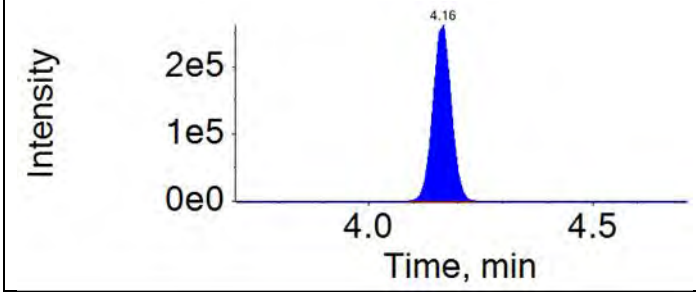
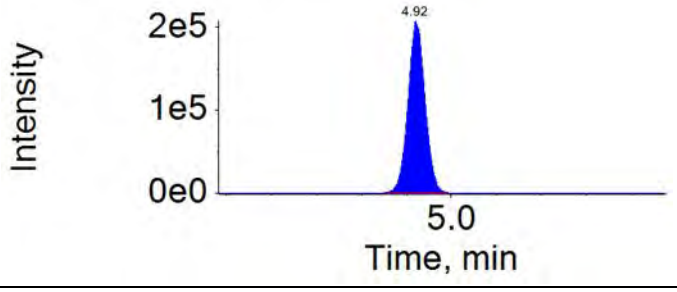
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

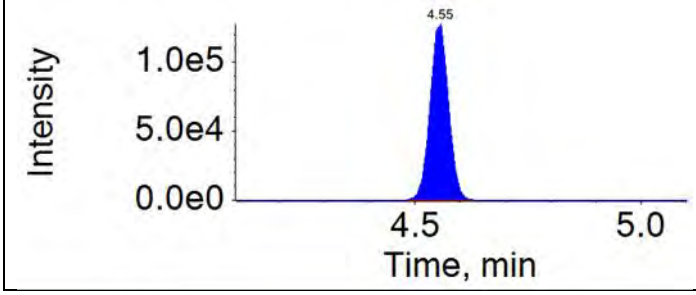
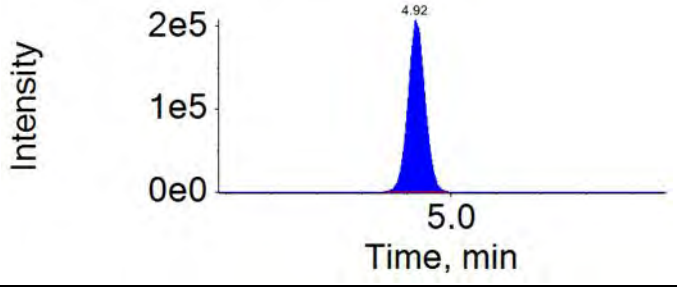
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

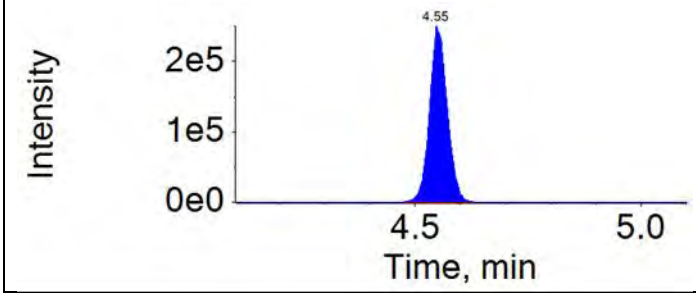
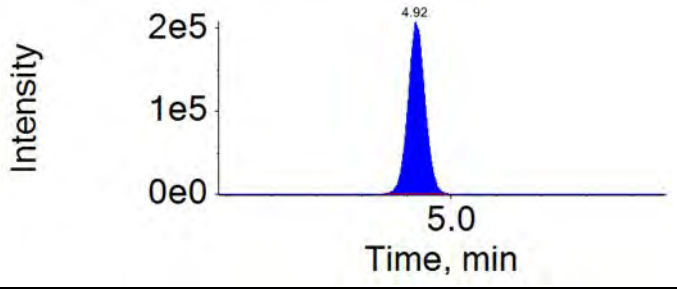
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

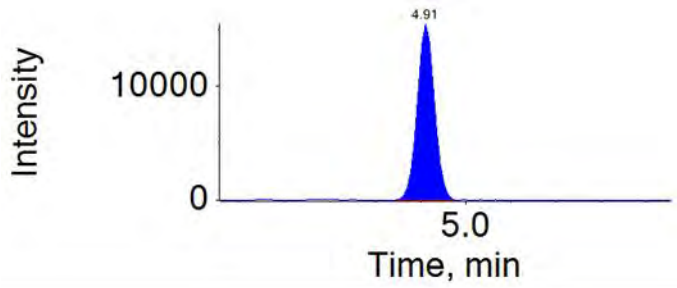
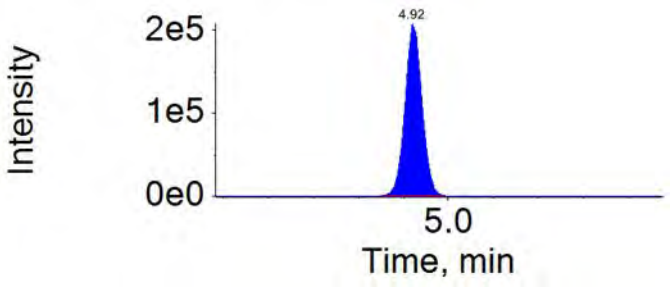
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

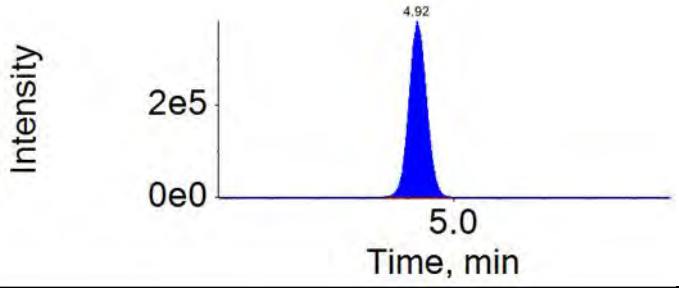
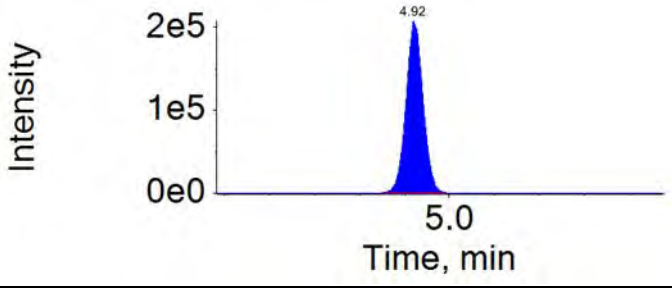
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

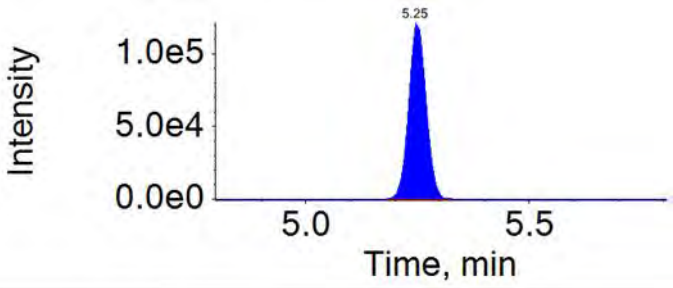
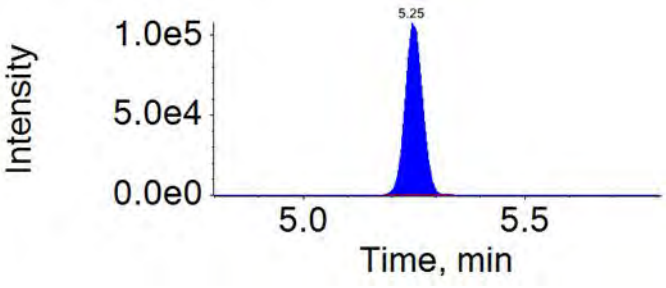
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

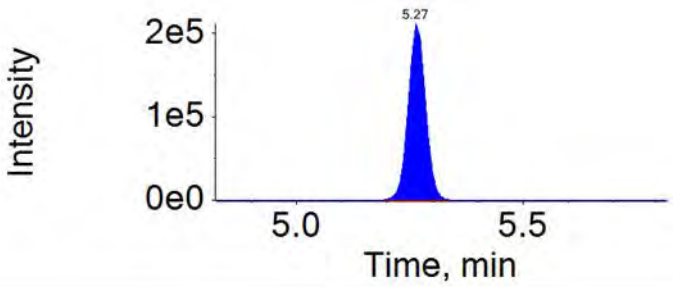
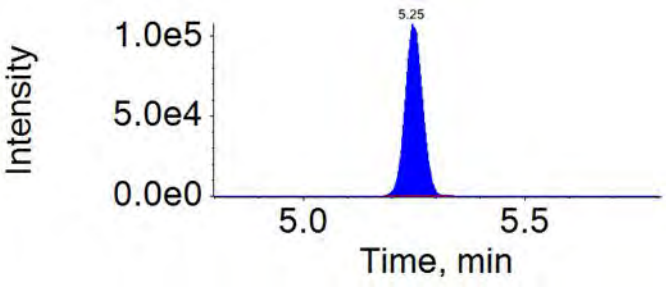
APPROVED
By JPT at 2:53 pm, 11/7/18

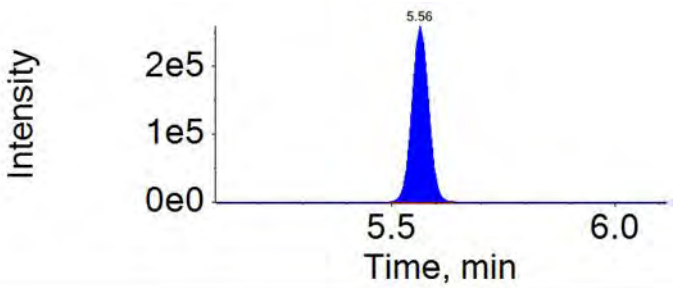
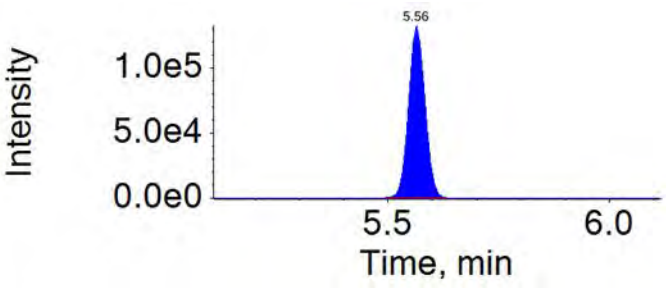
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

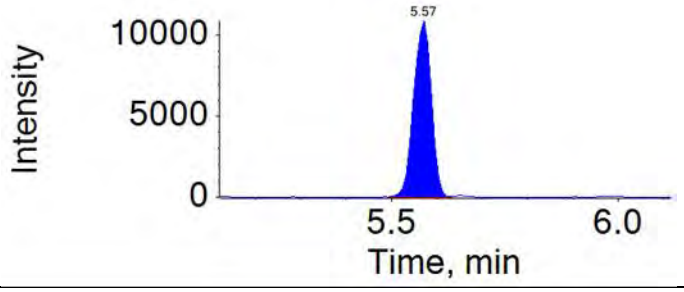
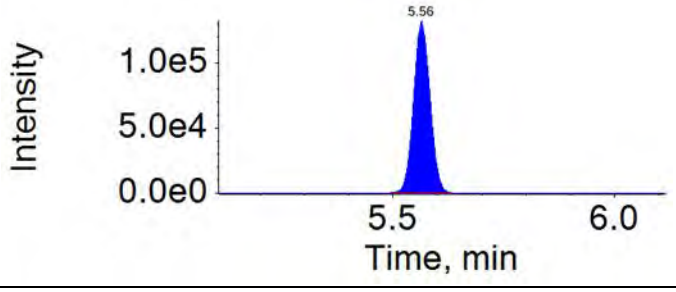
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

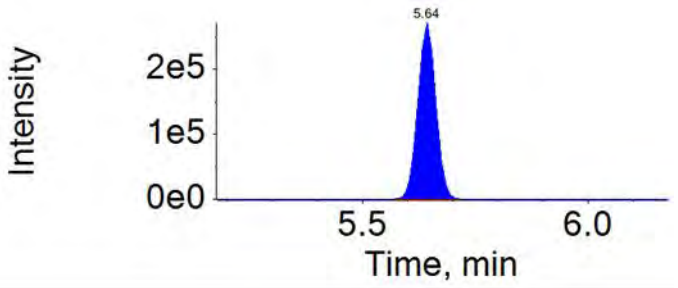
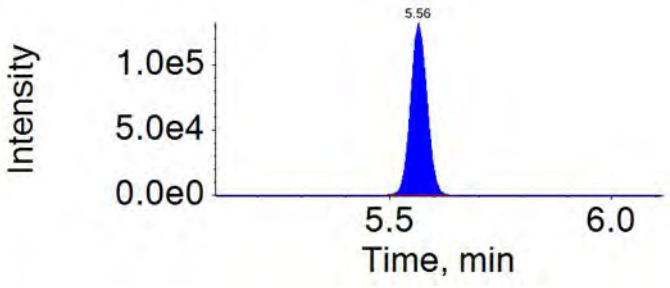
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

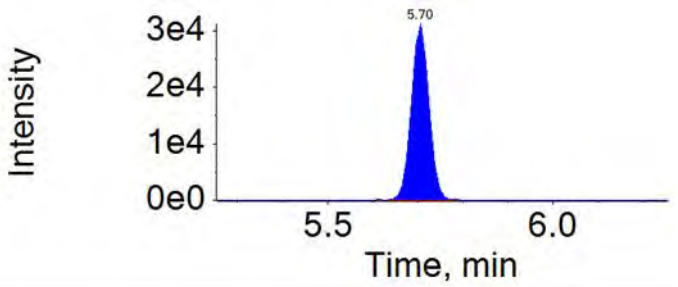
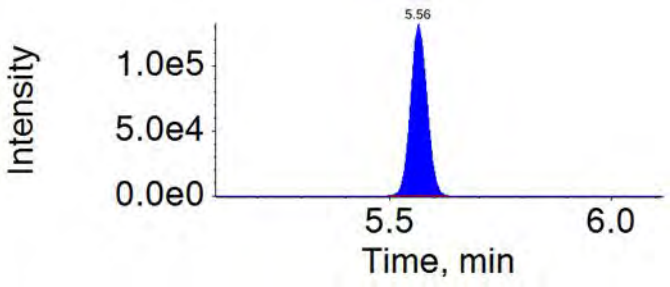
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

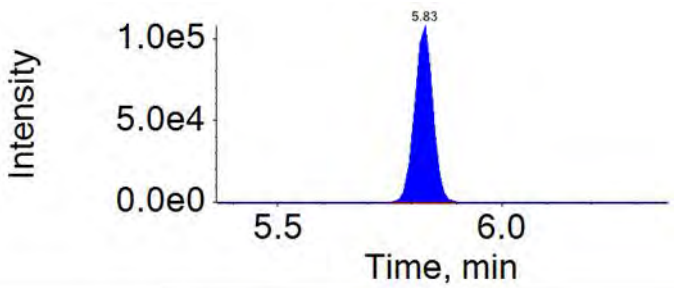
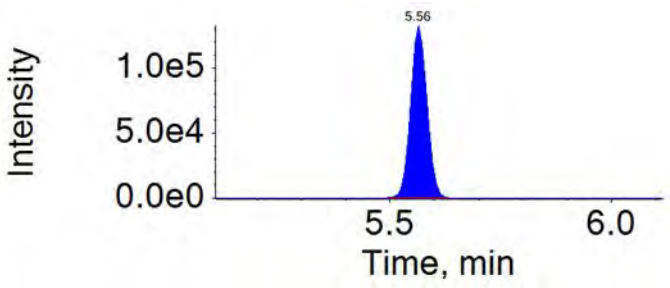
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

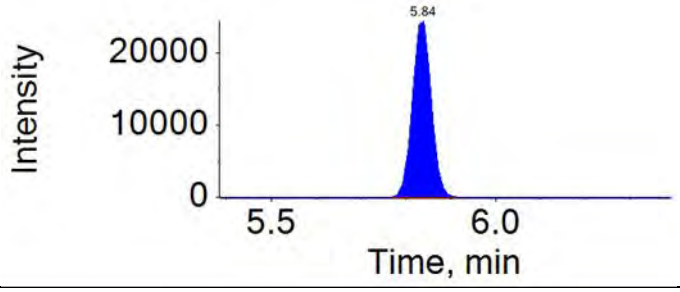
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

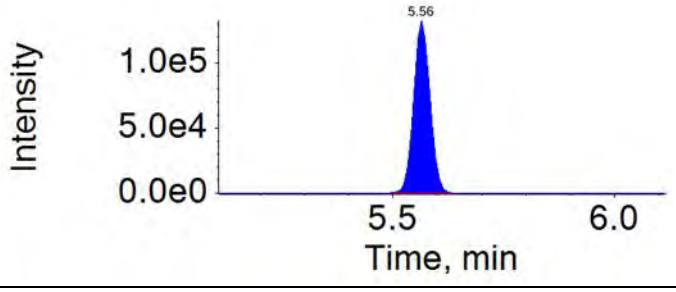
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

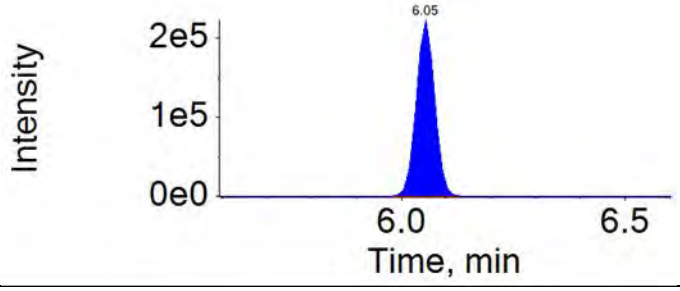
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

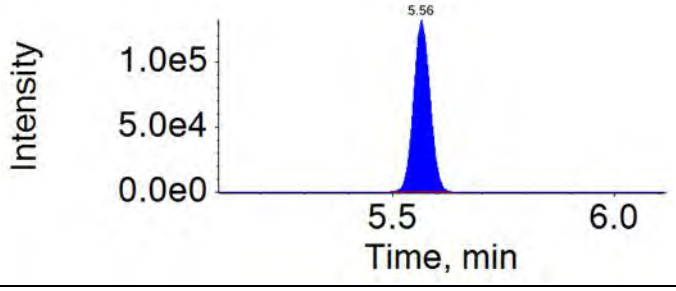
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



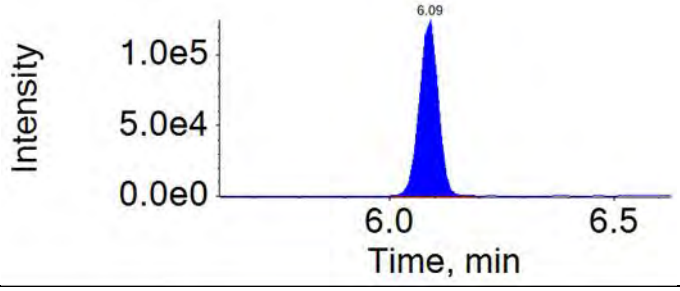


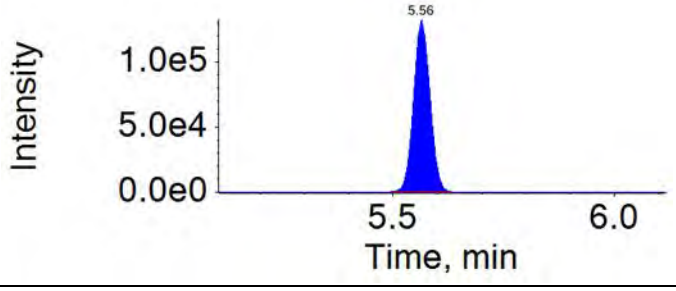
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



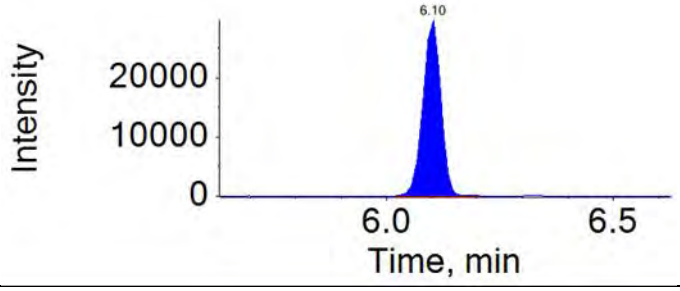


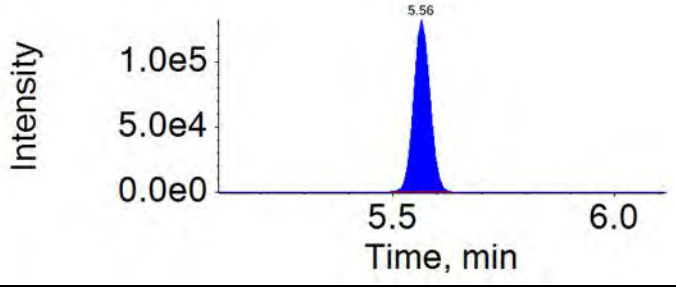
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



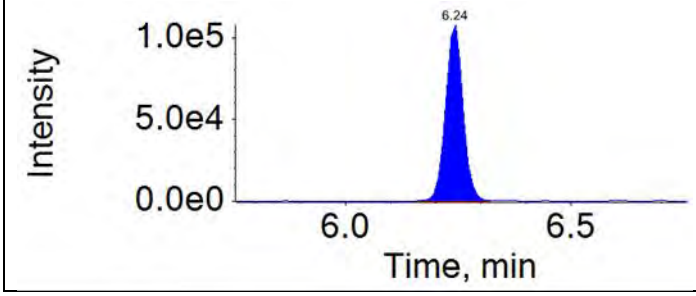


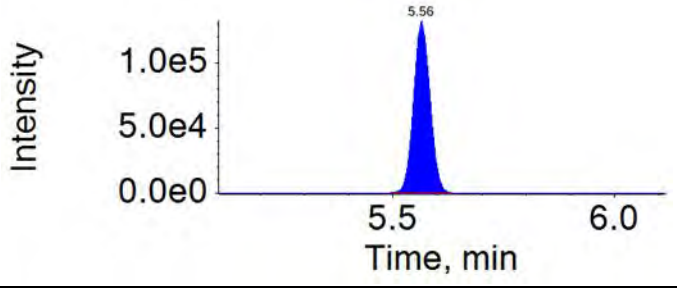
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

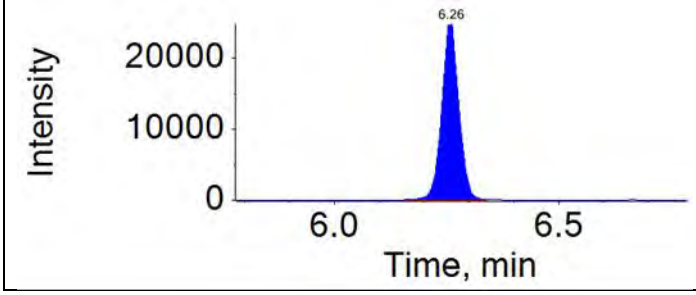
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

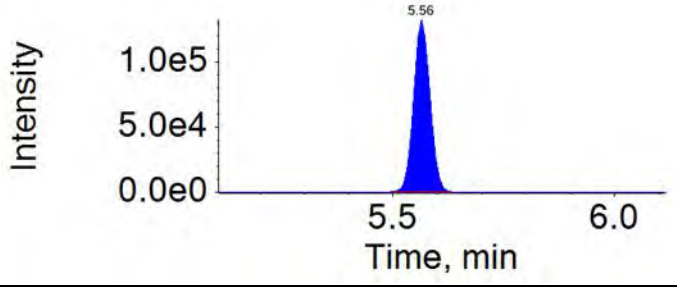
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



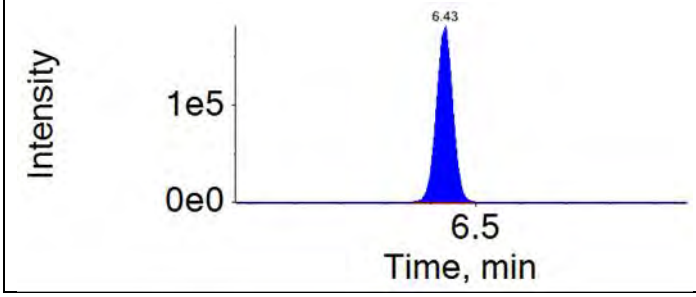


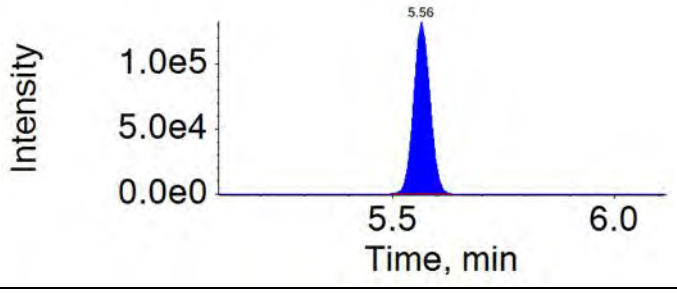
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



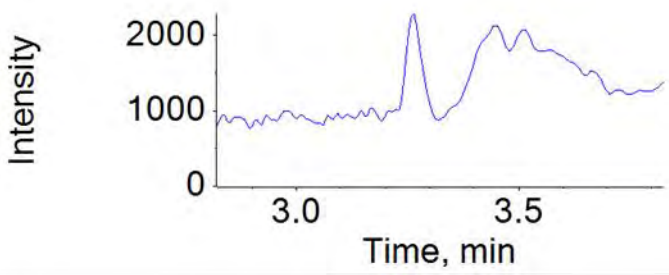


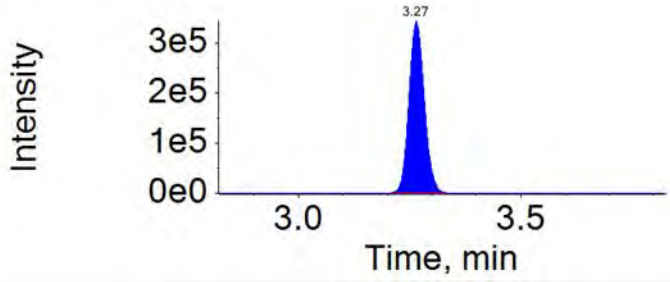
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

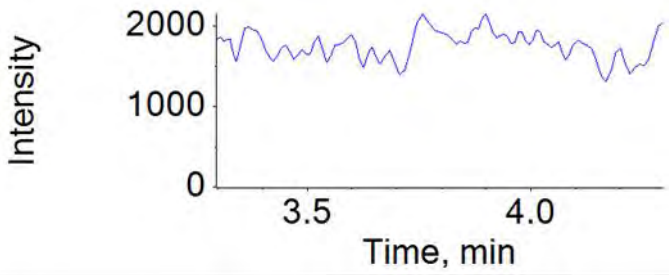
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

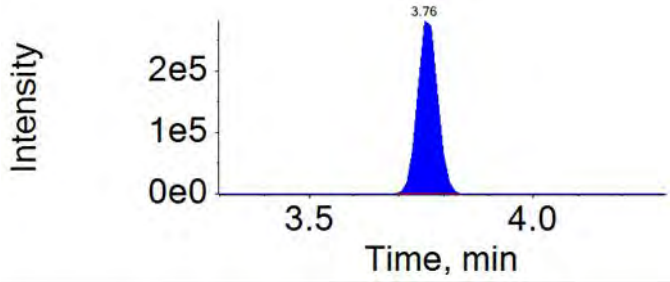
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



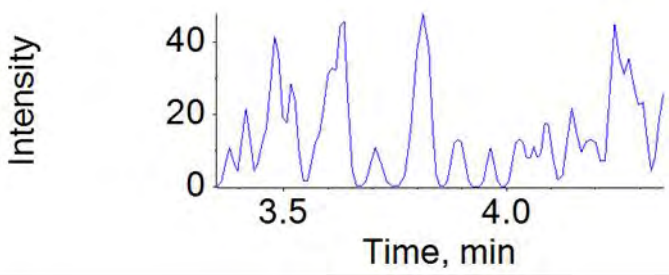


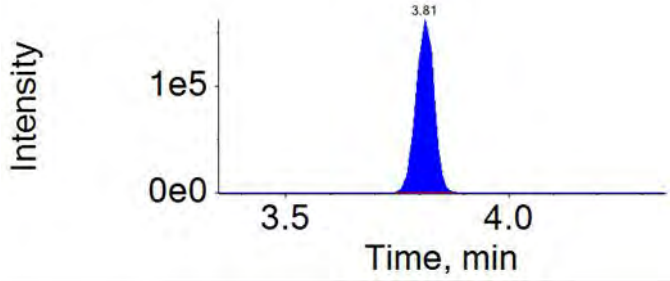
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



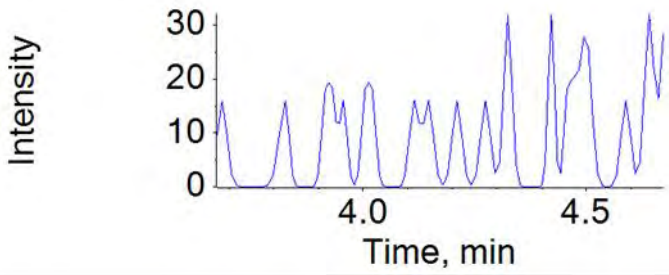


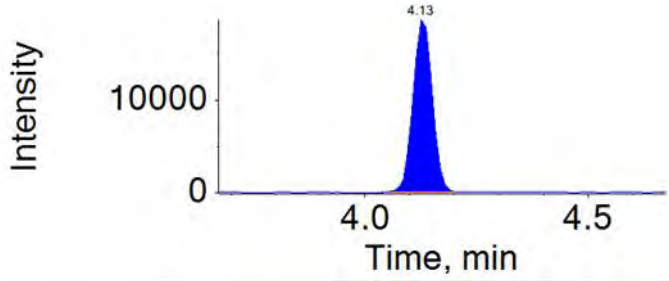
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



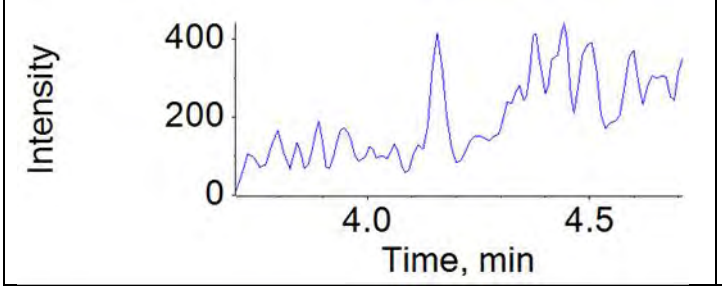


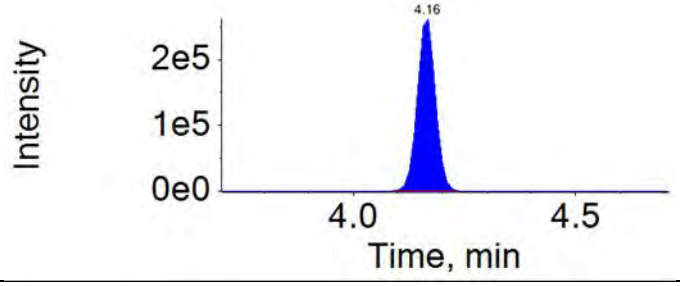
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

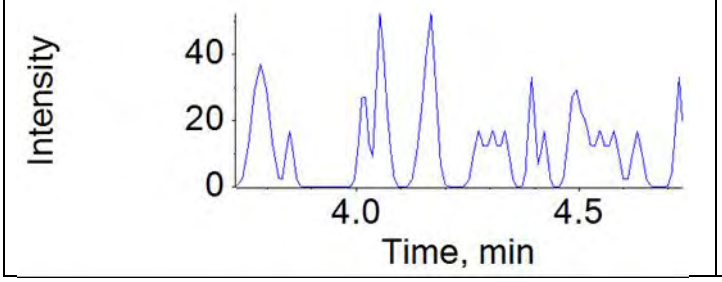
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

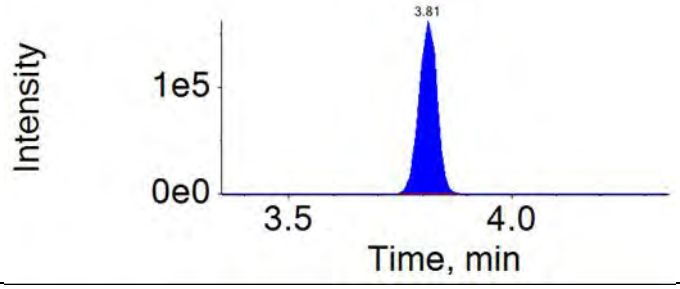
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



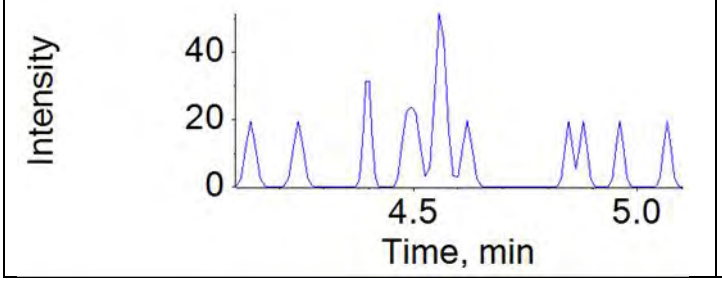


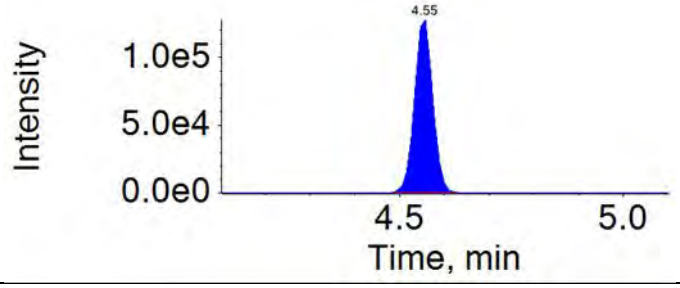
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



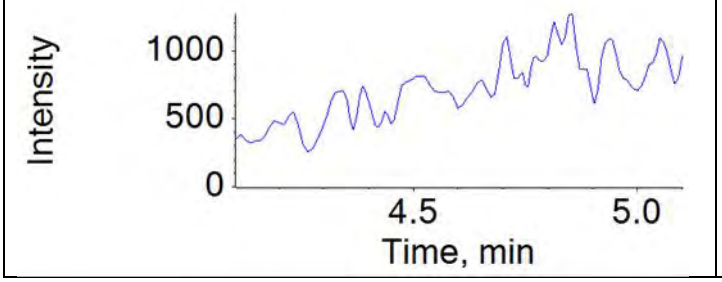


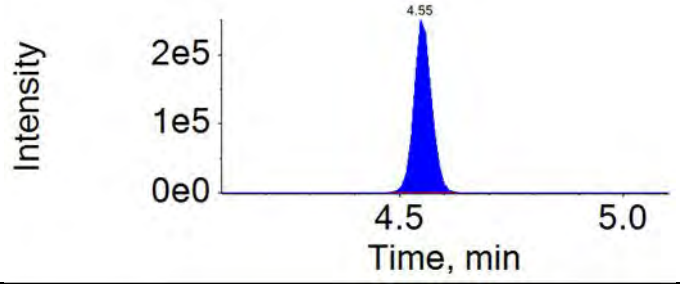
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



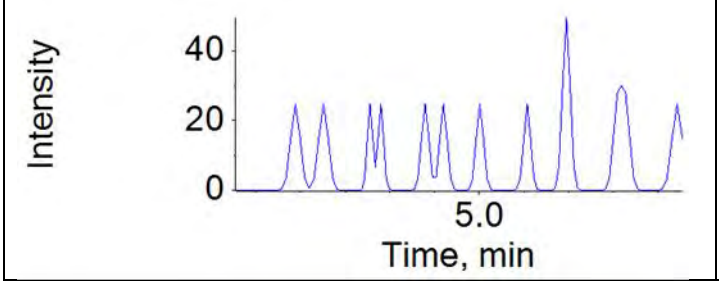


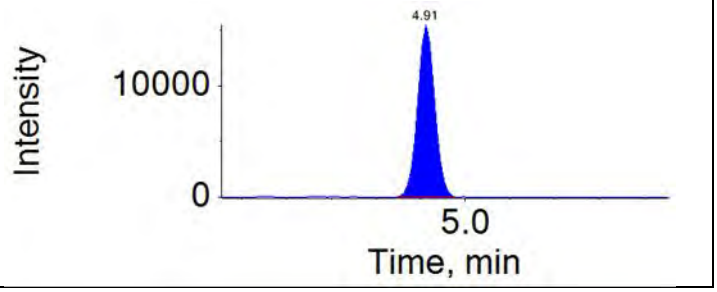
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

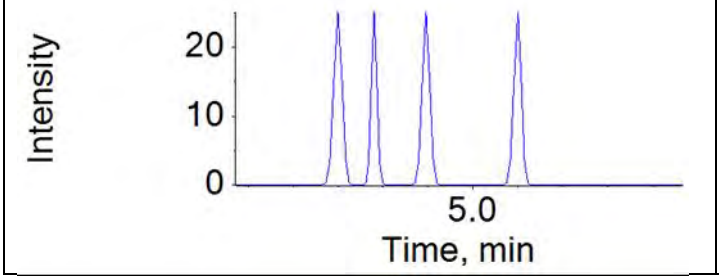
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

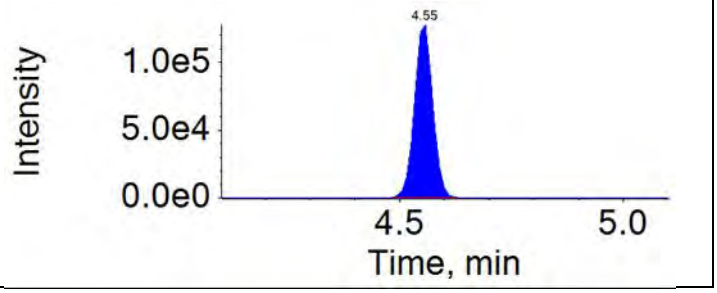
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



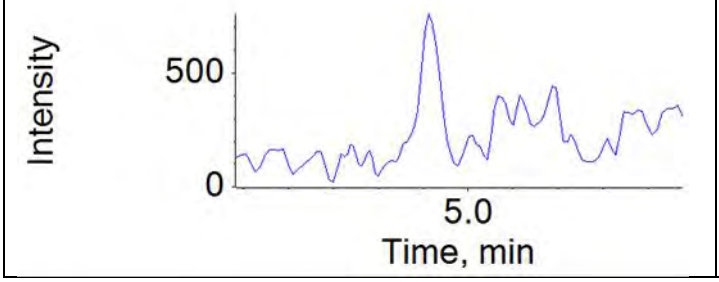


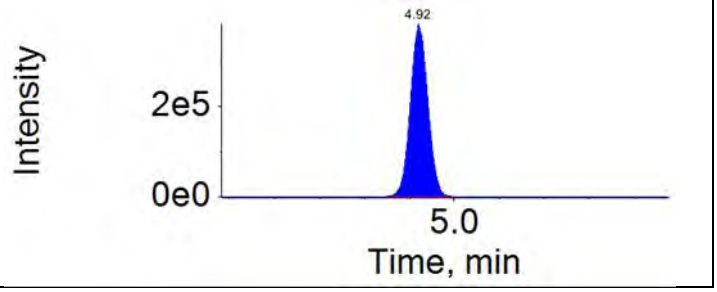
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



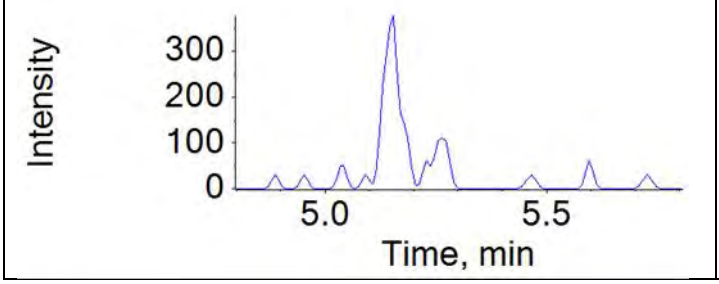


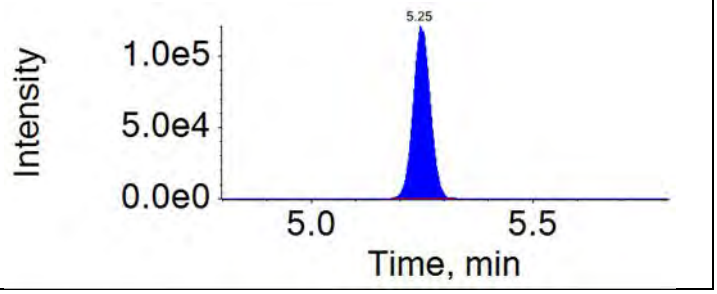
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



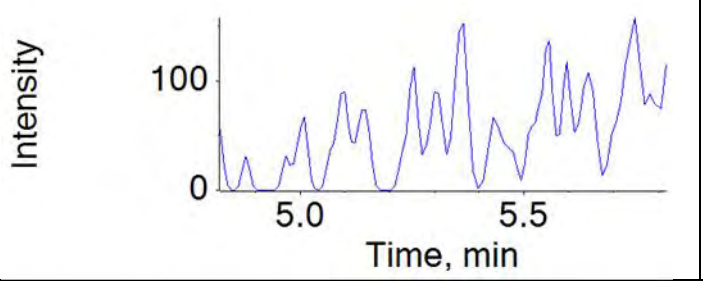


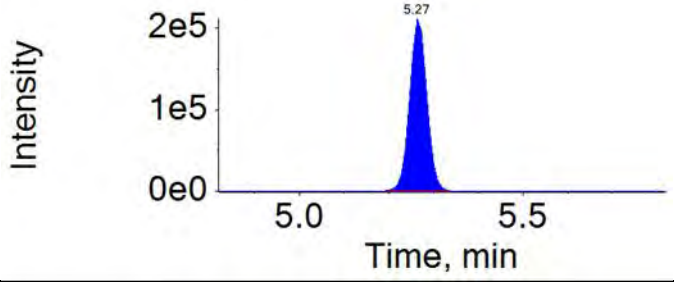
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

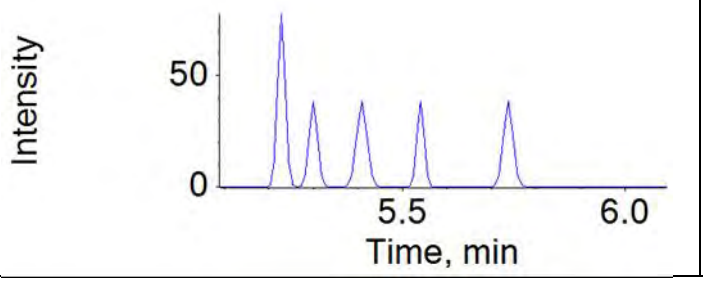
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

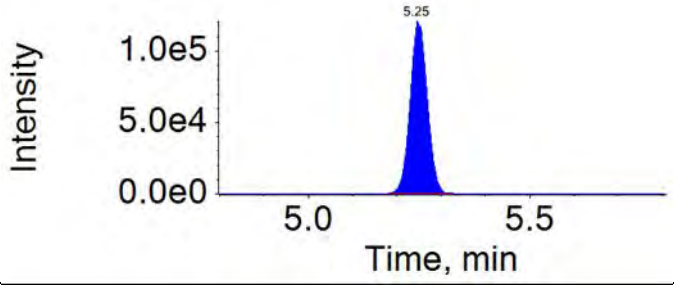
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



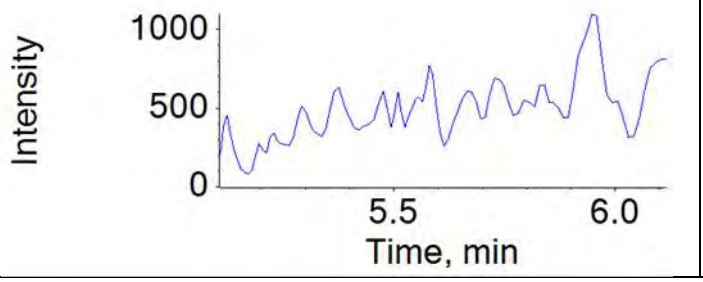


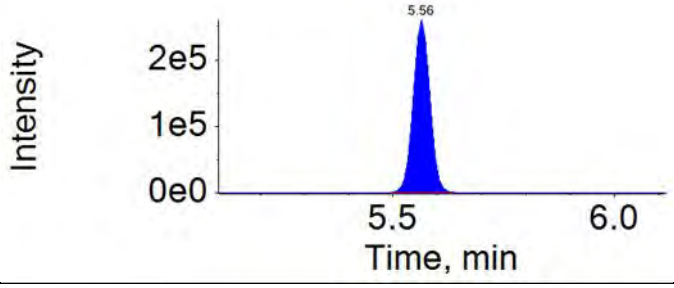
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



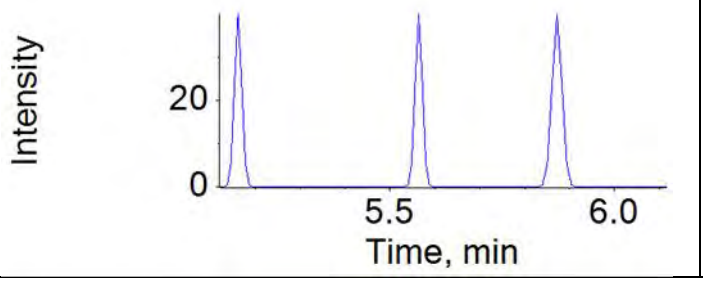


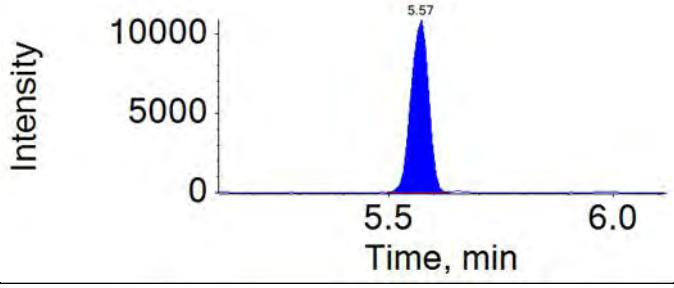
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



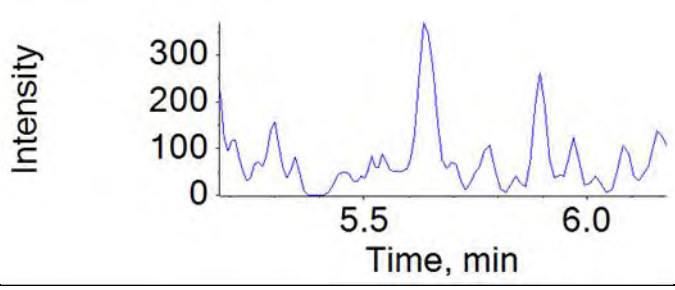


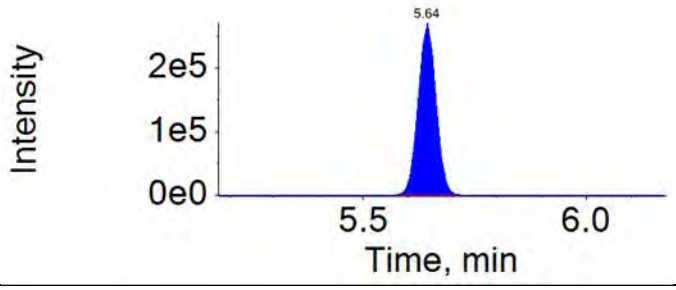
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

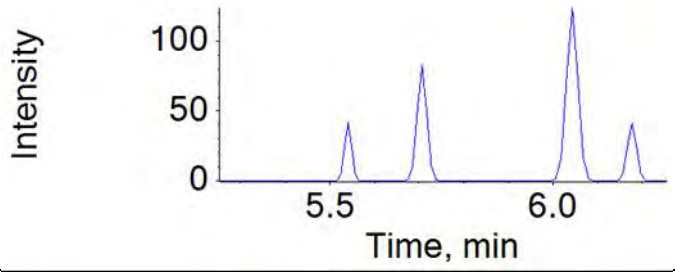
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

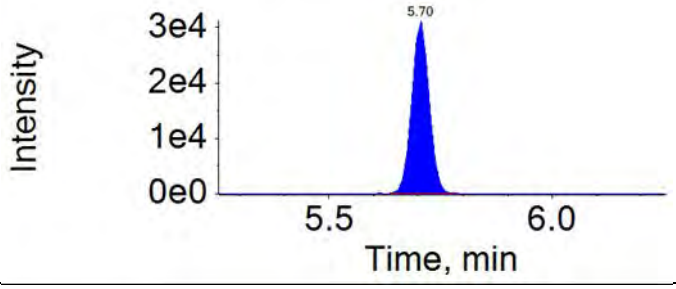
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



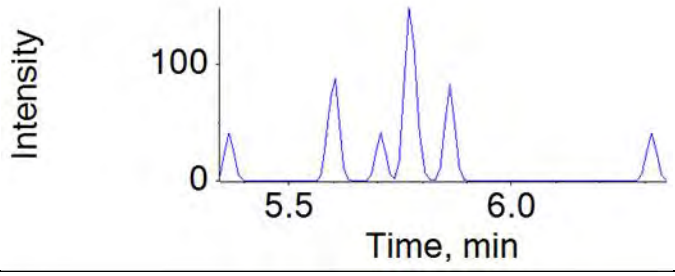


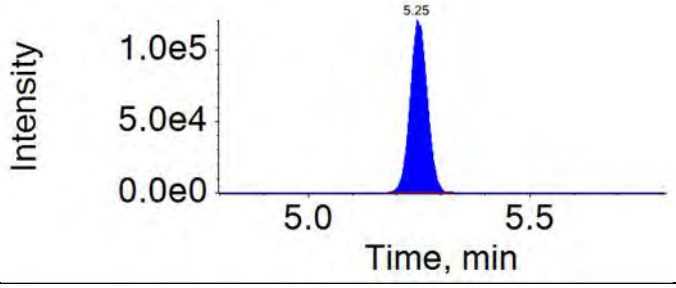
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



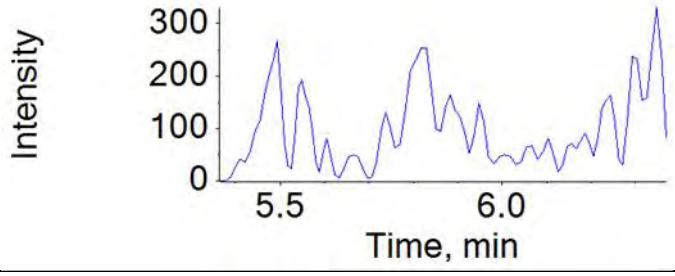


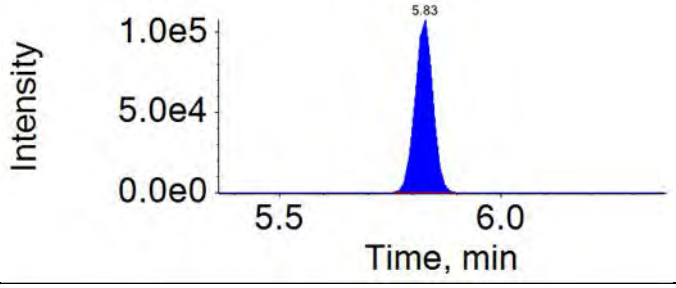
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

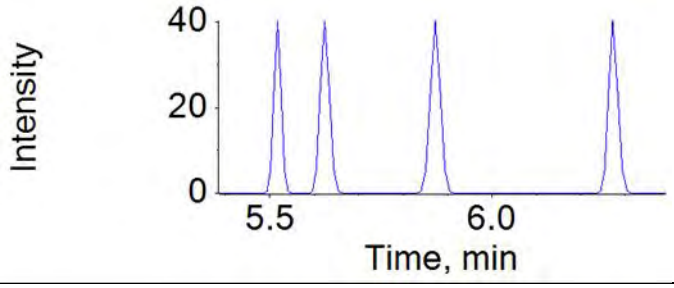
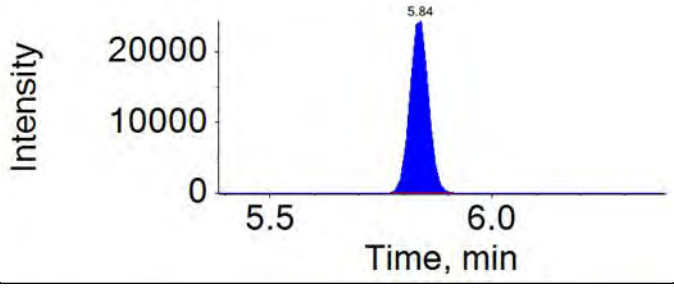


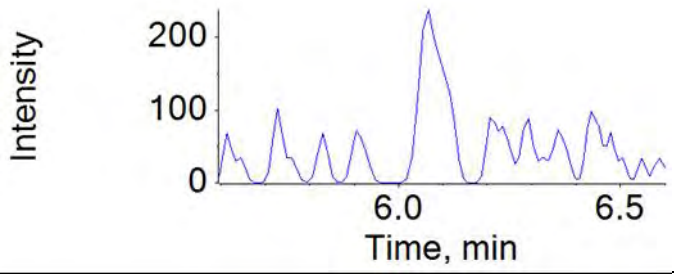
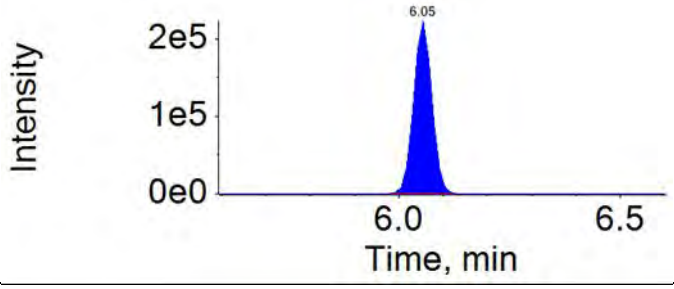


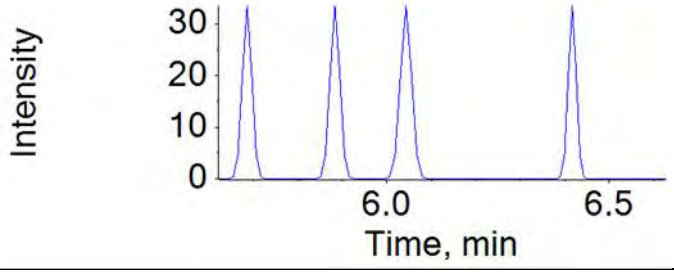
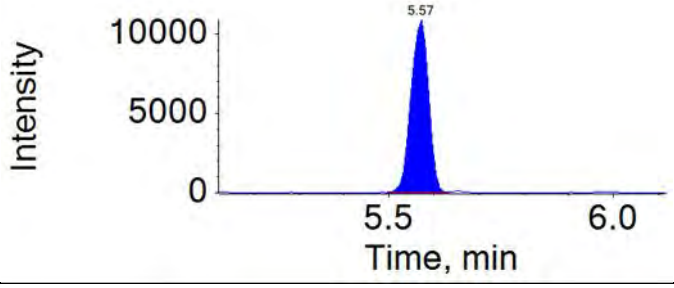
APPROVED
By JPT at 2:53 pm, 11/7/18

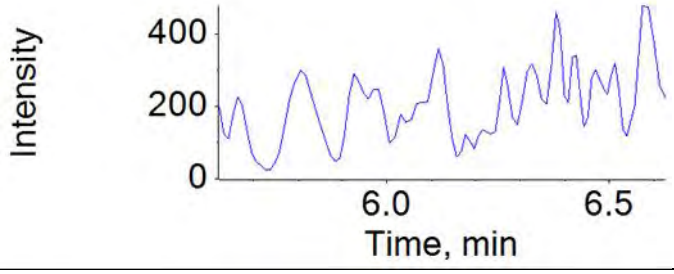
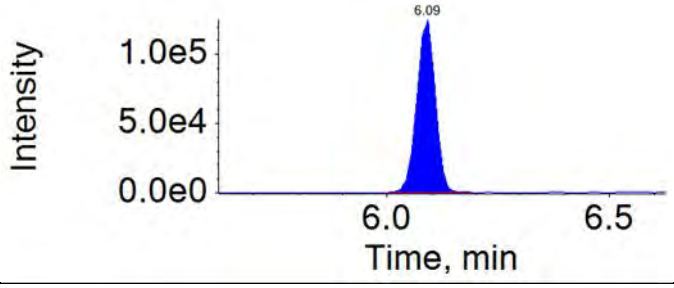
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

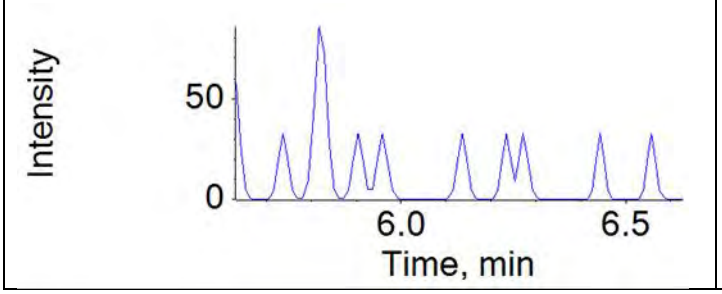
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

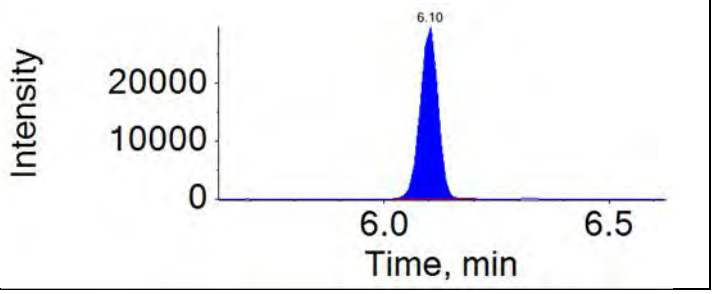
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

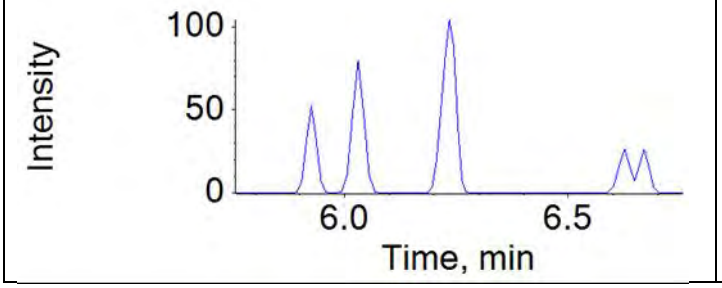
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

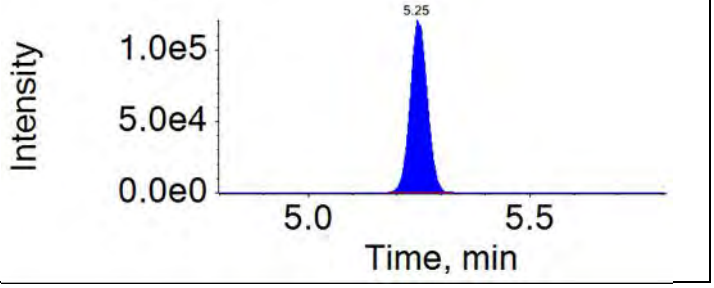
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



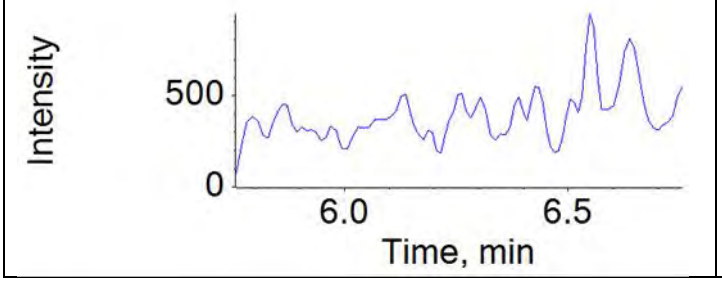


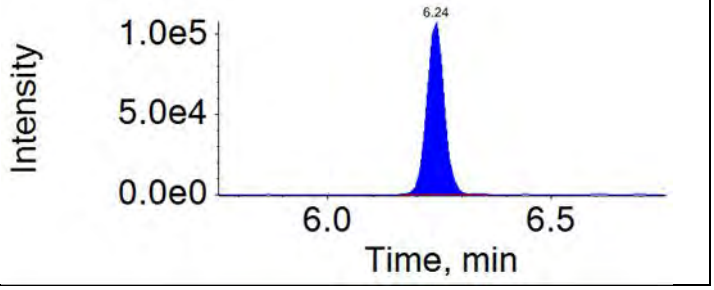
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



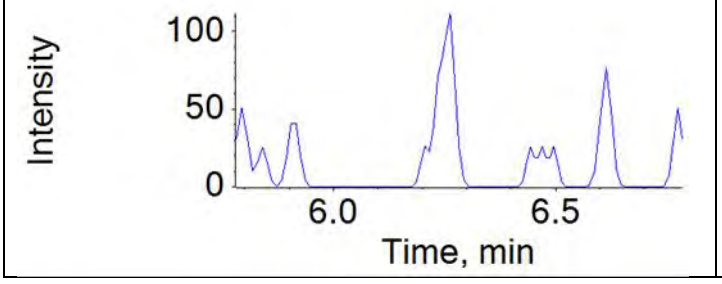


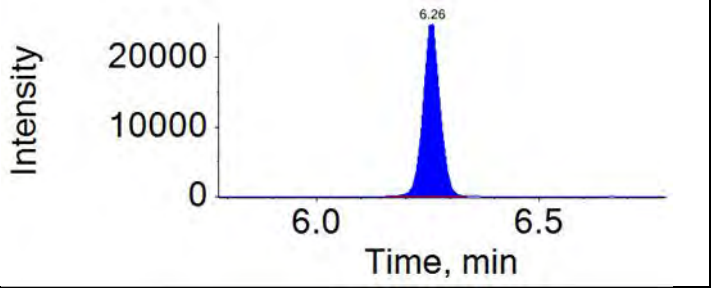
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





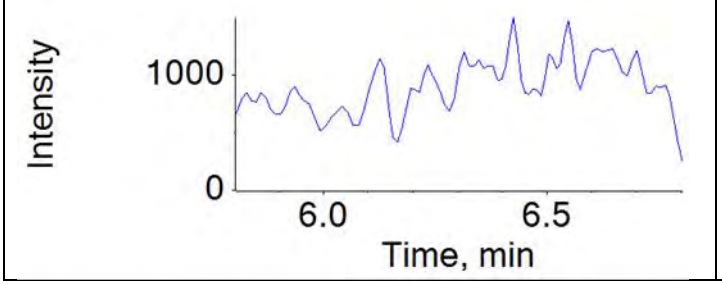
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

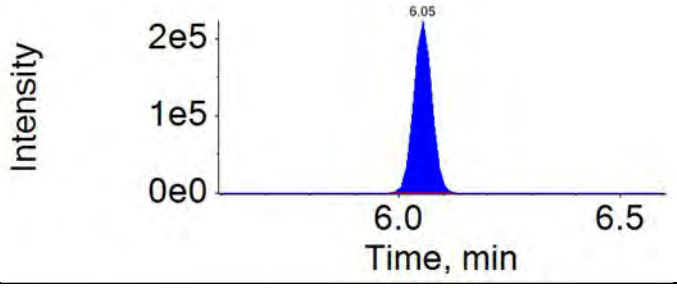




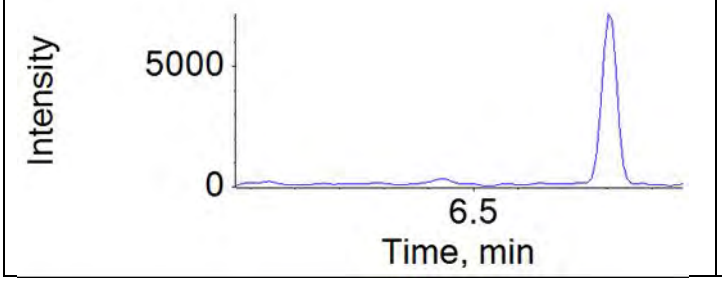
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

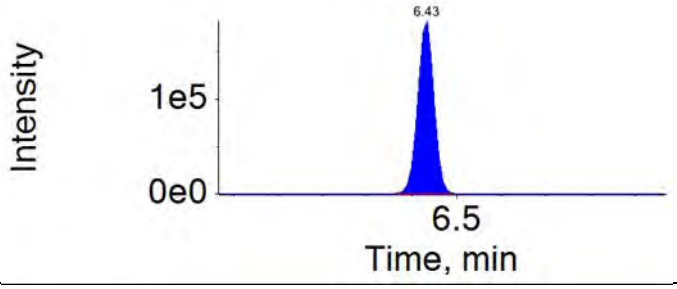
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



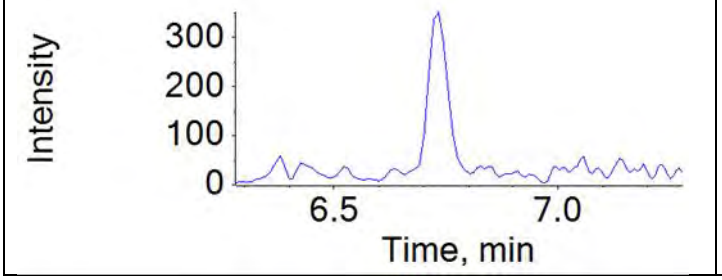


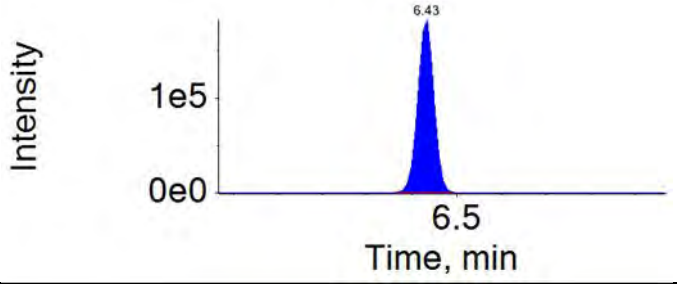
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



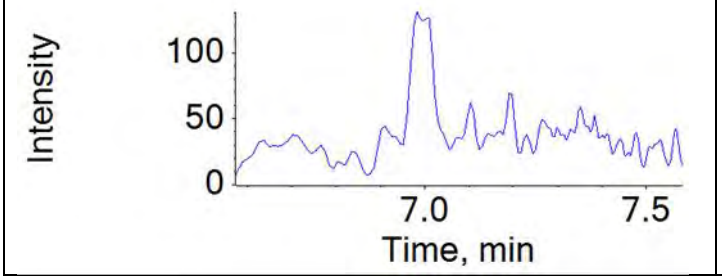


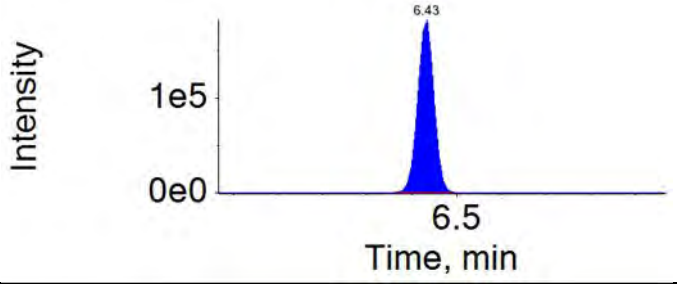
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

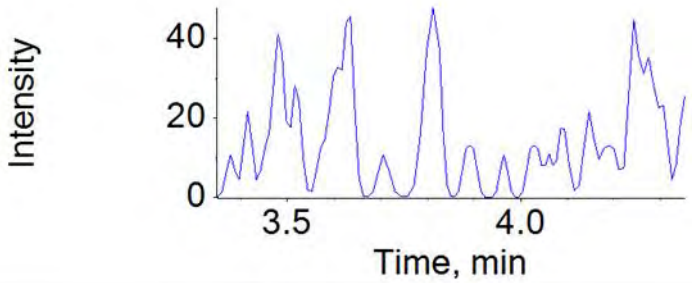
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-17.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	1.0000	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3576	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6359	N/A		50	
PFHxA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0115	N/A		50	
PFPeS	N/A	N/A	N/A	A	1.0000	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5384	N/A		50	
PFHxS	N/A	N/A	N/A	A	1.0000	N/A			
PFHxS_2	N/A	N/A	N/A	A	0.3569	N/A		50	
PFHpA	N/A	N/A	N/A	A	1.0000	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0577	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6752	N/A		50	
PFHpS	N/A	N/A	N/A	A	1.0000	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.3950	N/A		50	
PFOA	N/A	N/A	N/A	A	1.0000	N/A			
PFOA_2	N/A	N/A	N/A	A	0.0635	N/A		50	
PFOS	N/A	N/A	N/A	A	1.0000	N/A			
PFOS_2	N/A	N/A	N/A	A	0.3494	N/A		50	
PFNA	N/A	N/A	N/A	A	1.0000	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0207	N/A		50	
PFNS	N/A	N/A	N/A	A	1.0000	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4890	N/A		50	
PFDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0057	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.6169	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2206	N/A		50	
PFDS	N/A	N/A	N/A	A	1.0000	N/A			
PFDS_2	N/A	N/A	N/A	A	0.4648	N/A		50	
PFUnDA	N/A	N/A	N/A	A	1.0000	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.6082	N/A		50	
PFDoDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDoDA_2	N/A	N/A	N/A	A	0.0109	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.7082	N/A		50	
PFTrDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTrDA_2	N/A	N/A	N/A	A	0.0096	N/A		50	
PFTeDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0055	N/A		50	
PFHxDA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0596	N/A		50	
PFODA	N/A	N/A	N/A	A	1.0000	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0257	N/A		50	

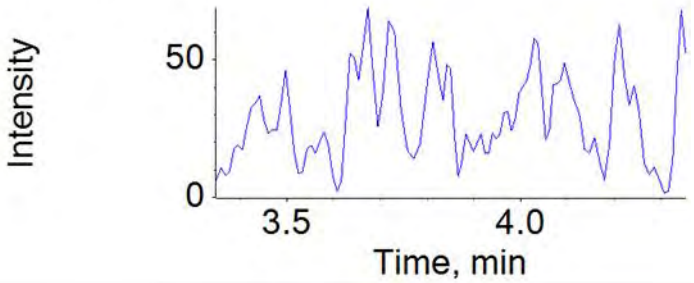
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

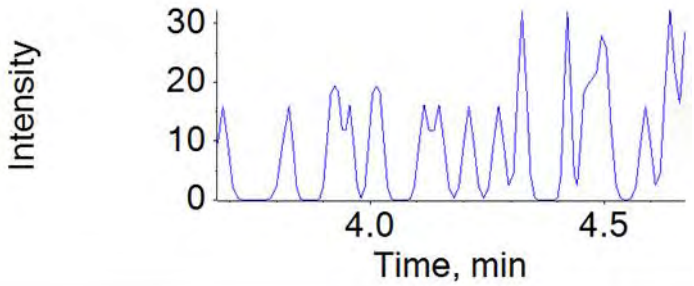
Component: PFBS
Primary Mass: 299.0 / 80.0



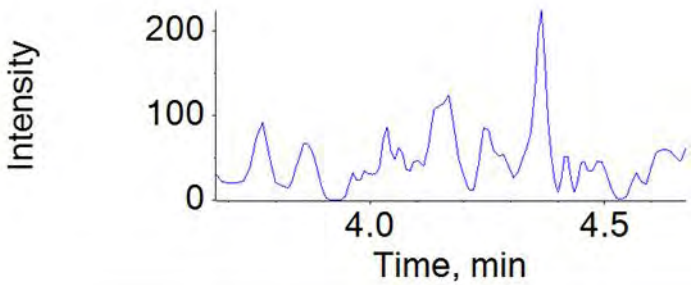
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



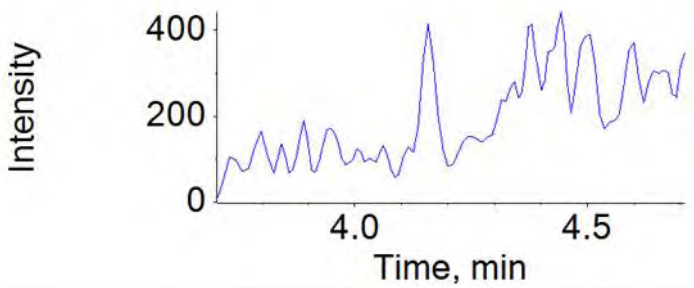
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



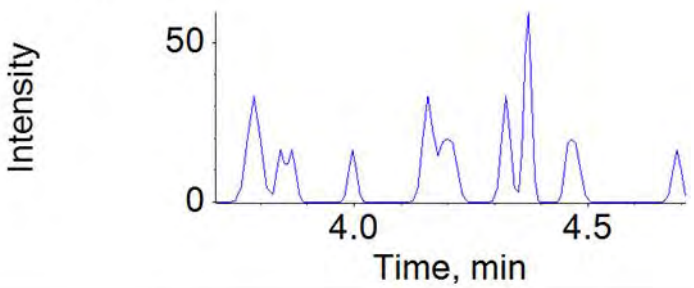
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



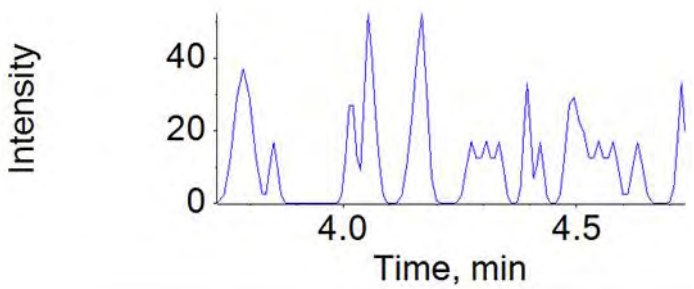
Component: PFHxA
Primary Mass: 313.0 / 269.0



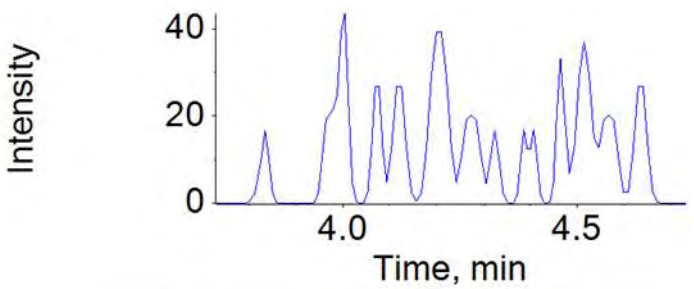
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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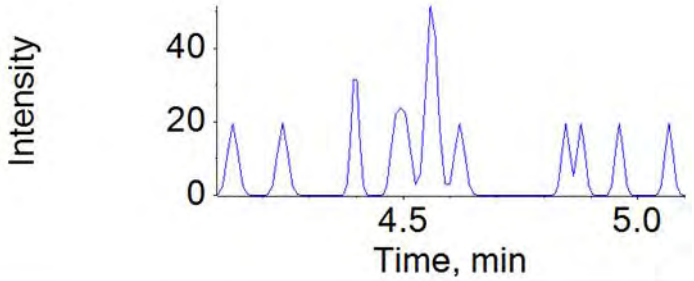
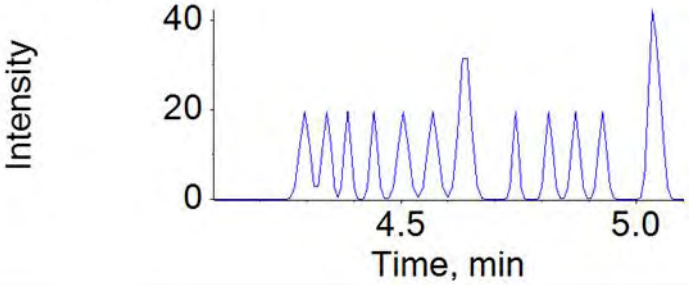
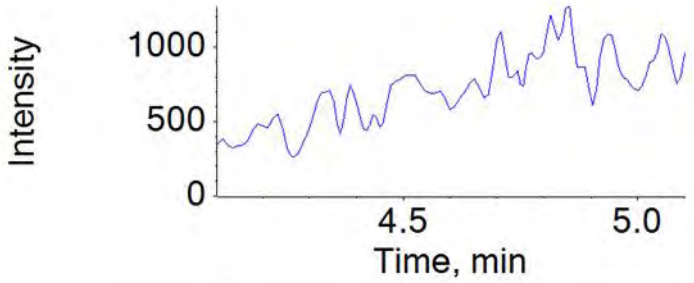
Component: PFHxS
Primary Mass: 399.0 / 80.0



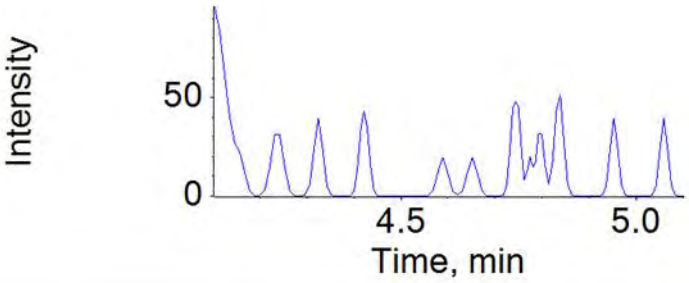
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



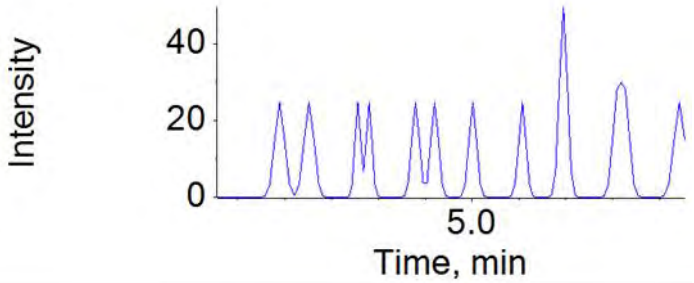
Component: PFHpA
Primary Mass: 363.0 / 319.0



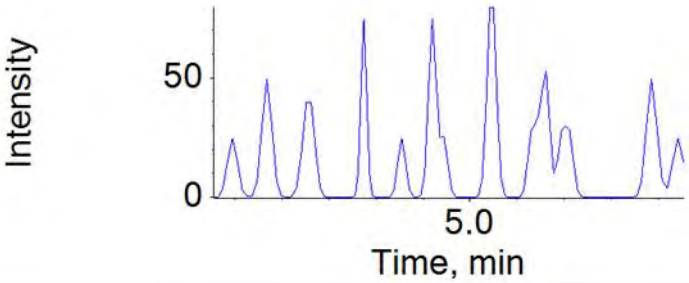
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



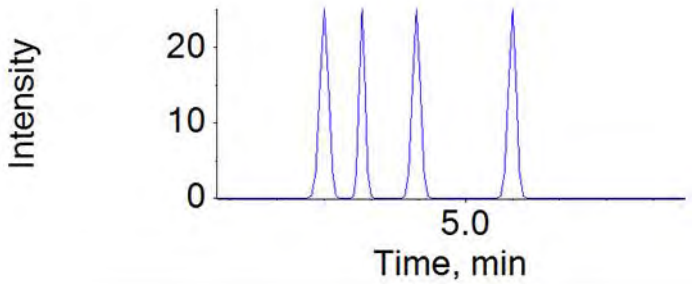
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



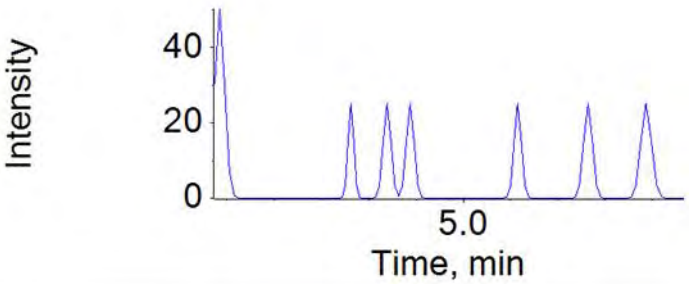
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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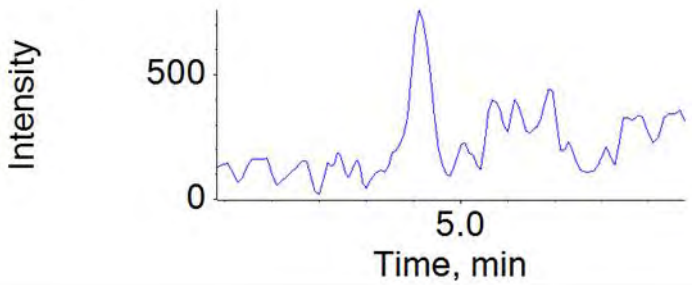
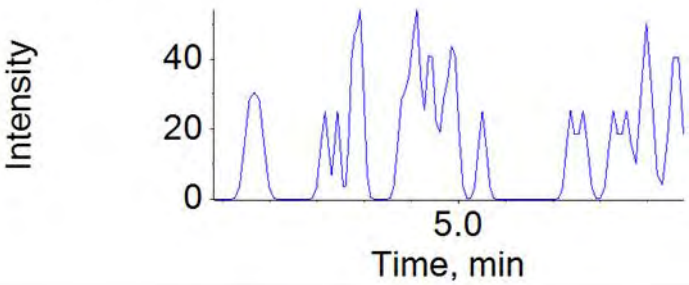
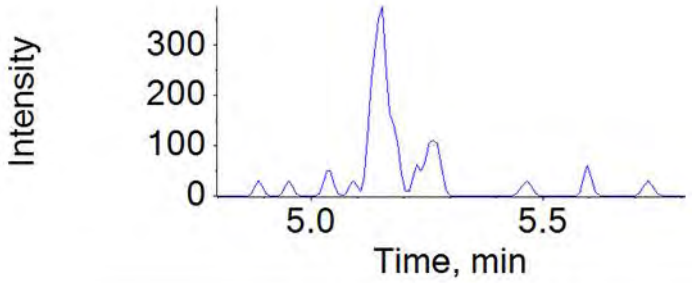
Component: PFOA
Primary Mass: 413.0 / 369.0



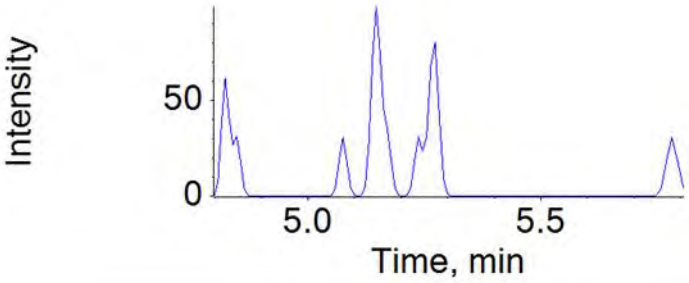
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



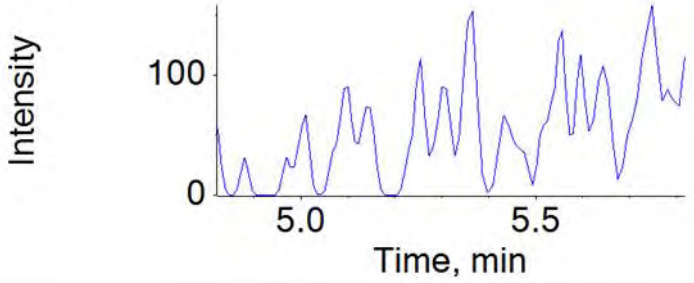
Component: PFOS
Primary Mass: 499.0 / 80.0



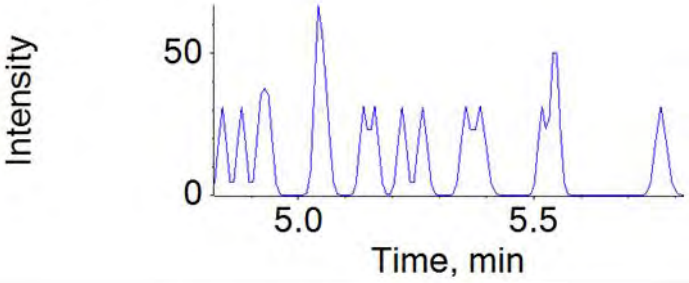
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



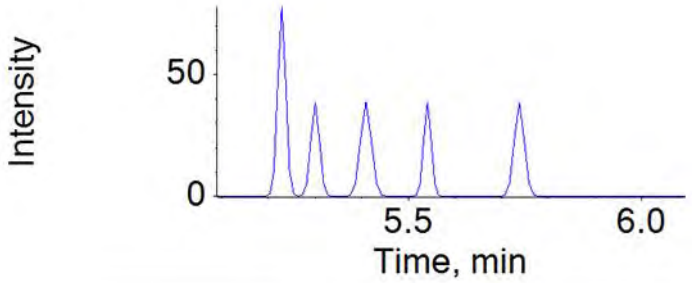
Component: PFNA
Primary Mass: 463.0 / 419.0



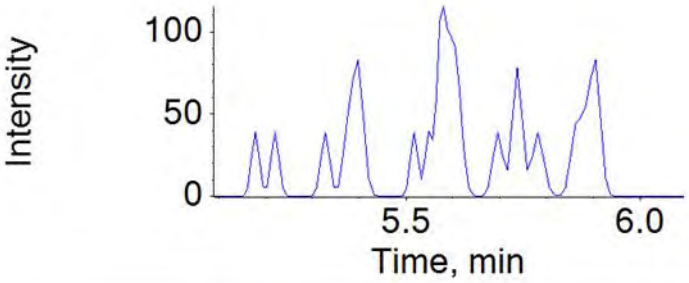
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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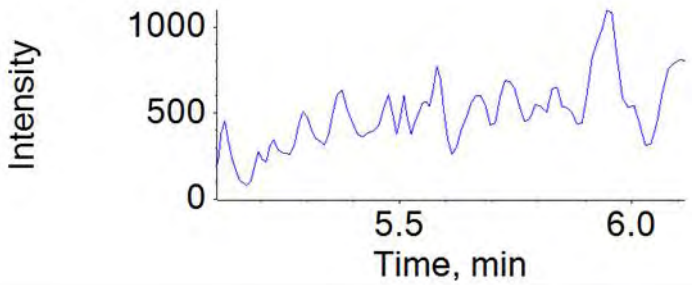
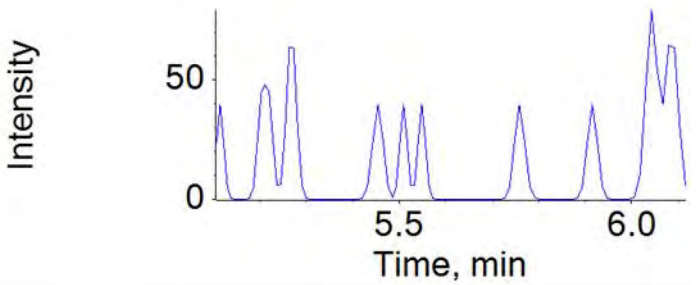
By umar at 5:23 pm, 11/9/18

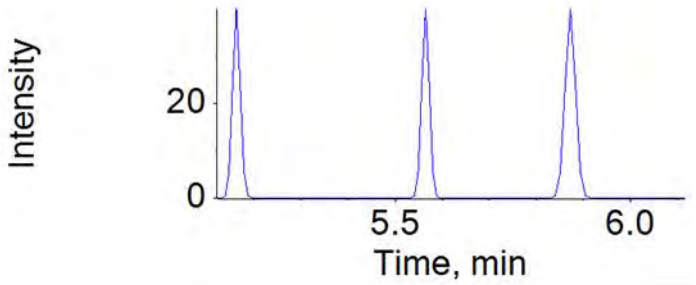
Component: PFDA
Primary Mass: 513.0 / 469.0



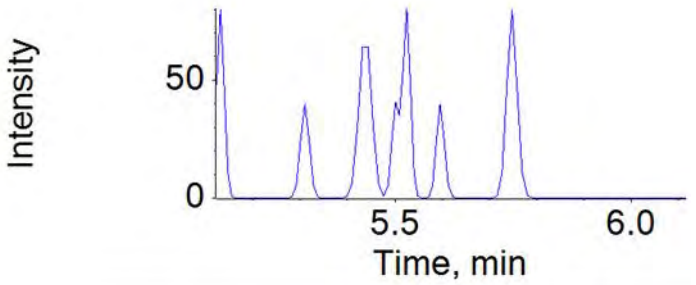
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



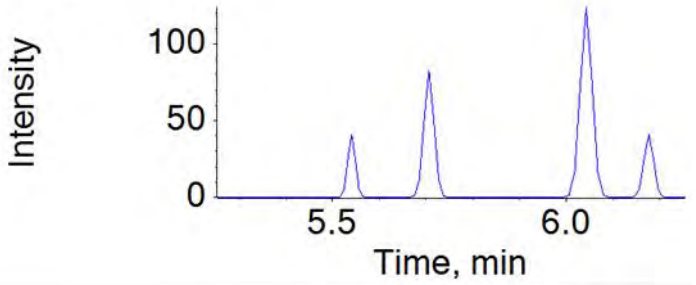
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



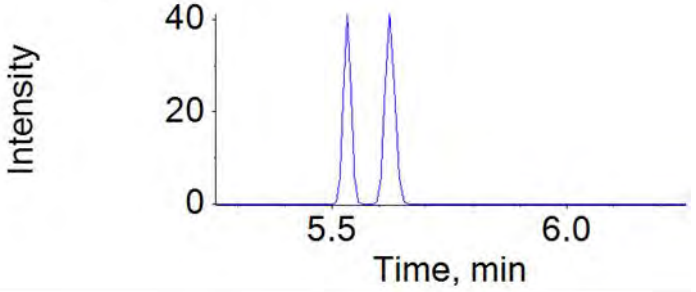
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



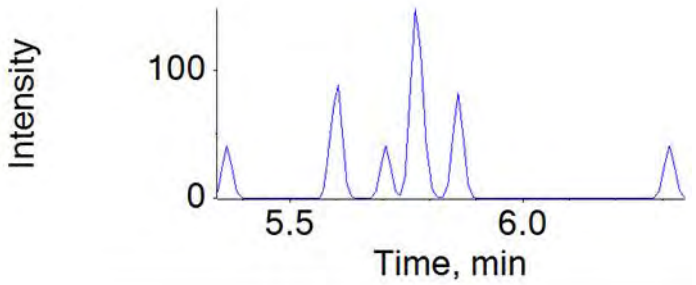
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



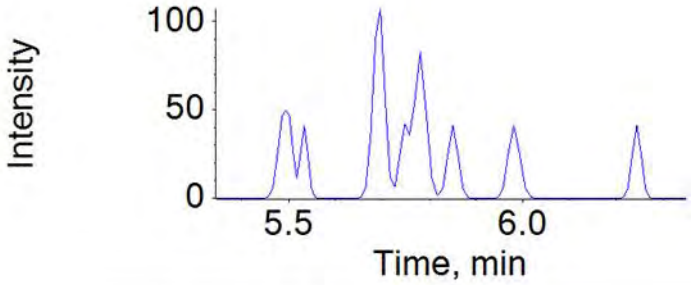
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



Component: PFDS_2
Secondary Mass: 599.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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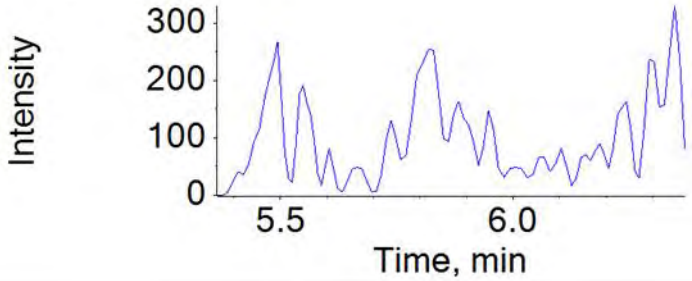
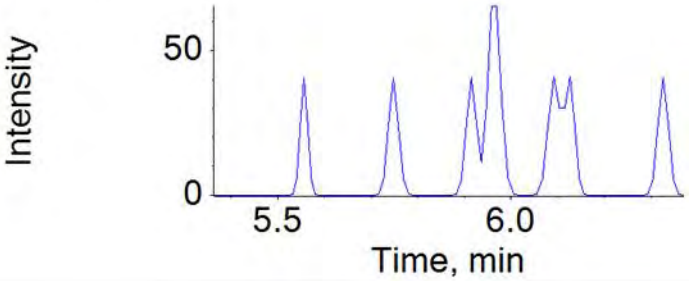
By umar at 5:23 pm, 11/9/18

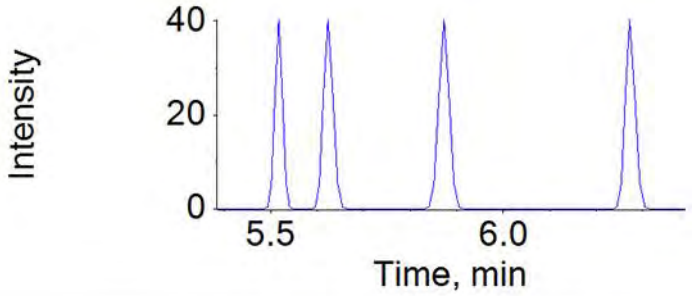
Component: PFUnDA
Primary Mass: 563.0 / 519.0



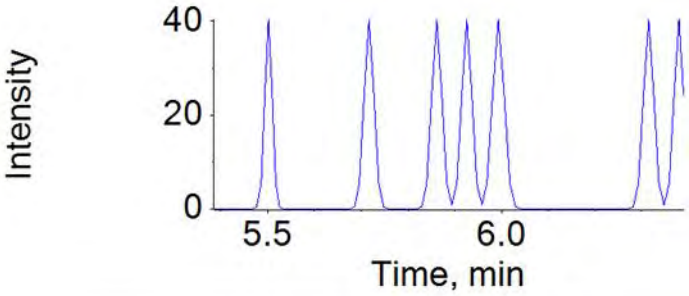
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



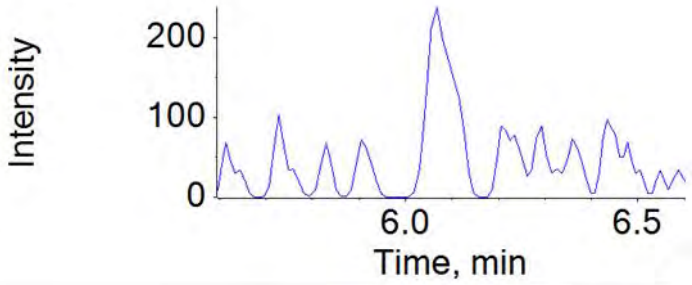
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



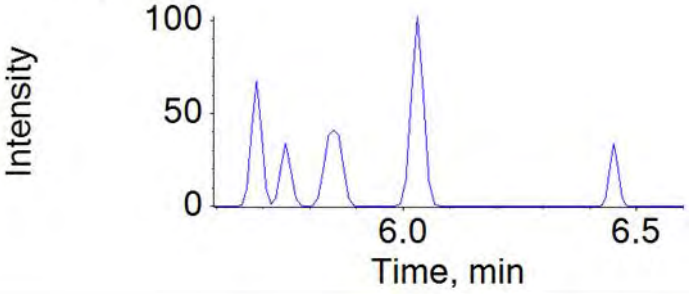
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



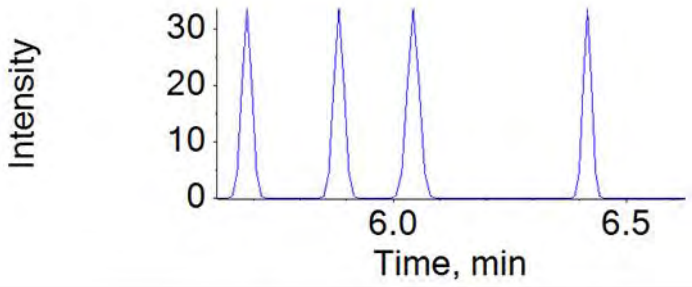
Component: PFDoDA
Primary Mass: 613.0 / 569.0



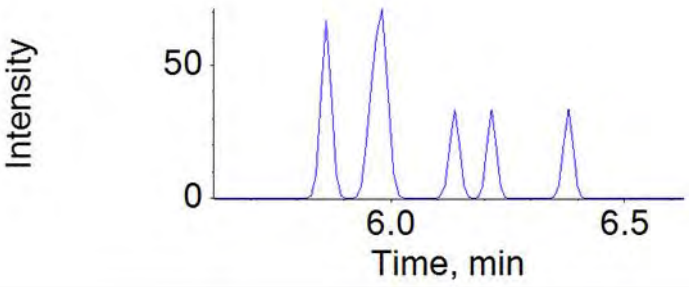
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



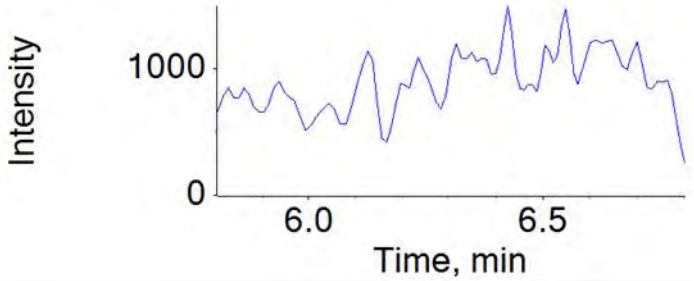
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



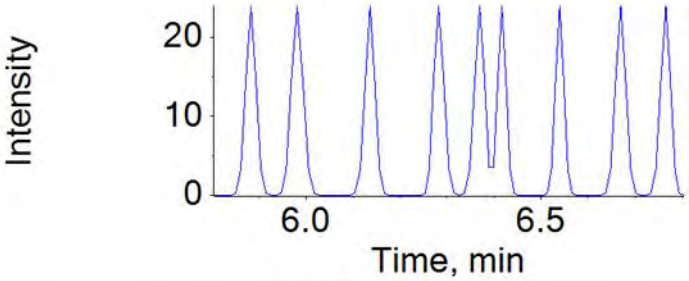
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



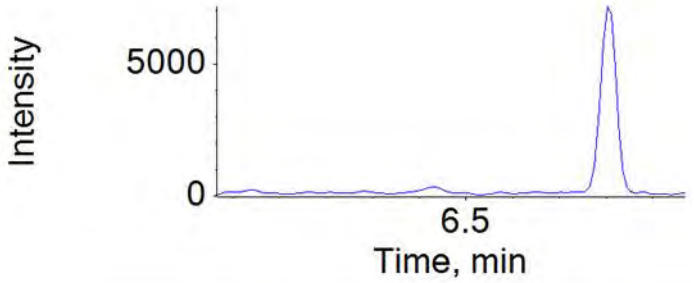
Component: PFTrDA
Primary Mass: 663.0 / 619.0



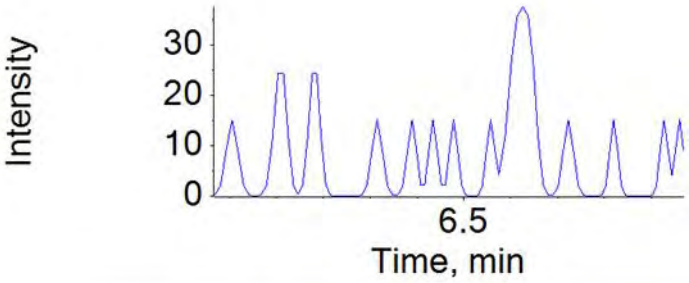
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



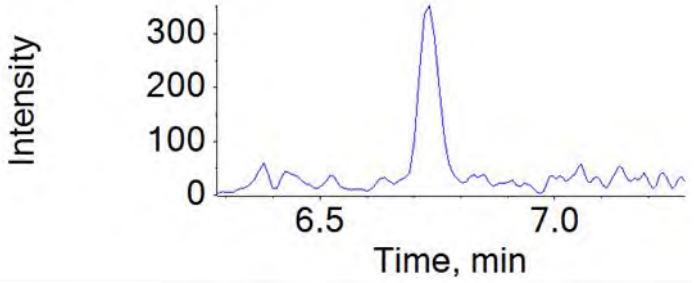
Component: PFTeDA
Primary Mass: 713.0 / 669.0



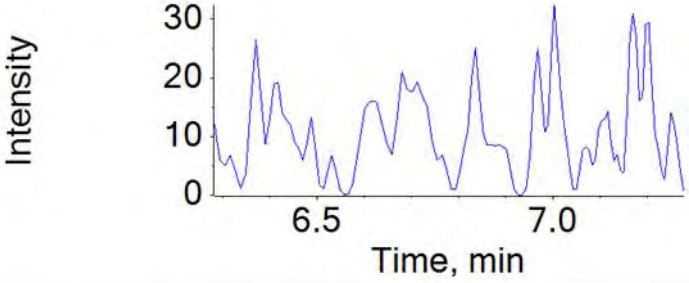
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



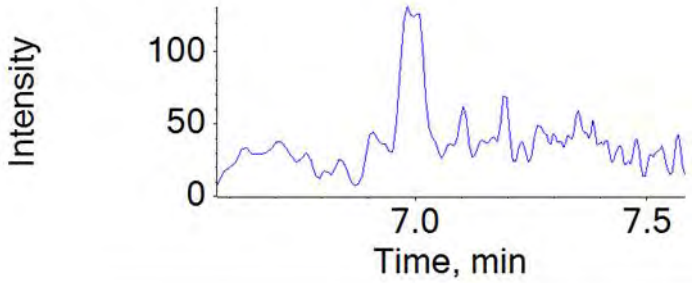
Component: PFHxDA
Primary Mass: 813.0 / 769.0



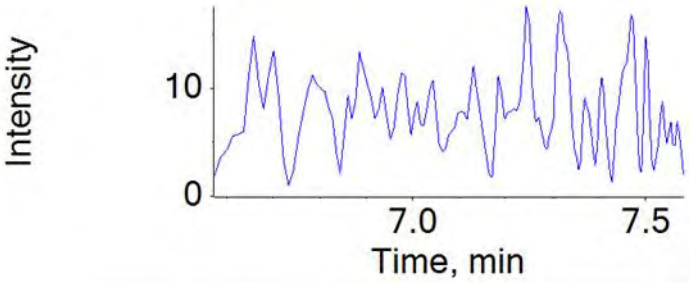
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	ICV			**Data File:**		18NOV07DCAL-18.wiff
Sample ID:	ICVMODX1833G			**Acquis Date:**		2018-11-07T10:51:59
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	10			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	748799.9	730410.6	3	50	
13C2-PFOA	5.0	501855.0	524423.6	-4	50	
13C4-PFOS	4.8	265586.7	274061.7	-3	50	
13C2-PFDA	5.0	309656.0	311442.1	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	809267.5	13C3-PFBA	748799.9	1.081	5.000	5.001	100	70-130	
E13C5-PFPeA	881218.2	13C3-PFBA	748799.9	1.177	5.000	5.127	103	70-130	
E13C3-PFBS	459507.5	13C3-PFBA	748799.9	0.614	4.650	4.504	97	70-130	
E13C2-4:2-FTS	53452.0	13C2-PFOA	501855.0	0.107	4.670	4.806	103	70-130	
E13C5-PFHxA	721013.6	13C2-PFOA	501855.0	1.437	5.000	5.285	106	70-130	
E13C3-PFHxS	351166.0	13C2-PFOA	501855.0	0.700	4.730	5.023	106	70-130	
E13C4-PFHpA	564695.4	13C2-PFOA	501855.0	1.125	5.000	5.119	102	70-130	
E13C2-6:2-FTS	37550.1	13C2-PFOA	501855.0	0.075	4.750	4.989	105	70-130	
E13C8-PFOA	985027.1	13C2-PFOA	501855.0	1.963	5.000	5.473	109	70-130	
E13C8-PFOS	289450.1	13C4-PFOS	265586.7	1.090	4.780	4.819	101	70-130	
E13C9-PFNA	531663.0	13C4-PFOS	265586.7	2.002	5.000	5.468	109	70-130	
E13C6-PFDA	669137.1	13C2-PFDA	309656.0	2.161	5.000	5.434	109	70-130	
E13C2-8:2-FTS	27983.4	13C2-PFDA	309656.0	0.090	4.790	4.782	100	70-130	
E13C8-PFOSA	741232.2	13C2-PFDA	309656.0	2.394	5.000	5.223	104	70-130	
Ed3-NMeFOSAA	76665.4	13C2-PFDA	309656.0	0.248	5.000	4.604	92	70-130	
E13C7-PFUnDA	292761.5	13C2-PFDA	309656.0	0.945	5.000	5.454	109	70-130	
Ed5-NEtFOSAA	78938.7	13C2-PFDA	309656.0	0.255	5.000	5.899	118	70-130	
E13C2-PFDoDA	580675.1	13C2-PFDA	309656.0	1.875	5.000	5.055	101	70-130	
Ed7-NMePFOSAE	334001.4	13C2-PFDA	309656.0	1.079	5.000	5.016	100	70-130	
Ed3-NMePFOSA	79719.1	13C2-PFDA	309656.0	0.257	5.000	4.713	94	70-130	
Ed9-NEtPFOSAE	293829.7	13C2-PFDA	309656.0	0.949	5.000	5.419	108	70-130	
Ed5-NEtPFOSA	65412.9	13C2-PFDA	309656.0	0.211	5.000	4.891	98	70-130	
E13C2-PFTeDA	427601.6	13C2-PFDA	309656.0	1.381	5.000	4.971	99	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

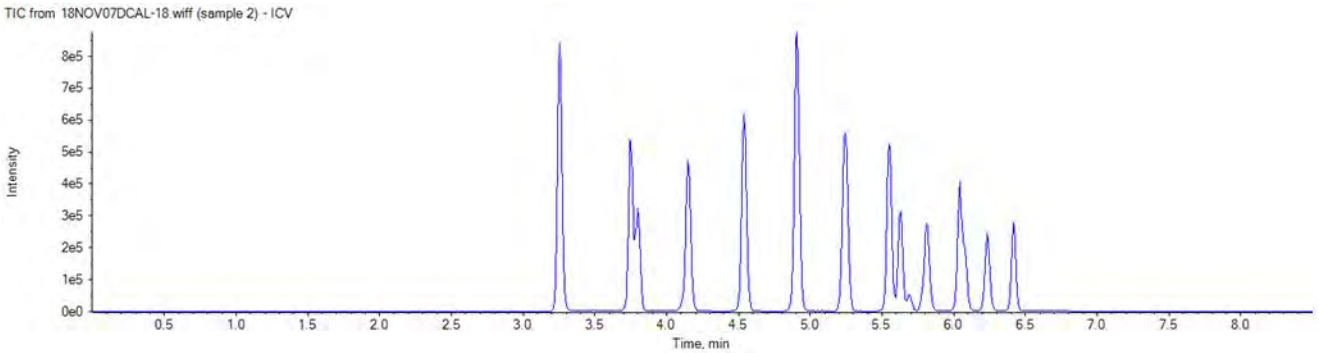
Analyte Quantitation Peak Table

Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-18.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	307777.1		A	13C4-PFBA	3.25	809267.5	0.380	2.226
PFPeA	3.75	1.000	325574.9		A	13C5-PFPeA	3.75	881218.2	0.369	2.196
PFBS	3.80	1.000	159719.5		A	13C3-PFBS	3.80	459507.5	0.348	1.752
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.11	53452.0	N/A	
PFHxA	4.15	1.000	397434.6		A	13C5-PFHxA	4.15	721013.6	0.551	2.364
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.80	459507.5	N/A	
PFHxS	4.54	1.000	126635.3		A	13C3-PFHxS	4.54	351166.0	0.361	1.828
PFHpA	4.54	1.000	390197.1		A	13C4-PFHpA	4.54	564695.4	0.691	2.324
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	37550.1	N/A	
PFHpS	4.90	1.080	126812.1		A	13C3-PFHxS	4.54	351166.0	0.361	1.889
PFOA	4.91	1.000	387215.1		M	13C8-PFOA	4.91	985027.1	0.393	2.213
PFOS	5.23	1.000	114911.8		M	13C8-PFOS	5.23	289450.1	0.397	2.059
PFNA	5.25	1.000	329644.4		A	13C9-PFNA	5.25	531663.0	0.620	2.317
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.23	289450.1	N/A	
PFDA	5.55	1.000	262760.0		A	13C6-PFDA	5.55	669137.1	0.393	2.160
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	27983.4	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.63	741232.2	N/A	
NMeFOSAA	5.69	1.000	33916.6		A	d3-NMeFOSAA	5.69	76665.4	0.442	2.276
PFDS	5.79	1.110	65962.5		A	13C8-PFOS	5.23	289450.1	0.228	2.177
PFUnDA	5.81	1.000	225137.5		A	13C7-PFUnDA	5.81	292761.5	0.769	2.205
NEtFOSAA	5.83	1.000	29687.2		A	d5-NEtFOSAA	5.82	78938.7	0.376	1.616
PFDoDA	6.04	1.000	232949.2		A	13C2-PFDoDA	6.04	580675.1	0.401	2.174
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	27983.4	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	334001.4	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.09	79719.1	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.23	289450.1	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.23	293829.7	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.25	65412.9	N/A	
PFTrDA	6.24	1.030	206908.4		A	13C2-PFDoDA	6.04	580675.1	0.356	2.247
PFTeDA	6.42	1.000	157975.3		A	13C2-PFTeDA	6.42	427601.6	0.369	2.169
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	427601.6	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	427601.6	N/A	

Total Ion Chromatogram

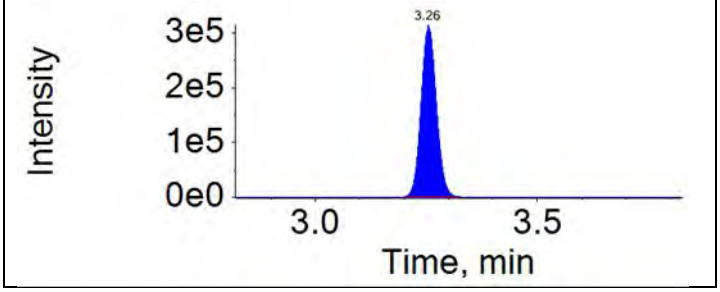


APPROVED
By JPT at 2:53 pm, 11/7/18

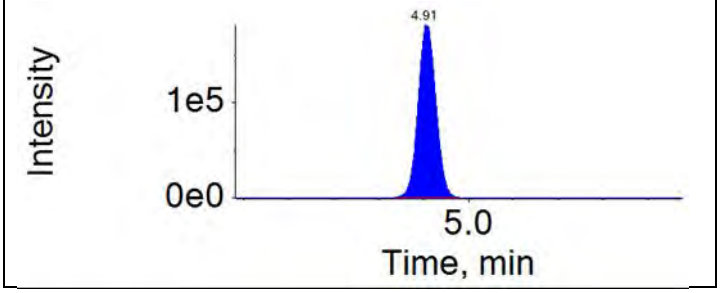
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

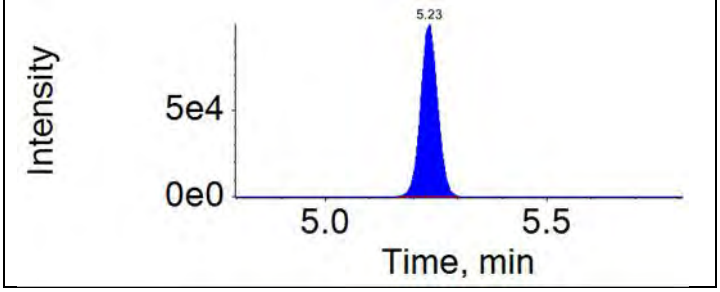
Injection Standard: 13C3-PFBA
216.0 / 172.0



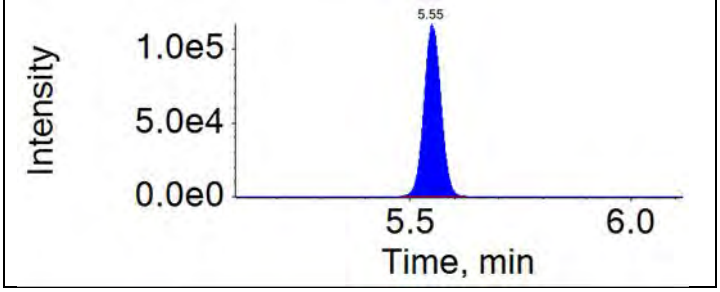
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



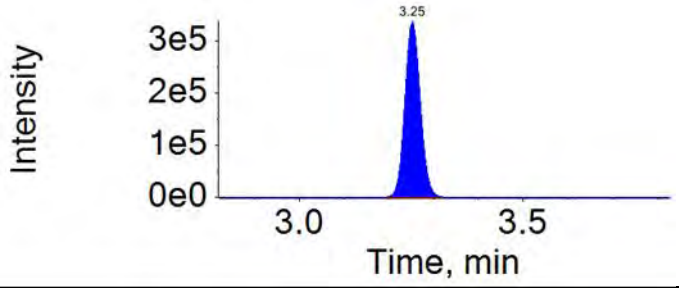
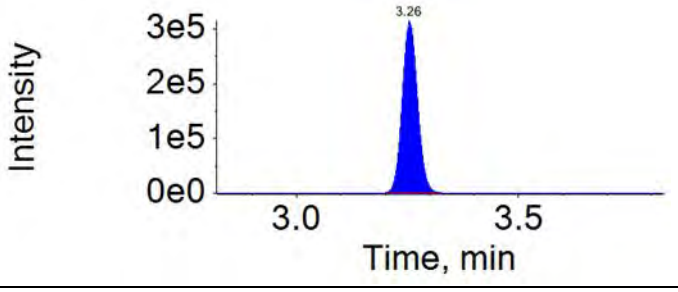
Injection Standard: 13C2-PFDA
515.0 / 470.0

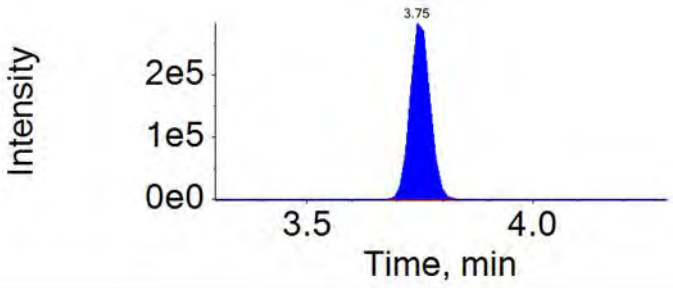
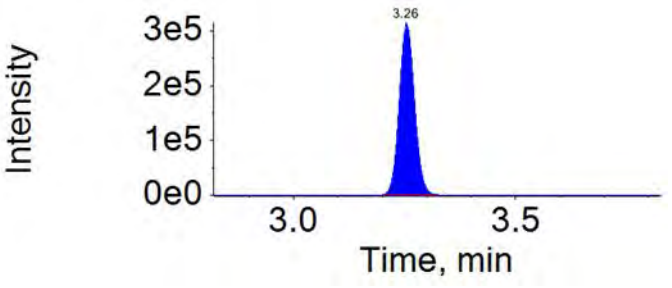


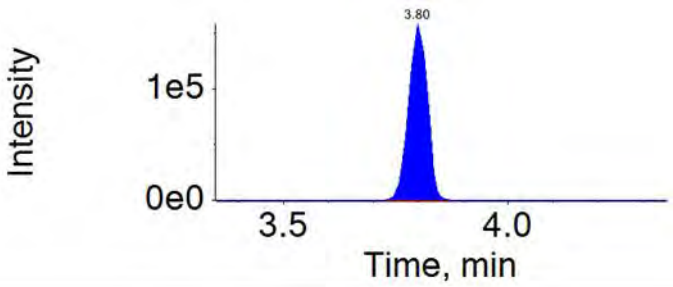
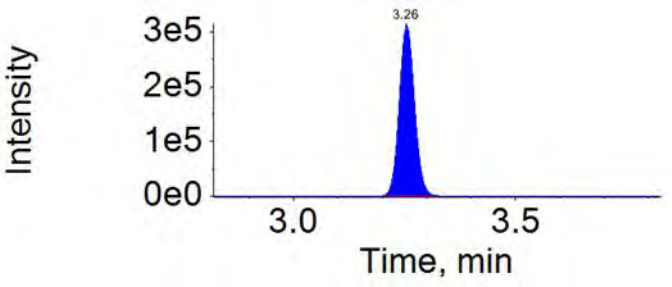
APPROVED
By JPT at 2:53 pm, 11/7/18

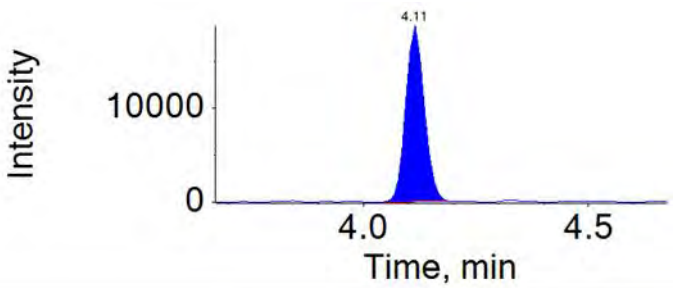
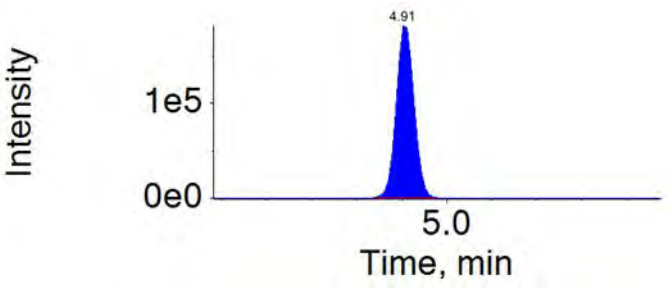
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

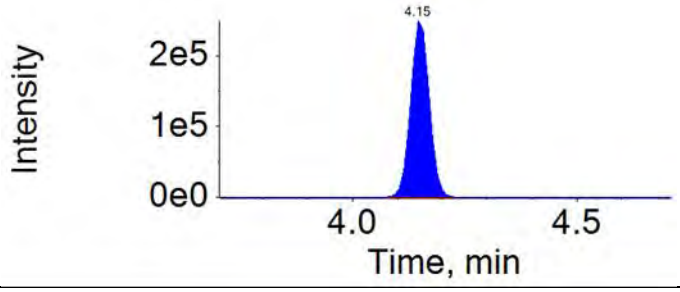
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

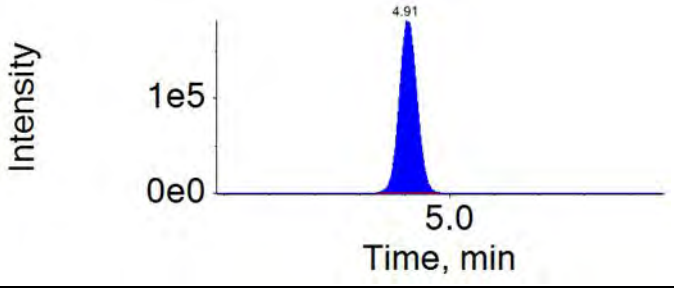
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

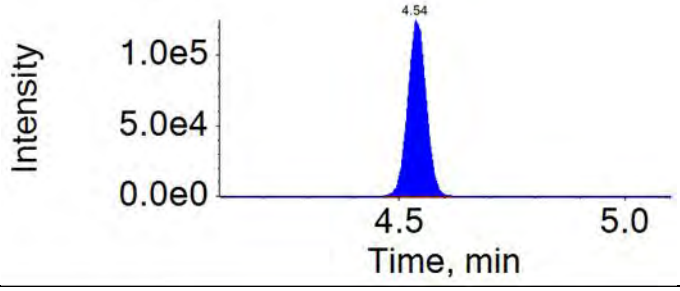
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

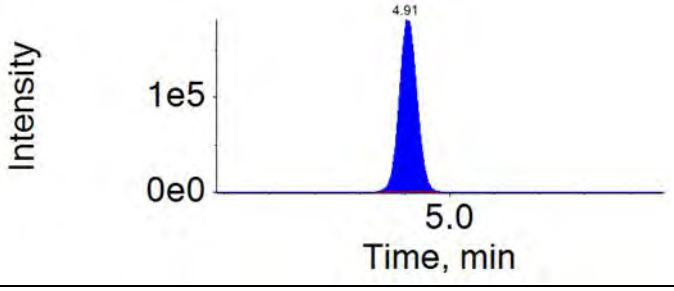
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



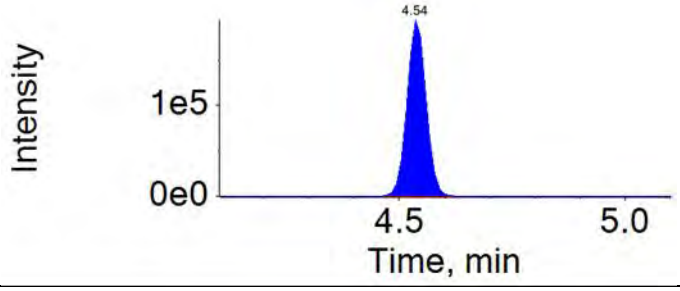


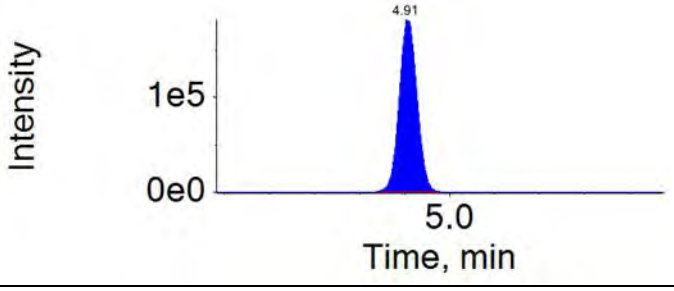
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



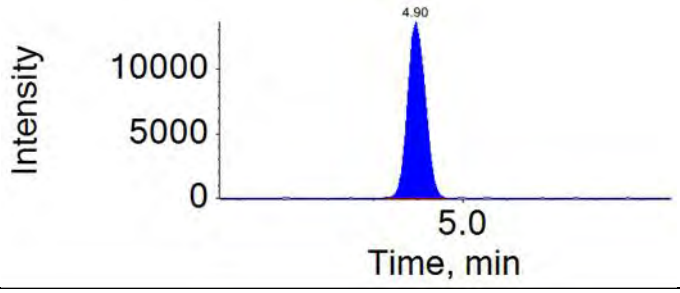


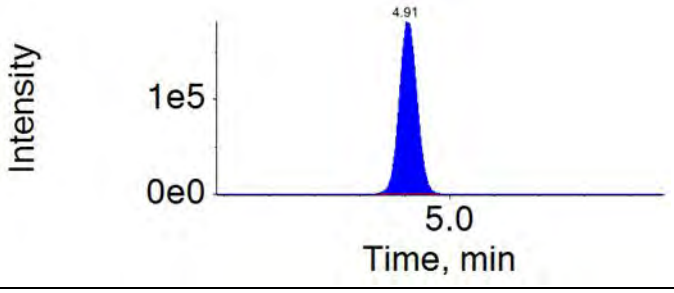
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

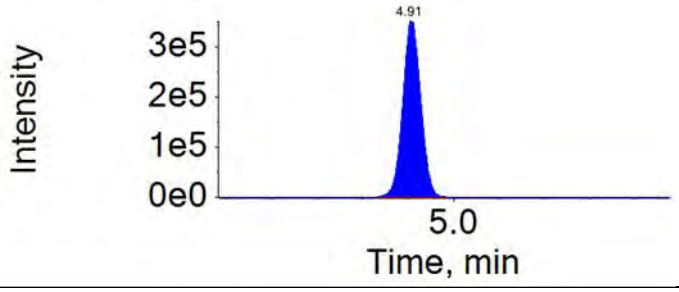
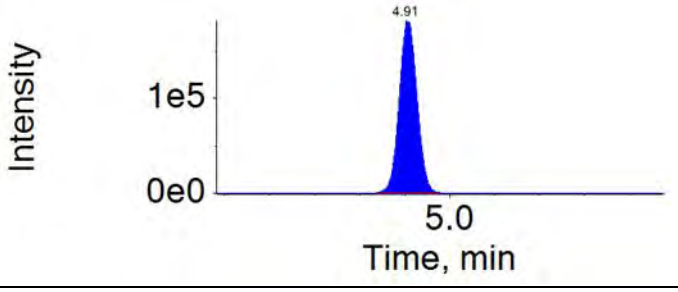


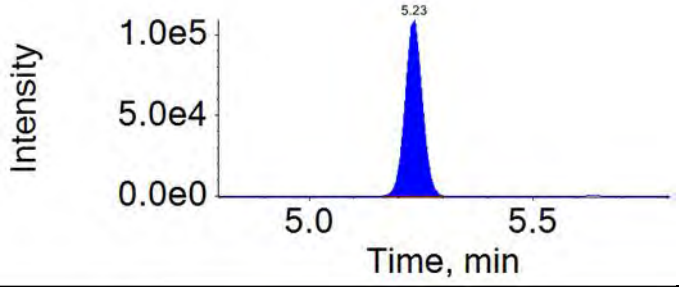
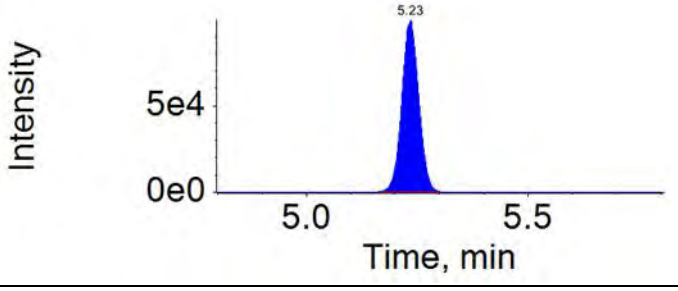


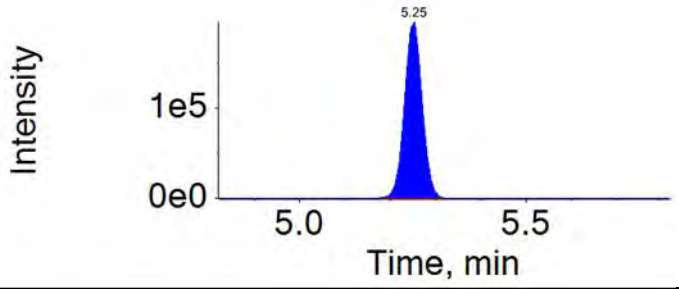
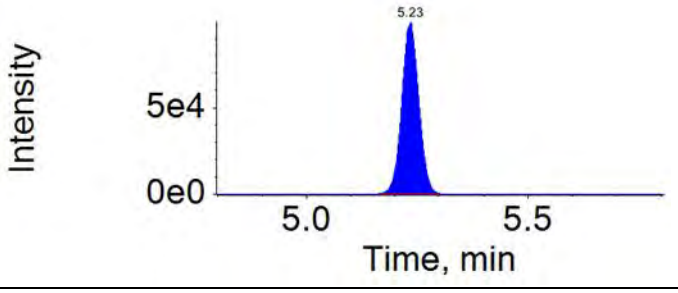
APPROVED
By JPT at 2:53 pm, 11/7/18

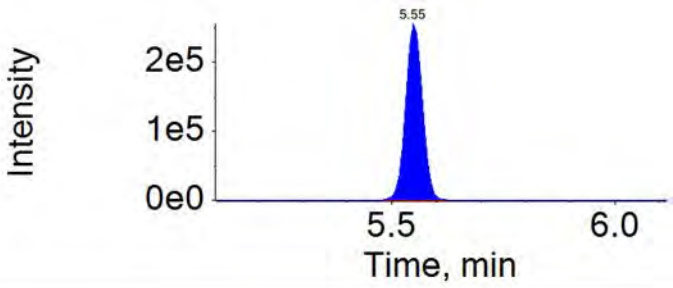
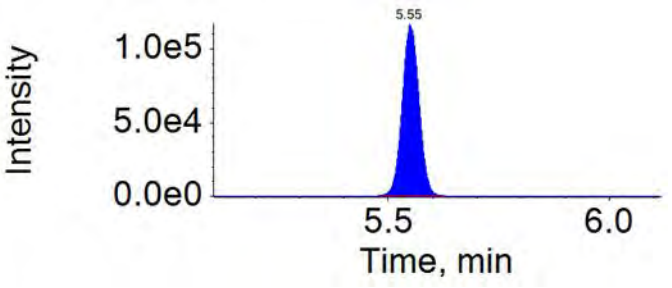
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

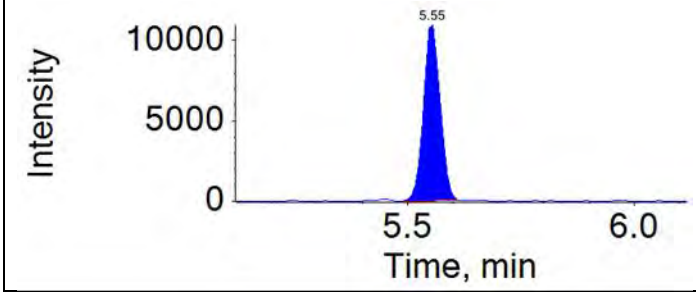
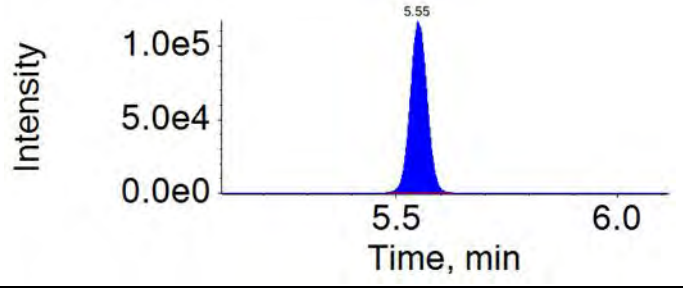
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

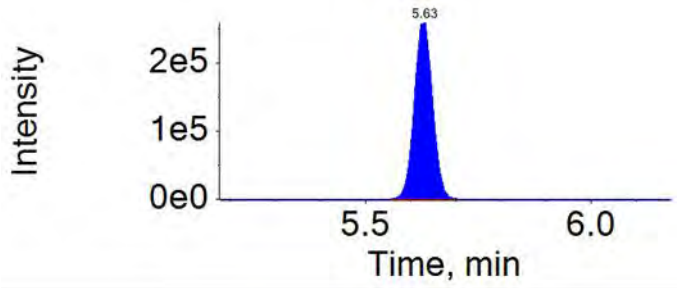
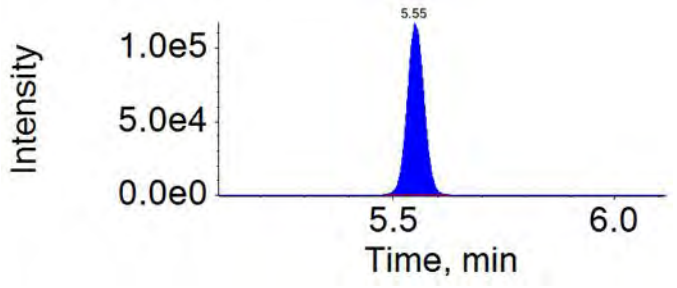
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

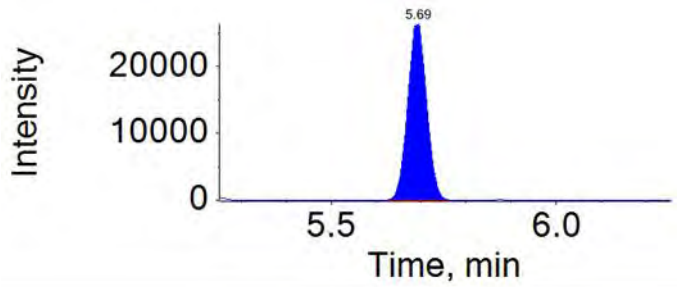
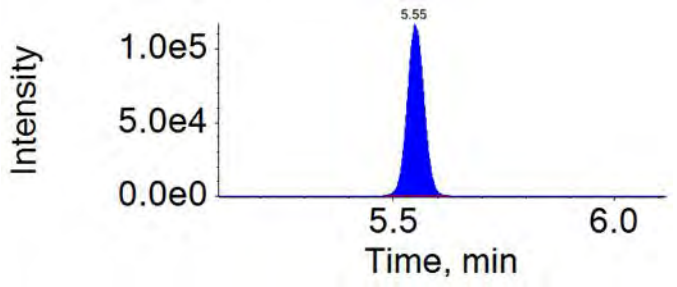
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

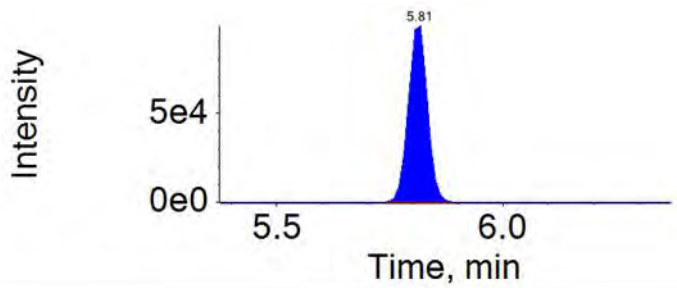
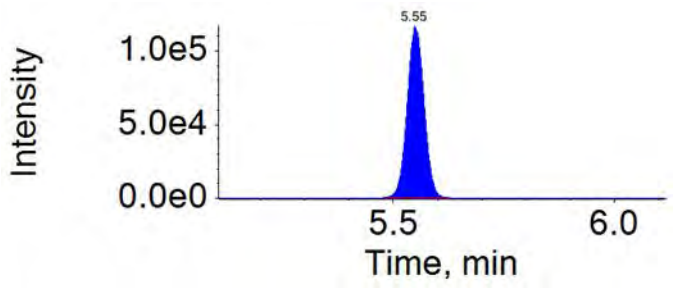
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

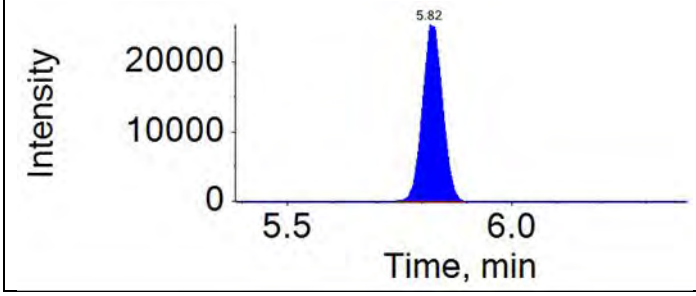
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

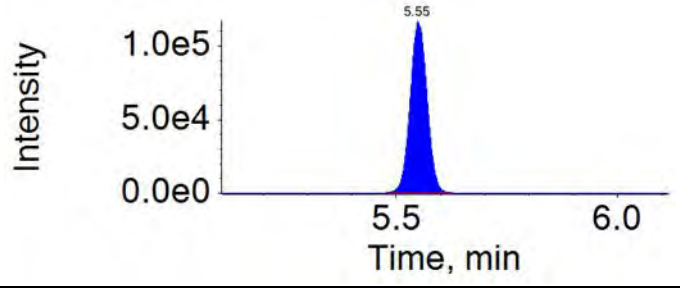
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

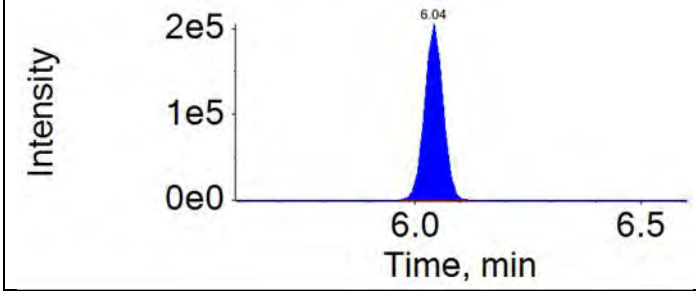
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

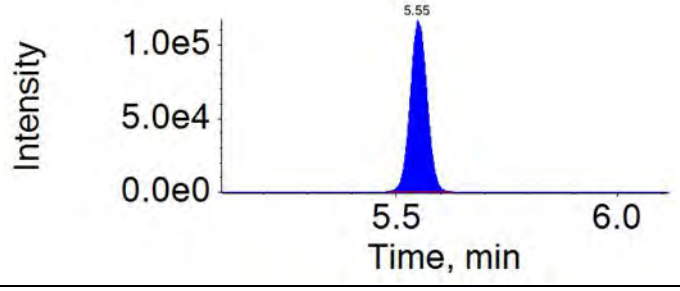
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



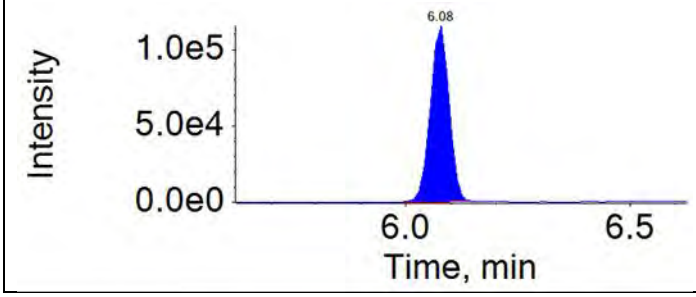


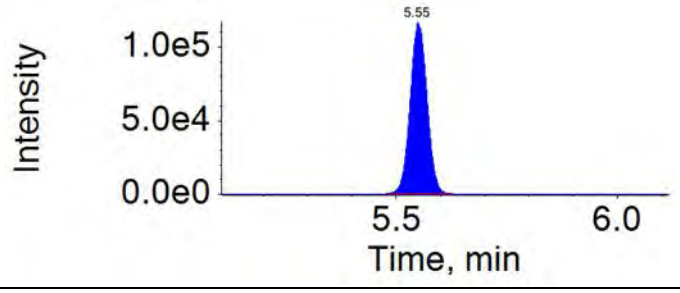
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



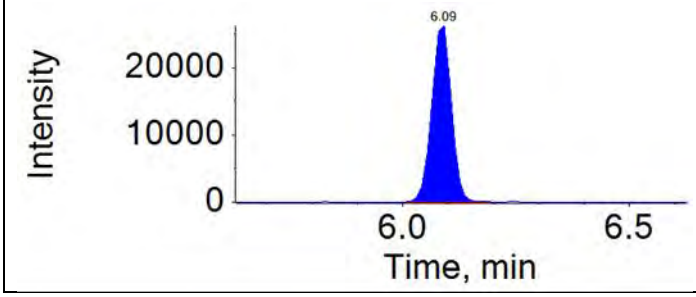


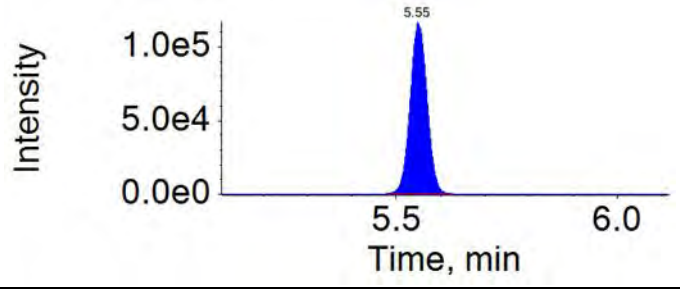
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



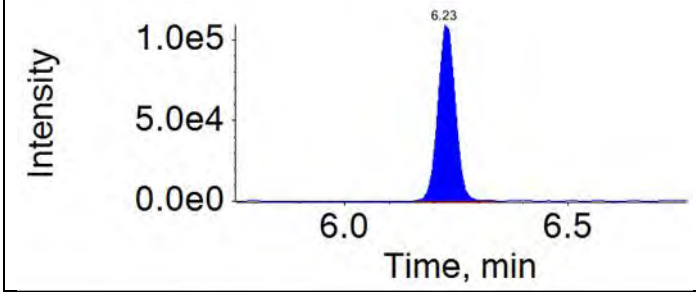


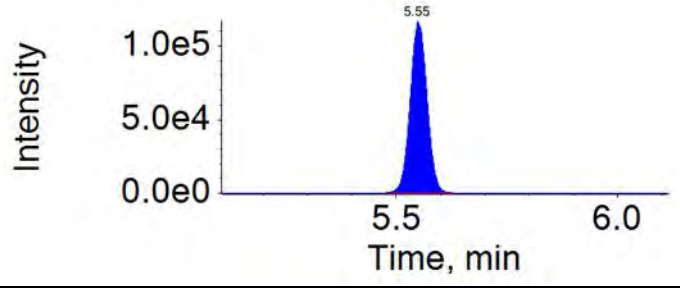
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

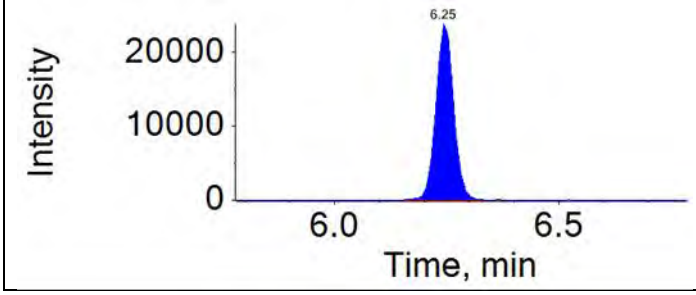
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

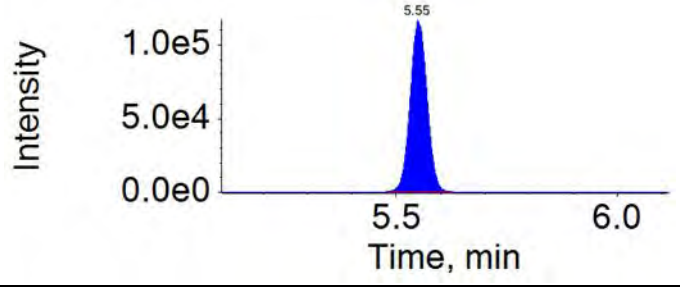
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



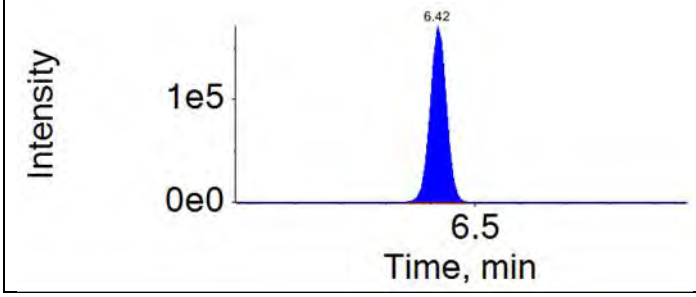


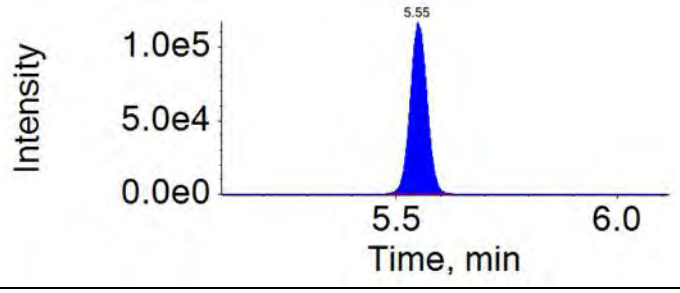
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

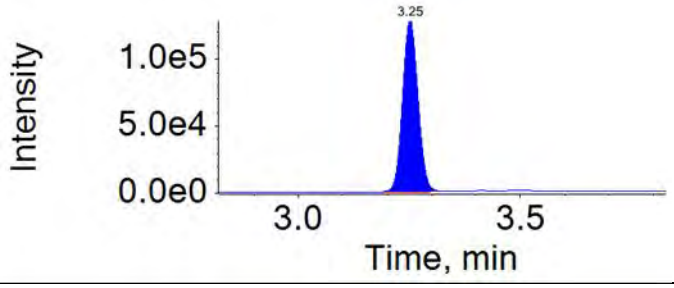
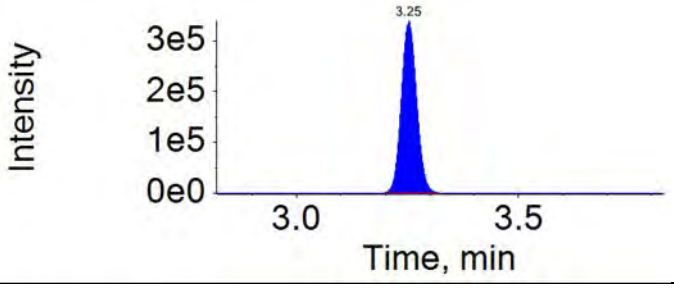


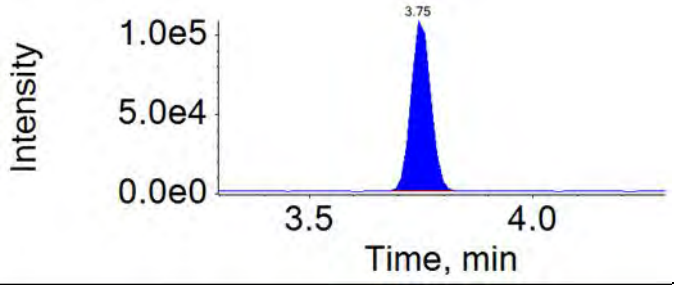
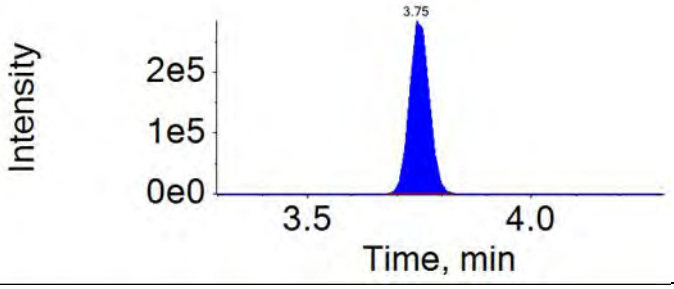


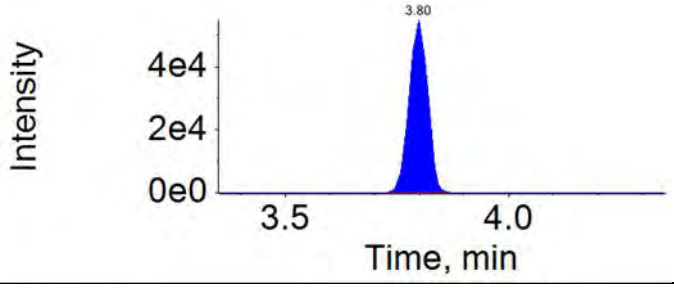
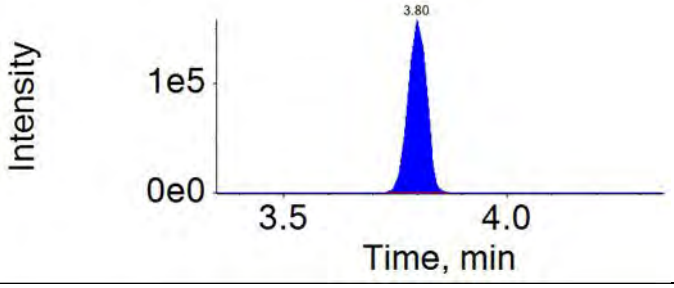
APPROVED
By JPT at 2:53 pm, 11/7/18

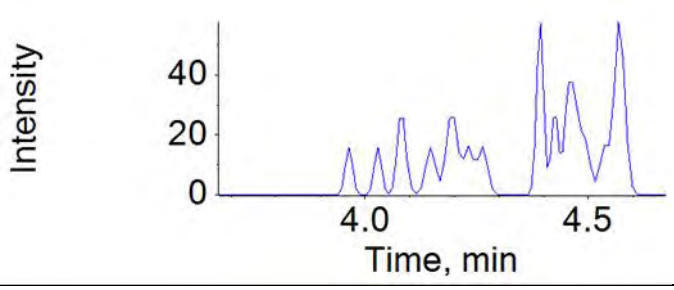
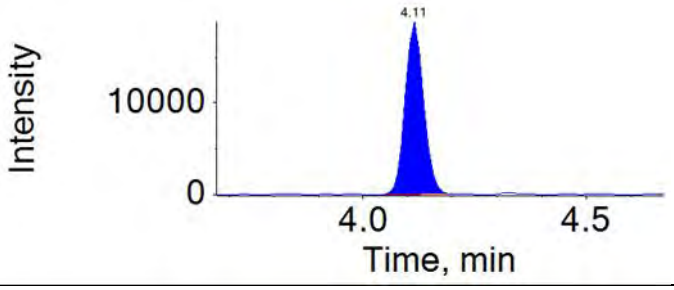
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

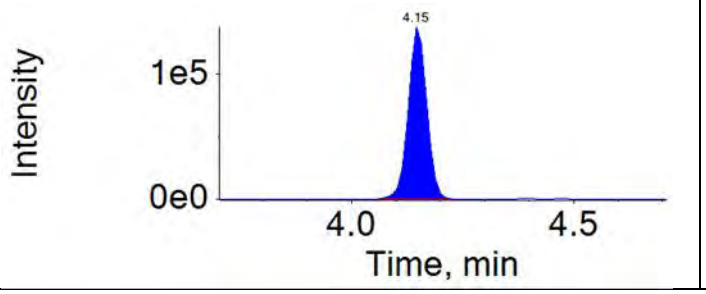
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

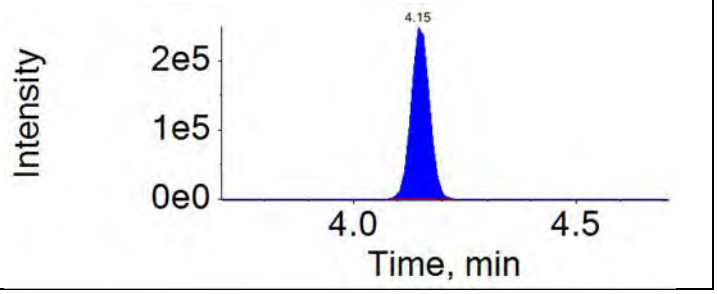
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

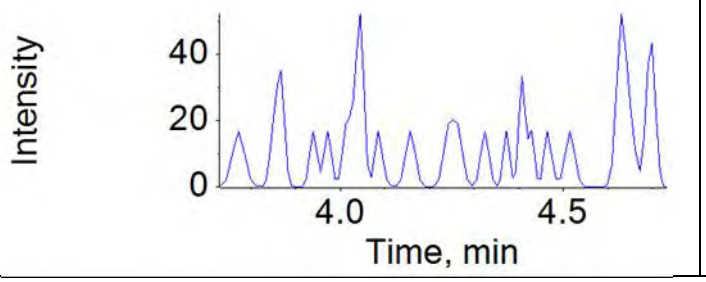
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

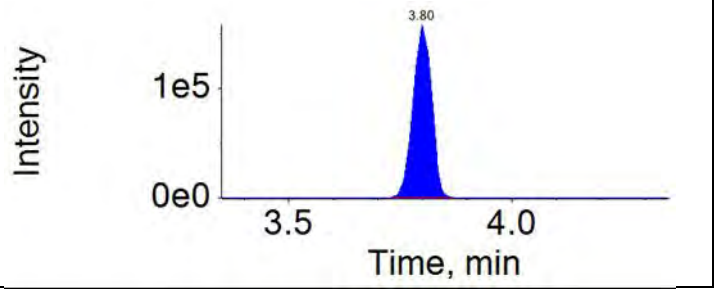
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



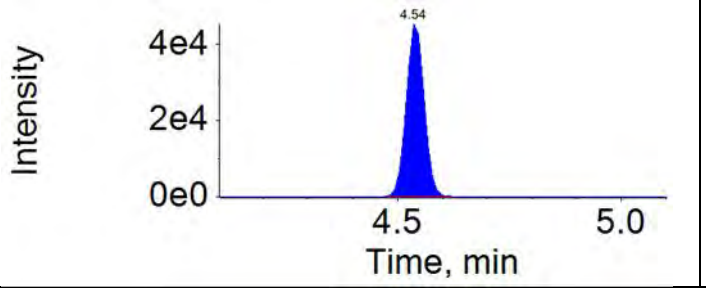


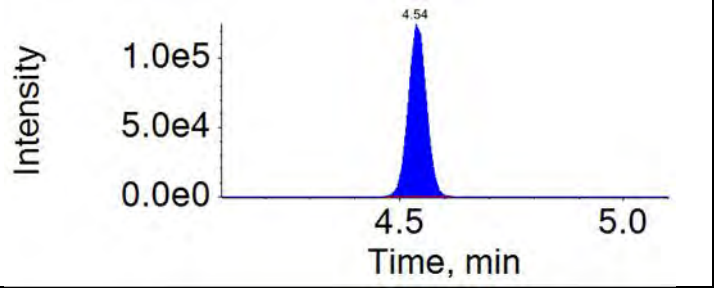
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



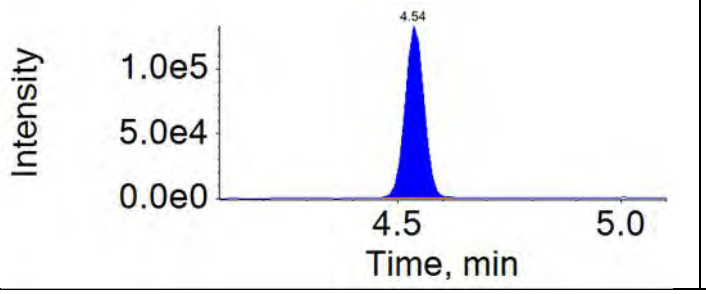


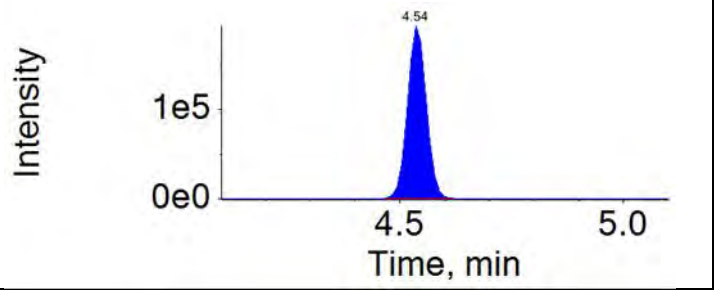
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



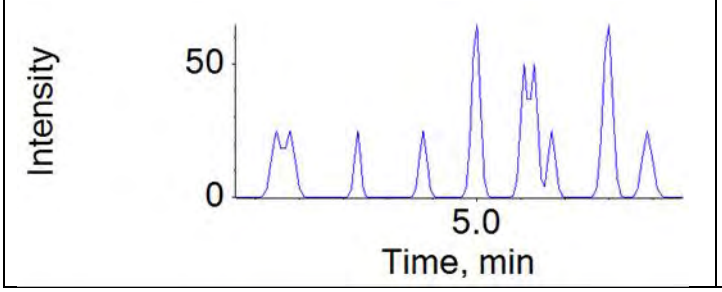


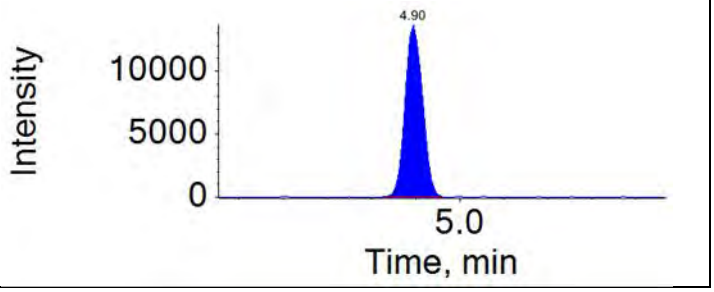
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

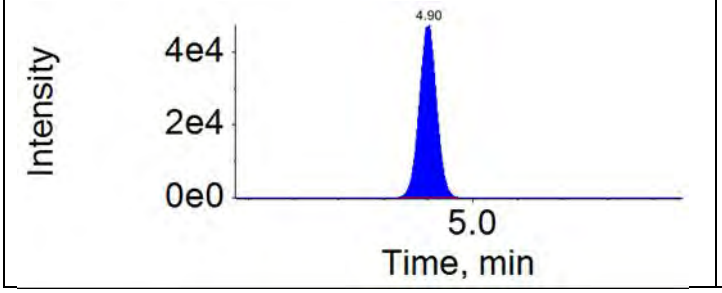
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

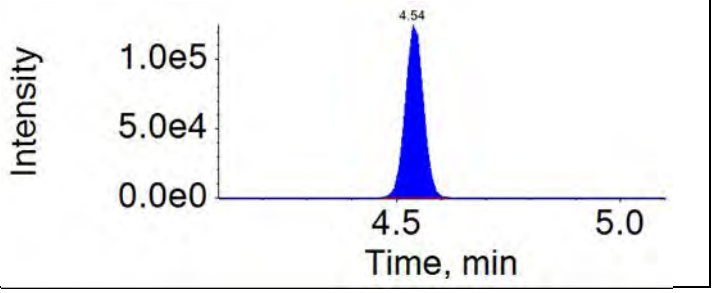
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



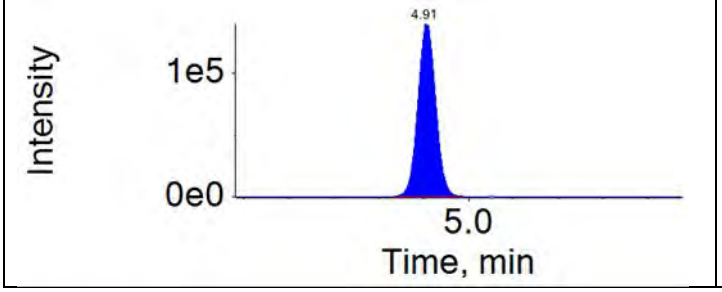


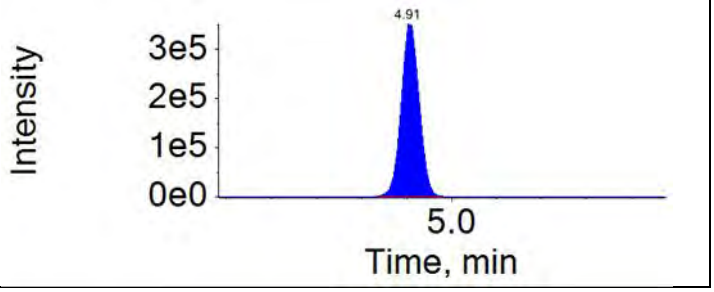
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



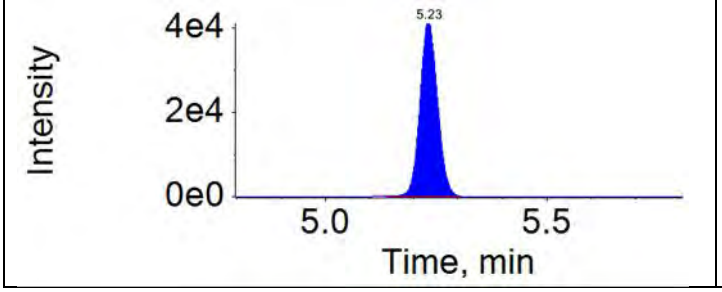


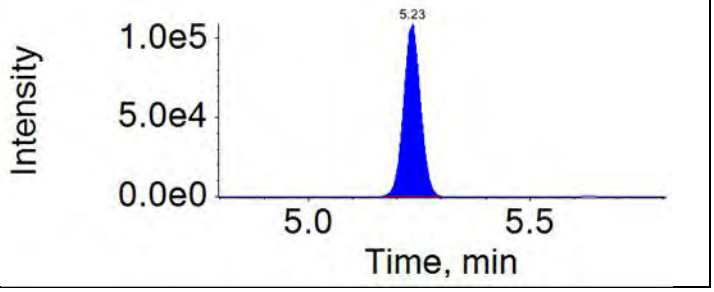
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

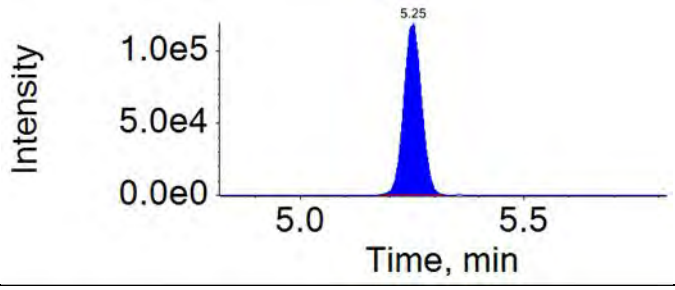
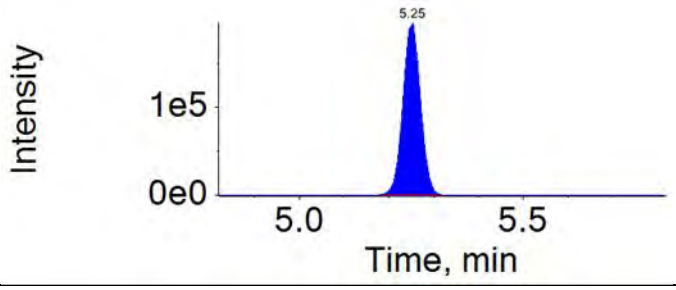


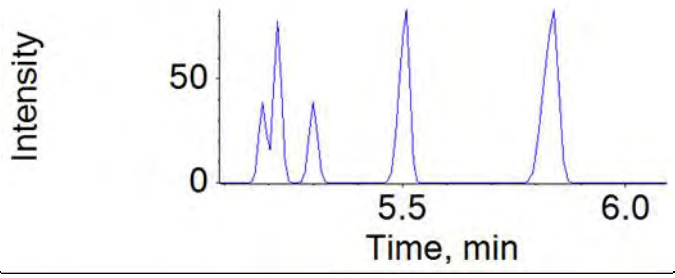
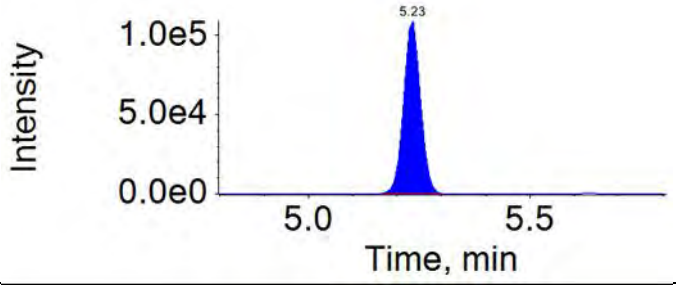


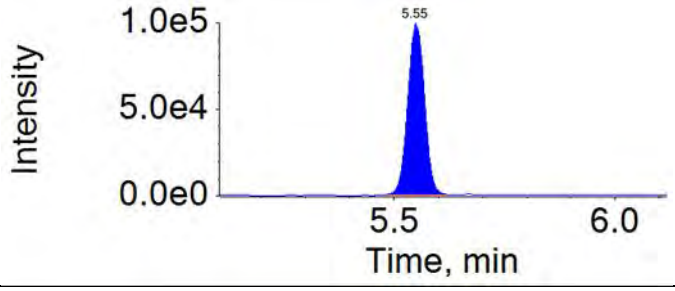
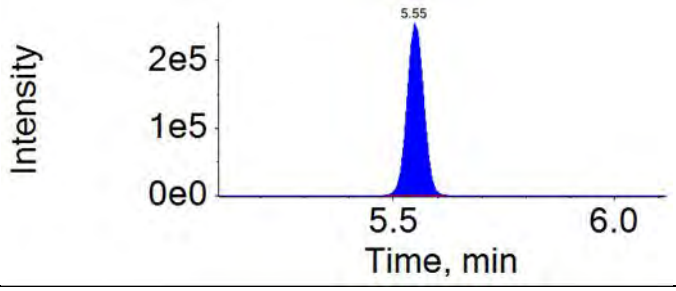
APPROVED
By JPT at 2:53 pm, 11/7/18

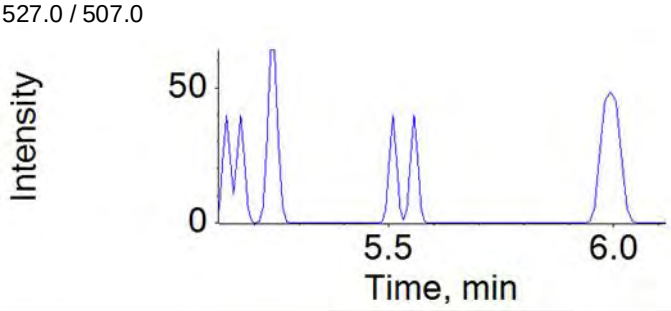
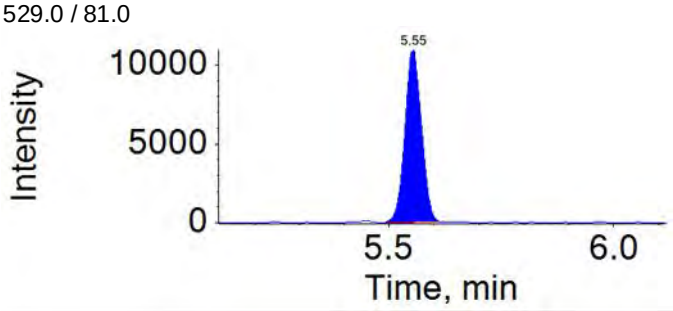
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

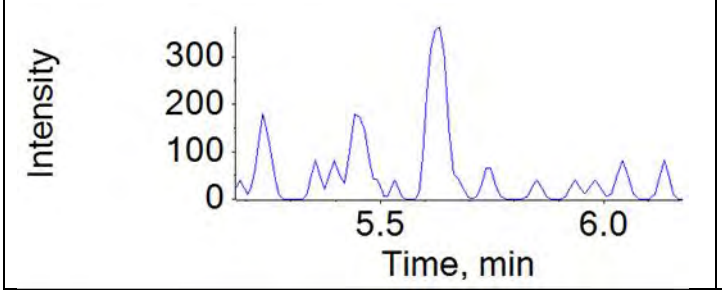
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

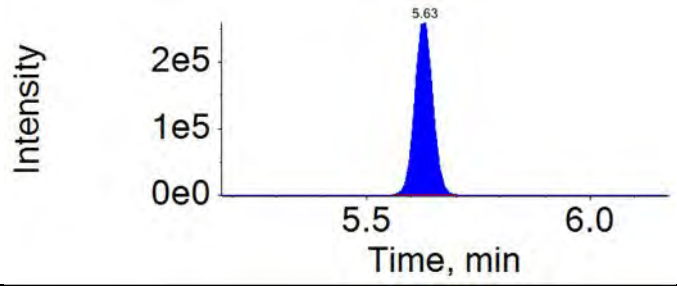
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

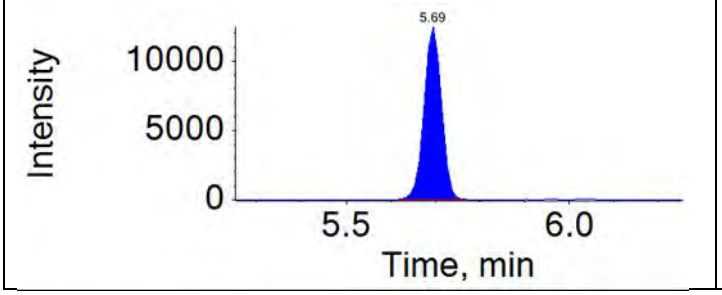
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

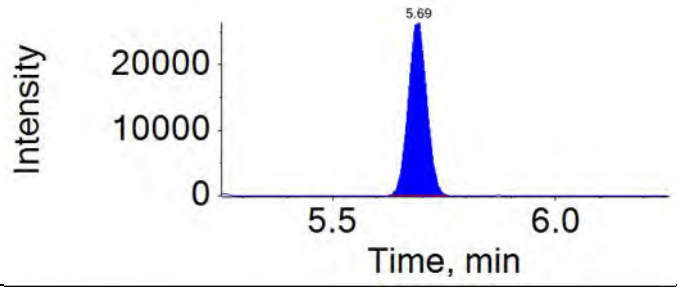
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



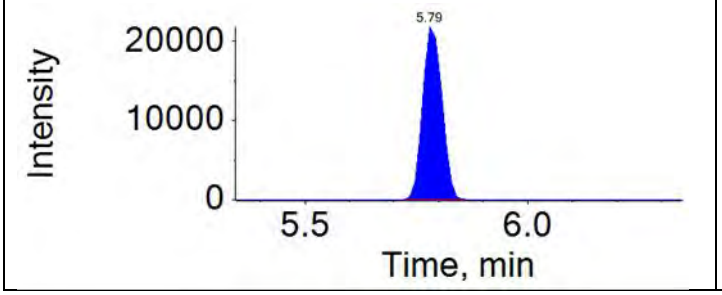


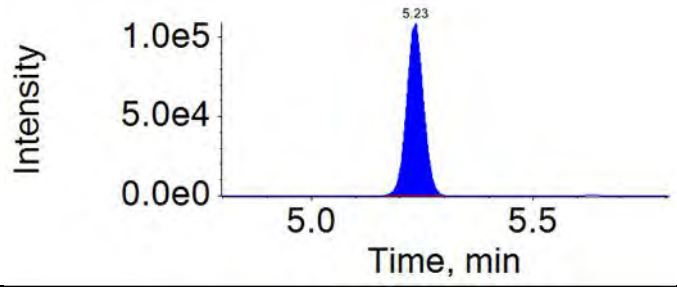
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



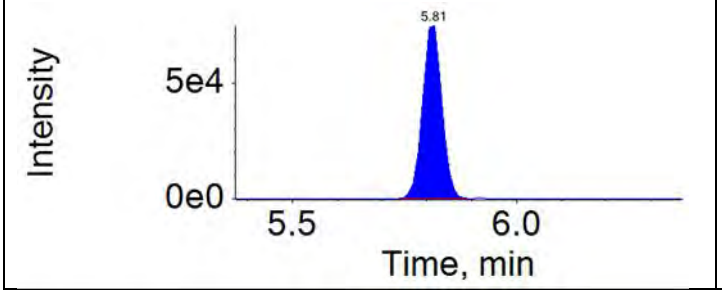


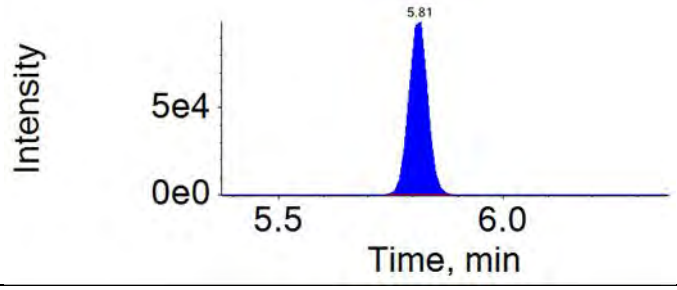
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



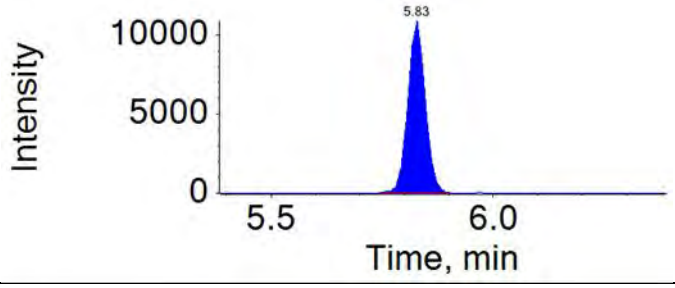


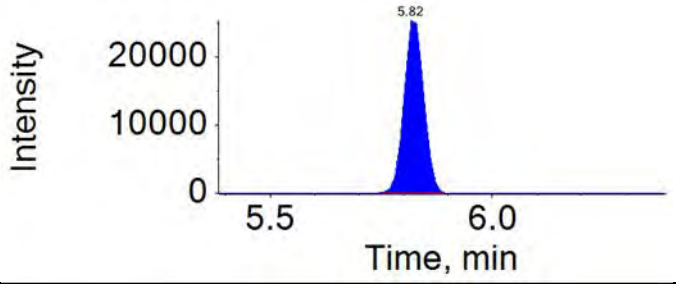
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

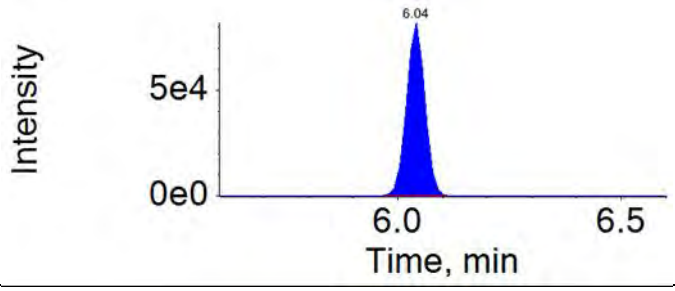
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

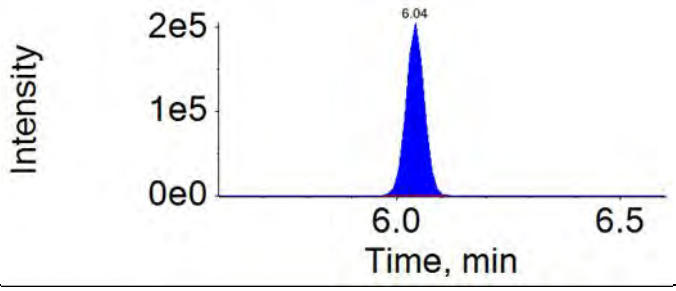
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



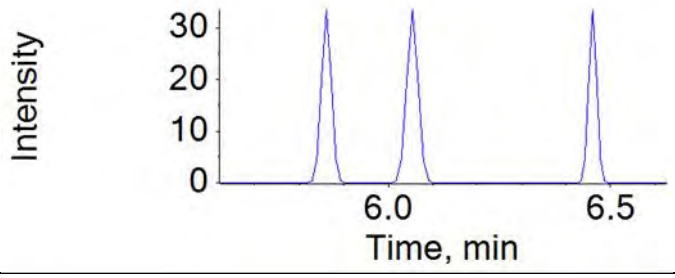


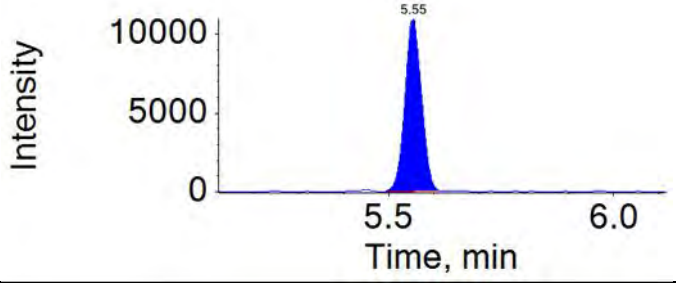
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



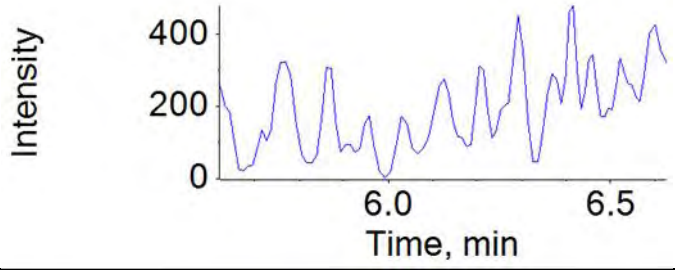


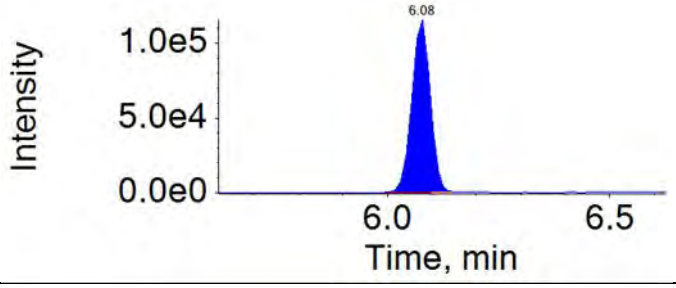
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



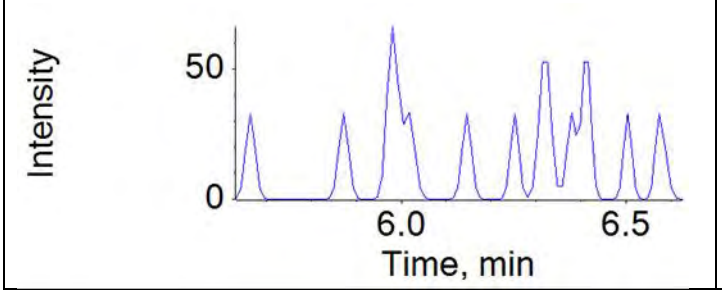


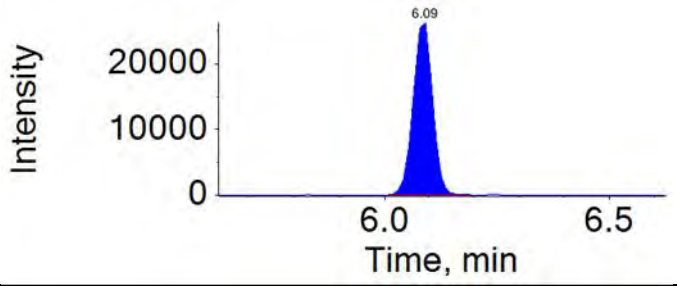
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

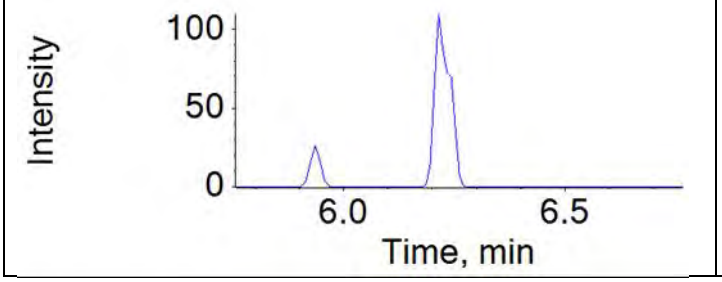
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

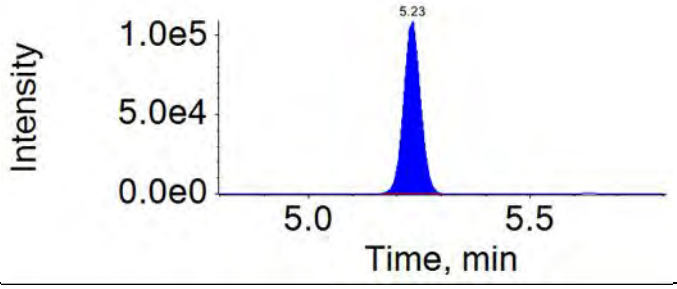
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



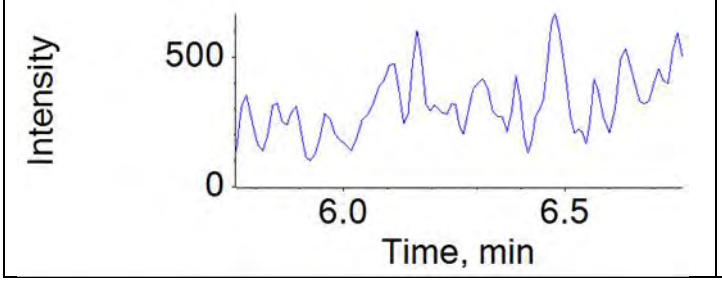


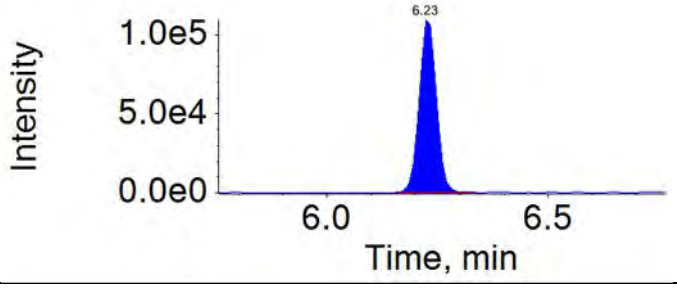
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



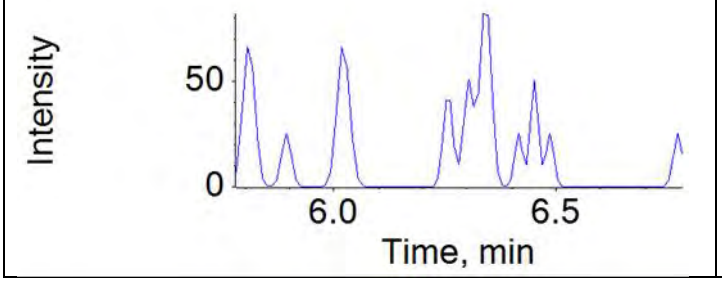


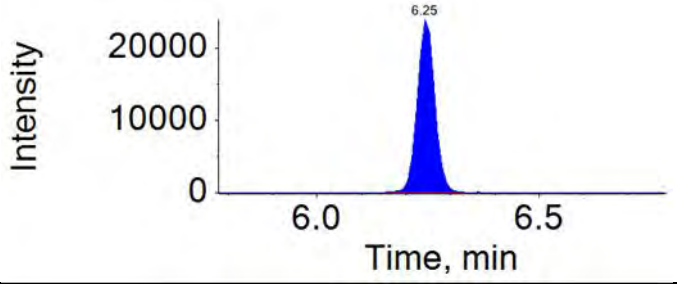
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

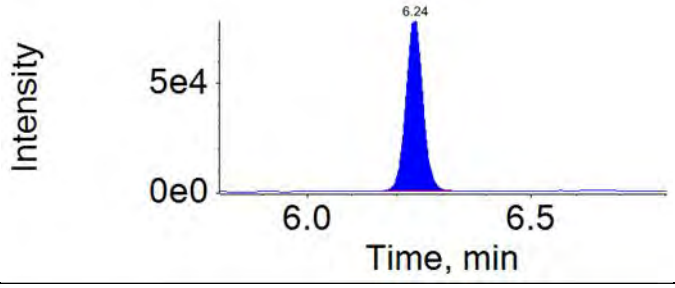
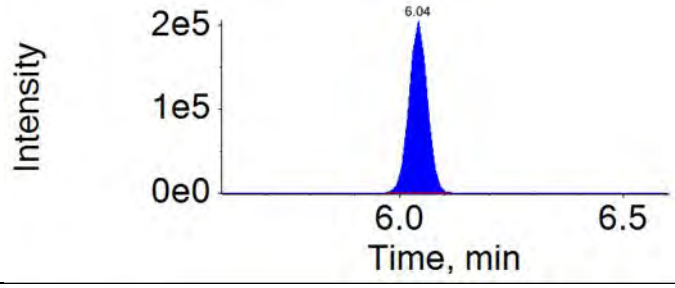


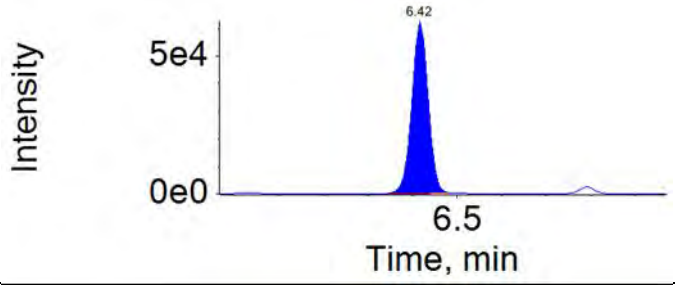
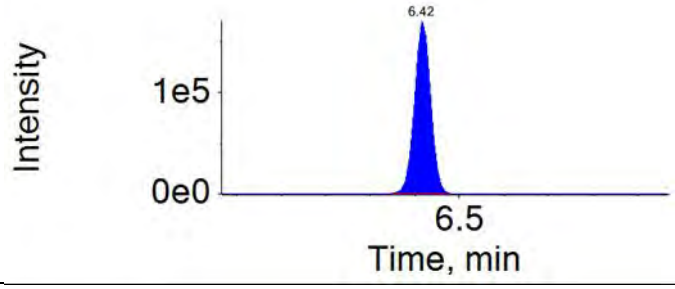


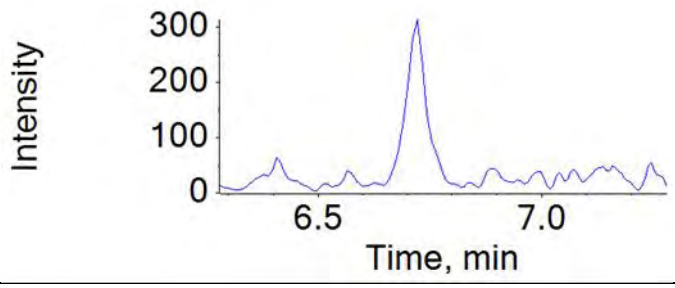
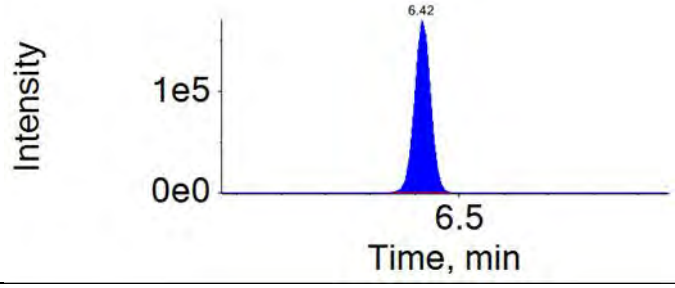
APPROVED
By JPT at 2:53 pm, 11/7/18

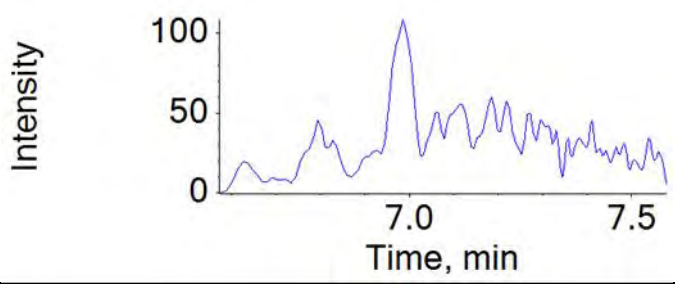
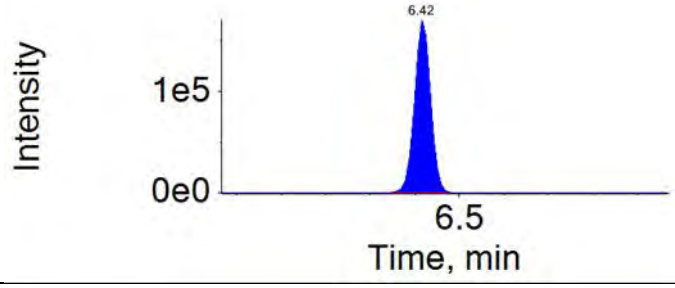
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

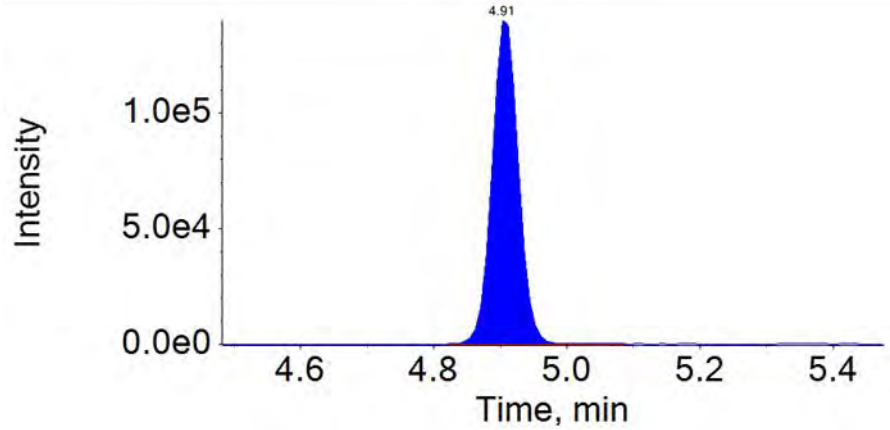
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

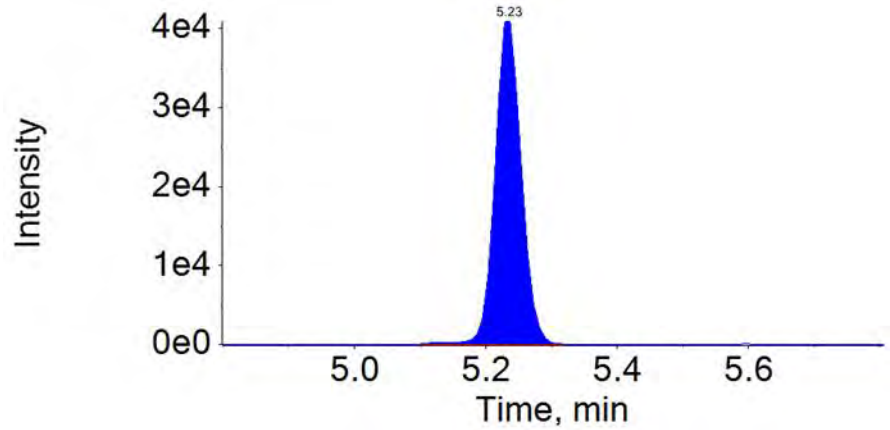
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: PFOA **RT (min.):** 4.91 **Peak Area:** 388249.1 **Mass Range:** 413.0 / 369.0 **File Name:** 18NOV07DCAL-18.wiff **Sample Name:** ICV	 **Integration Comment:** incorrect integration

Component Name: PFOS **RT (min.):** 5.23 **Peak Area:** 115469.0 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV07DCAL-18.wiff **Sample Name:** ICV	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-18.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	159719.5	A	1.0000	1.0000			
PFBS_2	3.80	1.00	61541.1	A	0.3576	0.3853	8	50	
4:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6359	N/A		50	
PFHxA	4.15	1.00	397434.6	A	1.0000	1.0000			
PFHxA_2	4.15	1.00	3792.4	A	0.0115	0.0095	-17	50	
PFPeS	N/A	N/A	N/A	A	1.0000	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5384	N/A		50	
PFHxS	4.54	1.00	126635.3	A	1.0000	1.0000			
PFHxS_2	4.54	1.00	48242.3	A	0.3569	0.3810	7	50	
PFHpA	4.54	1.00	390197.1	A	1.0000	1.0000			
PFHpA_2	4.54	1.00	18822.2	A	0.0577	0.0482	-16	50	
6:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6752	N/A		50	
PFHpS	4.90	1.08	126812.1	A	1.0000	1.0000			
PFHpS_2	4.90	1.08	51068.7	A	0.3950	0.4027	2	50	
PFOA	4.91	1.00	387215.1	M	1.0000	1.0000			
PFOA_2	4.91	1.00	20820.8	A	0.0635	0.0538	-15	50	
PFOS	5.23	1.00	114911.8	M	1.0000	1.0000			
PFOS_2	5.23	1.00	40072.6	A	0.3494	0.3487	0	50	
PFNA	5.25	1.00	329644.4	A	1.0000	1.0000			
PFNA_2	5.25	1.00	6625.6	A	0.0207	0.0201	-3	50	
PFNS	N/A	N/A	N/A	A	1.0000	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4890	N/A		50	
PFDA	5.55	1.00	262760.0	A	1.0000	1.0000			
PFDA_2	5.55	1.00	2122.6	A	0.0057	0.0081	43	50	
8:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.6169	N/A		50	
NMeFOSAA	5.69	1.00	33916.6	A	1.0000	1.0000			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2206	N/A		50	
PFDS	5.79	1.11	65962.5	A	1.0000	1.0000			
PFDS_2	5.78	1.11	33540.9	A	0.4648	0.5085	9	50	
PFUnDA	5.81	1.00	225137.5	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	557.6	A	0.0031	0.0025	-21	50	
NEtFOSAA	5.83	1.00	29687.2	A	1.0000	1.0000			
NEtFOSAA_2	5.83	1.00	17691.0	A	0.6082	0.5959	-2	50	
PFDoDA	6.04	1.00	232949.2	A	1.0000	1.0000			
PFDoDA_2	6.04	1.00	3431.7	A	0.0109	0.0147	35	50	
10:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.7082	N/A		50	
PFTrDA	6.24	1.03	206908.4	A	1.0000	1.0000			
PFTrDA_2	6.24	1.03	2086.3	A	0.0096	0.0101	5	50	
PFTeDA	6.42	1.00	157975.3	A	1.0000	1.0000			
PFTeDA_2	6.41	1.00	879.0	A	0.0055	0.0056	0	50	
PFHxDA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0596	N/A		50	
PFODA	N/A	N/A	N/A	A	1.0000	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0257	N/A		50	

APPROVED
By JPT at 2:53 pm, 11/7/18

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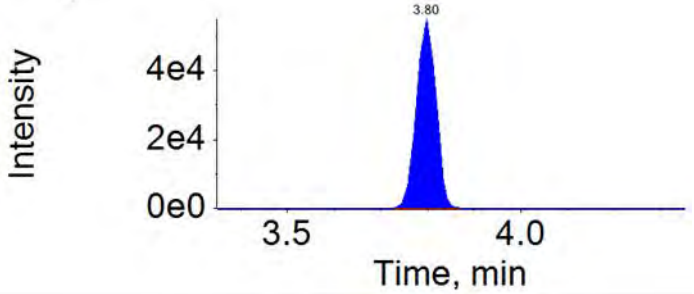
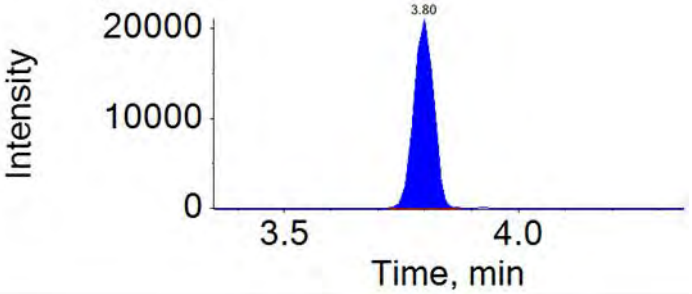
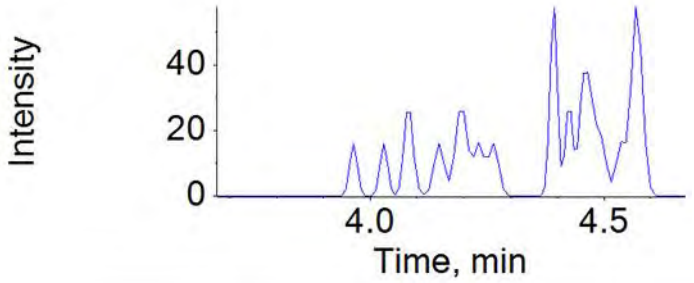
Component: PFBS
Primary Mass: 299.0 / 80.0



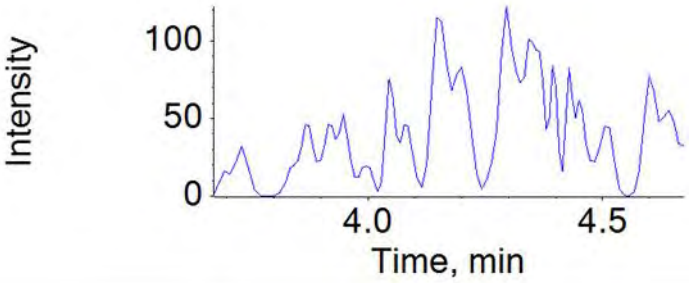
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



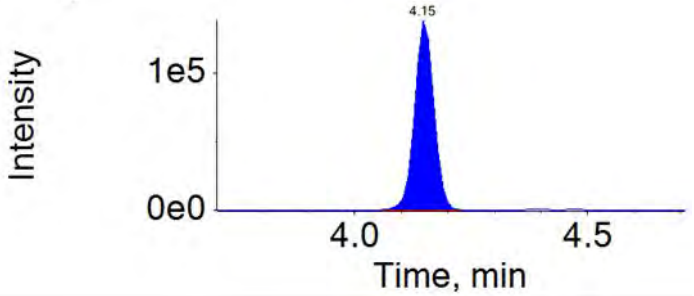
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



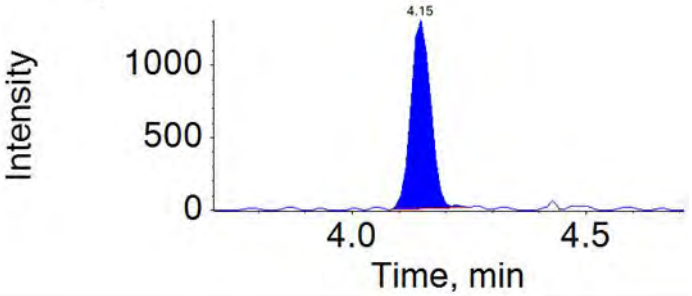
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



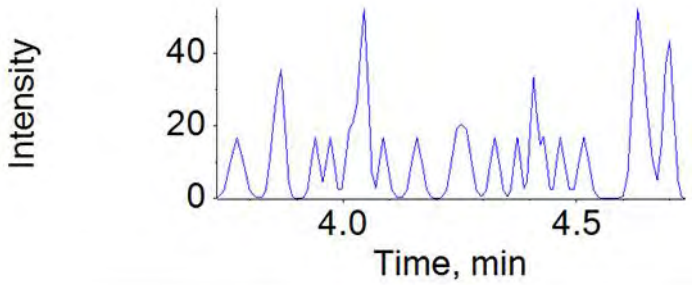
Component: PFHxA
Primary Mass: 313.0 / 269.0



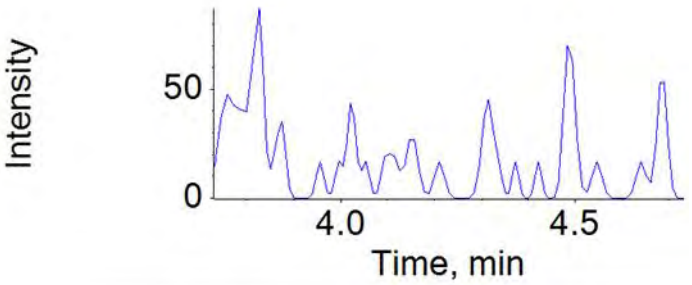
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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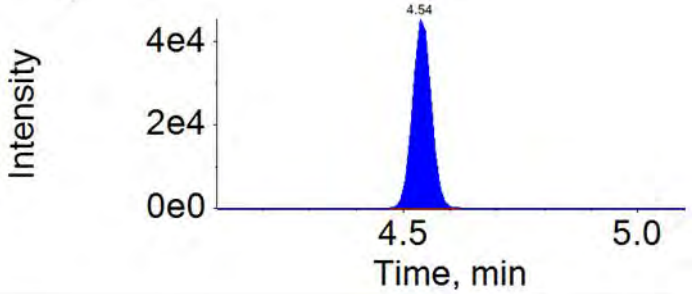
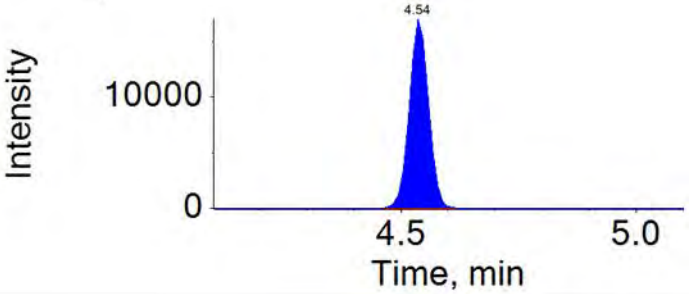
By umar at 5:23 pm, 11/9/18

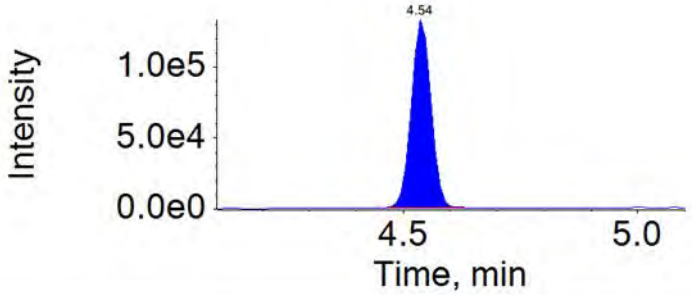
Component: PFHxS
Primary Mass: 399.0 / 80.0



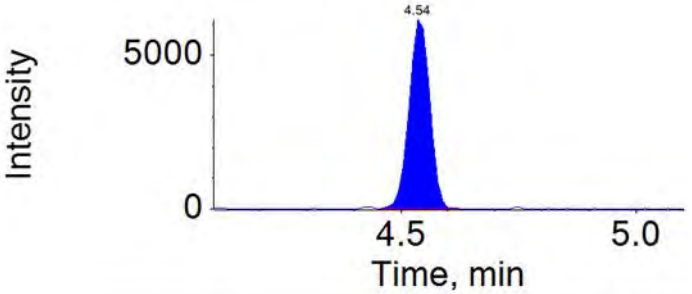
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



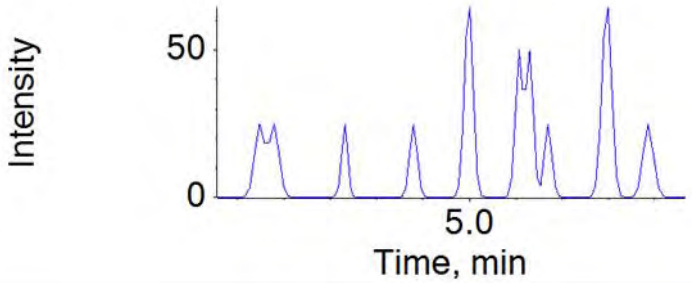
Component: PFHpA
Primary Mass: 363.0 / 319.0



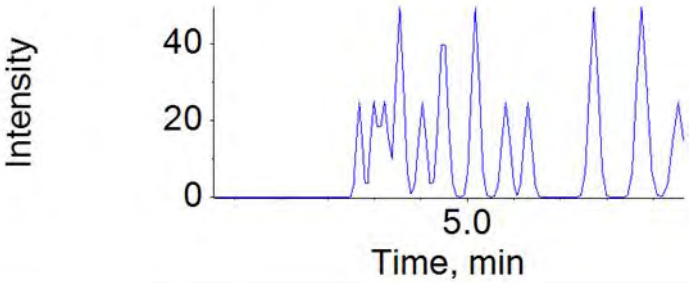
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



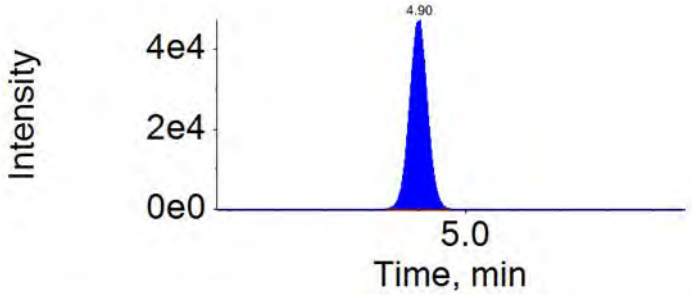
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



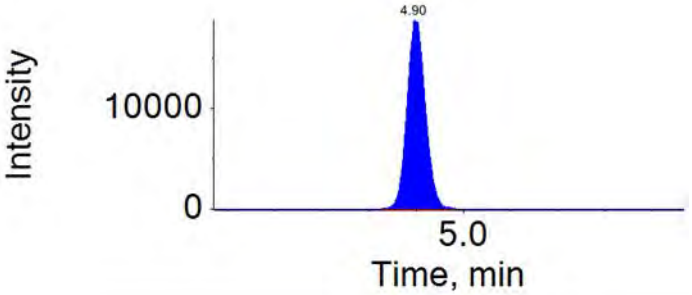
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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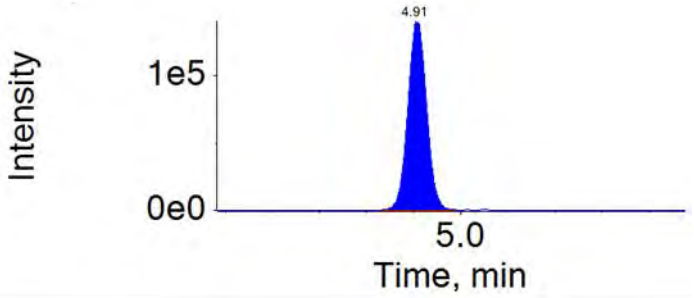
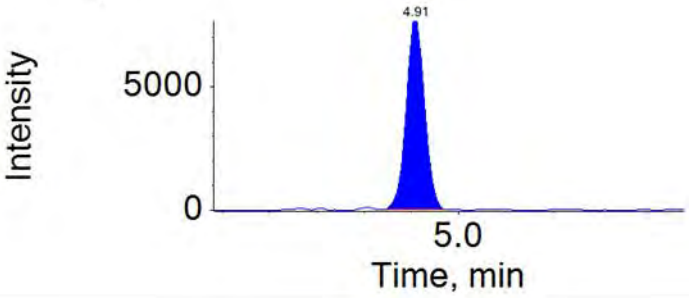
By umar at 5:23 pm, 11/9/18

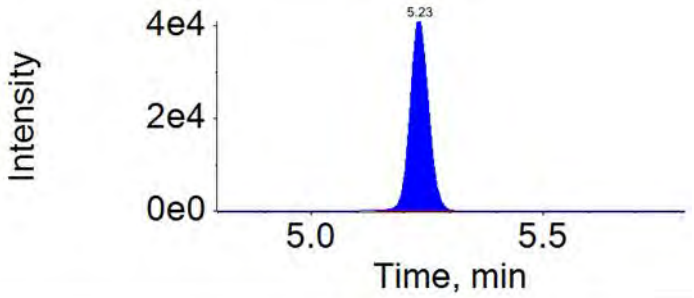
Component: PFOA
Primary Mass: 413.0 / 369.0



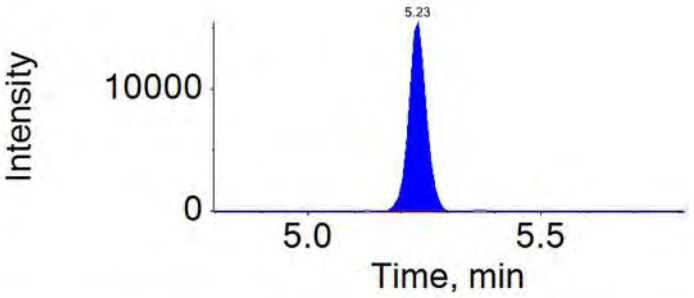
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



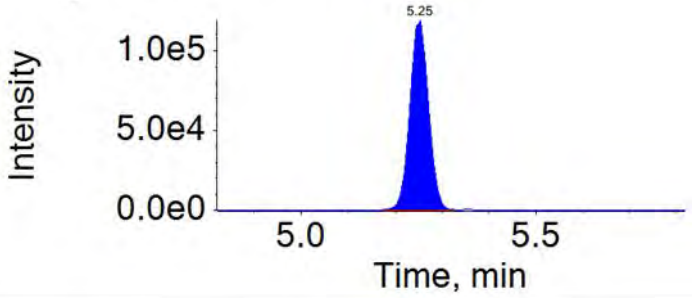
Component: PFOS
Primary Mass: 499.0 / 80.0



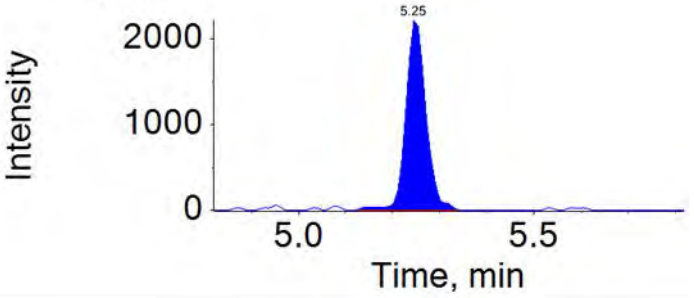
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



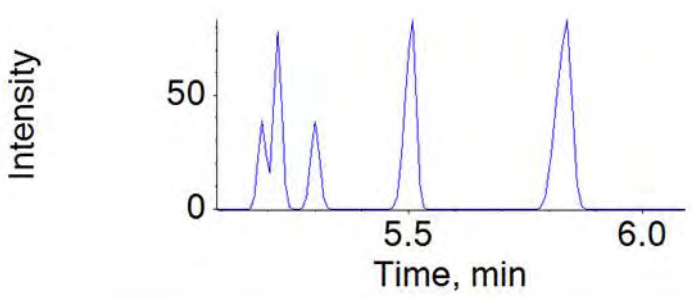
Component: PFNA
Primary Mass: 463.0 / 419.0



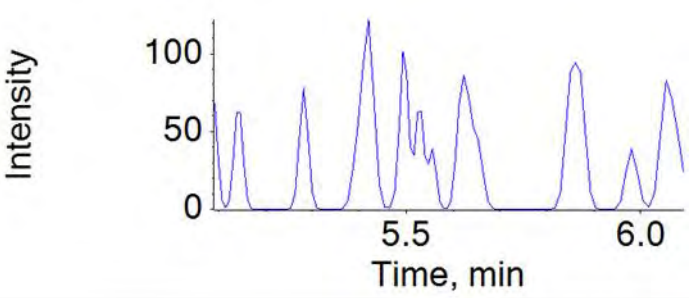
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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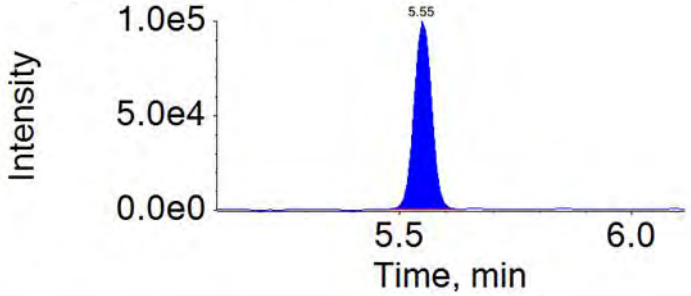
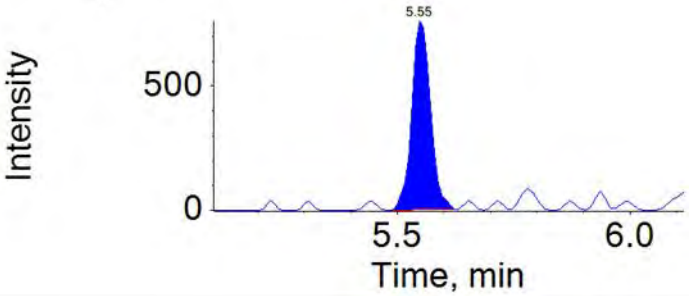
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

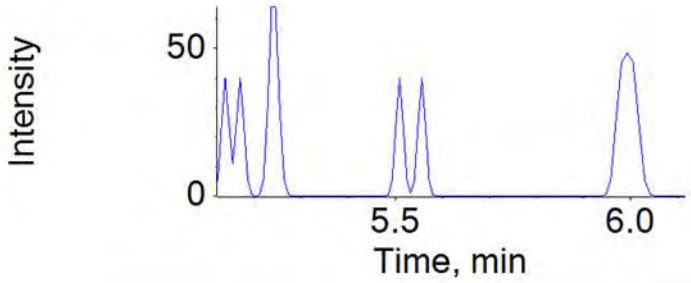
Component: PFDA
Primary Mass: 513.0 / 469.0



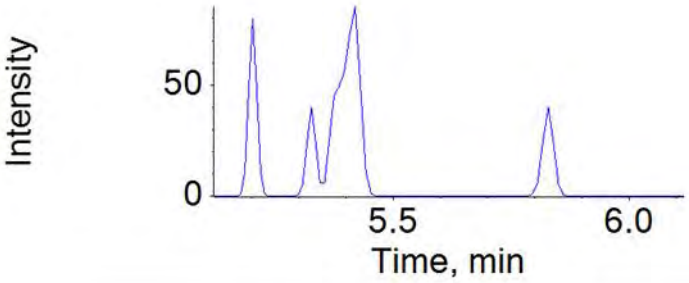
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



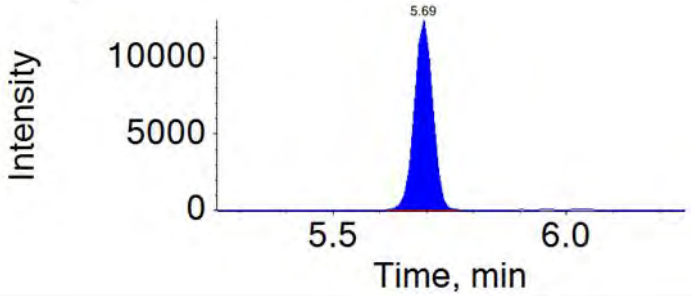
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



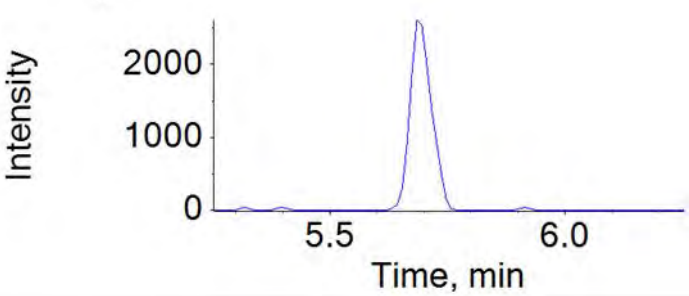
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



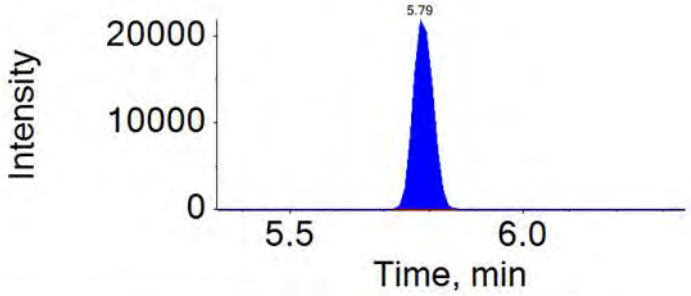
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



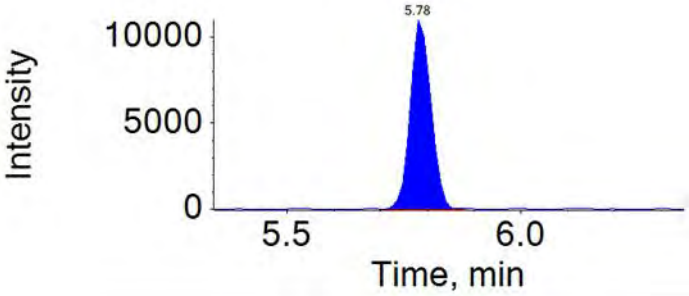
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



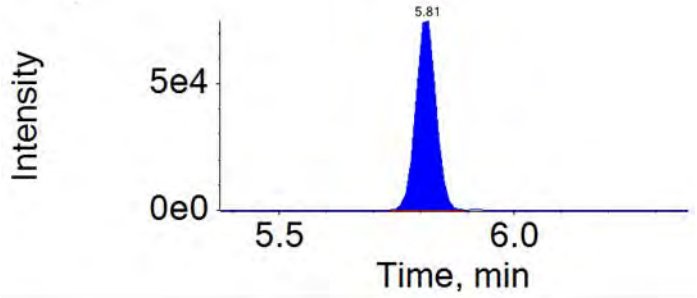
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



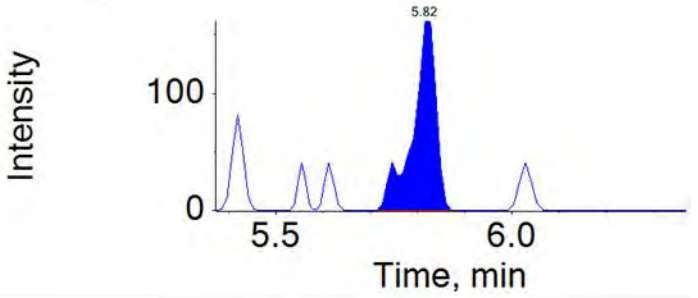
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

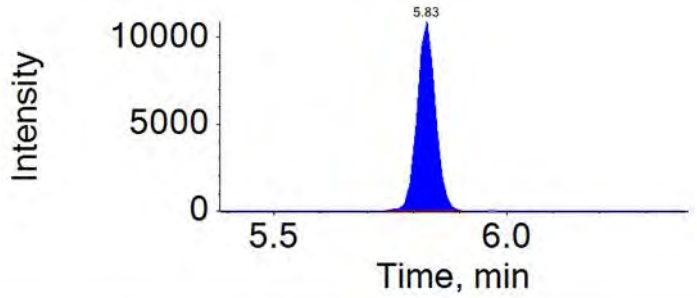
Component: PFUnDA
Primary Mass: 563.0 / 519.0



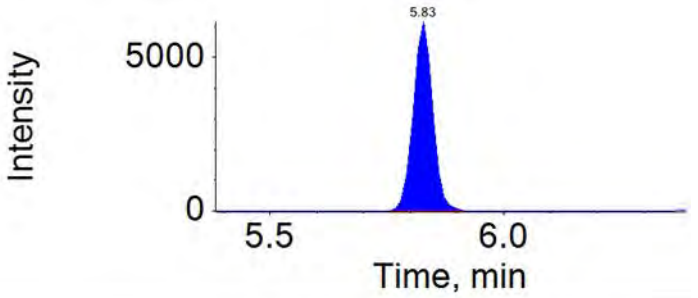
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



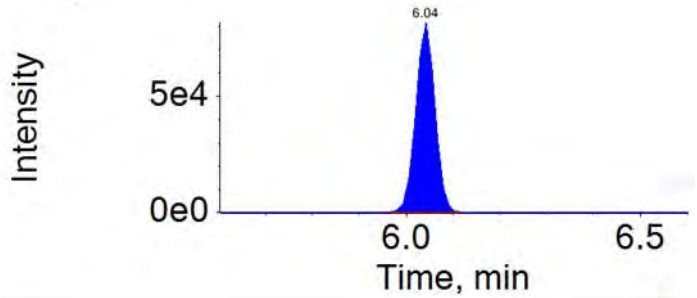
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



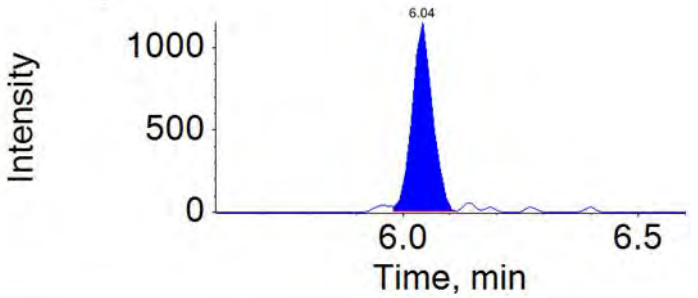
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



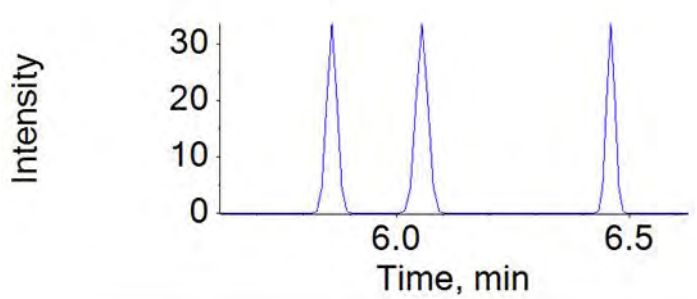
Component: PFDoDA
Primary Mass: 613.0 / 569.0



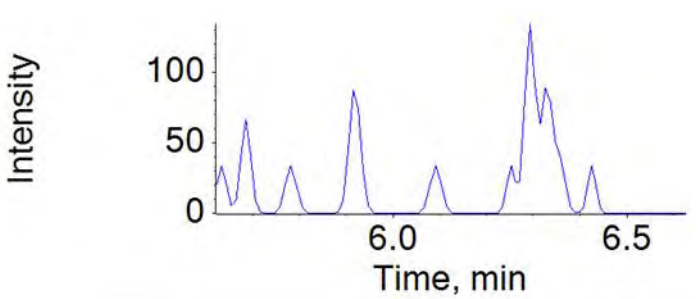
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



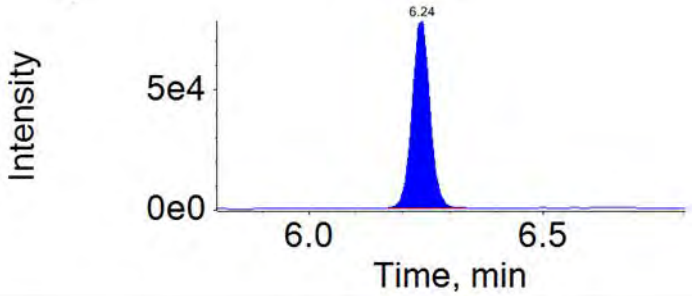
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



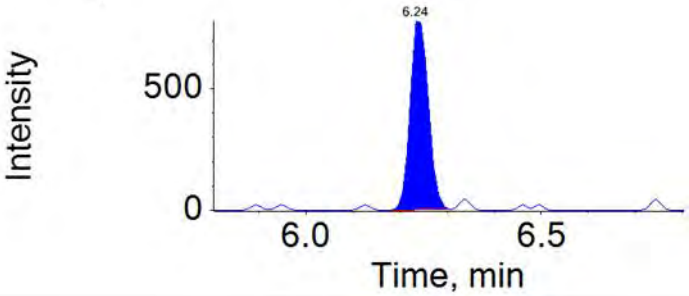
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

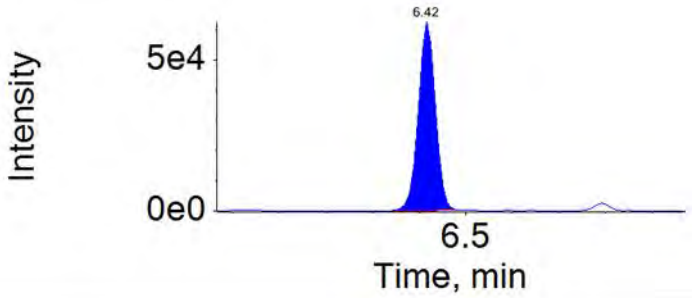
Component: PFTrDA
Primary Mass: 663.0 / 619.0



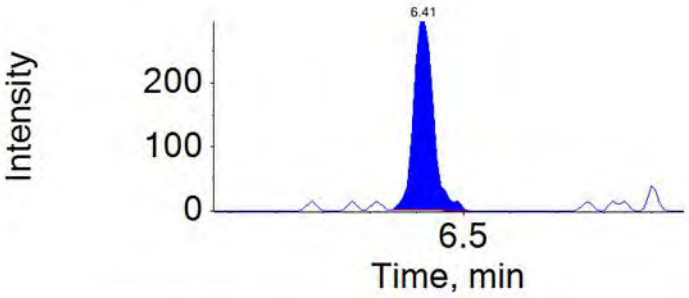
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



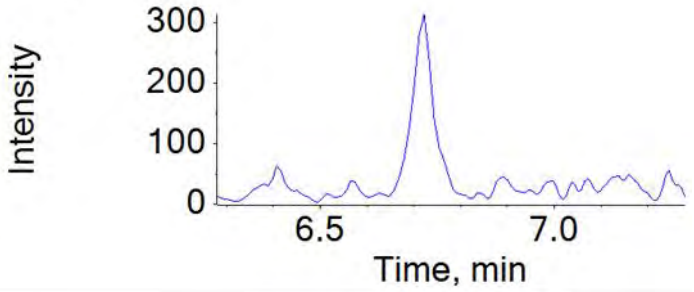
Component: PFTeDA
Primary Mass: 713.0 / 669.0



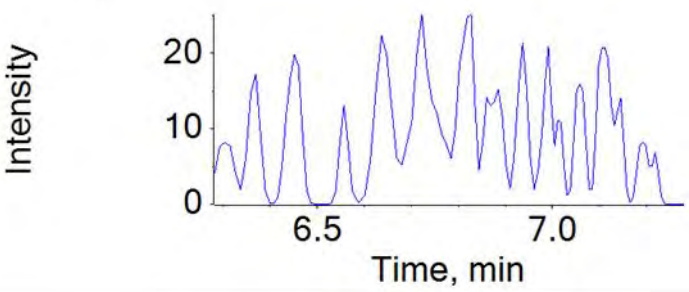
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



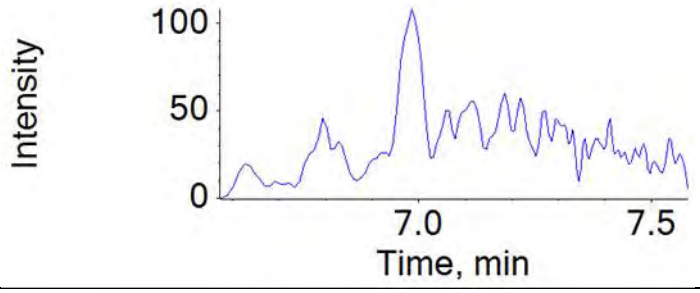
Component: PFHxDA
Primary Mass: 813.0 / 769.0



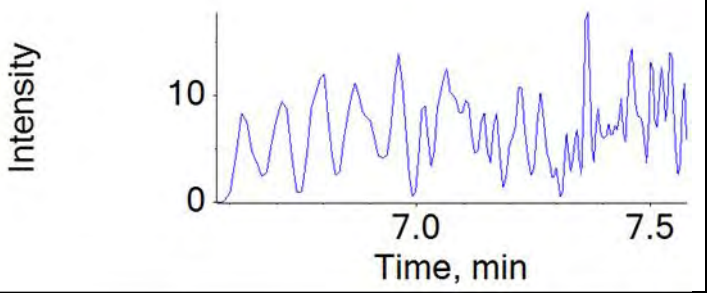
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	L+B CAL3			**Data File:**		18NOV07DCAL-19.wiff
Sample ID:	LBMODX1833D			**Acquis Date:**		2018-11-07T11:00:59
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	11			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	736211.8	730410.6	1	50	
13C2-PFOA	5.0	529333.9	524423.6	1	50	
13C4-PFOS	4.8	269502.4	274061.7	-2	50	
13C2-PFDA	5.0	314695.8	311442.1	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	798089.2	13C3-PFBA	736211.8	1.084	5.000	5.017	100	70-130	
E13C5-PFPeA	837606.5	13C3-PFBA	736211.8	1.138	5.000	4.956	99	70-130	
E13C3-PFBS	434778.6	13C3-PFBA	736211.8	0.591	4.650	4.334	93	70-130	
E13C2-4:2-FTS	52170.5	13C2-PFOA	529333.9	0.099	4.670	4.447	95	70-130	
E13C5-PFHxA	698718.6	13C2-PFOA	529333.9	1.320	5.000	4.856	97	70-130	
E13C3-PFHxS	338752.7	13C2-PFOA	529333.9	0.640	4.730	4.594	97	70-130	
E13C4-PFHpA	566540.4	13C2-PFOA	529333.9	1.070	5.000	4.869	97	70-130	
E13C2-6:2-FTS	34551.5	13C2-PFOA	529333.9	0.065	4.750	4.353	92	70-130	
E13C8-PFOA	967968.8	13C2-PFOA	529333.9	1.829	5.000	5.099	102	70-130	
E13C8-PFOS	276433.8	13C4-PFOS	269502.4	1.026	4.780	4.536	95	70-130	
E13C9-PFNA	490916.1	13C4-PFOS	269502.4	1.822	5.000	4.976	100	70-130	
E13C6-PFDA	634835.7	13C2-PFDA	314695.8	2.017	5.000	5.073	101	70-130	
E13C2-8:2-FTS	29224.4	13C2-PFDA	314695.8	0.093	4.790	4.914	103	70-130	
E13C8-PFOSA	714716.6	13C2-PFDA	314695.8	2.271	5.000	4.956	99	70-130	
Ed3-NMeFOSAA	78018.5	13C2-PFDA	314695.8	0.248	5.000	4.610	92	70-130	
E13C7-PFUnDA	277737.7	13C2-PFDA	314695.8	0.883	5.000	5.091	102	70-130	
Ed5-NEtFOSAA	76987.7	13C2-PFDA	314695.8	0.245	5.000	5.661	113	70-130	
E13C2-PFDoDA	545941.2	13C2-PFDA	314695.8	1.735	5.000	4.677	94	70-130	
Ed7-NMePFOSAE	329839.8	13C2-PFDA	314695.8	1.048	5.000	4.874	97	70-130	
Ed3-NMePFOSA	79724.2	13C2-PFDA	314695.8	0.253	5.000	4.638	93	70-130	
Ed9-NEtPFOSAE	275393.6	13C2-PFDA	314695.8	0.875	5.000	4.998	100	70-130	
Ed5-NEtPFOSA	64841.7	13C2-PFDA	314695.8	0.206	5.000	4.771	95	70-130	
E13C2-PFTeDA	416258.4	13C2-PFDA	314695.8	1.323	5.000	4.762	95	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

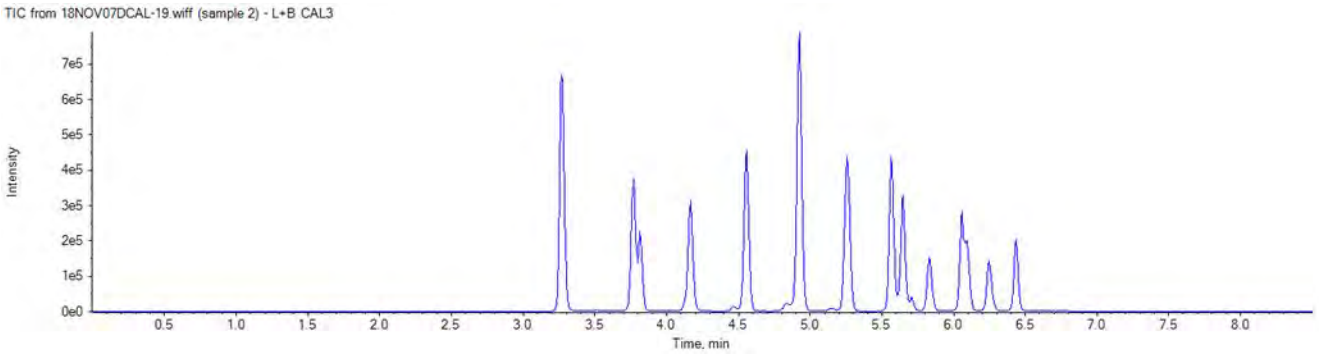
Analyte Quantitation Peak Table

Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-19.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	798089.2	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.77	837606.5	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.82	434778.6	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	52170.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.17	698718.6	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.82	434778.6	N/A	
PFHxS	4.56	1.000	140012.1		M	13C3-PFHxS	4.56	338752.7	0.413	2.095
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	566540.4	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	34551.5	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.56	338752.7	N/A	
PFOA	4.92	1.000	347563.0		M	13C8-PFOA	4.92	967968.8	0.359	2.022
PFOS	5.25	1.000	117649.0		M	13C8-PFOS	5.25	276433.8	0.426	2.207
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	490916.1	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	276433.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	634835.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29224.4	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	714716.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	78018.5	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	276433.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	277737.7	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	76987.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	545941.2	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29224.4	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	329839.8	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.11	79724.2	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	276433.8	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	275393.7	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	64841.7	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	545941.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	416258.4	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	416258.4	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	416258.4	N/A	

Total Ion Chromatogram

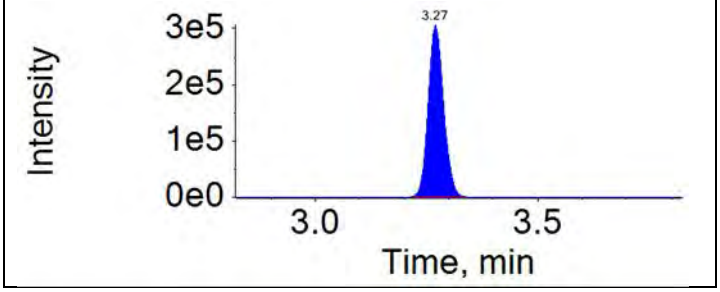


APPROVED
By JPT at 2:53 pm, 11/7/18

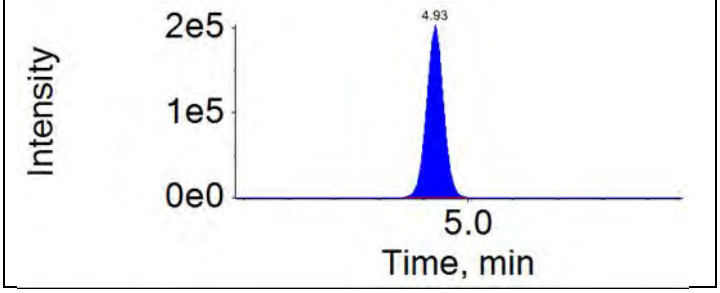
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

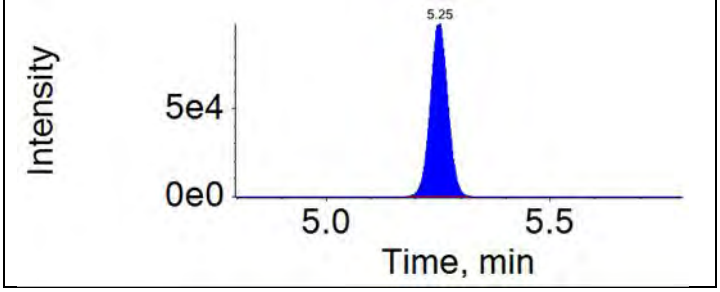
Injection Standard: 13C3-PFBA
216.0 / 172.0



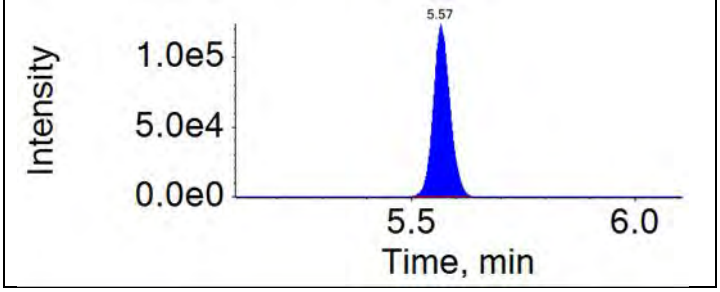
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

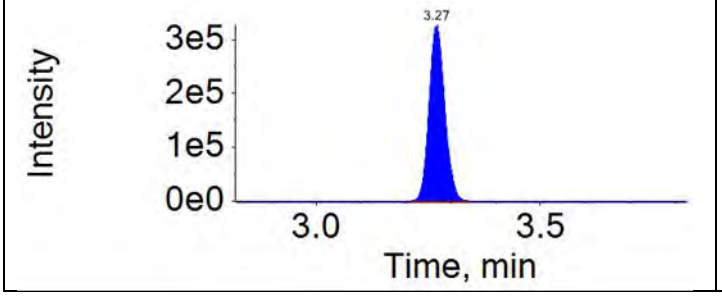


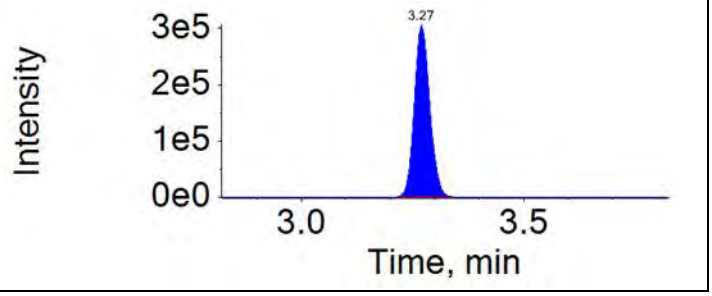
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

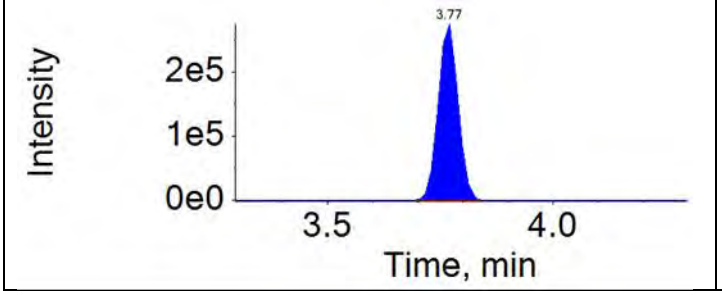
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

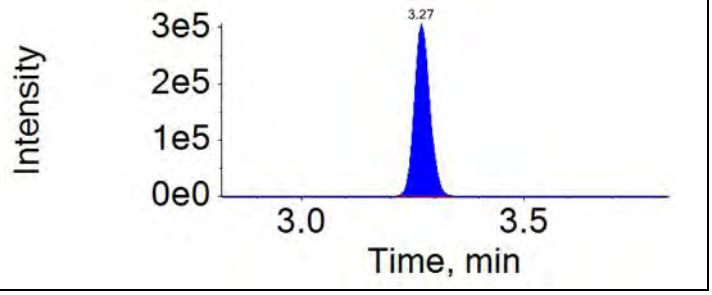
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



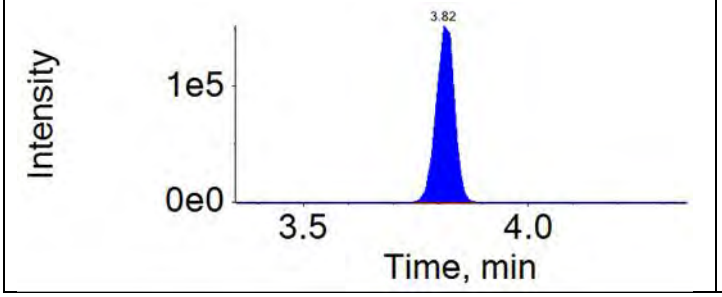


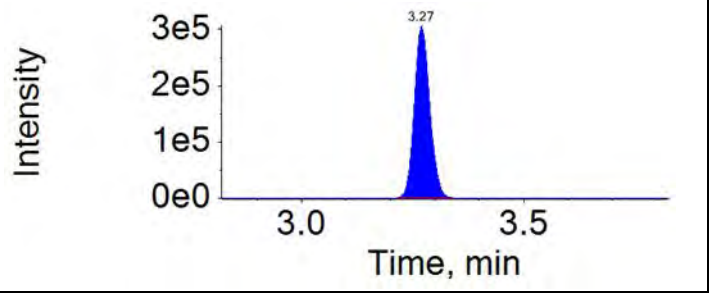
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



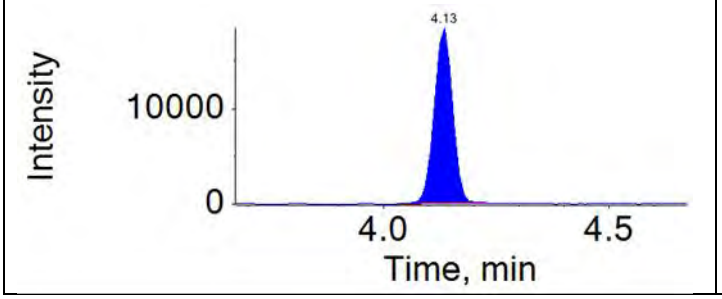


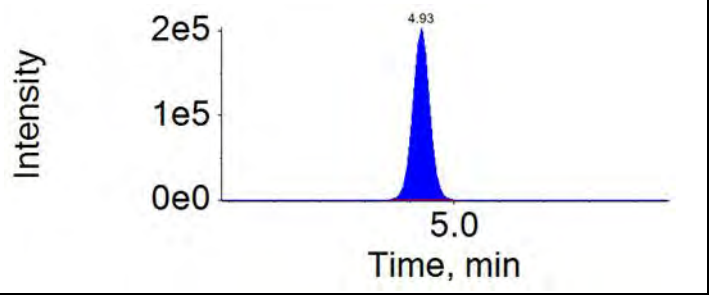
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





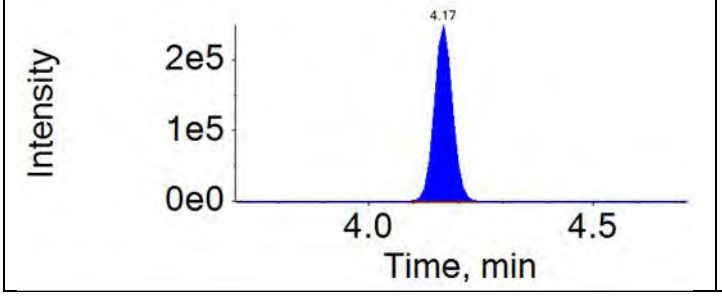
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

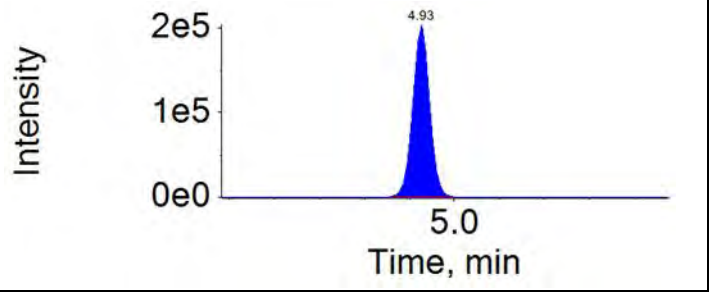




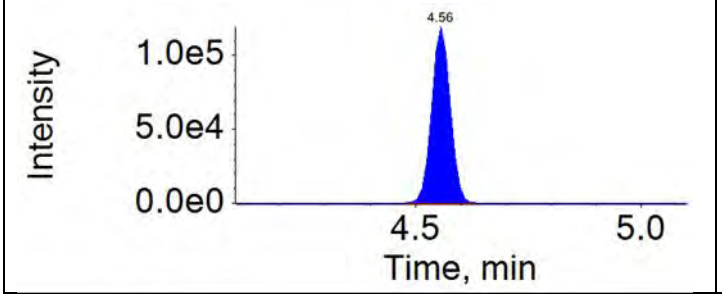
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

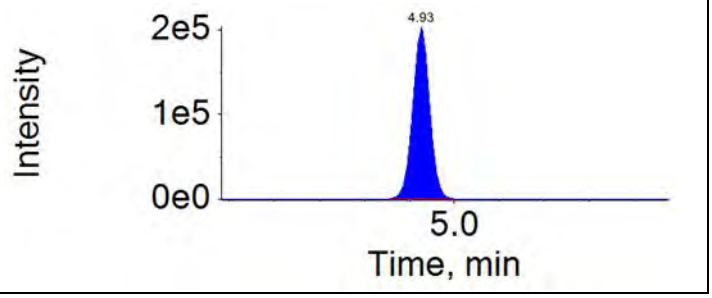
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



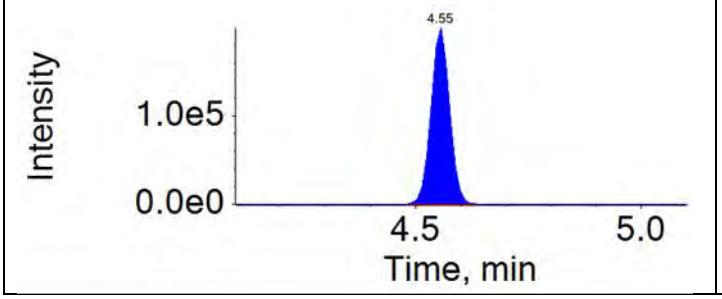


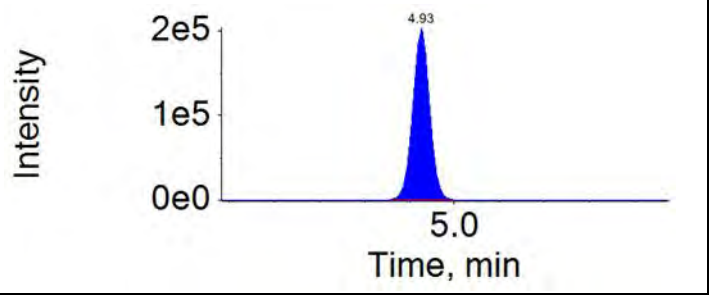
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



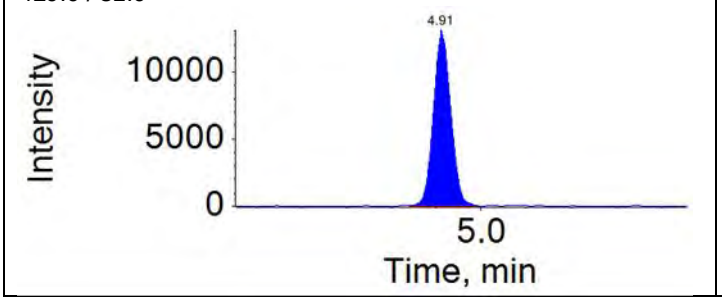


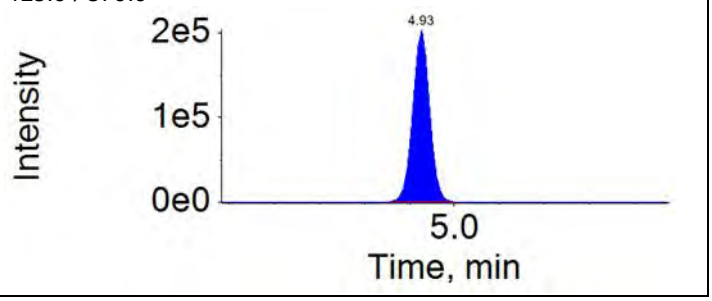
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

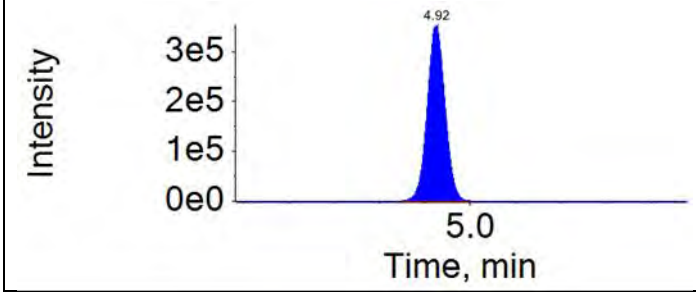
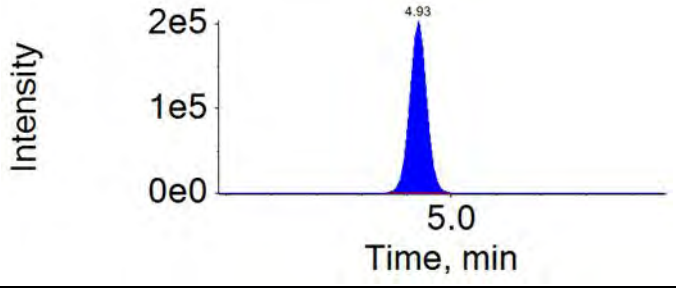


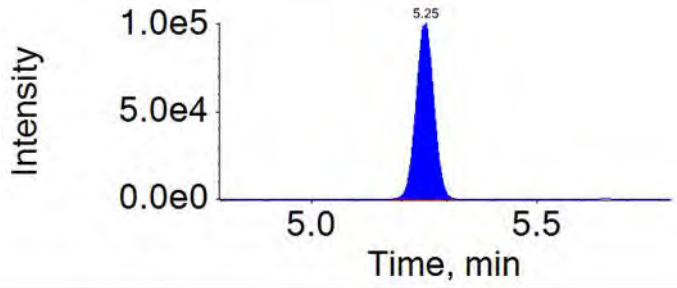
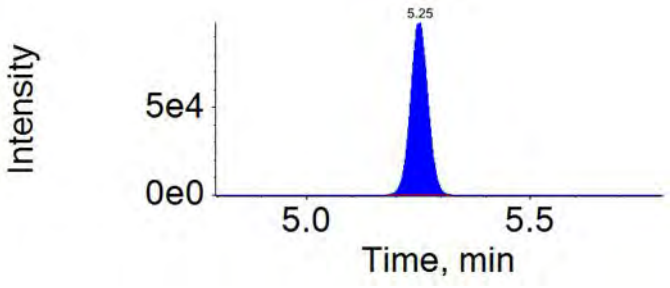


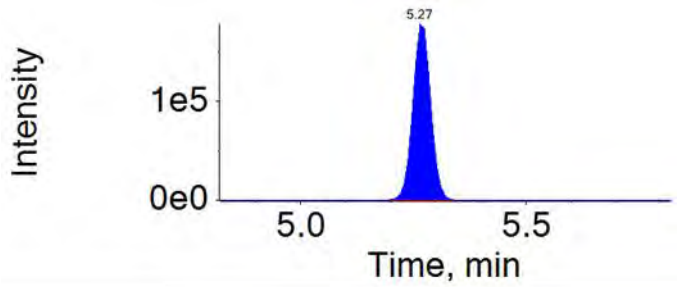
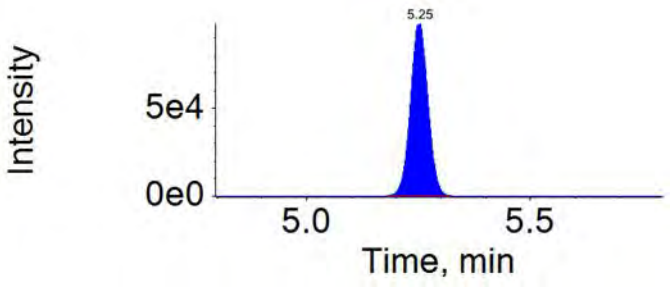
APPROVED
By JPT at 2:53 pm, 11/7/18

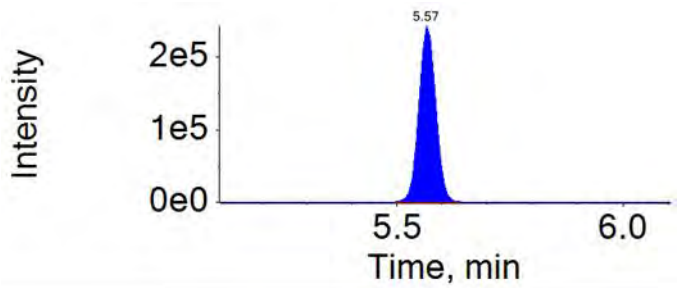
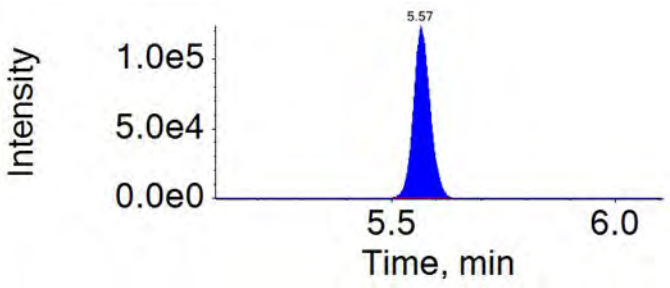
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

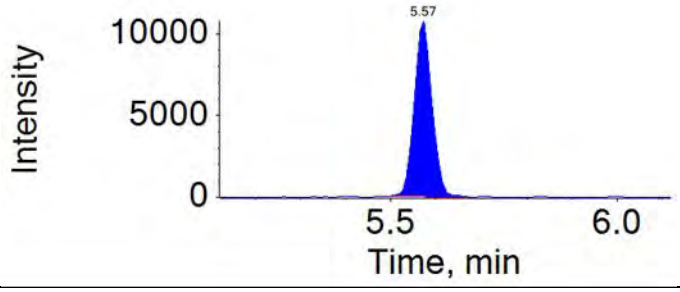
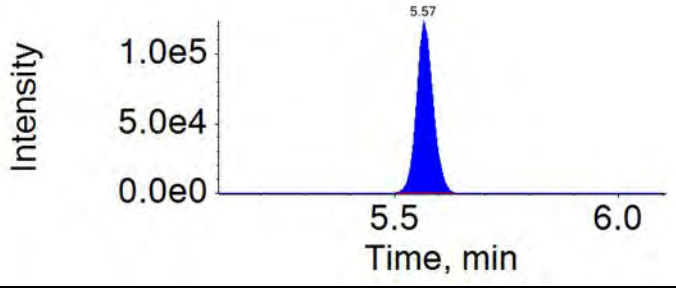
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

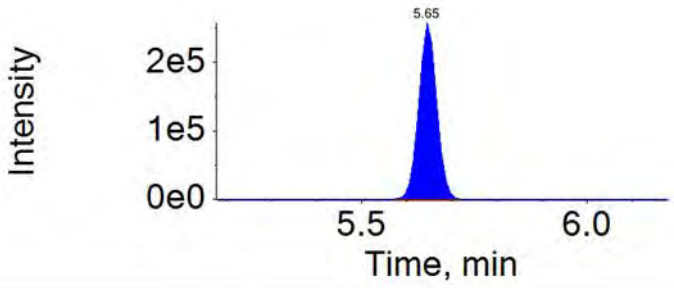
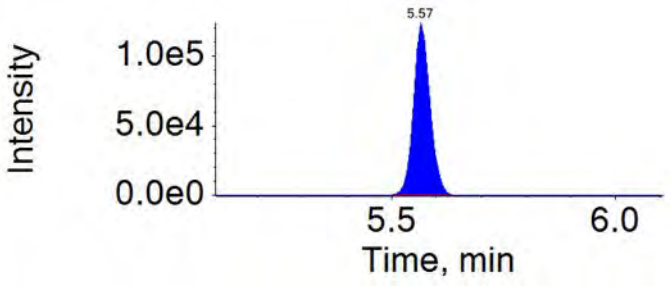
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

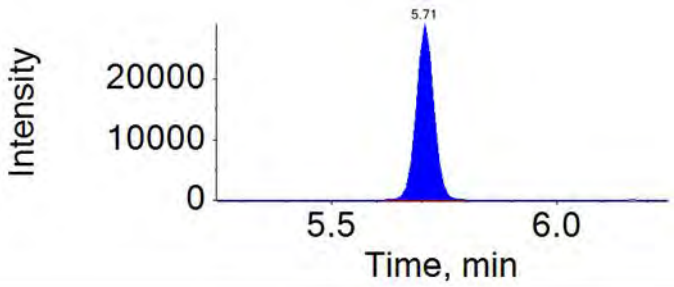
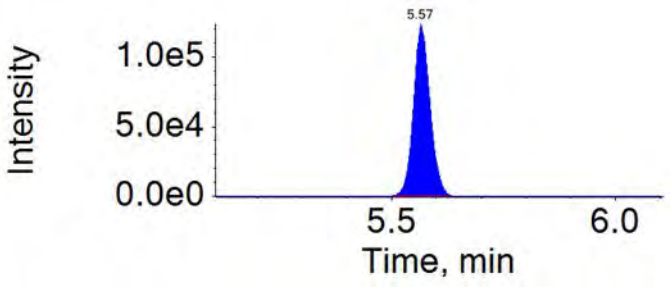
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

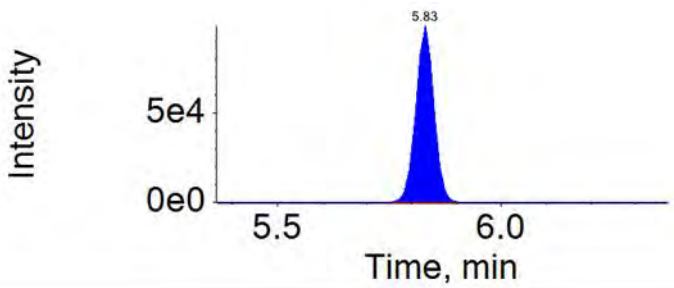
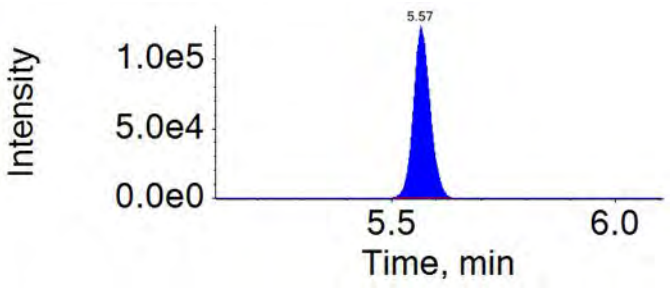
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

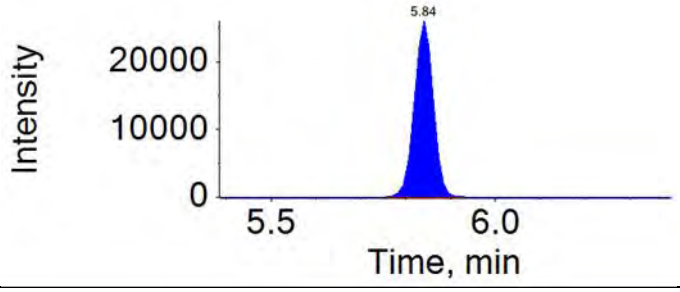
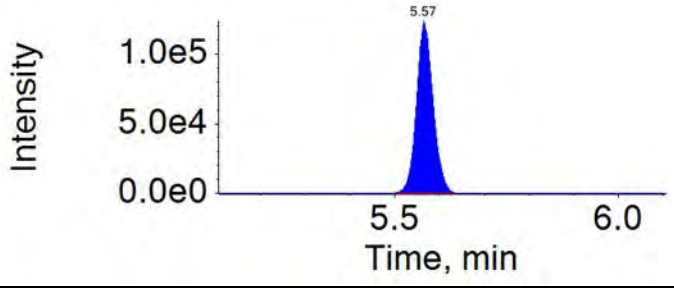
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

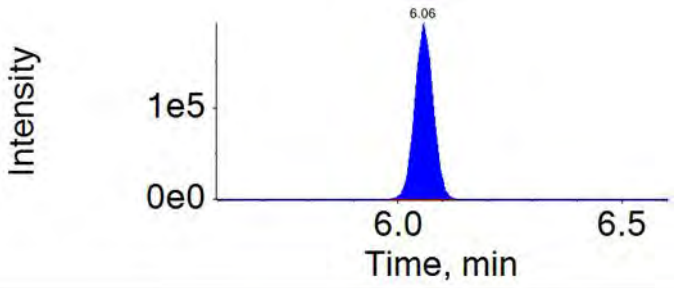
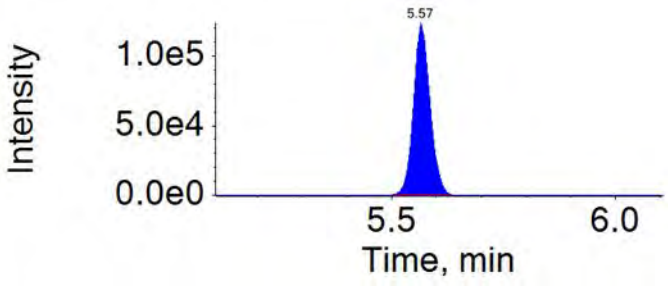
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

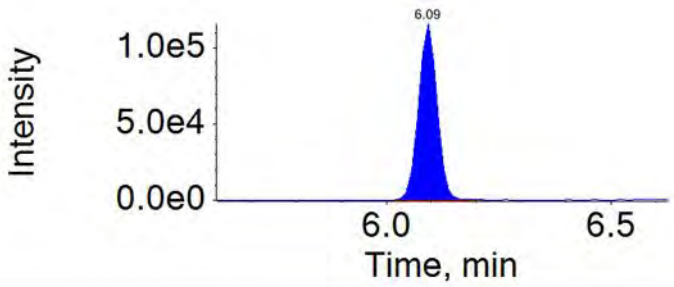
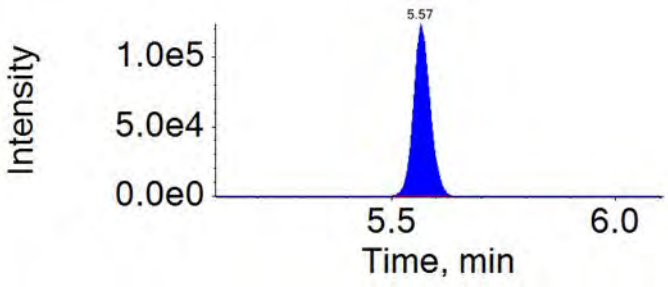
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

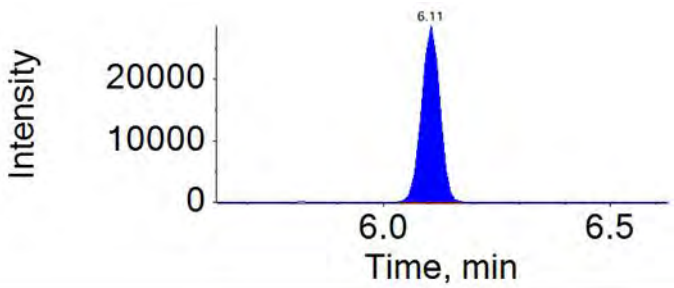
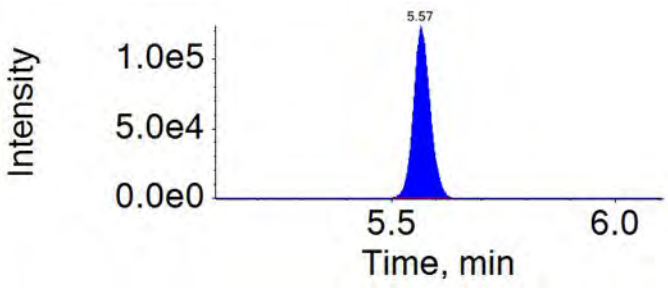
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

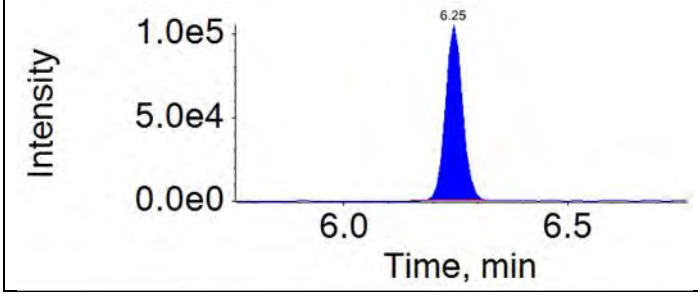
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

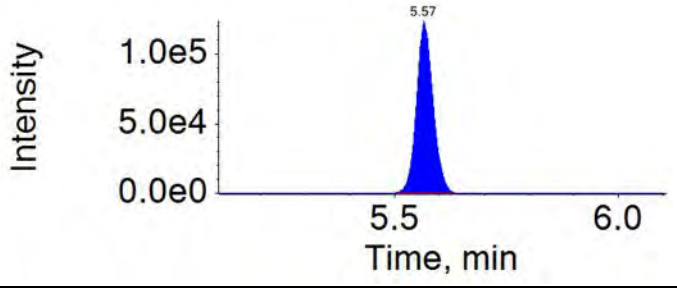
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

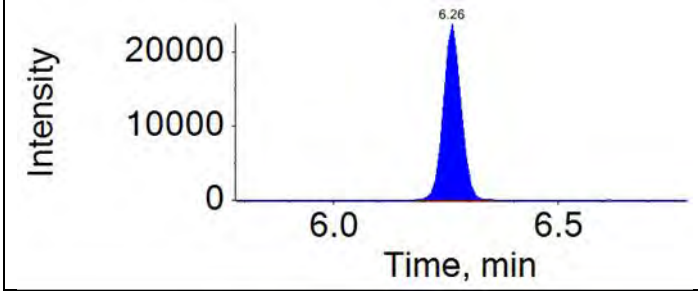
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

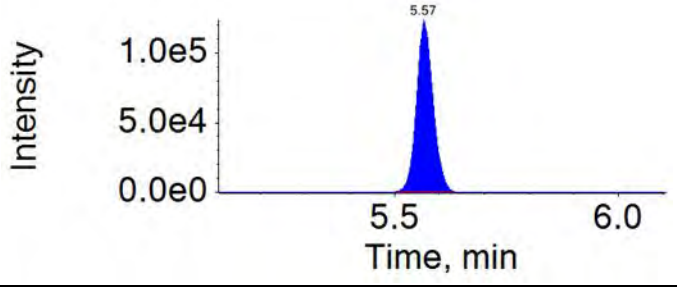
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



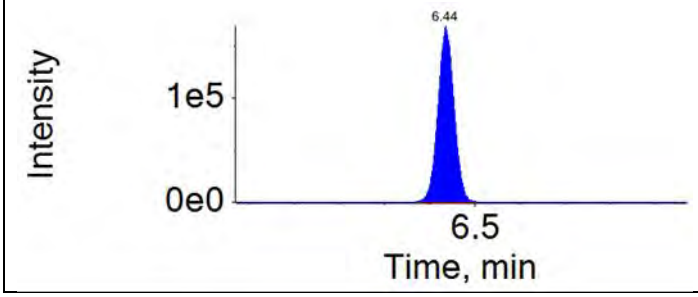


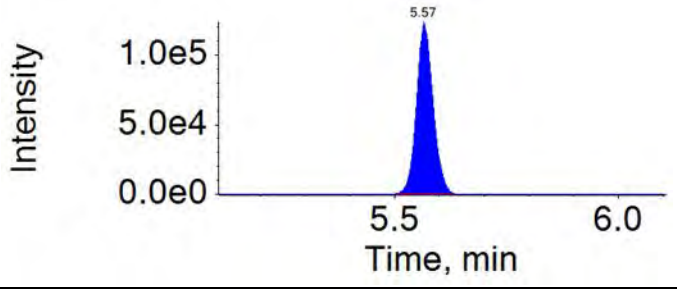
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



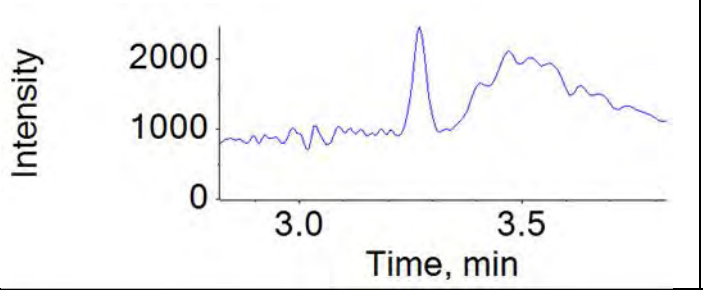


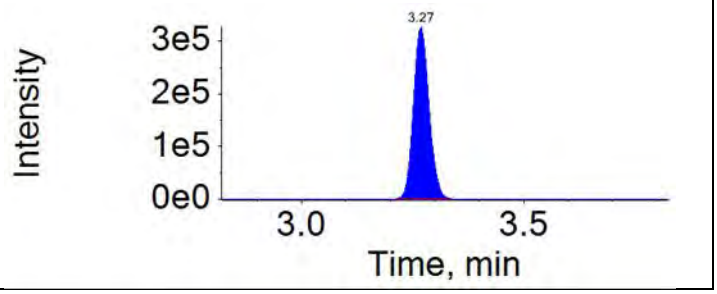
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

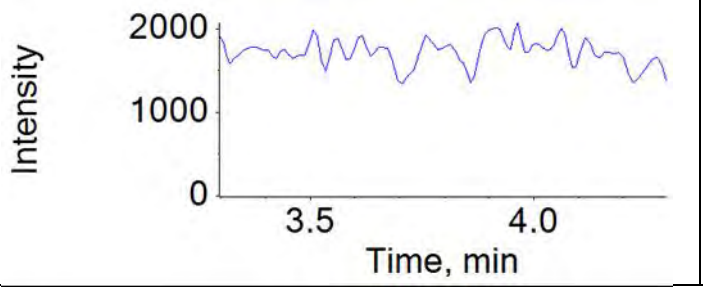
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

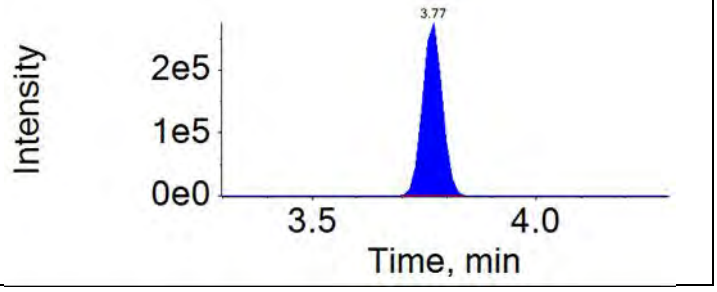
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



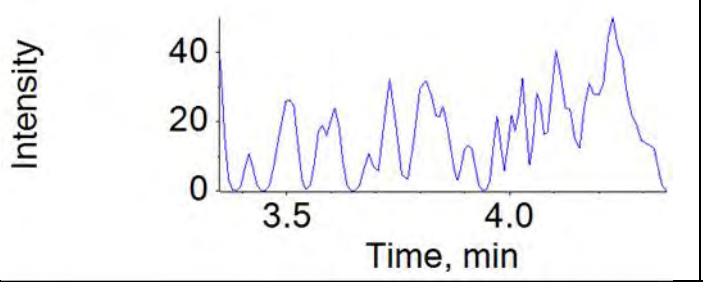


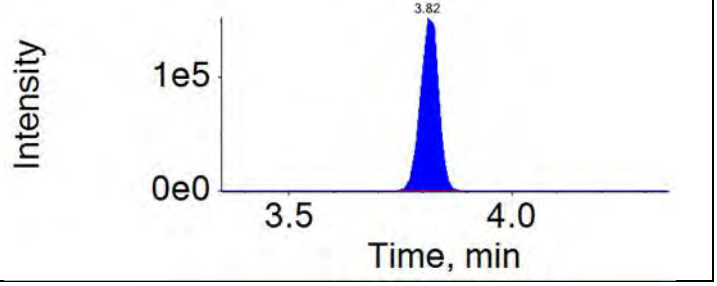
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



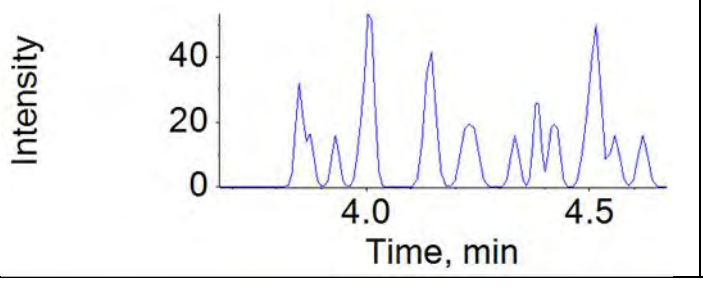


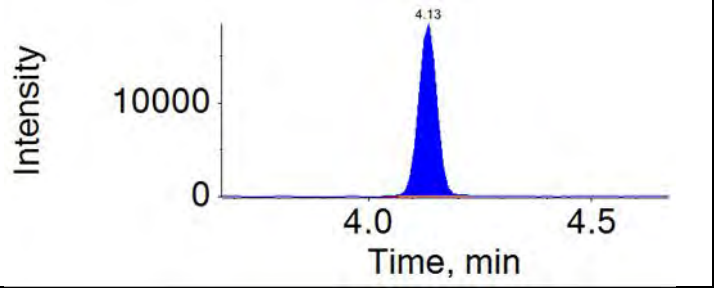
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



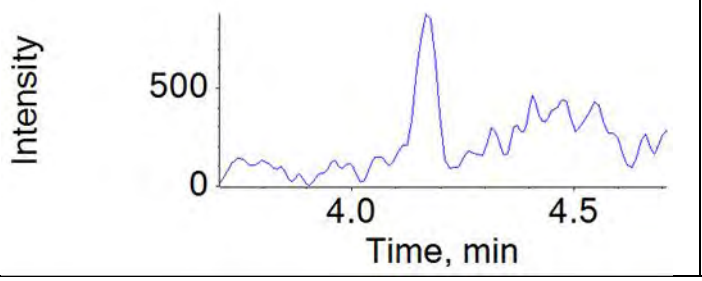


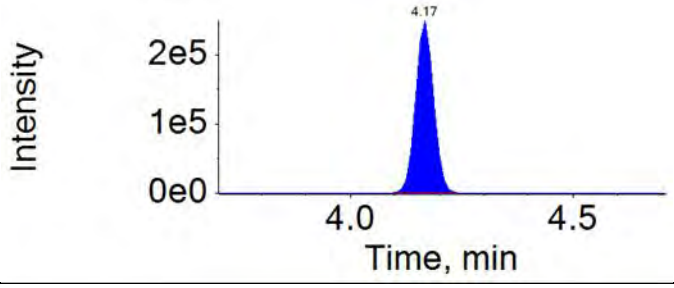
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

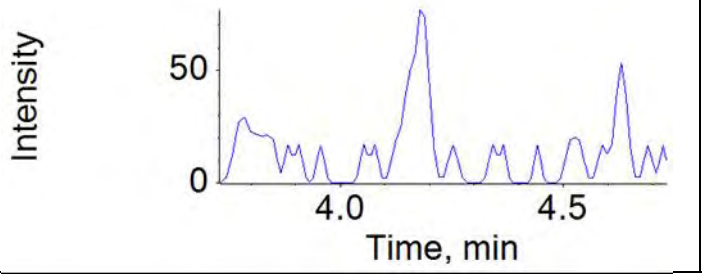
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

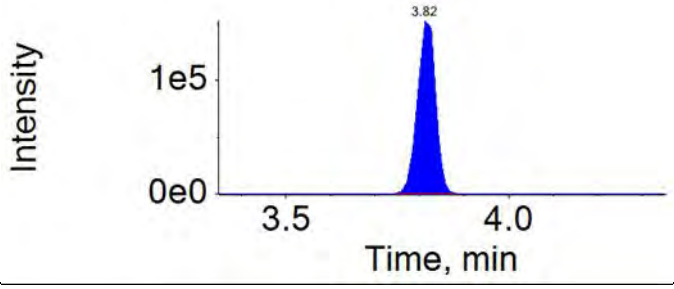
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



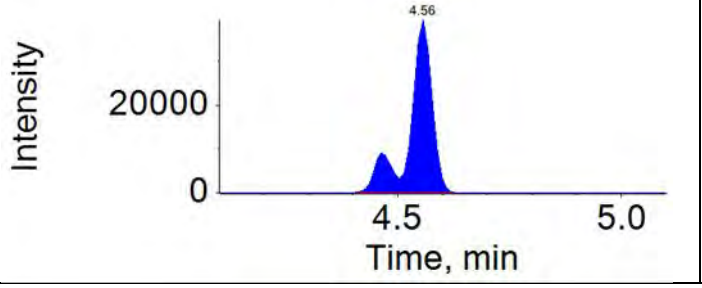


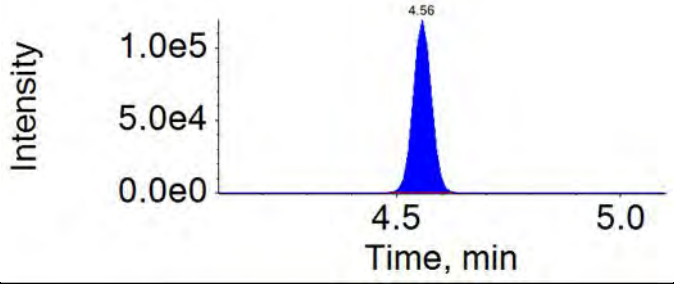
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



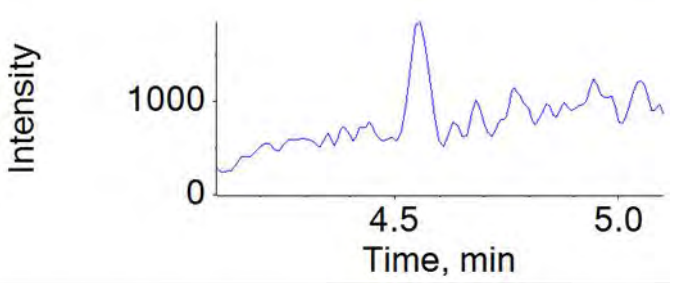


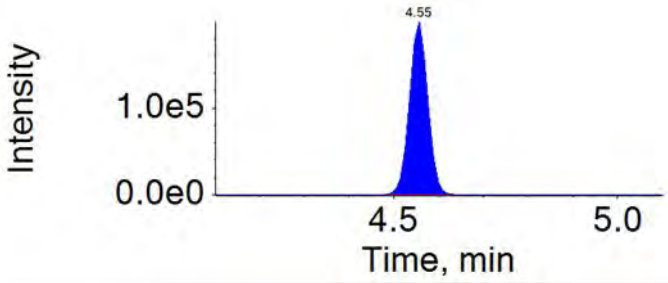
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

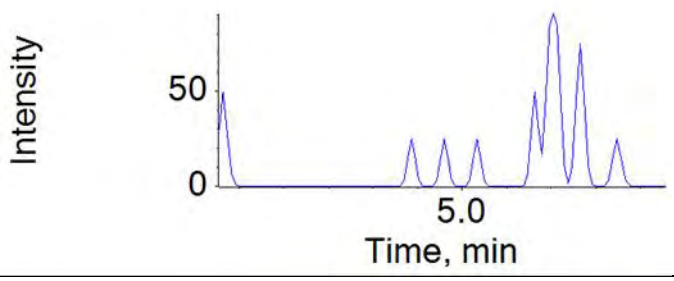
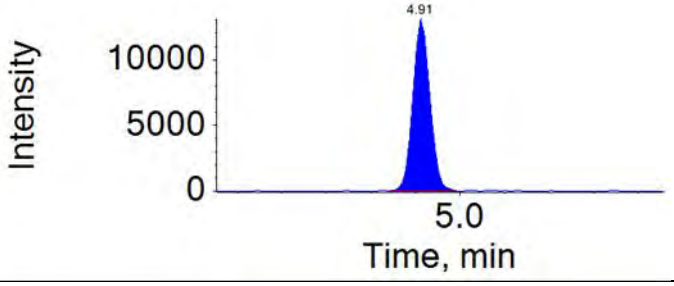


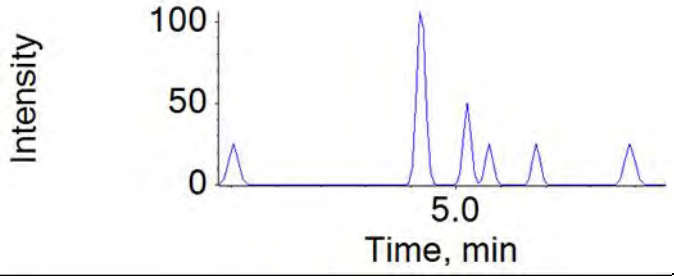
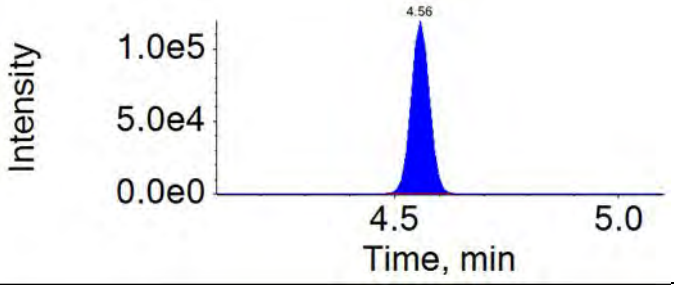


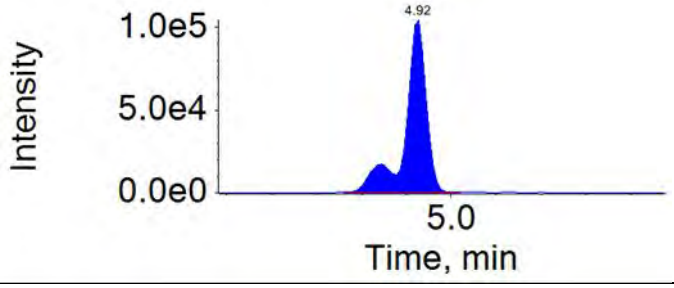
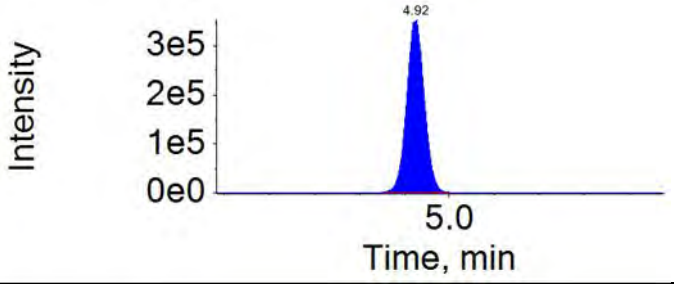
APPROVED
By JPT at 2:53 pm, 11/7/18

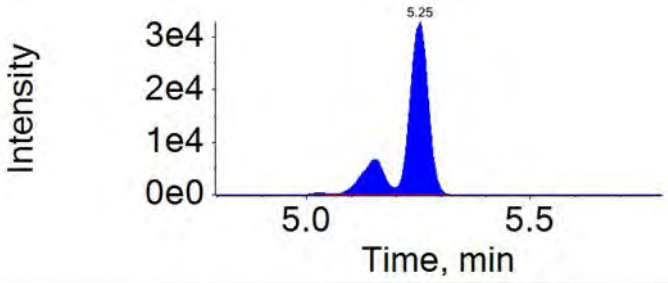
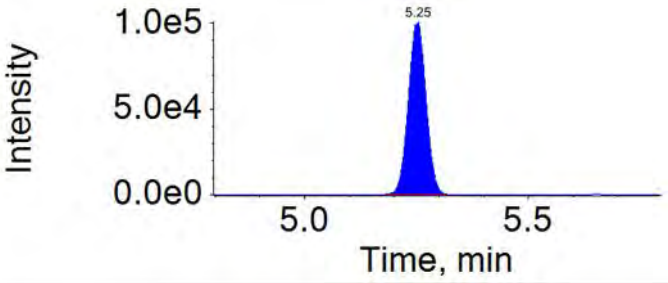
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

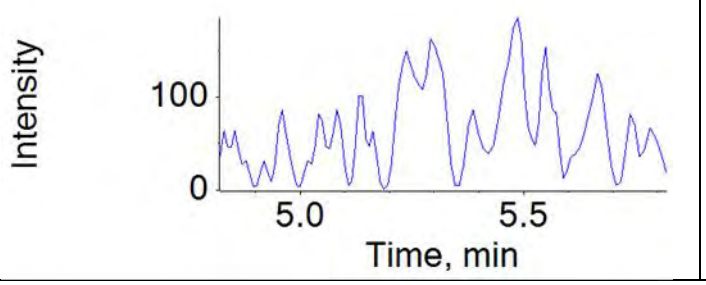
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

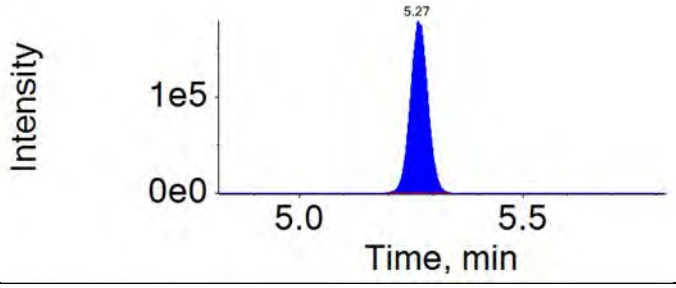
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

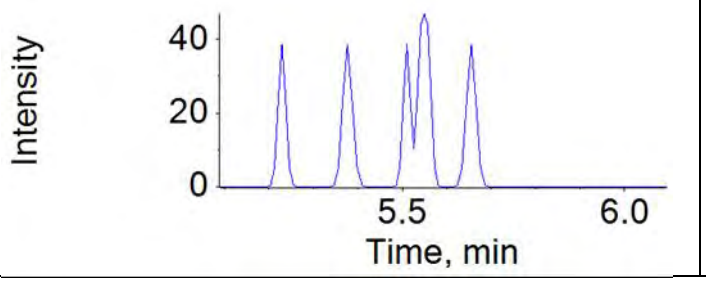
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

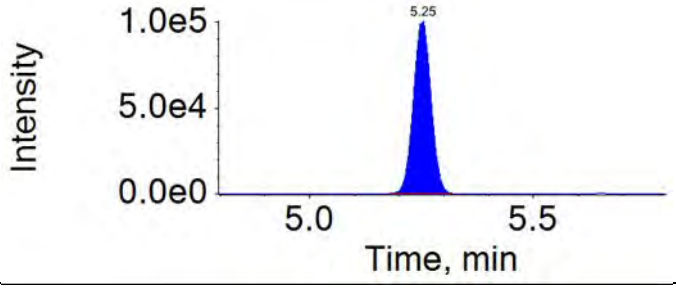
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



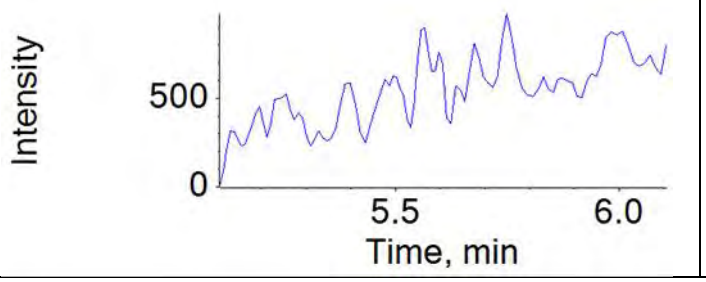


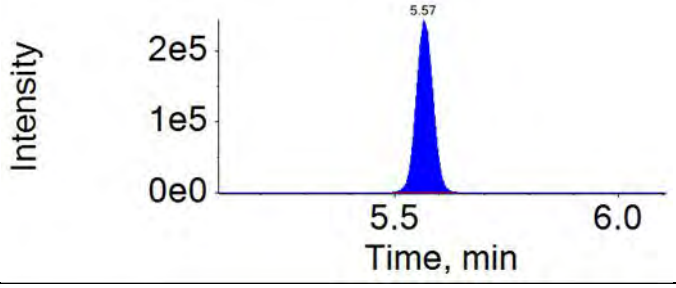
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



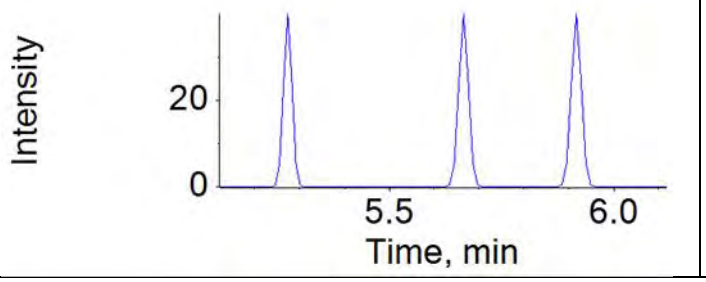


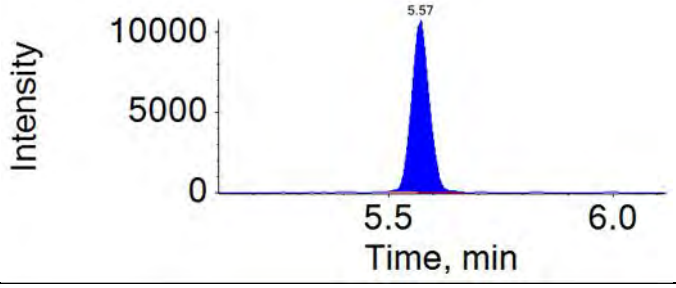
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

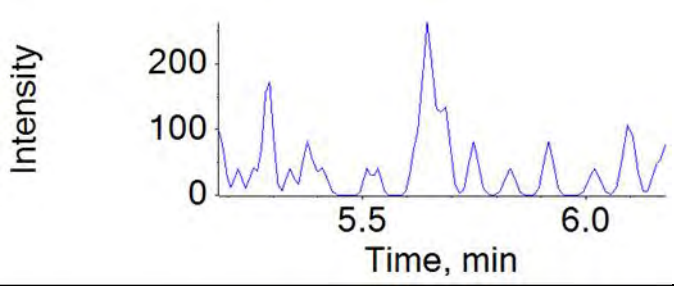
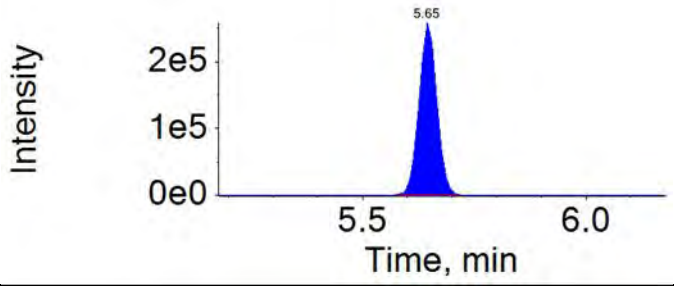


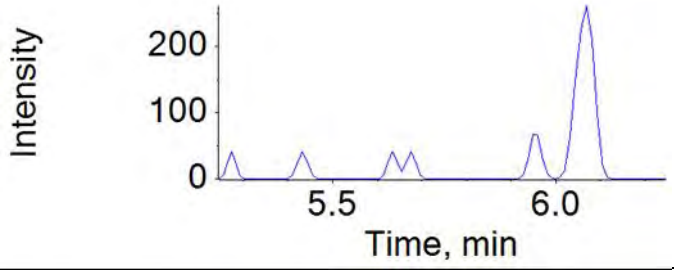
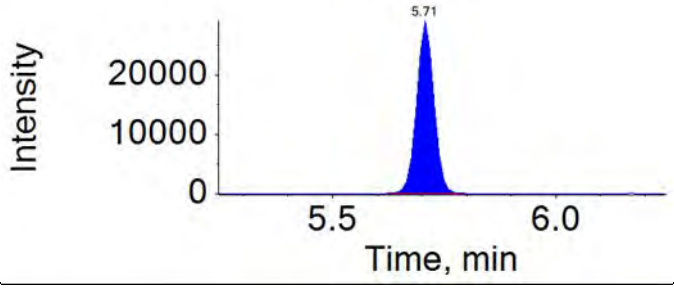


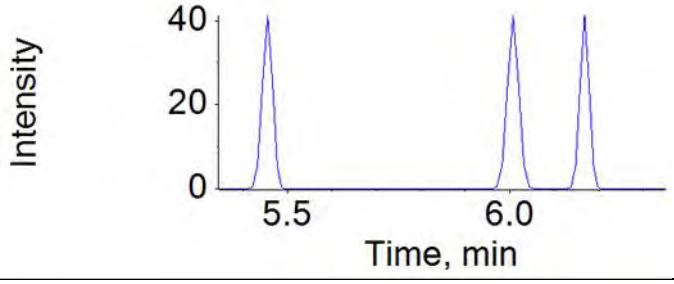
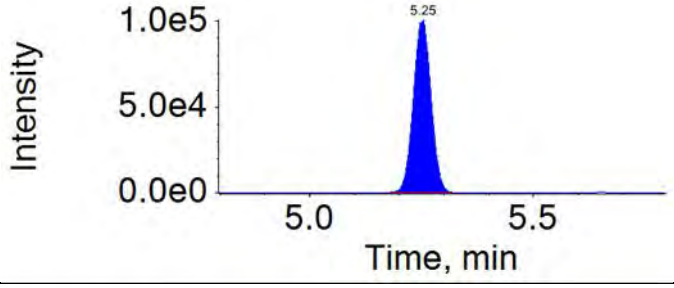
APPROVED
By JPT at 2:54 pm, 11/7/18

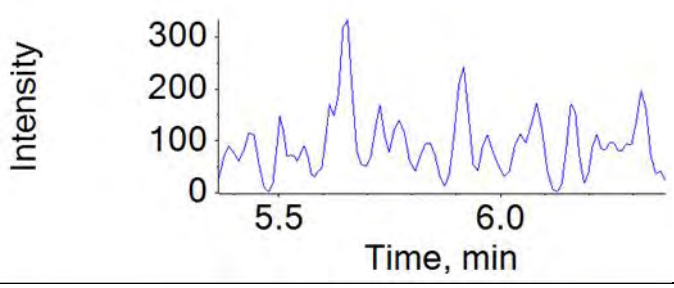
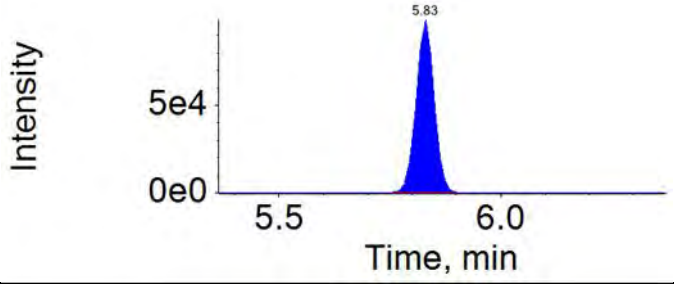
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

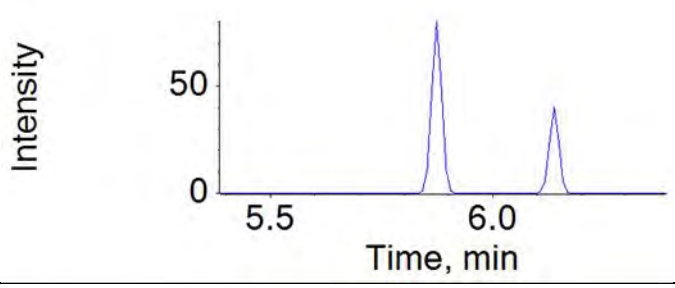
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

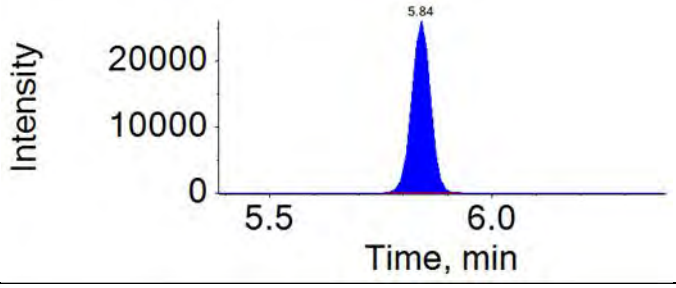
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

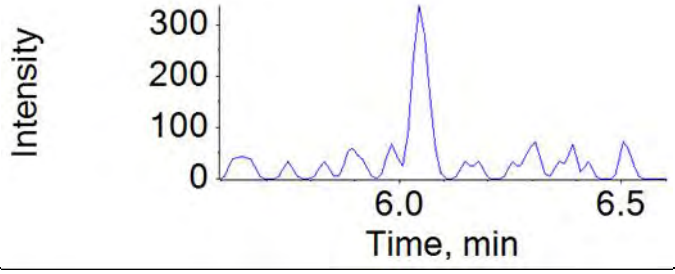
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

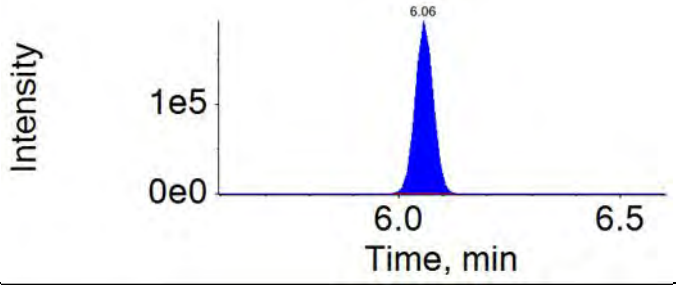
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



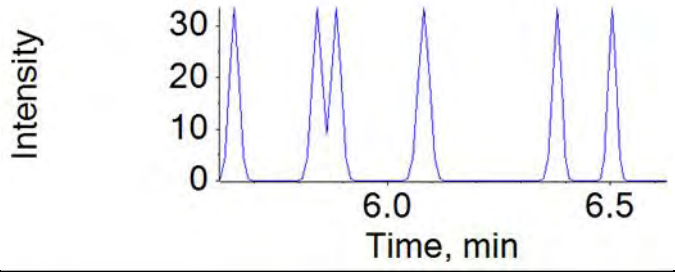


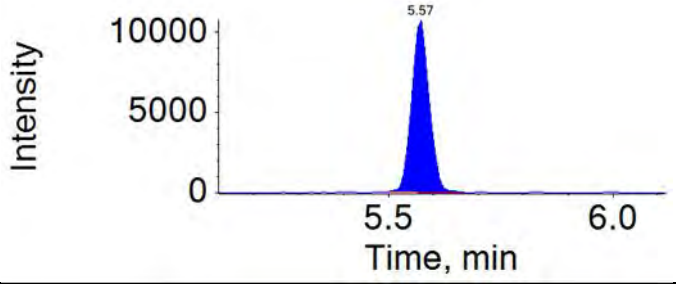
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



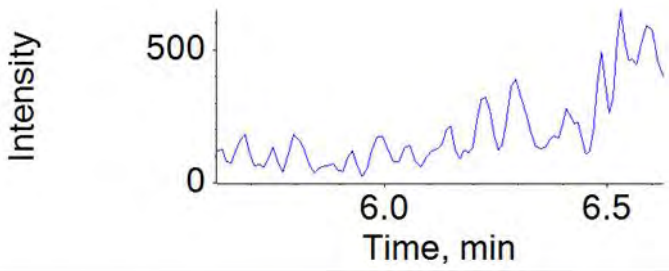


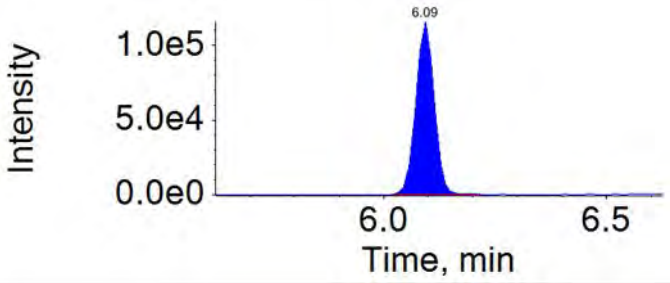
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



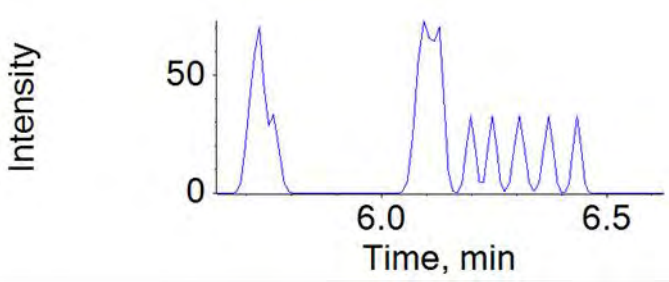


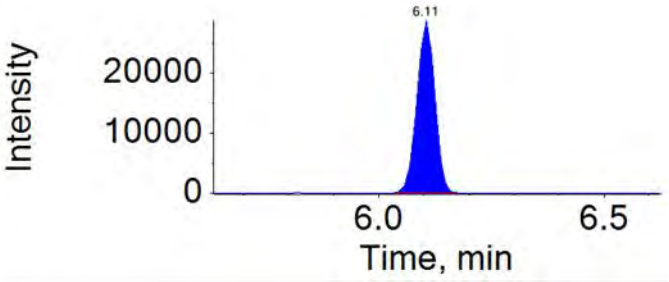
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

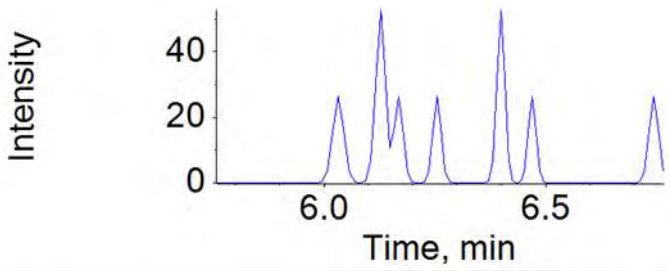
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

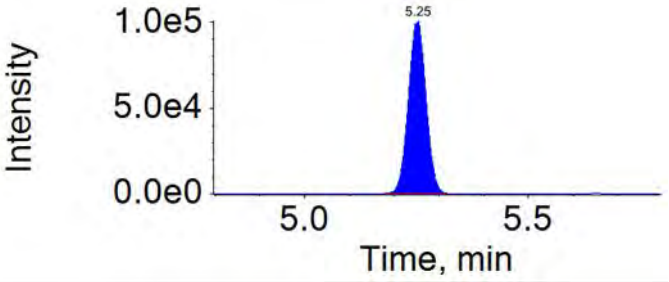
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



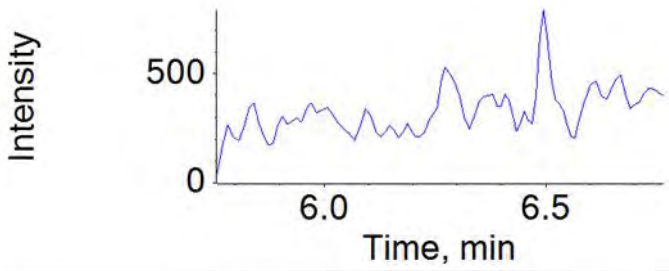


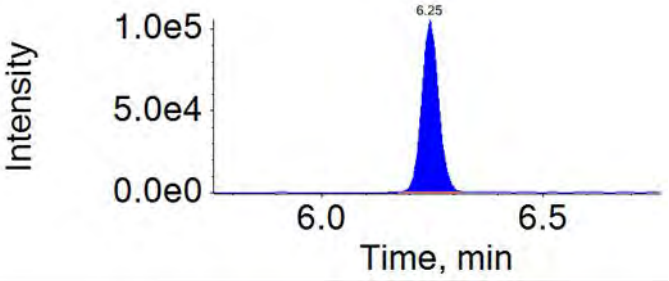
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



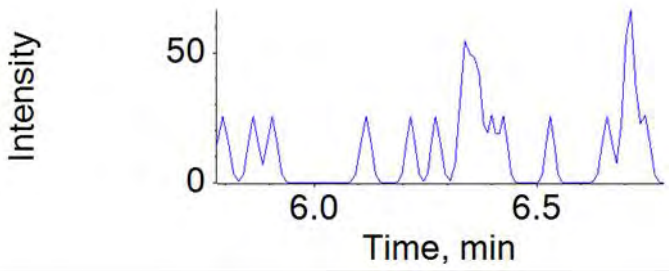


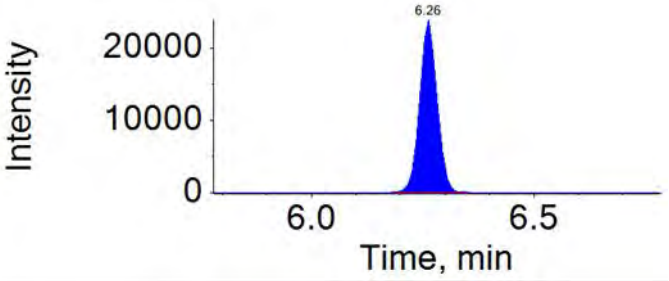
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





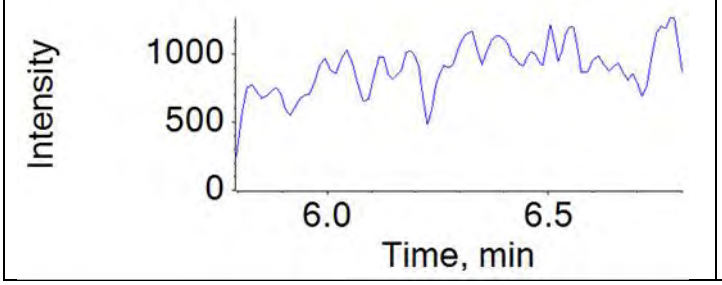
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

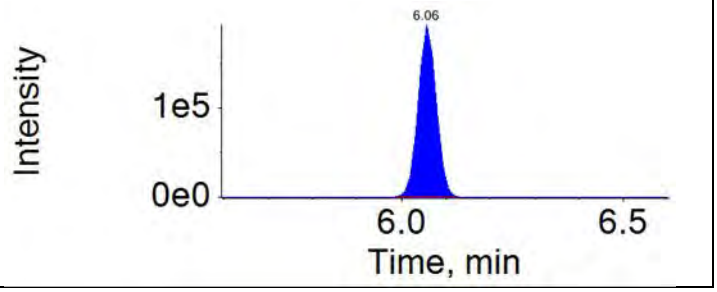




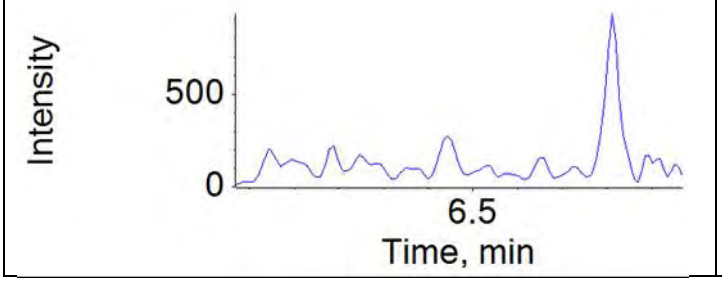
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

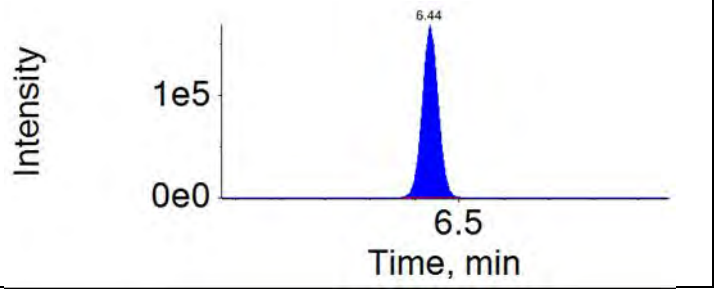
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



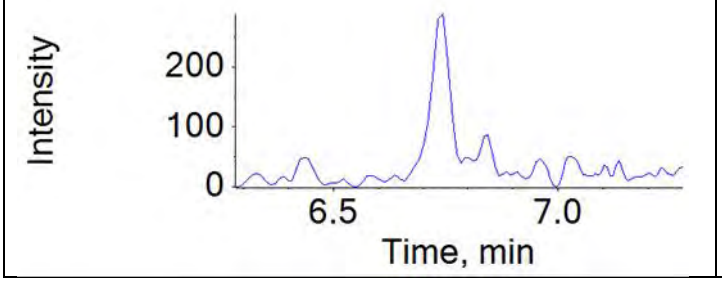


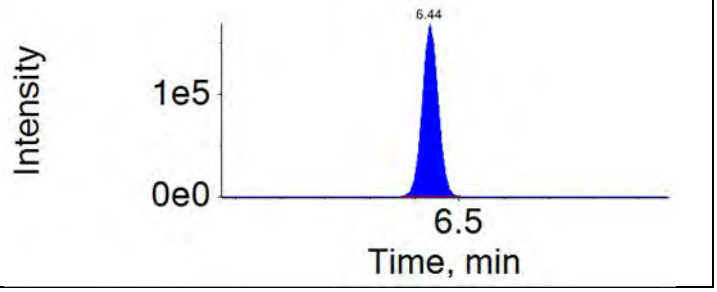
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



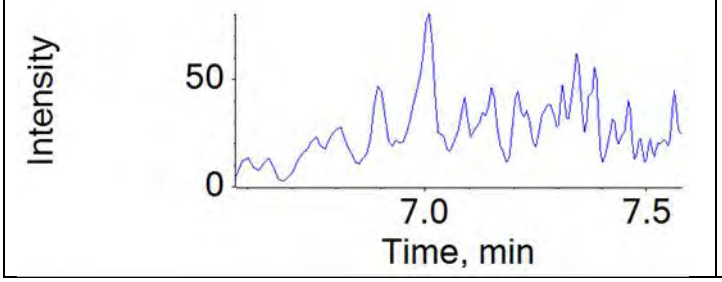


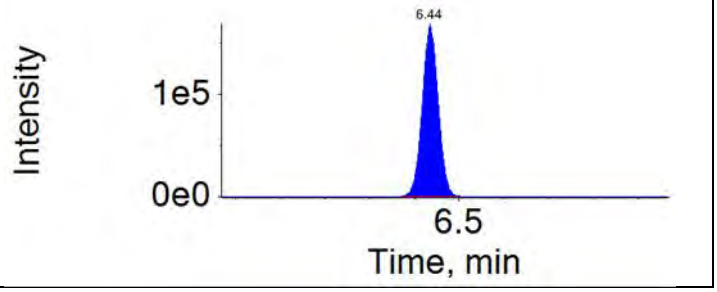
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



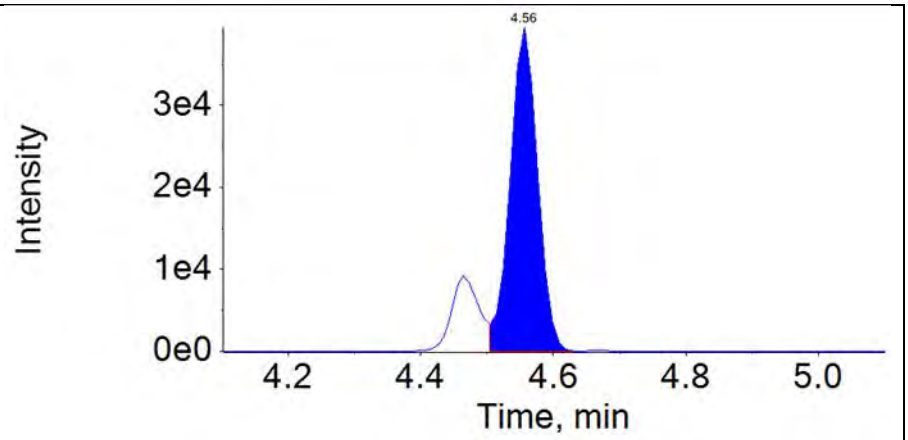


APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

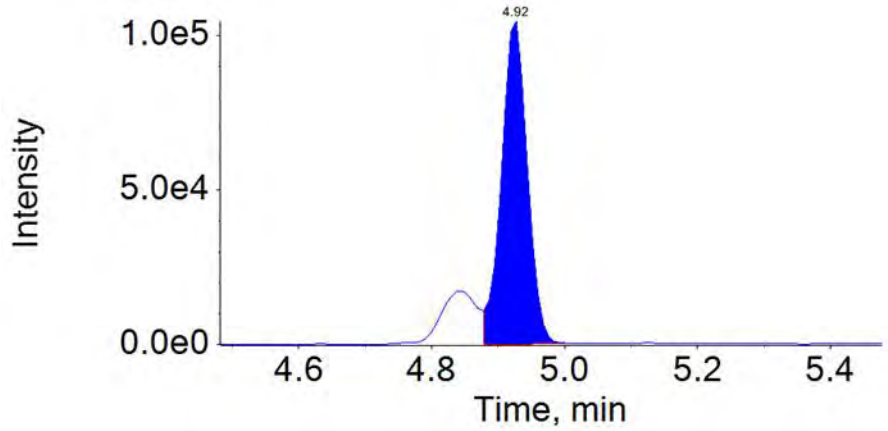
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: PFHxS
RT (min.): 4.56
Peak Area: 113540.6
Mass Range: 399.0 / 80.0
File Name: 18NOV07DCAL-19.wiff
Sample Name: L+B CAL3



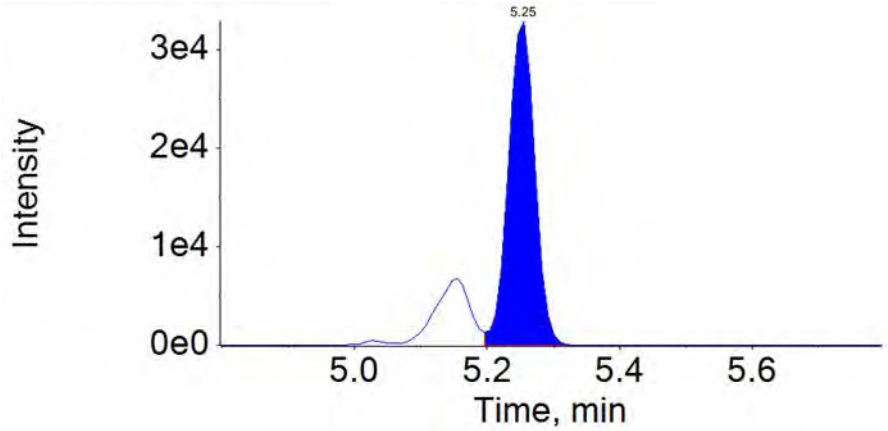
Integration Comment: incorrect integration

Component Name: PFOA
RT (min.): 4.92
Peak Area: 284491.6
Mass Range: 413.0 / 369.0
File Name: 18NOV07DCAL-19.wiff
Sample Name: L+B CAL3



Integration Comment: incorrect integration

Component Name: PFOS
RT (min.): 5.25
Peak Area: 91841.8
Mass Range: 499.0 / 80.0
File Name: 18NOV07DCAL-19.wiff
Sample Name: L+B CAL3



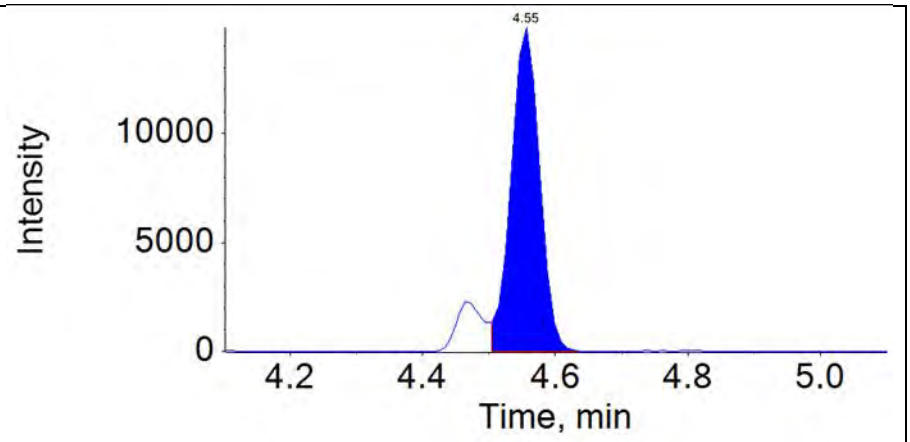
Integration Comment: incorrect integration

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

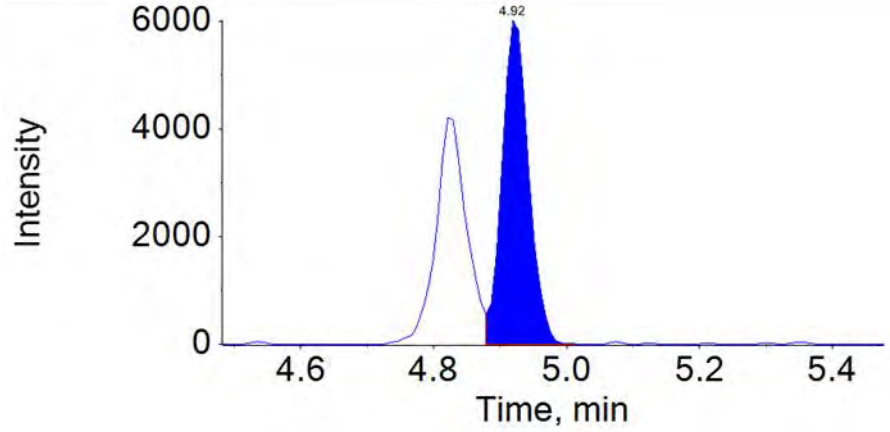
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
44357.1
Mass Range:
399.0 / 99.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



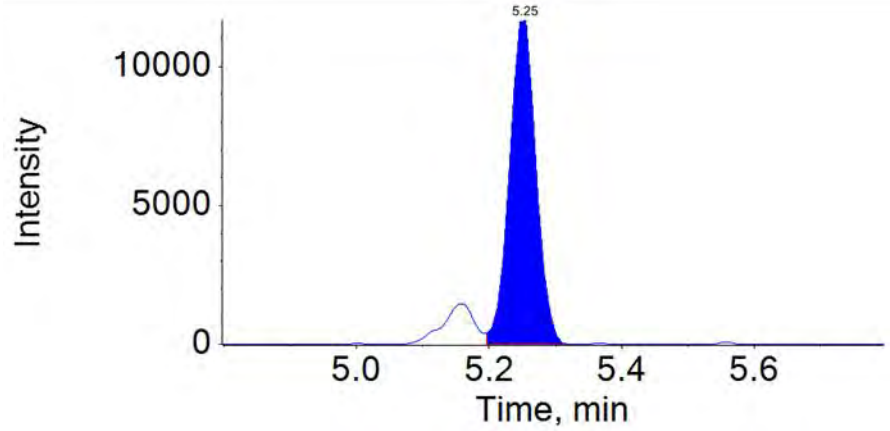
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
16848.6
Mass Range:
413.0 / 169.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
32705.6
Mass Range:
499.0 / 99.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Ion Ratio Report

Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-19.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	1.0000	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3576	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6359	N/A		50	
PFHxA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0115	N/A		50	
PFPeS	N/A	N/A	N/A	A	1.0000	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5384	N/A		50	
PFHxS	4.56	1.00	140012.1	M	1.0000	1.0000			
PFHxS_2	4.55	1.00	50830.8	M	0.3569	0.3630	2	50	
PFHpA	N/A	N/A	N/A	A	1.0000	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0577	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6752	N/A		50	
PFHpS	N/A	N/A	N/A	A	1.0000	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.3950	N/A		50	
PFOA	4.92	1.00	347563.0	M	1.0000	1.0000			
PFOA_2	4.90	0.99	30355.3	M	0.0635	0.0873	38	50	
PFOS	5.25	1.00	117649.0	M	1.0000	1.0000			
PFOS_2	5.25	1.00	37584.5	M	0.3494	0.3195	-9	50	
PFNA	N/A	N/A	N/A	A	1.0000	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0207	N/A		50	
PFNS	N/A	N/A	N/A	A	1.0000	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4890	N/A		50	
PFDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0057	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.6169	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2206	N/A		50	
PFDS	N/A	N/A	N/A	A	1.0000	N/A			
PFDS_2	N/A	N/A	N/A	A	0.4648	N/A		50	
PFUnDA	N/A	N/A	N/A	A	1.0000	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.6082	N/A		50	
PFDoDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDoDA_2	N/A	N/A	N/A	A	0.0109	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.7082	N/A		50	
PFTrDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTrDA_2	N/A	N/A	N/A	A	0.0096	N/A		50	
PFTeDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0055	N/A		50	
PFHxDA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0596	N/A		50	
PFODA	N/A	N/A	N/A	A	1.0000	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0257	N/A		50	

APPROVED
By JPT at 2:54 pm, 11/7/18

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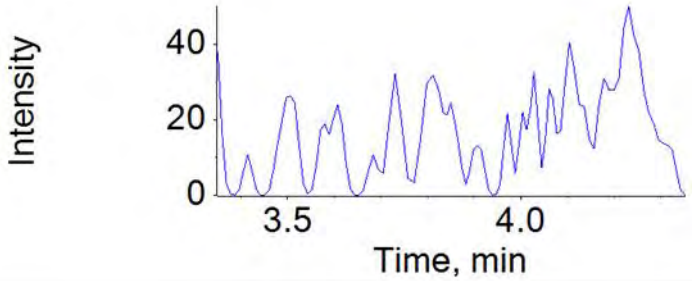
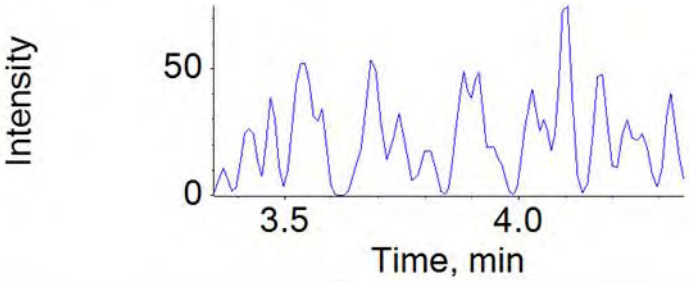
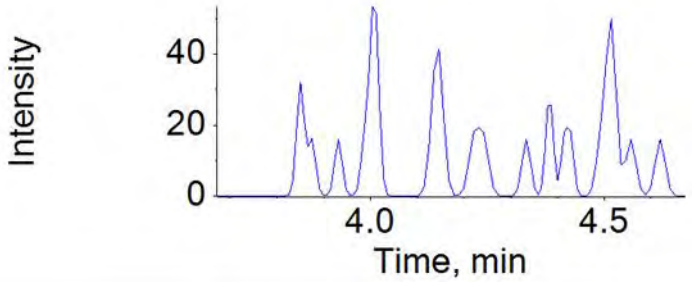
Component: PFBS
Primary Mass: 299.0 / 80.0



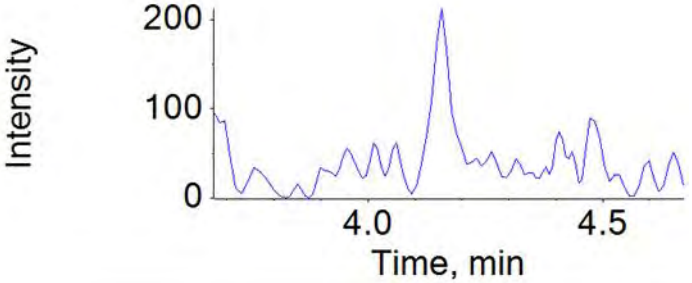
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



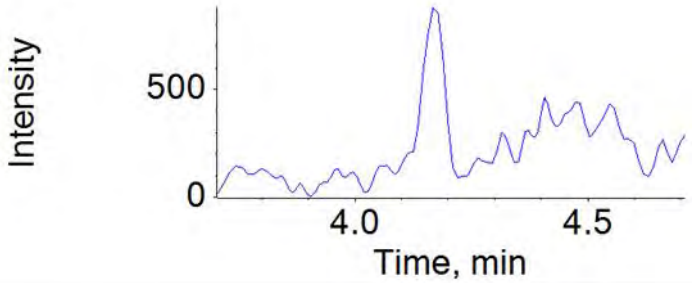
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



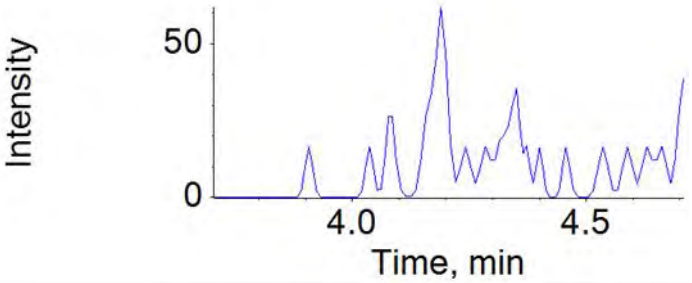
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



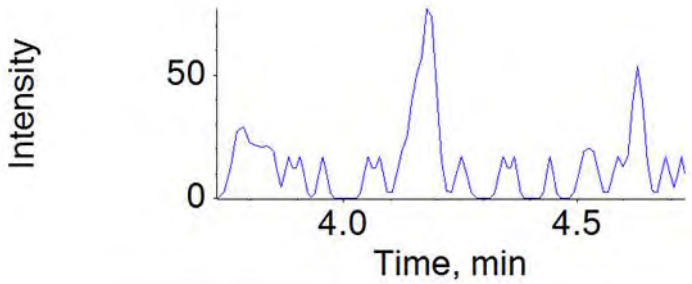
Component: PFHxA
Primary Mass: 313.0 / 269.0



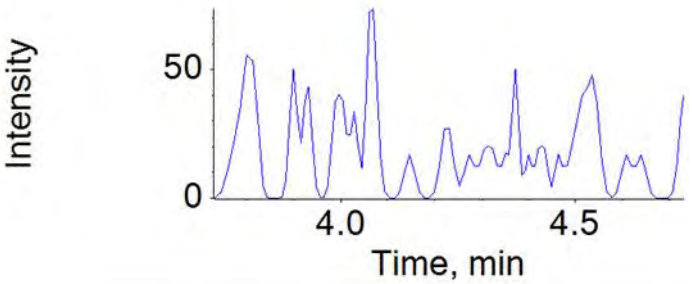
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 2:54 pm, 11/7/18

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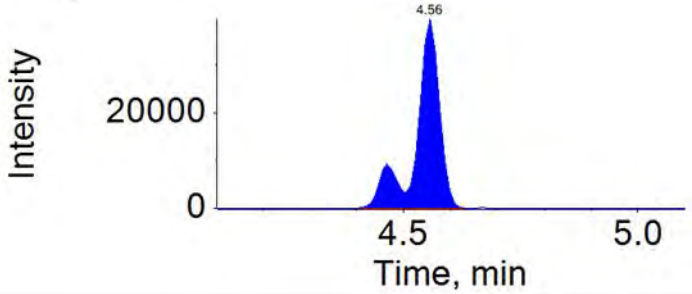
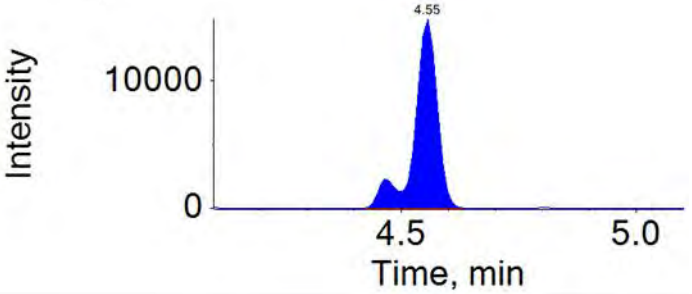
By umar at 5:24 pm, 11/9/18

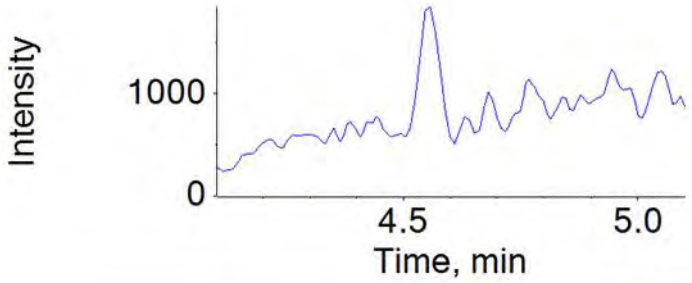
Component: PFHxS
Primary Mass: 399.0 / 80.0



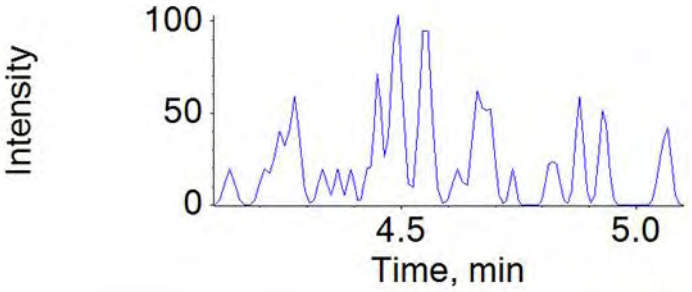
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



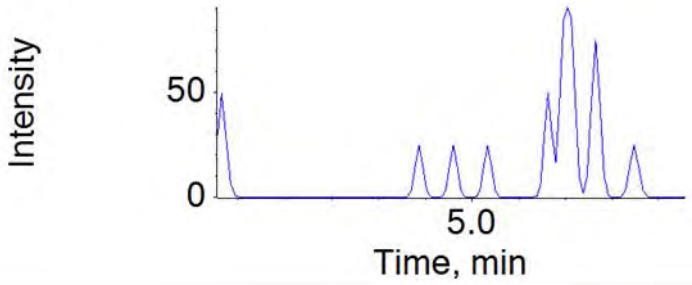
Component: PFHpA
Primary Mass: 363.0 / 319.0



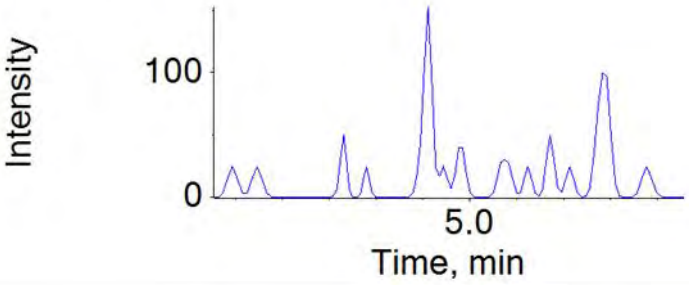
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



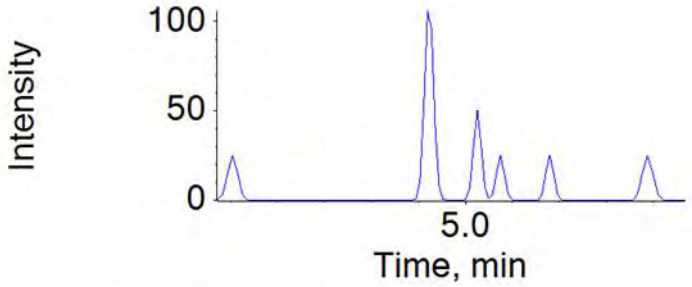
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



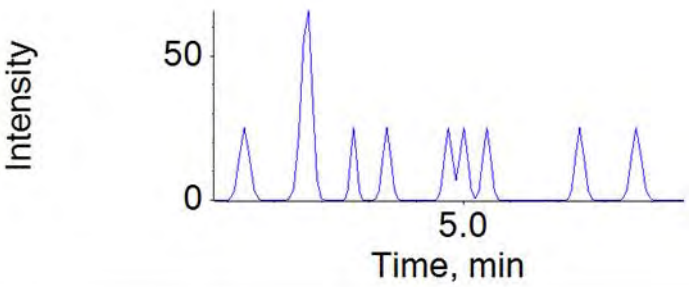
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



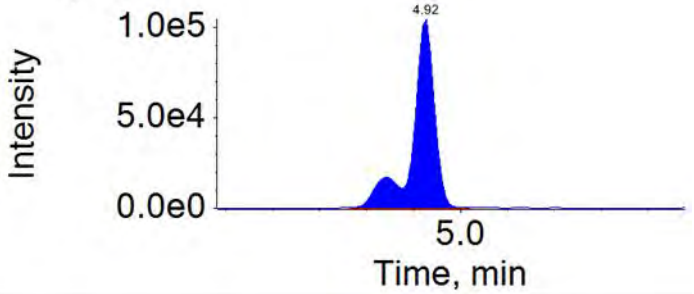
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



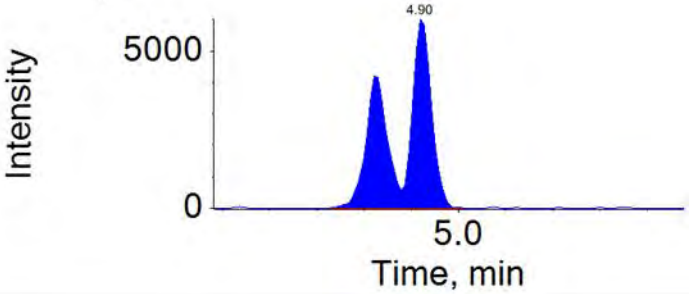
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

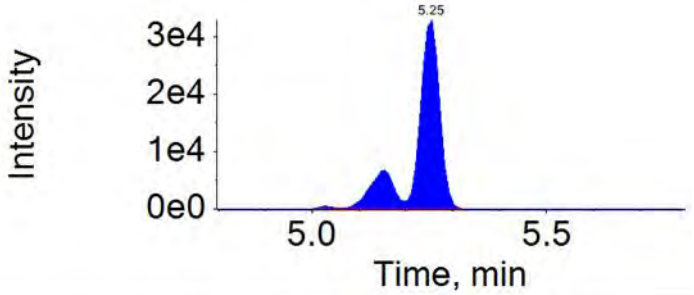
Component: PFOA
Primary Mass: 413.0 / 369.0



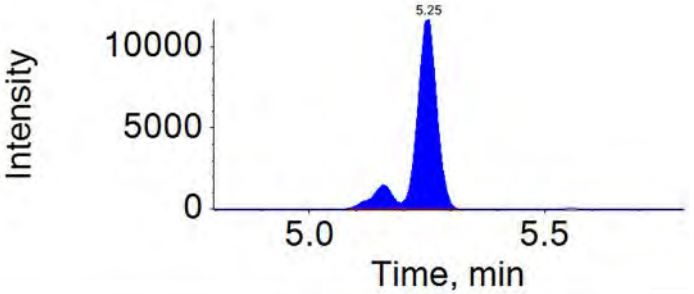
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



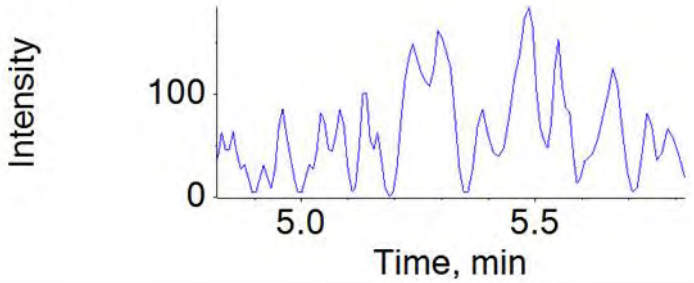
Component: PFOS
Primary Mass: 499.0 / 80.0



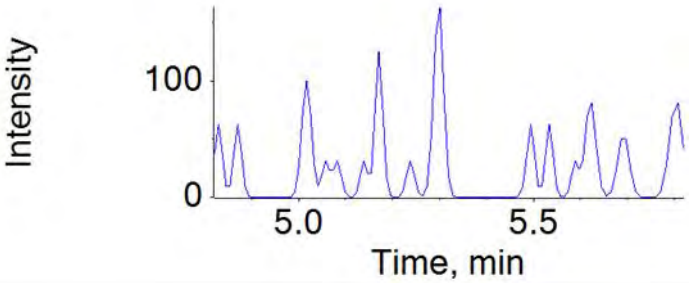
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



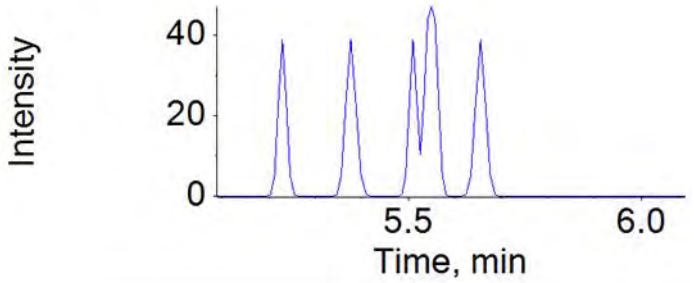
Component: PFNA
Primary Mass: 463.0 / 419.0



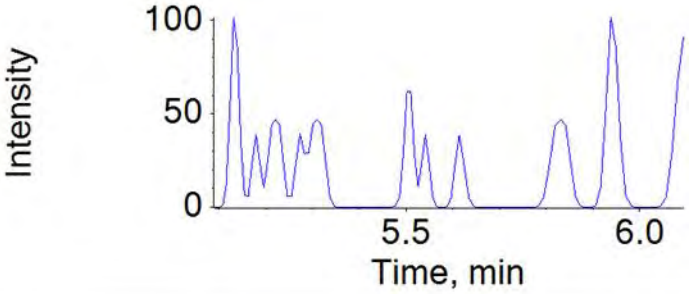
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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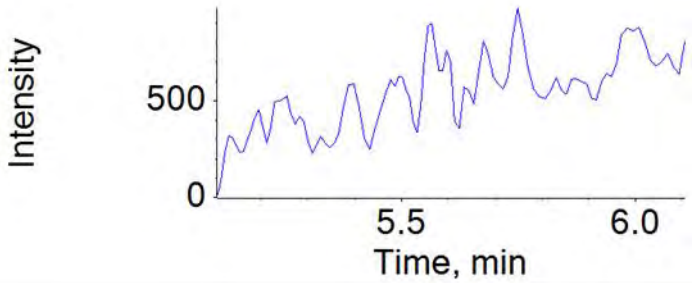
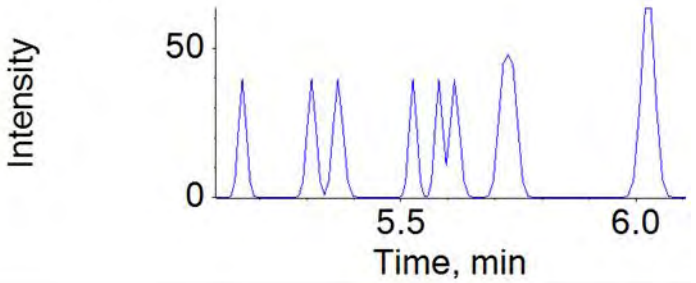
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

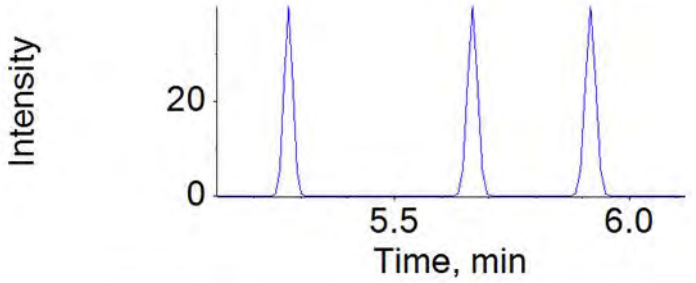
Component: PFDA
Primary Mass: 513.0 / 469.0



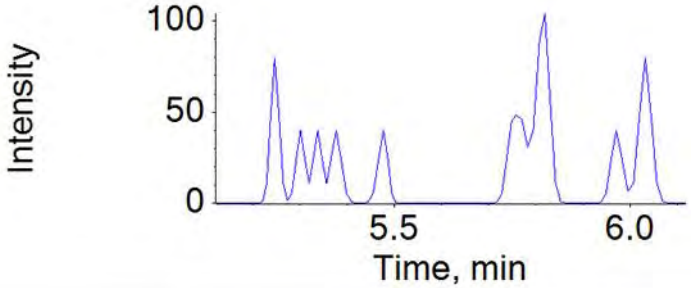
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



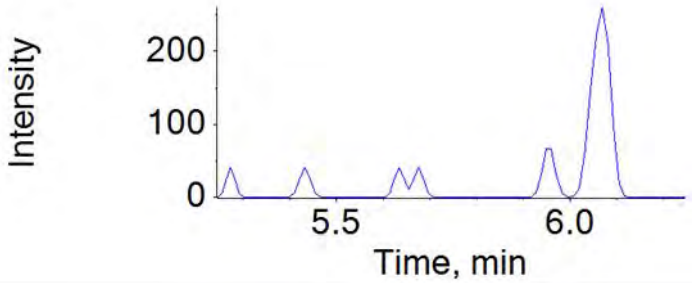
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



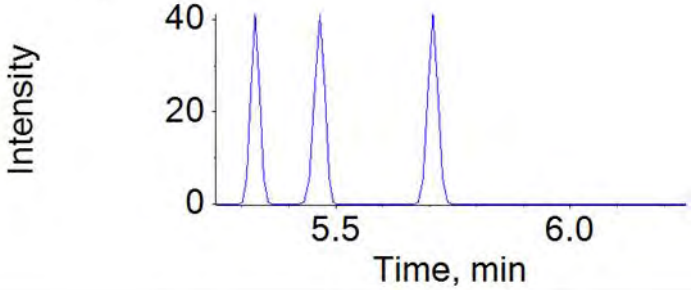
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



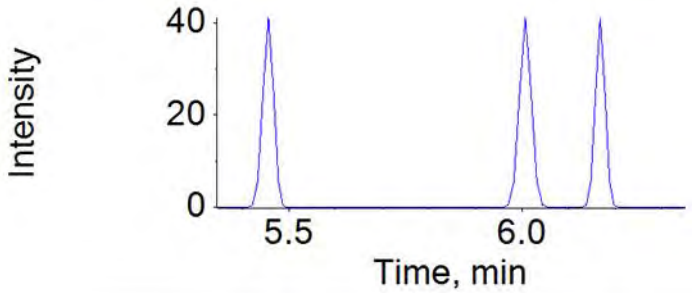
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



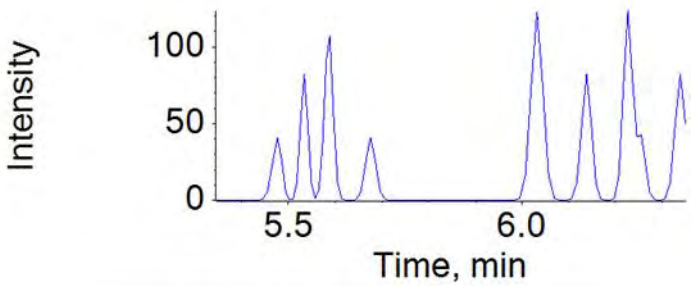
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



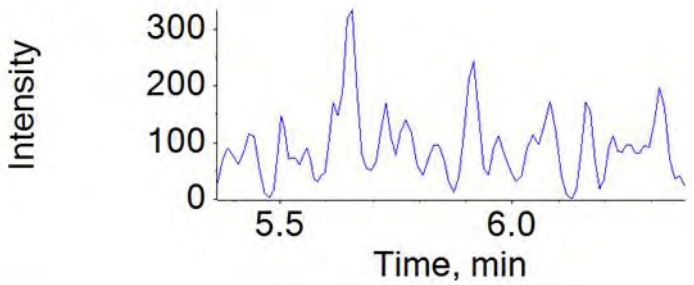
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



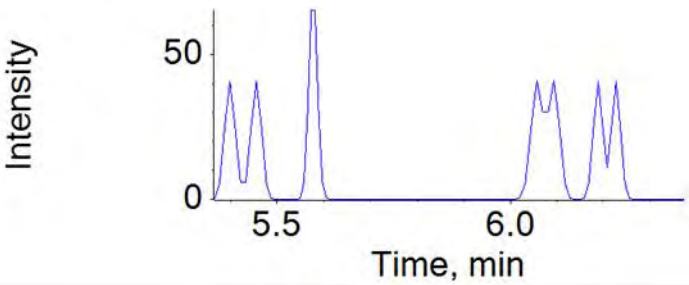
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

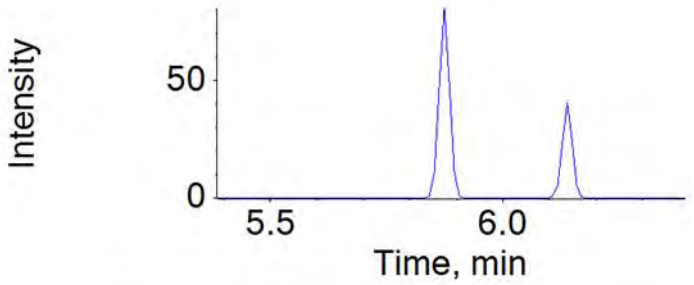
Component: PFUnDA
Primary Mass: 563.0 / 519.0



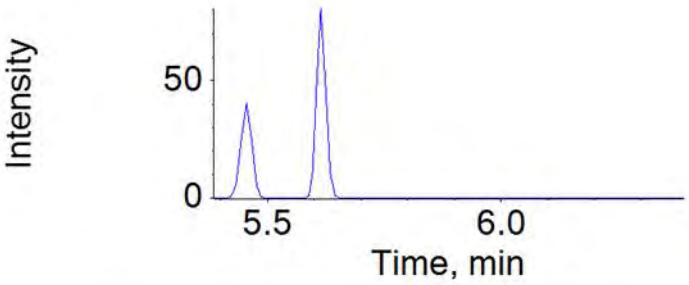
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



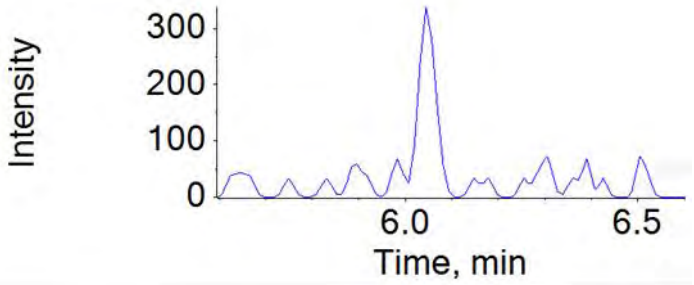
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



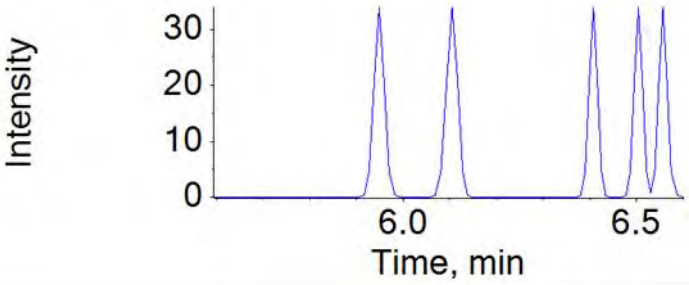
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



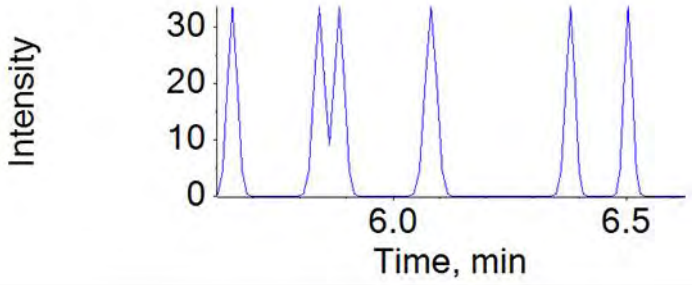
Component: PFDoDA
Primary Mass: 613.0 / 569.0



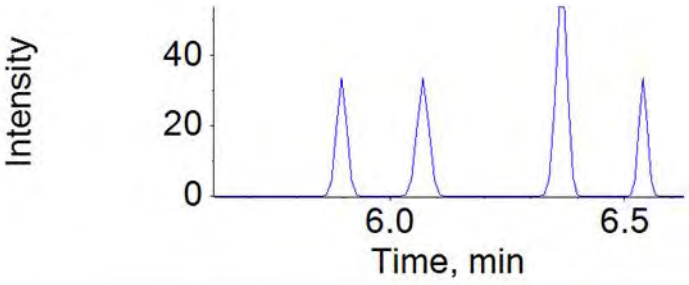
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



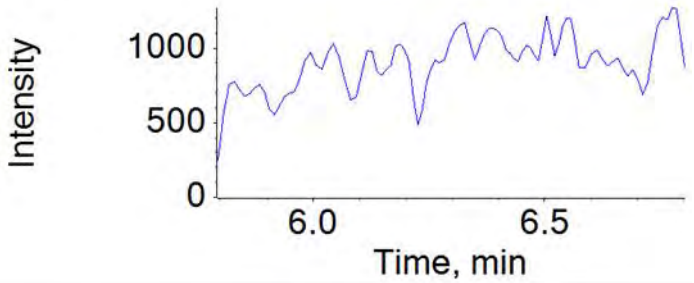
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



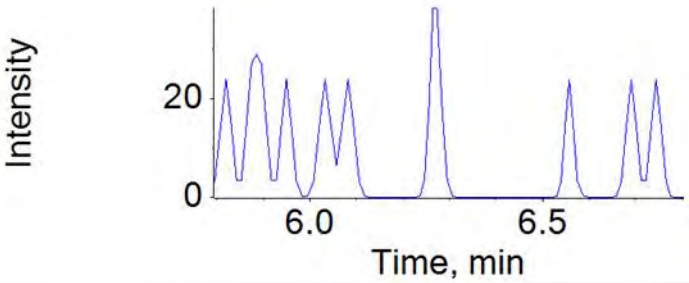
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

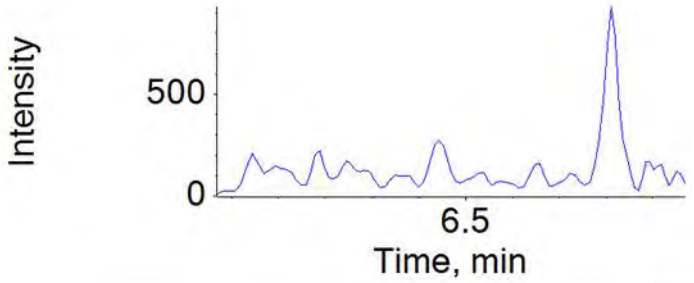
Component: PFTrDA
Primary Mass: 663.0 / 619.0



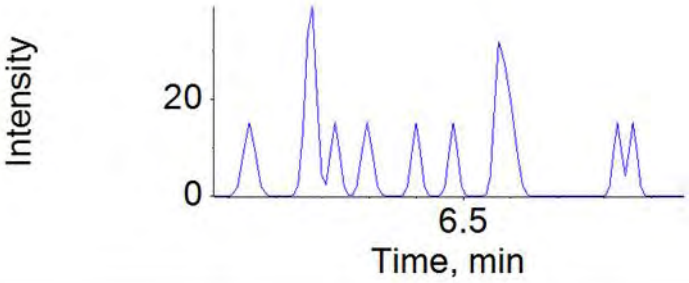
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



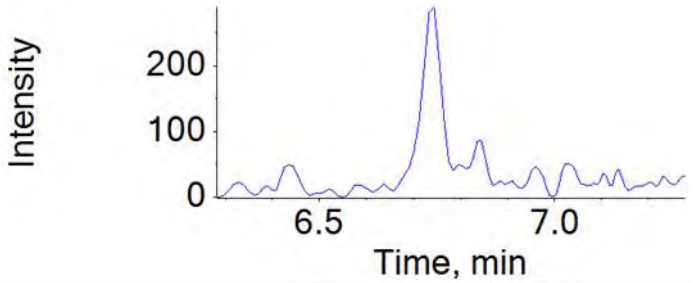
Component: PFTeDA
Primary Mass: 713.0 / 669.0



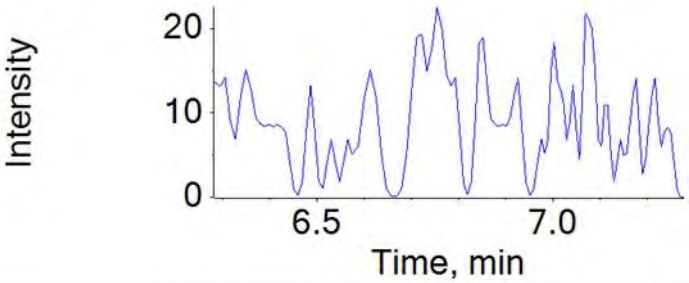
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



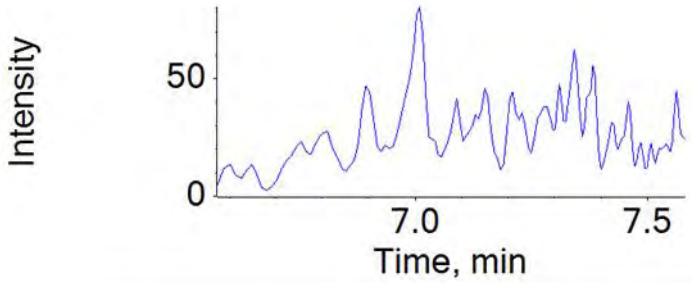
Component: PFHxDA
Primary Mass: 813.0 / 769.0



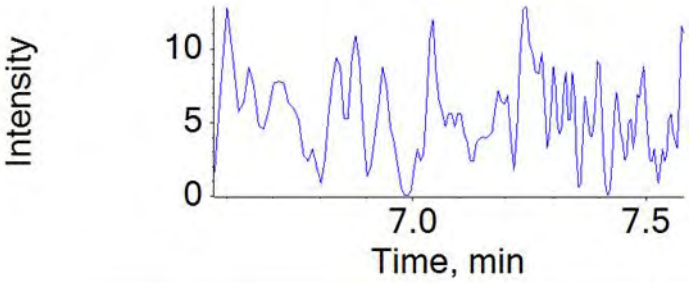
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



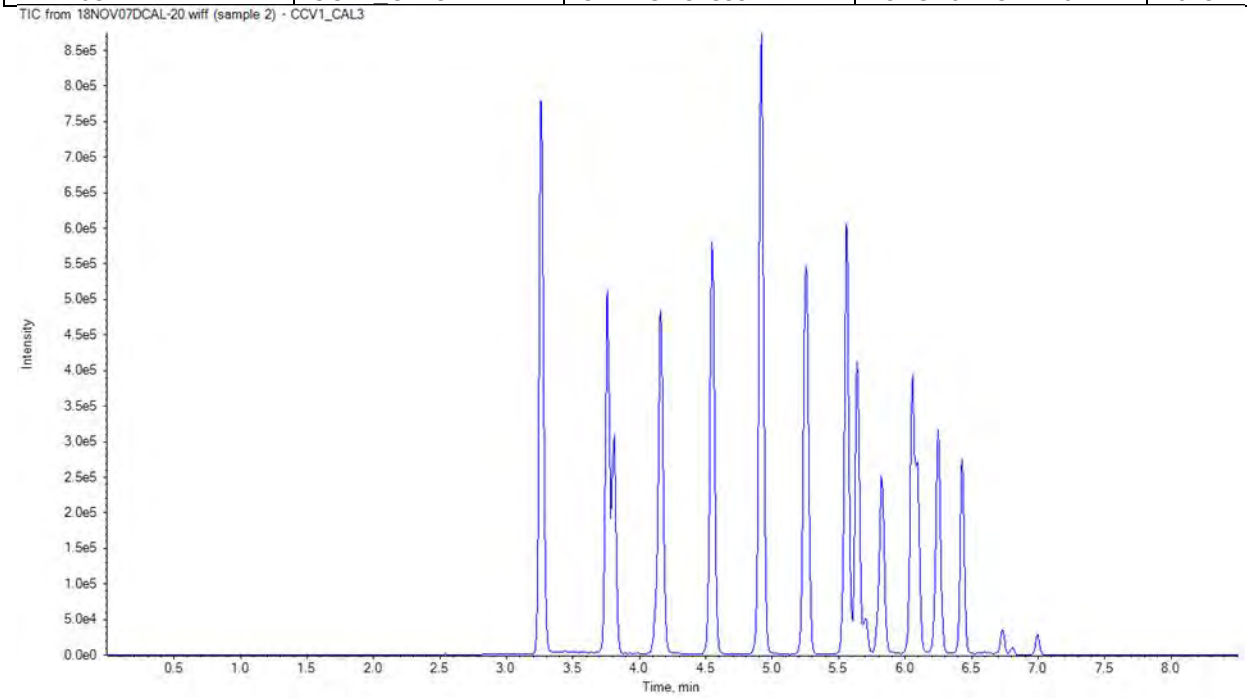
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALMOD31833F	18NOV07DCAL-20.wiff	2018-11-07T11:09:59



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	721701.6	730410.6	-1	50	
13C2-PFOA	5.0	512566.9	524423.6	-2	50	
13C4-PFOS	4.8	267946.3	274061.7	-2	50	
13C2-PFDA	5.0	316670.3	311442.1	2	50	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALMOD31833F	18NOV07DCAL-20.wiff	2018-11-07T11:09:59

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	278381.8	10	13C4-PFBA	780482.5	5.0	0.357	3.26	1.000	2.000	2.087	4	30	
PFPeA	286996.9	12	13C5-PFPeA	819317.3	5.0	0.350	3.76	1.000	2.000	2.082	4	30	
PFBS	155917.1	11	13C3-PFBS	430650.1	4.7	0.362	3.81	1.000	1.770	1.825	3	30	
4:2-FTS	41869.1	11	13C2-4:2-FTS	53424.6	4.7	0.784	4.13	1.000	1.980	2.107	6	30	
PFHxA	355844.6	12	13C5-PFHxA	678729.1	5.0	0.524	4.16	1.000	2.000	2.248	12	30	
PFPeS	84840.7	11	13C3-PFBS	430650.1	4.7	0.197	4.18	1.100	1.880	1.943	3	30	
PFHxS	126167.9	12	13C3-PFHxS	332171.0	4.7	0.380	4.55	1.000	1.890	1.925	2	30	
PFHpA	359438.8	12	13C4-PFHpA	553115.2	5.0	0.650	4.55	1.000	2.000	2.186	9	30	
6:2-FTS	30418.5	11	13C2-6:2-FTS	39617.7	4.8	0.768	4.91	1.000	2.090	1.915	-8	30	
PFHpS	118682.9	11	13C3-PFHxS	332171.0	4.7	0.357	4.91	1.080	1.900	1.869	-2	30	
PFOA	363186.2	11	13C8-PFOA	951797.5	5.0	0.382	4.92	1.000	2.000	2.148	7	30	
PFOS	113455.6	11	13C8-PFOS	281657.2	4.8	0.403	5.24	1.000	1.910	2.089	9	30	
PFNA	284061.5	11	13C9-PFNA	514994.9	5.0	0.552	5.26	1.000	2.000	2.061	3	30	
PFNS	70168.8	10	13C8-PFOS	281657.2	4.8	0.249	5.54	1.060	1.920	1.975	3	30	
PFDA	243089.4	11	13C6-PFDA	643202.5	5.0	0.378	5.56	1.000	2.000	2.079	4	30	
8:2-FTS	25674.2	11	13C2-8:2-FTS	27654.3	4.8	0.928	5.56	1.000	2.110	2.093	-1	30	
PFOSA	272309.7	12	13C8-PFOSA	710116.3	5.0	0.383	5.64	1.000	2.000	2.073	4	30	
NMeFOSAA	27107.5	12	d3-NMeFOSAA	85750.0	5.0	0.316	5.71	1.000	2.000	1.627	-19	30	
PFDS	57911.4	12	13C8-PFOS	281657.2	4.8	0.206	5.80	1.110	1.930	1.964	2	30	
PFUnDA	206684.1	12	13C7-PFUnDA	274326.2	5.0	0.753	5.82	1.000	2.000	2.161	8	30	
NEtFOSAA	29353.4	12	d5-NEtFOSAA	64529.1	5.0	0.455	5.84	1.000	2.000	1.955	-2	30	
PFDoDA	220745.0	12	13C2-PFDoDA	586710.7	5.0	0.376	6.05	1.000	2.000	2.039	2	30	
10:2-FTS	14526.2	12	13C2-8:2-FTS	27654.3	4.8	0.525	6.07	1.090	2.120	1.636	-23	30	
NMePFOSAE	157888.7	12	d7-NMePFOSAE	328201.0	5.0	0.481	6.10	1.000	2.000	2.156	8	30	
NMePFOSA	30788.7	12	d3-NMePFOSA	80699.5	5.0	0.382	6.10	1.000	2.000	2.136	7	30	
PFDoS	30510.8	11	13C8-PFOS	281657.2	4.8	0.108	6.22	1.190	1.940	2.091	8	30	
NEtPFOSAE	187574.4	11	d9-NEtPFOSAE	274277.4	5.0	0.684	6.25	1.000	2.000	2.192	10	30	
NEtPFOSA	29547.8	12	d5-NEtPFOSA	72708.8	5.0	0.406	6.26	1.000	2.000	1.790	-11	30	
PFTrDA	191338.9	11	13C2-PFDoDA	586710.7	5.0	0.326	6.25	1.030	2.000	2.057	3	30	
PFTeDA	153182.8	11	13C2-PFTeDA	429266.0	5.0	0.357	6.43	1.000	2.000	2.096	5	30	
PFHxDA	71156.3	11	13C2-PFTeDA	429266.0	5.0	0.166	6.73	1.050	2.000	2.058	3	30	
PFODA	60356.7	10	13C2-PFTeDA	429266.0	5.0	0.141	6.99	1.090	2.000	2.014	1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_CAL3			**Data File:**		18NOV07DCAL-20.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-07T11:09:59
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	721701.6	730410.6	-1	50	
13C2-PFOA	5.0	512566.9	524423.6	-2	50	
13C4-PFOS	4.8	267946.3	274061.7	-2	50	
13C2-PFDA	5.0	316670.3	311442.1	2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	780482.5	13C3-PFBA	721701.6	1.081	5.000	5.005	100	70-130	
E13C5-PFPeA	819317.3	13C3-PFBA	721701.6	1.135	5.000	4.946	99	70-130	
E13C3-PFBS	430650.1	13C3-PFBA	721701.6	0.597	4.650	4.379	94	70-130	
E13C2-4:2-FTS	53424.6	13C2-PFOA	512566.9	0.104	4.670	4.703	101	70-130	
E13C5-PFHxA	678729.1	13C2-PFOA	512566.9	1.324	5.000	4.871	97	70-130	
E13C3-PFHxS	332171.0	13C2-PFOA	512566.9	0.648	4.730	4.652	98	70-130	
E13C4-PFHpA	553115.2	13C2-PFOA	512566.9	1.079	5.000	4.909	98	70-130	
E13C2-6:2-FTS	39617.7	13C2-PFOA	512566.9	0.077	4.750	5.154	109	70-130	
E13C8-PFOA	951797.5	13C2-PFOA	512566.9	1.857	5.000	5.178	104	70-130	
E13C8-PFOS	281657.2	13C4-PFOS	267946.3	1.051	4.780	4.648	97	70-130	
E13C9-PFNA	514994.9	13C4-PFOS	267946.3	1.922	5.000	5.250	105	70-130	
E13C6-PFDA	643202.5	13C2-PFDA	316670.3	2.031	5.000	5.108	102	70-130	
E13C2-8:2-FTS	27654.3	13C2-PFDA	316670.3	0.087	4.790	4.621	96	70-130	
E13C8-PFOSA	710116.3	13C2-PFDA	316670.3	2.242	5.000	4.893	98	70-130	
Ed3-NMeFOSAA	85750.0	13C2-PFDA	316670.3	0.271	5.000	5.036	101	70-130	
E13C7-PFUnDA	274326.2	13C2-PFDA	316670.3	0.866	5.000	4.997	100	70-130	
Ed5-NEtFOSAA	64529.1	13C2-PFDA	316670.3	0.204	5.000	4.716	94	70-130	
E13C2-PFDoDA	586710.7	13C2-PFDA	316670.3	1.853	5.000	4.995	100	70-130	
Ed7-NMePFOSAE	328201.0	13C2-PFDA	316670.3	1.036	5.000	4.820	96	70-130	
Ed3-NMePFOSA	80699.5	13C2-PFDA	316670.3	0.255	5.000	4.665	93	70-130	
Ed9-NEtPFOSAE	274277.4	13C2-PFDA	316670.3	0.866	5.000	4.946	99	70-130	
Ed5-NEtPFOSA	72708.8	13C2-PFDA	316670.3	0.230	5.000	5.316	106	70-130	
E13C2-PFTeDA	429266.0	13C2-PFDA	316670.3	1.356	5.000	4.880	98	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

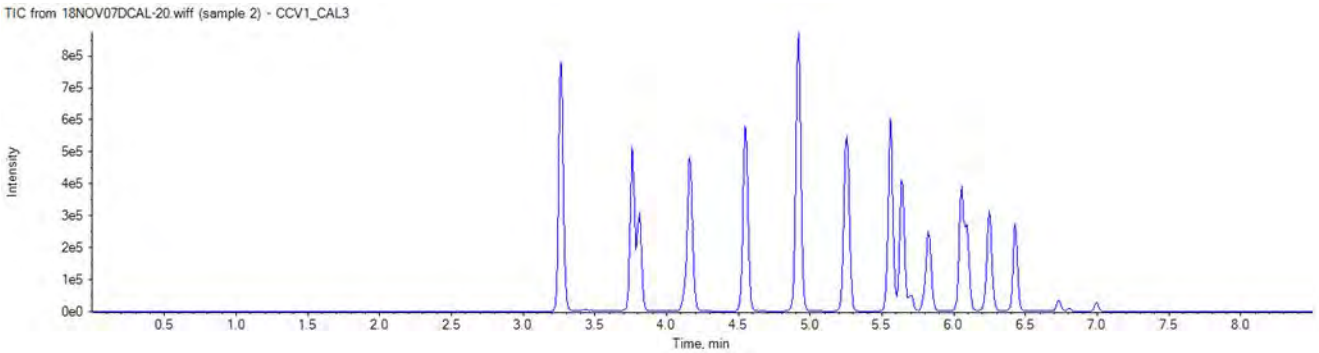
Analyte Quantitation Peak Table

Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-20.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	278381.8		A	13C4-PFBA	3.26	780482.5	0.357	2.087
PFPeA	3.76	1.000	286996.9		A	13C5-PFPeA	3.76	819317.3	0.350	2.082
PFBS	3.81	1.000	155917.1		A	13C3-PFBS	3.81	430650.1	0.362	1.825
4:2-FTS	4.13	1.000	41869.1		A	13C2-4:2-FTS	4.13	53424.6	0.784	2.107
PFHxA	4.16	1.000	355844.6		A	13C5-PFHxA	4.16	678729.1	0.524	2.248
PFPeS	4.18	1.100	84840.7		A	13C3-PFBS	3.81	430650.1	0.197	1.943
PFHxS	4.55	1.000	126167.9		A	13C3-PFHxS	4.55	332171.0	0.380	1.925
PFHpA	4.55	1.000	359438.8		A	13C4-PFHpA	4.55	553115.2	0.650	2.186
6:2-FTS	4.91	1.000	30418.5		A	13C2-6:2-FTS	4.91	39617.7	0.768	1.915
PFHpS	4.91	1.080	118682.9		A	13C3-PFHxS	4.55	332171.0	0.357	1.869
PFOA	4.92	1.000	363186.2		A	13C8-PFOA	4.92	951797.5	0.382	2.148
PFOS	5.24	1.000	113455.6		M	13C8-PFOS	5.24	281657.2	0.403	2.089
PFNA	5.26	1.000	284061.5		A	13C9-PFNA	5.26	514994.9	0.552	2.061
PFNS	5.54	1.060	70168.8		A	13C8-PFOS	5.24	281657.2	0.249	1.975
PFDA	5.56	1.000	243089.4		A	13C6-PFDA	5.56	643202.5	0.378	2.079
8:2-FTS	5.56	1.000	25674.2		A	13C2-8:2-FTS	5.56	27654.3	0.928	2.093
PFOSA	5.64	1.000	272309.7		A	13C8-PFOSA	5.64	710116.3	0.383	2.073
NMeFOSAA	5.71	1.000	27107.5		A	d3-NMeFOSAA	5.70	85750.0	0.316	1.627
PFDS	5.80	1.110	57911.4		A	13C8-PFOS	5.24	281657.2	0.206	1.964
PFUnDA	5.82	1.000	206684.1		A	13C7-PFUnDA	5.82	274326.2	0.753	2.161
NEtFOSAA	5.84	1.000	29353.4		A	d5-NEtFOSAA	5.84	64529.1	0.455	1.955
PFDoDA	6.05	1.000	220745.0		A	13C2-PFDoDA	6.05	586710.7	0.376	2.039
10:2-FTS	6.07	1.090	14526.2		A	13C2-8:2-FTS	5.56	27654.3	0.525	1.636
NMePFOSAE	6.10	1.000	157888.7		A	d7-NMePFOSAE	6.09	328201.0	0.481	2.156
NMePFOSA	6.10	1.000	30788.7		A	d3-NMePFOSA	6.10	80699.5	0.382	2.136
PFDoS	6.22	1.190	30510.8		A	13C8-PFOS	5.24	281657.2	0.108	2.091
NEtPFOSAE	6.25	1.000	187574.4		A	d9-NEtPFOSAE	6.24	274277.4	0.684	2.192
NEtPFOSA	6.26	1.000	29547.8		A	d5-NEtPFOSA	6.26	72708.8	0.406	1.790
PFTrDA	6.25	1.030	191338.9		A	13C2-PFDoDA	6.05	586710.7	0.326	2.057
PFTeDA	6.43	1.000	153182.8		A	13C2-PFTeDA	6.43	429266.0	0.357	2.096
PFHxDA	6.73	1.050	71156.3		A	13C2-PFTeDA	6.43	429266.0	0.166	2.058
PFODA	6.99	1.090	60356.7		A	13C2-PFTeDA	6.43	429266.0	0.141	2.014

Total Ion Chromatogram

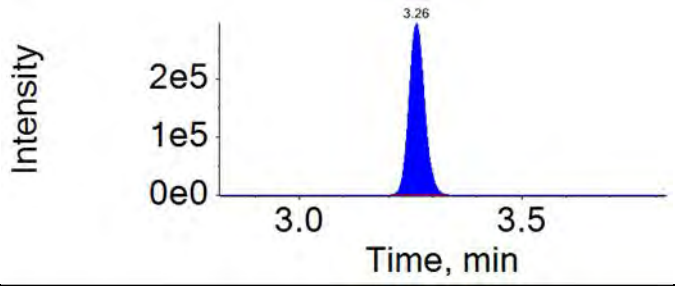


APPROVED
By JPT at 2:53 pm, 11/7/18

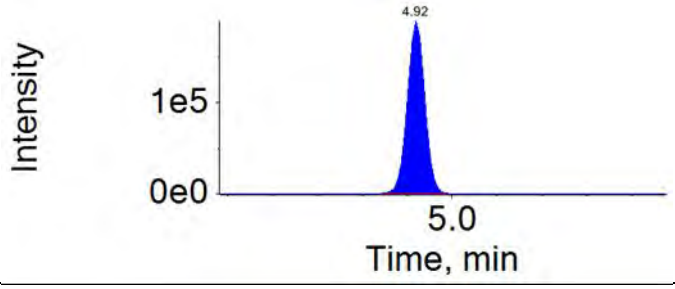
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

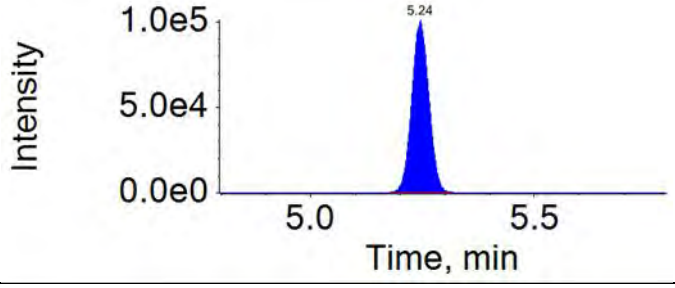
Injection Standard: 13C3-PFBA
216.0 / 172.0



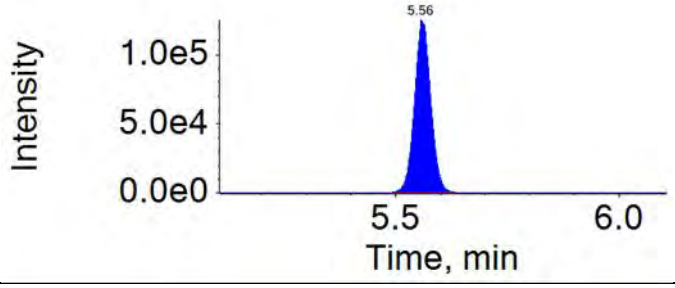
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

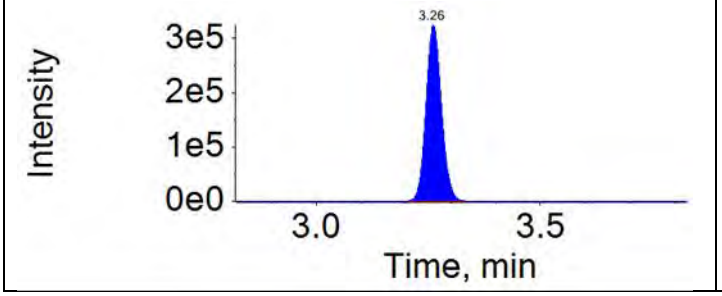


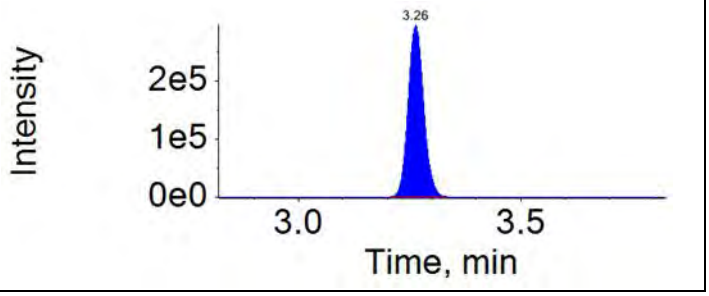
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

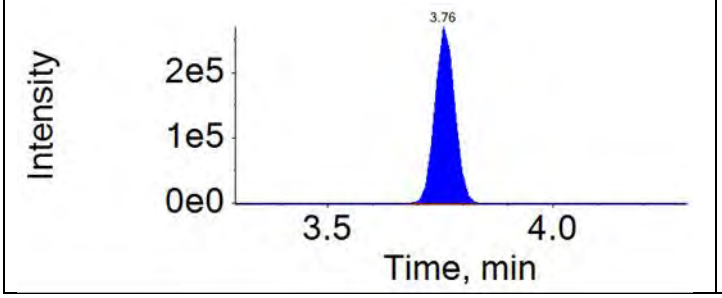
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

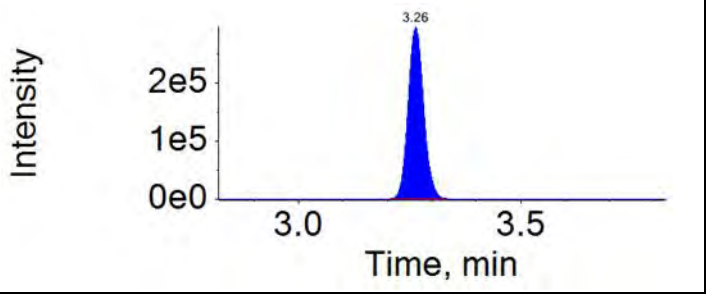
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



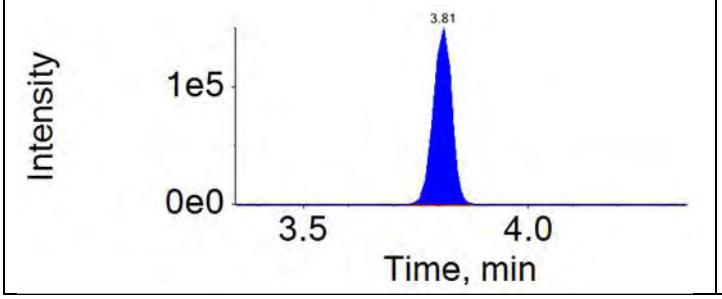


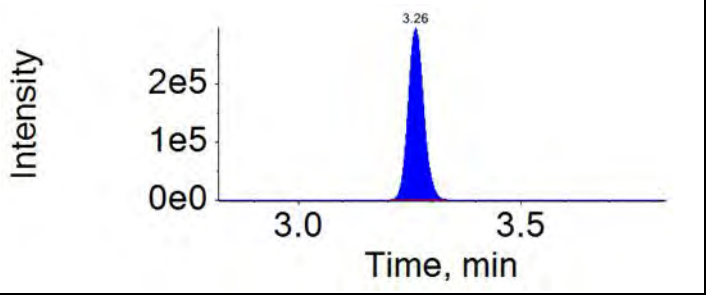
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



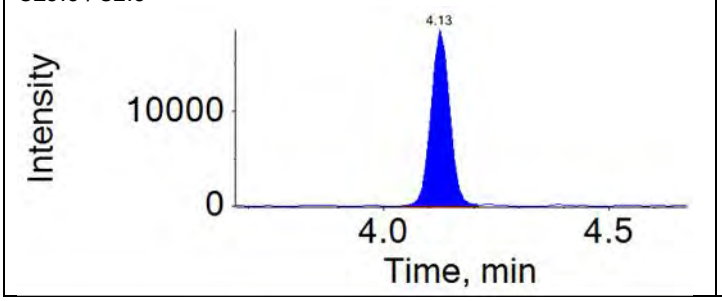


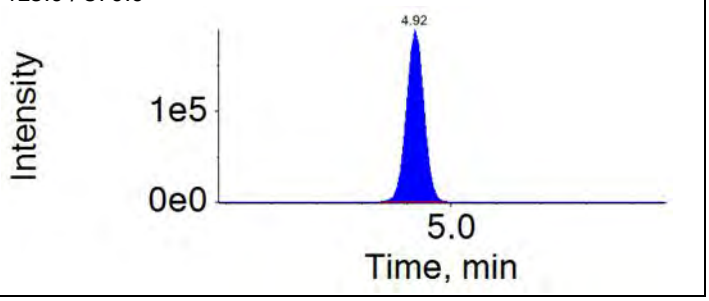
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

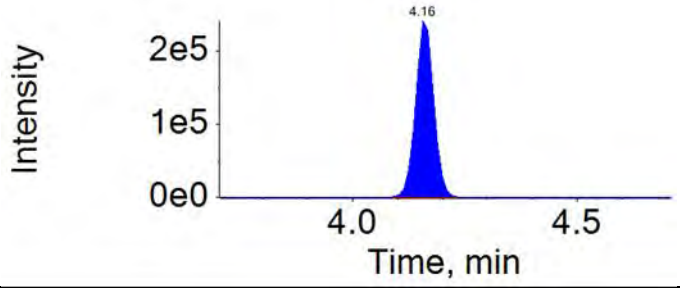
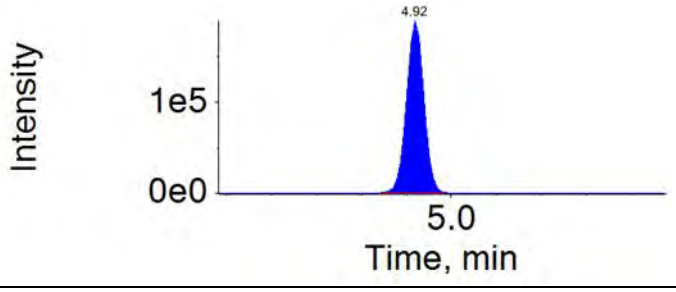


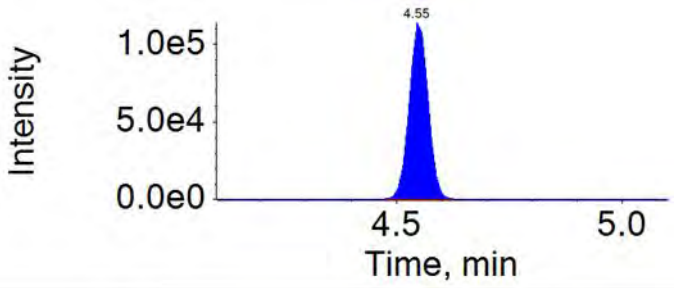
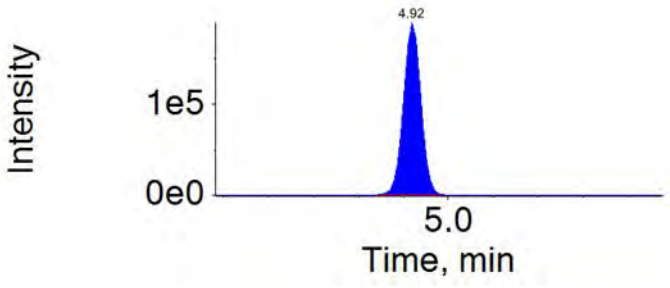


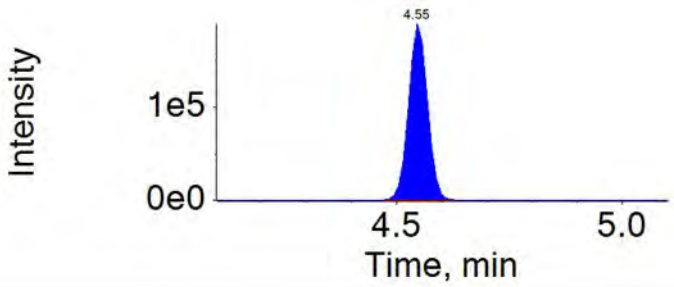
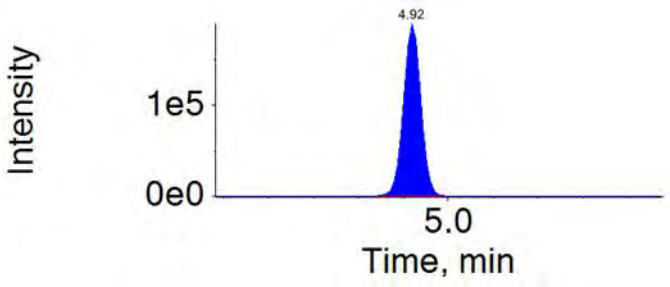
APPROVED
By JPT at 2:53 pm, 11/7/18

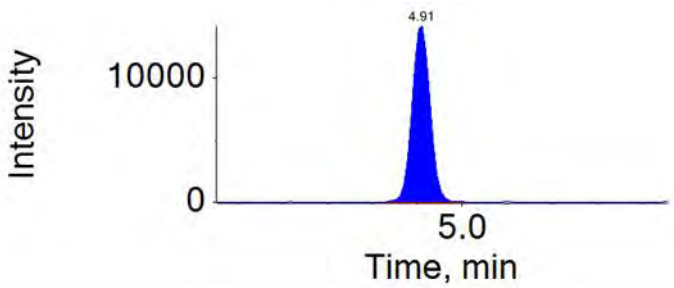
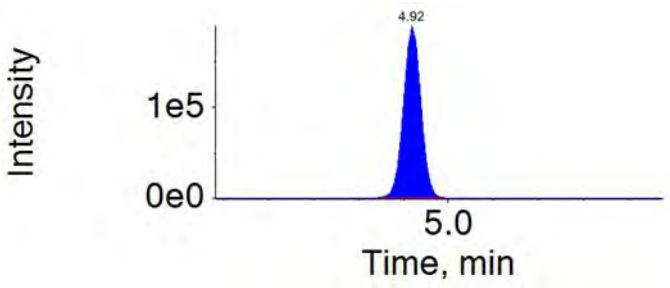
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

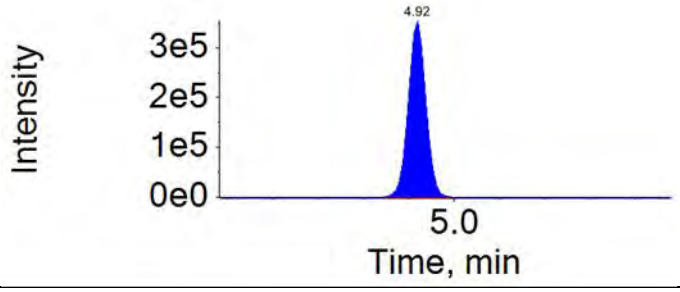
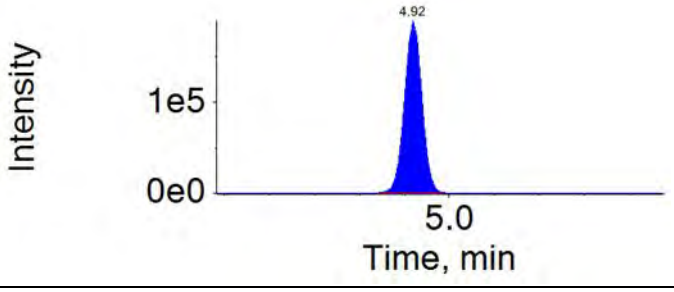
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

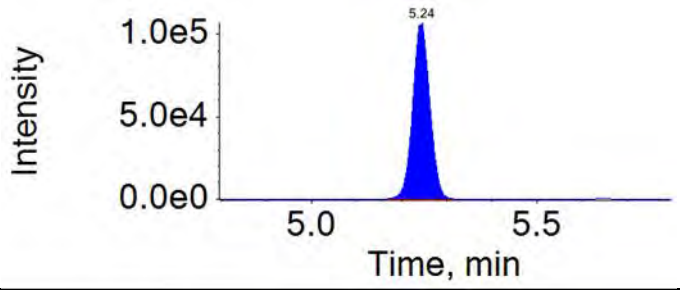
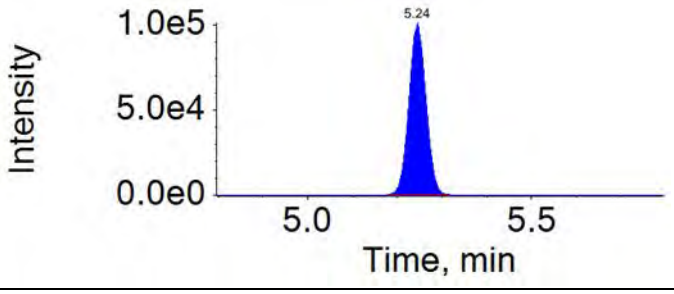
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

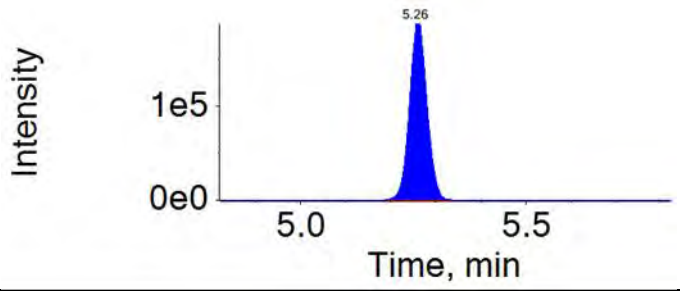
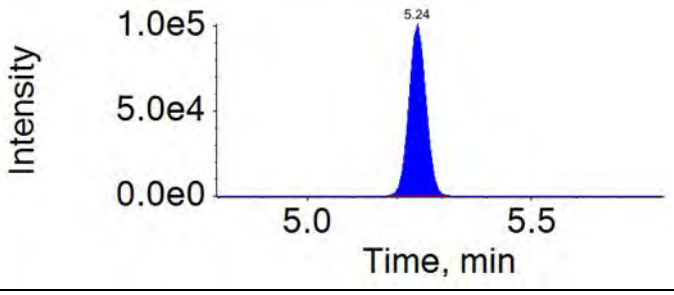
APPROVED
By JPT at 2:53 pm, 11/7/18

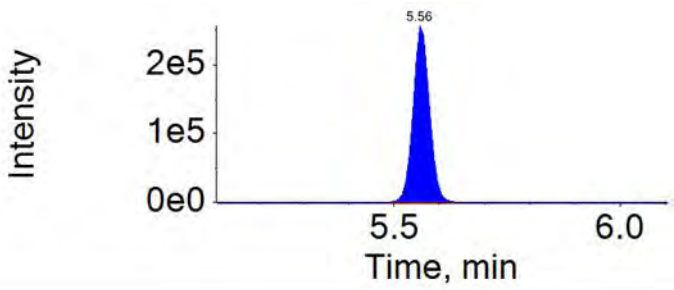
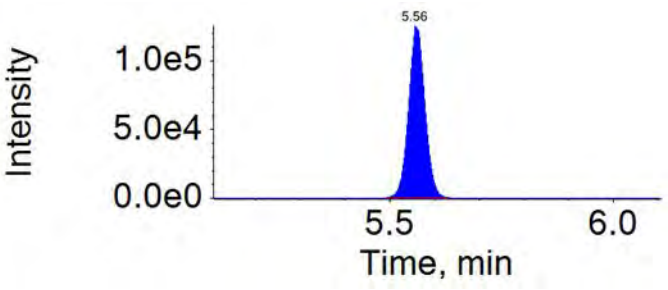
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

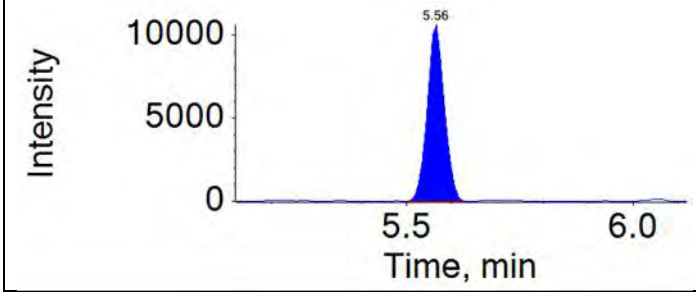
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

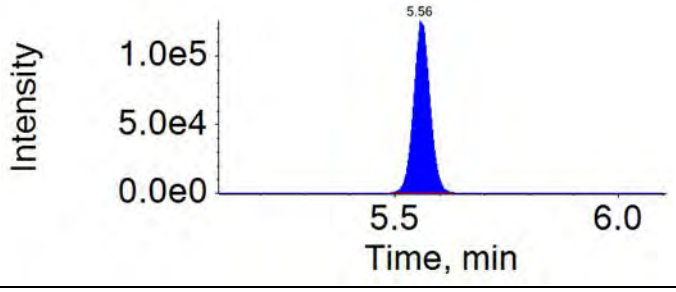
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

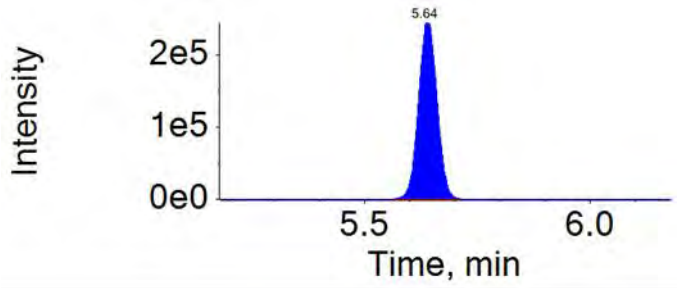
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

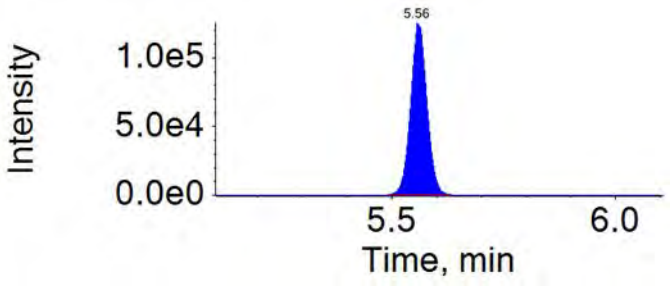
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



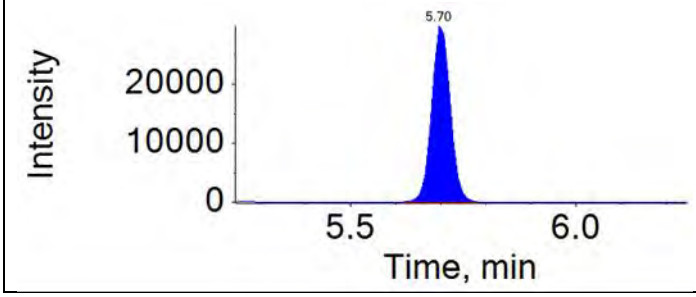


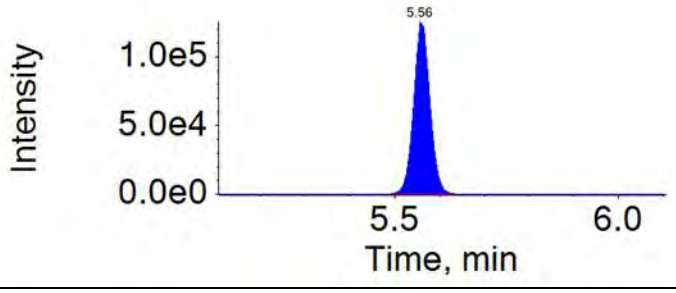
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



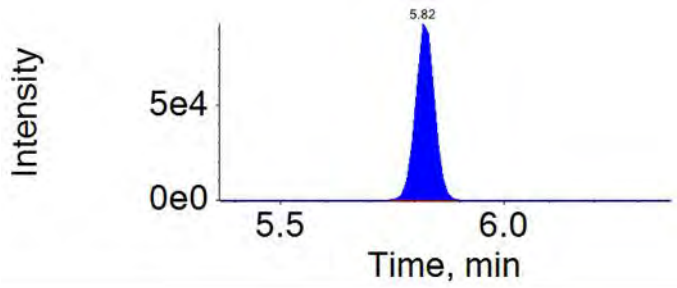


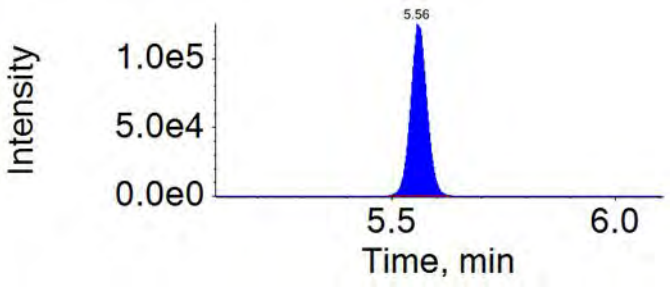
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





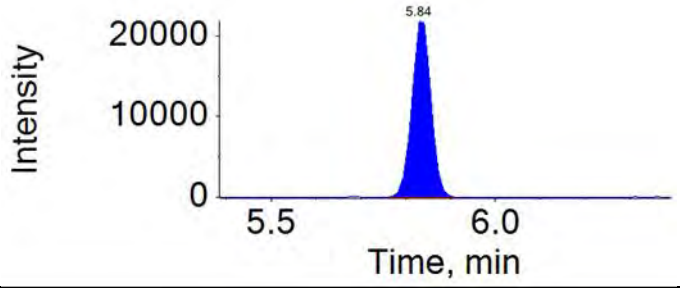
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

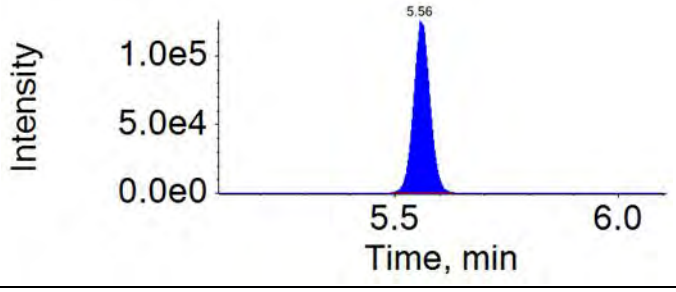




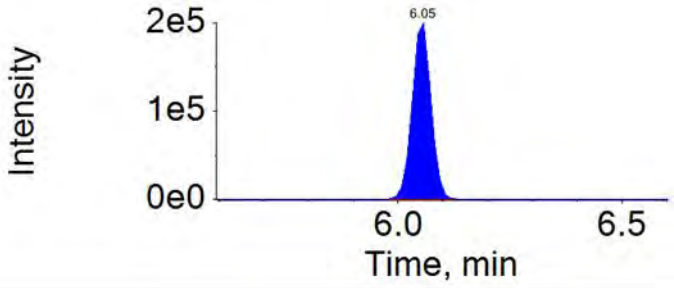
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

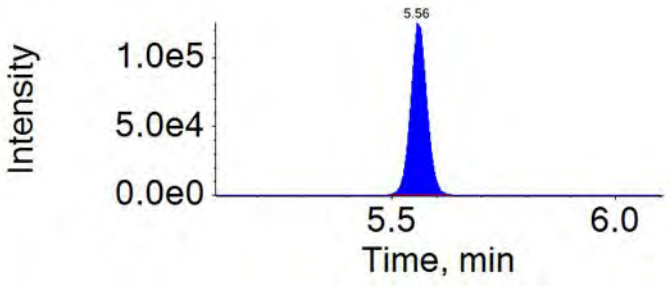
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



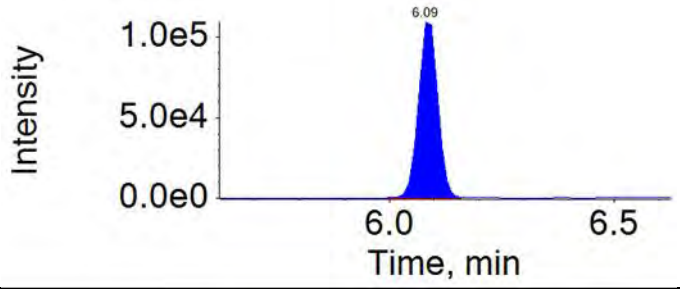


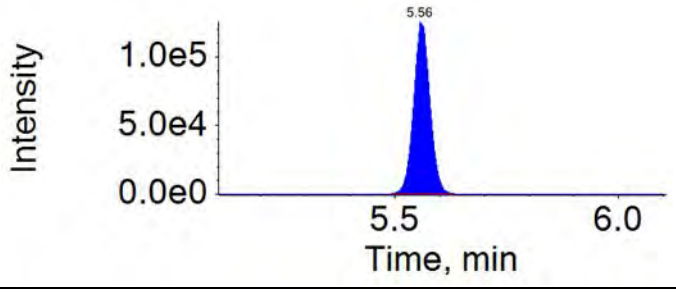
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



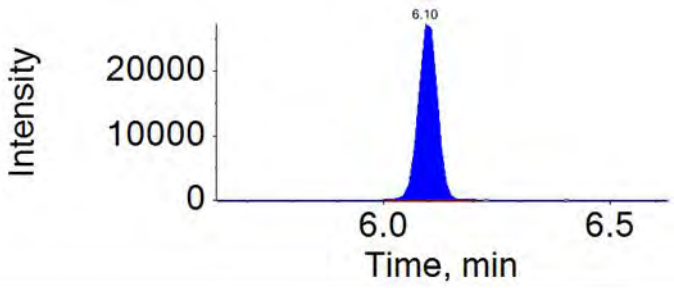


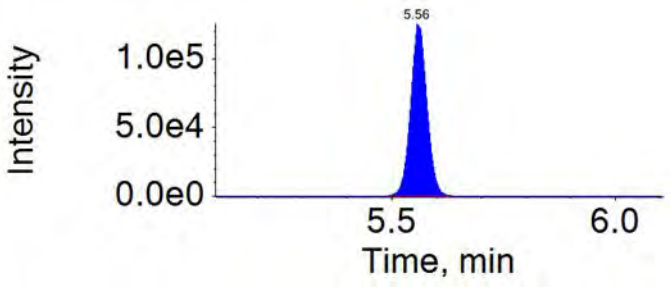
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



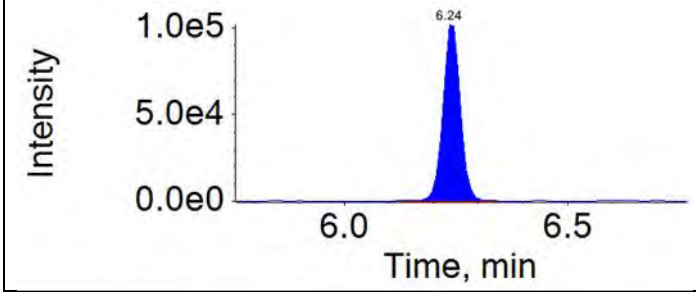


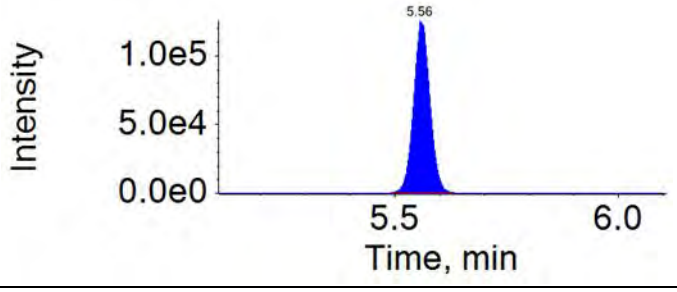
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

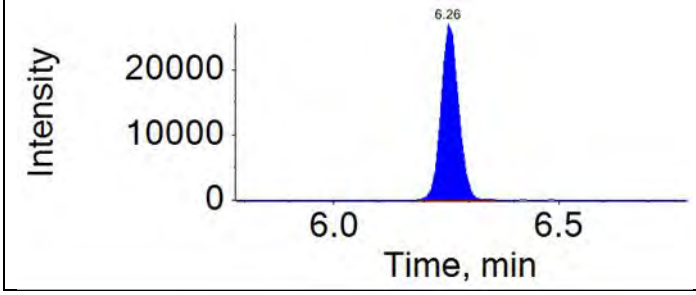
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

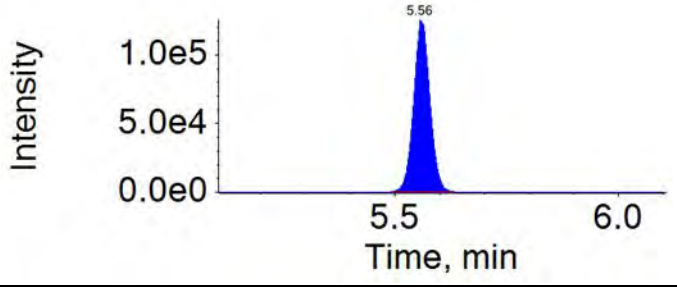
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



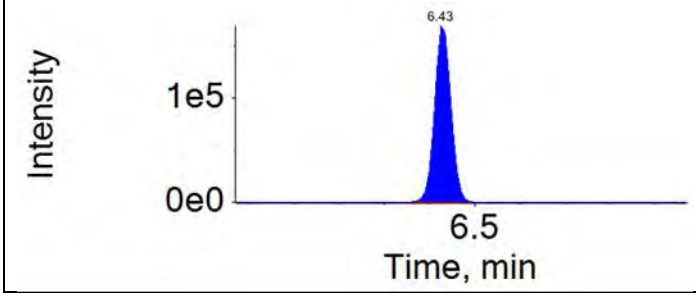


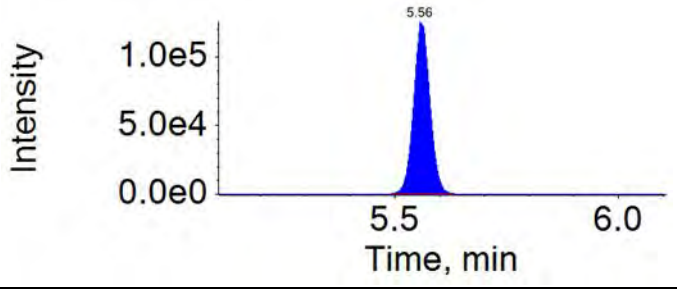
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



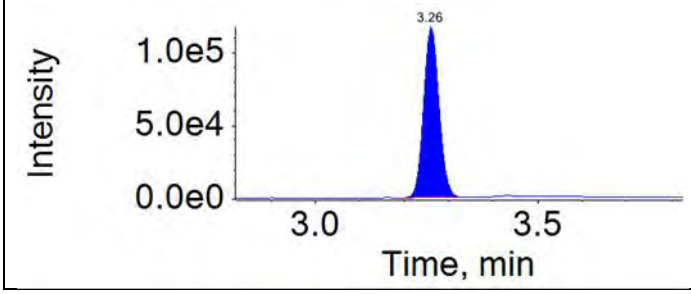


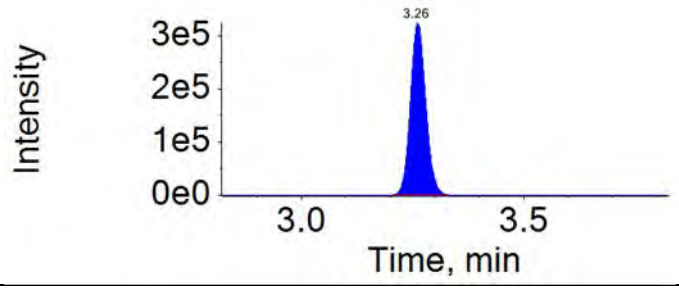
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

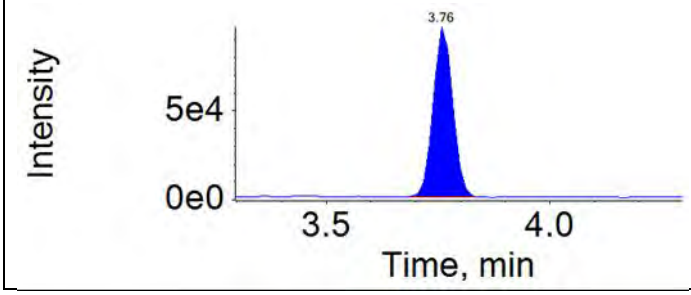
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

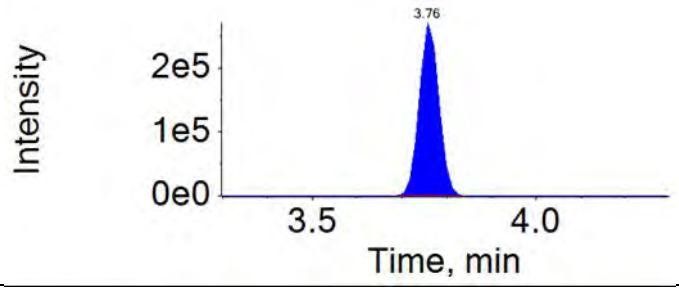
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



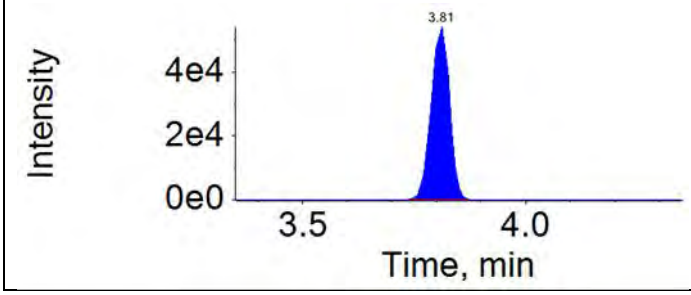


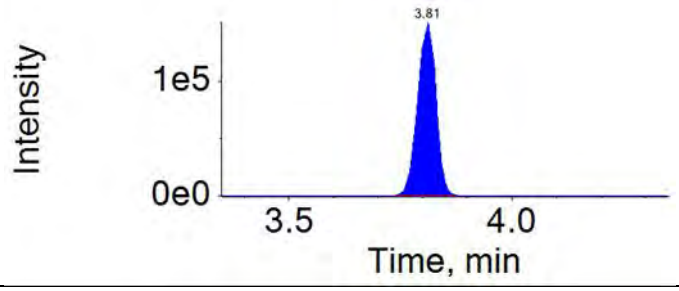
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



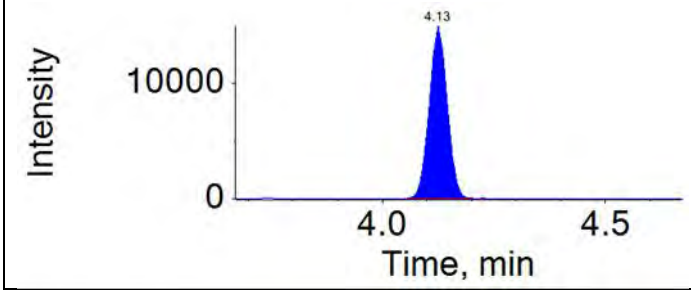


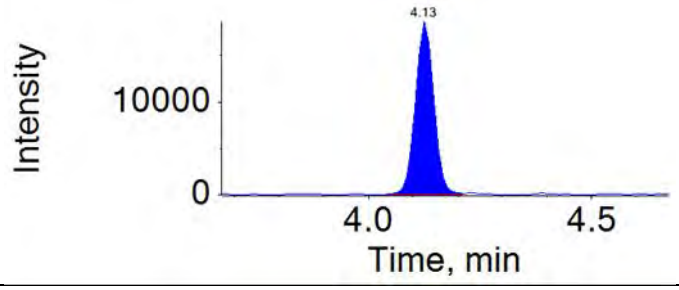
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

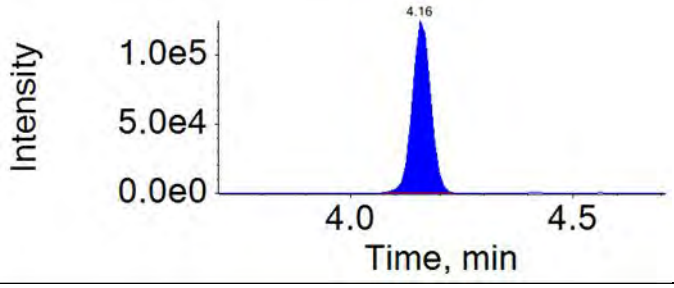
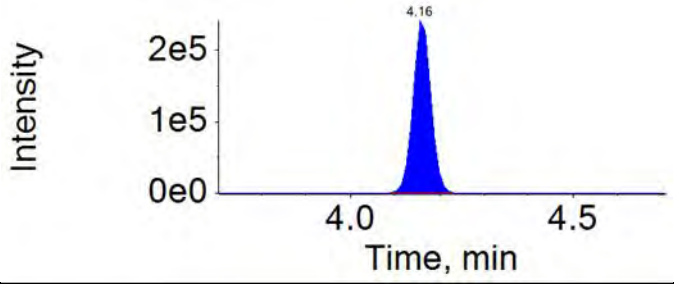


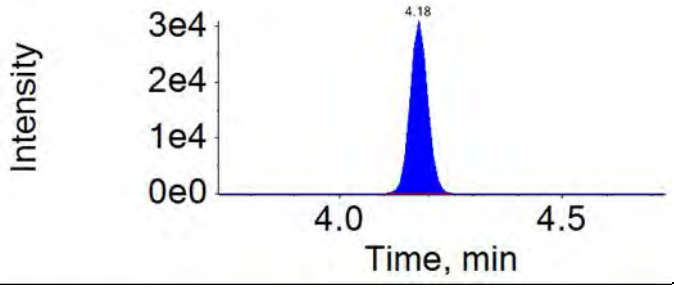
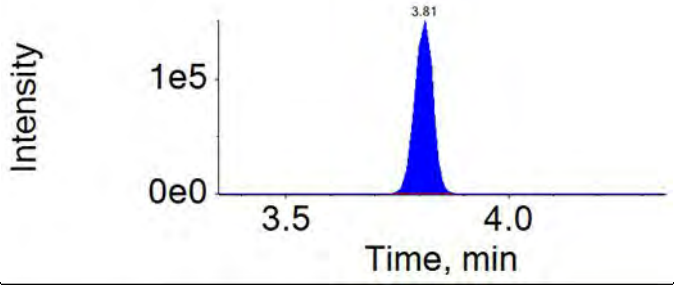


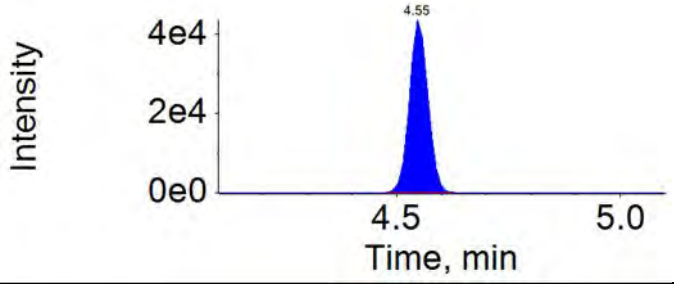
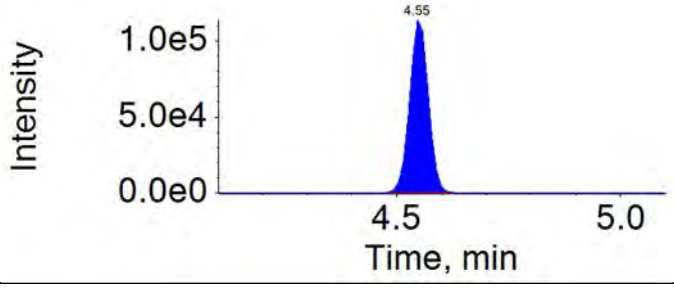
APPROVED
By JPT at 2:53 pm, 11/7/18

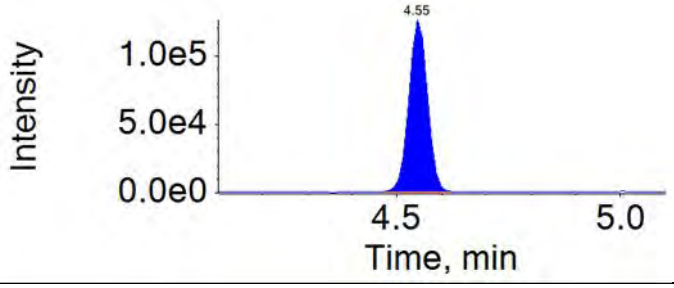
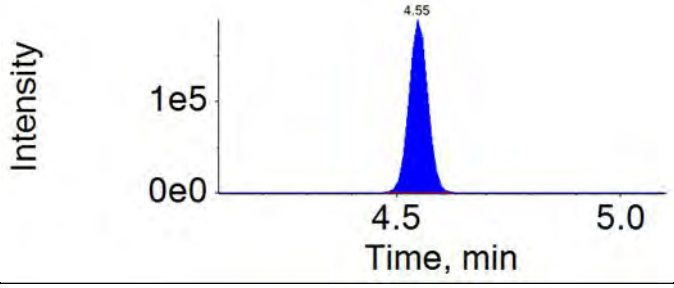
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

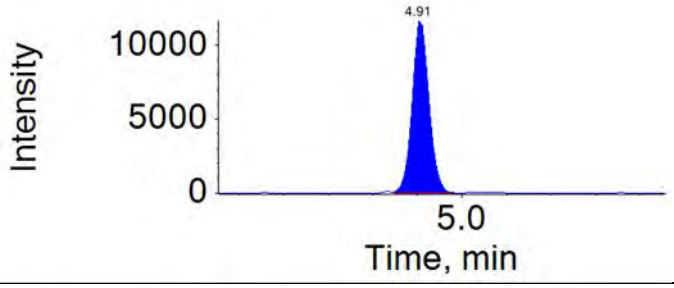
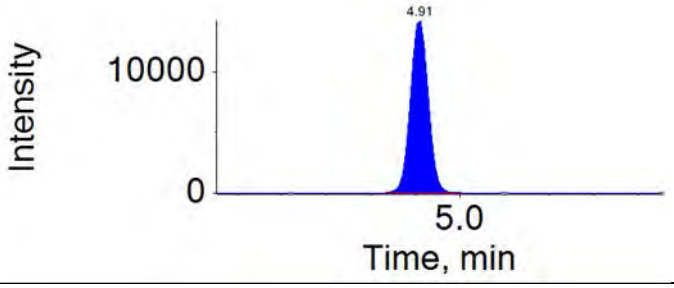
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

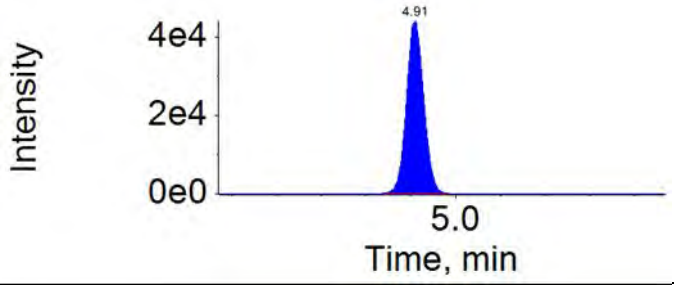
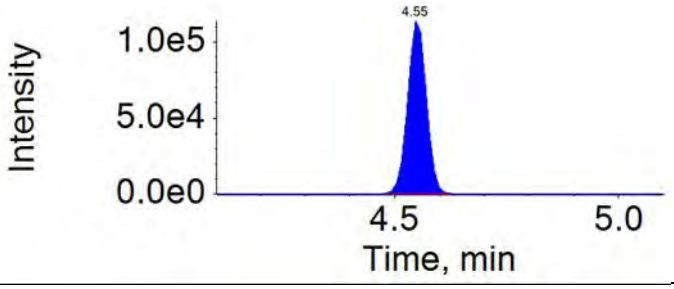
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

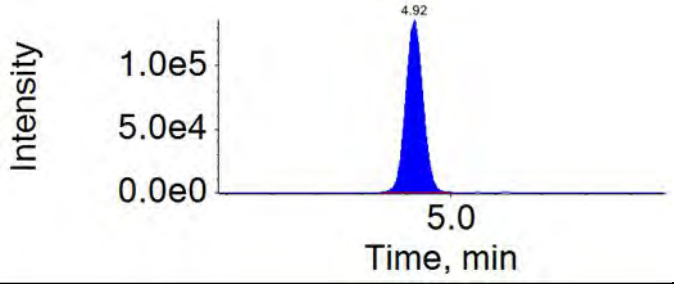
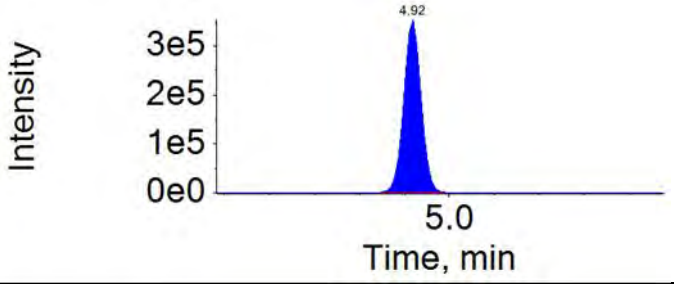
APPROVED
By JPT at 2:53 pm, 11/7/18

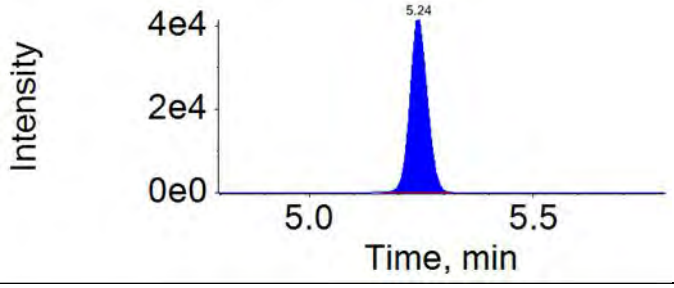
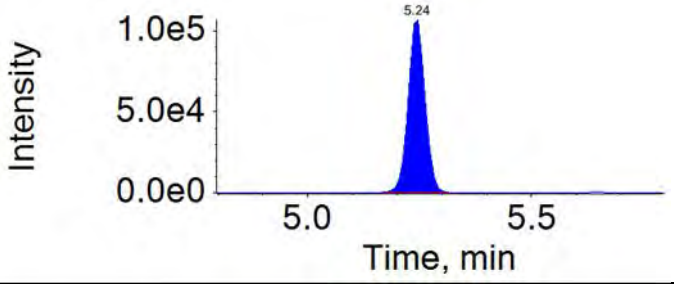
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

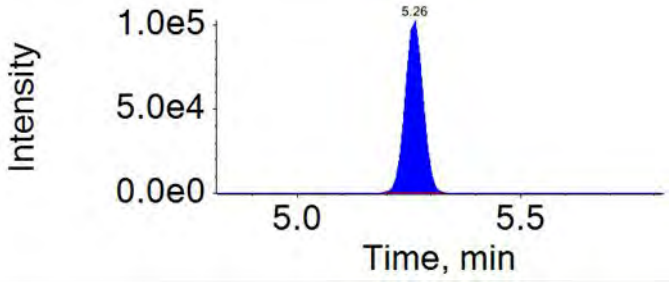
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

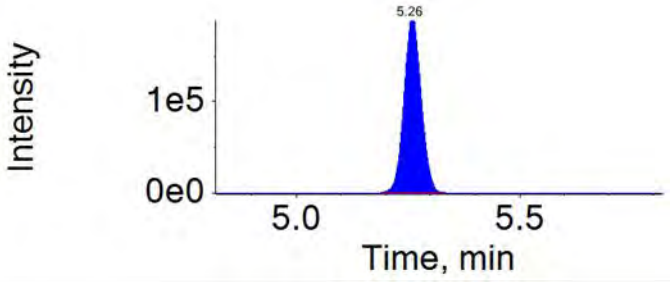
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

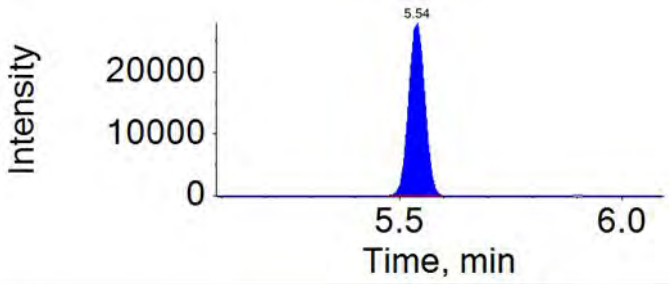
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

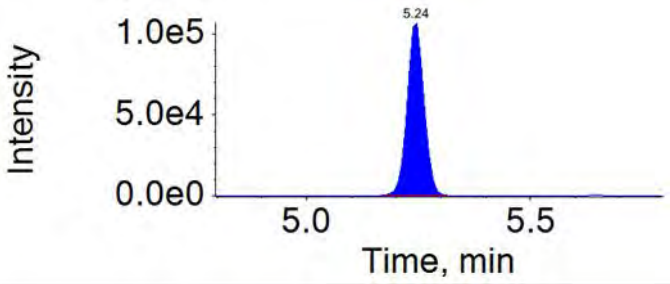
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



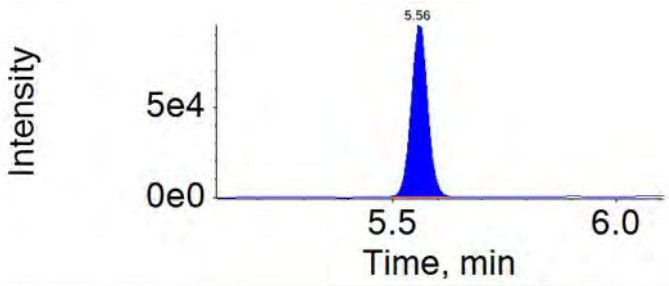


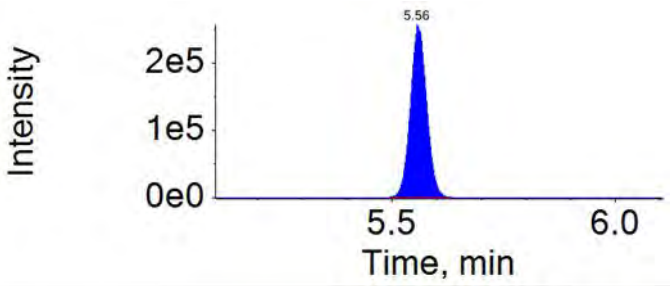
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



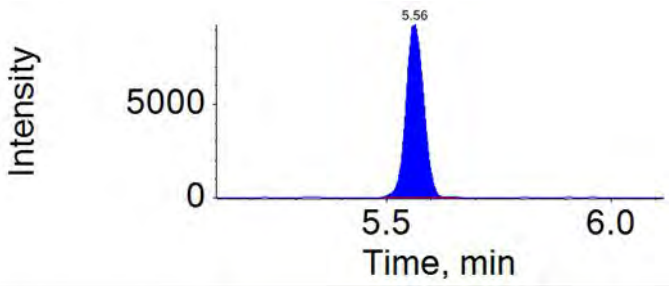


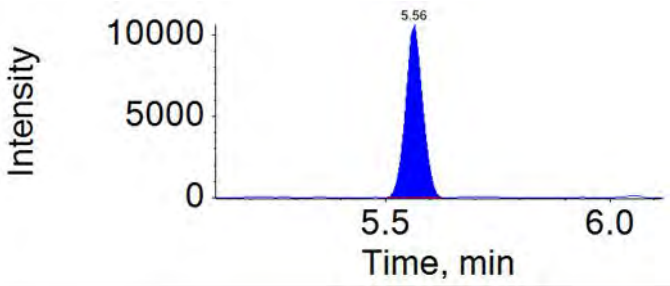
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

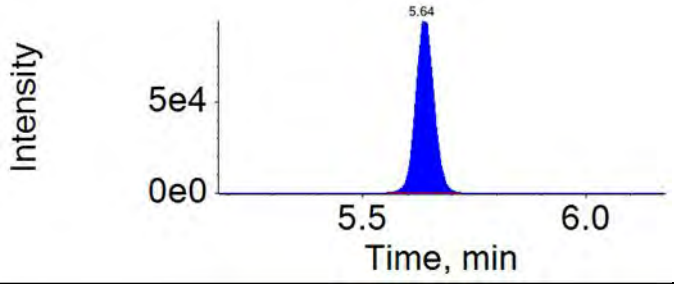
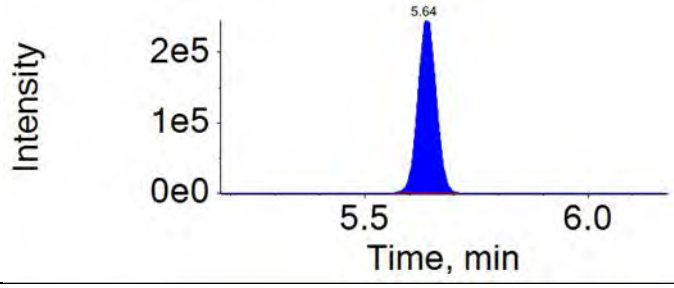


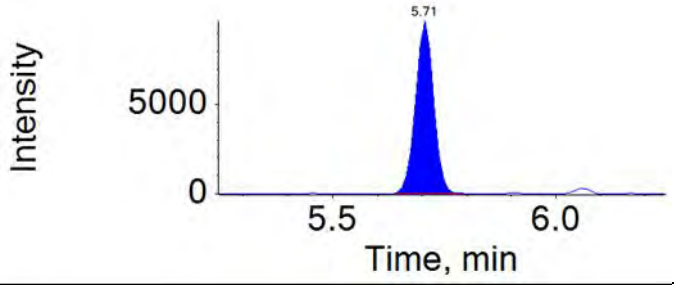
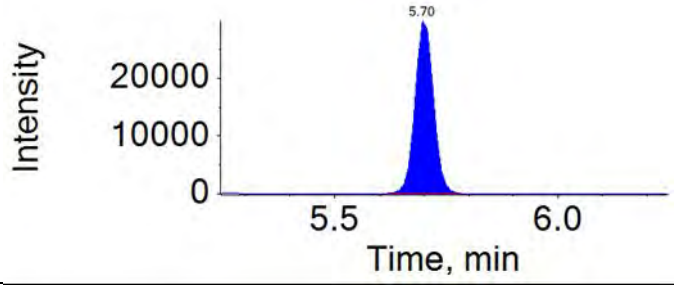


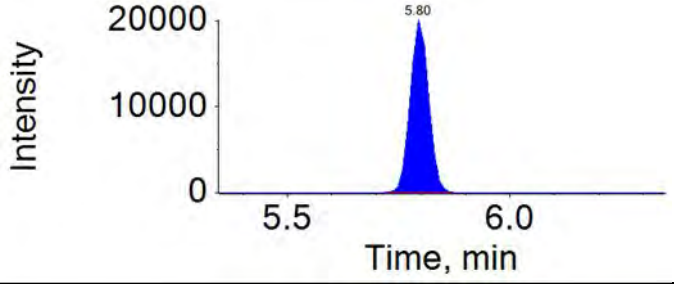
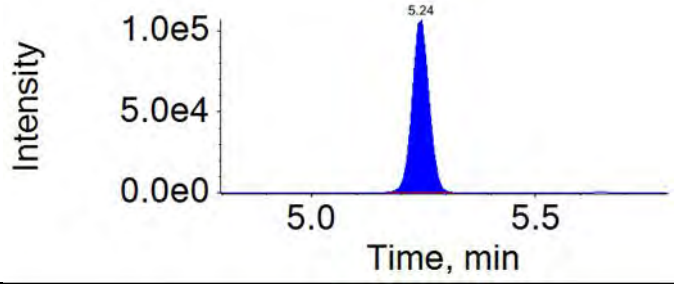
APPROVED
By JPT at 2:53 pm, 11/7/18

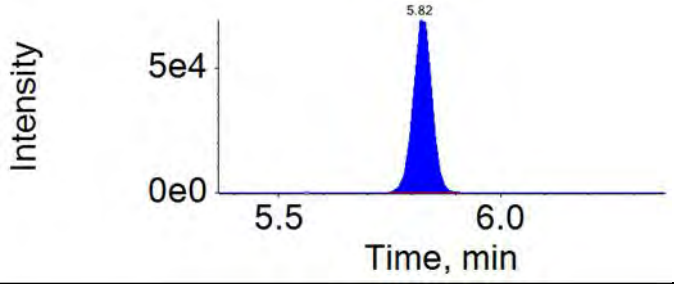
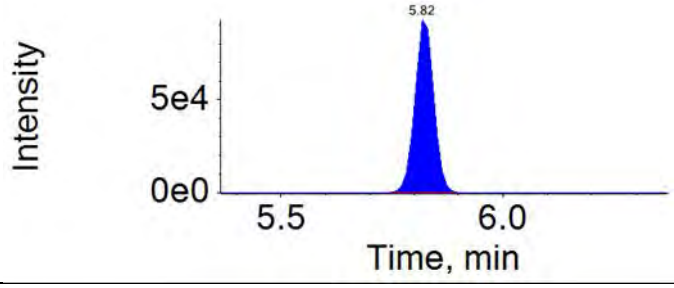
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

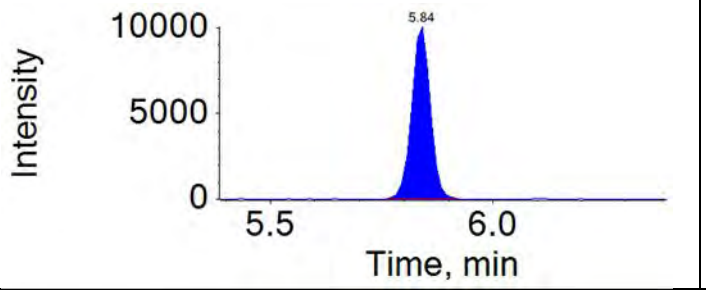
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

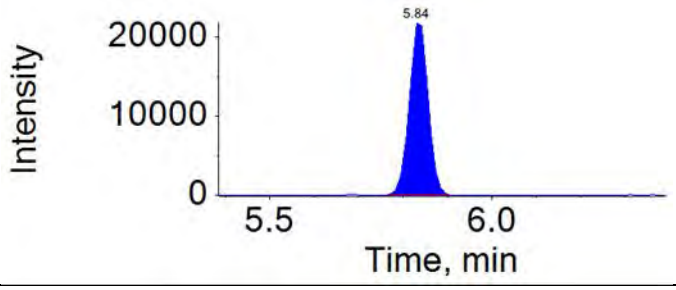
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

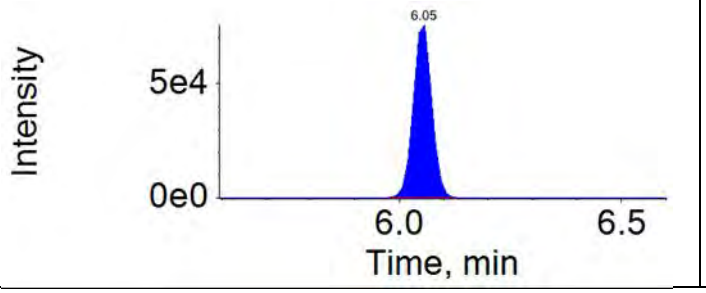
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

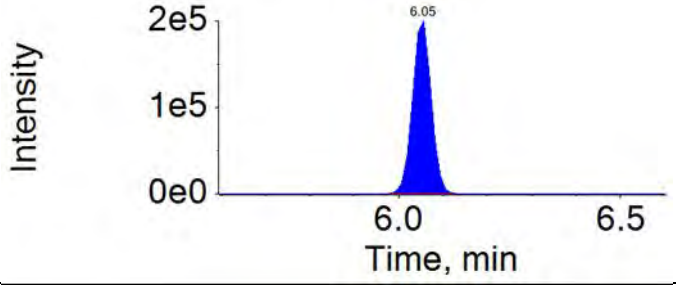
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



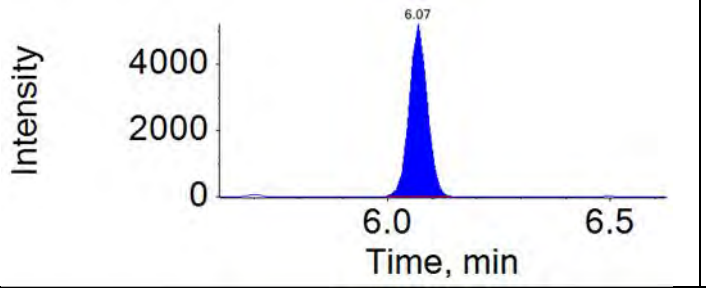


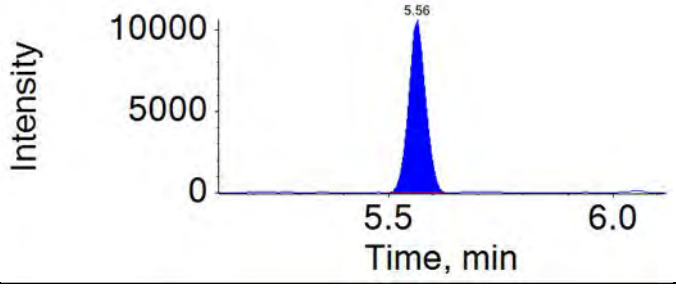
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



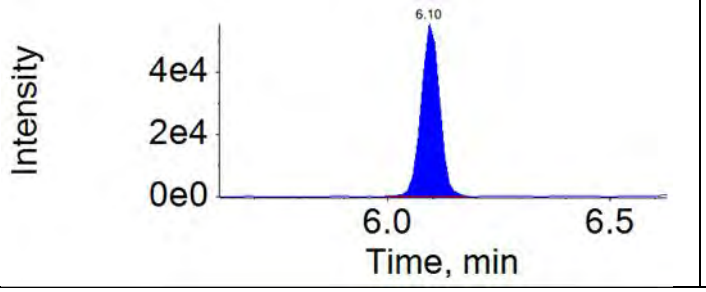


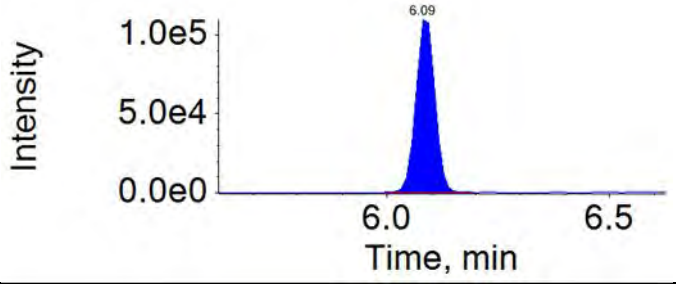
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0

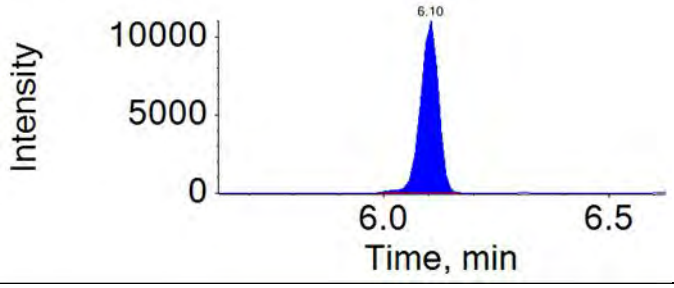
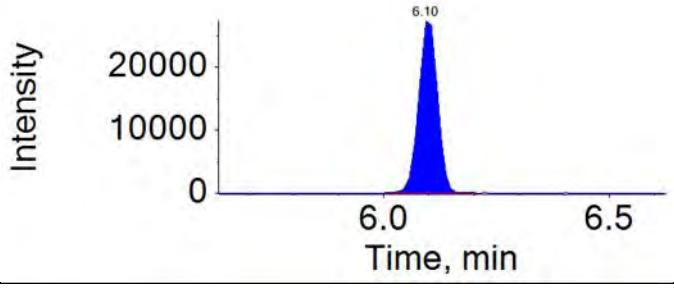


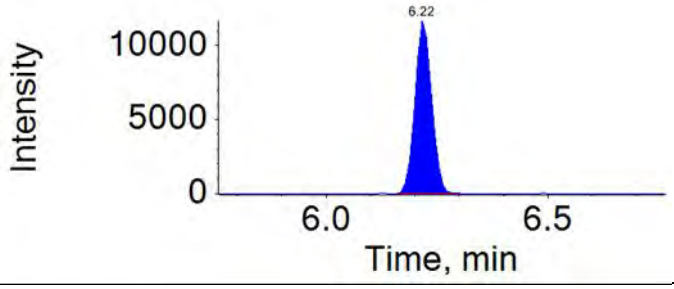
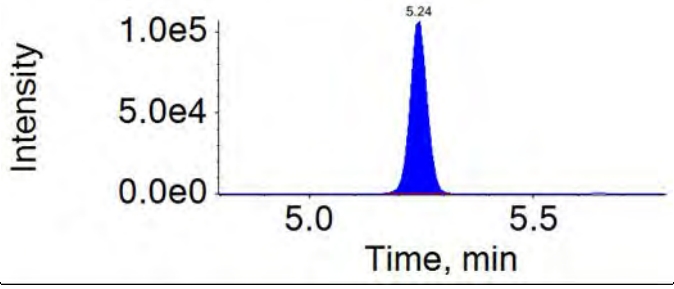


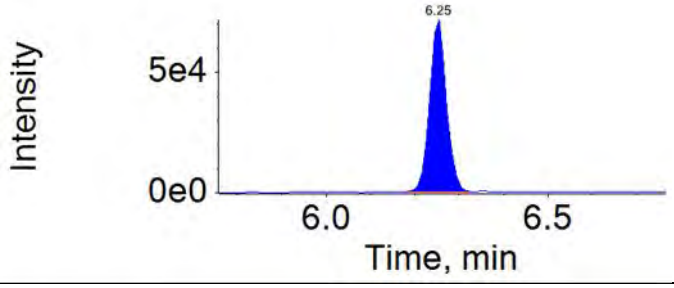
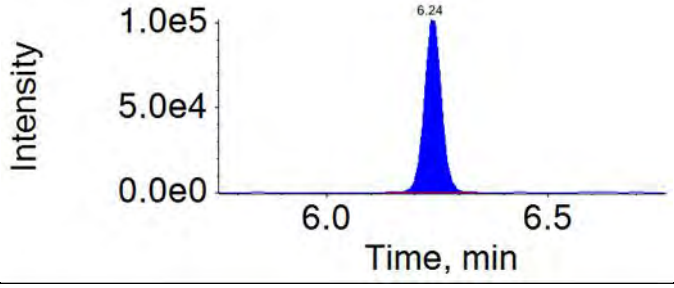
APPROVED
By JPT at 2:53 pm, 11/7/18

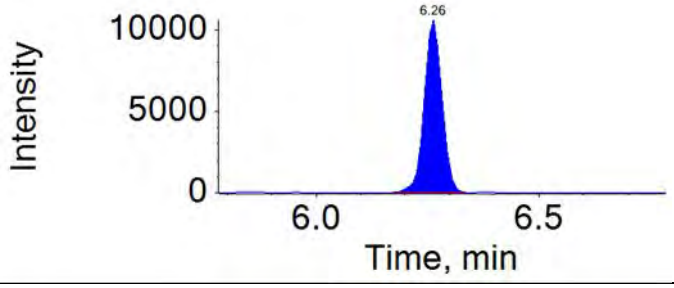
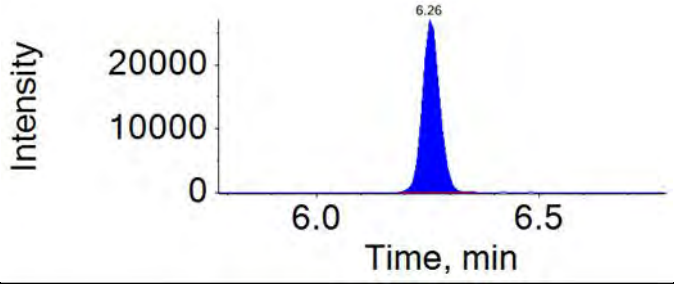
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

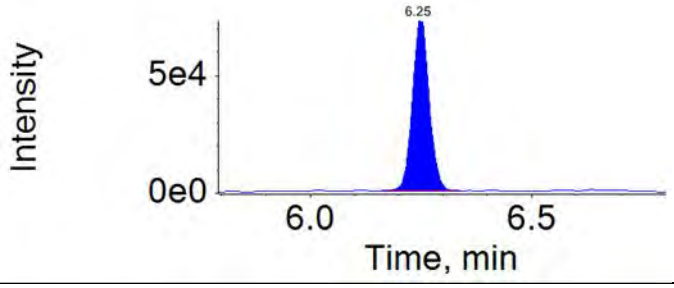
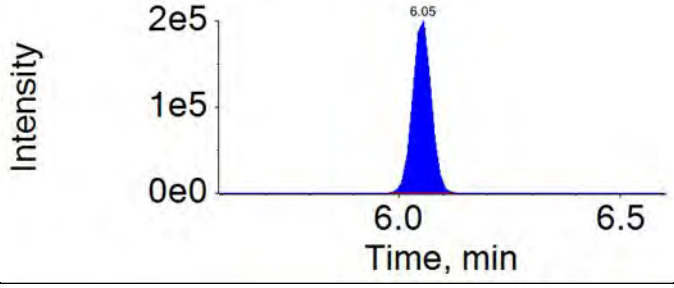
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0
	

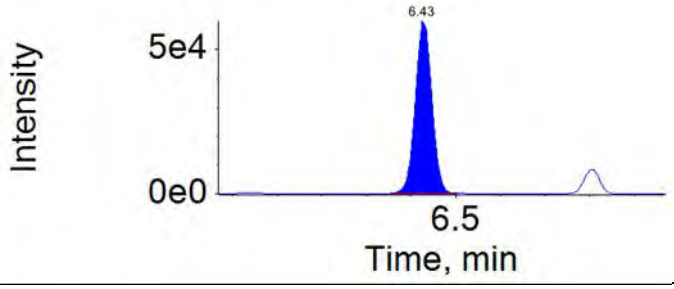
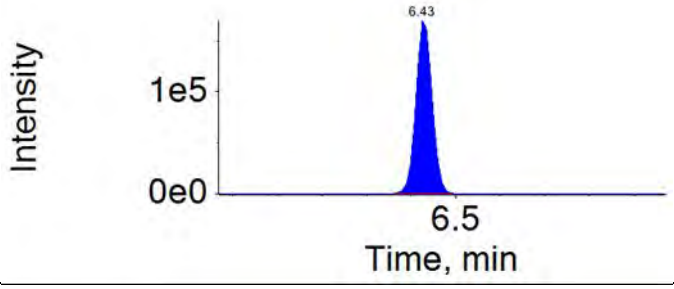
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0
	

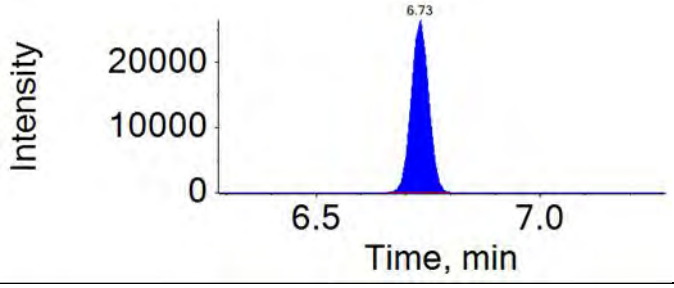
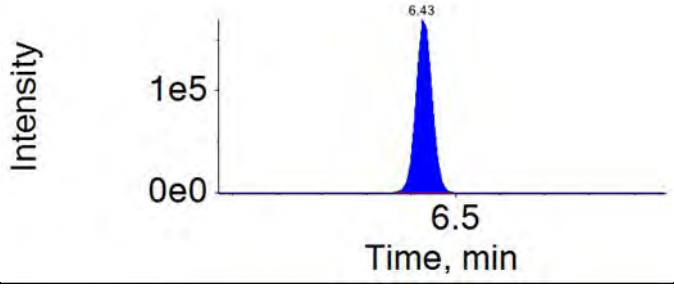
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0
	

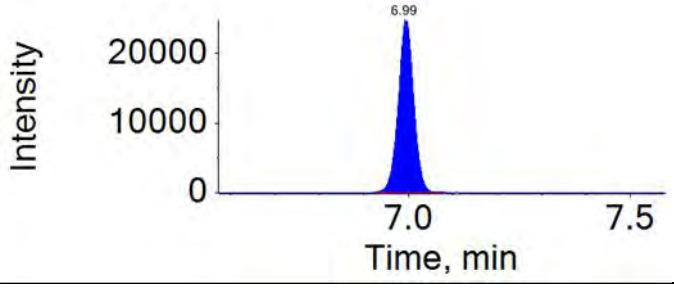
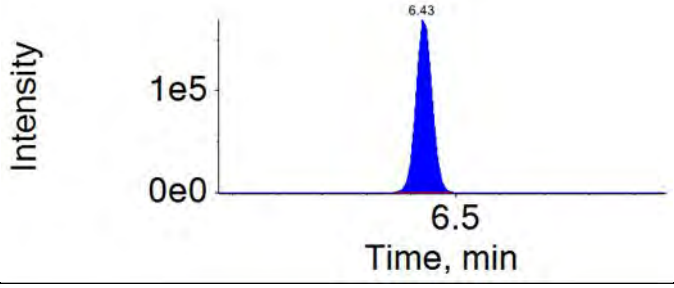
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

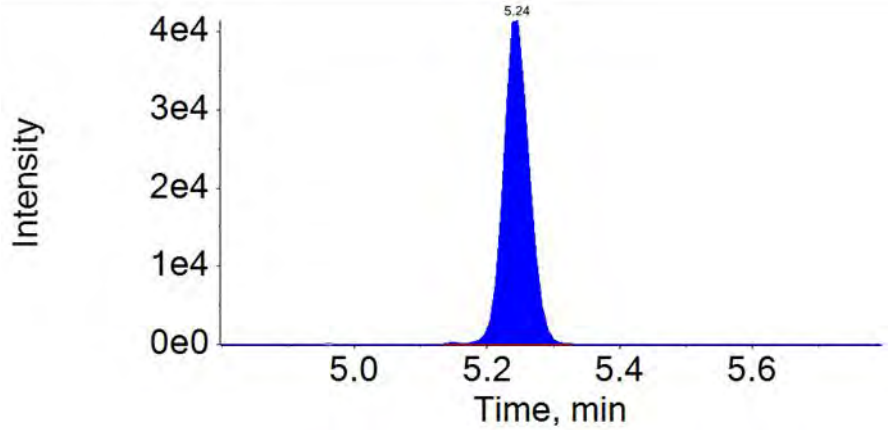
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
113697.4
Mass Range:
499.0 / 80.0
File Name:
18NOV07DCAL-20.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

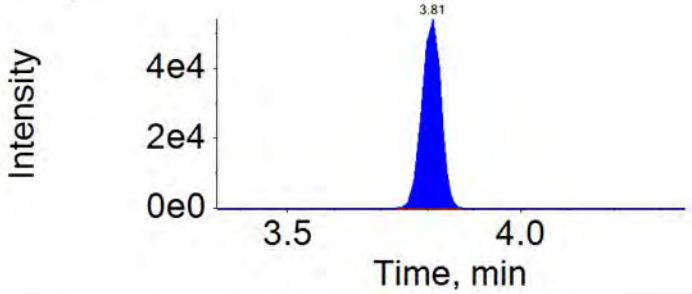
Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-20.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	155917.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	59330.4	A	0.3576	0.3805	6	50	
4:2-FTS	4.13	1.00	41869.1	A	1.0000	1.0000			
4:2-FTS_2	4.12	1.00	22969.1	A	0.6359	0.5486	-14	50	
PFHxA	4.16	1.00	355844.6	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	4420.8	A	0.0115	0.0124	8	50	
PFPeS	4.18	1.10	84840.7	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	44612.7	A	0.5384	0.5258	-2	50	
PFHxS	4.55	1.00	126167.9	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	44496.5	A	0.3569	0.3527	-1	50	
PFHpA	4.55	1.00	359438.8	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	17557.5	A	0.0577	0.0488	-15	50	
6:2-FTS	4.91	1.00	30418.5	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	19338.5	A	0.6752	0.6357	-6	50	
PFHpS	4.91	1.08	118682.9	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	47884.4	A	0.3950	0.4035	2	50	
PFOA	4.92	1.00	363186.2	A	1.0000	1.0000			
PFOA_2	4.92	1.00	21404.0	A	0.0635	0.0589	-7	50	
PFOS	5.24	1.00	113455.6	M	1.0000	1.0000			
PFOS_2	5.25	1.00	38360.0	A	0.3494	0.3381	-3	50	
PFNA	5.26	1.00	284061.5	A	1.0000	1.0000			
PFNA_2	5.26	1.00	5433.5	A	0.0207	0.0191	-8	50	
PFNS	5.54	1.06	70168.8	A	1.0000	1.0000			
PFNS_2	5.54	1.06	34369.0	A	0.4890	0.4898	0	50	
PFDA	5.56	1.00	243089.4	A	1.0000	1.0000			
PFDA_2	5.56	1.00	1775.1	A	0.0057	0.0073	29	50	
8:2-FTS	5.56	1.00	25674.2	A	1.0000	1.0000			
8:2-FTS_2	5.56	1.00	17540.1	A	0.6169	0.6832	11	50	
NMeFOSAA	5.71	1.00	27107.5	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	6964.7	A	0.2206	0.2569	16	50	
PFDS	5.80	1.11	57911.4	A	1.0000	1.0000			
PFDS_2	5.80	1.11	30519.9	A	0.4648	0.5270	13	50	
PFUnDA	5.82	1.00	206684.1	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	912.7	A	0.0031	0.0044	40	50	
NEtFOSAA	5.84	1.00	29353.4	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	17948.8	A	0.6082	0.6115	1	50	
PFDoDA	6.05	1.00	220745.0	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	3019.9	A	0.0109	0.0137	25	50	
10:2-FTS	6.07	1.09	14526.2	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	13571.8	A	0.7082	0.9343	32	50	
PFTrDA	6.25	1.03	191338.9	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	1915.2	A	0.0096	0.0100	4	50	
PFTeDA	6.43	1.00	153182.8	A	1.0000	1.0000			
PFTeDA_2	6.42	1.00	1214.6	A	0.0055	0.0079	43	50	
PFHxDA	6.73	1.05	71156.3	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	4385.3	A	0.0596	0.0616	3	50	
PFODA	6.99	1.09	60356.7	A	1.0000	1.0000			
PFODA_2	6.99	1.09	1801.4	A	0.0257	0.0298	16	50	

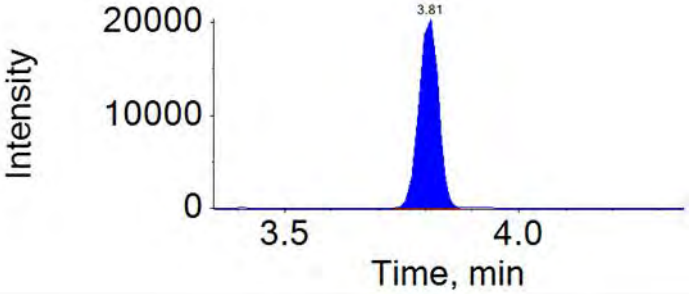
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

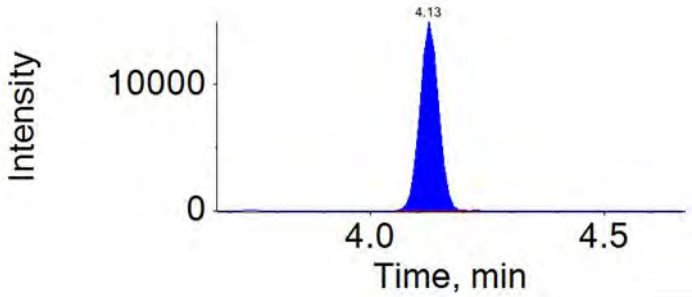
Component: PFBS
Primary Mass: 299.0 / 80.0



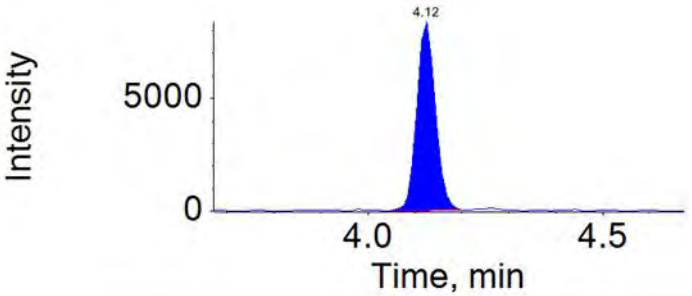
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



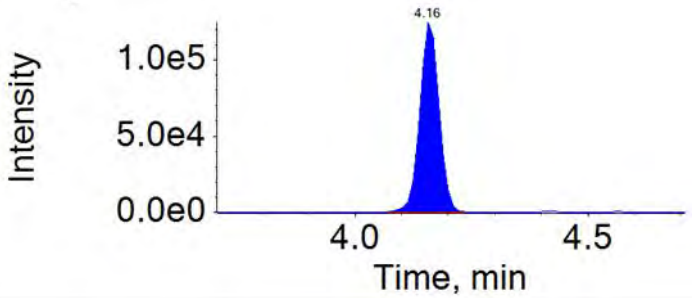
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



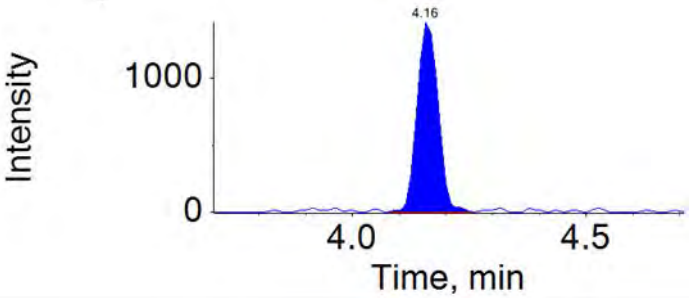
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



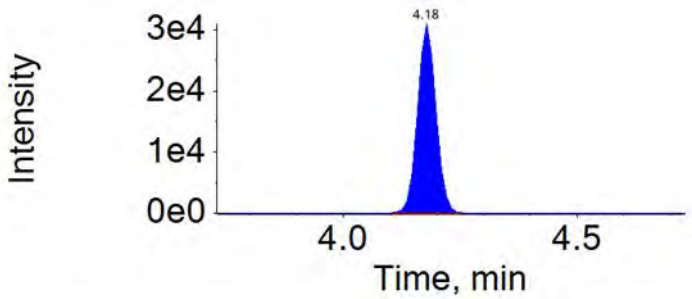
Component: PFHxA
Primary Mass: 313.0 / 269.0



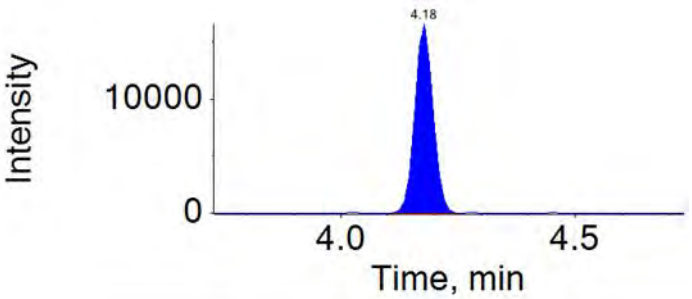
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



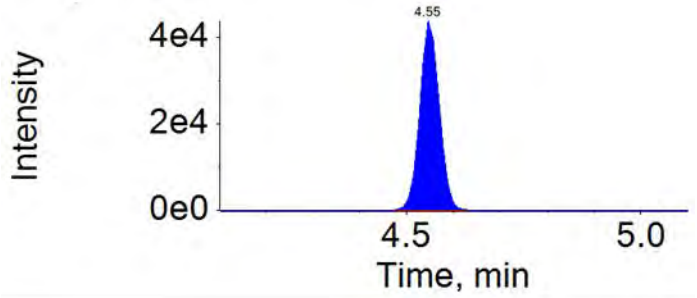
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



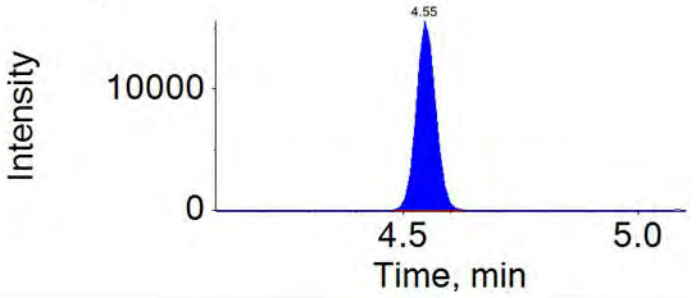
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

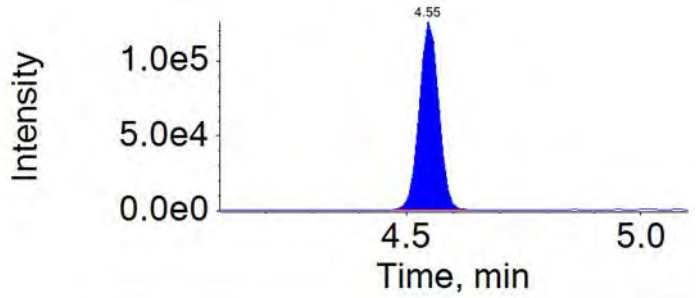
Component: PFHxS
Primary Mass: 399.0 / 80.0



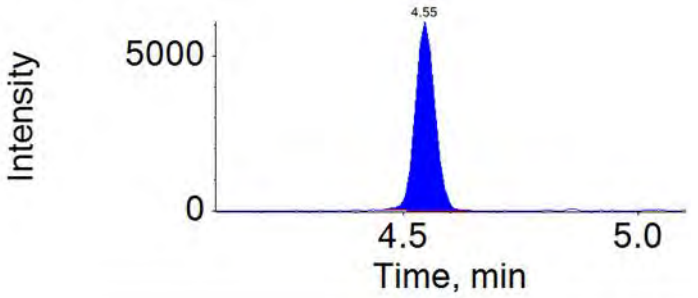
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



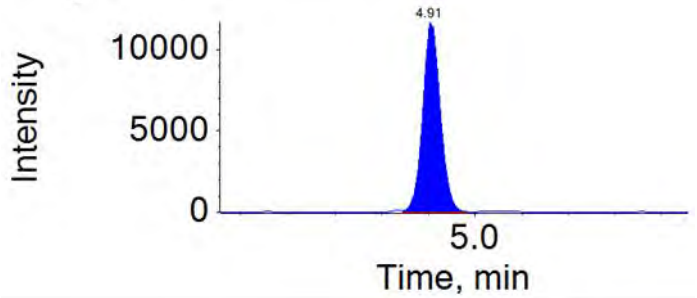
Component: PFHpA
Primary Mass: 363.0 / 319.0



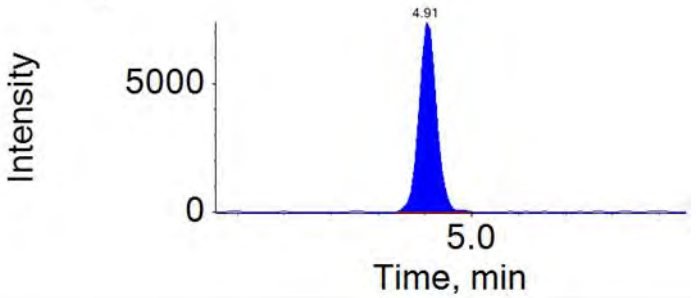
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



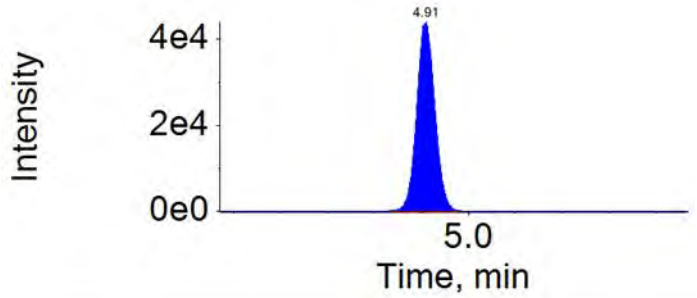
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



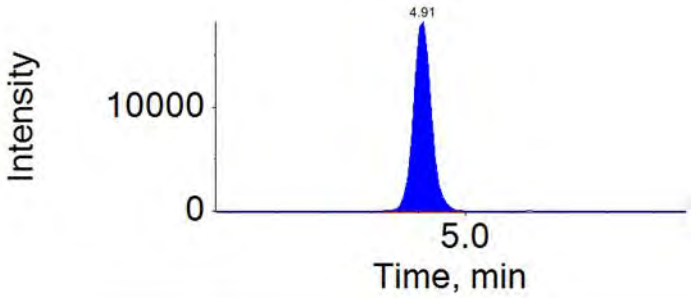
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



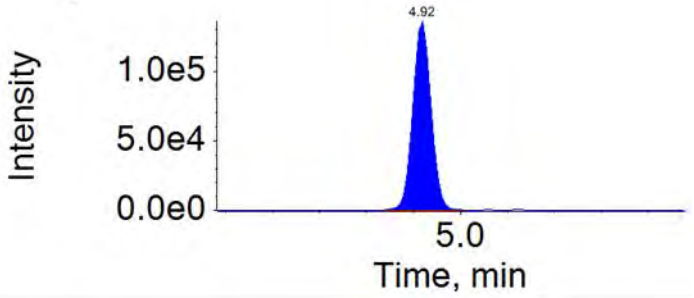
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



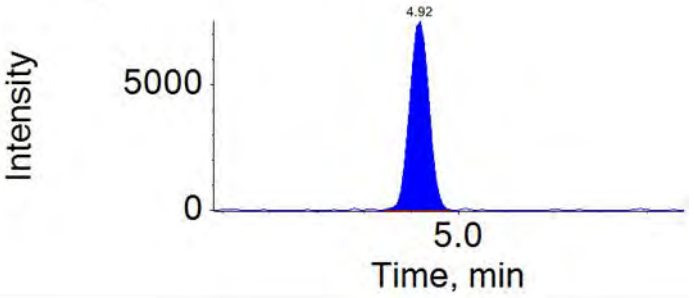
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

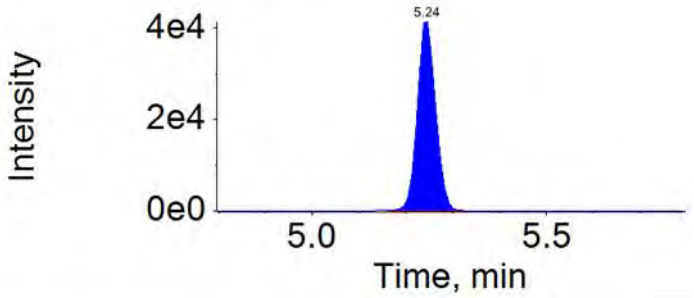
Component: PFOA
Primary Mass: 413.0 / 369.0



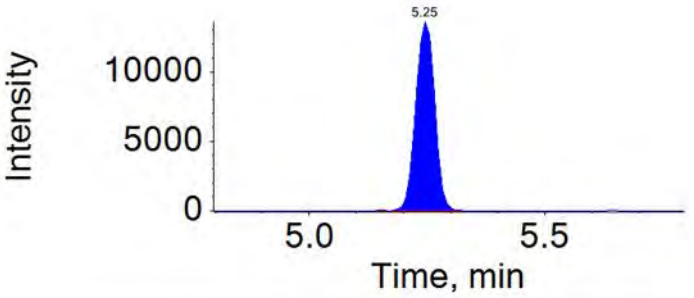
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



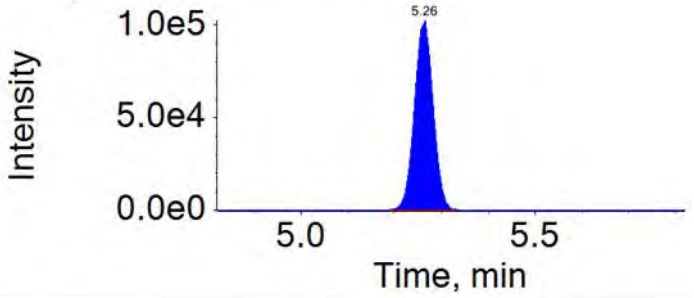
Component: PFOS
Primary Mass: 499.0 / 80.0



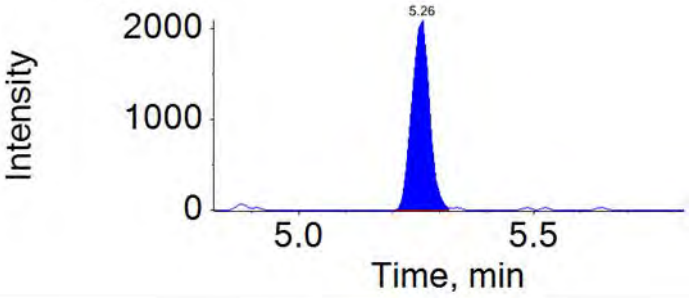
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



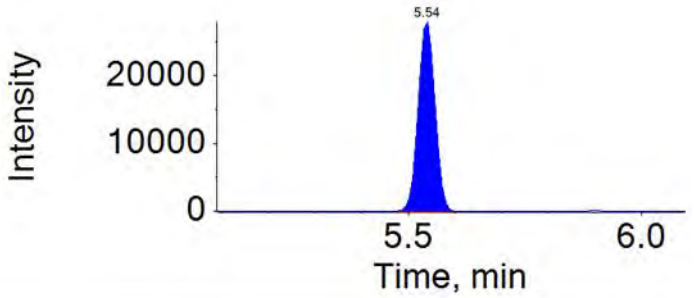
Component: PFNA
Primary Mass: 463.0 / 419.0



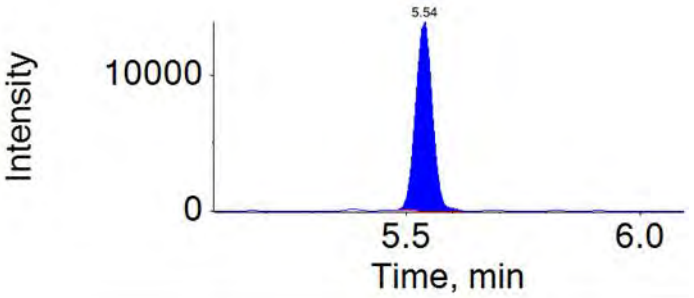
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



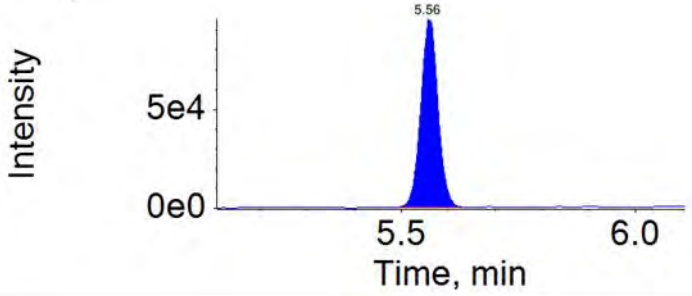
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



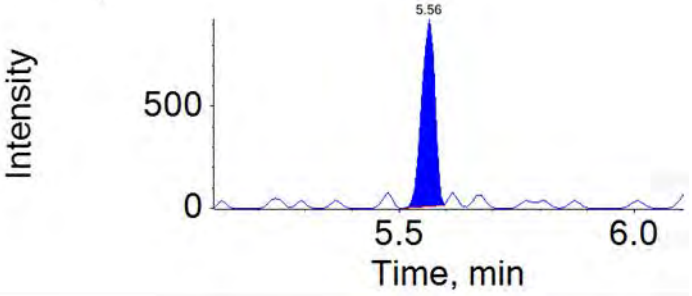
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

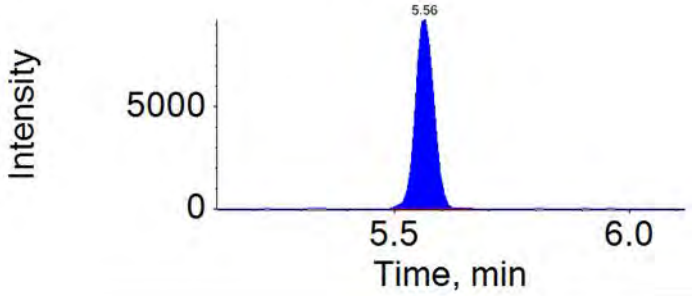
Component: PFDA
Primary Mass: 513.0 / 469.0



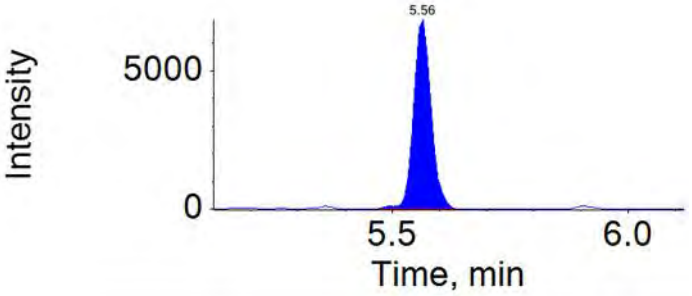
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



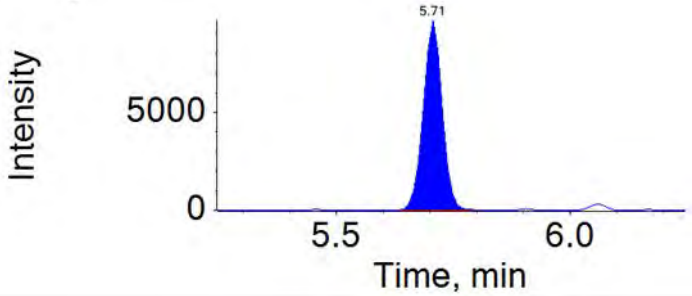
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



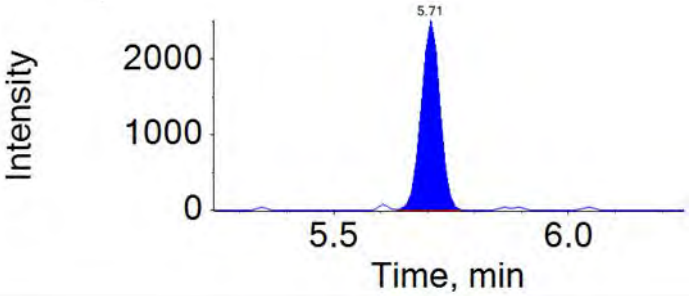
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



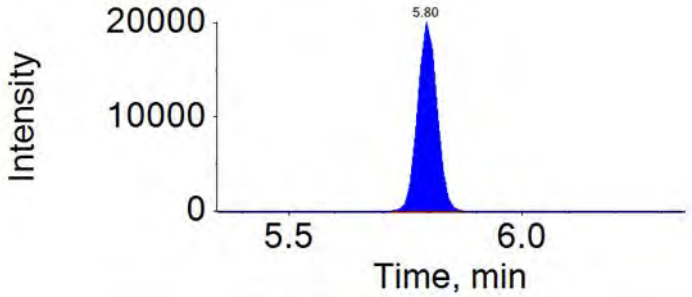
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



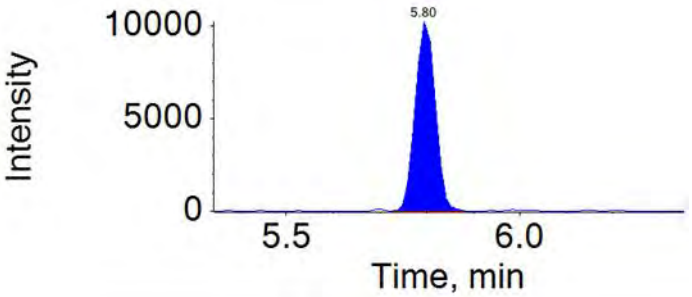
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



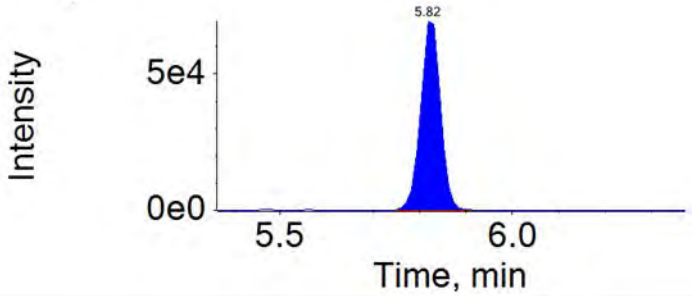
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



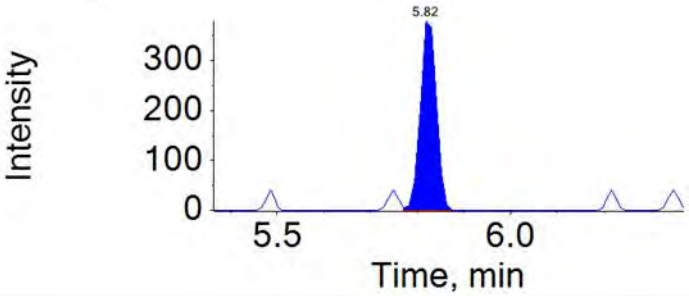
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

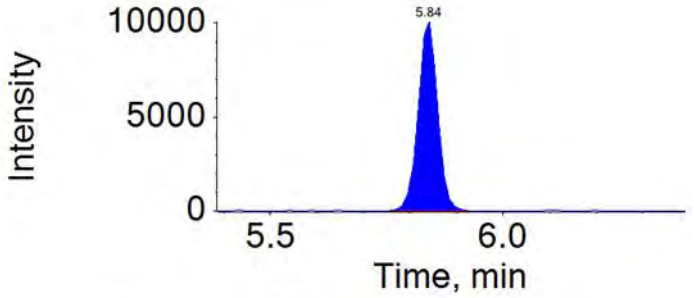
Component: PFUnDA
Primary Mass: 563.0 / 519.0



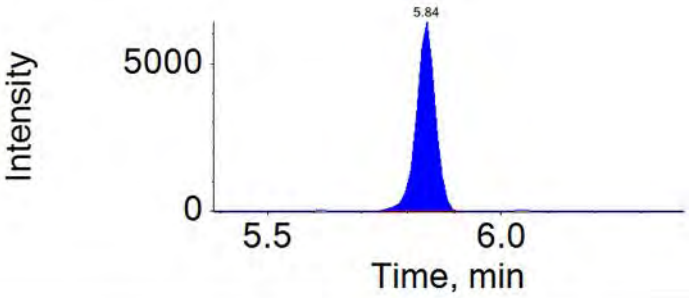
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



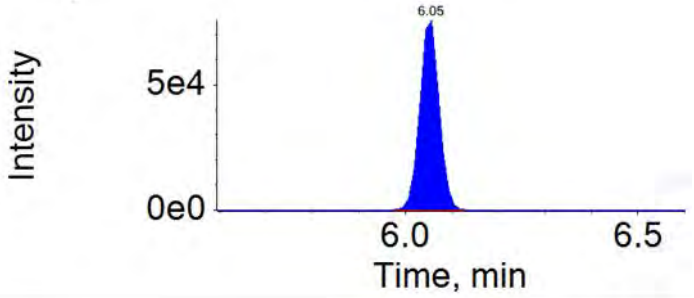
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



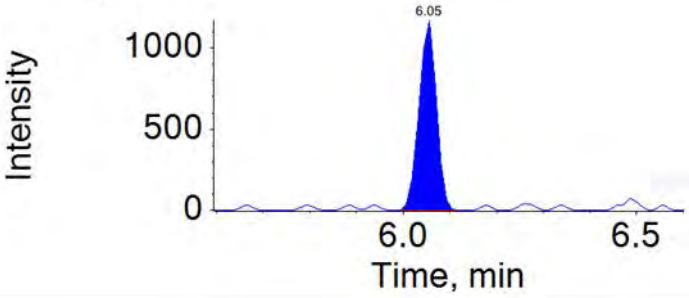
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



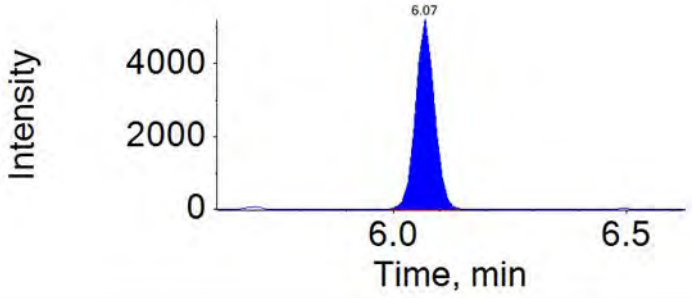
Component: PFDoDA
Primary Mass: 613.0 / 569.0



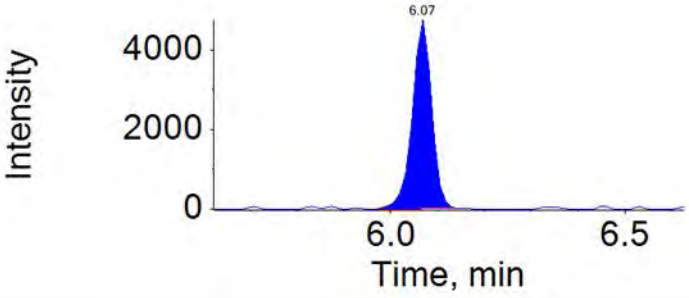
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



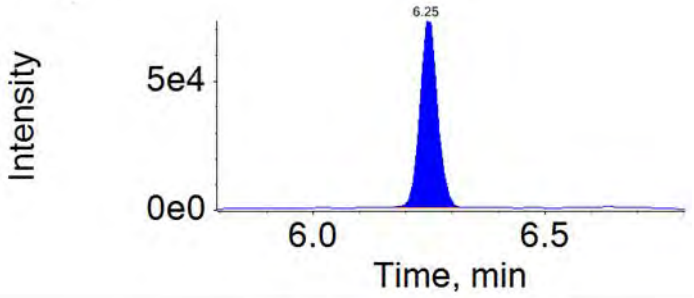
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



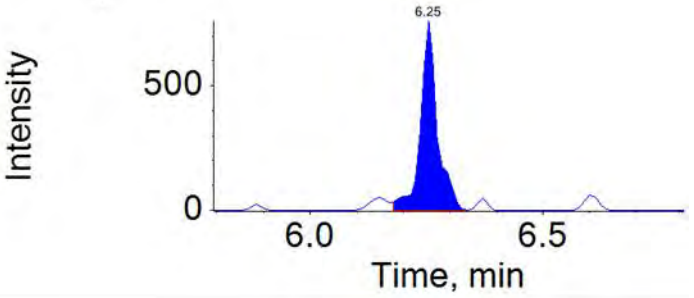
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

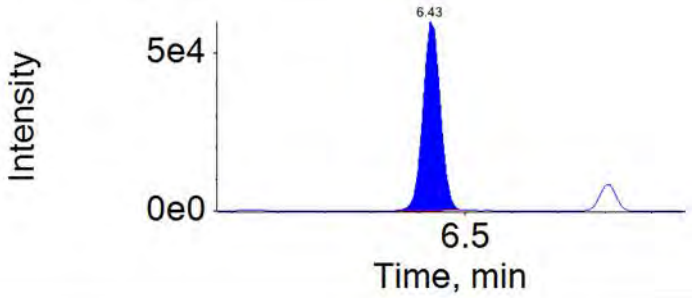
Component: PFTrDA
Primary Mass: 663.0 / 619.0



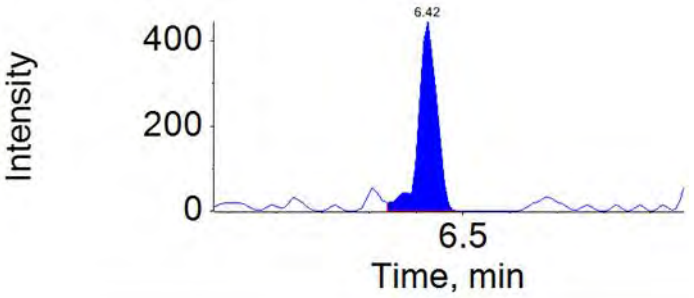
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



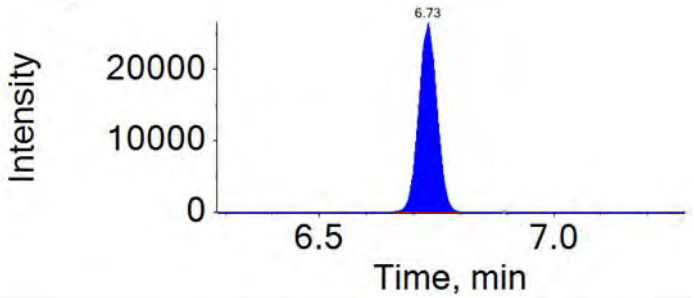
Component: PFTeDA
Primary Mass: 713.0 / 669.0



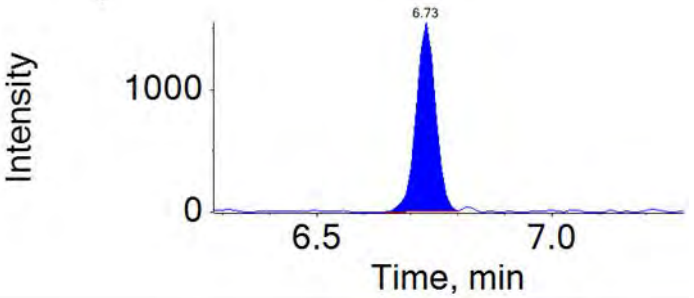
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



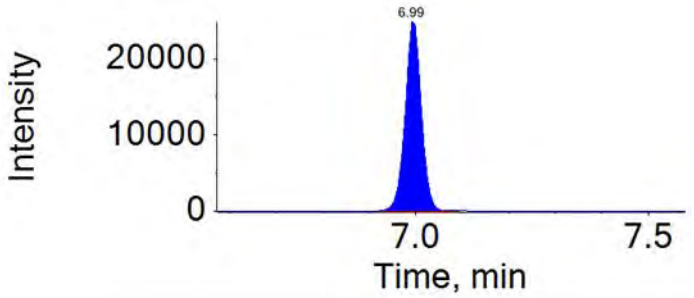
Component: PFHxDA
Primary Mass: 813.0 / 769.0



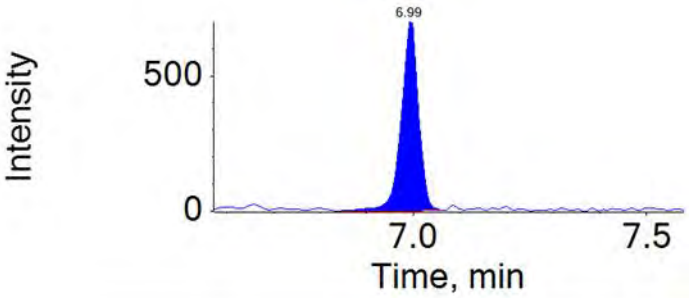
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



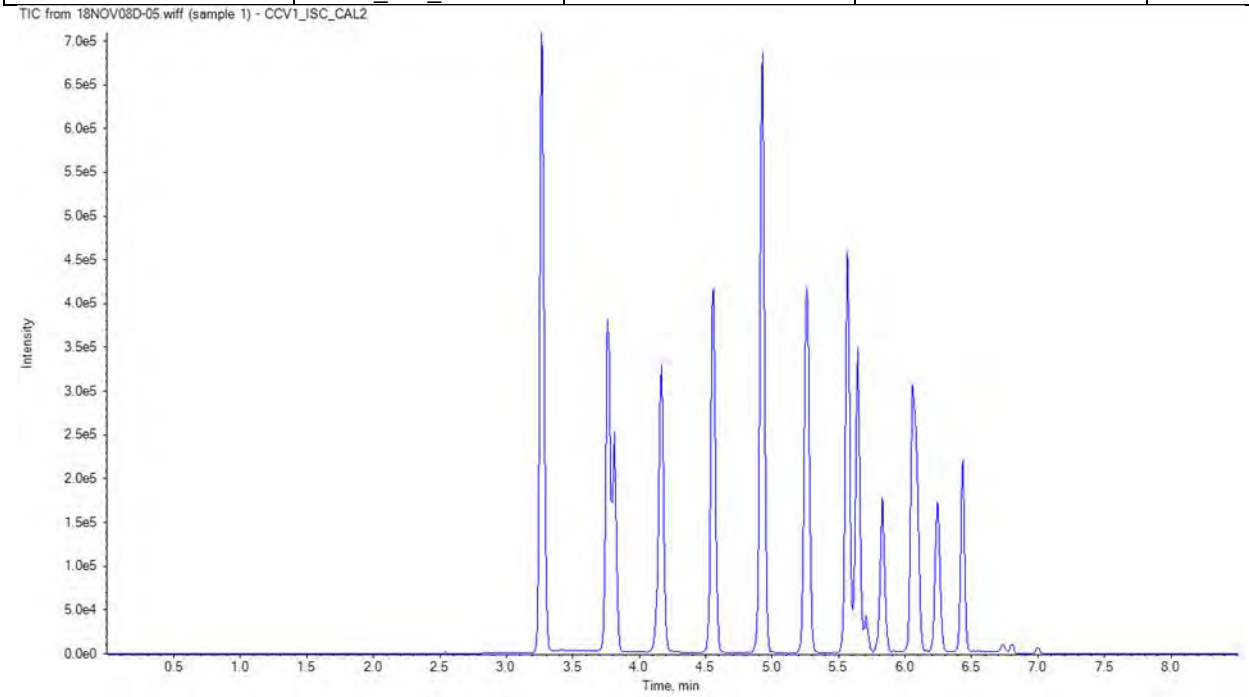
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALMOD21833F	18NOV08D-05.wiff	11/8/2018 12:24:40 PM



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	728839.7	730410.6	0	50	
13C2-PFOA	5.0	491983.1	524423.6	-6	50	
13C4-PFOS	4.8	255568.1	274061.7	-7	50	
13C2-PFDA	5.0	315407.5	311442.1	1	50	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALMOD21833F	18NOV08D-05.wiff	11/8/2018 12:24:40 PM

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	72084.0	10	13C4-PFBA	766928.2	5.0	0.094	3.26	1.000	0.500	0.550	10	30	
PFPeA	76376.3	13	13C5-PFPeA	809192.4	5.0	0.094	3.76	1.000	0.500	0.561	12	30	
PFBS	37650.0	11	13C3-PFBS	430491.1	4.7	0.087	3.81	1.000	0.440	0.441	0	30	
4:2-FTS	9377.7	11	13C2-4:2-FTS	51791.3	4.7	0.181	4.13	1.000	0.467	0.487	4	30	
PFHxA	85965.4	12	13C5-PFHxA	662030.6	5.0	0.130	4.16	1.000	0.500	0.557	11	30	
PFPeS	21837.5	11	13C3-PFBS	430491.1	4.7	0.051	4.18	1.100	0.469	0.500	7	30	
PFHxS	30165.5	12	13C3-PFHxS	325716.7	4.7	0.093	4.55	1.000	0.473	0.469	-1	30	
PFHpA	87232.0	12	13C4-PFHpA	548044.5	5.0	0.159	4.55	1.000	0.500	0.535	7	30	
6:2-FTS	7814.5	11	13C2-6:2-FTS	35283.6	4.8	0.221	4.91	1.000	0.474	0.553	17	30	
PFHpS	30009.2	11	13C3-PFHxS	325716.7	4.7	0.092	4.92	1.080	0.476	0.482	1	30	
PFOA	86207.9	11	13C8-PFOA	939368.6	5.0	0.092	4.93	1.000	0.500	0.517	3	30	
PFOS	28047.3	12	13C8-PFOS	285244.0	4.8	0.098	5.25	1.000	0.478	0.510	7	30	
PFNA	73414.7	11	13C9-PFNA	481998.0	5.0	0.152	5.27	1.000	0.500	0.569	14	30	
PFNS	17602.7	11	13C8-PFOS	285244.0	4.8	0.062	5.55	1.060	0.480	0.489	2	30	
PFDA	60165.4	11	13C6-PFDA	607904.1	5.0	0.099	5.57	1.000	0.500	0.545	9	30	
8:2-FTS	5527.1	12	13C2-8:2-FTS	25655.0	4.8	0.215	5.57	1.000	0.479	0.486	1	30	
PFOSA	68994.6	11	13C8-PFOSA	699314.0	5.0	0.099	5.64	1.000	0.500	0.533	7	30	
NMeFOSAA	8576.2	11	d3-NMeFOSAA	79412.4	5.0	0.108	5.71	1.000	0.500	0.556	11	30	
PFDS	13175.4	11	13C8-PFOS	285244.0	4.8	0.046	5.80	1.100	0.482	0.441	-8	30	
PFUnDA	48289.0	12	13C7-PFUnDA	263647.7	5.0	0.183	5.83	1.000	0.500	0.525	5	30	
NEtFOSAA	7263.0	11	d5-NEtFOSAA	64246.4	5.0	0.113	5.84	1.000	0.500	0.486	-3	30	
PFDoDA	58287.0	12	13C2-PFDoDA	556797.1	5.0	0.105	6.06	1.000	0.500	0.567	13	30	
10:2-FTS	5075.6	12	13C2-8:2-FTS	25655.0	4.8	0.198	6.07	1.090	0.482	0.616	28	30	
NMePFOSAE	41425.0	12	d7-NMePFOSAE	330937.5	5.0	0.125	6.09	1.000	0.500	0.561	12	30	
NMePFOSA	8417.2	11	d3-NMePFOSA	78208.3	5.0	0.108	6.10	1.000	0.500	0.602	20	30	
PFDoS	6665.7	10	13C8-PFOS	285244.0	4.8	0.023	6.22	1.190	0.484	0.451	-7	30	
NEtPFOSAE	43773.7	11	d9-NEtPFOSAE	266759.4	5.0	0.164	6.25	1.000	0.500	0.526	5	30	
NEtPFOSA	7022.0	11	d5-NEtPFOSA	69615.2	5.0	0.101	6.26	1.000	0.500	0.444	-11	30	
PFTrDA	46666.6	11	13C2-PFDoDA	556797.1	5.0	0.084	6.25	1.030	0.500	0.529	6	30	
PFTeDA	38675.5	11	13C2-PFTeDA	403281.7	5.0	0.096	6.43	1.000	0.500	0.563	13	30	
PFHxDA	17615.3	11	13C2-PFTeDA	403281.7	5.0	0.044	6.73	1.050	0.500	0.542	8	30	
PFODA	14725.2	10	13C2-PFTeDA	403281.7	5.0	0.037	7.00	1.090	0.500	0.523	5	30	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV08D-05.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-08T12:24:40
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV1-3
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	728839.7	730410.6	0	50	
13C2-PFOA	5.0	491983.1	524423.6	-6	50	
13C4-PFOS	4.8	255568.1	274061.7	-7	50	
13C2-PFDA	5.0	315407.5	311442.1	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	766928.2	13C3-PFBA	728839.7	1.052	5.000	4.870	97	70-130	
E13C5-PFPeA	809192.4	13C3-PFBA	728839.7	1.110	5.000	4.837	97	70-130	
E13C3-PFBS	430491.1	13C3-PFBA	728839.7	0.591	4.650	4.335	93	70-130	
E13C2-4:2-FTS	51791.3	13C2-PFOA	491983.1	0.105	4.670	4.750	102	70-130	
E13C5-PFHxA	662030.6	13C2-PFOA	491983.1	1.346	5.000	4.950	99	70-130	
E13C3-PFHxS	325716.7	13C2-PFOA	491983.1	0.662	4.730	4.753	100	70-130	
E13C4-PFHpA	548044.5	13C2-PFOA	491983.1	1.114	5.000	5.068	101	70-130	
E13C2-6:2-FTS	35283.6	13C2-PFOA	491983.1	0.072	4.750	4.782	101	70-130	
E13C8-PFOA	939368.6	13C2-PFOA	491983.1	1.909	5.000	5.325	106	70-130	
E13C8-PFOS	285244.0	13C4-PFOS	255568.1	1.116	4.780	4.935	103	70-130	
E13C9-PFNA	481998.0	13C4-PFOS	255568.1	1.886	5.000	5.152	103	70-130	
E13C6-PFDA	607904.1	13C2-PFDA	315407.5	1.927	5.000	4.847	97	70-130	
E13C2-8:2-FTS	25655.0	13C2-PFDA	315407.5	0.081	4.790	4.304	90	70-130	
E13C8-PFOSA	699314.0	13C2-PFDA	315407.5	2.217	5.000	4.838	97	70-130	
Ed3-NMeFOSAA	79412.4	13C2-PFDA	315407.5	0.252	5.000	4.682	94	70-130	
E13C7-PFUnDA	263647.7	13C2-PFDA	315407.5	0.836	5.000	4.822	96	70-130	
Ed5-NEtFOSAA	64246.4	13C2-PFDA	315407.5	0.204	5.000	4.714	94	70-130	
E13C2-PFDoDA	556797.1	13C2-PFDA	315407.5	1.765	5.000	4.759	95	70-130	
Ed7-NMePFOSAE	330937.5	13C2-PFDA	315407.5	1.049	5.000	4.879	98	70-130	
Ed3-NMePFOSA	78208.3	13C2-PFDA	315407.5	0.248	5.000	4.540	91	70-130	
Ed9-NEtPFOSAE	266759.3	13C2-PFDA	315407.5	0.846	5.000	4.830	97	70-130	
Ed5-NEtPFOSA	69615.2	13C2-PFDA	315407.5	0.221	5.000	5.111	102	70-130	
E13C2-PFTeDA	403281.7	13C2-PFDA	315407.5	1.279	5.000	4.603	92	70-130	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

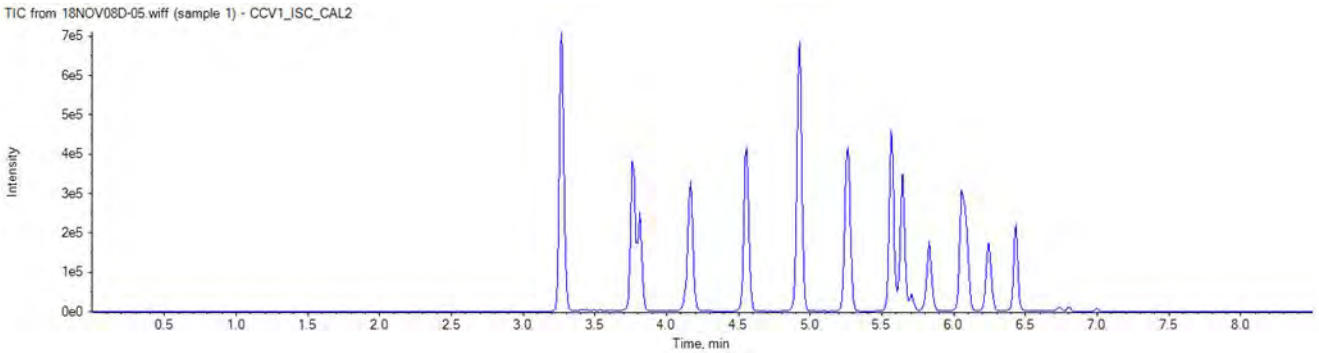
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV08D-05.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	72084.0		A	13C4-PFBA	3.27	766928.2	0.094	0.550
PFPeA	3.76	1.000	76376.3		A	13C5-PFPeA	3.76	809192.4	0.094	0.561
PFBS	3.81	1.000	37650.0		A	13C3-PFBS	3.81	430491.1	0.087	0.441
4:2-FTS	4.13	1.000	9377.7		A	13C2-4:2-FTS	4.13	51791.3	0.181	0.487
PFHxA	4.16	1.000	85965.4		A	13C5-PFHxA	4.16	662030.6	0.130	0.557
PFPeS	4.18	1.100	21837.5		A	13C3-PFBS	3.81	430491.1	0.051	0.500
PFHxS	4.55	1.000	30165.5		A	13C3-PFHxS	4.56	325716.7	0.093	0.469
PFHpA	4.55	1.000	87232.0		A	13C4-PFHpA	4.55	548044.5	0.159	0.535
6:2-FTS	4.91	1.000	7814.5		A	13C2-6:2-FTS	4.91	35283.6	0.221	0.553
PFHpS	4.92	1.080	30009.2		A	13C3-PFHxS	4.56	325716.7	0.092	0.482
PFOA	4.93	1.000	86207.9		M	13C8-PFOA	4.92	939368.6	0.092	0.517
PFOS	5.25	1.000	28047.3		A	13C8-PFOS	5.25	285244.0	0.098	0.510
PFNA	5.27	1.000	73414.7		A	13C9-PFNA	5.27	481998.0	0.152	0.569
PFNS	5.55	1.060	17602.7		A	13C8-PFOS	5.25	285244.0	0.062	0.489
PFDA	5.57	1.000	60165.4		A	13C6-PFDA	5.57	607904.1	0.099	0.545
8:2-FTS	5.57	1.000	5527.1		A	13C2-8:2-FTS	5.57	25655.0	0.215	0.486
PFOSA	5.64	1.000	68994.6		A	13C8-PFOSA	5.64	699314.0	0.099	0.533
NMeFOSAA	5.71	1.000	8576.2		A	d3-NMeFOSAA	5.71	79412.4	0.108	0.556
PFDS	5.80	1.100	13175.4		A	13C8-PFOS	5.25	285244.0	0.046	0.441
PFUnDA	5.83	1.000	48289.0		A	13C7-PFUnDA	5.83	263647.7	0.183	0.525
NEtFOSAA	5.84	1.000	7263.0		A	d5-NEtFOSAA	5.84	64246.4	0.113	0.486
PFDoDA	6.06	1.000	58287.0		A	13C2-PFDoDA	6.06	556797.1	0.105	0.567
10:2-FTS	6.07	1.090	5075.6		A	13C2-8:2-FTS	5.57	25655.0	0.198	0.616
NMePFOSAE	6.09	1.000	41425.0		A	d7-NMePFOSAE	6.08	330937.5	0.125	0.561
NMePFOSA	6.10	1.000	8417.2		A	d3-NMePFOSA	6.10	78208.3	0.108	0.602
PFDoS	6.22	1.190	6665.7		A	13C8-PFOS	5.25	285244.0	0.023	0.451
NEtPFOSAE	6.25	1.000	43773.7		A	d9-NEtPFOSAE	6.24	266759.4	0.164	0.526
NEtPFOSA	6.26	1.000	7022.0		A	d5-NEtPFOSA	6.26	69615.2	0.101	0.444
PFTrDA	6.25	1.030	46666.6		A	13C2-PFDoDA	6.06	556797.1	0.084	0.529
PFTeDA	6.43	1.000	38675.5		A	13C2-PFTeDA	6.43	403281.7	0.096	0.563
PFHxDA	6.73	1.050	17615.3		A	13C2-PFTeDA	6.43	403281.7	0.044	0.542
PFODA	7.00	1.090	14725.2		A	13C2-PFTeDA	6.43	403281.7	0.037	0.523

Total Ion Chromatogram

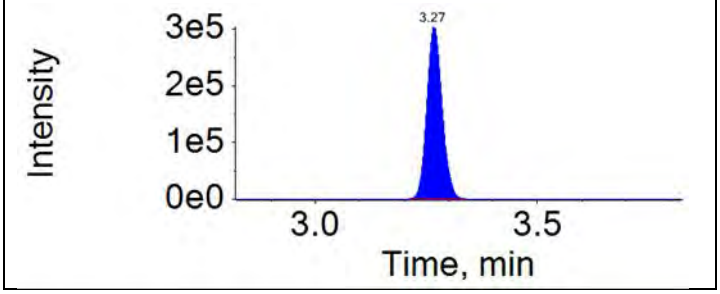


APPROVED
By JPT at 5:07 pm, 11/8/18

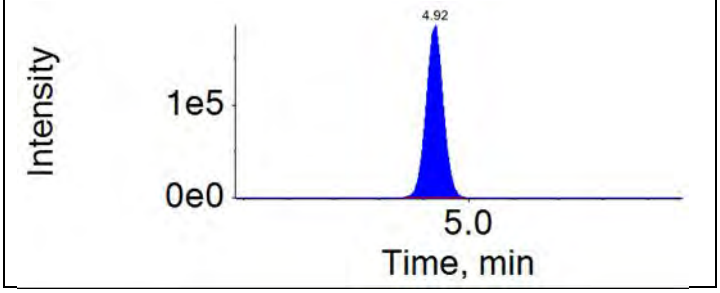
REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

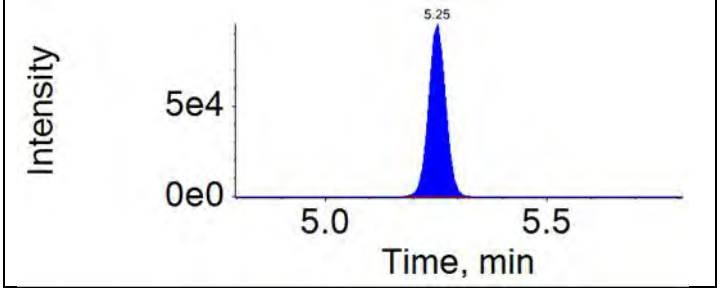
Injection Standard: 13C3-PFBA
216.0 / 172.0



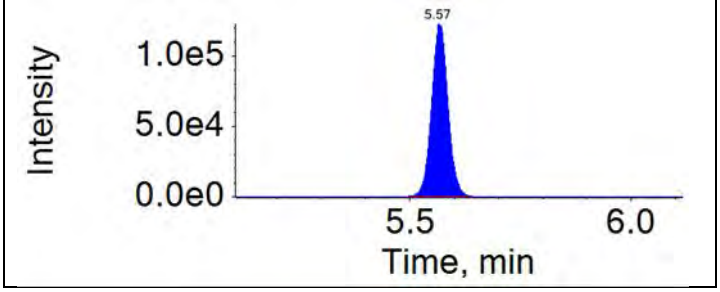
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



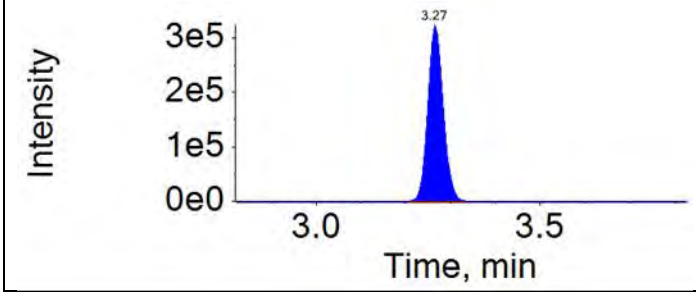
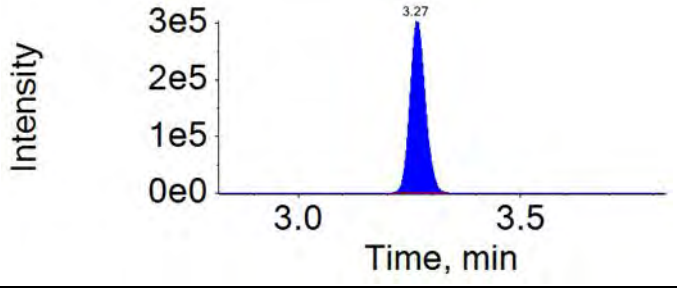
Injection Standard: 13C2-PFDA
515.0 / 470.0

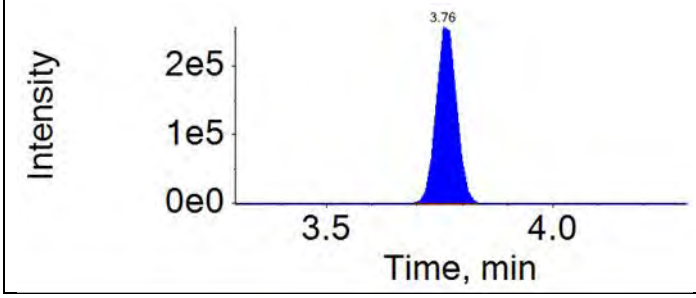
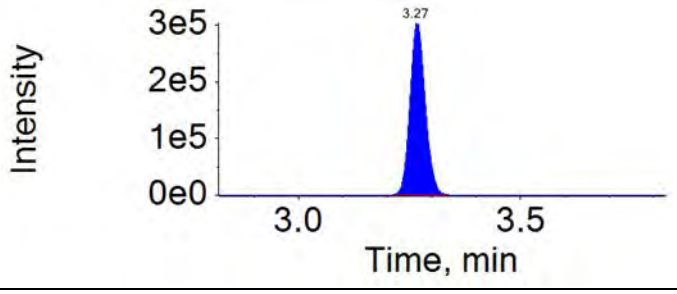


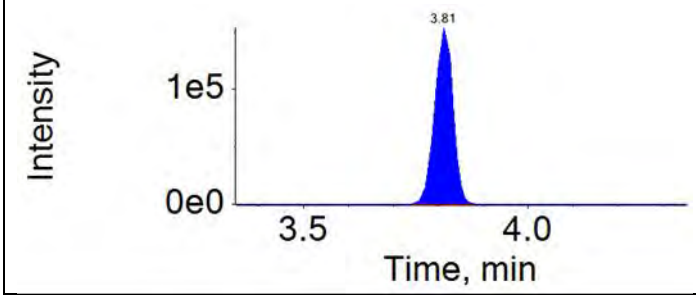
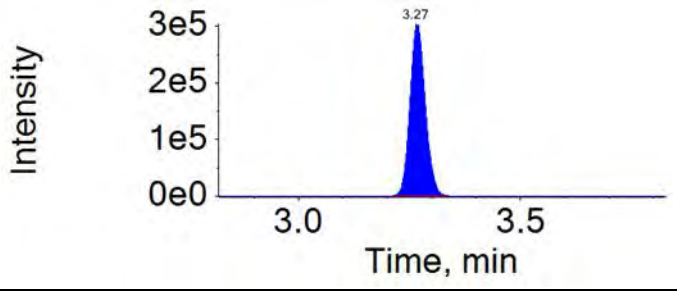
APPROVED
By JPT at 5:07 pm, 11/8/18

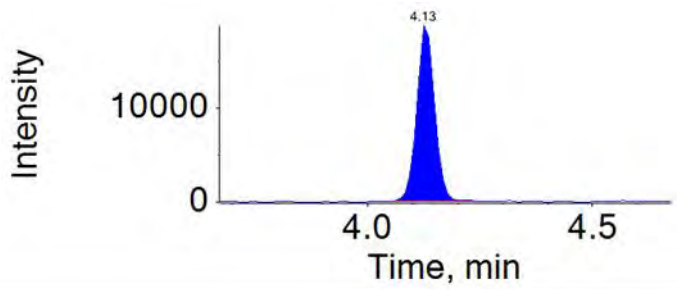
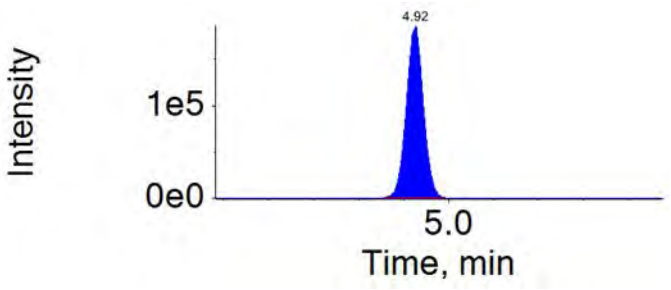
REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

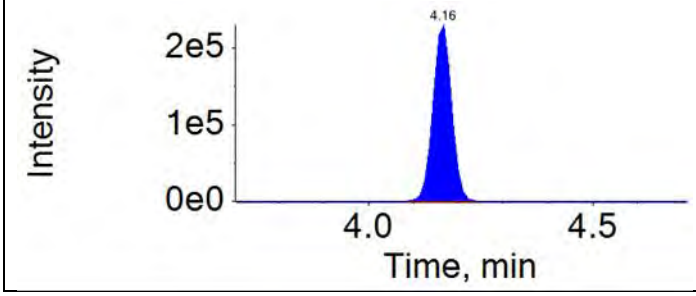
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

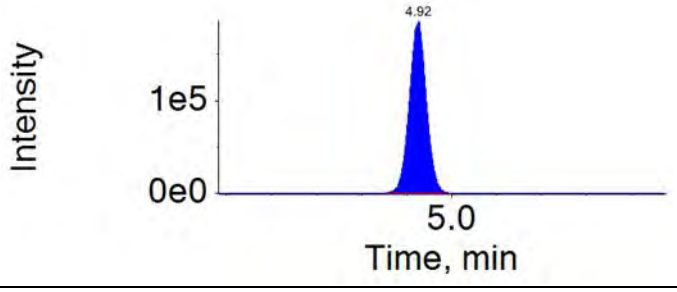
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

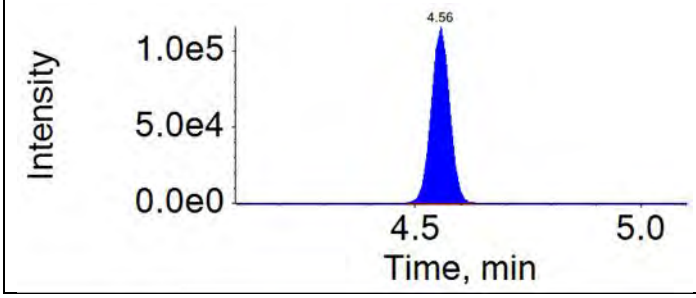
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

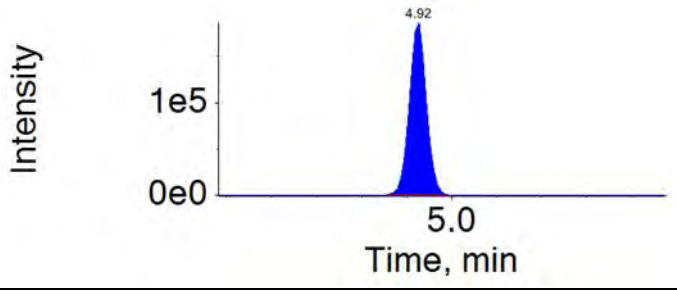
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



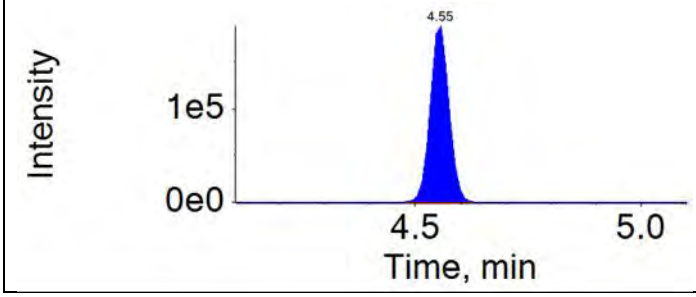


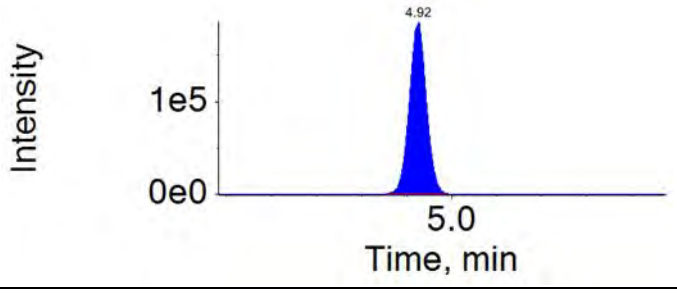
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



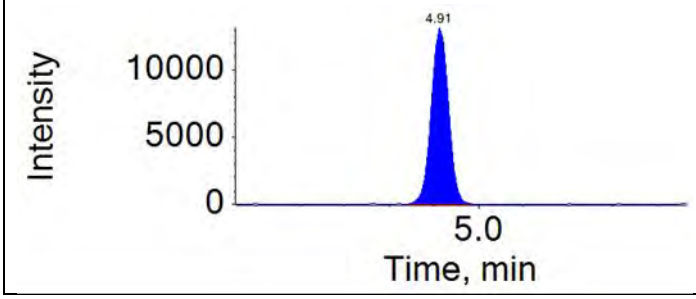


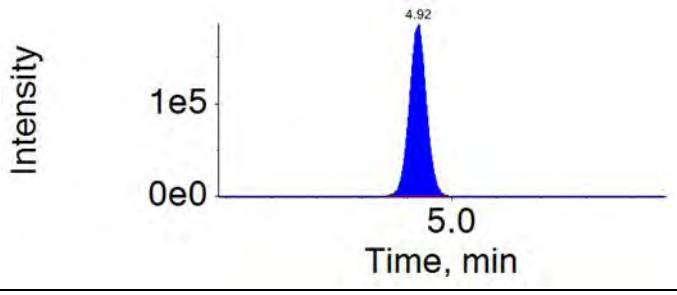
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



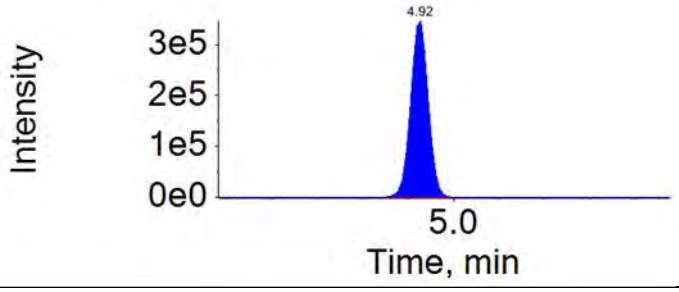
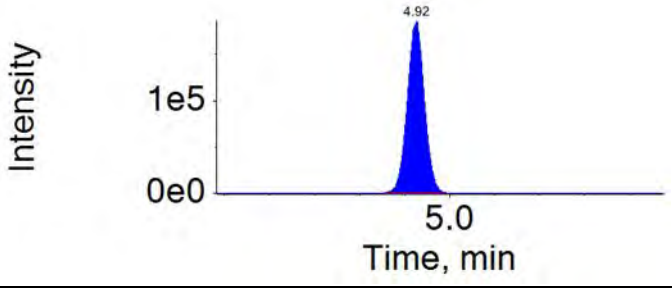


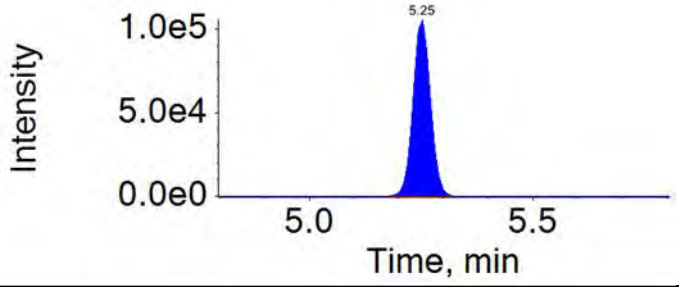
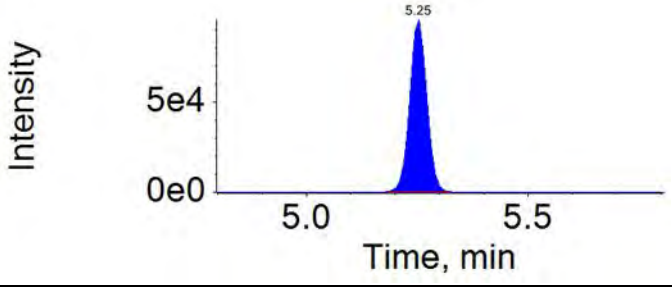
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

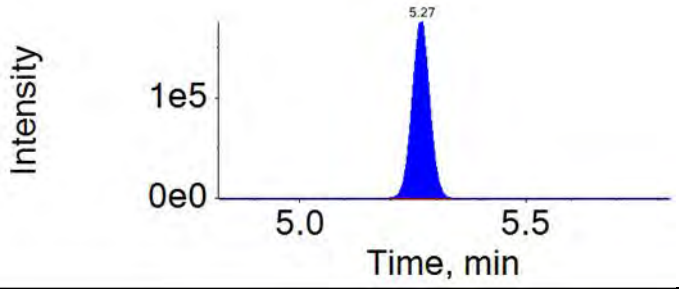
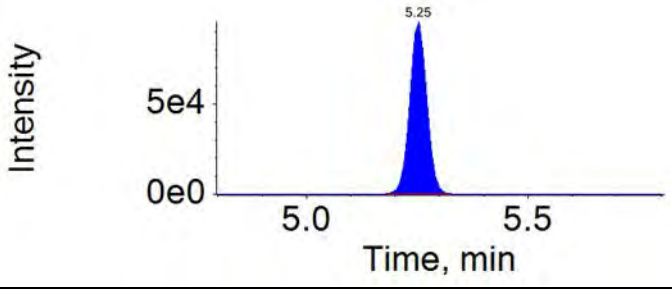


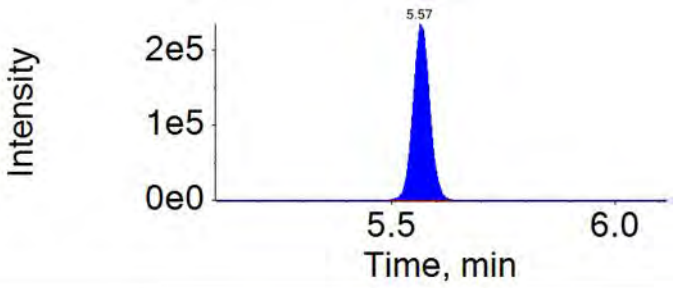
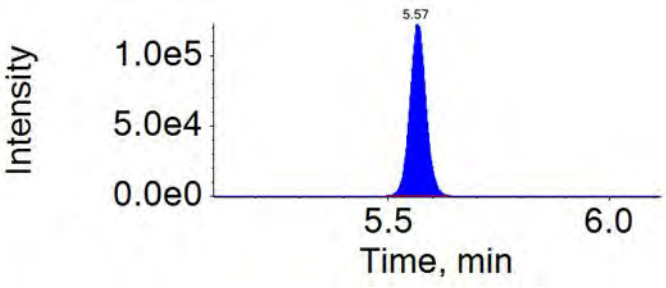


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

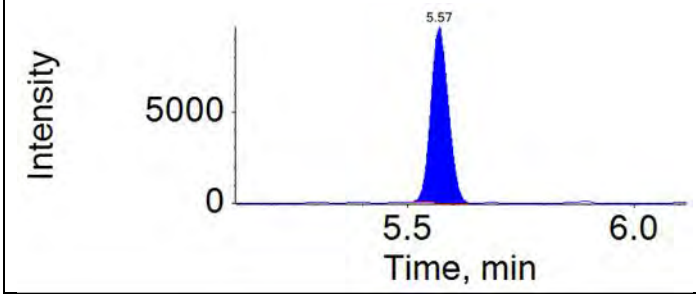
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

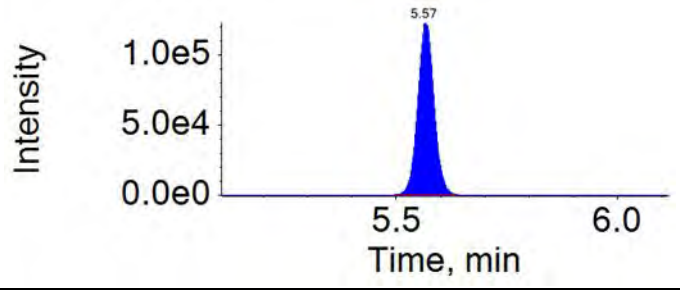
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

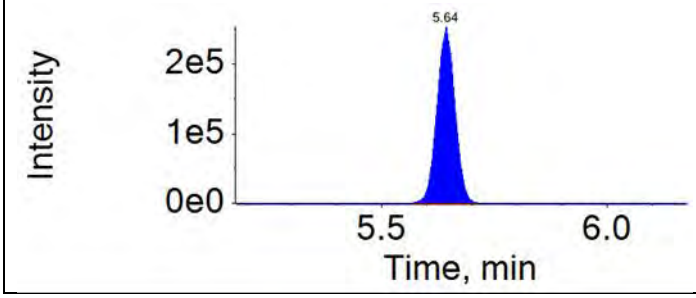
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

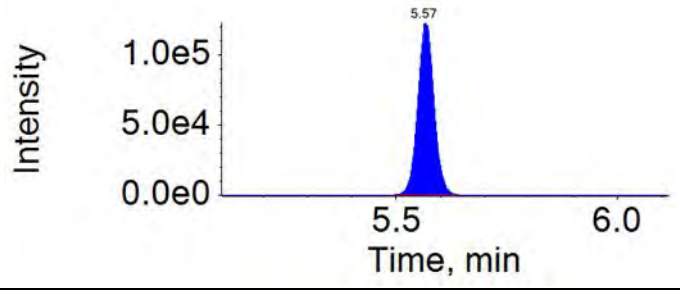
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



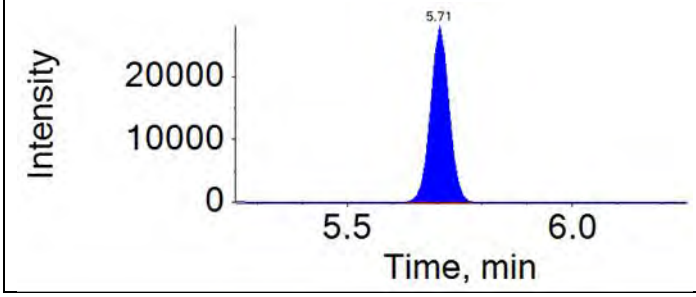


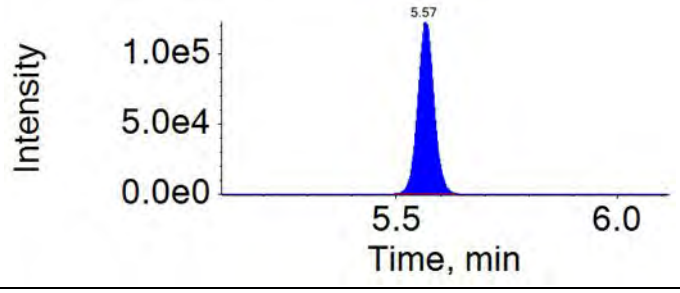
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



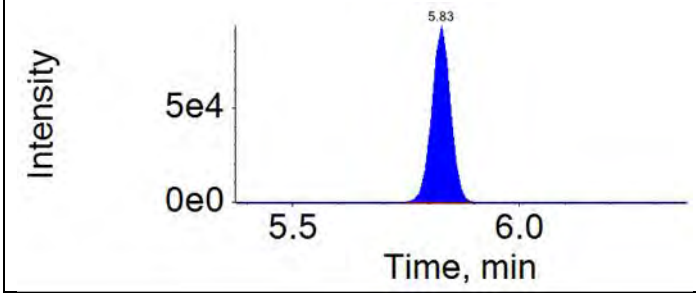


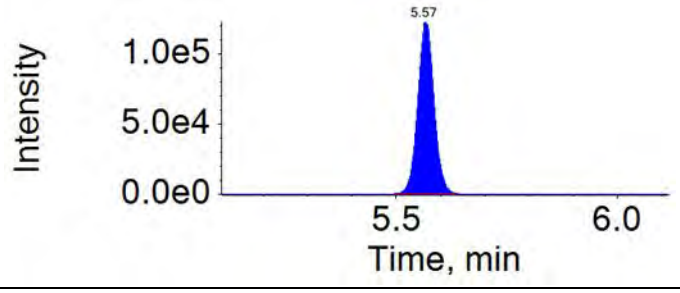
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



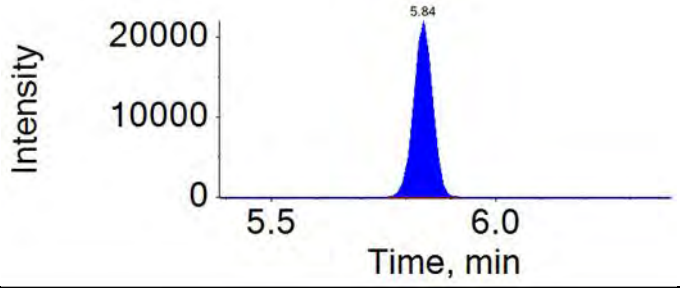


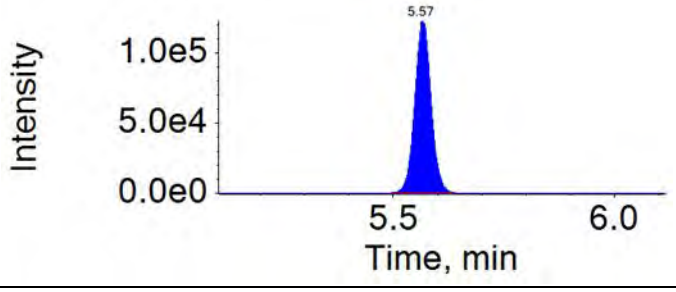
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

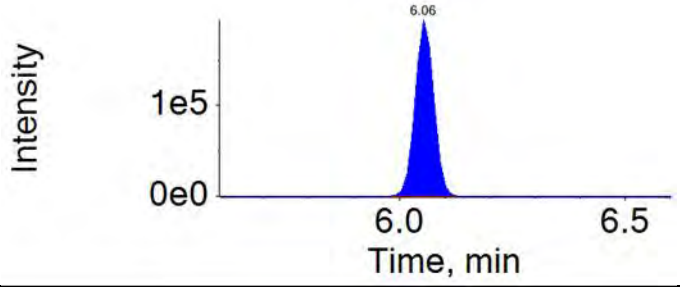
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

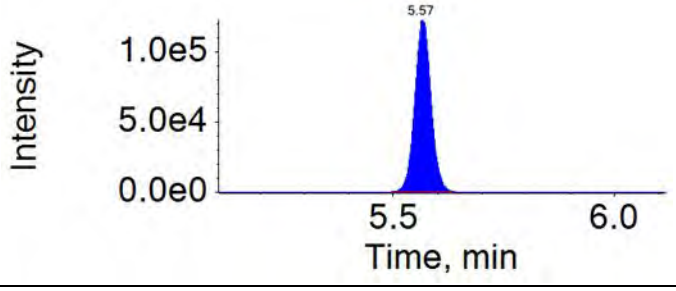
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



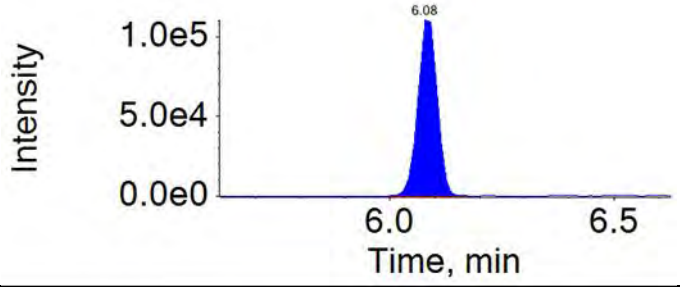


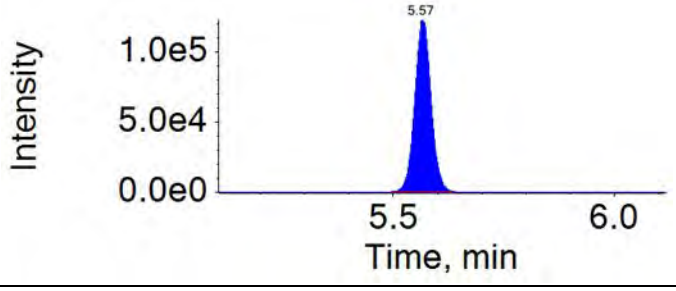
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



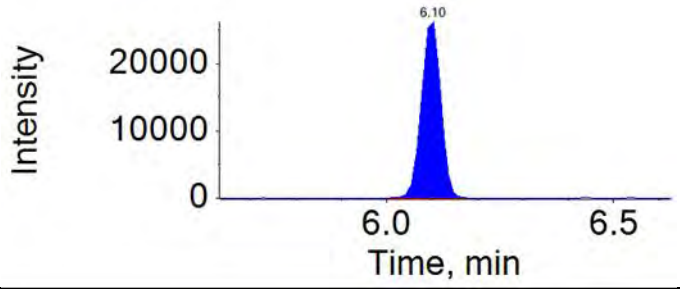


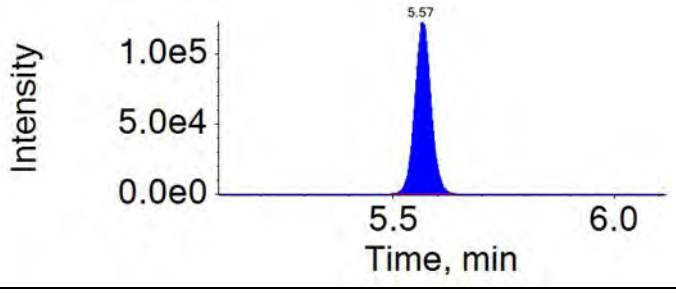
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



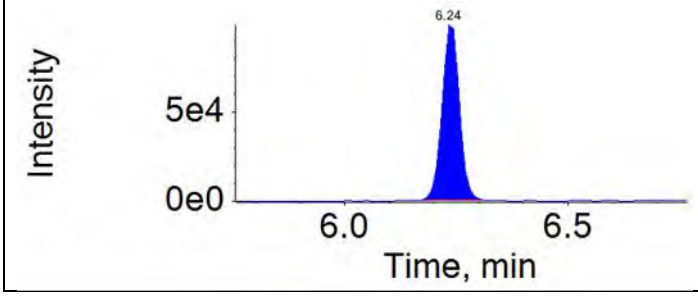


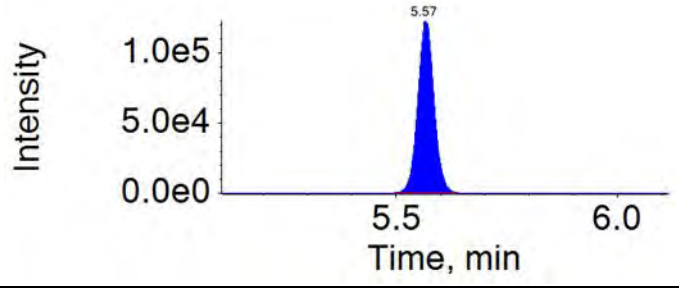
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

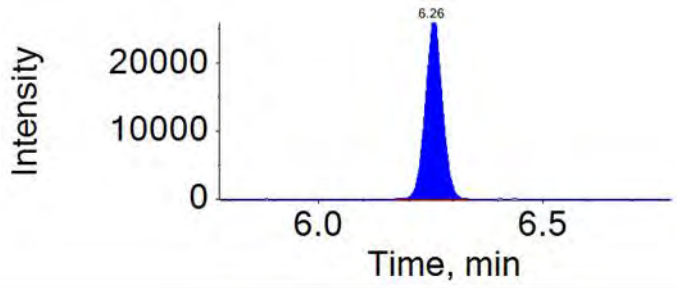
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

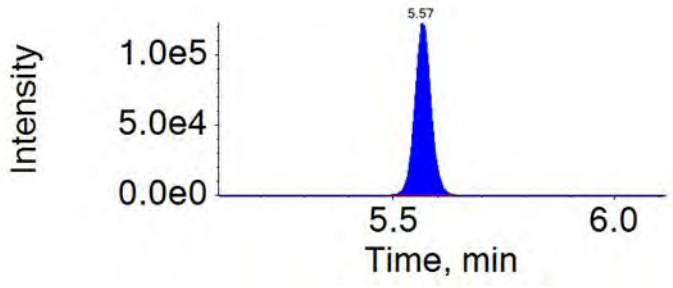
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



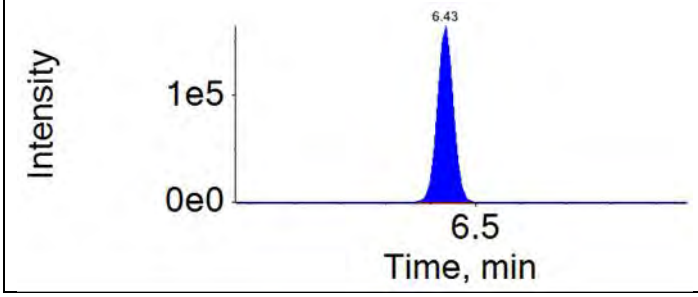


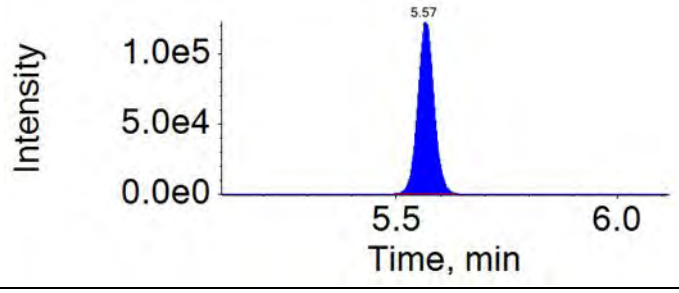
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



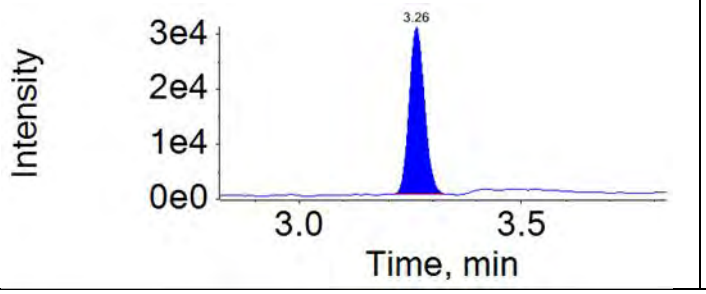


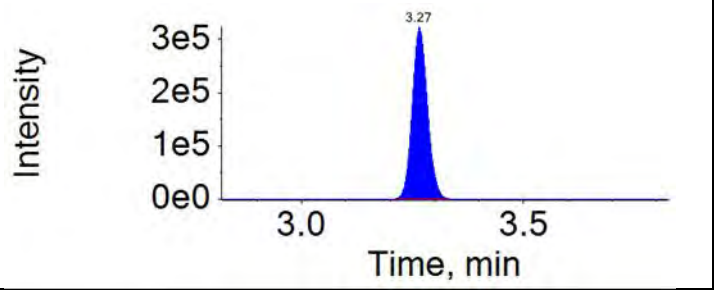
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

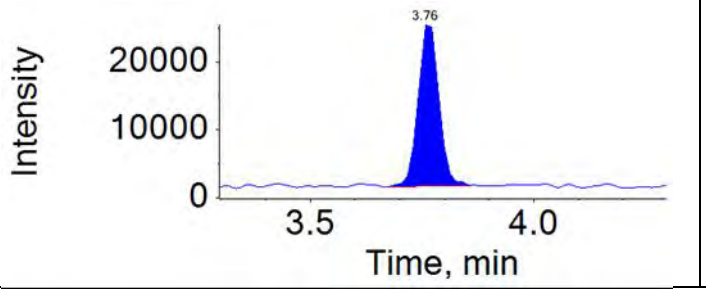
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

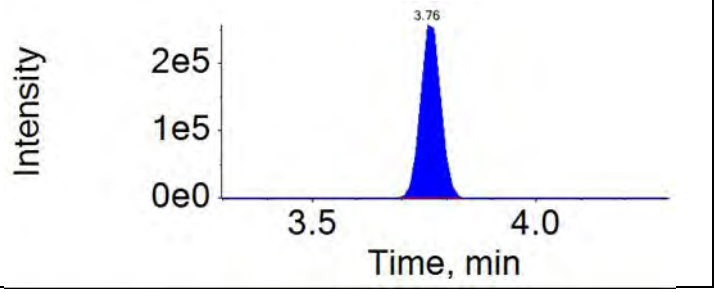
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



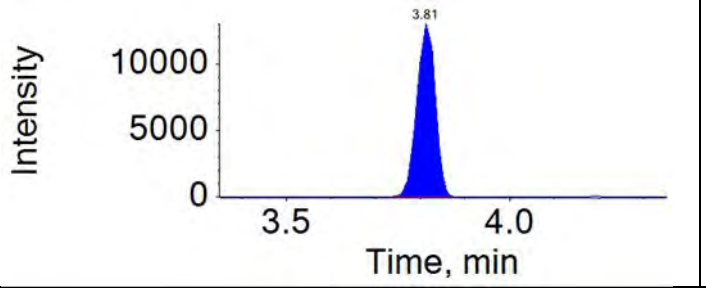


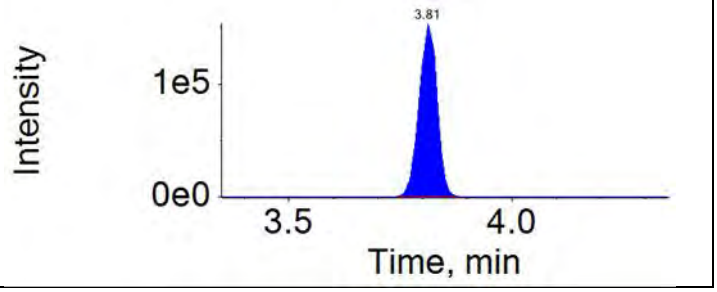
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



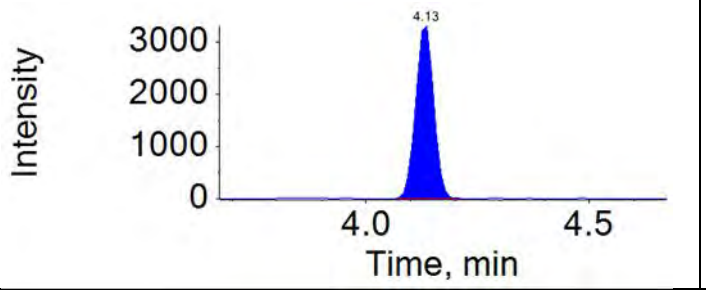


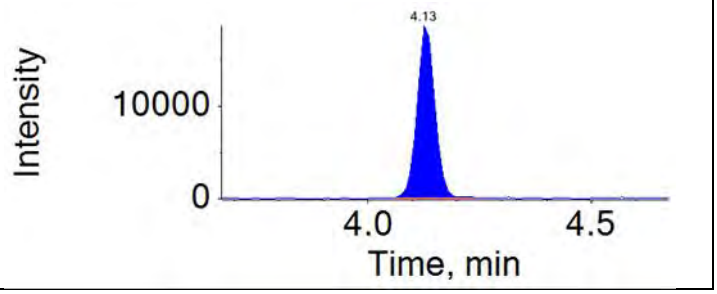
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



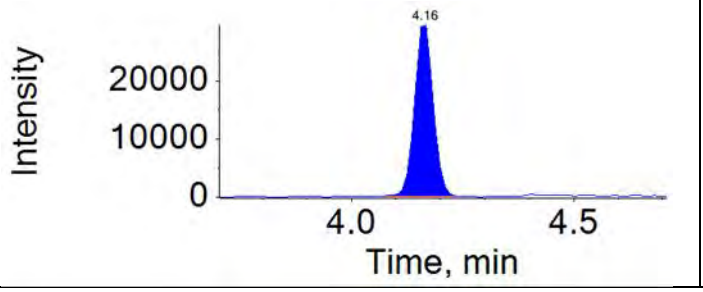


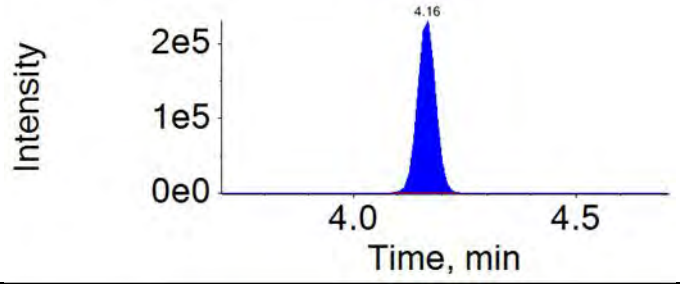
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

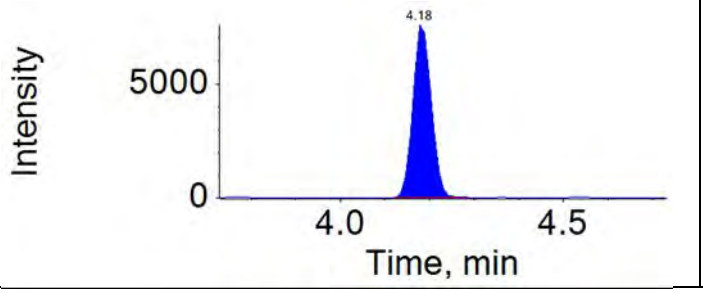
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

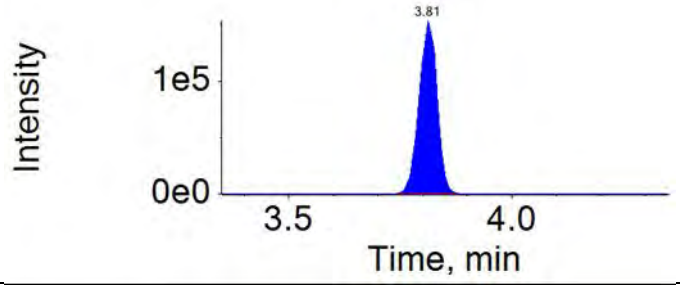
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



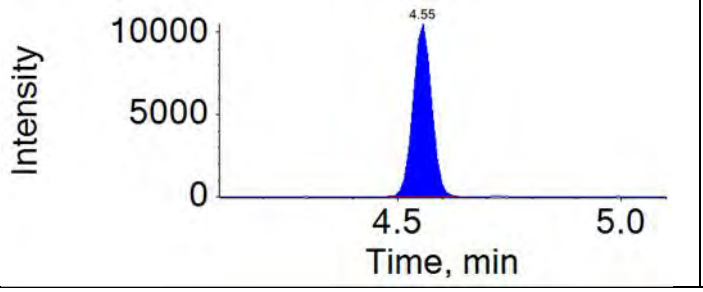


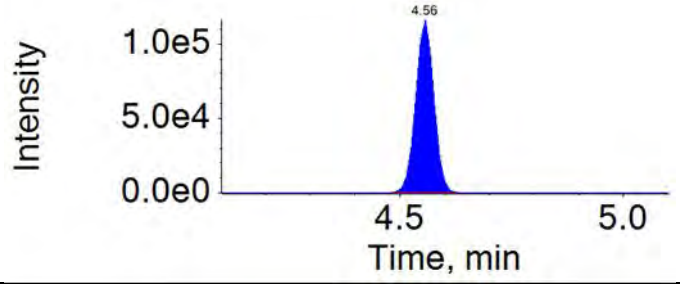
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



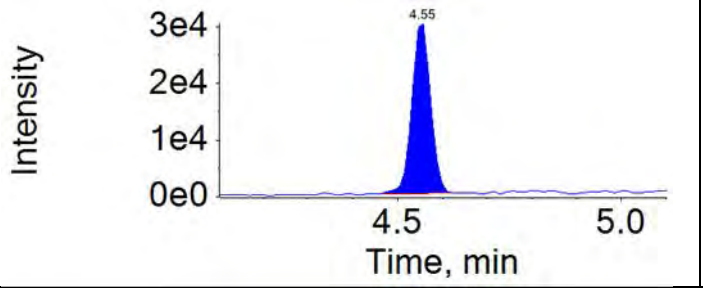


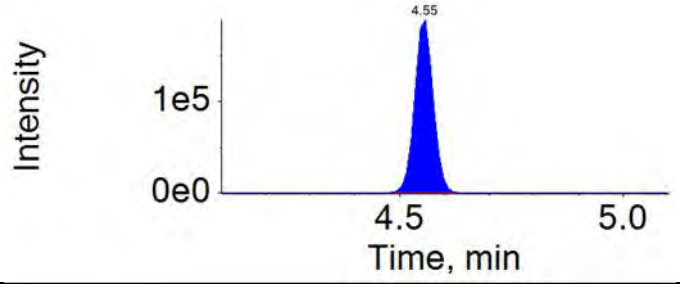
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

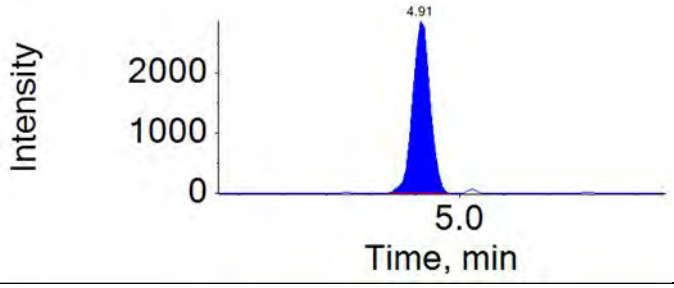
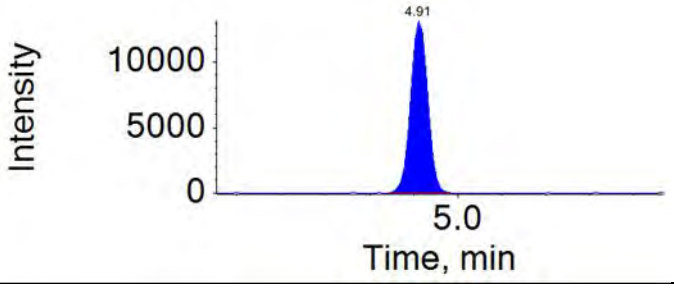


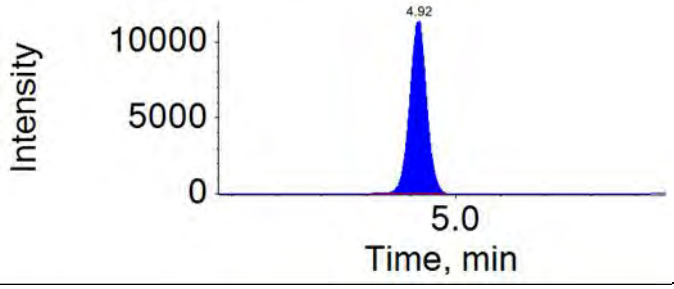
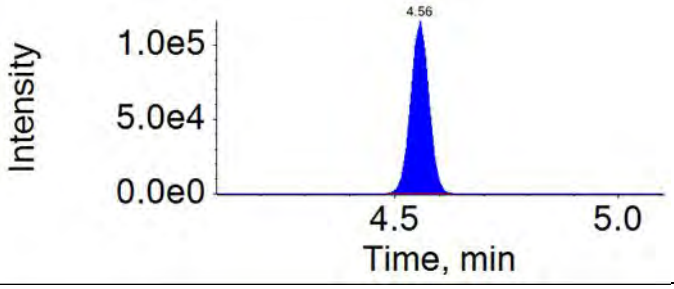


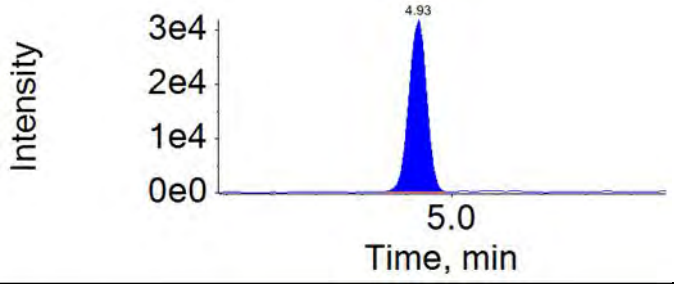
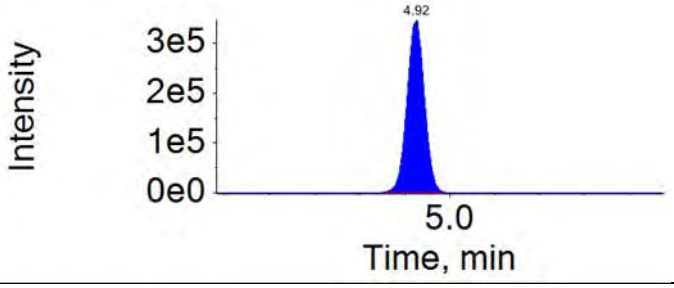
APPROVED
By JPT at 5:07 pm, 11/8/18

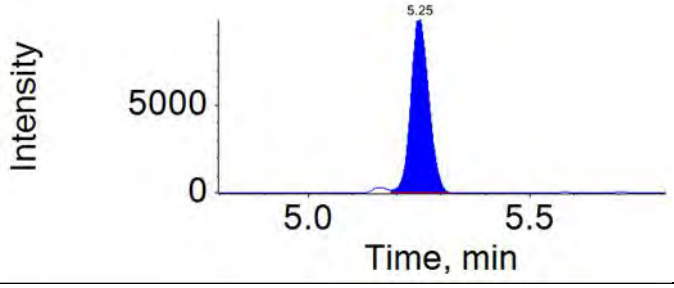
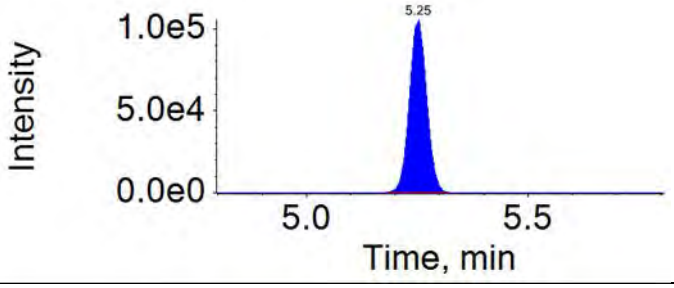
REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

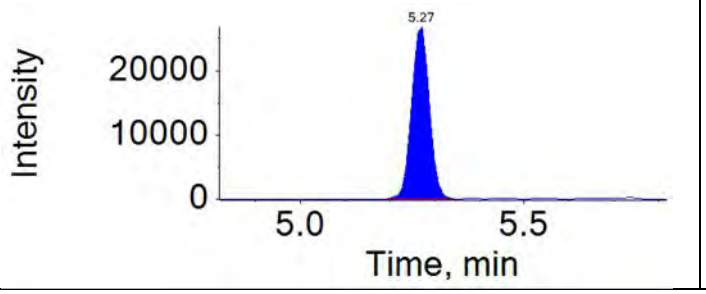
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

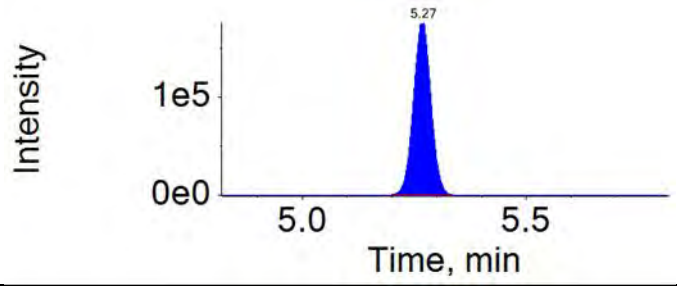
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

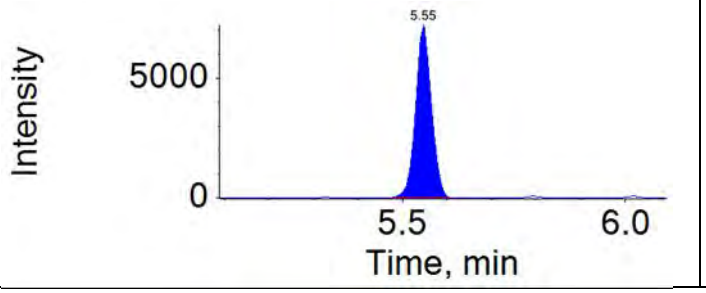
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

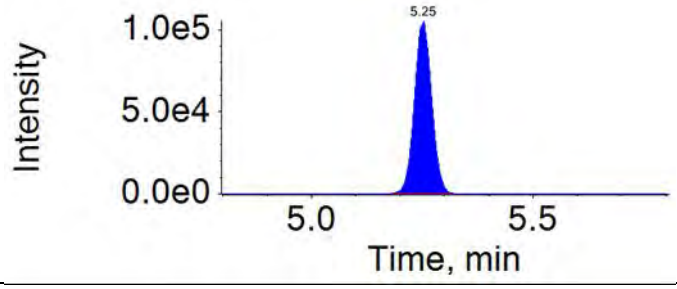
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



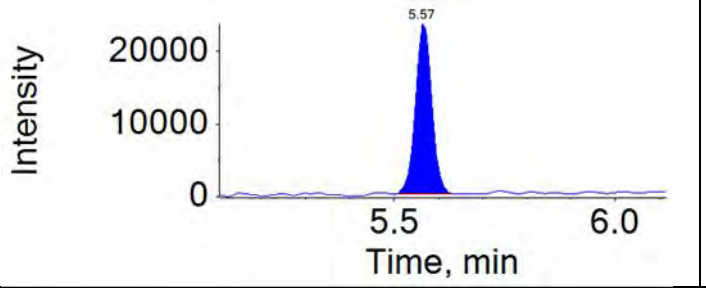


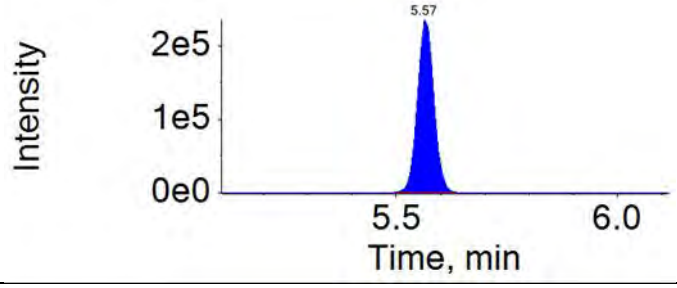
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



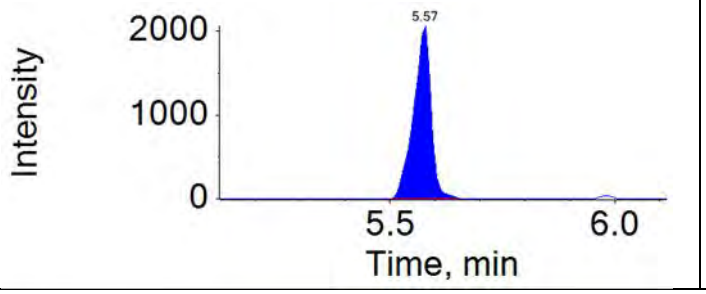


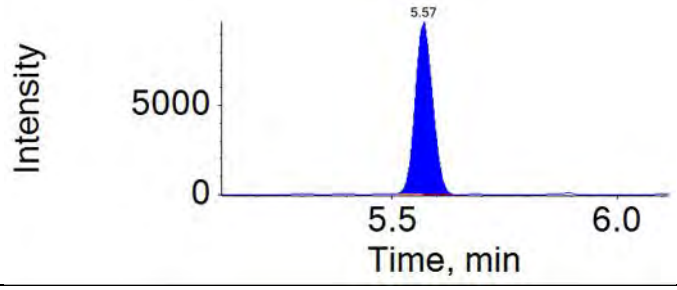
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



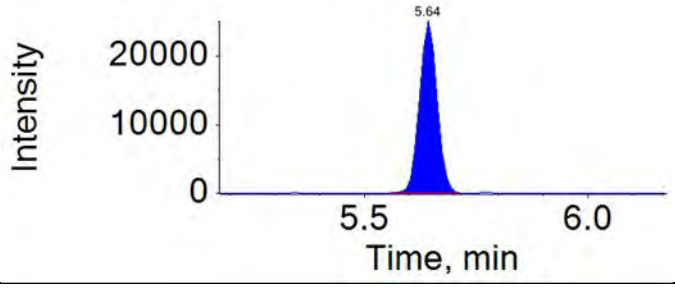


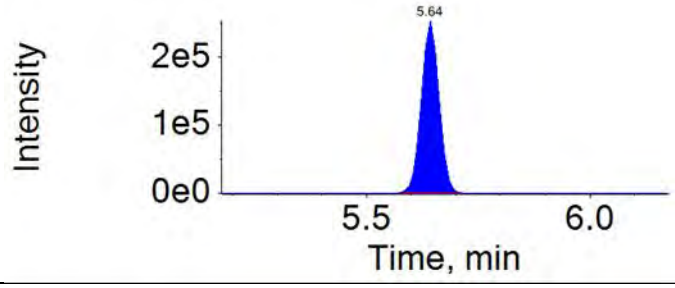
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

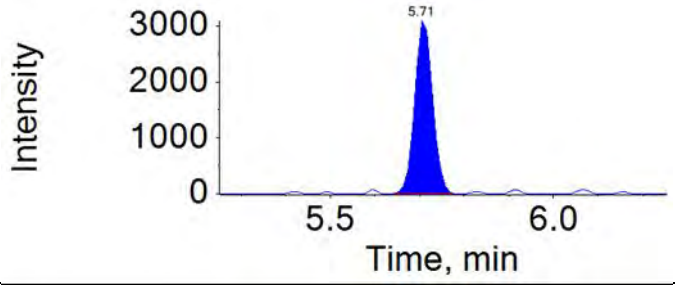
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

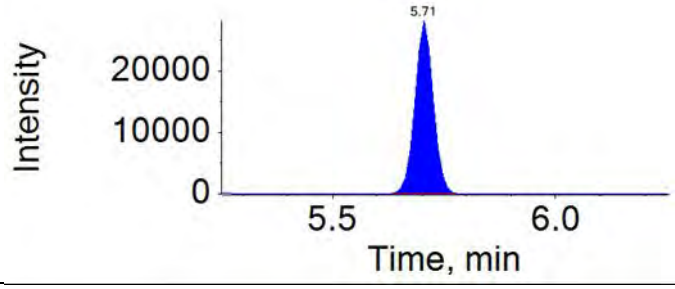
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



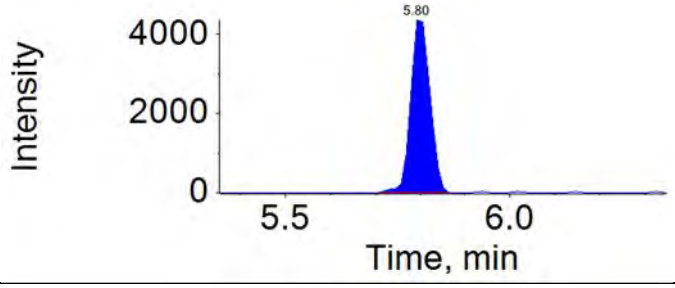


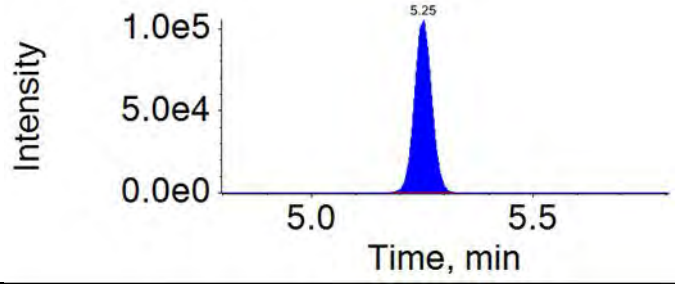
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



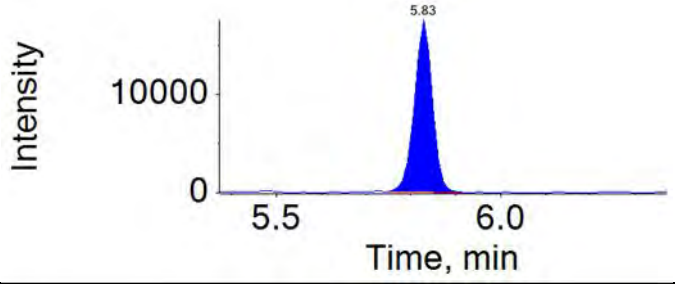


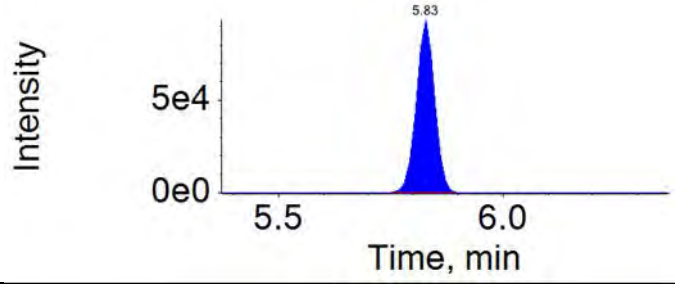
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



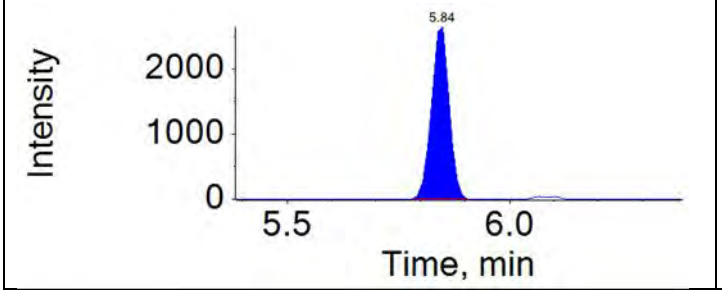


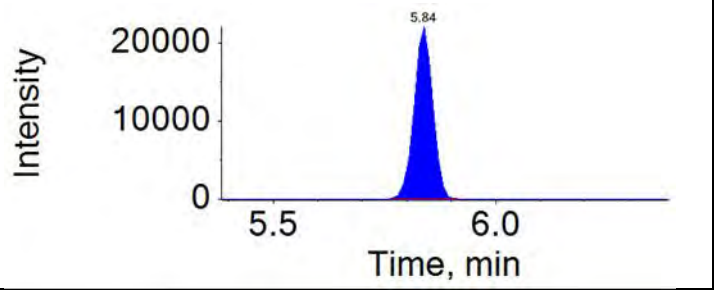
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

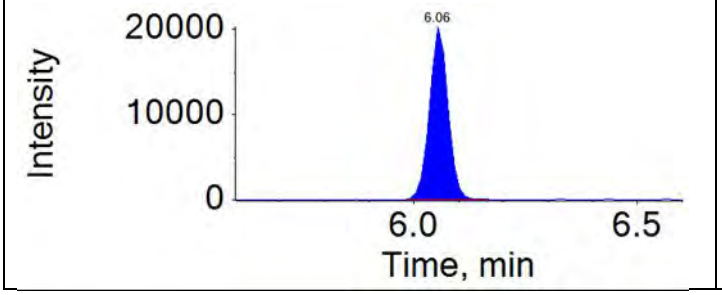
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

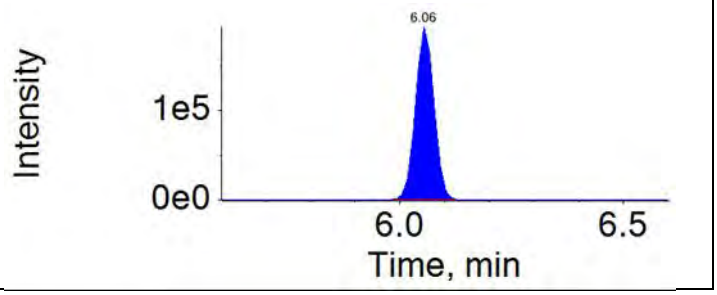
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



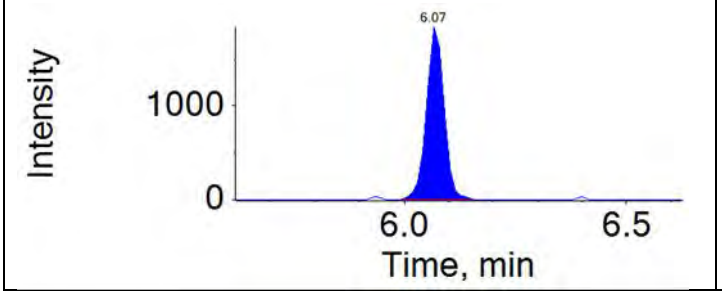


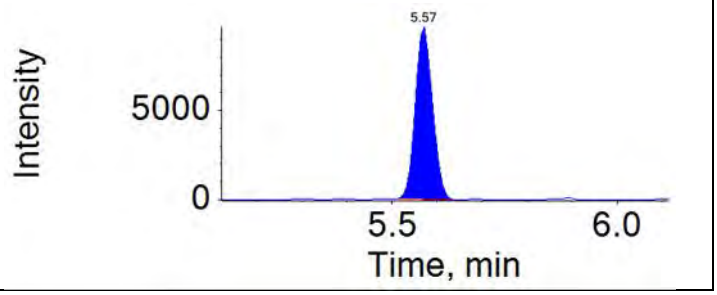
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



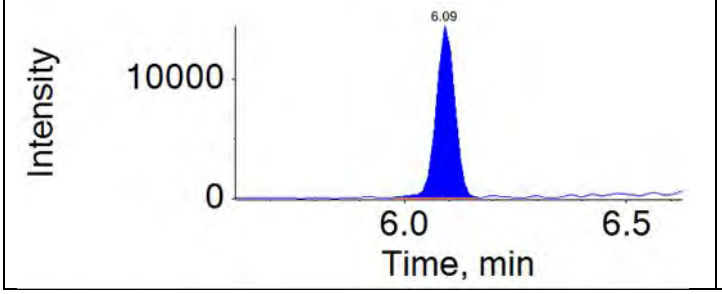


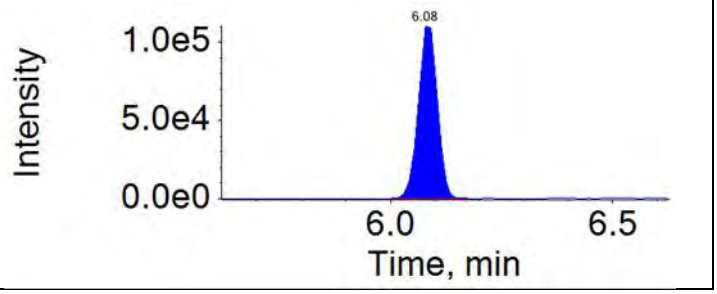
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



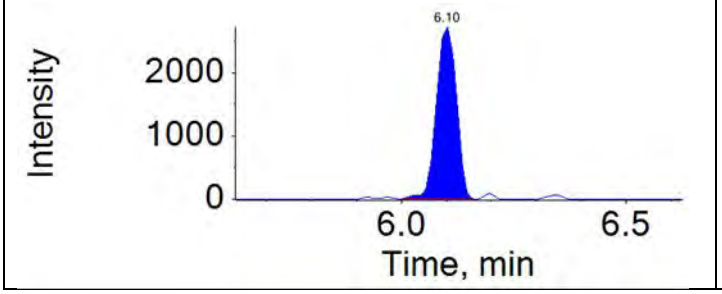


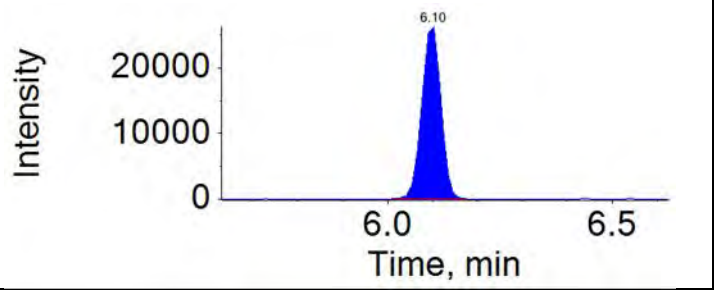
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

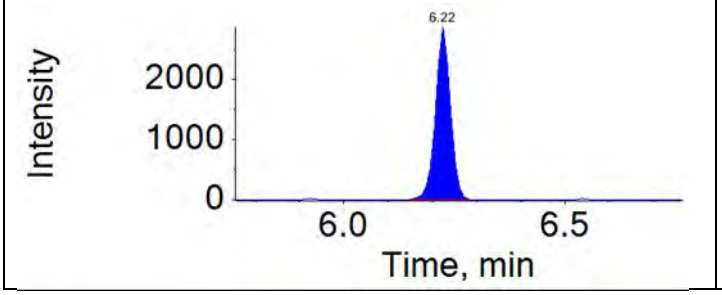
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

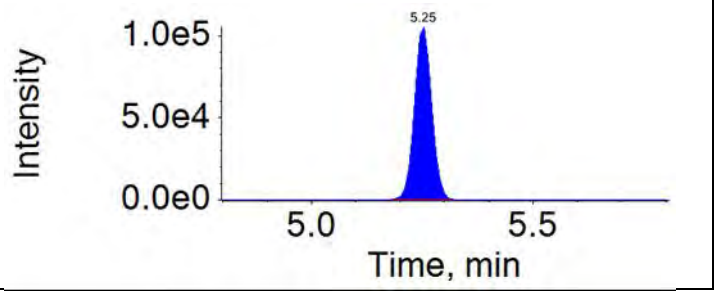
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



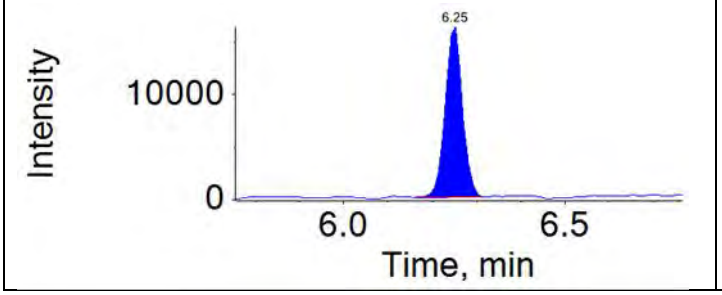


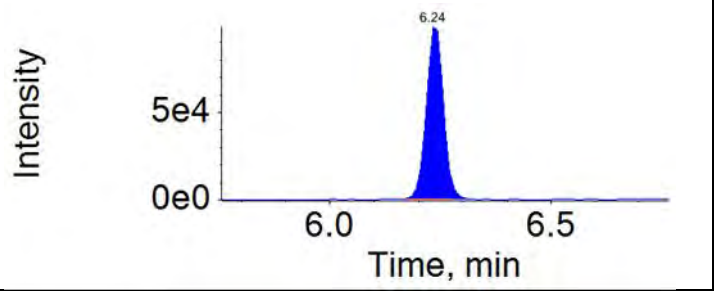
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



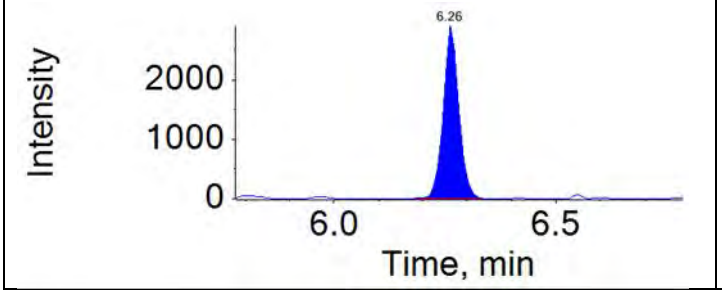


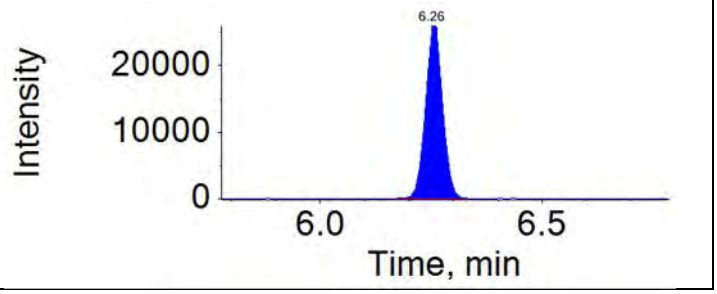
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



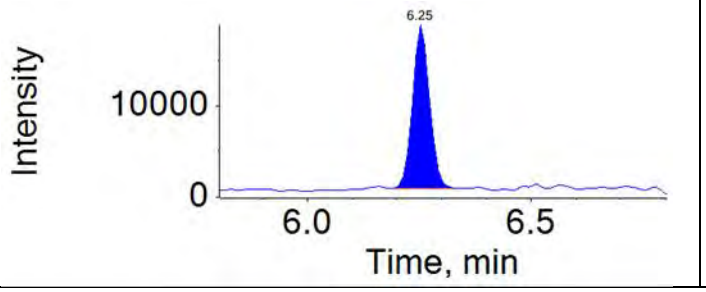


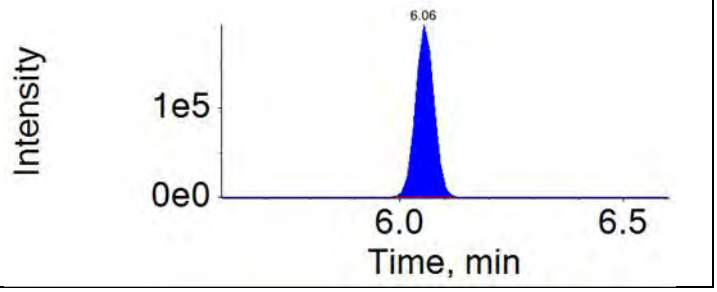
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

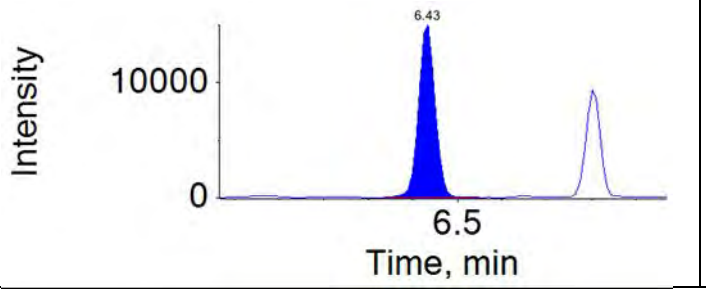
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

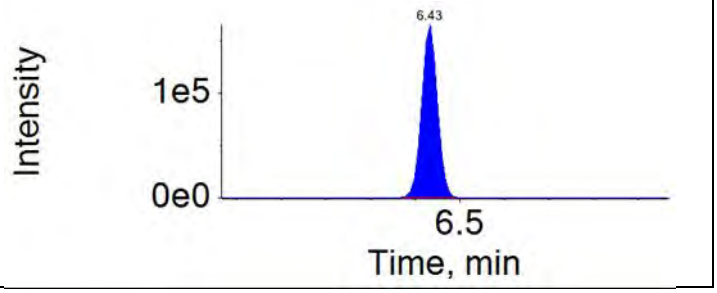
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



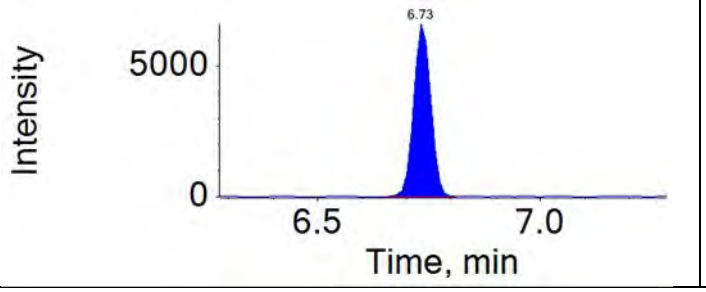


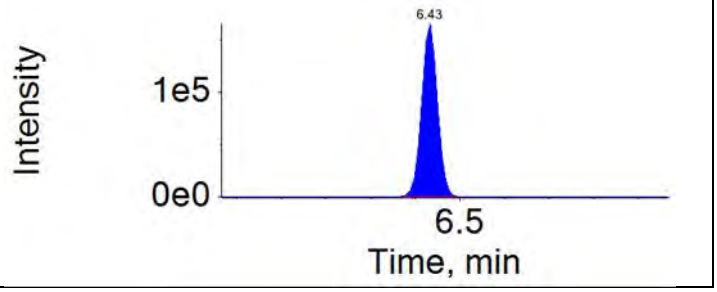
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



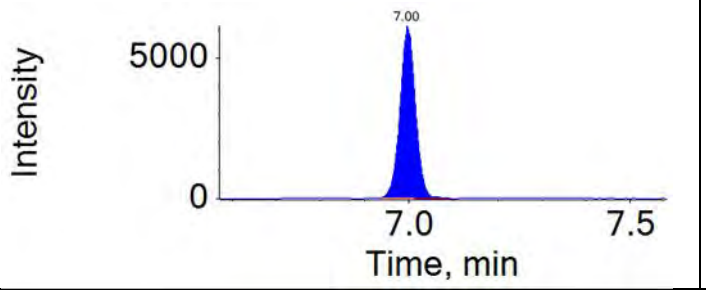


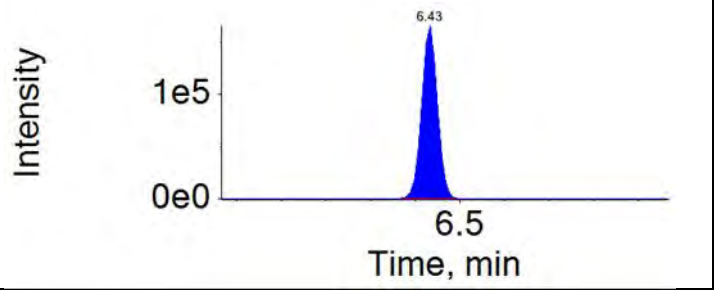
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



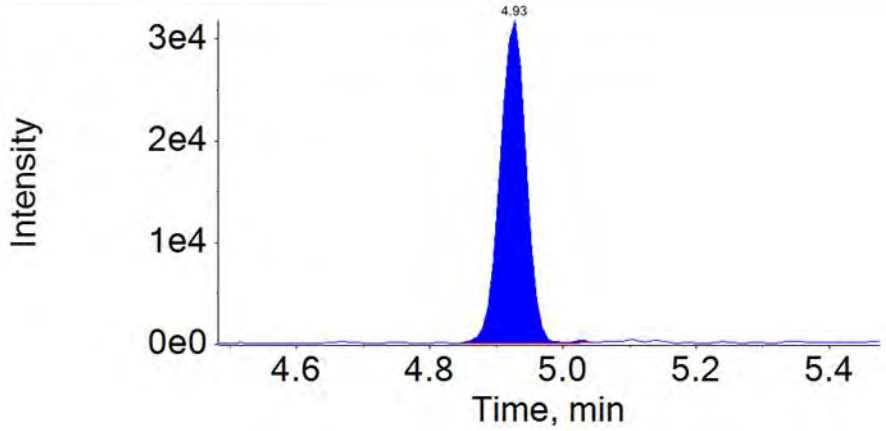


APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

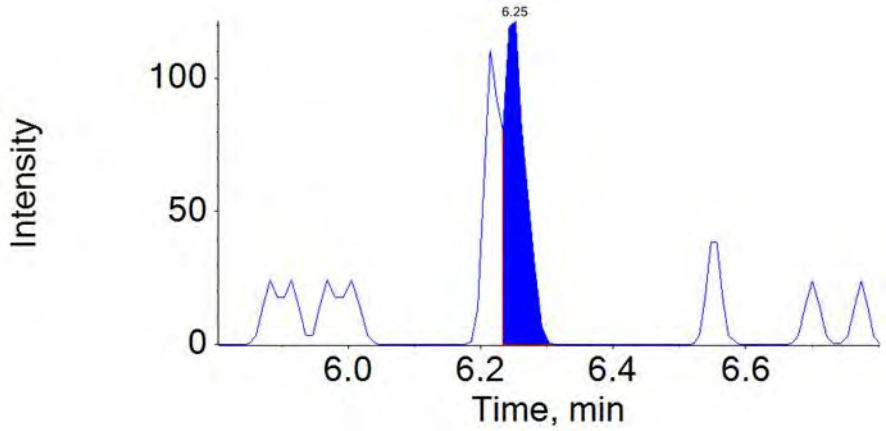
Results Table Name: 18NOV08DCCV1-3
Results Table Date: 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOA
RT (min.):
4.93
Peak Area:
86492.1
Mass Range:
413.0 / 369.0
File Name:
18NOV08D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.25
Peak Area:
260.9
Mass Range:
663.0 / 169.0
File Name:
18NOV08D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Results Table Name: 18NOV08DCCV1-3
Results Table Date: 11/8/2018 5:00:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Ion Ratio Report

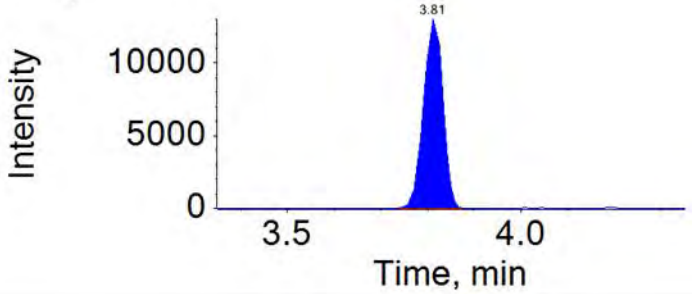
Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV08D-05.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	37650.0	A	N/A	1.0000			
PFBS_2	3.81	1.00	13251.9	A	N/A	0.3520	-2	50	
4:2-FTS	4.13	1.00	9377.7	A	N/A	1.0000			
4:2-FTS_2	4.13	1.00	5342.6	A	N/A	0.5697	-10	50	
PFHxA	4.16	1.00	85965.4	A	N/A	1.0000			
PFHxA_2	4.17	1.00	972.8	A	N/A	0.0113	-1	50	
PFPeS	4.18	1.10	21837.5	A	N/A	1.0000			
PFPeS_2	4.18	1.10	10586.9	A	N/A	0.4848	-10	50	
PFHxS	4.55	1.00	30165.5	A	N/A	1.0000			
PFHxS_2	4.56	1.00	10382.1	A	N/A	0.3442	-4	50	
PFHpA	4.55	1.00	87232.0	A	N/A	1.0000			
PFHpA_2	4.56	1.00	4952.8	A	N/A	0.0568	-2	50	
6:2-FTS	4.91	1.00	7814.5	A	N/A	1.0000			
6:2-FTS_2	4.91	1.00	4814.5	A	N/A	0.6161	-9	50	
PFHpS	4.92	1.08	30009.2	A	N/A	1.0000			
PFHpS_2	4.92	1.08	13233.1	A	N/A	0.4410	12	50	
PFOA	4.93	1.00	86207.9	M	N/A	1.0000			
PFOA_2	4.92	1.00	4733.1	A	N/A	0.0549	-14	50	
PFOS	5.25	1.00	28047.3	A	N/A	1.0000			
PFOS_2	5.25	1.00	9799.5	A	N/A	0.3494	0	50	
PFNA	5.27	1.00	73414.7	A	N/A	1.0000			
PFNA_2	5.26	1.00	1253.8	A	N/A	0.0171	-17	50	
PFNS	5.55	1.06	17602.7	A	N/A	1.0000			
PFNS_2	5.55	1.06	8114.4	A	N/A	0.4610	-6	50	
PFDA	5.57	1.00	60165.4	A	N/A	1.0000			
PFDA_2	5.56	1.00	427.9	A	N/A	0.0071	26	50	
8:2-FTS	5.57	1.00	5527.1	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	4227.8	A	N/A	0.7649	24	50	
NMeFOSAA	5.71	1.00	8576.2	A	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	1355.2	A	N/A	0.1580	-28	50	
PFDS	5.80	1.10	13175.4	A	N/A	1.0000			
PFDS_2	5.80	1.11	8331.4	A	N/A	0.6323	36	50	
PFUnDA	5.83	1.00	48289.0	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	182.7	A	N/A	0.0038	20	50	
NEtFOSAA	5.84	1.00	7263.0	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	4239.9	A	N/A	0.5838	-4	50	
PFDoDA	6.06	1.00	58287.0	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	1258.3	A	N/A	0.0216	97	50	OOS
10:2-FTS	6.07	1.09	5075.6	A	N/A	1.0000			
10:2-FTS_2	6.07	1.09	2705.8	A	N/A	0.5331	-25	50	
PFTrDA	6.25	1.03	46666.6	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	443.3	M	N/A	0.0095	-1	50	
PFTeDA	6.43	1.00	38675.5	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	32.8	A	N/A	0.0008	-85	50	OOS
PFHxDA	6.73	1.05	17615.3	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	985.7	A	N/A	0.0560	-6	50	
PFODA	7.00	1.09	14725.2	A	N/A	1.0000			
PFODA_2	7.00	1.09	380.8	A	N/A	0.0259	1	50	

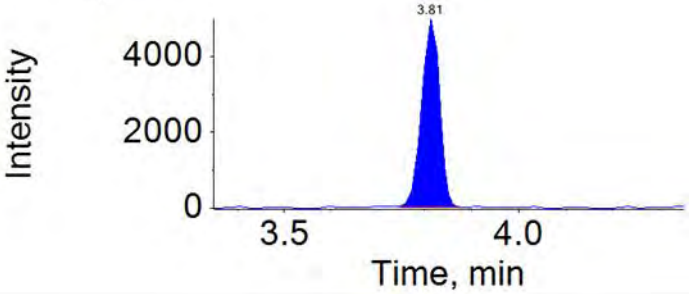
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

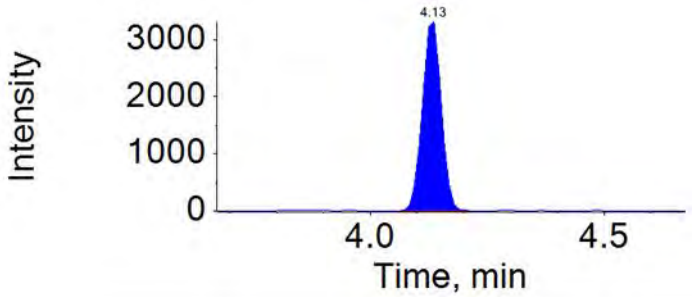
Component: PFBS
Primary Mass: 299.0 / 80.0



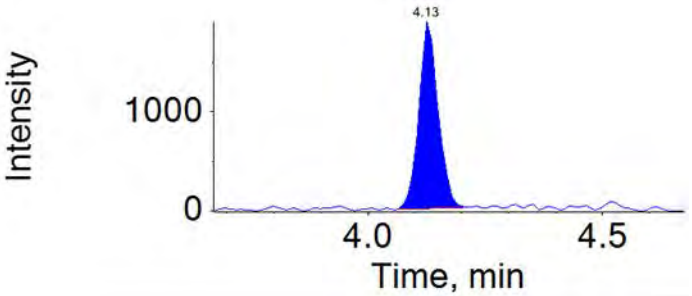
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



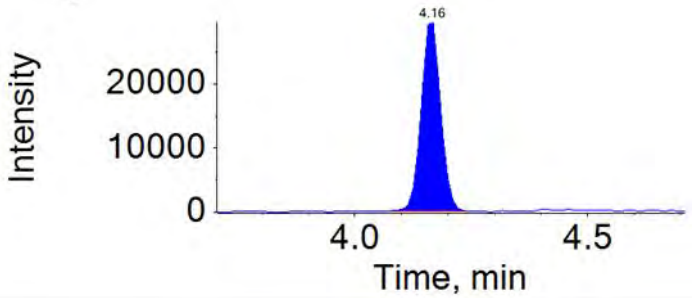
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



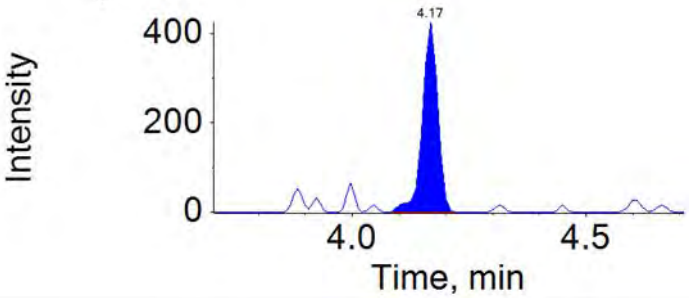
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



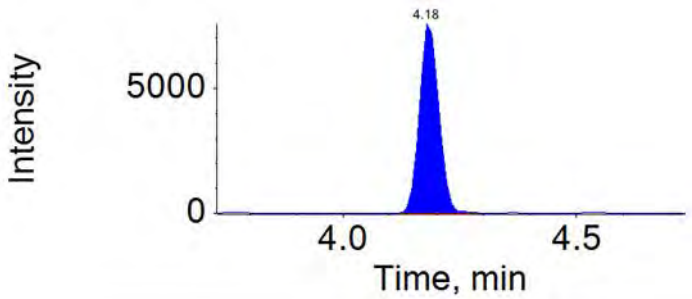
Component: PFHxA
Primary Mass: 313.0 / 269.0



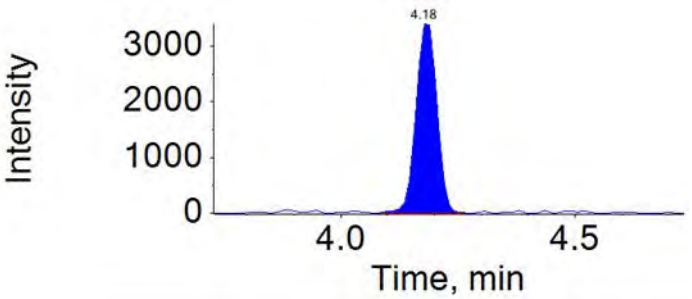
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



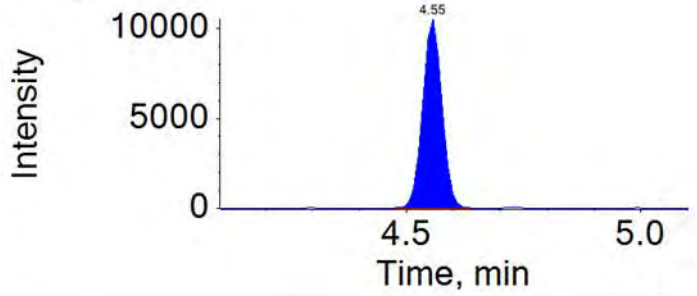
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



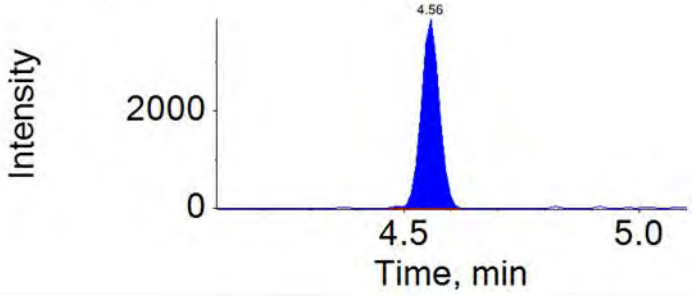
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

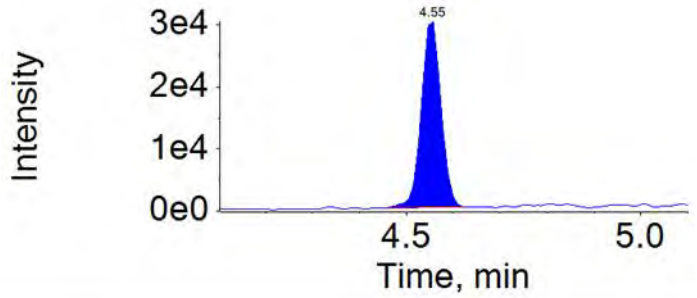
Component: PFHxS
Primary Mass: 399.0 / 80.0



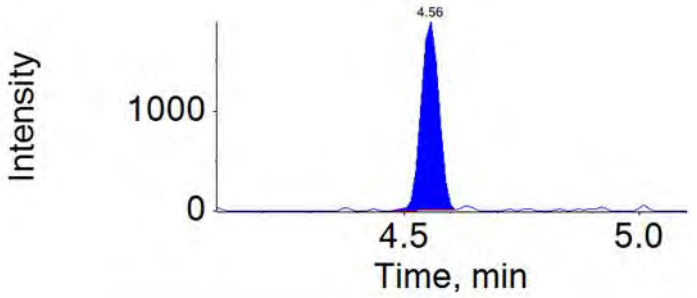
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



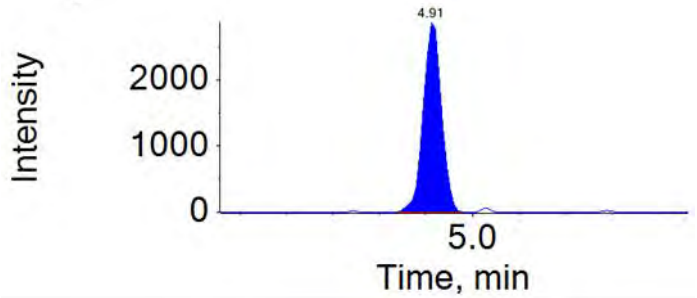
Component: PFHpA
Primary Mass: 363.0 / 319.0



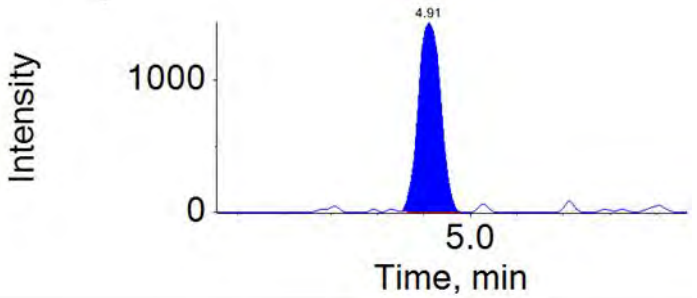
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



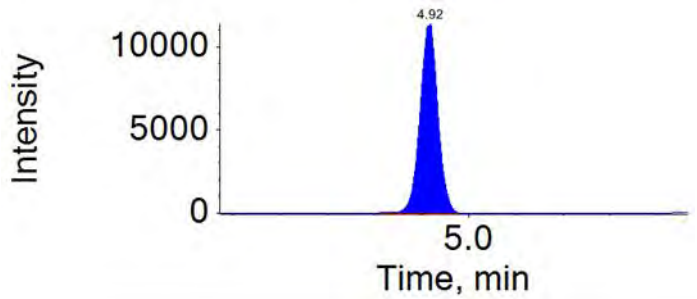
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



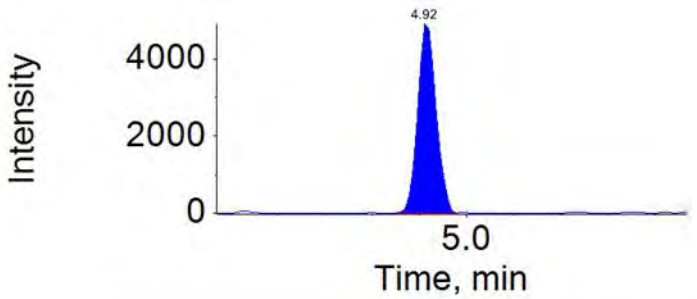
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



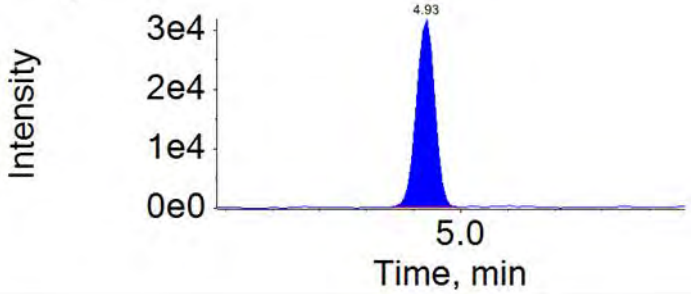
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



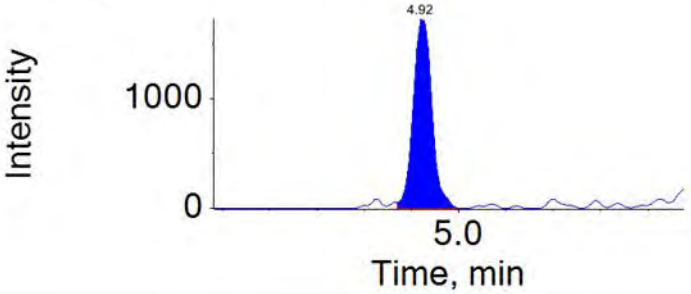
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

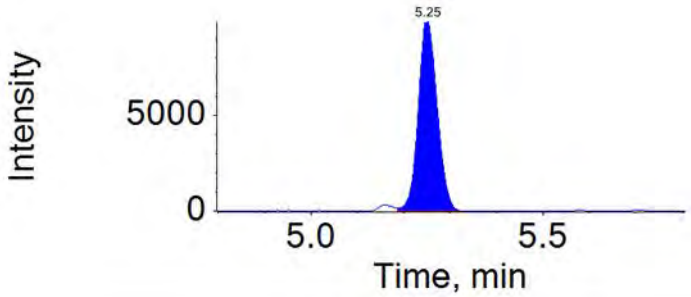
Component: PFOA
Primary Mass: 413.0 / 369.0



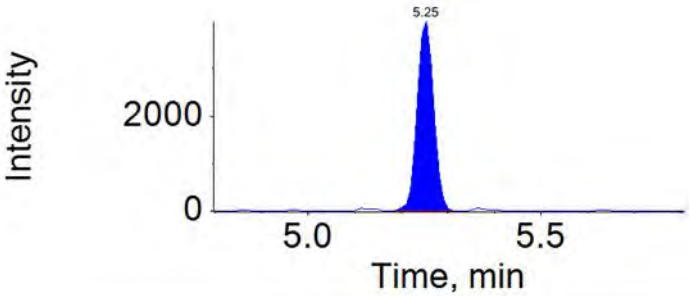
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



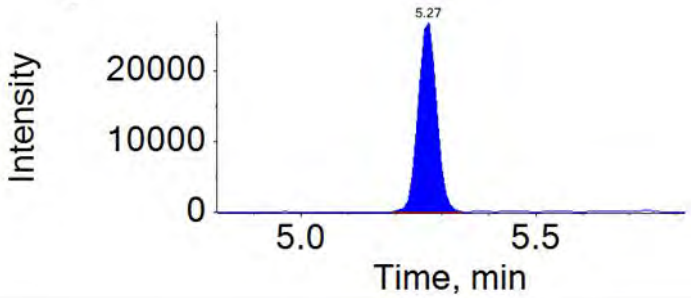
Component: PFOS
Primary Mass: 499.0 / 80.0



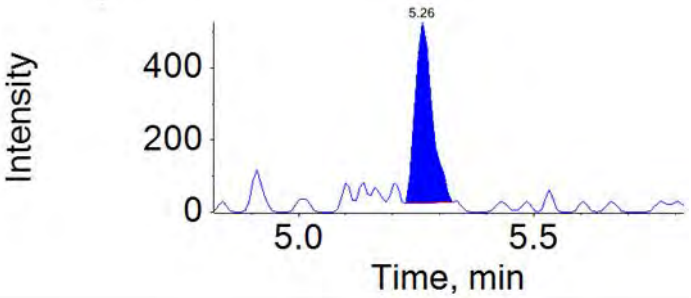
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



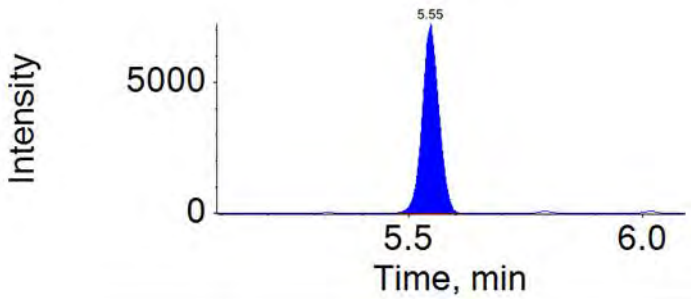
Component: PFNA
Primary Mass: 463.0 / 419.0



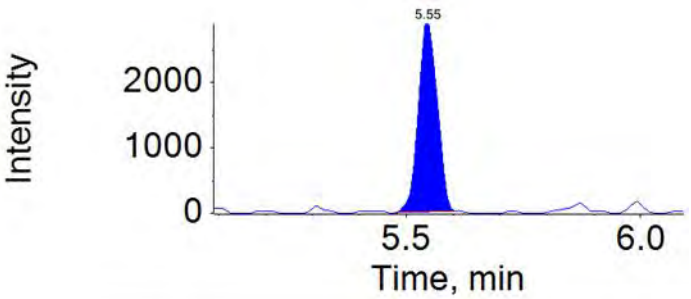
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



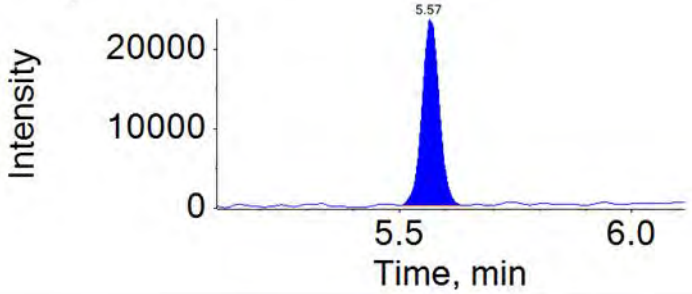
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



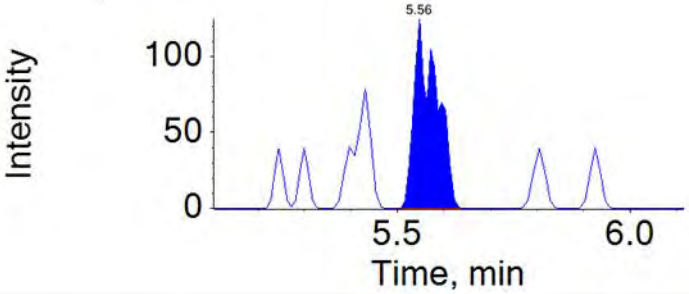
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

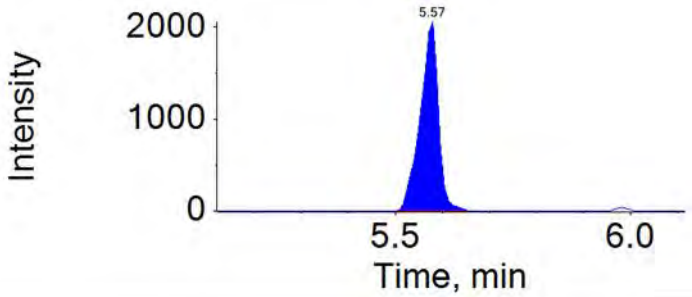
Component: PFDA
Primary Mass: 513.0 / 469.0



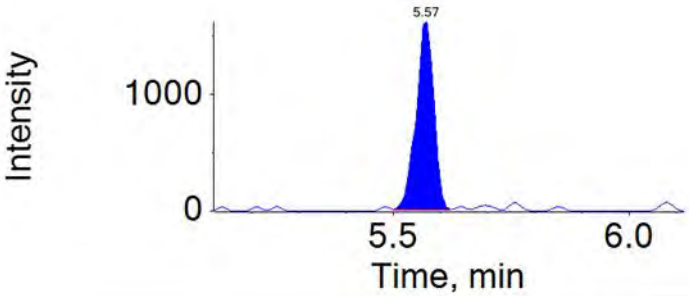
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



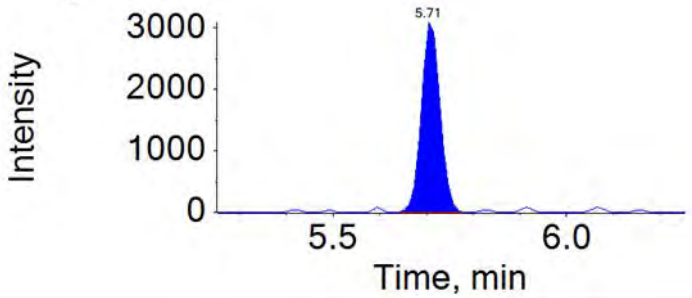
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



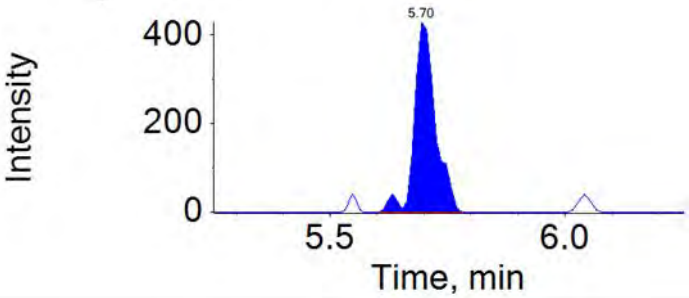
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



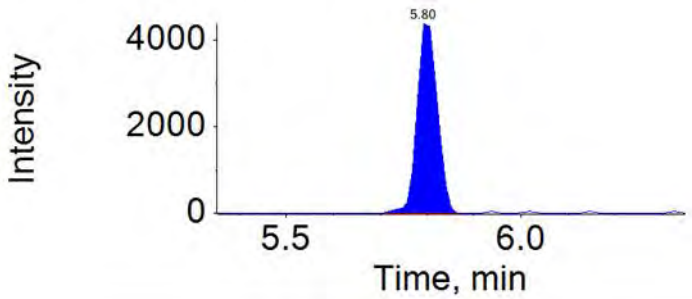
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



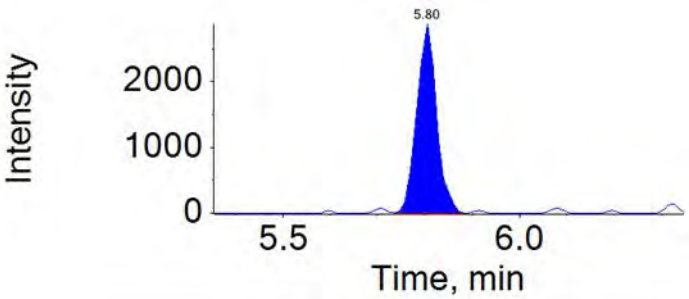
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



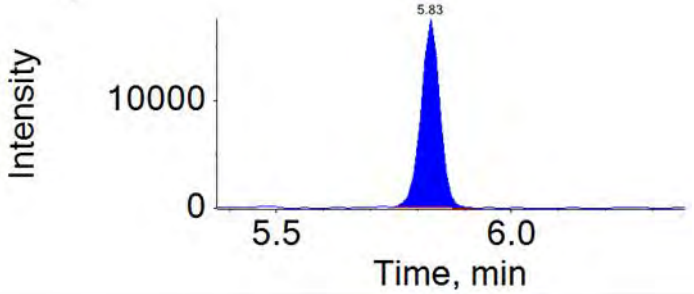
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



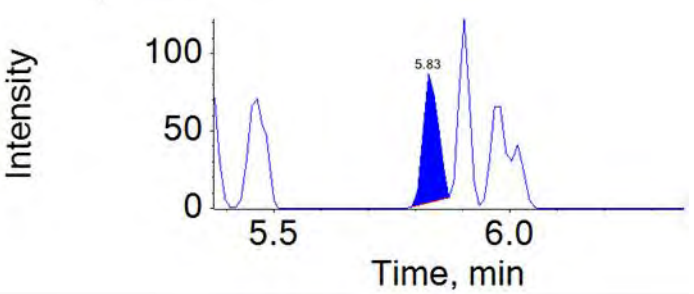
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

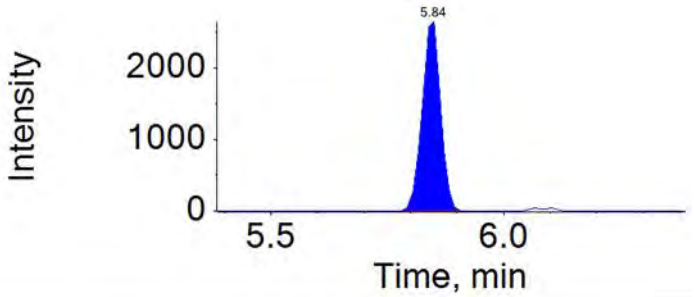
Component: PFUnDA
Primary Mass: 563.0 / 519.0



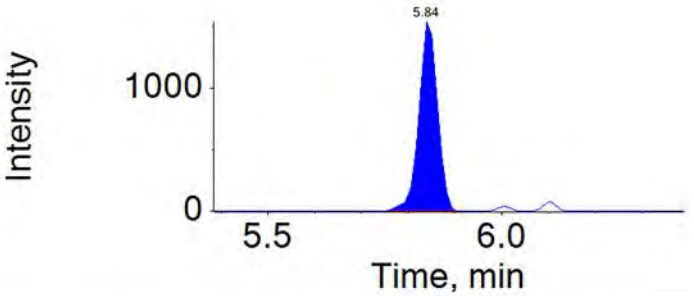
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



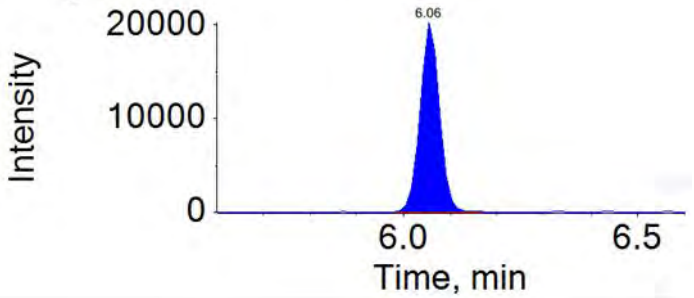
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



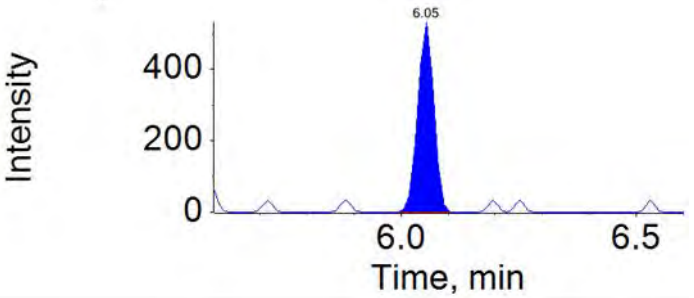
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



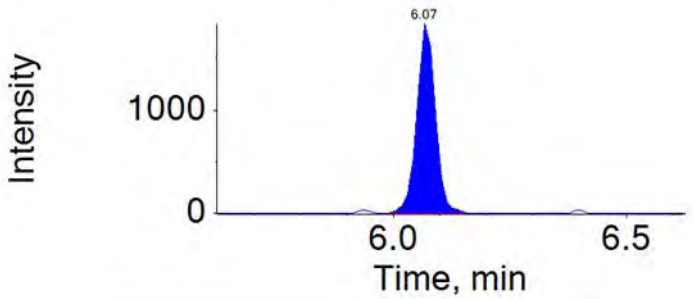
Component: PFDoDA
Primary Mass: 613.0 / 569.0



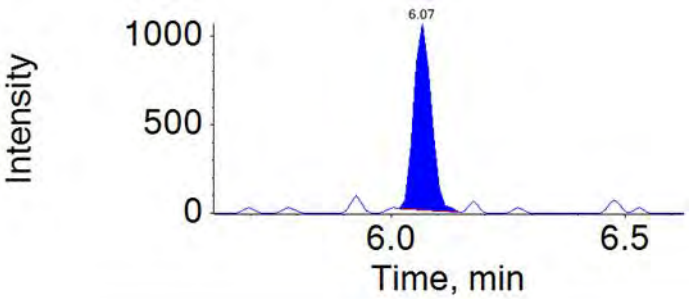
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



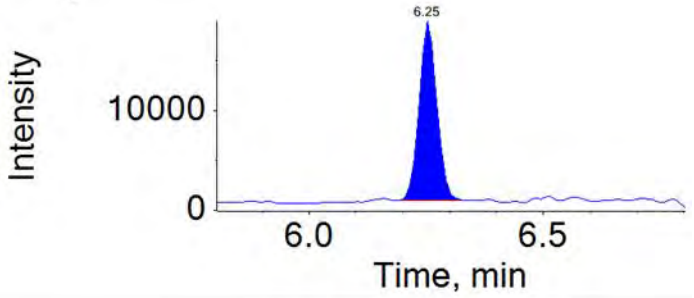
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



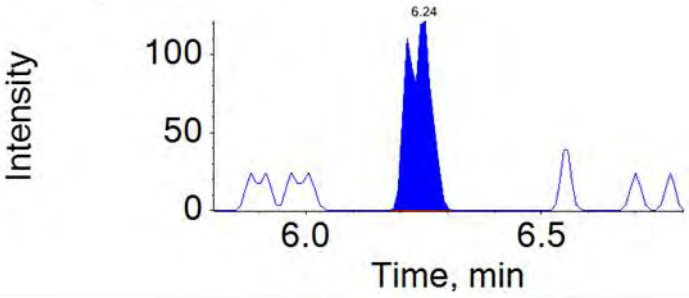
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

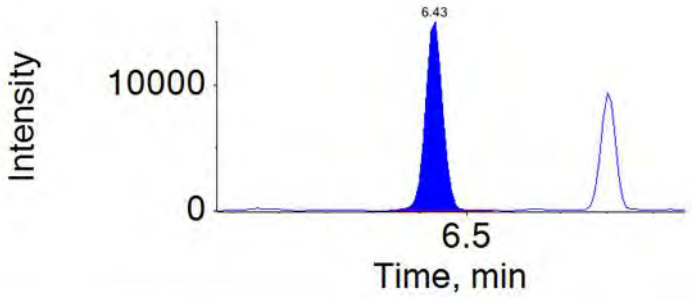
Component: PFTrDA
Primary Mass: 663.0 / 619.0



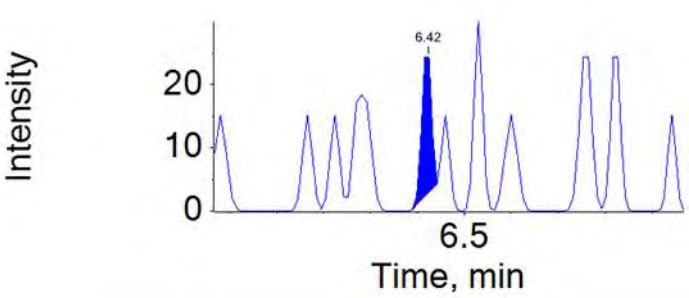
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



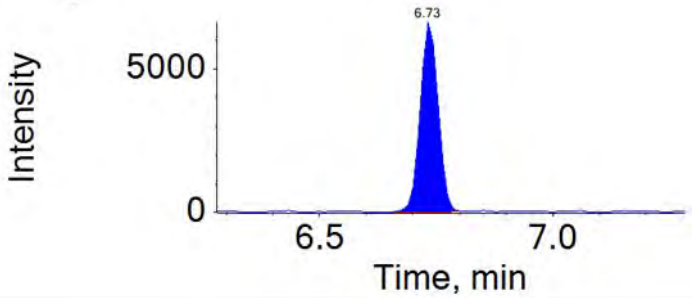
Component: PFTeDA
Primary Mass: 713.0 / 669.0



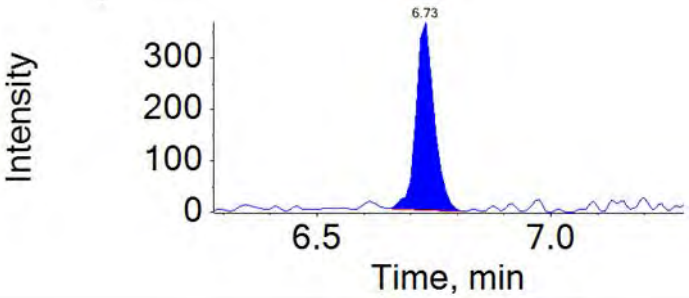
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



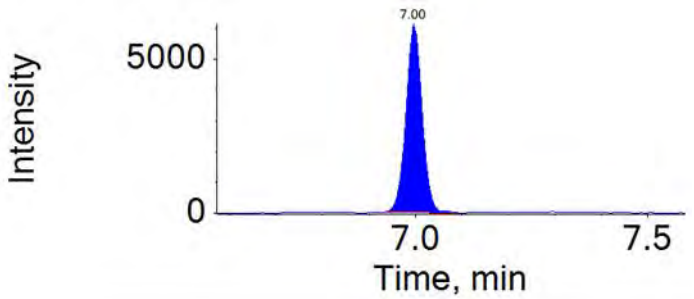
Component: PFHxDA
Primary Mass: 813.0 / 769.0



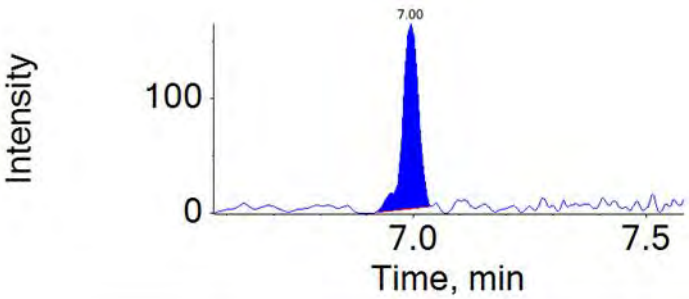
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	INBLK			**Data File:**		18NOV08D-06.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-08T12:33:40
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV1-3
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	762381.1	728839.7	5	50	
13C2-PFOA	5.0	518497.3	491983.1	5	50	
13C4-PFOS	4.8	299698.4	255568.1	17	50	
13C2-PFDA	5.0	319995.1	315407.5	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	833101.6	13C3-PFBA	762381.1	1.093	5.000	5.057	101	70-130	
E13C5-PFPeA	855177.9	13C3-PFBA	762381.1	1.122	5.000	4.887	98	70-130	
E13C3-PFBS	470351.2	13C3-PFBA	762381.1	0.617	4.650	4.528	97	70-130	
E13C2-4:2-FTS	60069.6	13C2-PFOA	518497.3	0.116	4.670	5.228	112	70-130	
E13C5-PFHxA	733289.5	13C2-PFOA	518497.3	1.414	5.000	5.202	104	70-130	
E13C3-PFHxS	361564.7	13C2-PFOA	518497.3	0.697	4.730	5.006	106	70-130	
E13C4-PFHpA	576861.3	13C2-PFOA	518497.3	1.113	5.000	5.061	101	70-130	
E13C2-6:2-FTS	42684.4	13C2-PFOA	518497.3	0.082	4.750	5.490	116	70-130	
E13C8-PFOA	1008040.9	13C2-PFOA	518497.3	1.944	5.000	5.422	108	70-130	
E13C8-PFOS	315952.3	13C4-PFOS	299698.4	1.054	4.780	4.662	98	70-130	
E13C9-PFNA	515145.7	13C4-PFOS	299698.4	1.719	5.000	4.695	94	70-130	
E13C6-PFDA	695304.3	13C2-PFDA	319995.1	2.173	5.000	5.464	109	70-130	
E13C2-8:2-FTS	28113.9	13C2-PFDA	319995.1	0.088	4.790	4.649	97	70-130	
E13C8-PFOSA	721168.7	13C2-PFDA	319995.1	2.254	5.000	4.918	98	70-130	
Ed3-NMeFOSAA	88068.2	13C2-PFDA	319995.1	0.275	5.000	5.118	102	70-130	
E13C7-PFUnDA	312553.5	13C2-PFDA	319995.1	0.977	5.000	5.635	113	70-130	
Ed5-NEtFOSAA	70219.9	13C2-PFDA	319995.1	0.219	5.000	5.078	102	70-130	
E13C2-PFDoDA	613302.5	13C2-PFDA	319995.1	1.917	5.000	5.167	103	70-130	
Ed7-NMePFOSAE	356044.2	13C2-PFDA	319995.1	1.113	5.000	5.174	103	70-130	
Ed3-NMePFOSA	81885.6	13C2-PFDA	319995.1	0.256	5.000	4.685	94	70-130	
Ed9-NEtPFOSAE	290570.6	13C2-PFDA	319995.1	0.908	5.000	5.186	104	70-130	
Ed5-NEtPFOSA	68097.6	13C2-PFDA	319995.1	0.213	5.000	4.927	99	70-130	
E13C2-PFTeDA	436421.1	13C2-PFDA	319995.1	1.364	5.000	4.910	98	70-130	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

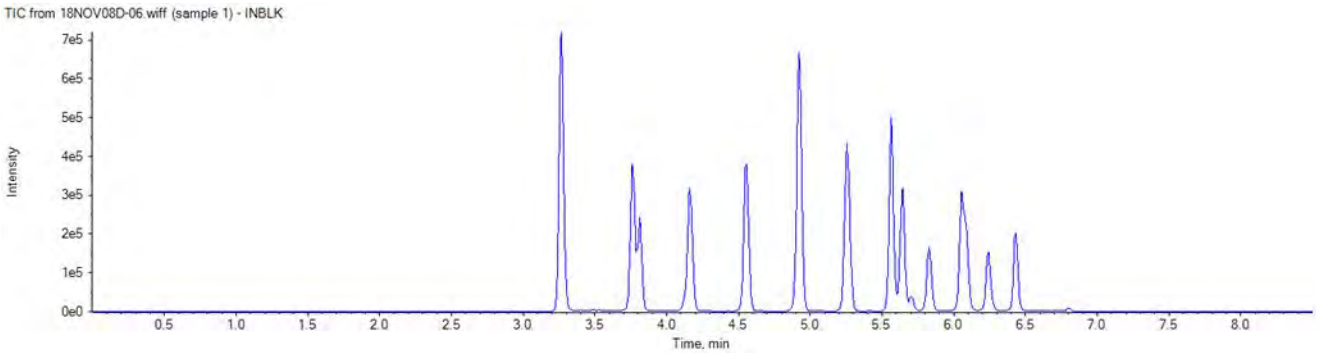
Analyte Quantitation Peak Table

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV08D-06.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	833101.6	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	855177.9	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	470351.2	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	60069.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	733289.5	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	470351.2	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	361564.7	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	576861.3	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	42684.4	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	361564.7	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	1008040.9	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	515145.7	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	695304.3	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	28113.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	721168.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	88068.2	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	312553.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	70219.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	613302.5	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	28113.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	356044.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	81885.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	290570.6	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	68097.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	613302.5	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	436421.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	436421.1	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	436421.1	N/A	

Total Ion Chromatogram

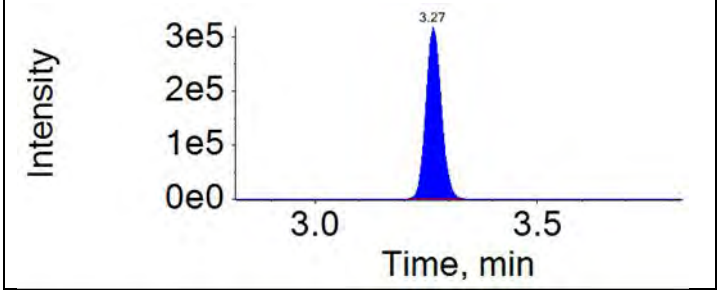


APPROVED
By JPT at 5:07 pm, 11/8/18

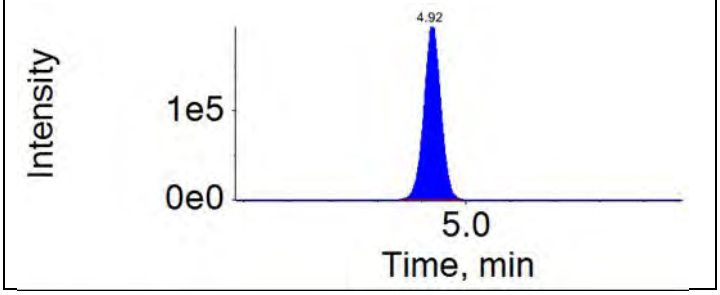
REVIEWED
By umar at 12:13 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

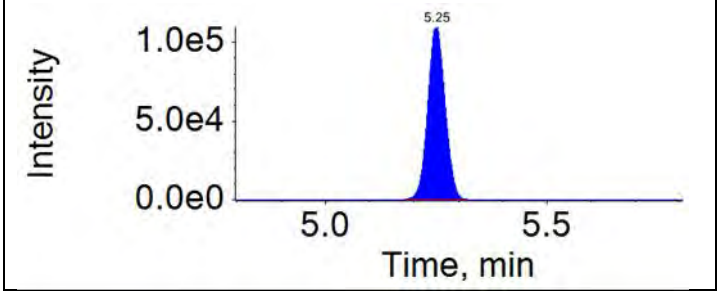
Injection Standard: 13C3-PFBA
216.0 / 172.0



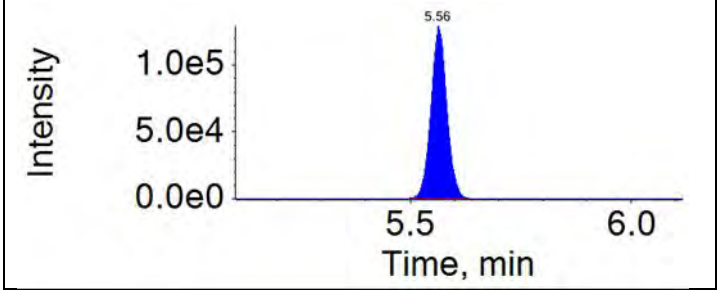
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

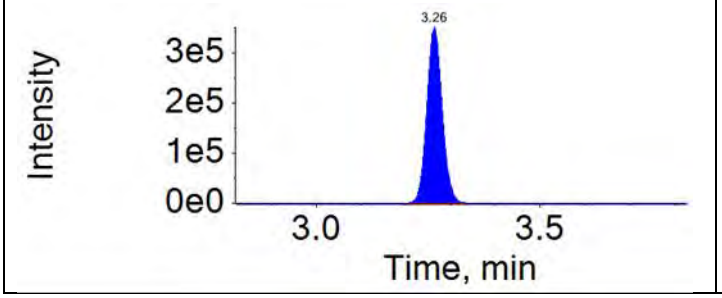


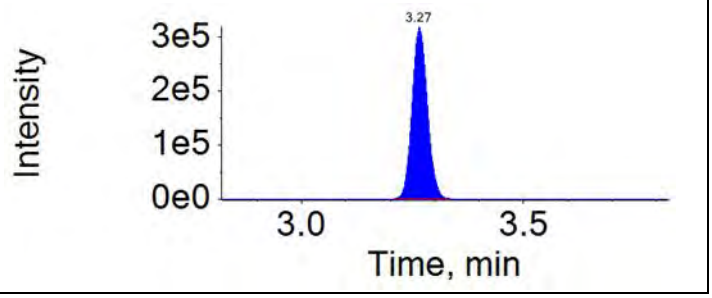
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

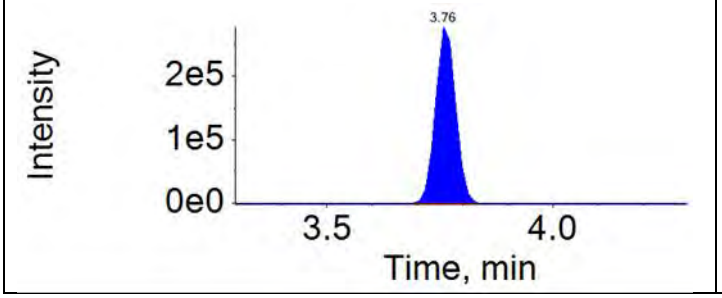
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

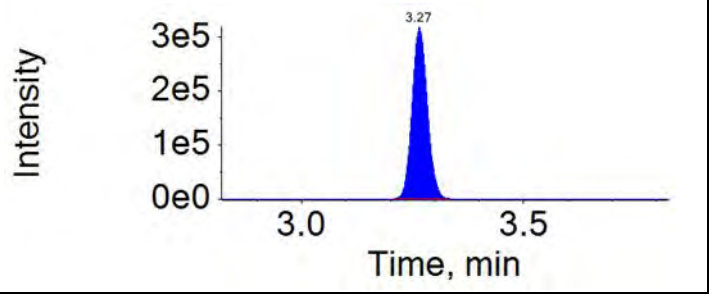
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



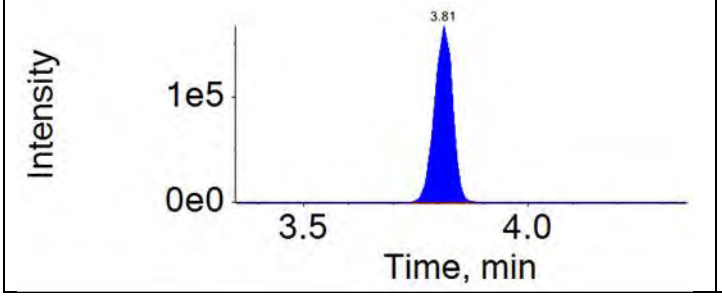


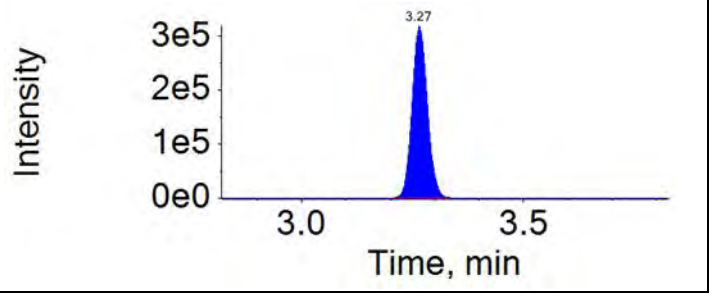
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



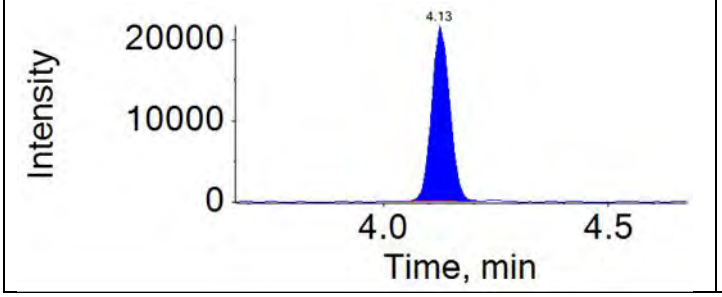


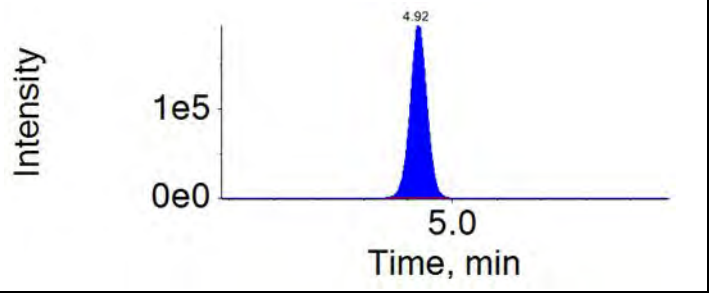
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



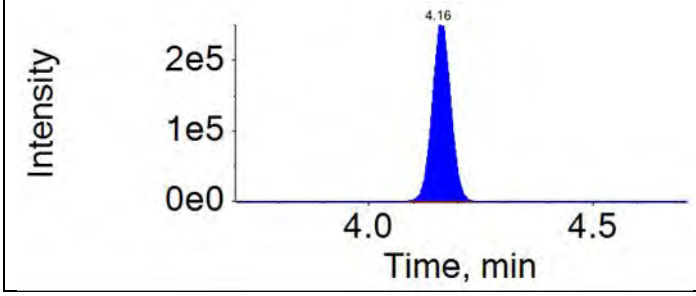


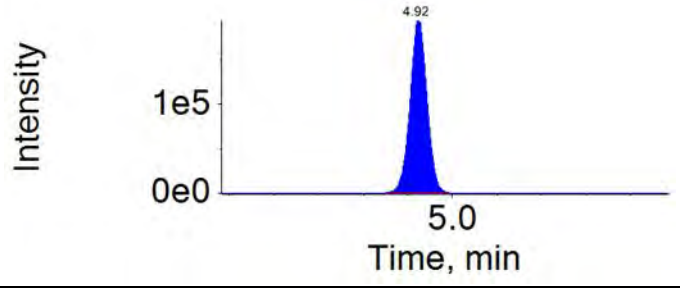
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

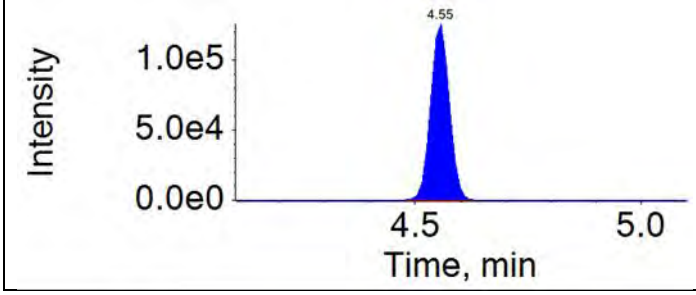
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

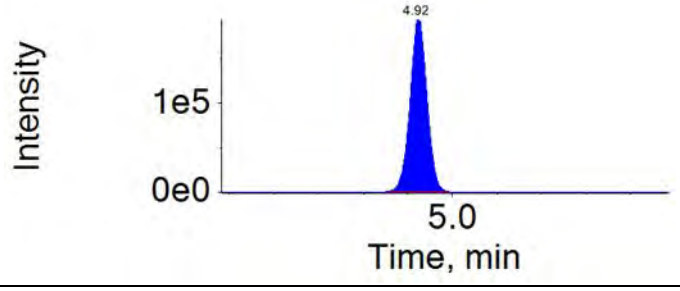
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



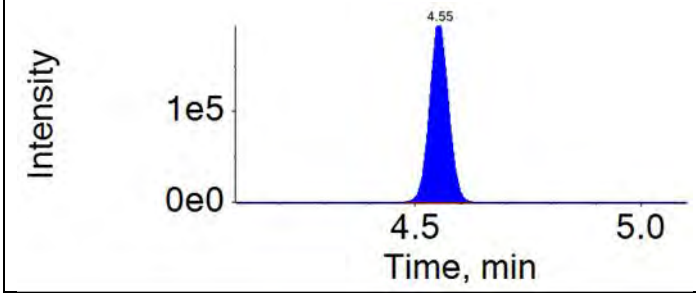


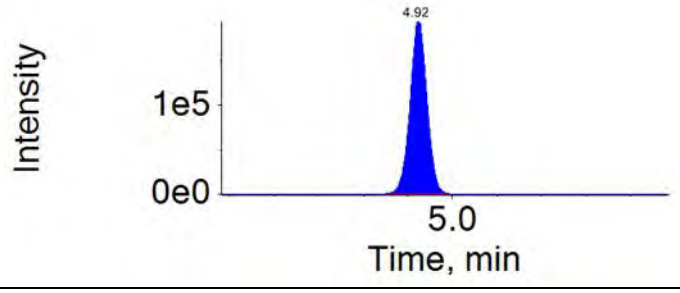
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



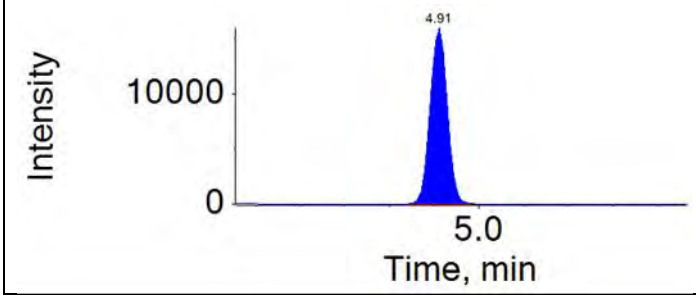


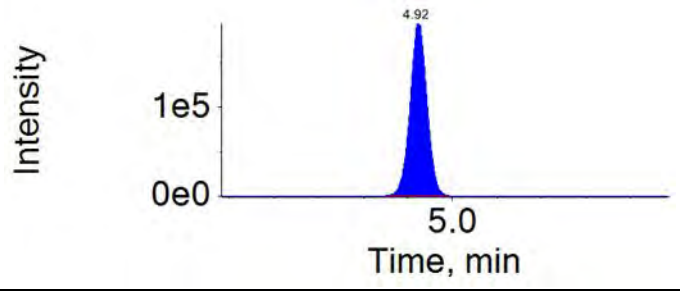
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



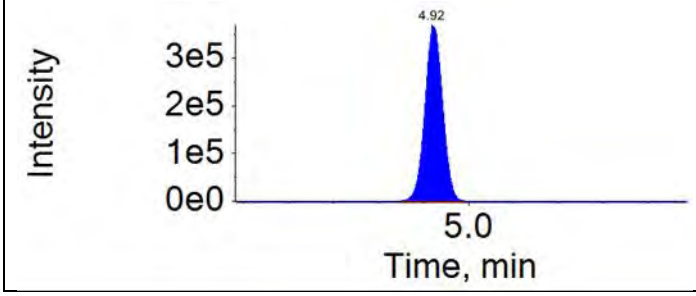
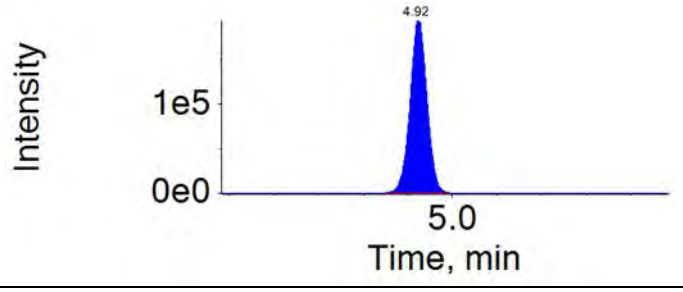


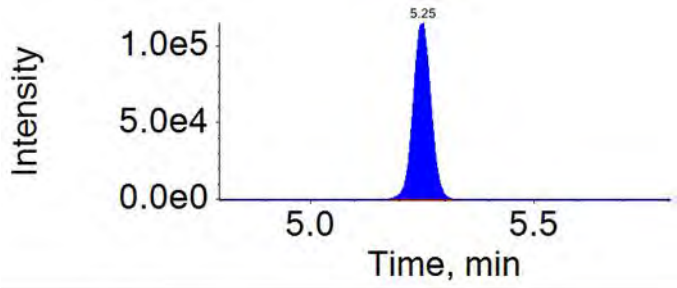
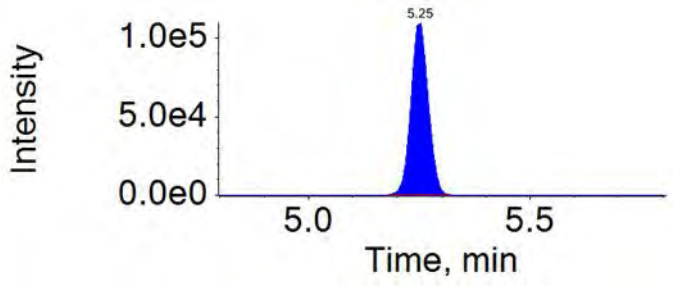
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

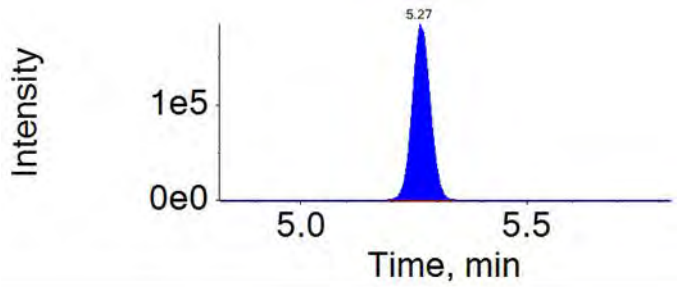
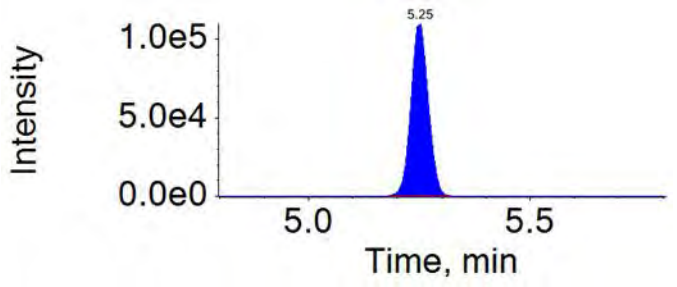


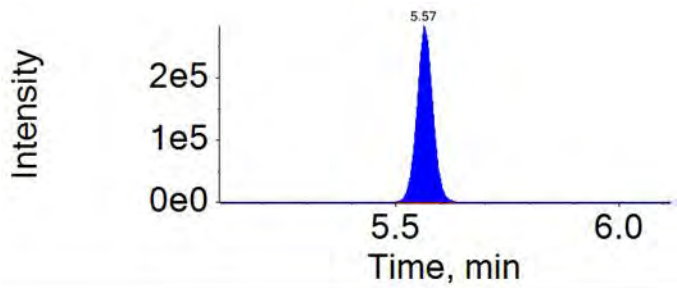
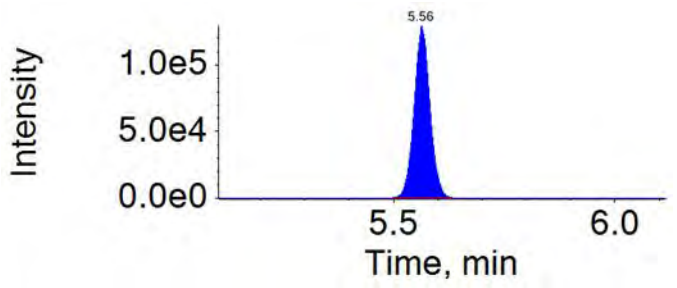


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

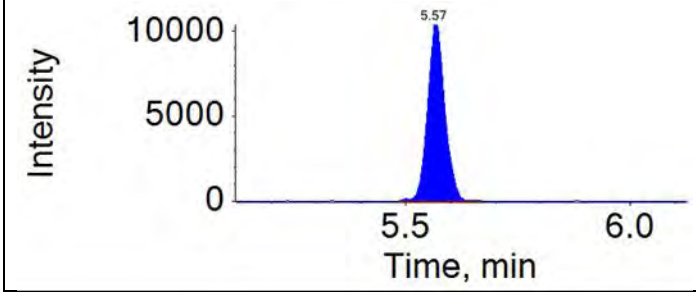
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

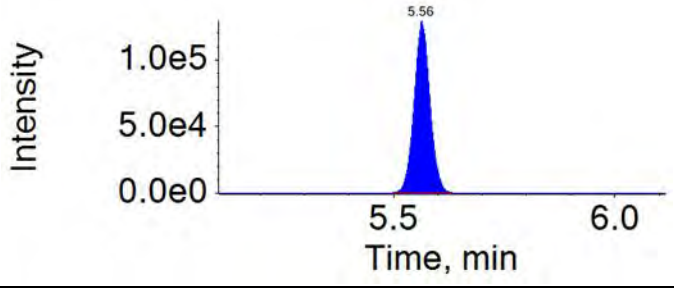
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

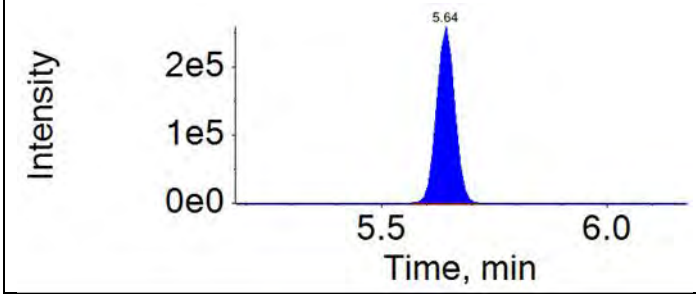
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

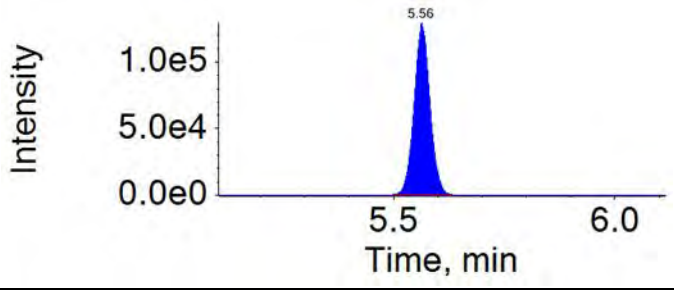
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



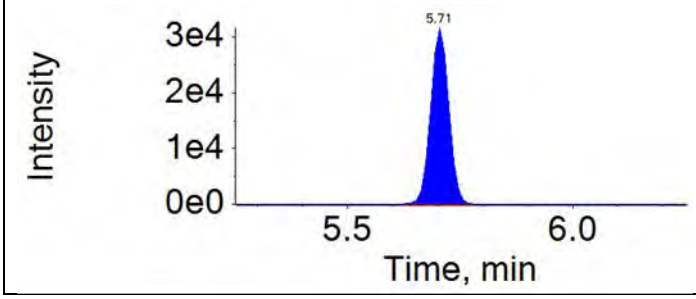


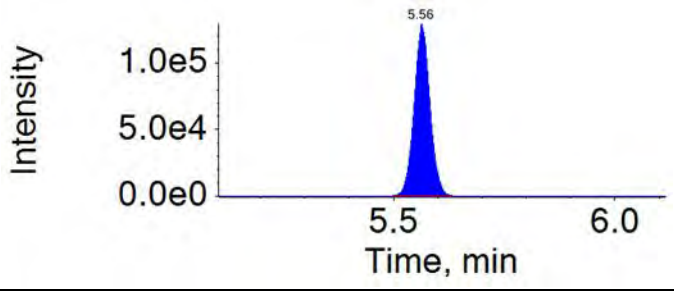
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



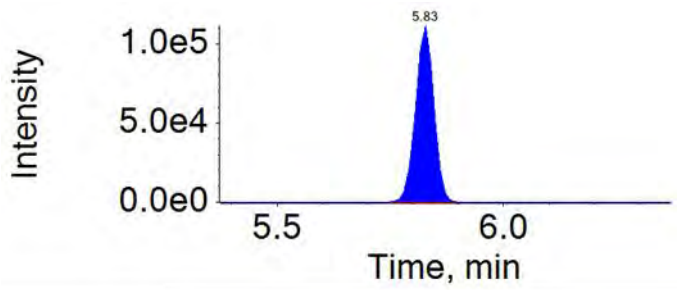


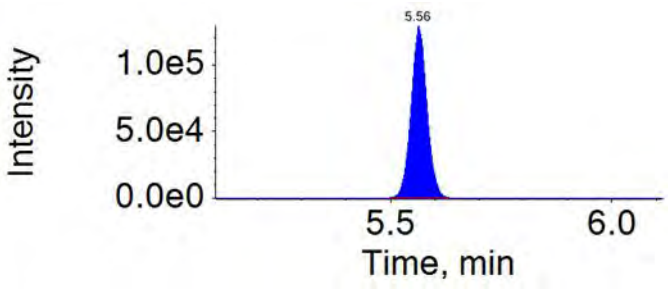
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



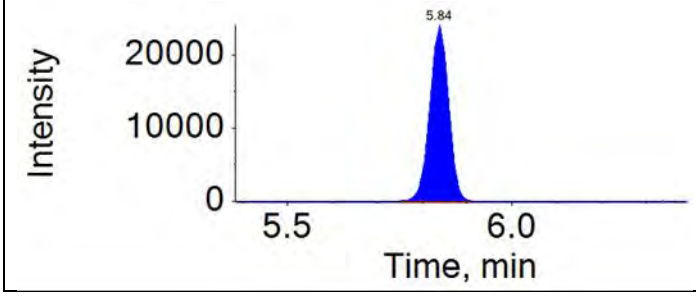


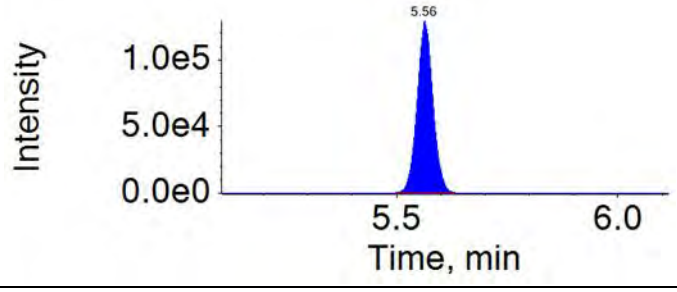
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

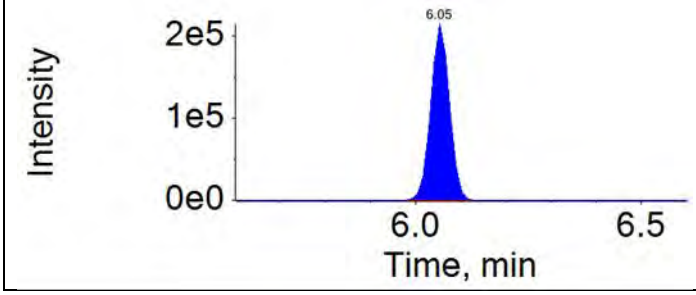
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

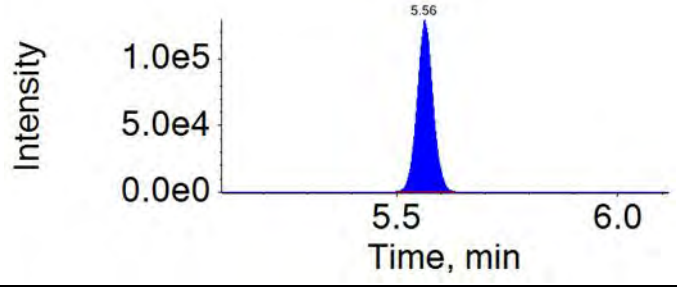
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



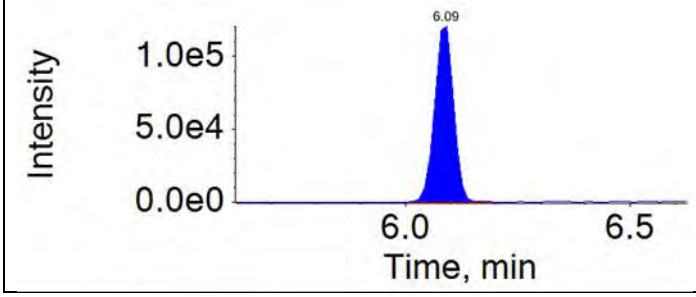


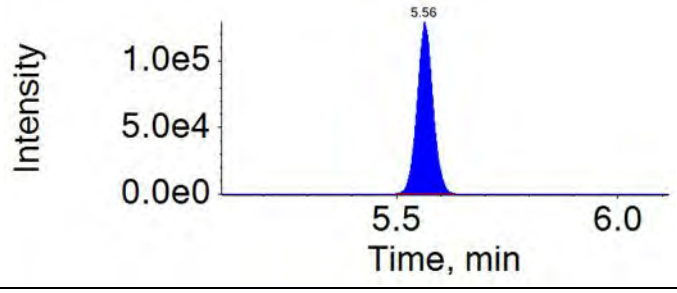
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



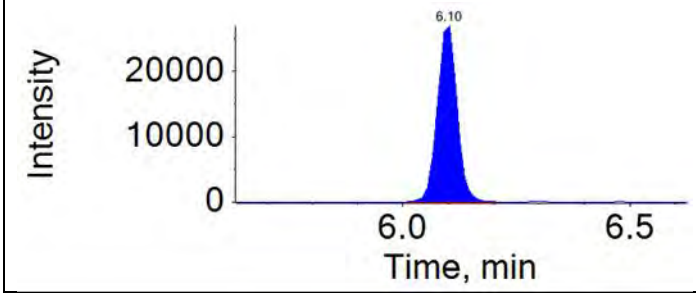


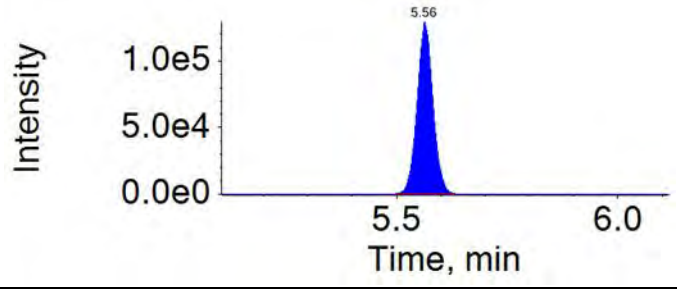
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



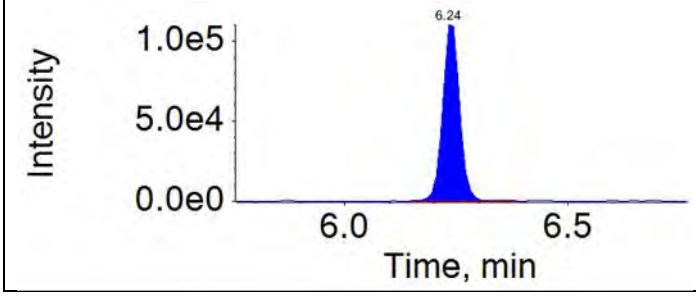


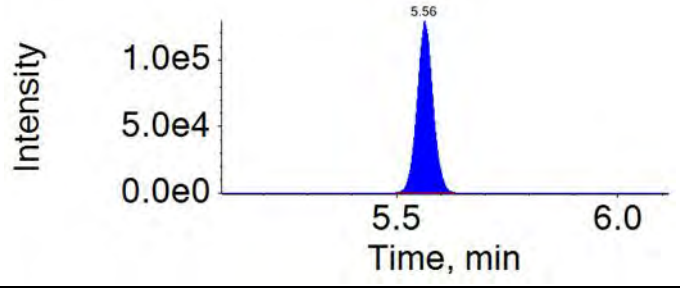
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

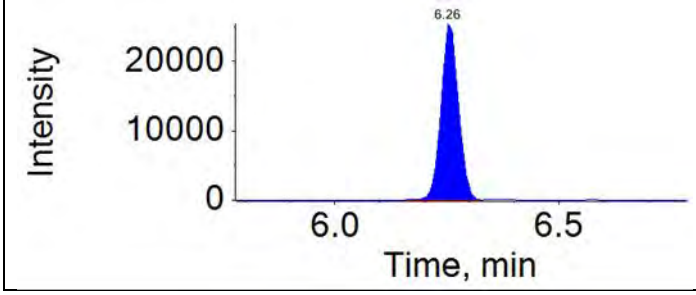
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

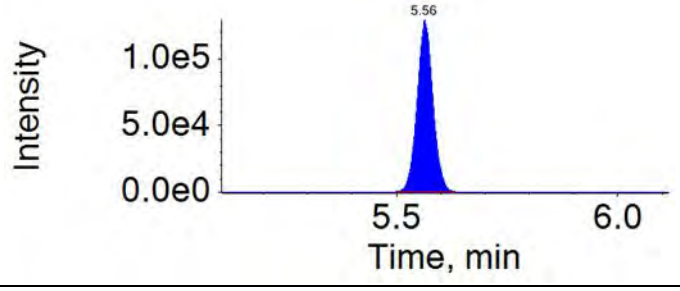
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



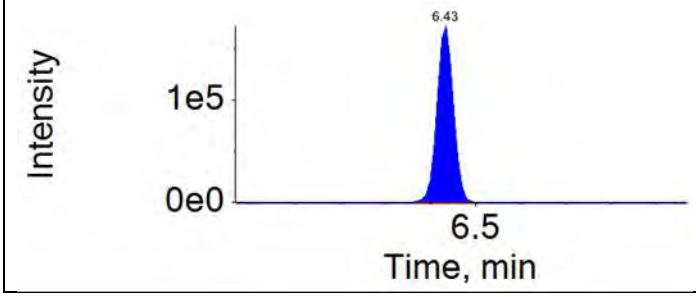


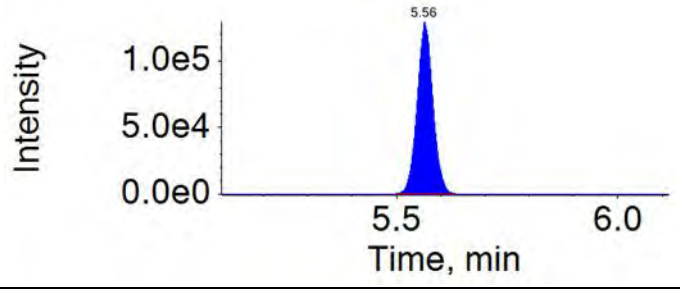
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



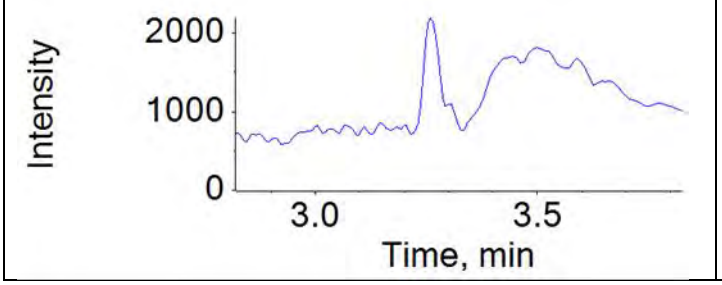


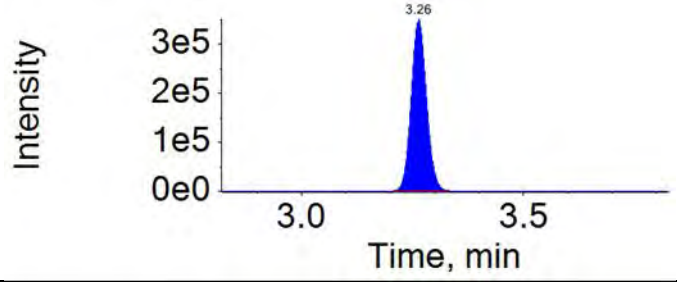
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

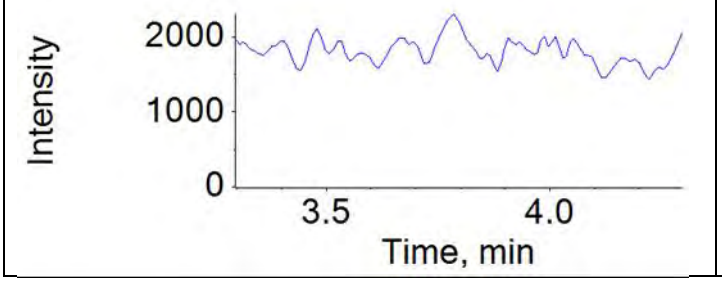
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

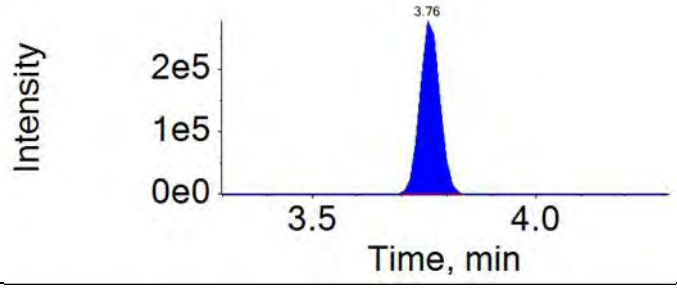
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



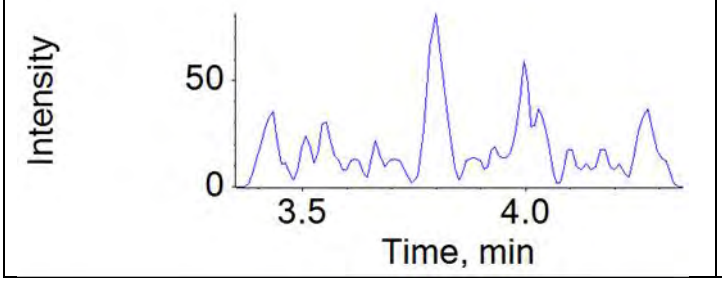


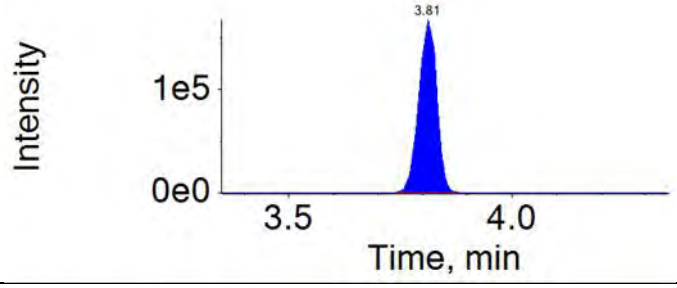
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



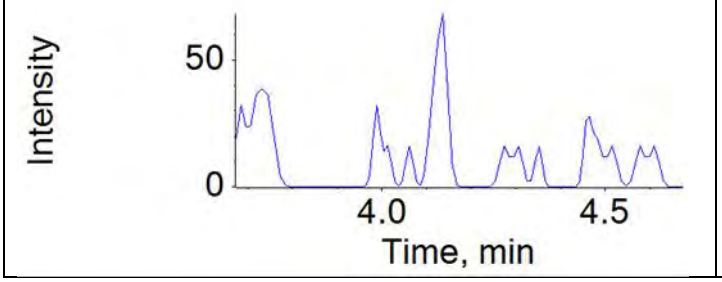


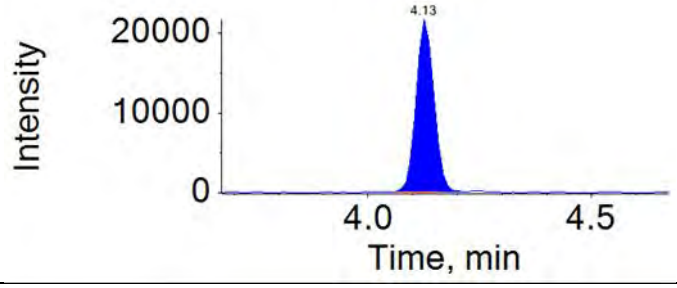
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



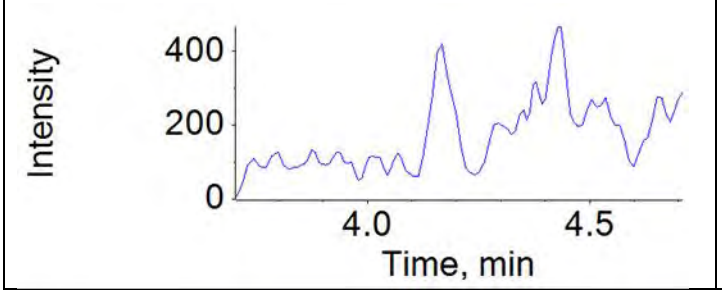


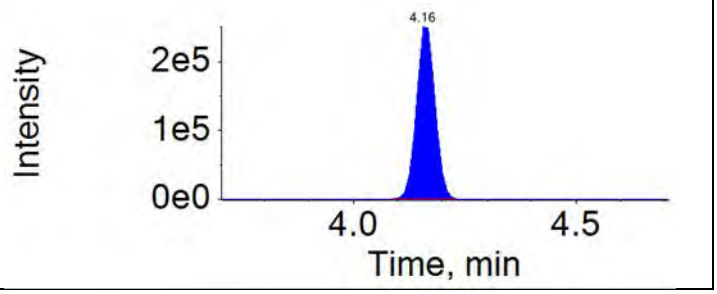
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

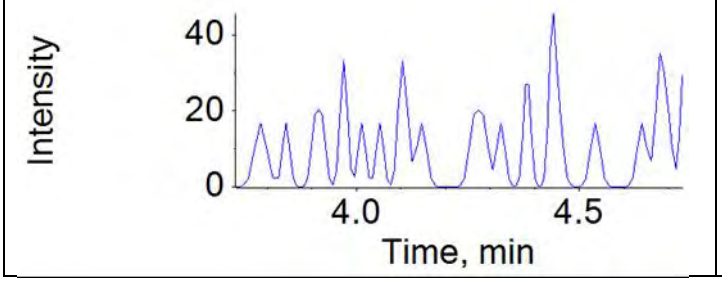
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

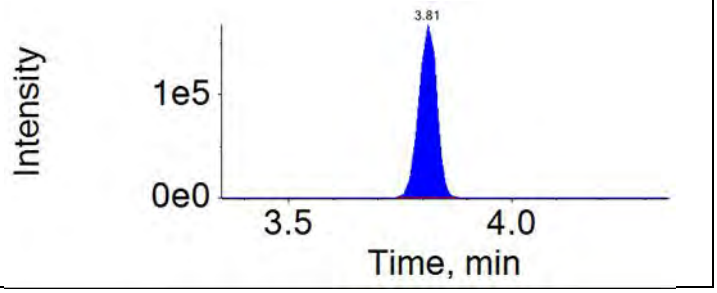
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



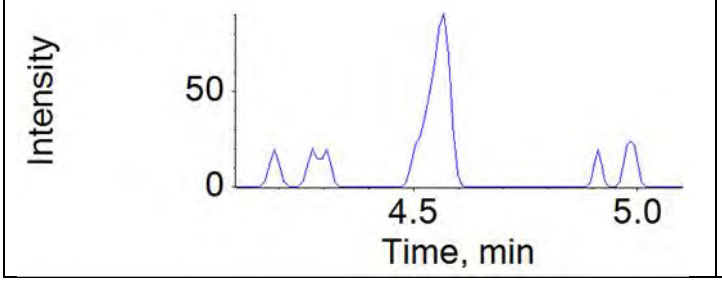


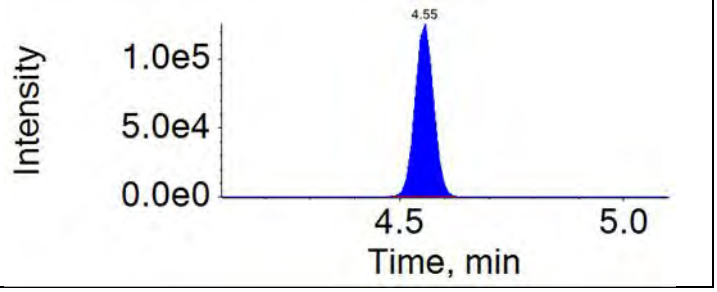
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



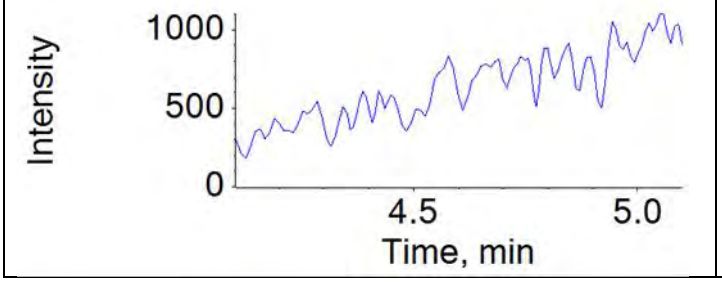


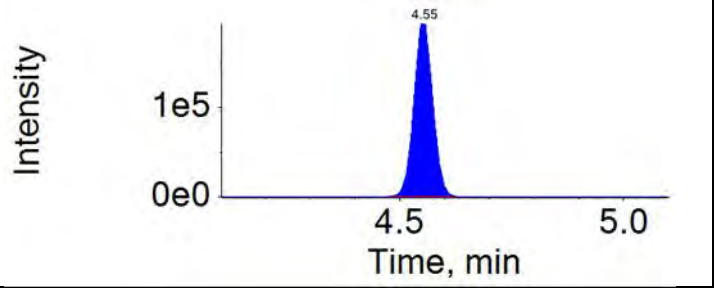
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



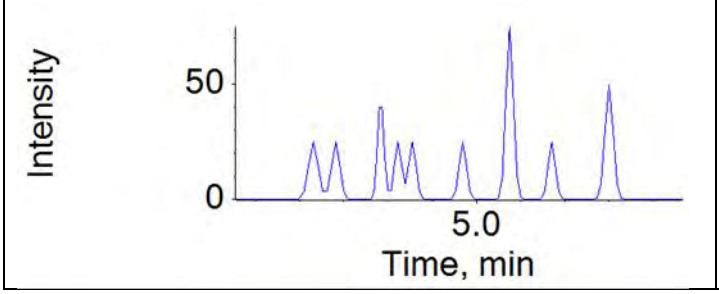


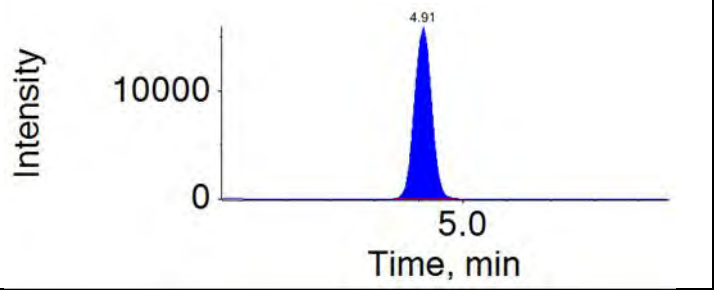
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

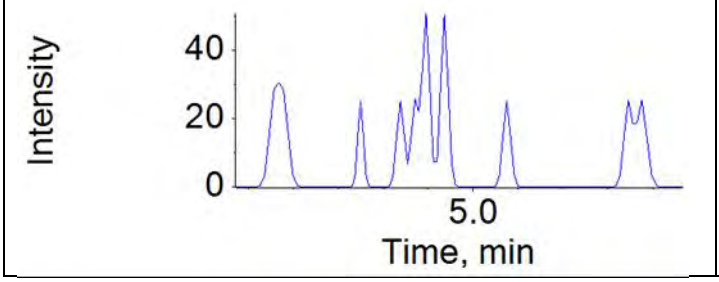
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

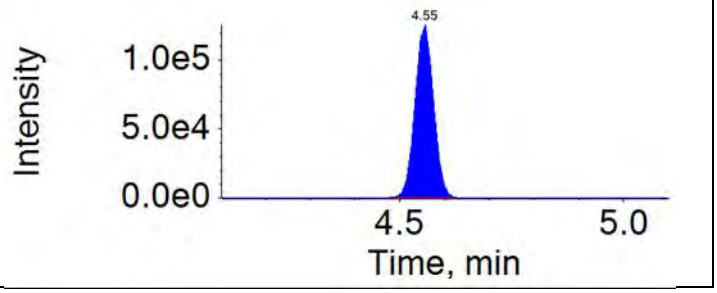
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



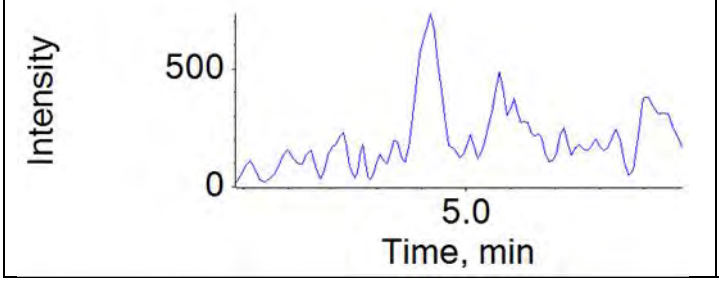


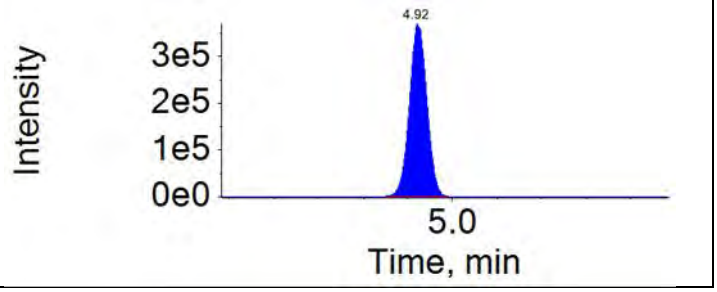
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



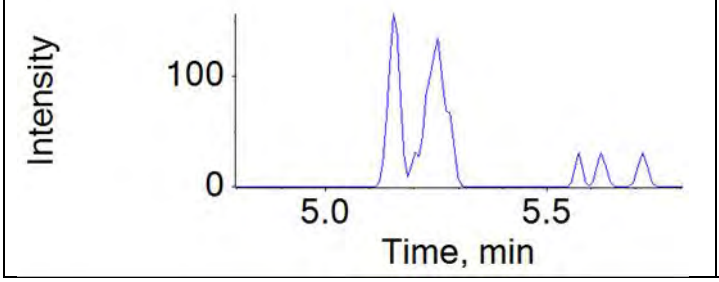


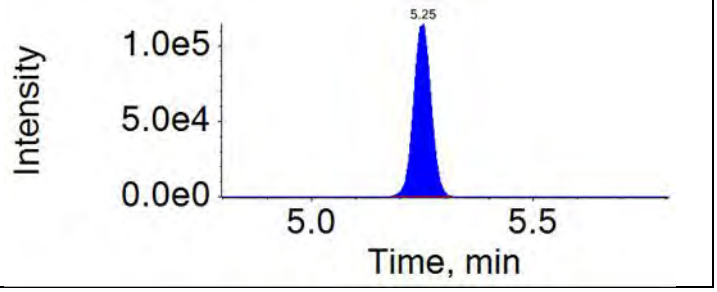
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





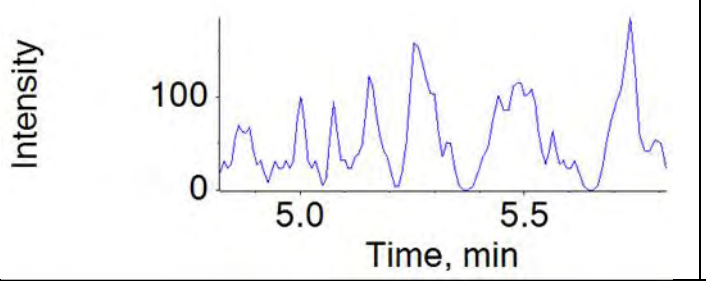
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

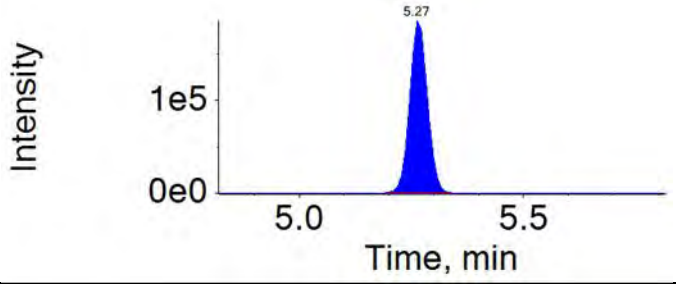




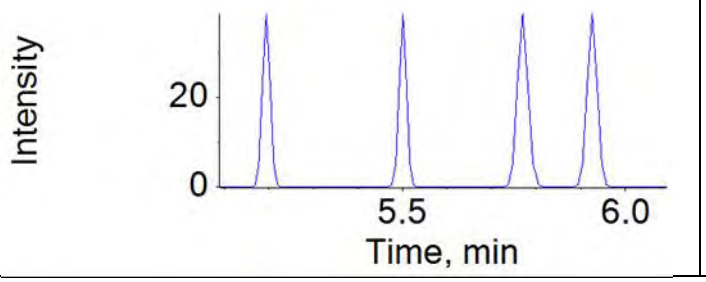
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

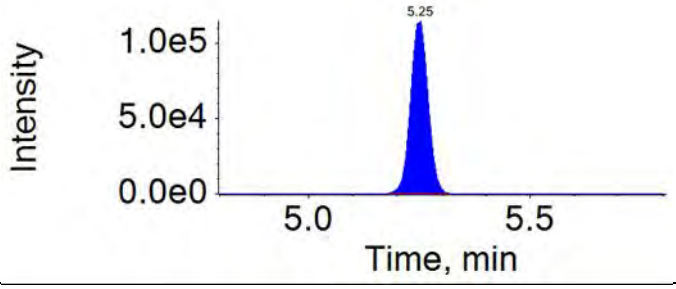
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



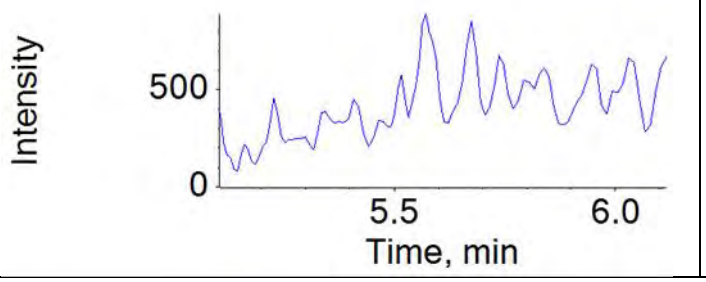


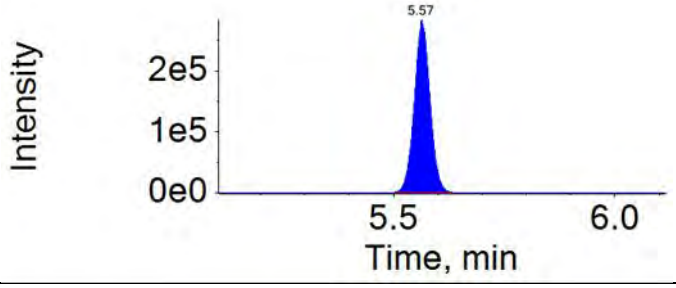
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



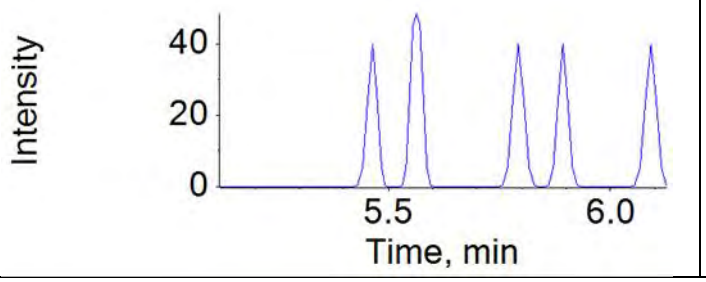


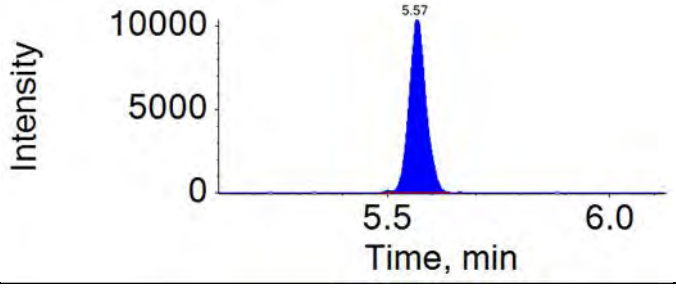
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



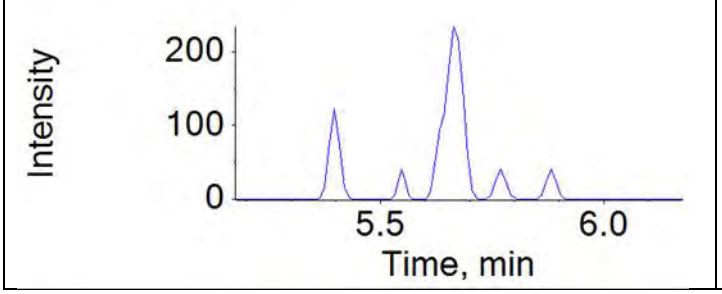


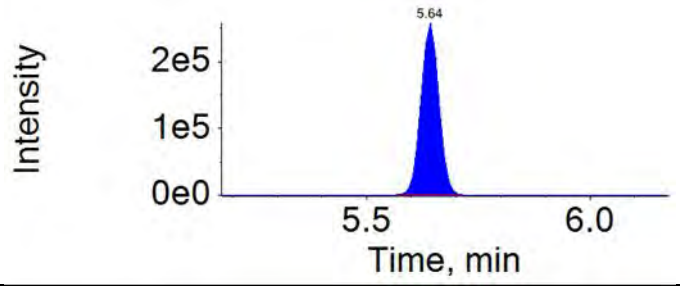
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

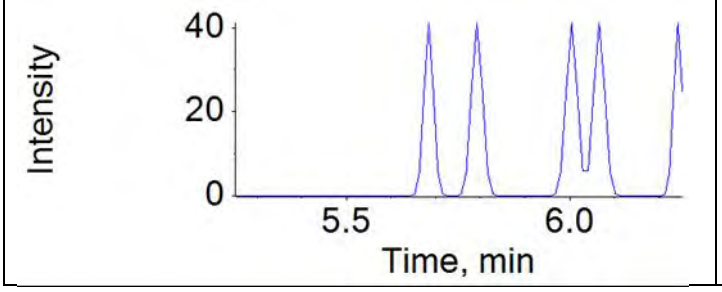
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

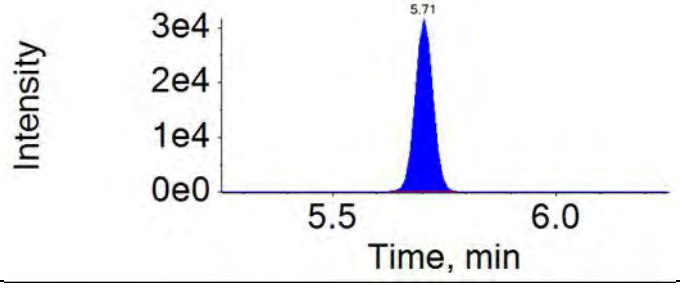
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



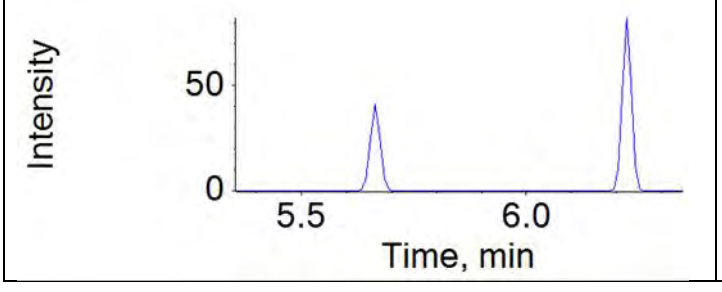


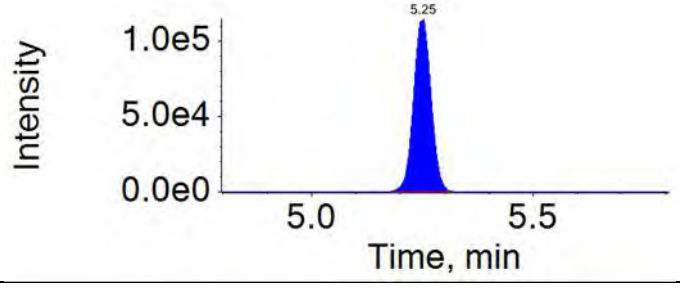
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



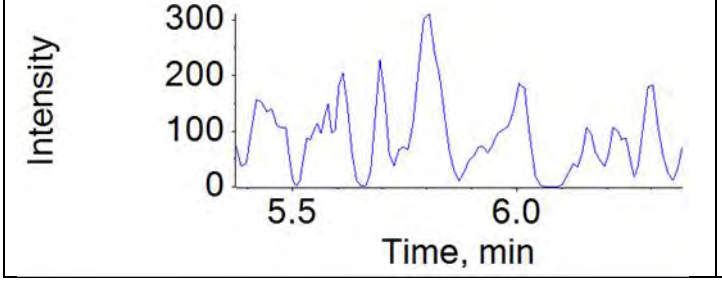


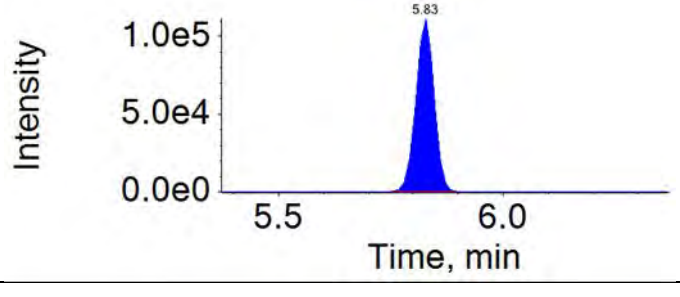
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



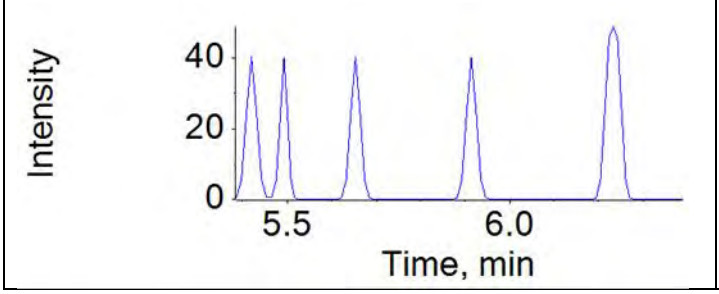


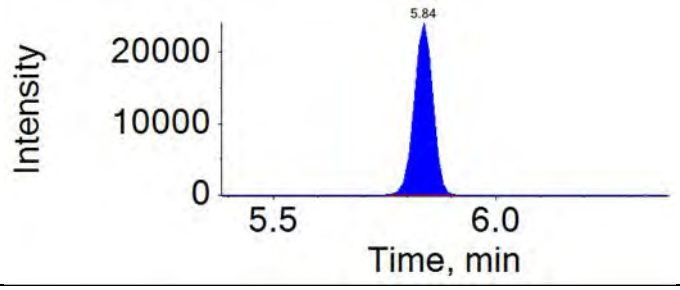
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

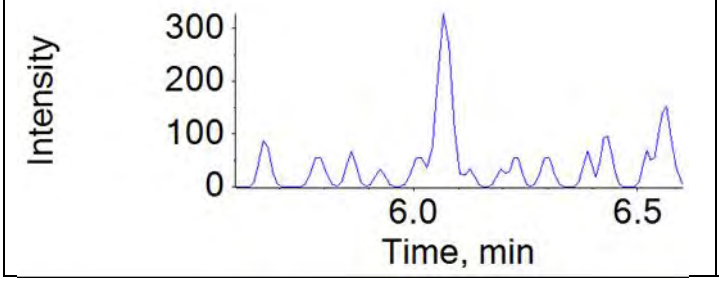
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

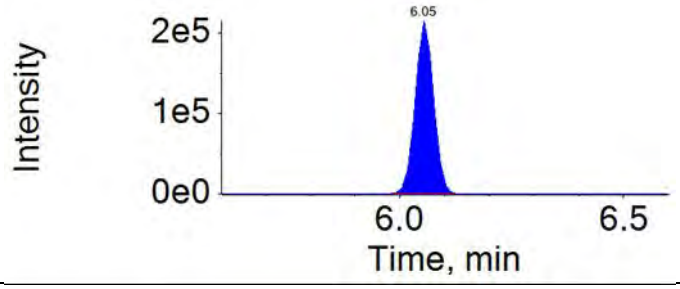
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



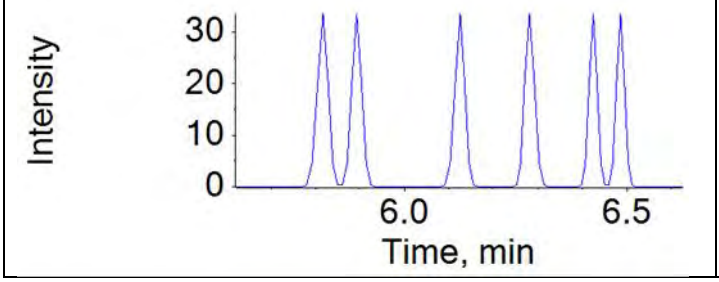


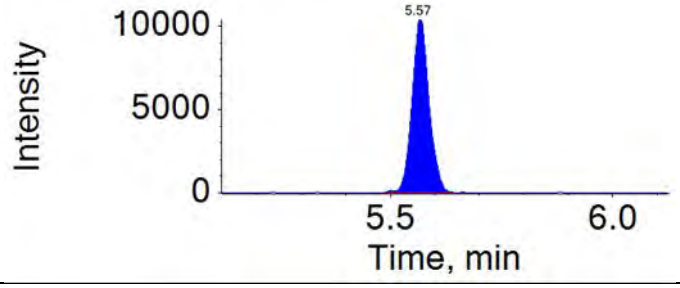
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



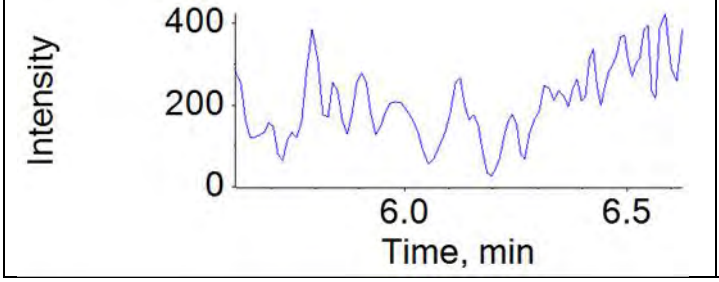


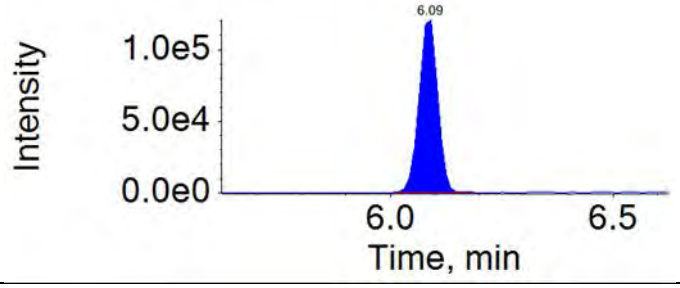
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



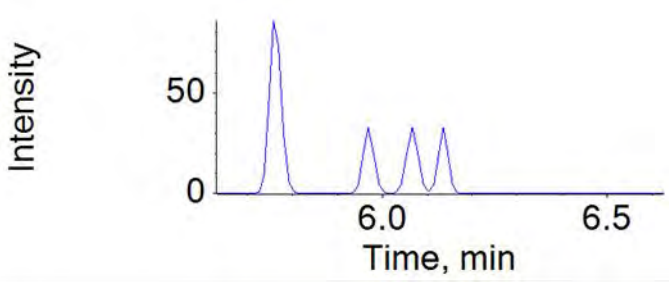


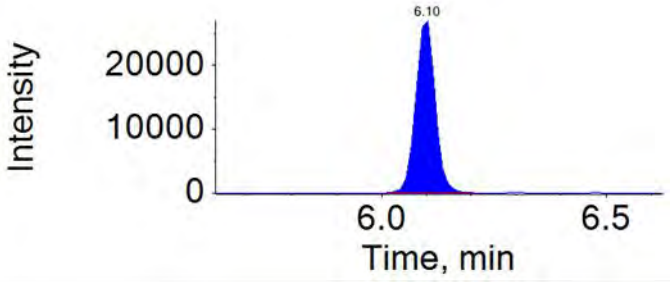
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

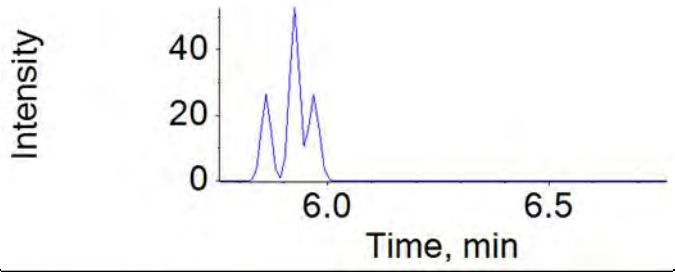
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

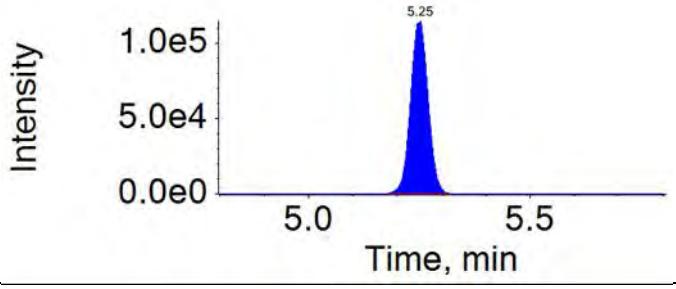
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



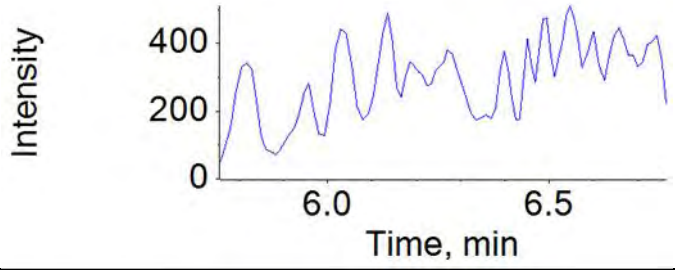


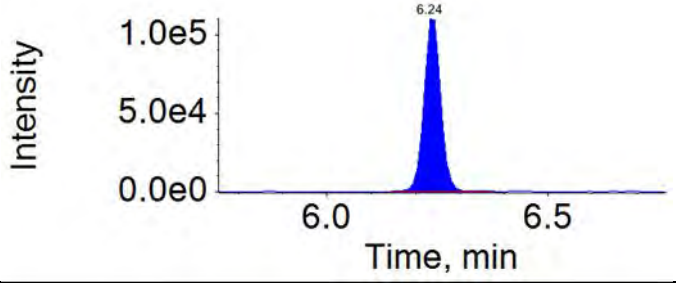
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



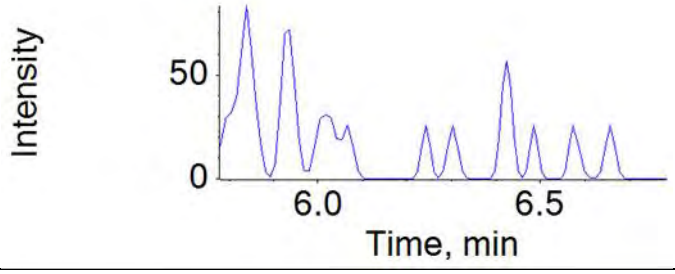


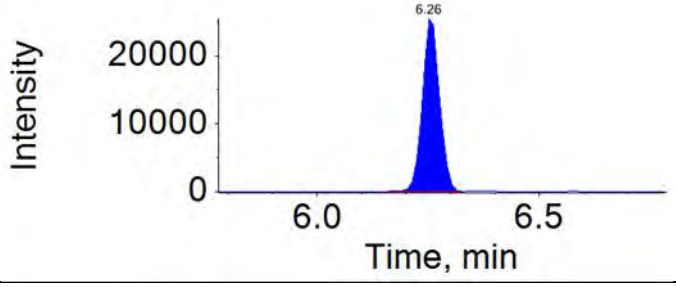
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





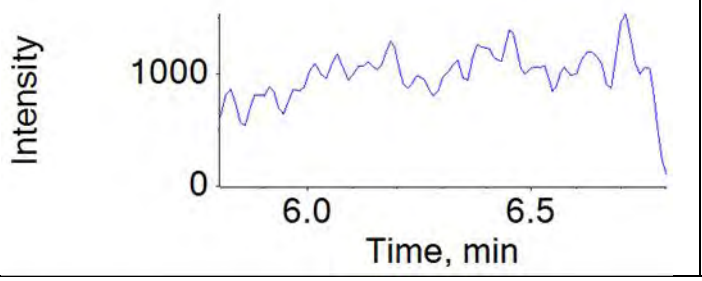
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

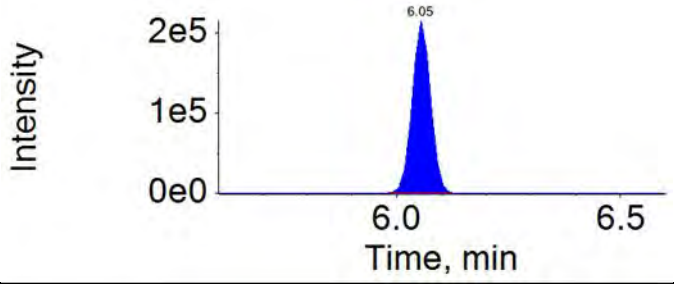




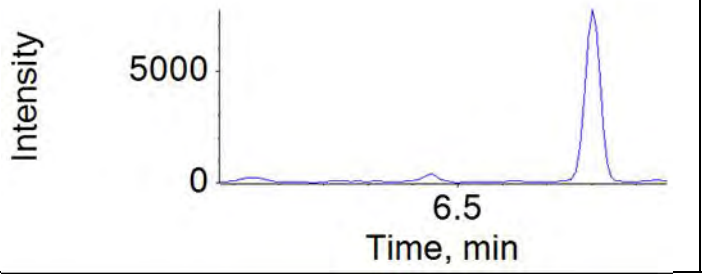
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

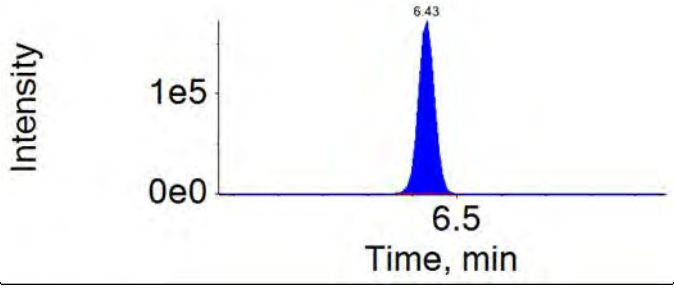
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



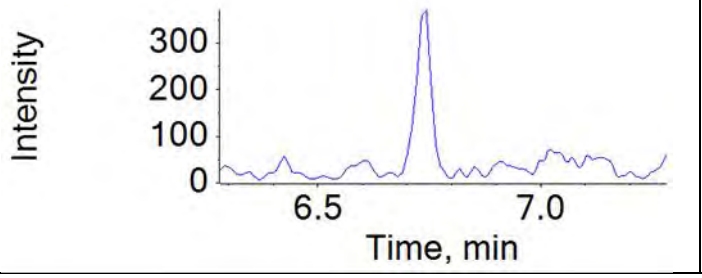


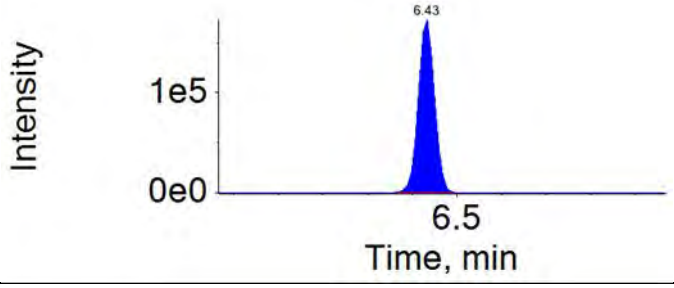
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



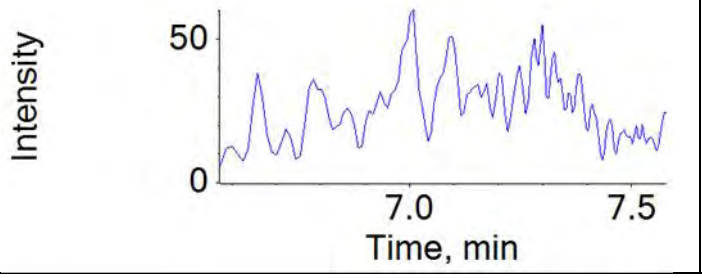


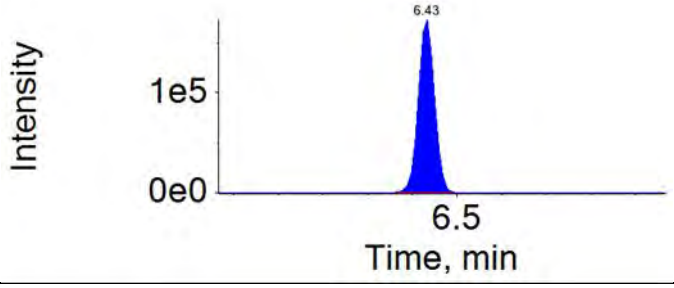
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

Ion Ratio Report

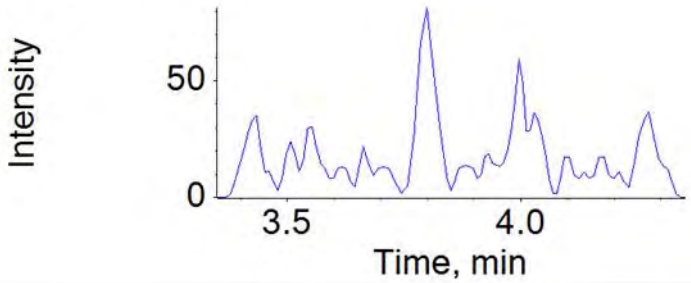
Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV08D-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

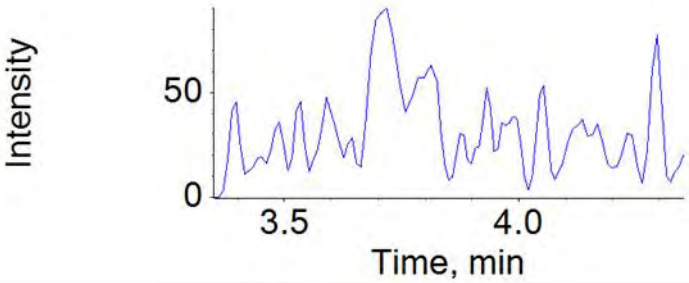
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

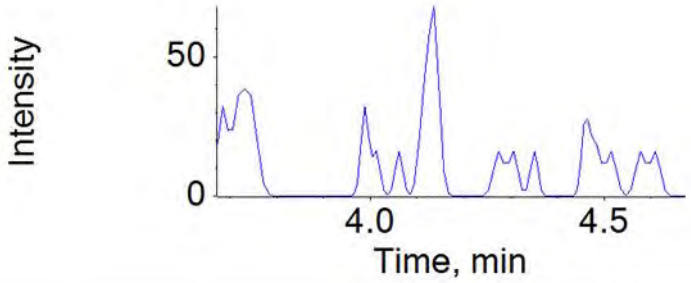
Component: PFBS
Primary Mass: 299.0 / 80.0



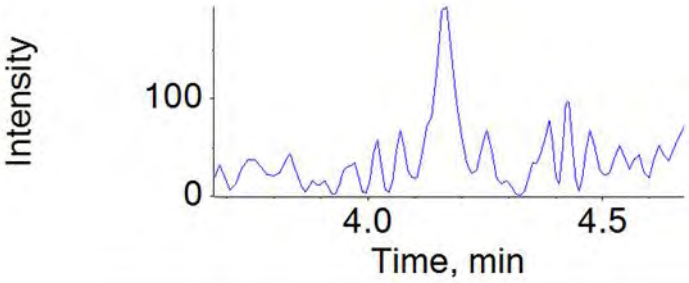
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



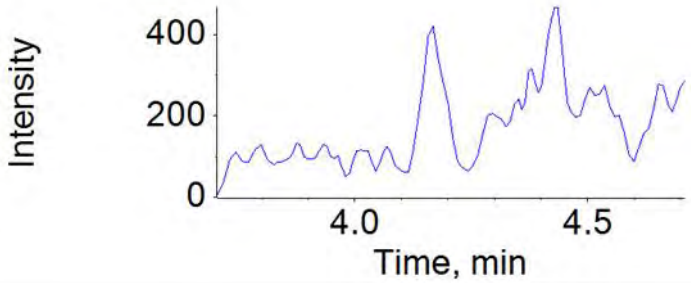
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



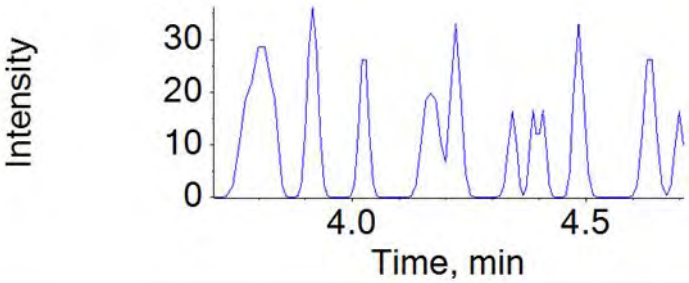
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



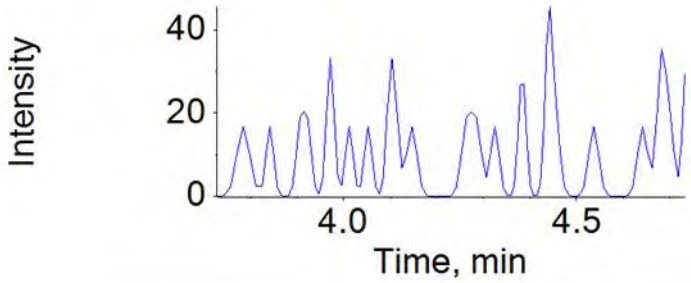
Component: PFHxA
Primary Mass: 313.0 / 269.0



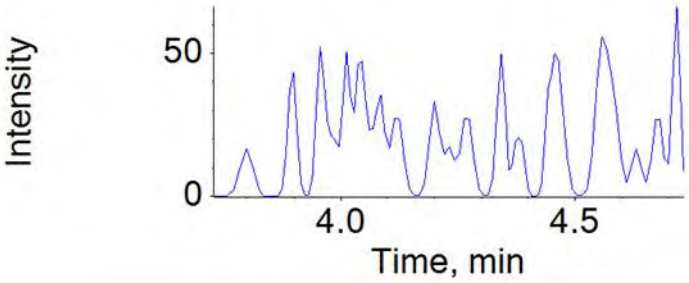
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 5:07 pm, 11/8/18

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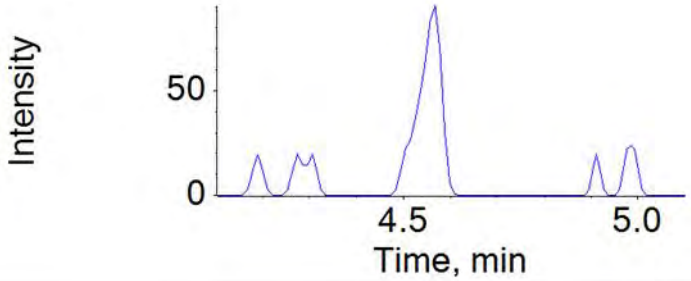
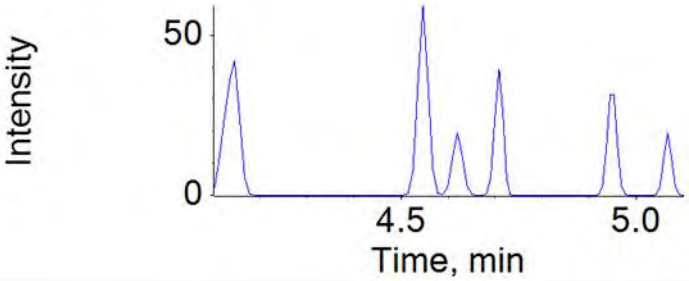
By umar at 12:13 pm, 11/12/18

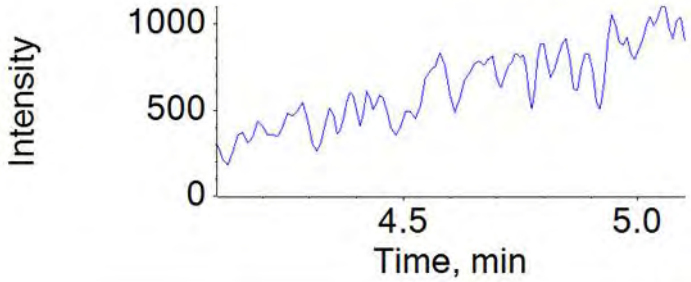
Component: PFHxS
Primary Mass: 399.0 / 80.0



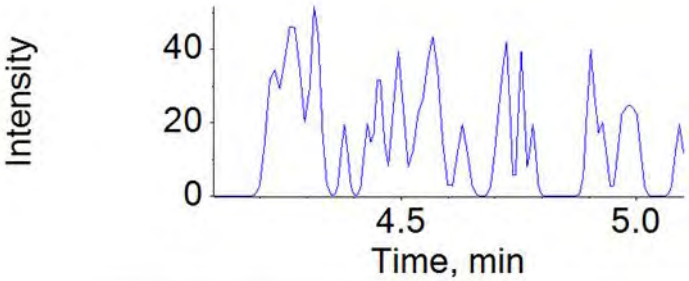
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



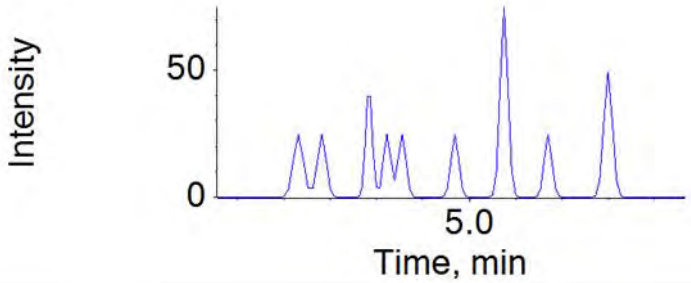
Component: PFHpA
Primary Mass: 363.0 / 319.0



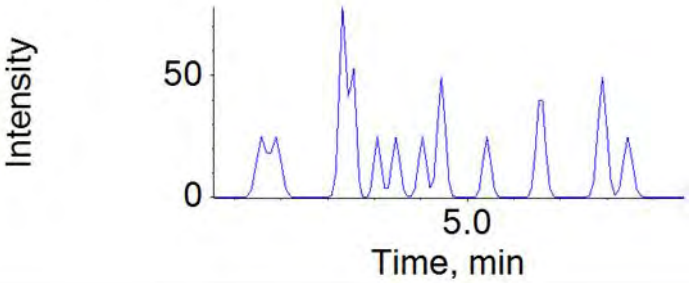
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



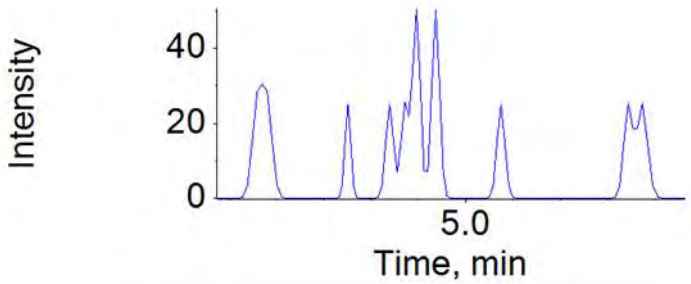
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



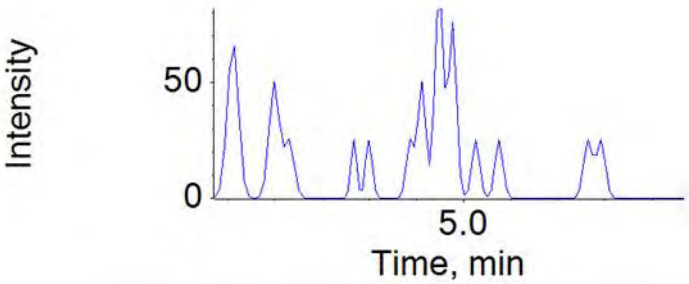
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By JPT at 5:07 pm, 11/8/18

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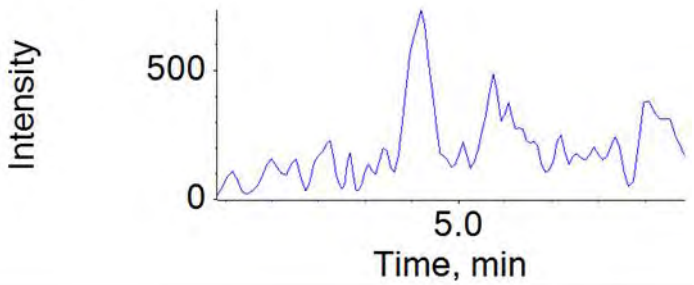
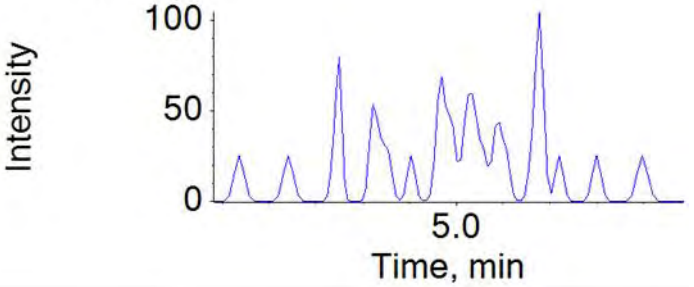
By umar at 12:13 pm, 11/12/18

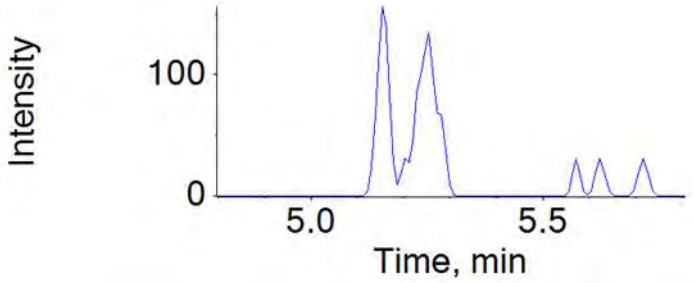
Component: PFOA
Primary Mass: 413.0 / 369.0



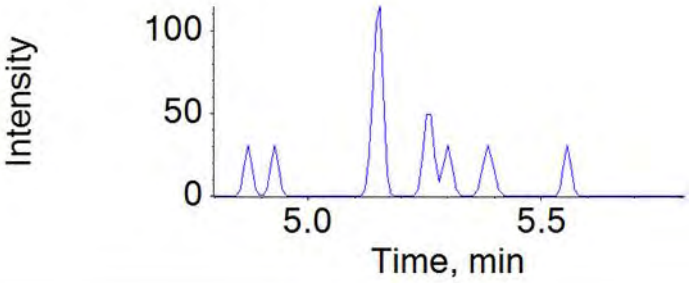
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



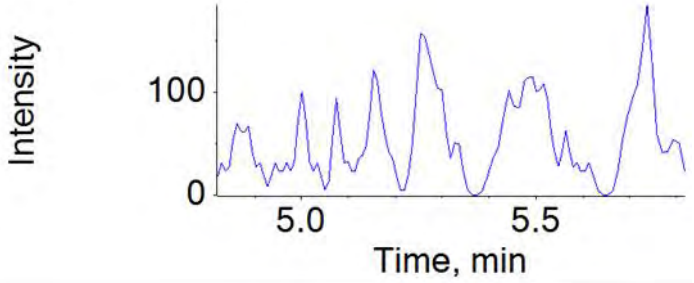
Component: PFOS
Primary Mass: 499.0 / 80.0



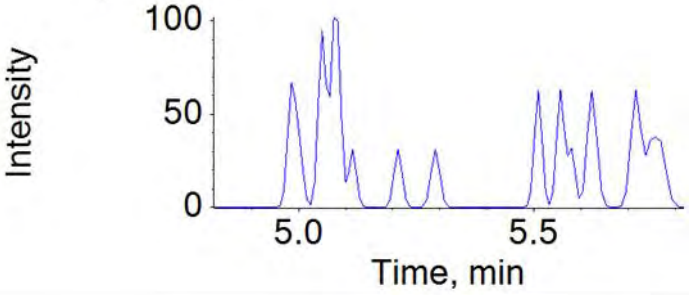
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



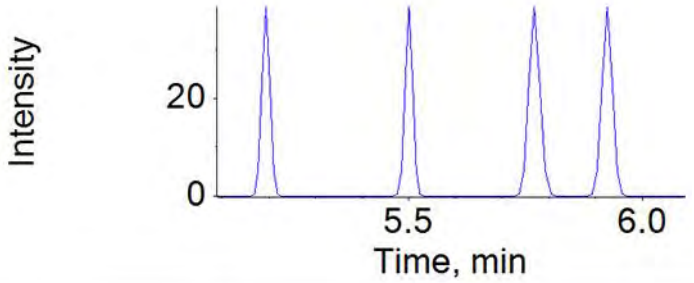
Component: PFNA
Primary Mass: 463.0 / 419.0



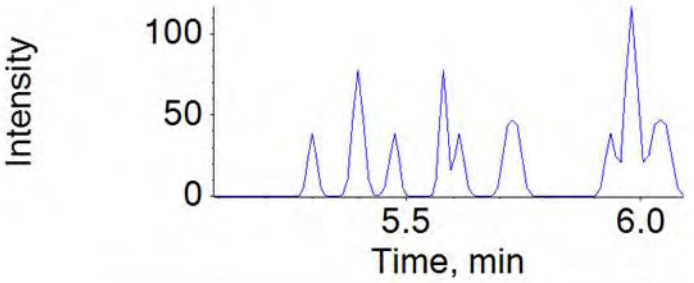
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



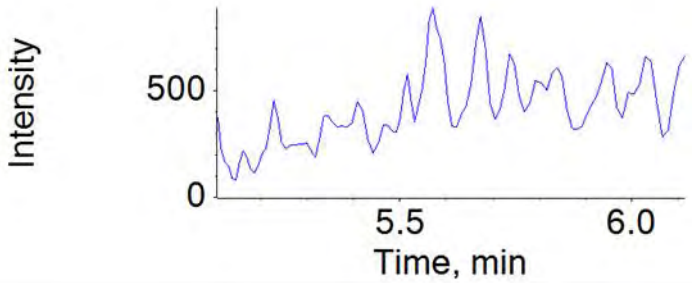
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



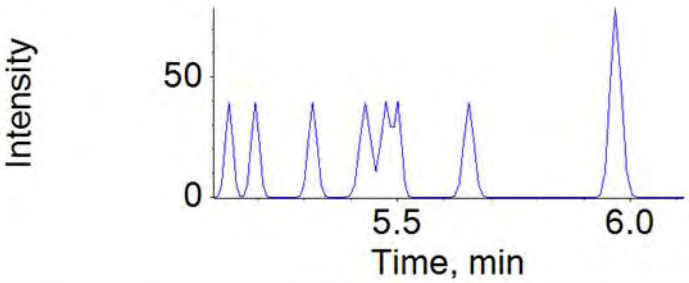
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

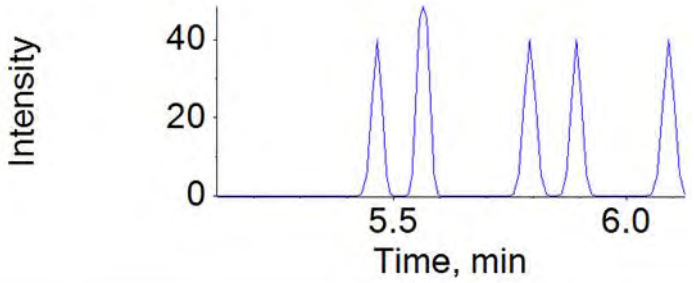
Component: PFDA
Primary Mass: 513.0 / 469.0



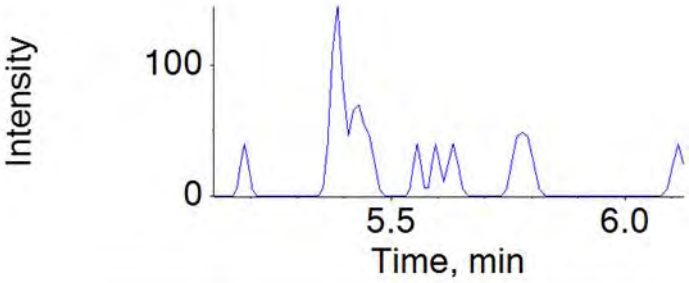
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



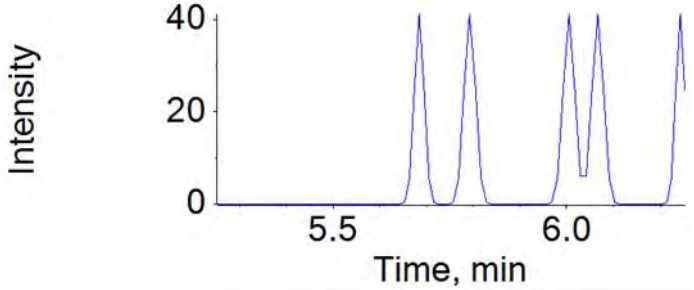
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



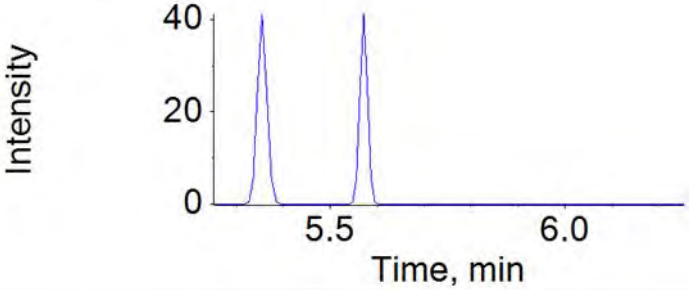
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



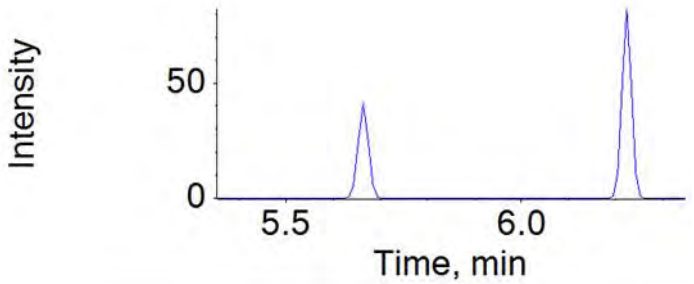
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



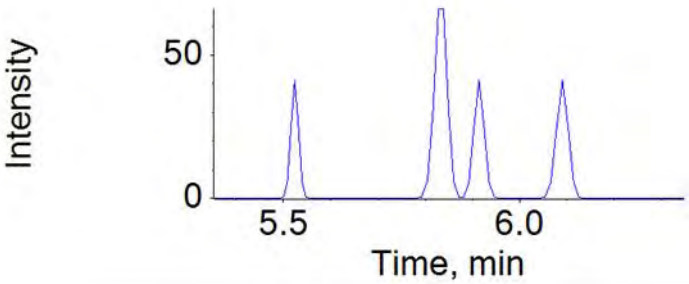
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



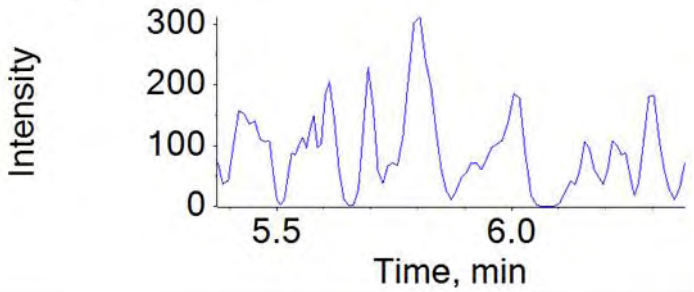
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



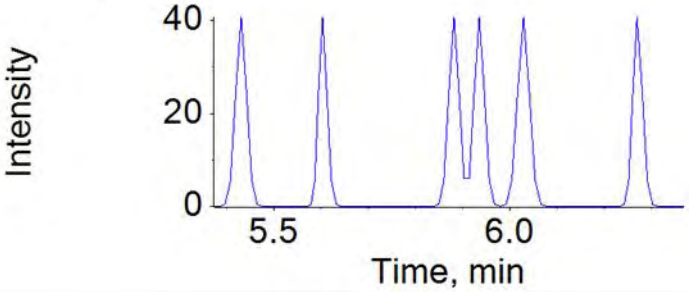
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

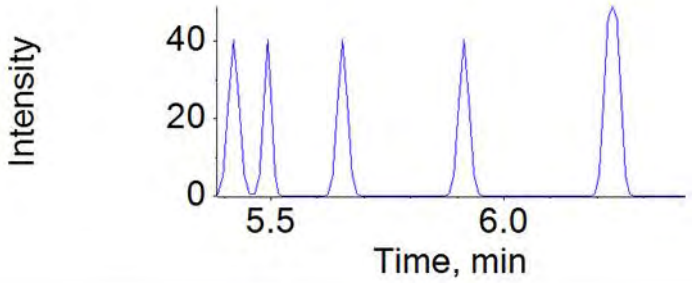
Component: PFUnDA
Primary Mass: 563.0 / 519.0



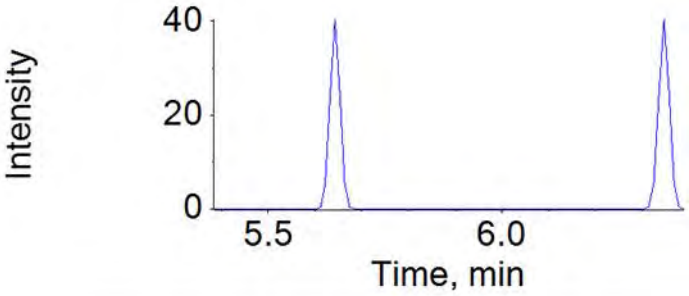
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



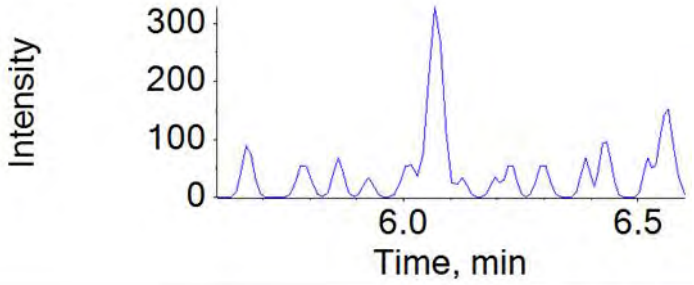
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



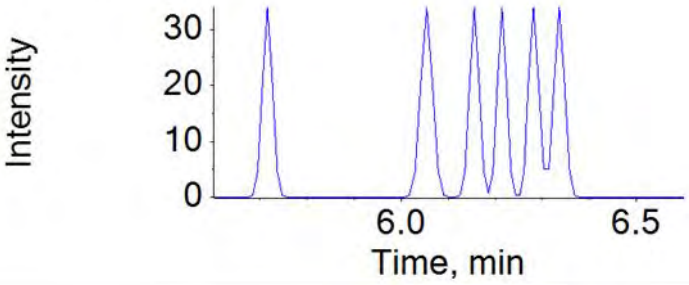
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



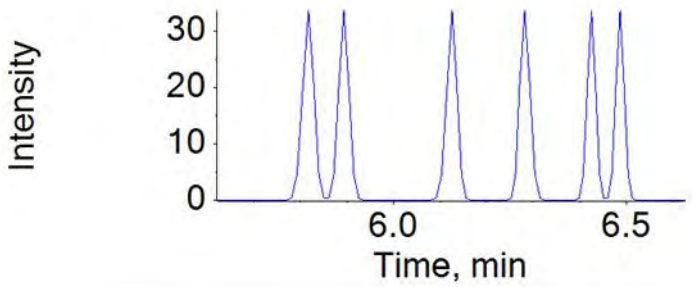
Component: PFDoDA
Primary Mass: 613.0 / 569.0



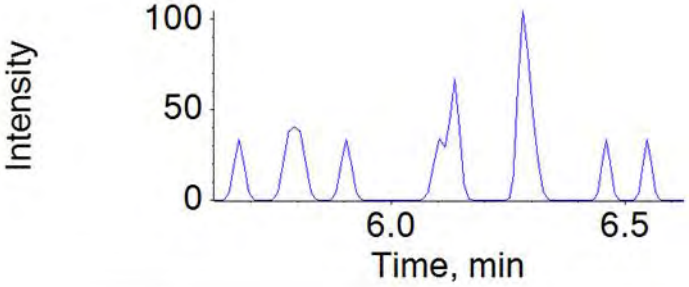
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



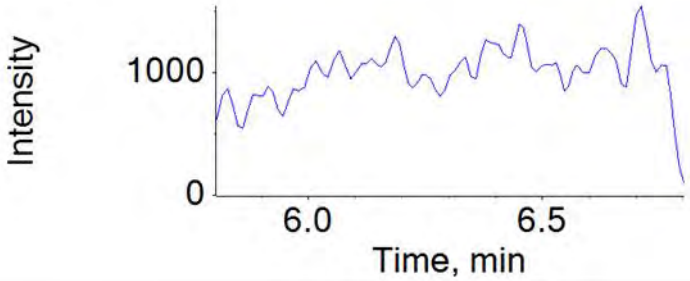
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



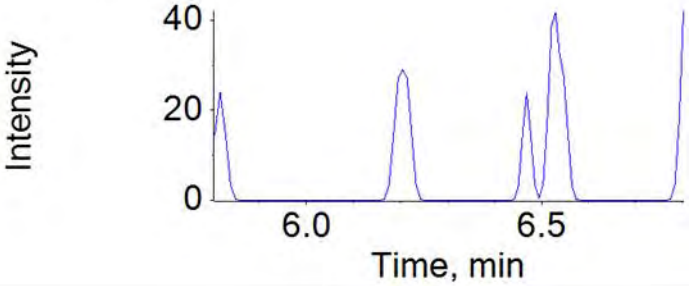
APPROVED
By JPT at 5:08 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

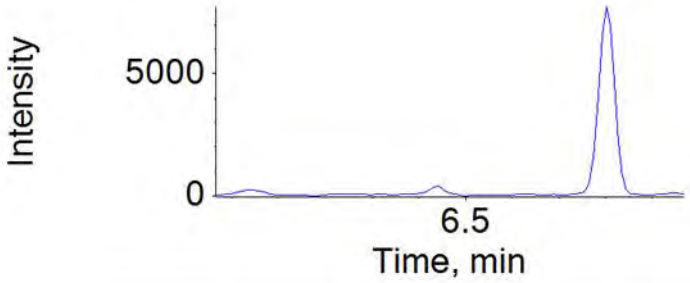
Component: PFTrDA
Primary Mass: 663.0 / 619.0



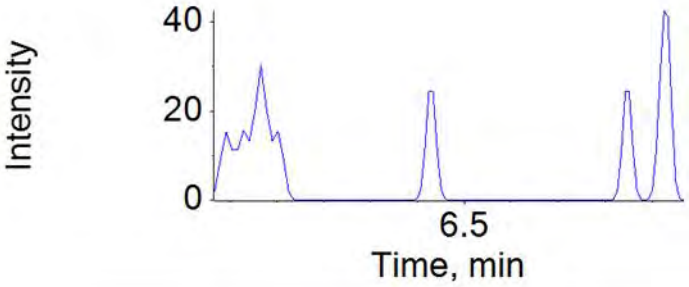
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



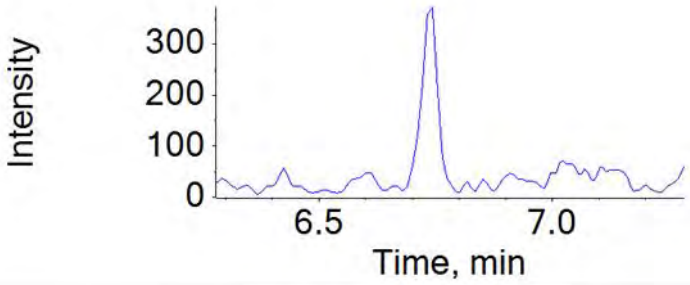
Component: PFTeDA
Primary Mass: 713.0 / 669.0



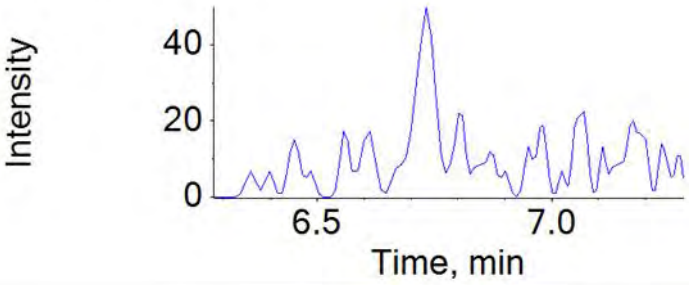
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



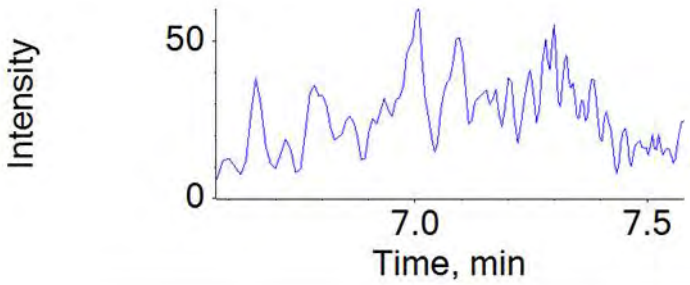
Component: PFHxDA
Primary Mass: 813.0 / 769.0



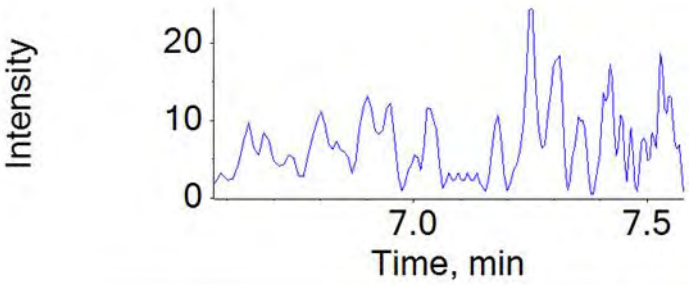
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



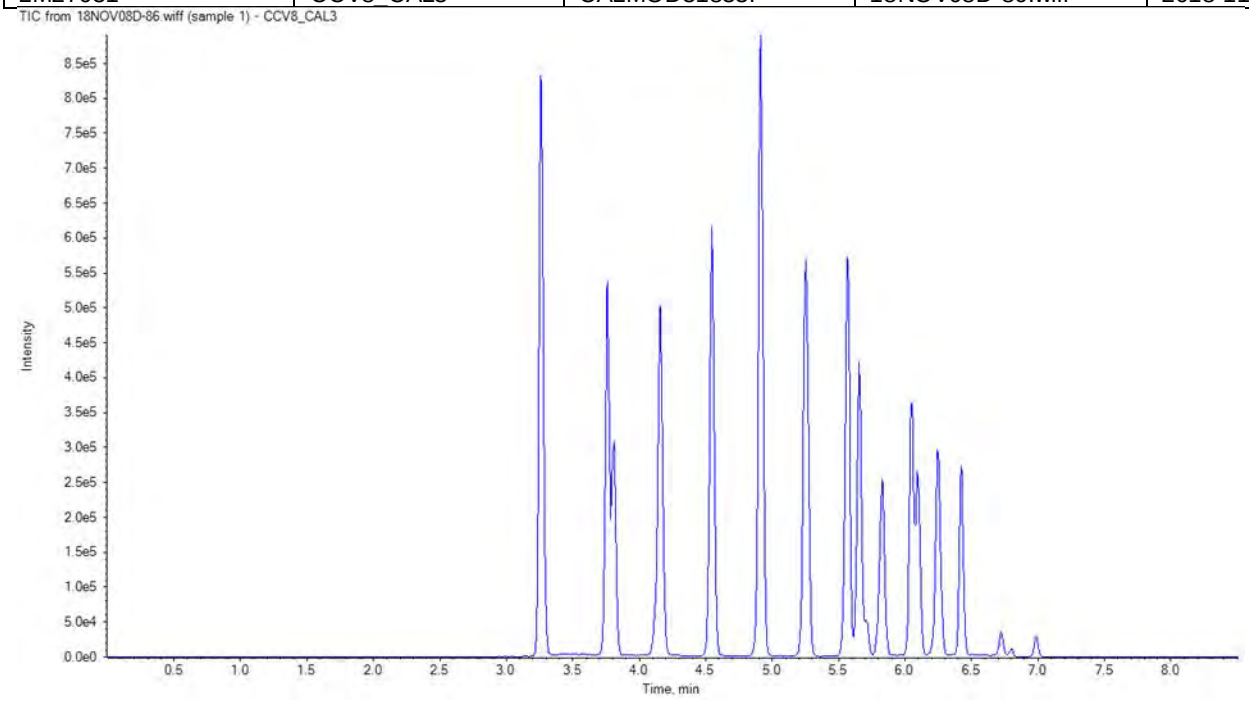
APPROVED
By JPT at 5:08 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV8_CAL3	CALMOD31833F	18NOV08D-86.wiff	2018-11-09T00:35:31



Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	751206.1	728839.7	3	50	
13C2-PFOA	5.0	508106.7	491983.1	3	50	
13C4-PFOS	4.8	287472.1	255568.1	12	50	
13C2-PFDA	5.0	314412.8	315407.5	0	50	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV8_CAL3	CALMOD31833F	18NOV08D-86.wiff	2018-11-09T00:35:31

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	298572.4	10	13C4-PFBA	813706.7	5.0	0.367	3.26	1.000	2.000	2.147	7	30	
PFPeA	288388.1	12	13C5-PFPeA	841505.1	5.0	0.343	3.76	1.000	2.000	2.037	2	30	
PFBS	159879.7	11	13C3-PFBS	443220.4	4.7	0.361	3.81	1.000	1.770	1.819	3	30	
4:2-FTS	34586.7	11	13C2-4:2-FTS	52920.0	4.7	0.654	4.12	1.000	1.868	1.757	-6	30	
PFHxA	348142.4	12	13C5-PFHxA	707751.9	5.0	0.492	4.16	1.000	2.000	2.110	5	30	
PFPeS	87376.5	11	13C3-PFBS	443220.4	4.7	0.197	4.18	1.100	1.880	1.944	3	30	
PFHxS	127903.2	12	13C3-PFHxS	346520.9	4.7	0.369	4.55	1.000	1.890	1.871	-1	30	
PFHpA	347897.1	12	13C4-PFHpA	546876.4	5.0	0.636	4.55	1.000	2.000	2.139	7	30	
6:2-FTS	34236.6	11	13C2-6:2-FTS	38229.6	4.8	0.896	4.90	1.000	1.896	2.234	18	30	
PFHpS	124721.2	11	13C3-PFHxS	346520.9	4.7	0.360	4.91	1.080	1.900	1.883	-1	30	
PFOA	353117.0	11	13C8-PFOA	942505.5	5.0	0.375	4.91	1.000	2.000	2.110	5	30	
PFOS	117262.9	11	13C8-PFOS	305093.3	4.8	0.384	5.25	1.000	1.910	1.993	4	30	
PFNA	289246.3	11	13C9-PFNA	512619.2	5.0	0.564	5.26	1.000	2.000	2.109	5	30	
PFNS	73898.6	11	13C8-PFOS	305093.3	4.8	0.242	5.55	1.060	1.920	1.920	0	30	
PFDA	227693.9	11	13C6-PFDA	673033.2	5.0	0.338	5.57	1.000	2.000	1.861	-7	30	
8:2-FTS	24122.7	11	13C2-8:2-FTS	30874.6	4.8	0.781	5.57	1.000	1.916	1.761	-8	30	
PFOSA	270238.8	11	13C8-PFOSA	698750.6	5.0	0.387	5.66	1.000	2.000	2.091	5	30	
NMeFOSAA	32027.6	12	d3-NMeFOSAA	78995.7	5.0	0.405	5.71	1.000	2.000	2.086	4	30	
PFDS	61957.5	12	13C8-PFOS	305093.3	4.8	0.203	5.80	1.110	1.930	1.940	1	30	
PFUnDA	194783.4	11	13C7-PFUnDA	279486.4	5.0	0.697	5.83	1.000	2.000	1.999	0	30	
NEtFOSAA	27638.0	12	d5-NEtFOSAA	65484.9	5.0	0.422	5.84	1.000	2.000	1.814	-9	30	
PFDoDA	219631.8	12	13C2-PFDoDA	585802.0	5.0	0.375	6.05	1.000	2.000	2.032	2	30	
10:2-FTS	16888.7	11	13C2-8:2-FTS	30874.6	4.8	0.547	6.07	1.090	1.928	1.703	-12	30	
NMePFOSAE	162327.5	11	d7-NMePFOSAE	353934.1	5.0	0.459	6.10	1.000	2.000	2.055	3	30	
NMePFOSA	30602.5	12	d3-NMePFOSA	78061.1	5.0	0.392	6.11	1.000	2.000	2.194	10	30	
PFDoS	28862.1	11	13C8-PFOS	305093.3	4.8	0.095	6.21	1.190	1.940	1.826	-6	30	
NEtPFOSAE	185331.3	11	d9-NEtPFOSAE	279379.9	5.0	0.663	6.25	1.000	2.000	2.127	6	30	
NEtPFOSA	27529.0	12	d5-NEtPFOSA	71581.8	5.0	0.385	6.27	1.000	2.000	1.694	-15	30	
PFTrDA	182645.5	11	13C2-PFDoDA	585802.0	5.0	0.312	6.24	1.030	2.000	1.966	-2	30	
PFTeDA	155169.1	10	13C2-PFTeDA	416875.0	5.0	0.372	6.42	1.000	2.000	2.186	9	30	
PFHxDA	68909.8	11	13C2-PFTeDA	416875.0	5.0	0.165	6.72	1.050	2.000	2.052	3	30	
PFODA	63043.0	10	13C2-PFTeDA	416875.0	5.0	0.151	6.99	1.090	2.000	2.167	8	30	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV8_CAL3			**Data File:**		18NOV08D-86.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-09T00:35:31
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV6-12
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	751206.1	728839.7	3	50	
13C2-PFOA	5.0	508106.7	491983.1	3	50	
13C4-PFOS	4.8	287472.1	255568.1	12	50	
13C2-PFDA	5.0	314412.8	315407.5	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	813706.7	13C3-PFBA	751206.1	1.083	5.000	5.013	100	70-130	
E13C5-PFPeA	841505.1	13C3-PFBA	751206.1	1.120	5.000	4.880	98	70-130	
E13C3-PFBS	443220.4	13C3-PFBA	751206.1	0.590	4.650	4.330	93	70-130	
E13C2-4:2-FTS	52920.0	13C2-PFOA	508106.7	0.104	4.670	4.700	101	70-130	
E13C5-PFHxA	707751.9	13C2-PFOA	508106.7	1.393	5.000	5.124	102	70-130	
E13C3-PFHxS	346520.9	13C2-PFOA	508106.7	0.682	4.730	4.896	104	70-130	
E13C4-PFHpA	546876.4	13C2-PFOA	508106.7	1.076	5.000	4.896	98	70-130	
E13C2-6:2-FTS	38229.6	13C2-PFOA	508106.7	0.075	4.750	5.017	106	70-130	
E13C8-PFOA	942505.5	13C2-PFOA	508106.7	1.855	5.000	5.173	103	70-130	
E13C8-PFOS	305093.3	13C4-PFOS	287472.1	1.061	4.780	4.693	98	70-130	
E13C9-PFNA	512619.2	13C4-PFOS	287472.1	1.783	5.000	4.871	97	70-130	
E13C6-PFDA	673033.2	13C2-PFDA	314412.8	2.141	5.000	5.383	108	70-130	
E13C2-8:2-FTS	30874.6	13C2-PFDA	314412.8	0.098	4.790	5.196	108	70-130	
E13C8-PFOSA	698750.6	13C2-PFDA	314412.8	2.222	5.000	4.850	97	70-130	
Ed3-NMeFOSAA	78995.7	13C2-PFDA	314412.8	0.251	5.000	4.672	93	70-130	
E13C7-PFUnDA	279486.4	13C2-PFDA	314412.8	0.889	5.000	5.128	103	70-130	
Ed5-NEtFOSAA	65484.9	13C2-PFDA	314412.8	0.208	5.000	4.820	96	70-130	
E13C2-PFDoDA	585802.0	13C2-PFDA	314412.8	1.863	5.000	5.023	100	70-130	
Ed7-NMePFOSAE	353934.1	13C2-PFDA	314412.8	1.126	5.000	5.235	105	70-130	
Ed3-NMePFOSA	78061.1	13C2-PFDA	314412.8	0.248	5.000	4.545	91	70-130	
Ed9-NEtPFOSAE	279379.9	13C2-PFDA	314412.8	0.889	5.000	5.075	101	70-130	
Ed5-NEtPFOSA	71581.8	13C2-PFDA	314412.8	0.228	5.000	5.272	105	70-130	
E13C2-PFTeDA	416875.0	13C2-PFDA	314412.8	1.326	5.000	4.773	95	70-130	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

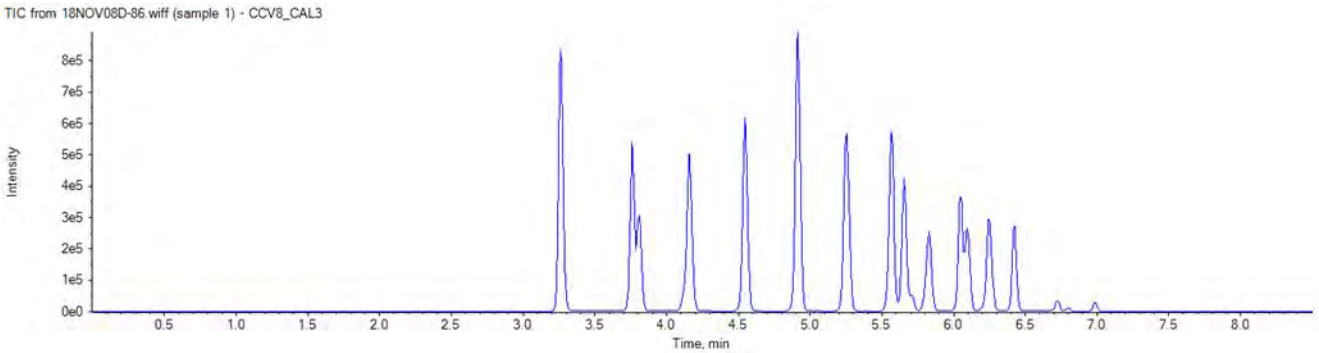
Analyte Quantitation Peak Table

Sample Name: CCV8_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV08D-86.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	298572.4		A	13C4-PFBA	3.26	813706.7	0.367	2.147
PFPeA	3.76	1.000	288388.1		A	13C5-PFPeA	3.76	841505.1	0.343	2.037
PFBS	3.81	1.000	159879.7		A	13C3-PFBS	3.81	443220.4	0.361	1.819
4:2-FTS	4.12	1.000	34586.7		A	13C2-4:2-FTS	4.12	52920.0	0.654	1.757
PFHxA	4.16	1.000	348142.4		A	13C5-PFHxA	4.16	707751.9	0.492	2.110
PFPeS	4.18	1.100	87376.5		A	13C3-PFBS	3.81	443220.4	0.197	1.944
PFHxS	4.55	1.000	127903.2		A	13C3-PFHxS	4.55	346520.9	0.369	1.871
PFHpA	4.55	1.000	347897.1		A	13C4-PFHpA	4.55	546876.4	0.636	2.139
6:2-FTS	4.90	1.000	34236.6		A	13C2-6:2-FTS	4.91	38229.6	0.896	2.234
PFHpS	4.91	1.080	124721.2		A	13C3-PFHxS	4.55	346520.9	0.360	1.883
PFOA	4.91	1.000	353117.0		A	13C8-PFOA	4.92	942505.5	0.375	2.110
PFOS	5.25	1.000	117262.9		A	13C8-PFOS	5.24	305093.3	0.384	1.993
PFNA	5.26	1.000	289246.3		A	13C9-PFNA	5.26	512619.2	0.564	2.109
PFNS	5.55	1.060	73898.6		A	13C8-PFOS	5.24	305093.3	0.242	1.920
PFDA	5.57	1.000	227693.9		A	13C6-PFDA	5.57	673033.2	0.338	1.861
8:2-FTS	5.57	1.000	24122.7		A	13C2-8:2-FTS	5.57	30874.6	0.781	1.761
PFOSA	5.66	1.000	270238.8		A	13C8-PFOSA	5.66	698750.6	0.387	2.091
NMeFOSAA	5.71	1.000	32027.6		A	d3-NMeFOSAA	5.71	78995.7	0.405	2.086
PFDS	5.80	1.110	61957.5		A	13C8-PFOS	5.24	305093.3	0.203	1.940
PFUnDA	5.83	1.000	194783.4		A	13C7-PFUnDA	5.83	279486.4	0.697	1.999
NEtFOSAA	5.84	1.000	27638.0		A	d5-NEtFOSAA	5.84	65484.9	0.422	1.814
PFDoDA	6.05	1.000	219631.8		A	13C2-PFDoDA	6.05	585802.0	0.375	2.032
10:2-FTS	6.07	1.090	16888.7		A	13C2-8:2-FTS	5.57	30874.6	0.547	1.703
NMePFOSAE	6.10	1.000	162327.5		A	d7-NMePFOSAE	6.09	353934.1	0.459	2.055
NMePFOSA	6.11	1.000	30602.5		A	d3-NMePFOSA	6.10	78061.1	0.392	2.194
PFDoS	6.21	1.190	28862.1		A	13C8-PFOS	5.24	305093.3	0.095	1.826
NEtPFOSAE	6.25	1.000	185331.3		A	d9-NEtPFOSAE	6.24	279379.9	0.663	2.127
NEtPFOSA	6.27	1.000	27529.0		A	d5-NEtPFOSA	6.26	71581.8	0.385	1.694
PFTrDA	6.24	1.030	182645.5		A	13C2-PFDoDA	6.05	585802.0	0.312	1.966
PFTeDA	6.42	1.000	155169.1		A	13C2-PFTeDA	6.42	416875.0	0.372	2.186
PFHxDA	6.72	1.050	68909.8		A	13C2-PFTeDA	6.42	416875.0	0.165	2.052
PFODA	6.99	1.090	63043.0		A	13C2-PFTeDA	6.42	416875.0	0.151	2.167

Total Ion Chromatogram

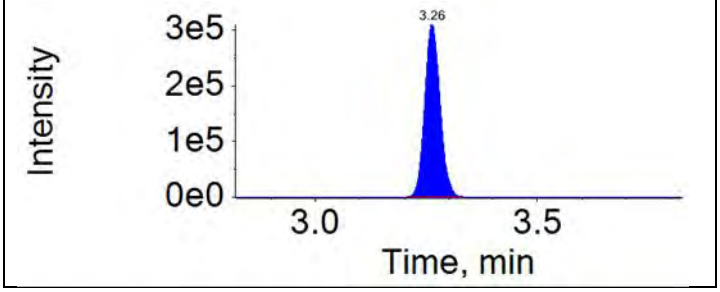


APPROVED
By JPT at 10:55 am, 11/9/18

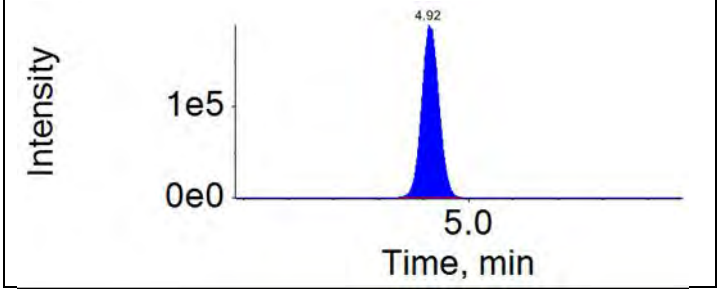
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

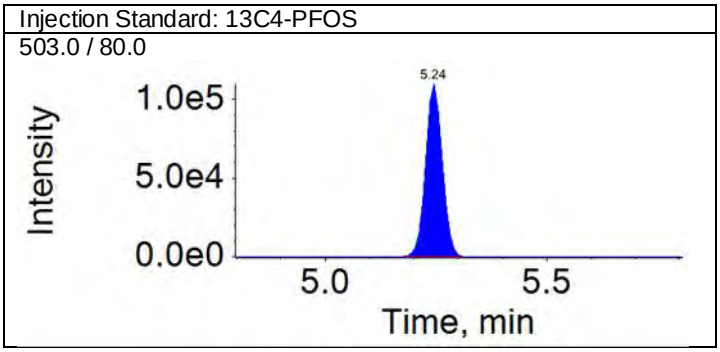
Injection Standard: 13C3-PFBA
216.0 / 172.0



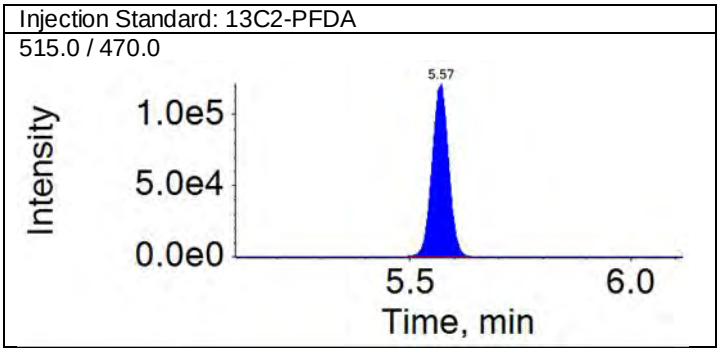
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

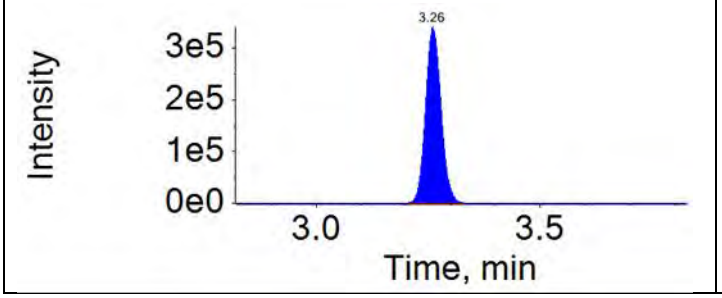


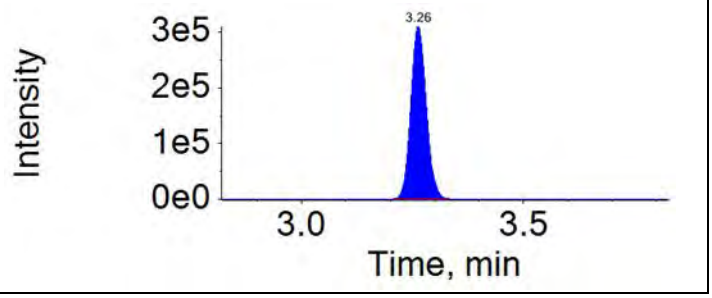
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

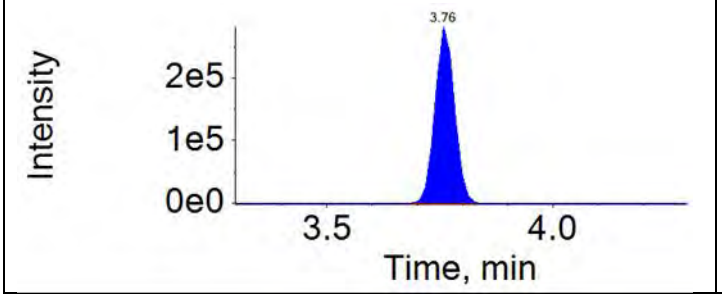
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

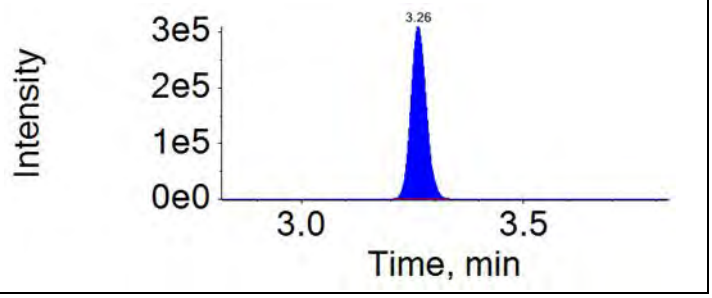
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



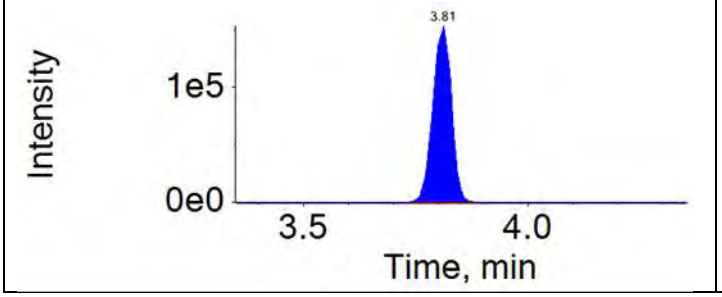


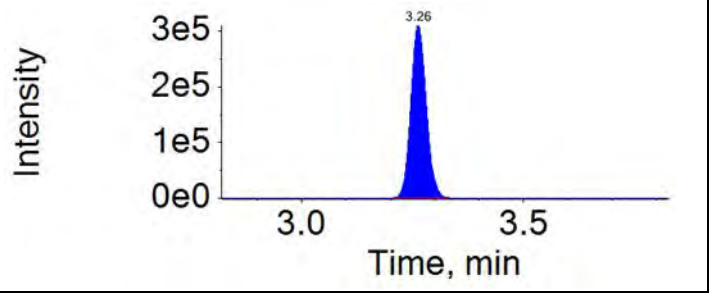
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



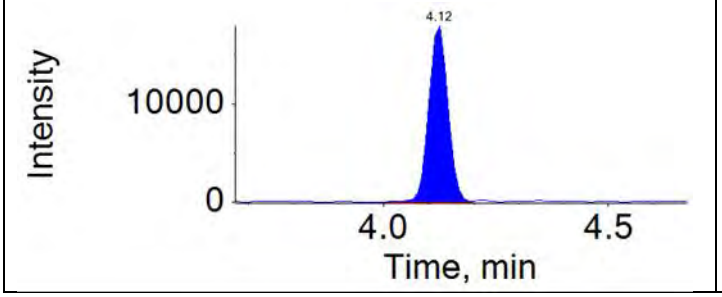


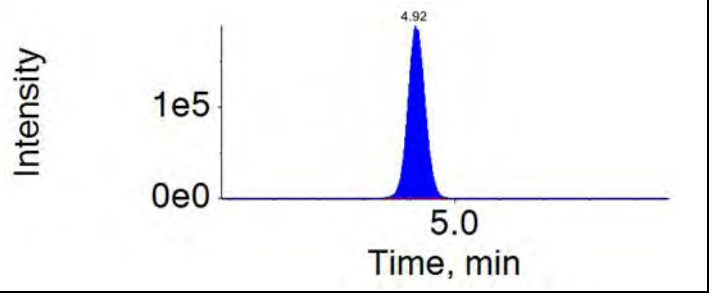
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





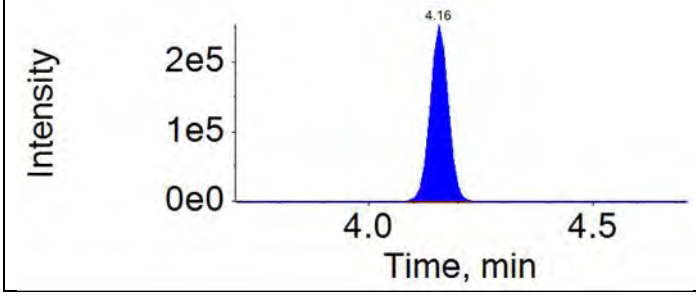
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

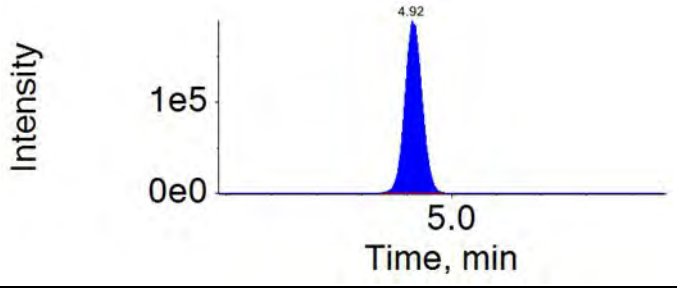




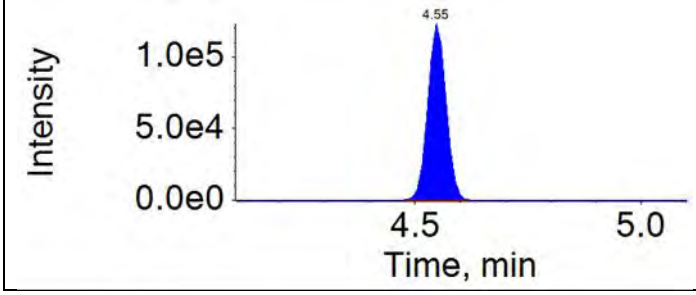
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

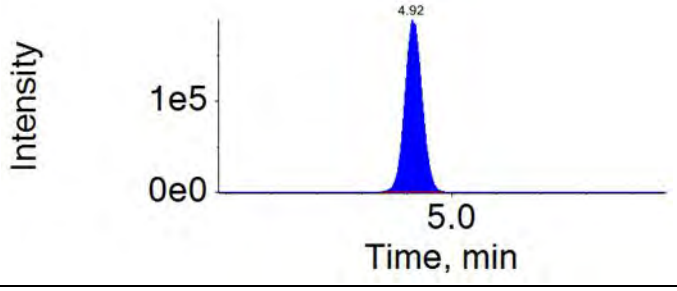
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



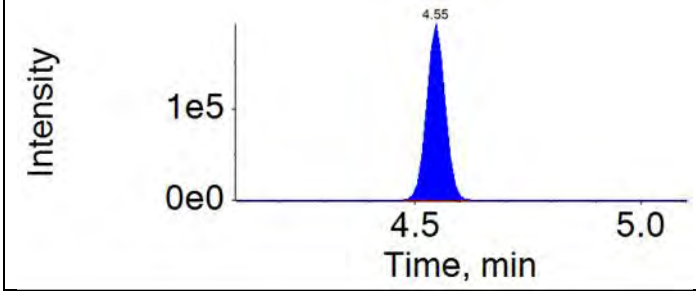


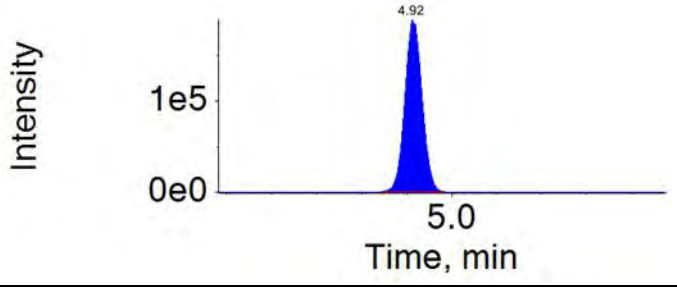
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



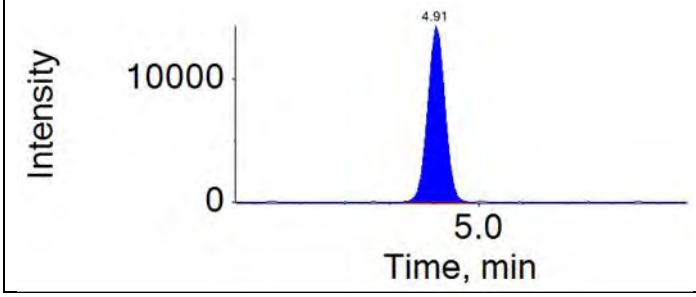


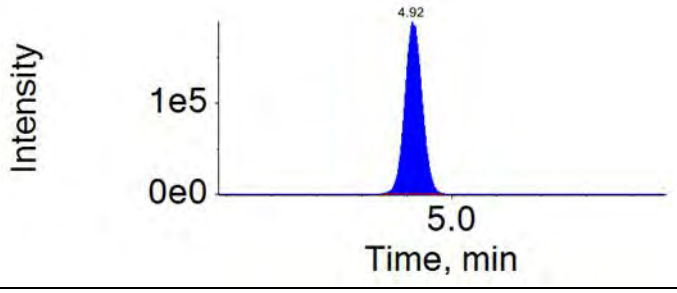
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



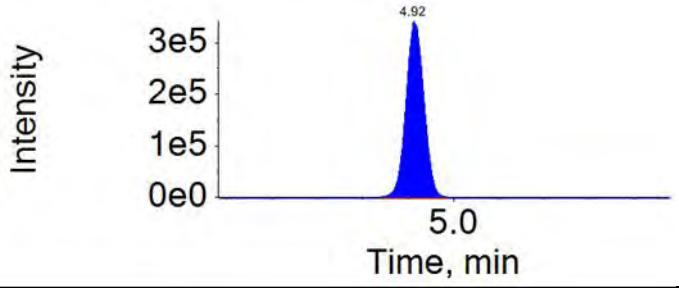
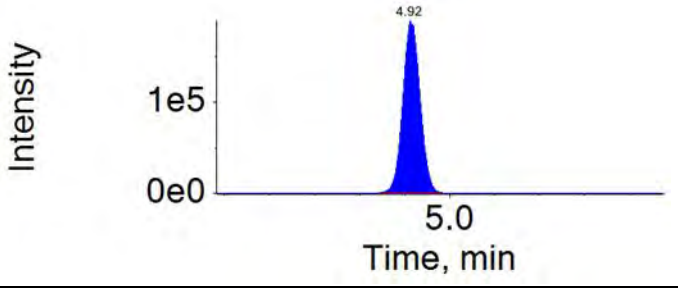


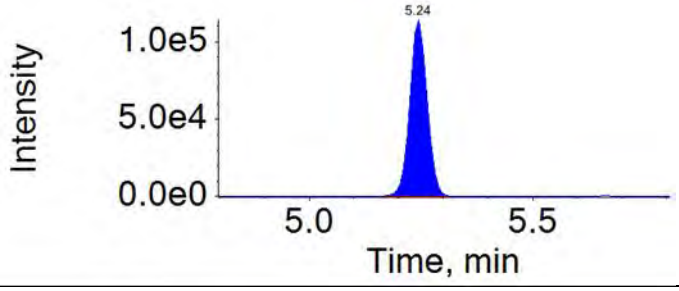
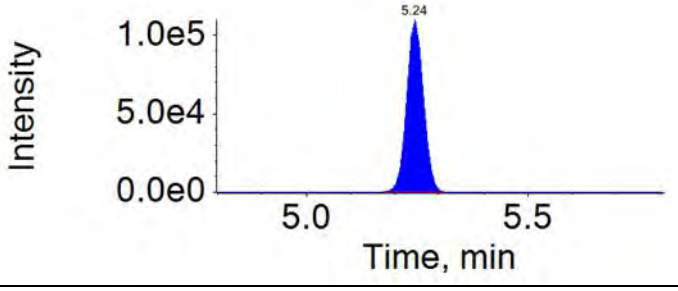
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

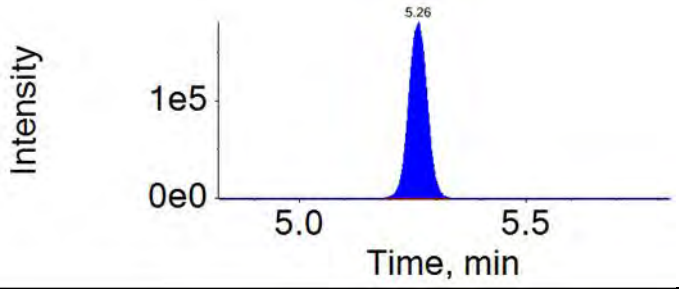
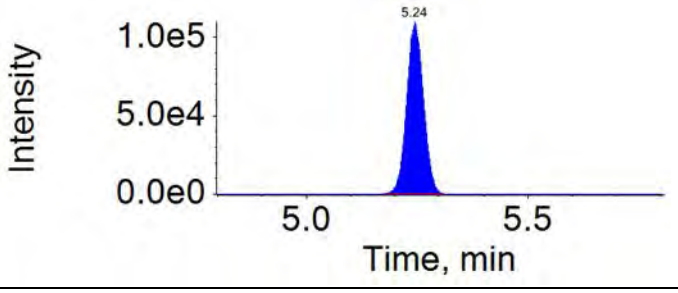


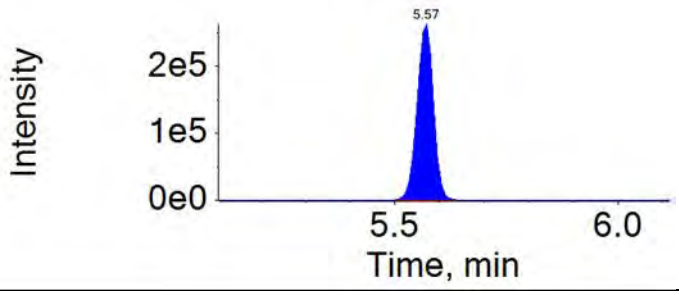
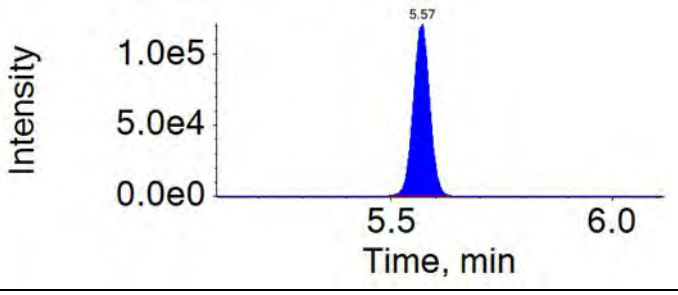


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

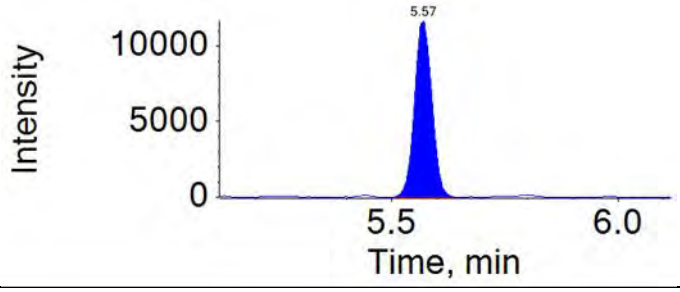
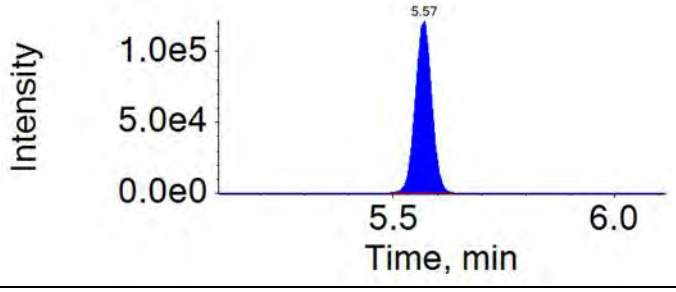
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

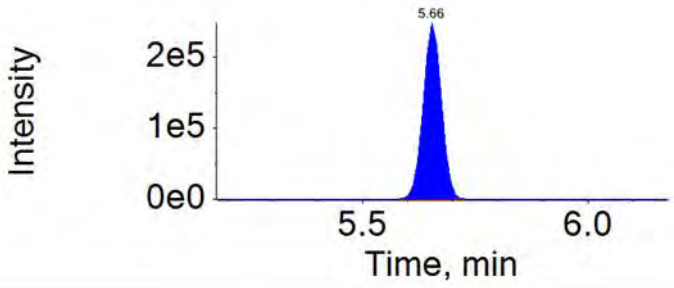
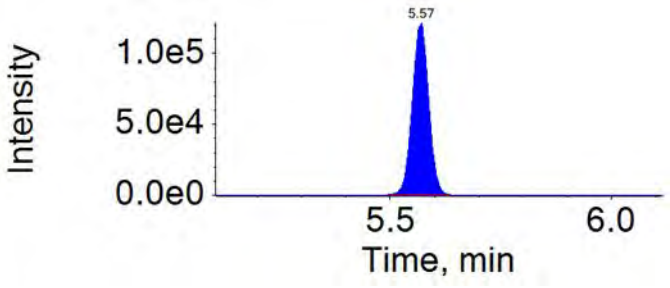
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

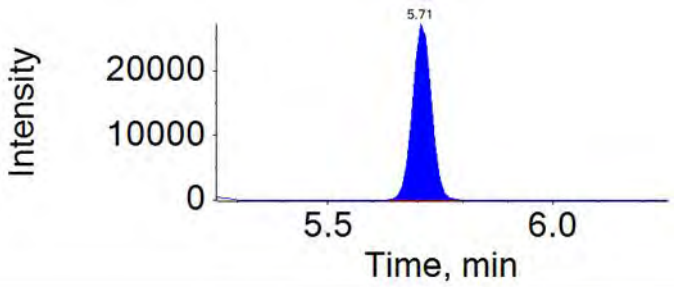
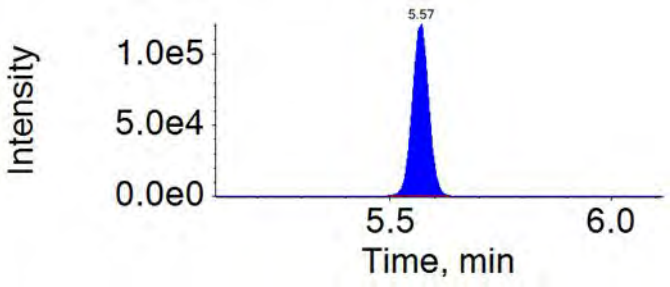
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

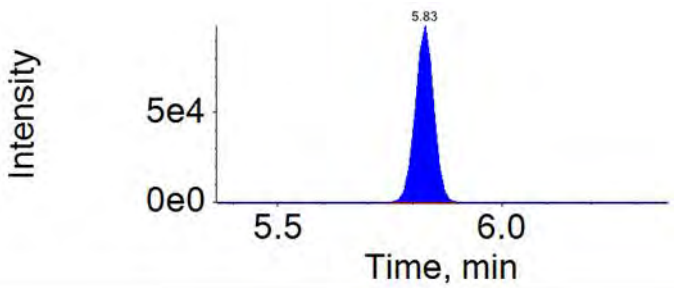
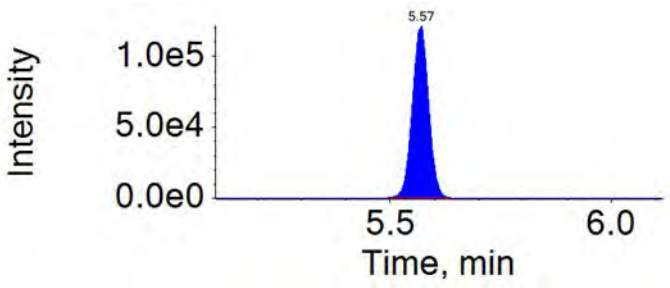
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

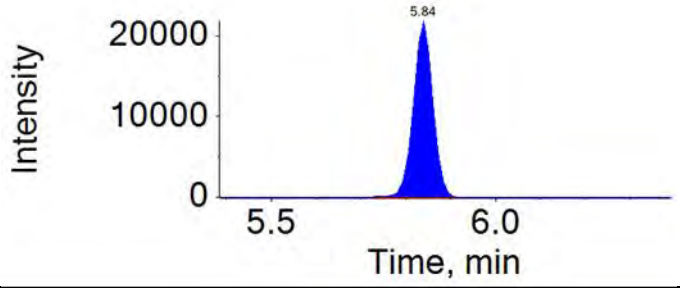
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

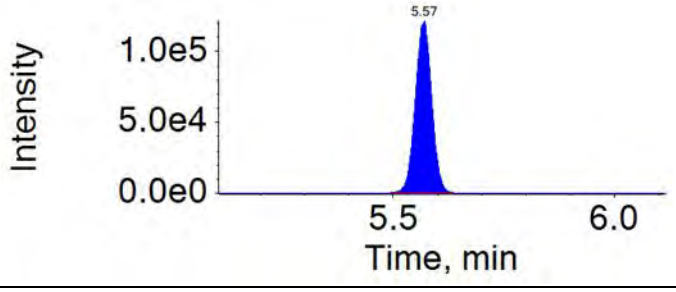
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

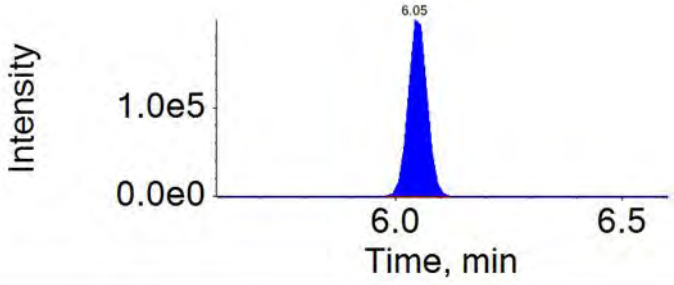
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

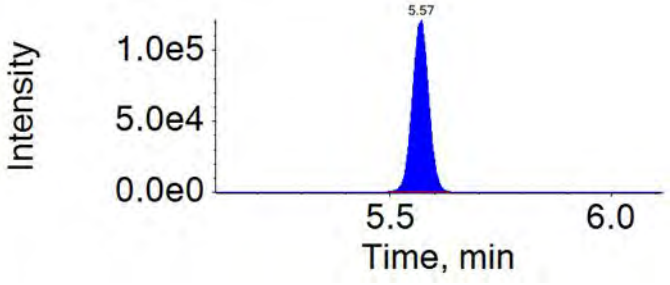
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



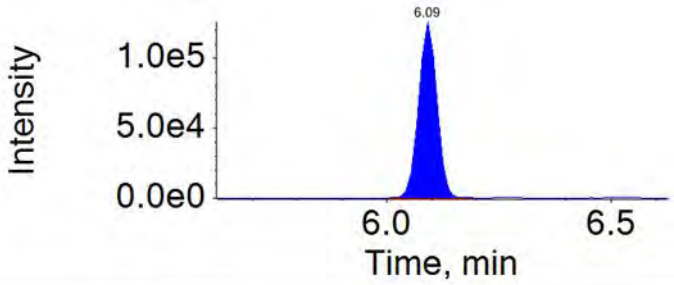


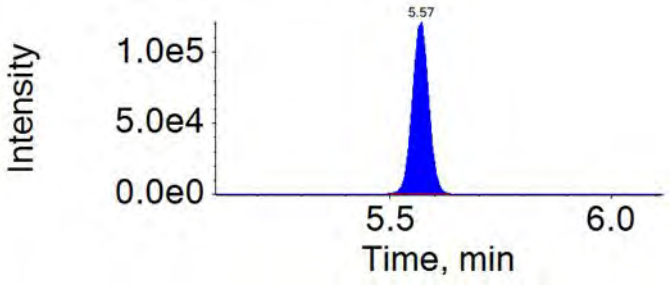
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



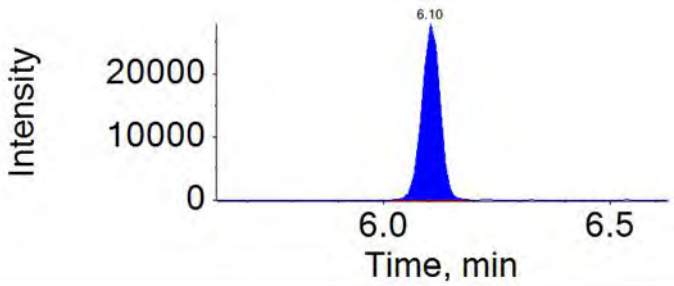


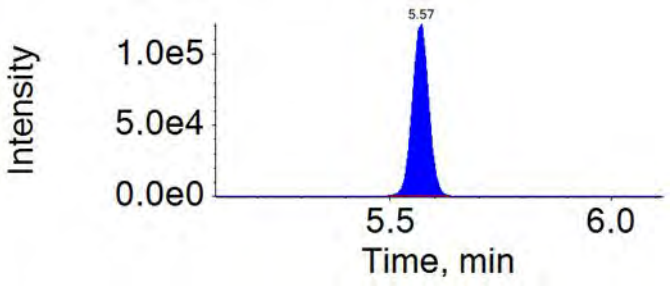
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



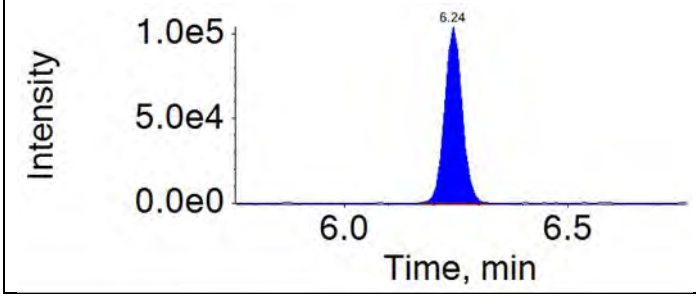


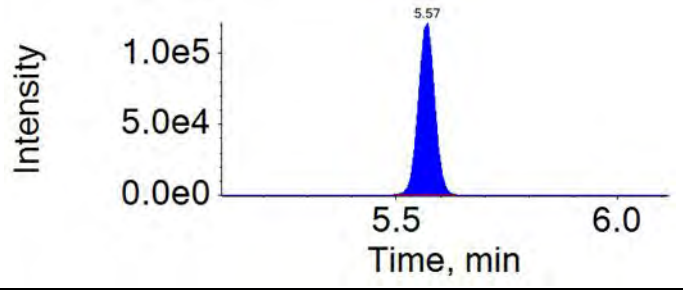
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

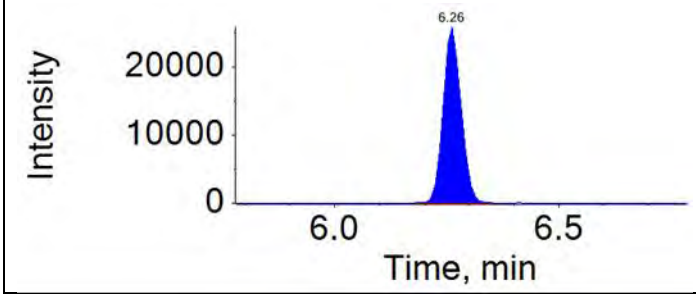
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

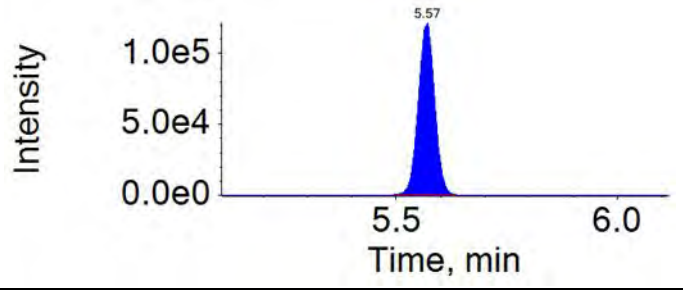
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



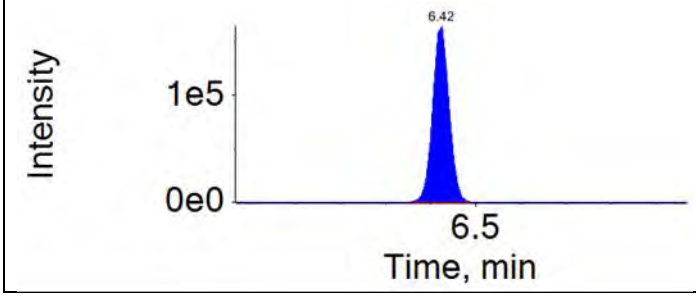


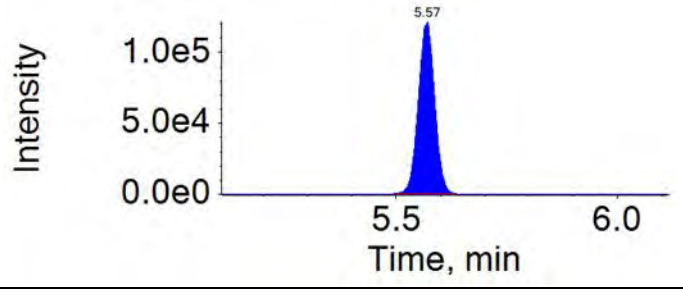
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



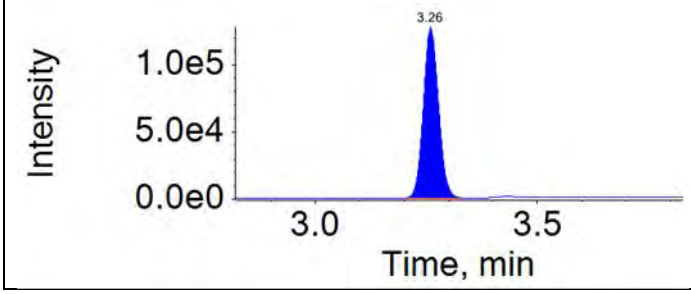


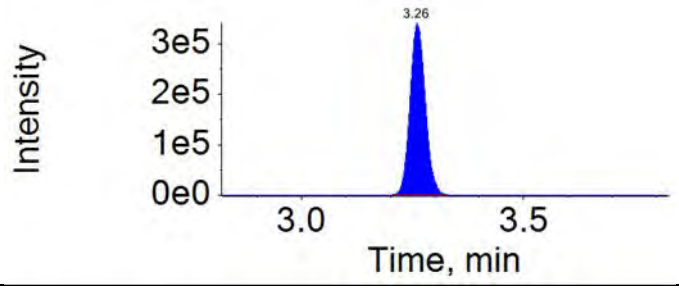
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

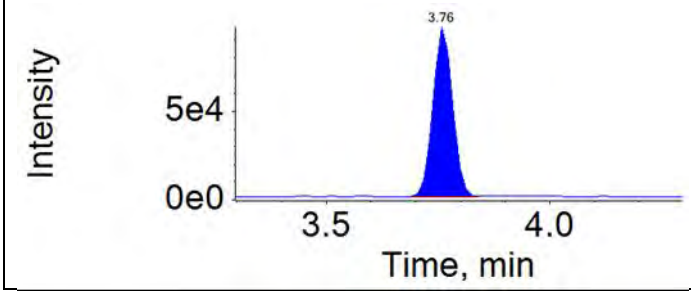
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

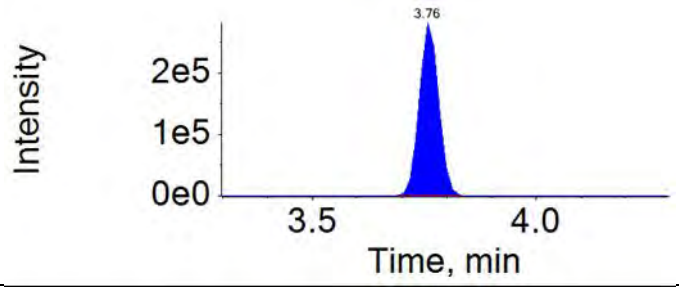
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



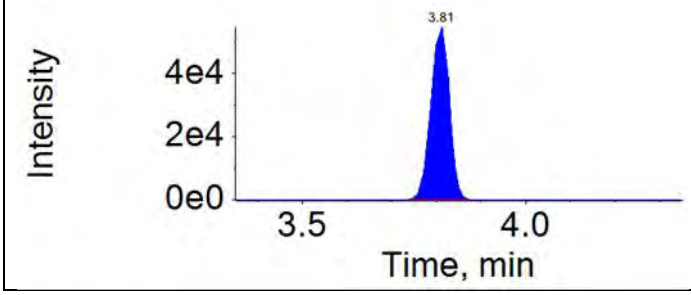


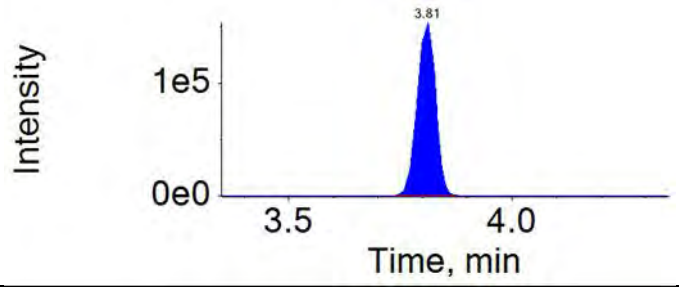
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



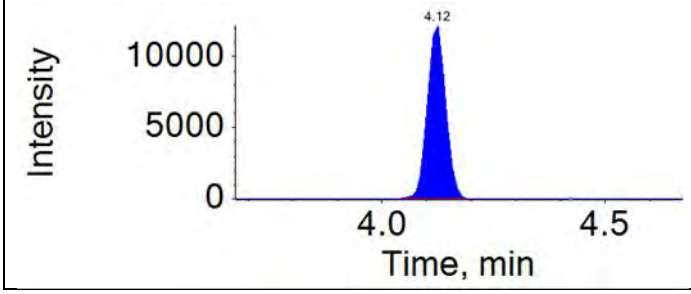


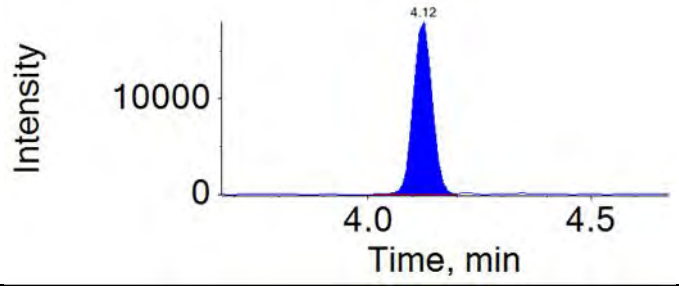
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



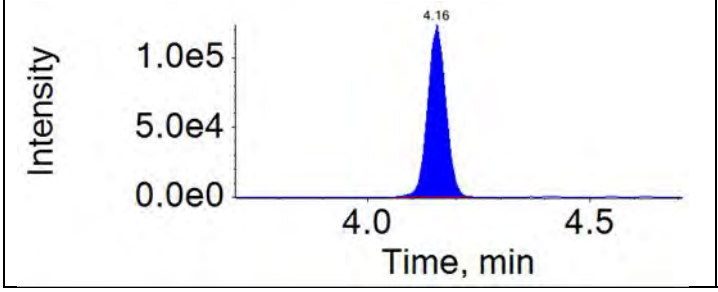


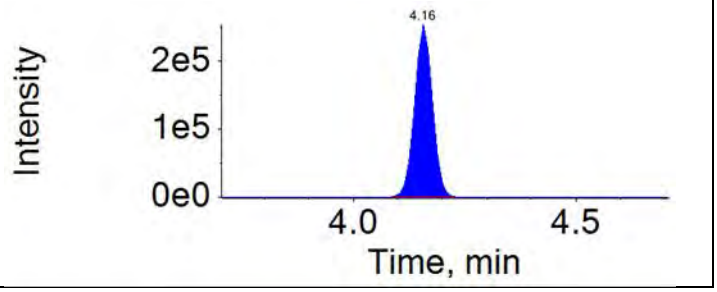
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

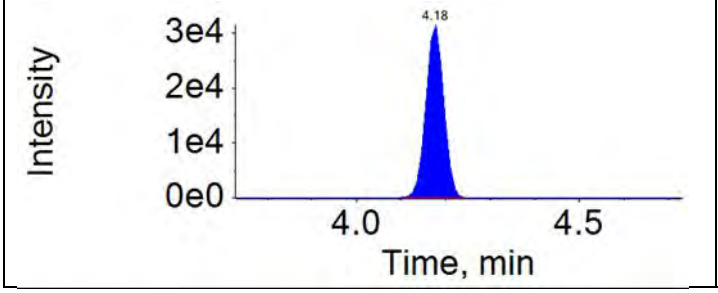
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

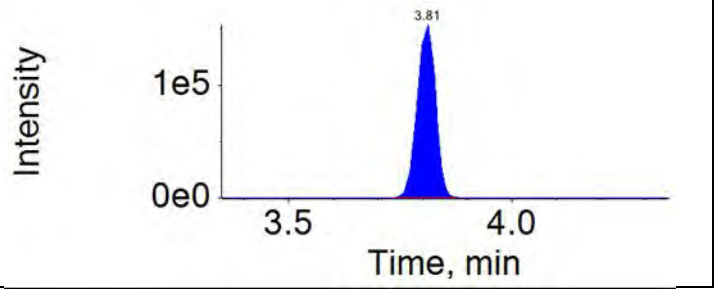
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



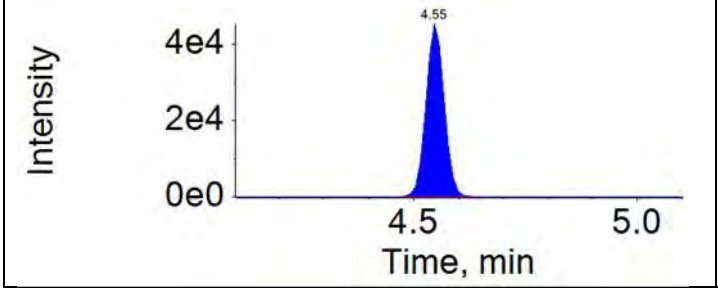


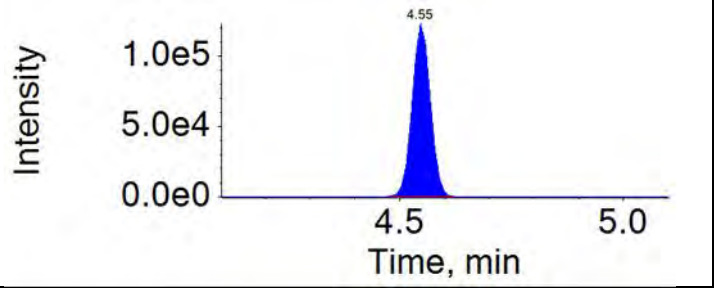
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



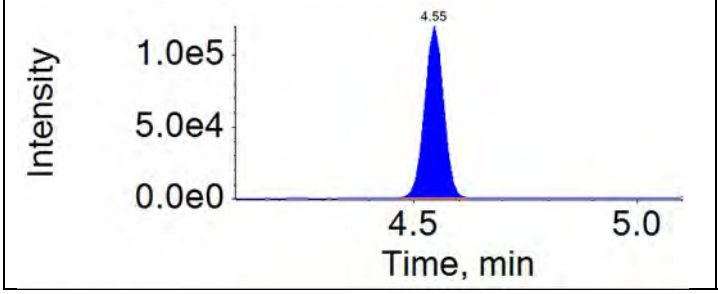


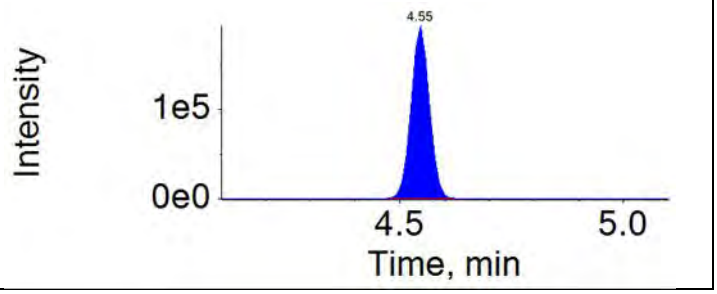
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





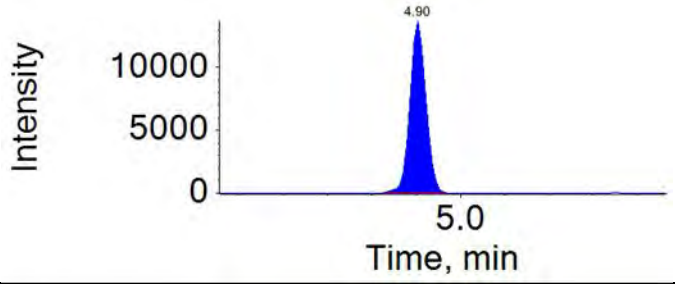
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

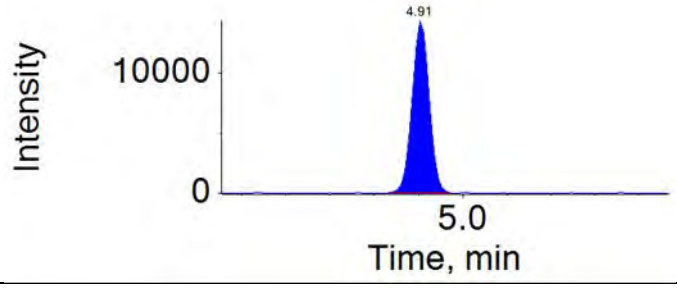




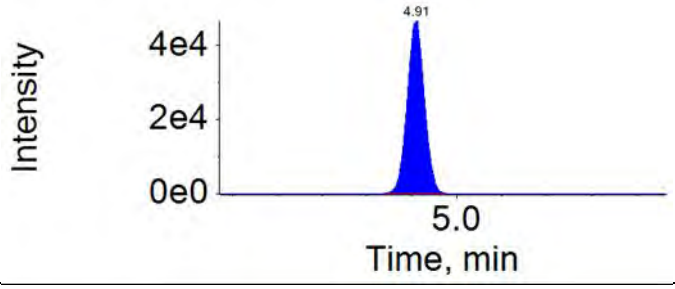
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

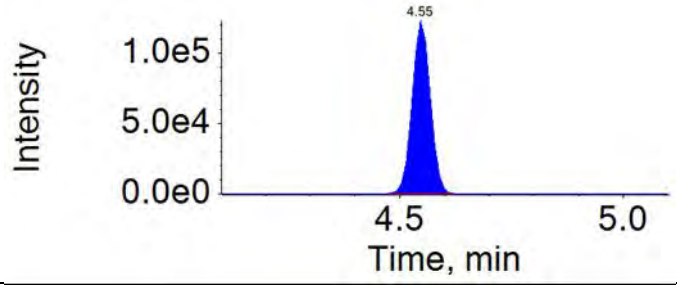
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



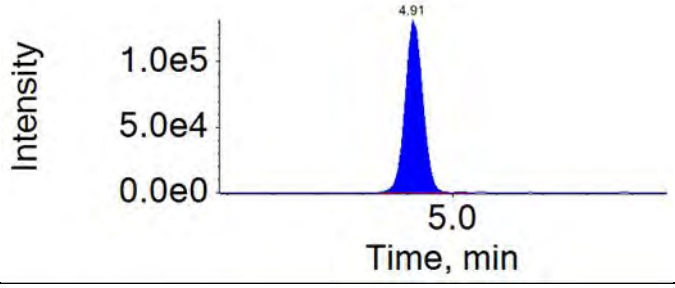


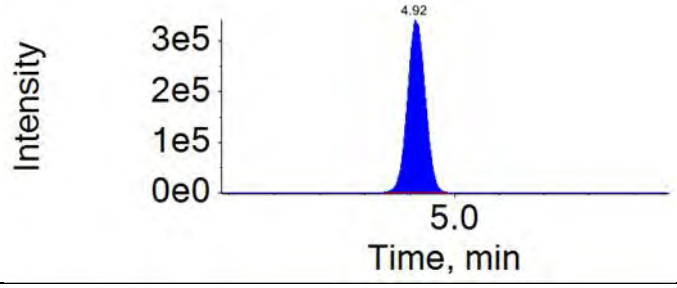
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



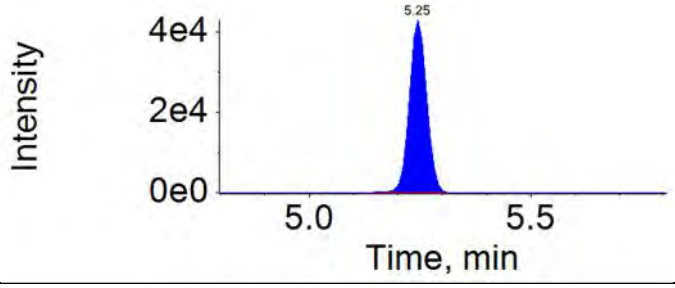


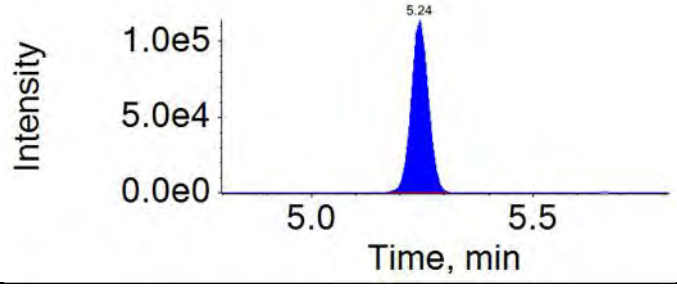
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



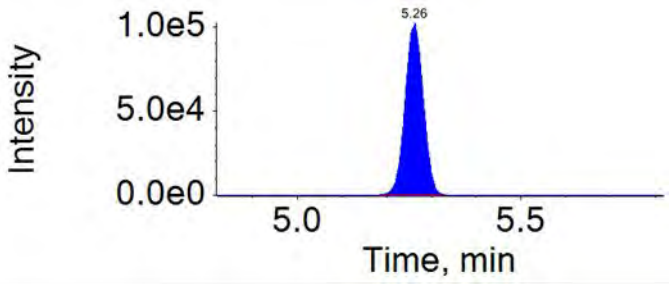


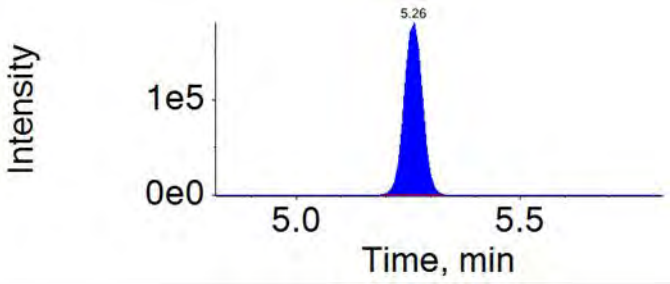
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

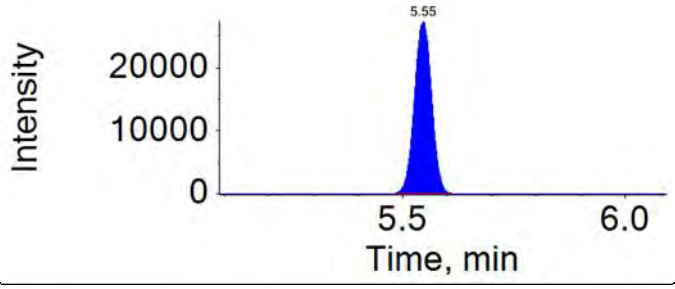
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

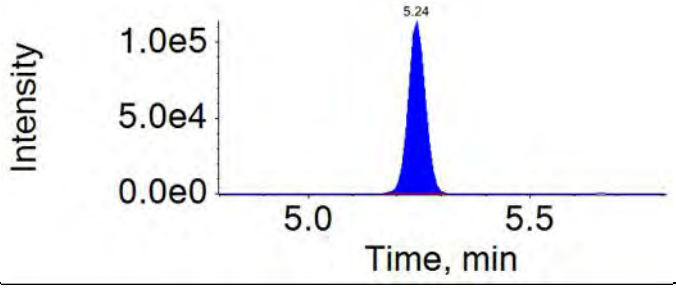
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



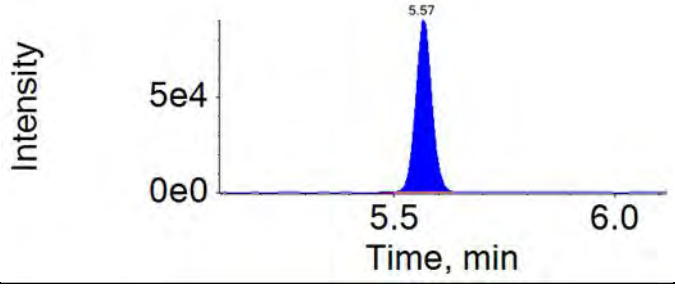


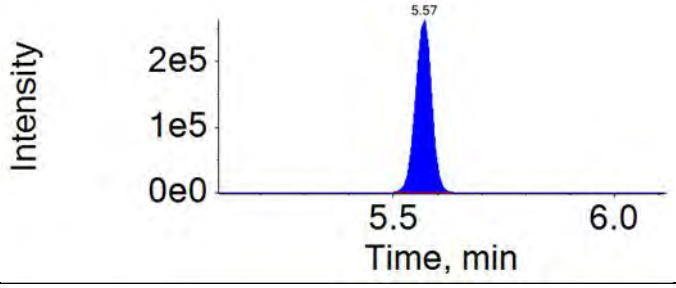
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



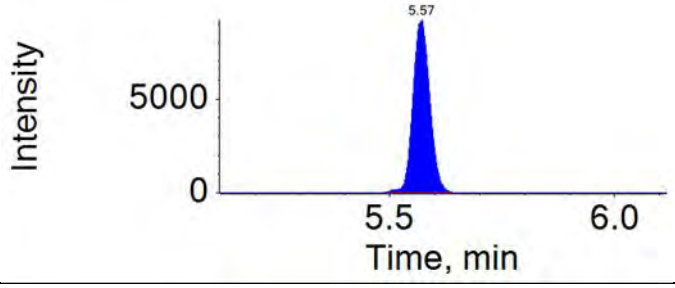


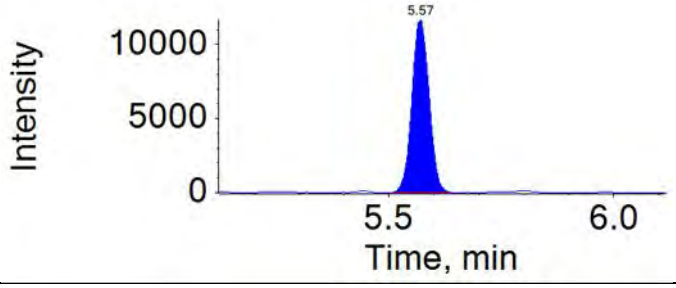
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



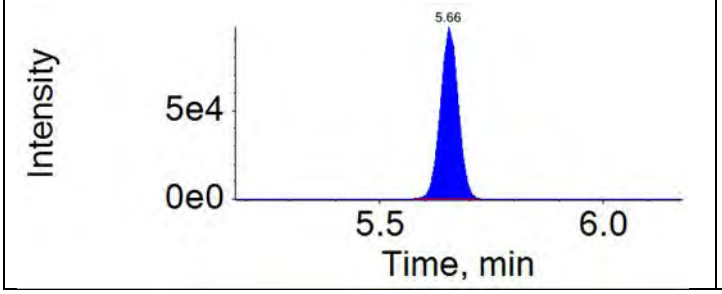


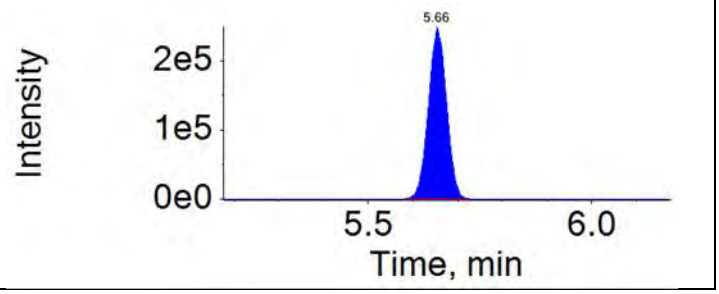
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

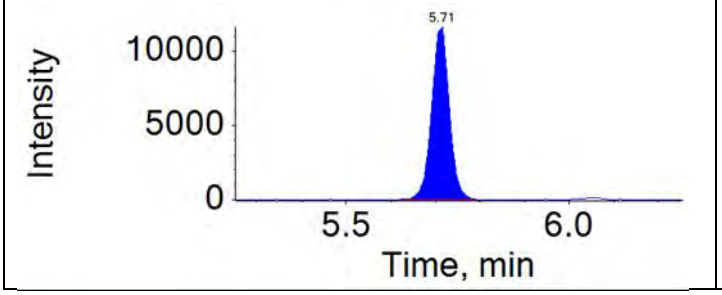
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

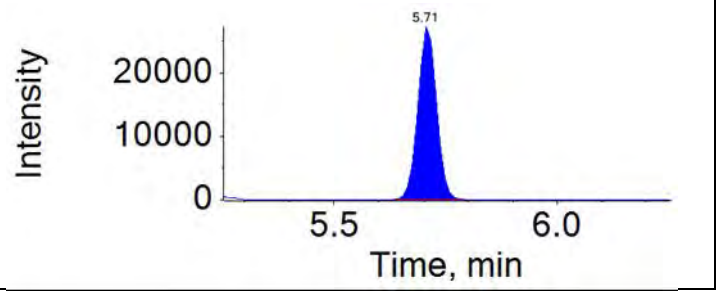
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



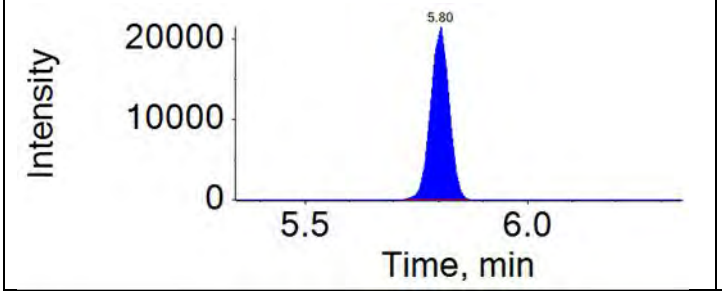


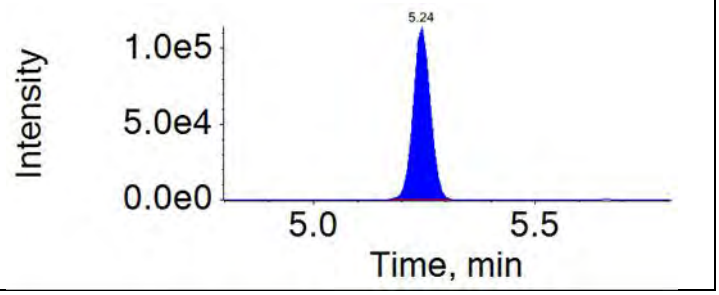
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



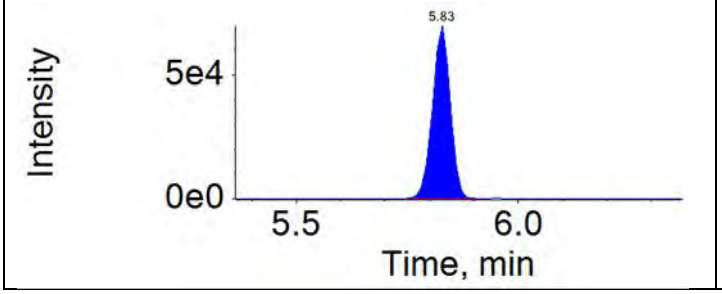


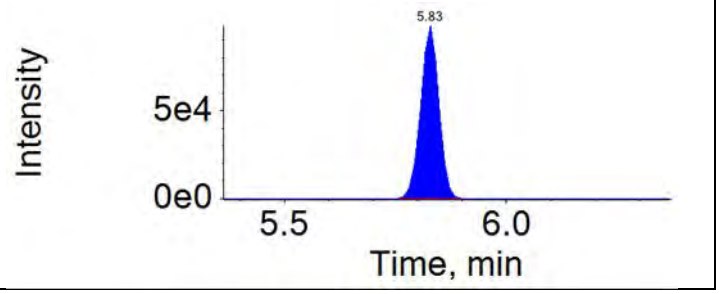
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

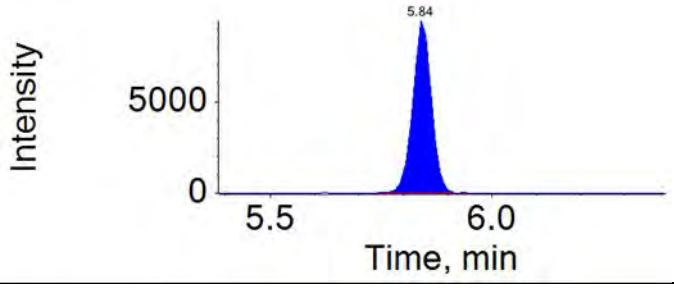
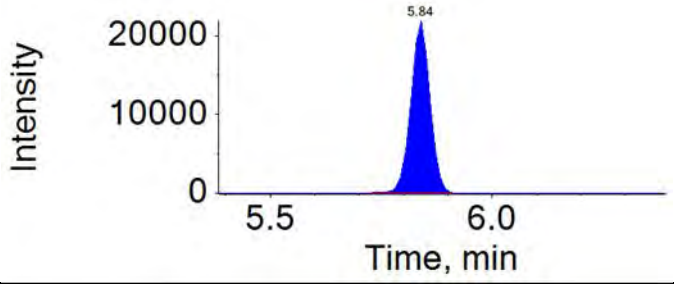


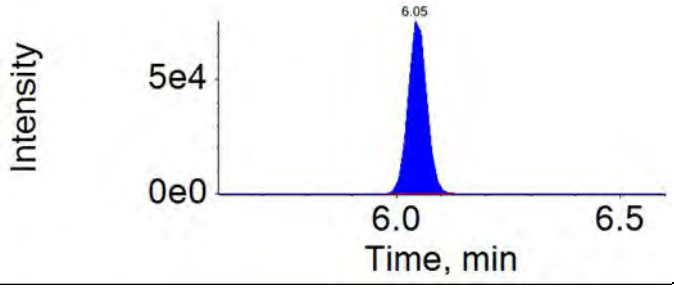
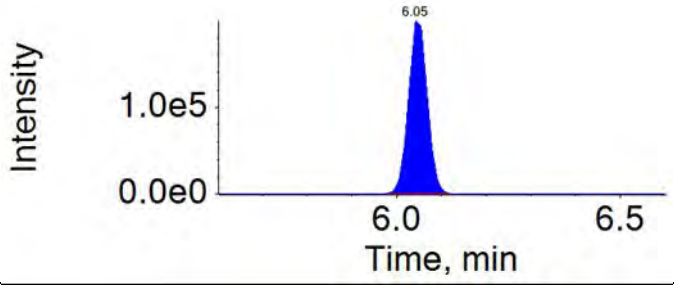


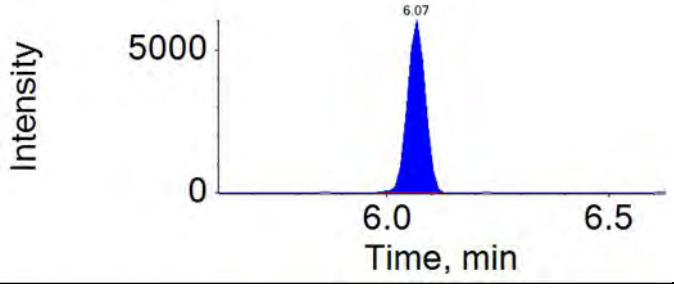
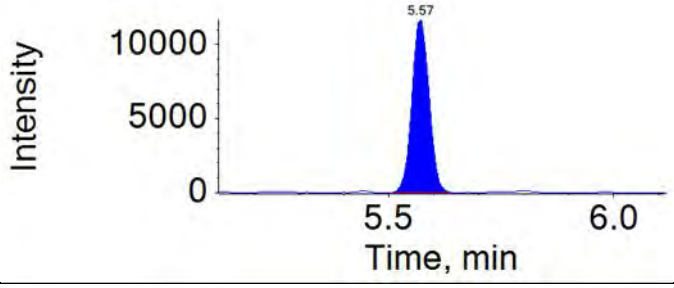
APPROVED
By JPT at 10:55 am, 11/9/18

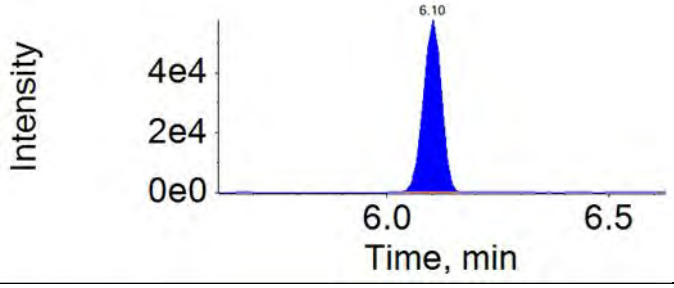
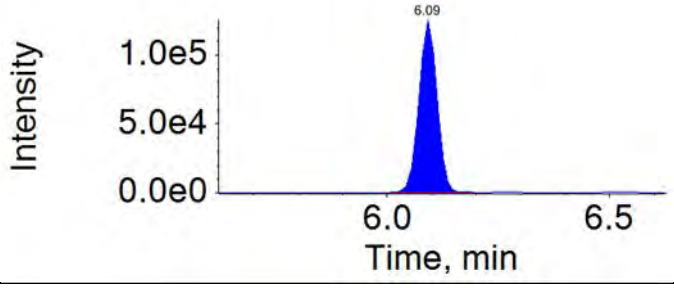
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

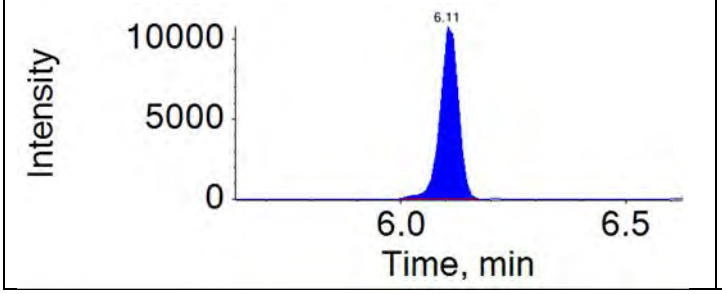
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

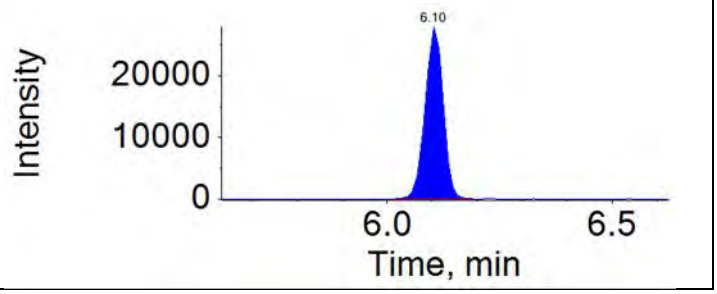
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

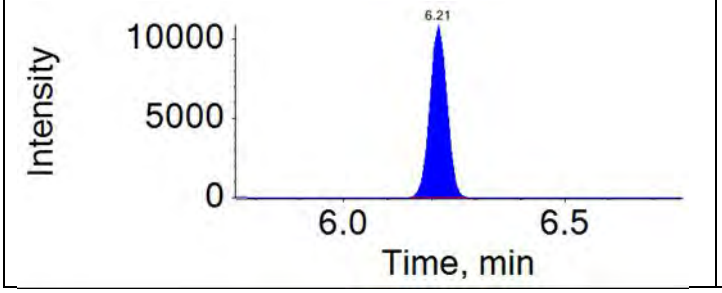
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

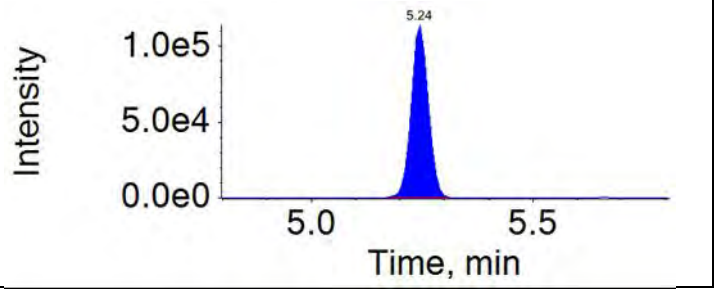
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



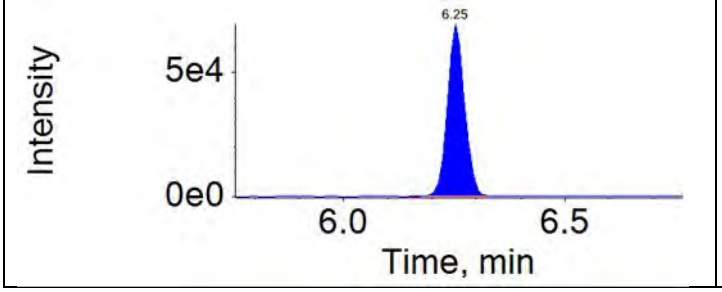


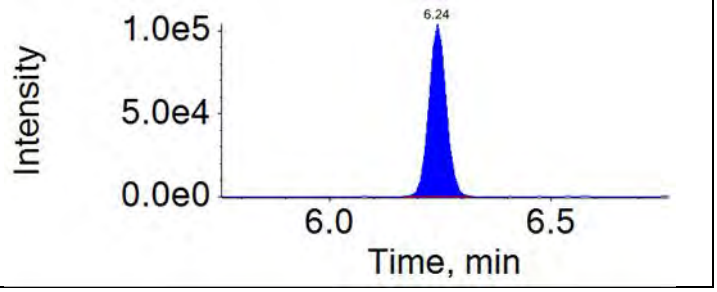
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



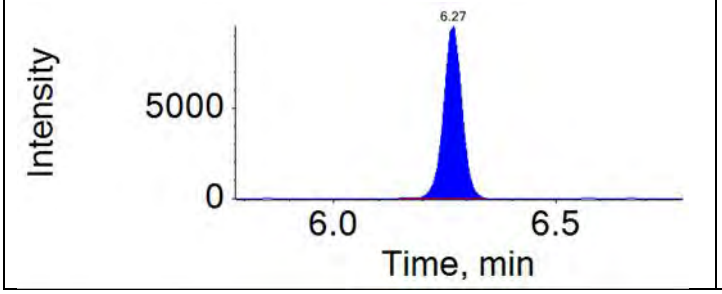


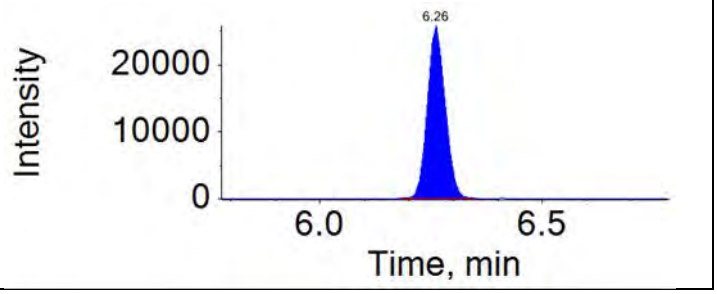
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



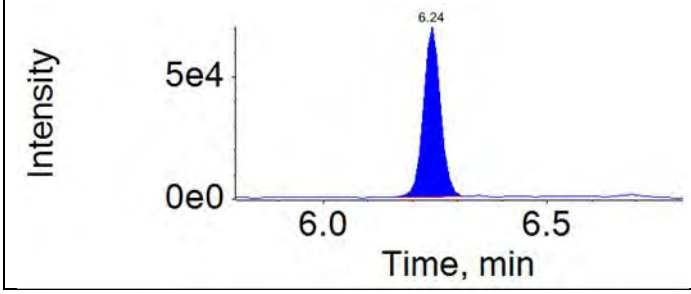


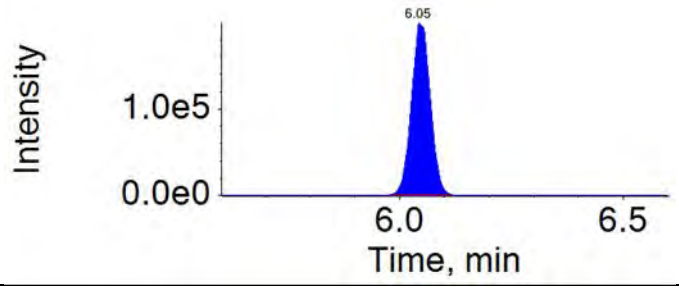
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

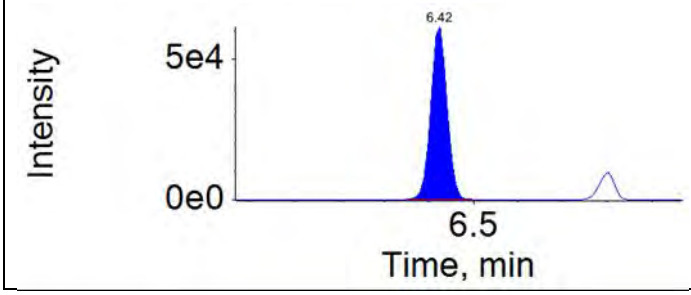
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

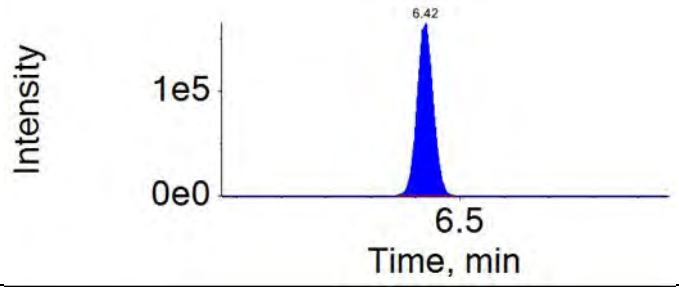
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



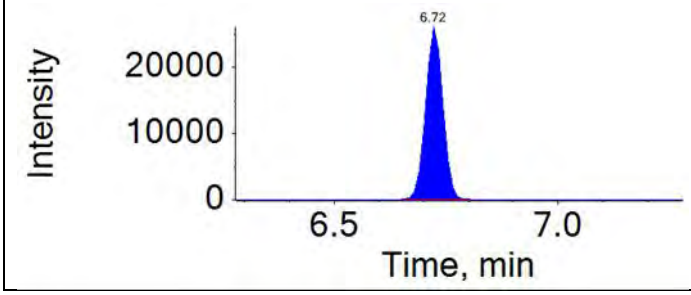


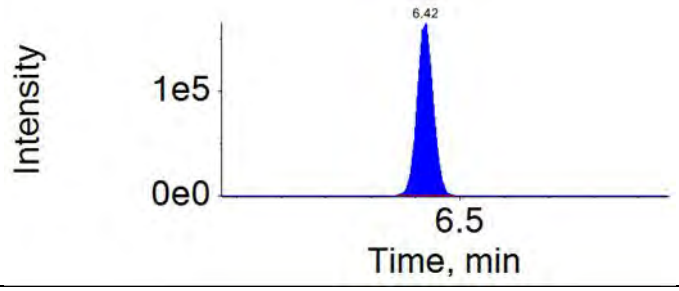
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



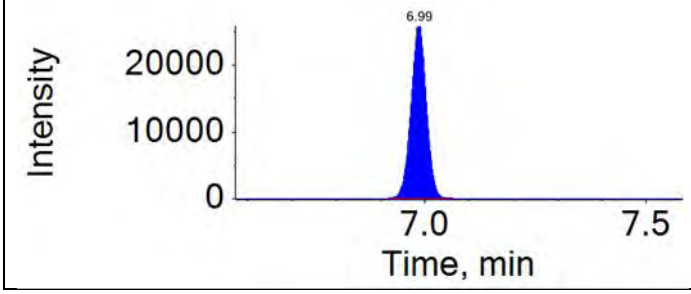


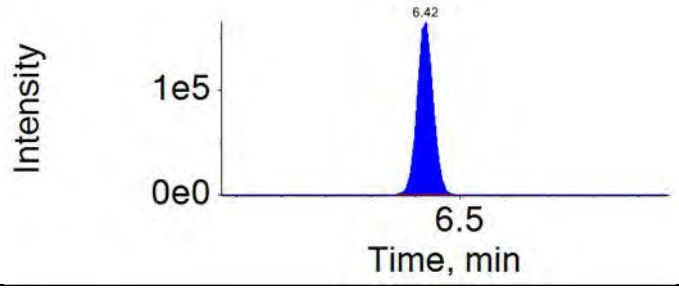
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Ion Ratio Report

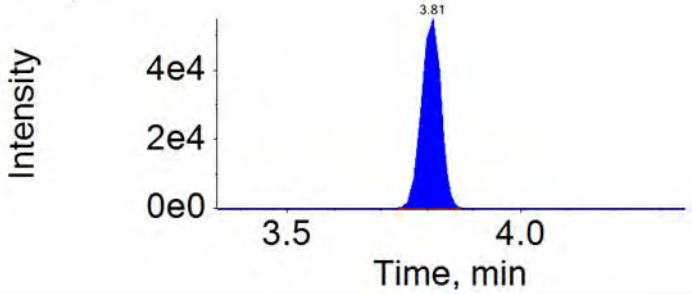
Sample Name: CCV8_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV08D-86.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	159879.7	A	N/A	1.0000			
PFBS_2	3.81	1.00	59535.3	A	N/A	0.3724	4	50	
4:2-FTS	4.12	1.00	34586.7	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	24784.2	A	N/A	0.7166	13	50	
PFHxA	4.16	1.00	348142.4	A	N/A	1.0000			
PFHxA_2	4.16	1.00	3920.7	A	N/A	0.0113	-2	50	
PFPeS	4.18	1.10	87376.5	A	N/A	1.0000			
PFPeS_2	4.18	1.10	45455.6	A	N/A	0.5202	-3	50	
PFHxS	4.55	1.00	127903.2	A	N/A	1.0000			
PFHxS_2	4.55	1.00	47229.7	A	N/A	0.3693	3	50	
PFHpA	4.55	1.00	347897.1	A	N/A	1.0000			
PFHpA_2	4.55	1.00	16467.9	A	N/A	0.0473	-18	50	
6:2-FTS	4.90	1.00	34236.6	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	19800.2	A	N/A	0.5783	-14	50	
PFHpS	4.91	1.08	124721.2	A	N/A	1.0000			
PFHpS_2	4.91	1.08	50643.4	A	N/A	0.4061	3	50	
PFOA	4.91	1.00	353117.0	A	N/A	1.0000			
PFOA_2	4.91	1.00	21107.6	A	N/A	0.0598	-6	50	
PFOS	5.25	1.00	117262.9	A	N/A	1.0000			
PFOS_2	5.24	1.00	40359.8	A	N/A	0.3442	-1	50	
PFNA	5.26	1.00	289246.3	A	N/A	1.0000			
PFNA_2	5.26	1.00	5770.2	A	N/A	0.0199	-4	50	
PFNS	5.55	1.06	73898.6	A	N/A	1.0000			
PFNS_2	5.54	1.06	33943.4	A	N/A	0.4593	-6	50	
PFDA	5.57	1.00	227693.9	A	N/A	1.0000			
PFDA_2	5.57	1.00	1567.7	A	N/A	0.0069	22	50	
8:2-FTS	5.57	1.00	24122.7	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	15132.4	A	N/A	0.6273	2	50	
NMeFOSAA	5.71	1.00	32027.6	A	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	6127.0	A	N/A	0.1913	-13	50	
PFDS	5.80	1.11	61957.5	A	N/A	1.0000			
PFDS_2	5.80	1.11	33673.2	A	N/A	0.5435	17	50	
PFUnDA	5.83	1.00	194783.4	A	N/A	1.0000			
PFUnDA_2	5.82	1.00	698.0	A	N/A	0.0036	14	50	
NEtFOSAA	5.84	1.00	27638.0	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	18561.3	A	N/A	0.6716	10	50	
PFDoDA	6.05	1.00	219631.8	A	N/A	1.0000			
PFDoDA_2	6.04	1.00	3482.0	A	N/A	0.0159	45	50	
10:2-FTS	6.07	1.09	16888.7	A	N/A	1.0000			
10:2-FTS_2	6.06	1.09	12656.7	A	N/A	0.7494	6	50	
PFTrDA	6.24	1.03	182645.5	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	1461.5	A	N/A	0.0080	-17	50	
PFTeDA	6.42	1.00	155169.1	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	1132.9	A	N/A	0.0073	32	50	
PFHxDA	6.72	1.05	68909.8	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	4318.5	A	N/A	0.0627	5	50	
PFODA	6.99	1.09	63043.0	A	N/A	1.0000			
PFODA_2	6.99	1.09	1467.7	A	N/A	0.0233	-9	50	

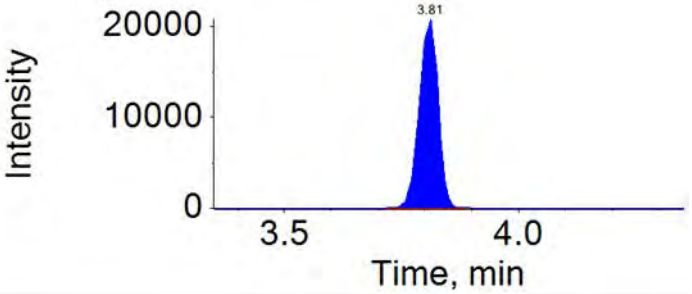
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

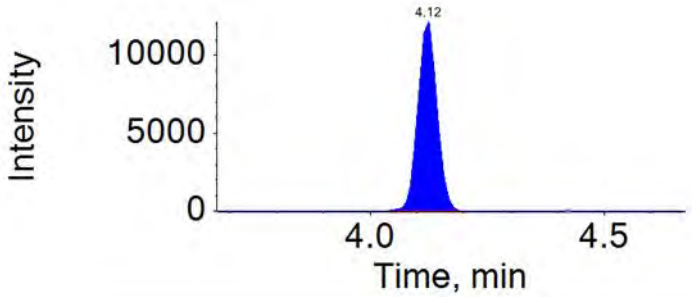
Component: PFBS
Primary Mass: 299.0 / 80.0



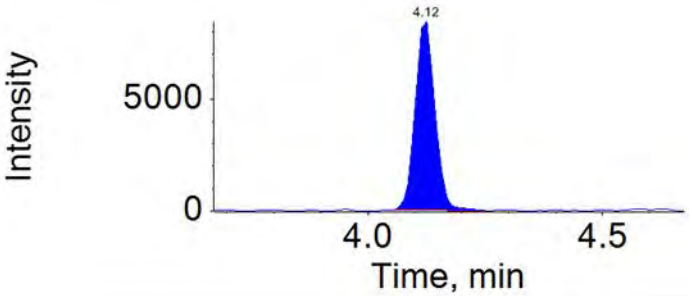
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



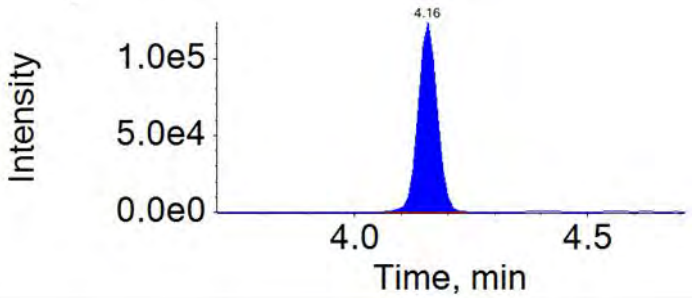
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



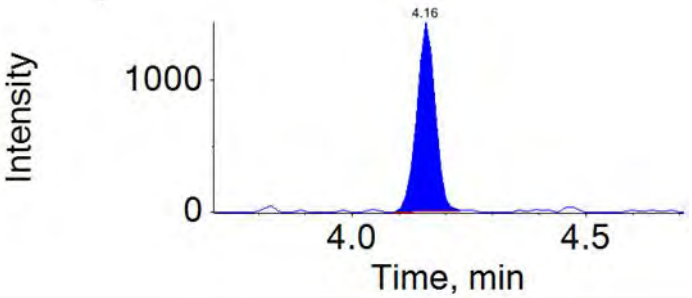
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



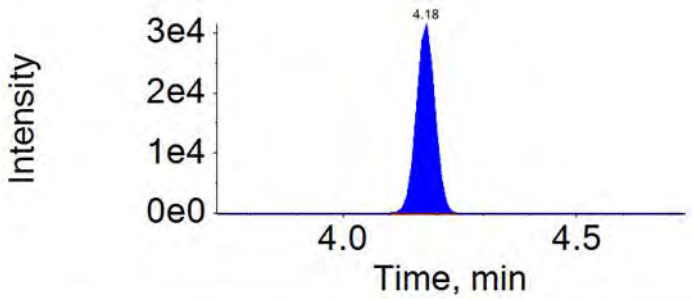
Component: PFHxA
Primary Mass: 313.0 / 269.0



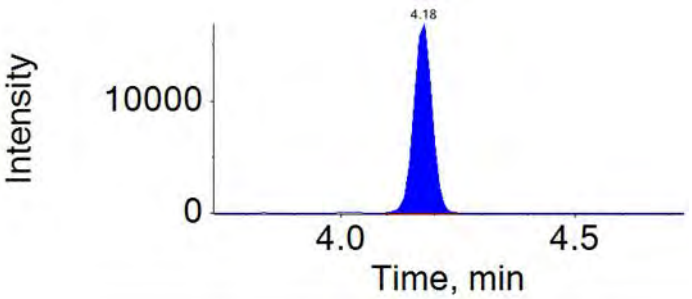
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



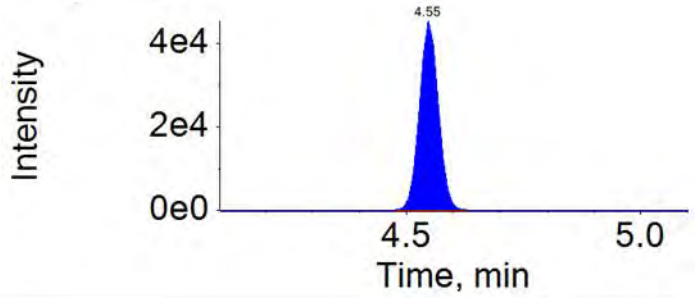
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



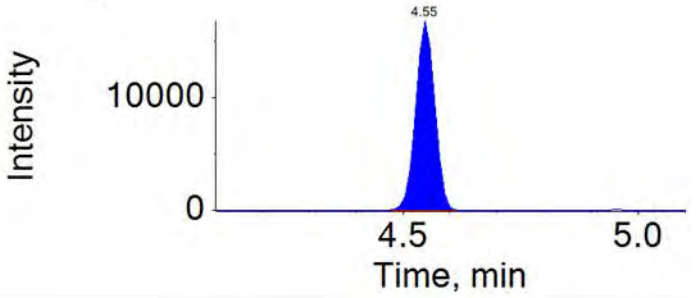
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

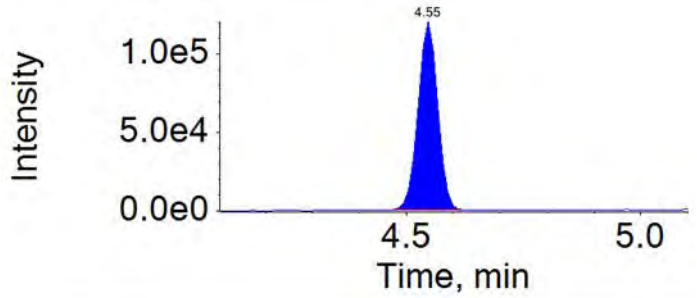
Component: PFHxS
Primary Mass: 399.0 / 80.0



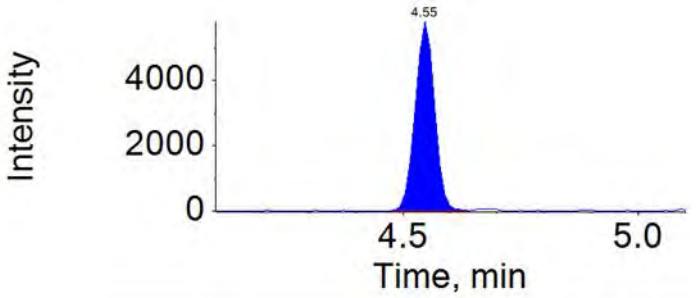
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



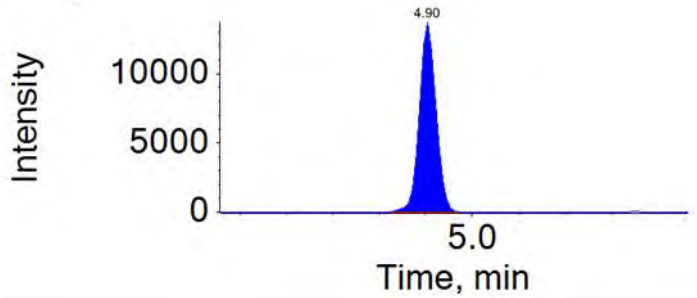
Component: PFHpA
Primary Mass: 363.0 / 319.0



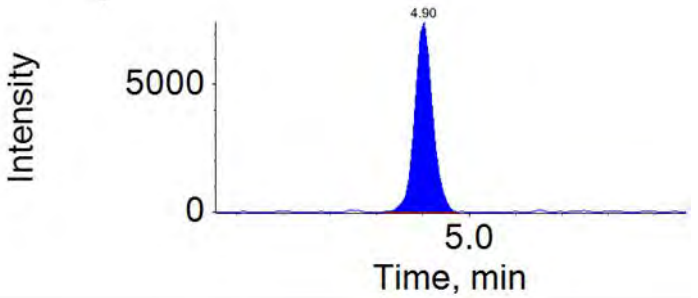
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



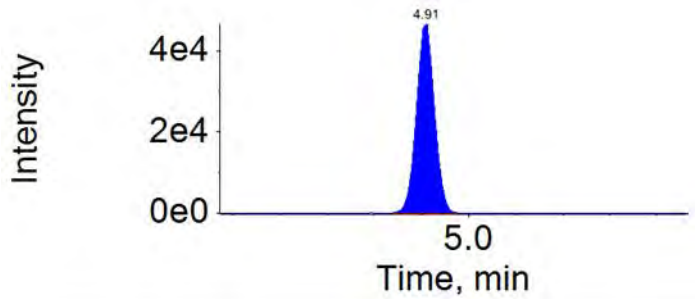
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



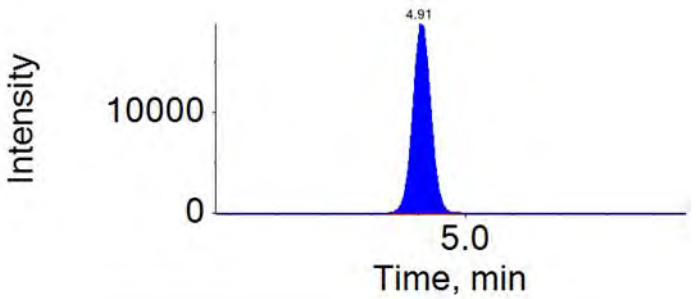
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



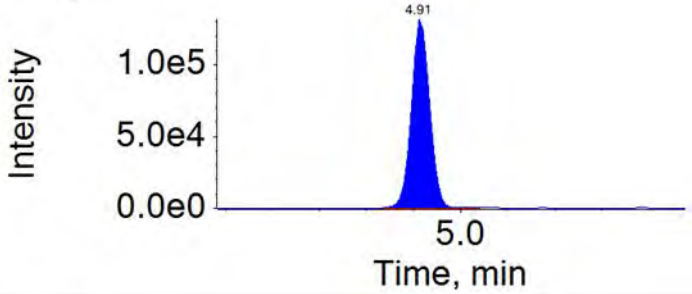
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



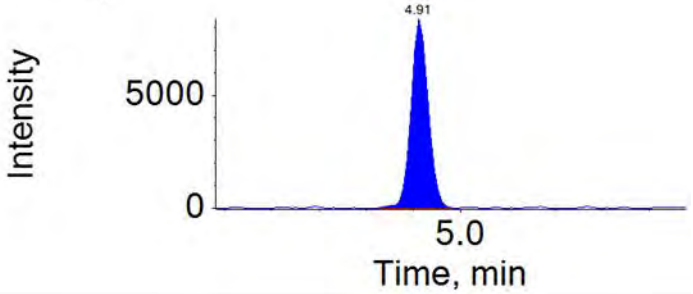
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

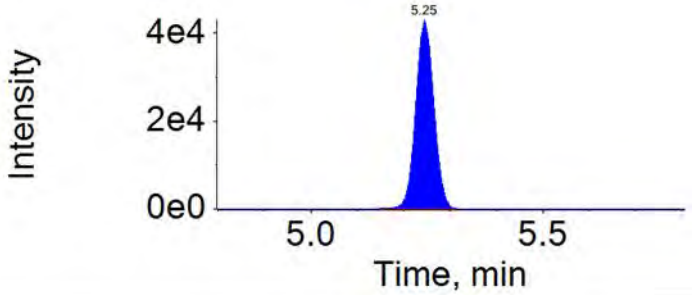
Component: PFOA
Primary Mass: 413.0 / 369.0



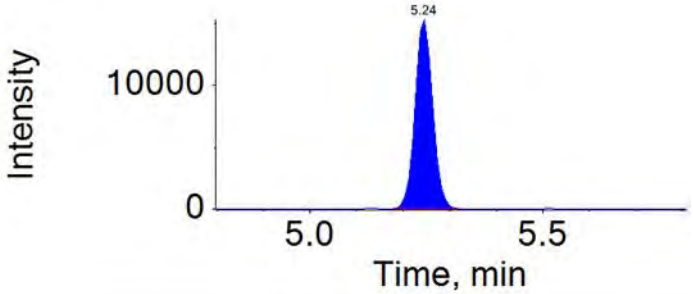
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



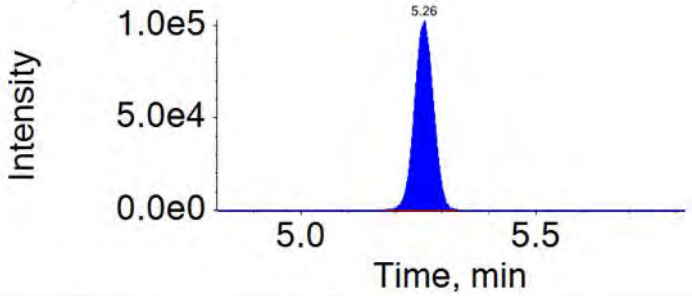
Component: PFOS
Primary Mass: 499.0 / 80.0



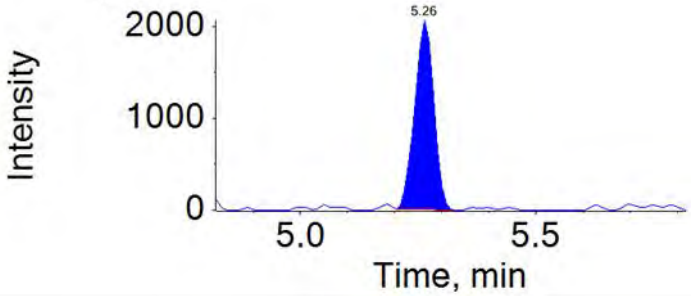
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



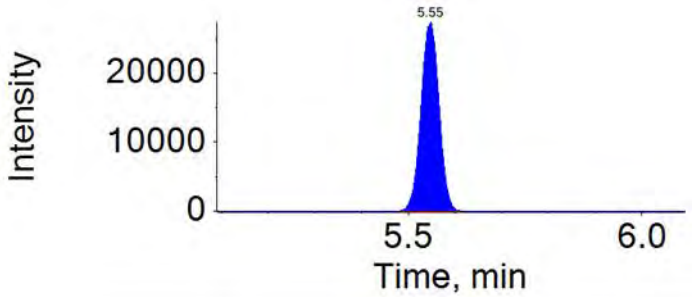
Component: PFNA
Primary Mass: 463.0 / 419.0



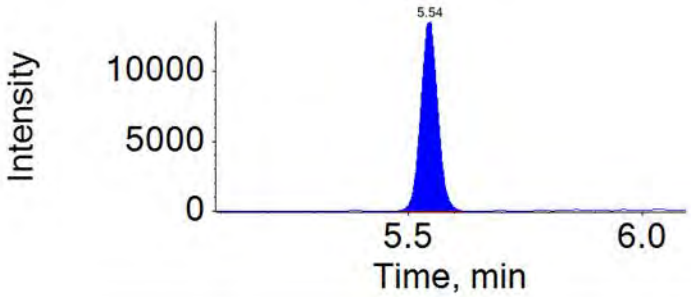
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



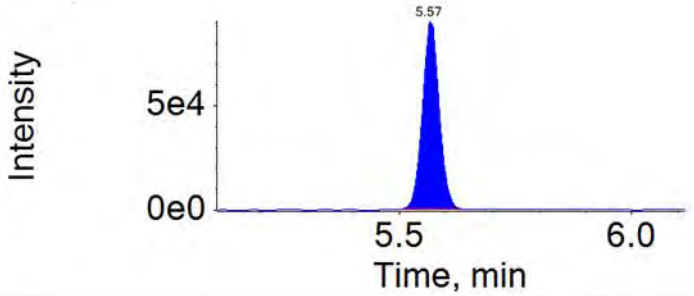
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



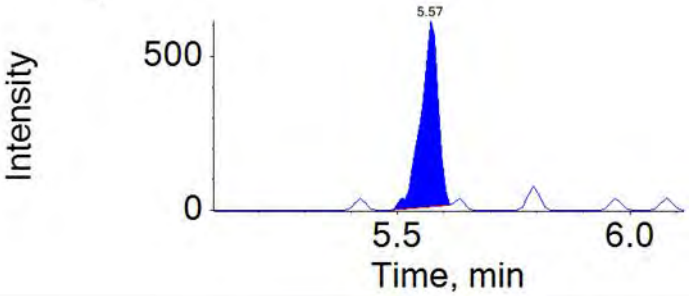
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

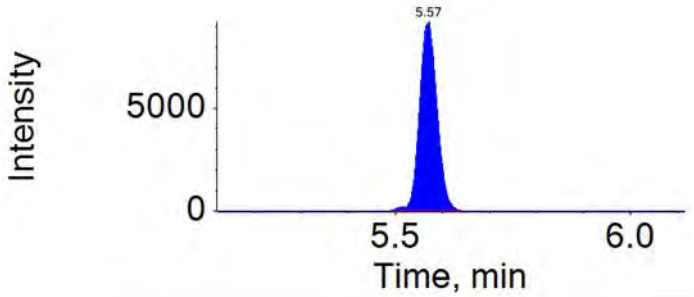
Component: PFDA
Primary Mass: 513.0 / 469.0



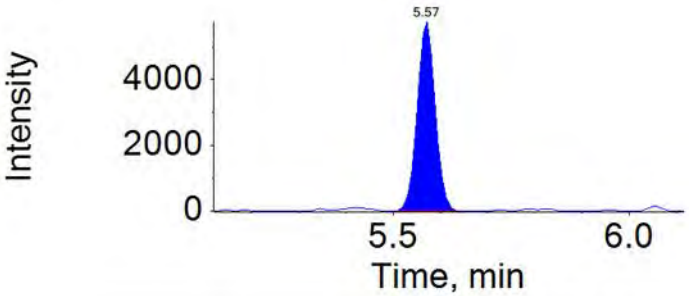
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



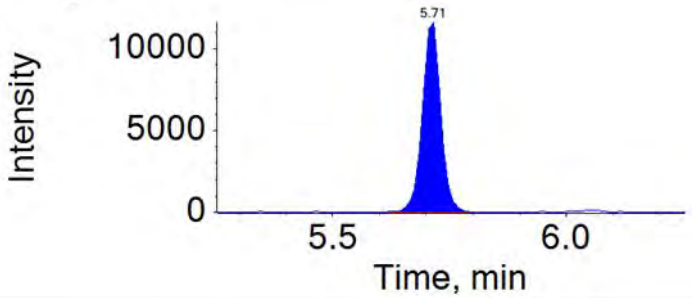
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



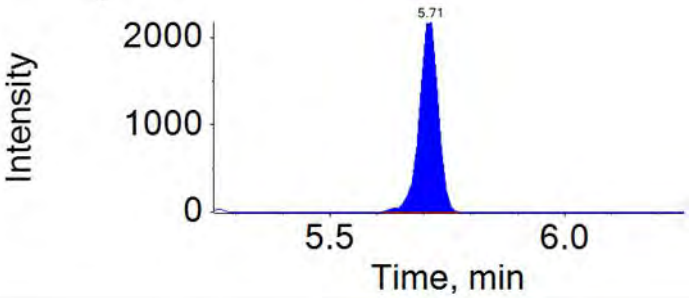
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



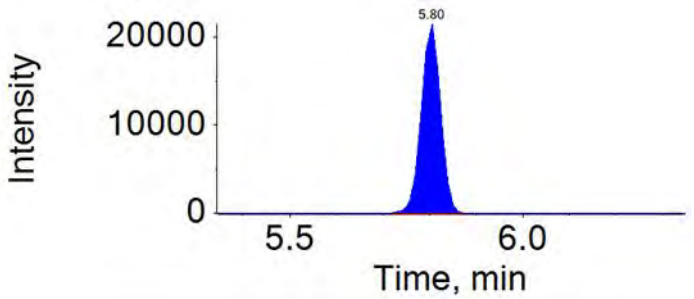
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



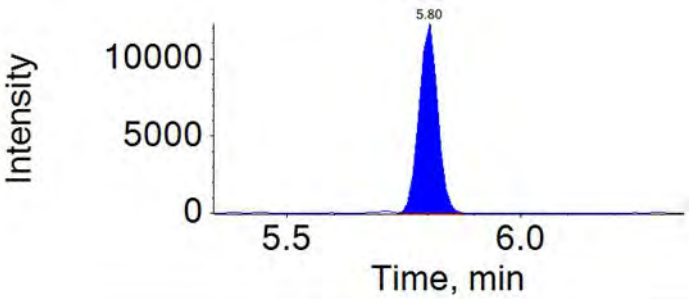
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



Component: PFDS_2
Secondary Mass: 599.0 / 99.0



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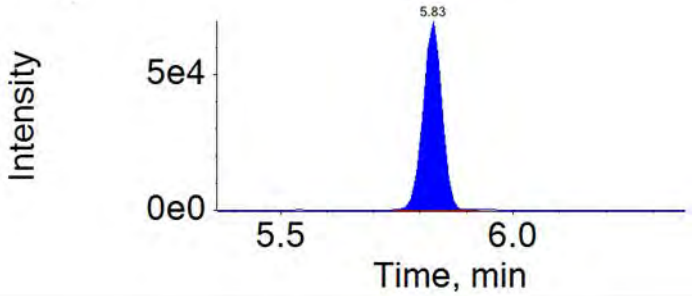
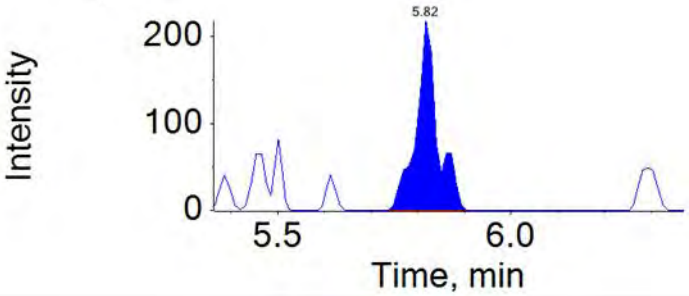
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

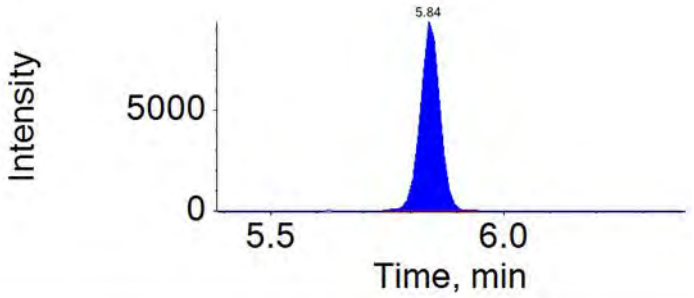
Component: PFUnDA
Primary Mass: 563.0 / 519.0



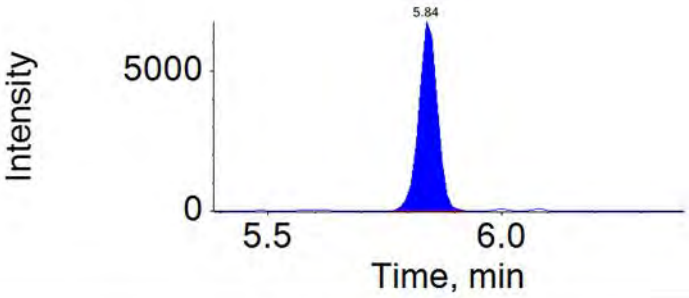
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



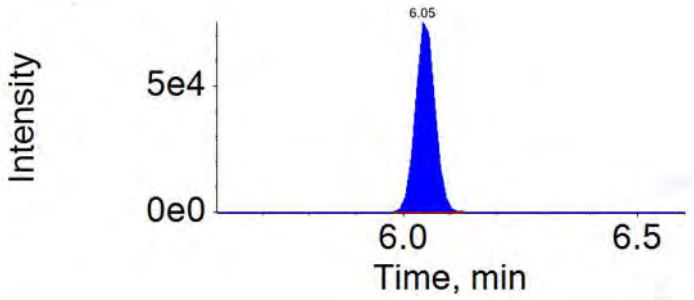
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



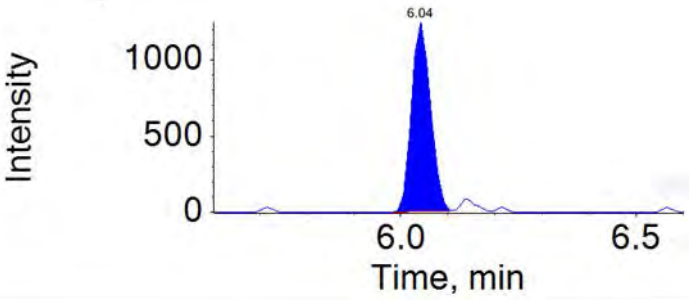
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



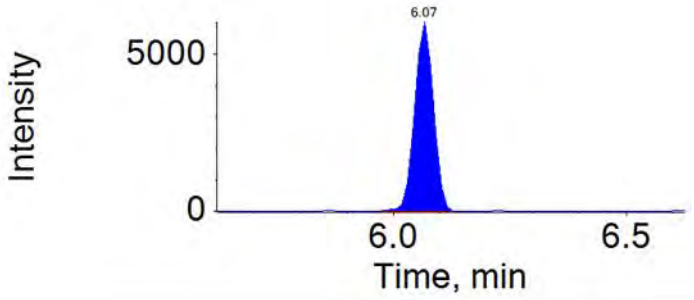
Component: PFDoDA
Primary Mass: 613.0 / 569.0



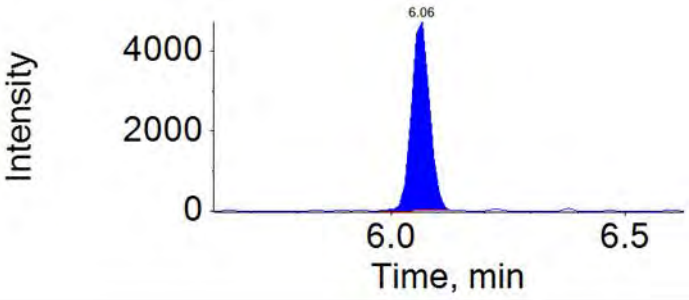
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



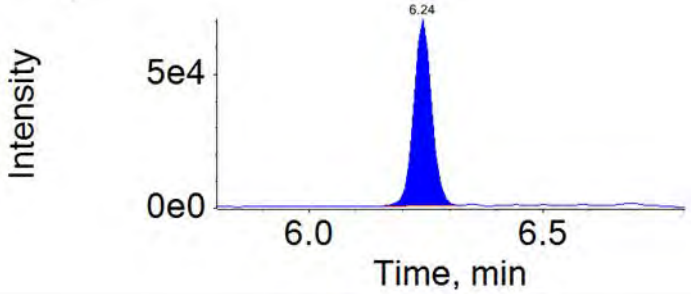
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



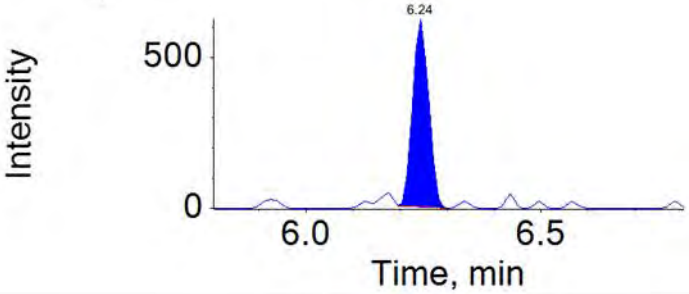
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



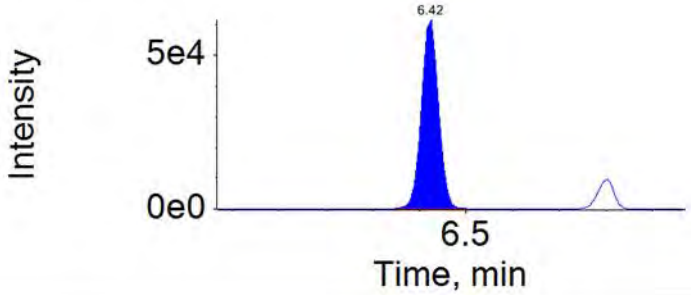
Component: PFTrDA
Primary Mass: 663.0 / 619.0



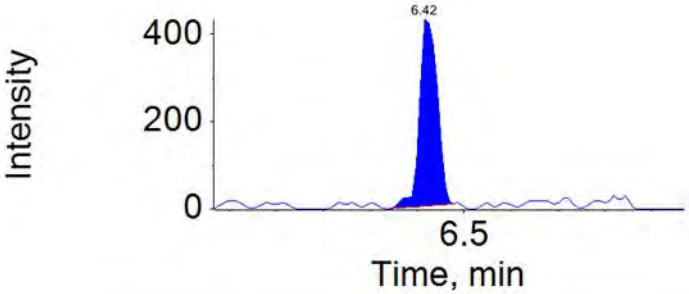
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



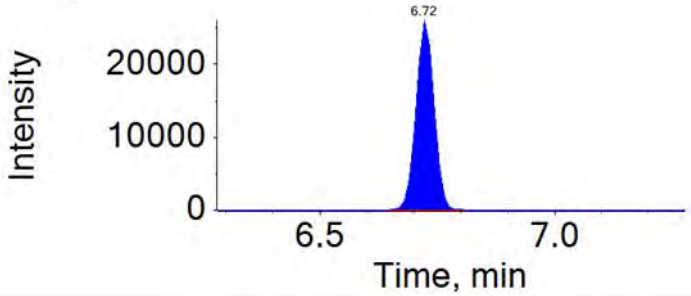
Component: PFTeDA
Primary Mass: 713.0 / 669.0



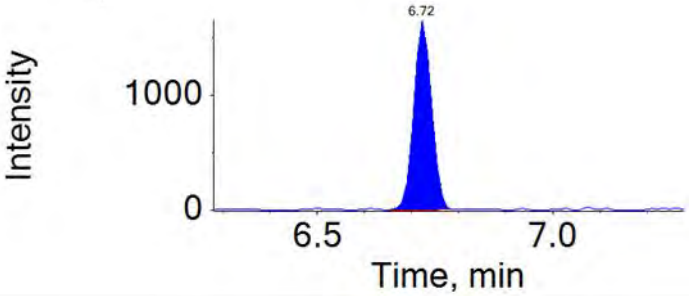
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



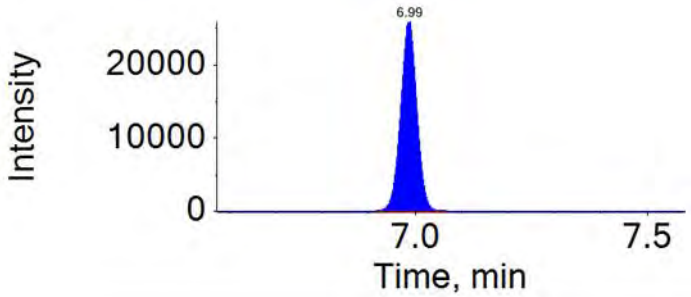
Component: PFHxDA
Primary Mass: 813.0 / 769.0



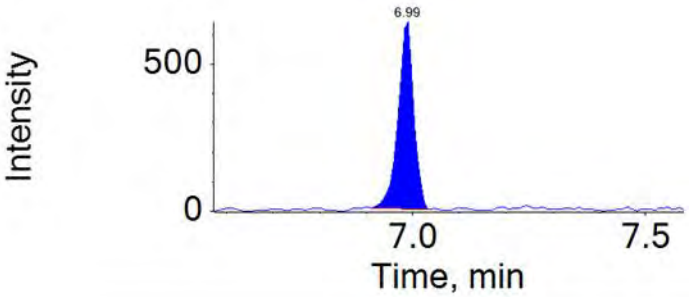
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



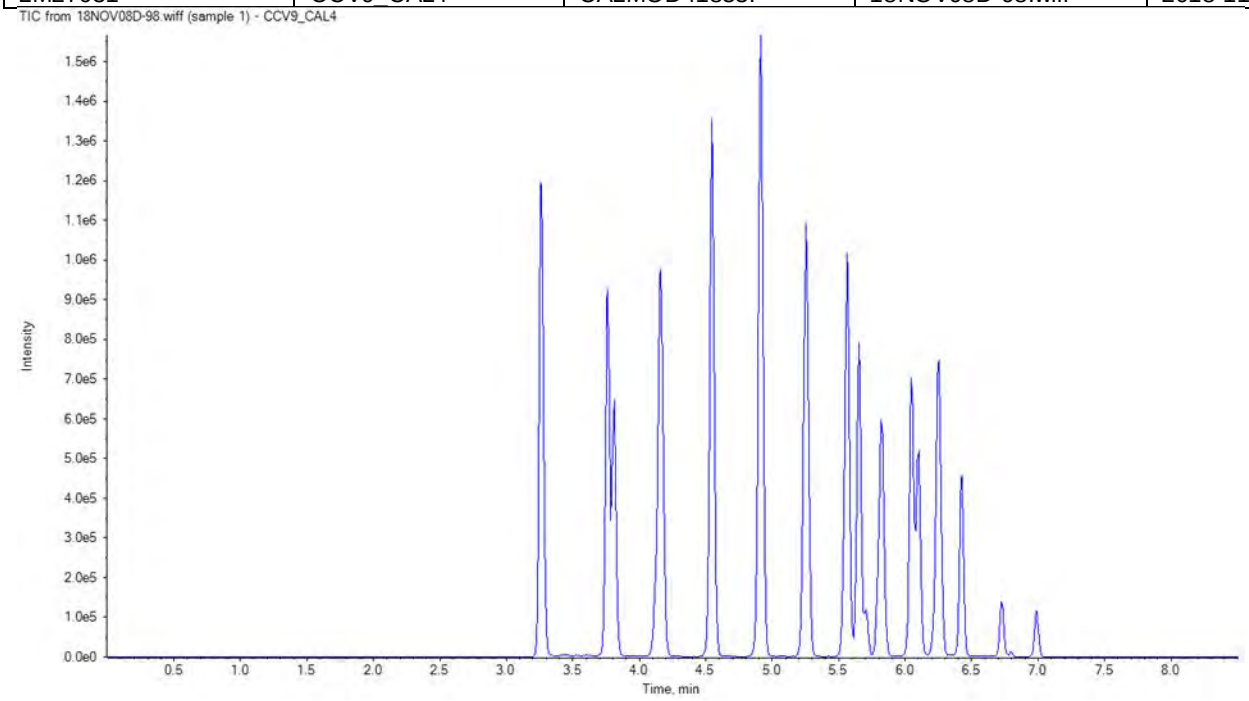
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV9_CAL4	CALMOD41833F	18NOV08D-98.wiff	2018-11-09T02:23:41



Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	741455.5	728839.7	2	50	
13C2-PFOA	5.0	497621.3	491983.1	1	50	
13C4-PFOS	4.8	277463.4	255568.1	9	50	
13C2-PFDA	5.0	310374.5	315407.5	-2	50	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV9_CAL4	CALMOD41833F	18NOV08D-98.wiff	2018-11-09T02:23:41

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	1177367.2	10	13C4-PFBA	805036.9	5.0	1.463	3.26	1.000	8.000	8.559	7	30	
PFPeA	1199606.7	12	13C5-PFPeA	816254.5	5.0	1.470	3.76	1.000	8.000	8.734	9	30	
PFBS	655034.7	11	13C3-PFBS	436095.9	4.7	1.502	3.81	1.000	7.080	7.573	7	30	
4:2-FTS	163905.4	11	13C2-4:2-FTS	56112.6	4.7	2.921	4.12	1.000	7.472	7.853	5	30	
PFHxA	1345026.8	12	13C5-PFHxA	698833.5	5.0	1.925	4.16	1.000	8.000	8.254	3	30	
PFPeS	340112.7	11	13C3-PFBS	436095.9	4.7	0.780	4.18	1.100	7.500	7.692	3	30	
PFHxS	509899.0	12	13C3-PFHxS	344016.0	4.7	1.482	4.55	1.000	7.560	7.513	-1	30	
PFHpA	1445409.9	12	13C4-PFHpA	558538.5	5.0	2.588	4.55	1.000	8.000	8.703	9	30	
6:2-FTS	127621.2	11	13C2-6:2-FTS	34576.4	4.8	3.691	4.90	1.000	7.584	9.208	21	30	
PFHpS	497691.3	11	13C3-PFHxS	344016.0	4.7	1.447	4.91	1.080	7.610	7.569	-1	30	
PFOA	1388094.5	11	13C8-PFOA	917664.7	5.0	1.513	4.92	1.000	8.000	8.517	6	30	
PFOS	470028.6	11	13C8-PFOS	297760.9	4.8	1.579	5.24	1.000	7.650	8.185	7	30	
PFNA	1129680.1	11	13C9-PFNA	514586.5	5.0	2.195	5.26	1.000	8.000	8.204	3	30	
PFNS	309702.8	10	13C8-PFOS	297760.9	4.8	1.040	5.54	1.060	7.680	8.247	7	30	
PFDA	941307.1	11	13C6-PFDA	626037.4	5.0	1.504	5.57	1.000	8.000	8.272	3	30	
8:2-FTS	103270.8	11	13C2-8:2-FTS	30324.3	4.8	3.406	5.57	1.000	7.664	7.676	0	30	
PFOSA	1111869.6	11	13C8-PFOSA	678033.1	5.0	1.640	5.65	1.000	8.000	8.864	11	30	
NMeFOSAA	134156.5	11	d3-NMeFOSAA	82369.0	5.0	1.629	5.71	1.000	8.000	8.381	5	30	
PFDS	241813.5	12	13C8-PFOS	297760.9	4.8	0.812	5.80	1.110	7.700	7.758	1	30	
PFUnDA	803352.1	12	13C7-PFUnDA	275136.7	5.0	2.920	5.82	1.000	8.000	8.373	5	30	
NEtFOSAA	123087.8	12	d5-NEtFOSAA	63104.8	5.0	1.951	5.84	1.000	8.000	8.383	5	30	
PFDoDA	882612.8	12	13C2-PFDoDA	591800.0	5.0	1.491	6.05	1.000	8.000	8.083	1	30	
10:2-FTS	74557.5	12	13C2-8:2-FTS	30324.3	4.8	2.459	6.06	1.090	7.712	7.656	-1	30	
NMePFOSAE	663960.0	11	d7-NMePFOSAE	346078.5	5.0	1.919	6.10	1.000	8.000	8.597	7	30	
NMePFOSA	133693.8	12	d3-NMePFOSA	82571.1	5.0	1.619	6.11	1.000	8.000	9.063	13	30	
PFDoS	115072.4	11	13C8-PFOS	297760.9	4.8	0.386	6.22	1.190	7.740	7.459	-4	30	
NEtPFOSAE	771582.3	11	d9-NEtPFOSAE	277641.9	5.0	2.779	6.26	1.000	8.000	8.909	11	30	
NEtPFOSA	120921.0	11	d5-NEtPFOSA	71632.1	5.0	1.688	6.27	1.000	8.000	7.435	-7	30	
PFTrDA	702504.0	11	13C2-PFDoDA	591800.0	5.0	1.187	6.25	1.030	8.000	7.486	-6	30	
PFTeDA	585138.5	11	13C2-PFTeDA	393961.7	5.0	1.485	6.42	1.000	8.000	8.722	9	30	
PFHxDA	280180.8	11	13C2-PFTeDA	393961.7	5.0	0.711	6.73	1.050	8.000	8.828	10	30	
PFODA	241980.2	10	13C2-PFTeDA	393961.7	5.0	0.614	6.99	1.090	8.000	8.800	10	30	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV9_CAL4			**Data File:**		18NOV08D-98.wiff
Sample ID:	CALMOD41833F			**Acquis Date:**		2018-11-09T02:23:41
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV6-12
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	741455.5	728839.7	2	50	
13C2-PFOA	5.0	497621.3	491983.1	1	50	
13C4-PFOS	4.8	277463.4	255568.1	9	50	
13C2-PFDA	5.0	310374.5	315407.5	-2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	805036.9	13C3-PFBA	741455.5	1.086	5.000	5.025	100	70-130	
E13C5-PFPeA	816254.5	13C3-PFBA	741455.5	1.101	5.000	4.796	96	70-130	
E13C3-PFBS	436095.9	13C3-PFBA	741455.5	0.588	4.650	4.317	93	70-130	
E13C2-4:2-FTS	56112.6	13C2-PFOA	497621.3	0.113	4.670	5.088	109	70-130	
E13C5-PFHxA	698833.5	13C2-PFOA	497621.3	1.404	5.000	5.166	103	70-130	
E13C3-PFHxS	344016.0	13C2-PFOA	497621.3	0.691	4.730	4.963	105	70-130	
E13C4-PFHpA	558538.5	13C2-PFOA	497621.3	1.122	5.000	5.106	102	70-130	
E13C2-6:2-FTS	34576.4	13C2-PFOA	497621.3	0.069	4.750	4.633	98	70-130	
E13C8-PFOA	917664.7	13C2-PFOA	497621.3	1.844	5.000	5.143	103	70-130	
E13C8-PFOS	297760.9	13C4-PFOS	277463.4	1.073	4.780	4.745	99	70-130	
E13C9-PFNA	514586.5	13C4-PFOS	277463.4	1.855	5.000	5.066	101	70-130	
E13C6-PFDA	626037.4	13C2-PFDA	310374.5	2.017	5.000	5.072	101	70-130	
E13C2-8:2-FTS	30324.3	13C2-PFDA	310374.5	0.098	4.790	5.170	108	70-130	
E13C8-PFOSA	678033.1	13C2-PFDA	310374.5	2.185	5.000	4.767	95	70-130	
Ed3-NMeFOSAA	82369.0	13C2-PFDA	310374.5	0.265	5.000	4.935	99	70-130	
E13C7-PFUnDA	275136.7	13C2-PFDA	310374.5	0.886	5.000	5.114	102	70-130	
Ed5-NEtFOSAA	63104.8	13C2-PFDA	310374.5	0.203	5.000	4.705	94	70-130	
E13C2-PFDoDA	591800.0	13C2-PFDA	310374.5	1.907	5.000	5.140	103	70-130	
Ed7-NMePFOSAE	346078.5	13C2-PFDA	310374.5	1.115	5.000	5.185	104	70-130	
Ed3-NMePFOSA	82571.1	13C2-PFDA	310374.5	0.266	5.000	4.870	97	70-130	
Ed9-NEtPFOSAE	277641.9	13C2-PFDA	310374.5	0.895	5.000	5.109	102	70-130	
Ed5-NEtPFOSA	71632.1	13C2-PFDA	310374.5	0.231	5.000	5.344	107	70-130	
E13C2-PFTeDA	393961.7	13C2-PFDA	310374.5	1.269	5.000	4.569	91	70-130	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

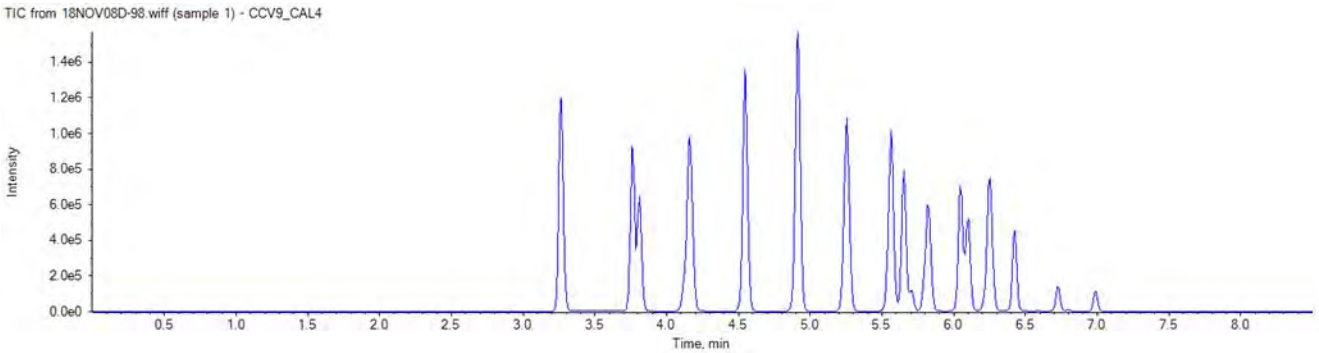
Analyte Quantitation Peak Table

Sample Name: CCV9_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV08D-98.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	1177367.2		A	13C4-PFBA	3.26	805036.9	1.463	8.559
PFPeA	3.76	1.000	1199606.7		A	13C5-PFPeA	3.76	816254.5	1.470	8.734
PFBS	3.81	1.000	655034.7		A	13C3-PFBS	3.81	436095.9	1.502	7.573
4:2-FTS	4.12	1.000	163905.4		A	13C2-4:2-FTS	4.12	56112.6	2.921	7.853
PFHxA	4.16	1.000	1345026.8		A	13C5-PFHxA	4.16	698833.5	1.925	8.254
PFPeS	4.18	1.100	340112.7		A	13C3-PFBS	3.81	436095.9	0.780	7.692
PFHxS	4.55	1.000	509899.0		A	13C3-PFHxS	4.55	344016.0	1.482	7.513
PFHpA	4.55	1.000	1445409.9		A	13C4-PFHpA	4.55	558538.5	2.588	8.703
6:2-FTS	4.90	1.000	127621.2		A	13C2-6:2-FTS	4.90	34576.4	3.691	9.208
PFHpS	4.91	1.080	497691.3		A	13C3-PFHxS	4.55	344016.0	1.447	7.569
PFOA	4.92	1.000	1388094.5		A	13C8-PFOA	4.91	917664.7	1.513	8.517
PFOS	5.24	1.000	470028.6		A	13C8-PFOS	5.24	297760.9	1.579	8.185
PFNA	5.26	1.000	1129680.1		A	13C9-PFNA	5.26	514586.5	2.195	8.204
PFNS	5.54	1.060	309702.8		A	13C8-PFOS	5.24	297760.9	1.040	8.247
PFDA	5.57	1.000	941307.1		A	13C6-PFDA	5.57	626037.4	1.504	8.272
8:2-FTS	5.57	1.000	103270.8		A	13C2-8:2-FTS	5.57	30324.3	3.406	7.676
PFOSA	5.65	1.000	1111869.6		A	13C8-PFOSA	5.65	678033.1	1.640	8.864
NMeFOSAA	5.71	1.000	134156.5		A	d3-NMeFOSAA	5.70	82369.0	1.629	8.381
PFDS	5.80	1.110	241813.5		A	13C8-PFOS	5.24	297760.9	0.812	7.758
PFUnDA	5.82	1.000	803352.1		A	13C7-PFUnDA	5.82	275136.7	2.920	8.373
NEtFOSAA	5.84	1.000	123087.8		A	d5-NEtFOSAA	5.83	63104.8	1.951	8.383
PFDoDA	6.05	1.000	882612.8		A	13C2-PFDoDA	6.05	591800.0	1.491	8.083
10:2-FTS	6.06	1.090	74557.5		A	13C2-8:2-FTS	5.57	30324.3	2.459	7.656
NMePFOSAE	6.10	1.000	663960.0		A	d7-NMePFOSAE	6.09	346078.5	1.919	8.597
NMePFOSA	6.11	1.000	133693.8		A	d3-NMePFOSA	6.10	82571.1	1.619	9.063
PFDoS	6.22	1.190	115072.4		A	13C8-PFOS	5.24	297760.9	0.386	7.459
NEtPFOSAE	6.26	1.000	771582.3		A	d9-NEtPFOSAE	6.24	277641.9	2.779	8.909
NEtPFOSA	6.27	1.000	120921.0		A	d5-NEtPFOSA	6.26	71632.1	1.688	7.435
PFTrDA	6.25	1.030	702504.0		A	13C2-PFDoDA	6.05	591800.0	1.187	7.486
PFTeDA	6.42	1.000	585138.5		A	13C2-PFTeDA	6.42	393961.7	1.485	8.722
PFHxDA	6.73	1.050	280180.8		A	13C2-PFTeDA	6.42	393961.7	0.711	8.828
PFODA	6.99	1.090	241980.2		A	13C2-PFTeDA	6.42	393961.7	0.614	8.800

Total Ion Chromatogram

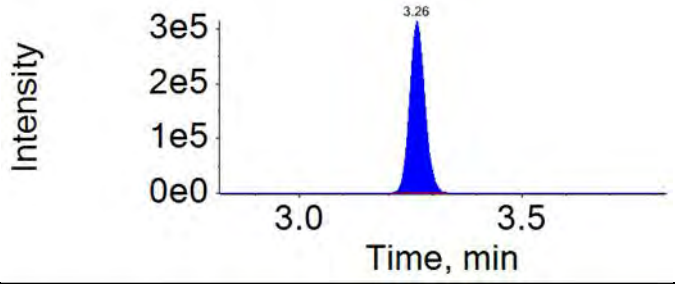


APPROVED
By JPT at 10:55 am, 11/9/18

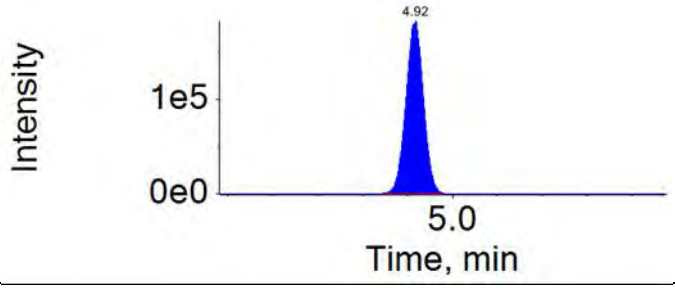
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

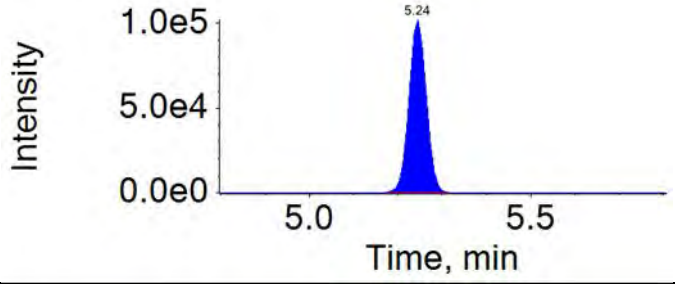
Injection Standard: 13C3-PFBA
216.0 / 172.0



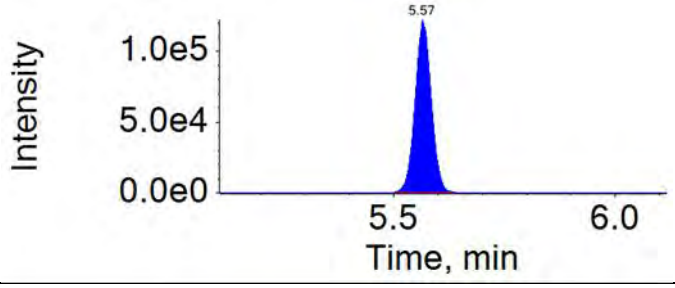
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

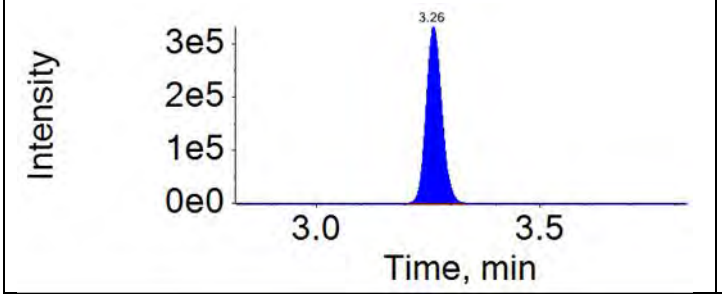


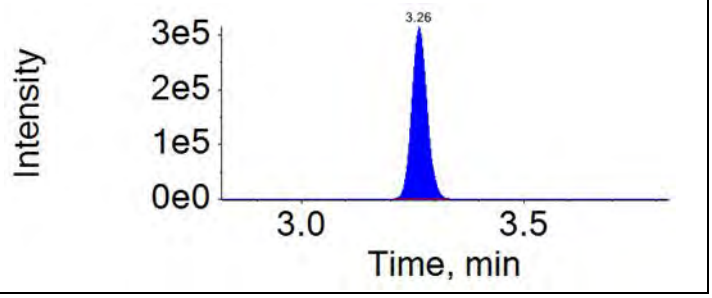
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

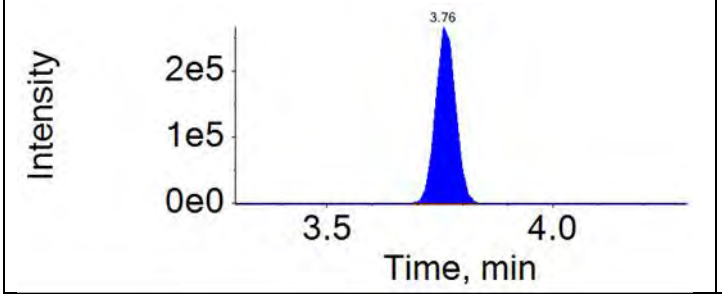
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

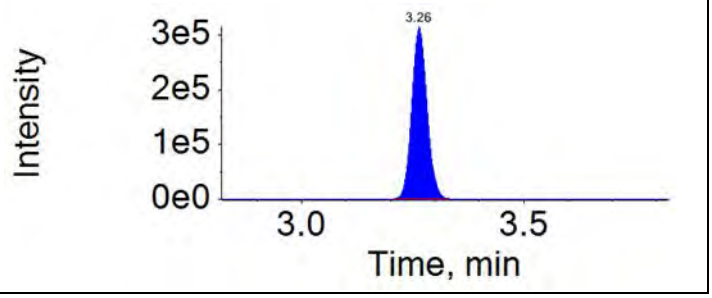
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



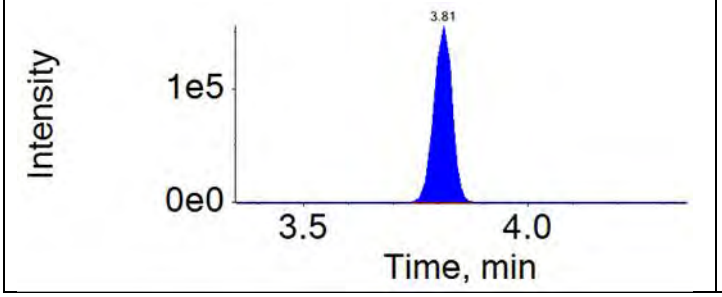


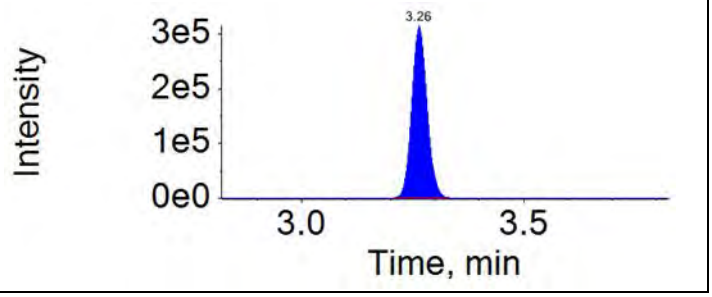
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



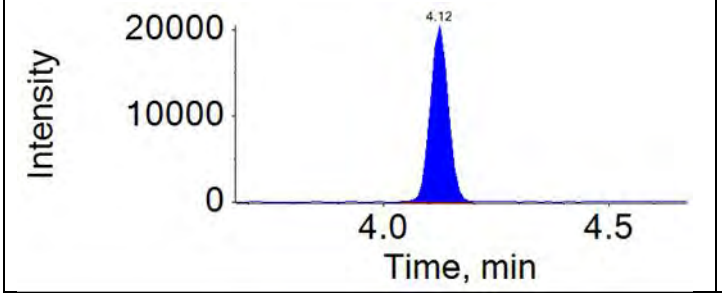


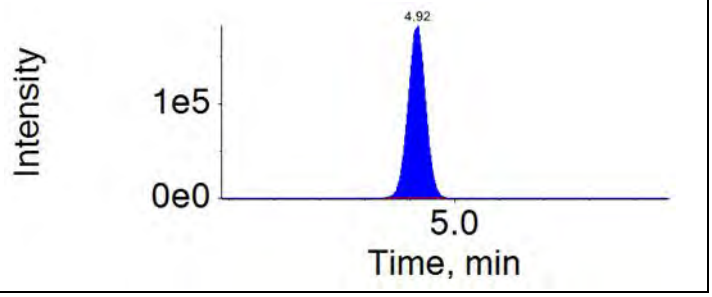
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





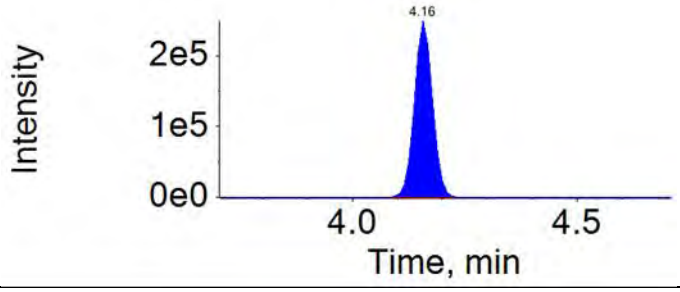
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

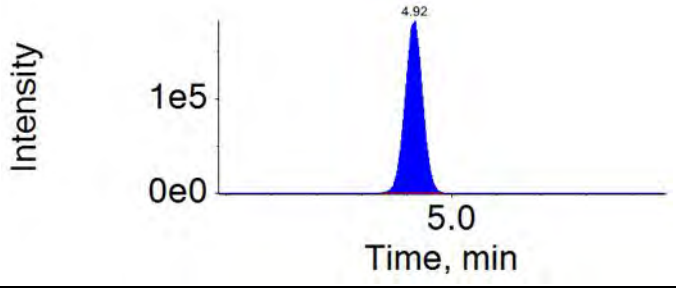




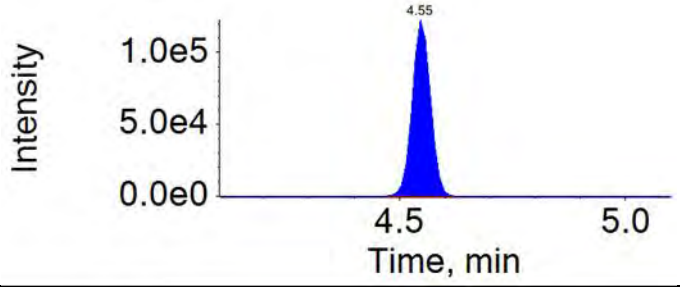
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

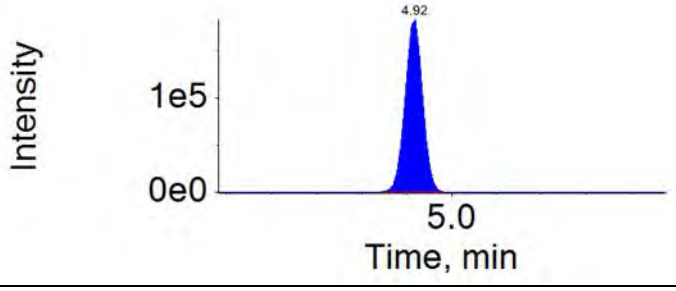
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



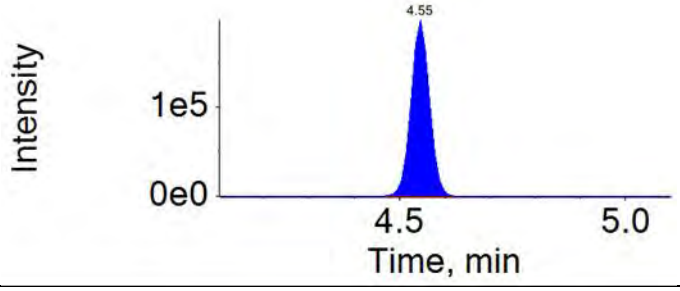


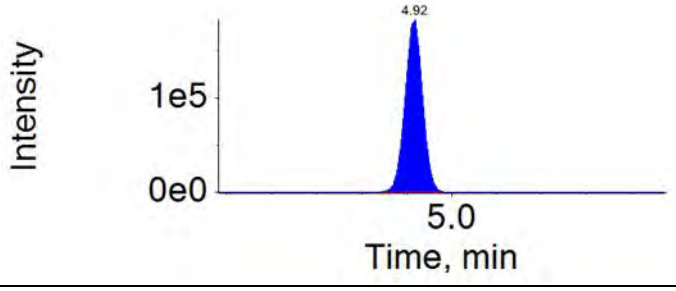
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



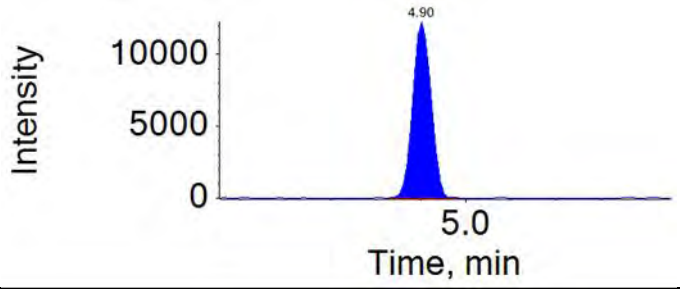


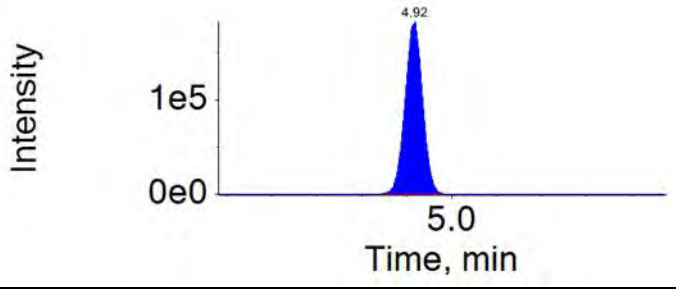
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



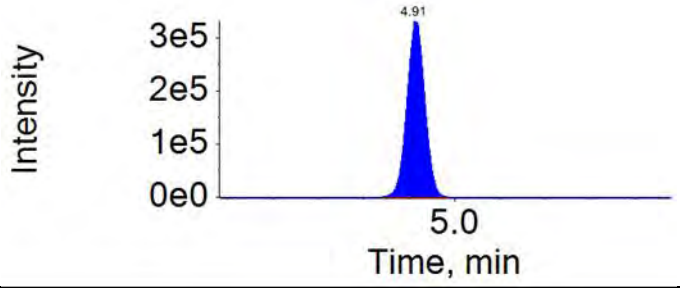


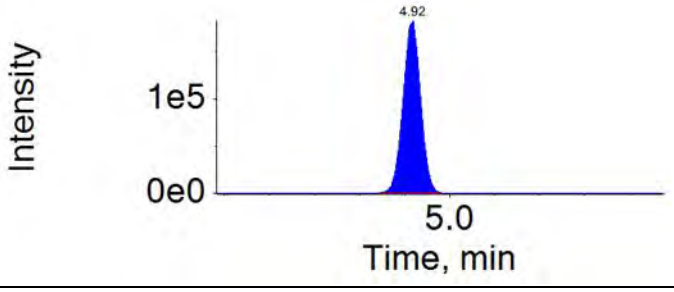
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

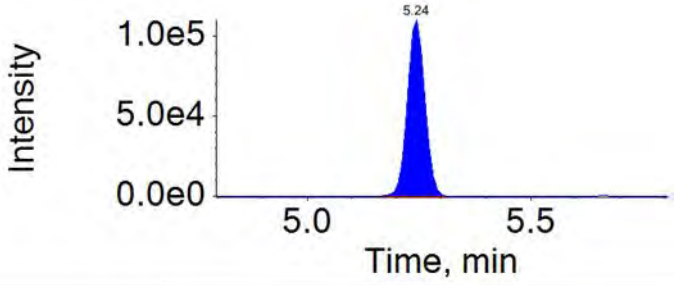
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

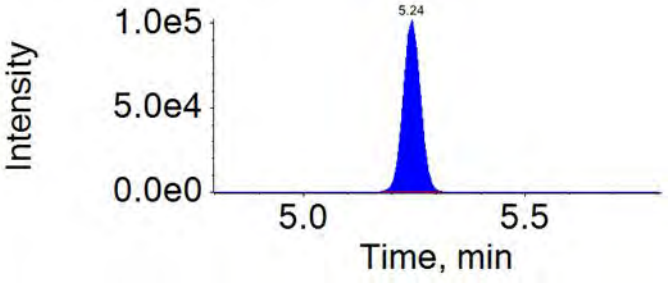
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



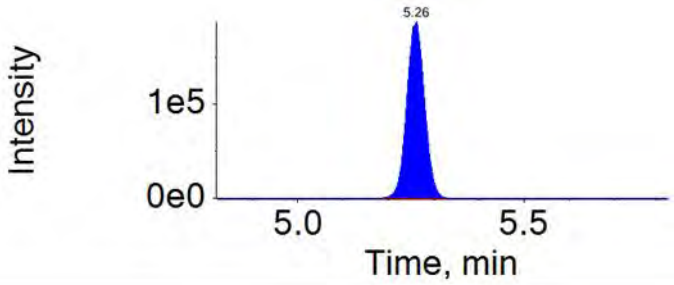


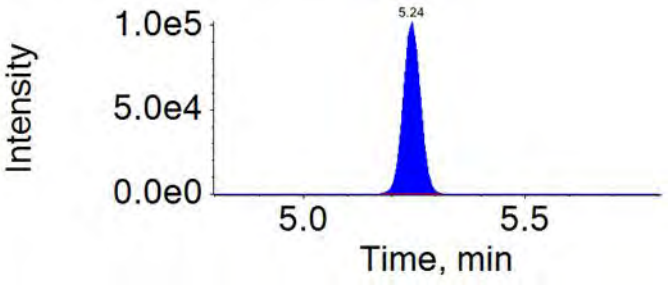
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



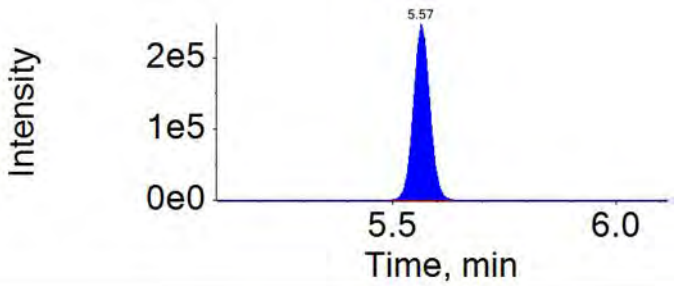


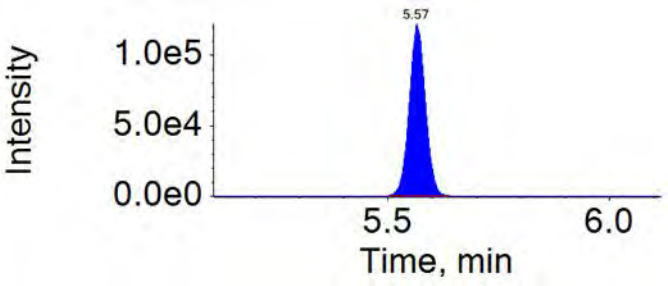
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0



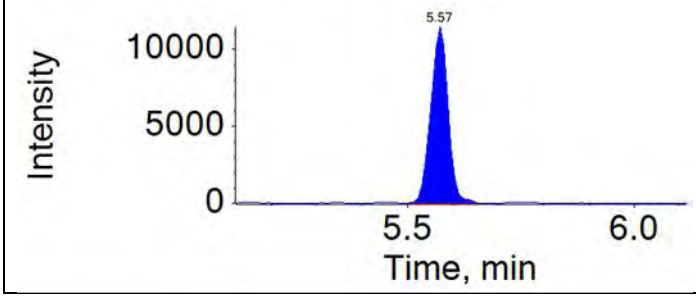


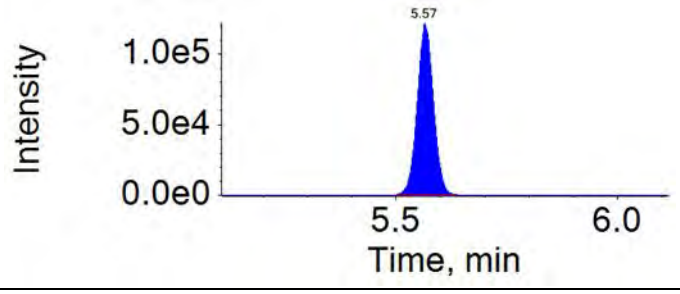
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

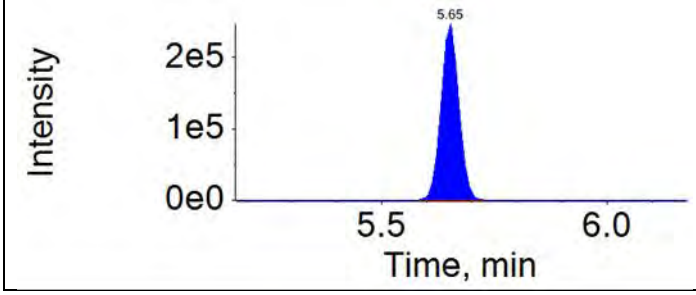
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

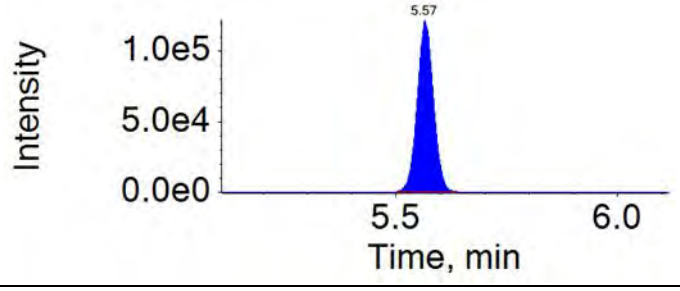
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



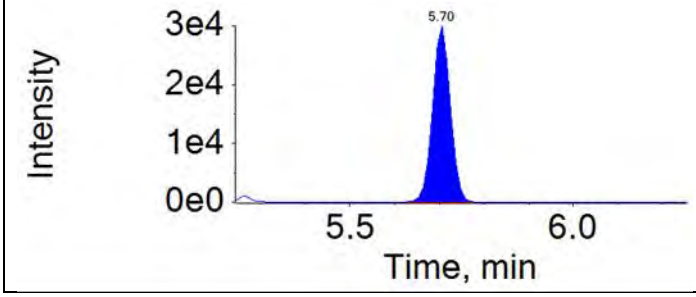


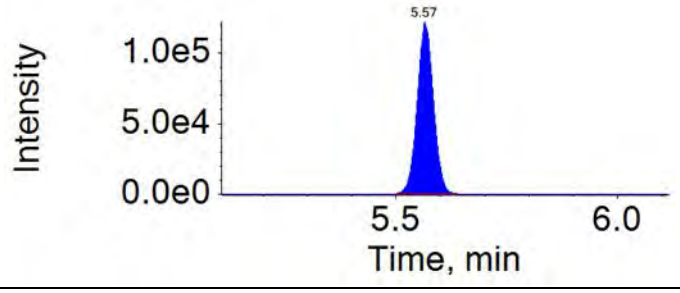
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



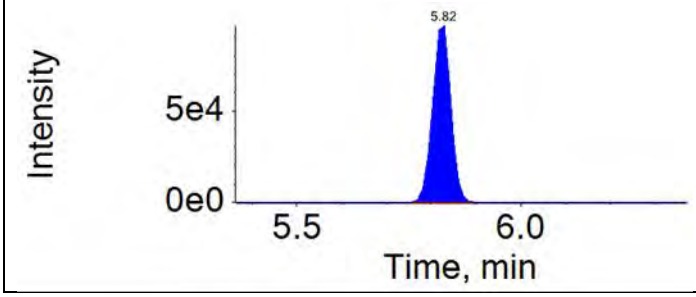


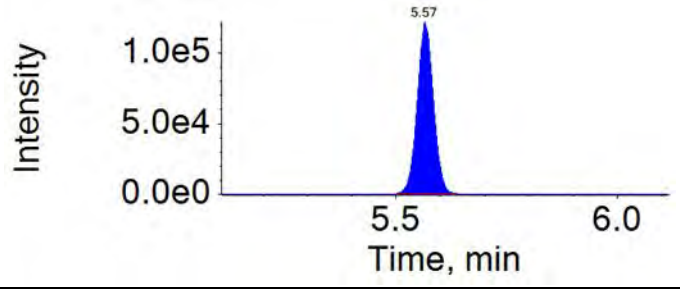
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





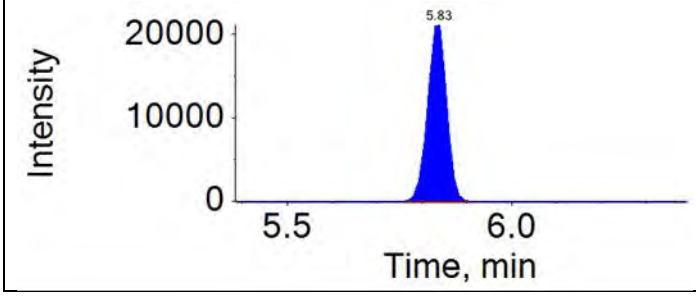
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

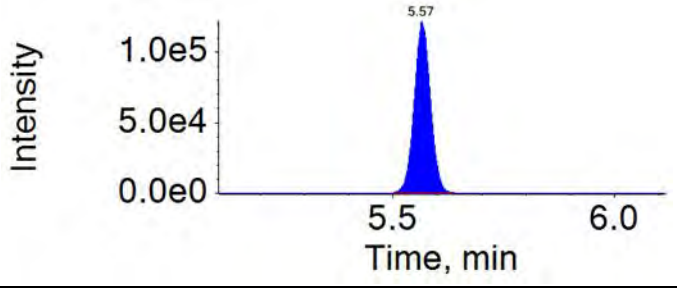




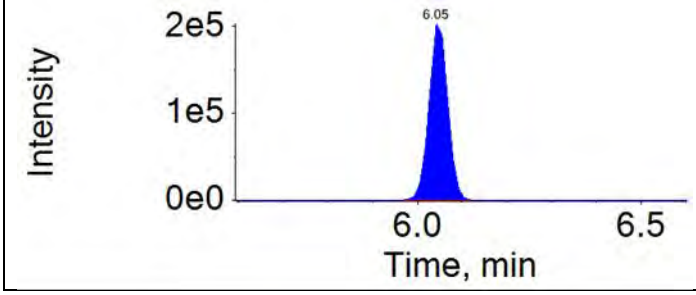
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

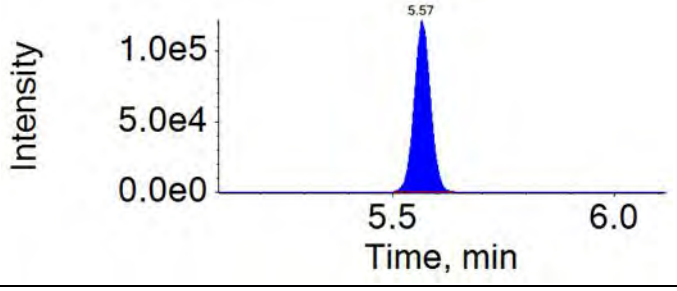
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



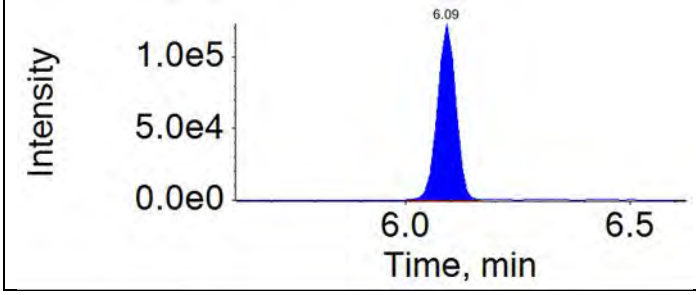


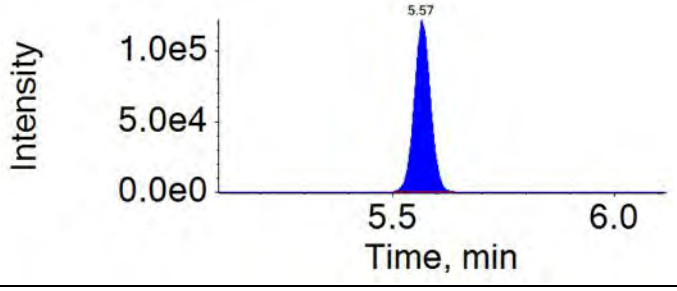
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



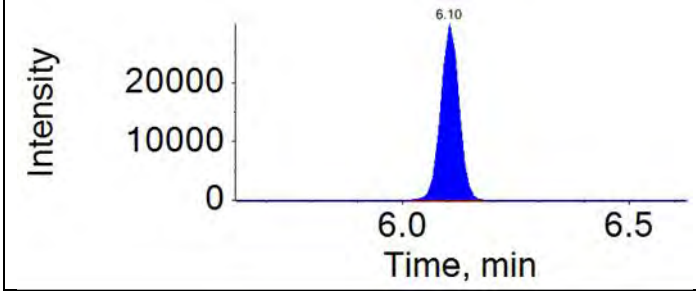


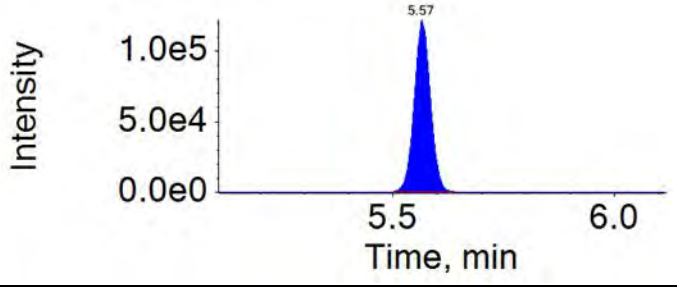
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



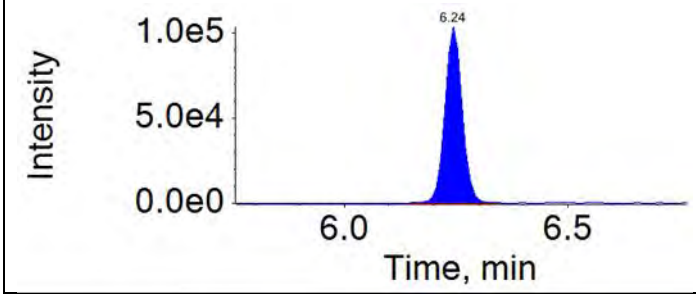


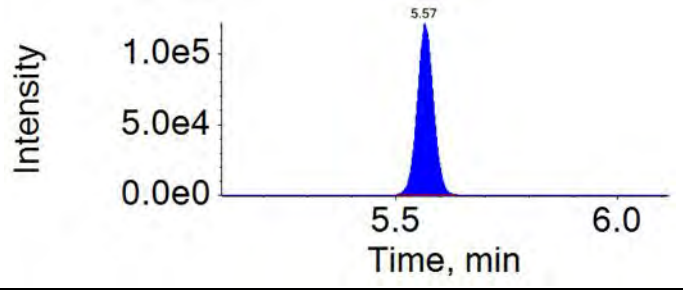
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

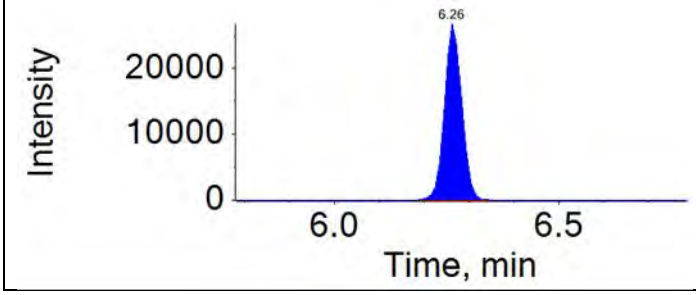
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

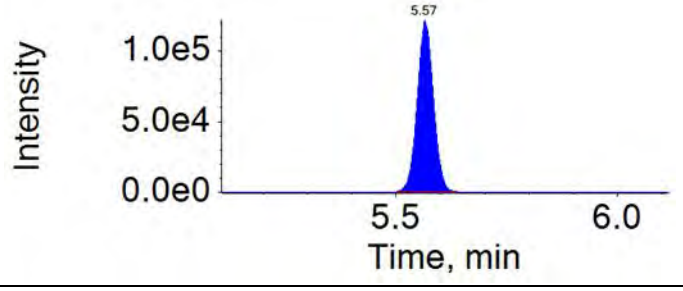
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



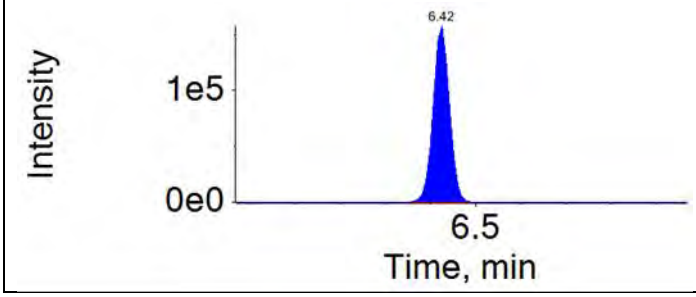


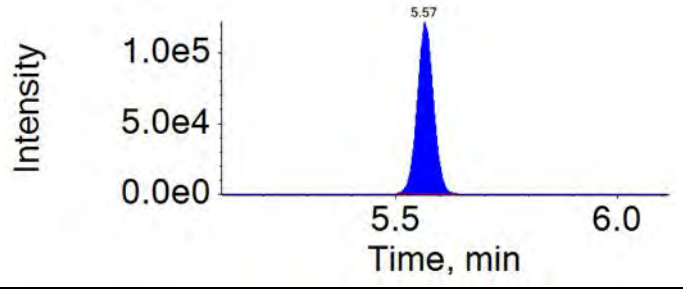
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



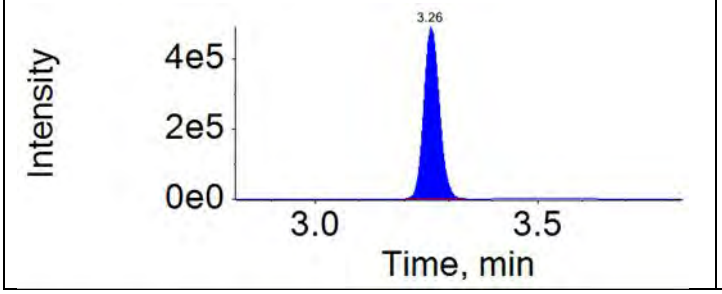


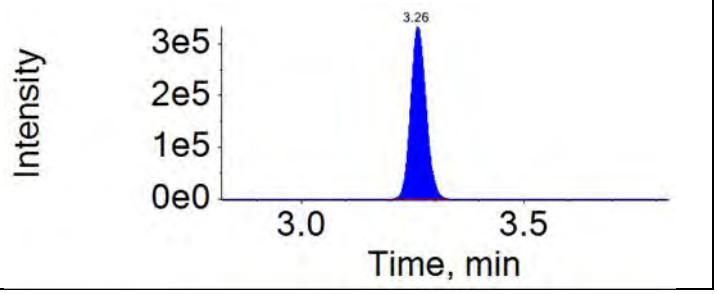
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

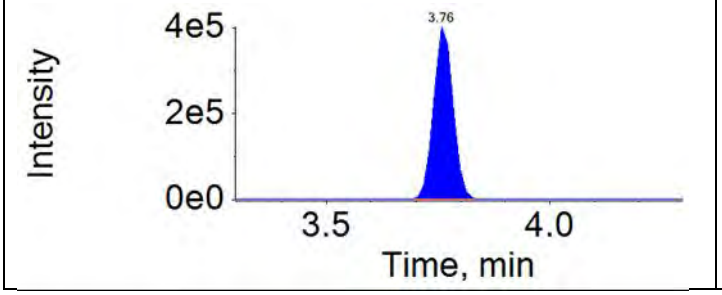
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

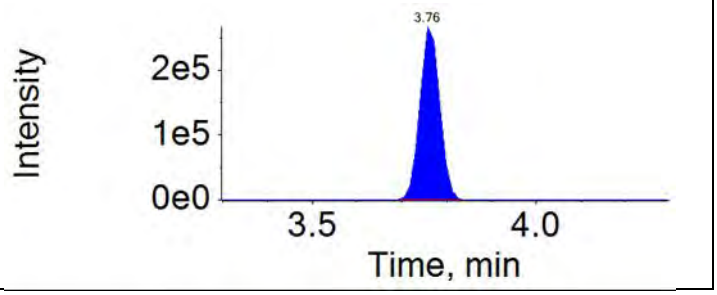
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



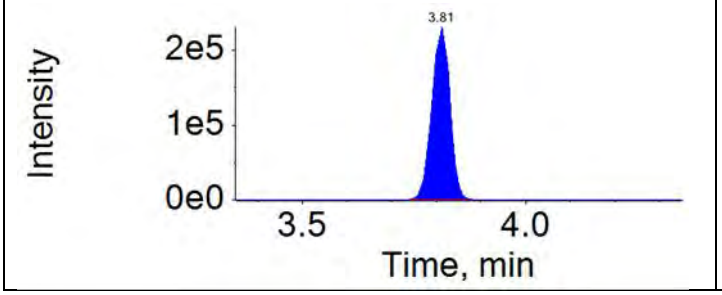


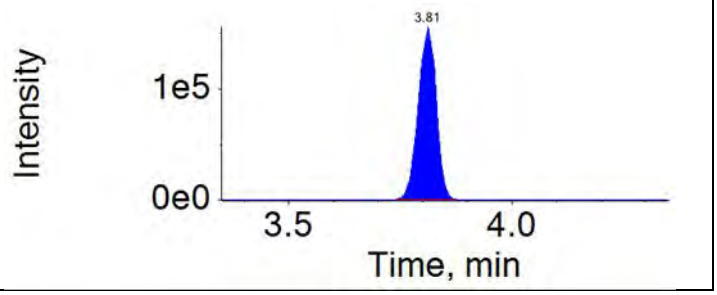
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



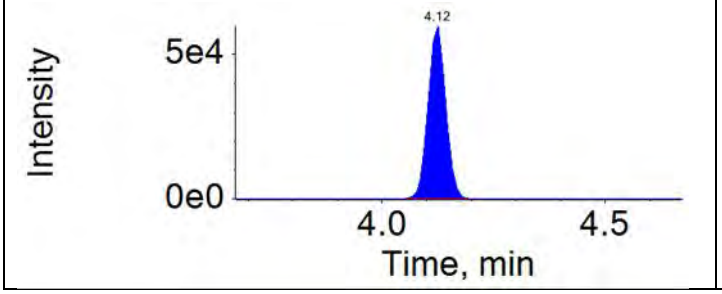


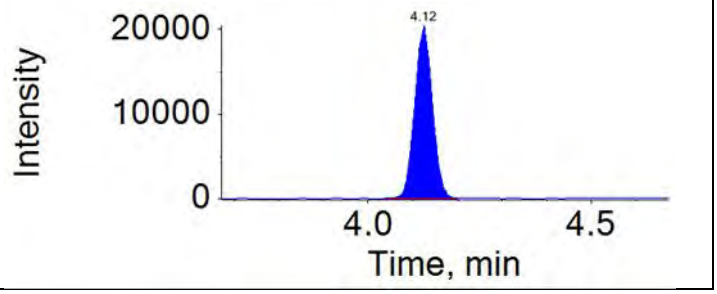
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



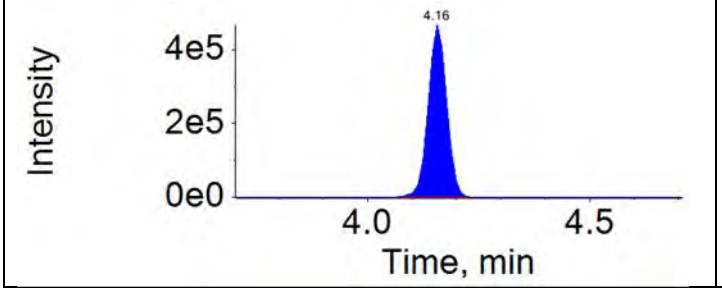


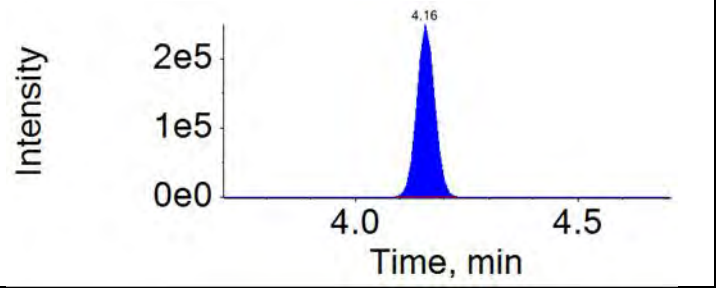
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

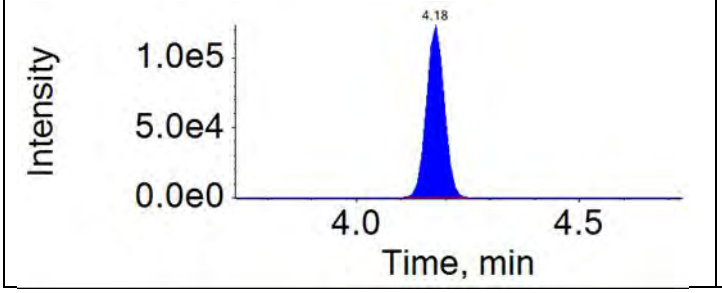
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

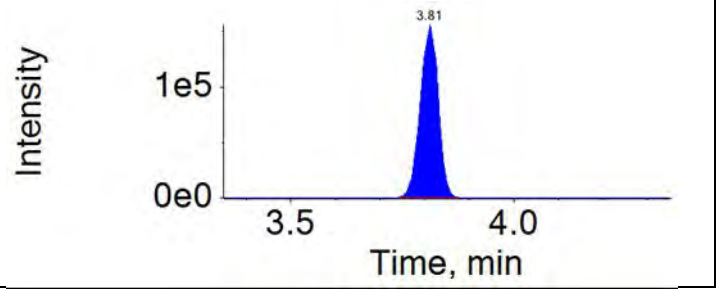
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



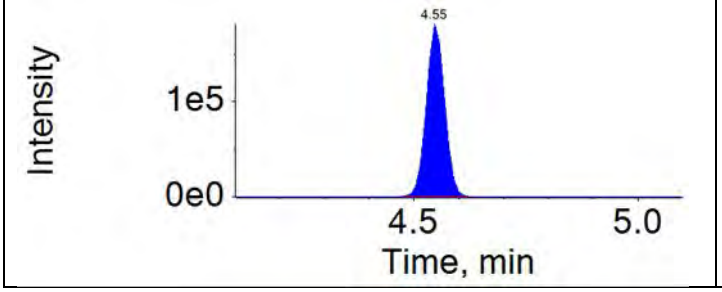


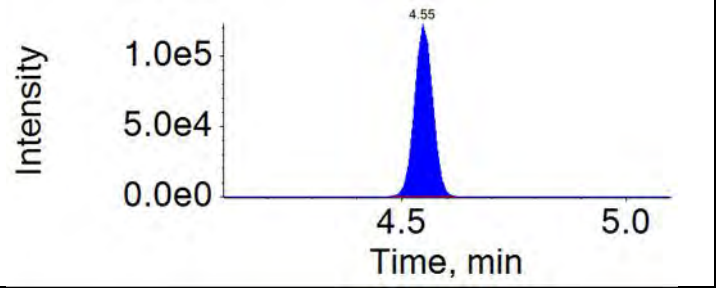
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



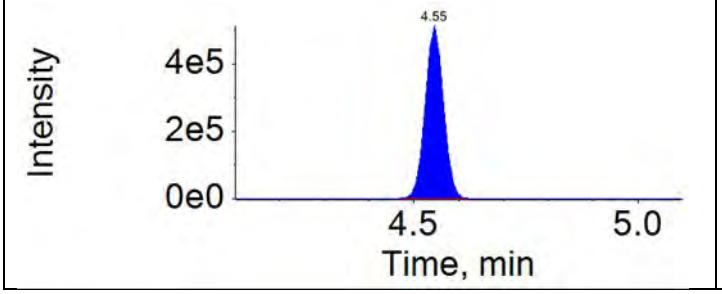


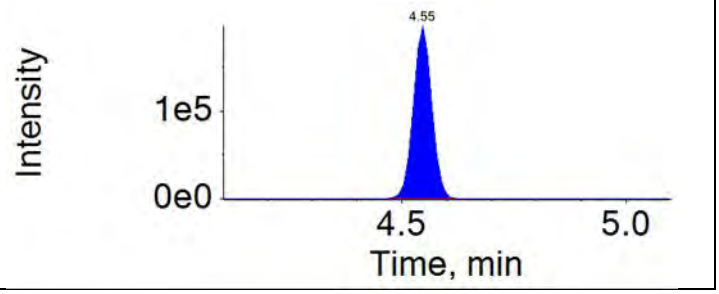
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



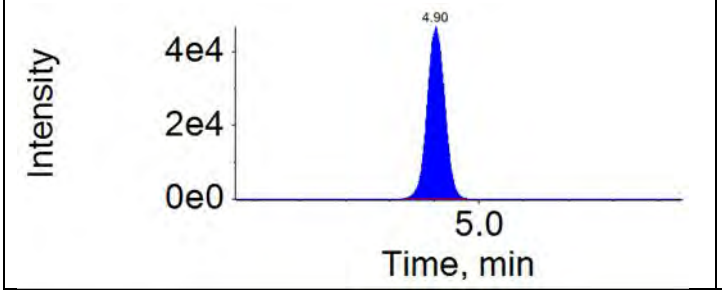


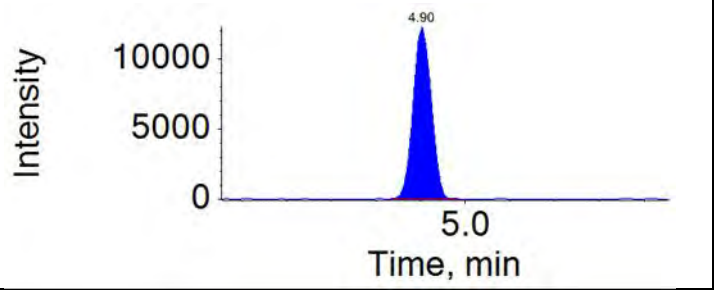
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

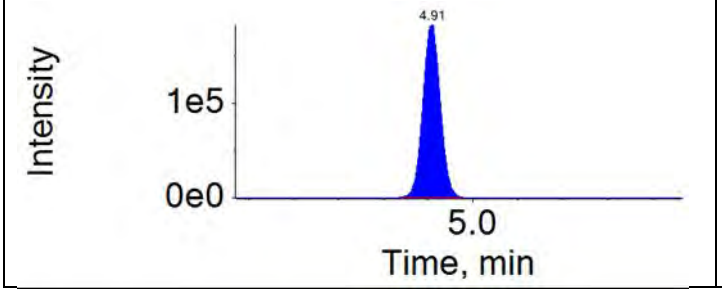
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

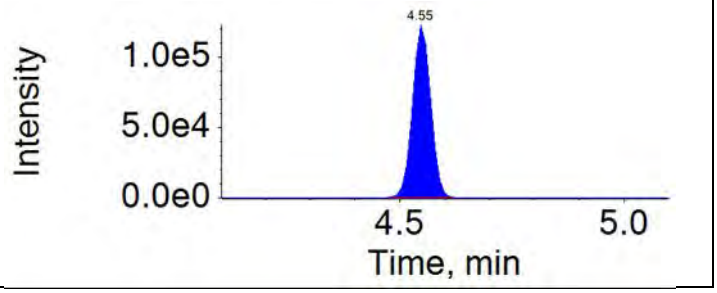
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



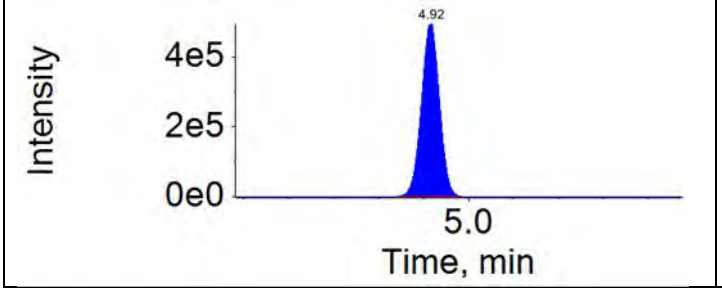


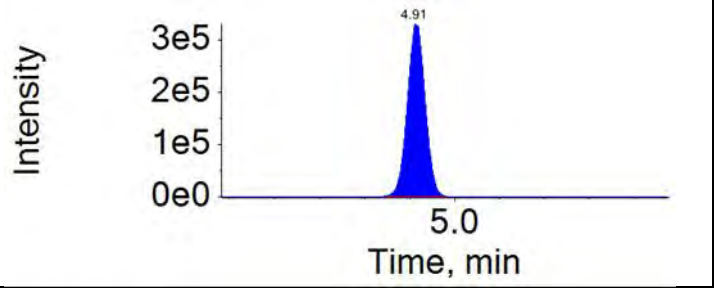
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



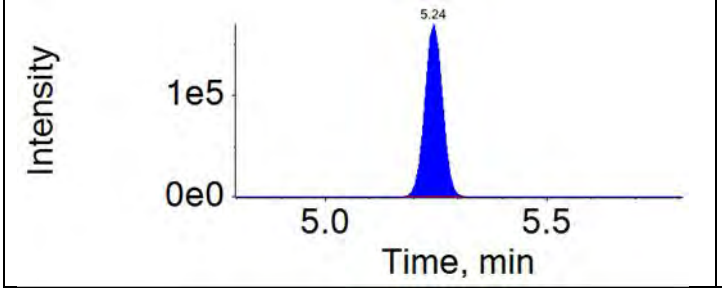


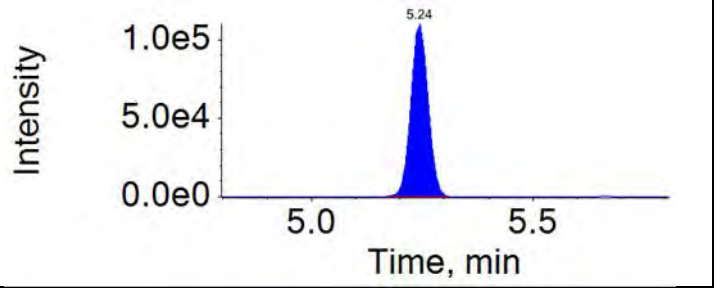
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



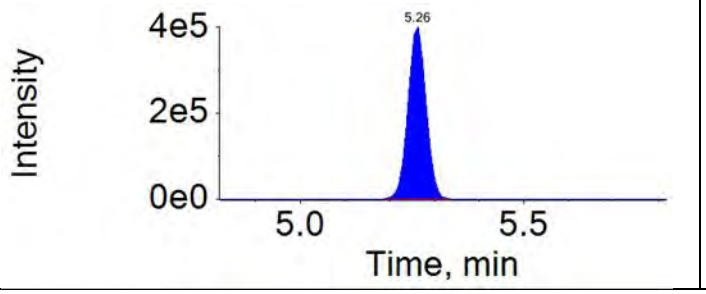


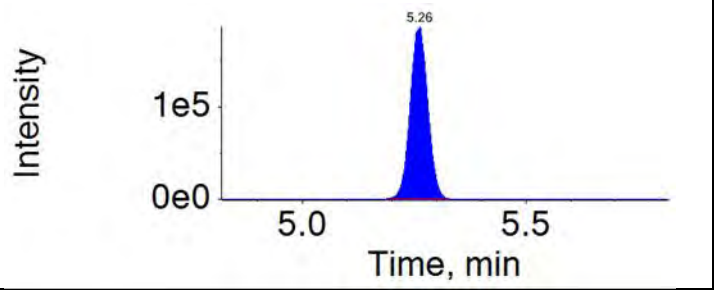
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

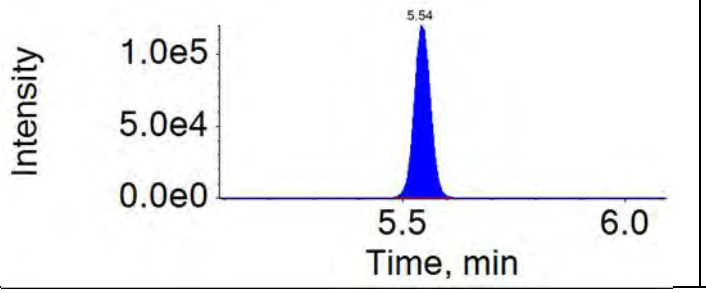
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

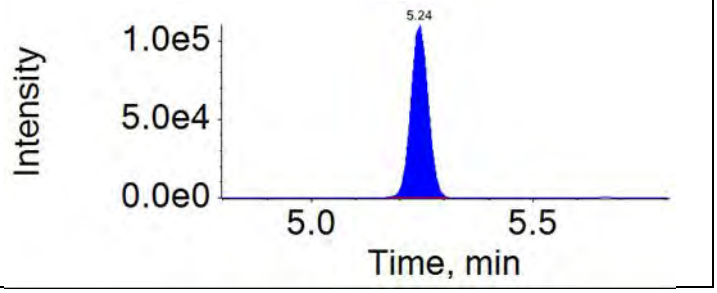
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



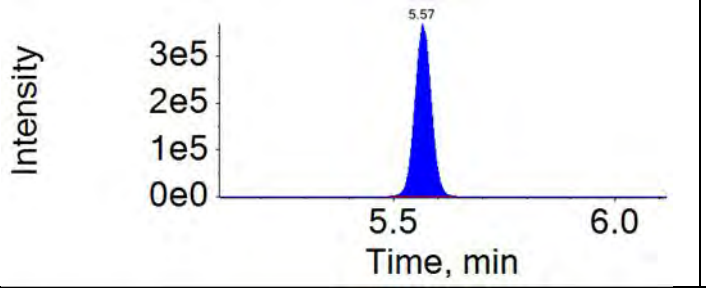


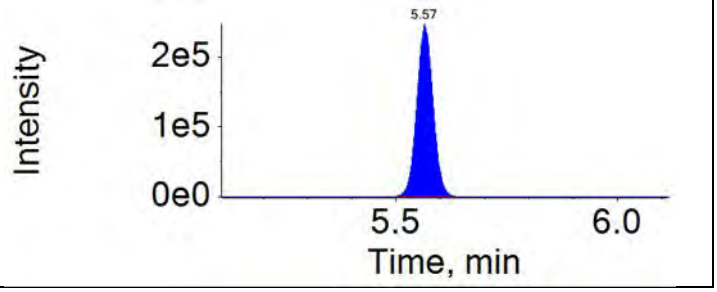
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



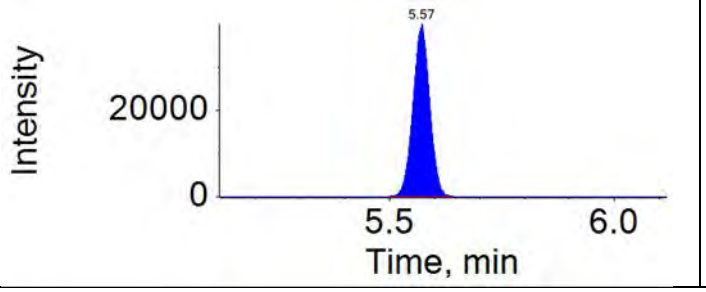


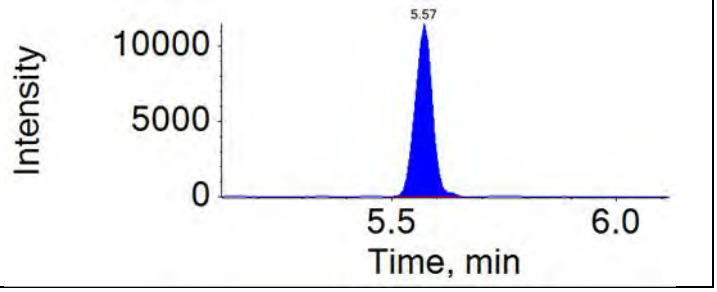
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

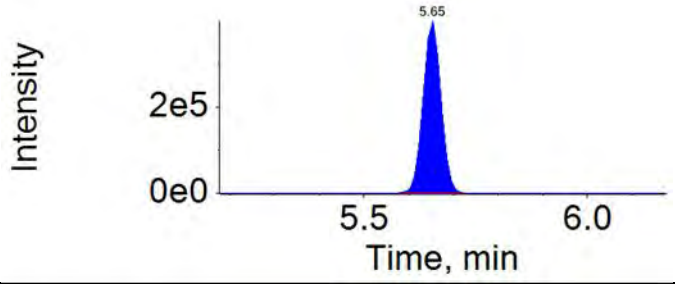
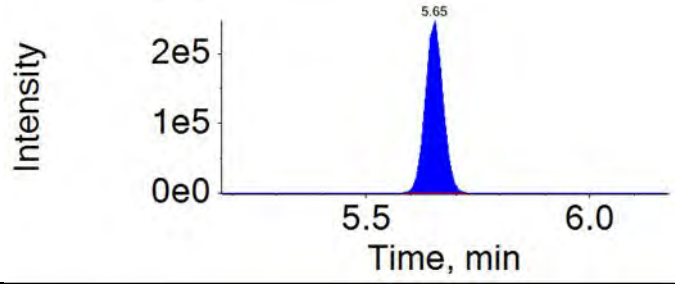


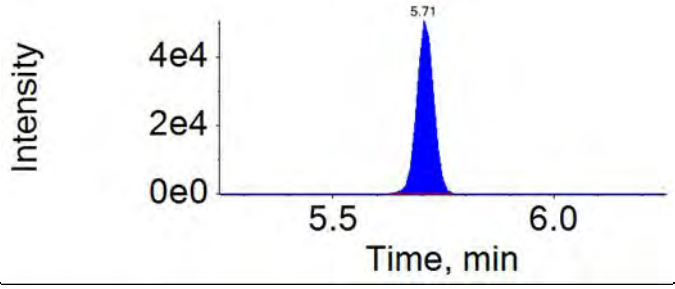
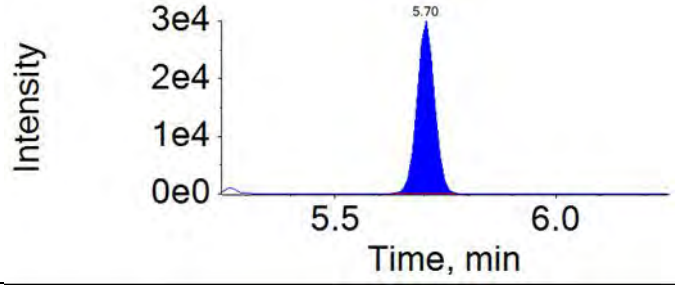


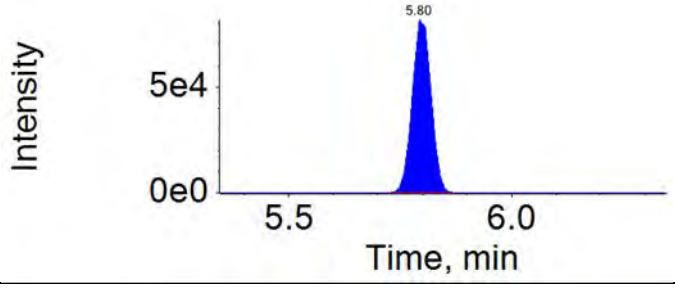
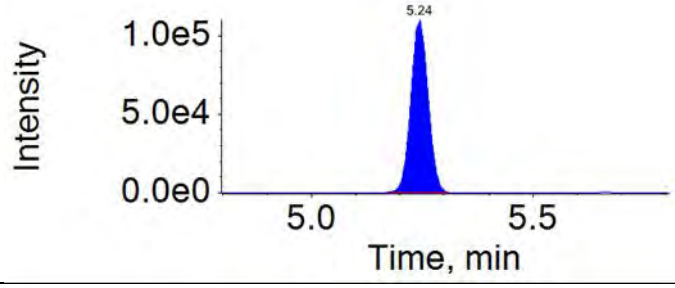
APPROVED
By JPT at 10:55 am, 11/9/18

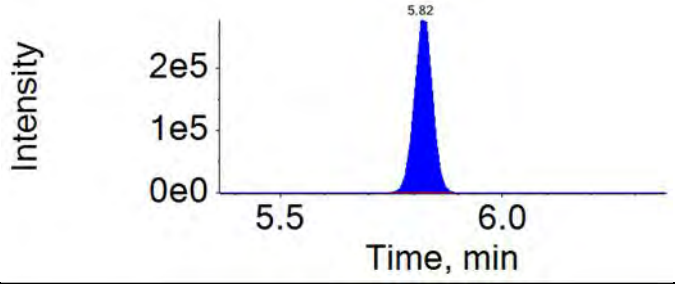
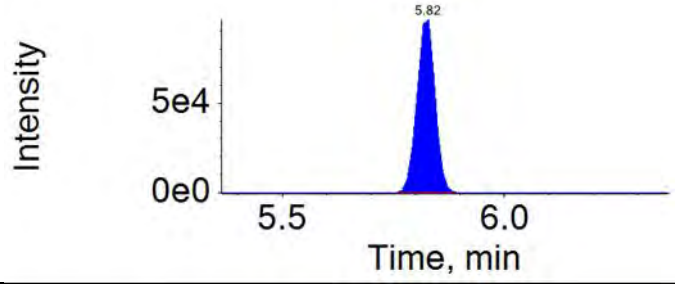
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

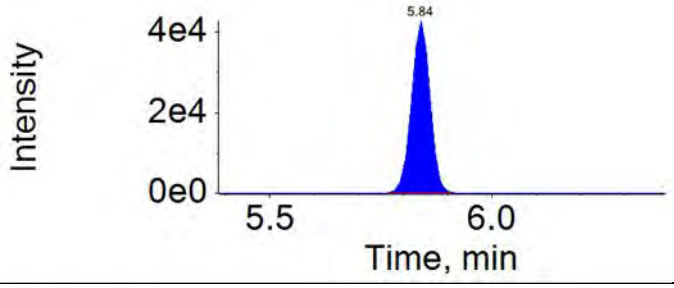
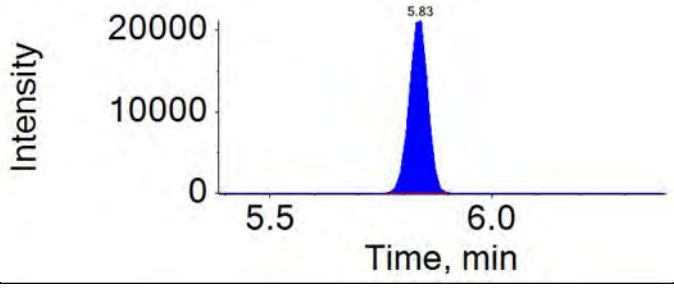
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

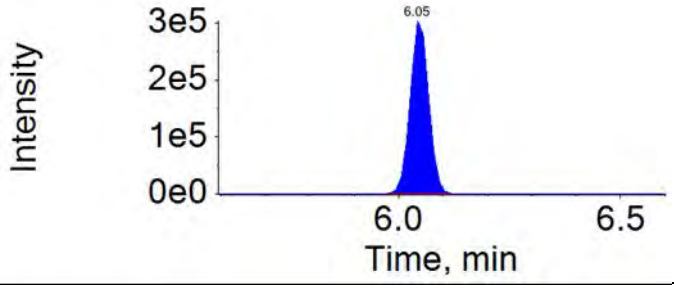
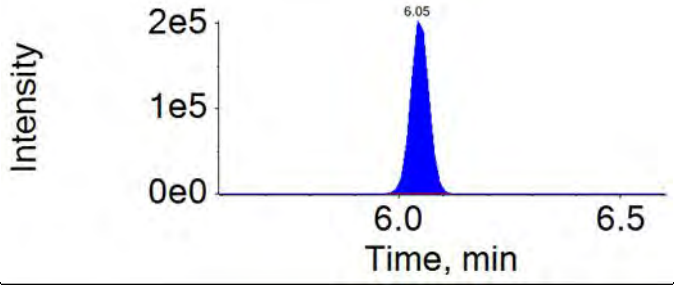
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

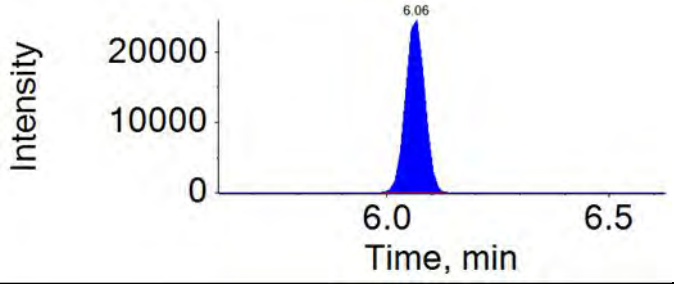
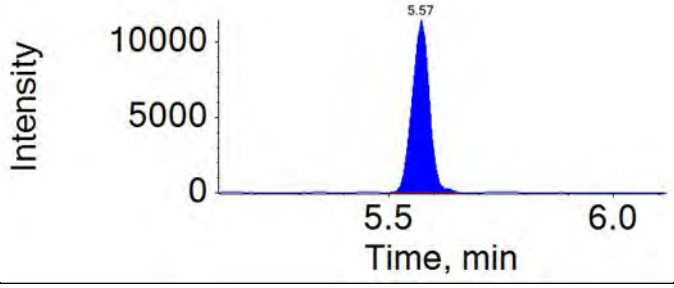
APPROVED
By JPT at 10:55 am, 11/9/18

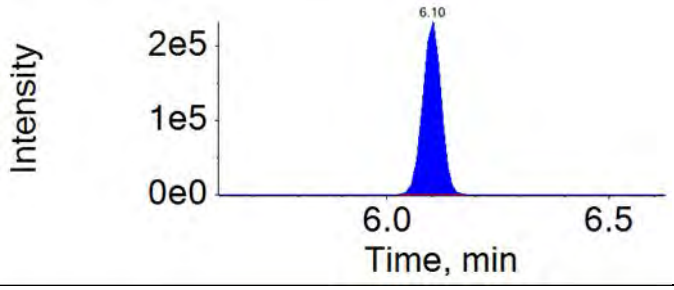
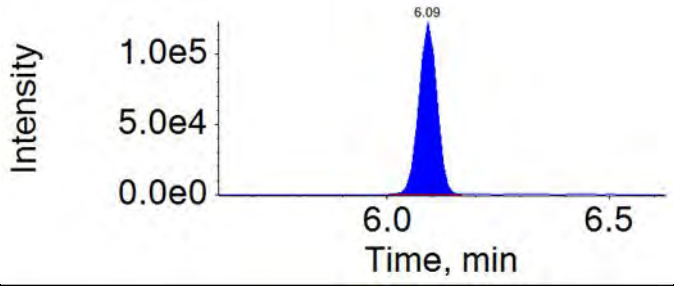
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

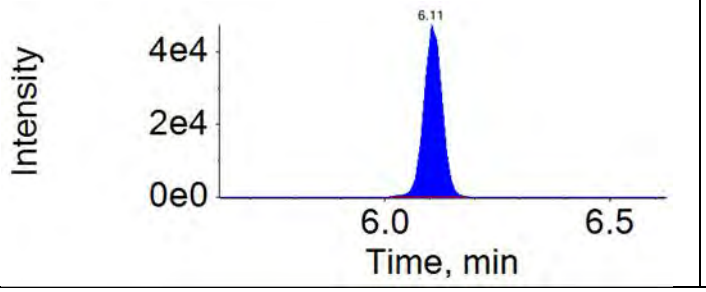
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

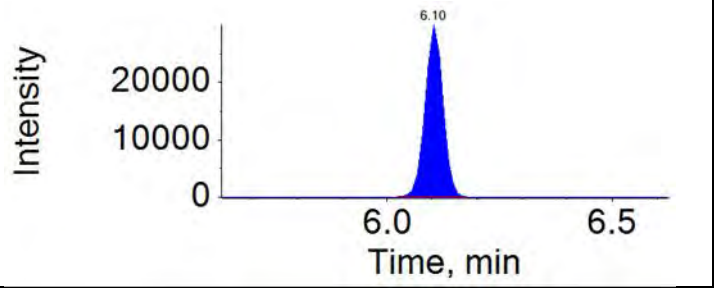
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

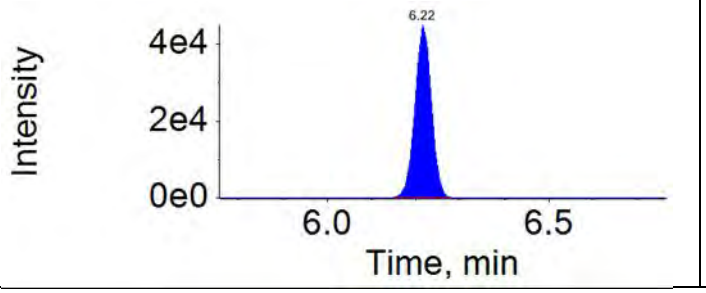
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

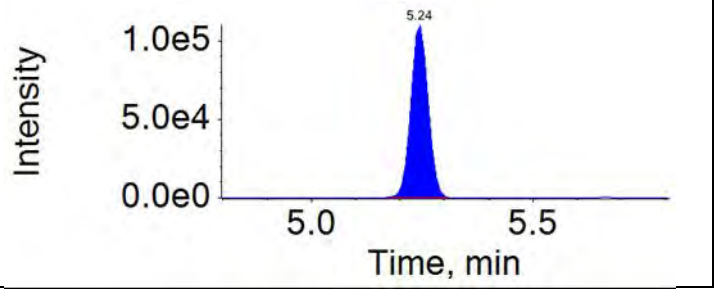
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



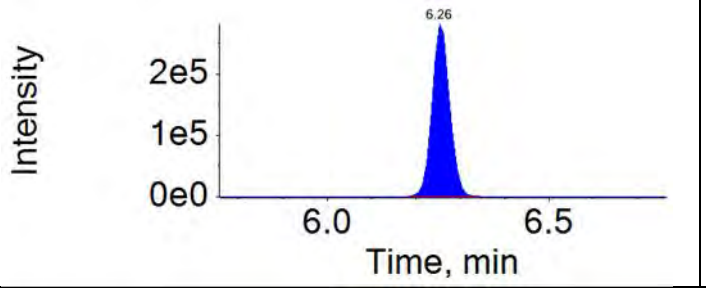


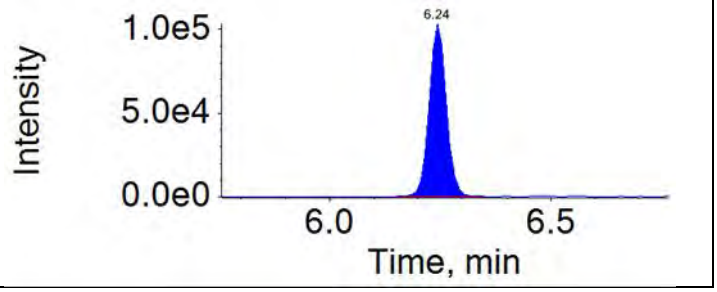
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



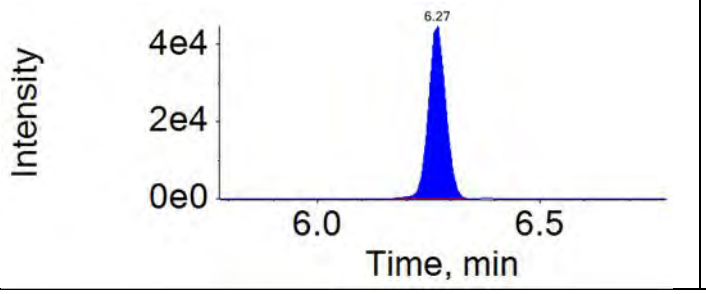


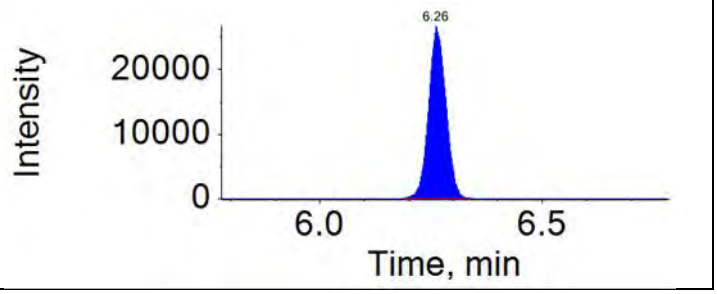
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



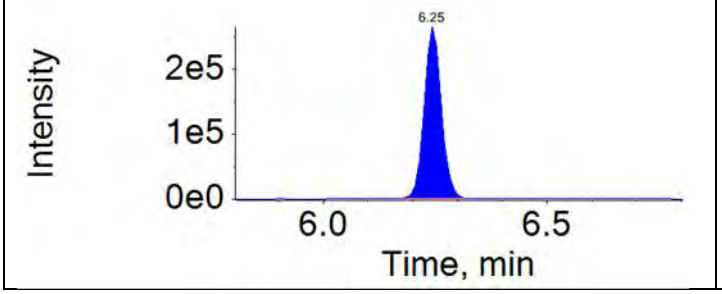


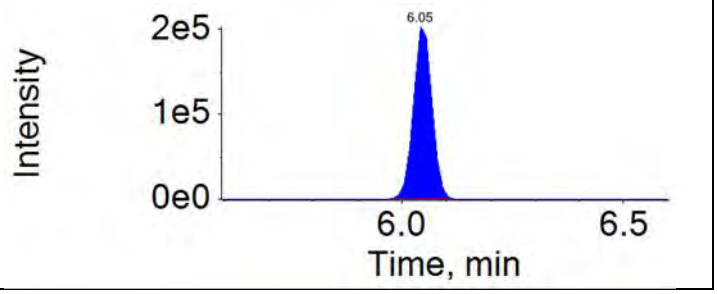
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

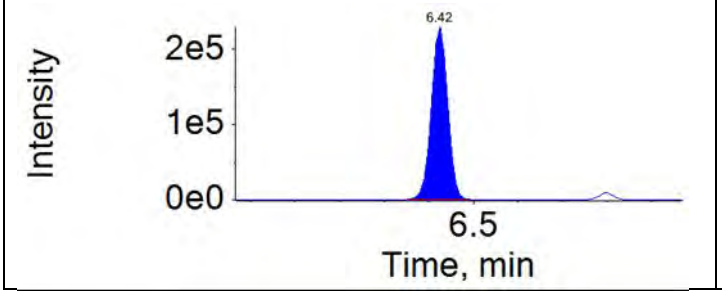
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

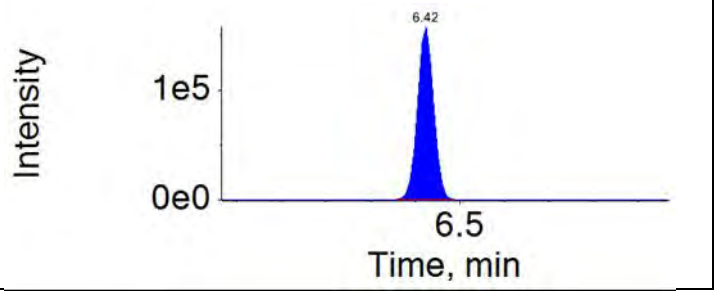
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



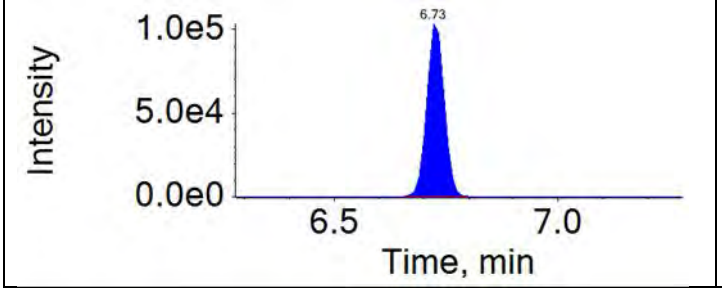


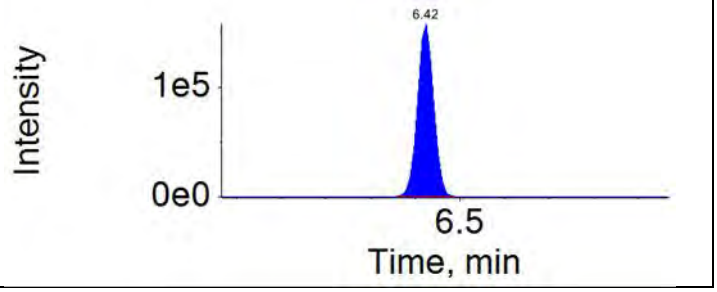
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



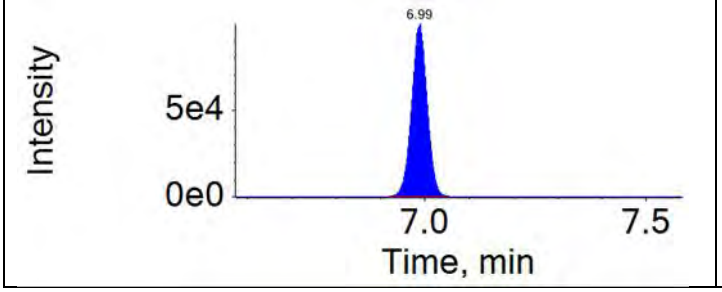


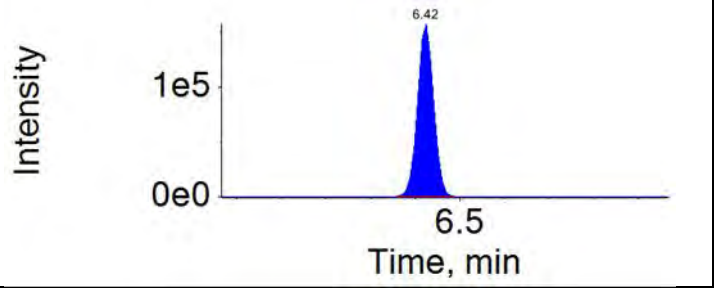
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Ion Ratio Report

Sample Name: CCV9_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV08D-98.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	655034.7	A	N/A	1.0000			
PFBS_2	3.81	1.00	231149.3	A	N/A	0.3529	-1	50	
4:2-FTS	4.12	1.00	163905.4	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	102343.5	A	N/A	0.6244	-2	50	
PFHxA	4.16	1.00	1345026.8	A	N/A	1.0000			
PFHxA_2	4.16	1.00	14743.1	A	N/A	0.0110	-4	50	
PFPeS	4.18	1.10	340112.7	A	N/A	1.0000			
PFPeS_2	4.18	1.10	176556.3	A	N/A	0.5191	-4	50	
PFHxS	4.55	1.00	509899.0	A	N/A	1.0000			
PFHxS_2	4.55	1.00	176303.9	A	N/A	0.3458	-3	50	
PFHpA	4.55	1.00	1445409.9	A	N/A	1.0000			
PFHpA_2	4.55	1.00	79392.8	A	N/A	0.0549	-5	50	
6:2-FTS	4.90	1.00	127621.2	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	84468.6	A	N/A	0.6619	-2	50	
PFHpS	4.91	1.08	497691.3	A	N/A	1.0000			
PFHpS_2	4.91	1.08	198484.5	A	N/A	0.3988	1	50	
PFOA	4.92	1.00	1388094.5	A	N/A	1.0000			
PFOA_2	4.91	1.00	78095.2	A	N/A	0.0563	-11	50	
PFOS	5.24	1.00	470028.6	A	N/A	1.0000			
PFOS_2	5.24	1.00	147984.6	A	N/A	0.3148	-10	50	
PFNA	5.26	1.00	1129680.1	A	N/A	1.0000			
PFNA_2	5.26	1.00	20629.8	A	N/A	0.0183	-12	50	
PFNS	5.54	1.06	309702.8	A	N/A	1.0000			
PFNS_2	5.54	1.06	144613.1	A	N/A	0.4669	-5	50	
PFDA	5.57	1.00	941307.1	A	N/A	1.0000			
PFDA_2	5.57	1.00	7437.0	A	N/A	0.0079	40	50	
8:2-FTS	5.57	1.00	103270.8	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	59922.2	A	N/A	0.5802	-6	50	
NMeFOSAA	5.71	1.00	134156.5	A	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	30521.7	A	N/A	0.2275	3	50	
PFDS	5.80	1.11	241813.5	A	N/A	1.0000			
PFDS_2	5.80	1.11	118758.7	A	N/A	0.4911	6	50	
PFUnDA	5.82	1.00	803352.1	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	2580.7	A	N/A	0.0032	2	50	
NEtFOSAA	5.84	1.00	123087.8	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	74779.9	A	N/A	0.6075	0	50	
PFDoDA	6.05	1.00	882612.8	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	12360.0	A	N/A	0.0140	28	50	
10:2-FTS	6.06	1.09	74557.5	A	N/A	1.0000			
10:2-FTS_2	6.06	1.09	49497.1	A	N/A	0.6639	-6	50	
PFTrDA	6.25	1.03	702504.0	A	N/A	1.0000			
PFTrDA_2	6.25	1.03	7191.3	A	N/A	0.0102	6	50	
PFTeDA	6.42	1.00	585138.5	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	3516.5	A	N/A	0.0060	8	50	
PFHxDA	6.73	1.05	280180.8	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	17791.9	A	N/A	0.0635	7	50	
PFODA	6.99	1.09	241980.2	A	N/A	1.0000			
PFODA_2	6.99	1.09	6103.4	A	N/A	0.0252	-2	50	

APPROVED
By JPT at 10:55 am, 11/9/18

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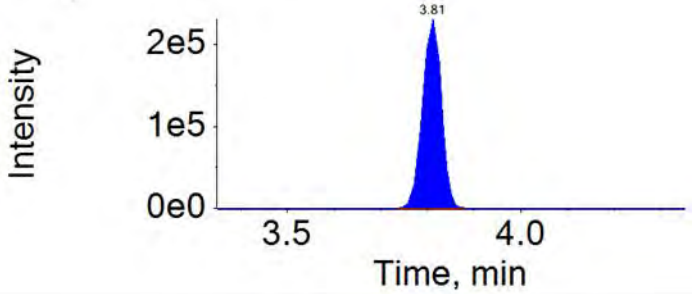
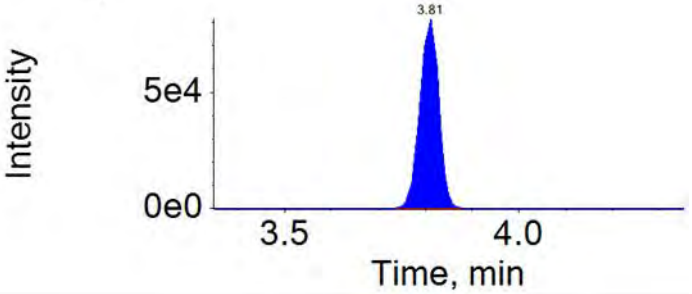
By umar at 3:41 pm, 11/12/18

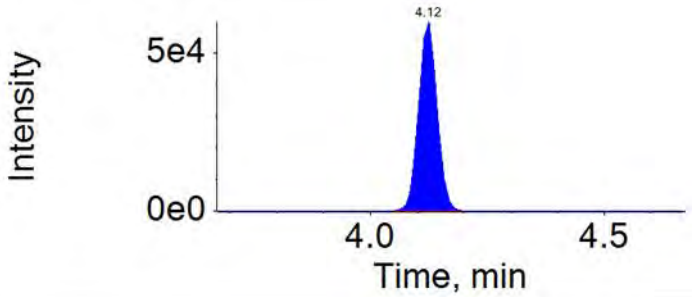
Component: PFBS
Primary Mass: 299.0 / 80.0



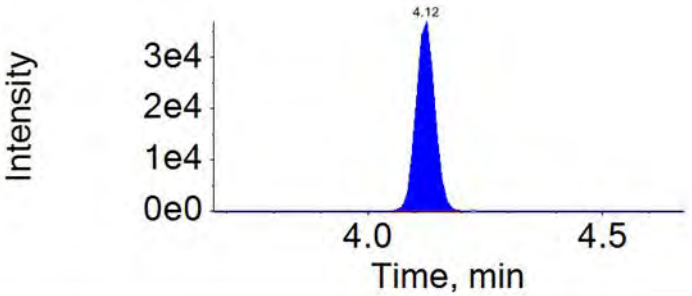
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



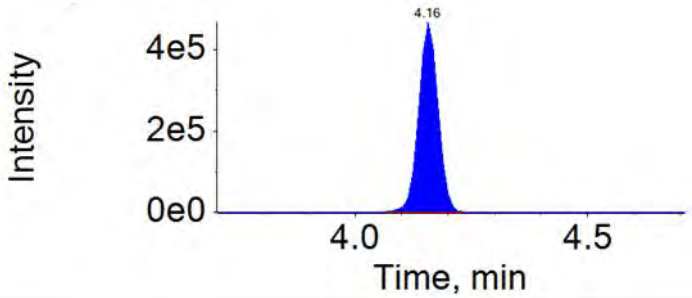
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



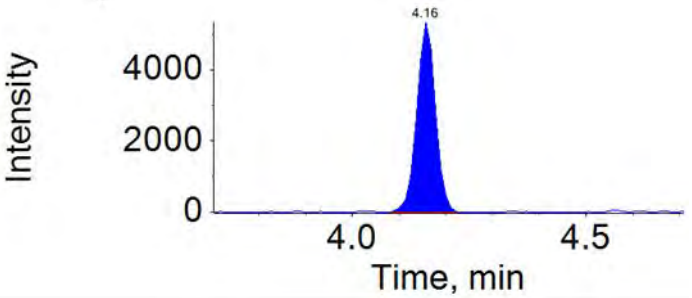
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



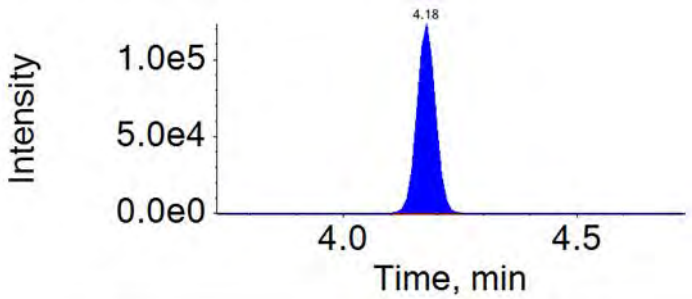
Component: PFHxA
Primary Mass: 313.0 / 269.0



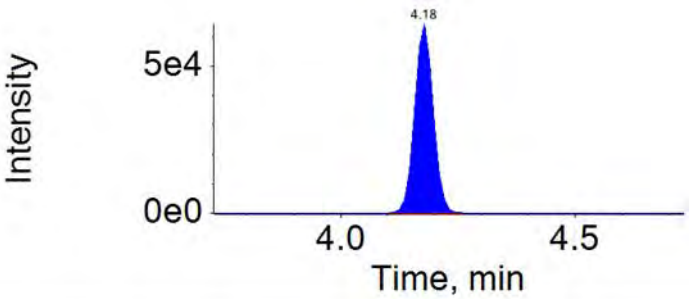
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 10:55 am, 11/9/18

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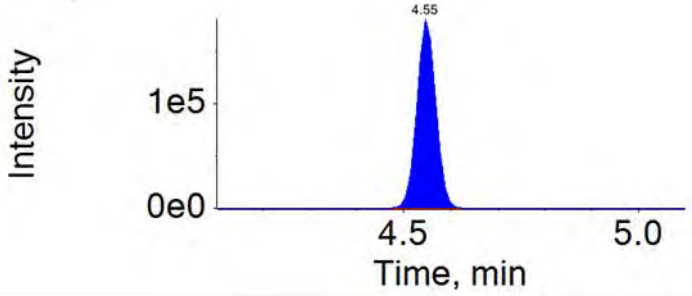
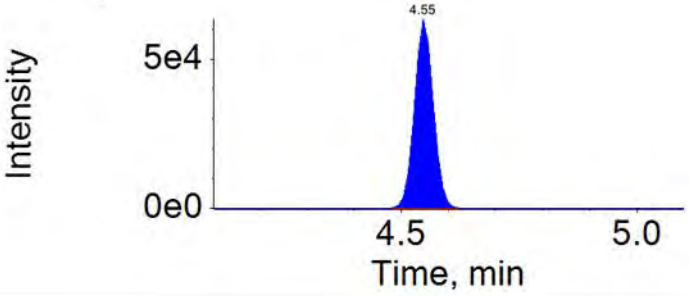
By umar at 3:41 pm, 11/12/18

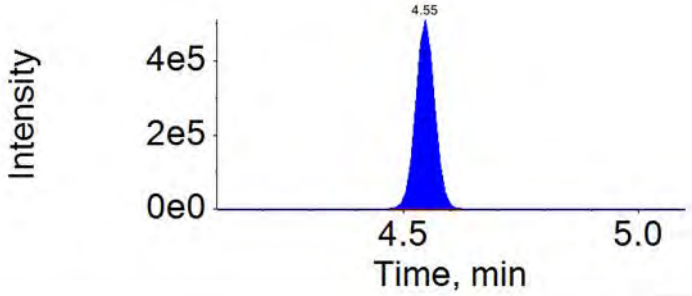
Component: PFHxS
Primary Mass: 399.0 / 80.0



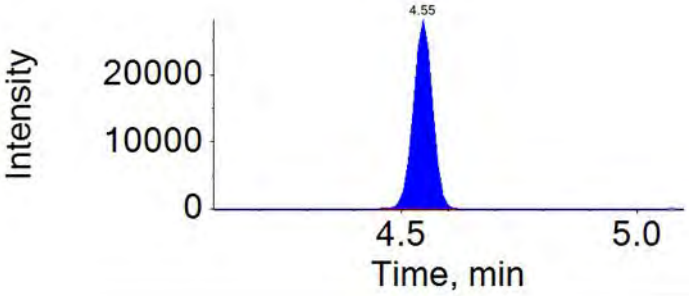
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



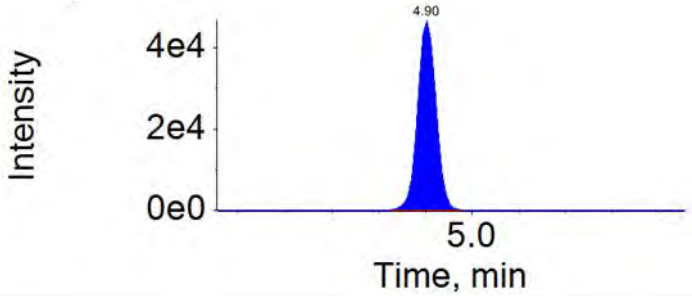
Component: PFHpA
Primary Mass: 363.0 / 319.0



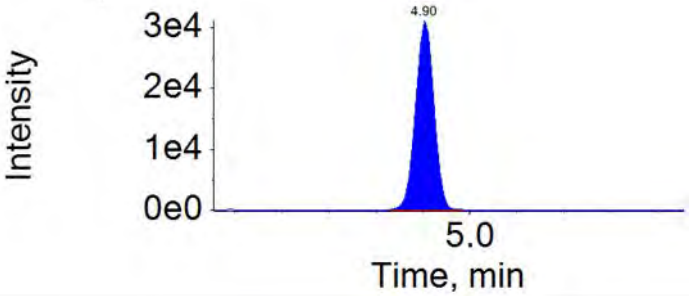
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



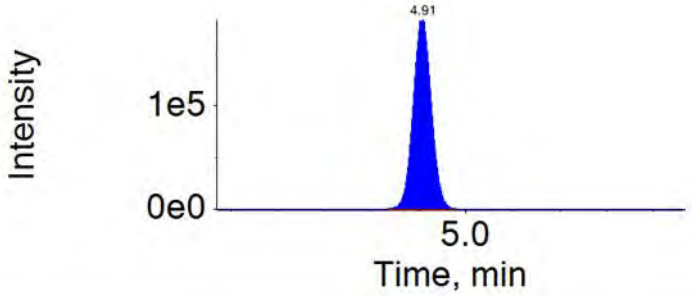
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



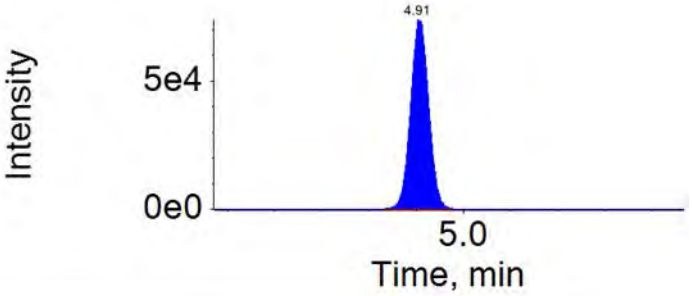
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By JPT at 10:55 am, 11/9/18

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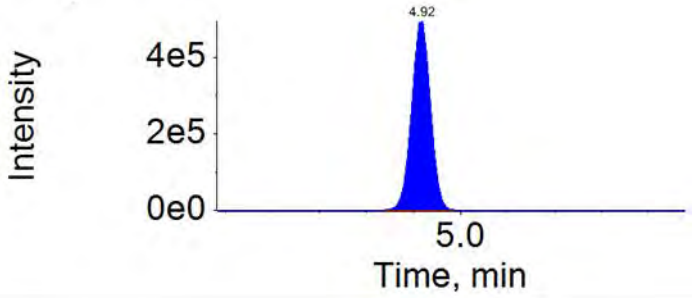
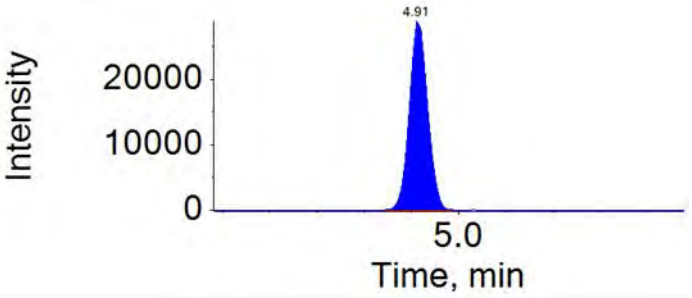
By umar at 3:41 pm, 11/12/18

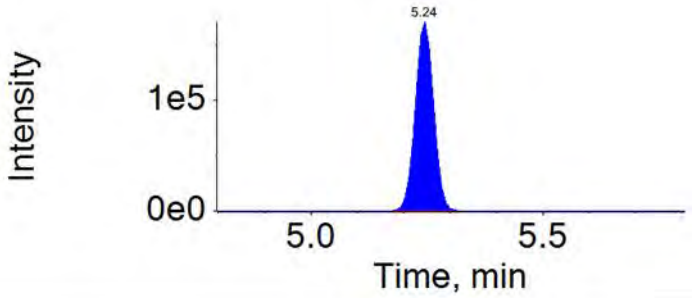
Component: PFOA
Primary Mass: 413.0 / 369.0



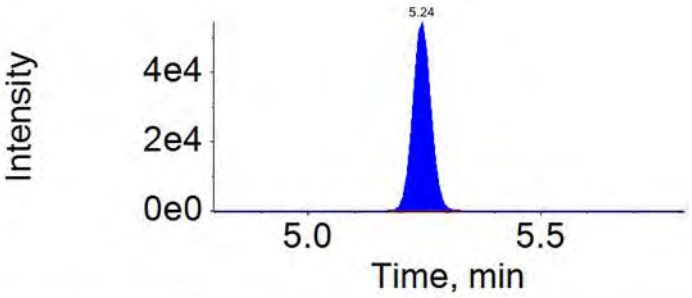
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



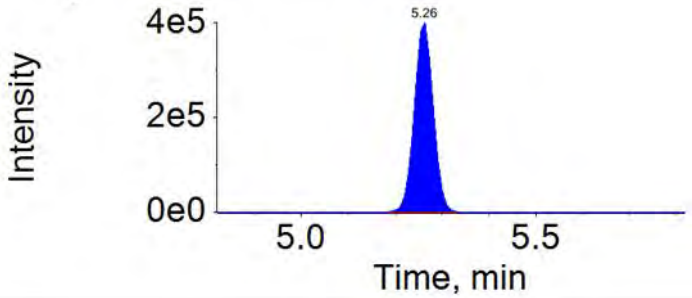
Component: PFOS
Primary Mass: 499.0 / 80.0



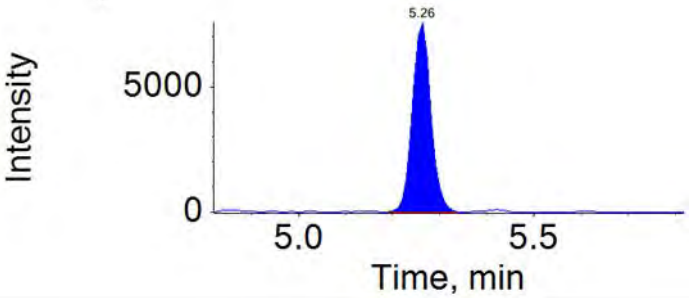
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



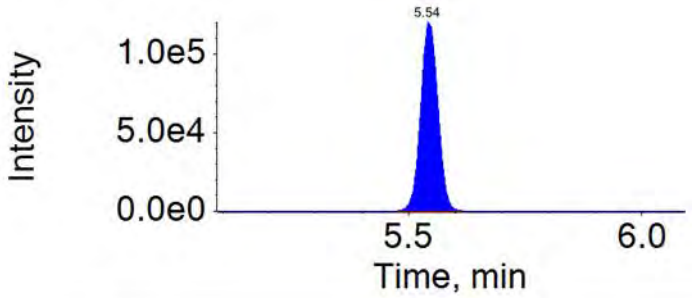
Component: PFNA
Primary Mass: 463.0 / 419.0



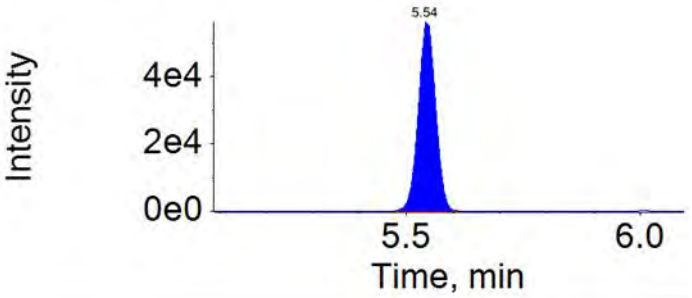
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



APPROVED
By JPT at 10:55 am, 11/9/18

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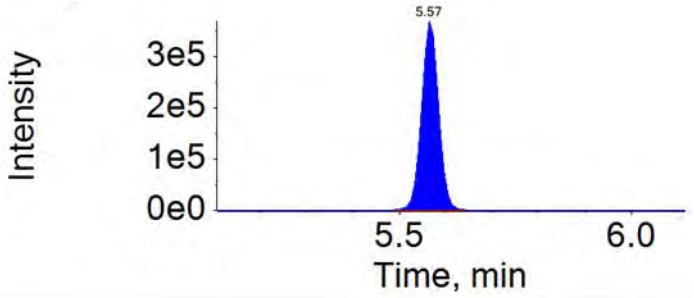
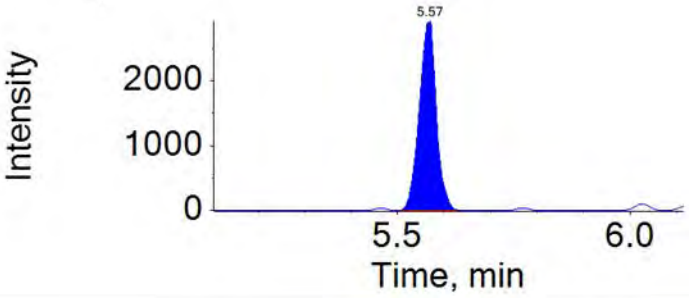
By umar at 3:41 pm, 11/12/18

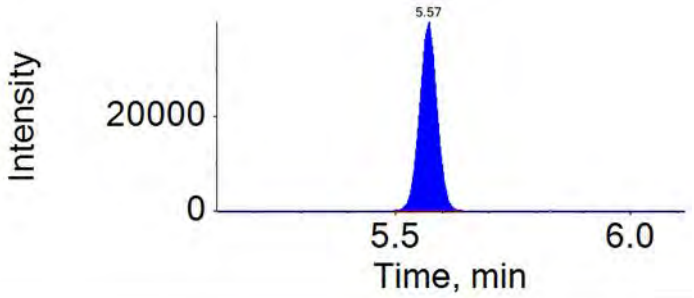
Component: PFDA
Primary Mass: 513.0 / 469.0



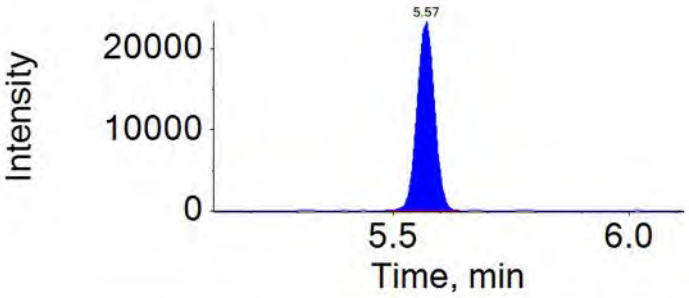
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



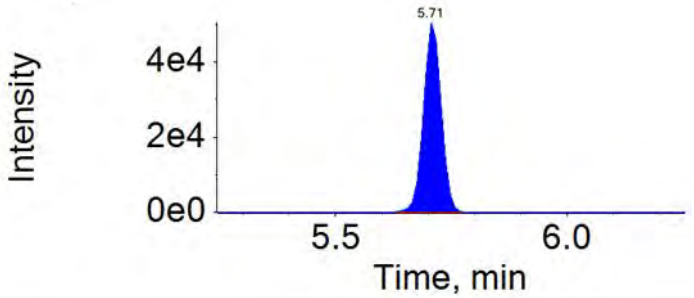
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



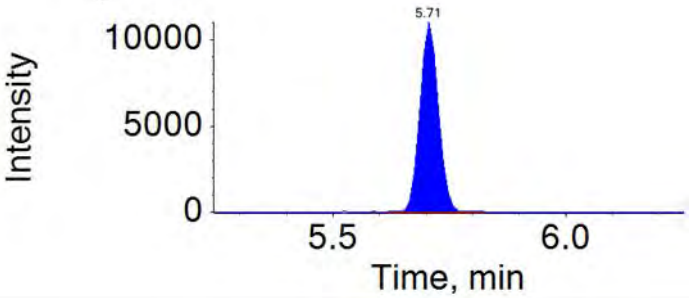
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



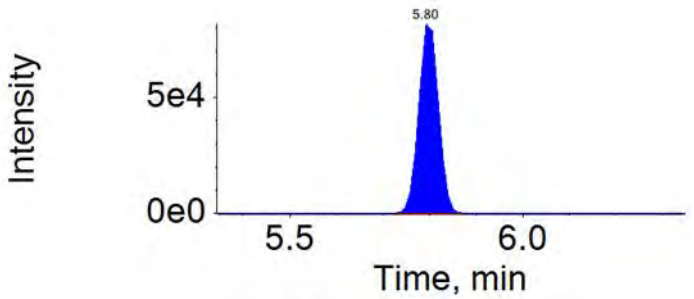
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



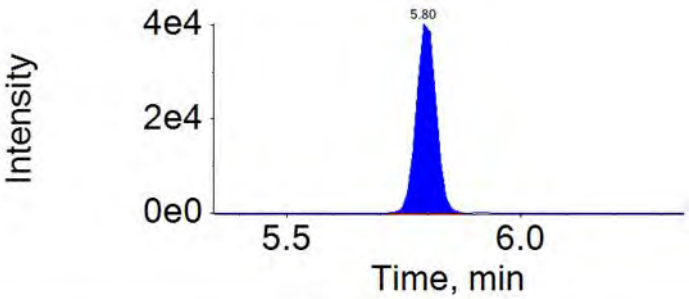
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



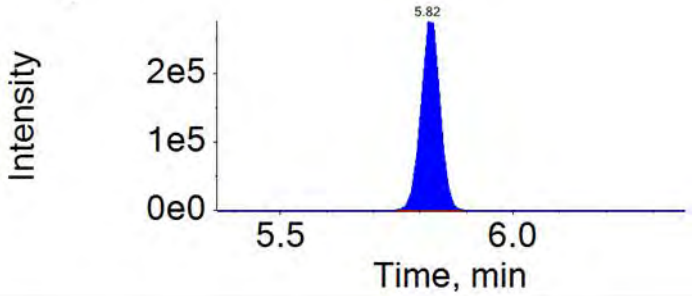
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



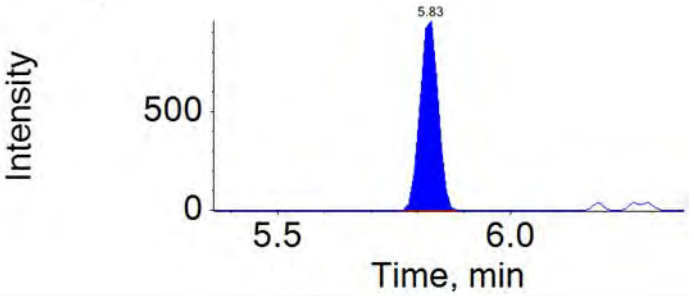
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

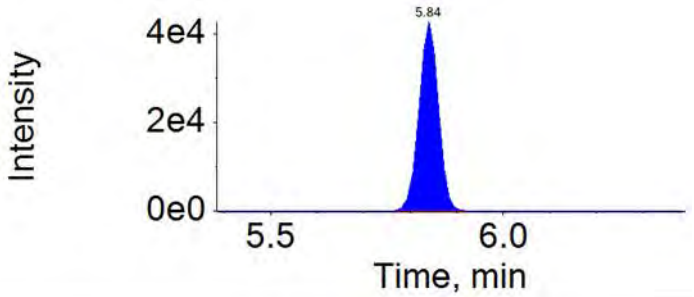
Component: PFUnDA
Primary Mass: 563.0 / 519.0



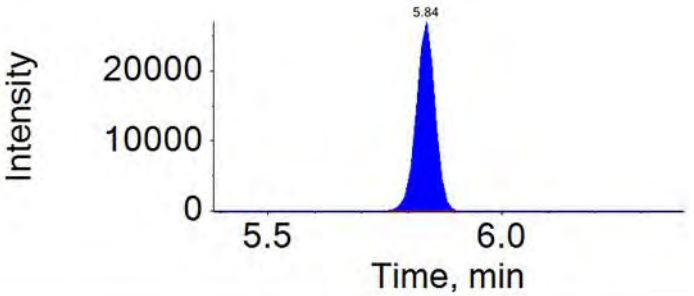
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



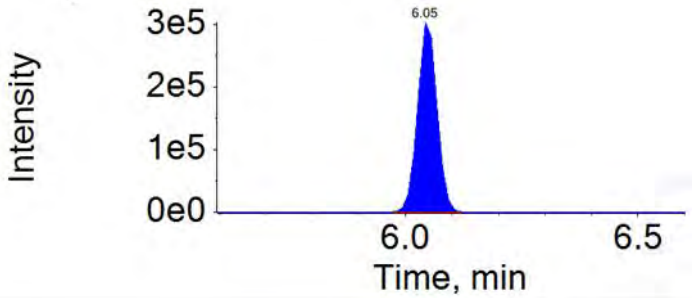
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



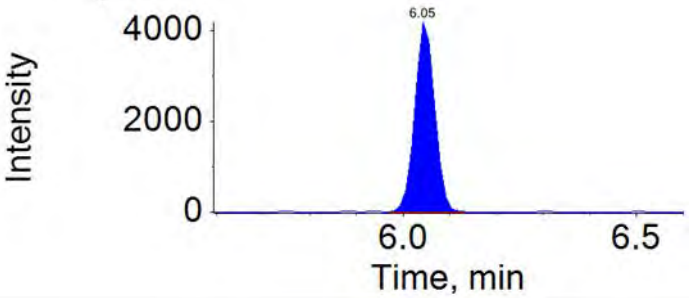
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



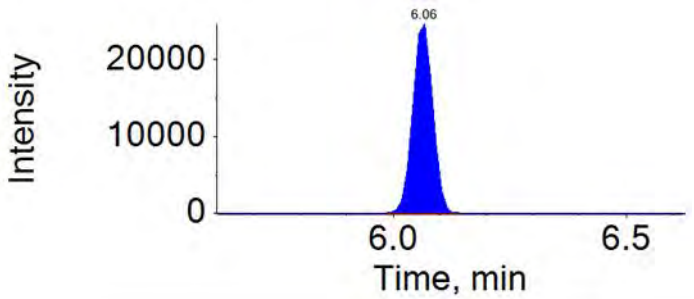
Component: PFDoDA
Primary Mass: 613.0 / 569.0



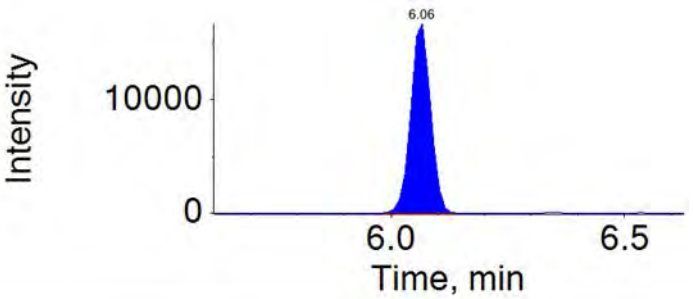
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



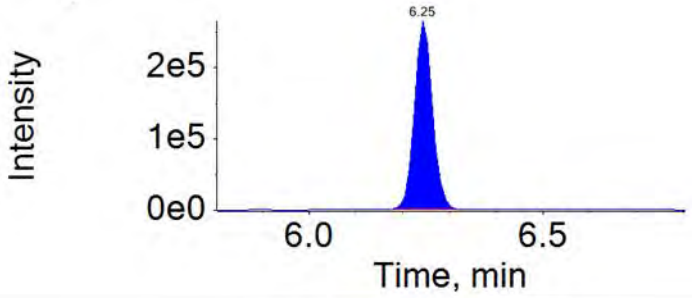
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



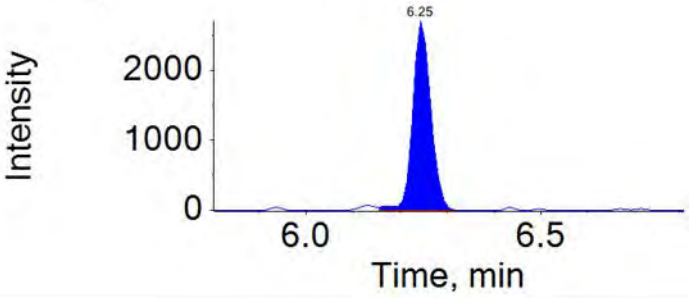
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

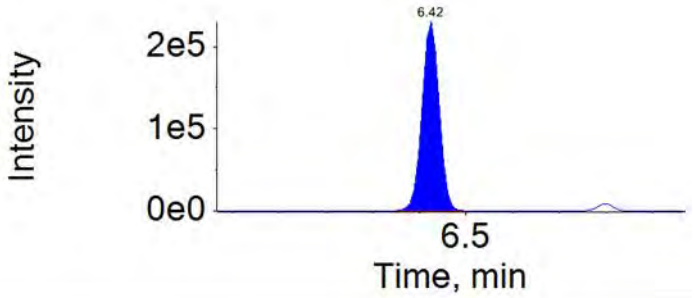
Component: PFTrDA
Primary Mass: 663.0 / 619.0



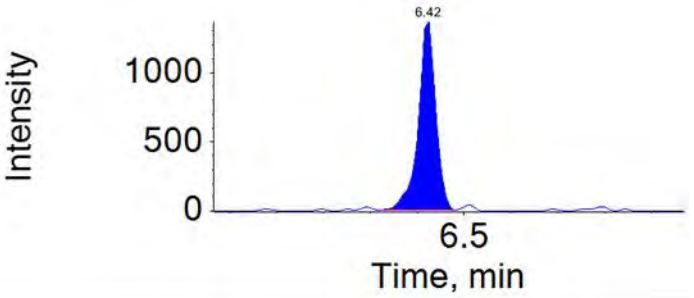
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



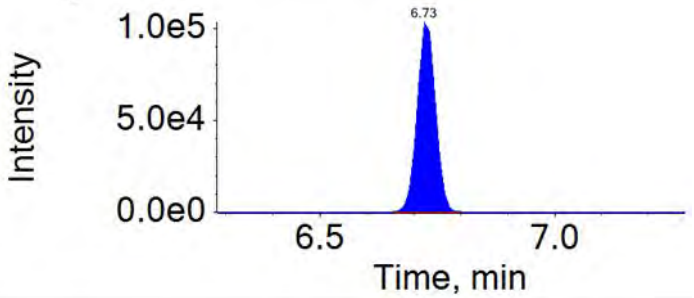
Component: PFTeDA
Primary Mass: 713.0 / 669.0



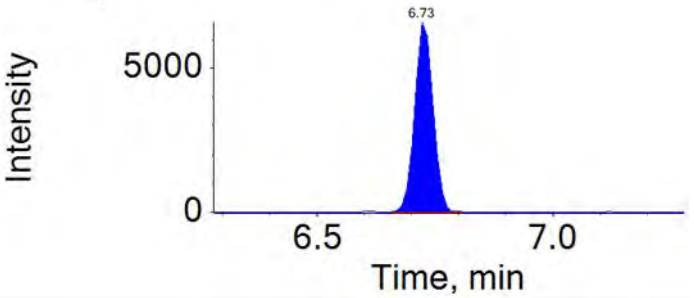
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



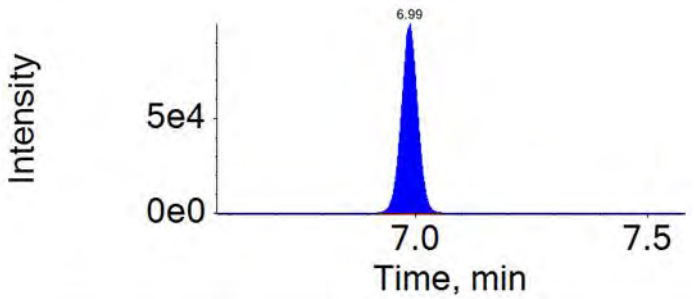
Component: PFHxDA
Primary Mass: 813.0 / 769.0



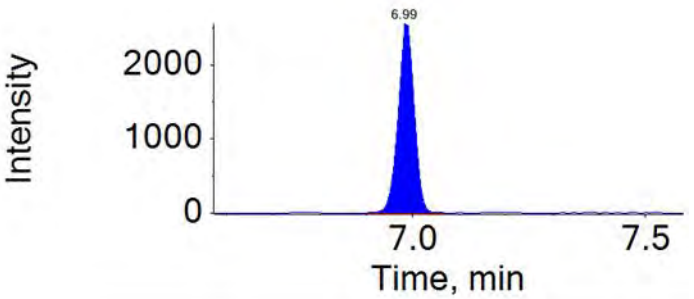
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



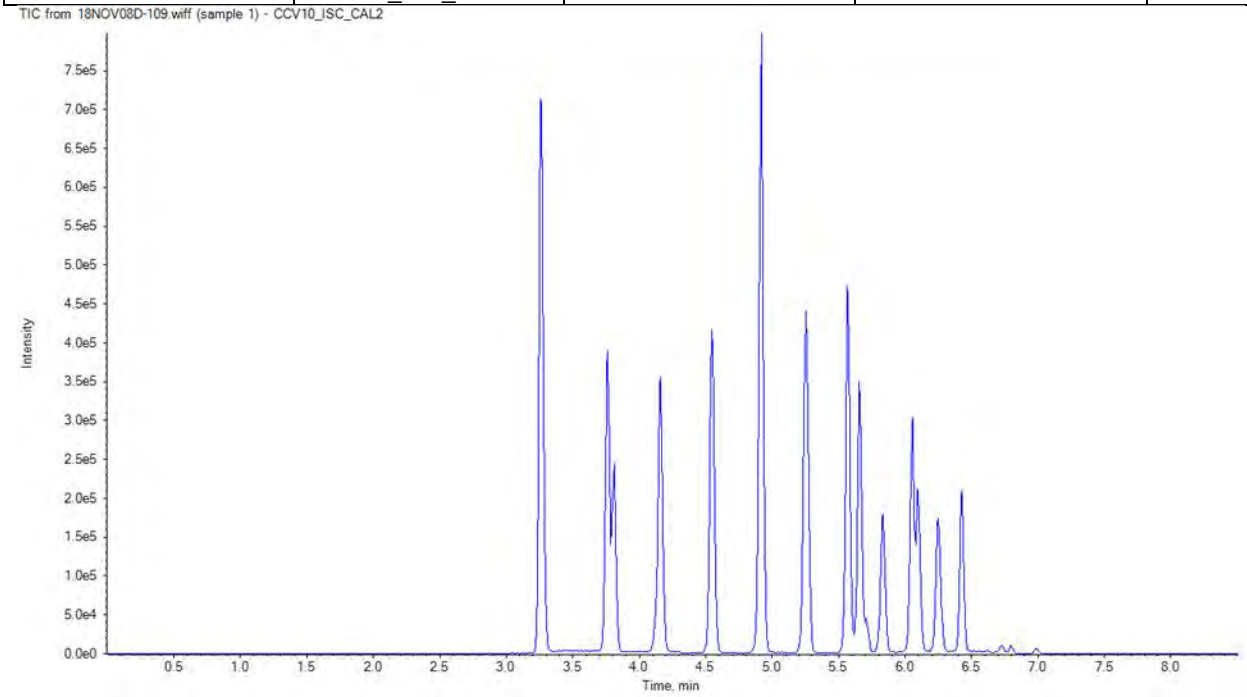
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV10_ISC_CAL2	CALMOD21833F	18NOV08D-109.wiff	2018-11-09T04:02:59



Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	733658.7	728839.7	1	50	
13C2-PFOA	5.0	495133.6	491983.1	1	50	
13C4-PFOS	4.8	272420.3	255568.1	7	50	
13C2-PFDA	5.0	314619.9	315407.5	0	50	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV10_ISC_CAL2	CALMOD21833F	18NOV08D-109.wiff	2018-11-09T04:02:59

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	74074.0	10	13C4-PFBA	795676.8	5.0	0.093	3.26	1.000	0.500	0.545	9	30	
PFPeA	74402.5	13	13C5-PFPeA	790007.7	5.0	0.094	3.76	1.000	0.500	0.560	12	30	
PFBS	41078.3	11	13C3-PFBS	424111.0	4.7	0.097	3.81	1.000	0.440	0.488	11	30	
4:2-FTS	9663.4	12	13C2-4:2-FTS	51605.1	4.7	0.187	4.12	1.000	0.467	0.503	8	30	
PFHxA	88198.5	12	13C5-PFHxA	680008.6	5.0	0.130	4.16	1.000	0.500	0.556	11	30	
PFPeS	19380.9	11	13C3-PFBS	424111.0	4.7	0.046	4.18	1.100	0.469	0.451	-4	30	
PFHxS	30924.8	11	13C3-PFHxS	331329.1	4.7	0.093	4.55	1.000	0.473	0.473	0	30	
PFHpA	93415.3	12	13C4-PFHpA	544363.7	5.0	0.172	4.55	1.000	0.500	0.577	15	30	
6:2-FTS	7777.7	11	13C2-6:2-FTS	41279.5	4.8	0.188	4.90	1.000	0.474	0.470	-1	30	
PFHpS	28597.4	11	13C3-PFHxS	331329.1	4.7	0.086	4.91	1.080	0.476	0.452	-5	30	
PFOA	91880.3	11	13C8-PFOA	988039.5	5.0	0.093	4.92	1.000	0.500	0.524	5	30	
PFOS	26455.5	11	13C8-PFOS	286296.5	4.8	0.092	5.25	1.000	0.478	0.479	0	30	
PFNA	74897.5	11	13C9-PFNA	495082.0	5.0	0.151	5.26	1.000	0.500	0.565	13	30	
PFNS	18460.5	11	13C8-PFOS	286296.5	4.8	0.064	5.55	1.060	0.480	0.511	7	30	
PFDA	57162.3	11	13C6-PFDA	605588.9	5.0	0.094	5.57	1.000	0.500	0.519	4	30	
8:2-FTS	6386.5	11	13C2-8:2-FTS	26022.2	4.8	0.245	5.57	1.000	0.479	0.553	15	30	
PFOSA	67053.7	11	13C8-PFOSA	697991.6	5.0	0.096	5.66	1.000	0.500	0.519	4	30	
NMeFOSAA	8840.9	13	d3-NMeFOSAA	75506.5	5.0	0.117	5.72	1.000	0.500	0.602	20	30	
PFDS	16096.0	10	13C8-PFOS	286296.5	4.8	0.056	5.81	1.110	0.482	0.537	11	30	
PFUnDA	45466.7	12	13C7-PFUnDA	286916.7	5.0	0.158	5.83	1.000	0.500	0.454	-9	30	
NEtFOSAA	6910.6	11	d5-NEtFOSAA	62453.9	5.0	0.111	5.85	1.000	0.500	0.476	-5	30	
PFDoDA	51308.0	12	13C2-PFDoDA	553597.5	5.0	0.093	6.05	1.000	0.500	0.502	0	30	
10:2-FTS	4668.0	12	13C2-8:2-FTS	26022.2	4.8	0.179	6.07	1.090	0.482	0.559	16	30	
NMePFOSAE	42033.1	11	d7-NMePFOSAE	331032.5	5.0	0.127	6.11	1.000	0.500	0.569	14	30	
NMePFOSA	8433.8	12	d3-NMePFOSA	81277.7	5.0	0.104	6.11	1.000	0.500	0.581	16	30	
PFDoS	6640.2	10	13C8-PFOS	286296.5	4.8	0.023	6.22	1.190	0.484	0.448	-8	30	
NEtPFOSAE	46142.2	12	d9-NEtPFOSAE	277972.1	5.0	0.166	6.26	1.000	0.500	0.532	6	30	
NEtPFOSA	7121.6	13	d5-NEtPFOSA	64284.9	5.0	0.111	6.27	1.000	0.500	0.488	-2	30	
PFTrDA	45642.7	12	13C2-PFDoDA	553597.5	5.0	0.082	6.25	1.030	0.500	0.520	4	30	
PFTeDA	36443.3	11	13C2-PFTeDA	392742.2	5.0	0.093	6.43	1.000	0.500	0.545	9	30	
PFHxDA	17348.7	11	13C2-PFTeDA	392742.2	5.0	0.044	6.73	1.050	0.500	0.548	10	30	
PFODA	14871.1	10	13C2-PFTeDA	392742.2	5.0	0.038	6.99	1.090	0.500	0.542	8	30	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV10_ISC_CAL2			**Data File:**		18NOV08D-109.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-09T04:02:59
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV6-12
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	733658.7	728839.7	1	50	
13C2-PFOA	5.0	495133.6	491983.1	1	50	
13C4-PFOS	4.8	272420.3	255568.1	7	50	
13C2-PFDA	5.0	314619.9	315407.5	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	795676.8	13C3-PFBA	733658.7	1.085	5.000	5.019	100	70-130	
E13C5-PFPeA	790007.7	13C3-PFBA	733658.7	1.077	5.000	4.691	94	70-130	
E13C3-PFBS	424111.0	13C3-PFBA	733658.7	0.578	4.650	4.243	91	70-130	
E13C2-4:2-FTS	51605.1	13C2-PFOA	495133.6	0.104	4.670	4.703	101	70-130	
E13C5-PFHxA	680008.6	13C2-PFOA	495133.6	1.373	5.000	5.052	101	70-130	
E13C3-PFHxS	331329.1	13C2-PFOA	495133.6	0.669	4.730	4.804	102	70-130	
E13C4-PFHpA	544363.7	13C2-PFOA	495133.6	1.099	5.000	5.001	100	70-130	
E13C2-6:2-FTS	41279.5	13C2-PFOA	495133.6	0.083	4.750	5.559	117	70-130	
E13C8-PFOA	988039.5	13C2-PFOA	495133.6	1.996	5.000	5.565	111	70-130	
E13C8-PFOS	286296.5	13C4-PFOS	272420.3	1.051	4.780	4.647	97	70-130	
E13C9-PFNA	495082.0	13C4-PFOS	272420.3	1.817	5.000	4.964	99	70-130	
E13C6-PFDA	605588.9	13C2-PFDA	314619.9	1.925	5.000	4.841	97	70-130	
E13C2-8:2-FTS	26022.2	13C2-PFDA	314619.9	0.083	4.790	4.377	91	70-130	
E13C8-PFOSA	697991.6	13C2-PFDA	314619.9	2.219	5.000	4.841	97	70-130	
Ed3-NMeFOSAA	75506.5	13C2-PFDA	314619.9	0.240	5.000	4.463	89	70-130	
E13C7-PFUnDA	286916.7	13C2-PFDA	314619.9	0.912	5.000	5.261	105	70-130	
Ed5-NEtFOSAA	62453.9	13C2-PFDA	314619.9	0.199	5.000	4.594	92	70-130	
E13C2-PFDoDA	553597.5	13C2-PFDA	314619.9	1.760	5.000	4.744	95	70-130	
Ed7-NMePFOSAE	331032.4	13C2-PFDA	314619.9	1.052	5.000	4.893	98	70-130	
Ed3-NMePFOSA	81277.7	13C2-PFDA	314619.9	0.258	5.000	4.729	95	70-130	
Ed9-NEtPFOSAE	277972.1	13C2-PFDA	314619.9	0.884	5.000	5.046	101	70-130	
Ed5-NEtPFOSA	64284.9	13C2-PFDA	314619.9	0.204	5.000	4.731	95	70-130	
E13C2-PFTeDA	392742.2	13C2-PFDA	314619.9	1.248	5.000	4.494	90	70-130	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

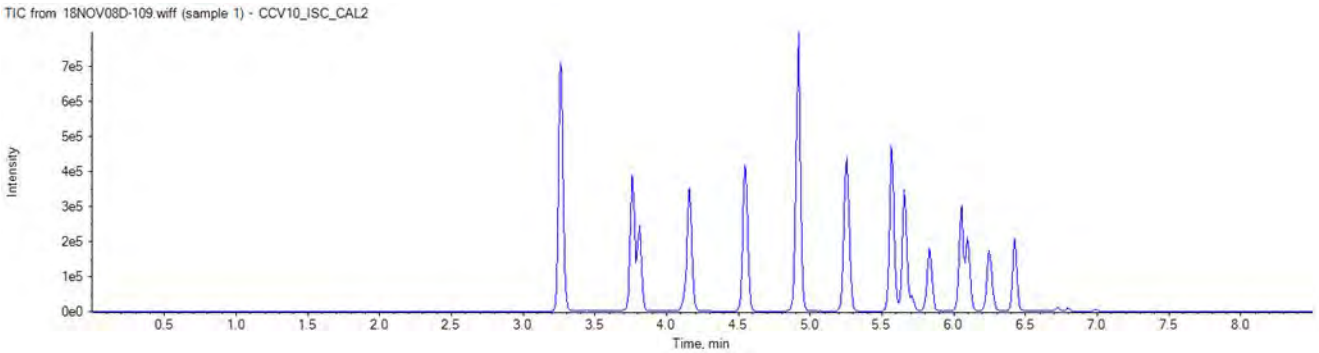
Analyte Quantitation Peak Table

Sample Name: CCV10_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV08D-109.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	74074.0		A	13C4-PFBA	3.26	795676.8	0.093	0.545
PFPeA	3.76	1.000	74402.5		A	13C5-PFPeA	3.76	790007.7	0.094	0.560
PFBS	3.81	1.000	41078.3		A	13C3-PFBS	3.81	424111.0	0.097	0.488
4:2-FTS	4.12	1.000	9663.4		A	13C2-4:2-FTS	4.12	51605.1	0.187	0.503
PFHxA	4.16	1.000	88198.5		A	13C5-PFHxA	4.16	680008.6	0.130	0.556
PFPeS	4.18	1.100	19380.9		A	13C3-PFBS	3.81	424111.0	0.046	0.451
PFHxS	4.55	1.000	30924.8		A	13C3-PFHxS	4.55	331329.1	0.093	0.473
PFHpA	4.55	1.000	93415.3		A	13C4-PFHpA	4.55	544363.7	0.172	0.577
6:2-FTS	4.90	1.000	7777.7		A	13C2-6:2-FTS	4.91	41279.5	0.188	0.470
PFHpS	4.91	1.080	28597.4		A	13C3-PFHxS	4.55	331329.1	0.086	0.452
PFOA	4.92	1.000	91880.3		A	13C8-PFOA	4.92	988039.5	0.093	0.524
PFOS	5.25	1.000	26455.5		A	13C8-PFOS	5.24	286296.5	0.092	0.479
PFNA	5.26	1.000	74897.5		A	13C9-PFNA	5.26	495082.0	0.151	0.565
PFNS	5.55	1.060	18460.5		A	13C8-PFOS	5.24	286296.5	0.064	0.511
PFDA	5.57	1.000	57162.3		A	13C6-PFDA	5.57	605588.9	0.094	0.519
8:2-FTS	5.57	1.000	6386.5		A	13C2-8:2-FTS	5.57	26022.2	0.245	0.553
PFOSA	5.66	1.000	67053.7		A	13C8-PFOSA	5.66	697991.6	0.096	0.519
NMeFOSAA	5.72	1.000	8840.9		A	d3-NMeFOSAA	5.71	75506.5	0.117	0.602
PFDS	5.81	1.110	16096.0		A	13C8-PFOS	5.24	286296.5	0.056	0.537
PFUnDA	5.83	1.000	45466.7		A	13C7-PFUnDA	5.83	286916.7	0.158	0.454
NEtFOSAA	5.85	1.000	6910.6		A	d5-NEtFOSAA	5.84	62453.9	0.111	0.476
PFDoDA	6.05	1.000	51308.0		A	13C2-PFDoDA	6.05	553597.5	0.093	0.502
10:2-FTS	6.07	1.090	4668.0		A	13C2-8:2-FTS	5.57	26022.2	0.179	0.559
NMePFOSAE	6.11	1.000	42033.1		A	d7-NMePFOSAE	6.09	331032.5	0.127	0.569
NMePFOSA	6.11	1.000	8433.8		A	d3-NMePFOSA	6.11	81277.7	0.104	0.581
PFDoS	6.22	1.190	6640.2		A	13C8-PFOS	5.24	286296.5	0.023	0.448
NEtPFOSAE	6.26	1.000	46142.2		M	d9-NEtPFOSAE	6.25	277972.1	0.166	0.532
NEtPFOSA	6.27	1.000	7121.6		A	d5-NEtPFOSA	6.26	64284.9	0.111	0.488
PFTrDA	6.25	1.030	45642.7		A	13C2-PFDoDA	6.05	553597.5	0.082	0.520
PFTeDA	6.43	1.000	36443.3		A	13C2-PFTeDA	6.43	392742.2	0.093	0.545
PFHxDA	6.73	1.050	17348.7		A	13C2-PFTeDA	6.43	392742.2	0.044	0.548
PFODA	6.99	1.090	14871.1		A	13C2-PFTeDA	6.43	392742.2	0.038	0.542

Total Ion Chromatogram

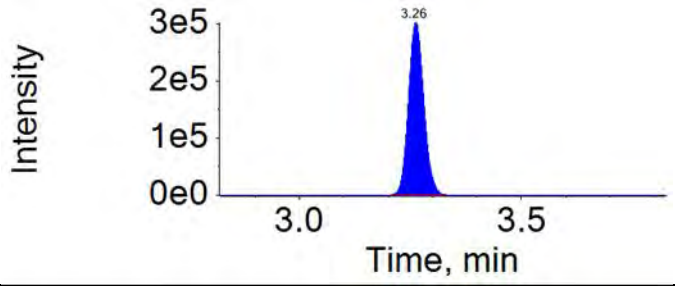


APPROVED
By JPT at 10:55 am, 11/9/18

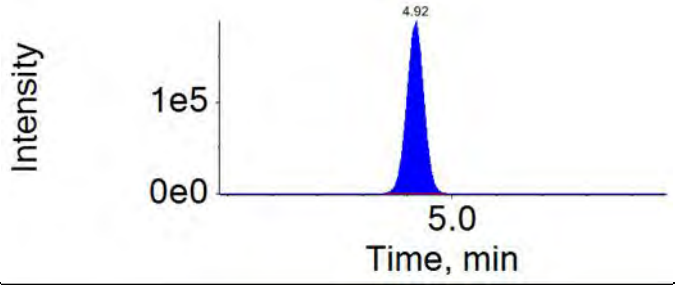
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

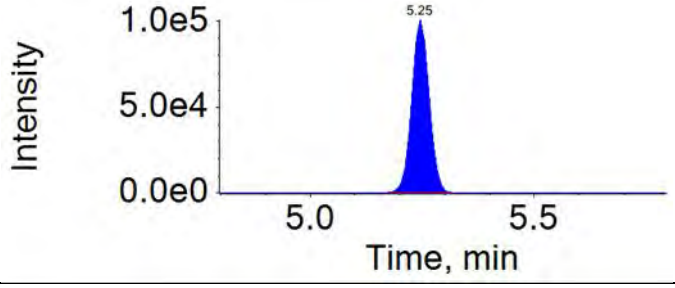
Injection Standard: 13C3-PFBA
216.0 / 172.0



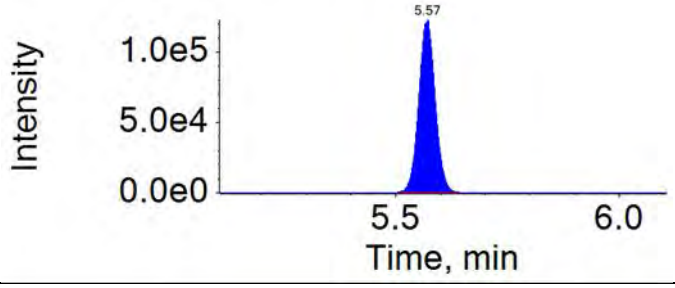
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

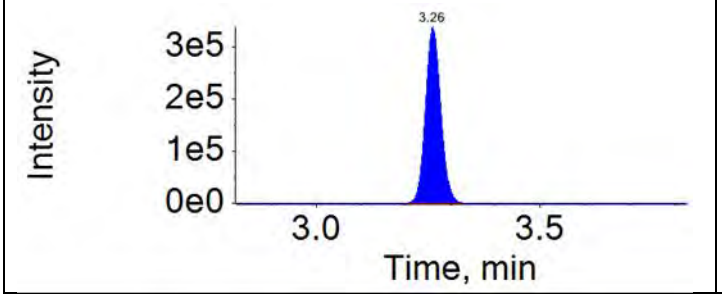


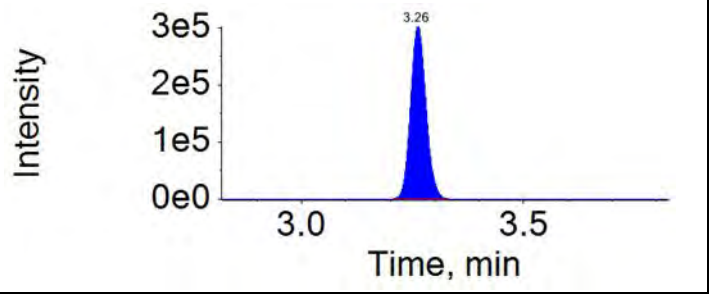
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

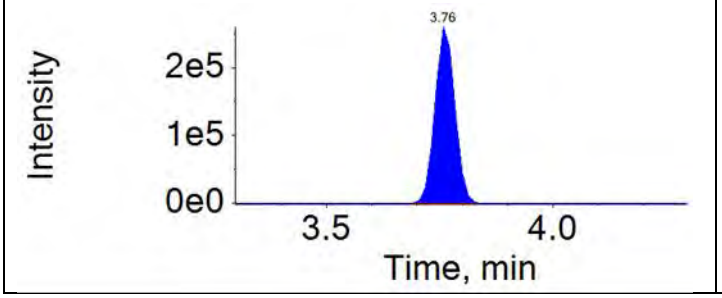
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

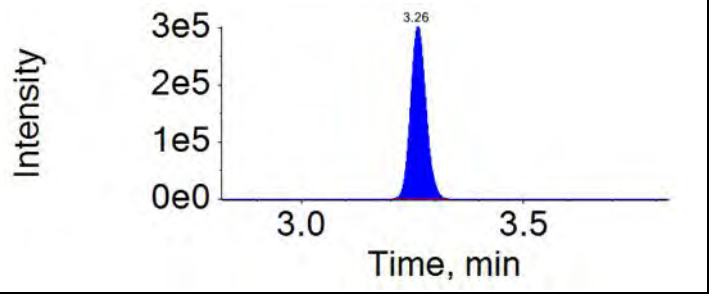
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



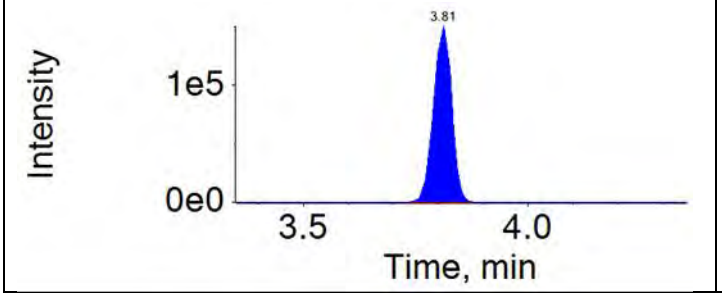


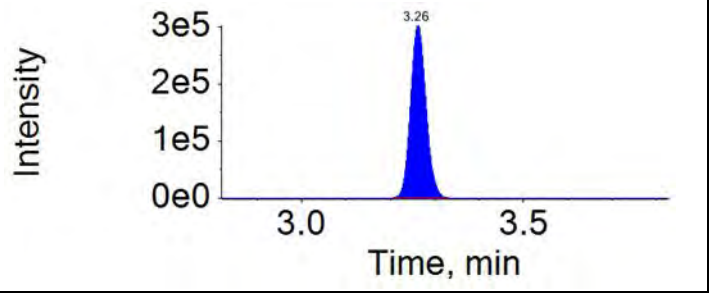
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



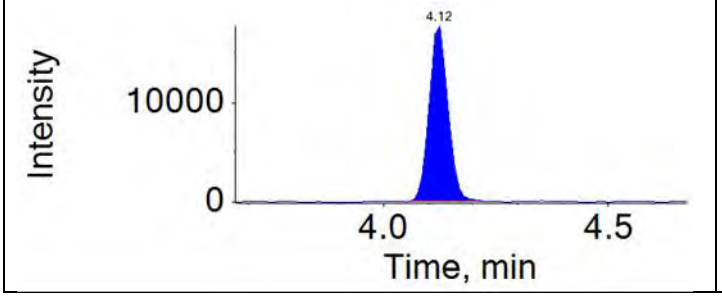


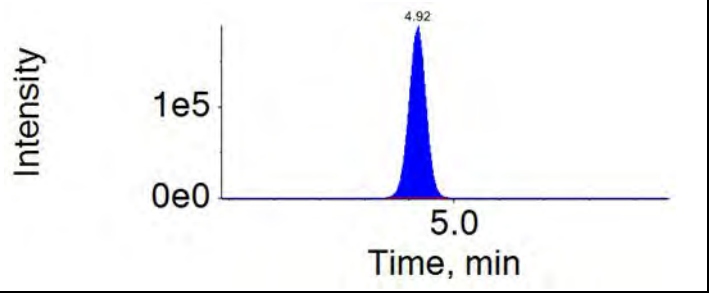
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





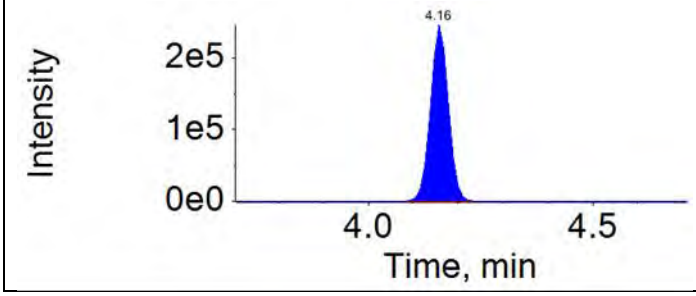
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

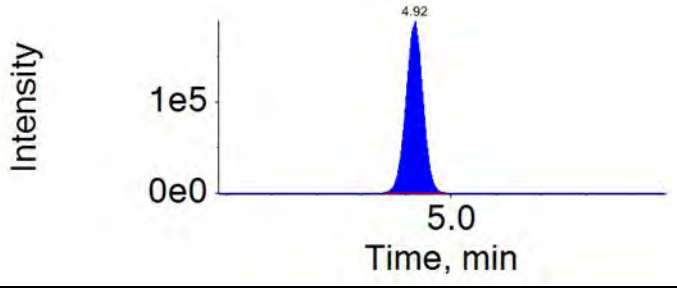




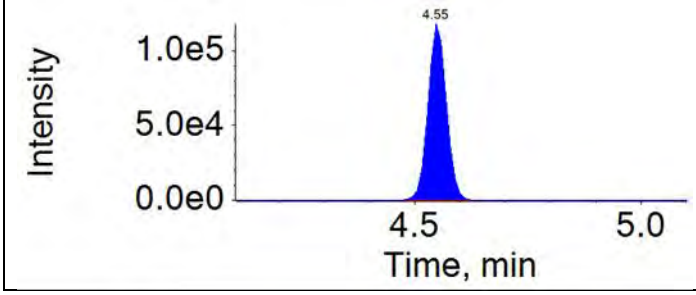
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

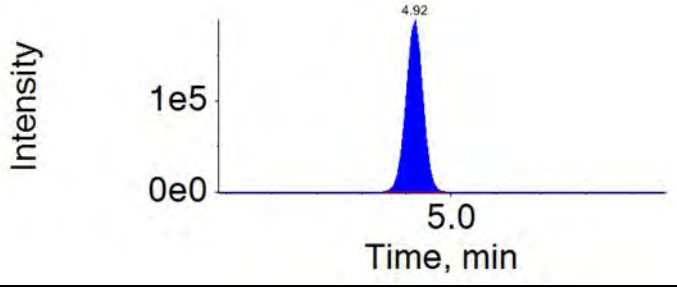
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



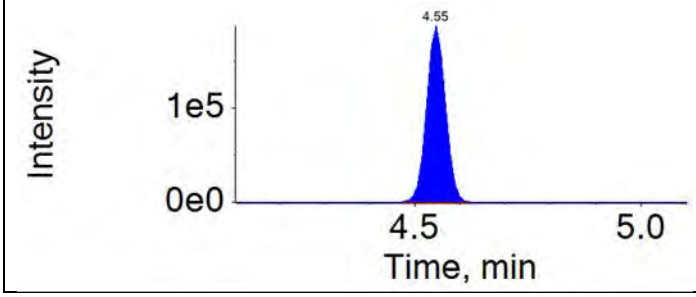


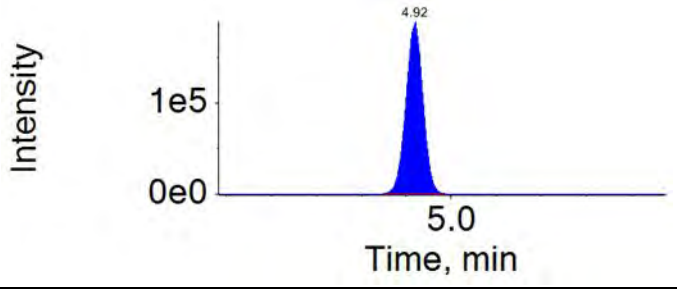
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



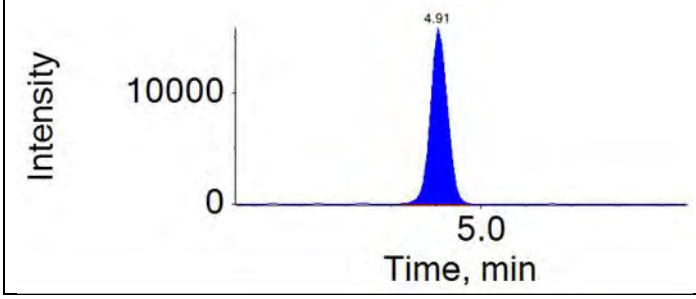


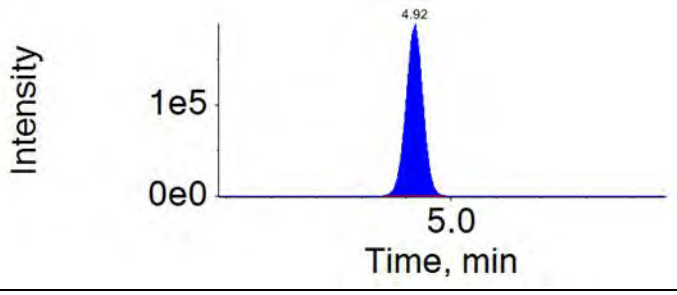
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

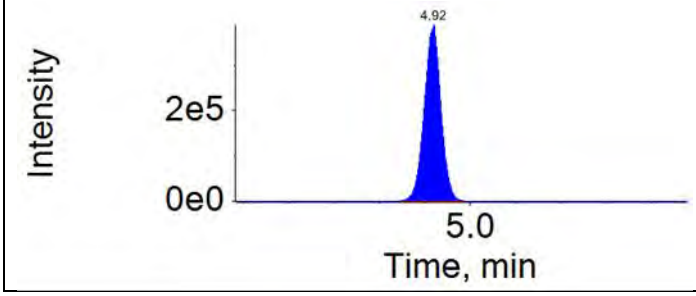
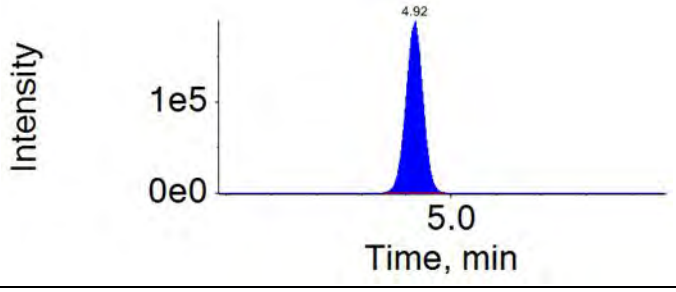


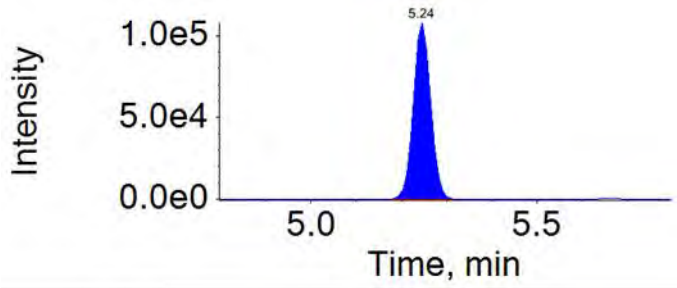
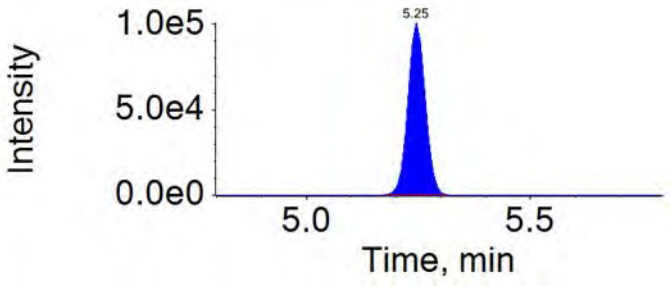


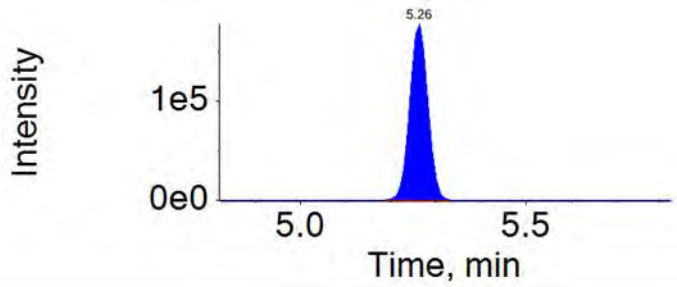
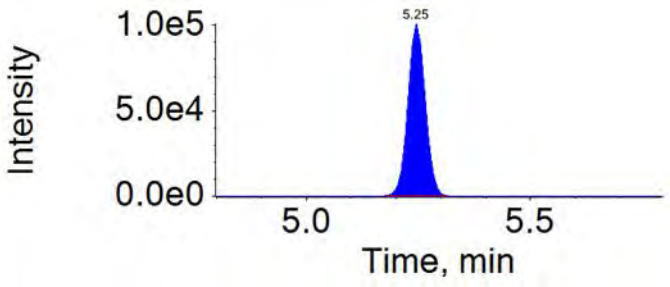
APPROVED
By JPT at 10:55 am, 11/9/18

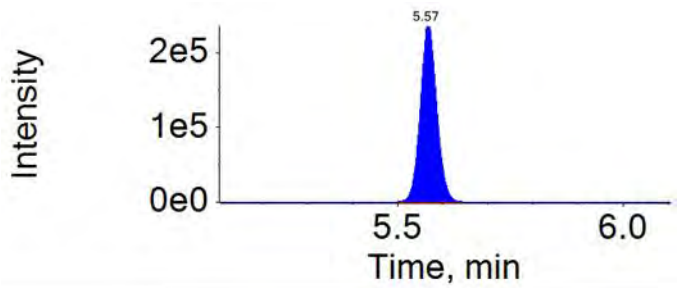
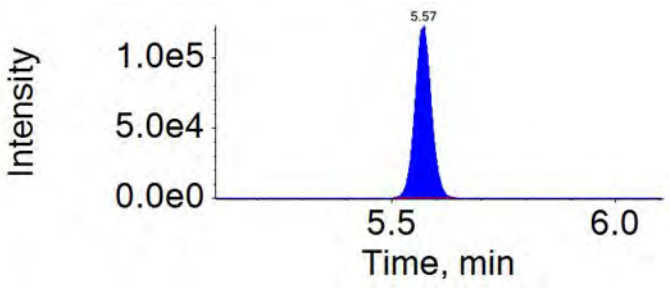
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

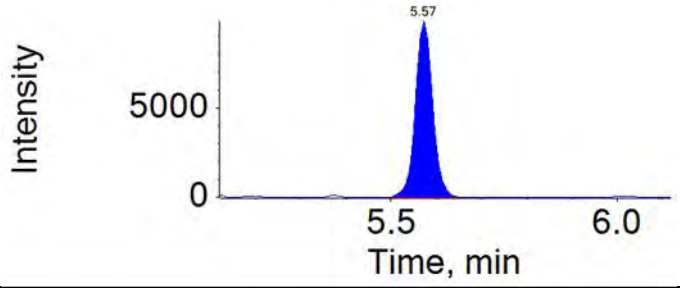
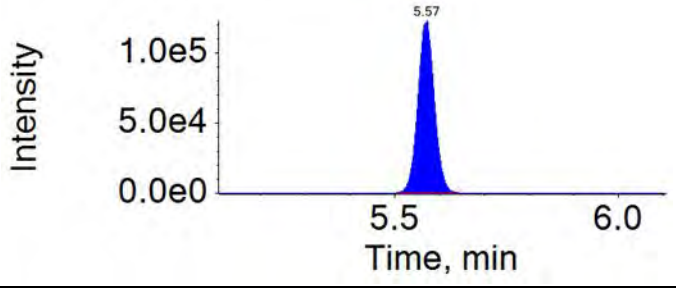
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

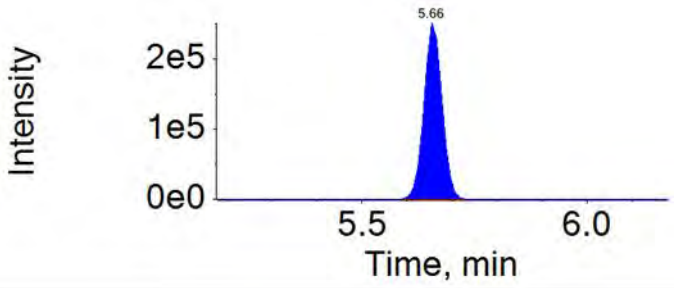
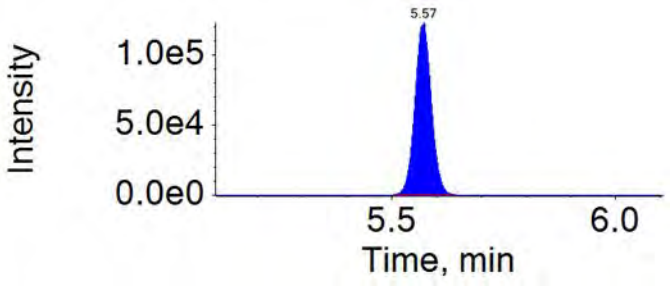
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

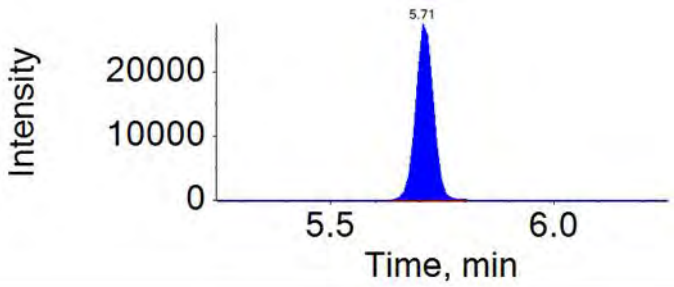
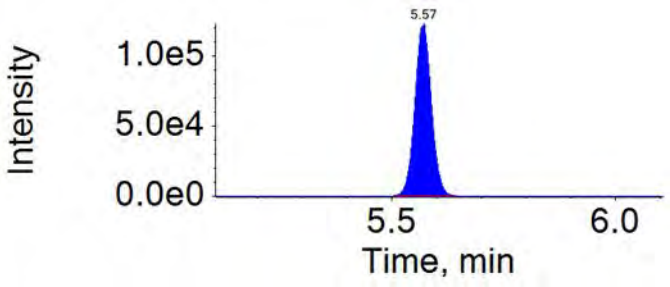
APPROVED
By JPT at 10:55 am, 11/9/18

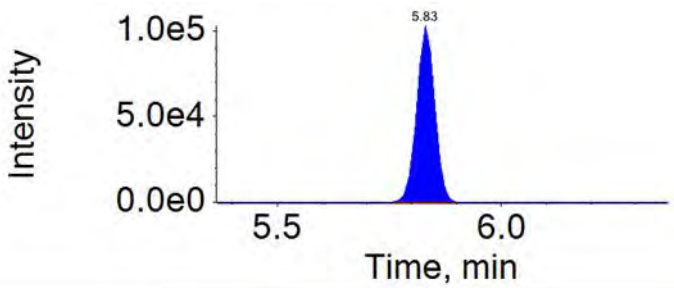
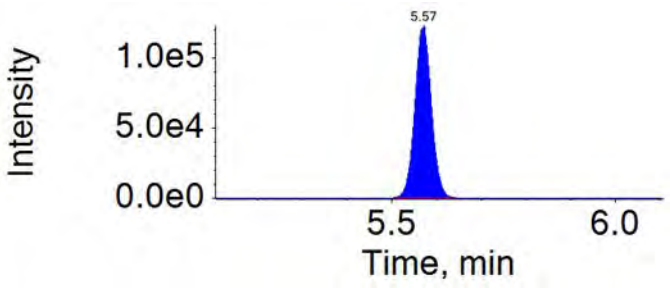
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

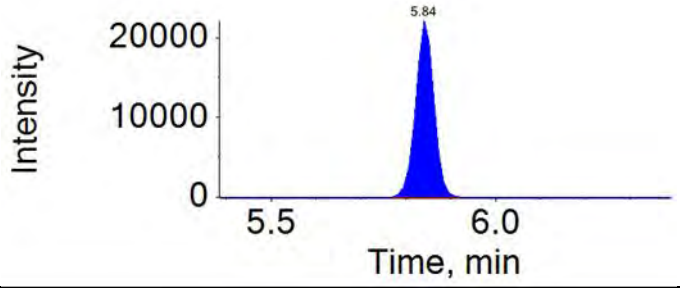
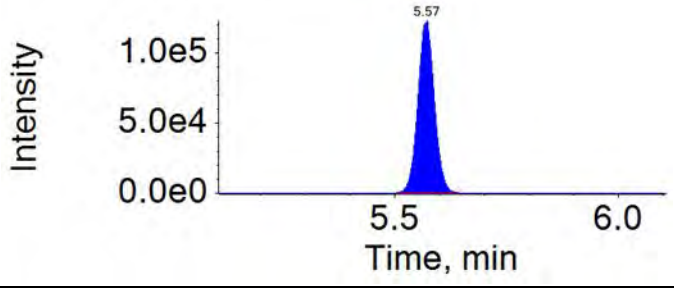
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

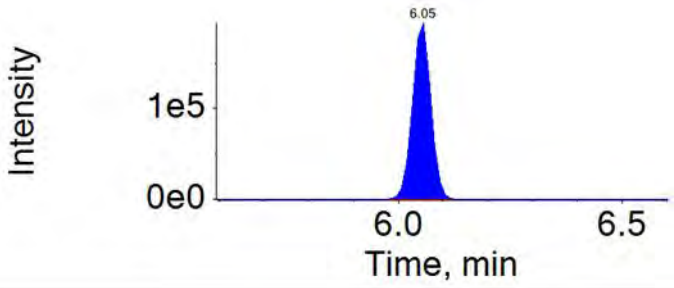
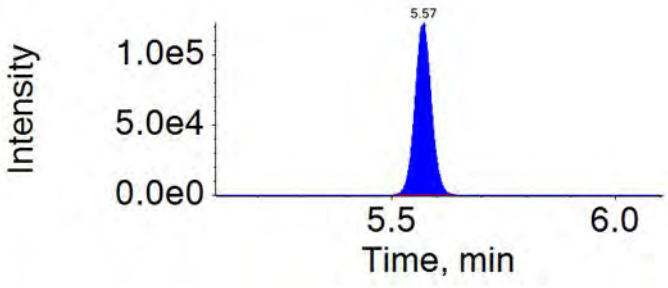
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

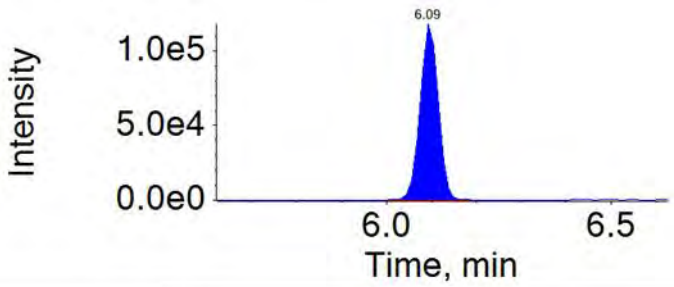
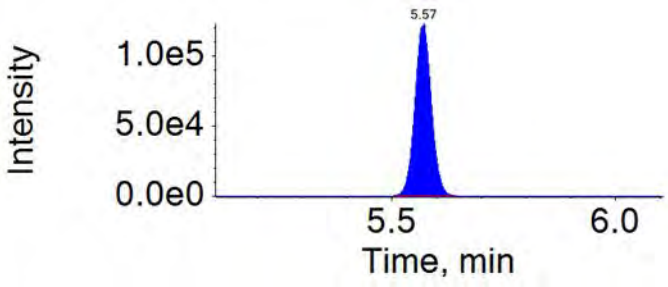
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

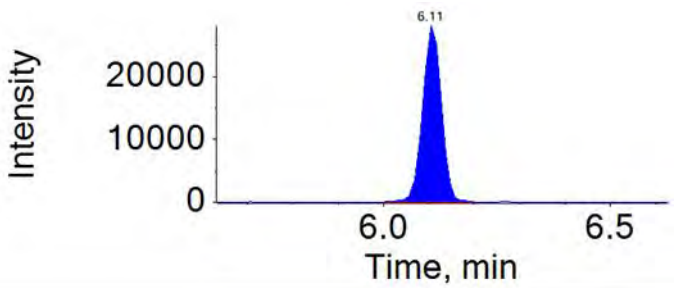
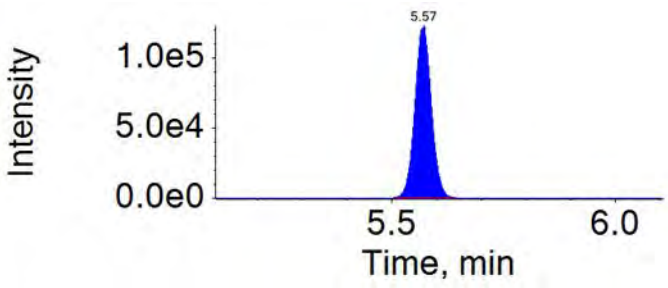
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

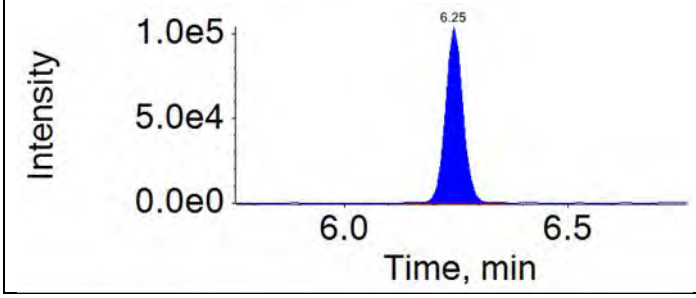
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

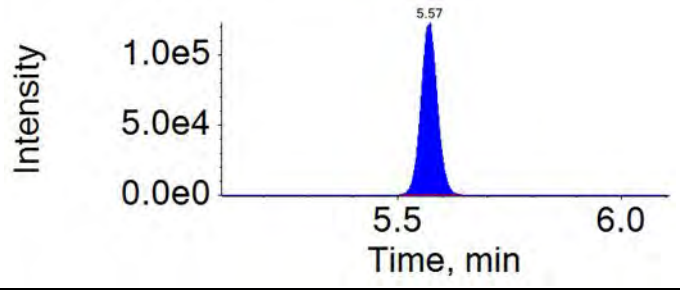
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

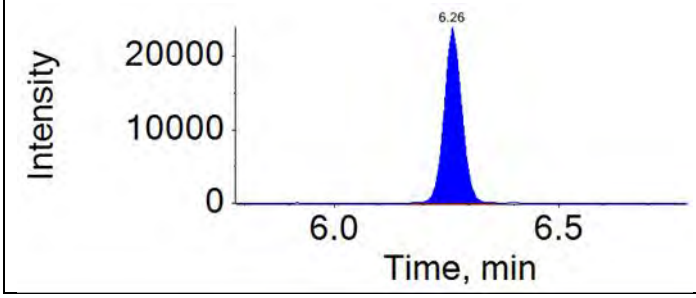
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

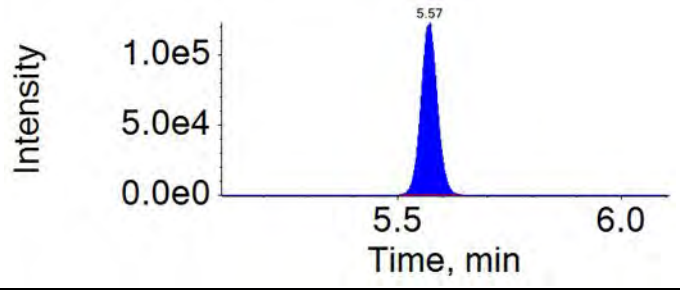
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



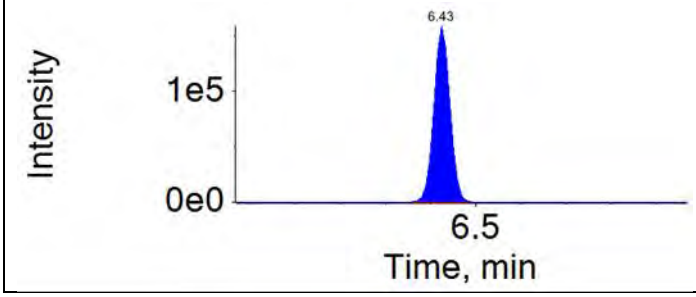


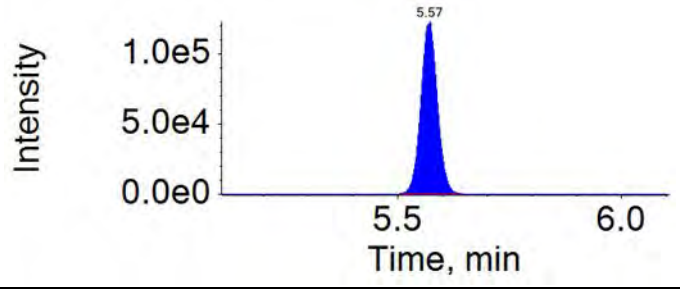
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





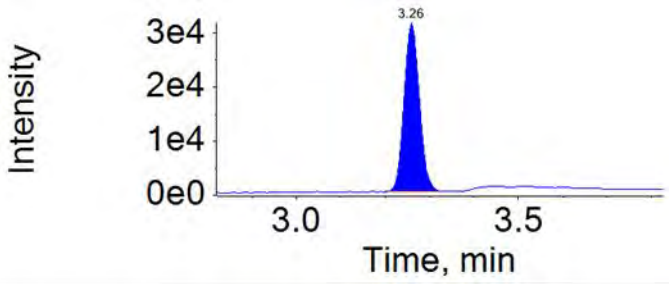
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

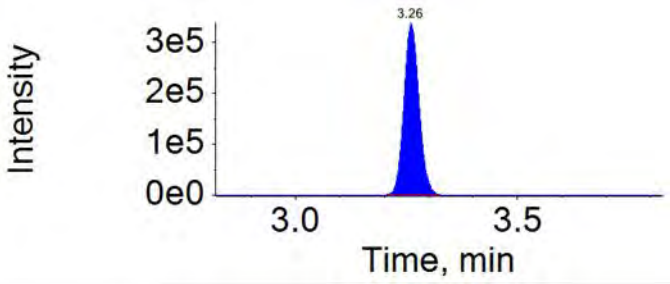




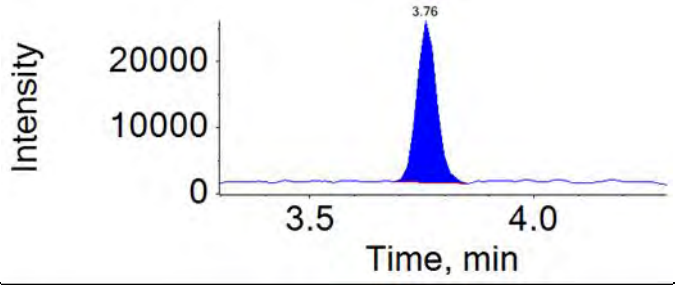
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

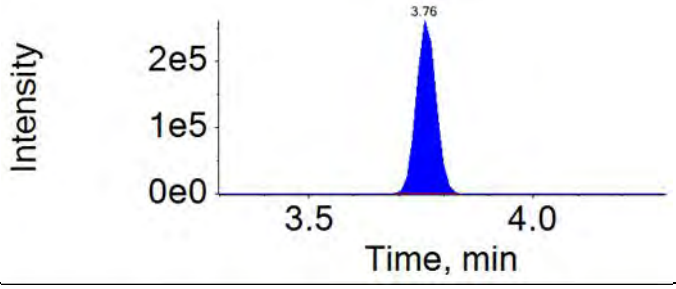
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



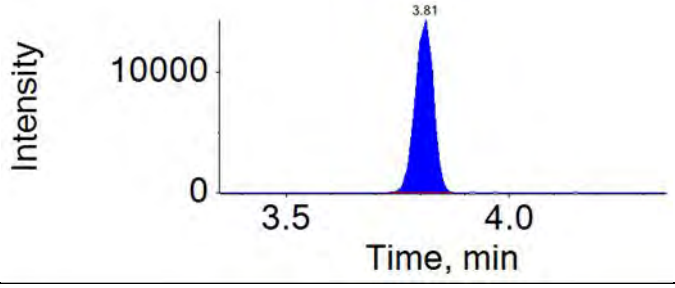


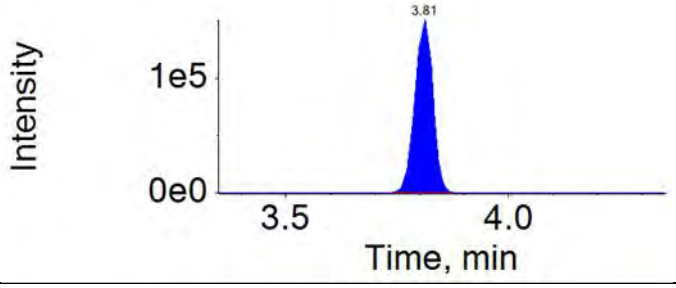
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



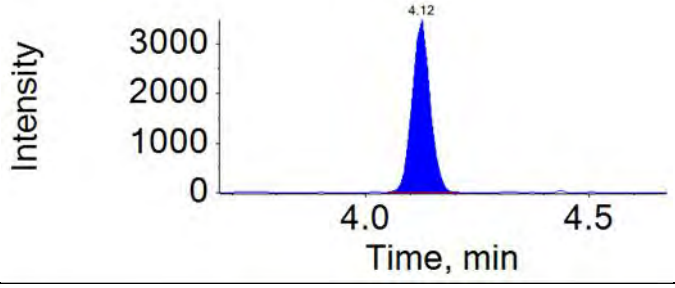


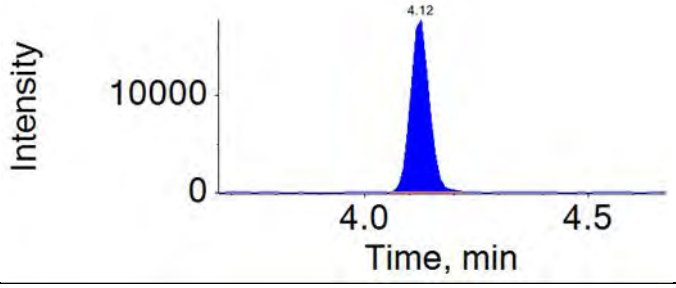
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



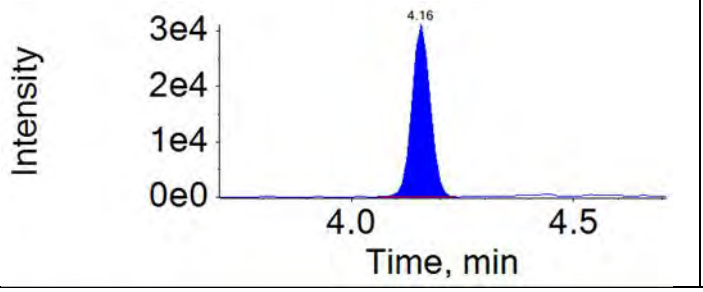


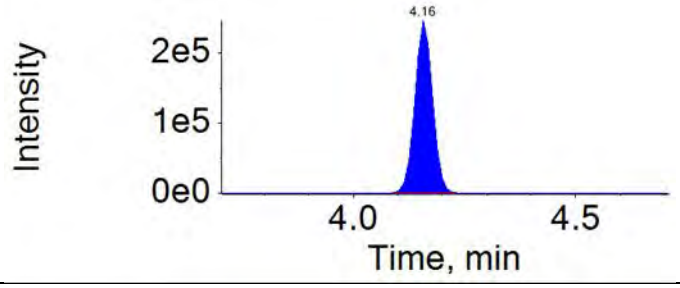
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

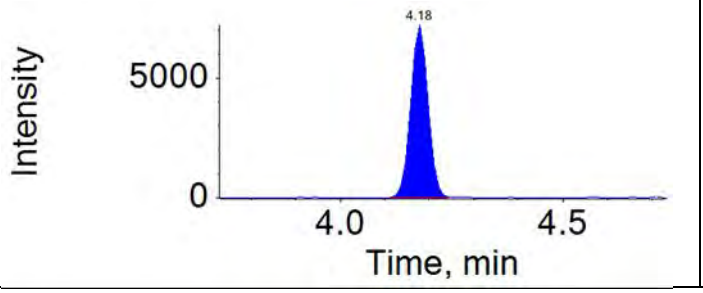
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

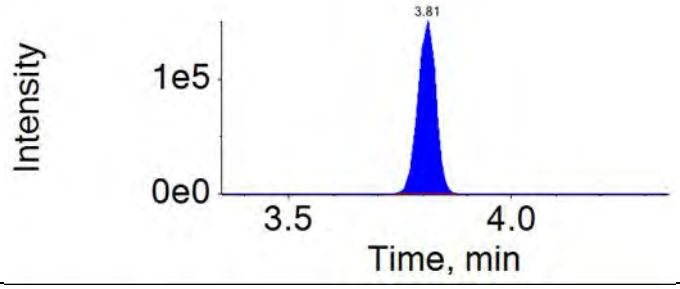
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



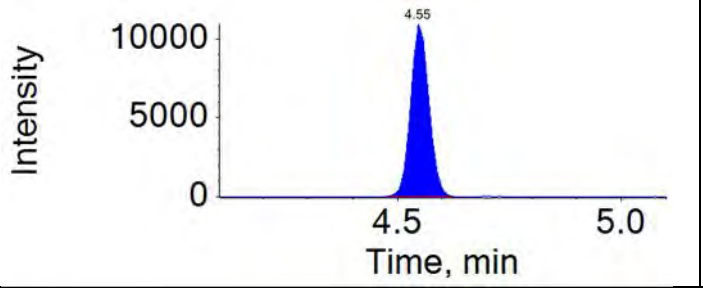


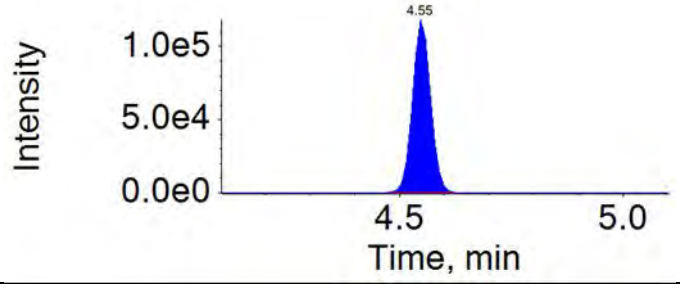
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



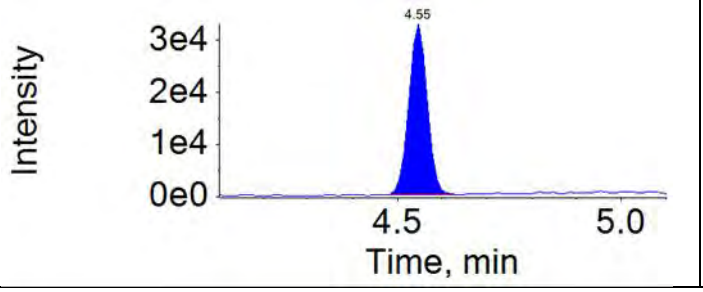


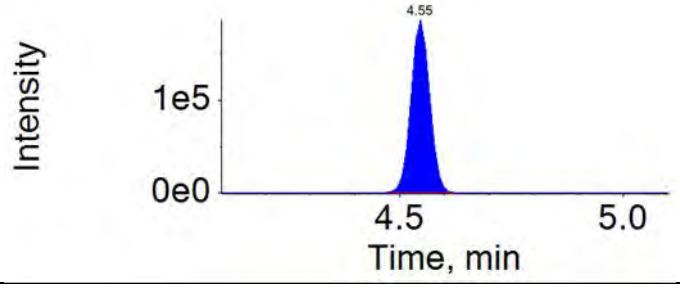
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

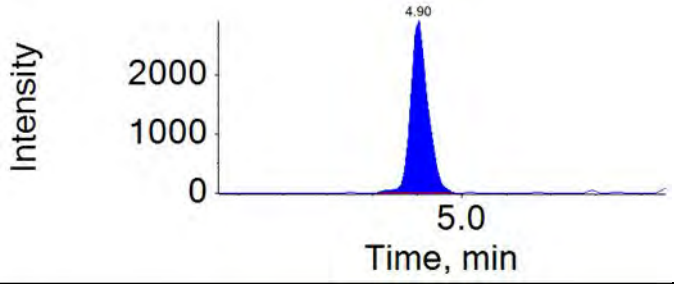
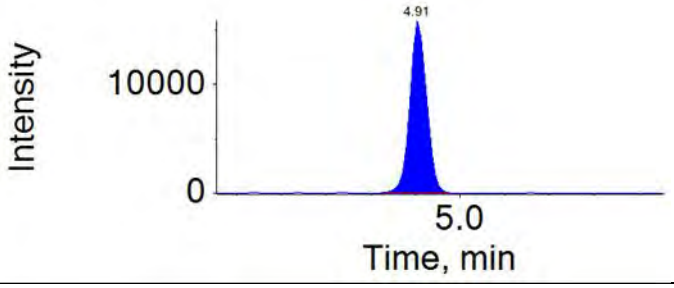


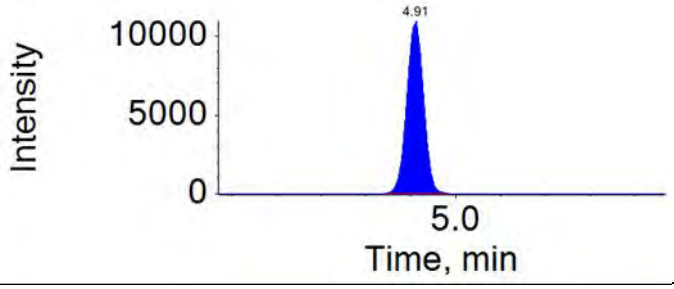
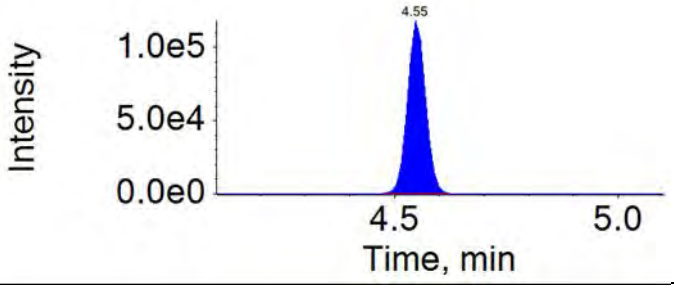


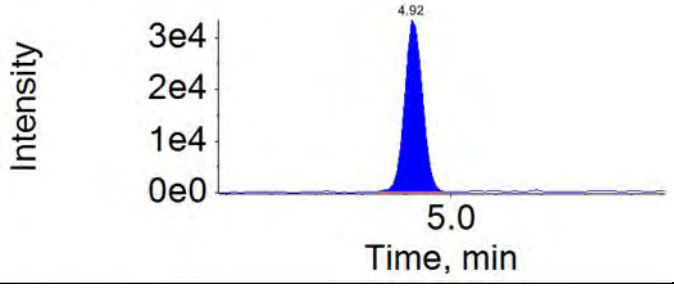
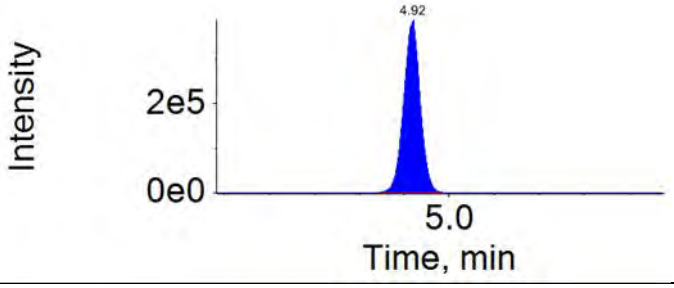
APPROVED
By JPT at 10:55 am, 11/9/18

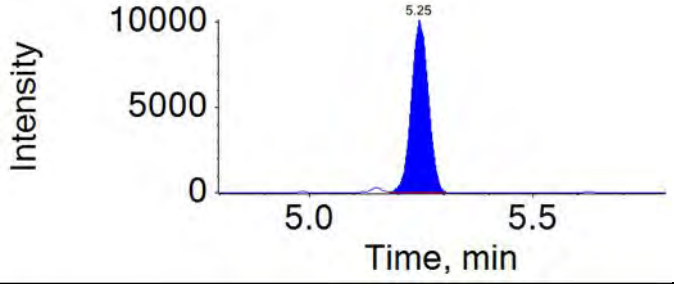
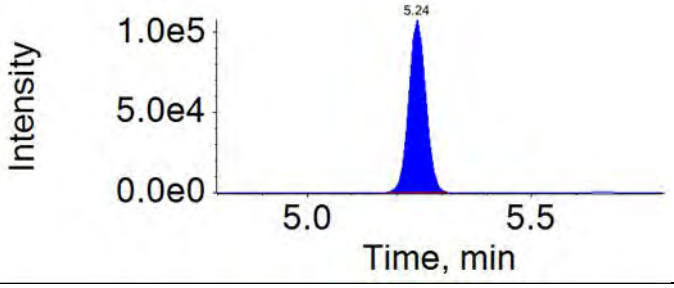
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

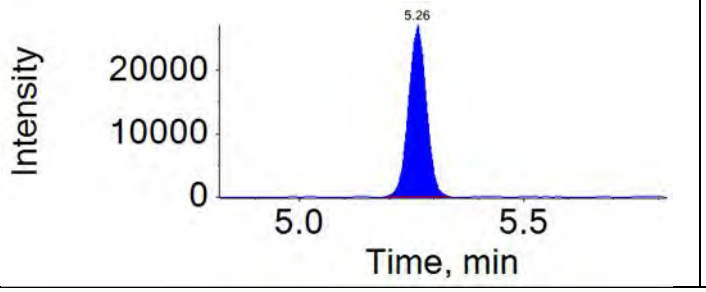
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

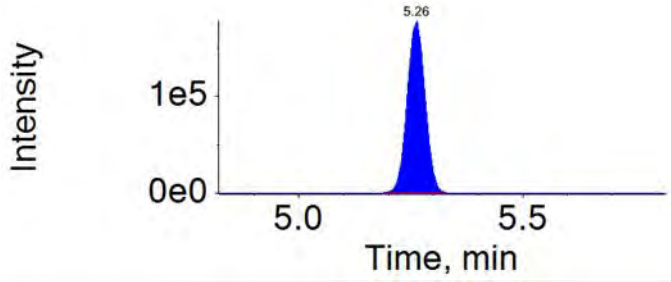
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

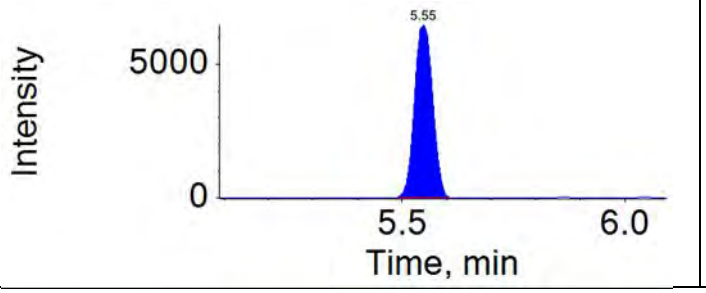
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

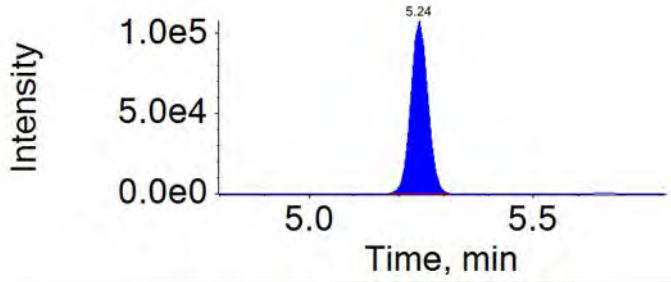
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



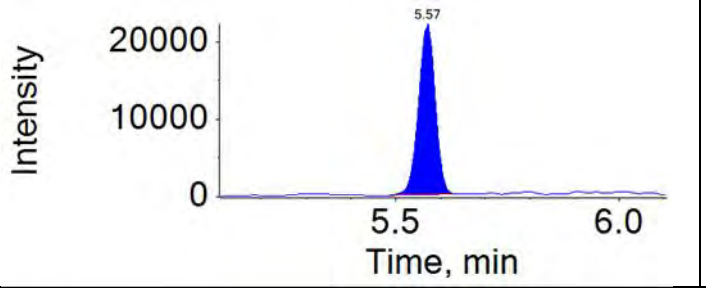


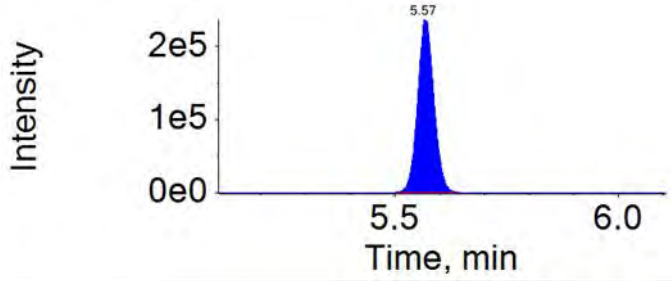
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



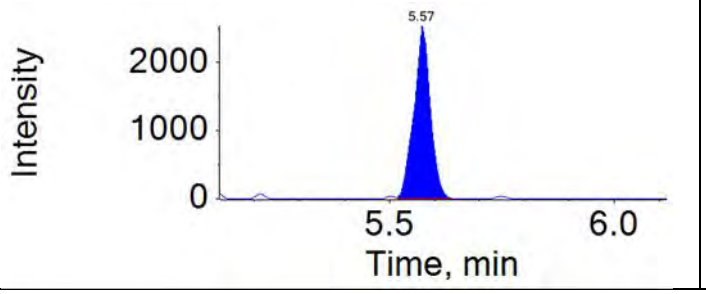


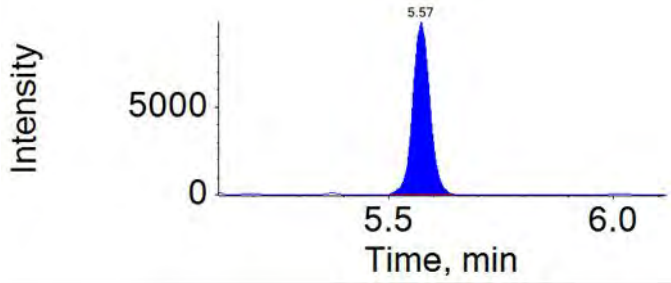
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



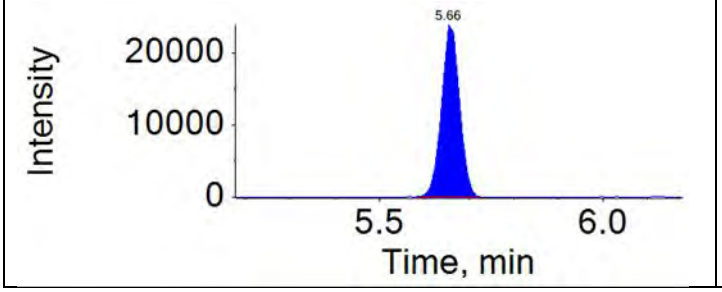


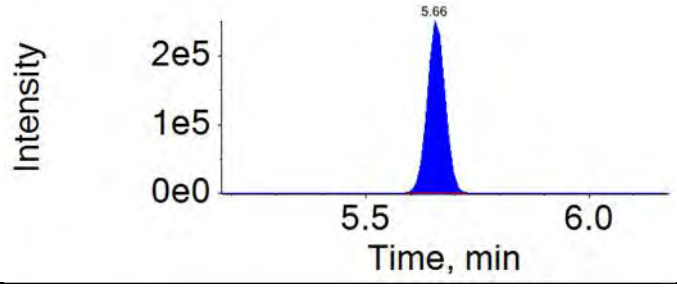
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

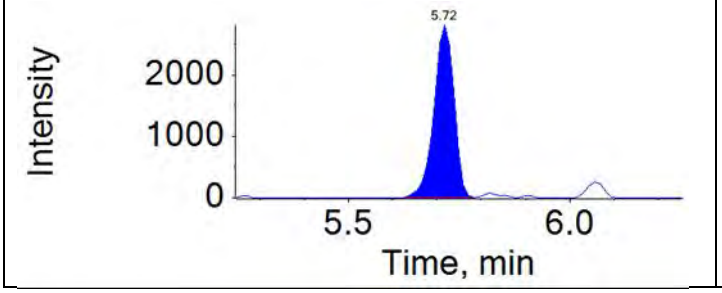
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

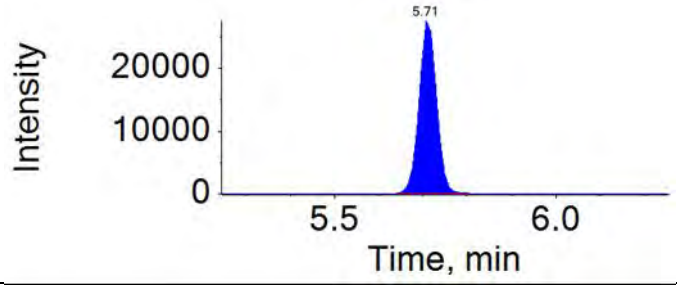
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



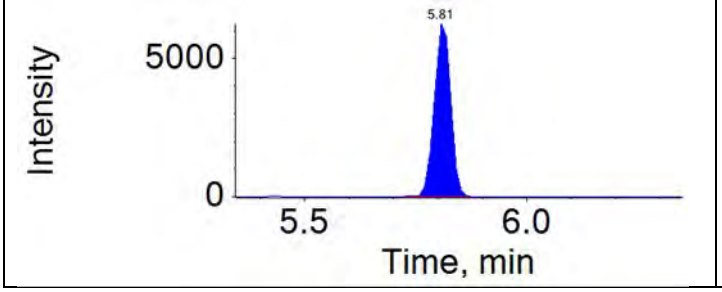


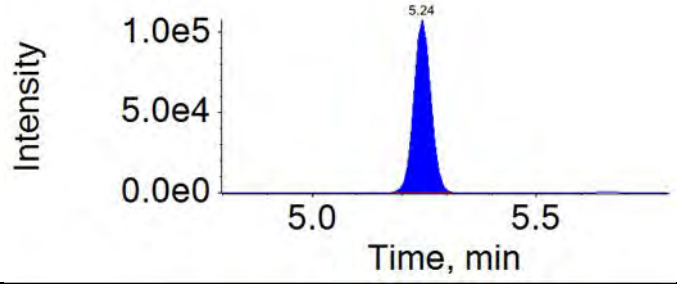
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



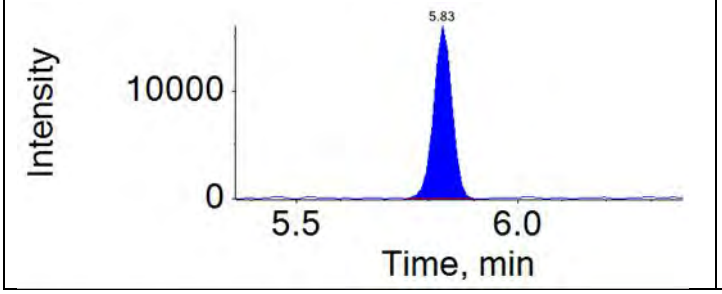


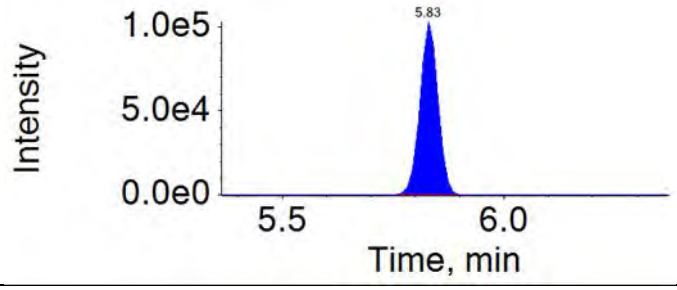
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

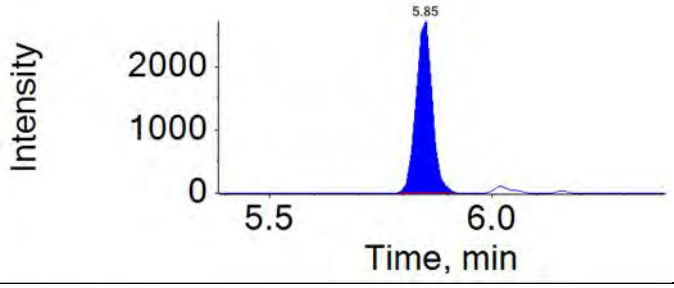
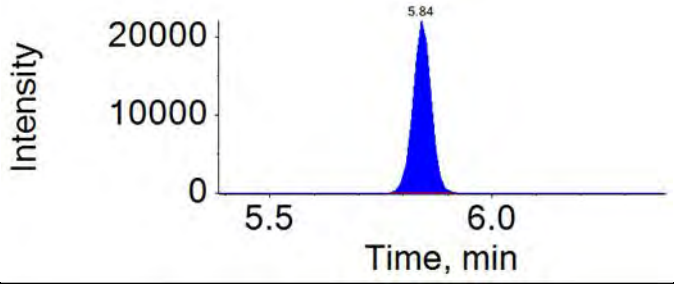


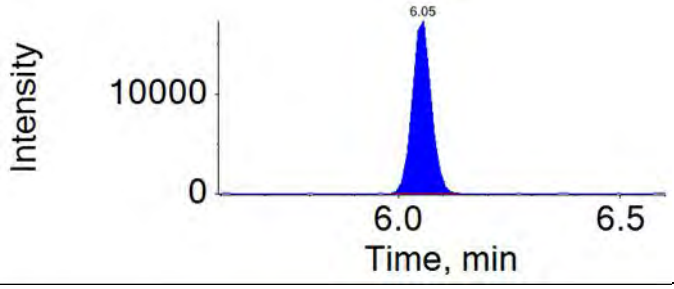
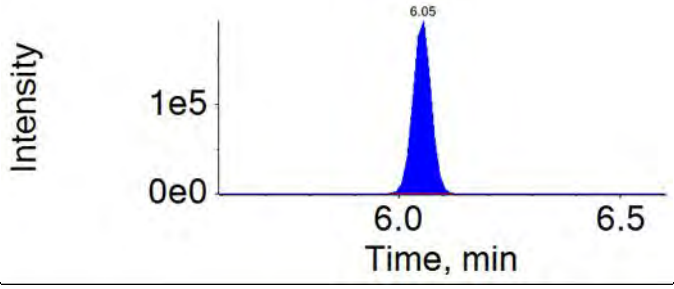


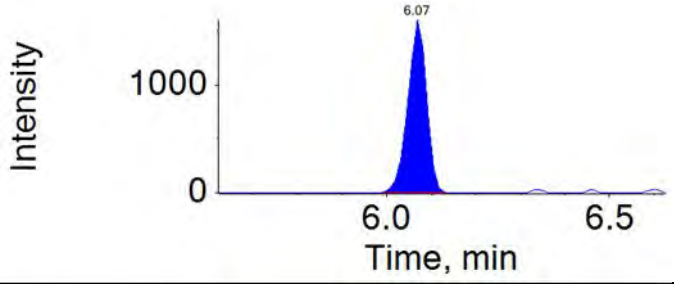
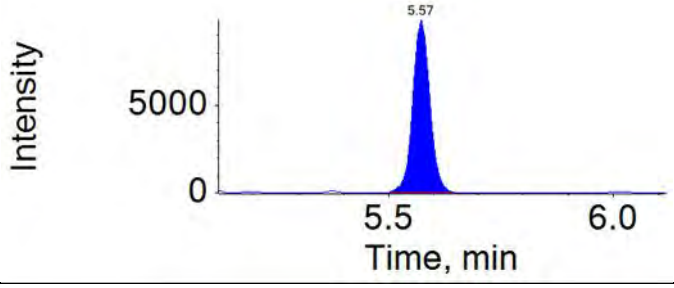
APPROVED
By JPT at 10:55 am, 11/9/18

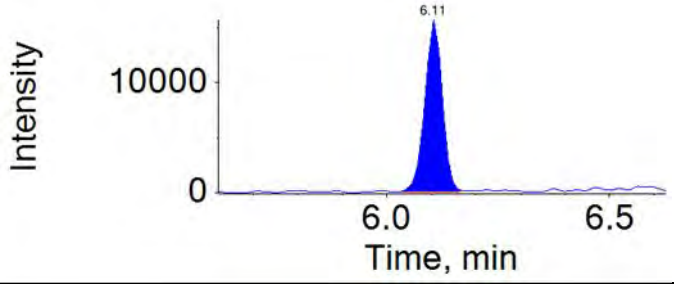
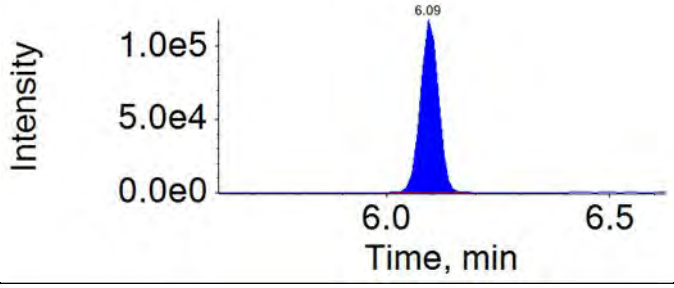
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

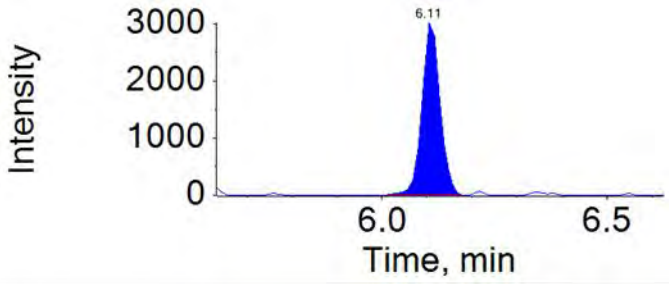
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

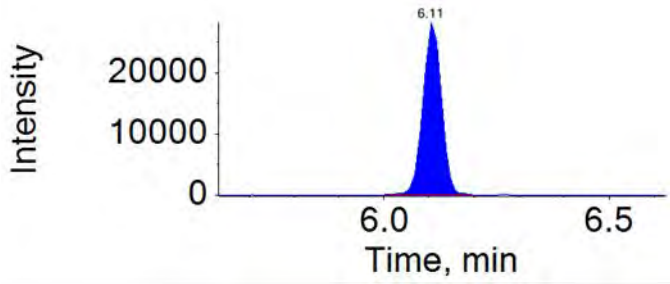
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

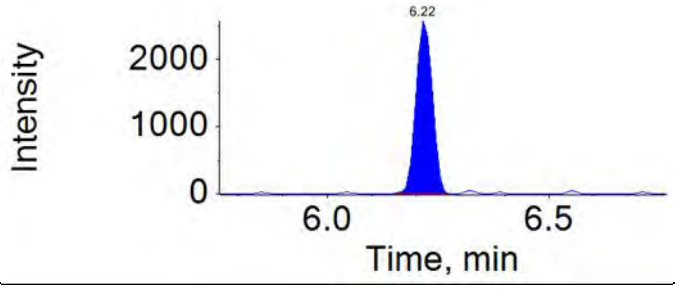
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

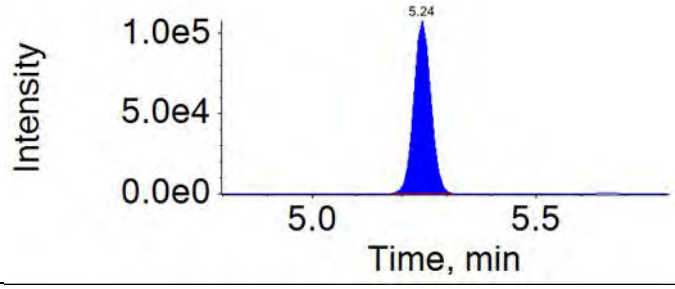
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



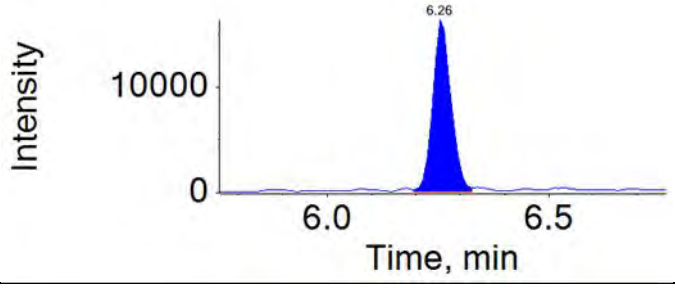


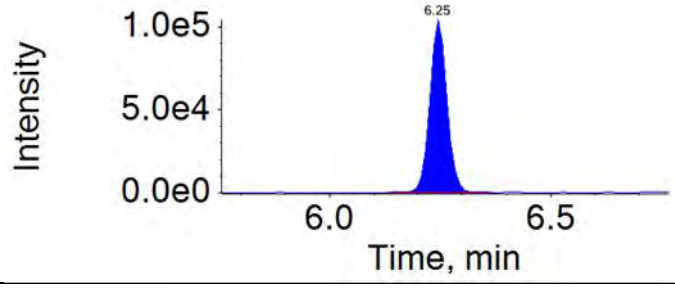
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



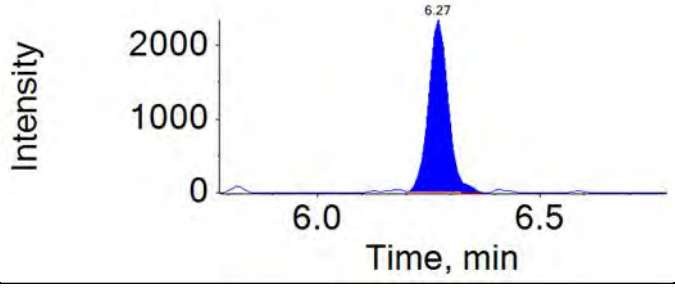


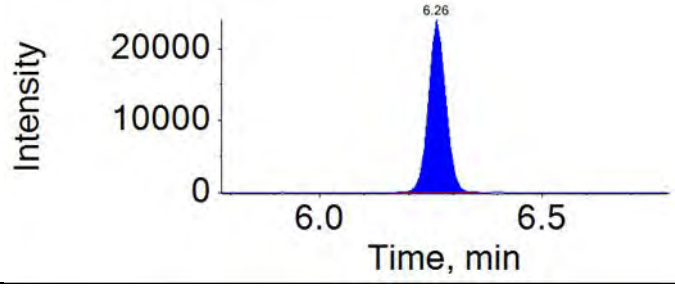
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

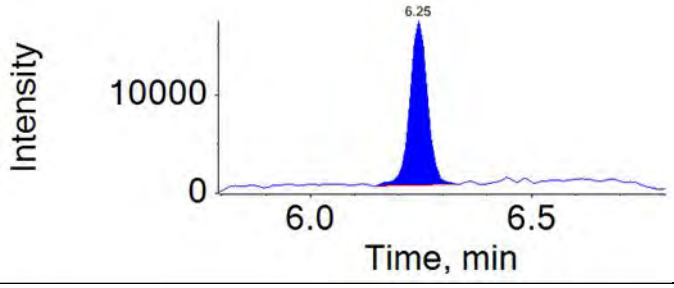
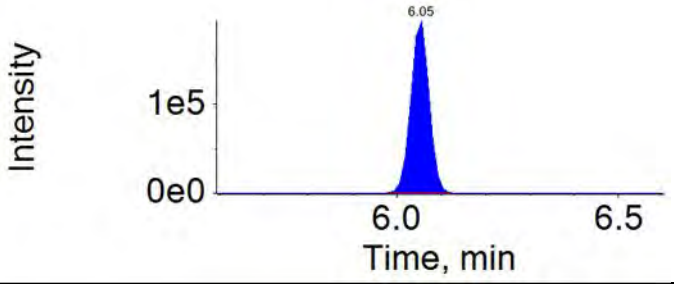


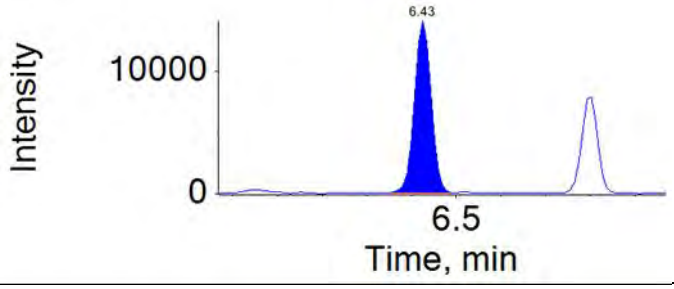
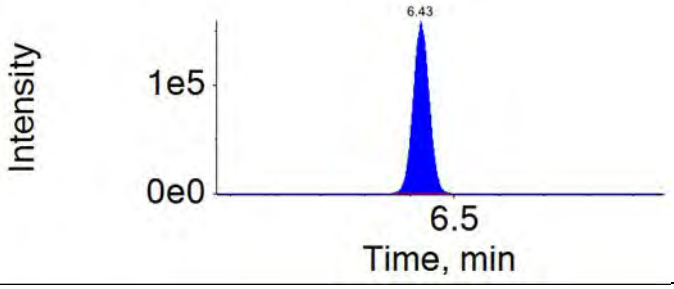


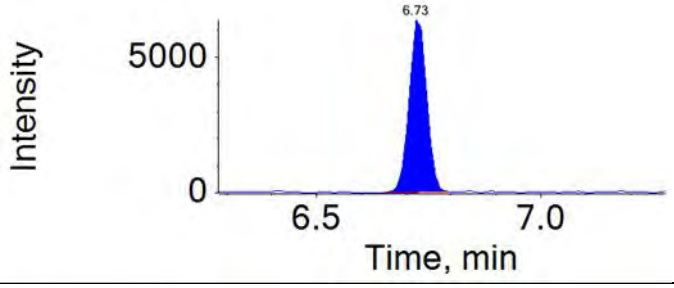
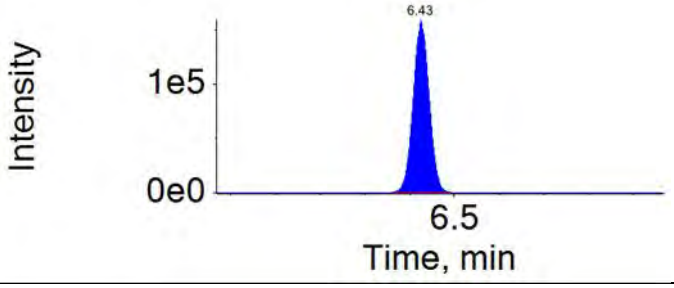
APPROVED
By JPT at 10:55 am, 11/9/18

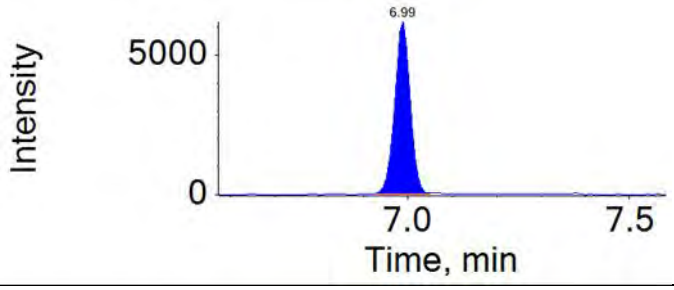
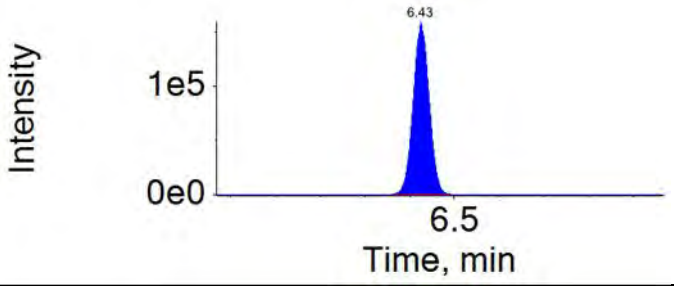
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

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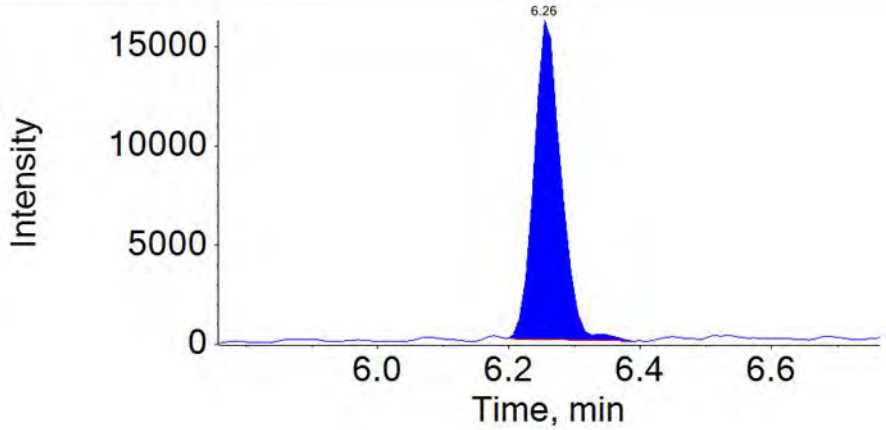
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Results Table Name: 18NOV08DCCV6-12
Results Table Date: 11/9/2018 9:21:41 AM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
NEtPFOSAE
RT (min.):
6.26
Peak Area:
45995.1
Mass Range:
630.0 / 59.0
File Name:
18NOV08D-109.wiff
Sample Name:
CCV10_ISC_CAL2



Integration Comment: incorrect integration

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By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Results Table Name: 18NOV08DCCV6-12
Results Table Date: 11/9/2018 9:21:41 AM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Ion Ratio Report

Sample Name: CCV10_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV08D-109.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	41078.3	A	N/A	1.0000			
PFBS_2	3.81	1.00	14172.1	A	N/A	0.3450	-4	50	
4:2-FTS	4.12	1.00	9663.4	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	5879.1	A	N/A	0.6084	-4	50	
PFHxA	4.16	1.00	88198.5	A	N/A	1.0000			
PFHxA_2	4.16	1.00	882.8	A	N/A	0.0100	-13	50	
PFPeS	4.18	1.10	19380.9	A	N/A	1.0000			
PFPeS_2	4.18	1.10	11547.4	A	N/A	0.5958	11	50	
PFHxS	4.55	1.00	30924.8	A	N/A	1.0000			
PFHxS_2	4.55	1.00	10071.6	A	N/A	0.3257	-9	50	
PFHpA	4.55	1.00	93415.3	A	N/A	1.0000			
PFHpA_2	4.55	1.00	5086.8	A	N/A	0.0545	-6	50	
6:2-FTS	4.90	1.00	7777.7	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	4441.7	A	N/A	0.5711	-15	50	
PFHpS	4.91	1.08	28597.4	A	N/A	1.0000			
PFHpS_2	4.91	1.08	13806.2	A	N/A	0.4828	22	50	
PFOA	4.92	1.00	91880.3	A	N/A	1.0000			
PFOA_2	4.92	1.00	4946.8	A	N/A	0.0538	-15	50	
PFOS	5.25	1.00	26455.5	A	N/A	1.0000			
PFOS_2	5.24	1.00	10305.2	A	N/A	0.3895	11	50	
PFNA	5.26	1.00	74897.5	A	N/A	1.0000			
PFNA_2	5.27	1.00	1358.8	A	N/A	0.0181	-12	50	
PFNS	5.55	1.06	18460.5	A	N/A	1.0000			
PFNS_2	5.55	1.06	10198.9	A	N/A	0.5525	13	50	
PFDA	5.57	1.00	57162.3	A	N/A	1.0000			
PFDA_2	5.57	1.00	333.7	A	N/A	0.0058	3	50	
8:2-FTS	5.57	1.00	6386.5	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	4529.4	A	N/A	0.7092	15	50	
NMeFOSAA	5.72	1.00	8840.9	A	N/A	1.0000			
NMeFOSAA_2	5.72	1.00	1870.4	A	N/A	0.2116	-4	50	
PFDS	5.81	1.11	16096.0	A	N/A	1.0000			
PFDS_2	5.81	1.11	8090.4	A	N/A	0.5026	8	50	
PFUnDA	5.83	1.00	45466.7	A	N/A	1.0000			
PFUnDA_2	5.82	1.00	71.4	A	N/A	0.0016	-50	50	
NEtFOSAA	5.85	1.00	6910.6	A	N/A	1.0000			
NEtFOSAA_2	5.85	1.00	4213.5	A	N/A	0.6097	0	50	
PFDoDA	6.05	1.00	51308.0	A	N/A	1.0000			
PFDoDA_2	6.06	1.00	545.8	A	N/A	0.0106	-3	50	
10:2-FTS	6.07	1.09	4668.0	A	N/A	1.0000			
10:2-FTS_2	6.07	1.09	3114.5	A	N/A	0.6672	-6	50	
PFTrDA	6.25	1.03	45642.7	A	N/A	1.0000			
PFTrDA_2	6.25	1.03	503.2	A	N/A	0.0110	15	50	
PFTeDA	6.43	1.00	36443.3	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	218.1	A	N/A	0.0060	8	50	
PFHxDA	6.73	1.05	17348.7	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	1167.5	A	N/A	0.0673	13	50	

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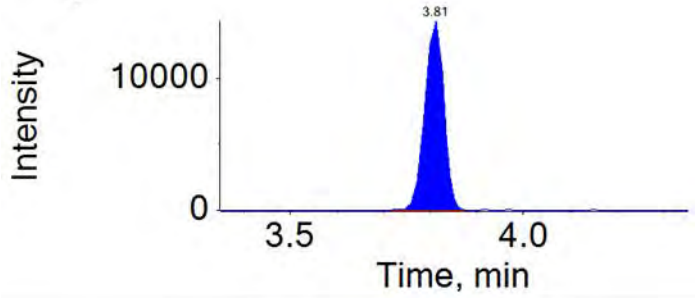
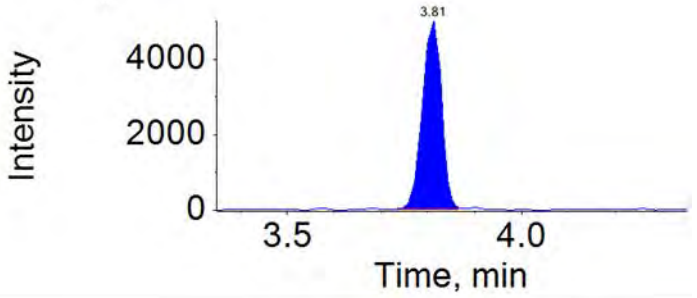
By umar at 3:41 pm, 11/12/18

PFODA	6.99	1.09	14871.1	A	N/A	1.0000			
PFODA_2	6.99	1.09	320.0	A	N/A	0.0215	-16	50	

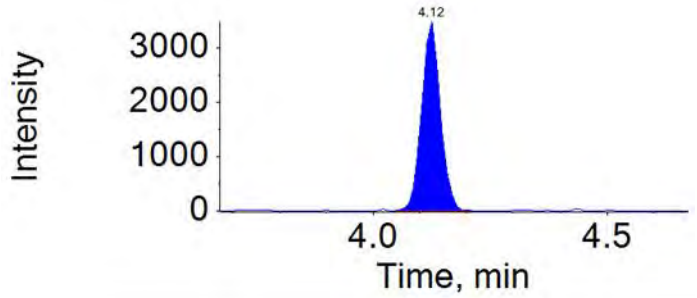
Component: PFBS
Primary Mass: 299.0 / 80.0



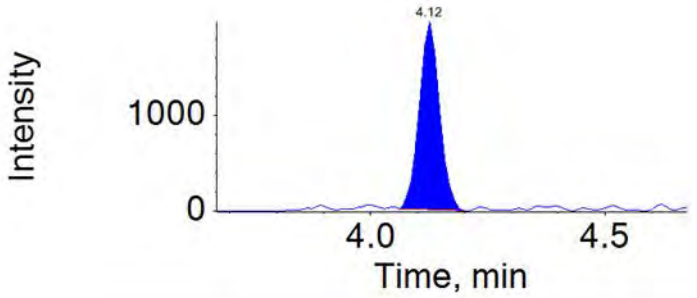
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



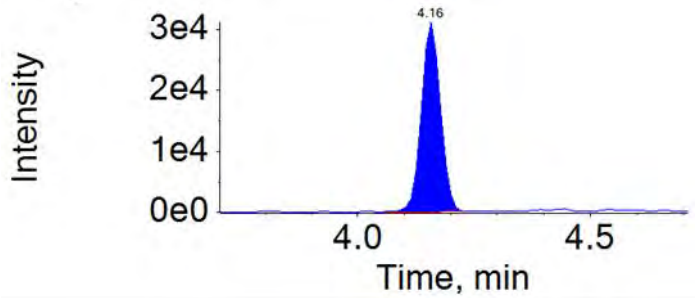
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



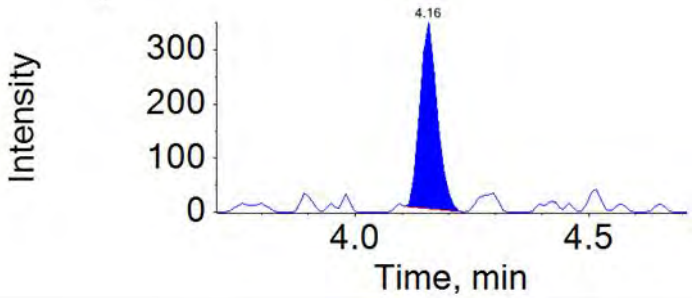
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



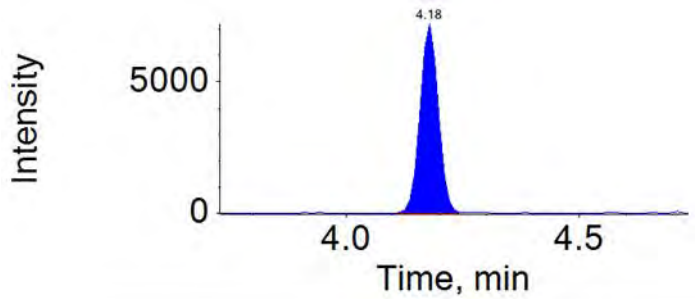
Component: PFHxA
Primary Mass: 313.0 / 269.0



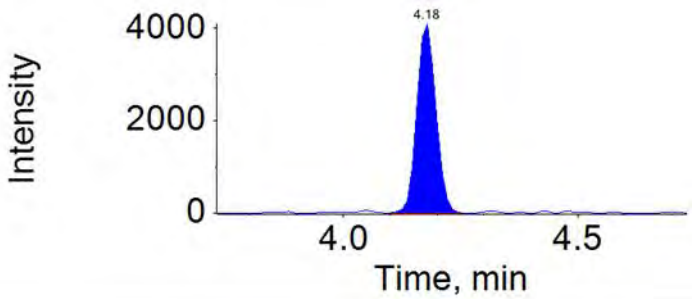
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 10:55 am, 11/9/18

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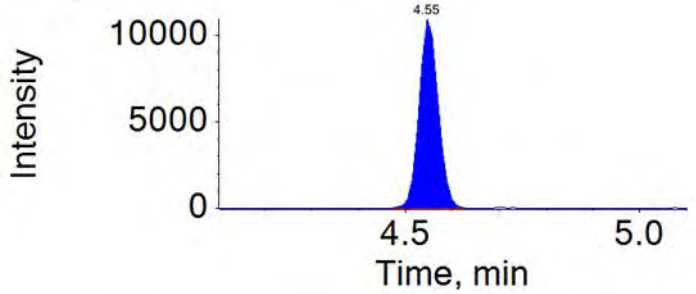
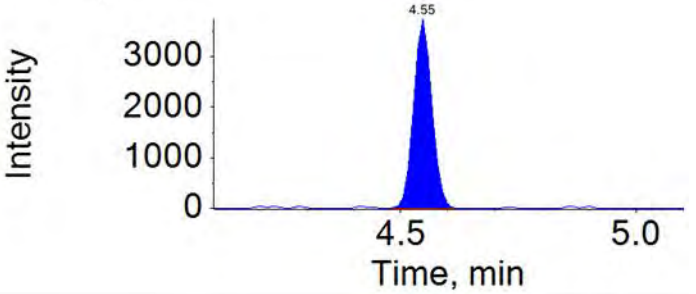
By umar at 3:41 pm, 11/12/18

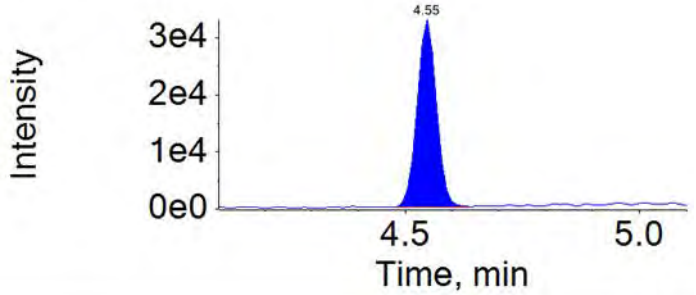
Component: PFHxS
Primary Mass: 399.0 / 80.0



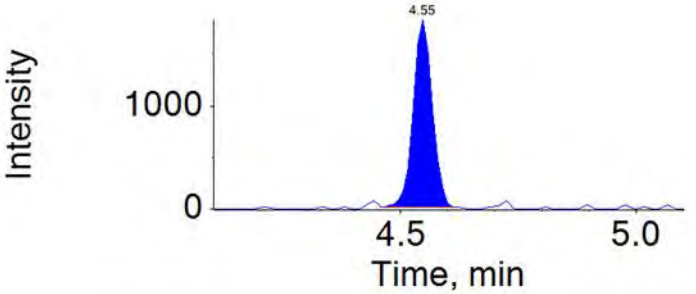
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



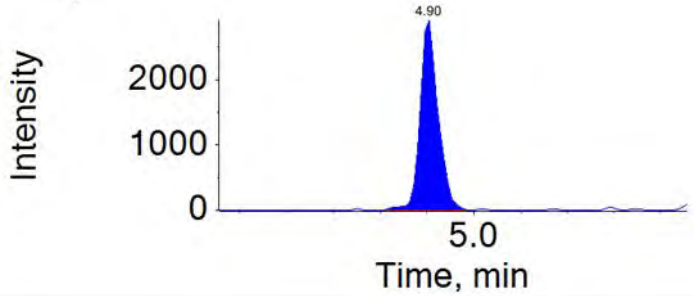
Component: PFHpA
Primary Mass: 363.0 / 319.0



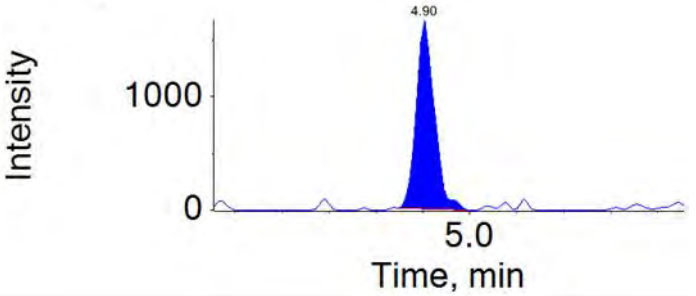
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



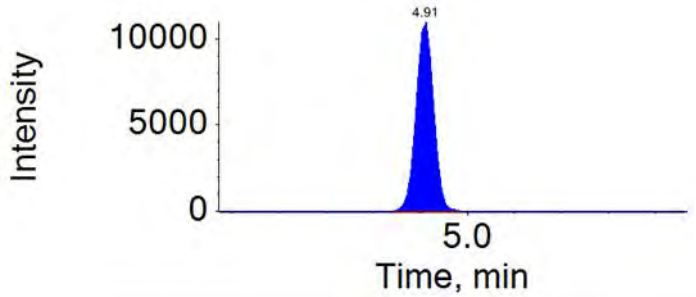
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



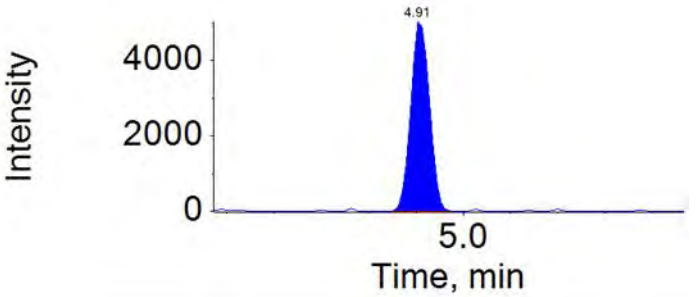
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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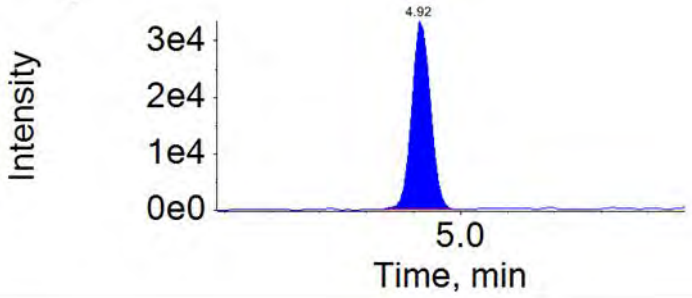
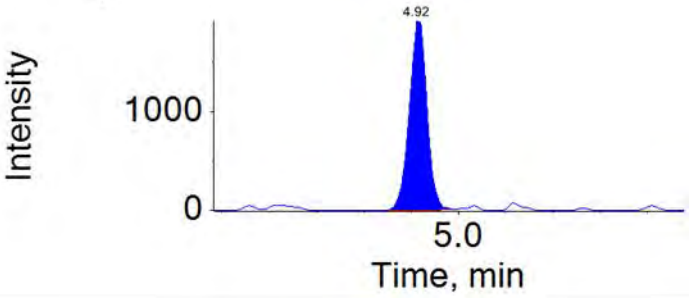
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

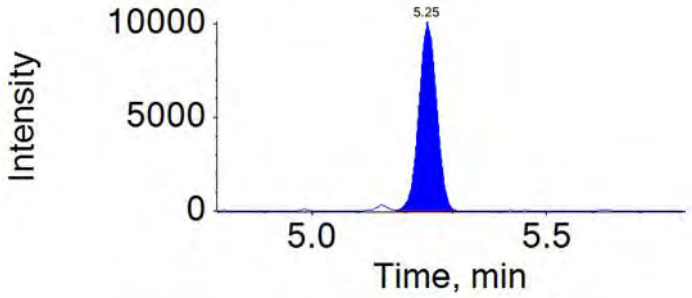
Component: PFOA
Primary Mass: 413.0 / 369.0



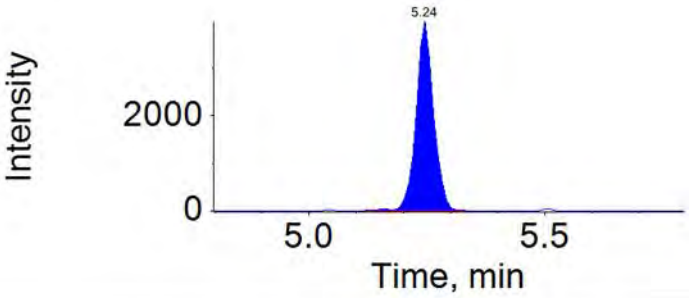
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



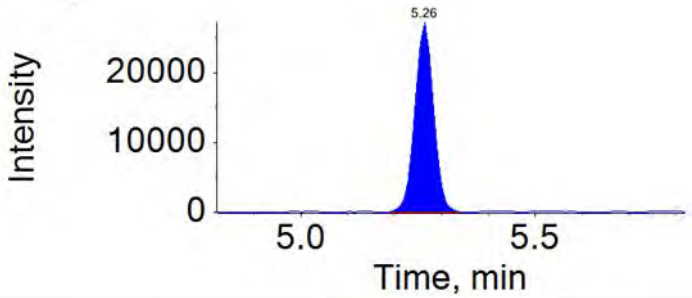
Component: PFOS
Primary Mass: 499.0 / 80.0



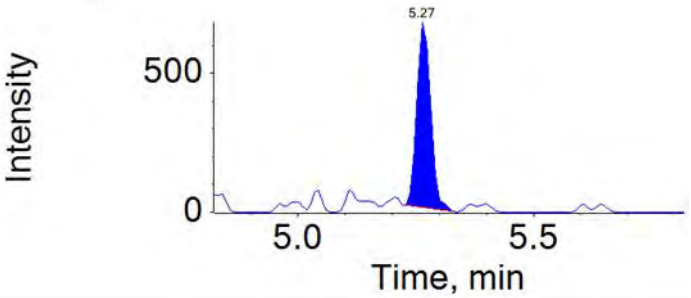
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



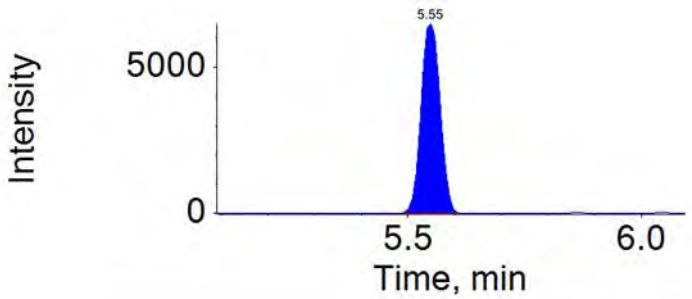
Component: PFNA
Primary Mass: 463.0 / 419.0



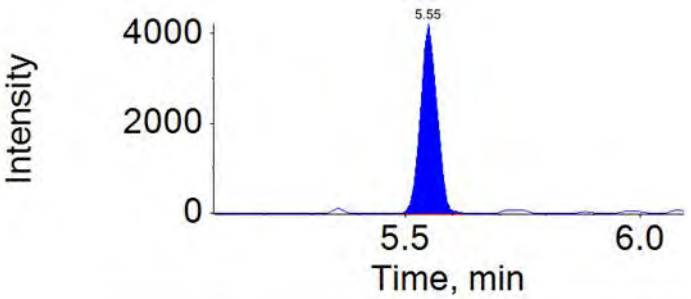
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



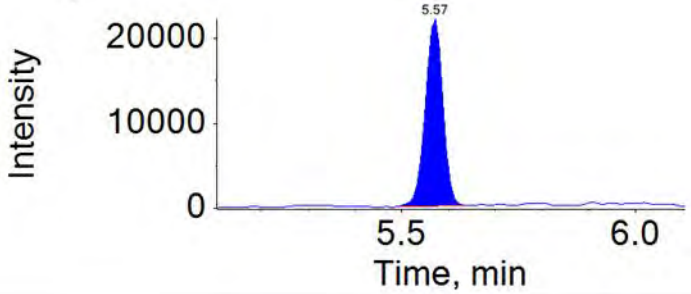
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



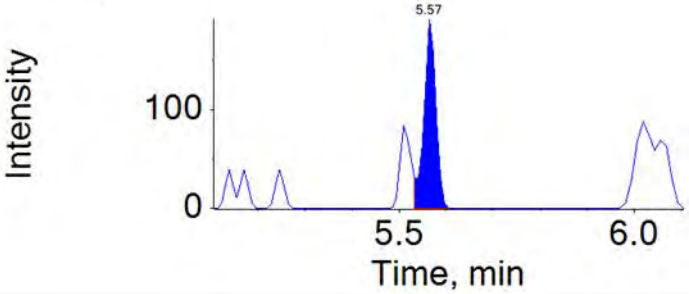
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

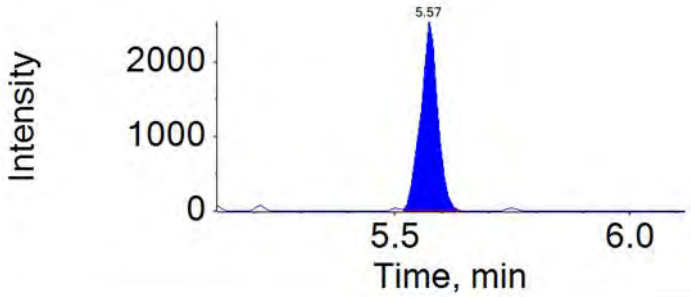
Component: PFDA
Primary Mass: 513.0 / 469.0



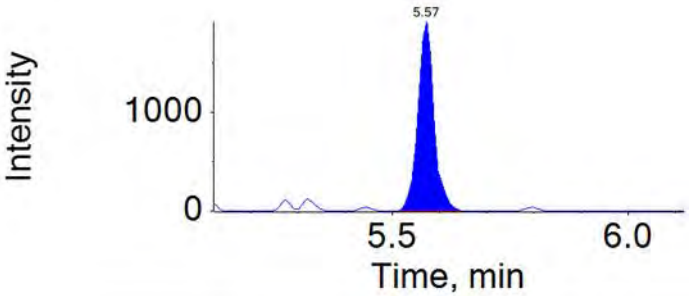
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



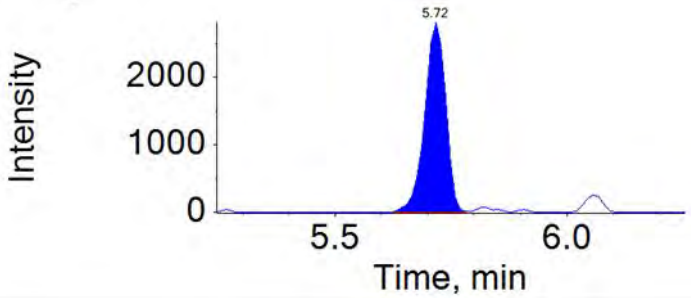
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



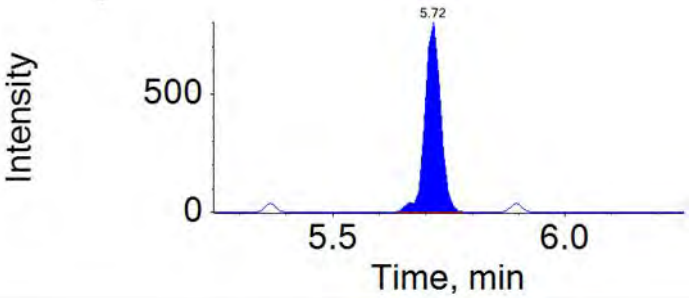
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



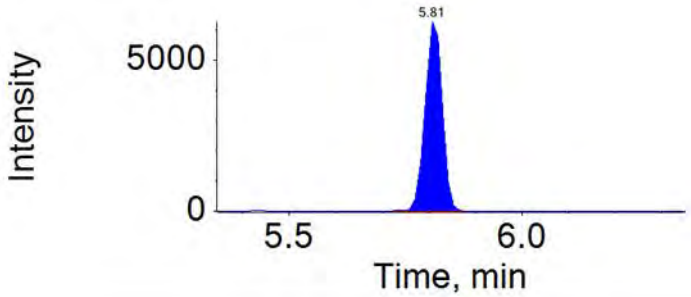
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



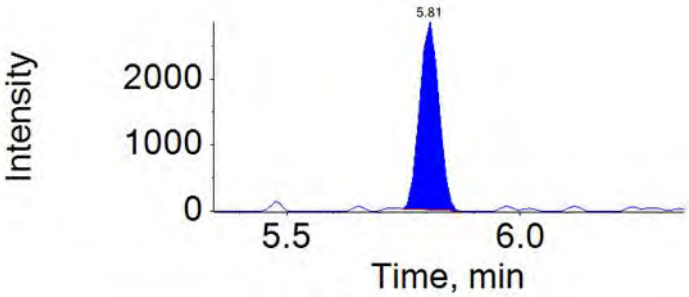
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



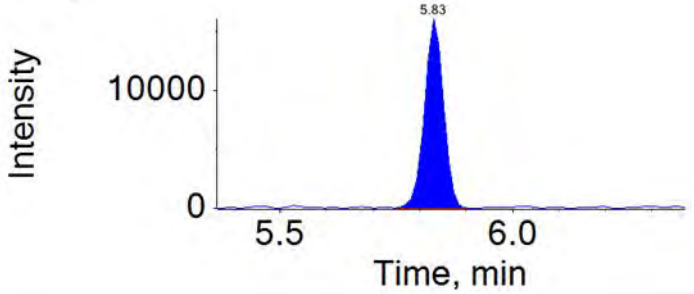
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



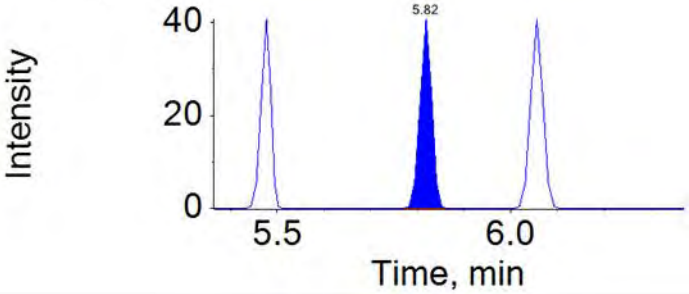
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

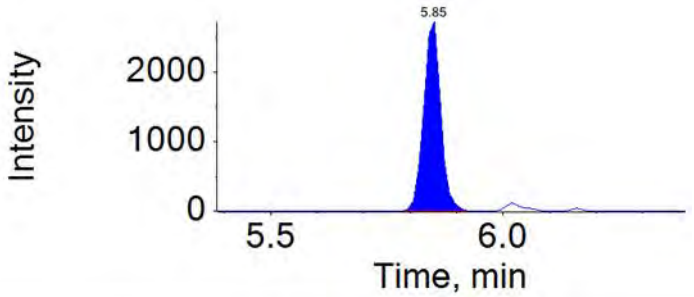
Component: PFUnDA
Primary Mass: 563.0 / 519.0



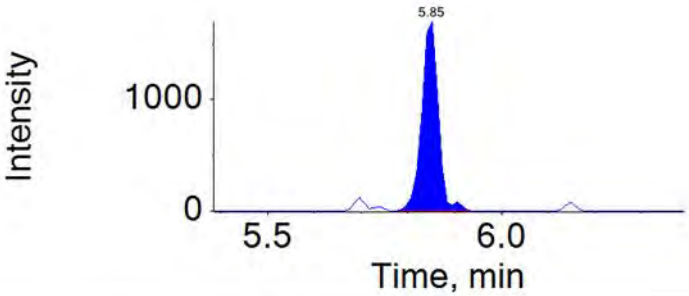
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



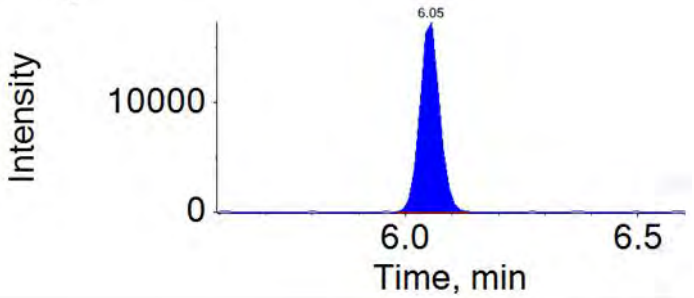
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



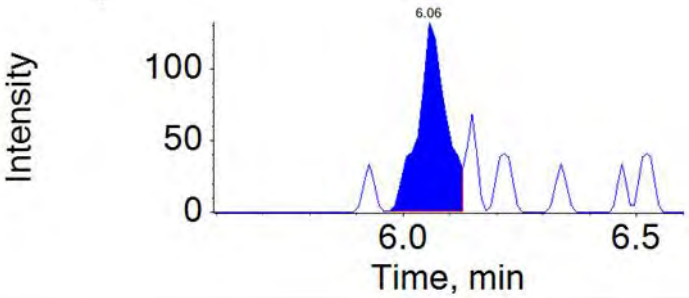
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



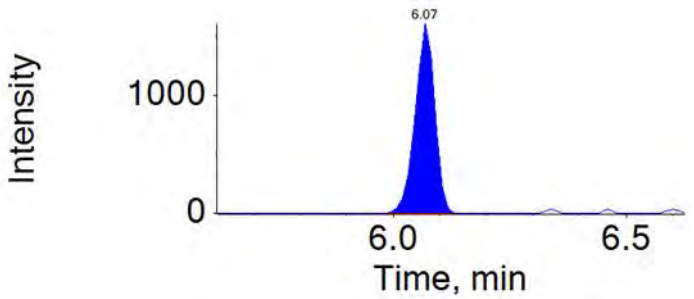
Component: PFDoDA
Primary Mass: 613.0 / 569.0



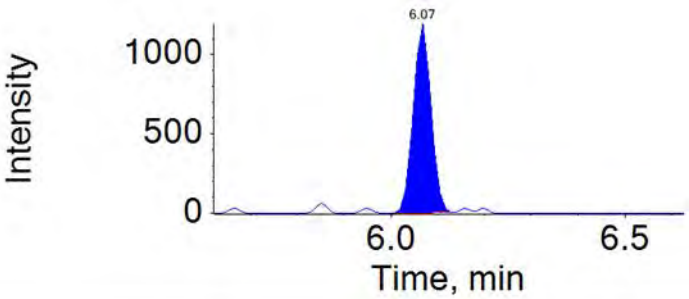
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



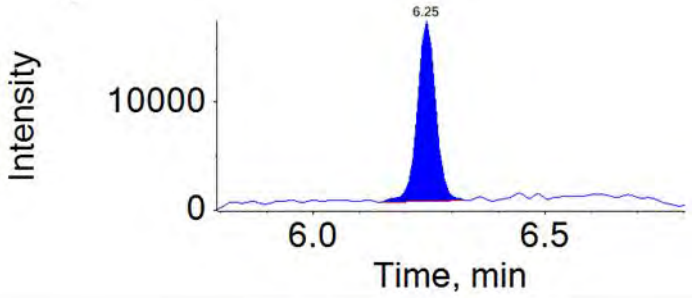
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



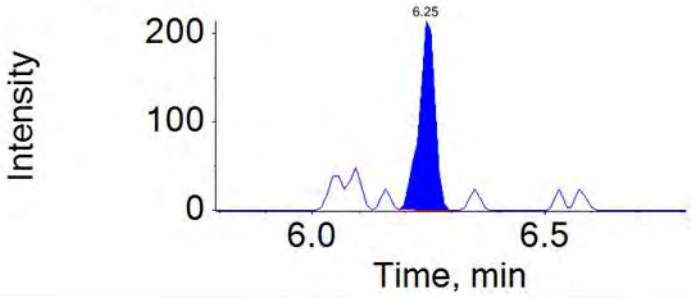
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

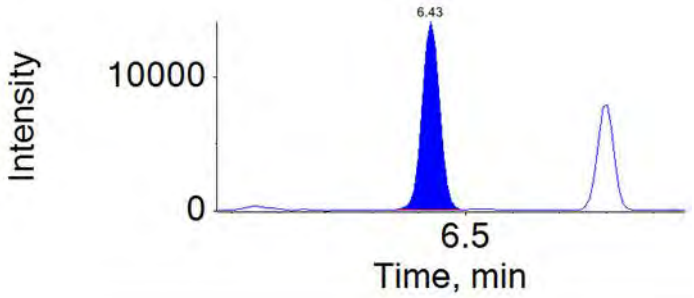
Component: PFTrDA
Primary Mass: 663.0 / 619.0



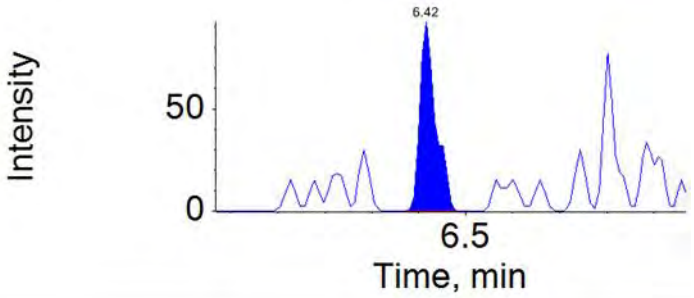
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



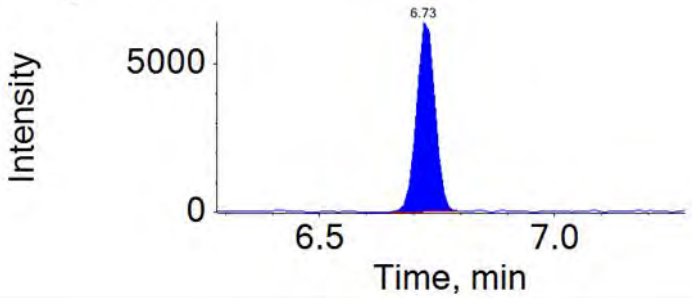
Component: PFTeDA
Primary Mass: 713.0 / 669.0



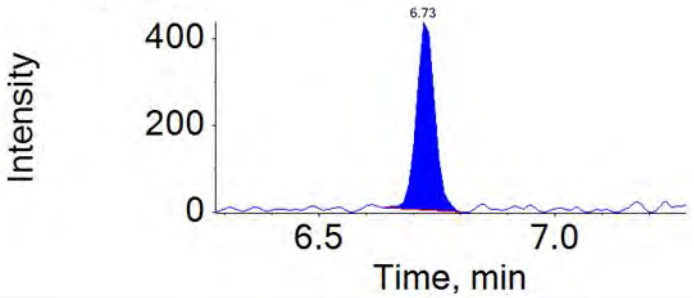
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



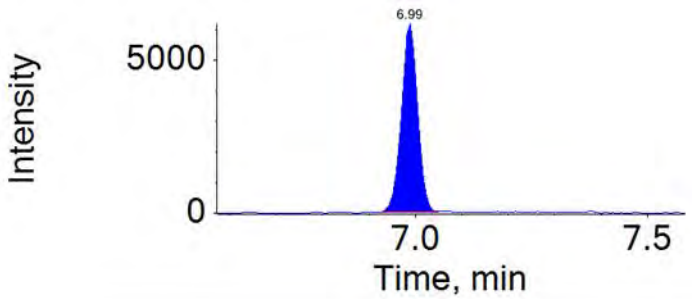
Component: PFHxDA
Primary Mass: 813.0 / 769.0



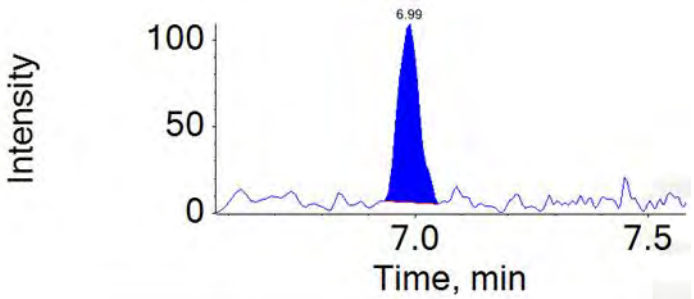
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
18NOV12DCAL-42.wiff	11/12/2018 3:05:54 PM	CALBRN11833C	CAL1
18NOV12DCAL-43.wiff	11/12/2018 3:15:03 PM	CALBRN21833C	CAL2
18NOV12DCAL-44.wiff	11/12/2018 3:24:03 PM	CALBRN31833B	CAL3
18NOV12DCAL-45.wiff	11/12/2018 3:33:03 PM	CALBRN41833B	CAL4
18NOV12DCAL-46.wiff	11/12/2018 3:42:06 PM	CALBRN51833B	CAL5
18NOV12DCAL-47.wiff	11/12/2018 3:51:06 PM	CALBRN61833B	CAL6
18NOV12DCAL-48.wiff	11/12/2018 4:00:06 PM	CALBRN71833B	CAL7

CAL3 Injection Standard Areas

Sample Name	Injection Std Name	Injection Std Area
CAL3	13C3-PFBA	659926.2
CAL3	13C2-PFOA	450219.7
CAL3	13C4-PFOS	249205.8
CAL3	13C2-PFDA	278743.9

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Response Factor Table

Analyte Name	CAL 1	CAL 2	CAL 3	CAL 4	CAL 5	CAL 6	CAL 7	%RSD	Limit	OOS	r^2	OOS
PFBA	1.059	0.868	1.034	0.919	0.966	0.910	0.882	7	20		0.999	
PFPeA	1.058	0.952	1.052	0.939	0.906	0.876	0.839	8	20		0.999	
PFBS	1.061	0.938	1.061	0.954	1.001	0.997	0.964	5	20		1.000	
4:2-FTS	1.764	1.591	1.797	1.672	1.662	1.782	1.703	4	20		0.999	
PFHxA	1.470	1.241	1.361	1.233	1.255	1.160	N/A	8	20		0.998	
PFPeS	0.534	0.400	0.499	0.479	0.471	0.484	0.478	8	20		1.000	
PFHpA	1.776	1.486	1.766	1.619	1.555	1.461	N/A	8	20		0.998	
PFHxS	1.019	0.838	1.029	0.984	0.957	0.972	0.980	6	20		1.000	
6:2-FTS	1.892	1.888	2.214	2.112	2.098	1.876	N/A	7	20		0.996	
PFHpS	1.007	0.773	0.988	0.856	0.922	0.911	0.890	8	20		1.000	
PFOA	1.136	0.940	1.059	0.960	1.022	0.956	0.904	7	20		0.998	
PFOS	1.194	1.024	1.112	1.084	1.110	1.087	1.093	4	20		1.000	
PFNA	1.545	1.489	1.658	1.424	1.542	1.407	1.336	7	20		0.997	
PFNS	0.602	0.621	0.674	0.628	0.676	0.673	0.695	5	20		0.999	
PFDA	1.122	0.883	1.037	0.962	0.987	0.919	N/A	8	20		0.999	
8:2-FTS	2.201	1.873	2.243	1.857	2.127	2.051	N/A	7	20		0.998	
PFOSA	1.113	0.931	1.074	0.954	1.047	1.024	N/A	6	20		0.999	
NMeFOSAA	0.663	0.620	0.877	0.890	0.865	0.893	0.886	13	20		1.000	
PFDS	0.521	0.496	0.511	0.520	0.537	0.515	0.533	2	20		1.000	
PFUnDA	2.280	1.757	2.026	2.069	1.918	1.881	N/A	8	20		0.999	
NEtFOSAA	0.709	1.011	1.153	0.906	0.931	0.963	N/A	14	20		0.998	
PFDoDA	1.015	0.935	1.079	0.963	1.034	0.961	N/A	5	20		0.999	
10:2-FTS	1.703	1.561	1.573	1.278	1.573	1.511	1.383	9	20		0.997	
NMePFOSAE	1.287	1.110	1.331	1.179	1.255	1.278	1.152	6	20		0.997	
NMePFOSA	0.758	0.950	0.975	1.020	1.096	0.983	N/A	11	20		0.998	
PFDoS	0.306	0.272	0.264	0.272	0.266	0.278	0.272	5	20		1.000	
NEtPFOSAE	1.873	1.487	1.717	1.622	1.623	1.516	N/A	8	20		0.999	
NEtPFOSA	1.129	1.156	1.156	1.125	1.166	1.070	1.078	3	20		0.999	
PFTrDA	0.925	0.751	0.839	0.808	0.827	0.774	N/A	7	20		0.999	
PFTeDA	0.996	0.851	0.994	0.911	0.934	0.892	0.880	6	20		0.999	
PFHxDA	0.486	0.402	0.442	0.409	0.413	0.435	0.414	6	20		0.999	
PFODA	0.367	0.316	0.367	0.349	0.358	0.360	0.359	5	20		1.000	

APPROVED
By MCD at 6:33 pm, 11/12/18

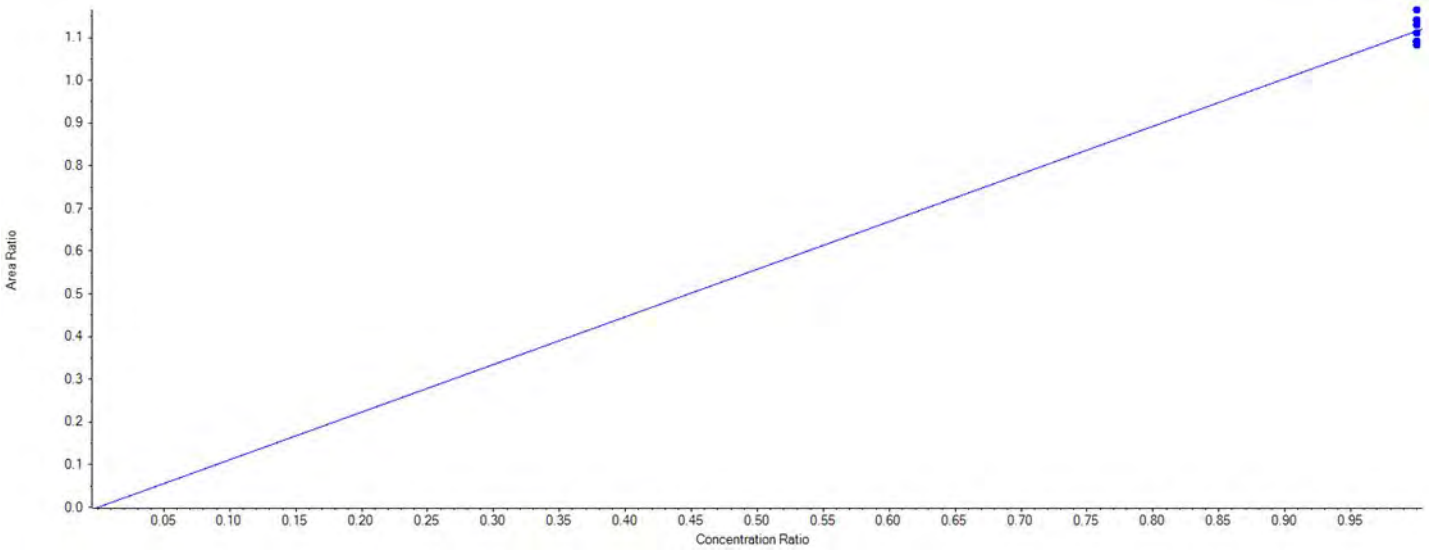
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFBA

y = 1.11523 x (std. dev. = 0.03058) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFBA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	763334.27	676527.50	True	5.00	1.128	3.27	1.000	5.000	5.059	1	30	
CAL2	771445.80	662396.70	True	5.00	1.165	3.27	1.000	5.000	5.221	4	30	
CAL3	733360.15	659926.18	True	5.00	1.111	3.27	1.000	5.000	4.982	0	30	
CAL4	726395.96	671568.05	True	5.00	1.082	3.26	1.000	5.000	4.849	-3	30	
CAL5	698871.91	641789.51	True	5.00	1.089	3.26	1.000	5.000	4.882	-2	30	
CAL6	633648.38	555817.86	True	5.00	1.140	3.27	1.000	5.000	5.111	2	30	
CAL7	557392.78	510525.81	True	5.00	1.092	3.25	1.000	5.000	4.895	-2	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

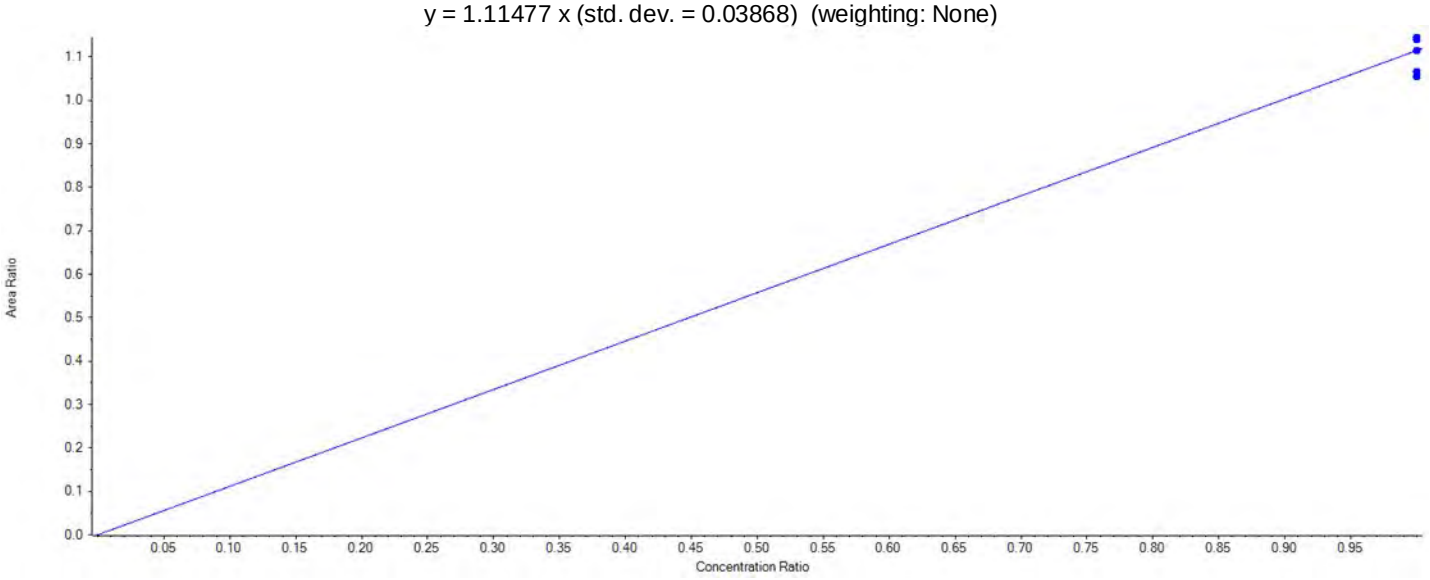
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFPeA

y = 1.11477 x (std. dev. = 0.03868) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFPeA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	771179.39	676527.50	True	5.00	1.140	3.76	1.150	5.000	5.113	2	30	
CAL2	738194.74	662396.70	True	5.00	1.114	3.77	1.150	5.000	4.998	0	30	
CAL3	695805.67	659926.18	True	5.00	1.054	3.77	1.150	5.000	4.729	-5	30	
CAL4	716206.93	671568.05	True	5.00	1.066	3.76	1.150	5.000	4.783	-4	30	
CAL5	734598.25	641789.51	True	5.00	1.145	3.76	1.150	5.000	5.134	3	30	
CAL6	635977.79	555817.86	True	5.00	1.144	3.76	1.150	5.000	5.132	3	30	
CAL7	581688.66	510525.81	True	5.00	1.139	3.75	1.150	5.000	5.110	2	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

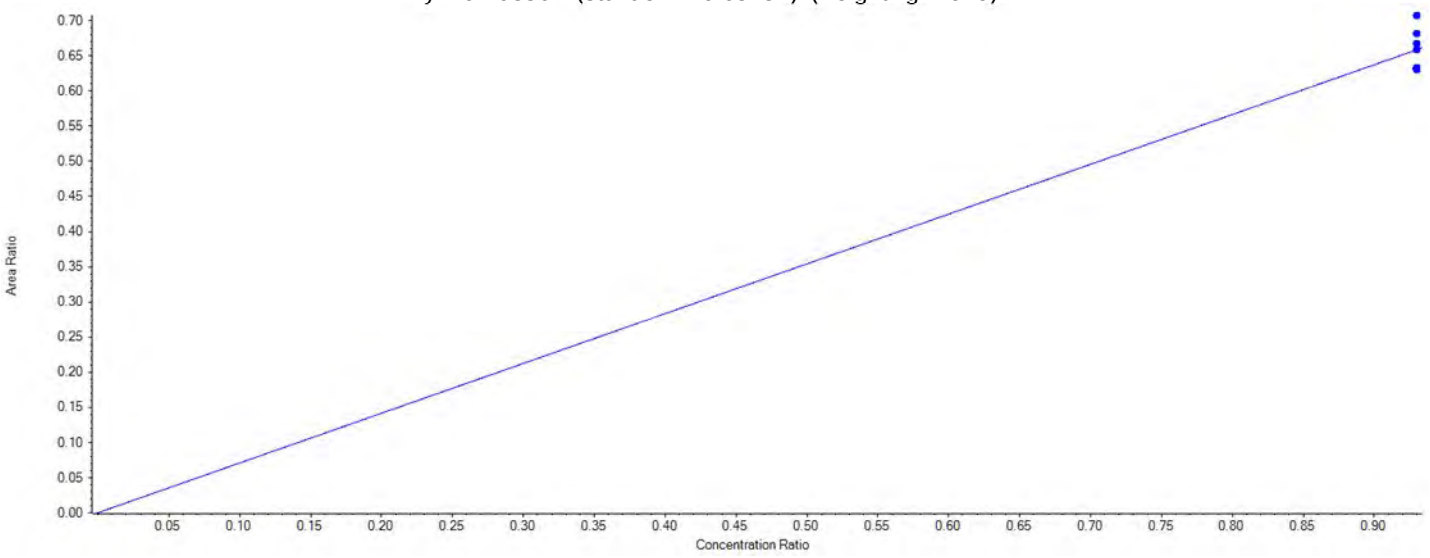
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFBS

y = 0.70830 x (std. dev. = 0.03132) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C3-PFBS Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	445963.43	676527.50	True	5.00	0.659	3.81	1.170	4.650	4.653	0	30	
CAL2	418860.68	662396.70	True	5.00	0.632	3.82	1.170	4.650	4.464	-4	30	
CAL3	416352.75	659926.18	True	5.00	0.631	3.82	1.170	4.650	4.454	-4	30	
CAL4	425015.72	671568.05	True	5.00	0.633	3.81	1.170	4.650	4.468	-4	30	
CAL5	428050.64	641789.51	True	5.00	0.667	3.81	1.170	4.650	4.708	1	30	
CAL6	378676.81	555817.86	True	5.00	0.681	3.81	1.170	4.650	4.809	3	30	
CAL7	361166.00	510525.81	True	5.00	0.707	3.80	1.170	4.650	4.994	7	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

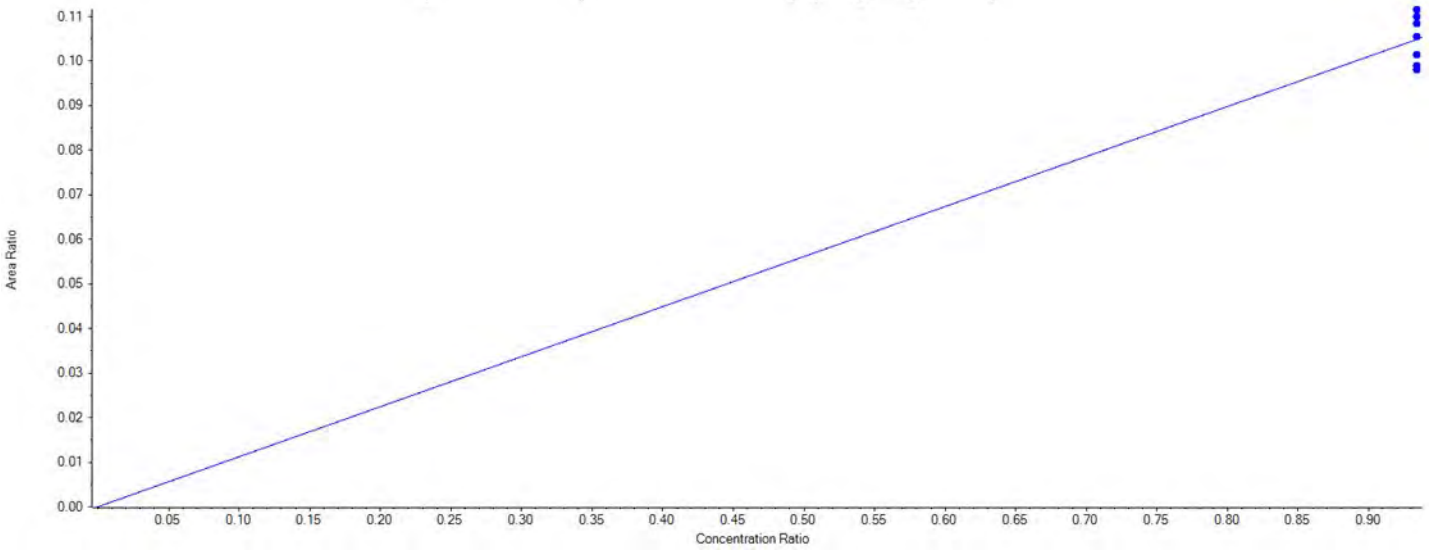
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-4:2-FTS

y = 0.11226 x (std. dev. = 0.00584) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-4:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	51494.57	474834.93	True	5.00	0.108	4.13	0.840	4.670	4.830	3	30	
CAL2	46141.76	454466.72	True	5.00	0.102	4.13	0.840	4.670	4.522	-3	30	
CAL3	47514.79	450219.68	True	5.00	0.106	4.13	0.840	4.670	4.700	1	30	
CAL4	47246.37	477519.68	True	5.00	0.099	4.13	0.840	4.670	4.407	-6	30	
CAL5	51791.87	464284.62	True	5.00	0.112	4.12	0.840	4.670	4.968	6	30	
CAL6	41422.17	422900.47	True	5.00	0.098	4.13	0.840	4.670	4.362	-7	30	
CAL7	40505.09	368158.25	True	5.00	0.110	4.11	0.840	4.670	4.900	5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

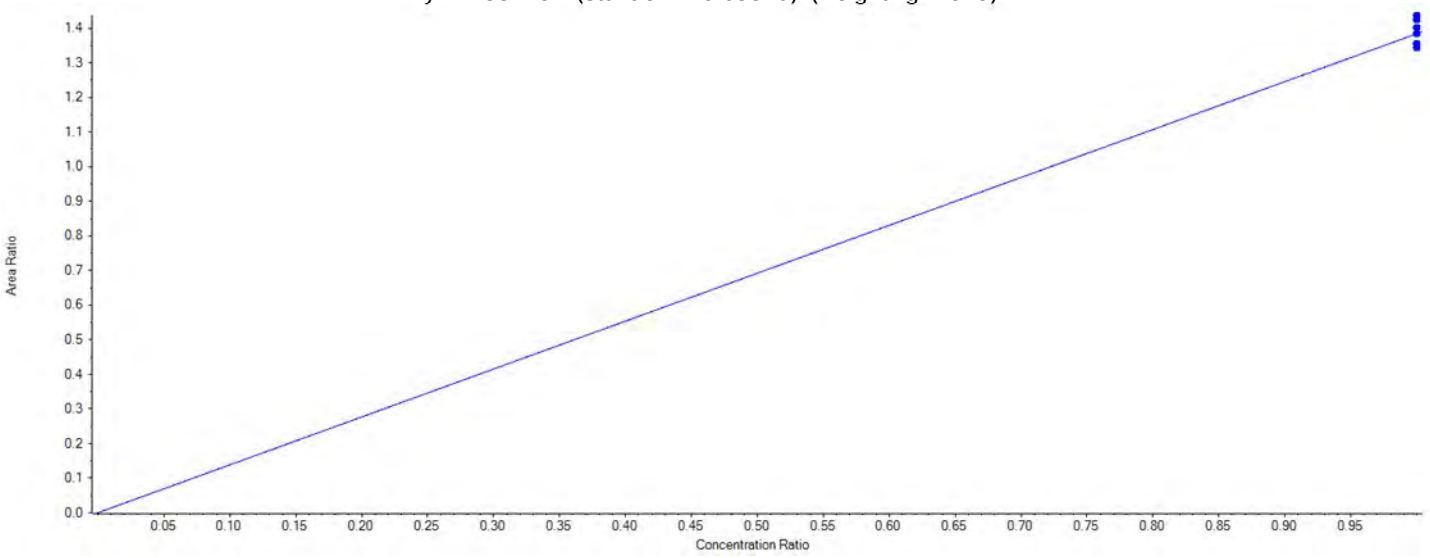
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFHxA

y = 1.38415 x (std. dev. = 0.03876) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFHxA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	664975.88	474834.93	True	5.00	1.400	4.16	0.850	5.000	5.059	1	30	
CAL2	648170.06	454466.72	True	5.00	1.426	4.17	0.850	5.000	5.152	3	30	
CAL3	646783.50	450219.68	True	5.00	1.437	4.17	0.850	5.000	5.189	4	30	
CAL4	641195.85	477519.68	True	5.00	1.343	4.16	0.850	5.000	4.851	-3	30	
CAL5	628952.79	464284.62	True	5.00	1.355	4.15	0.850	5.000	4.894	-2	30	
CAL6	568205.82	422900.47	True	5.00	1.344	4.16	0.850	5.000	4.854	-3	30	
CAL7	509807.95	368158.25	True	5.00	1.385	4.15	0.840	5.000	5.002	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

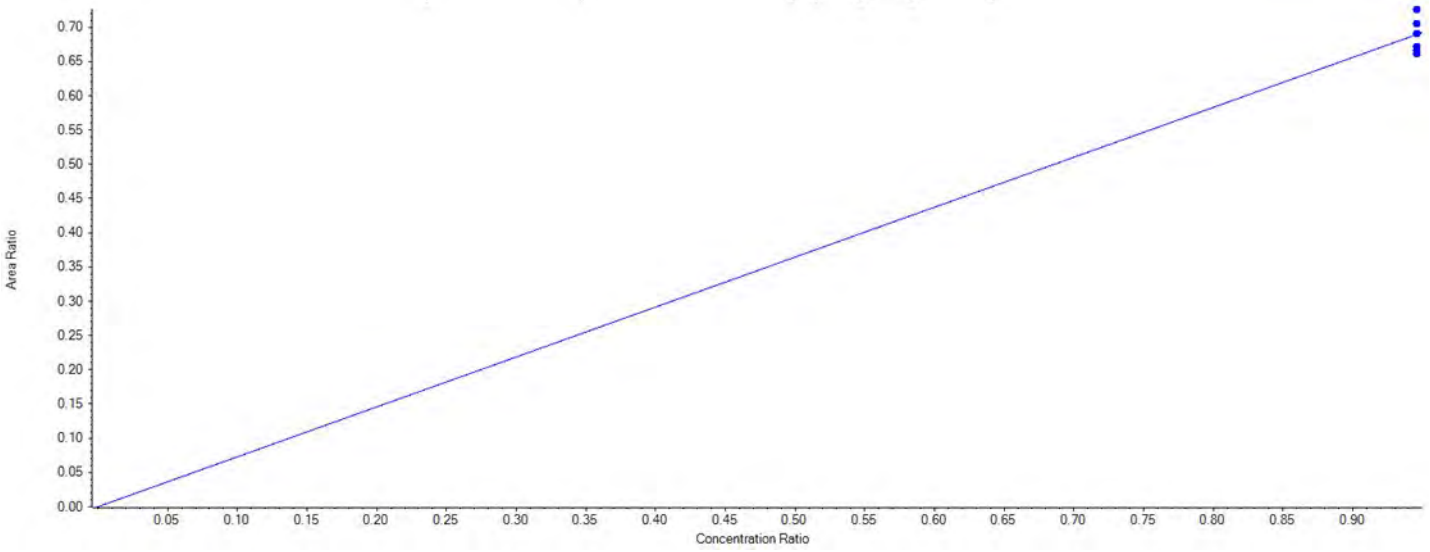
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFHxS

y = 0.72866 x (std. dev. = 0.02531) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C3-PFHxS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	327944.53	474834.93	True	5.00	0.691	4.55	0.930	4.730	4.739	0	30	
CAL2	320400.37	454466.72	True	5.00	0.705	4.56	0.930	4.730	4.838	2	30	
CAL3	317243.20	450219.68	True	5.00	0.705	4.56	0.930	4.730	4.835	2	30	
CAL4	315722.63	477519.68	True	5.00	0.661	4.55	0.930	4.730	4.537	-4	30	
CAL5	309304.49	464284.62	True	5.00	0.666	4.54	0.920	4.730	4.571	-3	30	
CAL6	284116.51	422900.47	True	5.00	0.672	4.55	0.920	4.730	4.610	-3	30	
CAL7	267182.79	368158.25	True	5.00	0.726	4.54	0.920	4.730	4.980	5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

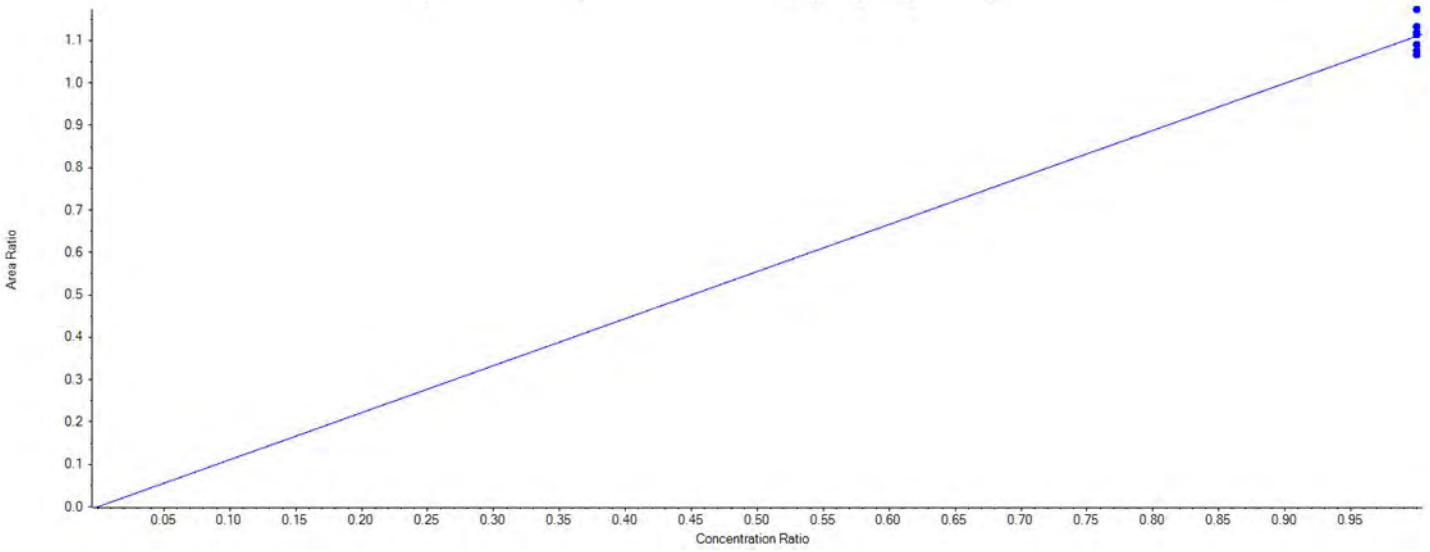
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFHpA

y = 1.10984 x (std. dev. = 0.03656) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFHpA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	528473.49	474834.93	True	5.00	1.113	4.55	0.920	5.000	5.014	0	30	
CAL2	532987.49	454466.72	True	5.00	1.173	4.55	0.920	5.000	5.284	6	30	
CAL3	503681.03	450219.68	True	5.00	1.119	4.55	0.920	5.000	5.040	1	30	
CAL4	509151.78	477519.68	True	5.00	1.066	4.55	0.920	5.000	4.804	-4	30	
CAL5	525802.05	464284.62	True	5.00	1.132	4.54	0.920	5.000	5.102	2	30	
CAL6	455005.81	422900.47	True	5.00	1.076	4.55	0.920	5.000	4.847	-3	30	
CAL7	401203.88	368158.25	True	5.00	1.090	4.54	0.920	5.000	4.910	-2	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

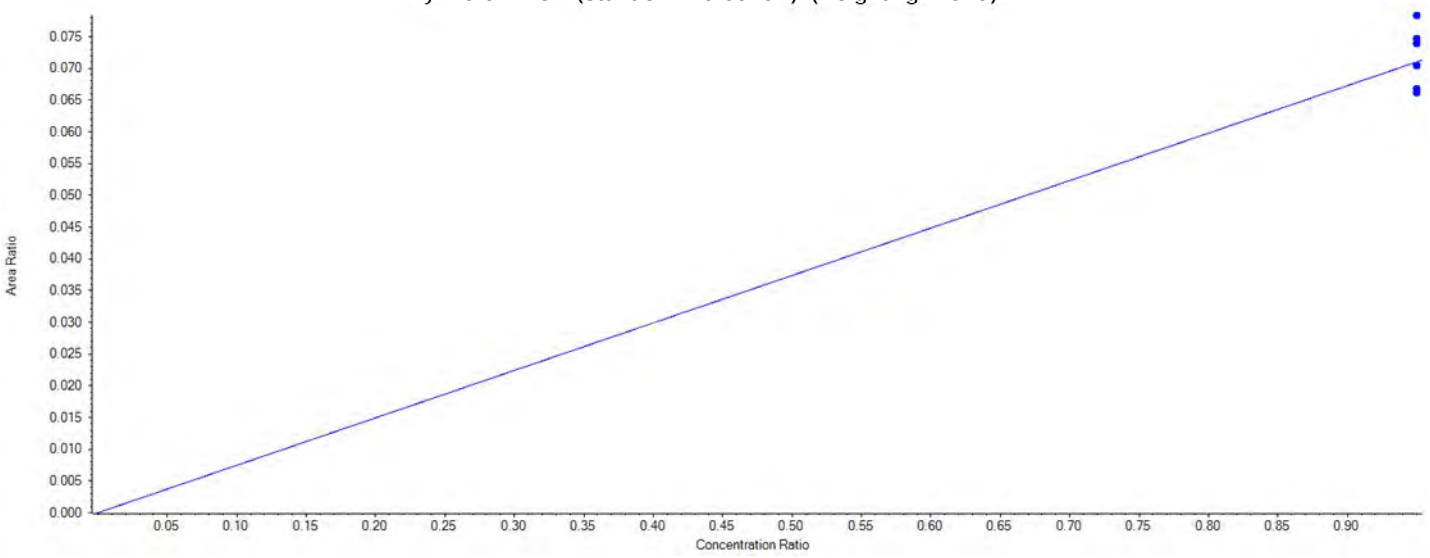
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-6:2-FTS

y = 0.07473 x (std. dev. = 0.00497) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-6:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	35455.22	474834.93	True	5.00	0.075	4.91	1.000	4.750	4.996	5	30	
CAL2	35585.69	454466.72	True	5.00	0.078	4.91	1.000	4.750	5.239	10	30	
CAL3	31706.42	450219.68	True	5.00	0.070	4.91	1.000	4.750	4.712	-1	30	
CAL4	31883.28	477519.68	True	5.00	0.067	4.91	1.000	4.750	4.467	-6	30	
CAL5	31012.00	464284.62	True	5.00	0.067	4.90	1.000	4.750	4.469	-6	30	
CAL6	27988.49	422900.47	True	5.00	0.066	4.91	1.000	4.750	4.428	-7	30	
CAL7	27180.24	368158.25	True	5.00	0.074	4.89	1.000	4.750	4.939	4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

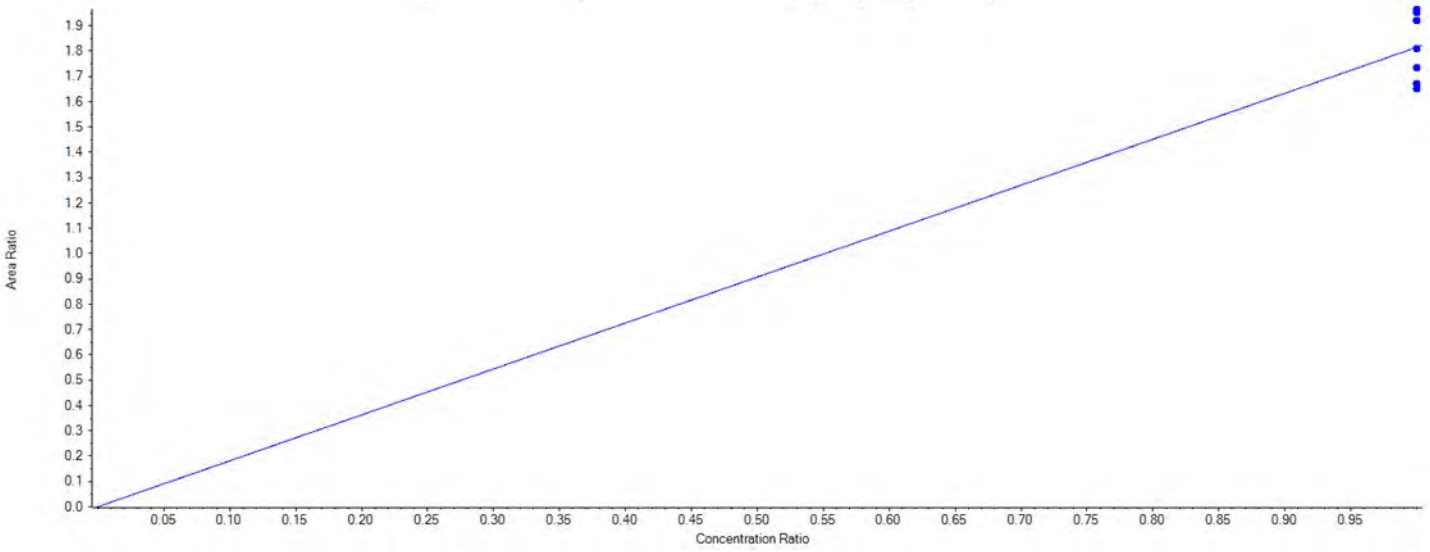
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOA

y = 1.81479 x (std. dev. = 0.13316) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	912537.72	474834.93	True	5.00	1.922	4.92	1.000	5.000	5.295	6	30	
CAL2	892584.21	454466.72	True	5.00	1.964	4.92	1.000	5.000	5.411	8	30	
CAL3	878868.48	450219.68	True	5.00	1.952	4.93	1.000	5.000	5.378	8	30	
CAL4	863597.26	477519.68	True	5.00	1.809	4.92	1.000	5.000	4.983	0	30	
CAL5	805288.72	464284.62	True	5.00	1.734	4.91	1.000	5.000	4.779	-4	30	
CAL6	707130.31	422900.47	True	5.00	1.672	4.92	1.000	5.000	4.607	-8	30	
CAL7	607669.53	368158.25	True	5.00	1.651	4.91	1.000	5.000	4.548	-9	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

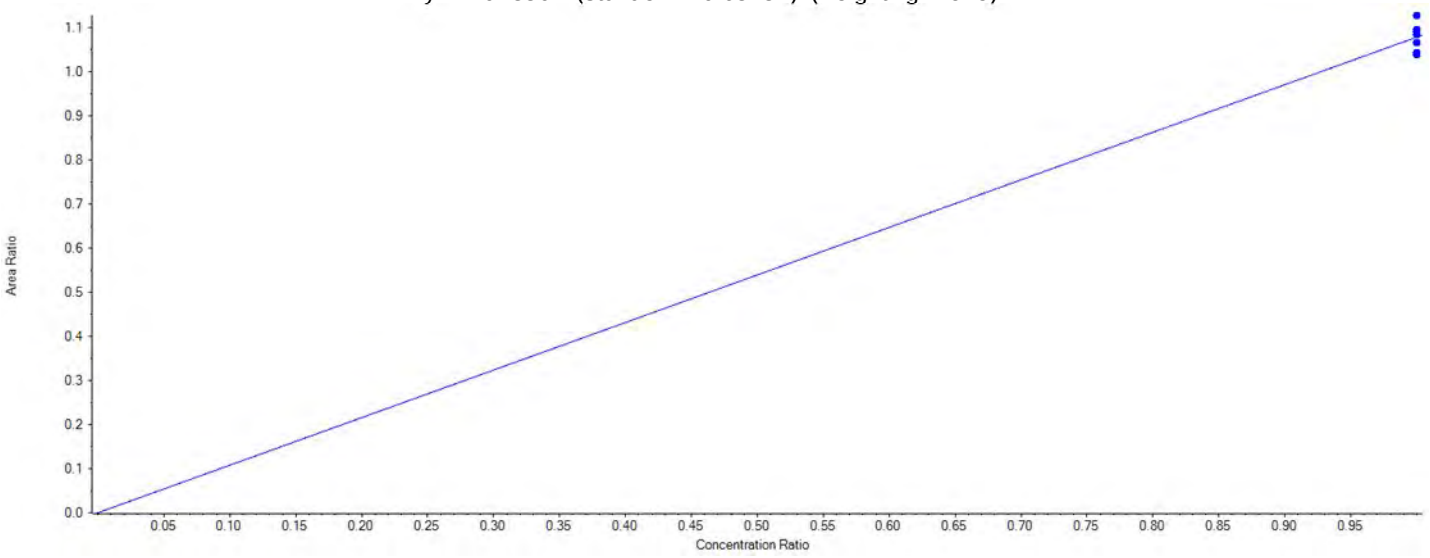
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOS

y = 1.07880 x (std. dev. = 0.03134) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOS Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	283127.43	265368.99	True	4.78	1.067	5.25	1.000	4.780	4.727	-1	30	
CAL2	271778.84	250483.82	True	4.78	1.085	5.25	1.000	4.780	4.808	1	30	
CAL3	281035.50	249205.78	True	4.78	1.128	5.25	1.000	4.780	4.997	5	30	
CAL4	267380.81	256143.29	True	4.78	1.044	5.25	1.000	4.780	4.625	-3	30	
CAL5	267157.61	243589.87	True	4.78	1.097	5.24	1.000	4.780	4.860	2	30	
CAL6	253129.16	231712.12	True	4.78	1.092	5.25	1.000	4.780	4.840	1	30	
CAL7	242617.53	233532.69	True	4.78	1.039	5.24	1.000	4.780	4.603	-4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

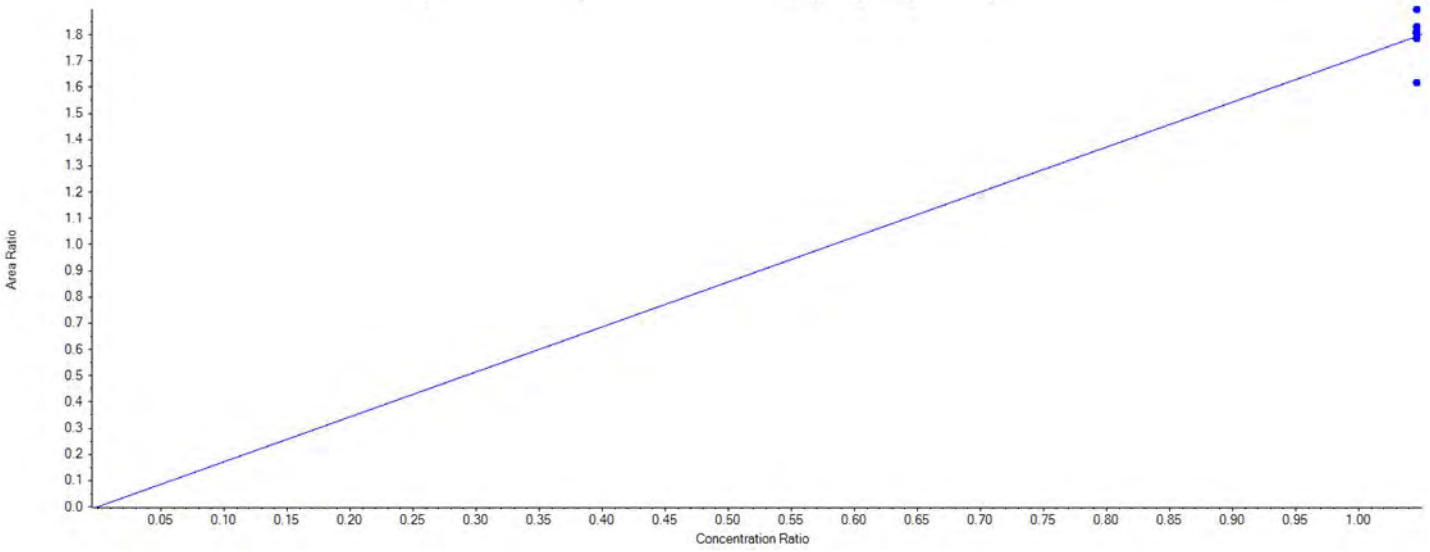
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C9-PFNA

y = 1.71440 x (std. dev. = 0.08194) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C9-PFNA Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	479931.43	265368.99	True	4.78	1.809	5.26	1.000	5.000	5.042	1	30	
CAL2	451850.14	250483.82	True	4.78	1.804	5.27	1.000	5.000	5.030	1	30	
CAL3	455948.85	249205.78	True	4.78	1.830	5.27	1.000	5.000	5.101	2	30	
CAL4	485570.41	256143.29	True	4.78	1.896	5.26	1.000	5.000	5.285	6	30	
CAL5	441776.75	243589.87	True	4.78	1.814	5.26	1.000	5.000	5.057	1	30	
CAL6	413811.35	231712.12	True	4.78	1.786	5.27	1.000	5.000	4.979	0	30	
CAL7	377369.76	233532.69	True	4.78	1.616	5.25	1.000	5.000	4.505	-10	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

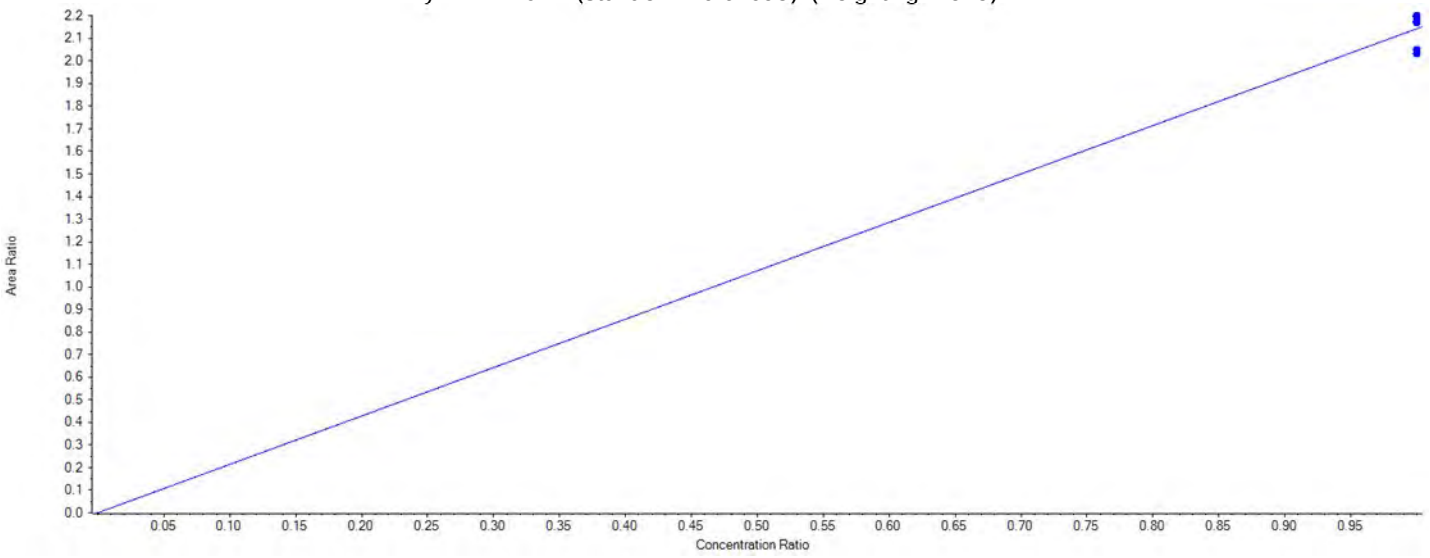
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C6-PFDA

y = 2.14262 x (std. dev. = 0.07095) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C6-PFDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	612577.43	281654.75	True	5.00	2.175	5.57	1.000	5.000	5.075	2	30	
CAL2	601859.80	277324.19	True	5.00	2.170	5.57	1.000	5.000	5.064	1	30	
CAL3	612680.79	278743.89	True	5.00	2.198	5.57	1.000	5.000	5.129	3	30	
CAL4	612056.47	301327.18	True	5.00	2.031	5.56	1.000	5.000	4.740	-5	30	
CAL5	585231.23	269315.72	True	5.00	2.173	5.56	1.000	5.000	5.071	1	30	
CAL6	522613.81	237446.93	True	5.00	2.201	5.57	1.000	5.000	5.136	3	30	
CAL7	479333.06	233825.07	True	5.00	2.050	5.55	1.000	5.000	4.784	-4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

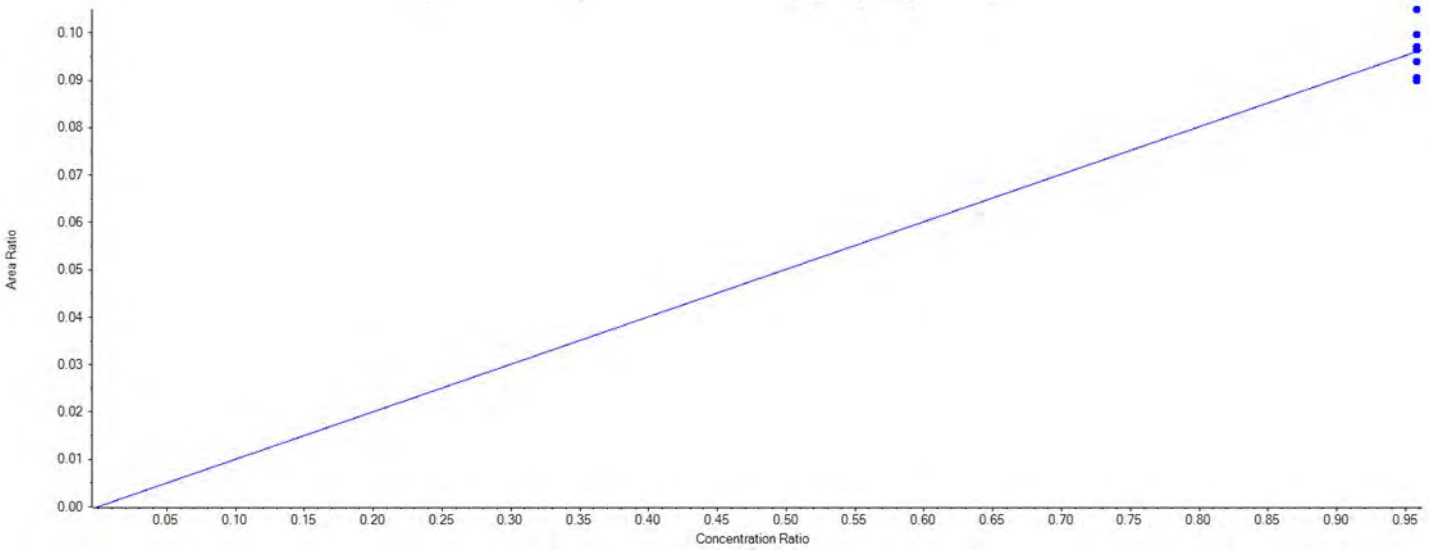
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-8:2-FTS

y = 0.10026 x (std. dev. = 0.00552) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-8:2-FTS Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	26445.48	281654.75	True	5.00	0.094	5.57	1.000	4.790	4.683	-2	30	
CAL2	27639.19	277324.19	True	5.00	0.100	5.57	1.000	4.790	4.970	4	30	
CAL3	29249.84	278743.89	True	5.00	0.105	5.57	1.000	4.790	5.233	9	30	
CAL4	27253.46	301327.18	True	5.00	0.090	5.57	1.000	4.790	4.511	-6	30	
CAL5	24192.14	269315.72	True	5.00	0.090	5.56	1.000	4.790	4.480	-6	30	
CAL6	22899.00	237446.93	True	5.00	0.096	5.57	1.000	4.790	4.810	0	30	
CAL7	22710.95	233825.07	True	5.00	0.097	5.56	1.000	4.790	4.844	1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

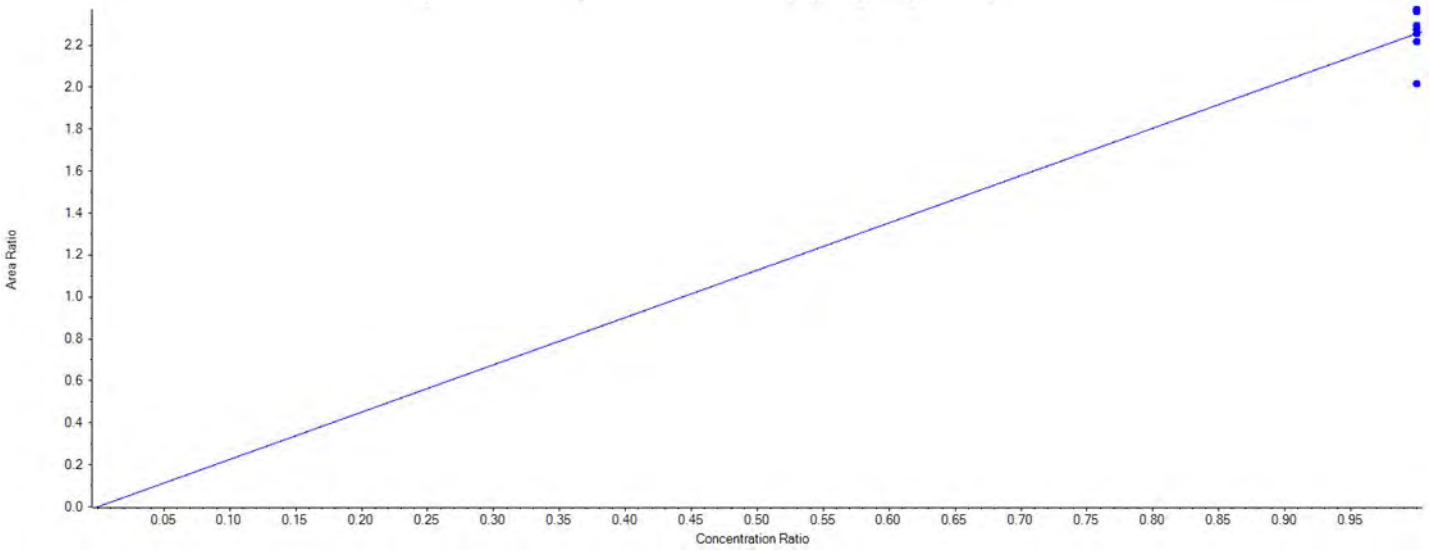
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOSA

y = 2.25533 x (std. dev. = 0.11852) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	664489.93	281654.75	True	5.00	2.359	5.65	1.010	5.000	5.230	5	30	
CAL2	636543.15	277324.19	True	5.00	2.295	5.65	1.010	5.000	5.089	2	30	
CAL3	629109.87	278743.89	True	5.00	2.257	5.65	1.010	5.000	5.004	0	30	
CAL4	607762.03	301327.18	True	5.00	2.017	5.64	1.010	5.000	4.472	-11	30	
CAL5	596544.13	269315.72	True	5.00	2.215	5.64	1.010	5.000	4.911	-2	30	
CAL6	539992.50	237446.93	True	5.00	2.274	5.65	1.010	5.000	5.042	1	30	
CAL7	554092.64	233825.07	True	5.00	2.370	5.63	1.010	5.000	5.254	5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

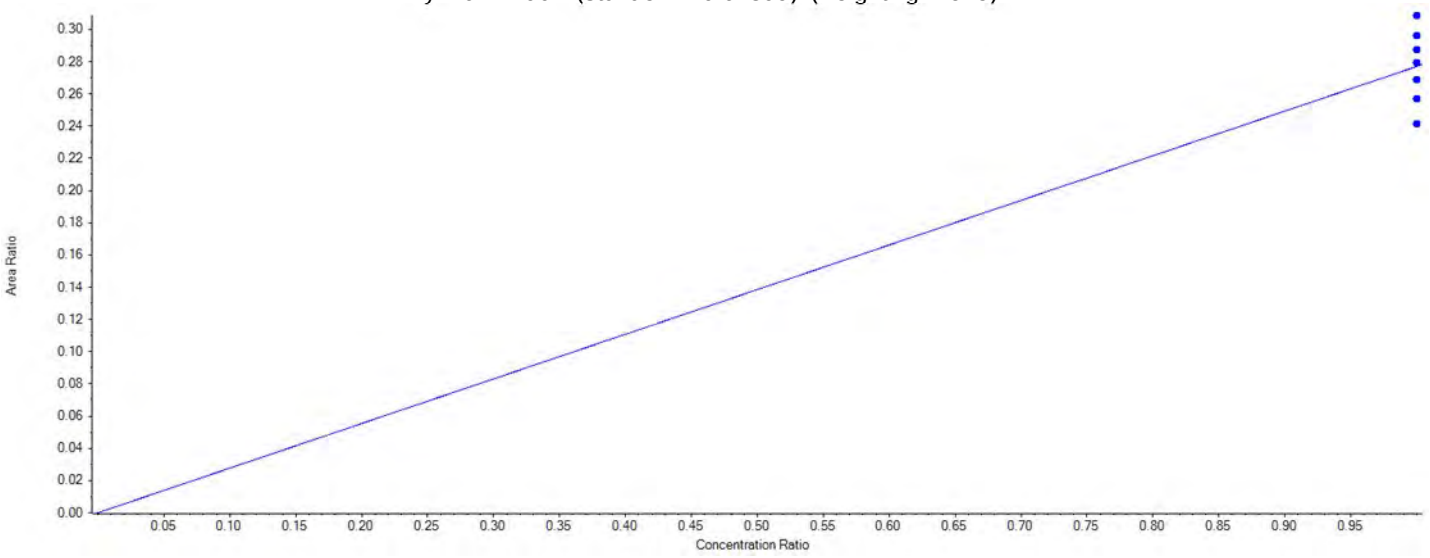
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMeFOSAA

y = 0.27700 x (std. dev. = 0.02309) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMeFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	86914.51	281654.75	True	5.00	0.309	5.70	1.020	5.000	5.570	11	30	
CAL2	77388.61	277324.19	True	5.00	0.279	5.71	1.020	5.000	5.037	1	30	
CAL3	71670.26	278743.89	True	5.00	0.257	5.71	1.030	5.000	4.641	-7	30	
CAL4	72788.02	301327.18	True	5.00	0.242	5.70	1.020	5.000	4.360	-13	30	
CAL5	72424.49	269315.72	True	5.00	0.269	5.70	1.020	5.000	4.854	-3	30	
CAL6	70320.26	237446.93	True	5.00	0.296	5.71	1.020	5.000	5.346	7	30	
CAL7	67250.45	233825.07	True	5.00	0.288	5.69	1.020	5.000	5.192	4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

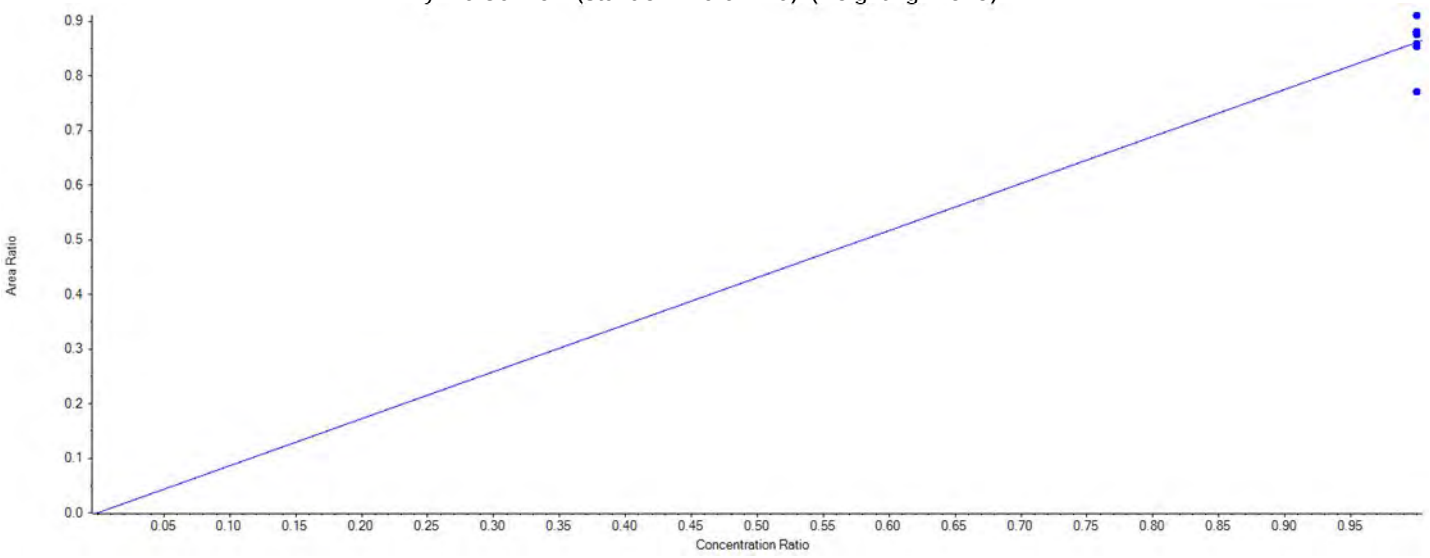
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C7-PFUnDA

y = 0.86119 x (std. dev. = 0.04416) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C7-PFUnDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	256401.96	281654.75	True	5.00	0.910	5.83	1.050	5.000	5.285	6	30	
CAL2	242881.75	277324.19	True	5.00	0.876	5.83	1.050	5.000	5.085	2	30	
CAL3	245605.30	278743.89	True	5.00	0.881	5.83	1.050	5.000	5.116	2	30	
CAL4	232014.10	301327.18	True	5.00	0.770	5.82	1.050	5.000	4.470	-11	30	
CAL5	231187.89	269315.72	True	5.00	0.858	5.82	1.050	5.000	4.984	0	30	
CAL6	208574.11	237446.93	True	5.00	0.878	5.83	1.050	5.000	5.100	2	30	
CAL7	199746.83	233825.07	True	5.00	0.854	5.81	1.050	5.000	4.960	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

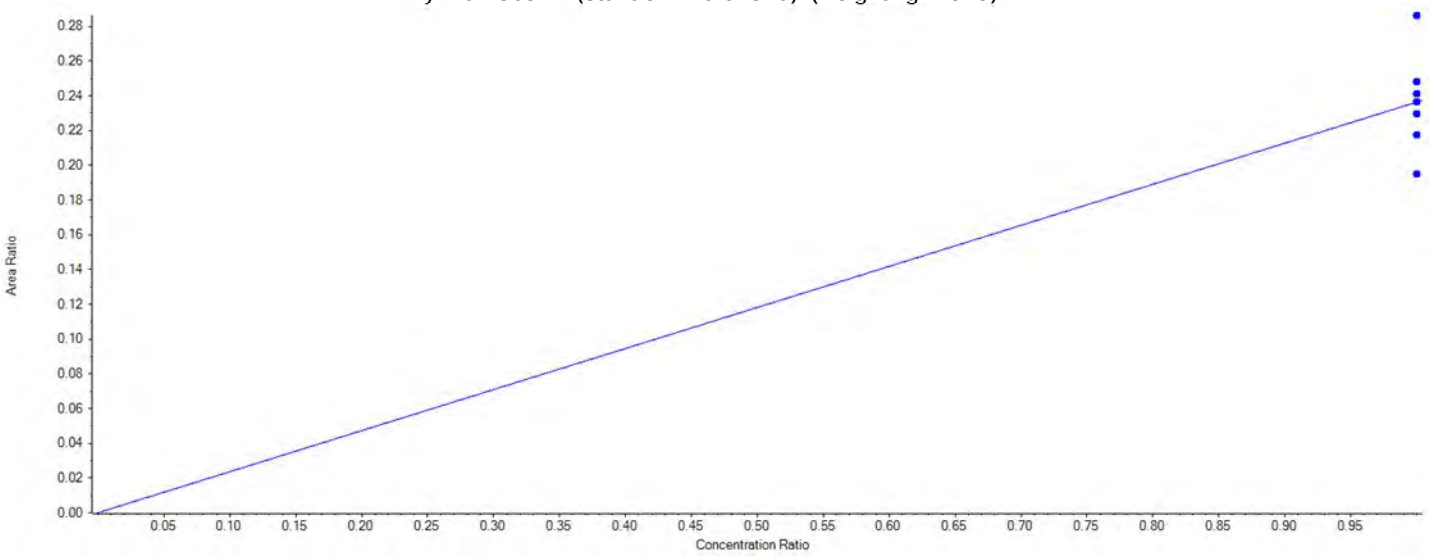
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtFOSAA

y = 0.23634 x (std. dev. = 0.02816) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	80597.24	281654.75	True	5.00	0.286	5.84	1.050	5.000	6.054	21	30	
CAL2	63686.93	277324.19	True	5.00	0.230	5.84	1.050	5.000	4.859	-3	30	
CAL3	54383.91	278743.89	True	5.00	0.195	5.84	1.050	5.000	4.128	-17	30	
CAL4	65477.96	301327.18	True	5.00	0.217	5.83	1.050	5.000	4.597	-8	30	
CAL5	63701.69	269315.72	True	5.00	0.237	5.83	1.050	5.000	5.004	0	30	
CAL6	57308.08	237446.93	True	5.00	0.241	5.84	1.050	5.000	5.106	2	30	
CAL7	58049.49	233825.07	True	5.00	0.248	5.82	1.050	5.000	5.252	5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

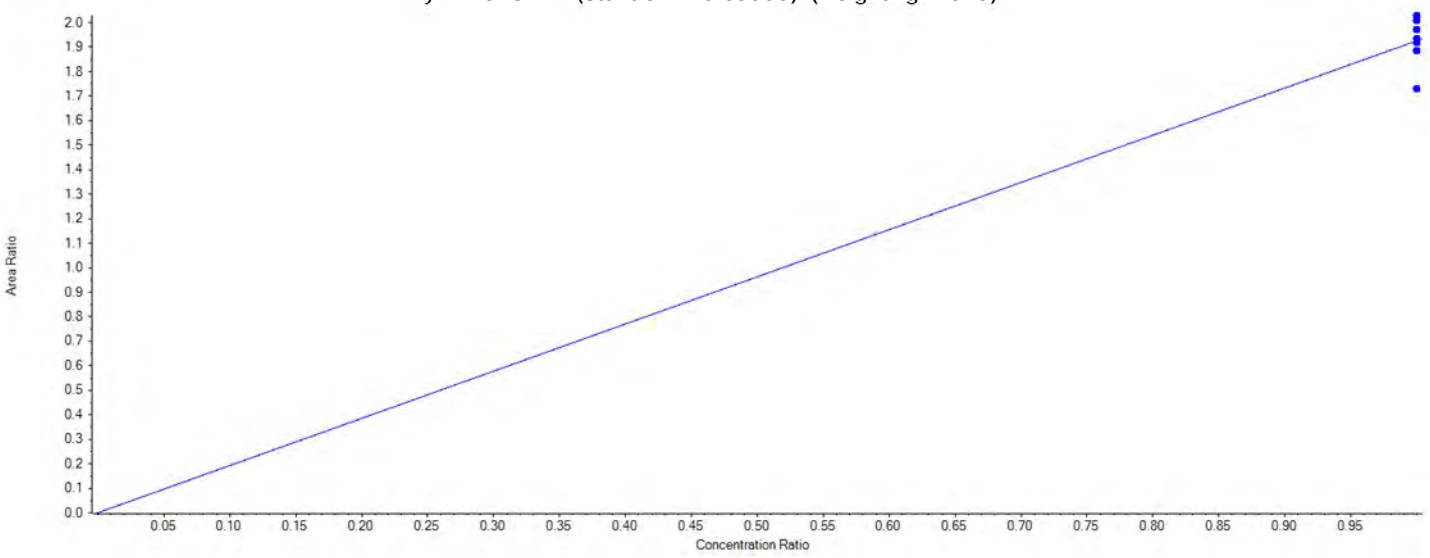
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFDoDA

y = 1.92577 x (std. dev. = 0.09966) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-PFDoDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	545413.19	281654.75	True	5.00	1.936	6.05	1.090	5.000	5.028	1	30	
CAL2	532175.35	277324.19	True	5.00	1.919	6.06	1.090	5.000	4.982	0	30	
CAL3	549542.28	278743.89	True	5.00	1.971	6.06	1.090	5.000	5.119	2	30	
CAL4	521514.09	301327.18	True	5.00	1.731	6.05	1.090	5.000	4.494	-10	30	
CAL5	507556.82	269315.72	True	5.00	1.885	6.04	1.090	5.000	4.893	-2	30	
CAL6	477105.49	237446.93	True	5.00	2.009	6.06	1.090	5.000	5.217	4	30	
CAL7	474393.79	233825.07	True	5.00	2.029	6.04	1.090	5.000	5.268	5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

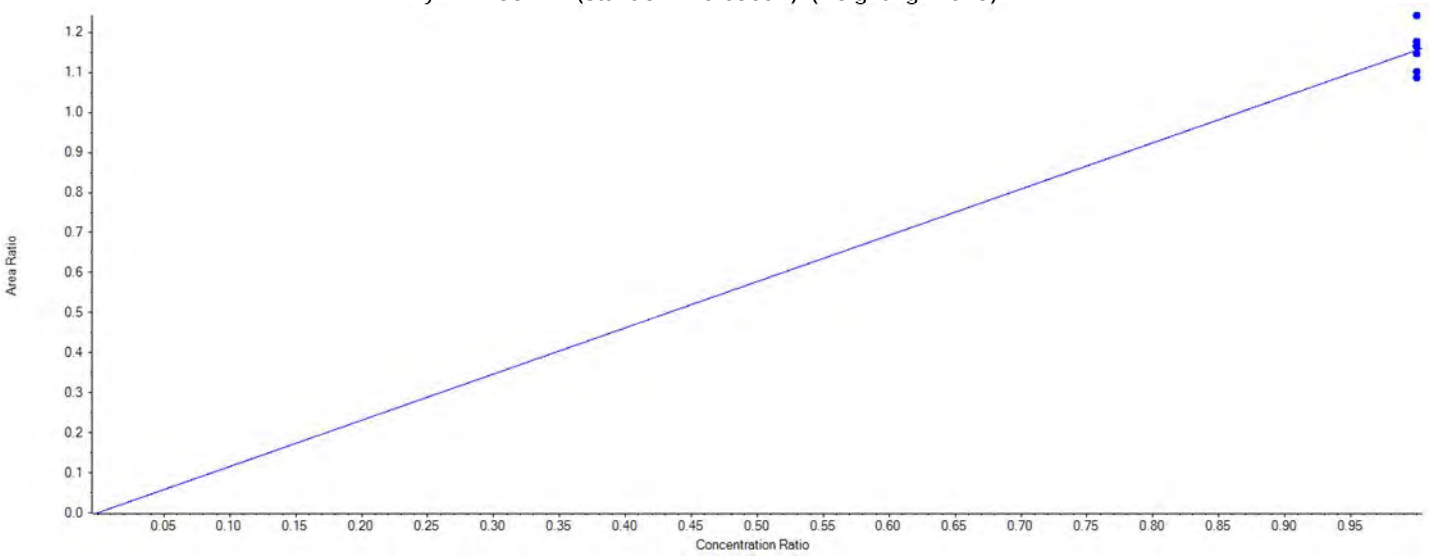
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed7-NMePFOSAE

y = 1.15541 x (std. dev. = 0.05092) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed7-NMePFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	349854.47	281654.75	True	5.00	1.242	6.09	1.090	5.000	5.375	8	30	
CAL2	323456.51	277324.19	True	5.00	1.166	6.09	1.090	5.000	5.047	1	30	
CAL3	307355.43	278743.89	True	5.00	1.103	6.09	1.090	5.000	4.772	-5	30	
CAL4	327796.39	301327.18	True	5.00	1.088	6.09	1.090	5.000	4.708	-6	30	
CAL5	316777.82	269315.72	True	5.00	1.176	6.08	1.090	5.000	5.090	2	30	
CAL6	272638.97	237446.93	True	5.00	1.148	6.09	1.090	5.000	4.969	-1	30	
CAL7	272283.14	233825.07	True	5.00	1.164	6.08	1.090	5.000	5.039	1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

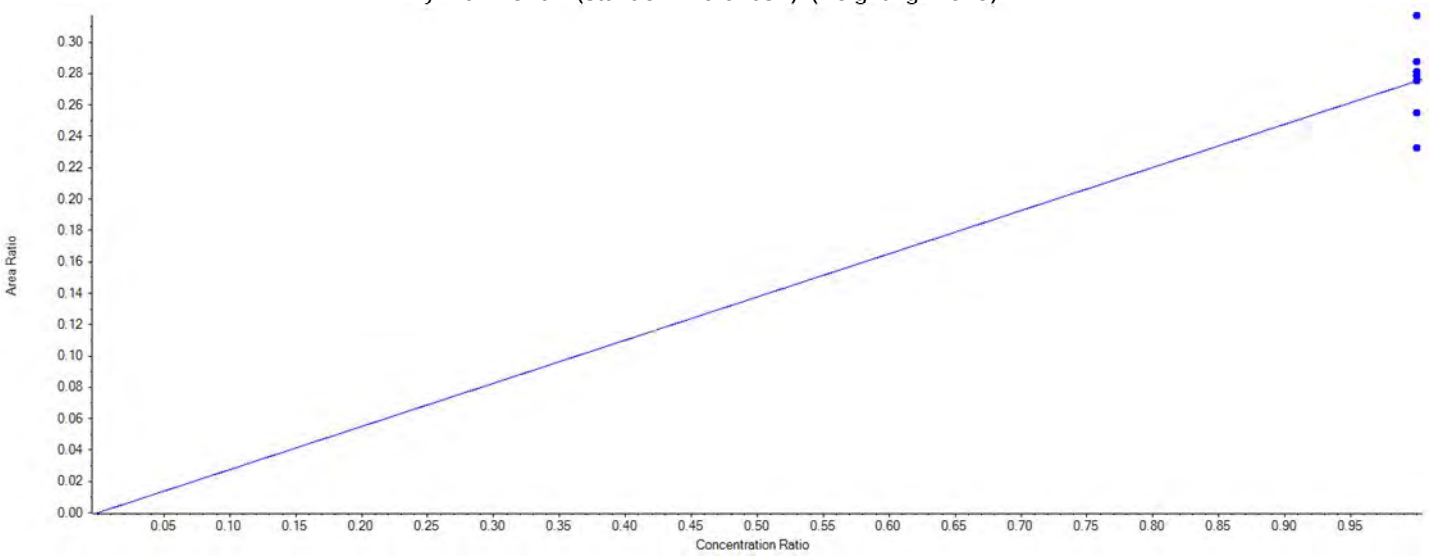
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMePFOSA

y = 0.27520 x (std. dev. = 0.02631) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMePFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	78396.49	281654.75	True	5.00	0.278	6.10	1.100	5.000	5.057	1	30	
CAL2	77893.24	277324.19	True	5.00	0.281	6.11	1.100	5.000	5.103	2	30	
CAL3	76782.89	278743.89	True	5.00	0.275	6.11	1.100	5.000	5.005	0	30	
CAL4	70122.47	301327.18	True	5.00	0.233	6.10	1.100	5.000	4.228	-15	30	
CAL5	68615.66	269315.72	True	5.00	0.255	6.09	1.100	5.000	4.629	-7	30	
CAL6	68215.94	237446.93	True	5.00	0.287	6.11	1.100	5.000	5.220	4	30	
CAL7	74110.30	233825.07	True	5.00	0.317	6.09	1.100	5.000	5.758	15	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

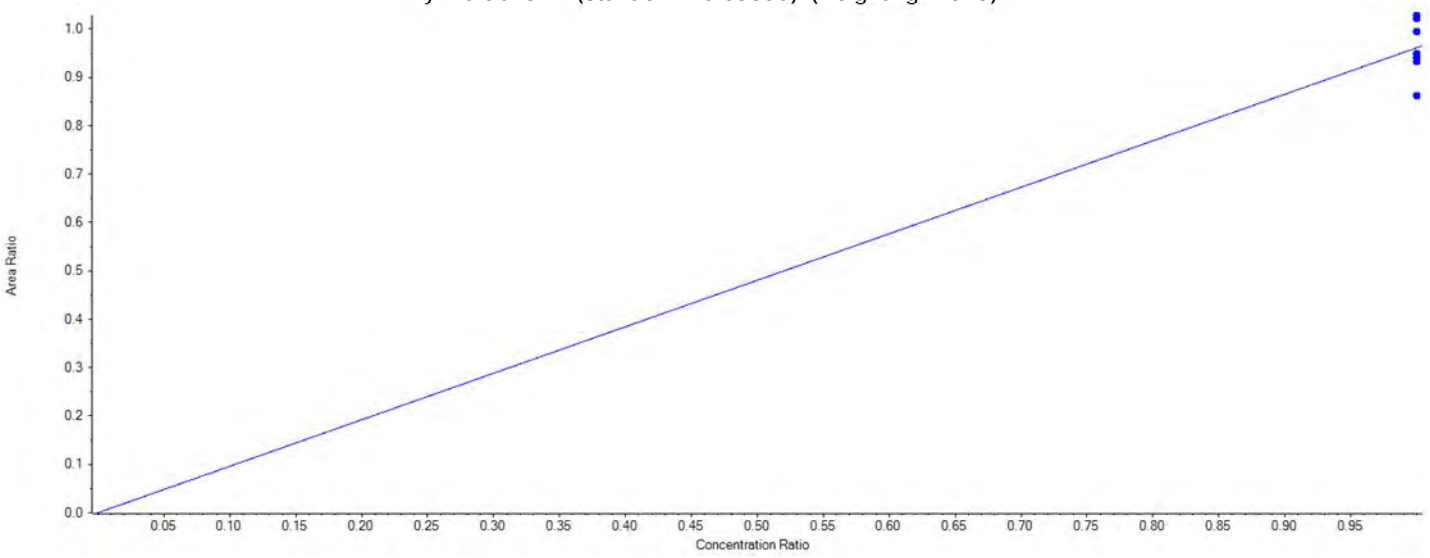
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed9-NEtPFOSAE

y = 0.96134 x (std. dev. = 0.05866) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed9-NEtPFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	280311.62	281654.75	True	5.00	0.995	6.24	1.120	5.000	5.176	4	30	
CAL2	261195.61	277324.19	True	5.00	0.942	6.25	1.120	5.000	4.899	-2	30	
CAL3	259792.28	278743.89	True	5.00	0.932	6.25	1.120	5.000	4.847	-3	30	
CAL4	259467.37	301327.18	True	5.00	0.861	6.24	1.120	5.000	4.479	-10	30	
CAL5	255767.75	269315.72	True	5.00	0.950	6.23	1.120	5.000	4.939	-1	30	
CAL6	242587.53	237446.93	True	5.00	1.022	6.25	1.120	5.000	5.314	6	30	
CAL7	240346.47	233825.07	True	5.00	1.028	6.23	1.120	5.000	5.346	7	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

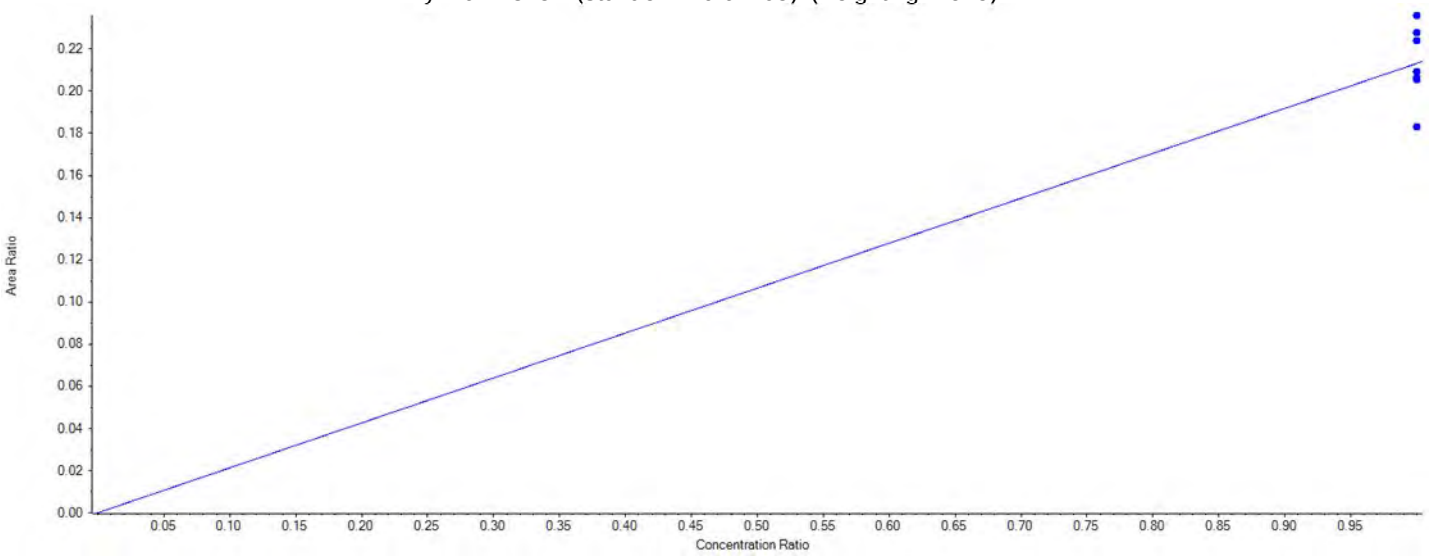
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtPFOSA

y = 0.21315 x (std. dev. = 0.01765) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtPFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	63047.06	281654.75	True	5.00	0.224	6.26	1.130	5.000	5.251	5	30	
CAL2	58073.45	277324.19	True	5.00	0.209	6.27	1.130	5.000	4.912	-2	30	
CAL3	57485.89	278743.89	True	5.00	0.206	6.27	1.130	5.000	4.838	-3	30	
CAL4	55177.27	301327.18	True	5.00	0.183	6.26	1.130	5.000	4.296	-14	30	
CAL5	55378.45	269315.72	True	5.00	0.206	6.25	1.130	5.000	4.824	-4	30	
CAL6	56004.04	237446.93	True	5.00	0.236	6.27	1.130	5.000	5.533	11	30	
CAL7	53297.85	233825.07	True	5.00	0.228	6.25	1.130	5.000	5.347	7	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

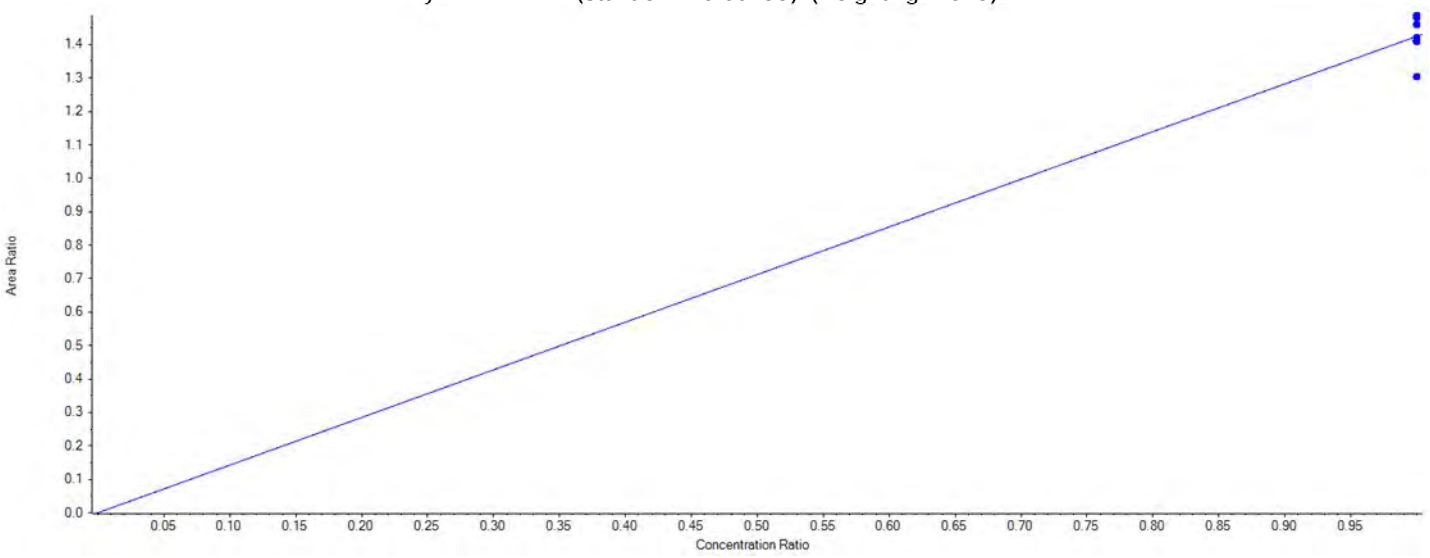
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFTeDA

y = 1.42422 x (std. dev. = 0.06255) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-PFTeDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	410633.04	281654.75	True	5.00	1.458	6.43	1.160	5.000	5.118	2	30	
CAL2	394146.24	277324.19	True	5.00	1.421	6.43	1.160	5.000	4.990	0	30	
CAL3	393544.94	278743.89	True	5.00	1.412	6.43	1.160	5.000	4.957	-1	30	
CAL4	392356.63	301327.18	True	5.00	1.302	6.43	1.160	5.000	4.571	-9	30	
CAL5	379571.56	269315.72	True	5.00	1.409	6.42	1.160	5.000	4.948	-1	30	
CAL6	352892.21	237446.93	True	5.00	1.486	6.43	1.160	5.000	5.218	4	30	
CAL7	346256.59	233825.07	True	5.00	1.481	6.42	1.160	5.000	5.199	4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

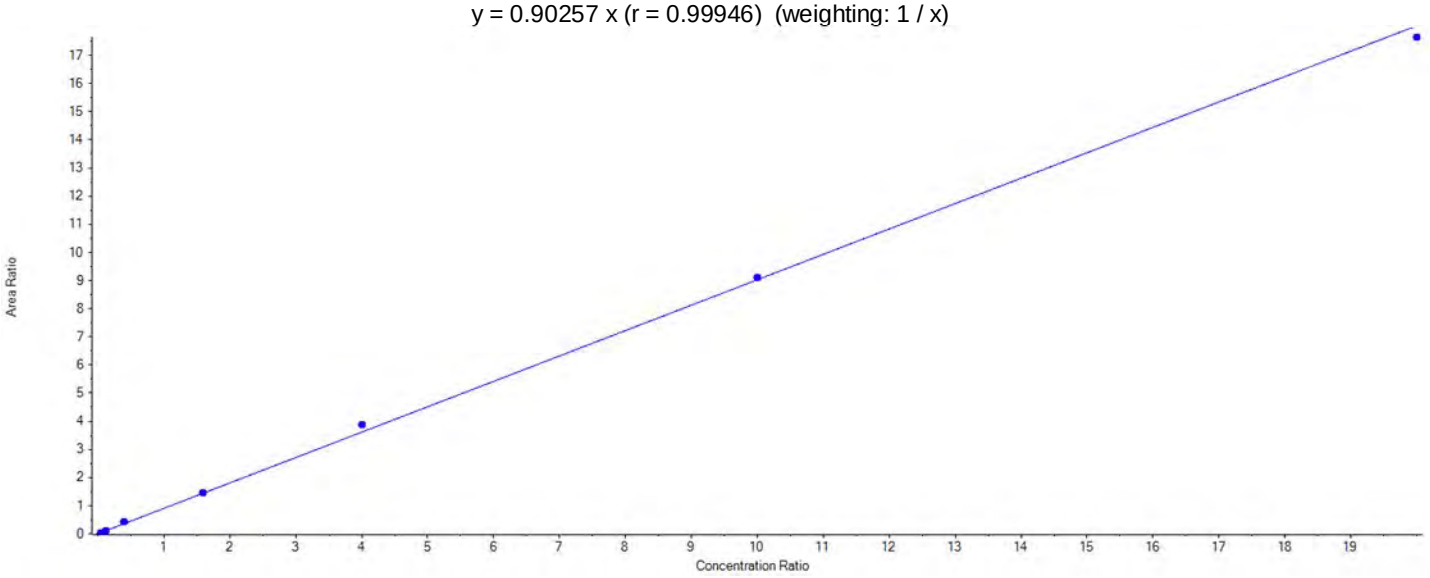
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBA

y = 0.90257 x (r = 0.99946) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBA Area	S/N	13C4-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32322.94	189.9	763334.27	True	5.00	0.042	3.27	1.000	0.200	0.235	17	30	
CAL2	80396.23	328.7	771445.80	True	5.00	0.104	3.27	1.000	0.600	0.577	-4	30	
CAL3	303228.65	603.0	733360.15	True	5.00	0.413	3.27	1.000	2.000	2.291	15	30	
CAL4	1068414.88	996.7	726395.96	True	5.00	1.471	3.26	1.000	8.000	8.148	2	30	
CAL5	2700090.79	1579.9	698871.91	True	5.00	3.863	3.26	1.000	20.000	21.403	7	30	
CAL6	5765353.41	2132.7	633648.38	True	5.00	9.099	3.26	1.000	50.000	50.404	1	30	
CAL7	9834601.68	2326.7	557392.78	True	5.00	17.644	3.25	1.000	100.000	97.743	-2	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

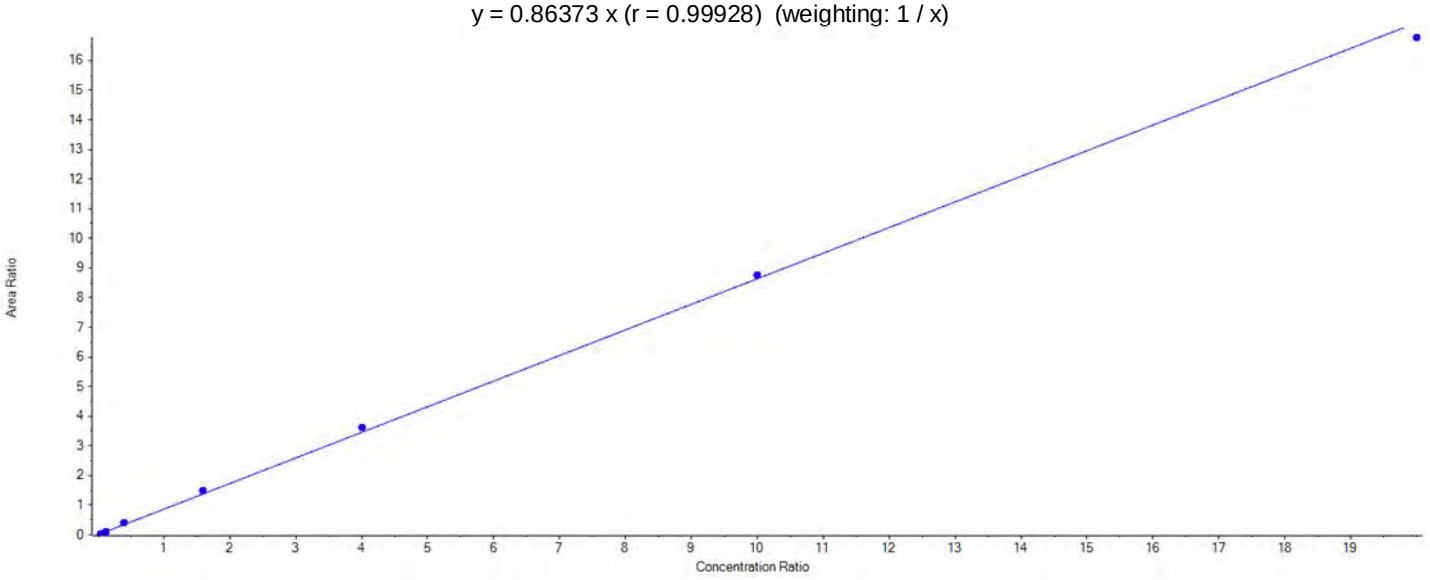
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeA

y = 0.86373 x (r = 0.99928) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeA Area	S/N	13C5-PFPeA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32633.13	78.7	771179.39	True	5.00	0.042	3.77	1.000	0.200	0.245	22	30	
CAL2	84319.38	153.0	738194.74	True	5.00	0.114	3.77	1.000	0.600	0.661	10	30	
CAL3	292715.83	240.6	695805.67	True	5.00	0.421	3.77	1.000	2.000	2.435	22	30	
CAL4	1075643.54	403.4	716206.93	True	5.00	1.502	3.76	1.000	8.000	8.694	9	30	
CAL5	2660895.37	642.6	734598.25	True	5.00	3.622	3.76	1.000	20.000	20.969	5	30	
CAL6	5570221.70	1016.0	635977.79	True	5.00	8.759	3.77	1.000	50.000	50.702	1	30	
CAL7	9756431.51	1095.7	581688.66	True	5.00	16.773	3.75	1.000	100.000	97.094	-3	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

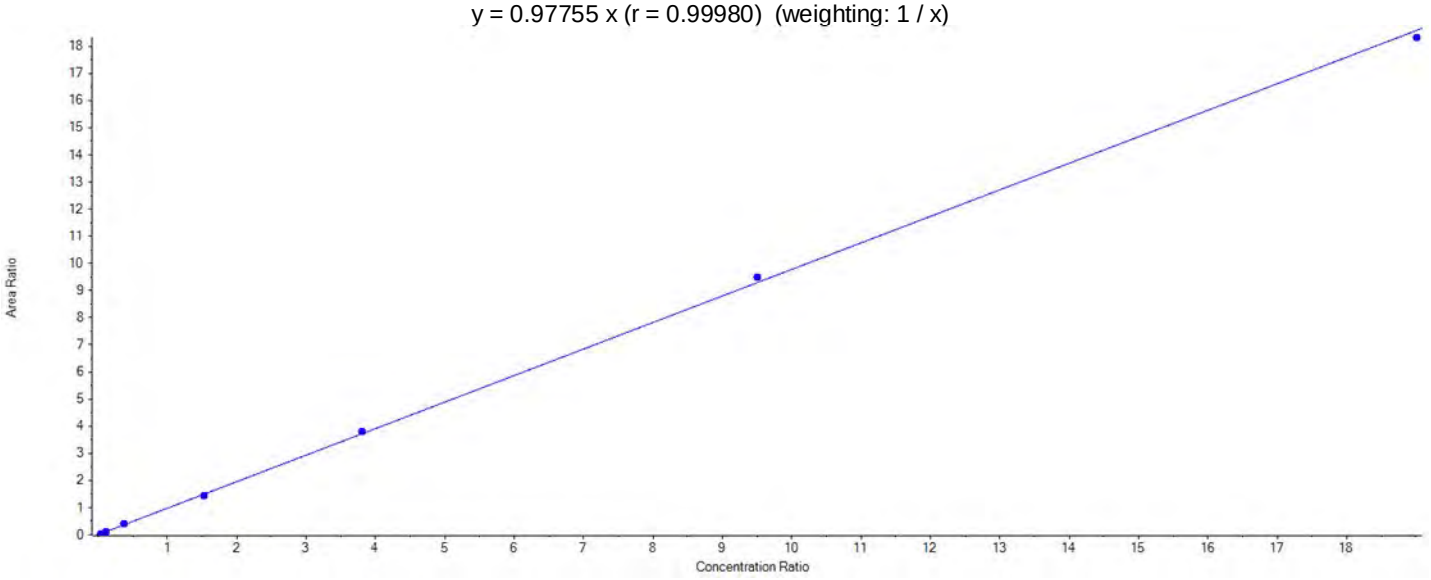
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBS

y = 0.97755 x (r = 0.99980) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	18010.03	456.9	445963.43	True	4.65	0.040	3.81	1.000	0.177	0.192	9	30	
CAL2	44885.16	959.4	418860.68	True	4.65	0.107	3.82	1.000	0.531	0.510	-4	30	
CAL3	168144.64	1287.7	416352.75	True	4.65	0.404	3.82	1.000	1.770	1.921	9	30	
CAL4	617045.58	2604.2	425015.72	True	4.65	1.452	3.81	1.000	7.080	6.906	-2	30	
CAL5	1630613.49	4013.6	428050.64	True	4.65	3.809	3.80	1.000	17.700	18.121	2	30	
CAL6	3588084.15	4714.2	378676.81	True	4.65	9.475	3.81	1.000	44.200	45.072	2	30	
CAL7	6615935.34	4086.7	361166.00	True	4.65	18.318	3.80	1.000	88.400	87.136	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

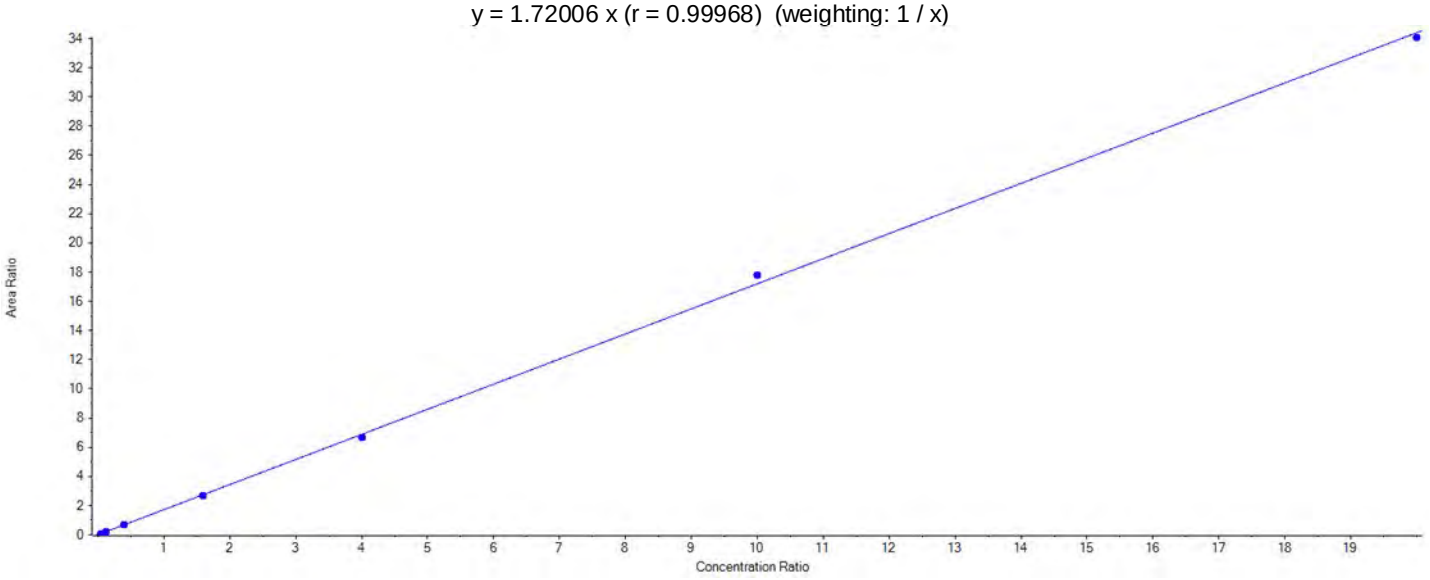
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

4:2-FTS

y = 1.72006 x (r = 0.99968) (weighting: 1 / x)



Component Calibration Verification

Sample Name	4:2-FTS Area	S/N	13C2-4:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3636.36	188.8	51494.57	True	4.67	0.071	4.13	1.000	0.187	0.192	3	30	
CAL2	8803.96	391.1	46141.76	True	4.67	0.191	4.13	1.000	0.560	0.518	-7	30	
CAL3	34188.48	932.2	47514.79	True	4.67	0.720	4.13	1.000	1.870	1.954	4	30	
CAL4	126396.51	2063.7	47246.37	True	4.67	2.675	4.13	1.000	7.470	7.263	-3	30	
CAL5	344695.89	2546.9	51791.87	True	4.67	6.655	4.12	1.000	18.700	18.070	-3	30	
CAL6	738293.95	3115.2	41422.17	True	4.67	17.824	4.13	1.000	46.700	48.392	4	30	
CAL7	1379983.90	3342.5	40505.09	True	4.67	34.069	4.11	1.000	93.400	92.499	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

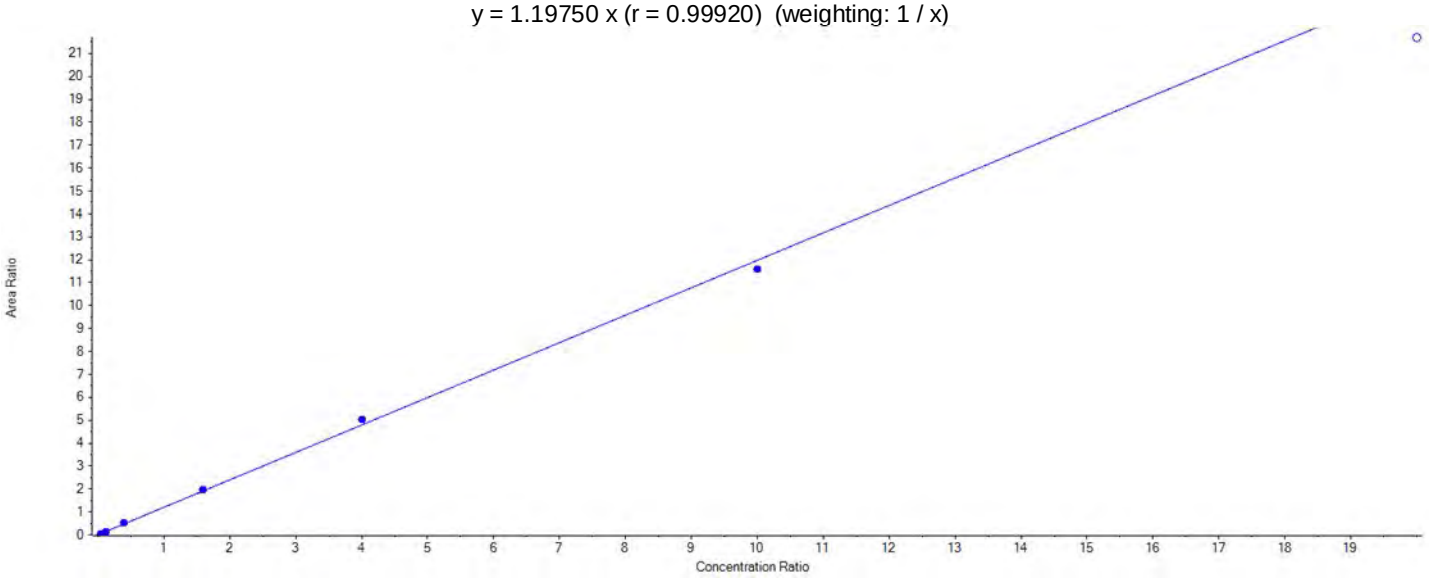
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxA

y = 1.19750 x (r = 0.99920) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxA Area	S/N	13C5-PFHxA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39108.19	254.9	664975.88	True	5.00	0.059	4.16	1.000	0.200	0.246	23	30	
CAL2	96559.34	367.8	648170.06	True	5.00	0.149	4.16	1.000	0.600	0.622	4	30	
CAL3	352013.45	713.4	646783.50	True	5.00	0.544	4.17	1.000	2.000	2.272	14	30	
CAL4	1265231.12	1181.4	641195.85	True	5.00	1.973	4.16	1.000	8.000	8.239	3	30	
CAL5	3158486.41	1640.8	628952.79	True	5.00	5.022	4.15	1.000	20.000	20.968	5	30	
CAL6	6593778.96	2095.1	568205.82	True	5.00	11.605	4.16	1.000	50.000	48.453	-3	30	
CAL7	11059420.28	2611.8	509807.95	False	5.00	21.693	4.15	1.000	100.000	90.577	-9	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

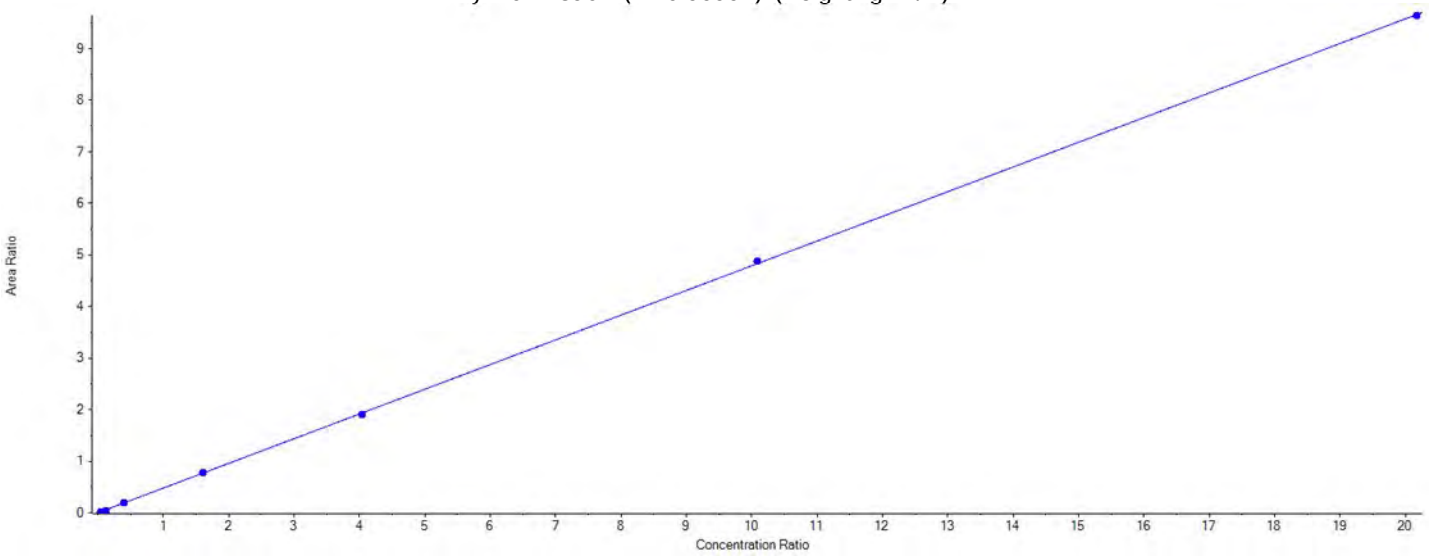
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeS

y = 0.47896 x (r = 0.99991) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	9620.09	321.5	445963.43	True	4.65	0.022	4.18	1.100	0.188	0.209	11	30	
CAL2	20295.04	611.8	418860.68	True	4.65	0.048	4.19	1.100	0.563	0.470	-16	30	
CAL3	84071.24	1175.2	416352.75	True	4.65	0.202	4.19	1.100	1.880	1.960	4	30	
CAL4	328681.66	3455.2	425015.72	True	4.65	0.773	4.18	1.100	7.500	7.508	0	30	
CAL5	815928.18	2443.7	428050.64	True	4.65	1.906	4.17	1.100	18.800	18.506	-2	30	
CAL6	1847826.78	3263.9	378676.81	True	4.65	4.880	4.18	1.100	46.900	47.375	1	30	
CAL7	3482095.87	4201.9	361166.00	True	4.65	9.641	4.17	1.100	93.800	93.602	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

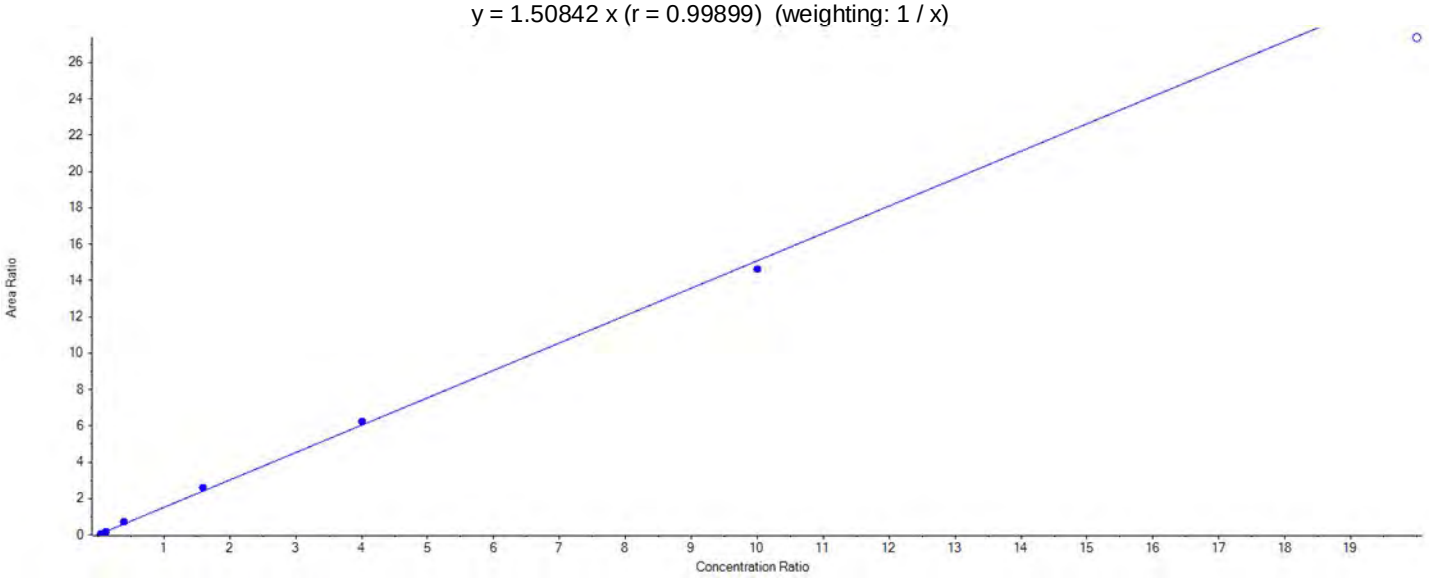
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpA

y = 1.50842 x (r = 0.99899) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpA Area	S/N	13C4-PFHpA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	37545.37	111.6	528473.49	True	5.00	0.071	4.55	1.000	0.200	0.235	18	30	
CAL2	95048.34	255.2	532987.49	True	5.00	0.178	4.55	1.000	0.600	0.591	-1	30	
CAL3	355834.18	621.3	503681.03	True	5.00	0.706	4.56	1.000	2.000	2.342	17	30	
CAL4	1318774.50	846.6	509151.78	True	5.00	2.590	4.55	1.000	8.000	8.586	7	30	
CAL5	3269561.01	1266.8	525802.05	True	5.00	6.218	4.54	1.000	20.000	20.612	3	30	
CAL6	6648455.32	1607.4	455005.81	True	5.00	14.612	4.55	1.000	50.000	48.434	-3	30	
CAL7	10981922.82	1824.2	401203.88	False	5.00	27.372	4.54	1.000	100.000	90.732	-9	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

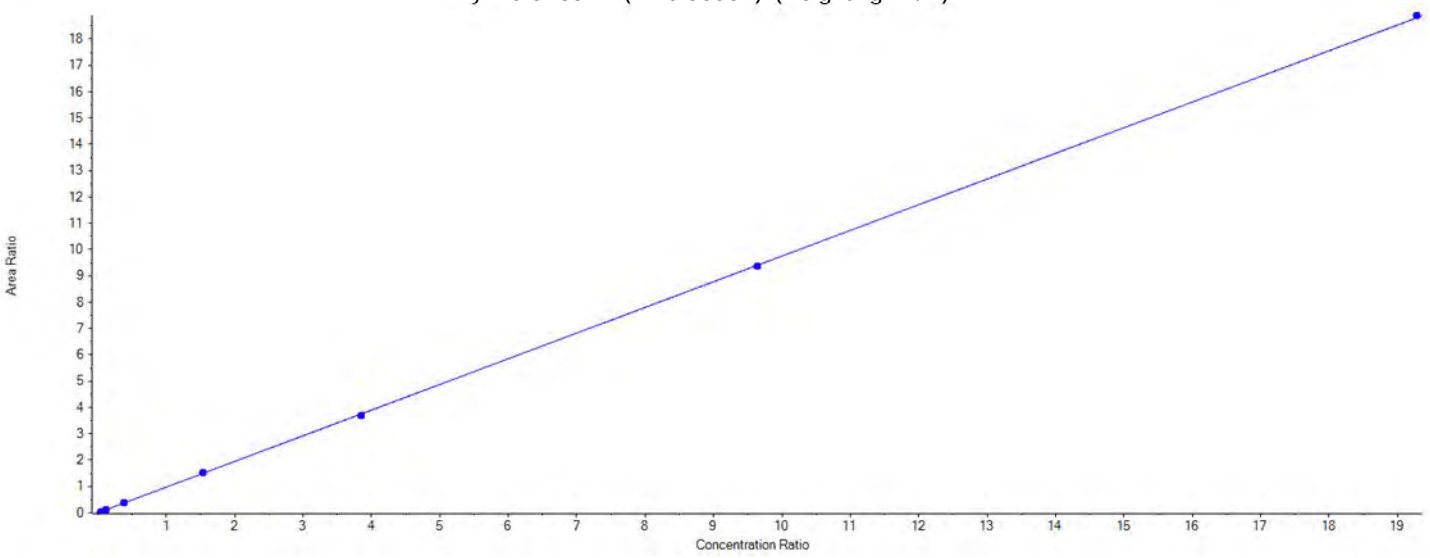
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxS

y = 0.97552 x (r = 0.99992) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	12858.11	420.7	327944.53	True	4.73	0.039	4.55	1.000	0.182	0.190	4	30	
CAL2	31064.73	21916.1	320400.37	True	4.73	0.097	4.56	1.000	0.547	0.470	-14	30	
CAL3	125622.02	1397.4	317243.20	True	4.73	0.396	4.56	1.000	1.820	1.920	5	30	
CAL4	479290.97	1690.0	315722.63	True	4.73	1.518	4.55	1.000	7.300	7.361	1	30	
CAL5	1138604.25	1511.8	309304.49	True	4.73	3.681	4.54	1.000	18.200	17.849	-2	30	
CAL6	2662852.00	1747.2	284116.51	True	4.73	9.372	4.55	1.000	45.600	45.444	0	30	
CAL7	5048349.82	1449.1	267182.79	True	4.73	18.895	4.54	1.000	91.200	91.615	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

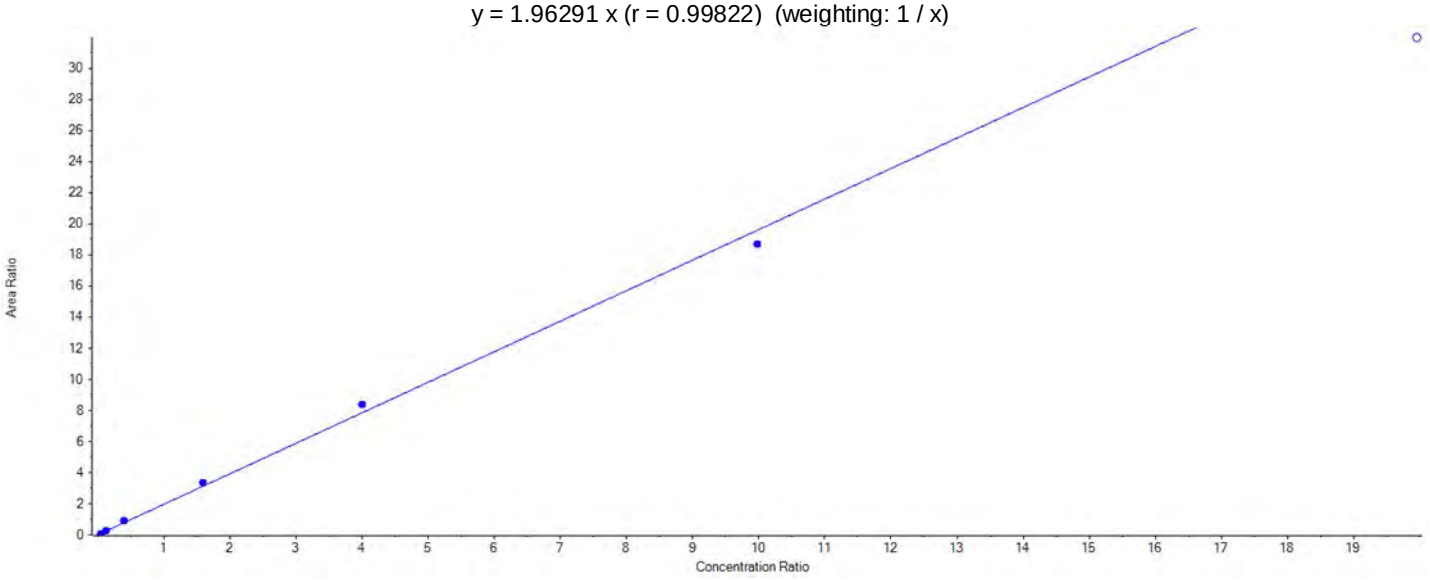
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

6:2-FTS

y = 1.96291 x (r = 0.99822) (weighting: 1 / x)



Component Calibration Verification

Sample Name	6:2-FTS Area	S/N	13C2-6:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2683.12	289.4	35455.22	True	4.75	0.076	4.90	1.000	0.190	0.183	-4	30	
CAL2	8048.37	680.8	35585.69	True	4.75	0.226	4.91	1.000	0.569	0.547	-4	30	
CAL3	28084.91	4492.0	31706.42	True	4.75	0.886	4.91	1.000	1.900	2.143	13	30	
CAL4	107470.62	1876.3	31883.28	True	4.75	3.371	4.91	1.000	7.580	8.157	8	30	
CAL5	260254.34	2335.4	31012.00	True	4.75	8.392	4.90	1.000	19.000	20.308	7	30	
CAL6	523949.46	2243.2	27988.49	True	4.75	18.720	4.91	1.000	47.400	45.301	-4	30	
CAL7	869227.19	3021.8	27180.24	False	4.75	31.980	4.89	1.000	94.800	77.388	-18	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

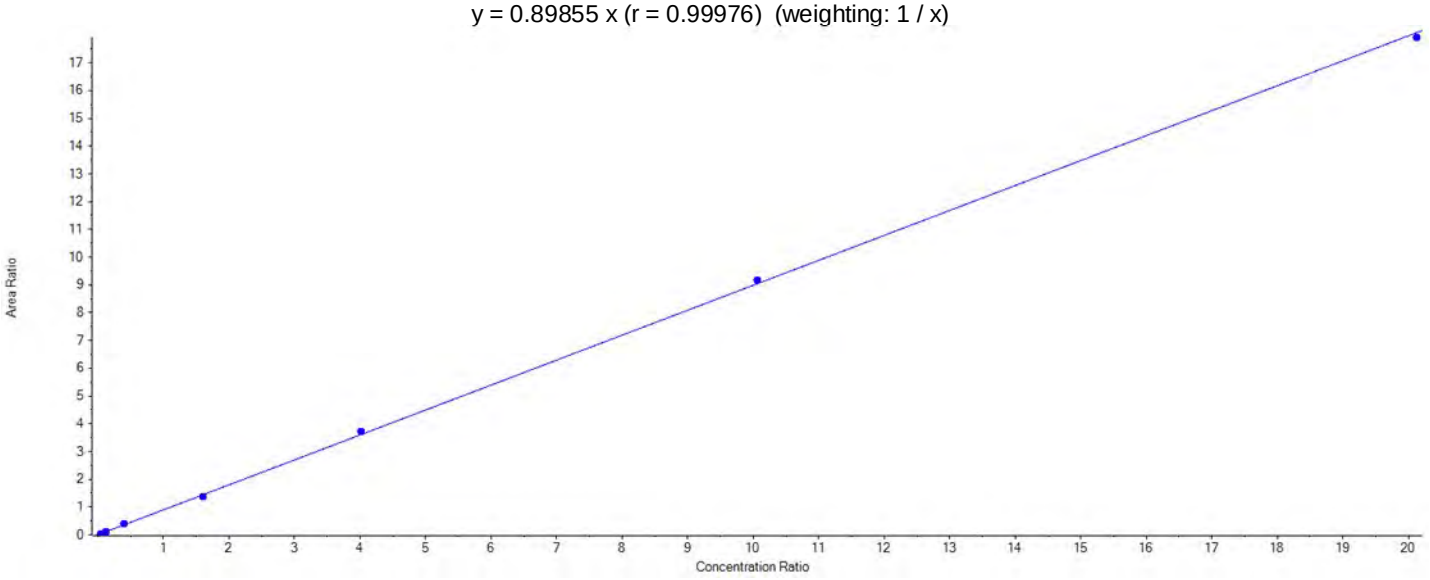
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpS

y = 0.89855 x (r = 0.99976) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13262.78	924.7	327944.53	True	4.73	0.040	4.91	1.080	0.190	0.213	12	30	
CAL2	29902.32	1651.5	320400.37	True	4.73	0.093	4.92	1.080	0.571	0.491	-14	30	
CAL3	125907.86	2910.0	317243.20	True	4.73	0.397	4.92	1.080	1.900	2.089	10	30	
CAL4	434949.18	2606.3	315722.63	True	4.73	1.378	4.91	1.080	7.610	7.252	-5	30	
CAL5	1145559.80	3668.3	309304.49	True	4.73	3.704	4.90	1.080	19.000	19.496	3	30	
CAL6	2604868.63	3378.5	284116.51	True	4.73	9.168	4.91	1.080	47.600	48.262	1	30	
CAL7	4784682.82	2777.4	267182.79	True	4.73	17.908	4.90	1.080	95.200	94.267	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

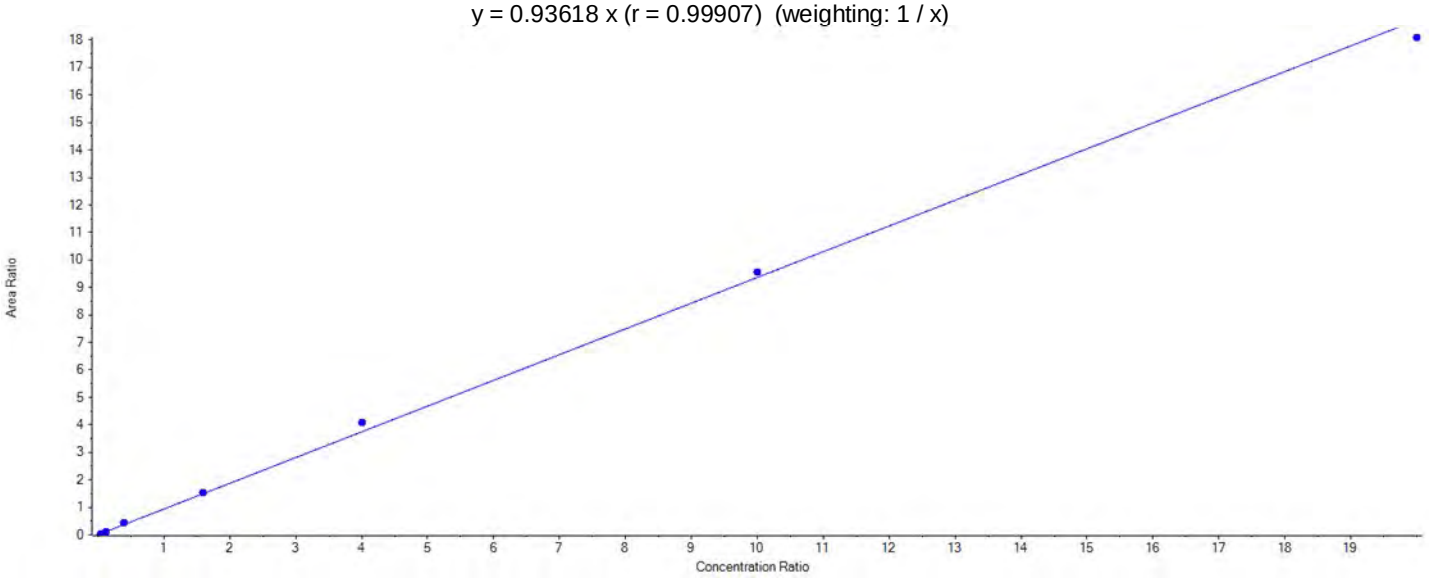
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOA

y = 0.93618 x (r = 0.99907) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOA Area	S/N	13C8-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	41467.99	187.1	912537.72	True	5.00	0.045	4.92	1.000	0.200	0.243	21	30	
CAL2	100710.53	331.7	892584.21	True	5.00	0.113	4.93	1.000	0.600	0.603	0	30	
CAL3	372258.90	744.4	878868.48	True	5.00	0.424	4.93	1.000	2.000	2.262	13	30	
CAL4	1327086.09	1187.5	863597.26	True	5.00	1.537	4.92	1.000	8.000	8.207	3	30	
CAL5	3291549.40	1816.2	805288.72	True	5.00	4.087	4.91	1.000	20.000	21.830	9	30	
CAL6	6758642.79	2708.4	707130.31	True	5.00	9.558	4.92	1.000	50.000	51.047	2	30	
CAL7	10991740.12	2902.7	607669.53	True	5.00	18.088	4.91	1.000	100.000	96.608	-3	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

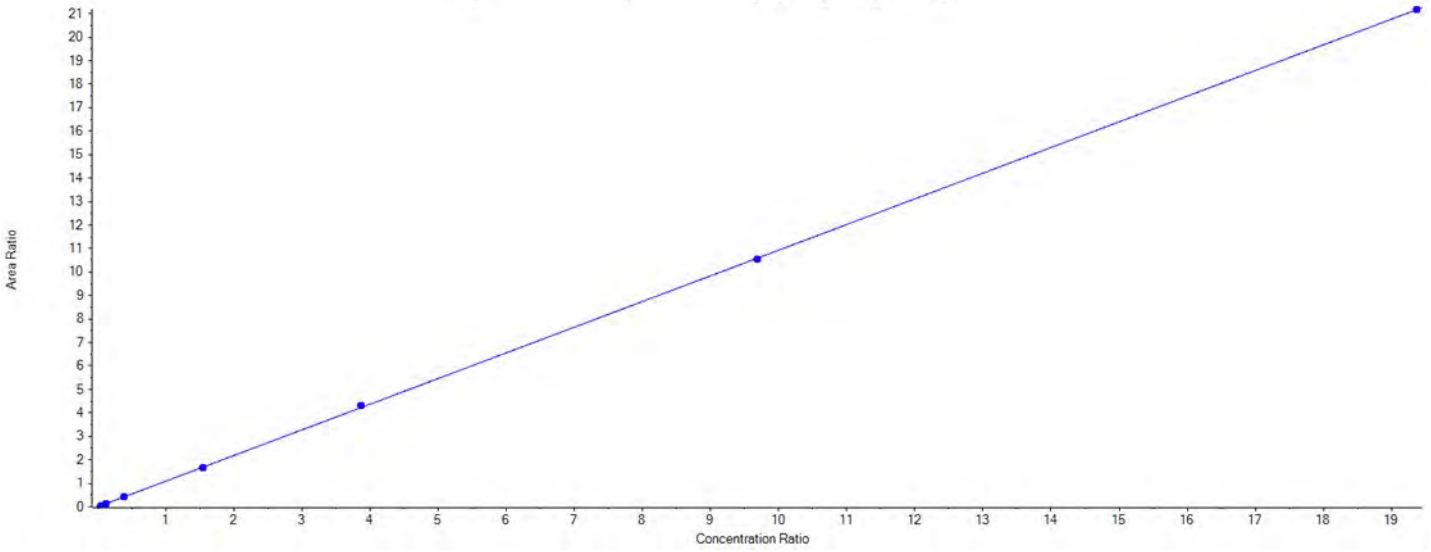
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOS

y = 1.09305 x (r = 0.99997) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13088.49	581.9	283127.43	True	4.78	0.046	5.25	1.000	0.185	0.202	9	30	
CAL2	32300.98	342.7	271778.84	True	4.78	0.119	5.25	1.000	0.555	0.520	-6	30	
CAL3	120897.45	739.8	281035.50	True	4.78	0.430	5.25	1.000	1.850	1.881	2	30	
CAL4	448833.83	1353.6	267380.81	True	4.78	1.679	5.25	1.000	7.400	7.341	-1	30	
CAL5	1147826.77	1190.7	267157.61	True	4.78	4.296	5.24	1.000	18.500	18.789	2	30	
CAL6	2664957.22	1191.1	253129.16	True	4.78	10.528	5.25	1.000	46.300	46.040	-1	30	
CAL7	5138366.95	1123.0	242617.53	True	4.78	21.179	5.24	1.000	92.600	92.617	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

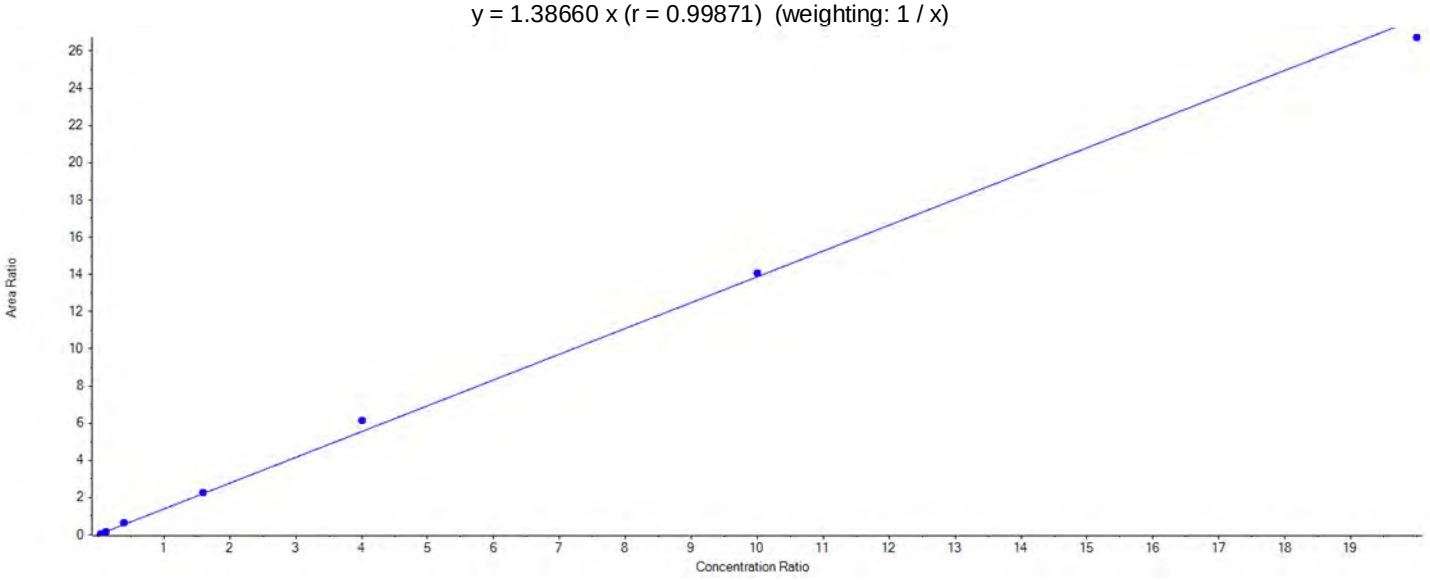
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNA

y = 1.38660 x (r = 0.99871) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNA Area	S/N	13C9-PFNA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	29660.05	270.7	479931.43	True	5.00	0.062	5.26	1.000	0.200	0.223	11	30	
CAL2	80724.19	537.0	451850.14	True	5.00	0.179	5.27	1.000	0.600	0.644	7	30	
CAL3	302323.82	1252.4	455948.85	True	5.00	0.663	5.27	1.000	2.000	2.391	20	30	
CAL4	1106664.23	1697.5	485570.41	True	5.00	2.279	5.26	1.000	8.000	8.218	3	30	
CAL5	2725089.71	2530.1	441776.75	True	5.00	6.168	5.26	1.000	20.000	22.243	11	30	
CAL6	5820576.59	3024.4	413811.35	True	5.00	14.066	5.27	1.000	50.000	50.720	1	30	
CAL7	10084288.28	3917.9	377369.76	True	5.00	26.723	5.25	1.000	100.000	96.360	-4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

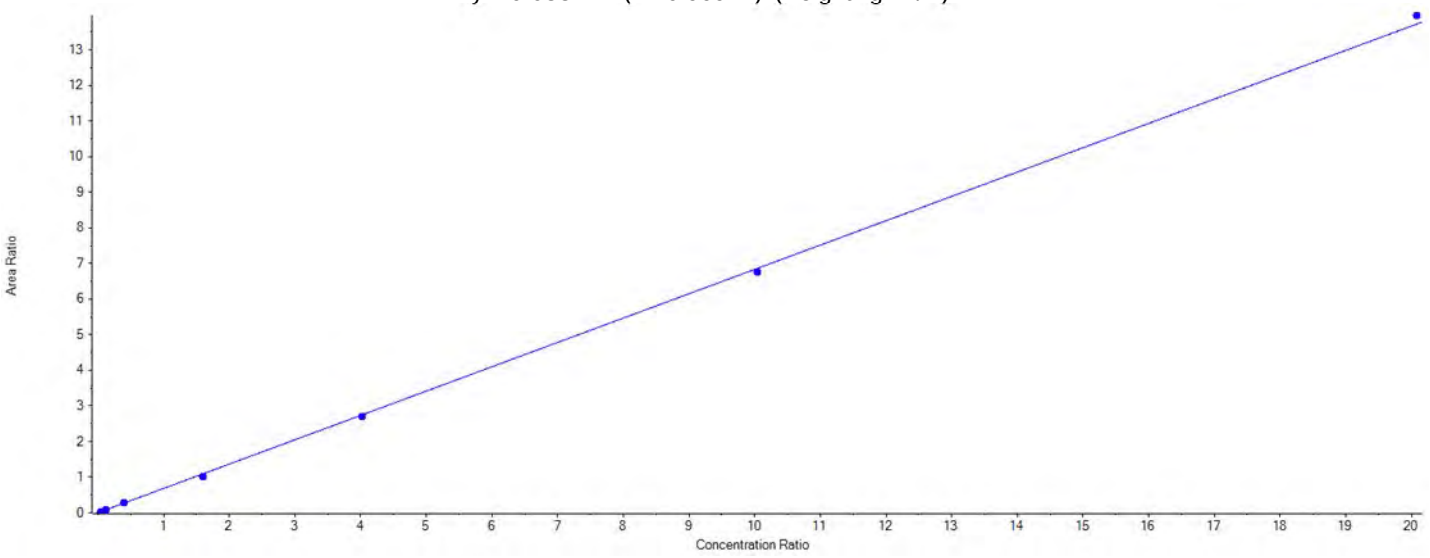
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNS

y = 0.68322 x (r = 0.99974) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6846.55	64175.9	283127.43	True	4.78	0.024	5.54	1.060	0.192	0.169	-12	30	
CAL2	20326.14	1643.1	271778.84	True	4.78	0.075	5.55	1.060	0.576	0.523	-9	30	
CAL3	76049.00	306613.9	281035.50	True	4.78	0.271	5.55	1.060	1.920	1.893	-1	30	
CAL4	269712.27	3708.3	267380.81	True	4.78	1.009	5.54	1.060	7.680	7.057	-8	30	
CAL5	725402.00	3853.5	267157.61	True	4.78	2.715	5.53	1.060	19.200	18.997	-1	30	
CAL6	1709959.45	3115.5	253129.16	True	4.78	6.755	5.55	1.060	48.000	47.262	-2	30	
CAL7	3386860.46	3789.1	242617.53	True	4.78	13.960	5.53	1.060	96.000	97.666	2	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

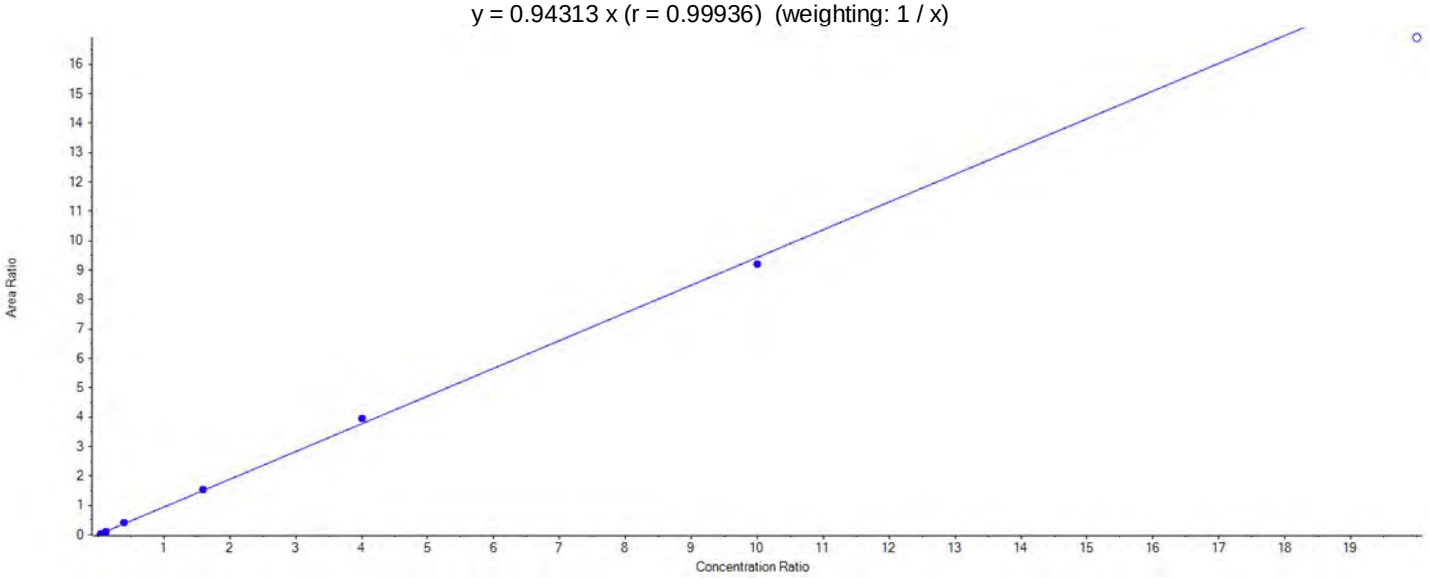
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDA

y = 0.94313 x (r = 0.99936) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDA Area	S/N	13C6-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	27488.55	91.3	612577.43	True	5.00	0.045	5.56	1.000	0.200	0.238	19	30	
CAL2	63802.06	156.0	601859.80	True	5.00	0.106	5.57	1.000	0.600	0.562	-6	30	
CAL3	254047.79	380.5	612680.79	True	5.00	0.415	5.57	1.000	2.000	2.198	10	30	
CAL4	941985.31	720.2	612056.47	True	5.00	1.539	5.56	1.000	8.000	8.159	2	30	
CAL5	2309359.54	1113.9	585231.23	True	5.00	3.946	5.56	1.000	20.000	20.920	5	30	
CAL6	4802967.81	1415.3	522613.81	True	5.00	9.190	5.57	1.000	50.000	48.722	-3	30	
CAL7	8104726.61	2024.7	479333.06	False	5.00	16.908	5.55	1.000	100.000	89.640	-10	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

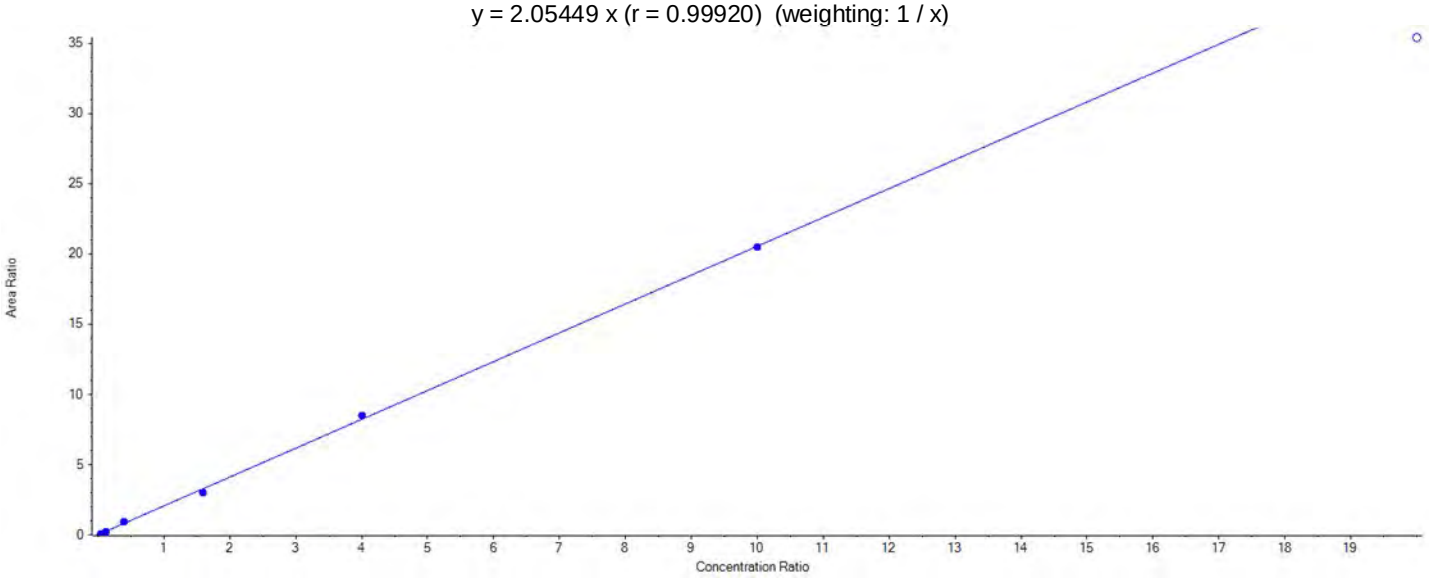
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

8:2-FTS

y = 2.05449 x (r = 0.99920) (weighting: 1 / x)



Component Calibration Verification

Sample Name	8:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2333.06	294799.1	26445.48	True	4.79	0.088	5.57	1.000	0.192	0.206	7	30	
CAL2	6214.24	6270.0	27639.19	True	4.79	0.225	5.57	1.000	0.575	0.524	-9	30	
CAL3	26295.08	17693.1	29249.84	True	4.79	0.899	5.57	1.000	1.920	2.096	9	30	
CAL4	80922.57	6228.9	27253.46	True	4.79	2.969	5.57	1.000	7.660	6.923	-10	30	
CAL5	206213.12	2630.2	24192.14	True	4.79	8.524	5.56	1.000	19.200	19.873	4	30	
CAL6	469719.63	3836.0	22899.00	True	4.79	20.513	5.57	1.000	47.900	47.825	0	30	
CAL7	804019.53	2307.7	22710.95	False	4.79	35.402	5.56	1.000	95.800	82.540	-14	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

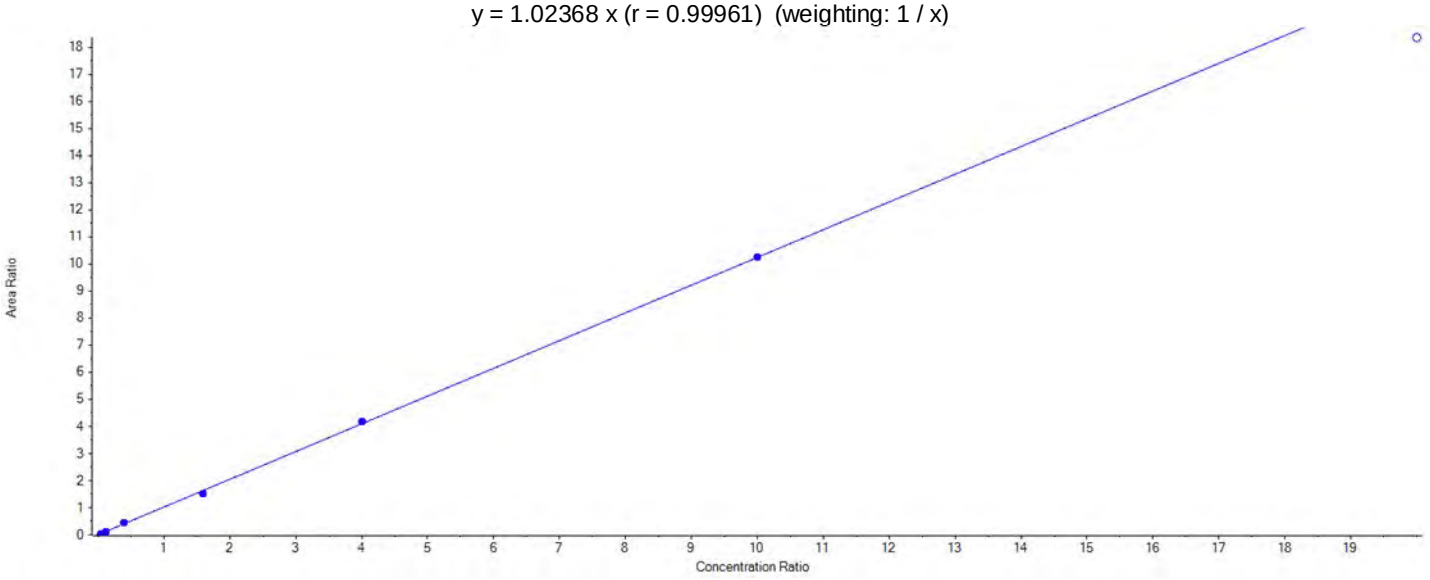
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOSA

y = 1.02368 x (r = 0.99961) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOSA Area	S/N	13C8-PFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	29582.80	441.0	664489.93	True	5.00	0.045	5.64	1.000	0.200	0.217	9	30	
CAL2	71087.03	726.6	636543.15	True	5.00	0.112	5.65	1.000	0.600	0.545	-9	30	
CAL3	270175.45	1379.9	629109.87	True	5.00	0.429	5.65	1.000	2.000	2.098	5	30	
CAL4	927660.45	2034.5	607762.03	True	5.00	1.526	5.64	1.000	8.000	7.455	-7	30	
CAL5	2498877.87	2082.0	596544.13	True	5.00	4.189	5.64	1.000	20.000	20.460	2	30	
CAL6	5530440.62	2331.7	539992.50	True	5.00	10.242	5.65	1.000	50.000	50.024	0	30	
CAL7	10169176.93	2455.7	554092.64	False	5.00	18.353	5.63	1.000	100.000	89.642	-10	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

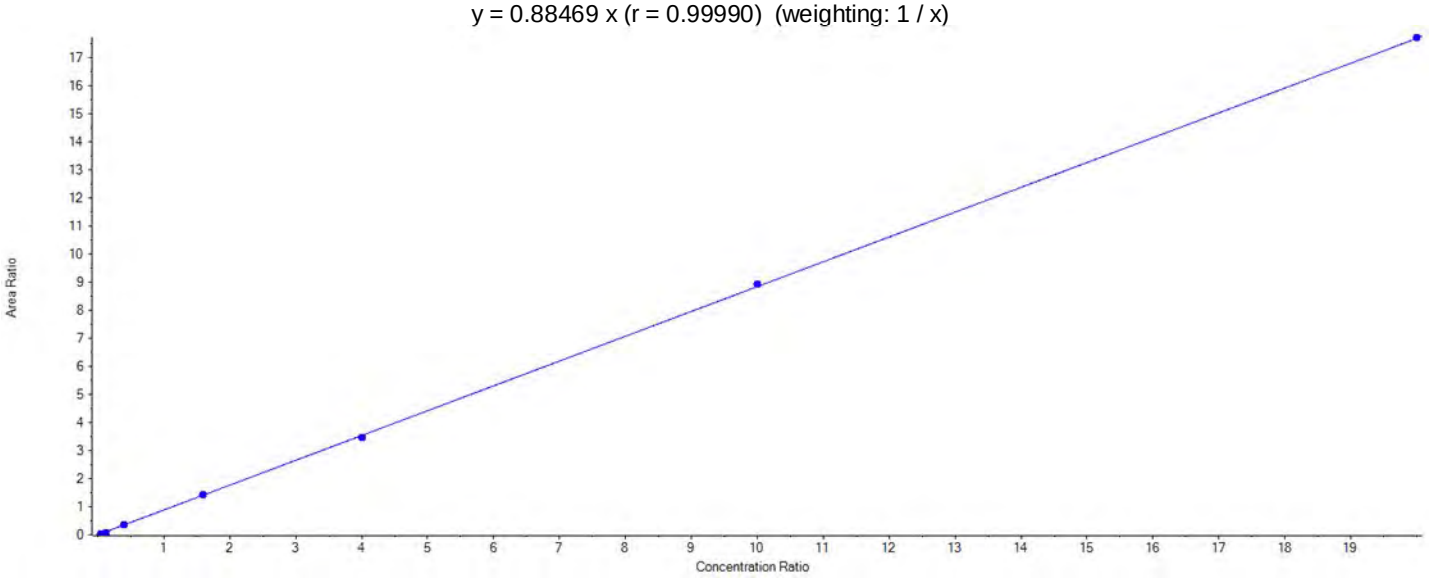
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NMeFOSAA

y = 0.88469 x (r = 0.99990) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMeFOSAA Area	S/N	d3-NMeFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2306.38	597.4	86914.51	True	5.00	0.027	5.71	1.000	0.200	0.150	-25	30	
CAL2	5759.59	226.1	77388.61	True	5.00	0.074	5.71	1.000	0.600	0.421	-30	30	
CAL3	25147.65	632.7	71670.26	True	5.00	0.351	5.71	1.000	2.000	1.983	-1	30	
CAL4	103649.07	37382.5	72788.02	True	5.00	1.424	5.70	1.000	8.000	8.048	1	30	
CAL5	250711.49	2299.0	72424.49	True	5.00	3.462	5.70	1.000	20.000	19.564	-2	30	
CAL6	627854.43	1632.7	70320.26	True	5.00	8.928	5.71	1.000	50.000	50.461	1	30	
CAL7	1191981.70	2314.0	67250.45	True	5.00	17.725	5.69	1.000	100.000	100.173	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

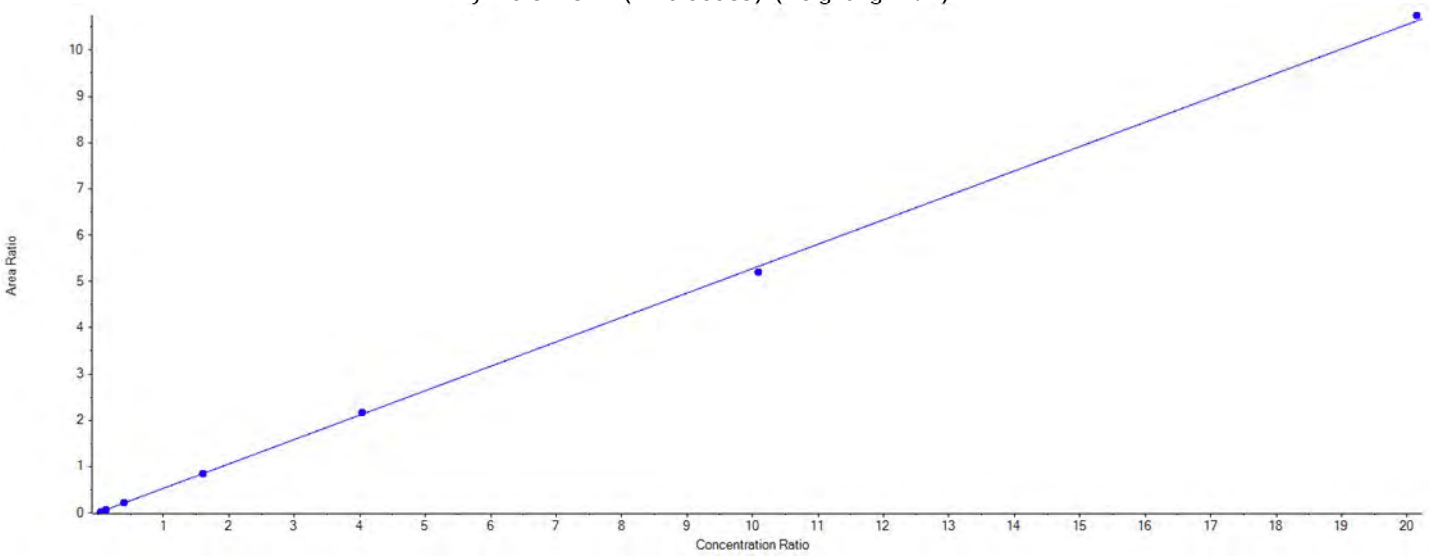
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDS

y = 0.52754 x (r = 0.99985) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5952.23	1142.3	283127.43	True	4.78	0.021	5.80	1.100	0.193	0.190	-1	30	
CAL2	16291.91	12424.6	271778.84	True	4.78	0.060	5.80	1.100	0.578	0.543	-6	30	
CAL3	57966.88	3930335.8	281035.50	True	4.78	0.206	5.80	1.110	1.930	1.869	-3	30	
CAL4	224031.22	2859776.1	267380.81	True	4.78	0.838	5.80	1.110	7.700	7.592	-1	30	
CAL5	578877.50	2392.5	267157.61	True	4.78	2.167	5.79	1.100	19.300	19.633	2	30	
CAL6	1313570.32	3303.1	253129.16	True	4.78	5.189	5.80	1.100	48.200	47.020	-2	30	
CAL7	2606720.69	3557.3	242617.53	True	4.78	10.744	5.79	1.110	96.300	97.353	1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

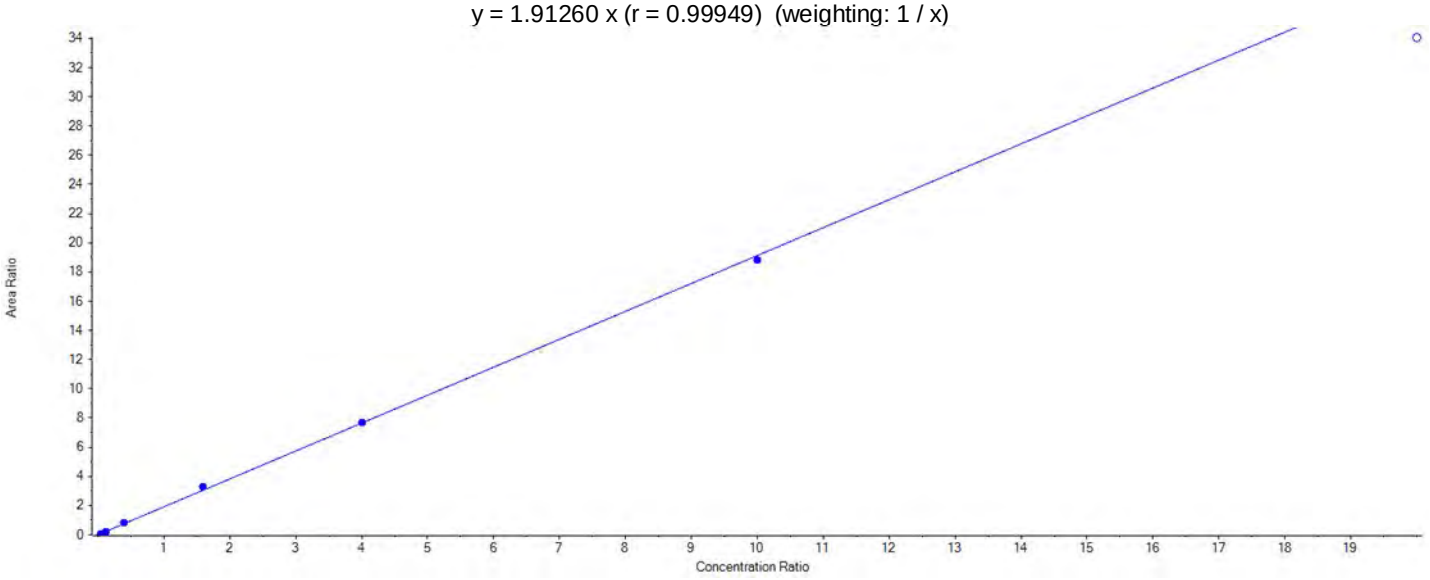
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFUnDA

y = 1.91260 x (r = 0.99949) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFUnDA Area	S/N	13C7-PFUnDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	23379.53	206.2	256401.96	True	5.00	0.091	5.82	1.000	0.200	0.238	19	30	
CAL2	51206.76	285.0	242881.75	True	5.00	0.211	5.83	1.000	0.600	0.551	-8	30	
CAL3	199061.83	846.0	245605.30	True	5.00	0.810	5.83	1.000	2.000	2.119	6	30	
CAL4	768010.80	1510.9	232014.10	True	5.00	3.310	5.82	1.000	8.000	8.654	8	30	
CAL5	1773582.60	2061.6	231187.89	True	5.00	7.672	5.82	1.000	20.000	20.055	0	30	
CAL6	3923979.21	2695.3	208574.11	True	5.00	18.813	5.83	1.000	50.000	49.183	-2	30	
CAL7	6802701.21	3209.1	199746.83	False	5.00	34.057	5.81	1.000	100.000	89.032	-11	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

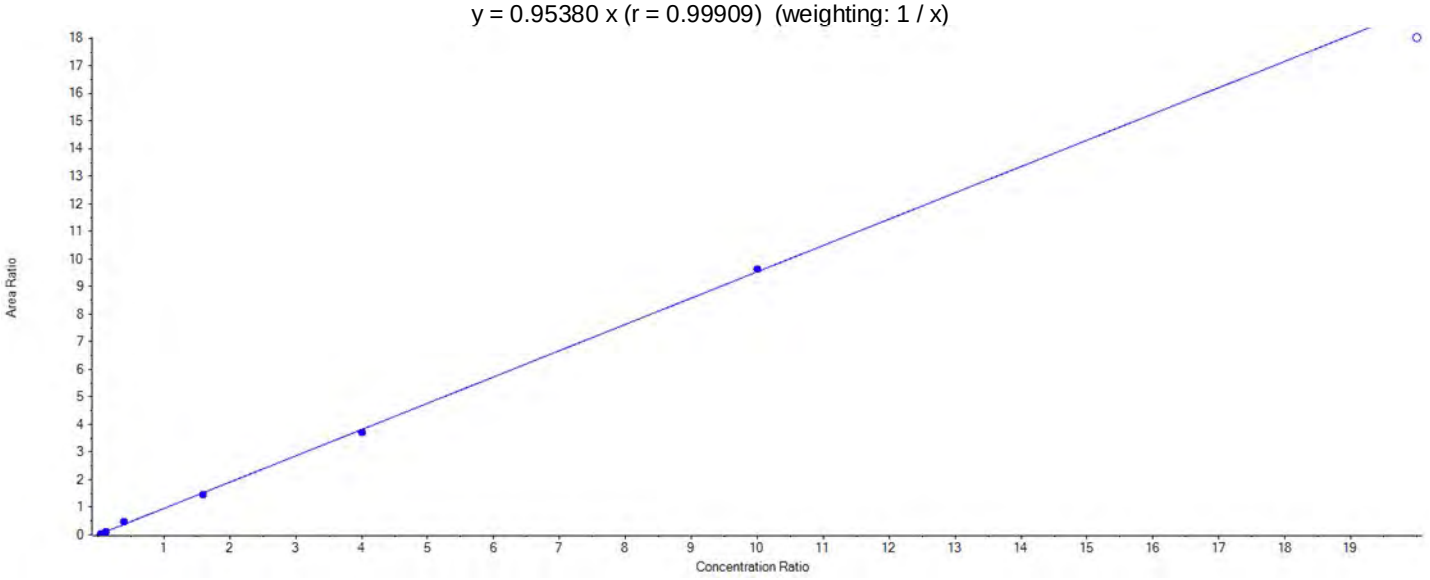
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtFOSAA

y = 0.95380 x (r = 0.99909) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtFOSAA Area	S/N	d5-NEtFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2284.89	20256.7	80597.24	True	5.00	0.028	5.85	1.000	0.200	0.149	-26	30	
CAL2	7727.12	209.6	63686.93	True	5.00	0.121	5.85	1.000	0.600	0.636	6	30	
CAL3	25089.02	97.0	54383.91	True	5.00	0.461	5.84	1.000	2.000	2.418	21	30	
CAL4	94877.84	20462.7	65477.96	True	5.00	1.449	5.84	1.000	8.000	7.596	-5	30	
CAL5	237197.18	1311.0	63701.69	True	5.00	3.724	5.83	1.000	20.000	19.520	-2	30	
CAL6	551865.73	1762.3	57308.08	True	5.00	9.630	5.84	1.000	50.000	50.481	1	30	
CAL7	1046636.11	1311.5	58049.49	False	5.00	18.030	5.83	1.000	100.000	94.517	-5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

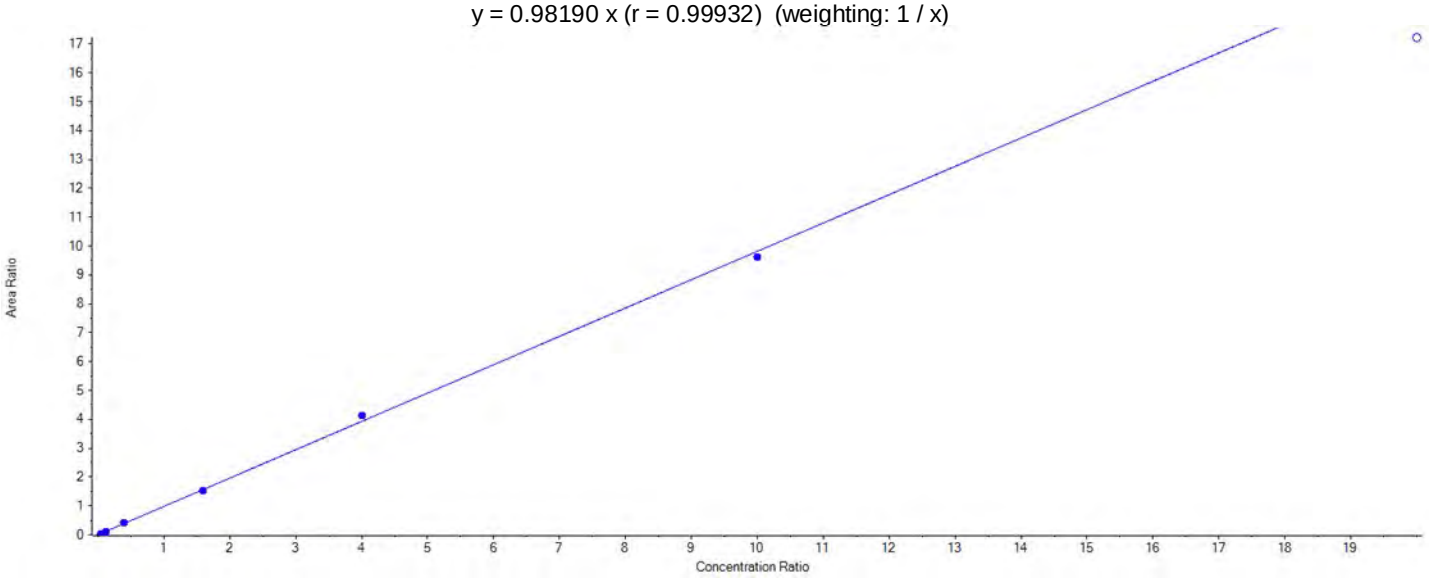
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoDA

y = 0.98190 x (r = 0.99932) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	22143.56	430.3	545413.19	True	5.00	0.041	6.05	1.000	0.200	0.207	3	30	
CAL2	59695.25	467.4	532175.35	True	5.00	0.112	6.06	1.000	0.600	0.571	-5	30	
CAL3	237252.63	1192.0	549542.28	True	5.00	0.432	6.06	1.000	2.000	2.198	10	30	
CAL4	803646.84	1372.0	521514.09	True	5.00	1.541	6.05	1.000	8.000	7.847	-2	30	
CAL5	2099385.04	2645.1	507556.82	True	5.00	4.136	6.04	1.000	20.000	21.062	5	30	
CAL6	4582985.49	2623.0	477105.49	True	5.00	9.606	6.06	1.000	50.000	48.914	-2	30	
CAL7	8171355.35	3494.7	474393.79	False	5.00	17.225	6.04	1.000	100.000	87.711	-12	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

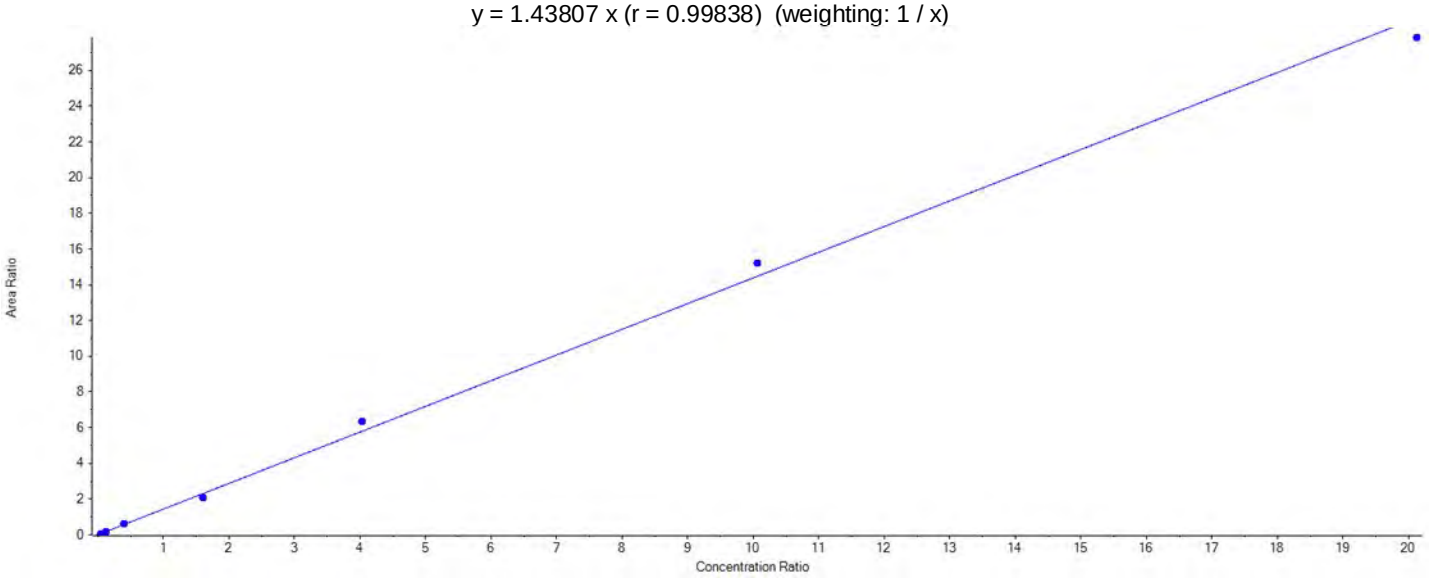
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

10:2-FTS

y = 1.43807 x (r = 0.99838) (weighting: 1 / x)



Component Calibration Verification

Sample Name	10:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1814.19	3265.8	26445.48	True	4.79	0.069	6.07	1.090	0.193	0.229	18	30	
CAL2	5206.47	6837.3	27639.19	True	4.79	0.188	6.08	1.090	0.578	0.627	9	30	
CAL3	18541.69	12580.7	29249.84	True	4.79	0.634	6.07	1.090	1.930	2.111	9	30	
CAL4	56040.80	5520.1	27253.46	True	4.79	2.056	6.07	1.090	7.710	6.849	-11	30	
CAL5	153343.55	2460.5	24192.14	True	4.79	6.339	6.06	1.090	19.300	21.113	9	30	
CAL6	348263.21	3159.4	22899.00	True	4.79	15.209	6.07	1.090	48.200	50.658	5	30	
CAL7	632223.71	3215.8	22710.95	True	4.79	27.838	6.06	1.090	96.400	92.724	-4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

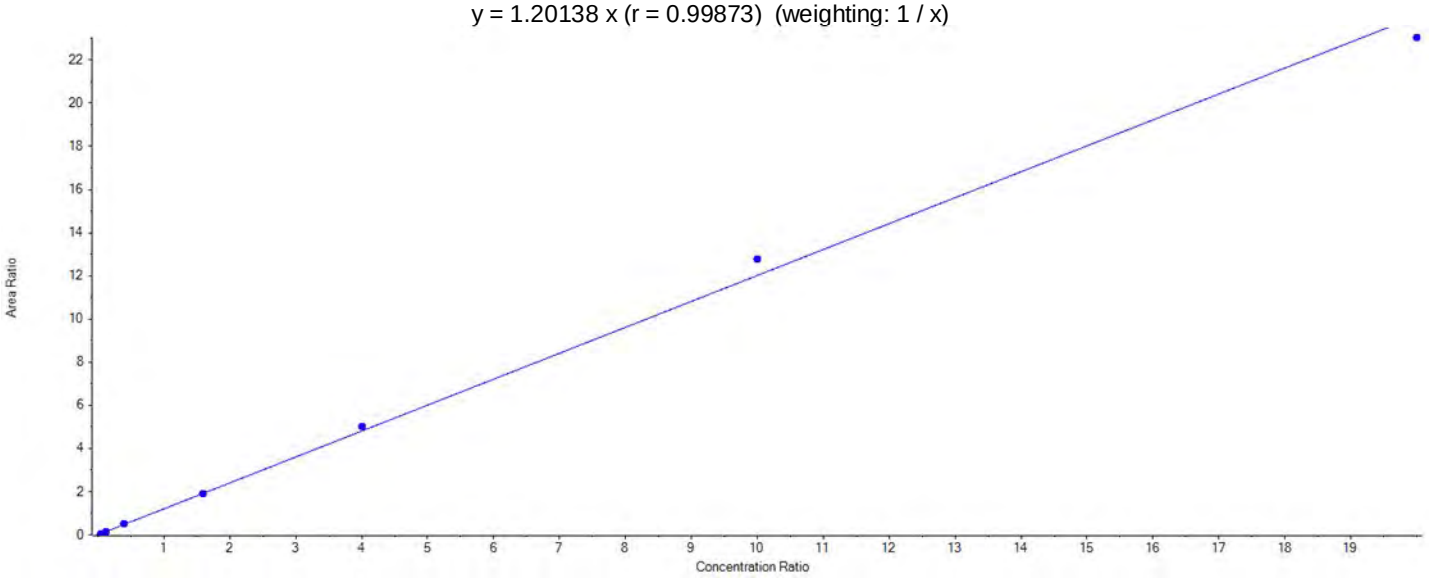
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSAE

y = 1.20138 x (r = 0.99873) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSAE Area	S/N	d7-NMePFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	18013.88	109.4	349854.47	True	5.00	0.051	6.10	1.000	0.200	0.214	7	30	
CAL2	43085.10	193.1	323456.51	True	5.00	0.133	6.10	1.000	0.600	0.554	-8	30	
CAL3	163668.66	409.2	307355.43	True	5.00	0.533	6.10	1.000	2.000	2.216	11	30	
CAL4	618314.36	740.2	327796.39	True	5.00	1.886	6.10	1.000	8.000	7.850	-2	30	
CAL5	1590507.13	975.1	316777.82	True	5.00	5.021	6.09	1.000	20.000	20.896	4	30	
CAL6	3484588.79	1388.9	272638.97	True	5.00	12.781	6.10	1.000	50.000	53.193	6	30	
CAL7	6272486.25	1388.0	272283.14	True	5.00	23.037	6.09	1.000	100.000	95.876	-4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

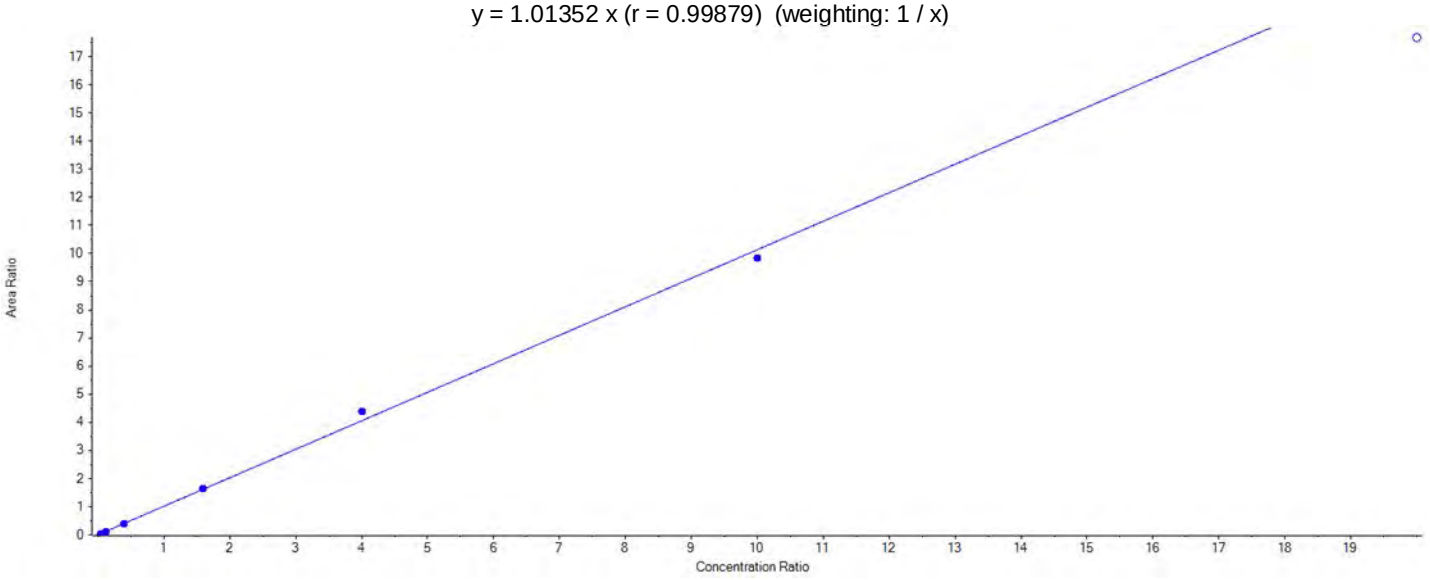
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSA

y = 1.01352 x (r = 0.99879) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSA Area	S/N	d3-NMePFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2376.29	153.9	78396.49	True	5.00	0.030	6.11	1.000	0.200	0.150	-25	30	
CAL2	8877.69	472.1	77893.24	True	5.00	0.114	6.11	1.000	0.600	0.562	-6	30	
CAL3	29934.31	447.4	76782.89	True	5.00	0.390	6.11	1.000	2.000	1.923	-4	30	
CAL4	114415.89	890.1	70122.47	True	5.00	1.632	6.10	1.000	8.000	8.049	1	30	
CAL5	300855.72	937.9	68615.66	True	5.00	4.385	6.10	1.000	20.000	21.631	8	30	
CAL6	670429.56	1054.0	68215.94	True	5.00	9.828	6.11	1.000	50.000	48.485	-3	30	
CAL7	1310162.93	1043.5	74110.30	False	5.00	17.679	6.09	1.000	100.000	87.214	-13	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

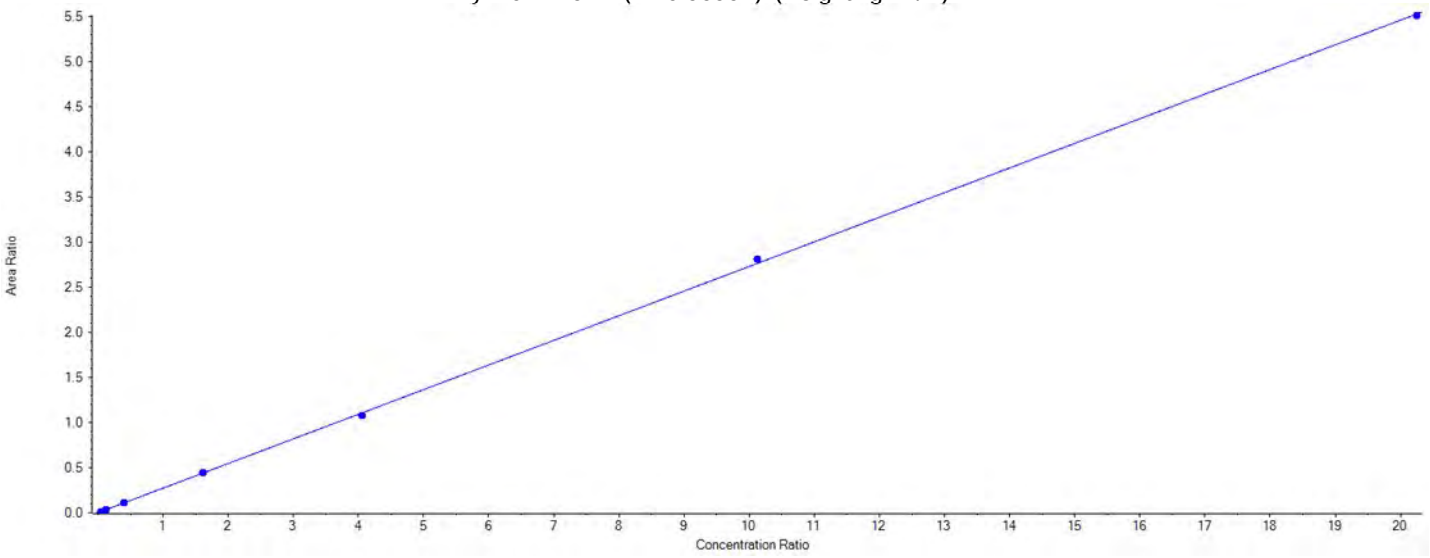
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoS

y = 0.27292 x (r = 0.99991) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3520.93	58335.2	283127.43	True	4.78	0.012	6.22	1.190	0.194	0.218	12	30	
CAL2	8992.48	12149.3	271778.84	True	4.78	0.033	6.22	1.190	0.581	0.580	0	30	
CAL3	30098.33	137145.7	281035.50	True	4.78	0.107	6.23	1.190	1.940	1.876	-3	30	
CAL4	117663.31	1376.2	267380.81	True	4.78	0.440	6.22	1.190	7.740	7.707	0	30	
CAL5	288905.05	1660.8	267157.61	True	4.78	1.081	6.21	1.190	19.400	18.940	-2	30	
CAL6	711567.54	2275.7	253129.16	True	4.78	2.811	6.23	1.190	48.400	49.234	2	30	
CAL7	1336765.26	3028.7	242617.53	True	4.78	5.510	6.21	1.190	96.800	96.500	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

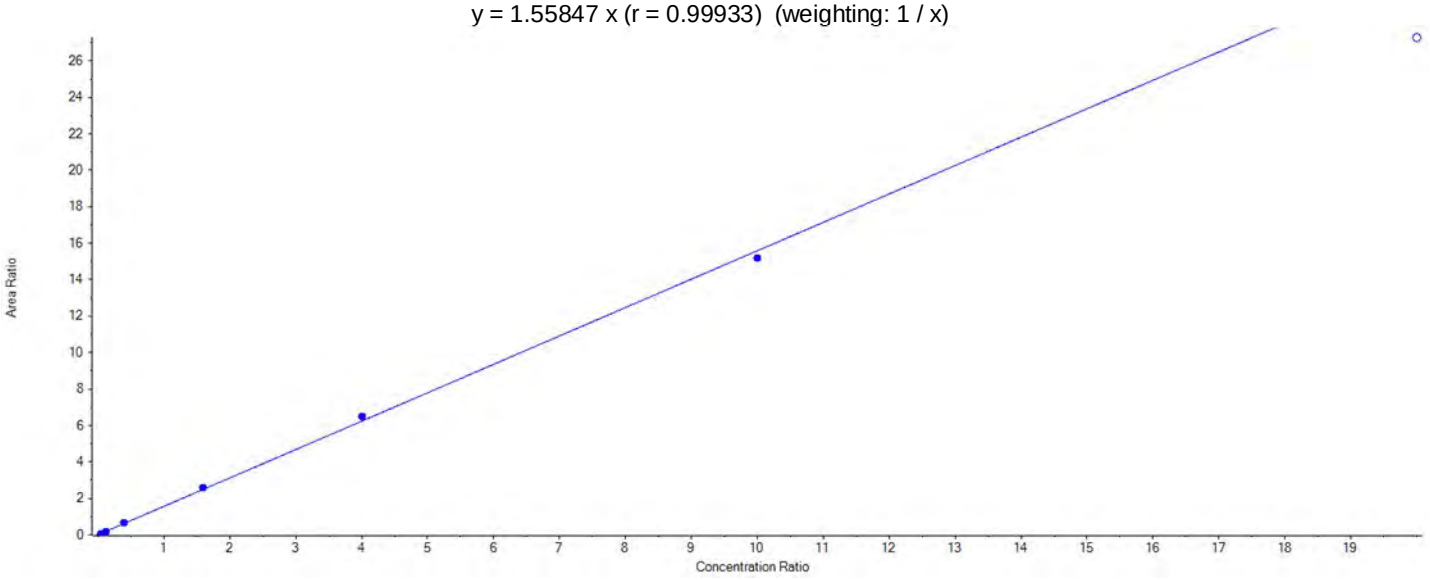
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSAE

y = 1.55847 x (r = 0.99933) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSAE Area	S/N	d9-NEtPFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	21005.85	119.5	280311.62	True	5.00	0.075	6.26	1.000	0.200	0.240	20	30	
CAL2	46623.33	205.6	261195.61	True	5.00	0.178	6.26	1.000	0.600	0.573	-5	30	
CAL3	178457.85	320.7	259792.28	True	5.00	0.687	6.26	1.000	2.000	2.204	10	30	
CAL4	673196.14	592.1	259467.37	True	5.00	2.595	6.25	1.000	8.000	8.324	4	30	
CAL5	1660562.59	810.5	255767.75	True	5.00	6.492	6.25	1.000	20.000	20.830	4	30	
CAL6	3677006.58	1204.8	242587.53	True	5.00	15.157	6.26	1.000	50.000	48.629	-3	30	
CAL7	6557402.46	1093.9	240346.47	False	5.00	27.283	6.25	1.000	100.000	87.532	-12	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

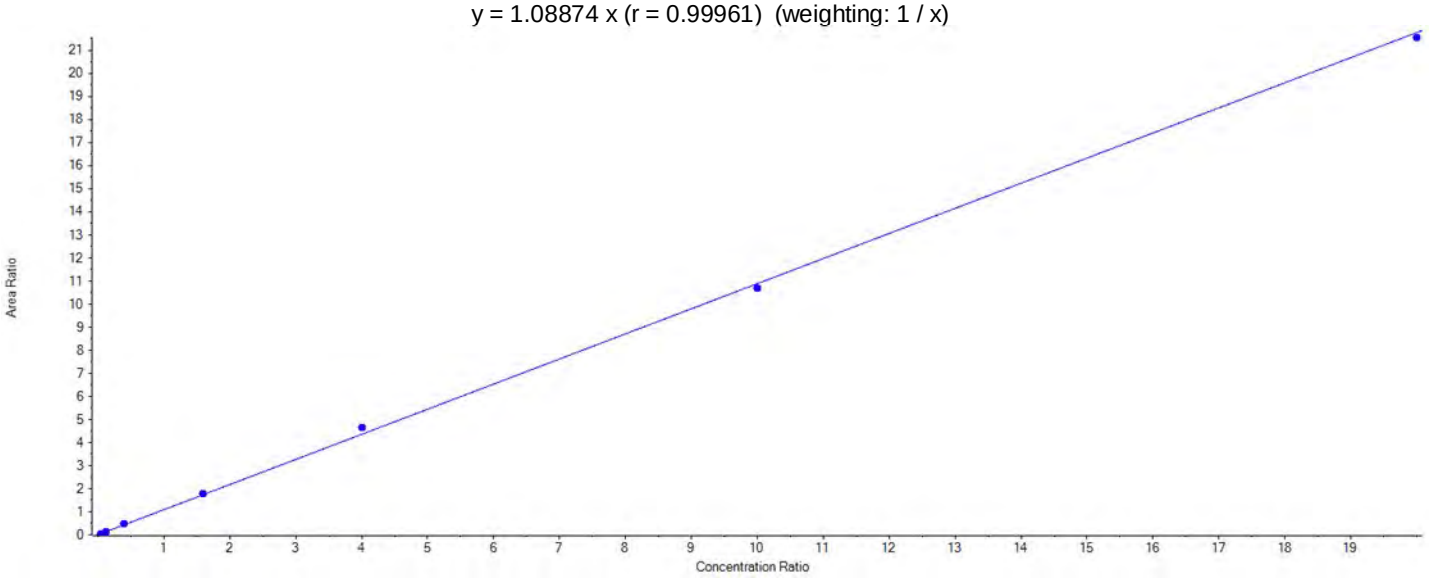
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSA

y = 1.08874 x (r = 0.99961) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSA Area	S/N	d5-NEtPFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2846.21	154.5	63047.06	True	5.00	0.045	6.27	1.000	0.200	0.207	4	30	
CAL2	8053.68	439.3	58073.45	True	5.00	0.139	6.27	1.000	0.600	0.637	6	30	
CAL3	26590.22	407.4	57485.89	True	5.00	0.463	6.27	1.000	2.000	2.124	6	30	
CAL4	99354.14	862.8	55177.27	True	5.00	1.801	6.27	1.000	8.000	8.269	3	30	
CAL5	258300.34	1044.0	55378.45	True	5.00	4.664	6.26	1.000	20.000	21.421	7	30	
CAL6	599280.41	865.2	56004.04	True	5.00	10.701	6.27	1.000	50.000	49.142	-2	30	
CAL7	1148933.01	1266.7	53297.85	True	5.00	21.557	6.26	1.000	100.000	98.999	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

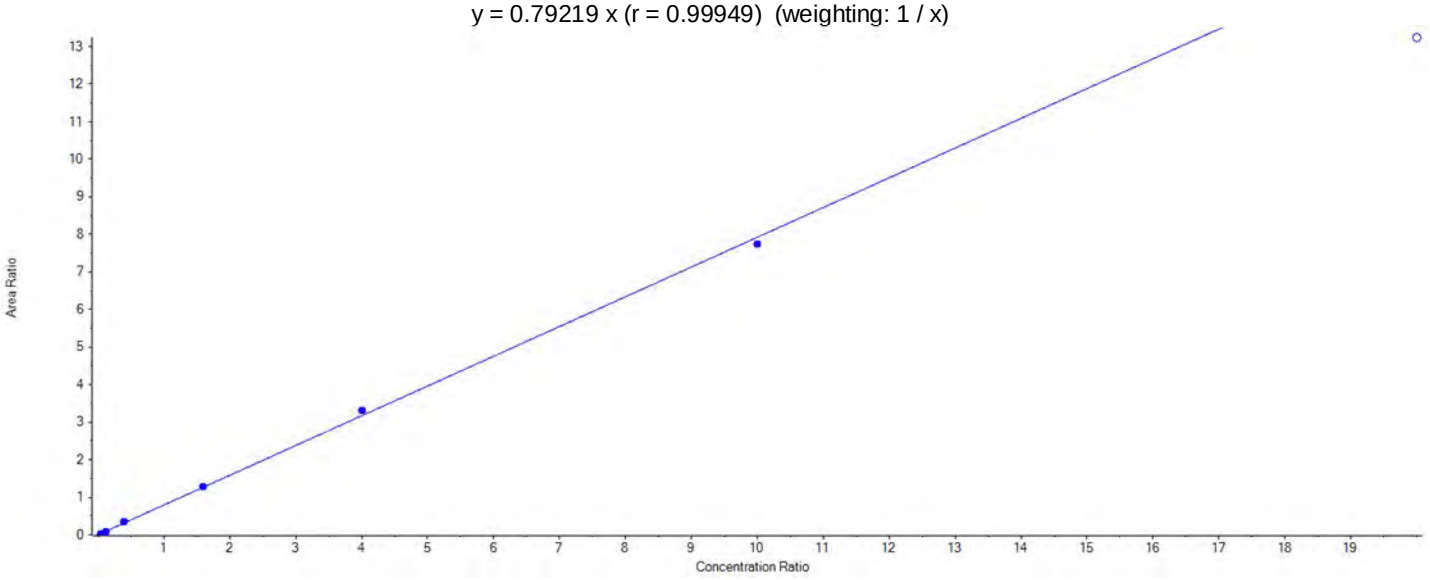
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTrDA

y = 0.79219 x (r = 0.99949) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTrDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	20185.08	68.6	545413.19	True	5.00	0.037	6.25	1.030	0.200	0.234	17	30	
CAL2	47991.31	109.2	532175.35	True	5.00	0.090	6.26	1.030	0.600	0.569	-5	30	
CAL3	184322.87	257.3	549542.28	True	5.00	0.335	6.26	1.030	2.000	2.117	6	30	
CAL4	674140.32	350.0	521514.09	True	5.00	1.293	6.25	1.030	8.000	8.159	2	30	
CAL5	1679407.24	589.3	507556.82	True	5.00	3.309	6.24	1.030	20.000	20.884	4	30	
CAL6	3691733.76	935.9	477105.49	True	5.00	7.738	6.26	1.030	50.000	48.838	-2	30	
CAL7	6281239.03	1061.9	474393.79	False	5.00	13.241	6.24	1.030	100.000	83.569	-16	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

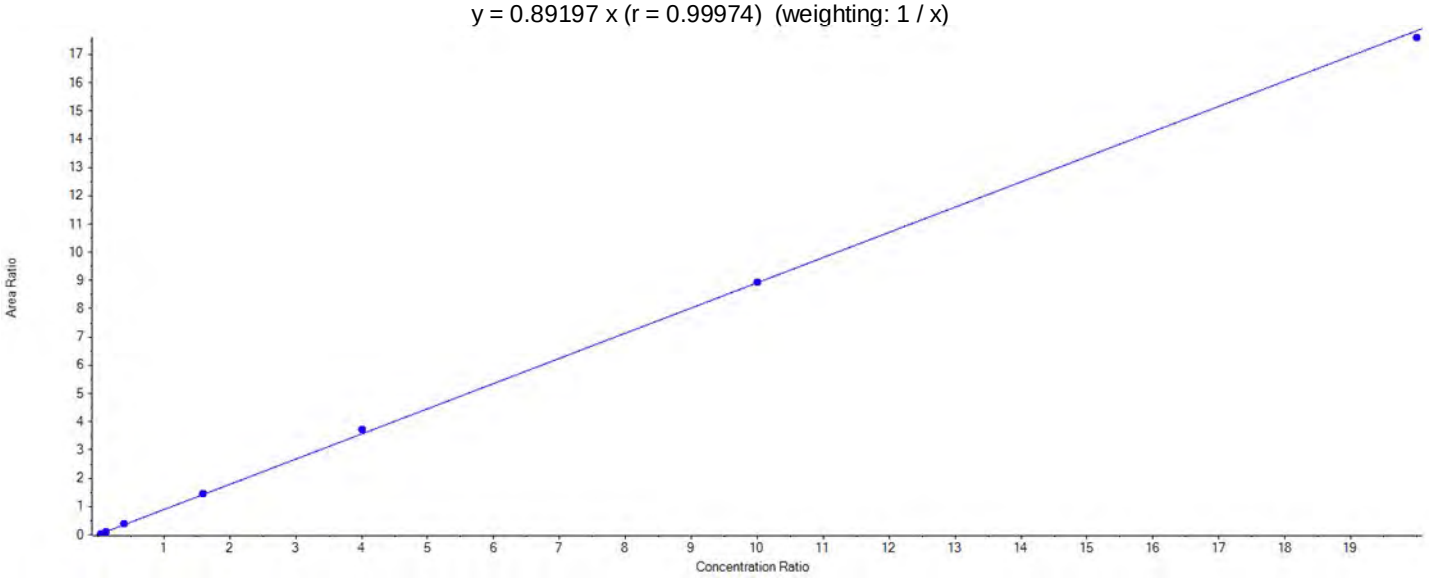
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA

y = 0.89197 x (r = 0.99974) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTeDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	16357.53	210.0	410633.04	True	5.00	0.040	6.43	1.000	0.200	0.223	12	30	
CAL2	40236.53	281.3	394146.24	True	5.00	0.102	6.43	1.000	0.600	0.572	-5	30	
CAL3	156439.94	700.6	393544.94	True	5.00	0.398	6.43	1.000	2.000	2.228	11	30	
CAL4	571926.74	1105.3	392356.63	True	5.00	1.458	6.43	1.000	8.000	8.171	2	30	
CAL5	1418276.72	1705.5	379571.56	True	5.00	3.737	6.42	1.000	20.000	20.945	5	30	
CAL6	3149020.22	2109.2	352892.21	True	5.00	8.923	6.43	1.000	50.000	50.021	0	30	
CAL7	6092875.66	2023.1	346256.59	True	5.00	17.596	6.42	1.000	100.000	98.638	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

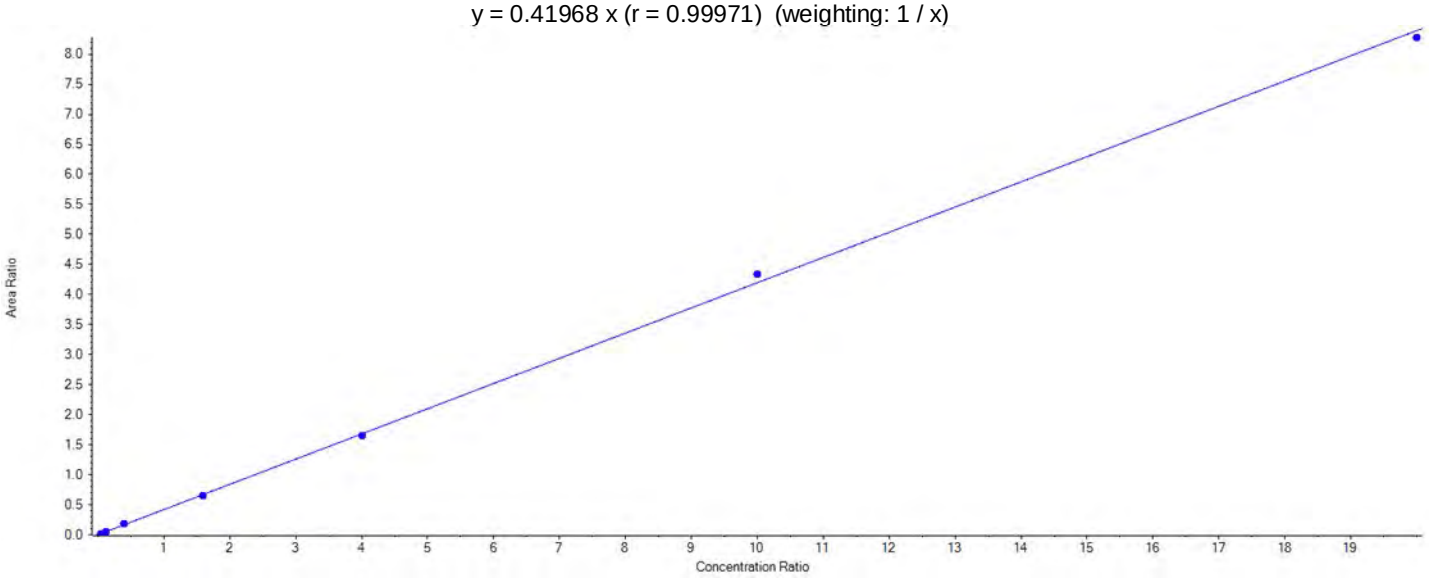
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxDA

y = 0.41968 x (r = 0.99971) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	7976.02	221.5	410633.04	True	5.00	0.019	6.73	1.050	0.200	0.231	16	30	
CAL2	19006.44	621.9	394146.24	True	5.00	0.048	6.74	1.050	0.600	0.575	-4	30	
CAL3	69655.07	986.8	393544.94	True	5.00	0.177	6.74	1.050	2.000	2.109	5	30	
CAL4	256654.28	1362.8	392356.63	True	5.00	0.654	6.73	1.050	8.000	7.793	-3	30	
CAL5	627350.68	1919.3	379571.56	True	5.00	1.653	6.72	1.050	20.000	19.691	-2	30	
CAL6	1533920.21	4020.8	352892.21	True	5.00	4.347	6.74	1.050	50.000	51.786	4	30	
CAL7	2866097.32	3342.9	346256.59	True	5.00	8.277	6.72	1.050	100.000	98.615	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

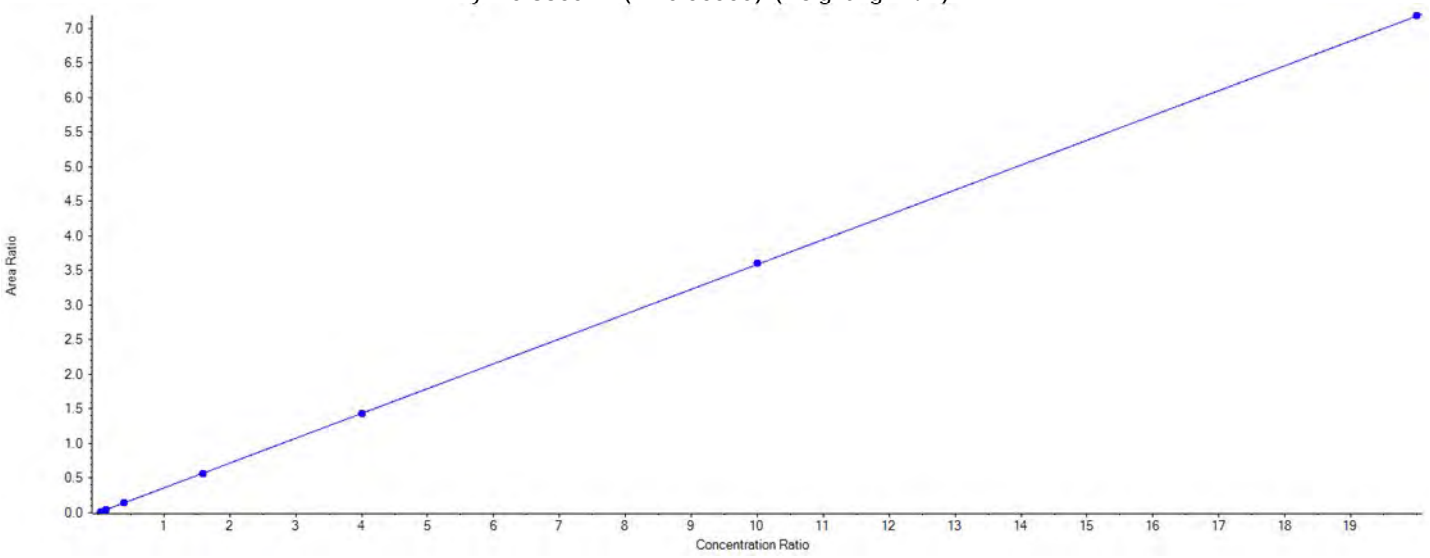
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFODA

y = 0.35901 x (r = 0.99996) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFODA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6020.31	470.6	410633.04	True	5.00	0.015	7.00	1.090	0.200	0.204	2	30	
CAL2	14955.56	635.0	394146.24	True	5.00	0.038	7.00	1.090	0.600	0.528	-12	30	
CAL3	57795.96	1304.8	393544.94	True	5.00	0.147	7.00	1.090	2.000	2.045	2	30	
CAL4	219359.64	2291.9	392356.63	True	5.00	0.559	6.99	1.090	8.000	7.786	-3	30	
CAL5	544296.46	2946.8	379571.56	True	5.00	1.434	6.98	1.090	20.000	19.971	0	30	
CAL6	1270897.62	3196.4	352892.21	True	5.00	3.601	7.00	1.090	50.000	50.157	0	30	
CAL7	2488863.64	3668.3	346256.59	True	5.00	7.188	6.98	1.090	100.000	100.107	0	30	

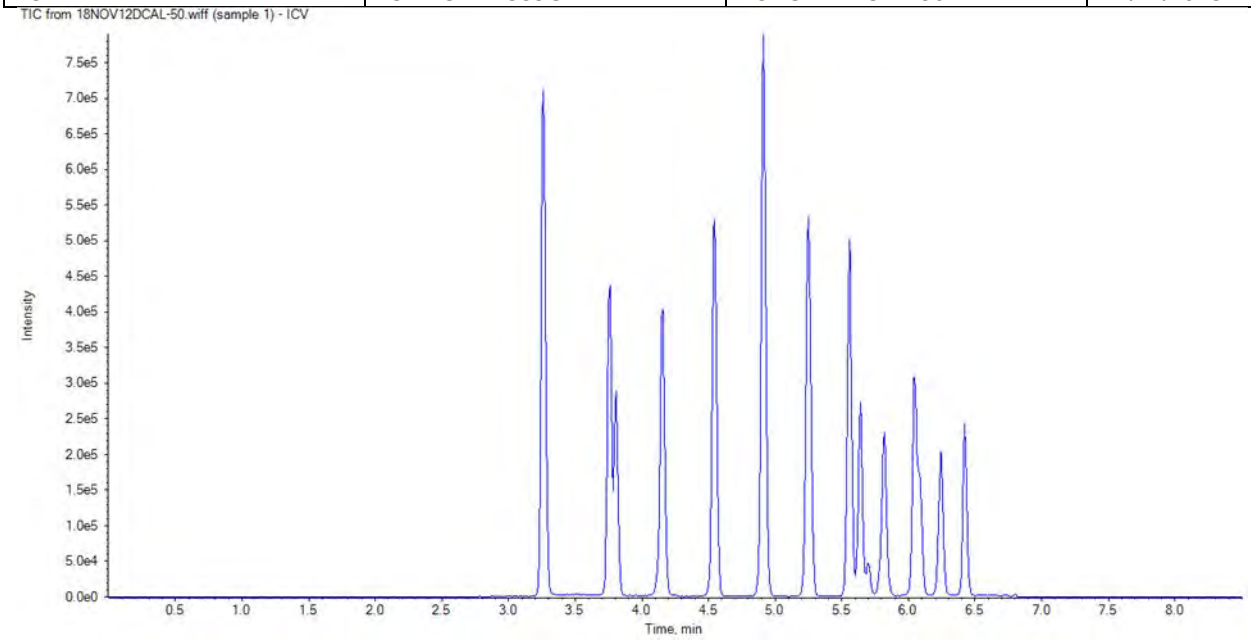
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV12DCAL-50.wiff	11/12/2018 4:18:11 PM



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	CAL3 Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.000	655209.26	659926.2	-0.7	50	
13C2-PFOA	5.000	452726.16	450219.7	0.6	50	
13C4-PFOS	4.780	253010.34	249205.8	1.5	50	
13C2-PFDA	5.000	277002.66	278743.9	-0.6	50	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV12DCAL-50.wiff	11/12/2018 4:18:11 PM

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	270820.62	13C4-PFBA	715834.41	5.00	0.378	3.26	1.00	2.000	2.096	5	30	
PFPeA	265646.79	13C5-PFPeA	699482.19	5.00	0.380	3.76	1.00	2.000	2.198	10	30	
PFBS	150059.59	13C3-PFBS	394903.38	4.65	0.380	3.80	1.00	1.769	1.808	2	30	
4:2-FTS	N/A	13C2-4:2-FTS	47297.29	4.67	N/A	N/A	N/A	0.000	N/A		30	
PFHxA	328694.28	13C5-PFHxA	613579.43	5.00	0.536	4.15	1.00	2.000	2.237	12	30	
PFPeS	N/A	13C3-PFBS	394903.38	4.65	N/A	N/A	N/A	0.000	N/A		30	
PFHpA	316975.28	13C4-PFHpA	485394.91	5.00	0.653	4.54	1.00	2.000	2.165	8	30	
PFHxS	115564.23	13C3-PFHxS	304897.78	4.73	0.379	4.55	1.00	1.890	1.838	-3	30	
6:2-FTS	N/A	13C2-6:2-FTS	31532.78	4.75	N/A	N/A	N/A	0.000	N/A		30	
PFHpS	118318.71	13C3-PFHxS	304897.78	4.73	0.388	4.91	1.08	1.900	2.043	8	30	
PFOA	332094.35	13C8-PFOA	843573.28	5.00	0.394	4.91	1.00	2.000	2.103	5	30	
PFOS	100952.54	13C8-PFOS	266211.35	4.78	0.379	5.24	1.00	1.910	1.658	-13	30	
PFNA	271240.37	13C9-PFNA	458821.54	5.00	0.591	5.26	1.00	2.000	2.132	7	30	
PFNS	N/A	13C8-PFOS	266211.35	4.78	N/A	N/A	N/A	0.000	N/A		30	
PFDA	224279.75	13C6-PFDA	590290.29	5.00	0.380	5.56	1.00	0.000	2.014		30	
8:2-FTS	N/A	13C2-8:2-FTS	22188.87	4.79	N/A	N/A	N/A	0.000	N/A		30	
PFOSA	N/A	13C8-PFOSA	587080.14	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMeFOSAA	30591.86	d3-NMeFOSAA	70133.21	5.00	0.436	5.70	1.00	2.000	2.465	23	30	
PFDS	52860.94	13C8-PFOS	266211.35	4.78	0.199	5.79	1.11	0.000	1.799		30	
PFUnDA	183511.26	13C7-PFUnDA	228363.91	5.00	0.804	5.82	1.00	2.000	2.101	5	30	
NEtFOSAA	26149.34	d5-NEtFOSAA	59551.26	5.00	0.439	5.83	1.00	2.000	2.302	15	30	
PFDoDA	185295.04	13C2-PFDoDA	495858.06	5.00	0.374	6.05	1.00	2.000	1.903	-5	30	
10:2-FTS	N/A	13C2-8:2-FTS	22188.87	4.79	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSAE	N/A	d7-NMePFOSAE	299185.38	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSA	N/A	d3-NMePFOSA	75186.89	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFDoS	N/A	13C8-PFOS	266211.35	4.78	N/A	N/A	N/A	1.930	N/A		30	
NEtPFOSAE	N/A	d9-NEtPFOSAE	255149.77	5.00	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSA	N/A	d5-NEtPFOSA	53596.17	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFTrDA	165153.11	13C2-PFDoDA	495858.06	5.00	0.333	6.25	1.03	2.000	2.102	5	30	
PFTeDA	135650.98	13C2-PFTeDA	365300.22	5.00	0.371	6.42	1.00	2.000	2.082	4	30	
PFHxDA	N/A	13C2-PFTeDA	365300.22	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFODA	N/A	13C2-PFTeDA	365300.22	5.00	N/A	N/A	N/A	0.000	N/A		30	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL1			**Data File:**		18NOV12DCAL-42.wiff
Sample ID:	CALBRN11833C			**Acquis Date:**		2018-11-12T15:05:54
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	3			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	676527.5	659926.2	3	50	
13C2-PFOA	5.0	474834.9	450219.7	5	50	
13C4-PFOS	4.8	265369.0	249205.8	6	50	
13C2-PFDA	5.0	281654.8	278743.9	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	763334.3	13C3-PFBA	676527.5	1.128	5.000	5.059	101	70-130	
E13C5-PFPeA	771179.4	13C3-PFBA	676527.5	1.140	5.000	5.113	102	70-130	
E13C3-PFBS	445963.4	13C3-PFBA	676527.5	0.659	4.650	4.653	100	70-130	
E13C2-4:2-FTS	51494.6	13C2-PFOA	474834.9	0.108	4.670	4.830	103	70-130	
E13C5-PFHxA	664975.9	13C2-PFOA	474834.9	1.400	5.000	5.059	101	70-130	
E13C3-PFHxS	327944.5	13C2-PFOA	474834.9	0.691	4.730	4.739	100	70-130	
E13C4-PFHpA	528473.5	13C2-PFOA	474834.9	1.113	5.000	5.014	100	70-130	
E13C2-6:2-FTS	35455.2	13C2-PFOA	474834.9	0.075	4.750	4.996	105	70-130	
E13C8-PFOA	912537.7	13C2-PFOA	474834.9	1.922	5.000	5.295	106	70-130	
E13C8-PFOS	283127.4	13C4-PFOS	265369.0	1.067	4.780	4.727	99	70-130	
E13C9-PFNA	479931.4	13C4-PFOS	265369.0	1.809	5.000	5.042	101	70-130	
E13C6-PFDA	612577.4	13C2-PFDA	281654.8	2.175	5.000	5.075	102	70-130	
E13C2-8:2-FTS	26445.5	13C2-PFDA	281654.8	0.094	4.790	4.683	98	70-130	
E13C8-PFOSA	664489.9	13C2-PFDA	281654.8	2.359	5.000	5.230	105	70-130	
Ed3-NMeFOSAA	86914.5	13C2-PFDA	281654.8	0.309	5.000	5.570	111	70-130	
E13C7-PFUnDA	256402.0	13C2-PFDA	281654.8	0.910	5.000	5.285	106	70-130	
Ed5-NEtFOSAA	80597.2	13C2-PFDA	281654.8	0.286	5.000	6.054	121	70-130	
E13C2-PFDoDA	545413.2	13C2-PFDA	281654.8	1.936	5.000	5.028	101	70-130	
Ed7-NMePFOSAE	349854.5	13C2-PFDA	281654.8	1.242	5.000	5.375	108	70-130	
Ed3-NMePFOSA	78396.5	13C2-PFDA	281654.8	0.278	5.000	5.057	101	70-130	
Ed9-NEtPFOSAE	280311.6	13C2-PFDA	281654.8	0.995	5.000	5.176	104	70-130	
Ed5-NEtPFOSA	63047.1	13C2-PFDA	281654.8	0.224	5.000	5.251	105	70-130	
E13C2-PFTeDA	410633.0	13C2-PFDA	281654.8	1.458	5.000	5.118	102	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

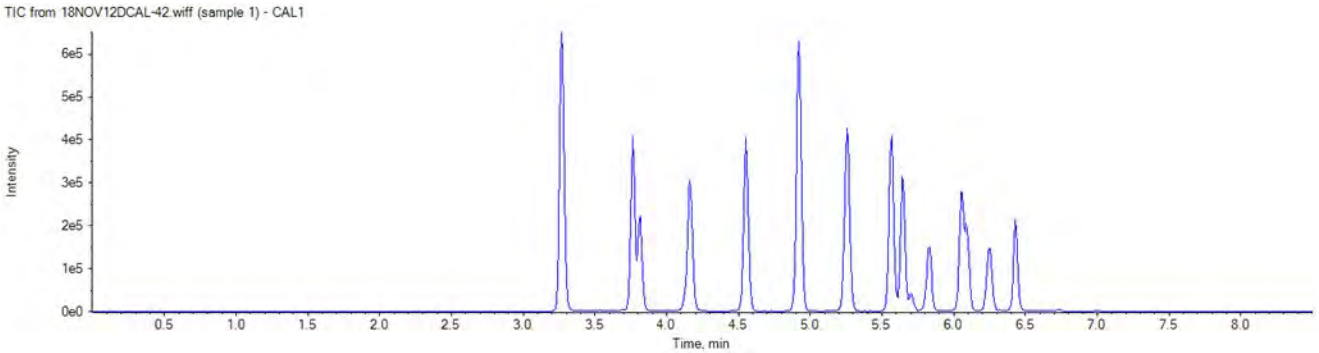
Analyte Quantitation Peak Table

Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-42.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	32322.9		A	13C4-PFBA	3.27	763334.3	0.042	0.235
PFPeA	3.77	1.000	32633.1		M	13C5-PFPeA	3.76	771179.4	0.042	0.245
PFBS	3.81	1.000	18010.0		A	13C3-PFBS	3.81	445963.4	0.040	0.192
4:2-FTS	4.13	1.000	3636.4		A	13C2-4:2-FTS	4.13	51494.6	0.071	0.192
PFHxA	4.16	1.000	39108.2		A	13C5-PFHxA	4.16	664975.9	0.059	0.246
PFPeS	4.18	1.100	9620.1		A	13C3-PFBS	3.81	445963.4	0.022	0.209
PFHpA	4.55	1.000	37545.4		A	13C4-PFHpA	4.55	528473.5	0.071	0.235
PFHxS	4.55	1.000	12858.1		M	13C3-PFHxS	4.55	327944.5	0.039	0.190
6:2-FTS	4.90	1.000	2683.1		M	13C2-6:2-FTS	4.91	35455.2	0.076	0.183
PFHpS	4.91	1.080	13262.8		A	13C3-PFHxS	4.55	327944.5	0.040	0.213
PFOA	4.92	1.000	41468.0		A	13C8-PFOA	4.92	912537.7	0.045	0.243
PFOS	5.25	1.000	13088.5		M	13C8-PFOS	5.25	283127.4	0.046	0.202
PFNA	5.26	1.000	29660.1		A	13C9-PFNA	5.26	479931.4	0.062	0.223
PFNS	5.54	1.060	6846.6		A	13C8-PFOS	5.25	283127.4	0.024	0.169
PFDA	5.56	1.000	27488.6		A	13C6-PFDA	5.57	612577.4	0.045	0.238
8:2-FTS	5.57	1.000	2333.1		A	13C2-8:2-FTS	5.57	26445.5	0.088	0.206
PFOSA	5.64	1.000	29582.8		A	13C8-PFOSA	5.65	664489.9	0.045	0.217
NMeFOSAA	5.71	1.000	2306.4		A	d3-NMeFOSAA	5.70	86914.5	0.027	0.150
PFDS	5.80	1.100	5952.2		A	13C8-PFOS	5.25	283127.4	0.021	0.190
PFUnDA	5.82	1.000	23379.5		A	13C7-PFUnDA	5.83	256402.0	0.091	0.238
NEtFOSAA	5.85	1.000	2284.9		A	d5-NEtFOSAA	5.84	80597.2	0.028	0.149
PFDoDA	6.05	1.000	22143.6		A	13C2-PFDoDA	6.05	545413.2	0.041	0.207
10:2-FTS	6.07	1.090	1814.2		A	13C2-8:2-FTS	5.57	26445.5	0.069	0.229
NMePFOSAE	6.10	1.000	18013.9		A	d7-NMePFOSAE	6.09	349854.5	0.051	0.214
NMePFOSA	6.11	1.000	2376.3		A	d3-NMePFOSA	6.10	78396.5	0.030	0.150
PFDoS	6.22	1.190	3520.9		A	13C8-PFOS	5.25	283127.4	0.012	0.218
NEtPFOSAE	6.26	1.000	21005.9		A	d9-NEtPFOSAE	6.24	280311.6	0.075	0.240
NEtPFOSA	6.27	1.000	2846.2		M	d5-NEtPFOSA	6.26	63047.1	0.045	0.207
PFTrDA	6.25	1.030	20185.1		M	13C2-PFDoDA	6.05	545413.2	0.037	0.234
PFTeDA	6.43	1.000	16357.5		A	13C2-PFTeDA	6.43	410633.0	0.040	0.223
PFHxDA	6.73	1.050	7976.0		M	13C2-PFTeDA	6.43	410633.0	0.019	0.231
PFODA	7.00	1.090	6020.3		A	13C2-PFTeDA	6.43	410633.0	0.015	0.204

Total Ion Chromatogram

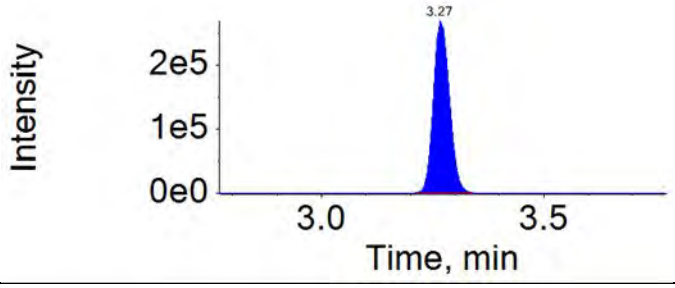


APPROVED
By MCD at 6:33 pm, 11/12/18

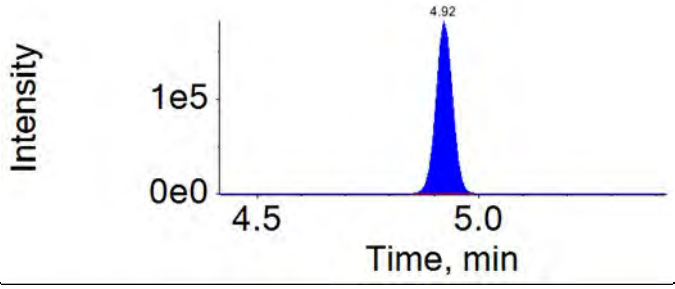
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

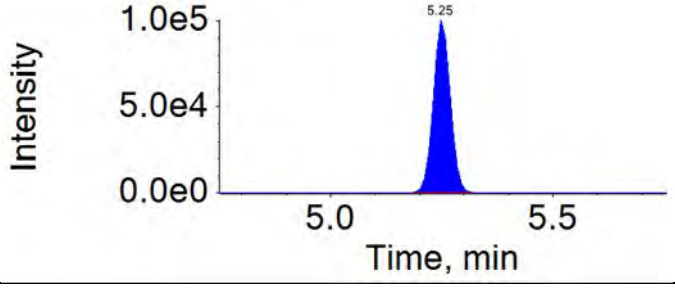
Injection Standard: 13C3-PFBA
216.0 / 172.0



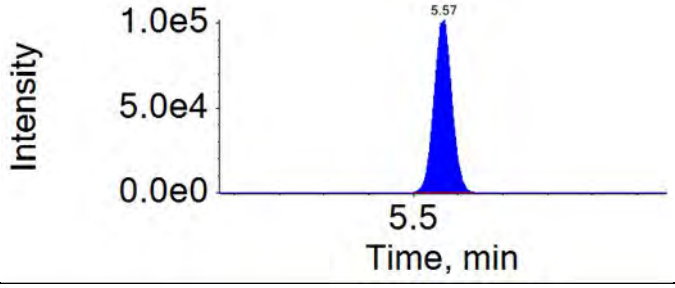
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

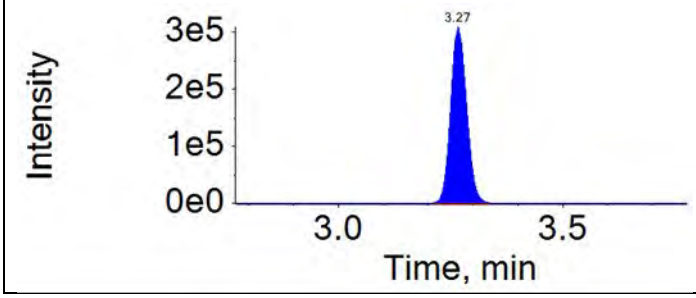


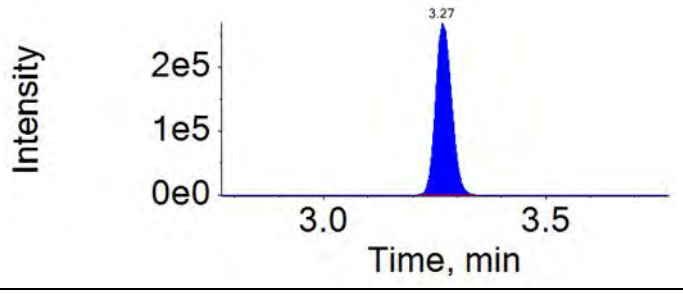
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

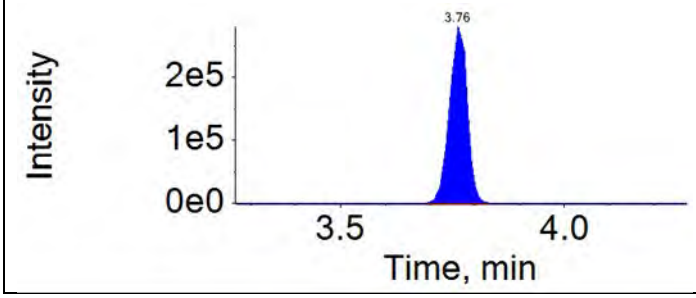
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

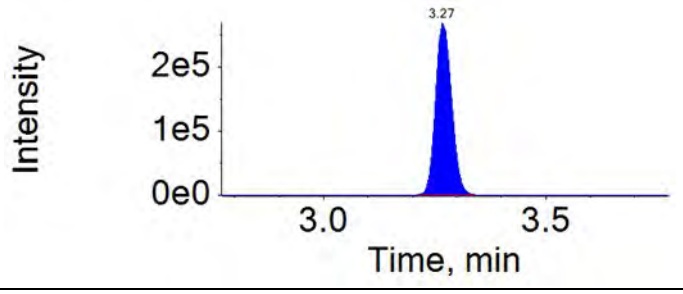
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



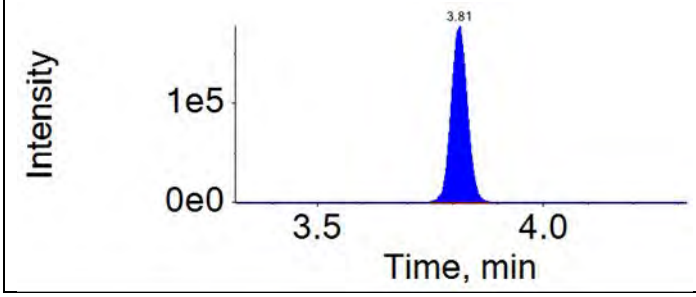


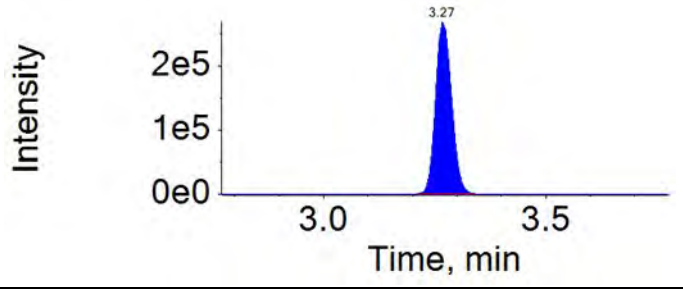
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



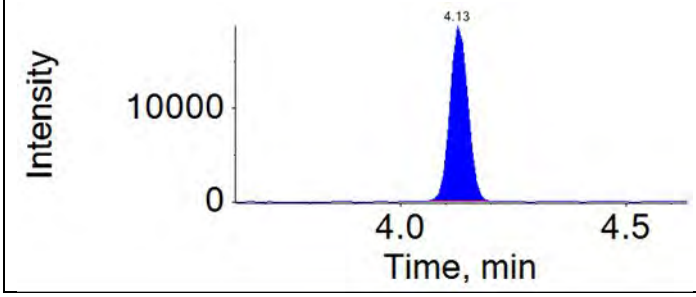


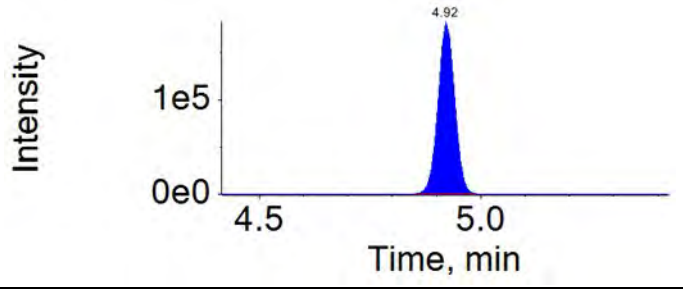
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





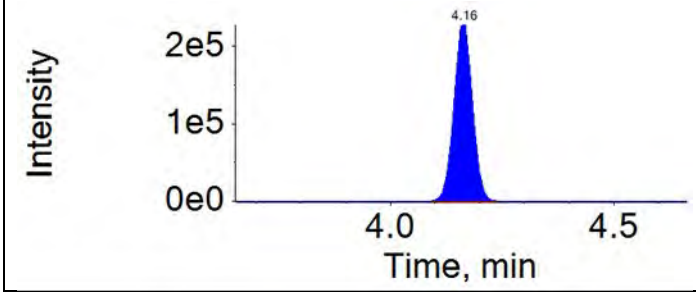
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

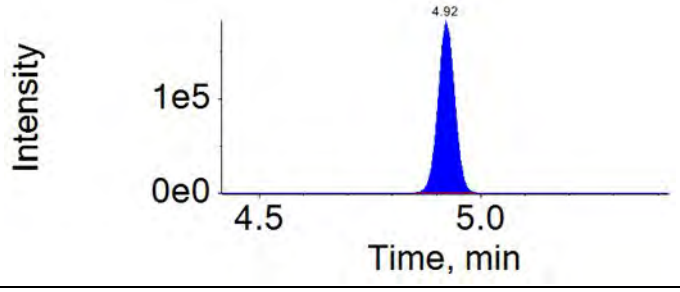




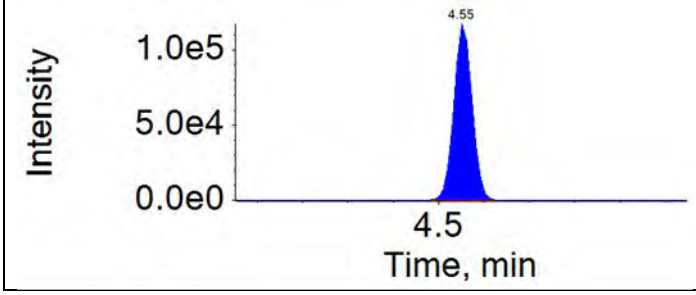
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

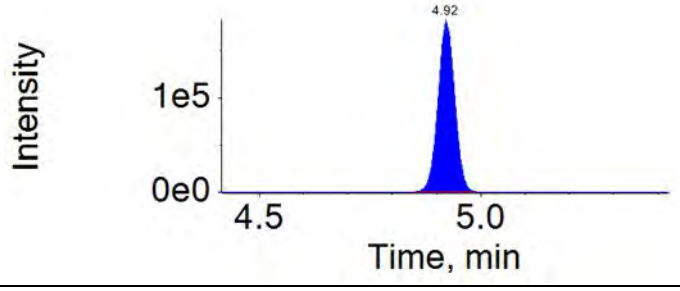
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



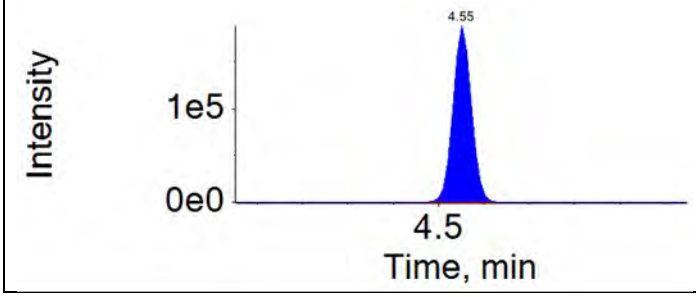


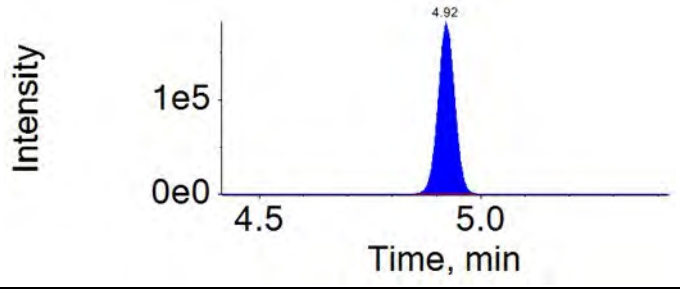
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



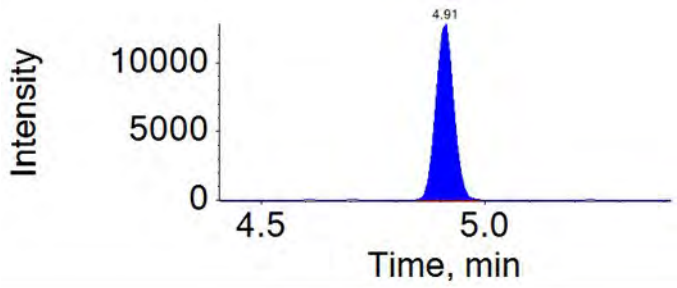


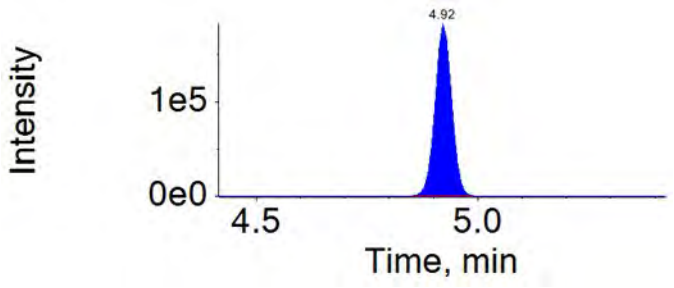
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

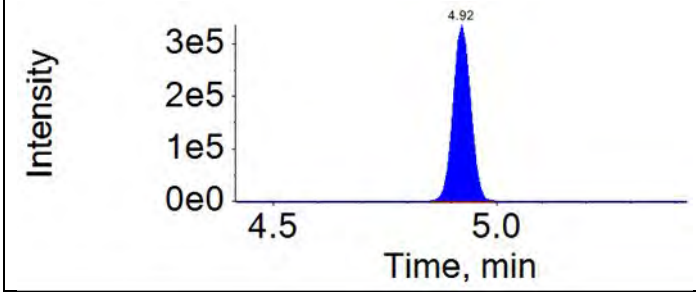
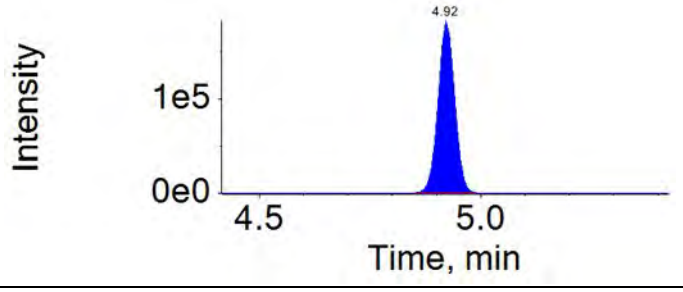


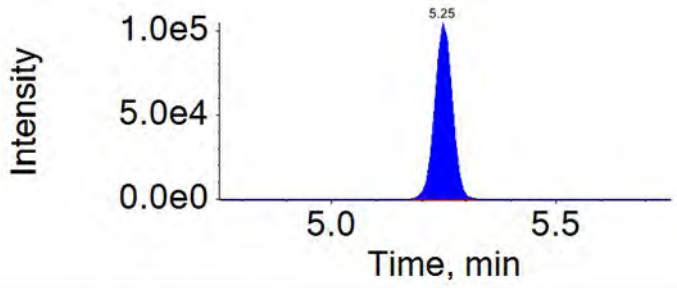
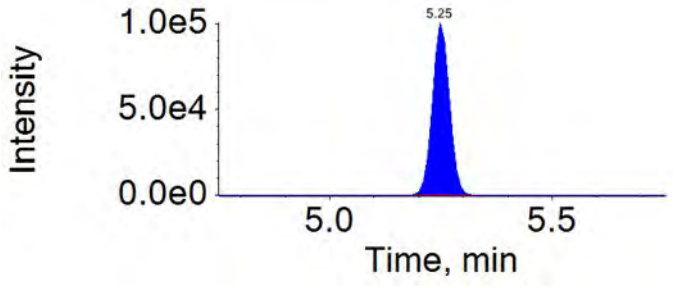


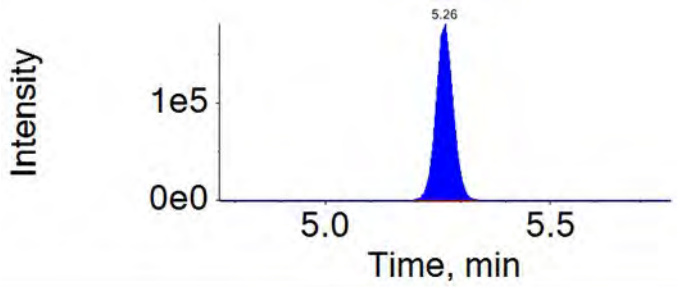
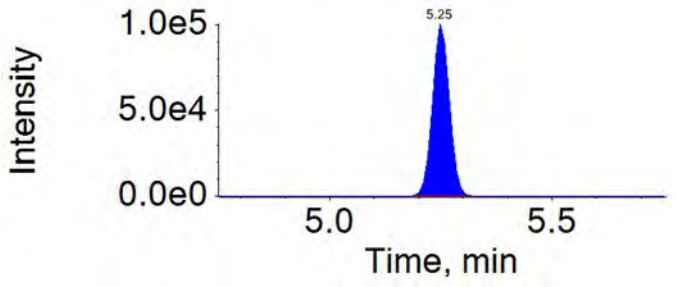
APPROVED
By MCD at 6:33 pm, 11/12/18

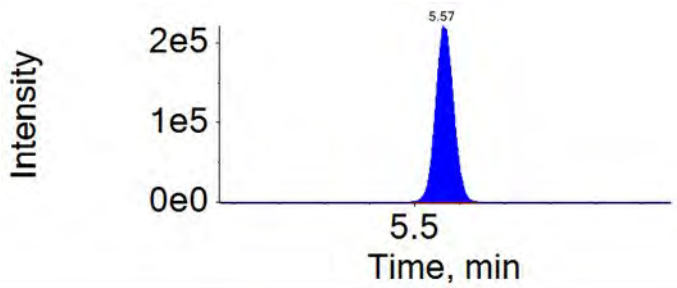
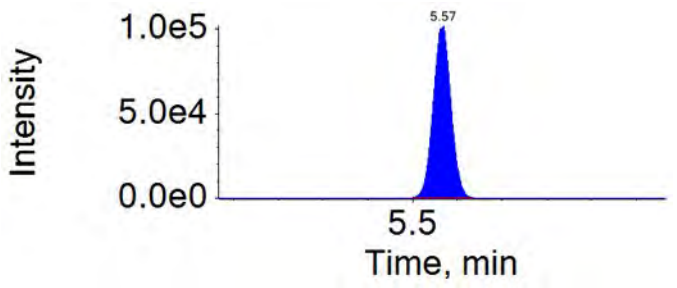
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

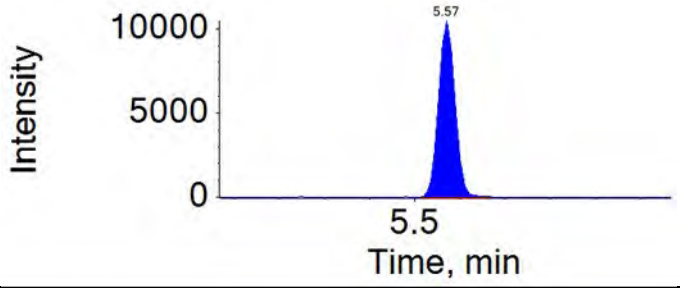
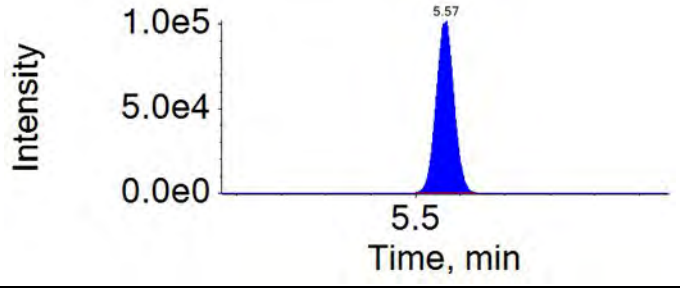
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

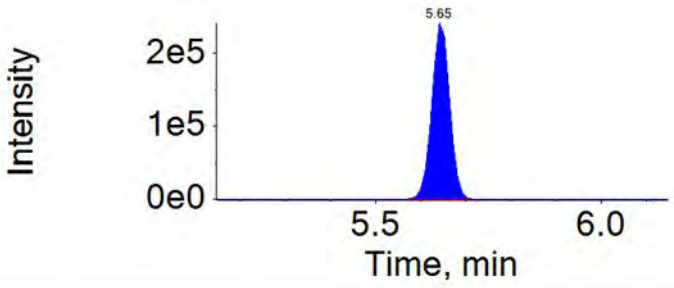
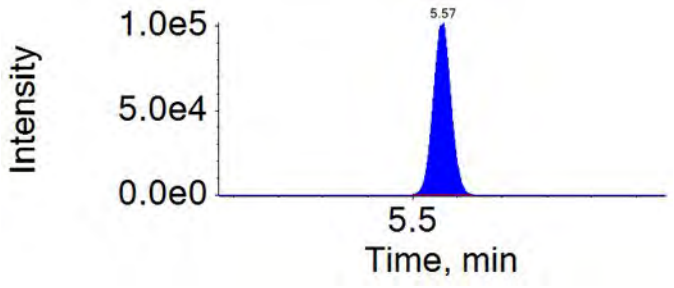
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

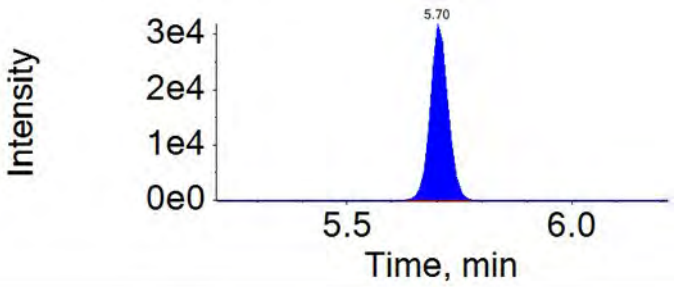
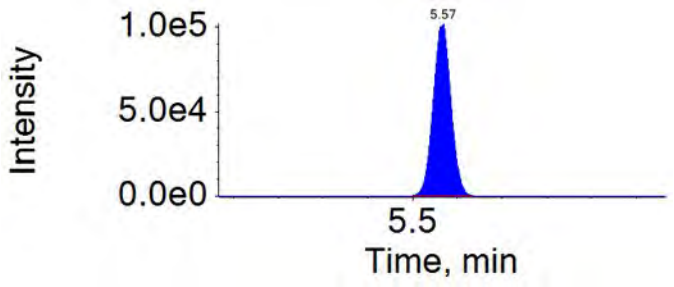
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

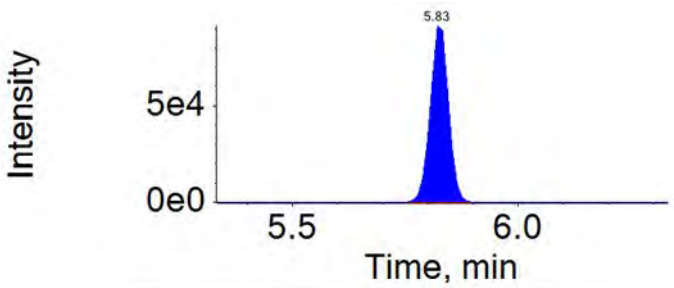
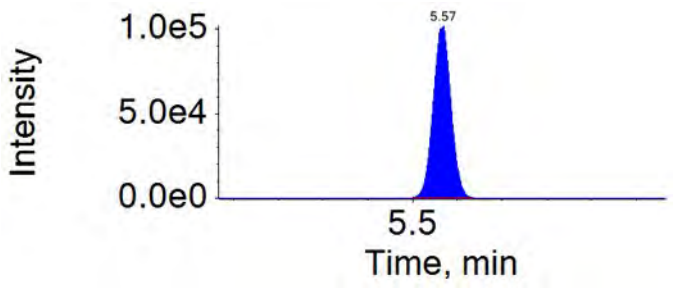
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

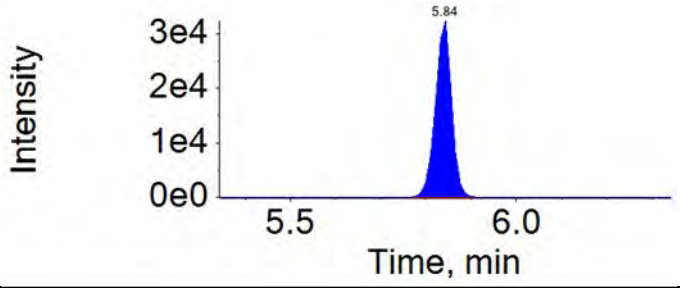
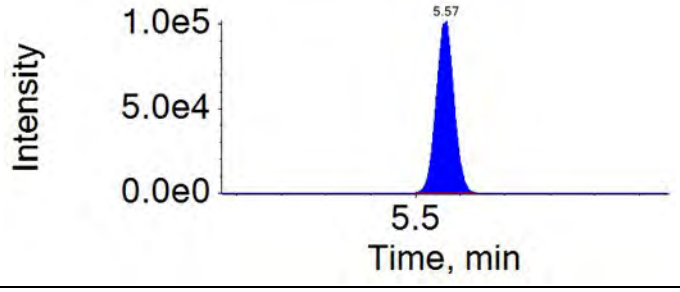
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

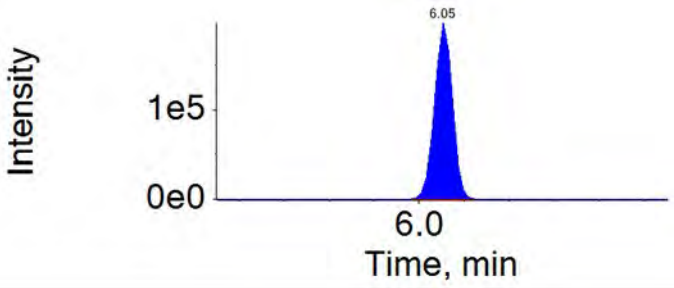
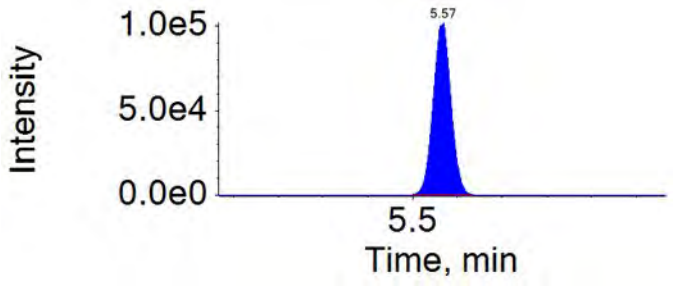
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

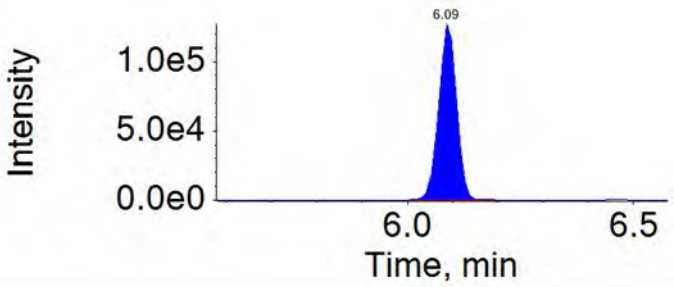
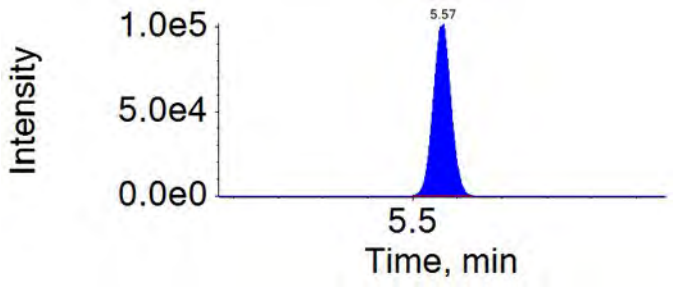
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

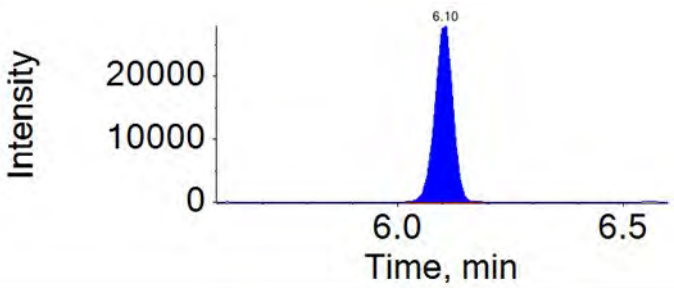
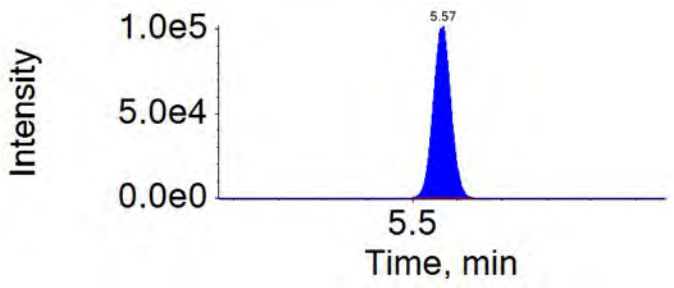
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

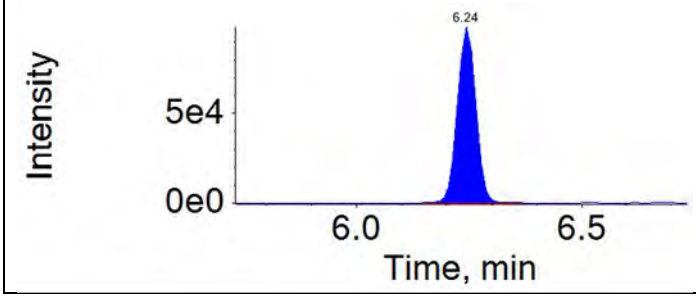
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

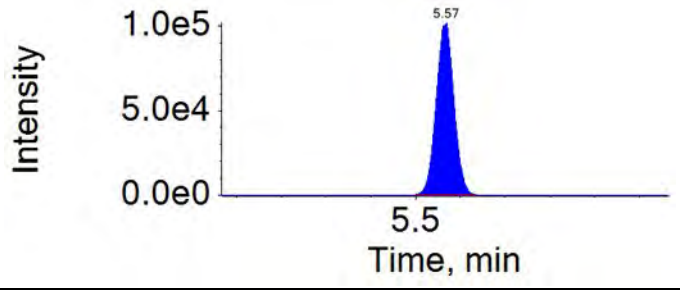
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

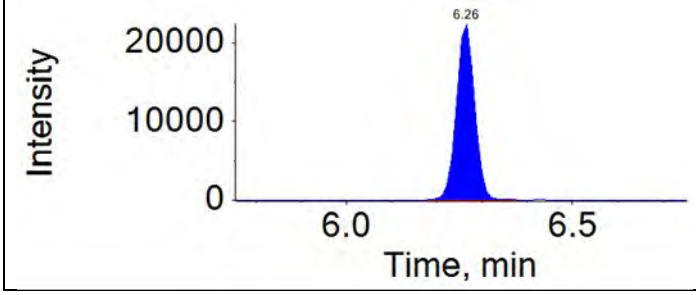
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

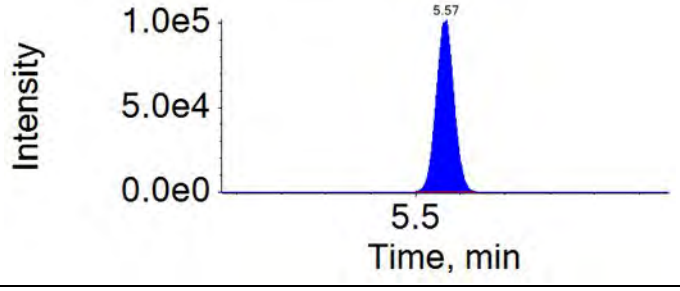
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



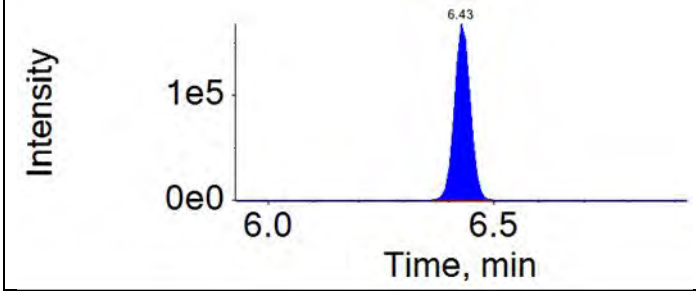


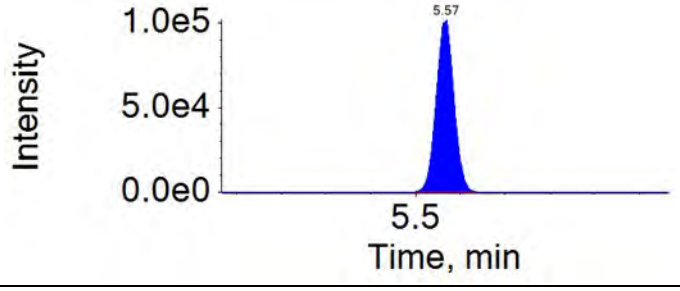
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



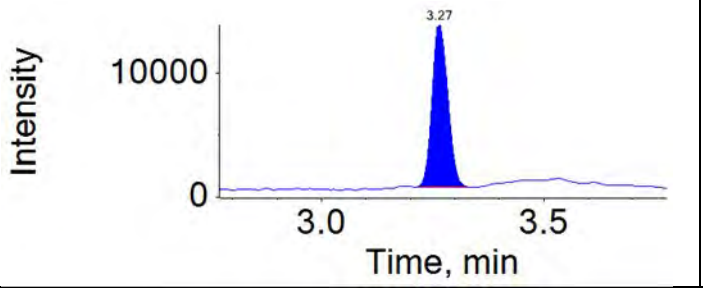


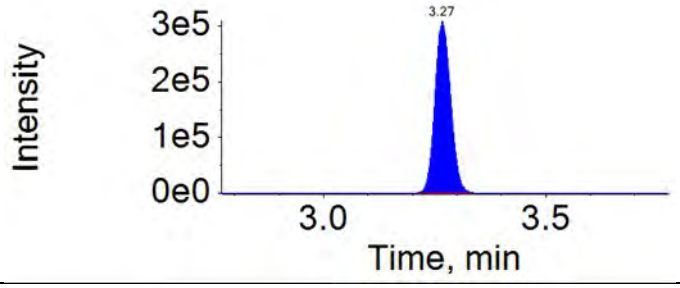
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

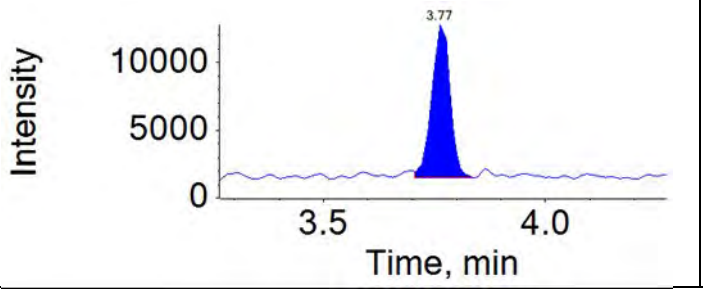
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

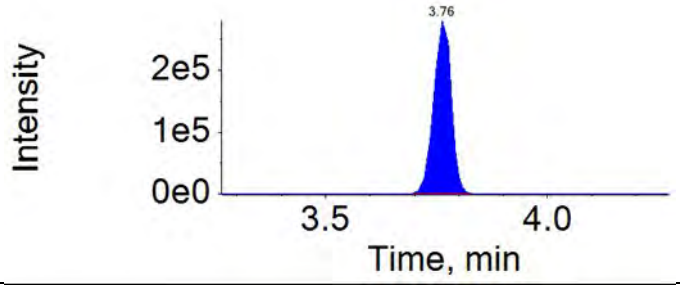
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



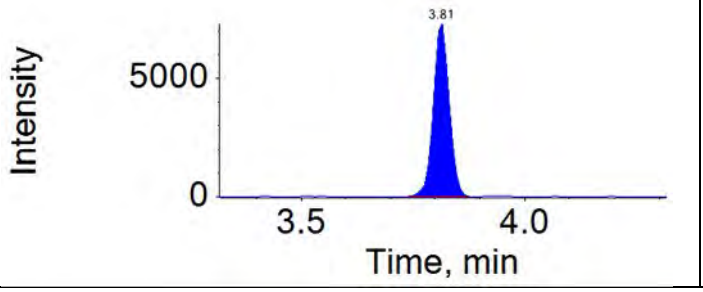


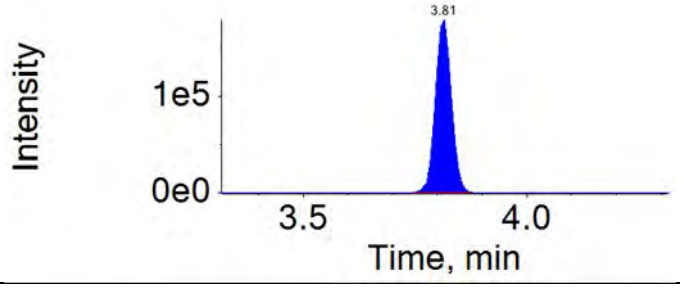
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



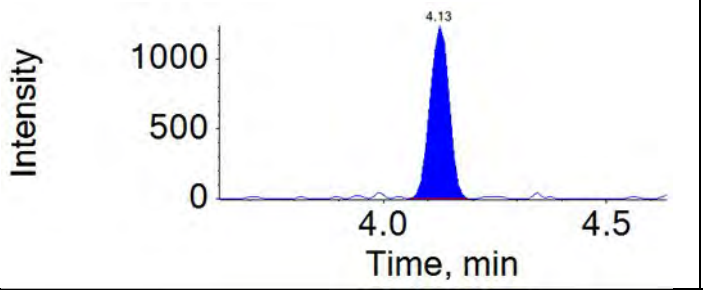


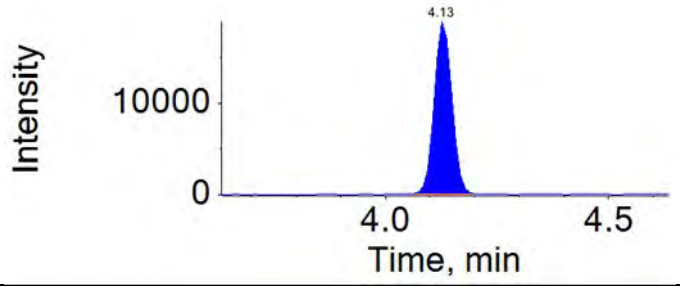
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



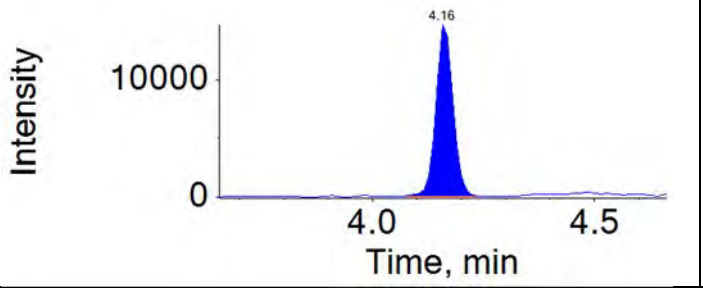


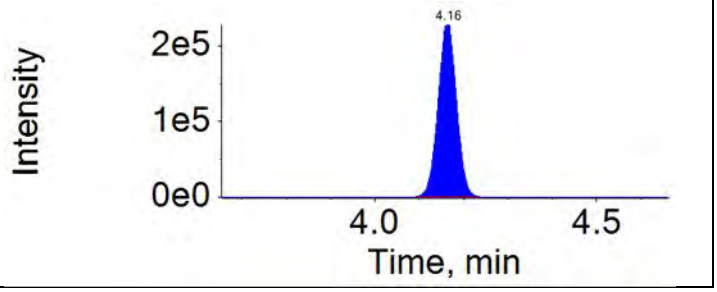
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

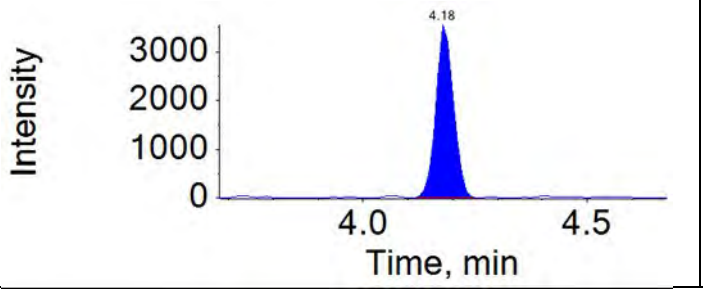
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

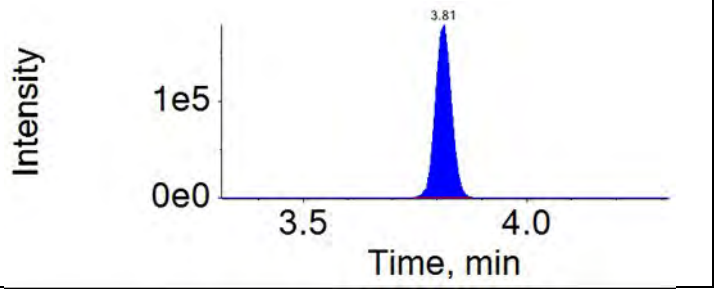
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



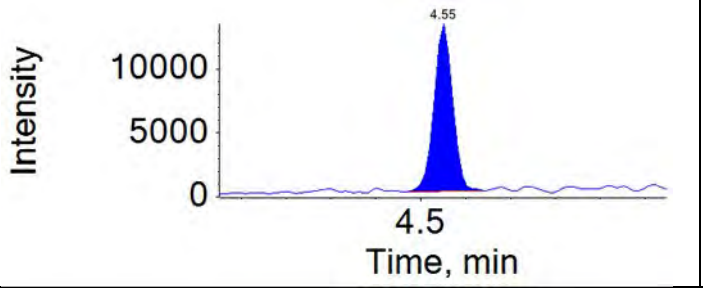


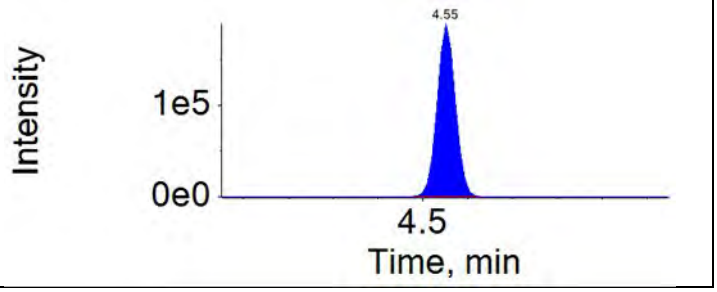
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



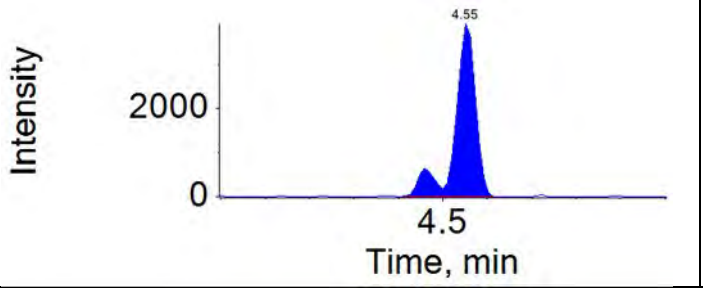


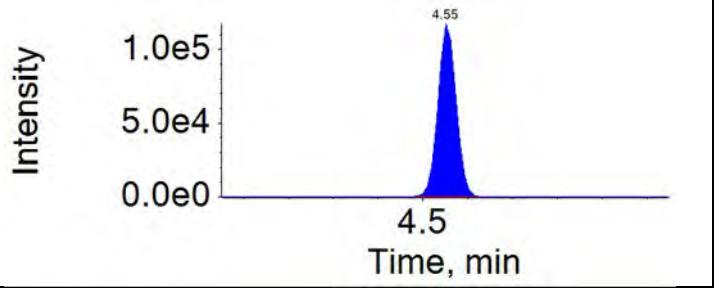
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



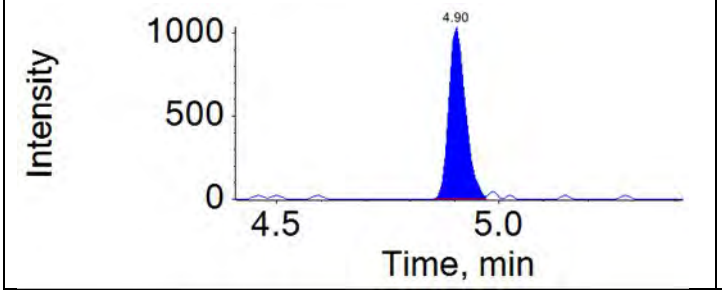


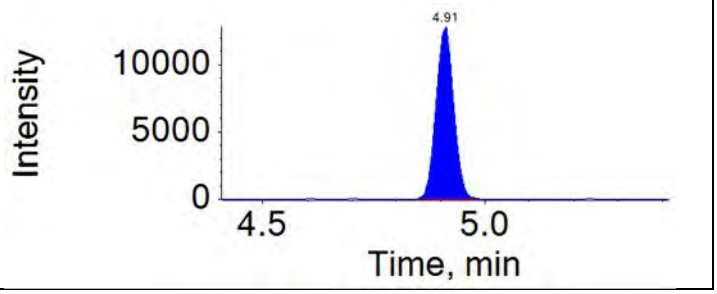
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

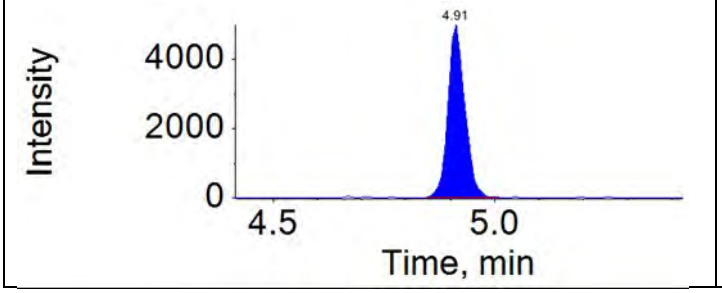
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

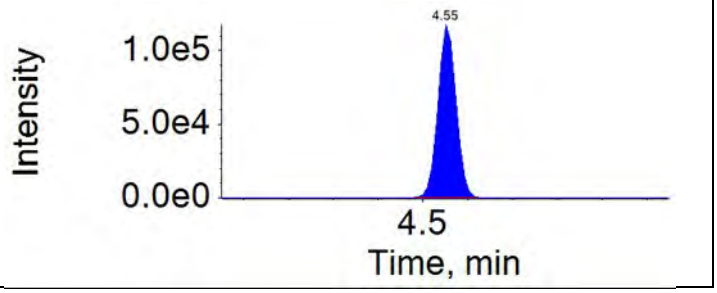
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



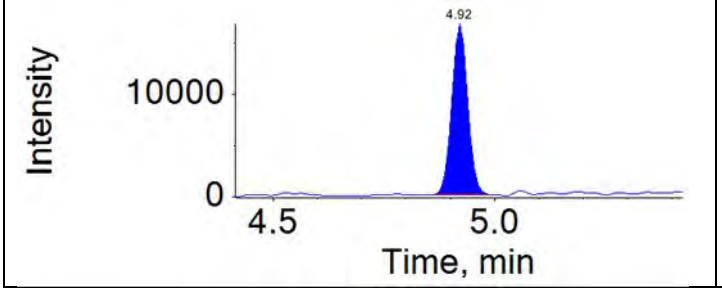


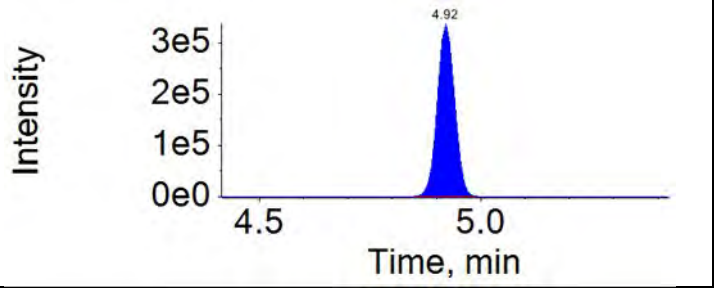
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



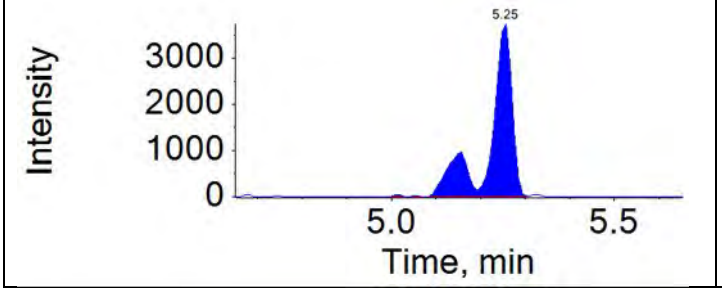


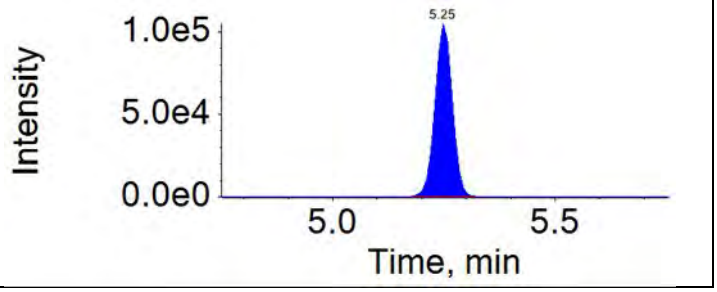
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



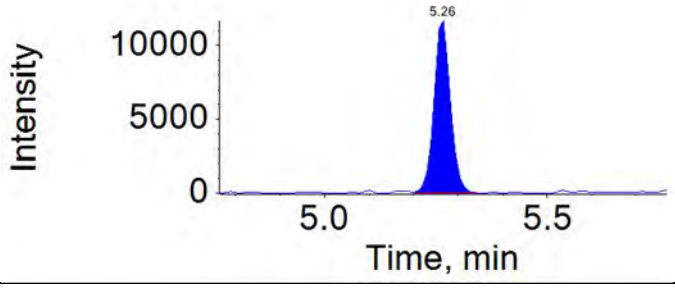


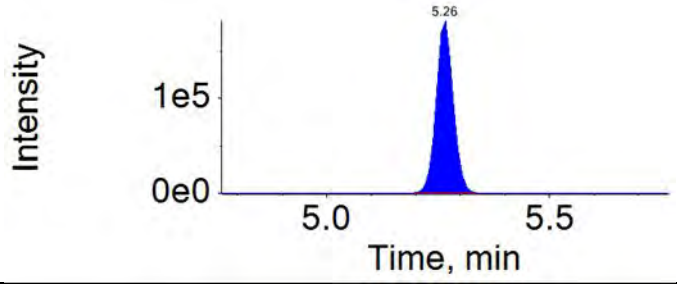
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

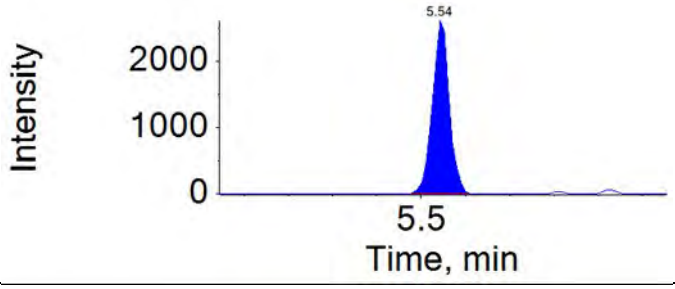
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

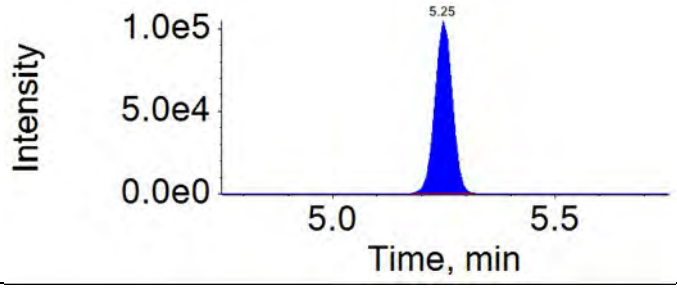
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



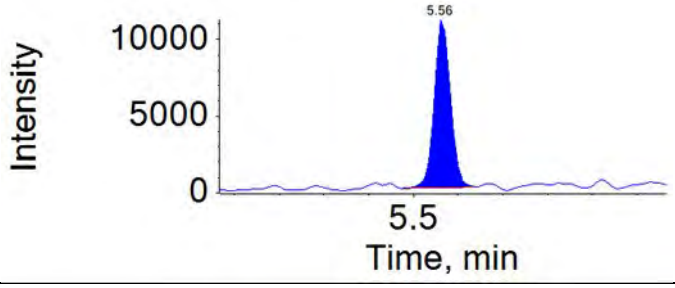


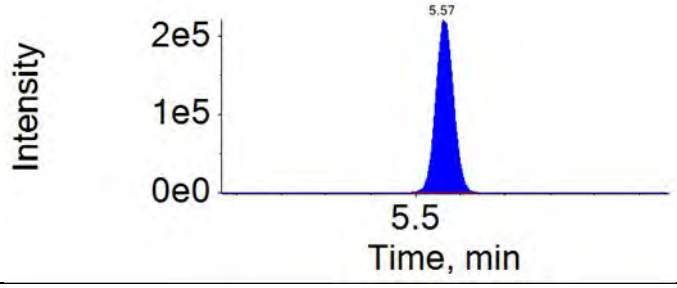
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



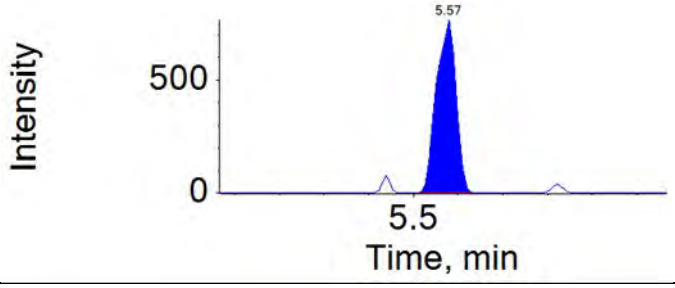


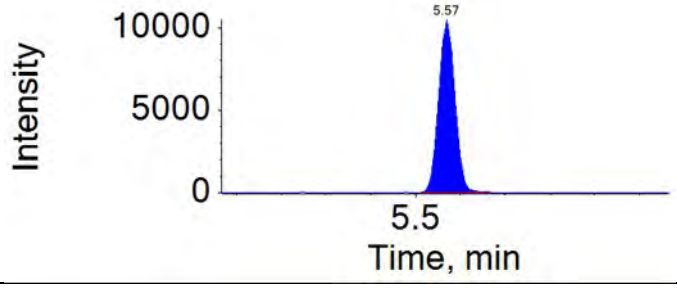
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



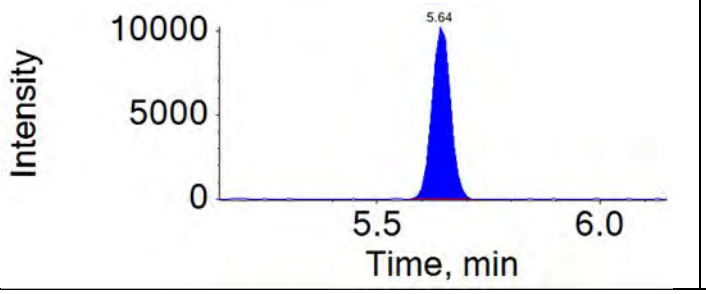


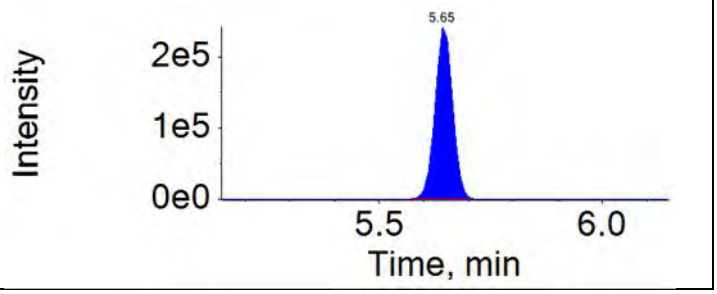
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

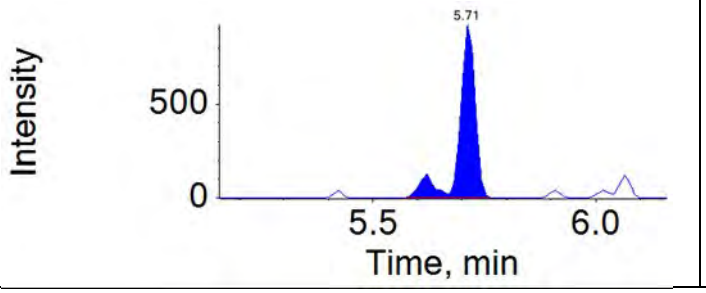
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

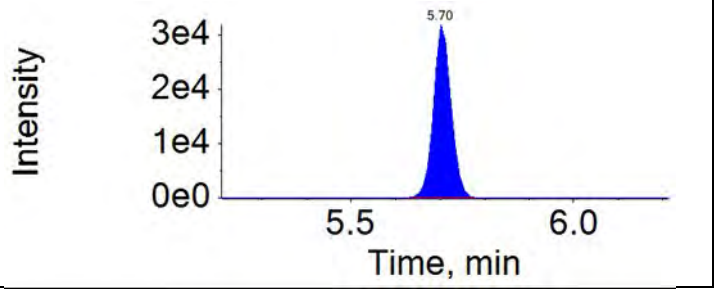
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



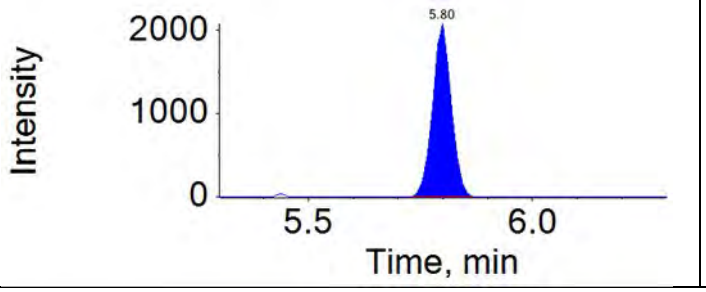


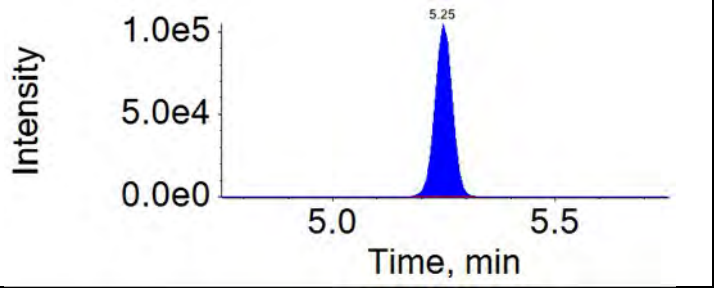
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



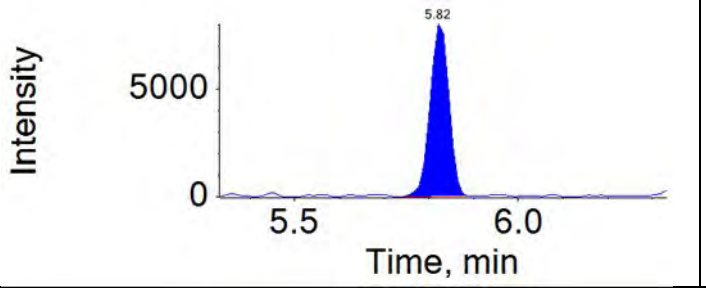


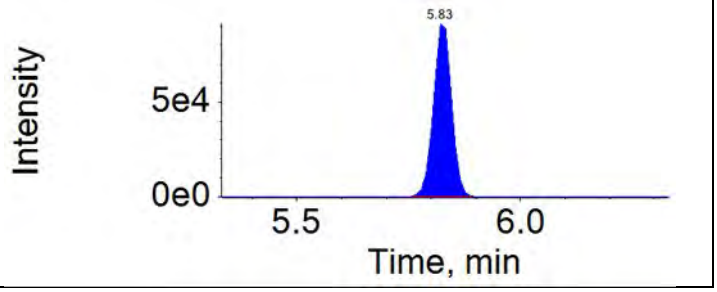
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



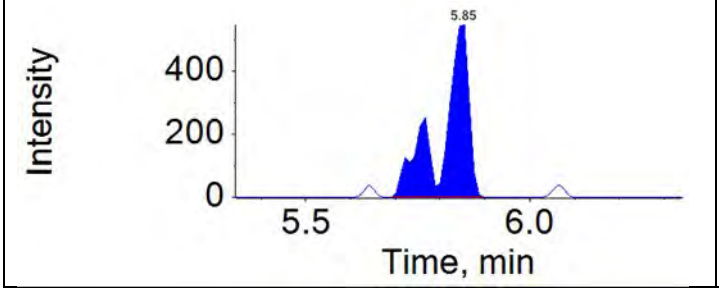


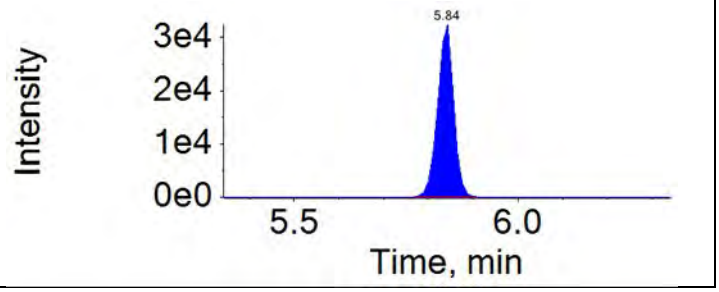
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

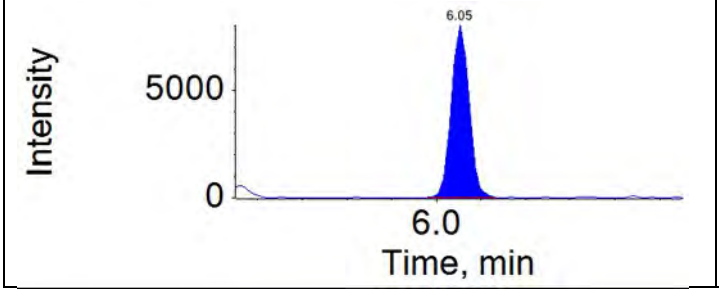
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

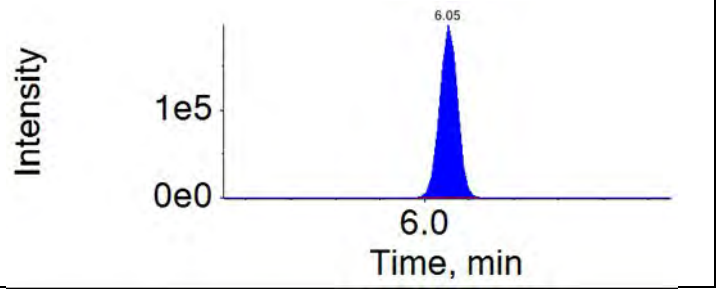
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



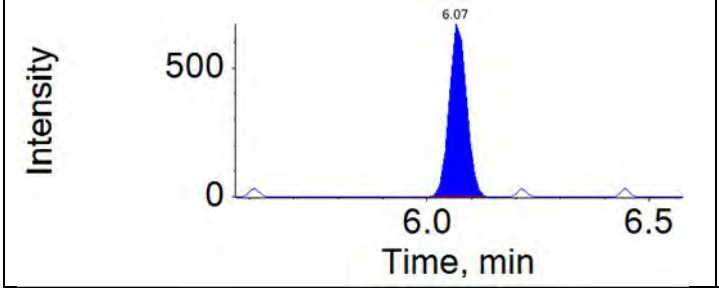


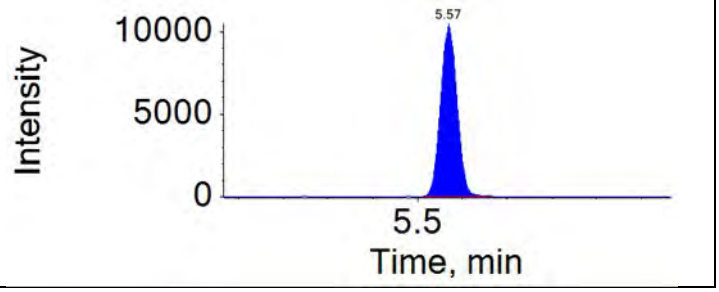
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



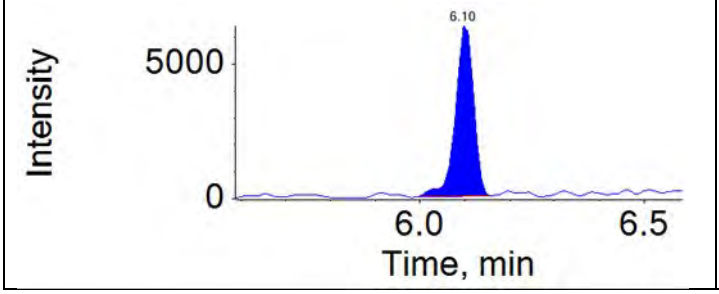


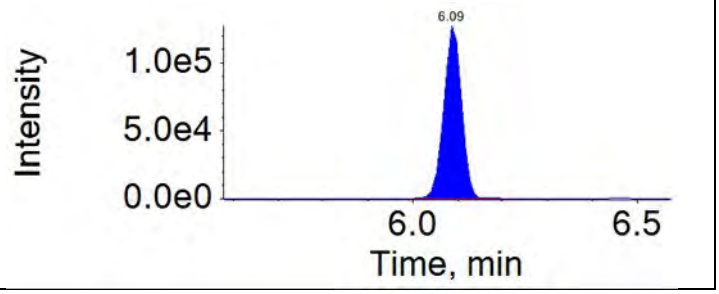
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



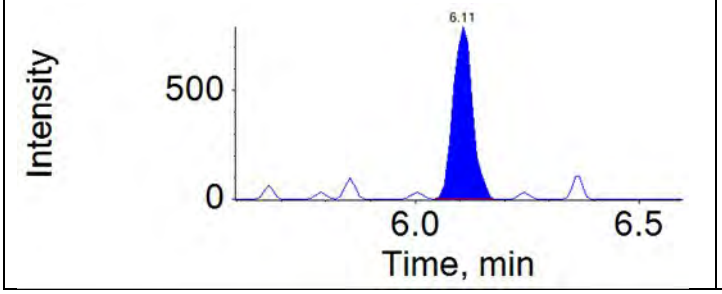


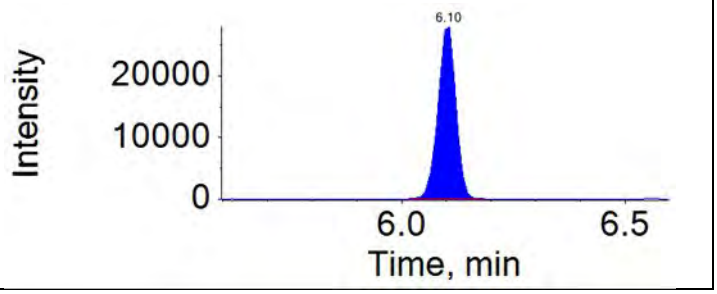
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

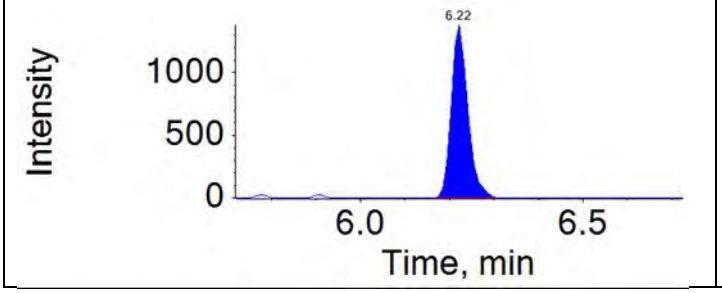
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

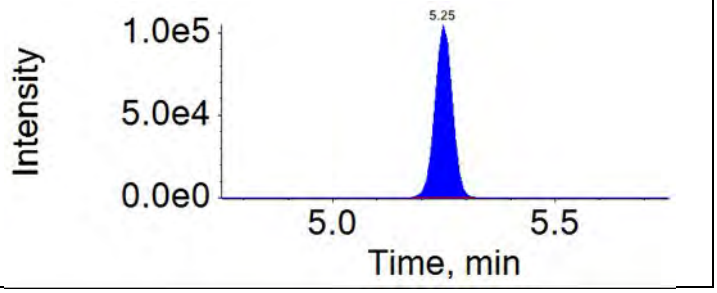
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



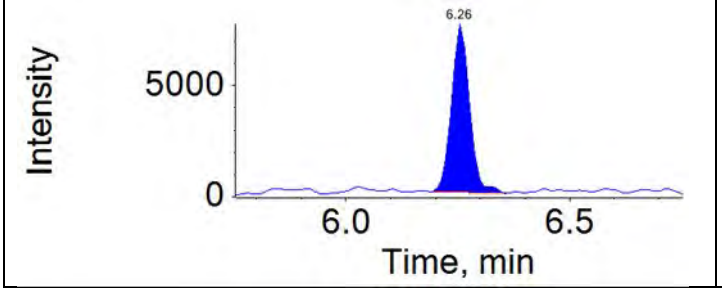


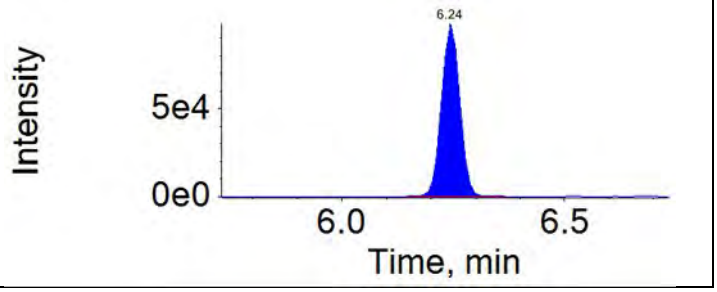
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



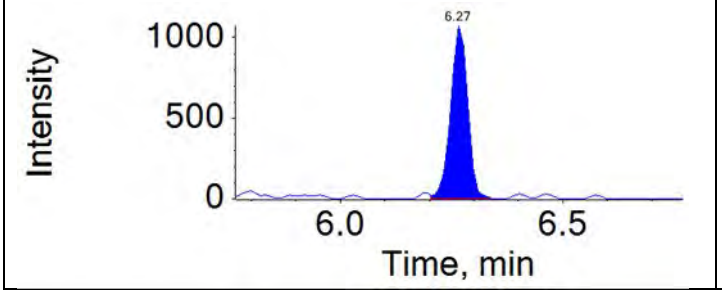


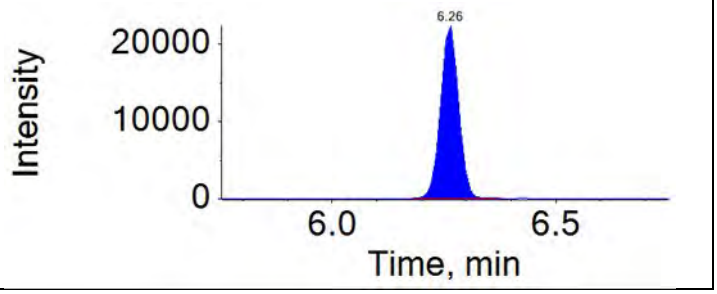
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

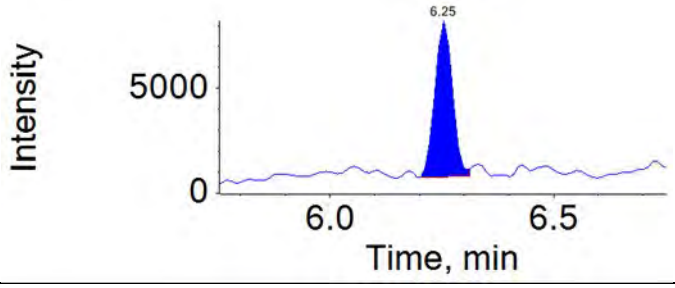
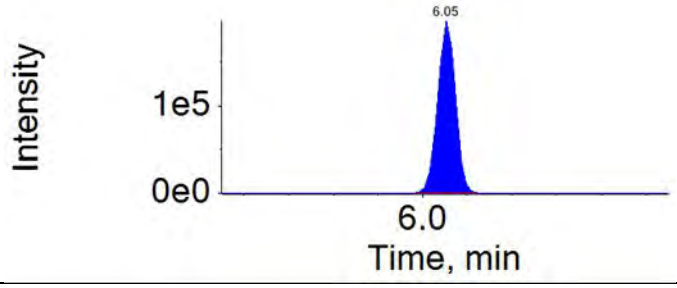


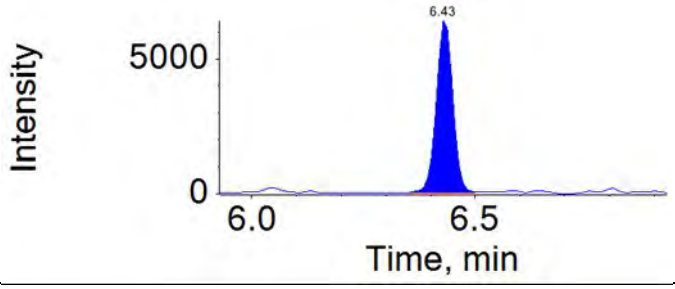
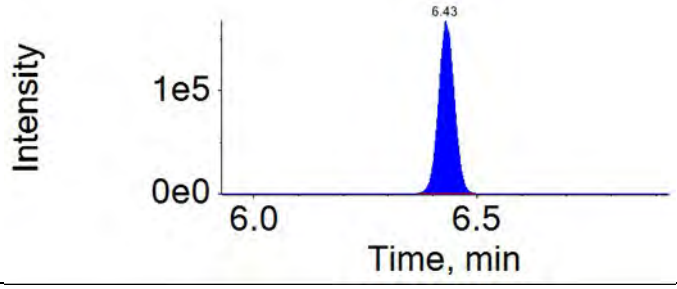


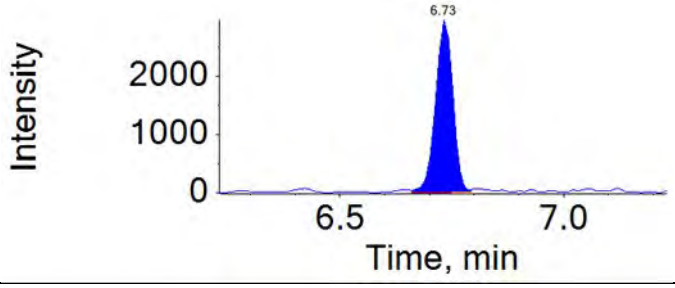
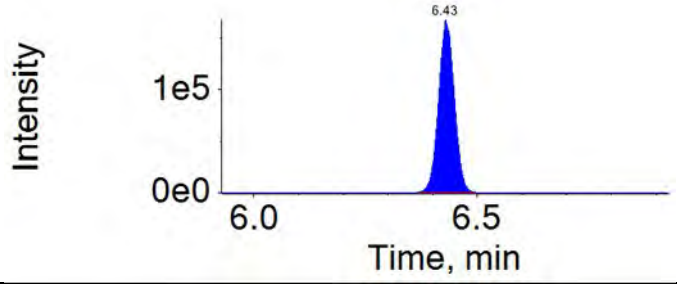
APPROVED
By MCD at 6:33 pm, 11/12/18

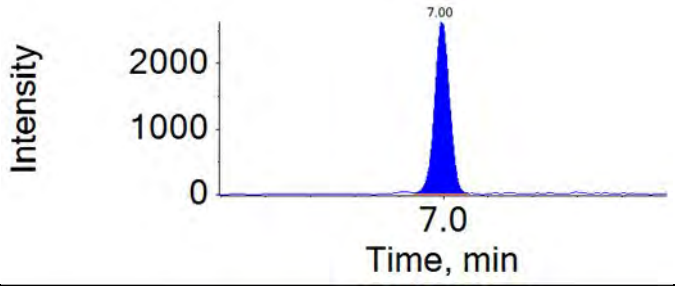
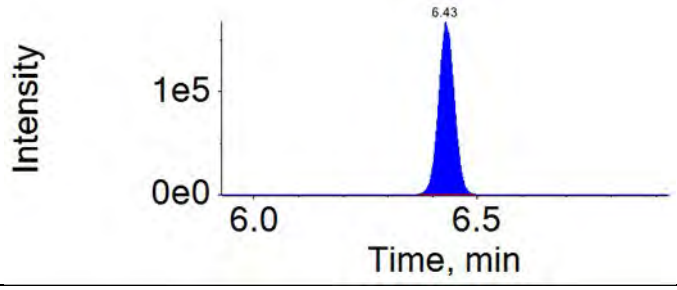
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

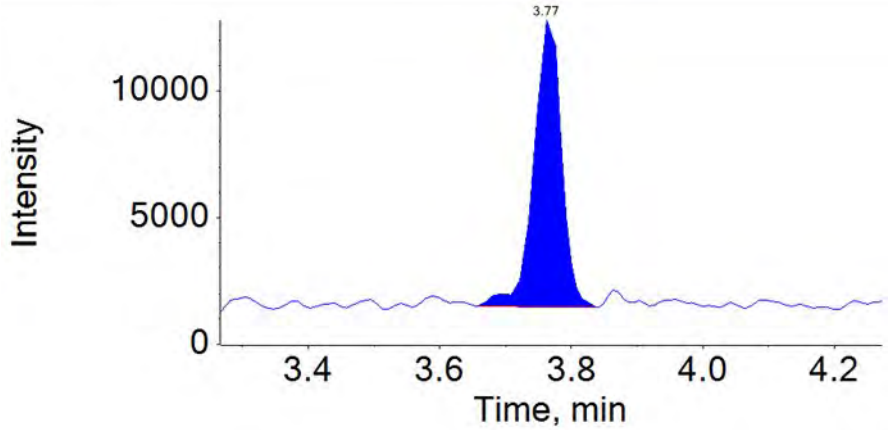
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

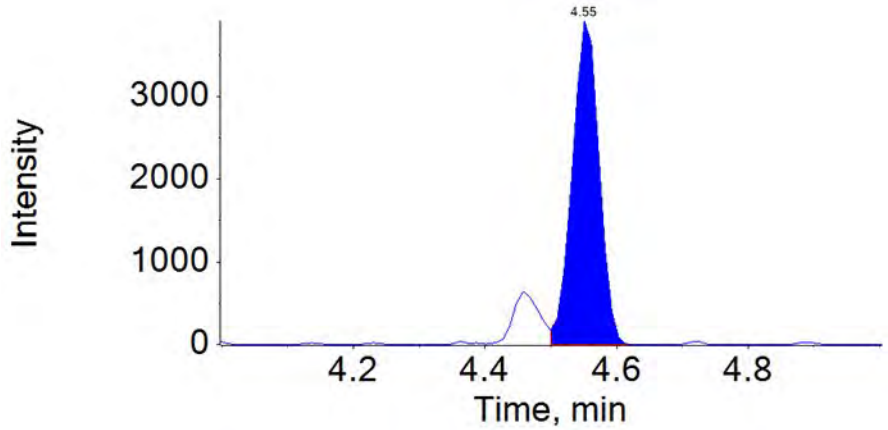
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

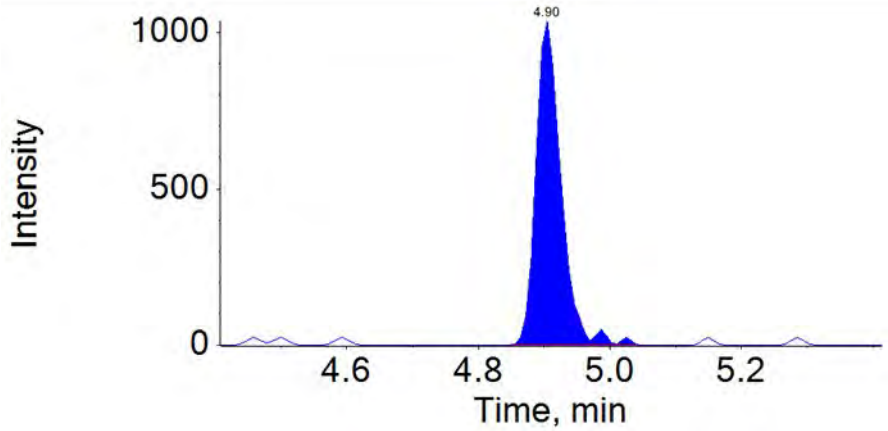
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFPeA **RT (min.):** 3.77 **Peak Area:** 33474.86 **Mass Range:** 263.0 / 219.0 **File Name:** 18NOV12DCAL-42.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

Component Name: PFHxS **RT (min.):** 4.55 **Peak Area:** 11101.81 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV12DCAL-42.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

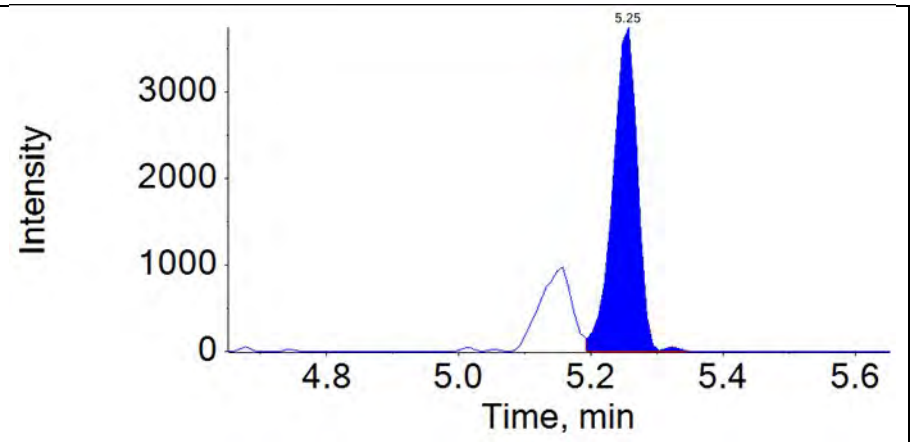
Component Name: 6:2-FTS **RT (min.):** 4.90 **Peak Area:** 2772.78 **Mass Range:** 427.0 / 407.0 **File Name:** 18NOV12DCAL-42.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

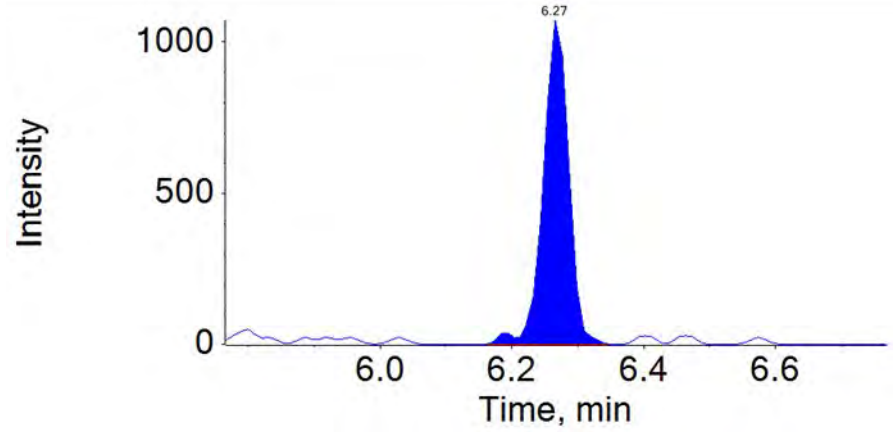
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOS
RT (min.): 5.25
Peak Area: 9779.70
Mass Range: 499.0 / 80.0
File Name: 18NOV12DCAL-42.wiff
Sample Name: CAL1



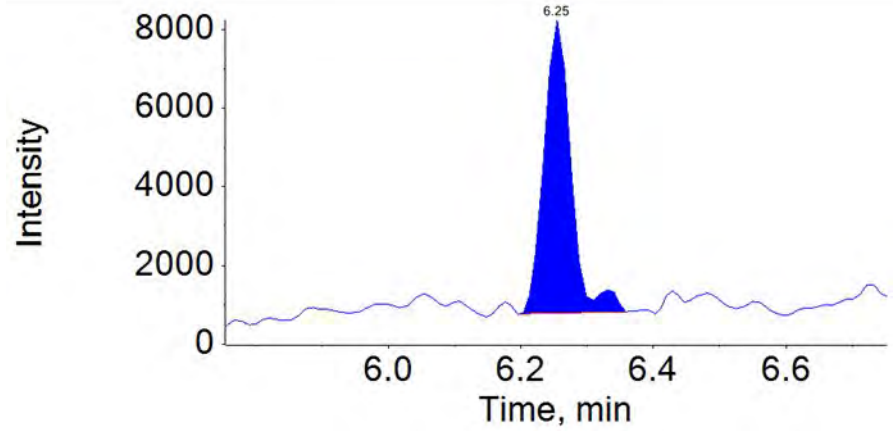
Integration Comment: incorrect integration

Component Name: NEtPFOSA
RT (min.): 6.27
Peak Area: 2904.33
Mass Range: 526.0 / 169.0
File Name: 18NOV12DCAL-42.wiff
Sample Name: CAL1



Integration Comment: incorrect integration

Component Name: PFTrDA
RT (min.): 6.25
Peak Area: 21221.75
Mass Range: 663.0 / 619.0
File Name: 18NOV12DCAL-42.wiff
Sample Name: CAL1



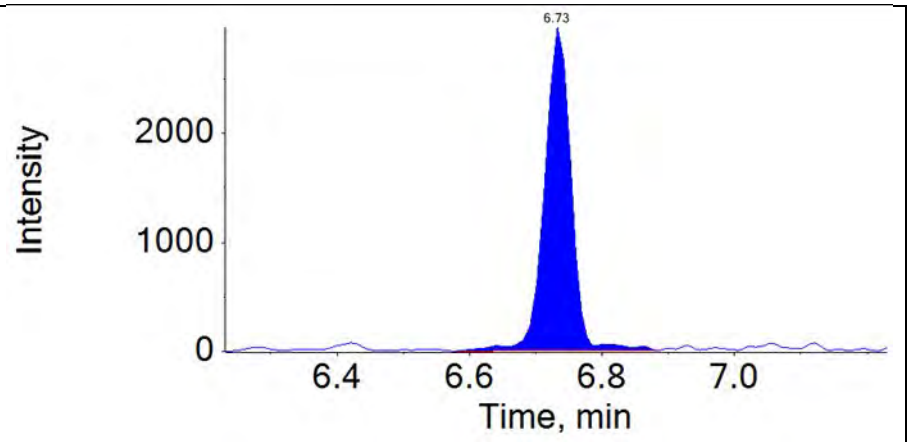
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

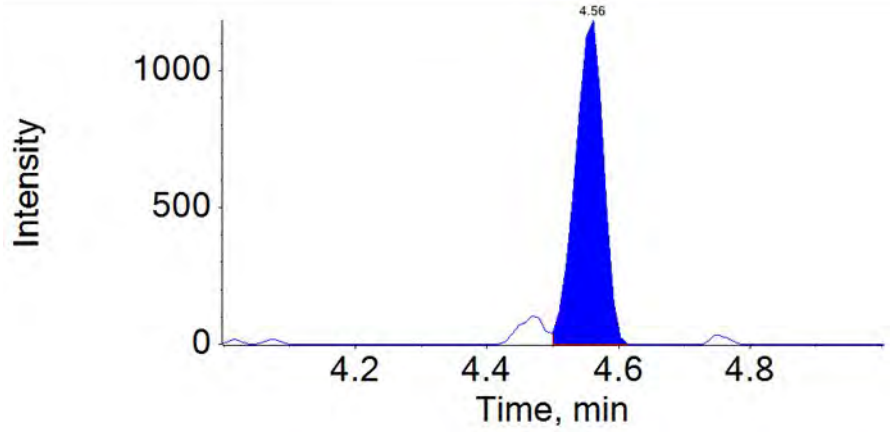
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxDA
RT (min.):
6.73
Peak Area:
8304.86
Mass Range:
813.0 / 769.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



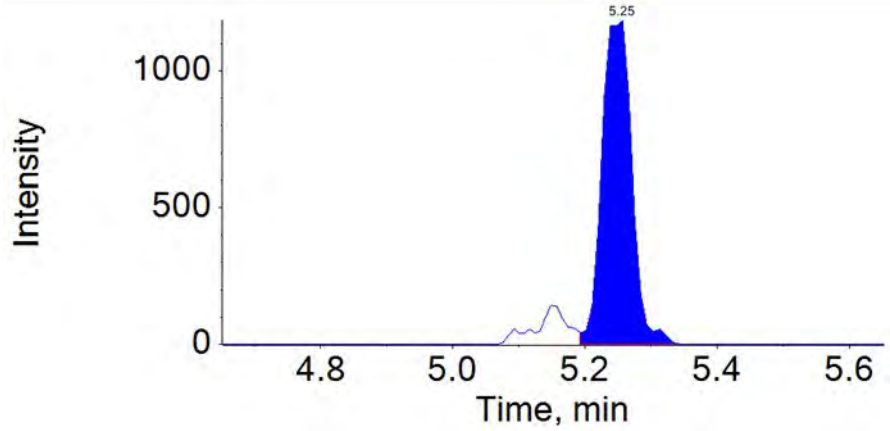
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
3529.38
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
3773.94
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

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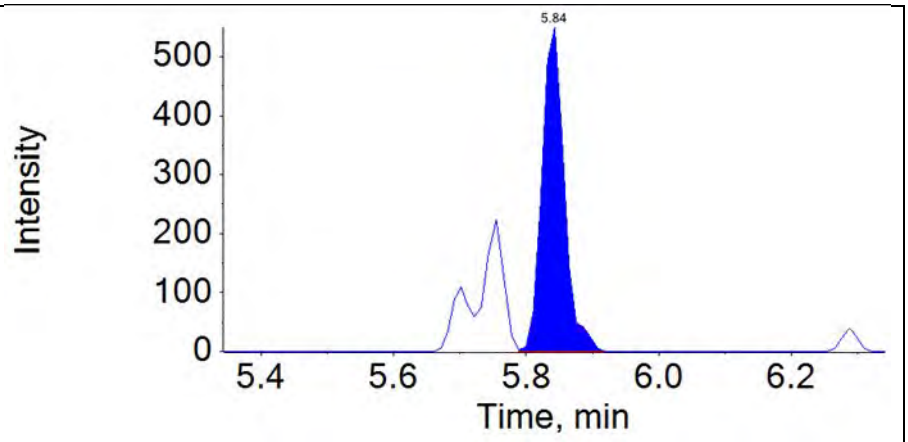
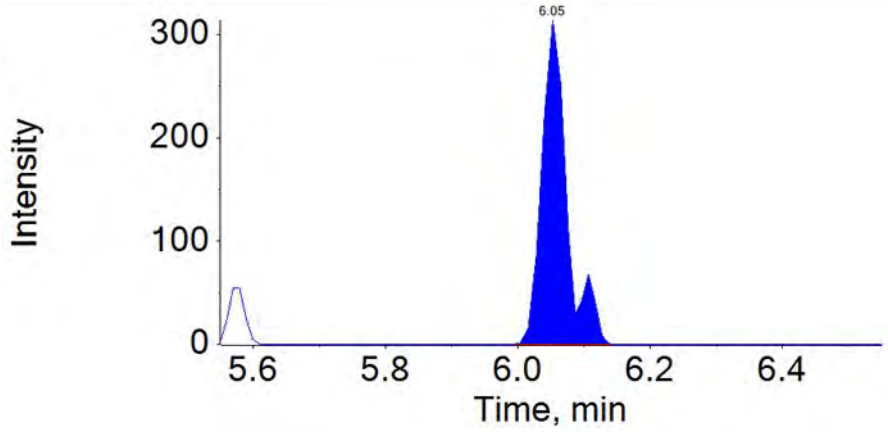
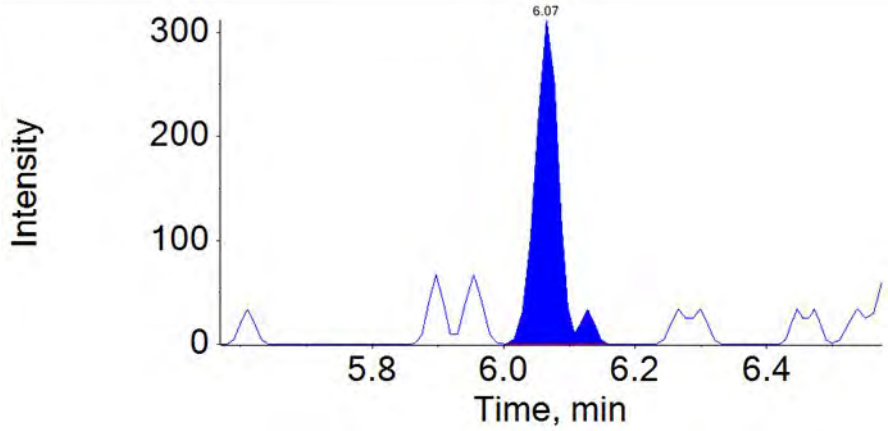
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtFOSAA_2 **RT (min.):** 5.84 **Peak Area:** 1295.22 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV12DCAL-42.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

Component Name: PFDoDA_2 **RT (min.):** 6.05 **Peak Area:** 835.89 **Mass Range:** 613.0 / 169.0 **File Name:** 18NOV12DCAL-42.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

Component Name: 10:2 FTS_2 **RT (min.):** 6.07 **Peak Area:** 801.59 **Mass Range:** 627.0 / 81.0 **File Name:** 18NOV12DCAL-42.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

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Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-42.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	18010.03	A	0.3619	0.3587			
PFBS_2	3.81	1.00	6459.67	A	0.3619	0.3587	-1	50	
4:2-FTS	4.13	1.00	3636.36	A	0.6730	0.7769			
4:2 FTS_2	4.13	1.00	2825.20	A	0.6730	0.7769		#NA!	
PFHxA	4.16	1.00	39108.19	A	0.0117	0.0110			
PFHxA_2	4.16	1.00	431.19	A	0.0117	0.0110	-5	50	
PFPeS	4.18	1.10	9620.09	A	0.5191	0.4377			
PFPeS_2	4.18	1.10	4210.95	A	0.5191	0.4377	-16	50	
PFHpA	4.55	1.00	37545.37	A	0.0563	0.0594			
PFHpA_2	4.55	1.00	2229.00	A	0.0563	0.0594	5	50	
PFHxS	4.55	1.00	12858.11	M	0.3428	0.2967			
PFHxS_2	4.56	1.00	3815.05	M	0.3428	0.2967	-13	50	
6:2-FTS	4.90	1.00	2683.12	M	0.6604	0.6208			
6:2 FTS_2	4.91	1.00	1665.70	A	0.6604	0.6208		#NA!	
PFHpS	4.91	1.08	13262.78	A	0.4066	0.3857			
PFHpS_2	4.91	1.08	5115.91	A	0.4066	0.3857	-5	50	
PFOA	4.92	1.00	41467.99	A	0.0562	0.0587			
PFOA_2	4.92	1.00	2433.19	A	0.0562	0.0587	4	50	
PFOS	5.25	1.00	13088.49	M	0.2968	0.3248			
PFOS_2	5.25	1.00	4250.80	M	0.2968	0.3248	9	50	
PFNA	5.26	1.00	29660.05	A	0.0229	0.0300			
PFNA_2	5.26	1.00	890.58	A	0.0229	0.0300	31	50	
PFNS	5.54	1.06	6846.55	A	0.4828	0.5747			
PFNS_2	5.55	1.06	3934.96	A	0.4828	0.5747	19	50	
PFDA	5.56	1.00	27488.55	A	0.0081	0.0185			
PFDA_2	5.57	1.00	509.91	A	0.0081	0.0185	130	50	OOS
8:2-FTS	5.57	1.00	2333.06	A	0.6814	0.8052			
8:2 FTS_2	5.57	1.00	1878.62	A	0.6814	0.8052		#NA!	
NMeFOSAA	5.71	1.00	2306.38	A	0.2569	0.2416			
NMeFOSAA_2	5.69	1.00	557.21	A	0.2569	0.2416	-6	50	
PFDS	5.80	1.10	5952.23	A	0.5144	0.5857			
PFDS_2	5.80	1.11	3486.36	A	0.5144	0.5857	14	50	
PFUnDA	5.82	1.00	23379.53	A	0.0058	0.0168			
PFUnDA_2	5.83	1.00	393.36	A	0.0058	0.0168	189	50	OOS
NEtFOSAA	5.85	1.00	2284.89	A	0.7253	0.8510			
NEtFOSAA_2	5.84	1.00	1944.53	M	0.7253	0.8510	17	50	
PFDoDA	6.05	1.00	22143.56	A	0.0157	0.0329			
PFDoDA_2	6.05	1.00	728.93	M	0.0157	0.0329	110	50	OOS
10:2-FTS	6.07	1.09	1814.19	A	0.6356	0.4140			
10:2 FTS_2	6.07	1.09	751.03	M	0.6356	0.4140		#NA!	
PFTrDA	6.25	1.03	20185.08	M	0.0086	0.0098			
PFTrDA_2	6.24	1.03	198.77	A	0.0086	0.0098	15	50	
PFTeDA	6.43	1.00	16357.53	A	0.0062	0.0036			
PFTeDA_2	6.46	1.01	58.89	A	0.0062	0.0036	-42	50	
PFHxDA	6.73	1.05	7976.02	M	0.0683	0.0708			
PFHxDA_2	6.73	1.05	564.53	A	0.0683	0.0708	4	50	
PFODA	7.00	1.09	6020.31	A	0.0277	0.0307			
PFODA_2	6.99	1.09	185.07	A	0.0277	0.0307	11	50	

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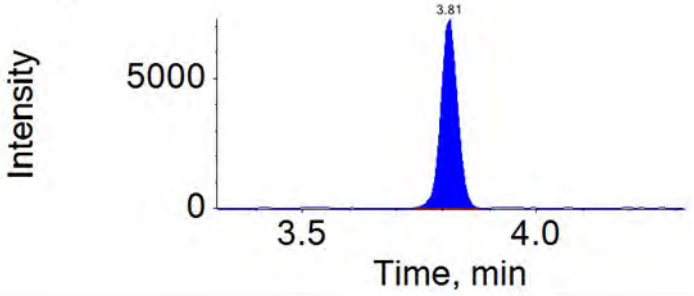
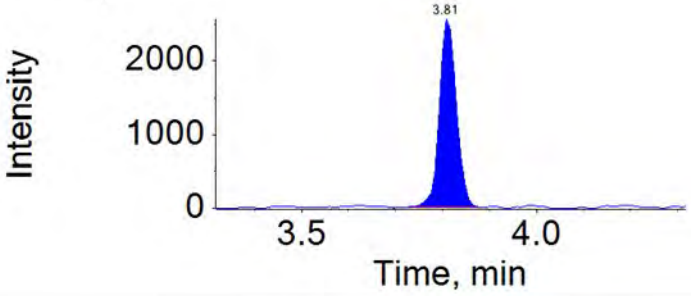
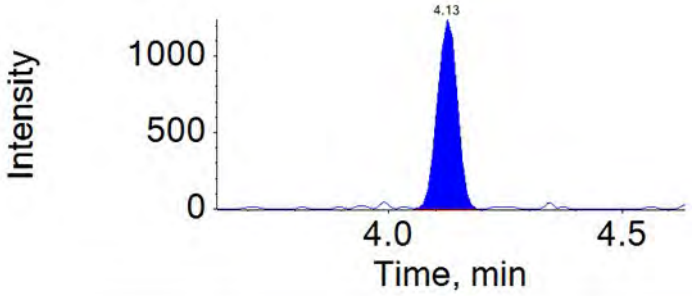
Component: PFBS
Primary Mass: 299.0 / 80.0



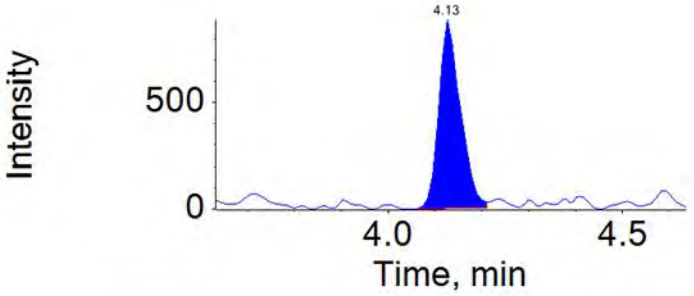
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



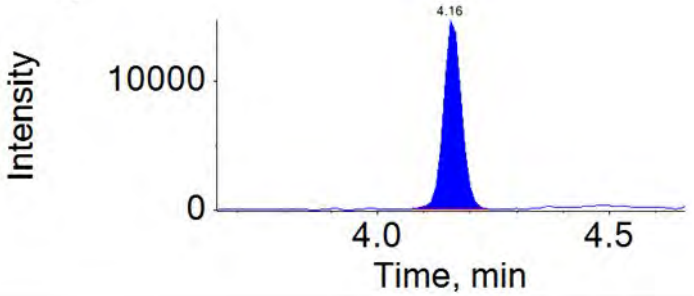
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



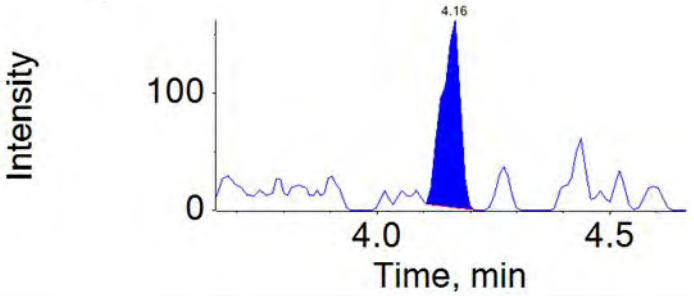
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



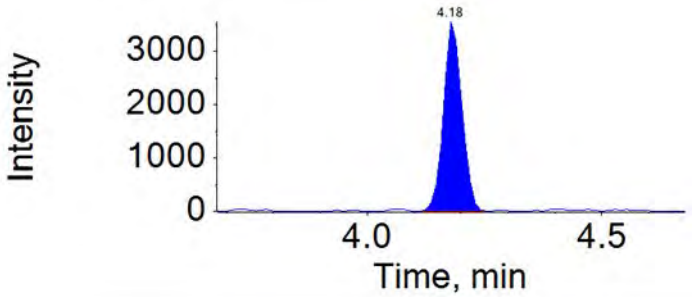
Component: PFHxA
Primary Mass: 313.0 / 269.0



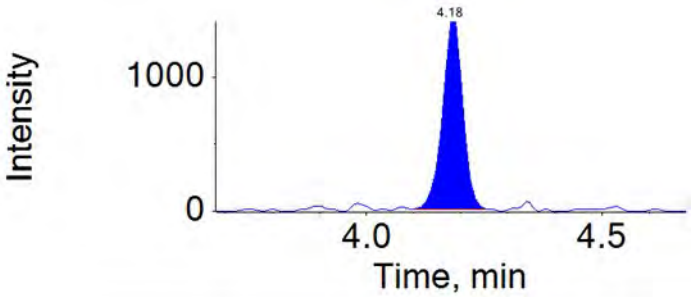
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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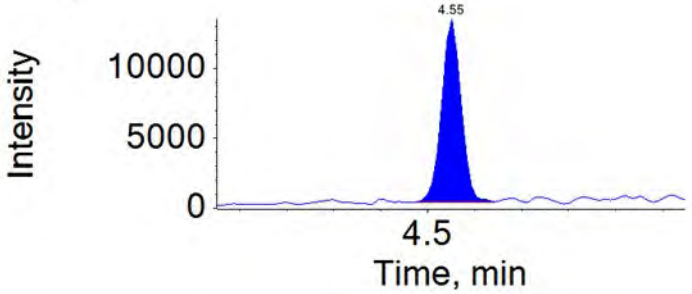
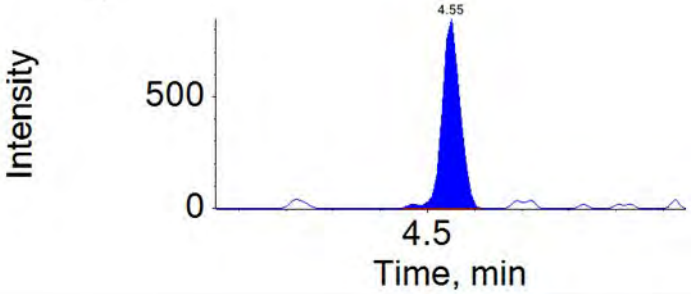
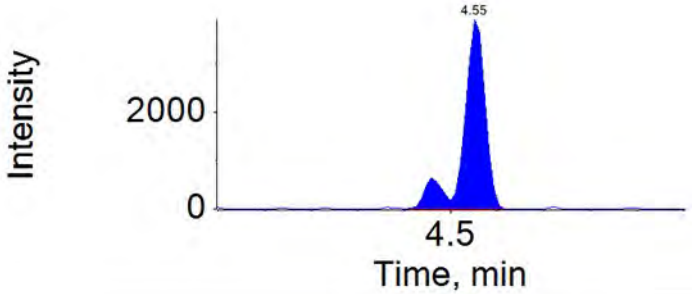
Component: PFHpA
Primary Mass: 363.0 / 319.0



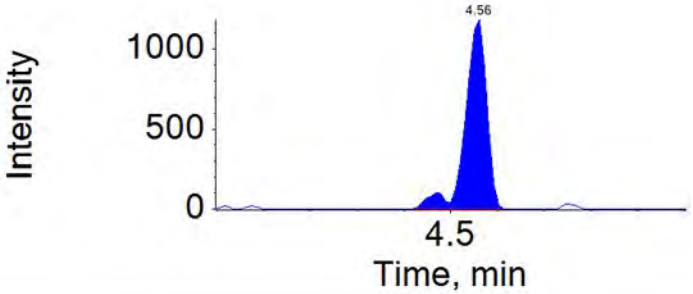
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



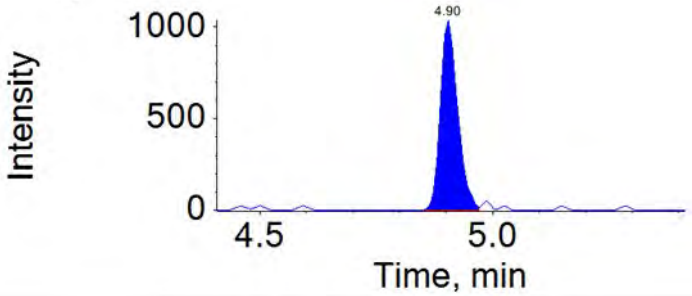
Component: PFHxS
Primary Mass: 399.0 / 80.0



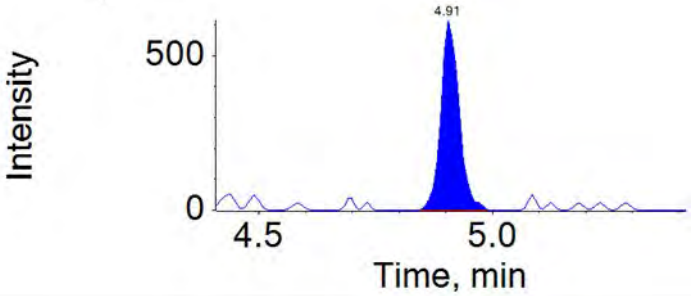
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



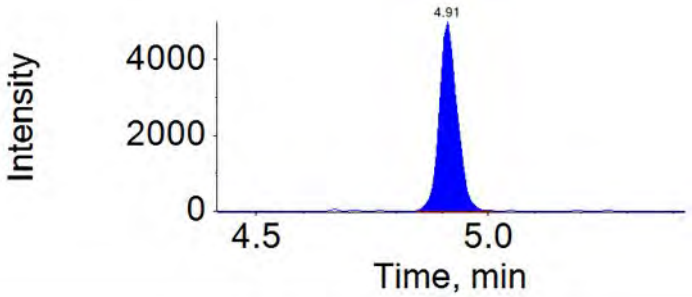
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



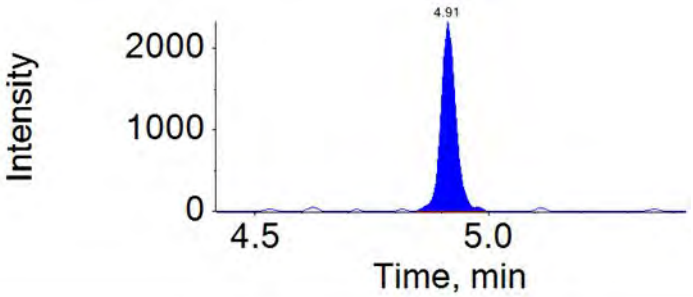
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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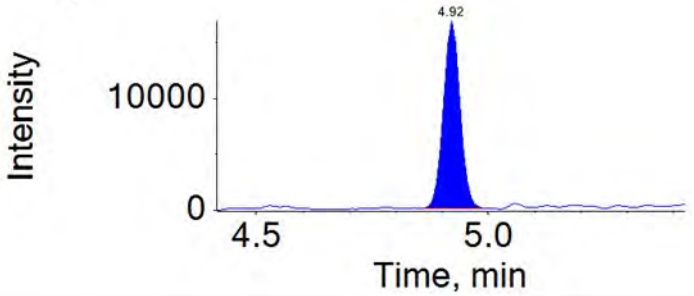
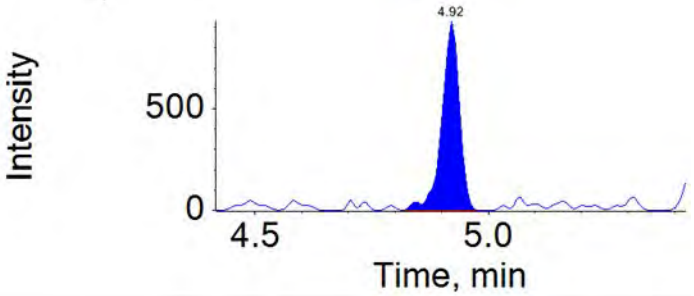
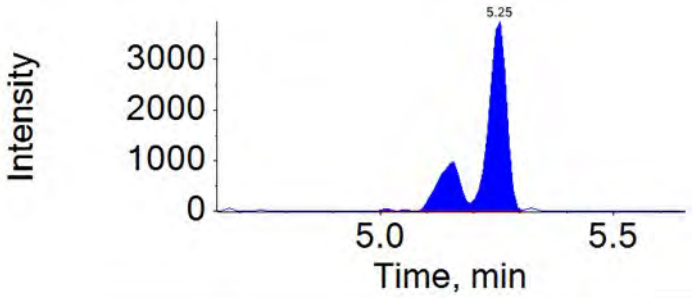
Component: PFOA
Primary Mass: 413.0 / 369.0



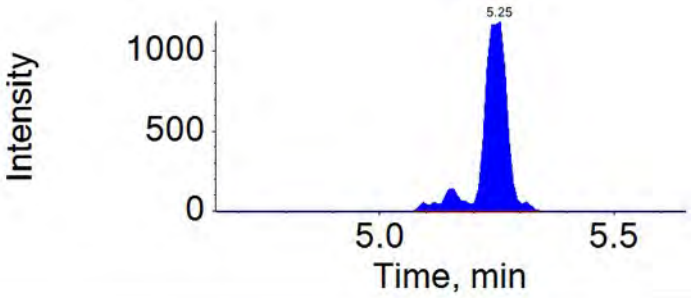
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



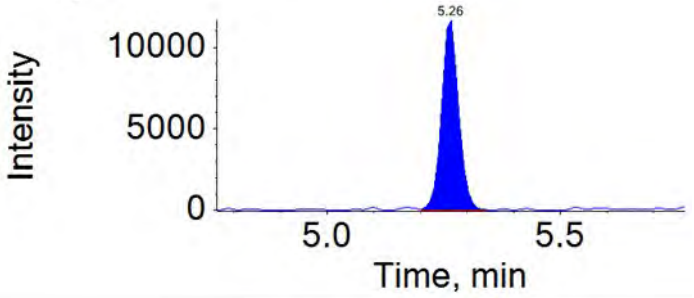
Component: PFOS
Primary Mass: 499.0 / 80.0



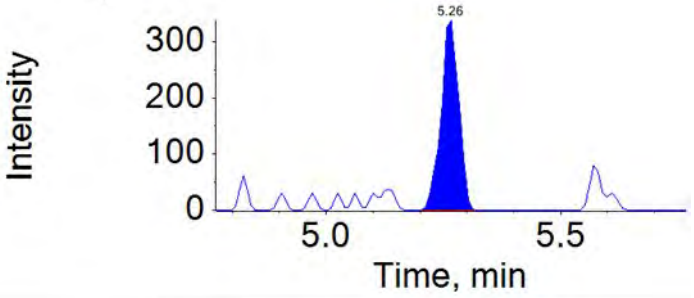
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



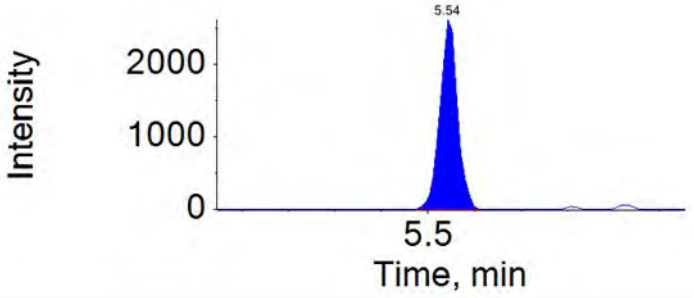
Component: PFNA
Primary Mass: 463.0 / 419.0



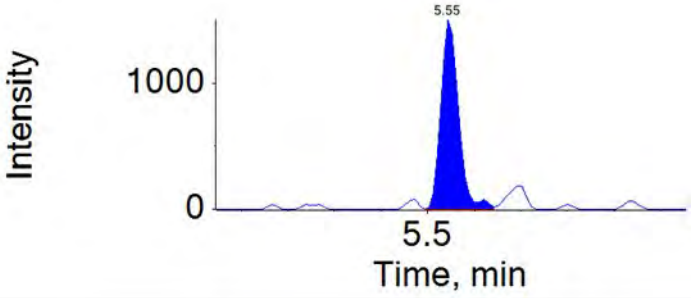
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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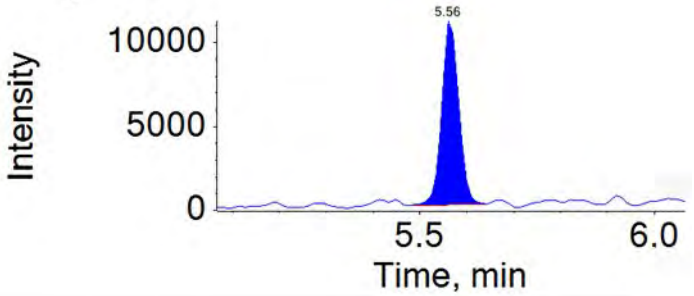
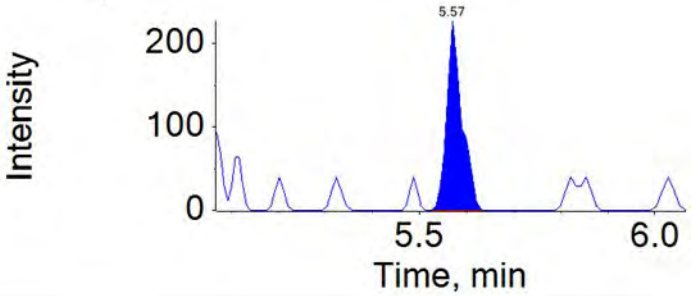
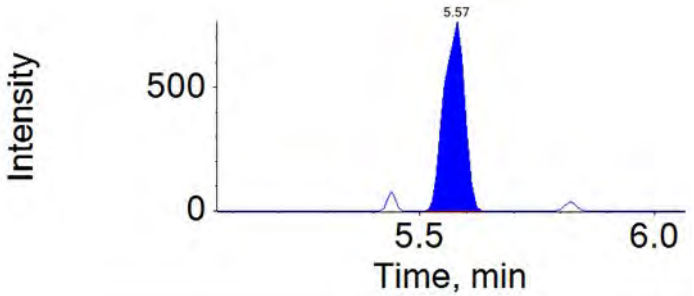
Component: PFDA
Primary Mass: 513.0 / 469.0



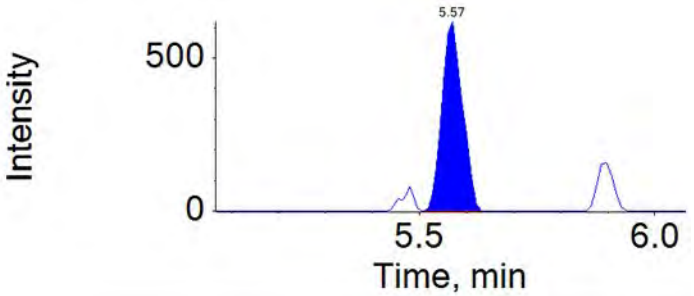
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



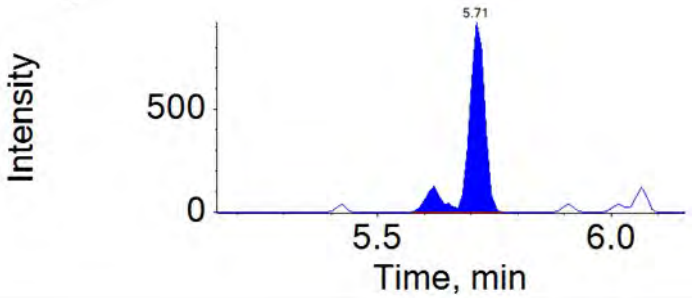
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



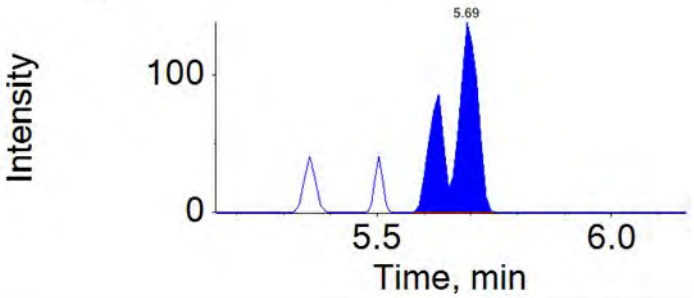
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



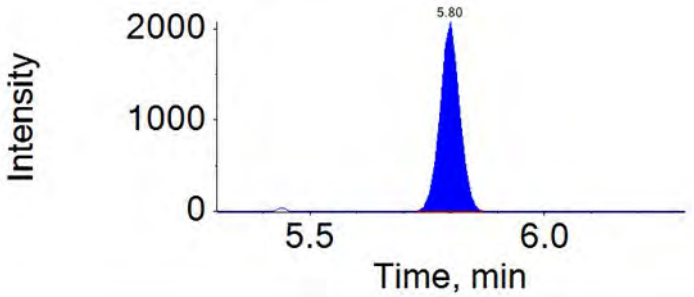
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



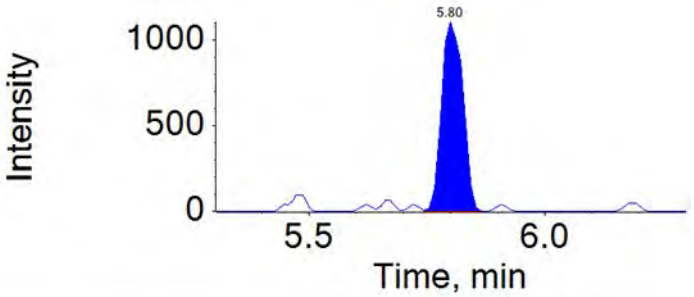
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



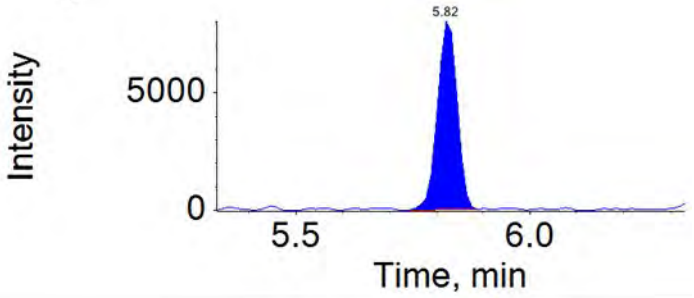
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



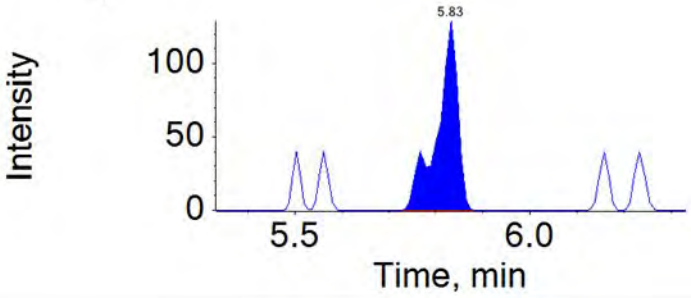
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

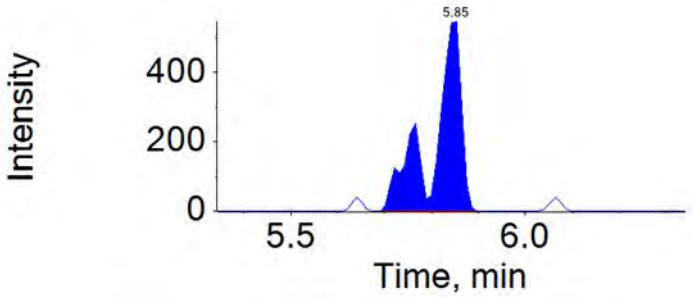
Component: PFUnDA
Primary Mass: 563.0 / 519.0



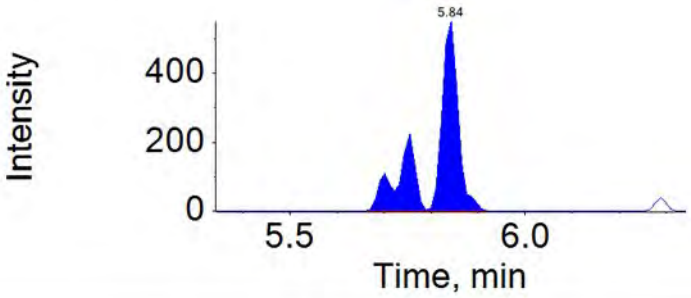
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



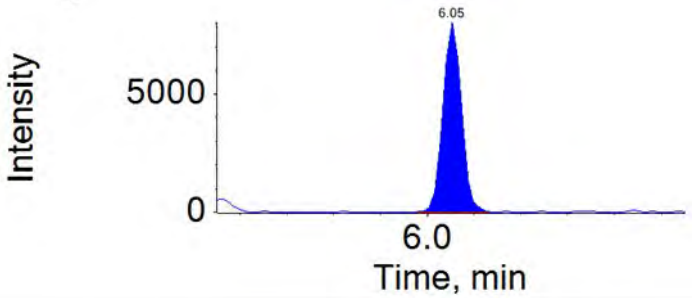
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



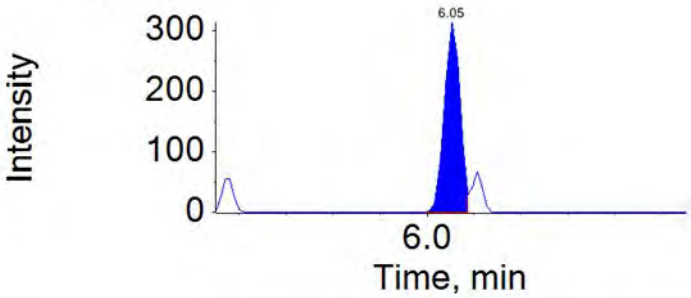
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



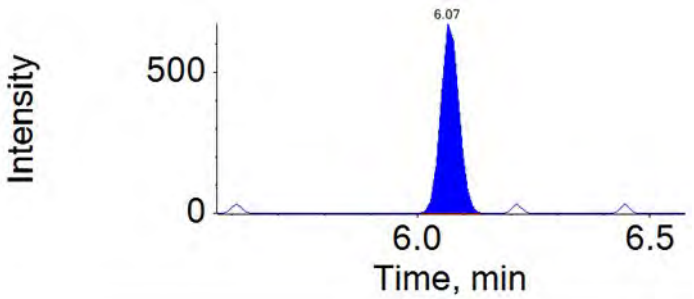
Component: PFDoDA
Primary Mass: 613.0 / 569.0



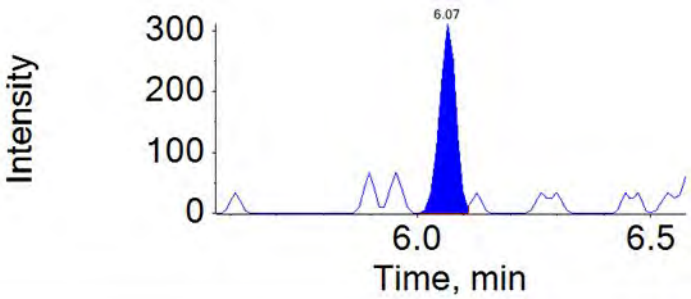
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



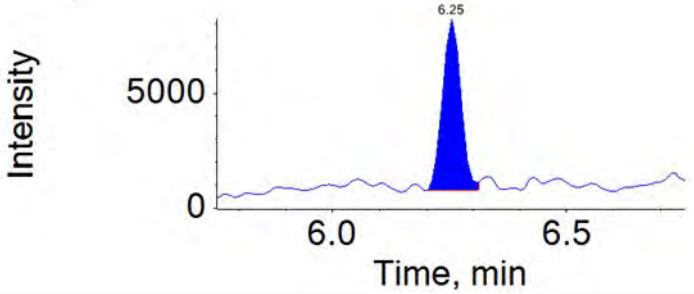
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



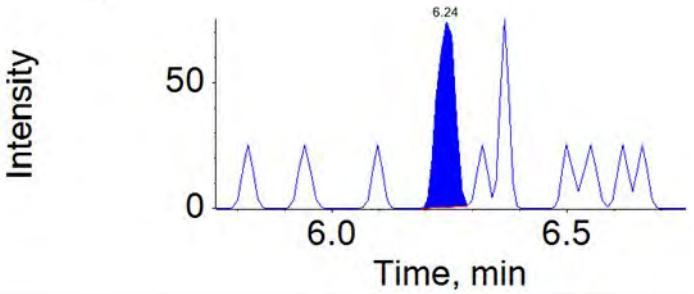
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

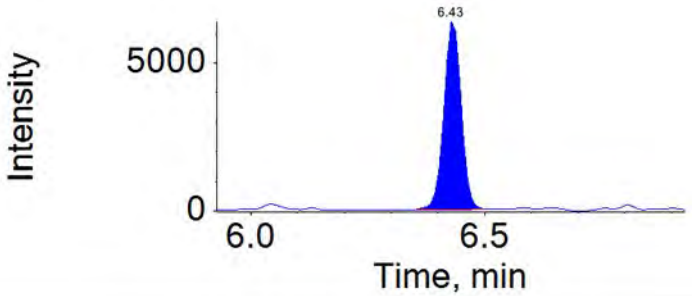
Component: PFTrDA
Primary Mass: 663.0 / 619.0



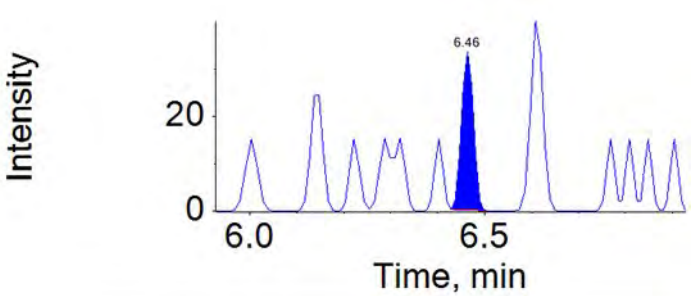
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



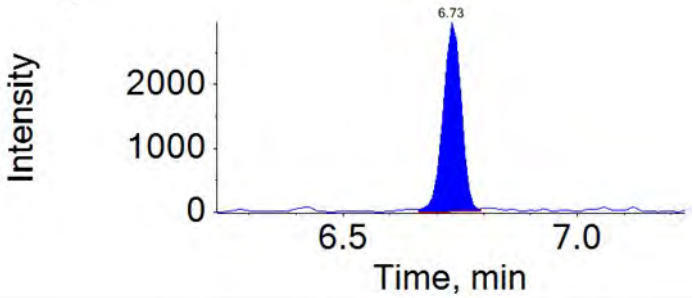
Component: PFTeDA
Primary Mass: 713.0 / 669.0



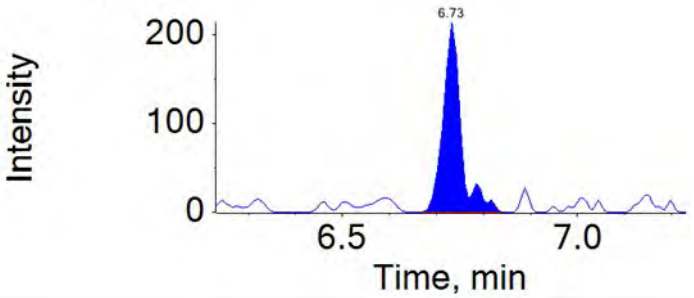
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



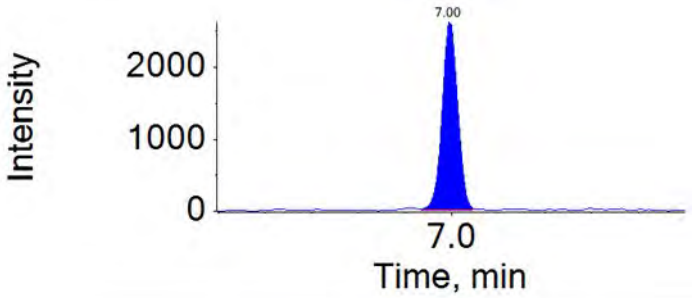
Component: PFHxDA
Primary Mass: 813.0 / 769.0



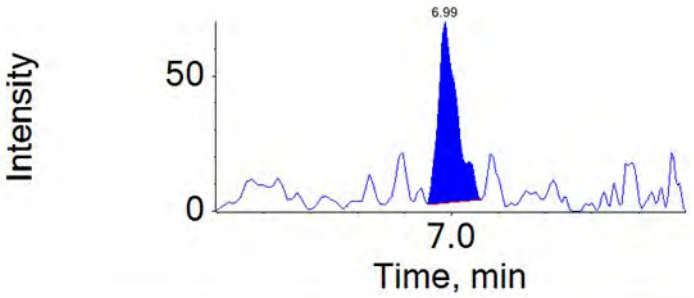
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL2			**Data File:**		18NOV12DCAL-43.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-12T15:15:03
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	662396.7	659926.2	0	50	
13C2-PFOA	5.0	454466.7	450219.7	1	50	
13C4-PFOS	4.8	250483.8	249205.8	1	50	
13C2-PFDA	5.0	277324.2	278743.9	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	771445.8	13C3-PFBA	662396.7	1.165	5.000	5.221	104	70-130	
E13C5-PFPeA	738194.7	13C3-PFBA	662396.7	1.114	5.000	4.998	100	70-130	
E13C3-PFBS	418860.7	13C3-PFBA	662396.7	0.632	4.650	4.464	96	70-130	
E13C2-4:2-FTS	46141.8	13C2-PFOA	454466.7	0.102	4.670	4.522	97	70-130	
E13C5-PFHxA	648170.1	13C2-PFOA	454466.7	1.426	5.000	5.152	103	70-130	
E13C3-PFHxS	320400.4	13C2-PFOA	454466.7	0.705	4.730	4.838	102	70-130	
E13C4-PFHpA	532987.5	13C2-PFOA	454466.7	1.173	5.000	5.284	106	70-130	
E13C2-6:2-FTS	35585.7	13C2-PFOA	454466.7	0.078	4.750	5.239	110	70-130	
E13C8-PFOA	892584.2	13C2-PFOA	454466.7	1.964	5.000	5.411	108	70-130	
E13C8-PFOS	271778.8	13C4-PFOS	250483.8	1.085	4.780	4.808	101	70-130	
E13C9-PFNA	451850.1	13C4-PFOS	250483.8	1.804	5.000	5.030	101	70-130	
E13C6-PFDA	601859.8	13C2-PFDA	277324.2	2.170	5.000	5.064	101	70-130	
E13C2-8:2-FTS	27639.2	13C2-PFDA	277324.2	0.100	4.790	4.970	104	70-130	
E13C8-PFOSA	636543.2	13C2-PFDA	277324.2	2.295	5.000	5.089	102	70-130	
Ed3-NMeFOSAA	77388.6	13C2-PFDA	277324.2	0.279	5.000	5.037	101	70-130	
E13C7-PFUnDA	242881.8	13C2-PFDA	277324.2	0.876	5.000	5.085	102	70-130	
Ed5-NEtFOSAA	63686.9	13C2-PFDA	277324.2	0.230	5.000	4.859	97	70-130	
E13C2-PFDoDA	532175.4	13C2-PFDA	277324.2	1.919	5.000	4.982	100	70-130	
Ed7-NMePFOSAE	323456.5	13C2-PFDA	277324.2	1.166	5.000	5.047	101	70-130	
Ed3-NMePFOSA	77893.2	13C2-PFDA	277324.2	0.281	5.000	5.103	102	70-130	
Ed9-NEtPFOSAE	261195.6	13C2-PFDA	277324.2	0.942	5.000	4.899	98	70-130	
Ed5-NEtPFOSA	58073.5	13C2-PFDA	277324.2	0.209	5.000	4.912	98	70-130	
E13C2-PFTeDA	394146.2	13C2-PFDA	277324.2	1.421	5.000	4.990	100	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

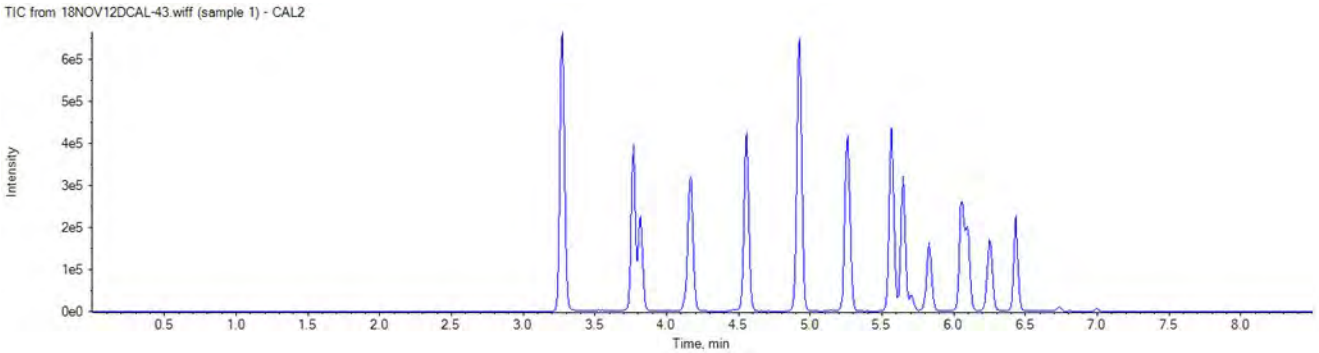
Analyte Quantitation Peak Table

Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-43.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	80396.2		A	13C4-PFBA	3.27	771445.8	0.104	0.577
PFPeA	3.77	1.000	84319.4		A	13C5-PFPeA	3.77	738194.7	0.114	0.661
PFBS	3.82	1.000	44885.2		A	13C3-PFBS	3.82	418860.7	0.107	0.510
4:2-FTS	4.13	1.000	8804.0		A	13C2-4:2-FTS	4.13	46141.8	0.191	0.518
PFHxA	4.16	1.000	96559.3		A	13C5-PFHxA	4.17	648170.1	0.149	0.622
PFPeS	4.19	1.100	20295.0		A	13C3-PFBS	3.82	418860.7	0.048	0.470
PFHpA	4.55	1.000	95048.3		M	13C4-PFHpA	4.55	532987.5	0.178	0.591
PFHxS	4.56	1.000	31064.7		M	13C3-PFHxS	4.56	320400.4	0.097	0.470
6:2-FTS	4.91	1.000	8048.4		A	13C2-6:2-FTS	4.91	35585.7	0.226	0.547
PFHpS	4.92	1.080	29902.3		A	13C3-PFHxS	4.56	320400.4	0.093	0.491
PFOA	4.93	1.000	100710.5		A	13C8-PFOA	4.92	892584.2	0.113	0.603
PFOS	5.25	1.000	32301.0		M	13C8-PFOS	5.25	271778.8	0.119	0.520
PFNA	5.27	1.000	80724.2		A	13C9-PFNA	5.27	451850.1	0.179	0.644
PFNS	5.55	1.060	20326.1		A	13C8-PFOS	5.25	271778.8	0.075	0.523
PFDA	5.57	1.000	63802.1		M	13C6-PFDA	5.57	601859.8	0.106	0.562
8:2-FTS	5.57	1.000	6214.2		A	13C2-8:2-FTS	5.57	27639.2	0.225	0.524
PFOSA	5.65	1.000	71087.0		A	13C8-PFOSA	5.65	636543.2	0.112	0.545
NMeFOSAA	5.71	1.000	5759.6		A	d3-NMeFOSAA	5.71	77388.6	0.074	0.421
PFDS	5.80	1.100	16291.9		A	13C8-PFOS	5.25	271778.8	0.060	0.543
PFUnDA	5.83	1.000	51206.8		A	13C7-PFUnDA	5.83	242881.8	0.211	0.551
NEtFOSAA	5.85	1.000	7727.1		M	d5-NEtFOSAA	5.84	63686.9	0.121	0.636
PFDoDA	6.06	1.000	59695.3		A	13C2-PFDoDA	6.06	532175.4	0.112	0.571
10:2-FTS	6.08	1.090	5206.5		A	13C2-8:2-FTS	5.57	27639.2	0.188	0.627
NMePFOSAE	6.10	1.000	43085.1		A	d7-NMePFOSAE	6.09	323456.5	0.133	0.554
NMePFOSA	6.11	1.000	8877.7		A	d3-NMePFOSA	6.11	77893.2	0.114	0.562
PFDoS	6.22	1.190	8992.5		M	13C8-PFOS	5.25	271778.8	0.033	0.580
NEtPFOSAE	6.26	1.000	46623.3		M	d9-NEtPFOSAE	6.25	261195.6	0.178	0.573
NEtPFOSA	6.27	1.000	8053.7		M	d5-NEtPFOSA	6.27	58073.5	0.139	0.637
PFTrDA	6.26	1.030	47991.3		A	13C2-PFDoDA	6.06	532175.4	0.090	0.569
PFTeDA	6.43	1.000	40236.5		A	13C2-PFTeDA	6.43	394146.2	0.102	0.572
PFHxDA	6.74	1.050	19006.4		A	13C2-PFTeDA	6.43	394146.2	0.048	0.575
PFODA	7.00	1.090	14955.6		A	13C2-PFTeDA	6.43	394146.2	0.038	0.528

Total Ion Chromatogram

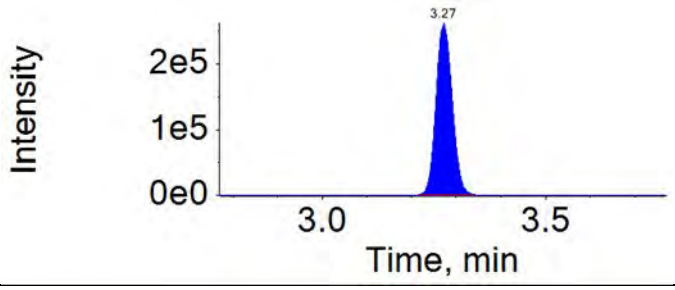


APPROVED
By MCD at 6:33 pm, 11/12/18

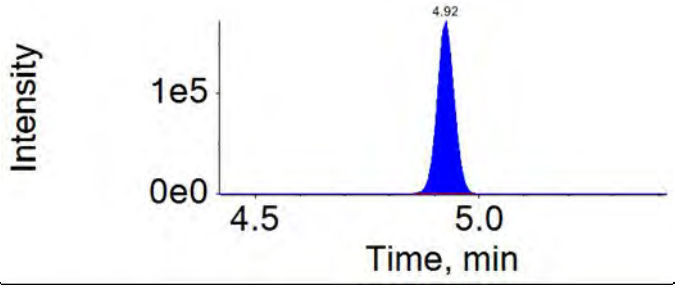
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

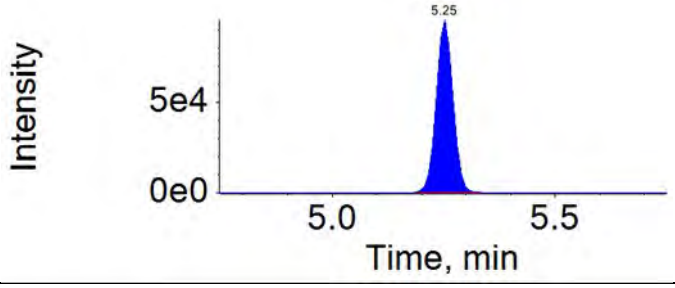
Injection Standard: 13C3-PFBA
216.0 / 172.0



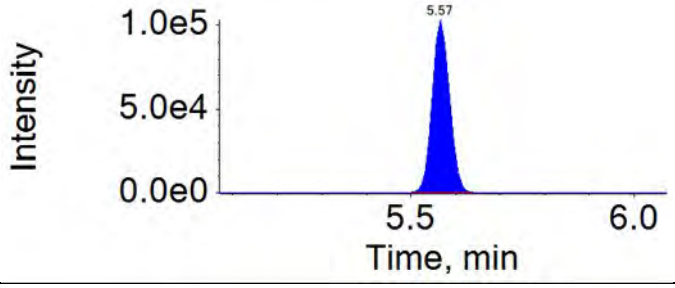
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

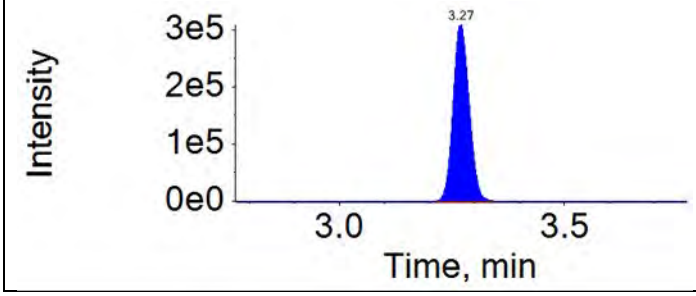


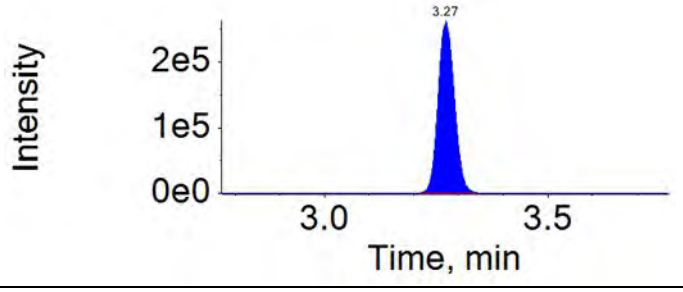
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

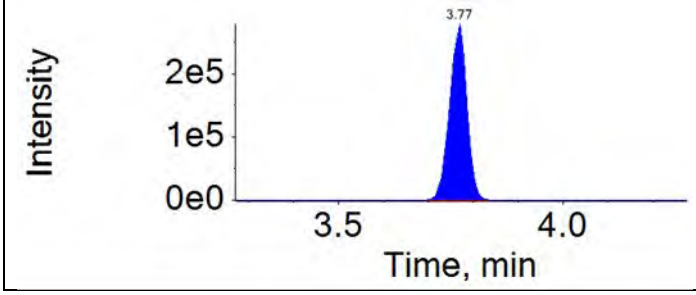
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

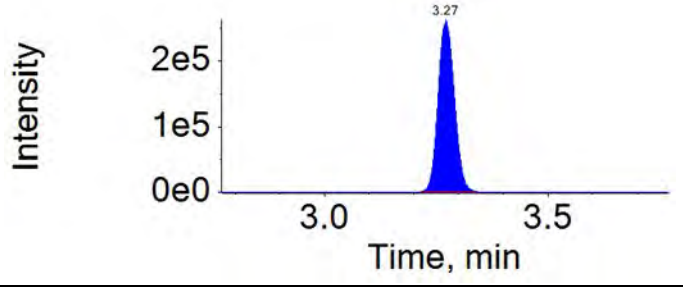
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



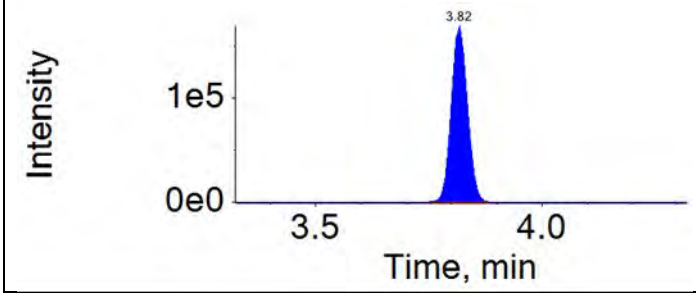


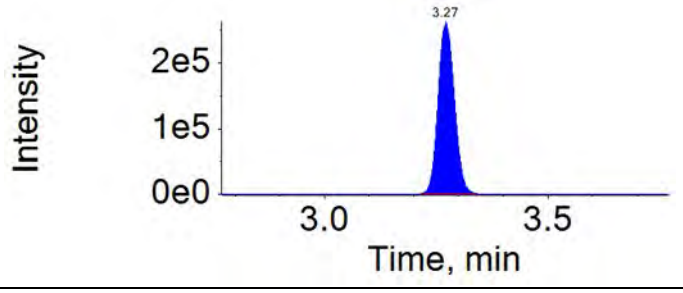
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



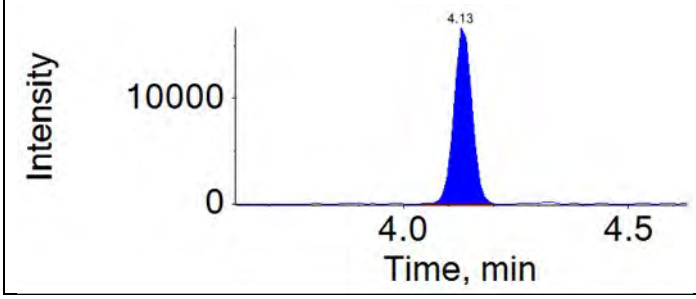


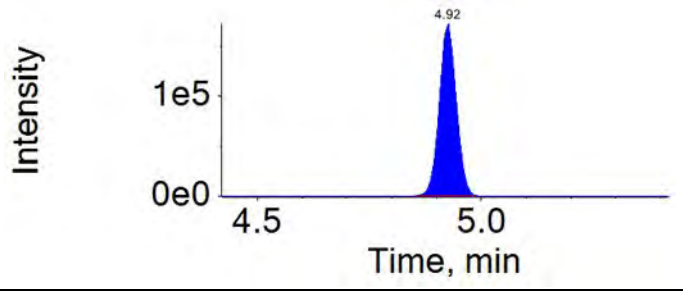
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





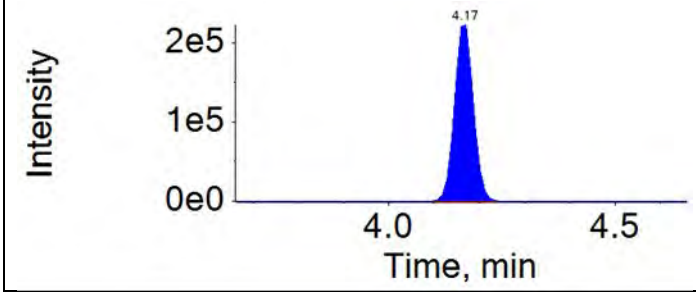
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

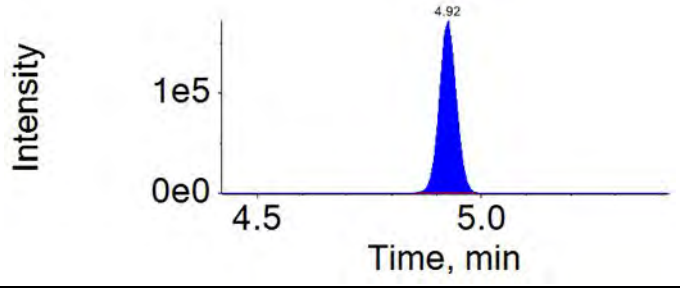




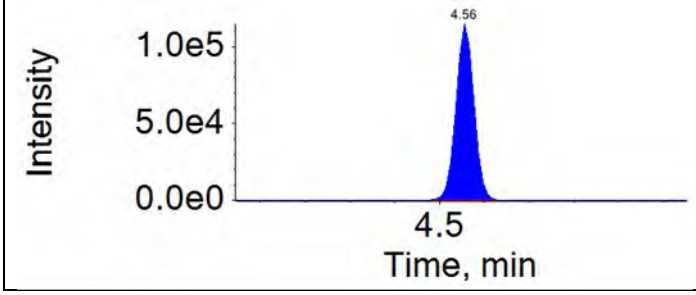
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

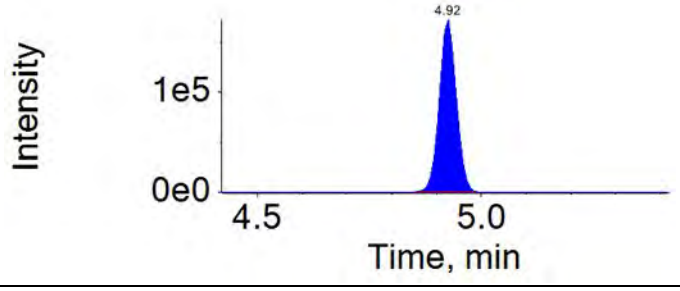
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



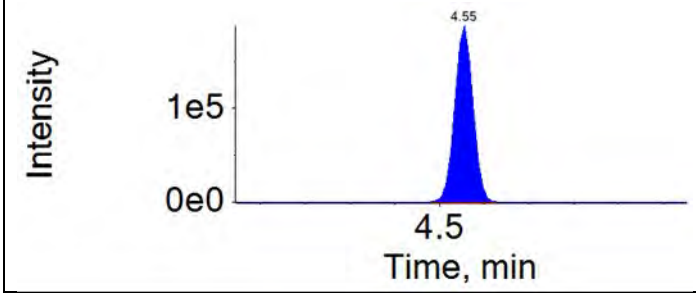


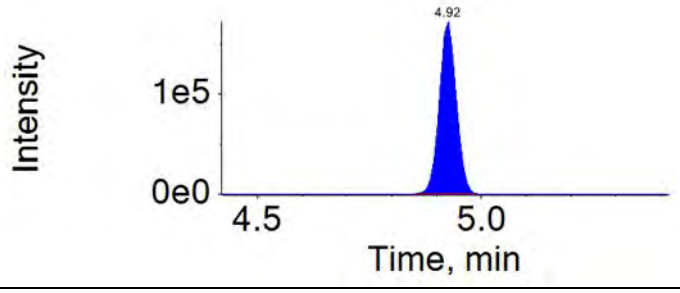
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



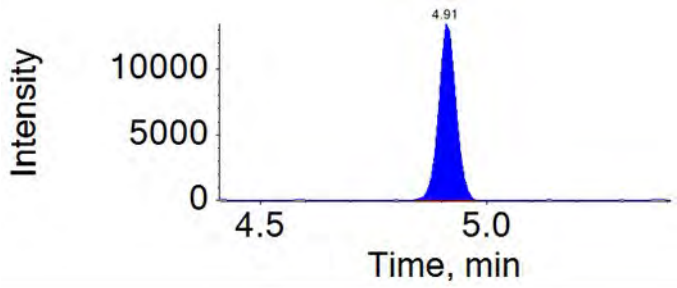


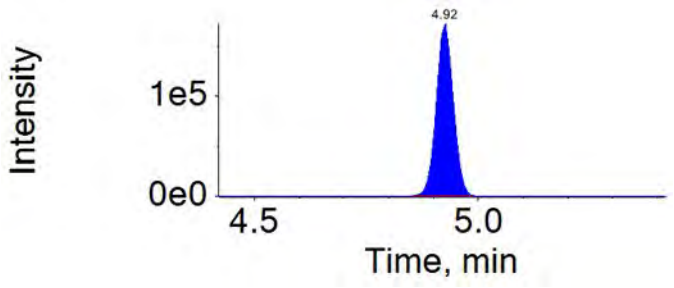
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

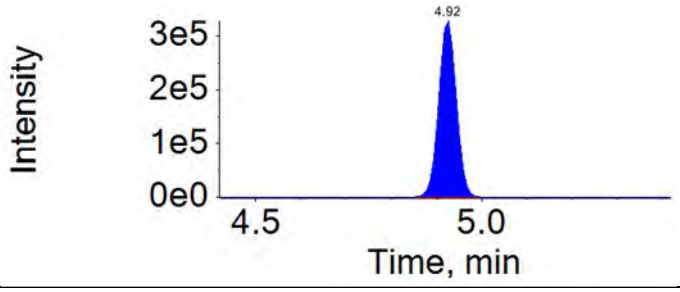
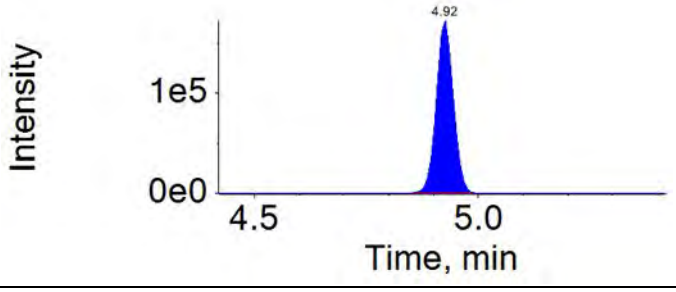


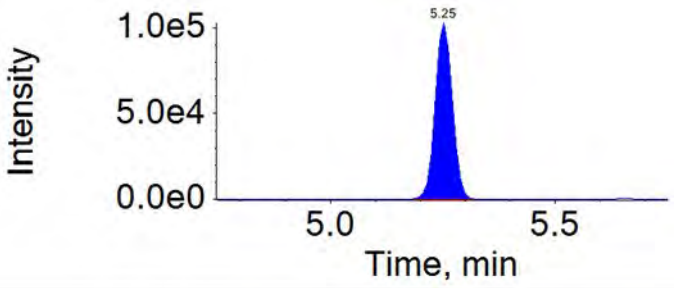
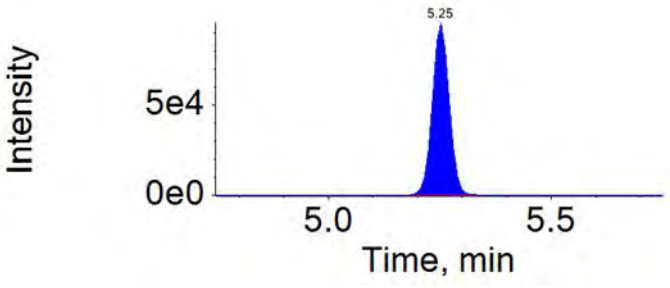


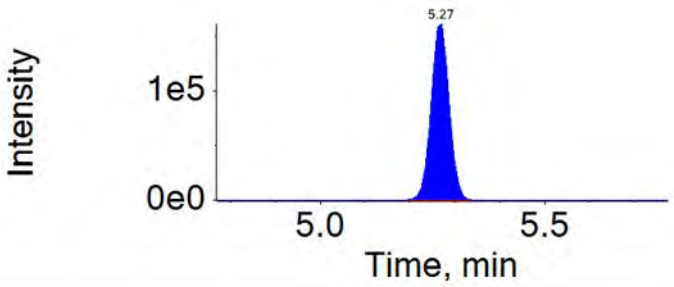
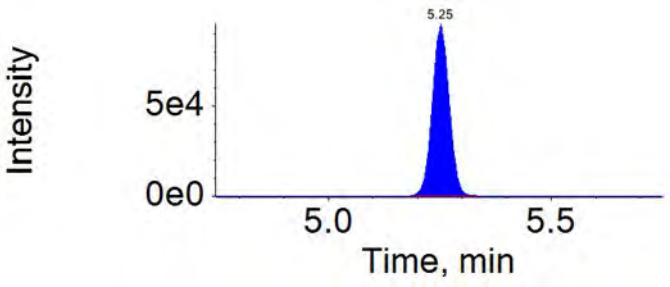
APPROVED
By MCD at 6:33 pm, 11/12/18

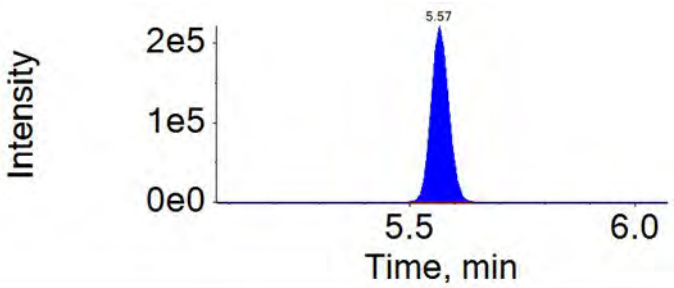
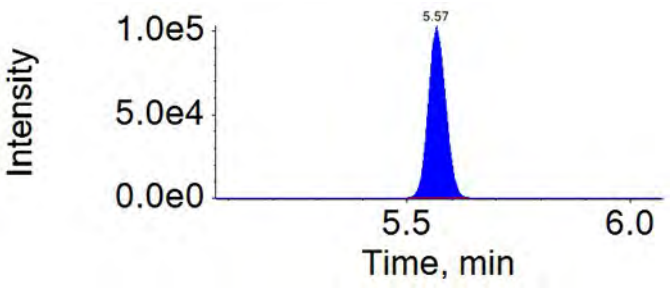
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

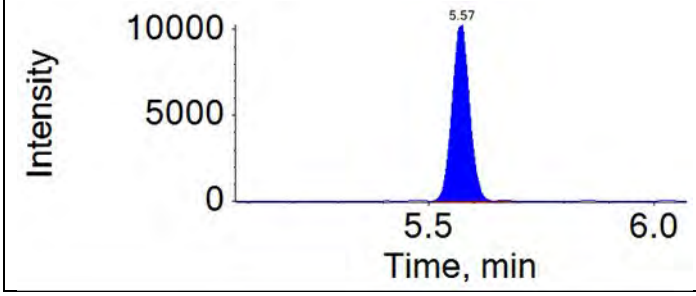
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

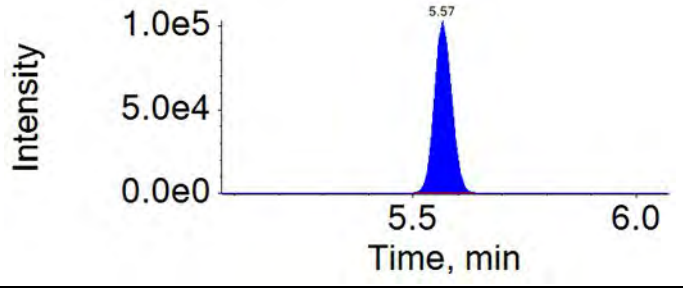
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

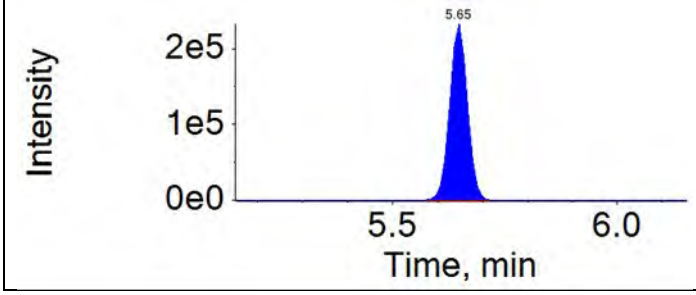
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

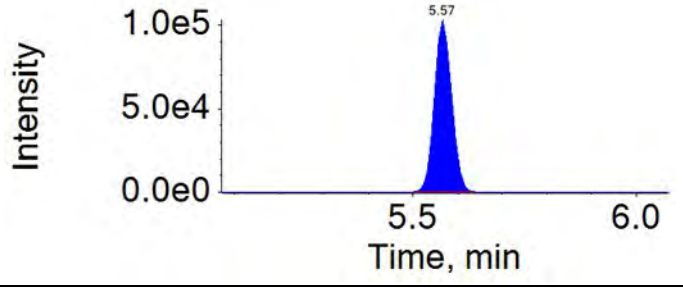
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



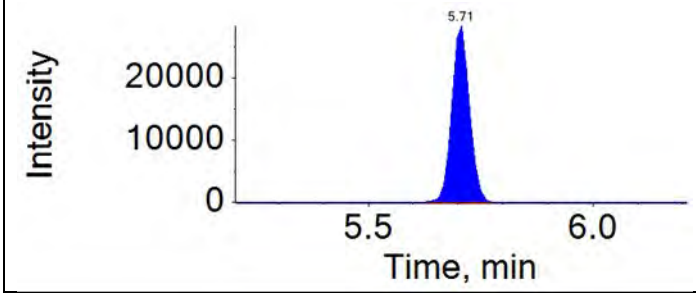


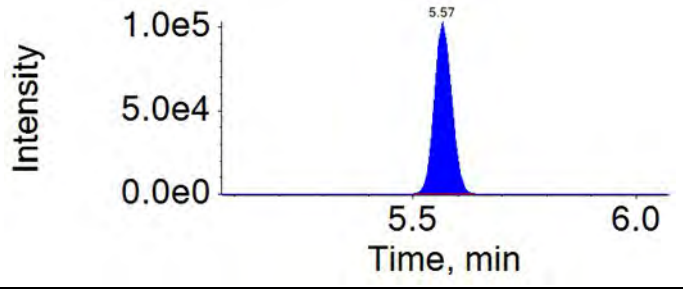
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



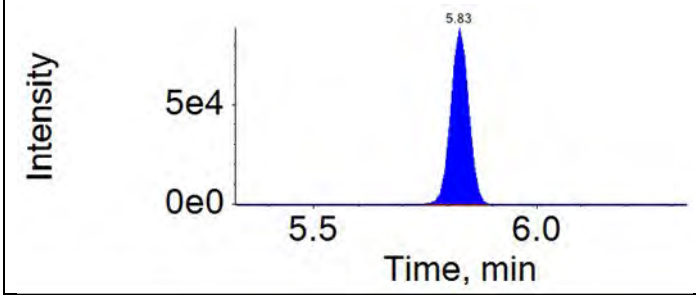


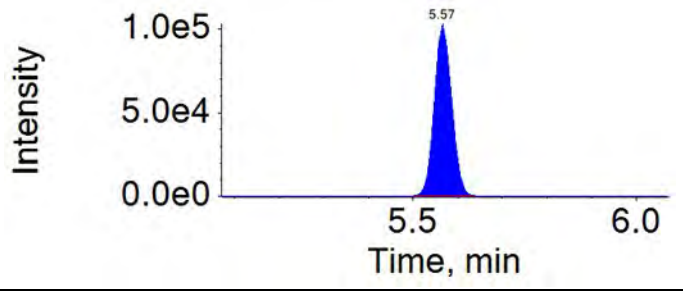
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

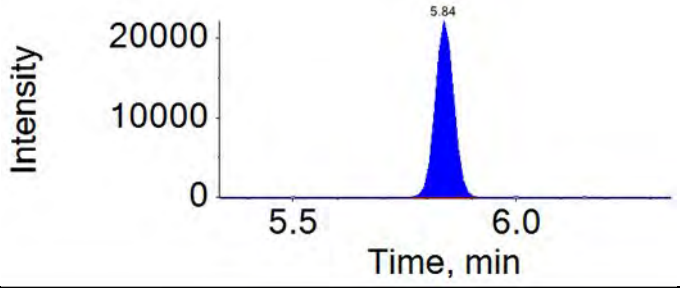
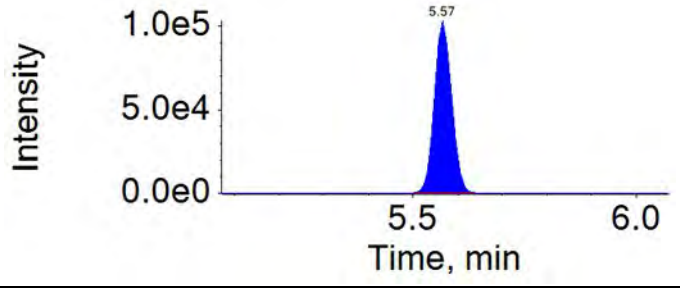


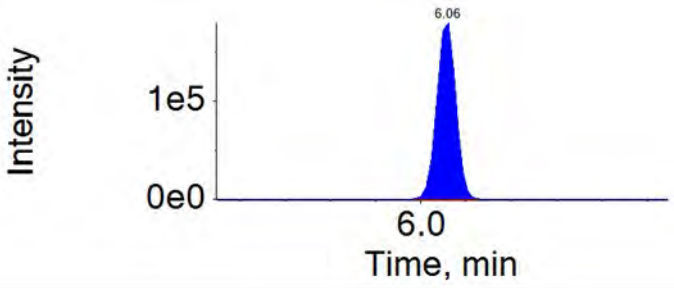
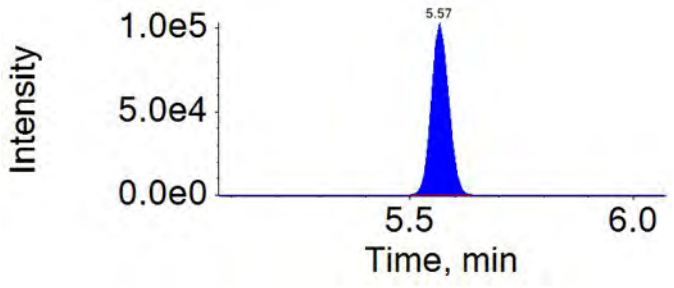


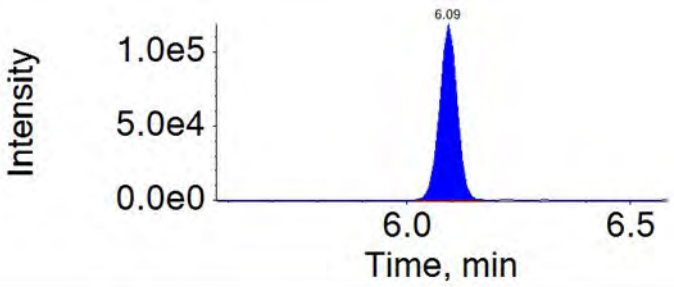
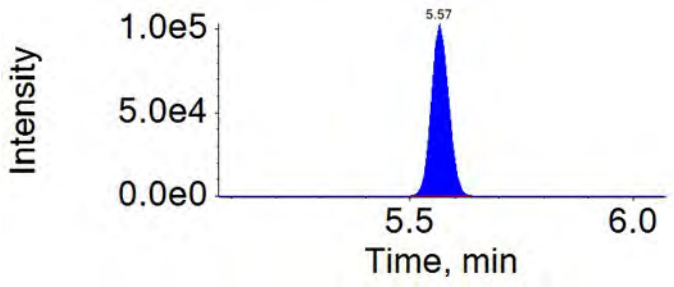
APPROVED
By MCD at 6:33 pm, 11/12/18

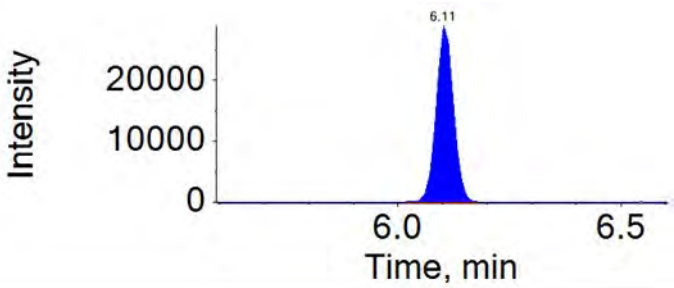
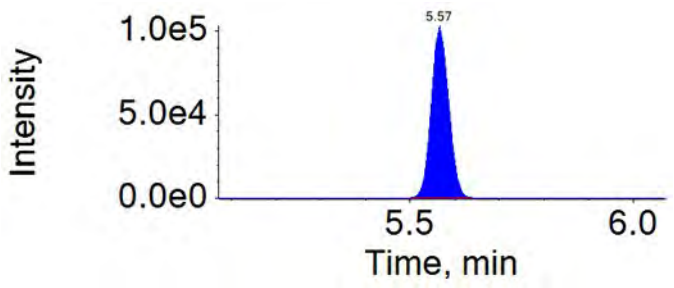
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

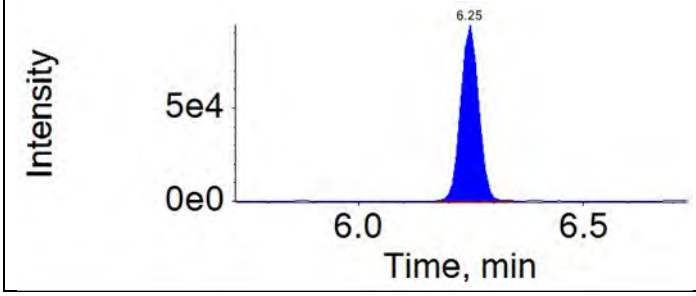
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

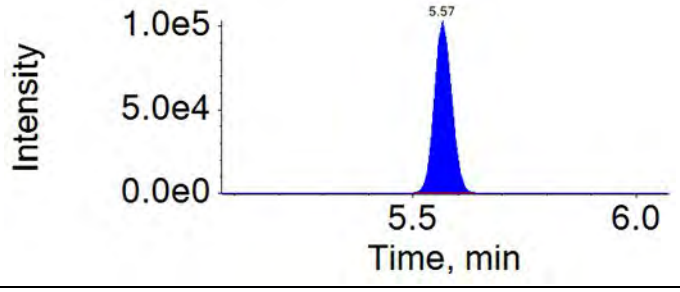
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

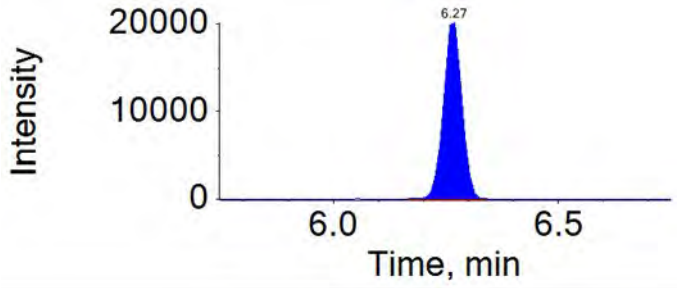
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

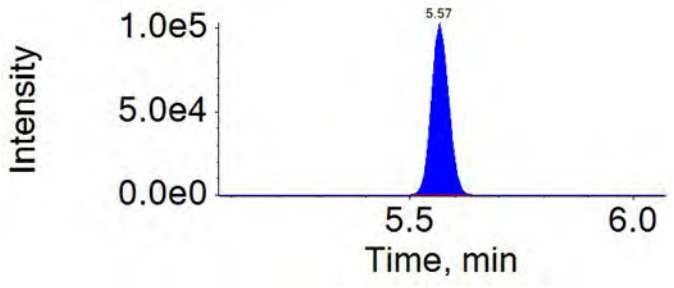
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



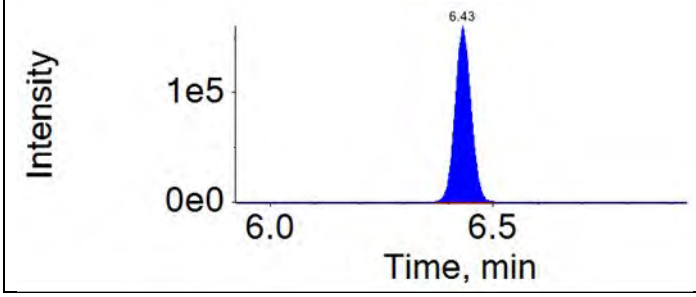


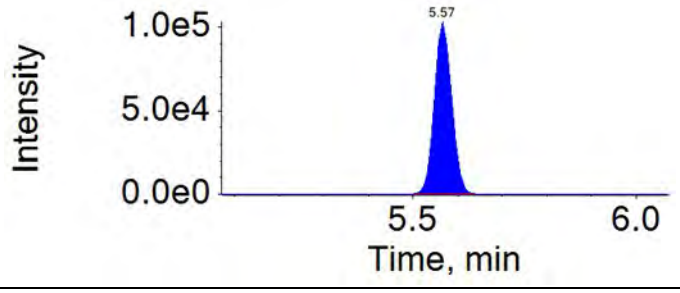
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



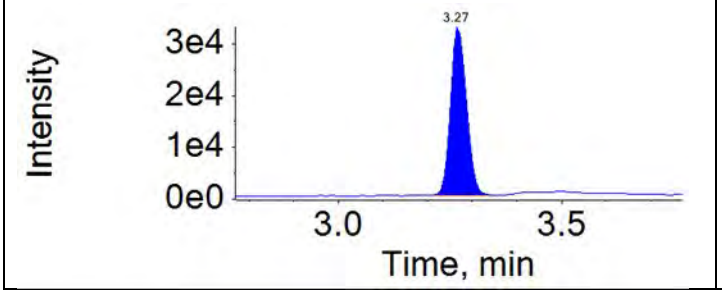


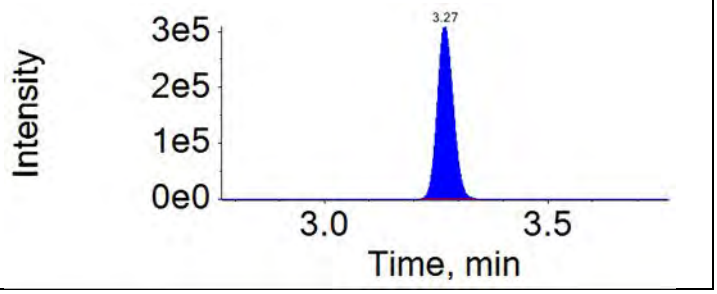
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

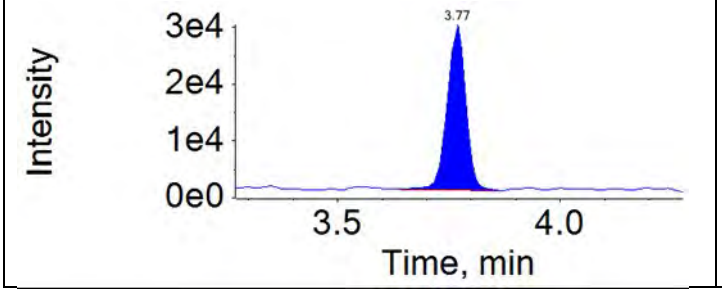
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

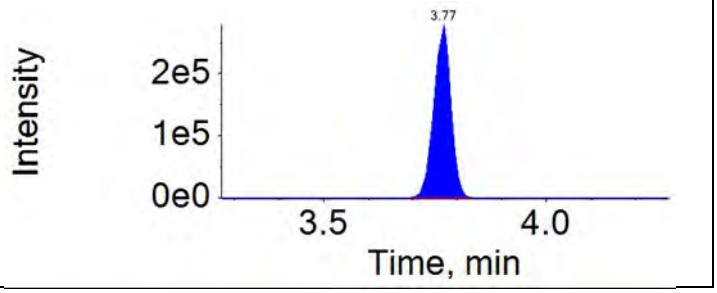
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



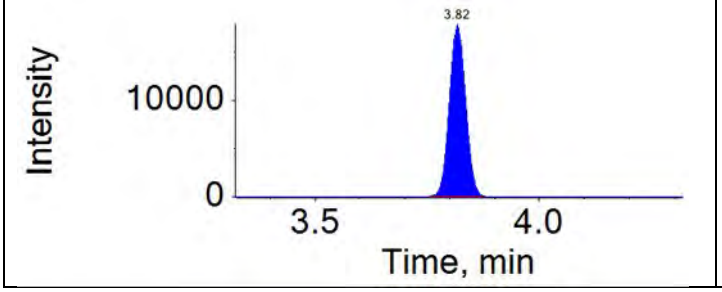


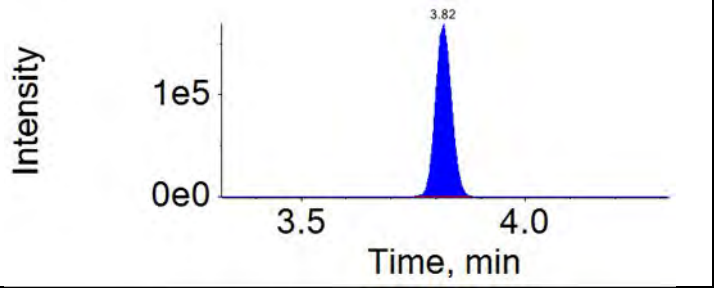
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



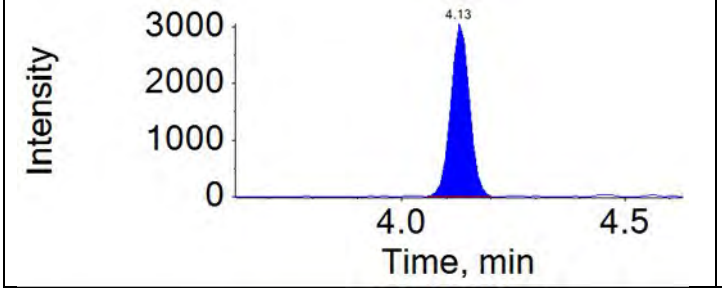


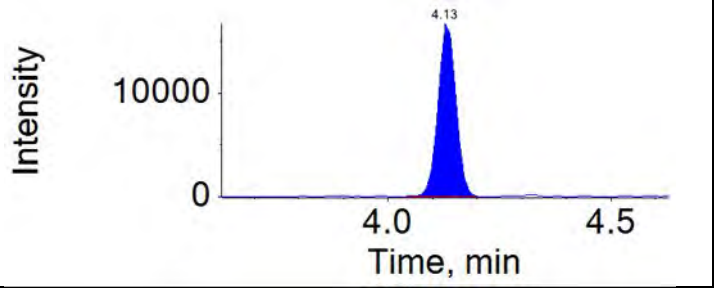
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



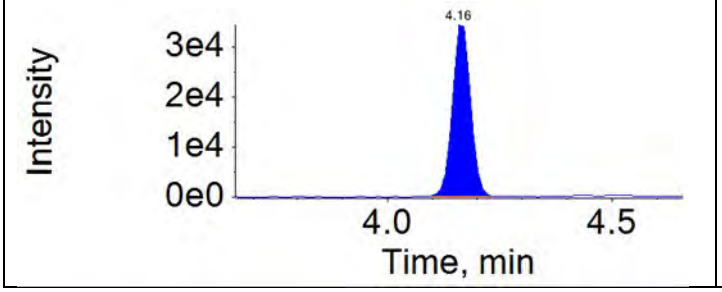


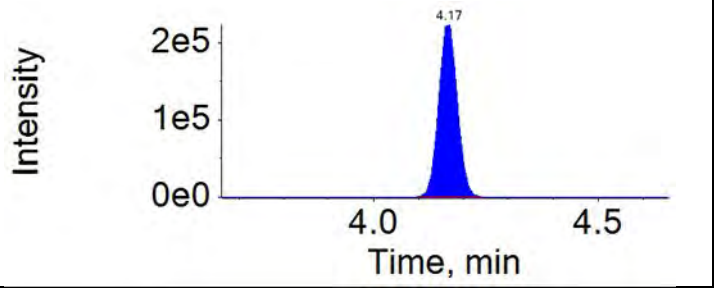
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

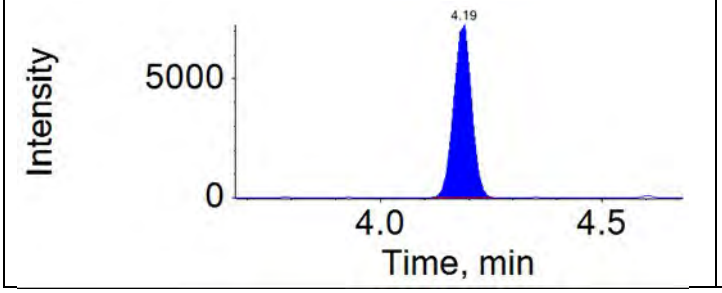
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

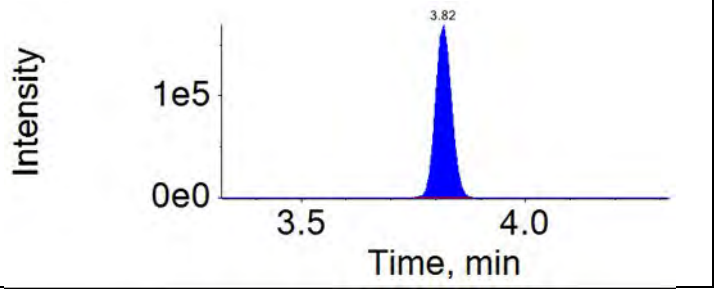
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



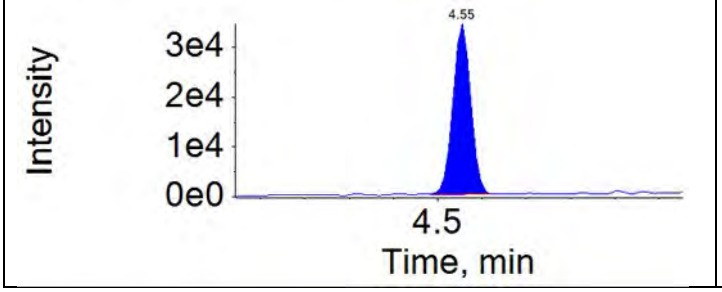


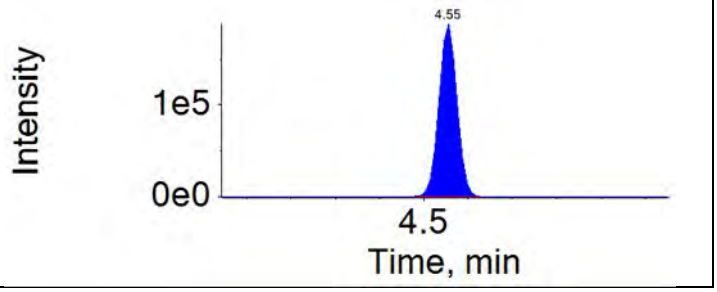
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



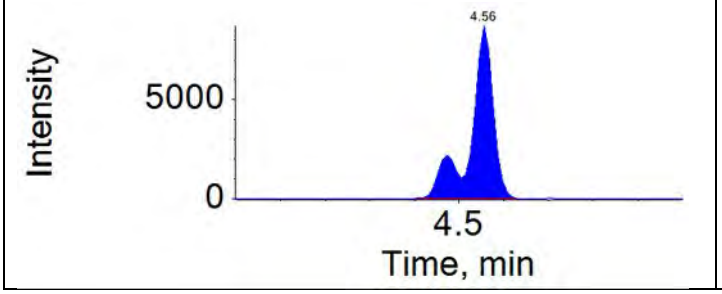


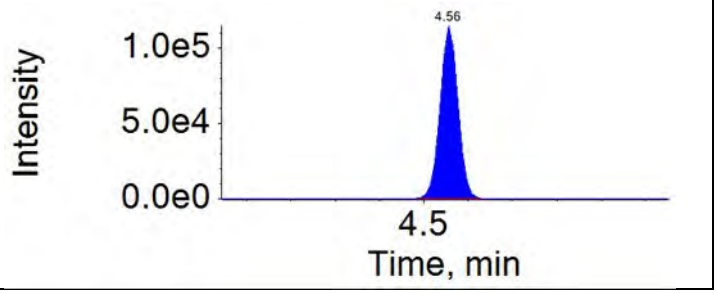
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



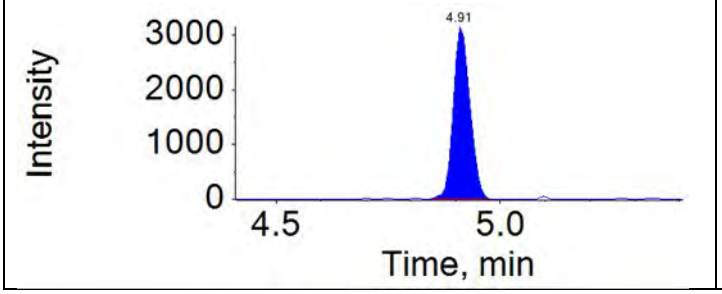


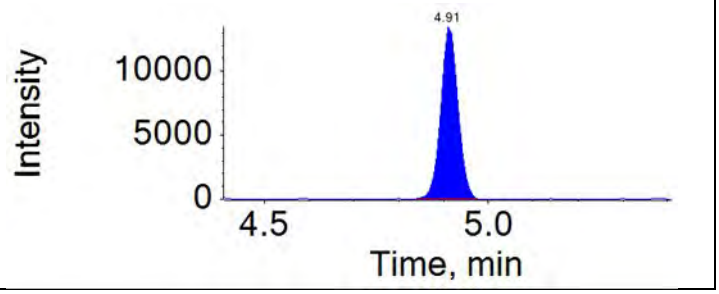
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

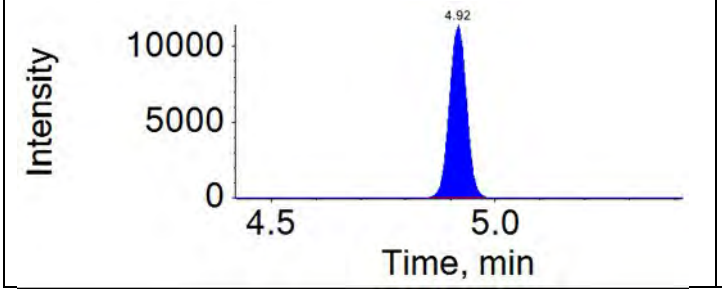
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

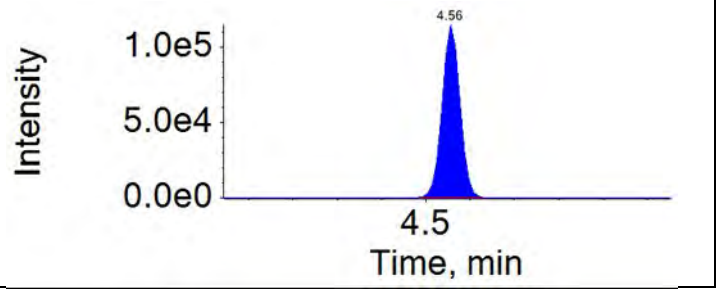
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



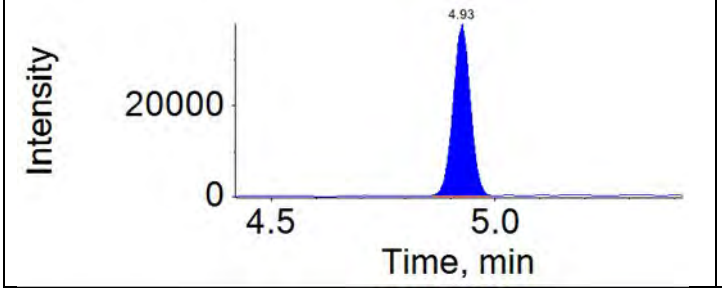


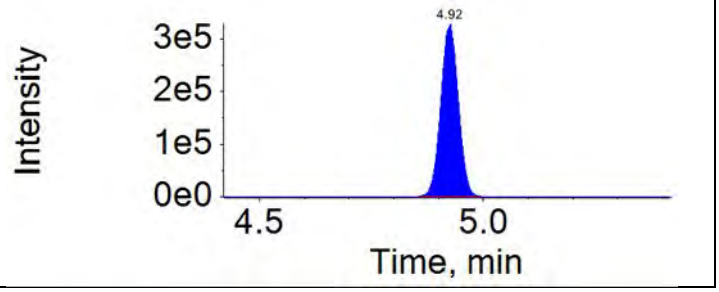
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



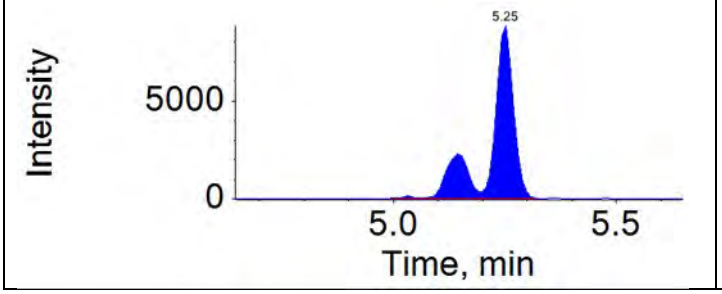


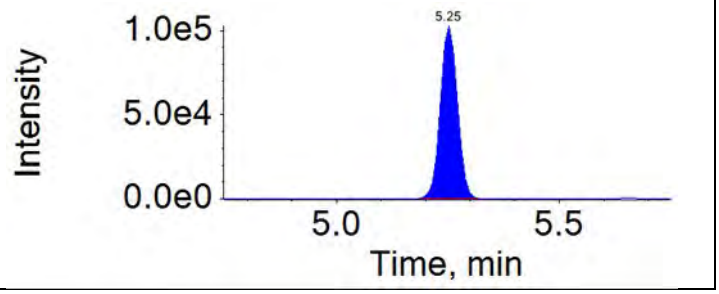
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





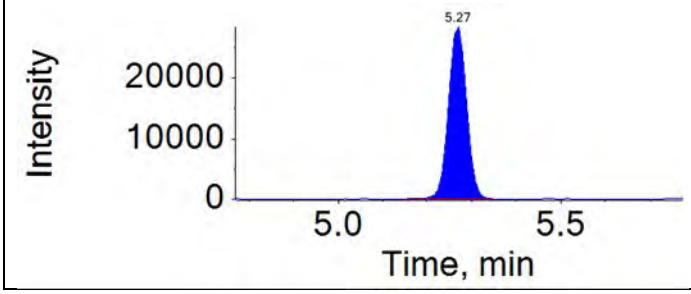
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

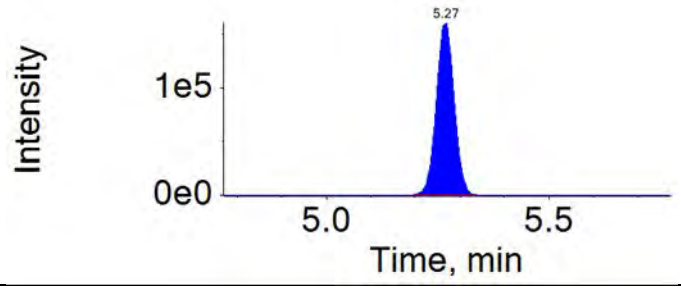




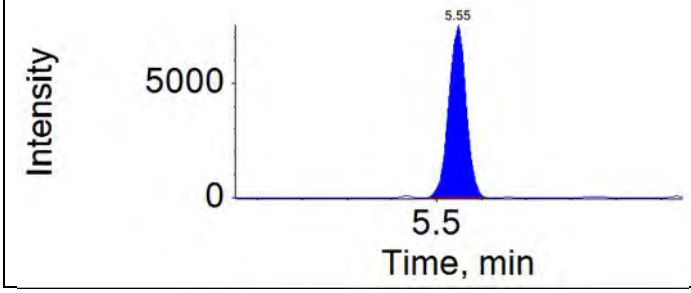
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

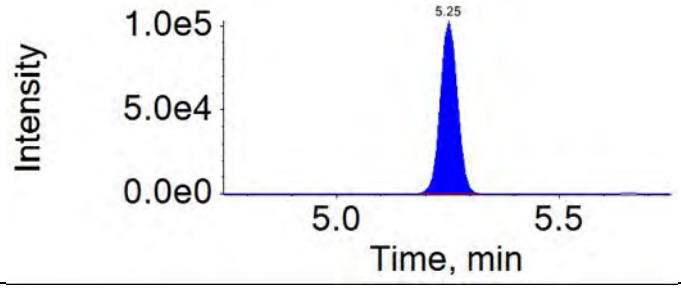
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



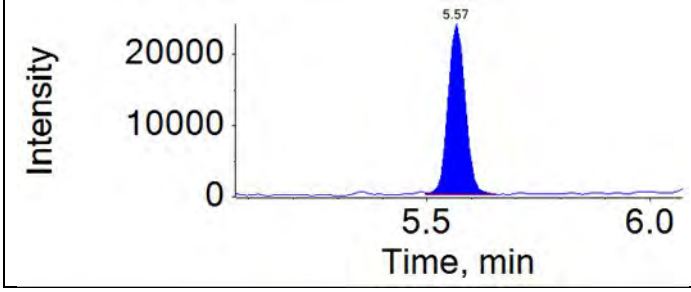


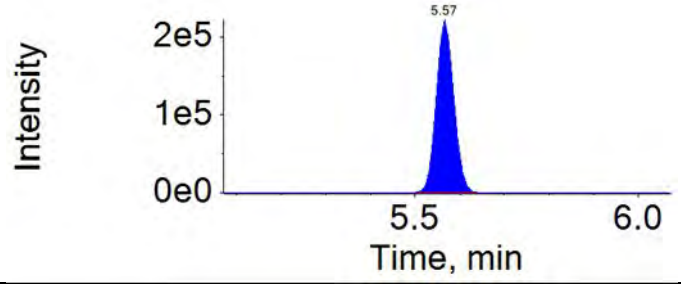
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



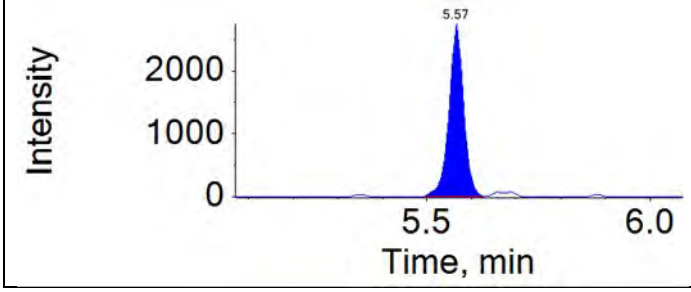


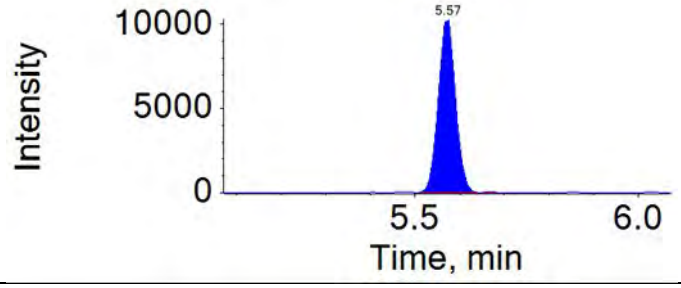
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



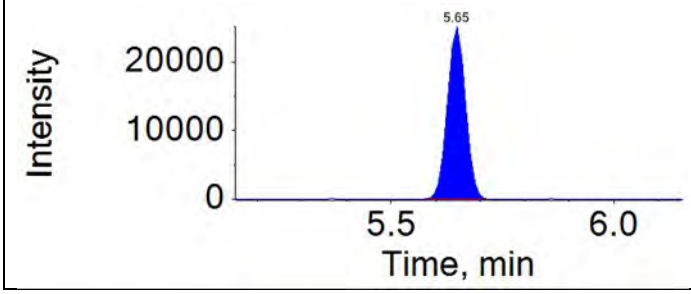


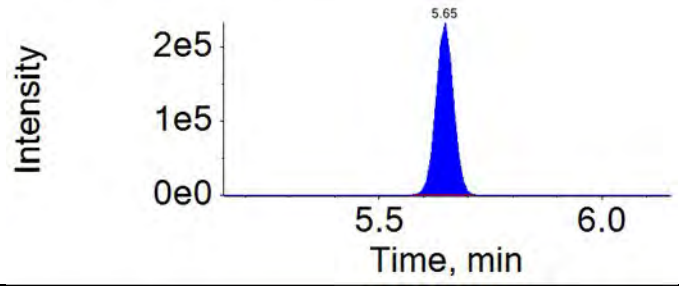
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

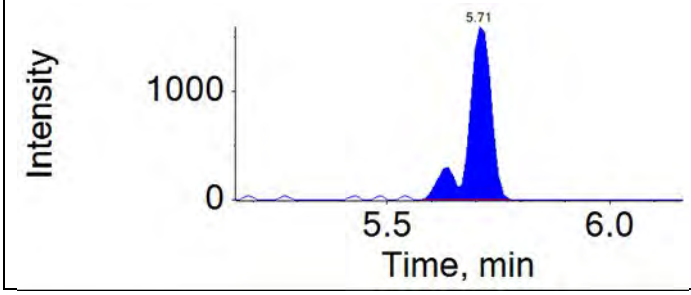
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

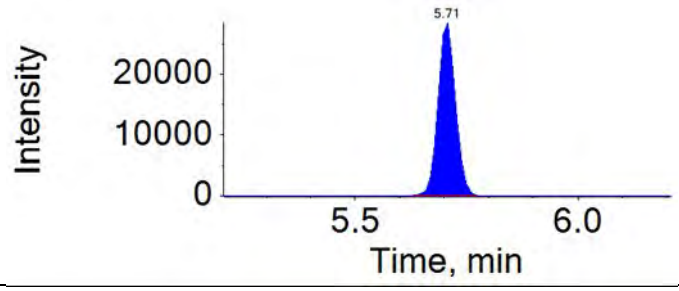
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



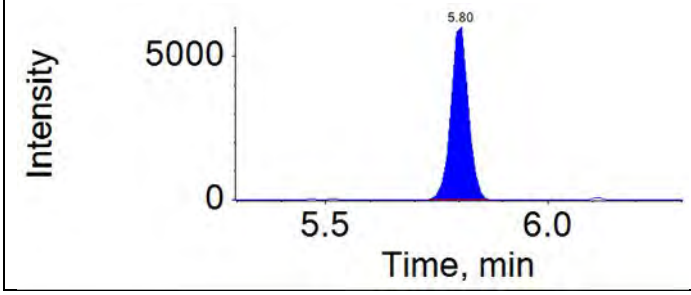


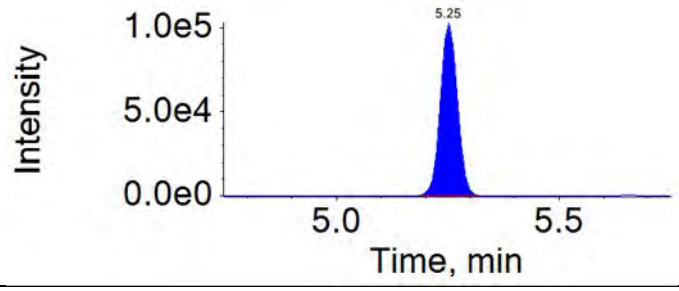
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



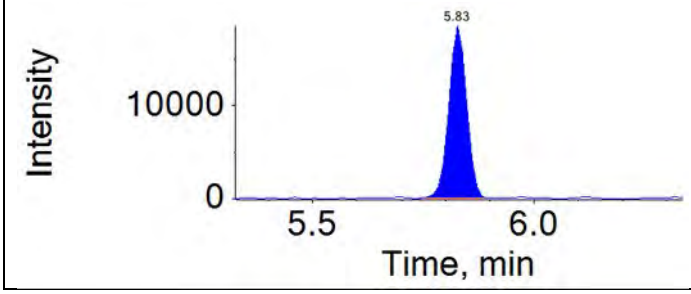


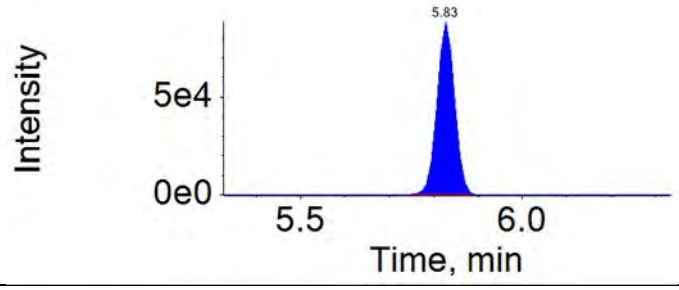
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

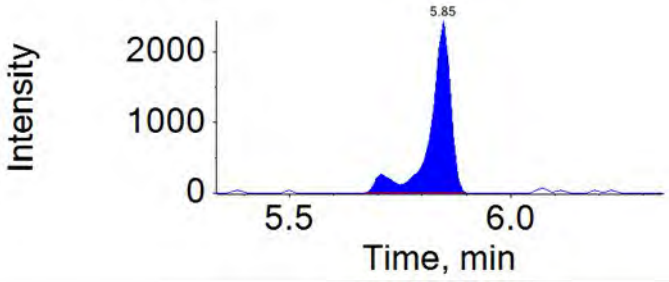
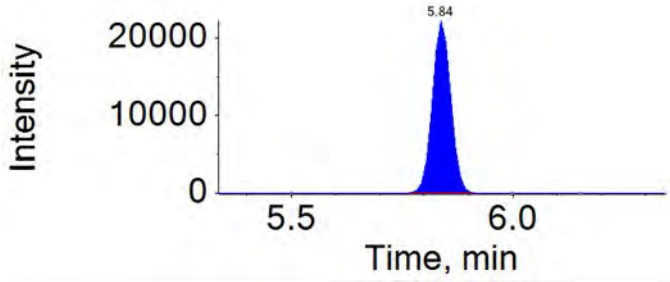


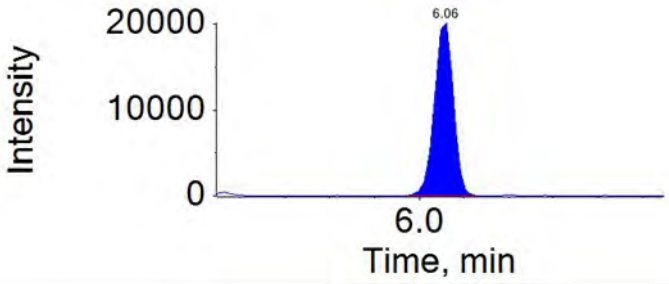
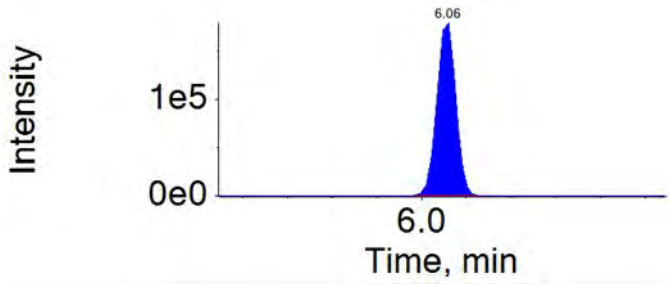


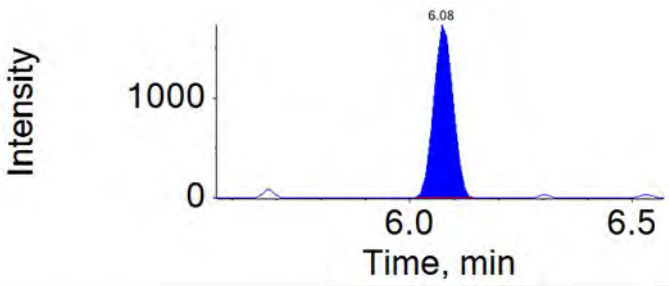
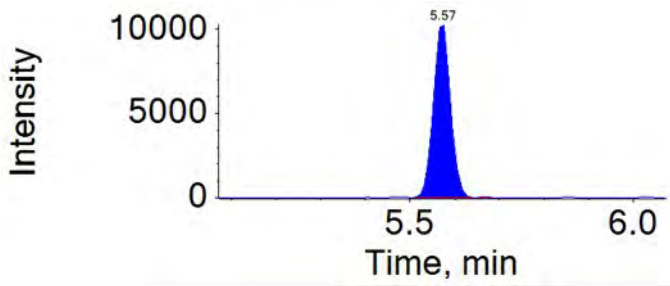
APPROVED
By MCD at 6:33 pm, 11/12/18

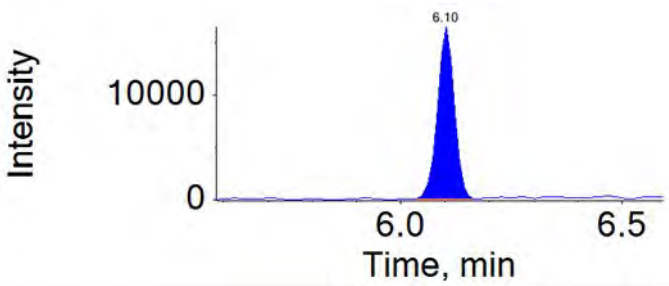
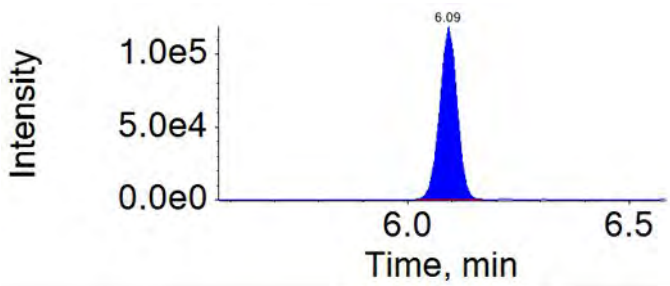
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

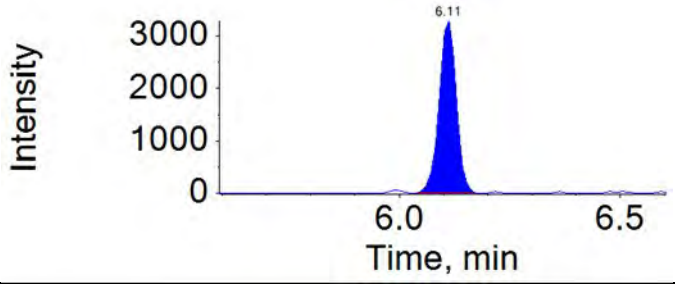
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

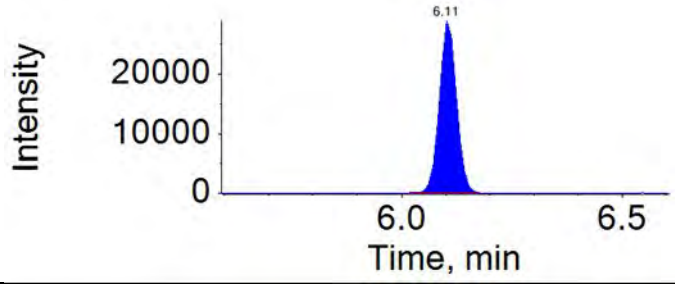
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

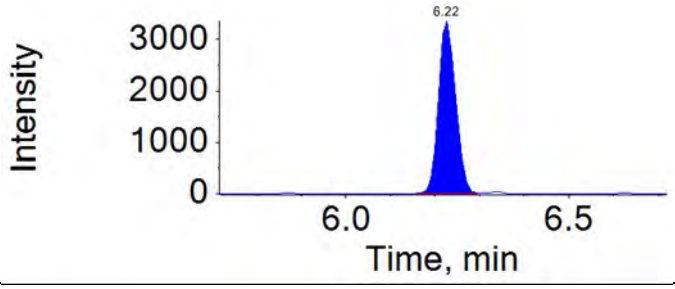
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

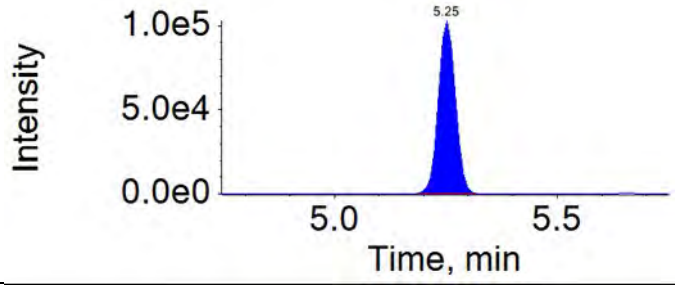
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



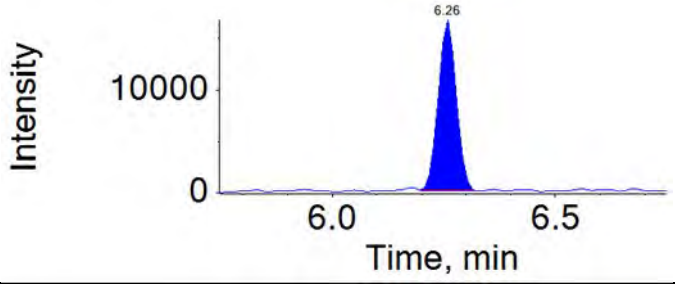


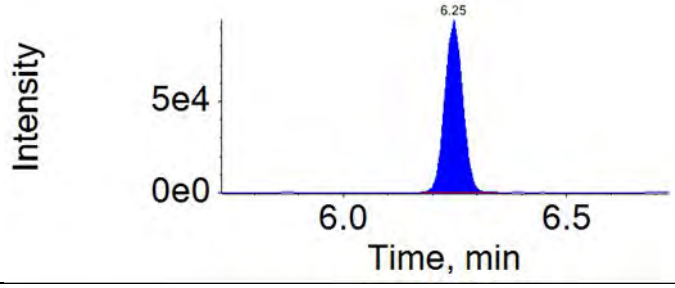
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



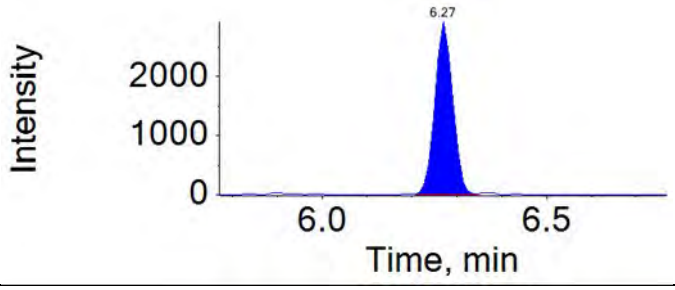


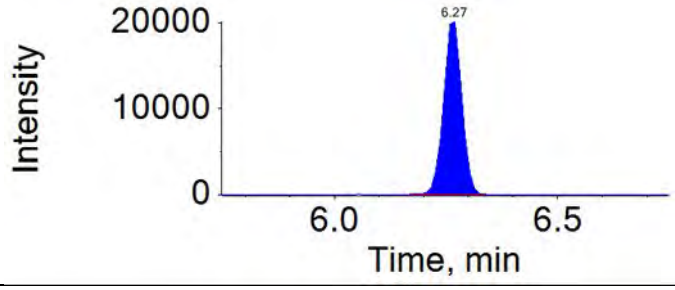
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

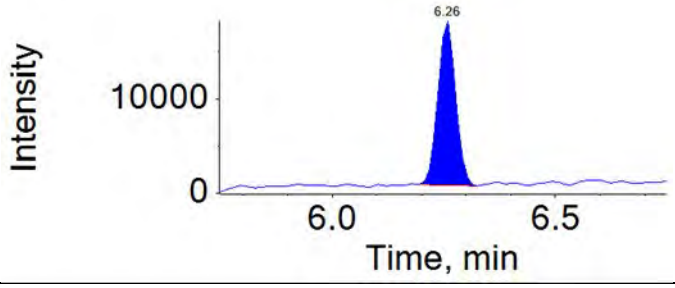
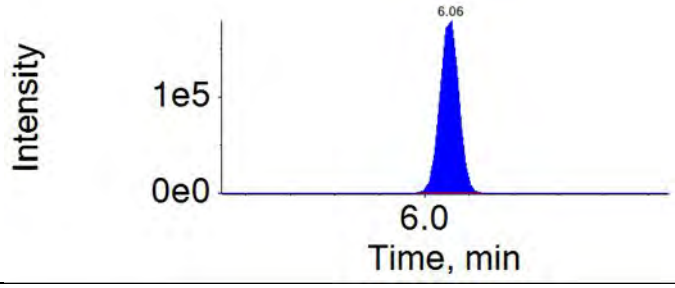


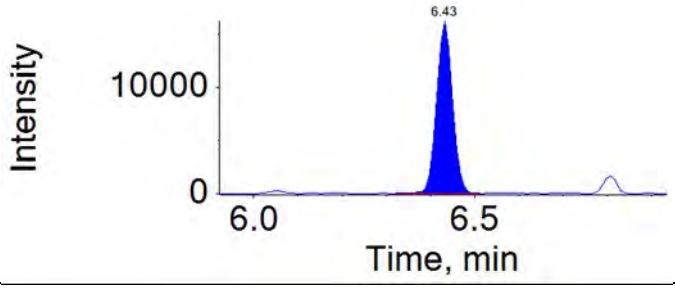
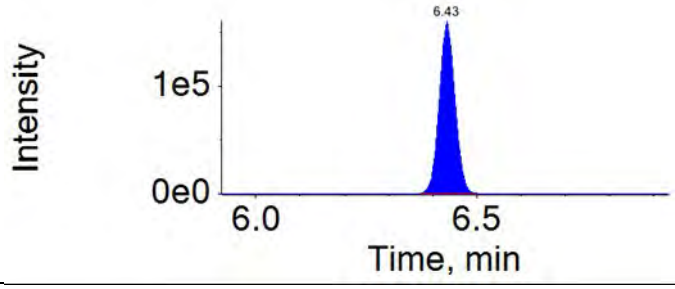


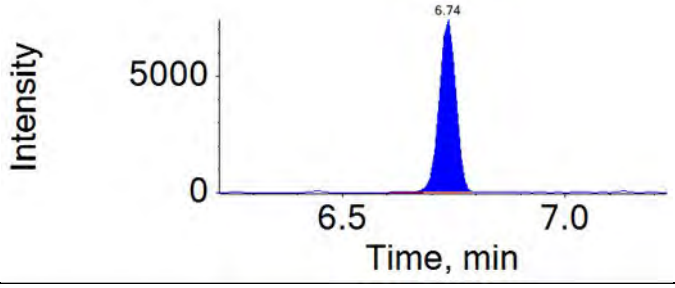
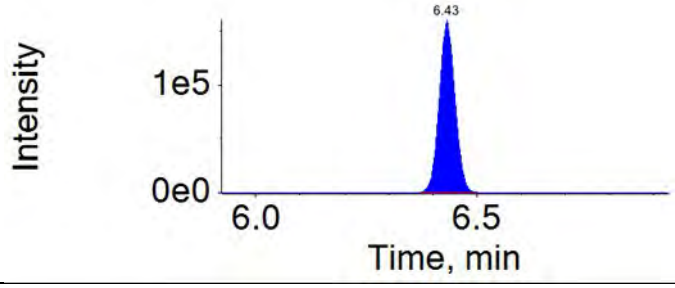
APPROVED
By MCD at 6:33 pm, 11/12/18

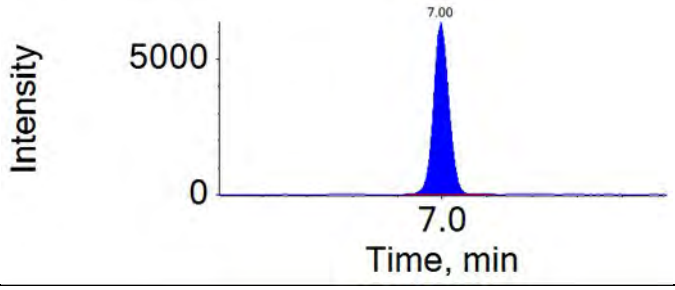
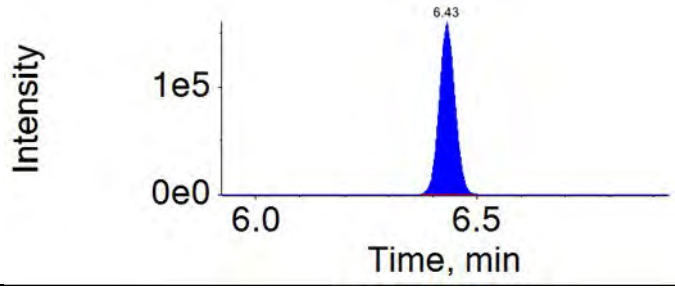
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

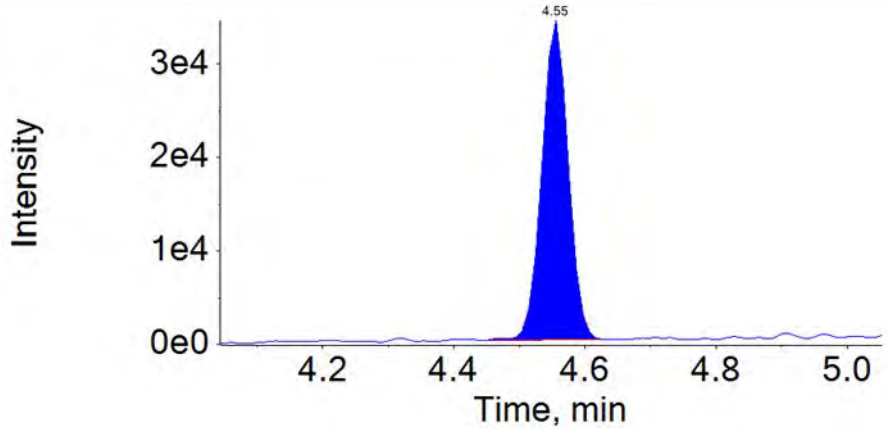
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

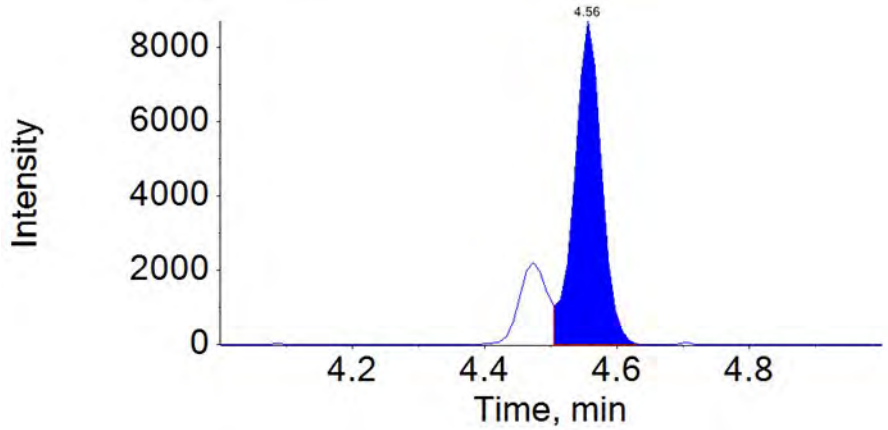
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA
RT (min.):
4.55
Peak Area:
95434.80
Mass Range:
363.0 / 319.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



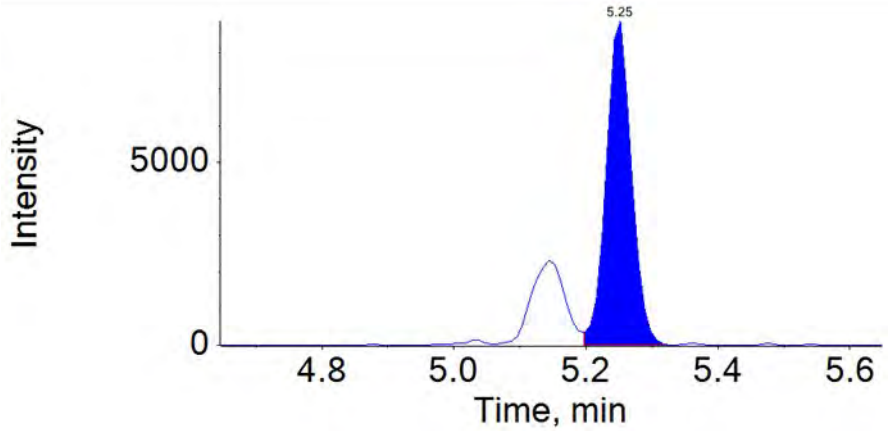
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
24710.47
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
23625.90
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



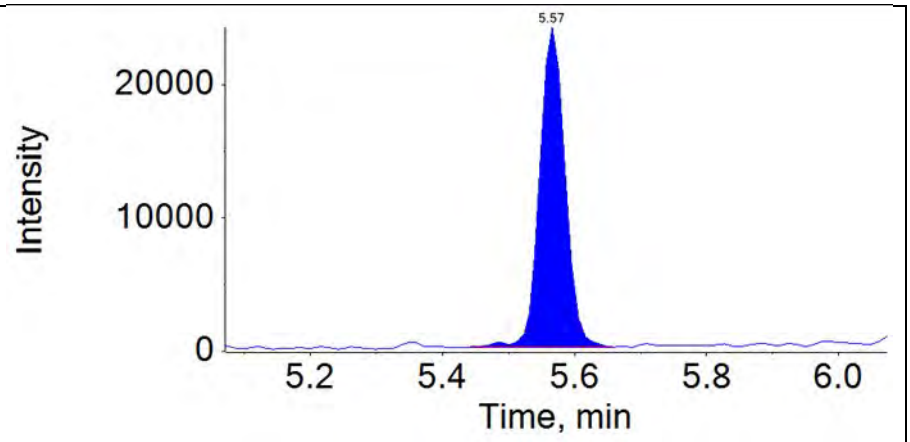
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

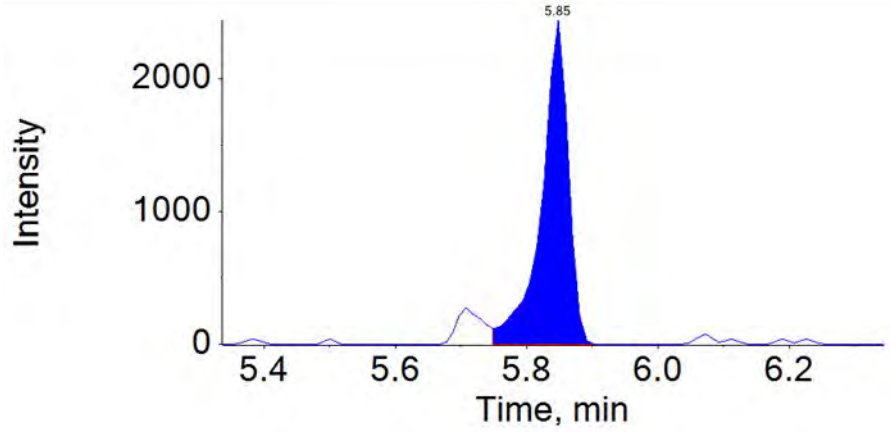
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDA
RT (min.):
5.57
Peak Area:
64555.75
Mass Range:
513.0 / 469.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



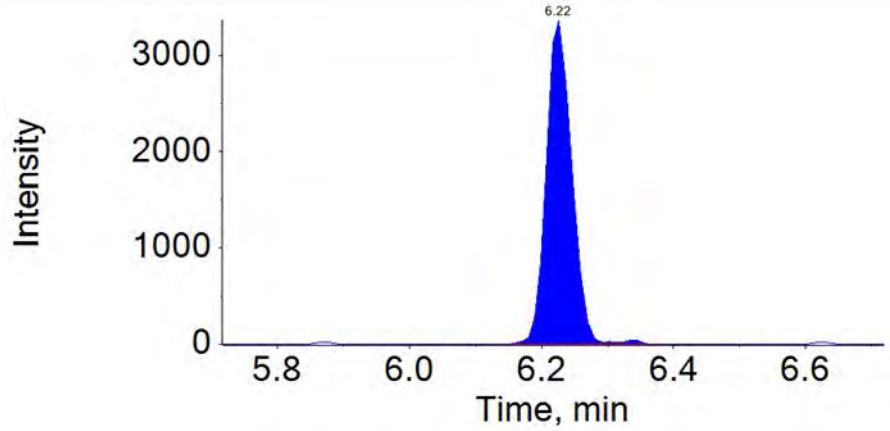
Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.85
Peak Area:
6972.11
Mass Range:
584.0 / 419.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFDoS
RT (min.):
6.22
Peak Area:
9104.97
Mass Range:
699.0 / 80.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2

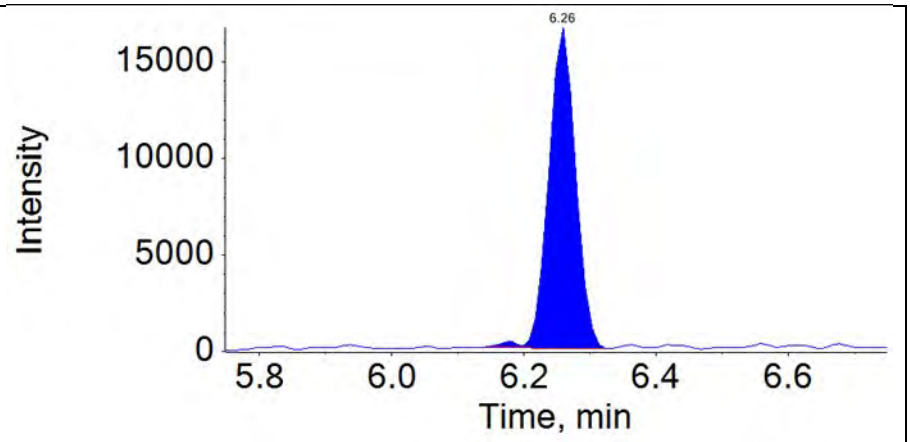


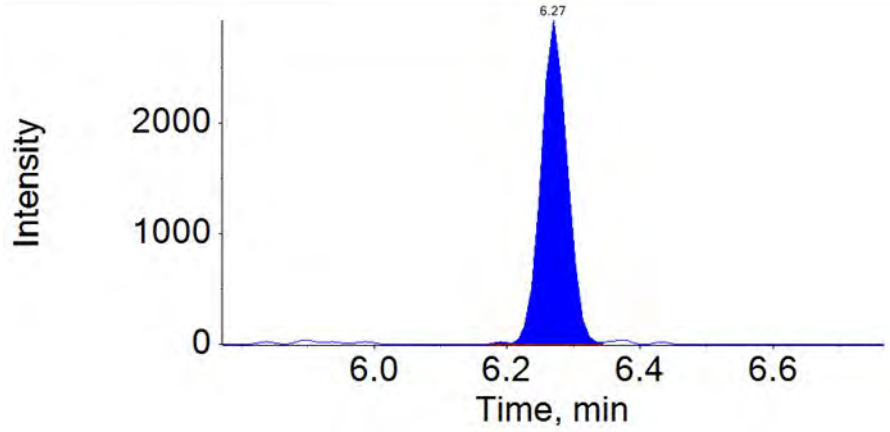
Integration Comment: incorrect integration

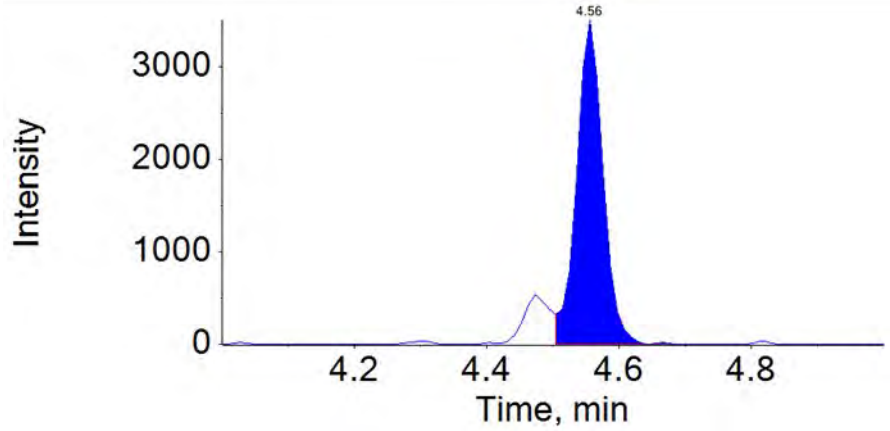
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtPFOSAE **RT (min.):** 6.26 **Peak Area:** 47267.14 **Mass Range:** 630.0 / 59.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

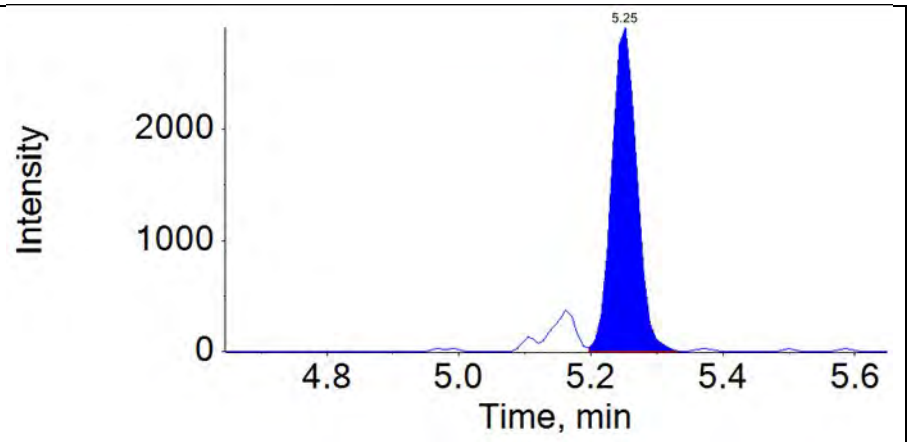
Component Name: NEtPFOSA **RT (min.):** 6.27 **Peak Area:** 8081.41 **Mass Range:** 526.0 / 169.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

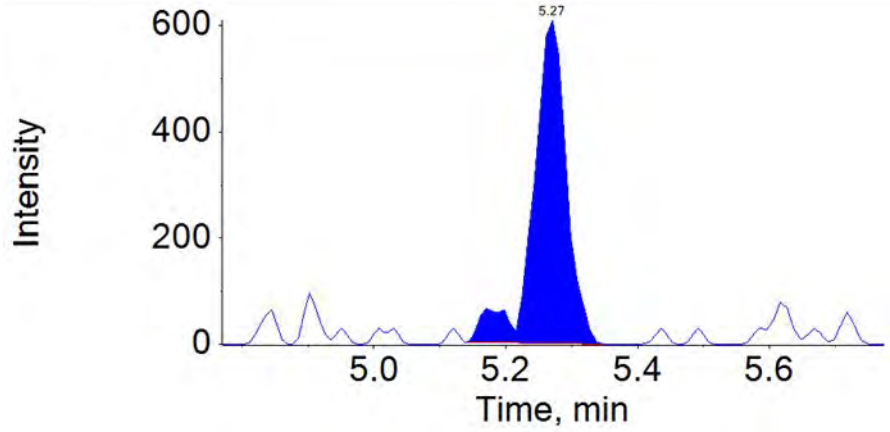
Component Name: PFHxS_2 **RT (min.):** 4.56 **Peak Area:** 9734.65 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

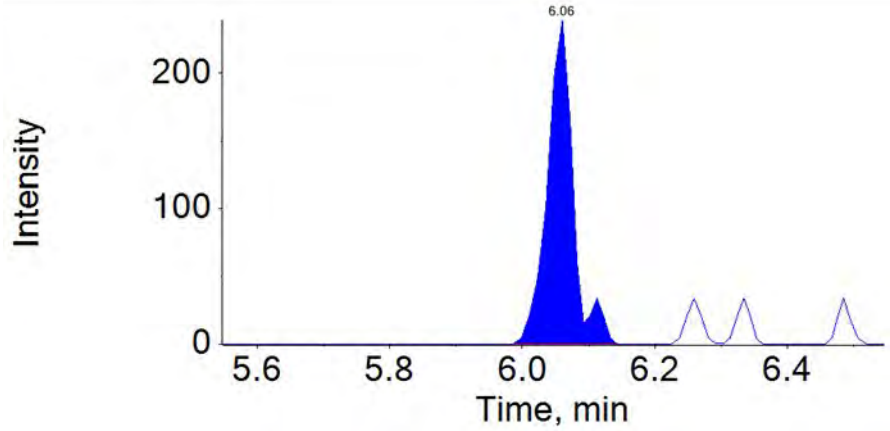
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOS_2 **RT (min.):** 5.25 **Peak Area:** 7692.11 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

Component Name: PFNA_2 **RT (min.):** 5.27 **Peak Area:** 2176.77 **Mass Range:** 463.0 / 169.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

Component Name: PFDoDA_2 **RT (min.):** 6.06 **Peak Area:** 655.49 **Mass Range:** 613.0 / 169.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

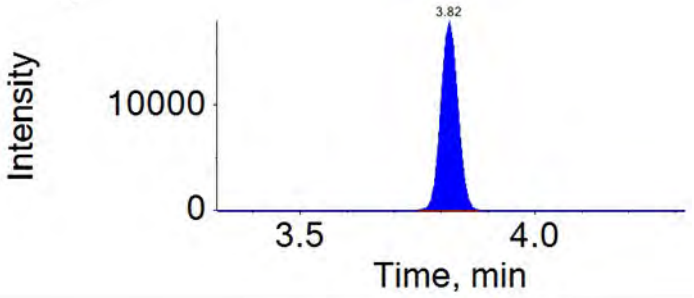
Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-43.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	44885.16	A	0.3619	0.3622			
PFBS_2	3.82	1.00	16259.22	A	0.3619	0.3622	0	50	
4:2-FTS	4.13	1.00	8803.96	A	0.6730	0.7006			
4:2 FTS_2	4.13	1.00	6168.18	A	0.6730	0.7006		#NA!	
PFHxA	4.16	1.00	96559.34	A	0.0117	0.0147			
PFHxA_2	4.16	1.00	1416.25	A	0.0117	0.0147	26	50	
PFPeS	4.19	1.10	20295.04	A	0.5191	0.5794			
PFPeS_2	4.18	1.10	11758.90	A	0.5191	0.5794	12	50	
PFHpA	4.55	1.00	95048.34	M	0.0563	0.0529			
PFHpA_2	4.55	1.00	5032.31	A	0.0563	0.0529	-6	50	
PFHxS	4.56	1.00	31064.73	M	0.3428	0.3595			
PFHxS_2	4.56	1.00	11169.02	M	0.3428	0.3595	5	50	
6:2-FTS	4.91	1.00	8048.37	A	0.6604	0.6742			
6:2 FTS_2	4.91	1.00	5425.84	A	0.6604	0.6742		#NA!	
PFHpS	4.92	1.08	29902.32	A	0.4066	0.4437			
PFHpS_2	4.92	1.08	13266.19	A	0.4066	0.4437	9	50	
PFOA	4.93	1.00	100710.53	A	0.0562	0.0523			
PFOA_2	4.92	1.00	5264.55	A	0.0562	0.0523	-7	50	
PFOS	5.25	1.00	32300.98	M	0.2968	0.2722			
PFOS_2	5.25	1.00	8793.88	M	0.2968	0.2722	-8	50	
PFNA	5.27	1.00	80724.19	A	0.0229	0.0248			
PFNA_2	5.27	1.00	1999.67	M	0.0229	0.0248	8	50	
PFNS	5.55	1.06	20326.14	A	0.4828	0.4548			
PFNS_2	5.54	1.06	9243.39	A	0.4828	0.4548	-6	50	
PFDA	5.57	1.00	63802.06	M	0.0081	0.0067			
PFDA_2	5.56	1.00	427.00	A	0.0081	0.0067	-17	50	
8:2-FTS	5.57	1.00	6214.24	A	0.6814	0.7964			
8:2 FTS_2	5.57	1.00	4949.26	A	0.6814	0.7964		#NA!	
NMeFOSAA	5.71	1.00	5759.59	A	0.2569	0.2344			
NMeFOSAA_2	5.70	1.00	1350.22	A	0.2569	0.2344	-9	50	
PFDS	5.80	1.10	16291.91	A	0.5144	0.5360			
PFDS_2	5.80	1.11	8732.52	A	0.5144	0.5360	4	50	
PFUnDA	5.83	1.00	51206.76	A	0.0058	0.0013			
PFUnDA_2	5.87	1.01	64.88	A	0.0058	0.0013	-78	50	OOS
NEtFOSAA	5.85	1.00	7727.12	M	0.7253	0.7329			
NEtFOSAA_2	5.84	1.00	5663.34	A	0.7253	0.7329	1	50	
PFDoDA	6.06	1.00	59695.25	A	0.0157	0.0101			
PFDoDA_2	6.06	1.00	604.13	M	0.0157	0.0101	-35	50	
10:2-FTS	6.08	1.09	5206.47	A	0.6356	0.6377			
10:2 FTS_2	6.07	1.09	3320.12	A	0.6356	0.6377		#NA!	
PFTrDA	6.26	1.03	47991.31	A	0.0086	0.0047			
PFTrDA_2	6.26	1.03	226.86	A	0.0086	0.0047	-45	50	
PFTeDA	6.43	1.00	40236.53	A	0.0062	0.0078			
PFTeDA_2	6.43	1.00	314.50	A	0.0062	0.0078	25	50	
PFHxDA	6.74	1.05	19006.44	A	0.0683	0.0747			
PFHxDA_2	6.73	1.05	1419.64	A	0.0683	0.0747	9	50	
PFODA	7.00	1.09	14955.56	A	0.0277	0.0314			
PFODA_2	7.00	1.09	469.81	A	0.0277	0.0314	13	50	

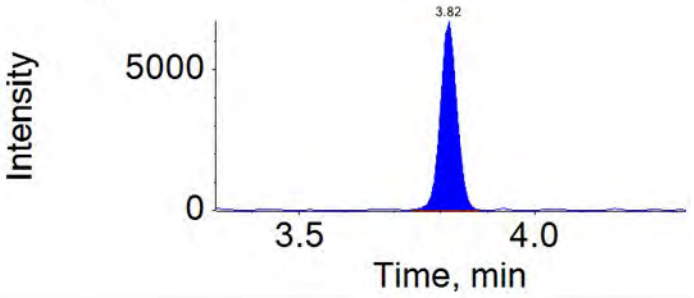
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

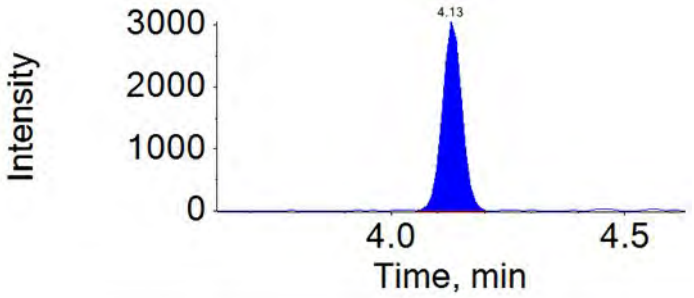
Component: PFBS
Primary Mass: 299.0 / 80.0



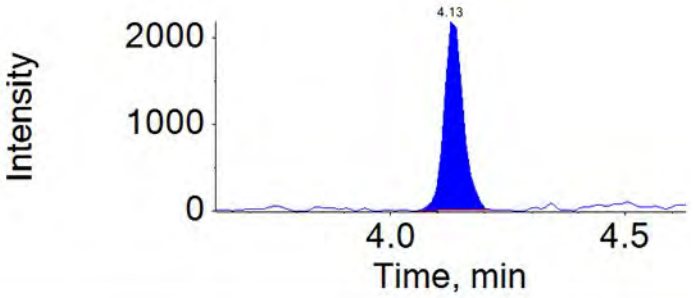
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



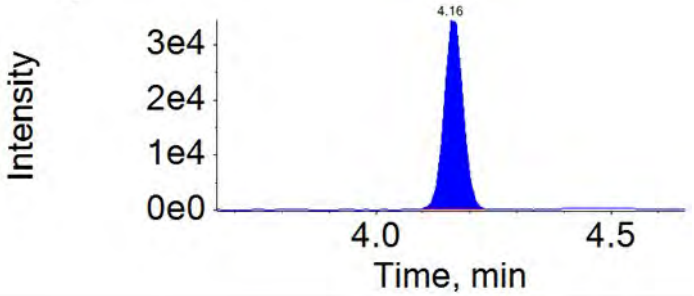
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



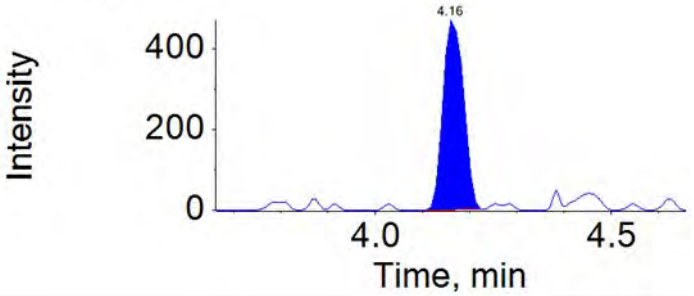
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



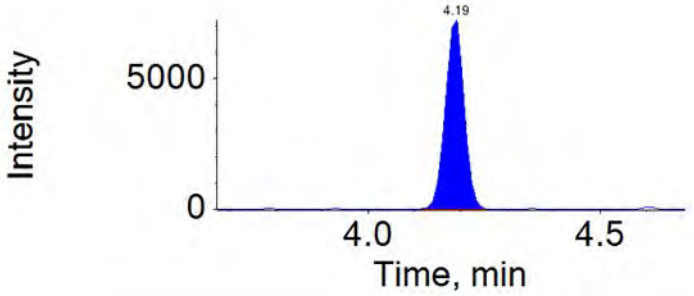
Component: PFHxA
Primary Mass: 313.0 / 269.0



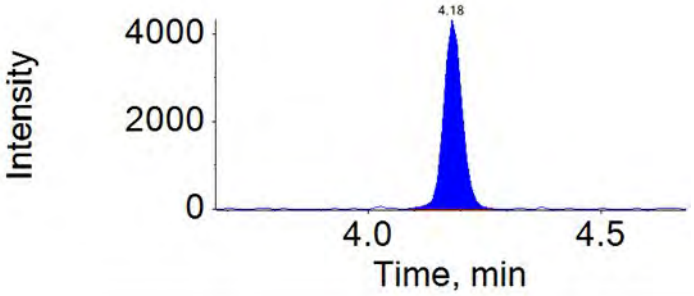
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



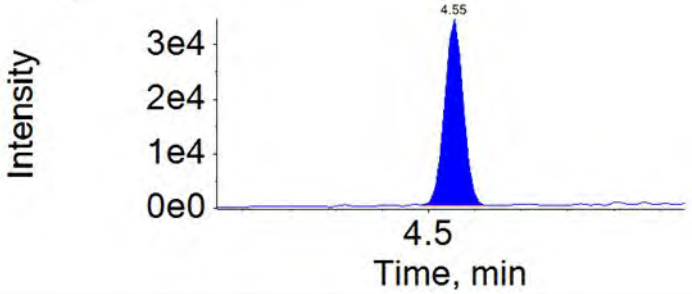
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



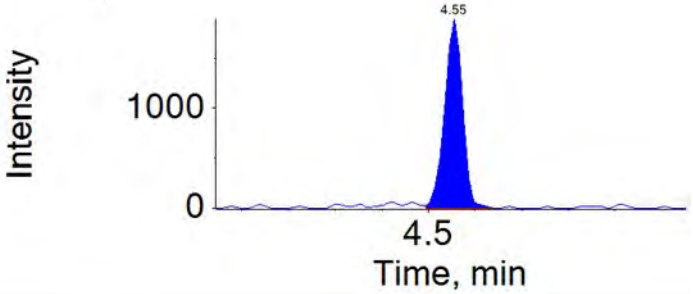
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

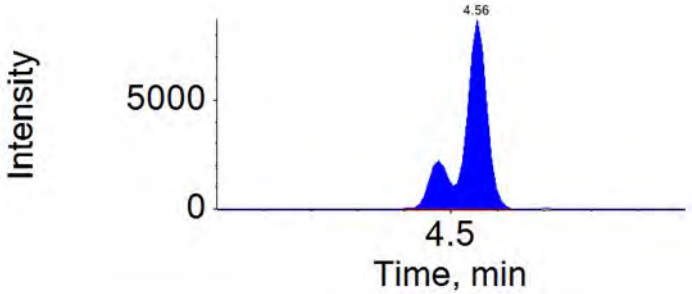
Component: PFHpA
Primary Mass: 363.0 / 319.0



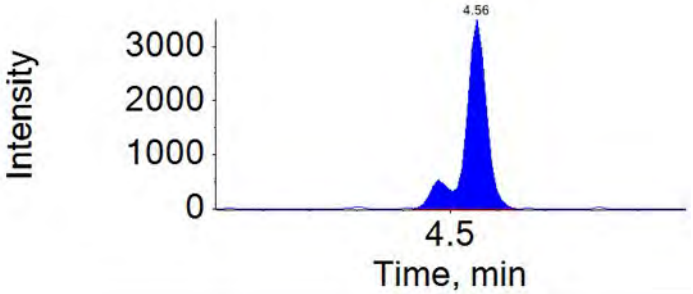
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



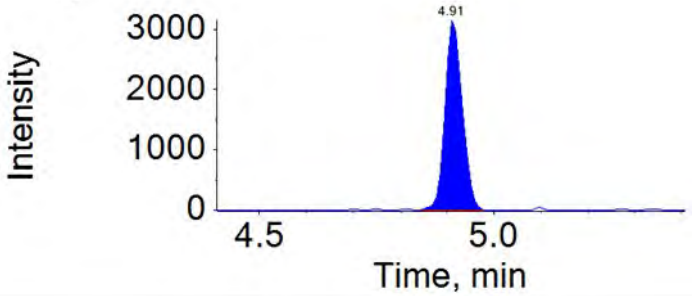
Component: PFHxS
Primary Mass: 399.0 / 80.0



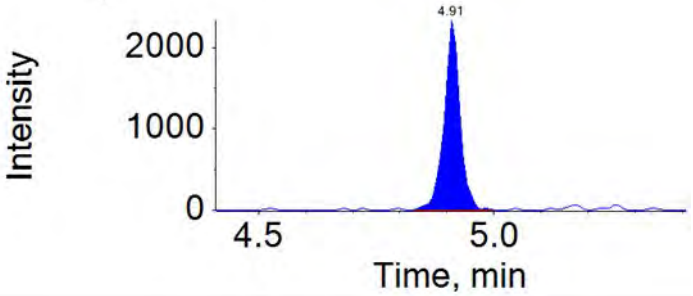
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



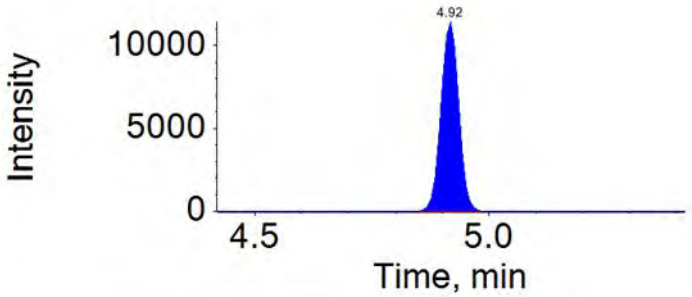
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



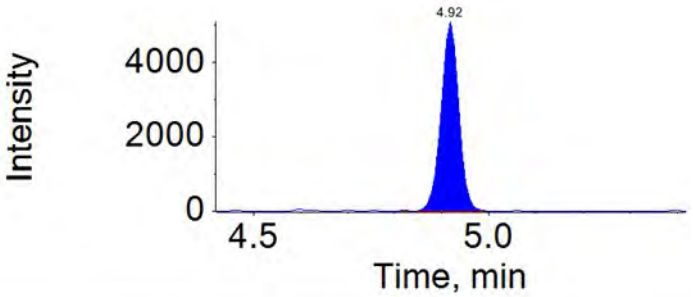
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



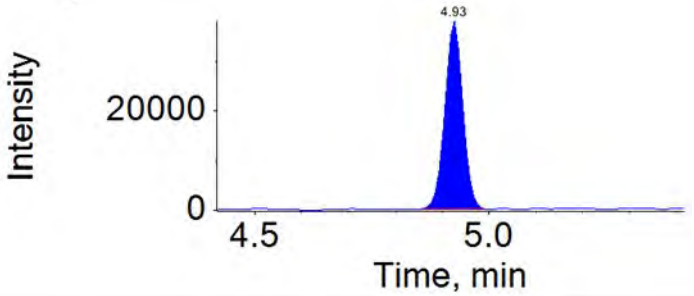
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



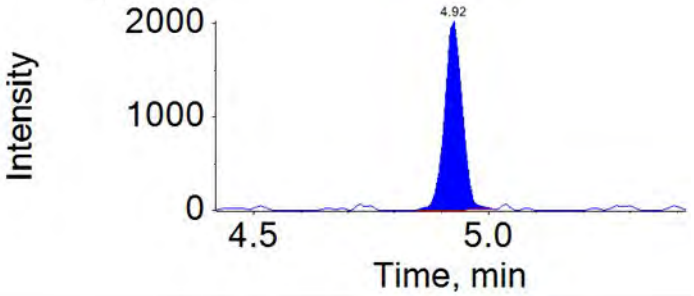
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

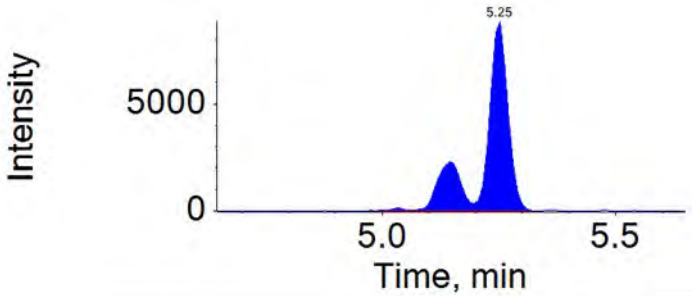
Component: PFOA
Primary Mass: 413.0 / 369.0



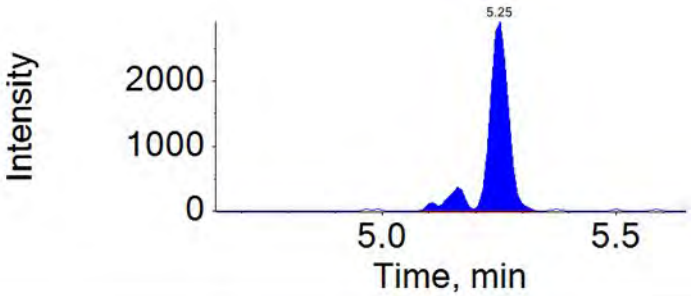
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



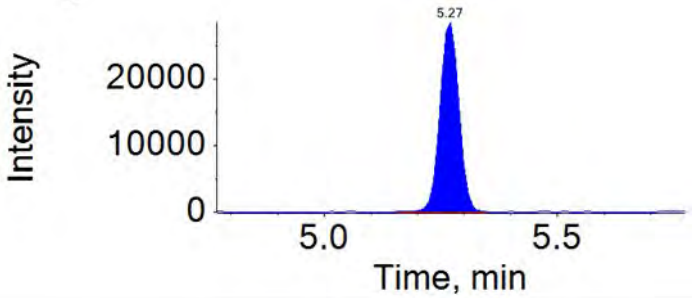
Component: PFOS
Primary Mass: 499.0 / 80.0



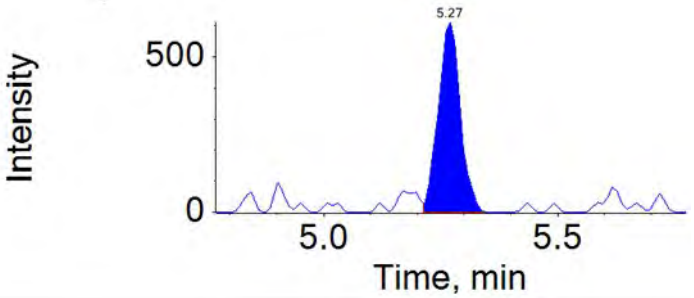
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



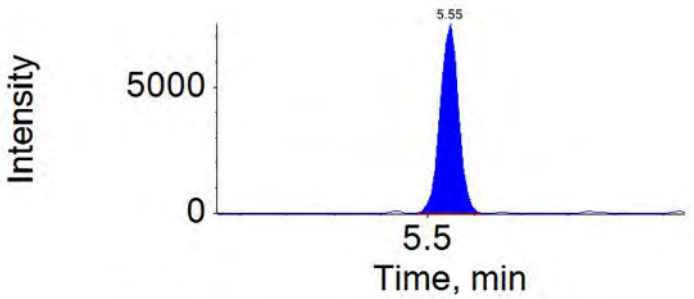
Component: PFNA
Primary Mass: 463.0 / 419.0



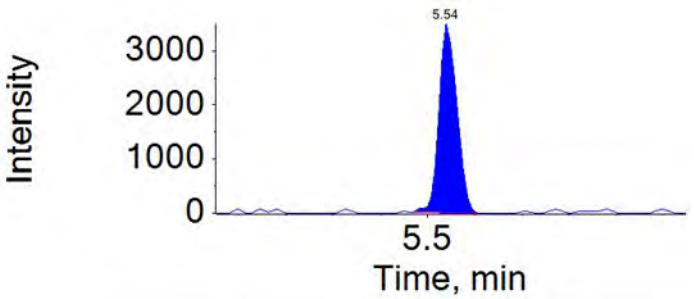
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



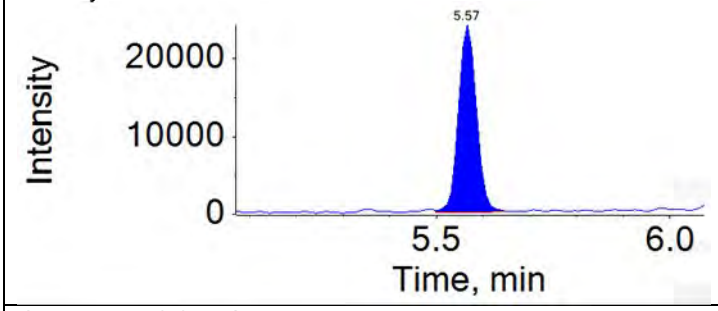
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



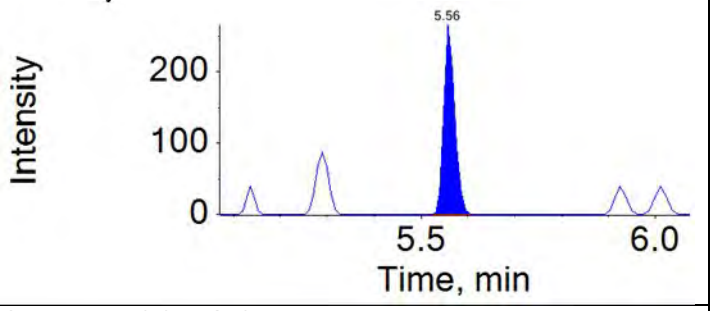
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

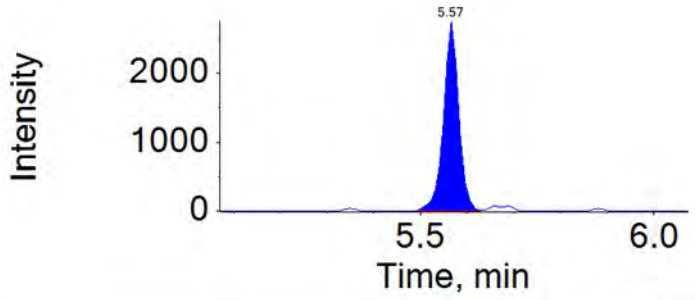
Component: PFDA
Primary Mass: 513.0 / 469.0



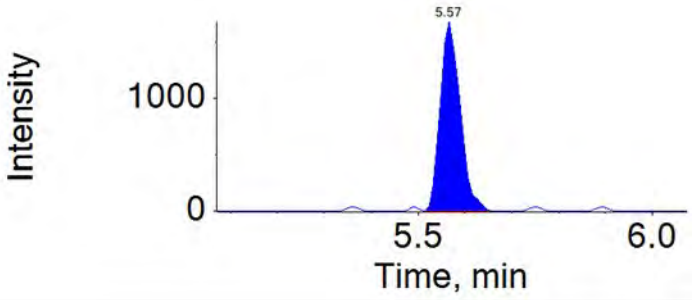
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



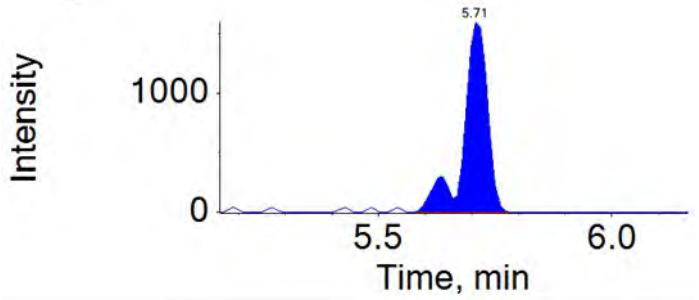
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



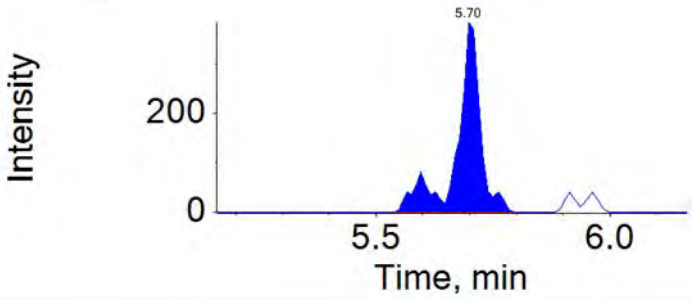
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



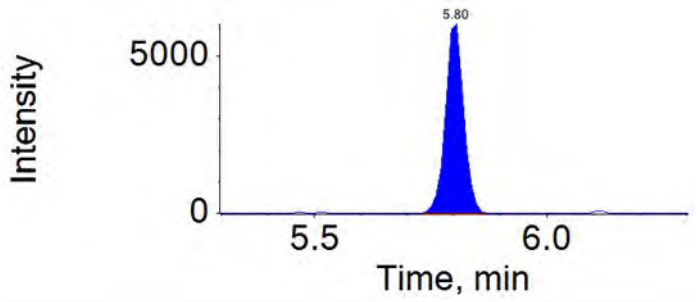
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



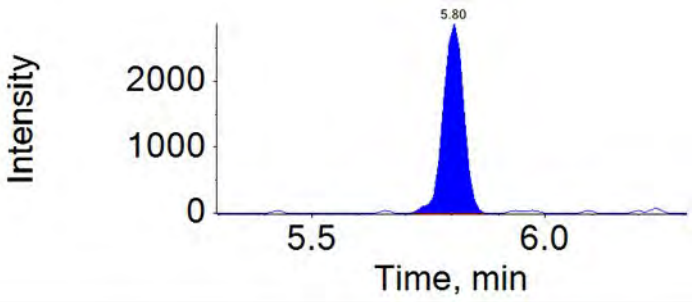
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



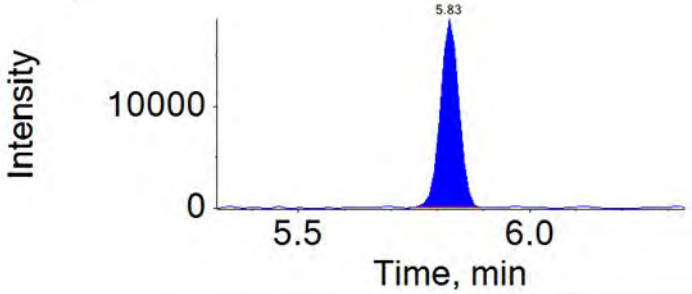
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



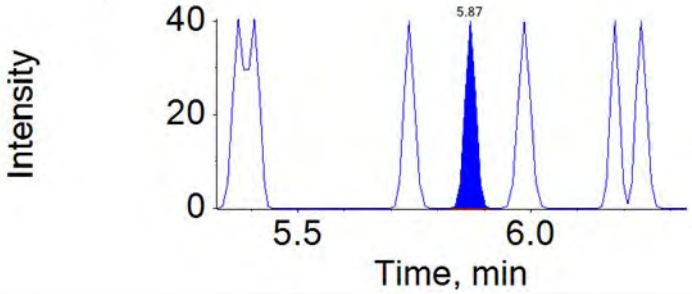
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

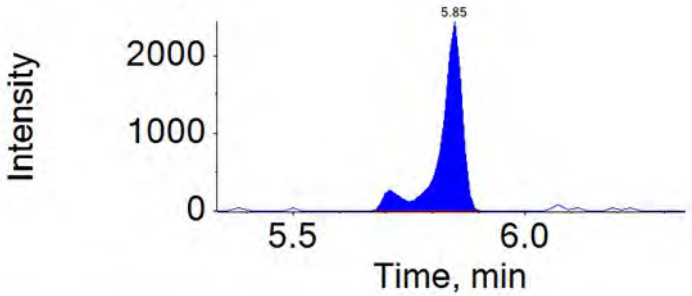
Component: PFUnDA
Primary Mass: 563.0 / 519.0



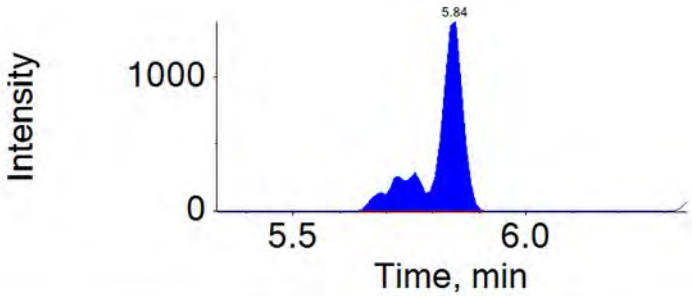
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



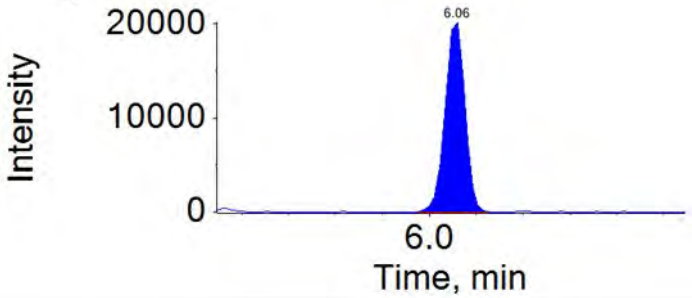
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



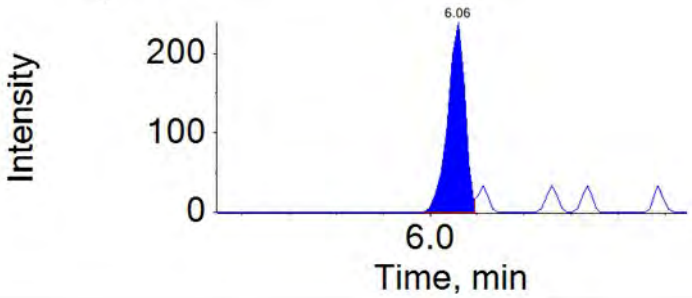
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



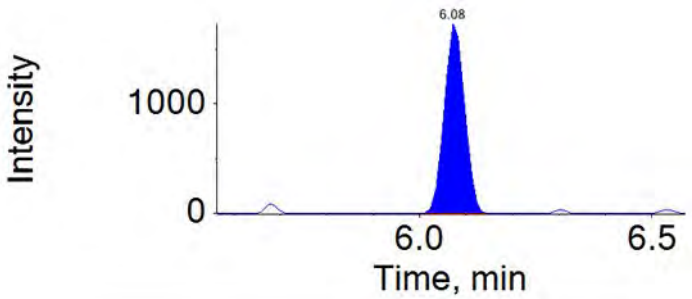
Component: PFDoDA
Primary Mass: 613.0 / 569.0



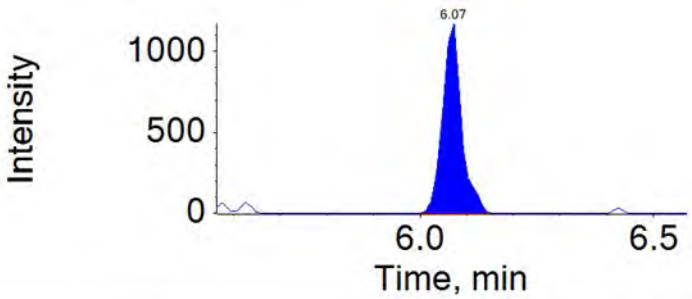
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



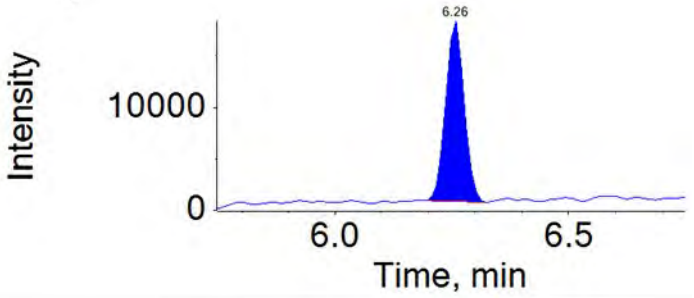
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



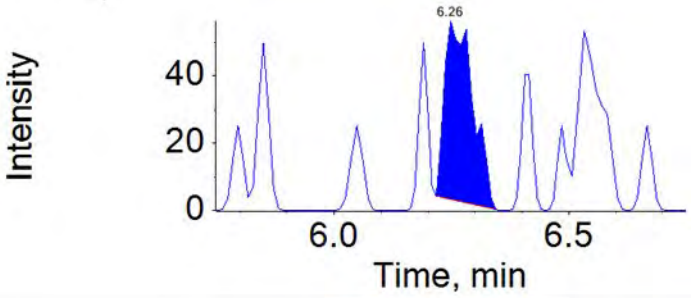
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

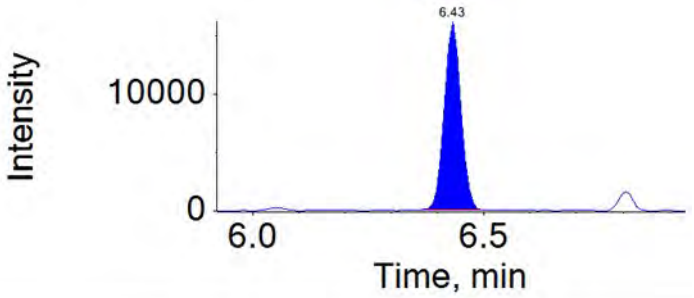
Component: PFTrDA
Primary Mass: 663.0 / 619.0



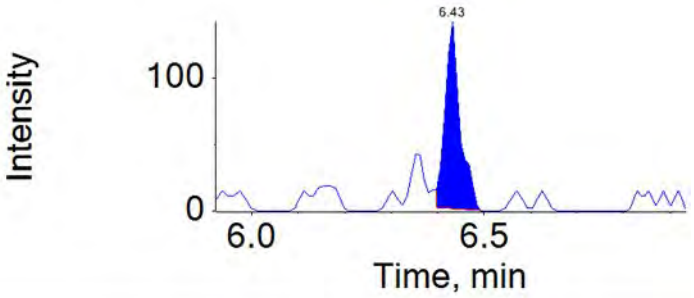
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



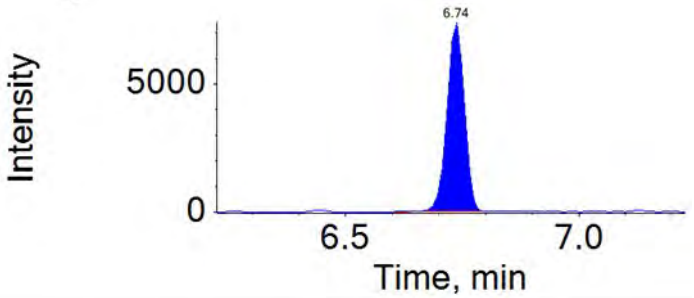
Component: PFTeDA
Primary Mass: 713.0 / 669.0



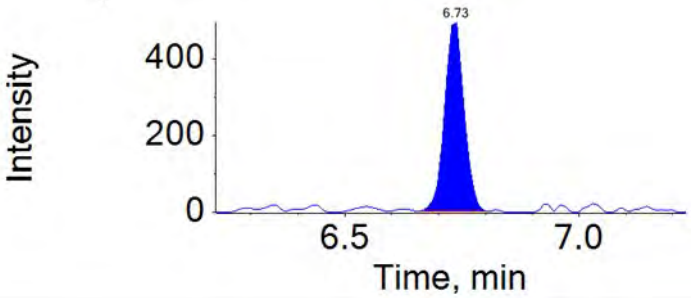
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



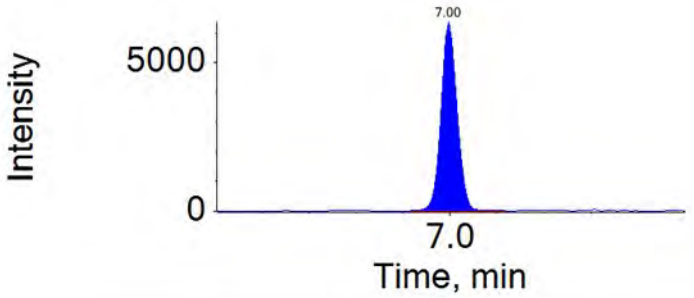
Component: PFHxDA
Primary Mass: 813.0 / 769.0



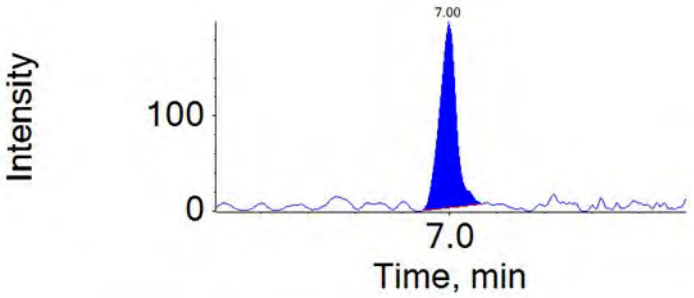
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL3			**Data File:**		18NOV12DCAL-44.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-12T15:24:03
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	659926.2	659926.2	0	50	
13C2-PFOA	5.0	450219.7	450219.7	0	50	
13C4-PFOS	4.8	249205.8	249205.8	0	50	
13C2-PFDA	5.0	278743.9	278743.9	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	733360.2	13C3-PFBA	659926.2	1.111	5.000	4.982	100	70-130	
E13C5-PFPeA	695805.7	13C3-PFBA	659926.2	1.054	5.000	4.729	95	70-130	
E13C3-PFBS	416352.8	13C3-PFBA	659926.2	0.631	4.650	4.454	96	70-130	
E13C2-4:2-FTS	47514.8	13C2-PFOA	450219.7	0.106	4.670	4.700	101	70-130	
E13C5-PFHxA	646783.5	13C2-PFOA	450219.7	1.437	5.000	5.189	104	70-130	
E13C3-PFHxS	317243.2	13C2-PFOA	450219.7	0.705	4.730	4.835	102	70-130	
E13C4-PFHpA	503681.0	13C2-PFOA	450219.7	1.119	5.000	5.040	101	70-130	
E13C2-6:2-FTS	31706.4	13C2-PFOA	450219.7	0.070	4.750	4.712	99	70-130	
E13C8-PFOA	878868.5	13C2-PFOA	450219.7	1.952	5.000	5.378	108	70-130	
E13C8-PFOS	281035.5	13C4-PFOS	249205.8	1.128	4.780	4.997	105	70-130	
E13C9-PFNA	455948.9	13C4-PFOS	249205.8	1.830	5.000	5.101	102	70-130	
E13C6-PFDA	612680.8	13C2-PFDA	278743.9	2.198	5.000	5.129	103	70-130	
E13C2-8:2-FTS	29249.8	13C2-PFDA	278743.9	0.105	4.790	5.233	109	70-130	
E13C8-PFOSA	629109.9	13C2-PFDA	278743.9	2.257	5.000	5.004	100	70-130	
Ed3-NMeFOSAA	71670.3	13C2-PFDA	278743.9	0.257	5.000	4.641	93	70-130	
E13C7-PFUnDA	245605.3	13C2-PFDA	278743.9	0.881	5.000	5.116	102	70-130	
Ed5-NEtFOSAA	54383.9	13C2-PFDA	278743.9	0.195	5.000	4.128	83	70-130	
E13C2-PFDoDA	549542.3	13C2-PFDA	278743.9	1.971	5.000	5.119	102	70-130	
Ed7-NMePFOSAE	307355.4	13C2-PFDA	278743.9	1.103	5.000	4.772	95	70-130	
Ed3-NMePFOSA	76782.9	13C2-PFDA	278743.9	0.275	5.000	5.005	100	70-130	
Ed9-NEtPFOSAE	259792.3	13C2-PFDA	278743.9	0.932	5.000	4.847	97	70-130	
Ed5-NEtPFOSA	57485.9	13C2-PFDA	278743.9	0.206	5.000	4.838	97	70-130	
E13C2-PFTeDA	393544.9	13C2-PFDA	278743.9	1.412	5.000	4.957	99	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

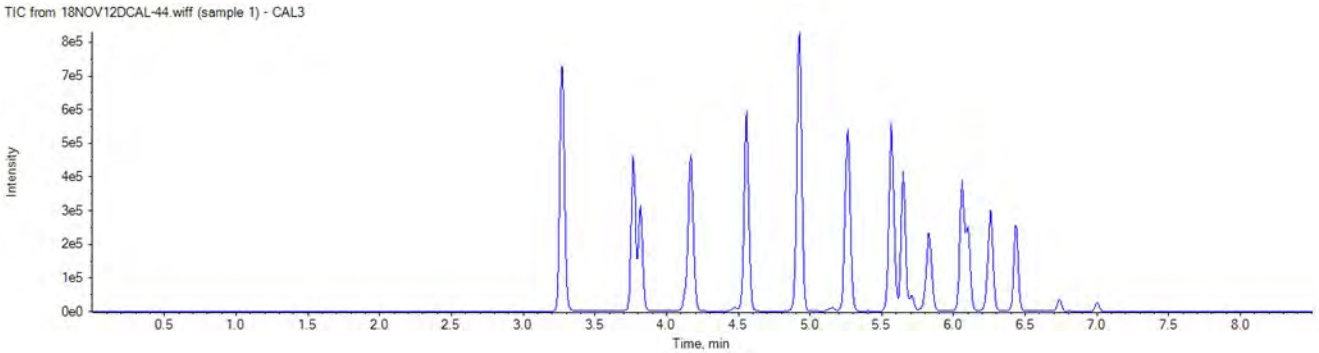
Analyte Quantitation Peak Table

Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-44.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	303228.7		A	13C4-PFBA	3.27	733360.2	0.413	2.291
PFPeA	3.77	1.000	292715.8		A	13C5-PFPeA	3.77	695805.7	0.421	2.435
PFBS	3.82	1.000	168144.6		A	13C3-PFBS	3.82	416352.8	0.404	1.921
4:2-FTS	4.13	1.000	34188.5		A	13C2-4:2-FTS	4.13	47514.8	0.720	1.954
PFHxA	4.17	1.000	352013.5		A	13C5-PFHxA	4.17	646783.5	0.544	2.272
PFPeS	4.19	1.100	84071.2		A	13C3-PFBS	3.82	416352.8	0.202	1.960
PFHpA	4.56	1.000	355834.2		A	13C4-PFHpA	4.55	503681.0	0.706	2.342
PFHxS	4.56	1.000	125622.0		M	13C3-PFHxS	4.56	317243.2	0.396	1.920
6:2-FTS	4.91	1.000	28084.9		A	13C2-6:2-FTS	4.91	31706.4	0.886	2.143
PFHpS	4.92	1.080	125907.9		A	13C3-PFHxS	4.56	317243.2	0.397	2.089
PFOA	4.93	1.000	372258.9		A	13C8-PFOA	4.93	878868.5	0.424	2.262
PFOS	5.25	1.000	120897.5		M	13C8-PFOS	5.25	281035.5	0.430	1.881
PFNA	5.27	1.000	302323.8		A	13C9-PFNA	5.27	455948.9	0.663	2.391
PFNS	5.55	1.060	76049.0		A	13C8-PFOS	5.25	281035.5	0.271	1.893
PFDA	5.57	1.000	254047.8		M	13C6-PFDA	5.57	612680.8	0.415	2.198
8:2-FTS	5.57	1.000	26295.1		A	13C2-8:2-FTS	5.57	29249.8	0.899	2.096
PFOSA	5.65	1.000	270175.5		A	13C8-PFOSA	5.65	629109.9	0.429	2.098
NMeFOSAA	5.71	1.000	25147.7		A	d3-NMeFOSAA	5.71	71670.3	0.351	1.983
PFDS	5.80	1.110	57966.9		A	13C8-PFOS	5.25	281035.5	0.206	1.869
PFUnDA	5.83	1.000	199061.8		A	13C7-PFUnDA	5.83	245605.3	0.810	2.119
NEtFOSAA	5.84	1.000	25089.0		A	d5-NEtFOSAA	5.84	54383.9	0.461	2.418
PFDoDA	6.06	1.000	237252.6		A	13C2-PFDoDA	6.06	549542.3	0.432	2.198
10:2-FTS	6.07	1.090	18541.7		A	13C2-8:2-FTS	5.57	29249.8	0.634	2.111
NMePFOSAE	6.10	1.000	163668.7		A	d7-NMePFOSAE	6.09	307355.4	0.533	2.216
NMePFOSA	6.11	1.000	29934.3		A	d3-NMePFOSA	6.11	76782.9	0.390	1.923
PFDoS	6.23	1.190	30098.3		A	13C8-PFOS	5.25	281035.5	0.107	1.876
NEtPFOSAE	6.26	1.000	178457.9		A	d9-NEtPFOSAE	6.25	259792.3	0.687	2.204
NEtPFOSA	6.27	1.000	26590.2		M	d5-NEtPFOSA	6.27	57485.9	0.463	2.124
PFTrDA	6.26	1.030	184322.9		A	13C2-PFDoDA	6.06	549542.3	0.335	2.117
PFTeDA	6.43	1.000	156439.9		A	13C2-PFTeDA	6.43	393544.9	0.398	2.228
PFHxDA	6.74	1.050	69655.1		A	13C2-PFTeDA	6.43	393544.9	0.177	2.109
PFODA	7.00	1.090	57796.0		A	13C2-PFTeDA	6.43	393544.9	0.147	2.045

Total Ion Chromatogram

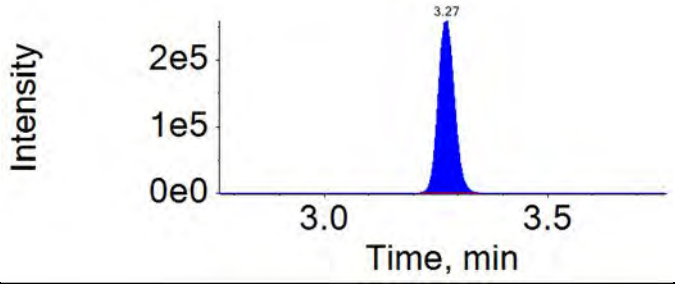


APPROVED
By MCD at 6:33 pm, 11/12/18

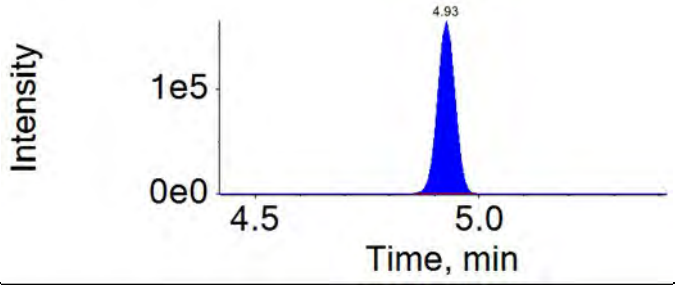
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

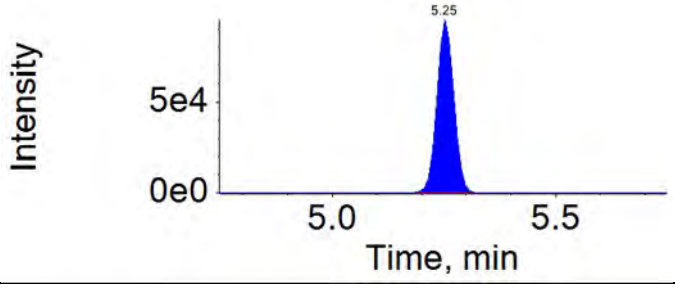
Injection Standard: 13C3-PFBA
216.0 / 172.0



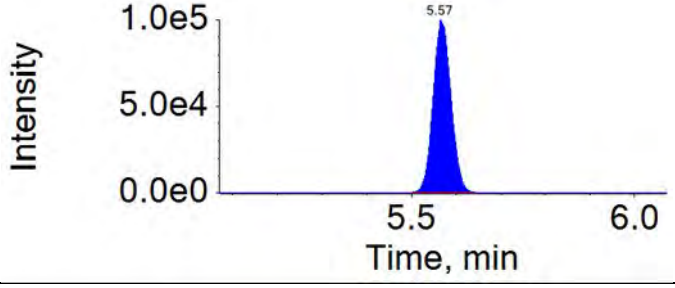
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

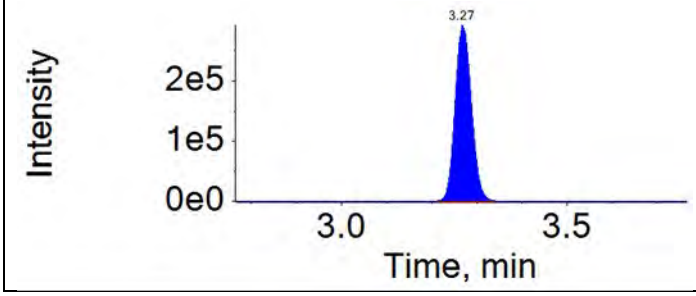


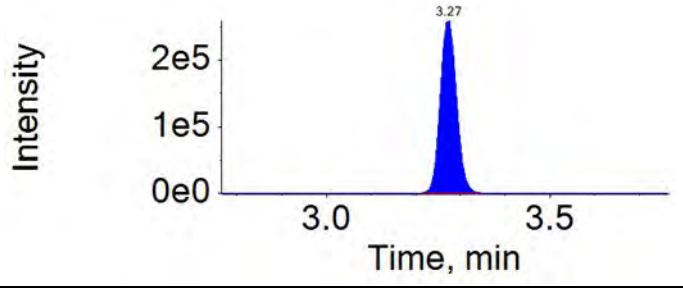
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

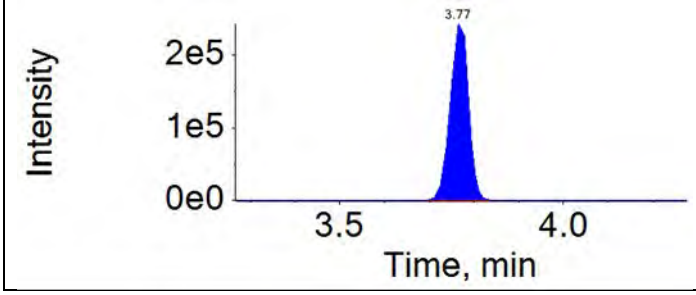
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

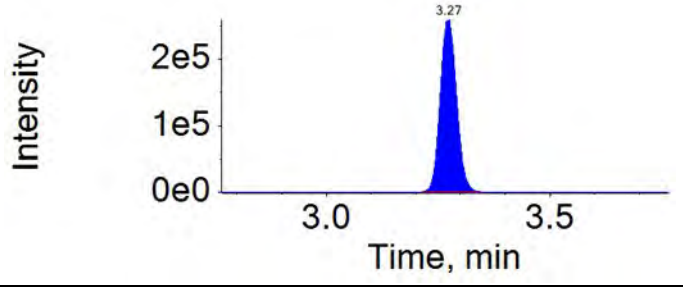
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



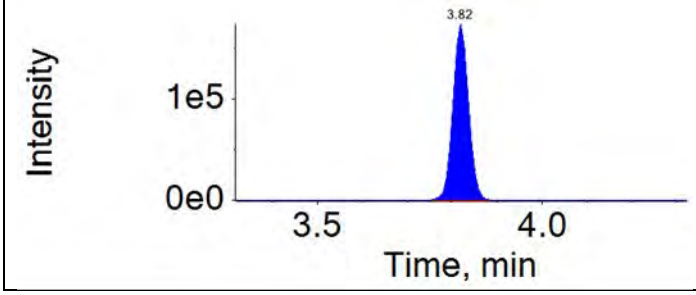


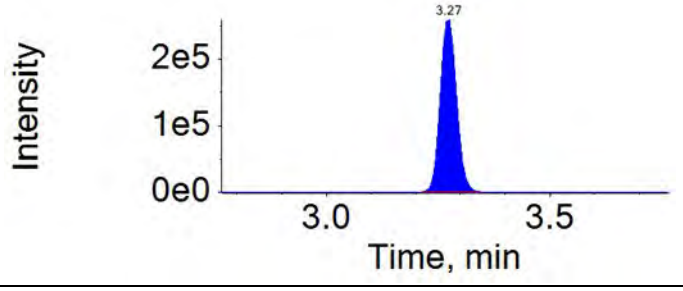
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



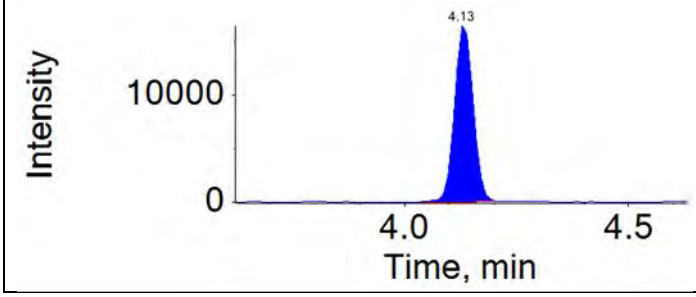


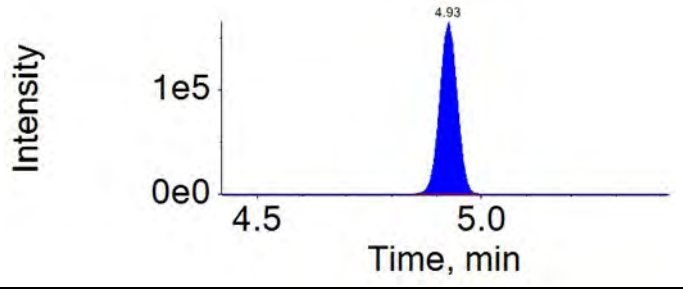
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



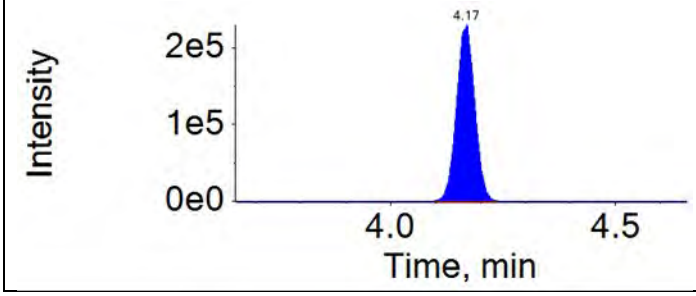


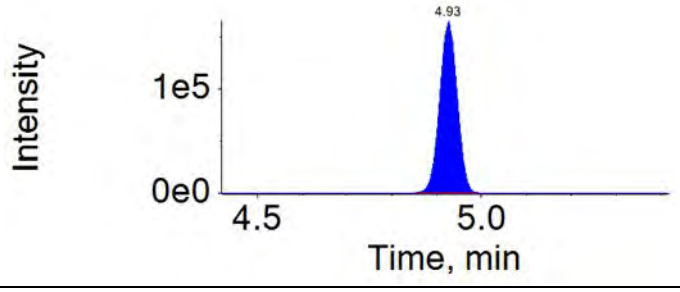
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

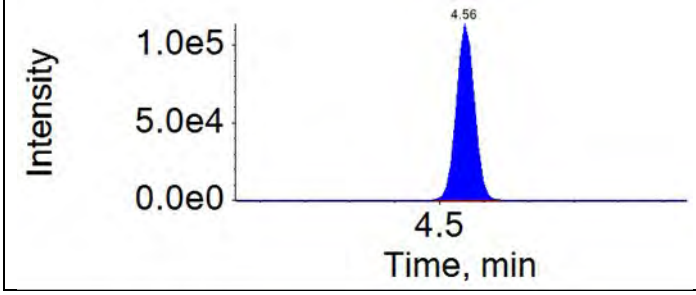
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

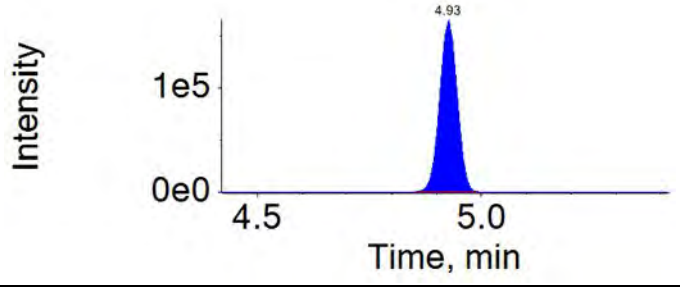
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



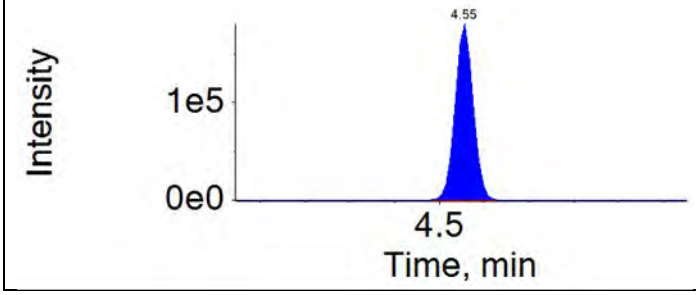


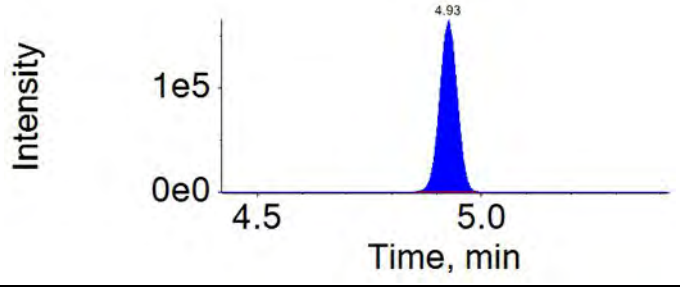
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



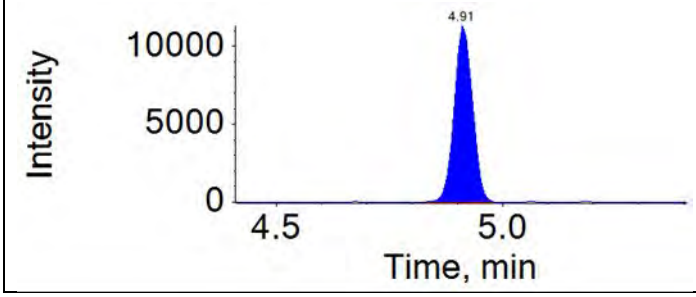


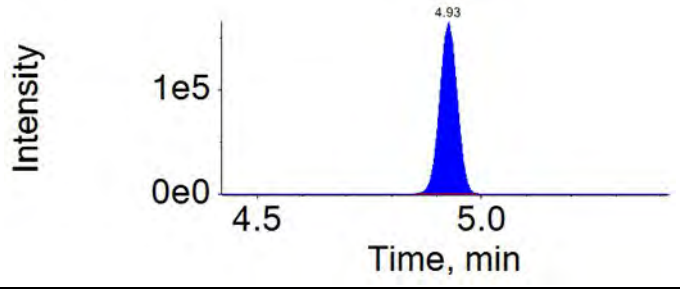
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

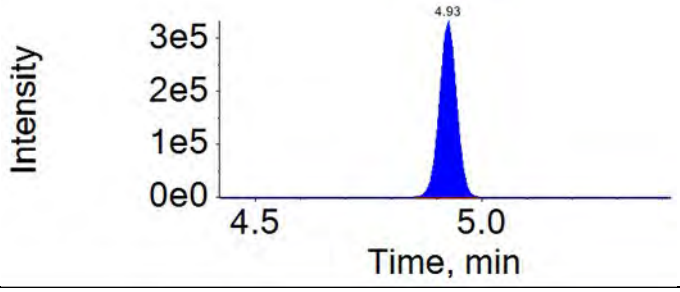
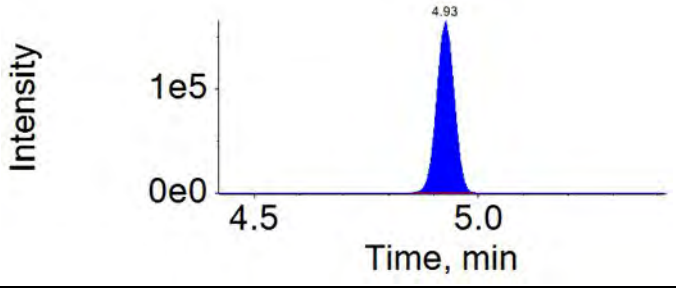


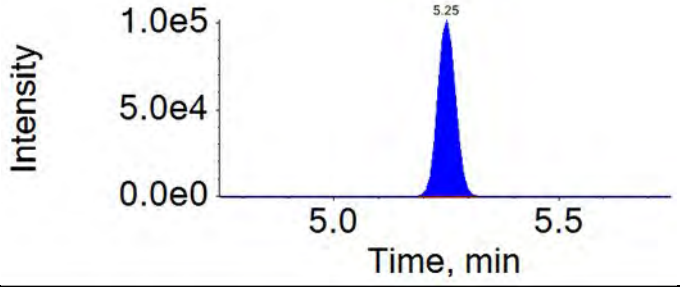
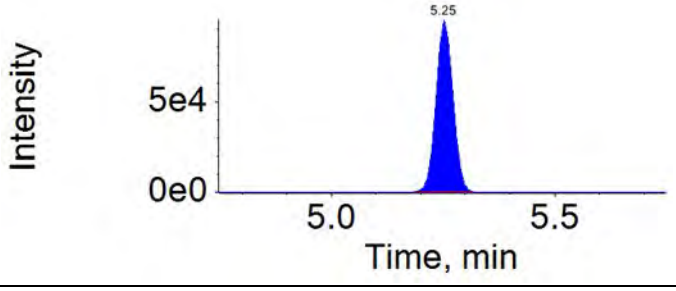


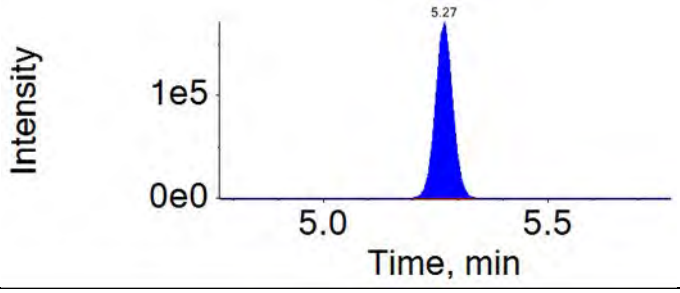
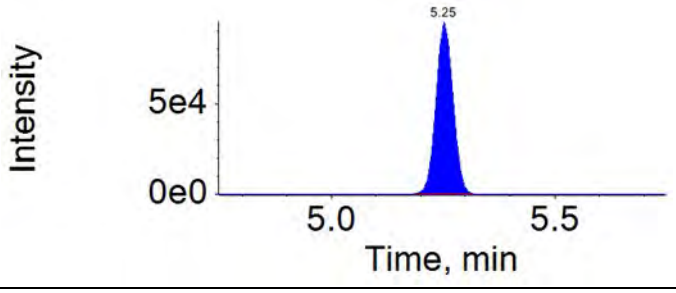
APPROVED
By MCD at 6:33 pm, 11/12/18

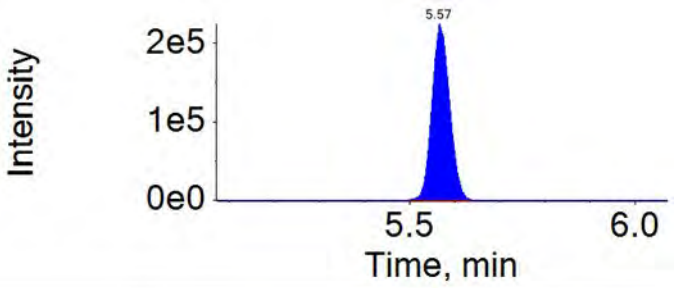
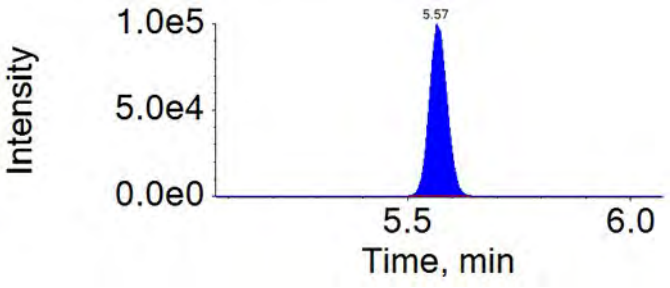
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

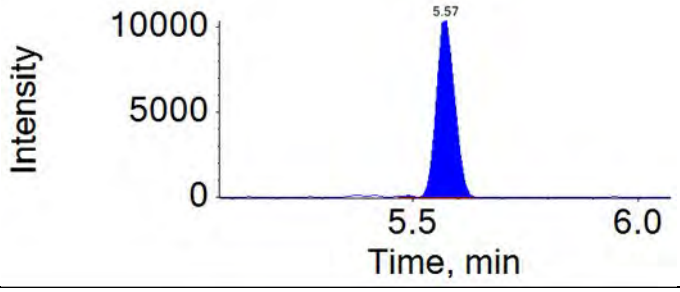
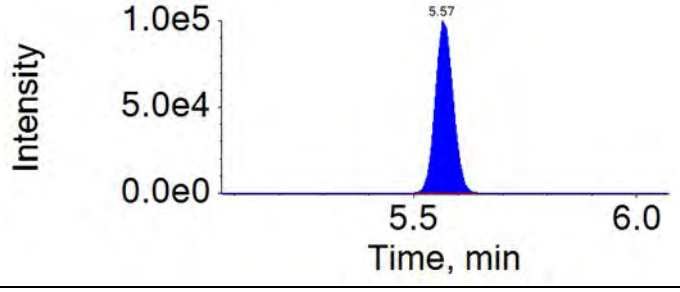
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

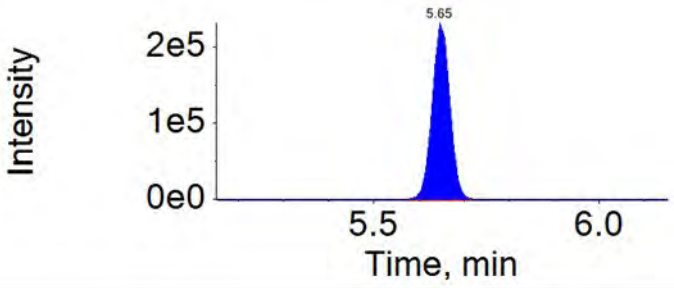
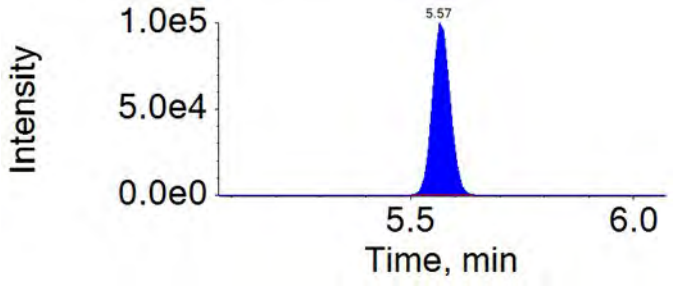
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

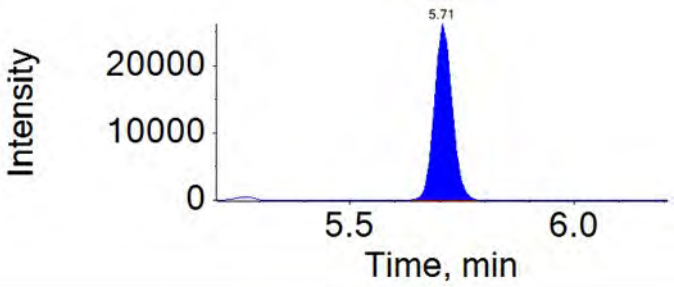
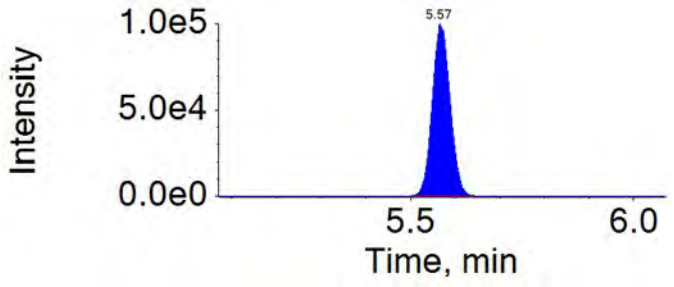
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

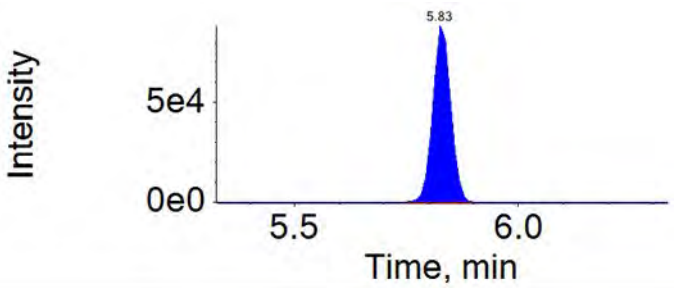
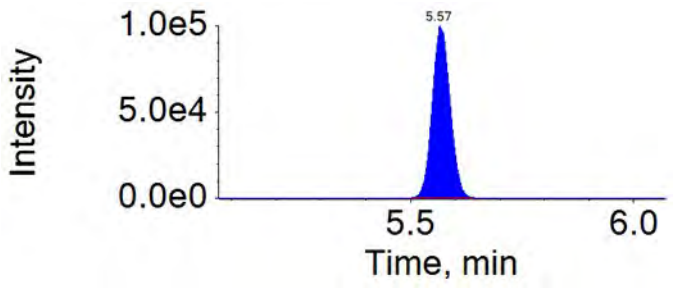
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

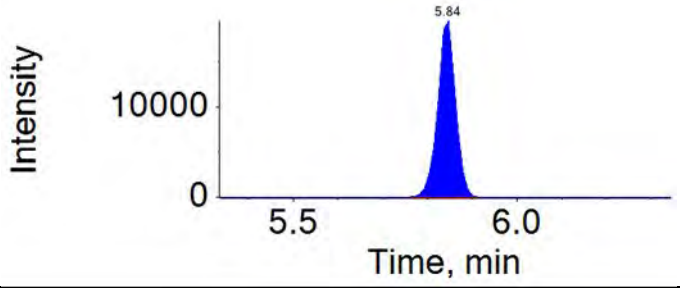
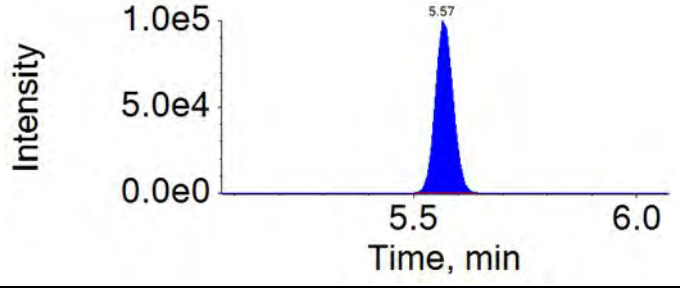
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

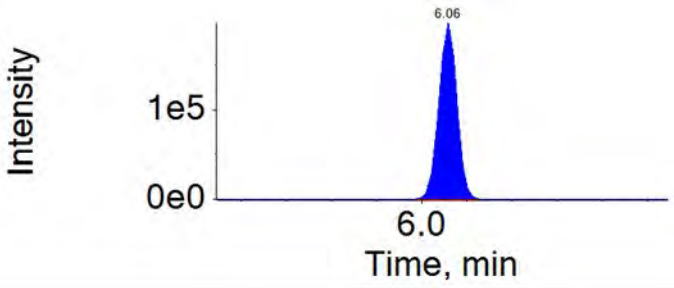
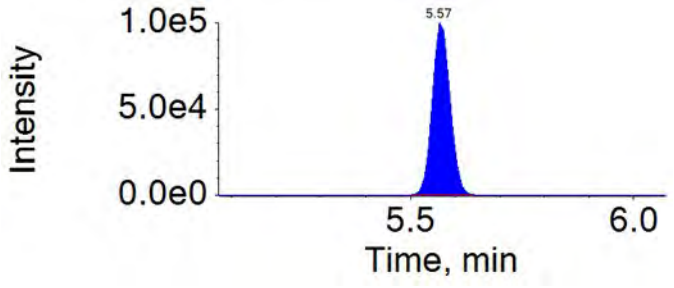
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

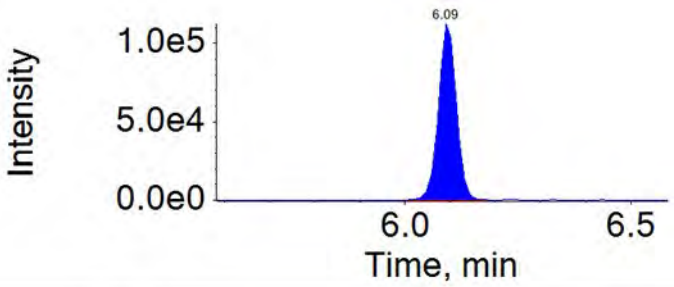
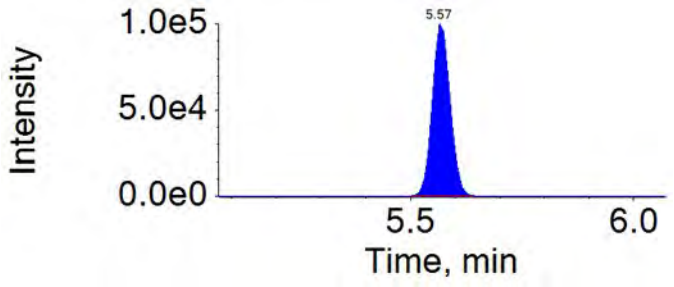
APPROVED
By MCD at 6:33 pm, 11/12/18

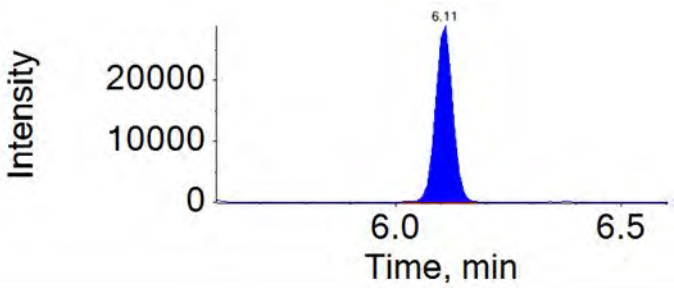
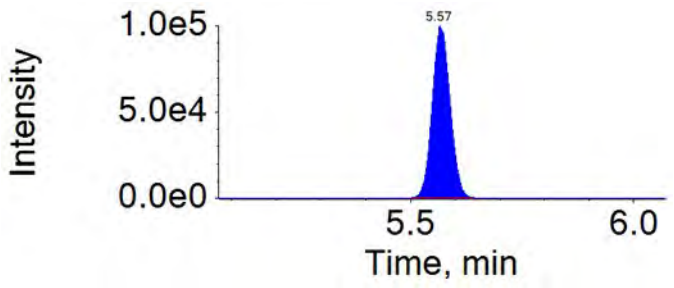
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

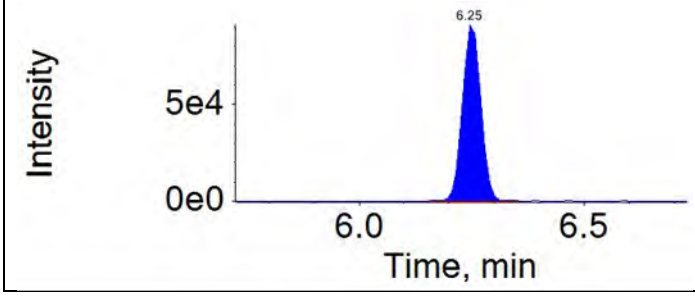
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

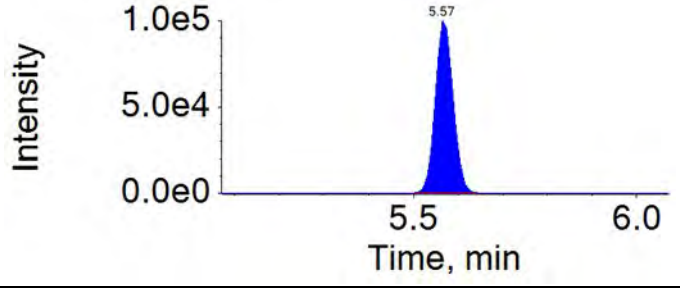
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

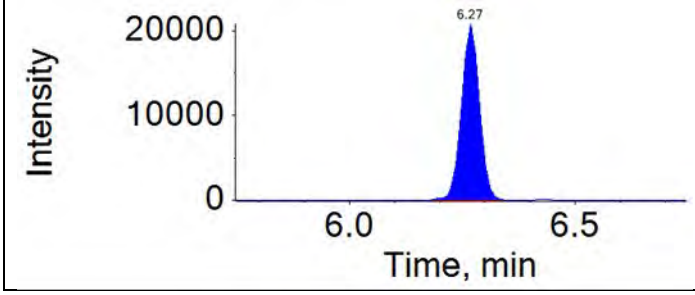
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

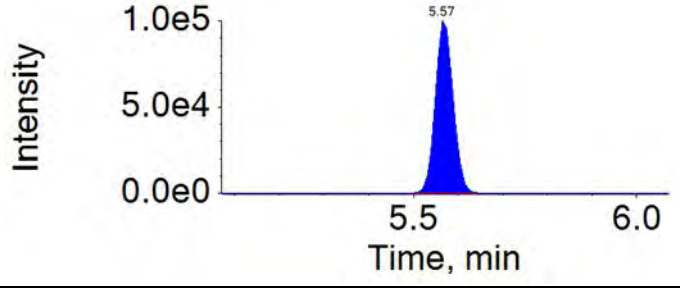
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



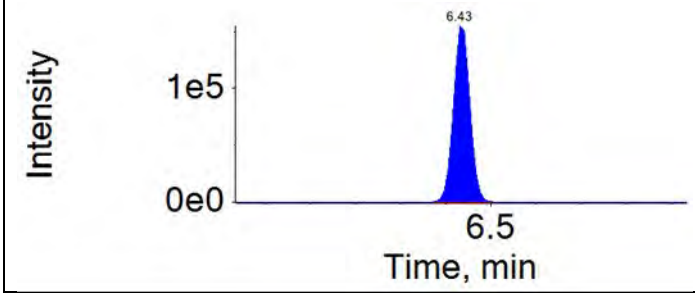


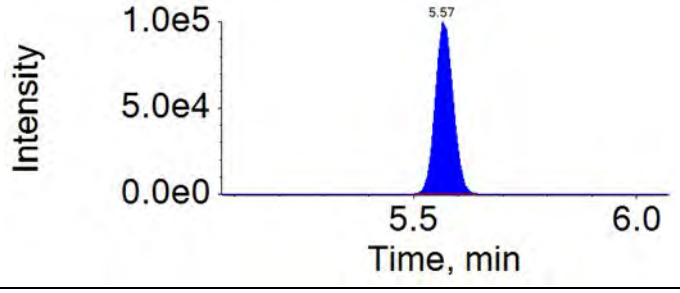
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

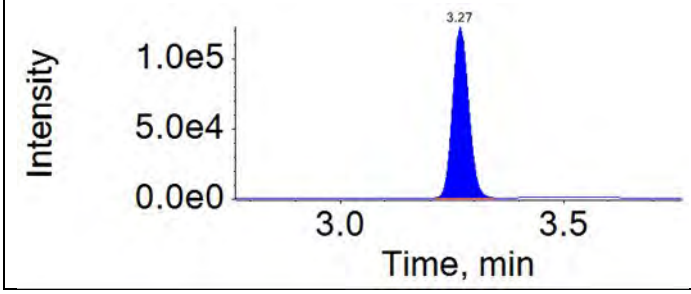
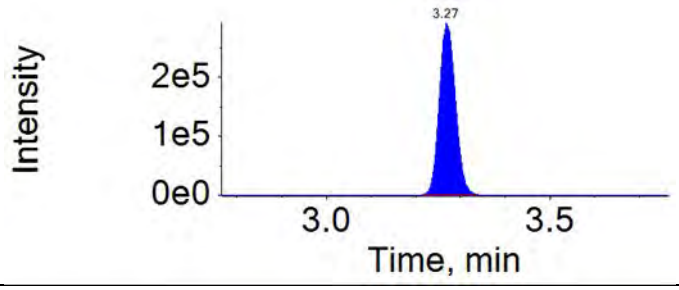


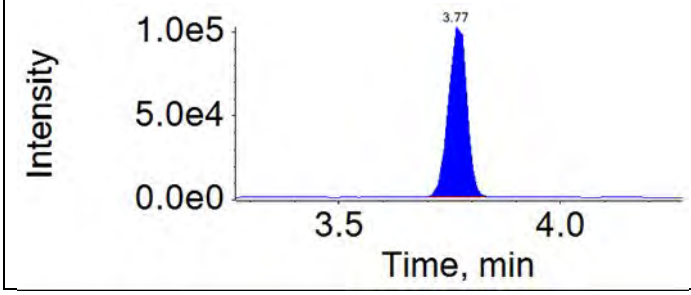
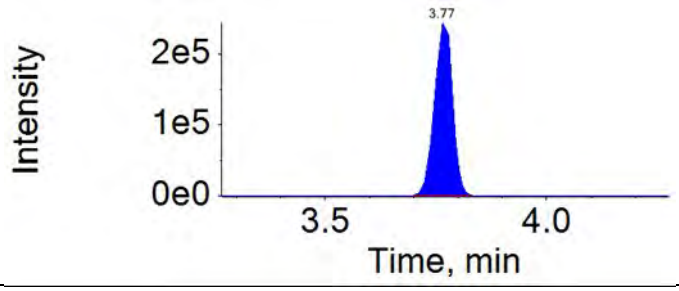


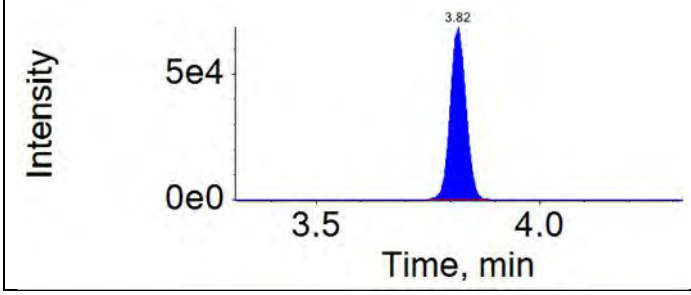
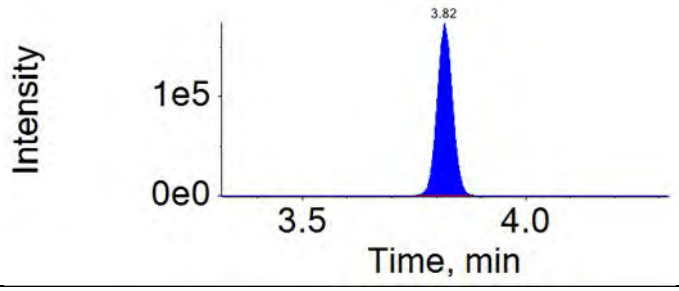
APPROVED
By MCD at 6:33 pm, 11/12/18

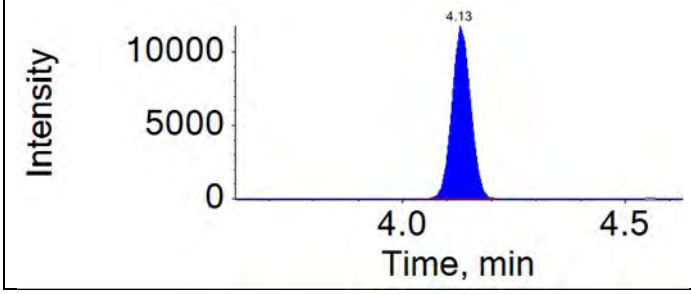
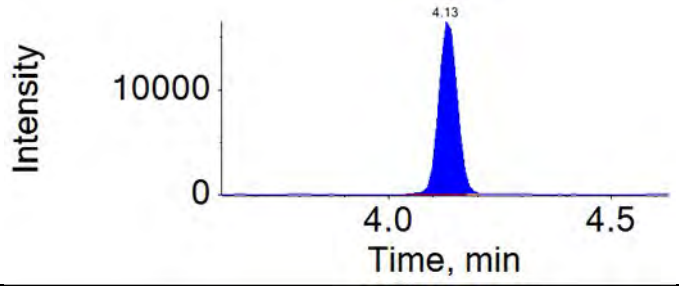
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

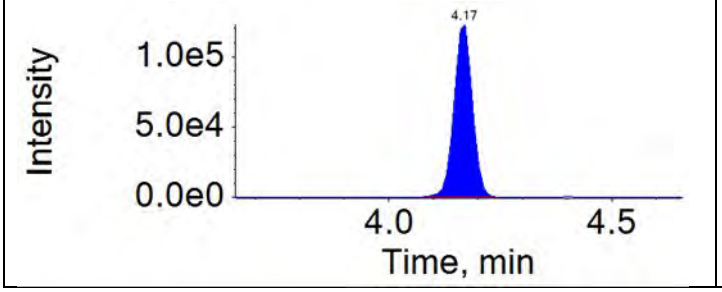
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

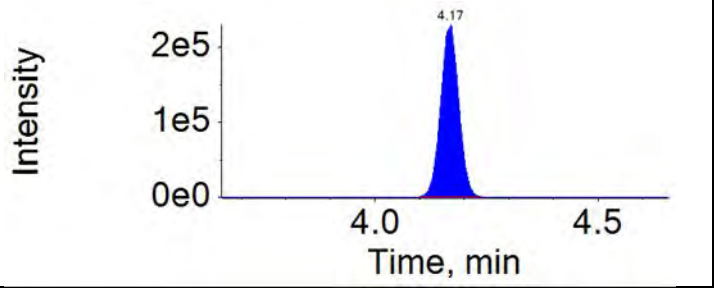
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

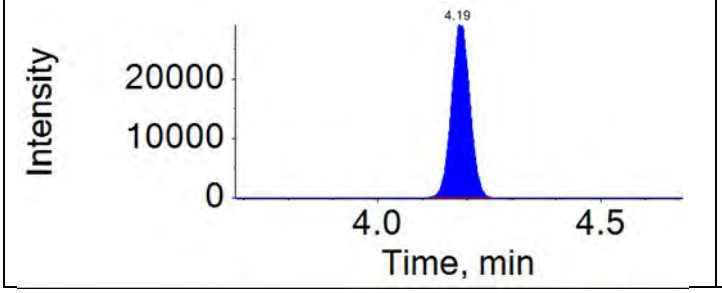
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

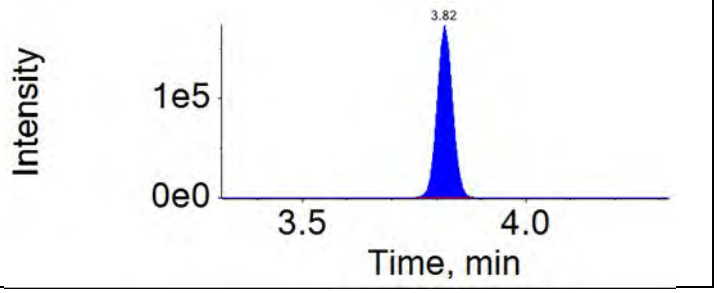
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



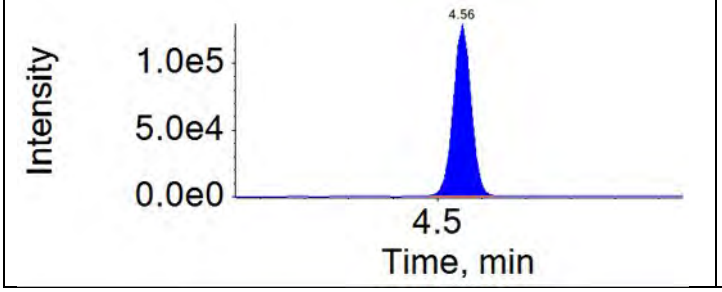


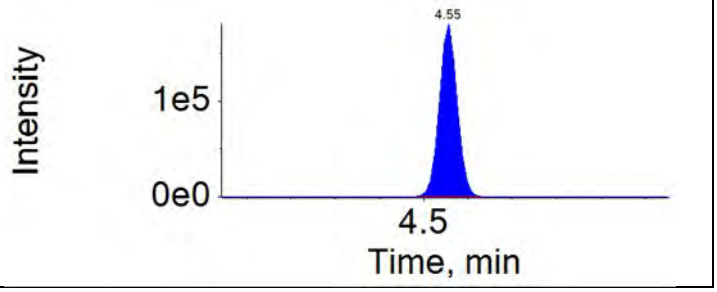
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



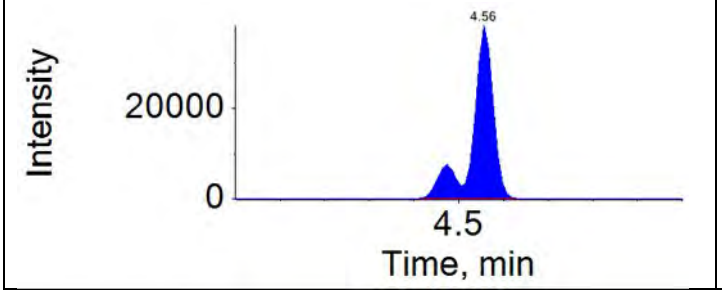


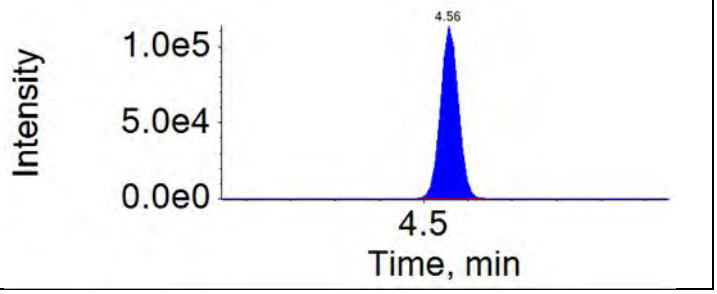
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



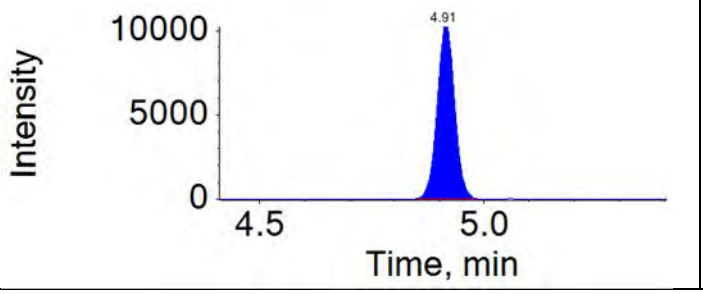


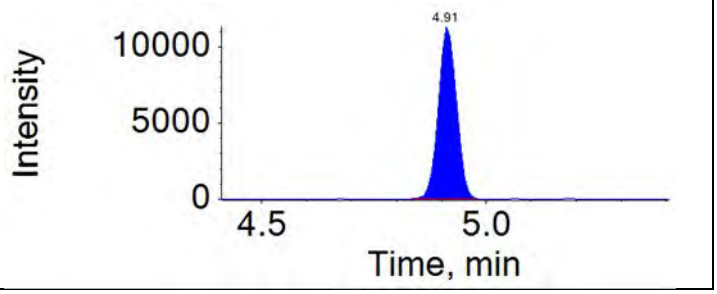
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

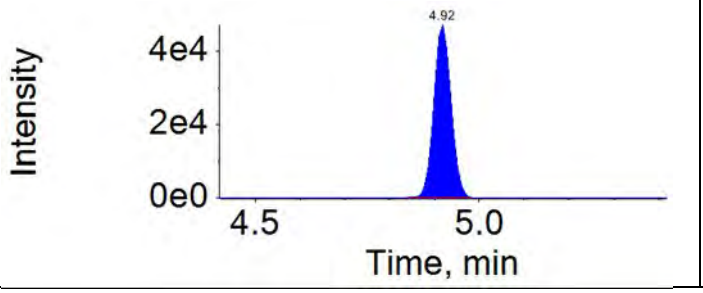
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

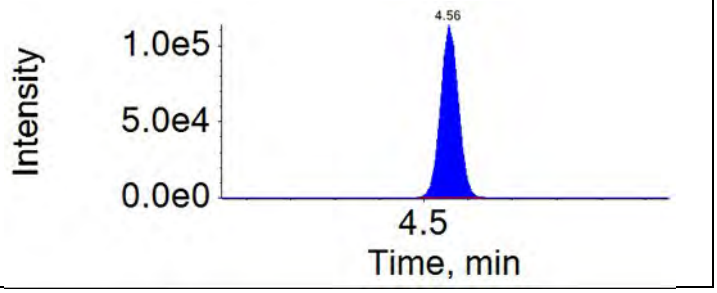
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



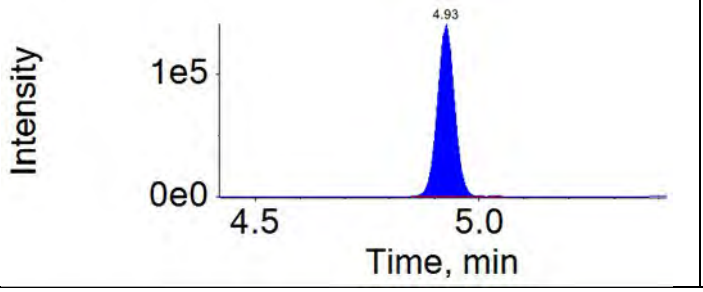


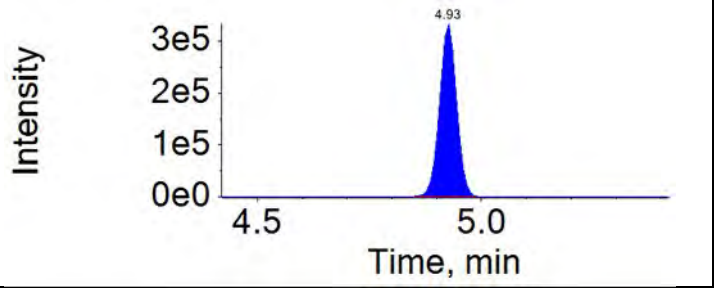
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



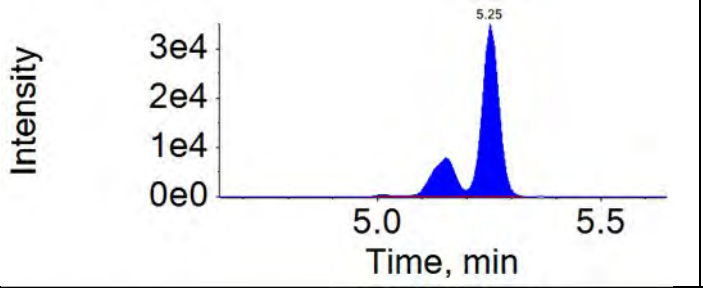


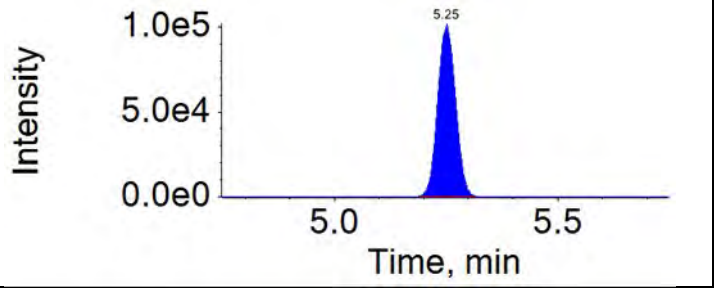
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



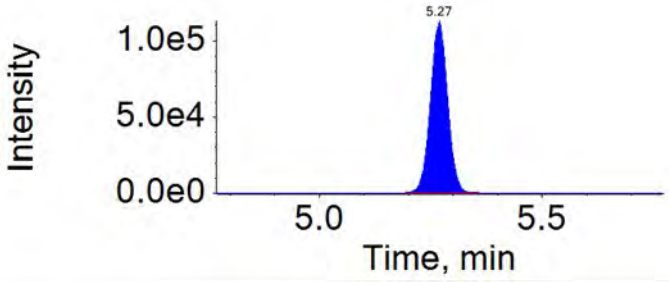


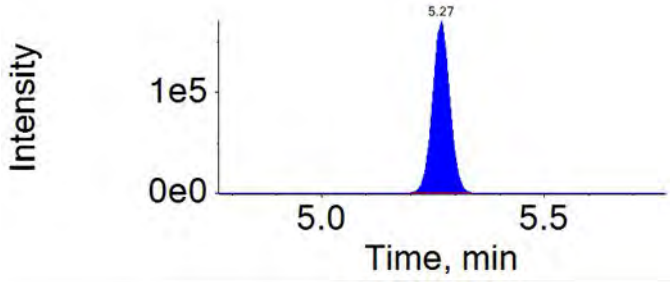
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

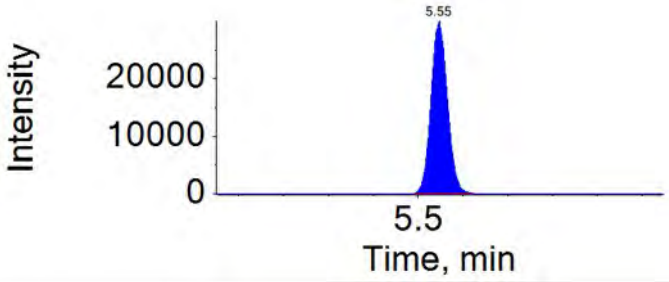
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

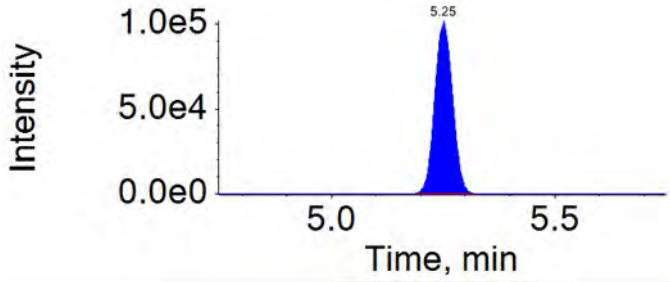
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



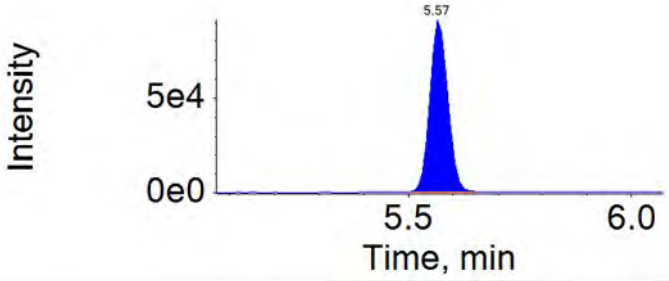


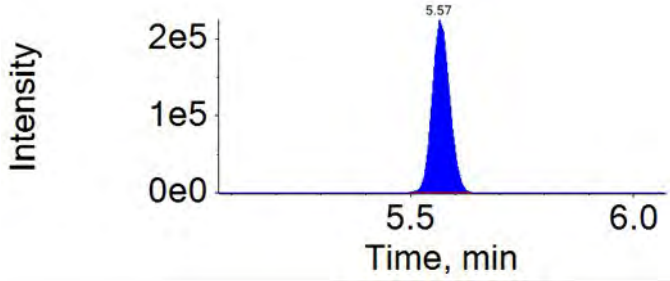
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



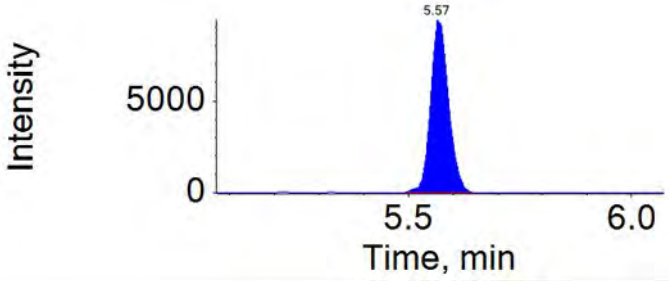


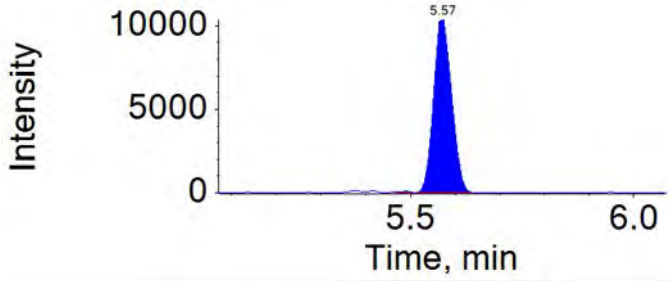
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



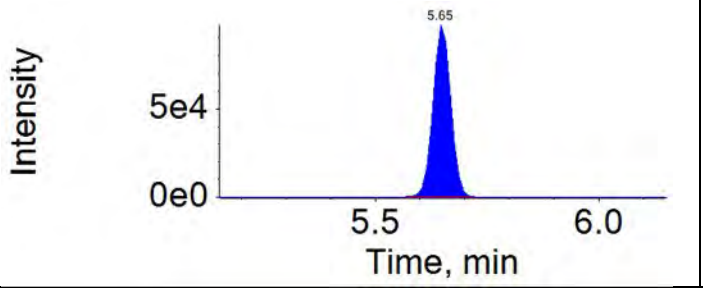


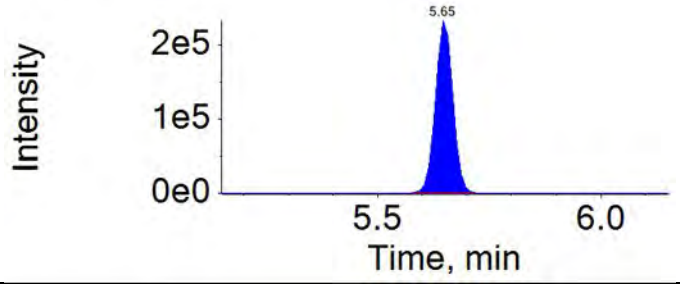
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

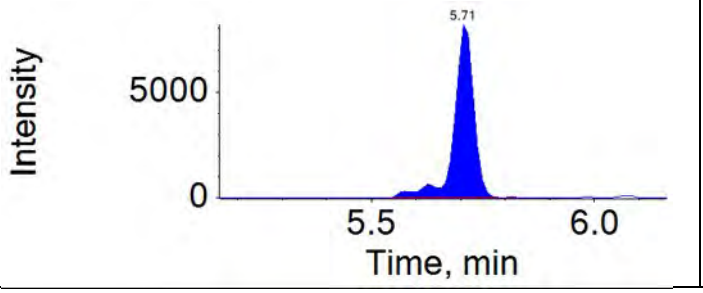
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

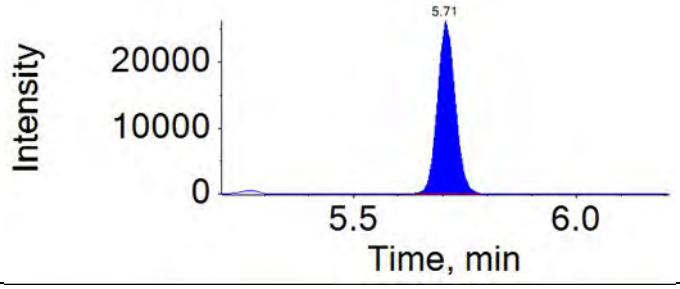
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



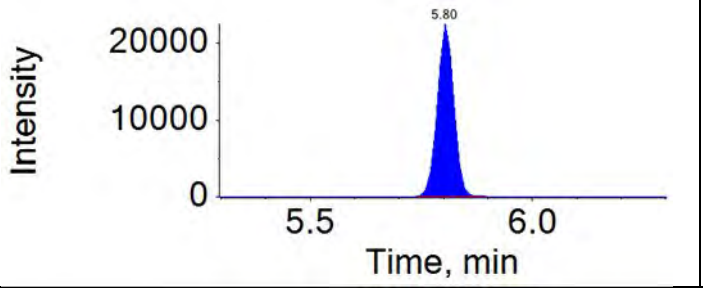


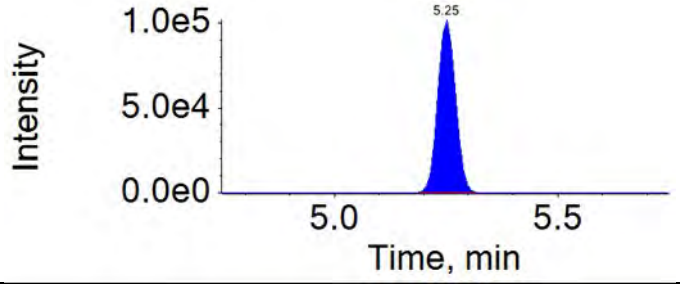
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



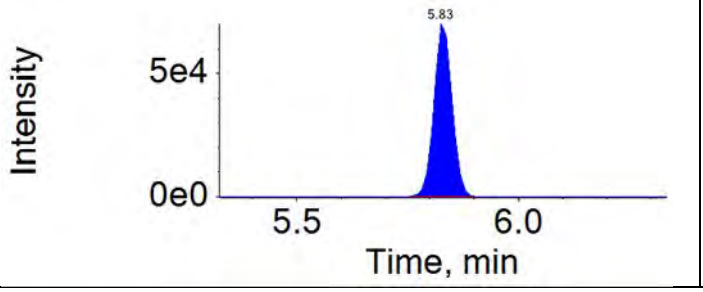


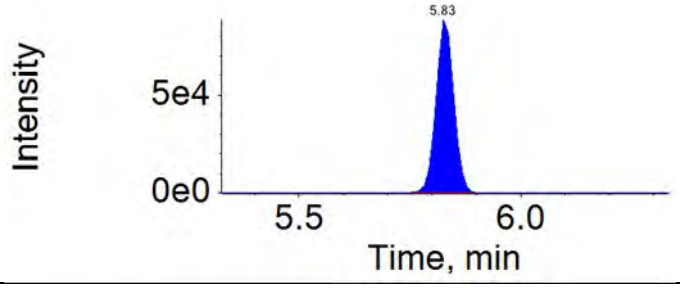
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

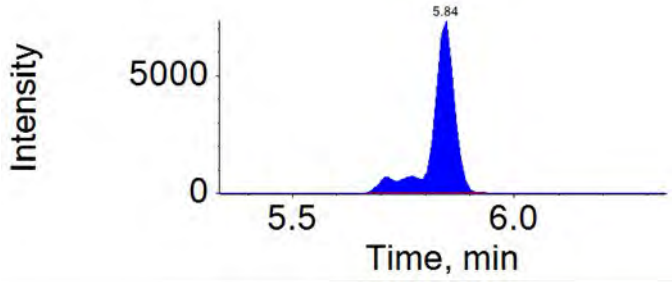
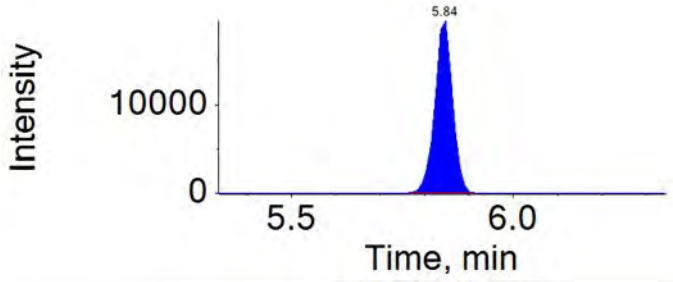


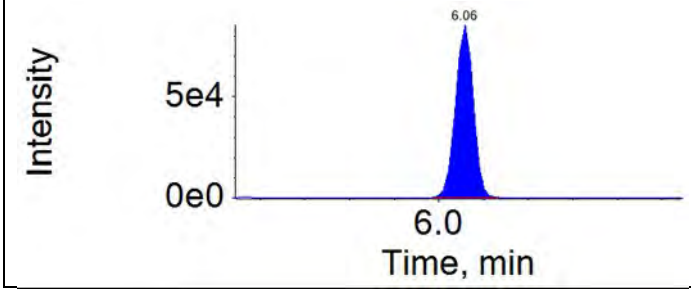
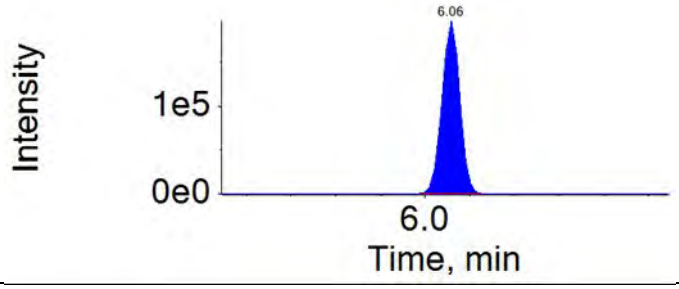


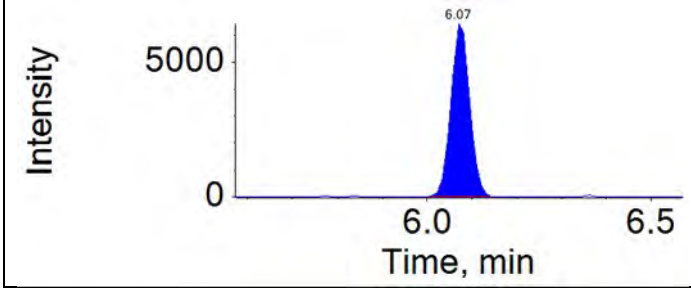
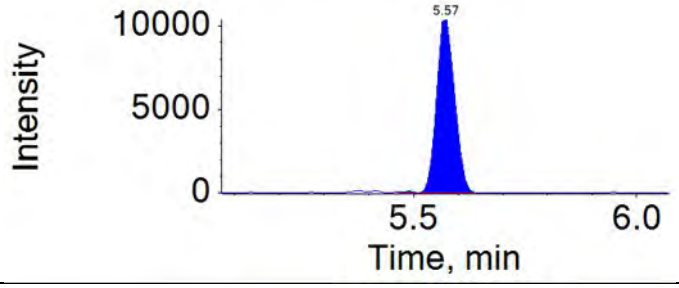
APPROVED
By MCD at 6:33 pm, 11/12/18

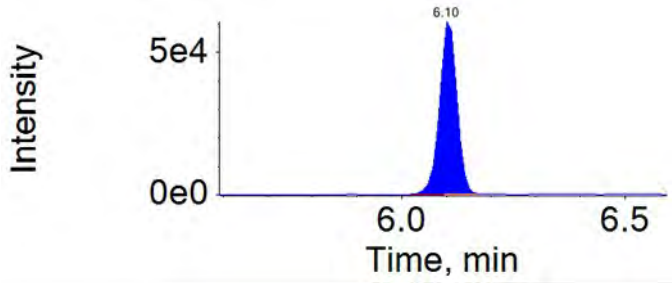
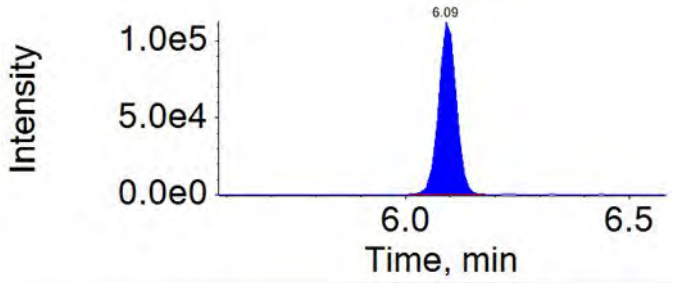
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

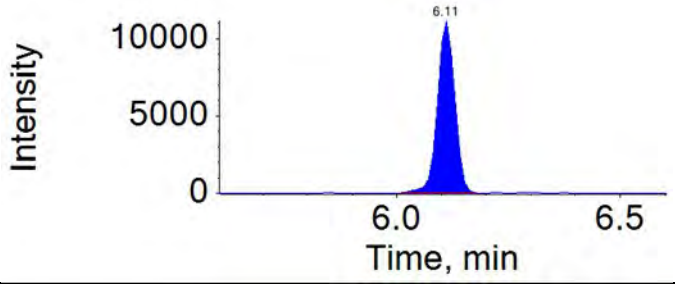
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

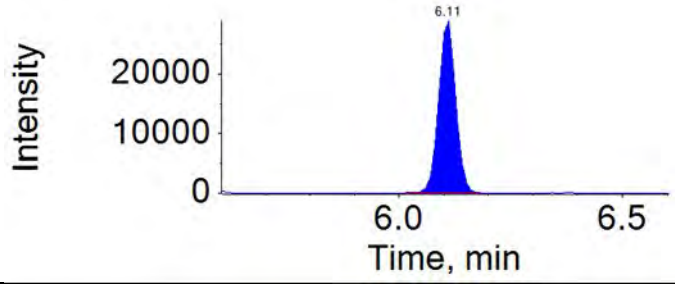
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

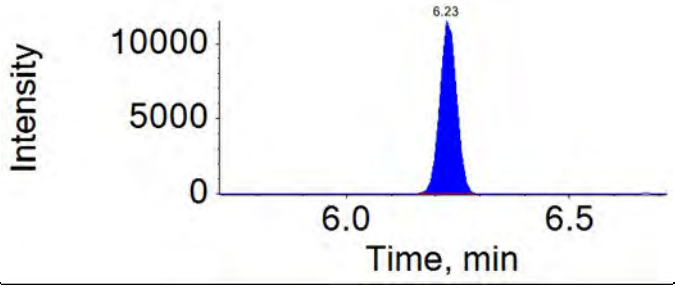
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

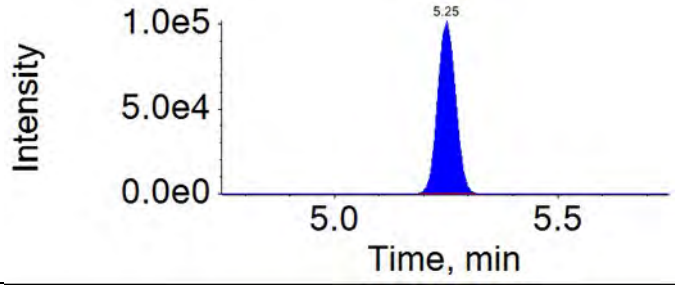
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



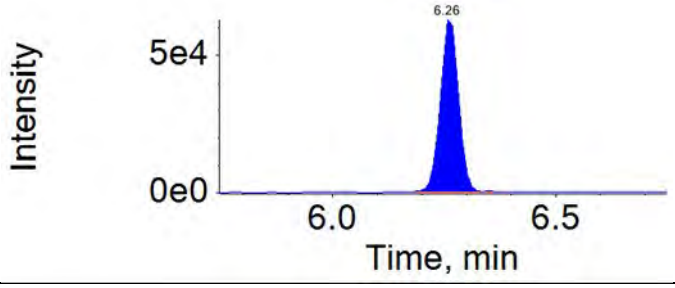


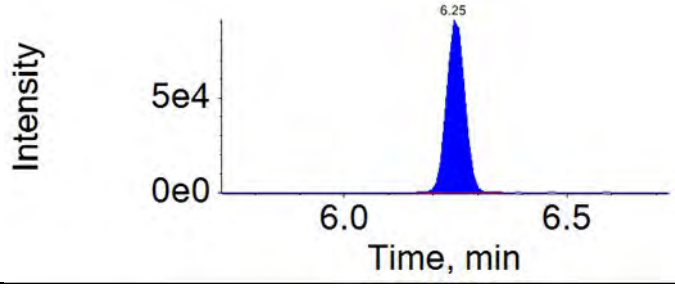
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



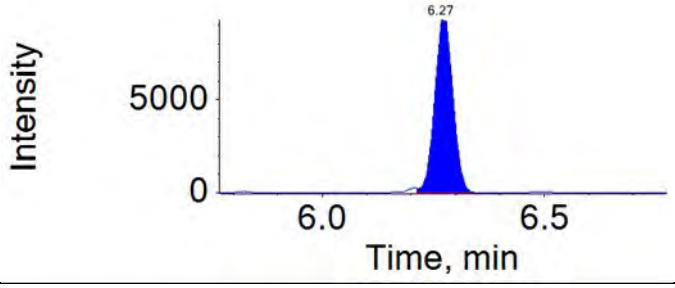


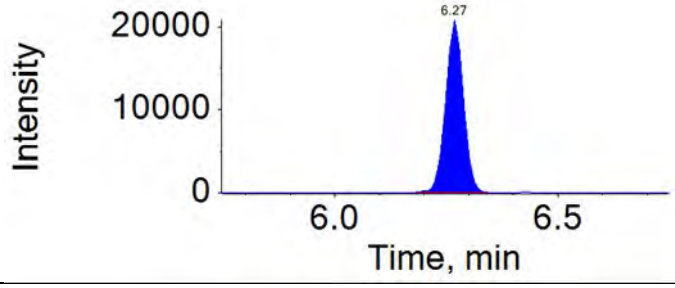
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



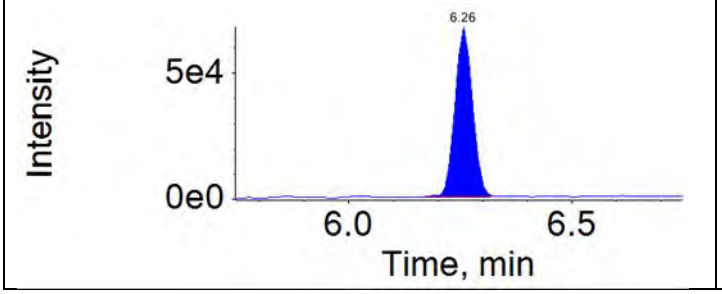


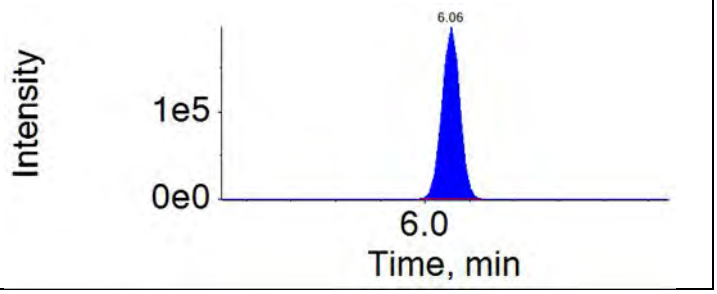
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

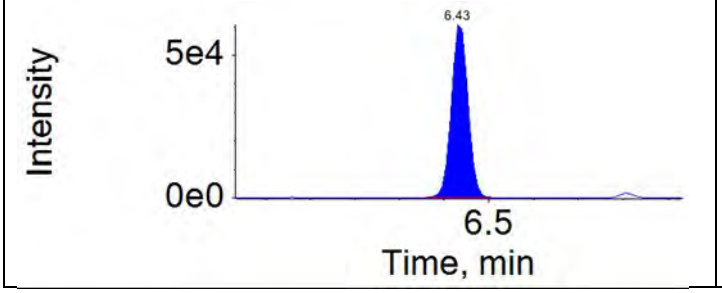
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

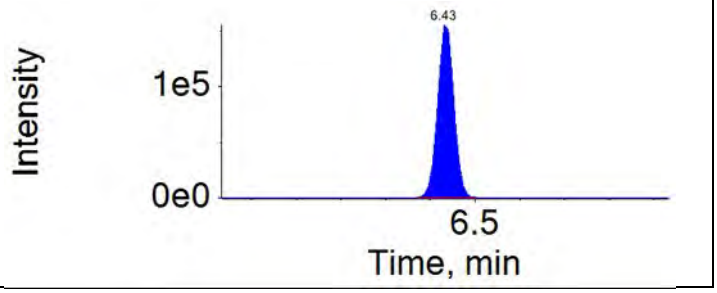
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



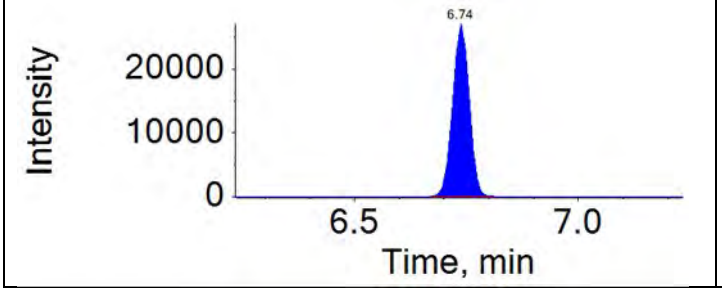


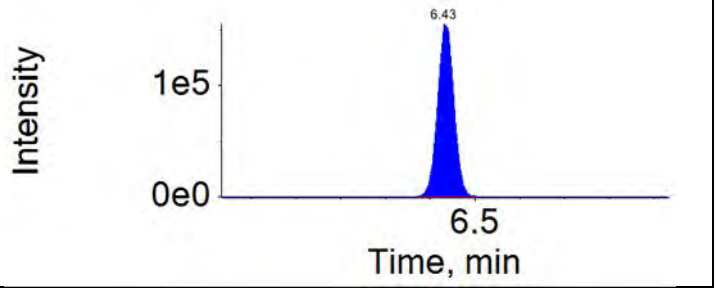
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



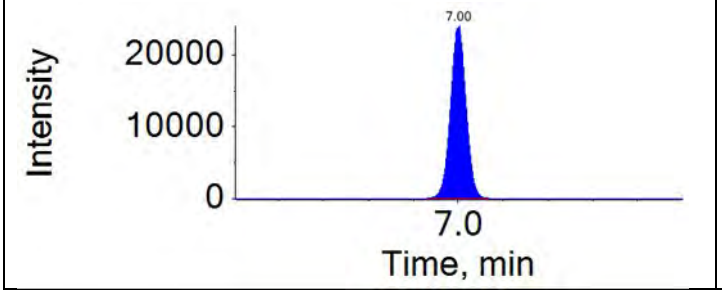


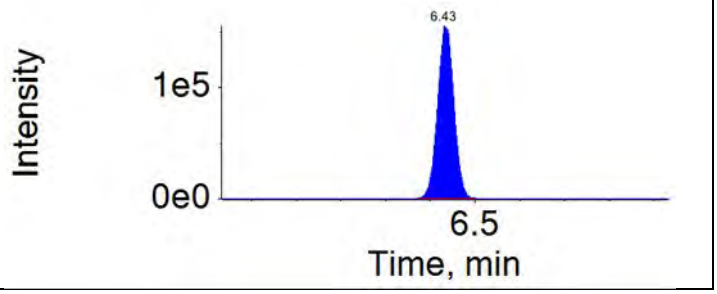
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



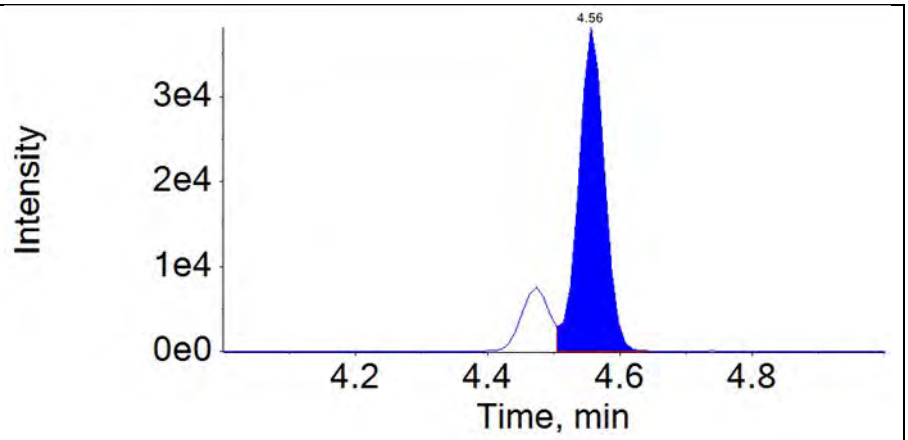


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

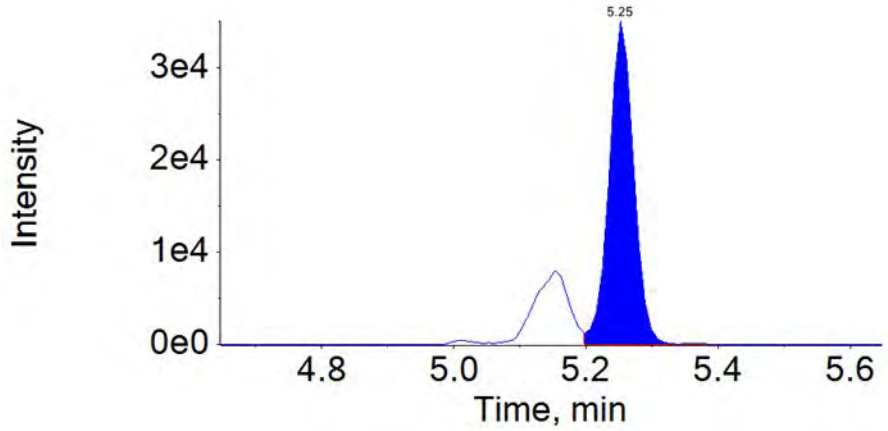
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
103825.76
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



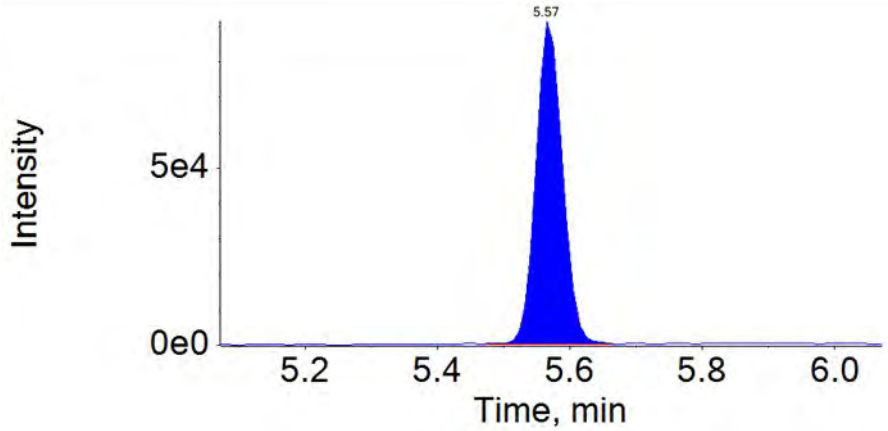
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
90727.07
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
PFDA
RT (min.):
5.57
Peak Area:
254529.84
Mass Range:
513.0 / 469.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



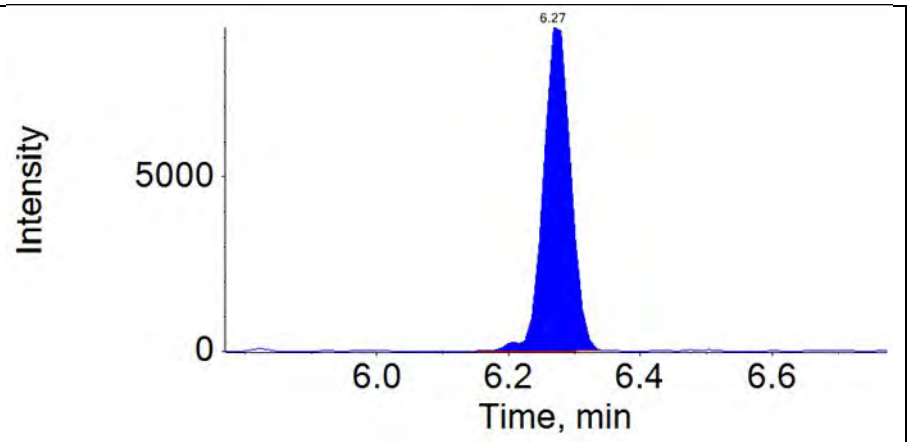
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

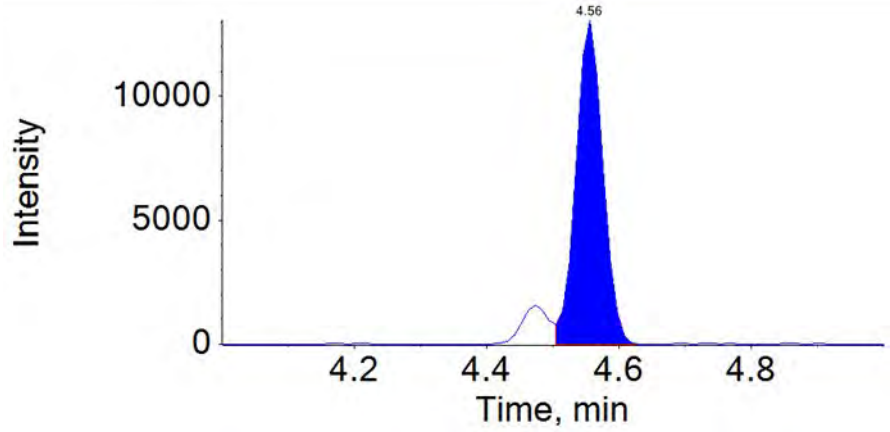
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
26985.34
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



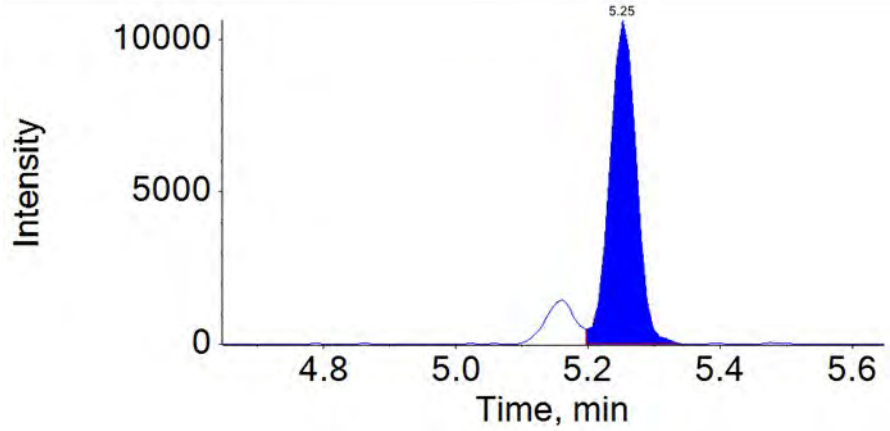
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
37027.02
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
29768.90
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



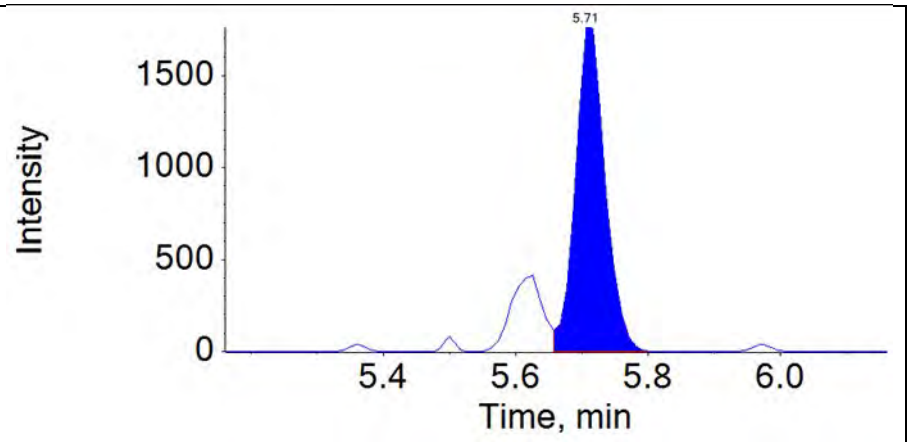
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

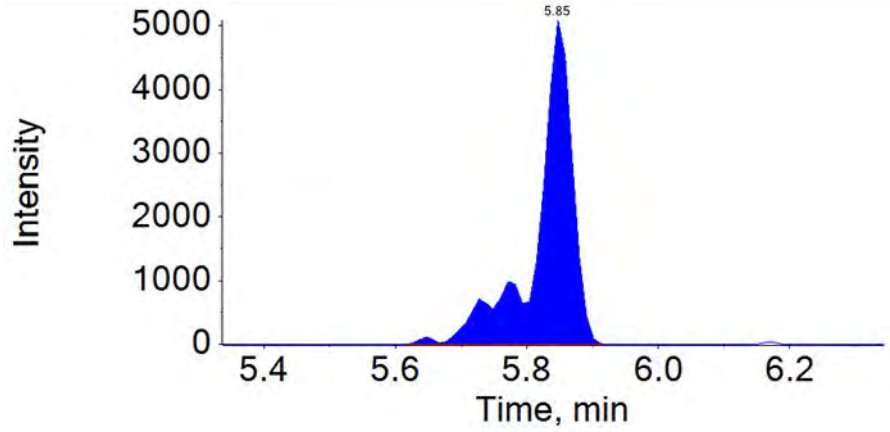
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
5548.71
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



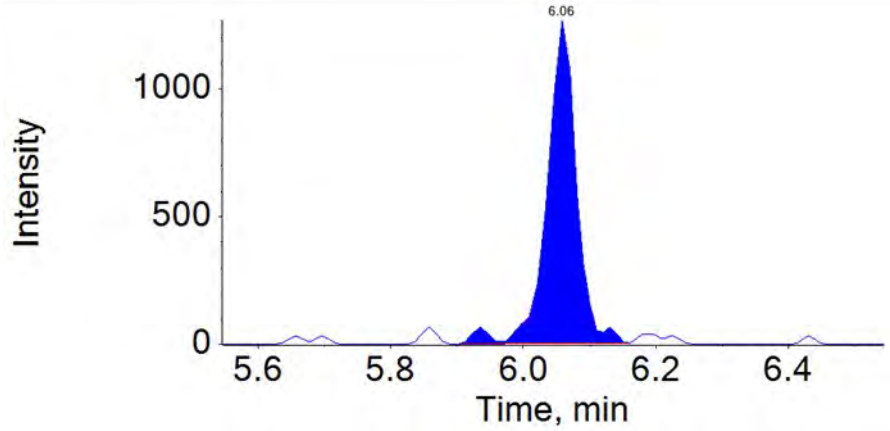
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.85
Peak Area:
19243.29
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.06
Peak Area:
3956.45
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

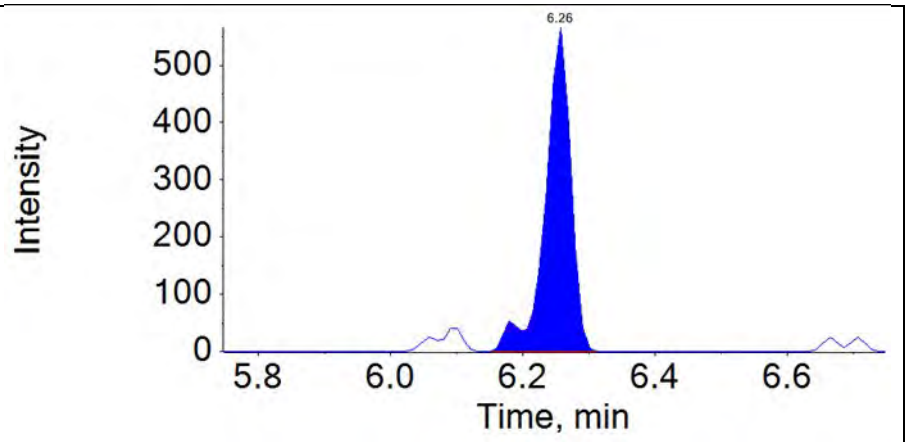
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
6.26
Peak Area:
1527.41
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

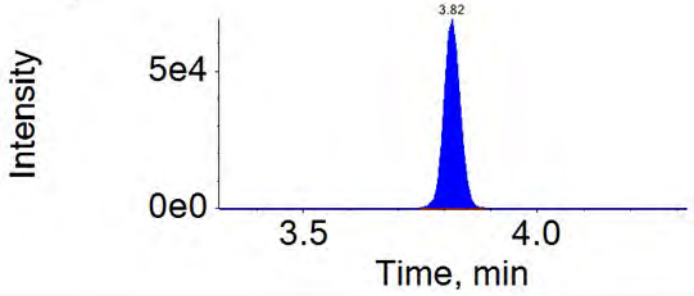
Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-44.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	168144.64	A	0.3619	0.3569			
PFBS_2	3.82	1.00	60008.36	A	0.3619	0.3569	-1	50	
4:2-FTS	4.13	1.00	34188.48	A	0.6730	0.6730			
4:2 FTS_2	4.13	1.00	23007.23	A	0.6730	0.6730		#NA!	
PFHxA	4.17	1.00	352013.45	A	0.0117	0.0120			
PFHxA_2	4.17	1.00	4207.12	A	0.0117	0.0120	3	50	
PFPeS	4.19	1.10	84071.24	A	0.5191	0.5304			
PFPeS_2	4.19	1.10	44592.70	A	0.5191	0.5304	2	50	
PFHpA	4.56	1.00	355834.18	A	0.0563	0.0619			
PFHpA_2	4.55	1.00	22030.36	A	0.0563	0.0619	10	50	
PFHxS	4.56	1.00	125622.02	M	0.3428	0.3304			
PFHxS_2	4.56	1.00	41506.57	M	0.3428	0.3304	-4	50	
6:2-FTS	4.91	1.00	28084.91	A	0.6604	0.7337			
6:2 FTS_2	4.91	1.00	20606.67	A	0.6604	0.7337		#NA!	
PFHpS	4.92	1.08	125907.86	A	0.4066	0.3838			
PFHpS_2	4.92	1.08	48327.03	A	0.4066	0.3838	-6	50	
PFOA	4.93	1.00	372258.90	A	0.0562	0.0567			
PFOA_2	4.92	1.00	21118.14	A	0.0562	0.0567	1	50	
PFOS	5.25	1.00	120897.45	M	0.2968	0.2842			
PFOS_2	5.25	1.00	34361.90	M	0.2968	0.2842	-4	50	
PFNA	5.27	1.00	302323.82	A	0.0229	0.0192			
PFNA_2	5.28	1.00	5790.58	A	0.0229	0.0192	-16	50	
PFNS	5.55	1.06	76049.00	A	0.4828	0.4502			
PFNS_2	5.54	1.06	34233.54	A	0.4828	0.4502	-7	50	
PFDA	5.57	1.00	254047.79	M	0.0081	0.0044			
PFDA_2	5.56	1.00	1125.96	A	0.0081	0.0044	-45	50	
8:2-FTS	5.57	1.00	26295.08	A	0.6814	0.5850			
8:2 FTS_2	5.57	1.00	15383.41	A	0.6814	0.5850		#NA!	
NMeFOSAA	5.71	1.00	25147.65	A	0.2569	0.2754			
NMeFOSAA_2	5.71	1.00	6926.51	M	0.2569	0.2754	7	50	
PFDS	5.80	1.11	57966.88	A	0.5144	0.5358			
PFDS_2	5.80	1.11	31061.10	A	0.5144	0.5358	4	50	
PFUnDA	5.83	1.00	199061.83	A	0.0058	0.0049			
PFUnDA_2	5.83	1.00	975.19	A	0.0058	0.0049	-16	50	
NEtFOSAA	5.84	1.00	25089.02	A	0.7253	0.7602			
NEtFOSAA_2	5.85	1.00	19071.96	M	0.7253	0.7602	5	50	
PFDoDA	6.06	1.00	237252.63	A	0.0157	0.0159			
PFDoDA_2	6.06	1.00	3761.16	M	0.0157	0.0159	1	50	
10:2-FTS	6.07	1.09	18541.69	A	0.6356	0.6613			
10:2 FTS_2	6.08	1.09	12260.75	A	0.6356	0.6613		#NA!	
PFTrDA	6.26	1.03	184322.87	A	0.0086	0.0079			
PFTrDA_2	6.26	1.03	1447.70	M	0.0086	0.0079	-8	50	
PFTeDA	6.43	1.00	156439.94	A	0.0062	0.0065			
PFTeDA_2	6.44	1.00	1023.07	A	0.0062	0.0065	5	50	
PFHxDA	6.74	1.05	69655.07	A	0.0683	0.0690			
PFHxDA_2	6.74	1.05	4808.92	A	0.0683	0.0690	1	50	
PFODA	7.00	1.09	57795.96	A	0.0277	0.0253			
PFODA_2	7.00	1.09	1464.82	A	0.0277	0.0253	-9	50	

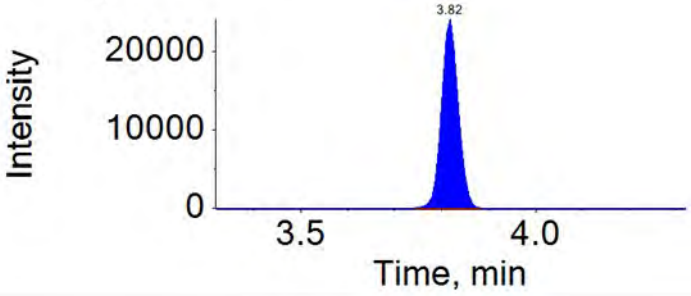
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

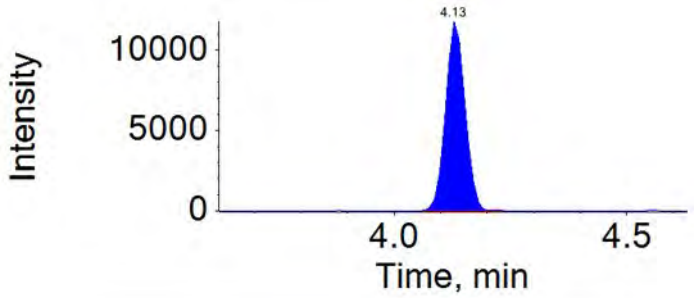
Component: PFBS
Primary Mass: 299.0 / 80.0



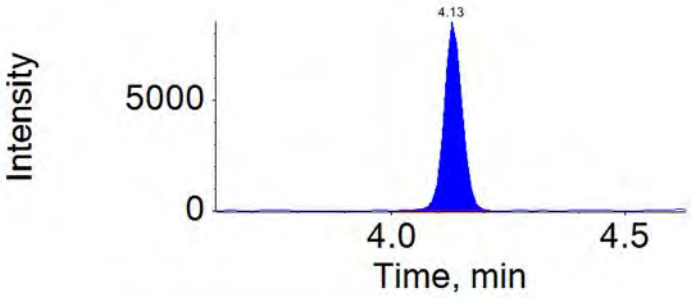
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



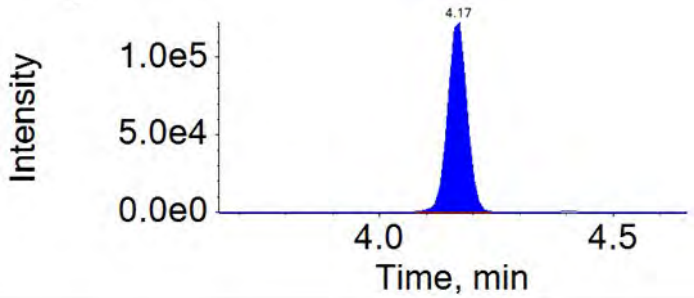
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



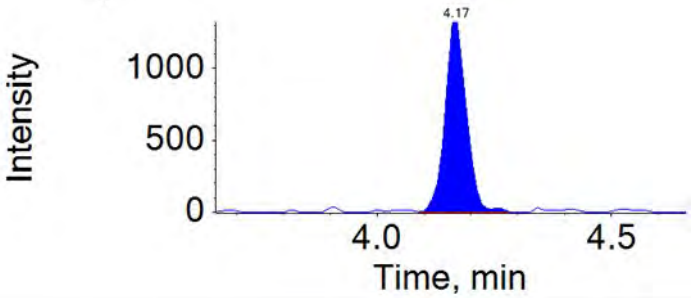
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



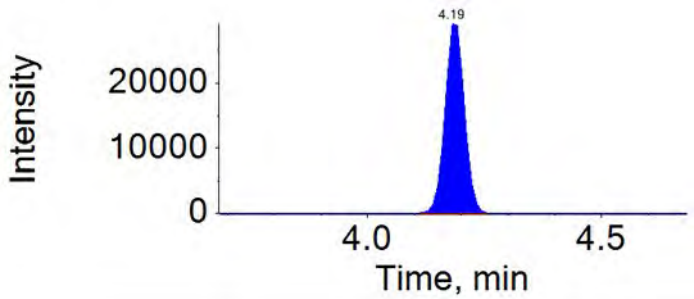
Component: PFHxA
Primary Mass: 313.0 / 269.0



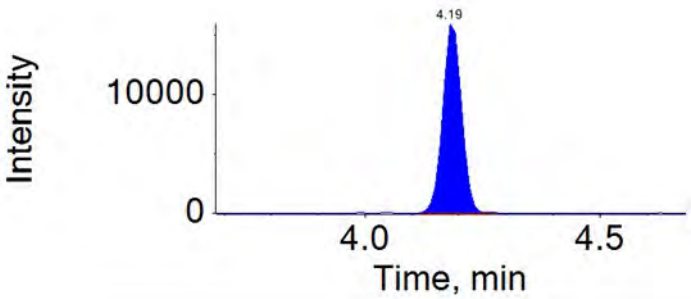
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



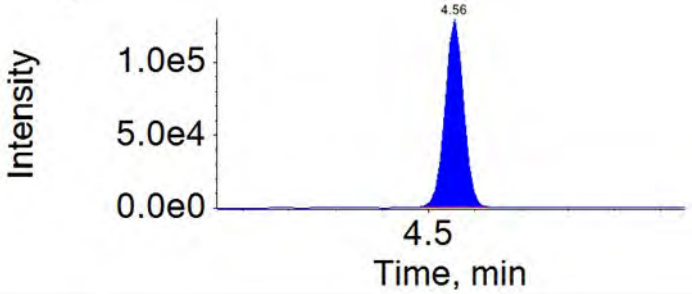
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



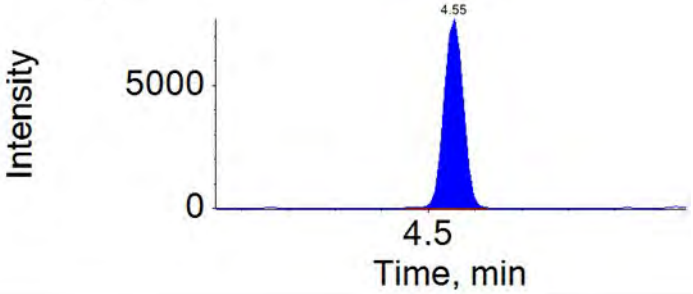
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

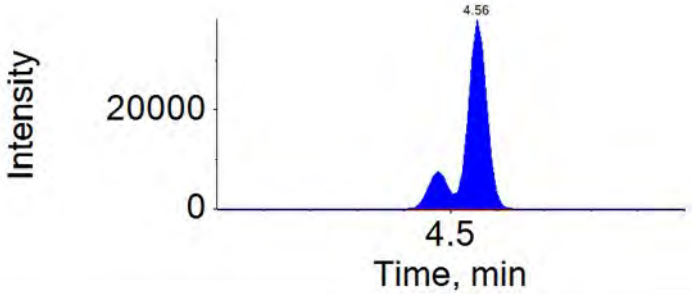
Component: PFHpA
Primary Mass: 363.0 / 319.0



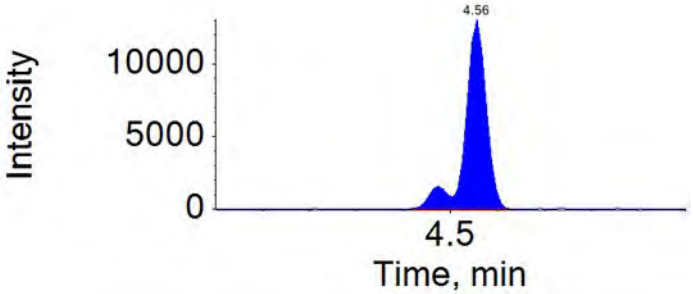
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



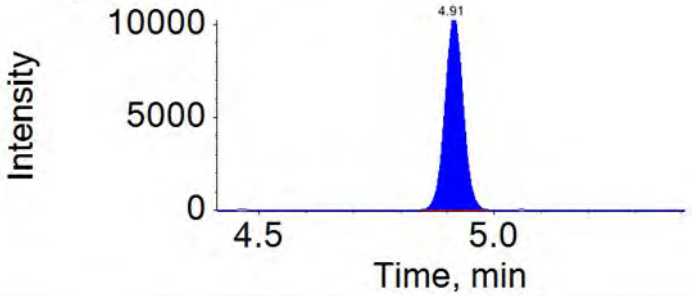
Component: PFHxS
Primary Mass: 399.0 / 80.0



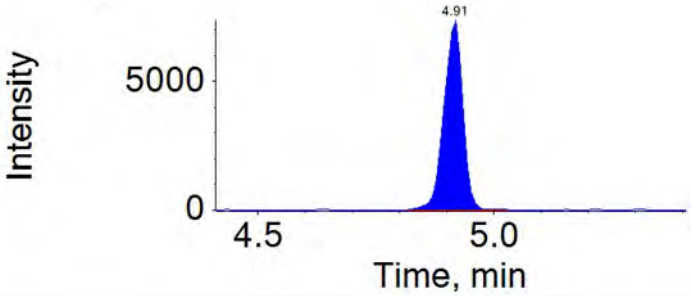
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



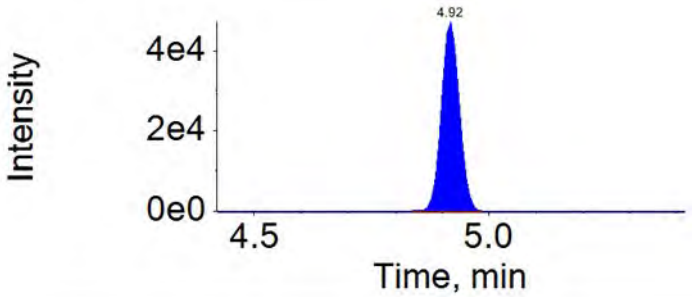
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



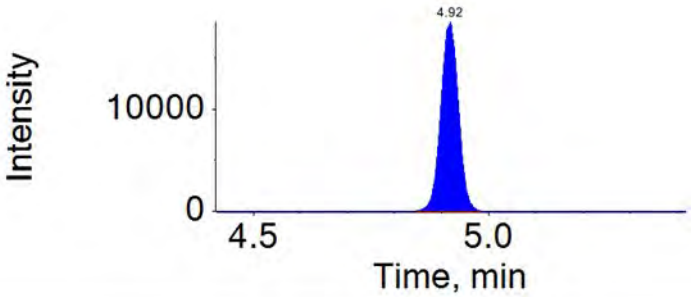
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



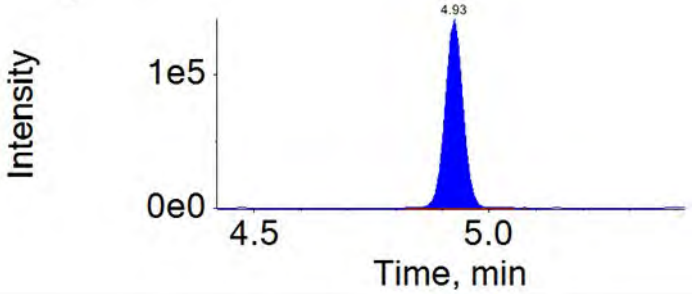
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



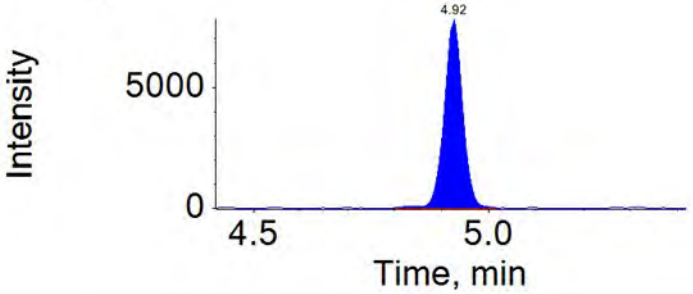
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

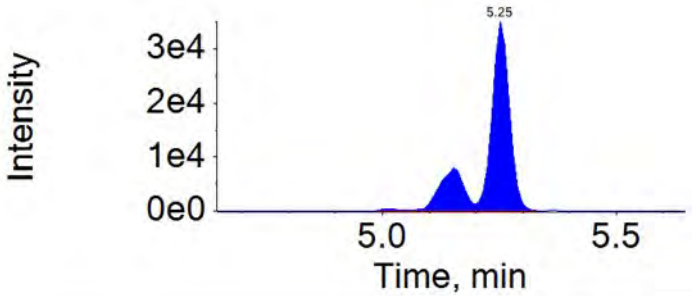
Component: PFOA
Primary Mass: 413.0 / 369.0



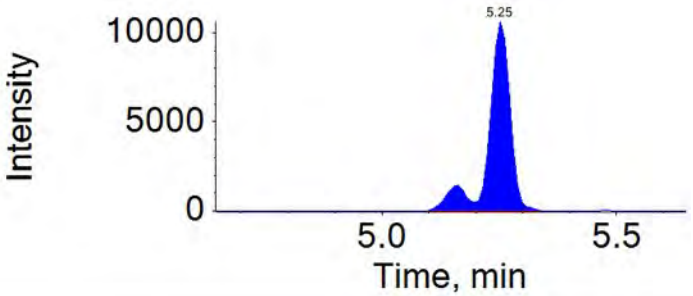
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



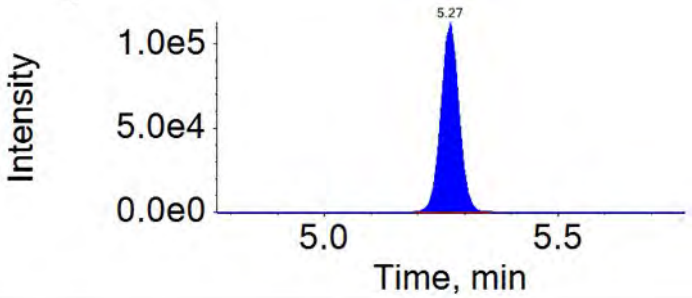
Component: PFOS
Primary Mass: 499.0 / 80.0



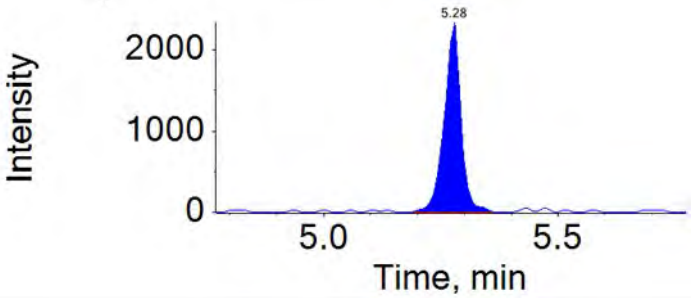
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



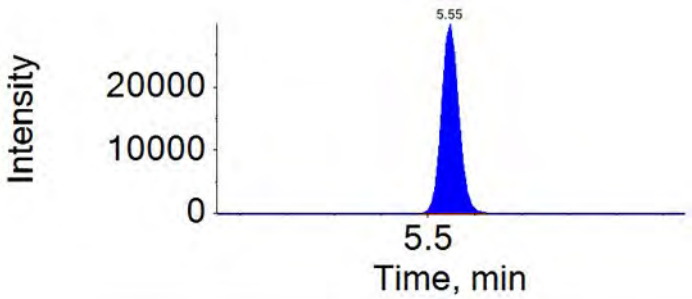
Component: PFNA
Primary Mass: 463.0 / 419.0



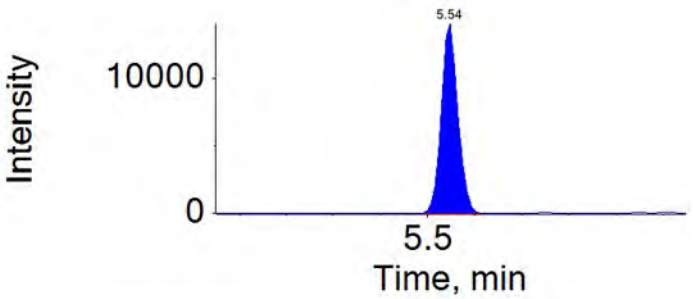
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



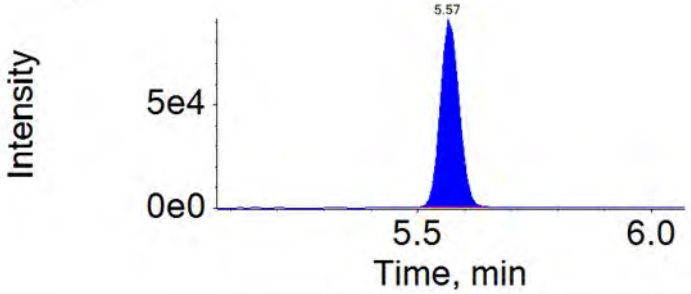
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



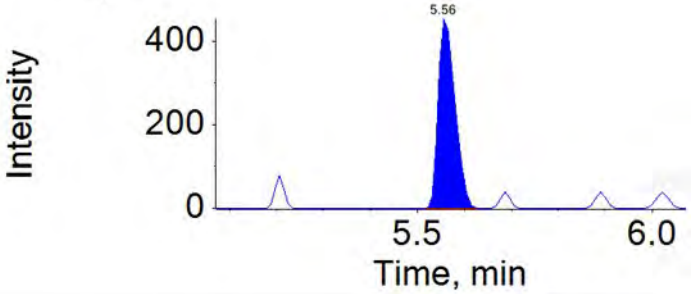
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

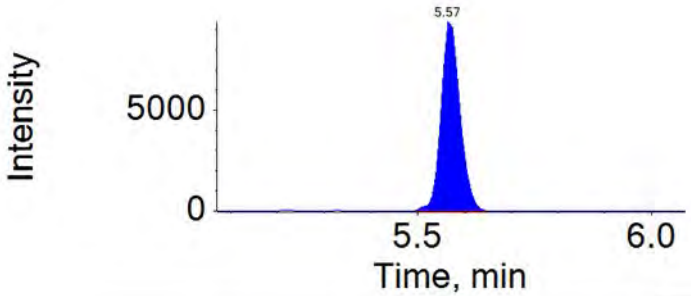
Component: PFDA
Primary Mass: 513.0 / 469.0



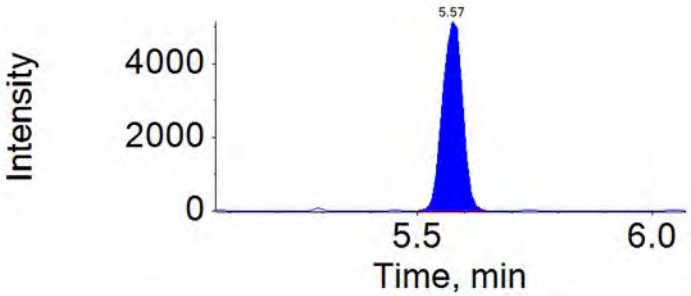
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



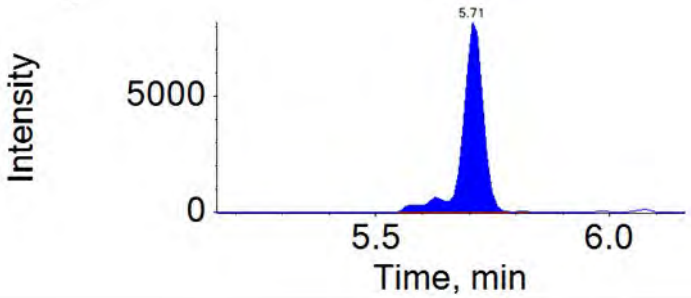
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



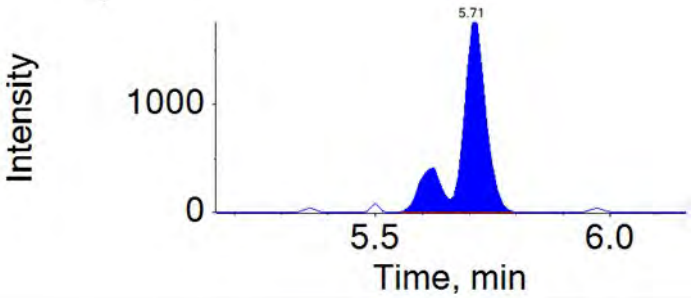
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



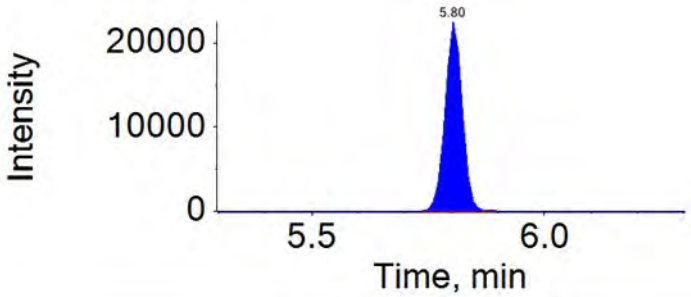
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



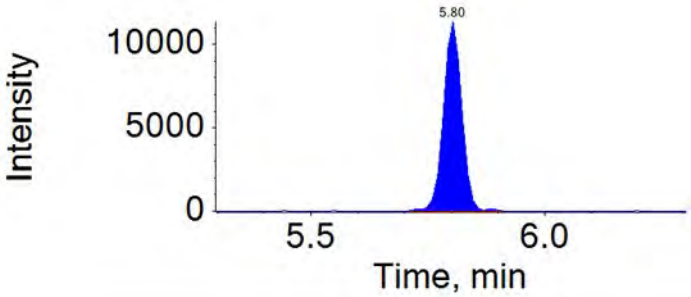
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



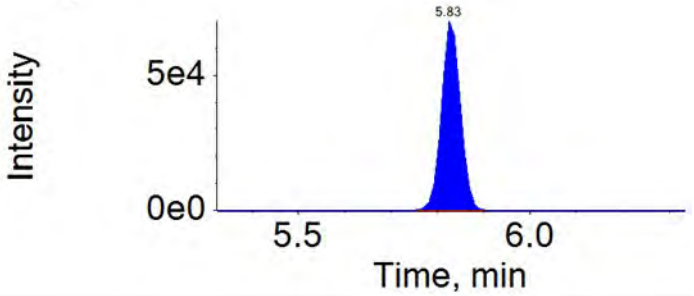
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



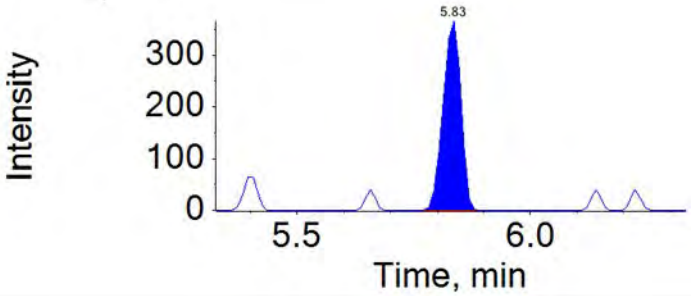
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

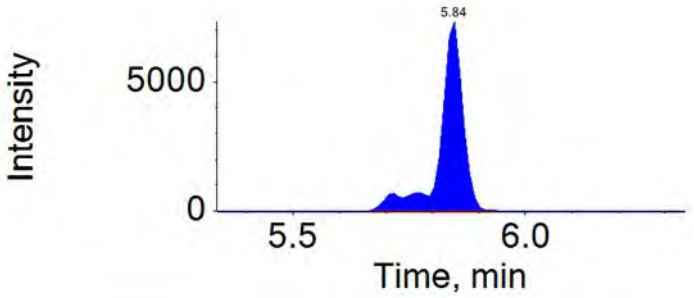
Component: PFUnDA
Primary Mass: 563.0 / 519.0



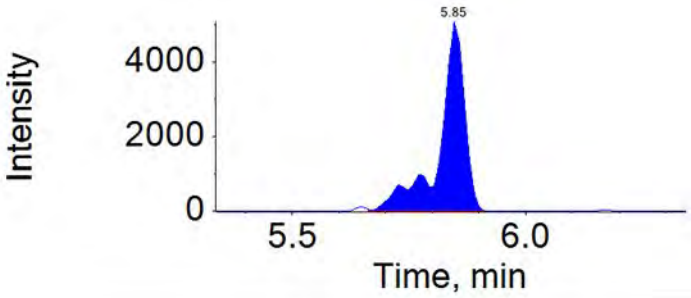
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



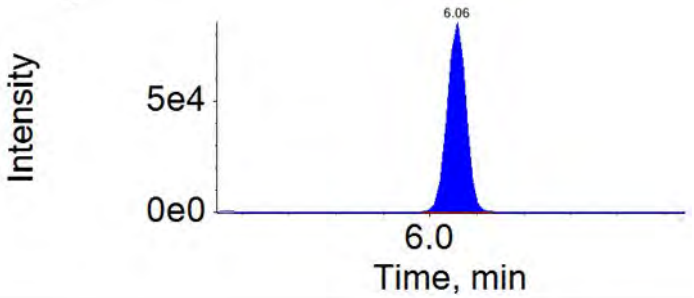
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



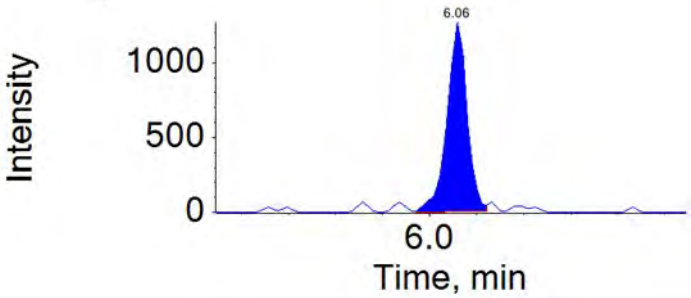
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



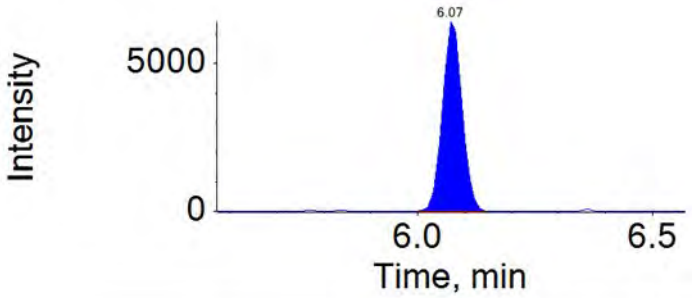
Component: PFDoDA
Primary Mass: 613.0 / 569.0



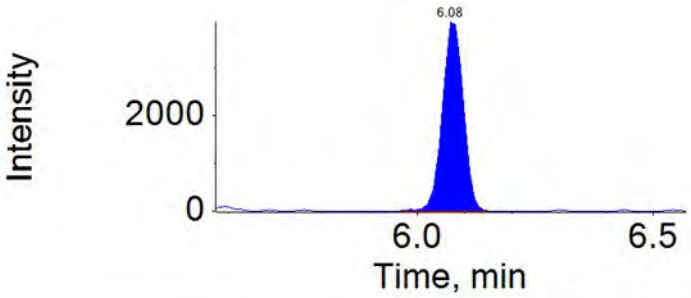
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



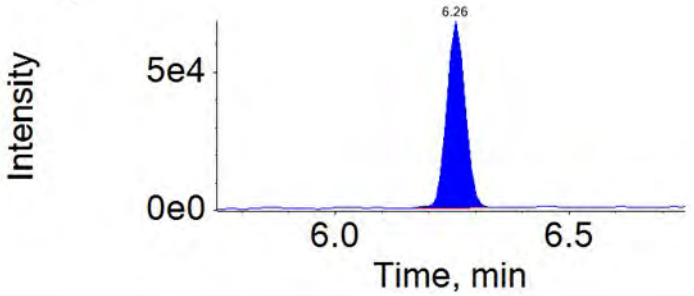
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



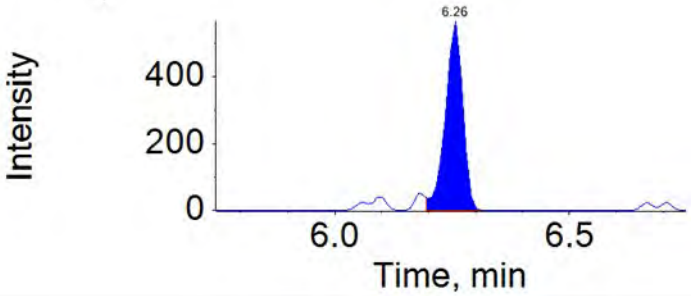
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

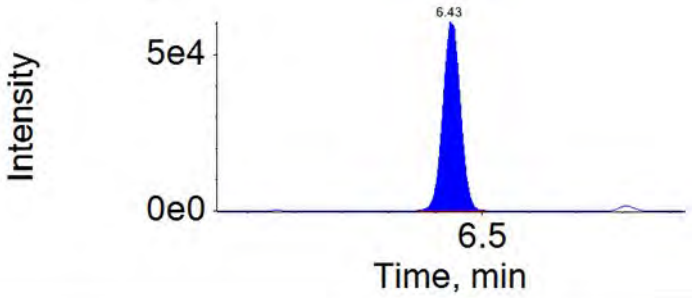
Component: PFTrDA
Primary Mass: 663.0 / 619.0



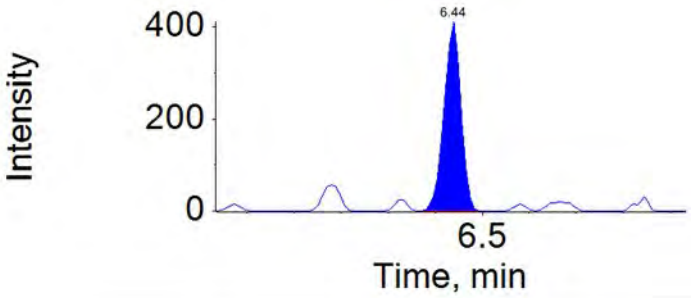
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



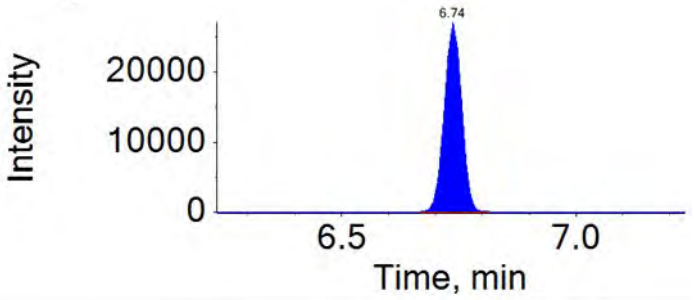
Component: PFTeDA
Primary Mass: 713.0 / 669.0



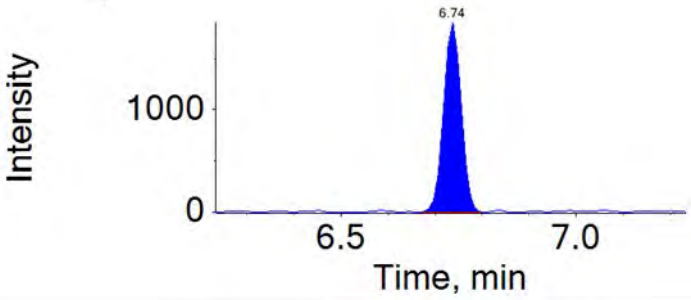
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



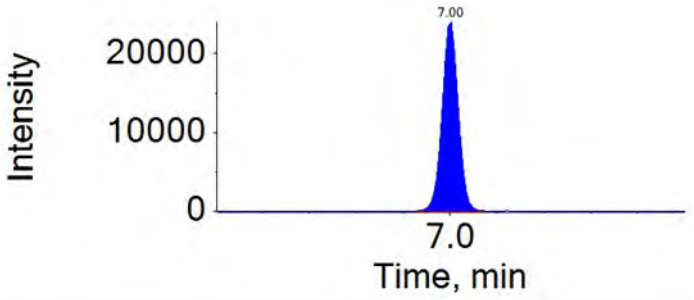
Component: PFHxDA
Primary Mass: 813.0 / 769.0



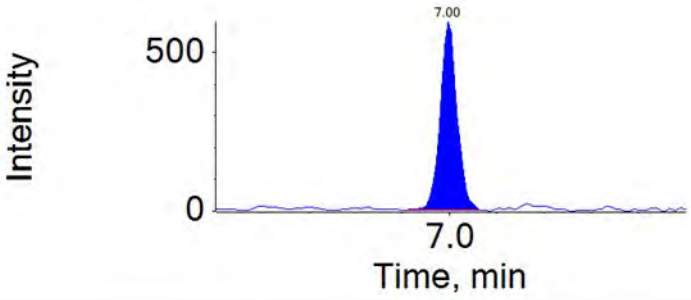
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL4			**Data File:**		18NOV12DCAL-45.wiff
Sample ID:	CALBRN41833B			**Acquis Date:**		2018-11-12T15:33:03
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	671568.1	659926.2	2	50	
13C2-PFOA	5.0	477519.7	450219.7	6	50	
13C4-PFOS	4.8	256143.3	249205.8	3	50	
13C2-PFDA	5.0	301327.2	278743.9	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	726396.0	13C3-PFBA	671568.1	1.082	5.000	4.849	97	70-130	
E13C5-PFPeA	716206.9	13C3-PFBA	671568.1	1.066	5.000	4.783	96	70-130	
E13C3-PFBS	425015.7	13C3-PFBA	671568.1	0.633	4.650	4.468	96	70-130	
E13C2-4:2-FTS	47246.4	13C2-PFOA	477519.7	0.099	4.670	4.407	94	70-130	
E13C5-PFHxA	641195.9	13C2-PFOA	477519.7	1.343	5.000	4.851	97	70-130	
E13C3-PFHxS	315722.6	13C2-PFOA	477519.7	0.661	4.730	4.537	96	70-130	
E13C4-PFHpA	509151.8	13C2-PFOA	477519.7	1.066	5.000	4.804	96	70-130	
E13C2-6:2-FTS	31883.3	13C2-PFOA	477519.7	0.067	4.750	4.467	94	70-130	
E13C8-PFOA	863597.3	13C2-PFOA	477519.7	1.809	5.000	4.983	100	70-130	
E13C8-PFOS	267380.8	13C4-PFOS	256143.3	1.044	4.780	4.625	97	70-130	
E13C9-PFNA	485570.4	13C4-PFOS	256143.3	1.896	5.000	5.285	106	70-130	
E13C6-PFDA	612056.5	13C2-PFDA	301327.2	2.031	5.000	4.740	95	70-130	
E13C2-8:2-FTS	27253.5	13C2-PFDA	301327.2	0.090	4.790	4.511	94	70-130	
E13C8-PFOSA	607762.0	13C2-PFDA	301327.2	2.017	5.000	4.472	89	70-130	
Ed3-NMeFOSAA	72788.0	13C2-PFDA	301327.2	0.242	5.000	4.360	87	70-130	
E13C7-PFUnDA	232014.1	13C2-PFDA	301327.2	0.770	5.000	4.470	89	70-130	
Ed5-NEtFOSAA	65478.0	13C2-PFDA	301327.2	0.217	5.000	4.597	92	70-130	
E13C2-PFDoDA	521514.1	13C2-PFDA	301327.2	1.731	5.000	4.494	90	70-130	
Ed7-NMePFOSAE	327796.4	13C2-PFDA	301327.2	1.088	5.000	4.708	94	70-130	
Ed3-NMePFOSA	70122.5	13C2-PFDA	301327.2	0.233	5.000	4.228	85	70-130	
Ed9-NEtPFOSAE	259467.4	13C2-PFDA	301327.2	0.861	5.000	4.479	90	70-130	
Ed5-NEtPFOSA	55177.3	13C2-PFDA	301327.2	0.183	5.000	4.296	86	70-130	
E13C2-PFTeDA	392356.6	13C2-PFDA	301327.2	1.302	5.000	4.571	91	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

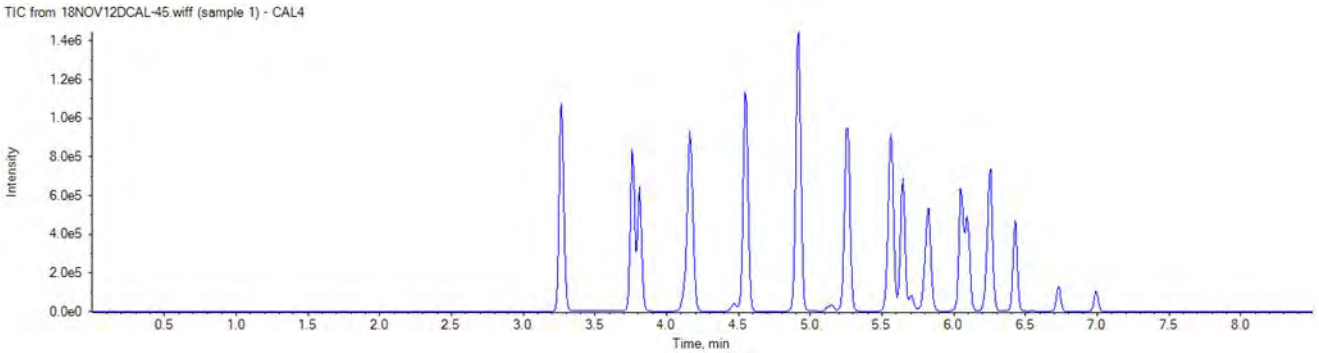
Analyte Quantitation Peak Table

Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-45.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	1068414.9		A	13C4-PFBA	3.26	726396.0	1.471	8.148
PFPeA	3.76	1.000	1075643.5		A	13C5-PFPeA	3.76	716206.9	1.502	8.694
PFBS	3.81	1.000	617045.6		A	13C3-PFBS	3.81	425015.7	1.452	6.906
4:2-FTS	4.13	1.000	126396.5		A	13C2-4:2-FTS	4.13	47246.4	2.675	7.263
PFHxA	4.16	1.000	1265231.1		A	13C5-PFHxA	4.16	641195.9	1.973	8.239
PFPeS	4.18	1.100	328681.7		A	13C3-PFBS	3.81	425015.7	0.773	7.508
PFHpA	4.55	1.000	1318774.5		A	13C4-PFHpA	4.55	509151.8	2.590	8.586
PFHxS	4.55	1.000	479291.0		M	13C3-PFHxS	4.55	315722.6	1.518	7.361
6:2-FTS	4.91	1.000	107470.6		A	13C2-6:2-FTS	4.91	31883.3	3.371	8.157
PFHpS	4.91	1.080	434949.2		A	13C3-PFHxS	4.55	315722.6	1.378	7.252
PFOA	4.92	1.000	1327086.1		A	13C8-PFOA	4.92	863597.3	1.537	8.207
PFOS	5.25	1.000	448833.8		M	13C8-PFOS	5.25	267380.8	1.679	7.341
PFNA	5.26	1.000	1106664.2		A	13C9-PFNA	5.26	485570.4	2.279	8.218
PFNS	5.54	1.060	269712.3		A	13C8-PFOS	5.25	267380.8	1.009	7.057
PFDA	5.56	1.000	941985.3		M	13C6-PFDA	5.56	612056.5	1.539	8.159
8:2-FTS	5.57	1.000	80922.6		A	13C2-8:2-FTS	5.57	27253.5	2.969	6.923
PFOSA	5.64	1.000	927660.5		A	13C8-PFOSA	5.64	607762.0	1.526	7.455
NMeFOSAA	5.70	1.000	103649.1		A	d3-NMeFOSAA	5.70	72788.0	1.424	8.048
PFDS	5.80	1.110	224031.2		A	13C8-PFOS	5.25	267380.8	0.838	7.592
PFUnDA	5.82	1.000	768010.8		A	13C7-PFUnDA	5.82	232014.1	3.310	8.654
NEtFOSAA	5.84	1.000	94877.8		A	d5-NEtFOSAA	5.83	65478.0	1.449	7.596
PFDoDA	6.05	1.000	803646.8		A	13C2-PFDoDA	6.05	521514.1	1.541	7.847
10:2-FTS	6.07	1.090	56040.8		A	13C2-8:2-FTS	5.57	27253.5	2.056	6.849
NMePFOSAE	6.10	1.000	618314.4		M	d7-NMePFOSAE	6.09	327796.4	1.886	7.850
NMePFOSA	6.10	1.000	114415.9		M	d3-NMePFOSA	6.10	70122.5	1.632	8.049
PFDoS	6.22	1.190	117663.3		A	13C8-PFOS	5.25	267380.8	0.440	7.707
NEtPFOSAE	6.25	1.000	673196.1		A	d9-NEtPFOSAE	6.24	259467.4	2.595	8.324
NEtPFOSA	6.27	1.000	99354.1		M	d5-NEtPFOSA	6.26	55177.3	1.801	8.269
PFTrDA	6.25	1.030	674140.3		A	13C2-PFDoDA	6.05	521514.1	1.293	8.159
PFTeDA	6.43	1.000	571926.7		A	13C2-PFTeDA	6.43	392356.6	1.458	8.171
PFHxDA	6.73	1.050	256654.3		A	13C2-PFTeDA	6.43	392356.6	0.654	7.793
PFODA	6.99	1.090	219359.6		A	13C2-PFTeDA	6.43	392356.6	0.559	7.786

Total Ion Chromatogram

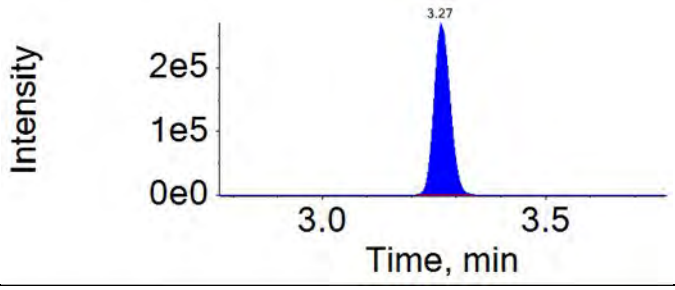


APPROVED
By MCD at 6:33 pm, 11/12/18

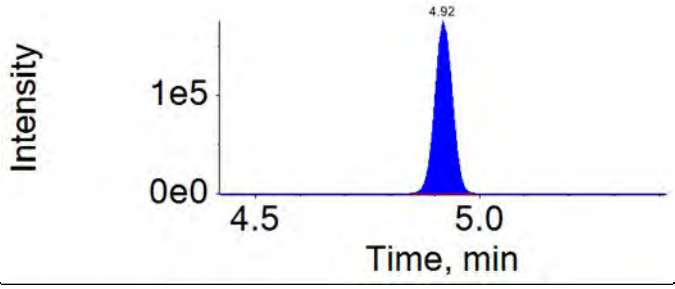
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

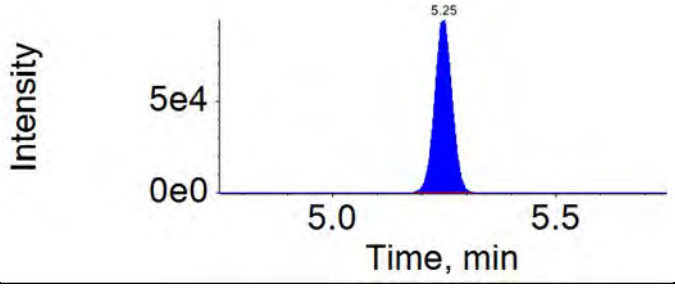
Injection Standard: 13C3-PFBA
216.0 / 172.0



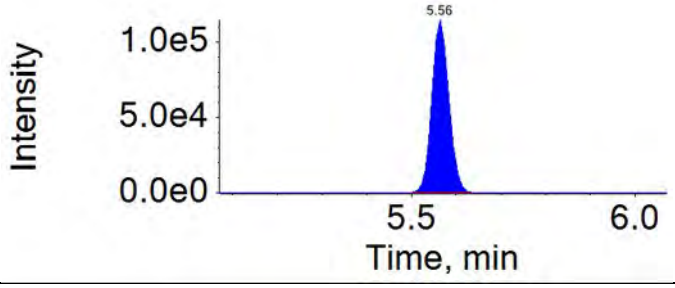
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

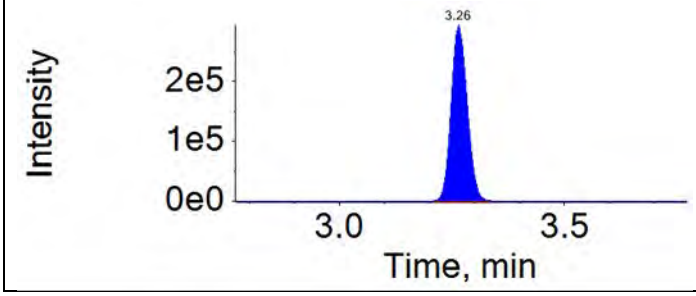


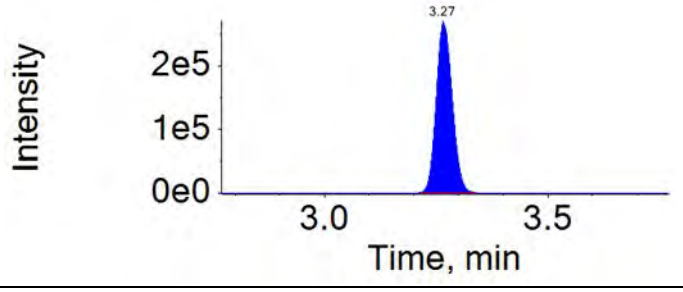
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

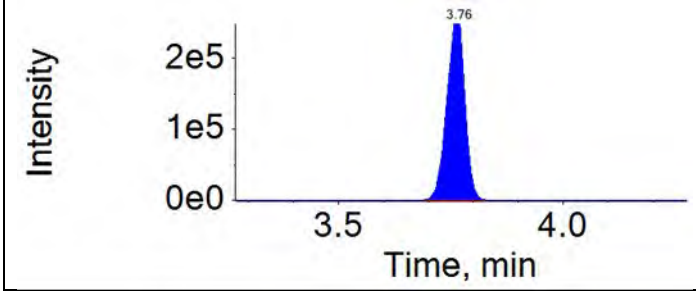
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

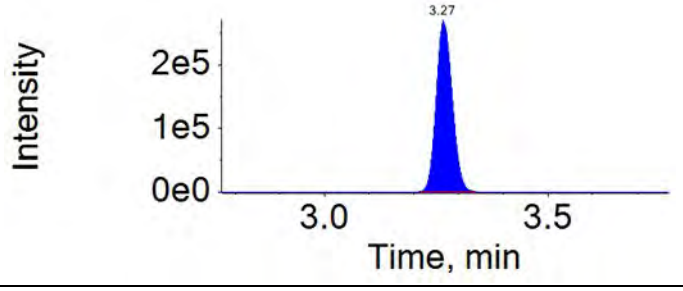
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



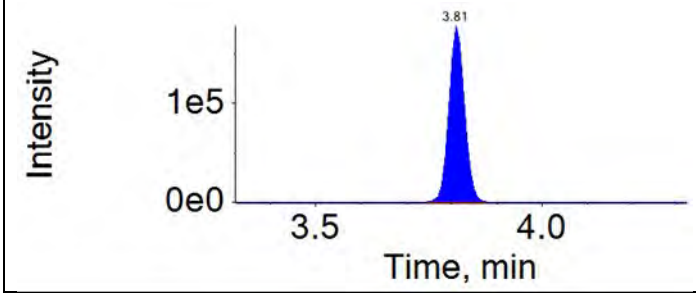


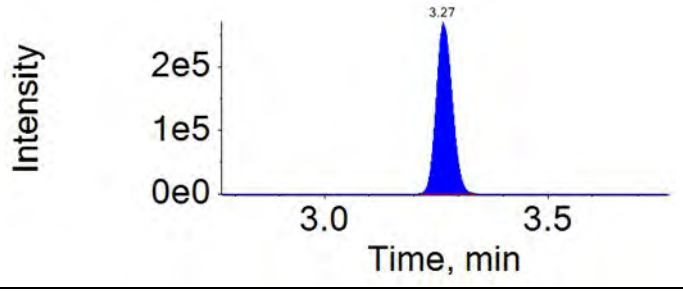
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



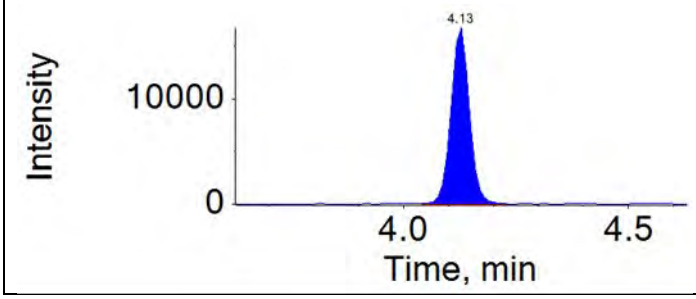


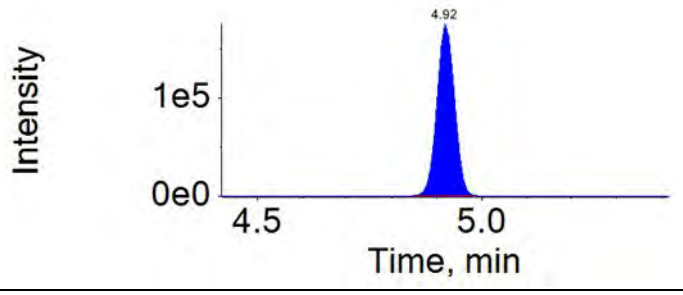
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



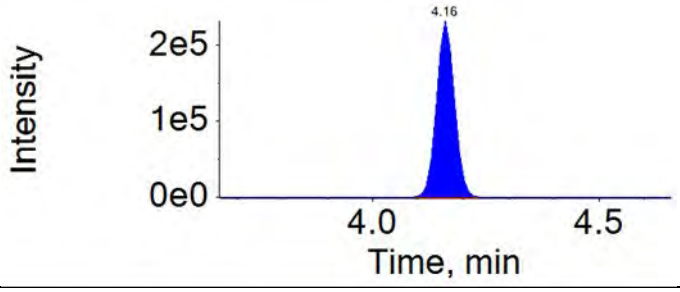
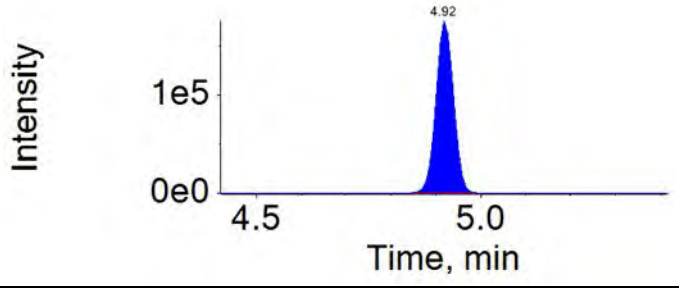


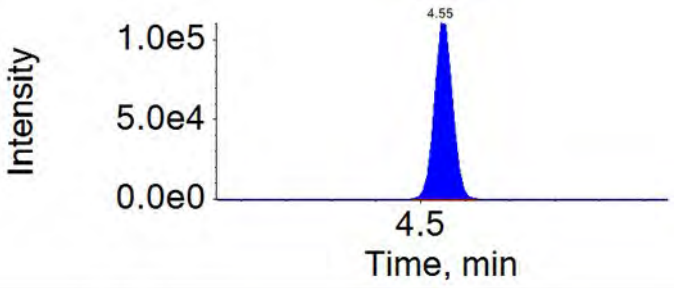
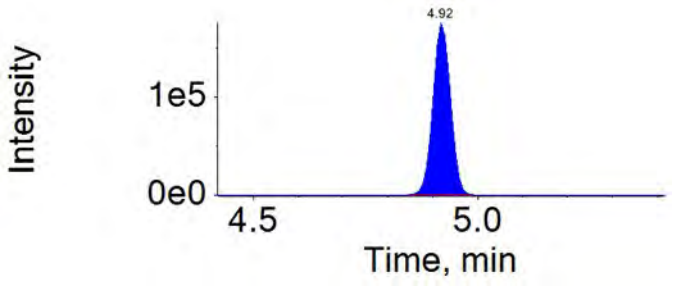
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

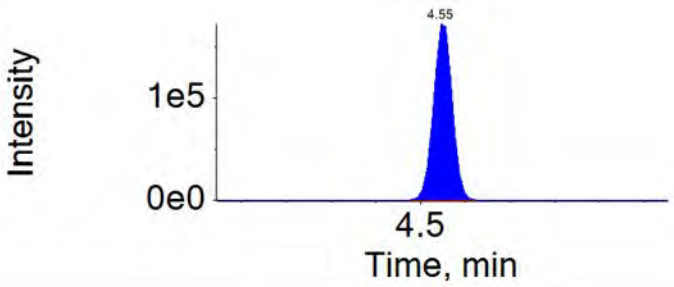
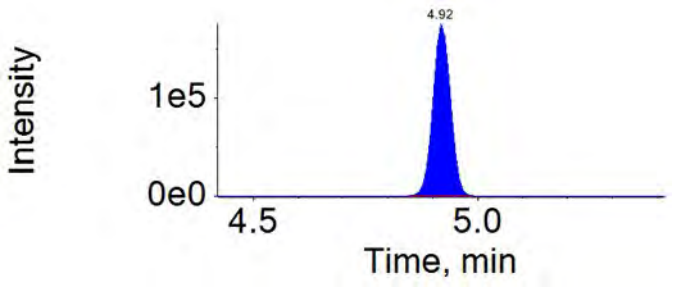


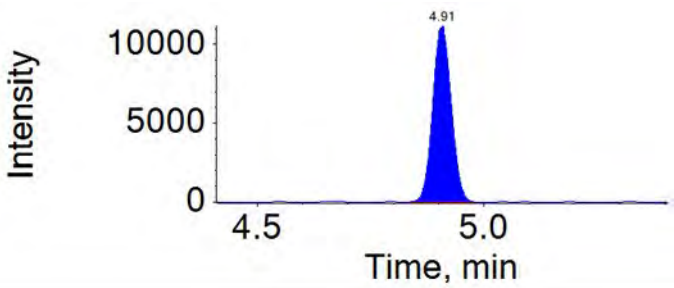
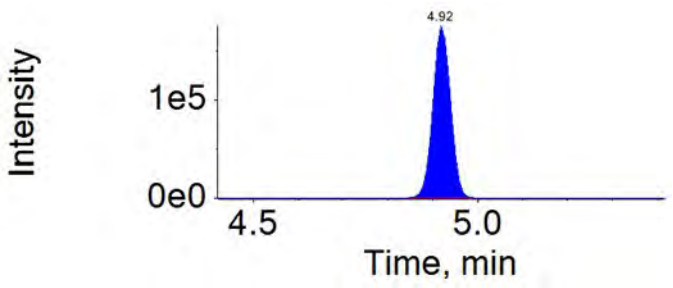


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

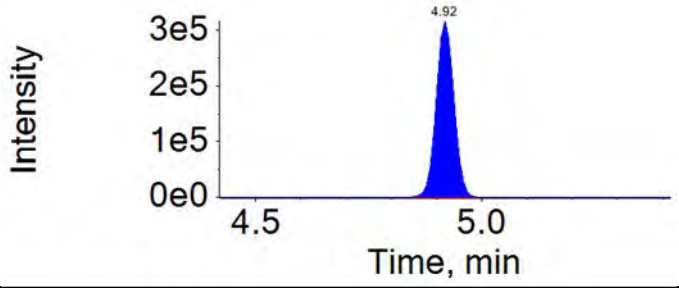
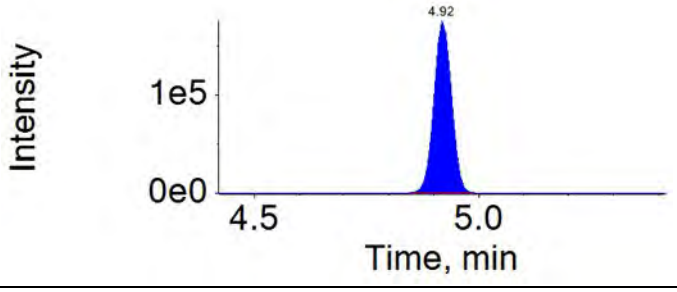
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

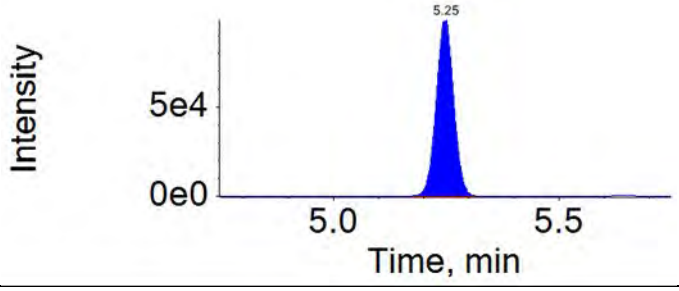
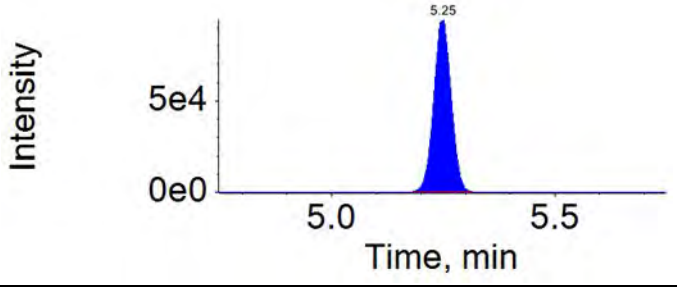
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

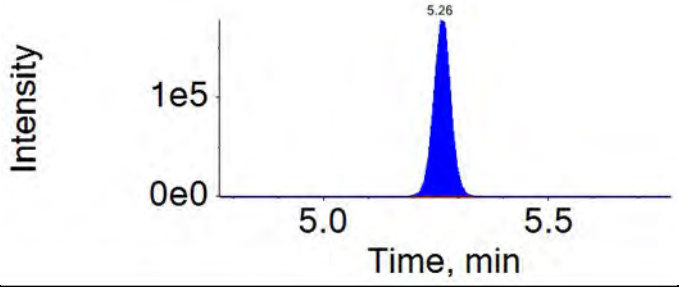
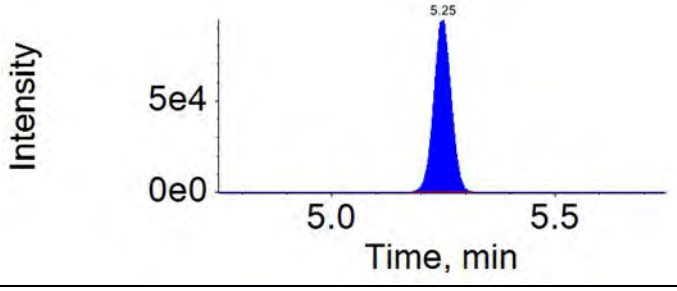
APPROVED
By MCD at 6:33 pm, 11/12/18

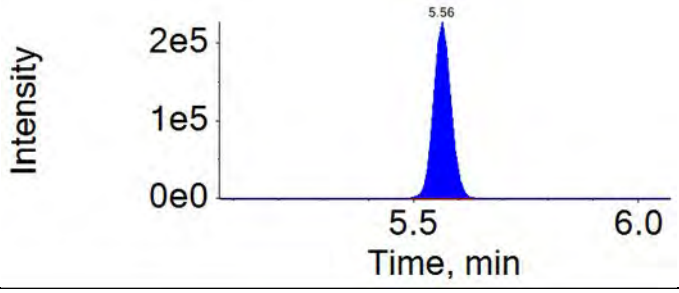
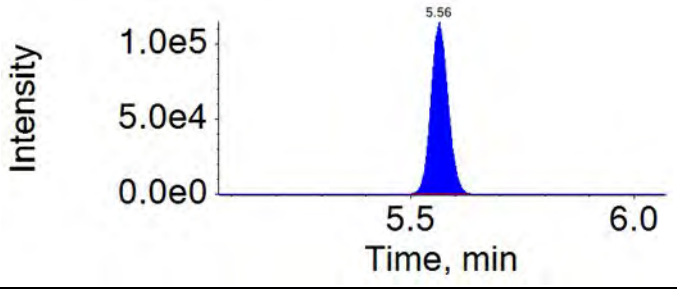
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

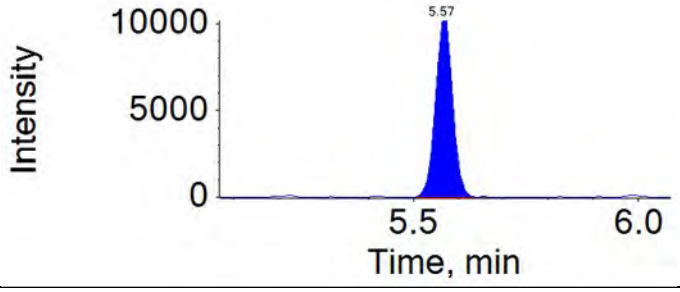
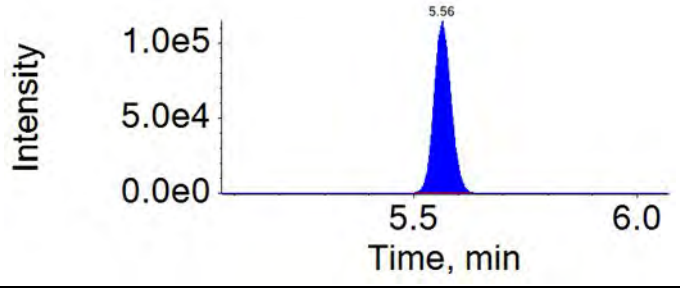
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

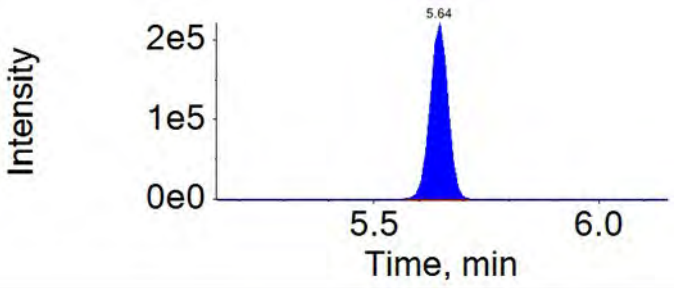
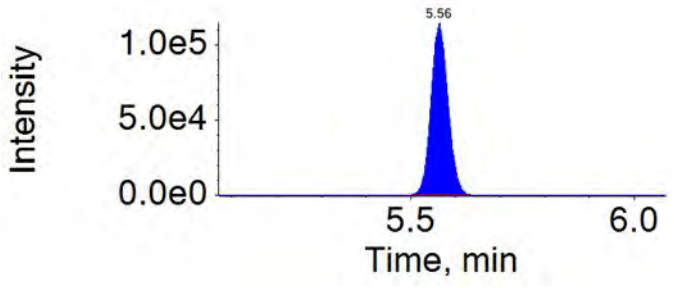
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

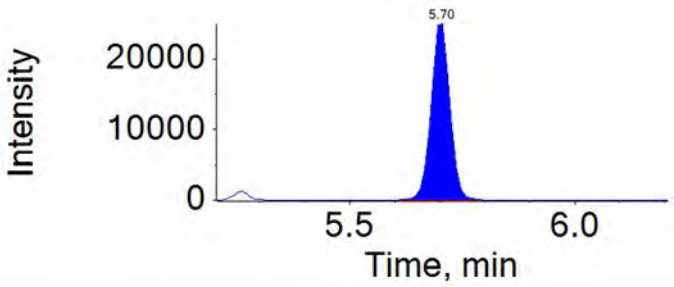
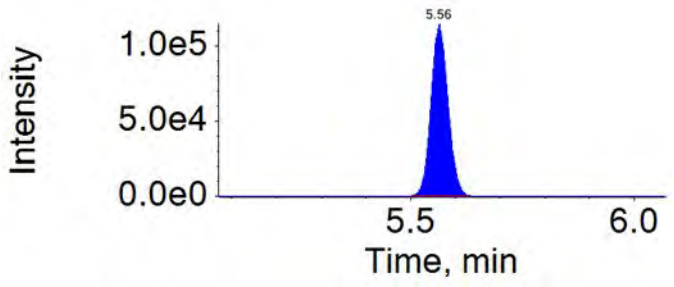
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

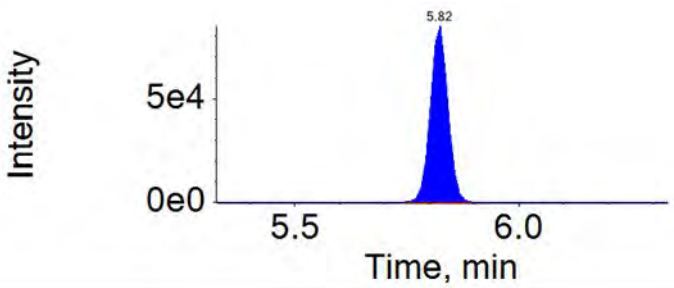
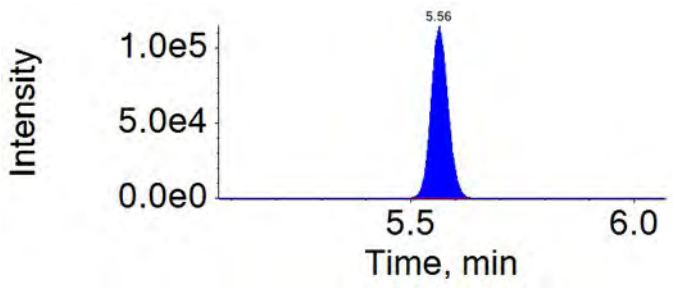
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

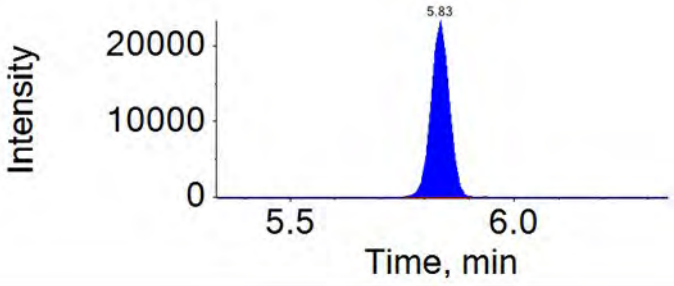
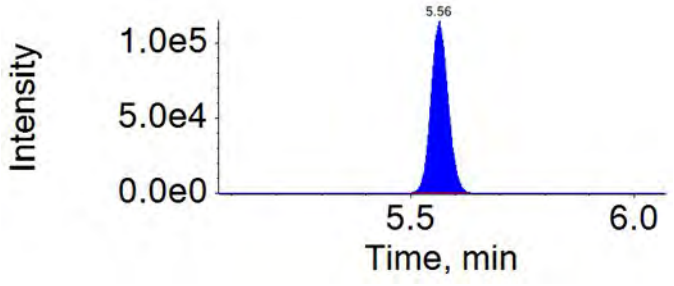
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

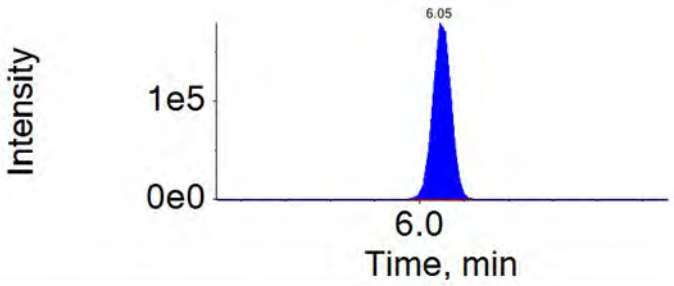
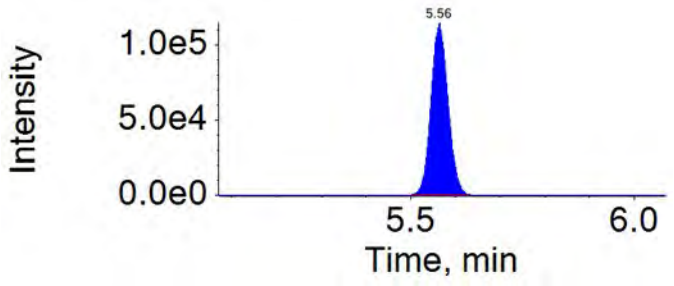
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

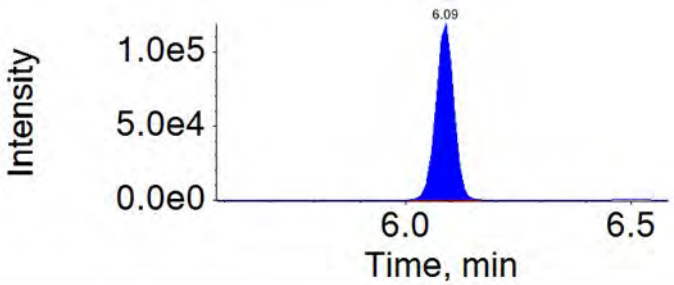
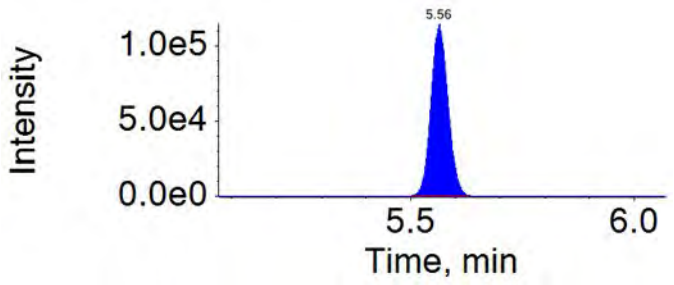
APPROVED
By MCD at 6:33 pm, 11/12/18

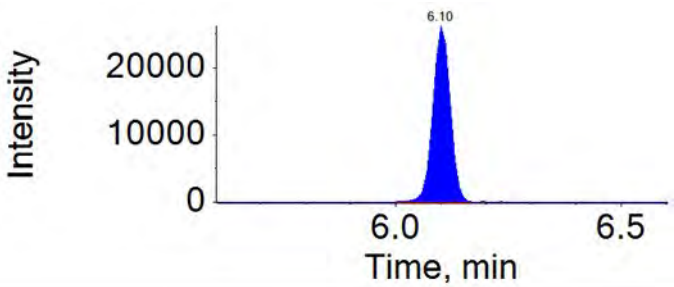
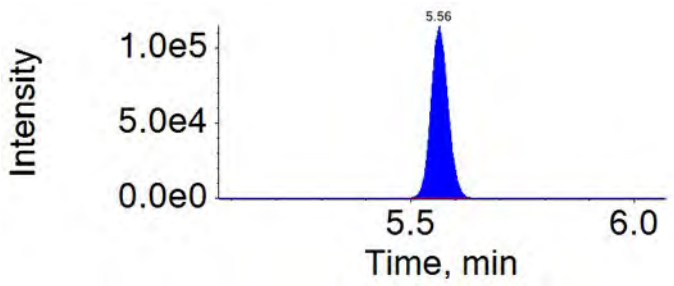
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

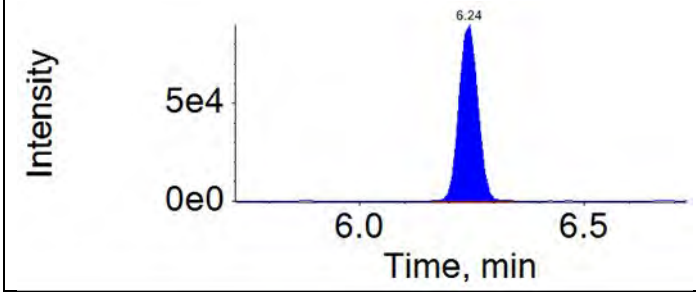
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

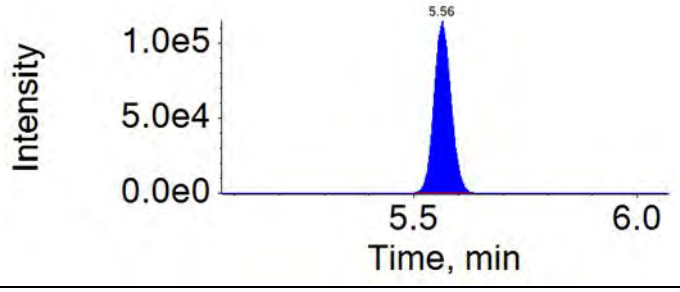
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

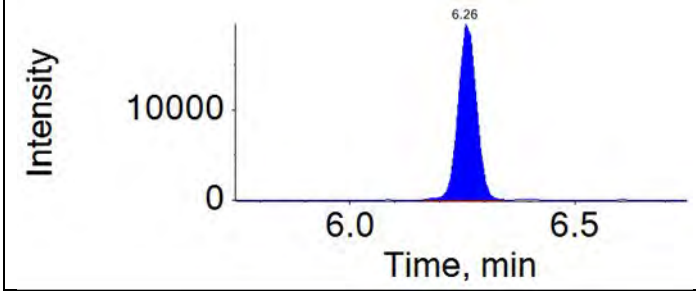
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

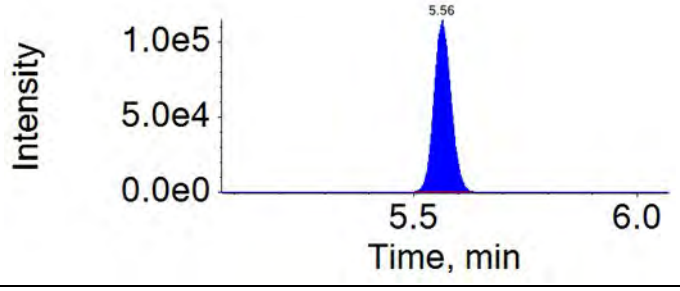
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



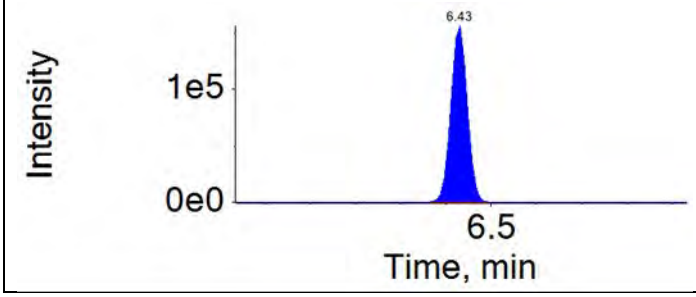


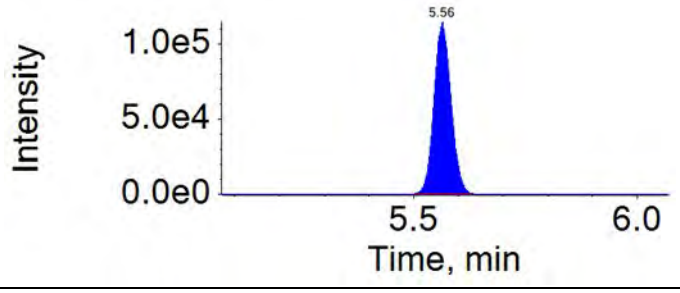
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

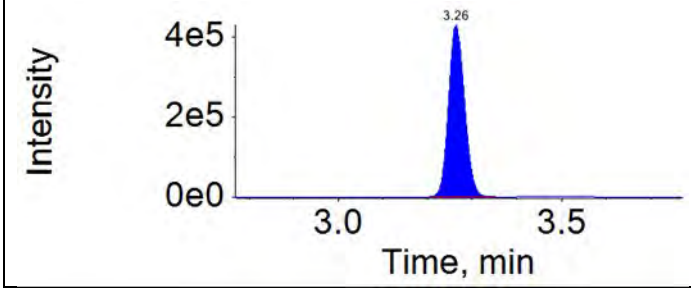
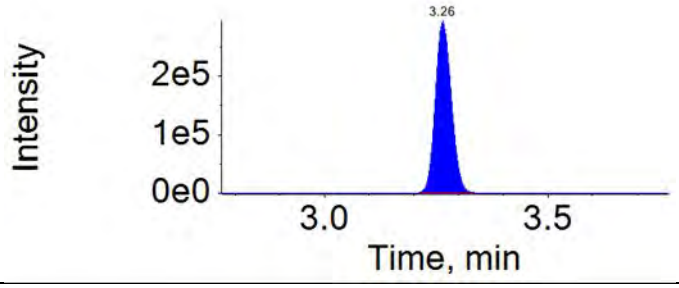


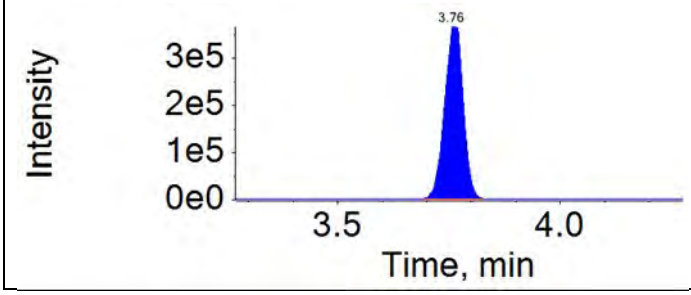
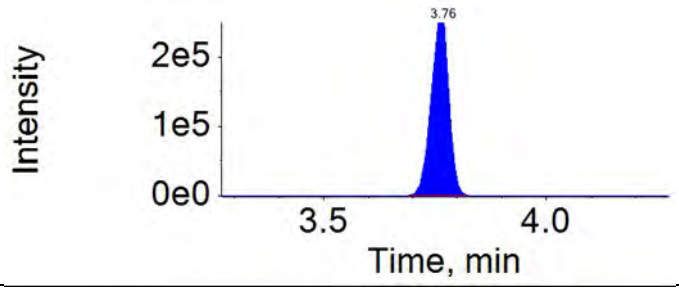


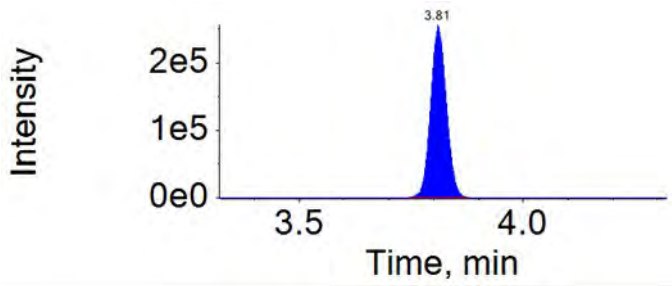
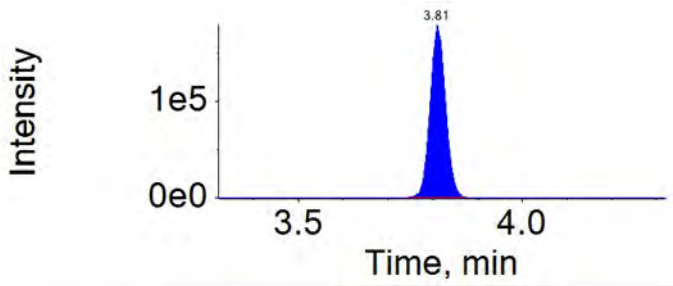
APPROVED
By MCD at 6:33 pm, 11/12/18

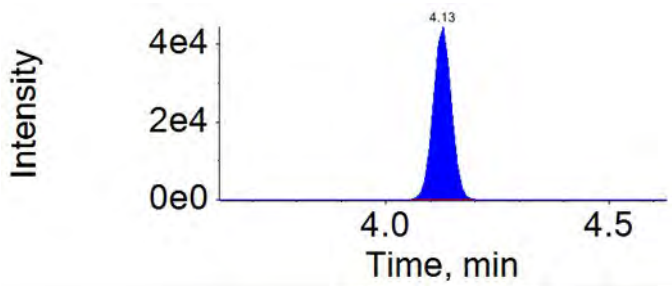
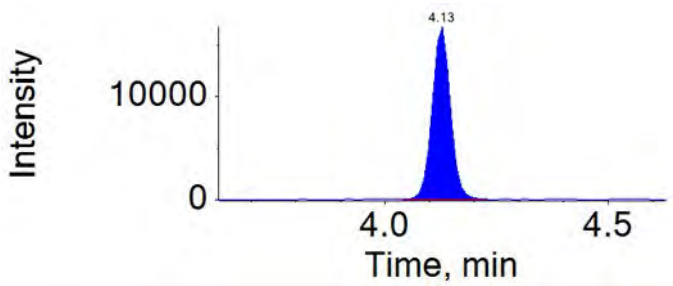
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

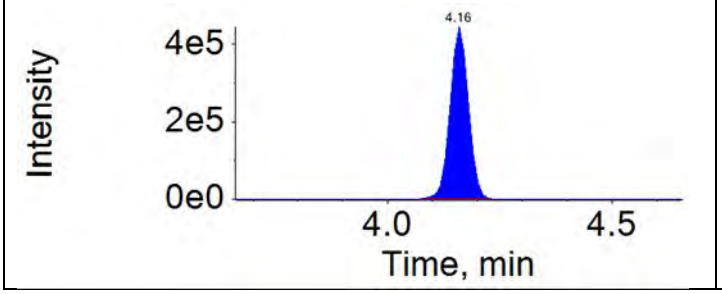
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

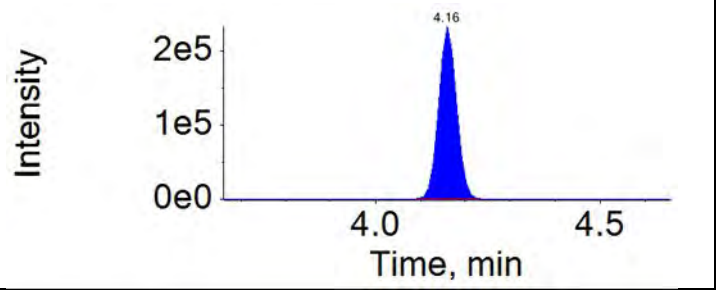
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

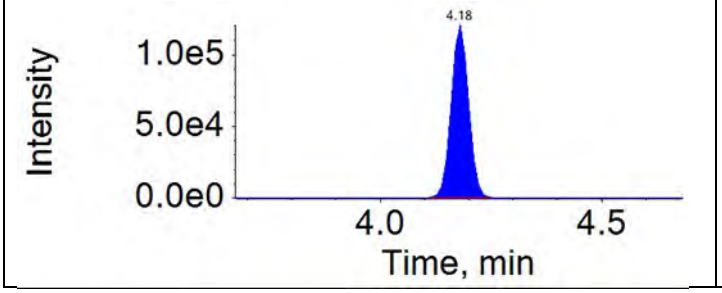
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

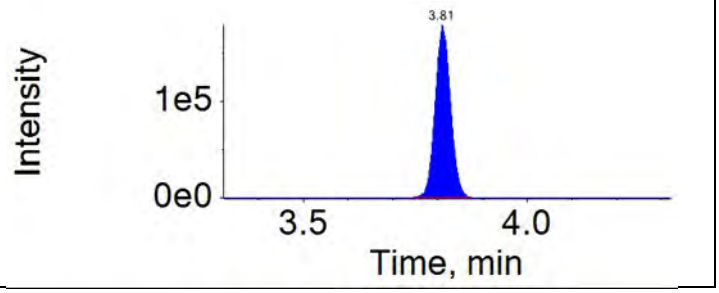
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



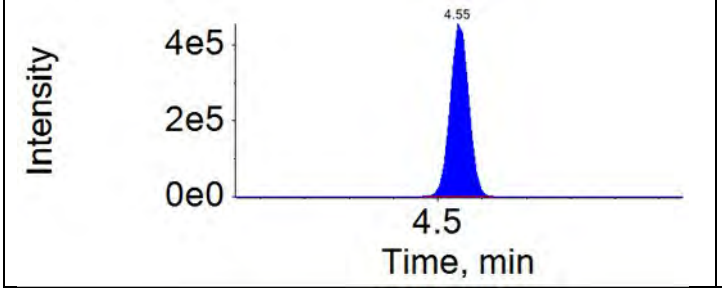


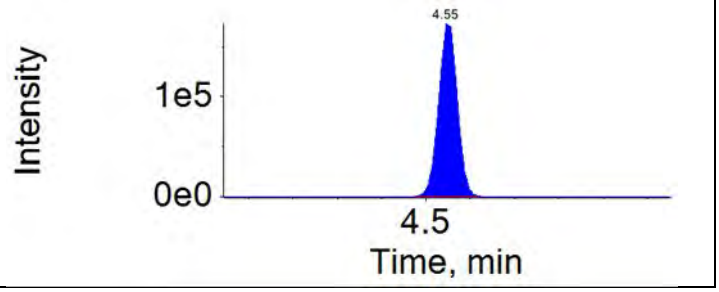
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



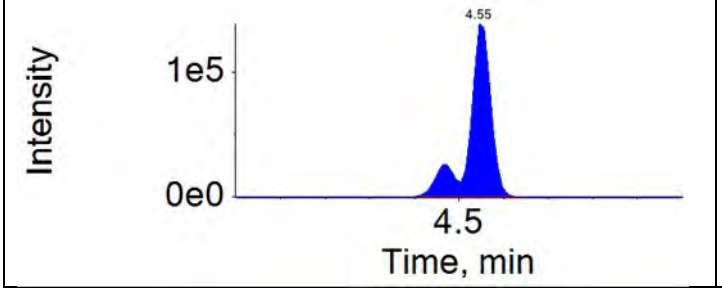


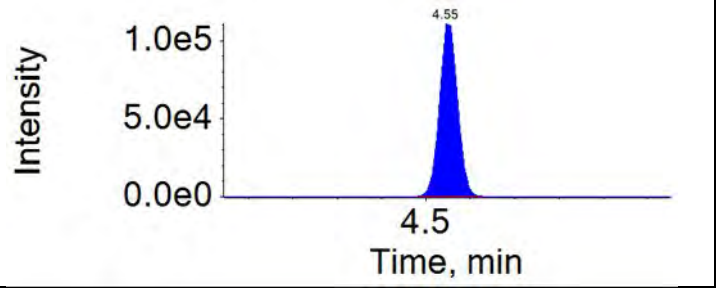
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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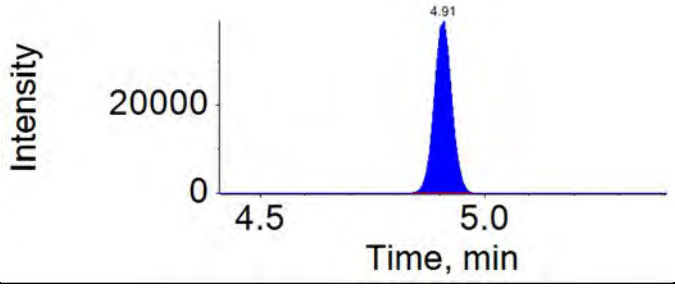
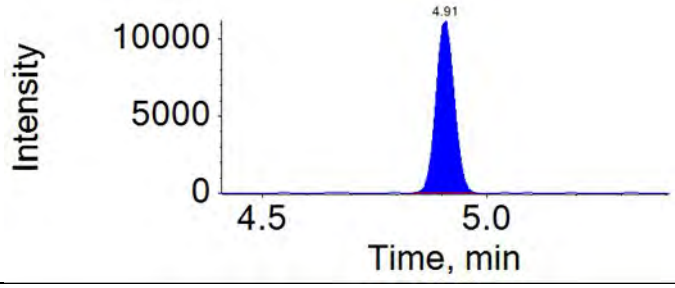
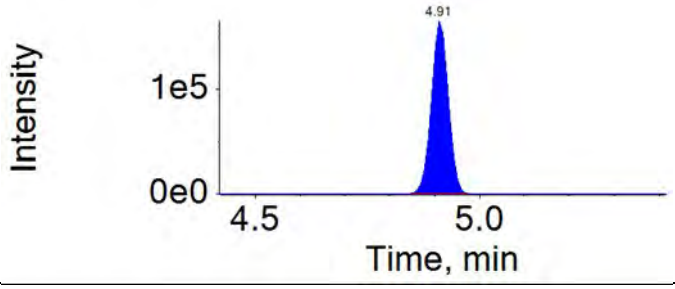
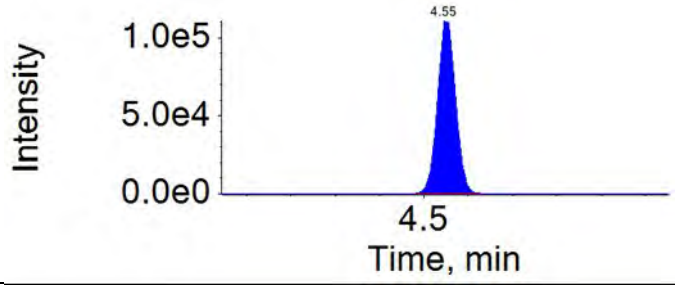
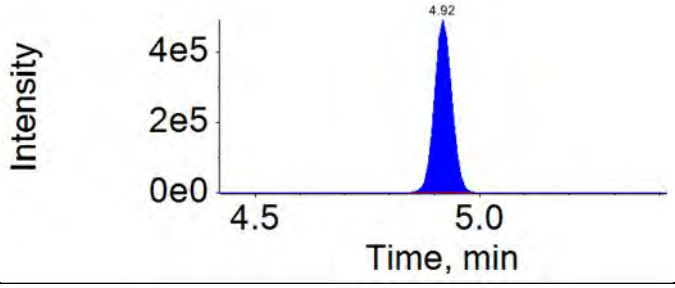
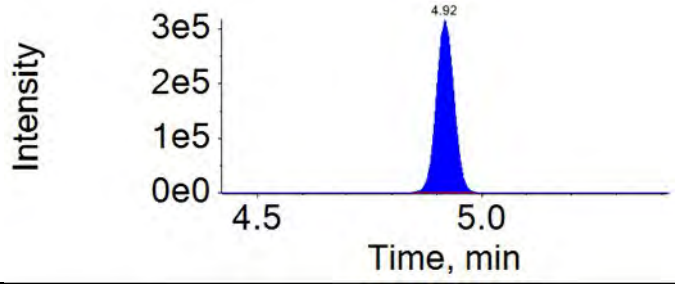
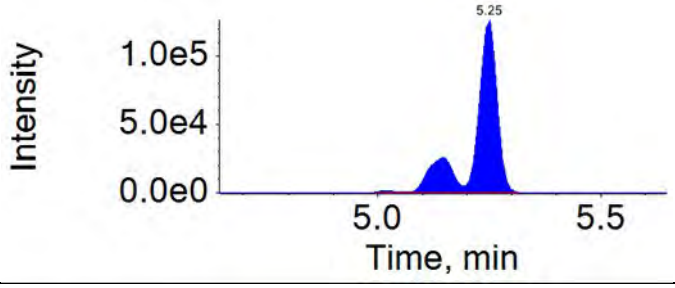
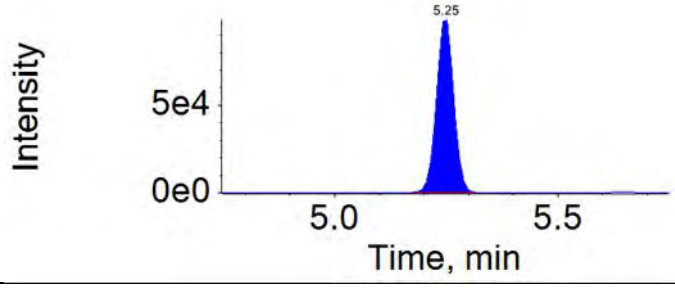
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

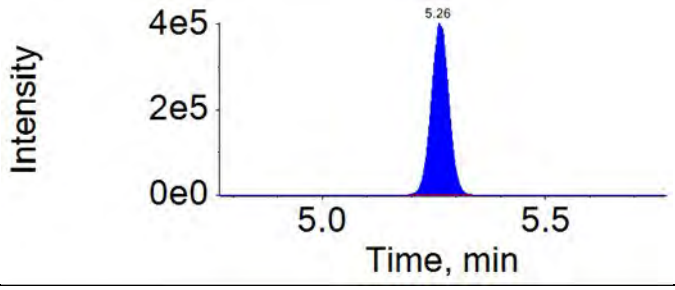
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

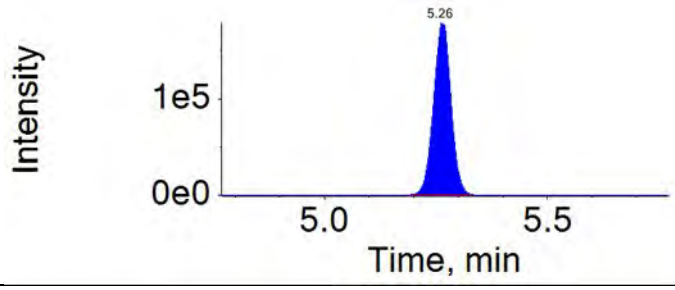
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

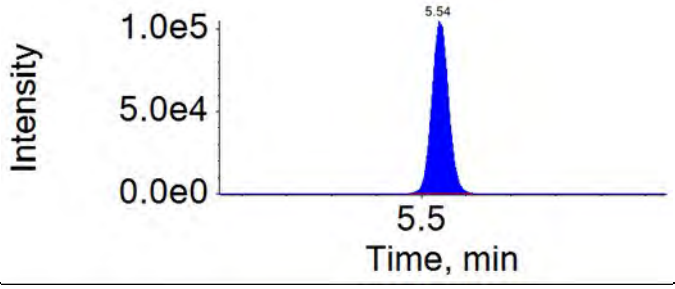
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

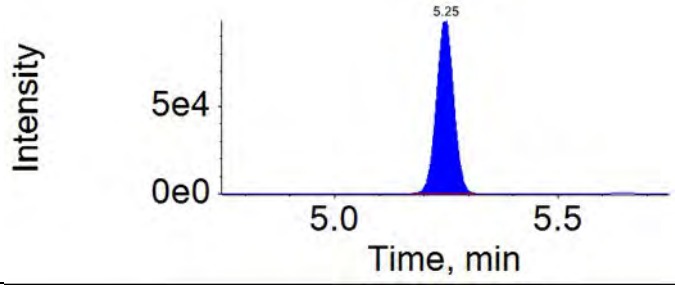
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



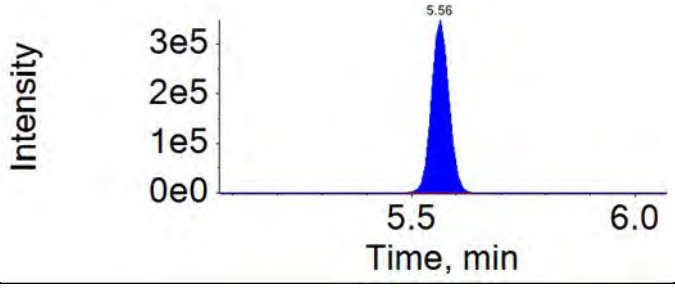


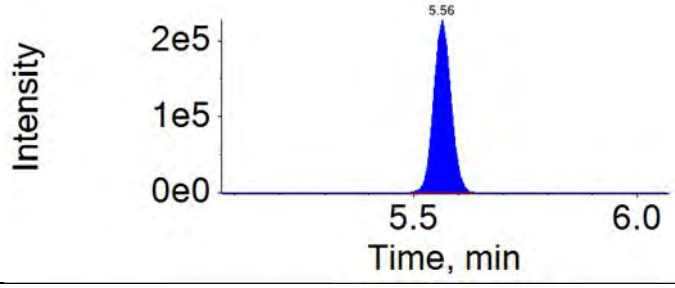
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



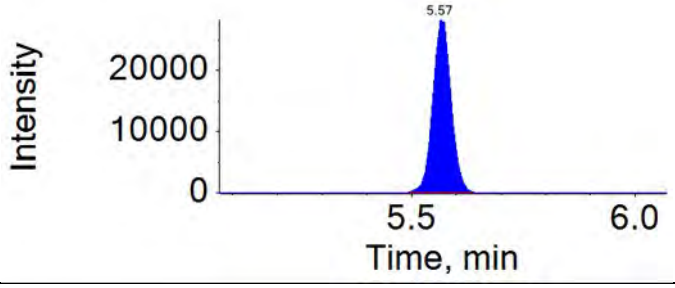


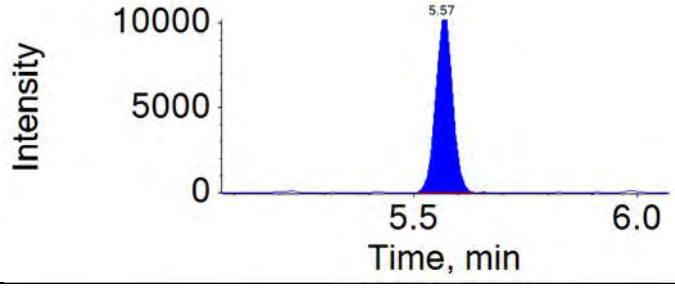
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



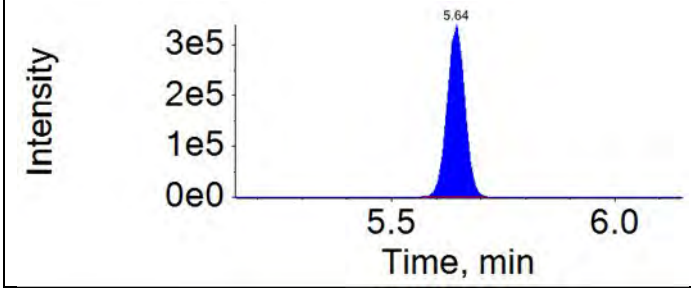


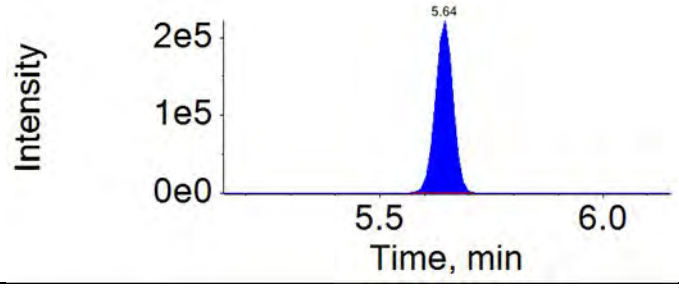
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

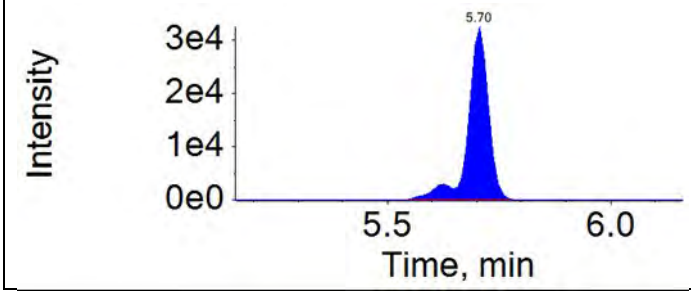
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

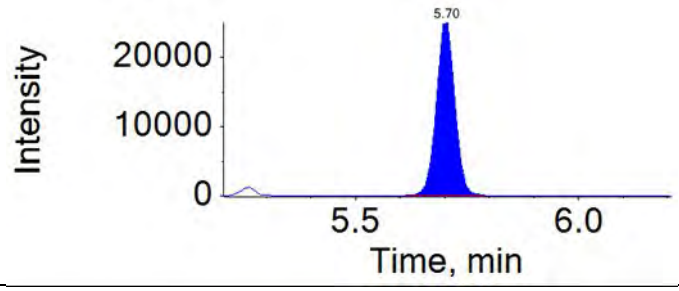
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



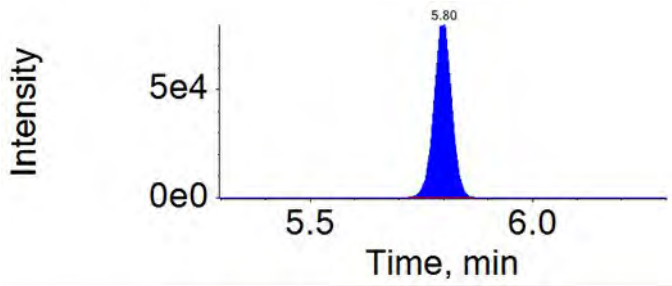


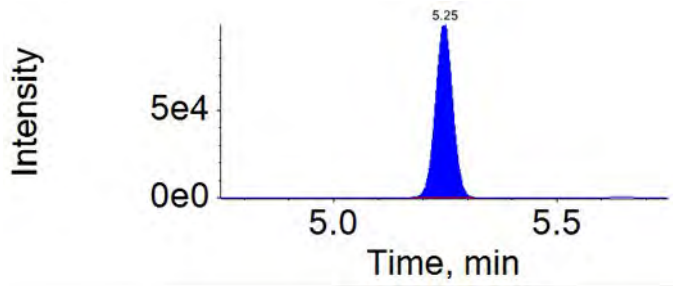
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



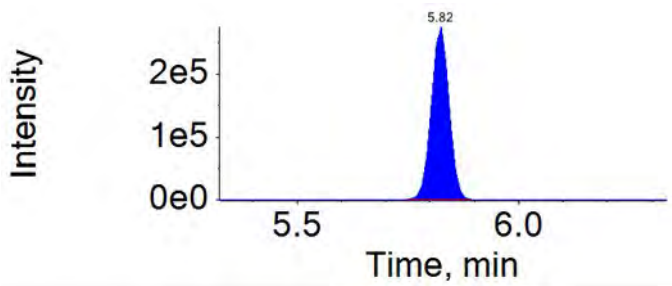


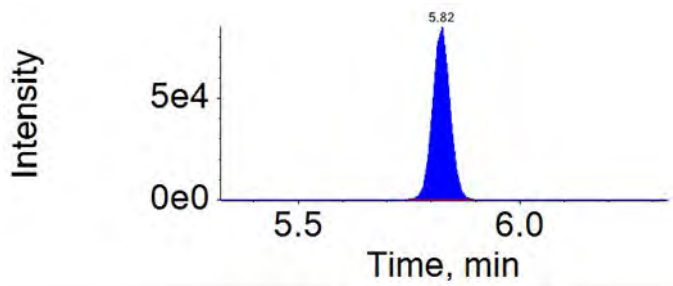
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



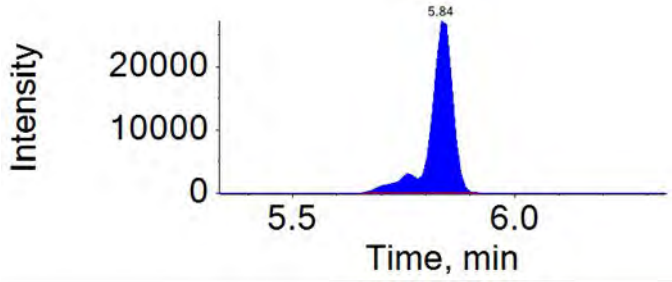


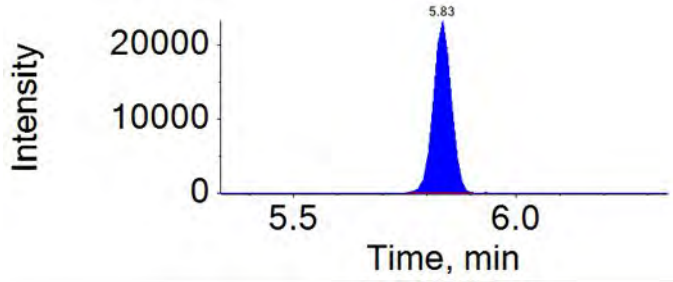
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

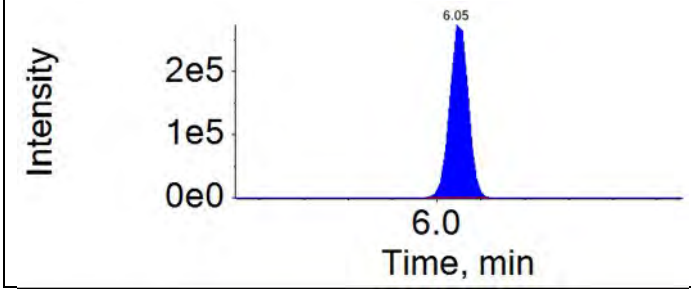
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

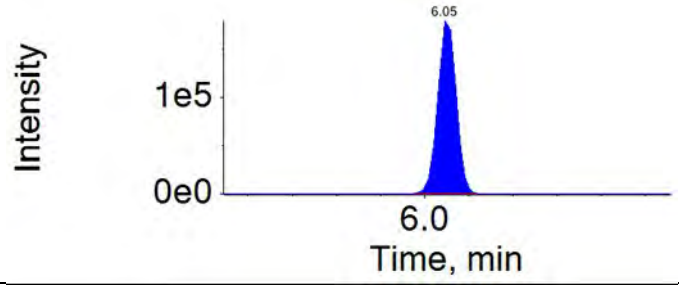
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



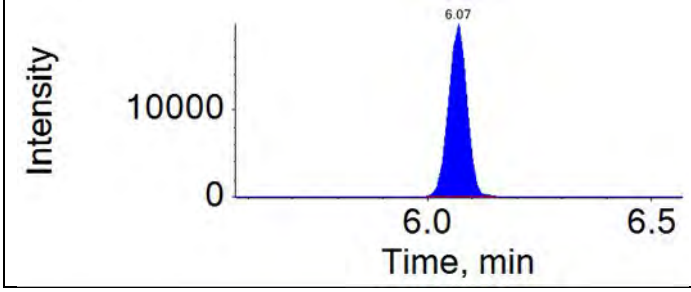


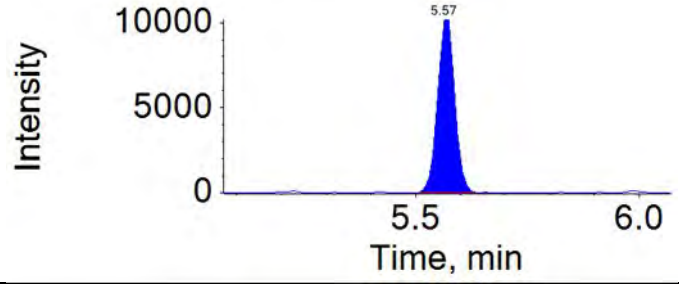
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



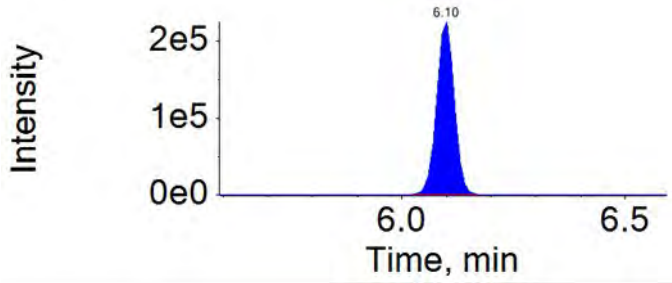


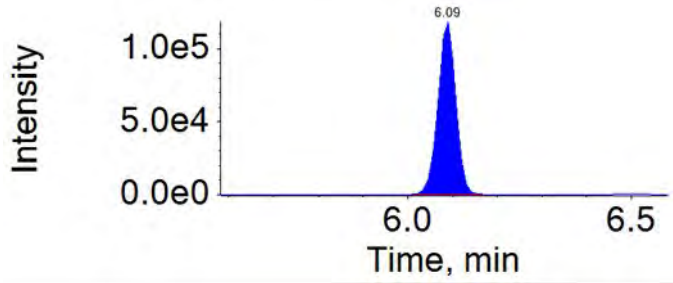
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



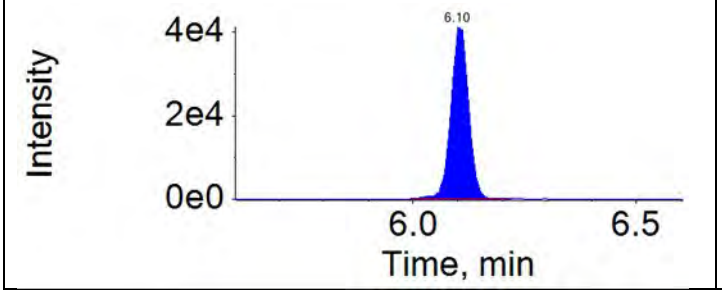


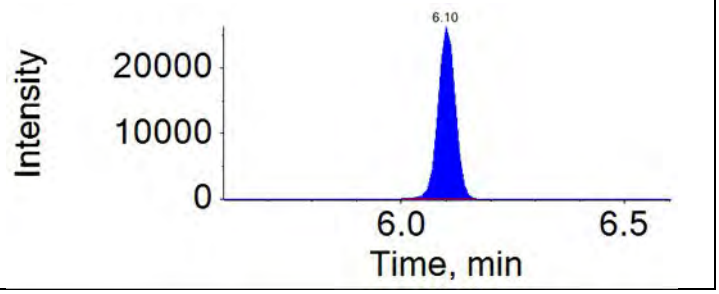
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

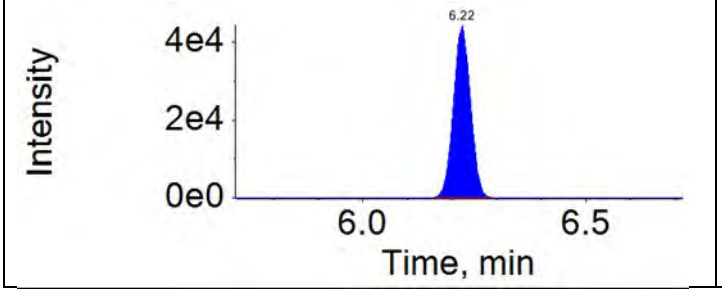
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

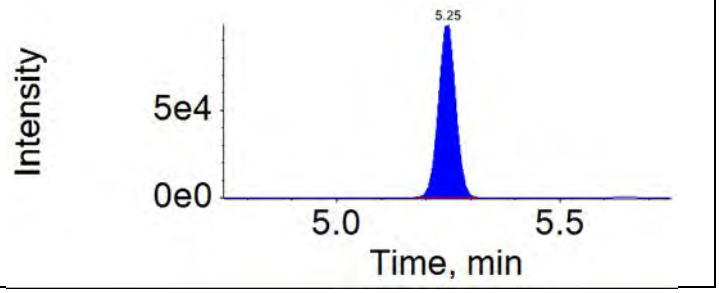
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



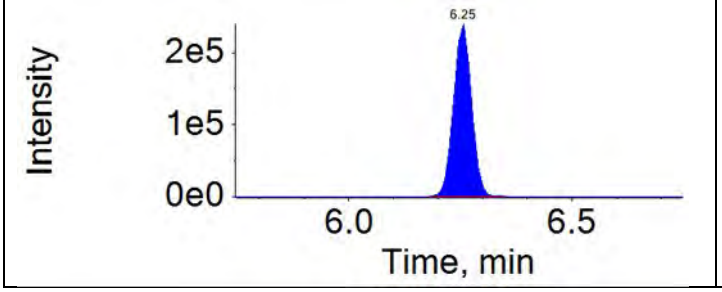


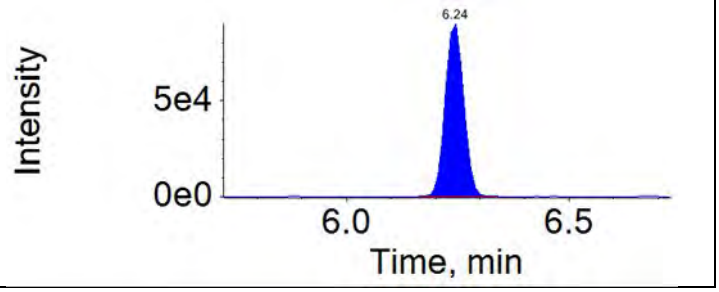
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



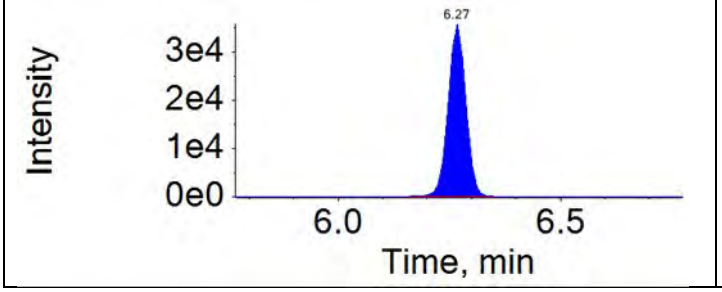


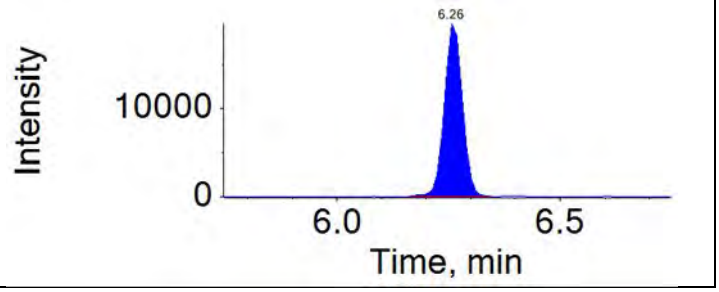
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

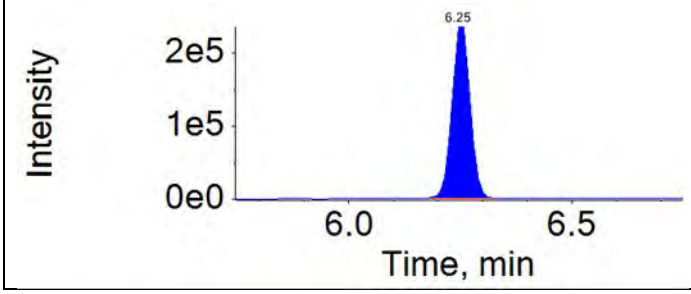
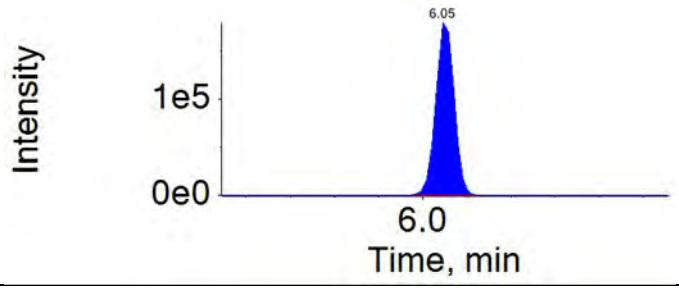


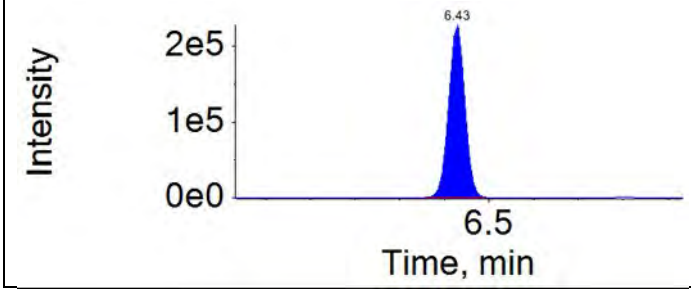
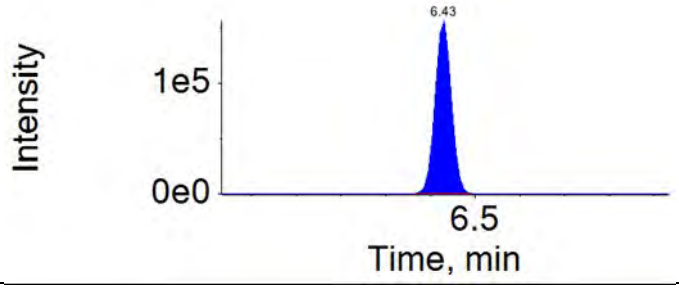


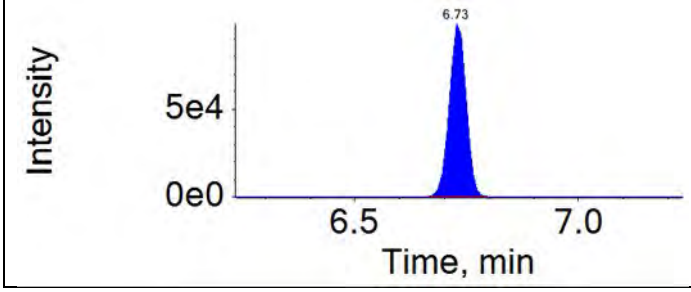
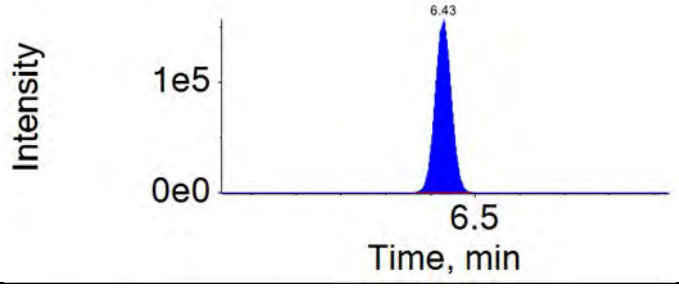
APPROVED
By MCD at 6:33 pm, 11/12/18

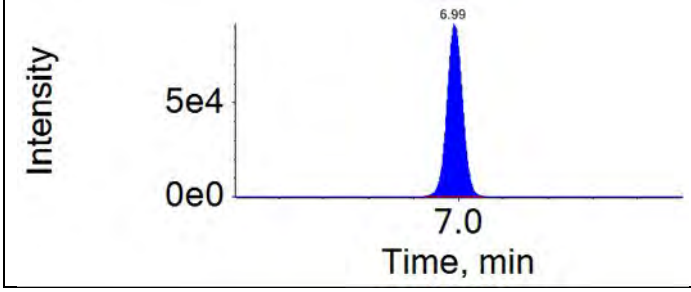
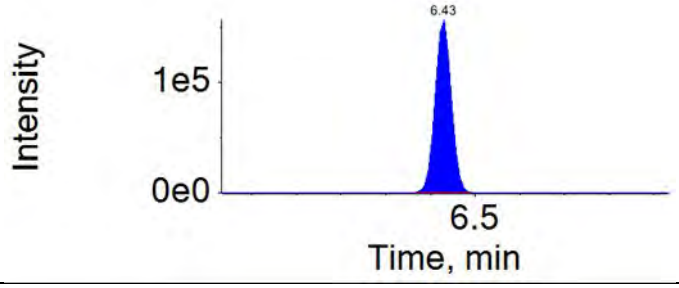
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

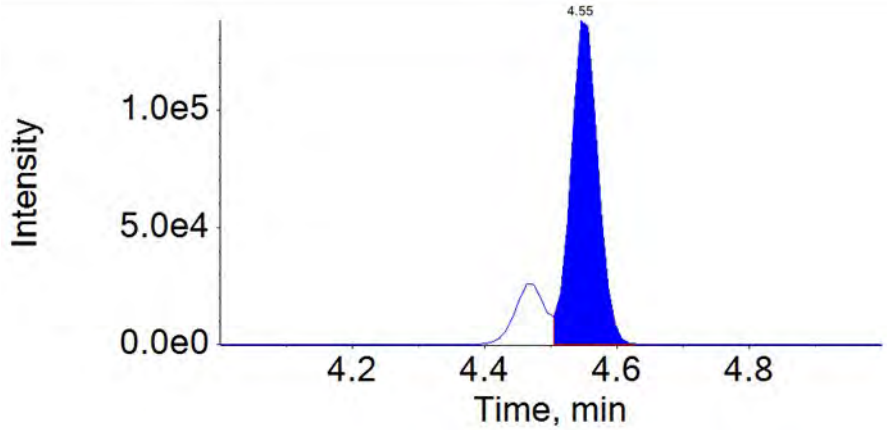
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

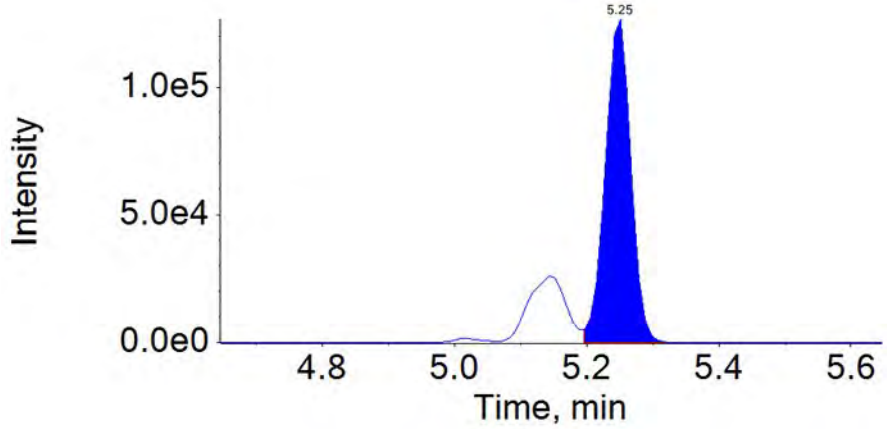
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
397028.39
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



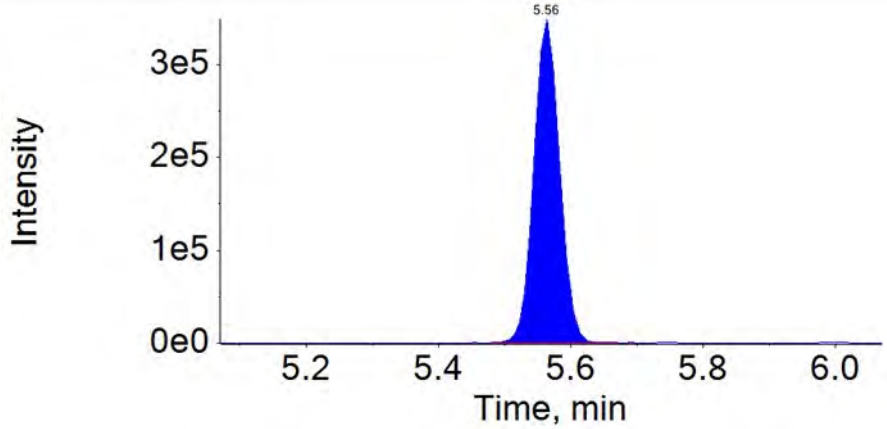
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
340529.09
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
PFDA
RT (min.):
5.56
Peak Area:
942897.11
Mass Range:
513.0 / 469.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



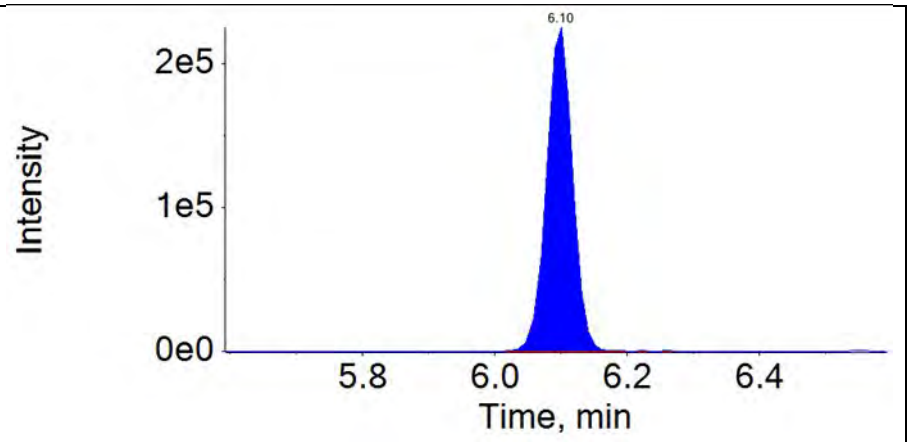
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

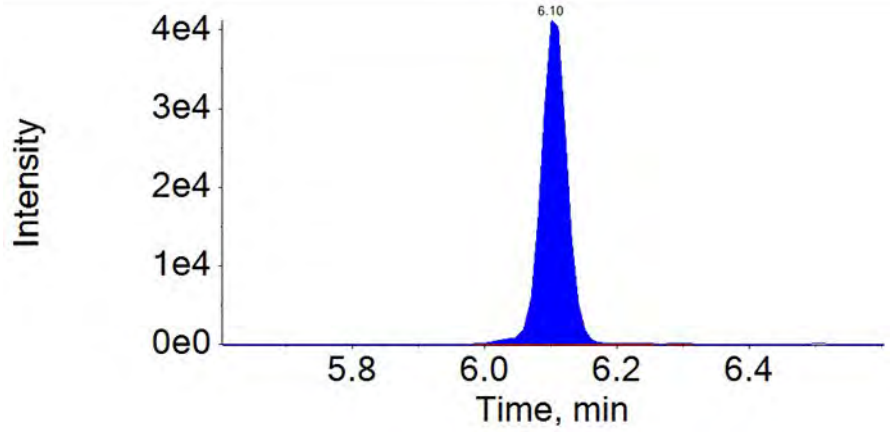
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMePFOSAE
RT (min.):
6.10
Peak Area:
620009.05
Mass Range:
616.0 / 59.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



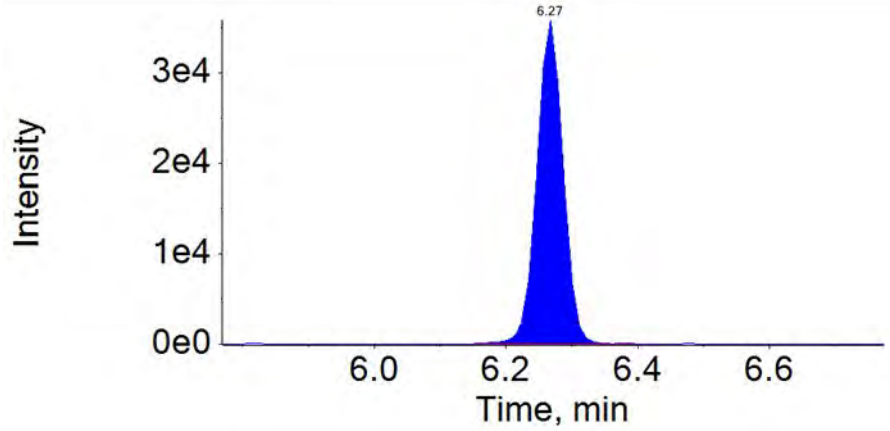
Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.10
Peak Area:
115018.95
Mass Range:
512.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
99550.21
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4

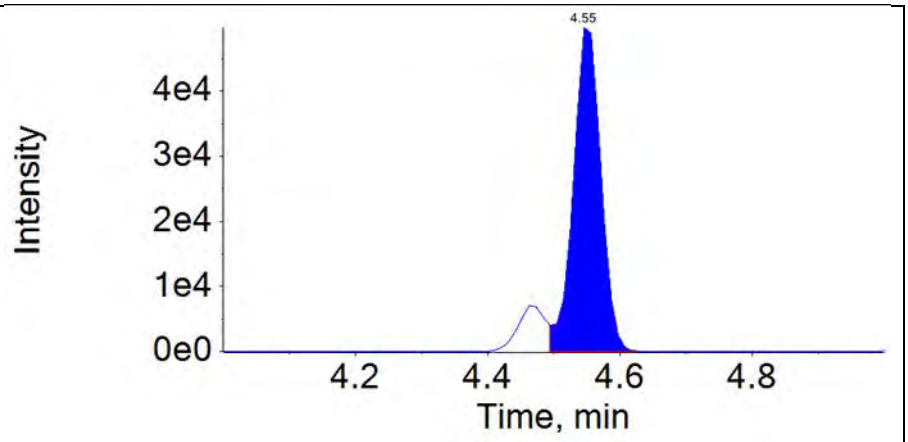


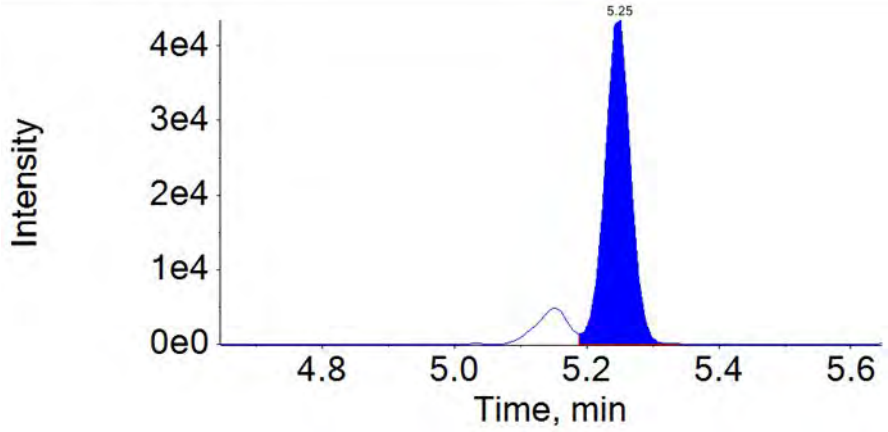
Integration Comment: incorrect integration

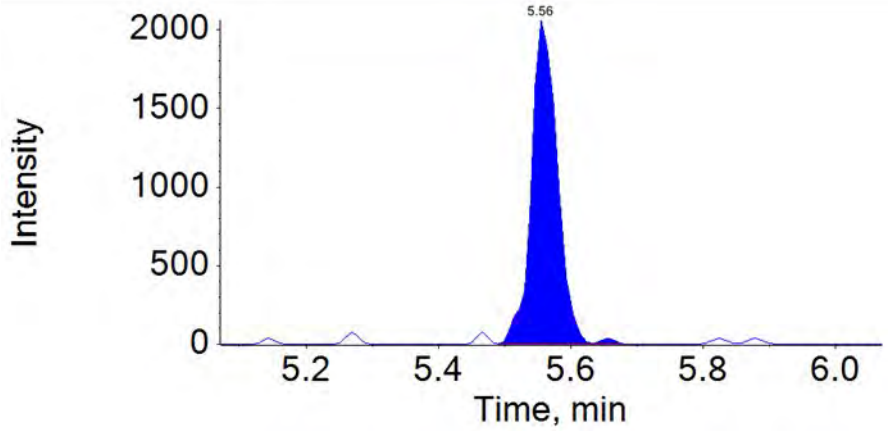
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS_2 **RT (min.):** 4.55 **Peak Area:** 144906.99 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV12DCAL-45.wiff **Sample Name:** CAL4	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.25 **Peak Area:** 119086.74 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-45.wiff **Sample Name:** CAL4	 **Integration Comment:** incorrect integration

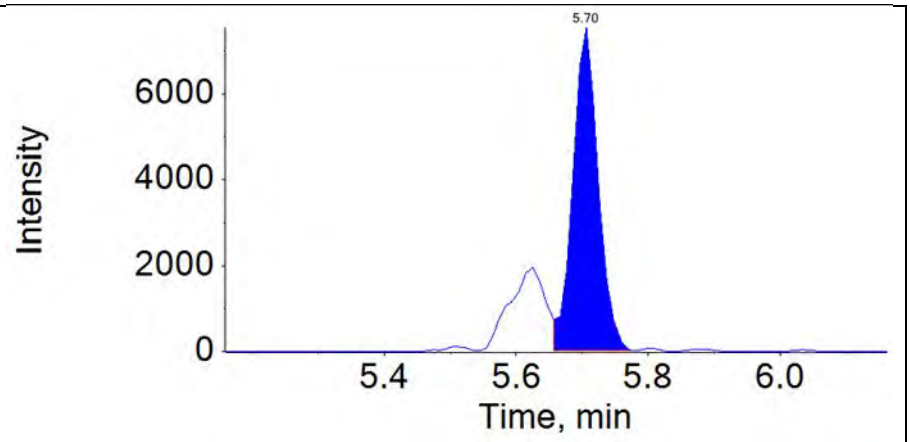
Component Name: PFDA_2 **RT (min.):** 5.56 **Peak Area:** 5673.40 **Mass Range:** 513.0 / 169.0 **File Name:** 18NOV12DCAL-45.wiff **Sample Name:** CAL4	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

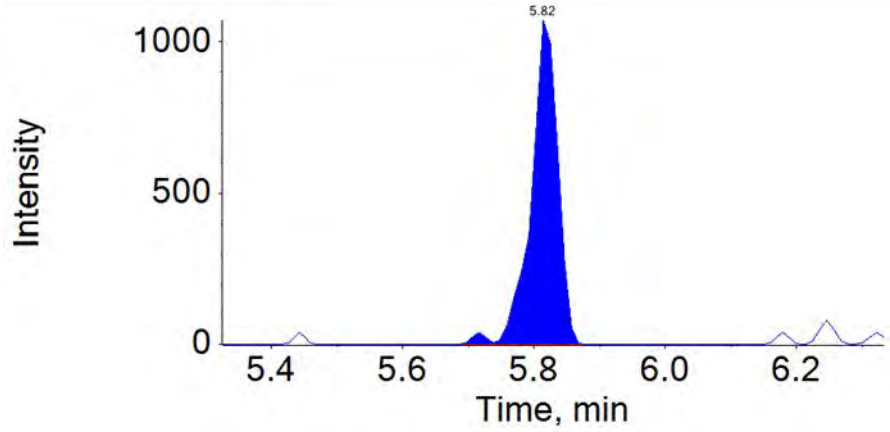
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
20115.54
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



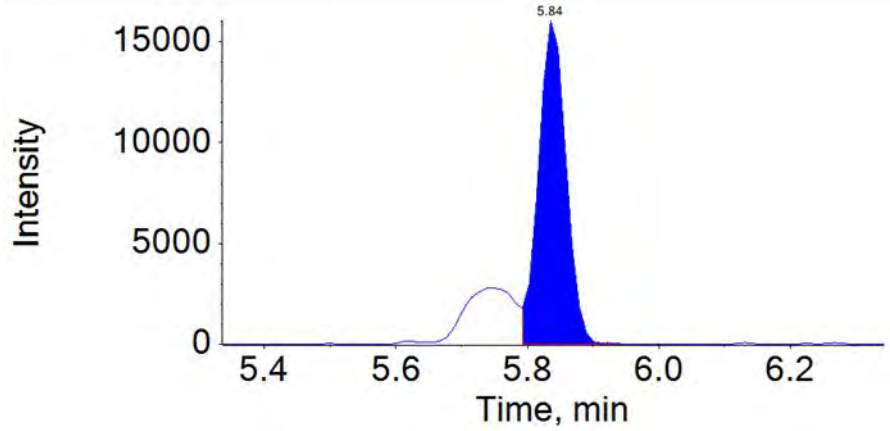
Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
5.82
Peak Area:
3055.95
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
46742.13
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

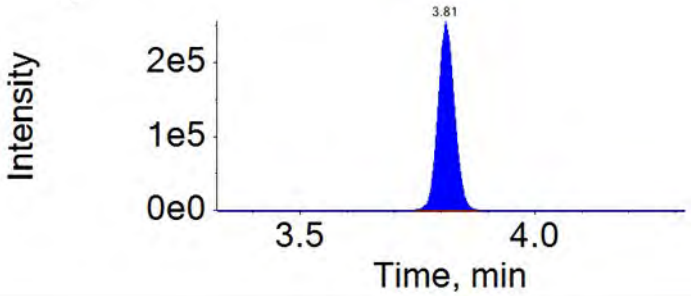
Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-45.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	617045.58	A	0.3619	0.3710			
PFBS_2	3.81	1.00	228894.51	A	0.3619	0.3710	3	50	
4:2-FTS	4.13	1.00	126396.51	A	0.6730	0.6813			
4:2 FTS_2	4.12	1.00	86110.06	A	0.6730	0.6813		#NA!	
PFHxA	4.16	1.00	1265231.12	A	0.0117	0.0101			
PFHxA_2	4.16	1.00	12793.78	A	0.0117	0.0101	-13	50	
PFPeS	4.18	1.10	328681.66	A	0.5191	0.5078			
PFPeS_2	4.18	1.10	166890.99	A	0.5191	0.5078	-2	50	
PFHpA	4.55	1.00	1318774.50	A	0.0563	0.0555			
PFHpA_2	4.55	1.00	73135.24	A	0.0563	0.0555	-2	50	
PFHxS	4.55	1.00	479290.97	M	0.3428	0.3441			
PFHxS_2	4.55	1.00	164902.13	M	0.3428	0.3441	0	50	
6:2-FTS	4.91	1.00	107470.62	A	0.6604	0.6264			
6:2 FTS_2	4.91	1.00	67319.96	A	0.6604	0.6264		#NA!	
PFHpS	4.91	1.08	434949.18	A	0.4066	0.4089			
PFHpS_2	4.91	1.08	177851.23	A	0.4066	0.4089	1	50	
PFOA	4.92	1.00	1327086.09	A	0.0562	0.0557			
PFOA_2	4.92	1.00	73867.47	A	0.0562	0.0557	-1	50	
PFOS	5.25	1.00	448833.83	M	0.2968	0.3022			
PFOS_2	5.25	1.00	135652.81	M	0.2968	0.3022	2	50	
PFNA	5.26	1.00	1106664.23	A	0.0229	0.0210			
PFNA_2	5.26	1.00	23205.90	A	0.0229	0.0210	-8	50	
PFNS	5.54	1.06	269712.27	A	0.4828	0.4818			
PFNS_2	5.54	1.06	129941.05	A	0.4828	0.4818	0	50	
PFDA	5.56	1.00	941985.31	M	0.0081	0.0060			
PFDA_2	5.56	1.00	5626.45	M	0.0081	0.0060	-26	50	
8:2-FTS	5.57	1.00	80922.57	A	0.6814	0.6947			
8:2 FTS_2	5.57	1.00	56219.65	A	0.6814	0.6947		#NA!	
NMeFOSAA	5.70	1.00	103649.07	A	0.2569	0.2651			
NMeFOSAA_2	5.70	1.00	27472.86	M	0.2569	0.2651	3	50	
PFDS	5.80	1.11	224031.22	A	0.5144	0.4482			
PFDS_2	5.80	1.10	100404.30	A	0.5144	0.4482	-13	50	
PFUnDA	5.82	1.00	768010.80	A	0.0058	0.0039			
PFUnDA_2	5.82	1.00	2997.45	M	0.0058	0.0039	-33	50	
NEtFOSAA	5.84	1.00	94877.84	A	0.7253	0.6488			
NEtFOSAA_2	5.84	1.00	61554.78	M	0.7253	0.6488	-11	50	
PFDoDA	6.05	1.00	803646.84	A	0.0157	0.0099			
PFDoDA_2	6.05	1.00	7981.38	A	0.0157	0.0099	-37	50	
10:2-FTS	6.07	1.09	56040.80	A	0.6356	0.7371			
10:2 FTS_2	6.07	1.09	41308.18	A	0.6356	0.7371		#NA!	
PFTrDA	6.25	1.03	674140.32	A	0.0086	0.0101			
PFTrDA_2	6.25	1.03	6830.51	A	0.0086	0.0101	18	50	
PFTeDA	6.43	1.00	571926.74	A	0.0062	0.0068			
PFTeDA_2	6.43	1.00	3881.08	A	0.0062	0.0068	9	50	
PFHxDA	6.73	1.05	256654.28	A	0.0683	0.0616			
PFHxDA_2	6.73	1.05	15804.20	A	0.0683	0.0616	-10	50	
PFODA	6.99	1.09	219359.64	A	0.0277	0.0258			
PFODA_2	6.99	1.09	5669.48	A	0.0277	0.0258	-7	50	

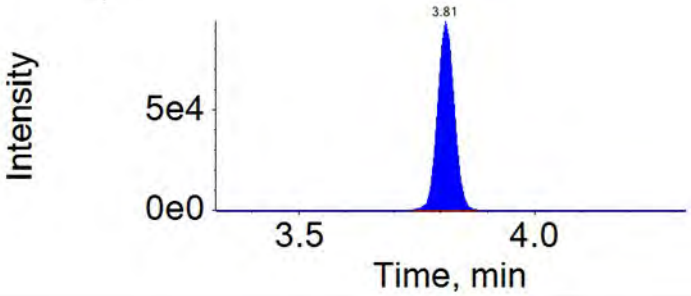
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

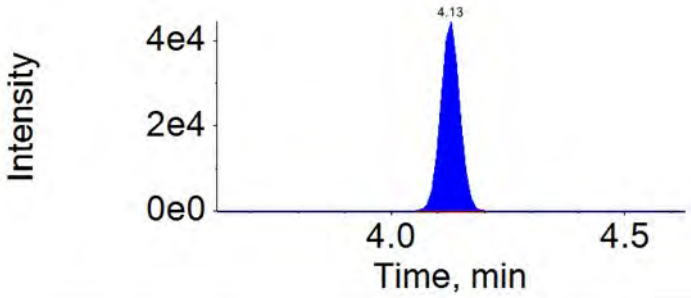
Component: PFBS
Primary Mass: 299.0 / 80.0



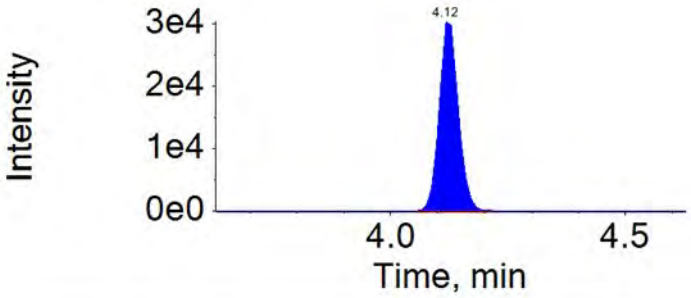
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



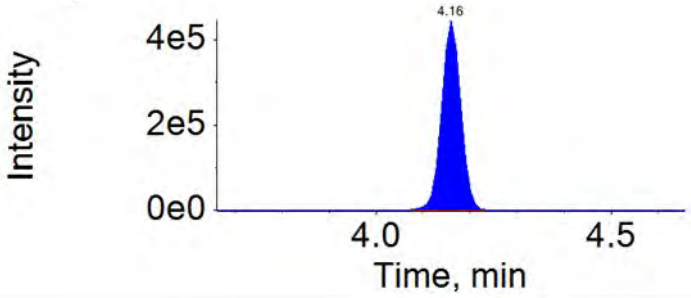
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



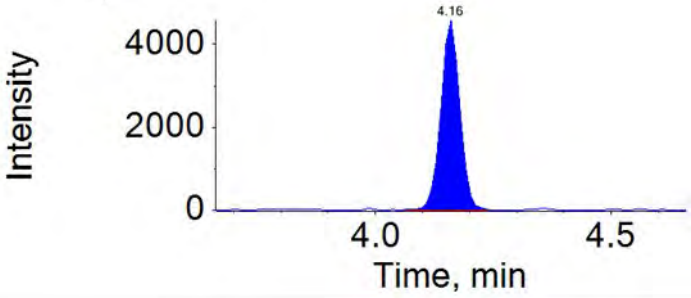
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



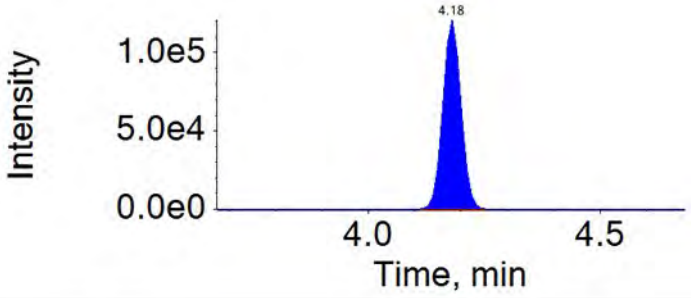
Component: PFHxA
Primary Mass: 313.0 / 269.0



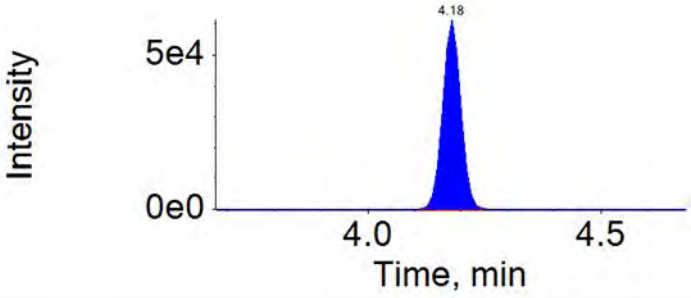
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By MCD at 6:33 pm, 11/12/18

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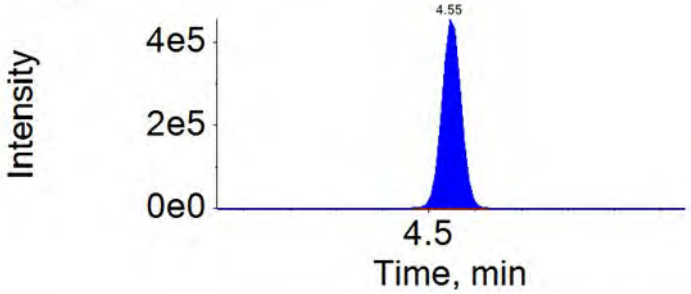
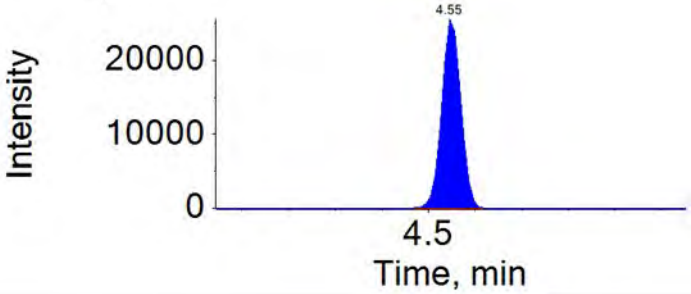
By HMK at 10:53 am, 11/13/18

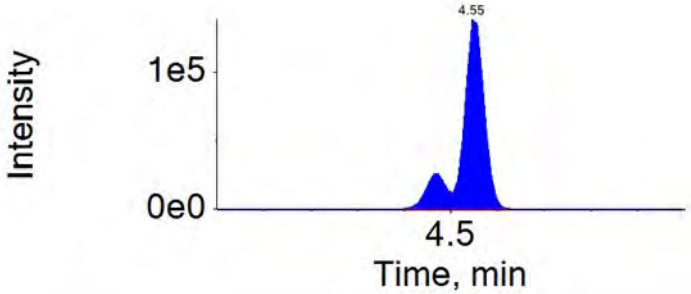
Component: PFHpA
Primary Mass: 363.0 / 319.0



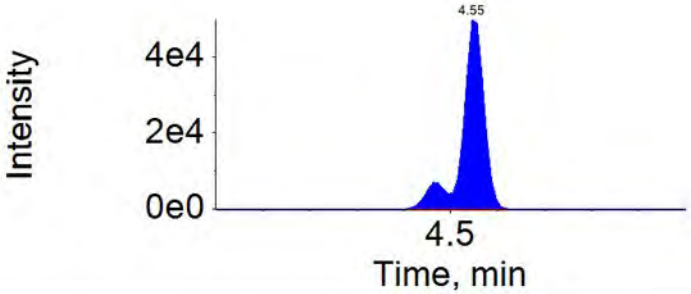
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



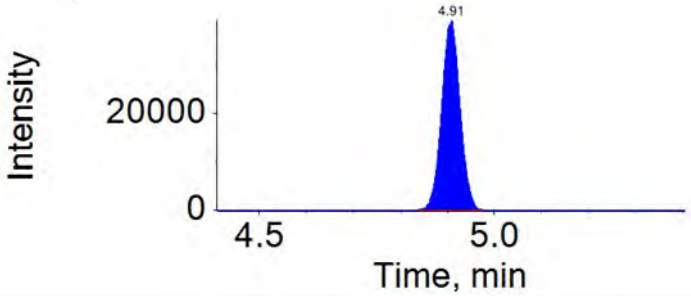
Component: PFHxS
Primary Mass: 399.0 / 80.0



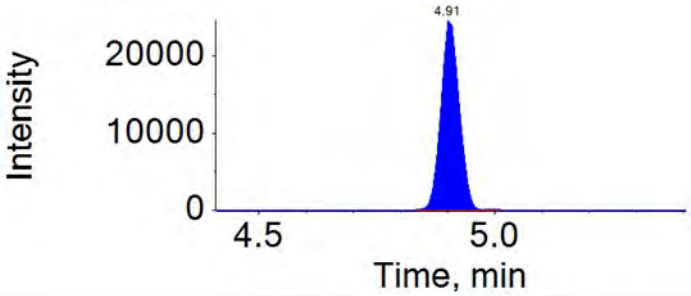
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



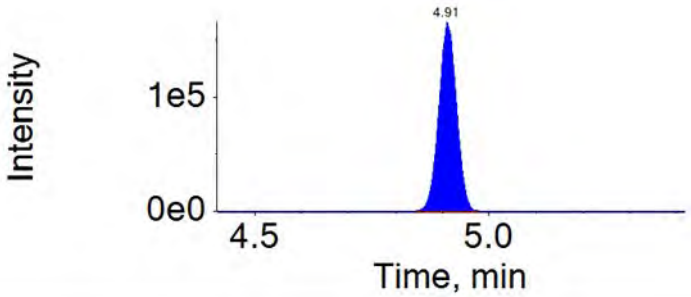
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



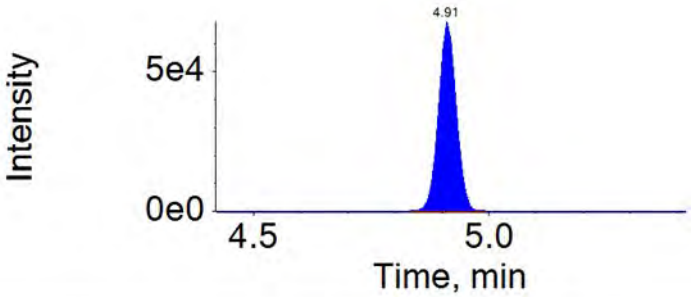
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



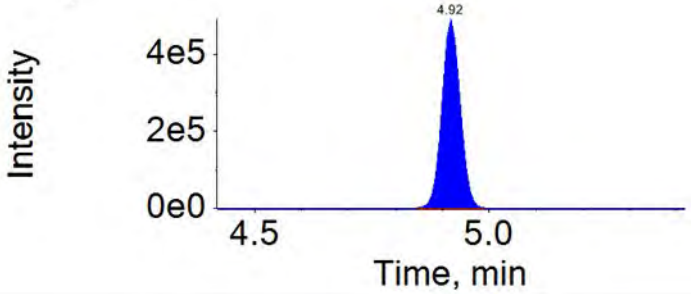
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



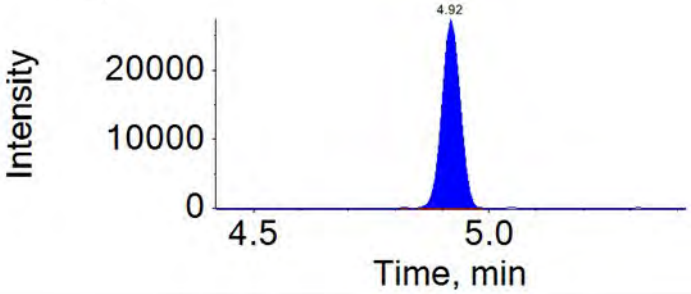
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

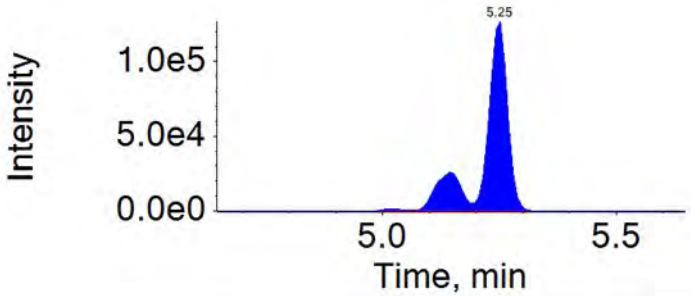
Component: PFOA
Primary Mass: 413.0 / 369.0



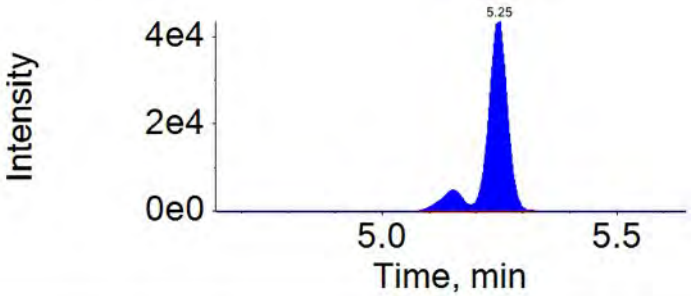
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



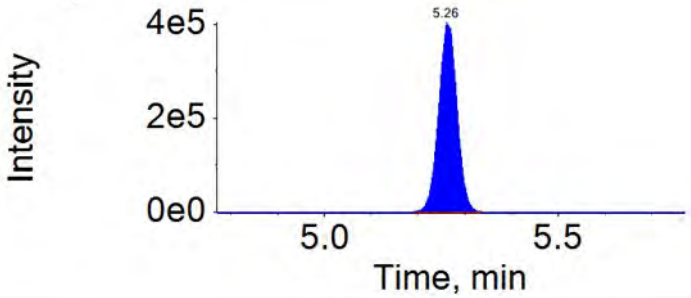
Component: PFOS
Primary Mass: 499.0 / 80.0



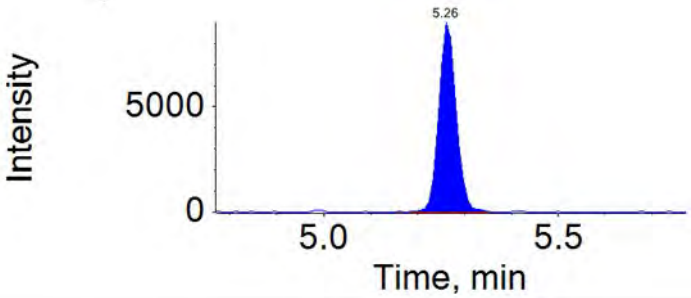
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



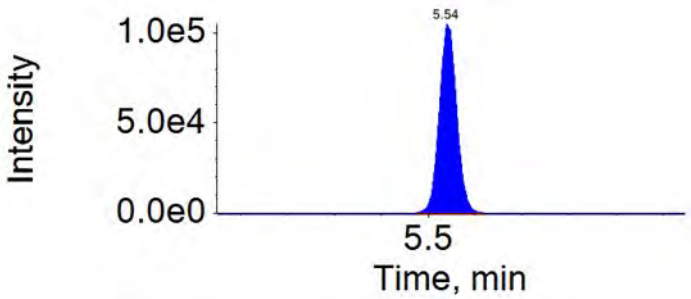
Component: PFNA
Primary Mass: 463.0 / 419.0



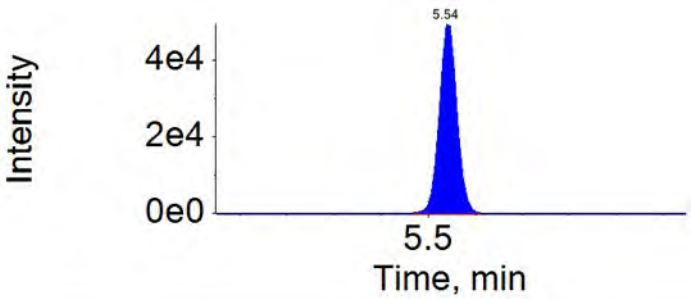
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



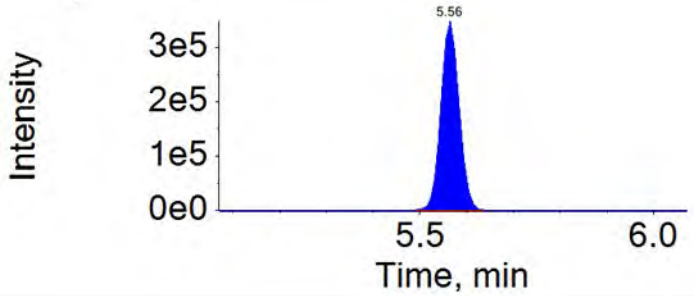
Component: PFNS
Primary Mass: 549.0 / 80.0



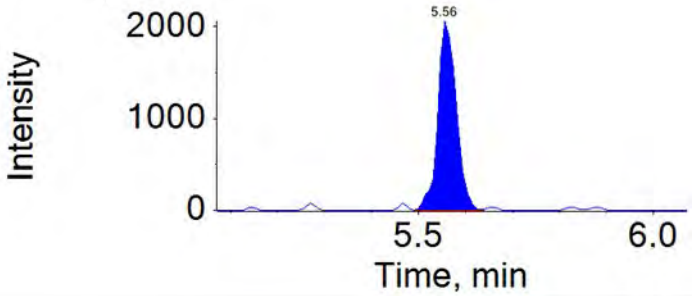
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



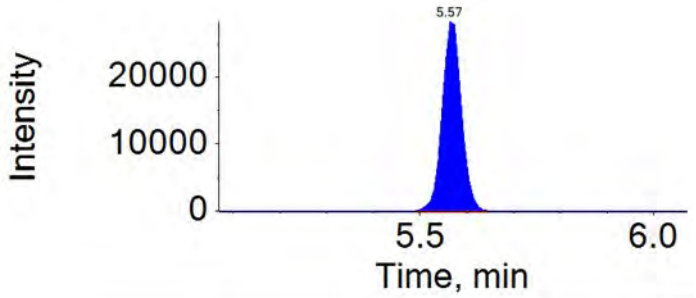
Component: PFDA
Primary Mass: 513.0 / 469.0



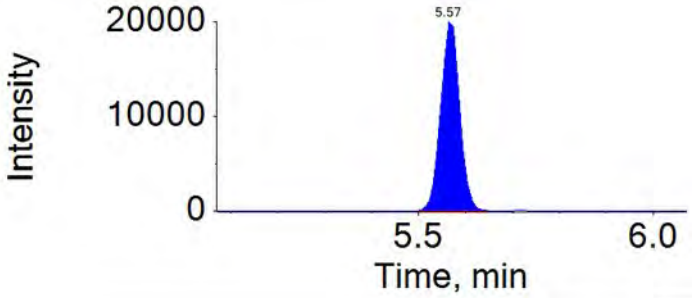
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



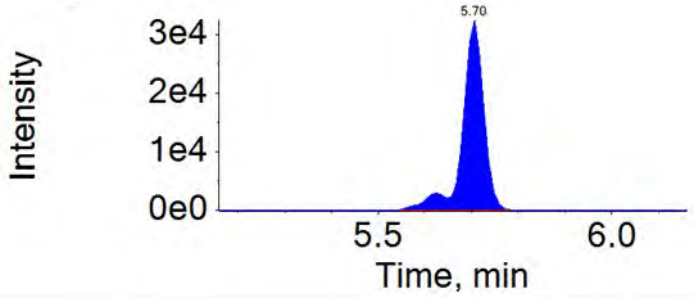
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



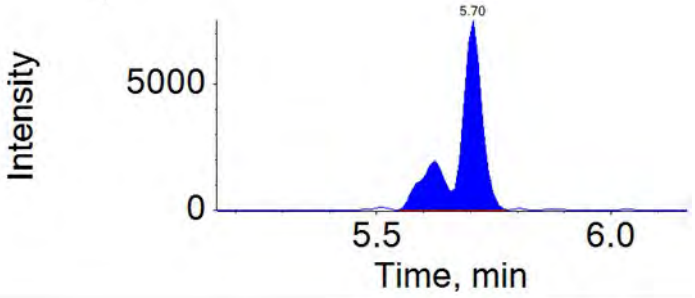
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



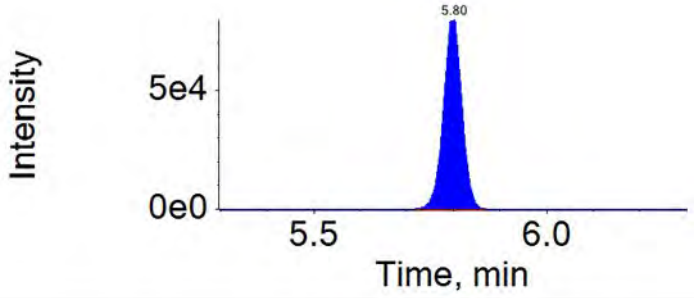
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



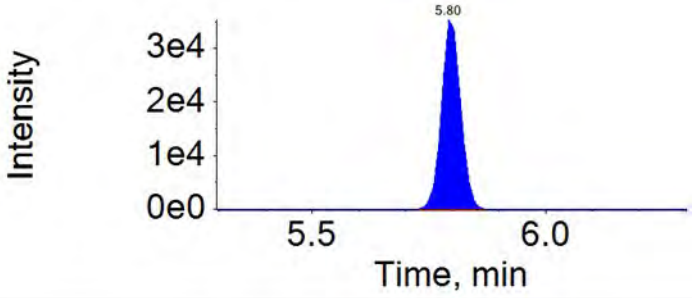
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



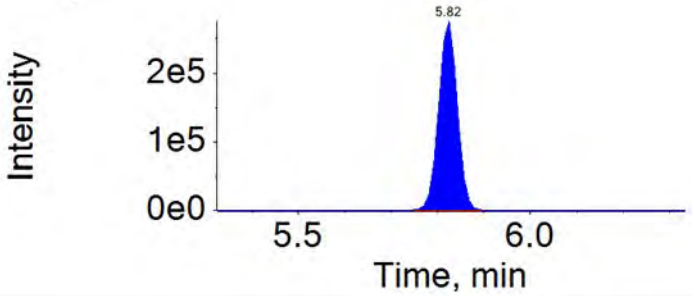
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



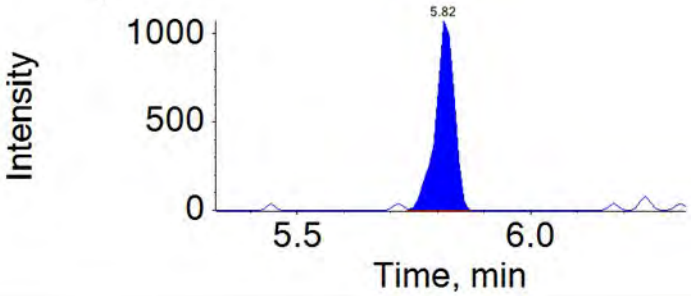
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

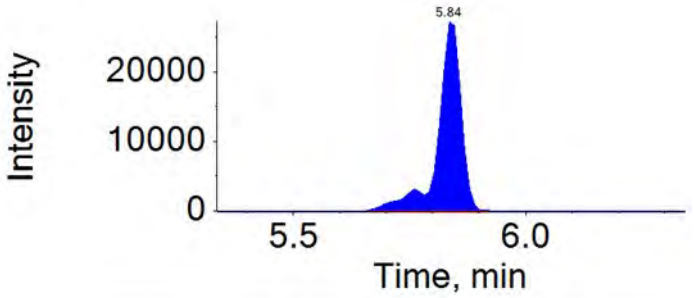
Component: PFUnDA
Primary Mass: 563.0 / 519.0



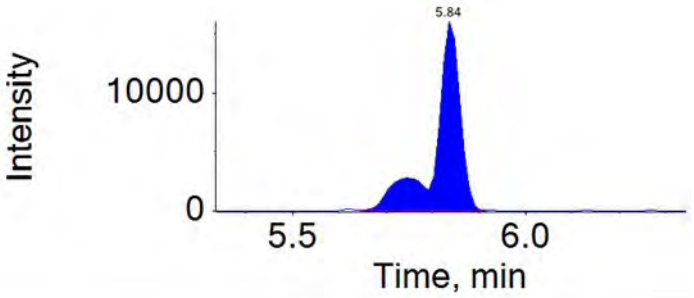
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



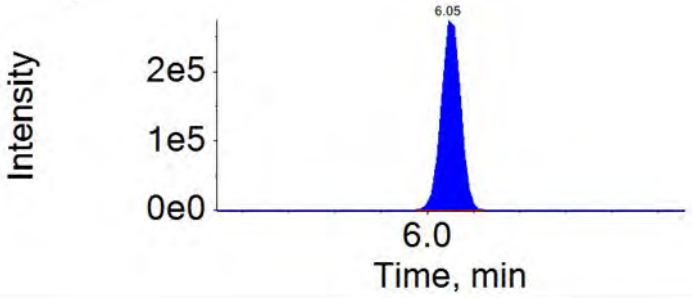
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



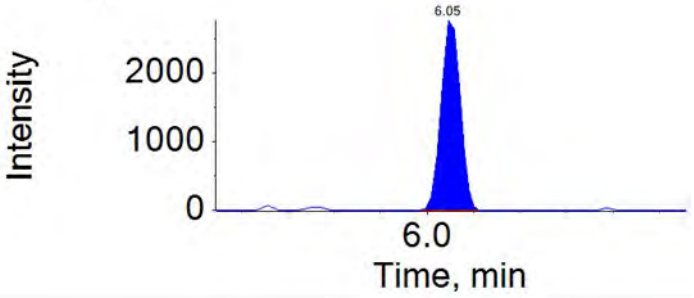
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



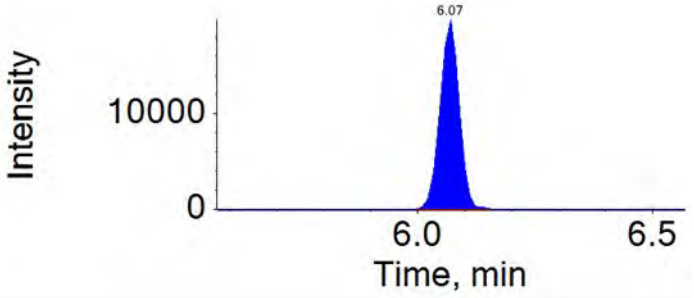
Component: PFDoDA
Primary Mass: 613.0 / 569.0



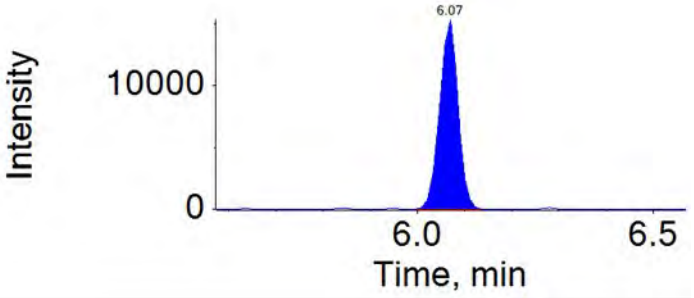
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



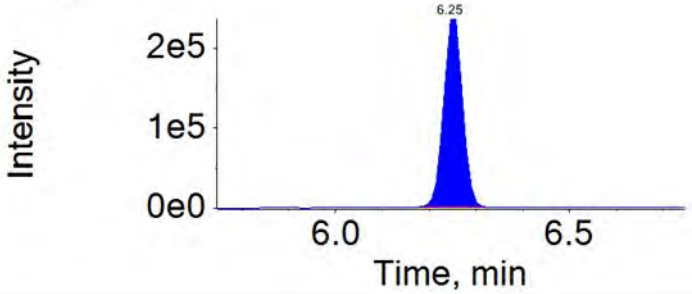
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



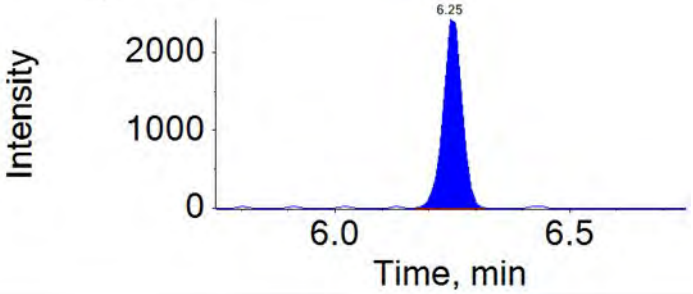
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

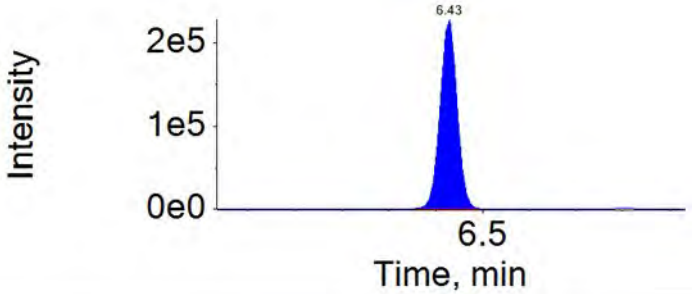
Component: PFTrDA
Primary Mass: 663.0 / 619.0



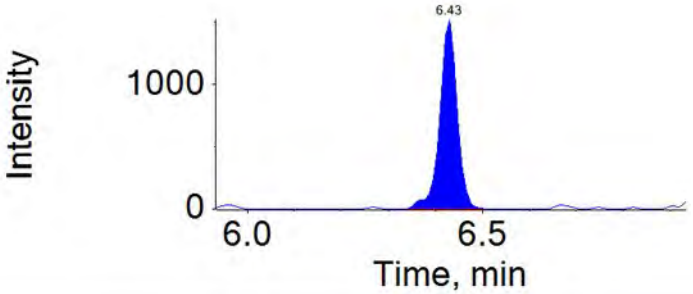
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



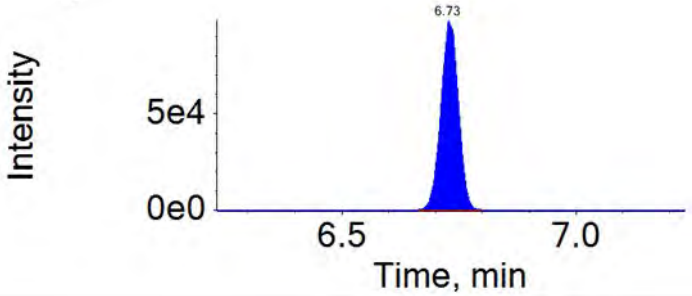
Component: PFTeDA
Primary Mass: 713.0 / 669.0



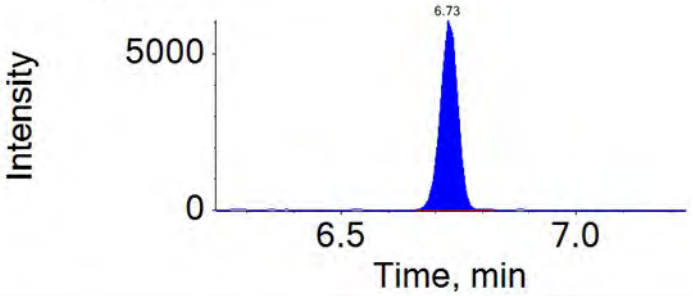
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



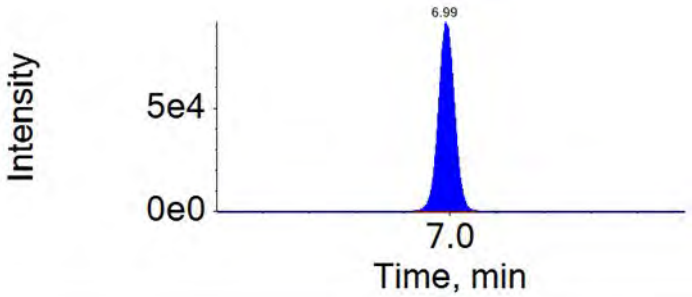
Component: PFHxDA
Primary Mass: 813.0 / 769.0



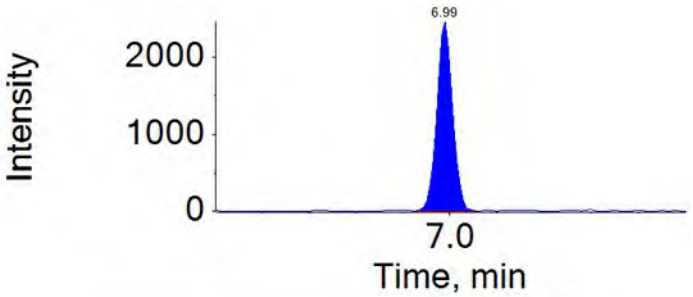
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL5			**Data File:**		18NOV12DCAL-46.wiff
Sample ID:	CALBRN51833B			**Acquis Date:**		2018-11-12T15:42:06
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	7			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	641789.5	659926.2	-3	50	
13C2-PFOA	5.0	464284.6	450219.7	3	50	
13C4-PFOS	4.8	243589.9	249205.8	-2	50	
13C2-PFDA	5.0	269315.7	278743.9	-3	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	698871.9	13C3-PFBA	641789.5	1.089	5.000	4.882	98	70-130	
E13C5-PFPeA	734598.3	13C3-PFBA	641789.5	1.145	5.000	5.134	103	70-130	
E13C3-PFBS	428050.6	13C3-PFBA	641789.5	0.667	4.650	4.708	101	70-130	
E13C2-4:2-FTS	51791.9	13C2-PFOA	464284.6	0.112	4.670	4.968	106	70-130	
E13C5-PFHxA	628952.8	13C2-PFOA	464284.6	1.355	5.000	4.894	98	70-130	
E13C3-PFHxS	309304.5	13C2-PFOA	464284.6	0.666	4.730	4.571	97	70-130	
E13C4-PFHpA	525802.1	13C2-PFOA	464284.6	1.132	5.000	5.102	102	70-130	
E13C2-6:2-FTS	31012.0	13C2-PFOA	464284.6	0.067	4.750	4.469	94	70-130	
E13C8-PFOA	805288.7	13C2-PFOA	464284.6	1.734	5.000	4.779	96	70-130	
E13C8-PFOS	267157.6	13C4-PFOS	243589.9	1.097	4.780	4.860	102	70-130	
E13C9-PFNA	441776.8	13C4-PFOS	243589.9	1.814	5.000	5.057	101	70-130	
E13C6-PFDA	585231.2	13C2-PFDA	269315.7	2.173	5.000	5.071	101	70-130	
E13C2-8:2-FTS	24192.1	13C2-PFDA	269315.7	0.090	4.790	4.480	94	70-130	
E13C8-PFOSA	596544.1	13C2-PFDA	269315.7	2.215	5.000	4.911	98	70-130	
Ed3-NMeFOSAA	72424.5	13C2-PFDA	269315.7	0.269	5.000	4.854	97	70-130	
E13C7-PFUnDA	231187.9	13C2-PFDA	269315.7	0.858	5.000	4.984	100	70-130	
Ed5-NEtFOSAA	63701.7	13C2-PFDA	269315.7	0.237	5.000	5.004	100	70-130	
E13C2-PFDoDA	507556.8	13C2-PFDA	269315.7	1.885	5.000	4.893	98	70-130	
Ed7-NMePFOSAE	316777.8	13C2-PFDA	269315.7	1.176	5.000	5.090	102	70-130	
Ed3-NMePFOSA	68615.7	13C2-PFDA	269315.7	0.255	5.000	4.629	93	70-130	
Ed9-NEtPFOSAE	255767.8	13C2-PFDA	269315.7	0.950	5.000	4.939	99	70-130	
Ed5-NEtPFOSA	55378.5	13C2-PFDA	269315.7	0.206	5.000	4.824	96	70-130	
E13C2-PFTeDA	379571.6	13C2-PFDA	269315.7	1.409	5.000	4.948	99	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

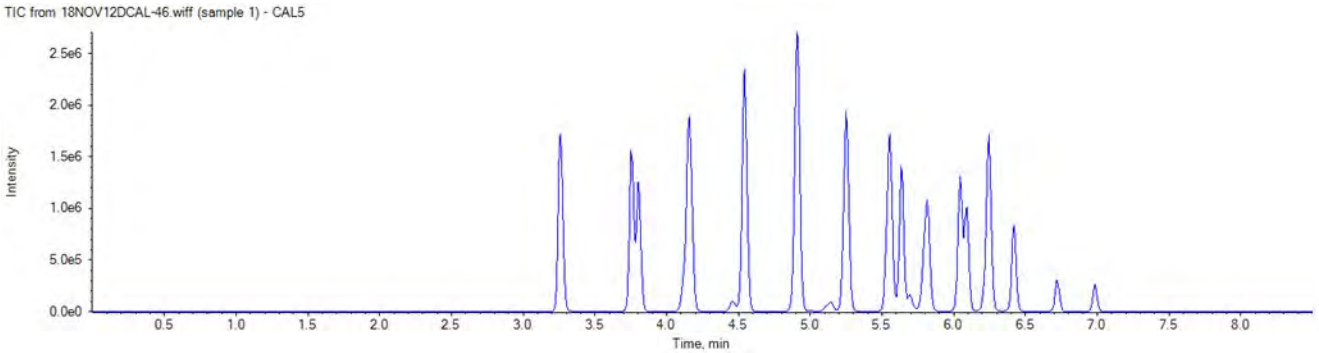
Analyte Quantitation Peak Table

Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-46.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	2700090.8		A	13C4-PFBA	3.26	698871.9	3.863	21.403
PFPeA	3.76	1.000	2660895.4		A	13C5-PFPeA	3.76	734598.3	3.622	20.969
PFBS	3.80	1.000	1630613.5		A	13C3-PFBS	3.81	428050.6	3.809	18.121
4:2-FTS	4.12	1.000	344695.9		A	13C2-4:2-FTS	4.12	51791.9	6.655	18.070
PFHxA	4.15	1.000	3158486.4		A	13C5-PFHxA	4.15	628952.8	5.022	20.968
PFPeS	4.17	1.100	815928.2		A	13C3-PFBS	3.81	428050.6	1.906	18.506
PFHpA	4.54	1.000	3269561.0		A	13C4-PFHpA	4.54	525802.1	6.218	20.612
PFHxS	4.54	1.000	1138604.3		M	13C3-PFHxS	4.54	309304.5	3.681	17.849
6:2-FTS	4.90	1.000	260254.3		A	13C2-6:2-FTS	4.90	31012.0	8.392	20.308
PFHpS	4.90	1.080	1145559.8		A	13C3-PFHxS	4.54	309304.5	3.704	19.496
PFOA	4.91	1.000	3291549.4		A	13C8-PFOA	4.91	805288.7	4.087	21.830
PFOS	5.24	1.000	1147826.8		M	13C8-PFOS	5.24	267157.6	4.296	18.789
PFNA	5.26	1.000	2725089.7		A	13C9-PFNA	5.26	441776.8	6.168	22.243
PFNS	5.53	1.060	725402.0		A	13C8-PFOS	5.24	267157.6	2.715	18.997
PFDA	5.56	1.000	2309359.5		A	13C6-PFDA	5.56	585231.2	3.946	20.920
8:2-FTS	5.56	1.000	206213.1		A	13C2-8:2-FTS	5.56	24192.1	8.524	19.873
PFOSA	5.64	1.000	2498877.9		A	13C8-PFOSA	5.64	596544.1	4.189	20.460
NMeFOSAA	5.70	1.000	250711.5		A	d3-NMeFOSAA	5.70	72424.5	3.462	19.564
PFDS	5.79	1.100	578877.5		A	13C8-PFOS	5.24	267157.6	2.167	19.633
PFUnDA	5.82	1.000	1773582.6		A	13C7-PFUnDA	5.82	231187.9	7.672	20.055
NEtFOSAA	5.83	1.000	237197.2		A	d5-NEtFOSAA	5.83	63701.7	3.724	19.520
PFDoDA	6.04	1.000	2099385.0		A	13C2-PFDoDA	6.04	507556.8	4.136	21.062
10:2-FTS	6.06	1.090	153343.6		A	13C2-8:2-FTS	5.56	24192.1	6.339	21.113
NMePFOSAE	6.09	1.000	1590507.1		M	d7-NMePFOSAE	6.08	316777.8	5.021	20.896
NMePFOSA	6.10	1.000	300855.7		A	d3-NMePFOSA	6.09	68615.7	4.385	21.631
PFDoS	6.21	1.190	288905.1		A	13C8-PFOS	5.24	267157.6	1.081	18.940
NEtPFOSAE	6.25	1.000	1660562.6		M	d9-NEtPFOSAE	6.23	255767.8	6.492	20.830
NEtPFOSA	6.26	1.000	258300.3		A	d5-NEtPFOSA	6.25	55378.5	4.664	21.421
PFTrDA	6.24	1.030	1679407.2		A	13C2-PFDoDA	6.04	507556.8	3.309	20.884
PFTeDA	6.42	1.000	1418276.7		A	13C2-PFTeDA	6.42	379571.6	3.737	20.945
PFHxDA	6.72	1.050	627350.7		A	13C2-PFTeDA	6.42	379571.6	1.653	19.691
PFODA	6.98	1.090	544296.5		A	13C2-PFTeDA	6.42	379571.6	1.434	19.971

Total Ion Chromatogram

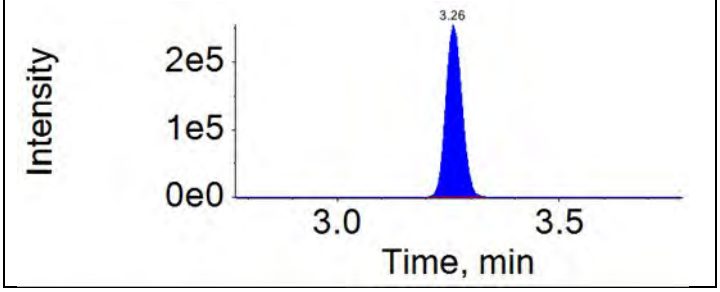


APPROVED
By MCD at 6:33 pm, 11/12/18

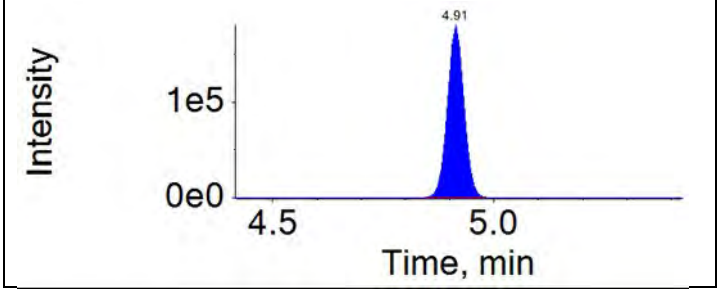
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

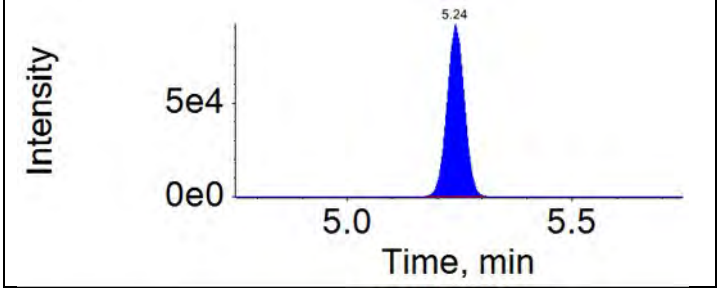
Injection Standard: 13C3-PFBA
216.0 / 172.0



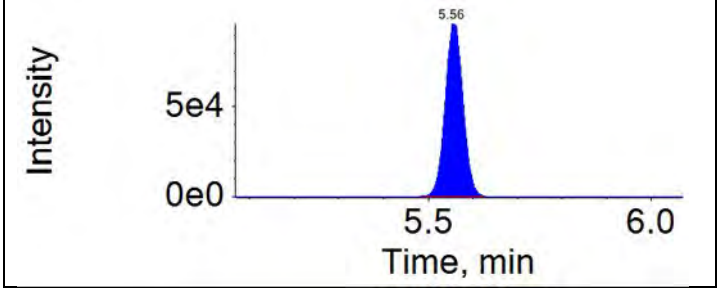
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

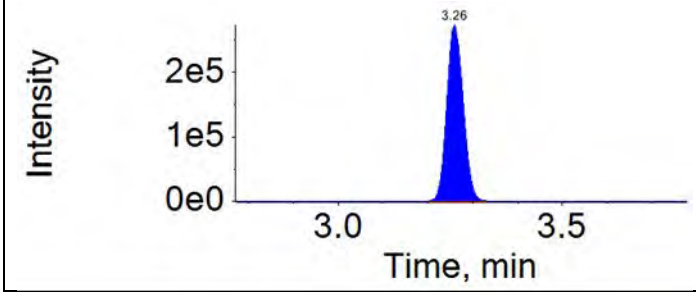


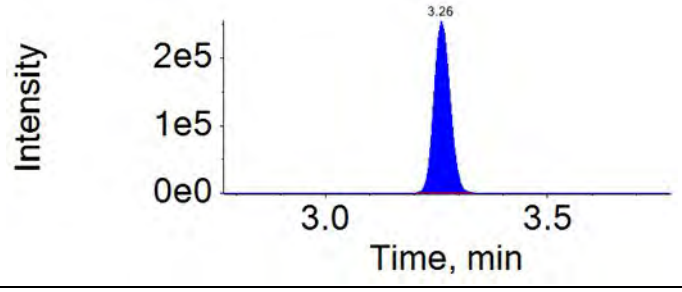
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

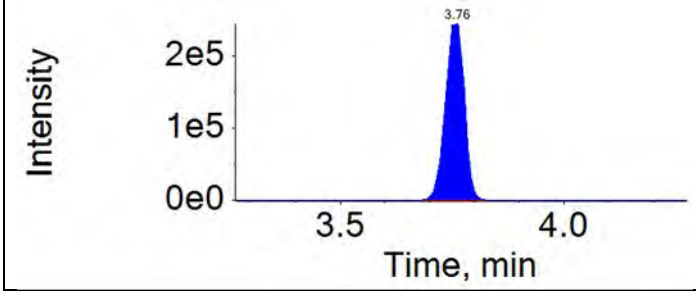
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

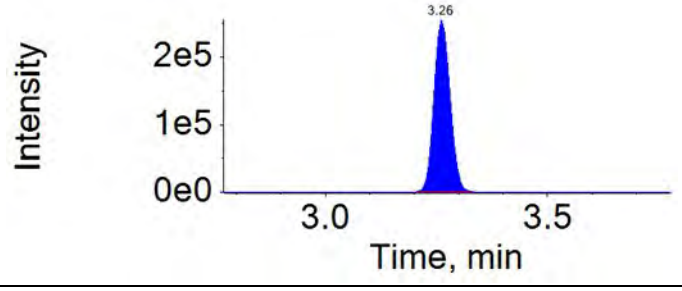
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



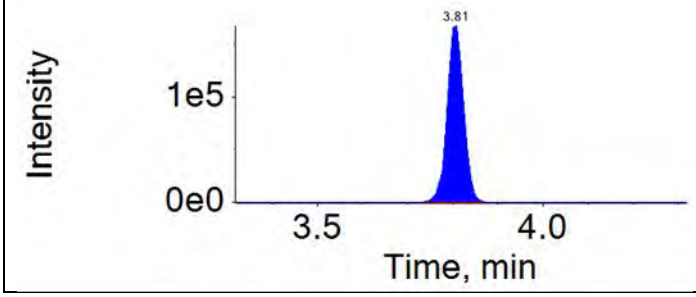


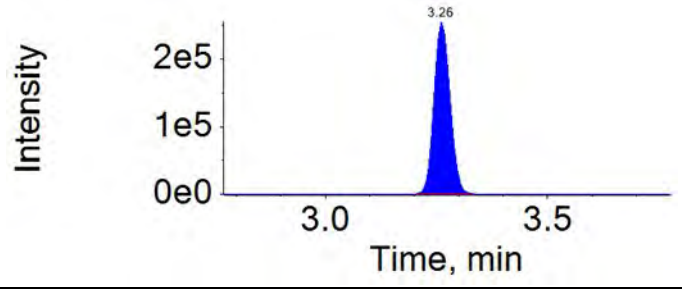
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



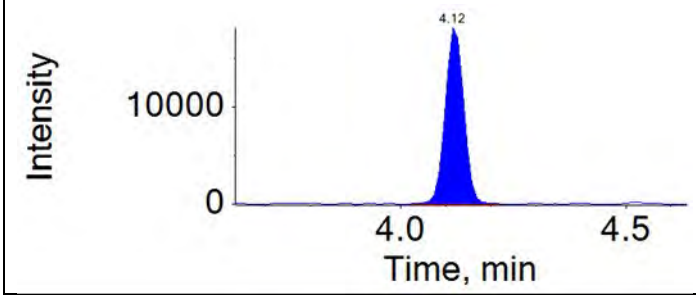


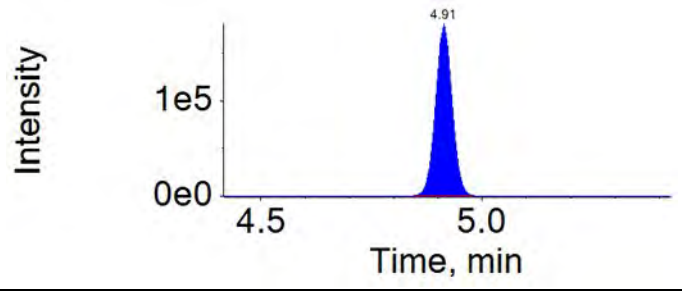
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



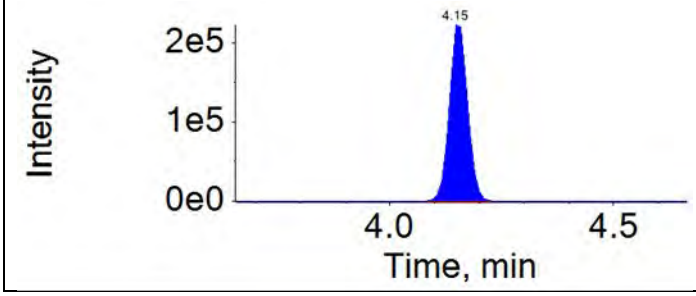


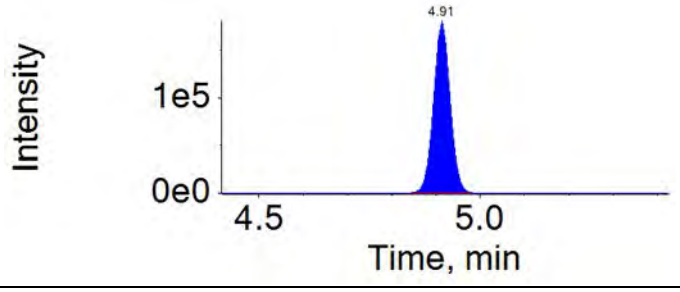
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

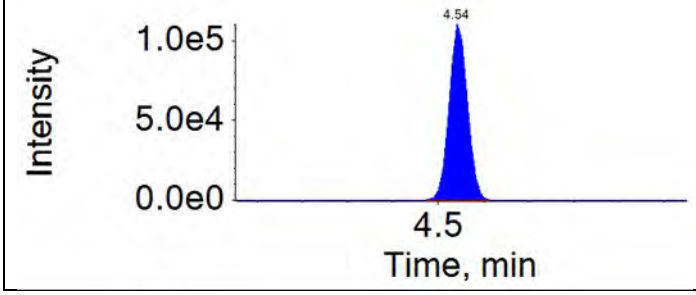
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

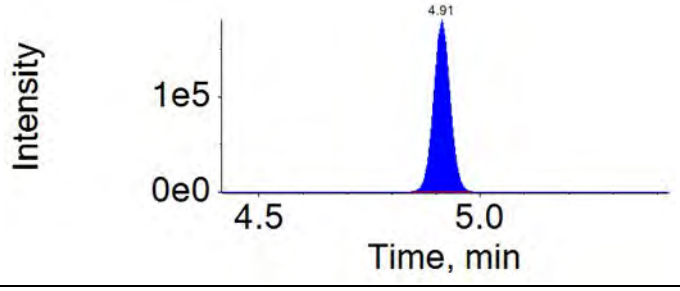
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



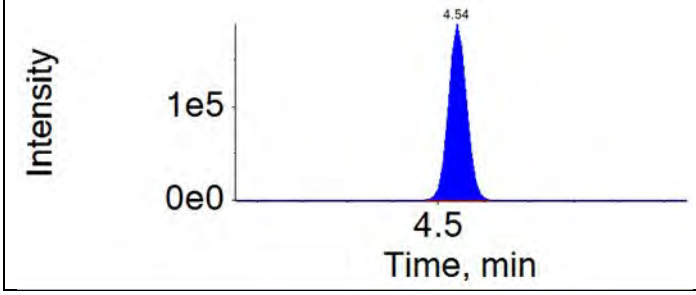


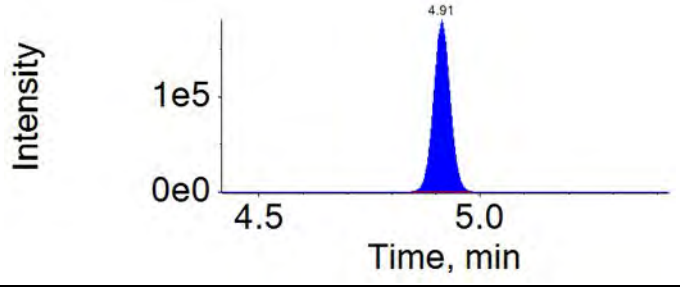
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



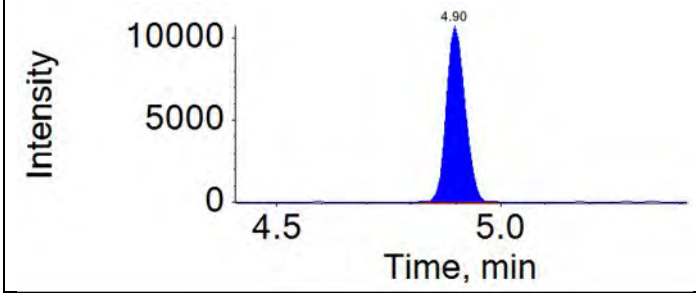


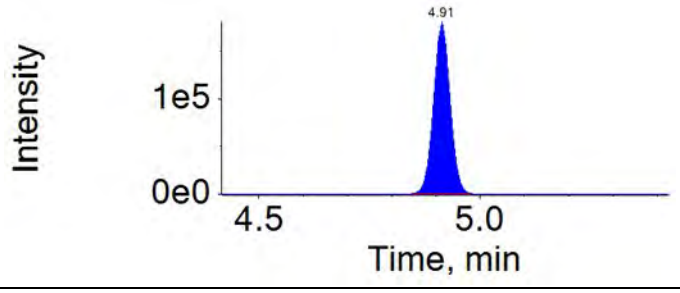
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

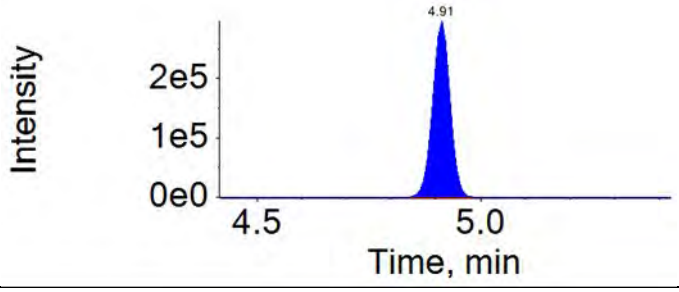
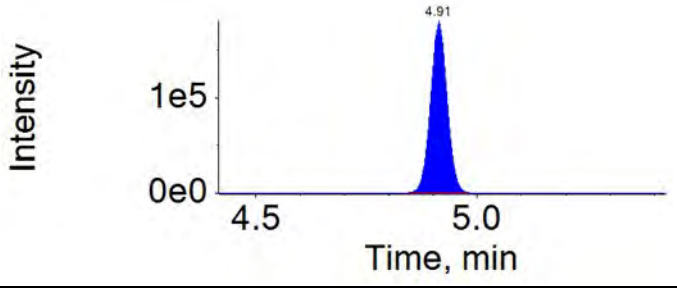


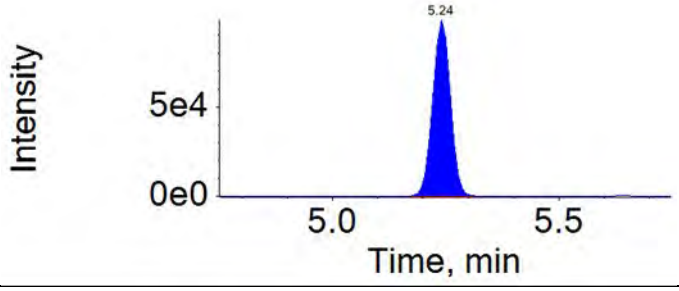
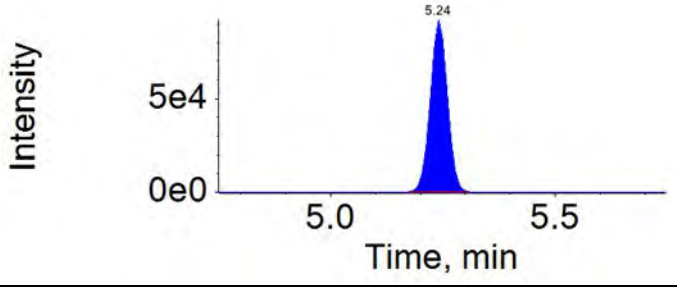


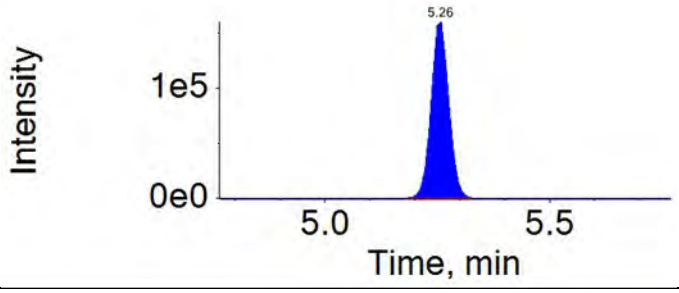
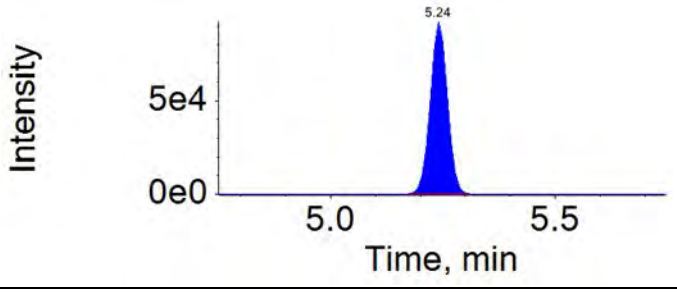
APPROVED
By MCD at 6:33 pm, 11/12/18

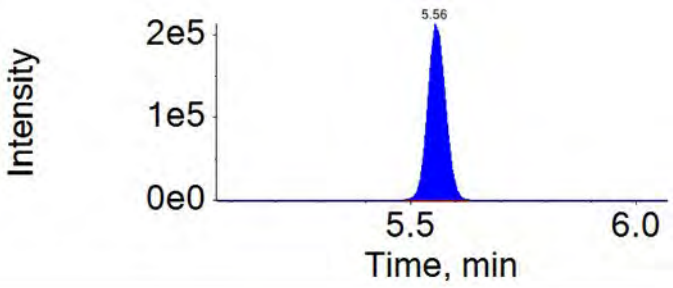
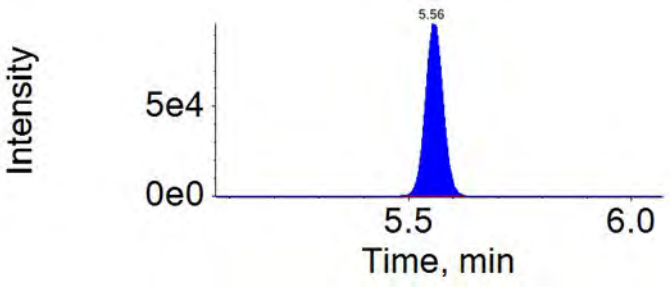
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

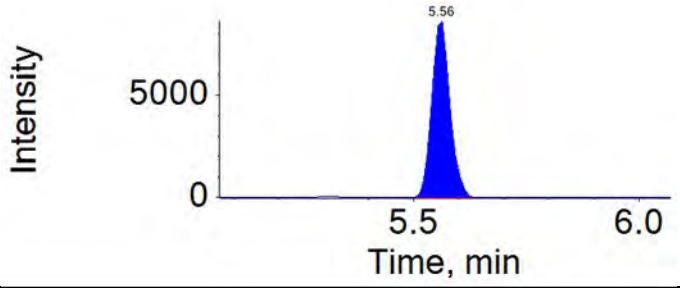
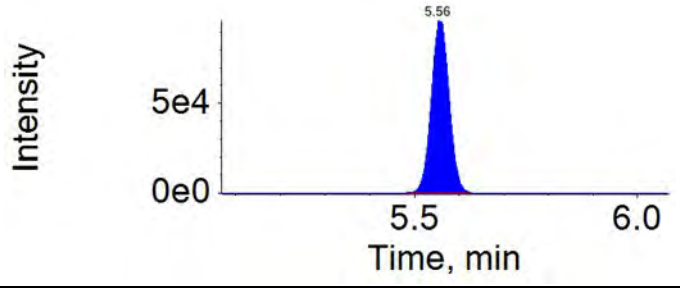
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

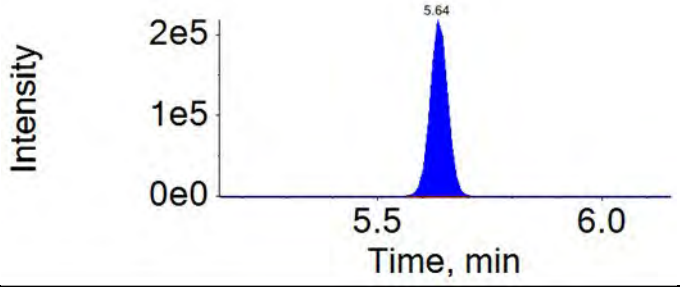
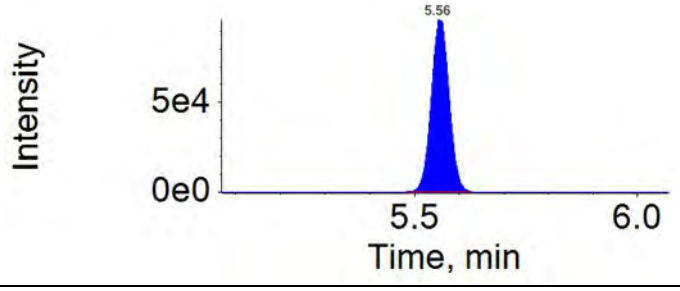
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

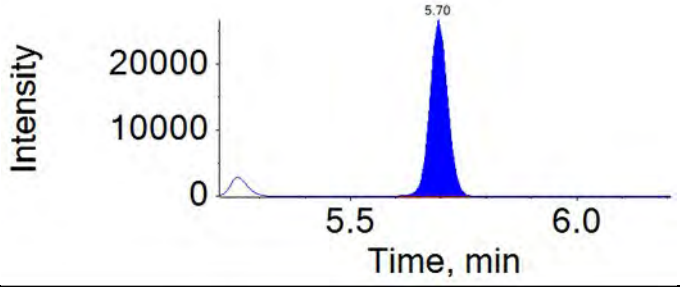
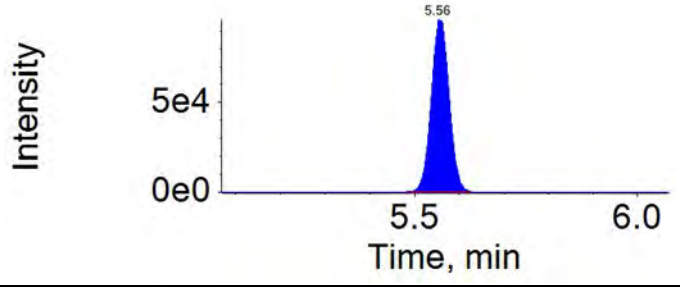
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

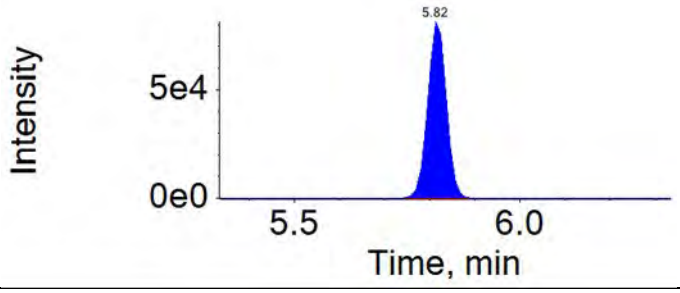
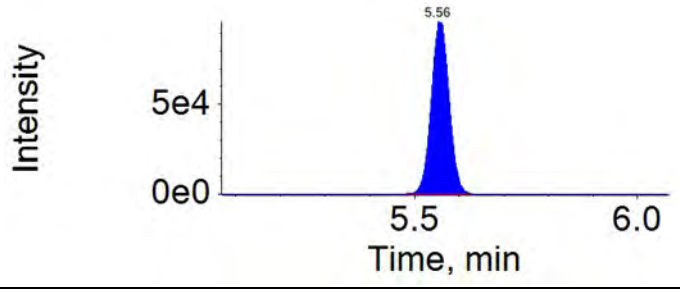
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

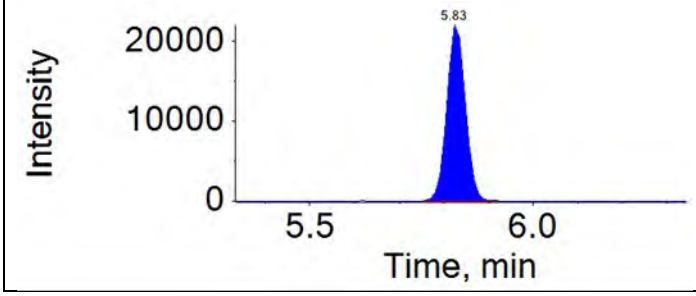
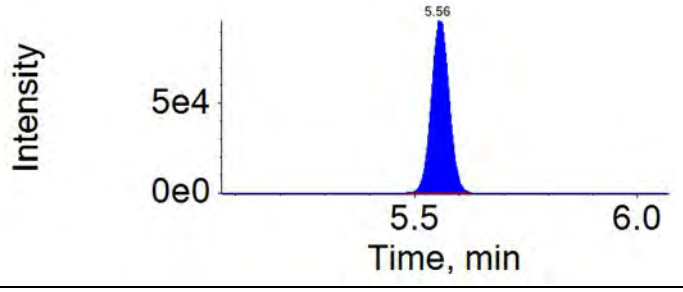
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

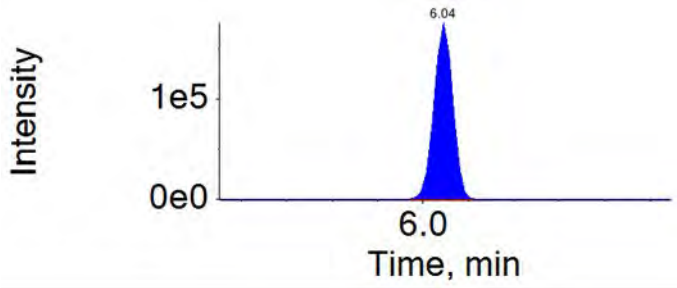
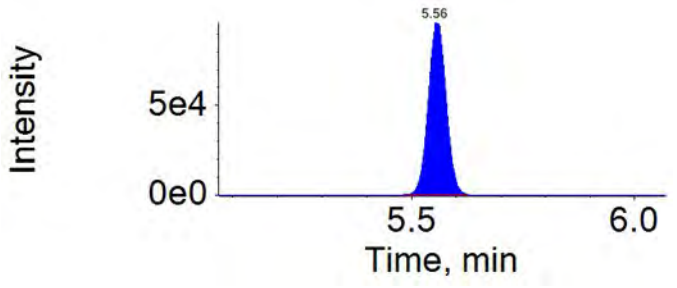
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

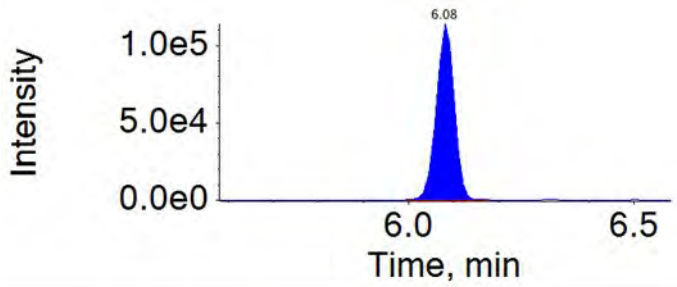
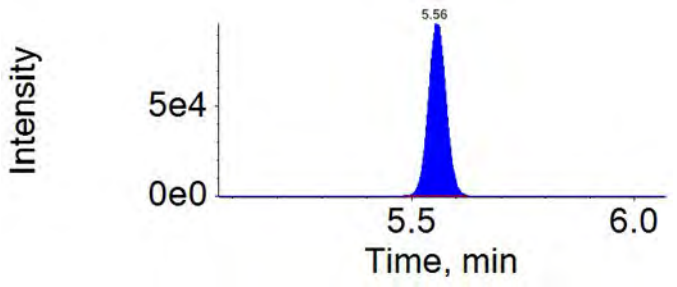
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

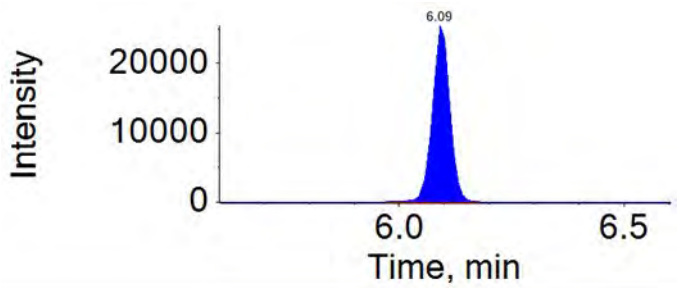
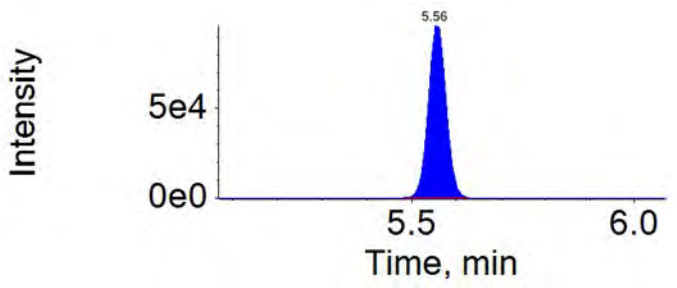
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

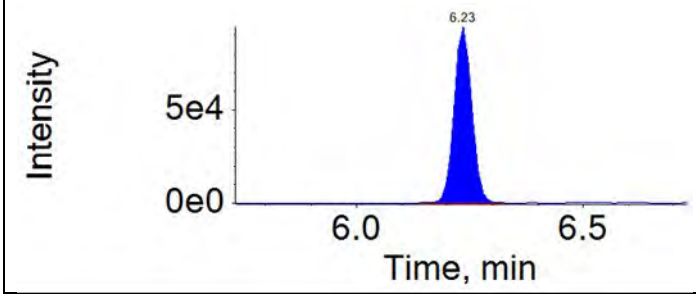
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

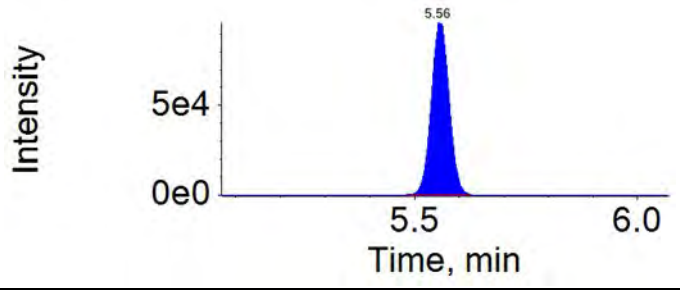
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

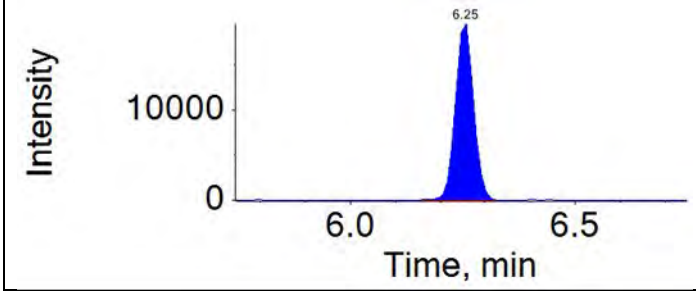
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

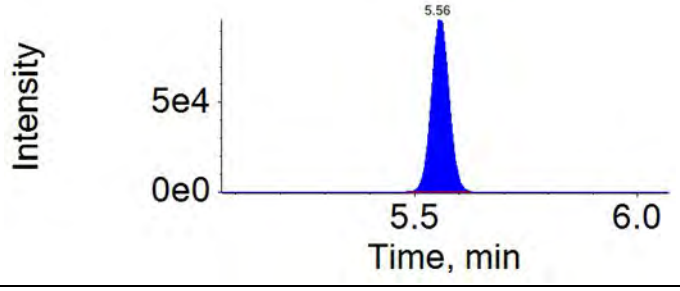
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



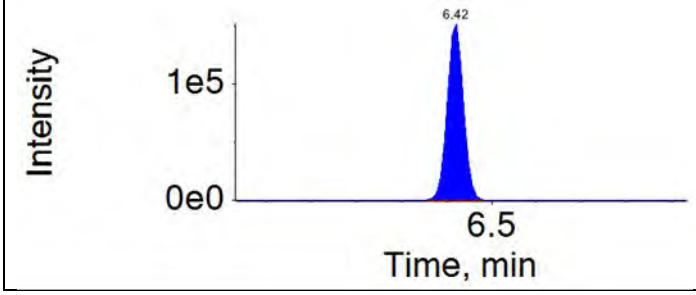


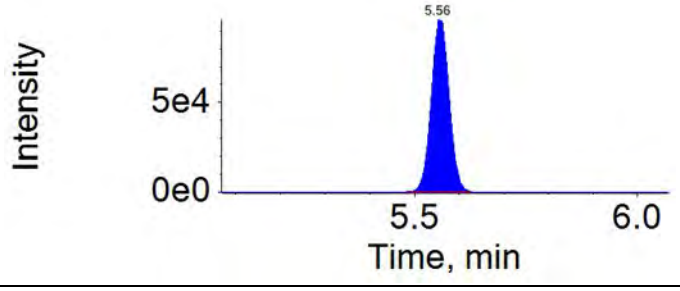
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



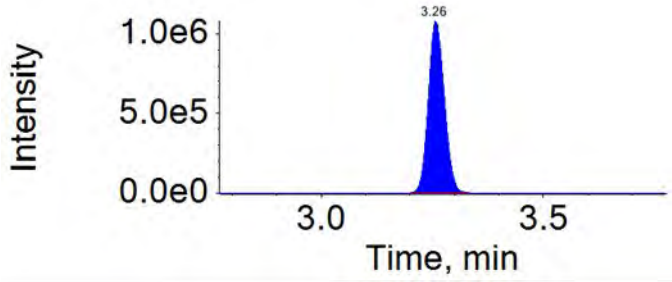


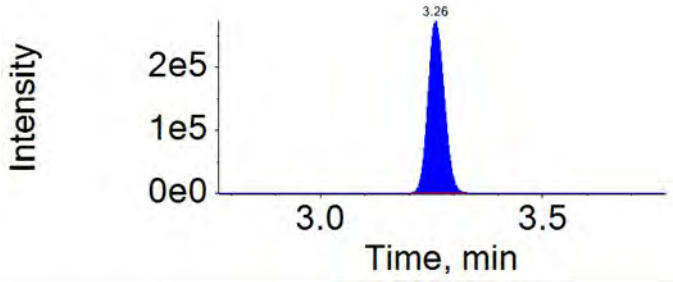
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

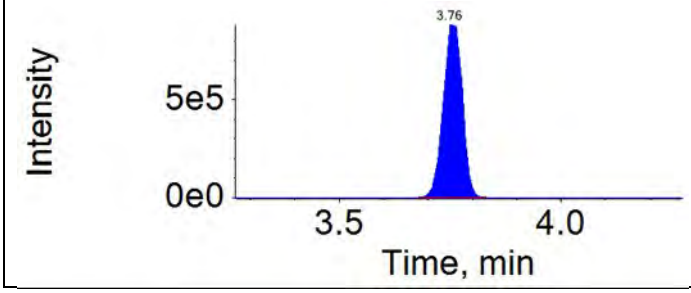
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

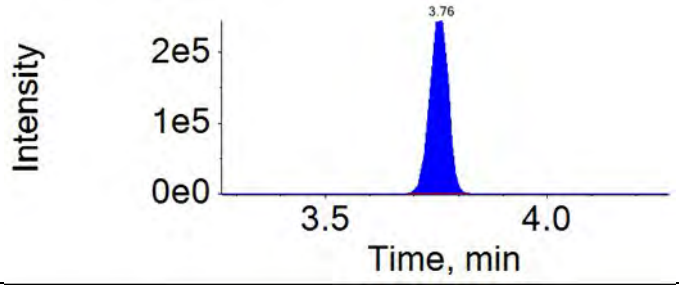
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



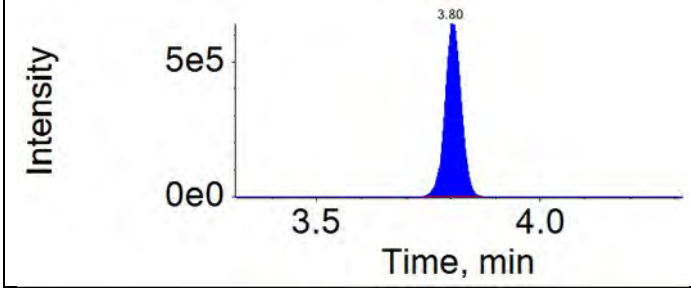


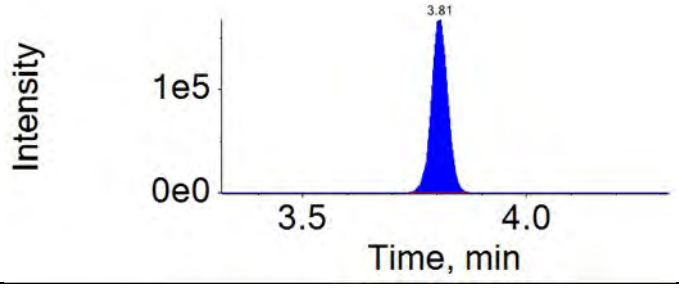
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



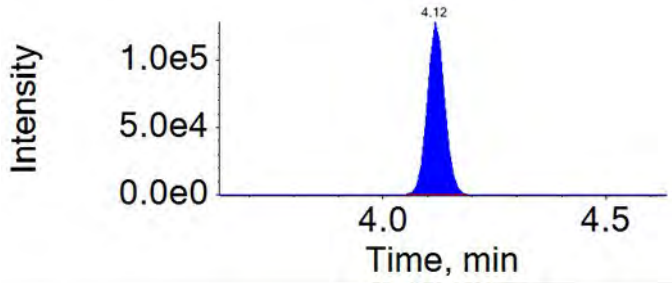


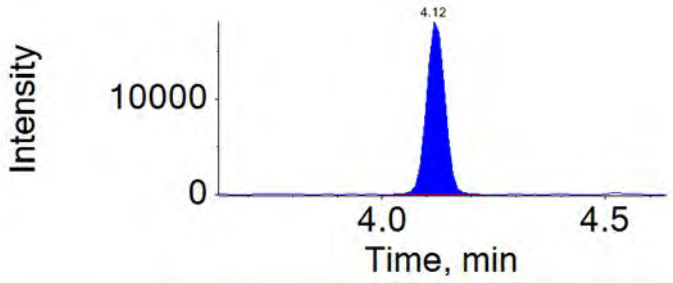
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



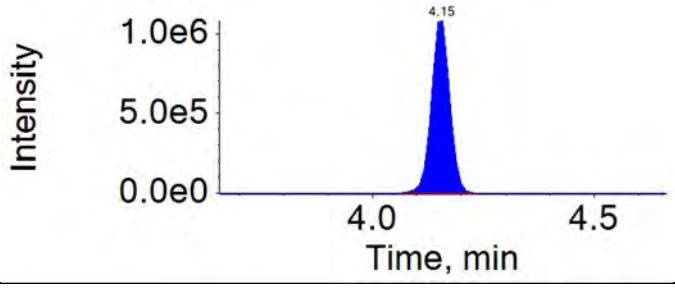


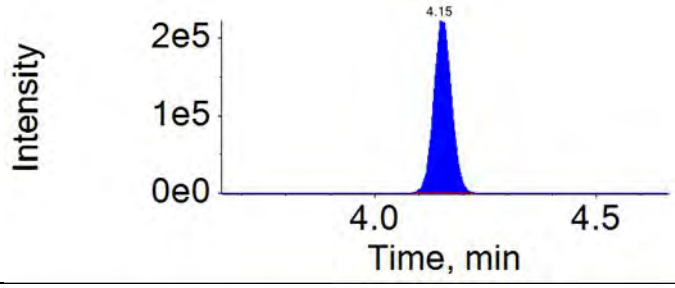
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

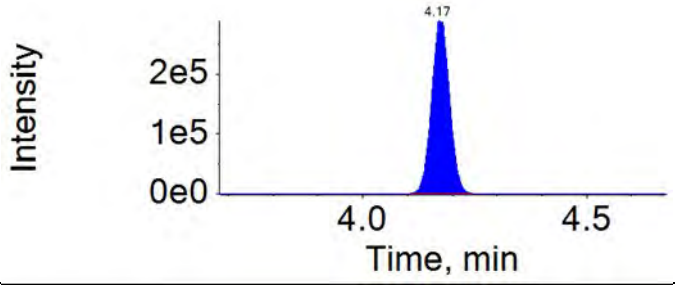
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

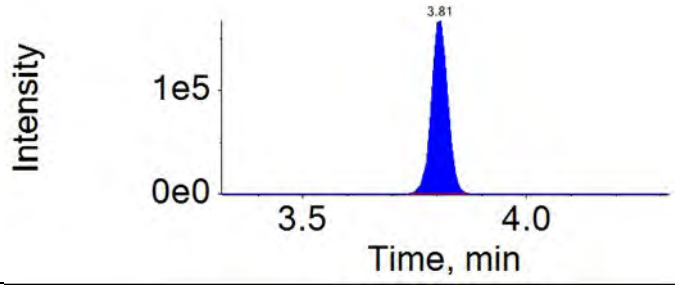
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



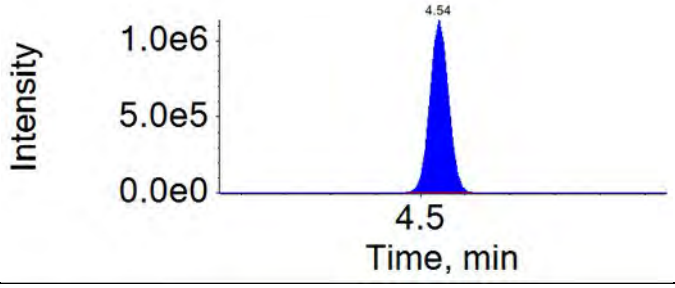


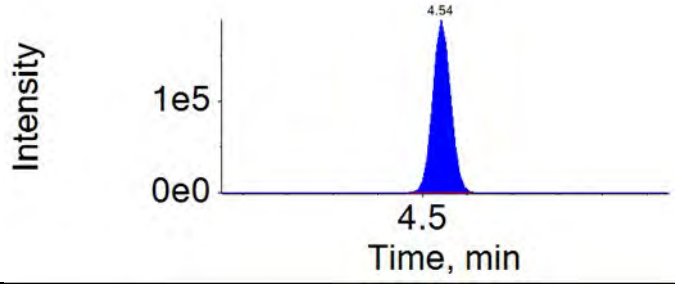
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



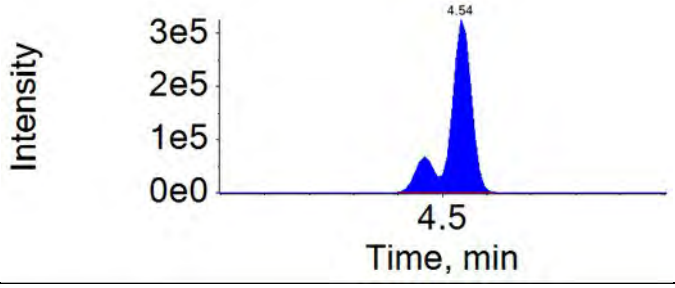


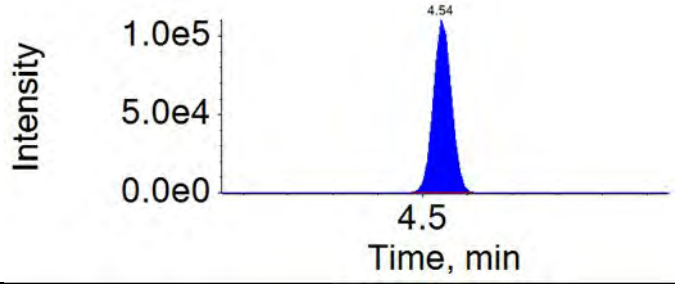
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

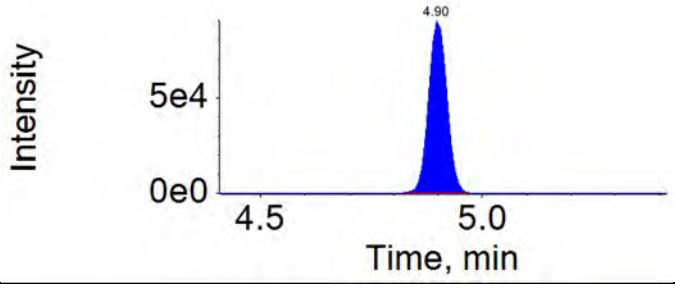
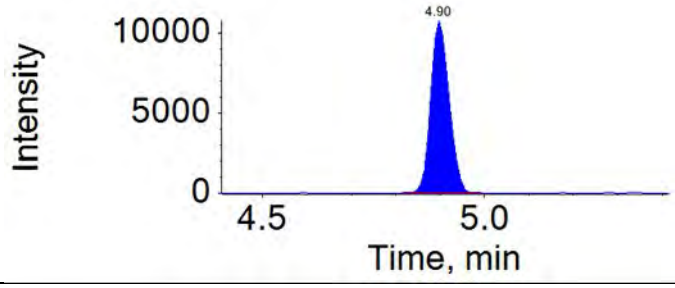


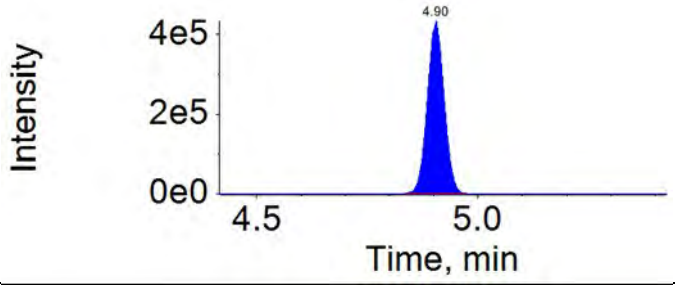
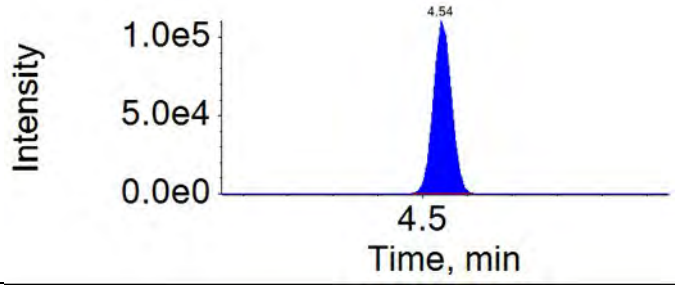


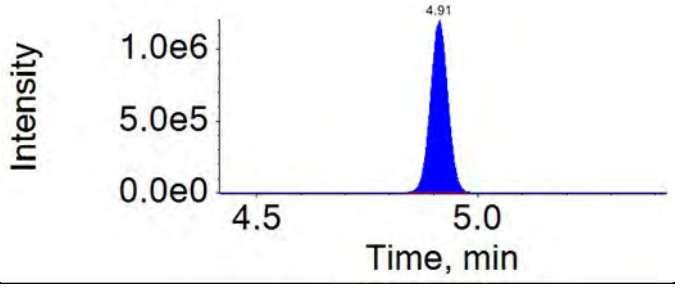
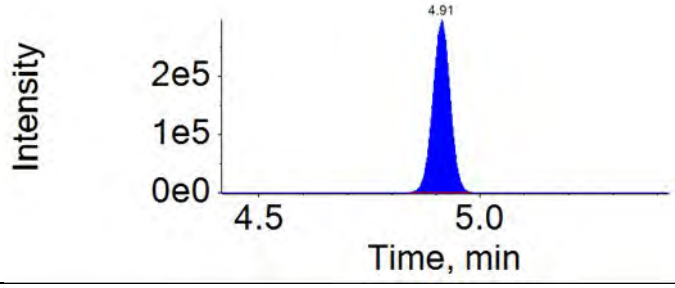
APPROVED
By MCD at 6:33 pm, 11/12/18

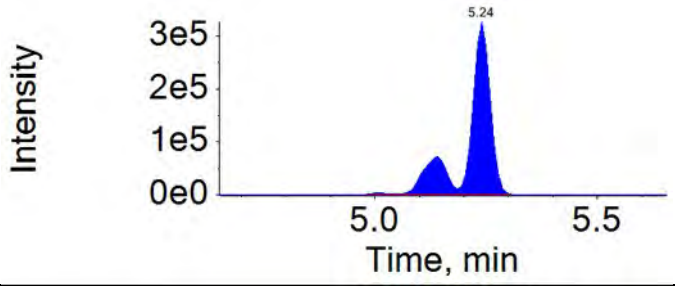
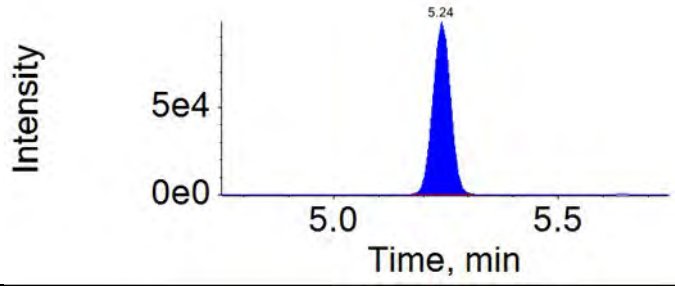
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

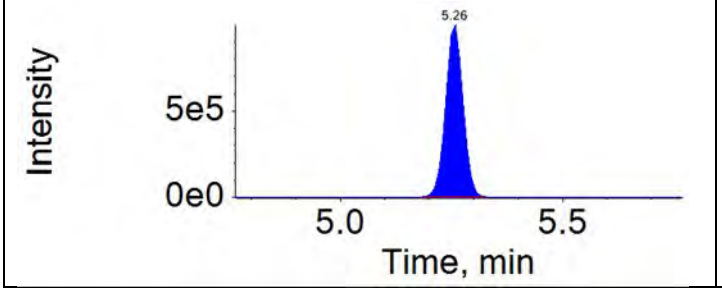
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

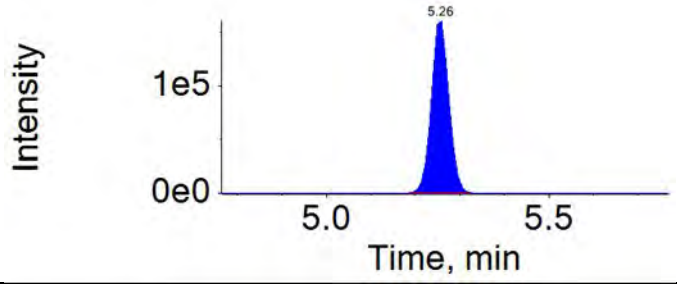
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

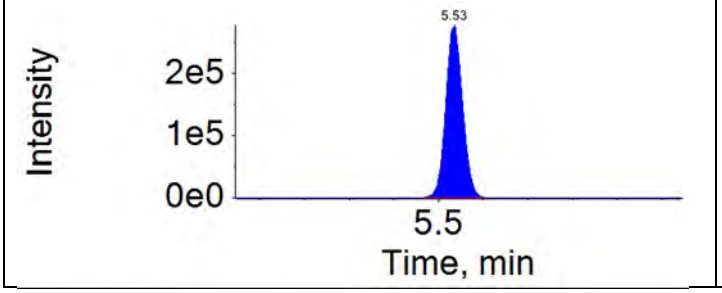
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

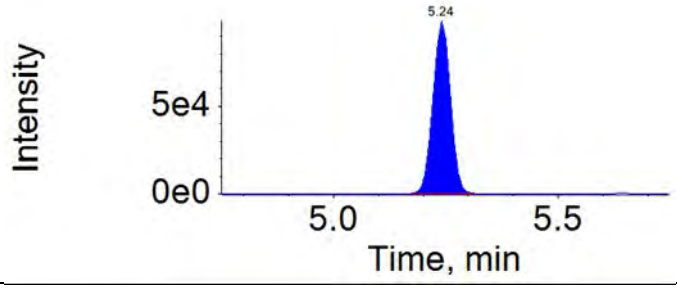
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



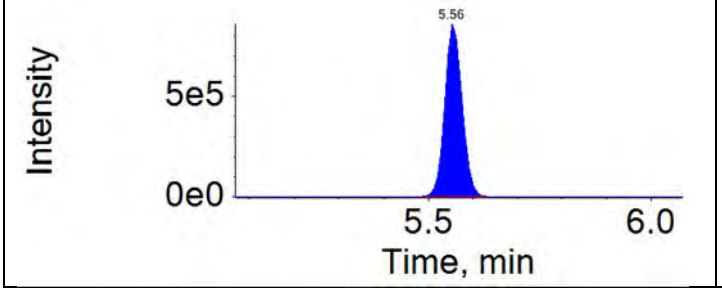


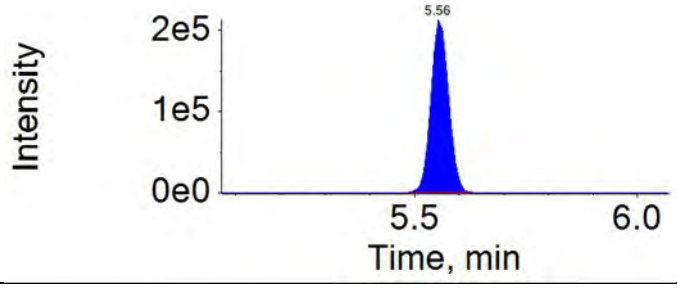
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



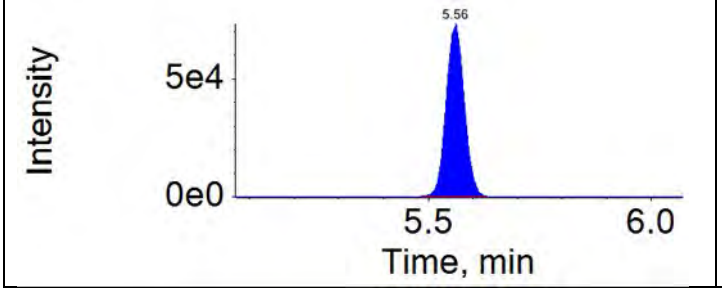


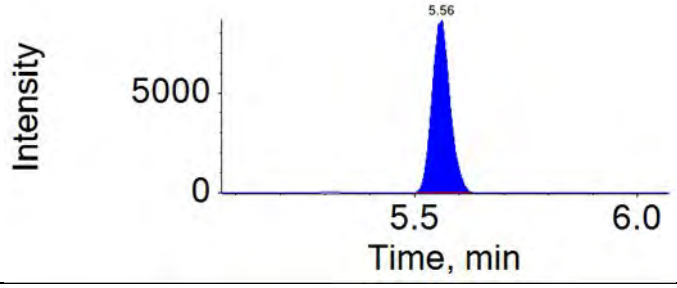
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



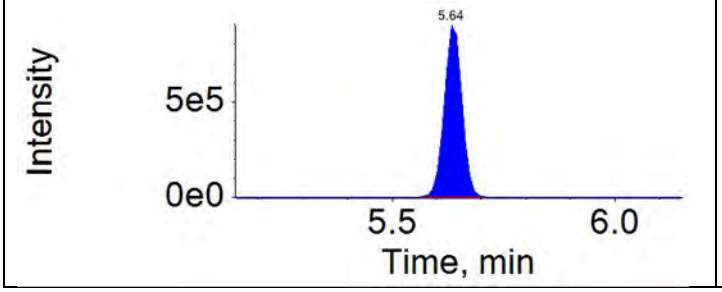


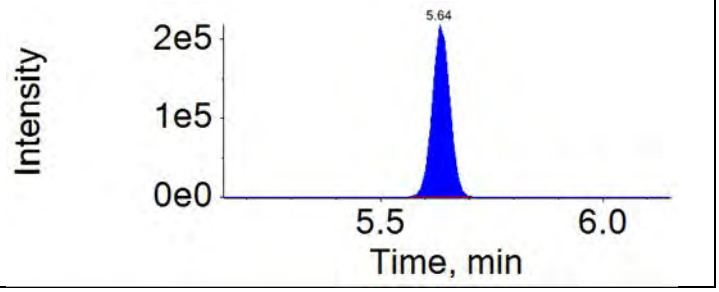
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

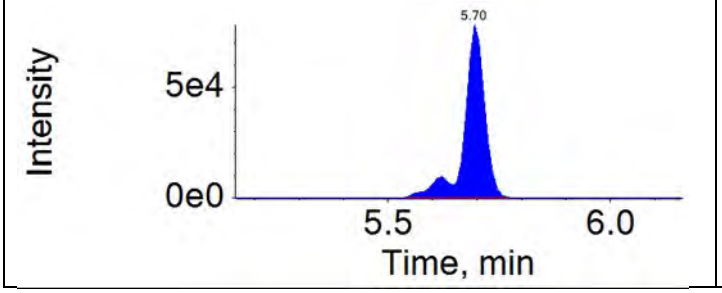
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

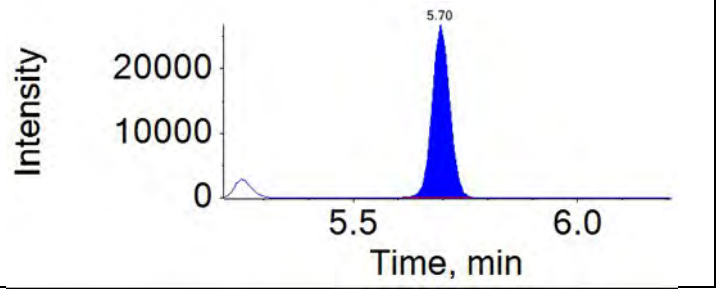
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



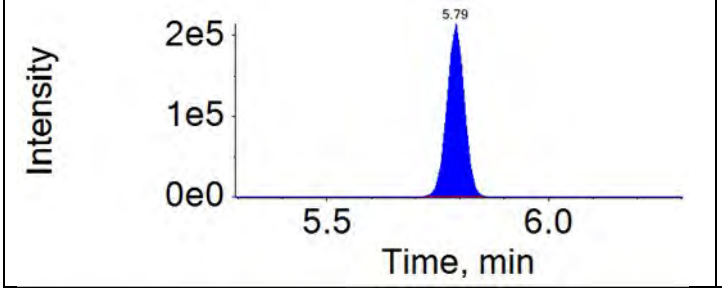


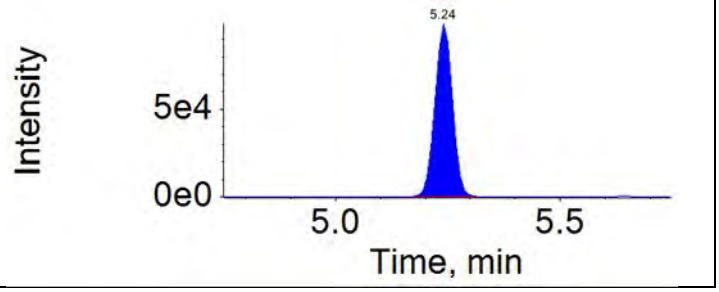
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



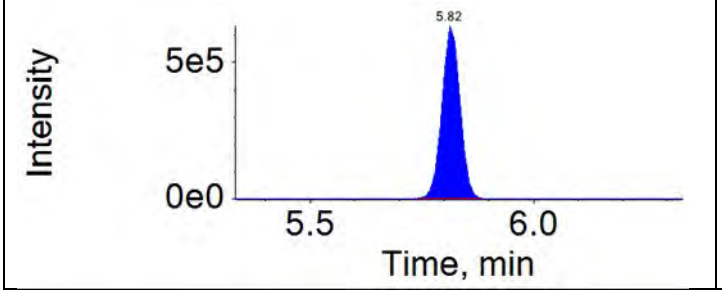


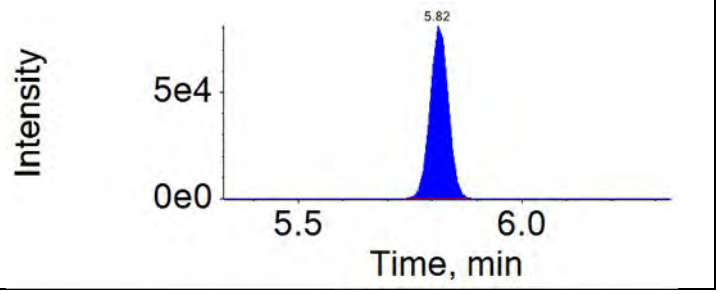
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



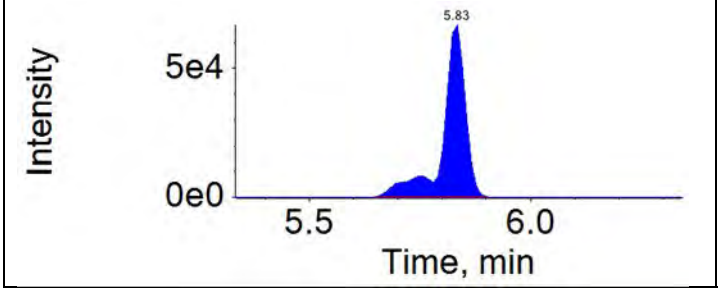


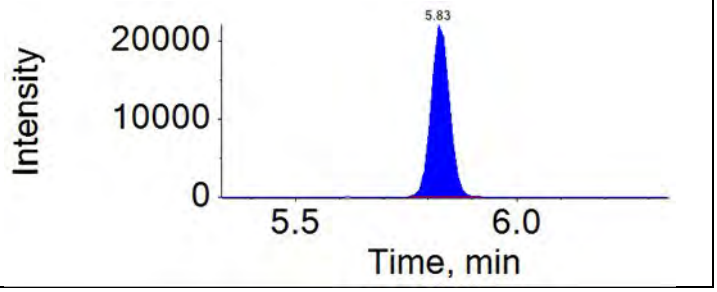
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

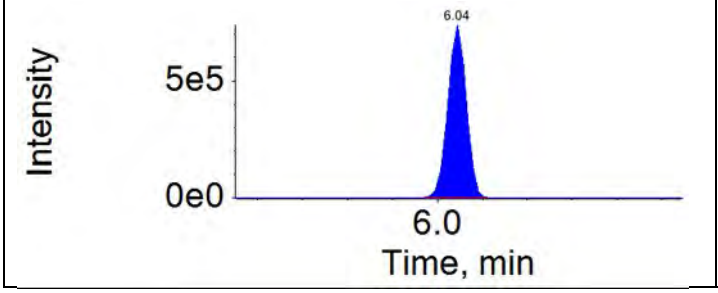
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

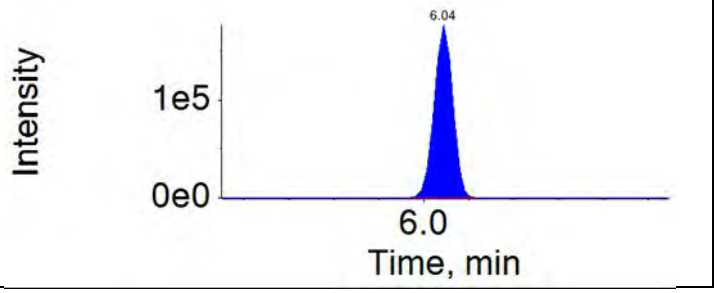
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



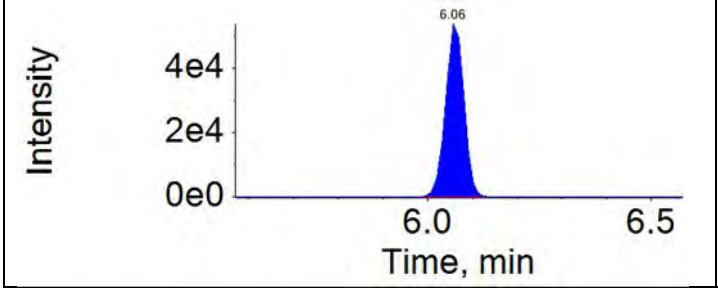


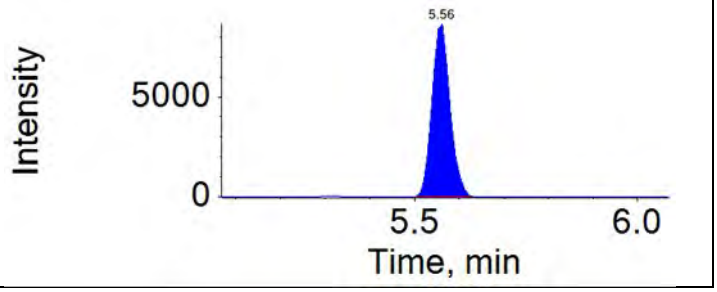
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



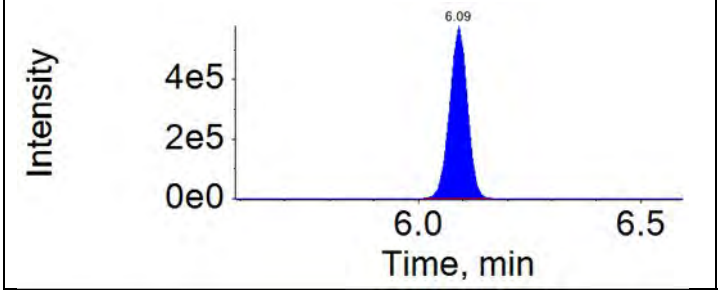


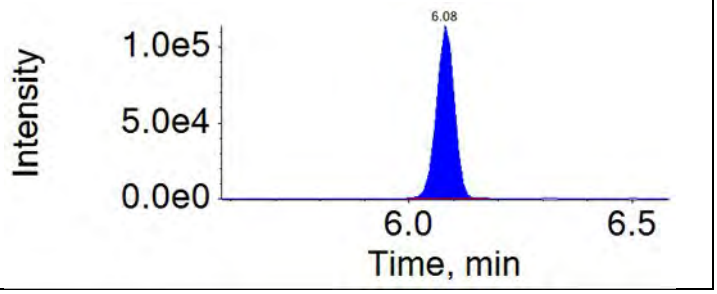
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



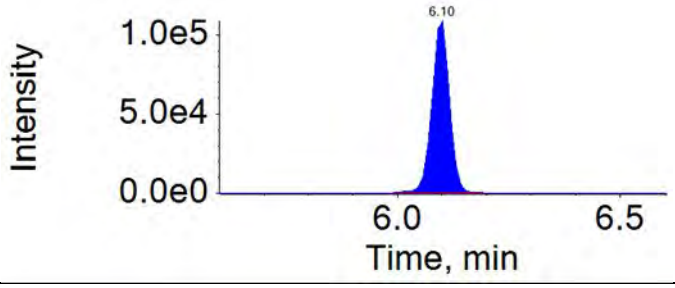


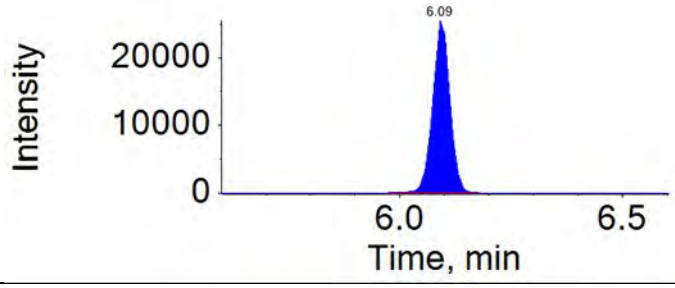
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

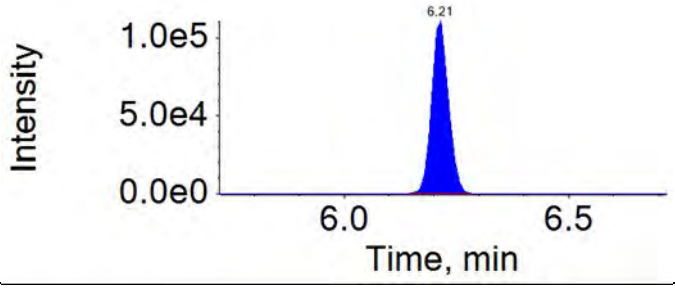
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

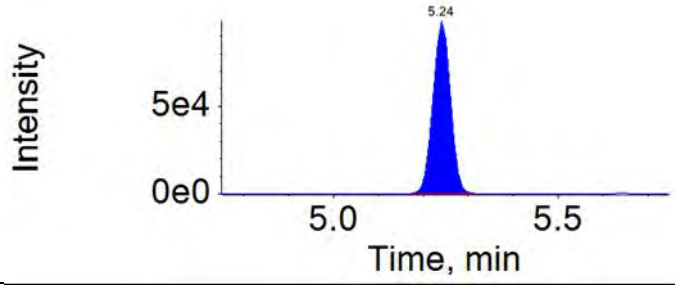
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



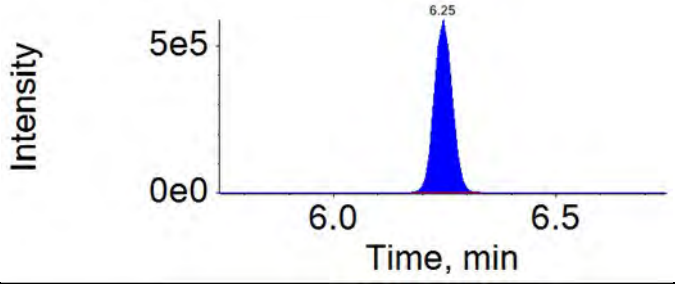


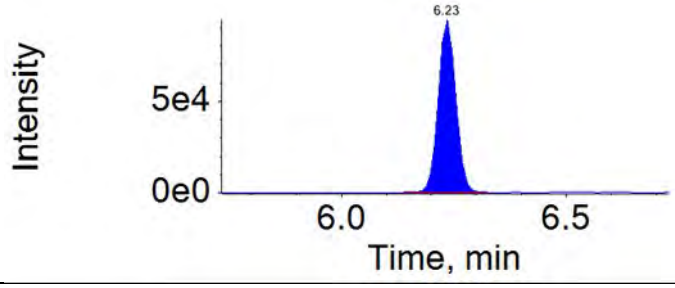
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



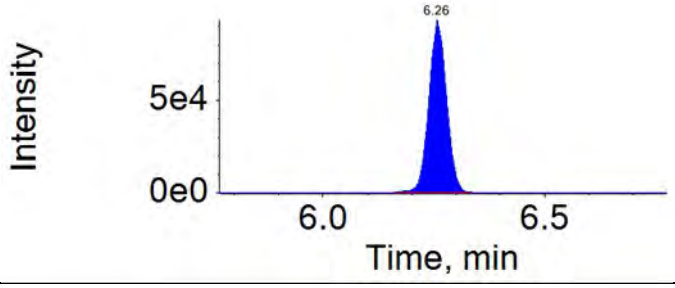


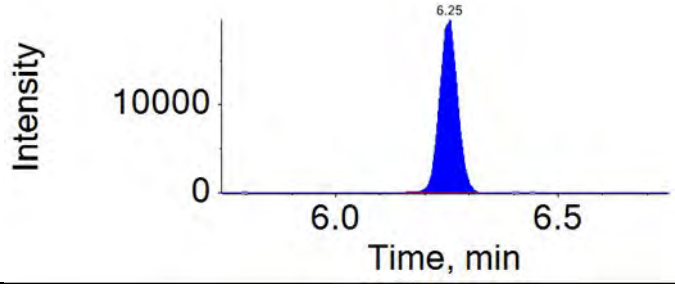
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

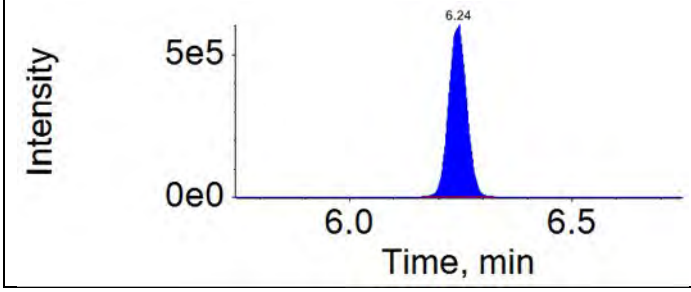
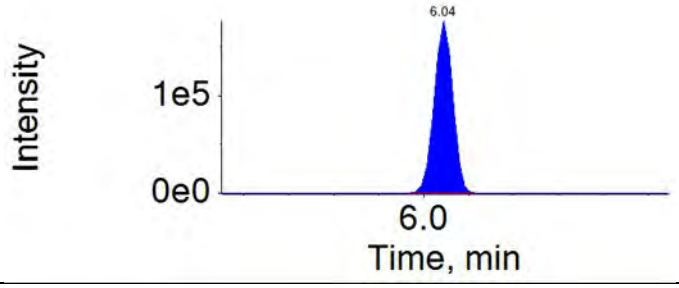


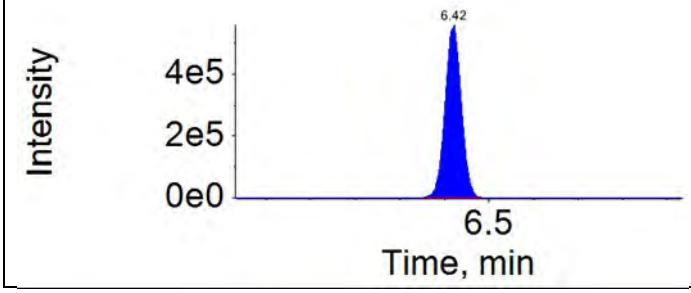
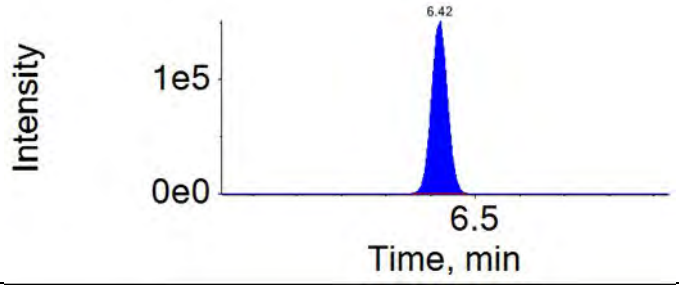


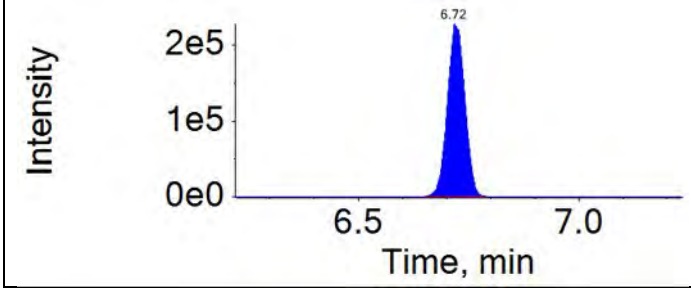
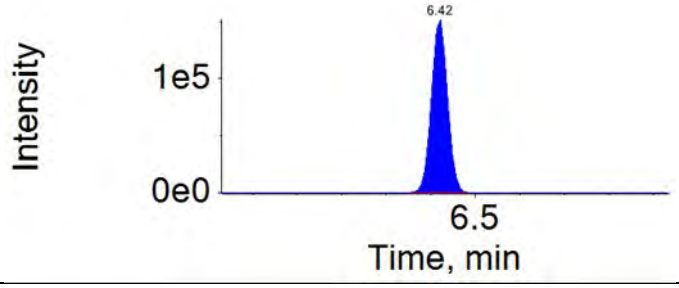
APPROVED
By MCD at 6:33 pm, 11/12/18

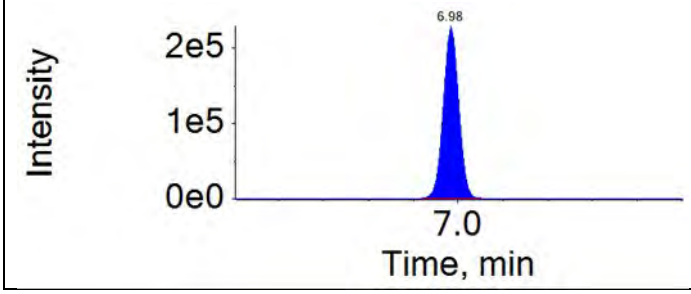
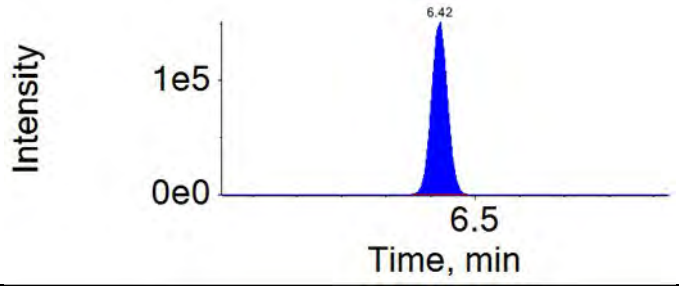
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

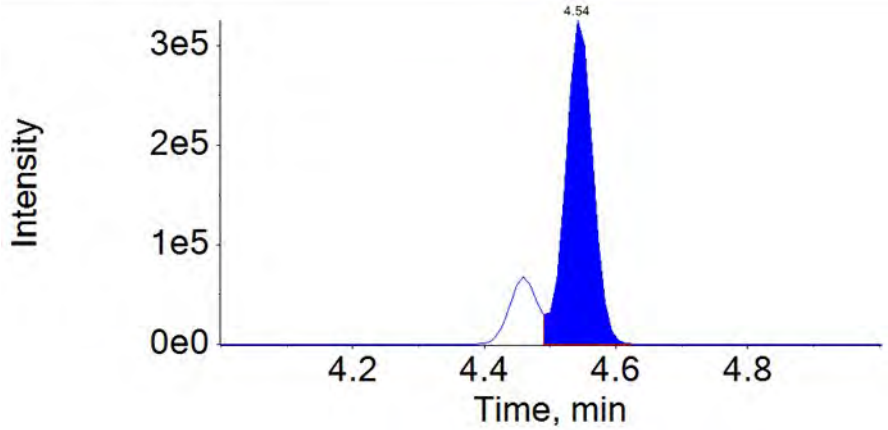
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

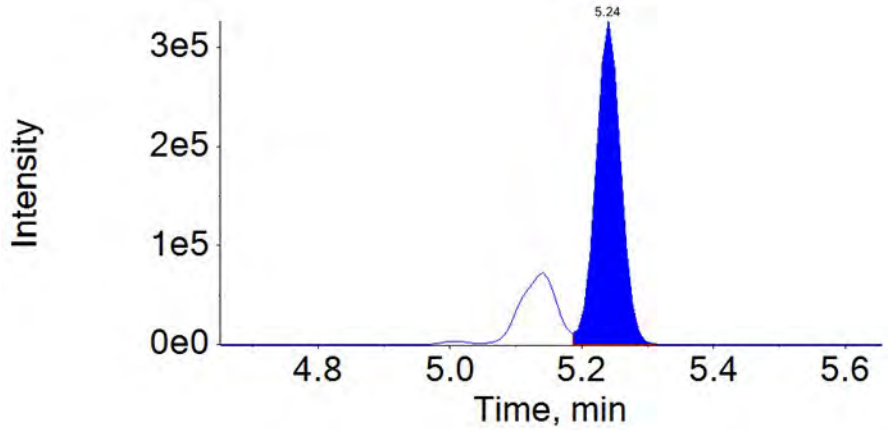
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
943687.14
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



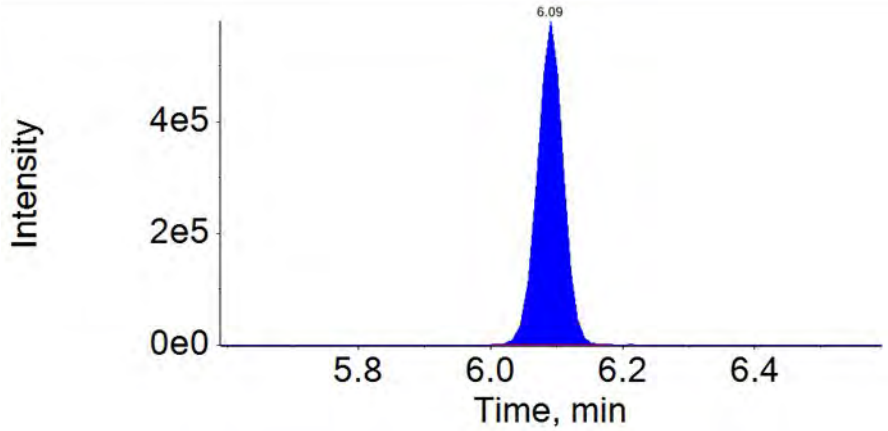
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
860586.56
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
NMePFOSAE
RT (min.):
6.09
Peak Area:
1591493.63
Mass Range:
616.0 / 59.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5

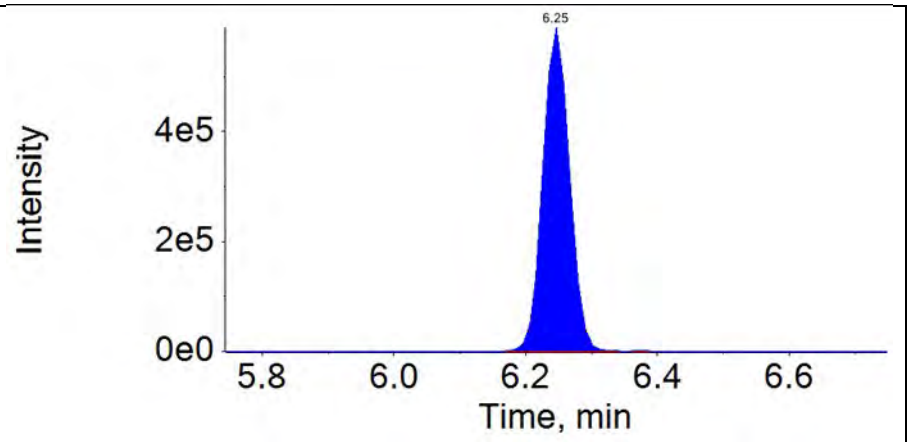


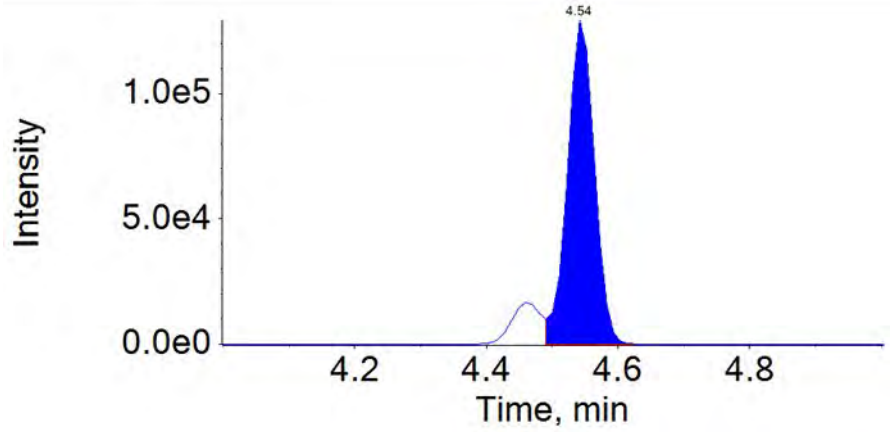
Integration Comment: incorrect integration

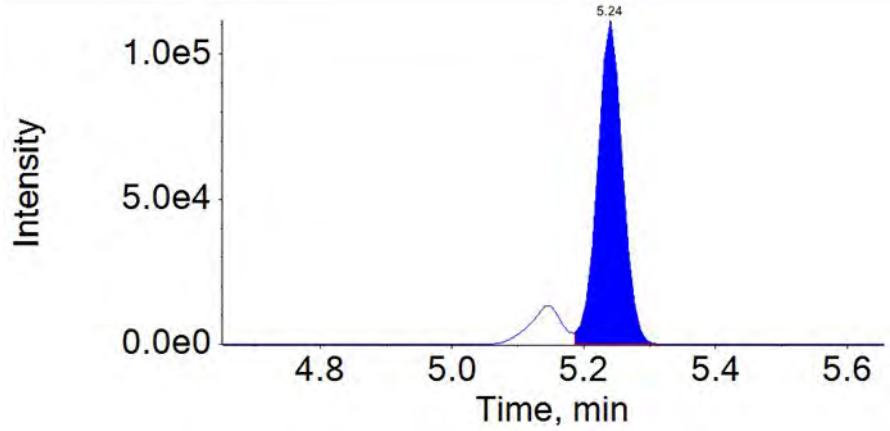
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtPFOSAE **RT (min.):** 6.25 **Peak Area:** 1662069.44 **Mass Range:** 630.0 / 59.0 **File Name:** 18NOV12DCAL-46.wiff **Sample Name:** CAL5	 **Integration Comment:** incorrect integration

Component Name: PFHxS_2 **RT (min.):** 4.54 **Peak Area:** 369522.57 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV12DCAL-46.wiff **Sample Name:** CAL5	 **Integration Comment:** incorrect integration

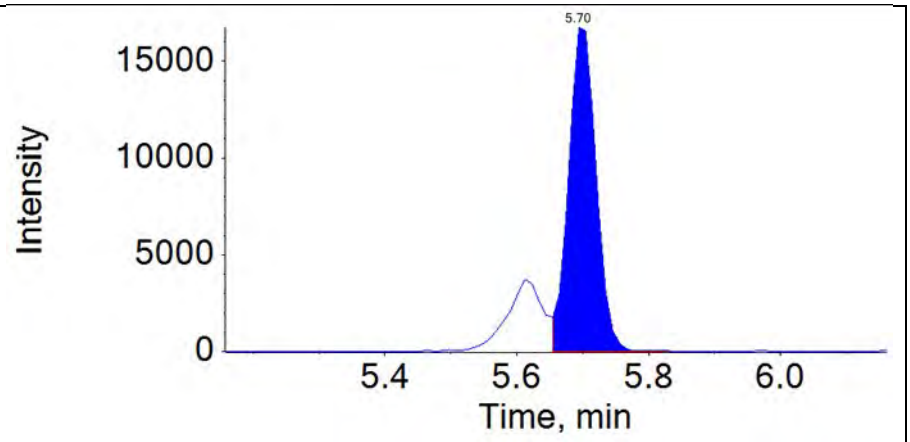
Component Name: PFOS_2 **RT (min.):** 5.24 **Peak Area:** 295251.82 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-46.wiff **Sample Name:** CAL5	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

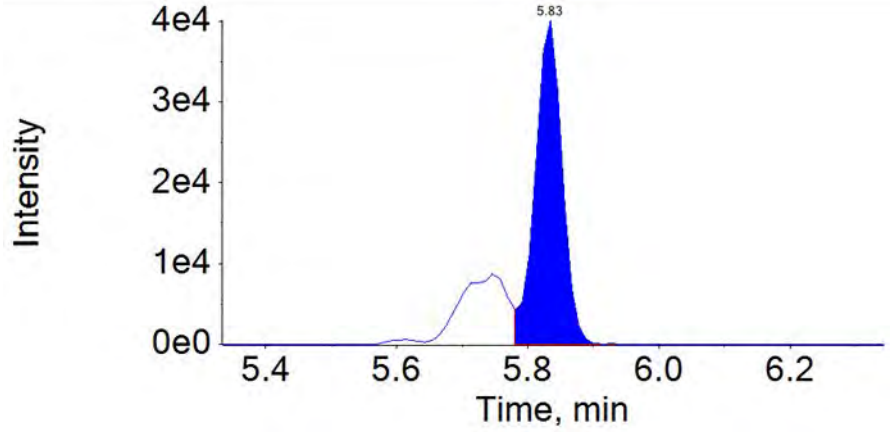
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
48911.60
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



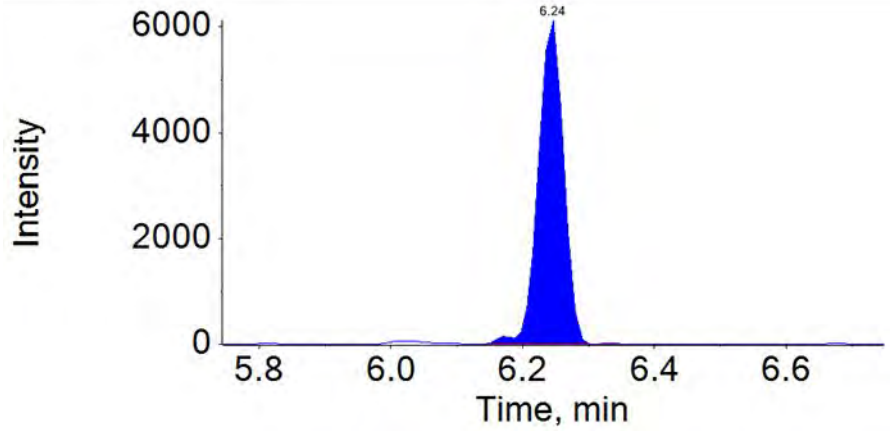
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
114677.93
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.24
Peak Area:
16434.79
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

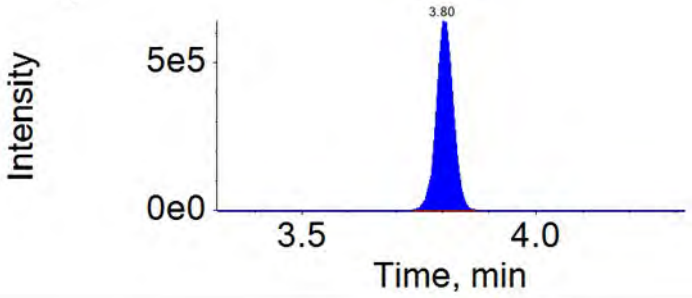
Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-46.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	1630613.49	A	0.3619	0.3539			
PFBS_2	3.80	1.00	577021.23	A	0.3619	0.3539	-2	50	
4:2-FTS	4.12	1.00	344695.89	A	0.6730	0.5792			
4:2 FTS_2	4.12	1.00	199643.08	A	0.6730	0.5792		#NA!	
PFHxA	4.15	1.00	3158486.41	A	0.0117	0.0109			
PFHxA_2	4.15	1.00	34335.08	A	0.0117	0.0109	-7	50	
PFPeS	4.17	1.10	815928.18	A	0.5191	0.5405			
PFPeS_2	4.17	1.10	440987.79	A	0.5191	0.5405	4	50	
PFHpA	4.54	1.00	3269561.01	A	0.0563	0.0518			
PFHpA_2	4.54	1.00	169510.99	A	0.0563	0.0518	-8	50	
PFHxS	4.54	1.00	1138604.25	M	0.3428	0.3697			
PFHxS_2	4.54	1.00	420898.36	M	0.3428	0.3697	8	50	
6:2-FTS	4.90	1.00	260254.34	A	0.6604	0.6706			
6:2 FTS_2	4.90	1.00	174514.29	A	0.6604	0.6706		#NA!	
PFHpS	4.90	1.08	1145559.80	A	0.4066	0.4043			
PFHpS_2	4.90	1.08	463097.70	A	0.4066	0.4043	-1	50	
PFOA	4.91	1.00	3291549.40	A	0.0562	0.0563			
PFOA_2	4.91	1.00	185238.19	A	0.0562	0.0563	0	50	
PFOS	5.24	1.00	1147826.77	M	0.2968	0.2969			
PFOS_2	5.24	1.00	340771.88	M	0.2968	0.2969	0	50	
PFNA	5.26	1.00	2725089.71	A	0.0229	0.0218			
PFNA_2	5.26	1.00	59324.51	A	0.0229	0.0218	-5	50	
PFNS	5.53	1.06	725402.00	A	0.4828	0.4661			
PFNS_2	5.53	1.06	338109.67	A	0.4828	0.4661	-3	50	
PFDA	5.56	1.00	2309359.54	A	0.0081	0.0056			
PFDA_2	5.56	1.00	12923.91	A	0.0081	0.0056	-31	50	
8:2-FTS	5.56	1.00	206213.12	A	0.6814	0.6384			
8:2 FTS_2	5.56	1.00	131655.86	A	0.6814	0.6384		#NA!	
NMeFOSAA	5.70	1.00	250711.49	A	0.2569	0.2507			
NMeFOSAA_2	5.70	1.00	62849.33	M	0.2569	0.2507	-2	50	
PFDS	5.79	1.10	578877.50	A	0.5144	0.4977			
PFDS_2	5.79	1.10	288112.49	A	0.5144	0.4977	-3	50	
PFUnDA	5.82	1.00	1773582.60	A	0.0058	0.0044			
PFUnDA_2	5.82	1.00	7755.59	A	0.0058	0.0044	-25	50	
NEtFOSAA	5.83	1.00	237197.18	A	0.7253	0.6651			
NEtFOSAA_2	5.83	1.00	157758.05	M	0.7253	0.6651	-8	50	
PFDoDA	6.04	1.00	2099385.04	A	0.0157	0.0116			
PFDoDA_2	6.04	1.00	24326.91	A	0.0157	0.0116	-26	50	
10:2-FTS	6.06	1.09	153343.55	A	0.6356	0.6979			
10:2 FTS_2	6.06	1.09	107018.53	A	0.6356	0.6979		#NA!	
PFTrDA	6.24	1.03	1679407.24	A	0.0086	0.0096			
PFTrDA_2	6.24	1.03	16152.60	M	0.0086	0.0096	12	50	
PFTeDA	6.42	1.00	1418276.72	A	0.0062	0.0062			
PFTeDA_2	6.42	1.00	8850.65	A	0.0062	0.0062	0	50	
PFHxDA	6.72	1.05	627350.68	A	0.0683	0.0680			
PFHxDA_2	6.72	1.05	42651.35	A	0.0683	0.0680	0	50	
PFODA	6.98	1.09	544296.46	A	0.0277	0.0265			
PFODA_2	6.98	1.09	14445.27	A	0.0277	0.0265	-4	50	

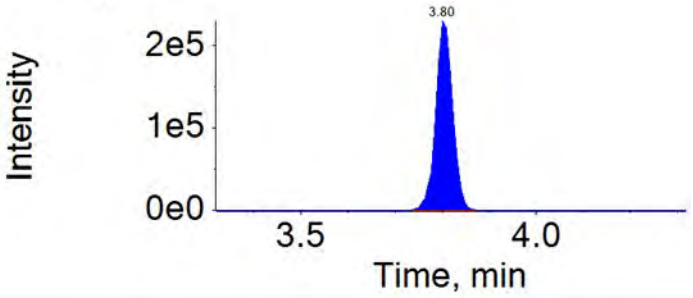
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

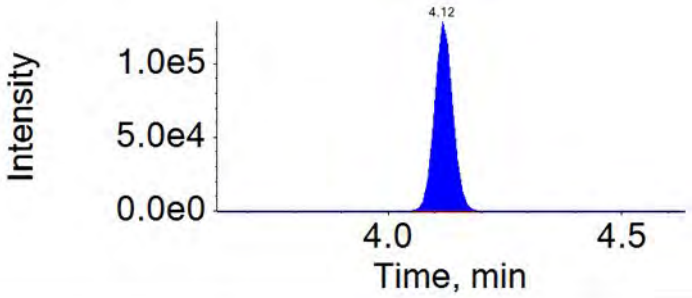
Component: PFBS
Primary Mass: 299.0 / 80.0



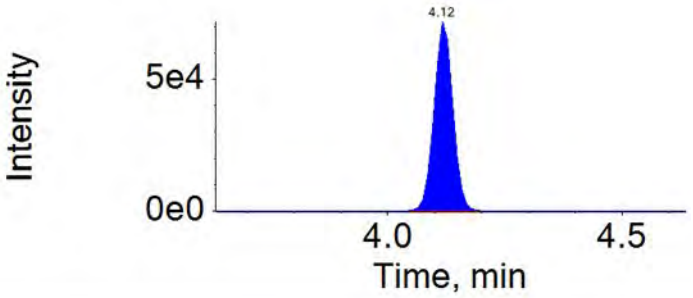
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



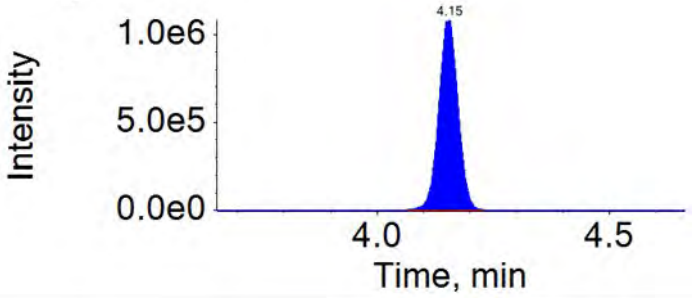
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



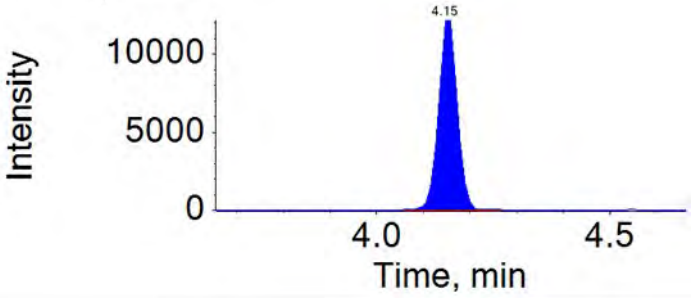
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



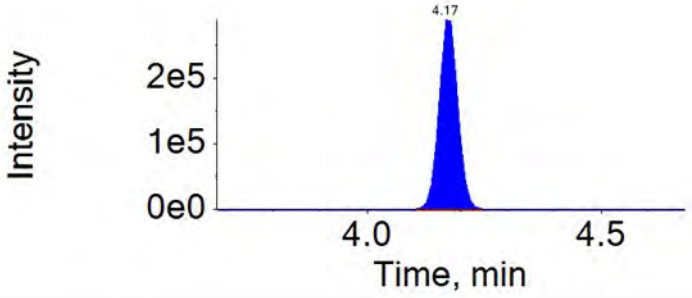
Component: PFHxA
Primary Mass: 313.0 / 269.0



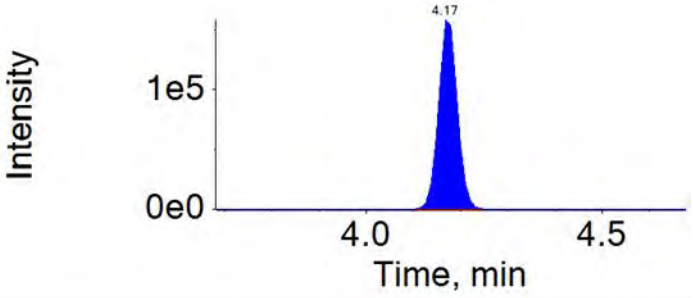
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



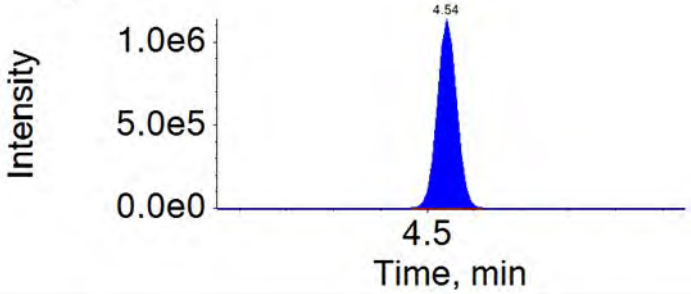
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



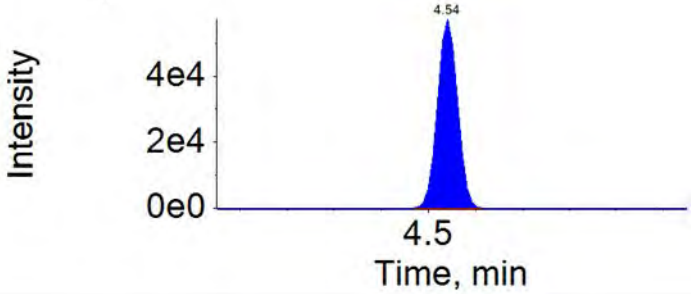
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

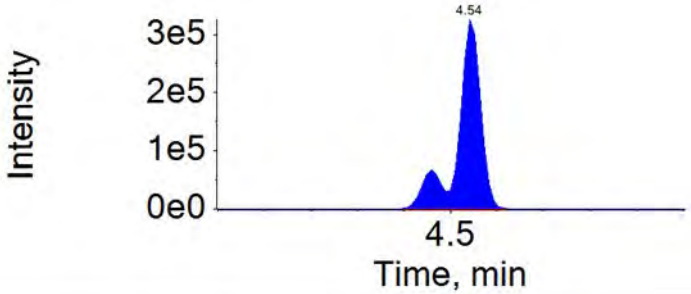
Component: PFHpA
Primary Mass: 363.0 / 319.0



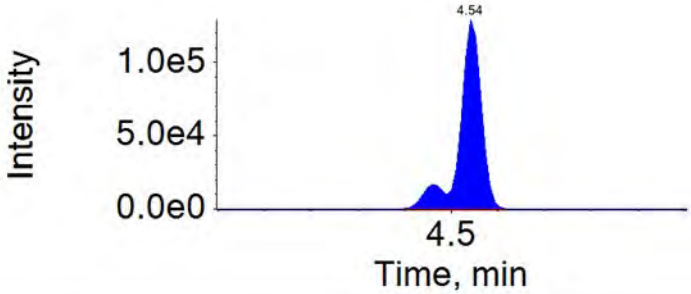
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



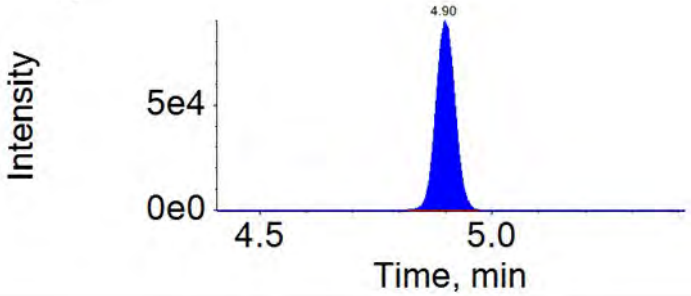
Component: PFHxS
Primary Mass: 399.0 / 80.0



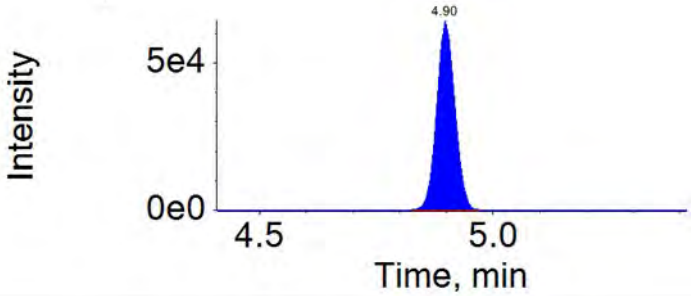
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



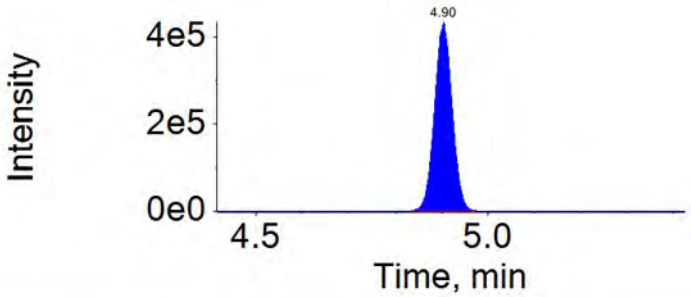
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



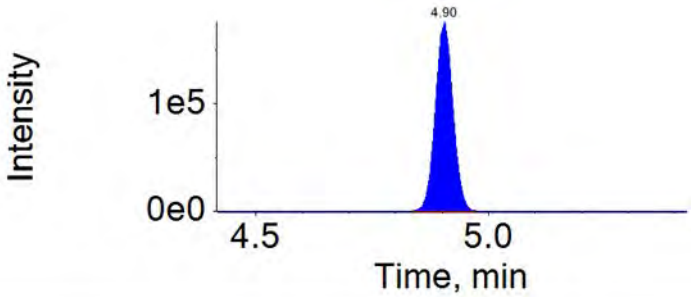
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



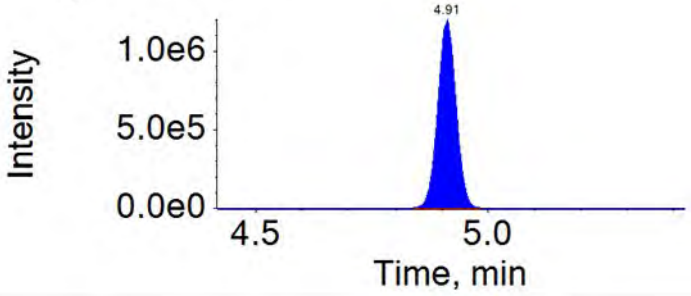
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



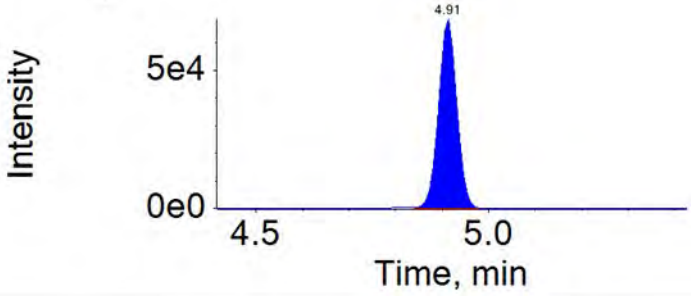
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

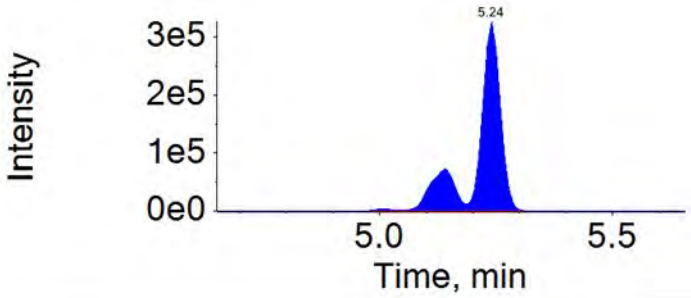
Component: PFOA
Primary Mass: 413.0 / 369.0



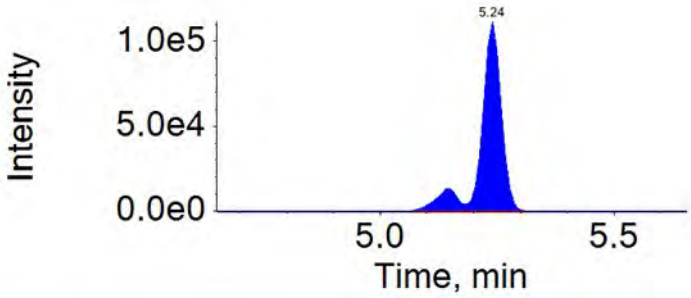
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



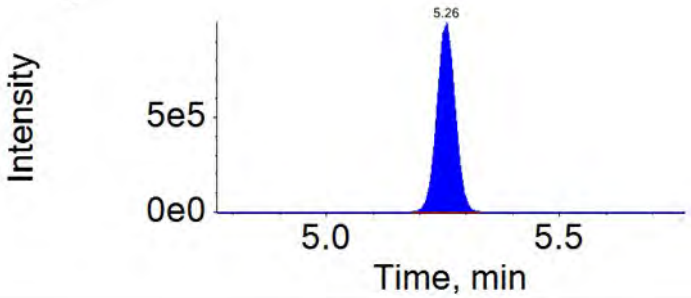
Component: PFOS
Primary Mass: 499.0 / 80.0



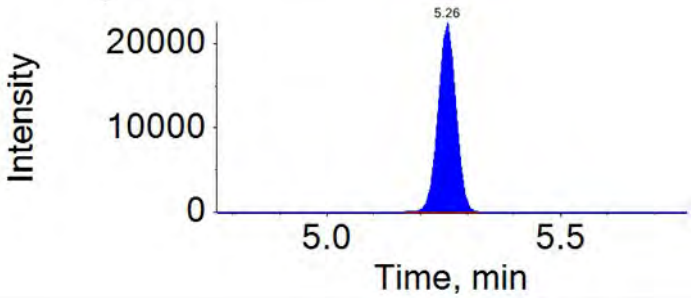
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



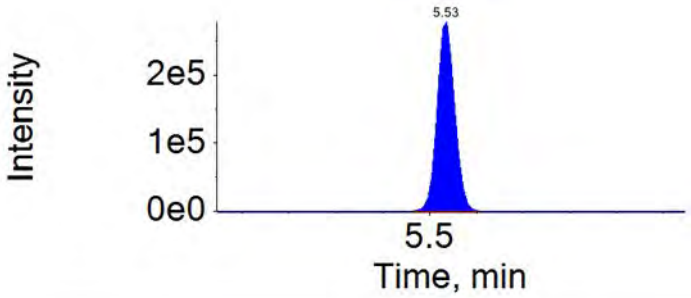
Component: PFNA
Primary Mass: 463.0 / 419.0



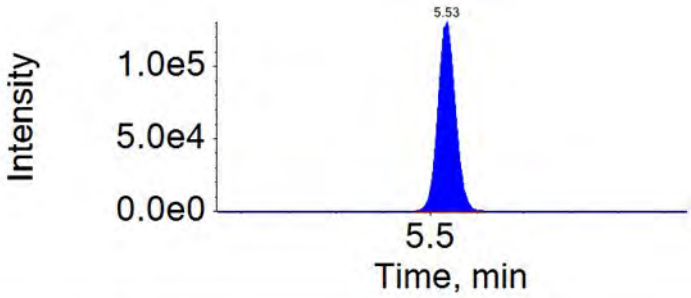
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



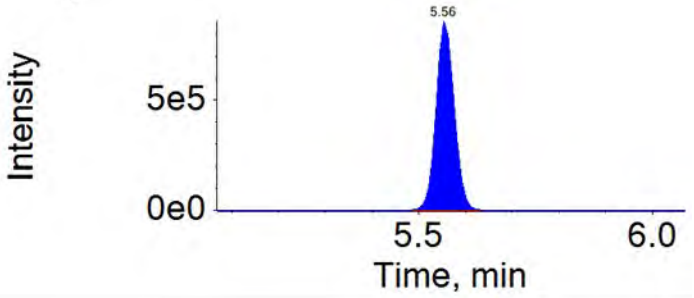
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



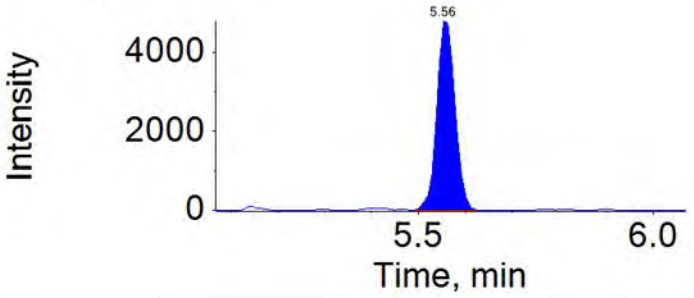
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

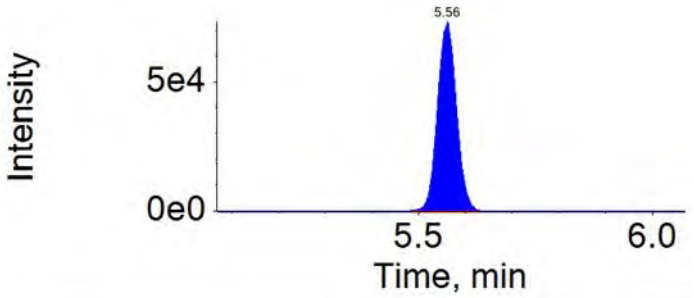
Component: PFDA
Primary Mass: 513.0 / 469.0



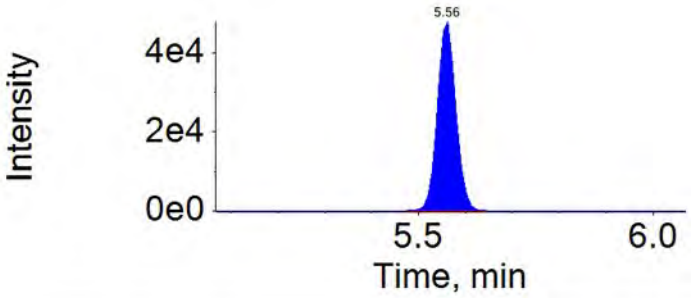
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



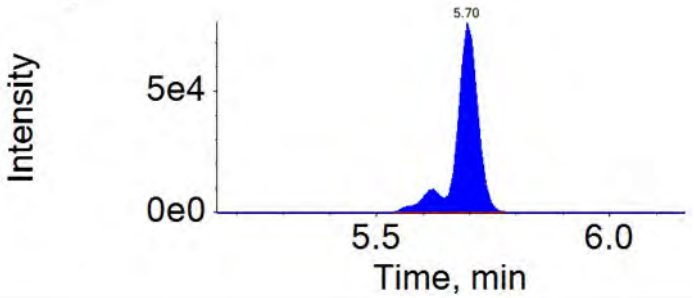
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



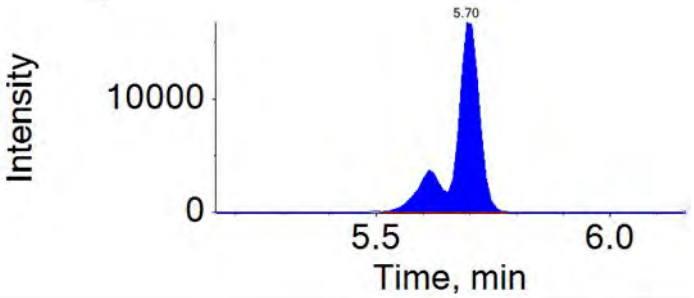
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



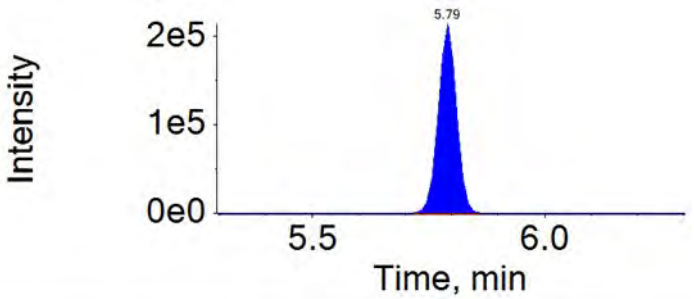
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



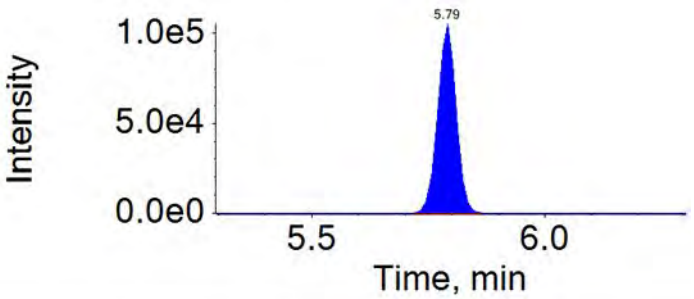
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



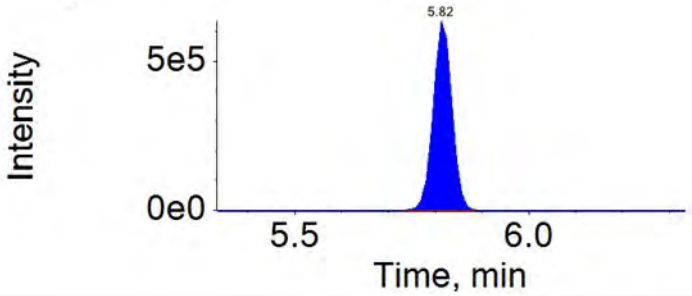
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



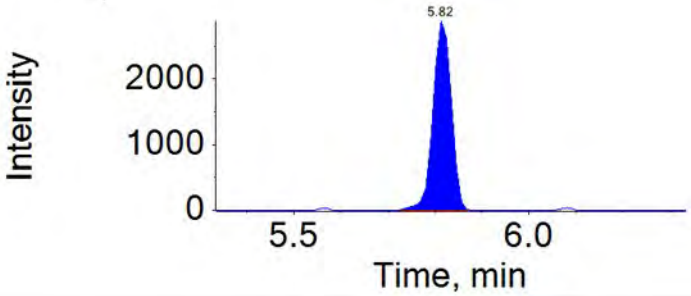
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

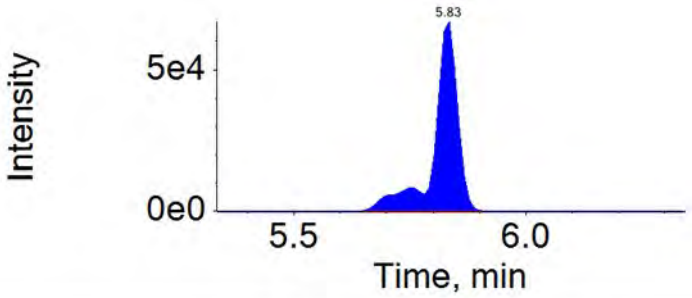
Component: PFUnDA
Primary Mass: 563.0 / 519.0



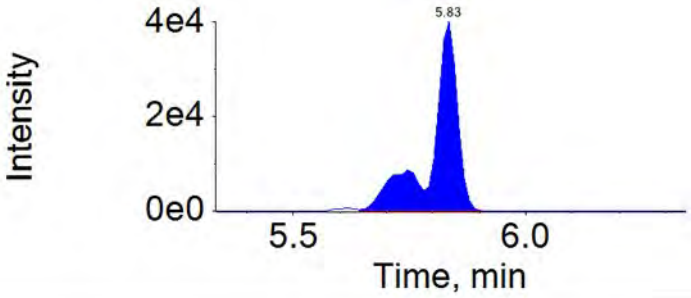
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



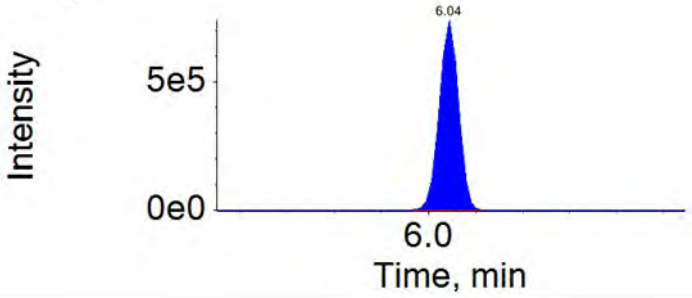
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



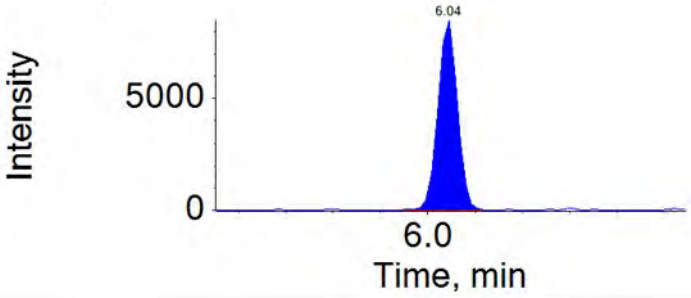
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



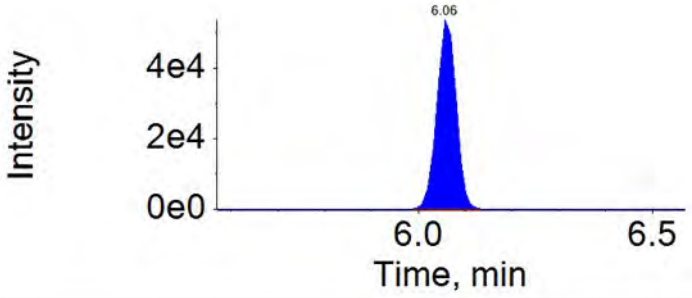
Component: PFDoDA
Primary Mass: 613.0 / 569.0



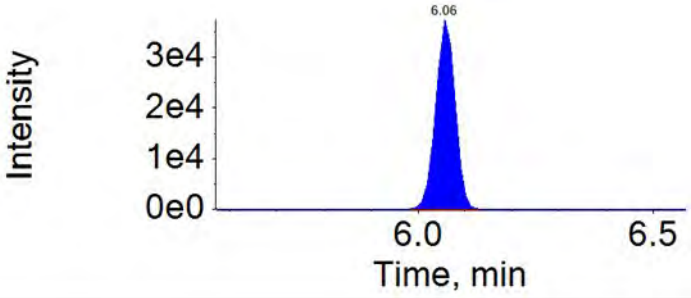
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



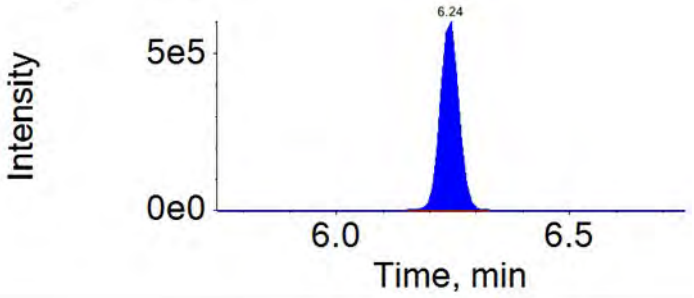
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



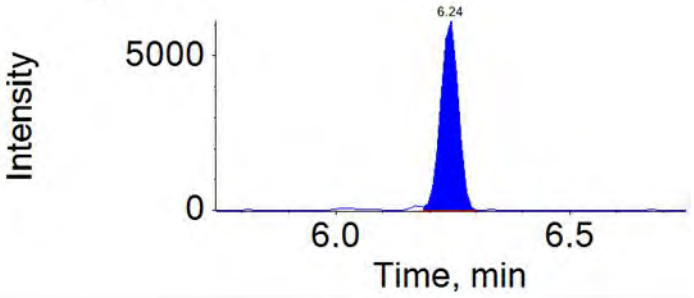
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

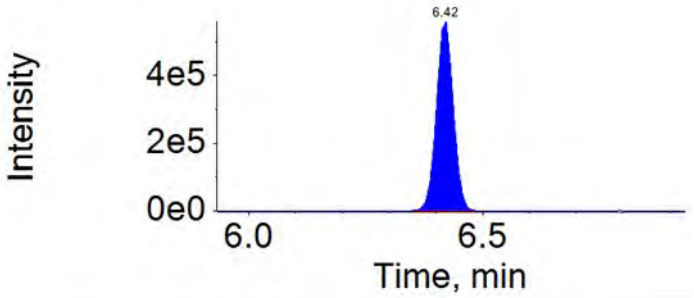
Component: PFTrDA
Primary Mass: 663.0 / 619.0



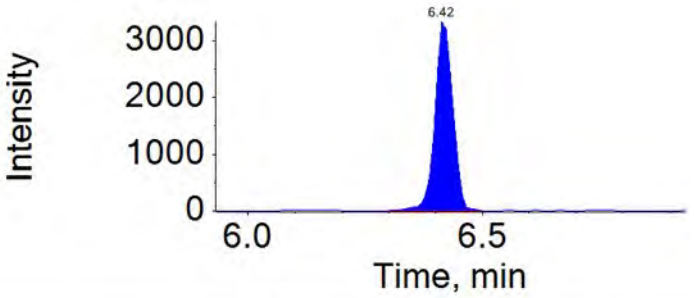
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



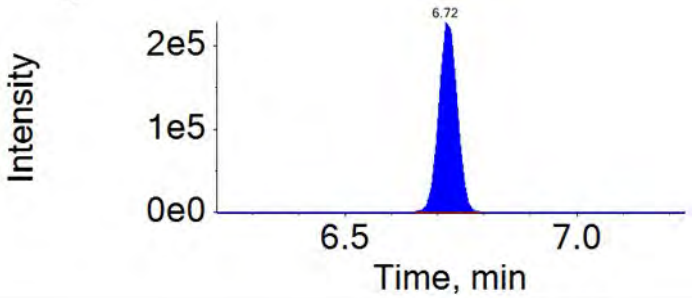
Component: PFTeDA
Primary Mass: 713.0 / 669.0



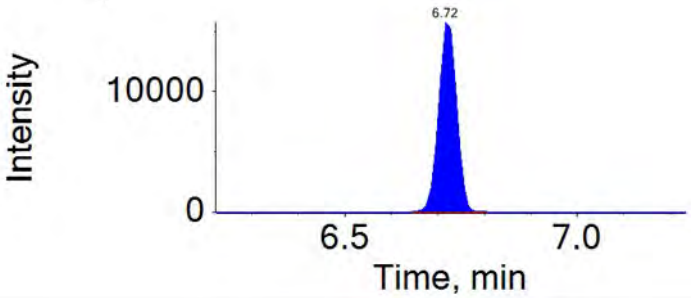
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



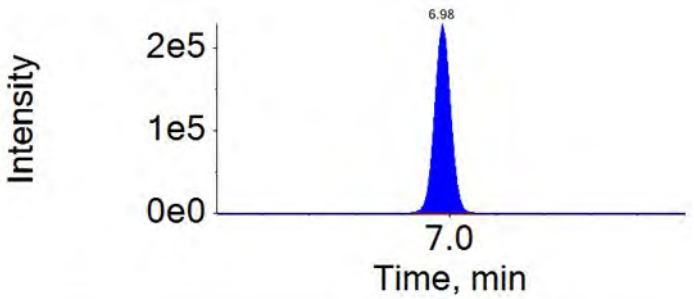
Component: PFHxDA
Primary Mass: 813.0 / 769.0



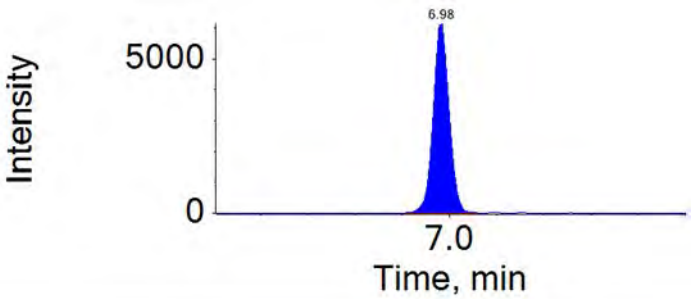
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL6			**Data File:**		18NOV12DCAL-47.wiff
Sample ID:	CALBRN61833B			**Acquis Date:**		2018-11-12T15:51:06
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	8			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	555817.9	659926.2	-16	50	
13C2-PFOA	5.0	422900.5	450219.7	-6	50	
13C4-PFOS	4.8	231712.1	249205.8	-7	50	
13C2-PFDA	5.0	237446.9	278743.9	-15	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	633648.4	13C3-PFBA	555817.9	1.140	5.000	5.111	102	70-130	
E13C5-PFPeA	635977.8	13C3-PFBA	555817.9	1.144	5.000	5.132	103	70-130	
E13C3-PFBS	378676.8	13C3-PFBA	555817.9	0.681	4.650	4.809	103	70-130	
E13C2-4:2-FTS	41422.2	13C2-PFOA	422900.5	0.098	4.670	4.362	93	70-130	
E13C5-PFHxA	568205.8	13C2-PFOA	422900.5	1.344	5.000	4.854	97	70-130	
E13C3-PFHxS	284116.5	13C2-PFOA	422900.5	0.672	4.730	4.610	97	70-130	
E13C4-PFHpA	455005.8	13C2-PFOA	422900.5	1.076	5.000	4.847	97	70-130	
E13C2-6:2-FTS	27988.5	13C2-PFOA	422900.5	0.066	4.750	4.428	93	70-130	
E13C8-PFOA	707130.3	13C2-PFOA	422900.5	1.672	5.000	4.607	92	70-130	
E13C8-PFOS	253129.2	13C4-PFOS	231712.1	1.092	4.780	4.840	101	70-130	
E13C9-PFNA	413811.4	13C4-PFOS	231712.1	1.786	5.000	4.979	100	70-130	
E13C6-PFDA	522613.8	13C2-PFDA	237446.9	2.201	5.000	5.136	103	70-130	
E13C2-8:2-FTS	22899.0	13C2-PFDA	237446.9	0.096	4.790	4.810	100	70-130	
E13C8-PFOSA	539992.5	13C2-PFDA	237446.9	2.274	5.000	5.042	101	70-130	
Ed3-NMeFOSAA	70320.3	13C2-PFDA	237446.9	0.296	5.000	5.346	107	70-130	
E13C7-PFUnDA	208574.1	13C2-PFDA	237446.9	0.878	5.000	5.100	102	70-130	
Ed5-NEtFOSAA	57308.1	13C2-PFDA	237446.9	0.241	5.000	5.106	102	70-130	
E13C2-PFDoDA	477105.5	13C2-PFDA	237446.9	2.009	5.000	5.217	104	70-130	
Ed7-NMePFOSAE	272639.0	13C2-PFDA	237446.9	1.148	5.000	4.969	99	70-130	
Ed3-NMePFOSA	68215.9	13C2-PFDA	237446.9	0.287	5.000	5.220	104	70-130	
Ed9-NEtPFOSAE	242587.5	13C2-PFDA	237446.9	1.022	5.000	5.314	106	70-130	
Ed5-NEtPFOSA	56004.0	13C2-PFDA	237446.9	0.236	5.000	5.533	111	70-130	
E13C2-PFTeDA	352892.2	13C2-PFDA	237446.9	1.486	5.000	5.218	104	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

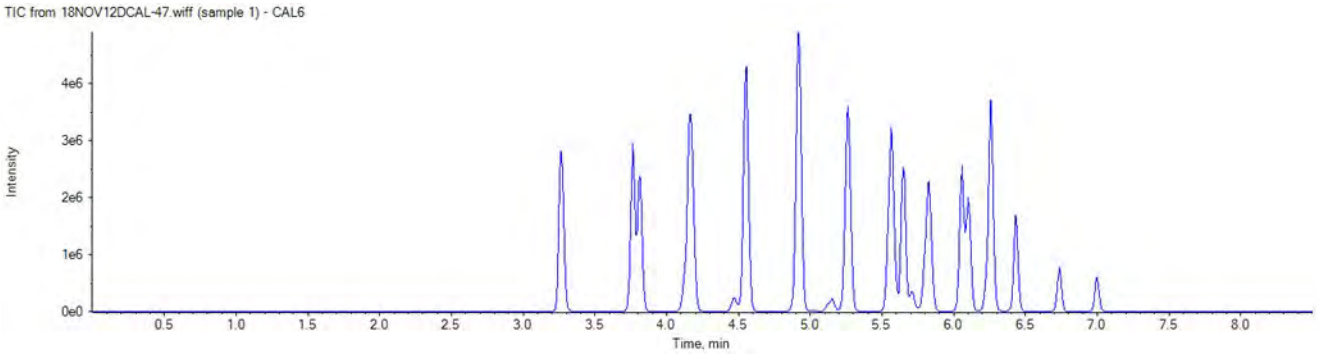
Analyte Quantitation Peak Table

Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-47.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	5765353.4		A	13C4-PFBA	3.27	633648.4	9.099	50.404
PFPeA	3.77	1.000	5570221.7		A	13C5-PFPeA	3.76	635977.8	8.759	50.702
PFBS	3.81	1.000	3588084.2		A	13C3-PFBS	3.81	378676.8	9.475	45.072
4:2-FTS	4.13	1.000	738294.0		A	13C2-4:2-FTS	4.13	41422.2	17.824	48.392
PFHxA	4.16	1.000	6593779.0		A	13C5-PFHxA	4.16	568205.8	11.605	48.453
PFPeS	4.18	1.100	1847826.8		A	13C3-PFBS	3.81	378676.8	4.880	47.375
PFHpA	4.55	1.000	6648455.3		A	13C4-PFHpA	4.55	455005.8	14.612	48.434
PFHxS	4.55	1.000	2662852.0		M	13C3-PFHxS	4.55	284116.5	9.372	45.444
6:2-FTS	4.91	1.000	523949.5		A	13C2-6:2-FTS	4.91	27988.5	18.720	45.301
PFHpS	4.91	1.080	2604868.6		A	13C3-PFHxS	4.55	284116.5	9.168	48.262
PFOA	4.92	1.000	6758642.8		A	13C8-PFOA	4.92	707130.3	9.558	51.047
PFOS	5.25	1.000	2664957.2		M	13C8-PFOS	5.25	253129.2	10.528	46.040
PFNA	5.27	1.000	5820576.6		A	13C9-PFNA	5.27	413811.4	14.066	50.720
PFNS	5.55	1.060	1709959.5		A	13C8-PFOS	5.25	253129.2	6.755	47.262
PFDA	5.57	1.000	4802967.8		A	13C6-PFDA	5.57	522613.8	9.190	48.722
8:2-FTS	5.57	1.000	469719.6		A	13C2-8:2-FTS	5.57	22899.0	20.513	47.825
PFOSA	5.65	1.000	5530440.6		A	13C8-PFOSA	5.65	539992.5	10.242	50.024
NMeFOSAA	5.71	1.000	627854.4		M	d3-NMeFOSAA	5.71	70320.3	8.928	50.461
PFDS	5.80	1.100	1313570.3		A	13C8-PFOS	5.25	253129.2	5.189	47.020
PFUnDA	5.83	1.000	3923979.2		A	13C7-PFUnDA	5.83	208574.1	18.813	49.183
NEtFOSAA	5.84	1.000	551865.7		A	d5-NEtFOSAA	5.84	57308.1	9.630	50.481
PFDoDA	6.06	1.000	4582985.5		A	13C2-PFDoDA	6.06	477105.5	9.606	48.914
10:2-FTS	6.07	1.090	348263.2		A	13C2-8:2-FTS	5.57	22899.0	15.209	50.658
NMePFOSAE	6.10	1.000	3484588.8		A	d7-NMePFOSAE	6.09	272639.0	12.781	53.193
NMePFOSA	6.11	1.000	670429.6		A	d3-NMePFOSA	6.11	68215.9	9.828	48.485
PFDoS	6.23	1.190	711567.5		A	13C8-PFOS	5.25	253129.2	2.811	49.234
NEtPFOSAE	6.26	1.000	3677006.6		A	d9-NEtPFOSAE	6.25	242587.5	15.157	48.629
NEtPFOSA	6.27	1.000	599280.4		A	d5-NEtPFOSA	6.27	56004.0	10.701	49.142
PFTrDA	6.26	1.030	3691733.8		A	13C2-PFDoDA	6.06	477105.5	7.738	48.838
PFTeDA	6.43	1.000	3149020.2		A	13C2-PFTeDA	6.43	352892.2	8.923	50.021
PFHxDA	6.74	1.050	1533920.2		A	13C2-PFTeDA	6.43	352892.2	4.347	51.786
PFODA	7.00	1.090	1270897.6		A	13C2-PFTeDA	6.43	352892.2	3.601	50.157

Total Ion Chromatogram

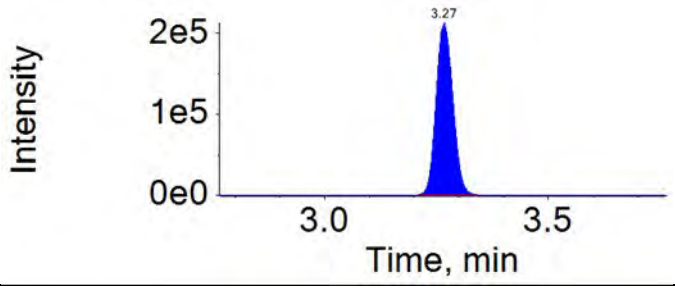


APPROVED
By MCD at 6:33 pm, 11/12/18

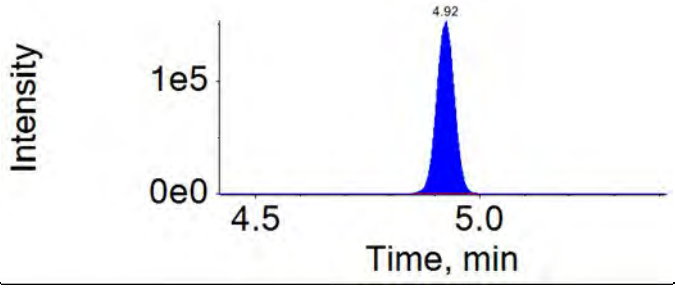
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

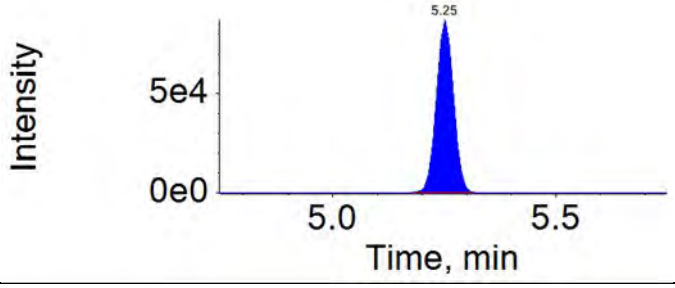
Injection Standard: 13C3-PFBA
216.0 / 172.0



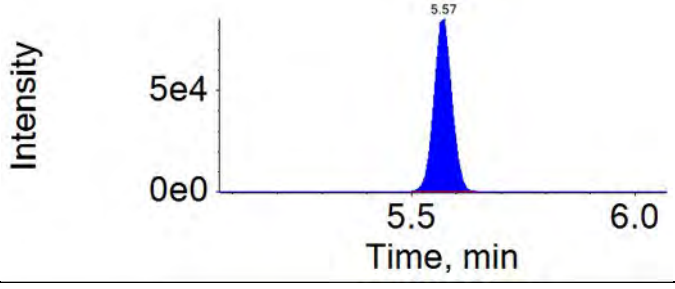
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

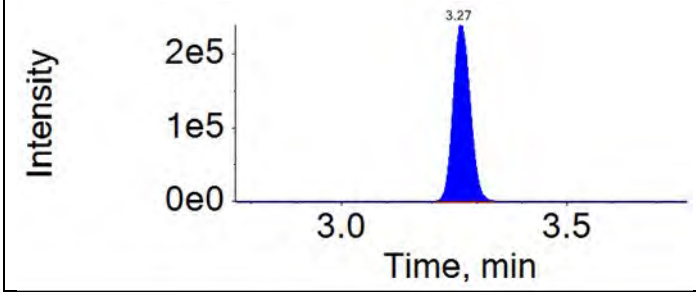


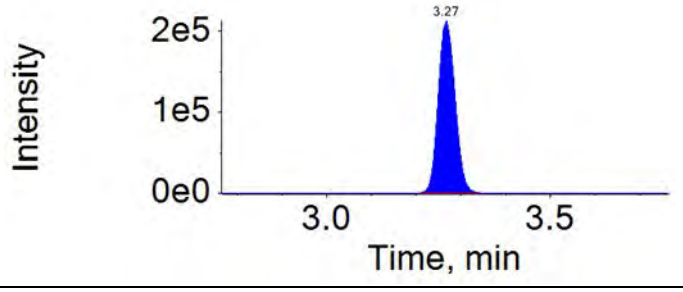
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

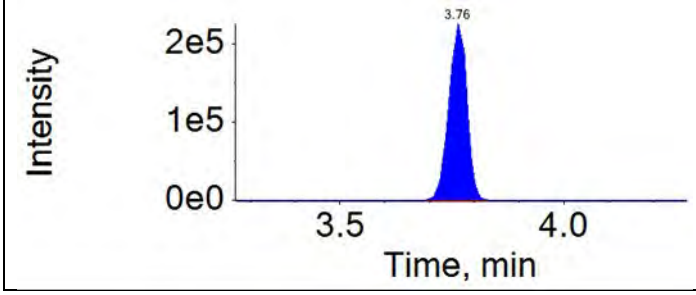
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

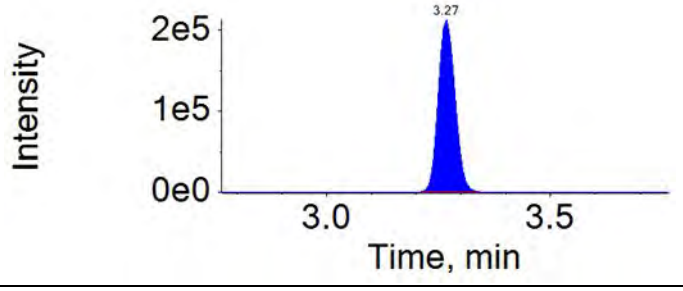
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



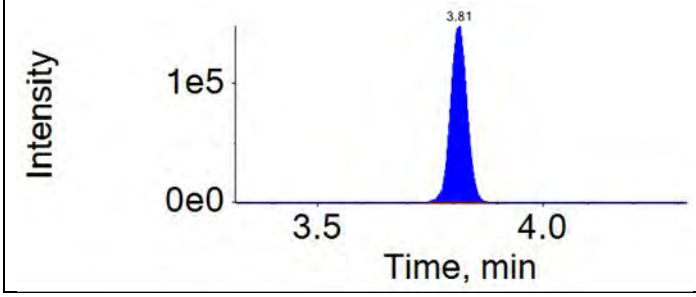


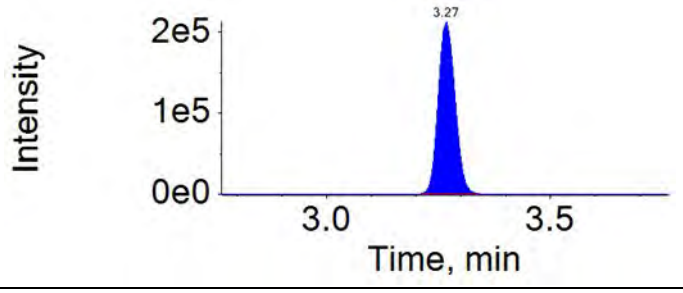
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



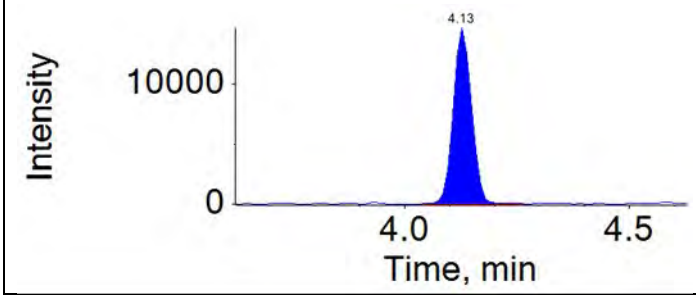


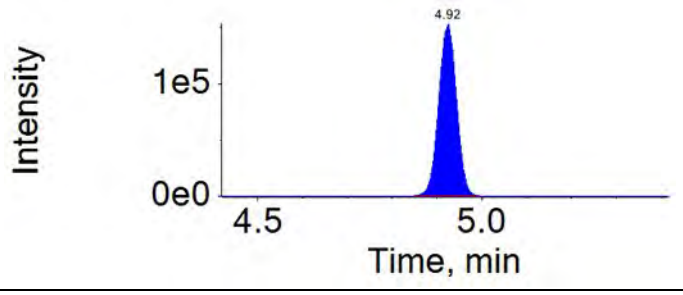
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



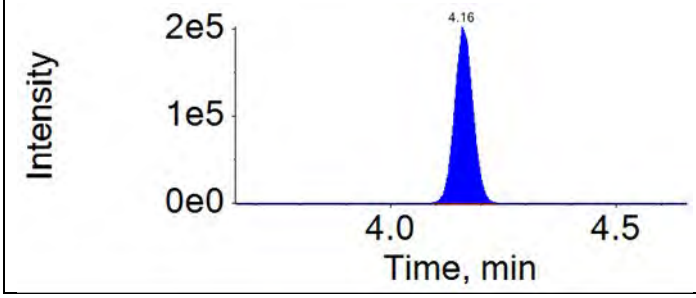


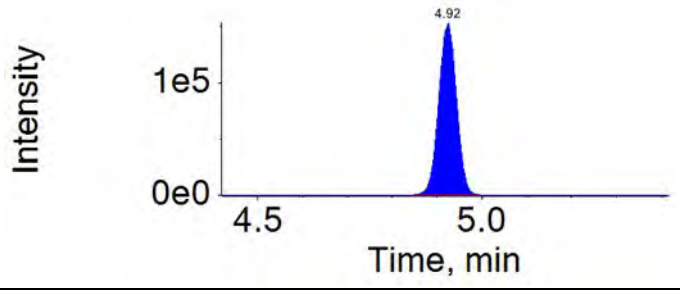
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

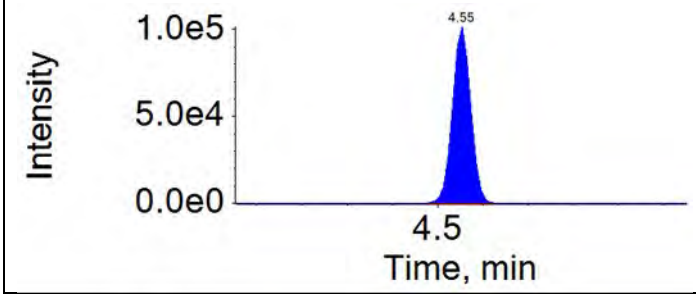
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

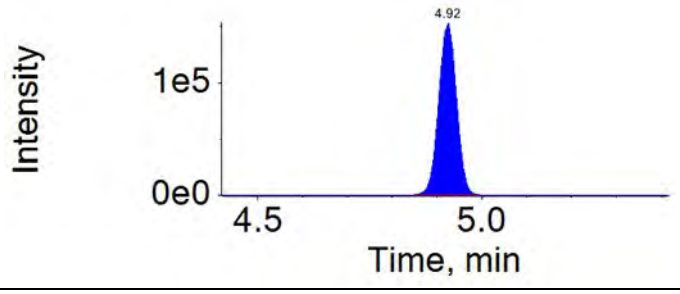
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



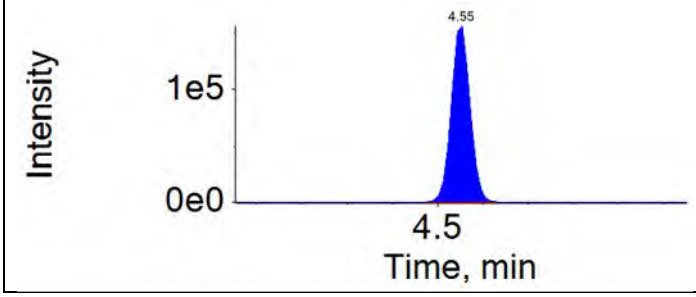


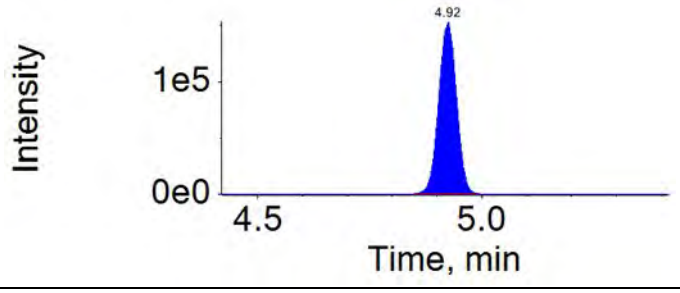
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



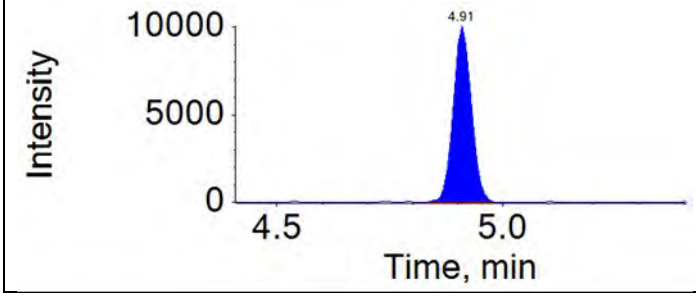


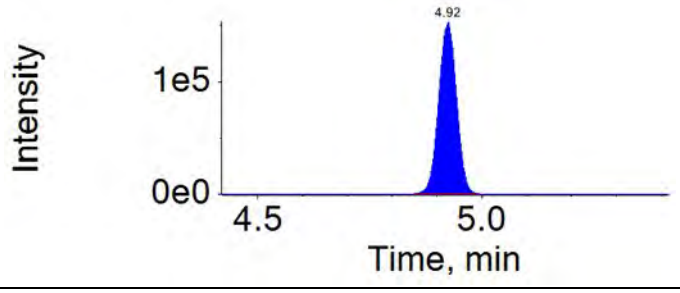
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

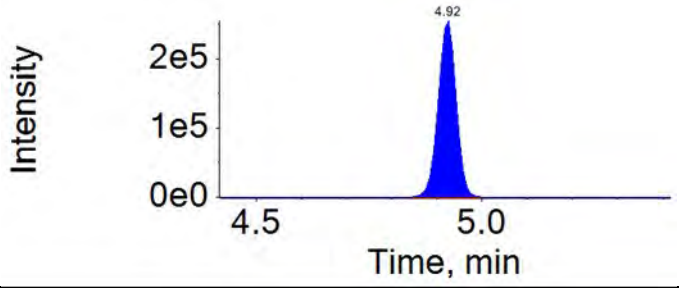
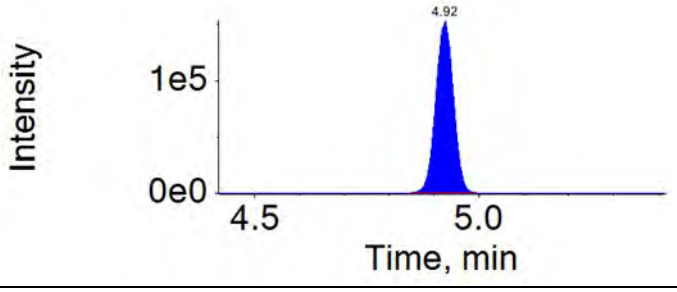


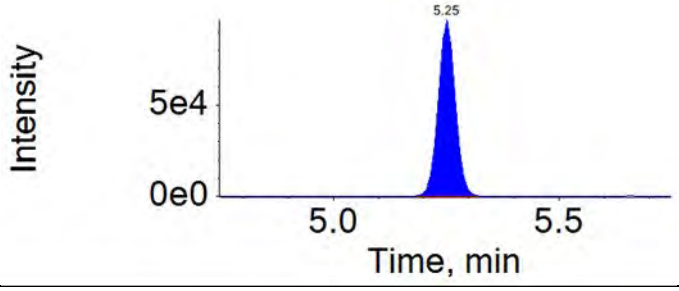
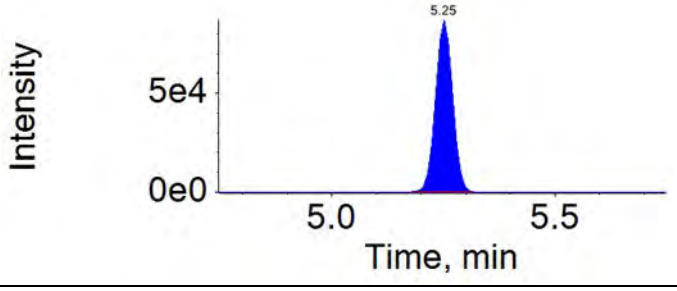


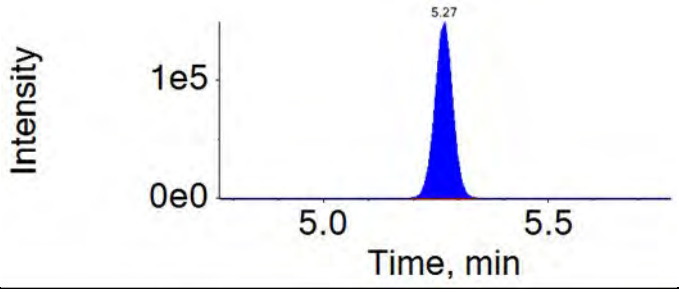
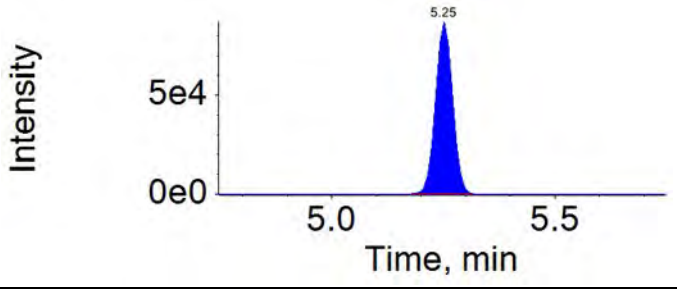
APPROVED
By MCD at 6:33 pm, 11/12/18

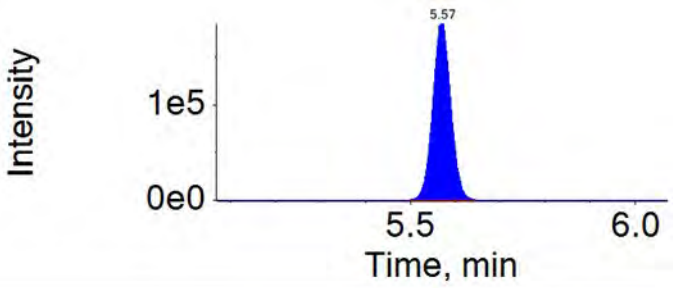
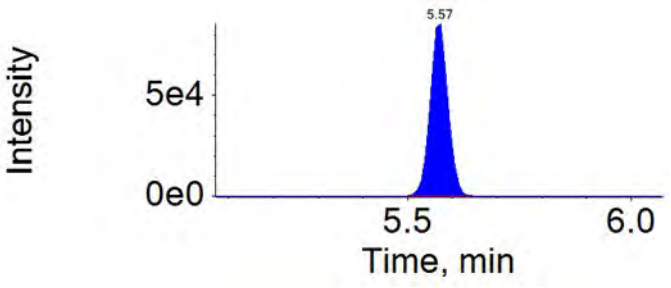
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

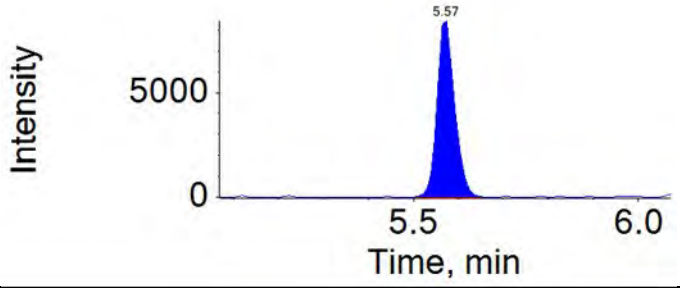
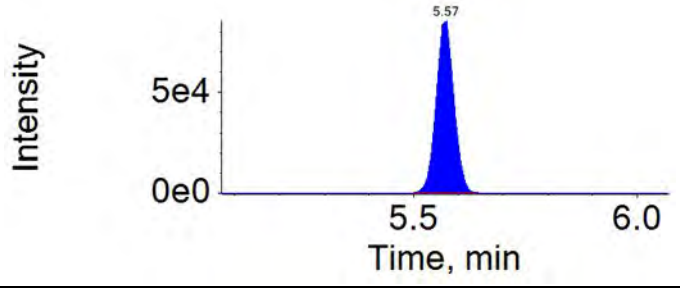
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

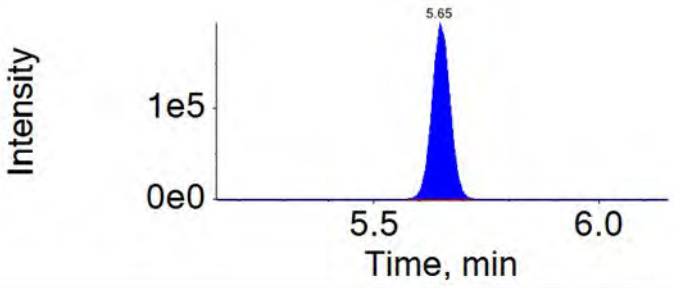
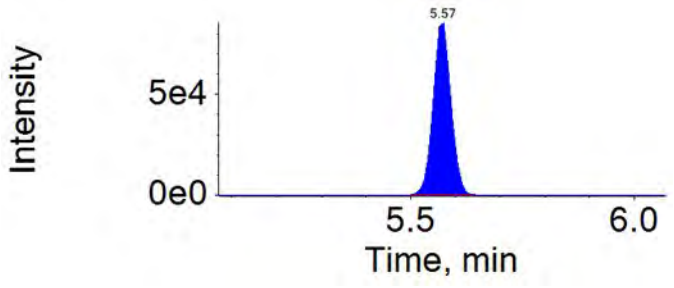
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

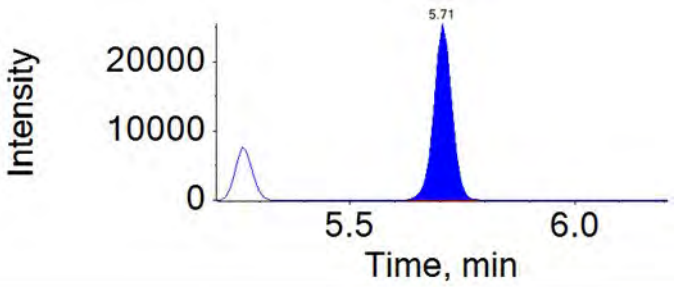
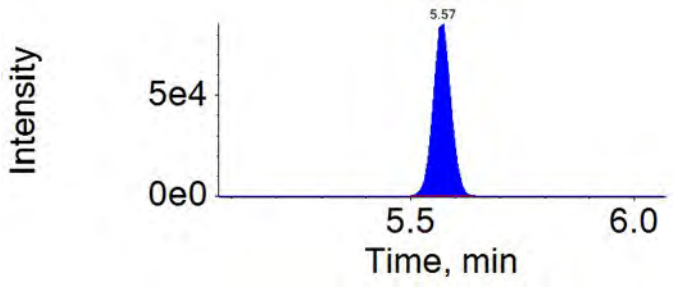
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

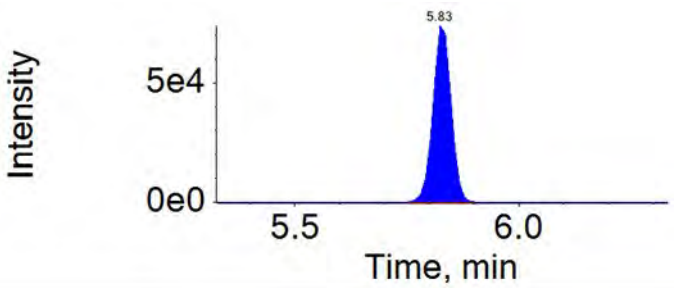
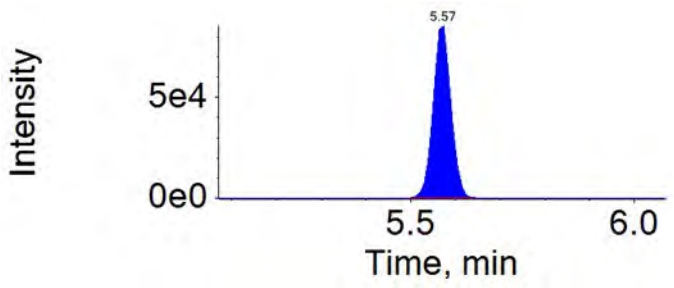
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

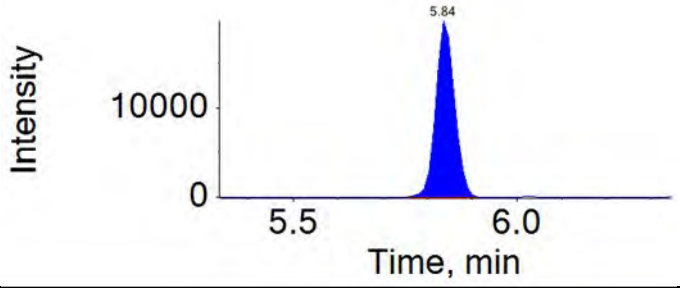
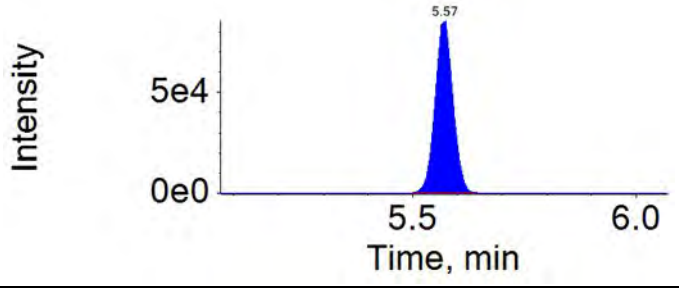
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

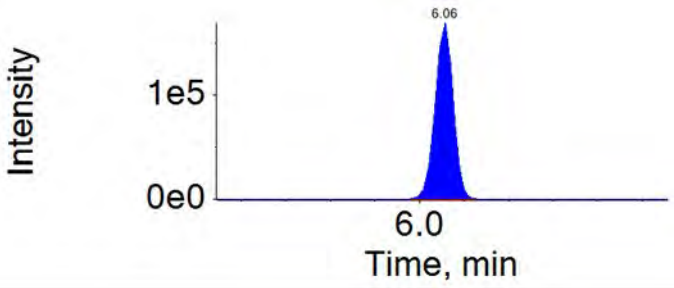
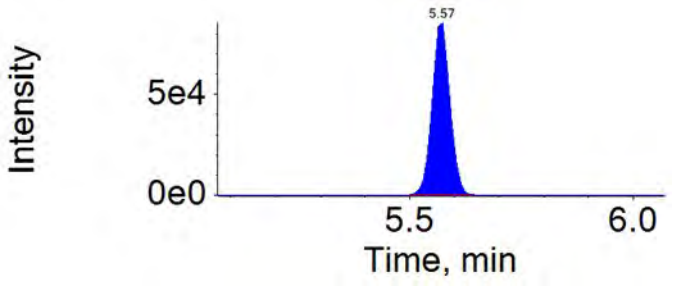
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

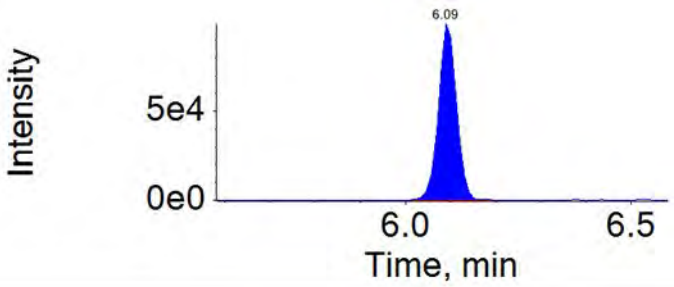
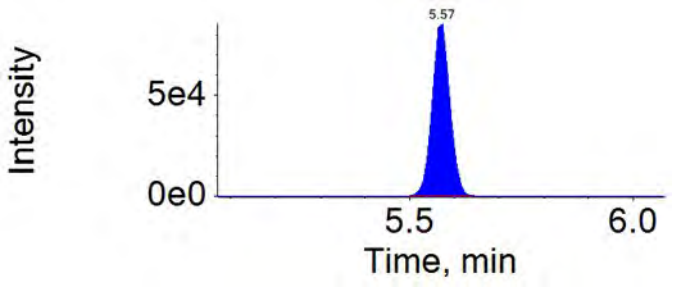
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

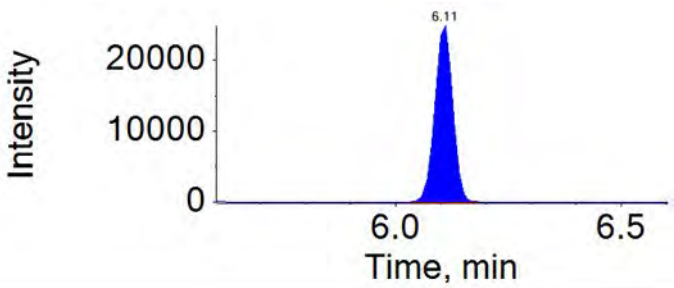
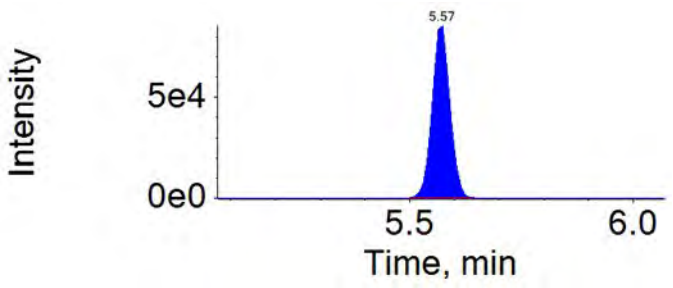
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

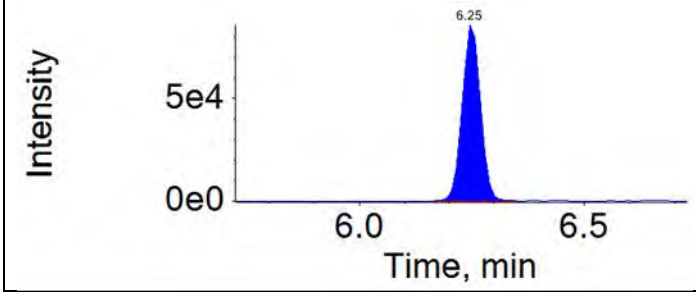
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

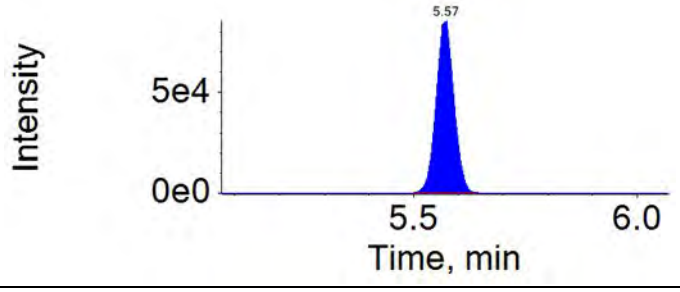
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

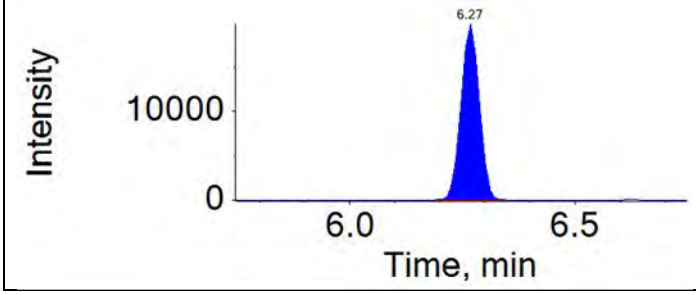
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

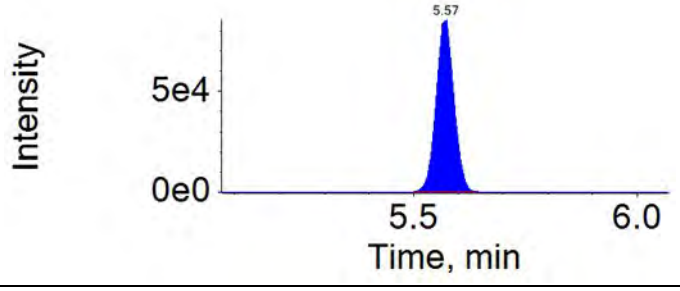
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



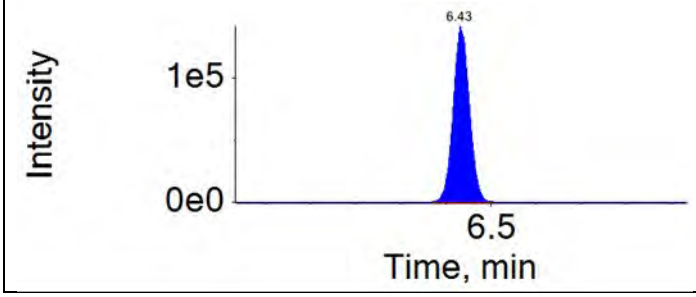


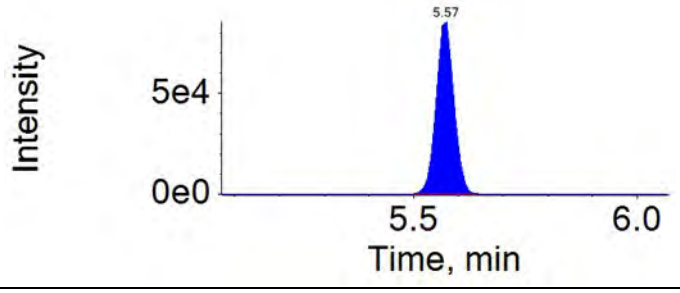
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





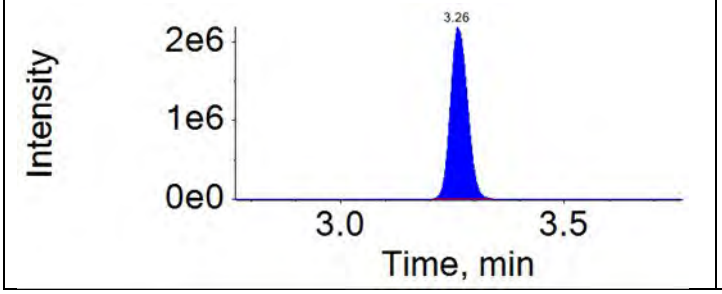
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

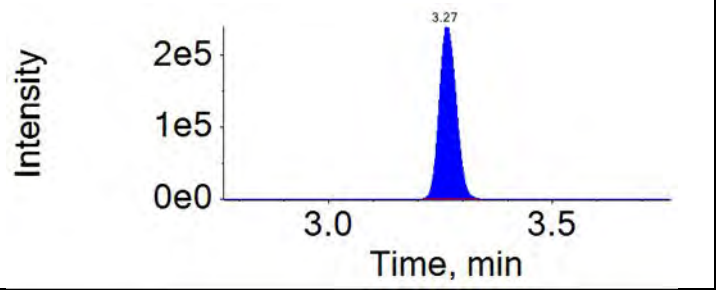




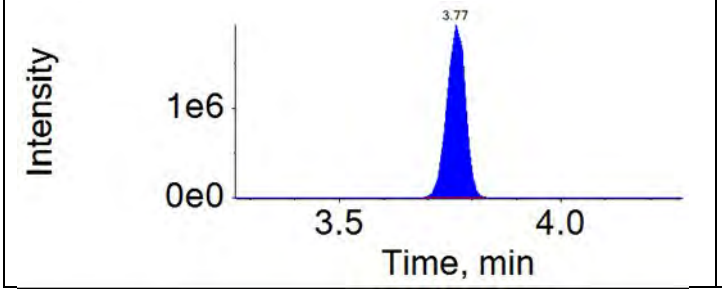
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

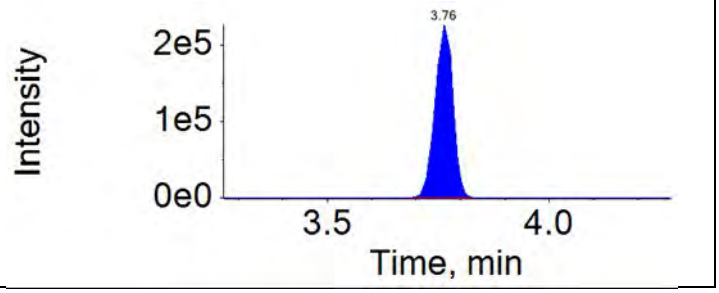
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



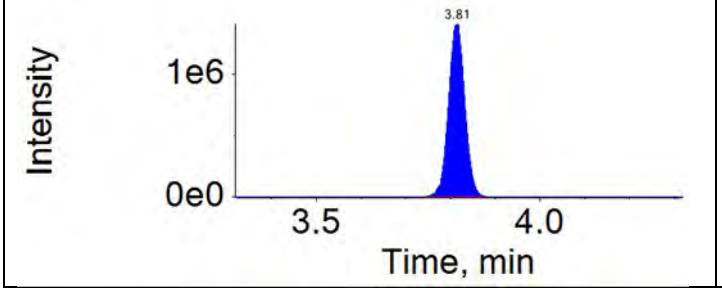


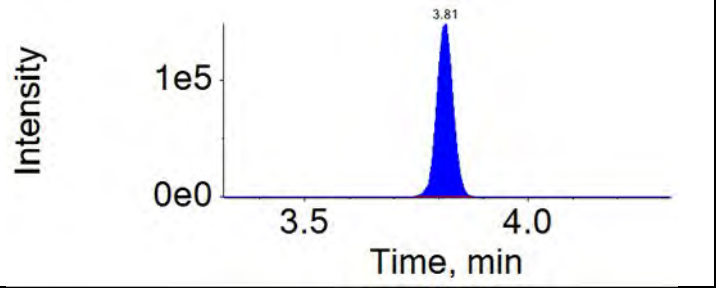
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



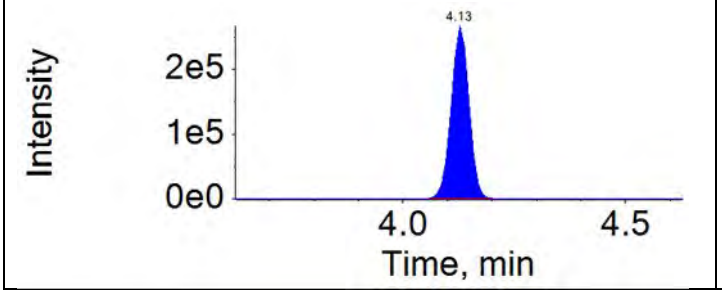


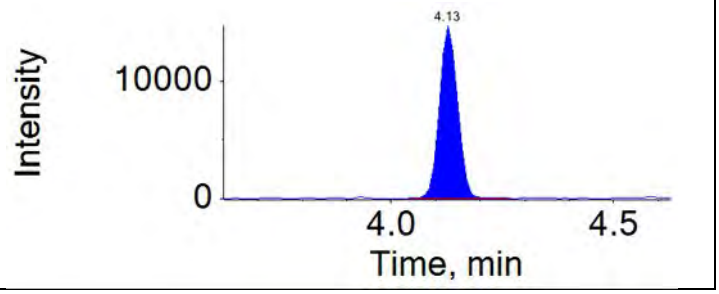
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



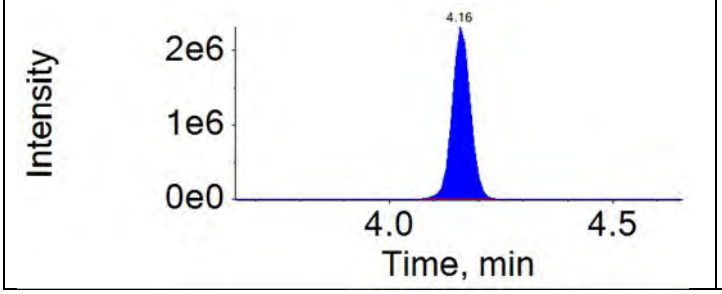


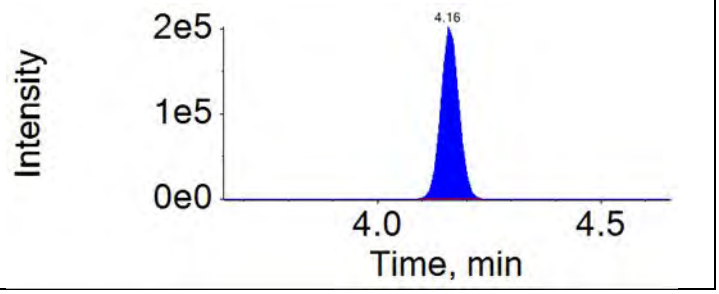
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

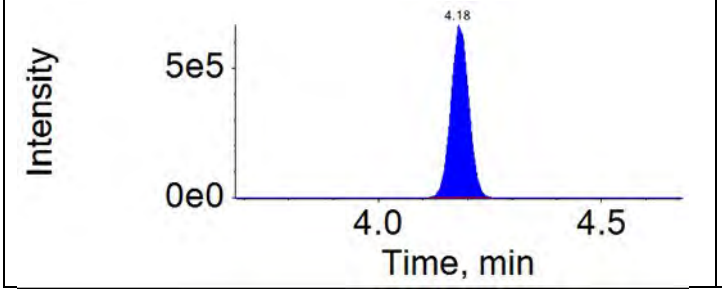
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

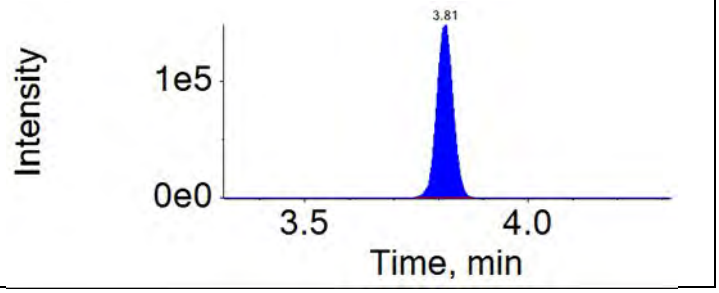
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



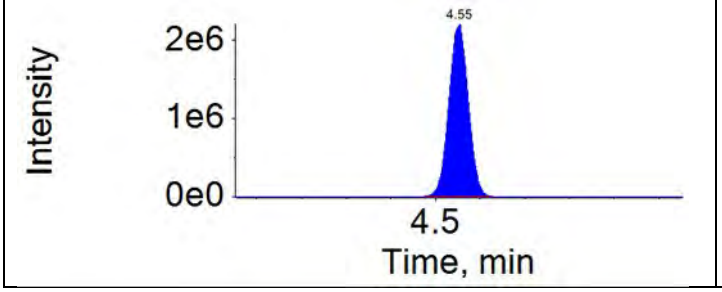


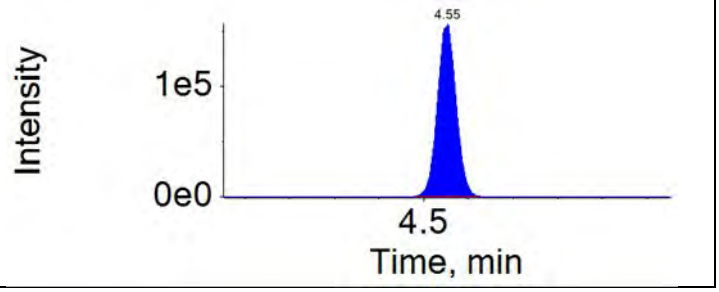
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



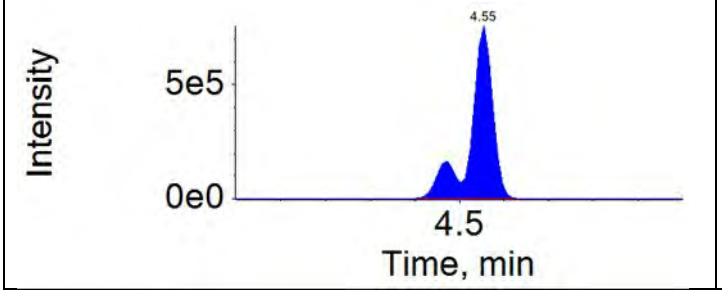


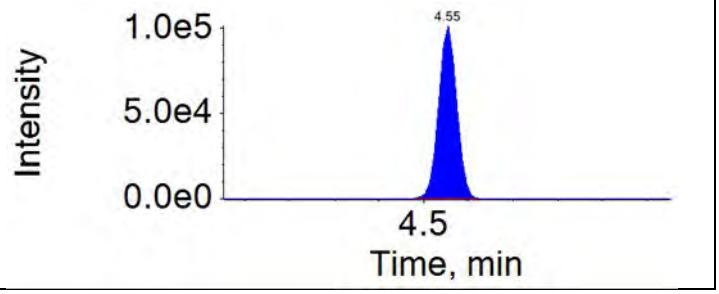
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





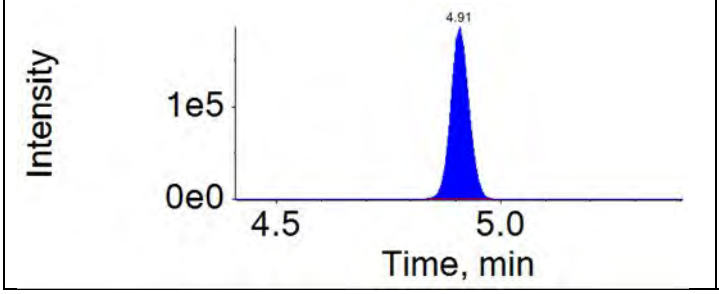
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

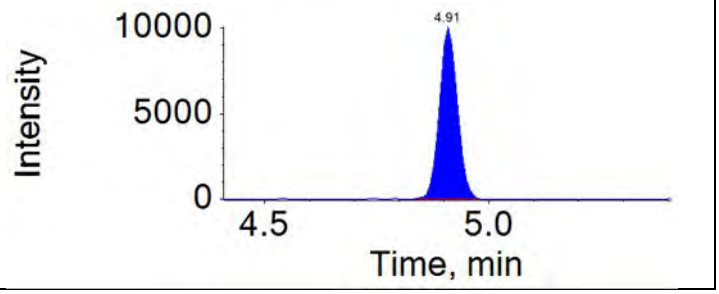




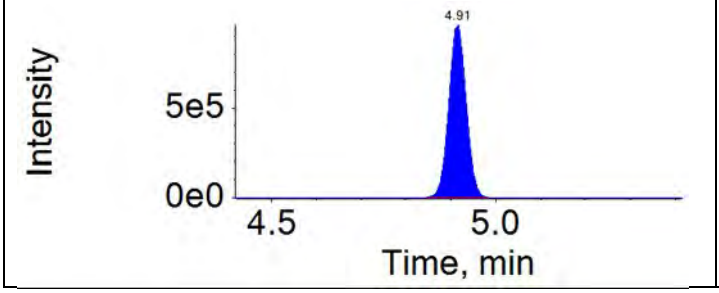
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

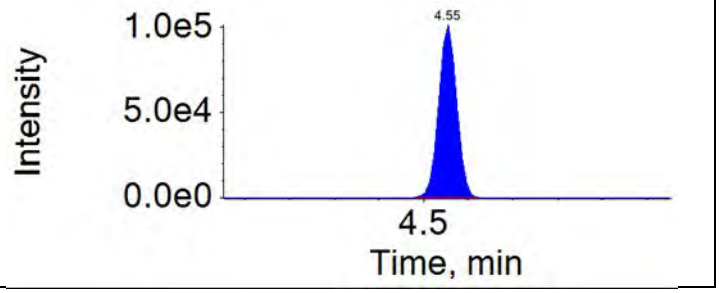
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



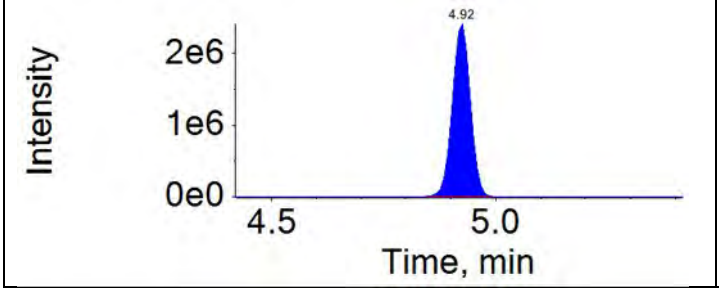


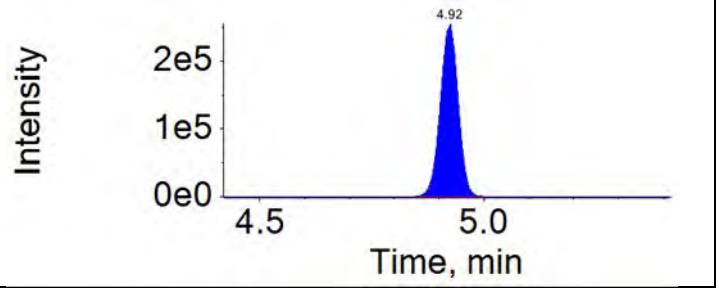
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



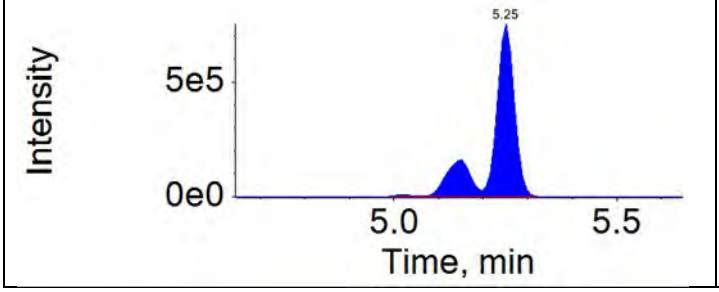


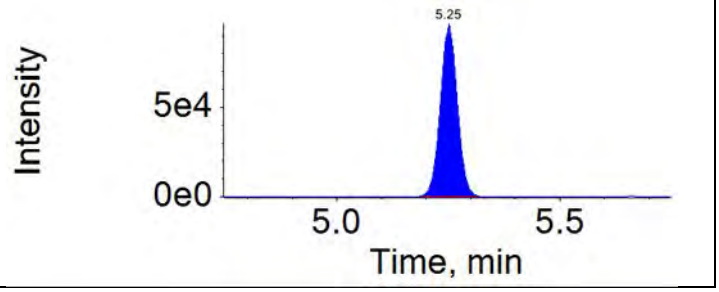
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



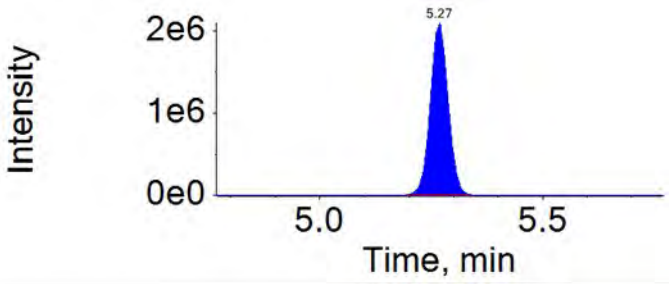


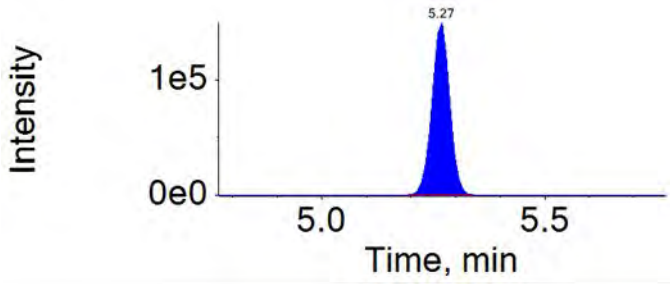
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

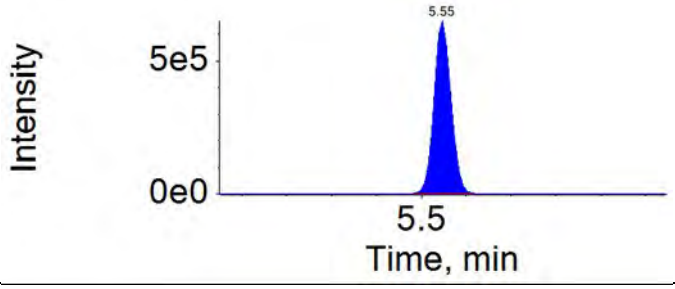
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

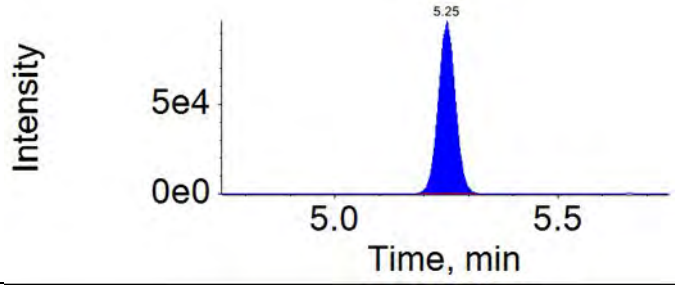
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



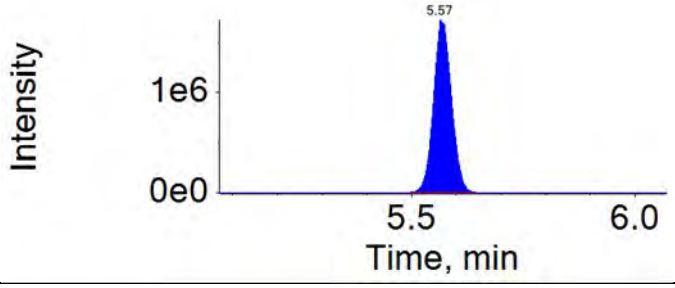


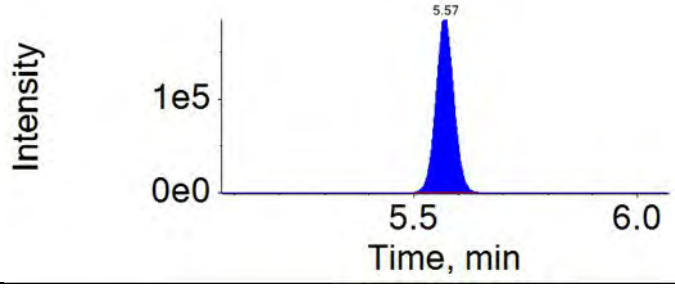
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



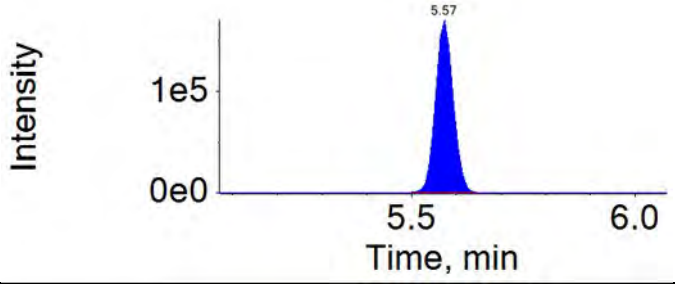


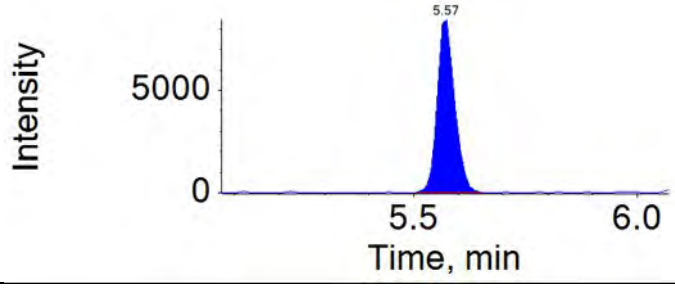
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



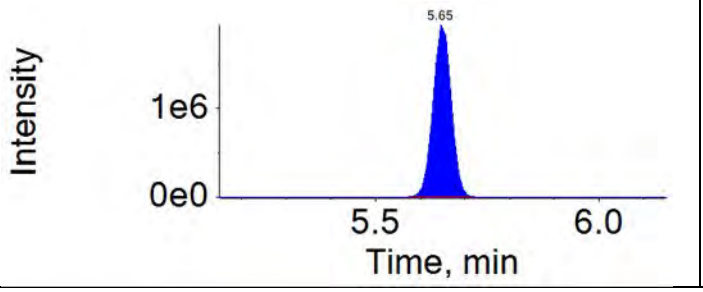


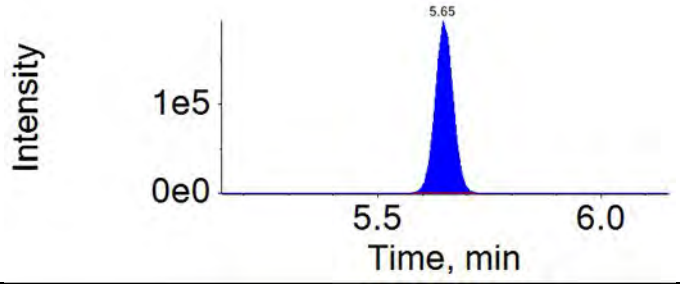
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

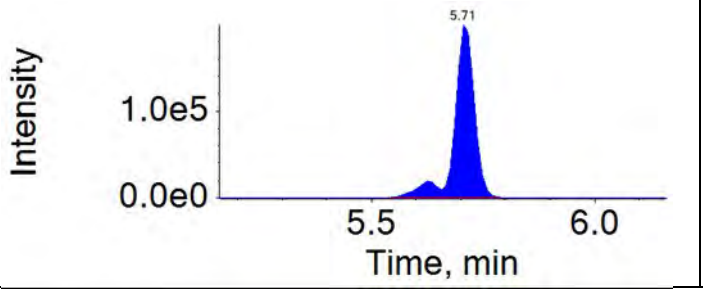
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

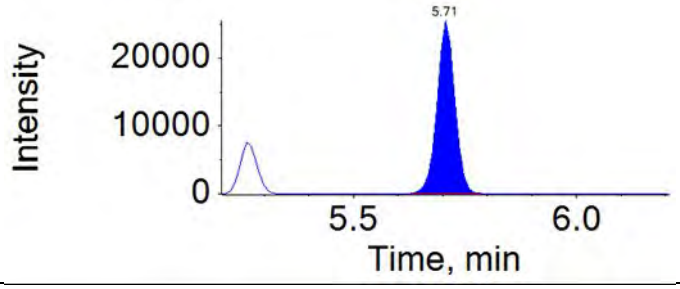
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



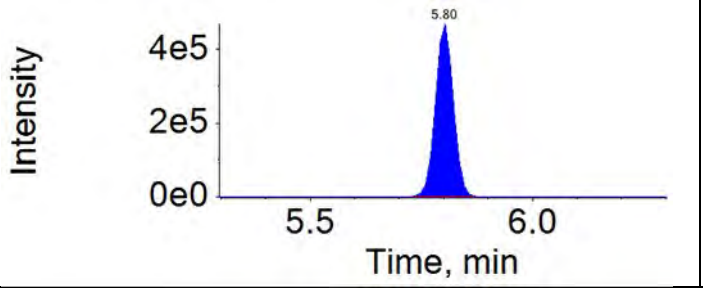


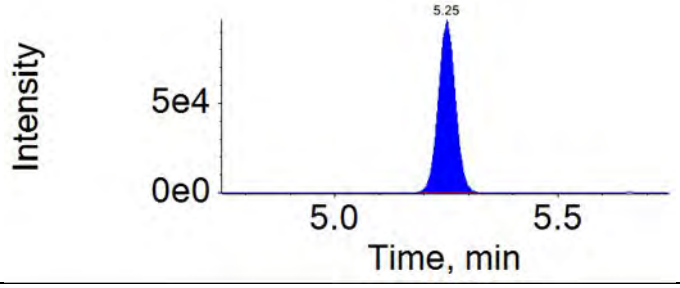
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



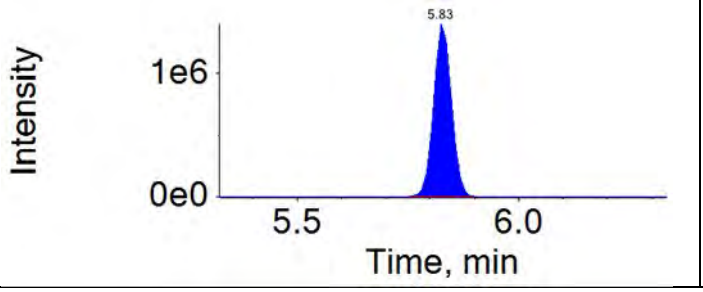


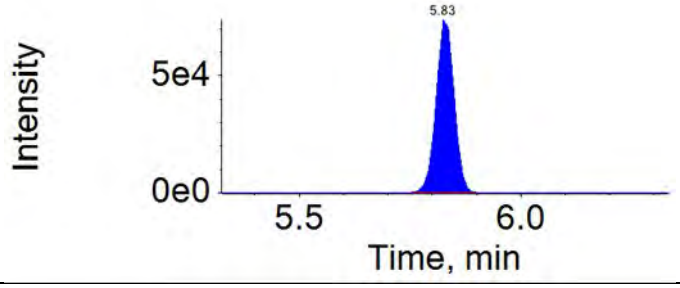
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



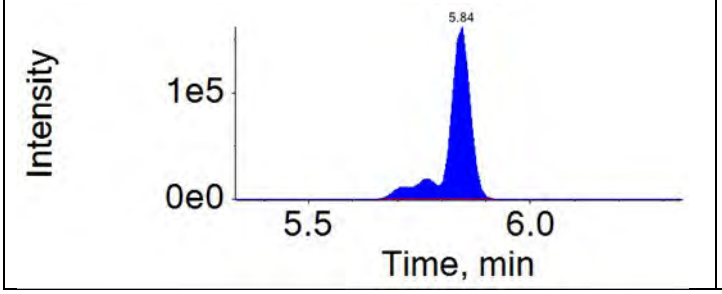


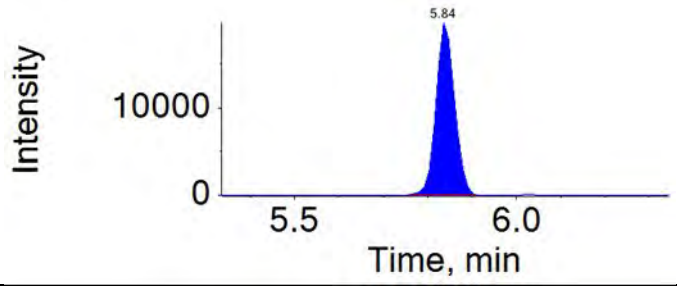
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

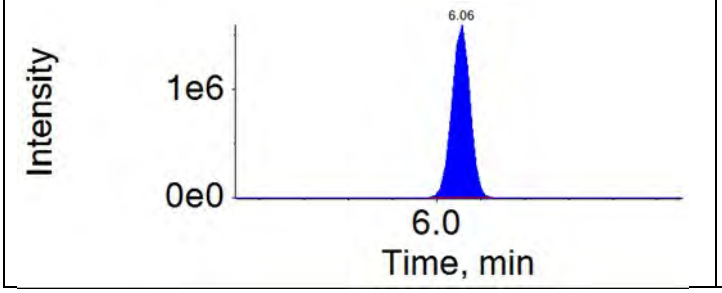
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

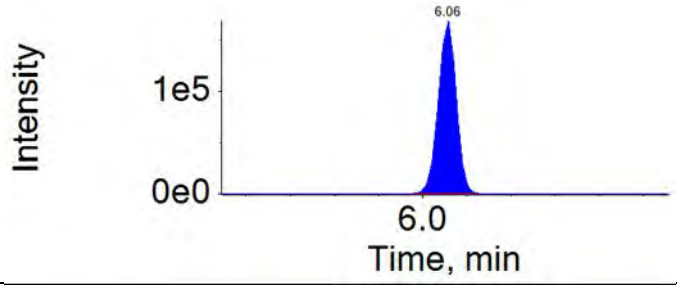
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



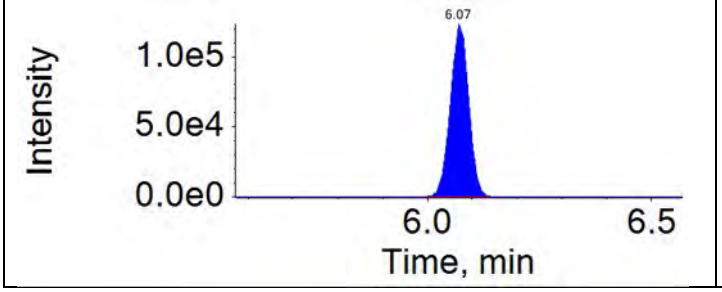


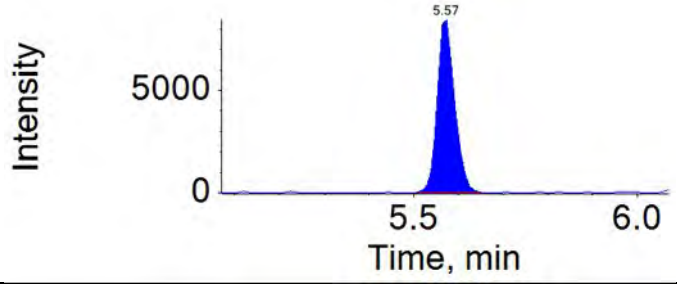
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



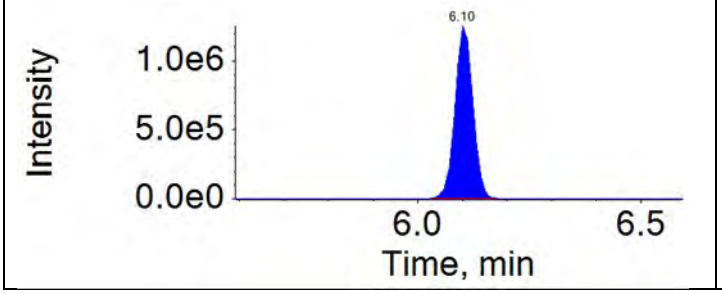


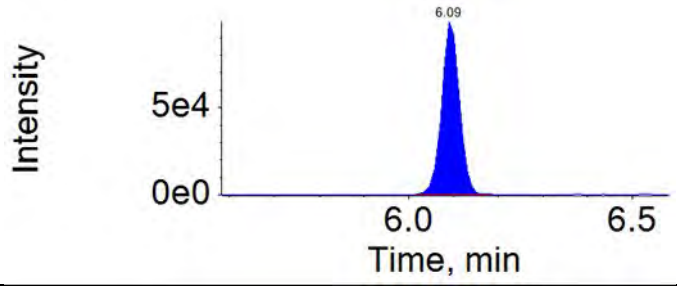
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



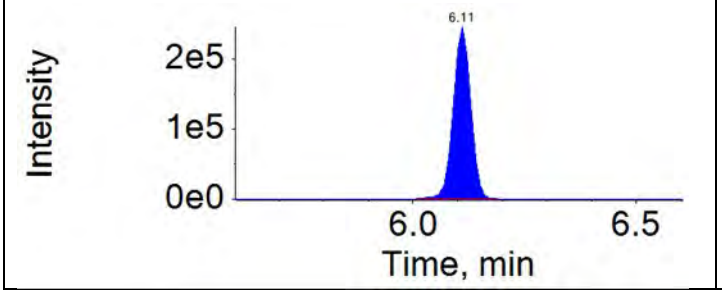


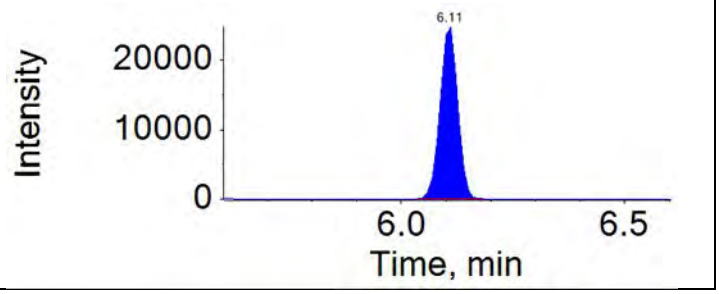
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

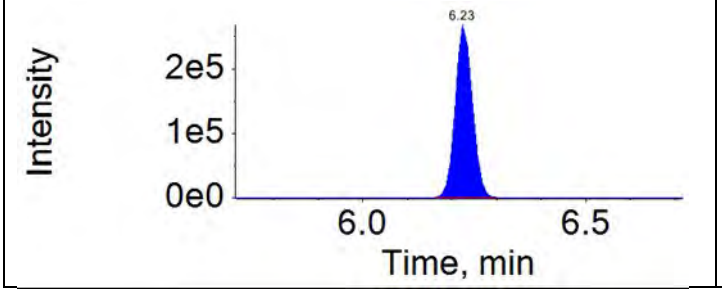
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

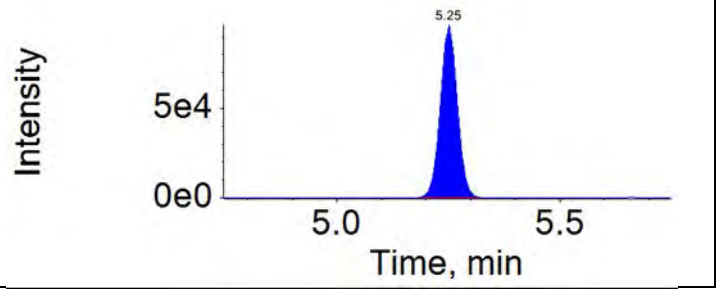
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



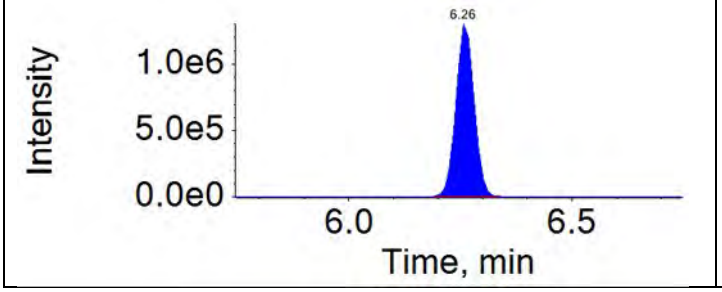


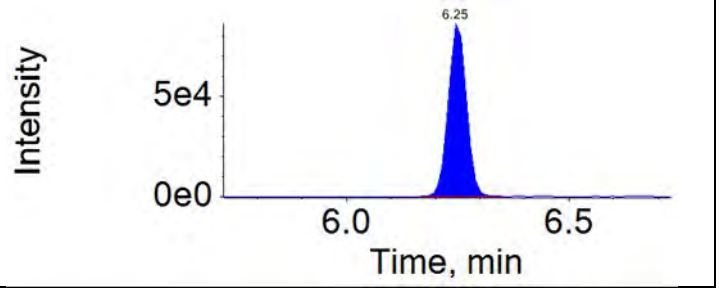
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



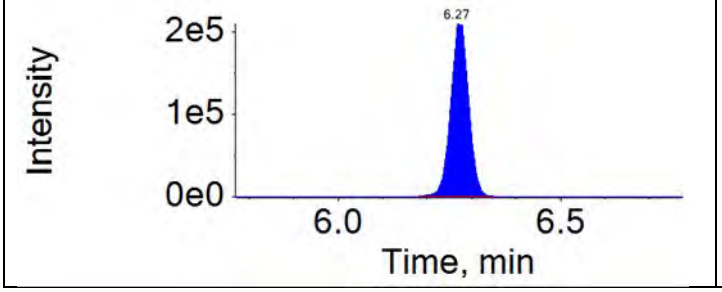


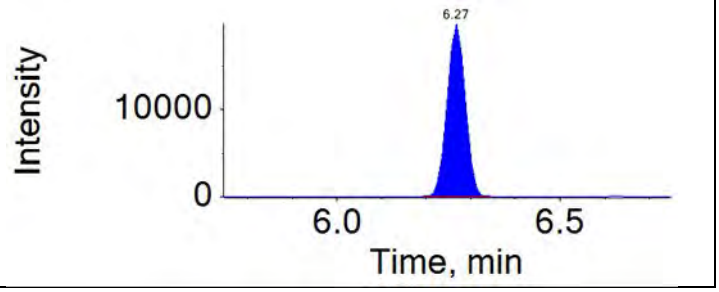
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



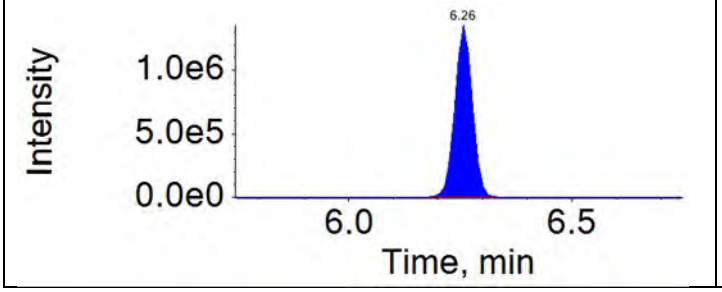


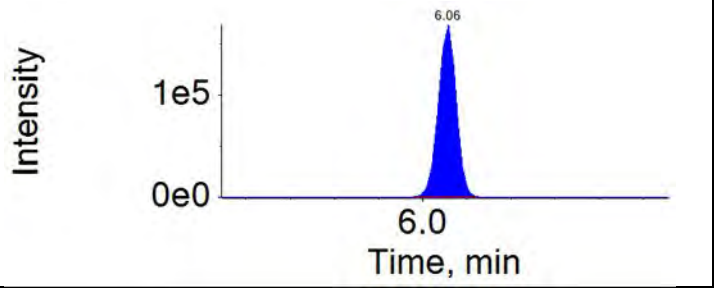
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

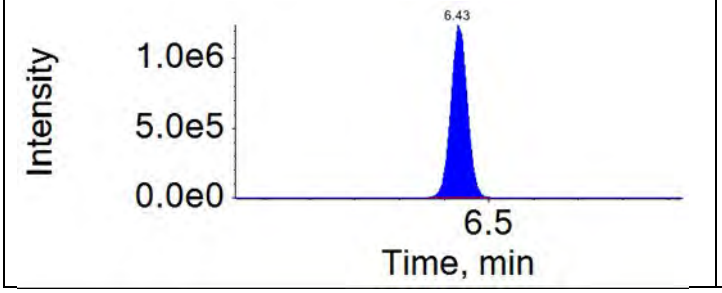
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

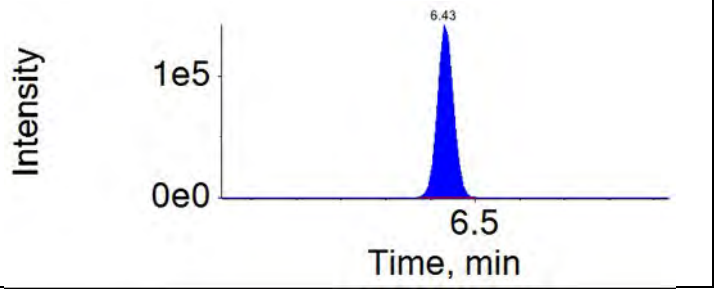
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



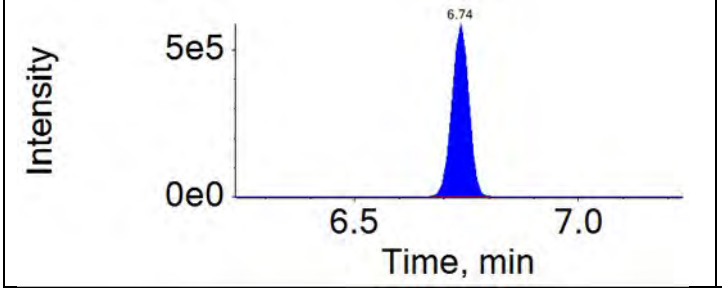


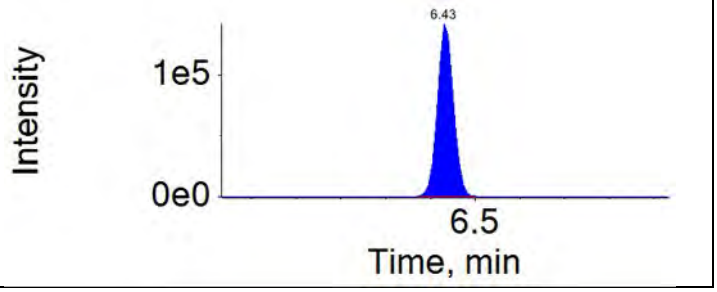
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



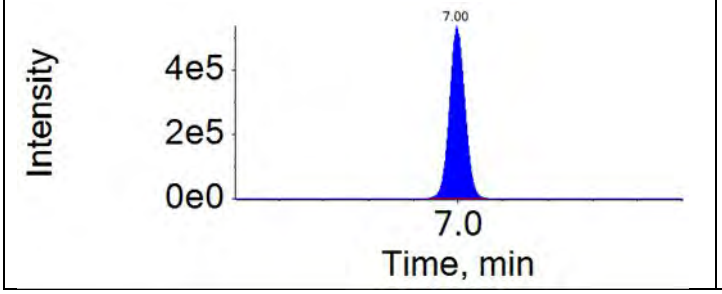


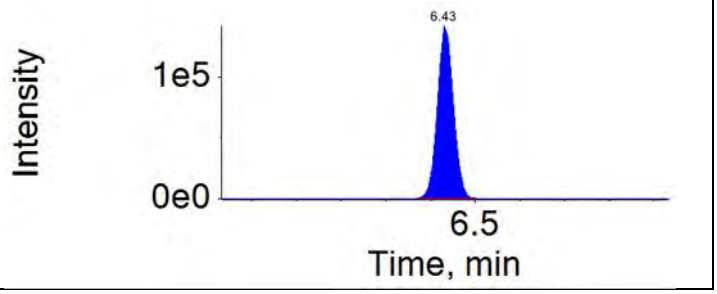
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



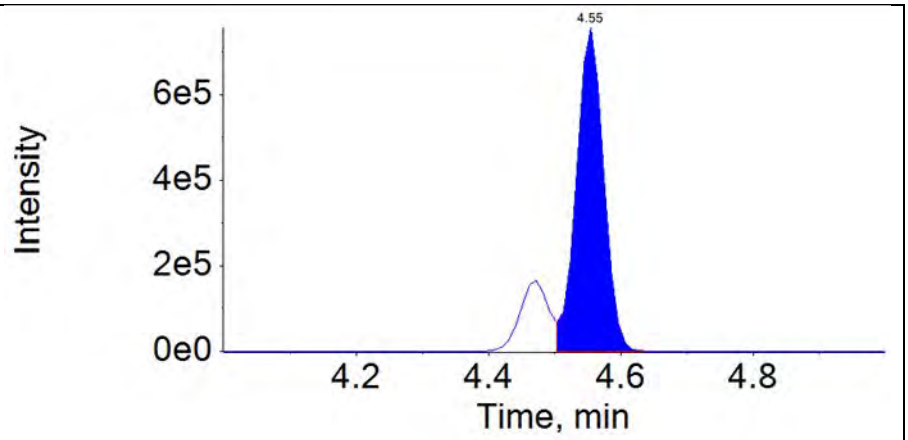


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

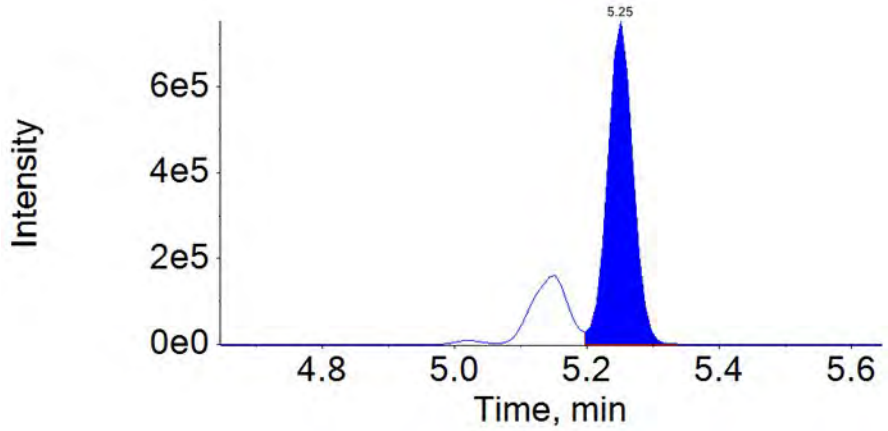
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
2168276.79
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



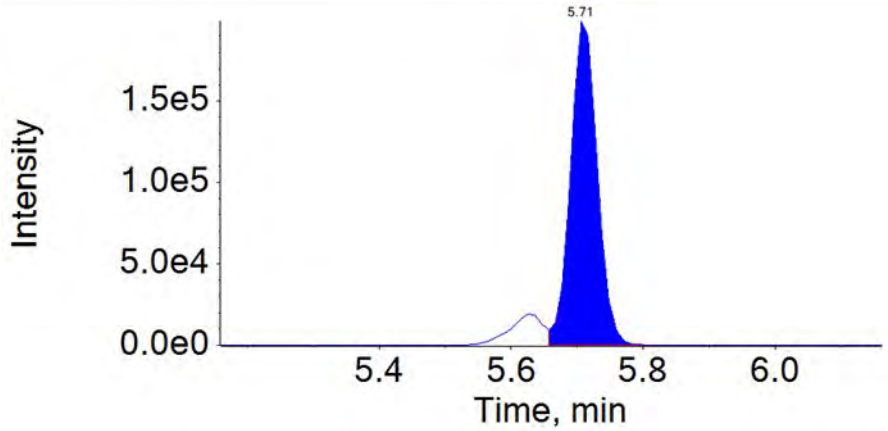
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
2015391.27
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
561930.92
Mass Range:
570.0 / 419.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6

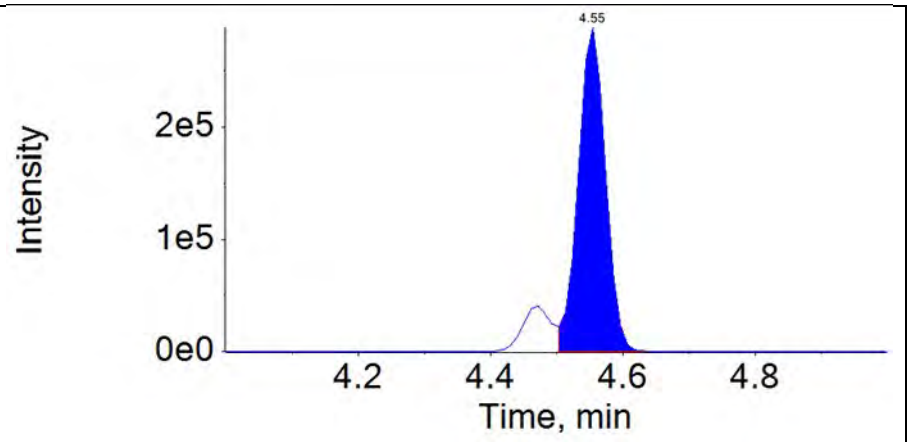


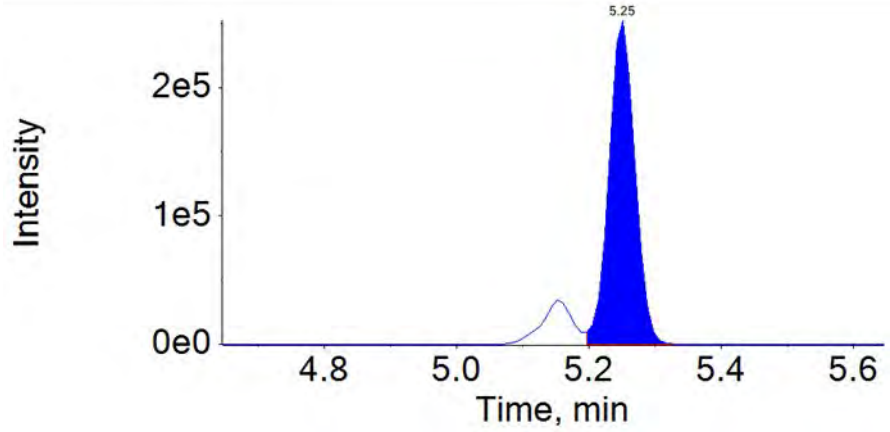
Integration Comment: incorrect integration

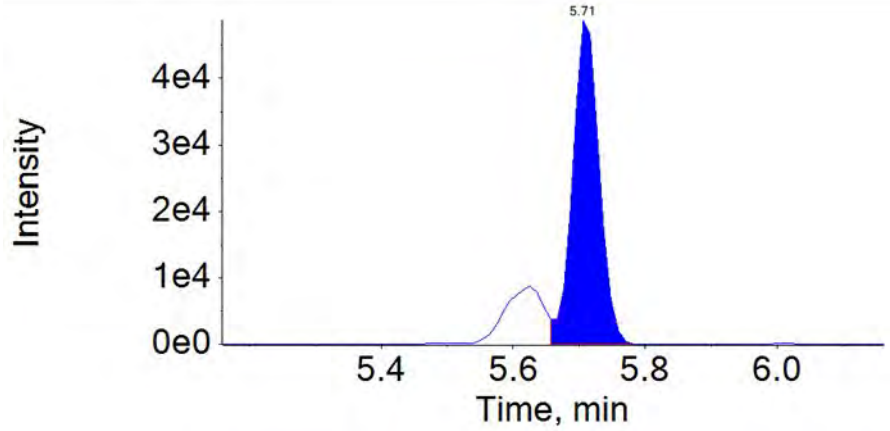
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS_2 **RT (min.):** 4.55 **Peak Area:** 827831.34 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV12DCAL-47.wiff **Sample Name:** CAL6	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.25 **Peak Area:** 689553.42 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-47.wiff **Sample Name:** CAL6	 **Integration Comment:** incorrect integration

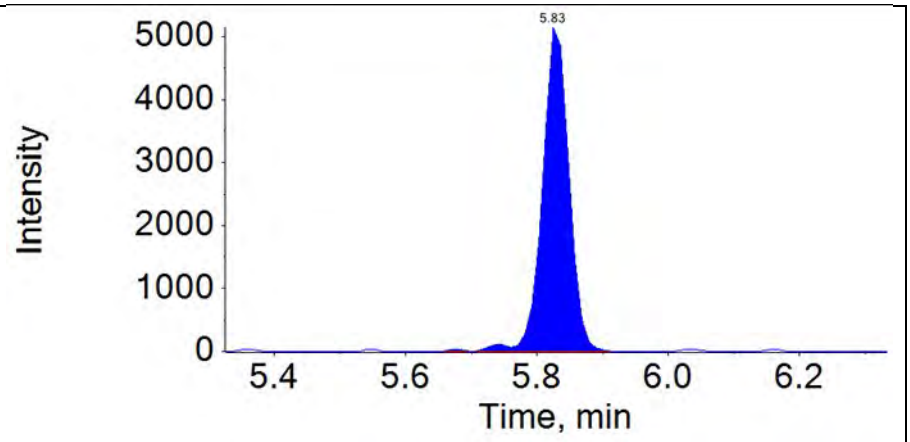
Component Name: NMeFOSAA_2 **RT (min.):** 5.71 **Peak Area:** 136171.13 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV12DCAL-47.wiff **Sample Name:** CAL6	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

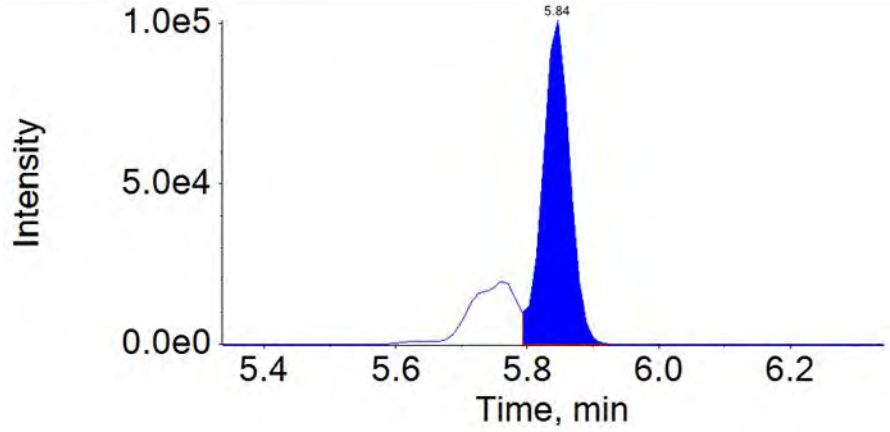
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFUnDA_2
RT (min.):
5.83
Peak Area:
14552.55
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



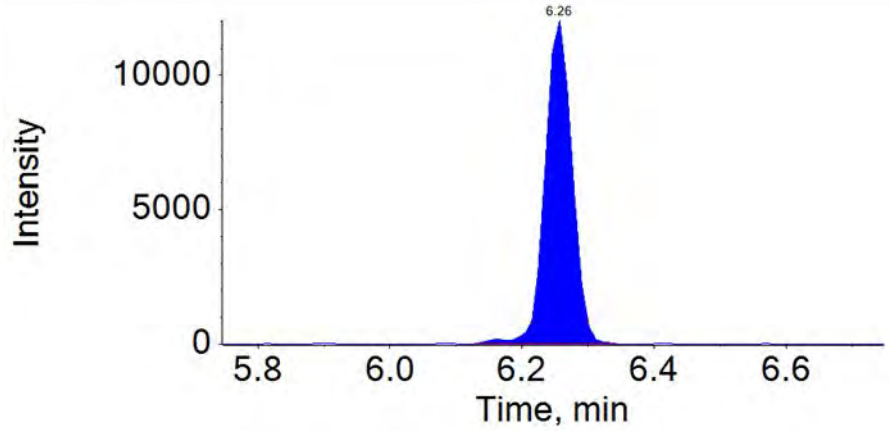
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
290918.50
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.26
Peak Area:
34575.92
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

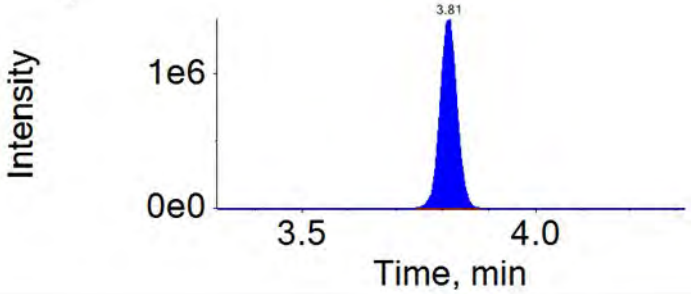
Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-47.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	3588084.15	A	0.3619	0.3688			
PFBS_2	3.81	1.00	1323155.38	A	0.3619	0.3688	2	50	
4:2-FTS	4.13	1.00	738293.95	A	0.6730	0.6272			
4:2 FTS_2	4.13	1.00	463074.71	A	0.6730	0.6272		#NA!	
PFHxA	4.16	1.00	6593778.96	A	0.0117	0.0113			
PFHxA_2	4.16	1.00	74578.79	A	0.0117	0.0113	-3	50	
PFPeS	4.18	1.10	1847826.78	A	0.5191	0.5187			
PFPeS_2	4.18	1.10	958558.40	A	0.5191	0.5187	0	50	
PFHpA	4.55	1.00	6648455.32	A	0.0563	0.0564			
PFHpA_2	4.55	1.00	375071.53	A	0.0563	0.0564	0	50	
PFHxS	4.55	1.00	2662852.00	M	0.3428	0.3565			
PFHxS_2	4.55	1.00	949378.20	M	0.3428	0.3565	4	50	
6:2-FTS	4.91	1.00	523949.46	A	0.6604	0.6368			
6:2 FTS_2	4.91	1.00	333633.12	A	0.6604	0.6368		#NA!	
PFHpS	4.91	1.08	2604868.63	A	0.4066	0.4130			
PFHpS_2	4.91	1.08	1075742.12	A	0.4066	0.4130	2	50	
PFOA	4.92	1.00	6758642.79	A	0.0562	0.0574			
PFOA_2	4.92	1.00	387863.69	A	0.0562	0.0574	2	50	
PFOS	5.25	1.00	2664957.22	M	0.2968	0.3006			
PFOS_2	5.25	1.00	801195.47	M	0.2968	0.3006	1	50	
PFNA	5.27	1.00	5820576.59	A	0.0229	0.0205			
PFNA_2	5.27	1.00	119436.95	A	0.0229	0.0205	-10	50	
PFNS	5.55	1.06	1709959.45	A	0.4828	0.4693			
PFNS_2	5.55	1.06	802535.42	A	0.4828	0.4693	-3	50	
PFDA	5.57	1.00	4802967.81	A	0.0081	0.0072			
PFDA_2	5.57	1.00	34768.56	A	0.0081	0.0072	-10	50	
8:2-FTS	5.57	1.00	469719.63	A	0.6814	0.5683			
8:2 FTS_2	5.57	1.00	266934.57	A	0.6814	0.5683		#NA!	
NMeFOSAA	5.71	1.00	627854.43	M	0.2569	0.2739			
NMeFOSAA_2	5.71	1.00	171981.91	M	0.2569	0.2739	7	50	
PFDS	5.80	1.10	1313570.32	A	0.5144	0.4832			
PFDS_2	5.80	1.11	634717.73	A	0.5144	0.4832	-6	50	
PFUnDA	5.83	1.00	3923979.21	A	0.0058	0.0036			
PFUnDA_2	5.83	1.00	14257.68	M	0.0058	0.0036	-38	50	
NEtFOSAA	5.84	1.00	551865.73	A	0.7253	0.6936			
NEtFOSAA_2	5.84	1.00	382778.11	M	0.7253	0.6936	-4	50	
PFDoDA	6.06	1.00	4582985.49	A	0.0157	0.0136			
PFDoDA_2	6.06	1.00	62235.50	A	0.0157	0.0136	-13	50	
10:2-FTS	6.07	1.09	348263.21	A	0.6356	0.6654			
10:2 FTS_2	6.07	1.09	231731.38	A	0.6356	0.6654		#NA!	
PFTrDA	6.26	1.03	3691733.76	A	0.0086	0.0093			
PFTrDA_2	6.26	1.03	34255.33	M	0.0086	0.0093	8	50	
PFTeDA	6.43	1.00	3149020.22	A	0.0062	0.0065			
PFTeDA_2	6.43	1.00	20486.74	A	0.0062	0.0065	4	50	
PFHxDA	6.74	1.05	1533920.21	A	0.0683	0.0655			
PFHxDA_2	6.73	1.05	100532.17	A	0.0683	0.0655	-4	50	
PFODA	7.00	1.09	1270897.62	A	0.0277	0.0264			
PFODA_2	7.00	1.09	33518.79	A	0.0277	0.0264	-5	50	

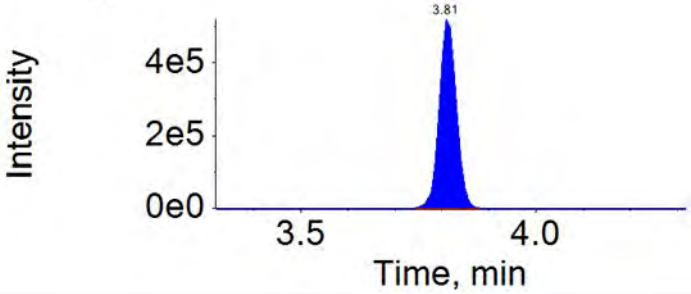
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

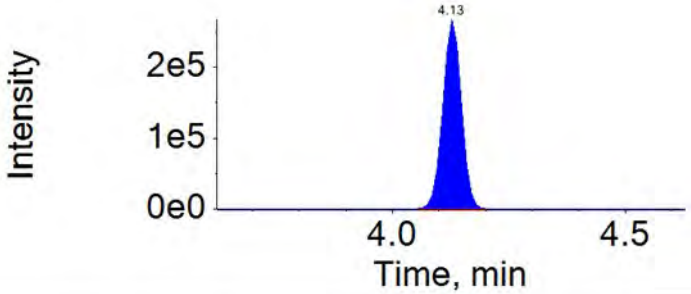
Component: PFBS
Primary Mass: 299.0 / 80.0



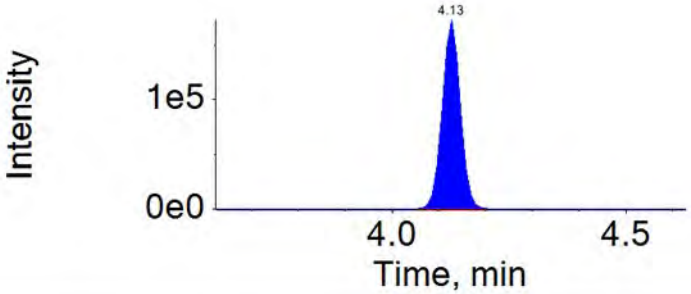
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



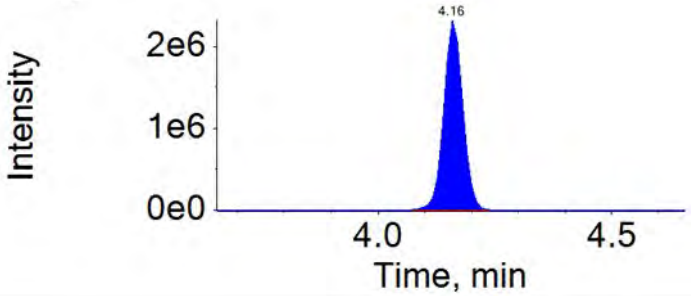
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



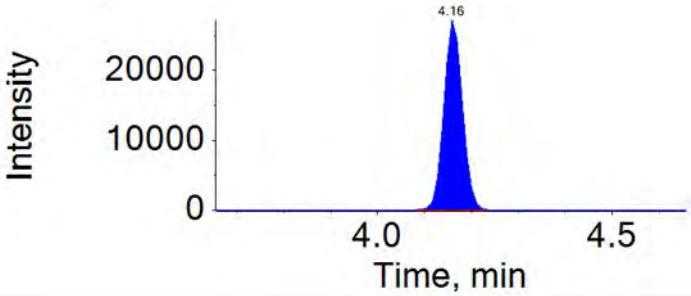
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



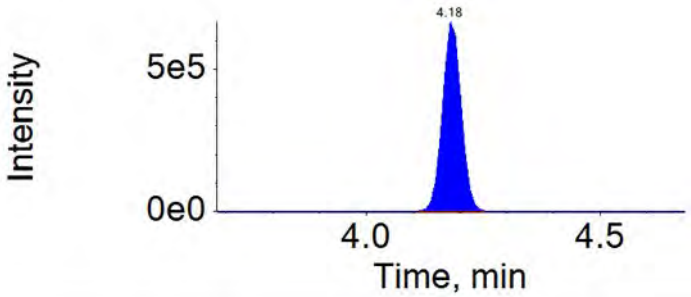
Component: PFHxA
Primary Mass: 313.0 / 269.0



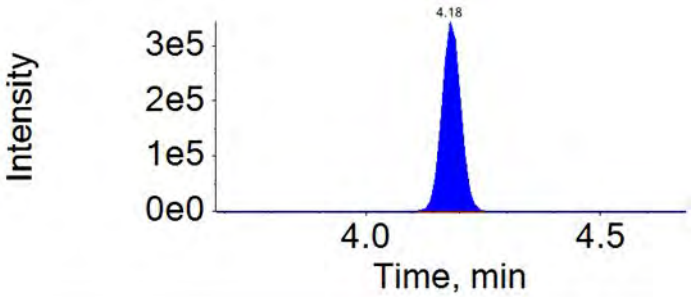
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



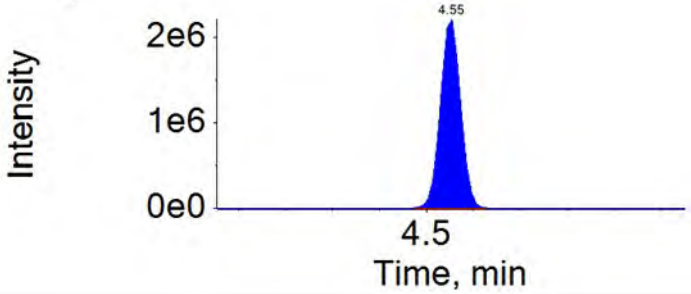
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



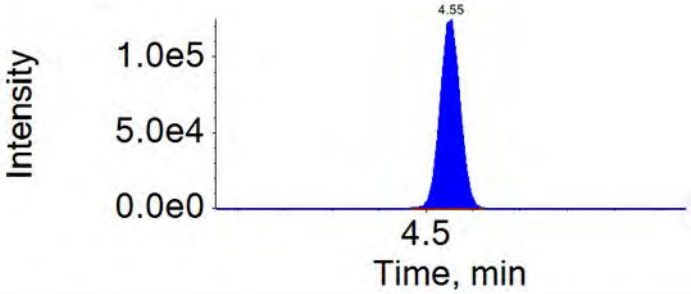
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

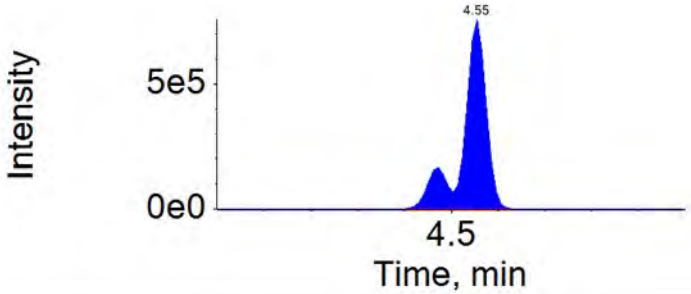
Component: PFHpA
Primary Mass: 363.0 / 319.0



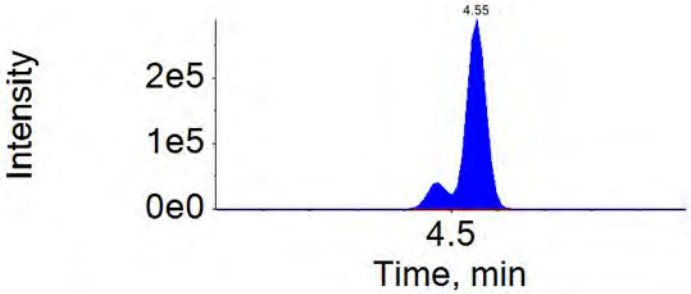
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



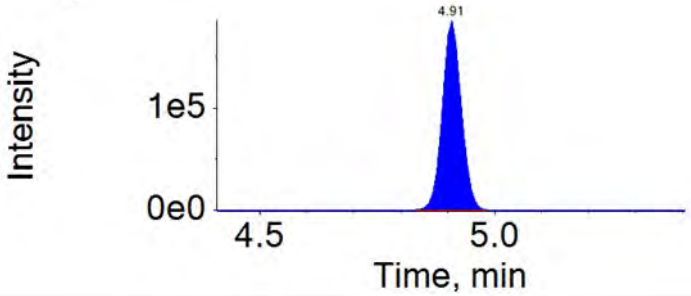
Component: PFHxS
Primary Mass: 399.0 / 80.0



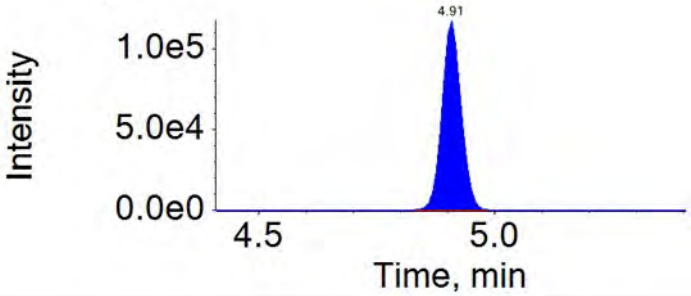
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



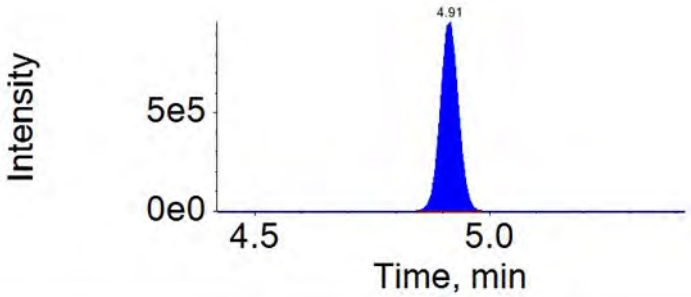
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



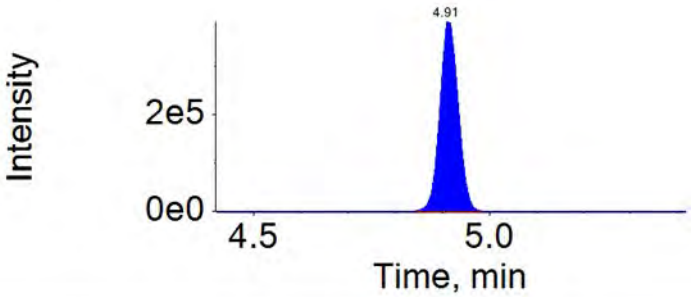
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



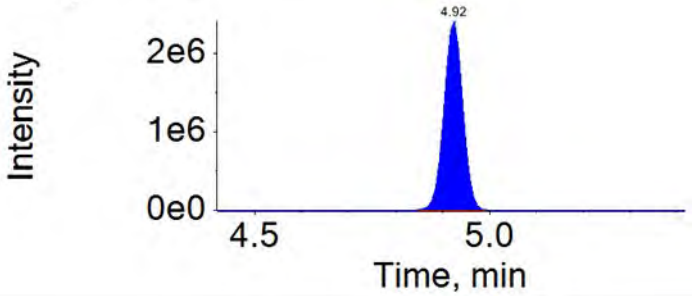
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



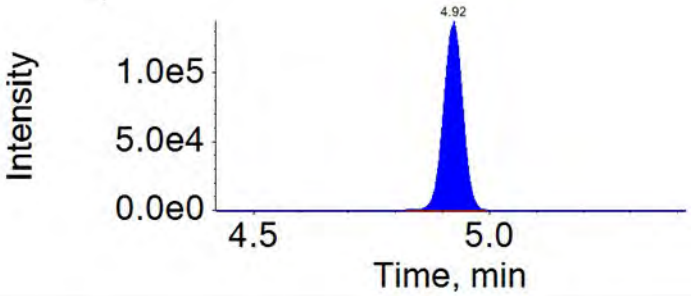
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

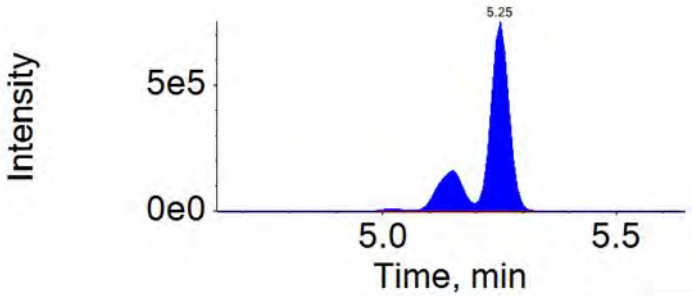
Component: PFOA
Primary Mass: 413.0 / 369.0



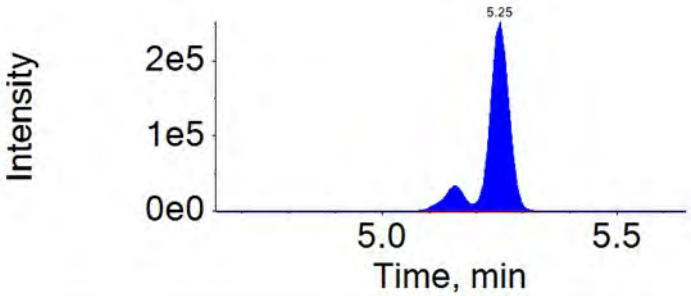
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



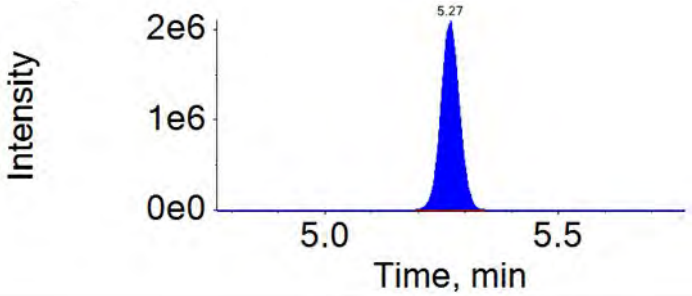
Component: PFOS
Primary Mass: 499.0 / 80.0



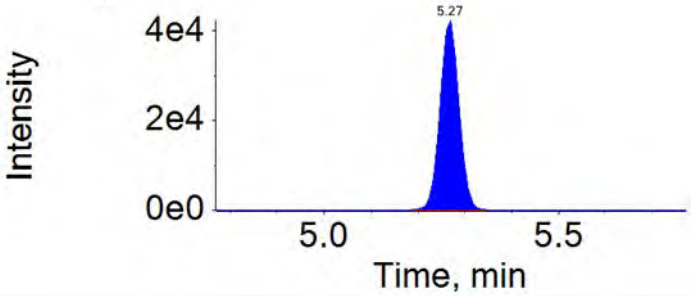
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



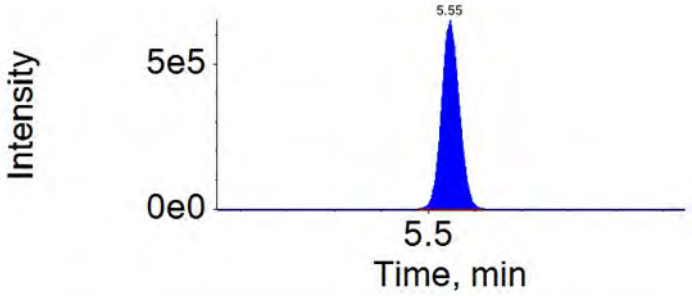
Component: PFNA
Primary Mass: 463.0 / 419.0



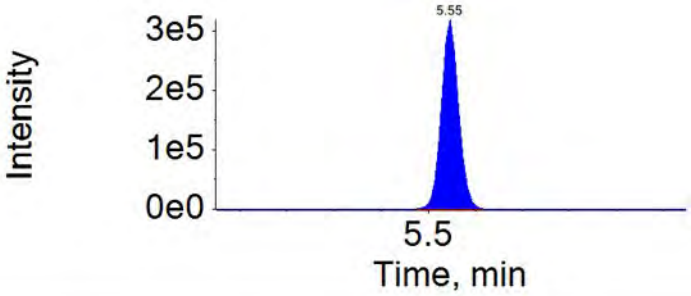
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



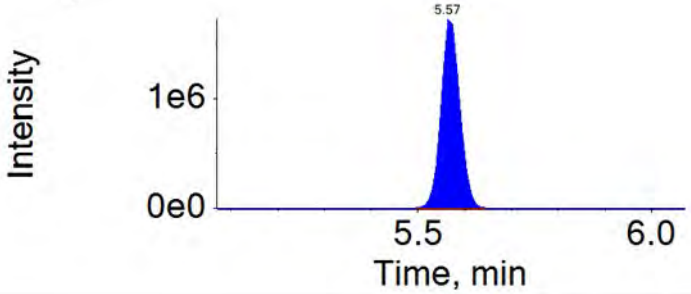
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



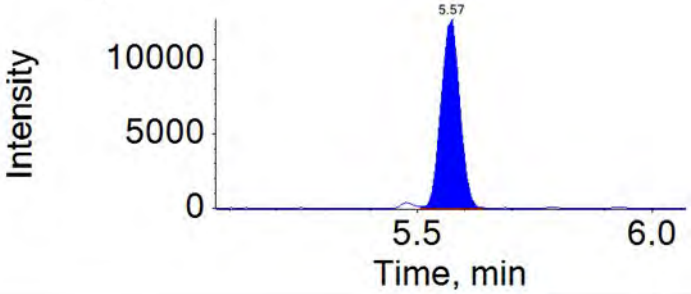
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

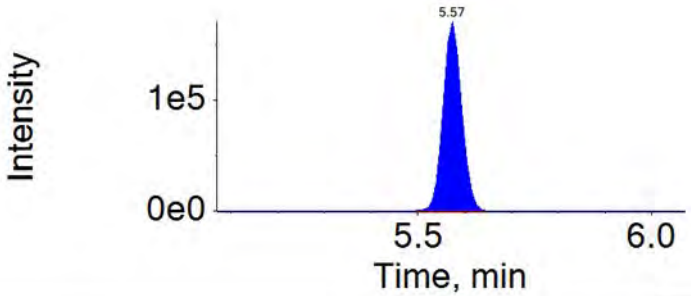
Component: PFDA
Primary Mass: 513.0 / 469.0



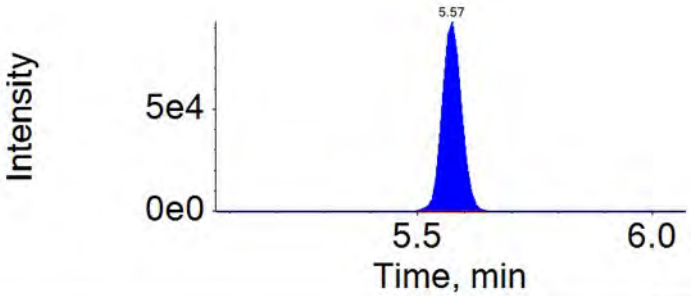
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



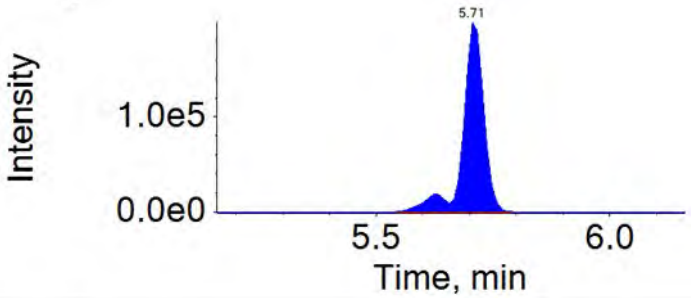
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



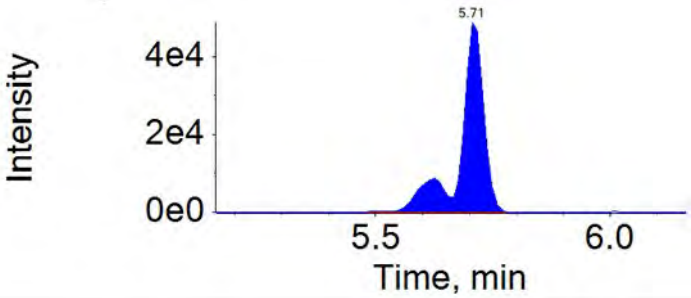
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



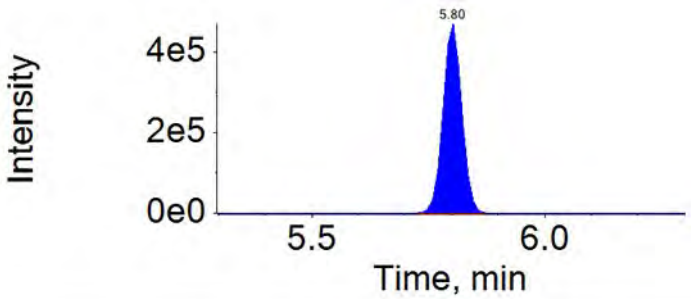
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



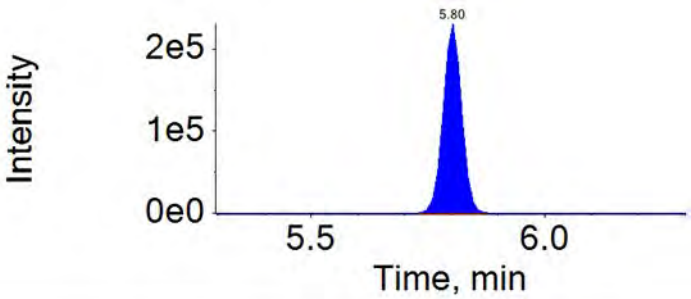
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



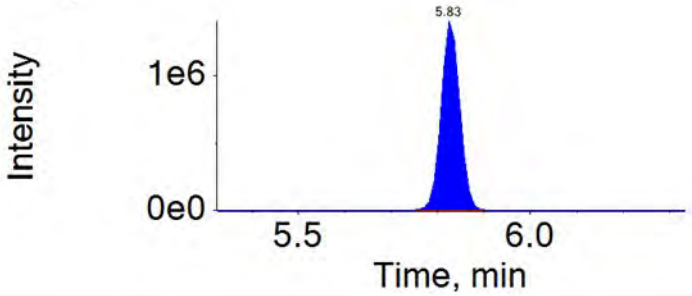
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



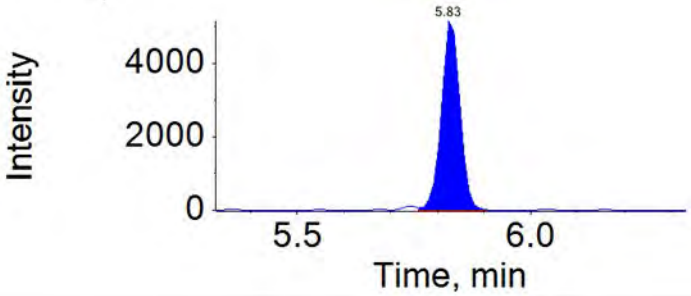
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

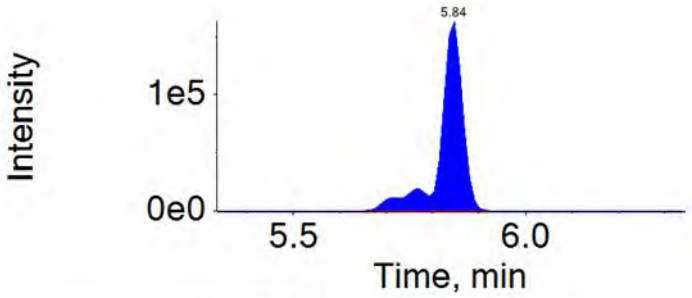
Component: PFUnDA
Primary Mass: 563.0 / 519.0



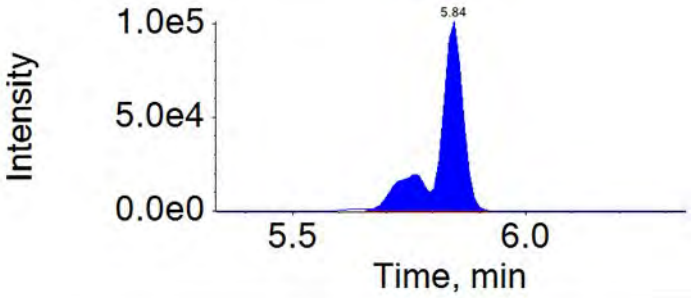
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



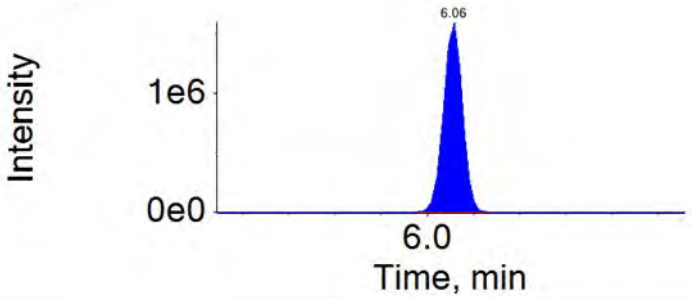
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



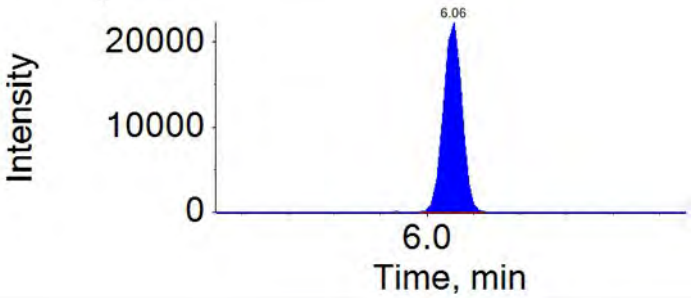
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



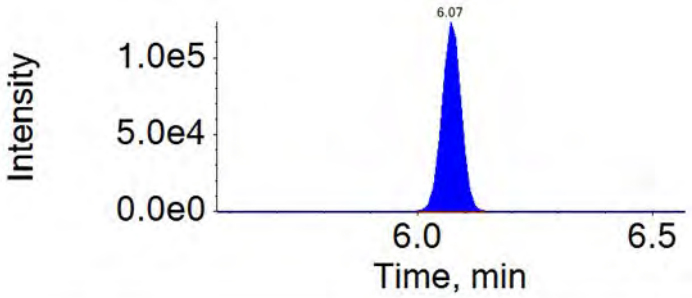
Component: PFDoDA
Primary Mass: 613.0 / 569.0



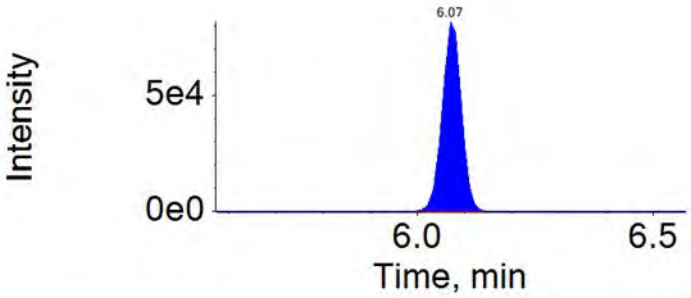
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



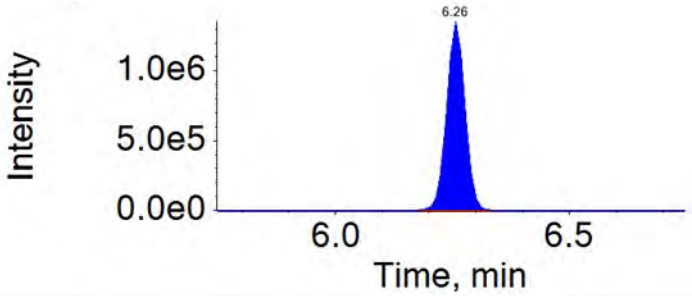
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



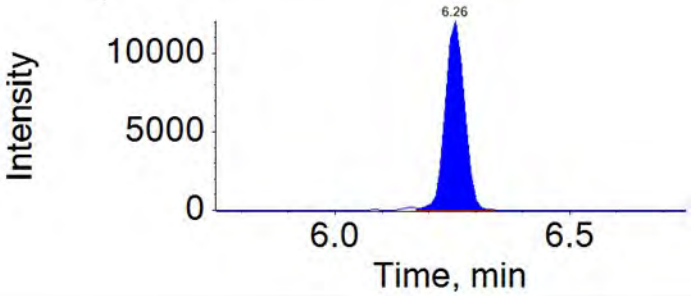
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

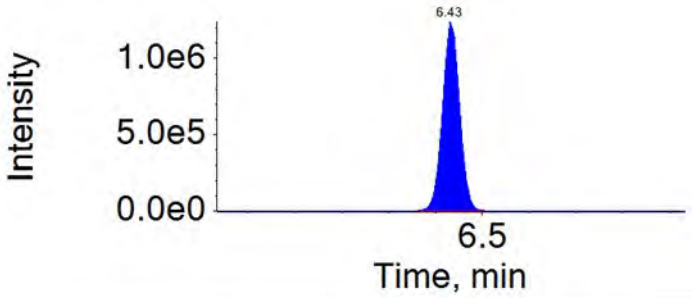
Component: PFTrDA
Primary Mass: 663.0 / 619.0



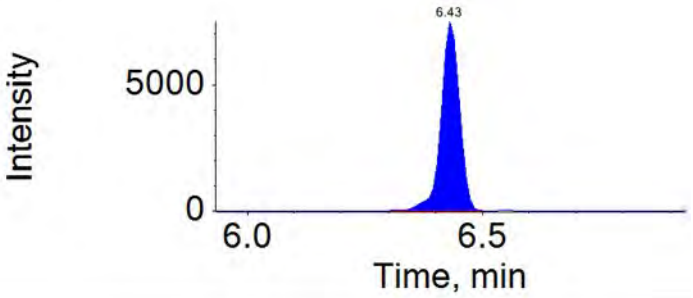
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



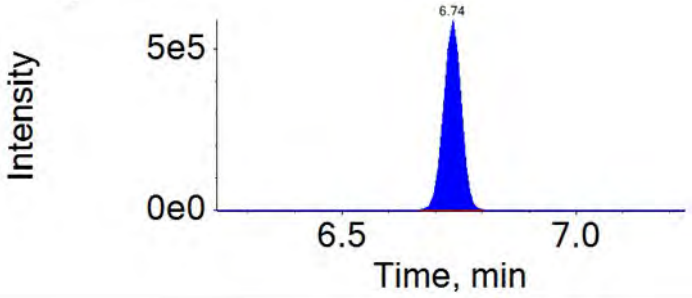
Component: PFTeDA
Primary Mass: 713.0 / 669.0



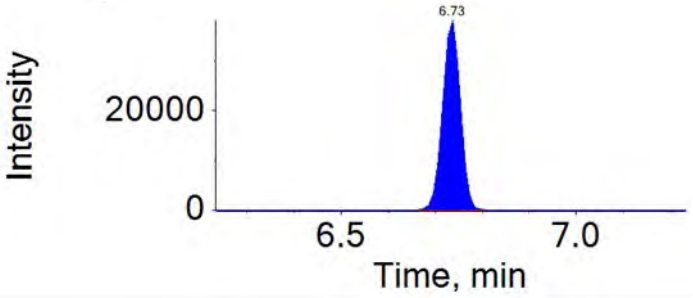
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



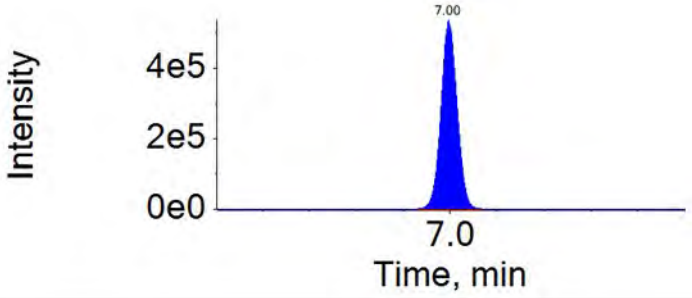
Component: PFHxDA
Primary Mass: 813.0 / 769.0



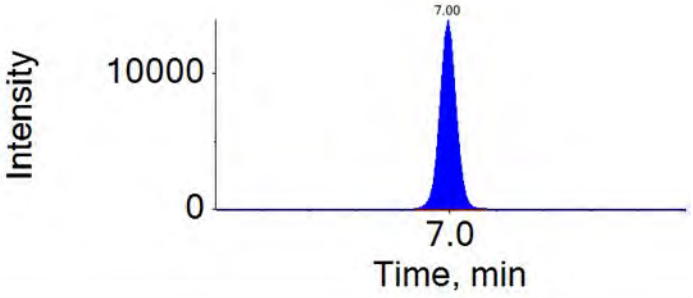
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL7			**Data File:**		18NOV12DCAL-48.wiff
Sample ID:	CALBRN71833B			**Acquis Date:**		2018-11-12T16:00:06
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	9			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	510525.8	659926.2	-23	50	
13C2-PFOA	5.0	368158.3	450219.7	-18	50	
13C4-PFOS	4.8	233532.7	249205.8	-6	50	
13C2-PFDA	5.0	233825.1	278743.9	-16	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	557392.8	13C3-PFBA	510525.8	1.092	5.000	4.895	98	70-130	
E13C5-PFPeA	581688.7	13C3-PFBA	510525.8	1.139	5.000	5.110	102	70-130	
E13C3-PFBS	361166.0	13C3-PFBA	510525.8	0.707	4.650	4.994	107	70-130	
E13C2-4:2-FTS	40505.1	13C2-PFOA	368158.3	0.110	4.670	4.900	105	70-130	
E13C5-PFHxA	509808.0	13C2-PFOA	368158.3	1.385	5.000	5.002	100	70-130	
E13C3-PFHxS	267182.8	13C2-PFOA	368158.3	0.726	4.730	4.980	105	70-130	
E13C4-PFHpA	401203.9	13C2-PFOA	368158.3	1.090	5.000	4.910	98	70-130	
E13C2-6:2-FTS	27180.2	13C2-PFOA	368158.3	0.074	4.750	4.939	104	70-130	
E13C8-PFOA	607669.5	13C2-PFOA	368158.3	1.651	5.000	4.548	91	70-130	
E13C8-PFOS	242617.5	13C4-PFOS	233532.7	1.039	4.780	4.603	96	70-130	
E13C9-PFNA	377369.8	13C4-PFOS	233532.7	1.616	5.000	4.505	90	70-130	
E13C6-PFDA	479333.1	13C2-PFDA	233825.1	2.050	5.000	4.784	96	70-130	
E13C2-8:2-FTS	22711.0	13C2-PFDA	233825.1	0.097	4.790	4.844	101	70-130	
E13C8-PFOSA	554092.6	13C2-PFDA	233825.1	2.370	5.000	5.254	105	70-130	
Ed3-NMeFOSAA	67250.5	13C2-PFDA	233825.1	0.288	5.000	5.192	104	70-130	
E13C7-PFUnDA	199746.8	13C2-PFDA	233825.1	0.854	5.000	4.960	99	70-130	
Ed5-NEtFOSAA	58049.5	13C2-PFDA	233825.1	0.248	5.000	5.252	105	70-130	
E13C2-PFDoDA	474393.8	13C2-PFDA	233825.1	2.029	5.000	5.268	105	70-130	
Ed7-NMePFOSAE	272283.1	13C2-PFDA	233825.1	1.164	5.000	5.039	101	70-130	
Ed3-NMePFOSA	74110.3	13C2-PFDA	233825.1	0.317	5.000	5.758	115	70-130	
Ed9-NEtPFOSAE	240346.5	13C2-PFDA	233825.1	1.028	5.000	5.346	107	70-130	
Ed5-NEtPFOSA	53297.9	13C2-PFDA	233825.1	0.228	5.000	5.347	107	70-130	
E13C2-PFTeDA	346256.6	13C2-PFDA	233825.1	1.481	5.000	5.199	104	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

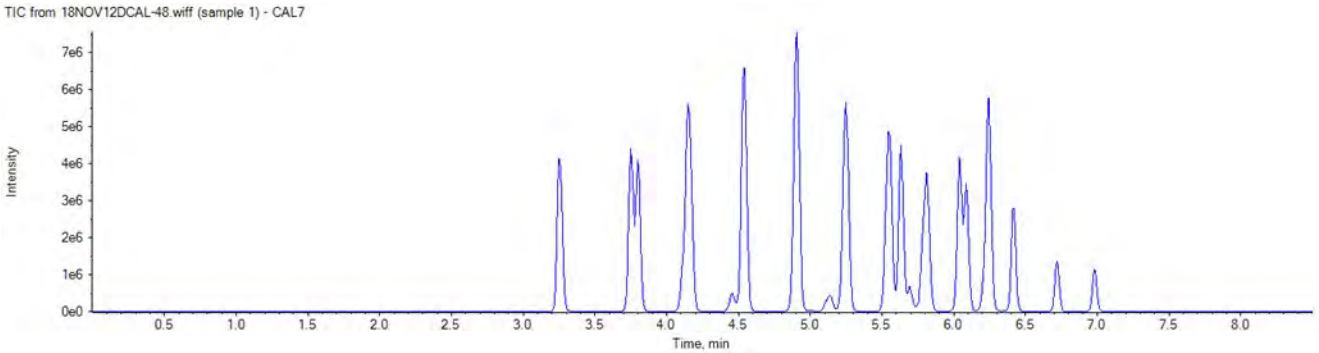
Analyte Quantitation Peak Table

Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-48.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	9834601.7		A	13C4-PFBA	3.25	557392.8	17.644	97.743
PFPeA	3.75	1.000	9756431.5		A	13C5-PFPeA	3.75	581688.7	16.773	97.094
PFBS	3.80	1.000	6615935.3		A	13C3-PFBS	3.80	361166.0	18.318	87.136
4:2-FTS	4.11	1.000	1379983.9		A	13C2-4:2-FTS	4.11	40505.1	34.069	92.499
PFHxA	4.15	1.000	11059420.3		A	13C5-PFHxA	4.15	509808.0	21.693	90.577
PFPeS	4.17	1.100	3482095.9		A	13C3-PFBS	3.80	361166.0	9.641	93.602
PFHpA	4.54	1.000	10981922.8		A	13C4-PFHpA	4.54	401203.9	27.372	90.732
PFHxS	4.54	1.000	5048349.8		M	13C3-PFHxS	4.54	267182.8	18.895	91.615
6:2-FTS	4.89	1.000	869227.2		A	13C2-6:2-FTS	4.89	27180.2	31.980	77.388
PFHpS	4.90	1.080	4784682.8		A	13C3-PFHxS	4.54	267182.8	17.908	94.267
PFOA	4.91	1.000	10991740.1		A	13C8-PFOA	4.91	607669.5	18.088	96.608
PFOS	5.24	1.000	5138367.0		M	13C8-PFOS	5.24	242617.5	21.179	92.617
PFNA	5.25	1.000	10084288.3		A	13C9-PFNA	5.25	377369.8	26.723	96.360
PFNS	5.53	1.060	3386860.5		A	13C8-PFOS	5.24	242617.5	13.960	97.666
PFDA	5.55	1.000	8104726.6		A	13C6-PFDA	5.55	479333.1	16.908	89.640
8:2-FTS	5.56	1.000	804019.5		A	13C2-8:2-FTS	5.56	22711.0	35.402	82.540
PFOSA	5.63	1.000	10169176.9		A	13C8-PFOSA	5.63	554092.6	18.353	89.642
NMeFOSAA	5.69	1.000	1191981.7		M	d3-NMeFOSAA	5.69	67250.5	17.725	100.173
PFDS	5.79	1.110	2606720.7		A	13C8-PFOS	5.24	242617.5	10.744	97.353
PFUnDA	5.81	1.000	6802701.2		A	13C7-PFUnDA	5.81	199746.8	34.057	89.032
NEtFOSAA	5.83	1.000	1046636.1		M	d5-NEtFOSAA	5.82	58049.5	18.030	94.517
PFDoDA	6.04	1.000	8171355.4		A	13C2-PFDoDA	6.04	474393.8	17.225	87.711
10:2-FTS	6.06	1.090	632223.7		A	13C2-8:2-FTS	5.56	22711.0	27.838	92.724
NMePFOSAE	6.09	1.000	6272486.3		A	d7-NMePFOSAE	6.08	272283.1	23.037	95.876
NMePFOSA	6.09	1.000	1310162.9		A	d3-NMePFOSA	6.09	74110.3	17.679	87.214
PFDoS	6.21	1.190	1336765.3		A	13C8-PFOS	5.24	242617.5	5.510	96.500
NEtPFOSAE	6.25	1.000	6557402.5		A	d9-NEtPFOSAE	6.23	240346.5	27.283	87.532
NEtPFOSA	6.26	1.000	1148933.0		A	d5-NEtPFOSA	6.25	53297.9	21.557	98.999
PFTrDA	6.24	1.030	6281239.0		A	13C2-PFDoDA	6.04	474393.8	13.241	83.569
PFTeDA	6.42	1.000	6092875.7		A	13C2-PFTeDA	6.42	346256.6	17.596	98.638
PFHxDA	6.72	1.050	2866097.3		A	13C2-PFTeDA	6.42	346256.6	8.277	98.615
PFODA	6.98	1.090	2488863.6		A	13C2-PFTeDA	6.42	346256.6	7.188	100.107

Total Ion Chromatogram

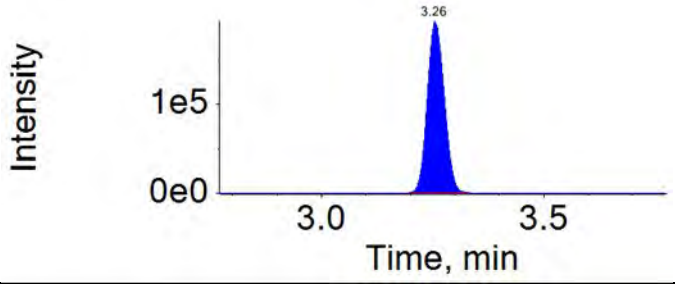


APPROVED
By MCD at 6:33 pm, 11/12/18

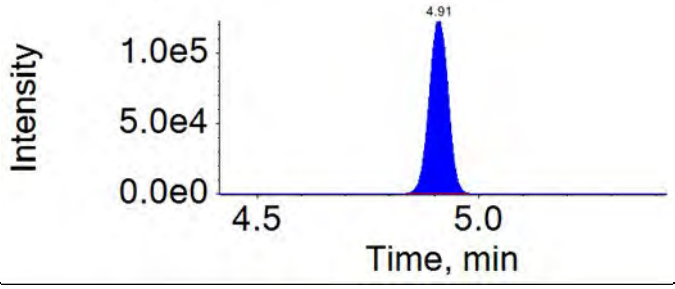
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

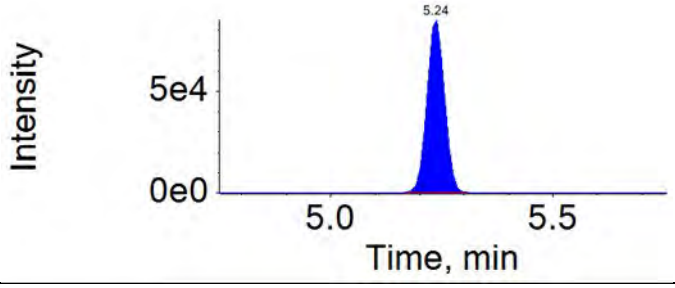
Injection Standard: 13C3-PFBA
216.0 / 172.0



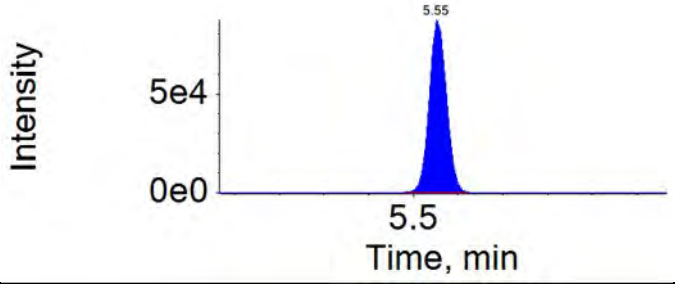
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

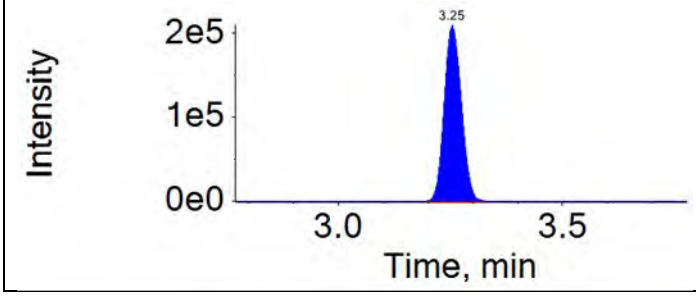


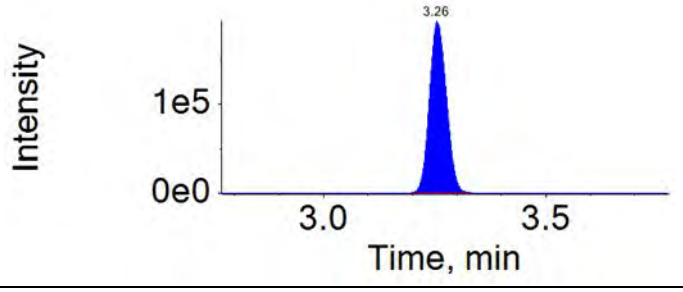
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

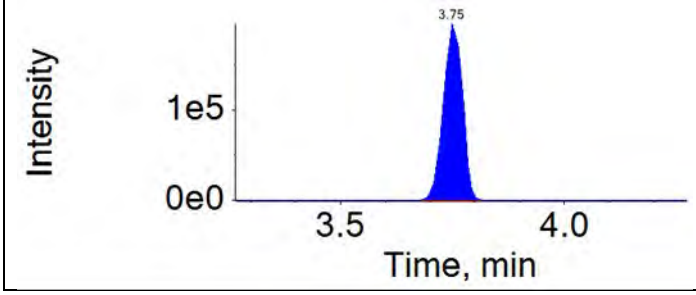
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

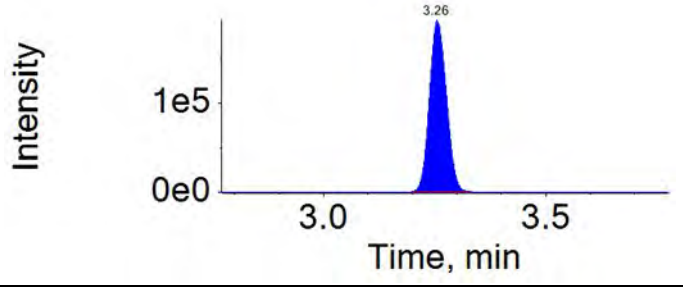
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



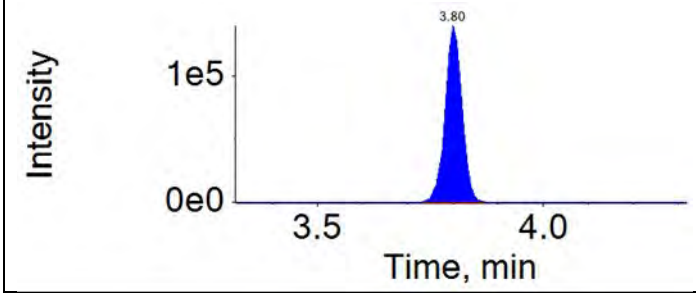


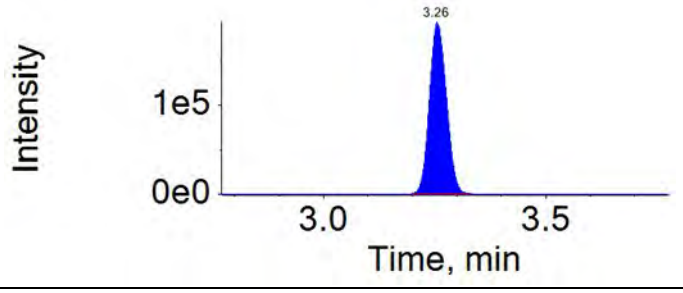
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



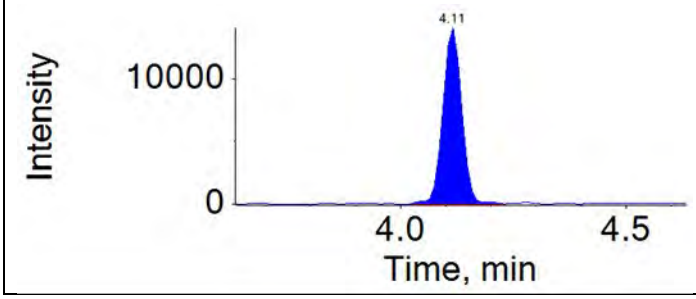


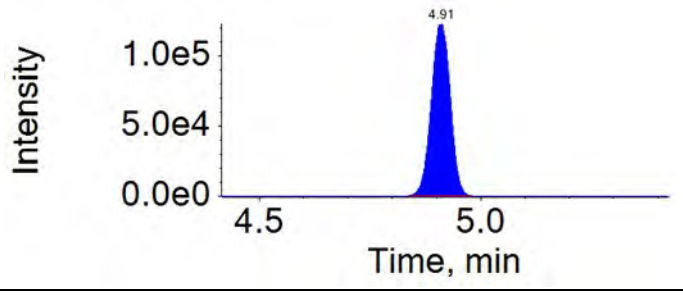
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



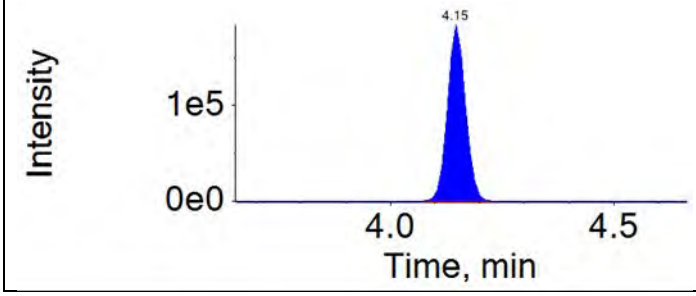


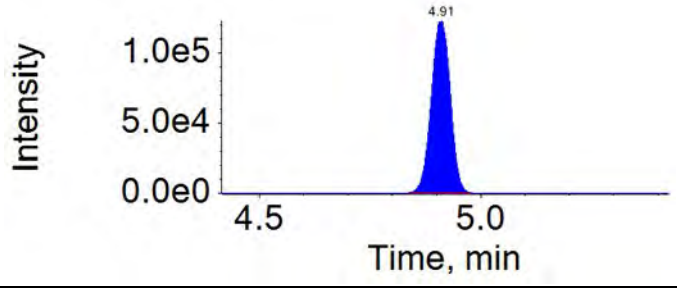
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

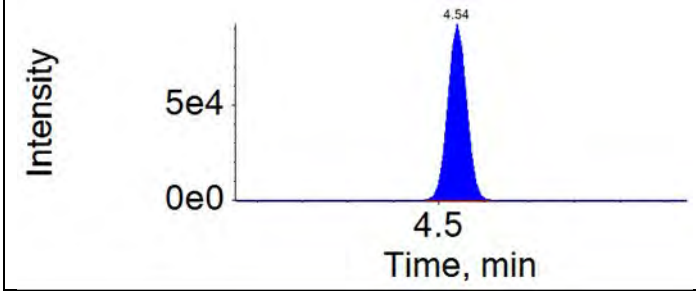
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

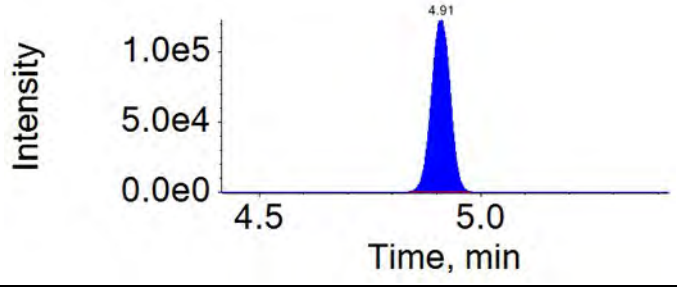
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



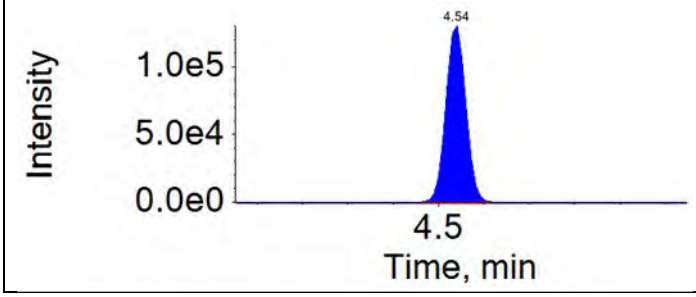


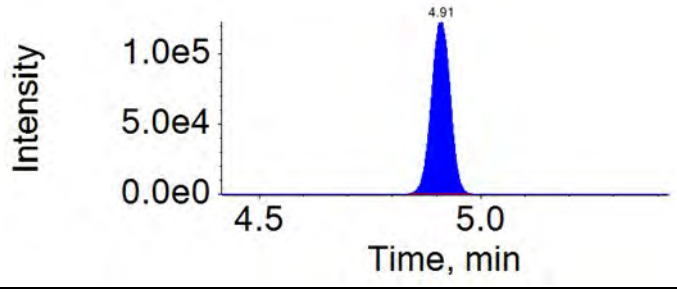
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



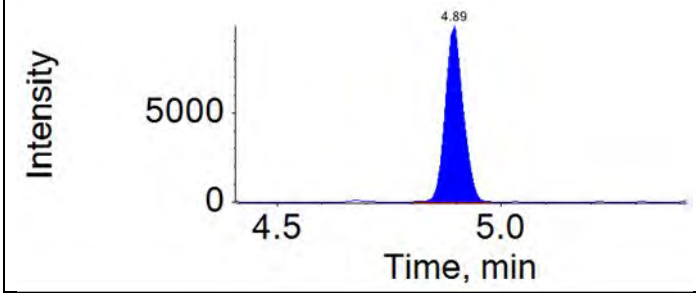


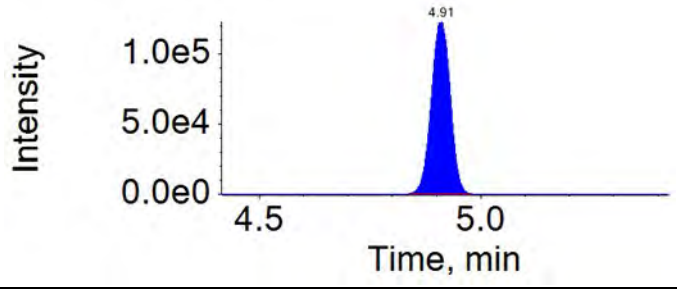
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

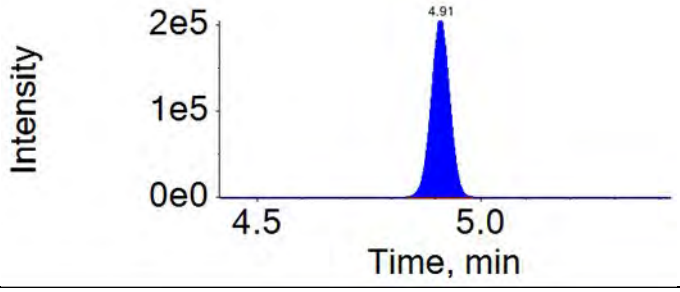
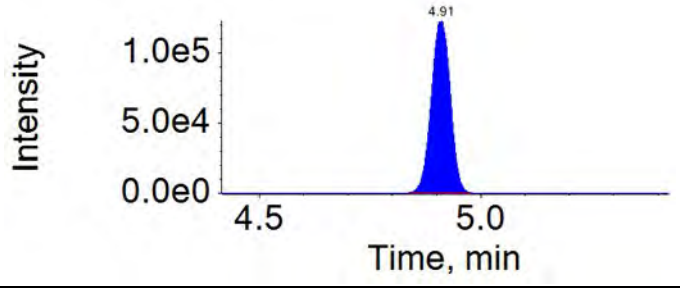


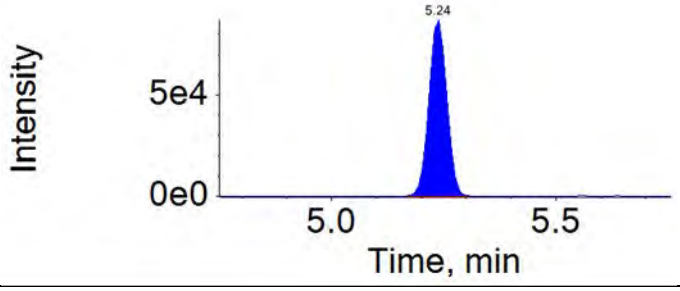
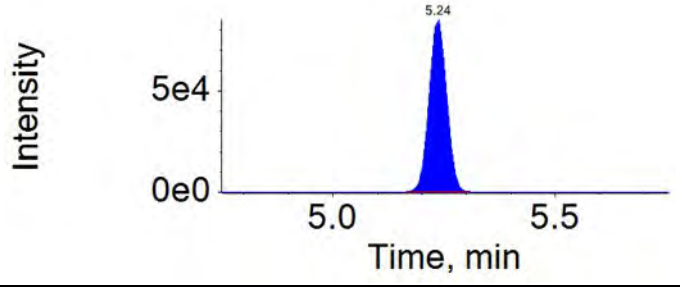


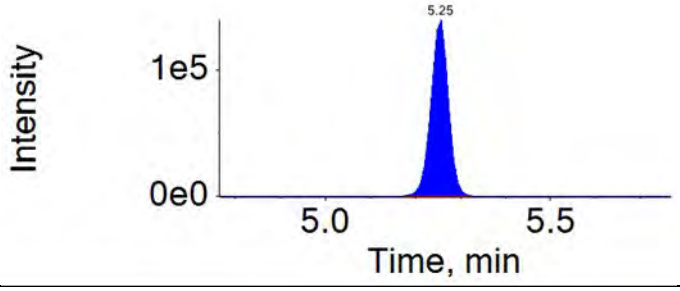
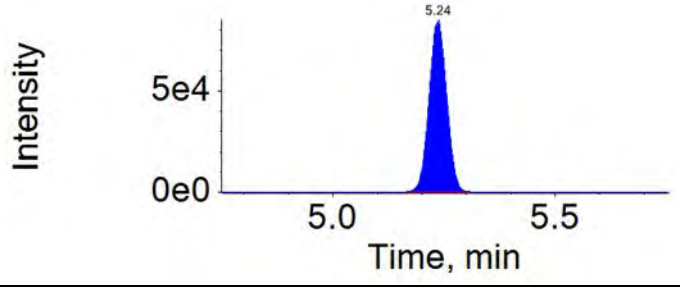
APPROVED
By MCD at 6:33 pm, 11/12/18

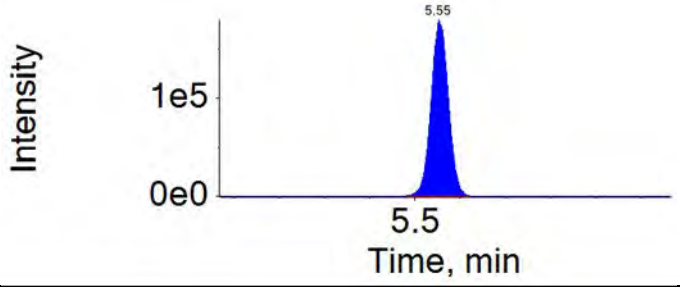
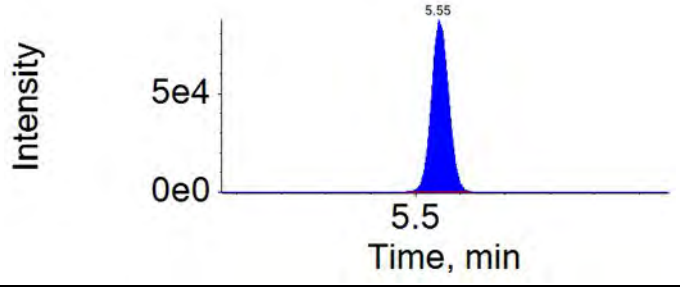
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

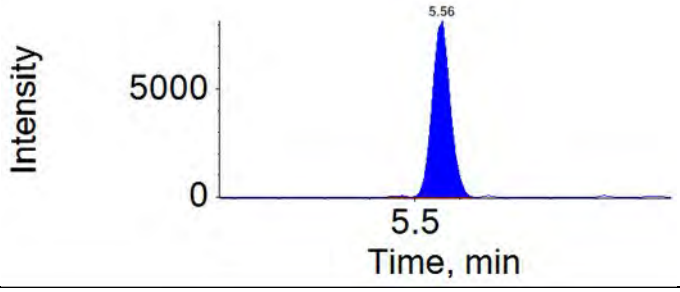
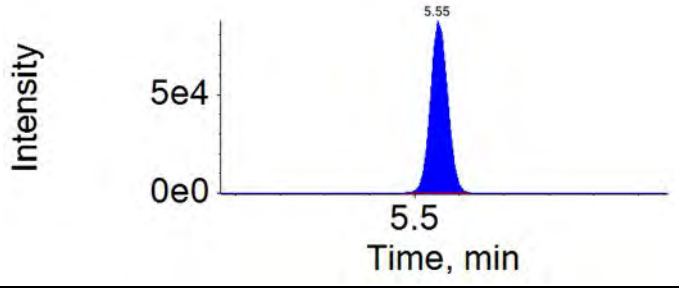
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

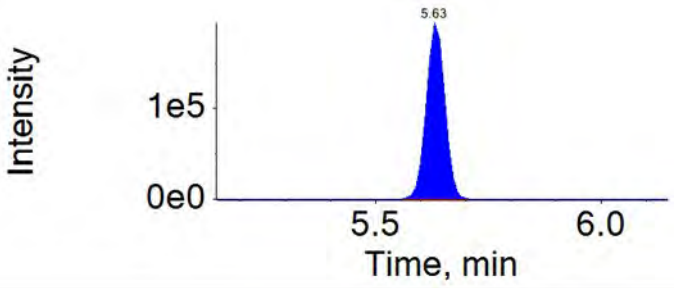
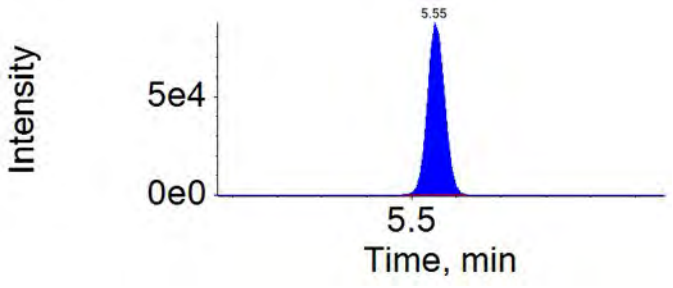
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

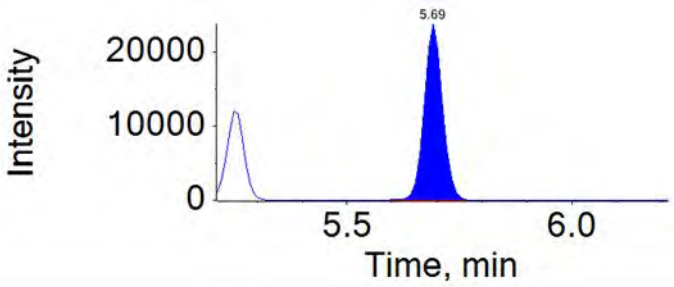
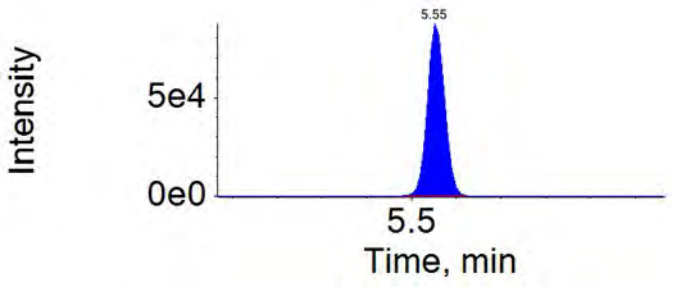
APPROVED
By MCD at 6:33 pm, 11/12/18

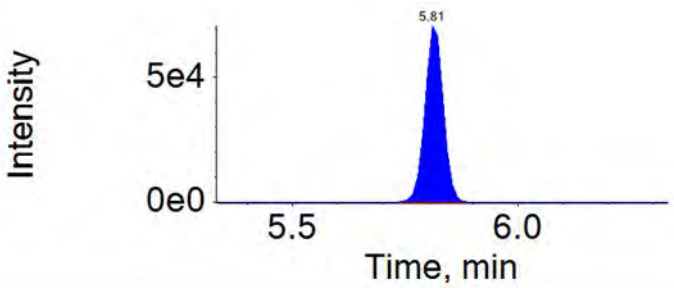
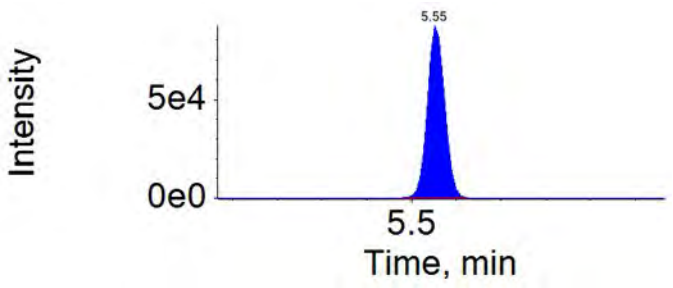
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

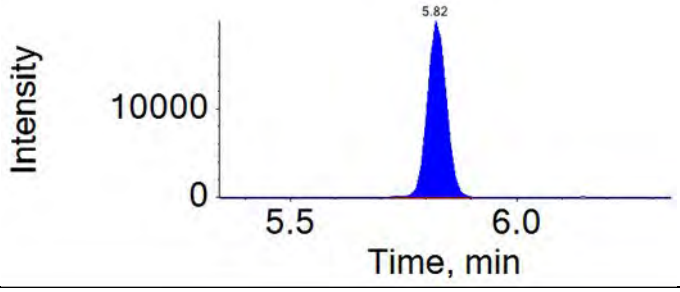
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

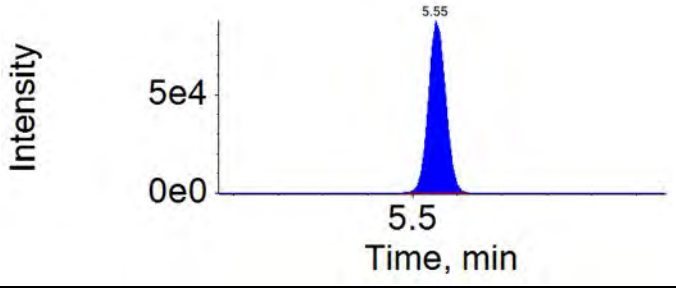
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

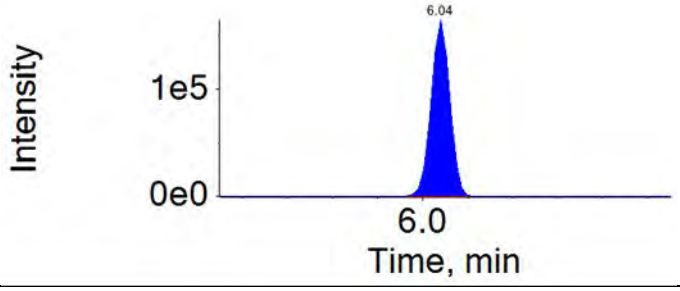
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

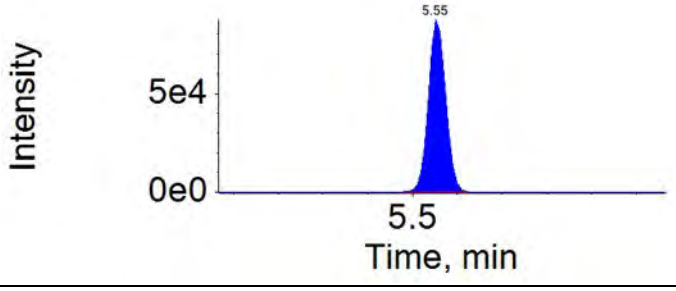
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



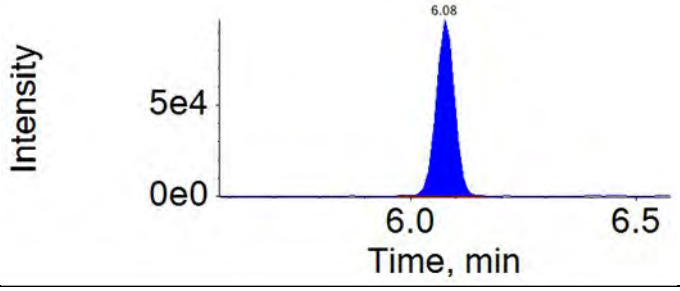


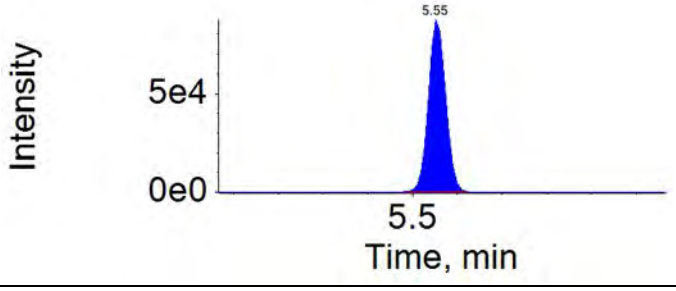
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



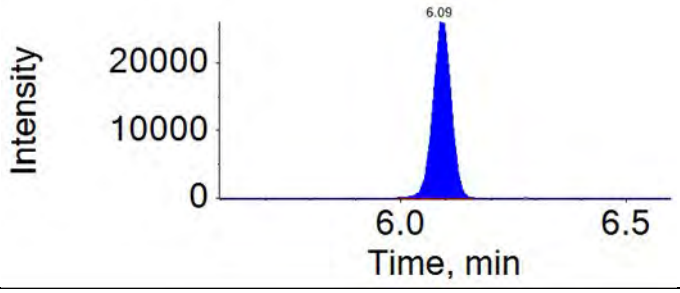


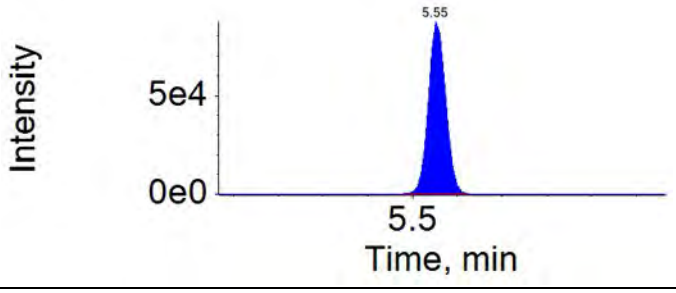
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



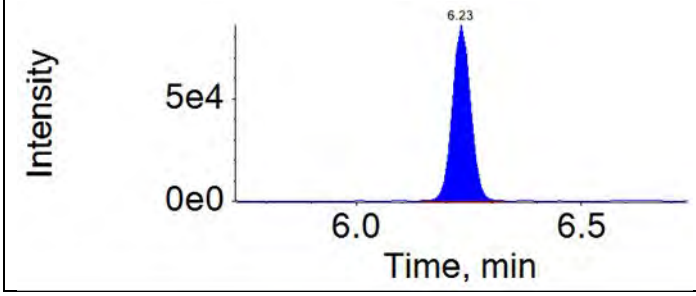


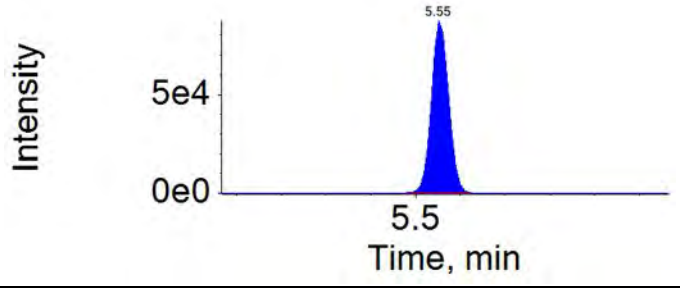
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

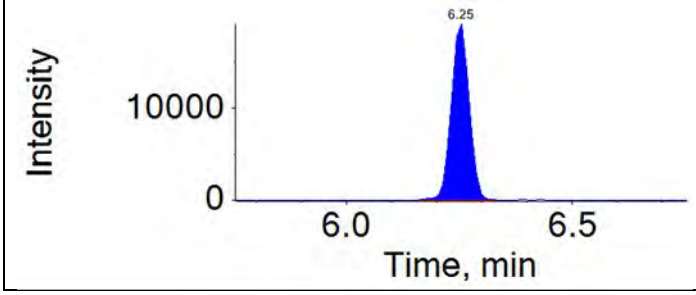
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

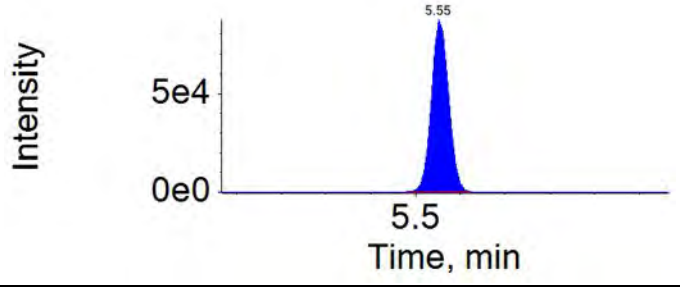
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



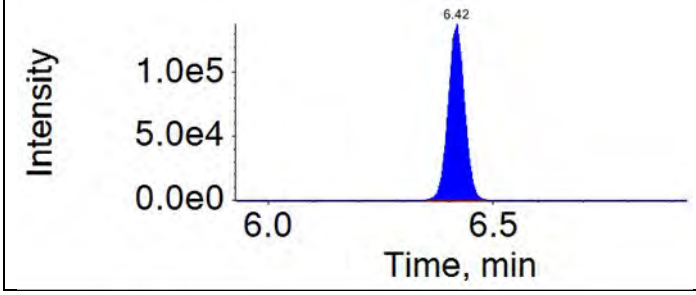


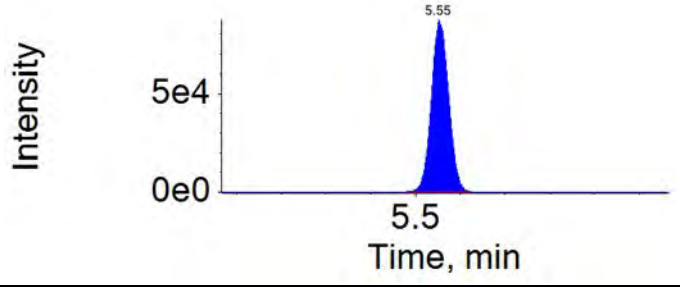
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



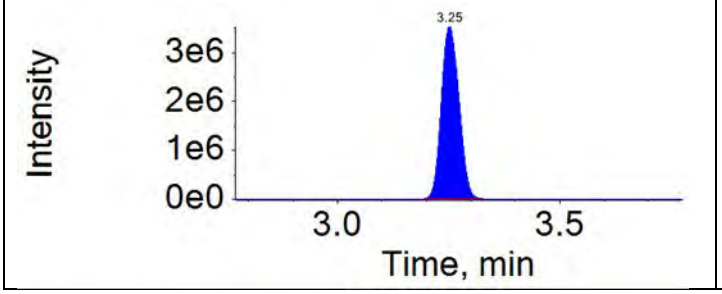


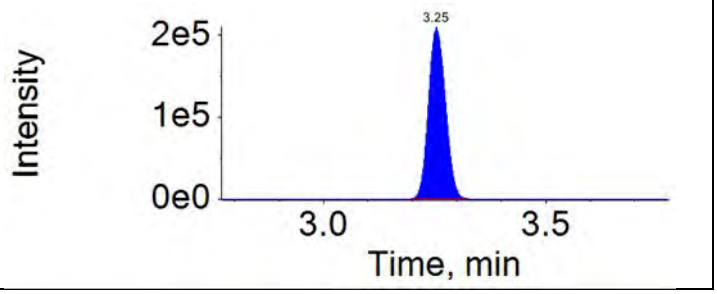
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

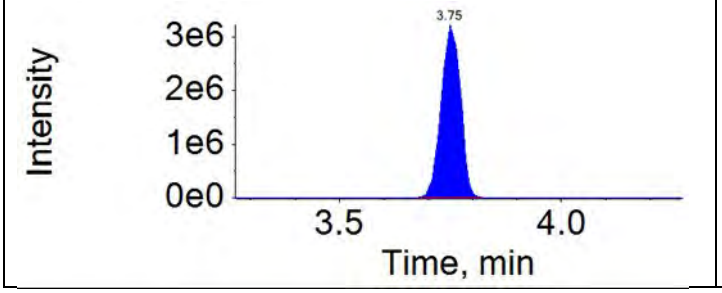
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

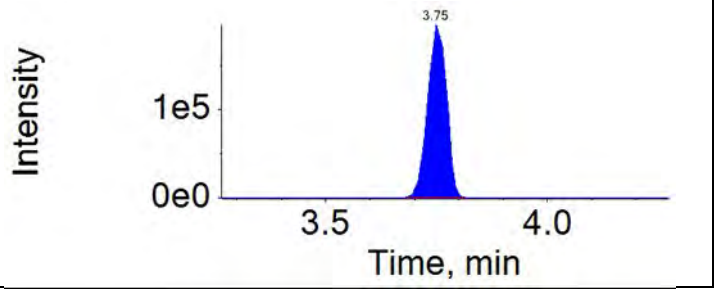
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



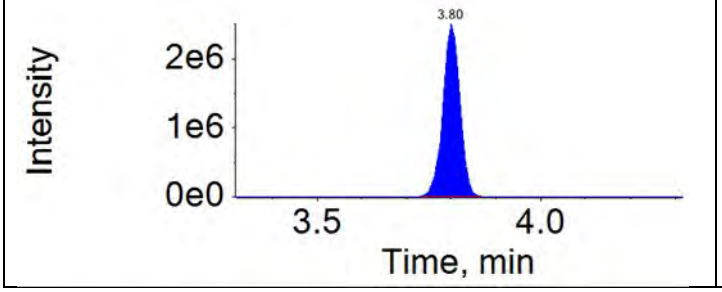


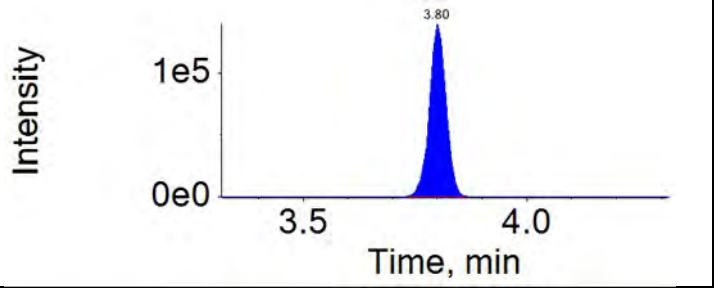
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



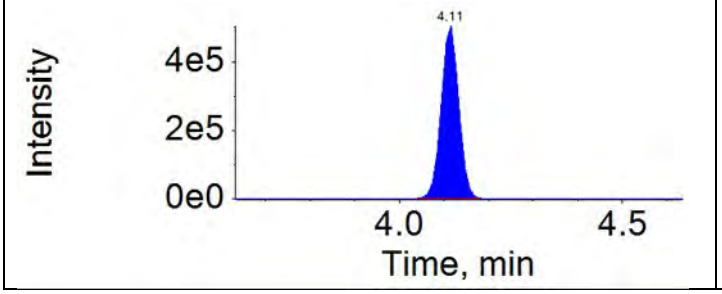


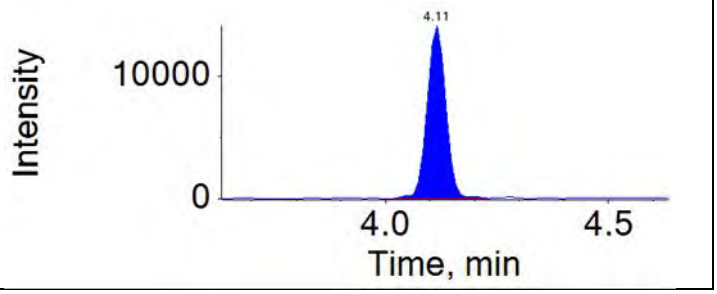
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



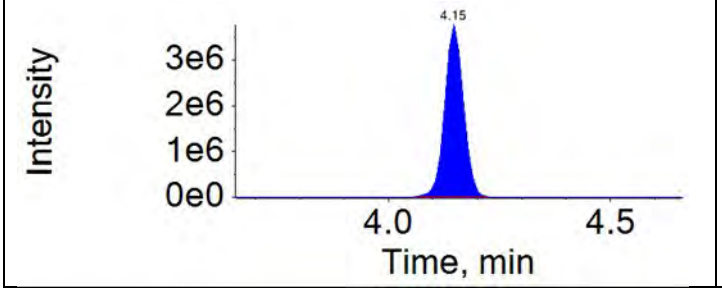


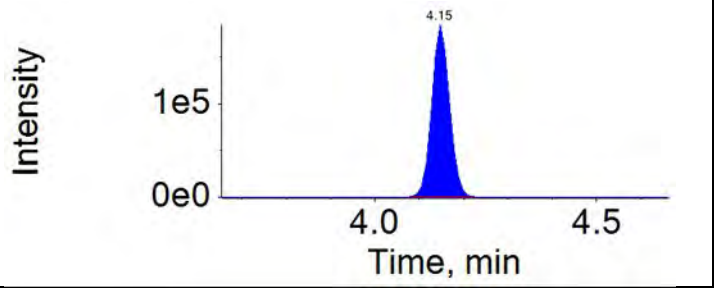
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

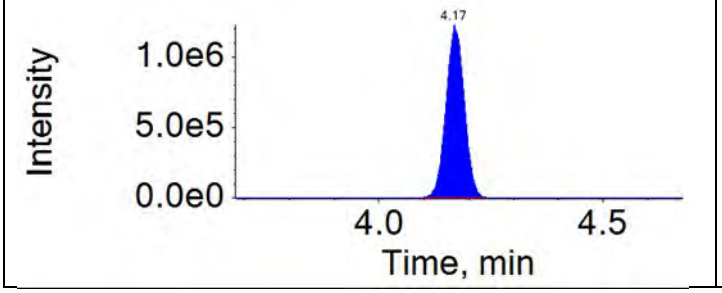
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

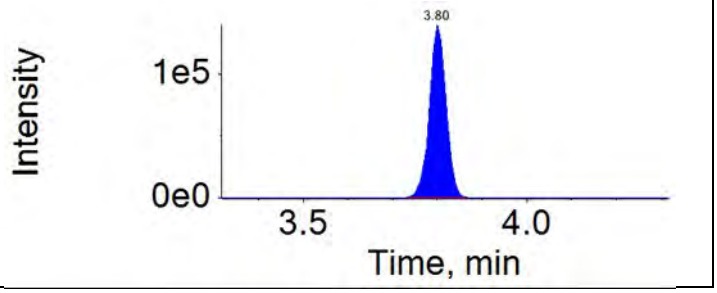
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



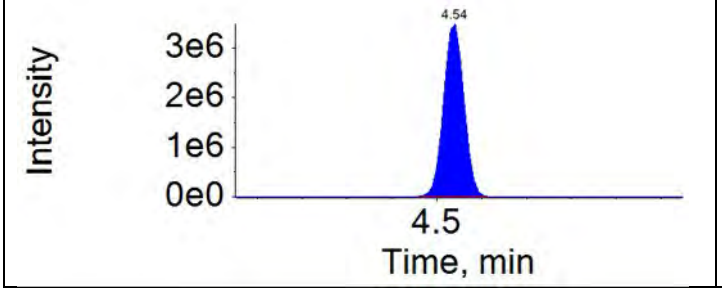


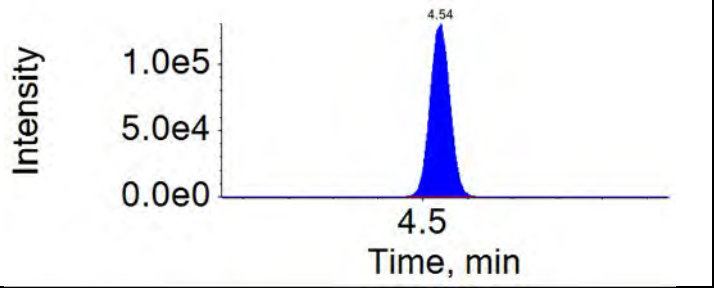
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



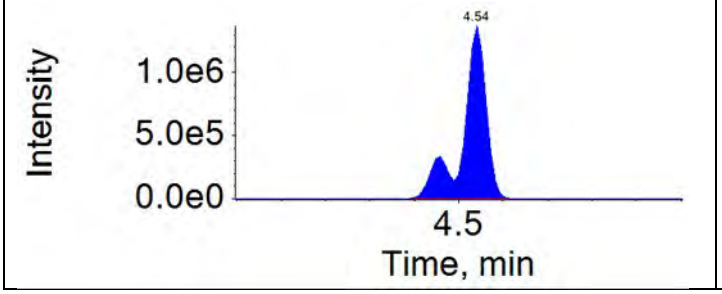


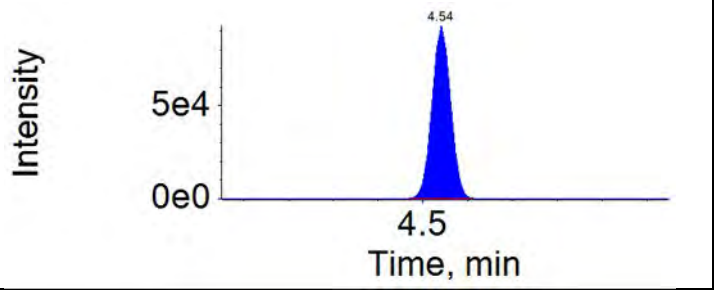
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



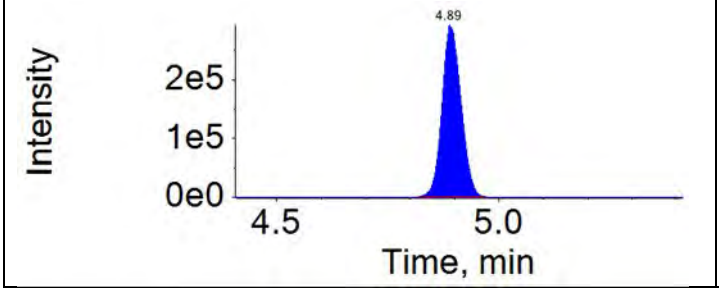


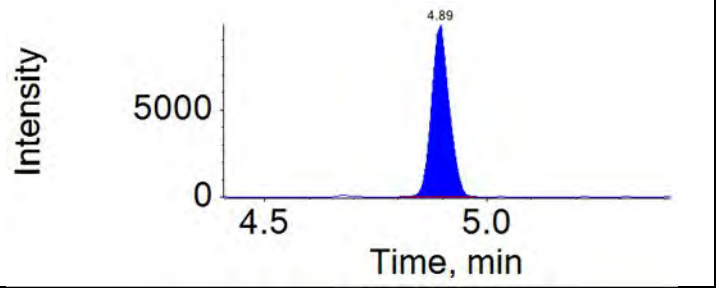
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

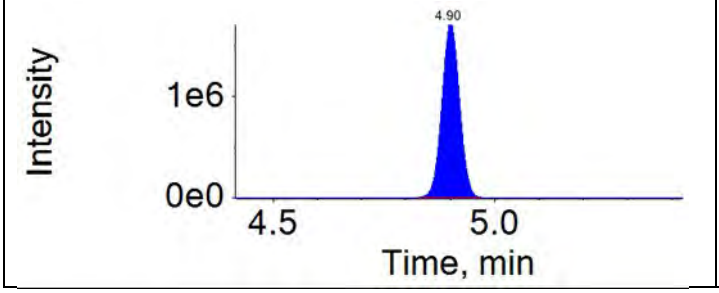
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

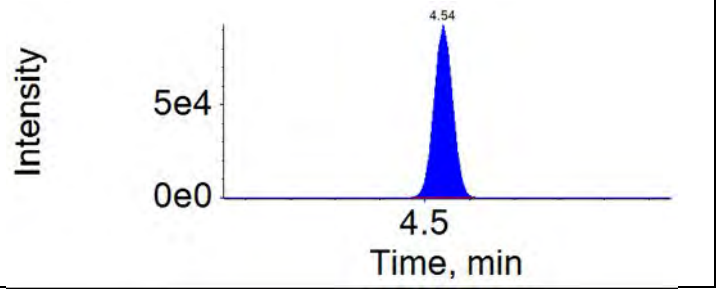
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



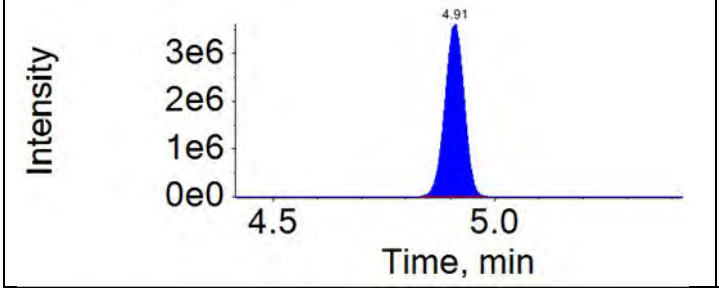


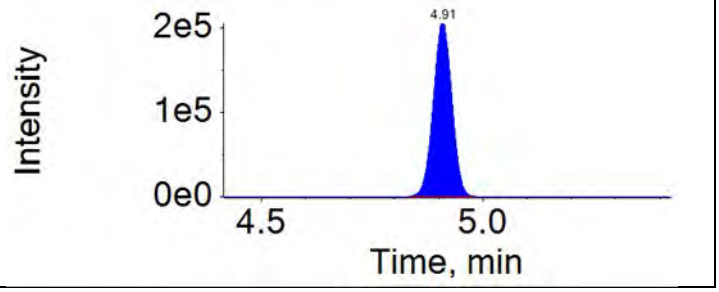
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



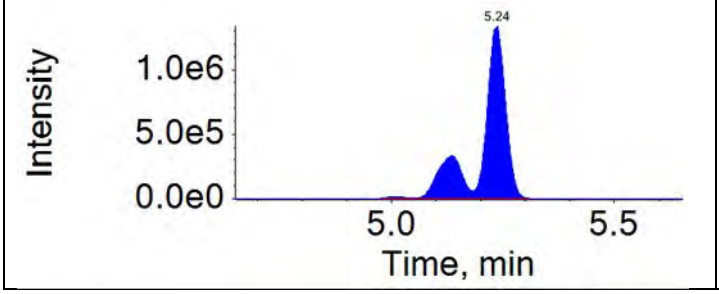


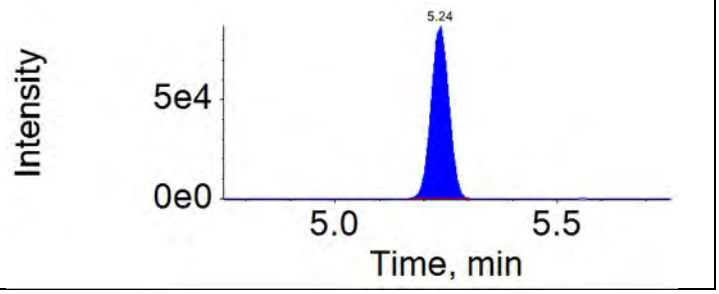
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



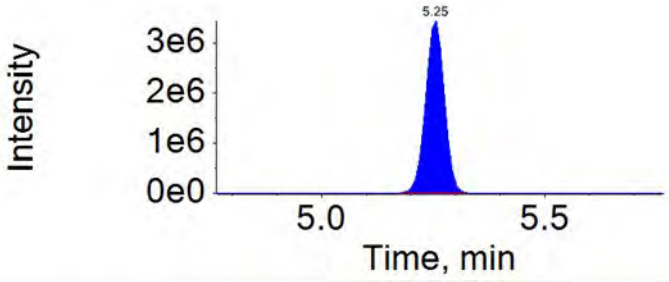


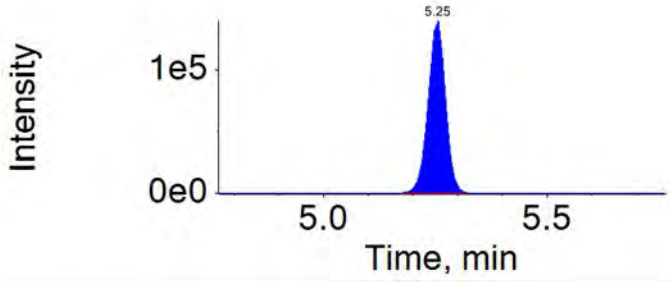
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

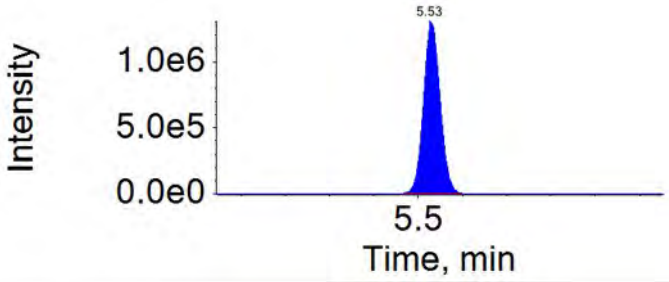
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

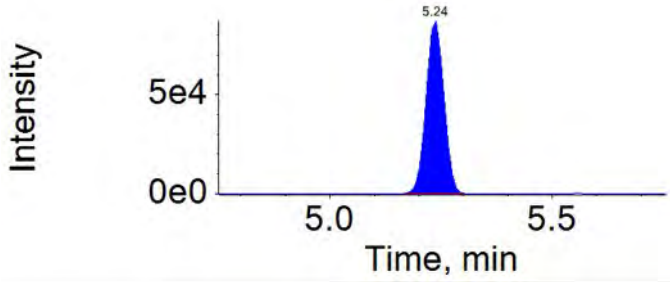
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



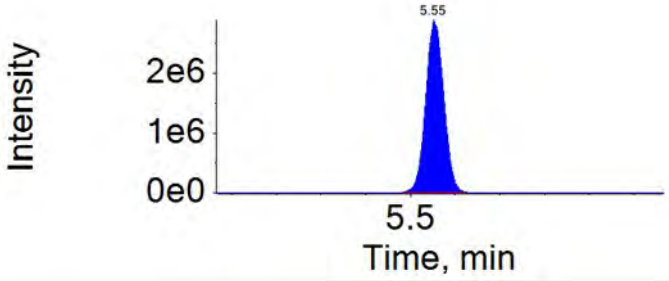


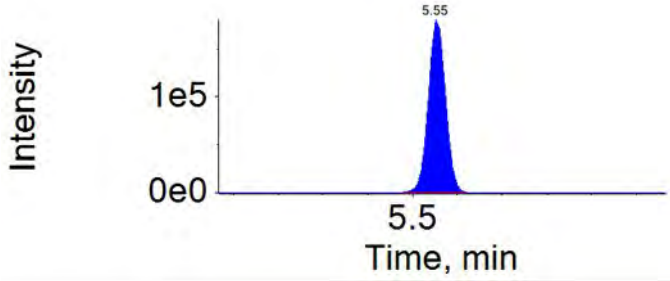
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



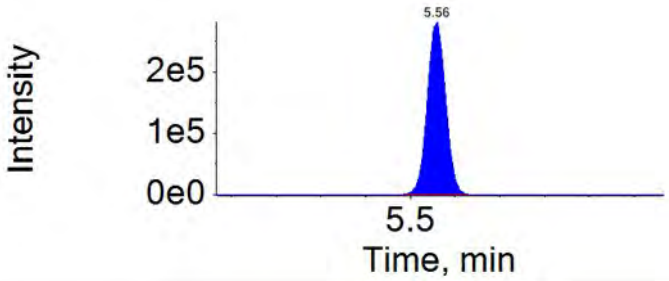


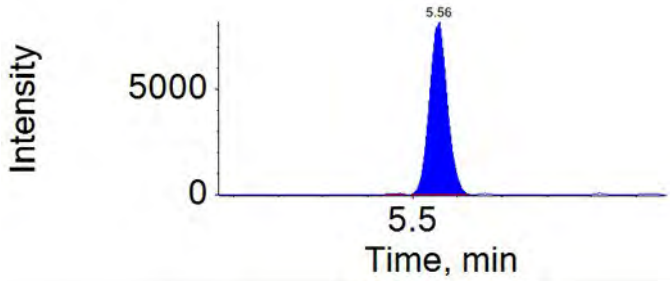
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



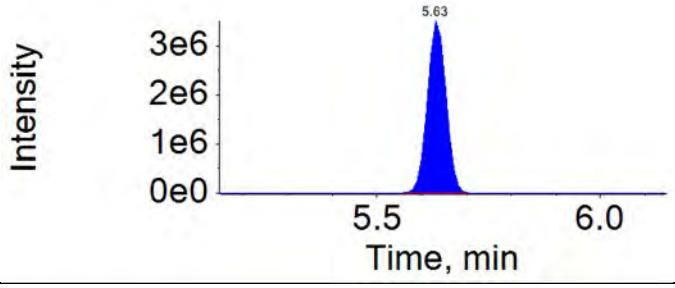


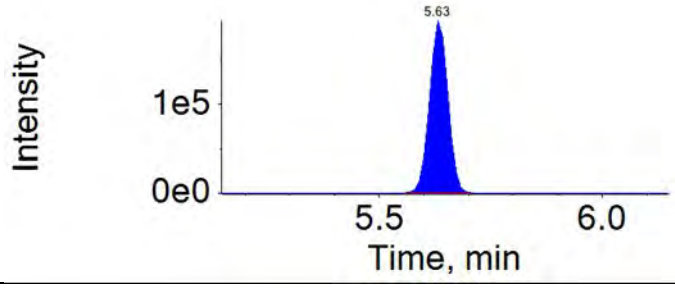
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

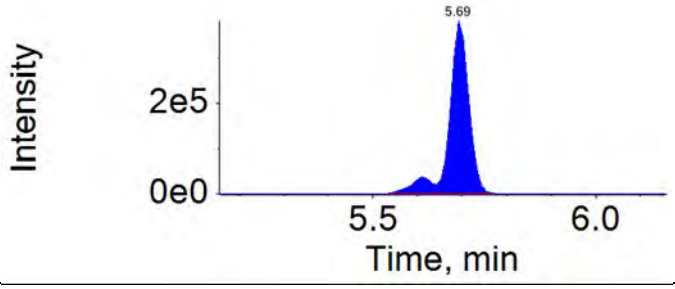
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

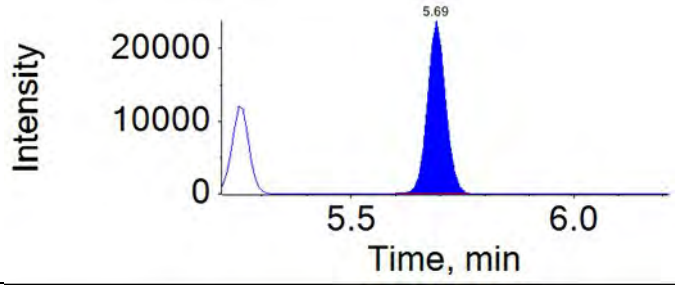
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



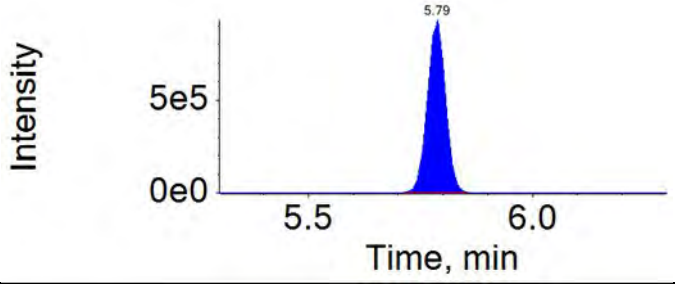


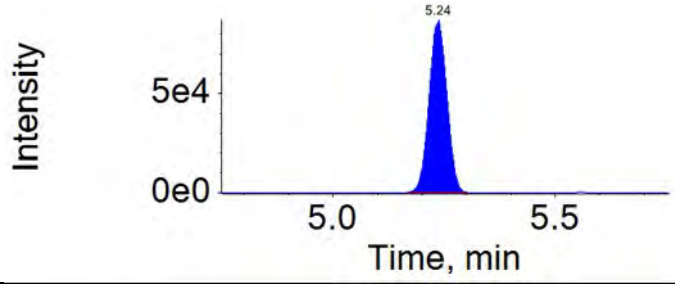
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



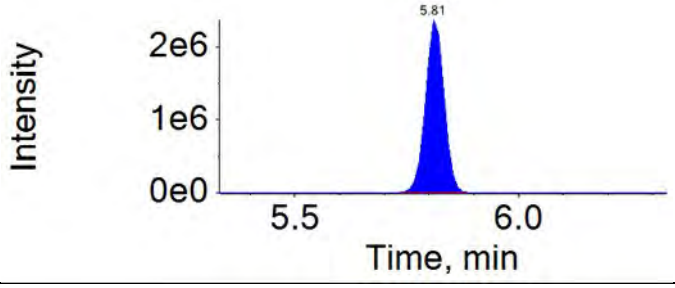


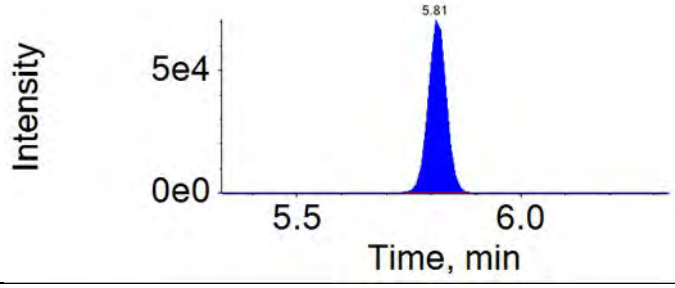
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



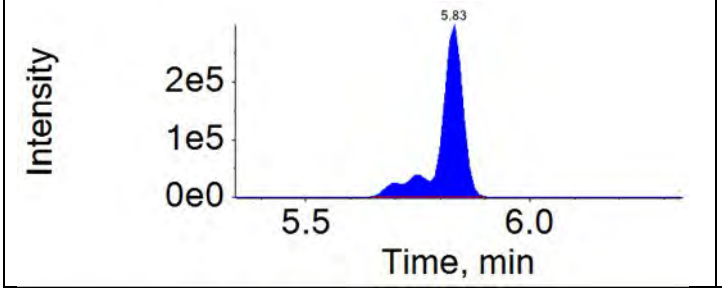


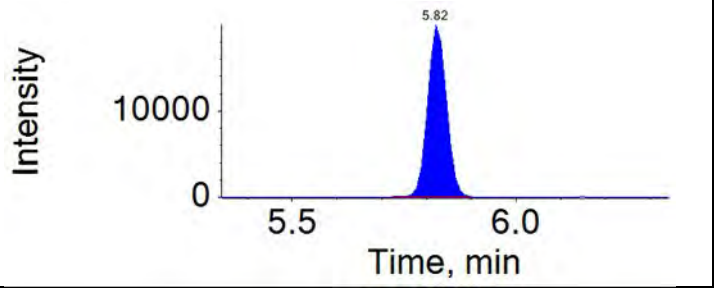
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

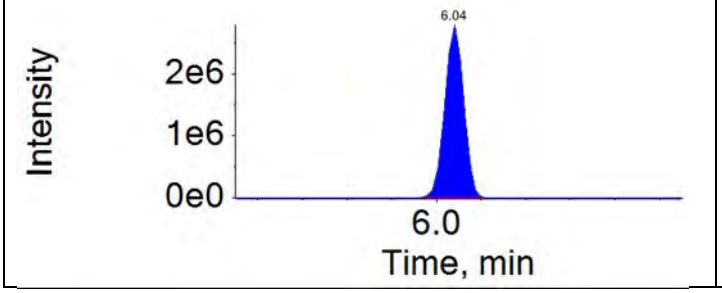
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

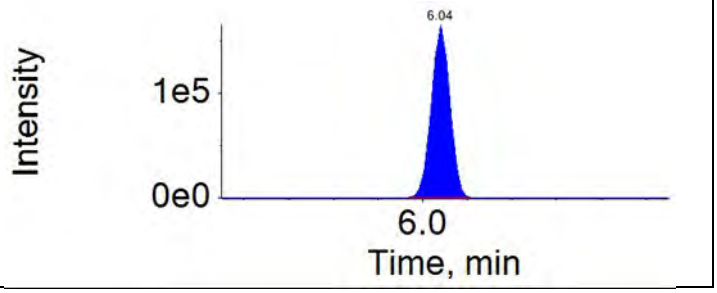
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



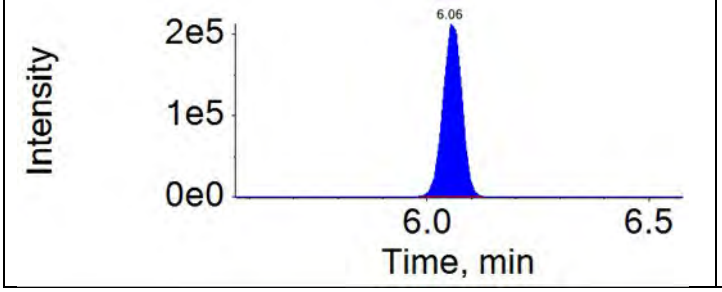


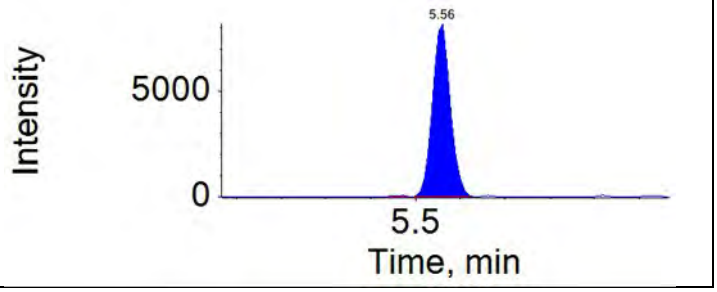
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



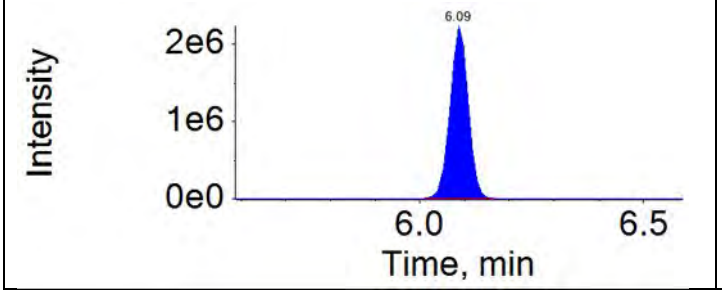


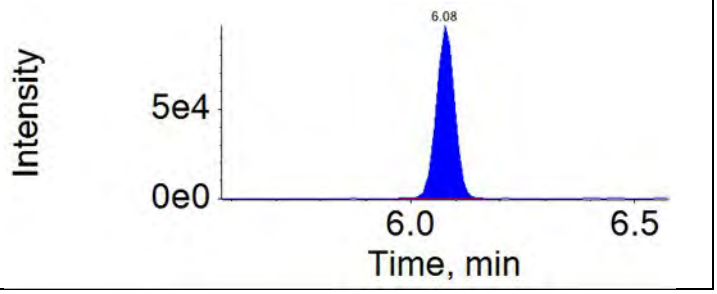
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



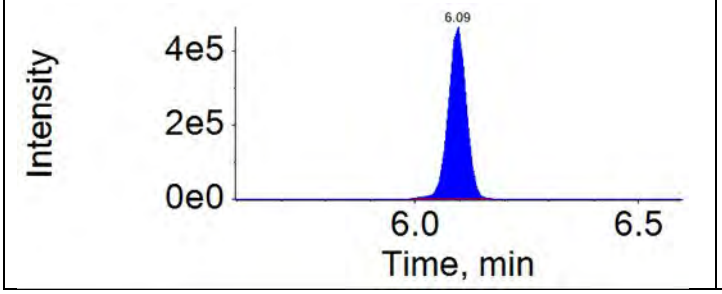


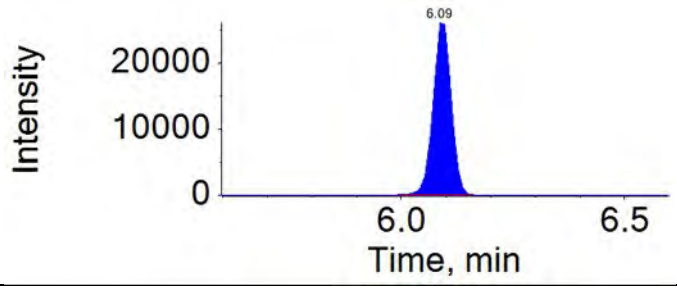
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

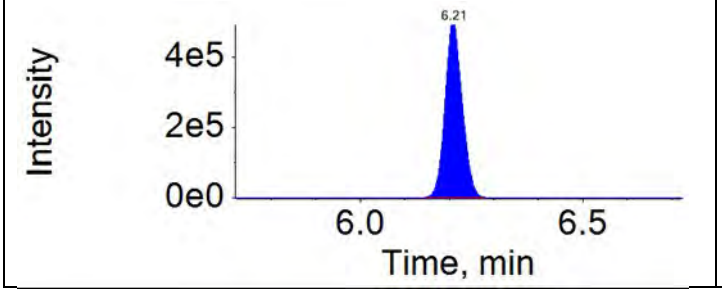
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

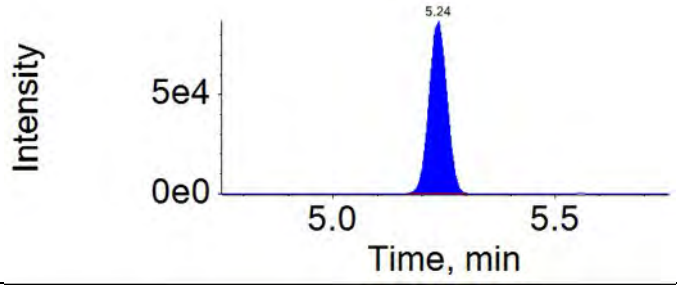
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



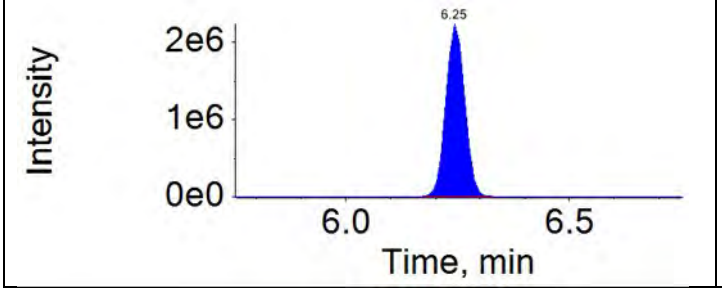


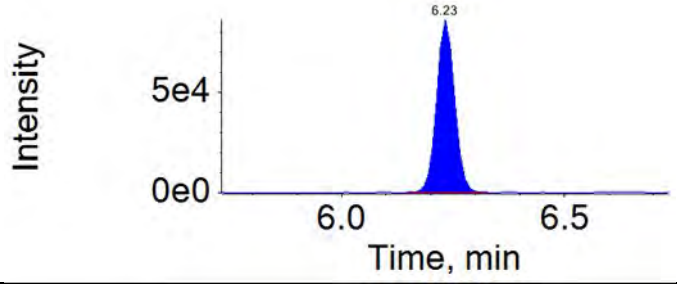
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



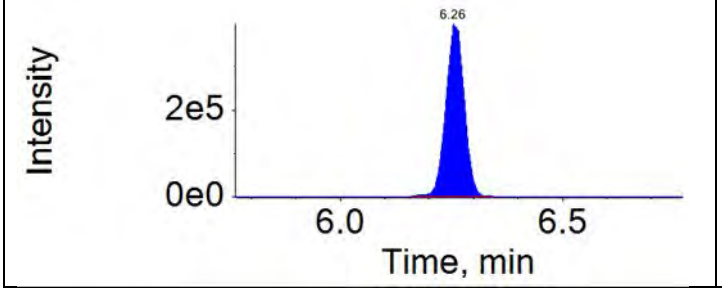


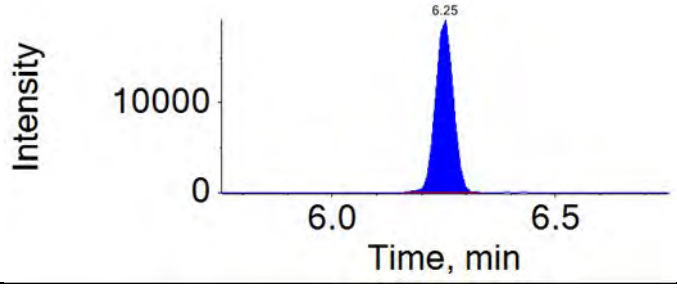
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



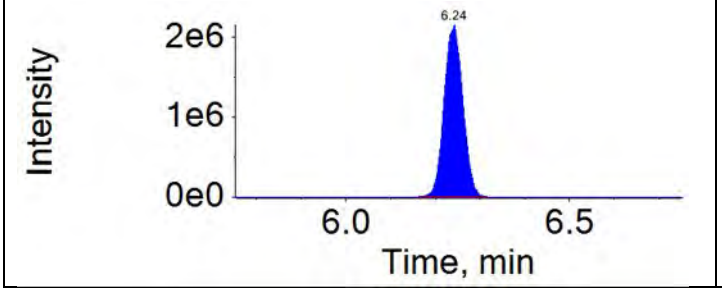


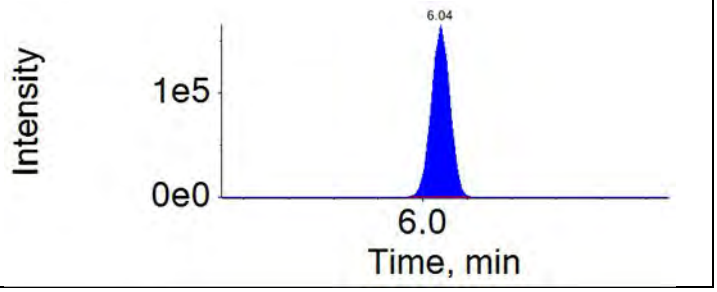
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

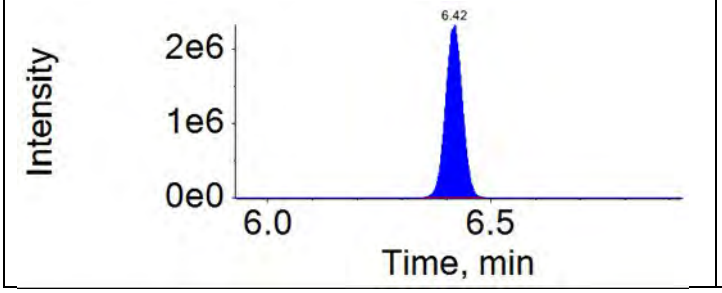
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

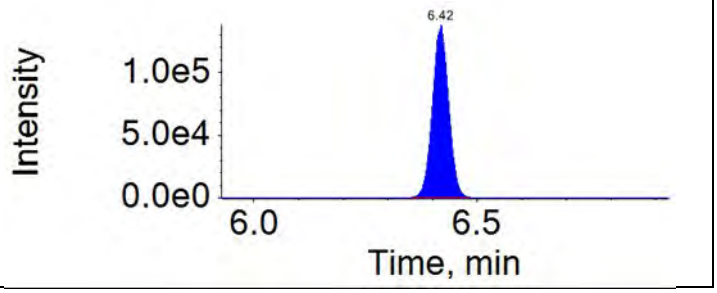
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



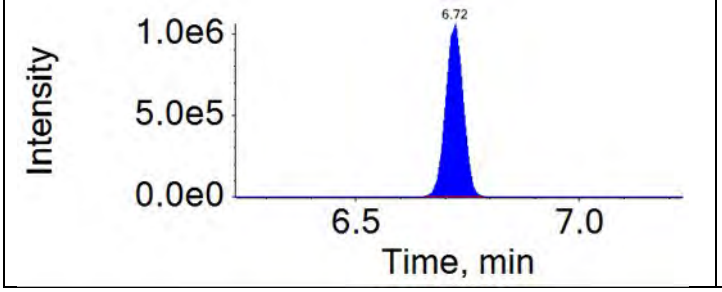


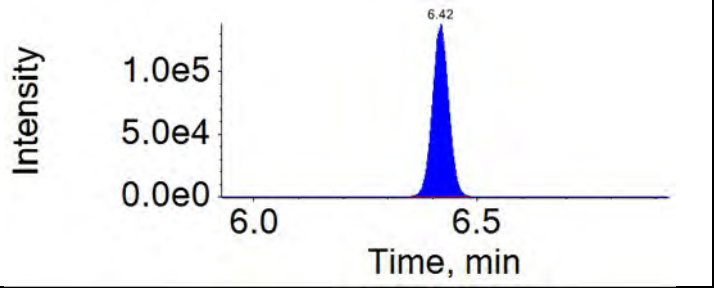
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



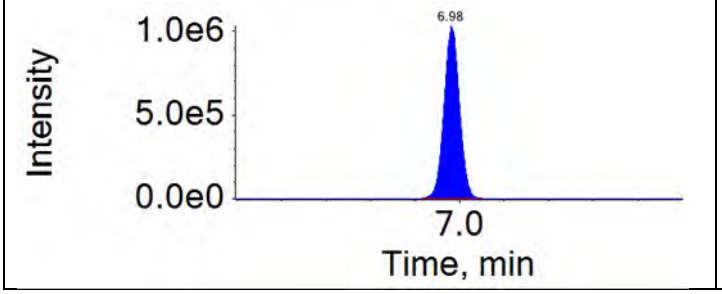


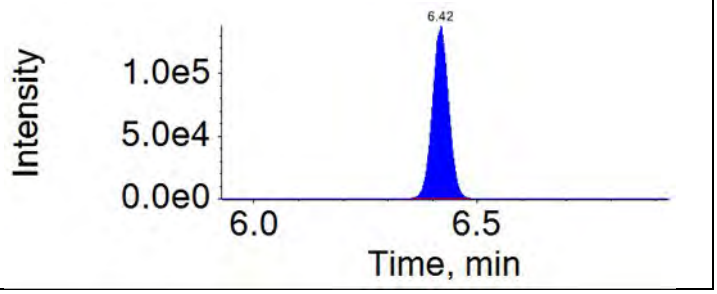
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



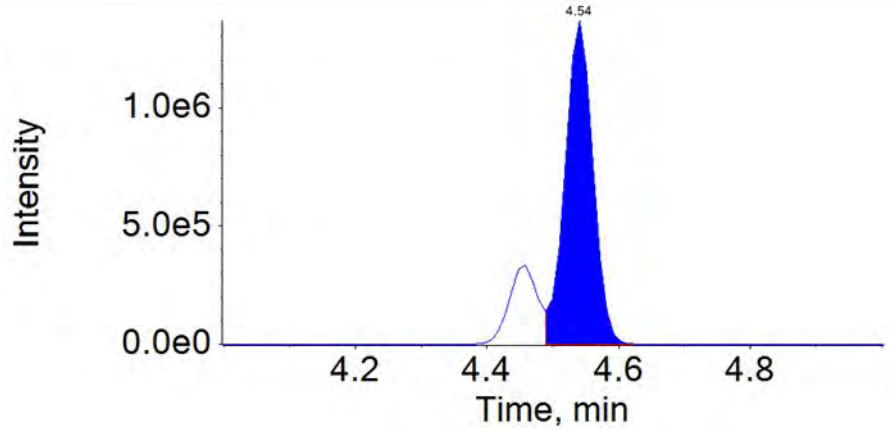


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

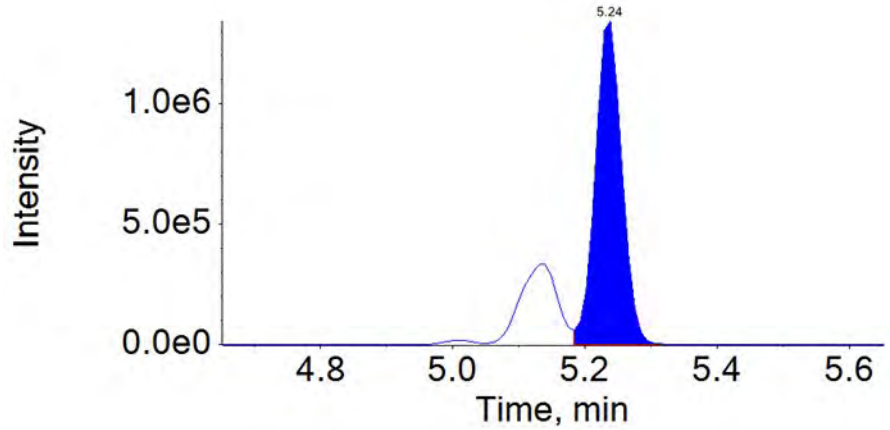
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
4044983.17
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



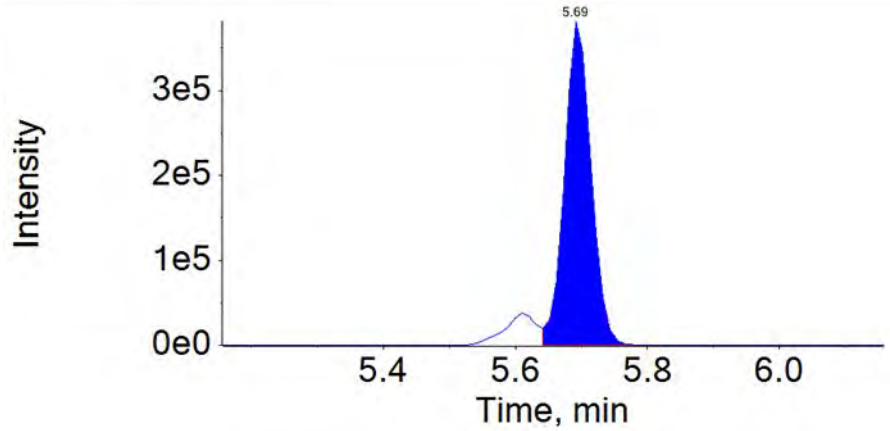
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
3770924.60
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.69
Peak Area:
1065914.33
Mass Range:
570.0 / 419.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7

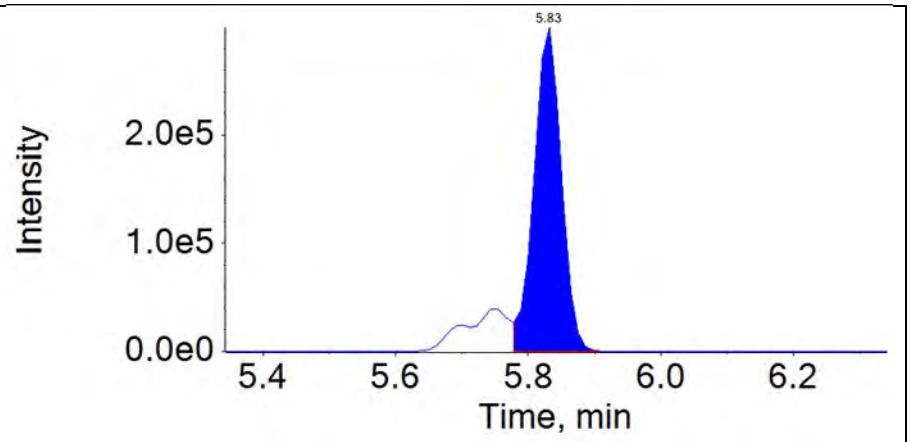


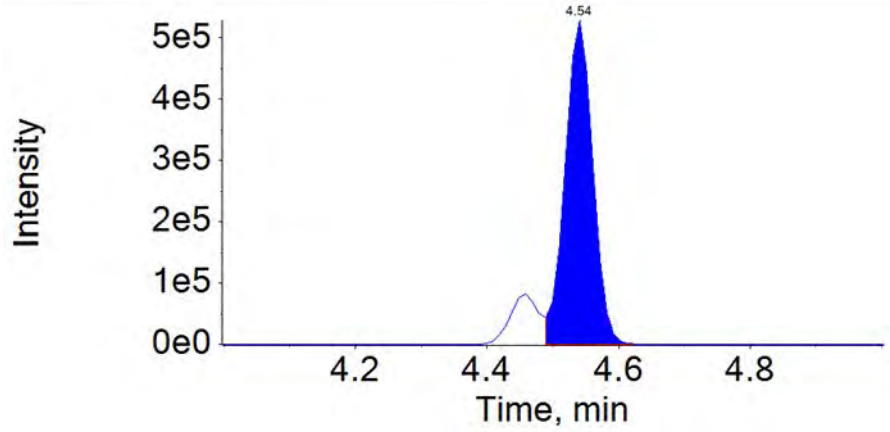
Integration Comment: incorrect integration

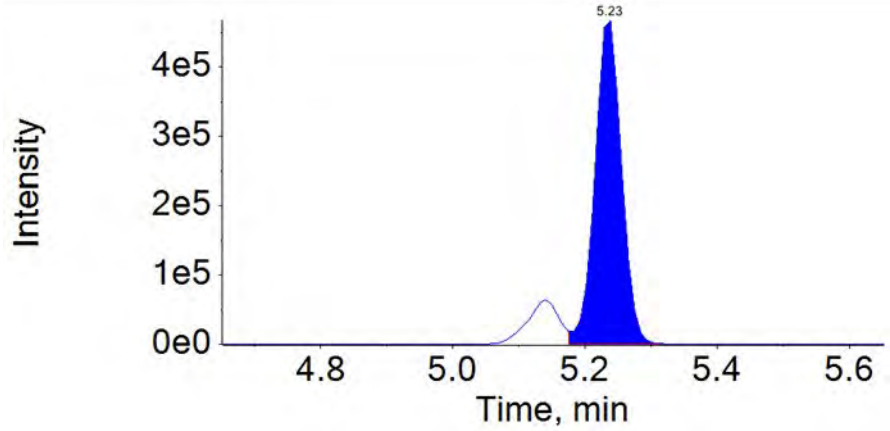
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtFOSAA **RT (min.):** 5.83 **Peak Area:** 862135.47 **Mass Range:** 584.0 / 419.0 **File Name:** 18NOV12DCAL-48.wiff **Sample Name:** CAL7	 **Integration Comment:** incorrect integration

Component Name: PFHxS_2 **RT (min.):** 4.54 **Peak Area:** 1552233.65 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV12DCAL-48.wiff **Sample Name:** CAL7	 **Integration Comment:** incorrect integration

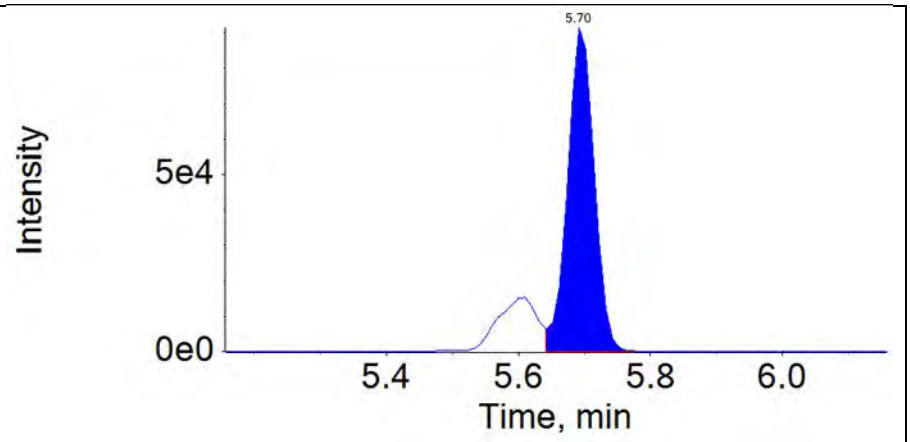
Component Name: PFOS_2 **RT (min.):** 5.23 **Peak Area:** 1316284.93 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-48.wiff **Sample Name:** CAL7	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

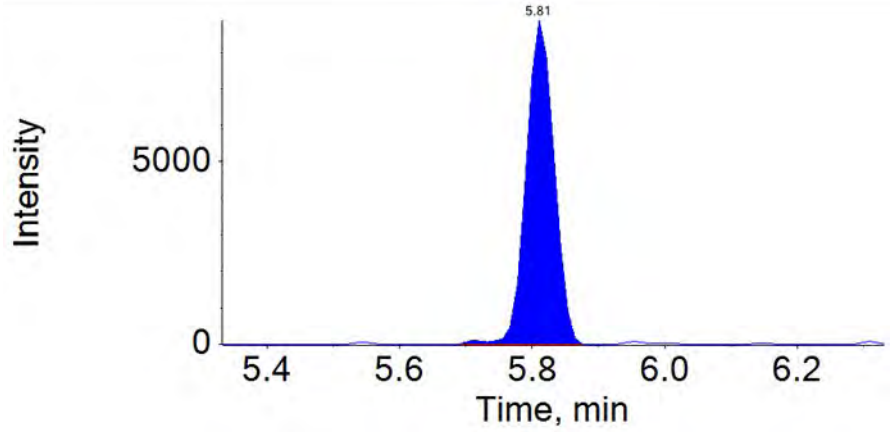
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
256419.22
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



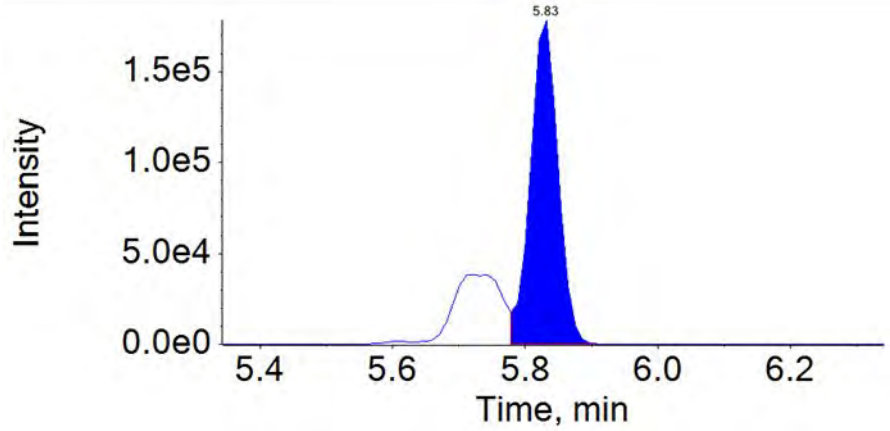
Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
5.81
Peak Area:
26121.92
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
517079.85
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

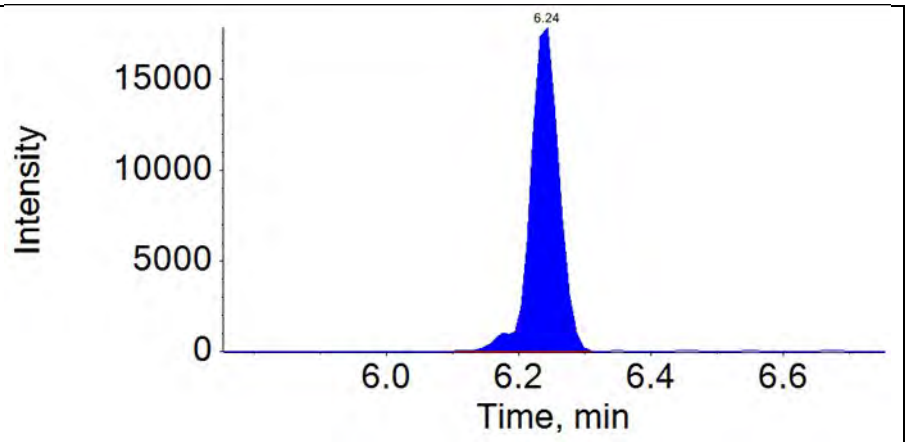
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
6.24
Peak Area:
53950.01
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

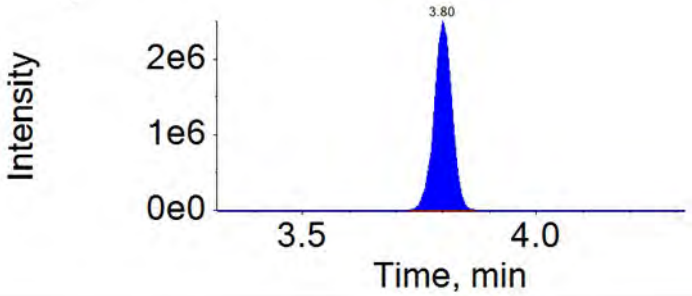
Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-48.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	6615935.34	A	0.3619	0.3803			
PFBS_2	3.80	1.00	2515947.77	A	0.3619	0.3803	5	50	
4:2-FTS	4.11	1.00	1379983.90	A	0.6730	0.6491			
4:2 FTS_2	4.11	1.00	895801.93	A	0.6730	0.6491		#NA!	
PFHxA	4.15	1.00	11059420.28	A	0.0117	0.0124			
PFHxA_2	4.15	1.00	136818.87	A	0.0117	0.0124	6	50	
PFPeS	4.17	1.10	3482095.87	A	0.5191	0.5217			
PFPeS_2	4.17	1.10	1816709.54	A	0.5191	0.5217	1	50	
PFHpA	4.54	1.00	10981922.82	A	0.0563	0.0563			
PFHpA_2	4.54	1.00	618128.71	A	0.0563	0.0563	0	50	
PFHxS	4.54	1.00	5048349.82	M	0.3428	0.3562			
PFHxS_2	4.54	1.00	1798400.55	M	0.3428	0.3562	4	50	
6:2-FTS	4.89	1.00	869227.19	A	0.6604	0.6365			
6:2 FTS_2	4.89	1.00	553300.52	A	0.6604	0.6365		#NA!	
PFHpS	4.90	1.08	4784682.82	A	0.4066	0.4068			
PFHpS_2	4.90	1.08	1946425.33	A	0.4066	0.4068	0	50	
PFOA	4.91	1.00	10991740.12	A	0.0562	0.0611			
PFOA_2	4.91	1.00	671295.39	A	0.0562	0.0611	9	50	
PFOS	5.24	1.00	5138366.95	M	0.2968	0.2975			
PFOS_2	5.23	1.00	1528751.71	M	0.2968	0.2975	0	50	
PFNA	5.25	1.00	10084288.28	A	0.0229	0.0213			
PFNA_2	5.25	1.00	214560.66	A	0.0229	0.0213	-7	50	
PFNS	5.53	1.06	3386860.46	A	0.4828	0.4408			
PFNS_2	5.53	1.06	1492987.09	A	0.4828	0.4408	-9	50	
PFDA	5.55	1.00	8104726.61	A	0.0081	0.0071			
PFDA_2	5.55	1.00	57305.88	A	0.0081	0.0071	-12	50	
8:2-FTS	5.56	1.00	804019.53	A	0.6814	0.5854			
8:2 FTS_2	5.56	1.00	470706.51	A	0.6814	0.5854		#NA!	
NMeFOSAA	5.69	1.00	1191981.70	M	0.2569	0.2688			
NMeFOSAA_2	5.70	1.00	320371.24	M	0.2569	0.2688	5	50	
PFDS	5.79	1.11	2606720.69	A	0.5144	0.4749			
PFDS_2	5.79	1.10	1238034.03	A	0.5144	0.4749	-8	50	
PFUnDA	5.81	1.00	6802701.21	A	0.0058	0.0038			
PFUnDA_2	5.81	1.00	25933.20	M	0.0058	0.0038	-34	50	
NEtFOSAA	5.83	1.00	1046636.11	M	0.7253	0.6803			
NEtFOSAA_2	5.83	1.00	711980.18	M	0.7253	0.6803	-6	50	
PFDoDA	6.04	1.00	8171355.35	A	0.0157	0.0138			
PFDoDA_2	6.04	1.00	113144.85	A	0.0157	0.0138	-12	50	
10:2-FTS	6.06	1.09	632223.71	A	0.6356	0.6817			
10:2 FTS_2	6.06	1.09	431003.27	A	0.6356	0.6817		#NA!	
PFTrDA	6.24	1.03	6281239.03	A	0.0086	0.0083			
PFTrDA_2	6.24	1.03	52325.72	M	0.0086	0.0083	-3	50	
PFTeDA	6.42	1.00	6092875.66	A	0.0062	0.0060			
PFTeDA_2	6.42	1.00	36395.60	A	0.0062	0.0060	-4	50	
PFHxDA	6.72	1.05	2866097.32	A	0.0683	0.0642			
PFHxDA_2	6.72	1.05	183981.95	A	0.0683	0.0642	-6	50	
PFODA	6.98	1.09	2488863.64	A	0.0277	0.0267			
PFODA_2	6.98	1.09	66332.27	A	0.0277	0.0267	-4	50	

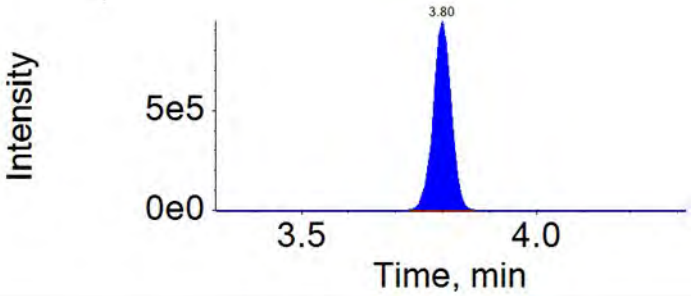
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

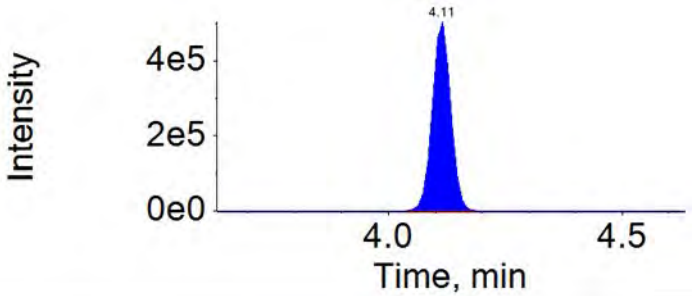
Component: PFBS
Primary Mass: 299.0 / 80.0



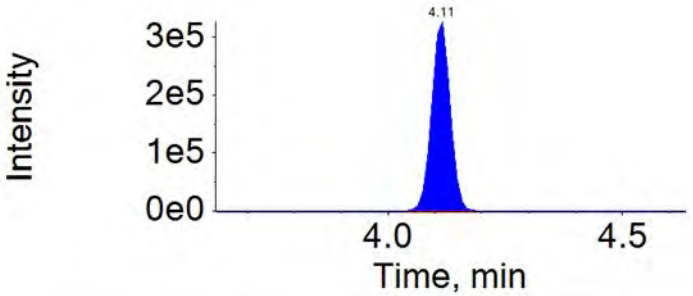
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



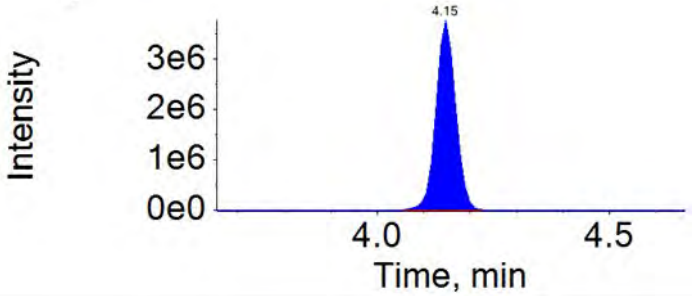
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



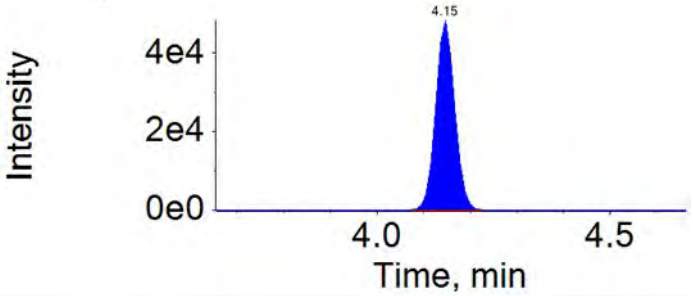
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



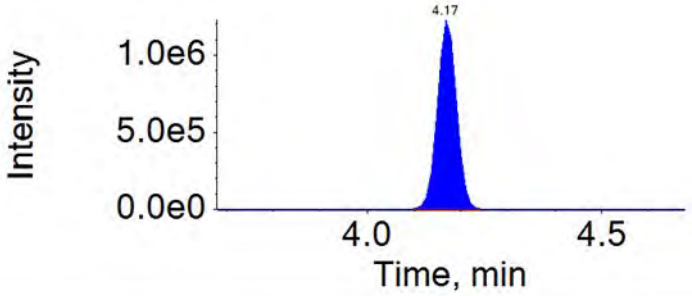
Component: PFHxA
Primary Mass: 313.0 / 269.0



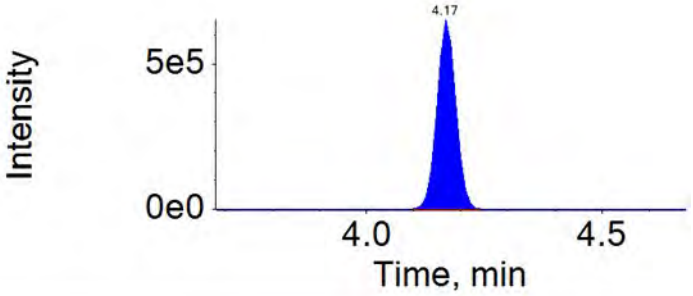
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By MCD at 6:33 pm, 11/12/18

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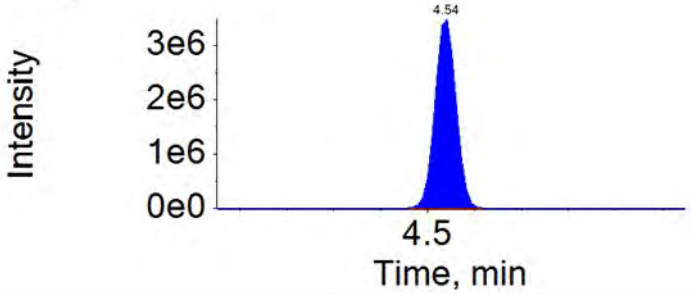
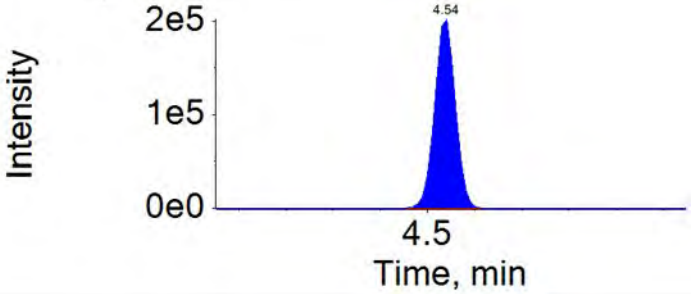
By HMK at 10:53 am, 11/13/18

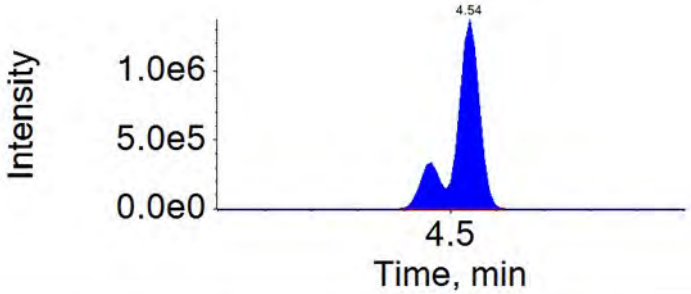
Component: PFHpA
Primary Mass: 363.0 / 319.0



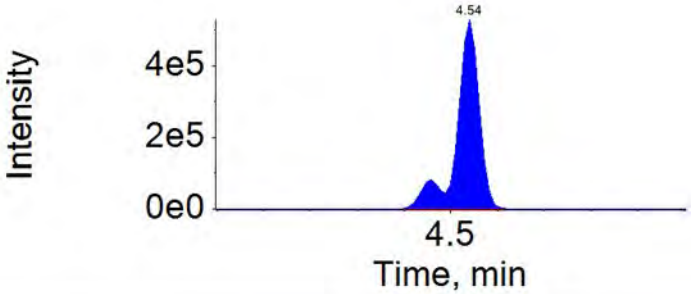
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



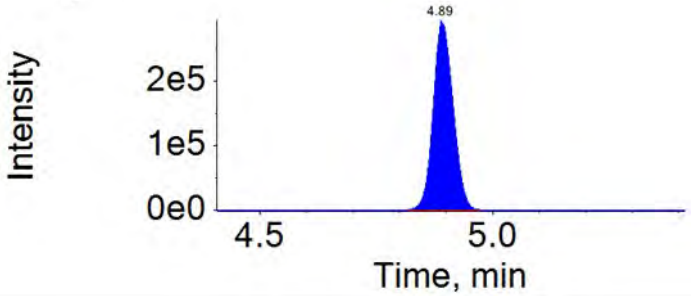
Component: PFHxS
Primary Mass: 399.0 / 80.0



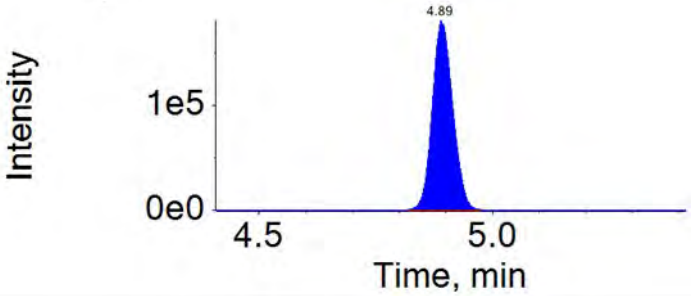
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



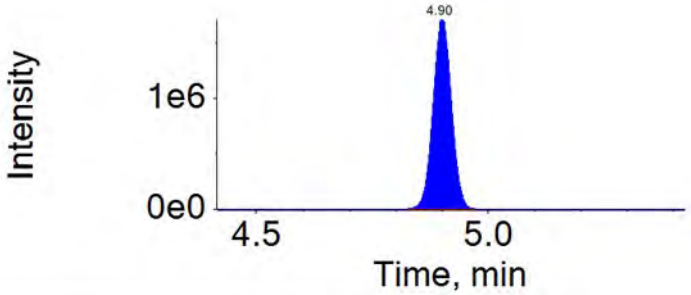
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



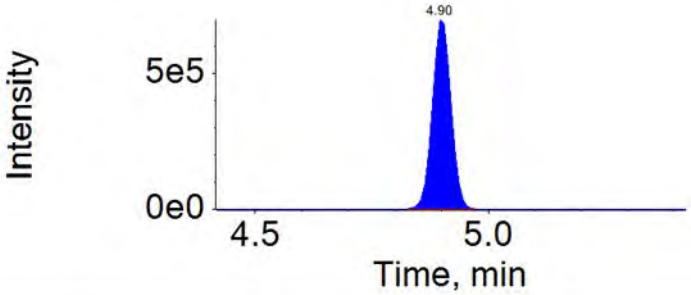
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



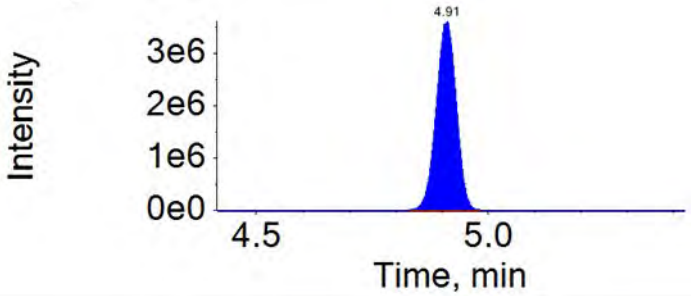
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



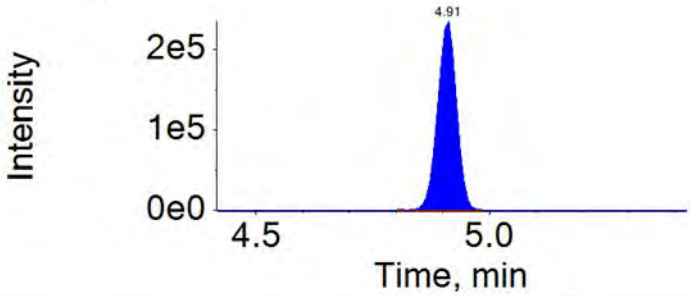
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

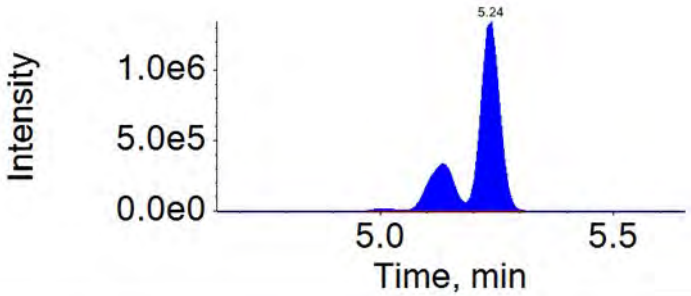
Component: PFOA
Primary Mass: 413.0 / 369.0



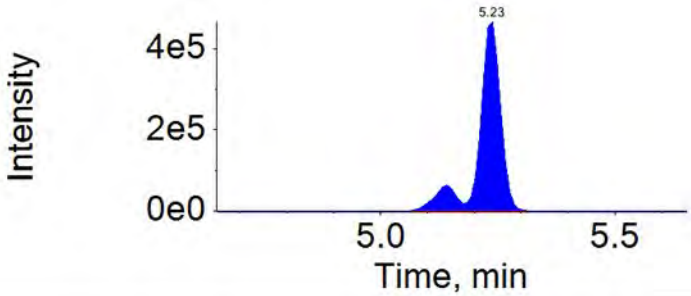
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



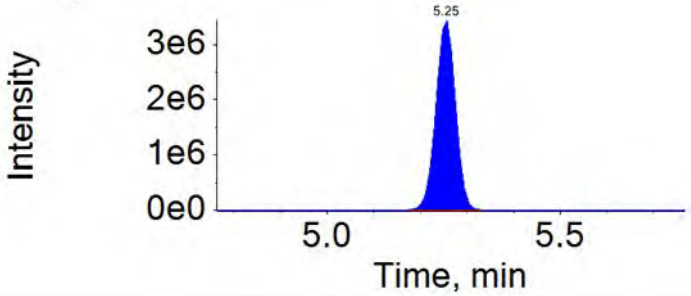
Component: PFOS
Primary Mass: 499.0 / 80.0



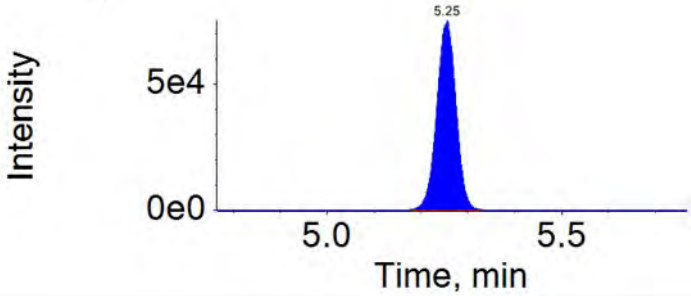
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



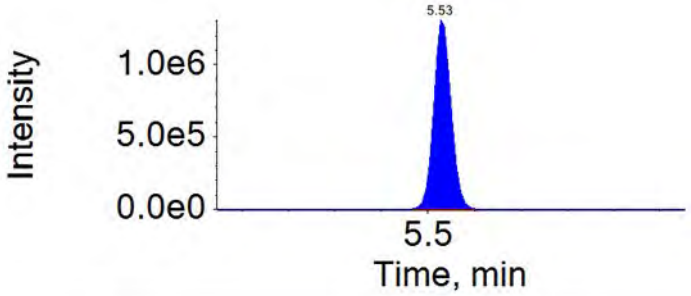
Component: PFNA
Primary Mass: 463.0 / 419.0



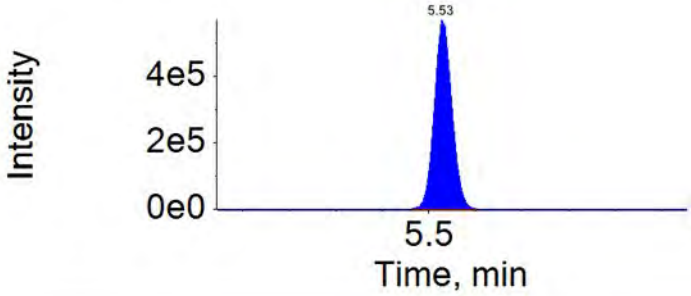
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



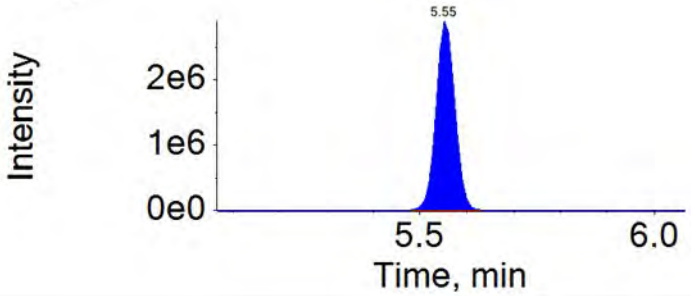
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



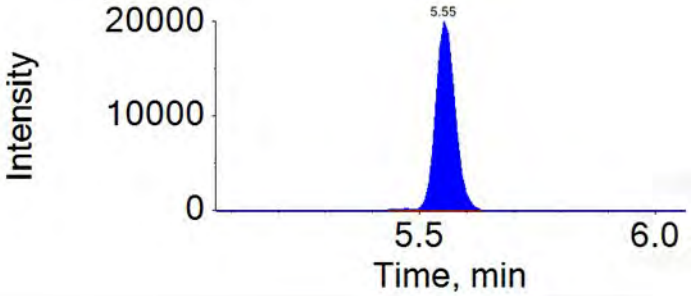
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

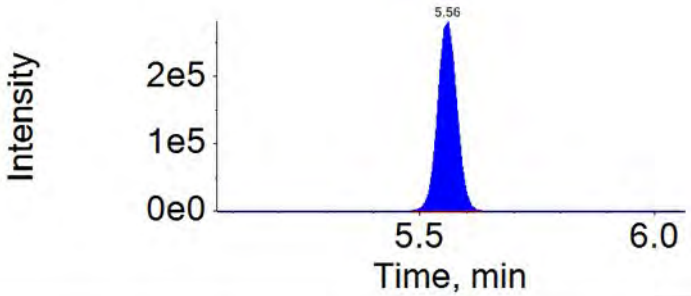
Component: PFDA
Primary Mass: 513.0 / 469.0



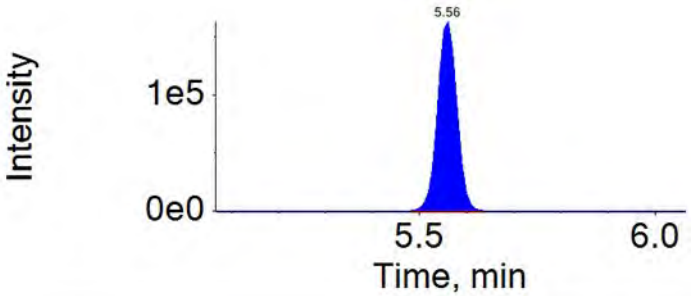
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



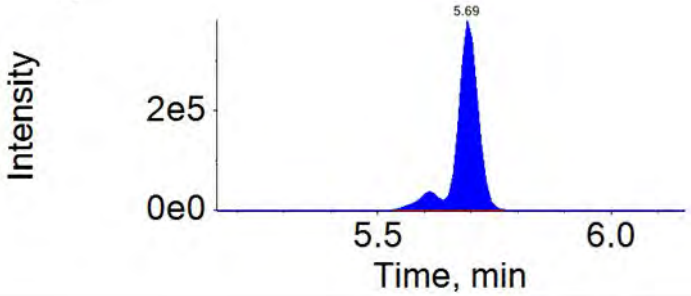
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



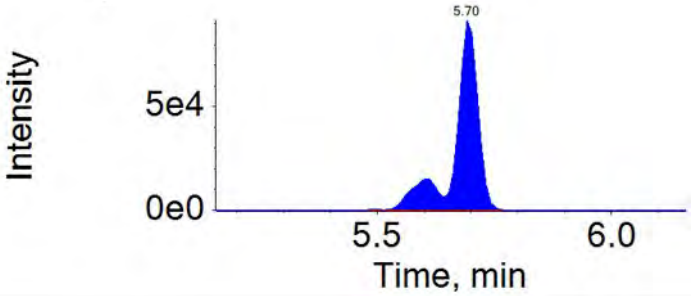
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



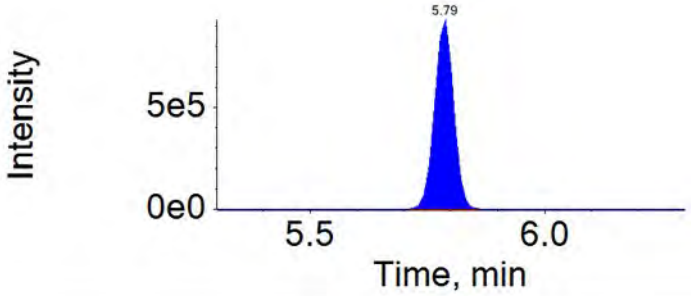
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



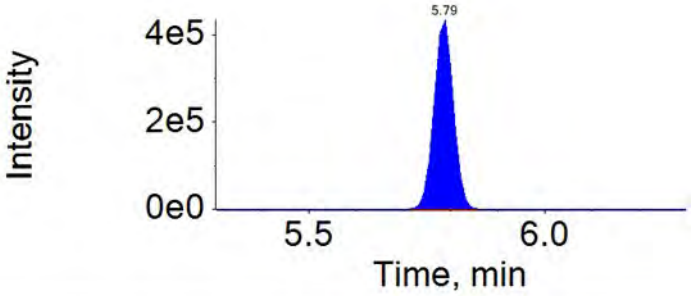
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



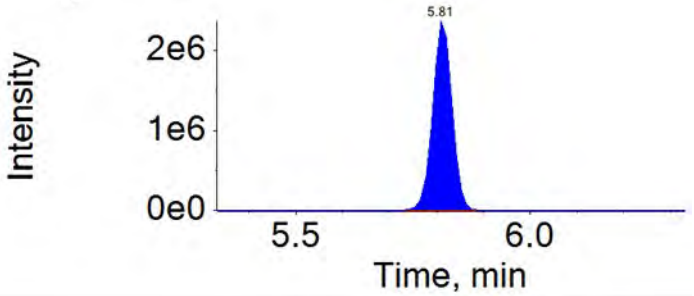
Component: PFDS
Primary Mass: 599.0 / 80.0



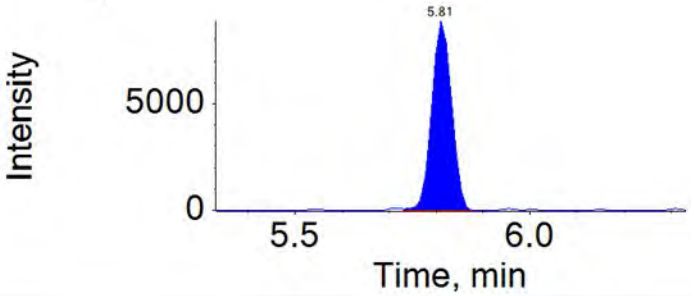
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



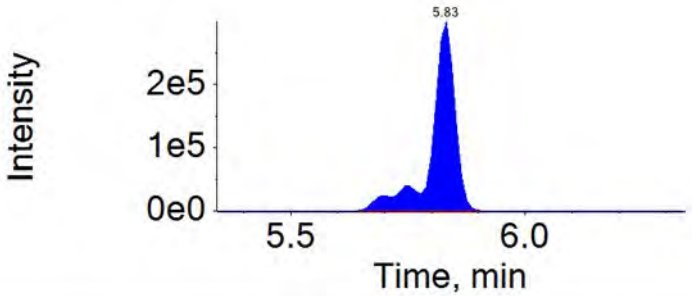
Component: PFUnDA
Primary Mass: 563.0 / 519.0



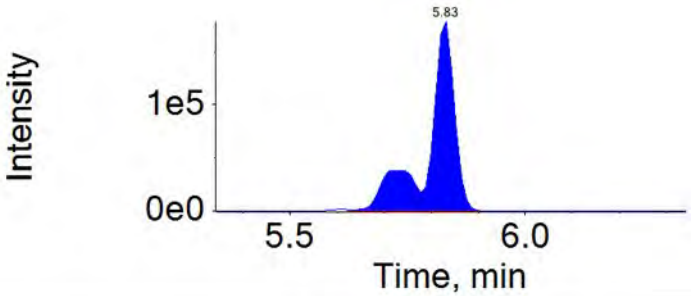
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



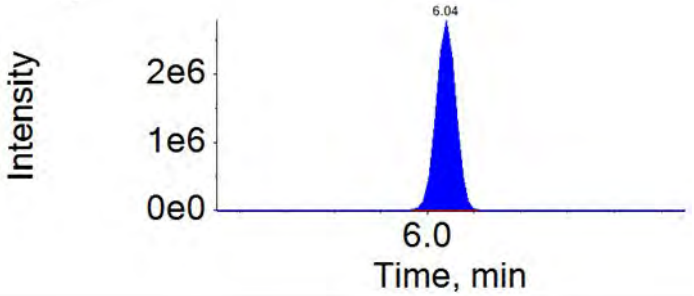
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



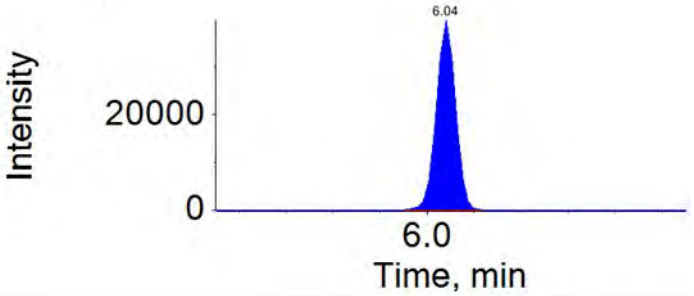
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



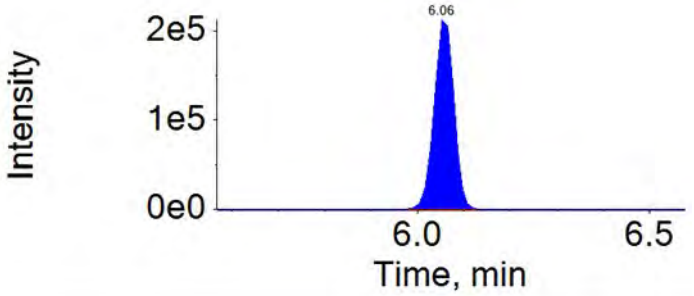
Component: PFDoDA
Primary Mass: 613.0 / 569.0



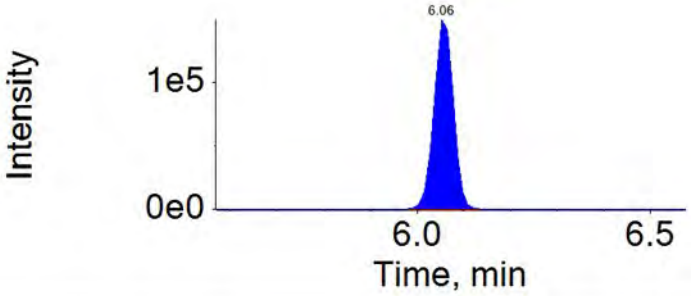
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



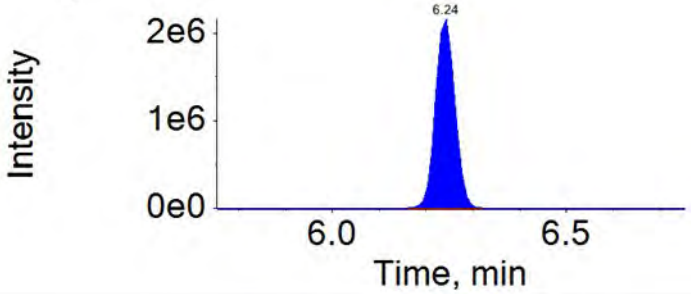
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



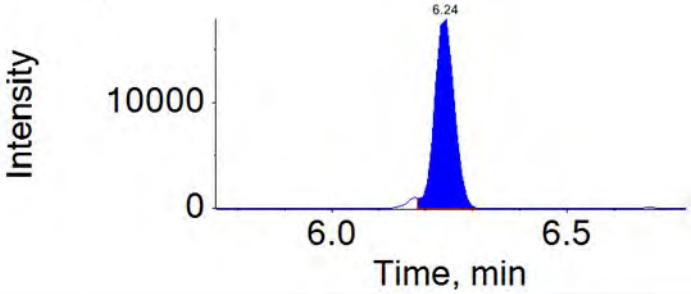
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

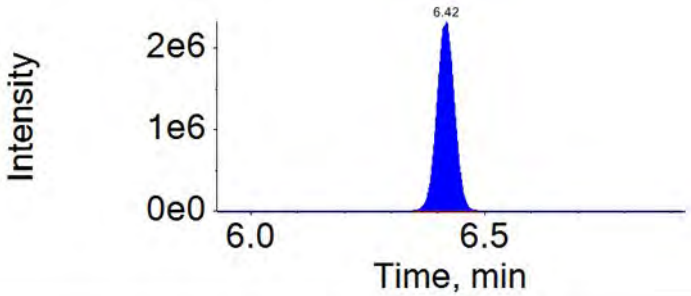
Component: PFTrDA
Primary Mass: 663.0 / 619.0



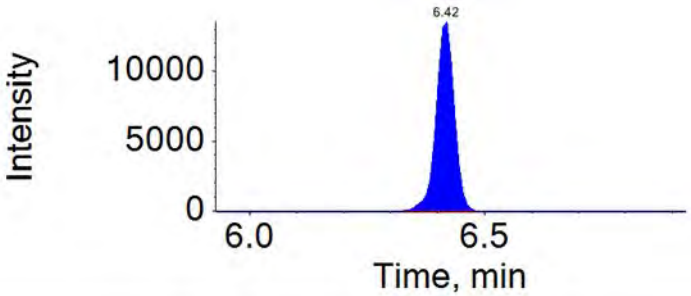
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



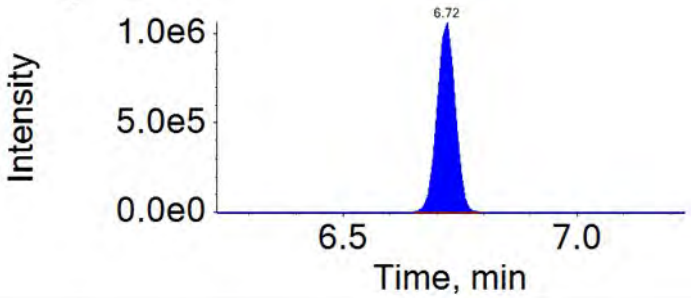
Component: PFTeDA
Primary Mass: 713.0 / 669.0



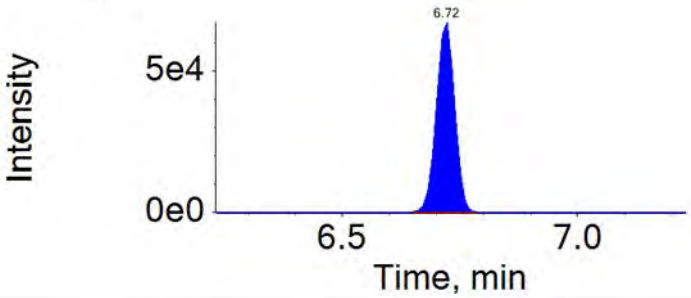
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



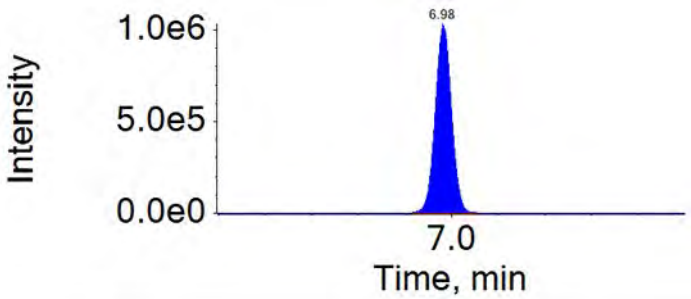
Component: PFHxDA
Primary Mass: 813.0 / 769.0



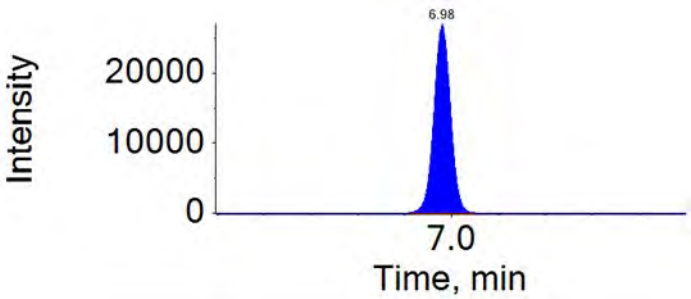
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	INBLK			**Data File:**		18NOV12DCAL-49.wiff
Sample ID:	methanol			**Acquis Date:**		11/12/2018 4:09:09 PM
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	705408.6	659926.2	7	50	
13C2-PFOA	5.0	484266.1	450219.7	8	50	
13C4-PFOS	4.8	261290.0	249205.8	5	50	
13C2-PFDA	5.0	303665.7	278743.9	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	778730.1	13C3-PFBA	705408.6	1.104	5.000	4.949	99	70-130	
E13C5-PFPeA	758823.9	13C3-PFBA	705408.6	1.076	5.000	4.825	96	70-130	
E13C3-PFBS	456635.4	13C3-PFBA	705408.6	0.647	4.650	4.570	98	70-130	
E13C2-4:2-FTS	57620.0	13C2-PFOA	484266.1	0.119	4.670	5.299	113	70-130	
E13C5-PFHxA	665797.6	13C2-PFOA	484266.1	1.375	5.000	4.966	99	70-130	
E13C3-PFHxS	372925.2	13C2-PFOA	484266.1	0.770	4.730	5.284	112	70-130	
E13C4-PFHpA	547261.8	13C2-PFOA	484266.1	1.130	5.000	5.091	102	70-130	
E13C2-6:2-FTS	39087.0	13C2-PFOA	484266.1	0.081	4.750	5.400	114	70-130	
E13C8-PFOA	901909.5	13C2-PFOA	484266.1	1.862	5.000	5.131	103	70-130	
E13C8-PFOS	289703.0	13C4-PFOS	261290.0	1.109	4.780	4.913	103	70-130	
E13C9-PFNA	509013.2	13C4-PFOS	261290.0	1.948	5.000	5.432	109	70-130	
E13C6-PFDA	643925.8	13C2-PFDA	303665.7	2.121	5.000	4.948	99	70-130	
E13C2-8:2-FTS	27339.0	13C2-PFDA	303665.7	0.090	4.790	4.490	94	70-130	
E13C8-PFOSA	681332.9	13C2-PFDA	303665.7	2.244	5.000	4.974	99	70-130	
Ed3-NMeFOSAA	73694.3	13C2-PFDA	303665.7	0.243	5.000	4.381	88	70-130	
E13C7-PFUnDA	265353.1	13C2-PFDA	303665.7	0.874	5.000	5.073	101	70-130	
Ed5-NEtFOSAA	59646.1	13C2-PFDA	303665.7	0.196	5.000	4.156	83	70-130	
E13C2-PFDoDA	576780.7	13C2-PFDA	303665.7	1.899	5.000	4.932	99	70-130	
Ed7-NMePFOSAE	354624.2	13C2-PFDA	303665.7	1.168	5.000	5.054	101	70-130	
Ed3-NMePFOSA	79601.3	13C2-PFDA	303665.7	0.262	5.000	4.763	95	70-130	
Ed9-NEtPFOSAE	287722.3	13C2-PFDA	303665.7	0.947	5.000	4.928	99	70-130	
Ed5-NEtPFOSA	59772.3	13C2-PFDA	303665.7	0.197	5.000	4.617	92	70-130	
E13C2-PFTeDA	418729.7	13C2-PFDA	303665.7	1.379	5.000	4.841	97	70-130	

APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

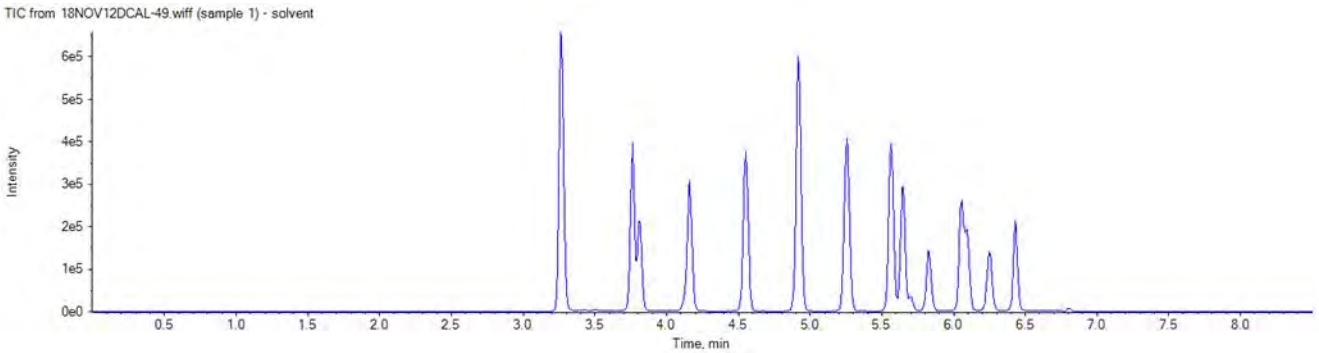
Analyte Quantitation Peak Table

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-49.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	778730.1	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	758823.9	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456635.4	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	57620.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	665797.6	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456635.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	547261.8	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	372925.2	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	39087.0	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	372925.2	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	901909.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	509013.2	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	643925.8	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	27339.0	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	681332.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	73694.3	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	265353.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	59646.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	576780.7	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	27339.0	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	354624.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	79601.3	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	287722.3	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	59772.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	576780.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	418729.7	N/A	
PFHxDA	6.73	1.050	2221.7		A	13C2-PFTeDA	6.43	418729.7	0.005	0.063
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	418729.7	N/A	

Total Ion Chromatogram

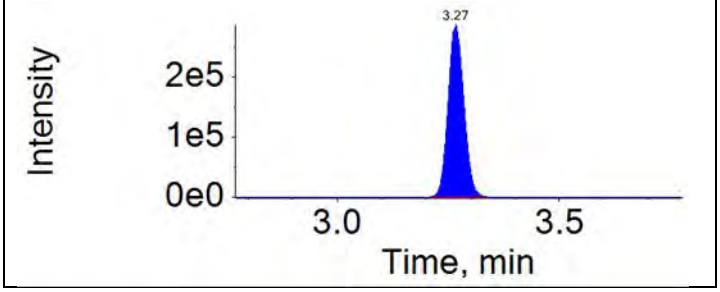


APPROVED
By JPT at 8:42 am, 11/20/18

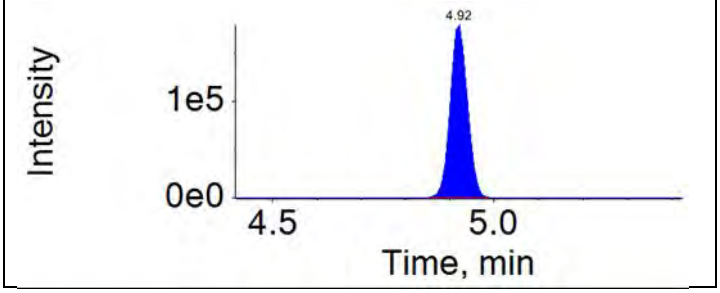
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

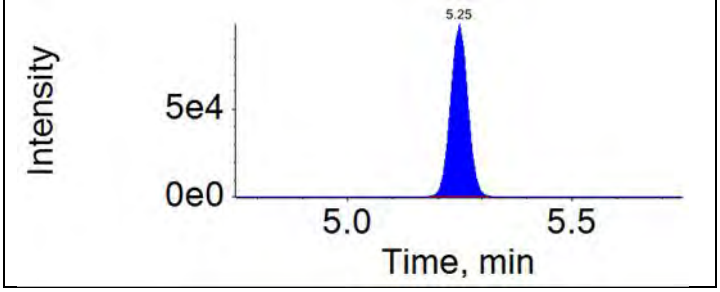
Injection Standard: 13C3-PFBA
216.0 / 172.0



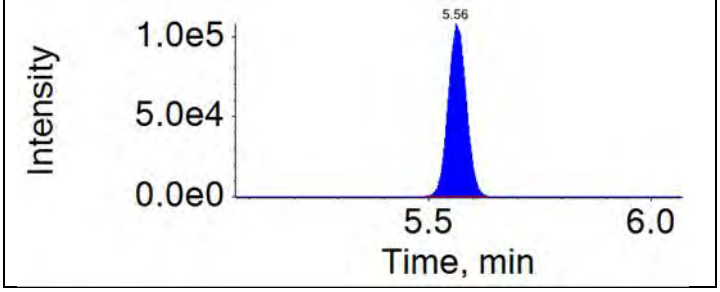
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

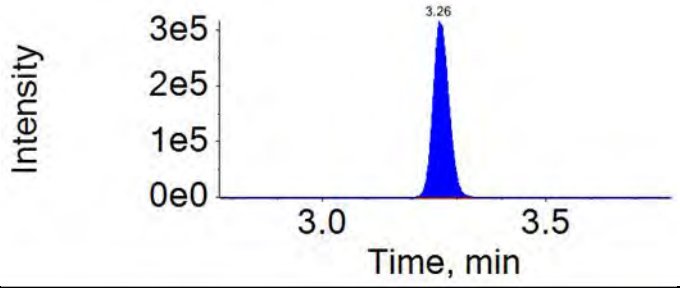


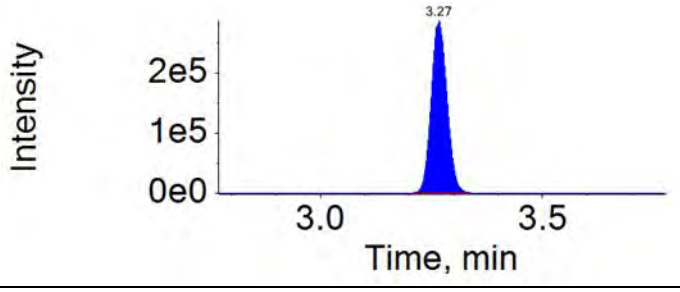
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

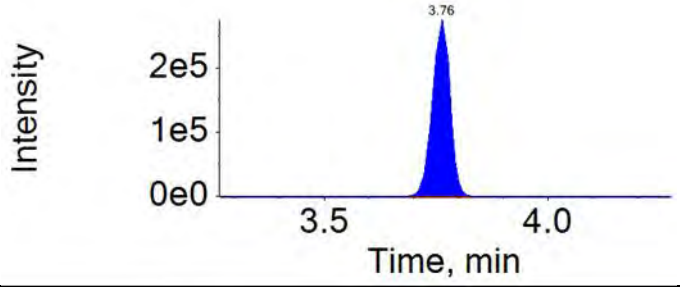
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

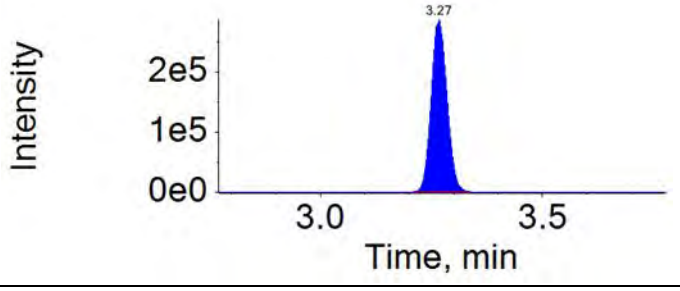
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



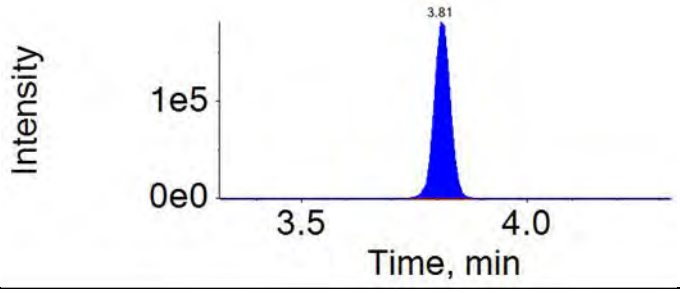


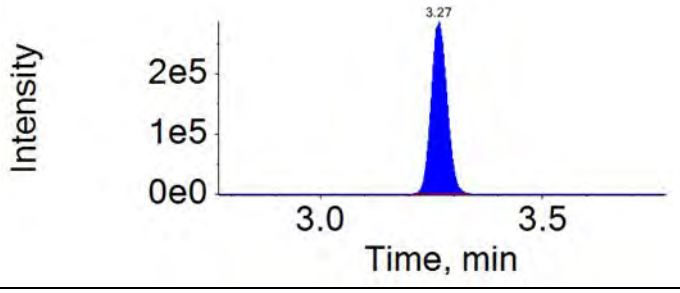
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



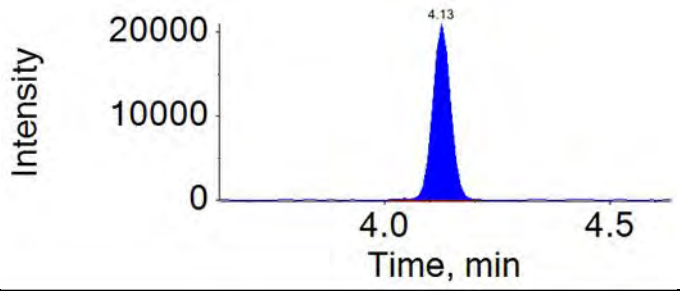


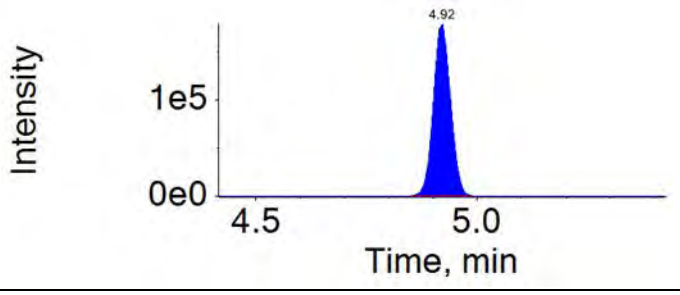
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



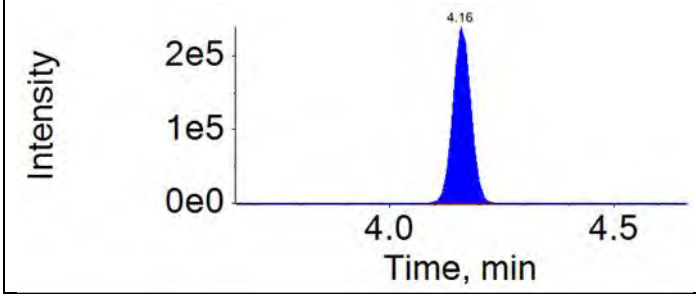


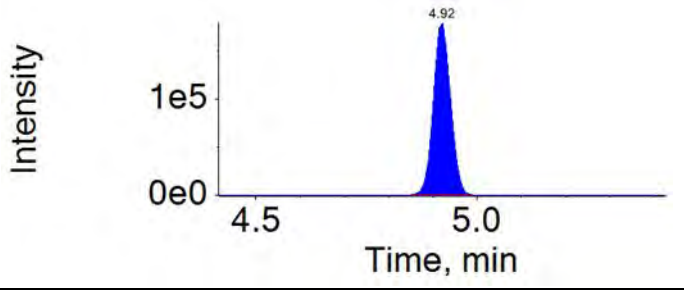
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

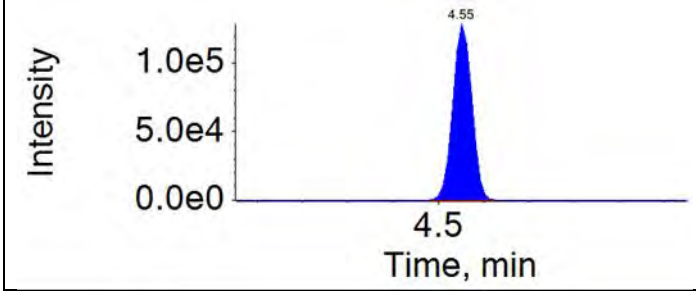
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

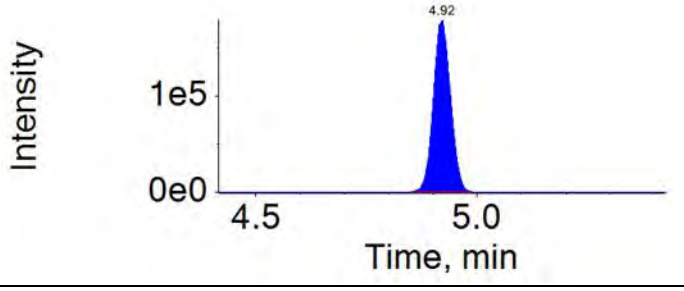
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



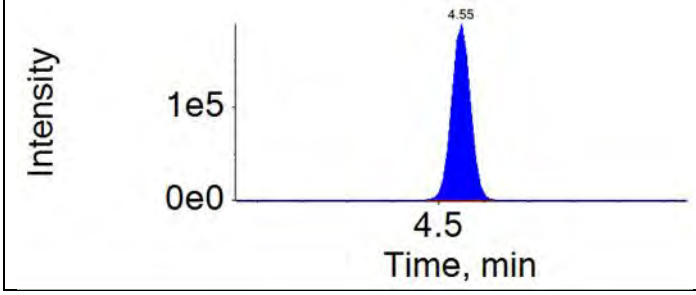


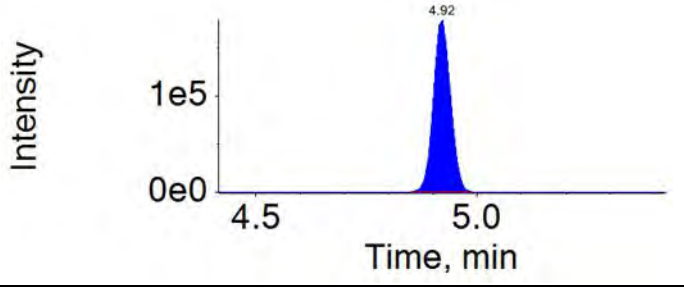
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



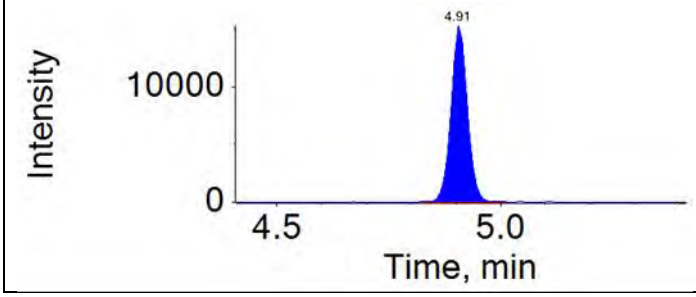


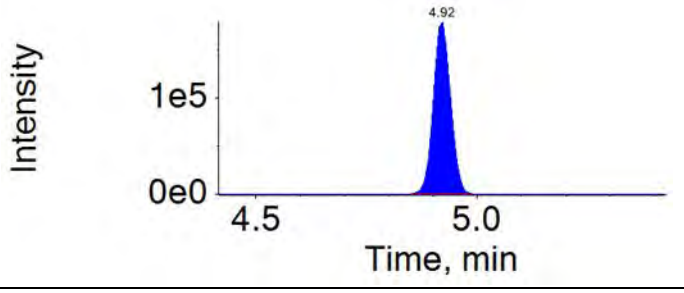
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

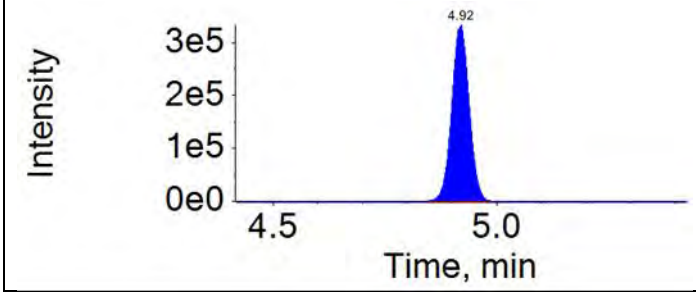
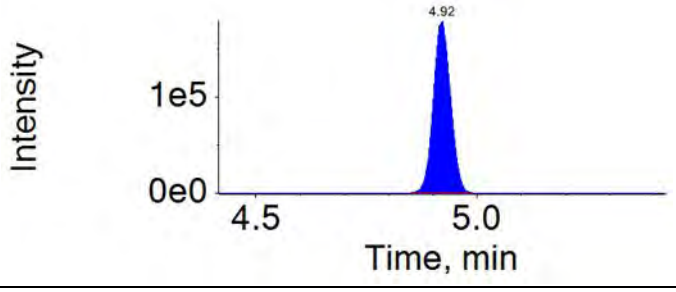


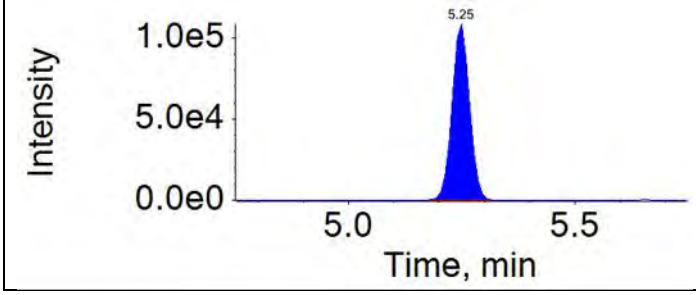
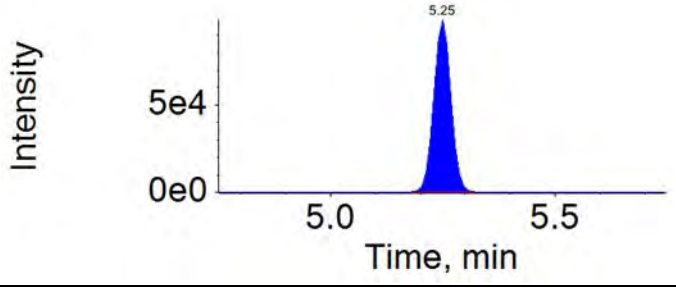


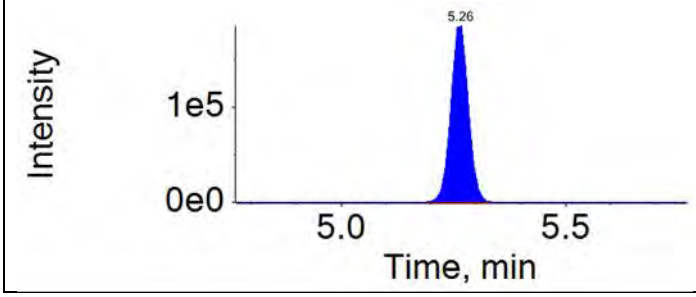
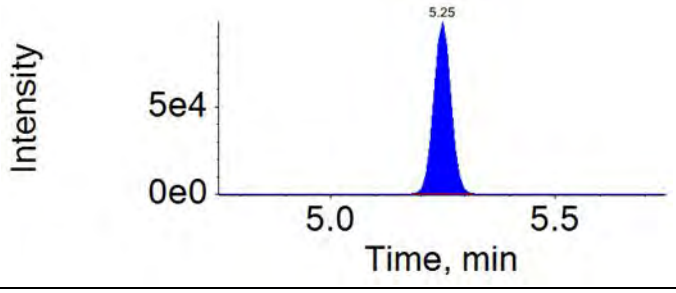
APPROVED
By JPT at 8:42 am, 11/20/18

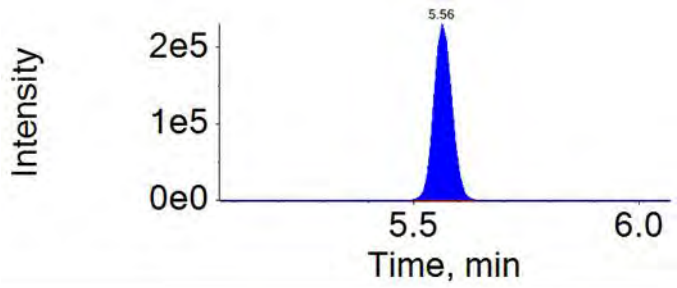
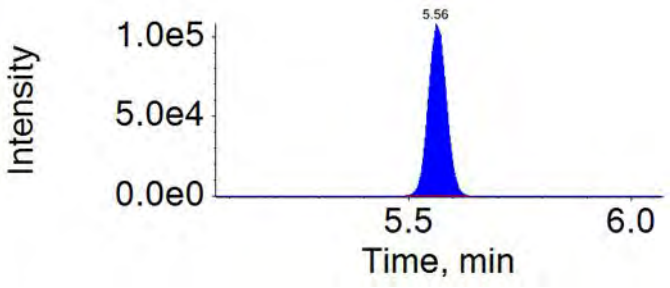
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

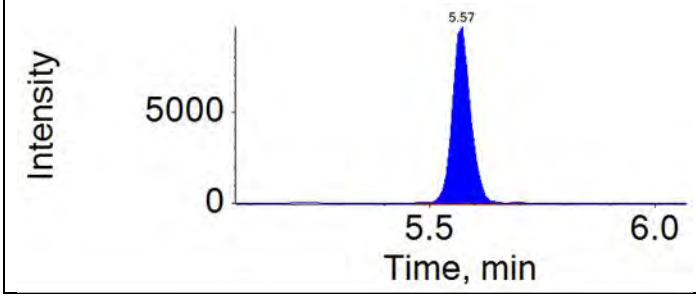
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

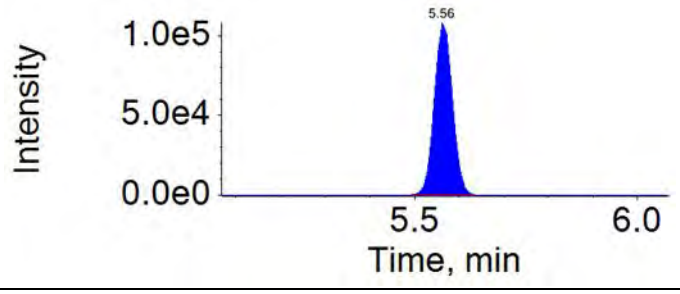
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

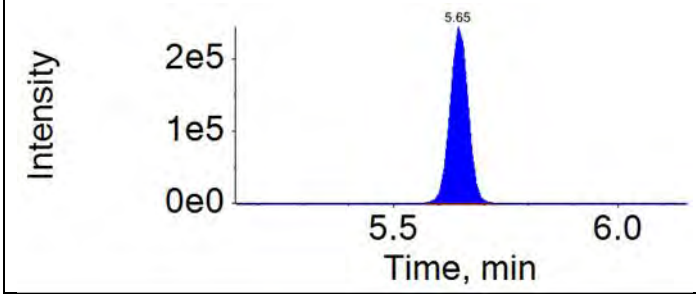
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

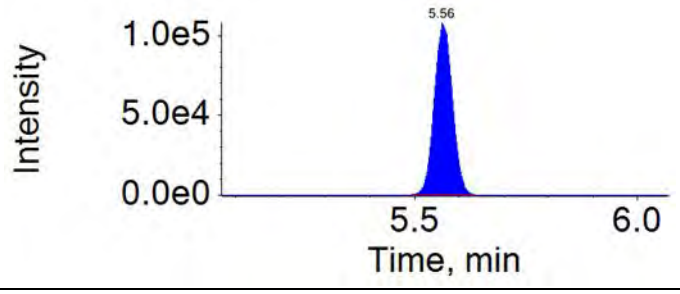
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



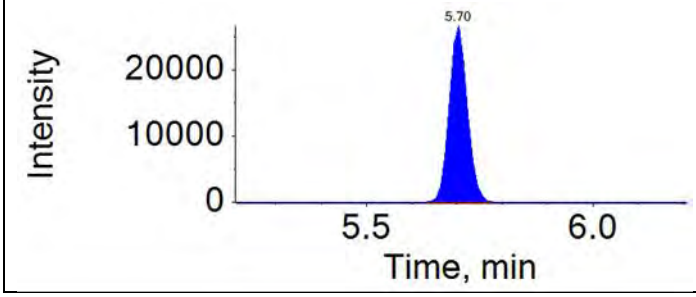


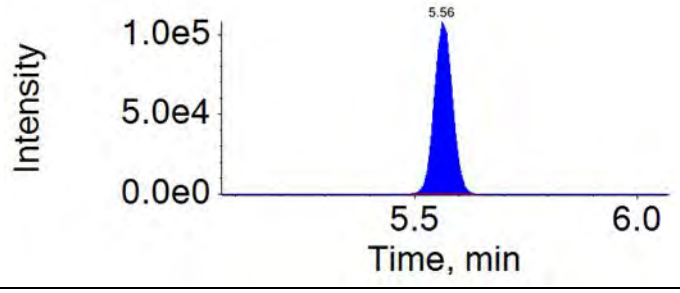
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



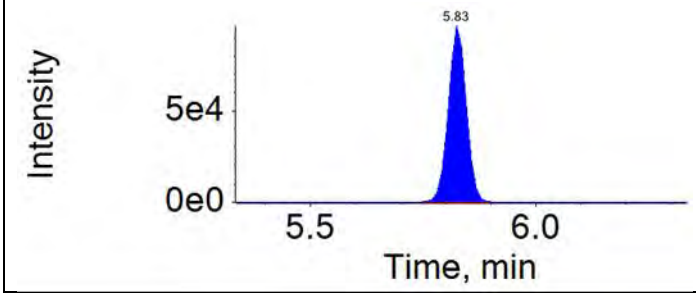


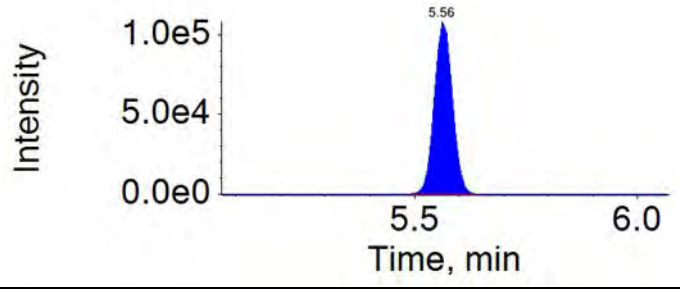
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



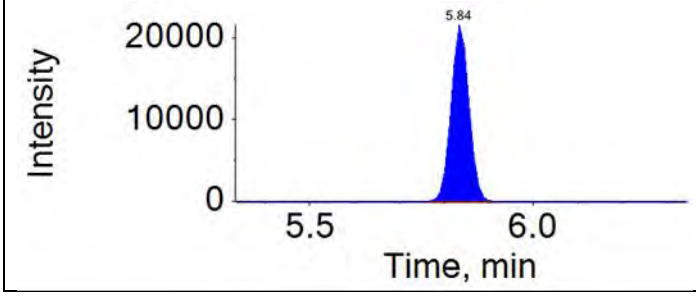


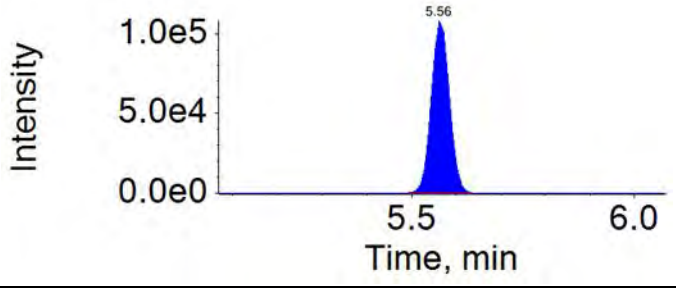
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

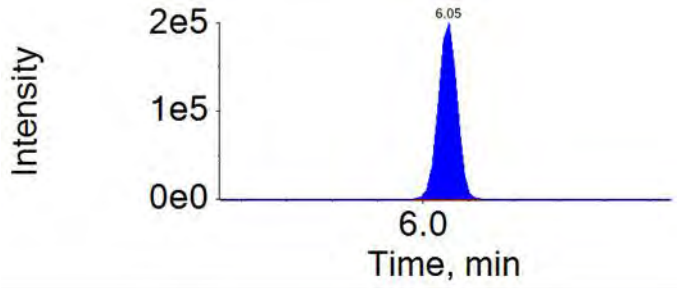
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

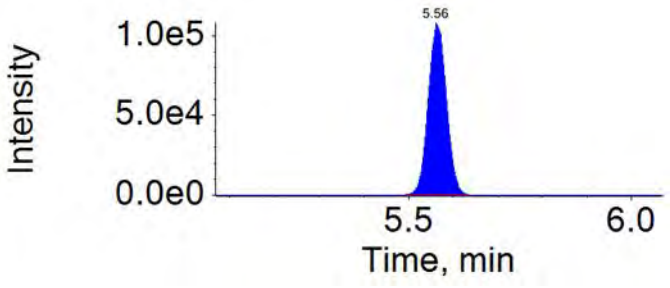
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



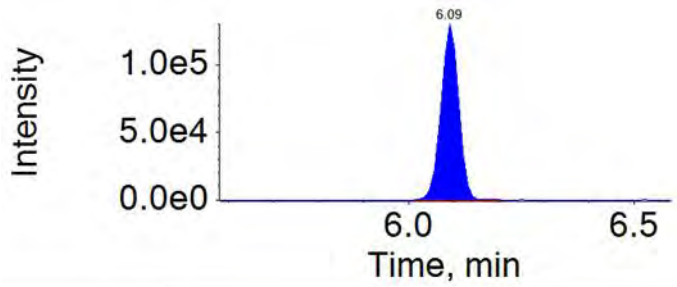


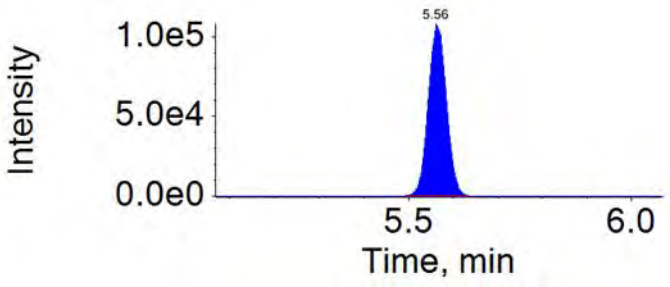
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



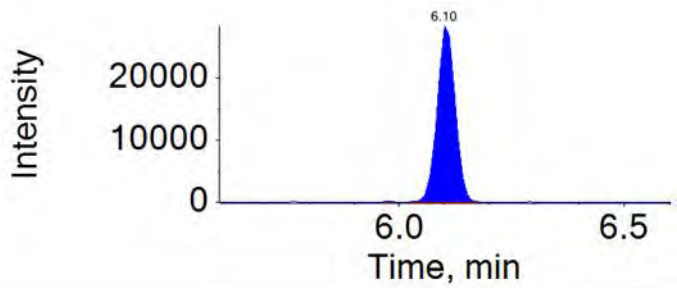


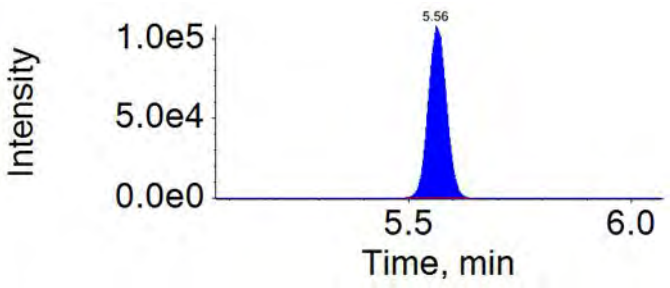
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



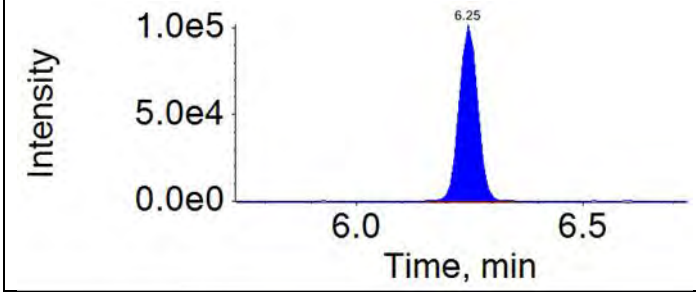


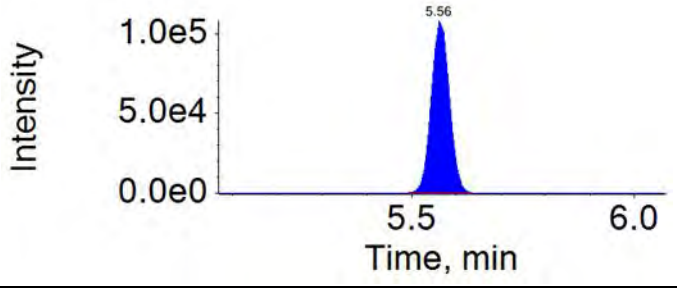
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

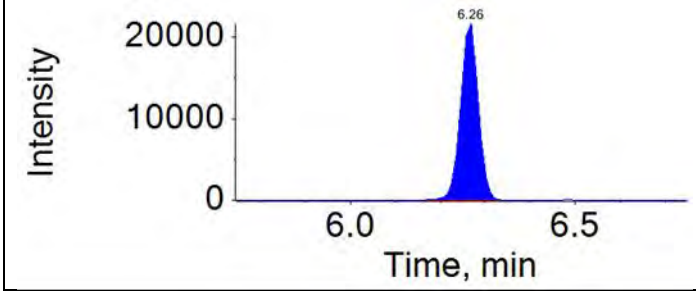
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

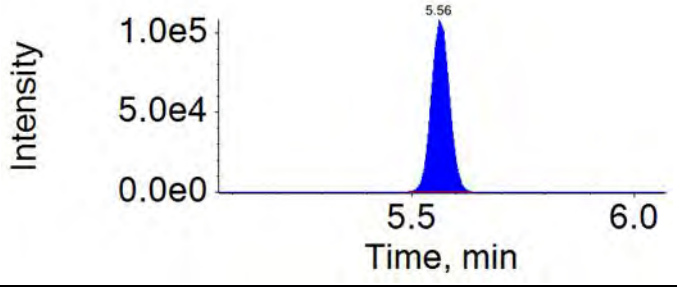
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



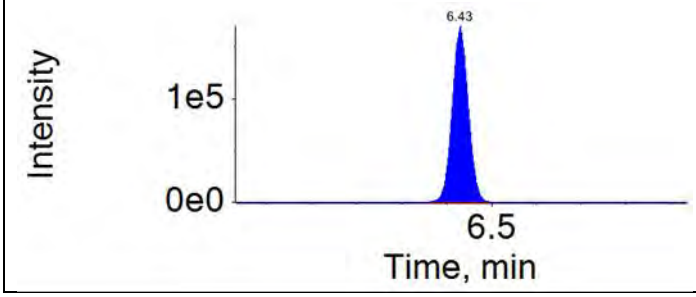


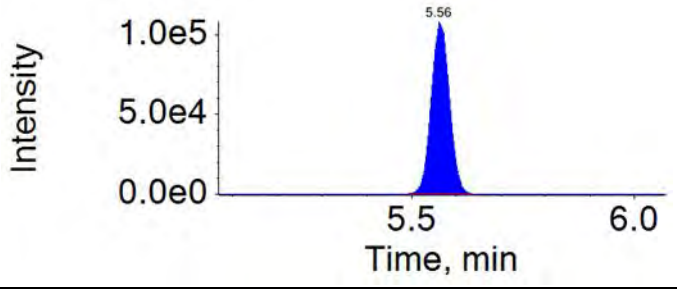
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



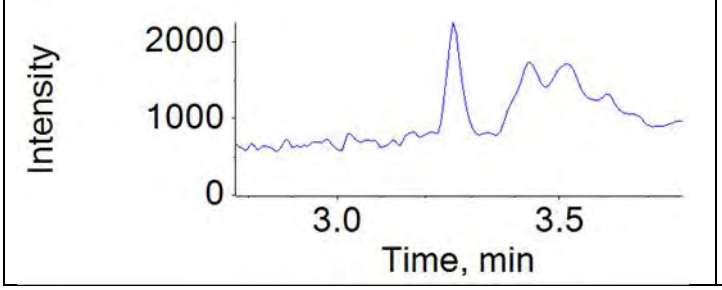


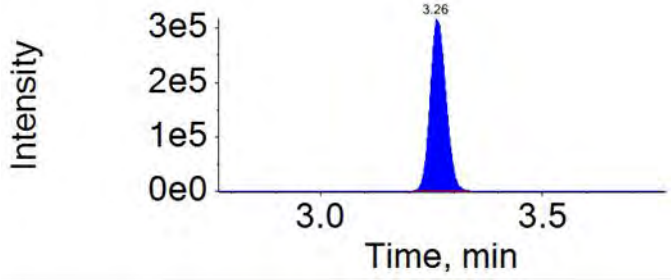
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

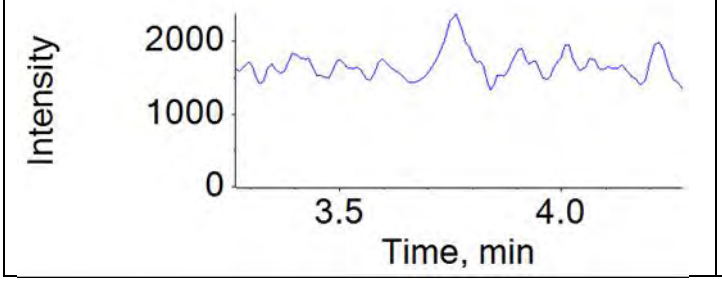
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

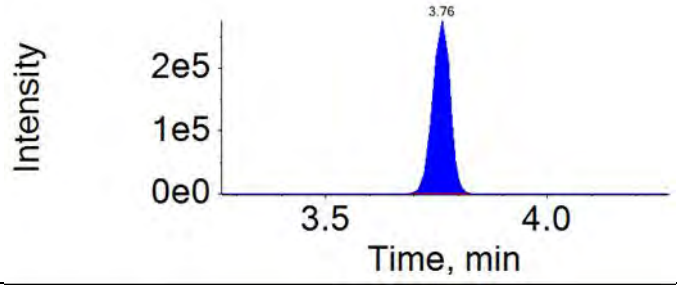
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



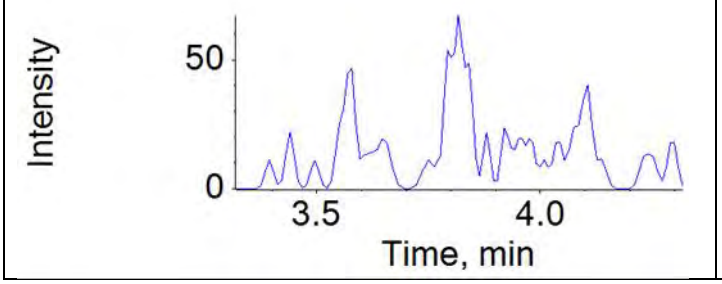


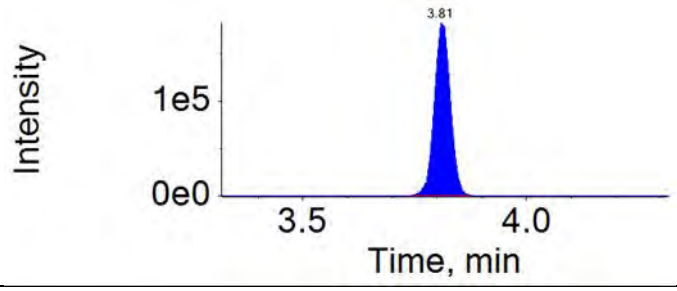
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



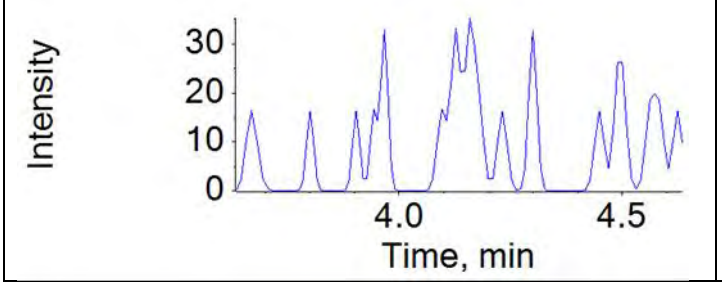


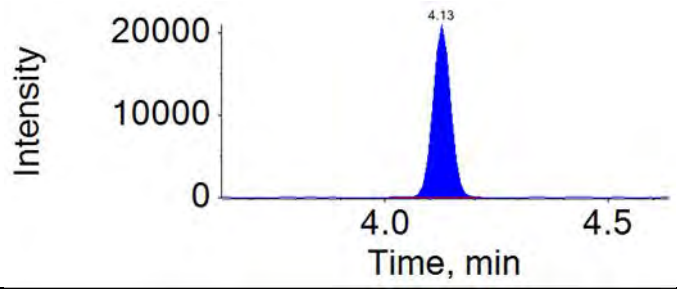
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



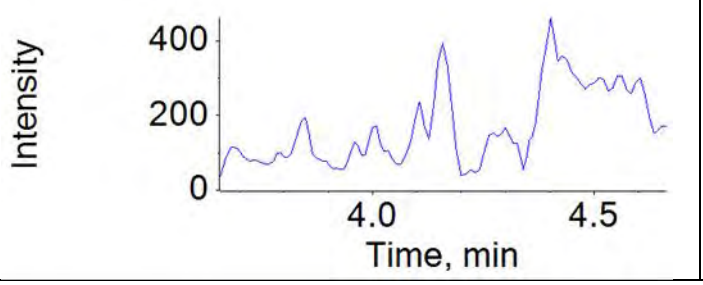


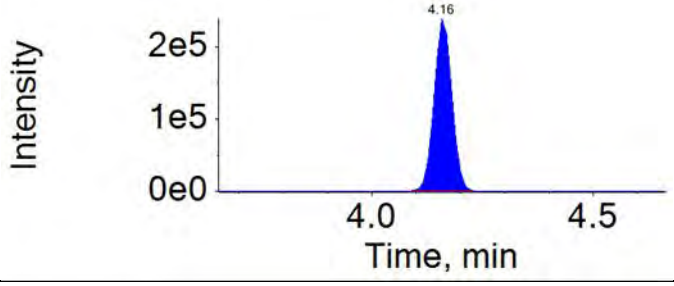
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

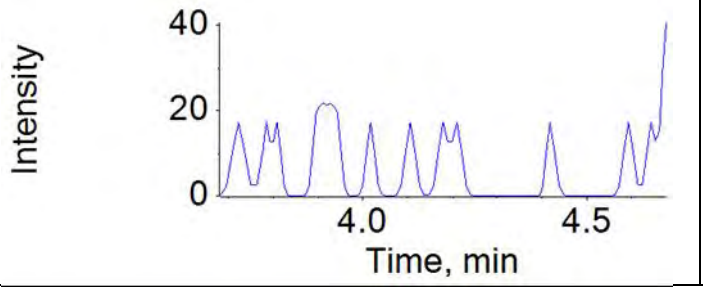
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

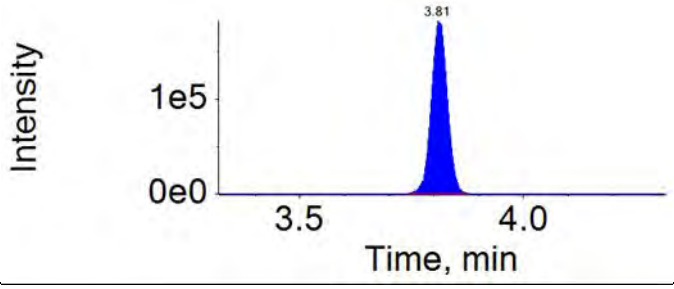
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



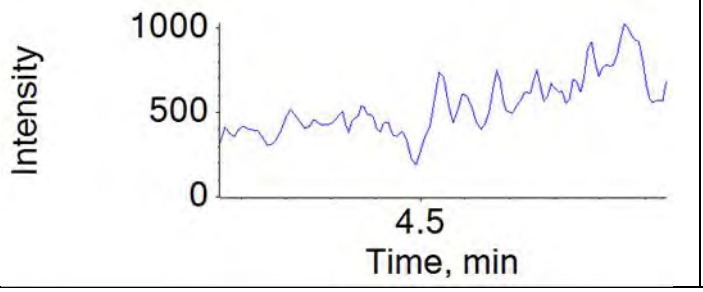


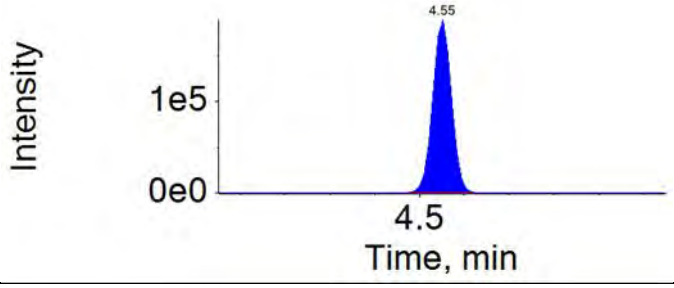
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



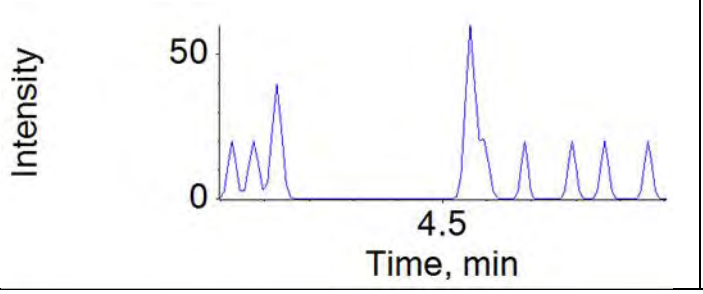


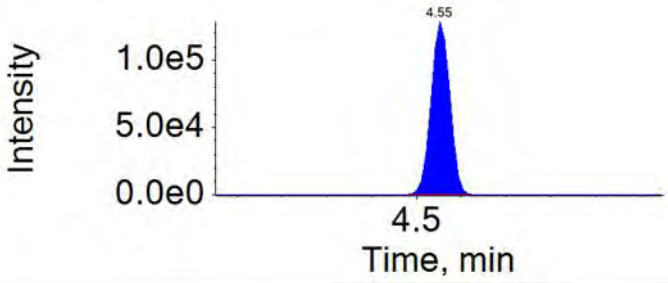
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



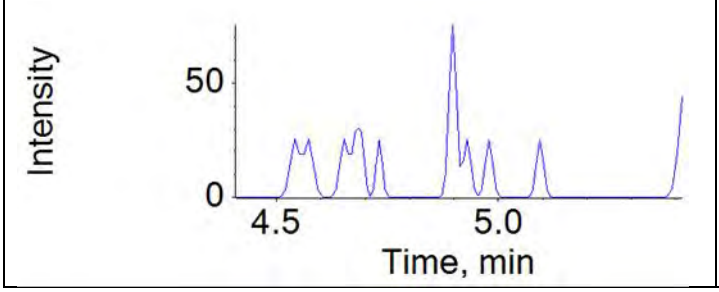


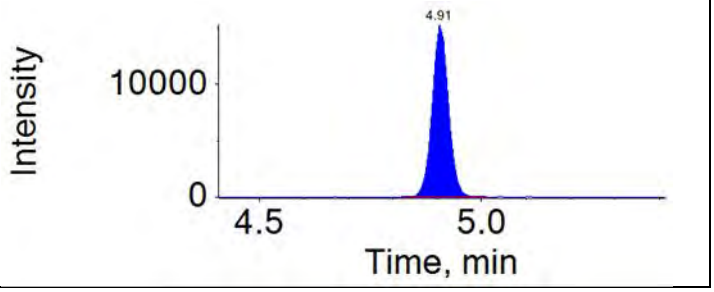
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

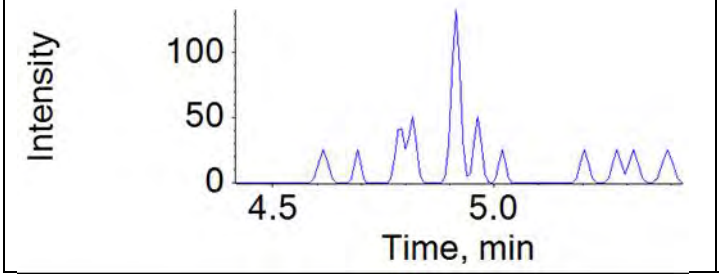
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

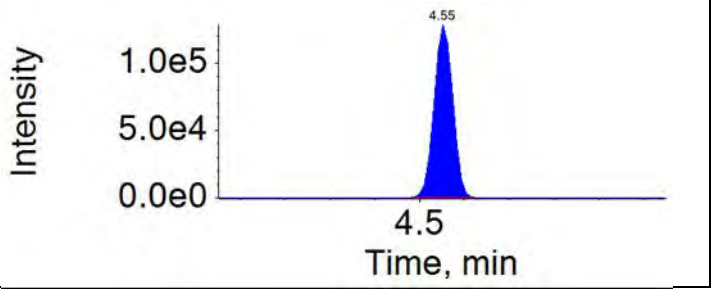
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



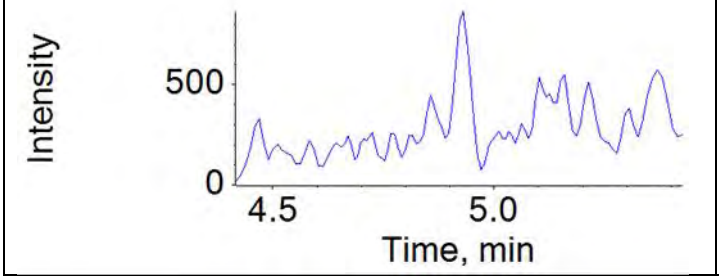


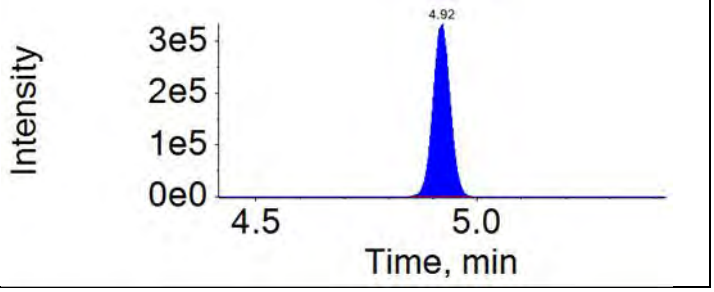
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



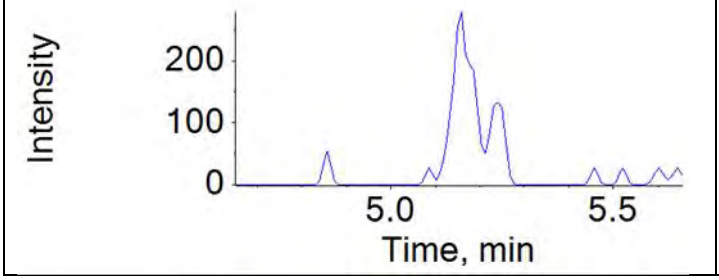


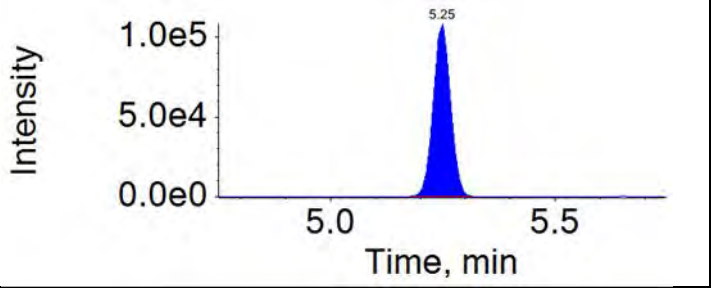
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



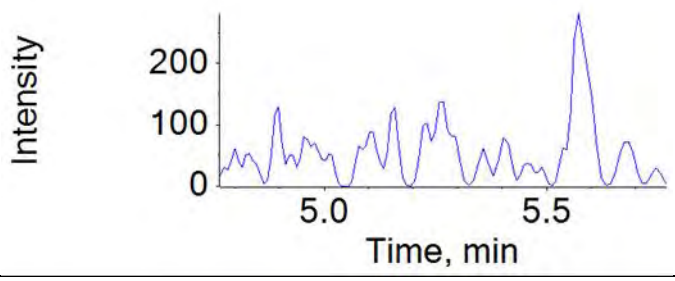


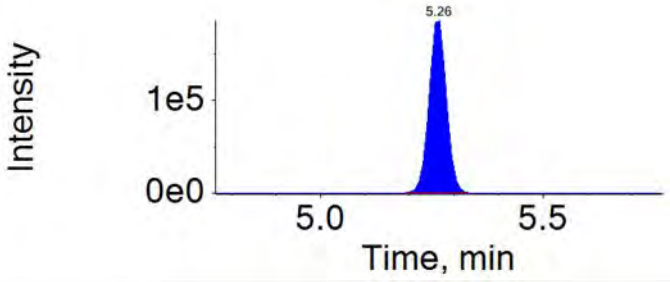
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

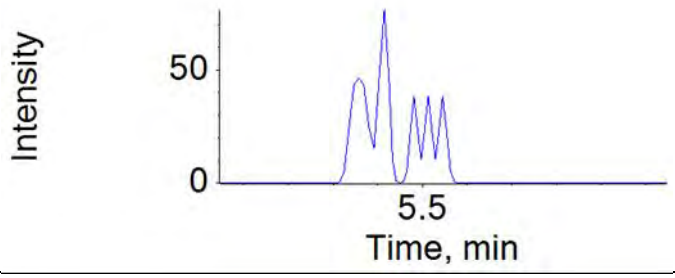
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

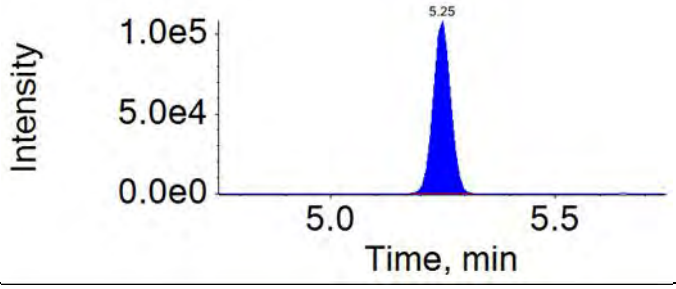
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



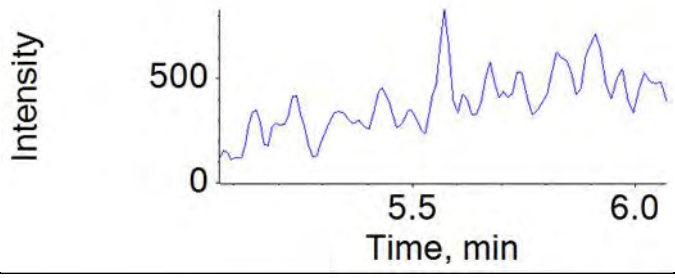


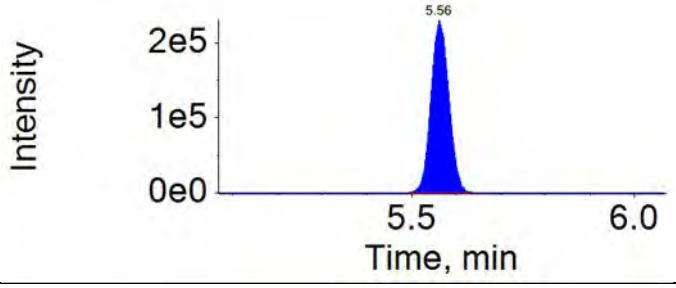
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



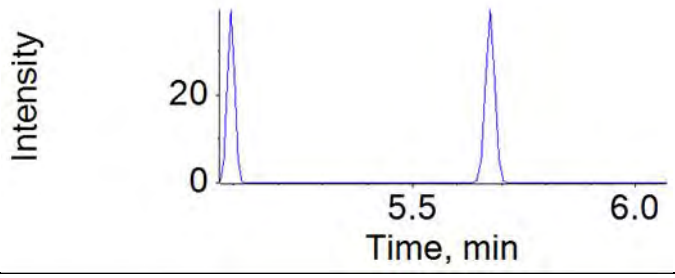


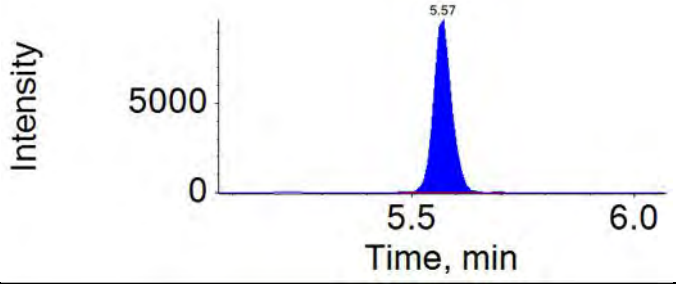
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



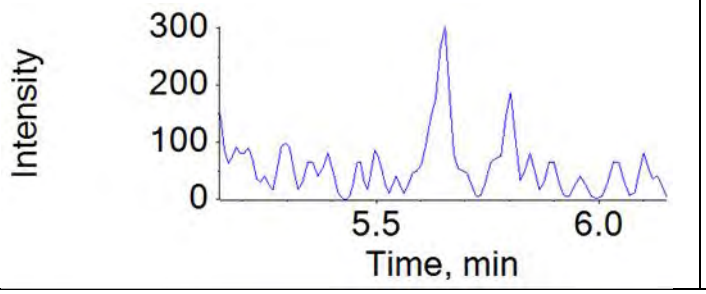


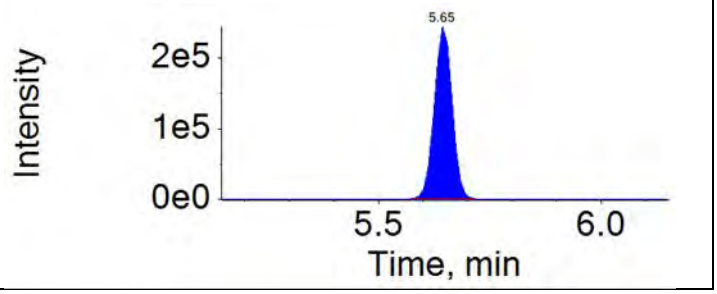
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

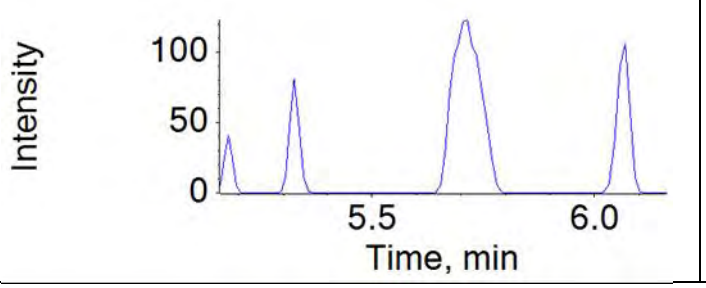
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

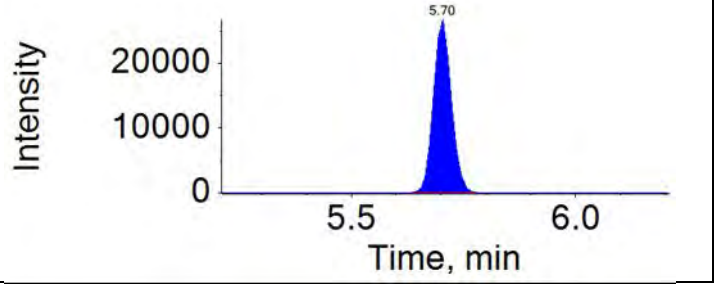
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



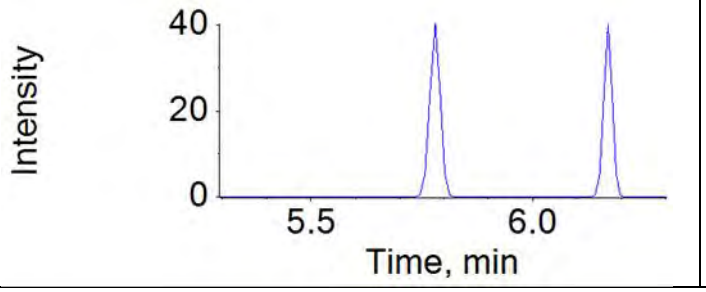


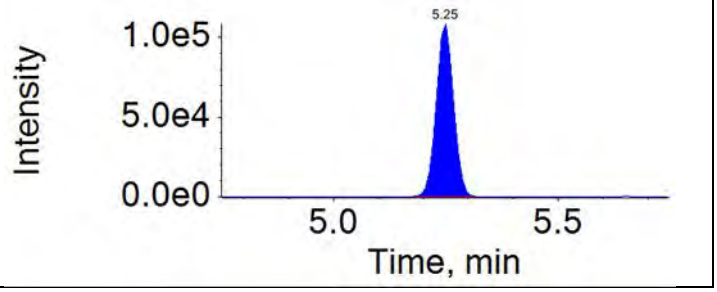
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



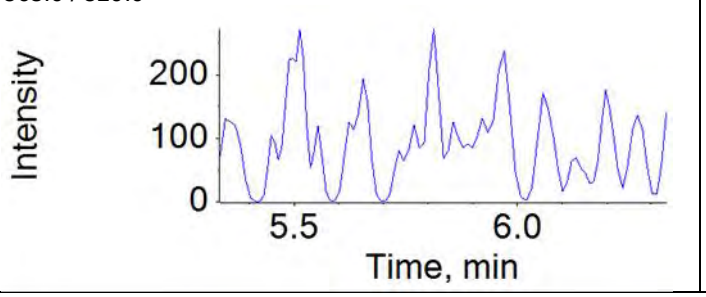


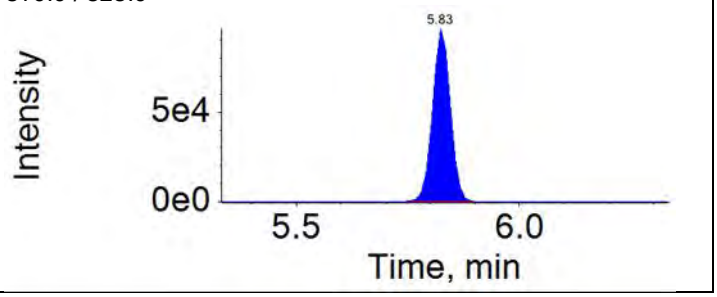
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



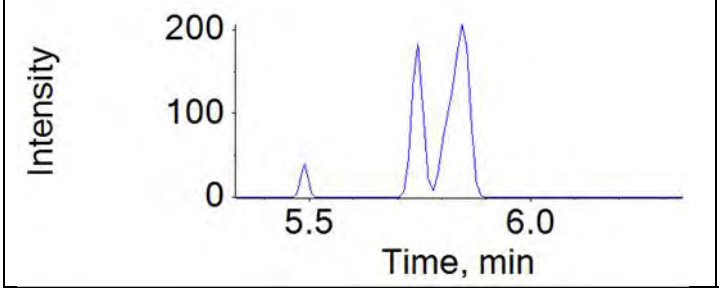


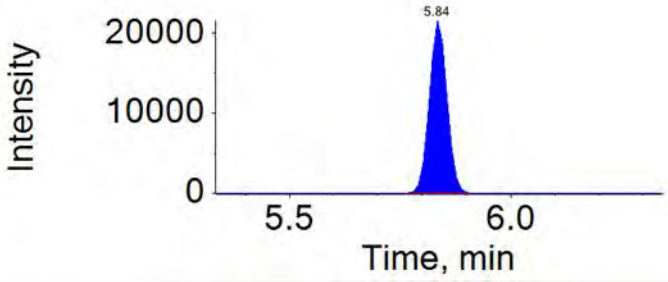
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

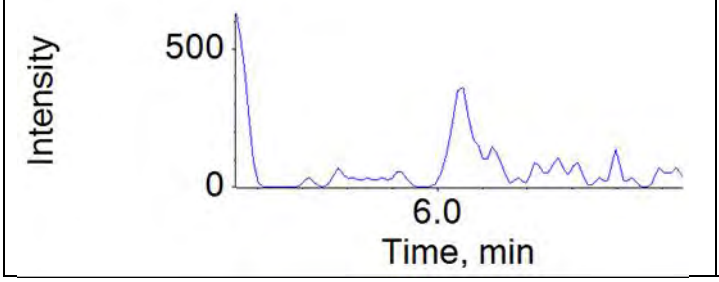
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

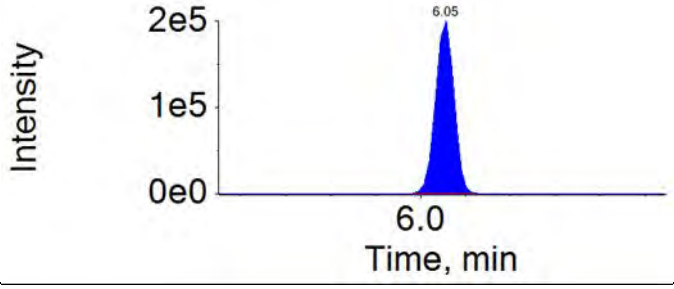
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



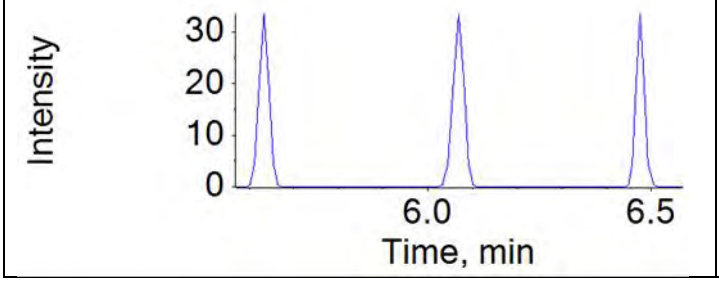


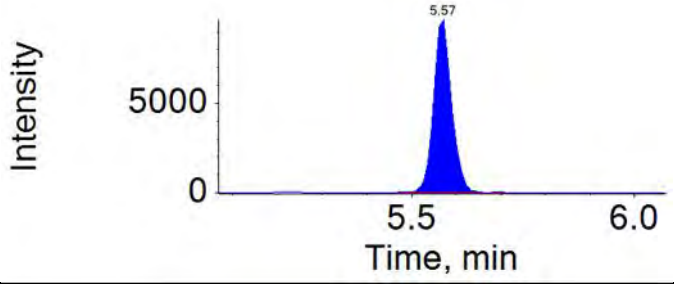
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



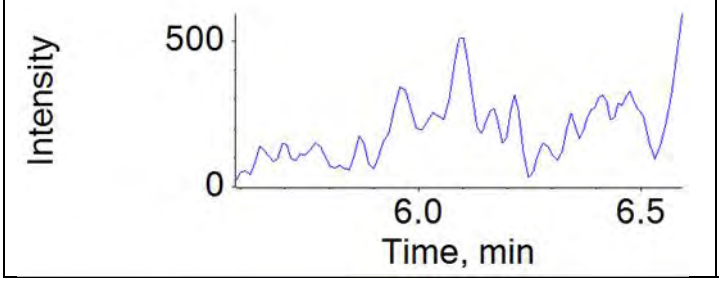


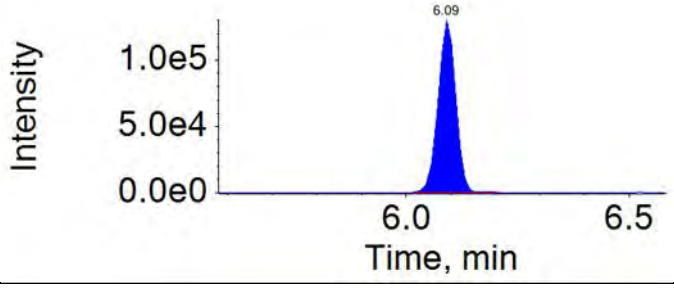
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



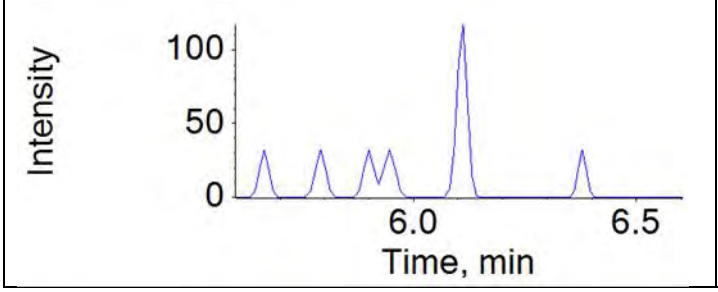


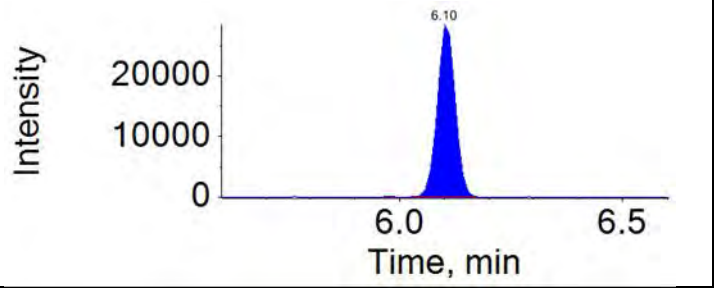
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

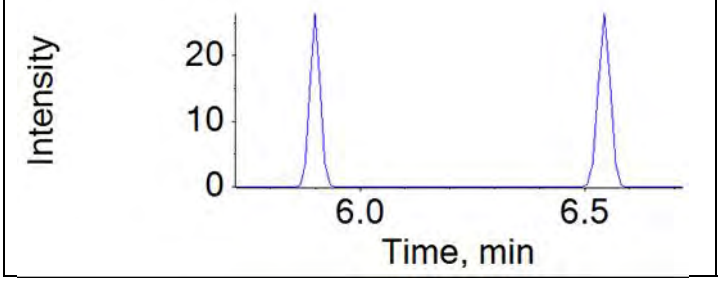
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

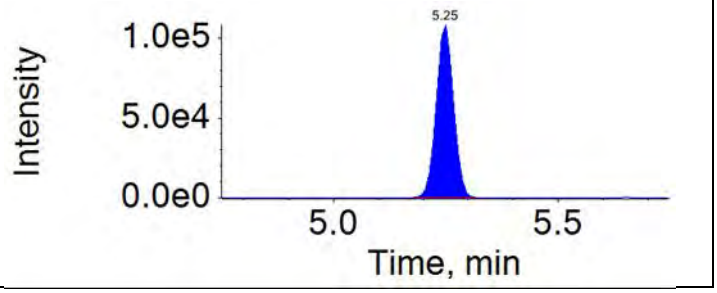
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



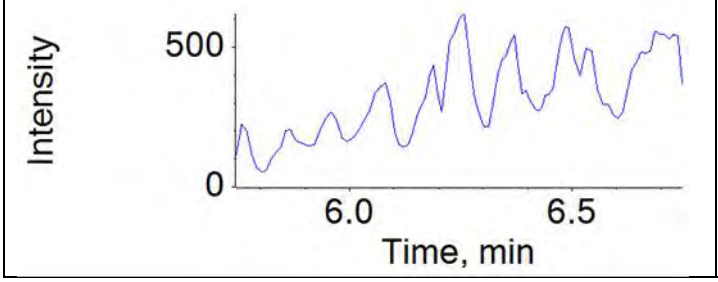


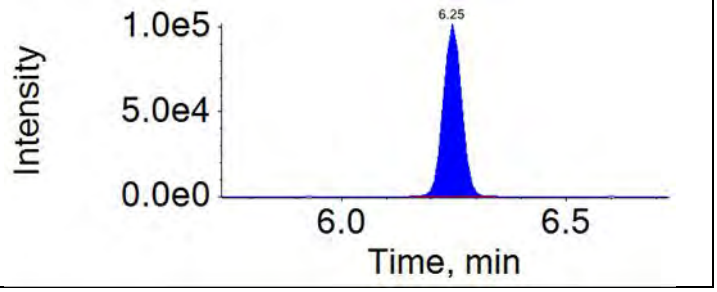
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



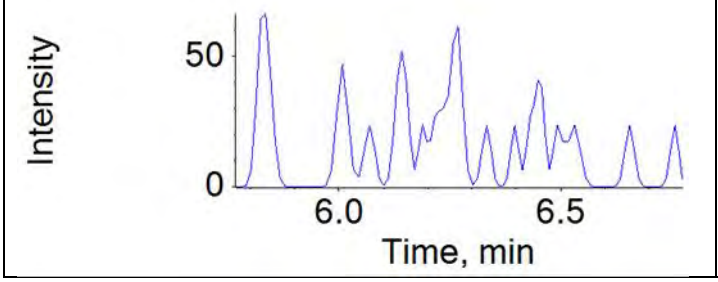


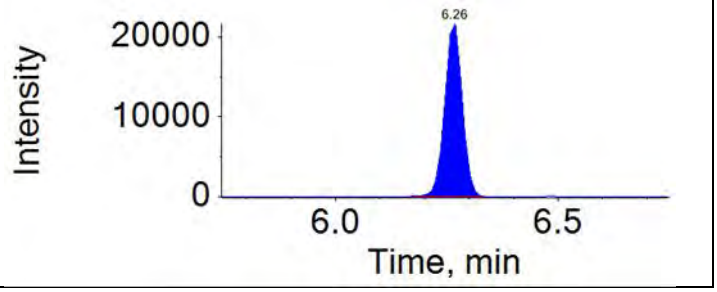
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





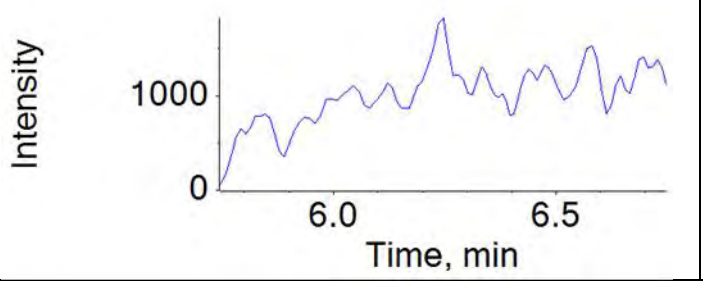
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

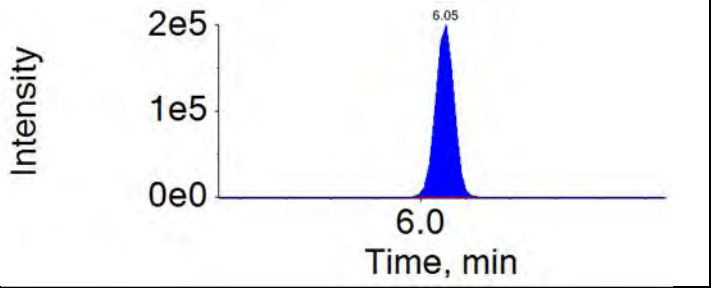




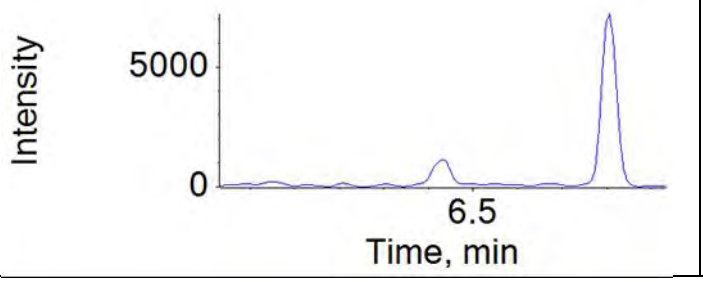
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

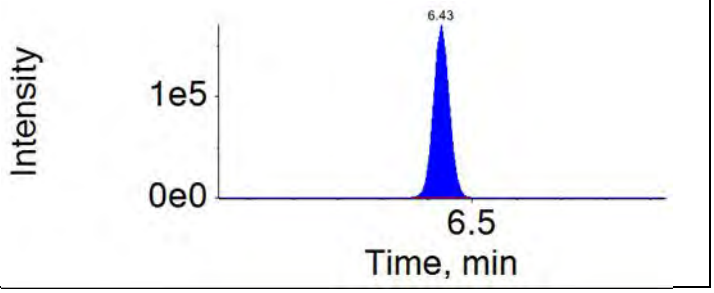
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



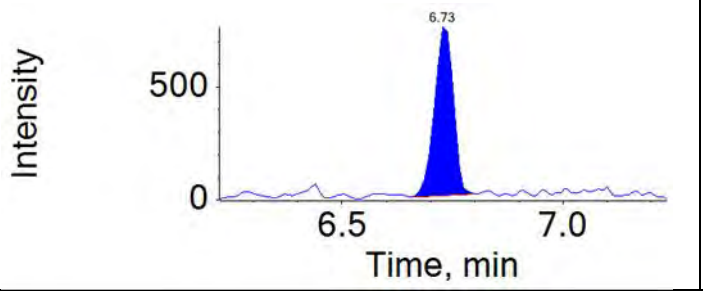


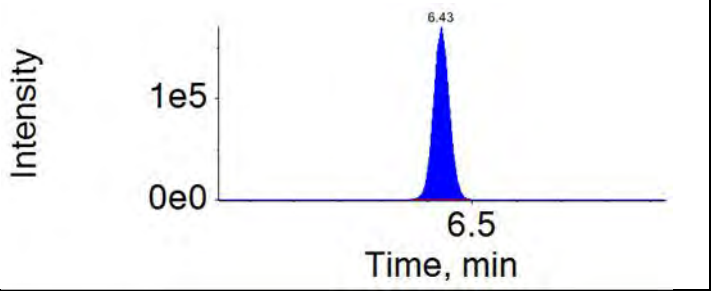
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



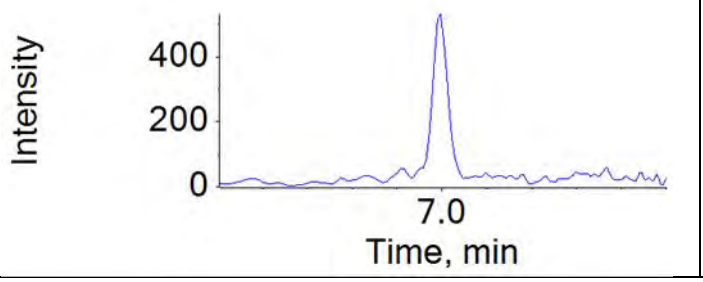


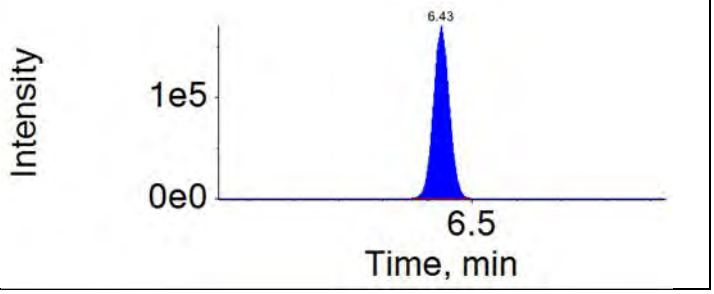
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

Ion Ratio Report

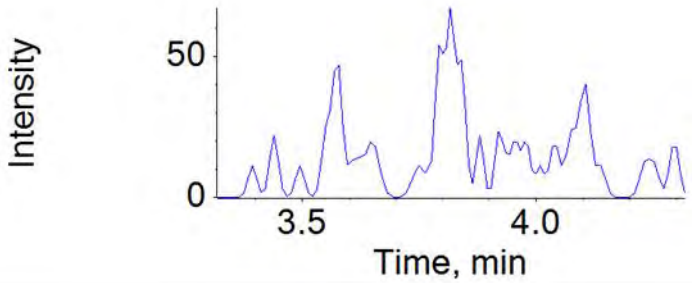
Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-49.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	5.81	1.00	64.89	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	6.73	1.05	2221.67	A	N/A	1.0000			
PFHxDA_2	6.74	1.05	133.29	A	N/A	0.0600	-11	50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

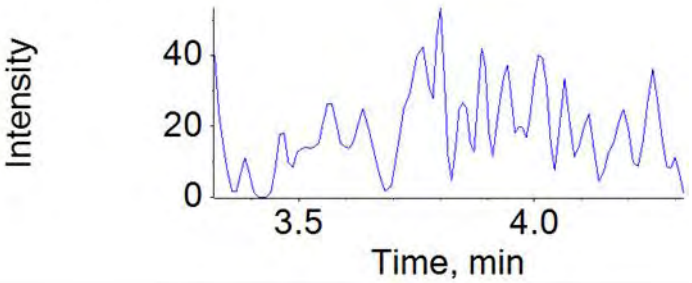
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

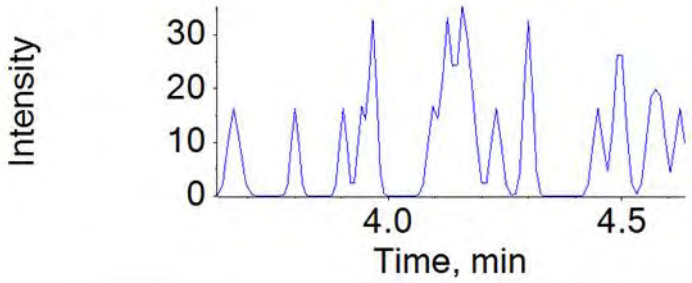
Component: PFBS
Primary Mass: 299.0 / 80.0



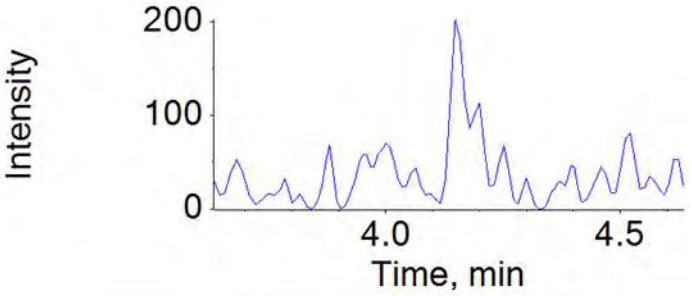
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



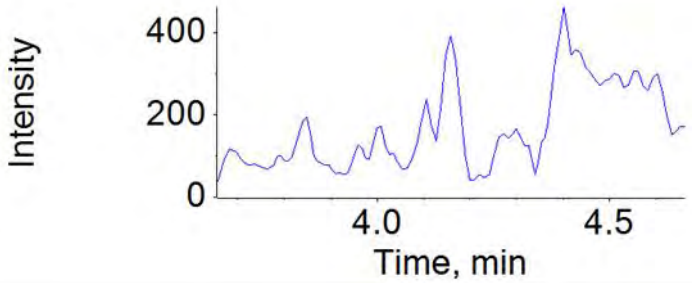
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



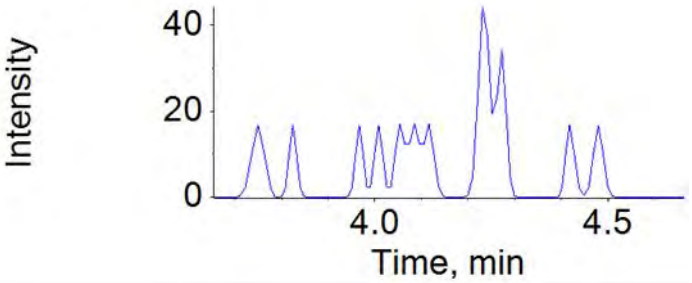
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



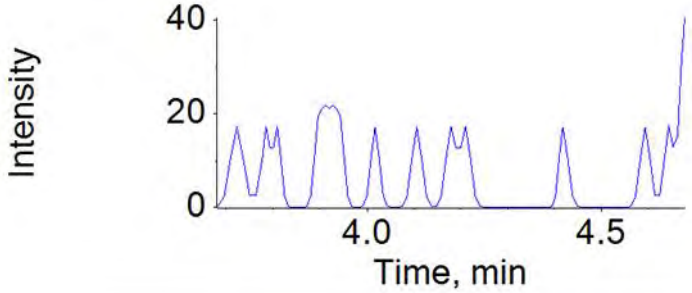
Component: PFHxA
Primary Mass: 313.0 / 269.0



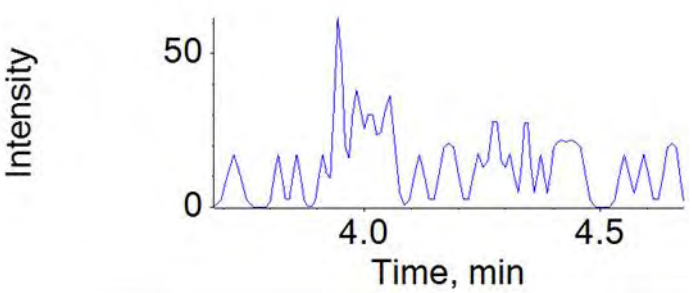
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



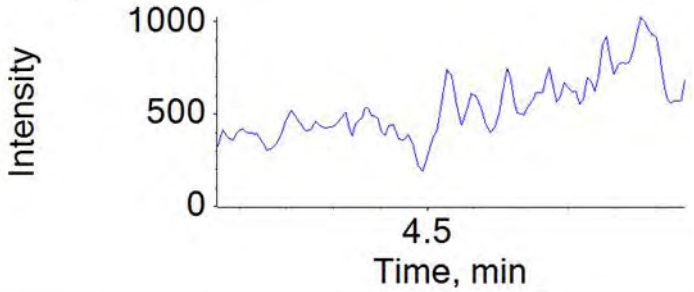
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



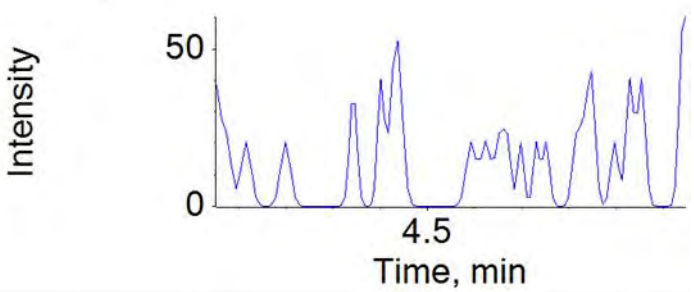
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

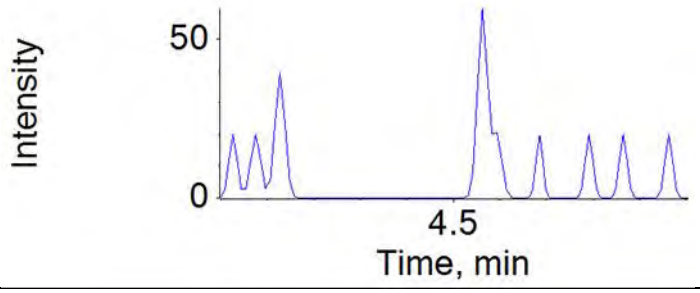
Component: PFHpA
Primary Mass: 363.0 / 319.0



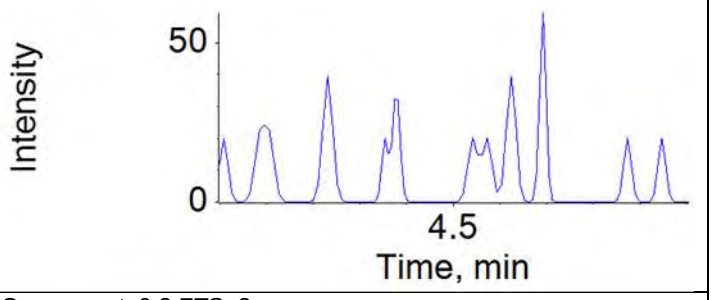
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



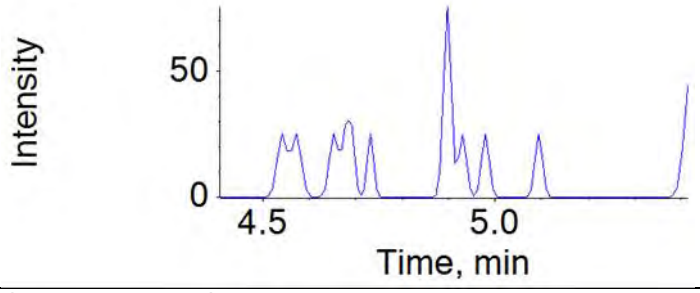
Component: PFHxS
Primary Mass: 399.0 / 80.0



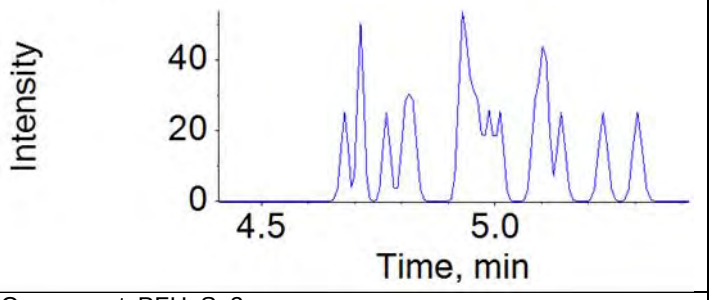
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



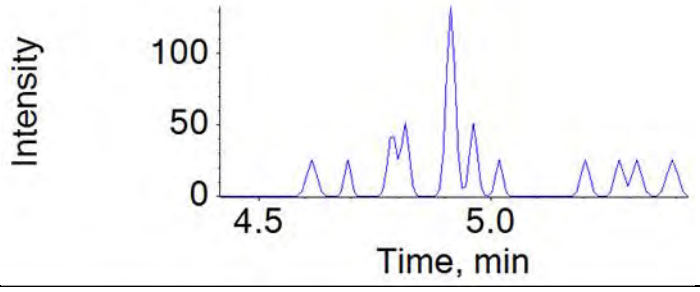
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



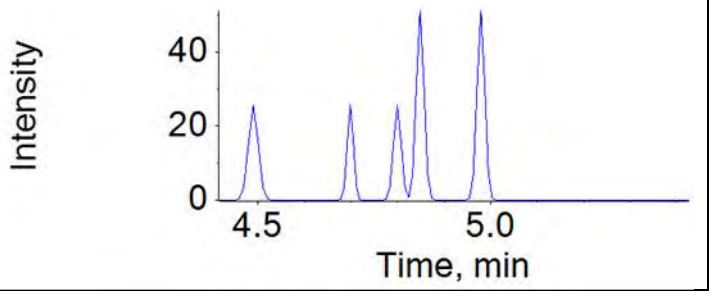
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



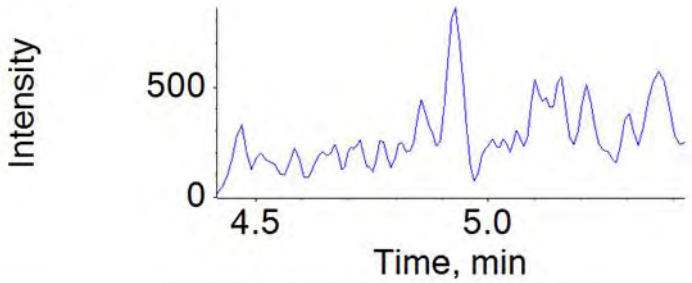
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



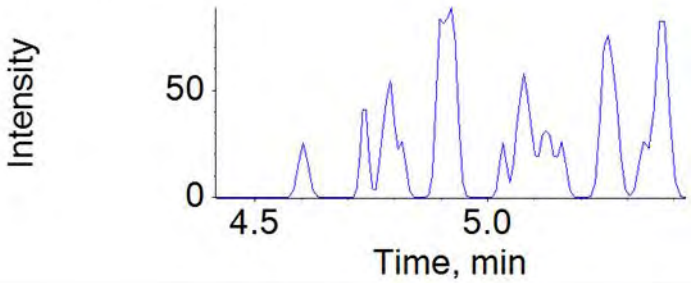
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

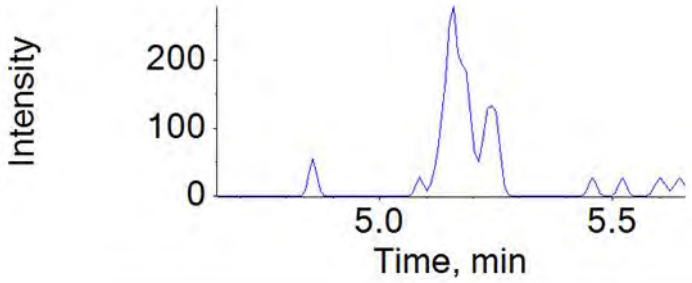
Component: PFOA
Primary Mass: 413.0 / 369.0



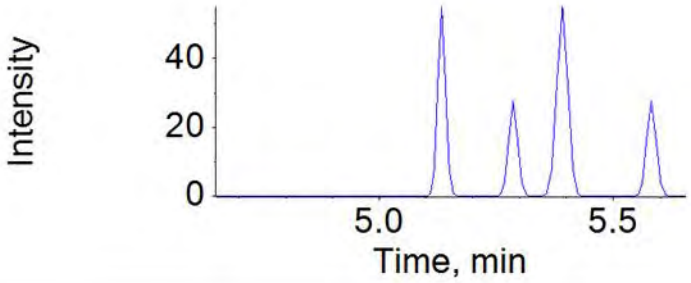
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



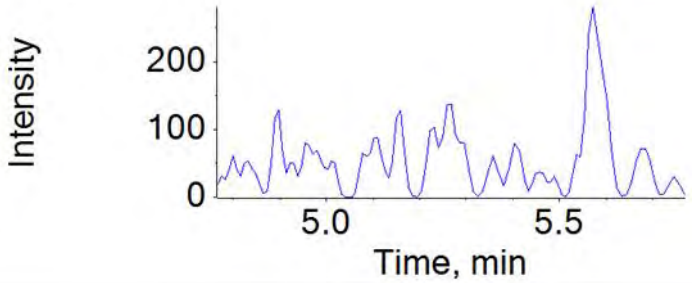
Component: PFOS
Primary Mass: 499.0 / 80.0



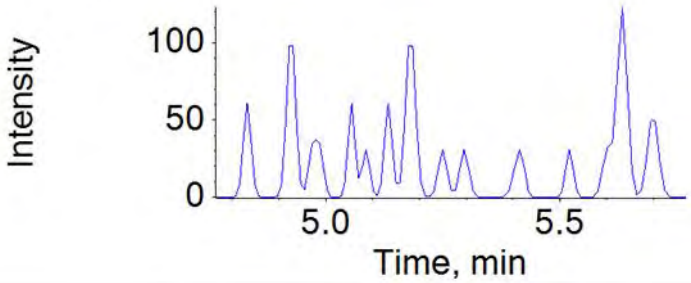
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



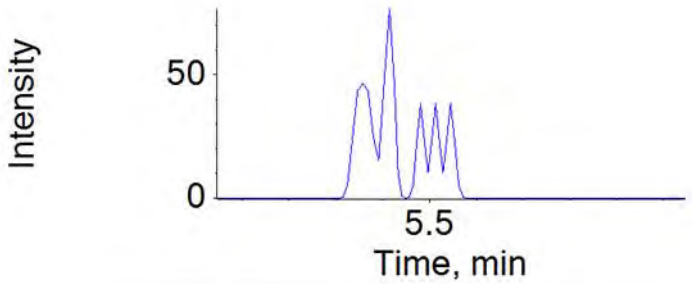
Component: PFNA
Primary Mass: 463.0 / 419.0



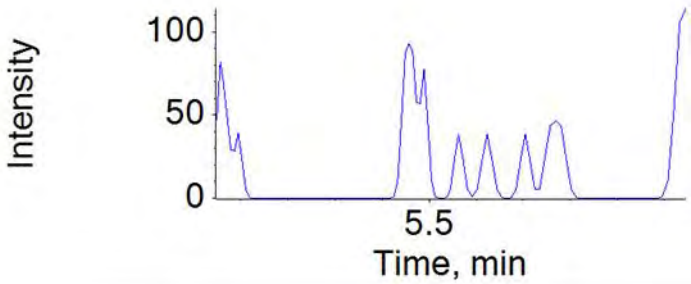
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



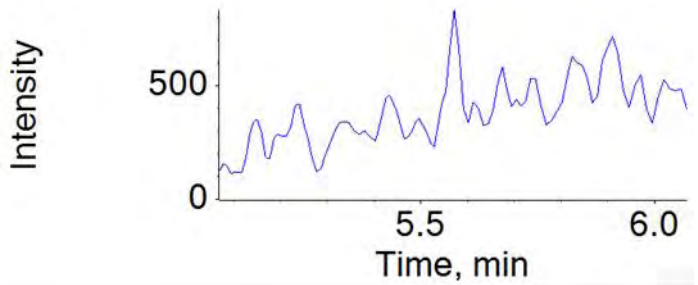
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



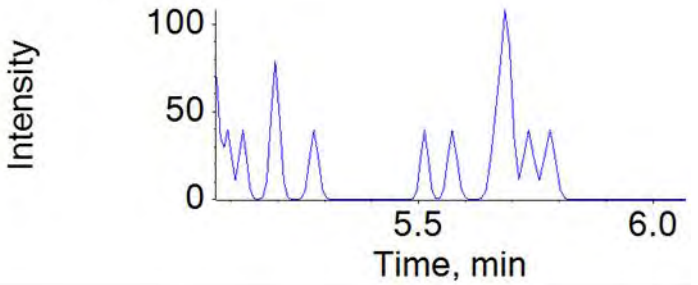
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

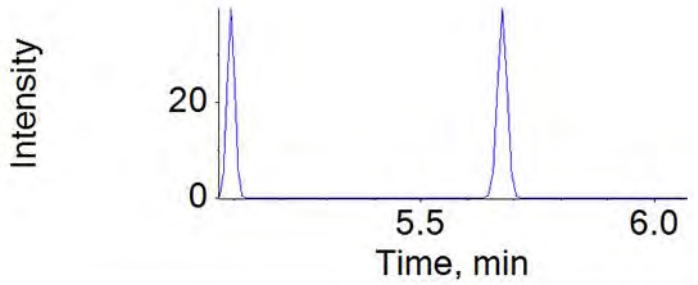
Component: PFDA
Primary Mass: 513.0 / 469.0



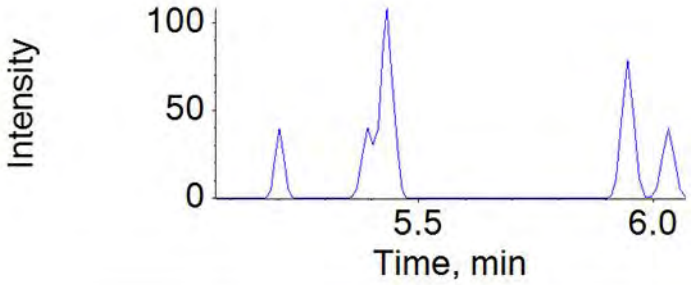
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



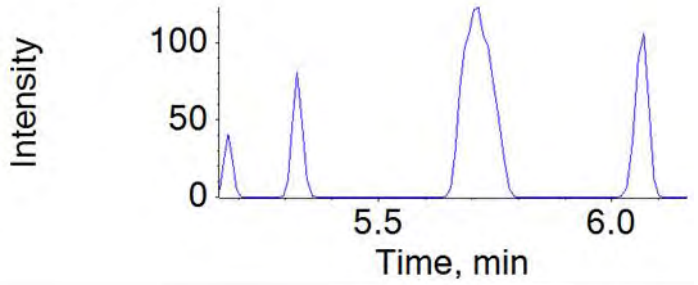
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



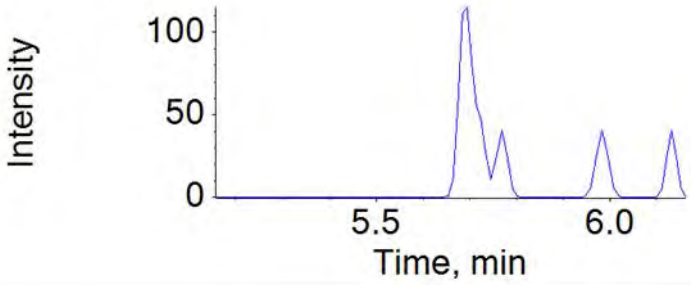
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



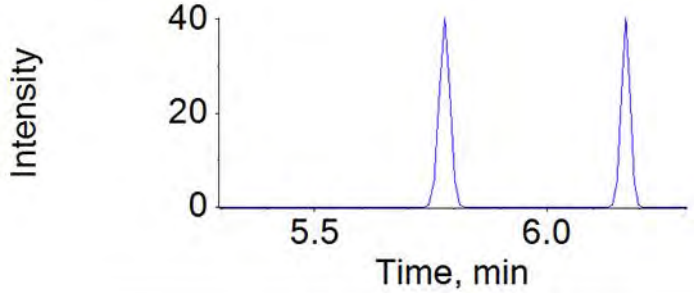
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



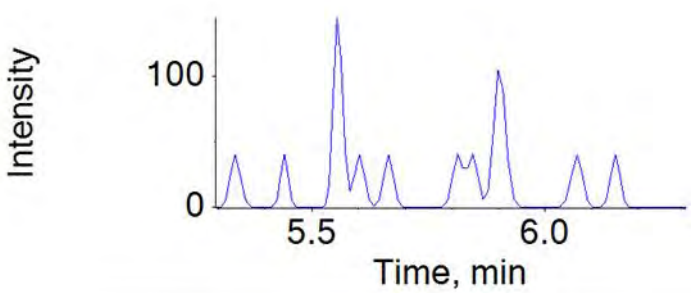
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



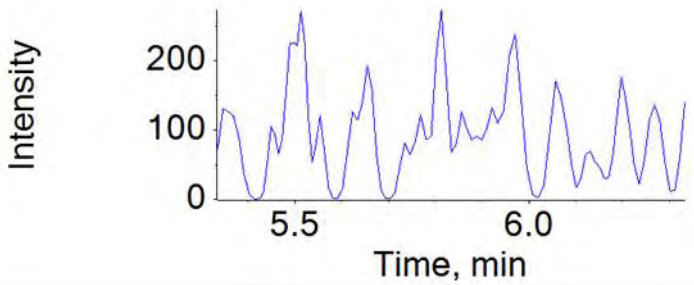
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



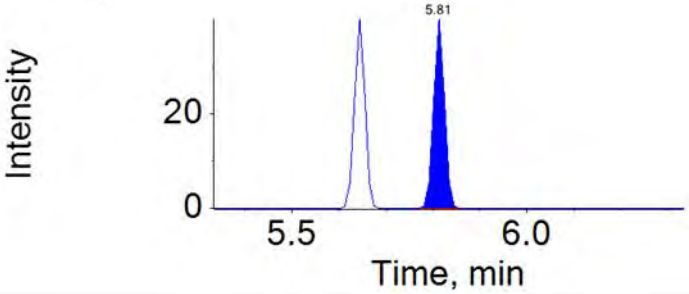
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

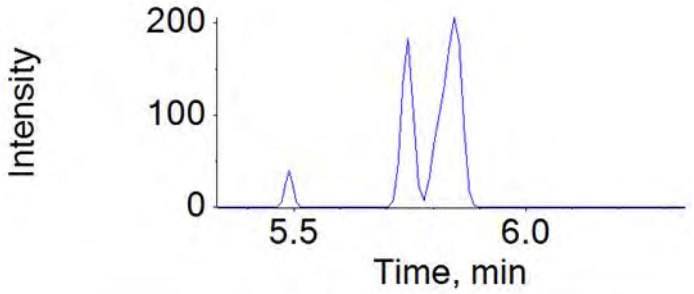
Component: PFUnDA
Primary Mass: 563.0 / 519.0



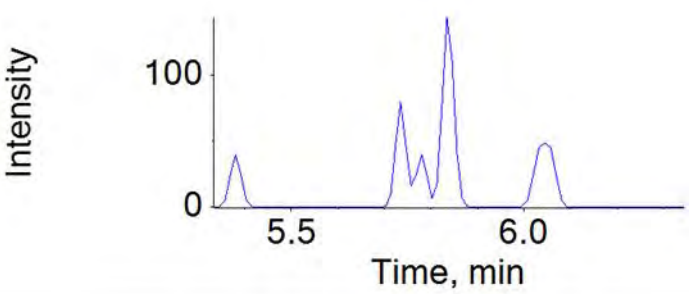
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



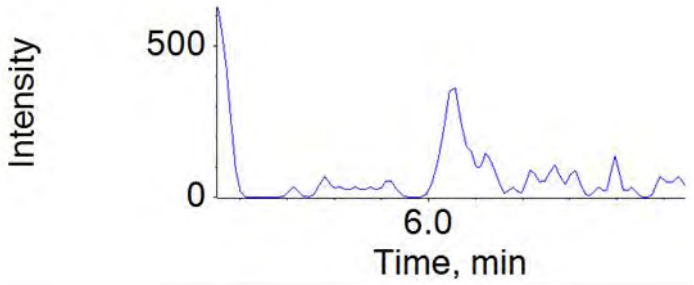
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



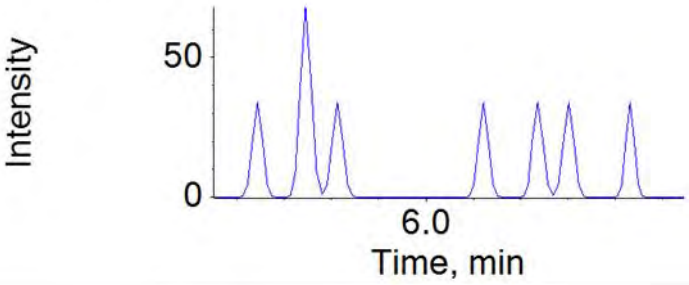
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



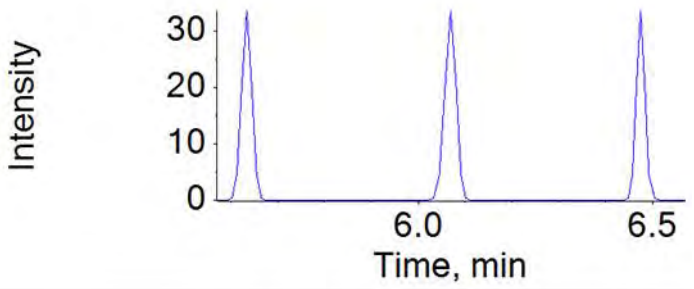
Component: PFDoDA
Primary Mass: 613.0 / 569.0



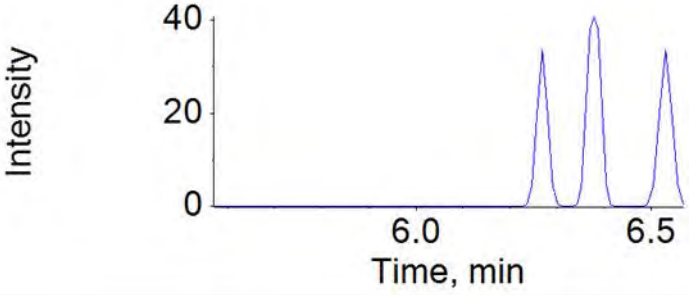
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



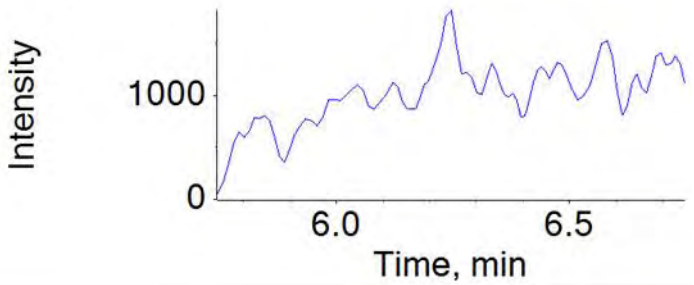
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



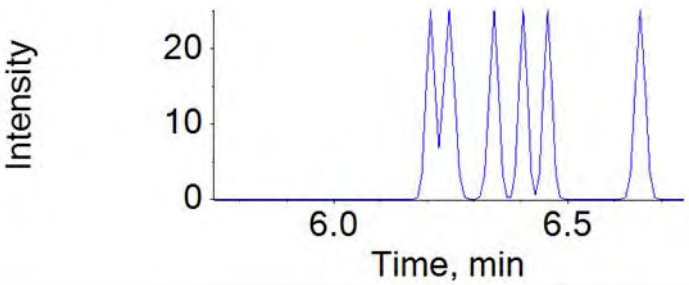
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

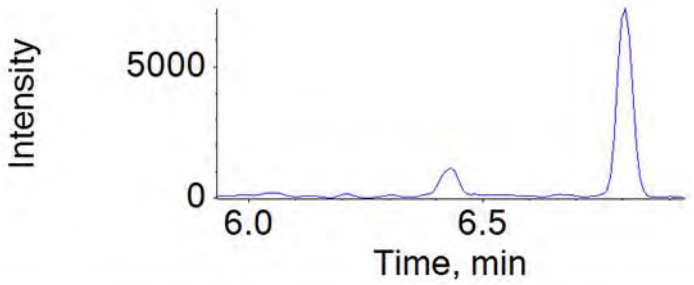
Component: PFTrDA
Primary Mass: 663.0 / 619.0



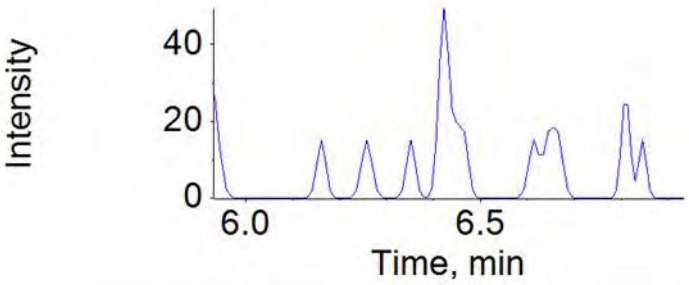
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



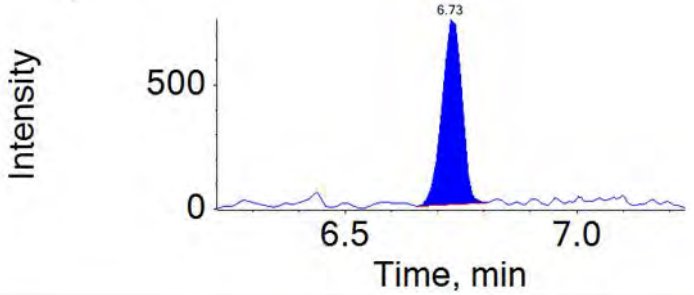
Component: PFTeDA
Primary Mass: 713.0 / 669.0



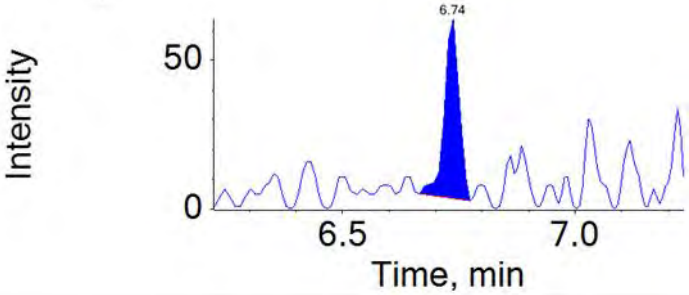
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



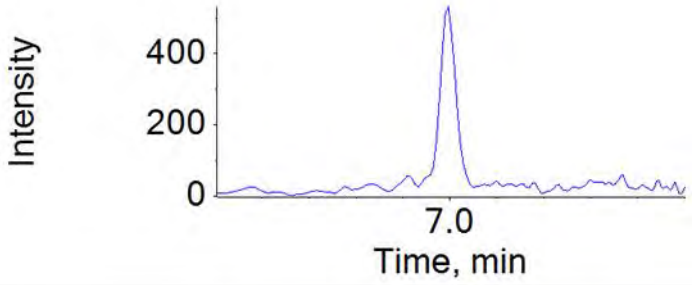
Component: PFHxDA
Primary Mass: 813.0 / 769.0



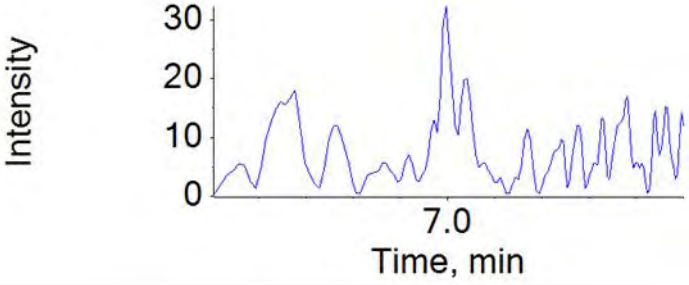
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	MDL			**Data File:**		18NOV12DCAL-41.wiff
Sample ID:	MDLMODX1833F			**Acquis Date:**		2018-11-12T14:56:51
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	2			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	633265.0	659926.2	-4	50	
13C2-PFOA	5.0	422926.0	450219.7	-6	50	
13C4-PFOS	4.8	238608.2	249205.8	-4	50	
13C2-PFDA	5.0	268362.6	278743.9	-4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	710466.9	13C3-PFBA	633265.0	1.122	5.000	5.030	101	70-130	
E13C5-PFPeA	681259.0	13C3-PFBA	633265.0	1.076	5.000	4.825	97	70-130	
E13C3-PFBS	393264.2	13C3-PFBA	633265.0	0.621	4.650	4.384	94	70-130	
E13C2-4:2-FTS	44526.6	13C2-PFOA	422926.0	0.105	4.670	4.689	100	70-130	
E13C5-PFHxA	637812.0	13C2-PFOA	422926.0	1.508	5.000	5.448	109	70-130	
E13C3-PFHxS	301527.6	13C2-PFOA	422926.0	0.713	4.730	4.892	103	70-130	
E13C4-PFHpA	476944.8	13C2-PFOA	422926.0	1.128	5.000	5.081	102	70-130	
E13C2-6:2-FTS	30514.4	13C2-PFOA	422926.0	0.072	4.750	4.827	102	70-130	
E13C8-PFOA	779343.3	13C2-PFOA	422926.0	1.843	5.000	5.077	102	70-130	
E13C8-PFOS	248479.3	13C4-PFOS	238608.2	1.041	4.780	4.614	97	70-130	
E13C9-PFNA	435787.7	13C4-PFOS	238608.2	1.826	5.000	5.092	102	70-130	
E13C6-PFDA	583105.1	13C2-PFDA	268362.6	2.173	5.000	5.070	101	70-130	
E13C2-8:2-FTS	24193.5	13C2-PFDA	268362.6	0.090	4.790	4.496	94	70-130	
E13C8-PFOSA	559143.9	13C2-PFDA	268362.6	2.084	5.000	4.619	92	70-130	
Ed3-NMeFOSAA	63421.6	13C2-PFDA	268362.6	0.236	5.000	4.266	85	70-130	
E13C7-PFUnDA	227858.5	13C2-PFDA	268362.6	0.849	5.000	4.930	99	70-130	
Ed5-NEtFOSAA	57840.8	13C2-PFDA	268362.6	0.216	5.000	4.560	91	70-130	
E13C2-PFDoDA	487146.2	13C2-PFDA	268362.6	1.815	5.000	4.713	94	70-130	
Ed7-NMePFOSAE	286690.6	13C2-PFDA	268362.6	1.068	5.000	4.623	92	70-130	
Ed3-NMePFOSA	71517.2	13C2-PFDA	268362.6	0.266	5.000	4.842	97	70-130	
Ed9-NEtPFOSAE	252037.2	13C2-PFDA	268362.6	0.939	5.000	4.885	98	70-130	
Ed5-NEtPFOSA	54637.9	13C2-PFDA	268362.6	0.204	5.000	4.776	96	70-130	
E13C2-PFTeDA	362820.8	13C2-PFDA	268362.6	1.352	5.000	4.746	95	70-130	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

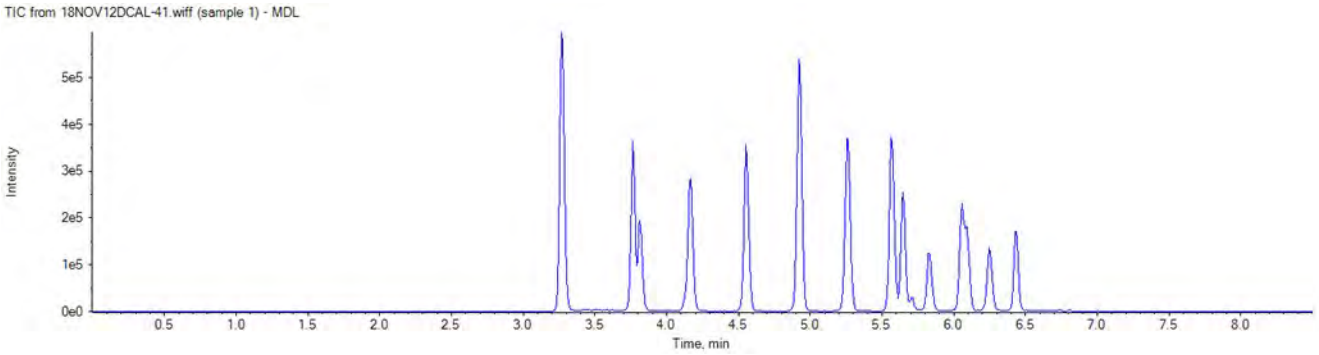
Analyte Quantitation Peak Table

Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-41.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	22532.9		A	13C4-PFBA	3.27	710466.9	0.032	0.176
PFPeA	3.77	1.000	20193.5		M	13C5-PFPeA	3.77	681259.0	0.030	0.172
PFBS	3.81	1.000	9248.3		A	13C3-PFBS	3.81	393264.2	0.024	0.112
4:2-FTS	4.13	1.000	1329.9		A	13C2-4:2-FTS	4.13	44526.6	0.030	0.081
PFHxA	4.17	1.000	21601.6		A	13C5-PFHxA	4.17	637812.0	0.034	0.141
PFPeS	4.19	1.100	4484.8		A	13C3-PFBS	3.81	393264.2	0.011	0.111
PFHpA	4.56	1.000	22043.5		A	13C4-PFHpA	4.55	476944.8	0.046	0.153
PFHxS	4.56	1.000	8143.5		M	13C3-PFHxS	4.56	301527.6	0.027	0.131
6:2-FTS	4.91	1.000	1176.2		M	13C2-6:2-FTS	4.91	30514.4	0.039	0.093
PFHpS	4.92	1.080	7117.5		A	13C3-PFHxS	4.56	301527.6	0.024	0.124
PFOA	4.93	1.000	18045.0		A	13C8-PFOA	4.93	779343.3	0.023	0.124
PFOS	5.25	1.000	6416.9		A	13C8-PFOS	5.25	248479.3	0.026	0.113
PFNA	5.27	1.000	18065.1		M	13C9-PFNA	5.27	435787.7	0.041	0.149
PFNS	5.54	1.060	3661.2		A	13C8-PFOS	5.25	248479.3	0.015	0.103
PFDA	5.57	1.000	17350.5		A	13C6-PFDA	5.57	583105.1	0.030	0.158
8:2-FTS	5.57	1.000	1475.2		A	13C2-8:2-FTS	5.57	24193.5	0.061	0.142
PFOSA	5.64	1.000	10288.3		A	13C8-PFOSA	5.65	559143.9	0.018	0.090
NMeFOSAA	5.72	1.000	1372.4		A	d3-NMeFOSAA	5.71	63421.6	0.022	0.122
PFDS	5.80	1.100	2648.8		A	13C8-PFOS	5.25	248479.3	0.011	0.097
PFUnDA	5.83	1.000	12215.3		M	13C7-PFUnDA	5.83	227858.5	0.054	0.140
NEtFOSAA	5.84	1.000	1937.8		A	d5-NEtFOSAA	5.84	57840.8	0.034	0.176
PFDoDA	6.06	1.000	14033.1		A	13C2-PFDoDA	6.06	487146.2	0.029	0.147
10:2-FTS	6.06	1.090	352.6		M	13C2-8:2-FTS	5.57	24193.5	0.015	0.049
NMePFOSAE	6.10	1.000	9218.1		A	d7-NMePFOSAE	6.09	286690.6	0.032	0.134
NMePFOSA	6.11	1.000	1339.8		A	d3-NMePFOSA	6.11	71517.2	0.019	0.092
PFDoS	6.22	1.180	1425.7		A	13C8-PFOS	5.25	248479.3	0.006	0.100
NEtPFOSAE	6.26	1.000	10510.3		A	d9-NEtPFOSAE	6.25	252037.2	0.042	0.134
NEtPFOSA	6.28	1.000	1191.3		M	d5-NEtPFOSA	6.27	54637.9	0.022	0.100
PFTrDA	6.26	1.030	7825.5		M	13C2-PFDoDA	6.06	487146.2	0.016	0.101
PFTeDA	6.43	1.000	8938.5		A	13C2-PFTeDA	6.43	362820.8	0.025	0.138
PFHxDA	6.74	1.050	3934.2		A	13C2-PFTeDA	6.43	362820.8	0.011	0.129
PFODA	7.00	1.090	2726.4		A	13C2-PFTeDA	6.43	362820.8	0.008	0.105

Total Ion Chromatogram

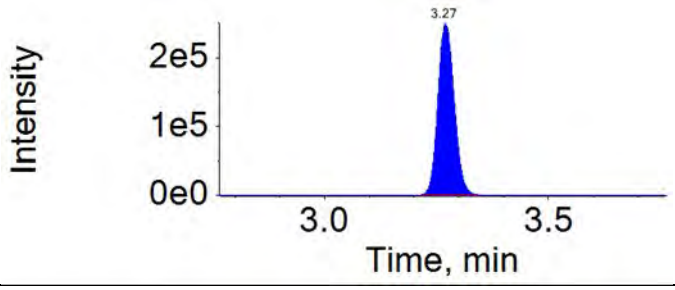


APPROVED
By MCD at 6:34 pm, 11/12/18

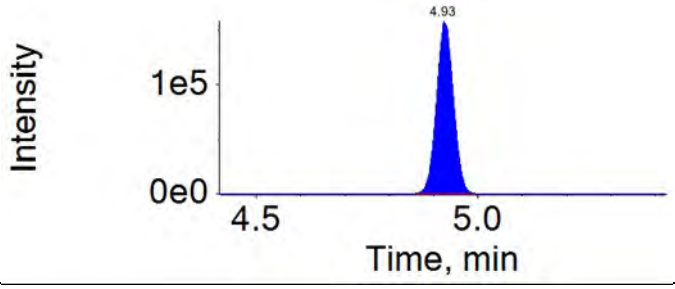
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

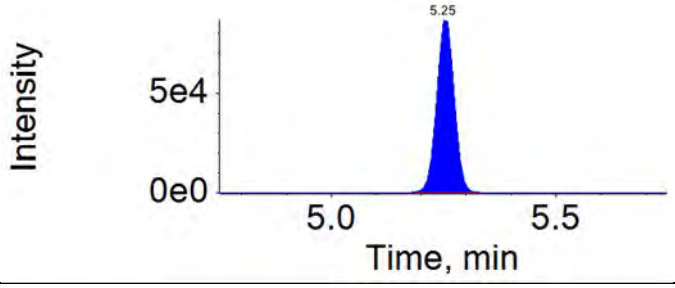
Injection Standard: 13C3-PFBA
216.0 / 172.0



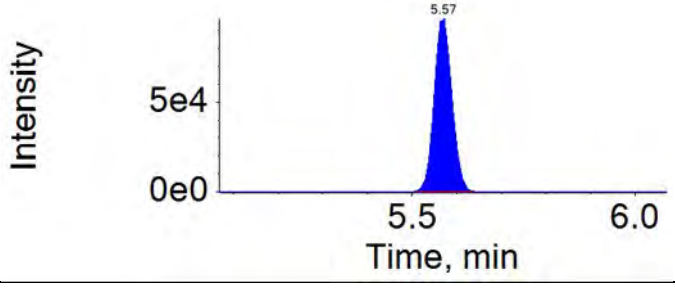
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

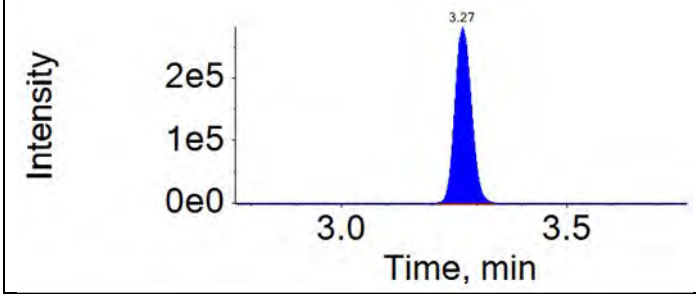


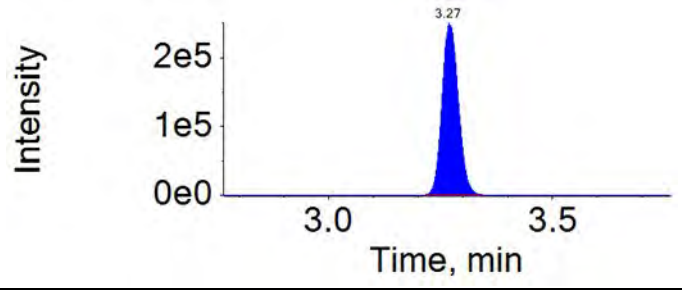
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

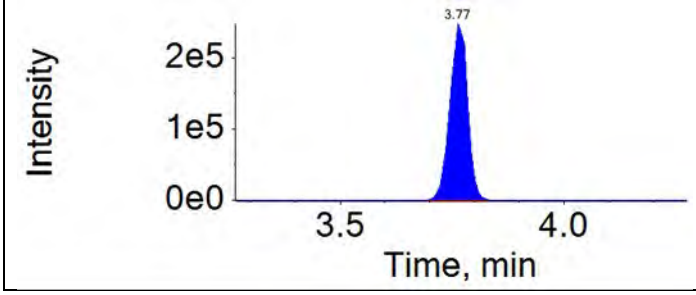
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

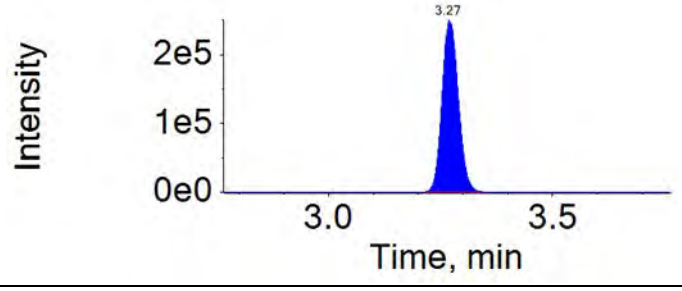
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



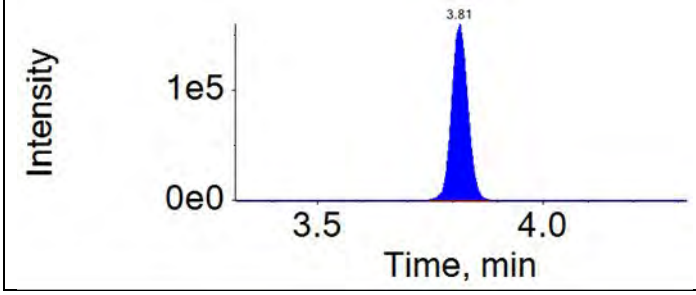


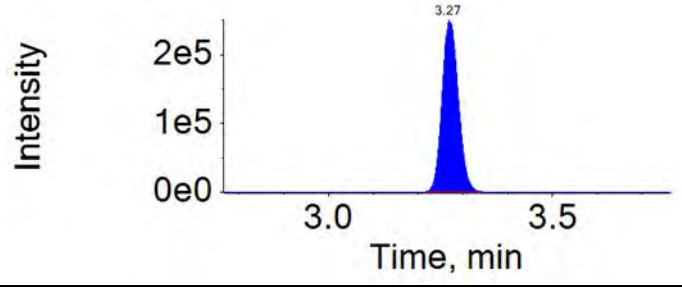
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



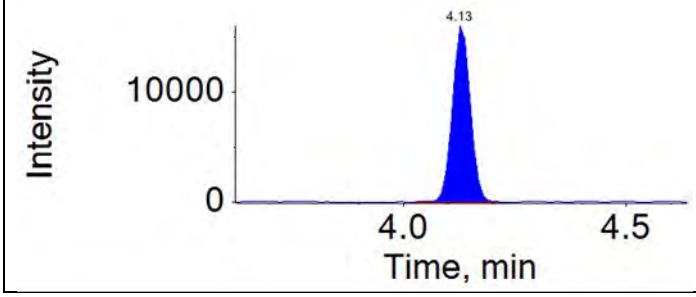


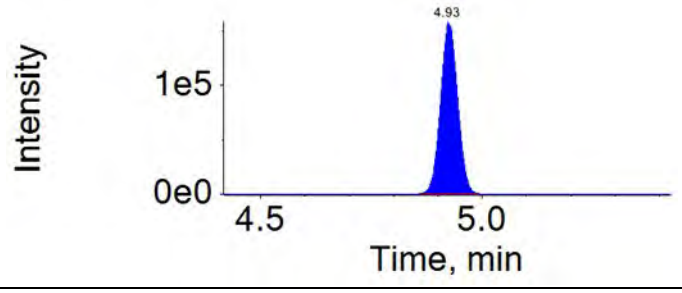
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



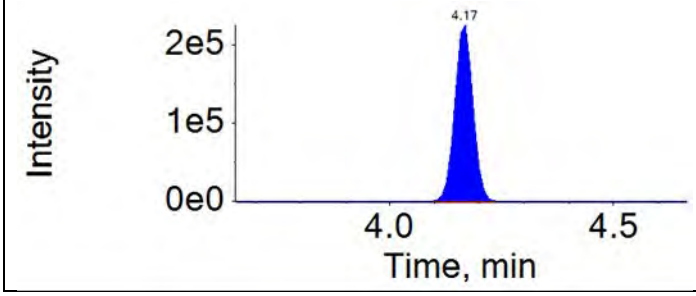


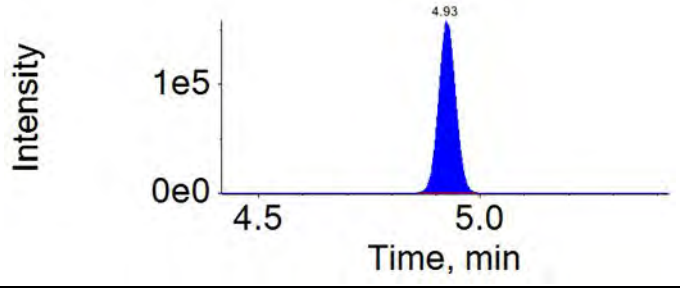
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

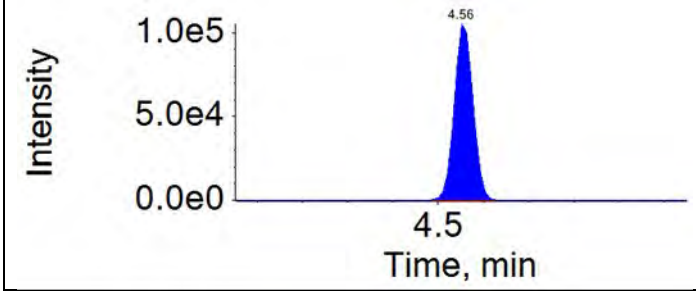
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

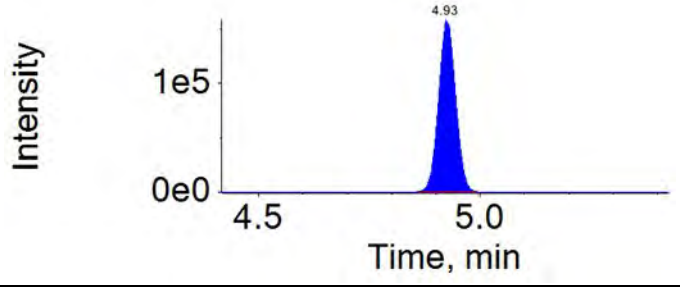
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



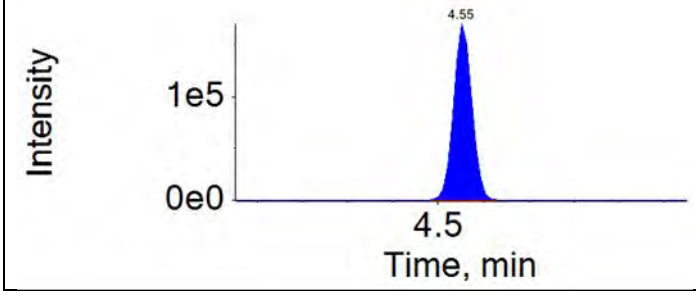


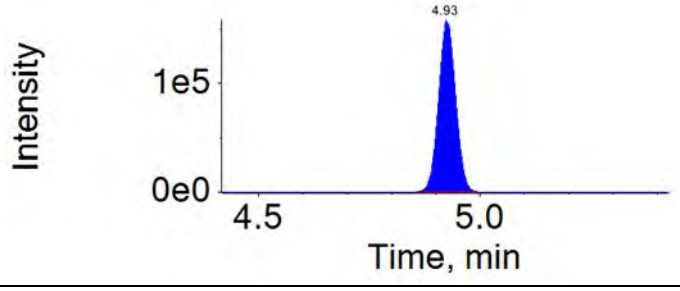
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



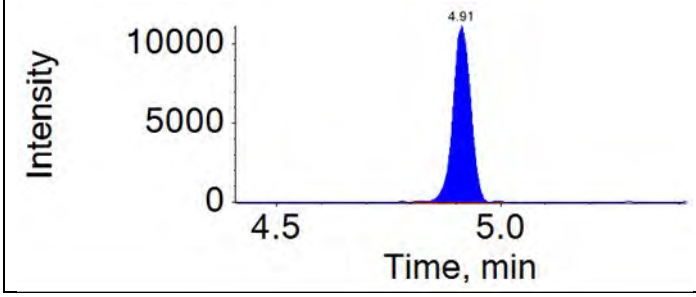


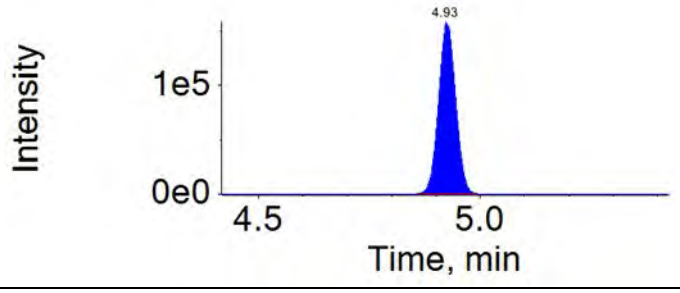
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



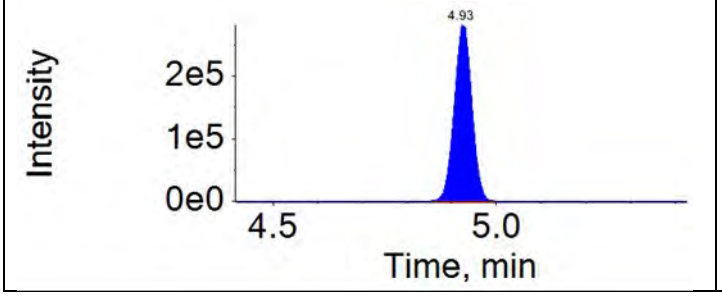


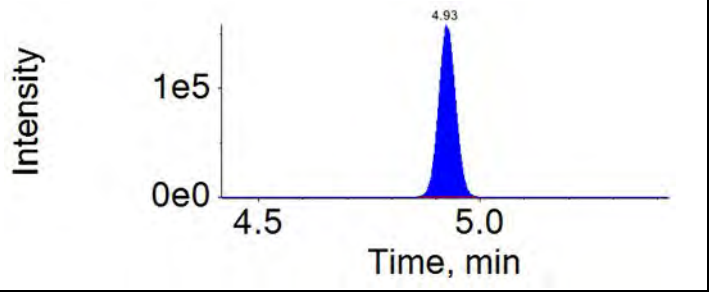
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

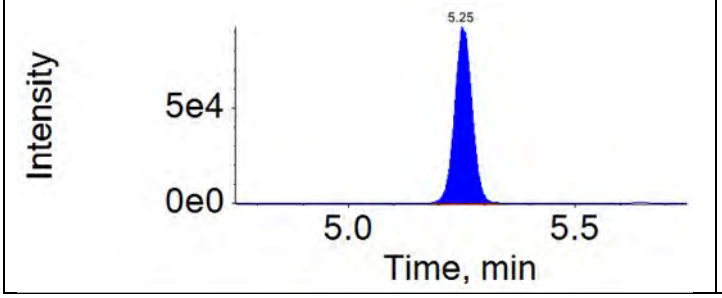
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

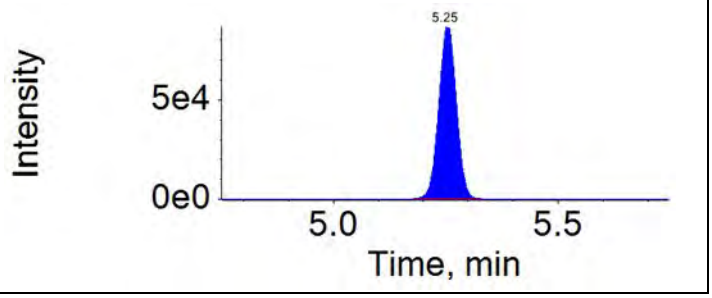
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



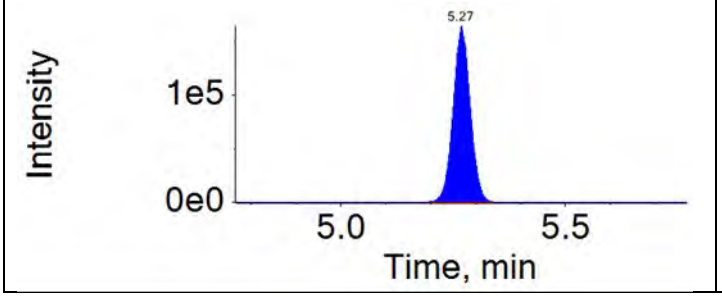


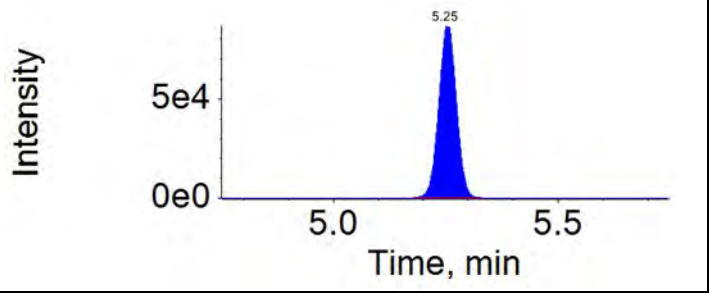
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



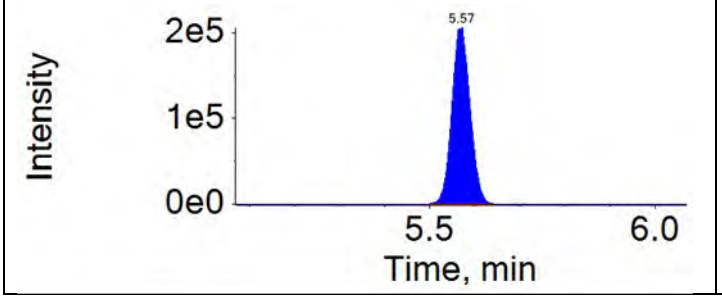


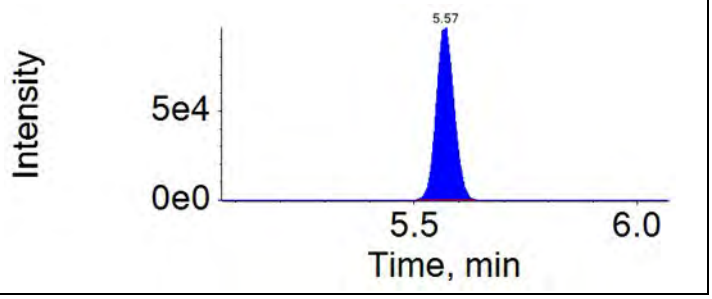
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

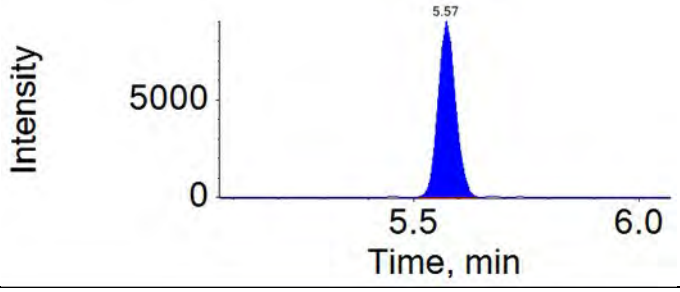
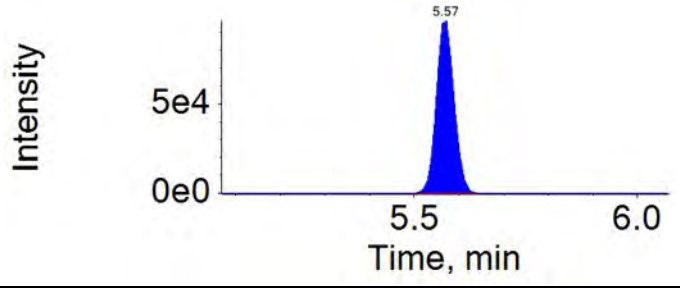


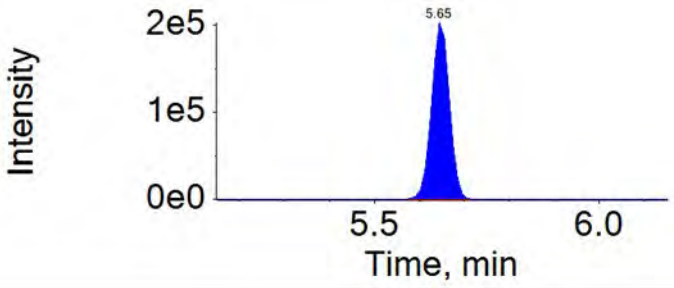
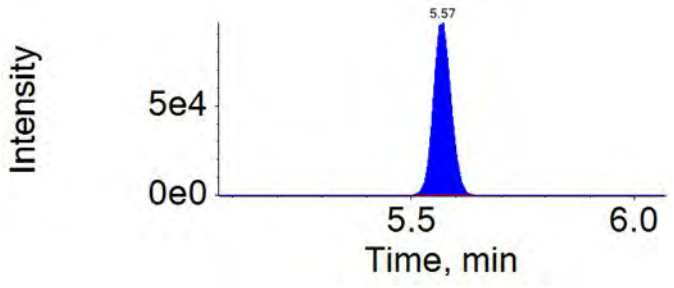


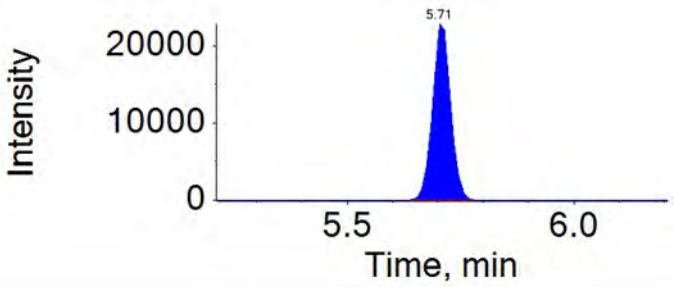
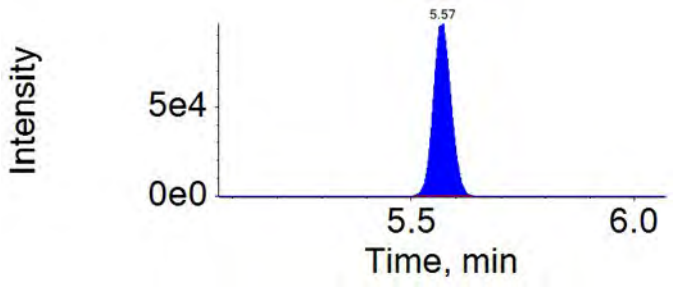
APPROVED
By MCD at 6:34 pm, 11/12/18

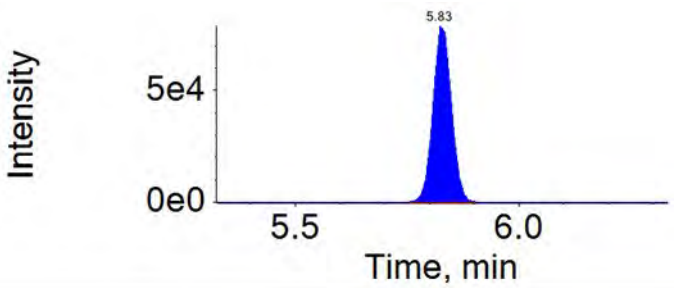
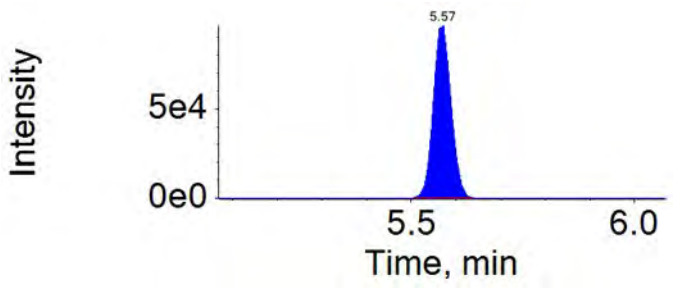
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

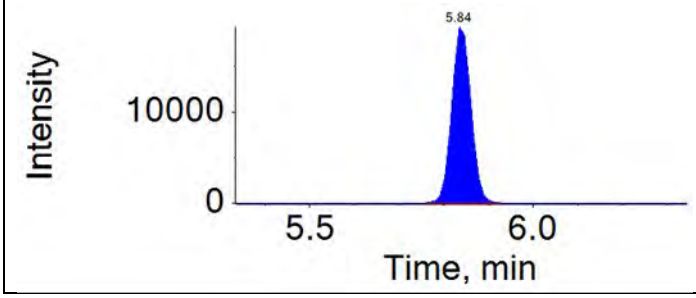
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

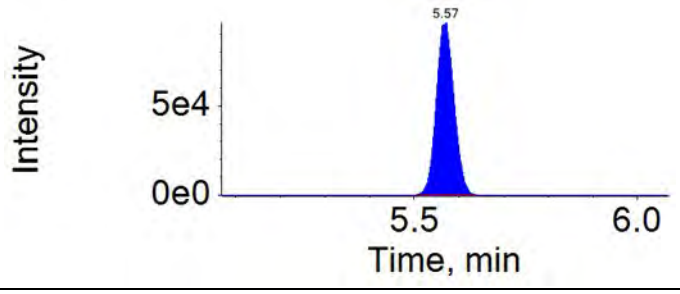
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

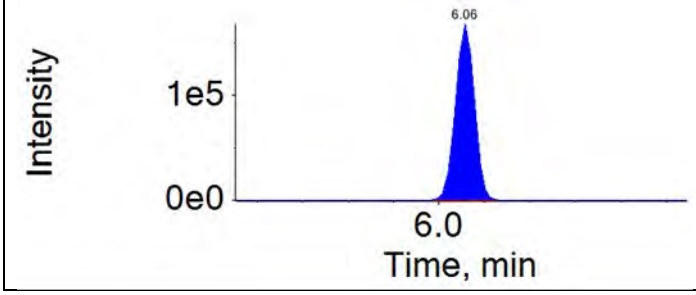
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

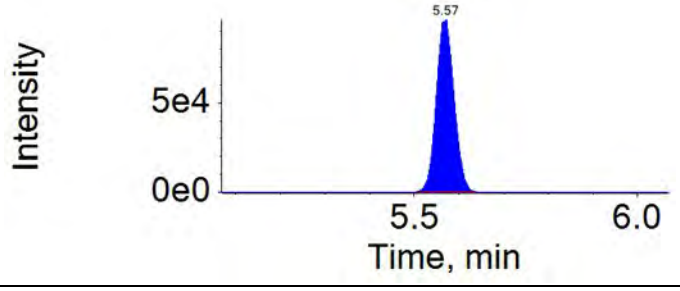
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



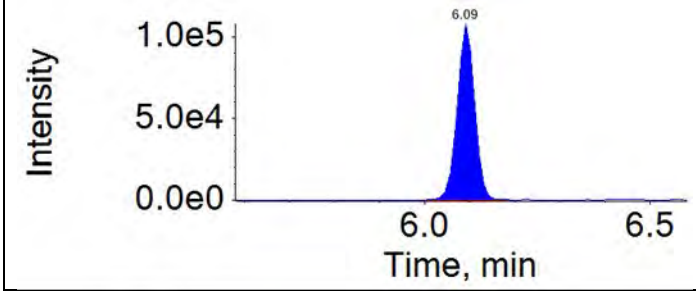


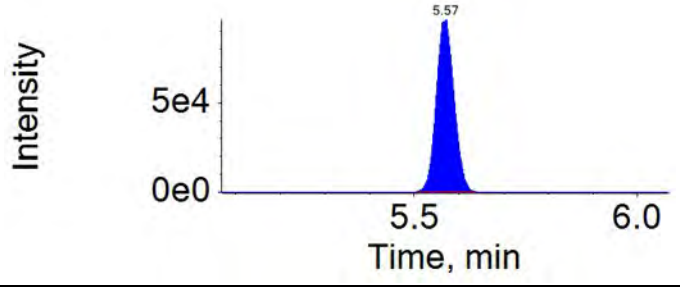
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



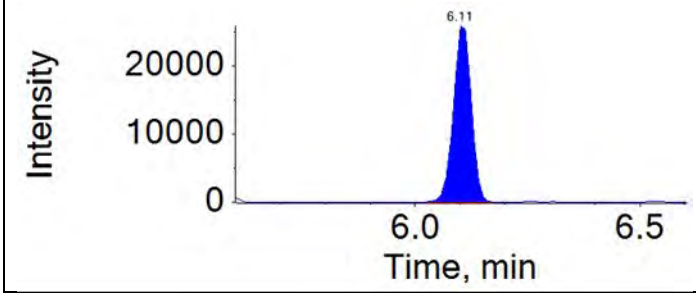


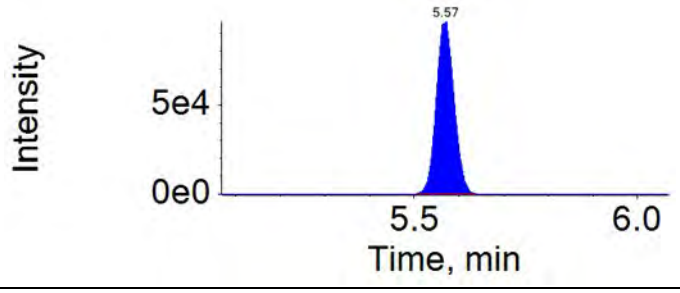
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



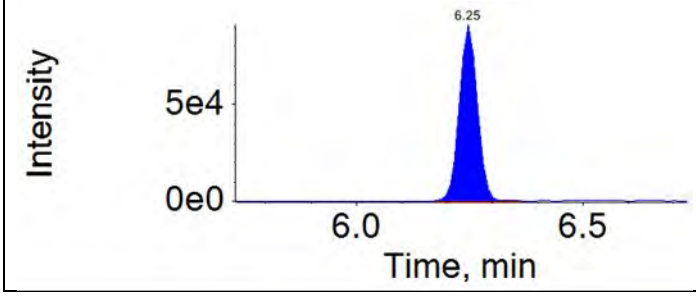


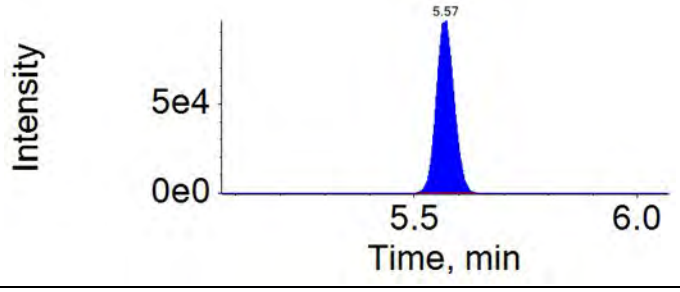
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

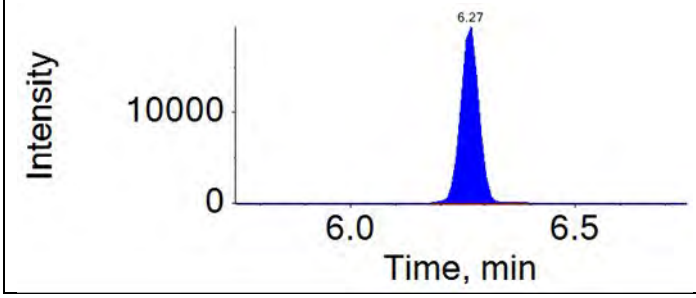
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

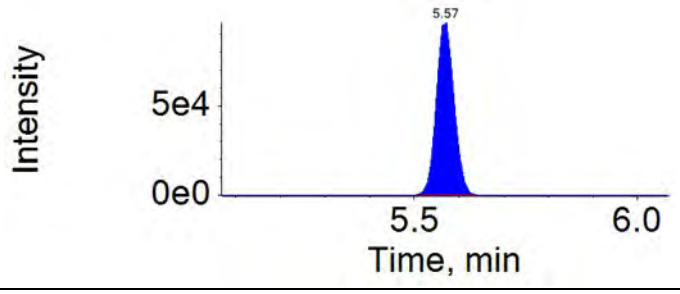
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



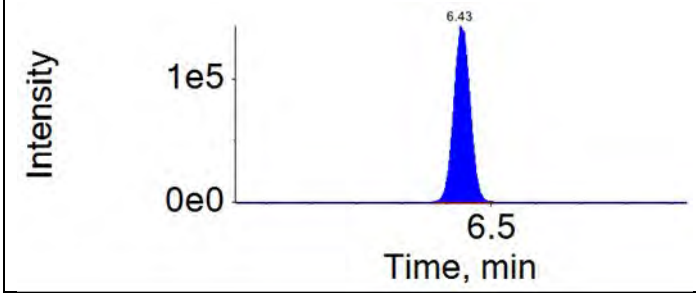


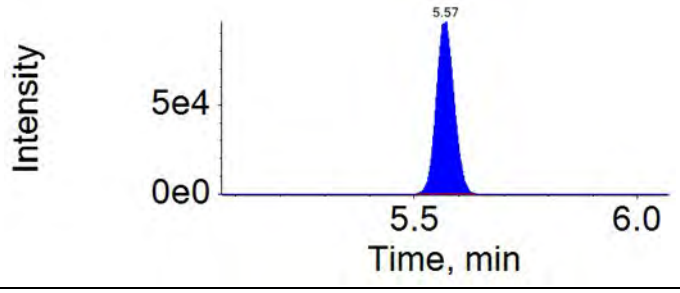
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



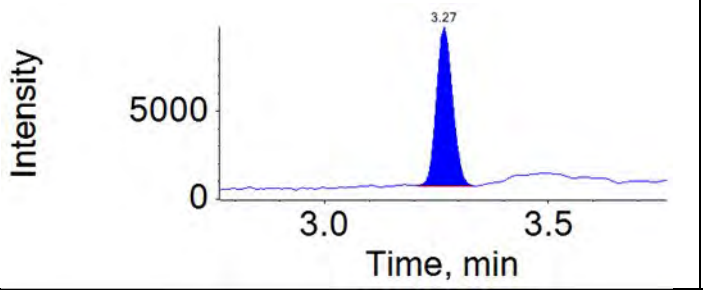


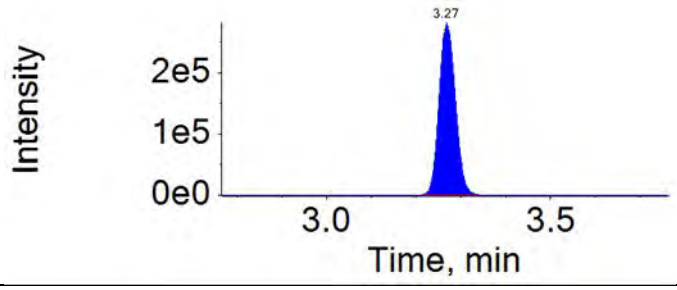
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

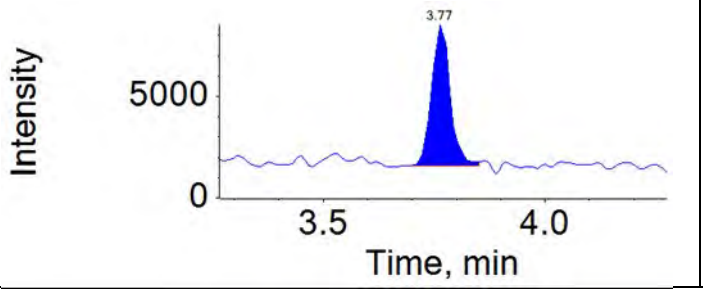
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

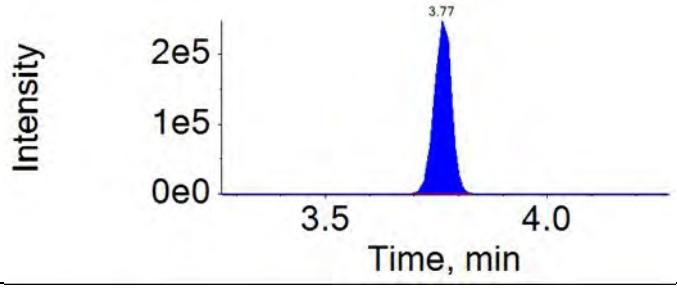
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



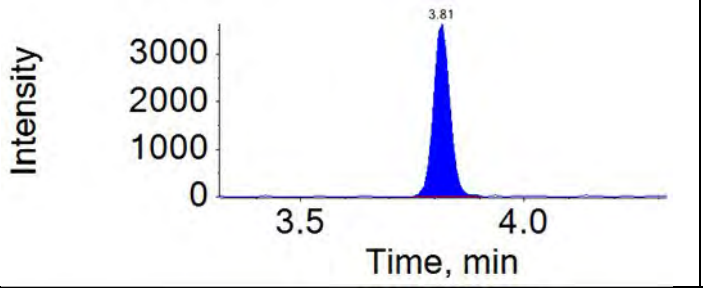


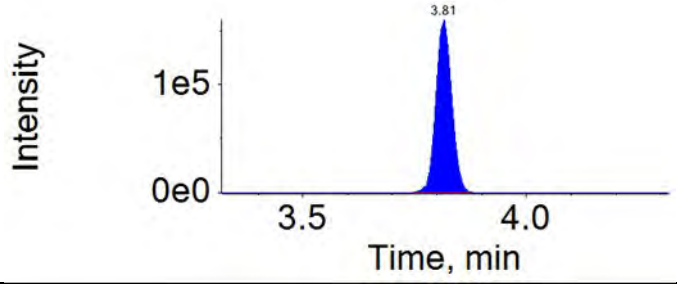
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



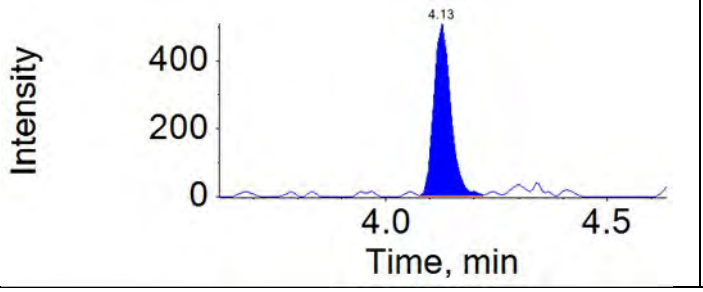


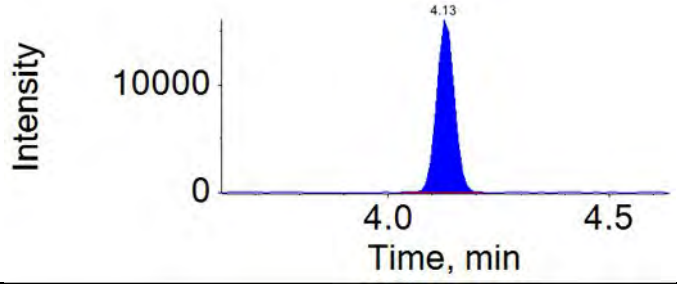
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



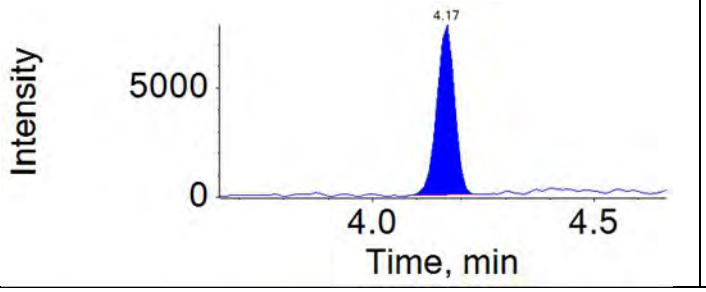


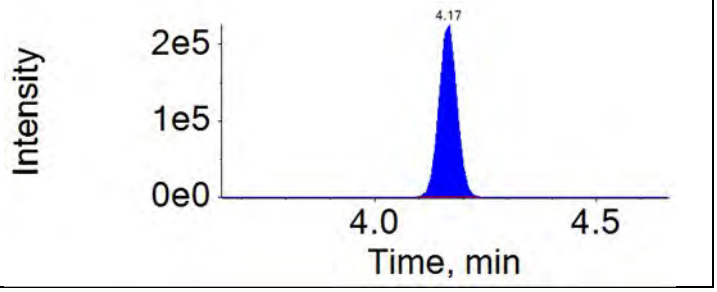
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

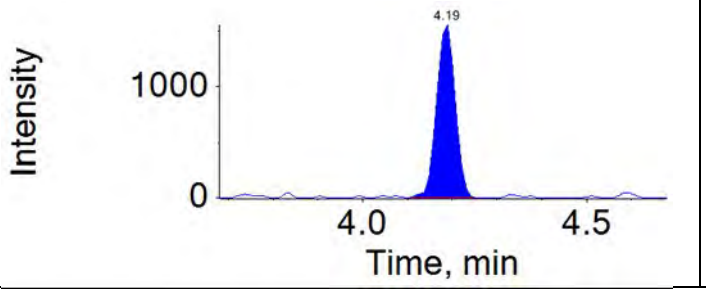
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

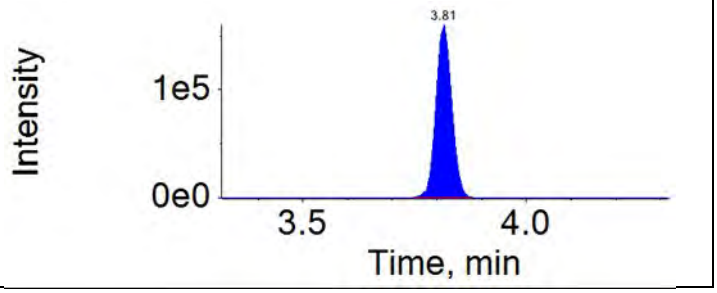
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



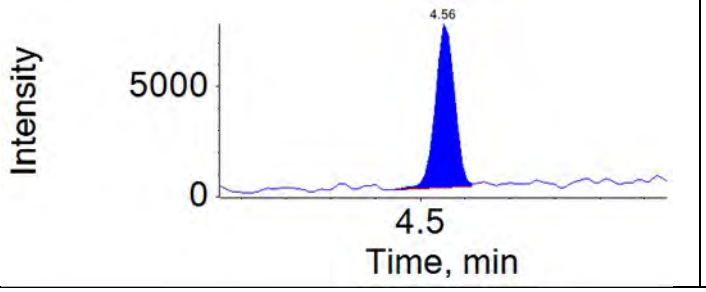


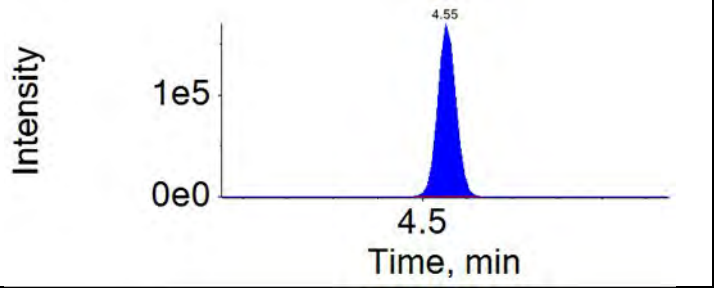
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



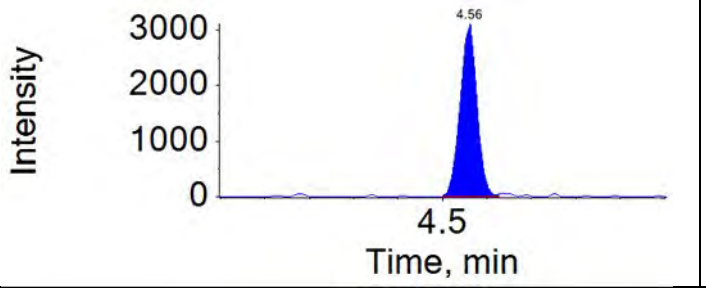


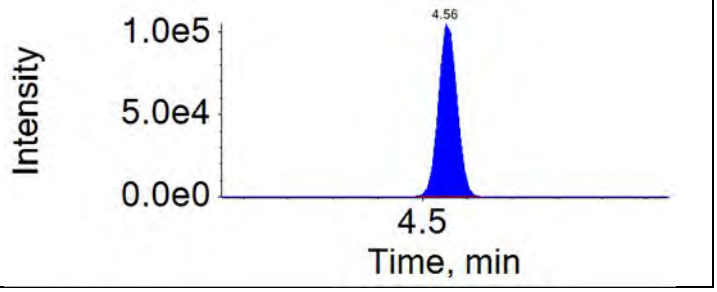
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



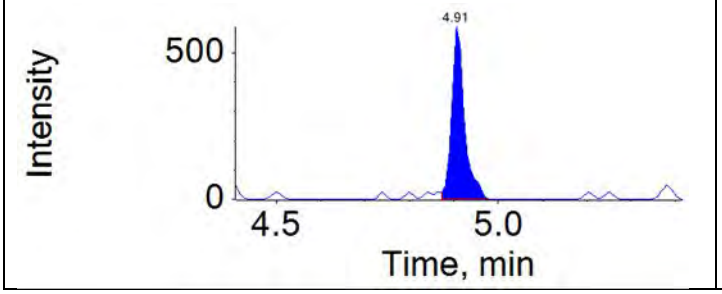


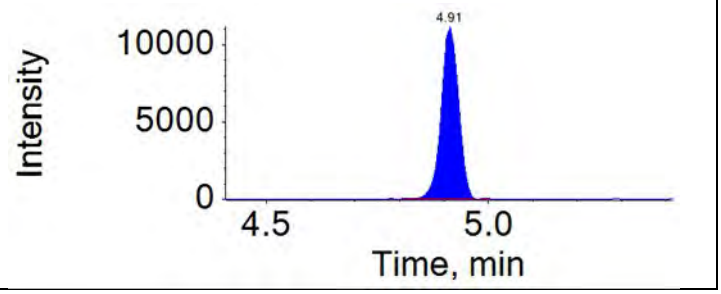
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

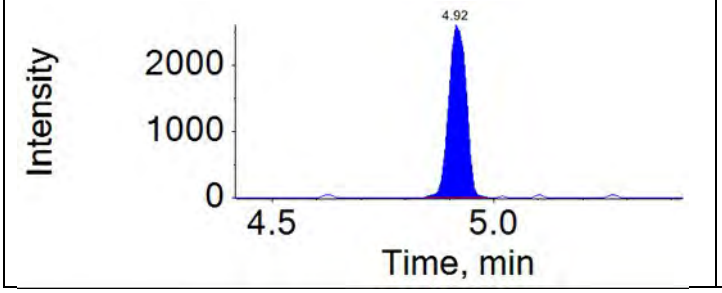
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

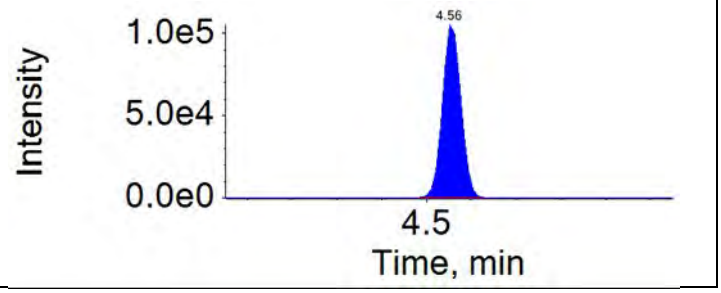
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



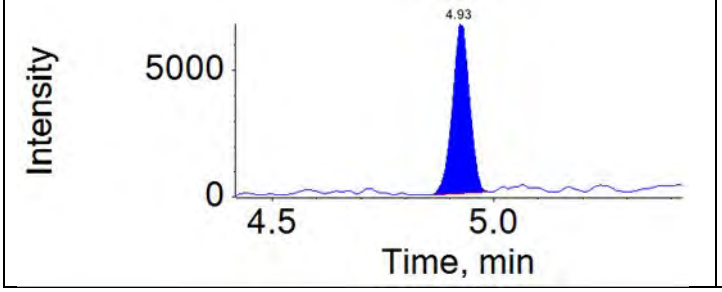


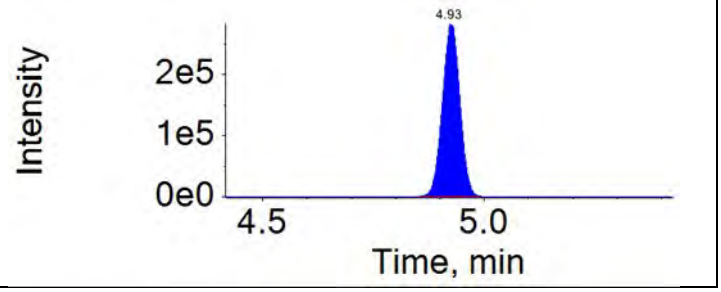
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



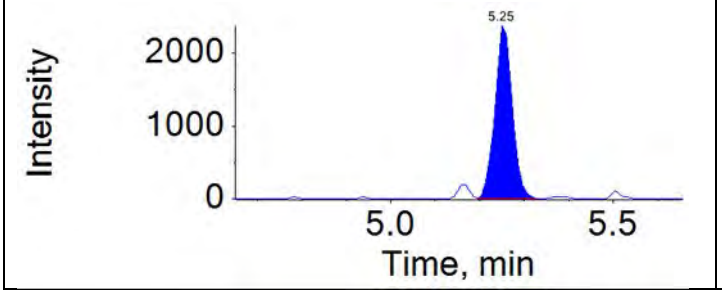


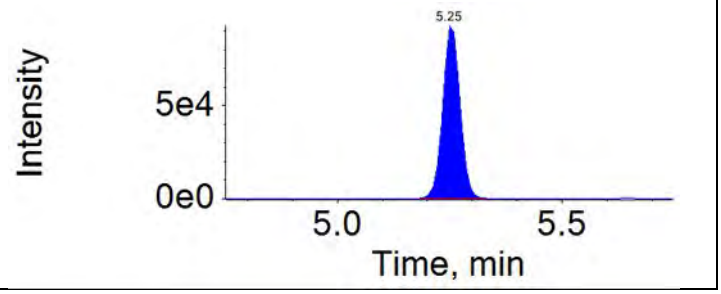
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

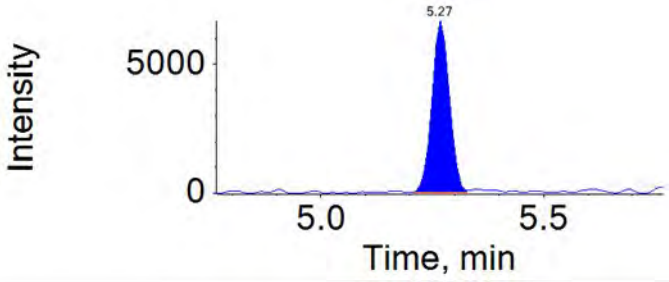
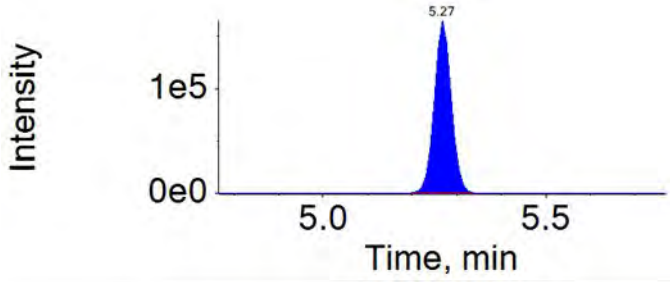


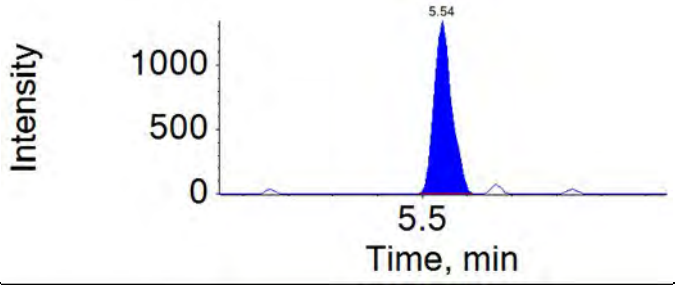
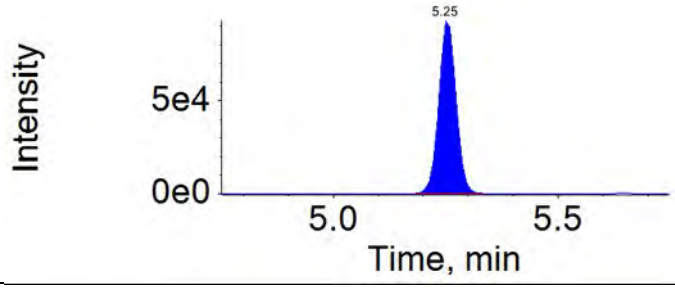


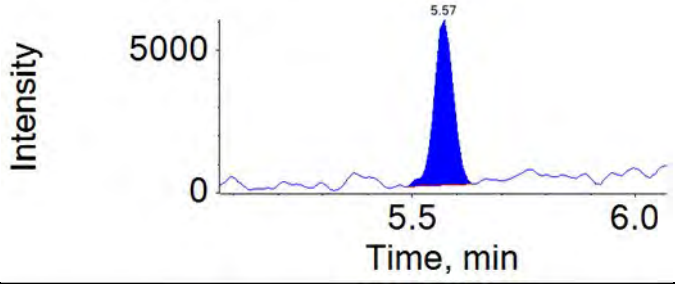
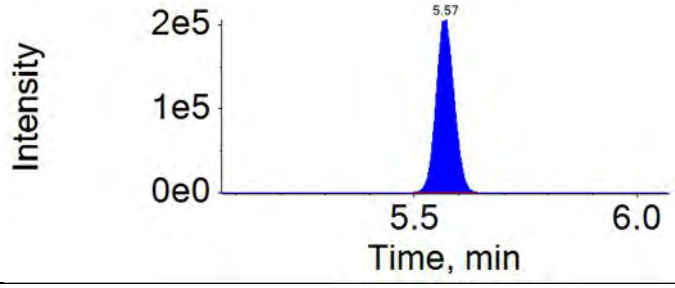
APPROVED
By MCD at 6:34 pm, 11/12/18

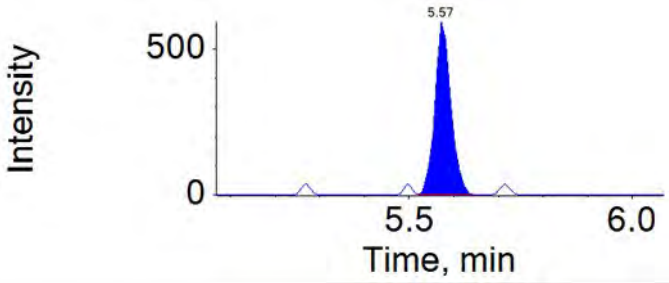
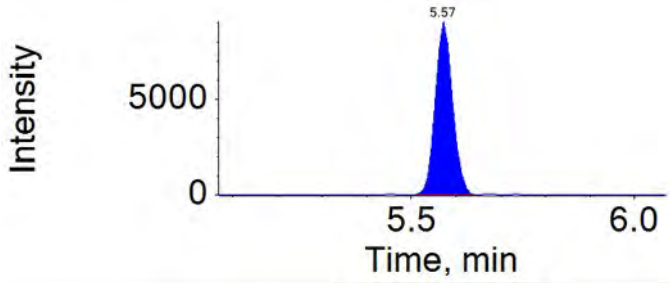
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

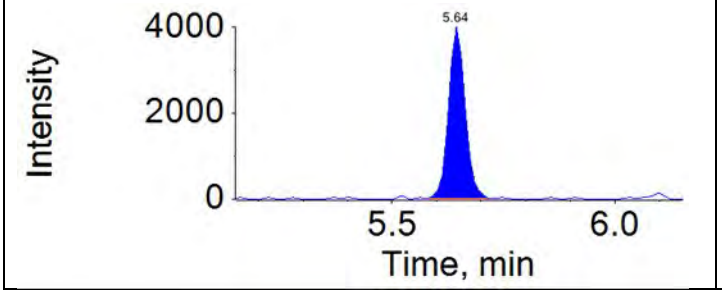
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

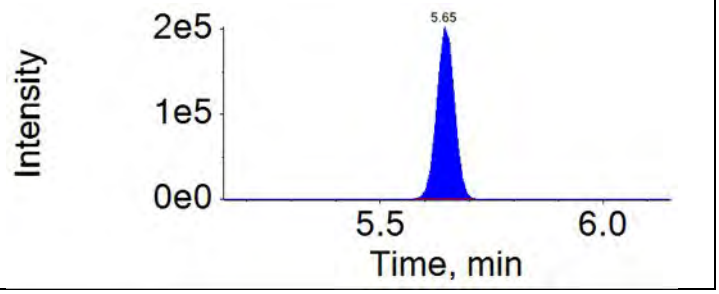
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

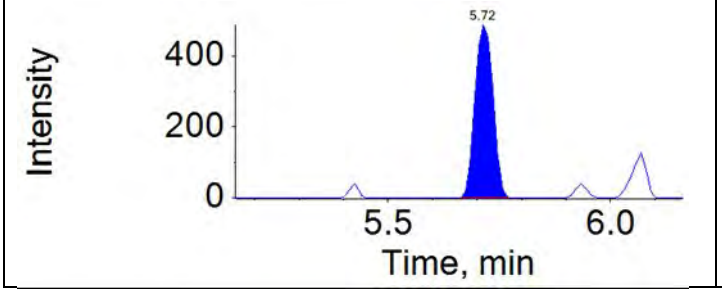
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

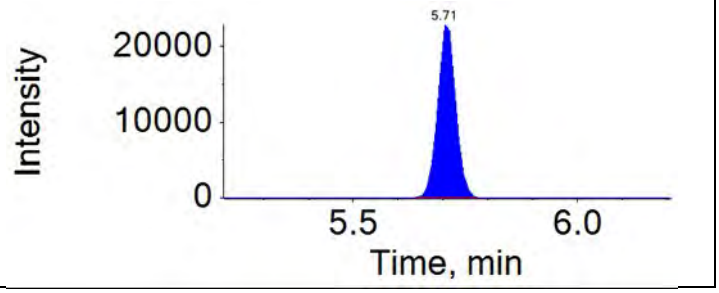
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



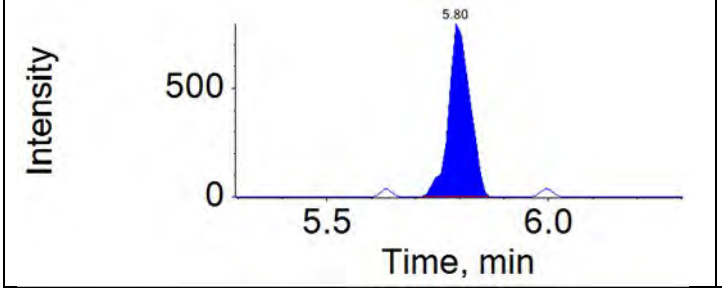


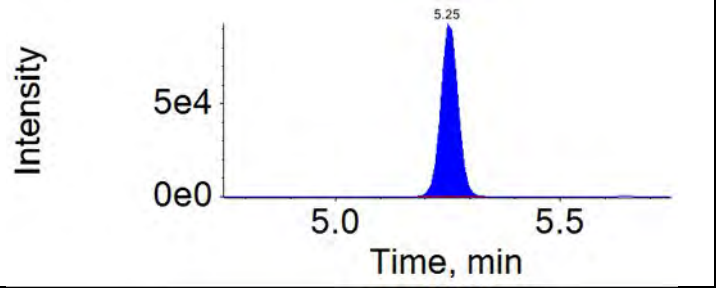
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



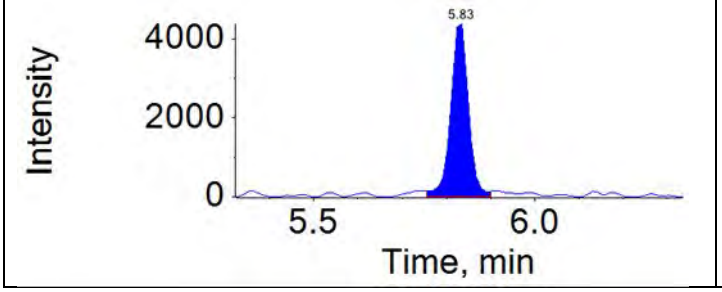


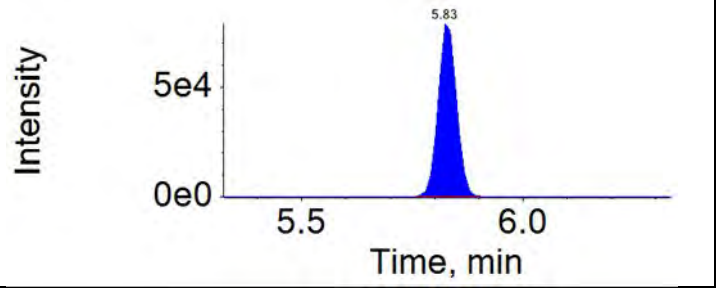
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



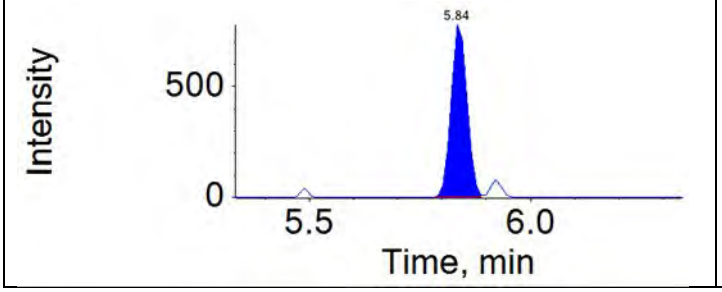


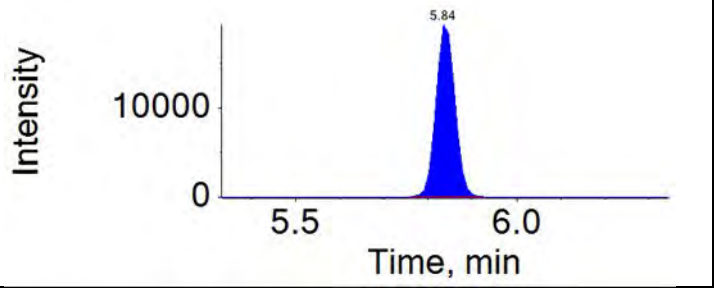
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

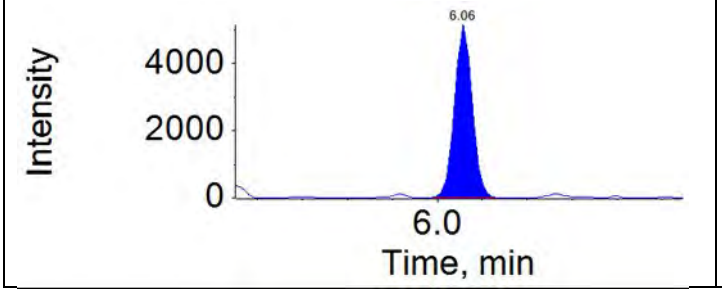
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

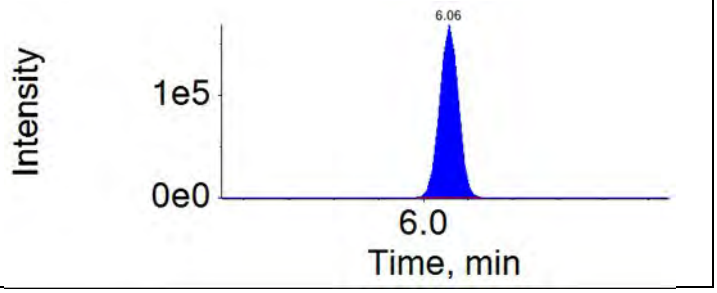
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



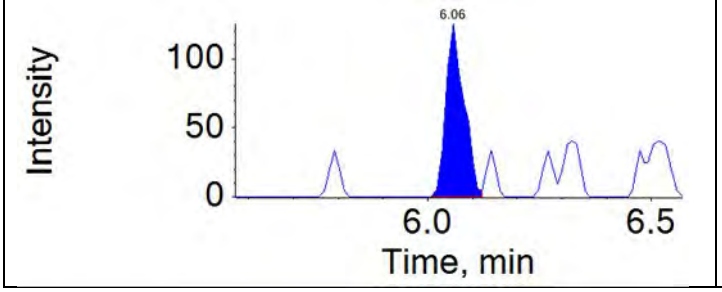


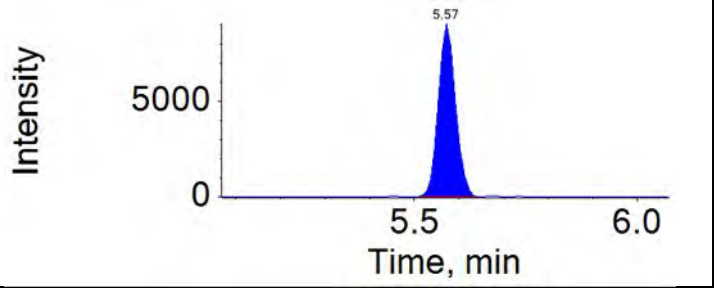
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



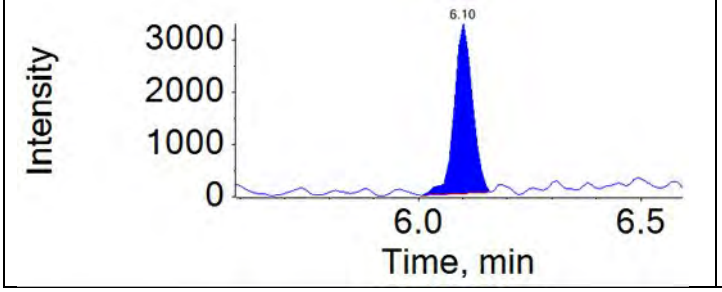


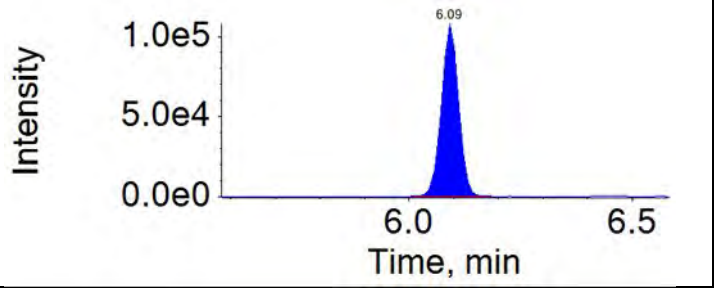
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



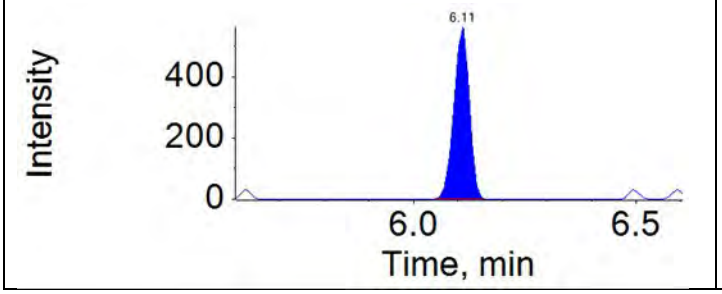


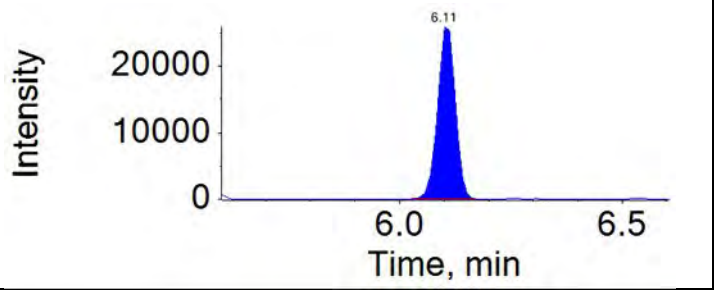
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

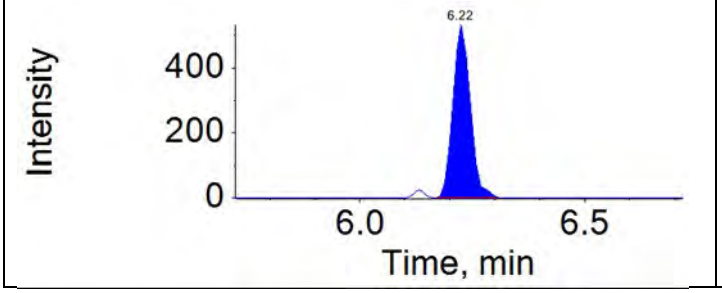
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

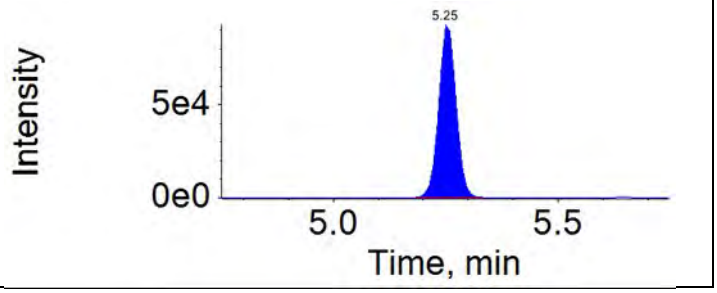
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



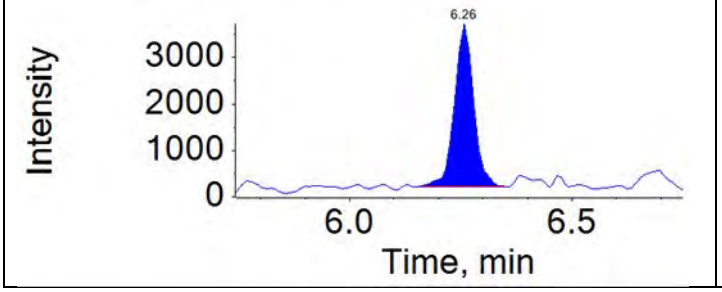


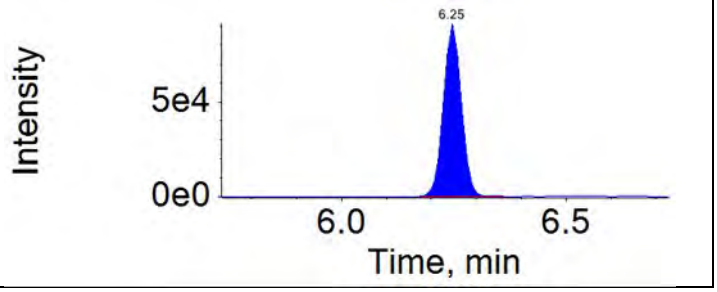
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



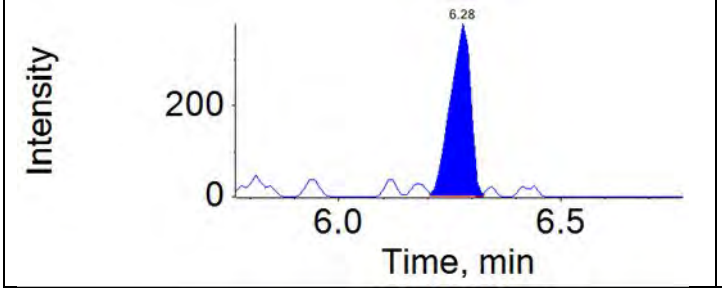


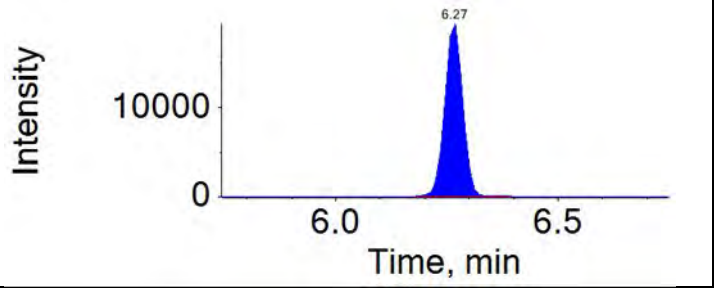
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

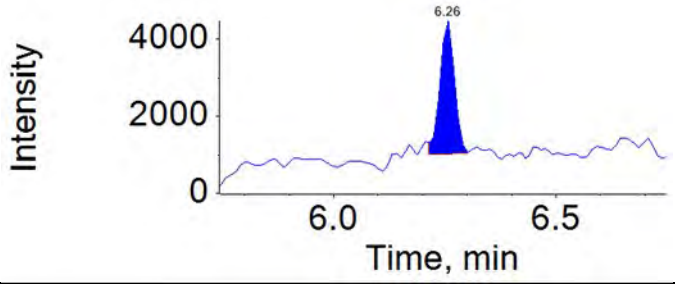
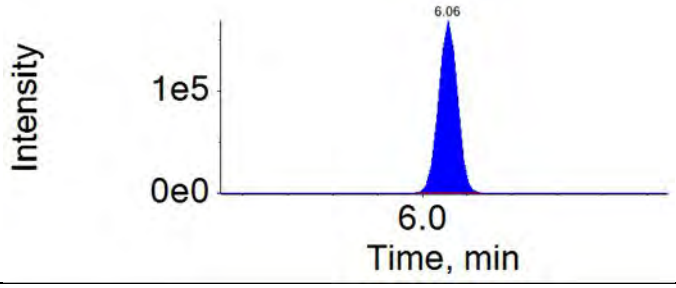


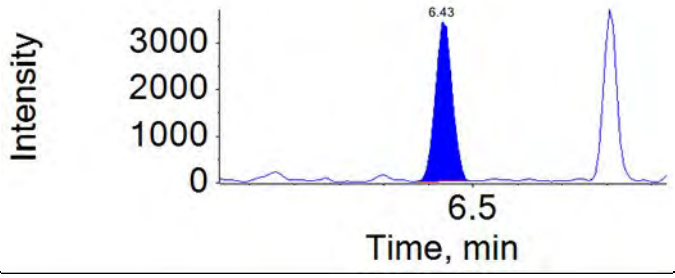
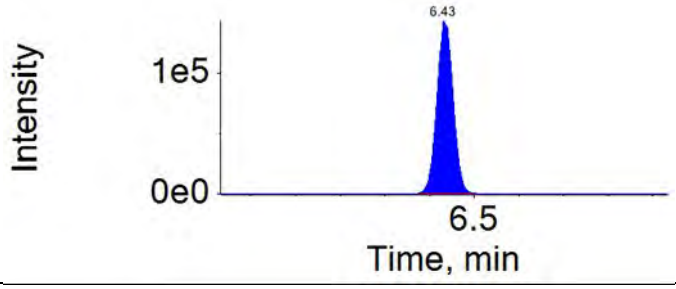


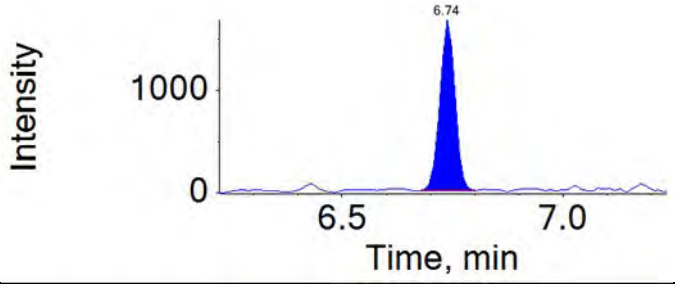
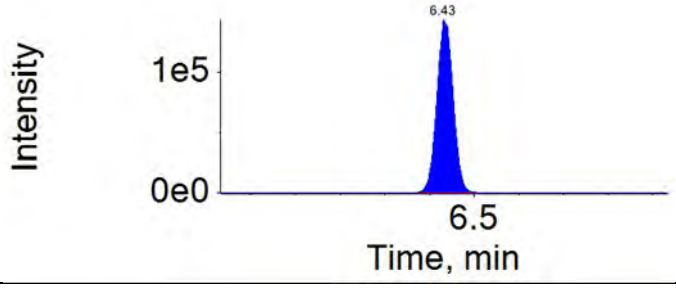
APPROVED
By MCD at 6:34 pm, 11/12/18

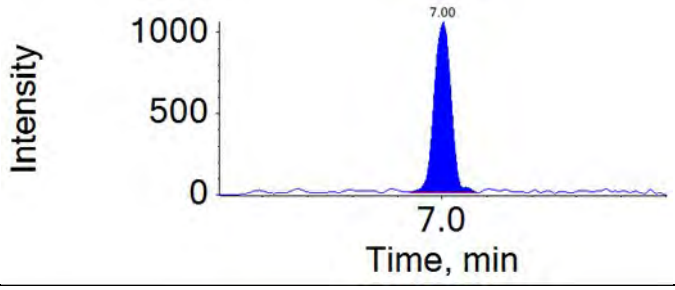
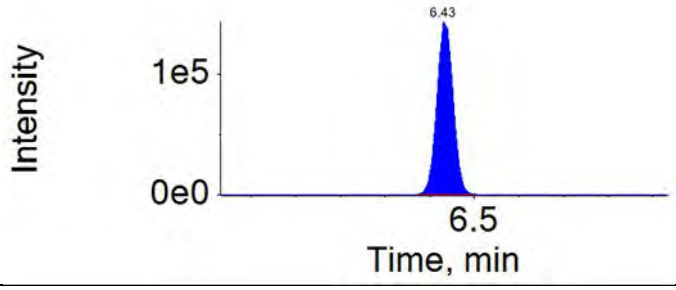
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

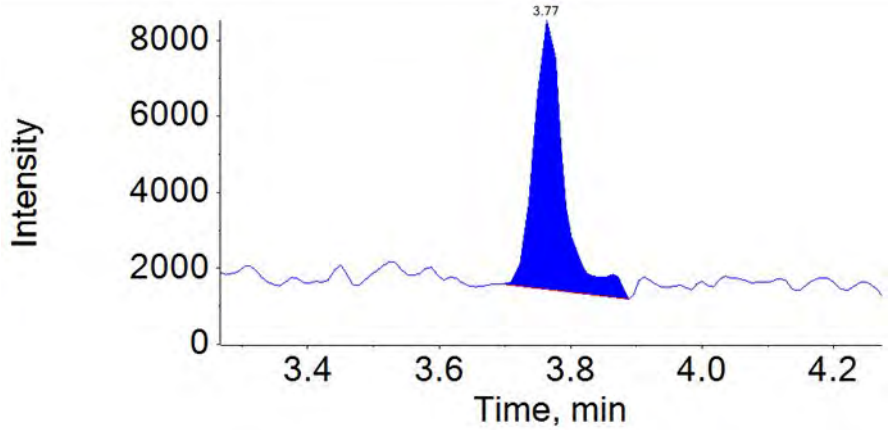
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

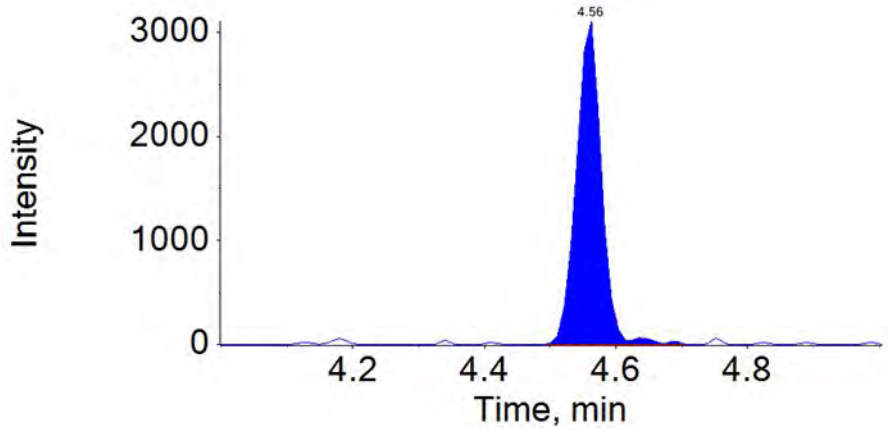
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

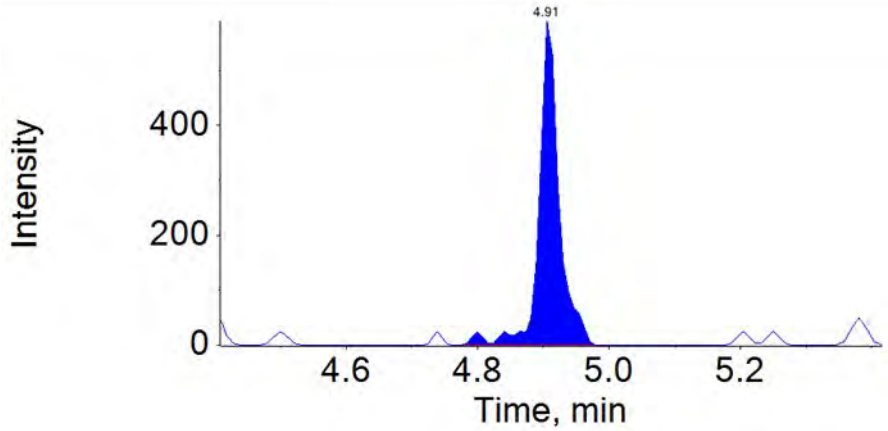
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFPeA **RT (min.):** 3.77 **Peak Area:** 22570.74 **Mass Range:** 263.0 / 219.0 **File Name:** 18NOV12DCAL-41.wiff **Sample Name:** MDL	 **Integration Comment:** incorrect integration

Component Name: PFHxS **RT (min.):** 4.56 **Peak Area:** 8305.21 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV12DCAL-41.wiff **Sample Name:** MDL	 **Integration Comment:** incorrect integration

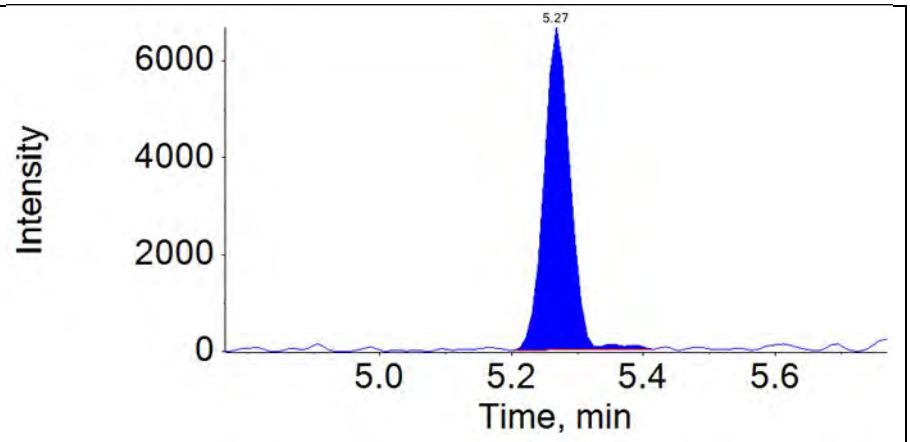
Component Name: 6:2-FTS **RT (min.):** 4.91 **Peak Area:** 1264.35 **Mass Range:** 427.0 / 407.0 **File Name:** 18NOV12DCAL-41.wiff **Sample Name:** MDL	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

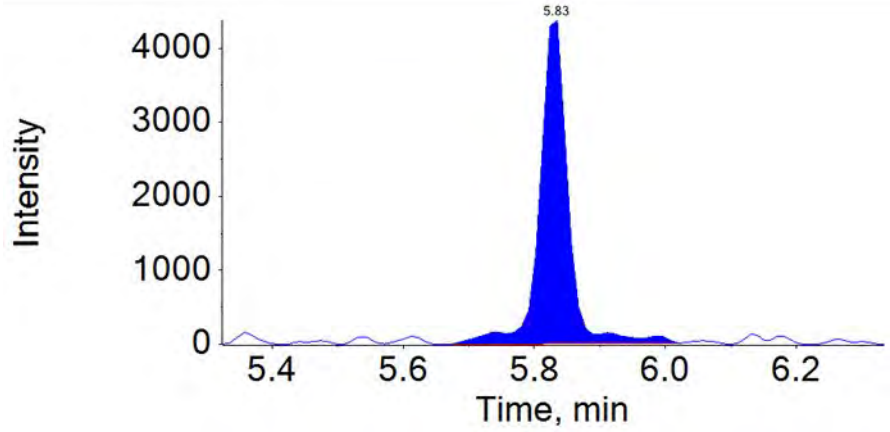
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFNA
RT (min.):
5.27
Peak Area:
18397.36
Mass Range:
463.0 / 419.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



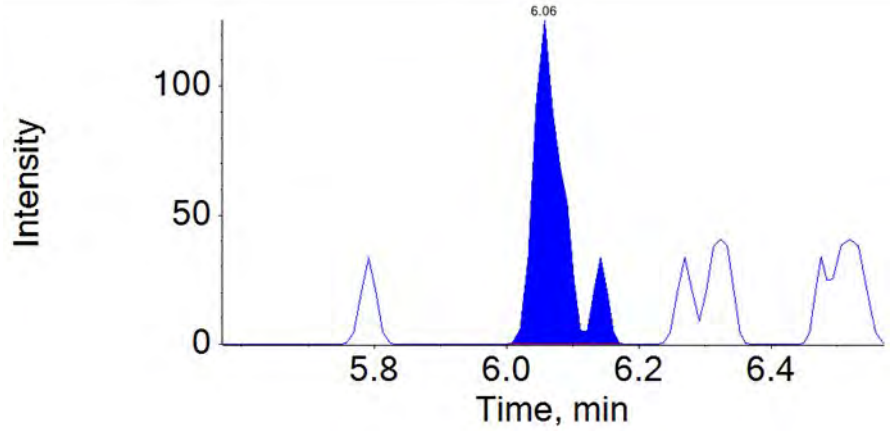
Integration Comment: incorrect integration

Component Name:
PFUnDA
RT (min.):
5.83
Peak Area:
13277.76
Mass Range:
563.0 / 519.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
10:2-FTS
RT (min.):
6.06
Peak Area:
401.71
Mass Range:
627.0 / 607.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL

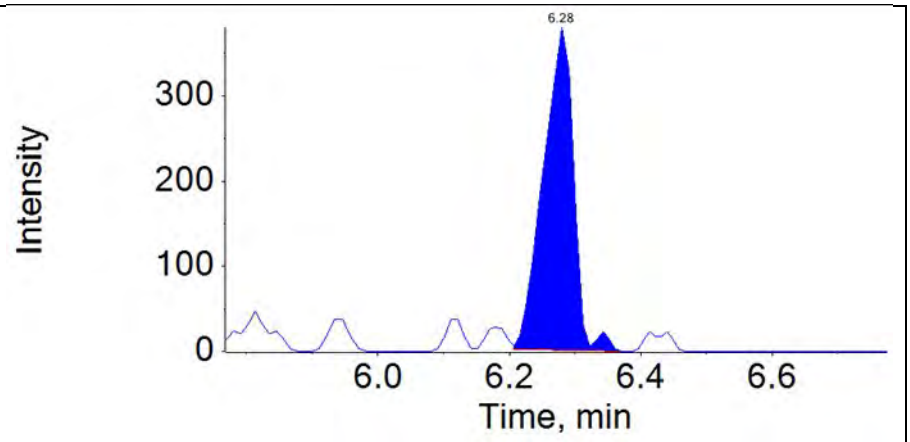


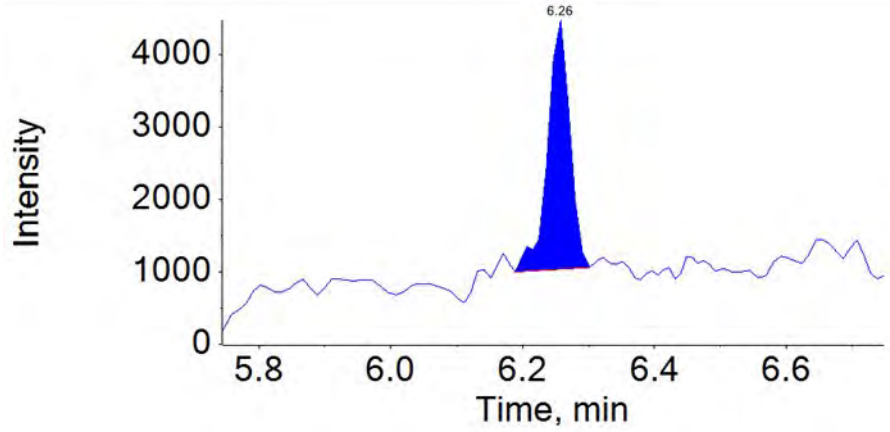
Integration Comment: incorrect integration

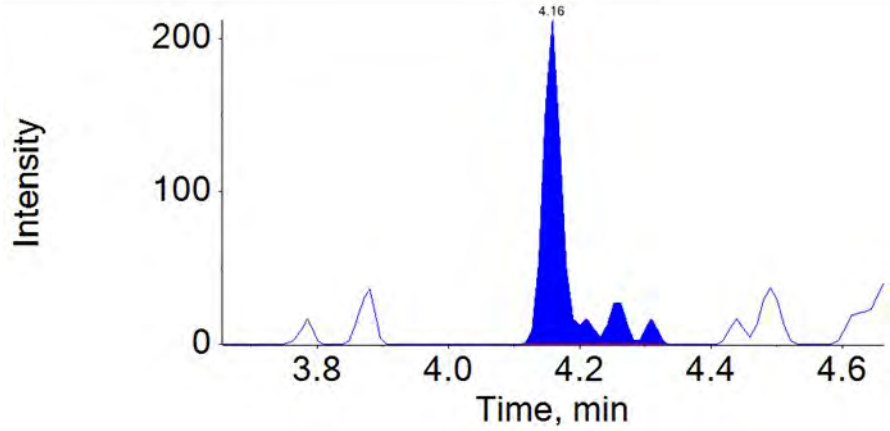
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtPFOSA **RT (min.):** 6.28 **Peak Area:** 1221.08 **Mass Range:** 526.0 / 169.0 **File Name:** 18NOV12DCAL-41.wiff **Sample Name:** MDL	 **Integration Comment:** incorrect integration

Component Name: PFTrDA **RT (min.):** 6.26 **Peak Area:** 8070.84 **Mass Range:** 663.0 / 619.0 **File Name:** 18NOV12DCAL-41.wiff **Sample Name:** MDL	 **Integration Comment:** incorrect integration

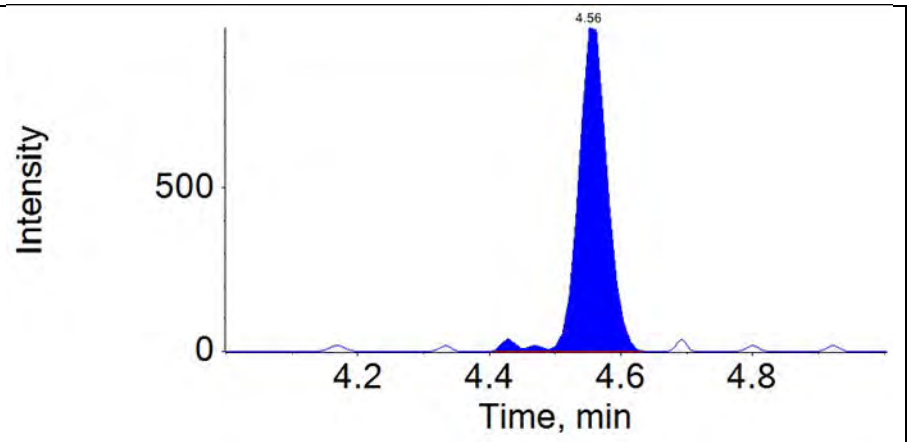
Component Name: PFHxA_2 **RT (min.):** 4.16 **Peak Area:** 496.72 **Mass Range:** 313.0 / 119.0 **File Name:** 18NOV12DCAL-41.wiff **Sample Name:** MDL	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

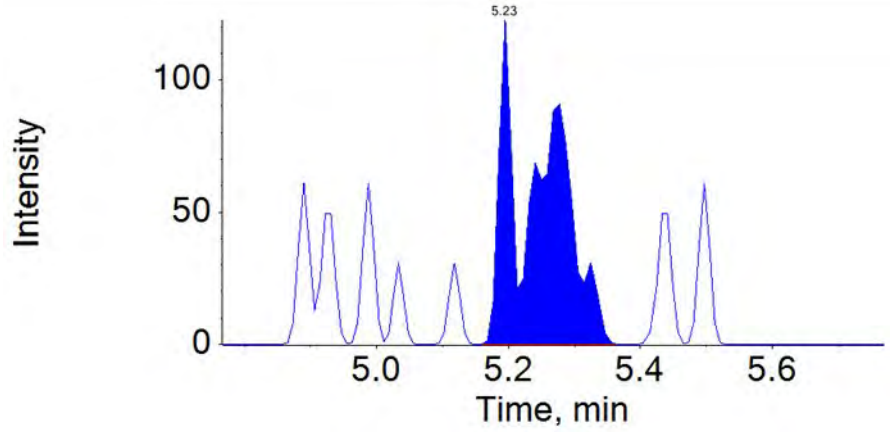
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
3074.31
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



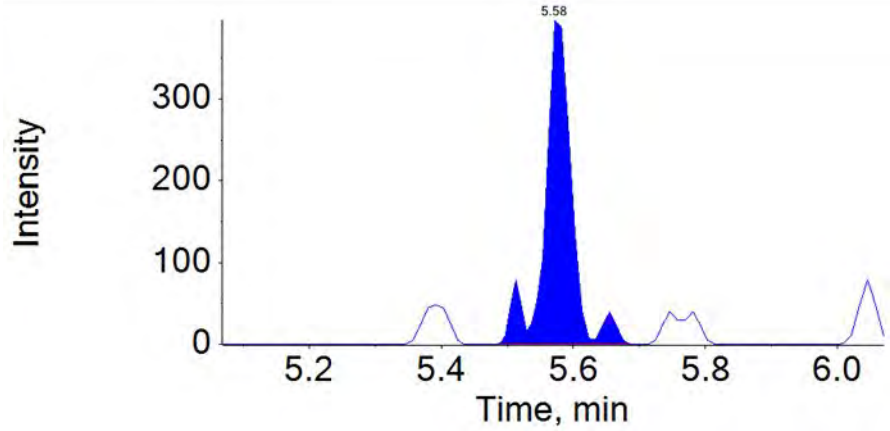
Integration Comment: incorrect integration

Component Name:
PFNA_2
RT (min.):
5.23
Peak Area:
553.54
Mass Range:
463.0 / 169.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
8:2 FTS_2
RT (min.):
5.58
Peak Area:
1126.66
Mass Range:
527.0 / 81.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



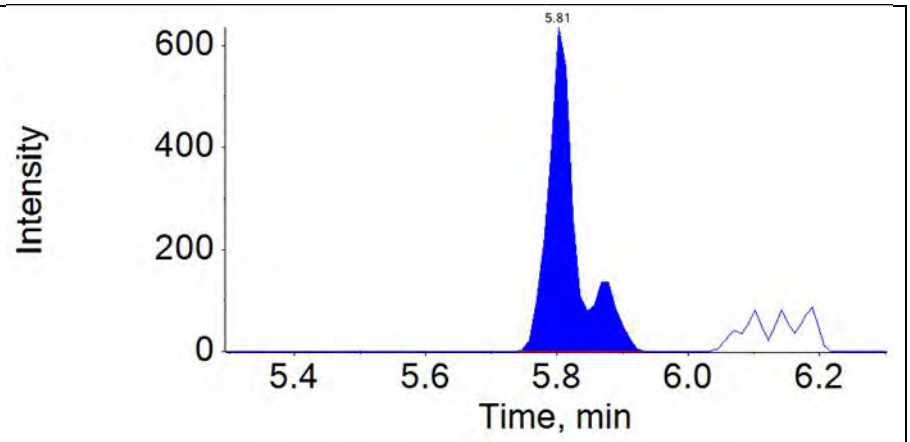
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

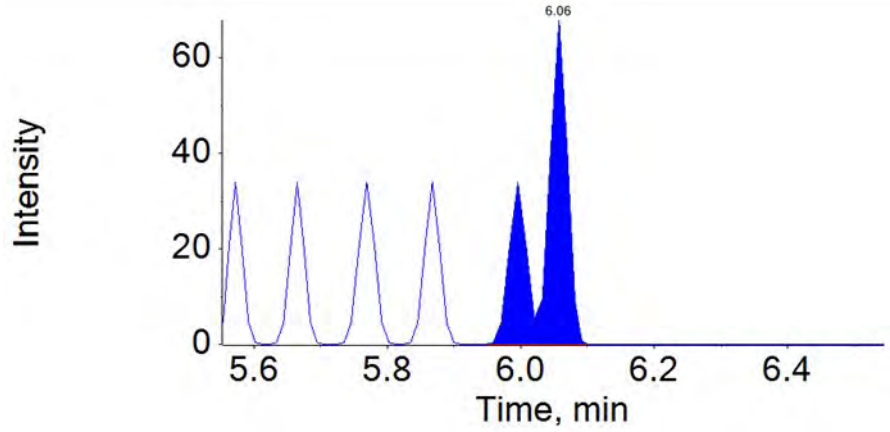
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDS_2
RT (min.):
5.81
Peak Area:
1909.26
Mass Range:
599.0 / 99.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.06
Peak Area:
186.10
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

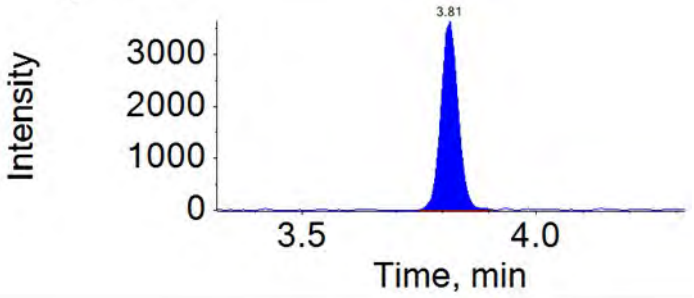
Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-41.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	9248.27	A	0.3619	0.4009			
PFBS_2	3.81	1.00	3707.95	A	0.3619	0.4009	11	50	
4:2-FTS	4.13	1.00	1329.90	A	0.6730	1.1531			
4:2 FTS_2	4.14	1.00	1533.53	A	0.6730	1.1531		#NA!	
PFHxA	4.17	1.00	21601.58	A	0.0117	0.0185			
PFHxA_2	4.16	1.00	400.56	M	0.0117	0.0185	59	50	OOS
PFPeS	4.19	1.10	4484.75	A	0.5191	0.5939			
PFPeS_2	4.18	1.10	2663.62	A	0.5191	0.5939	14	50	
PFHpA	4.56	1.00	22043.51	A	0.0563	0.0598			
PFHpA_2	4.54	1.00	1317.81	A	0.0563	0.0598	6	50	
PFHxS	4.56	1.00	8143.51	M	0.3428	0.3665			
PFHxS_2	4.56	1.00	2984.60	M	0.3428	0.3665	7	50	
6:2-FTS	4.91	1.00	1176.17	M	0.6604	0.6555			
6:2 FTS_2	4.91	1.00	771.04	A	0.6604	0.6555		#NA!	
PFHpS	4.92	1.08	7117.47	A	0.4066	0.3729			
PFHpS_2	4.92	1.08	2653.97	A	0.4066	0.3729	-8	50	
PFOA	4.93	1.00	18045.03	A	0.0562	0.0847			
PFOA_2	4.92	1.00	1528.65	A	0.0562	0.0847	51	50	OOS
PFOS	5.25	1.00	6416.89	A	0.2968	0.3439			
PFOS_2	5.25	1.00	2206.80	A	0.2968	0.3439	16	50	
PFNA	5.27	1.00	18065.11	M	0.0229	0.0217			
PFNA_2	5.27	1.00	391.14	M	0.0229	0.0217	-5	50	
PFNS	5.54	1.06	3661.22	A	0.4828	0.5154			
PFNS_2	5.55	1.06	1886.87	A	0.4828	0.5154	7	50	
PFDA	5.57	1.00	17350.54	A	0.0081	0.0034			
PFDA_2	5.58	1.00	58.57	A	0.0081	0.0034	-58	50	OOS
8:2-FTS	5.57	1.00	1475.16	A	0.6814	0.6626			
8:2 FTS_2	5.58	1.00	977.44	M	0.6814	0.6626		#NA!	
NMeFOSAA	5.72	1.00	1372.38	A	0.2569	0.3580			
NMeFOSAA_2	5.70	1.00	491.32	A	0.2569	0.3580	39	50	
PFDS	5.80	1.10	2648.79	A	0.5144	0.5845			
PFDS_2	5.81	1.10	1548.24	M	0.5144	0.5845	14	50	
PFUnDA	5.83	1.00	12215.29	M	0.0058	0.0269			
PFUnDA_2	5.82	1.00	328.37	A	0.0058	0.0269	362	50	OOS
NEtFOSAA	5.84	1.00	1937.77	A	0.7253	0.5676			
NEtFOSAA_2	5.85	1.00	1099.93	A	0.7253	0.5676	-22	50	
PFDoDA	6.06	1.00	14033.14	A	0.0157	0.0089			
PFDoDA_2	6.06	1.00	124.75	M	0.0157	0.0089	-43	50	
10:2-FTS	6.06	1.09	352.60	M	0.6356	0.9381			
10:2 FTS_2	6.08	1.09	330.78	A	0.6356	0.9381		#NA!	
PFTrDA	6.26	1.03	7825.51	M	0.0086	0.0105			
PFTrDA_2	6.26	1.03	82.38	A	0.0086	0.0105	23	50	
PFTeDA	6.43	1.00	8938.53	A	0.0062	0.0089			
PFTeDA_2	6.43	1.00	79.25	A	0.0062	0.0089	42	50	
PFHxDA	6.74	1.05	3934.22	A	0.0683	0.0745			
PFHxDA_2	6.74	1.05	292.96	A	0.0683	0.0745	9	50	
PFODA	7.00	1.09	2726.36	A	0.0277	0.0224			
PFODA_2	6.99	1.09	61.09	A	0.0277	0.0224	-19	50	

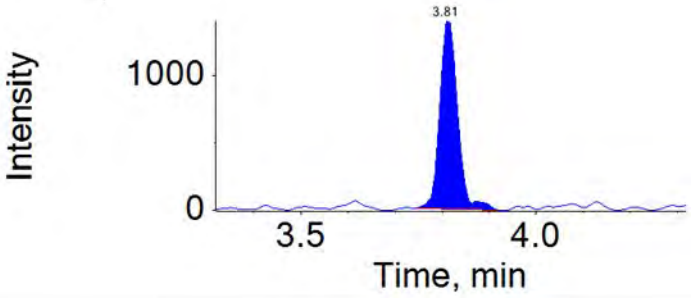
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

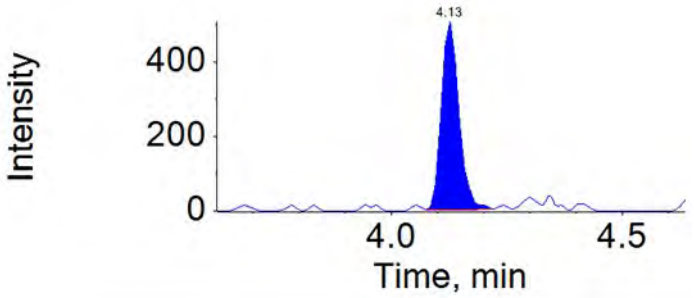
Component: PFBS
Primary Mass: 299.0 / 80.0



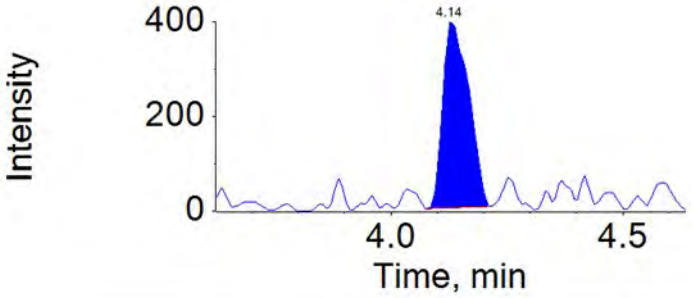
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



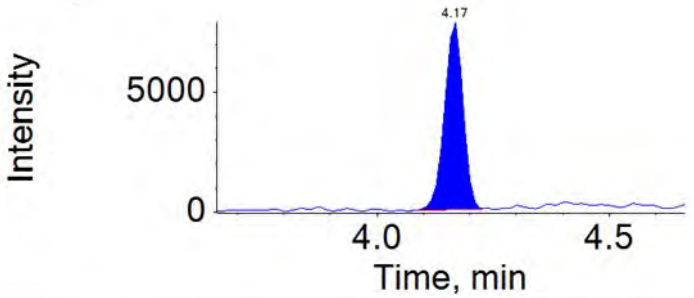
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



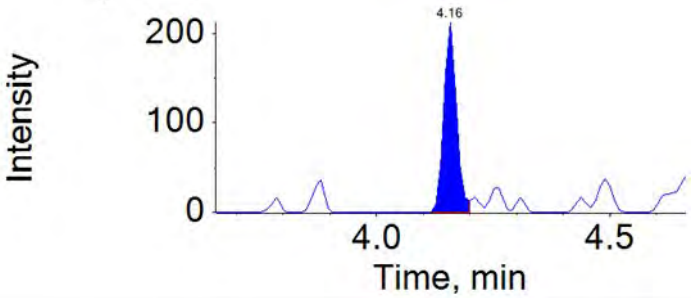
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



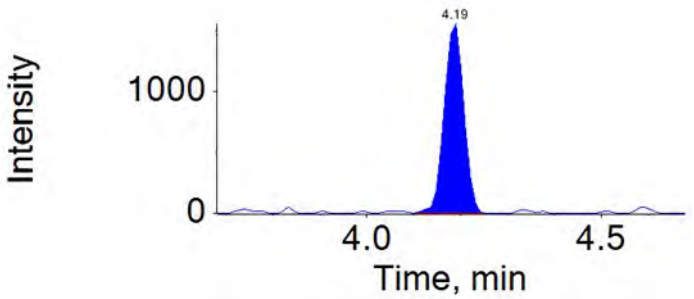
Component: PFHxA
Primary Mass: 313.0 / 269.0



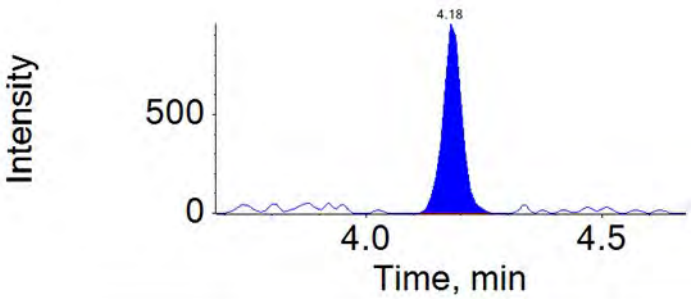
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By MCD at 6:34 pm, 11/12/18

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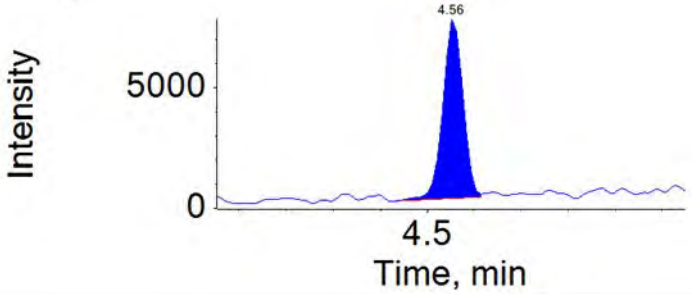
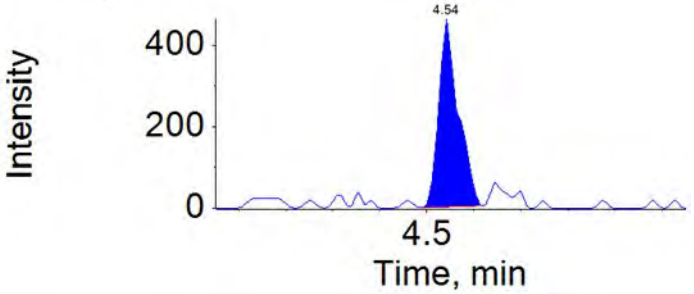
By HMK at 10:54 am, 11/13/18

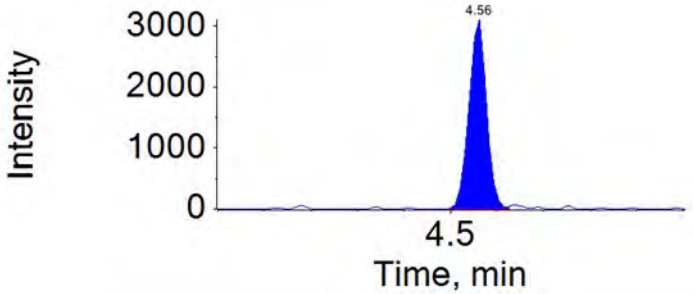
Component: PFHpA
Primary Mass: 363.0 / 319.0



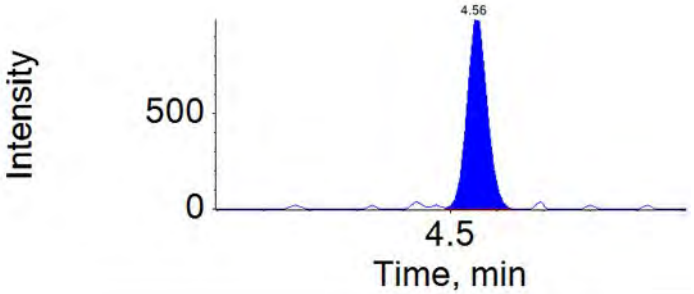
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



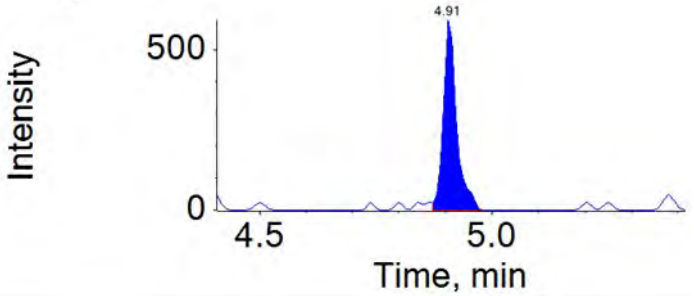
Component: PFHxS
Primary Mass: 399.0 / 80.0



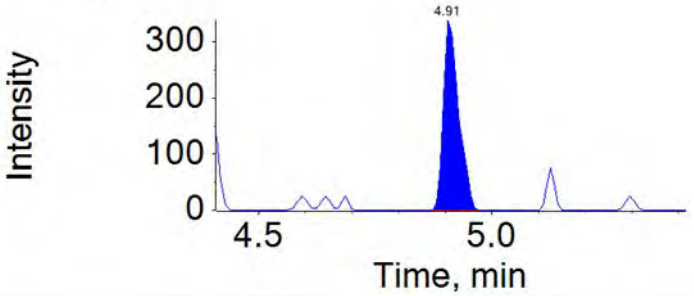
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



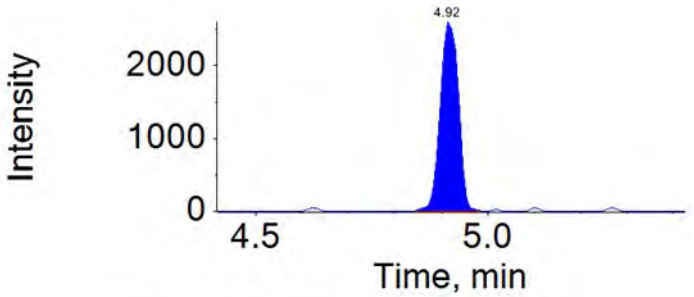
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



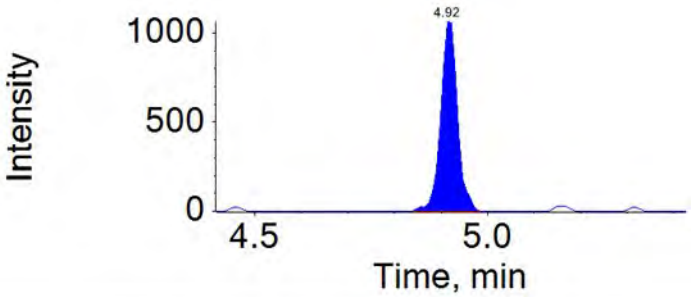
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By MCD at 6:34 pm, 11/12/18

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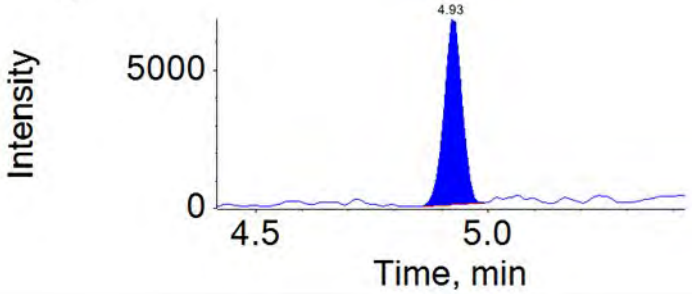
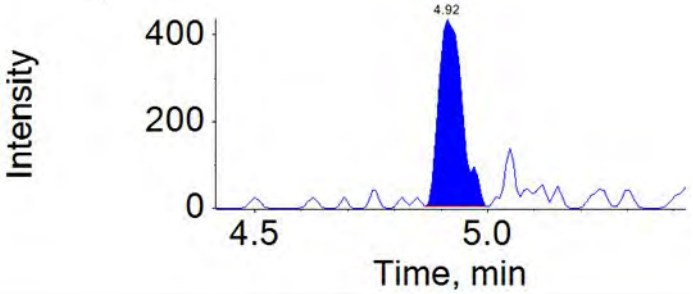
By HMK at 10:54 am, 11/13/18

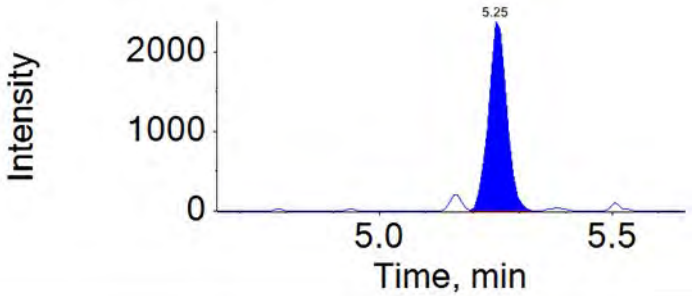
Component: PFOA
Primary Mass: 413.0 / 369.0



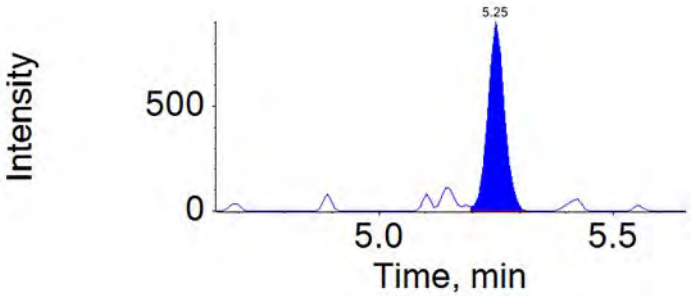
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



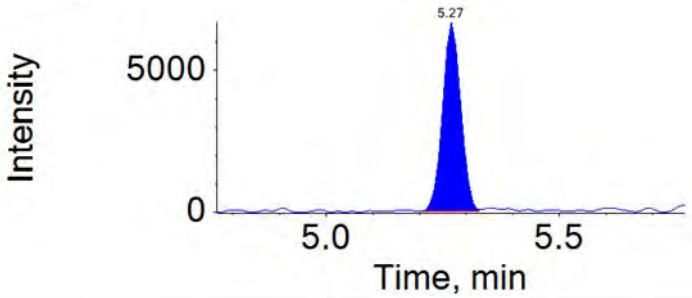
Component: PFOS
Primary Mass: 499.0 / 80.0



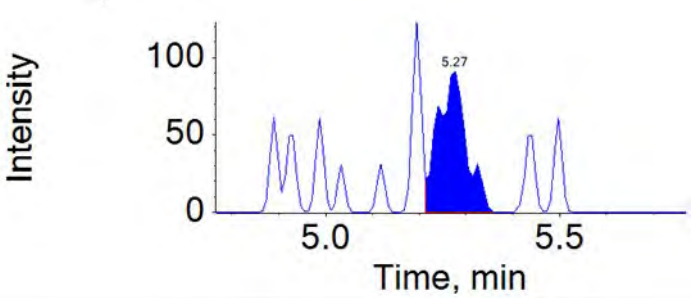
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



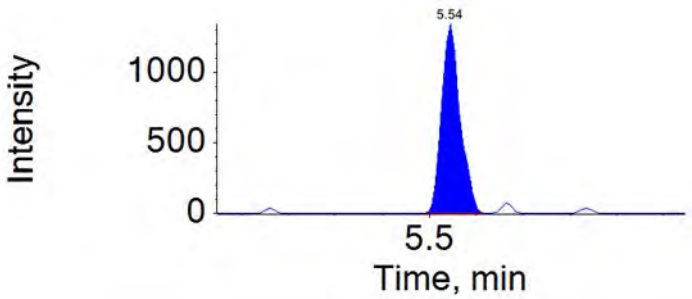
Component: PFNA
Primary Mass: 463.0 / 419.0



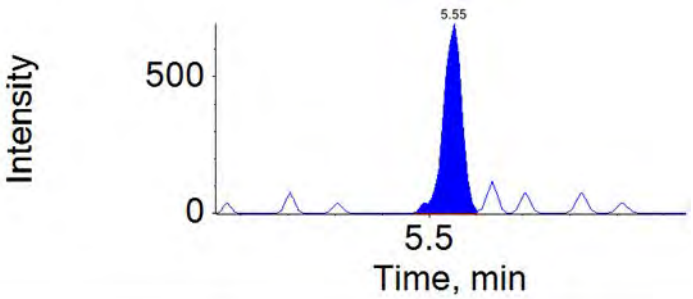
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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By MCD at 6:34 pm, 11/12/18

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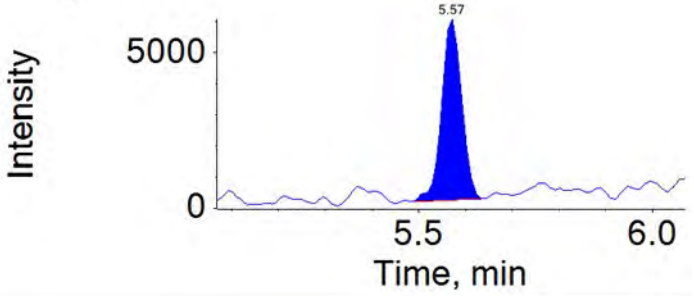
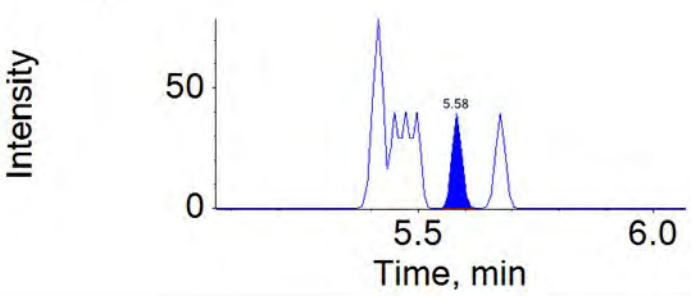
By HMK at 10:54 am, 11/13/18

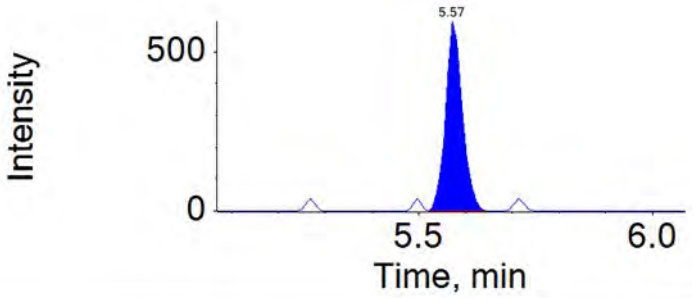
Component: PFDA
Primary Mass: 513.0 / 469.0



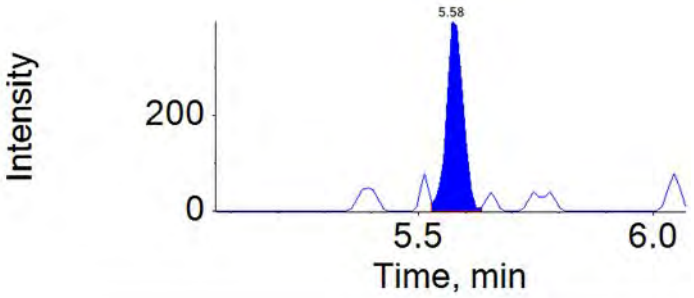
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



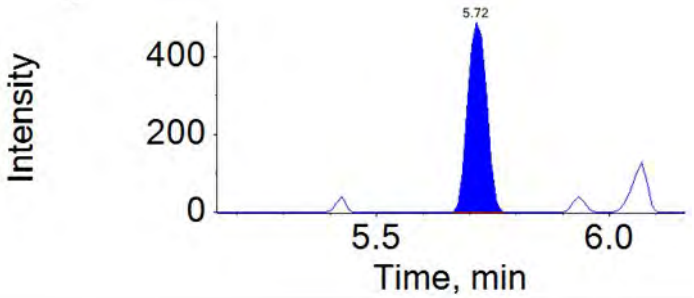
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



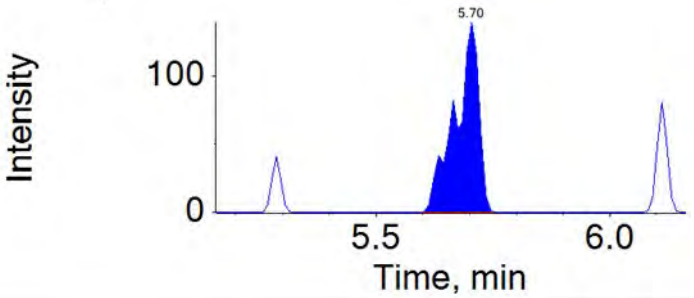
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



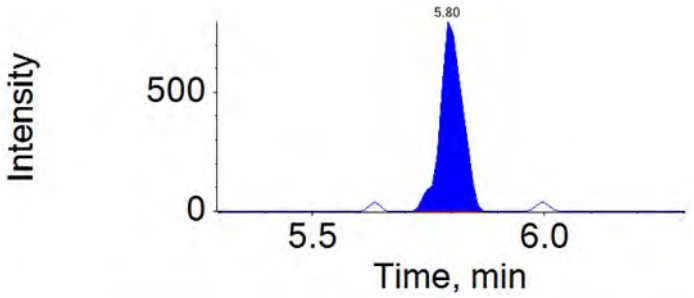
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



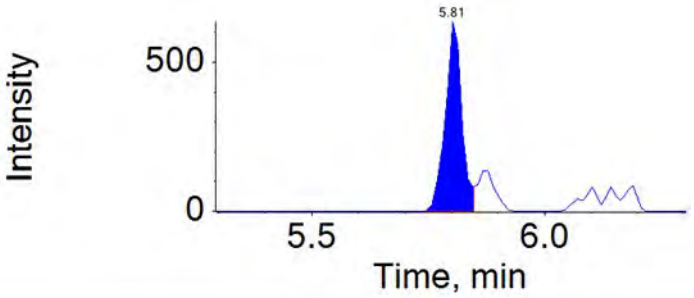
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



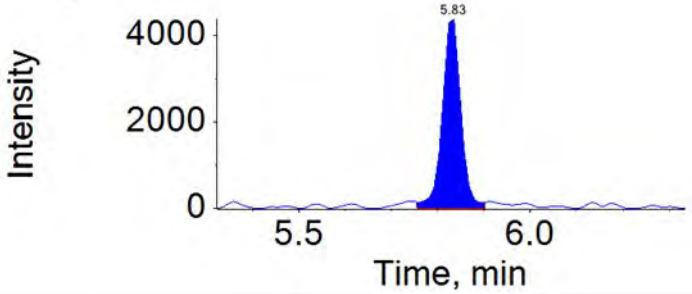
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



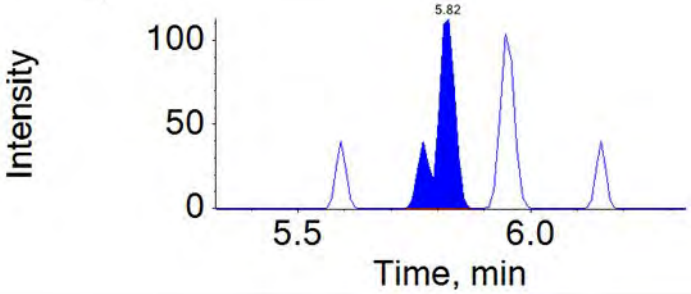
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

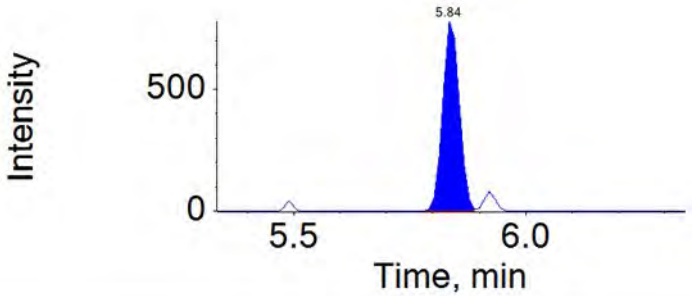
Component: PFUnDA
Primary Mass: 563.0 / 519.0



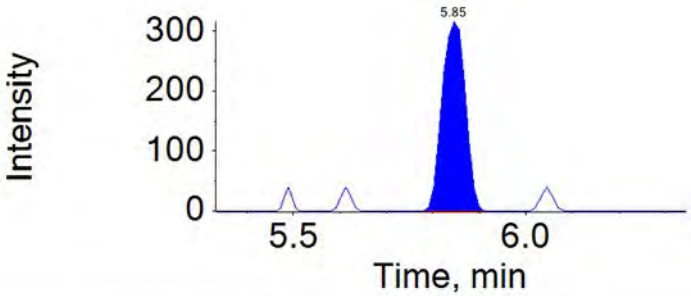
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



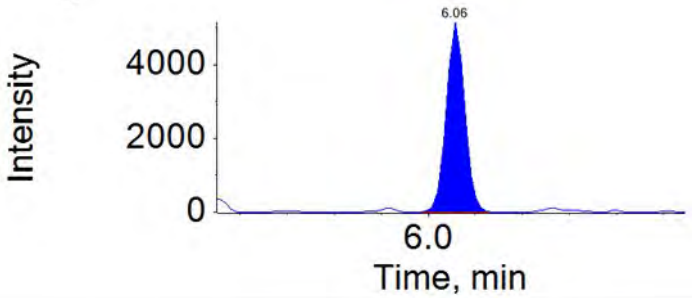
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



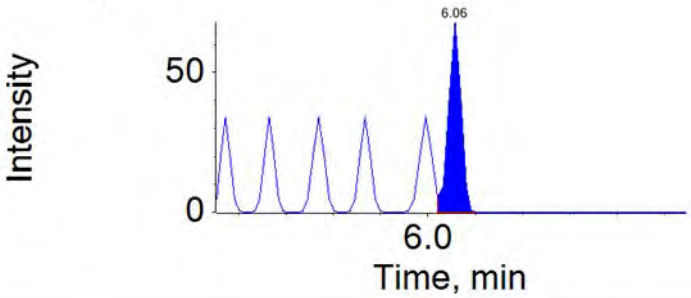
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



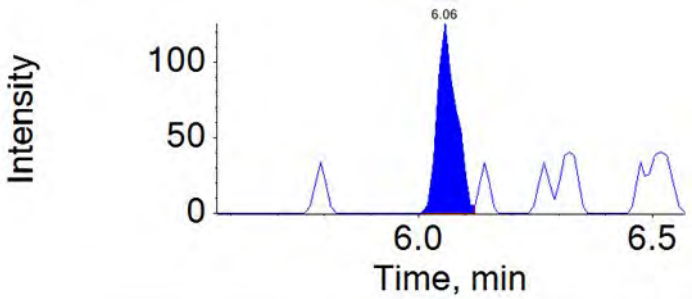
Component: PFDoDA
Primary Mass: 613.0 / 569.0



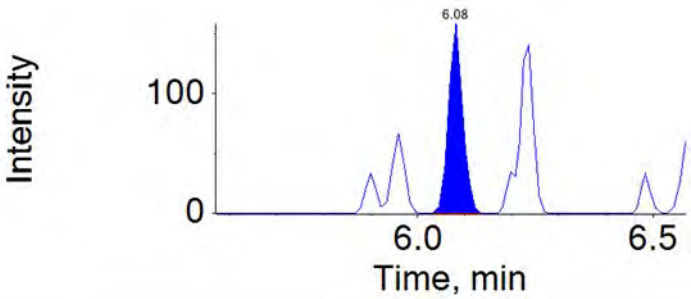
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



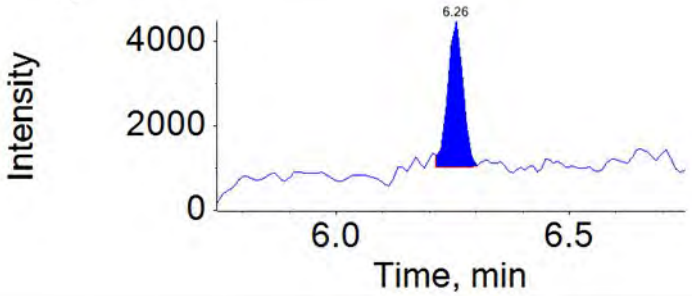
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



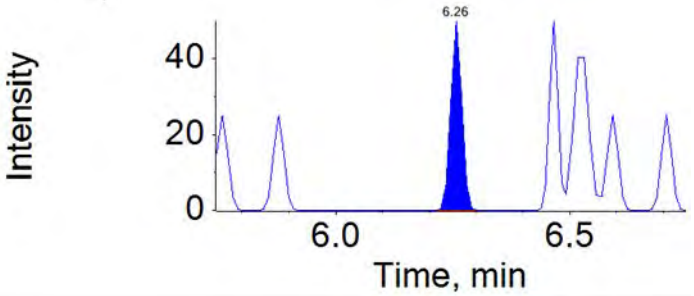
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

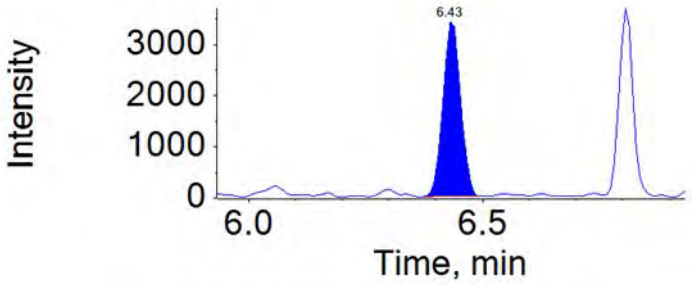
Component: PFTrDA
Primary Mass: 663.0 / 619.0



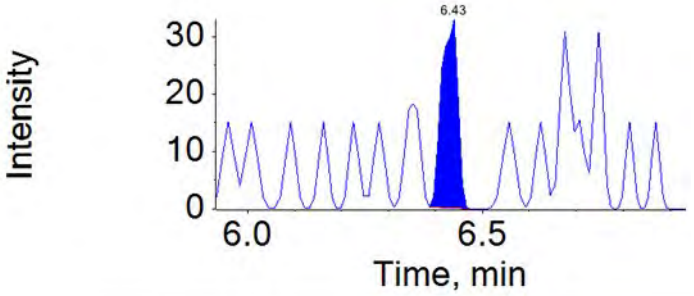
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



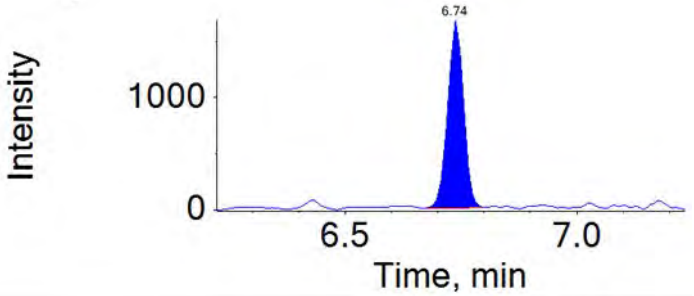
Component: PFTeDA
Primary Mass: 713.0 / 669.0



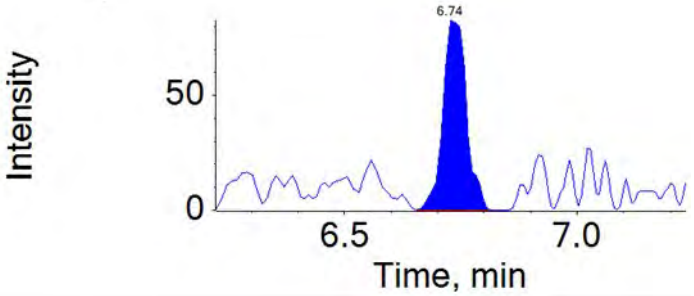
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



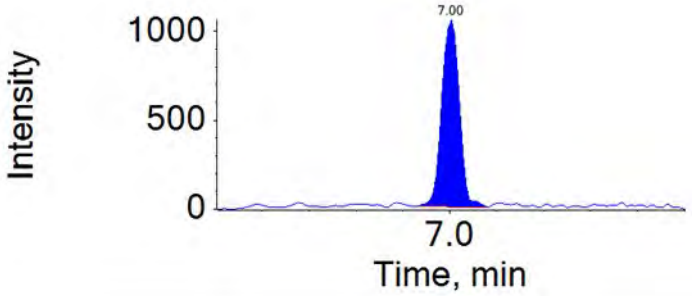
Component: PFHxDA
Primary Mass: 813.0 / 769.0



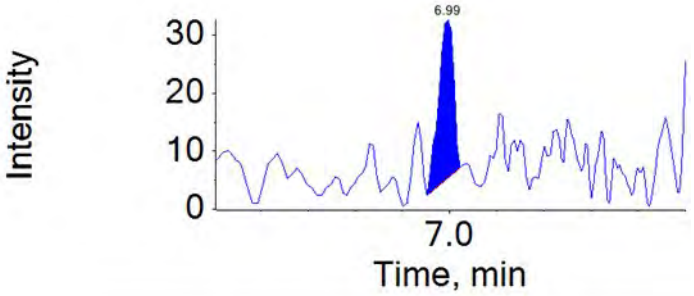
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	ICV			**Data File:**		18NOV12DCAL-50.wiff
Sample ID:	ICVMODX1833G			**Acquis Date:**		2018-11-12T16:18:11
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	10			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	655209.3	659926.2	-1	50	
13C2-PFOA	5.0	452726.2	450219.7	1	50	
13C4-PFOS	4.8	253010.3	249205.8	2	50	
13C2-PFDA	5.0	277002.7	278743.9	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	715834.4	13C3-PFBA	655209.3	1.093	5.000	4.898	98	70-130	
E13C5-PFPeA	699482.2	13C3-PFBA	655209.3	1.068	5.000	4.788	96	70-130	
E13C3-PFBS	394903.4	13C3-PFBA	655209.3	0.603	4.650	4.255	91	70-130	
E13C2-4:2-FTS	47297.3	13C2-PFOA	452726.2	0.104	4.670	4.653	100	70-130	
E13C5-PFHxA	613579.4	13C2-PFOA	452726.2	1.355	5.000	4.896	98	70-130	
E13C3-PFHxS	304897.8	13C2-PFOA	452726.2	0.673	4.730	4.621	98	70-130	
E13C4-PFHpA	485394.9	13C2-PFOA	452726.2	1.072	5.000	4.830	97	70-130	
E13C2-6:2-FTS	31532.8	13C2-PFOA	452726.2	0.070	4.750	4.660	98	70-130	
E13C8-PFOA	843573.3	13C2-PFOA	452726.2	1.863	5.000	5.134	103	70-130	
E13C8-PFOS	266211.4	13C4-PFOS	253010.3	1.052	4.780	4.662	98	70-130	
E13C9-PFNA	458821.5	13C4-PFOS	253010.3	1.813	5.000	5.056	101	70-130	
E13C6-PFDA	590290.3	13C2-PFDA	277002.7	2.131	5.000	4.973	99	70-130	
E13C2-8:2-FTS	22188.9	13C2-PFDA	277002.7	0.080	4.790	3.995	83	70-130	
E13C8-PFOSA	587080.1	13C2-PFDA	277002.7	2.119	5.000	4.699	94	70-130	
Ed3-NMeFOSAA	70133.2	13C2-PFDA	277002.7	0.253	5.000	4.570	91	70-130	
E13C7-PFUnDA	228363.9	13C2-PFDA	277002.7	0.824	5.000	4.786	96	70-130	
Ed5-NEtFOSAA	59551.3	13C2-PFDA	277002.7	0.215	5.000	4.548	91	70-130	
E13C2-PFDoDA	495858.1	13C2-PFDA	277002.7	1.790	5.000	4.648	93	70-130	
Ed7-NMePFOSAE	299185.4	13C2-PFDA	277002.7	1.080	5.000	4.674	93	70-130	
Ed3-NMePFOSA	75186.9	13C2-PFDA	277002.7	0.271	5.000	4.931	99	70-130	
Ed9-NEtPFOSAE	255149.8	13C2-PFDA	277002.7	0.921	5.000	4.791	96	70-130	
Ed5-NEtPFOSA	53596.2	13C2-PFDA	277002.7	0.193	5.000	4.539	91	70-130	
E13C2-PFTeDA	365300.2	13C2-PFDA	277002.7	1.319	5.000	4.630	93	70-130	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

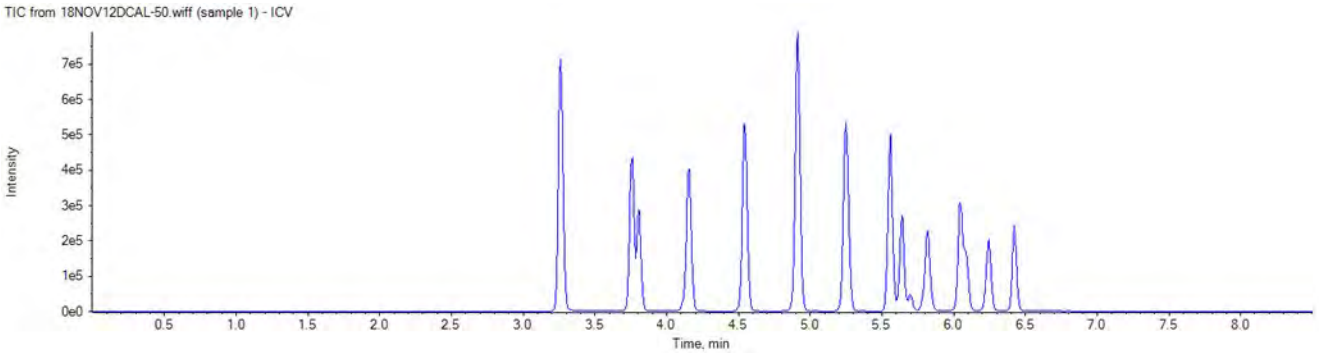
Analyte Quantitation Peak Table

Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-50.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	270820.6		A	13C4-PFBA	3.26	715834.4	0.378	2.096
PFPeA	3.76	1.000	265646.8		A	13C5-PFPeA	3.76	699482.2	0.380	2.198
PFBS	3.80	1.000	150059.6		A	13C3-PFBS	3.81	394903.4	0.380	1.808
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	47297.3	N/A	
PFHxA	4.15	1.000	328694.3		A	13C5-PFHxA	4.15	613579.4	0.536	2.237
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	394903.4	N/A	
PFHpA	4.54	1.000	316975.3		A	13C4-PFHpA	4.54	485394.9	0.653	2.165
PFHxS	4.55	1.000	115564.2		A	13C3-PFHxS	4.55	304897.8	0.379	1.838
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	31532.8	N/A	
PFHpS	4.91	1.080	118318.7		A	13C3-PFHxS	4.55	304897.8	0.388	2.043
PFOA	4.91	1.000	332094.4		A	13C8-PFOA	4.91	843573.3	0.394	2.103
PFOS	5.24	1.000	100952.5		M	13C8-PFOS	5.24	266211.4	0.379	1.658
PFNA	5.26	1.000	271240.4		A	13C9-PFNA	5.26	458821.5	0.591	2.132
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	266211.4	N/A	
PFDA	5.56	1.000	224279.8		A	13C6-PFDA	5.56	590290.3	0.380	2.014
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	22188.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	587080.1	N/A	
NMeFOSAA	5.70	1.000	30591.9		A	d3-NMeFOSAA	5.70	70133.2	0.436	2.465
PFDS	5.79	1.110	52860.9		M	13C8-PFOS	5.24	266211.4	0.199	1.799
PFUnDA	5.82	1.000	183511.3		A	13C7-PFUnDA	5.82	228363.9	0.804	2.101
NEtFOSAA	5.83	1.000	26149.3		A	d5-NEtFOSAA	5.83	59551.3	0.439	2.302
PFDoDA	6.05	1.000	185295.0		A	13C2-PFDoDA	6.05	495858.1	0.374	1.903
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	22188.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	299185.4	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	75186.9	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	266211.4	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	255149.8	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	53596.2	N/A	
PFTrDA	6.25	1.030	165153.1		A	13C2-PFDoDA	6.05	495858.1	0.333	2.102
PFTeDA	6.42	1.000	135651.0		A	13C2-PFTeDA	6.42	365300.2	0.371	2.082
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	365300.2	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	365300.2	N/A	

Total Ion Chromatogram

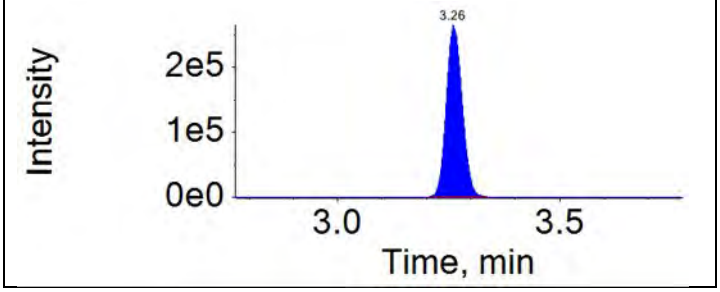


APPROVED
By MCD at 6:34 pm, 11/12/18

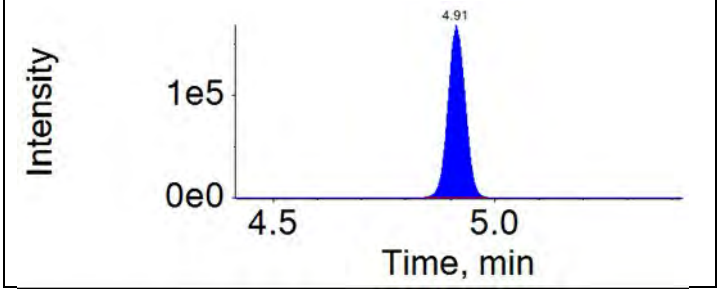
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

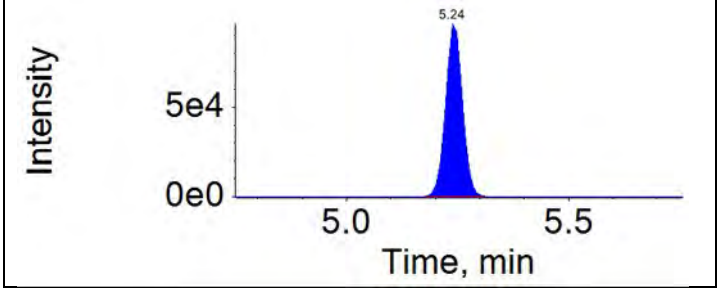
Injection Standard: 13C3-PFBA
216.0 / 172.0



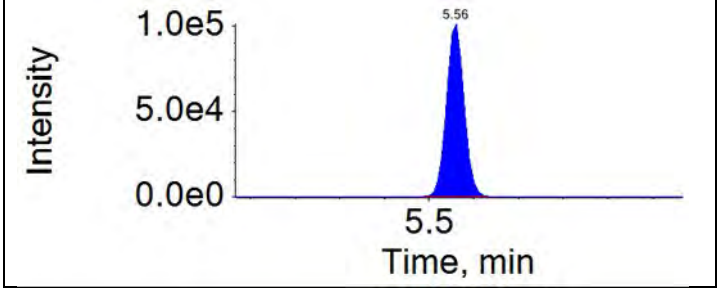
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

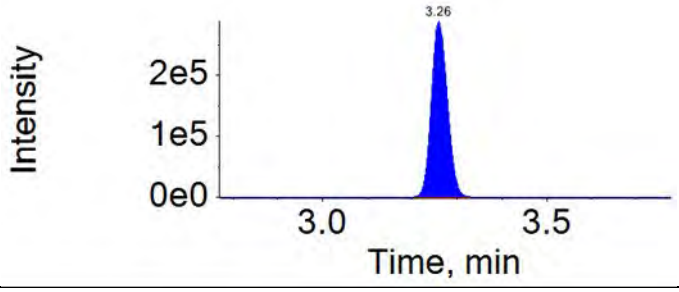


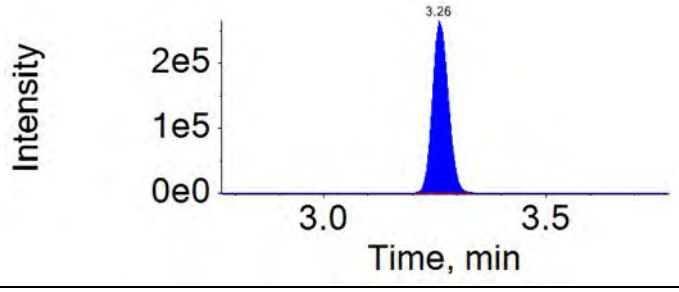
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

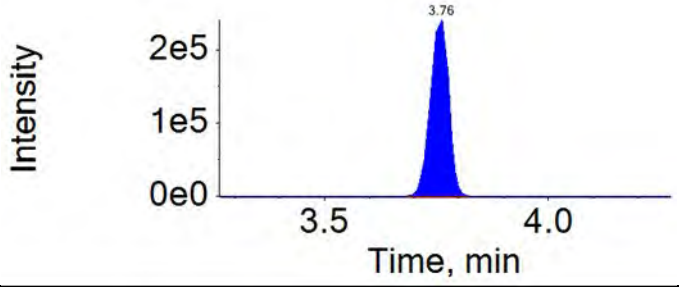
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

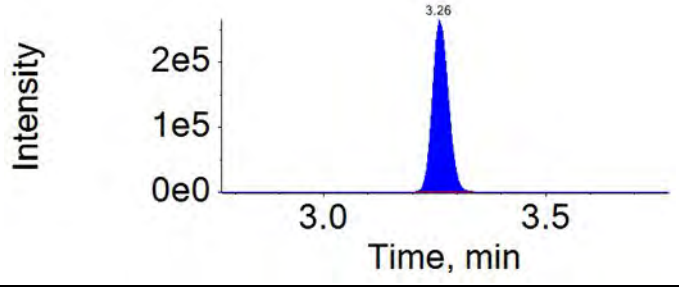
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



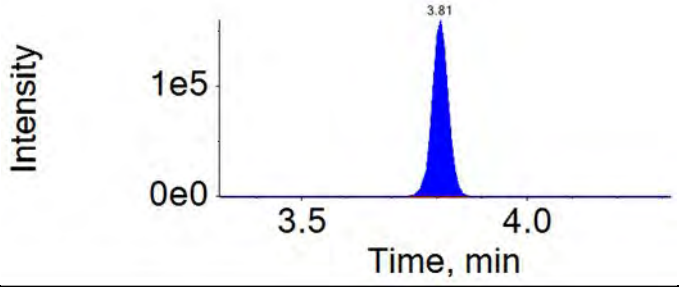


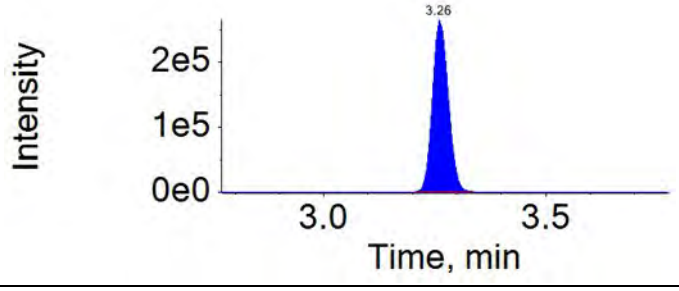
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



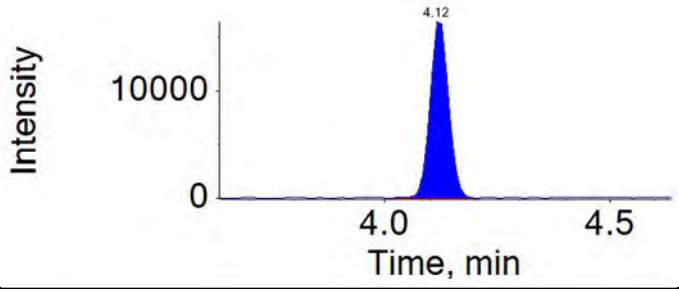


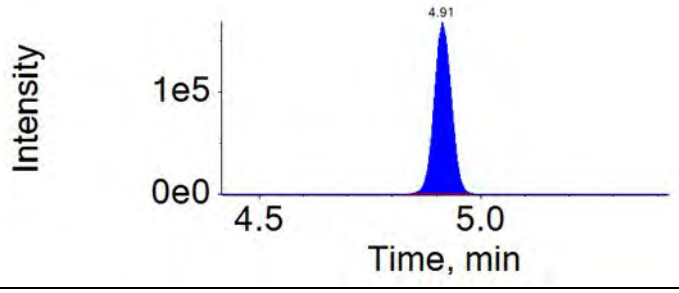
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





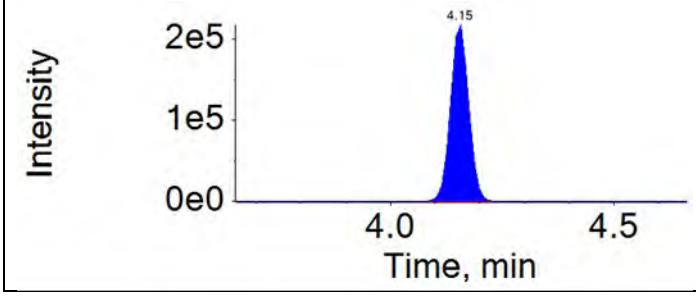
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

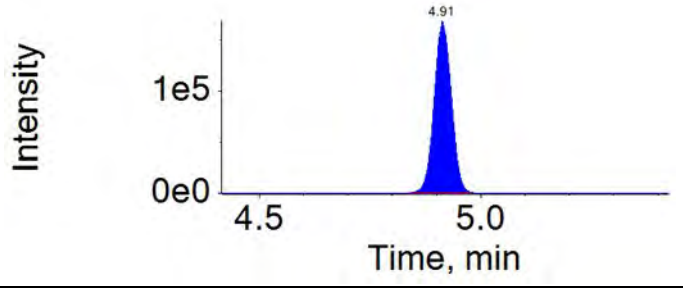




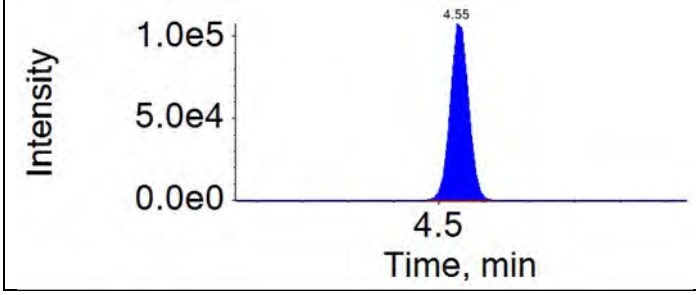
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

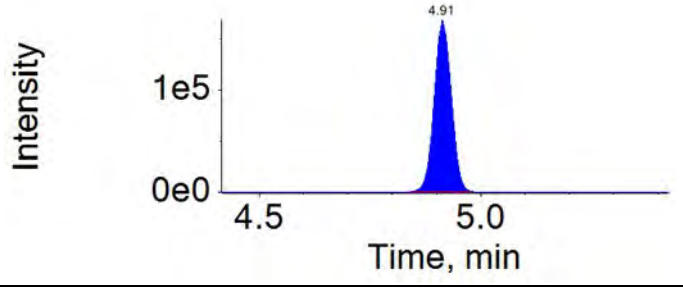
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



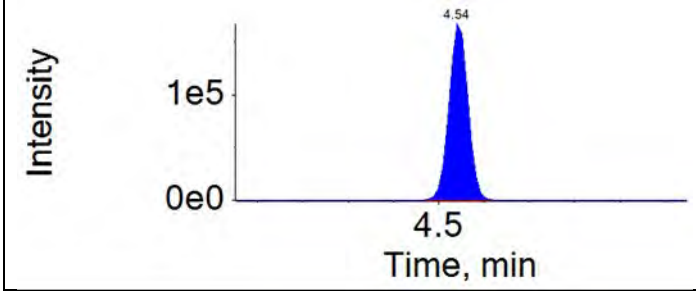


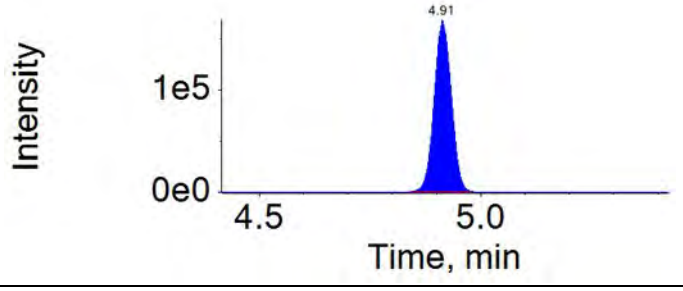
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



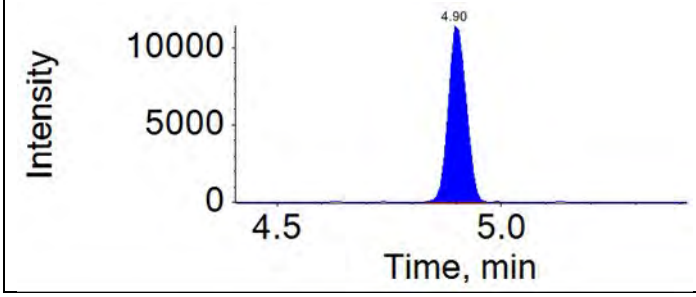


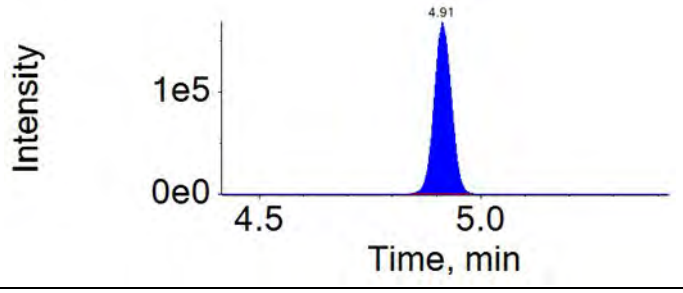
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

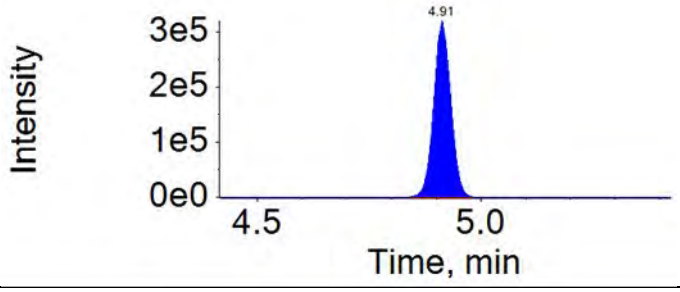
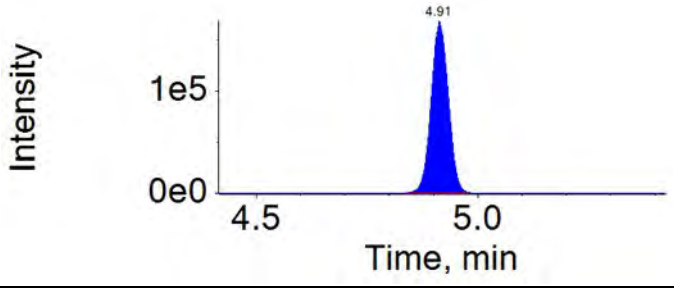


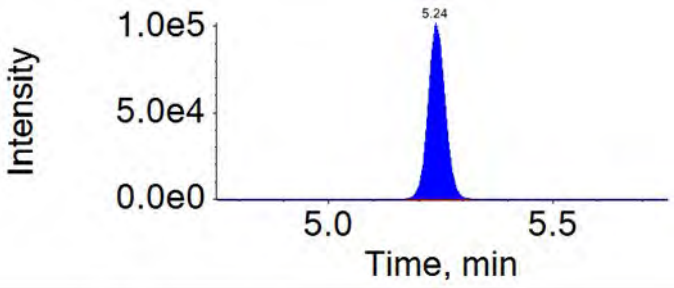
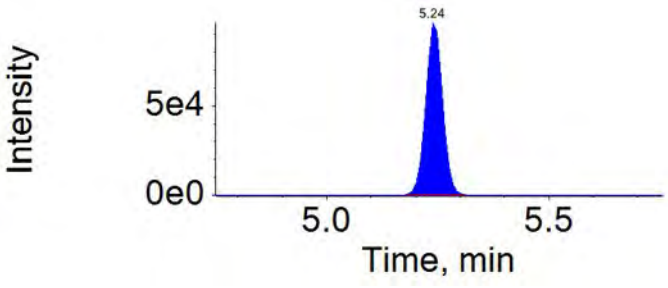


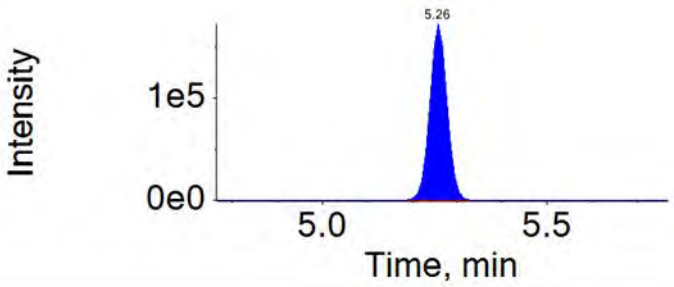
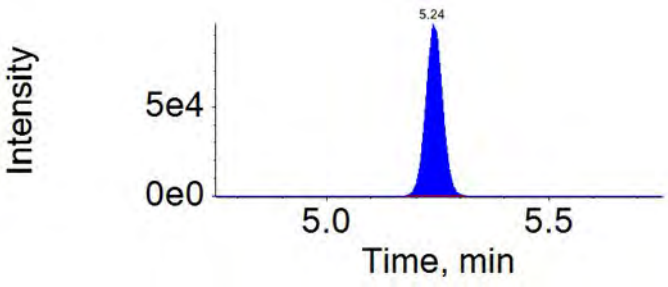
APPROVED
By MCD at 6:34 pm, 11/12/18

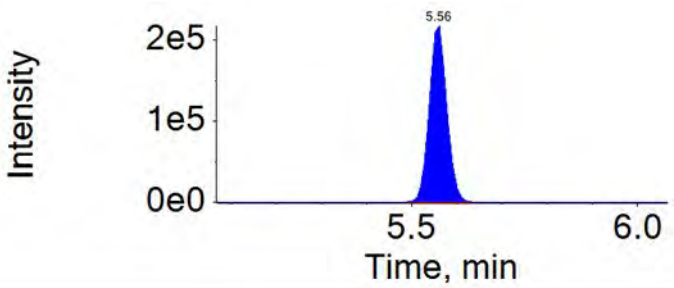
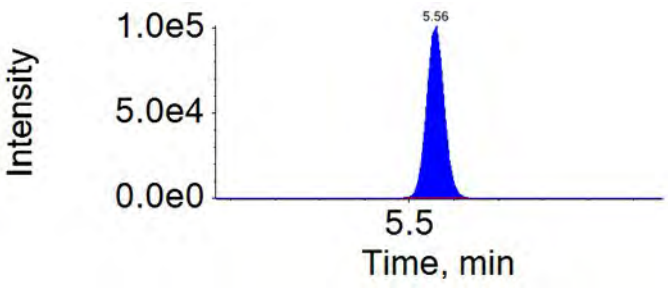
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

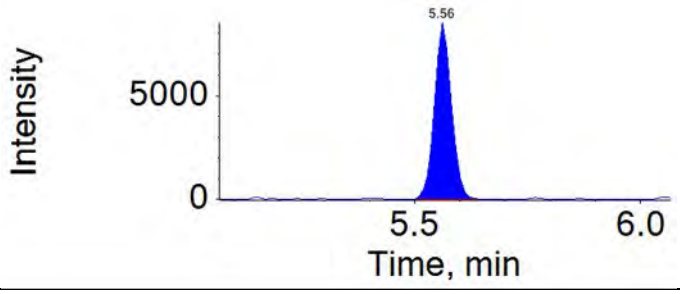
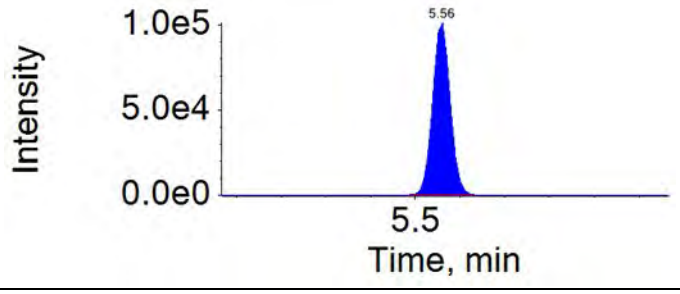
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

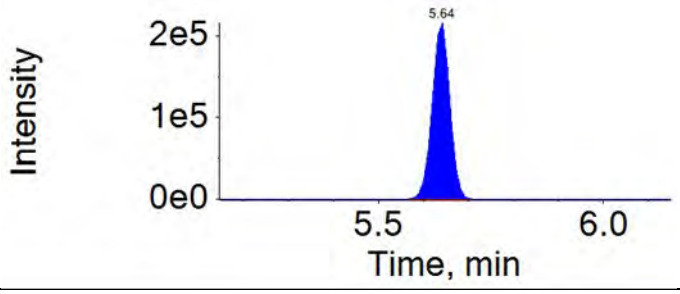
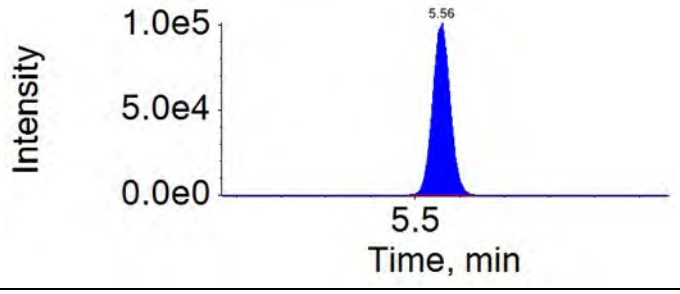
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

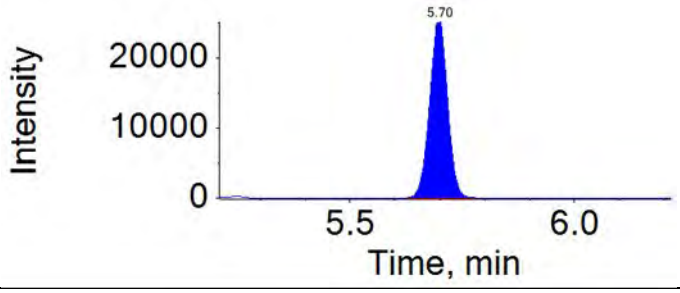
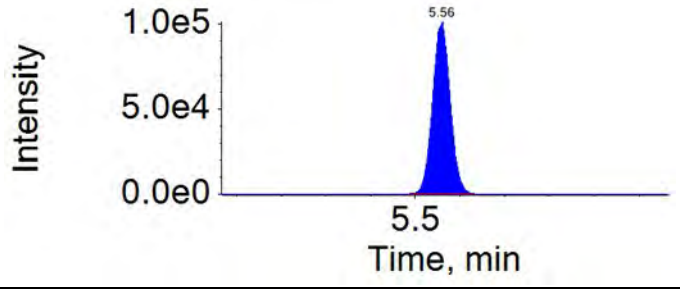
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

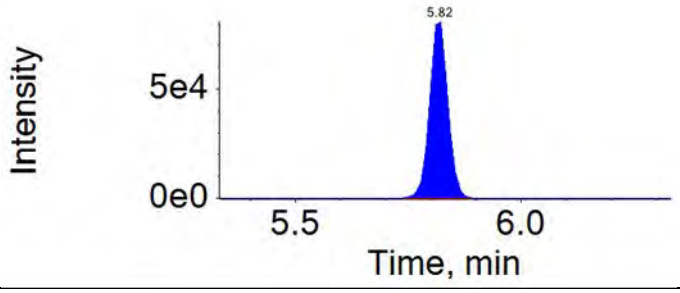
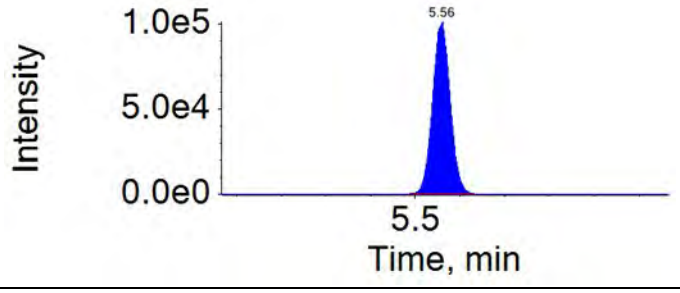
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

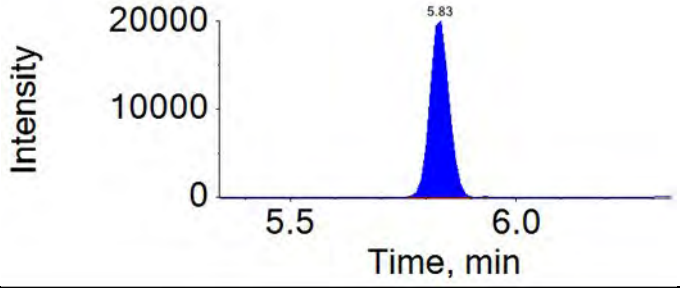
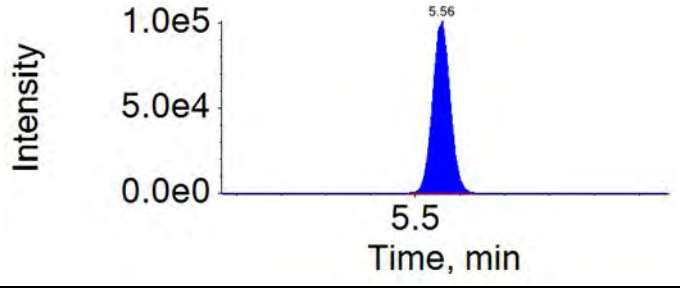
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

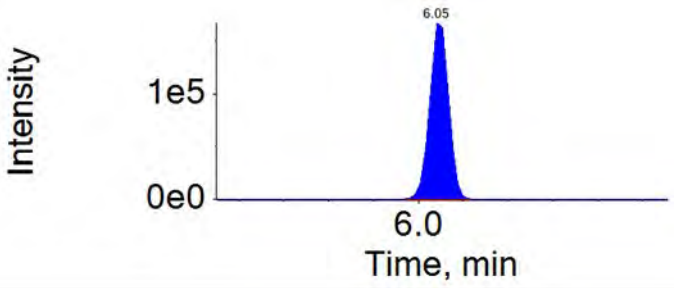
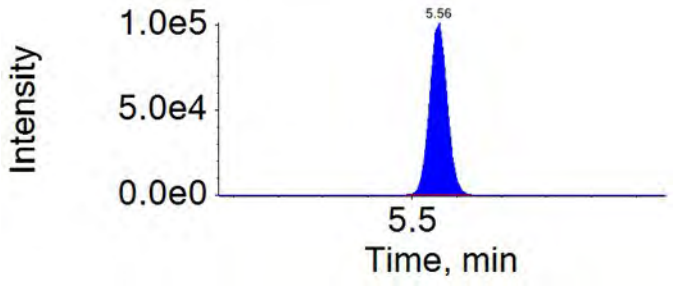
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

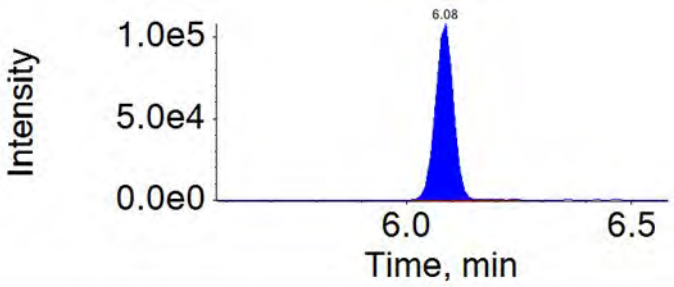
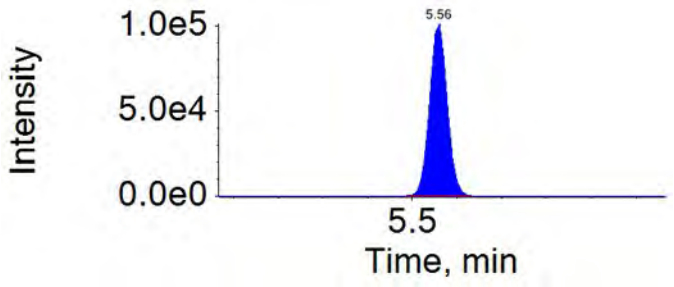
APPROVED
By MCD at 6:34 pm, 11/12/18

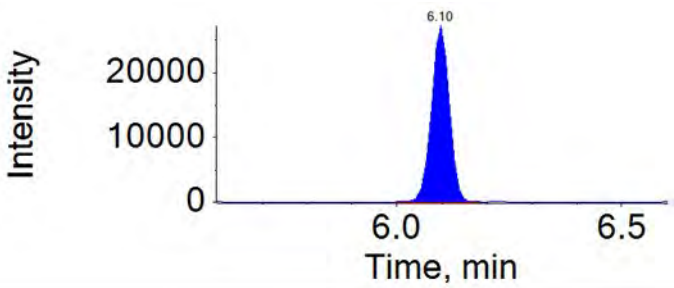
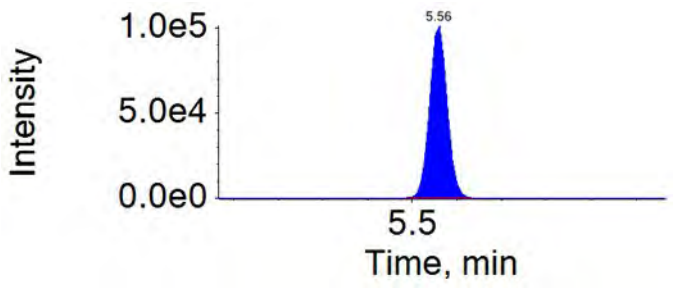
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

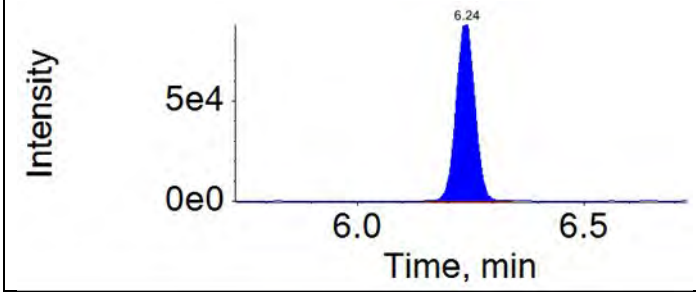
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

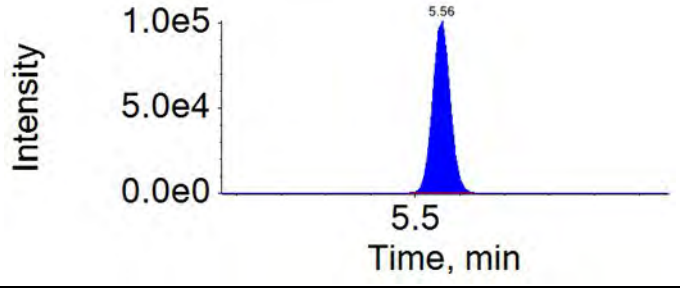
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

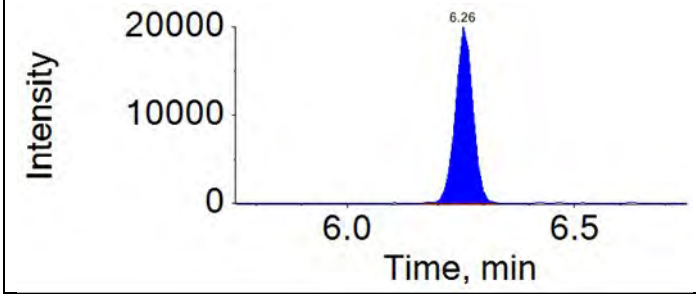
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

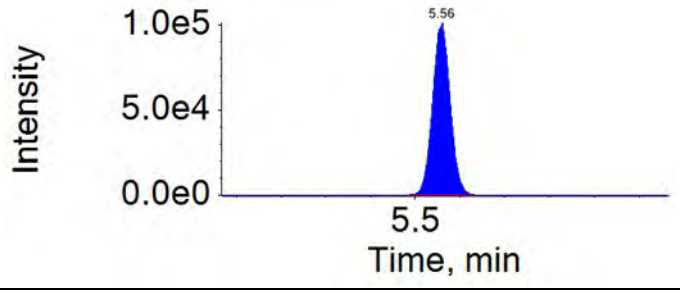
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



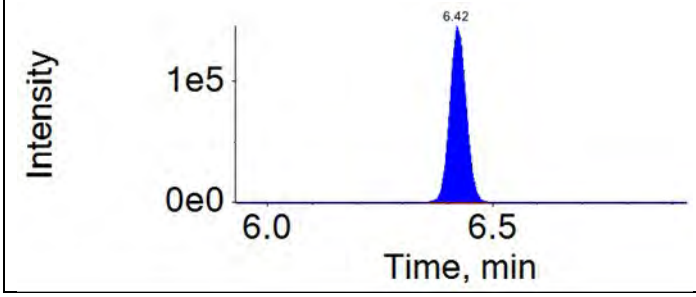


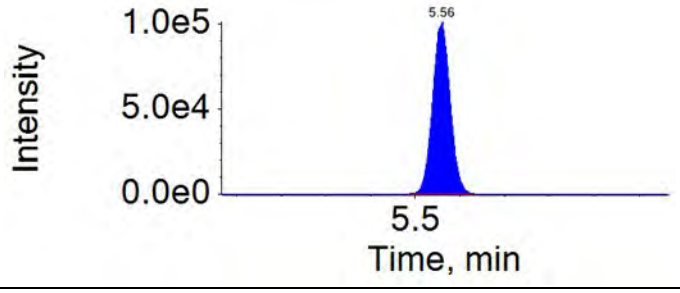
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



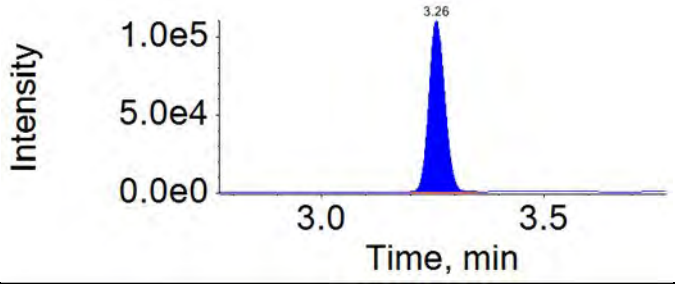


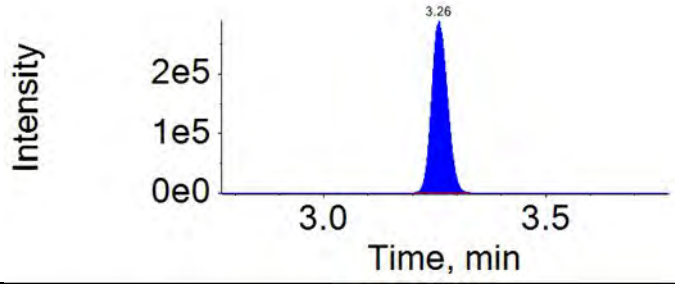
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

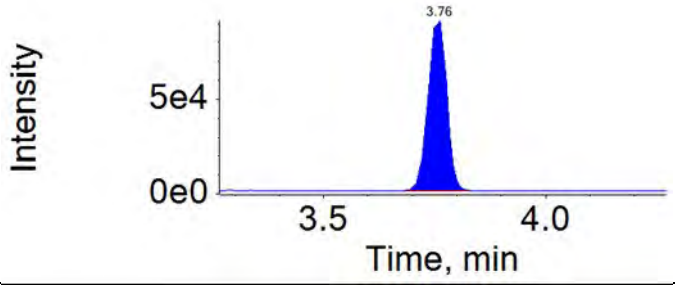
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

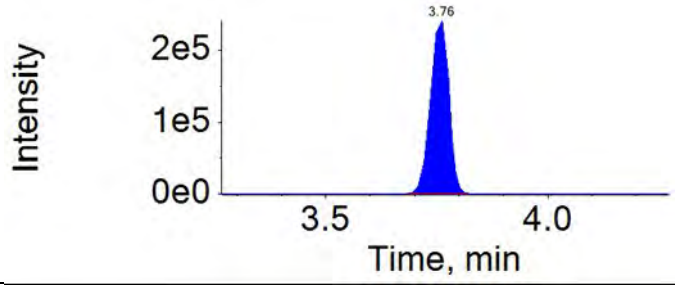
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



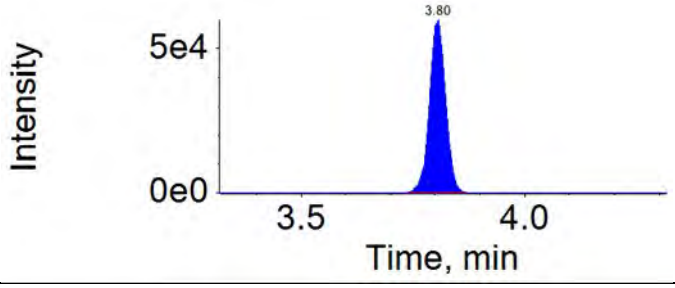


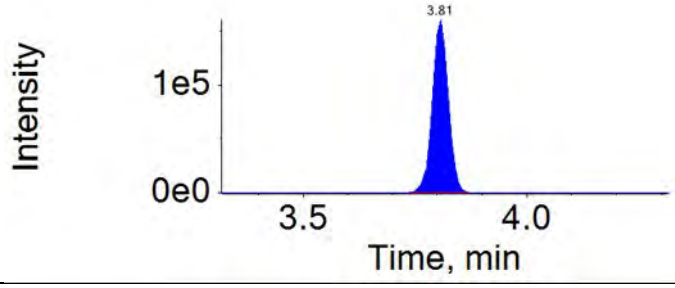
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



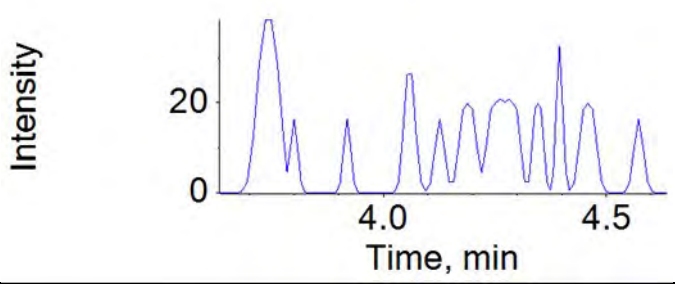


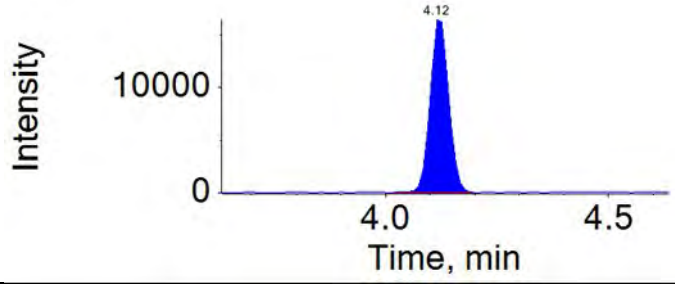
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



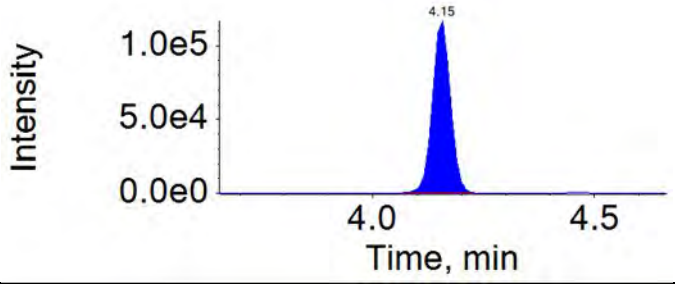


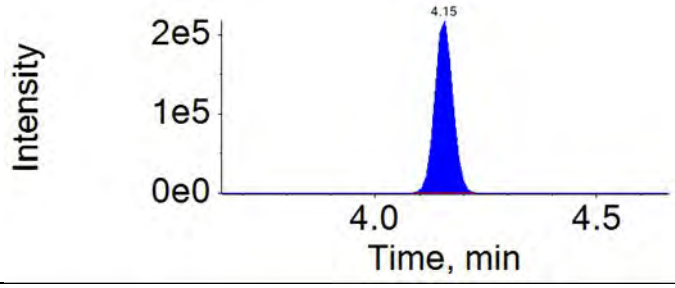
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

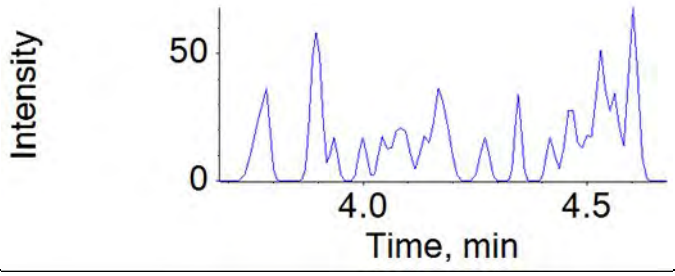
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

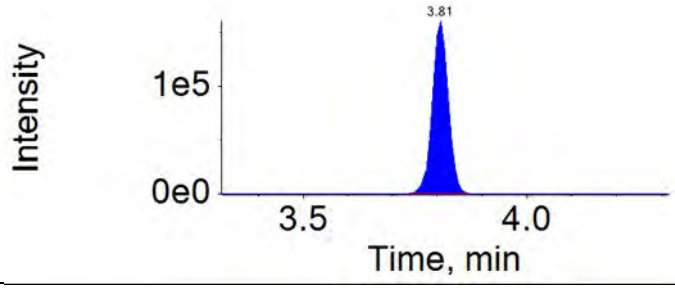
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



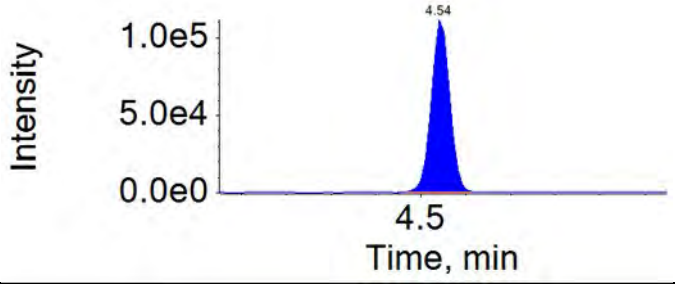


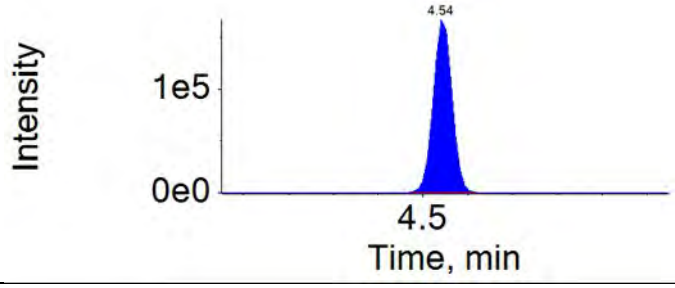
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



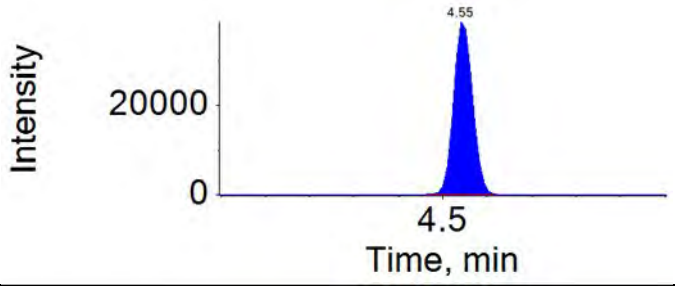


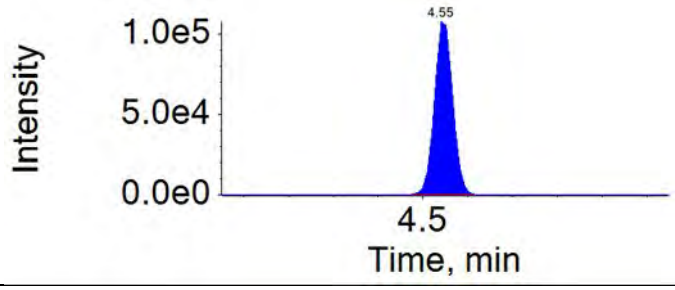
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





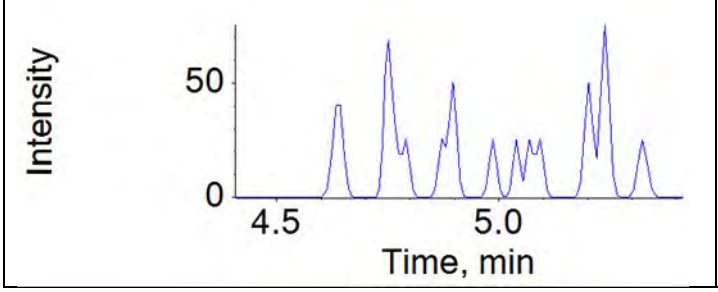
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

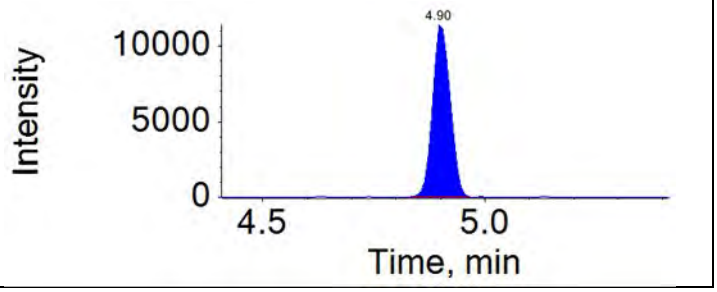




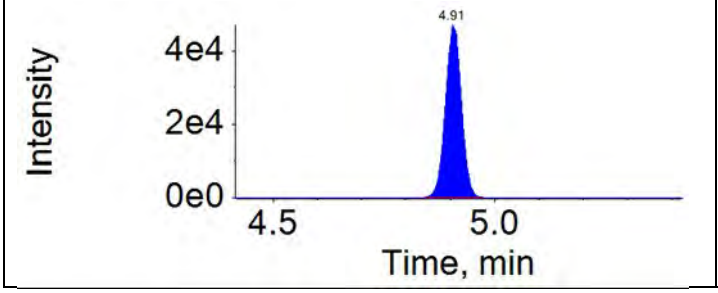
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

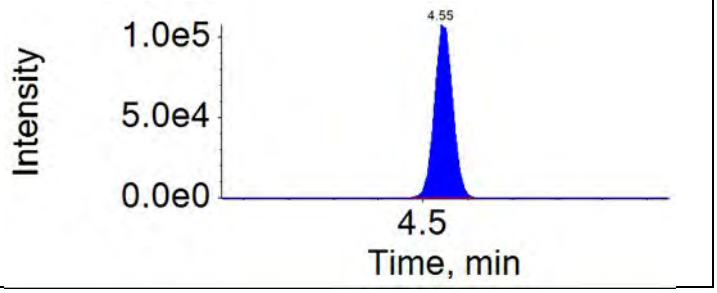
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



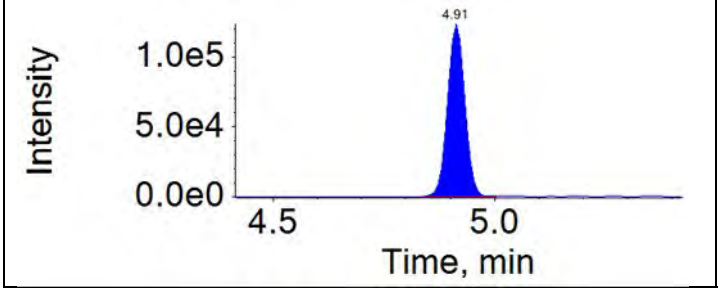


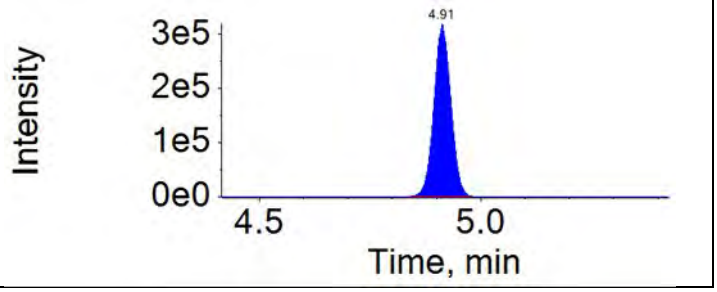
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



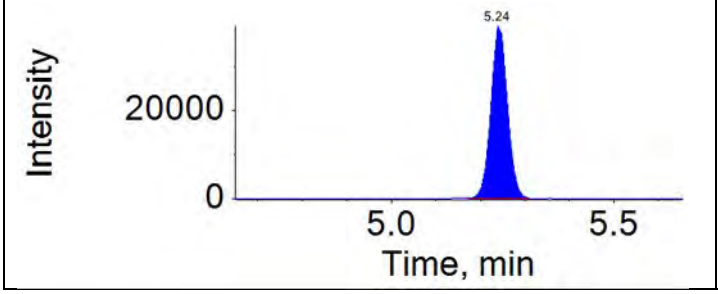


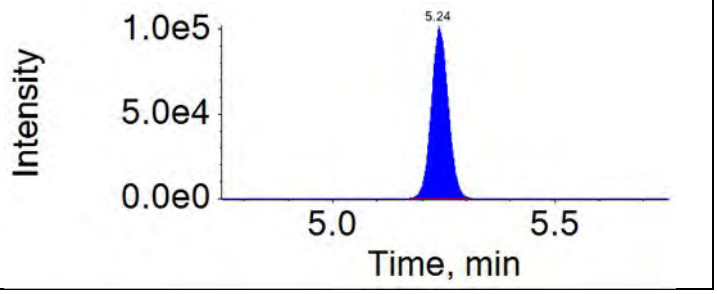
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



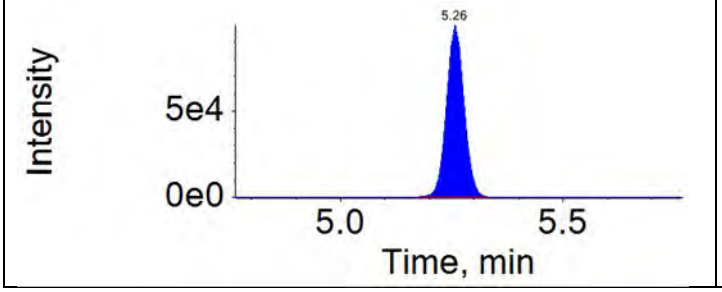


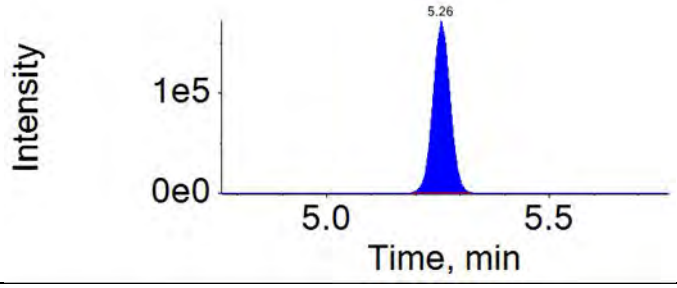
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

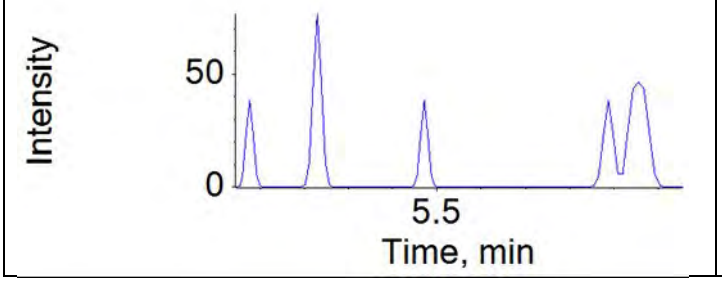
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

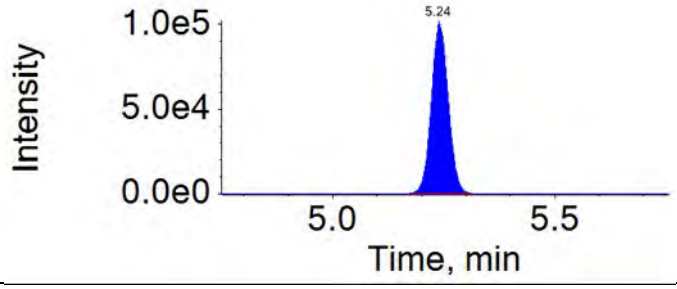
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



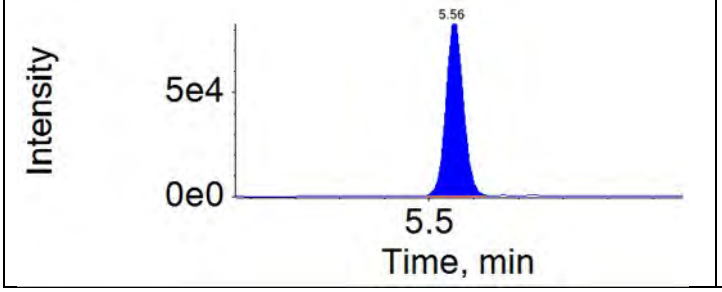


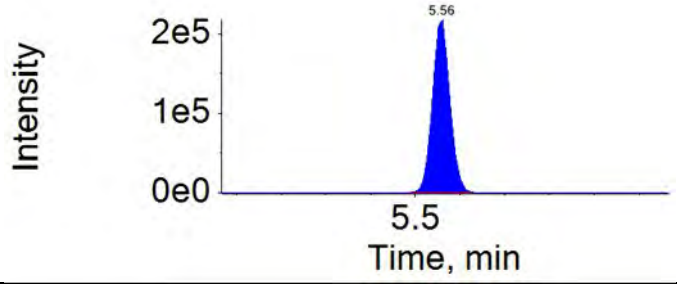
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



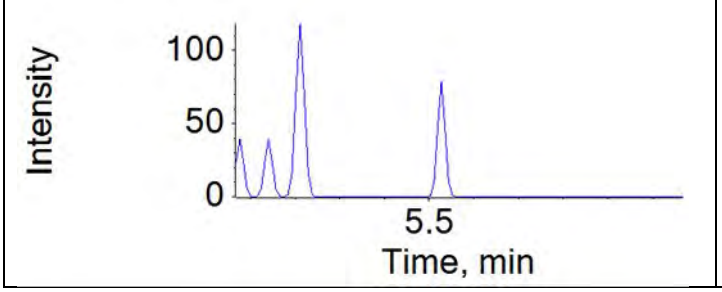


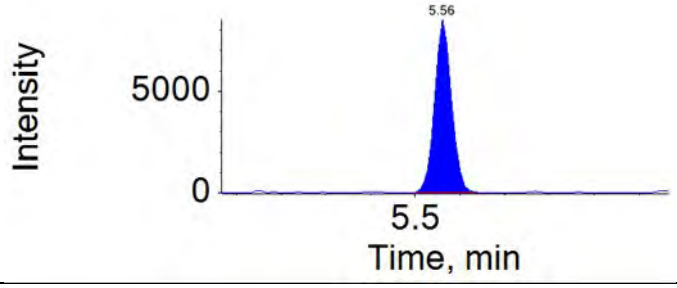
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



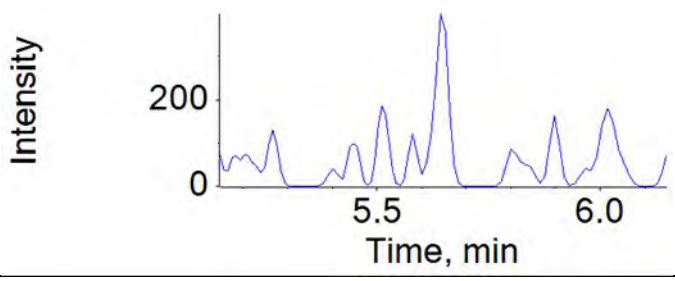


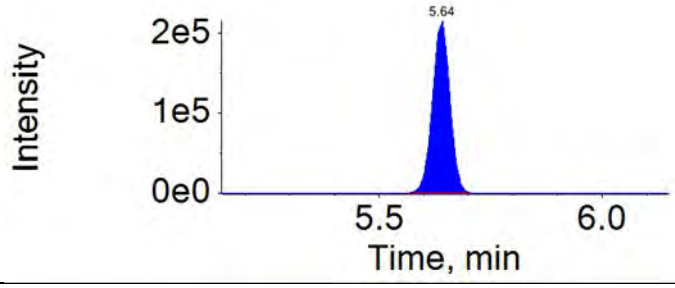
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

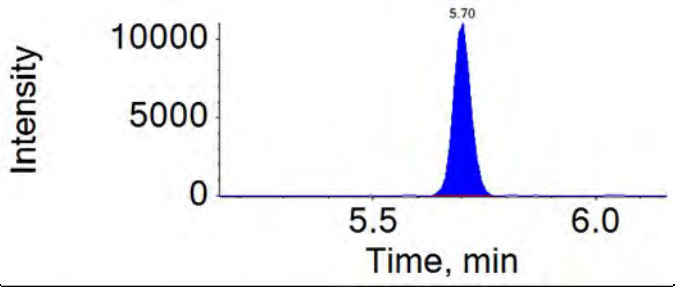
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

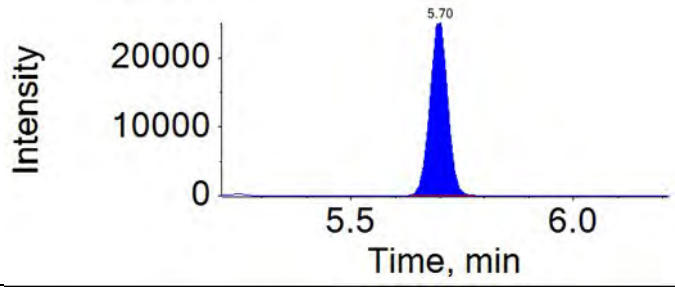
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



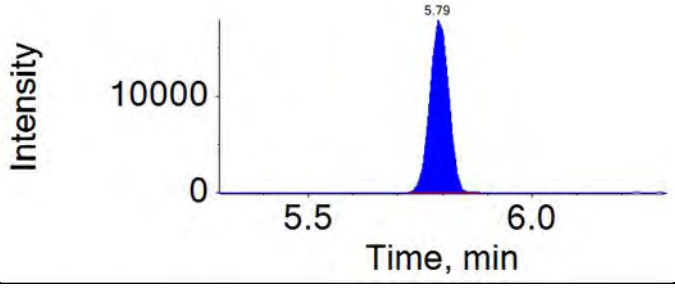


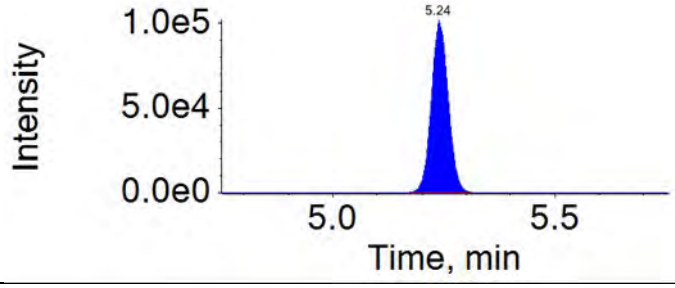
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



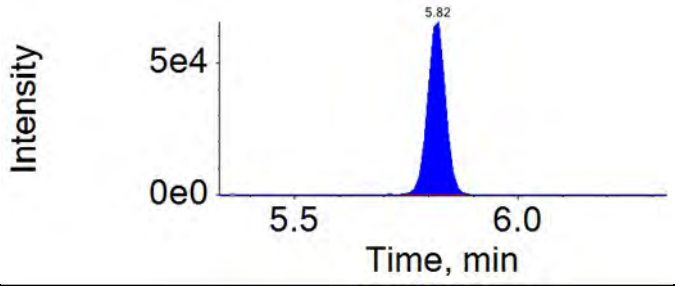


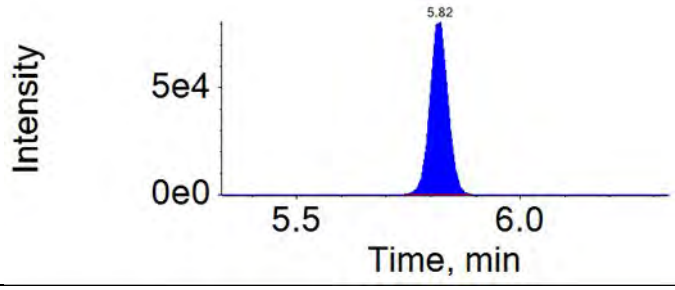
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



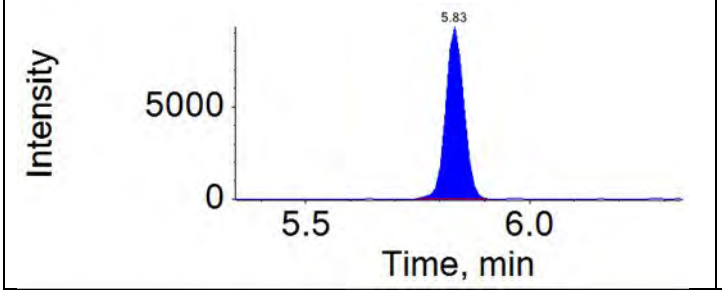


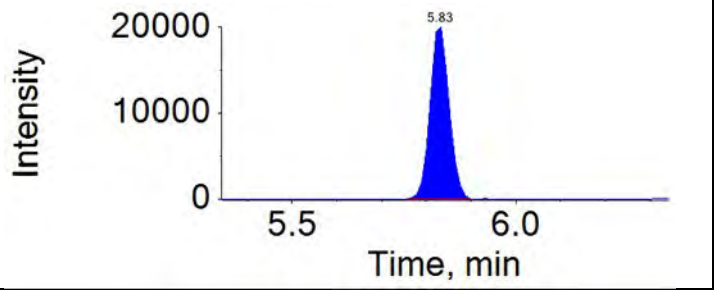
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

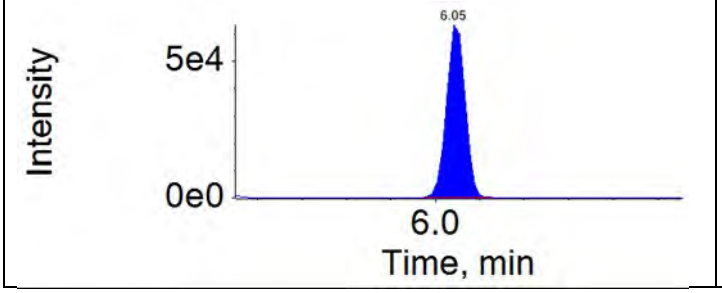
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

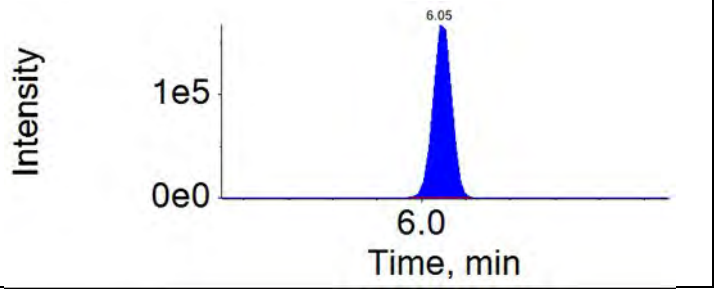
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



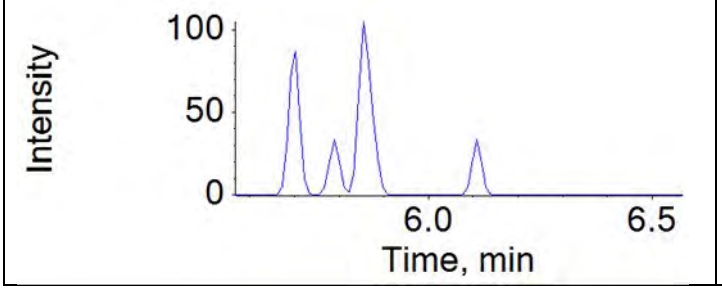


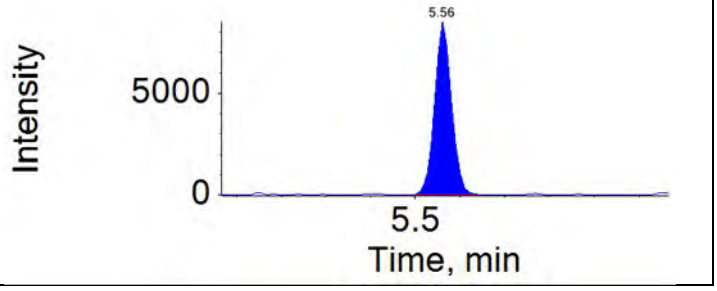
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



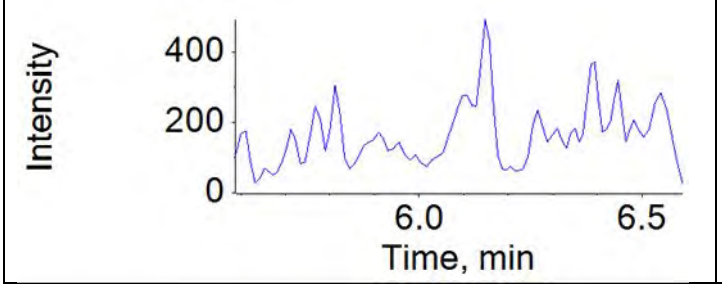


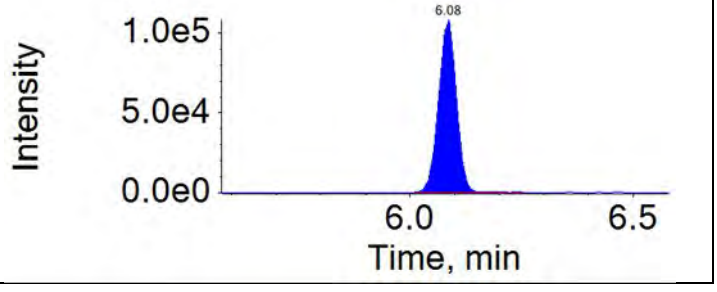
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



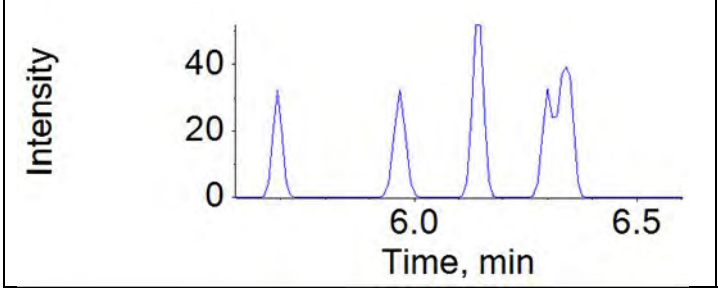


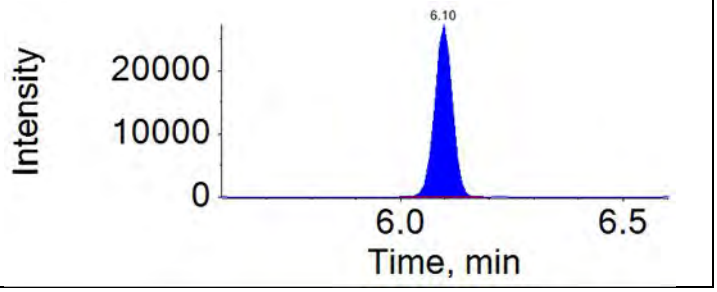
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

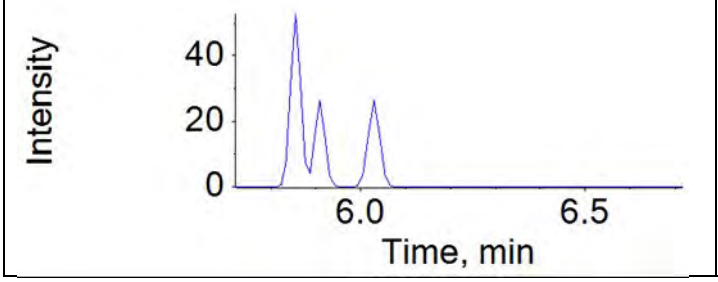
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

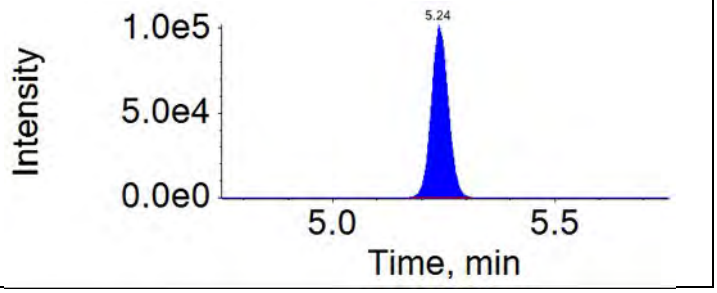
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



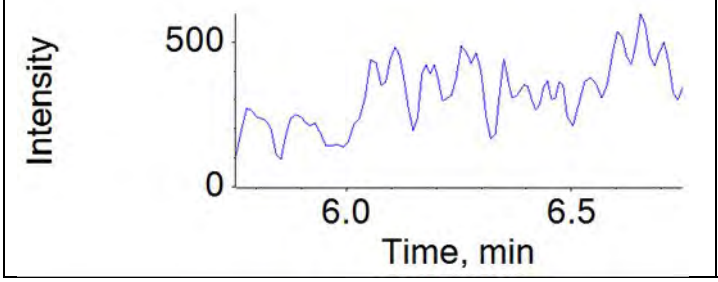


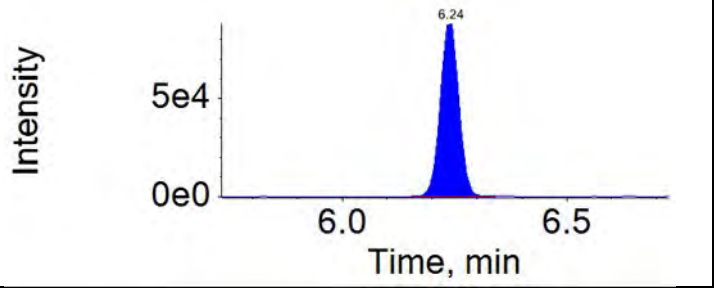
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



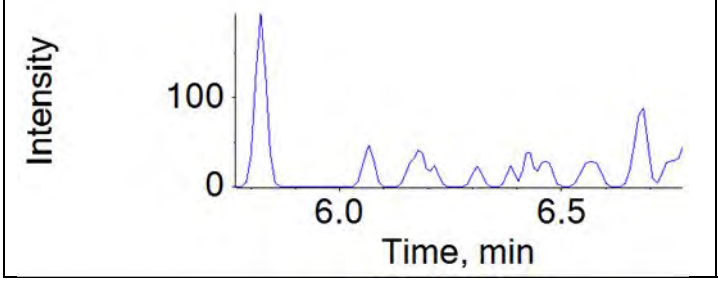


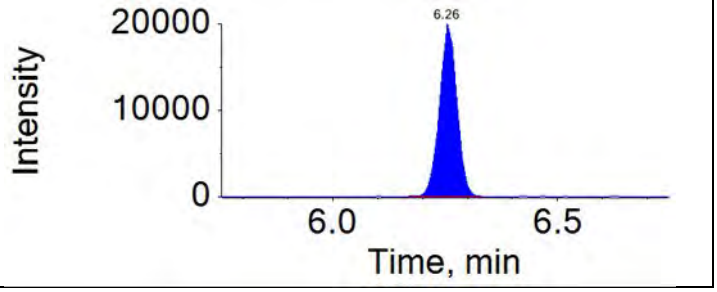
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



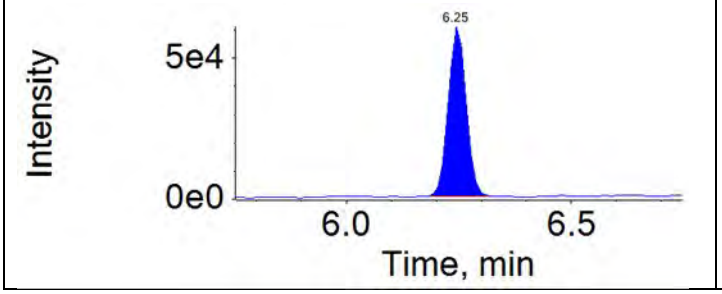


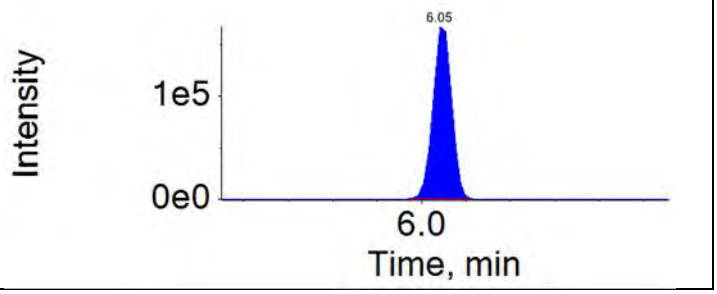
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

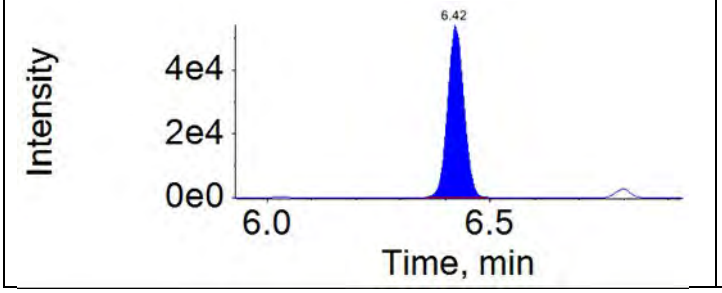
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

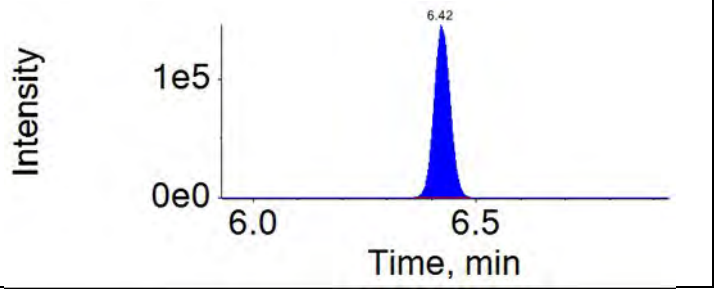
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



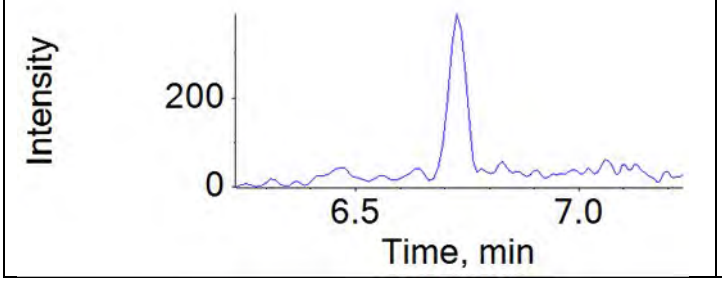


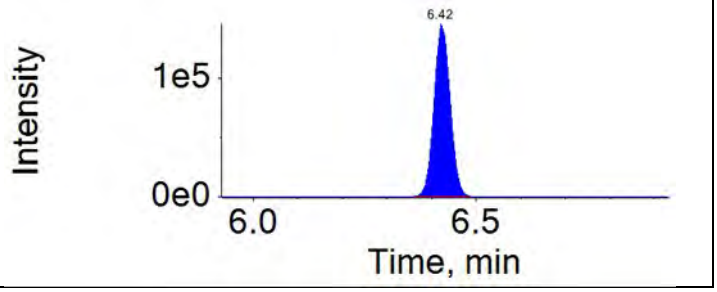
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



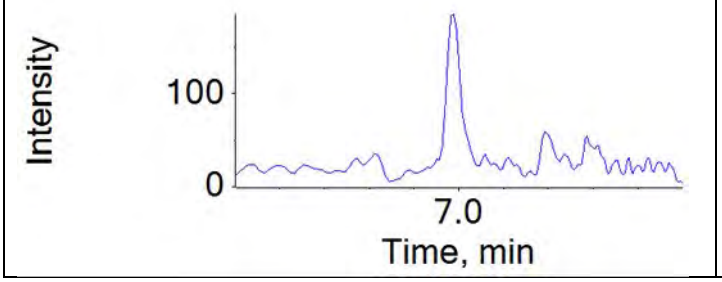


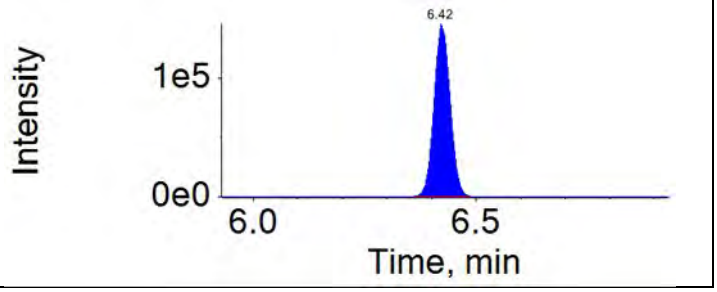
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



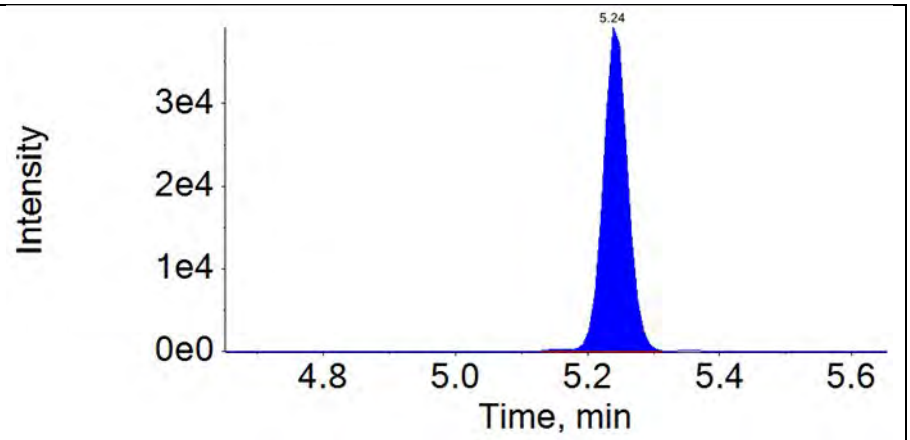


APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

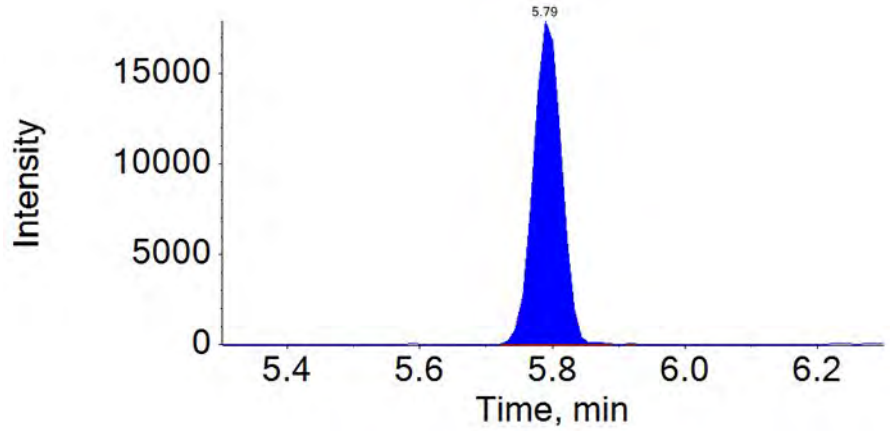
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
101508.83
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



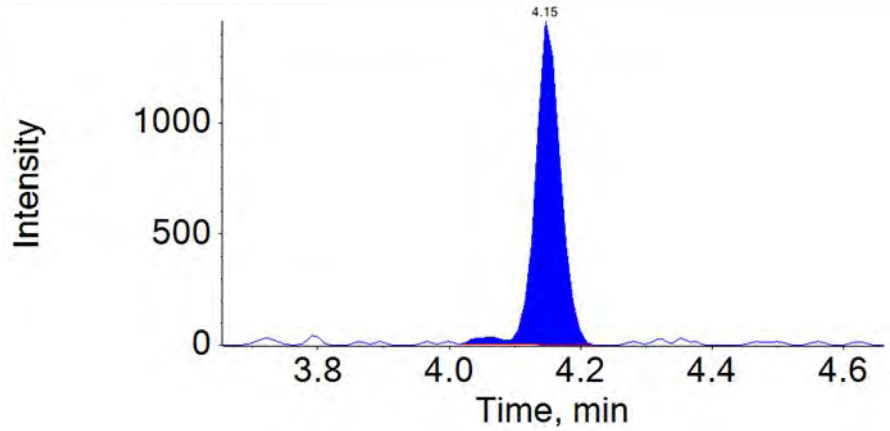
Integration Comment: incorrect integration

Component Name:
PFDS
RT (min.):
5.79
Peak Area:
52928.55
Mass Range:
599.0 / 80.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.15
Peak Area:
3909.75
Mass Range:
313.0 / 119.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV

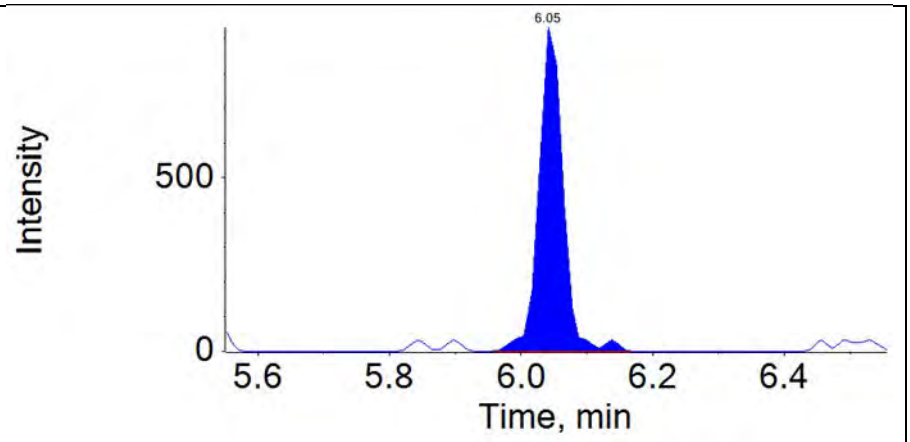


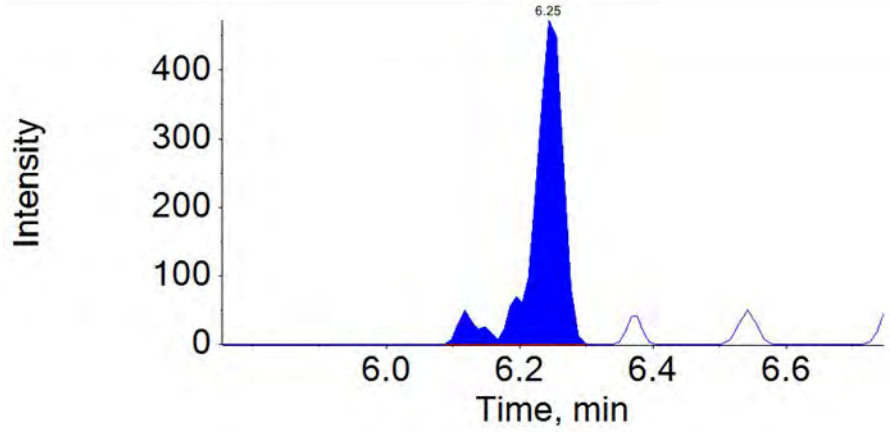
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFDoDA_2 **RT (min.):** 6.05 **Peak Area:** 2399.87 **Mass Range:** 613.0 / 169.0 **File Name:** 18NOV12DCAL-50.wiff **Sample Name:** ICV	 **Integration Comment:** incorrect integration

Component Name: PFTrDA_2 **RT (min.):** 6.25 **Peak Area:** 1468.60 **Mass Range:** 663.0 / 169.0 **File Name:** 18NOV12DCAL-50.wiff **Sample Name:** ICV	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

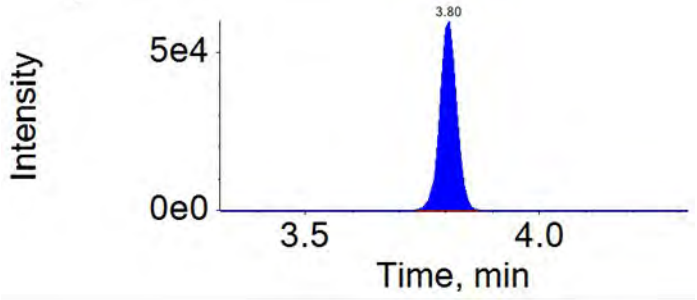
Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-50.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	150059.59	A	0.3619	0.3773			
PFBS_2	3.81	1.00	56617.66	A	0.3619	0.3773	4	50	
4:2-FTS	N/A	N/A	N/A	A	0.6730	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	0.6730	N/A		#NA!	
PFHxA	4.15	1.00	328694.28	A	0.0117	0.0117			
PFHxA_2	4.15	1.00	3829.67	M	0.0117	0.0117	0	50	
PFPeS	N/A	N/A	N/A	A	0.5191	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5191	N/A		50	
PFHpA	4.54	1.00	316975.28	A	0.0563	0.0530			
PFHpA_2	4.54	1.00	16790.55	A	0.0563	0.0530	-6	50	
PFHxS	4.55	1.00	115564.23	A	0.3428	0.3340			
PFHxS_2	4.55	1.00	38596.78	A	0.3428	0.3340	-3	50	
6:2-FTS	N/A	N/A	N/A	A	0.6604	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	0.6604	N/A		#NA!	
PFHpS	4.91	1.08	118318.71	A	0.4066	0.3735			
PFHpS_2	4.91	1.08	44193.16	A	0.4066	0.3735	-8	50	
PFOA	4.91	1.00	332094.35	A	0.0562	0.0559			
PFOA_2	4.91	1.00	18574.54	A	0.0562	0.0559	0	50	
PFOS	5.24	1.00	100952.54	M	0.2968	0.3741			
PFOS_2	5.24	1.00	37762.78	A	0.2968	0.3741	26	50	
PFNA	5.26	1.00	271240.37	A	0.0229	0.0190			
PFNA_2	5.26	1.00	5150.39	A	0.0229	0.0190	-17	50	
PFNS	N/A	N/A	N/A	A	0.4828	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4828	N/A		50	
PFDA	5.56	1.00	224279.75	A	0.0081	0.0061			
PFDA_2	5.56	1.00	1372.75	A	0.0081	0.0061	-24	50	
8:2-FTS	N/A	N/A	N/A	A	0.6814	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	0.6814	N/A		#NA!	
NMeFOSAA	5.70	1.00	30591.86	A	0.2569	0.2719			
NMeFOSAA_2	5.70	1.00	8316.89	A	0.2569	0.2719	6	50	
PFDS	5.79	1.11	52860.94	M	0.5144	0.5291			
PFDS_2	5.79	1.11	27969.61	A	0.5144	0.5291	3	50	
PFUnDA	5.82	1.00	183511.26	A	0.0058	0.0078			
PFUnDA_2	5.82	1.00	1432.36	A	0.0058	0.0078	34	50	
NEtFOSAA	5.83	1.00	26149.34	A	0.7253	0.6365			
NEtFOSAA_2	5.83	1.00	16644.93	A	0.7253	0.6365	-12	50	
PFDoDA	6.05	1.00	185295.04	A	0.0157	0.0127			
PFDoDA_2	6.05	1.00	2348.96	M	0.0157	0.0127	-19	50	
10:2-FTS	N/A	N/A	N/A	A	0.6356	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	0.6356	N/A		#NA!	
PFTrDA	6.25	1.03	165153.11	A	0.0086	0.0082			
PFTrDA_2	6.25	1.03	1356.95	M	0.0086	0.0082	-4	50	
PFTeDA	6.42	1.00	135650.98	A	0.0062	0.0054			
PFTeDA_2	6.42	1.00	727.00	A	0.0062	0.0054	-14	50	
PFHxDA	N/A	N/A	N/A	A	0.0683	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0683	N/A		50	
PFODA	N/A	N/A	N/A	A	0.0277	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0277	N/A		50	

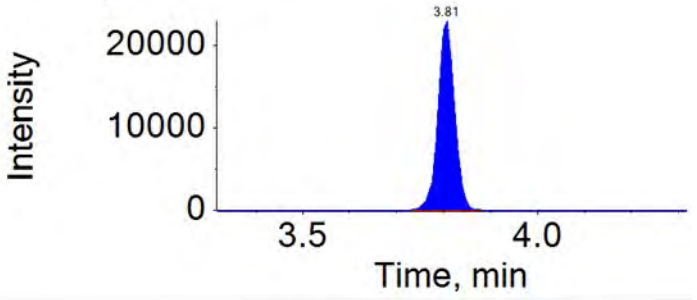
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

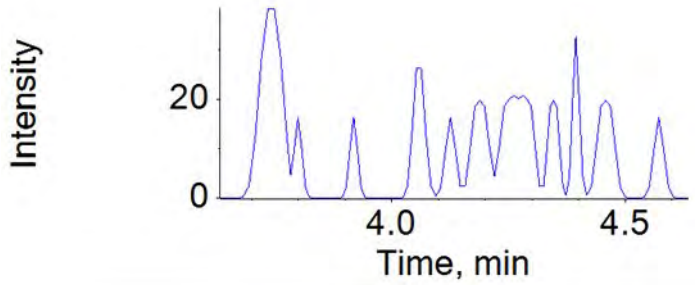
Component: PFBS
Primary Mass: 299.0 / 80.0



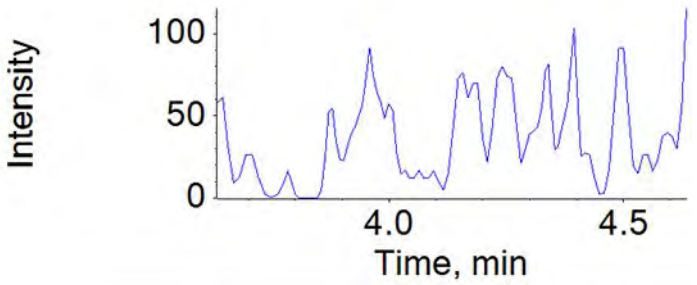
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



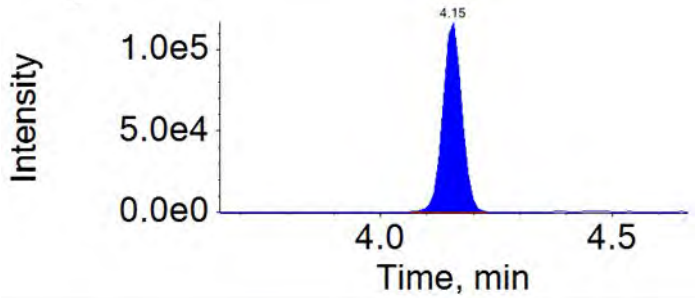
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



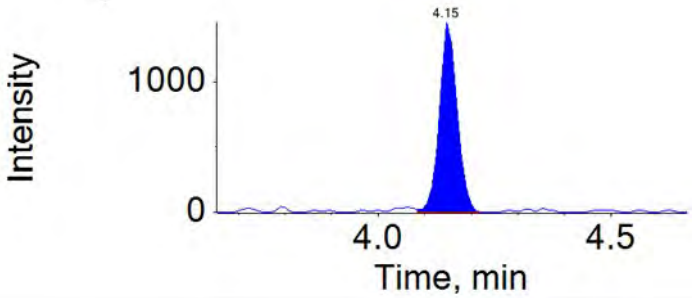
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



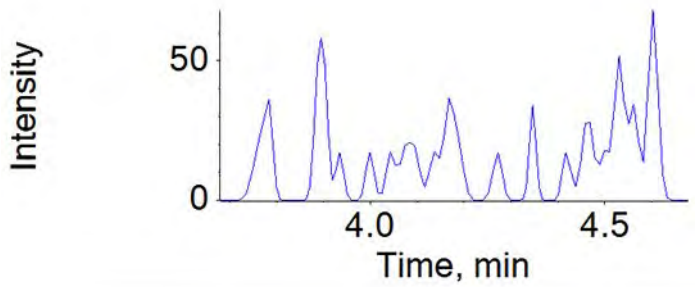
Component: PFHxA
Primary Mass: 313.0 / 269.0



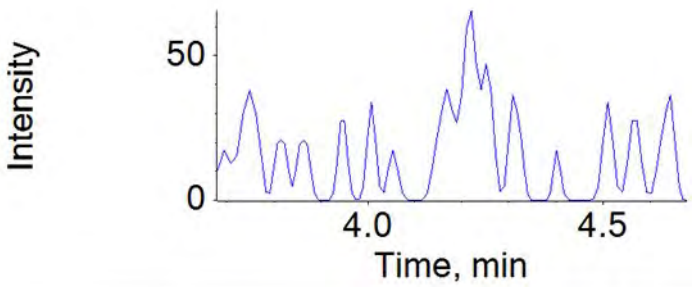
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



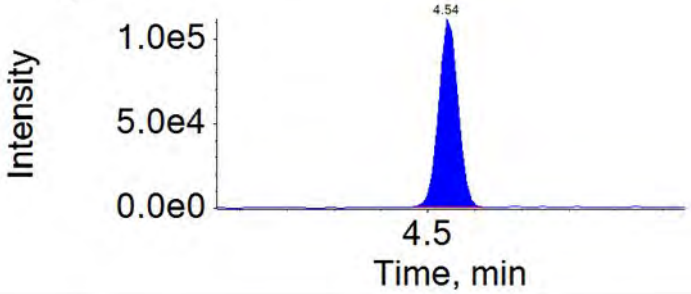
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



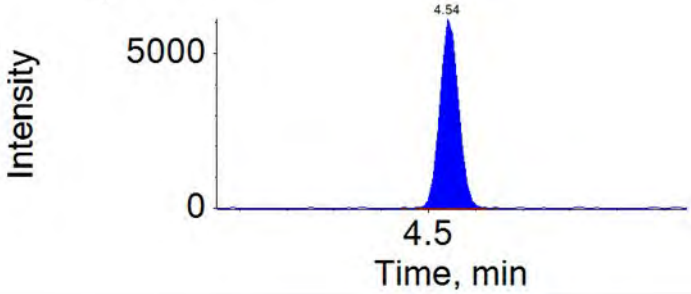
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

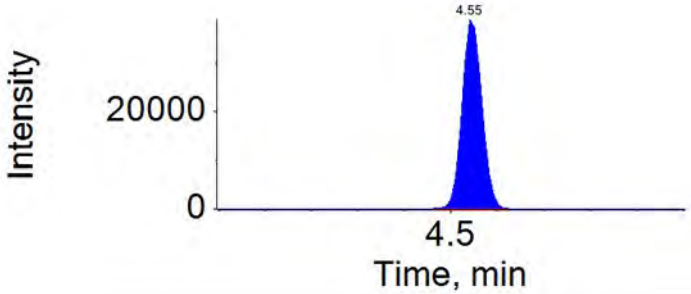
Component: PFHpA
Primary Mass: 363.0 / 319.0



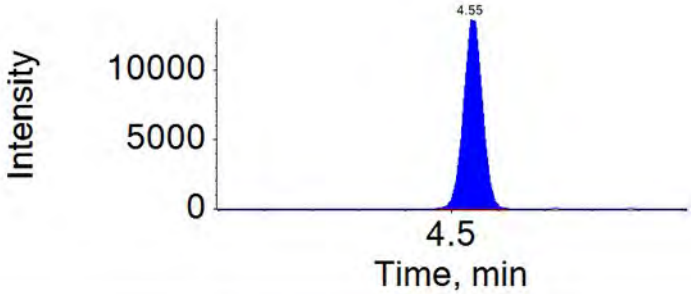
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



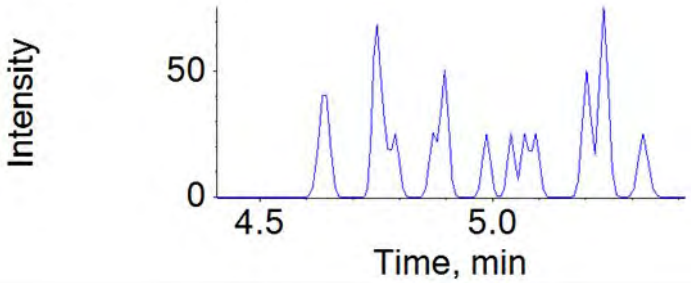
Component: PFHxS
Primary Mass: 399.0 / 80.0



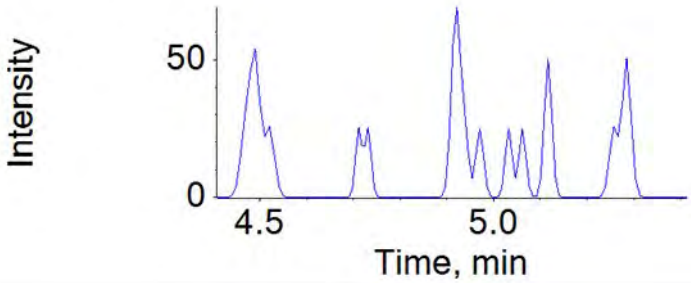
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



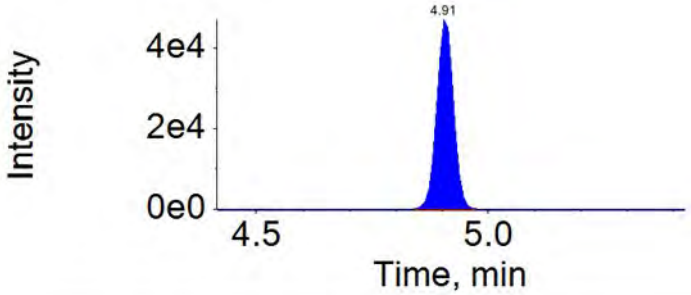
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



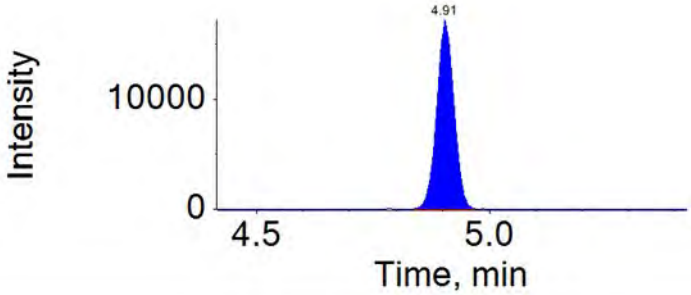
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



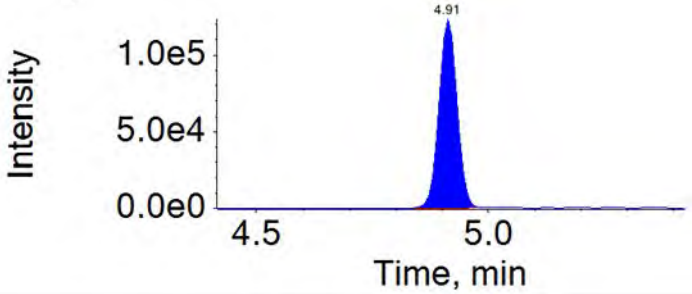
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



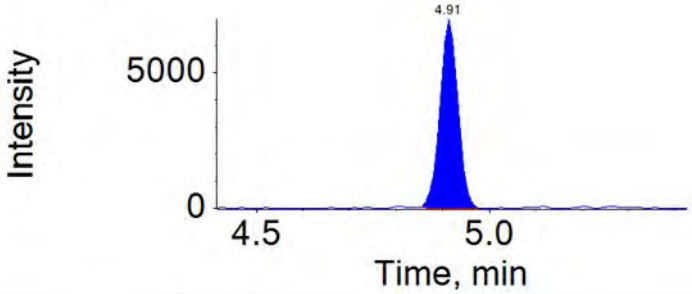
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

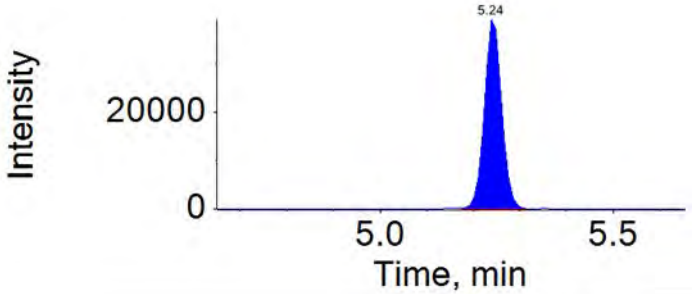
Component: PFOA
Primary Mass: 413.0 / 369.0



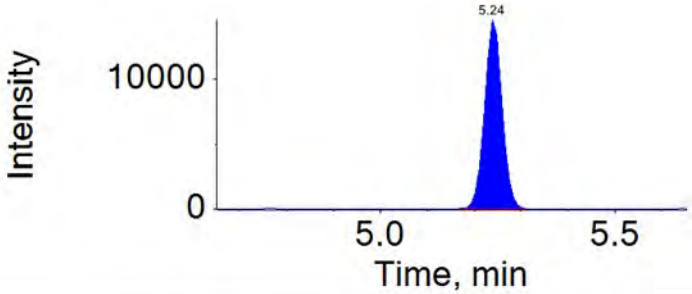
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



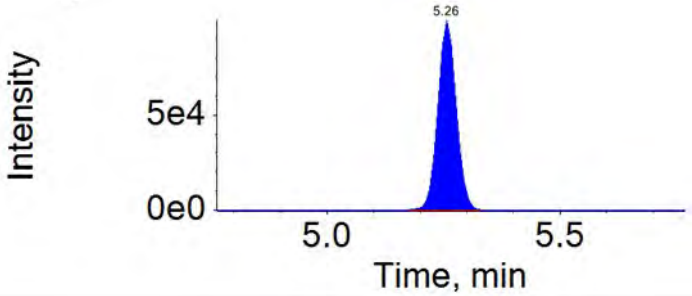
Component: PFOS
Primary Mass: 499.0 / 80.0



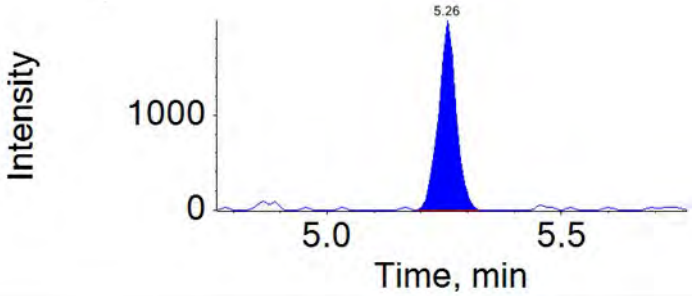
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



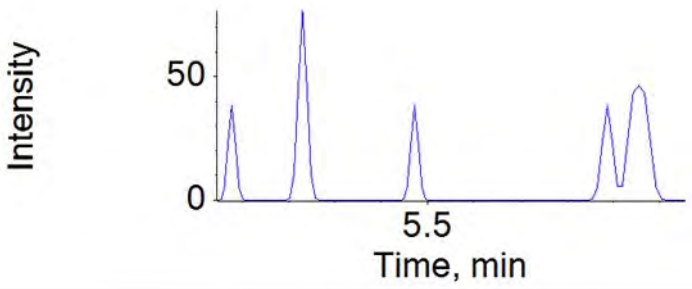
Component: PFNA
Primary Mass: 463.0 / 419.0



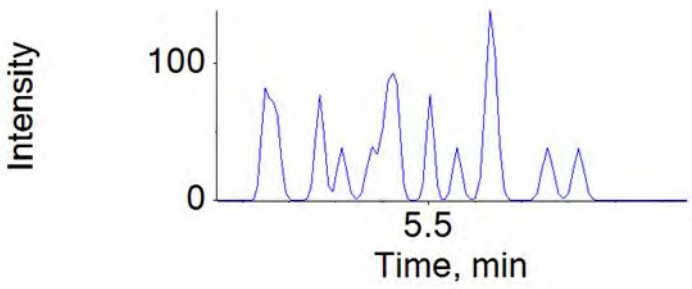
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



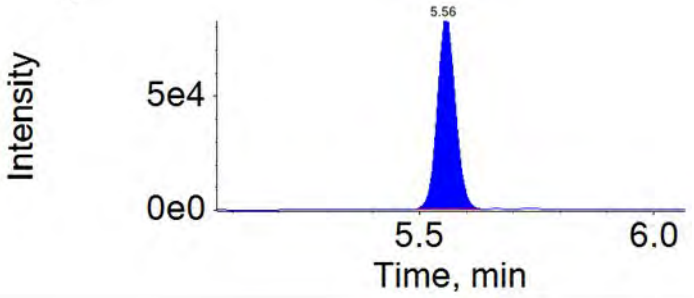
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



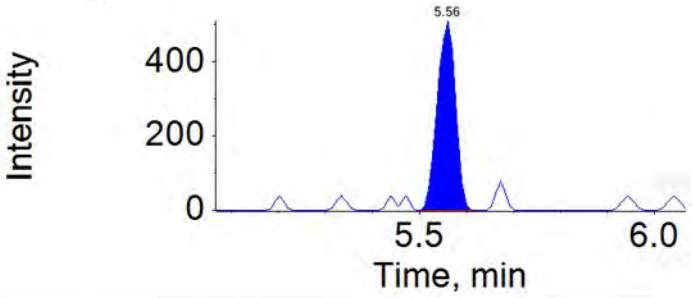
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

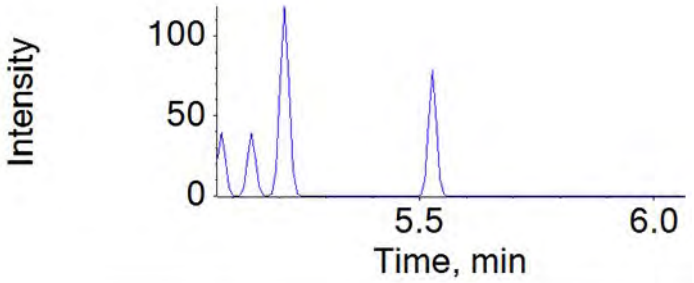
Component: PFDA
Primary Mass: 513.0 / 469.0



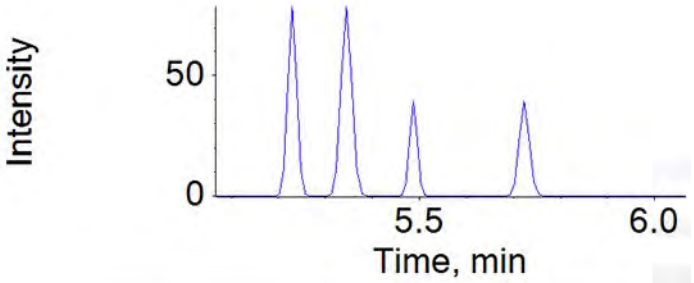
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



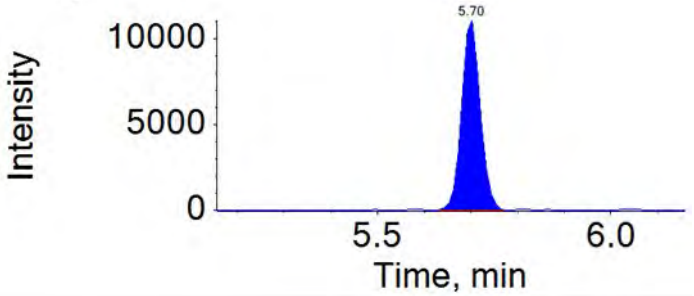
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



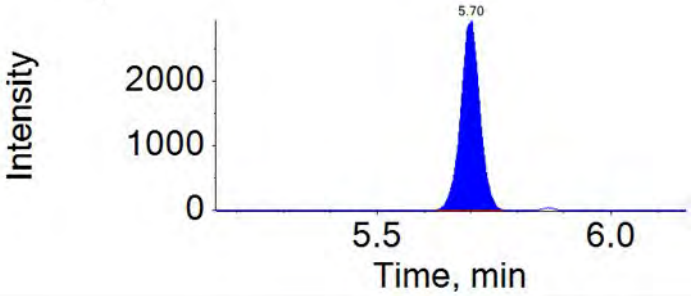
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



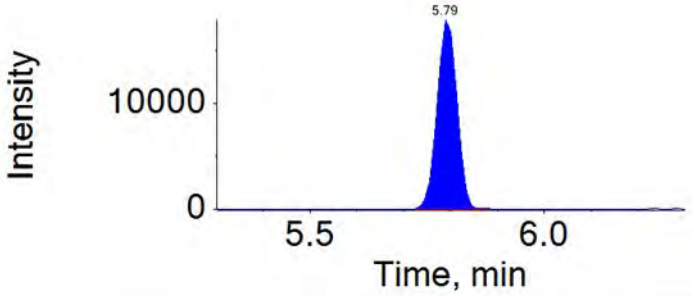
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



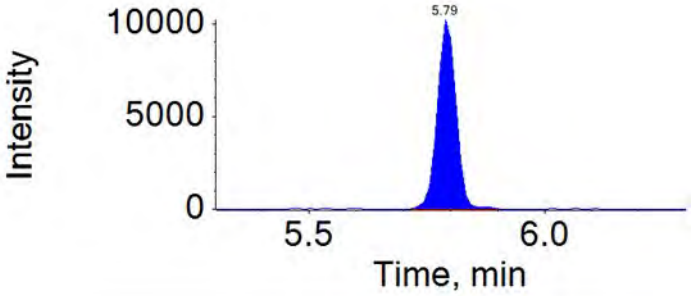
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



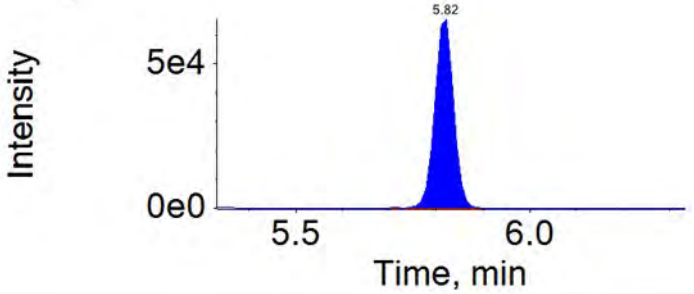
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



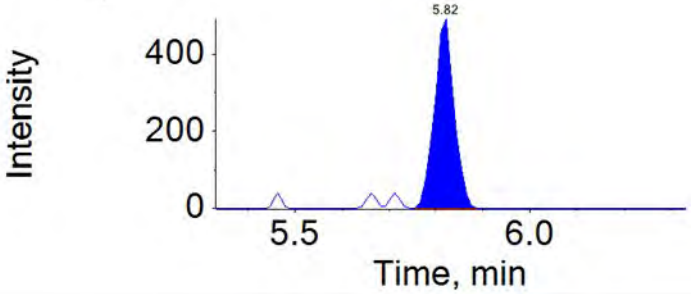
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

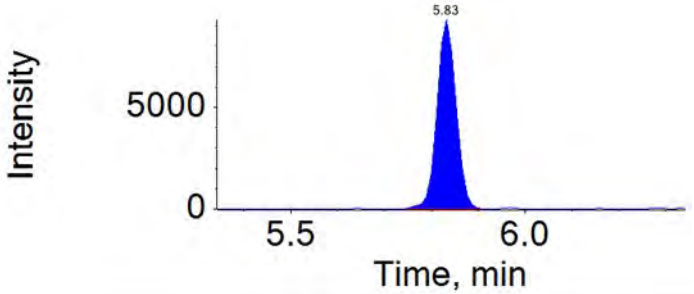
Component: PFUnDA
Primary Mass: 563.0 / 519.0



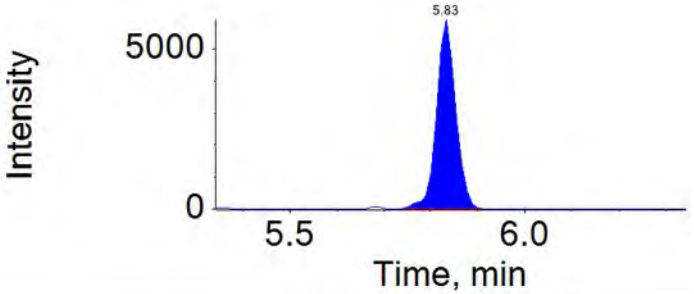
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



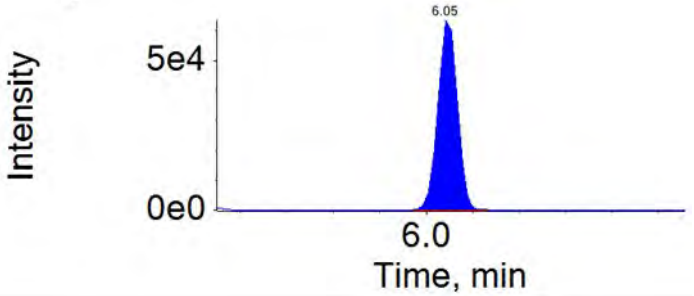
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



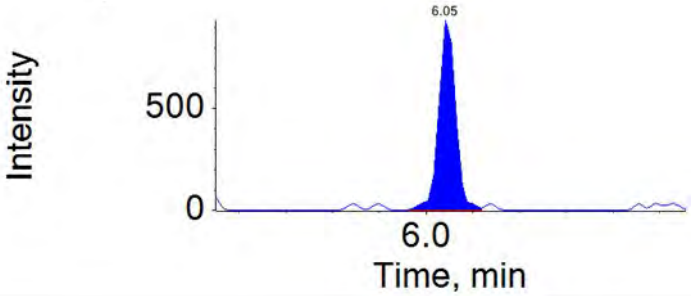
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



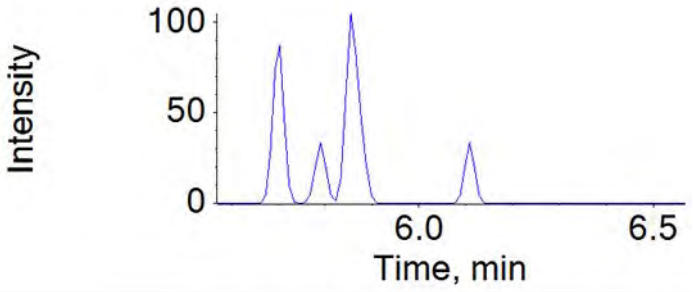
Component: PFDoDA
Primary Mass: 613.0 / 569.0



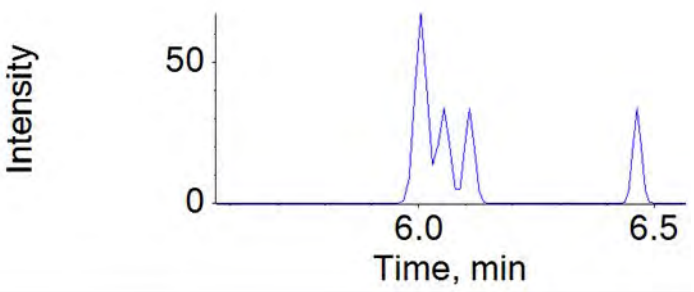
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



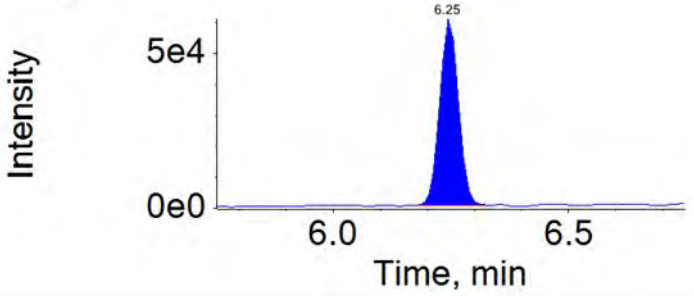
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



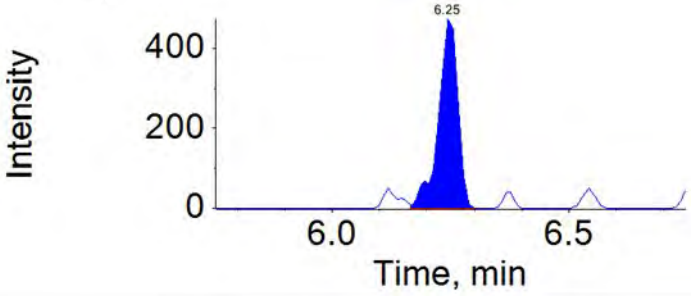
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

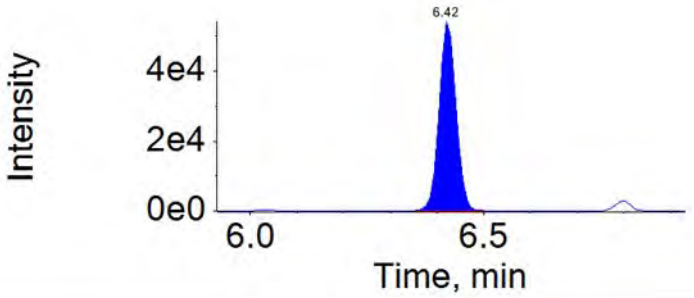
Component: PFTrDA
Primary Mass: 663.0 / 619.0



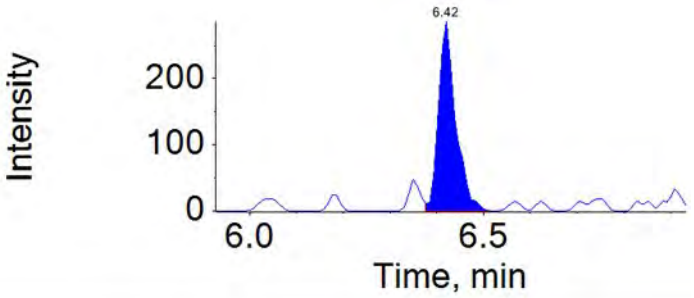
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



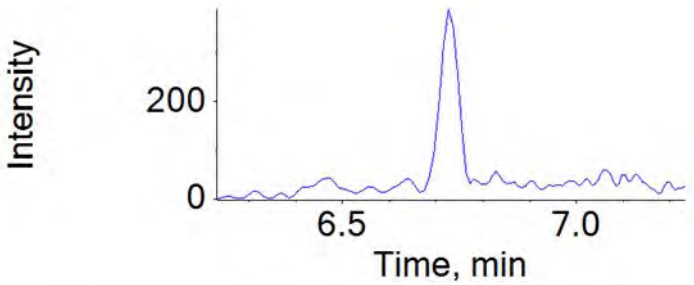
Component: PFTeDA
Primary Mass: 713.0 / 669.0



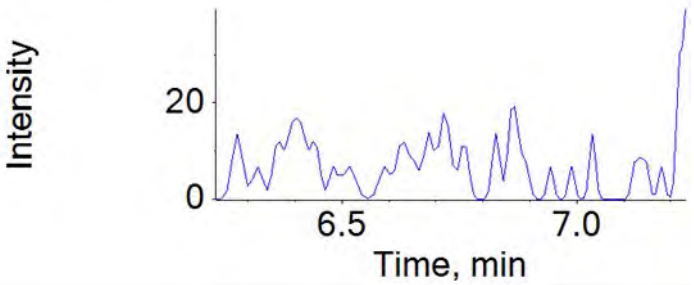
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



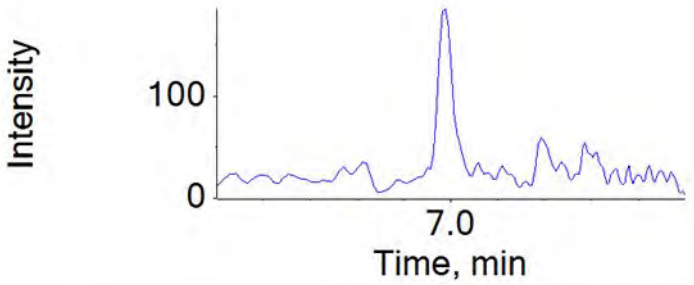
Component: PFHxDA
Primary Mass: 813.0 / 769.0



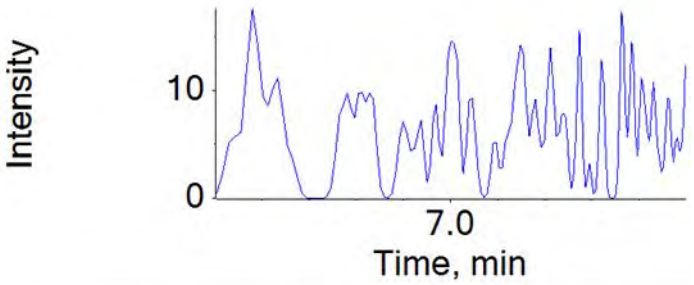
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	L+B CAL3			**Data File:**		18NOV12DCAL-51.wiff
Sample ID:	LBMODX1833D			**Acquis Date:**		2018-11-12T16:27:15
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	11			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	682528.6	659926.2	3	50	
13C2-PFOA	5.0	446810.2	450219.7	-1	50	
13C4-PFOS	4.8	256014.8	249205.8	3	50	
13C2-PFDA	5.0	295115.2	278743.9	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	735331.8	13C3-PFBA	682528.6	1.077	5.000	4.830	97	70-130	
E13C5-PFPeA	714738.5	13C3-PFBA	682528.6	1.047	5.000	4.697	94	70-130	
E13C3-PFBS	418749.4	13C3-PFBA	682528.6	0.614	4.650	4.331	93	70-130	
E13C2-4:2-FTS	45470.2	13C2-PFOA	446810.2	0.102	4.670	4.532	97	70-130	
E13C5-PFHxA	624943.7	13C2-PFOA	446810.2	1.399	5.000	5.052	101	70-130	
E13C3-PFHxS	318599.1	13C2-PFOA	446810.2	0.713	4.730	4.893	103	70-130	
E13C4-PFHpA	492218.6	13C2-PFOA	446810.2	1.102	5.000	4.963	99	70-130	
E13C2-6:2-FTS	35757.3	13C2-PFOA	446810.2	0.080	4.750	5.354	113	70-130	
E13C8-PFOA	860795.2	13C2-PFOA	446810.2	1.927	5.000	5.308	106	70-130	
E13C8-PFOS	257626.7	13C4-PFOS	256014.8	1.006	4.780	4.459	93	70-130	
E13C9-PFNA	443649.2	13C4-PFOS	256014.8	1.733	5.000	4.832	97	70-130	
E13C6-PFDA	588492.8	13C2-PFDA	295115.2	1.994	5.000	4.653	93	70-130	
E13C2-8:2-FTS	26035.6	13C2-PFDA	295115.2	0.088	4.790	4.400	92	70-130	
E13C8-PFOSA	615348.9	13C2-PFDA	295115.2	2.085	5.000	4.623	92	70-130	
Ed3-NMeFOSAA	69196.9	13C2-PFDA	295115.2	0.234	5.000	4.232	85	70-130	
E13C7-PFUnDA	249433.8	13C2-PFDA	295115.2	0.845	5.000	4.907	98	70-130	
Ed5-NEtFOSAA	70399.3	13C2-PFDA	295115.2	0.239	5.000	5.047	101	70-130	
E13C2-PFDoDA	502206.8	13C2-PFDA	295115.2	1.702	5.000	4.418	88	70-130	
Ed7-NMePFOSAE	314874.3	13C2-PFDA	295115.2	1.067	5.000	4.617	92	70-130	
Ed3-NMePFOSA	80287.6	13C2-PFDA	295115.2	0.272	5.000	4.943	99	70-130	
Ed9-NEtPFOSAE	265747.6	13C2-PFDA	295115.2	0.900	5.000	4.683	94	70-130	
Ed5-NEtPFOSA	56128.1	13C2-PFDA	295115.2	0.190	5.000	4.462	89	70-130	
E13C2-PFTeDA	379002.1	13C2-PFDA	295115.2	1.284	5.000	4.509	90	70-130	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

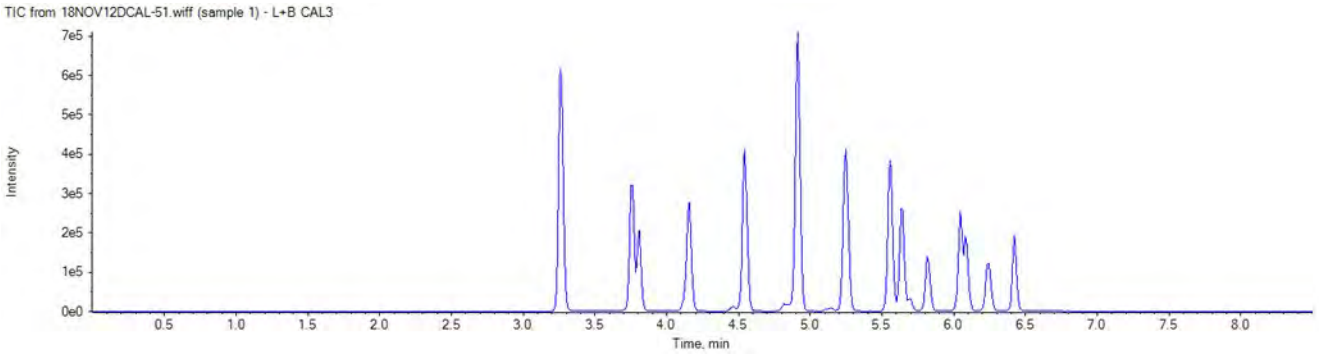
Analyte Quantitation Peak Table

Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-51.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	735331.8	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	714738.5	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	418749.4	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	45470.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	624943.7	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	418749.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	492218.6	N/A	
PFHxS	4.55	1.000	122359.8		M	13C3-PFHxS	4.55	318599.1	0.384	1.862
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	35757.3	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	318599.1	N/A	
PFOA	4.91	1.000	312625.4		M	13C8-PFOA	4.91	860795.2	0.363	1.940
PFOS	5.24	1.000	105809.8		M	13C8-PFOS	5.24	257626.7	0.411	1.796
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	443649.2	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	588492.8	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	26035.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	615348.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	69196.9	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	249433.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	70399.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	502206.8	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	26035.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	314874.3	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	80287.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	265747.6	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	56128.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	502206.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	

Total Ion Chromatogram

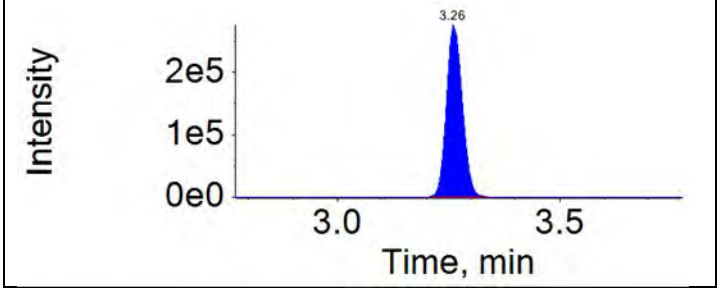


APPROVED
By MCD at 6:34 pm, 11/12/18

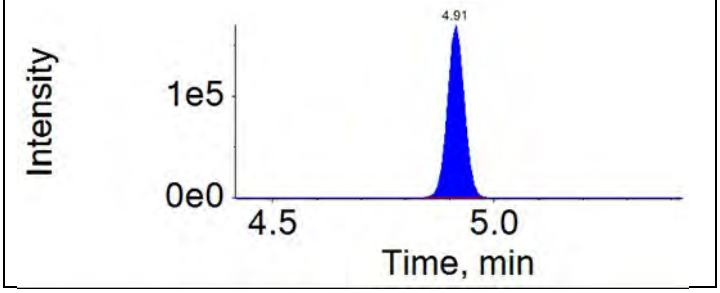
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

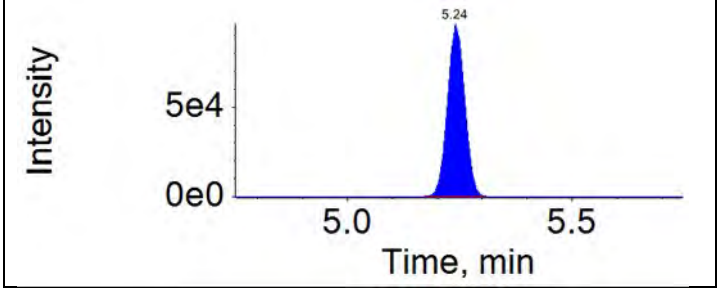
Injection Standard: 13C3-PFBA
216.0 / 172.0



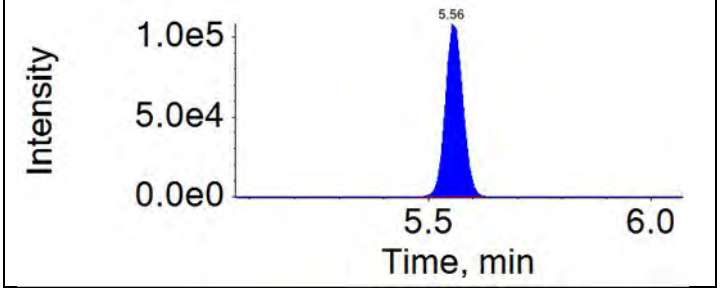
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

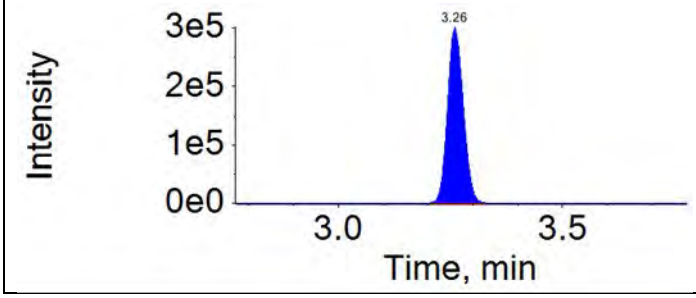


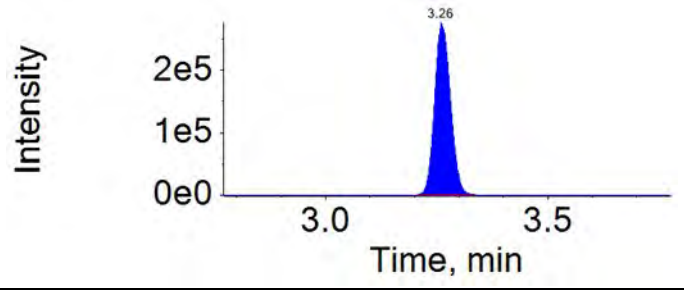
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

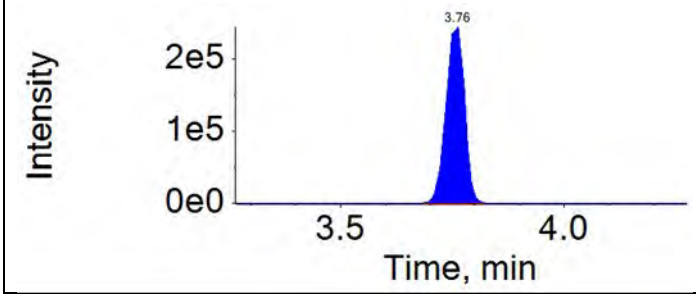
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

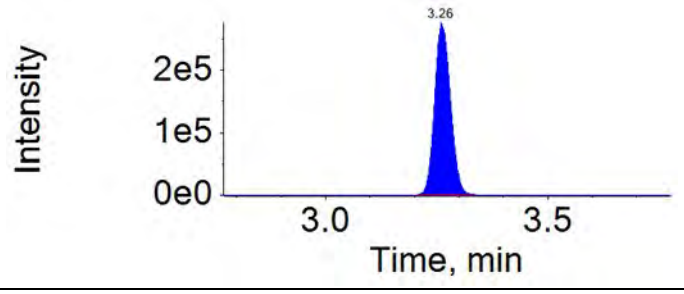
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



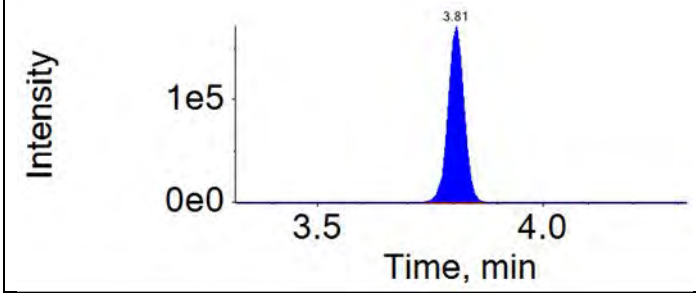


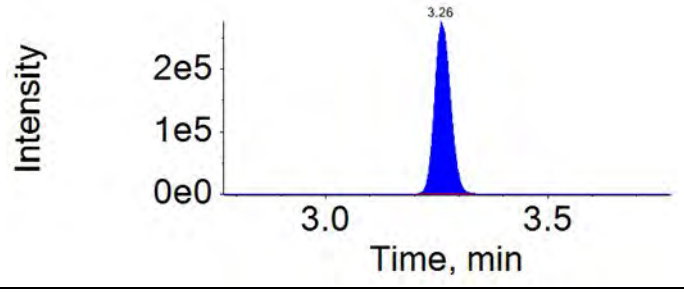
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



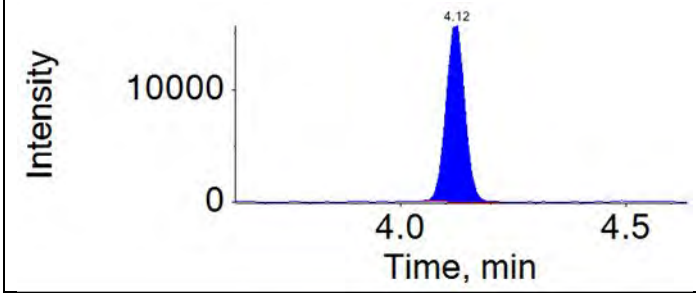


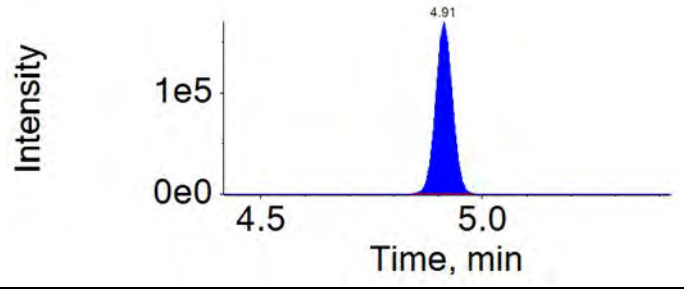
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



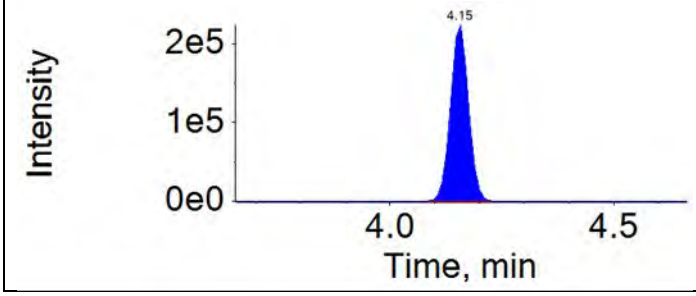


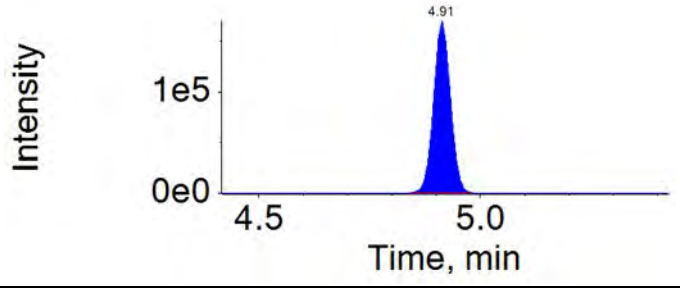
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

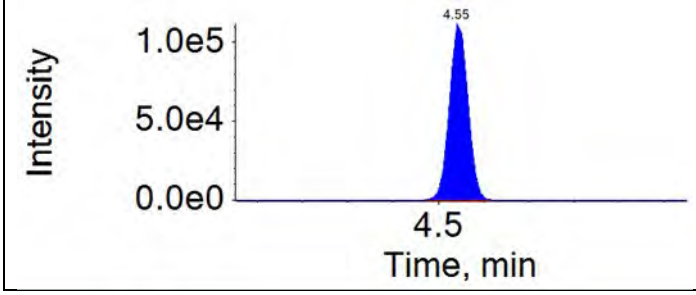
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

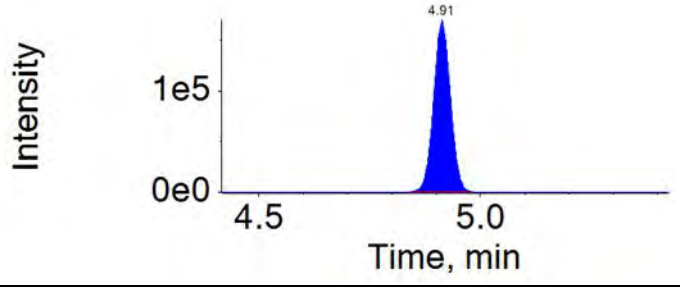
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



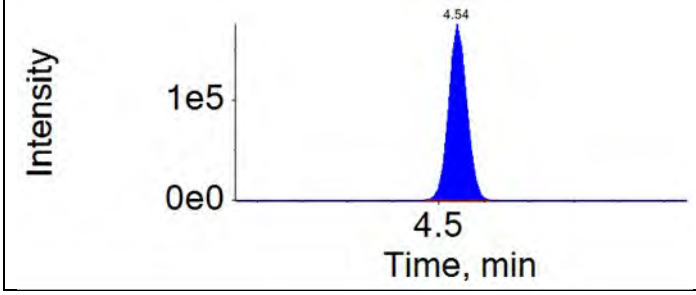


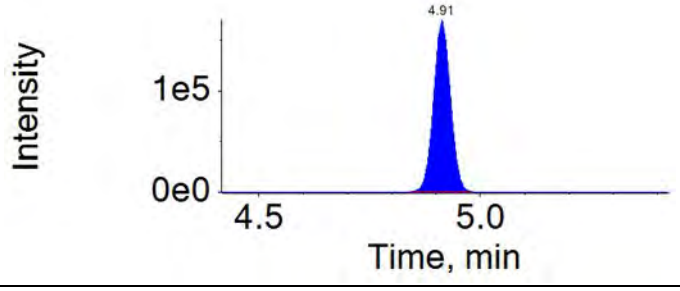
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



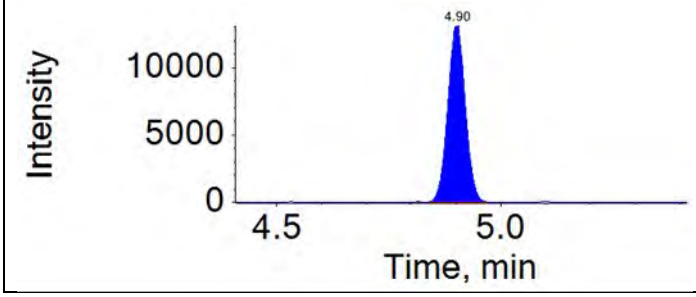


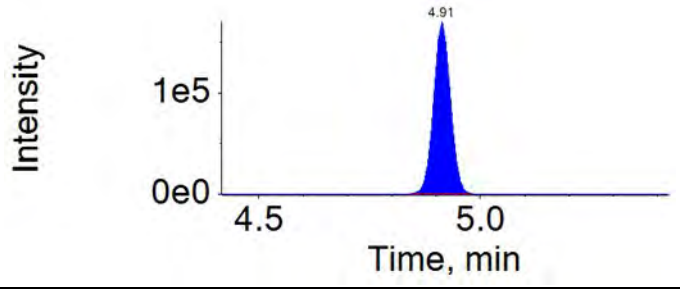
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

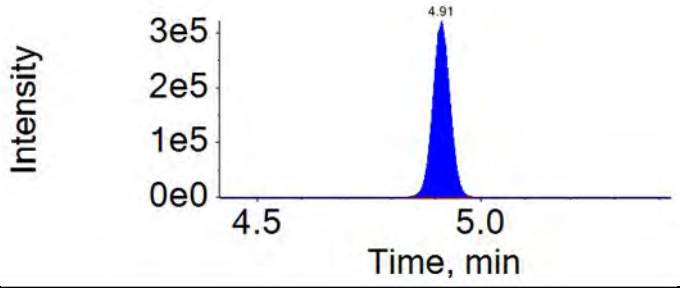
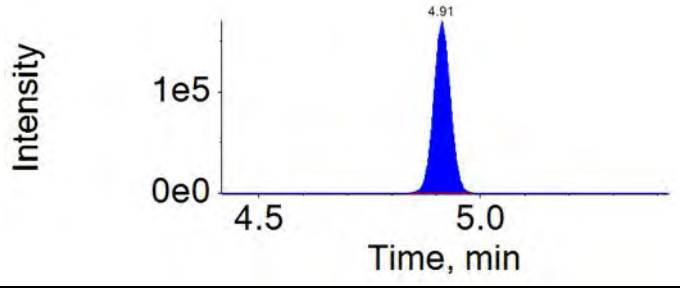


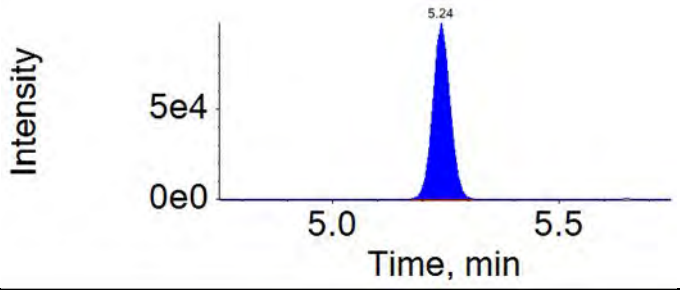
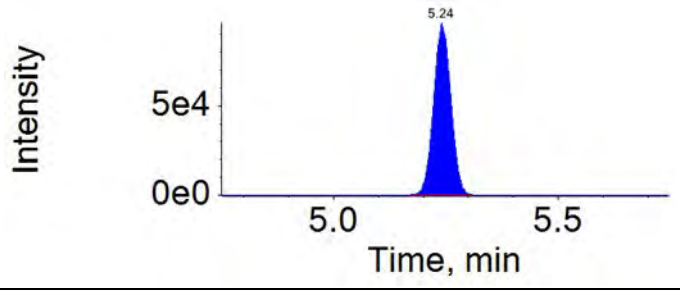


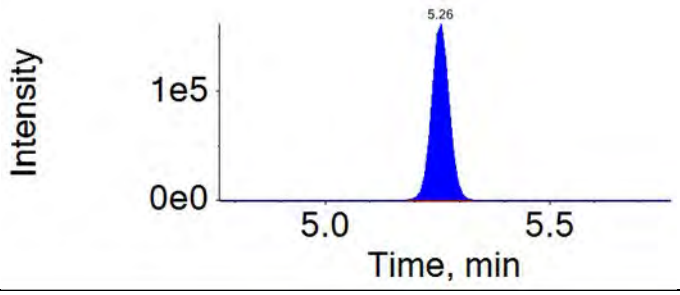
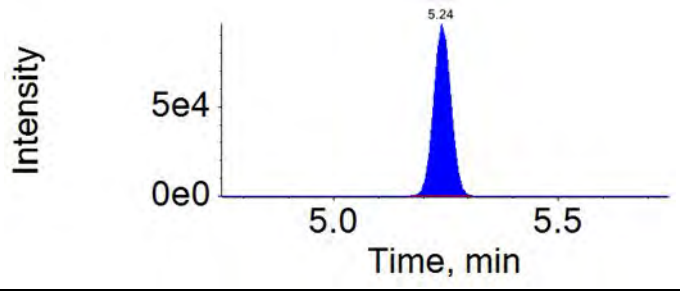
APPROVED
By MCD at 6:34 pm, 11/12/18

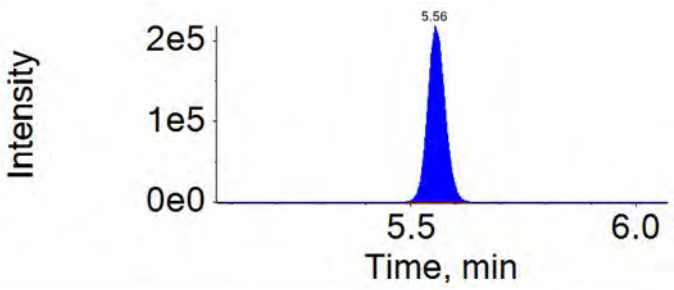
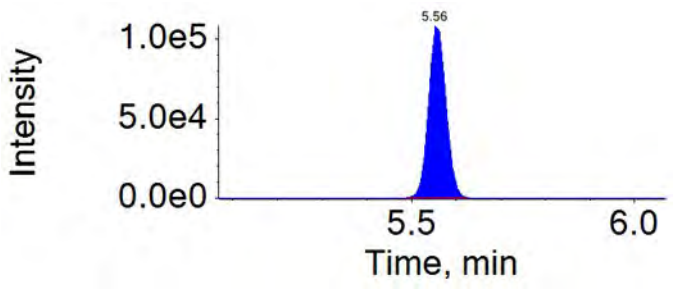
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

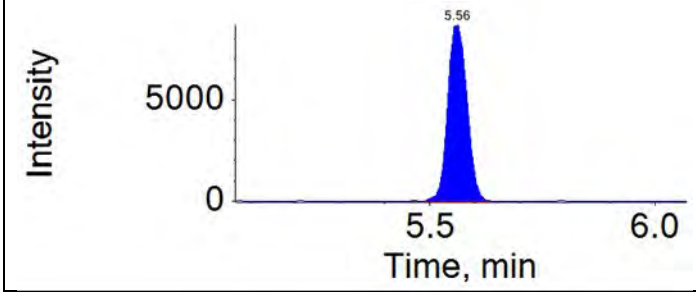
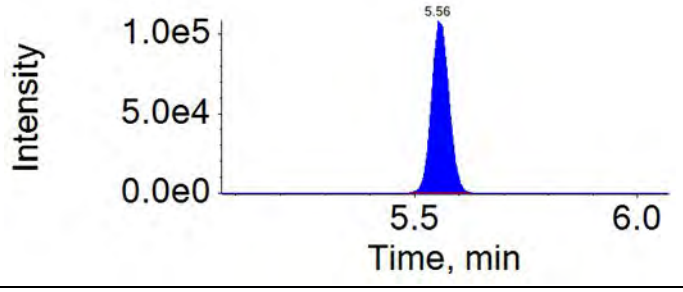
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

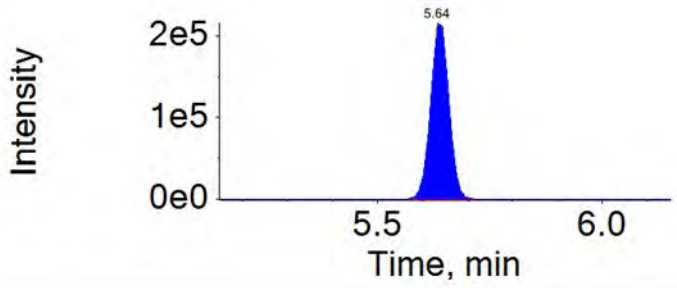
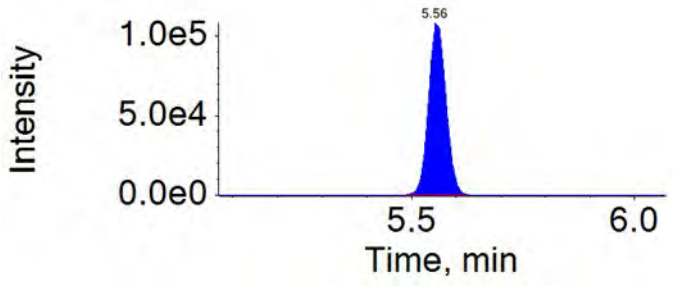
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

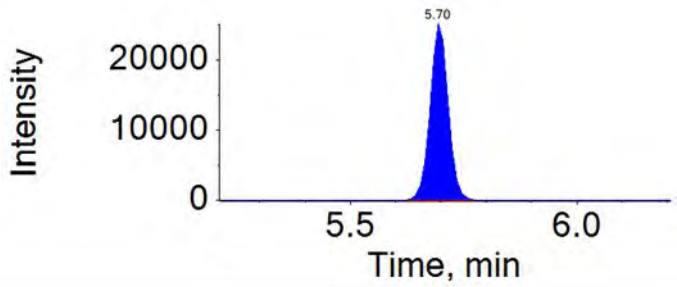
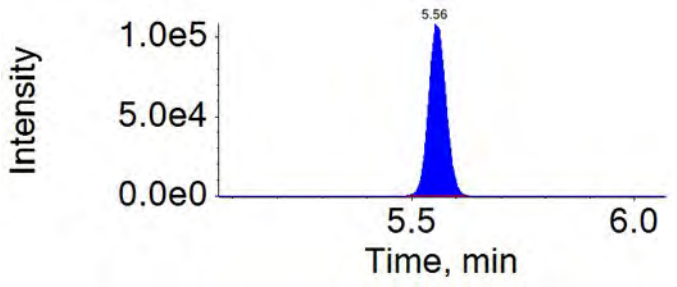
APPROVED
By MCD at 6:34 pm, 11/12/18

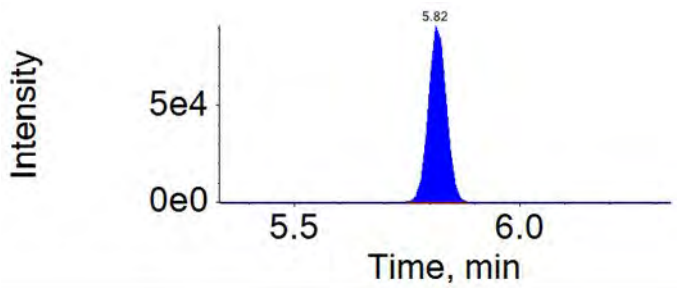
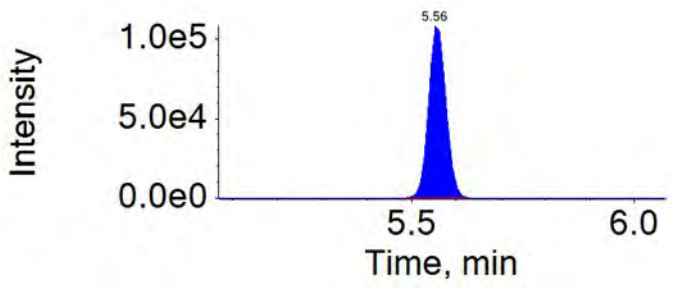
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

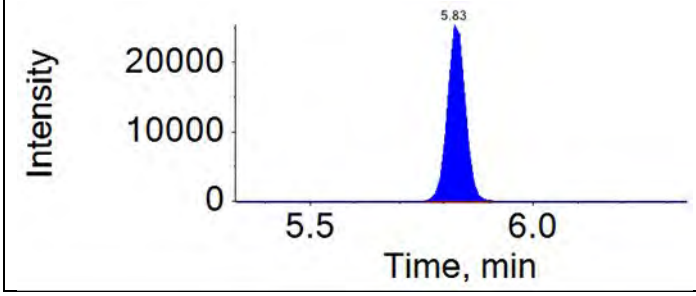
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

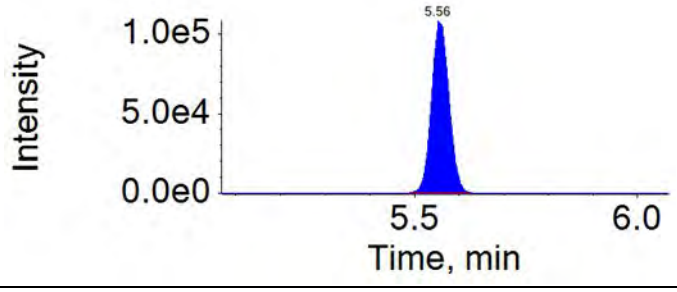
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

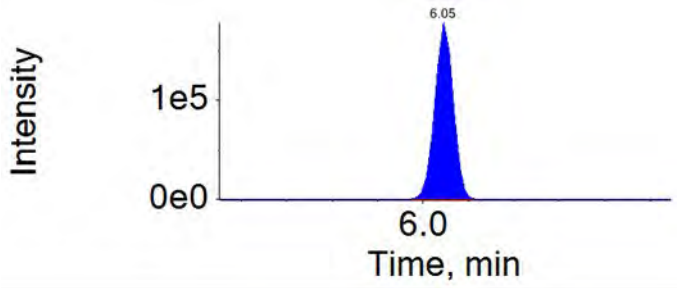
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

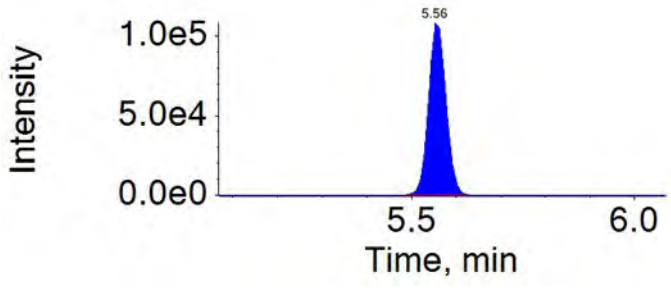
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



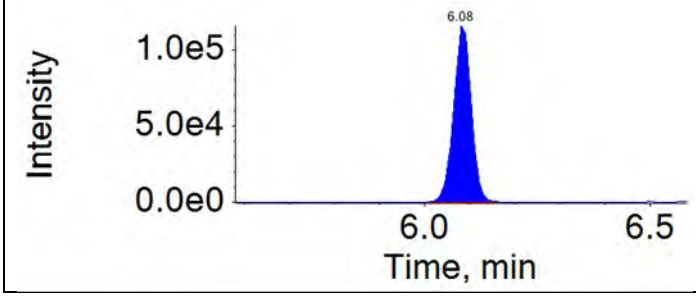


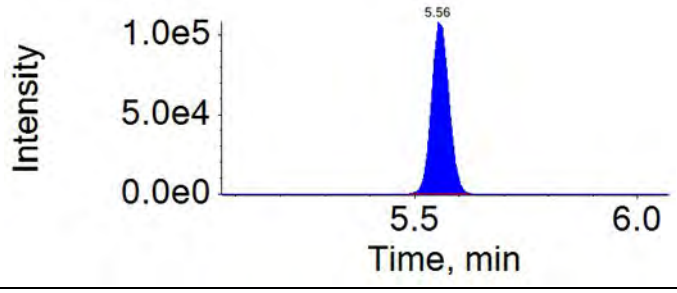
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



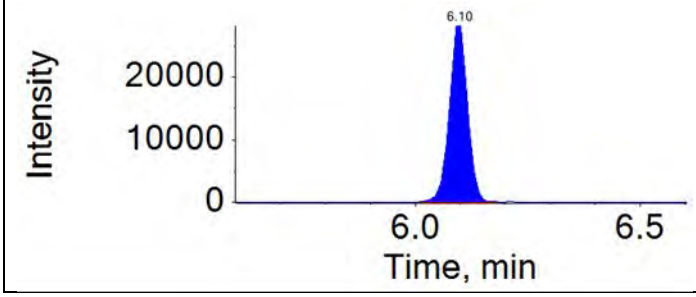


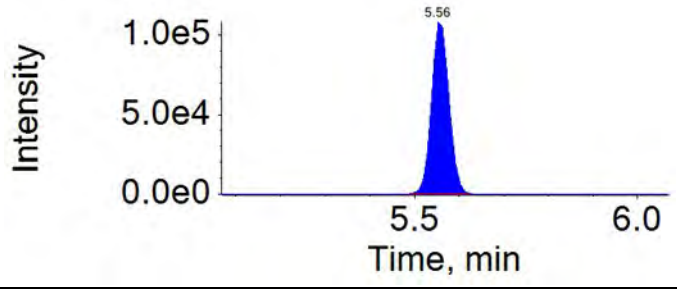
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





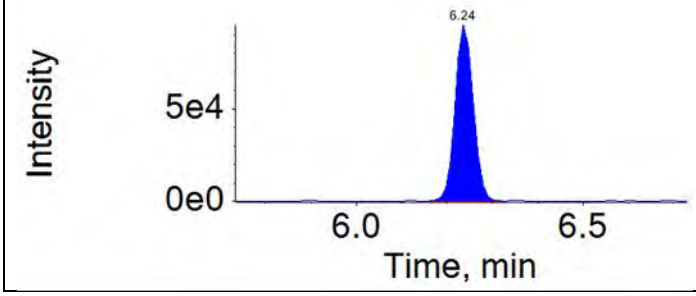
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

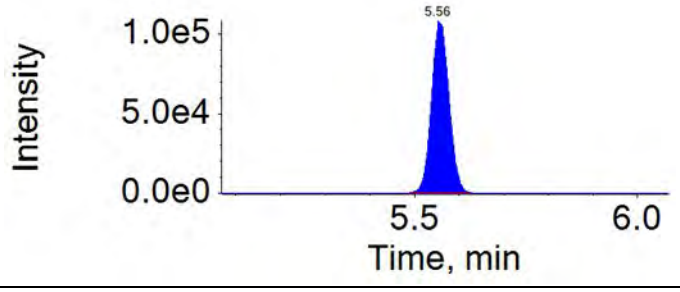




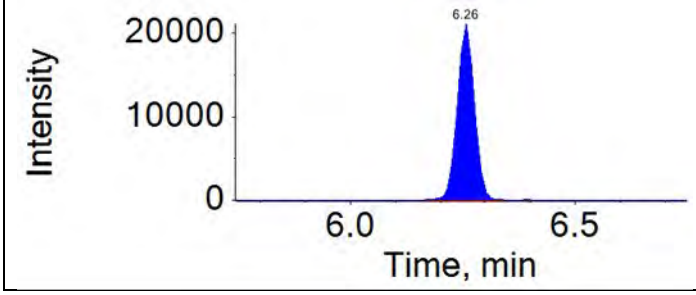
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

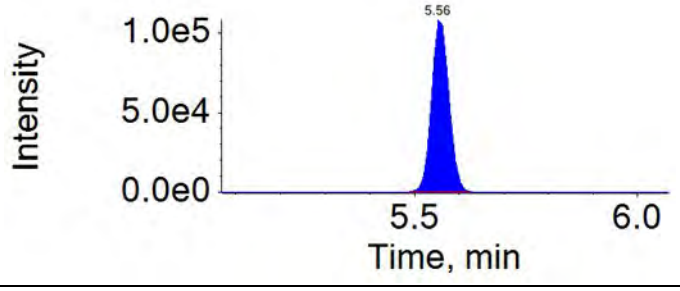
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



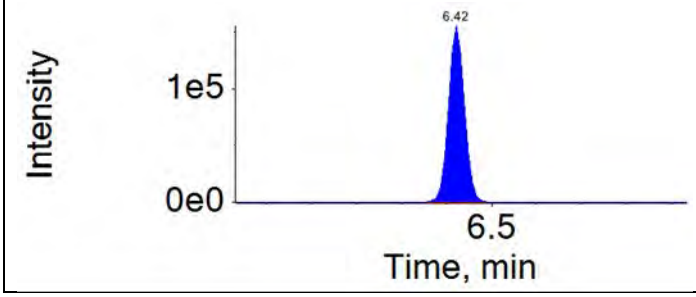


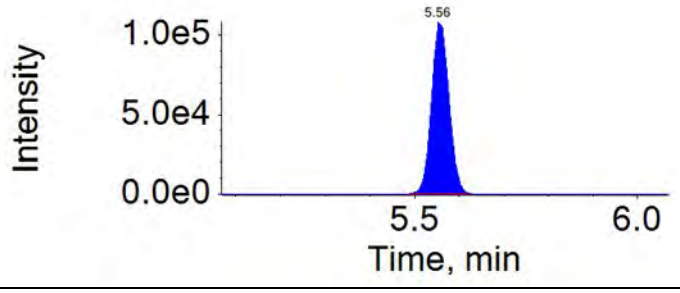
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



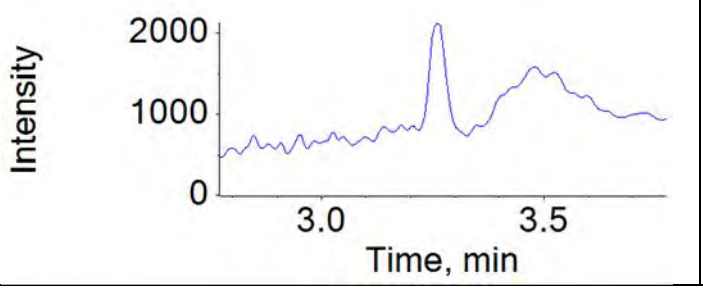


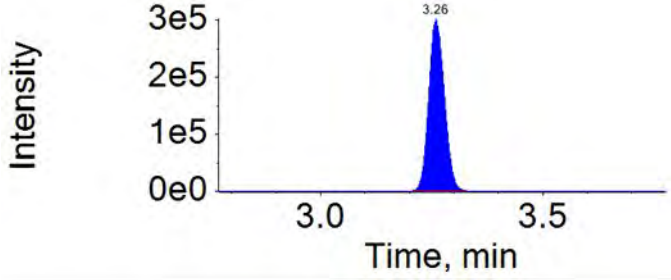
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

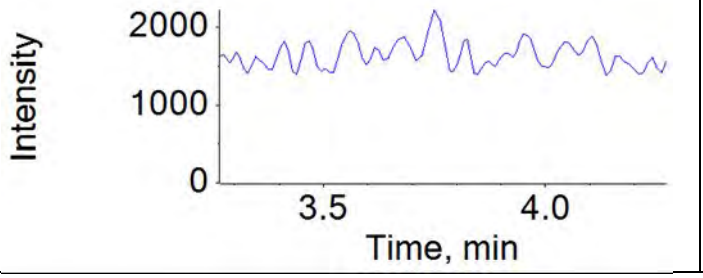
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

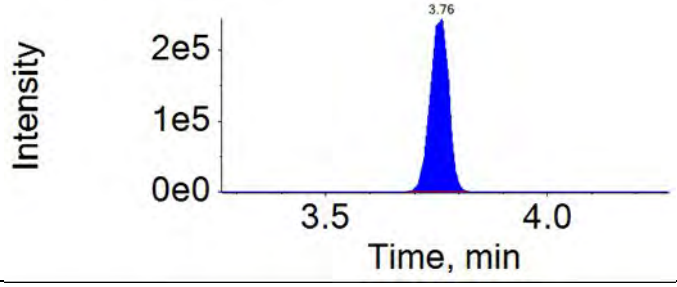
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



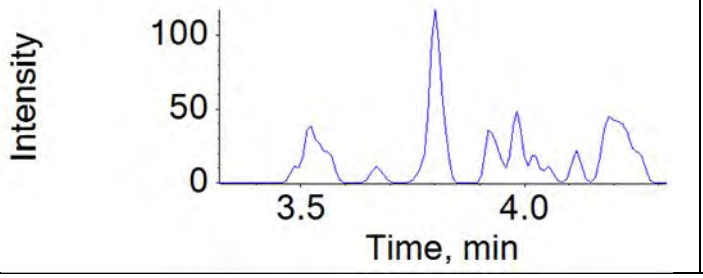


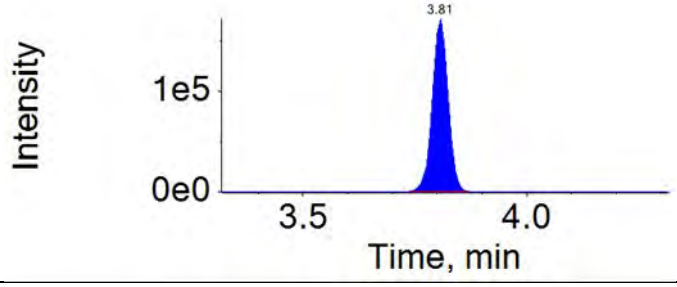
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



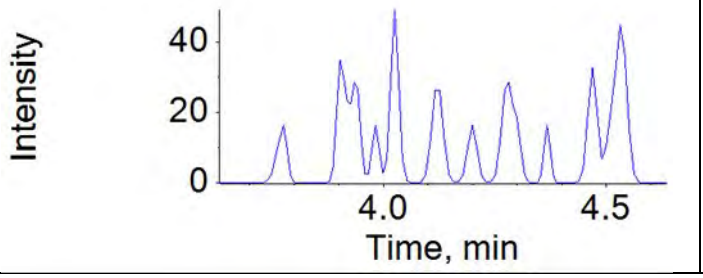


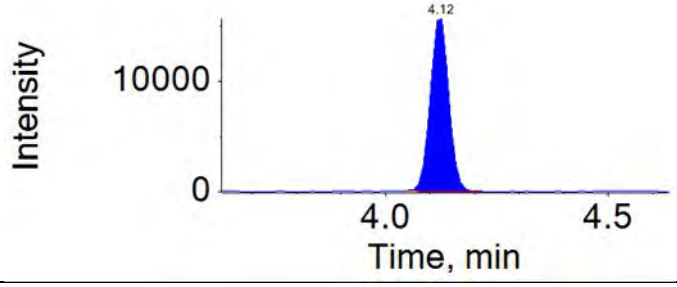
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



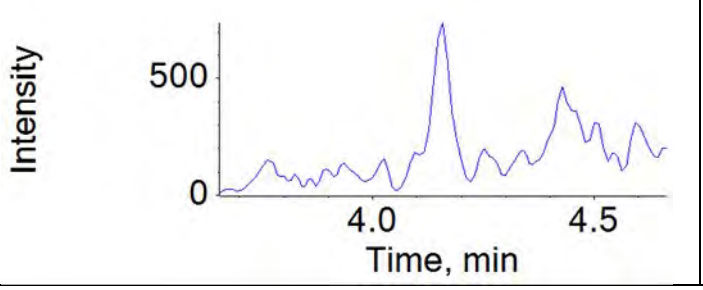


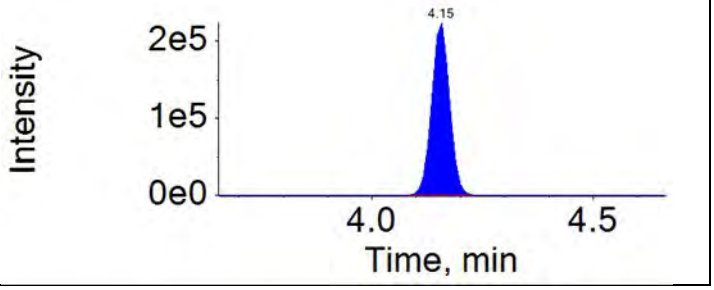
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

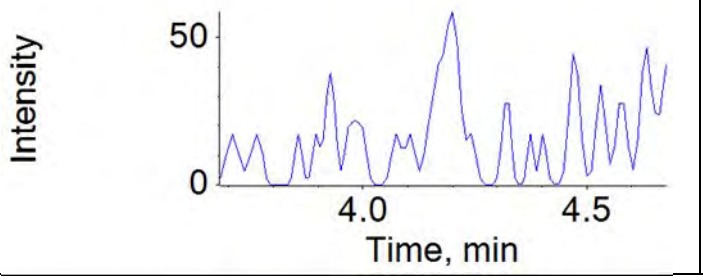
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

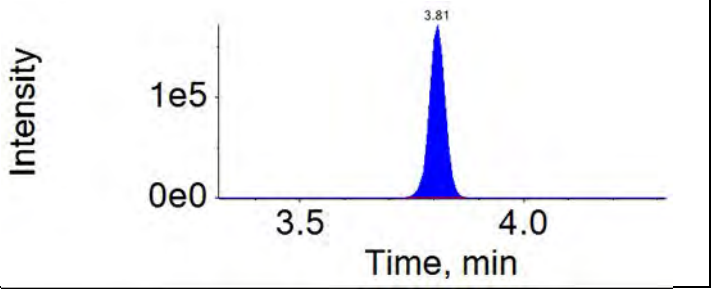
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



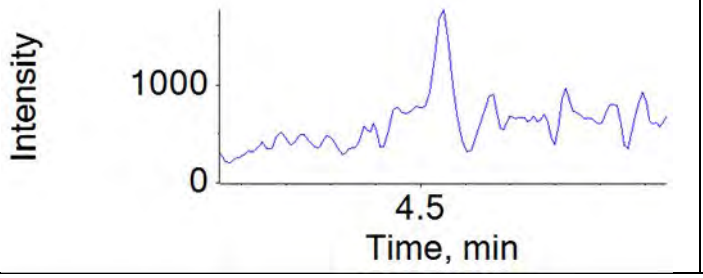


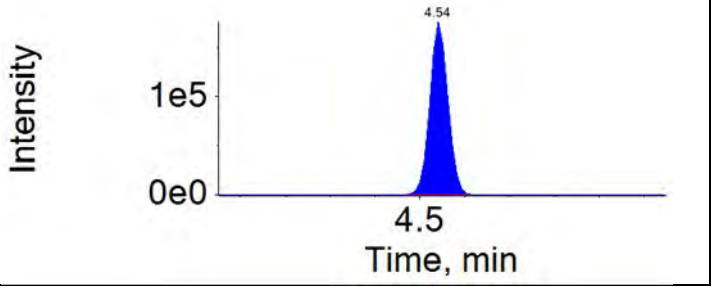
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



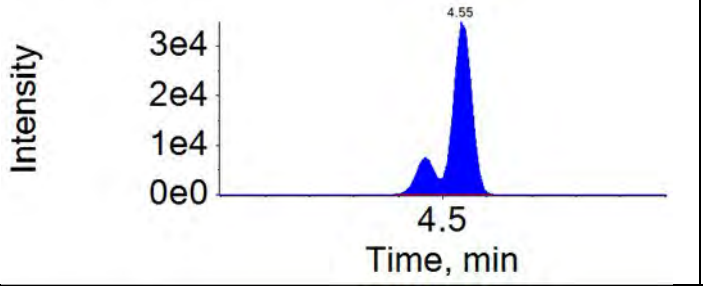


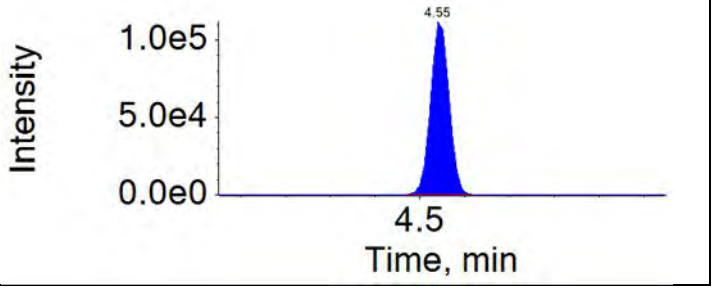
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





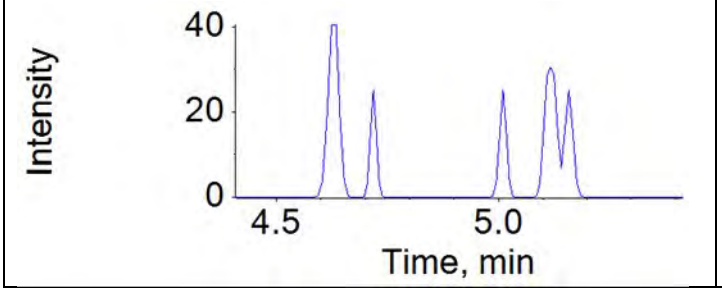
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

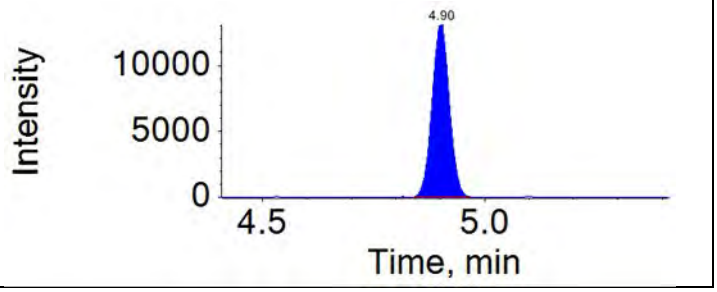




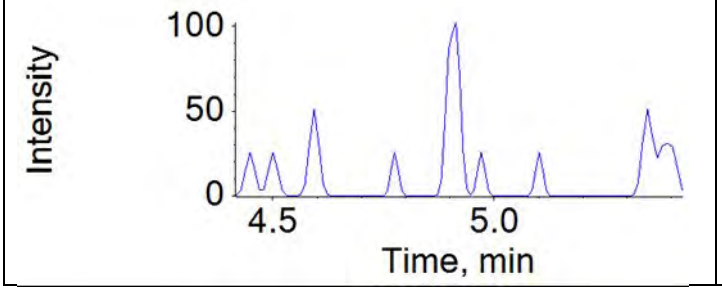
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

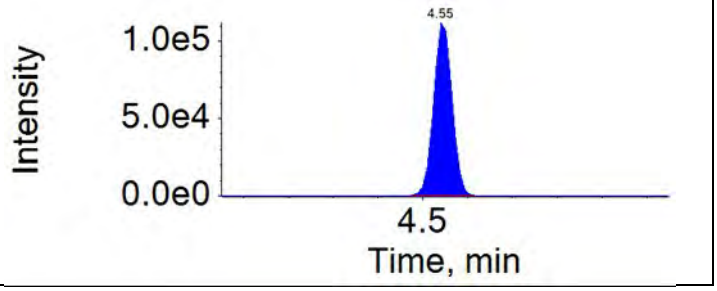
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



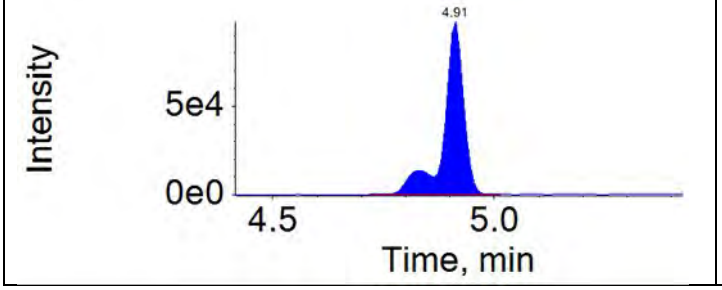


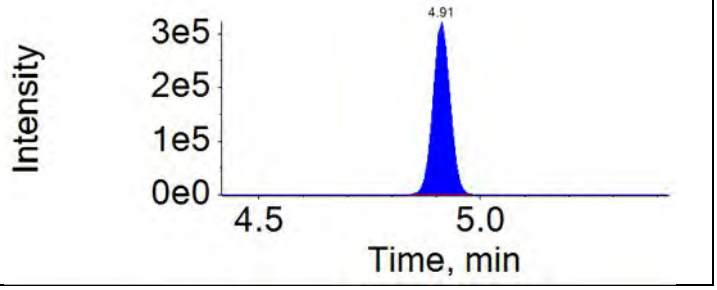
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



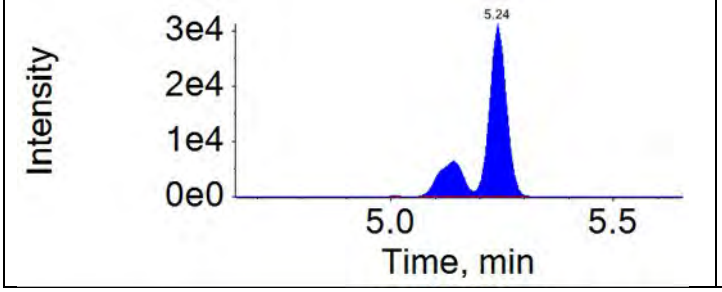


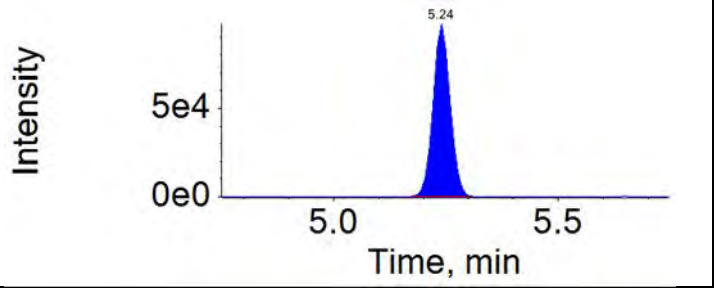
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



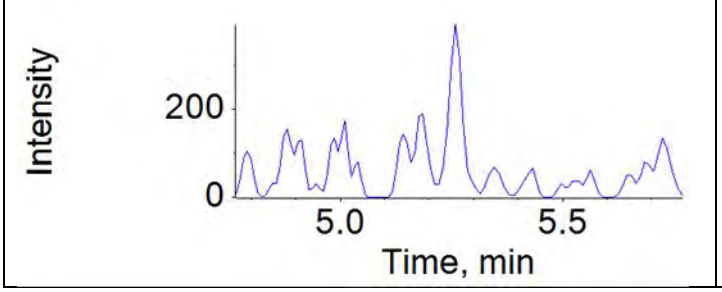


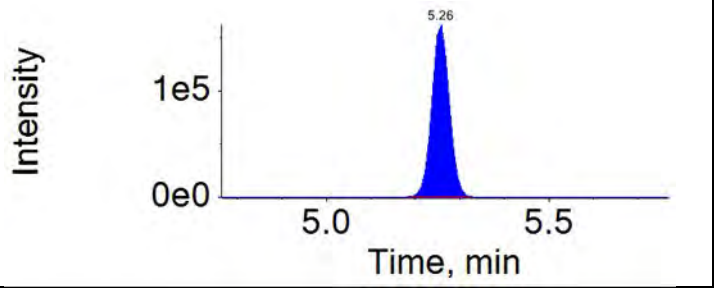
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

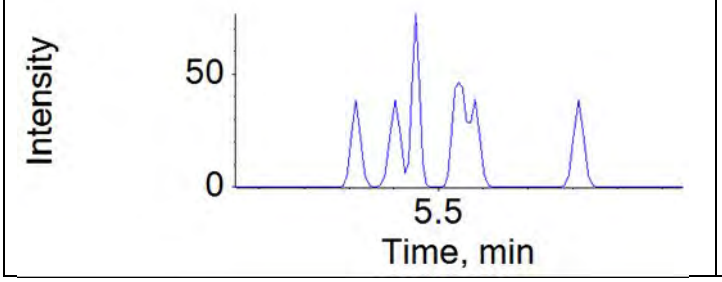
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

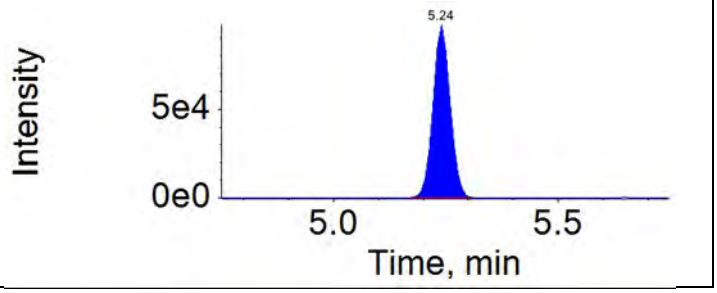
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



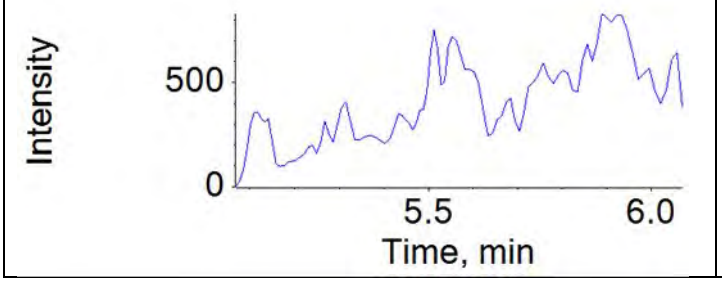


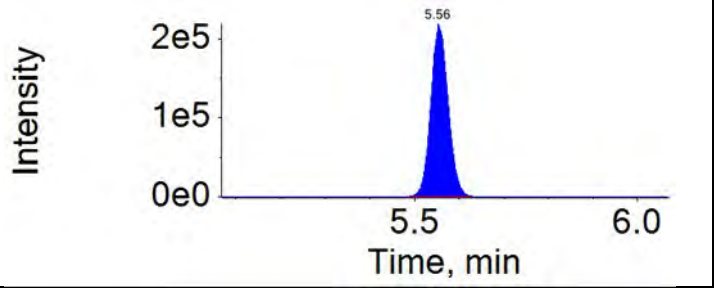
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



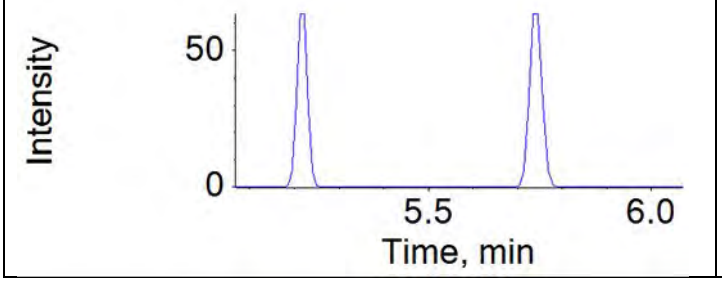


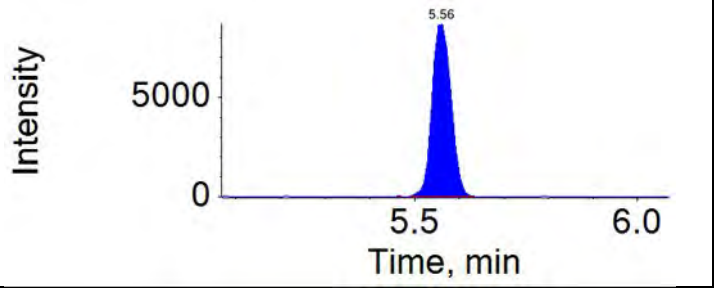
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



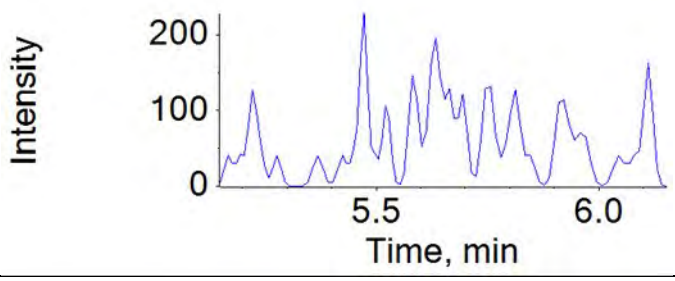


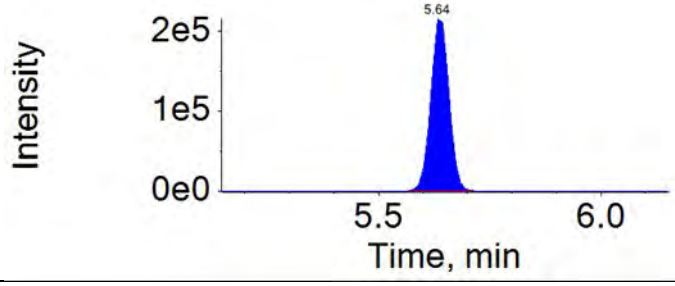
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

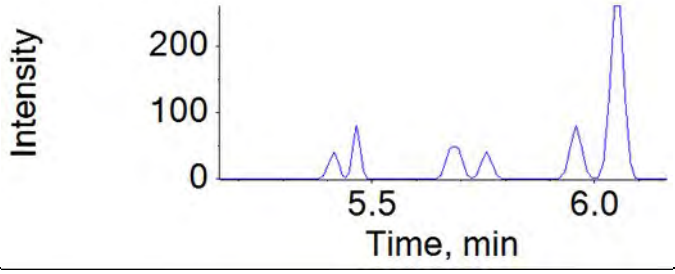
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

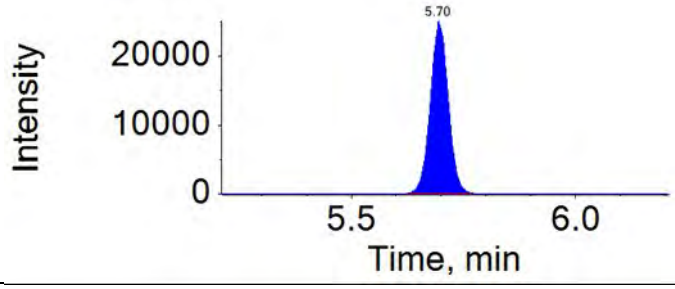
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



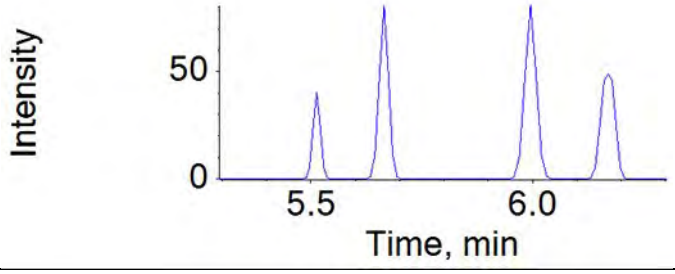


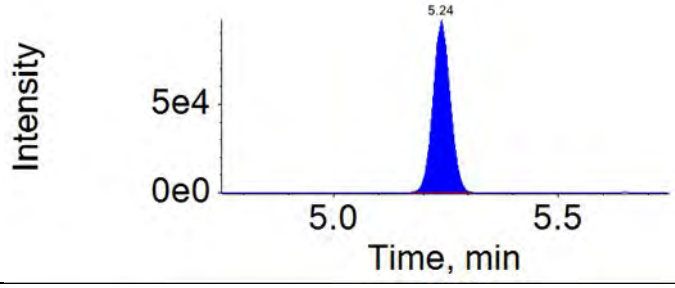
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



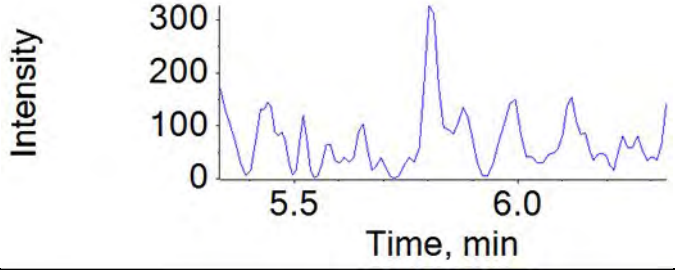


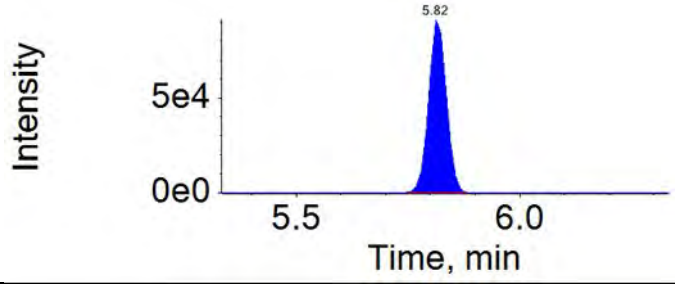
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



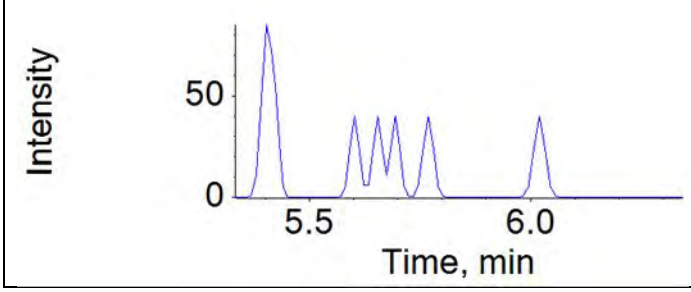


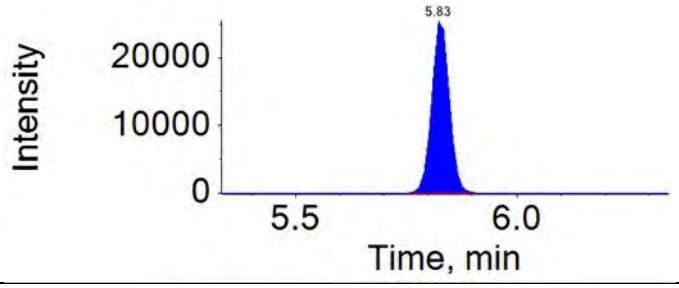
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

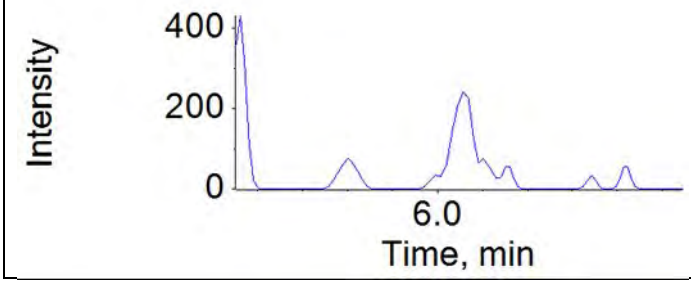
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

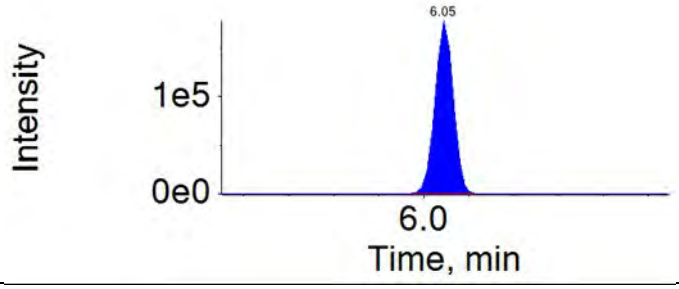
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



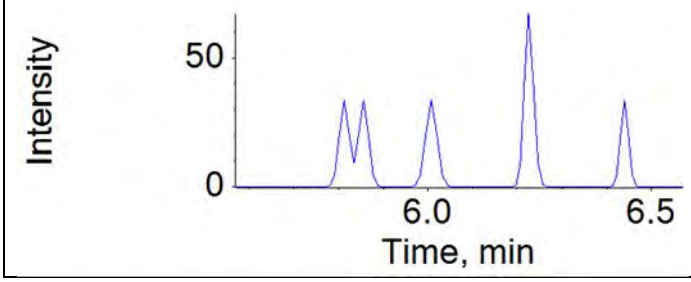


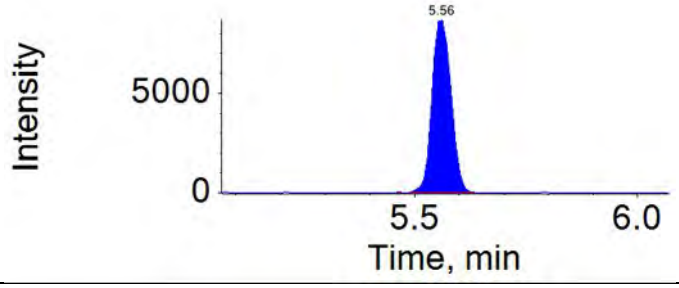
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



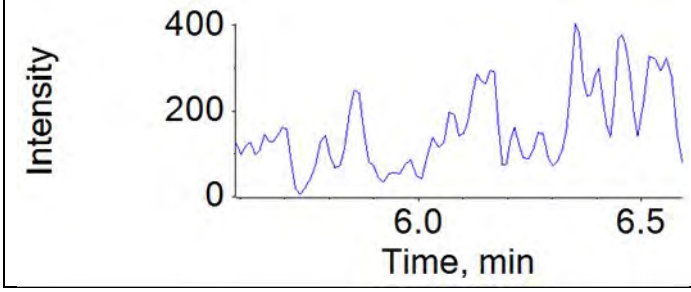


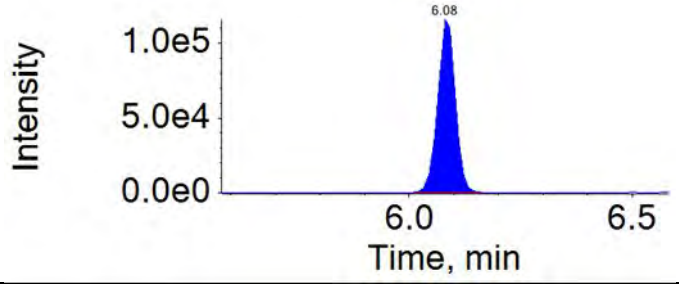
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



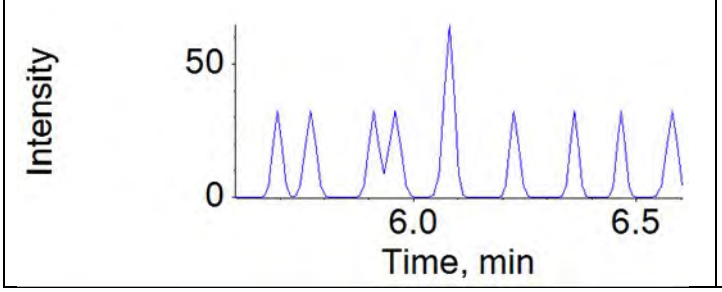


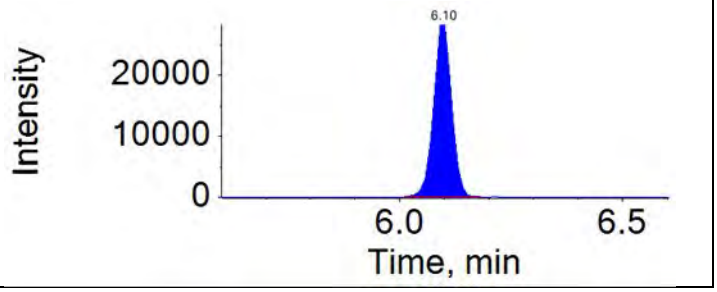
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

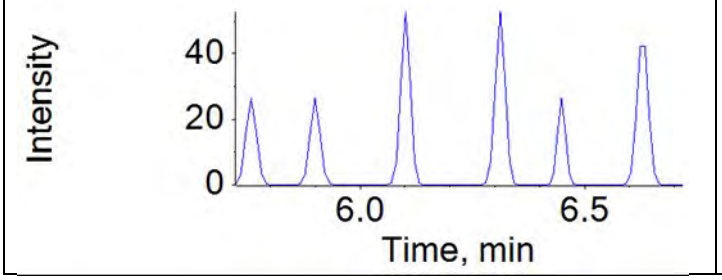
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

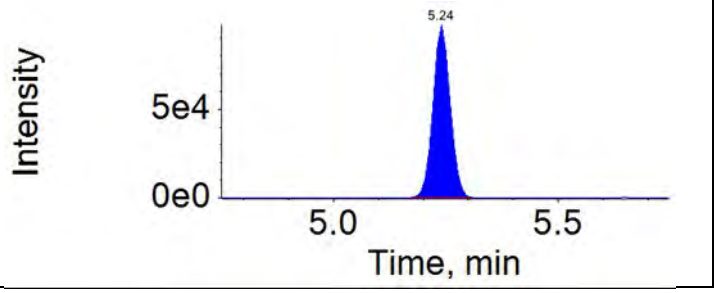
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



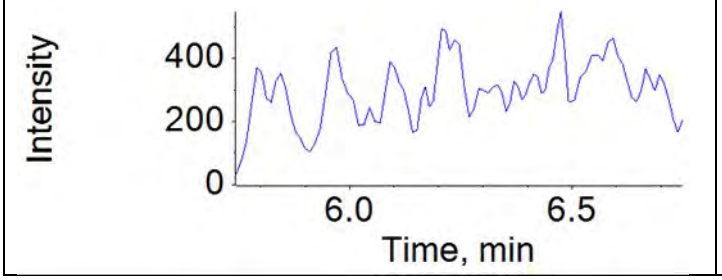


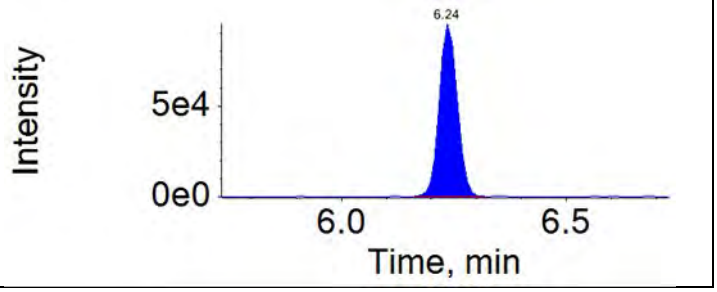
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



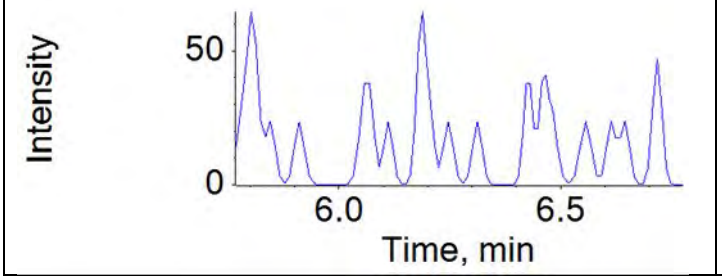


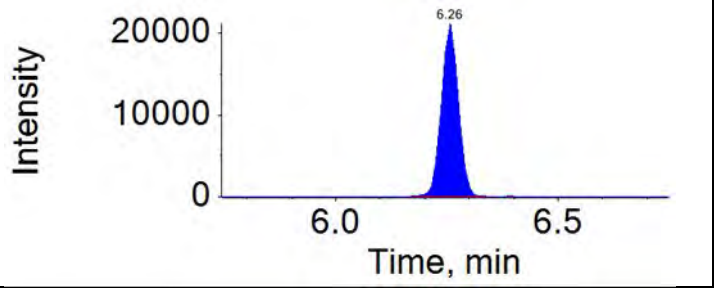
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



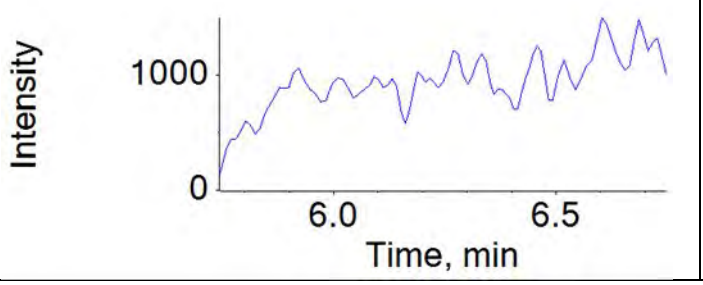


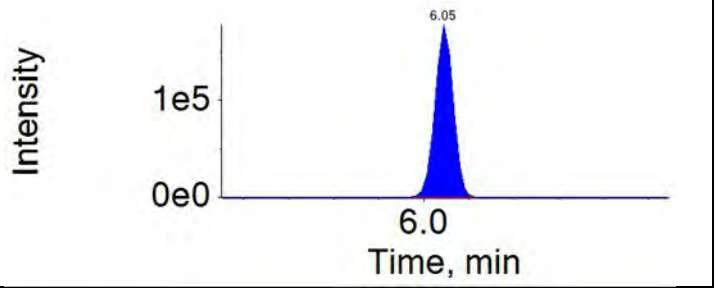
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

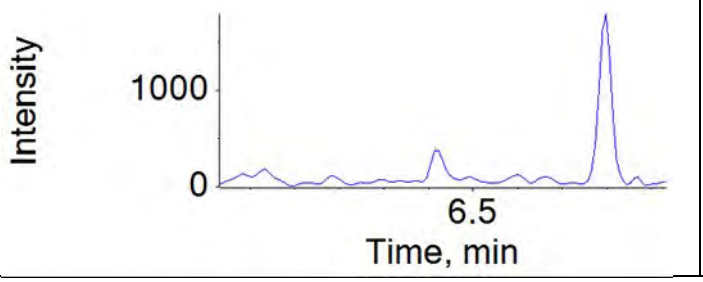
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

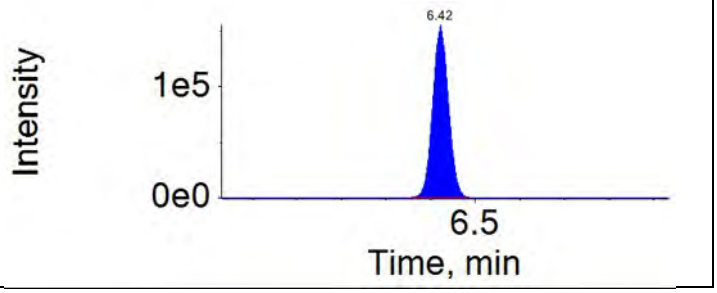
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



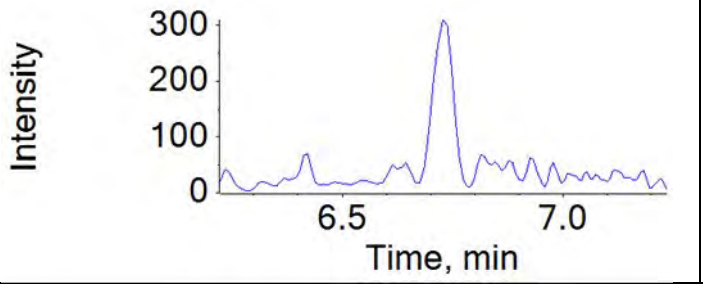


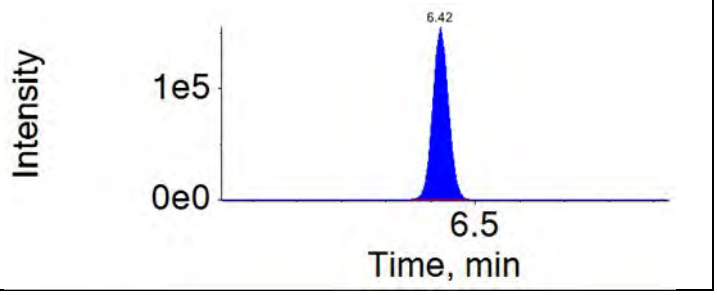
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



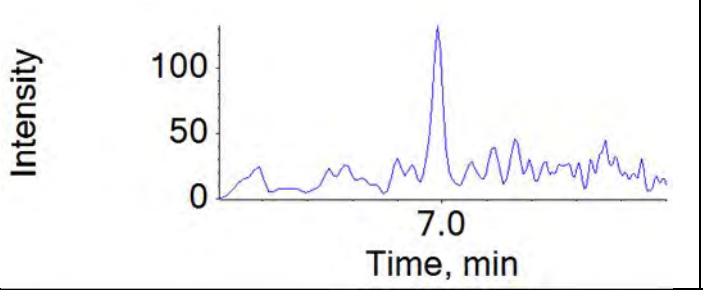


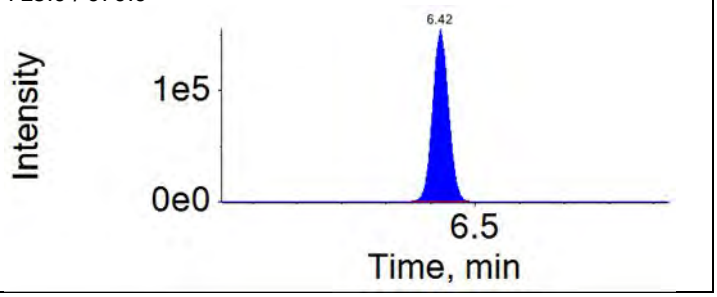
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



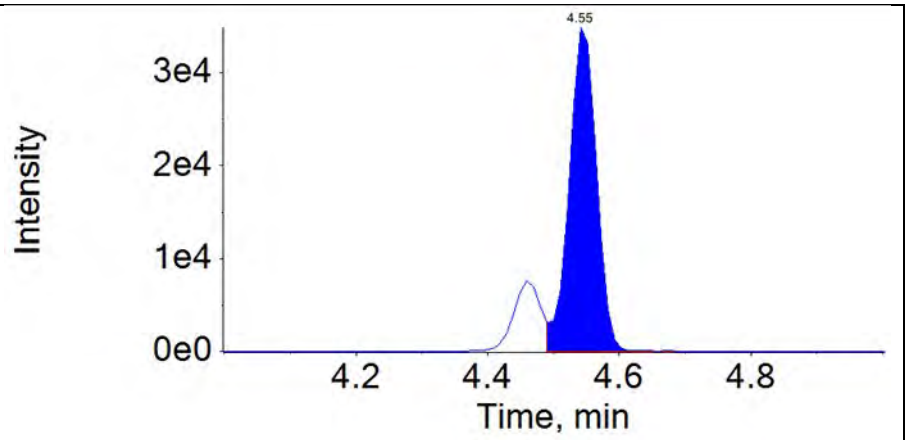


APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

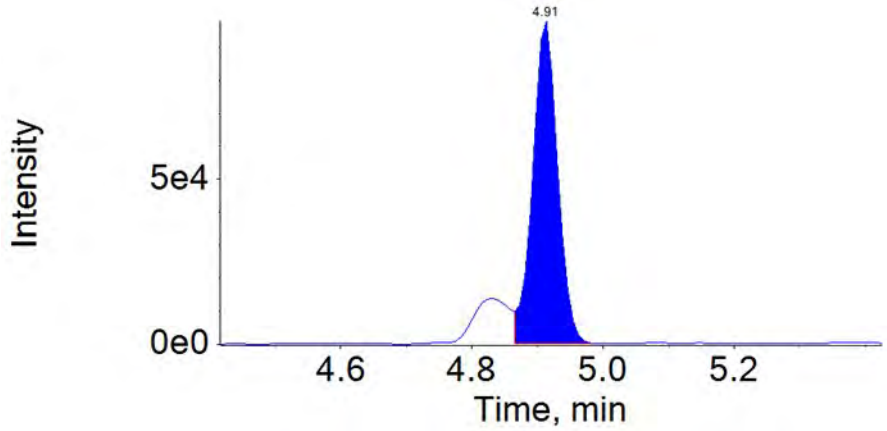
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
101341.11
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



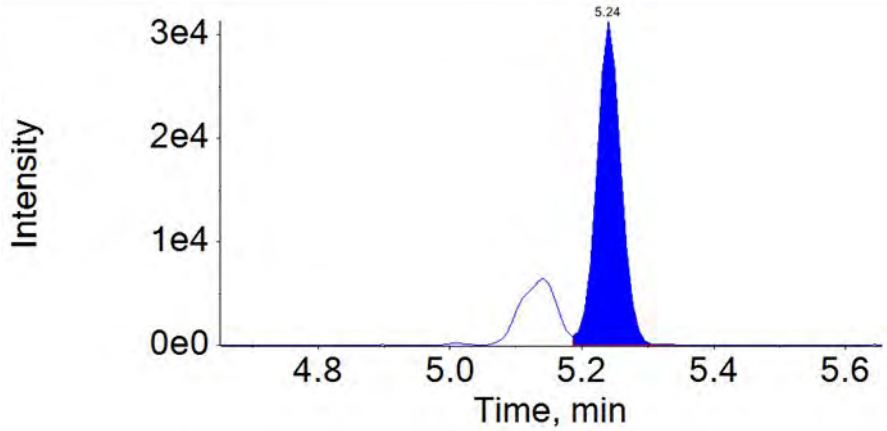
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
258567.11
Mass Range:
413.0 / 369.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
80546.10
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



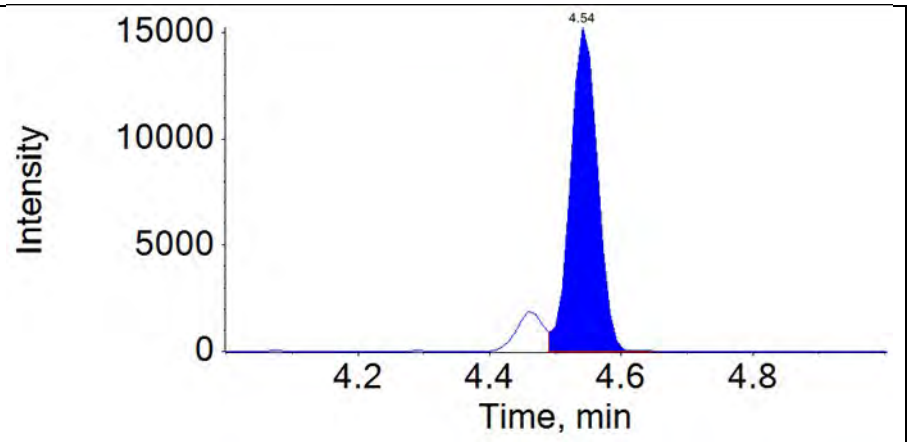
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

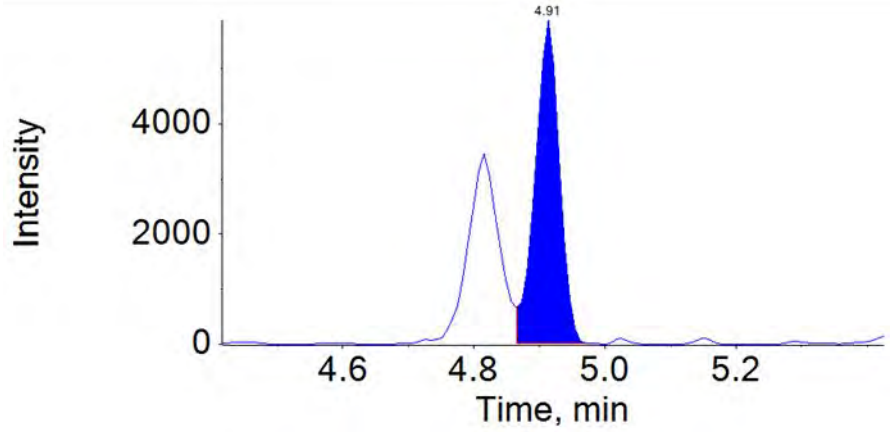
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
43554.75
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



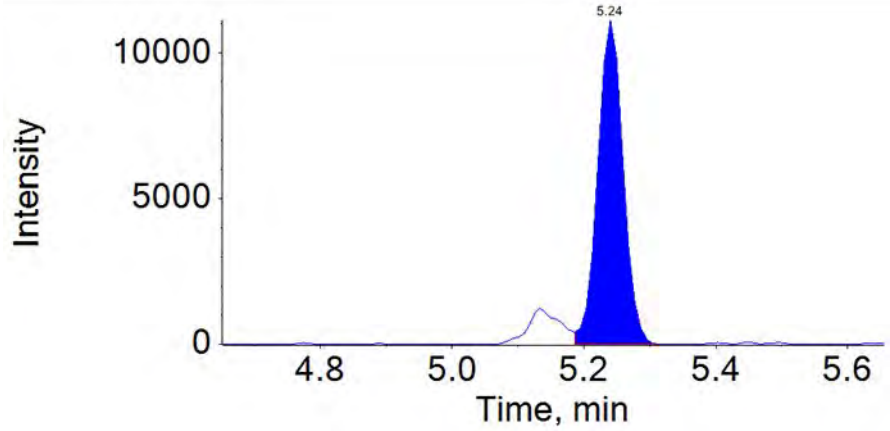
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
15059.21
Mass Range:
413.0 / 169.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
29829.42
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

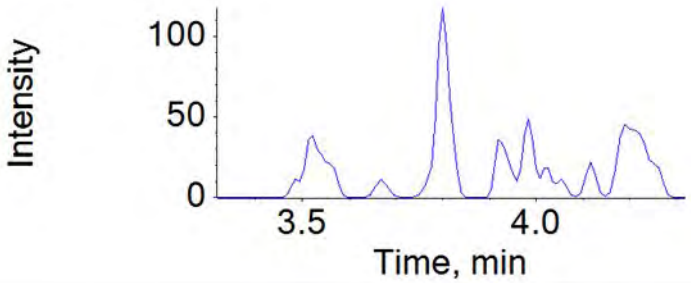
Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-51.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	0.3619	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3619	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	0.6730	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	0.6730	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	0.0117	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0117	N/A		50	
PFPeS	N/A	N/A	N/A	A	0.5191	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5191	N/A		50	
PFHpA	N/A	N/A	N/A	A	0.0563	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0563	N/A		50	
PFHxS	4.55	1.00	122359.84	M	0.3428	0.3979			
PFHxS_2	4.54	1.00	48686.07	M	0.3428	0.3979	16	50	
6:2-FTS	N/A	N/A	N/A	A	0.6604	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	0.6604	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	0.4066	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.4066	N/A		50	
PFOA	4.91	1.00	312625.40	M	0.0562	0.0855			
PFOA_2	4.90	1.00	26736.79	M	0.0562	0.0855	52	50	OOS
PFOS	5.24	1.00	105809.81	M	0.2968	0.3212			
PFOS_2	5.24	1.00	33989.74	M	0.2968	0.3212	8	50	
PFNA	N/A	N/A	N/A	A	0.0229	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0229	N/A		50	
PFNS	N/A	N/A	N/A	A	0.4828	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4828	N/A		50	
PFDA	N/A	N/A	N/A	A	0.0081	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0081	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	0.6814	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	0.6814	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	0.2569	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2569	N/A		50	
PFDS	N/A	N/A	N/A	A	0.5144	N/A			
PFDS_2	N/A	N/A	N/A	A	0.5144	N/A		50	
PFUnDA	N/A	N/A	N/A	A	0.0058	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0058	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	0.7253	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.7253	N/A		50	
PFDoDA	N/A	N/A	N/A	A	0.0157	N/A			
PFDoDA_2	N/A	N/A	N/A	A	0.0157	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	0.6356	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	0.6356	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	0.0086	N/A			
PFTrDA_2	N/A	N/A	N/A	A	0.0086	N/A		50	
PFTeDA	N/A	N/A	N/A	A	0.0062	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0062	N/A		50	
PFHxDA	N/A	N/A	N/A	A	0.0683	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0683	N/A		50	
PFODA	N/A	N/A	N/A	A	0.0277	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0277	N/A		50	

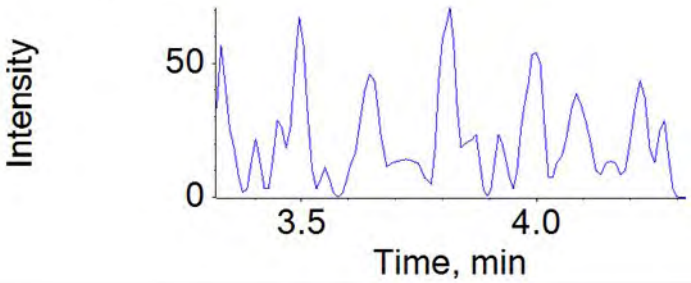
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

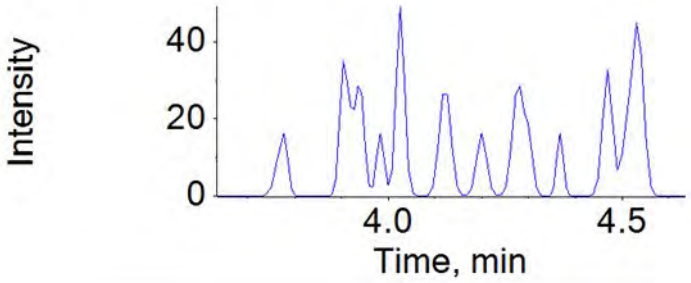
Component: PFBS
Primary Mass: 299.0 / 80.0



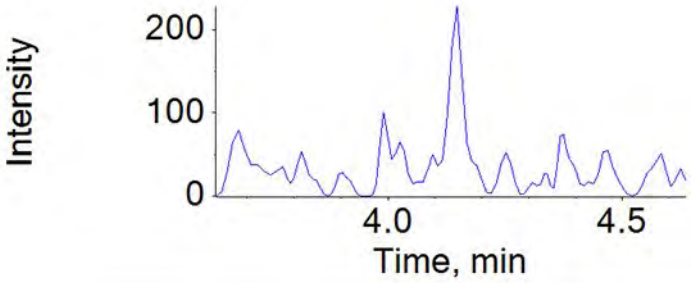
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



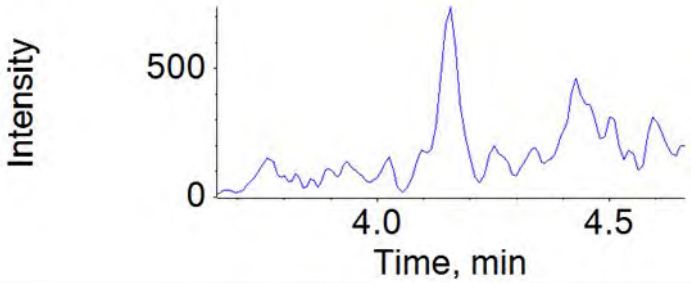
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



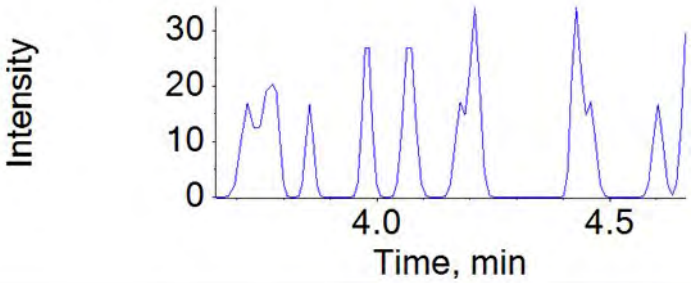
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



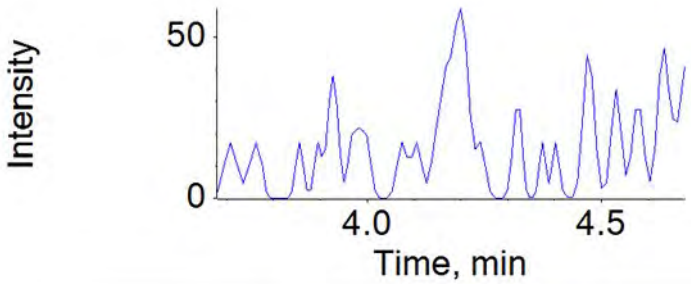
Component: PFHxA
Primary Mass: 313.0 / 269.0



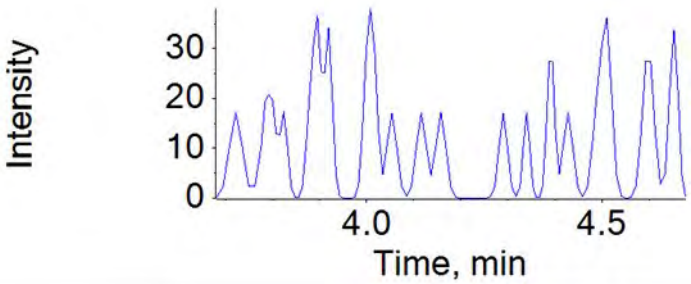
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



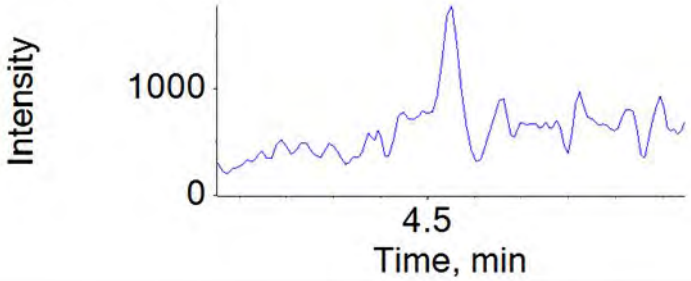
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



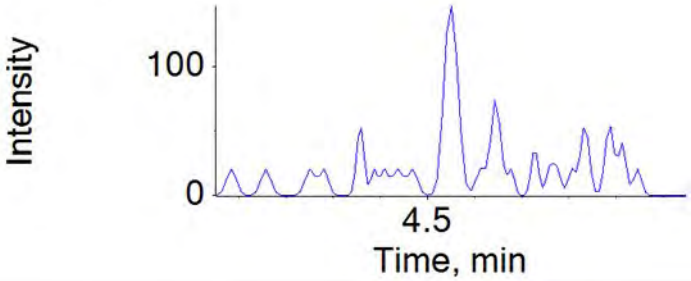
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

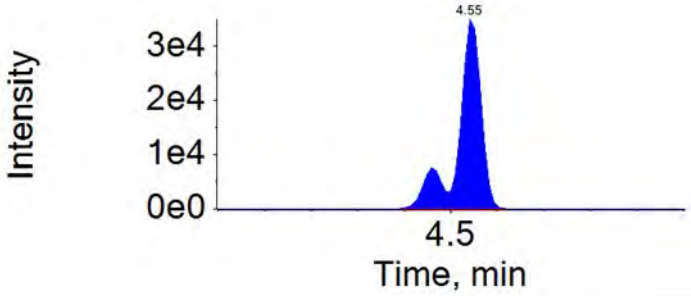
Component: PFHpA
Primary Mass: 363.0 / 319.0



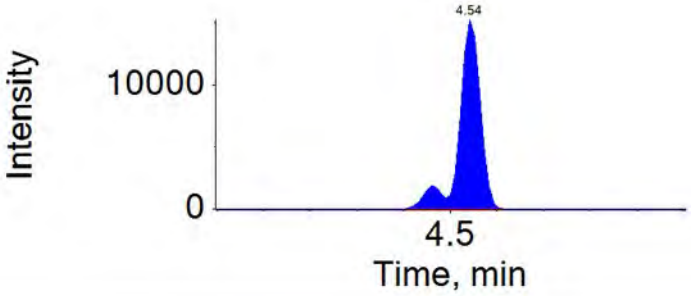
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



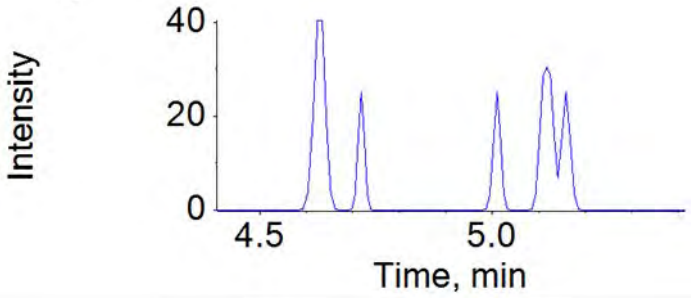
Component: PFHxS
Primary Mass: 399.0 / 80.0



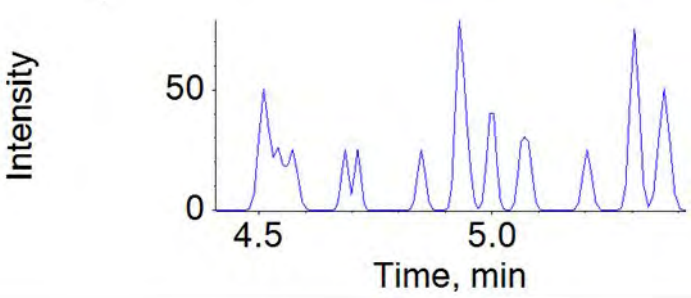
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



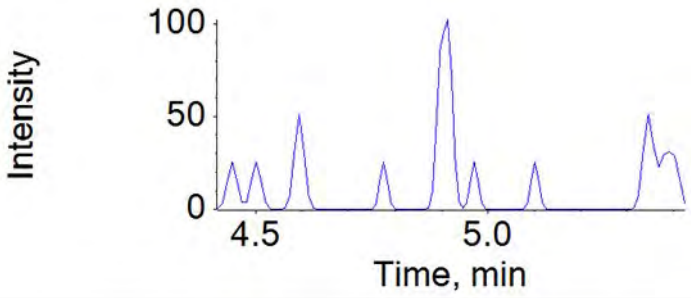
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



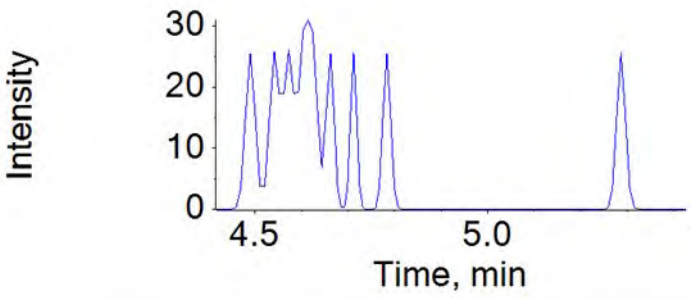
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



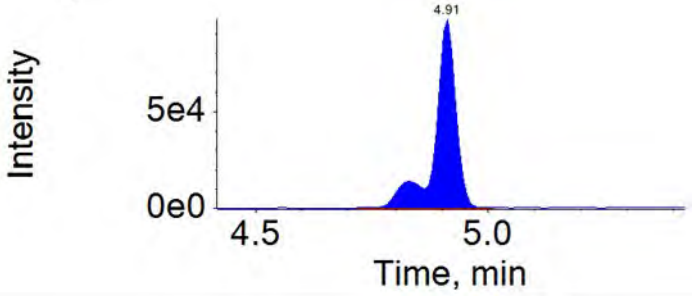
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



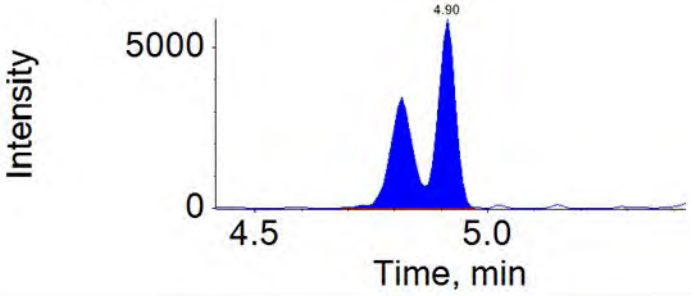
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

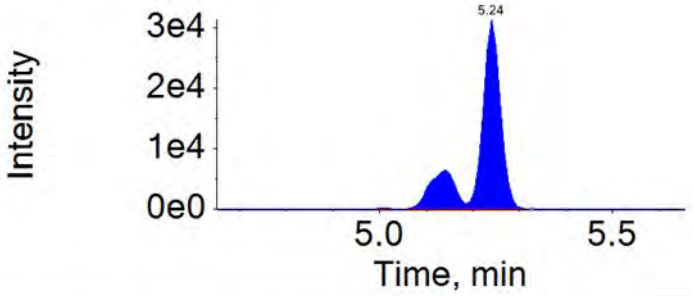
Component: PFOA
Primary Mass: 413.0 / 369.0



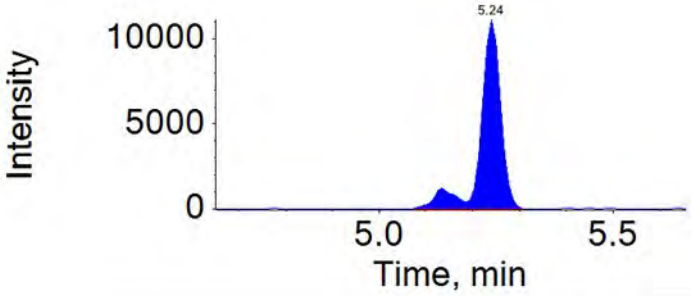
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



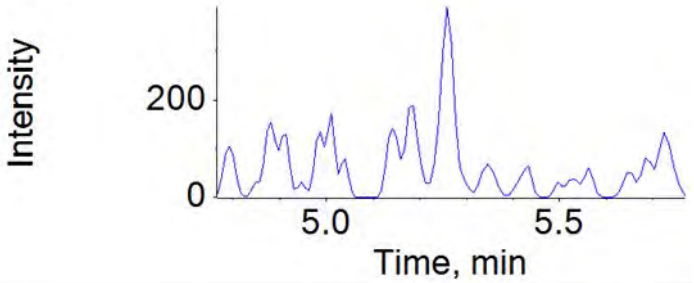
Component: PFOS
Primary Mass: 499.0 / 80.0



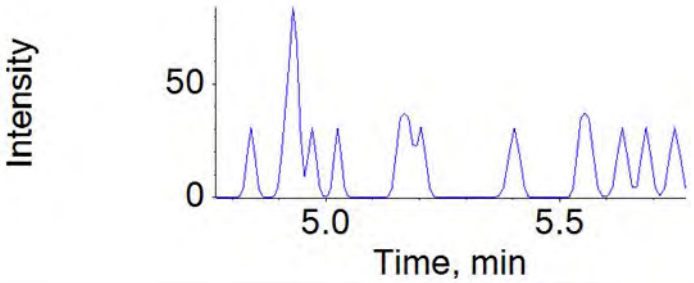
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



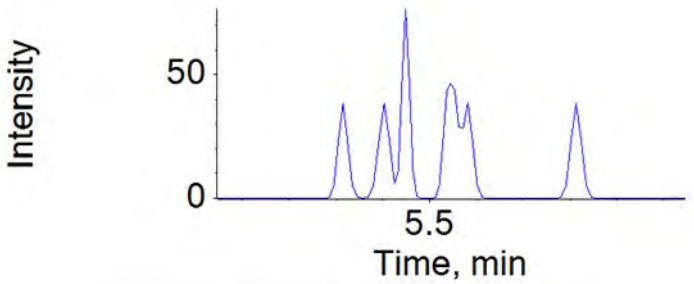
Component: PFNA
Primary Mass: 463.0 / 419.0



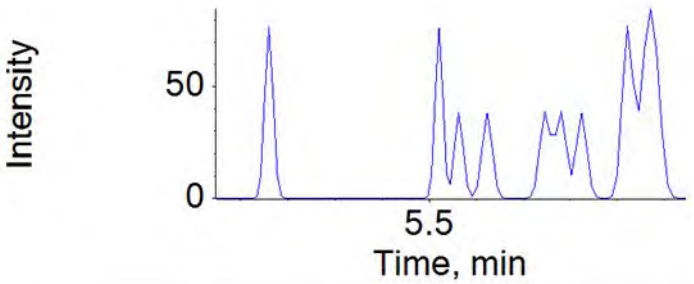
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



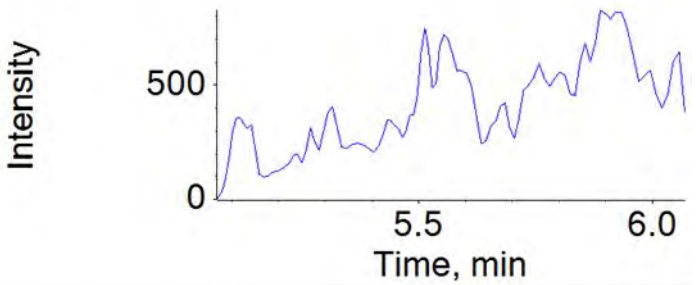
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



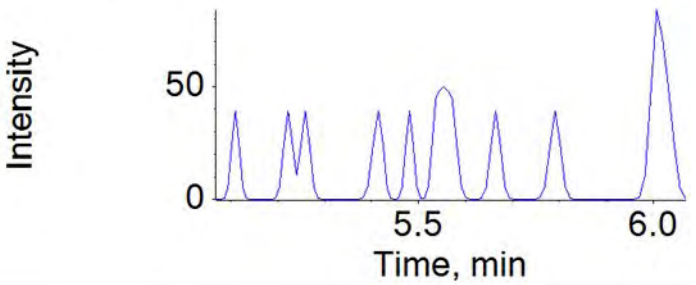
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

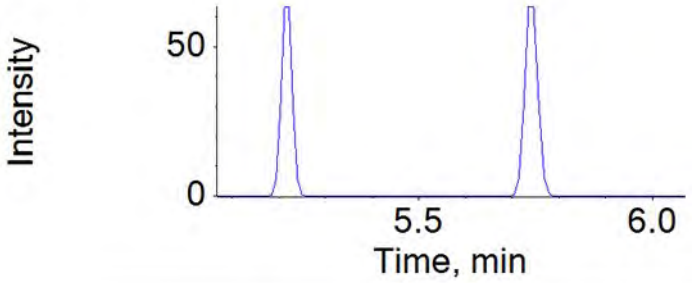
Component: PFDA
Primary Mass: 513.0 / 469.0



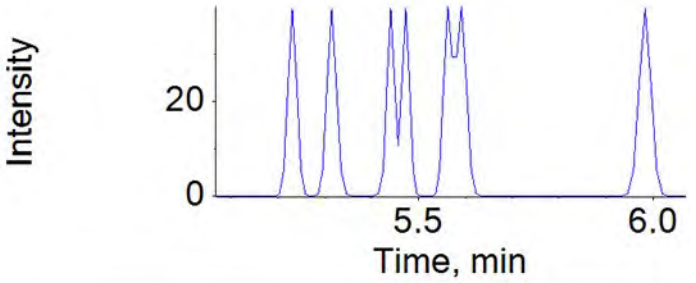
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



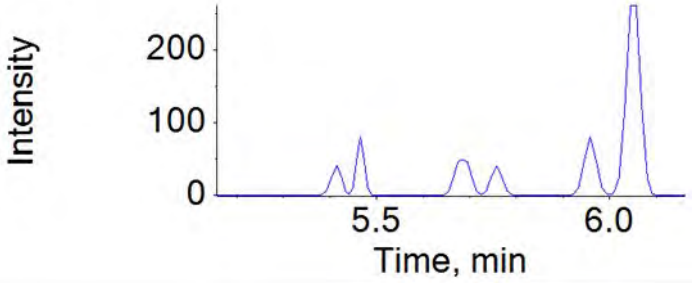
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



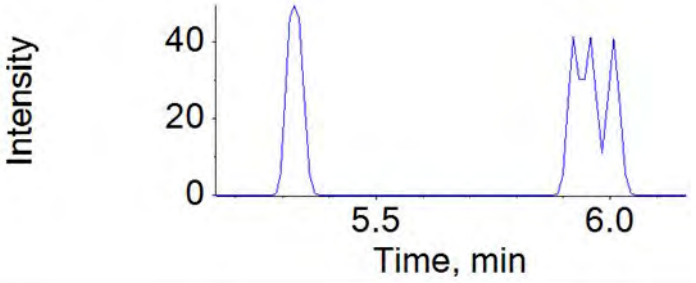
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



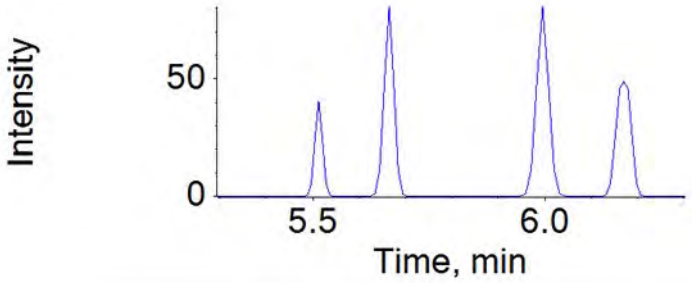
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



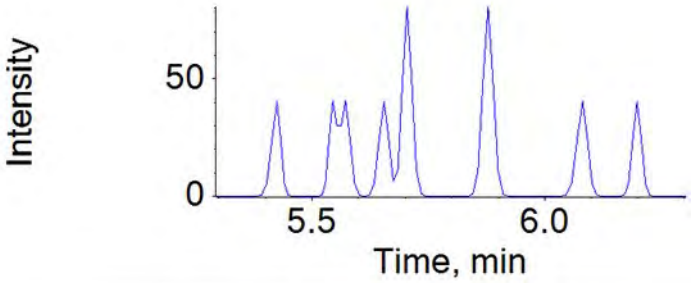
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



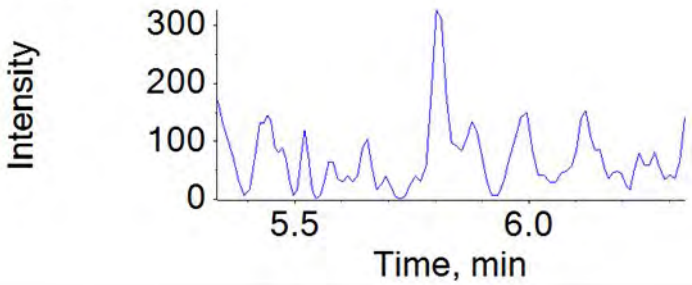
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



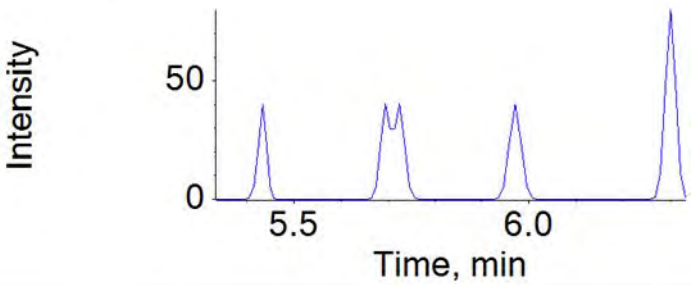
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

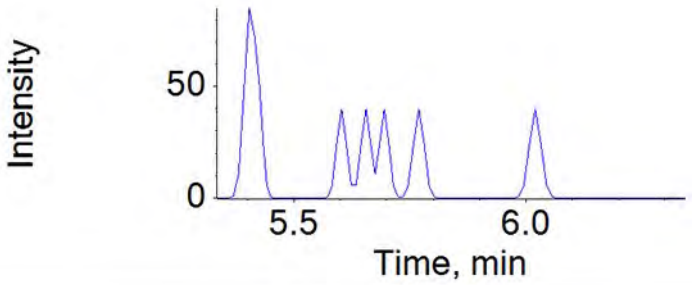
Component: PFUnDA
Primary Mass: 563.0 / 519.0



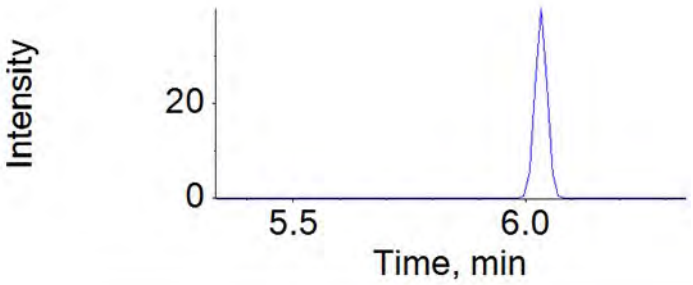
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



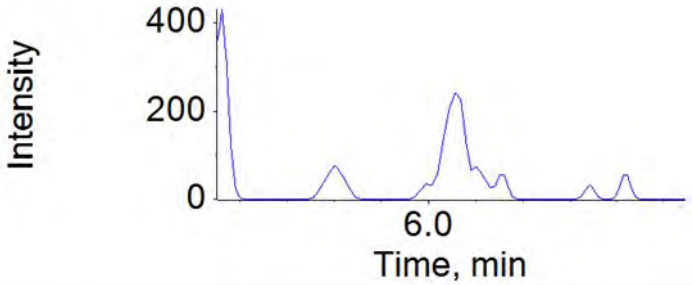
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



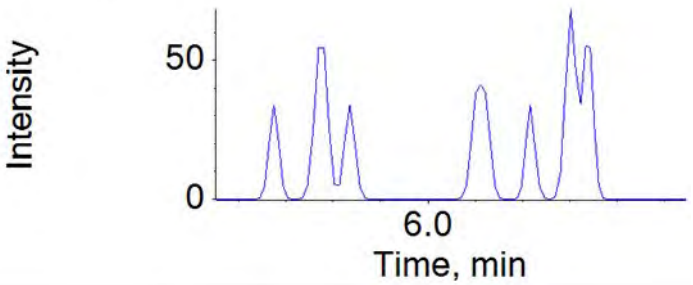
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



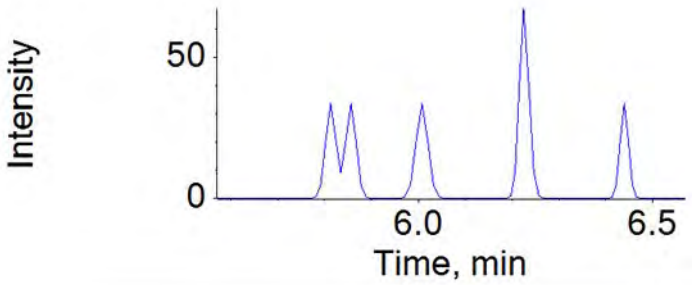
Component: PFDoDA
Primary Mass: 613.0 / 569.0



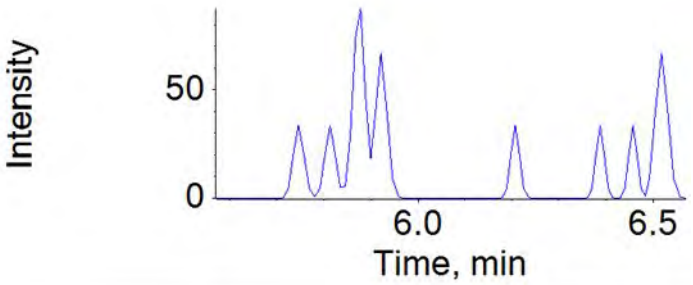
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



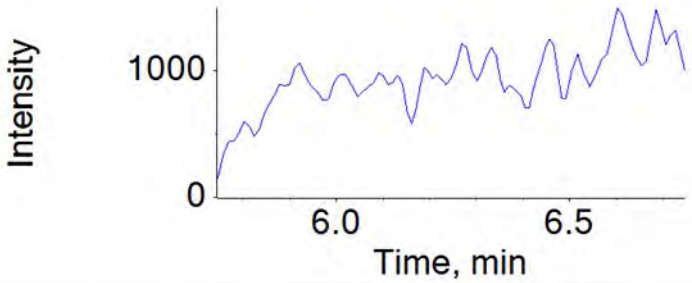
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



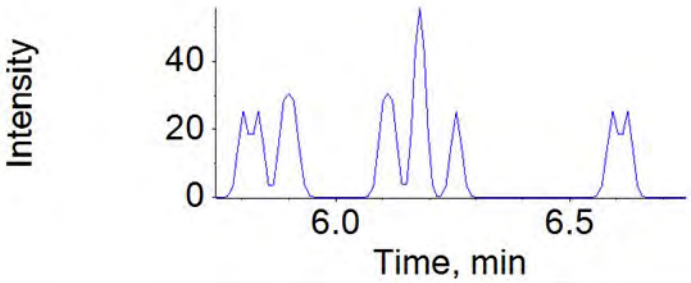
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

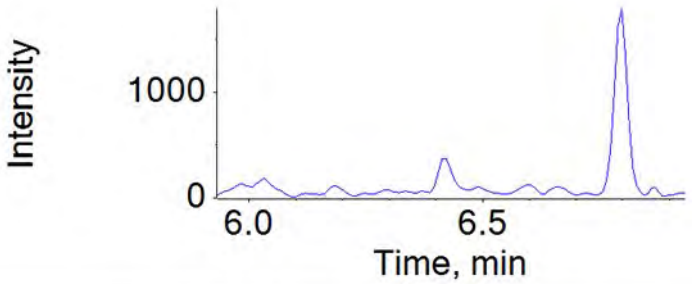
Component: PFTrDA
Primary Mass: 663.0 / 619.0



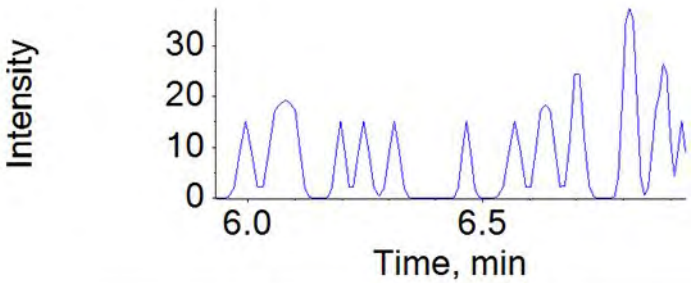
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



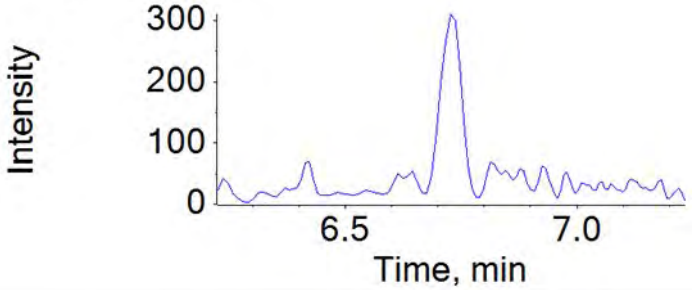
Component: PFTeDA
Primary Mass: 713.0 / 669.0



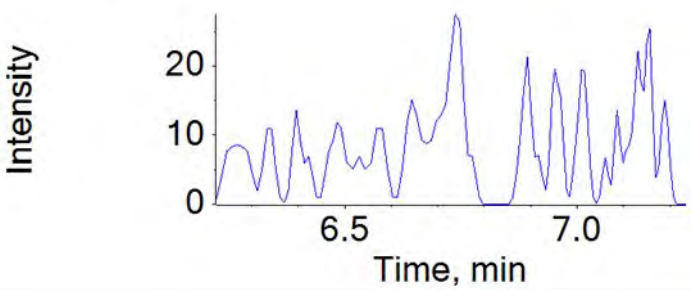
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



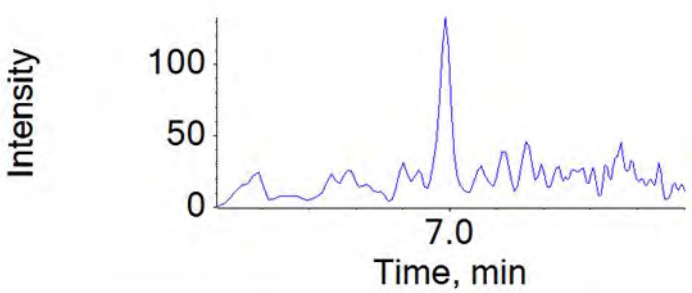
Component: PFHxDA
Primary Mass: 813.0 / 769.0



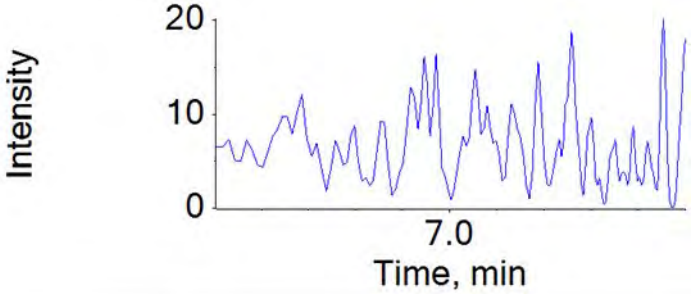
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



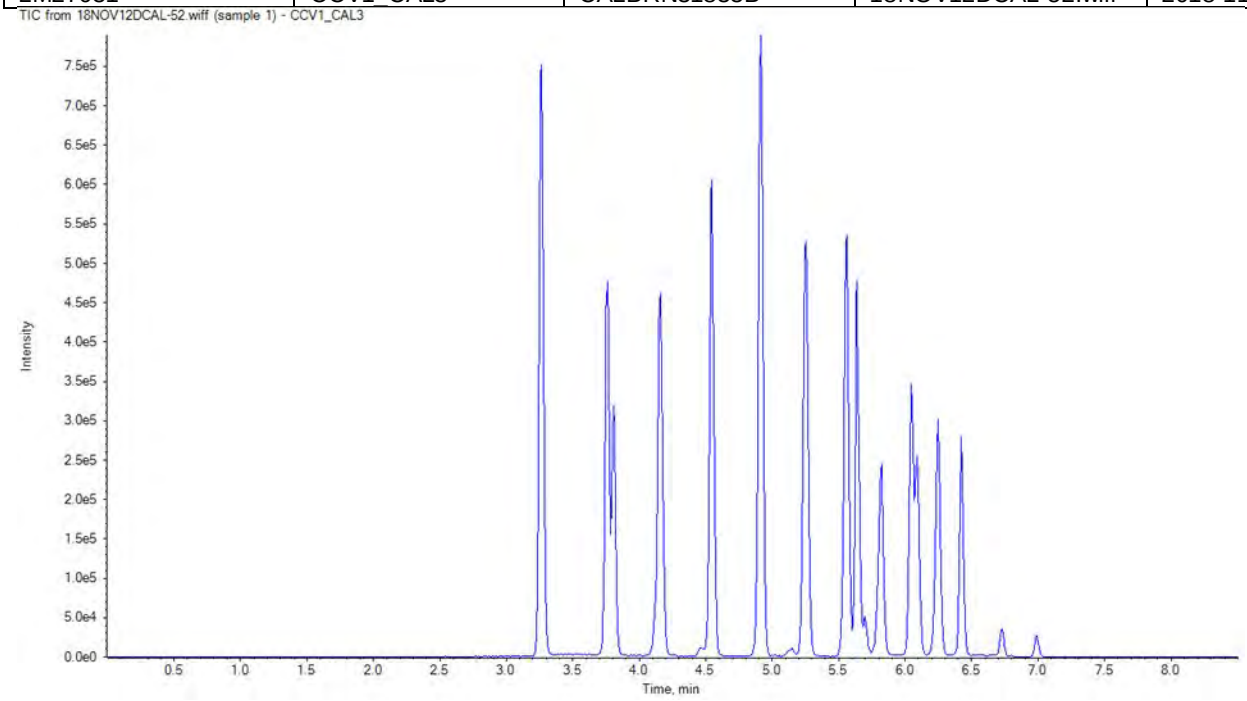
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALBRN31833B	18NOV12DCAL-52.wiff	2018-11-12T16:36:17



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664284.7	659926.2	1	50	
13C2-PFOA	5.0	438739.4	450219.7	-3	50	
13C4-PFOS	4.8	248122.9	249205.8	0	50	
13C2-PFDA	5.0	280671.6	278743.9	1	50	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALBRN31833B	18NOV12DCAL-52.wiff	2018-11-12T16:36:17

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	303662.2	10	13C4-PFBA	735275.5	5.0	0.413	3.26	1.000	2.000	2.288	14	30	
PFPeA	301109.0	11	13C5-PFPeA	741612.6	5.0	0.406	3.76	1.000	2.000	2.350	18	30	
PFBS	166889.6	10	13C3-PFBS	428368.4	4.7	0.390	3.81	1.000	1.770	1.853	5	30	
4:2-FTS	33008.9	12	13C2-4:2-FTS	45542.8	4.7	0.725	4.12	1.000	1.870	1.968	5	30	
PFHxA	362326.0	12	13C5-PFHxA	638944.4	5.0	0.567	4.16	1.000	2.000	2.368	18	30	
PFPeS	87834.9	11	13C3-PFBS	428368.4	4.7	0.205	4.18	1.100	1.880	1.991	6	30	
PFHpA	361271.6	11	13C4-PFHpA	513535.0	5.0	0.703	4.54	1.000	2.000	2.332	17	30	
PFHxS	128396.1	18	13C3-PFHxS	315408.2	4.7	0.407	4.55	1.000	1.820	1.974	8	30	
6:2-FTS	30500.7	11	13C2-6:2-FTS	31026.1	4.8	0.983	4.90	1.000	1.900	2.379	25	30	
PFHpS	122801.7	11	13C3-PFHxS	315408.2	4.7	0.389	4.91	1.080	1.900	2.050	8	30	
PFOA	370358.7	11	13C8-PFOA	845332.9	5.0	0.438	4.91	1.000	2.000	2.340	17	30	
PFOS	122332.0	21	13C8-PFOS	260810.5	4.8	0.469	5.24	1.000	1.850	2.051	11	30	
PFNA	292557.2	11	13C9-PFNA	468762.7	5.0	0.624	5.26	1.000	2.000	2.250	13	30	
PFNS	76021.2	11	13C8-PFOS	260810.5	4.8	0.291	5.54	1.060	1.920	2.039	6	30	
PFDA	253956.7	11	13C6-PFDA	610394.1	5.0	0.416	5.56	1.000	2.000	2.206	10	30	
8:2-FTS	22335.5	11	13C2-8:2-FTS	28002.9	4.8	0.798	5.56	1.000	1.920	1.860	-3	30	
PFOSA	236734.8	12	13C8-PFOSA	697263.3	5.0	0.340	5.64	1.000	2.000	1.658	-17	30	
NMeFOSAA	28733.4	18	d3-NMeFOSAA	73784.5	5.0	0.389	5.70	1.000	2.000	2.201	10	30	
PFDS	62507.8	11	13C8-PFOS	260810.5	4.8	0.240	5.79	1.110	1.930	2.172	13	30	
PFUnDA	199322.4	12	13C7-PFUnDA	244775.8	5.0	0.814	5.82	1.000	2.000	2.129	6	30	
NEtFOSAA	24531.9	20	d5-NEtFOSAA	70158.9	5.0	0.350	5.83	1.000	2.000	1.833	-8	30	
PFDoDA	228792.9	12	13C2-PFDoDA	497113.0	5.0	0.460	6.05	1.000	2.000	2.344	17	30	
10:2-FTS	14411.1	11	13C2-8:2-FTS	28002.9	4.8	0.515	6.06	1.090	1.930	1.714	-11	30	
NMePFOSAE	172466.5	11	d7-NMePFOSAE	300873.2	5.0	0.573	6.09	1.000	2.000	2.386	19	30	
NMePFOSA	31464.1	12	d3-NMePFOSA	75068.4	5.0	0.419	6.10	1.000	2.000	2.068	3	30	
PFDoS	33762.2	11	13C8-PFOS	260810.5	4.8	0.129	6.22	1.190	1.940	2.267	17	30	
NEtPFOSAE	180928.5	11	d9-NEtPFOSAE	250299.2	5.0	0.723	6.25	1.000	2.000	2.319	16	30	
NEtPFOSA	26529.3	11	d5-NEtPFOSA	59631.6	5.0	0.445	6.26	1.000	2.000	2.043	2	30	
PFTrDA	185154.6	11	13C2-PFDoDA	497113.0	5.0	0.372	6.25	1.030	2.000	2.351	18	30	
PFTeDA	159904.6	10	13C2-PFTeDA	379642.6	5.0	0.421	6.42	1.000	2.000	2.361	18	30	
PFHxDA	68393.8	11	13C2-PFTeDA	379642.6	5.0	0.180	6.73	1.050	2.000	2.146	7	30	
PFODA	58092.4	10	13C2-PFTeDA	379642.6	5.0	0.153	6.99	1.090	2.000	2.131	7	30	

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_CAL3			**Data File:**		18NOV12DCAL-52.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-12T16:36:17
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664284.7	659926.2	1	50	
13C2-PFOA	5.0	438739.4	450219.7	-3	50	
13C4-PFOS	4.8	248122.9	249205.8	0	50	
13C2-PFDA	5.0	280671.6	278743.9	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	735275.5	13C3-PFBA	664284.7	1.107	5.000	4.962	99	70-130	
E13C5-PFPeA	741612.6	13C3-PFBA	664284.7	1.116	5.000	5.007	100	70-130	
E13C3-PFBS	428368.4	13C3-PFBA	664284.7	0.645	4.650	4.552	98	70-130	
E13C2-4:2-FTS	45542.8	13C2-PFOA	438739.4	0.104	4.670	4.623	99	70-130	
E13C5-PFHxA	638944.4	13C2-PFOA	438739.4	1.456	5.000	5.261	105	70-130	
E13C3-PFHxS	315408.2	13C2-PFOA	438739.4	0.719	4.730	4.933	104	70-130	
E13C4-PFHpA	513535.0	13C2-PFOA	438739.4	1.170	5.000	5.273	105	70-130	
E13C2-6:2-FTS	31026.1	13C2-PFOA	438739.4	0.071	4.750	4.731	100	70-130	
E13C8-PFOA	845332.9	13C2-PFOA	438739.4	1.927	5.000	5.308	106	70-130	
E13C8-PFOS	260810.5	13C4-PFOS	248122.9	1.051	4.780	4.657	97	70-130	
E13C9-PFNA	468762.7	13C4-PFOS	248122.9	1.889	5.000	5.267	105	70-130	
E13C6-PFDA	610394.1	13C2-PFDA	280671.6	2.175	5.000	5.075	102	70-130	
E13C2-8:2-FTS	28002.9	13C2-PFDA	280671.6	0.100	4.790	4.976	104	70-130	
E13C8-PFOSA	697263.3	13C2-PFDA	280671.6	2.484	5.000	5.508	110	70-130	
Ed3-NMeFOSAA	73784.5	13C2-PFDA	280671.6	0.263	5.000	4.745	95	70-130	
E13C7-PFUnDA	244775.8	13C2-PFDA	280671.6	0.872	5.000	5.063	101	70-130	
Ed5-NEtFOSAA	70158.9	13C2-PFDA	280671.6	0.250	5.000	5.288	106	70-130	
E13C2-PFDoDA	497113.0	13C2-PFDA	280671.6	1.771	5.000	4.599	92	70-130	
Ed7-NMePFOSAE	300873.2	13C2-PFDA	280671.6	1.072	5.000	4.639	93	70-130	
Ed3-NMePFOSA	75068.4	13C2-PFDA	280671.6	0.267	5.000	4.859	97	70-130	
Ed9-NEtPFOSAE	250299.2	13C2-PFDA	280671.6	0.892	5.000	4.638	93	70-130	
Ed5-NEtPFOSA	59631.6	13C2-PFDA	280671.6	0.212	5.000	4.984	100	70-130	
E13C2-PFTeDA	379642.6	13C2-PFDA	280671.6	1.353	5.000	4.749	95	70-130	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

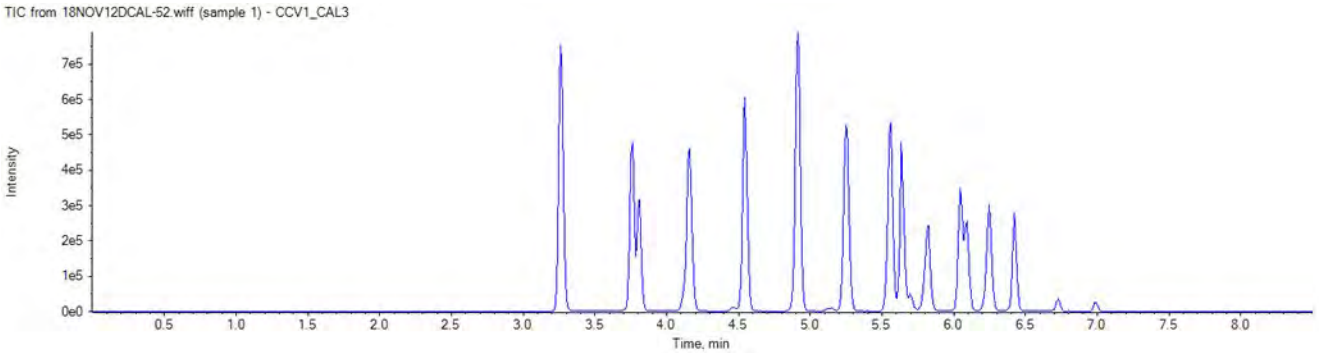
Analyte Quantitation Peak Table

Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-52.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	303662.2		A	13C4-PFBA	3.26	735275.5	0.413	2.288
PFPeA	3.76	1.000	301109.0		A	13C5-PFPeA	3.76	741612.6	0.406	2.350
PFBS	3.81	1.000	166889.6		A	13C3-PFBS	3.81	428368.4	0.390	1.853
4:2-FTS	4.12	1.000	33008.9		A	13C2-4:2-FTS	4.12	45542.8	0.725	1.968
PFHxA	4.16	1.000	362326.0		A	13C5-PFHxA	4.16	638944.4	0.567	2.368
PFPeS	4.18	1.100	87834.9		A	13C3-PFBS	3.81	428368.4	0.205	1.991
PFHpA	4.54	1.000	361271.6		A	13C4-PFHpA	4.54	513535.0	0.703	2.332
PFHxS	4.55	1.000	128396.1		M	13C3-PFHxS	4.55	315408.2	0.407	1.974
6:2-FTS	4.90	1.000	30500.7		A	13C2-6:2-FTS	4.90	31026.1	0.983	2.379
PFHpS	4.91	1.080	122801.7		A	13C3-PFHxS	4.55	315408.2	0.389	2.050
PFOA	4.91	1.000	370358.7		A	13C8-PFOA	4.91	845332.9	0.438	2.340
PFOS	5.24	1.000	122332.0		M	13C8-PFOS	5.24	260810.5	0.469	2.051
PFNA	5.26	1.000	292557.2		A	13C9-PFNA	5.26	468762.7	0.624	2.250
PFNS	5.54	1.060	76021.2		A	13C8-PFOS	5.24	260810.5	0.291	2.039
PFDA	5.56	1.000	253956.7		A	13C6-PFDA	5.56	610394.1	0.416	2.206
8:2-FTS	5.56	1.000	22335.5		A	13C2-8:2-FTS	5.56	28002.9	0.798	1.860
PFOSA	5.64	1.000	236734.8		A	13C8-PFOSA	5.64	697263.3	0.340	1.658
NMeFOSAA	5.70	1.000	28733.4		A	d3-NMeFOSAA	5.70	73784.5	0.389	2.201
PFDS	5.79	1.110	62507.8		A	13C8-PFOS	5.24	260810.5	0.240	2.172
PFUnDA	5.82	1.000	199322.4		A	13C7-PFUnDA	5.82	244775.8	0.814	2.129
NEtFOSAA	5.83	1.000	24531.9		A	d5-NEtFOSAA	5.83	70158.9	0.350	1.833
PFDoDA	6.05	1.000	228792.9		A	13C2-PFDoDA	6.05	497113.0	0.460	2.344
10:2-FTS	6.06	1.090	14411.1		A	13C2-8:2-FTS	5.56	28002.9	0.515	1.714
NMePFOSAE	6.09	1.000	172466.5		A	d7-NMePFOSAE	6.09	300873.2	0.573	2.386
NMePFOSA	6.10	1.000	31464.1		A	d3-NMePFOSA	6.10	75068.4	0.419	2.068
PFDoS	6.22	1.190	33762.2		A	13C8-PFOS	5.24	260810.5	0.129	2.267
NEtPFOSAE	6.25	1.000	180928.5		A	d9-NEtPFOSAE	6.24	250299.2	0.723	2.319
NEtPFOSA	6.26	1.000	26529.3		A	d5-NEtPFOSA	6.26	59631.6	0.445	2.043
PFTrDA	6.25	1.030	185154.6		A	13C2-PFDoDA	6.05	497113.0	0.372	2.351
PFTeDA	6.42	1.000	159904.6		A	13C2-PFTeDA	6.42	379642.6	0.421	2.361
PFHxDA	6.73	1.050	68393.8		A	13C2-PFTeDA	6.42	379642.6	0.180	2.146
PFODA	6.99	1.090	58092.4		A	13C2-PFTeDA	6.42	379642.6	0.153	2.131

Total Ion Chromatogram

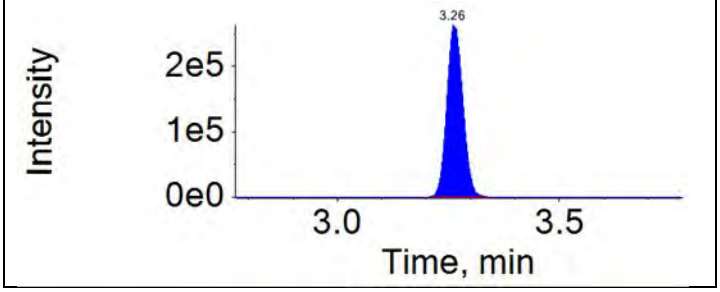


APPROVED
By MCD at 6:34 pm, 11/12/18

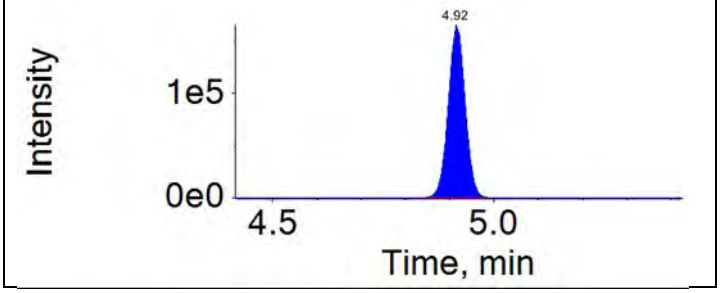
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

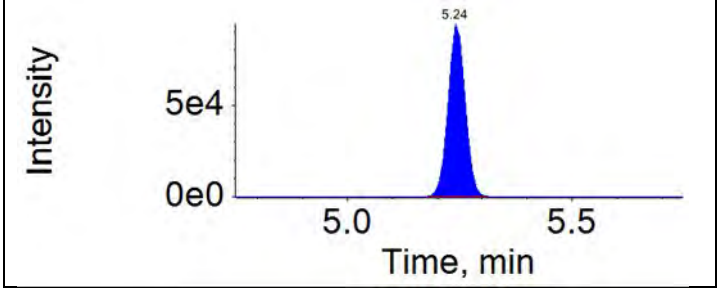
Injection Standard: 13C3-PFBA
216.0 / 172.0



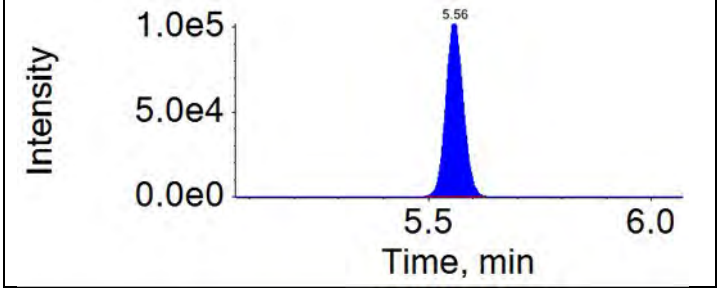
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

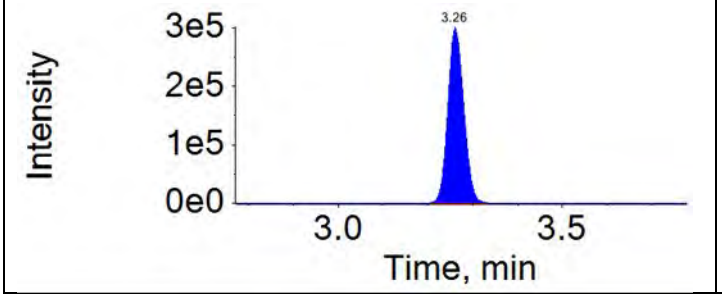


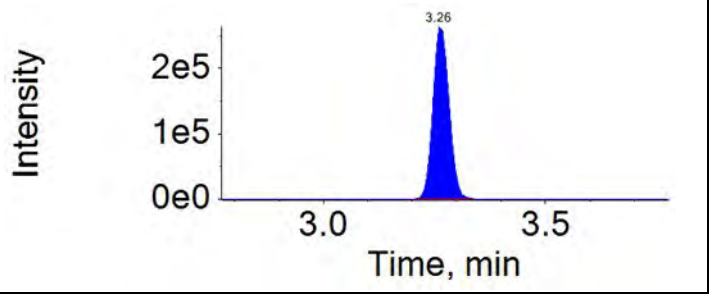
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

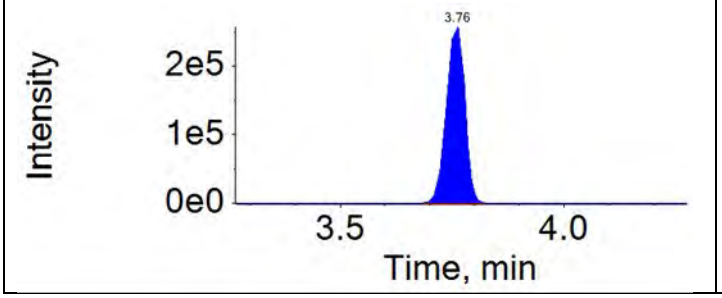
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

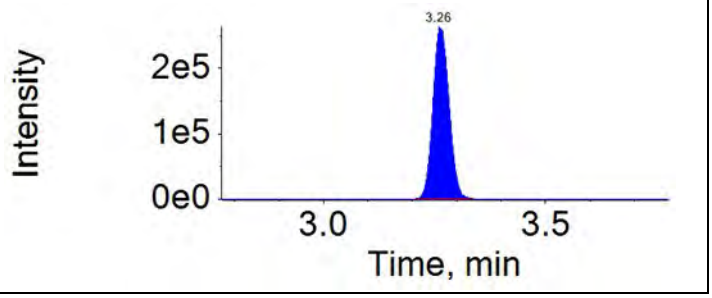
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



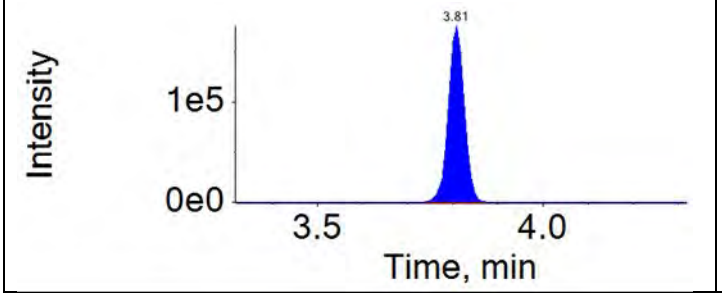


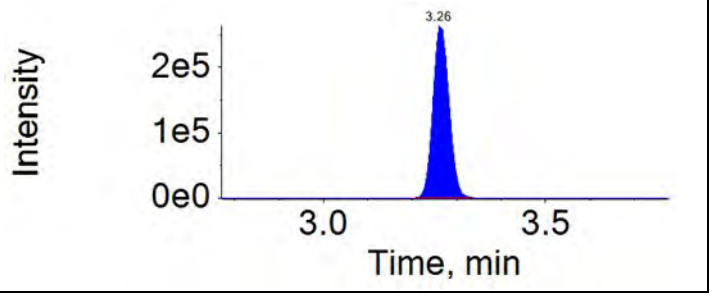
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



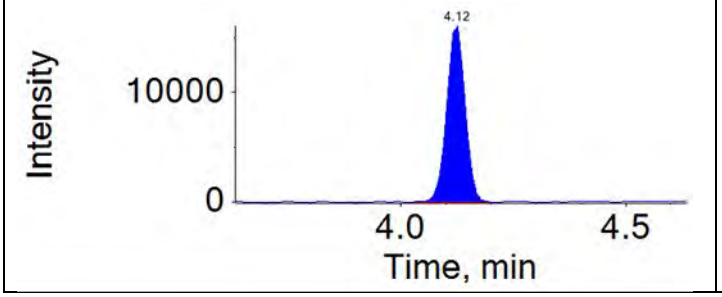


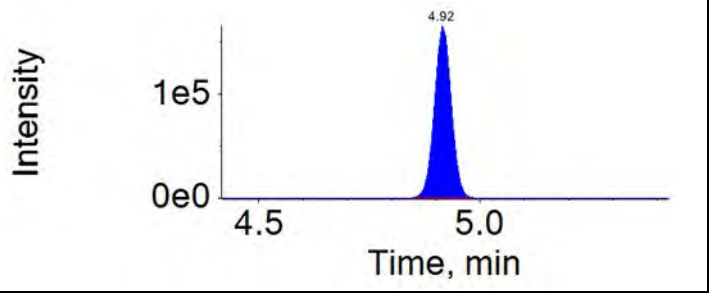
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



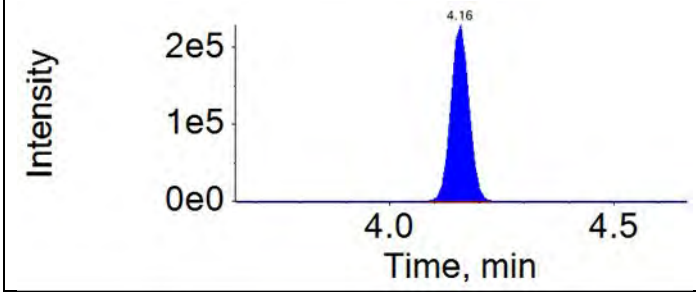


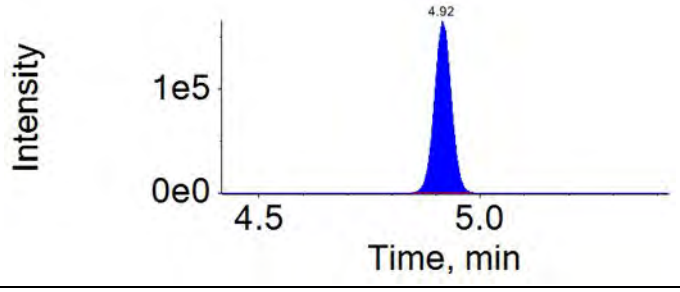
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

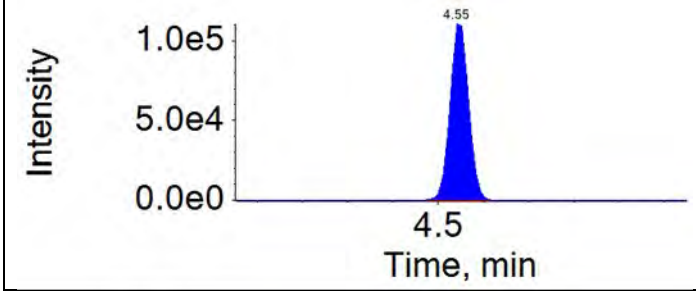
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

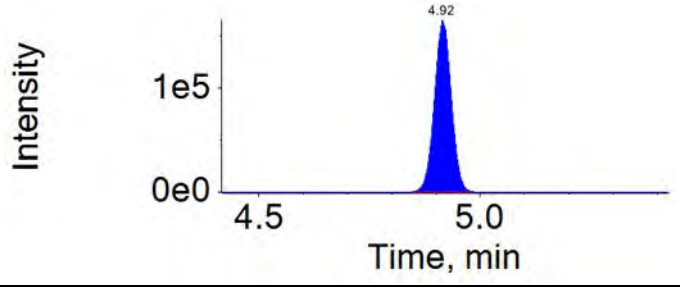
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



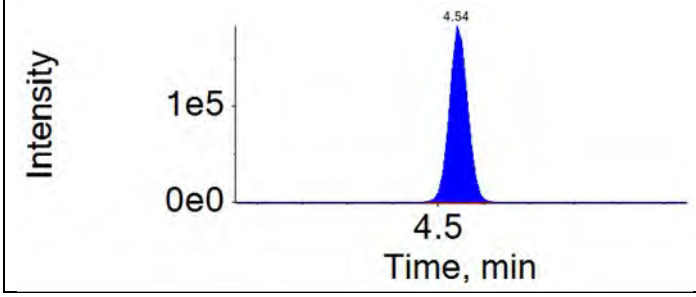


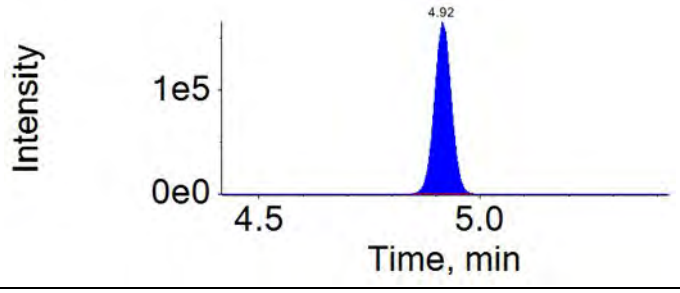
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



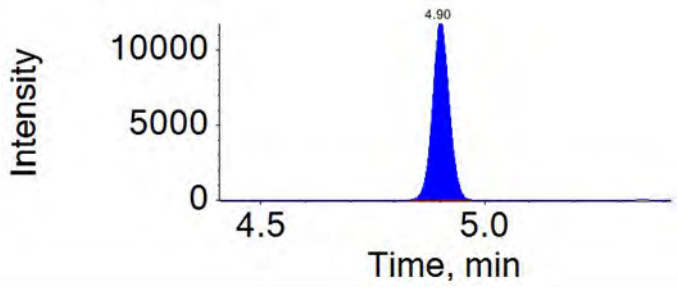


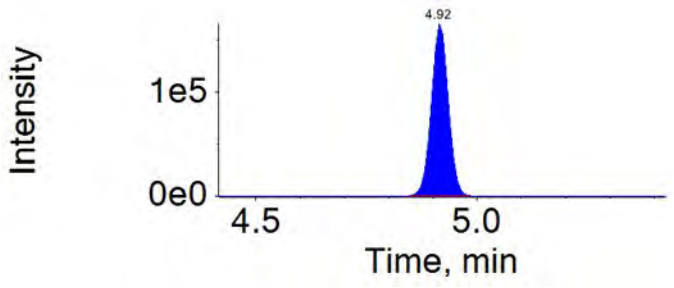
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

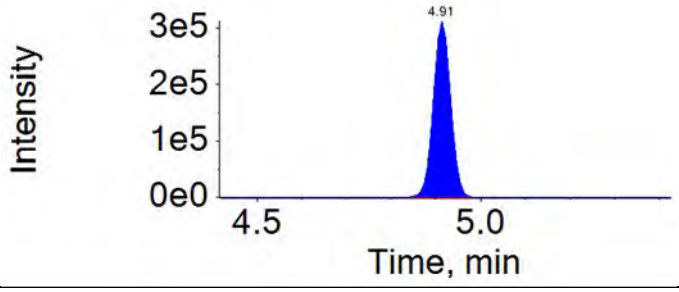
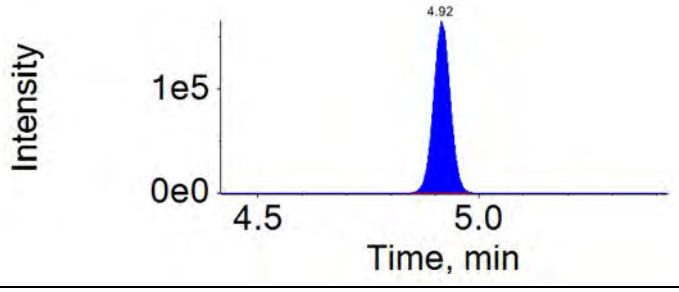


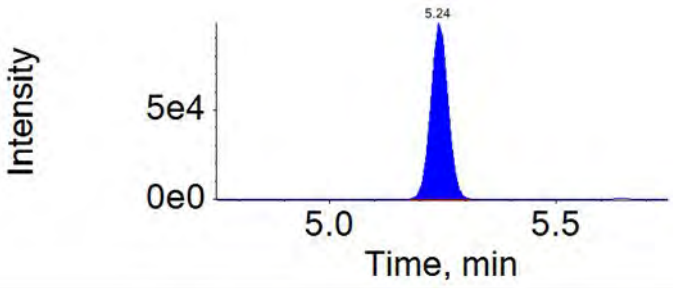
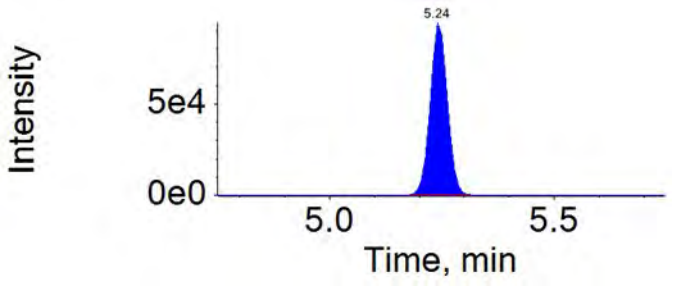


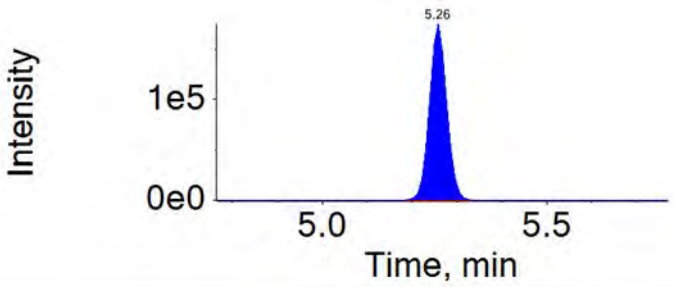
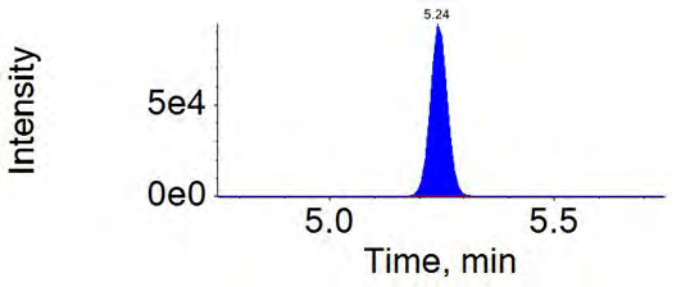
APPROVED
By MCD at 6:34 pm, 11/12/18

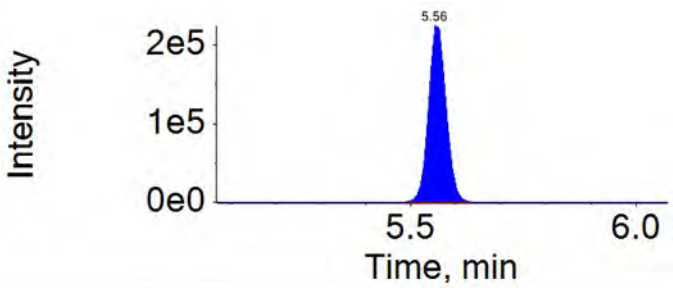
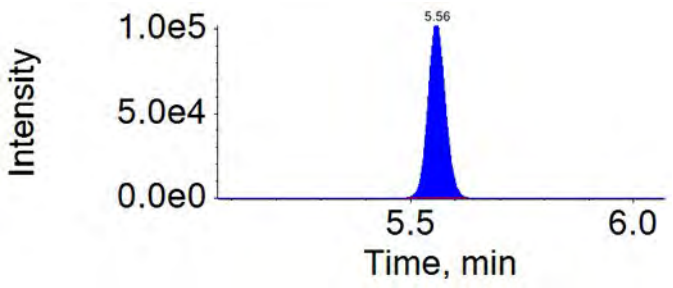
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

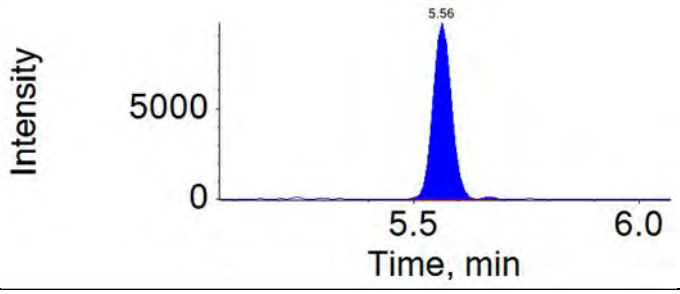
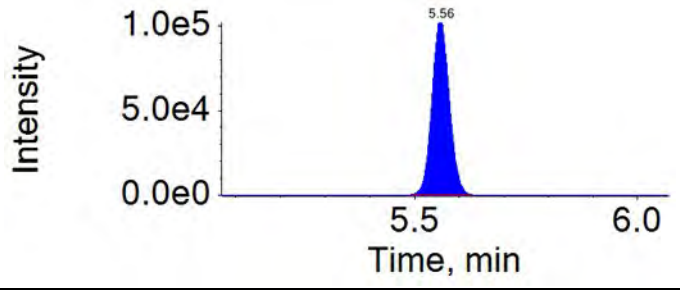
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

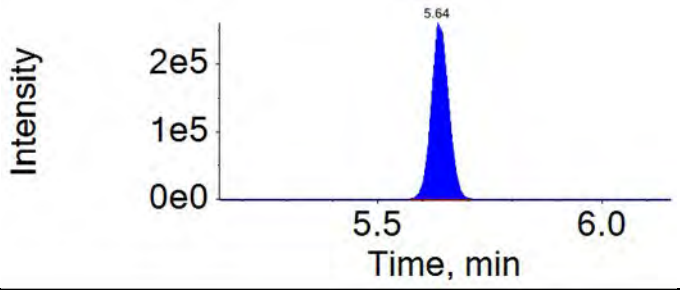
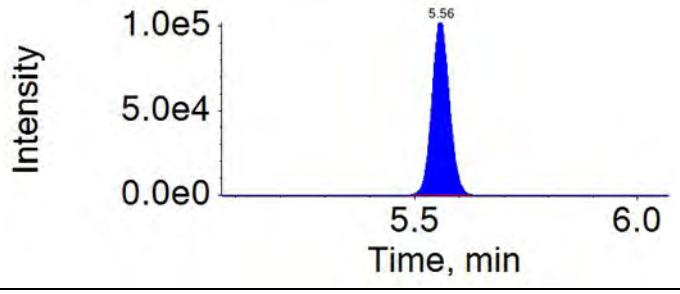
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

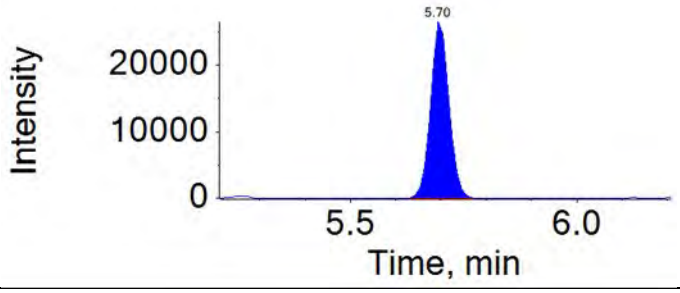
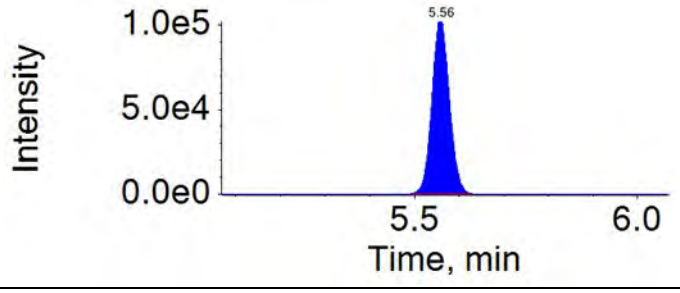
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

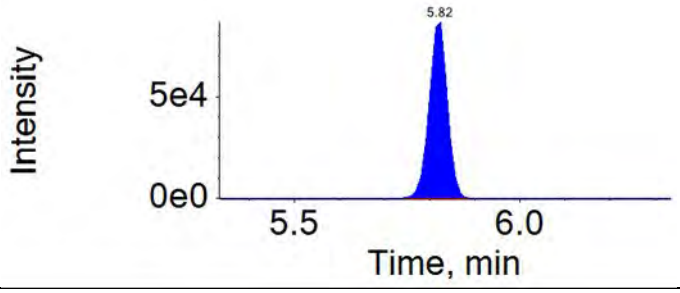
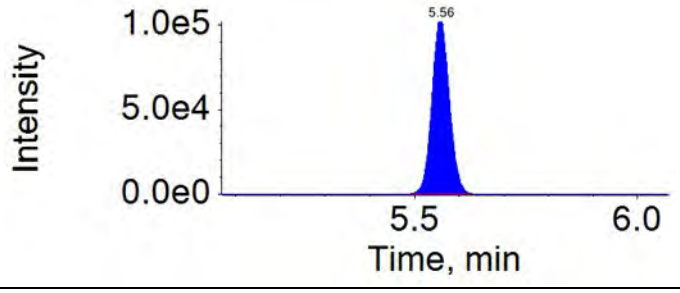
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

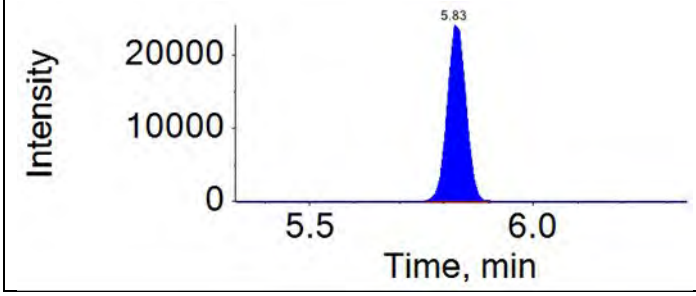
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

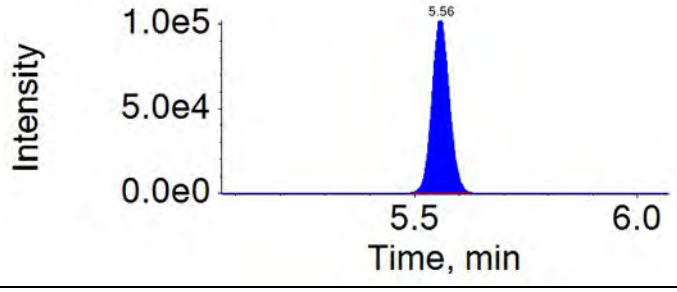
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

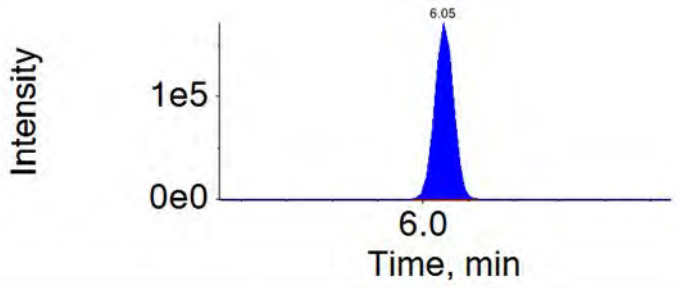
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

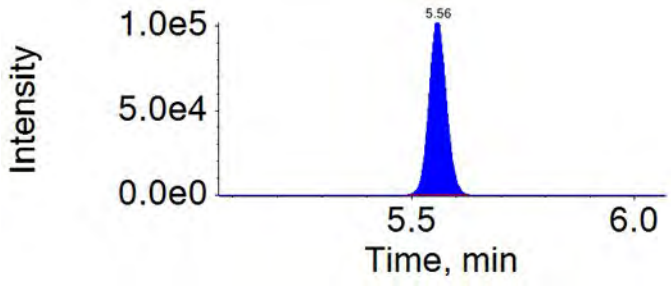
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



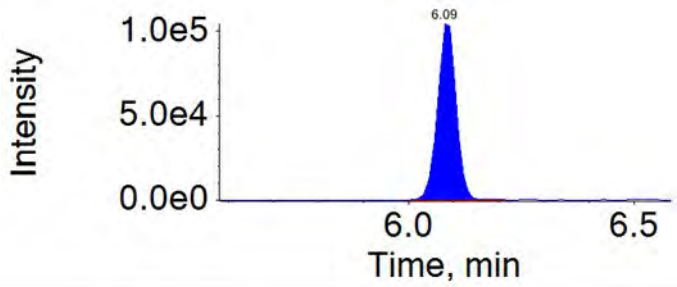


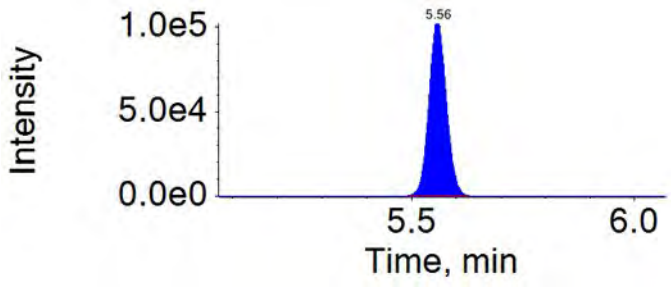
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



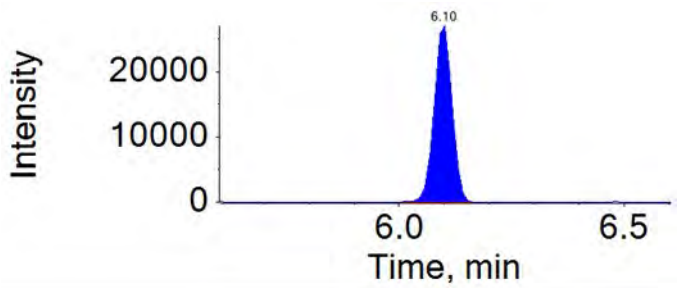


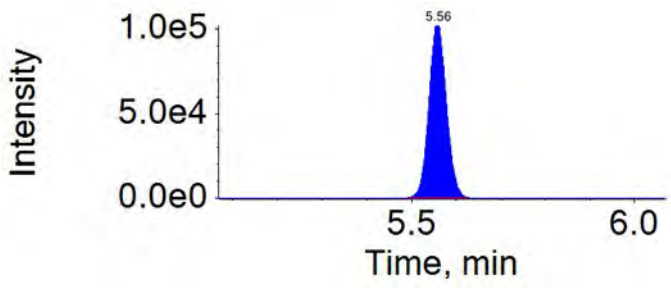
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





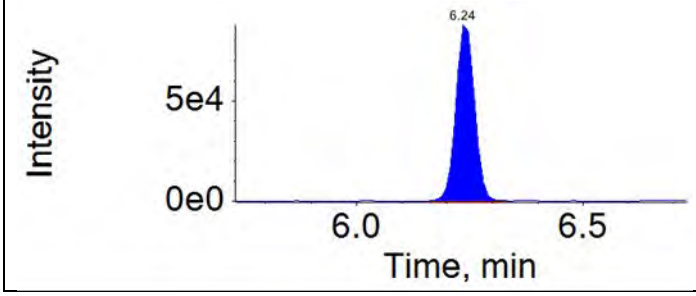
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

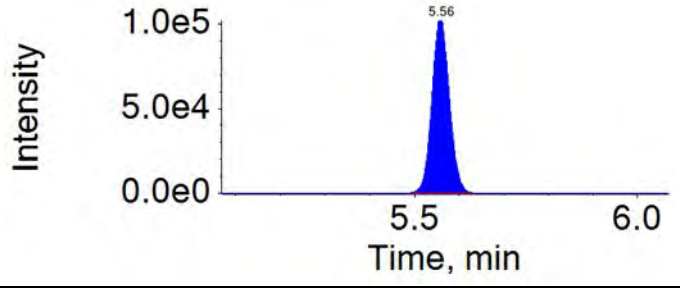




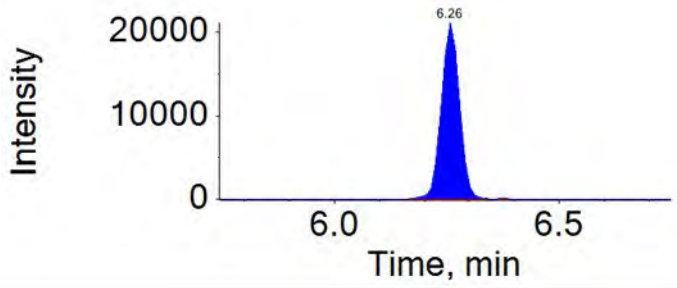
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

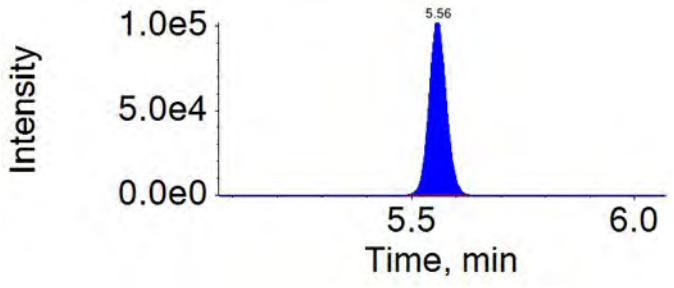
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



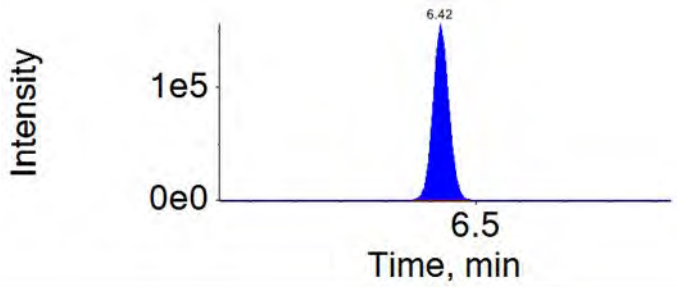


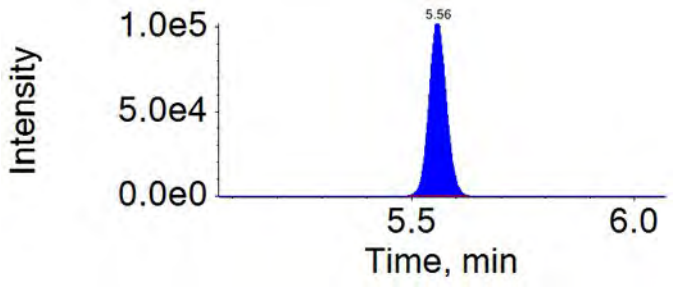
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



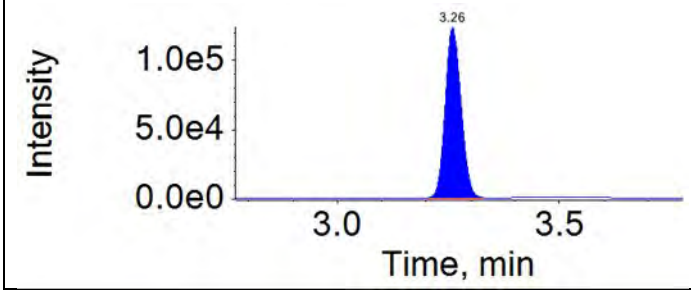


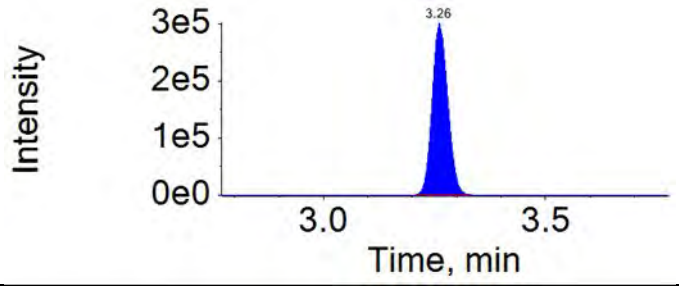
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

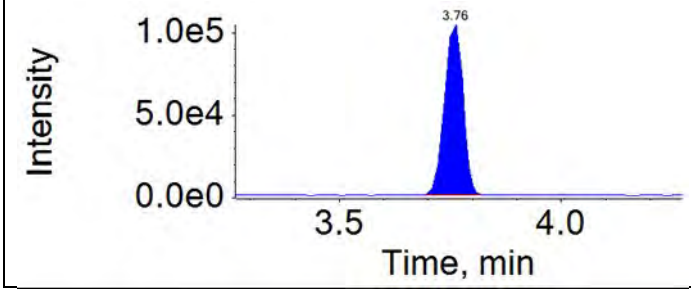
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

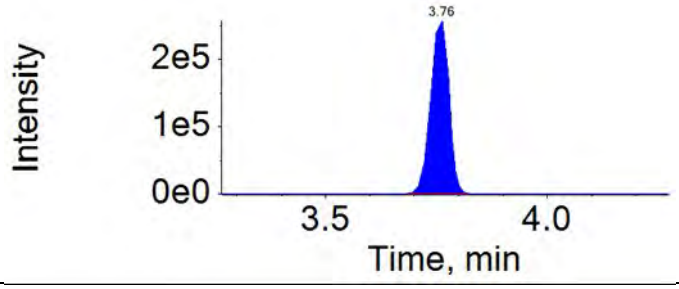
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



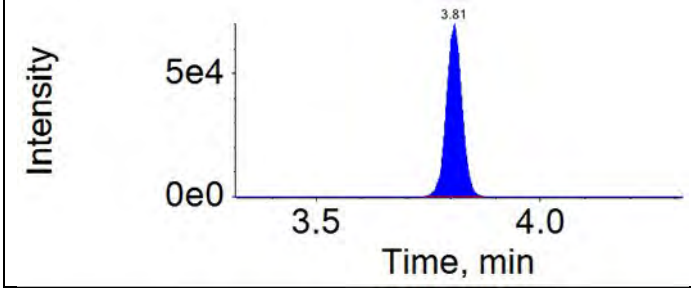


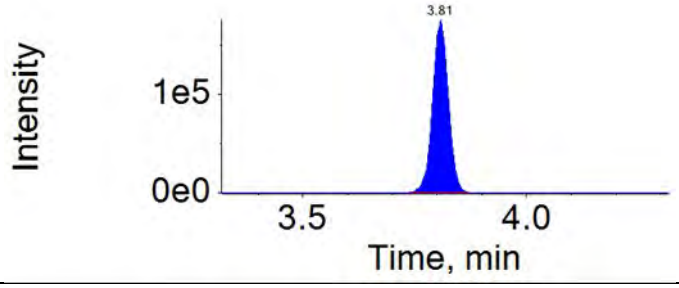
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



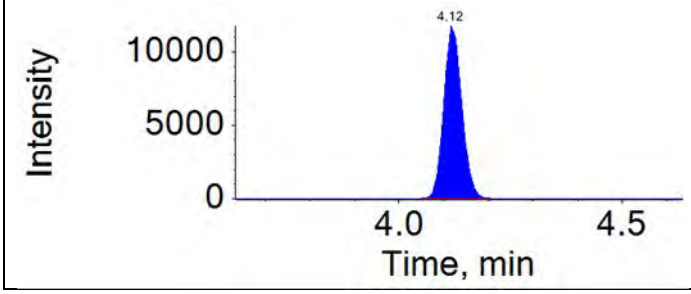


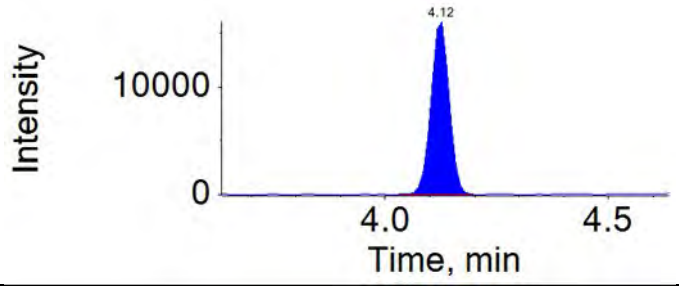
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



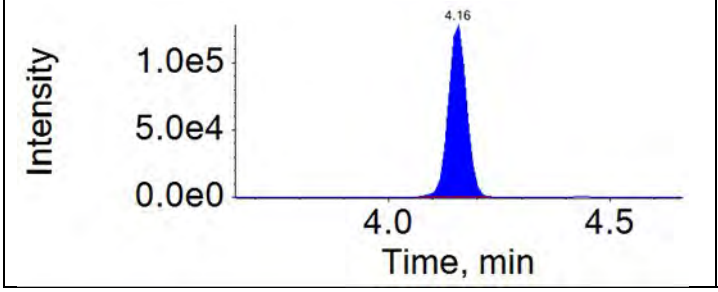


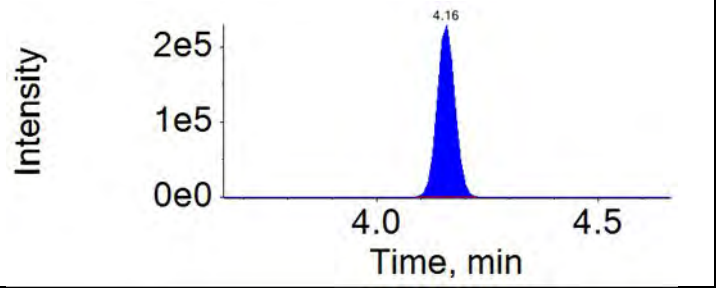
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

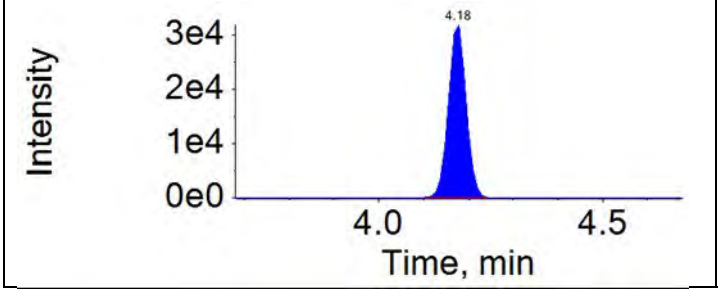
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

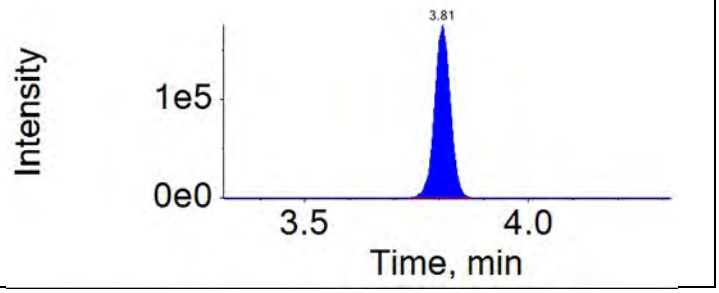
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



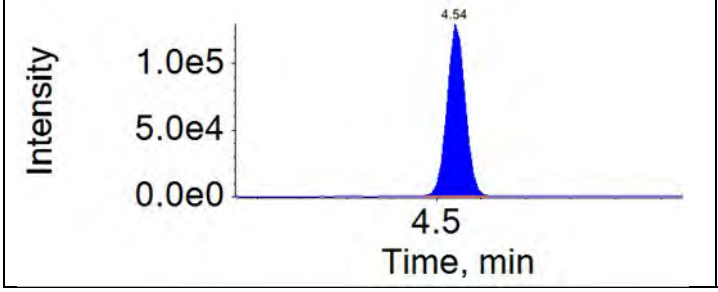


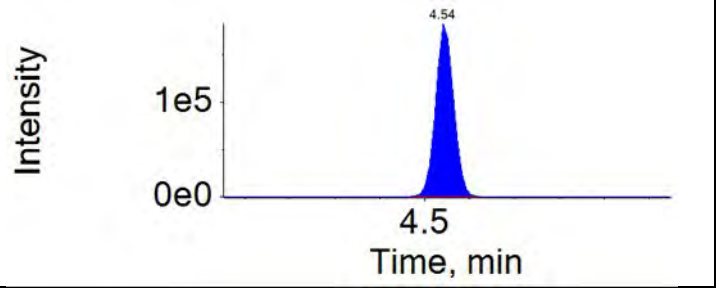
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



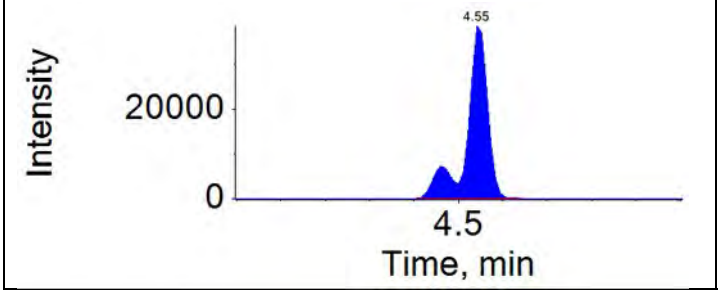


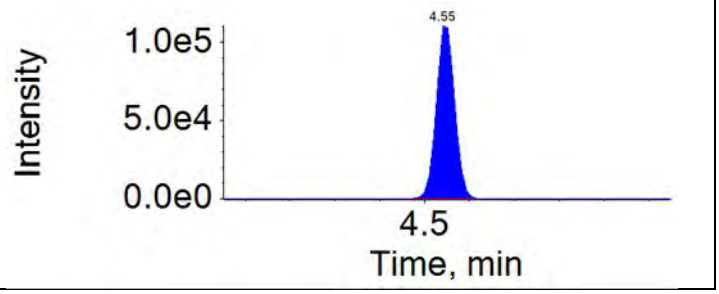
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





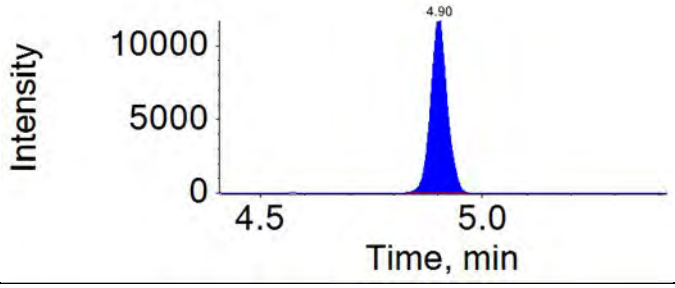
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

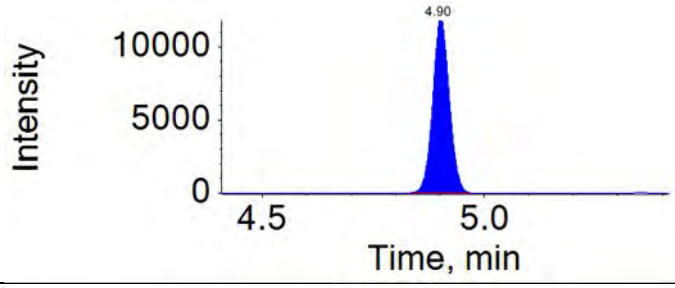




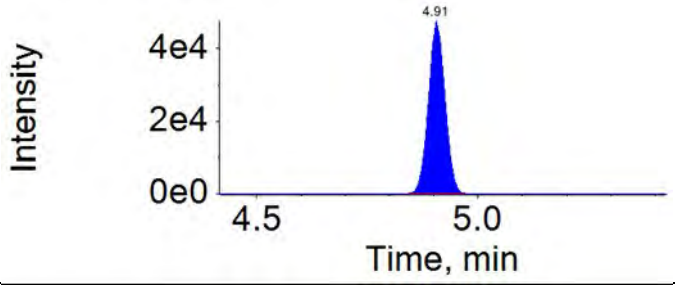
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

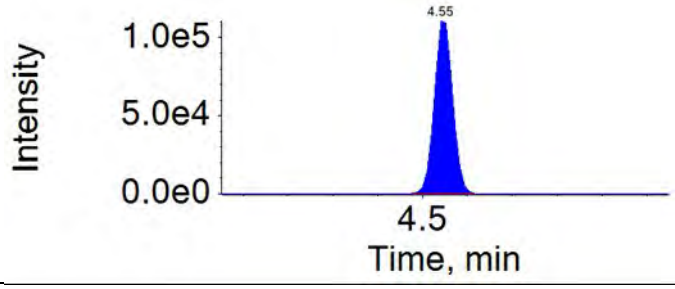
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



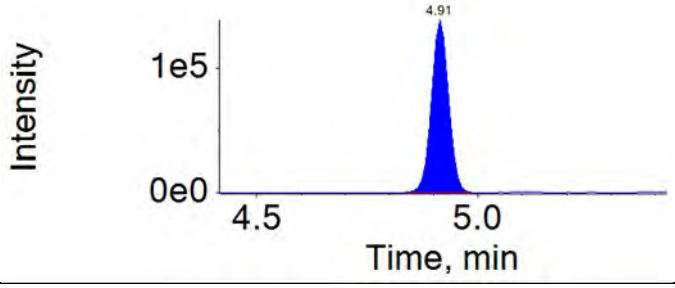


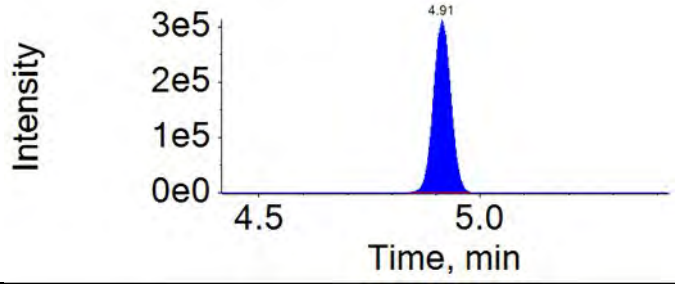
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



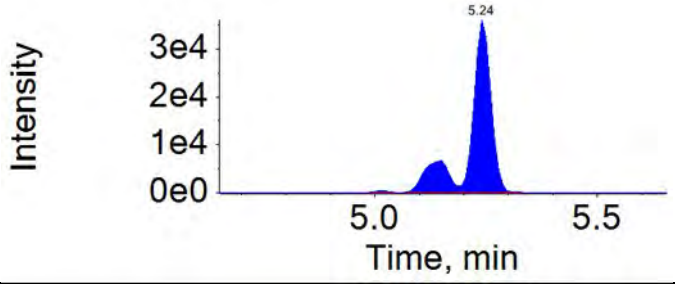


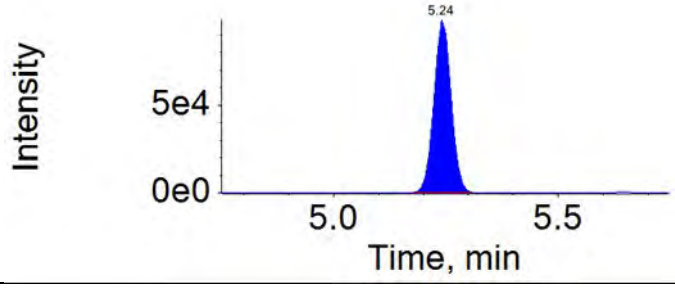
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





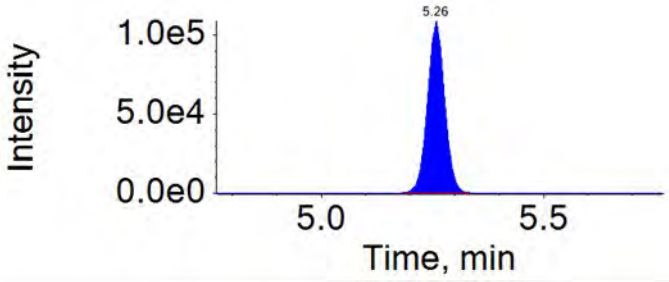
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

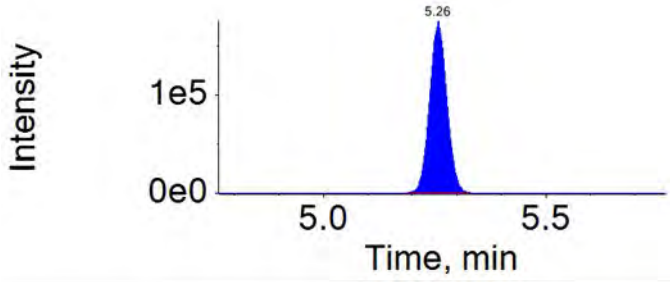




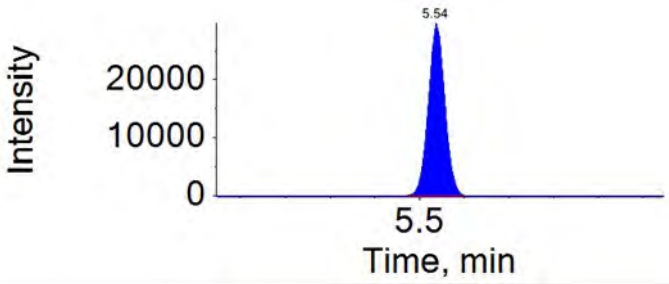
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

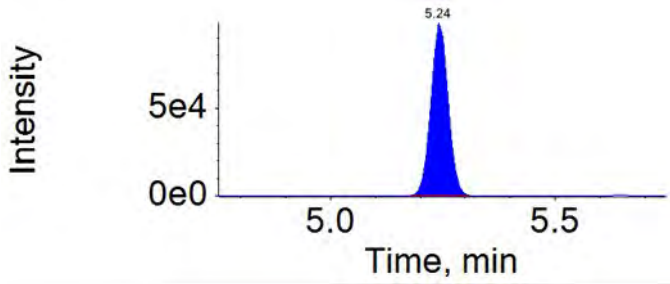
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



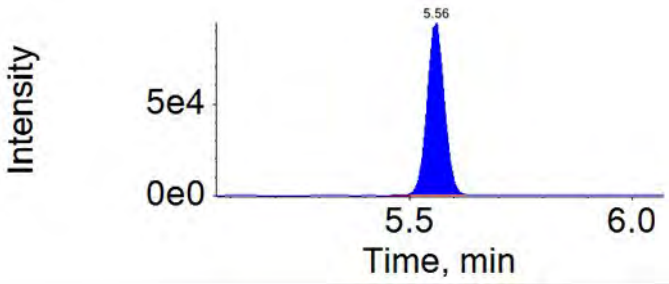


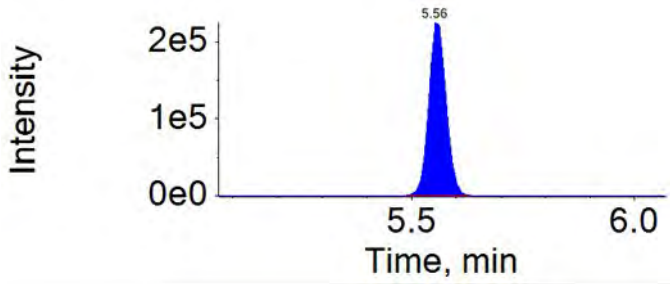
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



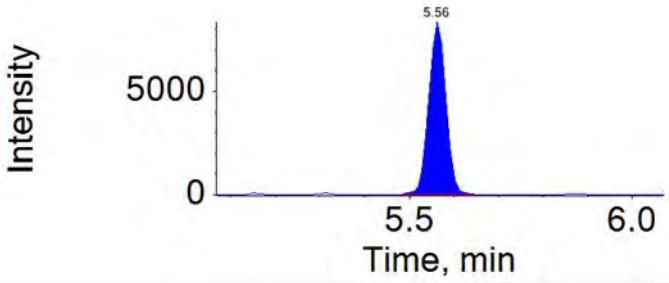


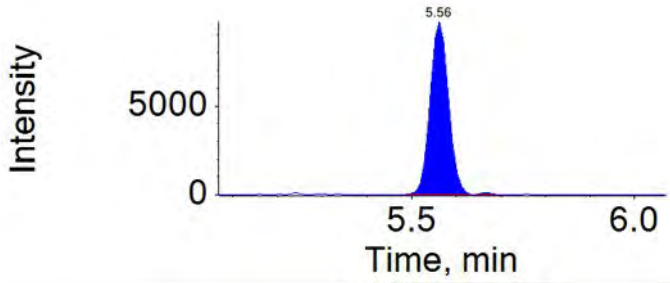
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



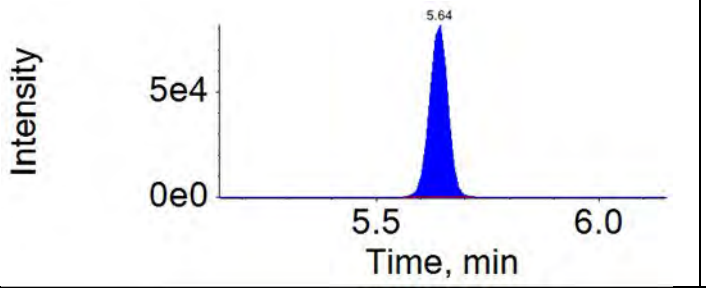


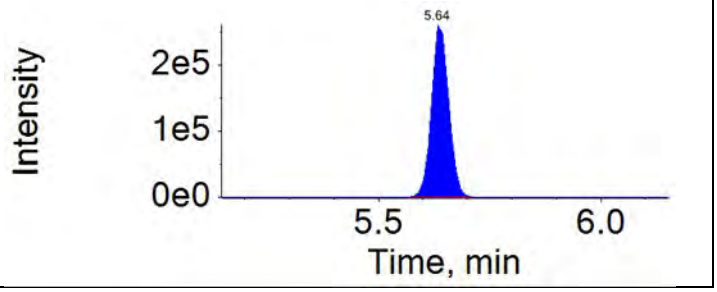
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

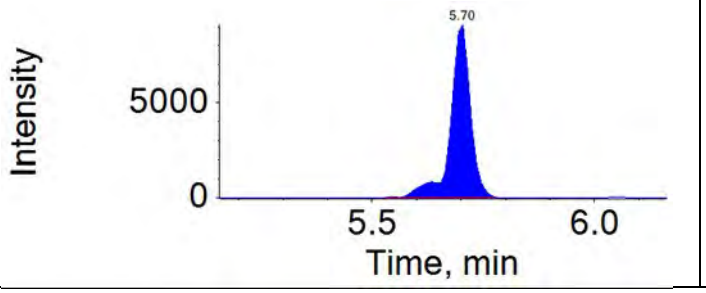
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

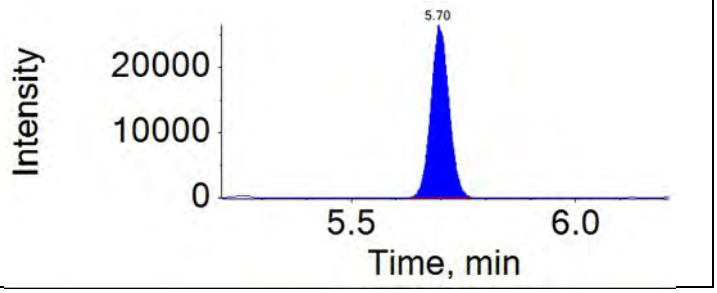
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



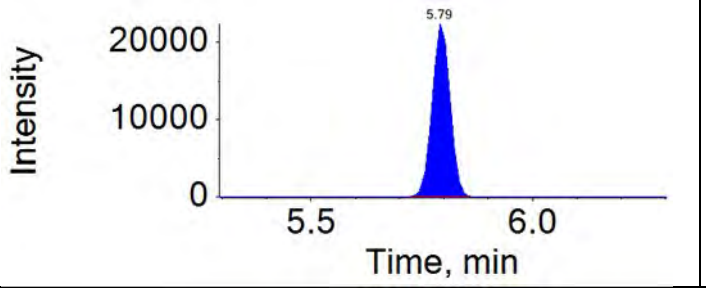


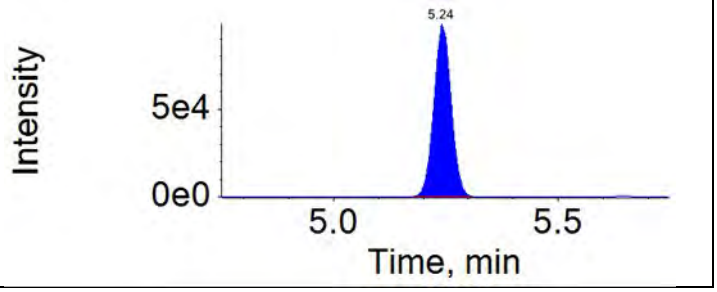
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



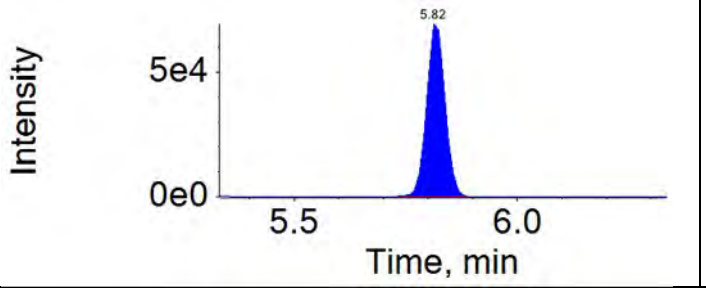


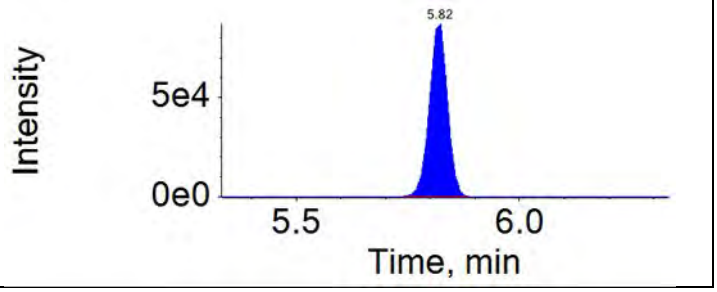
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



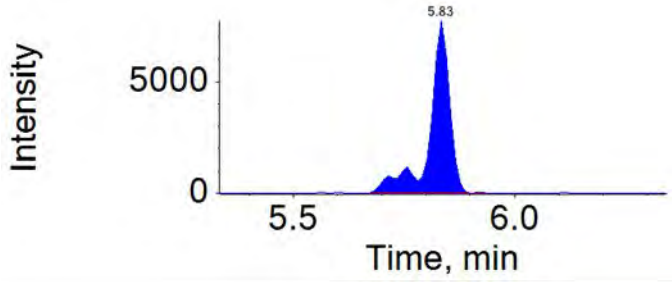


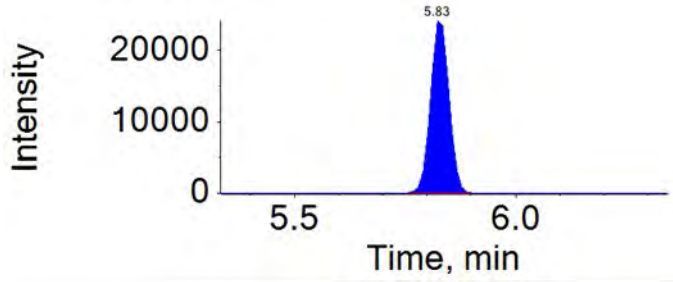
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

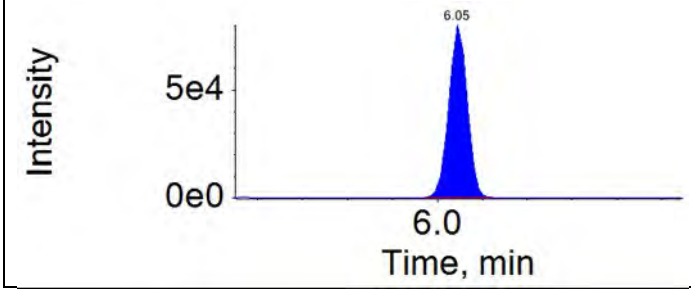
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

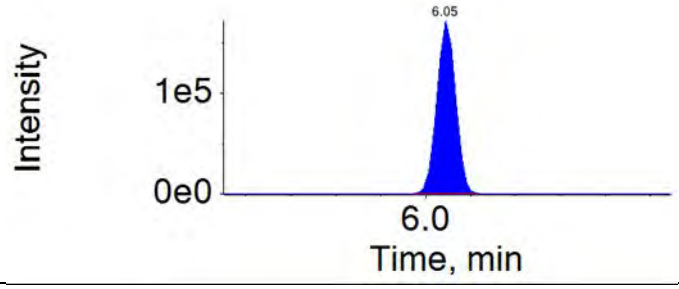
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



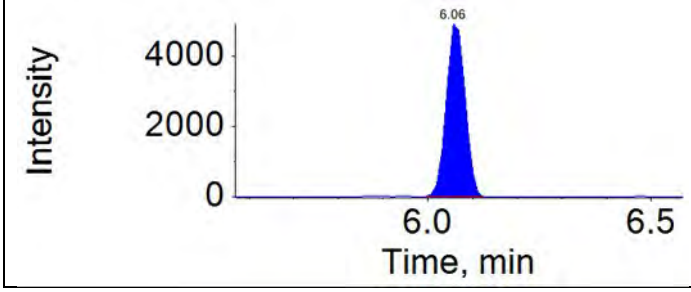


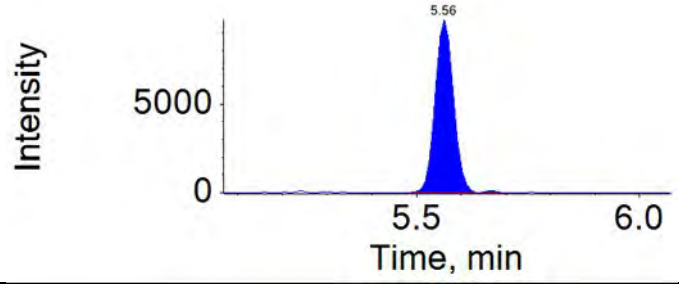
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



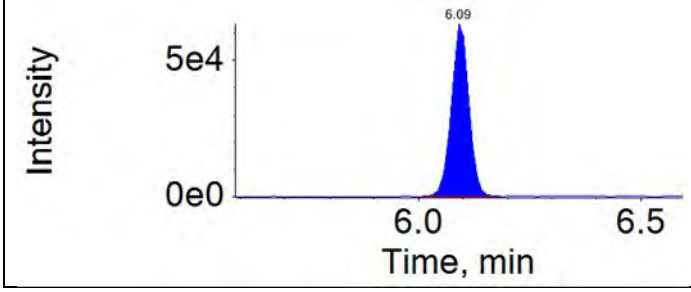


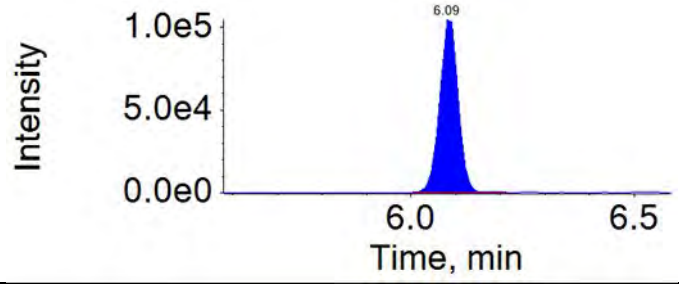
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



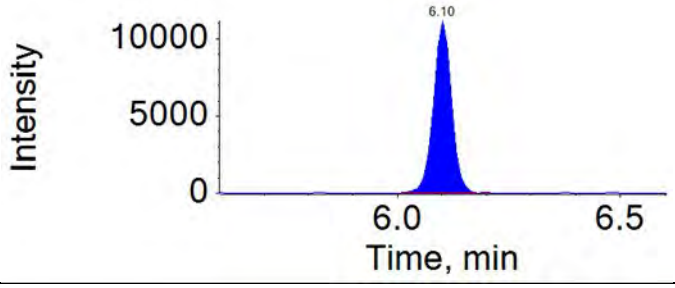


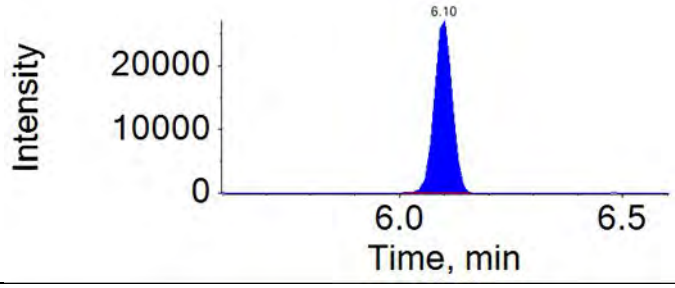
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

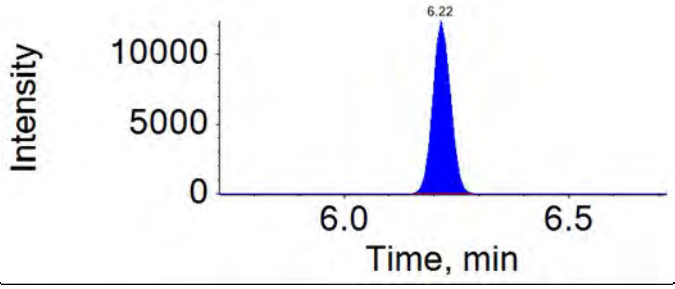
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

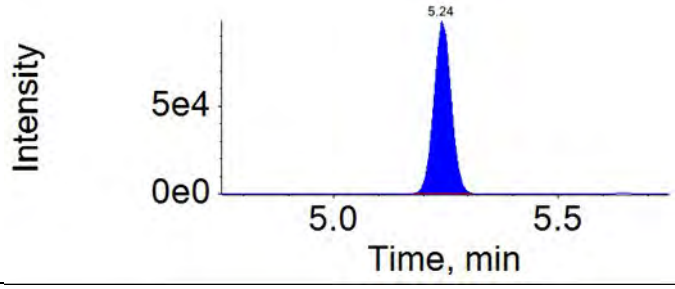
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



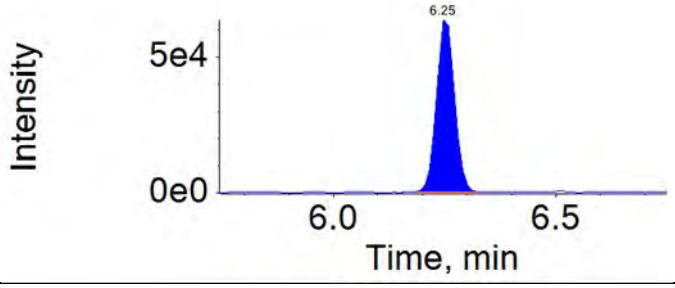


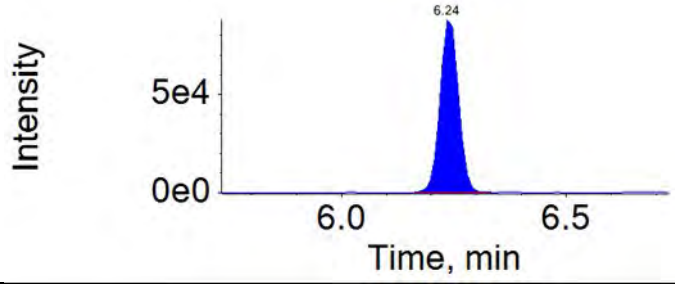
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



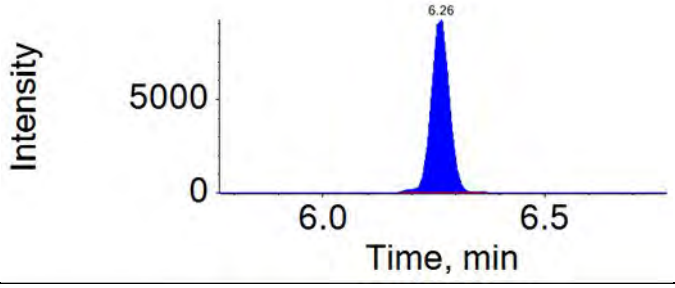


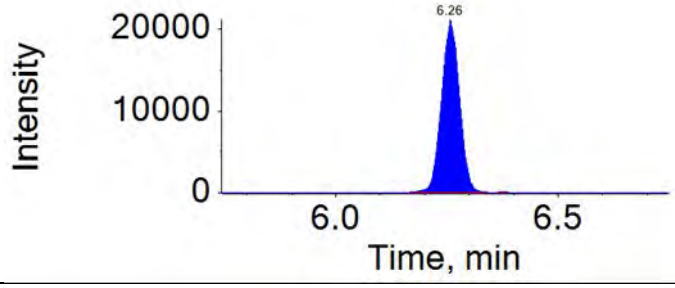
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



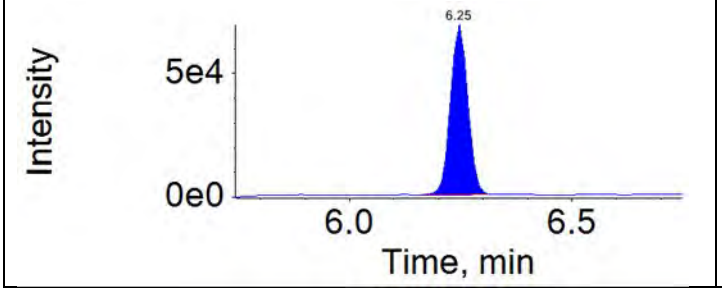


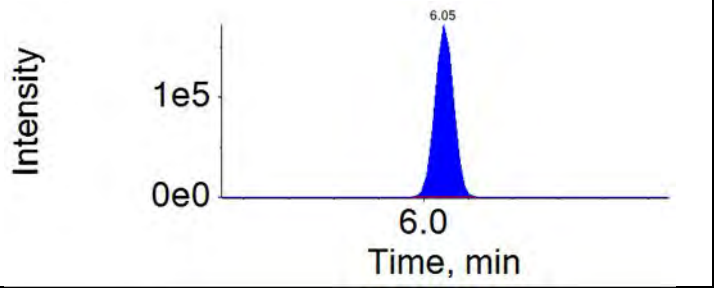
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

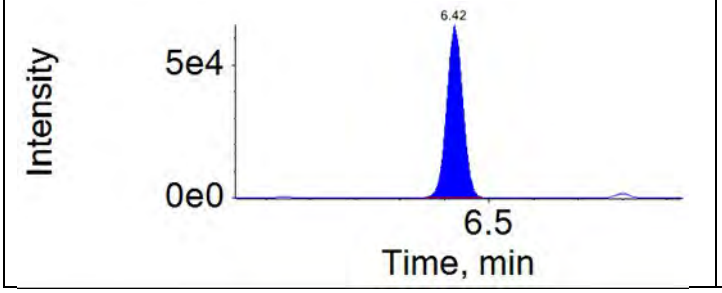
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

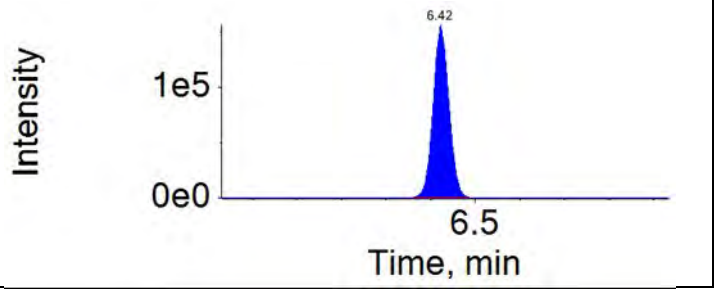
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



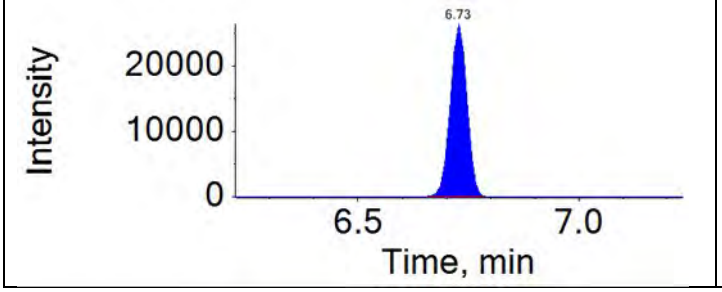


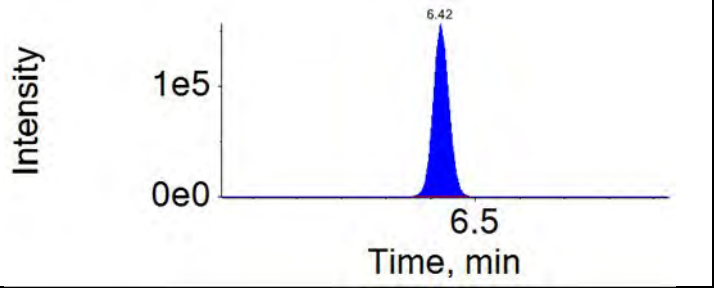
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



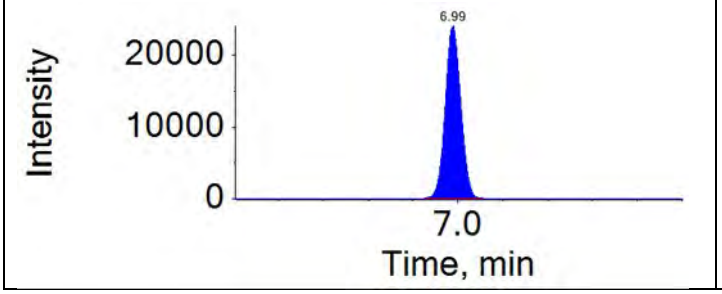


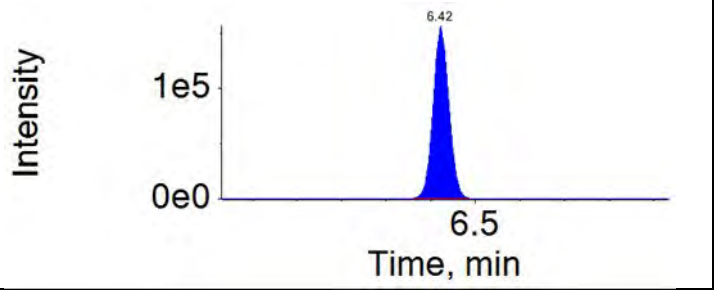
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0

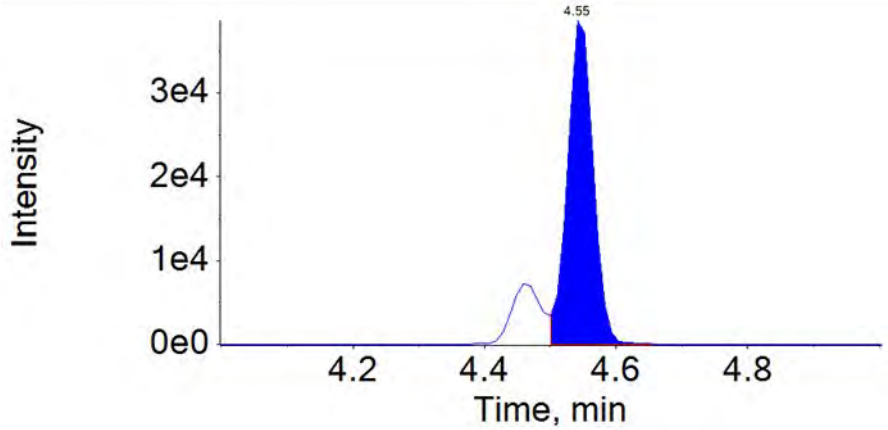


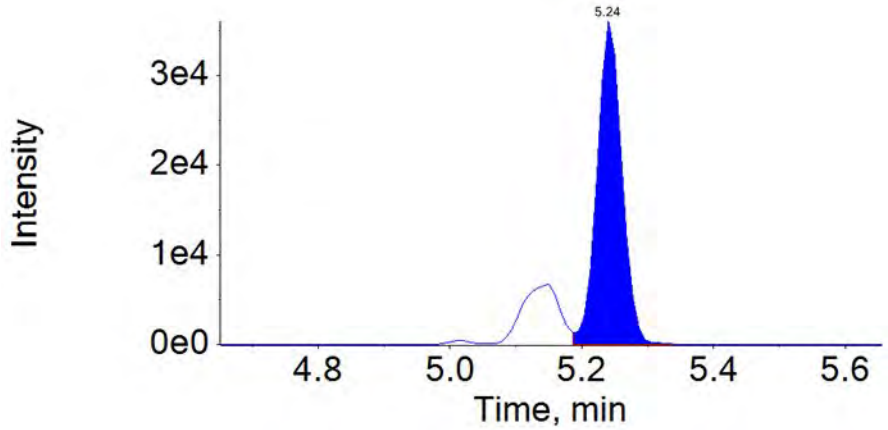


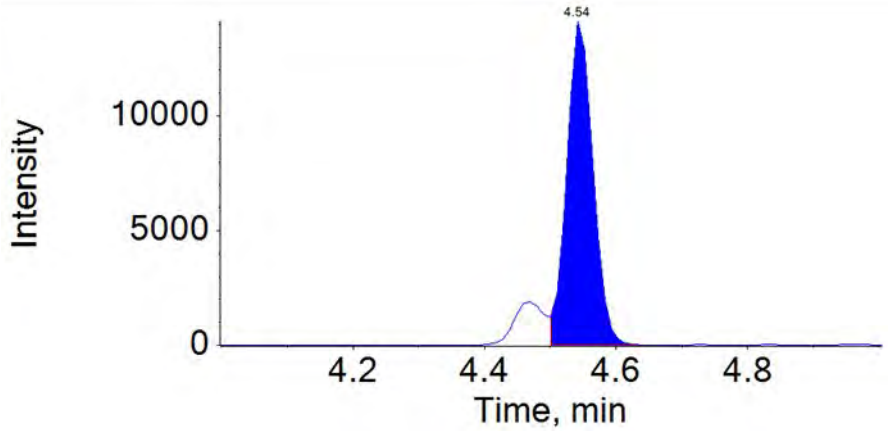
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS **RT (min.):** 4.55 **Peak Area:** 105576.75 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

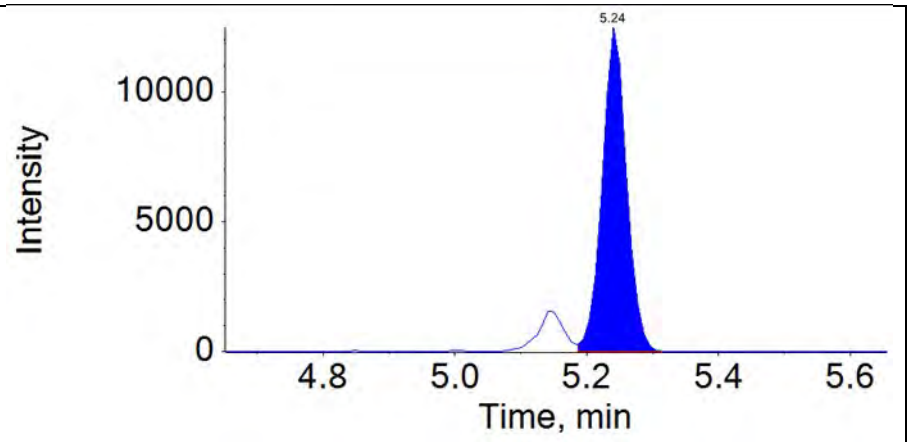
Component Name: PFOS **RT (min.):** 5.24 **Peak Area:** 94723.88 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

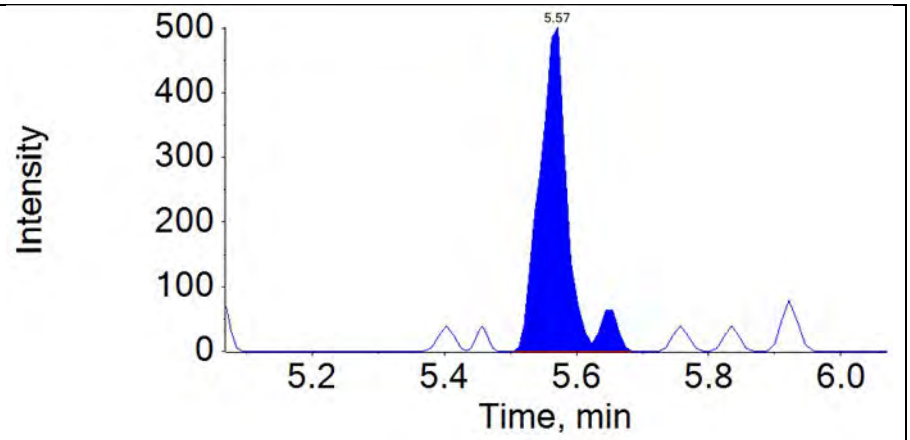
Component Name: PFHxS_2 **RT (min.):** 4.54 **Peak Area:** 39165.47 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

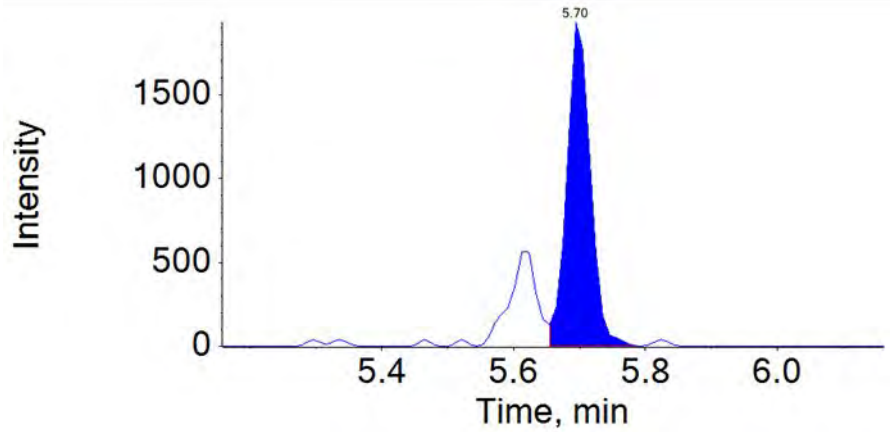
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOS_2 **RT (min.):** 5.24 **Peak Area:** 32024.51 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

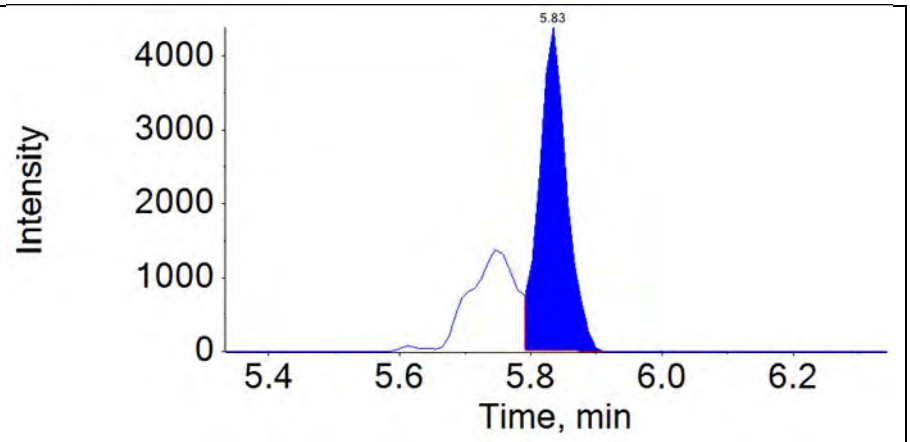
Component Name: PFDA_2 **RT (min.):** 5.57 **Peak Area:** 1525.22 **Mass Range:** 513.0 / 169.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

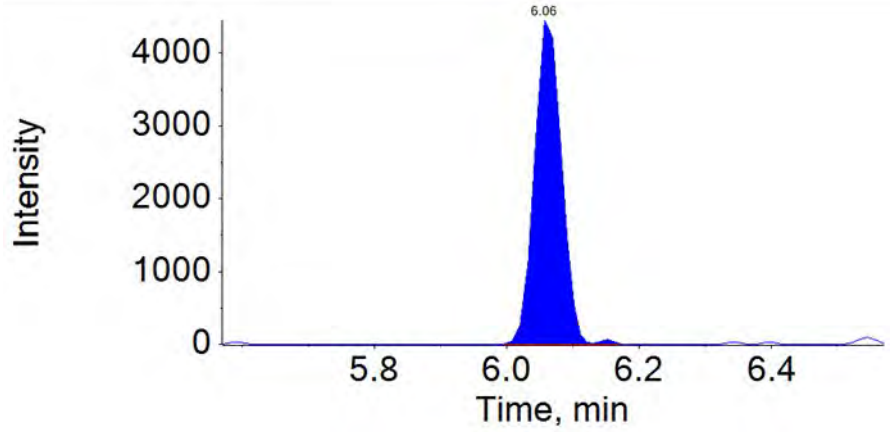
Component Name: NMeFOSAA_2 **RT (min.):** 5.70 **Peak Area:** 4786.64 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

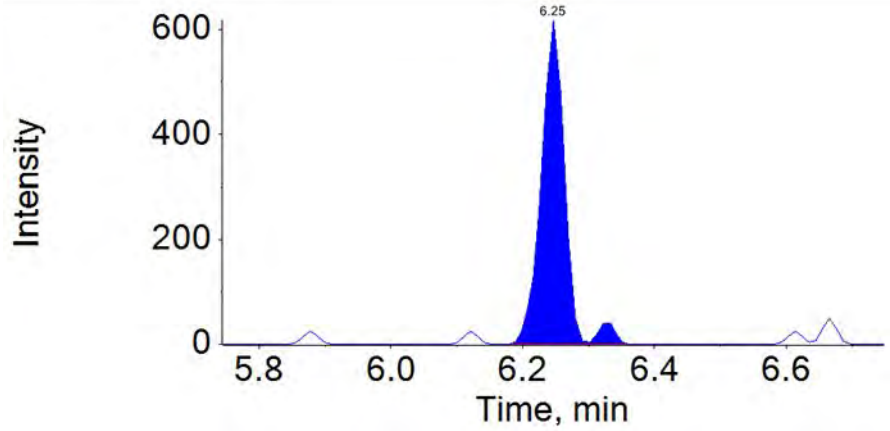
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtFOSAA_2 **RT (min.):** 5.83 **Peak Area:** 12735.31 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

Component Name: 10:2 FTS_2 **RT (min.):** 6.06 **Peak Area:** 12750.49 **Mass Range:** 627.0 / 81.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

Component Name: PFTrDA_2 **RT (min.):** 6.25 **Peak Area:** 1561.97 **Mass Range:** 663.0 / 169.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

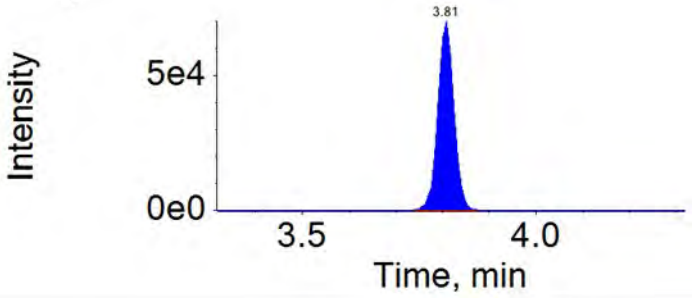
Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-52.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	166889.60	A	0.3619	0.3759			
PFBS_2	3.81	1.00	62739.70	A	0.3619	0.3759	4	50	
4:2-FTS	4.12	1.00	33008.94	A	0.6730	0.6769			
4:2 FTS_2	4.12	1.00	22342.63	A	0.6730	0.6769		#NA!	
PFHxA	4.16	1.00	362325.97	A	0.0117	0.0114			
PFHxA_2	4.16	1.00	4119.87	A	0.0117	0.0114	-2	50	
PFPeS	4.18	1.10	87834.91	A	0.5191	0.5380			
PFPeS_2	4.17	1.10	47259.43	A	0.5191	0.5380	4	50	
PFHpA	4.54	1.00	361271.55	A	0.0563	0.0528			
PFHpA_2	4.54	1.00	19075.67	A	0.0563	0.0528	-6	50	
PFHxS	4.55	1.00	128396.13	M	0.3428	0.3526			
PFHxS_2	4.54	1.00	45266.10	M	0.3428	0.3526	3	50	
6:2-FTS	4.90	1.00	30500.72	A	0.6604	0.6139			
6:2 FTS_2	4.90	1.00	18723.69	A	0.6604	0.6139		#NA!	
PFHpS	4.91	1.08	122801.74	A	0.4066	0.3898			
PFHpS_2	4.91	1.08	47867.04	A	0.4066	0.3898	-4	50	
PFOA	4.91	1.00	370358.65	A	0.0562	0.0572			
PFOA_2	4.91	1.00	21182.05	A	0.0562	0.0572	2	50	
PFOS	5.24	1.00	122332.00	M	0.2968	0.2965			
PFOS_2	5.24	1.00	36275.78	M	0.2968	0.2965	0	50	
PFNA	5.26	1.00	292557.20	A	0.0229	0.0191			
PFNA_2	5.26	1.00	5601.50	A	0.0229	0.0191	-16	50	
PFNS	5.54	1.06	76021.24	A	0.4828	0.4752			
PFNS_2	5.54	1.06	36125.34	A	0.4828	0.4752	-2	50	
PFDA	5.56	1.00	253956.70	A	0.0081	0.0055			
PFDA_2	5.57	1.00	1404.60	M	0.0081	0.0055	-32	50	
8:2-FTS	5.56	1.00	22335.45	A	0.6814	0.6085			
8:2 FTS_2	5.56	1.00	13590.39	A	0.6814	0.6085		#NA!	
NMeFOSAA	5.70	1.00	28733.42	A	0.2569	0.2248			
NMeFOSAA_2	5.70	1.00	6459.32	M	0.2569	0.2248	-12	50	
PFDS	5.79	1.11	62507.84	A	0.5144	0.4958			
PFDS_2	5.79	1.10	30989.83	A	0.5144	0.4958	-4	50	
PFUnDA	5.82	1.00	199322.38	A	0.0058	0.0036			
PFUnDA_2	5.82	1.00	716.12	A	0.0058	0.0036	-38	50	
NEtFOSAA	5.83	1.00	24531.93	A	0.7253	0.7928			
NEtFOSAA_2	5.83	1.00	19448.32	M	0.7253	0.7928	9	50	
PFDoDA	6.05	1.00	228792.93	A	0.0157	0.0084			
PFDoDA_2	6.05	1.00	1930.67	A	0.0157	0.0084	-46	50	
10:2-FTS	6.06	1.09	14411.12	A	0.6356	0.8781			
10:2 FTS_2	6.06	1.09	12654.02	M	0.6356	0.8781		#NA!	
PFTrDA	6.25	1.03	185154.57	A	0.0086	0.0080			
PFTrDA_2	6.25	1.03	1486.41	M	0.0086	0.0080	-6	50	
PFTeDA	6.42	1.00	159904.63	A	0.0062	0.0061			
PFTeDA_2	6.42	1.00	982.46	A	0.0062	0.0061	-2	50	
PFHxDA	6.73	1.05	68393.80	A	0.0683	0.0584			
PFHxDA_2	6.73	1.05	3992.51	A	0.0683	0.0584	-14	50	
PFODA	6.99	1.09	58092.41	A	0.0277	0.0262			
PFODA_2	6.99	1.09	1524.27	A	0.0277	0.0262	-5	50	

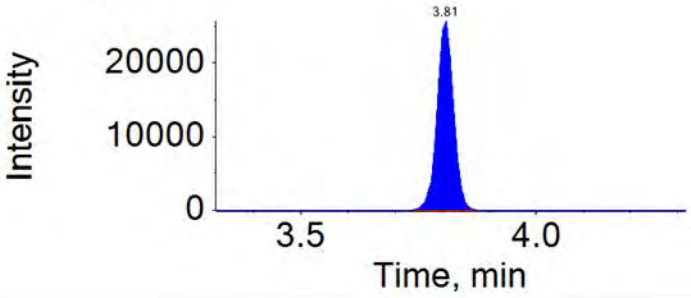
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

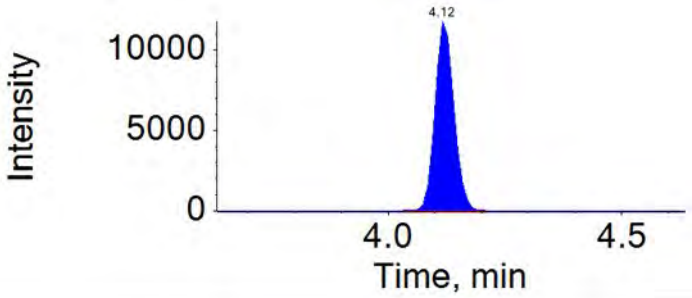
Component: PFBS
Primary Mass: 299.0 / 80.0



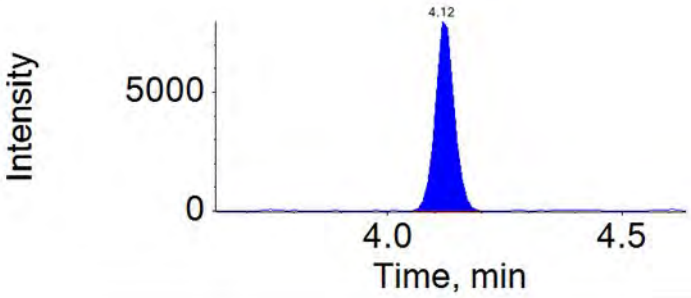
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



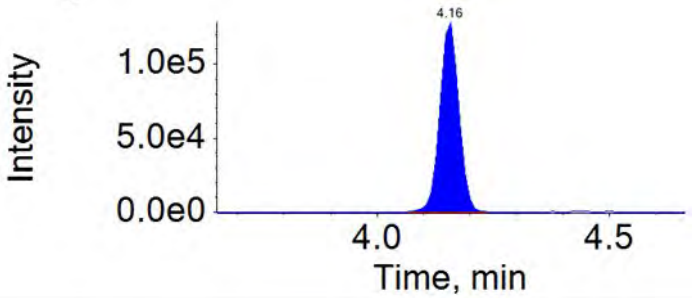
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



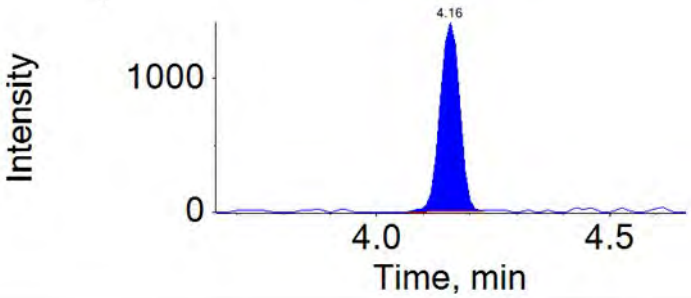
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



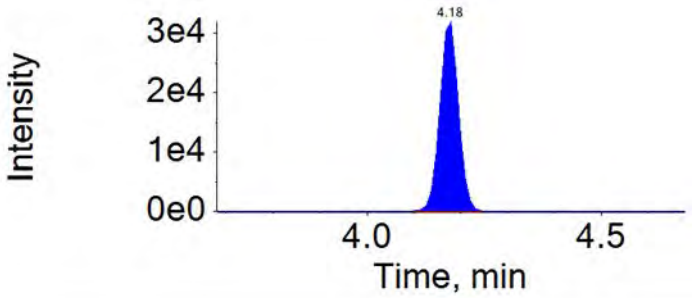
Component: PFHxA
Primary Mass: 313.0 / 269.0



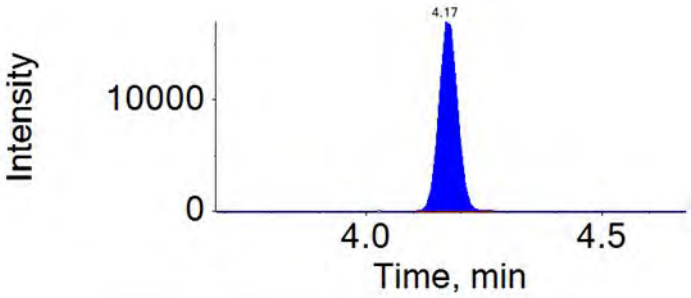
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



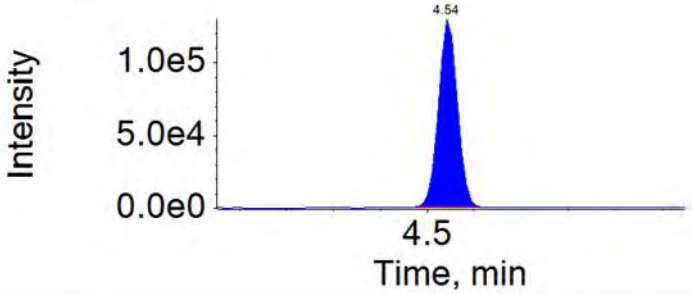
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



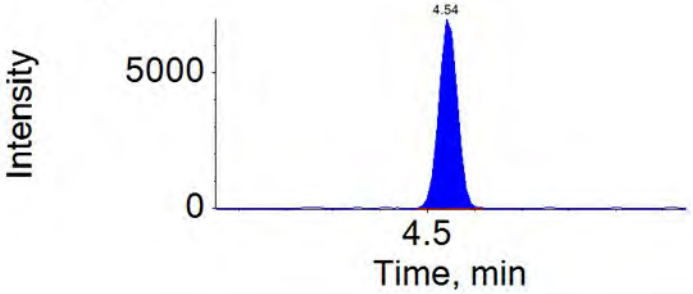
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

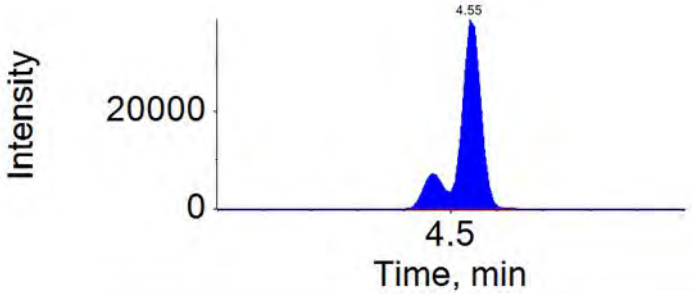
Component: PFHpA
Primary Mass: 363.0 / 319.0



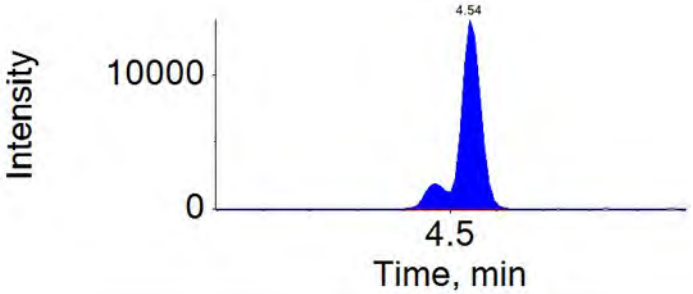
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



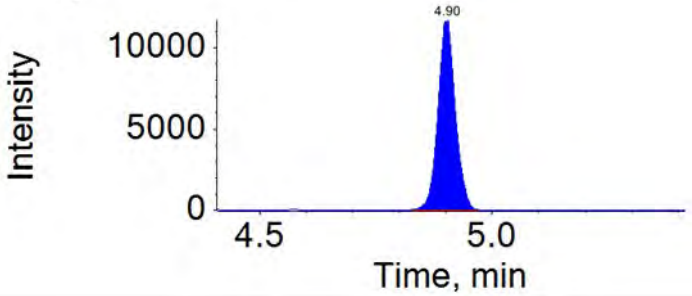
Component: PFHxS
Primary Mass: 399.0 / 80.0



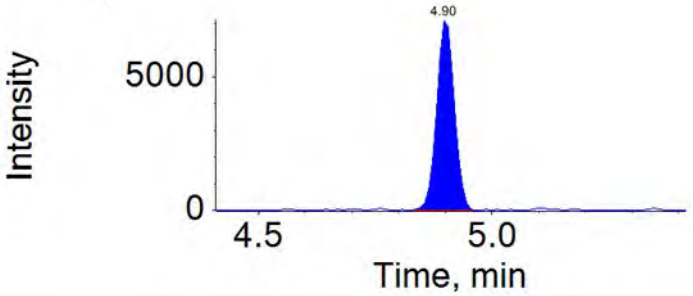
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



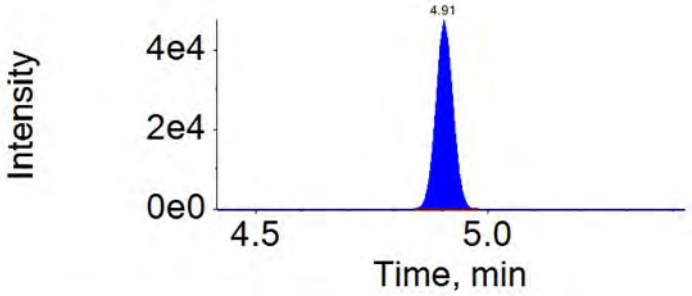
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



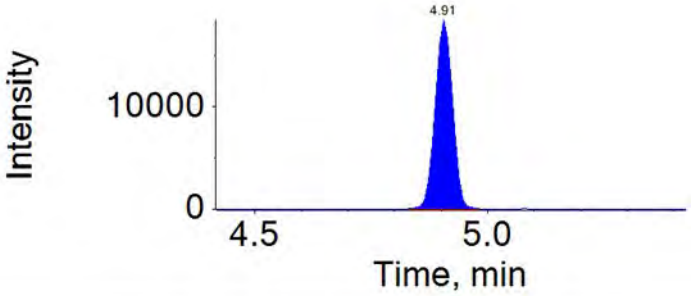
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



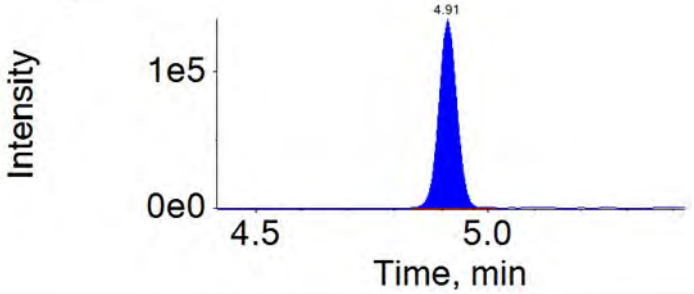
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



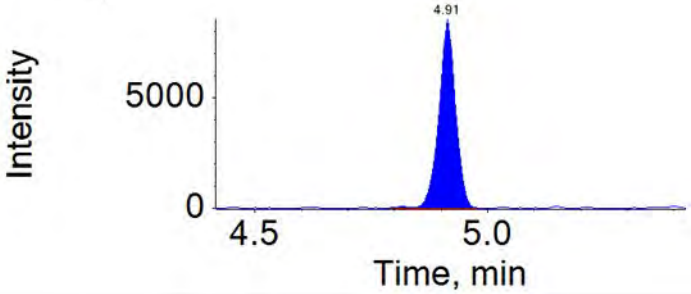
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

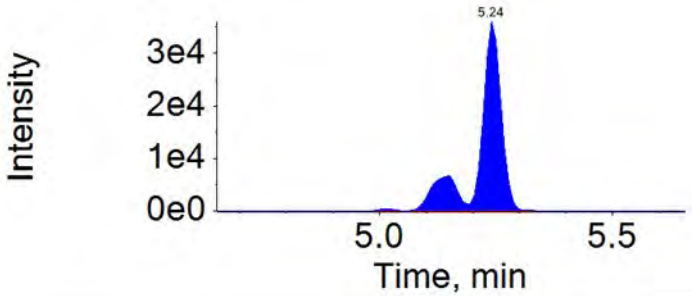
Component: PFOA
Primary Mass: 413.0 / 369.0



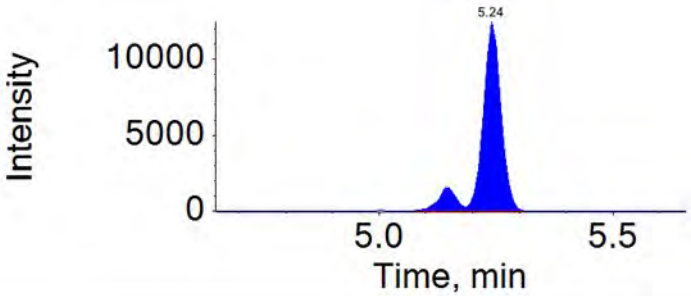
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



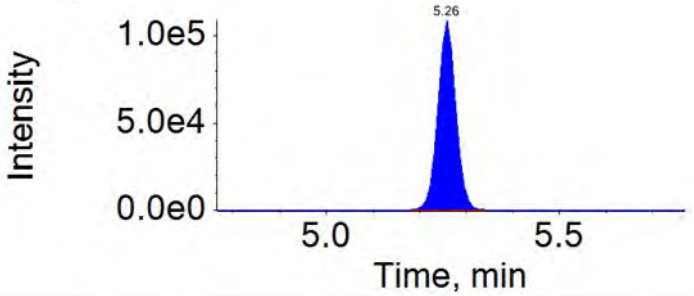
Component: PFOS
Primary Mass: 499.0 / 80.0



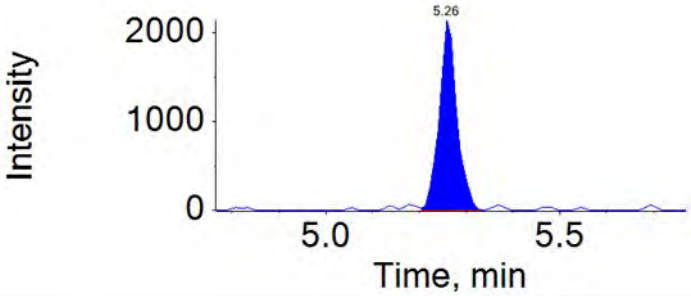
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



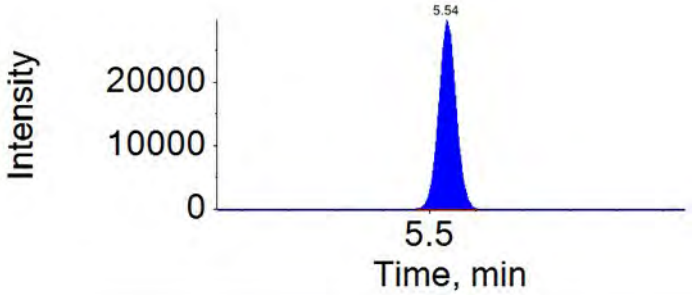
Component: PFNA
Primary Mass: 463.0 / 419.0



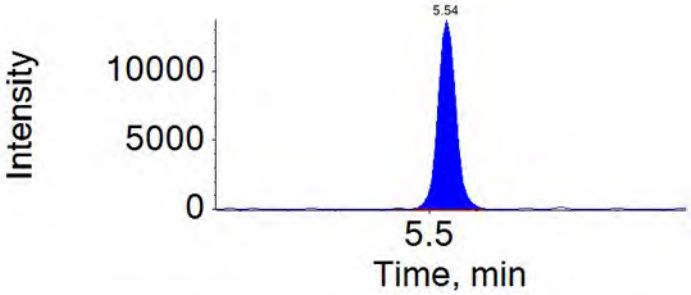
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



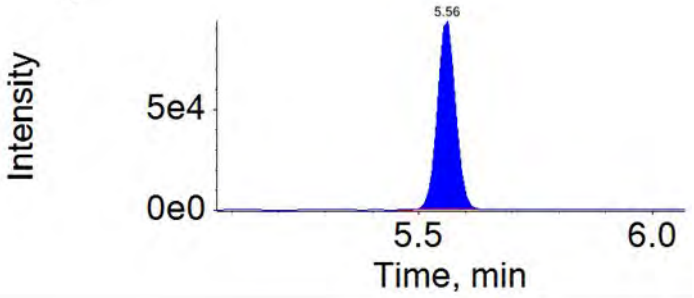
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



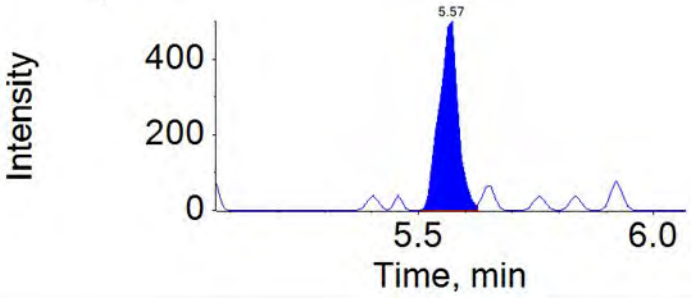
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

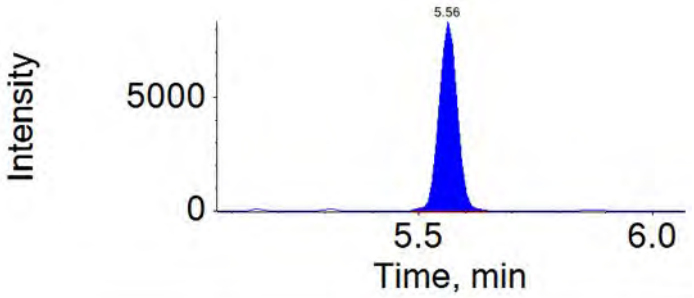
Component: PFDA
Primary Mass: 513.0 / 469.0



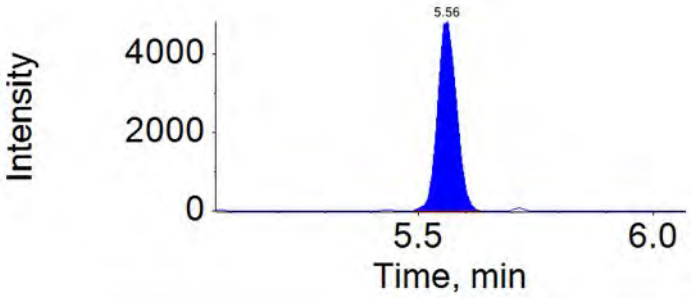
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



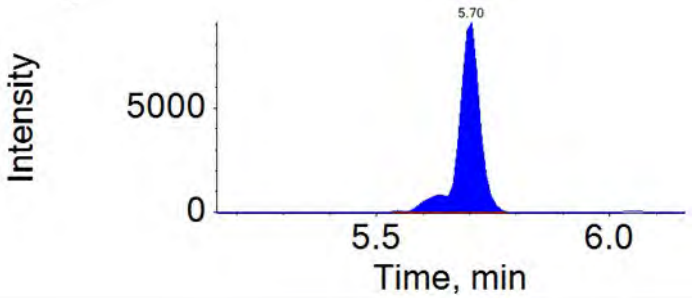
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



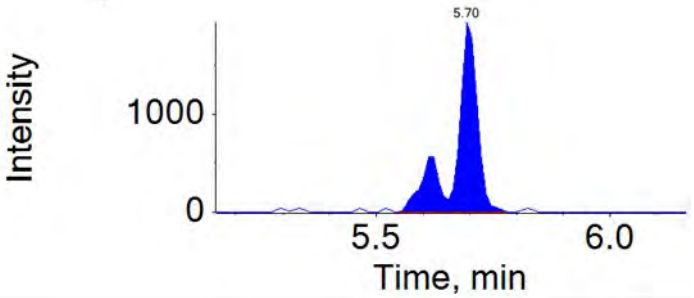
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



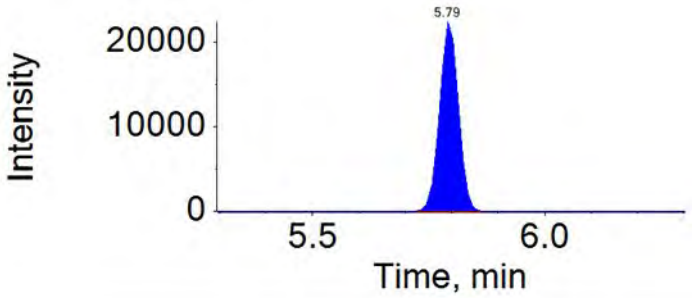
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



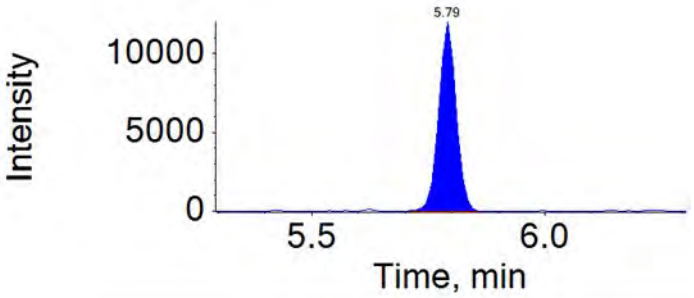
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



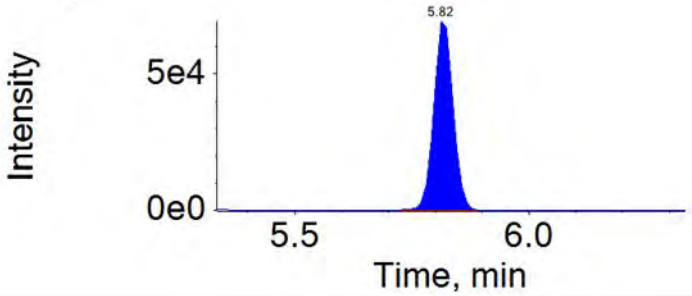
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



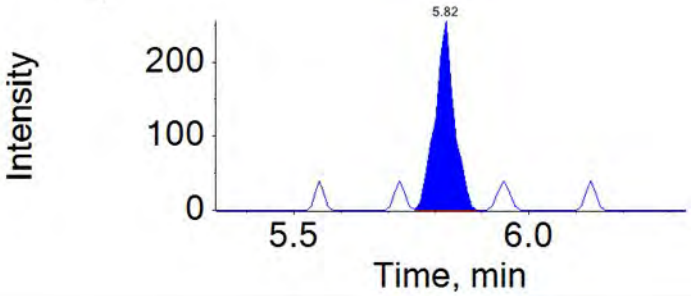
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

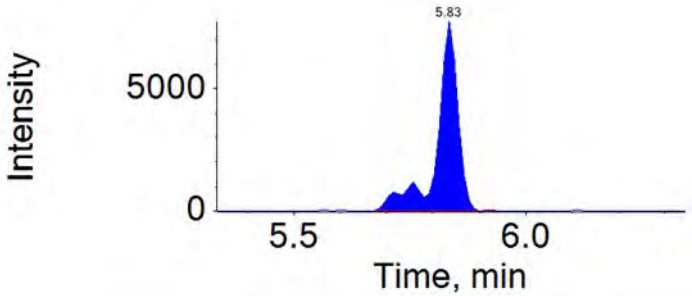
Component: PFUnDA
Primary Mass: 563.0 / 519.0



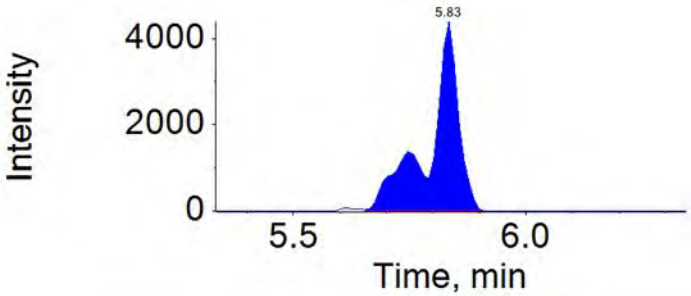
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



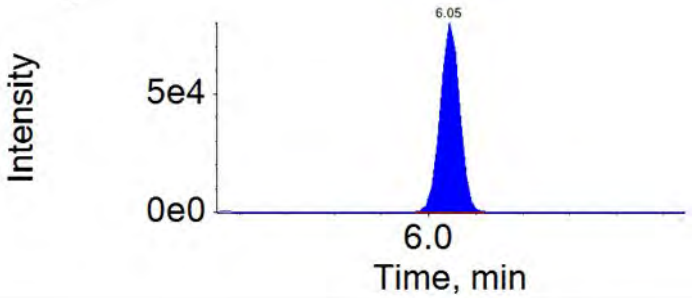
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



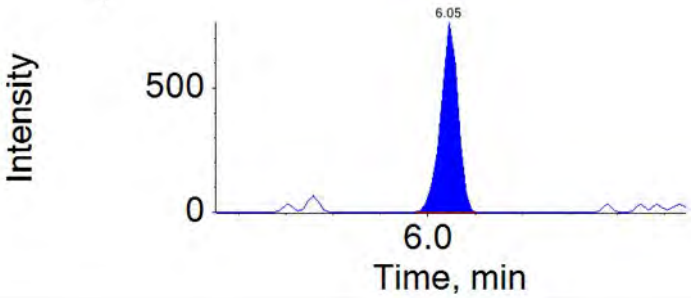
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



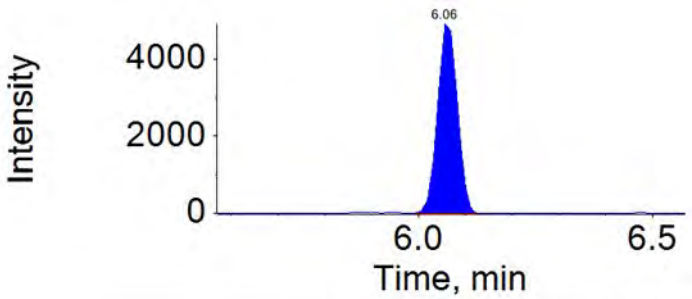
Component: PFDoDA
Primary Mass: 613.0 / 569.0



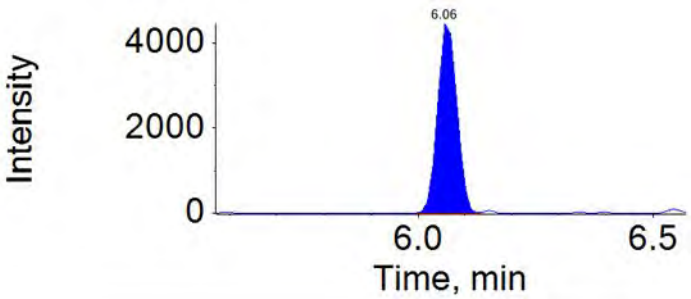
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



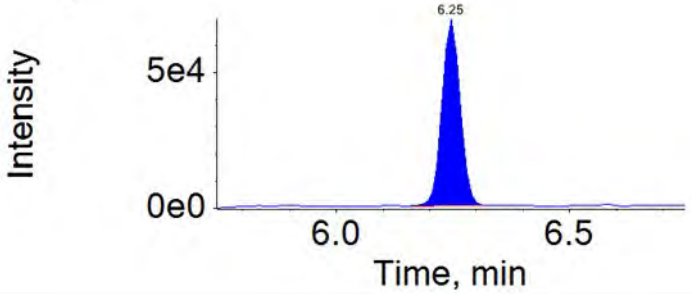
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



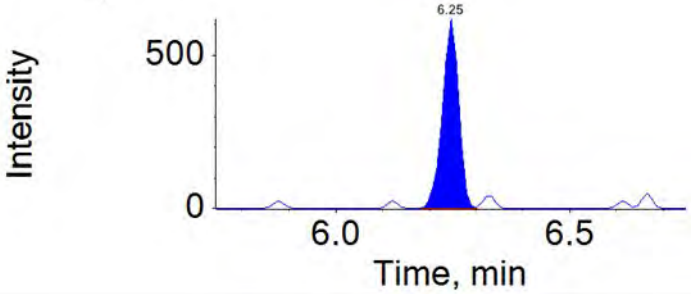
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

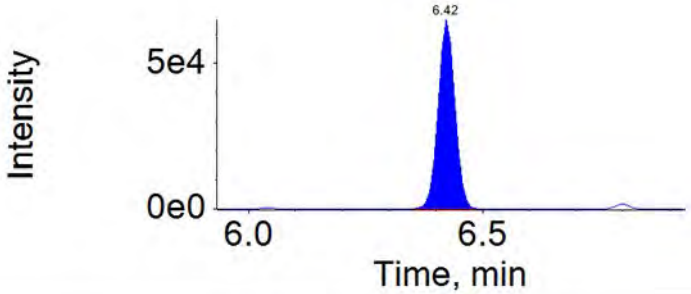
Component: PFTrDA
Primary Mass: 663.0 / 619.0



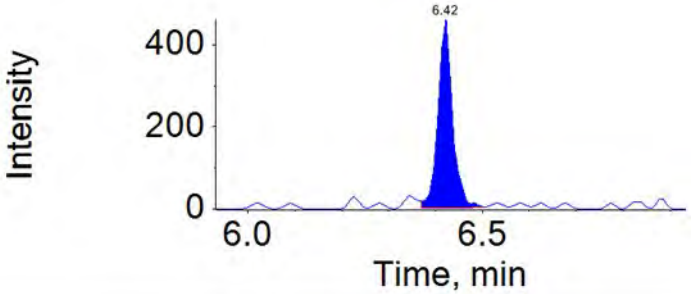
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



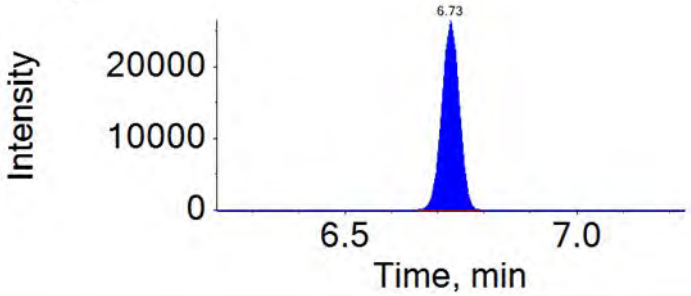
Component: PFTeDA
Primary Mass: 713.0 / 669.0



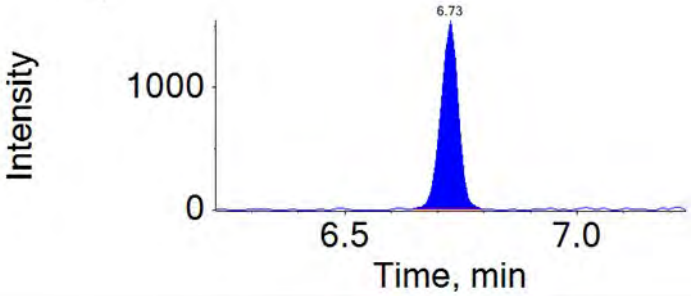
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



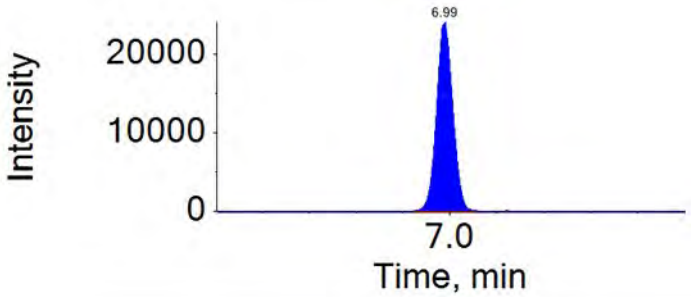
Component: PFHxDA
Primary Mass: 813.0 / 769.0



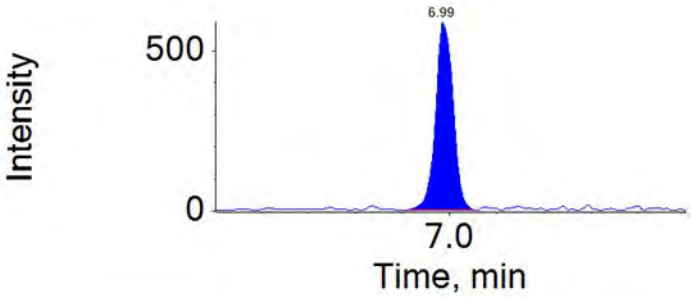
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



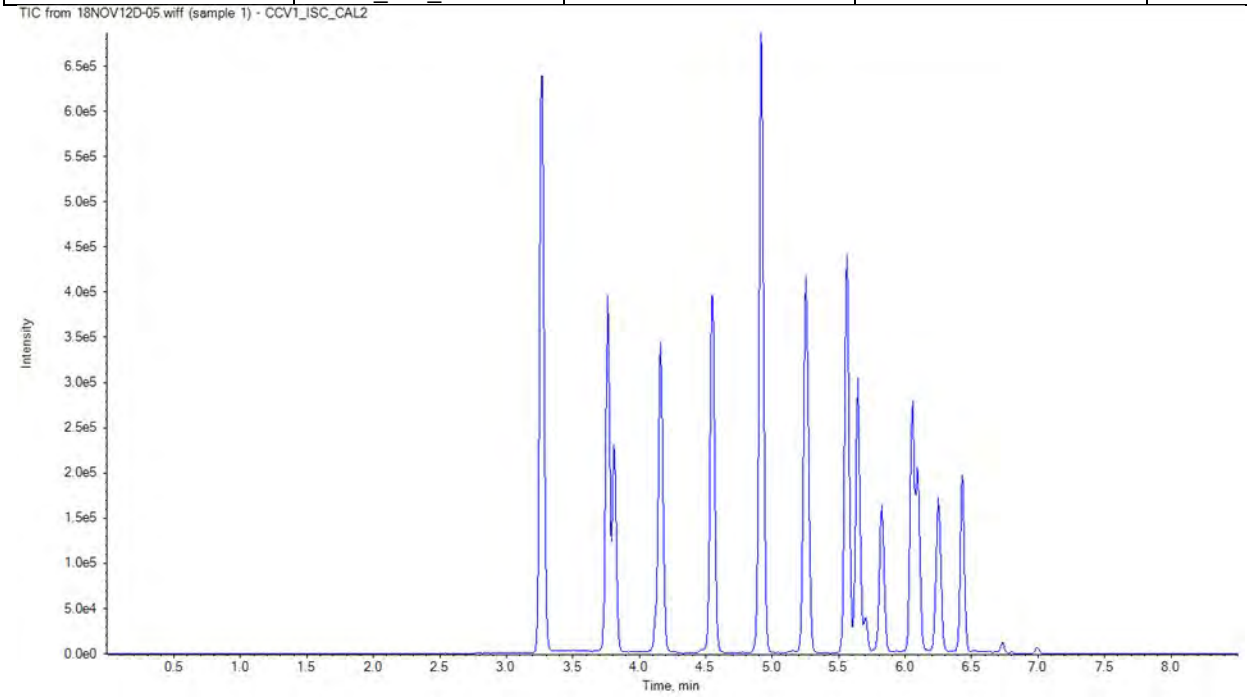
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:38:10 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV12D-05.wiff	2018-11-12T17:21:36



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	653019.5	659926.2	-1	50	
13C2-PFOA	5.0	460051.8	450219.7	2	50	
13C4-PFOS	4.8	246521.2	249205.8	-1	50	
13C2-PFDA	5.0	292717.8	278743.9	5	50	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:38:10 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV12D-05.wiff	2018-11-12T17:21:36

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	78557.0	10	13C4-PFBA	759618.7	5.0	0.103	3.26	1.000	0.600	0.573	-5	30	
PFPeA	78261.7	12	13C5-PFPeA	731579.8	5.0	0.107	3.76	1.000	0.600	0.619	3	30	
PFBS	40715.3	11	13C3-PFBS	427605.3	4.7	0.095	3.81	1.000	0.531	0.453	-15	30	
4:2-FTS	11234.3	11	13C2-4:2-FTS	48267.7	4.7	0.233	4.12	1.000	0.560	0.632	13	30	
PFHxA	94419.1	12	13C5-PFHxA	665991.1	5.0	0.142	4.16	1.000	0.600	0.592	-1	30	
PFPeS	22520.0	11	13C3-PFBS	427605.3	4.7	0.053	4.18	1.100	0.563	0.511	-9	30	
PFHpA	94703.4	12	13C4-PFHpA	515157.4	5.0	0.184	4.55	1.000	0.600	0.609	2	30	
PFHxS	31116.0	19	13C3-PFHxS	312372.4	4.7	0.100	4.55	1.000	0.547	0.483	-12	30	
6:2-FTS	7251.1	11	13C2-6:2-FTS	32906.8	4.8	0.220	4.91	1.000	0.569	0.533	-6	30	
PFHpS	33565.2	11	13C3-PFHxS	312372.4	4.7	0.107	4.91	1.080	0.571	0.566	-1	30	
PFOA	97268.8	11	13C8-PFOA	906076.3	5.0	0.107	4.92	1.000	0.600	0.573	-4	30	
PFOS	29101.9	21	13C8-PFOS	272463.6	4.8	0.107	5.25	1.000	0.555	0.467	-16	30	
PFNA	74726.2	11	13C9-PFNA	470836.1	5.0	0.159	5.26	1.000	0.600	0.572	-5	30	
PFNS	21280.8	11	13C8-PFOS	272463.6	4.8	0.078	5.54	1.060	0.576	0.546	-5	30	
PFDA	61208.1	11	13C6-PFDA	617340.8	5.0	0.099	5.56	1.000	0.600	0.526	-12	30	
8:2-FTS	6888.9	11	13C2-8:2-FTS	29145.0	4.8	0.236	5.56	1.000	0.575	0.551	-4	30	
PFOSA	67438.1	12	13C8-PFOSA	605816.1	5.0	0.111	5.64	1.000	0.600	0.544	-9	30	
NMeFOSAA	7803.6	22	d3-NMeFOSAA	75793.3	5.0	0.103	5.70	1.000	0.600	0.582	-3	30	
PFDS	16863.0	12	13C8-PFOS	272463.6	4.8	0.062	5.80	1.110	0.578	0.561	-3	30	
PFUnDA	50785.7	12	13C7-PFUnDA	255941.5	5.0	0.198	5.82	1.000	0.600	0.519	-14	30	
NEtFOSAA	6353.1	23	d5-NEtFOSAA	63458.3	5.0	0.100	5.83	1.000	0.600	0.525	-13	30	
PFDoDA	56256.7	11	13C2-PFDoDA	544805.3	5.0	0.103	6.05	1.000	0.600	0.526	-12	30	
10:2-FTS	4386.3	13	13C2-8:2-FTS	29145.0	4.8	0.150	6.07	1.090	0.578	0.501	-13	30	
NMePFOSAE	47816.0	11	d7-NMePFOSAE	324193.1	5.0	0.147	6.10	1.000	0.600	0.614	2	30	
NMePFOSA	7746.5	12	d3-NMePFOSA	79325.6	5.0	0.098	6.11	1.000	0.600	0.482	-20	30	
PFDoS	7863.8	11	13C8-PFOS	272463.6	4.8	0.029	6.22	1.190	0.581	0.505	-13	30	
NEtPFOSAE	47560.7	11	d9-NEtPFOSAE	265622.4	5.0	0.179	6.26	1.000	0.600	0.574	-4	30	
NEtPFOSA	7352.4	11	d5-NEtPFOSA	59158.0	5.0	0.124	6.27	1.000	0.600	0.571	-5	30	
PFTrDA	47478.9	12	13C2-PFDoDA	544805.3	5.0	0.087	6.25	1.030	0.600	0.550	-8	30	
PFTeDA	37143.0	11	13C2-PFTeDA	375963.1	5.0	0.099	6.43	1.000	0.600	0.554	-8	30	
PFHxDA	19260.7	10	13C2-PFTeDA	375963.1	5.0	0.051	6.73	1.050	0.600	0.610	2	30	
PFODA	14710.9	10	13C2-PFTeDA	375963.1	5.0	0.039	6.99	1.090	0.600	0.545	-9	30	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:38:10 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV12D-05.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-12T17:21:36
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV1-2
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	653019.5	659926.2	-1	50	
13C2-PFOA	5.0	460051.8	450219.7	2	50	
13C4-PFOS	4.8	246521.2	249205.8	-1	50	
13C2-PFDA	5.0	292717.8	278743.9	5	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	759618.7	13C3-PFBA	653019.5	1.163	5.000	5.215	104	70-130	
E13C5-PFPeA	731579.8	13C3-PFBA	653019.5	1.120	5.000	5.025	100	70-130	
E13C3-PFBS	427605.3	13C3-PFBA	653019.5	0.655	4.650	4.622	99	70-130	
E13C2-4:2-FTS	48267.7	13C2-PFOA	460051.8	0.105	4.670	4.673	100	70-130	
E13C5-PFHxA	665991.1	13C2-PFOA	460051.8	1.448	5.000	5.229	105	70-130	
E13C3-PFHxS	312372.4	13C2-PFOA	460051.8	0.679	4.730	4.659	99	70-130	
E13C4-PFHpA	515157.4	13C2-PFOA	460051.8	1.120	5.000	5.045	101	70-130	
E13C2-6:2-FTS	32906.8	13C2-PFOA	460051.8	0.072	4.750	4.786	101	70-130	
E13C8-PFOA	906076.3	13C2-PFOA	460051.8	1.970	5.000	5.426	109	70-130	
E13C8-PFOS	272463.6	13C4-PFOS	246521.2	1.105	4.780	4.897	102	70-130	
E13C9-PFNA	470836.1	13C4-PFOS	246521.2	1.910	5.000	5.325	107	70-130	
E13C6-PFDA	617340.8	13C2-PFDA	292717.8	2.109	5.000	4.922	98	70-130	
E13C2-8:2-FTS	29145.0	13C2-PFDA	292717.8	0.100	4.790	4.966	104	70-130	
E13C8-PFOSA	605816.1	13C2-PFDA	292717.8	2.070	5.000	4.588	92	70-130	
Ed3-NMeFOSAA	75793.3	13C2-PFDA	292717.8	0.259	5.000	4.674	93	70-130	
E13C7-PFUnDA	255941.5	13C2-PFDA	292717.8	0.874	5.000	5.076	102	70-130	
Ed5-NEtFOSAA	63458.3	13C2-PFDA	292717.8	0.217	5.000	4.586	92	70-130	
E13C2-PFDoDA	544805.3	13C2-PFDA	292717.8	1.861	5.000	4.832	97	70-130	
Ed7-NMePFOSAE	324193.1	13C2-PFDA	292717.8	1.108	5.000	4.793	96	70-130	
Ed3-NMePFOSA	79325.6	13C2-PFDA	292717.8	0.271	5.000	4.924	98	70-130	
Ed9-NEtPFOSAE	265622.4	13C2-PFDA	292717.8	0.907	5.000	4.720	94	70-130	
Ed5-NEtPFOSA	59158.0	13C2-PFDA	292717.8	0.202	5.000	4.741	95	70-130	
E13C2-PFTeDA	375963.1	13C2-PFDA	292717.8	1.284	5.000	4.509	90	70-130	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

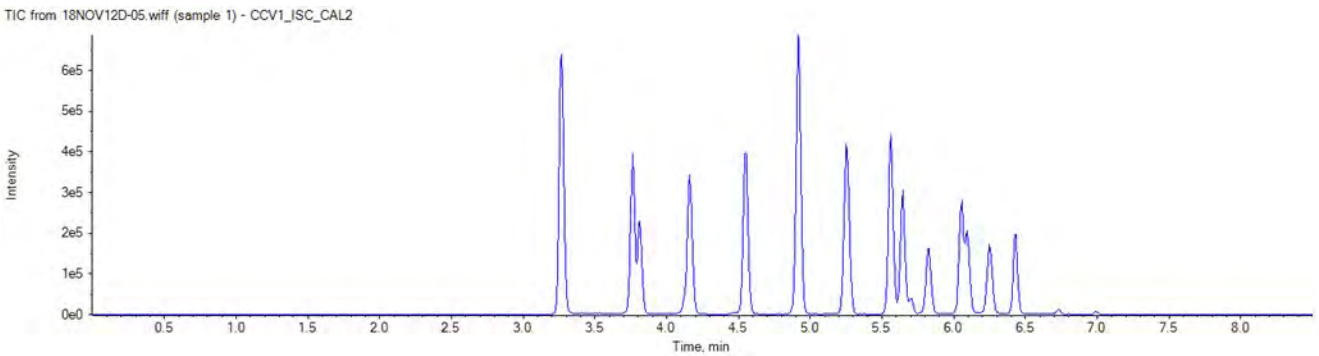
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12D-05.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	78557.0		A	13C4-PFBA	3.26	759618.7	0.103	0.573
PFPeA	3.76	1.000	78261.7		A	13C5-PFPeA	3.76	731579.8	0.107	0.619
PFBS	3.81	1.000	40715.3		A	13C3-PFBS	3.81	427605.3	0.095	0.453
4:2-FTS	4.12	1.000	11234.3		A	13C2-4:2-FTS	4.13	48267.7	0.233	0.632
PFHxA	4.16	1.000	94419.1		A	13C5-PFHxA	4.16	665991.1	0.142	0.592
PFPeS	4.18	1.100	22520.0		A	13C3-PFBS	3.81	427605.3	0.053	0.511
PFHpA	4.55	1.000	94703.4		A	13C4-PFHpA	4.55	515157.4	0.184	0.609
PFHxS	4.55	1.000	31116.0		M	13C3-PFHxS	4.55	312372.4	0.100	0.483
6:2-FTS	4.91	1.000	7251.1		A	13C2-6:2-FTS	4.91	32906.8	0.220	0.533
PFHpS	4.91	1.080	33565.2		A	13C3-PFHxS	4.55	312372.4	0.107	0.566
PFOA	4.92	1.000	97268.8		A	13C8-PFOA	4.92	906076.3	0.107	0.573
PFOS	5.25	1.000	29101.9		M	13C8-PFOS	5.25	272463.6	0.107	0.467
PFNA	5.26	1.000	74726.2		A	13C9-PFNA	5.26	470836.1	0.159	0.572
PFNS	5.54	1.060	21280.8		A	13C8-PFOS	5.25	272463.6	0.078	0.546
PFDA	5.56	1.000	61208.1		A	13C6-PFDA	5.56	617340.8	0.099	0.526
8:2-FTS	5.56	1.000	6888.9		A	13C2-8:2-FTS	5.57	29145.0	0.236	0.551
PFOSA	5.64	1.000	67438.1		A	13C8-PFOSA	5.64	605816.1	0.111	0.544
NMeFOSAA	5.70	1.000	7803.6		M	d3-NMeFOSAA	5.70	75793.3	0.103	0.582
PFDS	5.80	1.110	16863.0		A	13C8-PFOS	5.25	272463.6	0.062	0.561
PFUnDA	5.82	1.000	50785.7		A	13C7-PFUnDA	5.82	255941.5	0.198	0.519
NEtFOSAA	5.83	1.000	6353.1		M	d5-NEtFOSAA	5.83	63458.3	0.100	0.525
PFDoDA	6.05	1.000	56256.7		A	13C2-PFDoDA	6.05	544805.3	0.103	0.526
10:2-FTS	6.07	1.090	4386.3		A	13C2-8:2-FTS	5.57	29145.0	0.150	0.501
NMePFOSAE	6.10	1.000	47816.0		A	d7-NMePFOSAE	6.09	324193.1	0.147	0.614
NMePFOSA	6.11	1.000	7746.5		M	d3-NMePFOSA	6.11	79325.6	0.098	0.482
PFDoS	6.22	1.190	7863.8		A	13C8-PFOS	5.25	272463.6	0.029	0.505
NEtPFOSAE	6.26	1.000	47560.7		A	d9-NEtPFOSAE	6.25	265622.4	0.179	0.574
NEtPFOSA	6.27	1.000	7352.4		A	d5-NEtPFOSA	6.26	59158.0	0.124	0.571
PFTrDA	6.25	1.030	47478.9		A	13C2-PFDoDA	6.05	544805.3	0.087	0.550
PFTeDA	6.43	1.000	37143.0		A	13C2-PFTeDA	6.43	375963.1	0.099	0.554
PFHxDA	6.73	1.050	19260.7		A	13C2-PFTeDA	6.43	375963.1	0.051	0.610
PFODA	6.99	1.090	14710.9		A	13C2-PFTeDA	6.43	375963.1	0.039	0.545

Total Ion Chromatogram

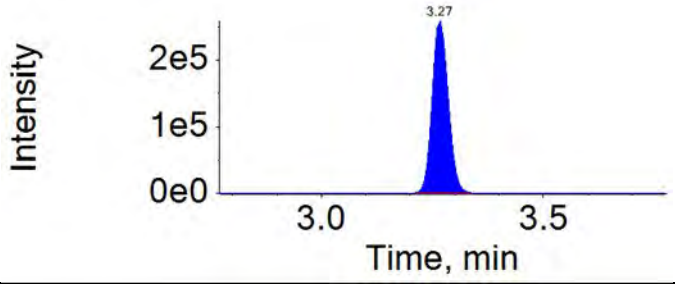


APPROVED
By MCD at 7:46 pm, 11/12/18

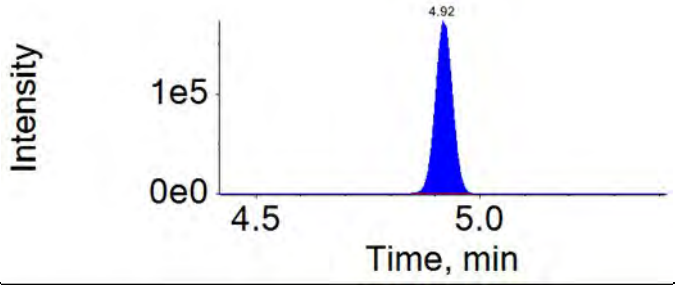
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

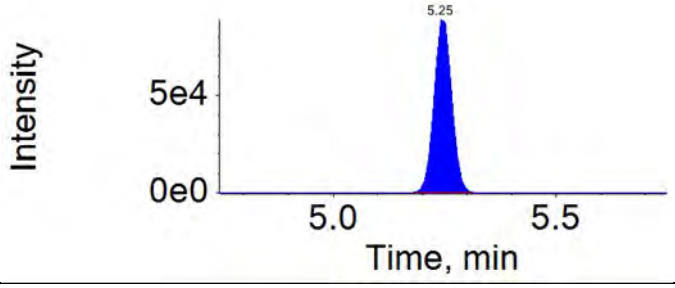
Injection Standard: 13C3-PFBA
216.0 / 172.0



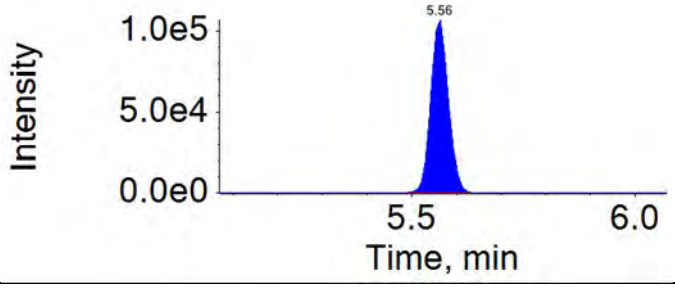
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

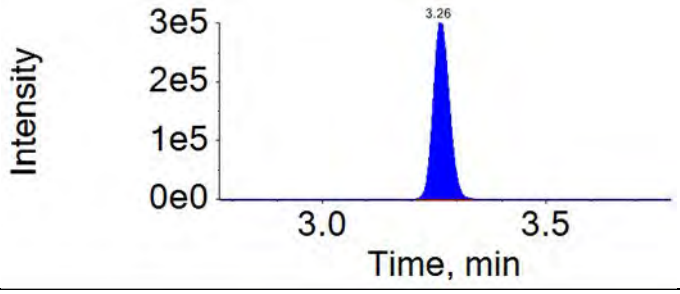


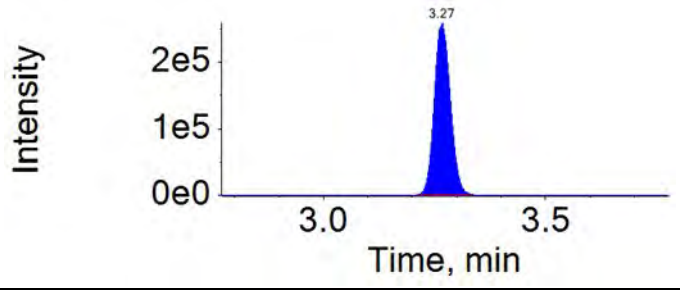
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

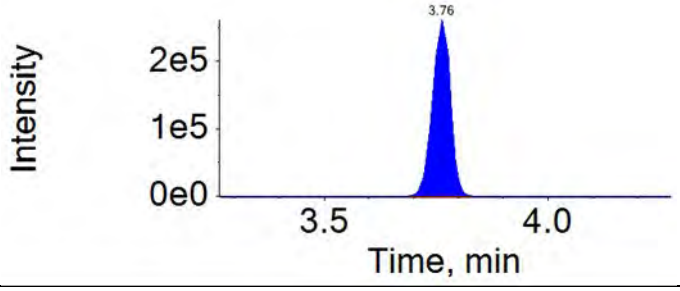
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

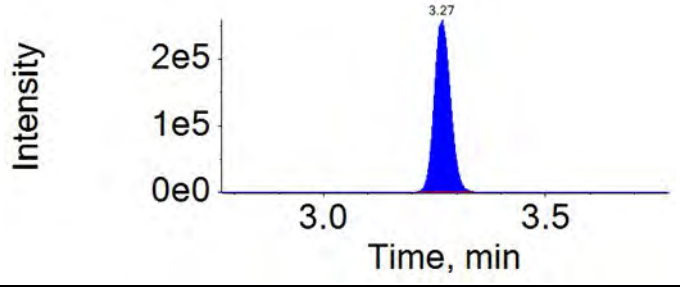
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



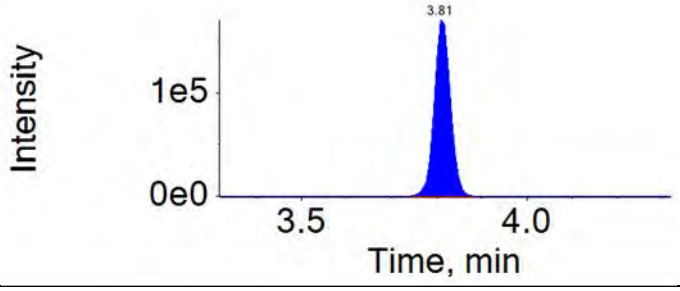


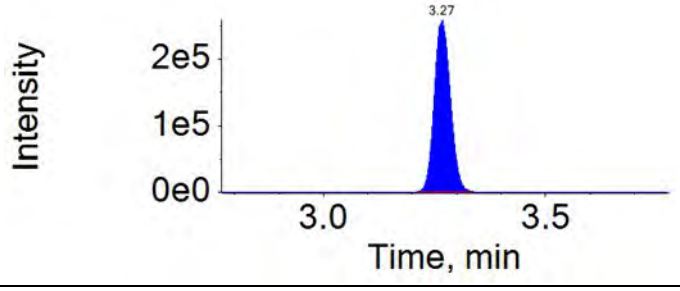
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



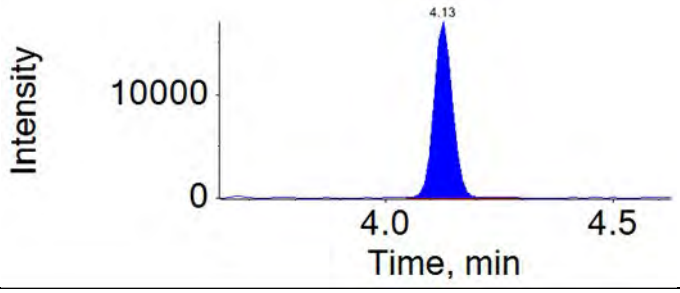


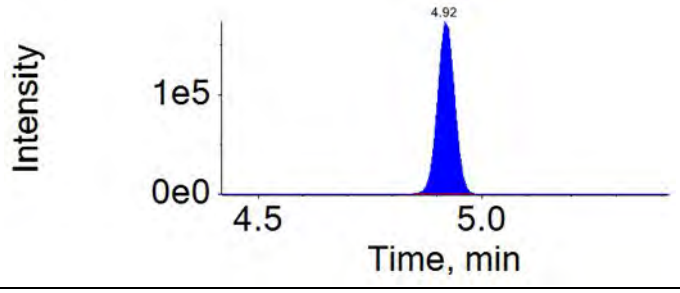
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





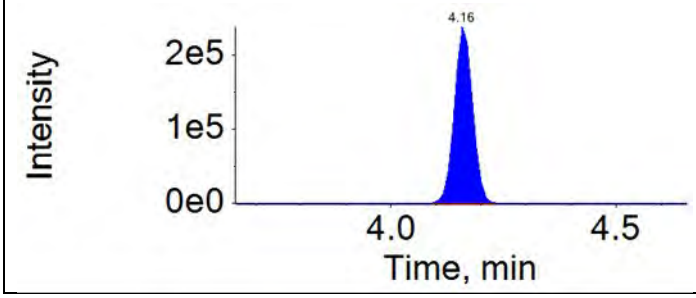
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

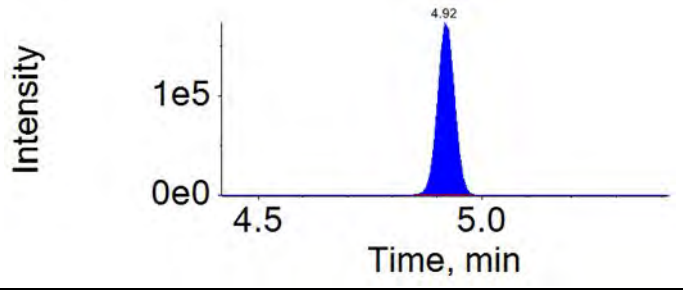




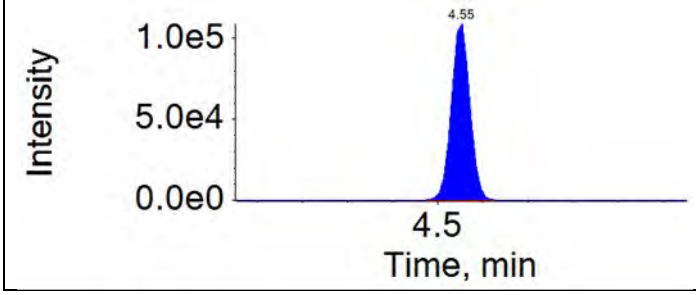
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

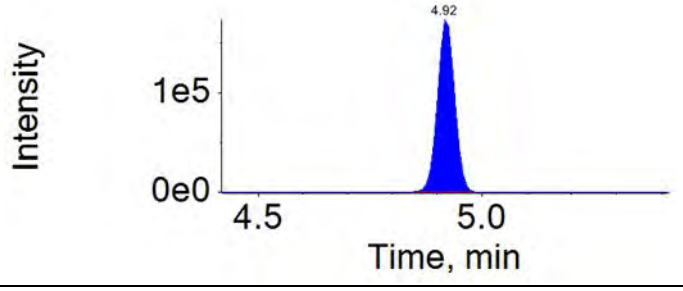
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



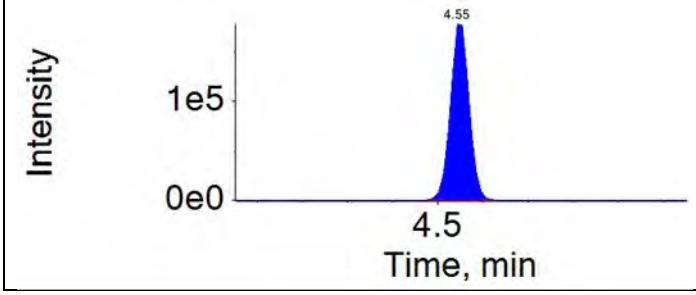


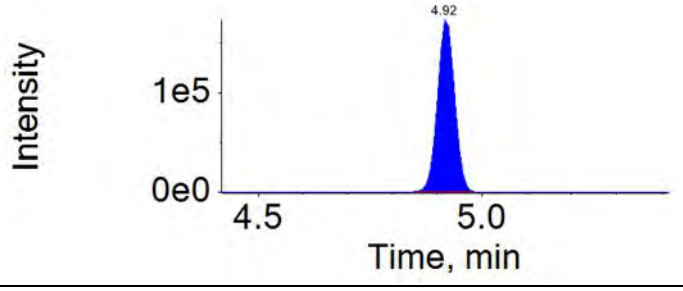
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



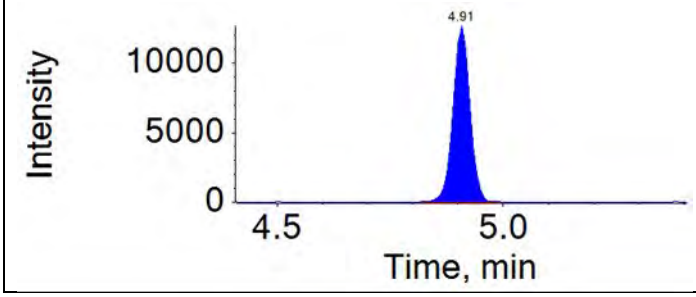


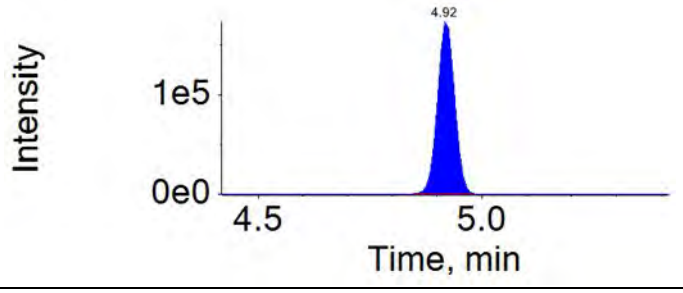
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

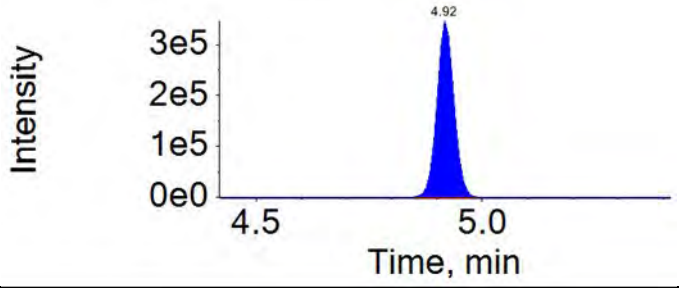
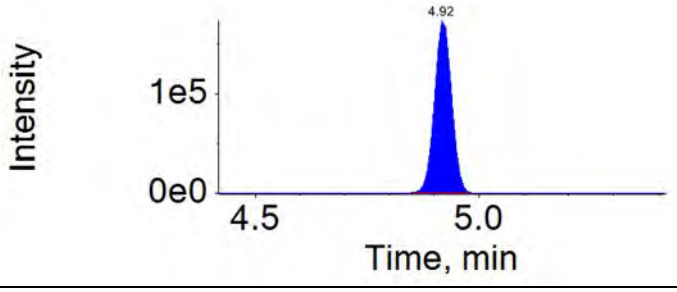


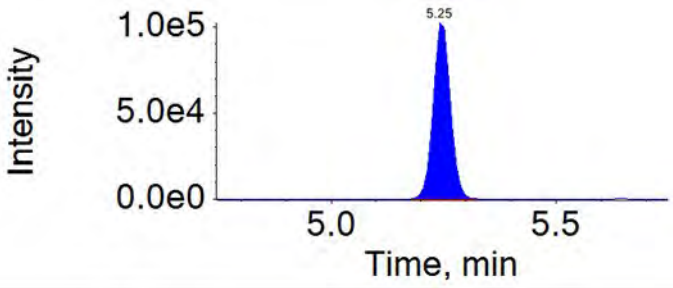
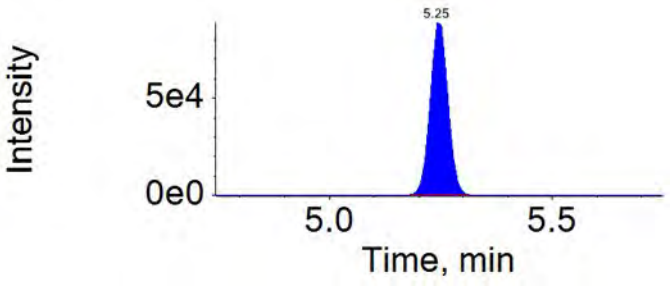


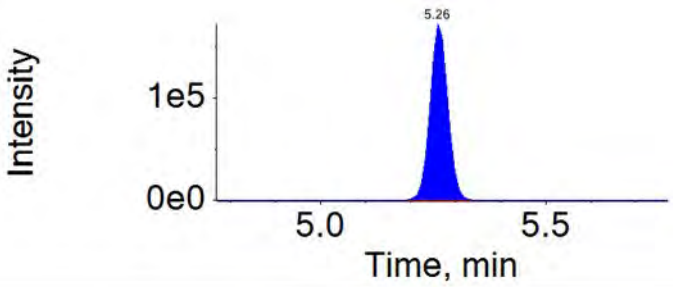
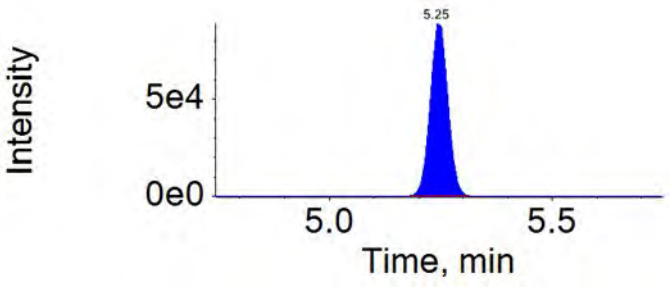
APPROVED
By MCD at 7:46 pm, 11/12/18

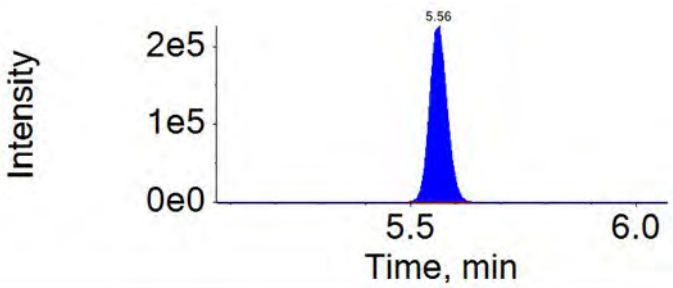
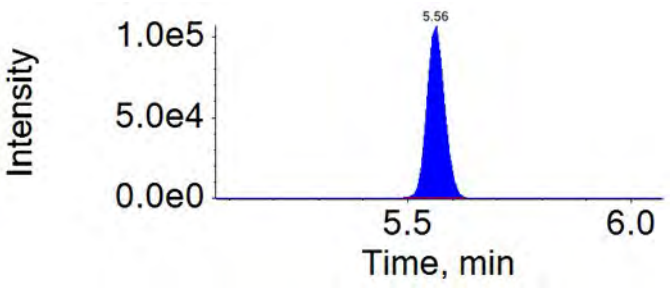
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

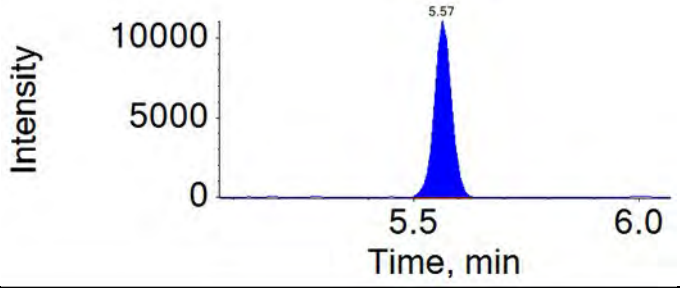
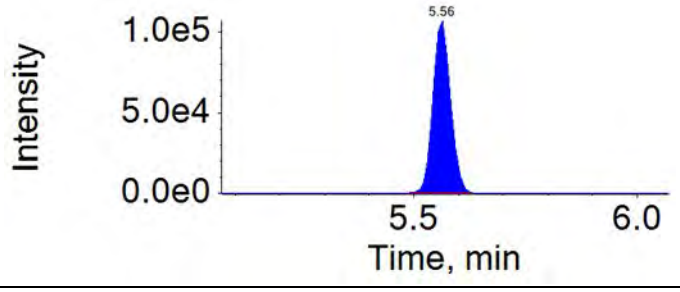
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

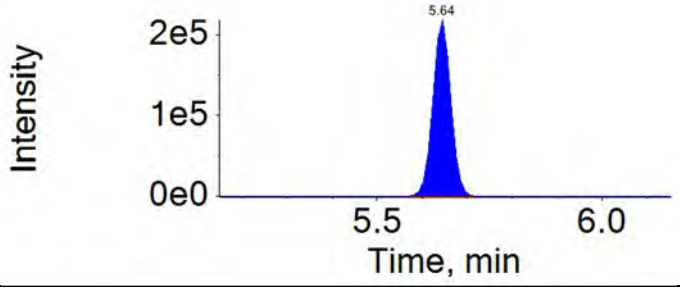
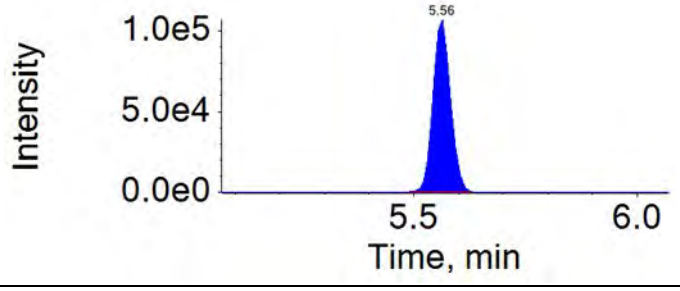
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

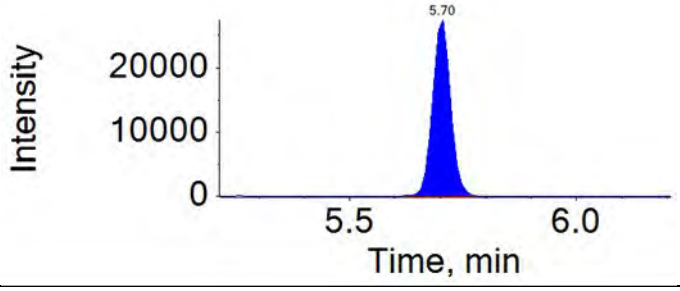
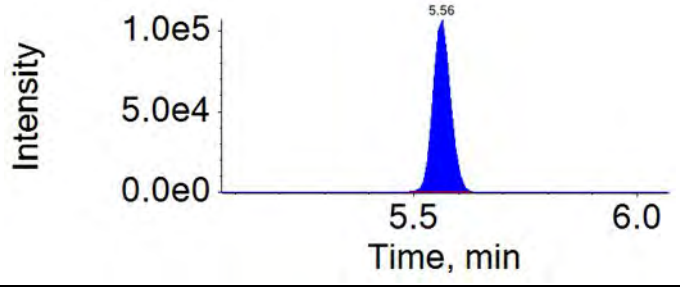
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

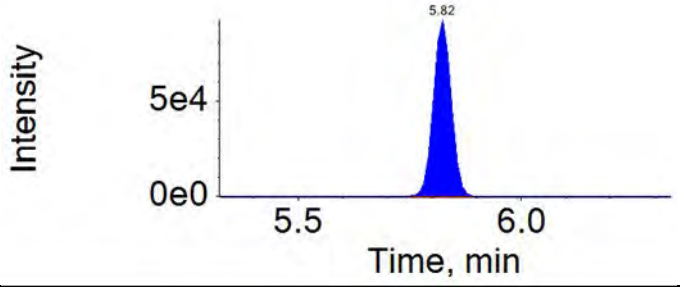
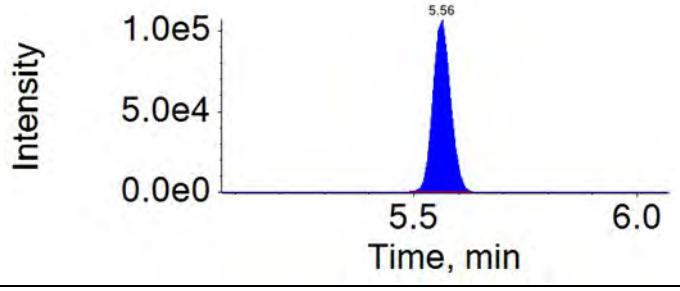
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

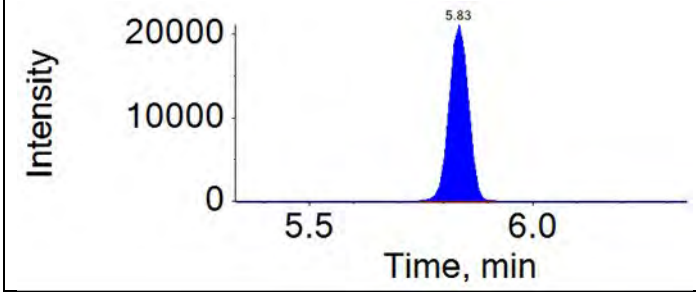
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

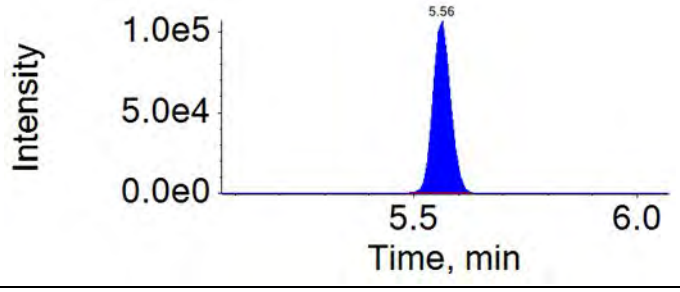
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

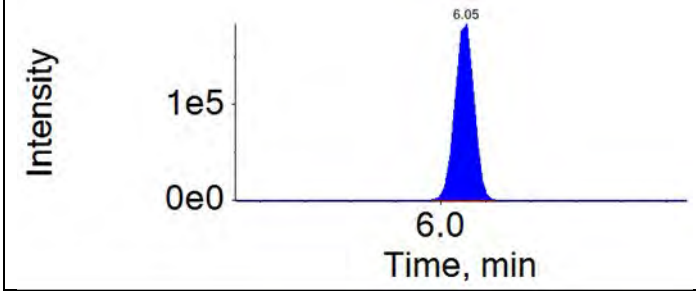
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

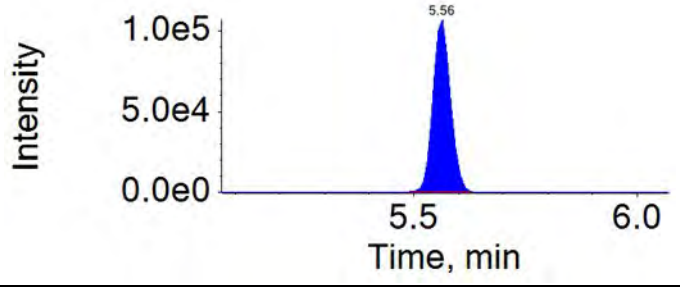
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



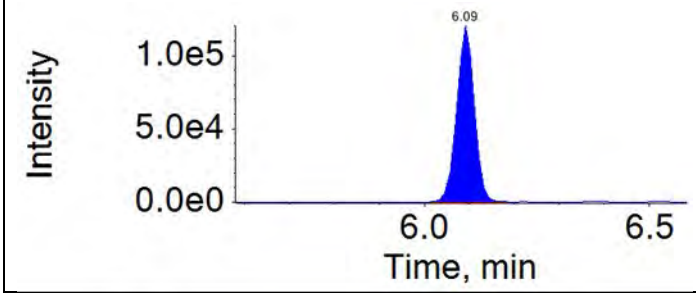


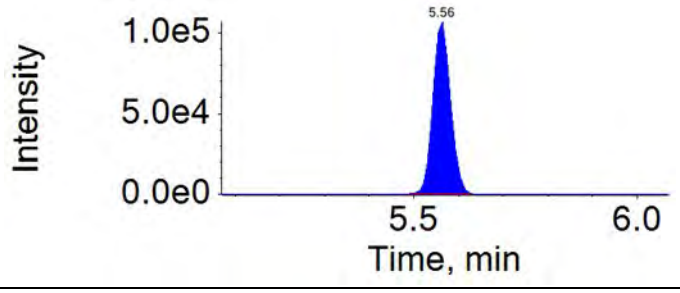
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



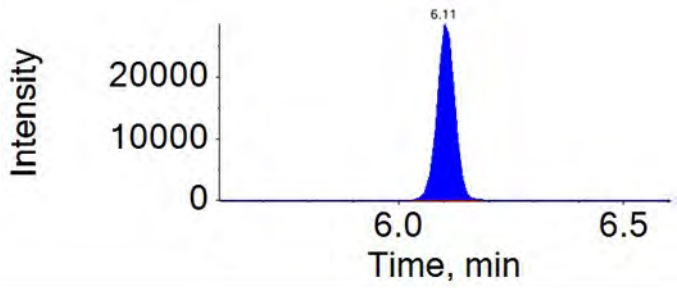


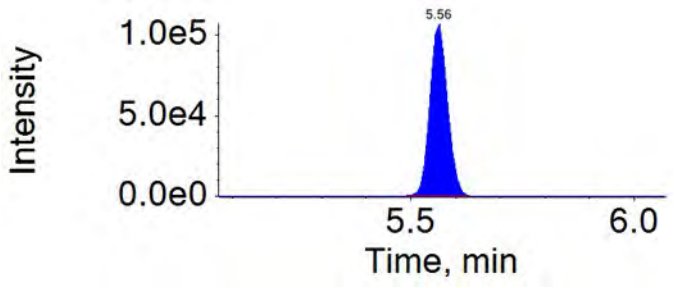
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



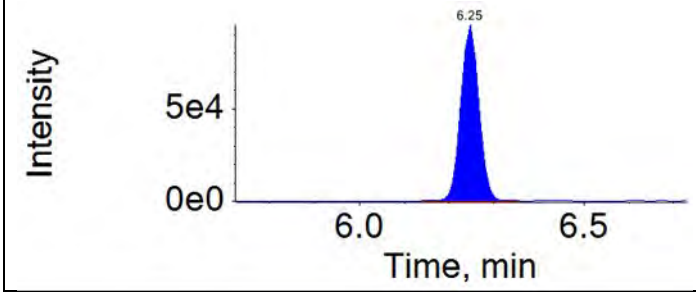


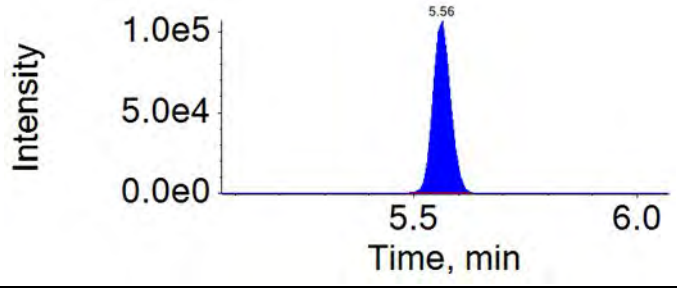
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

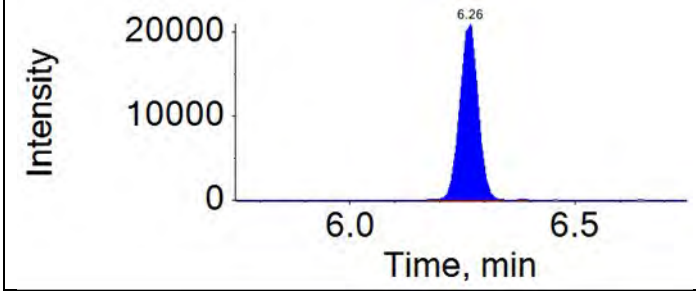
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

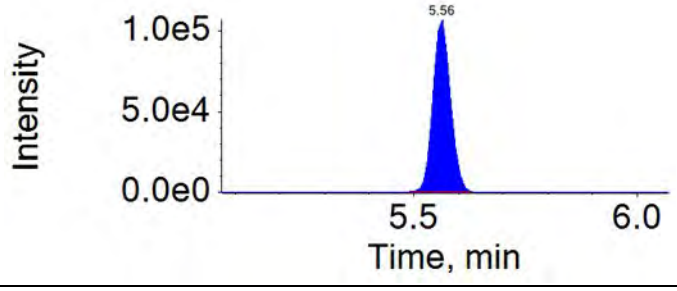
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



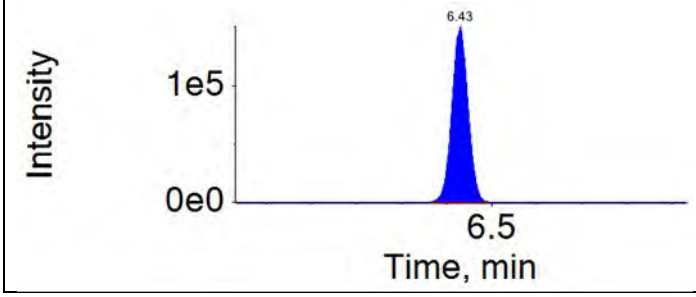


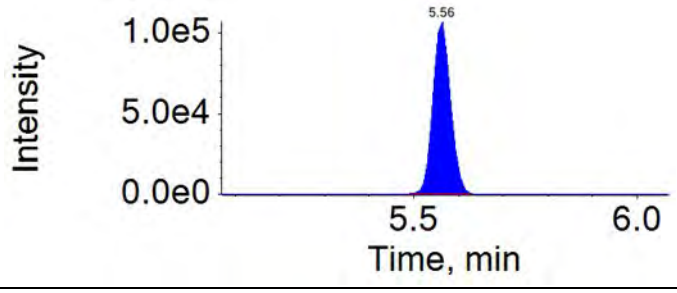
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



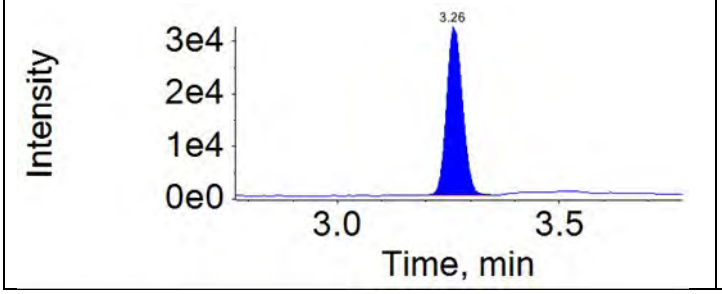


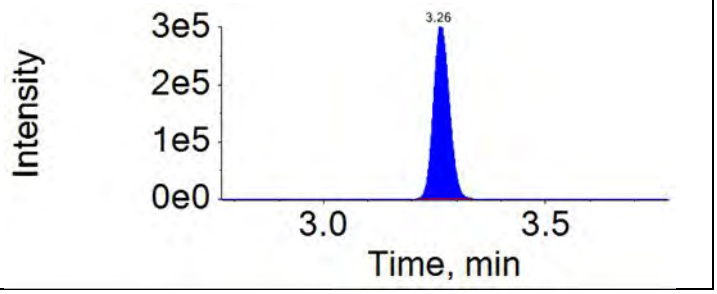
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

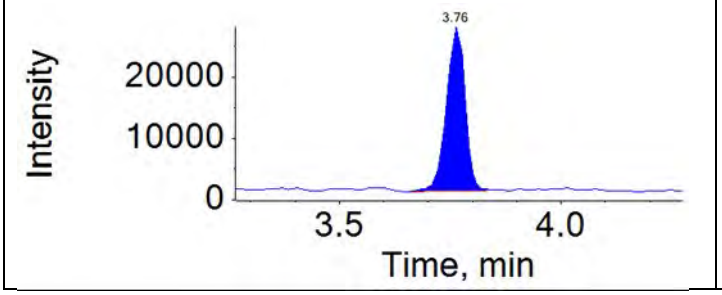
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

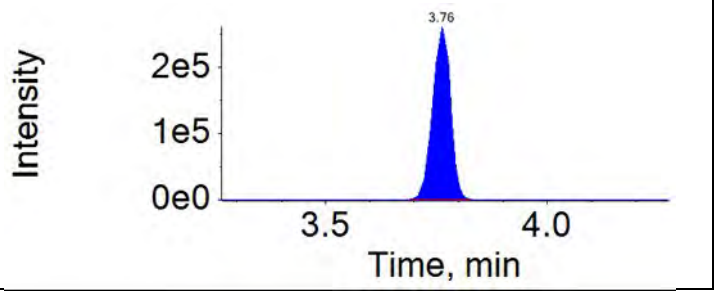
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



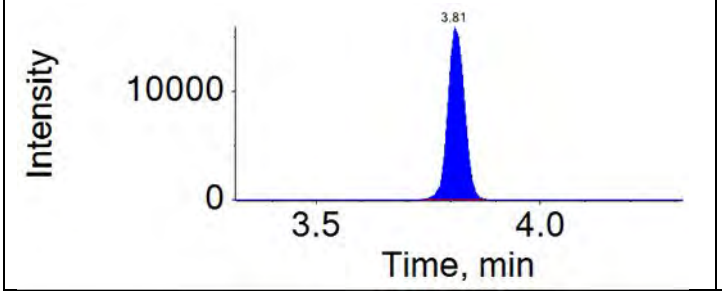


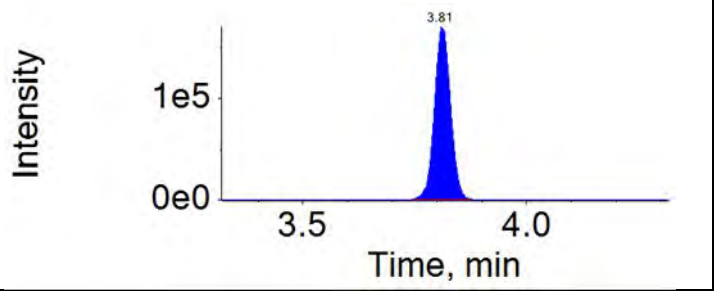
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



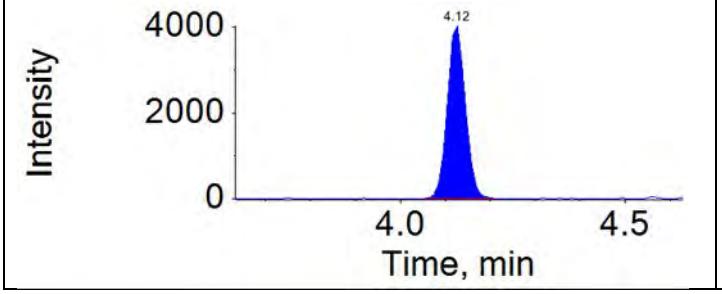


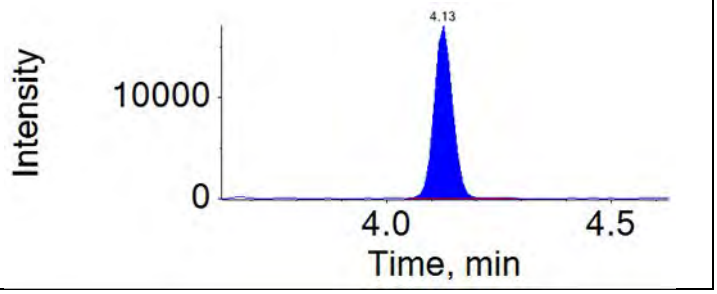
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



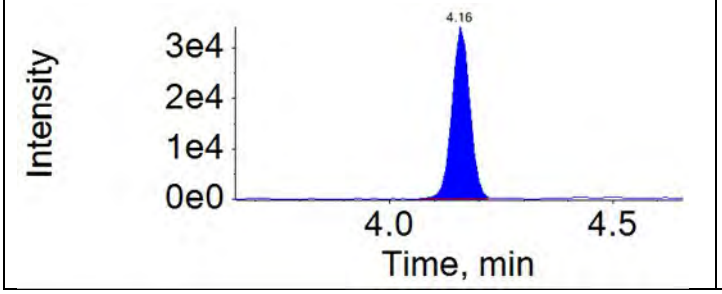


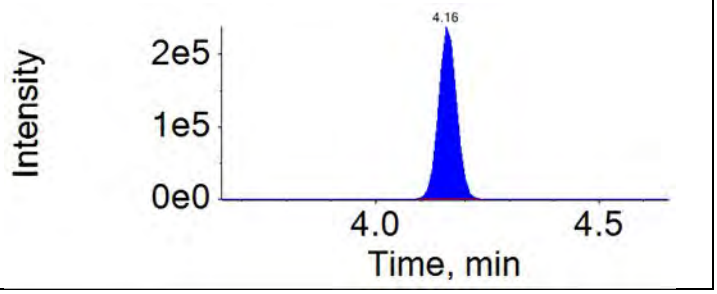
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

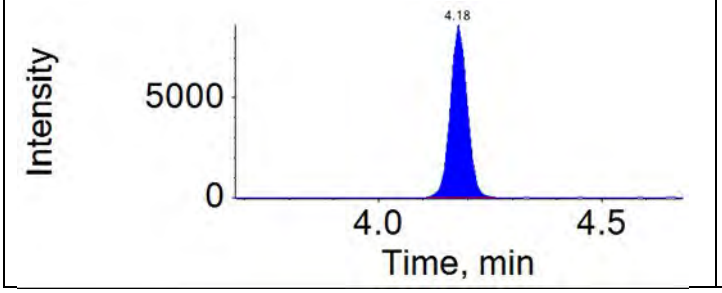
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

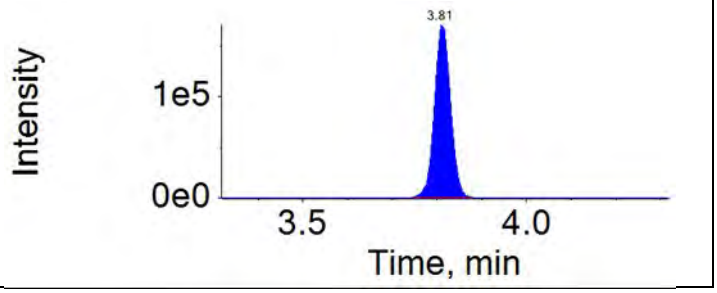
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



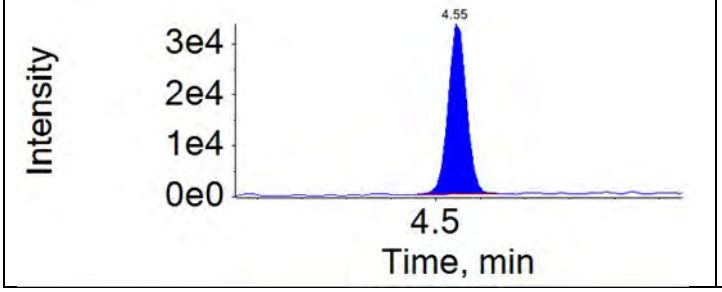


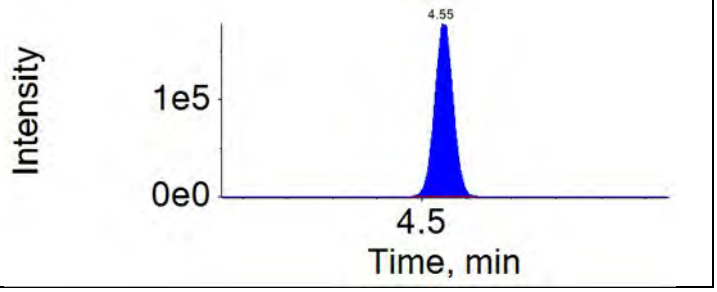
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



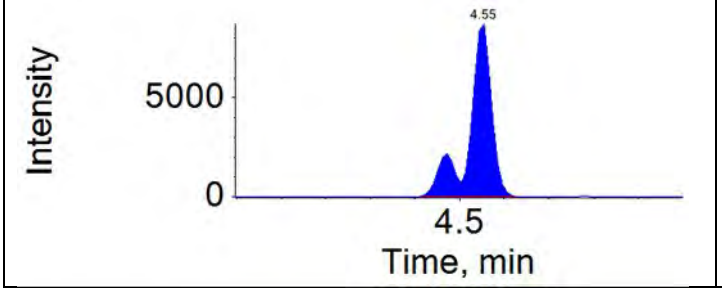


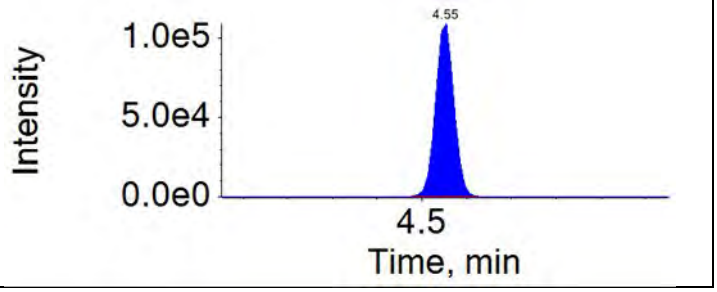
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

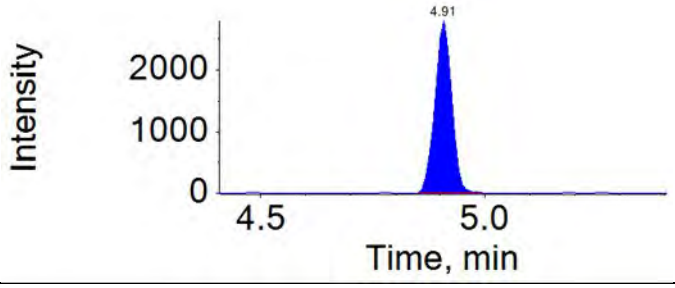
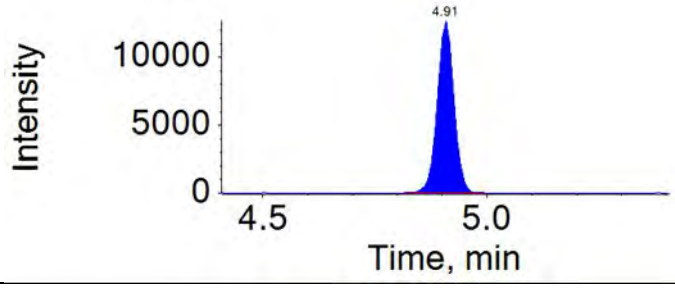


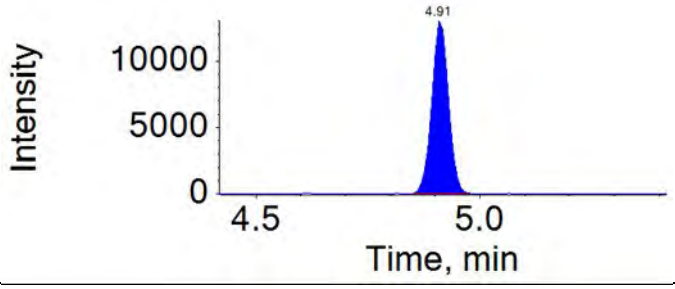
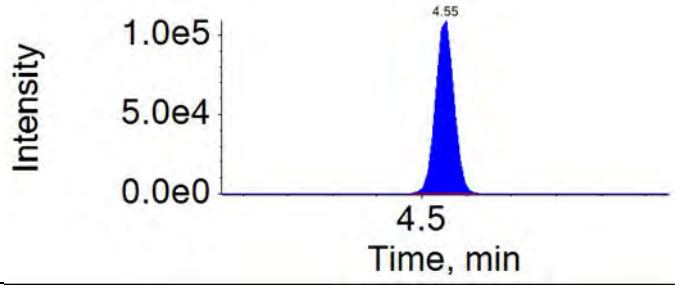


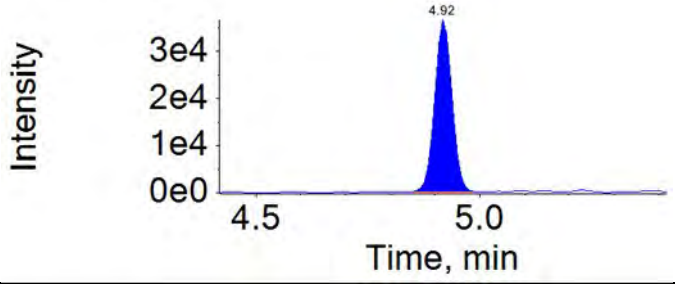
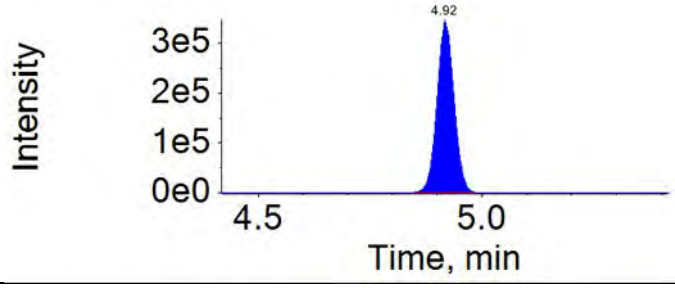
APPROVED
By MCD at 7:46 pm, 11/12/18

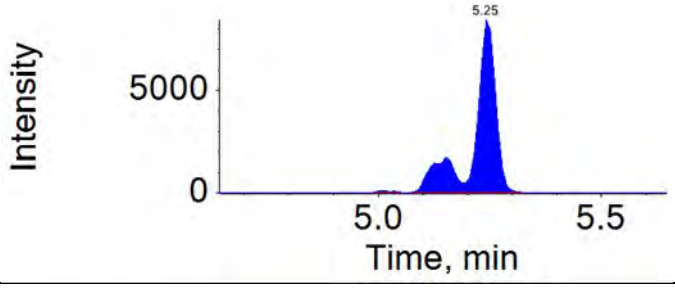
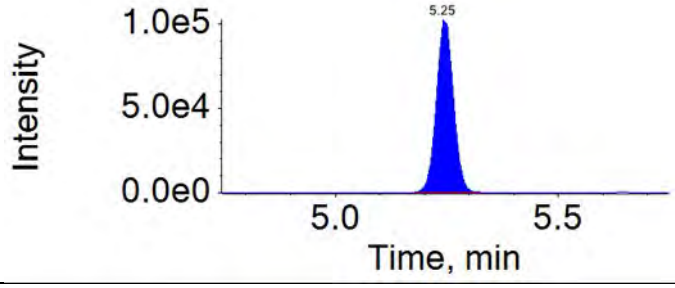
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

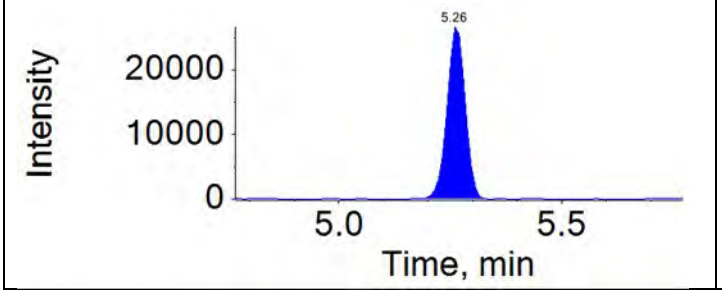
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

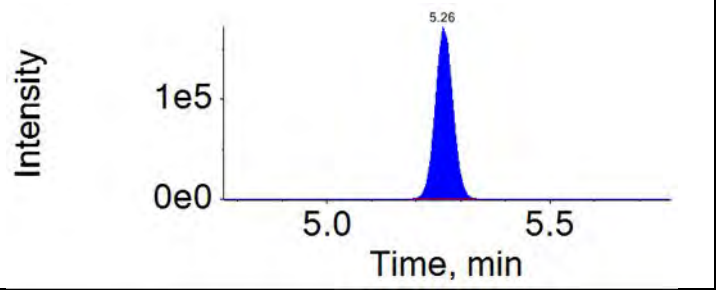
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

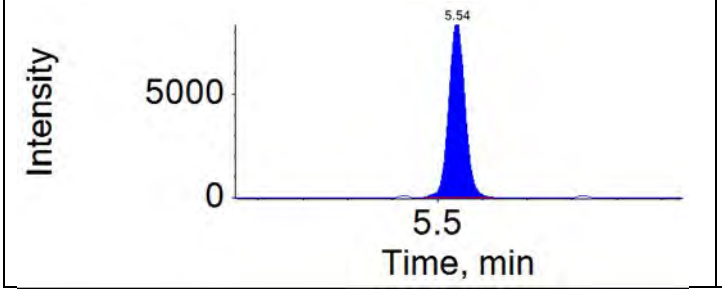
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

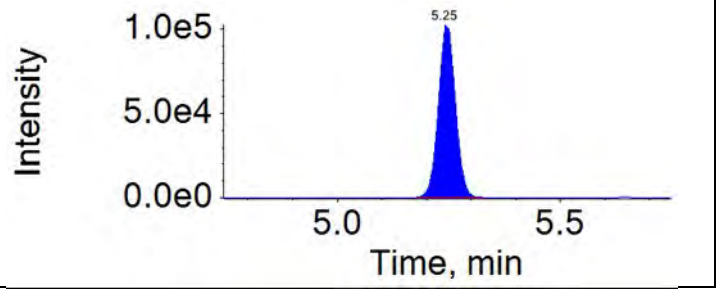
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



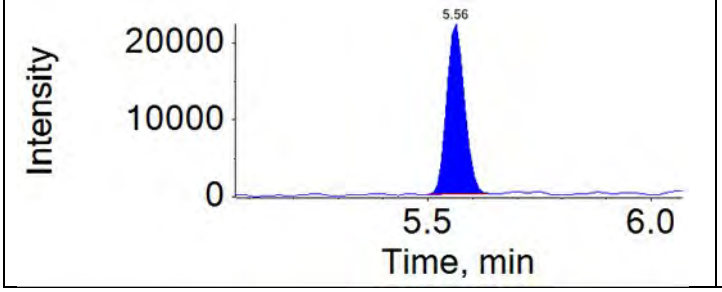


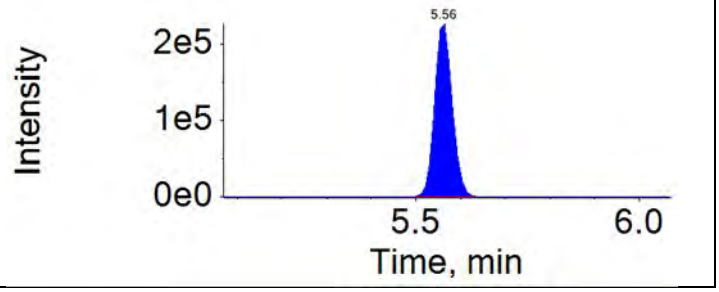
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



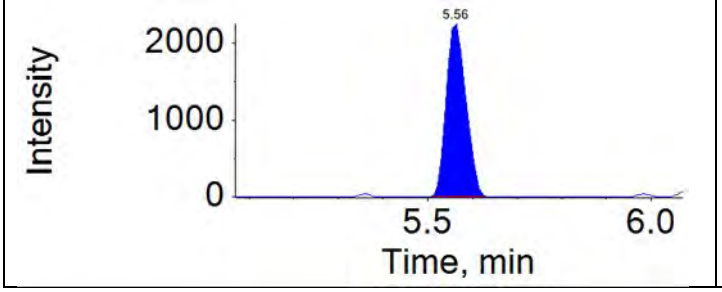


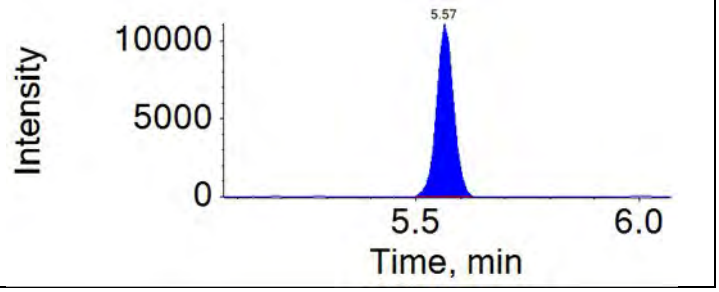
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

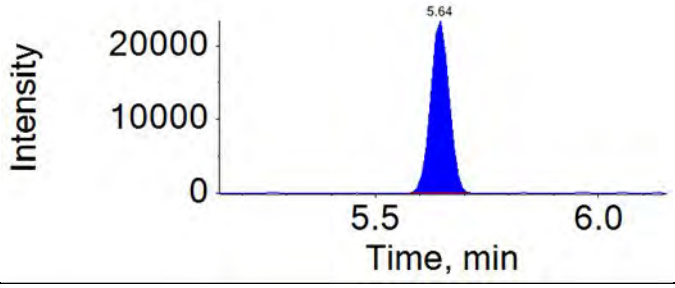
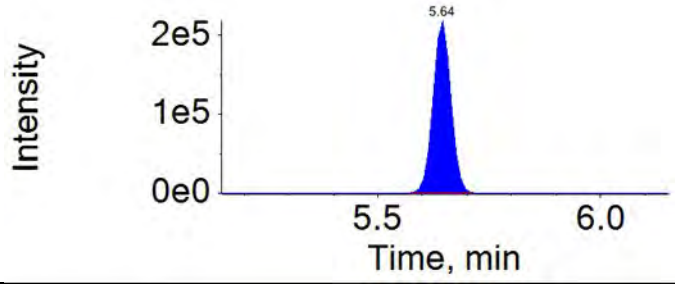


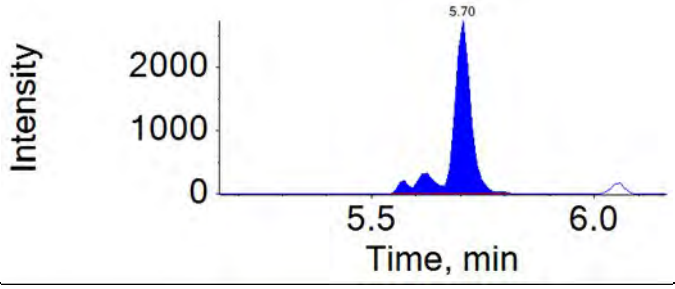
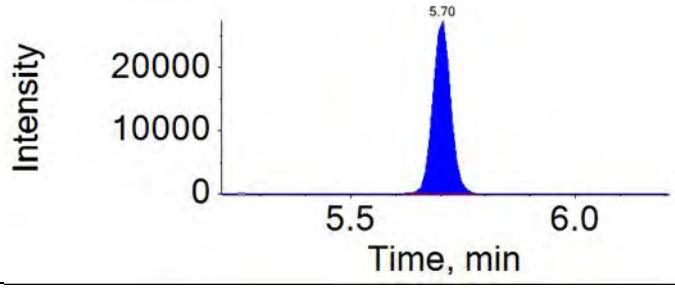


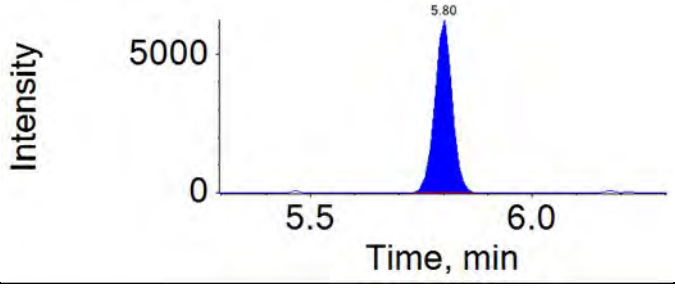
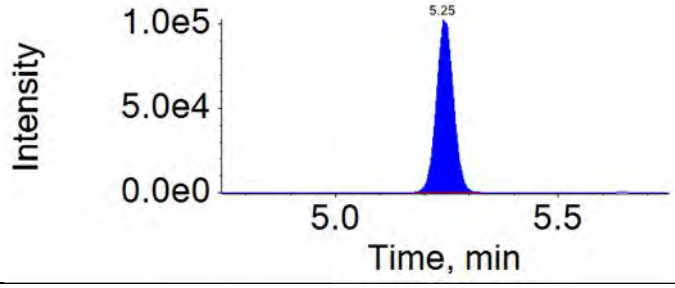
APPROVED
By MCD at 7:46 pm, 11/12/18

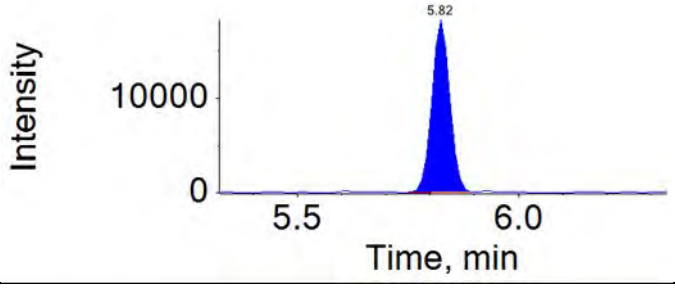
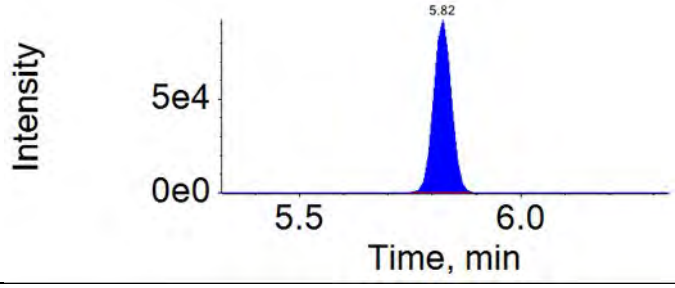
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

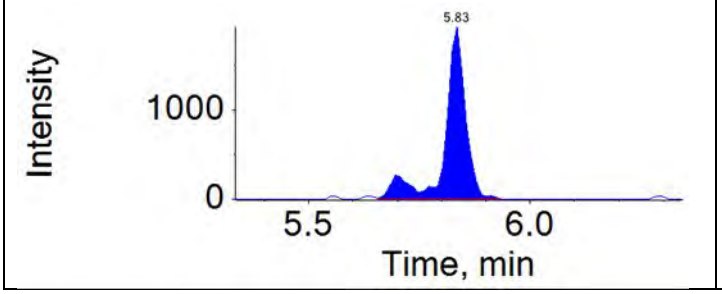
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

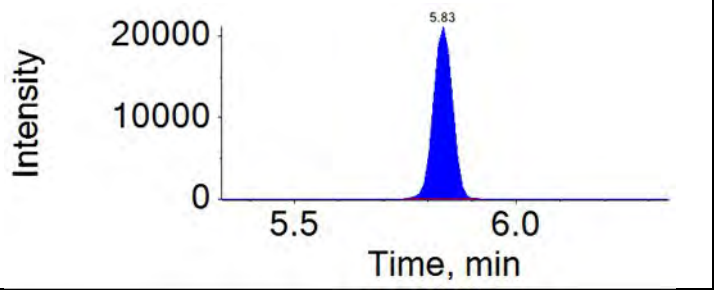
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

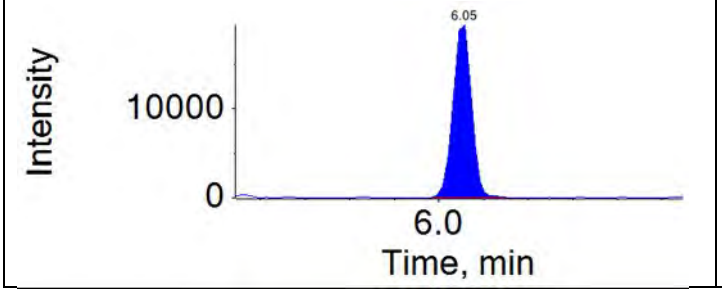
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

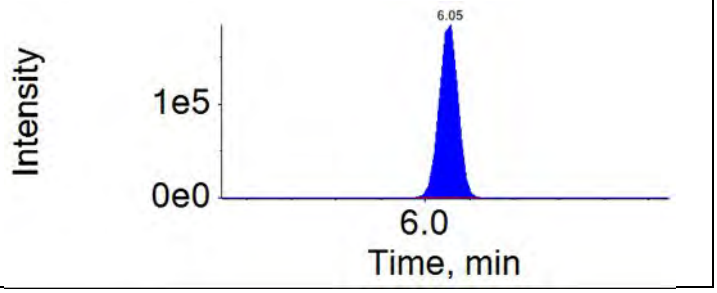
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



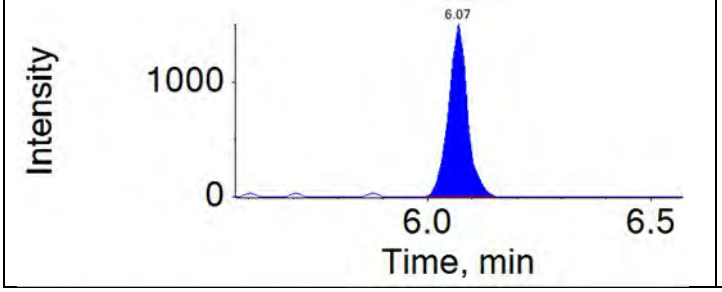


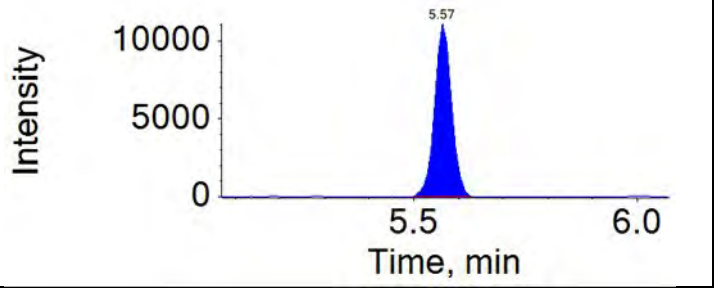
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



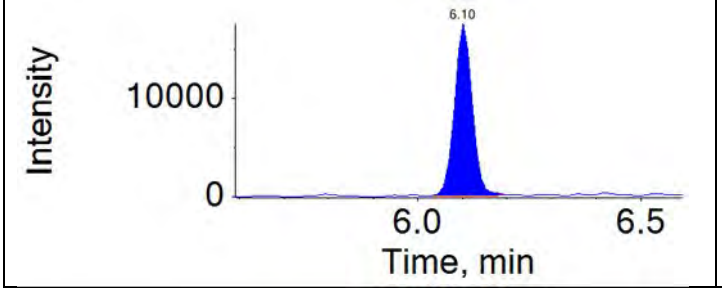


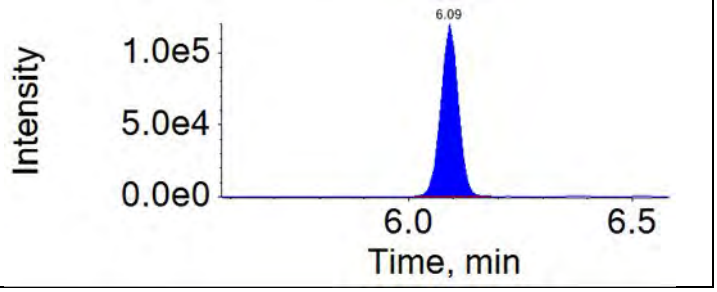
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



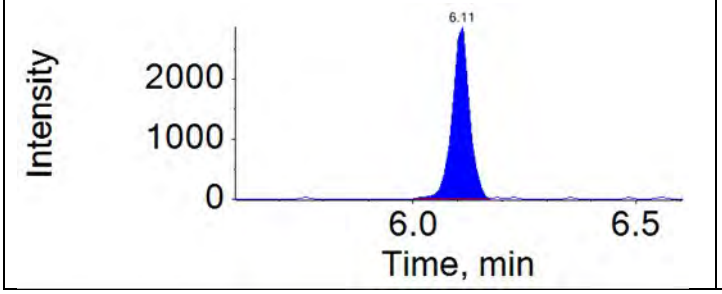


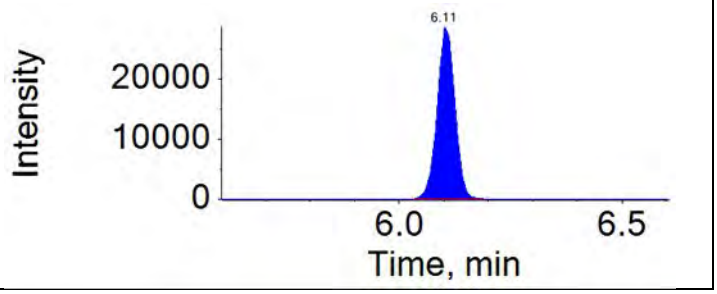
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

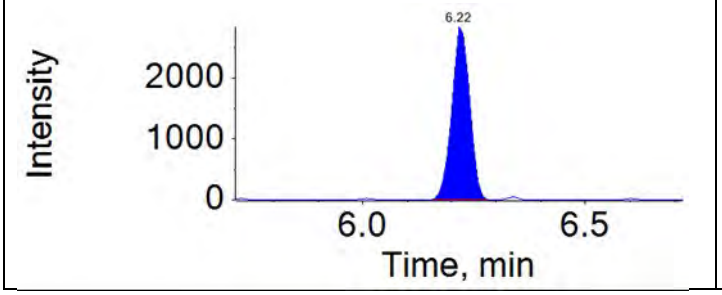
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

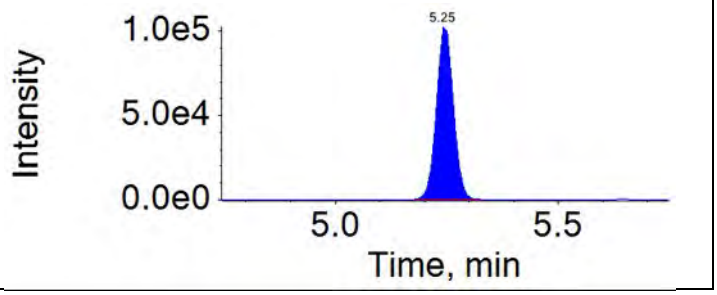
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



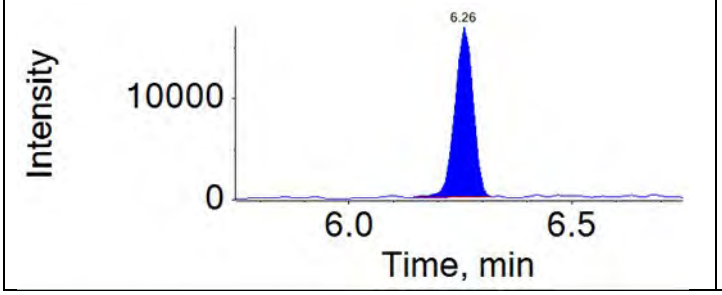


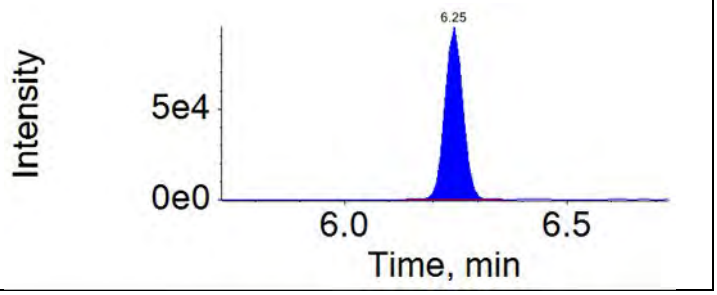
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



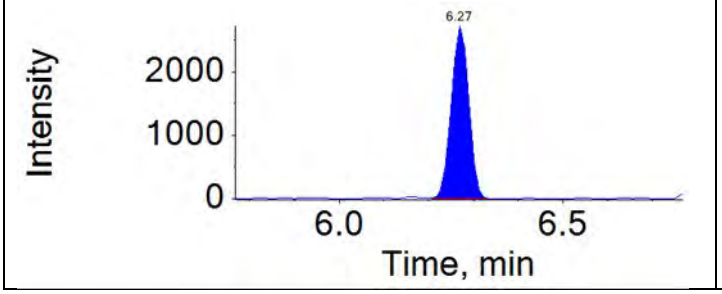


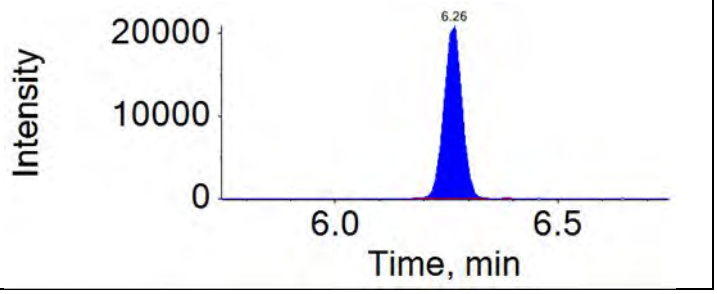
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

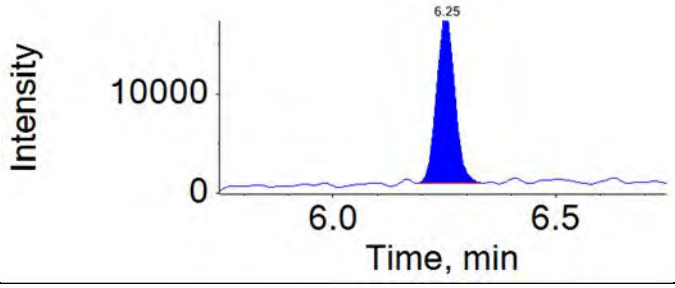
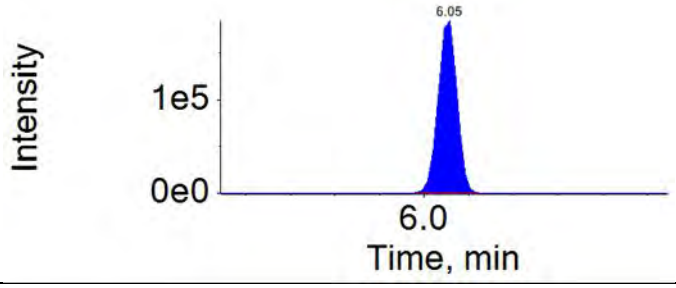


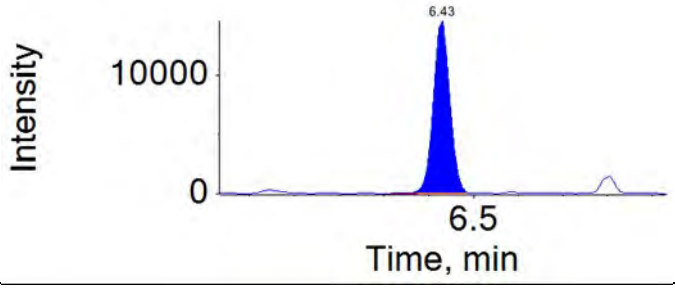
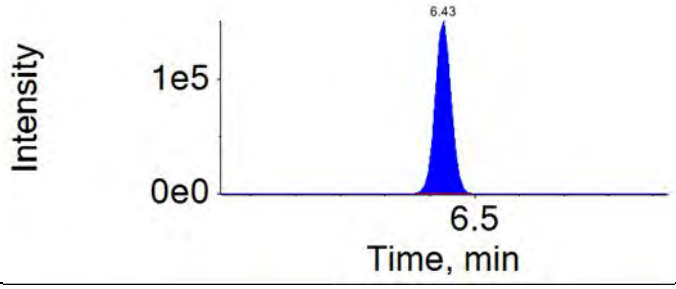


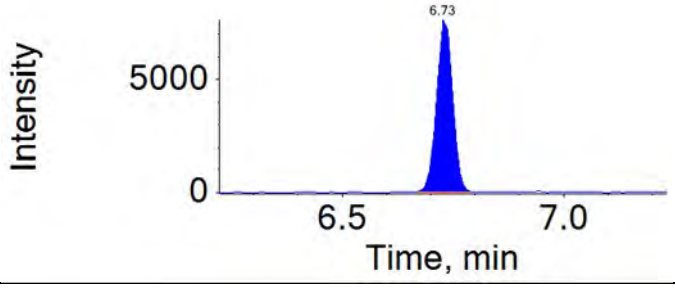
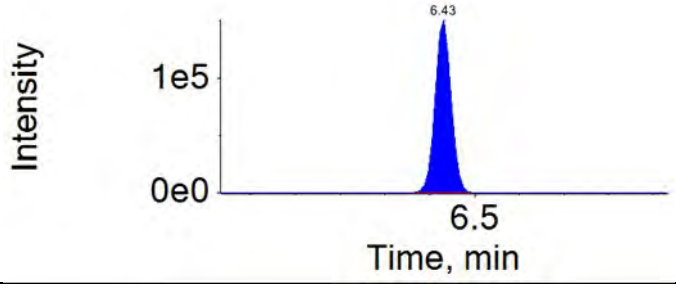
APPROVED
By MCD at 7:46 pm, 11/12/18

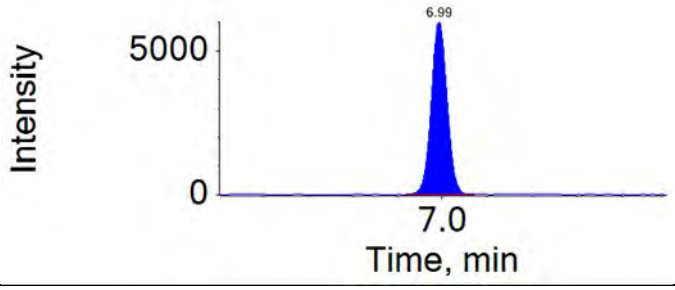
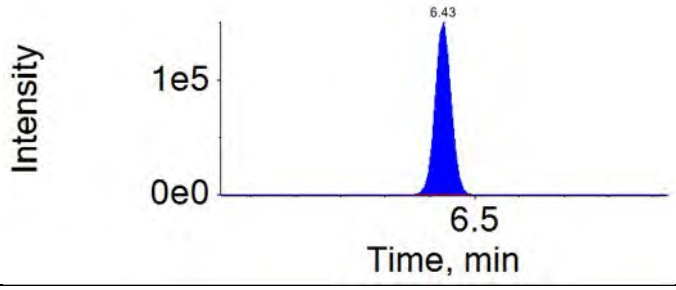
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

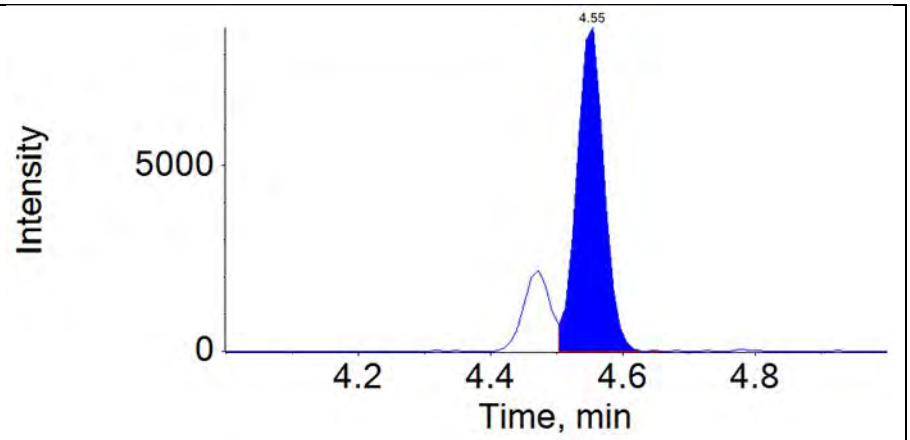
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

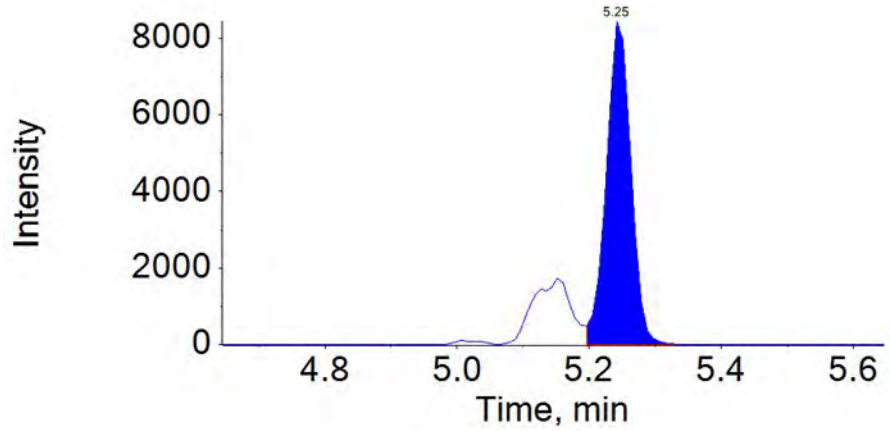
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

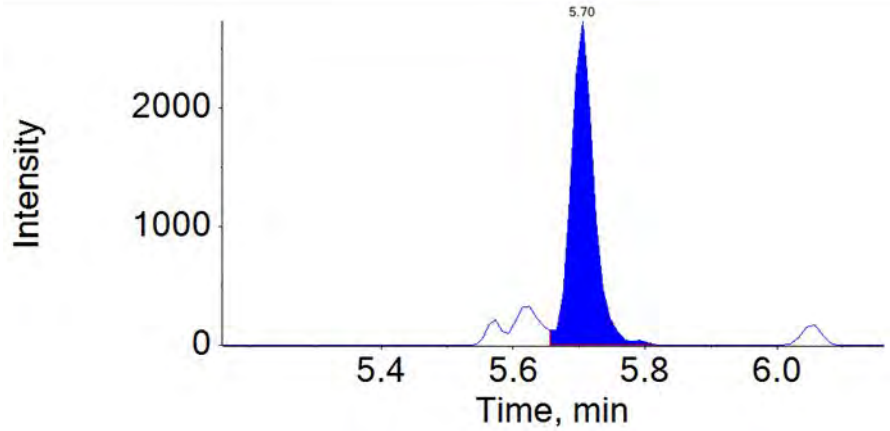
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS **RT (min.):** 4.55 **Peak Area:** 25019.0 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: PFOS **RT (min.):** 5.25 **Peak Area:** 21859.3 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: NMeFOSAA **RT (min.):** 5.70 **Peak Area:** 6576.0 **Mass Range:** 570.0 / 419.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

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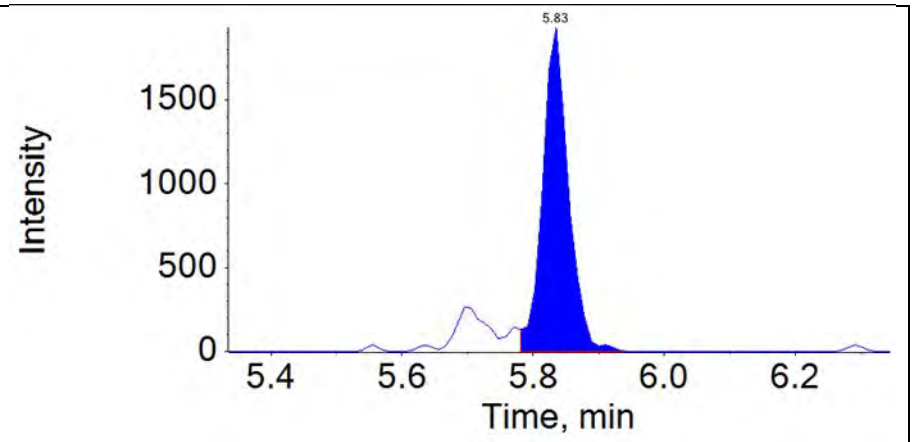
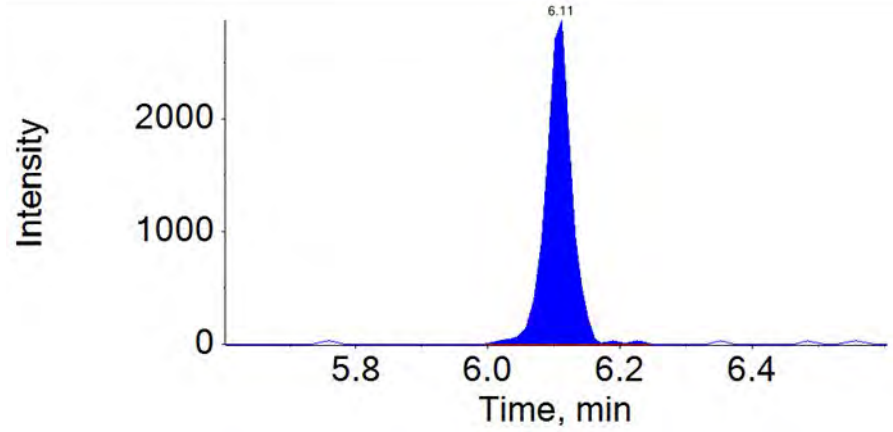
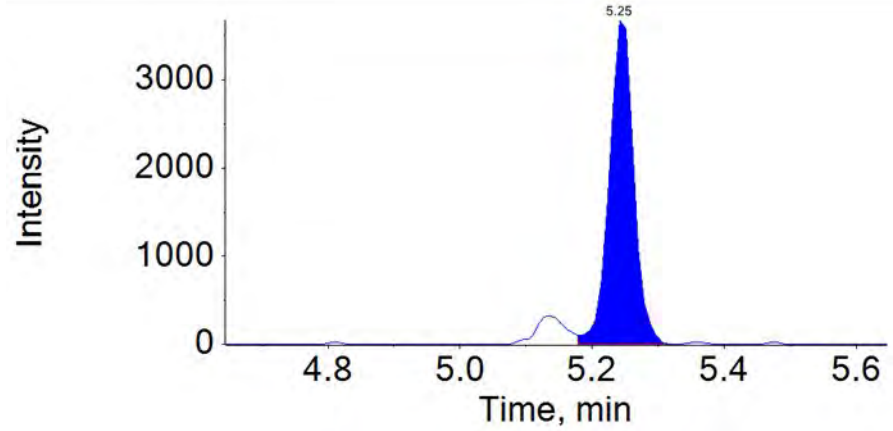
REVIEWED
By HMK at 11:56 am, 11/13/18

Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtFOSAA **RT (min.):** 5.83 **Peak Area:** 5300.0 **Mass Range:** 584.0 / 419.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

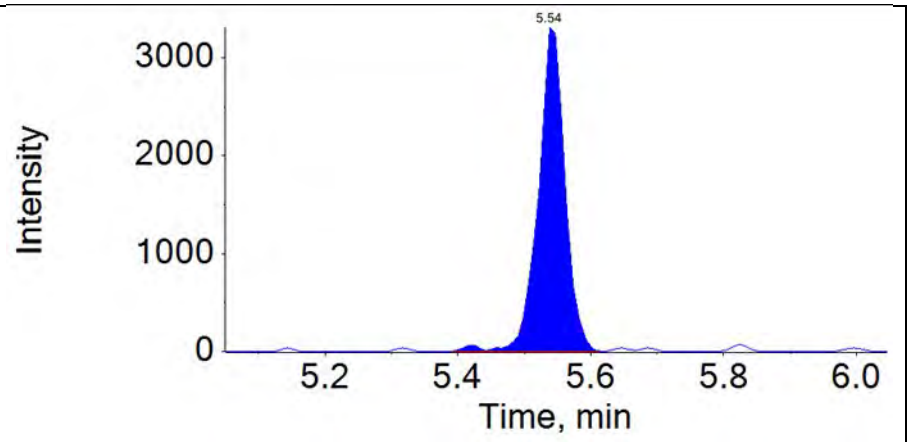
Component Name: NMePFOSA **RT (min.):** 6.11 **Peak Area:** 7839.0 **Mass Range:** 512.0 / 169.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

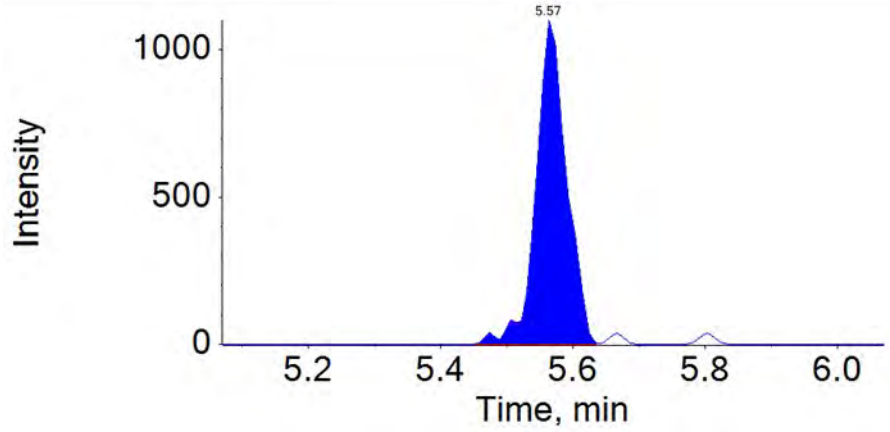
Component Name: PFOS_2 **RT (min.):** 5.25 **Peak Area:** 9521.7 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

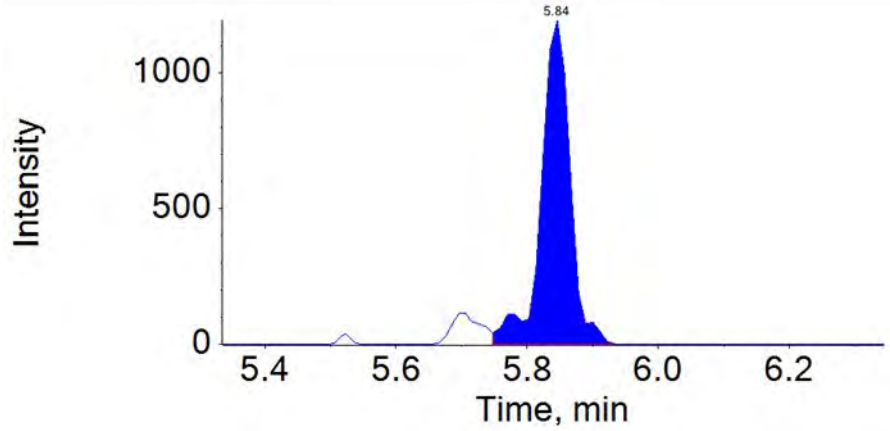
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFNS_2 **RT (min.):** 5.54 **Peak Area:** 9279.2 **Mass Range:** 549.0 / 99.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: 8:2 FTS_2 **RT (min.):** 5.57 **Peak Area:** 3541.1 **Mass Range:** 527.0 / 81.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: NEtFOSAA_2 **RT (min.):** 5.84 **Peak Area:** 3702.3 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Ion Ratio Report

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12D-05.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	40715.3	A	N/A	0.3906			
PFBS_2	3.81	1.00	15902.0	A	N/A	0.3906	8	50	
4:2-FTS	4.12	1.00	11234.3	A	N/A	0.5979			
4:2 FTS_2	4.13	1.00	6716.5	A	N/A	0.5979		#NA!	
PFHxA	4.16	1.00	94419.1	A	N/A	0.0129			
PFHxA_2	4.16	1.00	1215.5	A	N/A	0.0129	10	50	
PFPeS	4.18	1.10	22520.0	A	N/A	0.5041			
PFPeS_2	4.18	1.10	11351.9	A	N/A	0.5041	-3	50	
PFHpA	4.55	1.00	94703.4	A	N/A	0.0563			
PFHpA_2	4.55	1.00	5331.7	A	N/A	0.0563	0	50	
PFHxS	4.55	1.00	31116.0	M	N/A	0.3316			
PFHxS_2	4.55	1.00	10319.5	A	N/A	0.3316	-3	50	
6:2-FTS	4.91	1.00	7251.1	A	N/A	0.6715			
6:2 FTS_2	4.91	1.00	4869.2	A	N/A	0.6715		#NA!	
PFHpS	4.91	1.08	33565.2	A	N/A	0.3376			
PFHpS_2	4.91	1.08	11331.8	A	N/A	0.3376	-17	50	
PFOA	4.92	1.00	97268.8	A	N/A	0.0544			
PFOA_2	4.91	1.00	5290.4	A	N/A	0.0544	-3	50	
PFOS	5.25	1.00	29101.9	M	N/A	0.3621			
PFOS_2	5.25	1.00	10538.2	M	N/A	0.3621	22	50	
PFNA	5.26	1.00	74726.2	A	N/A	0.0205			
PFNA_2	5.27	1.00	1528.2	A	N/A	0.0205	-11	50	
PFNS	5.54	1.06	21280.8	A	N/A	0.4311			
PFNS_2	5.54	1.06	9173.8	M	N/A	0.4311	-11	50	
PFDA	5.56	1.00	61208.1	A	N/A	0.0038			
PFDA_2	5.55	1.00	232.9	A	N/A	0.0038	-53	50	OOS
8:2-FTS	5.56	1.00	6888.9	A	N/A	0.5073			
8:2 FTS_2	5.57	1.00	3494.5	M	N/A	0.5073		#NA!	
NMeFOSAA	5.70	1.00	7803.6	M	N/A	0.3014			
NMeFOSAA_2	5.71	1.00	2352.3	A	N/A	0.3014	17	50	
PFDS	5.80	1.11	16863.0	A	N/A	0.4542			
PFDS_2	5.80	1.11	7659.4	A	N/A	0.4542	-12	50	
PFUnDA	5.82	1.00	50785.7	A	N/A	0.0026			
PFUnDA_2	5.84	1.00	129.8	A	N/A	0.0026	-56	50	OOS
NEtFOSAA	5.83	1.00	6353.1	M	N/A	0.6384			
NEtFOSAA_2	5.84	1.00	4055.6	M	N/A	0.6384	-12	50	
PFDoDA	6.05	1.00	56256.7	A	N/A	0.0155			
PFDoDA_2	6.05	1.00	870.7	A	N/A	0.0155	-1	50	
10:2-FTS	6.07	1.09	4386.3	A	N/A	0.7830			
10:2 FTS_2	6.07	1.09	3434.5	A	N/A	0.7830		#NA!	
PFTrDA	6.25	1.03	47478.9	A	N/A	0.0141			
PFTrDA_2	6.25	1.03	667.5	A	N/A	0.0141	64	50	OOS
PFTeDA	6.43	1.00	37143.0	A	N/A	0.0027			
PFTeDA_2	6.45	1.00	100.7	A	N/A	0.0027	-57	50	OOS
PFHxDA	6.73	1.05	19260.7	A	N/A	0.0722			
PFHxDA_2	6.73	1.05	1390.3	A	N/A	0.0722	6	50	
PFODA	6.99	1.09	14710.9	A	N/A	0.0258			
PFODA_2	6.99	1.09	379.6	A	N/A	0.0258	-7	50	

APPROVED
By MCD at 7:46 pm, 11/12/18

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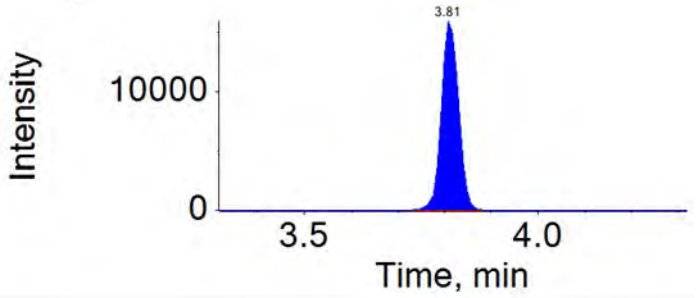
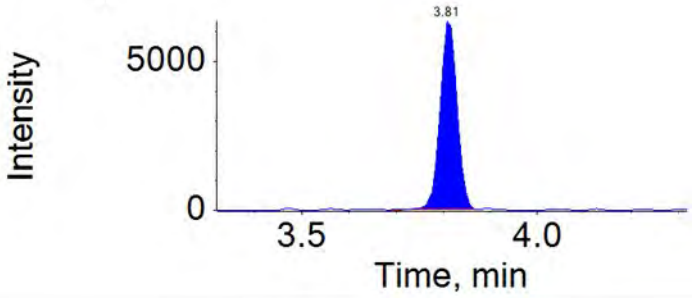
By HMK at 11:56 am, 11/13/18

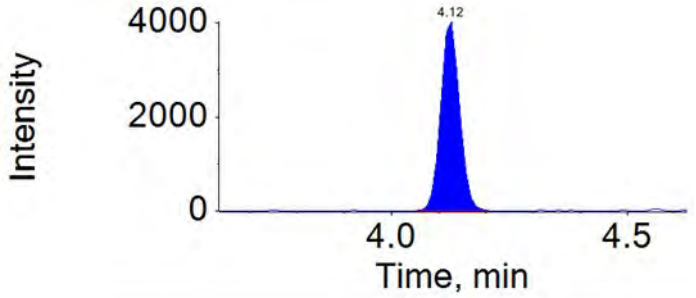
Component: PFBS
Primary Mass: 299.0 / 80.0



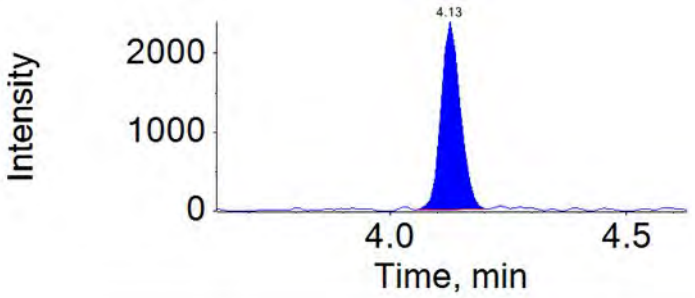
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



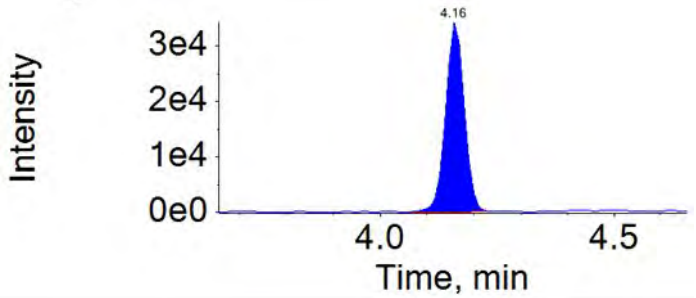
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



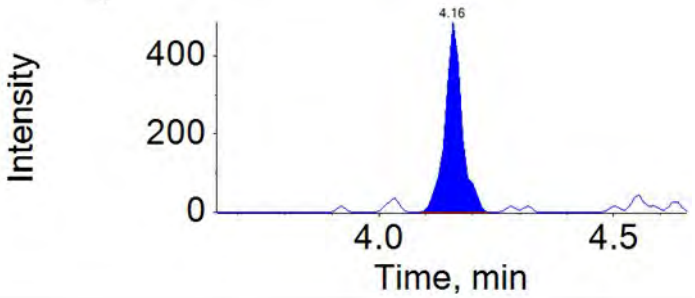
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



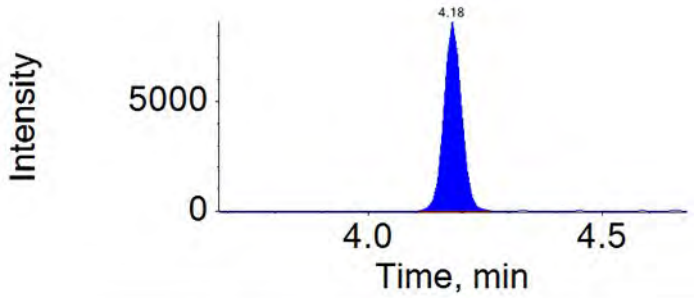
Component: PFHxA
Primary Mass: 313.0 / 269.0



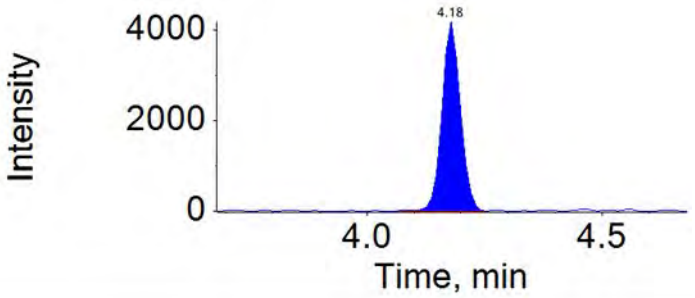
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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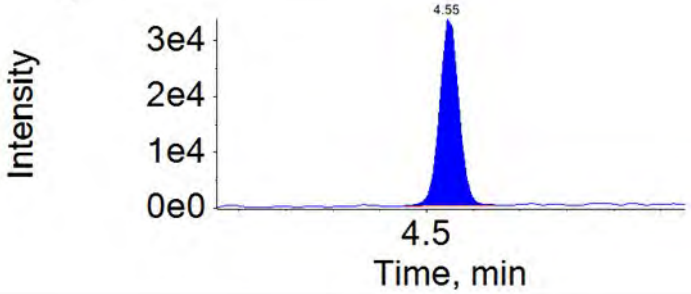
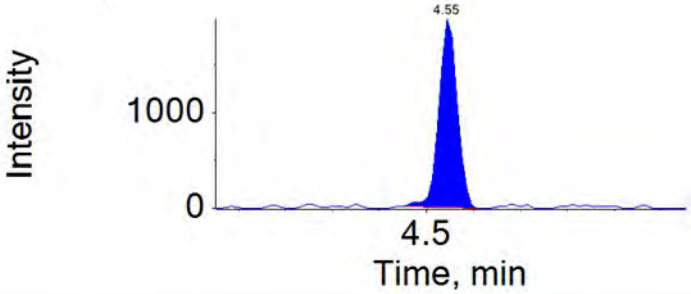
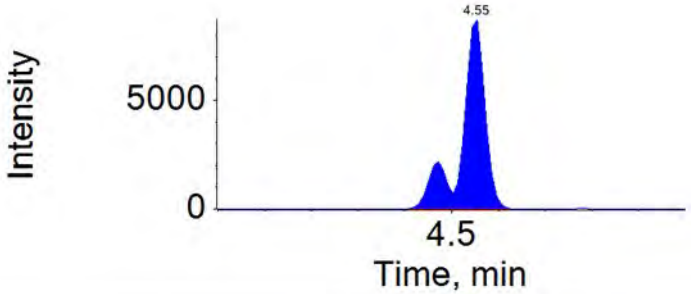
Component: PFHpA
Primary Mass: 363.0 / 319.0



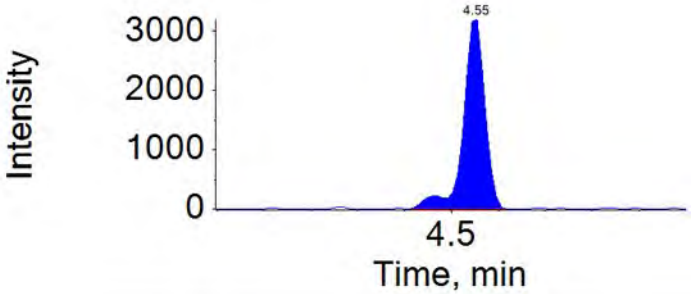
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



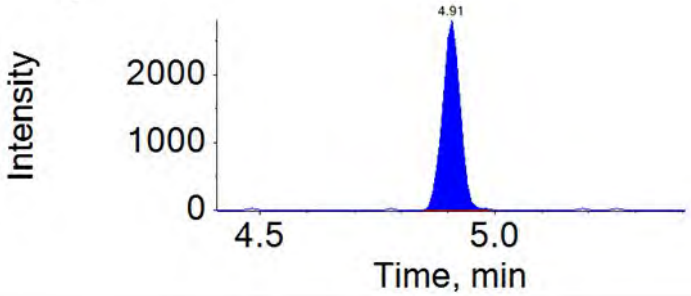
Component: PFHxS
Primary Mass: 399.0 / 80.0



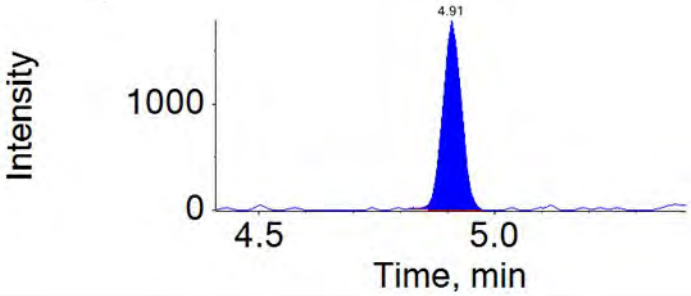
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



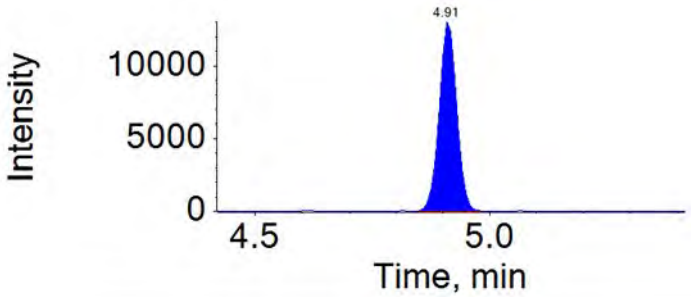
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



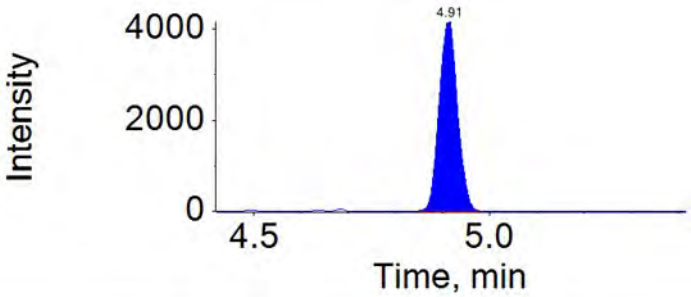
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



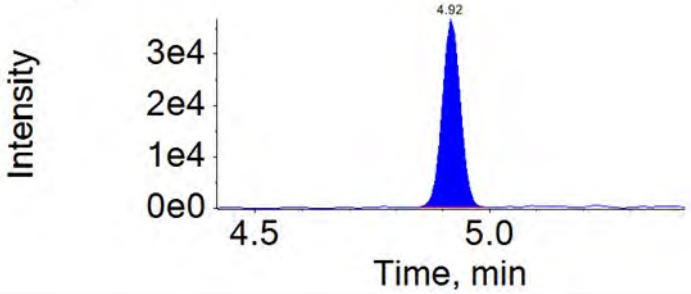
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



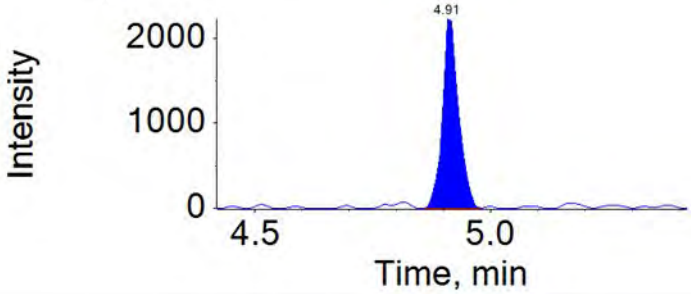
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

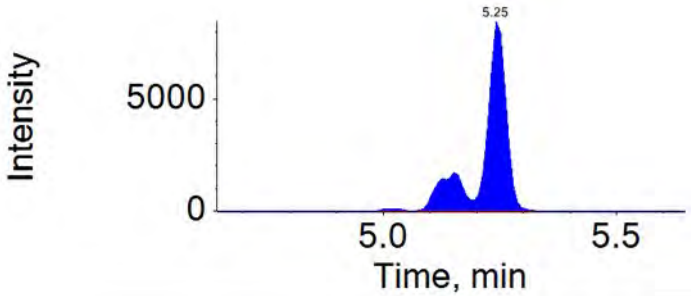
Component: PFOA
Primary Mass: 413.0 / 369.0



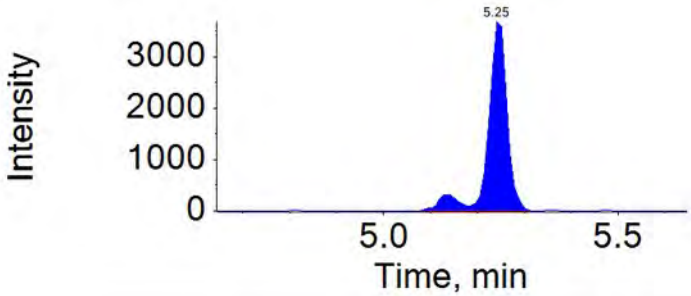
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



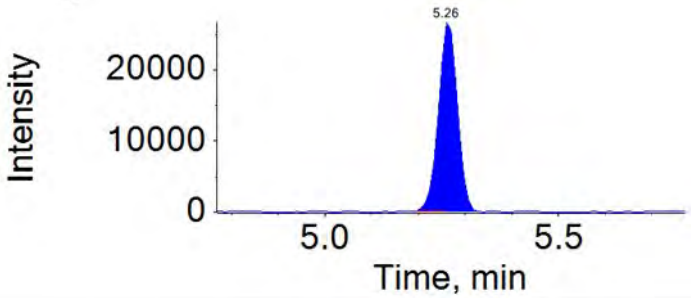
Component: PFOS
Primary Mass: 499.0 / 80.0



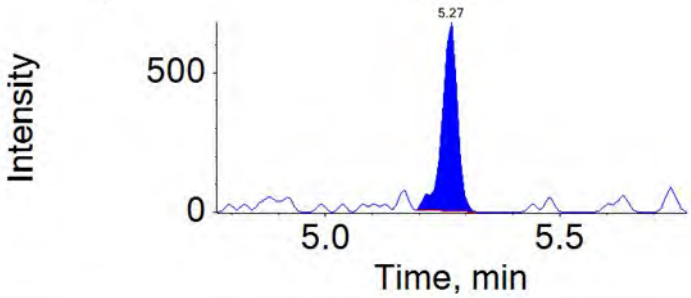
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



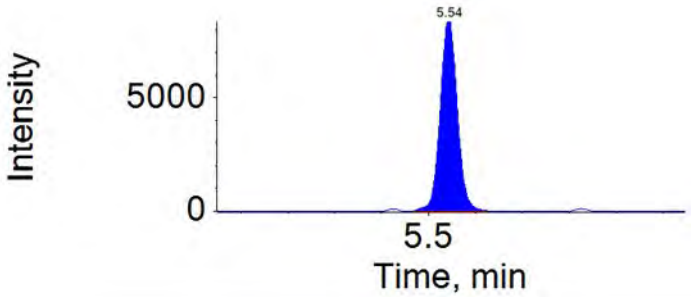
Component: PFNA
Primary Mass: 463.0 / 419.0



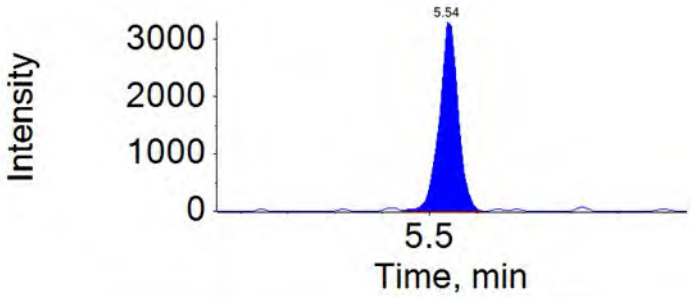
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



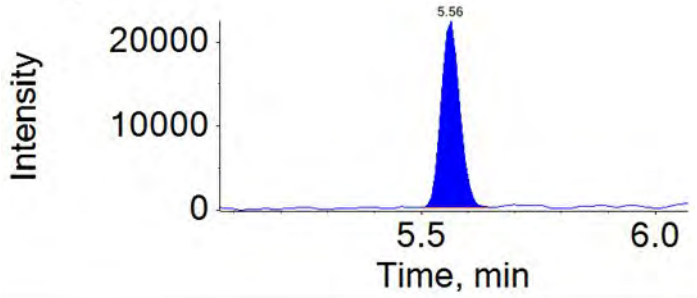
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



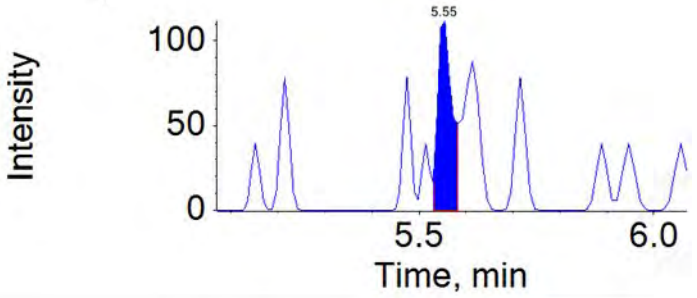
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

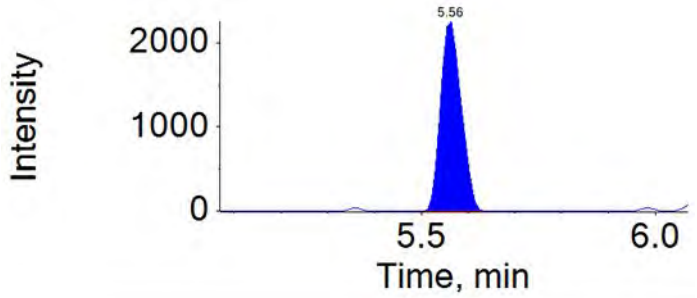
Component: PFDA
Primary Mass: 513.0 / 469.0



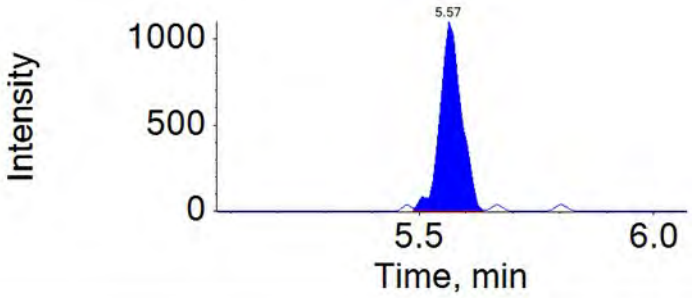
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



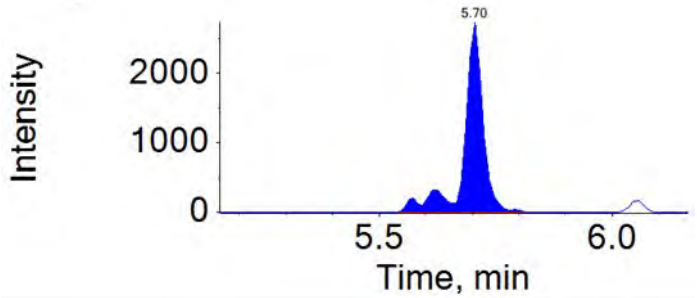
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



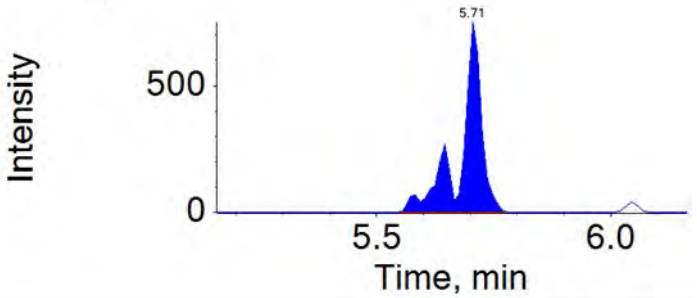
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



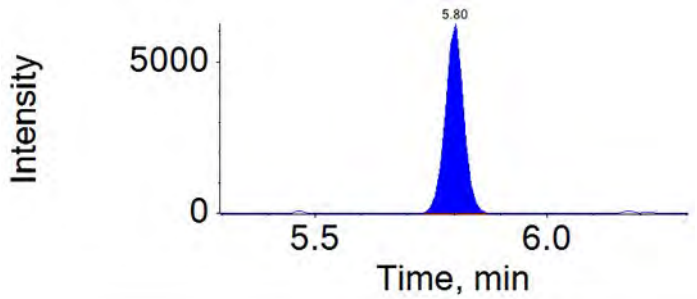
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



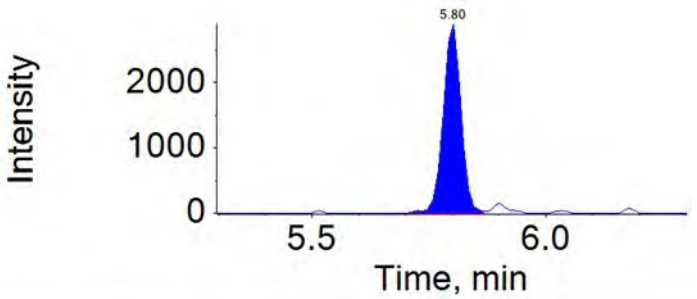
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



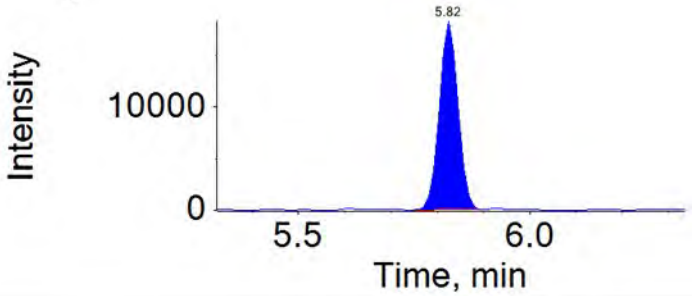
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



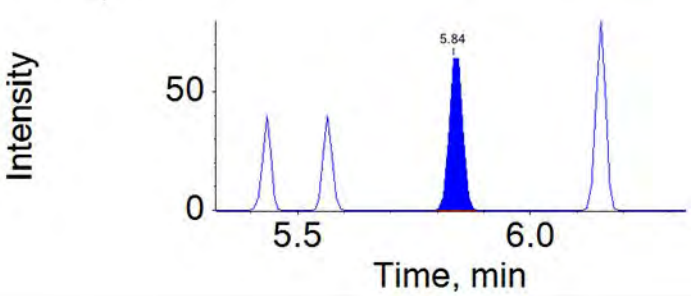
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

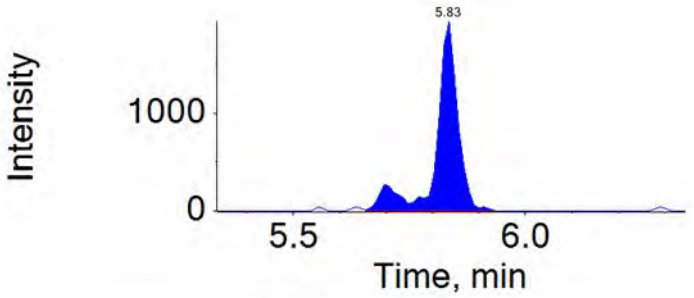
Component: PFUnDA
Primary Mass: 563.0 / 519.0



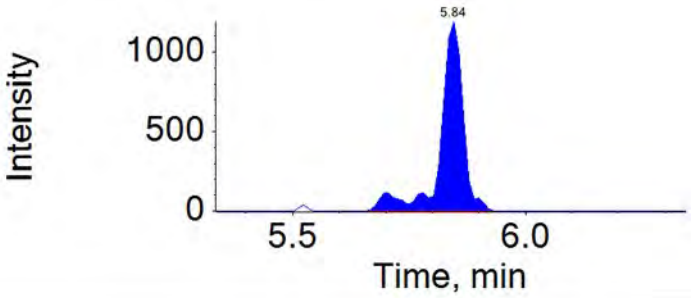
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



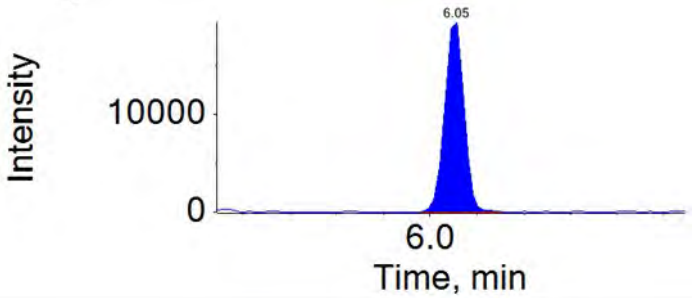
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



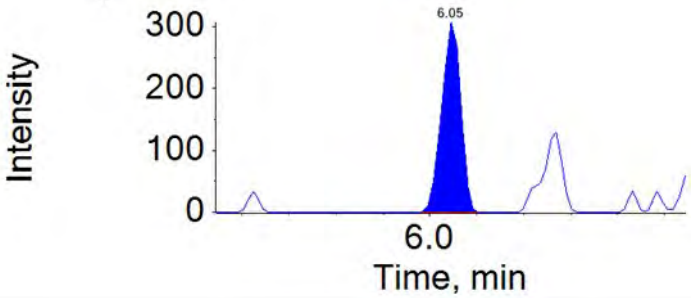
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



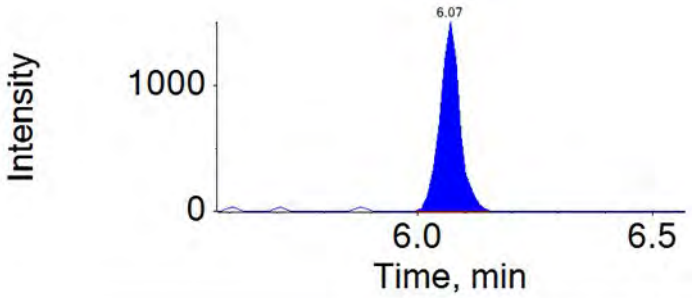
Component: PFDoDA
Primary Mass: 613.0 / 569.0



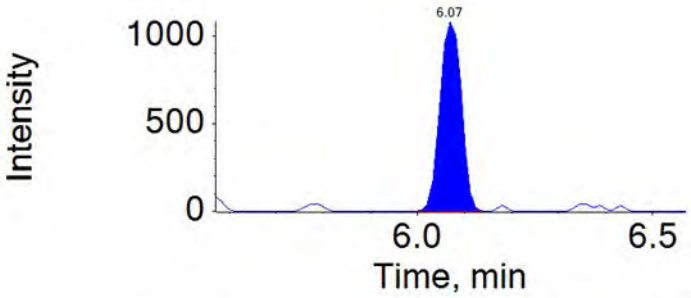
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



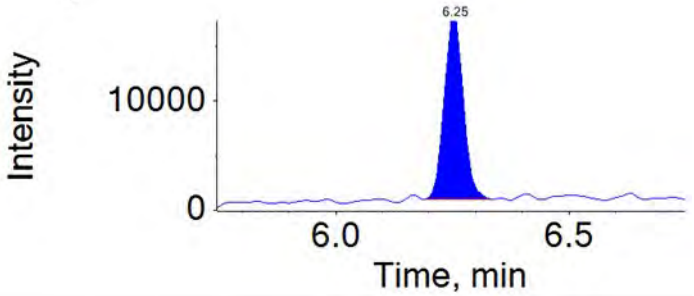
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



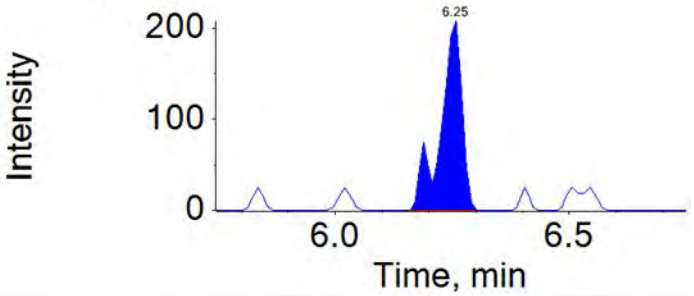
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

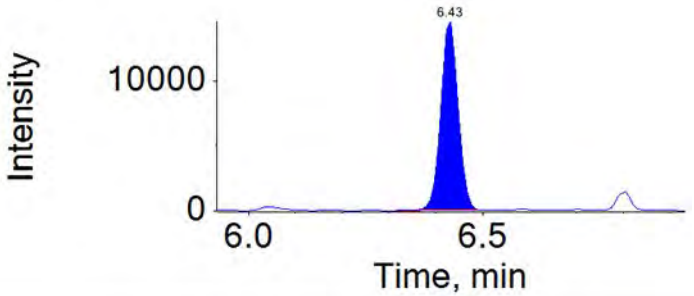
Component: PFTrDA
Primary Mass: 663.0 / 619.0



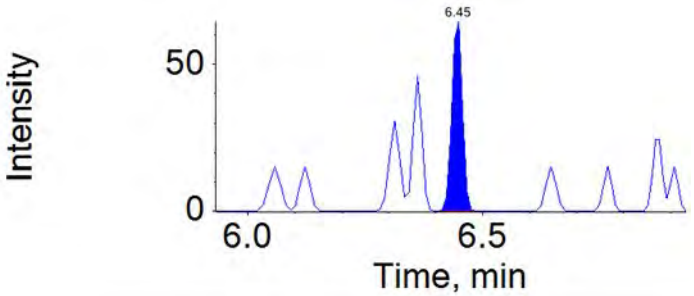
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



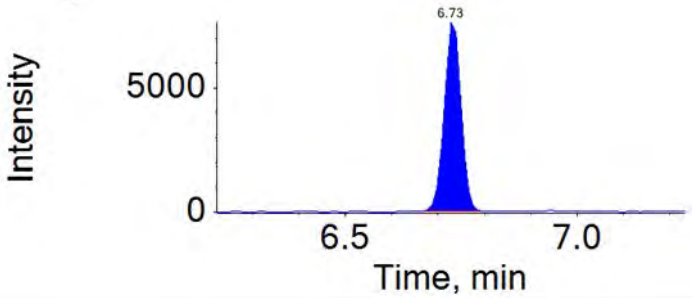
Component: PFTeDA
Primary Mass: 713.0 / 669.0



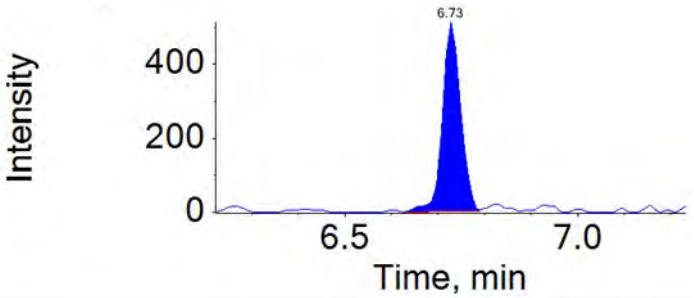
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



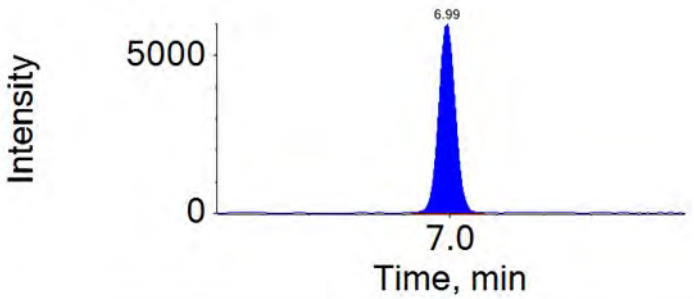
Component: PFHxDA
Primary Mass: 813.0 / 769.0



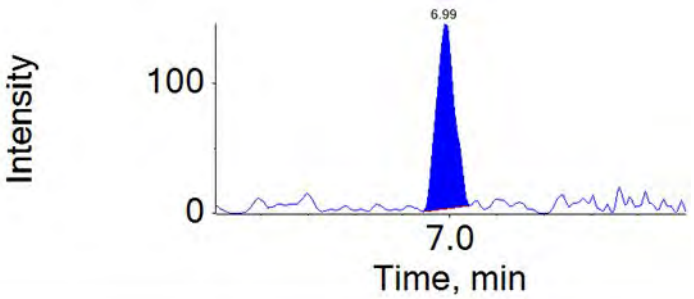
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV12D-06.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-12T17:30:36
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV1-2
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	700678.2	659926.2	6	50	
13C2-PFOA	5.0	501862.4	450219.7	11	50	
13C4-PFOS	4.8	265827.8	249205.8	7	50	
13C2-PFDA	5.0	313532.3	278743.9	12	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	778338.6	13C3-PFBA	700678.2	1.111	5.000	4.980	100	70-130	
E13C5-PFPeA	771183.8	13C3-PFBA	700678.2	1.101	5.000	4.937	99	70-130	
E13C3-PFBS	454738.5	13C3-PFBA	700678.2	0.649	4.650	4.581	99	70-130	
E13C2-4:2-FTS	54302.6	13C2-PFOA	501862.4	0.108	4.670	4.819	103	70-130	
E13C5-PFHxA	679071.8	13C2-PFOA	501862.4	1.353	5.000	4.888	98	70-130	
E13C3-PFHxS	344474.4	13C2-PFOA	501862.4	0.686	4.730	4.710	100	70-130	
E13C4-PFHpA	532521.5	13C2-PFOA	501862.4	1.061	5.000	4.780	96	70-130	
E13C2-6:2-FTS	37008.0	13C2-PFOA	501862.4	0.074	4.750	4.934	104	70-130	
E13C8-PFOA	918519.6	13C2-PFOA	501862.4	1.830	5.000	5.043	101	70-130	
E13C8-PFOS	289403.4	13C4-PFOS	265827.8	1.089	4.780	4.824	101	70-130	
E13C9-PFNA	484906.2	13C4-PFOS	265827.8	1.824	5.000	5.086	102	70-130	
E13C6-PFDA	652793.5	13C2-PFDA	313532.3	2.082	5.000	4.859	97	70-130	
E13C2-8:2-FTS	30551.9	13C2-PFDA	313532.3	0.097	4.790	4.860	101	70-130	
E13C8-PFOSA	652323.3	13C2-PFDA	313532.3	2.081	5.000	4.613	92	70-130	
Ed3-NMeFOSAA	76377.2	13C2-PFDA	313532.3	0.244	5.000	4.397	88	70-130	
E13C7-PFUnDA	271896.6	13C2-PFDA	313532.3	0.867	5.000	5.035	101	70-130	
Ed5-NEtFOSAA	60822.1	13C2-PFDA	313532.3	0.194	5.000	4.104	82	70-130	
E13C2-PFDoDA	565062.9	13C2-PFDA	313532.3	1.802	5.000	4.679	94	70-130	
Ed7-NMePFOSAE	349234.7	13C2-PFDA	313532.3	1.114	5.000	4.820	96	70-130	
Ed3-NMePFOSA	80586.7	13C2-PFDA	313532.3	0.257	5.000	4.670	93	70-130	
Ed9-NEtPFOSAE	267606.0	13C2-PFDA	313532.3	0.854	5.000	4.439	89	70-130	
Ed5-NEtPFOSA	61370.7	13C2-PFDA	313532.3	0.196	5.000	4.592	92	70-130	
E13C2-PFTeDA	416788.0	13C2-PFDA	313532.3	1.329	5.000	4.667	93	70-130	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

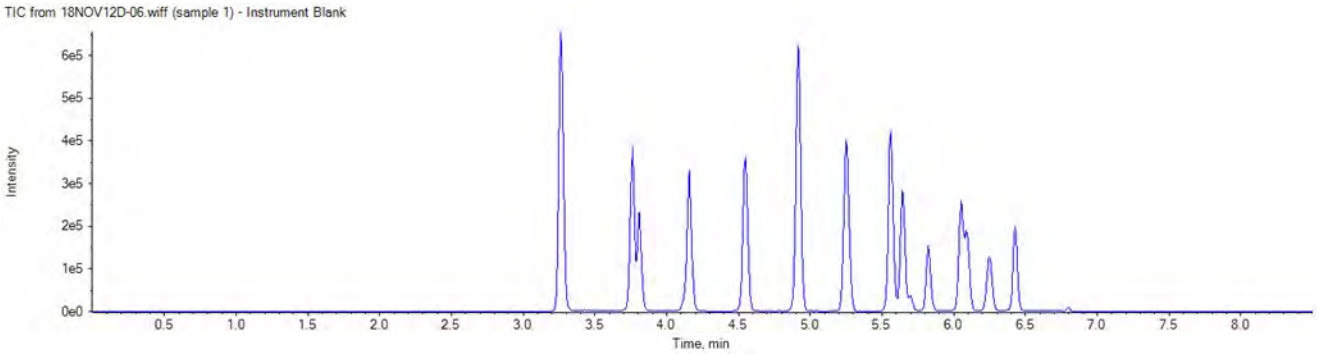
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV12D-06.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	778338.6	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	771183.8	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	454738.5	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	54302.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	679071.8	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	454738.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	532521.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	344474.4	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	37008.0	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	344474.4	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	918519.6	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	289403.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	484906.2	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	289403.4	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	652793.5	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	30551.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	652323.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	76377.2	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	289403.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	271896.6	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	60822.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	565062.9	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	30551.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	349234.7	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	80586.7	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	289403.4	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	267606.0	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	61370.7	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	565062.9	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	416788.0	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	416788.0	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	416788.0	N/A	

Total Ion Chromatogram

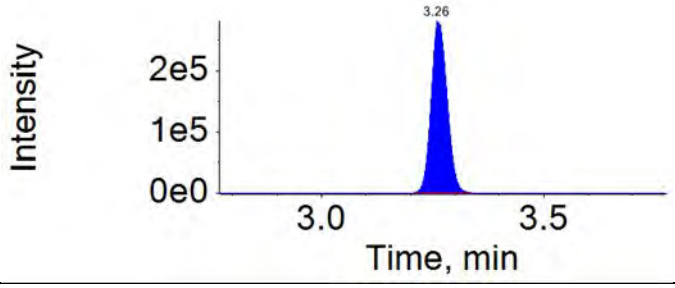


APPROVED
By MCD at 7:46 pm, 11/12/18

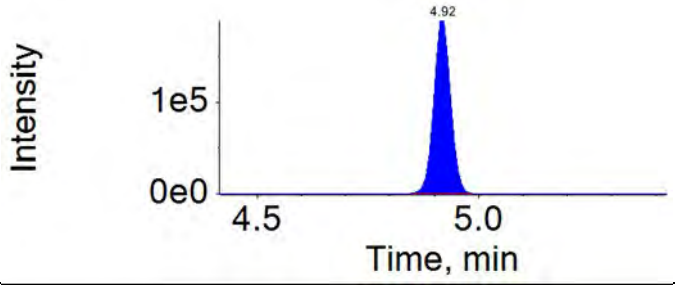
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

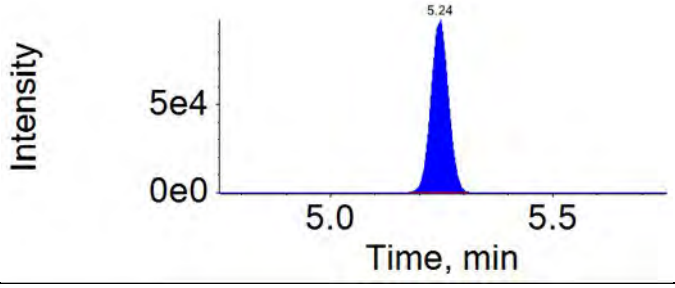
Injection Standard: 13C3-PFBA
216.0 / 172.0



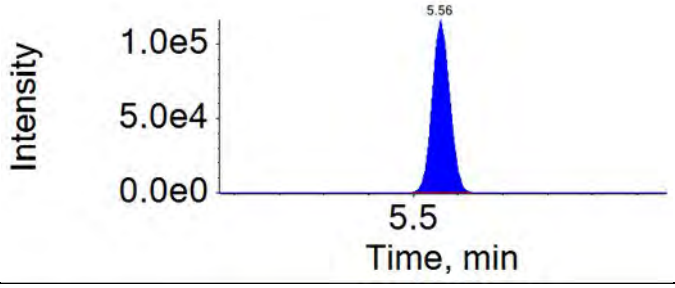
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



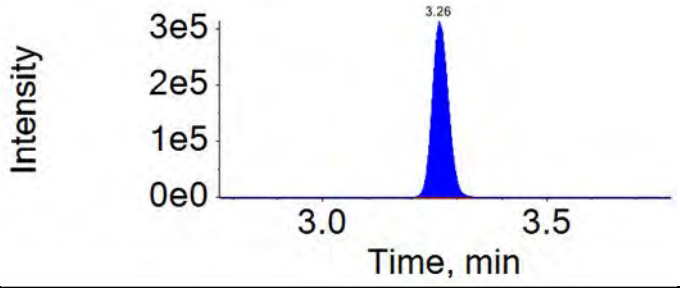
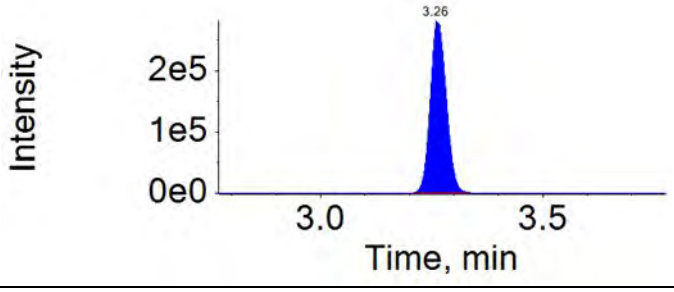
Injection Standard: 13C2-PFDA
515.0 / 470.0

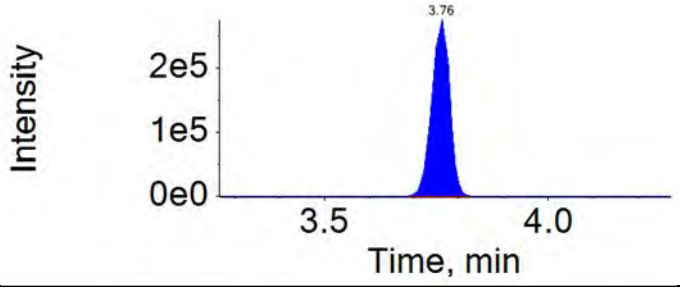
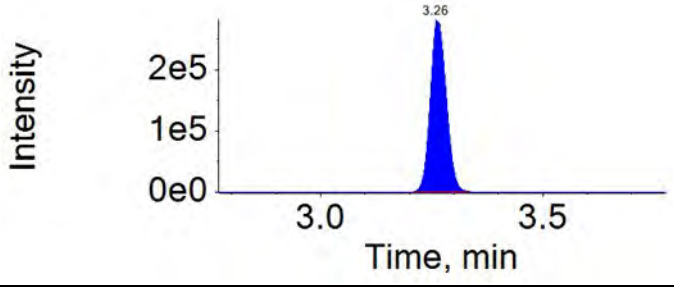


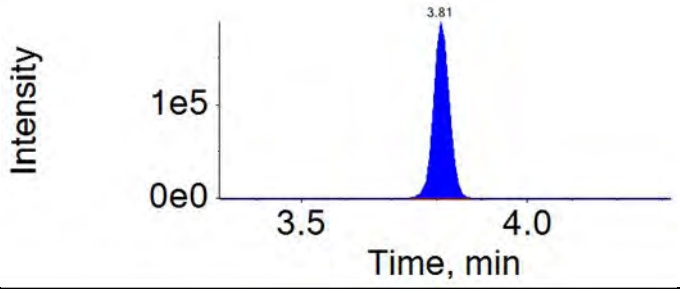
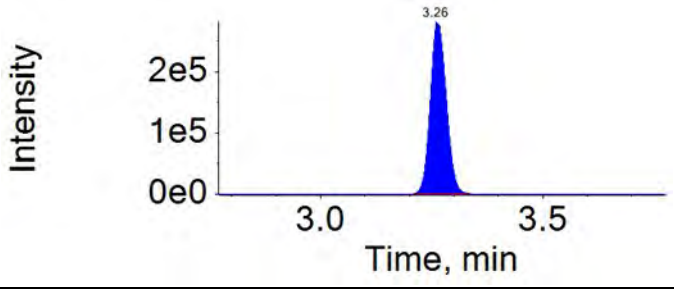
APPROVED
By MCD at 7:46 pm, 11/12/18

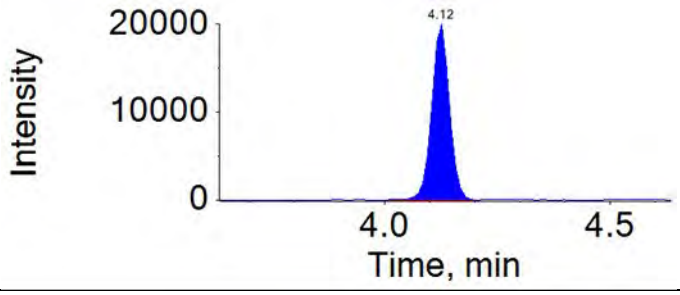
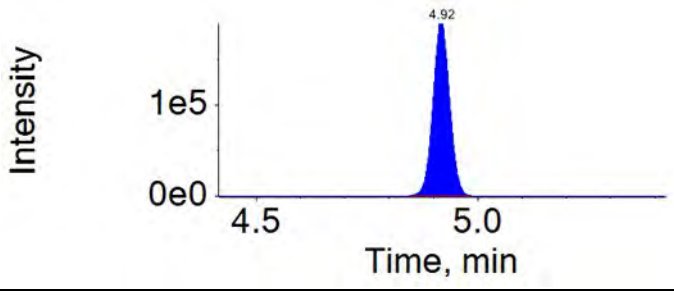
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

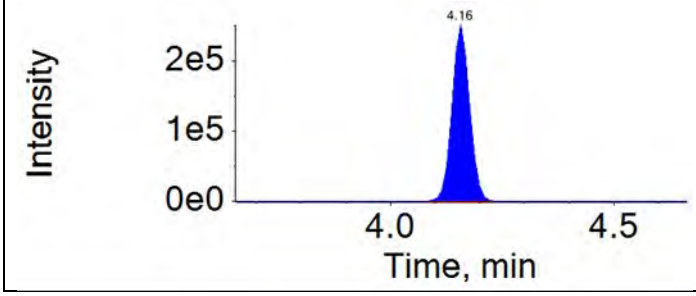
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

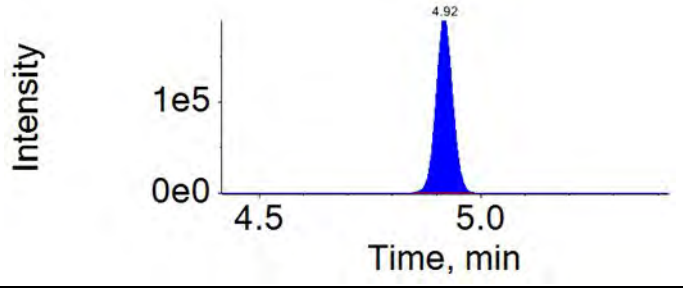
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

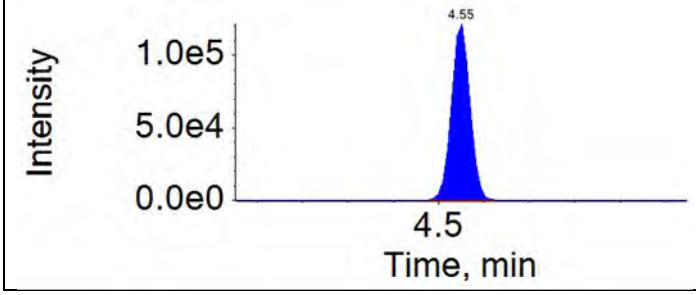
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

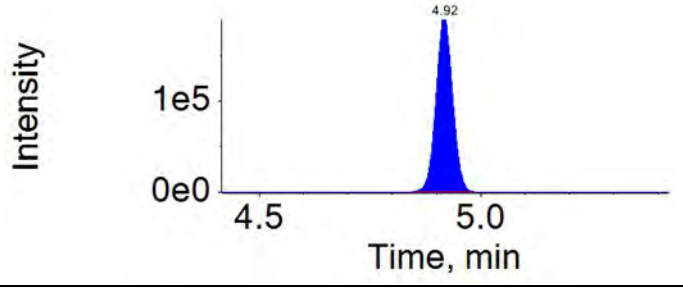
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



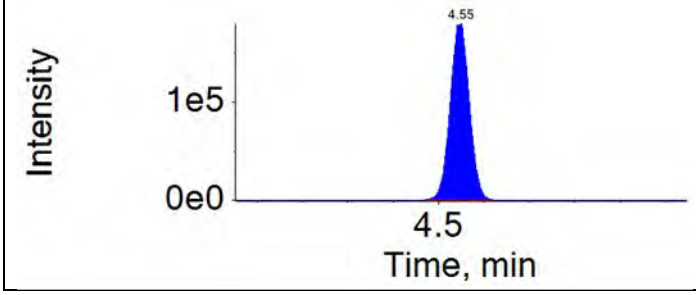


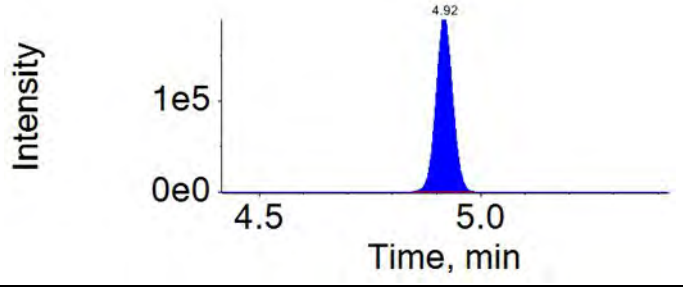
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



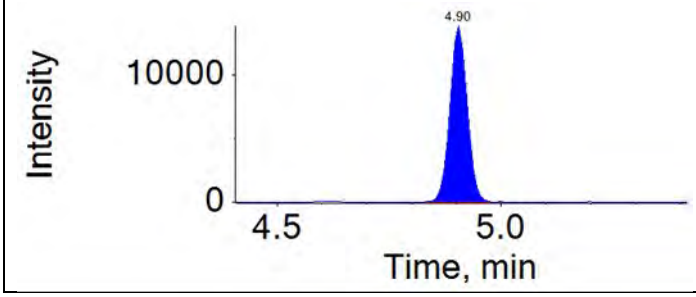


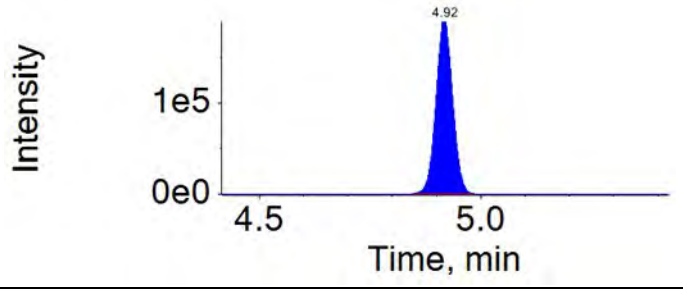
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

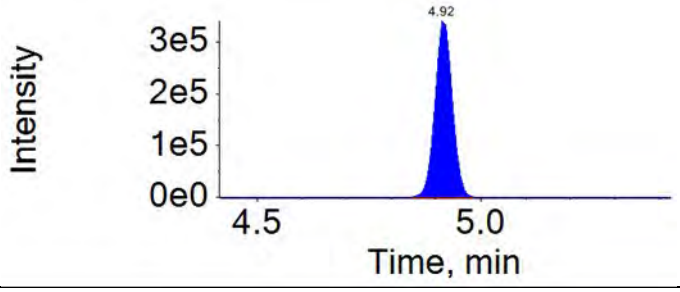
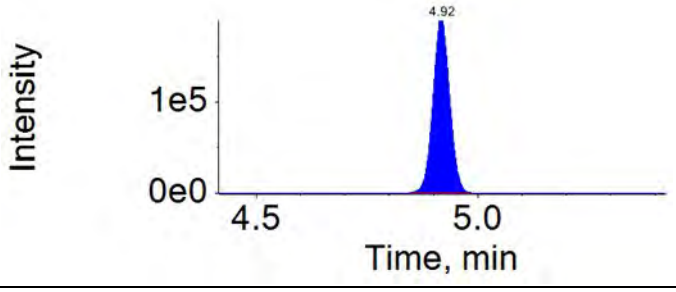


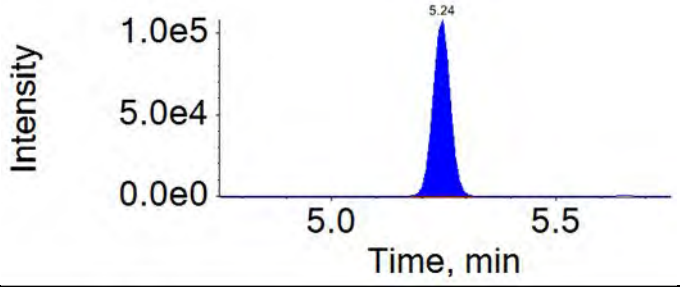
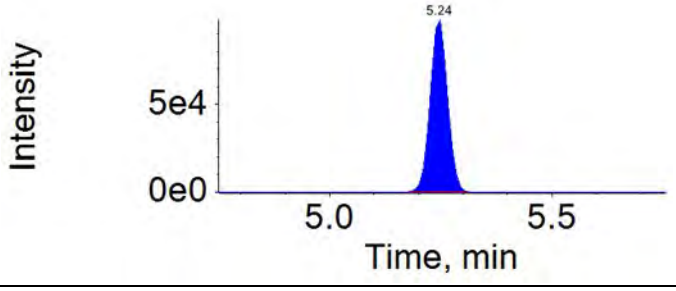


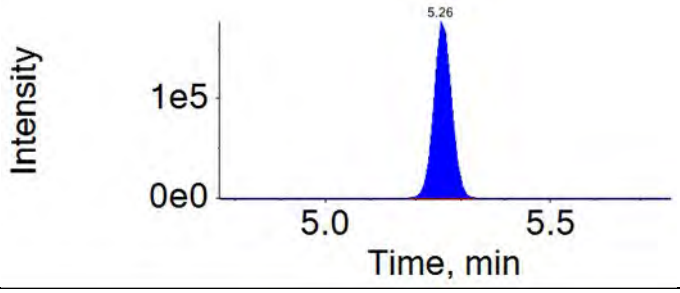
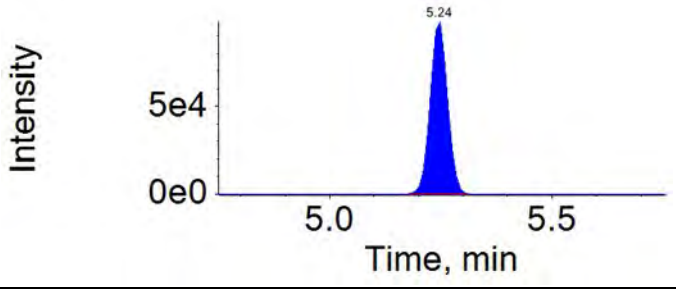
APPROVED
By MCD at 7:46 pm, 11/12/18

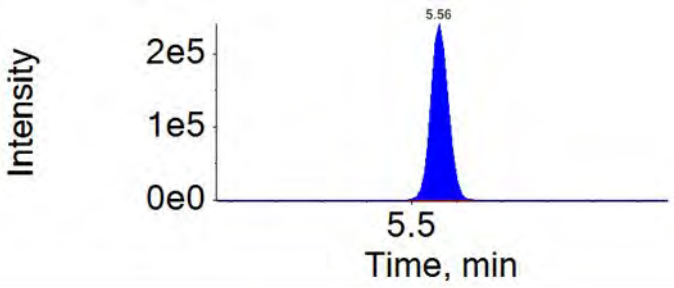
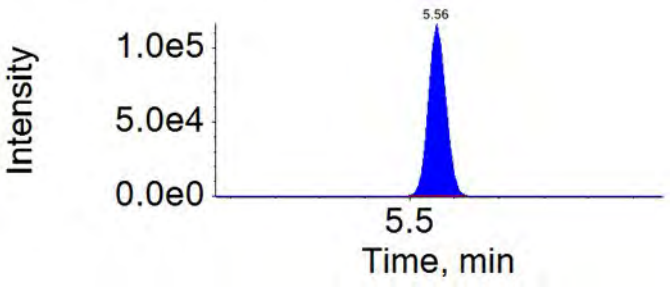
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

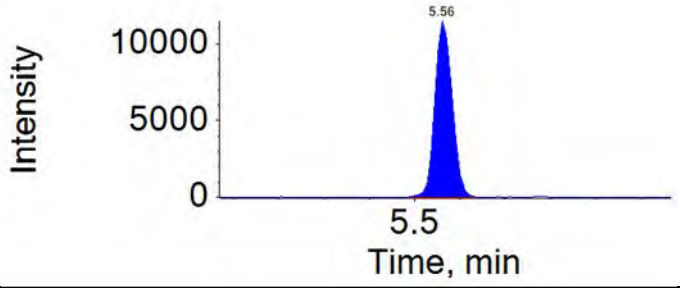
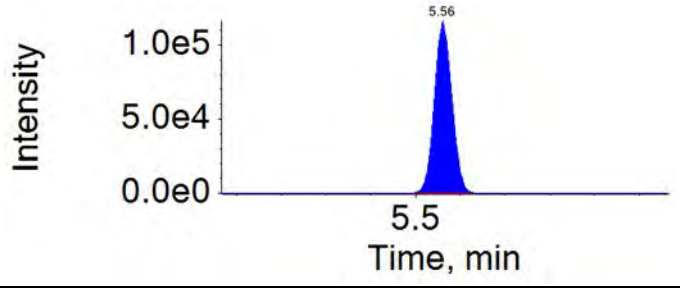
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

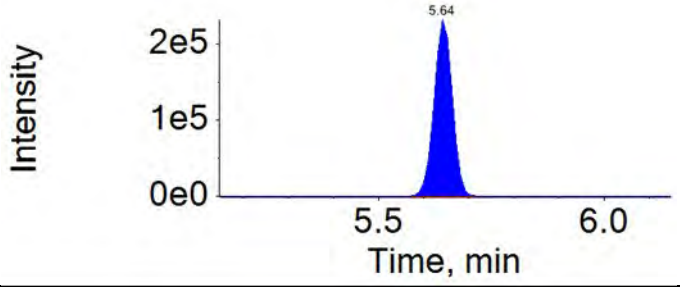
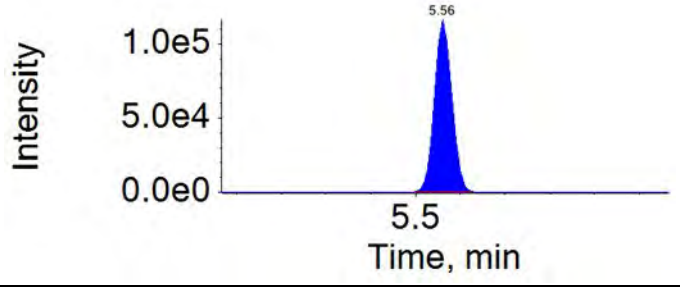
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

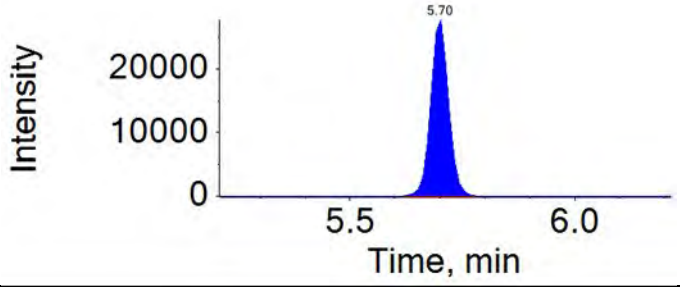
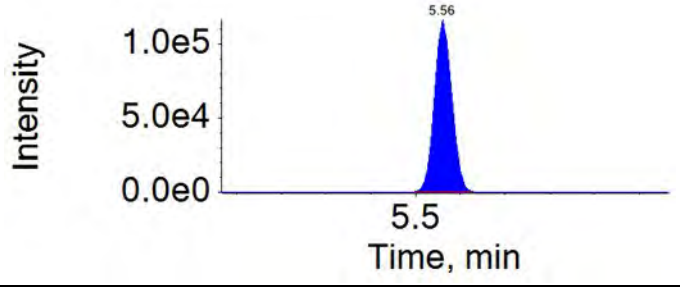
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

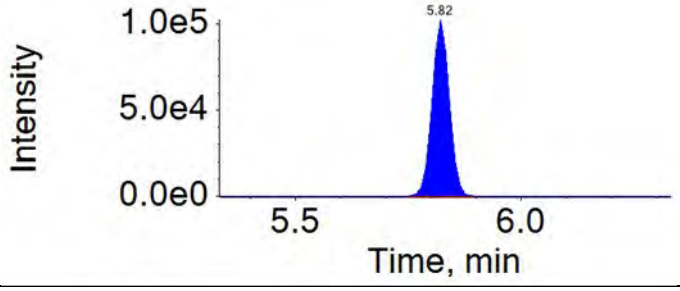
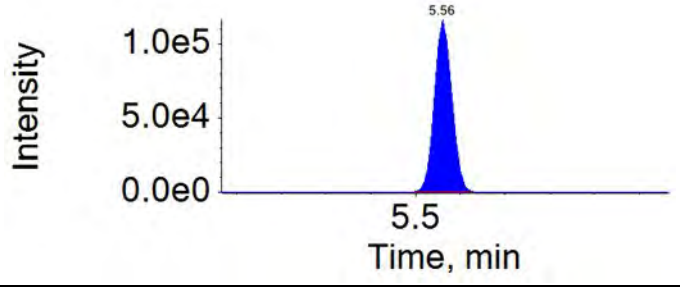
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

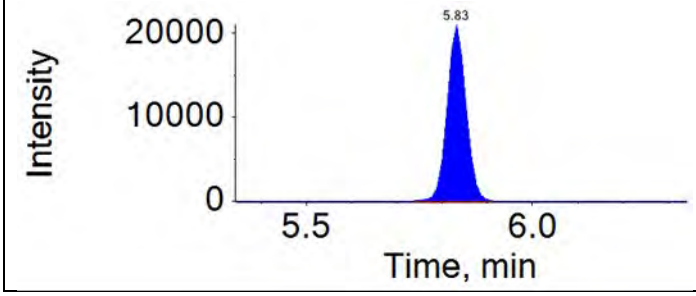
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

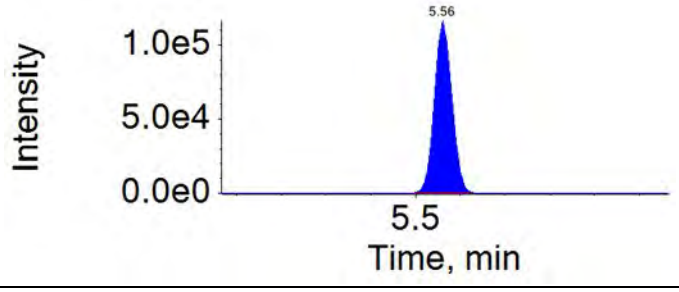
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

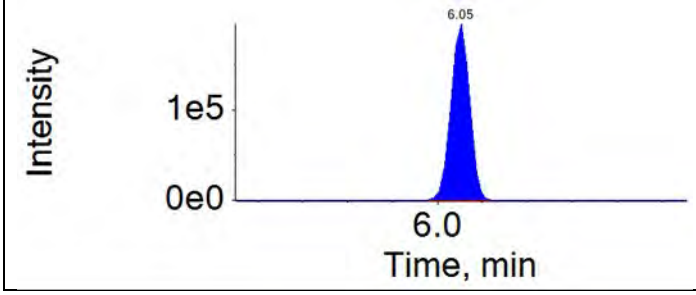
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

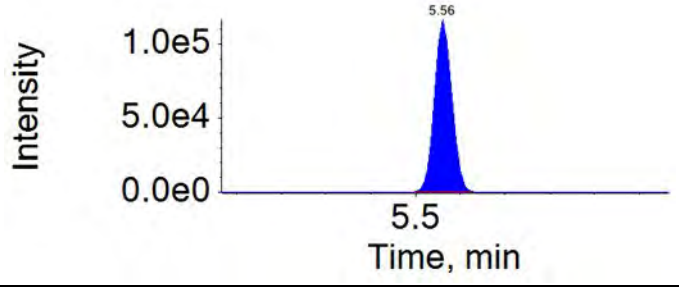
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



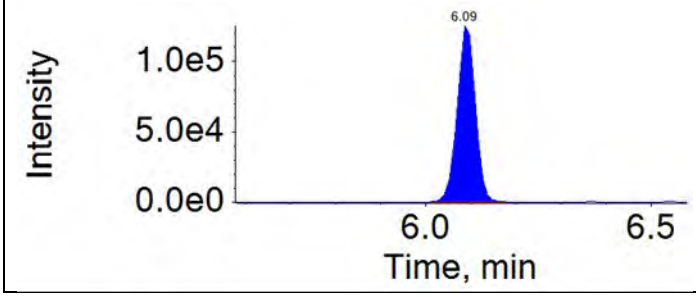


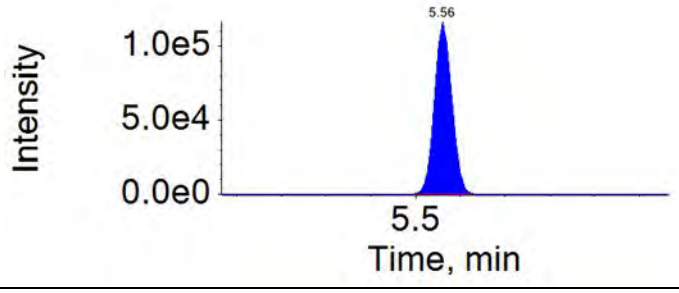
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



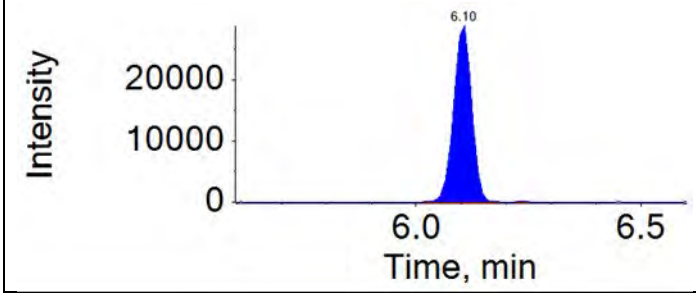


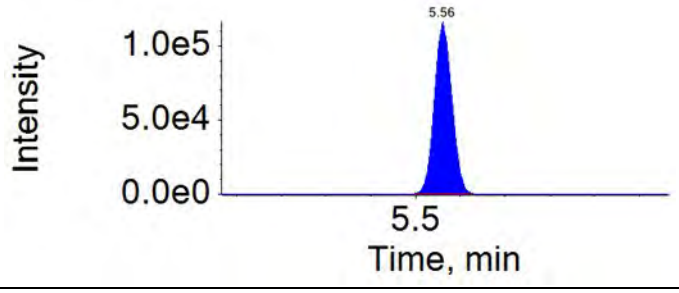
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



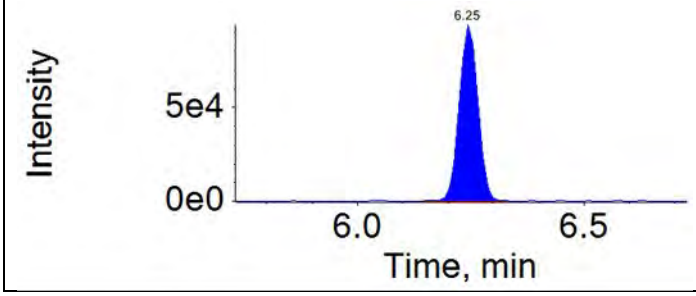


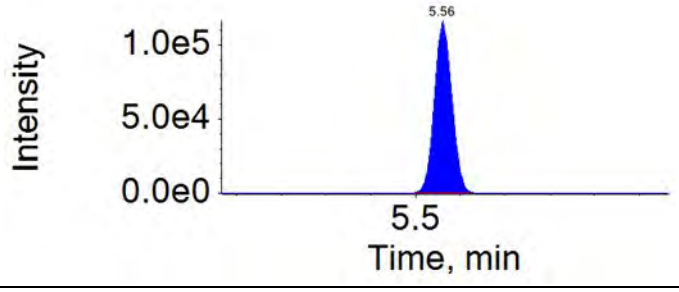
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

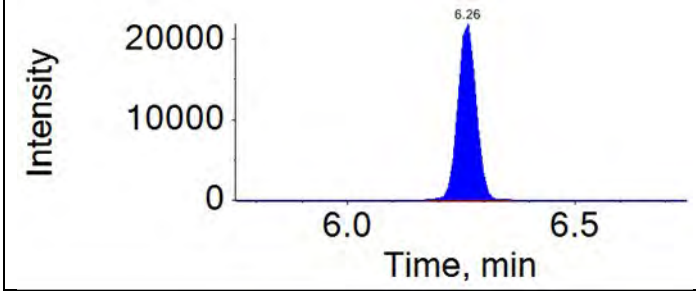
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

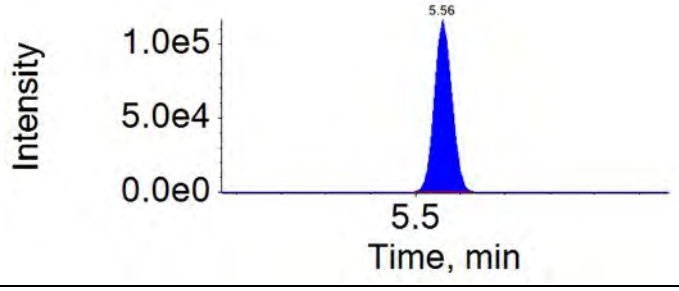
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



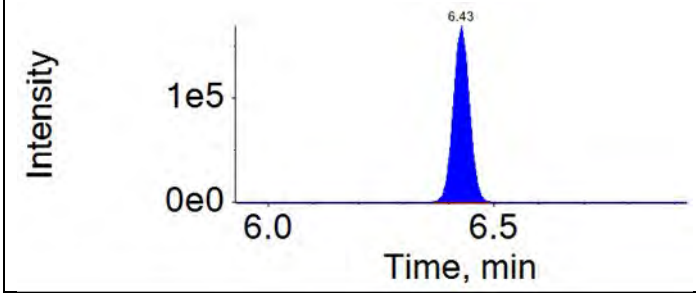


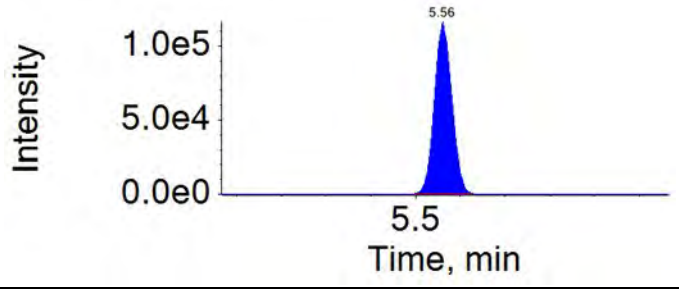
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



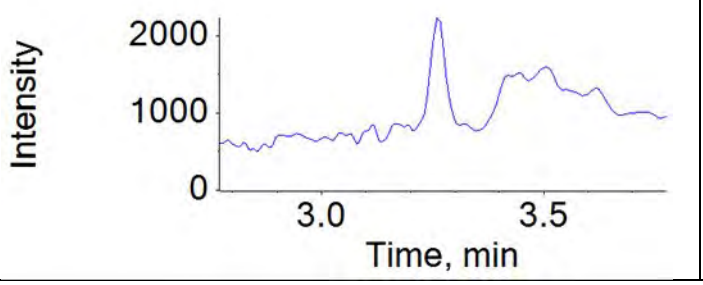


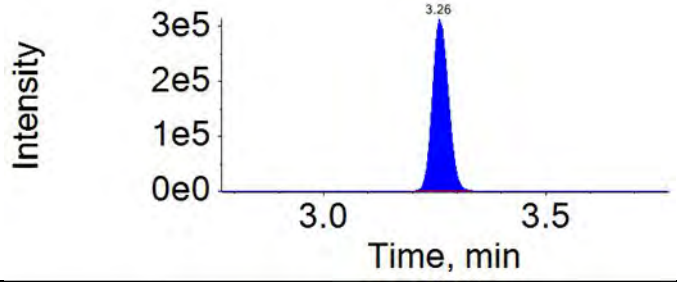
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

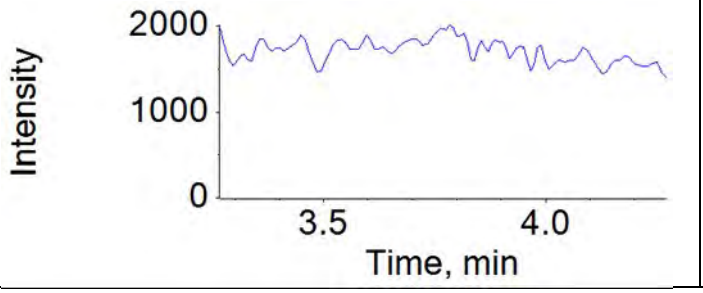
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

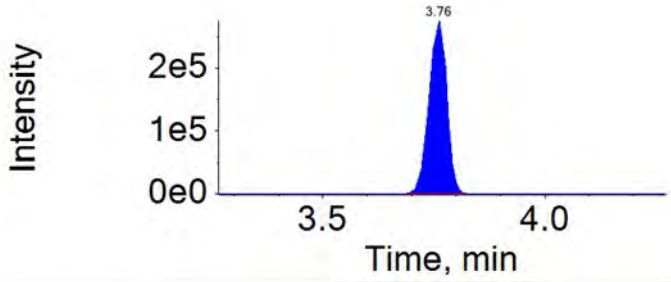
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



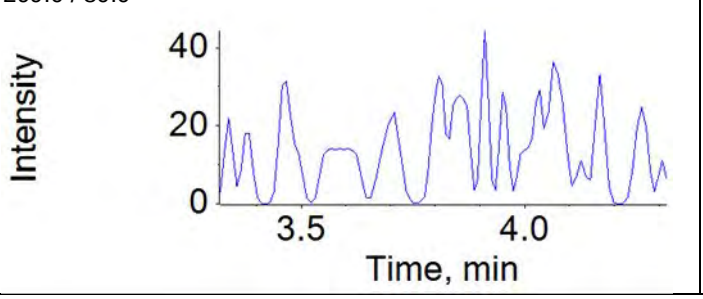


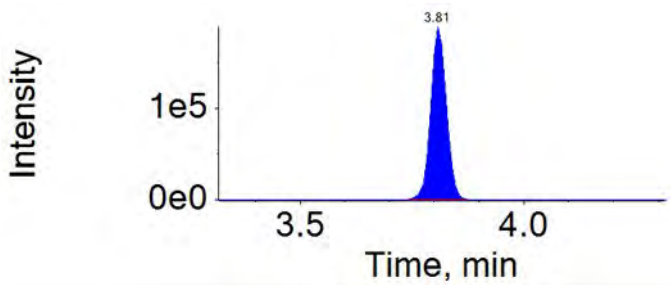
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



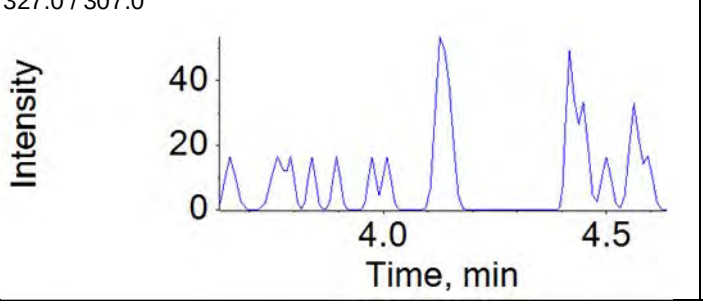


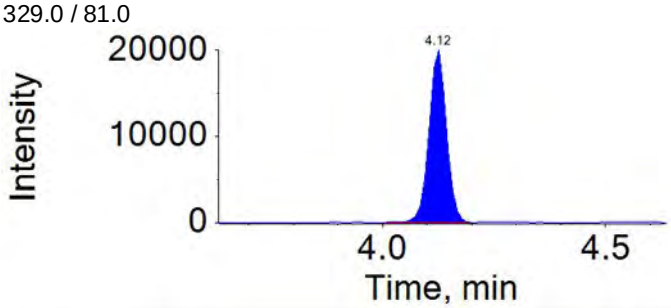
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



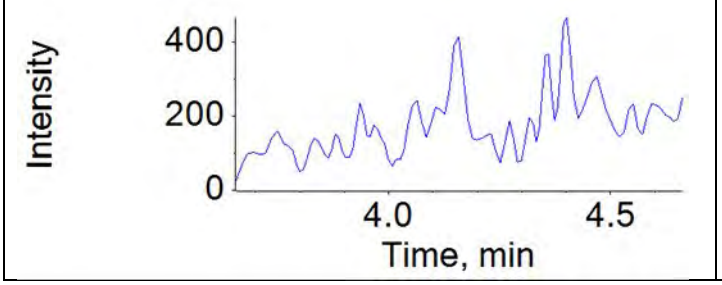


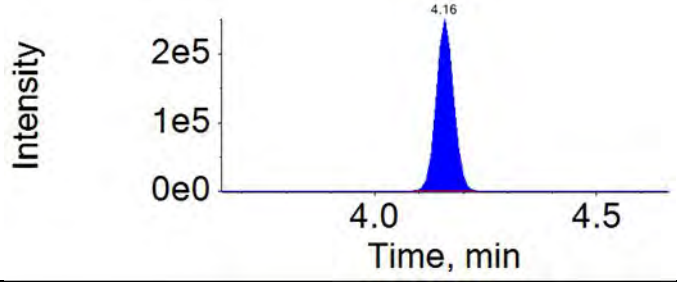
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

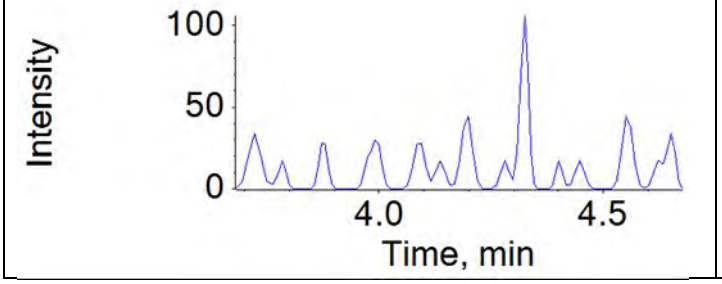
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

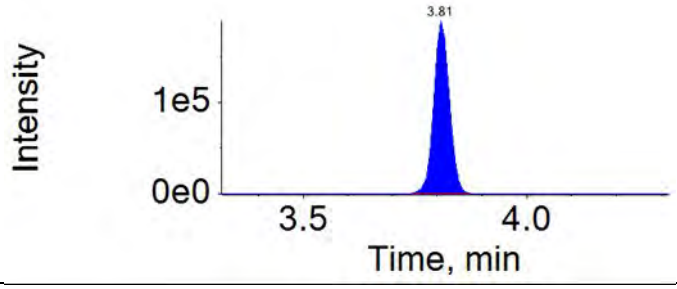
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



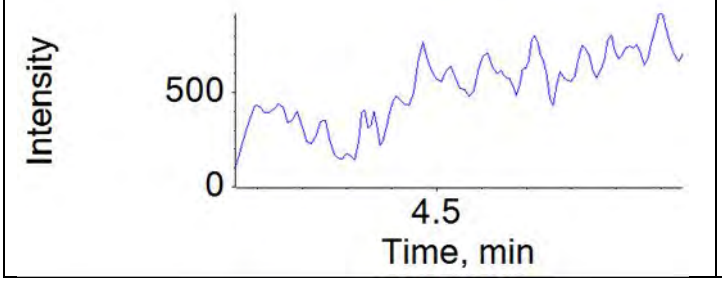


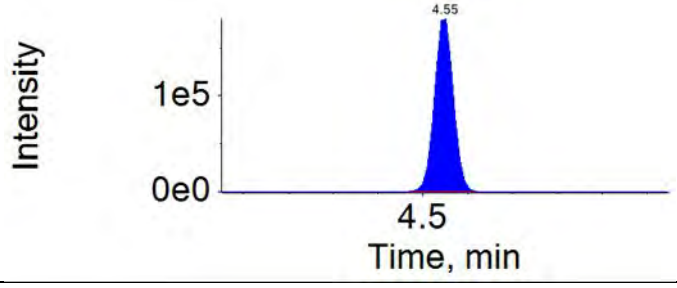
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



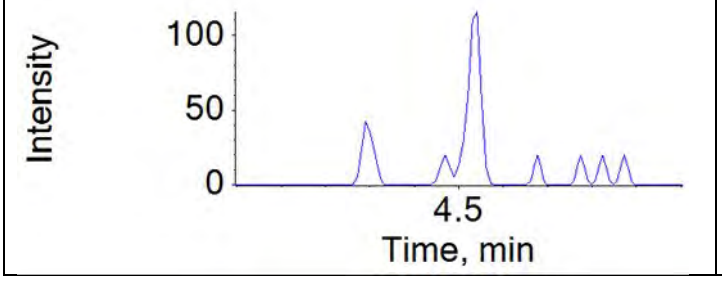


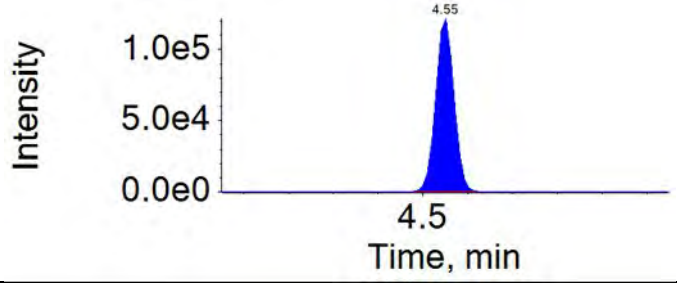
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

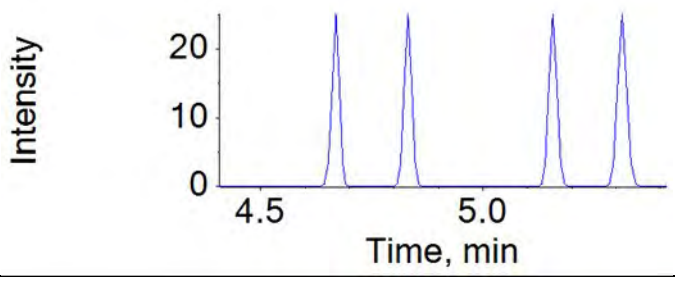
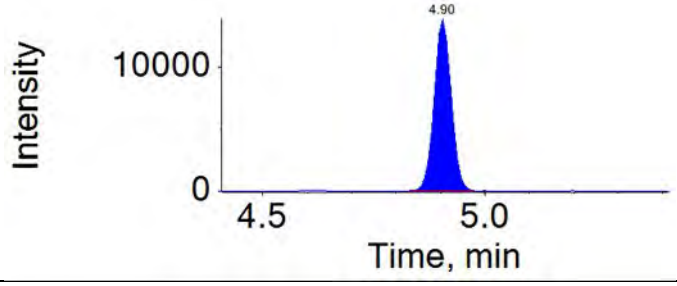


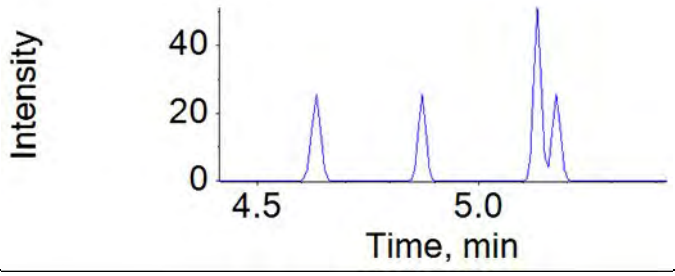
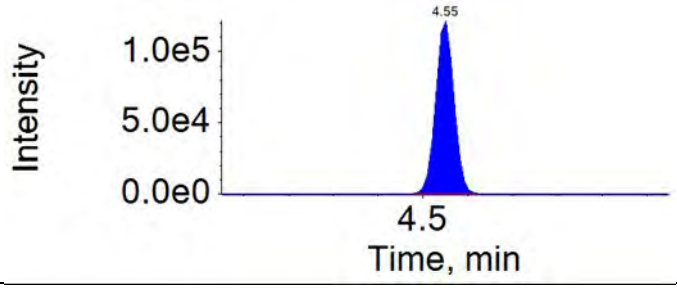


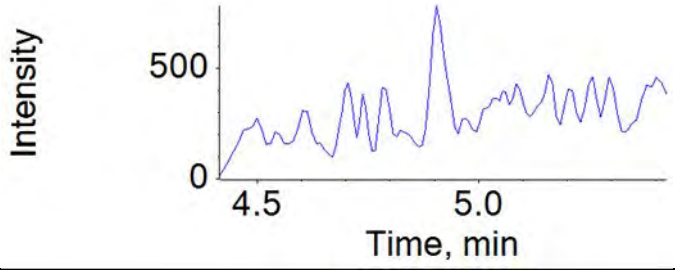
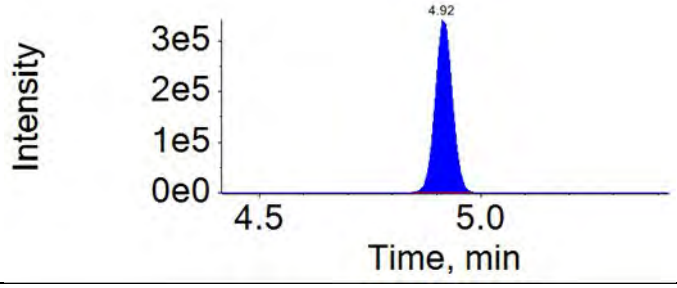
APPROVED
By MCD at 7:46 pm, 11/12/18

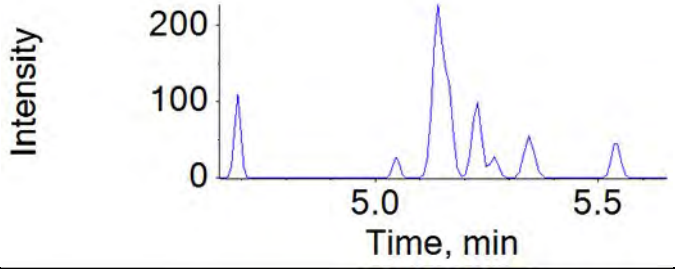
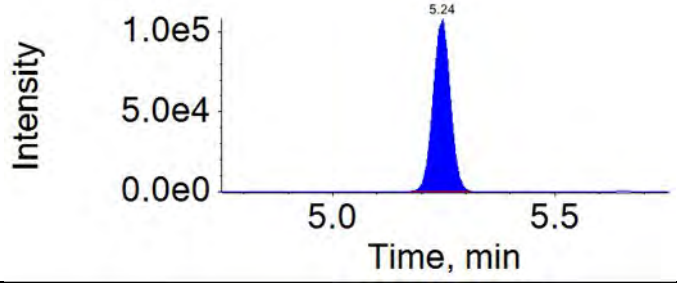
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

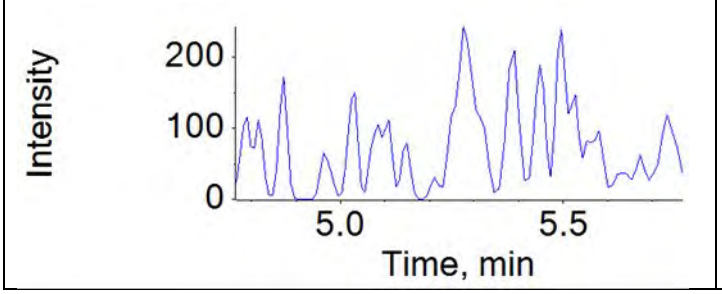
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

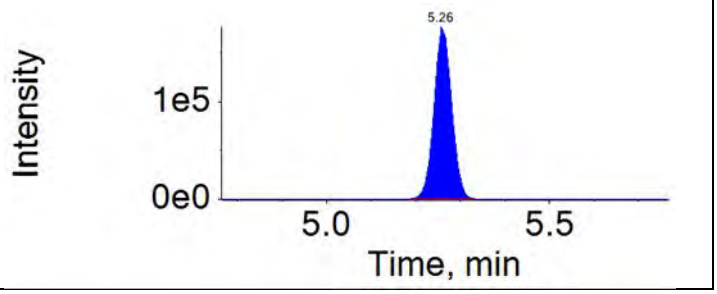
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

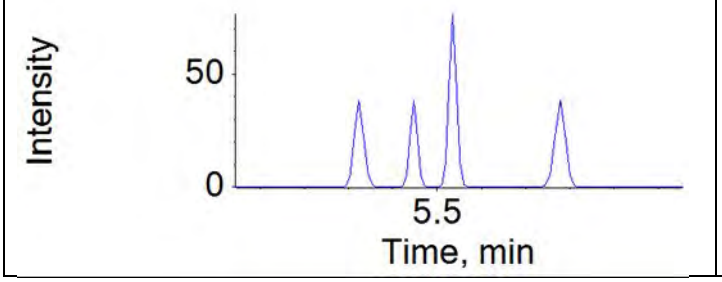
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

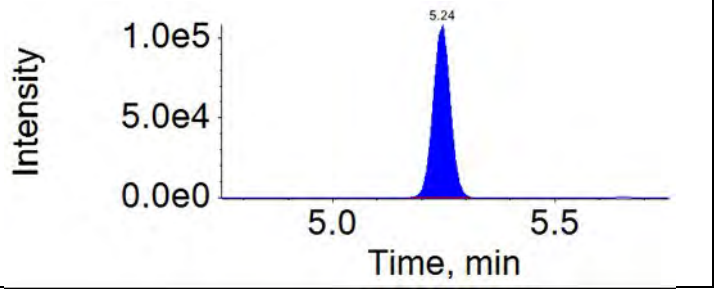
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



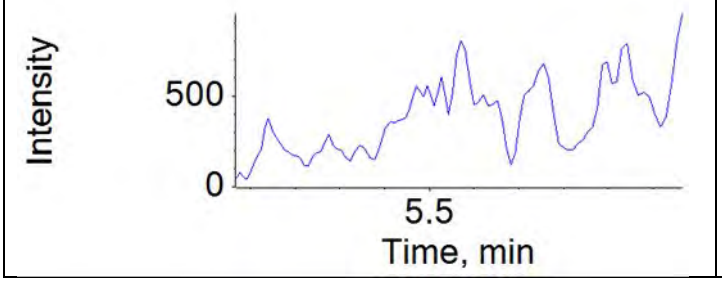


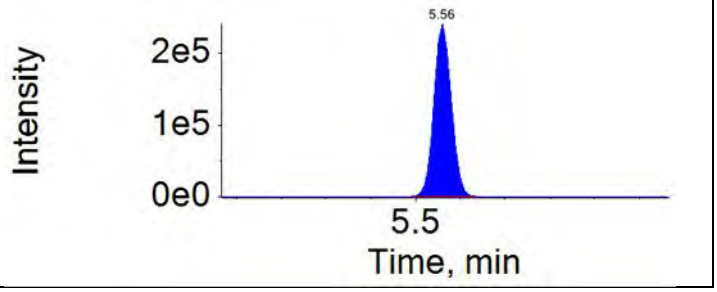
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



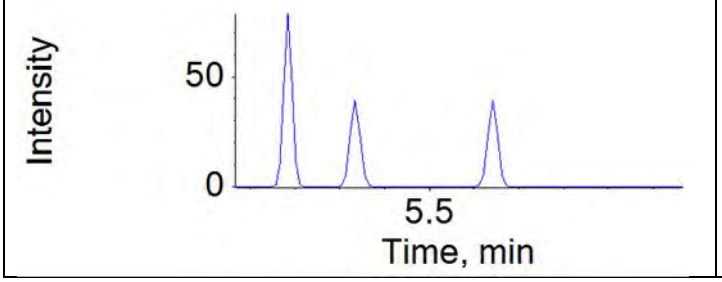


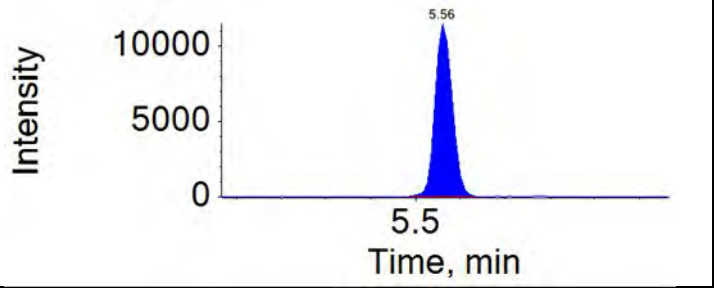
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



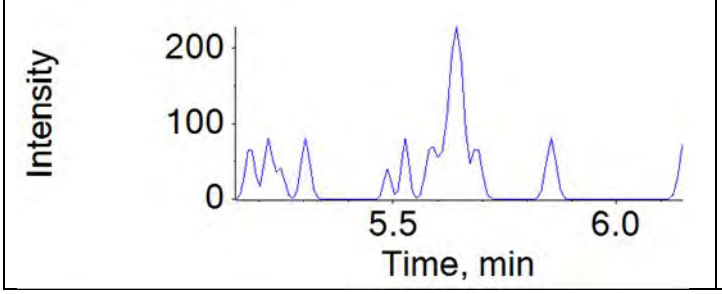


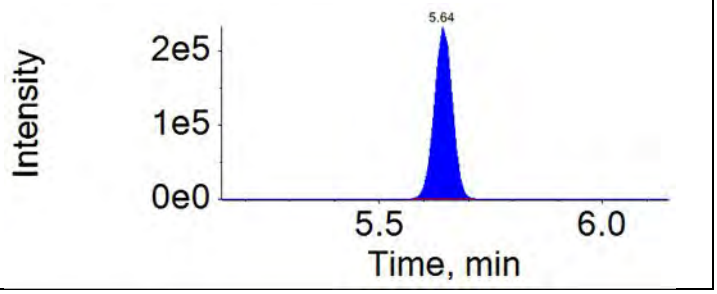
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

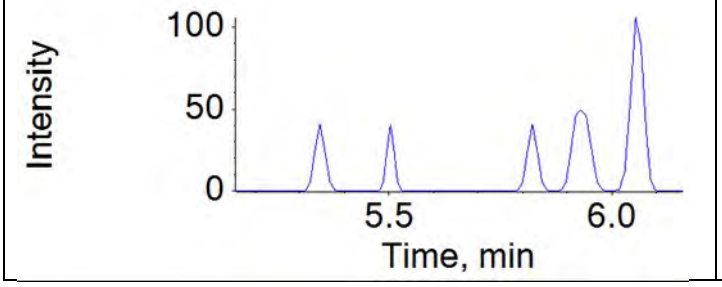
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

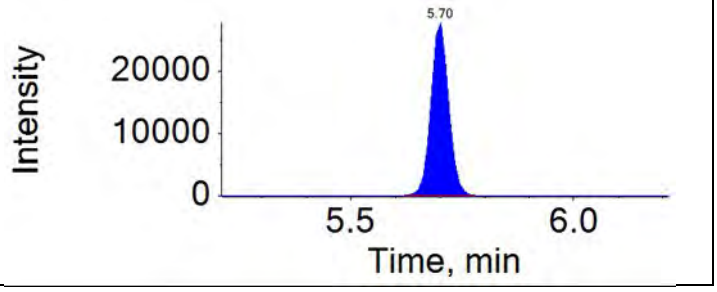
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



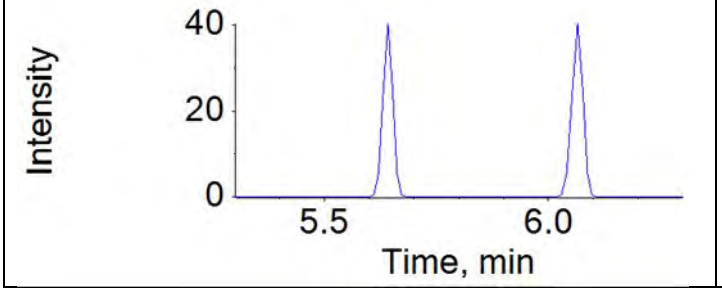


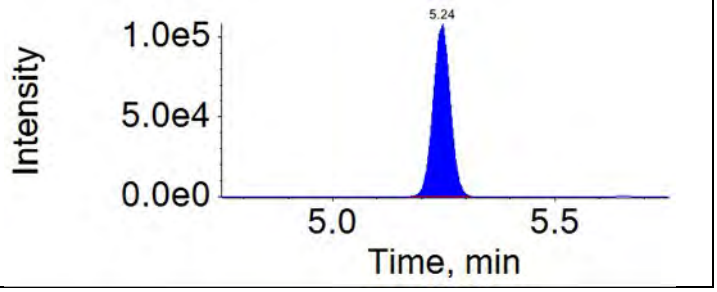
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



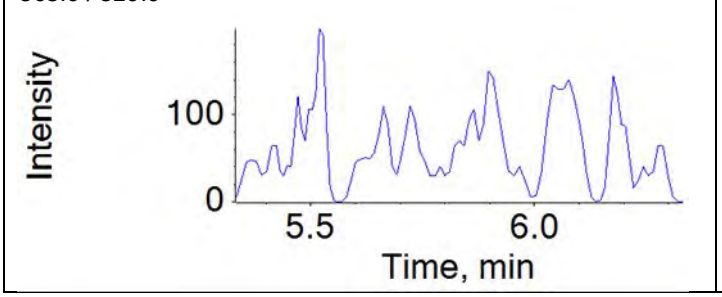


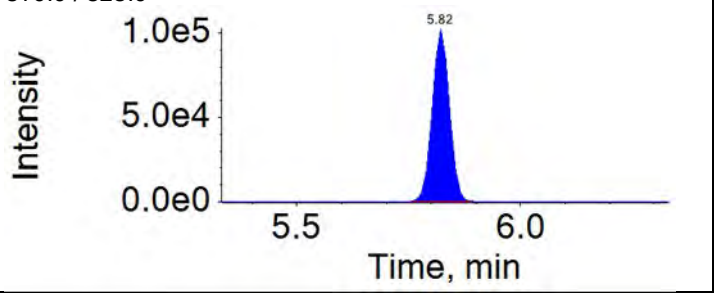
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



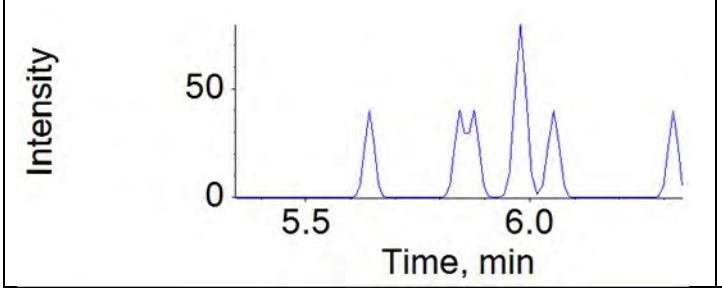


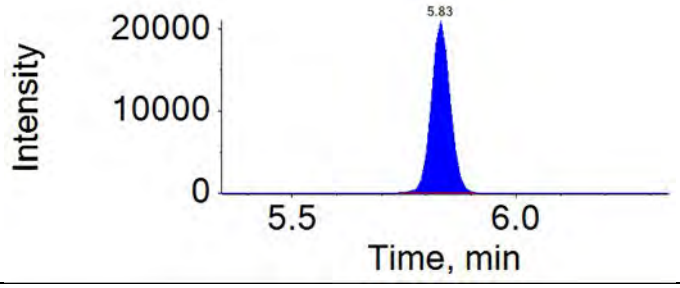
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

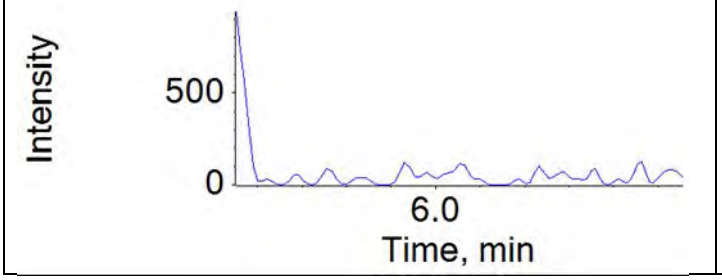
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

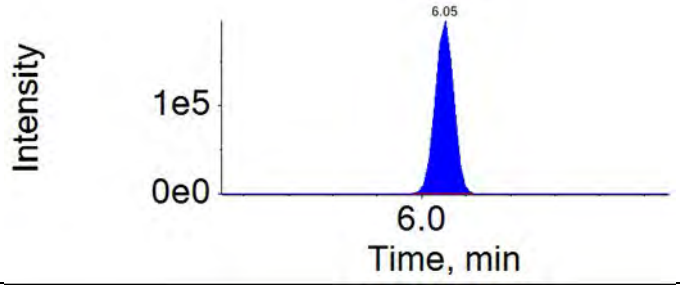
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



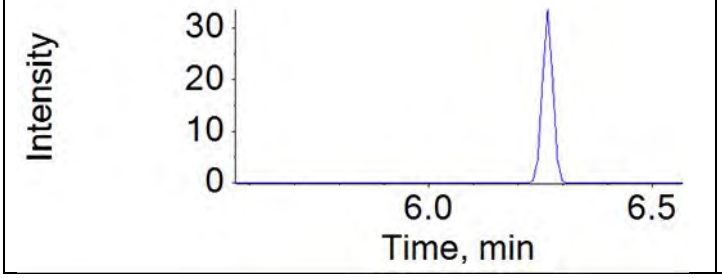


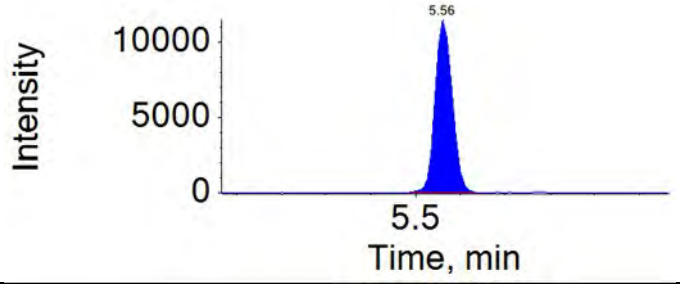
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



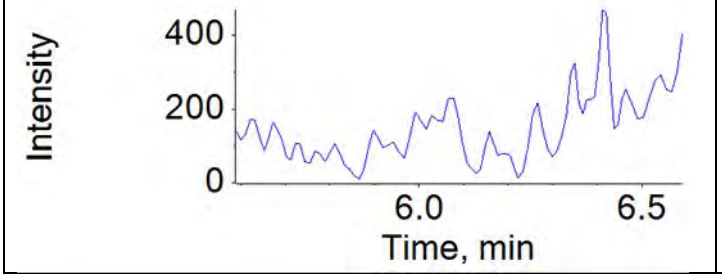


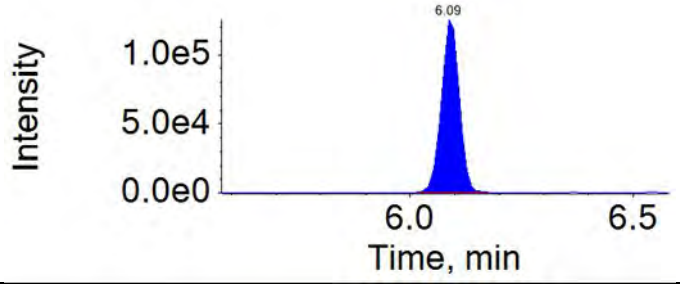
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



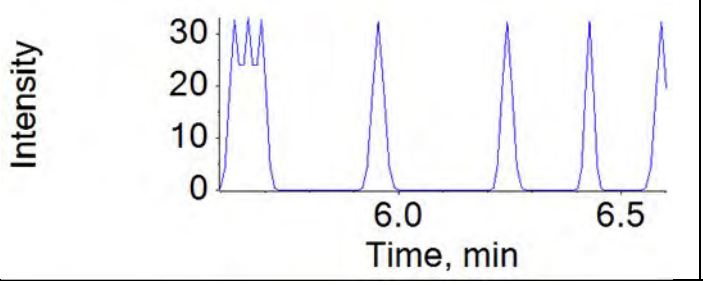


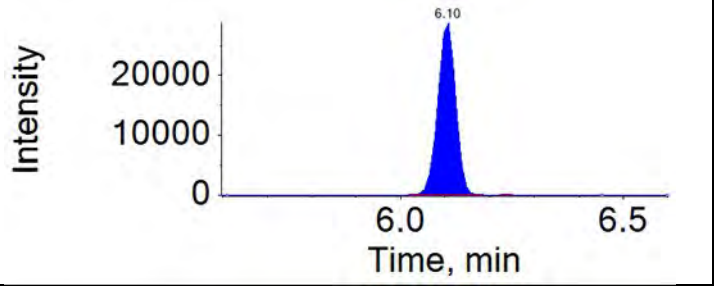
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

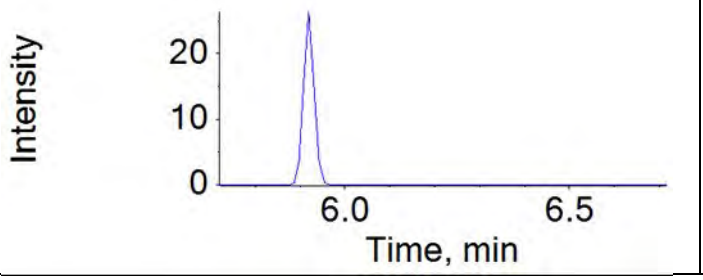
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

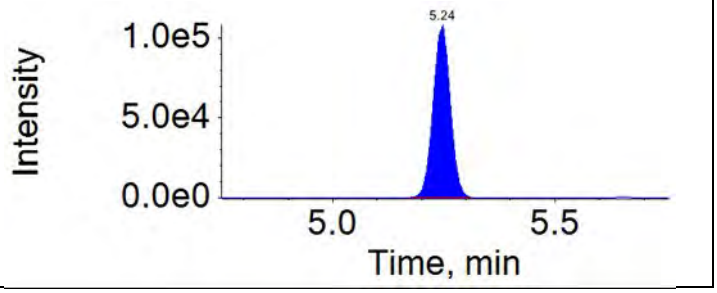
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



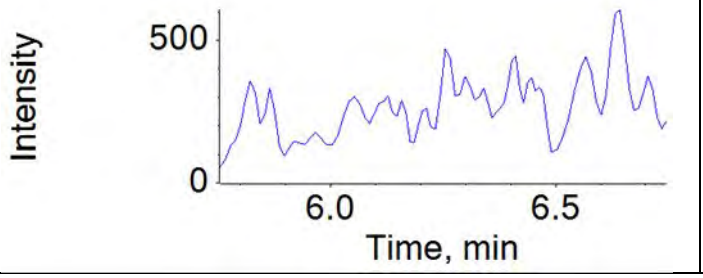


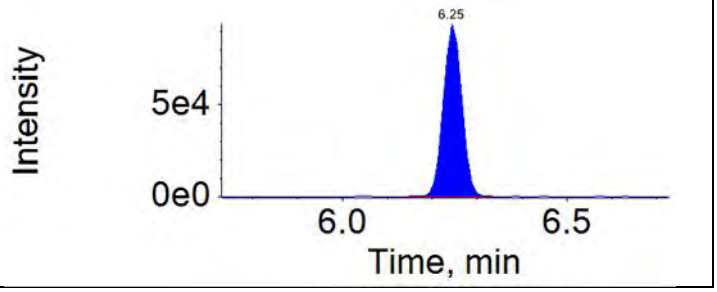
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



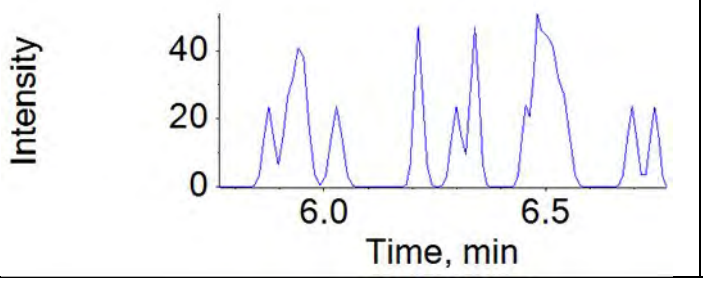


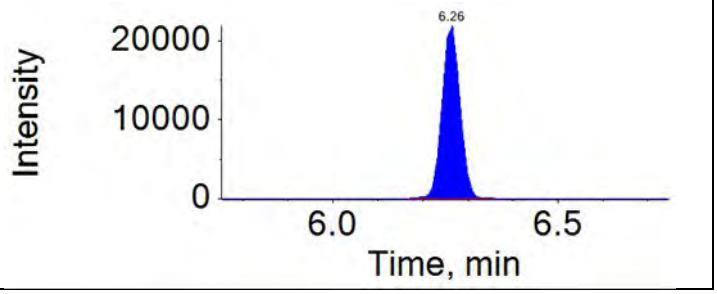
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



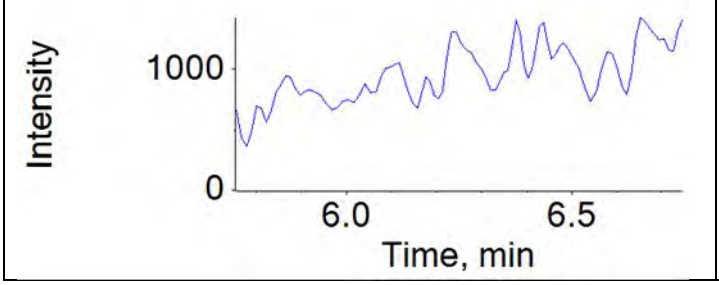


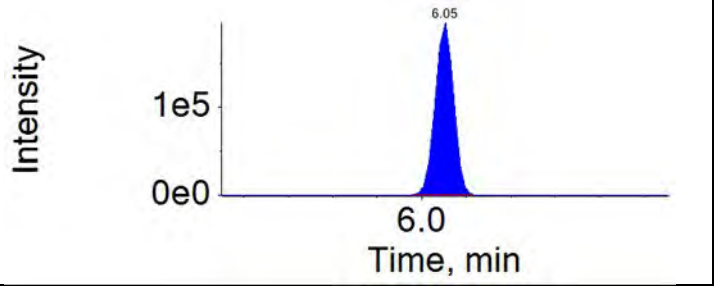
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

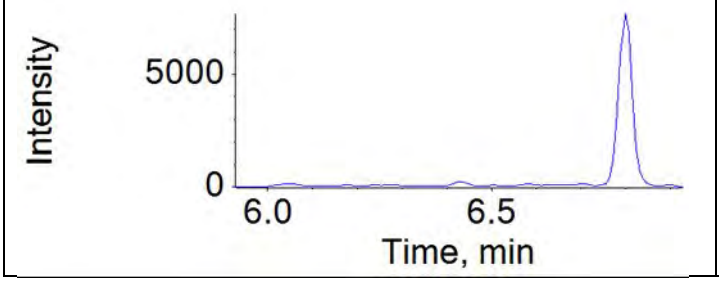
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

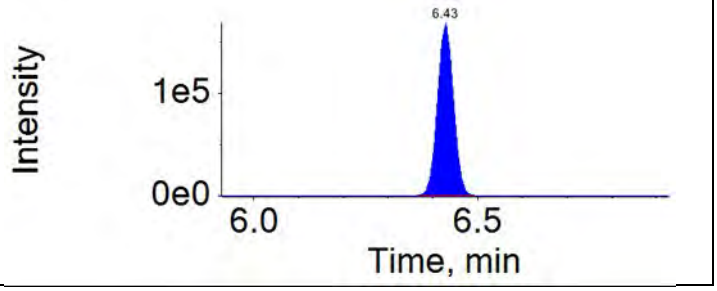
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



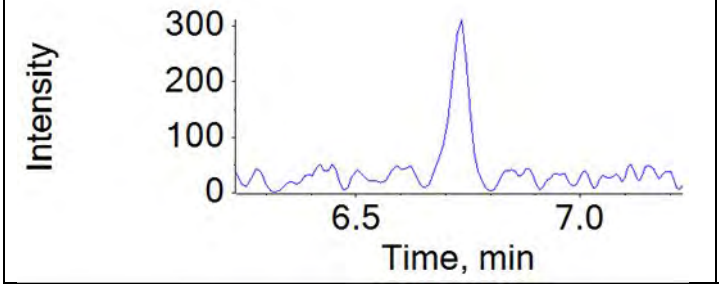


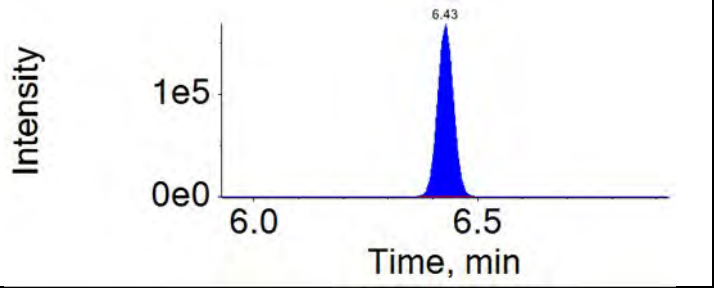
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



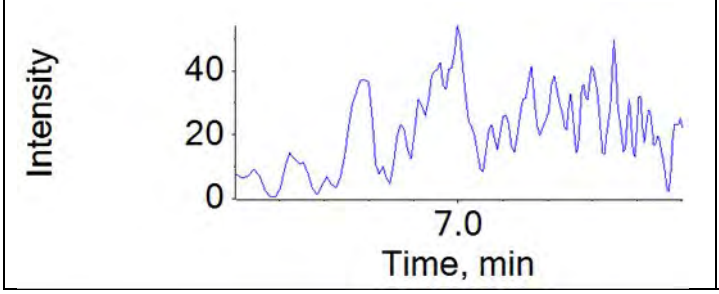


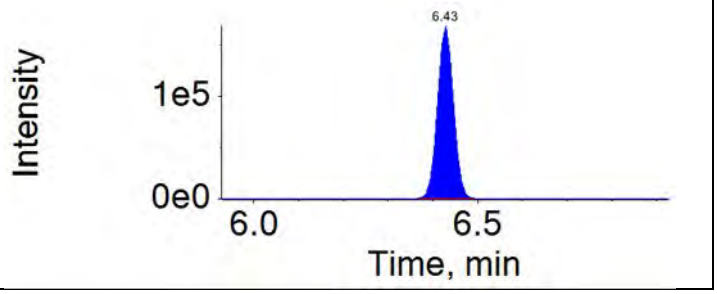
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Ion Ratio Report

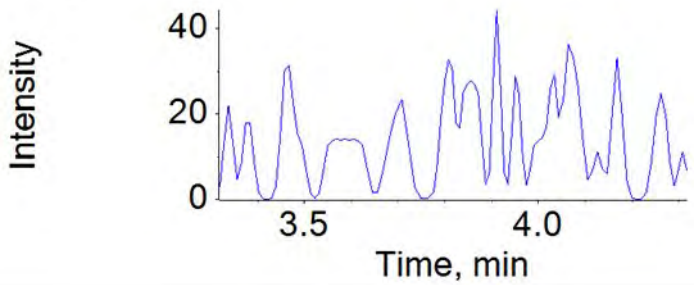
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV12D-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

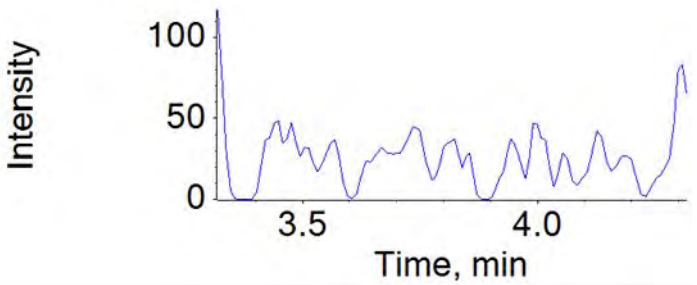
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

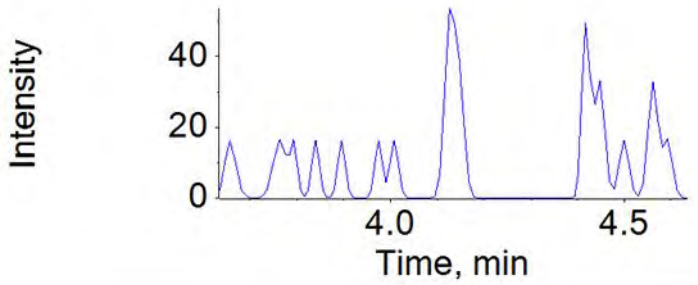
Component: PFBS
Primary Mass: 299.0 / 80.0



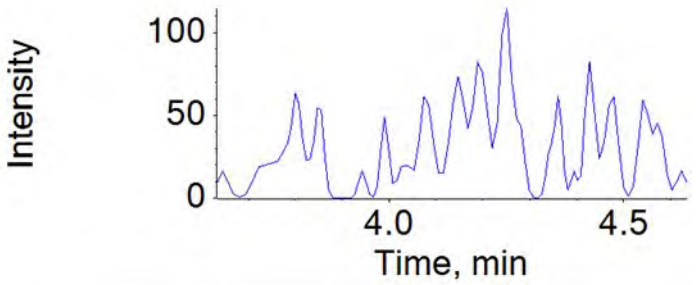
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



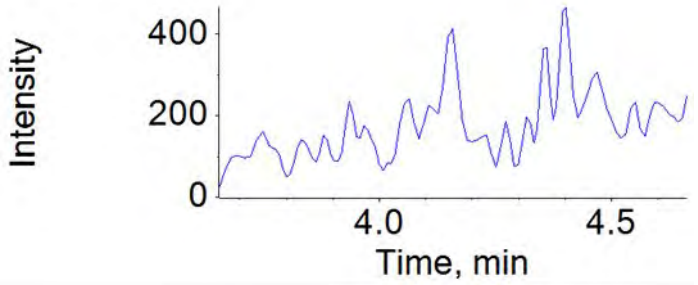
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



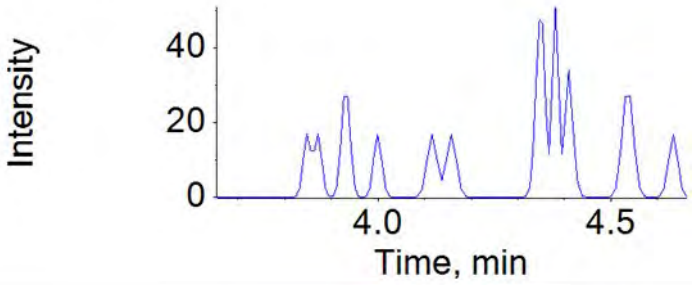
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



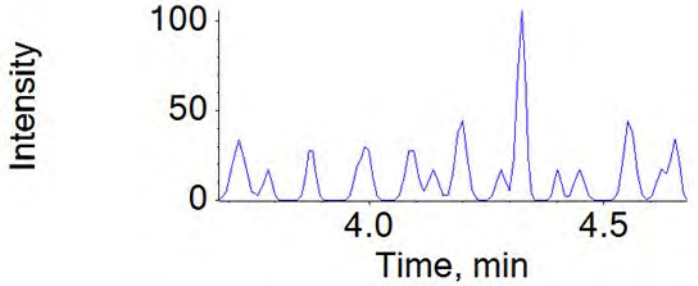
Component: PFHxA
Primary Mass: 313.0 / 269.0



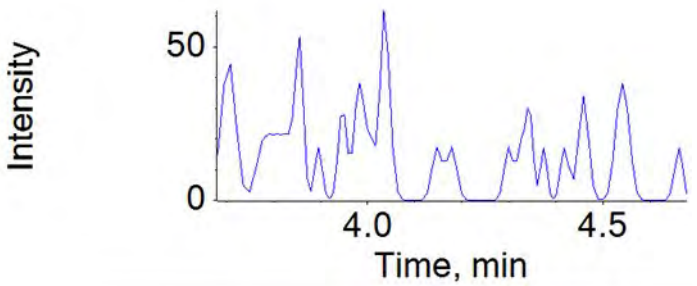
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



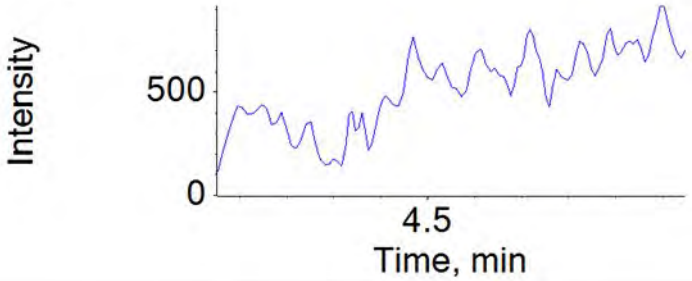
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



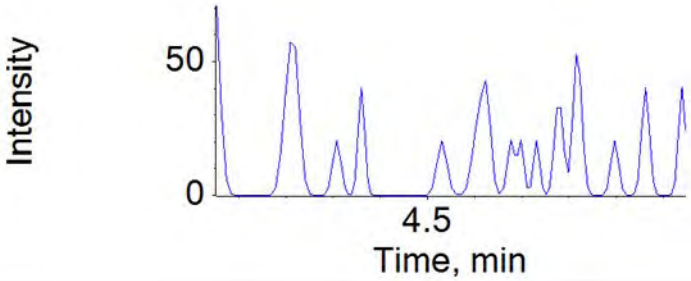
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

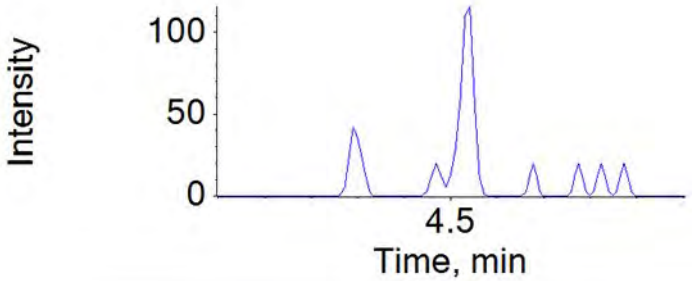
Component: PFHpA
Primary Mass: 363.0 / 319.0



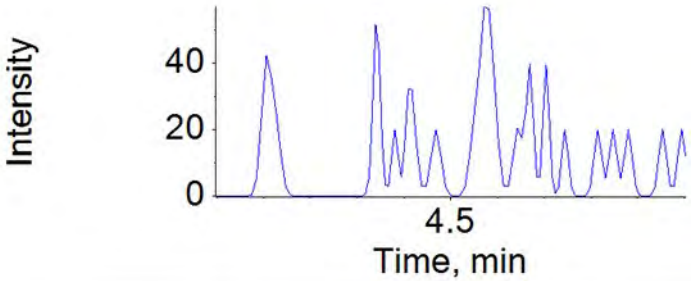
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



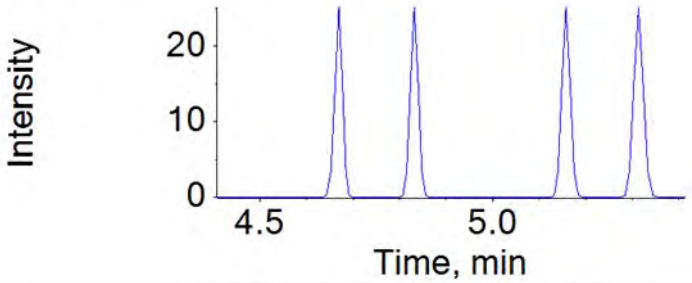
Component: PFHxS
Primary Mass: 399.0 / 80.0



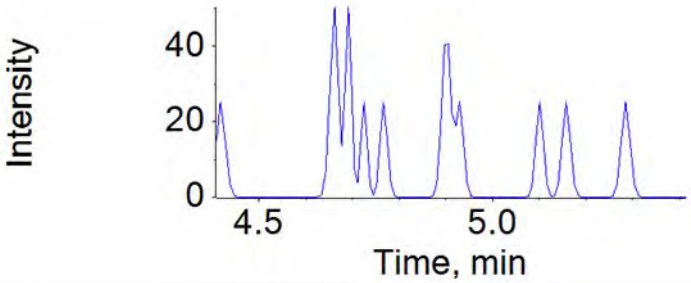
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



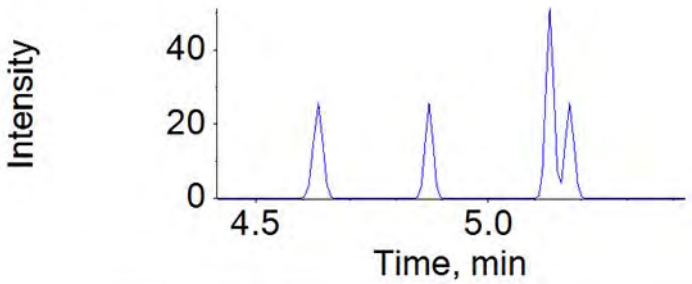
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



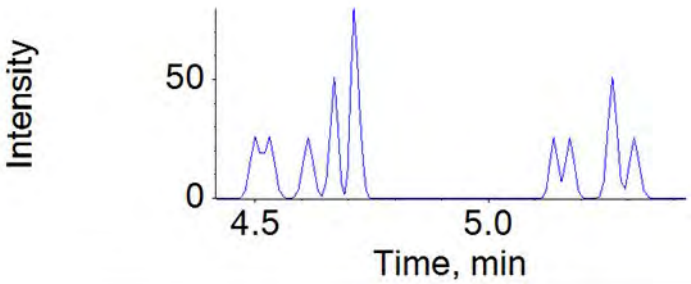
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



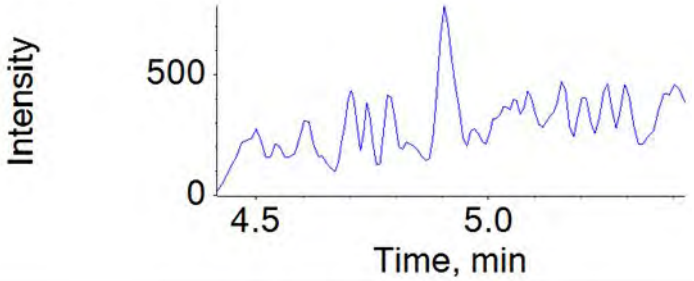
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



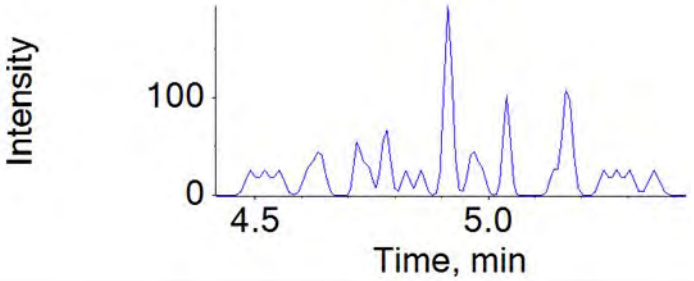
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

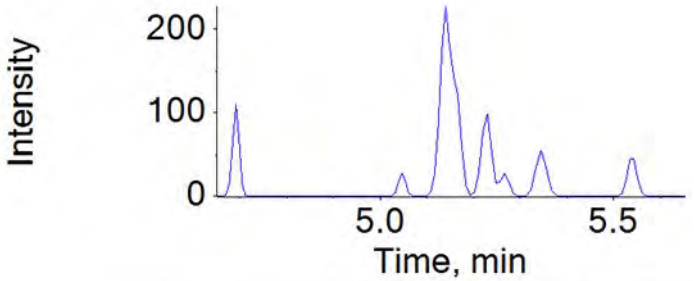
Component: PFOA
Primary Mass: 413.0 / 369.0



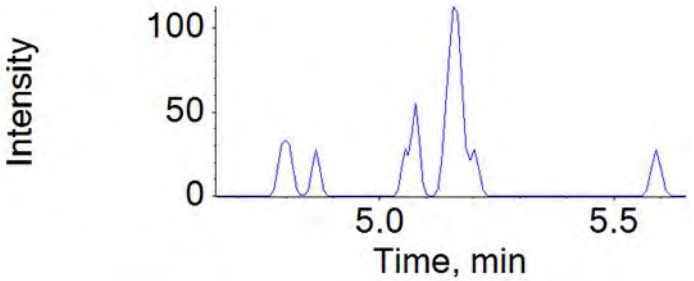
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



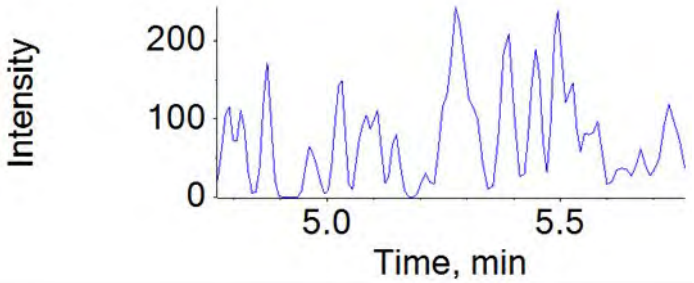
Component: PFOS
Primary Mass: 499.0 / 80.0



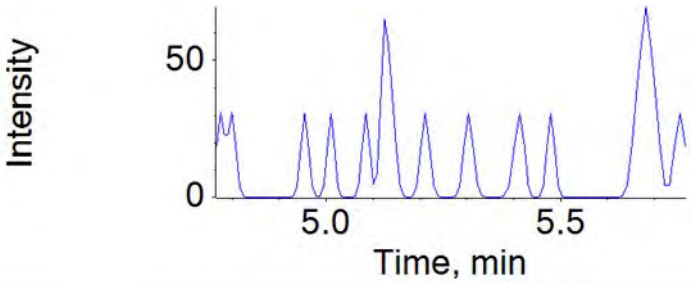
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



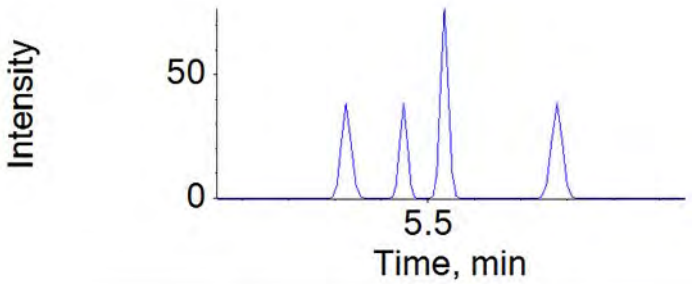
Component: PFNA
Primary Mass: 463.0 / 419.0



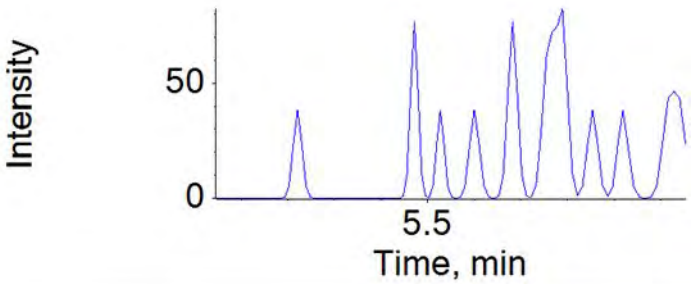
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



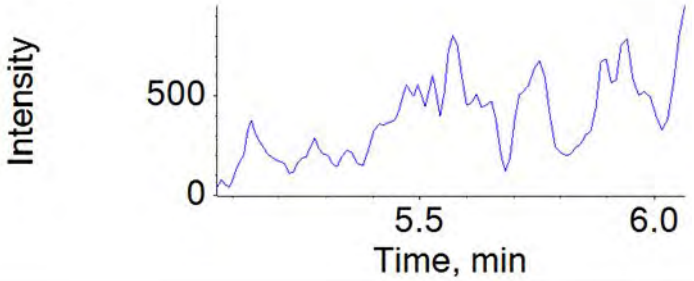
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



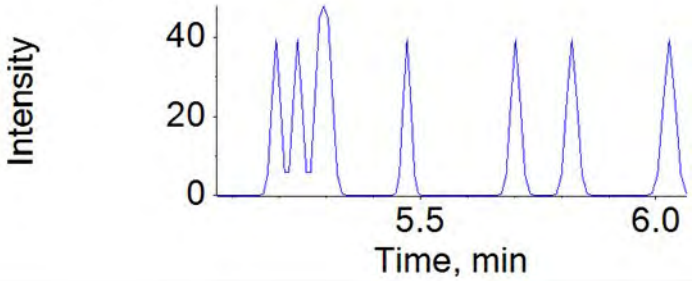
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

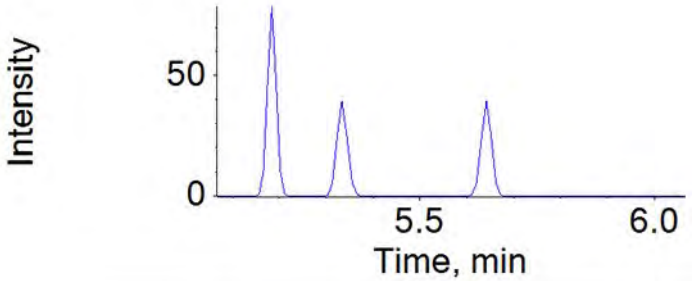
Component: PFDA
Primary Mass: 513.0 / 469.0



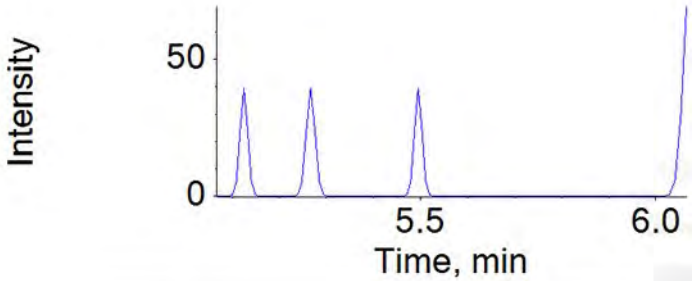
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



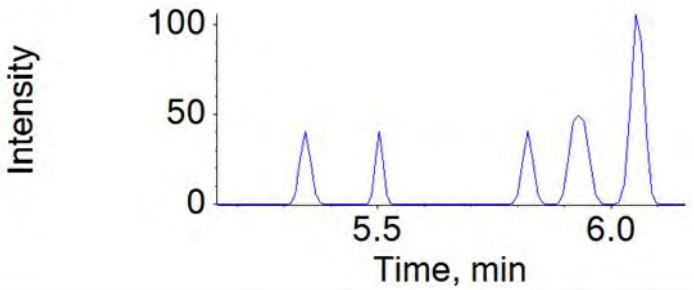
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



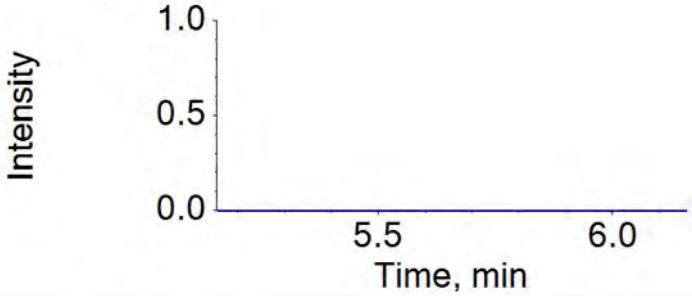
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



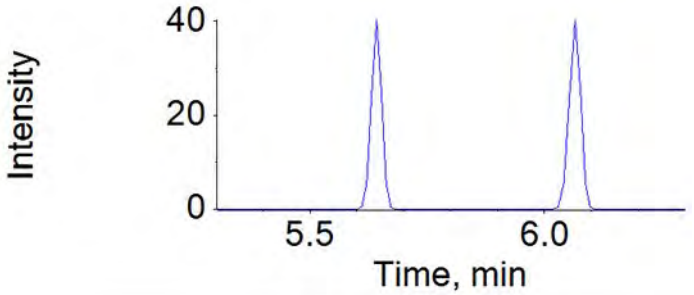
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



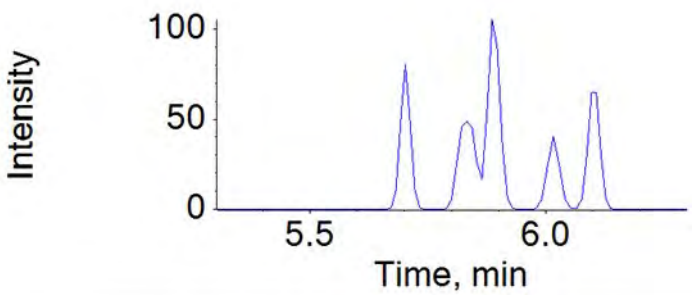
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



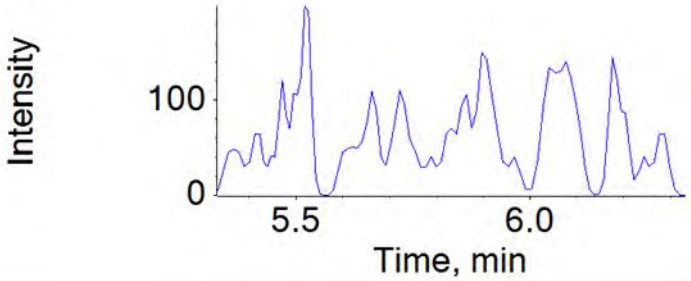
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



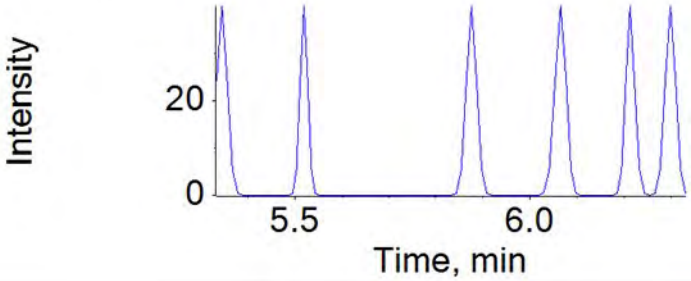
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

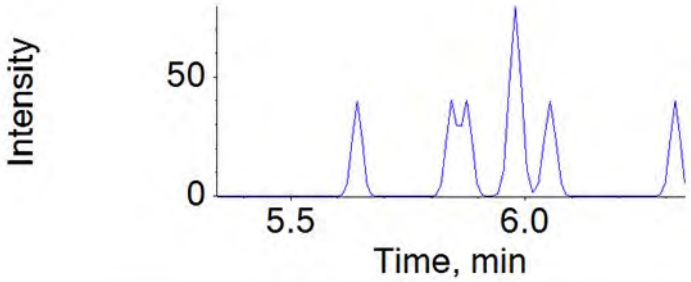
Component: PFUnDA
Primary Mass: 563.0 / 519.0



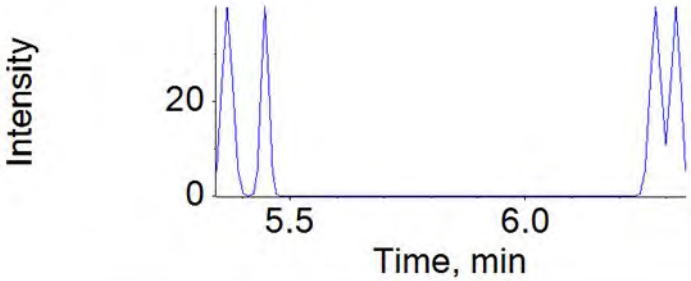
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



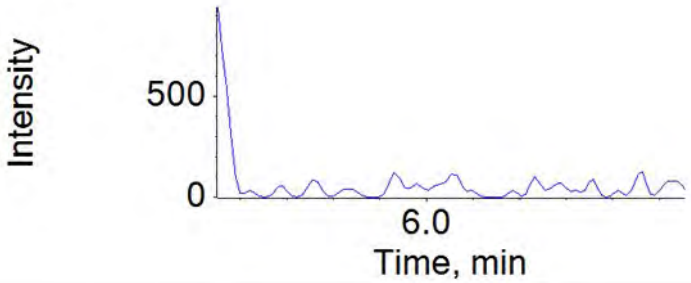
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



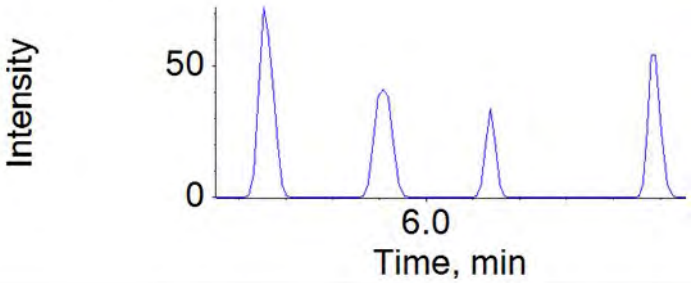
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



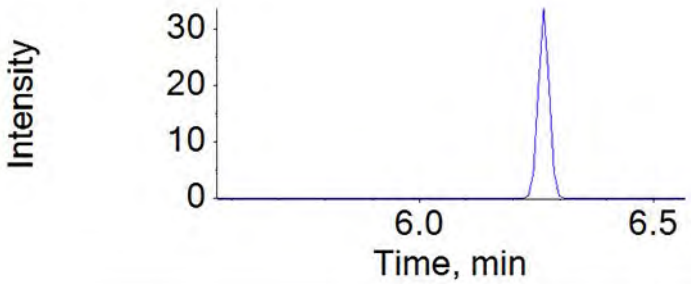
Component: PFDoDA
Primary Mass: 613.0 / 569.0



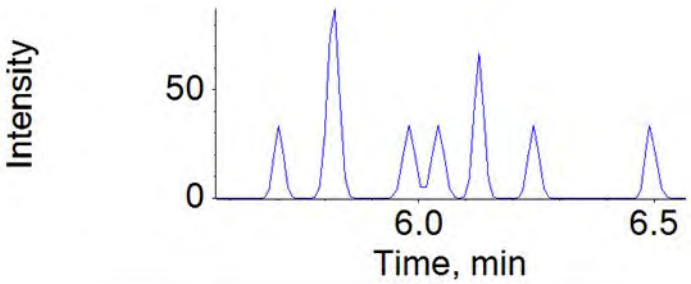
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



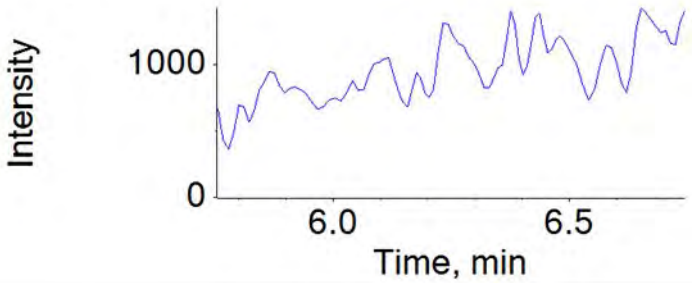
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



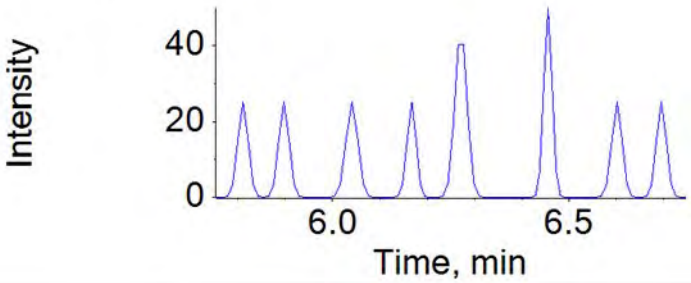
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

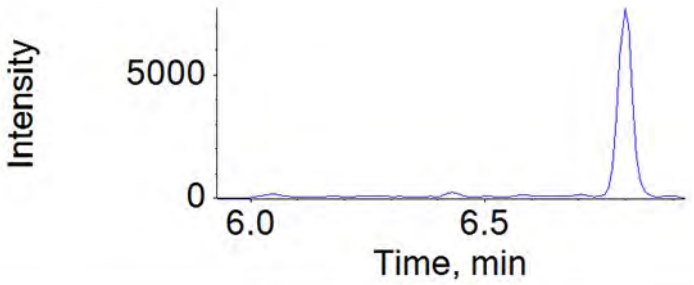
Component: PFTrDA
Primary Mass: 663.0 / 619.0



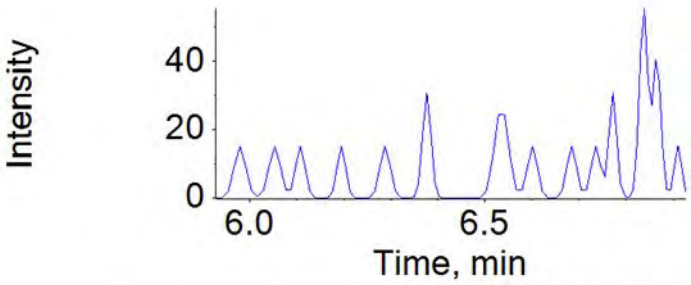
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



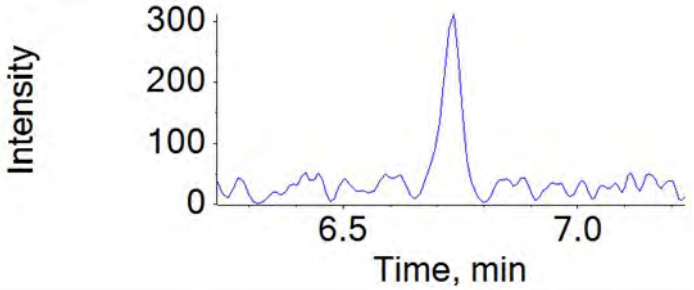
Component: PFTeDA
Primary Mass: 713.0 / 669.0



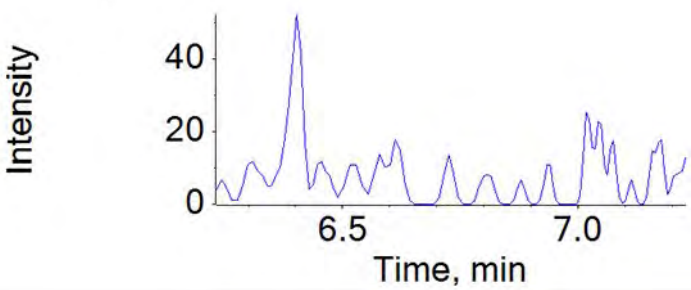
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



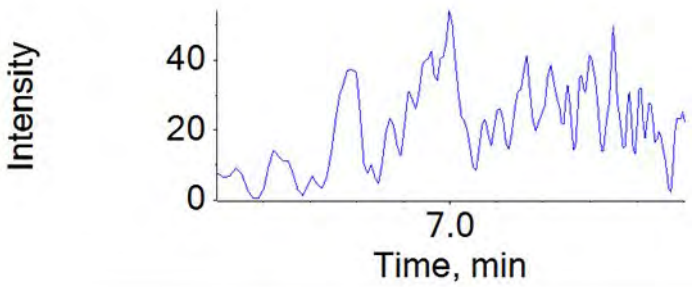
Component: PFHxDA
Primary Mass: 813.0 / 769.0



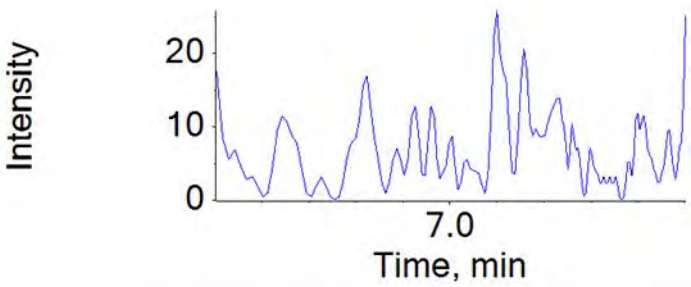
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



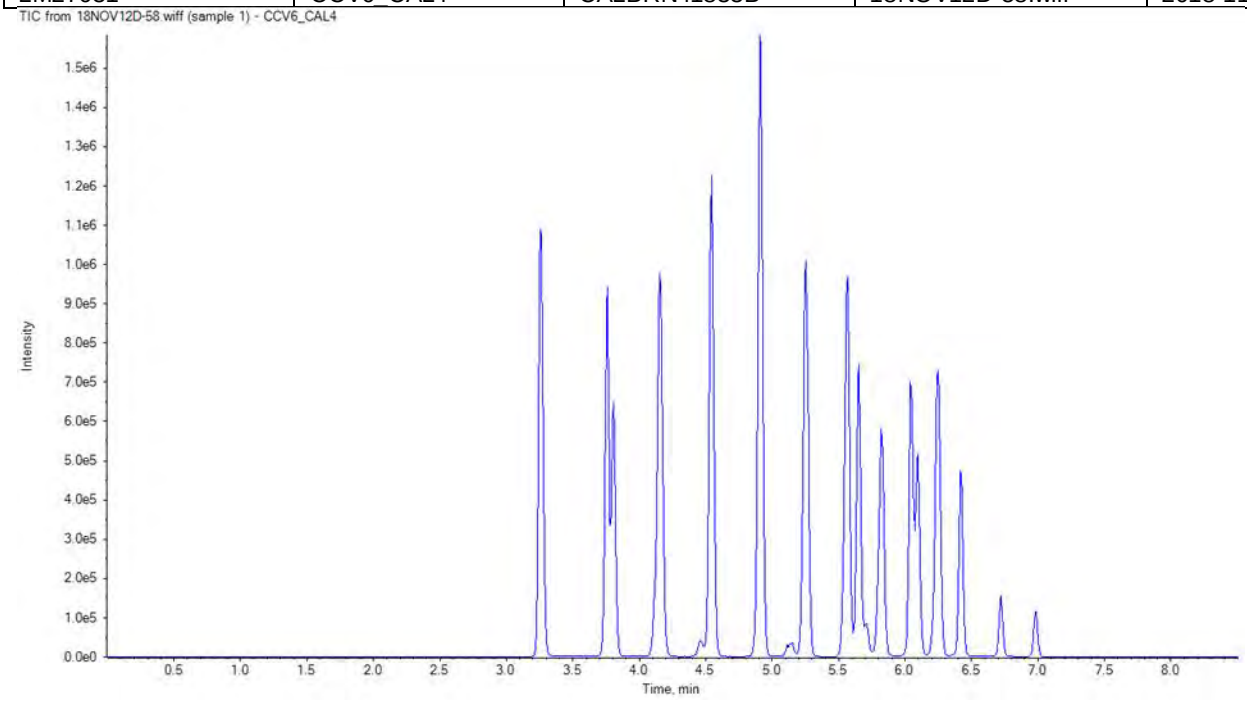
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV6_CAL4	CALBRN41833B	18NOV12D-58.wiff	2018-11-13T01:20:06



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	694943.9	659926.2	5	50	
13C2-PFOA	5.0	519786.2	450219.7	15	50	
13C4-PFOS	4.8	270198.2	249205.8	8	50	
13C2-PFDA	5.0	316423.1	278743.9	14	50	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV6_CAL4	CALBRN41833B	18NOV12D-58.wiff	2018-11-13T01:20:06

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	1105568.8	10	13C4-PFBA	760029.1	5.0	1.455	3.26	1.000	8.000	8.058	1	30	
PFPeA	1127259.1	11	13C5-PFPeA	759638.3	5.0	1.484	3.76	1.000	8.000	8.590	7	30	
PFBS	650121.6	10	13C3-PFBS	446027.4	4.7	1.458	3.81	1.000	7.080	6.933	-2	30	
4:2-FTS	150233.4	11	13C2-4:2-FTS	54881.6	4.7	2.737	4.12	1.000	7.470	7.432	-1	30	
PFHxA	1348987.8	12	13C5-PFHxA	695243.0	5.0	1.940	4.15	1.000	8.000	8.101	1	30	
PFPeS	319026.2	11	13C3-PFBS	446027.4	4.7	0.715	4.17	1.100	7.500	6.944	-7	30	
PFHpA	1384443.9	12	13C4-PFHpA	541625.6	5.0	2.556	4.54	1.000	8.000	8.473	6	30	
PFHxS	517754.3	19	13C3-PFHxS	339752.8	4.7	1.524	4.55	1.000	7.300	7.389	1	30	
6:2-FTS	113664.7	11	13C2-6:2-FTS	33652.2	4.8	3.378	4.90	1.000	7.580	8.173	8	30	
PFHpS	467674.4	11	13C3-PFHxS	339752.8	4.7	1.377	4.91	1.080	7.610	7.246	-5	30	
PFOA	1421585.9	11	13C8-PFOA	883150.2	5.0	1.610	4.91	1.000	8.000	8.597	7	30	
PFOS	478066.3	22	13C8-PFOS	282689.5	4.8	1.691	5.24	1.000	7.400	7.395	0	30	
PFNA	1179828.0	12	13C9-PFNA	501340.6	5.0	2.353	5.26	1.000	8.000	8.486	6	30	
PFNS	300128.1	11	13C8-PFOS	282689.5	4.8	1.062	5.54	1.060	7.680	7.428	-3	30	
PFDA	961061.7	11	13C6-PFDA	647591.8	5.0	1.484	5.57	1.000	8.000	7.868	-2	30	
8:2-FTS	96931.6	11	13C2-8:2-FTS	25579.6	4.8	3.789	5.57	1.000	7.660	8.835	15	30	
PFOSA	1008057.1	11	13C8-PFOSA	641137.8	5.0	1.572	5.65	1.000	8.000	7.680	-4	30	
NMeFOSAA	108210.9	19	d3-NMeFOSAA	73403.0	5.0	1.474	5.71	1.000	8.000	8.332	4	30	
PFDS	229123.3	11	13C8-PFOS	282689.5	4.8	0.811	5.80	1.110	7.700	7.344	-5	30	
PFUnDA	804226.7	11	13C7-PFUnDA	266920.0	5.0	3.013	5.82	1.000	8.000	7.877	-2	30	
NEtFOSAA	95358.9	21	d5-NEtFOSAA	69388.5	5.0	1.374	5.84	1.000	8.000	7.204	-10	30	
PFDoDA	903550.9	12	13C2-PFDoDA	564228.7	5.0	1.601	6.04	1.000	8.000	8.155	2	30	
10:2-FTS	67615.6	11	13C2-8:2-FTS	25579.6	4.8	2.643	6.06	1.090	7.710	8.805	14	30	
NMePFOSAE	663106.2	11	d7-NMePFOSAE	318171.3	5.0	2.084	6.10	1.000	8.000	8.674	8	30	
NMePFOSA	117948.1	11	d3-NMePFOSA	75466.9	5.0	1.563	6.10	1.000	8.000	7.710	-4	30	
PFDoS	118024.9	11	13C8-PFOS	282689.5	4.8	0.418	6.21	1.190	7.740	7.312	-6	30	
NEtPFOSAE	685532.3	11	d9-NEtPFOSAE	281982.8	5.0	2.431	6.25	1.000	8.000	7.800	-3	30	
NEtPFOSA	103077.1	11	d5-NEtPFOSA	56290.4	5.0	1.831	6.27	1.000	8.000	8.410	5	30	
PFTrDA	775027.4	11	13C2-PFDoDA	564228.7	5.0	1.374	6.24	1.030	8.000	8.670	8	30	
PFTeDA	594227.5	11	13C2-PFTeDA	403537.1	5.0	1.473	6.42	1.000	8.000	8.255	3	30	
PFHxDA	290625.8	11	13C2-PFTeDA	403537.1	5.0	0.720	6.72	1.050	8.000	8.580	7	30	
PFODA	248289.9	10	13C2-PFTeDA	403537.1	5.0	0.615	6.98	1.090	8.000	8.569	7	30	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV6_CAL4			**Data File:**		18NOV12D-58.wiff
Sample ID:	CALBRN41833B			**Acquis Date:**		2018-11-13T01:20:06
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV3-11
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	694943.9	659926.2	5	50	
13C2-PFOA	5.0	519786.2	450219.7	15	50	
13C4-PFOS	4.8	270198.2	249205.8	8	50	
13C2-PFDA	5.0	316423.1	278743.9	14	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	760029.1	13C3-PFBA	694943.9	1.094	5.000	4.903	98	70-130	
E13C5-PFPeA	759638.3	13C3-PFBA	694943.9	1.093	5.000	4.903	98	70-130	
E13C3-PFBS	446027.4	13C3-PFBA	694943.9	0.642	4.650	4.531	97	70-130	
E13C2-4:2-FTS	54881.6	13C2-PFOA	519786.2	0.106	4.670	4.703	101	70-130	
E13C5-PFHxA	695243.0	13C2-PFOA	519786.2	1.338	5.000	4.832	97	70-130	
E13C3-PFHxS	339752.8	13C2-PFOA	519786.2	0.654	4.730	4.485	95	70-130	
E13C4-PFHpA	541625.6	13C2-PFOA	519786.2	1.042	5.000	4.694	94	70-130	
E13C2-6:2-FTS	33652.2	13C2-PFOA	519786.2	0.065	4.750	4.332	91	70-130	
E13C8-PFOA	883150.2	13C2-PFOA	519786.2	1.699	5.000	4.681	94	70-130	
E13C8-PFOS	282689.5	13C4-PFOS	270198.2	1.046	4.780	4.636	97	70-130	
E13C9-PFNA	501340.6	13C4-PFOS	270198.2	1.855	5.000	5.173	103	70-130	
E13C6-PFDA	647591.8	13C2-PFDA	316423.1	2.047	5.000	4.776	96	70-130	
E13C2-8:2-FTS	25579.6	13C2-PFDA	316423.1	0.081	4.790	4.032	84	70-130	
E13C8-PFOSA	641137.8	13C2-PFDA	316423.1	2.026	5.000	4.492	90	70-130	
Ed3-NMeFOSAA	73403.0	13C2-PFDA	316423.1	0.232	5.000	4.187	84	70-130	
E13C7-PFUnDA	266920.0	13C2-PFDA	316423.1	0.844	5.000	4.898	98	70-130	
Ed5-NEtFOSAA	69388.5	13C2-PFDA	316423.1	0.219	5.000	4.639	93	70-130	
E13C2-PFDoDA	564228.7	13C2-PFDA	316423.1	1.783	5.000	4.630	93	70-130	
Ed7-NMePFOSAE	318171.3	13C2-PFDA	316423.1	1.006	5.000	4.351	87	70-130	
Ed3-NMePFOSA	75466.9	13C2-PFDA	316423.1	0.239	5.000	4.333	87	70-130	
Ed9-NEtPFOSAE	281982.8	13C2-PFDA	316423.1	0.891	5.000	4.635	93	70-130	
Ed5-NEtPFOSA	56290.4	13C2-PFDA	316423.1	0.178	5.000	4.173	83	70-130	
E13C2-PFTeDA	403537.1	13C2-PFDA	316423.1	1.275	5.000	4.477	90	70-130	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

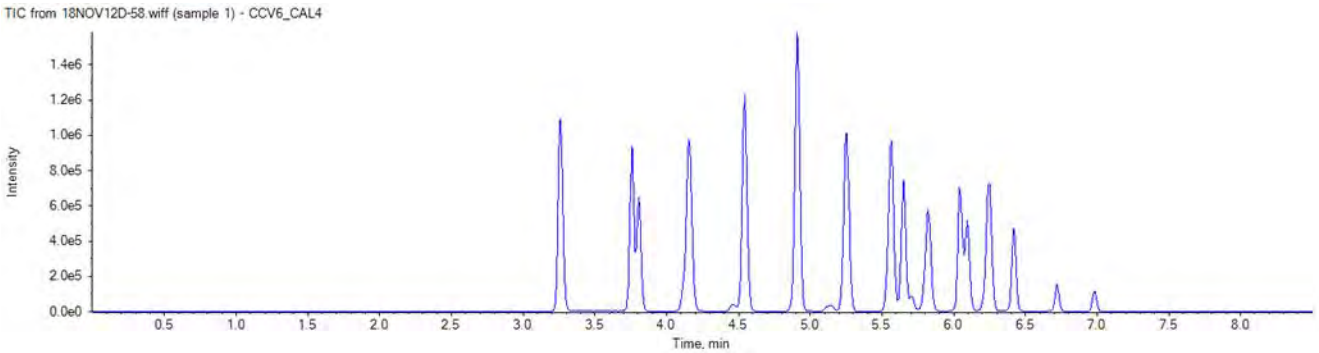
Analyte Quantitation Peak Table

Sample Name: CCV6_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12D-58.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	1105568.8		A	13C4-PFBA	3.26	760029.1	1.455	8.058
PFPeA	3.76	1.000	1127259.1		A	13C5-PFPeA	3.76	759638.3	1.484	8.590
PFBS	3.81	1.000	650121.6		A	13C3-PFBS	3.81	446027.4	1.458	6.933
4:2-FTS	4.12	1.000	150233.4		A	13C2-4:2-FTS	4.12	54881.6	2.737	7.432
PFHxA	4.15	1.000	1348987.8		A	13C5-PFHxA	4.15	695243.0	1.940	8.101
PFPeS	4.17	1.100	319026.2		A	13C3-PFBS	3.81	446027.4	0.715	6.944
PFHpA	4.54	1.000	1384443.9		A	13C4-PFHpA	4.54	541625.6	2.556	8.473
PFHxS	4.55	1.000	517754.3		M	13C3-PFHxS	4.55	339752.8	1.524	7.389
6:2-FTS	4.90	1.000	113664.7		A	13C2-6:2-FTS	4.90	33652.2	3.378	8.173
PFHpS	4.91	1.080	467674.4		A	13C3-PFHxS	4.55	339752.8	1.377	7.246
PFOA	4.91	1.000	1421585.9		A	13C8-PFOA	4.91	883150.2	1.610	8.597
PFOS	5.24	1.000	478066.3		M	13C8-PFOS	5.24	282689.5	1.691	7.395
PFNA	5.26	1.000	1179828.0		A	13C9-PFNA	5.26	501340.6	2.353	8.486
PFNS	5.54	1.060	300128.1		A	13C8-PFOS	5.24	282689.5	1.062	7.428
PFDA	5.57	1.000	961061.7		A	13C6-PFDA	5.57	647591.8	1.484	7.868
8:2-FTS	5.57	1.000	96931.6		A	13C2-8:2-FTS	5.57	25579.6	3.789	8.835
PFOSA	5.65	1.000	1008057.1		A	13C8-PFOSA	5.65	641137.8	1.572	7.680
NMeFOSAA	5.71	1.000	108210.9		M	d3-NMeFOSAA	5.71	73403.0	1.474	8.332
PFDS	5.80	1.110	229123.3		A	13C8-PFOS	5.24	282689.5	0.811	7.344
PFUnDA	5.82	1.000	804226.7		A	13C7-PFUnDA	5.82	266920.0	3.013	7.877
NEtFOSAA	5.84	1.000	95358.9		A	d5-NEtFOSAA	5.84	69388.5	1.374	7.204
PFDoDA	6.04	1.000	903550.9		A	13C2-PFDoDA	6.04	564228.7	1.601	8.155
10:2-FTS	6.06	1.090	67615.6		A	13C2-8:2-FTS	5.57	25579.6	2.643	8.805
NMePFOSAE	6.10	1.000	663106.2		A	d7-NMePFOSAE	6.09	318171.3	2.084	8.674
NMePFOSA	6.10	1.000	117948.1		A	d3-NMePFOSA	6.10	75466.9	1.563	7.710
PFDoS	6.21	1.190	118024.9		A	13C8-PFOS	5.24	282689.5	0.418	7.312
NEtPFOSAE	6.25	1.000	685532.3		A	d9-NEtPFOSAE	6.24	281982.8	2.431	7.800
NEtPFOSA	6.27	1.000	103077.1		A	d5-NEtPFOSA	6.26	56290.4	1.831	8.410
PFTrDA	6.24	1.030	775027.4		A	13C2-PFDoDA	6.04	564228.7	1.374	8.670
PFTeDA	6.42	1.000	594227.5		A	13C2-PFTeDA	6.42	403537.1	1.473	8.255
PFHxDA	6.72	1.050	290625.8		A	13C2-PFTeDA	6.42	403537.1	0.720	8.580
PFODA	6.98	1.090	248289.9		A	13C2-PFTeDA	6.42	403537.1	0.615	8.569

Total Ion Chromatogram

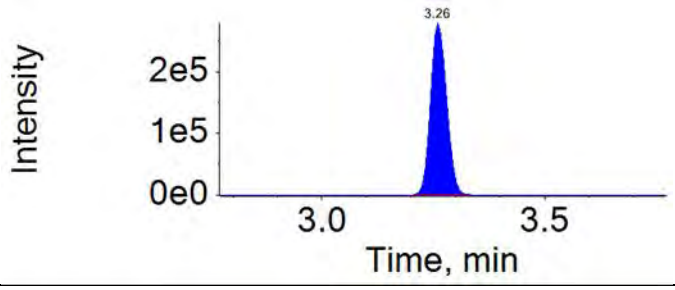


APPROVED
By JPT at 10:23 am, 11/13/18

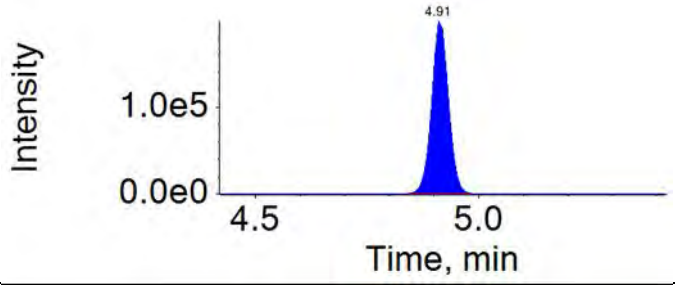
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

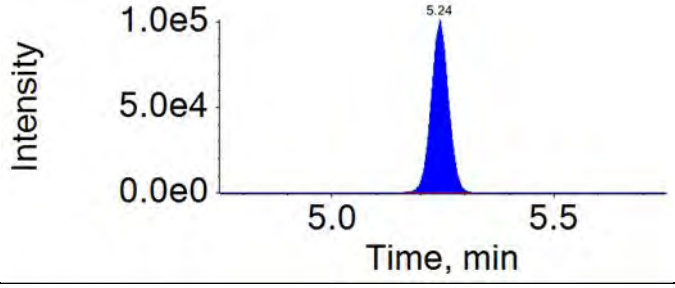
Injection Standard: 13C3-PFBA
216.0 / 172.0



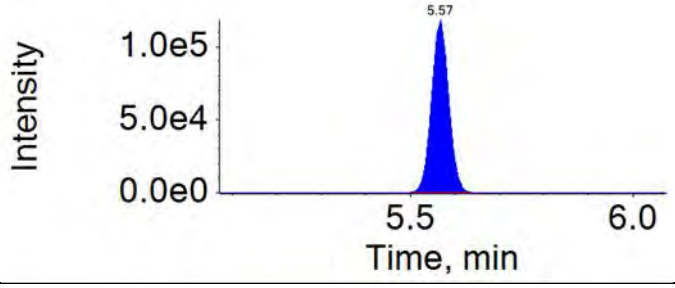
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

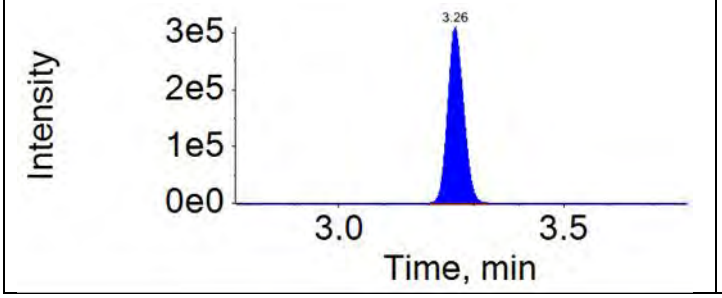


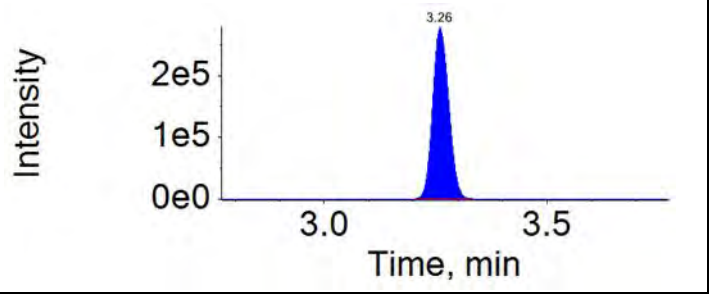
Injection Standard: 13C2-PFDA
515.0 / 470.0



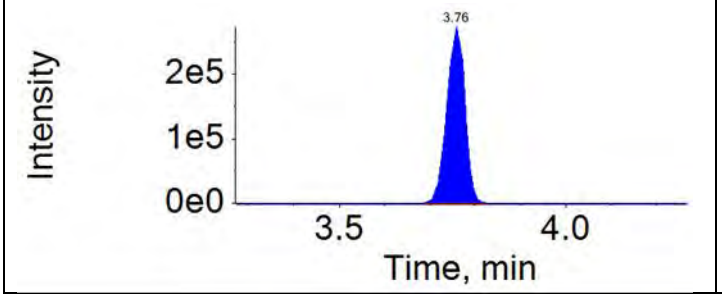
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

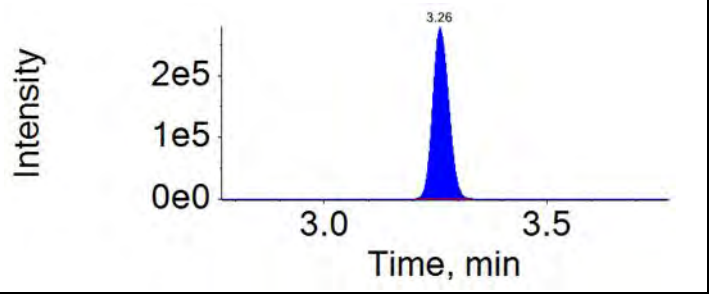
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



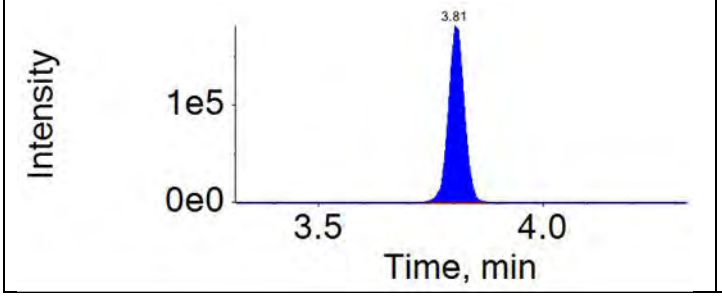


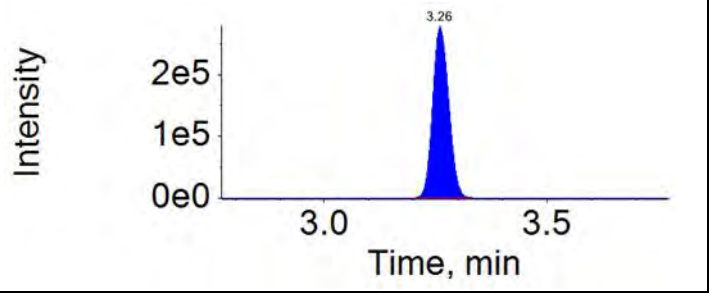
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



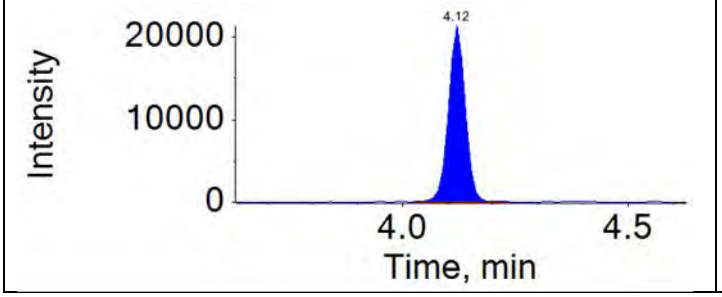


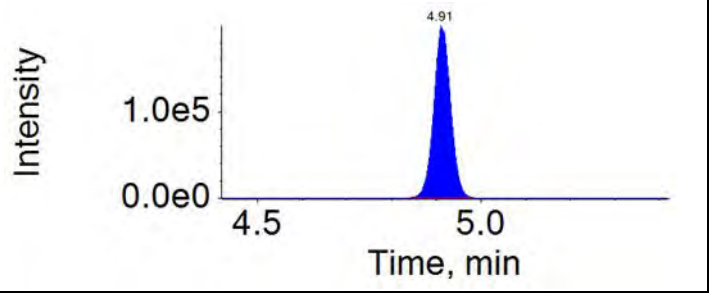
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



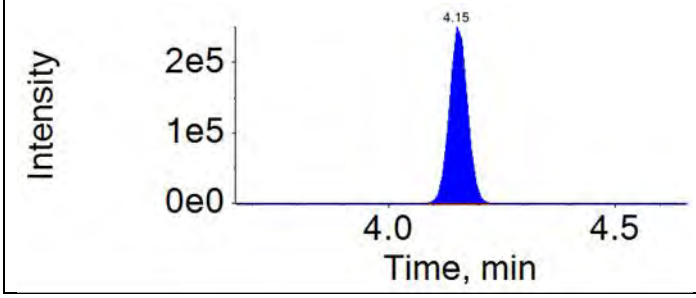


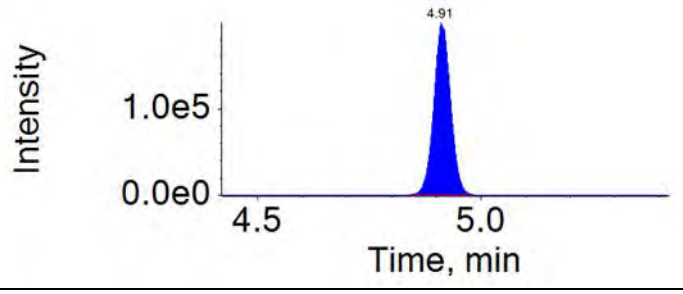
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

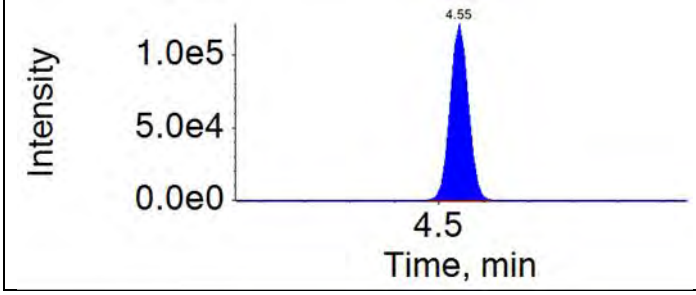
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

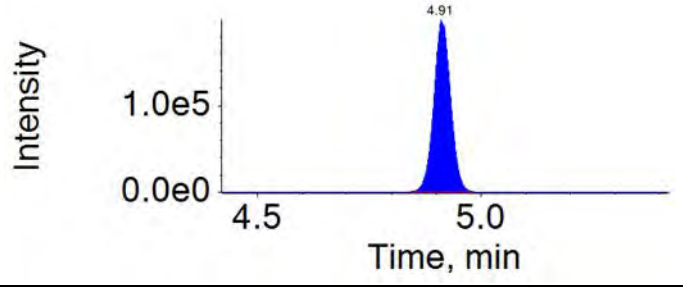
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



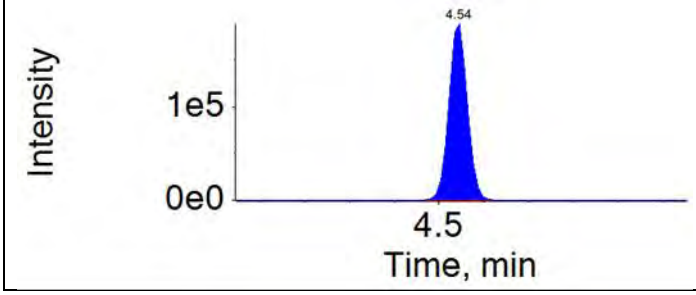


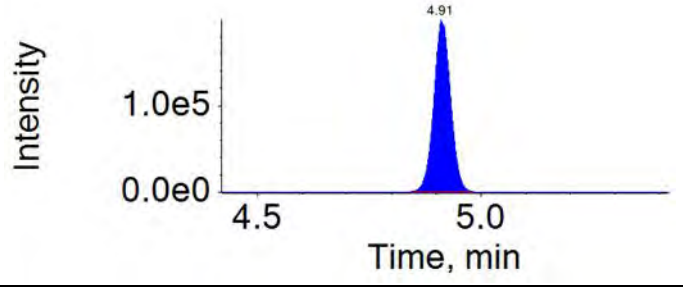
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



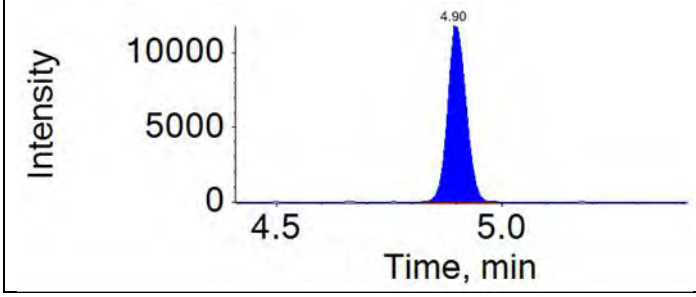


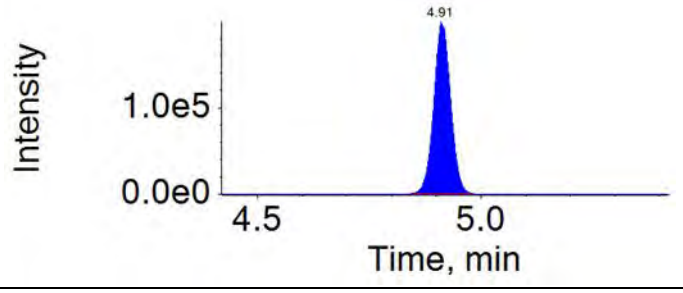
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

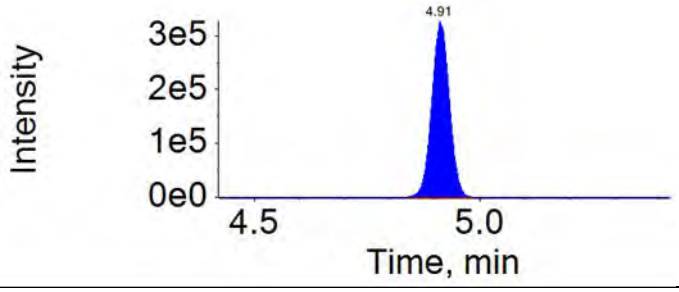
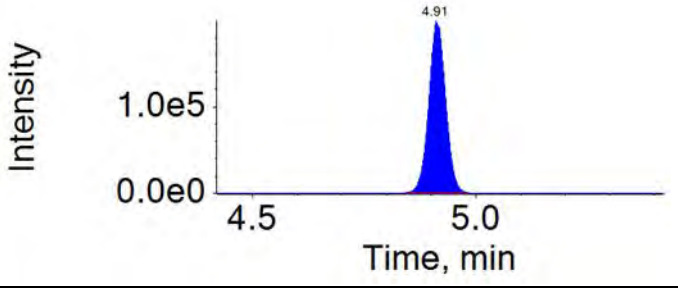


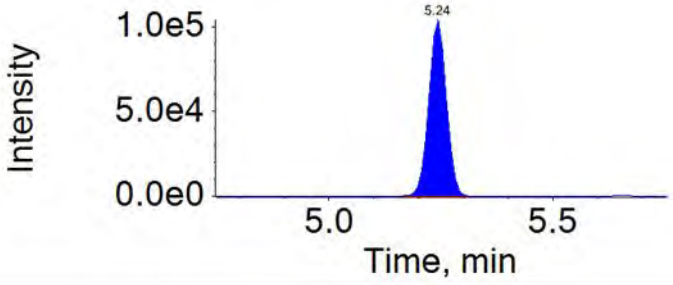
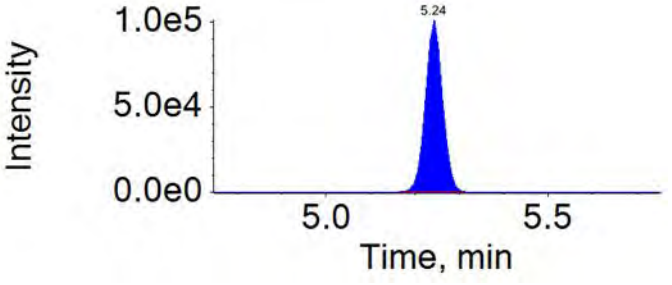


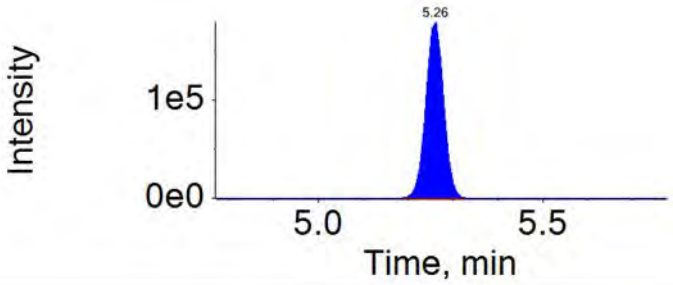
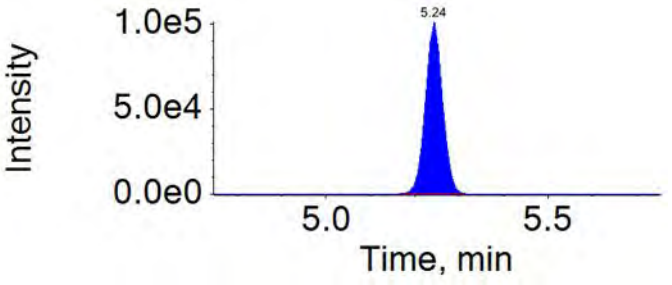
APPROVED
By JPT at 10:23 am, 11/13/18

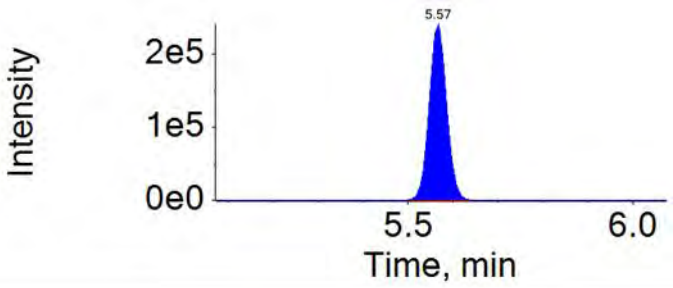
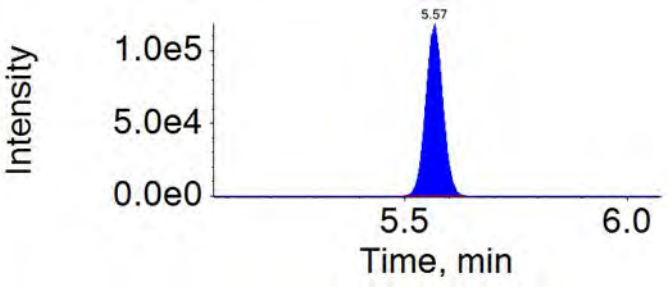
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

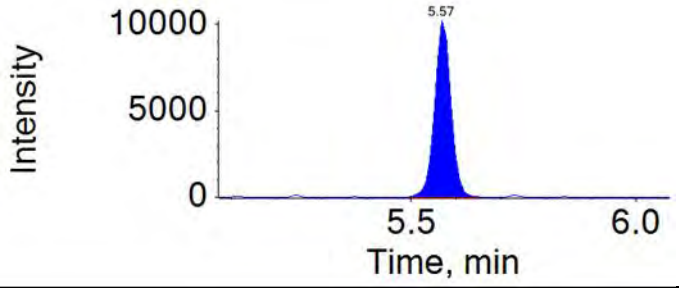
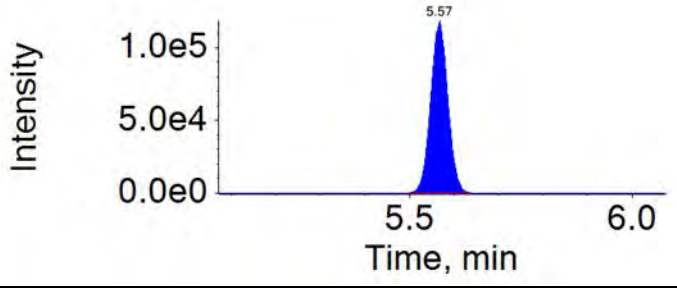
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

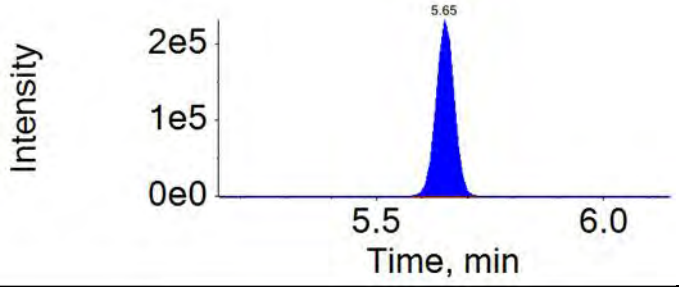
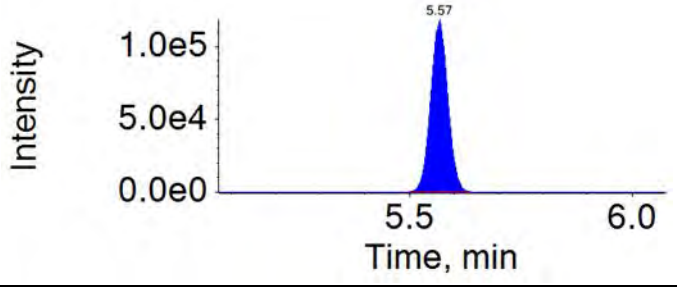
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

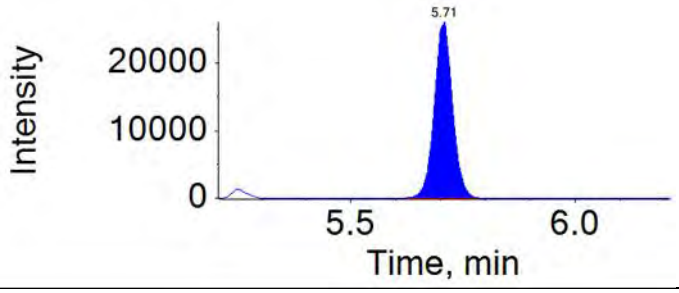
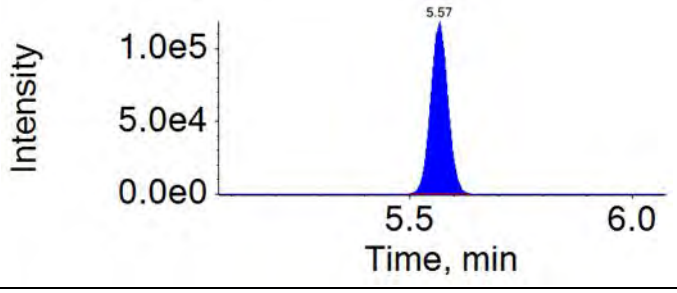
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

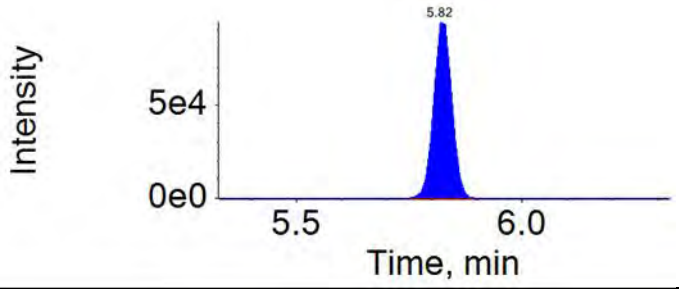
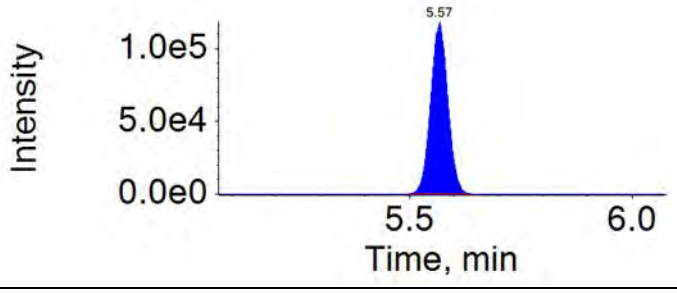
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

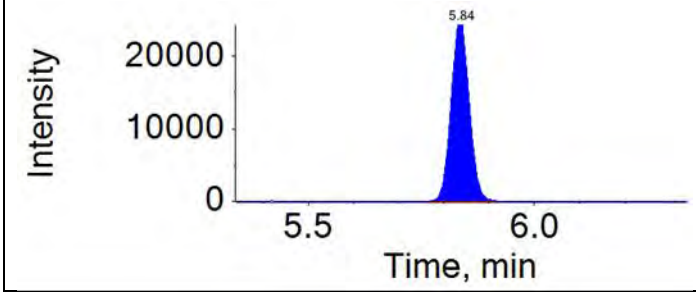
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

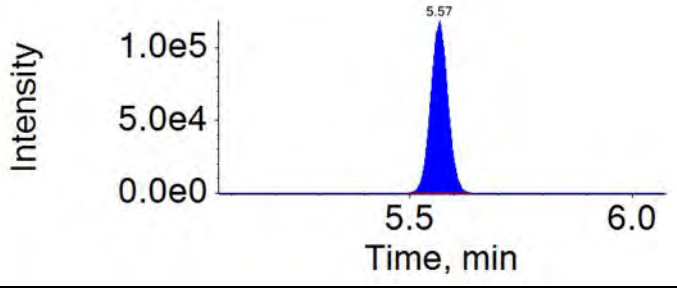
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

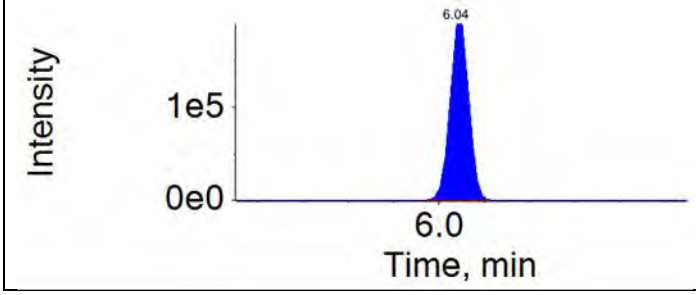
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

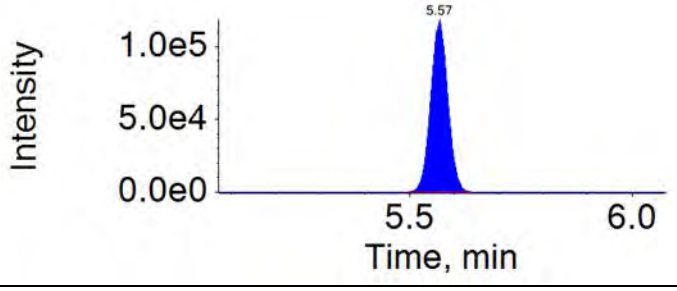
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



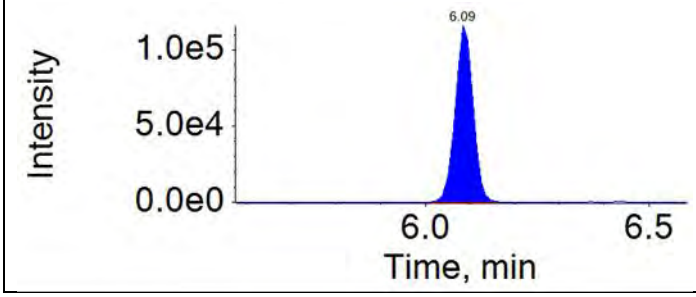


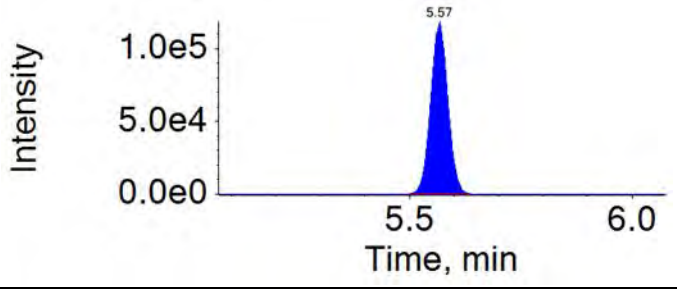
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



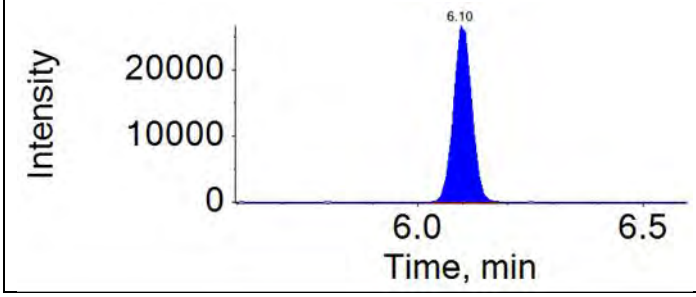


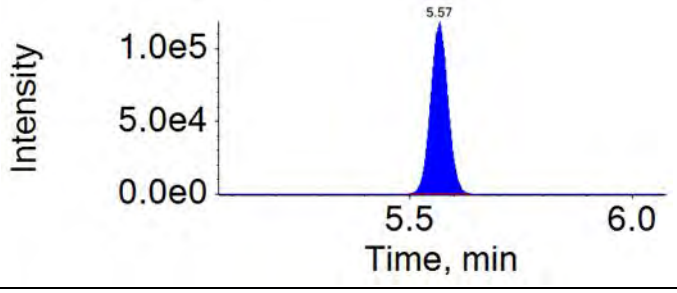
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



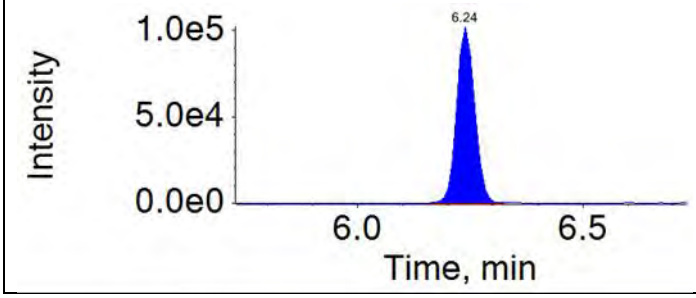


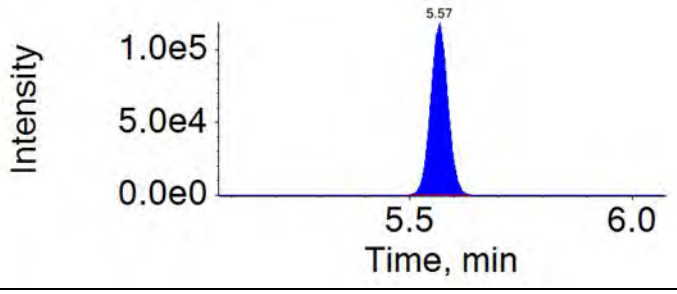
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

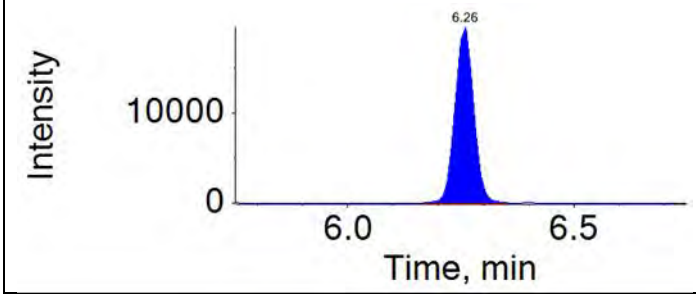
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

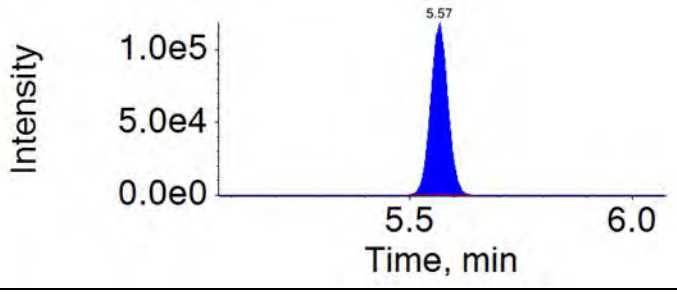
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



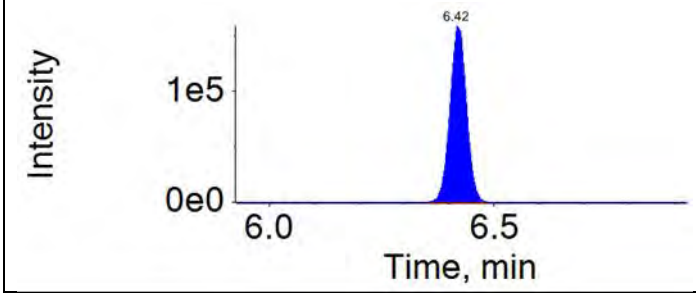


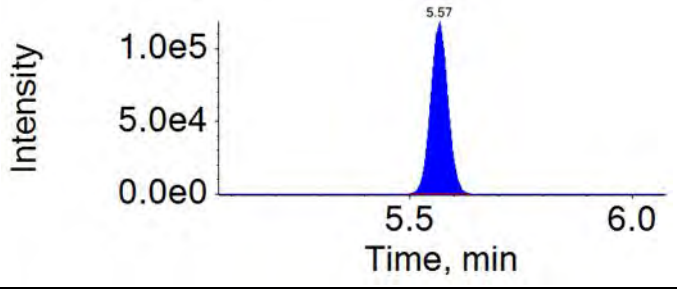
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



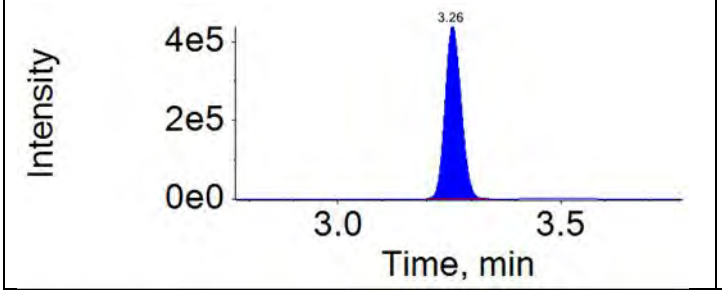


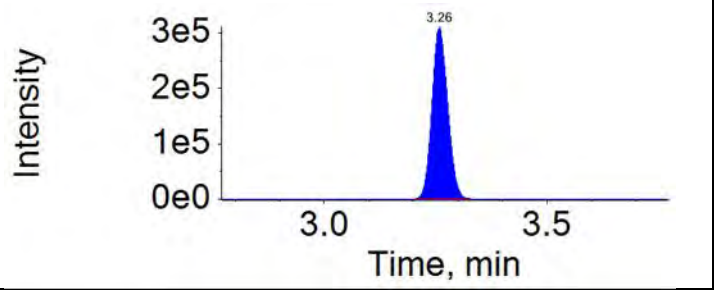
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

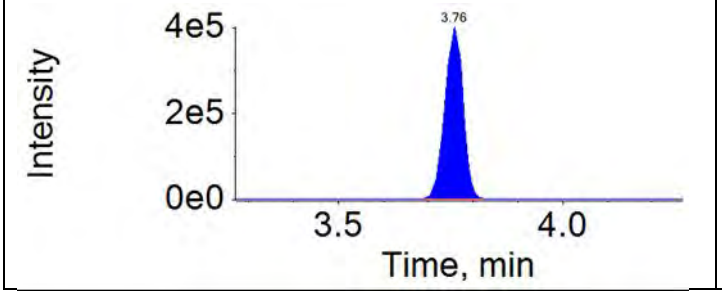
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

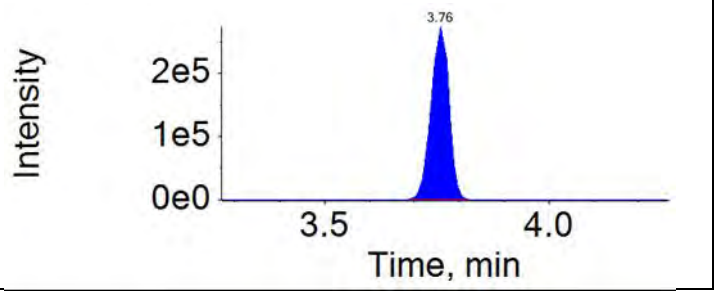
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



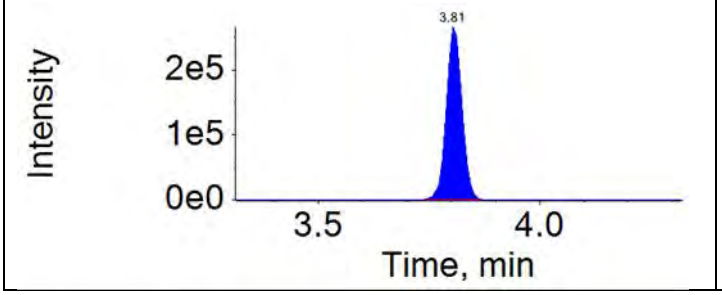


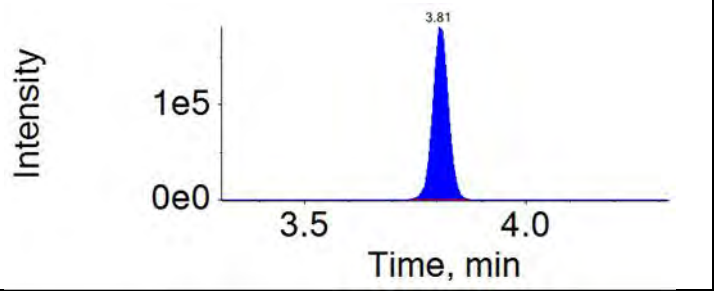
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



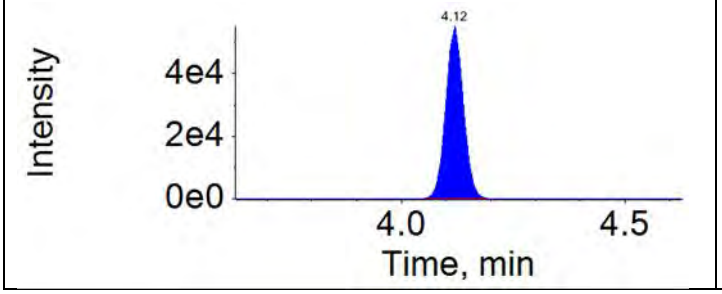


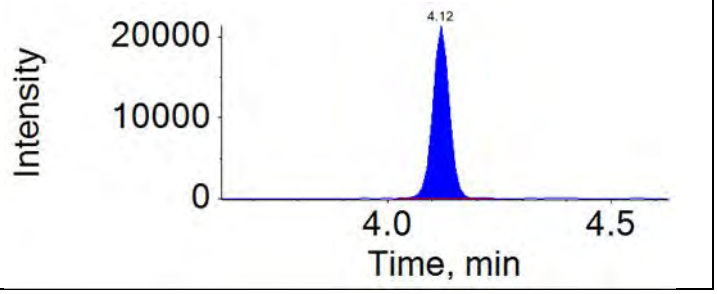
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

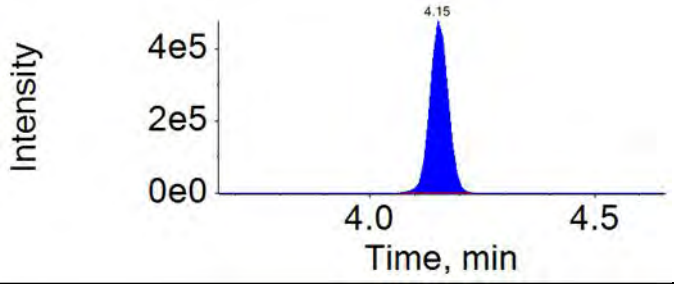
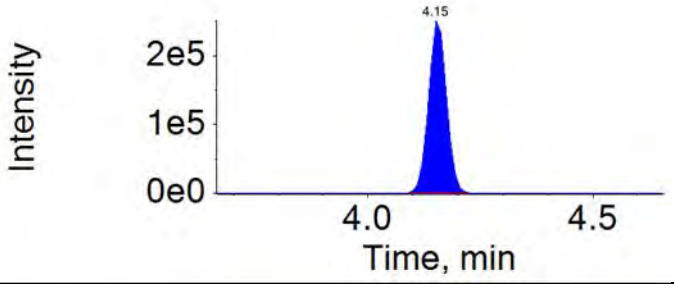


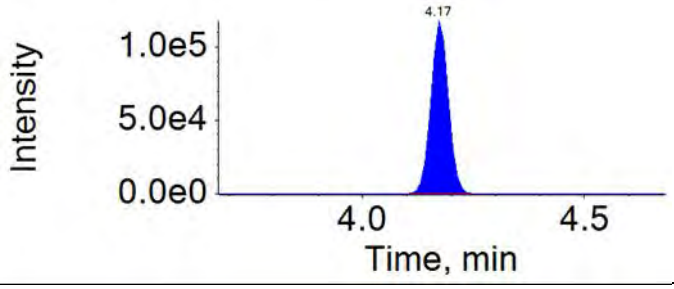
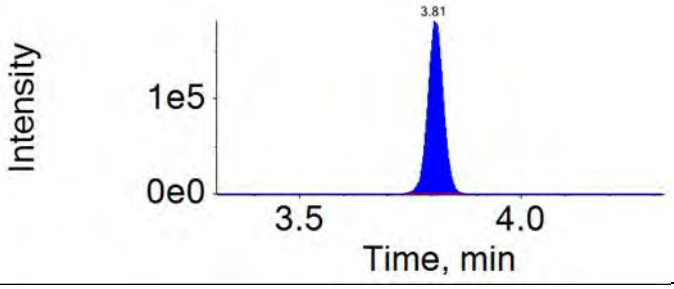


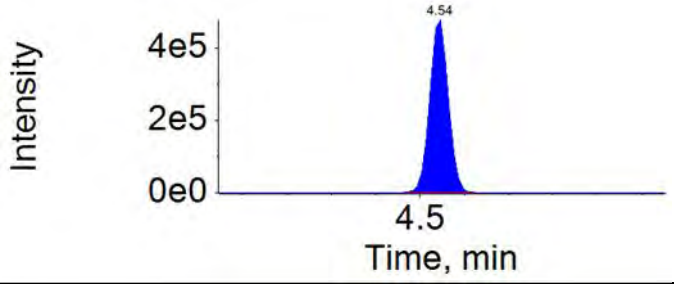
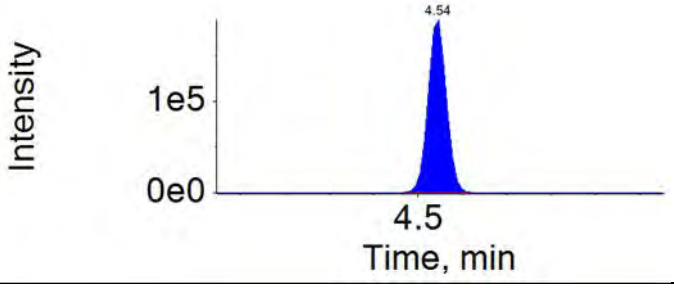
APPROVED
By JPT at 10:23 am, 11/13/18

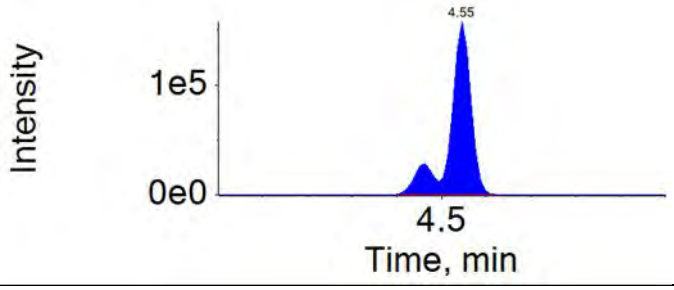
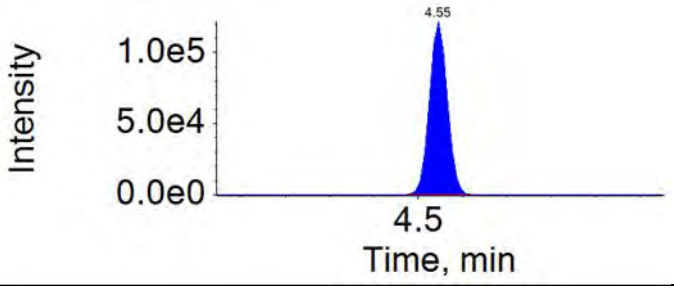
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

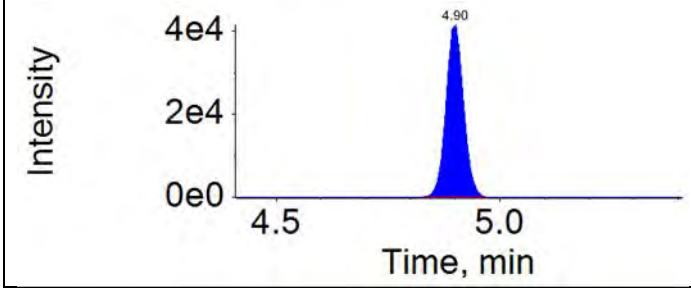
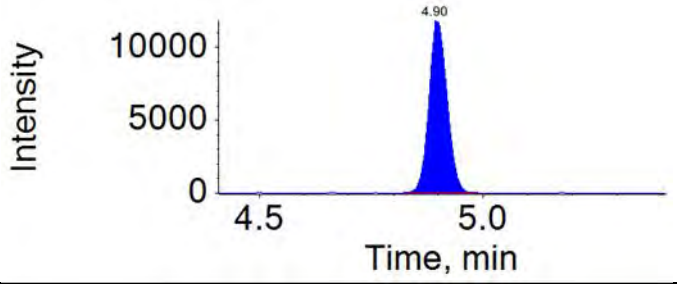
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

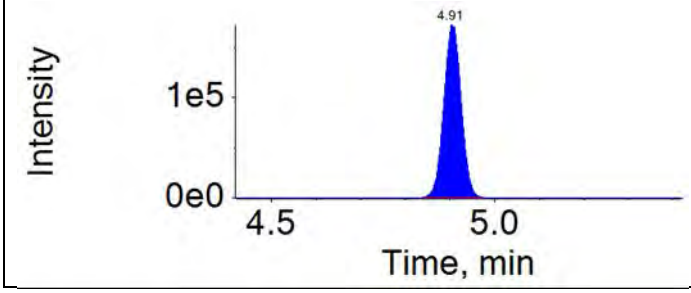
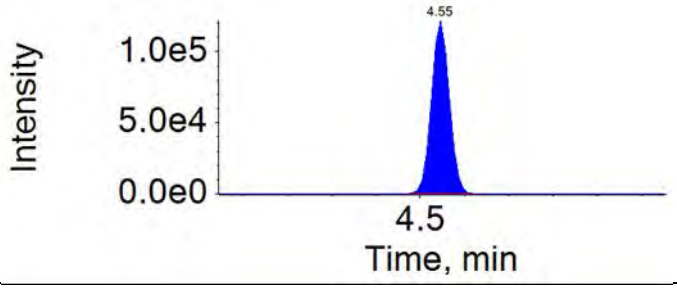
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

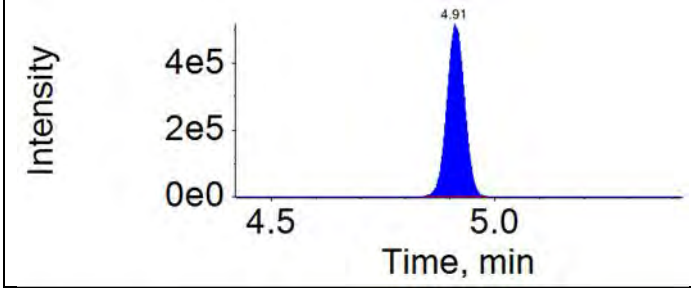
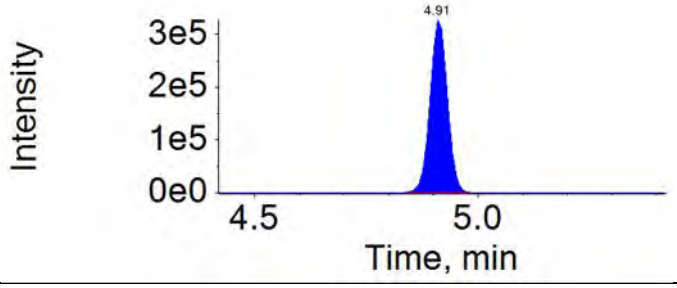
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

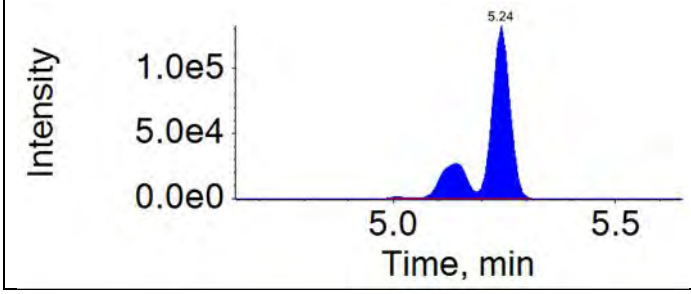
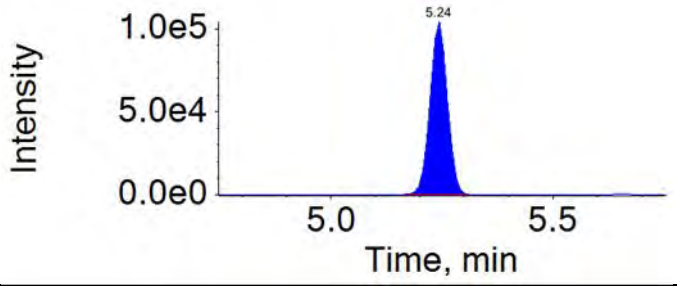
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

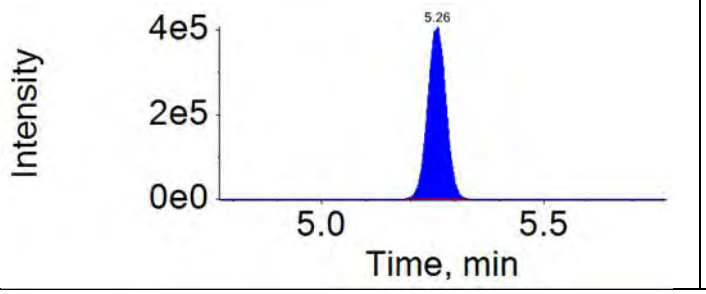
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

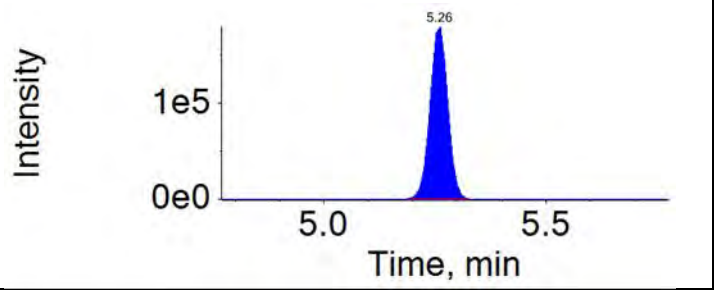
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

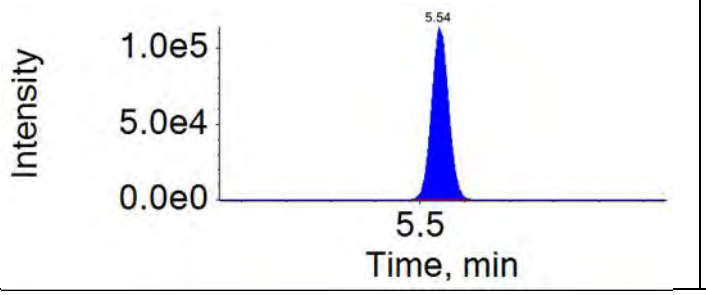
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

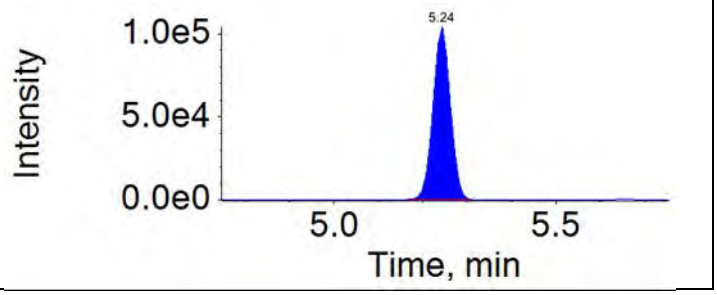
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



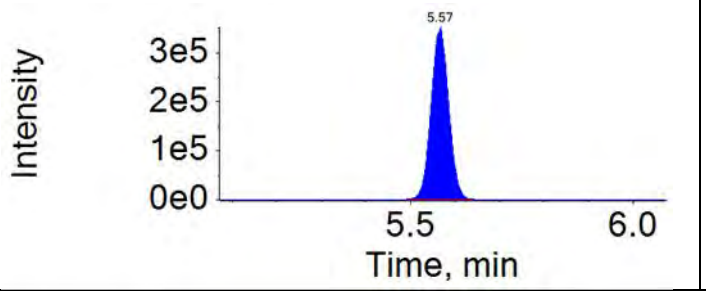


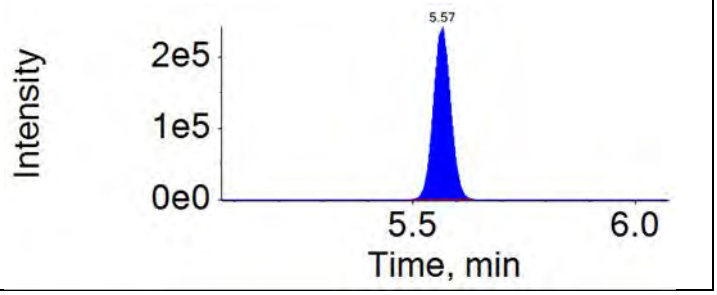
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



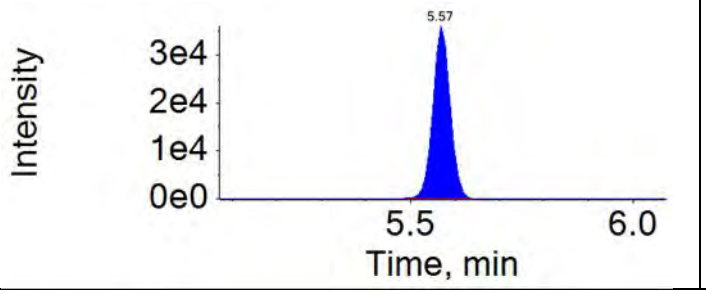


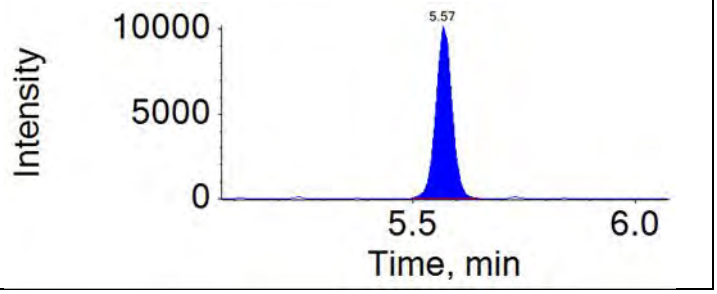
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



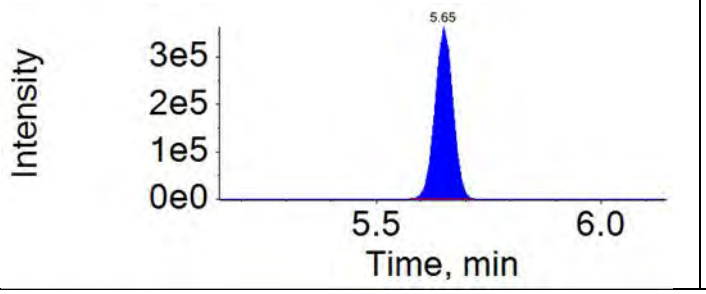


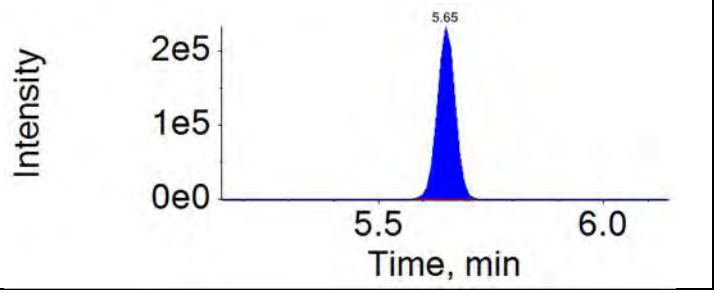
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

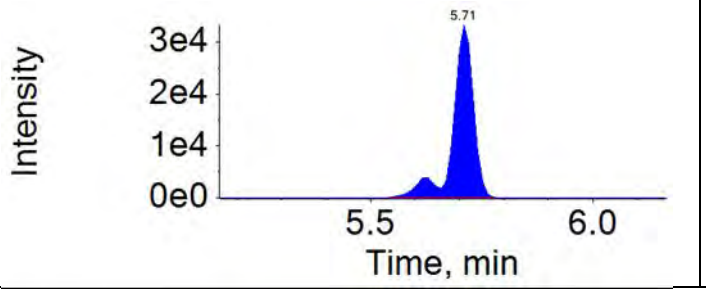
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

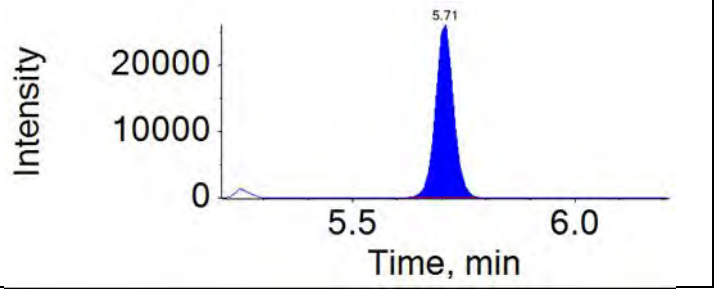
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



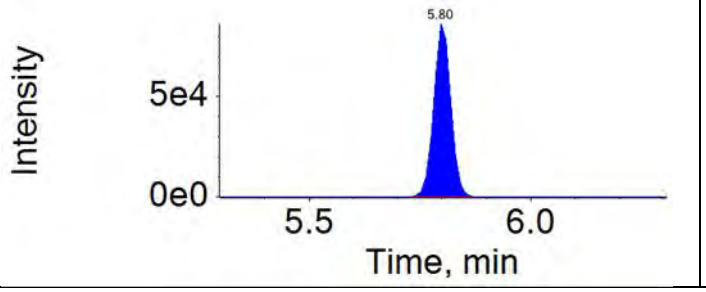


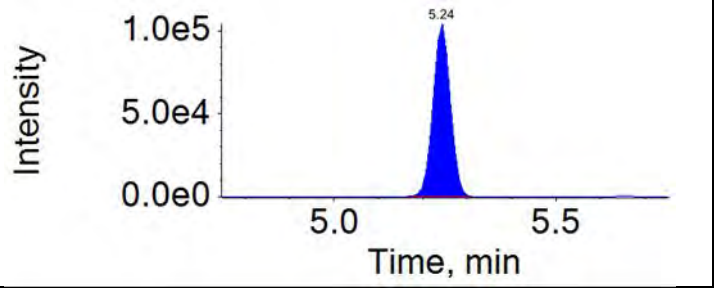
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



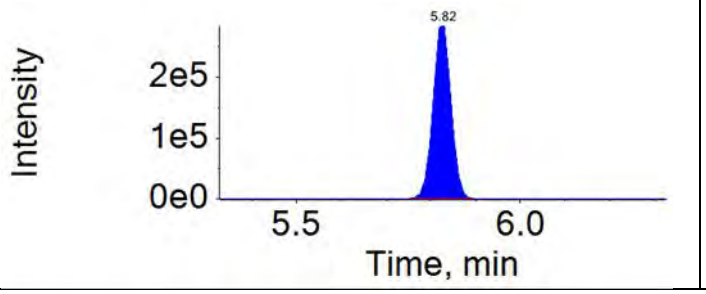


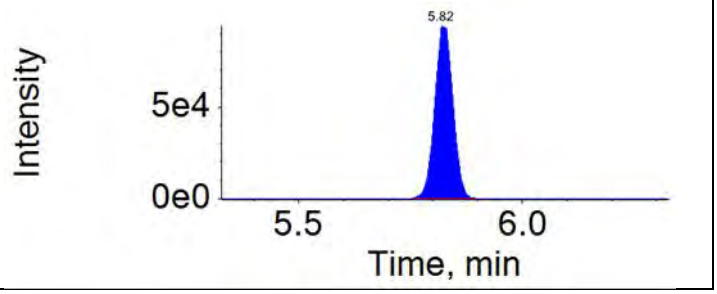
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



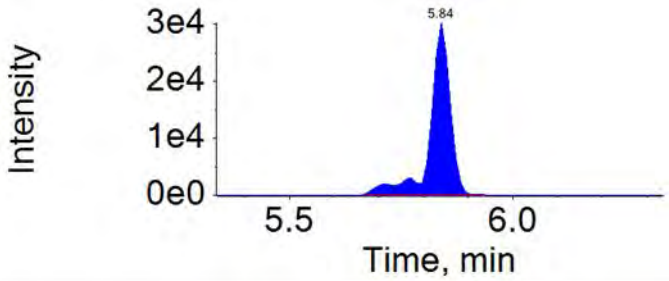


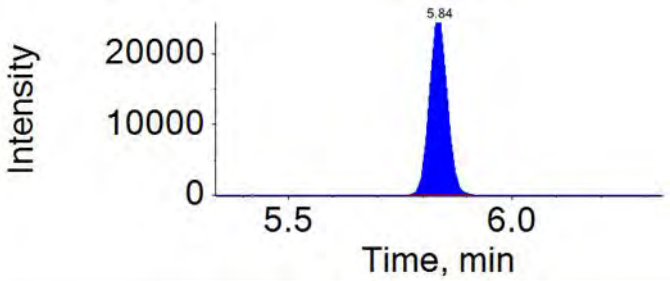
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

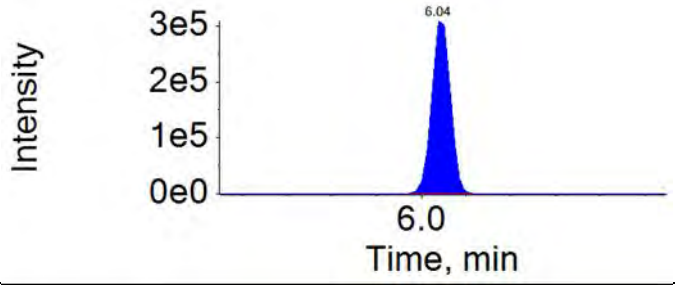
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

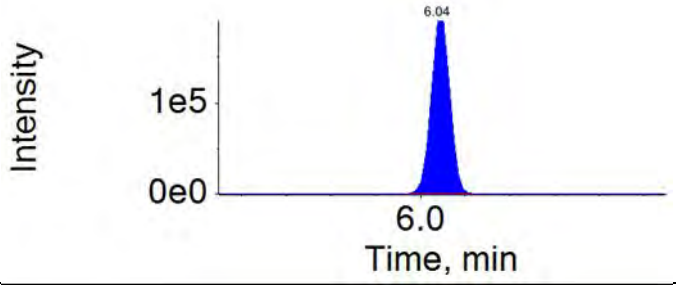
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



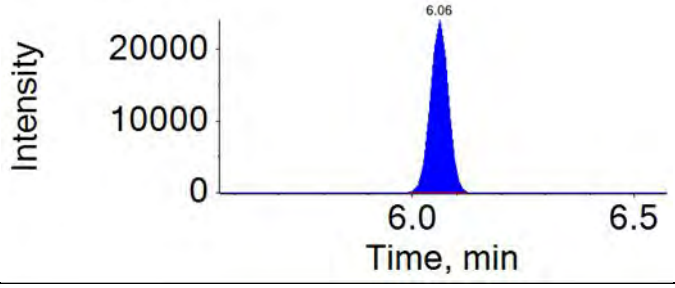


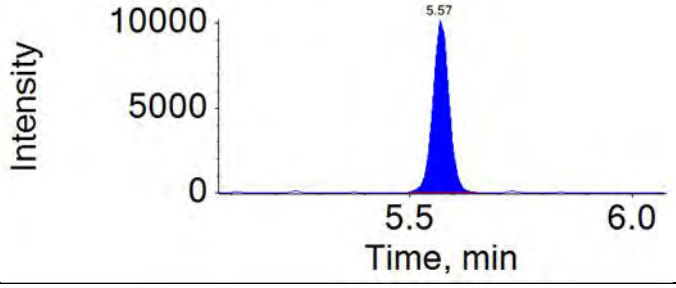
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



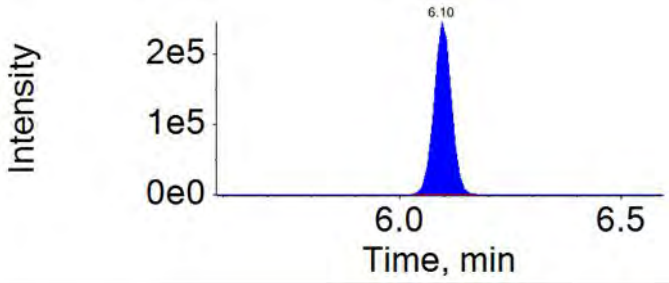


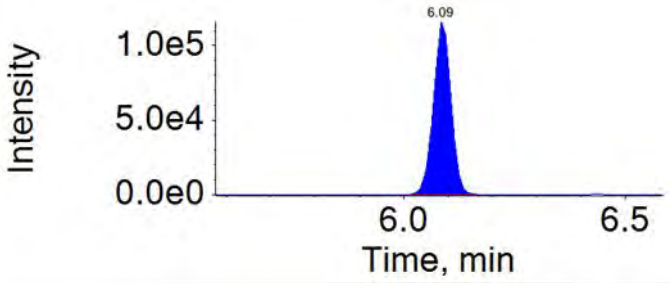
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



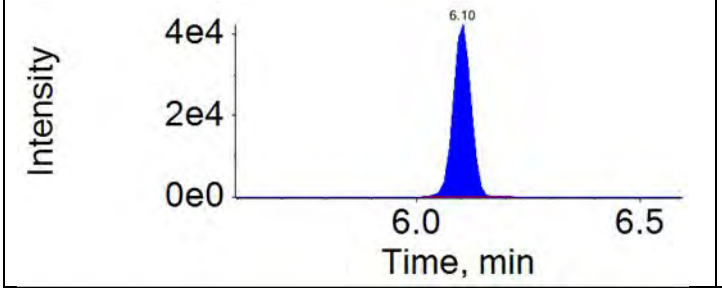


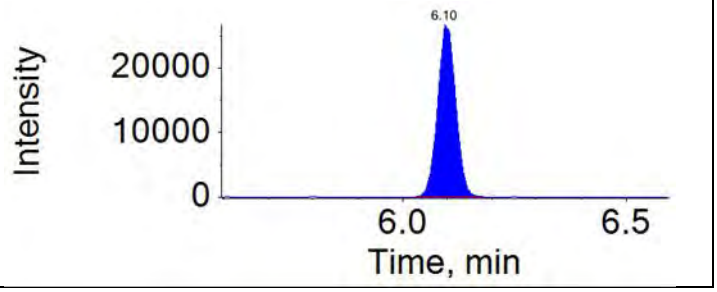
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

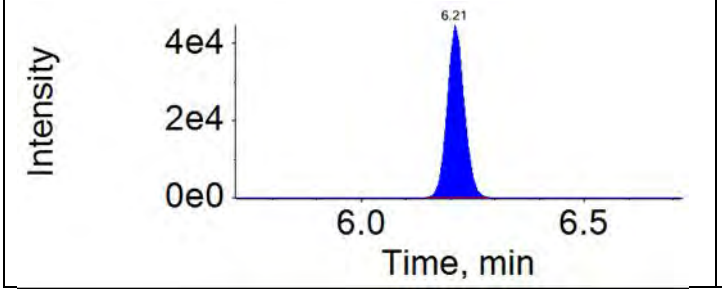
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

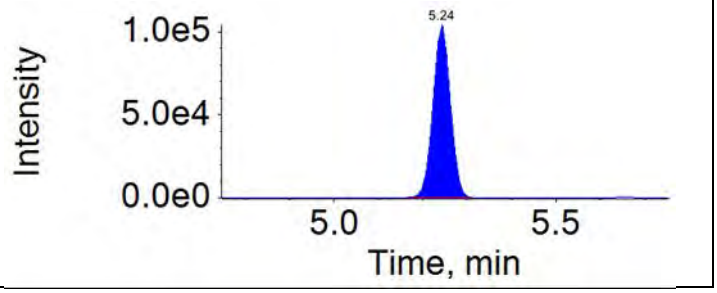
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



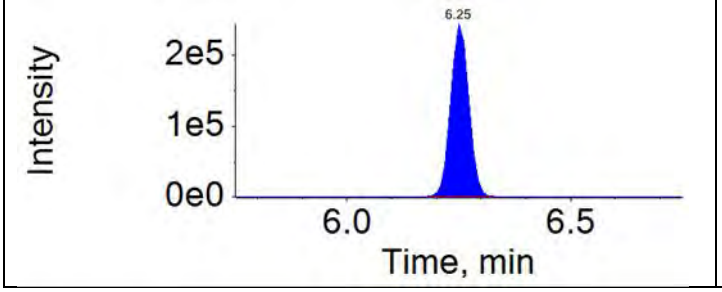


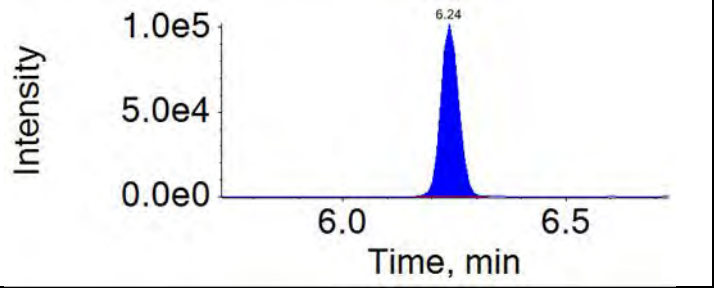
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



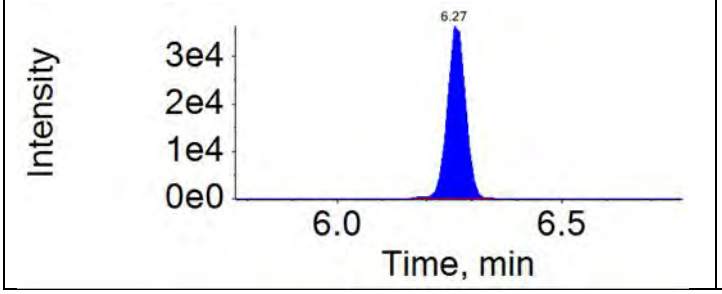


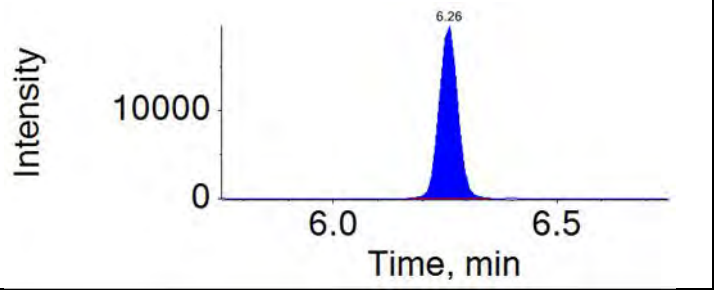
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

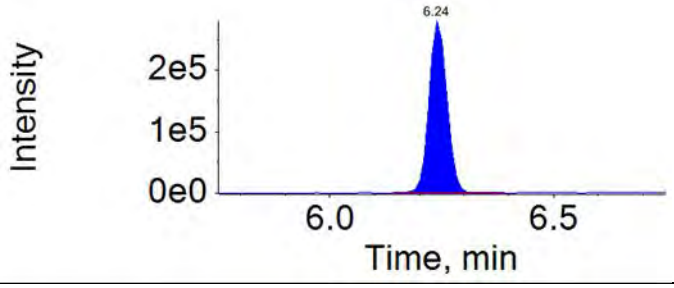
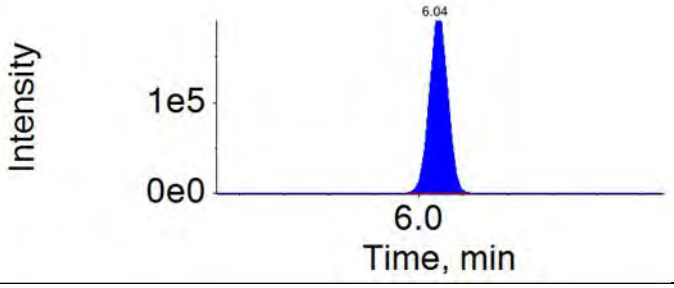


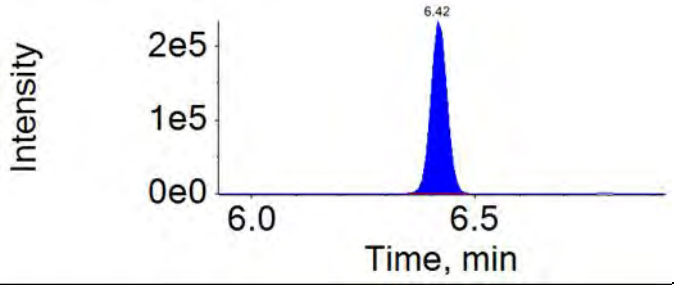
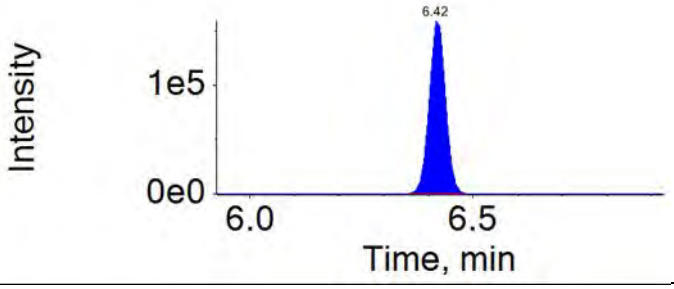


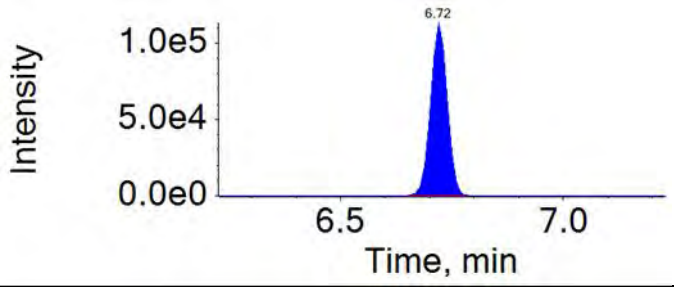
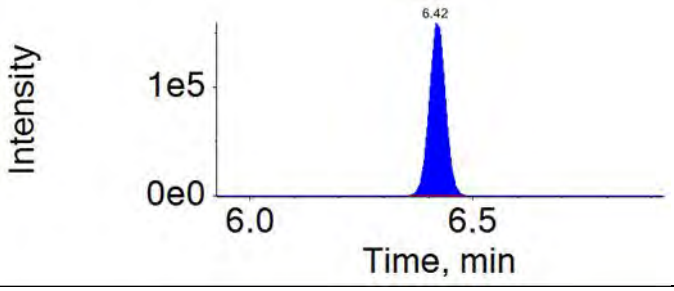
APPROVED
By JPT at 10:23 am, 11/13/18

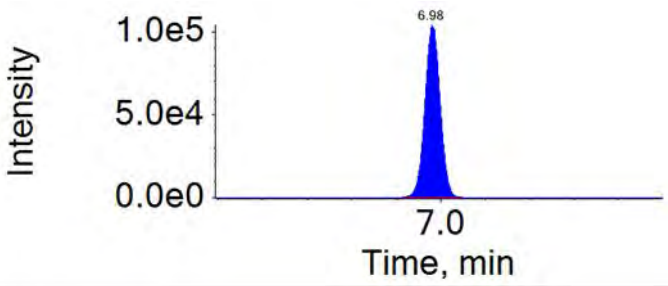
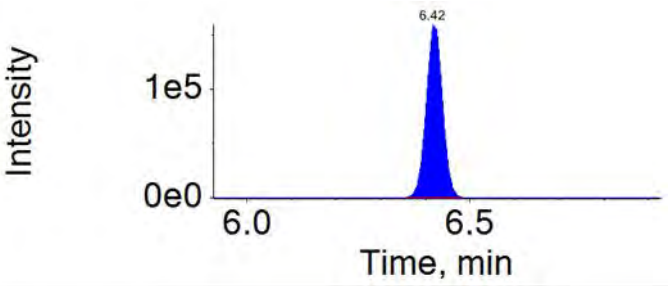
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

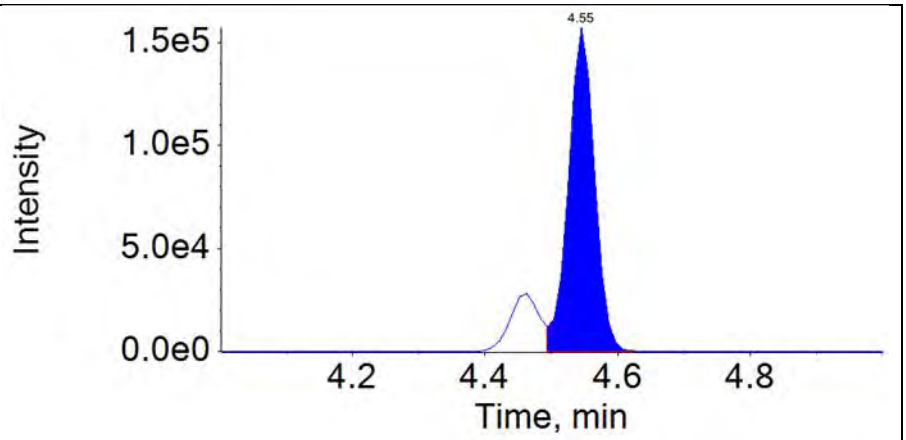
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

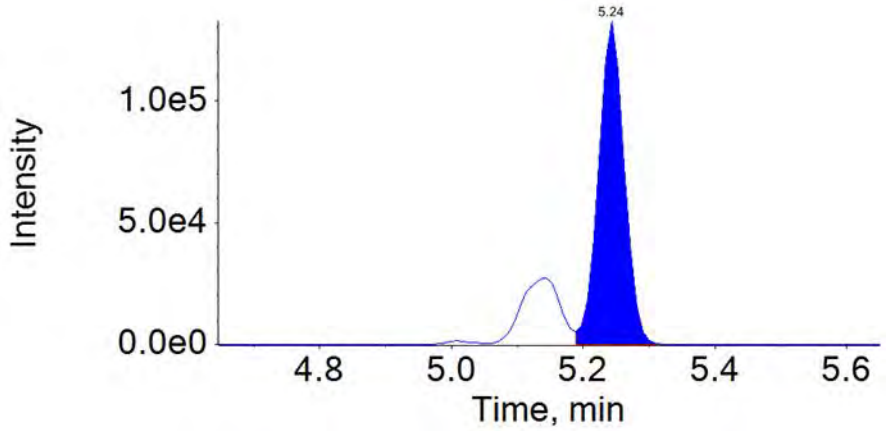
Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
432351.5
Mass Range:
399.0 / 80.0
File Name:
18NOV12D-58.wiff
Sample Name:
CCV6_CAL4



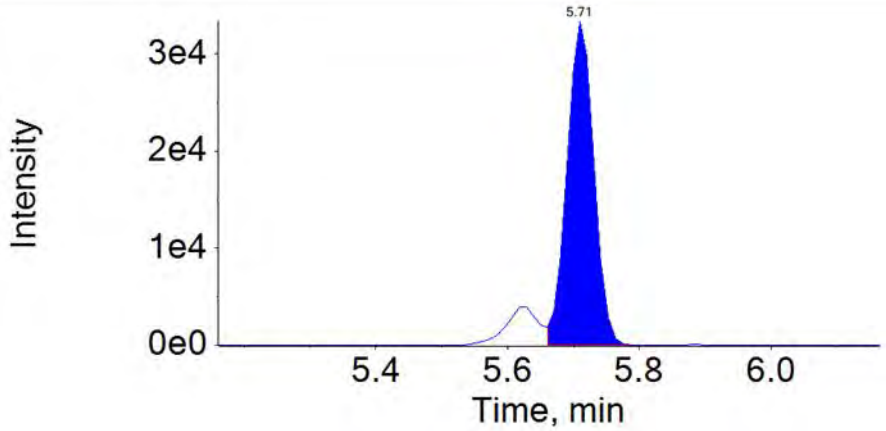
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
361424.2
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-58.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
94532.6
Mass Range:
570.0 / 419.0
File Name:
18NOV12D-58.wiff
Sample Name:
CCV6_CAL4



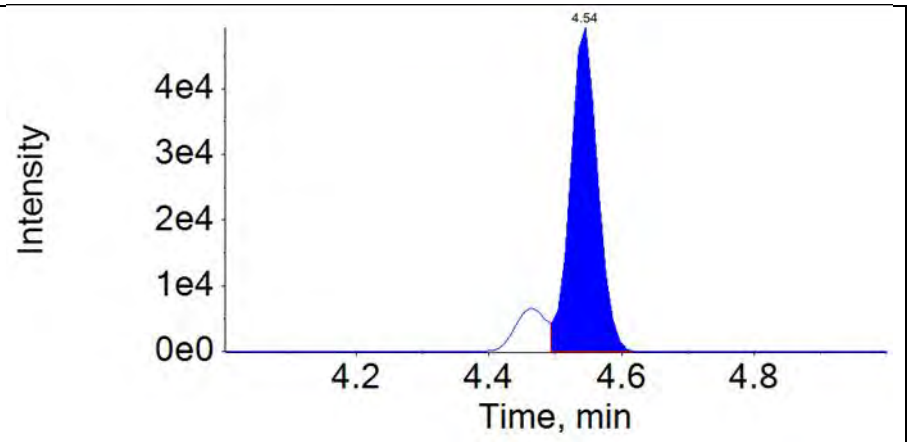
Integration Comment: incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

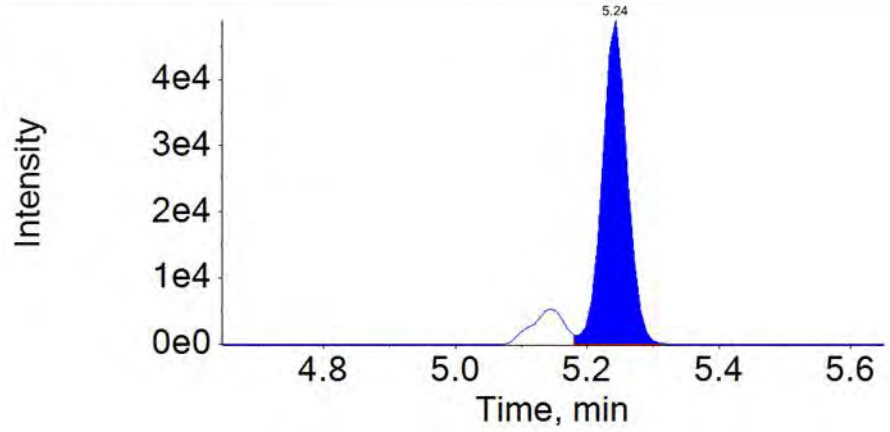
Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
141111.7
Mass Range:
399.0 / 99.0
File Name:
18NOV12D-58.wiff
Sample Name:
CCV6_CAL4



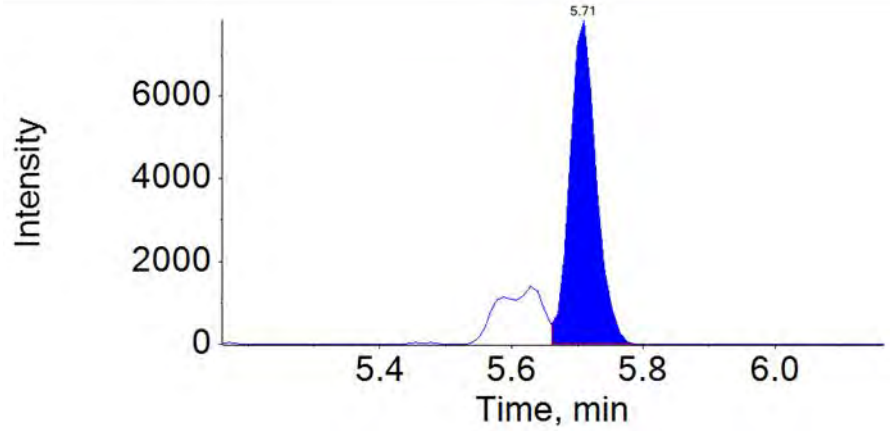
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
129888.3
Mass Range:
499.0 / 99.0
File Name:
18NOV12D-58.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
21702.3
Mass Range:
570.0 / 483.0
File Name:
18NOV12D-58.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

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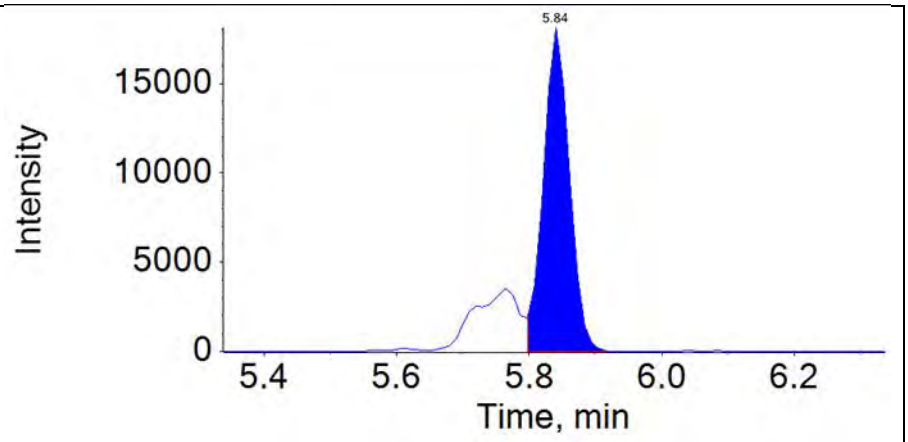
By umar at 5:20 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
49487.3
Mass Range:
584.0 / 526.0
File Name:
18NOV12D-58.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

Sample Name: CCV6_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12D-58.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	650121.6	A	N/A	1.0000			
PFBS_2	3.81	1.00	243270.4	A	N/A	0.3742	3	50	
4:2-FTS	4.12	1.00	150233.4	A	N/A	1.0000			
4:2 FTS_2	4.12	1.00	86381.2	A	N/A	0.5750		#NA!	
PFHxA	4.15	1.00	1348987.8	A	N/A	1.0000			
PFHxA_2	4.15	1.00	15975.5	A	N/A	0.0118	1	50	
PFPeS	4.17	1.10	319026.2	A	N/A	1.0000			
PFPeS_2	4.17	1.10	173011.5	A	N/A	0.5423	4	50	
PFHpA	4.54	1.00	1384443.9	A	N/A	1.0000			
PFHpA_2	4.54	1.00	75585.8	A	N/A	0.0546	-3	50	
PFHxS	4.55	1.00	517754.3	M	N/A	1.0000			
PFHxS_2	4.54	1.00	162008.9	M	N/A	0.3129	-9	50	
6:2-FTS	4.90	1.00	113664.7	A	N/A	1.0000			
6:2 FTS_2	4.90	1.00	72576.8	A	N/A	0.6385		#NA!	
PFHpS	4.91	1.08	467674.4	A	N/A	1.0000			
PFHpS_2	4.90	1.08	189233.9	A	N/A	0.4046	0	50	
PFOA	4.91	1.00	1421585.9	A	N/A	1.0000			
PFOA_2	4.91	1.00	80586.2	A	N/A	0.0567	0	50	
PFOS	5.24	1.00	478066.3	M	N/A	1.0000			
PFOS_2	5.24	1.00	148120.8	M	N/A	0.3098	4	50	
PFNA	5.26	1.00	1179828.0	A	N/A	1.0000			
PFNA_2	5.26	1.00	21195.4	A	N/A	0.0180	-21	50	
PFNS	5.54	1.06	300128.1	A	N/A	1.0000			
PFNS_2	5.54	1.06	138703.3	A	N/A	0.4621	-3	50	
PFDA	5.57	1.00	961061.7	A	N/A	1.0000			
PFDA_2	5.57	1.00	6570.1	A	N/A	0.0068	-14	50	
8:2-FTS	5.57	1.00	96931.6	A	N/A	1.0000			
8:2 FTS_2	5.57	1.00	57612.2	A	N/A	0.5944		#NA!	
NMeFOSAA	5.71	1.00	108210.9	M	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	28218.3	M	N/A	0.2608	1	50	
PFDS	5.80	1.11	229123.3	A	N/A	1.0000			
PFDS_2	5.80	1.11	110030.8	A	N/A	0.4802	-6	50	
PFUnDA	5.82	1.00	804226.7	A	N/A	1.0000			
PFUnDA_2	5.82	1.00	3771.3	A	N/A	0.0047	-15	50	
NEtFOSAA	5.84	1.00	95358.9	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	66089.1	M	N/A	0.6931	-4	50	
PFDoDA	6.04	1.00	903550.9	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	10723.7	A	N/A	0.0119	-23	50	
10:2-FTS	6.06	1.09	67615.6	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	44602.5	A	N/A	0.6596		#NA!	
PFTrDA	6.24	1.03	775027.4	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	7327.0	A	N/A	0.0095	11	50	
PFTeDA	6.42	1.00	594227.5	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	3706.9	A	N/A	0.0062	0	50	
PFHxDA	6.72	1.05	290625.8	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	17475.7	A	N/A	0.0601	-11	50	
PFODA	6.98	1.09	248289.9	A	N/A	1.0000			
PFODA_2	6.98	1.09	6003.1	A	N/A	0.0242	-12	50	

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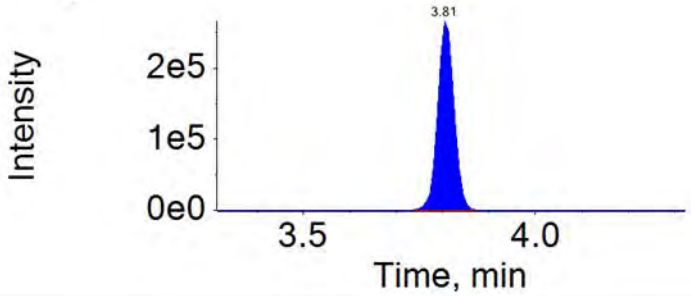
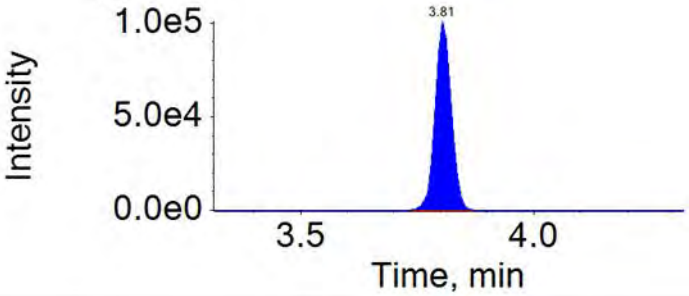
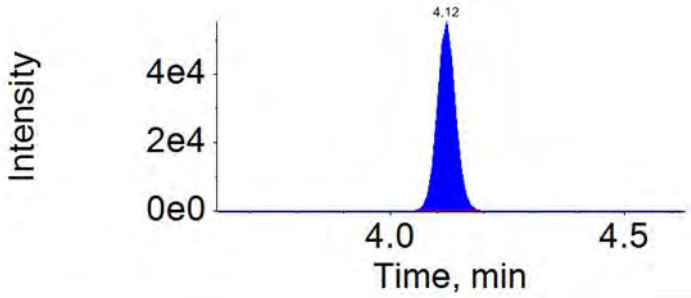
Component: PFBS
Primary Mass: 299.0 / 80.0



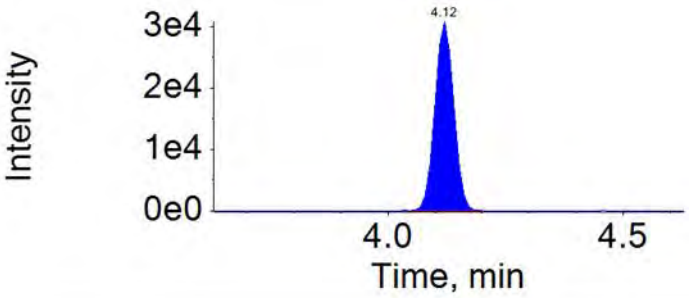
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



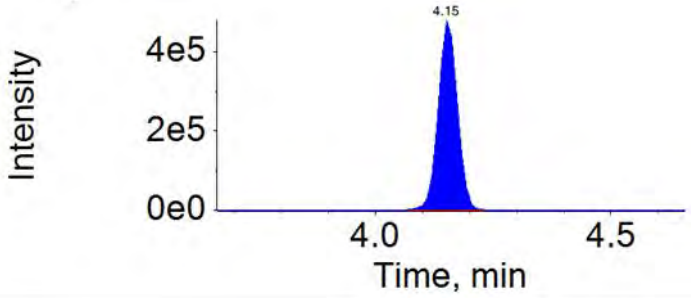
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



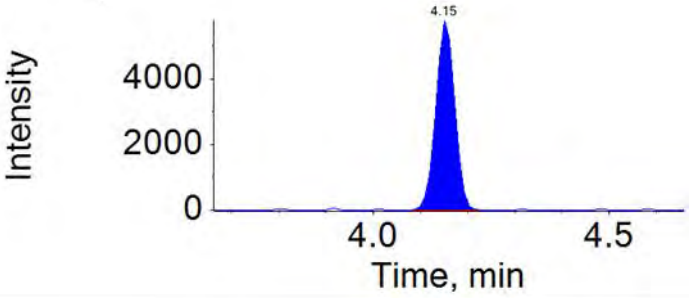
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



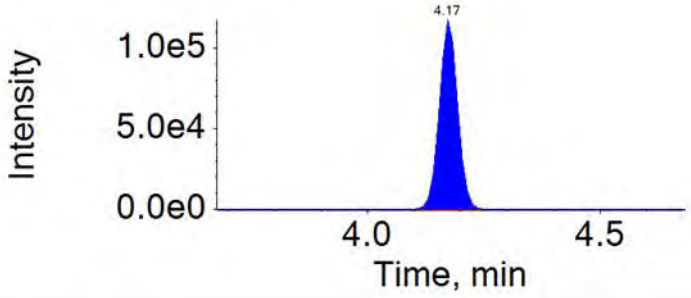
Component: PFHxA
Primary Mass: 313.0 / 269.0



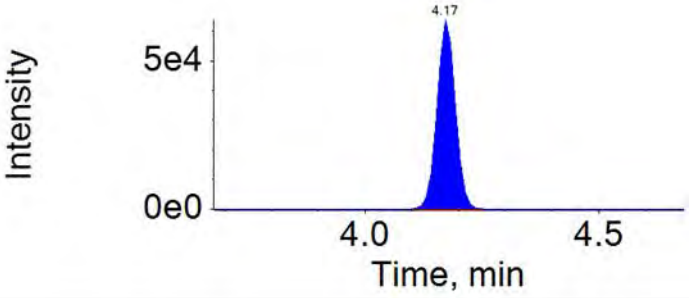
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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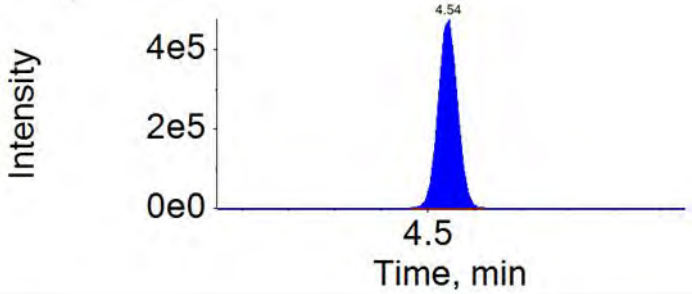
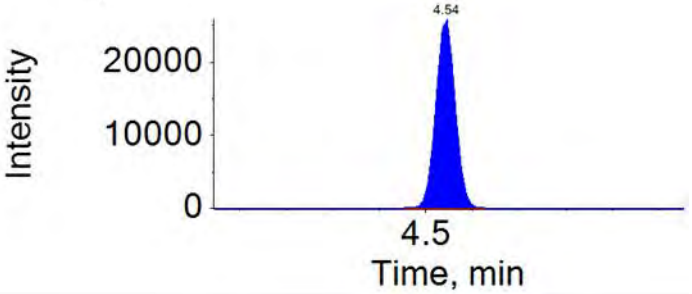
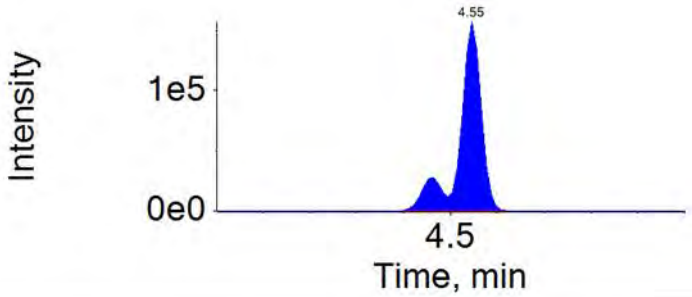
Component: PFHpA
Primary Mass: 363.0 / 319.0



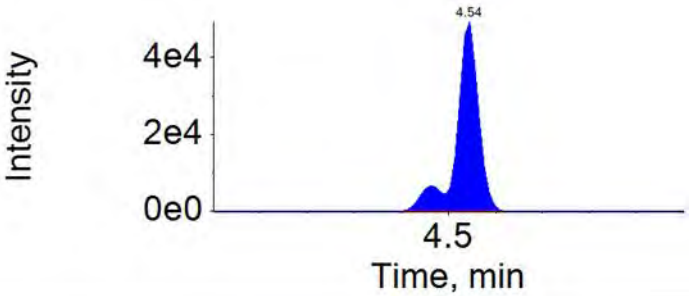
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



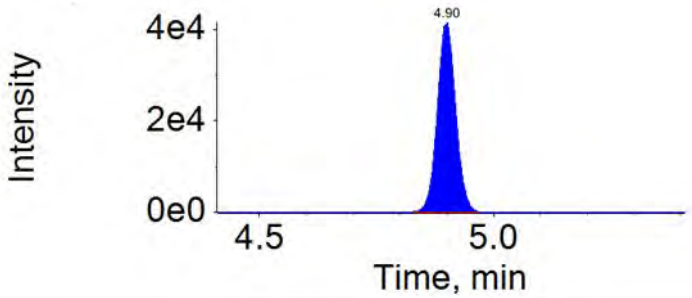
Component: PFHxS
Primary Mass: 399.0 / 80.0



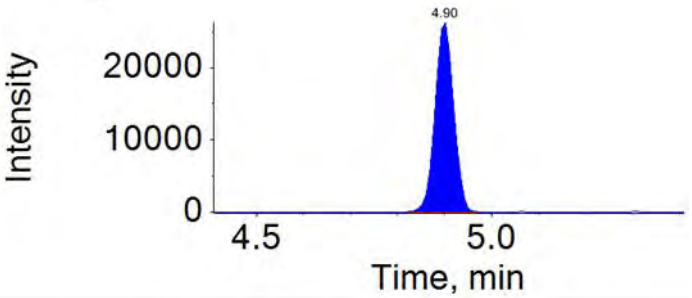
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



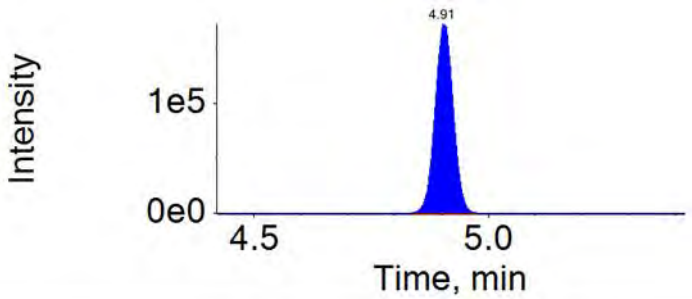
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



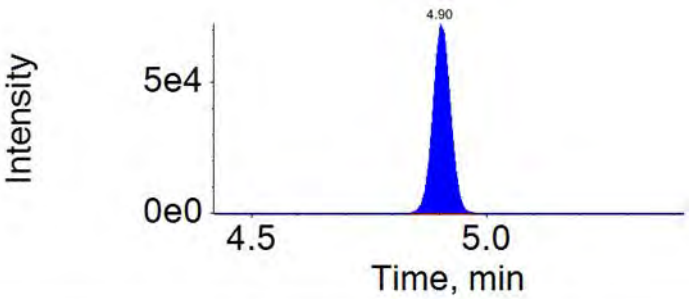
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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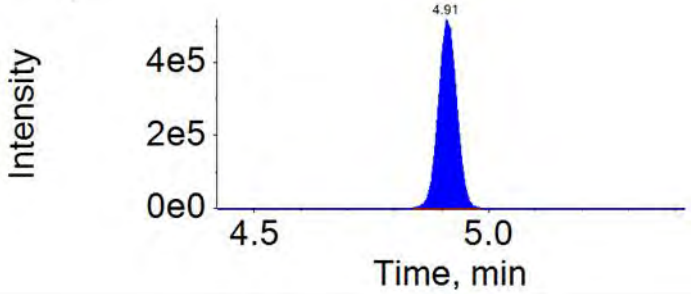
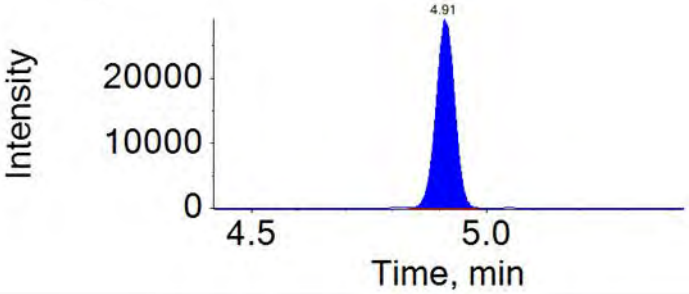
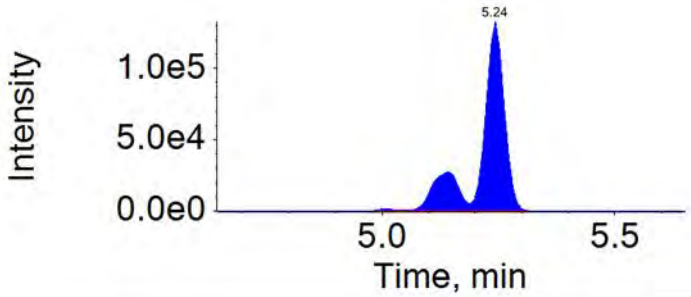
Component: PFOA
Primary Mass: 413.0 / 369.0



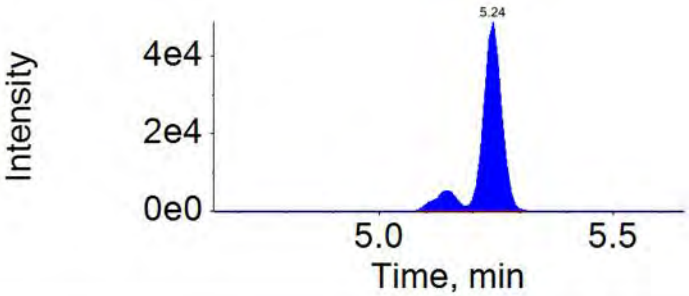
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



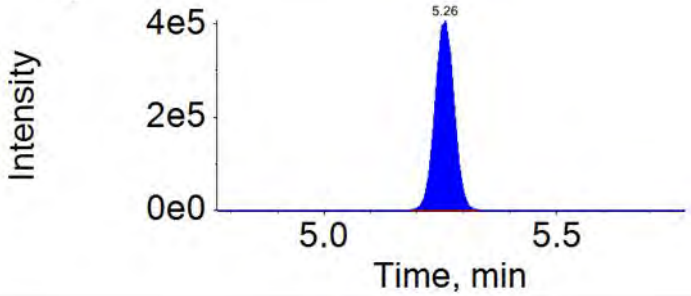
Component: PFOS
Primary Mass: 499.0 / 80.0



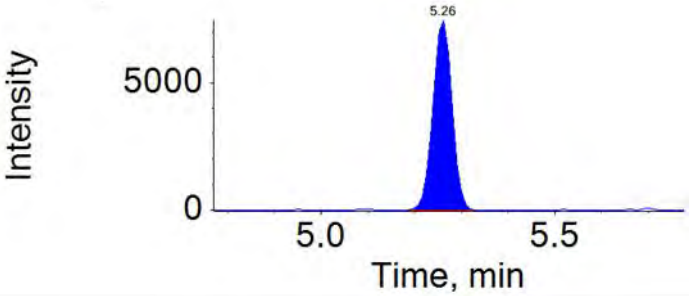
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



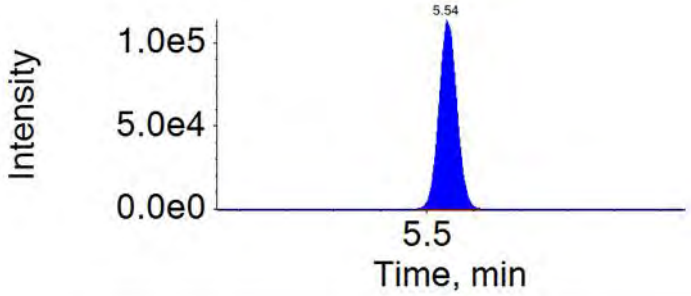
Component: PFNA
Primary Mass: 463.0 / 419.0



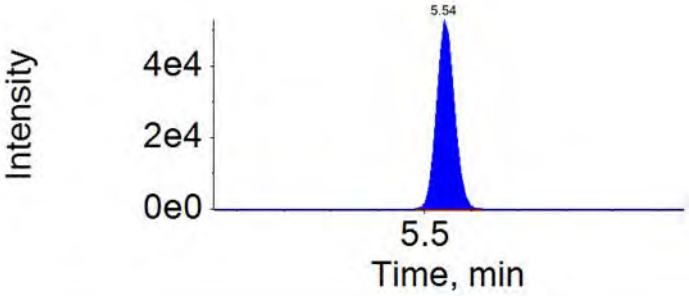
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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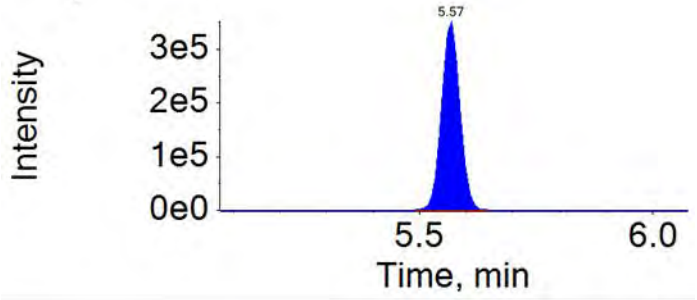
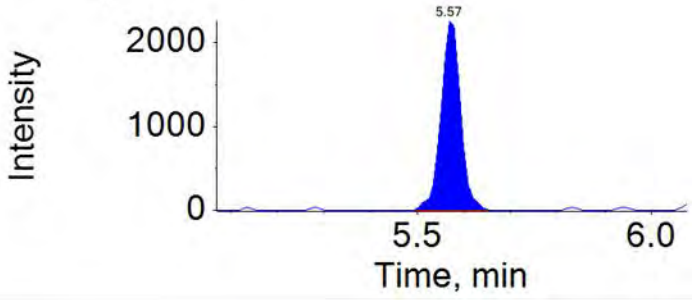
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

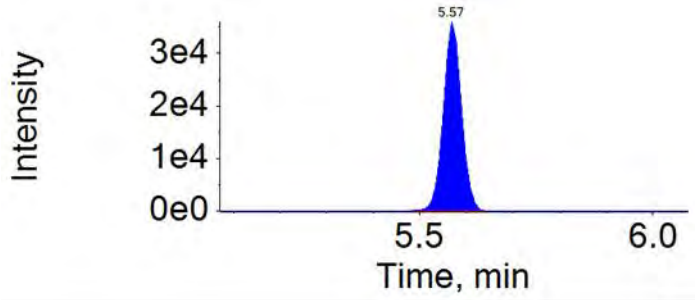
Component: PFDA
Primary Mass: 513.0 / 469.0



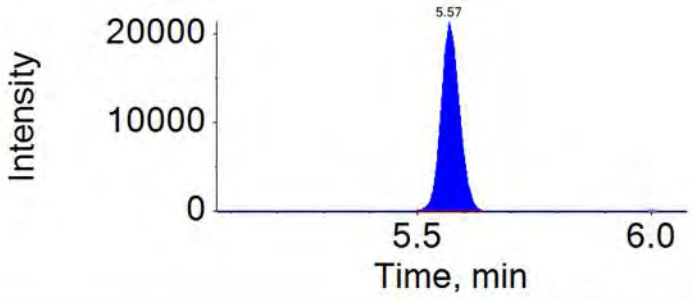
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



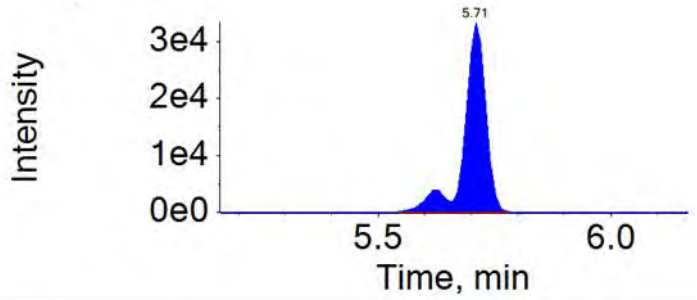
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



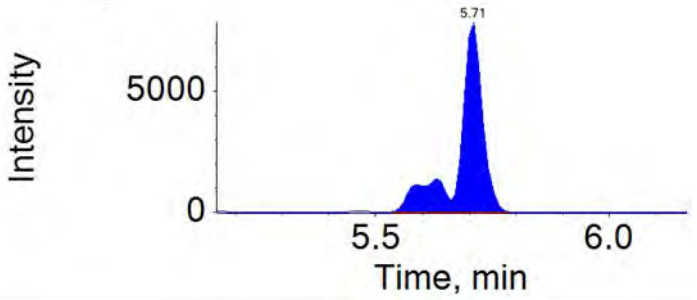
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



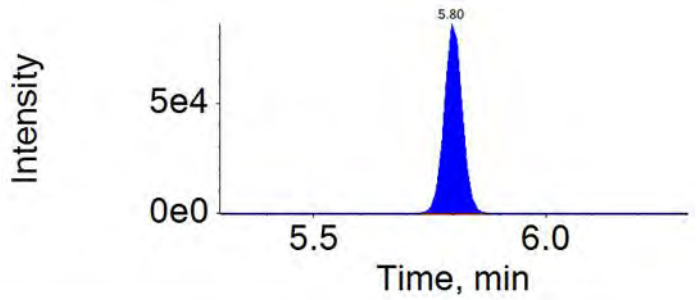
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



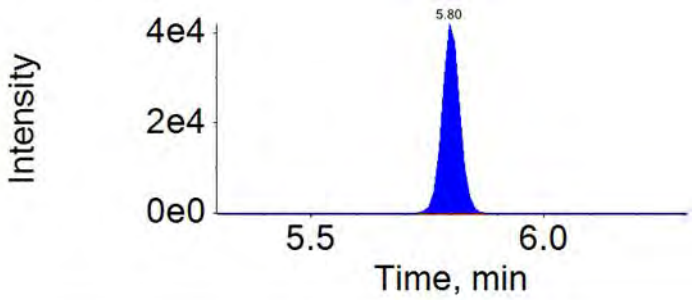
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



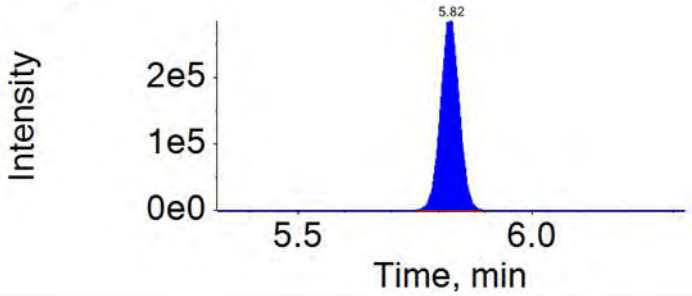
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



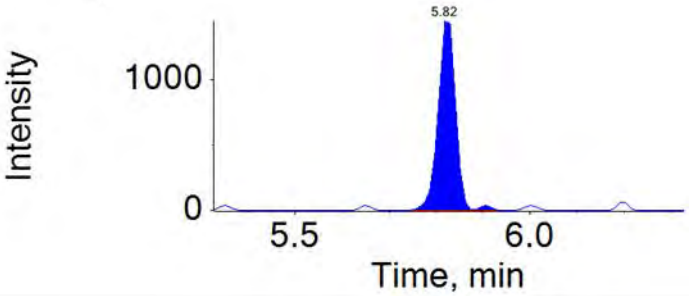
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

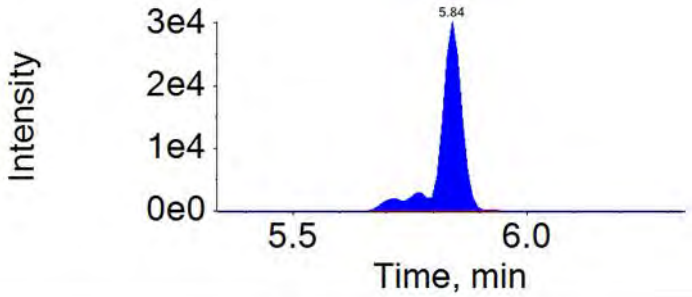
Component: PFUnDA
Primary Mass: 563.0 / 519.0



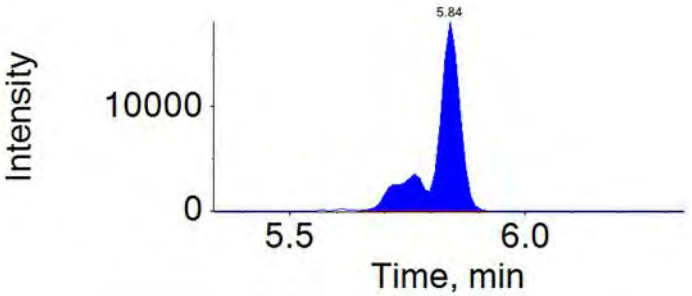
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



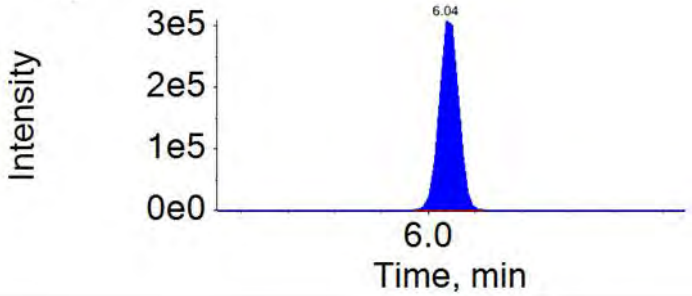
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



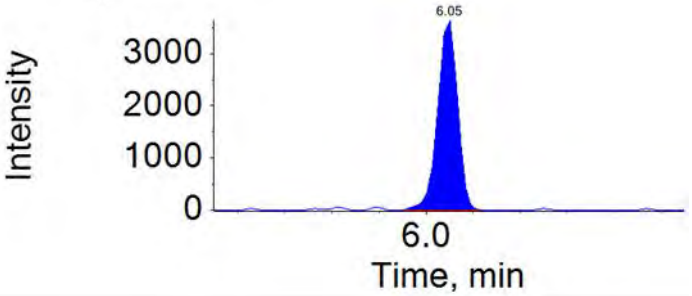
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



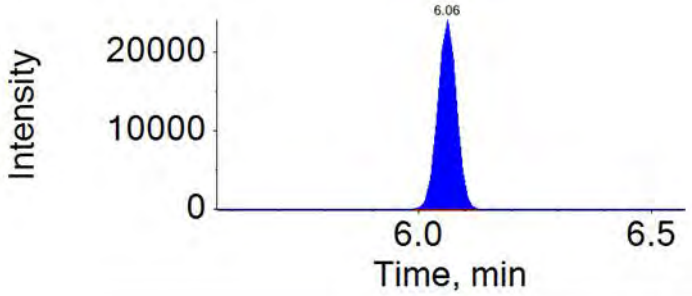
Component: PFDoDA
Primary Mass: 613.0 / 569.0



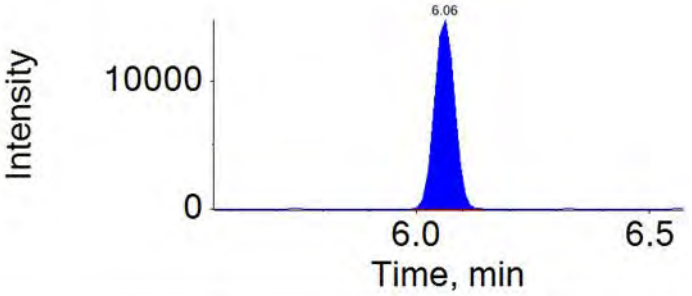
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



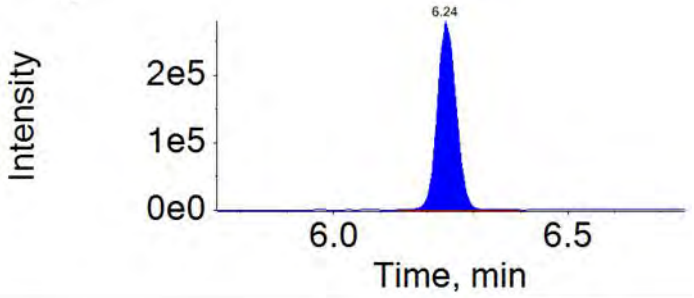
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



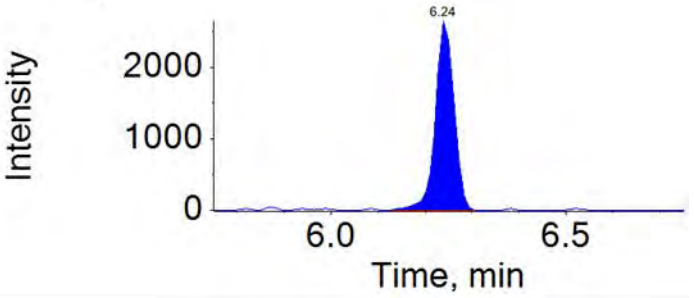
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

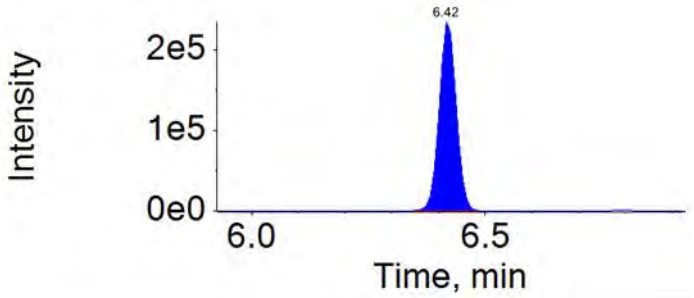
Component: PFTrDA
Primary Mass: 663.0 / 619.0



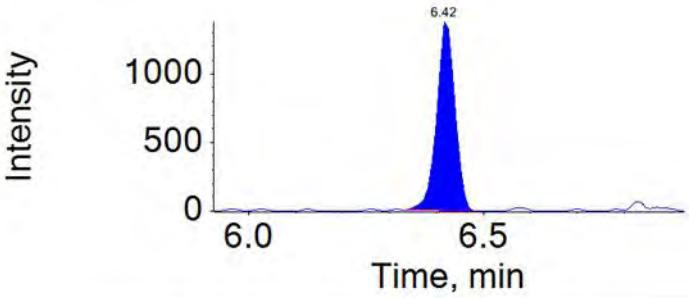
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



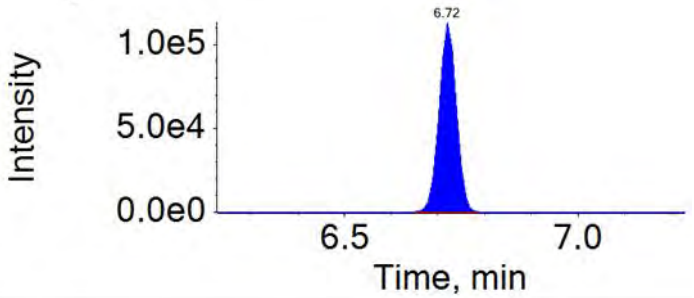
Component: PFTeDA
Primary Mass: 713.0 / 669.0



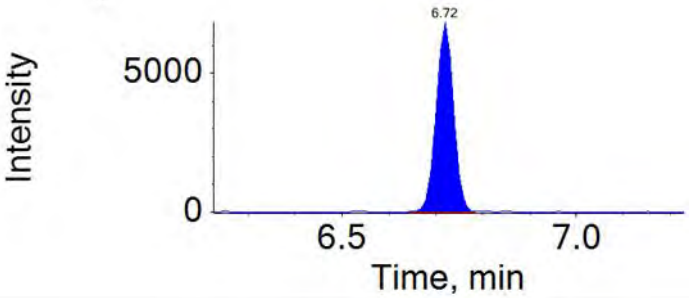
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



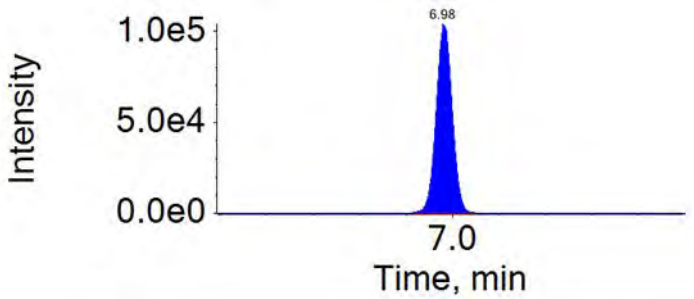
Component: PFHxDA
Primary Mass: 813.0 / 769.0



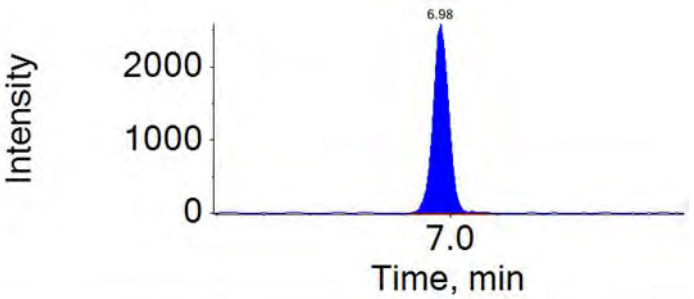
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



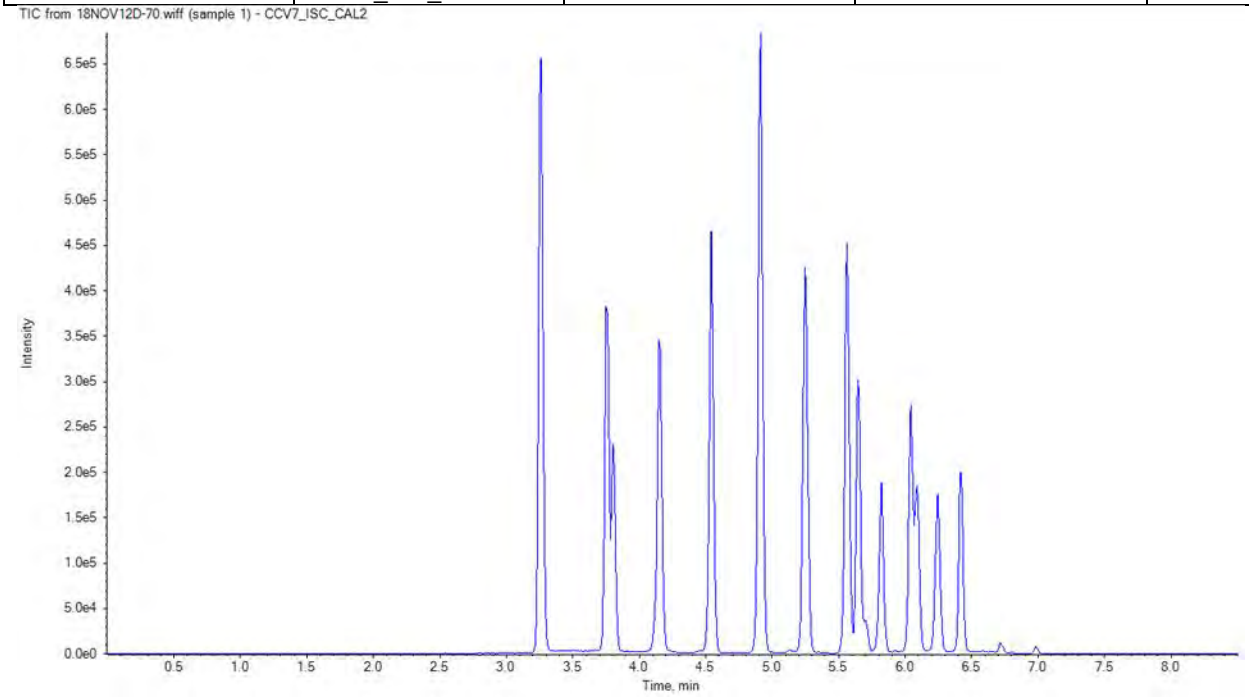
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV7_ISC_CAL2	CALBRN21833C	18NOV12D-70.wiff	2018-11-13T03:08:33



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	663781.9	659926.2	1	50	
13C2-PFOA	5.0	463595.2	450219.7	3	50	
13C4-PFOS	4.8	244885.7	249205.8	-2	50	
13C2-PFDA	5.0	281284.5	278743.9	1	50	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV7_ISC_CAL2	CALBRN21833C	18NOV12D-70.wiff	2018-11-13T03:08:33

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	80318.1	10	13C4-PFBA	759787.8	5.0	0.106	3.26	1.000	0.600	0.586	-2	30	
PFPeA	76199.0	11	13C5-PFPeA	776046.0	5.0	0.098	3.76	1.000	0.600	0.568	-5	30	
PFBS	43573.8	11	13C3-PFBS	433513.6	4.7	0.101	3.81	1.000	0.531	0.478	-10	30	
4:2-FTS	9044.8	11	13C2-4:2-FTS	45962.1	4.7	0.197	4.12	1.000	0.560	0.534	-5	30	
PFHxA	92374.7	12	13C5-PFHxA	675841.6	5.0	0.137	4.15	1.000	0.600	0.571	-5	30	
PFPeS	21331.8	11	13C3-PFBS	433513.6	4.7	0.049	4.17	1.100	0.563	0.478	-15	30	
PFHpA	94858.7	12	13C4-PFHpA	548919.2	5.0	0.173	4.54	1.000	0.600	0.573	-5	30	
PFHxS	31706.8	19	13C3-PFHxS	324722.8	4.7	0.098	4.54	1.000	0.547	0.473	-13	30	
6:2-FTS	8300.2	11	13C2-6:2-FTS	33444.9	4.8	0.248	4.90	1.000	0.569	0.601	6	30	
PFHpS	30342.3	11	13C3-PFHxS	324722.8	4.7	0.093	4.90	1.080	0.571	0.492	-14	30	
PFOA	99368.2	11	13C8-PFOA	925500.2	5.0	0.107	4.91	1.000	0.600	0.573	-4	30	
PFOS	30080.0	21	13C8-PFOS	271222.4	4.8	0.111	5.24	1.000	0.555	0.485	-13	30	
PFNA	75174.3	11	13C9-PFNA	455669.1	5.0	0.165	5.26	1.000	0.600	0.595	-1	30	
PFNS	17303.4	11	13C8-PFOS	271222.4	4.8	0.064	5.54	1.060	0.576	0.446	-23	30	
PFDA	69571.5	11	13C6-PFDA	652264.3	5.0	0.107	5.56	1.000	0.600	0.565	-6	30	
8:2-FTS	6246.5	13	13C2-8:2-FTS	25907.8	4.8	0.241	5.56	1.000	0.575	0.562	-2	30	
PFOSA	69637.2	11	13C8-PFOSA	621232.7	5.0	0.112	5.65	1.000	0.600	0.548	-9	30	
NMeFOSAA	8320.3	12	d3-NMeFOSAA	74991.5	5.0	0.111	5.71	1.000	0.600	0.627	5	30	
PFDS	15378.4	12	13C8-PFOS	271222.4	4.8	0.057	5.79	1.110	0.578	0.514	-11	30	
PFUnDA	56318.9	11	13C7-PFUnDA	260836.6	5.0	0.216	5.82	1.000	0.600	0.564	-6	30	
NEtFOSAA	5863.7	21	d5-NEtFOSAA	69408.4	5.0	0.084	5.83	1.000	0.600	0.443	-26	30	
PFDoDA	56183.0	11	13C2-PFDoDA	539910.7	5.0	0.104	6.04	1.000	0.600	0.530	-12	30	
10:2-FTS	4429.6	11	13C2-8:2-FTS	25907.8	4.8	0.171	6.07	1.090	0.578	0.569	-1	30	
NMePFOSAE	46046.4	12	d7-NMePFOSAE	316077.1	5.0	0.146	6.10	1.000	0.600	0.606	1	30	
NMePFOSA	8444.8	12	d3-NMePFOSA	77538.7	5.0	0.109	6.10	1.000	0.600	0.537	-10	30	
PFDoS	8181.4	11	13C8-PFOS	271222.4	4.8	0.030	6.21	1.190	0.581	0.528	-9	30	
NEtPFOSAE	45451.8	11	d9-NEtPFOSAE	260793.4	5.0	0.174	6.25	1.000	0.600	0.559	-7	30	
NEtPFOSA	8349.0	11	d5-NEtPFOSA	56766.8	5.0	0.147	6.26	1.000	0.600	0.675	13	30	
PFTrDA	50194.4	11	13C2-PFDoDA	539910.7	5.0	0.093	6.24	1.030	0.600	0.587	-2	30	
PFTeDA	38146.4	10	13C2-PFTeDA	409036.5	5.0	0.093	6.42	1.000	0.600	0.523	-13	30	
PFHxDA	19541.0	11	13C2-PFTeDA	409036.5	5.0	0.048	6.72	1.050	0.600	0.569	-5	30	
PFODA	15536.1	10	13C2-PFTeDA	409036.5	5.0	0.038	6.98	1.090	0.600	0.529	-12	30	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV7_ISC_CAL2			**Data File:**		18NOV12D-70.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-13T03:08:33
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV3-11
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	663781.9	659926.2	1	50	
13C2-PFOA	5.0	463595.2	450219.7	3	50	
13C4-PFOS	4.8	244885.7	249205.8	-2	50	
13C2-PFDA	5.0	281284.5	278743.9	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	759787.8	13C3-PFBA	663781.9	1.145	5.000	5.132	103	70-130	
E13C5-PFPeA	776046.0	13C3-PFBA	663781.9	1.169	5.000	5.244	105	70-130	
E13C3-PFBS	433513.6	13C3-PFBA	663781.9	0.653	4.650	4.610	99	70-130	
E13C2-4:2-FTS	45962.1	13C2-PFOA	463595.2	0.099	4.670	4.416	95	70-130	
E13C5-PFHxA	675841.6	13C2-PFOA	463595.2	1.458	5.000	5.266	105	70-130	
E13C3-PFHxS	324722.8	13C2-PFOA	463595.2	0.700	4.730	4.806	102	70-130	
E13C4-PFHpA	548919.2	13C2-PFOA	463595.2	1.184	5.000	5.334	107	70-130	
E13C2-6:2-FTS	33444.9	13C2-PFOA	463595.2	0.072	4.750	4.827	102	70-130	
E13C8-PFOA	925500.2	13C2-PFOA	463595.2	1.996	5.000	5.500	110	70-130	
E13C8-PFOS	271222.4	13C4-PFOS	244885.7	1.108	4.780	4.907	103	70-130	
E13C9-PFNA	455669.1	13C4-PFOS	244885.7	1.861	5.000	5.188	104	70-130	
E13C6-PFDA	652264.3	13C2-PFDA	281284.5	2.319	5.000	5.411	108	70-130	
E13C2-8:2-FTS	25907.8	13C2-PFDA	281284.5	0.092	4.790	4.593	96	70-130	
E13C8-PFOSA	621232.7	13C2-PFDA	281284.5	2.209	5.000	4.896	98	70-130	
Ed3-NMeFOSAA	74991.5	13C2-PFDA	281284.5	0.267	5.000	4.812	96	70-130	
E13C7-PFUnDA	260836.6	13C2-PFDA	281284.5	0.927	5.000	5.384	108	70-130	
Ed5-NEtFOSAA	69408.4	13C2-PFDA	281284.5	0.247	5.000	5.220	104	70-130	
E13C2-PFDoDA	539910.7	13C2-PFDA	281284.5	1.919	5.000	4.984	100	70-130	
Ed7-NMePFOSAE	316077.1	13C2-PFDA	281284.5	1.124	5.000	4.863	97	70-130	
Ed3-NMePFOSA	77538.7	13C2-PFDA	281284.5	0.276	5.000	5.008	100	70-130	
Ed9-NEtPFOSAE	260793.4	13C2-PFDA	281284.5	0.927	5.000	4.822	96	70-130	
Ed5-NEtPFOSA	56766.8	13C2-PFDA	281284.5	0.202	5.000	4.734	95	70-130	
E13C2-PFTeDA	409036.5	13C2-PFDA	281284.5	1.454	5.000	5.105	102	70-130	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

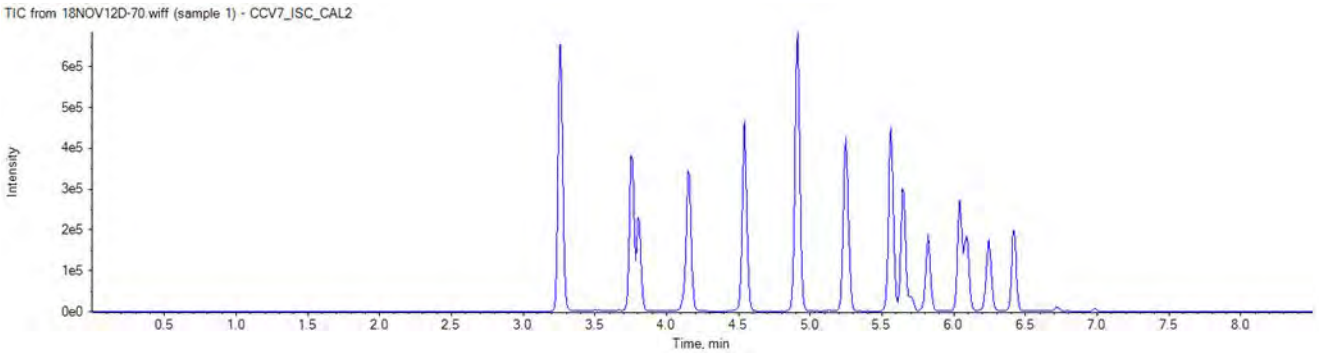
Analyte Quantitation Peak Table

Sample Name: CCV7_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12D-70.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	80318.1		A	13C4-PFBA	3.26	759787.8	0.106	0.586
PFPeA	3.76	1.000	76199.0		M	13C5-PFPeA	3.76	776046.0	0.098	0.568
PFBS	3.81	1.000	43573.8		A	13C3-PFBS	3.81	433513.6	0.101	0.478
4:2-FTS	4.12	1.000	9044.8		A	13C2-4:2-FTS	4.12	45962.1	0.197	0.534
PFHxA	4.15	1.000	92374.7		A	13C5-PFHxA	4.15	675841.6	0.137	0.571
PFPeS	4.17	1.100	21331.8		A	13C3-PFBS	3.81	433513.6	0.049	0.478
PFHpA	4.54	1.000	94858.7		A	13C4-PFHpA	4.54	548919.2	0.173	0.573
PFHxS	4.54	1.000	31706.8		M	13C3-PFHxS	4.54	324722.8	0.098	0.473
6:2-FTS	4.90	1.000	8300.2		A	13C2-6:2-FTS	4.90	33444.9	0.248	0.601
PFHpS	4.90	1.080	30342.3		A	13C3-PFHxS	4.54	324722.8	0.093	0.492
PFOA	4.91	1.000	99368.2		A	13C8-PFOA	4.91	925500.2	0.107	0.573
PFOS	5.24	1.000	30080.0		M	13C8-PFOS	5.24	271222.4	0.111	0.485
PFNA	5.26	1.000	75174.3		A	13C9-PFNA	5.26	455669.1	0.165	0.595
PFNS	5.54	1.060	17303.4		A	13C8-PFOS	5.24	271222.4	0.064	0.446
PFDA	5.56	1.000	69571.5		A	13C6-PFDA	5.56	652264.3	0.107	0.565
8:2-FTS	5.56	1.000	6246.5		A	13C2-8:2-FTS	5.57	25907.8	0.241	0.562
PFOSA	5.65	1.000	69637.2		A	13C8-PFOSA	5.65	621232.7	0.112	0.548
NMeFOSAA	5.71	1.000	8320.3		A	d3-NMeFOSAA	5.70	74991.5	0.111	0.627
PFDS	5.79	1.110	15378.4		A	13C8-PFOS	5.24	271222.4	0.057	0.514
PFUnDA	5.82	1.000	56318.9		A	13C7-PFUnDA	5.82	260836.6	0.216	0.564
NEtFOSAA	5.83	1.000	5863.7		M	d5-NEtFOSAA	5.83	69408.4	0.084	0.443
PFDoDA	6.04	1.000	56183.0		A	13C2-PFDoDA	6.04	539910.7	0.104	0.530
10:2-FTS	6.07	1.090	4429.6		A	13C2-8:2-FTS	5.57	25907.8	0.171	0.569
NMePFOSAE	6.10	1.000	46046.4		A	d7-NMePFOSAE	6.09	316077.1	0.146	0.606
NMePFOSA	6.10	1.000	8444.8		A	d3-NMePFOSA	6.10	77538.7	0.109	0.537
PFDoS	6.21	1.190	8181.4		A	13C8-PFOS	5.24	271222.4	0.030	0.528
NEtPFOSAE	6.25	1.000	45451.8		A	d9-NEtPFOSAE	6.24	260793.4	0.174	0.559
NEtPFOSA	6.26	1.000	8349.0		M	d5-NEtPFOSA	6.26	56766.8	0.147	0.675
PFTrDA	6.24	1.030	50194.4		A	13C2-PFDoDA	6.04	539910.7	0.093	0.587
PFTeDA	6.42	1.000	38146.4		A	13C2-PFTeDA	6.42	409036.5	0.093	0.523
PFHxDA	6.72	1.050	19541.0		A	13C2-PFTeDA	6.42	409036.5	0.048	0.569
PFODA	6.98	1.090	15536.1		A	13C2-PFTeDA	6.42	409036.5	0.038	0.529

Total Ion Chromatogram

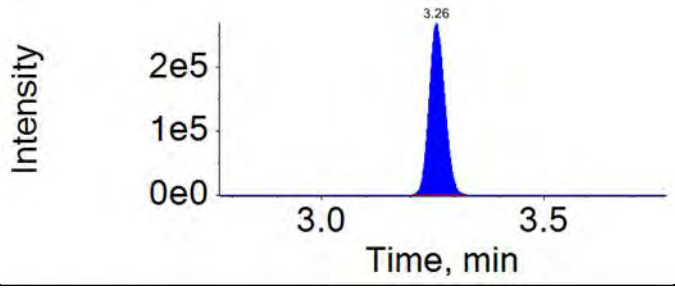


APPROVED
By JPT at 10:23 am, 11/13/18

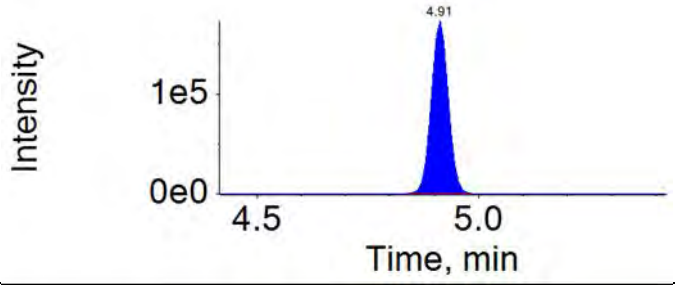
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

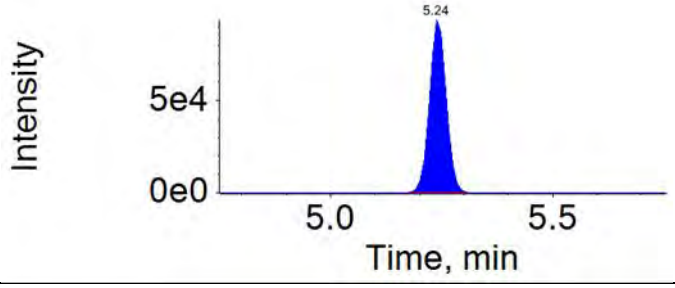
Injection Standard: 13C3-PFBA
216.0 / 172.0



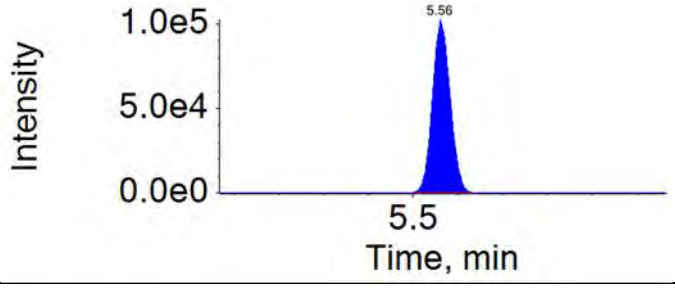
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

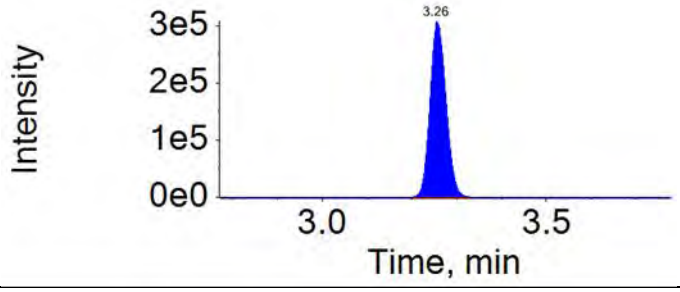


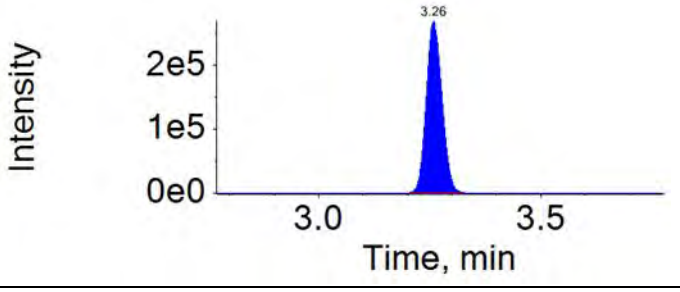
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

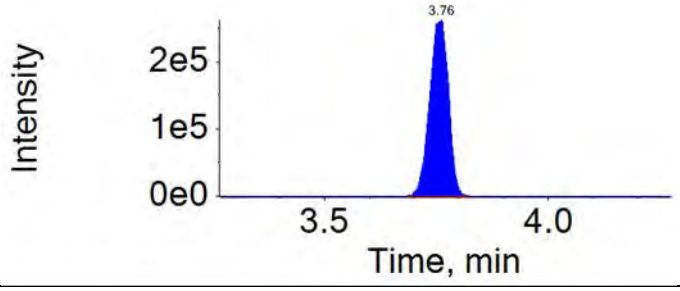
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

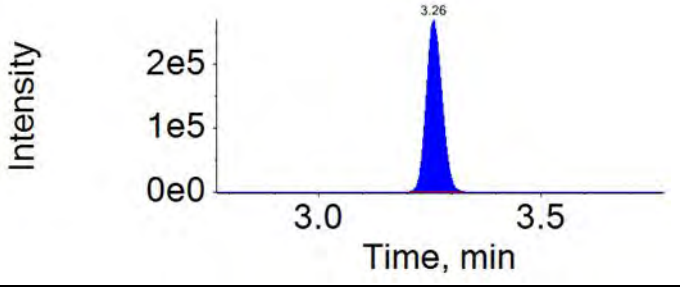
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



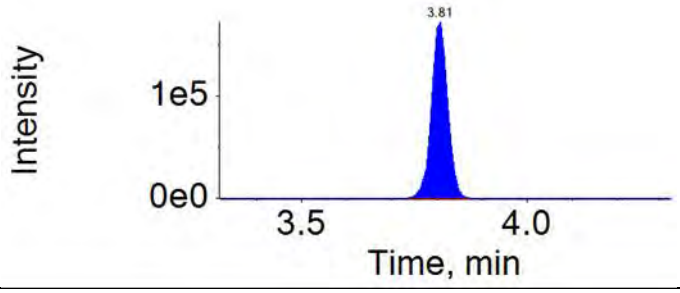


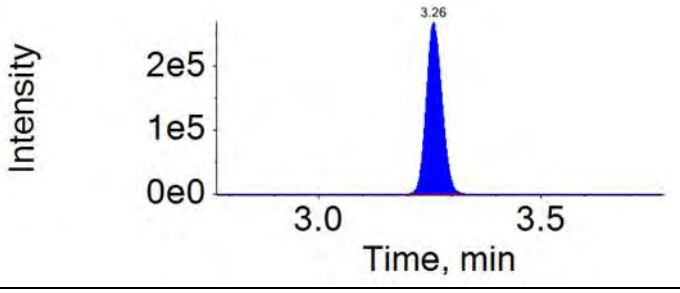
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



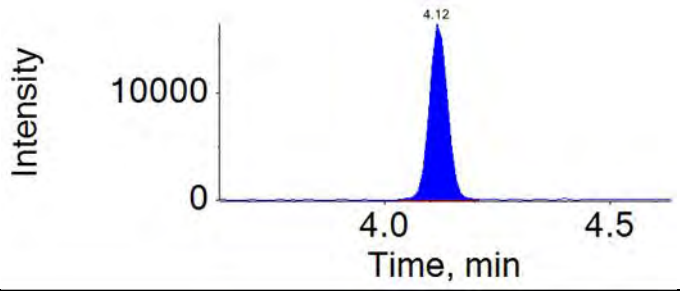


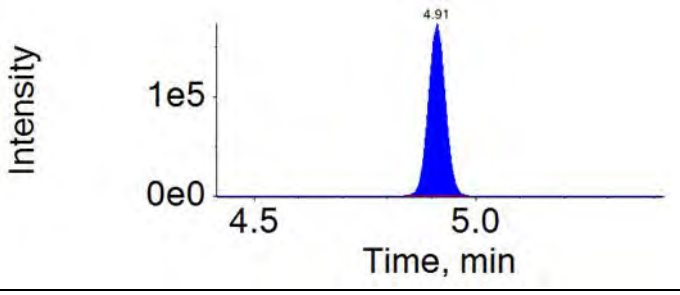
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





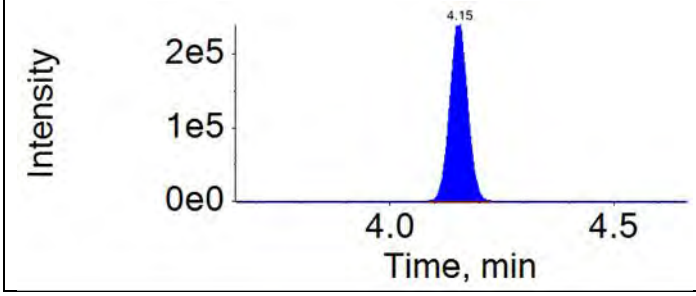
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

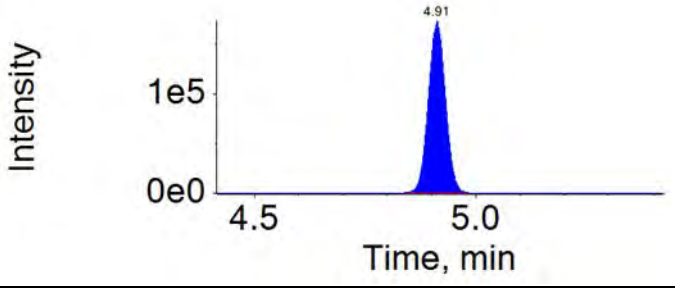




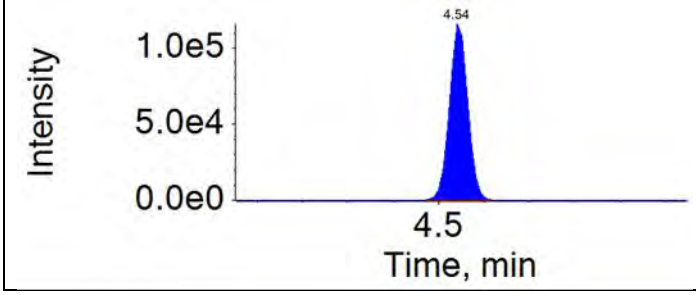
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

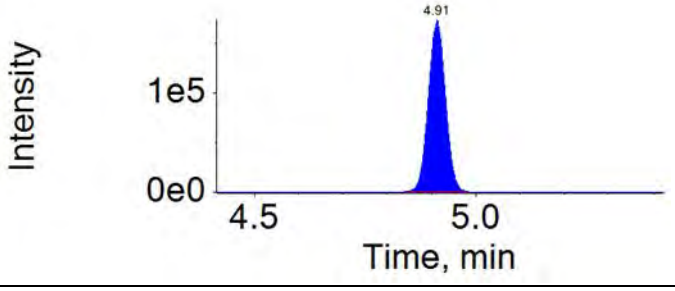
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



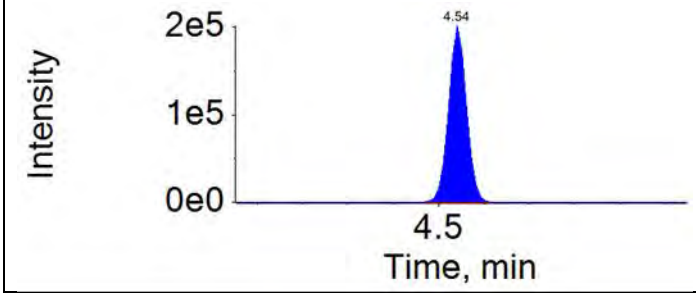


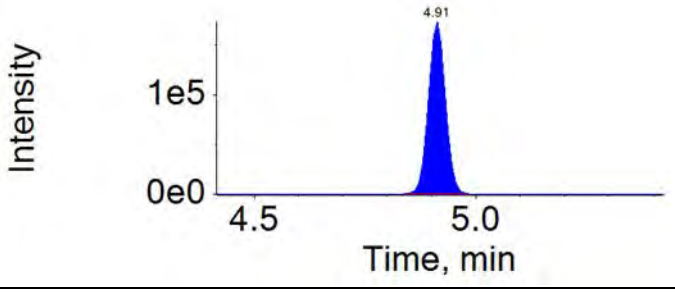
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



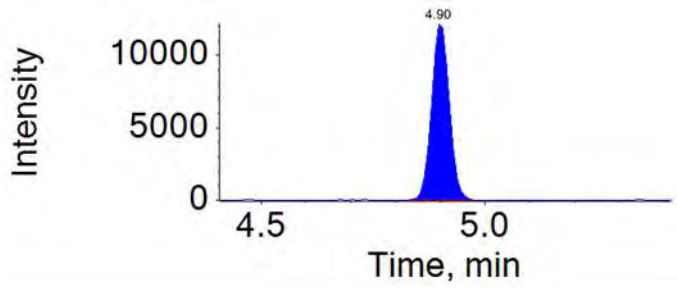


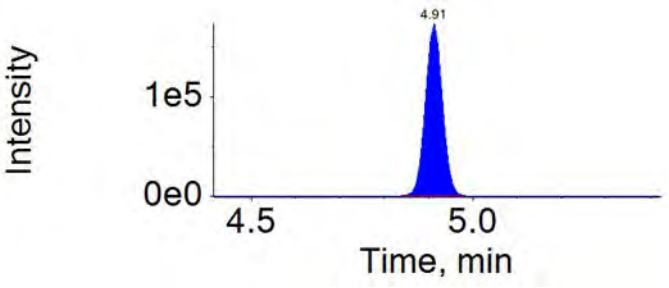
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

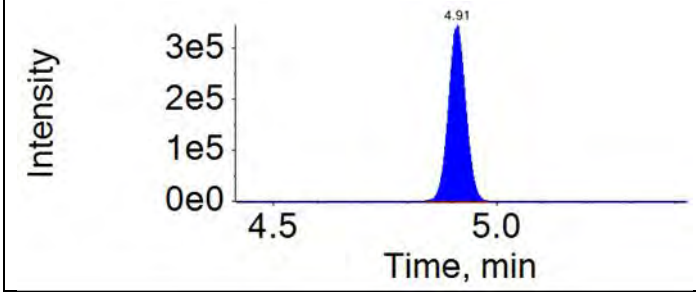
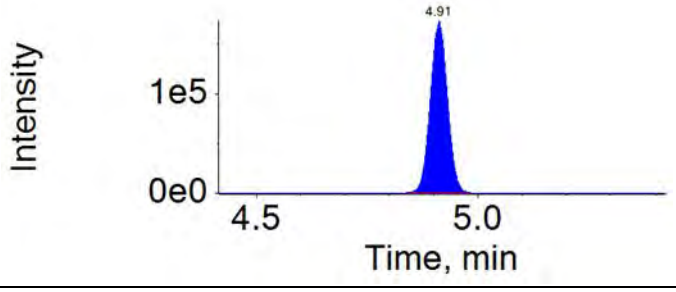


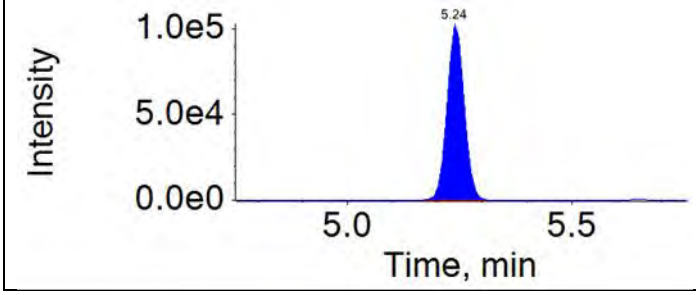
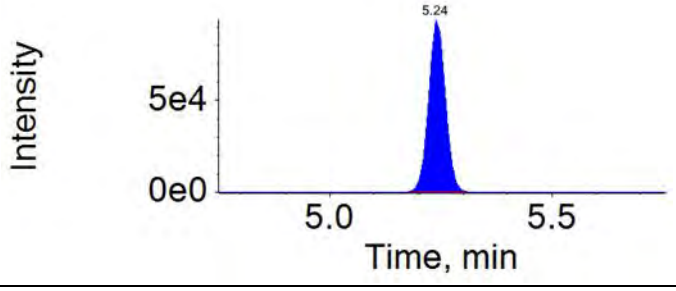


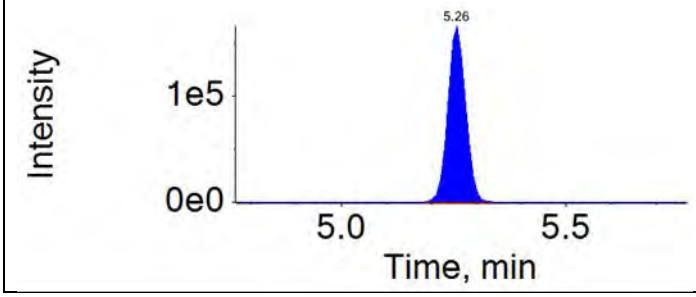
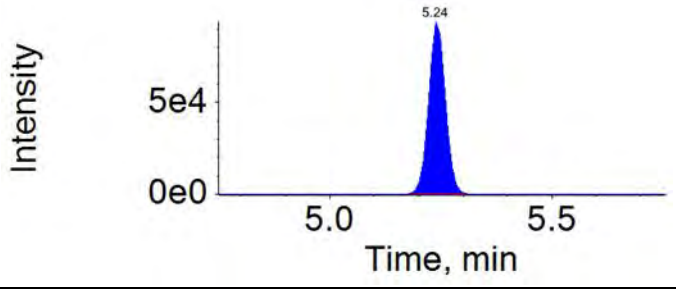
APPROVED
By JPT at 10:23 am, 11/13/18

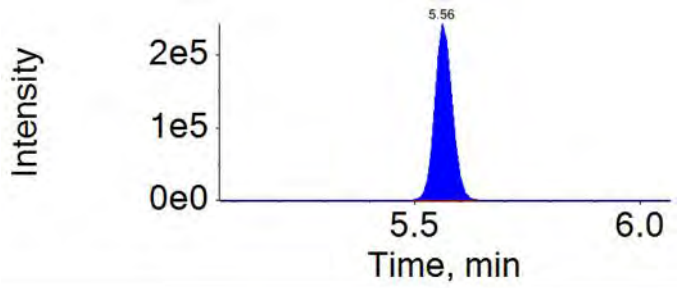
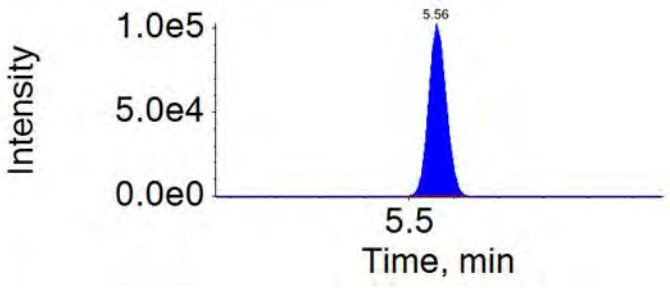
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

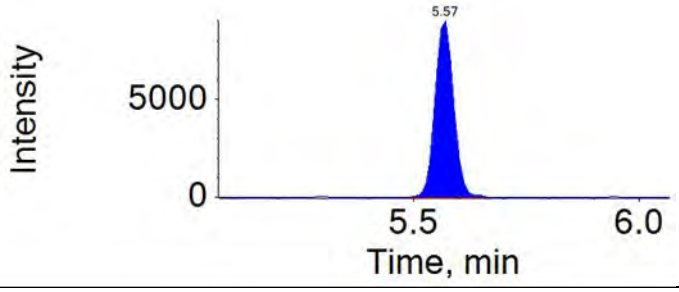
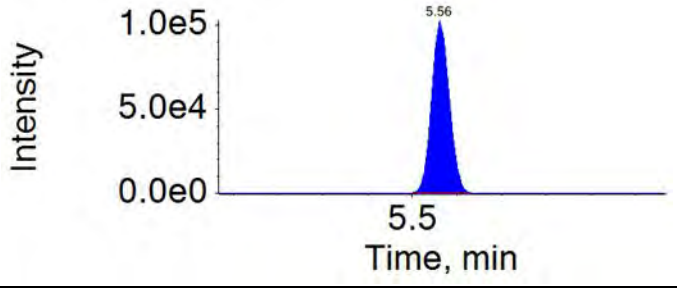
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

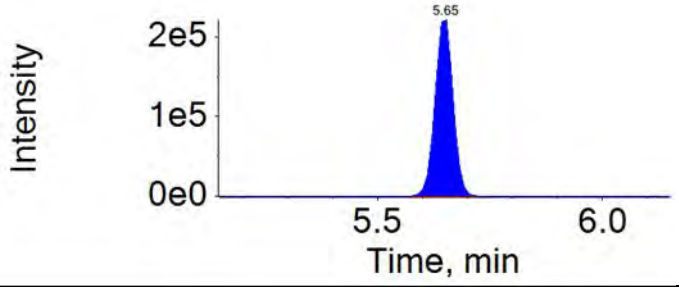
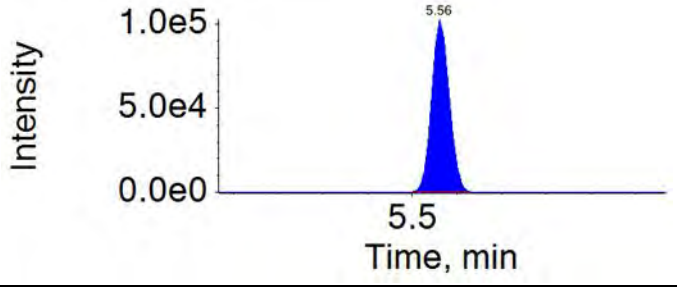
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

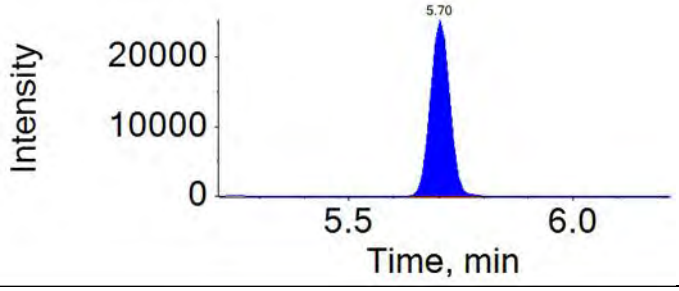
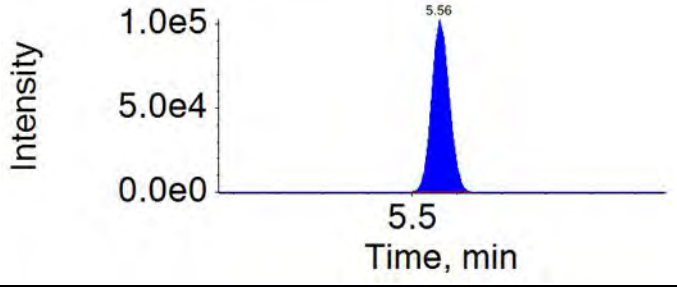
APPROVED
By JPT at 10:23 am, 11/13/18

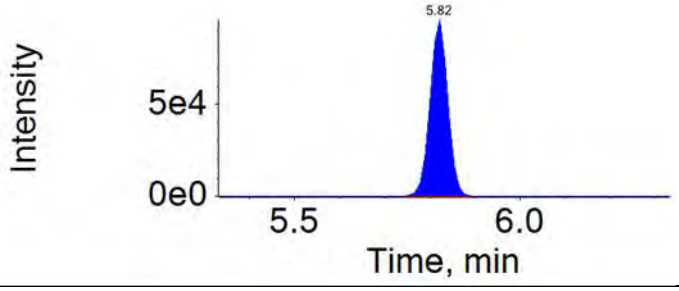
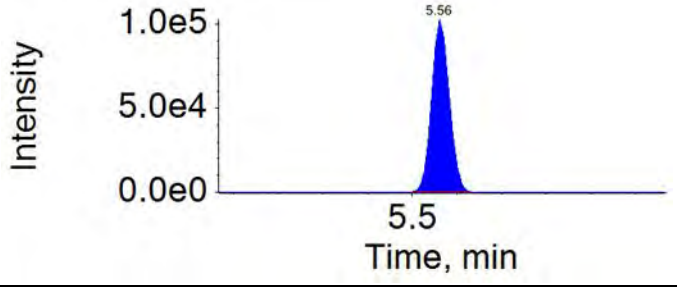
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

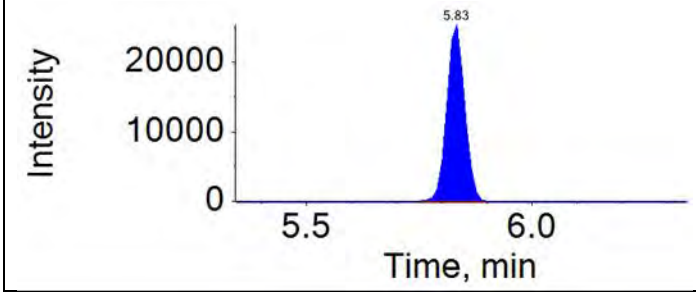
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

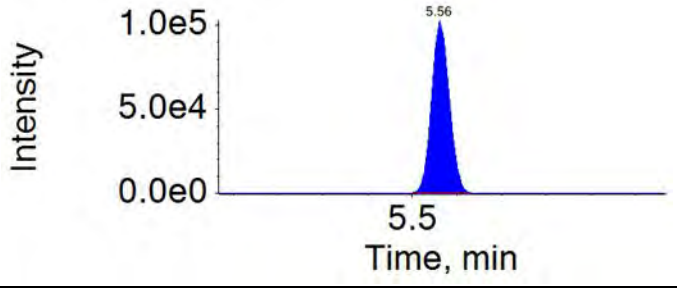
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

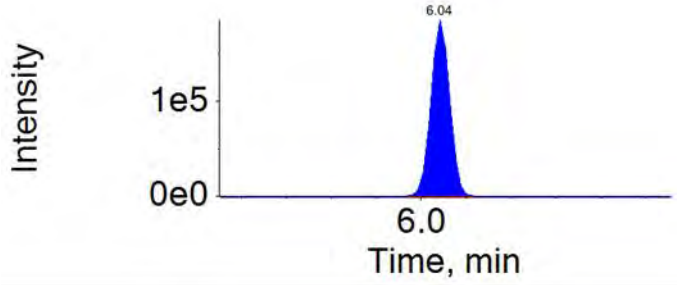
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

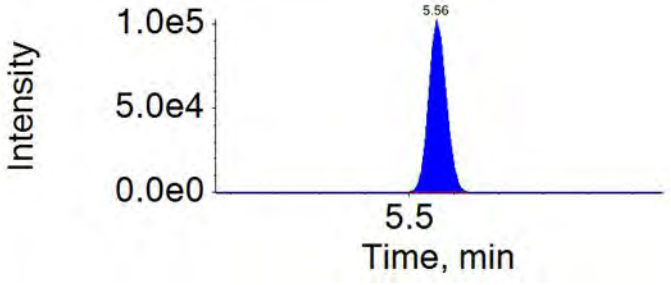
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



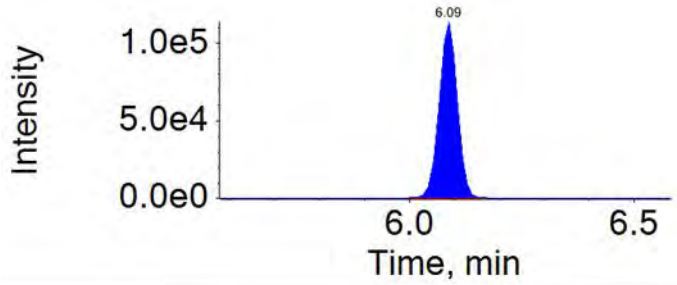


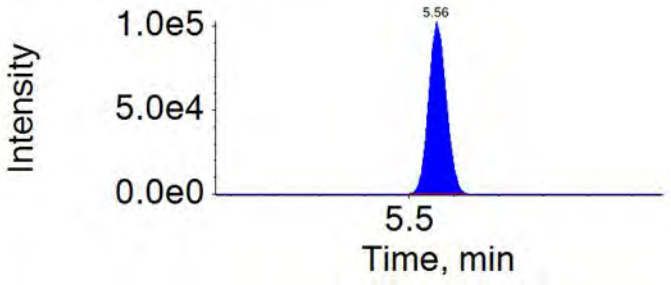
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



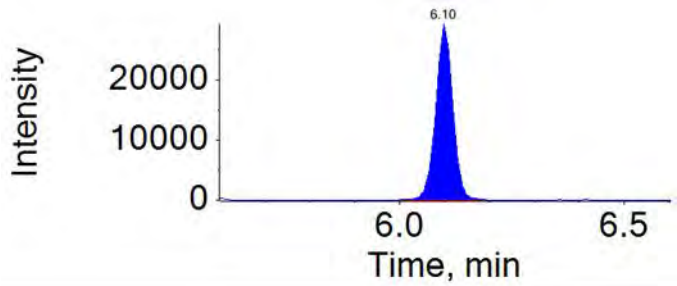


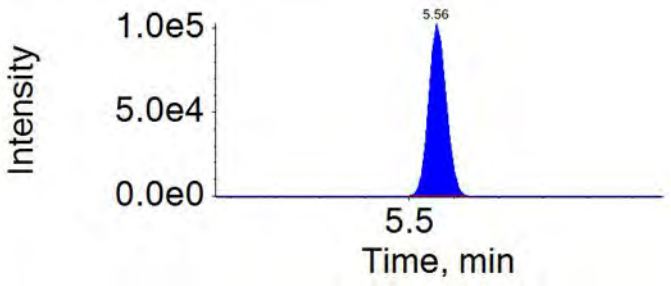
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



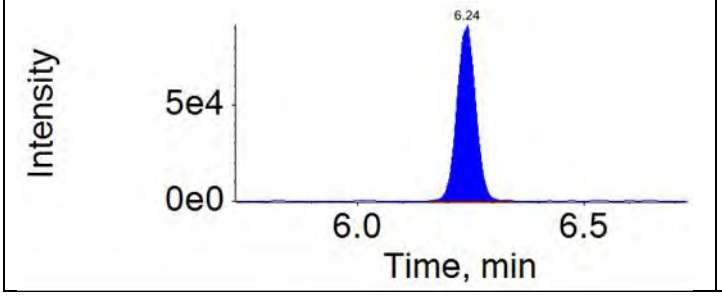


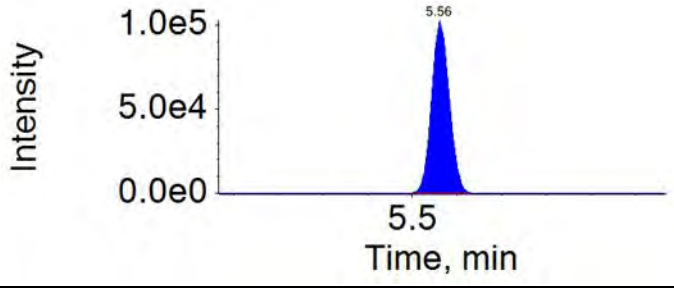
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

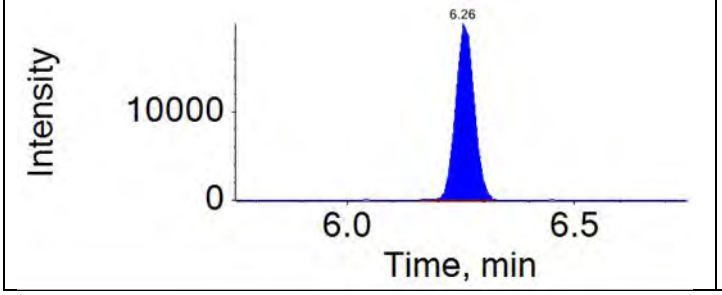
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

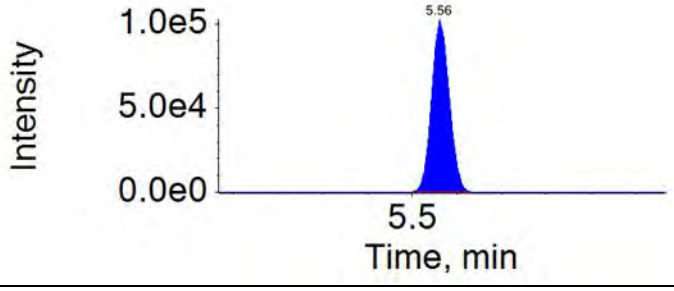
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



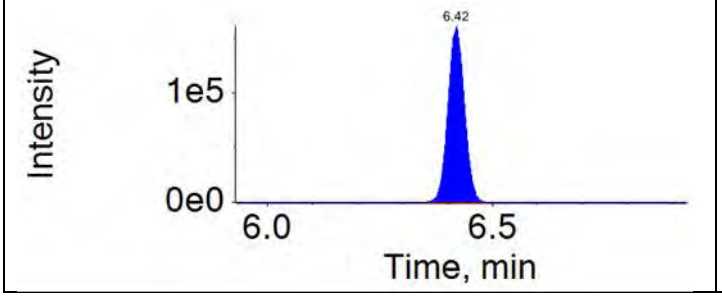


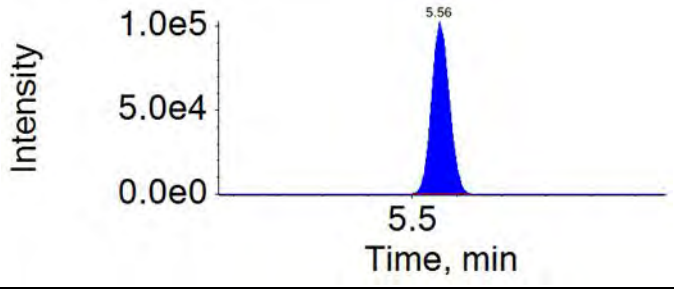
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



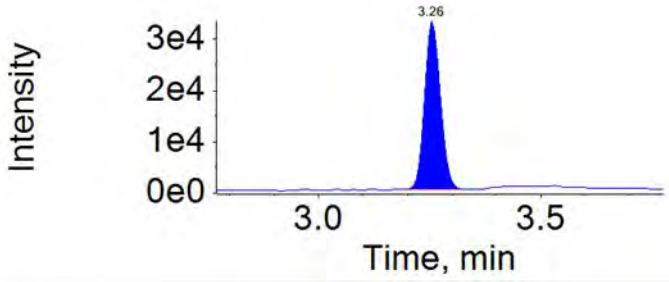


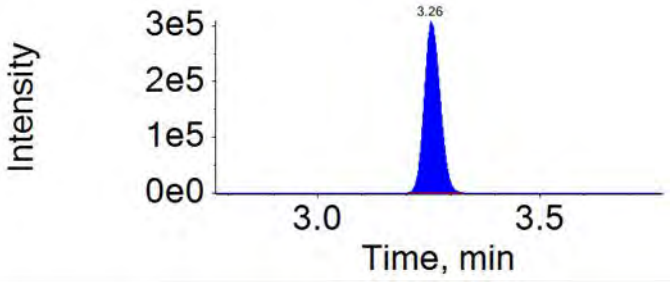
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

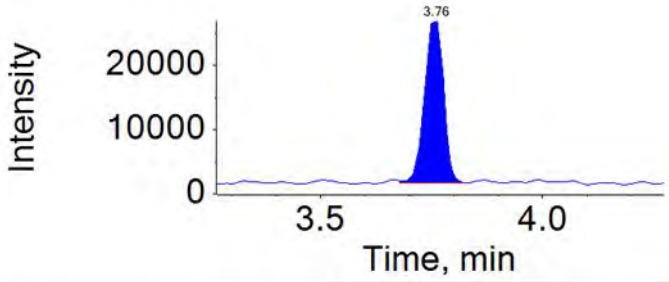
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

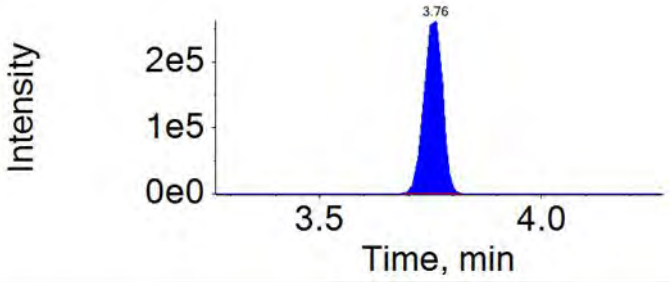
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



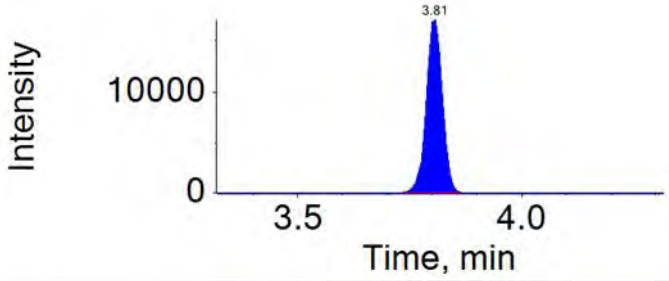


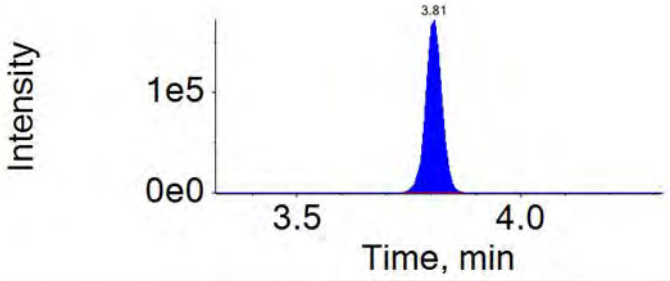
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



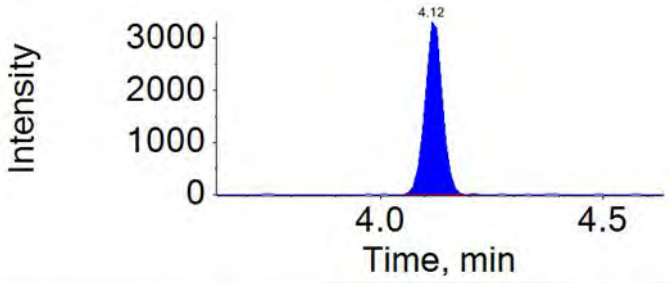


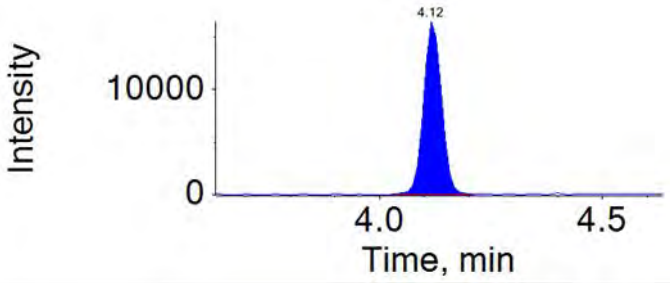
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



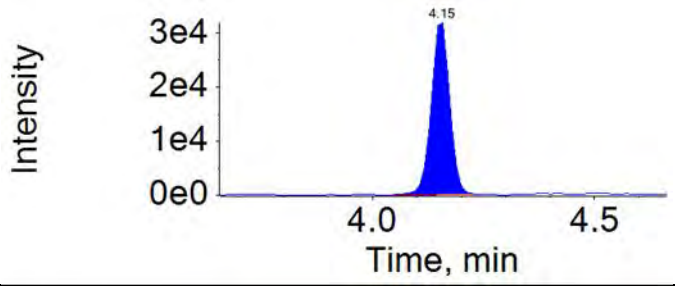


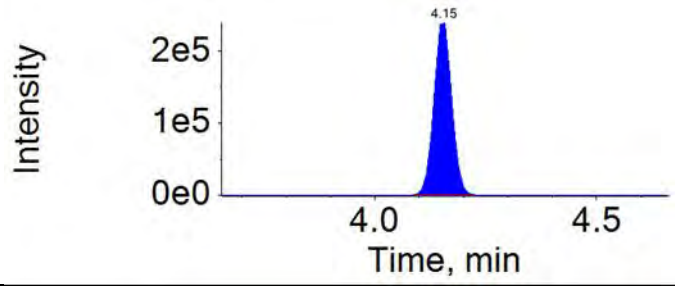
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

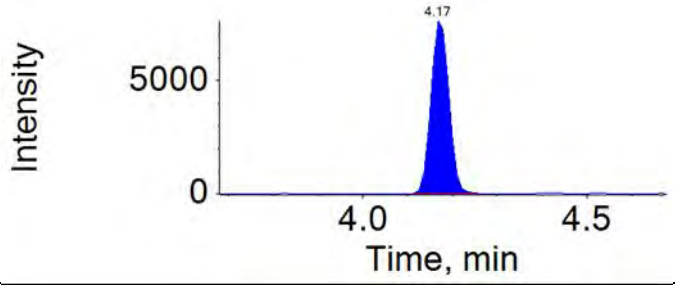
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

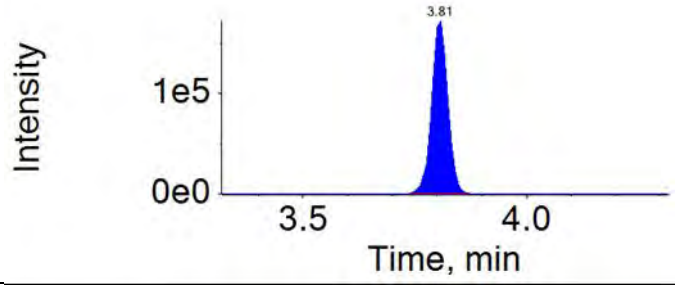
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



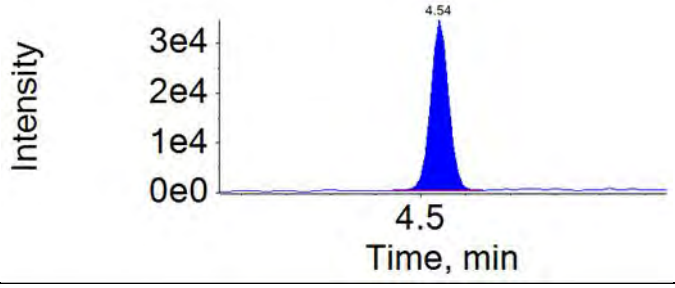


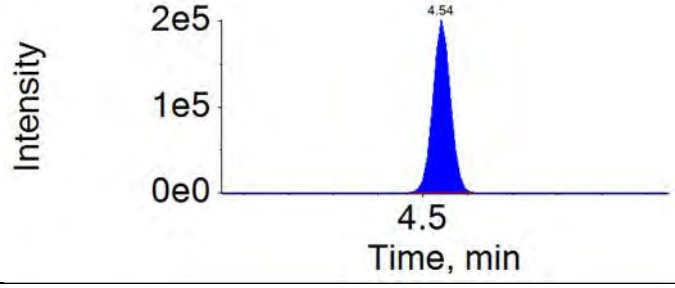
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



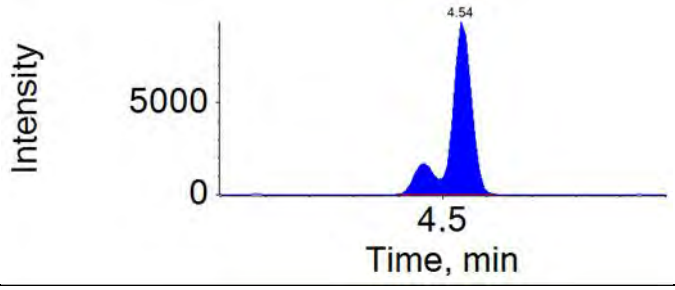


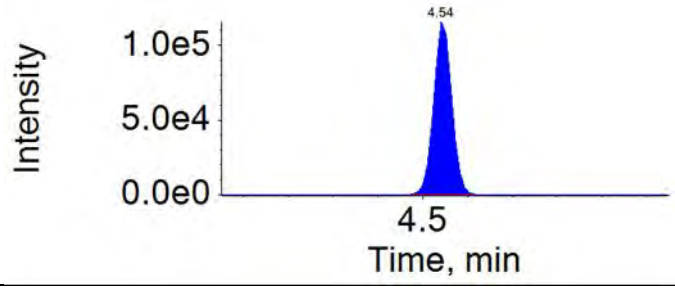
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

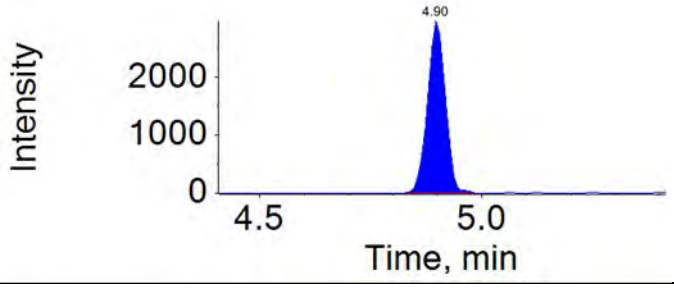
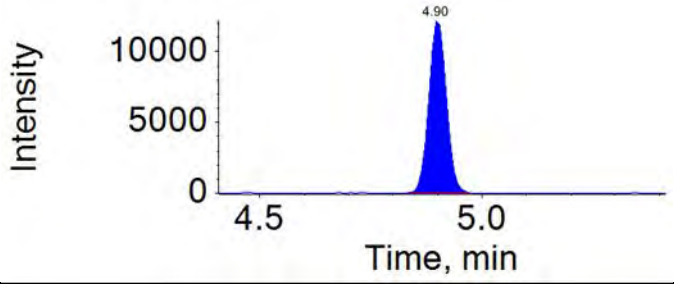


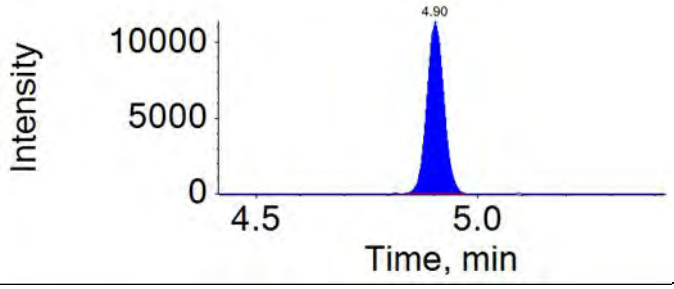
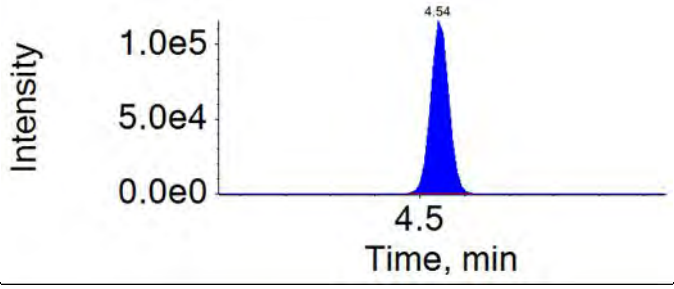


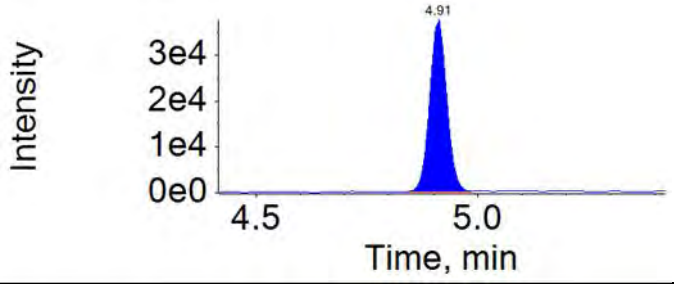
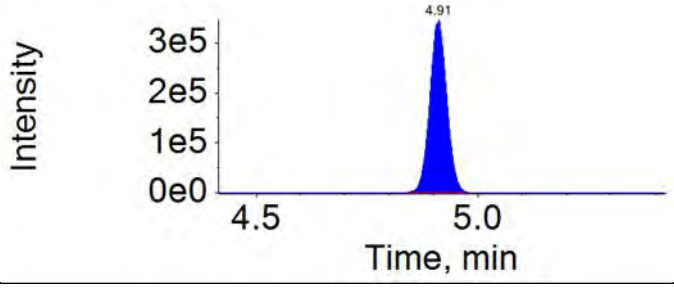
APPROVED
By JPT at 10:23 am, 11/13/18

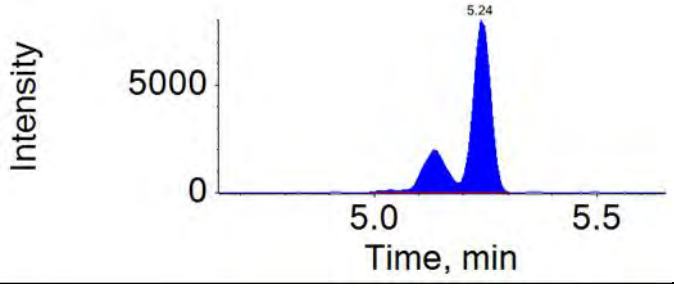
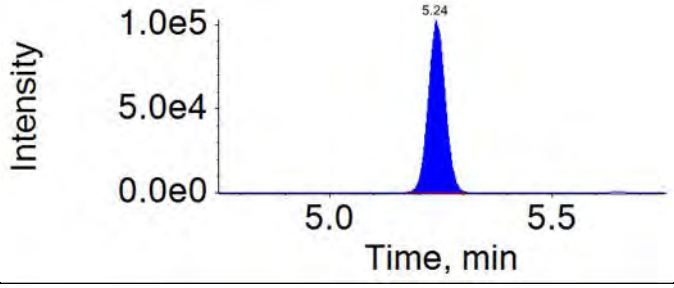
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

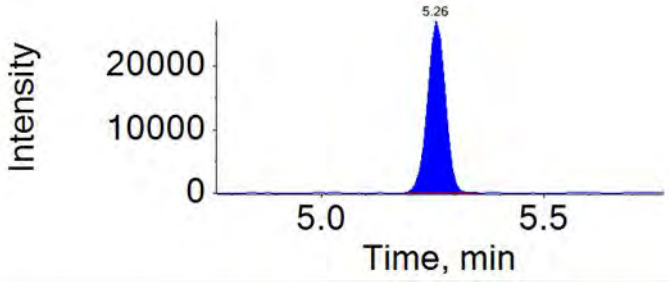
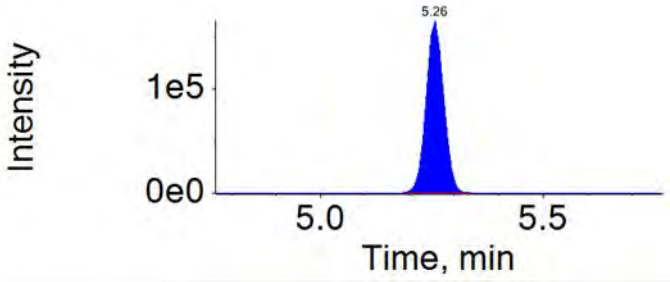
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

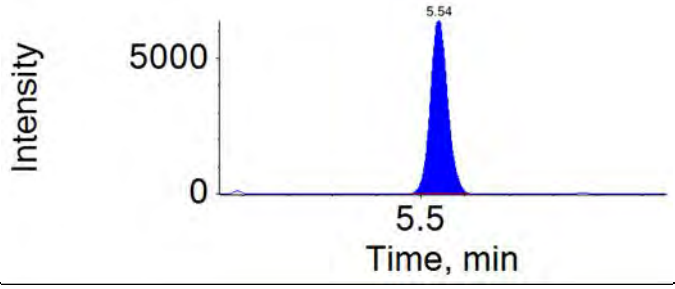
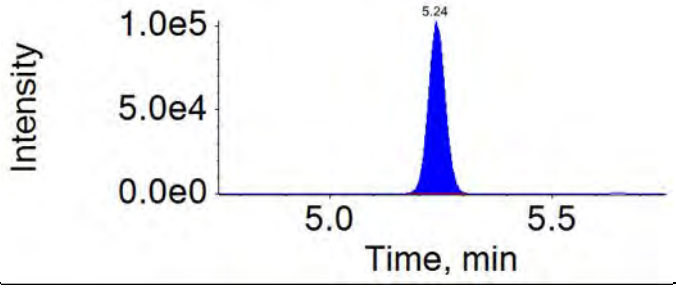
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

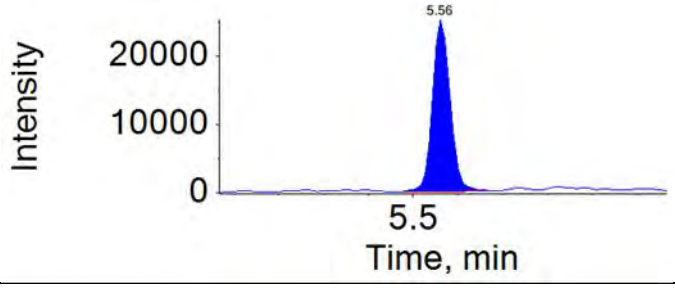
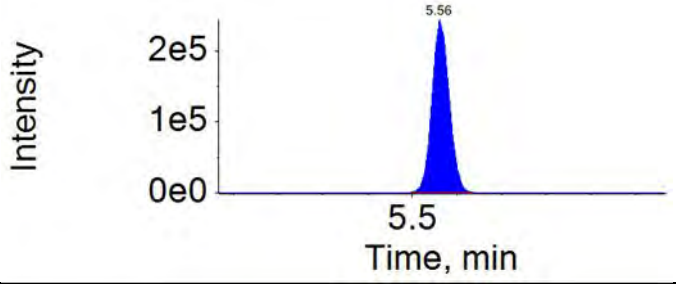
APPROVED
By JPT at 10:23 am, 11/13/18

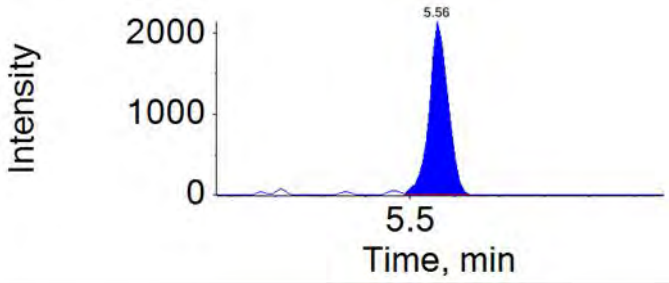
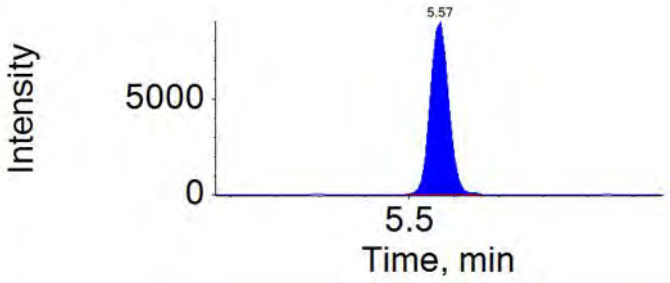
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

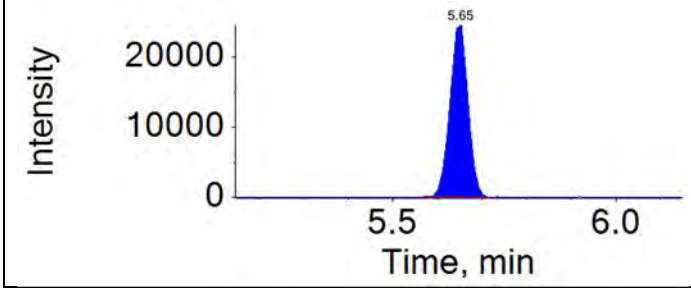
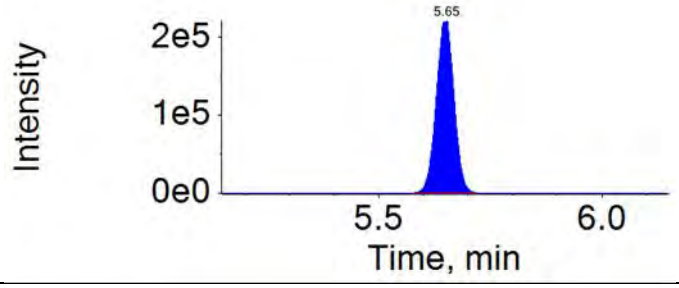
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

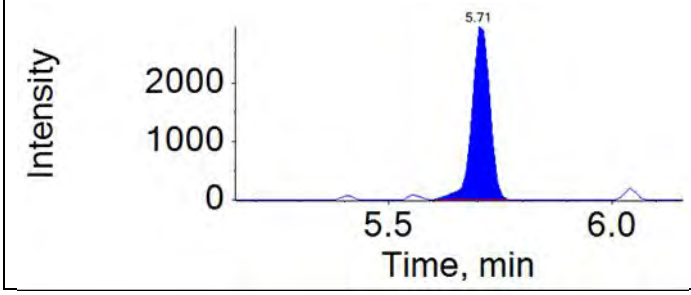
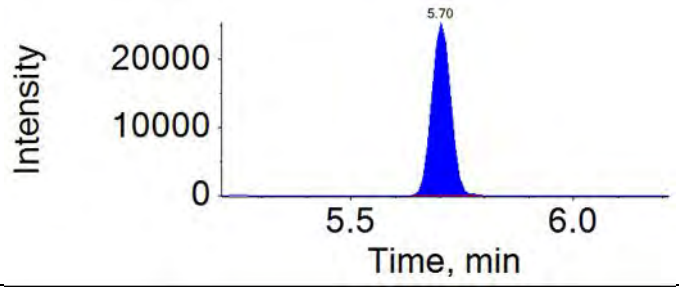
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

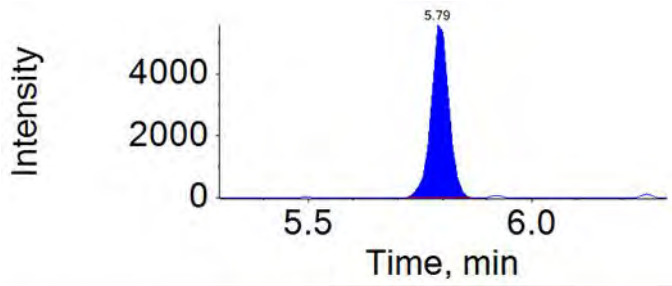
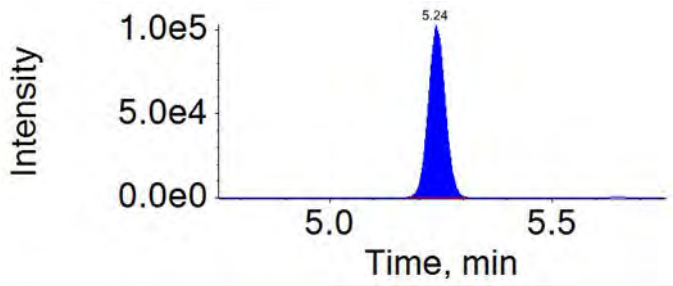
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

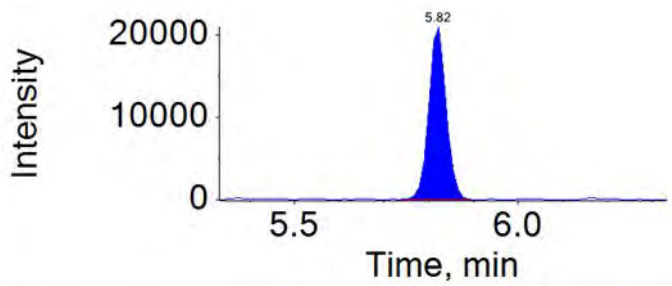
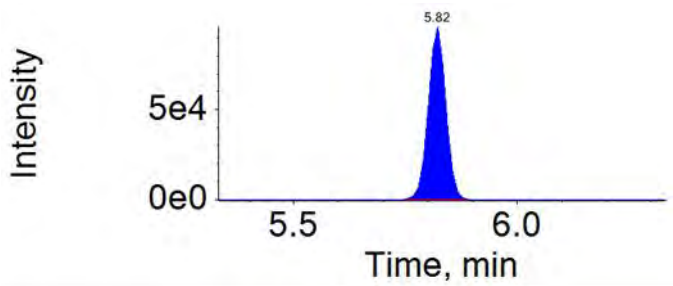
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

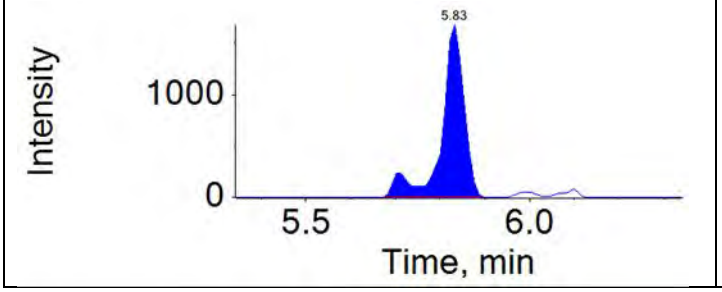
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

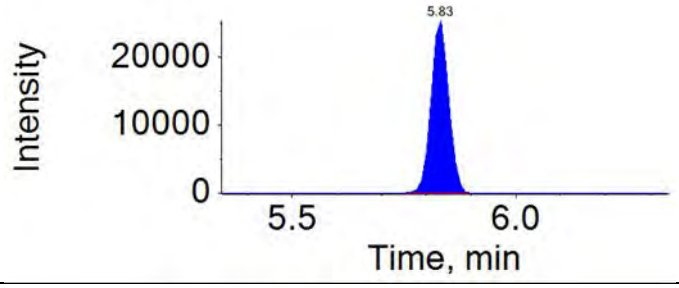
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

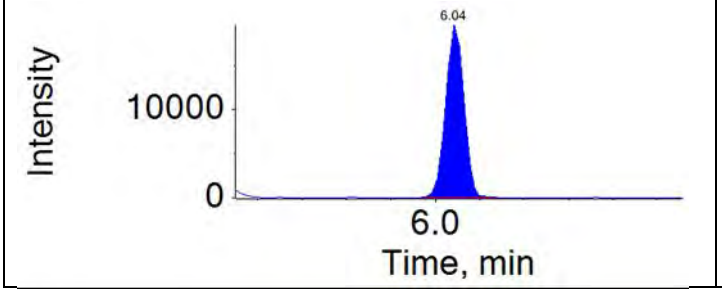
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

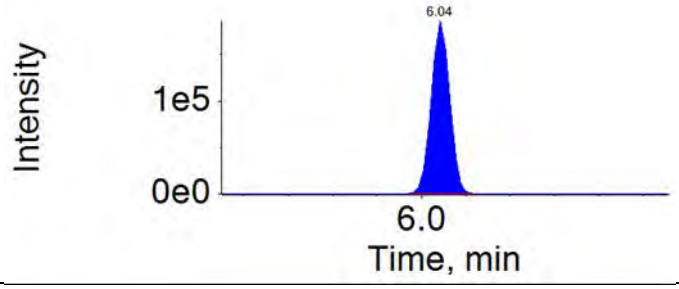
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



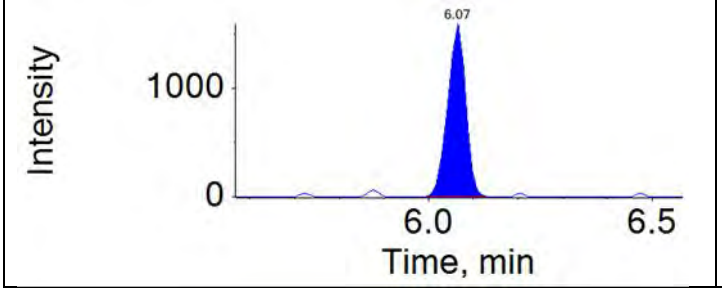


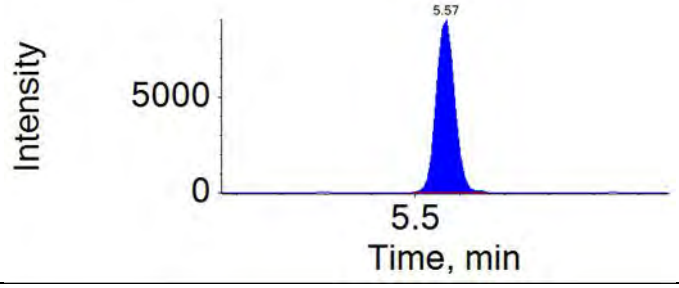
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



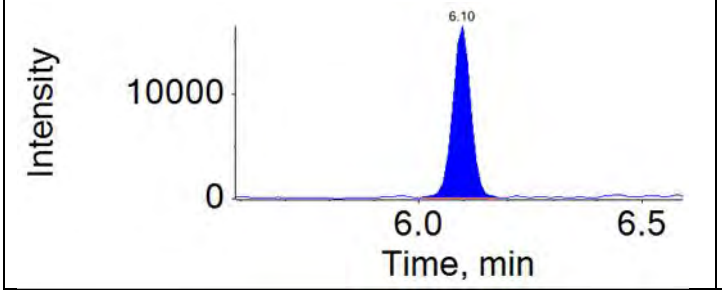


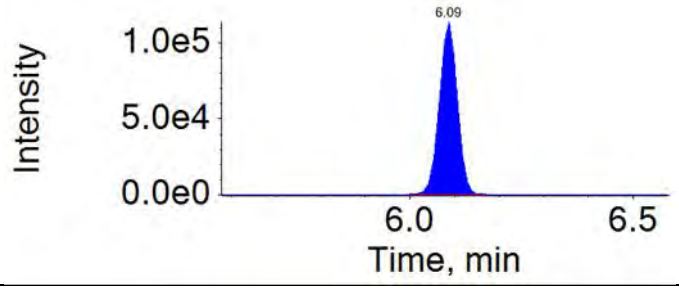
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



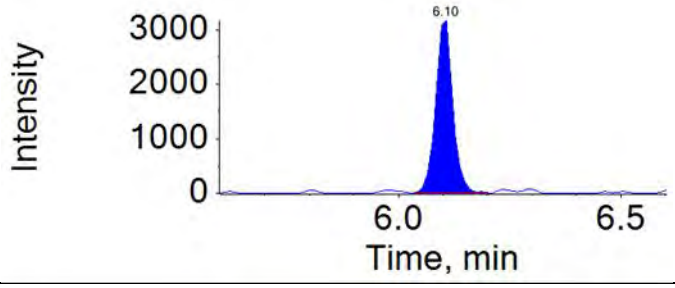


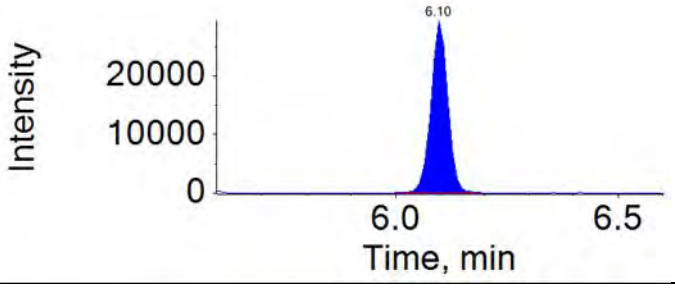
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

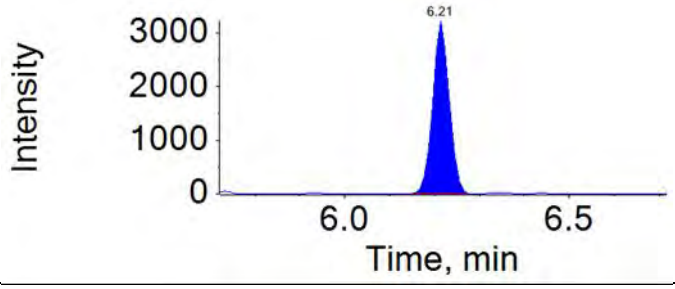
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

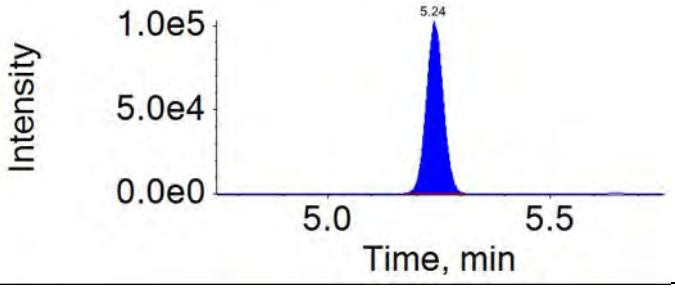
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



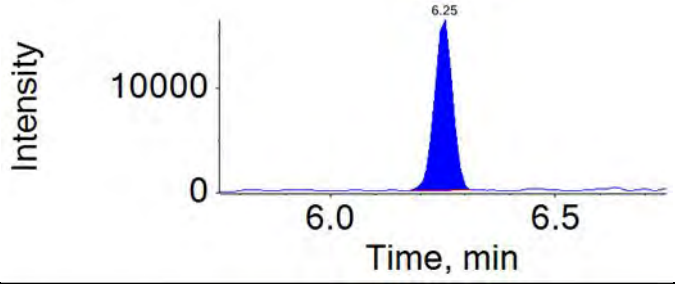


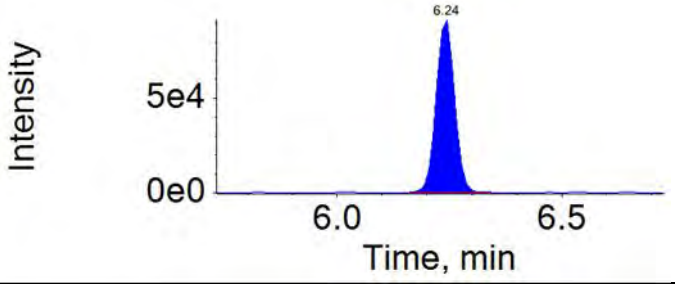
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



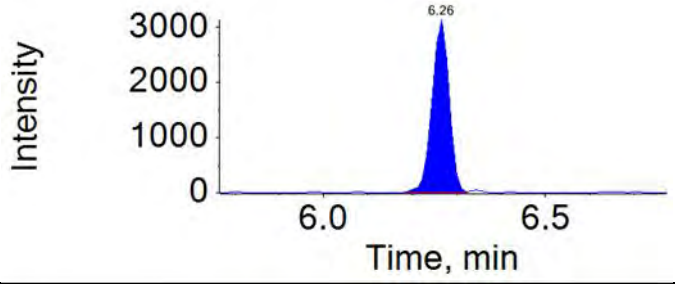


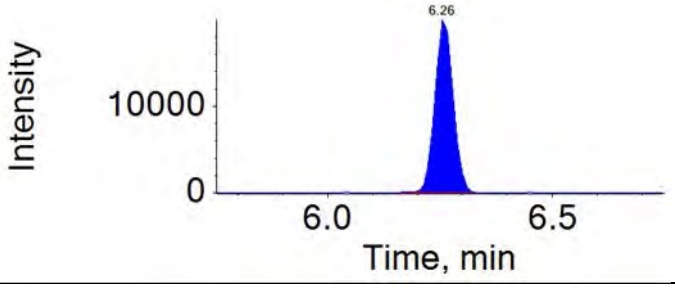
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

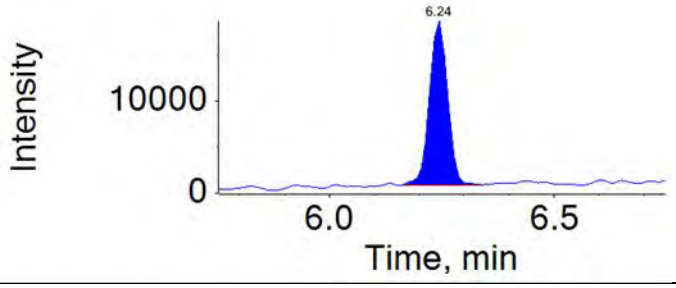
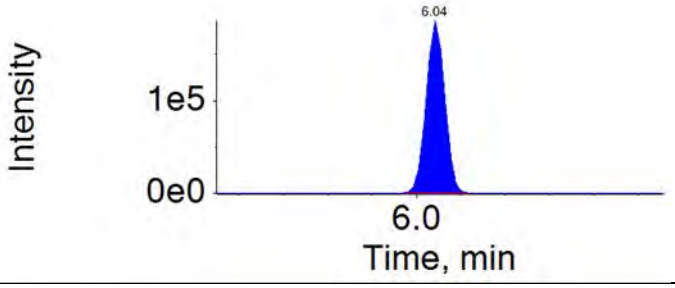


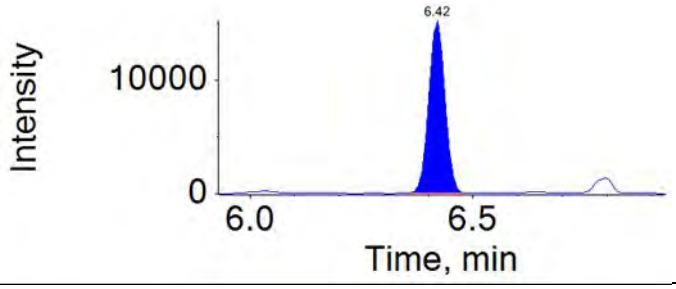
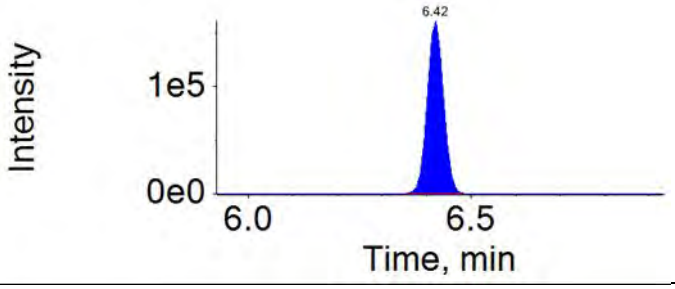


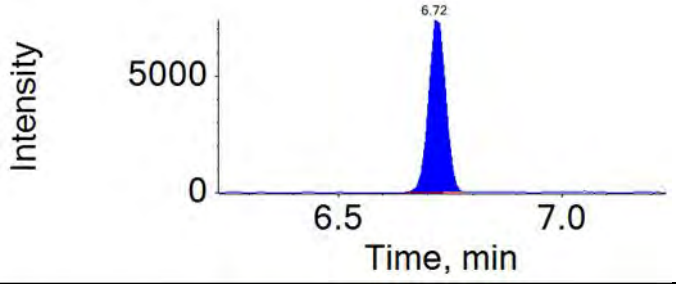
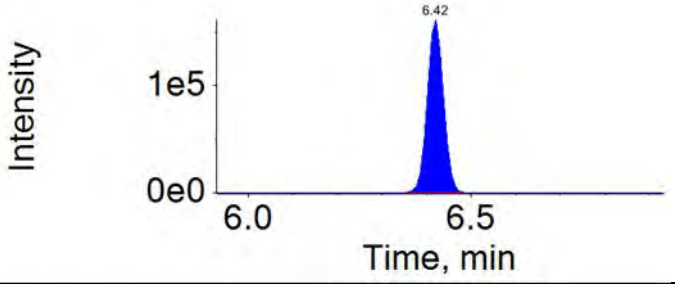
APPROVED
By JPT at 10:23 am, 11/13/18

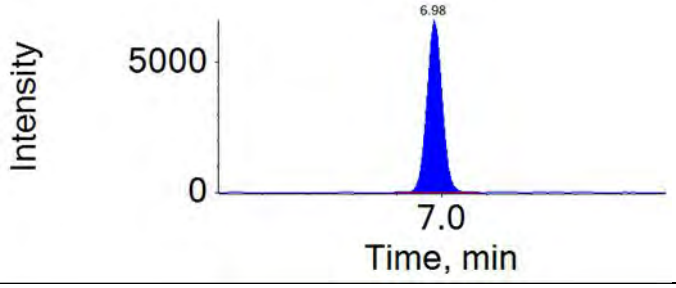
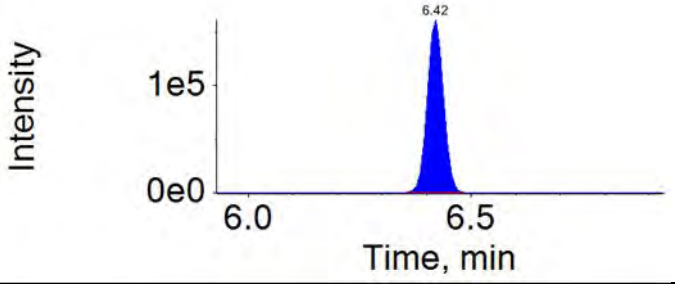
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

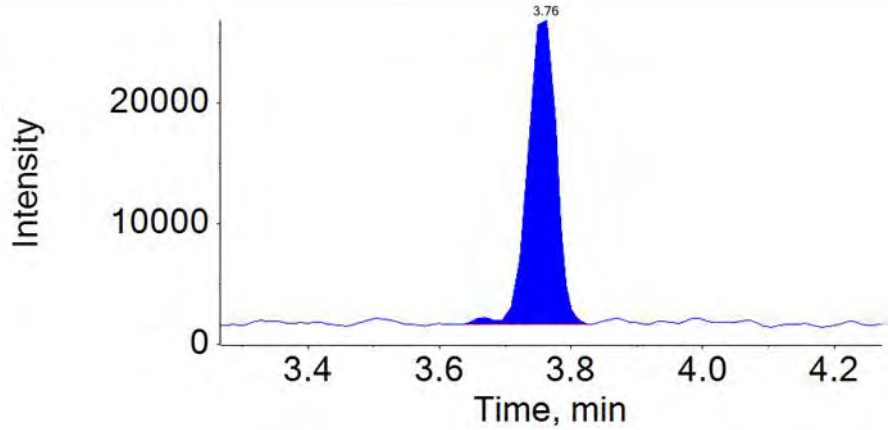
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

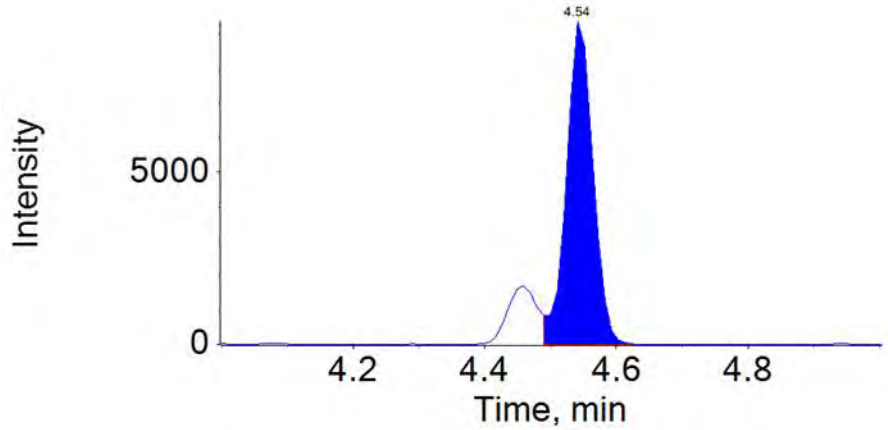
Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFPeA
RT (min.):
3.76
Peak Area:
77158.8
Mass Range:
263.0 / 219.0
File Name:
18NOV12D-70.wiff
Sample Name:
CCV7_ISC_CAL2



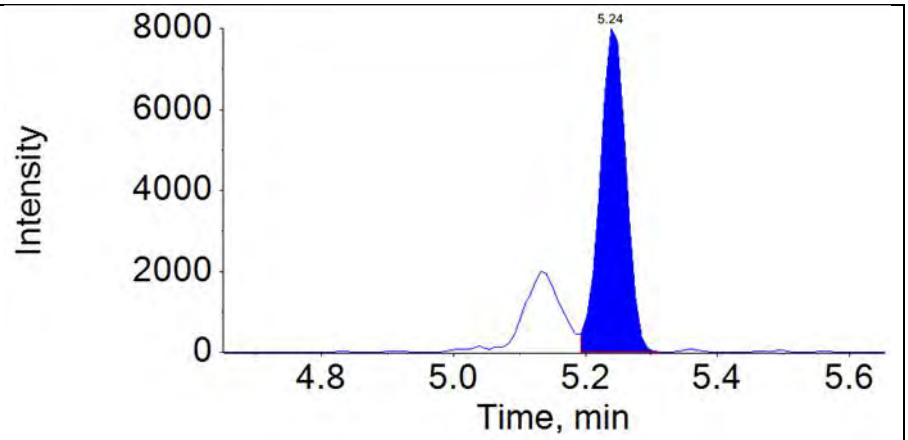
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
26470.9
Mass Range:
399.0 / 80.0
File Name:
18NOV12D-70.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
21977.8
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-70.wiff
Sample Name:
CCV7_ISC_CAL2

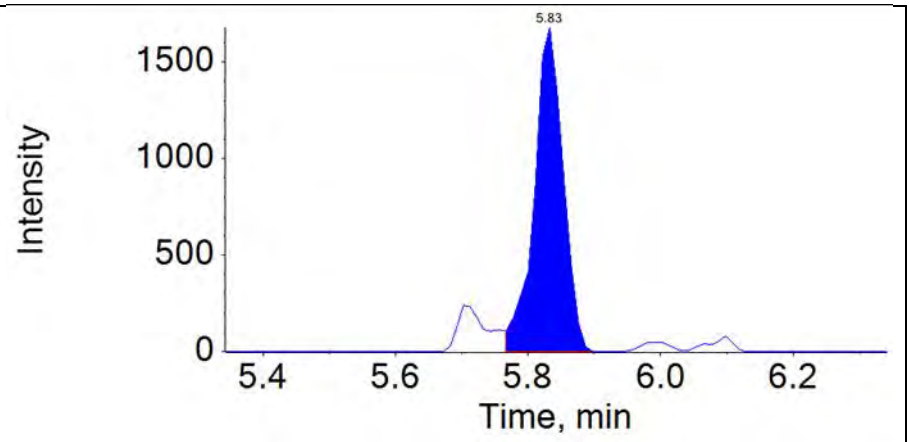


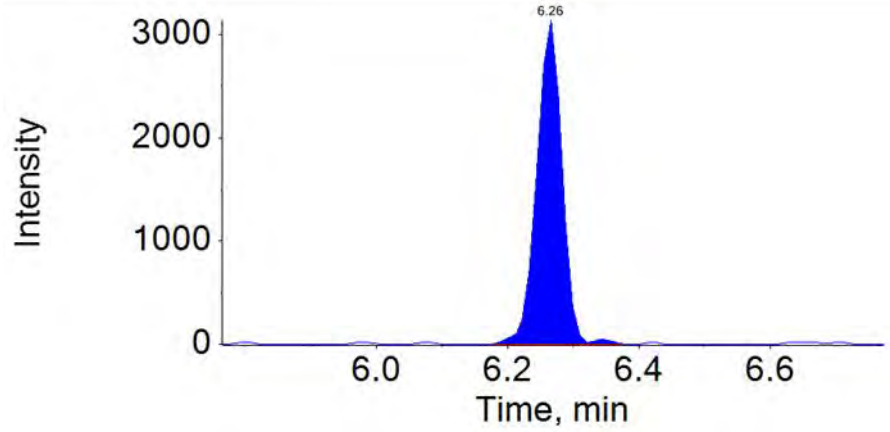
Integration Comment: incorrect integration

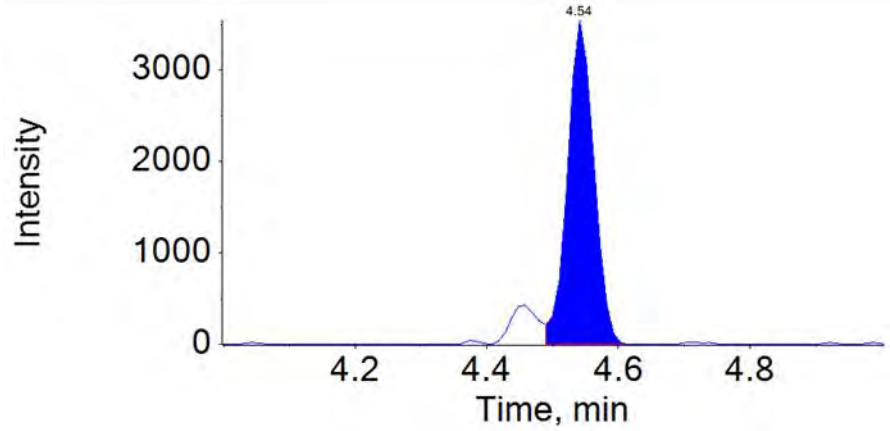
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtFOSAA **RT (min.):** 5.83 **Peak Area:** 5119.1 **Mass Range:** 584.0 / 419.0 **File Name:** 18NOV12D-70.wiff **Sample Name:** CCV7_ISC_CAL2	 **Integration Comment:** incorrect integration

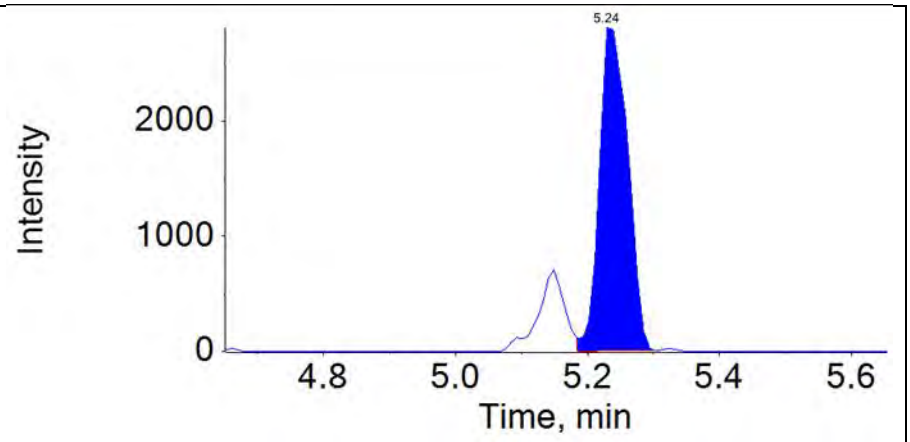
Component Name: NEtPFOSA **RT (min.):** 6.26 **Peak Area:** 8447.3 **Mass Range:** 526.0 / 169.0 **File Name:** 18NOV12D-70.wiff **Sample Name:** CCV7_ISC_CAL2	 **Integration Comment:** incorrect integration

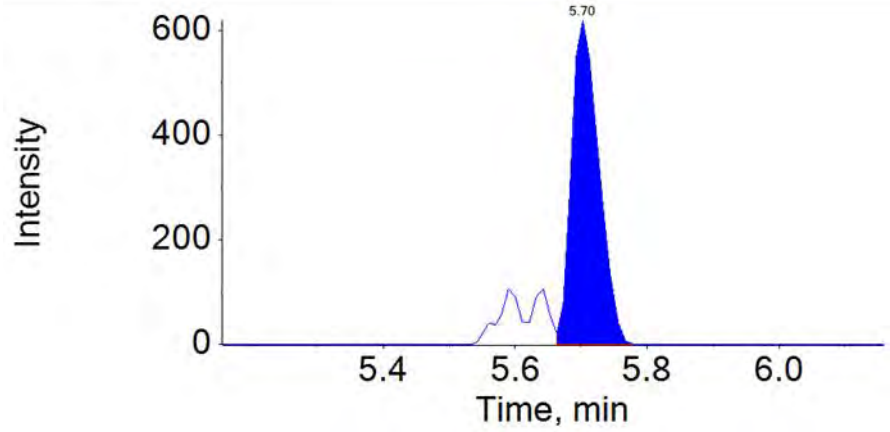
Component Name: PFHxS_2 **RT (min.):** 4.54 **Peak Area:** 9897.8 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV12D-70.wiff **Sample Name:** CCV7_ISC_CAL2	 **Integration Comment:** incorrect integration

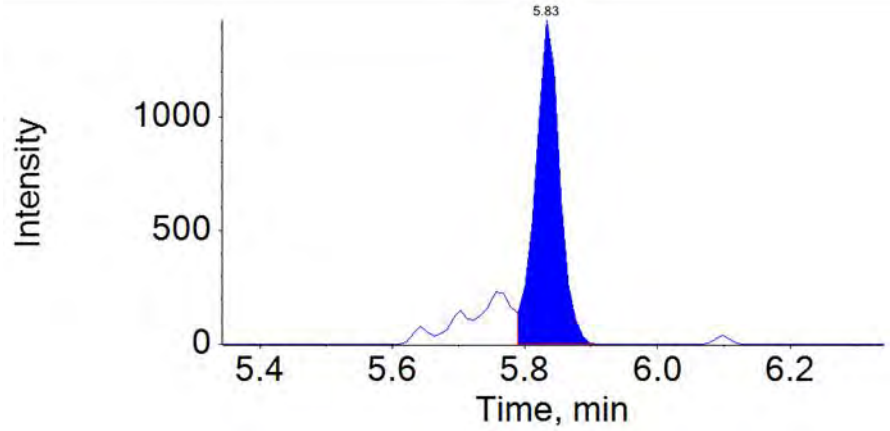
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOS_2 **RT (min.):** 5.24 **Peak Area:** 8459.9 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12D-70.wiff **Sample Name:** CCV7_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: NMeFOSAA_2 **RT (min.):** 5.70 **Peak Area:** 1794.8 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV12D-70.wiff **Sample Name:** CCV7_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: NEtFOSAA_2 **RT (min.):** 5.83 **Peak Area:** 3613.8 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV12D-70.wiff **Sample Name:** CCV7_ISC_CAL2	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

Sample Name: CCV7_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12D-70.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	43573.8	A	N/A	1.0000			
PFBS_2	3.80	1.00	17445.6	A	N/A	0.4004	10	50	
4:2-FTS	4.12	1.00	9044.8	A	N/A	1.0000			
4:2 FTS_2	4.12	1.00	6229.6	A	N/A	0.6887		#NA!	
PFHxA	4.15	1.00	92374.7	A	N/A	1.0000			
PFHxA_2	4.15	1.00	1107.4	A	N/A	0.0120	2	50	
PFPeS	4.17	1.10	21331.8	A	N/A	1.0000			
PFPeS_2	4.17	1.10	11531.1	A	N/A	0.5406	4	50	
PFHpA	4.54	1.00	94858.7	A	N/A	1.0000			
PFHpA_2	4.54	1.00	4516.1	A	N/A	0.0476	-15	50	
PFHxS	4.54	1.00	31706.8	M	N/A	1.0000			
PFHxS_2	4.54	1.00	11135.3	M	N/A	0.3512	2	50	
6:2-FTS	4.90	1.00	8300.2	A	N/A	1.0000			
6:2 FTS_2	4.90	1.00	4721.0	A	N/A	0.5688		#NA!	
PFHpS	4.90	1.08	30342.3	A	N/A	1.0000			
PFHpS_2	4.90	1.08	12955.9	A	N/A	0.4270	5	50	
PFOA	4.91	1.00	99368.2	A	N/A	1.0000			
PFOA_2	4.91	1.00	5384.6	A	N/A	0.0542	-5	50	
PFOS	5.24	1.00	30080.0	M	N/A	1.0000			
PFOS_2	5.24	1.00	10448.0	M	N/A	0.3473	17	50	
PFNA	5.26	1.00	75174.3	A	N/A	1.0000			
PFNA_2	5.26	1.00	1731.3	A	N/A	0.0230	2	50	
PFNS	5.54	1.06	17303.4	A	N/A	1.0000			
PFNS_2	5.54	1.06	8456.6	A	N/A	0.4887	2	50	
PFDA	5.56	1.00	69571.5	A	N/A	1.0000			
PFDA_2	5.56	1.00	219.0	A	N/A	0.0031	-60	50	OOS
8:2-FTS	5.56	1.00	6246.5	A	N/A	1.0000			
8:2 FTS_2	5.56	1.00	4176.8	A	N/A	0.6687		#NA!	
NMeFOSAA	5.71	1.00	8320.3	A	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	2229.5	M	N/A	0.2680	4	50	
PFDS	5.79	1.11	15378.4	A	N/A	1.0000			
PFDS_2	5.80	1.11	5748.8	A	N/A	0.3738	-27	50	
PFUnDA	5.82	1.00	56318.9	A	N/A	1.0000			
PFUnDA_2	5.85	1.00	389.3	A	N/A	0.0069	25	50	
NEtFOSAA	5.83	1.00	5863.7	M	N/A	1.0000			
NEtFOSAA_2	5.83	1.00	4774.4	M	N/A	0.8142	13	50	
PFDoDA	6.04	1.00	56183.0	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	677.7	A	N/A	0.0121	-22	50	
10:2-FTS	6.07	1.09	4429.6	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	2884.8	A	N/A	0.6513		#NA!	
PFTrDA	6.24	1.03	50194.4	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	466.1	A	N/A	0.0093	9	50	
PFTeDA	6.42	1.00	38146.4	A	N/A	1.0000			
PFTeDA_2	6.41	1.00	320.1	A	N/A	0.0084	35	50	
PFHxDA	6.72	1.05	19541.0	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	1036.2	A	N/A	0.0530	-22	50	
PFODA	6.98	1.09	15536.1	A	N/A	1.0000			
PFODA_2	6.98	1.09	478.3	A	N/A	0.0308	12	50	

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By JPT at 10:23 am, 11/13/18

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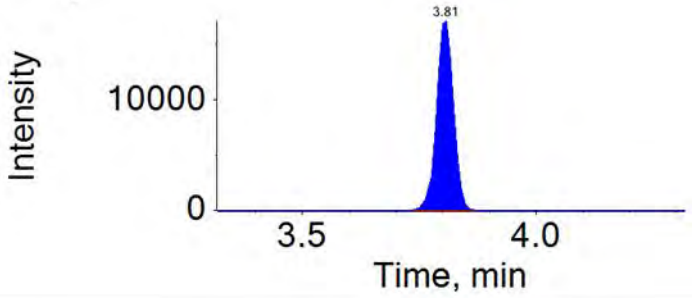
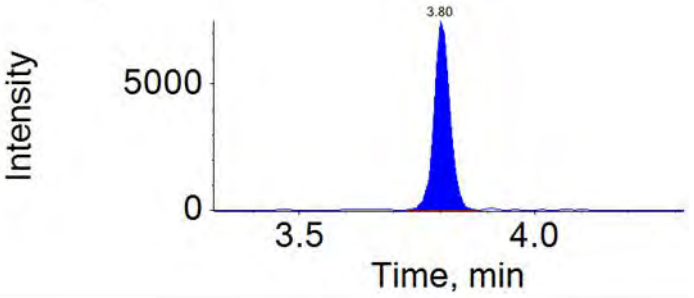
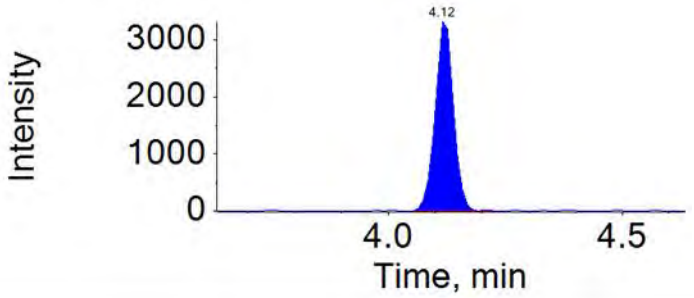
Component: PFBS
Primary Mass: 299.0 / 80.0



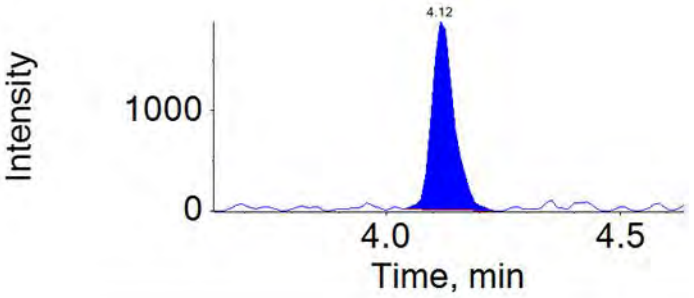
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



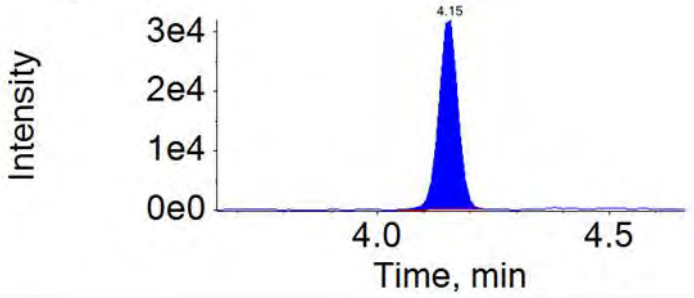
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



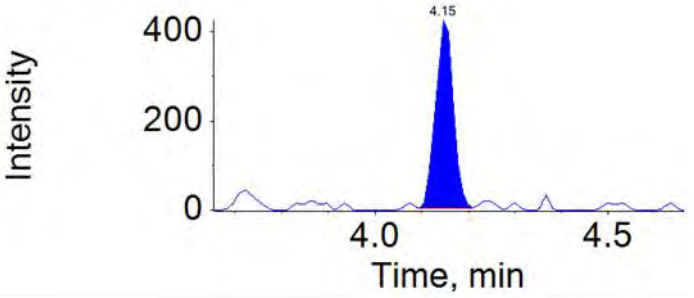
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



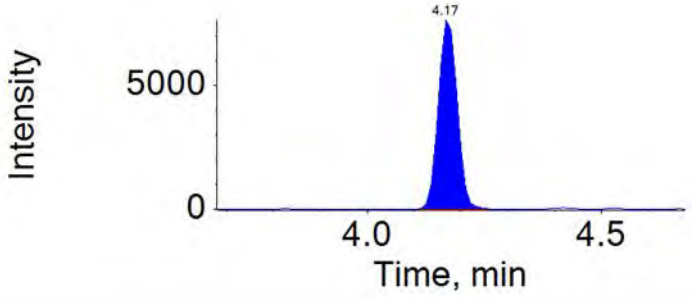
Component: PFHxA
Primary Mass: 313.0 / 269.0



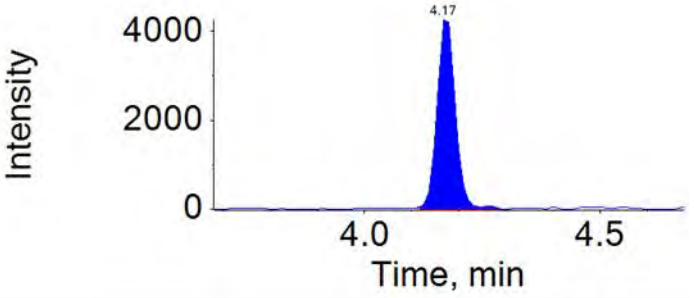
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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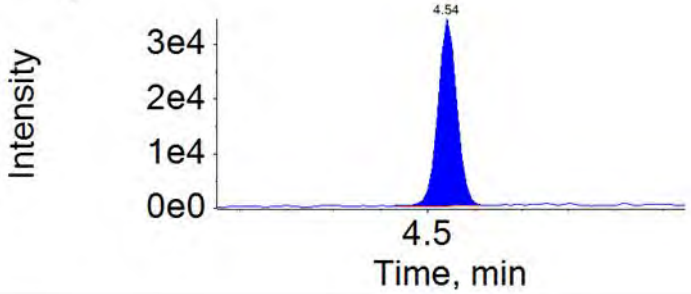
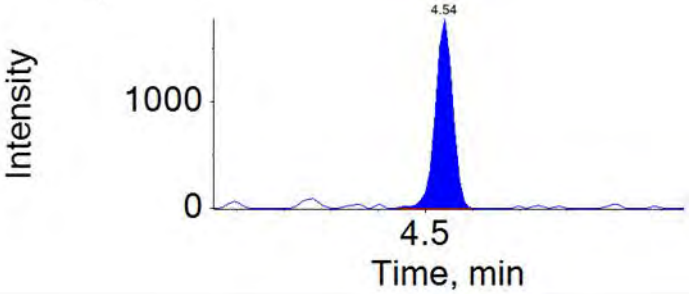
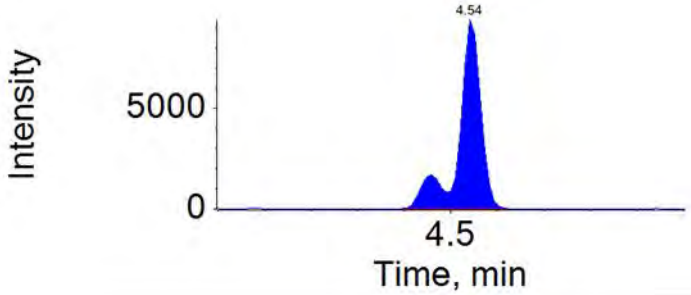
Component: PFHpA
Primary Mass: 363.0 / 319.0



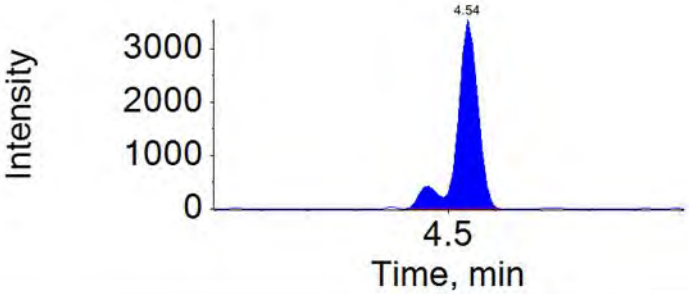
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



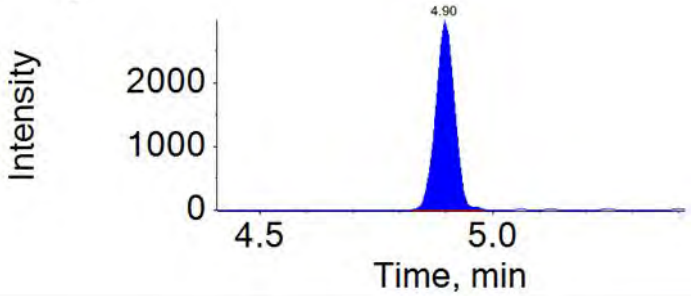
Component: PFHxS
Primary Mass: 399.0 / 80.0



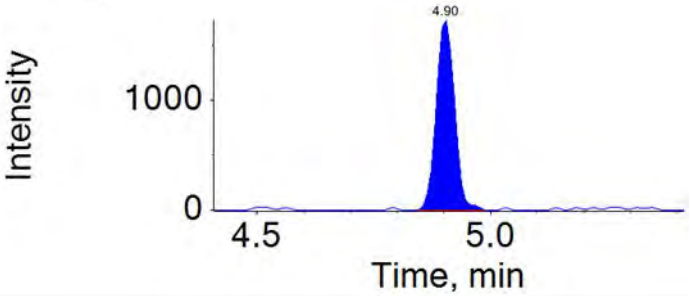
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



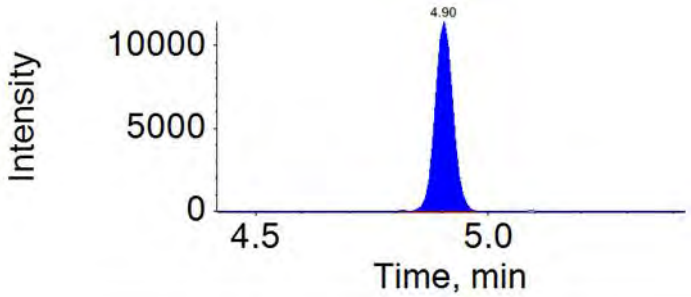
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



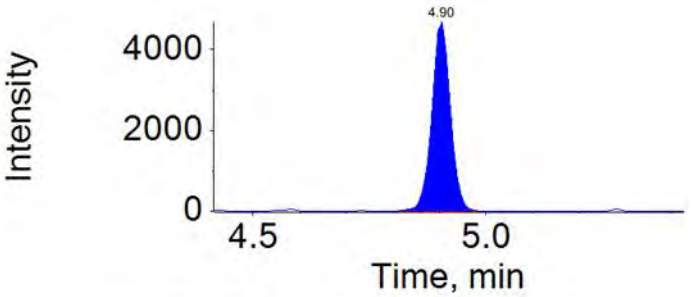
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By JPT at 10:23 am, 11/13/18

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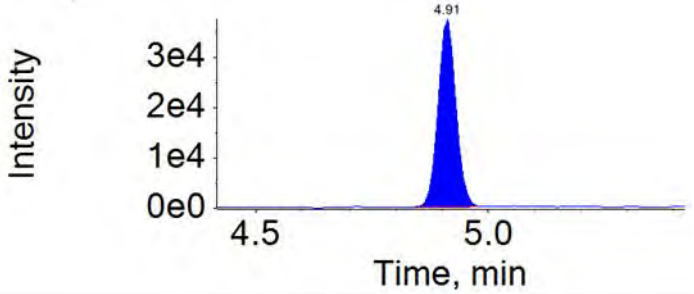
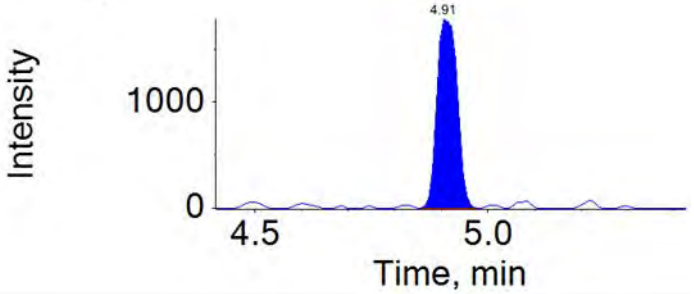
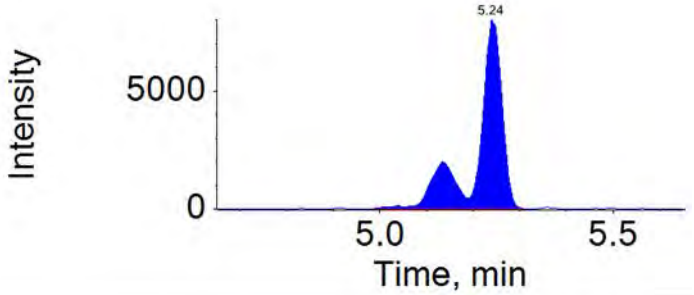
Component: PFOA
Primary Mass: 413.0 / 369.0



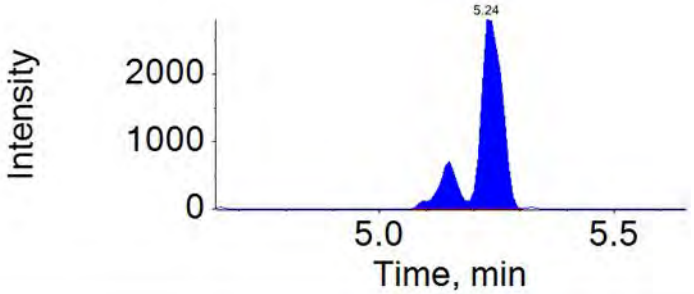
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



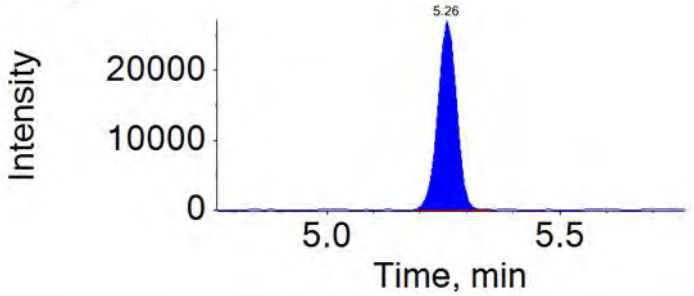
Component: PFOS
Primary Mass: 499.0 / 80.0



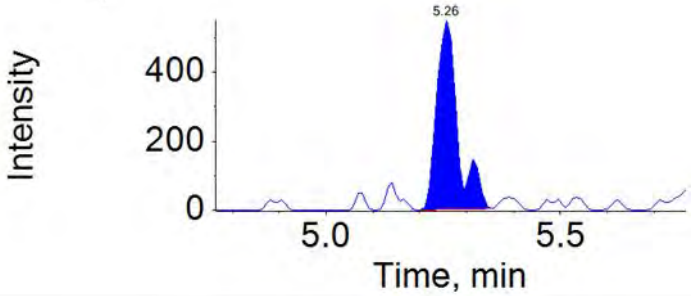
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



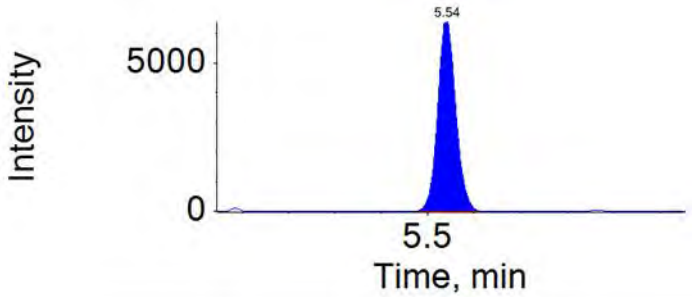
Component: PFNA
Primary Mass: 463.0 / 419.0



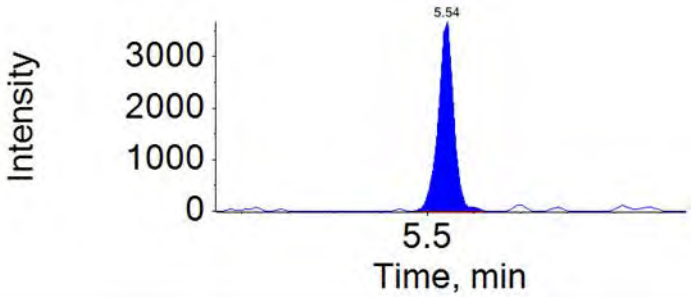
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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By JPT at 10:23 am, 11/13/18

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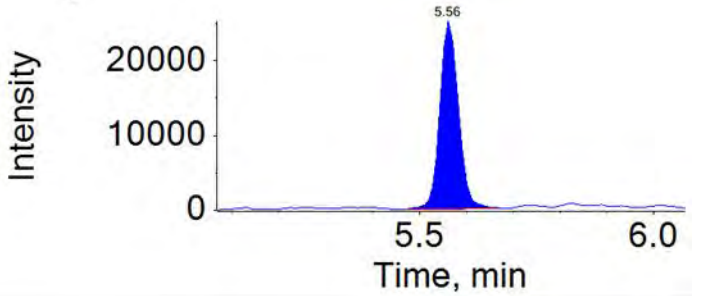
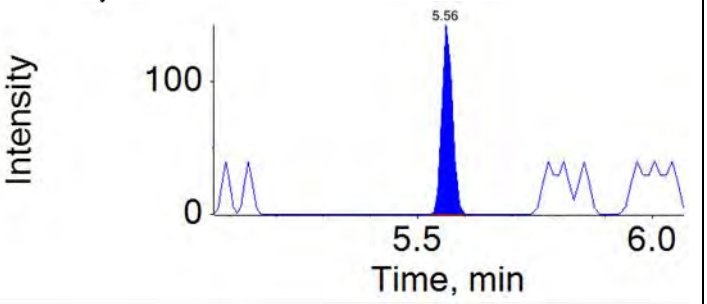
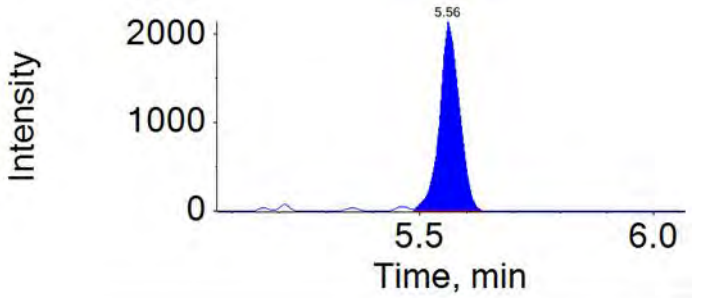
Component: PFDA
Primary Mass: 513.0 / 469.0



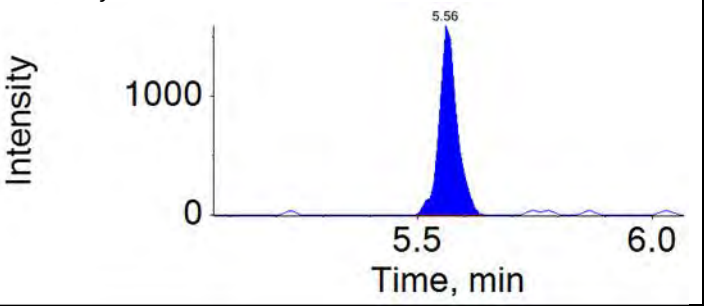
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



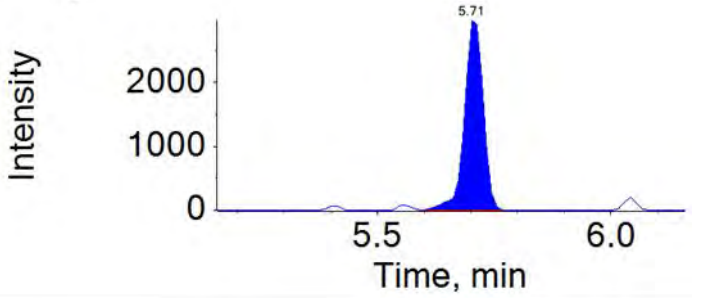
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



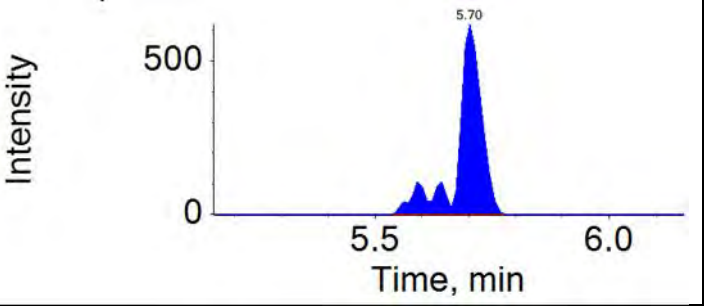
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



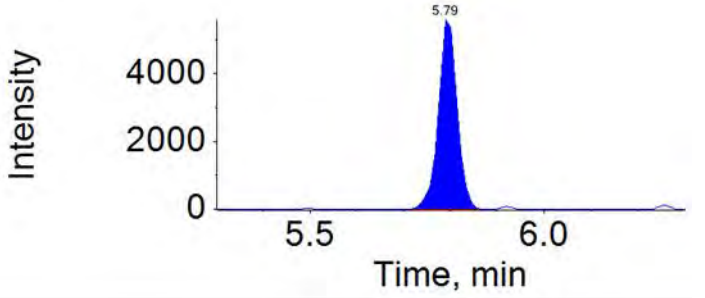
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



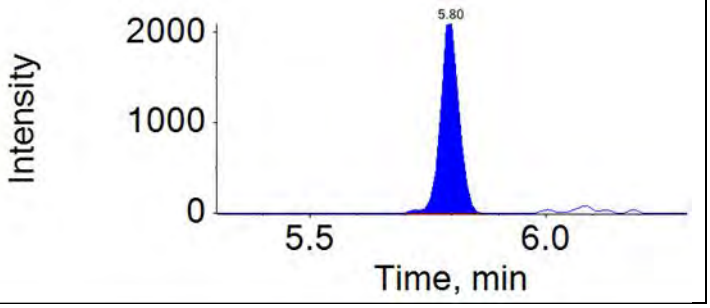
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



Component: PFDS_2
Secondary Mass: 599.0 / 99.0



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By JPT at 10:23 am, 11/13/18

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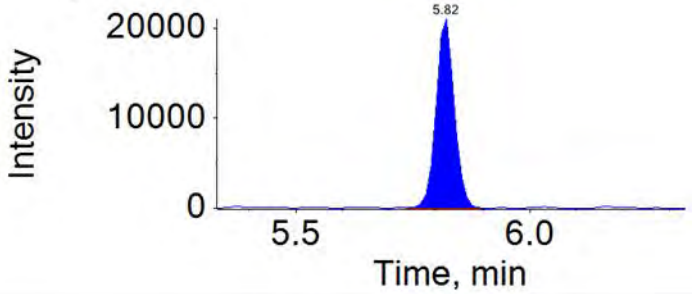
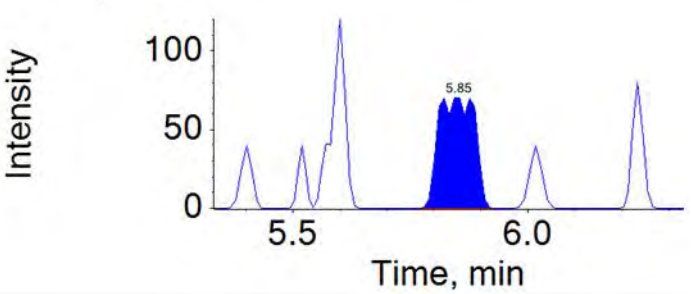
By umar at 5:20 pm, 11/13/18

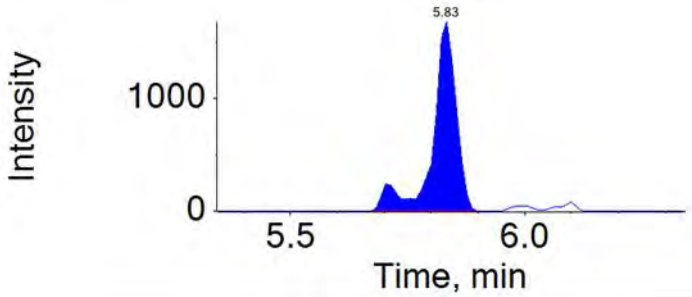
Component: PFUnDA
Primary Mass: 563.0 / 519.0



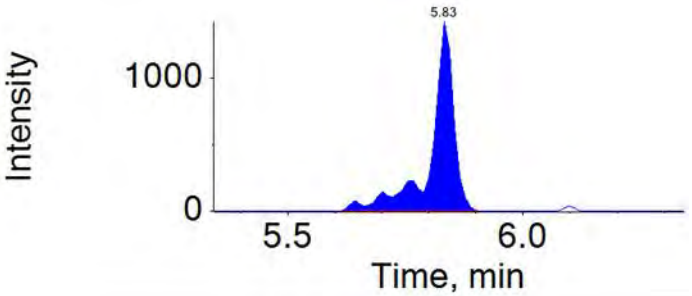
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



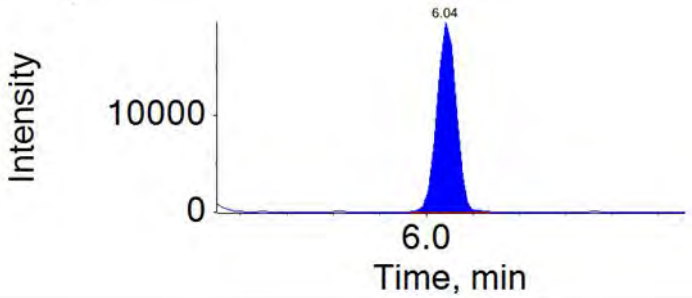
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



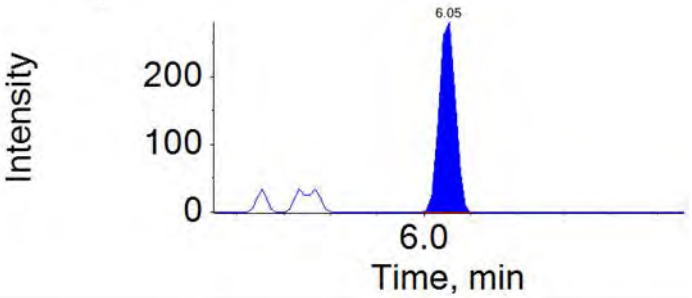
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



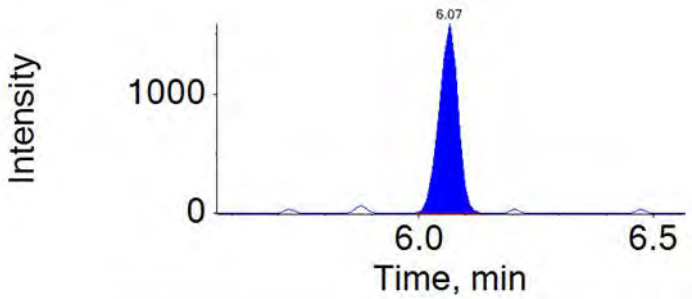
Component: PFDoDA
Primary Mass: 613.0 / 569.0



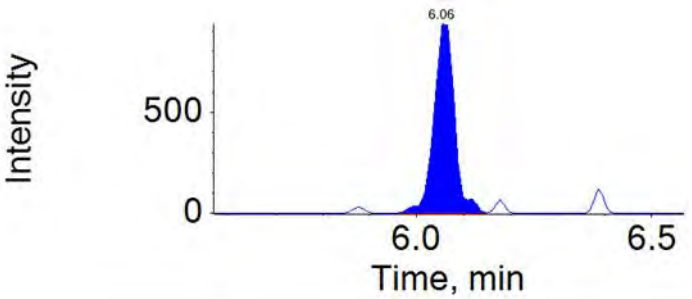
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



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By JPT at 10:23 am, 11/13/18

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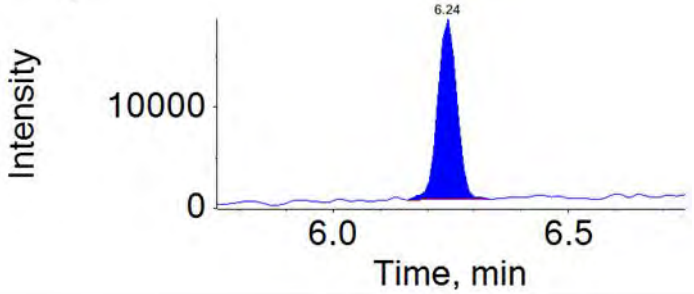
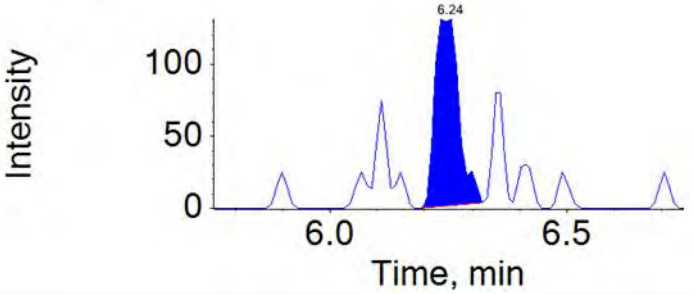
By umar at 5:20 pm, 11/13/18

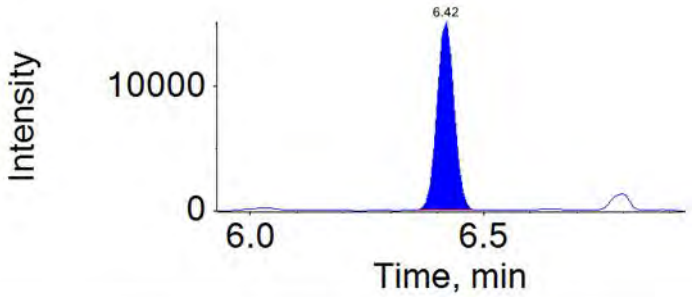
Component: PFTrDA
Primary Mass: 663.0 / 619.0



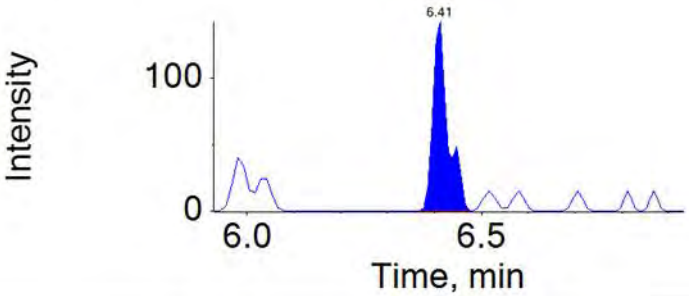
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



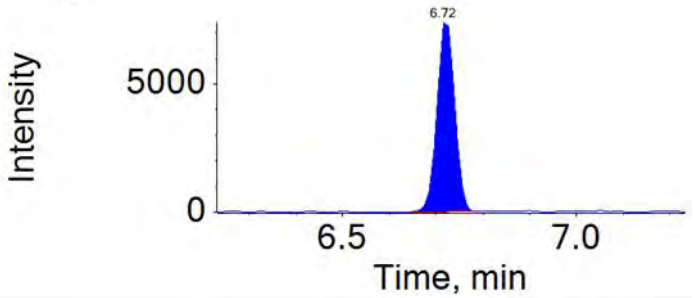
Component: PFTeDA
Primary Mass: 713.0 / 669.0



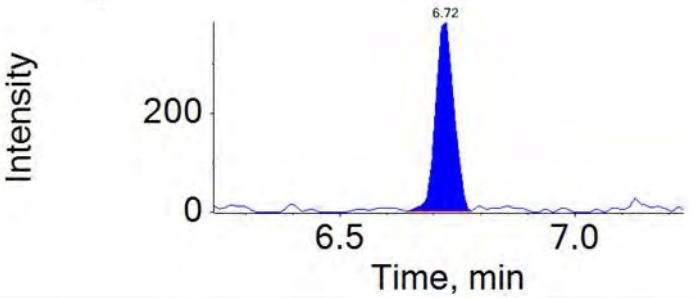
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



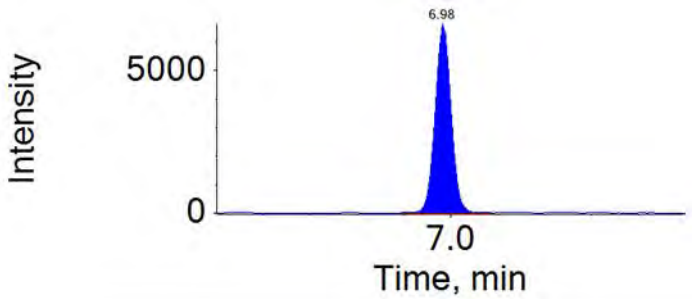
Component: PFHxDA
Primary Mass: 813.0 / 769.0



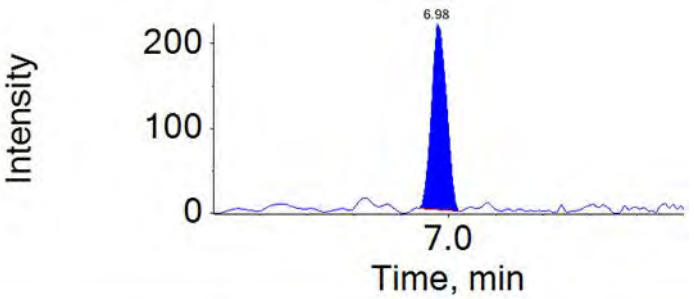
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV12D-71.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-13T03:17:33
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV3-11
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	697321.6	659926.2	6	50	
13C2-PFOA	5.0	497803.7	450219.7	11	50	
13C4-PFOS	4.8	275021.7	249205.8	10	50	
13C2-PFDA	5.0	301663.5	278743.9	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	771621.7	13C3-PFBA	697321.6	1.107	5.000	4.961	99	70-130	
E13C5-PFPeA	783833.6	13C3-PFBA	697321.6	1.124	5.000	5.042	101	70-130	
E13C3-PFBS	456189.9	13C3-PFBA	697321.6	0.654	4.650	4.618	99	70-130	
E13C2-4:2-FTS	52339.5	13C2-PFOA	497803.7	0.105	4.670	4.683	100	70-130	
E13C5-PFHxA	673746.3	13C2-PFOA	497803.7	1.353	5.000	4.889	98	70-130	
E13C3-PFHxS	357291.6	13C2-PFOA	497803.7	0.718	4.730	4.925	104	70-130	
E13C4-PFHpA	553727.4	13C2-PFOA	497803.7	1.112	5.000	5.011	100	70-130	
E13C2-6:2-FTS	41520.7	13C2-PFOA	497803.7	0.083	4.750	5.580	117	70-130	
E13C8-PFOA	964074.5	13C2-PFOA	497803.7	1.937	5.000	5.336	107	70-130	
E13C8-PFOS	303765.2	13C4-PFOS	275021.7	1.105	4.780	4.894	102	70-130	
E13C9-PFNA	511665.4	13C4-PFOS	275021.7	1.860	5.000	5.187	104	70-130	
E13C6-PFDA	682687.0	13C2-PFDA	301663.5	2.263	5.000	5.281	106	70-130	
E13C2-8:2-FTS	28451.6	13C2-PFDA	301663.5	0.094	4.790	4.704	98	70-130	
E13C8-PFOSA	662257.7	13C2-PFDA	301663.5	2.195	5.000	4.867	97	70-130	
Ed3-NMeFOSAA	73048.1	13C2-PFDA	301663.5	0.242	5.000	4.371	87	70-130	
E13C7-PFUnDA	275514.1	13C2-PFDA	301663.5	0.913	5.000	5.303	106	70-130	
Ed5-NEtFOSAA	69016.7	13C2-PFDA	301663.5	0.229	5.000	4.840	97	70-130	
E13C2-PFDoDA	600781.2	13C2-PFDA	301663.5	1.992	5.000	5.171	103	70-130	
Ed7-NMePFOSAE	344641.0	13C2-PFDA	301663.5	1.142	5.000	4.944	99	70-130	
Ed3-NMePFOSA	77204.1	13C2-PFDA	301663.5	0.256	5.000	4.650	93	70-130	
Ed9-NEtPFOSAE	284074.7	13C2-PFDA	301663.5	0.942	5.000	4.898	98	70-130	
Ed5-NEtPFOSA	60467.1	13C2-PFDA	301663.5	0.200	5.000	4.702	94	70-130	
E13C2-PFTeDA	417729.5	13C2-PFDA	301663.5	1.385	5.000	4.861	97	70-130	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

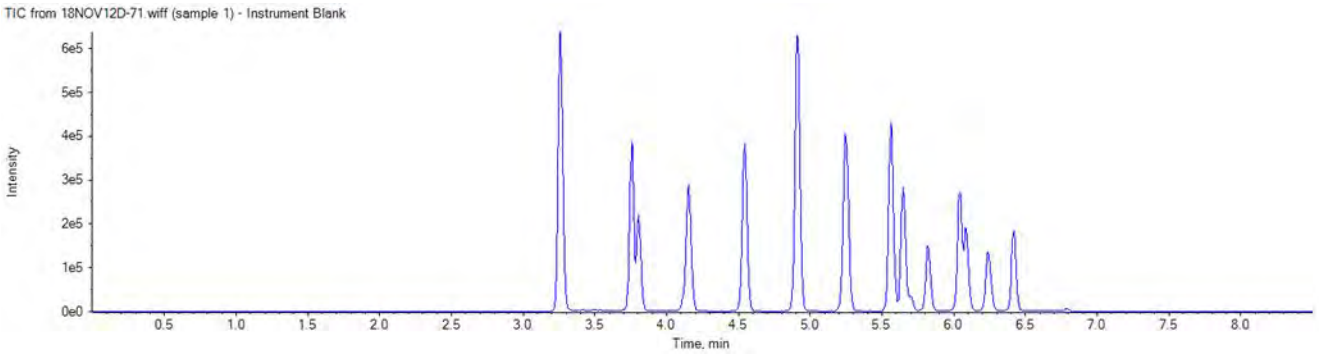
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV12D-71.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	771621.7	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	783833.6	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456189.9	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	52339.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	673746.3	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456189.9	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	553727.4	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	357291.6	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	41520.7	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	357291.6	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	964074.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	303765.2	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	511665.4	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	303765.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	682687.0	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	28451.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	662257.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	73048.1	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	303765.2	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	275514.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	69016.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	600781.2	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	28451.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	344641.0	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	77204.1	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	303765.2	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	284074.7	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	60467.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	600781.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	417729.5	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	417729.5	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	417729.5	N/A	

Total Ion Chromatogram

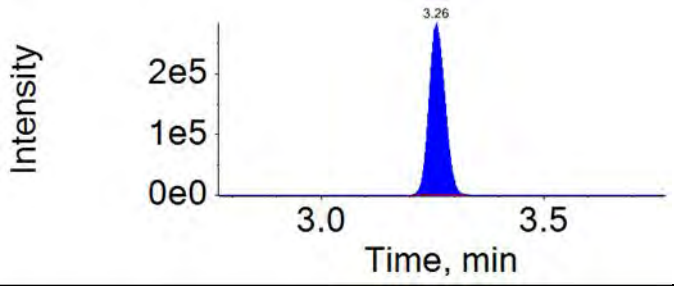


APPROVED
By JPT at 10:23 am, 11/13/18

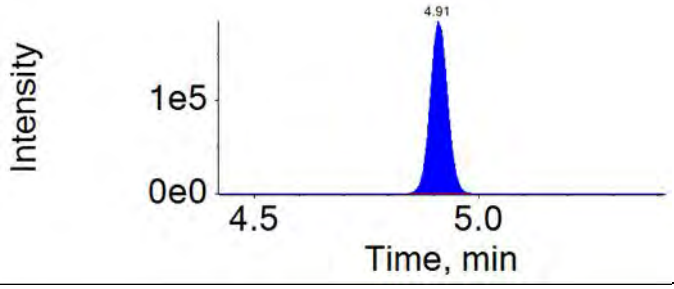
REVIEWED
By UMJS at 3:32 pm, 11/26/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

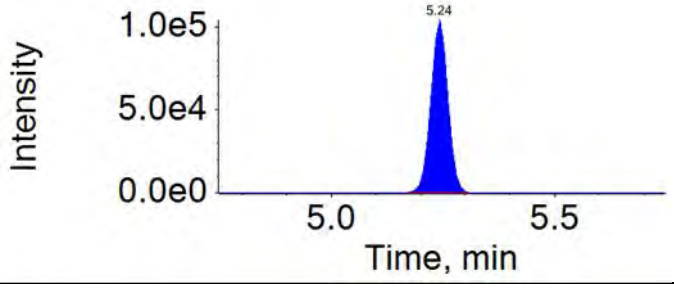
Injection Standard: 13C3-PFBA
216.0 / 172.0



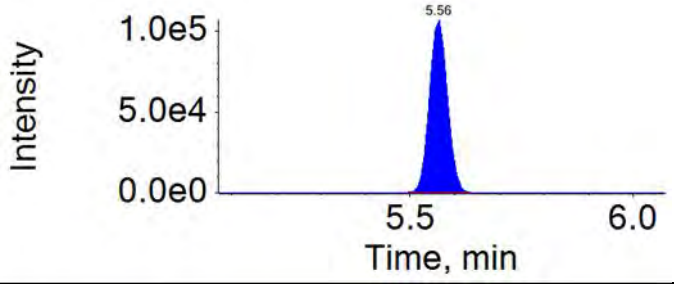
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

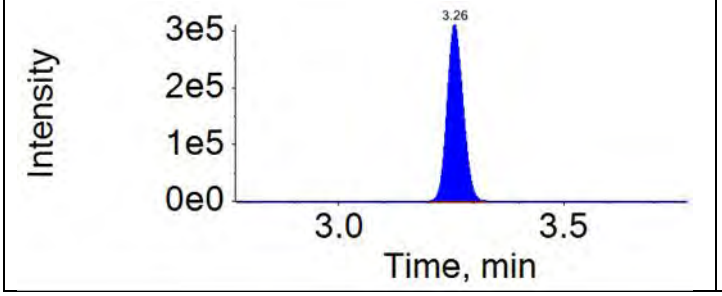


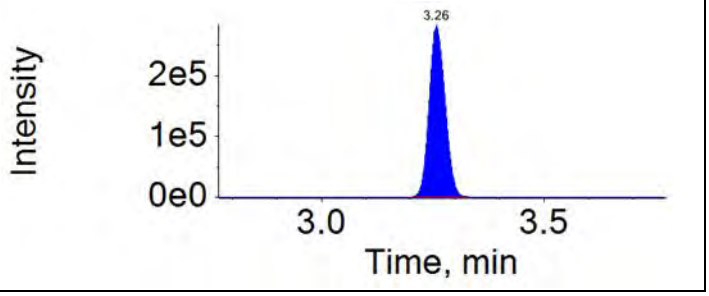
Injection Standard: 13C2-PFDA
515.0 / 470.0



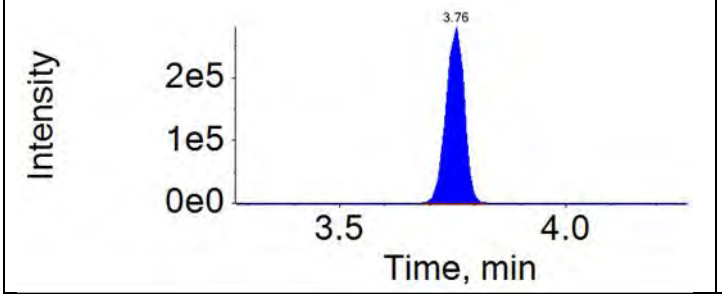
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

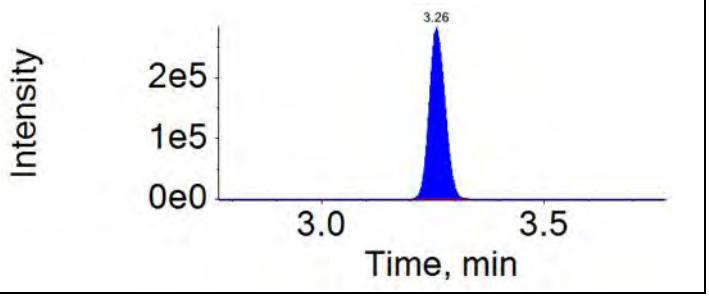
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



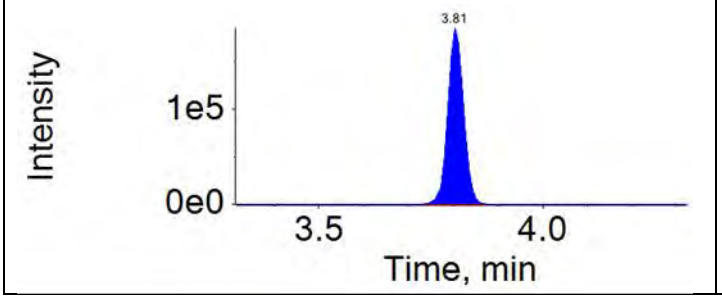


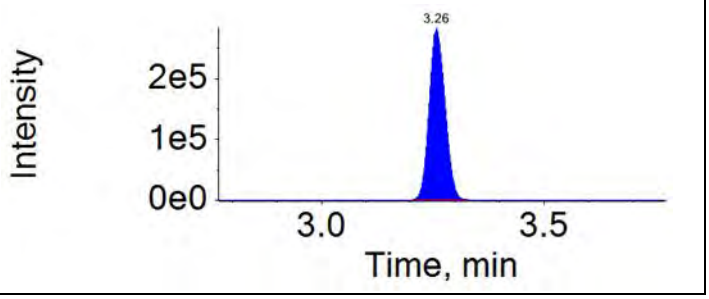
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



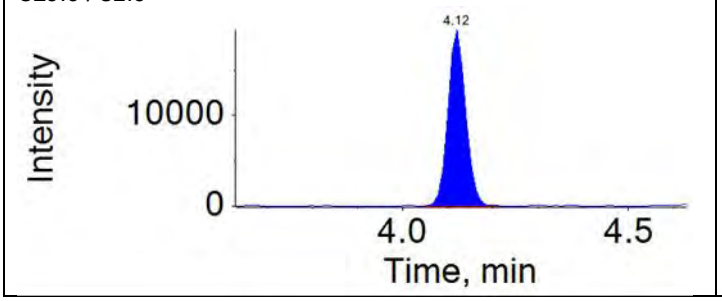


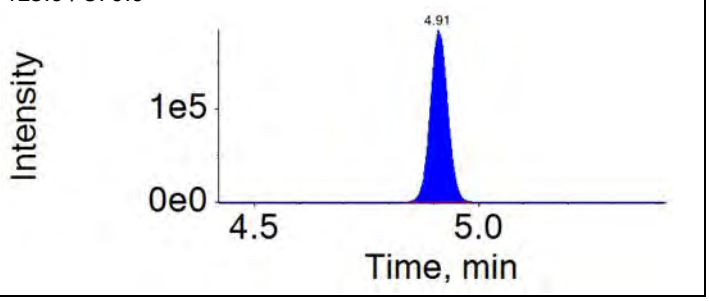
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





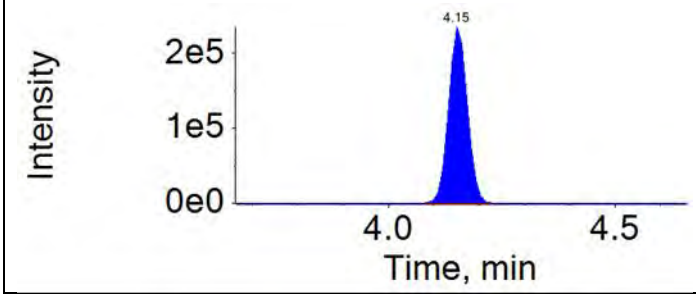
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

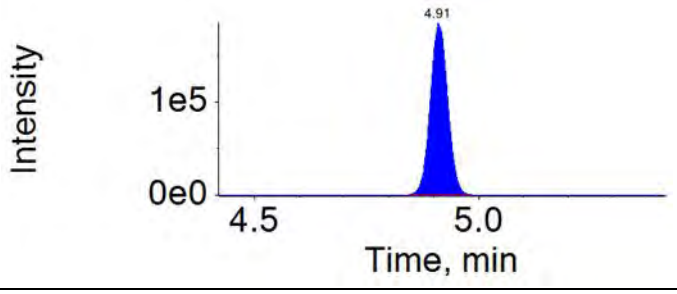




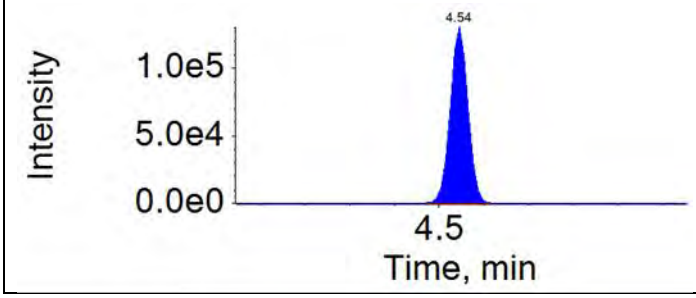
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

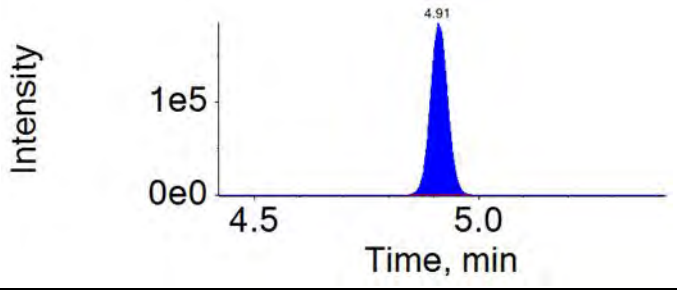
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



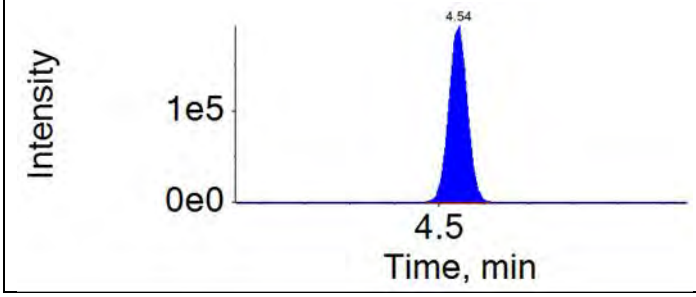


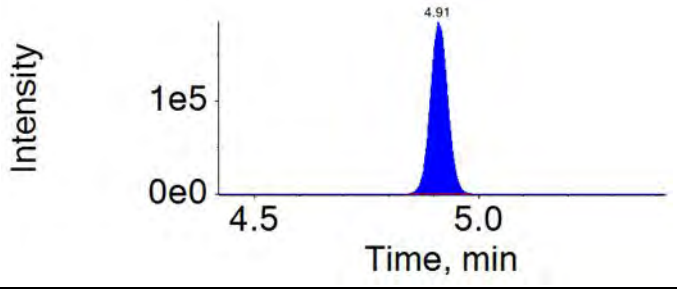
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



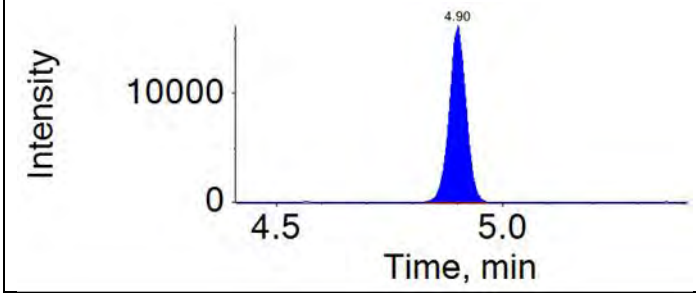


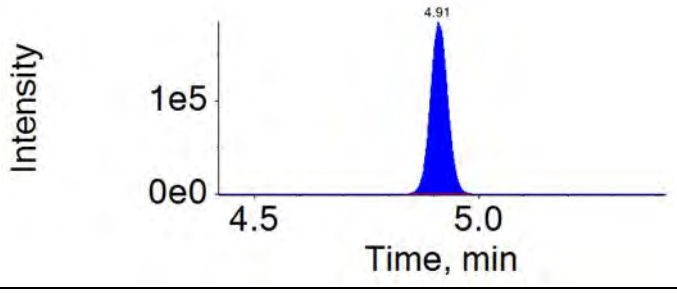
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



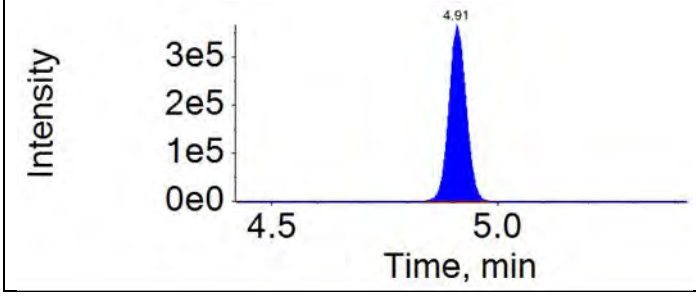
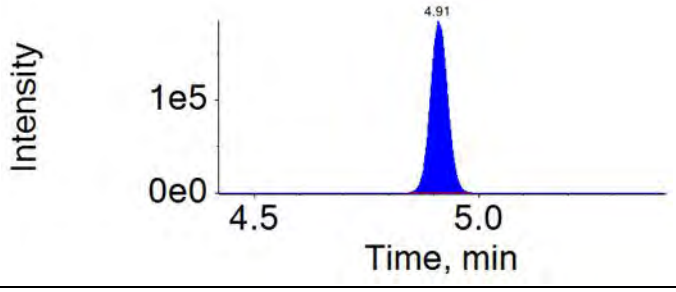


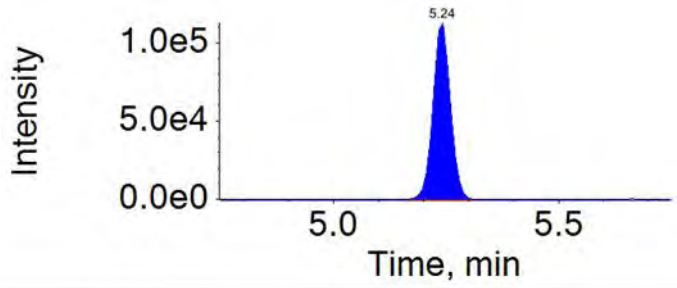
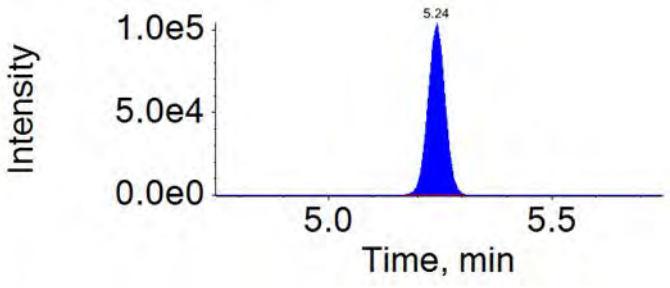
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

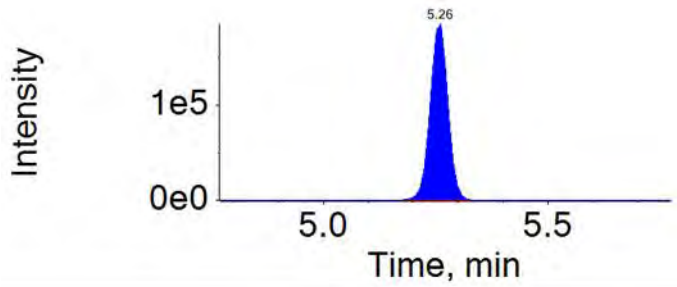
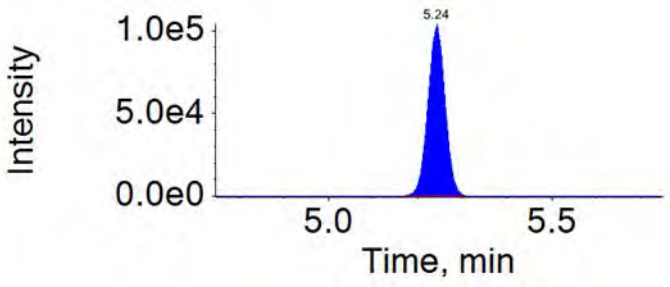


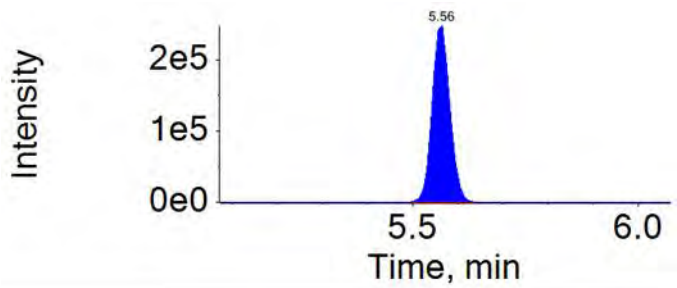
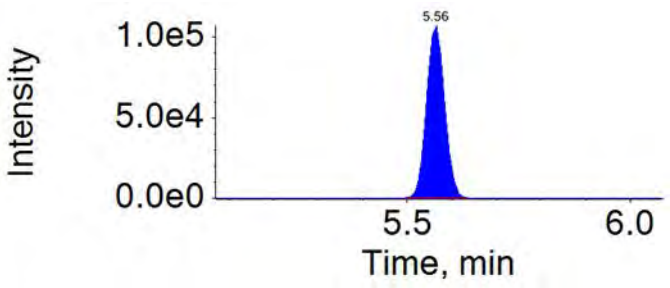


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

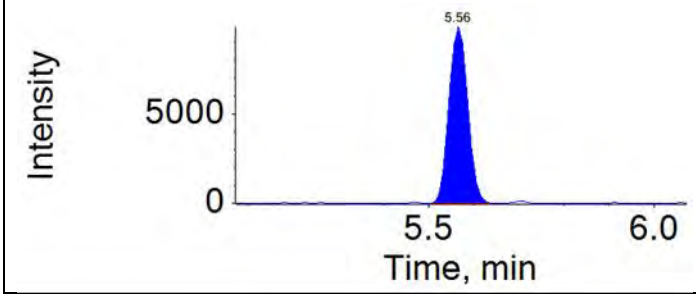
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

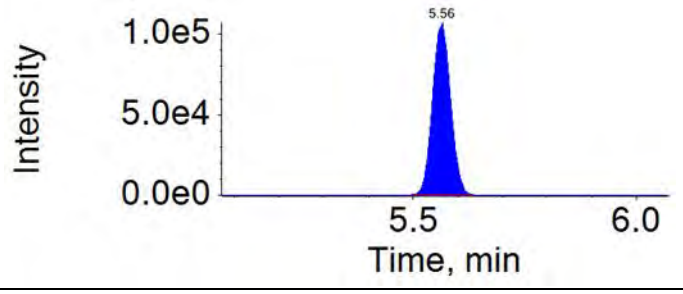
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

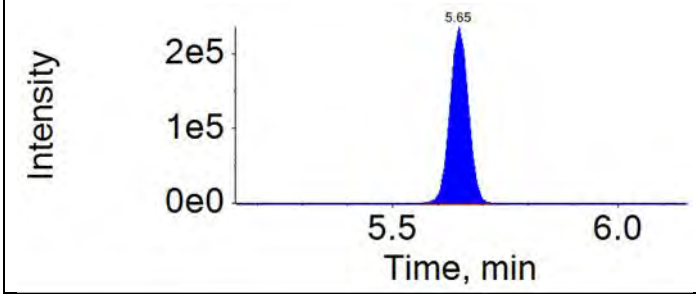
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

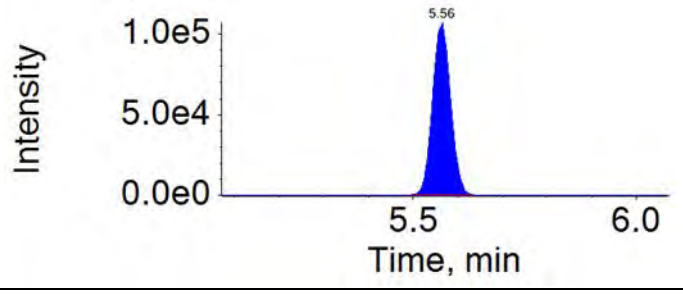
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



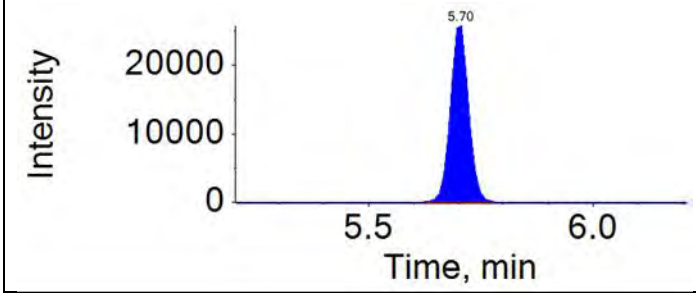


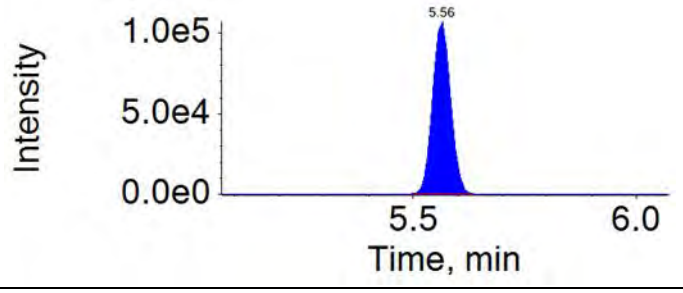
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



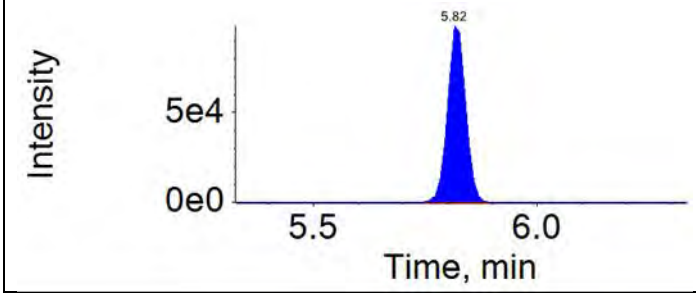


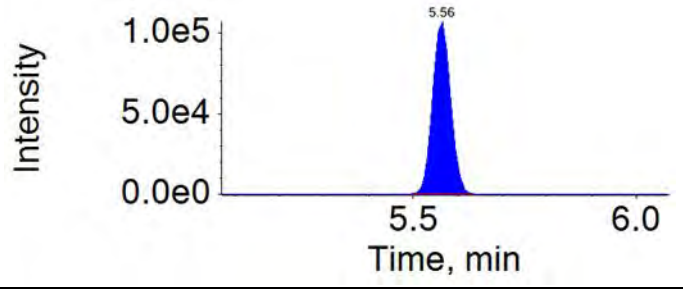
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





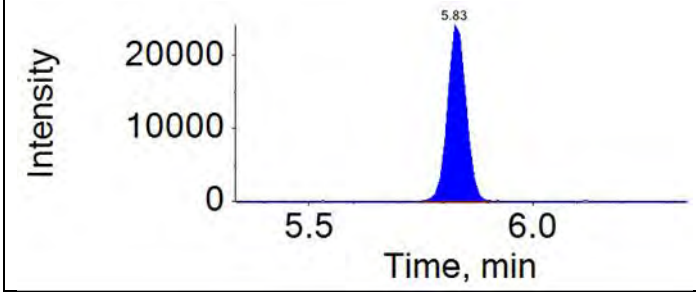
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

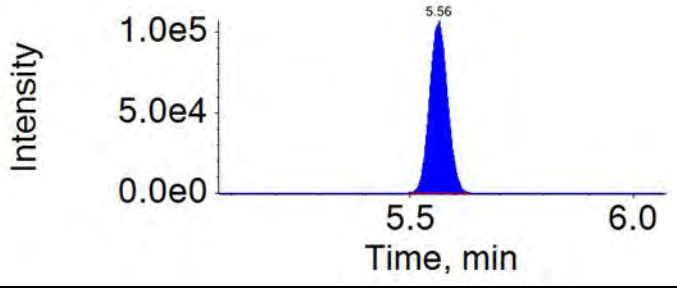




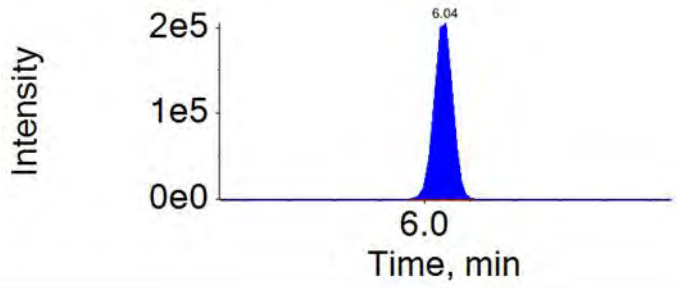
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

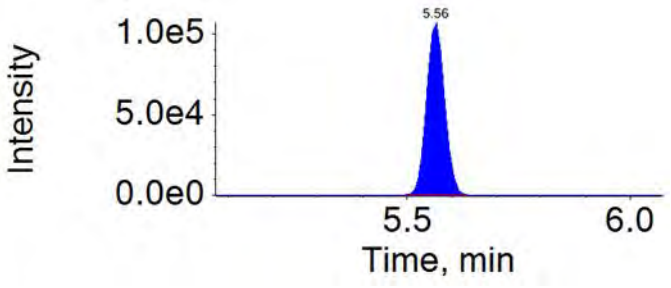
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



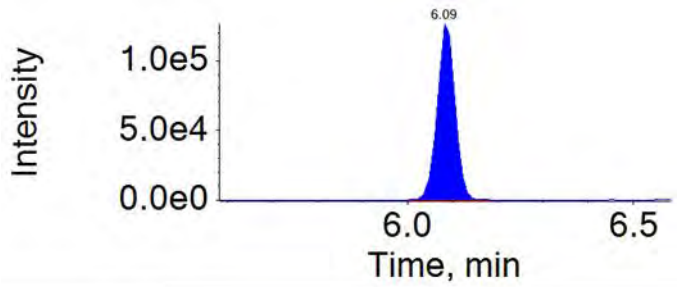


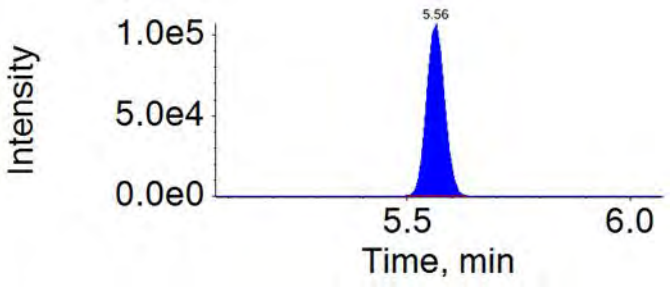
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



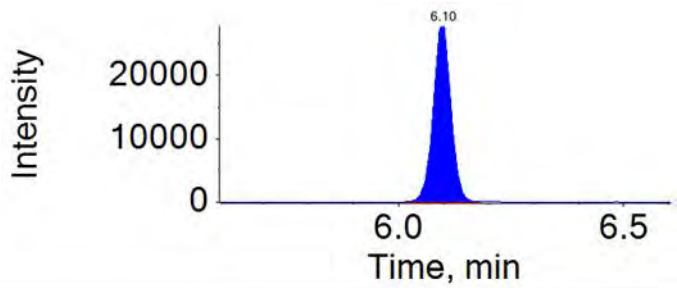


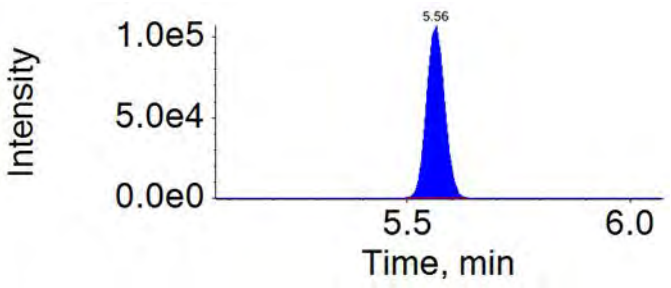
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



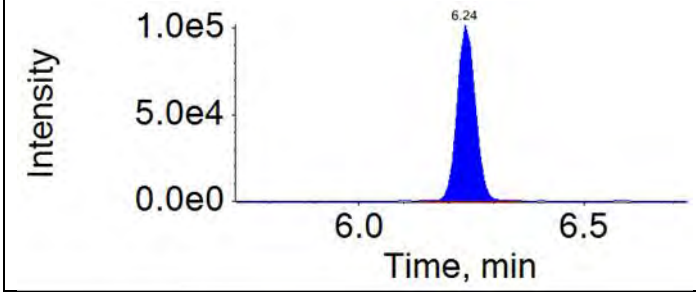


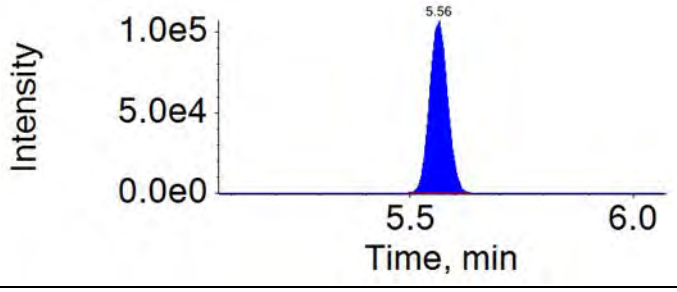
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

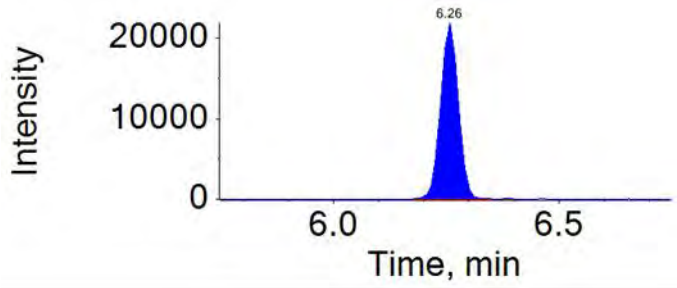
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

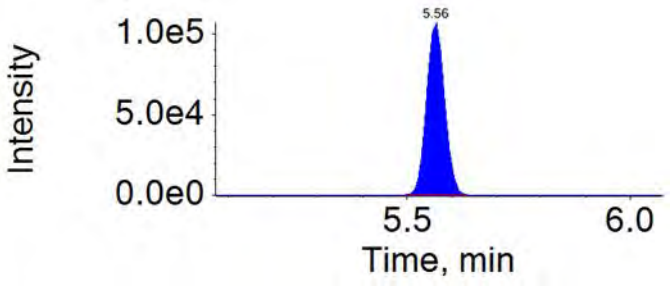
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



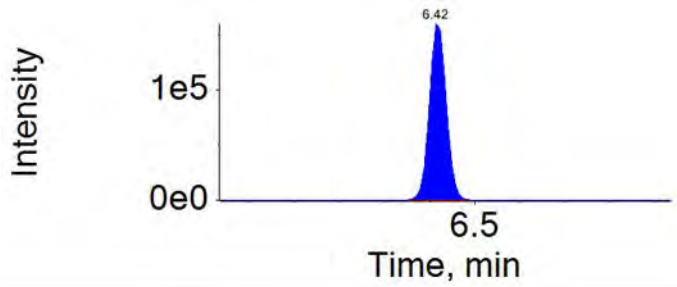


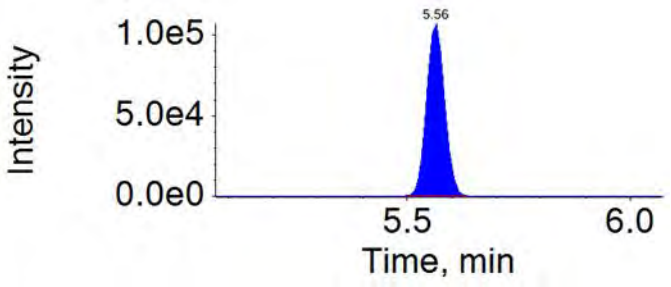
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





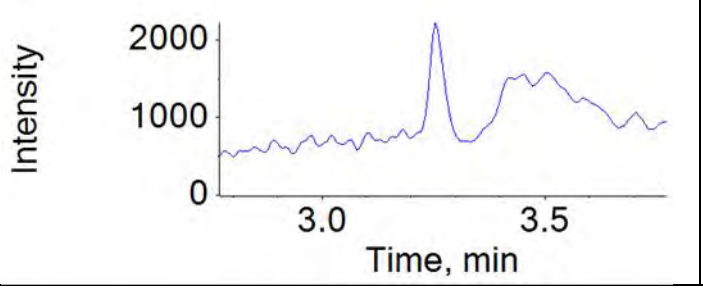
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

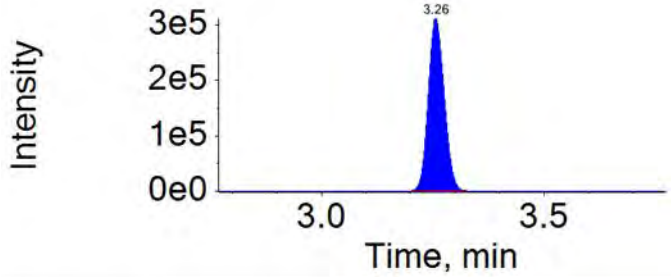




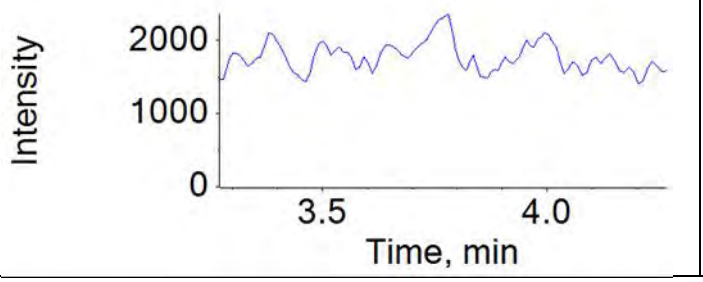
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

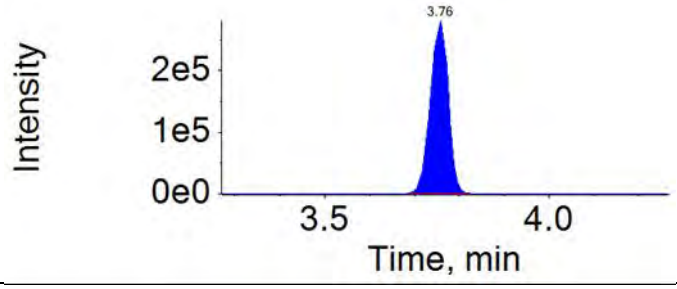
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



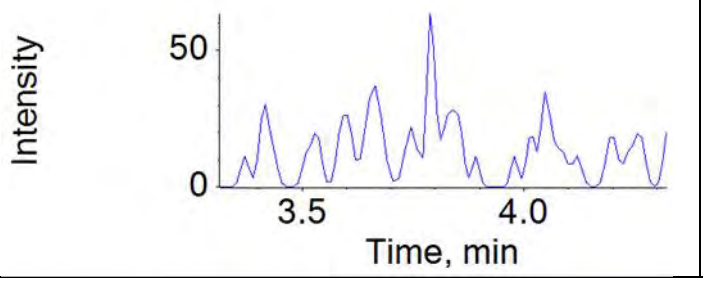


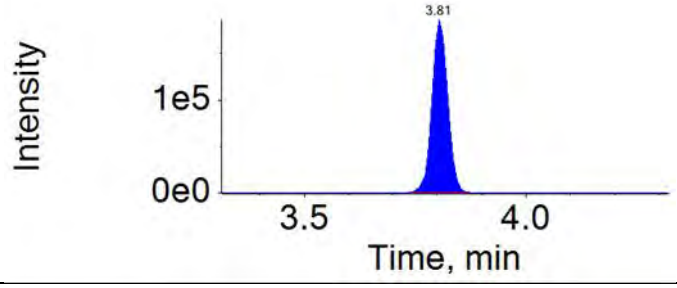
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



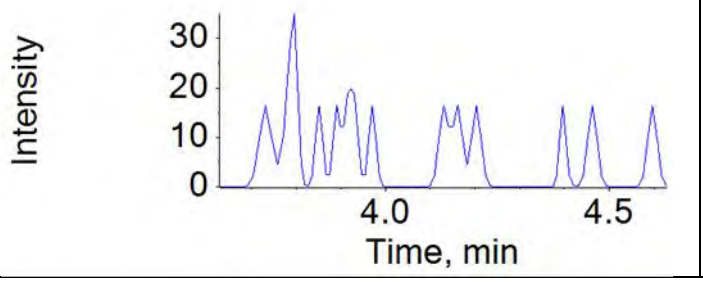


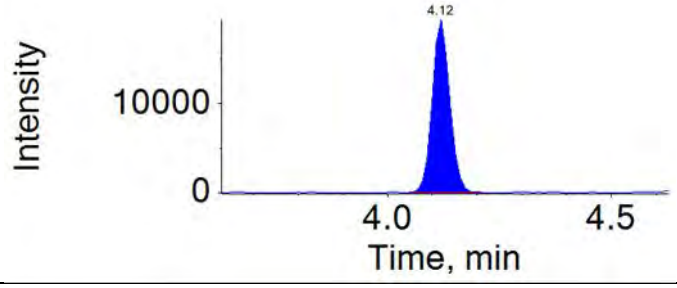
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



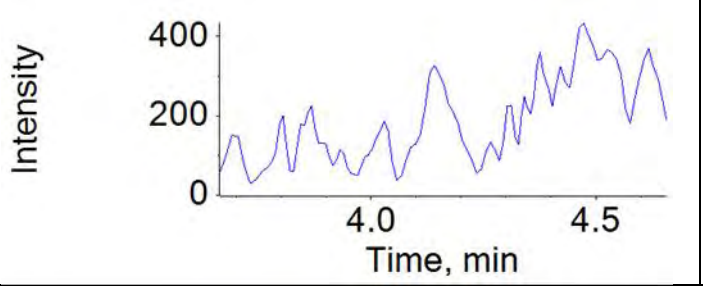


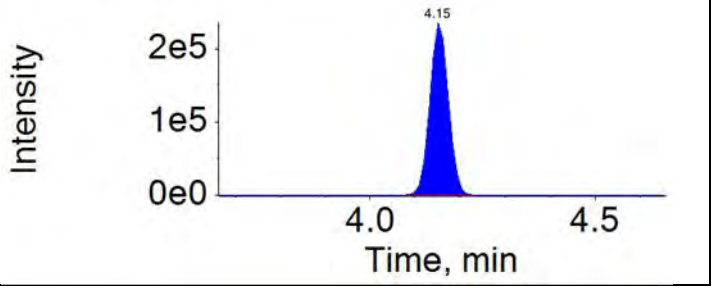
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

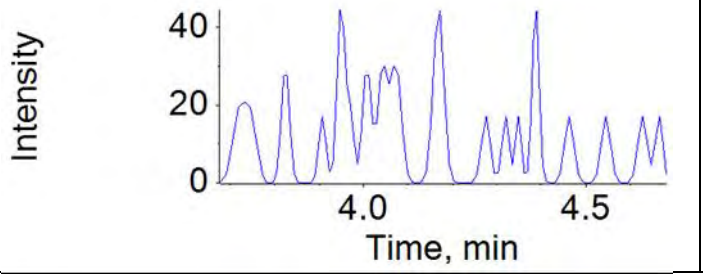
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

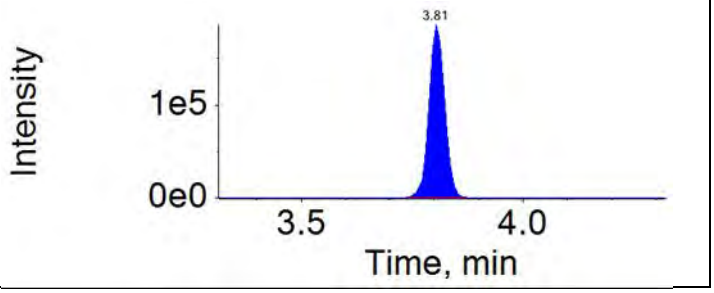
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



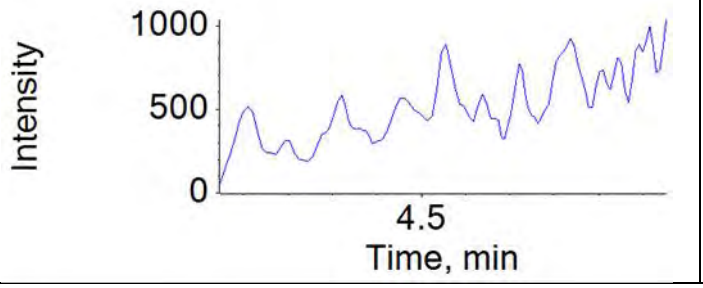


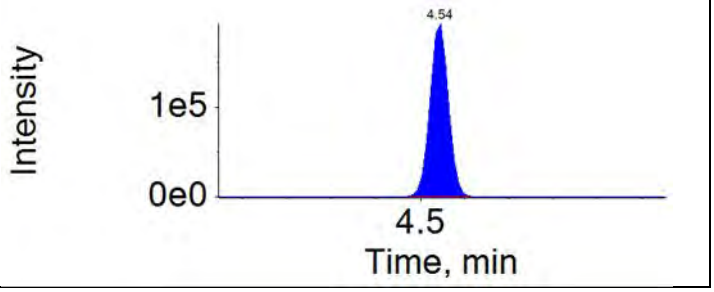
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



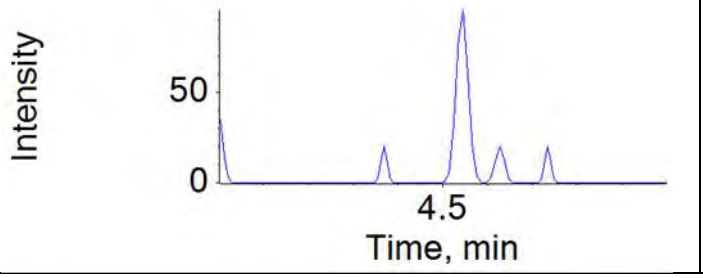


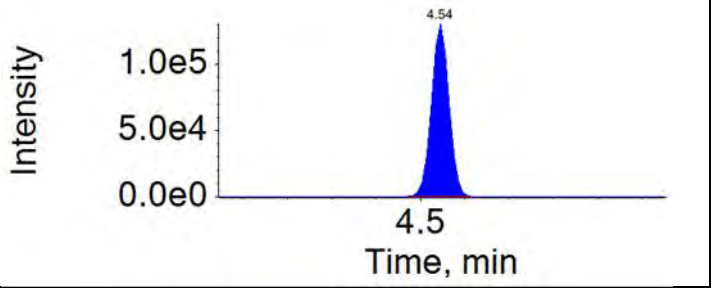
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



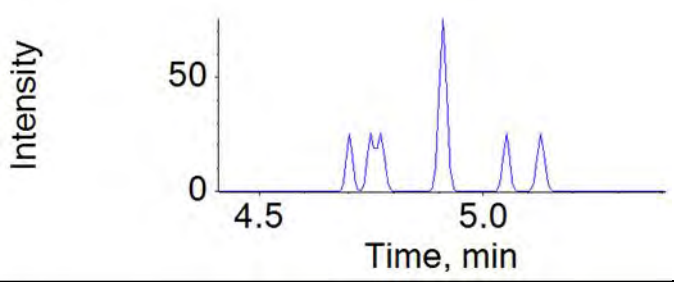
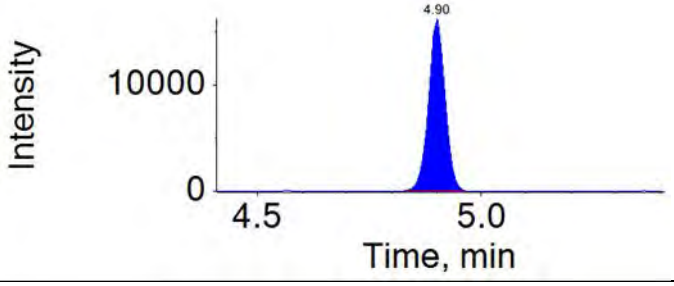


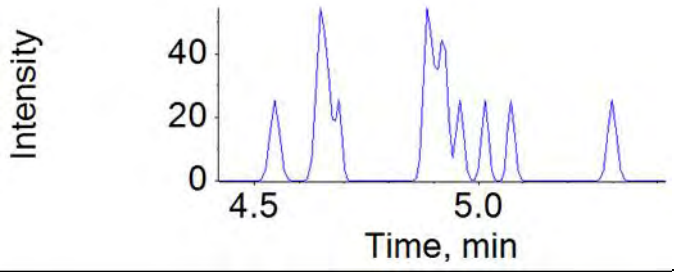
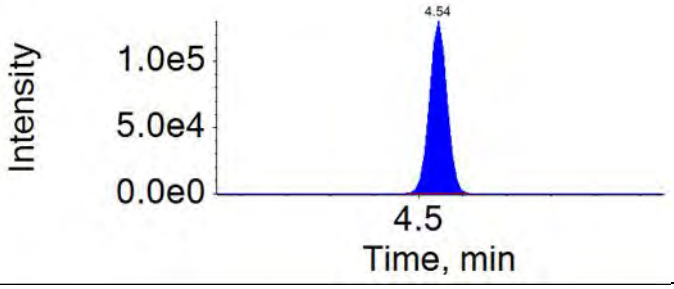
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

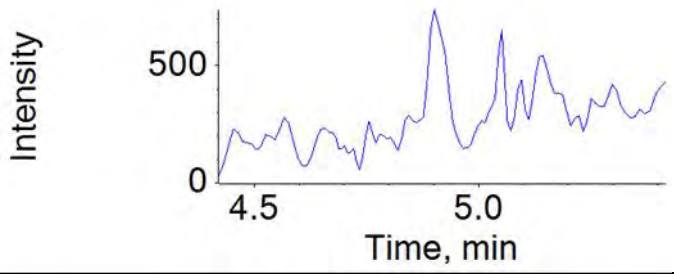
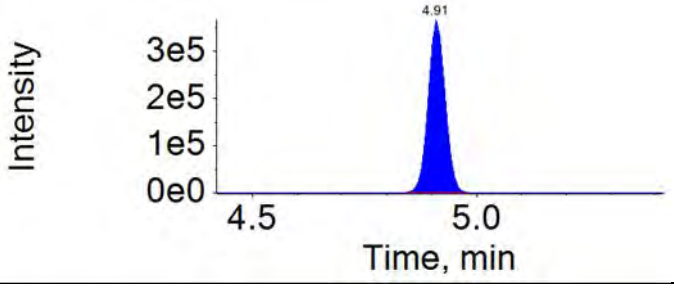


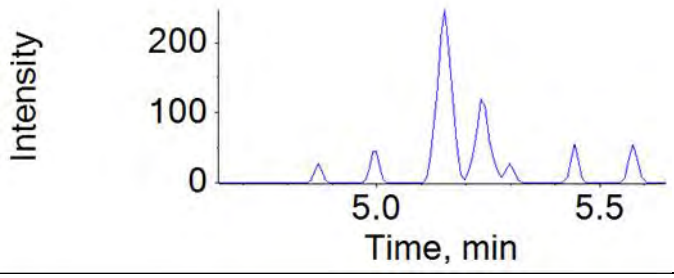
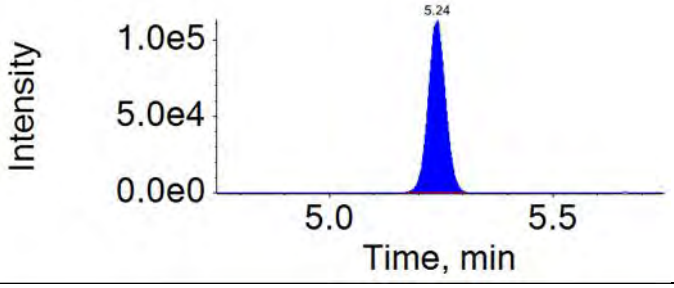


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

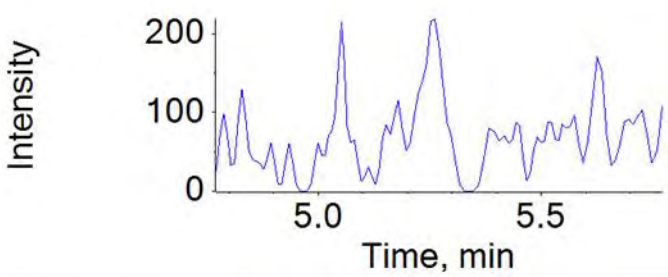
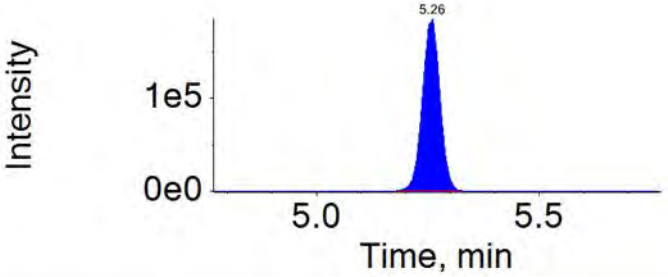
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

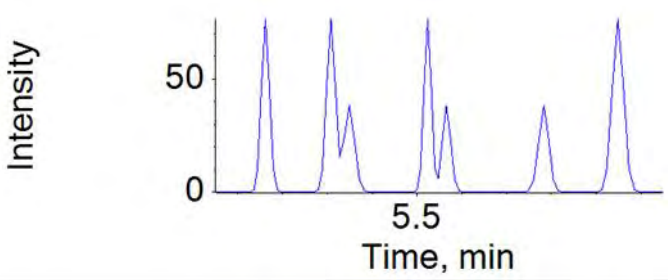
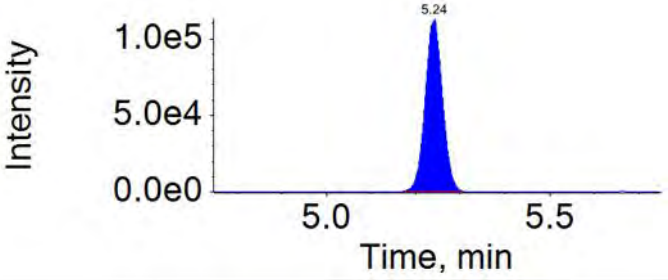
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

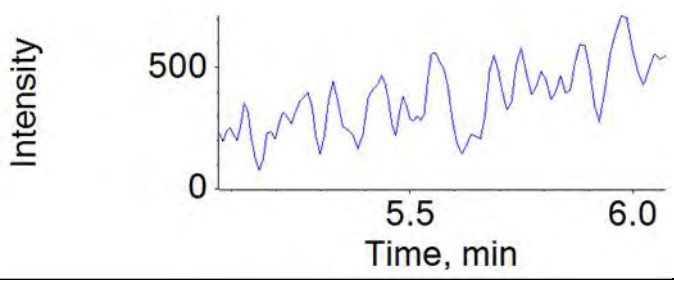
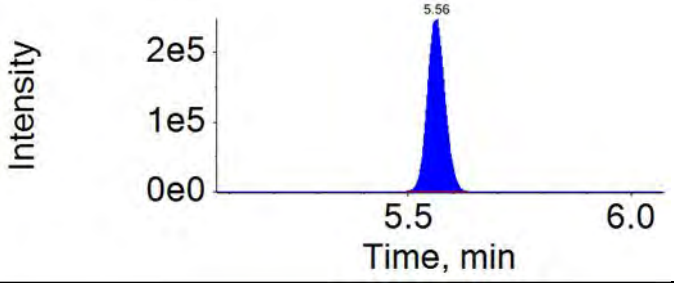
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

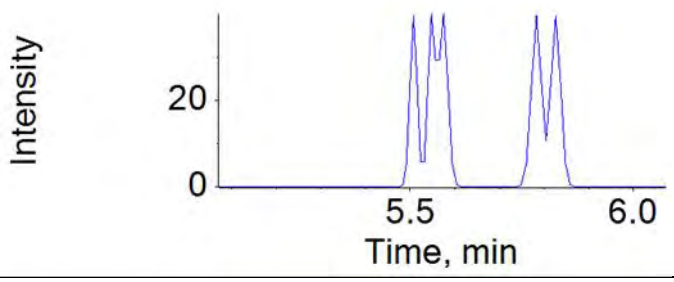
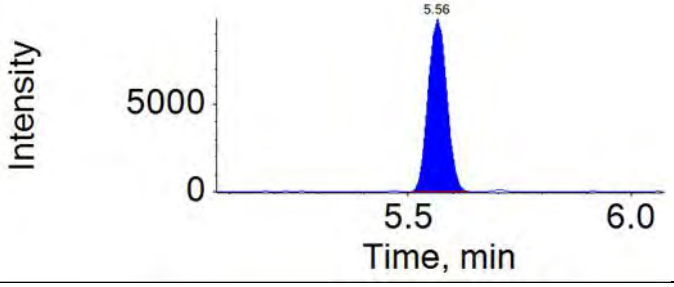
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

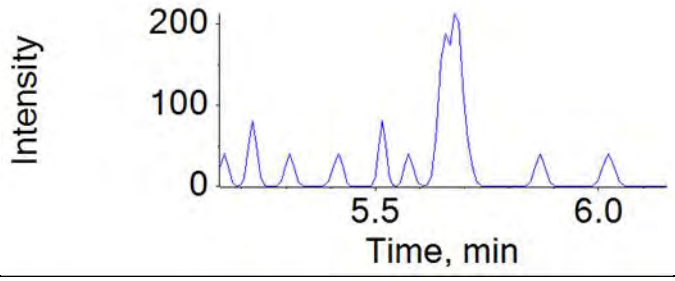
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

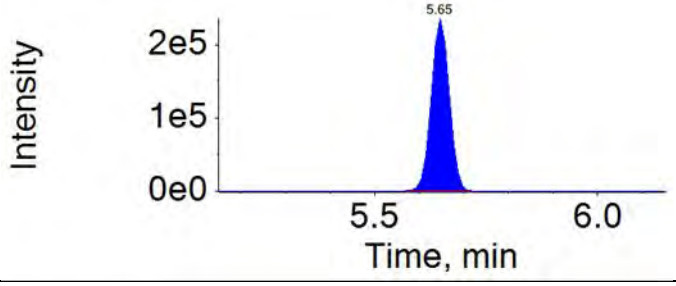
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

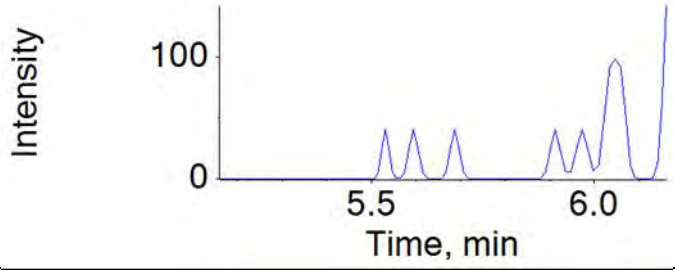
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

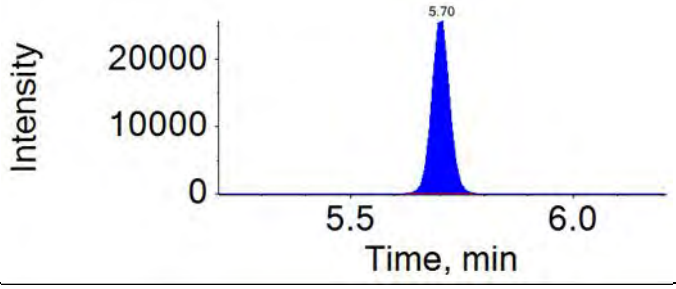
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



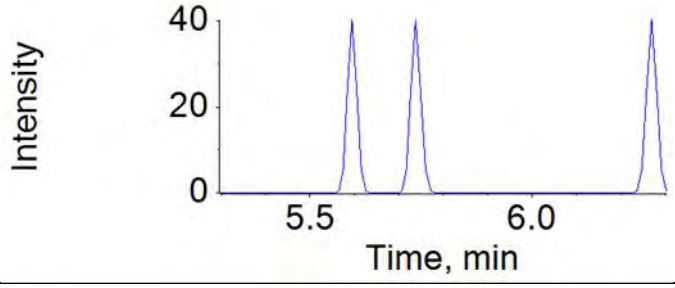


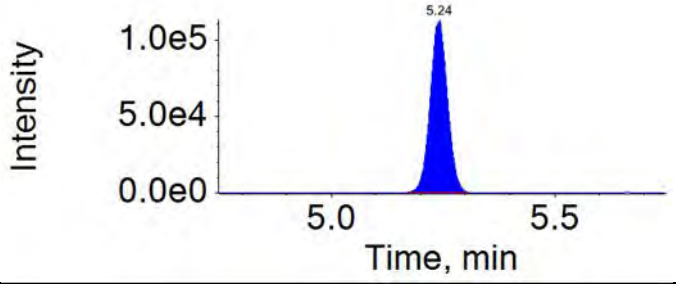
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



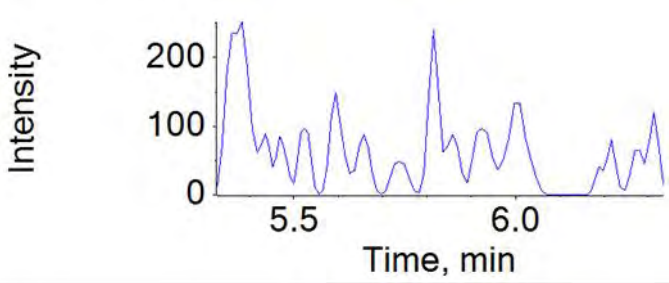


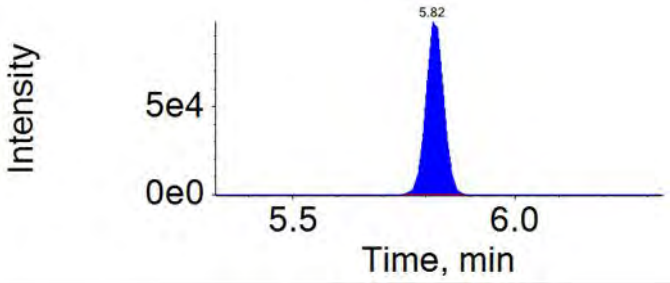
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





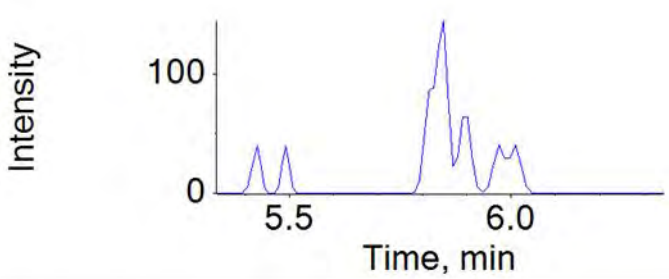
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

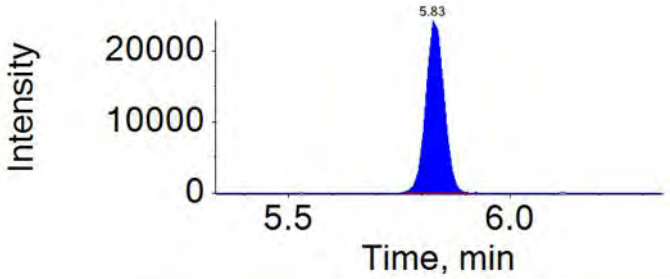




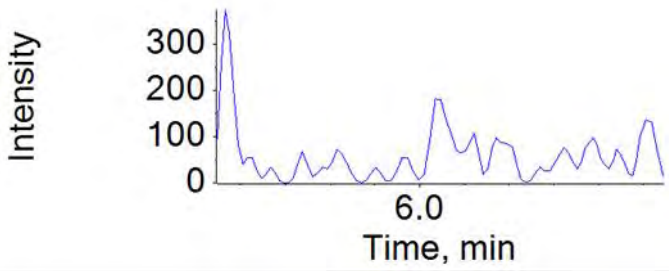
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

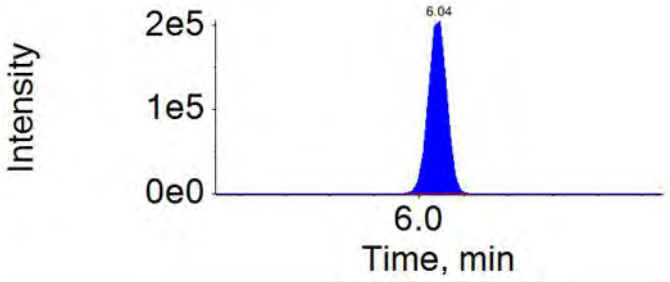
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



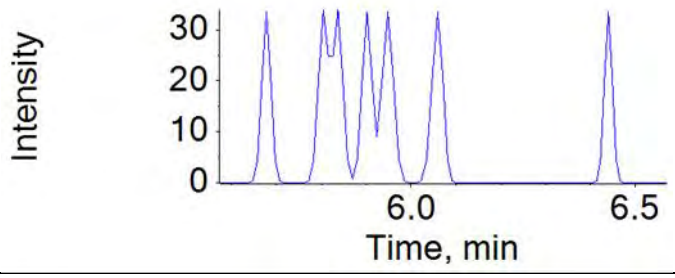


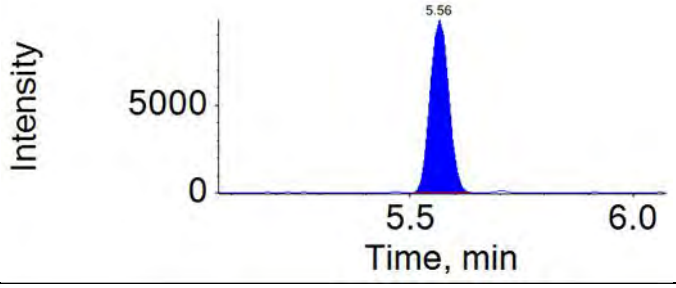
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



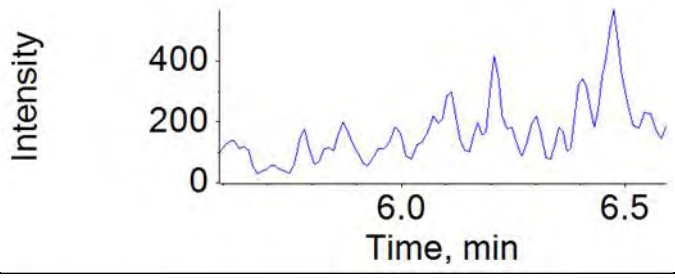


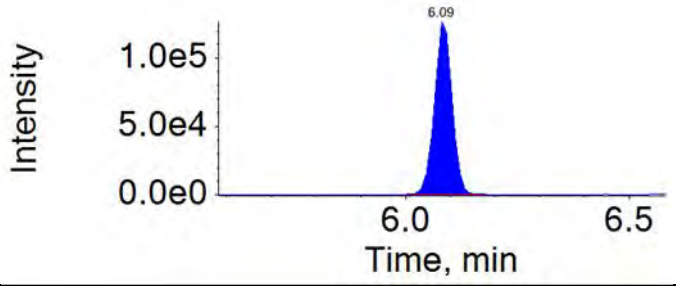
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



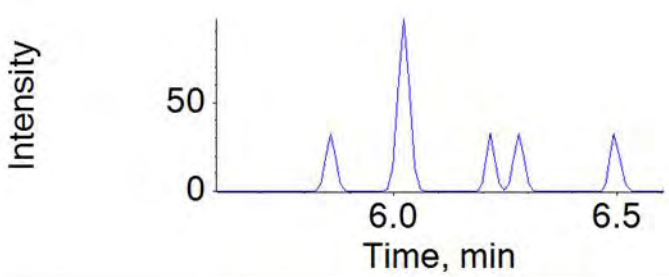


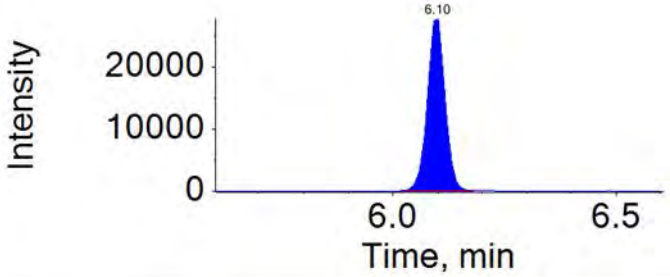
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

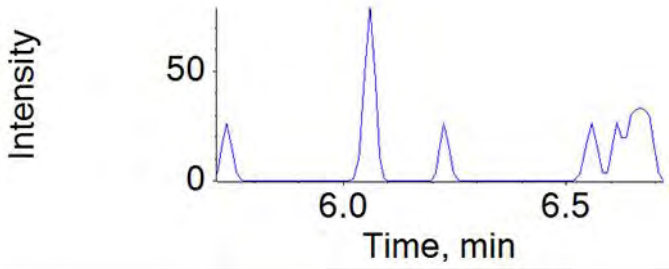
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

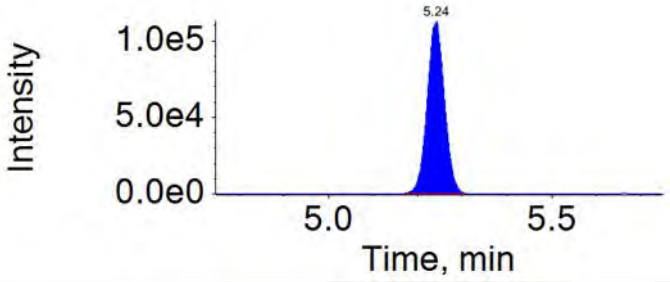
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



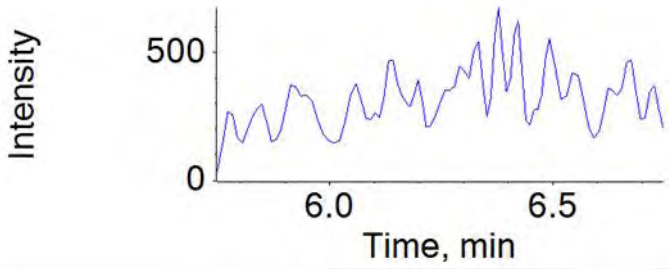


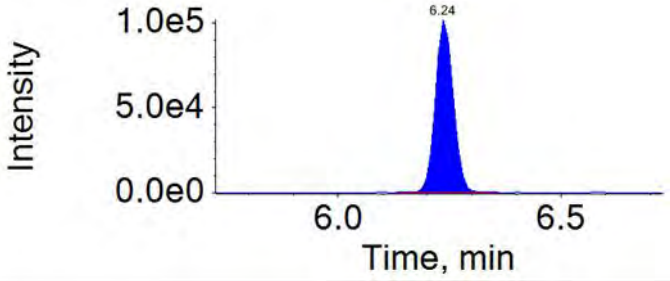
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



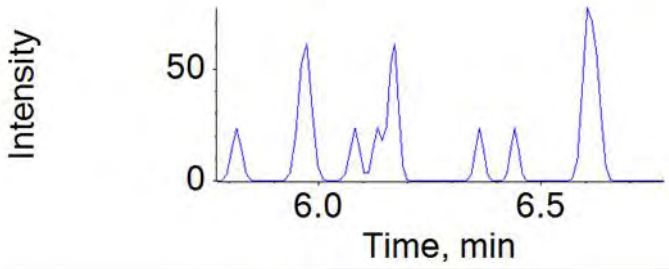


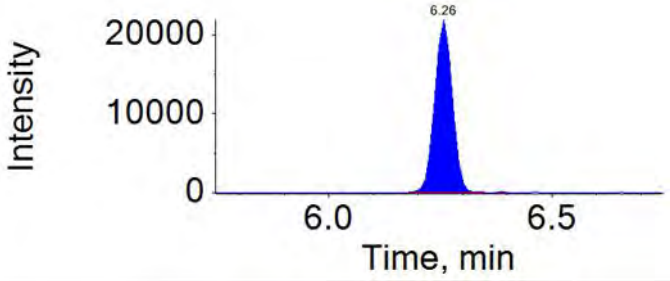
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



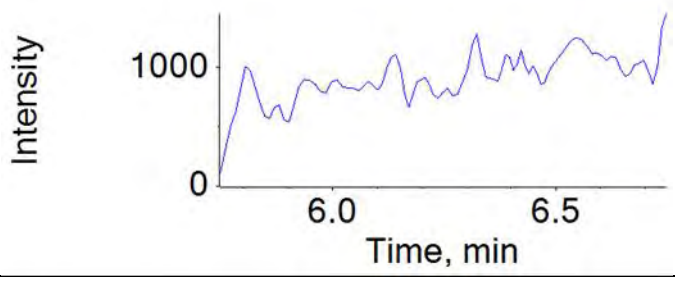


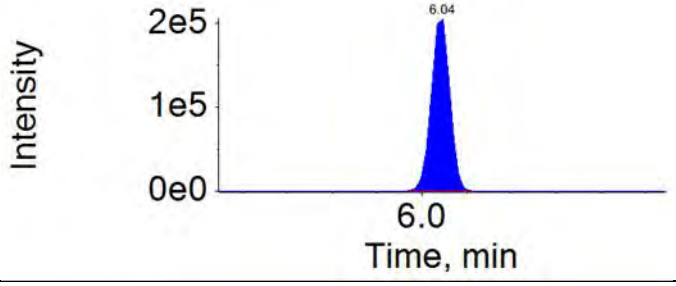
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

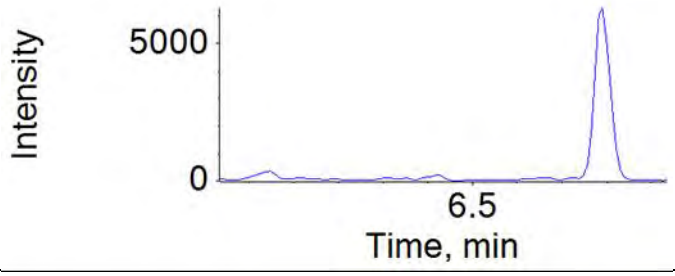
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

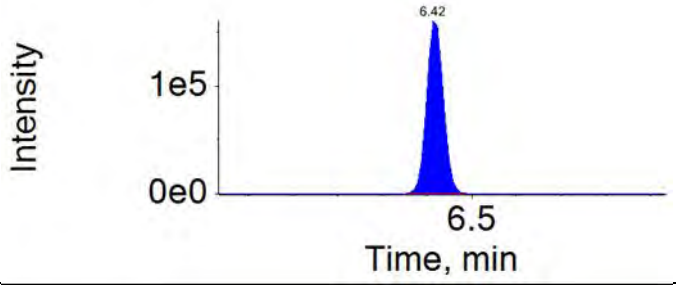
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



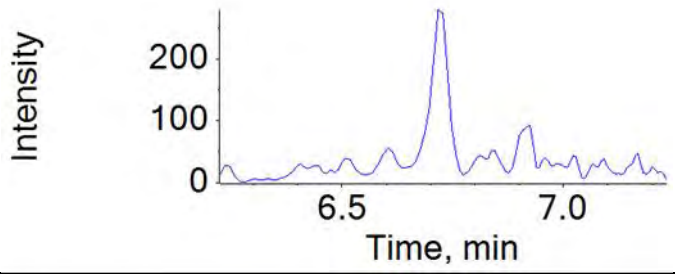


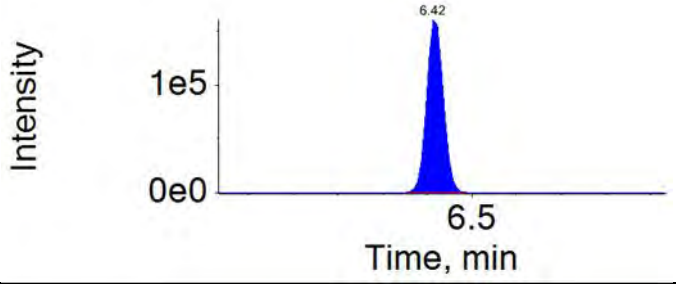
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



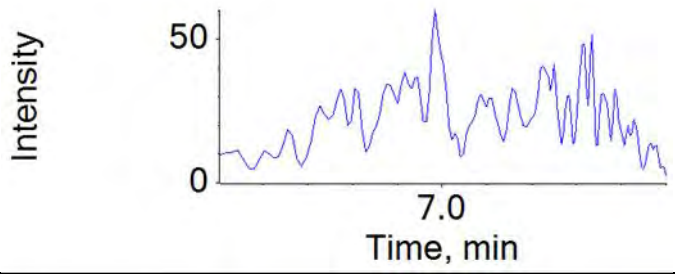


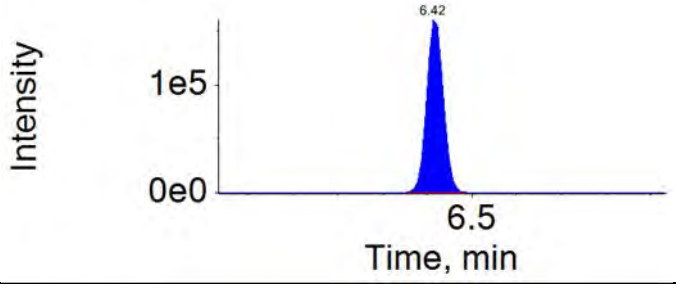
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





Ion Ratio Report

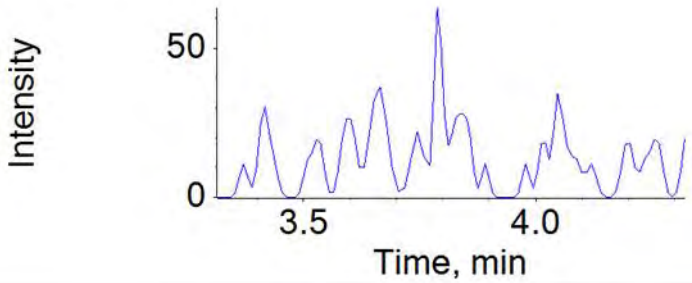
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV12D-71.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

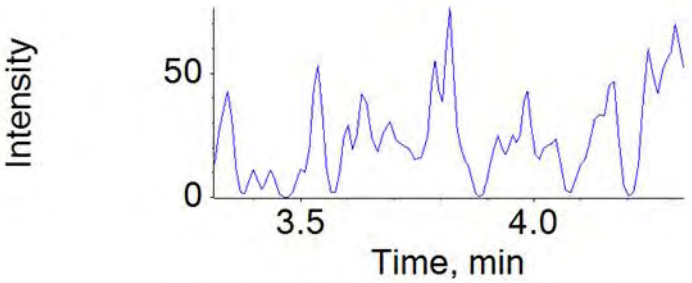
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

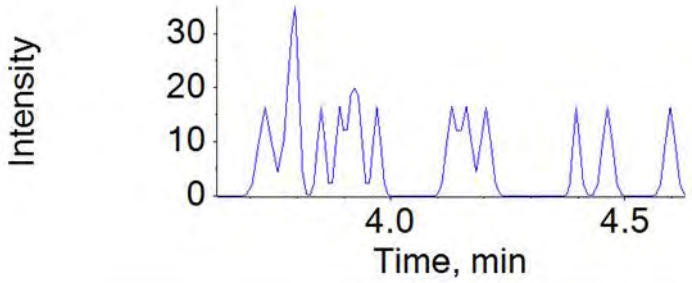
Component: PFBS
Primary Mass: 299.0 / 80.0



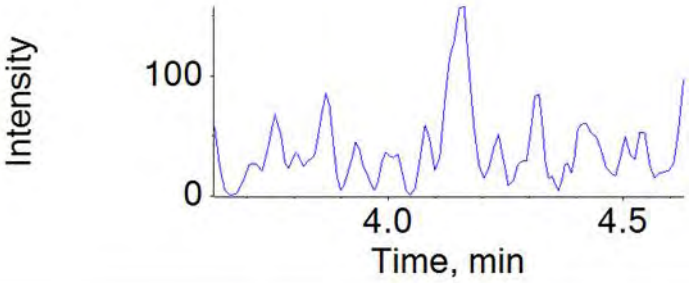
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



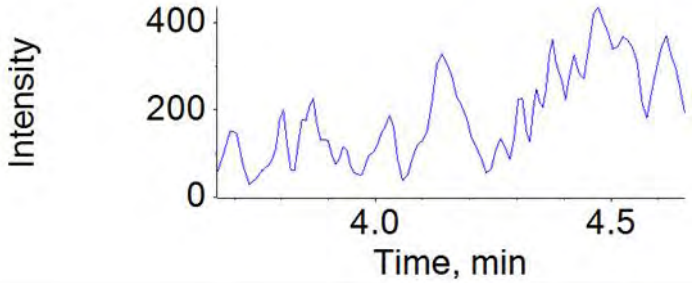
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



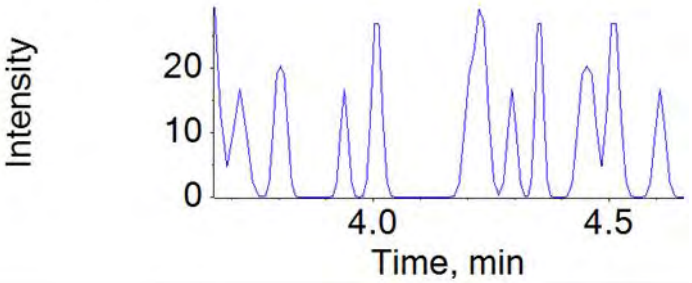
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



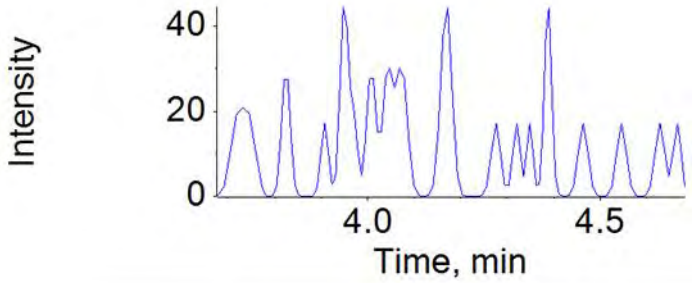
Component: PFHxA
Primary Mass: 313.0 / 269.0



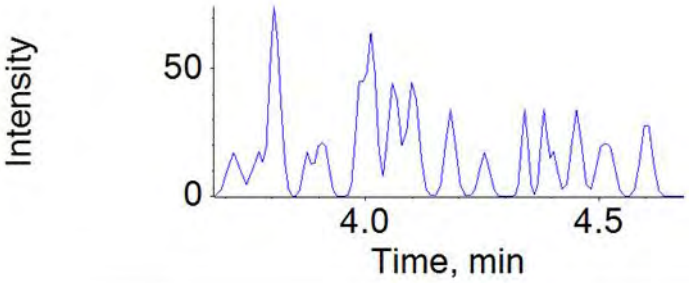
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



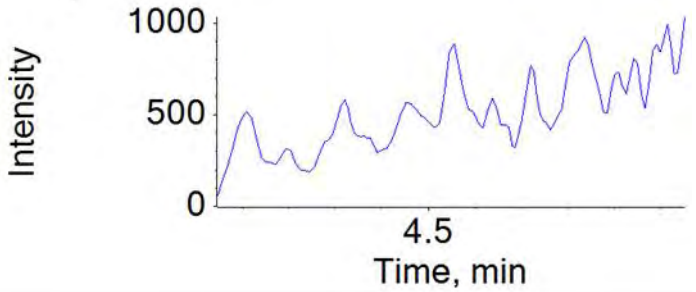
Component: PFPeS
Primary Mass: 349.0 / 80.0



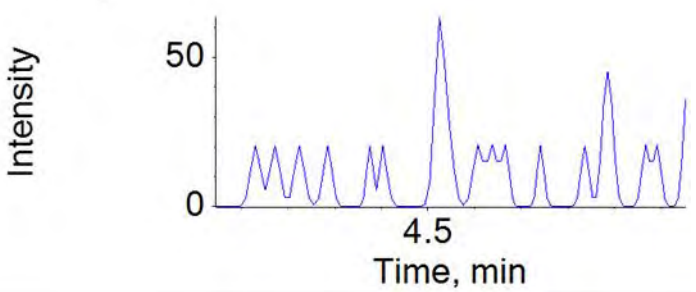
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



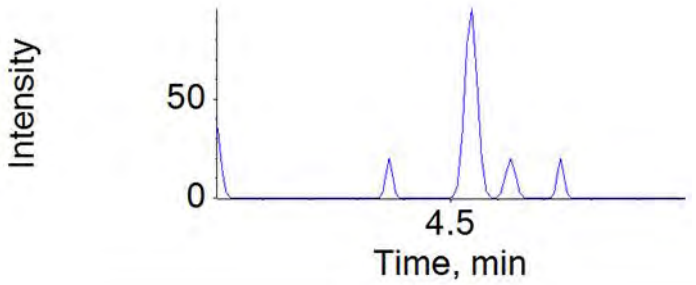
Component: PFHpA
Primary Mass: 363.0 / 319.0



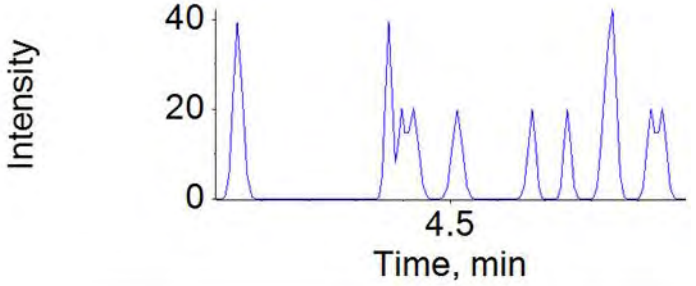
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



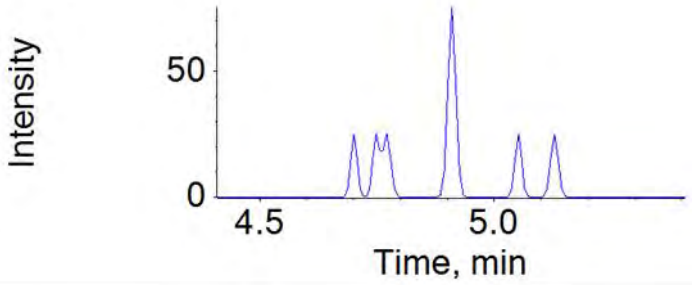
Component: PFHxS
Primary Mass: 399.0 / 80.0



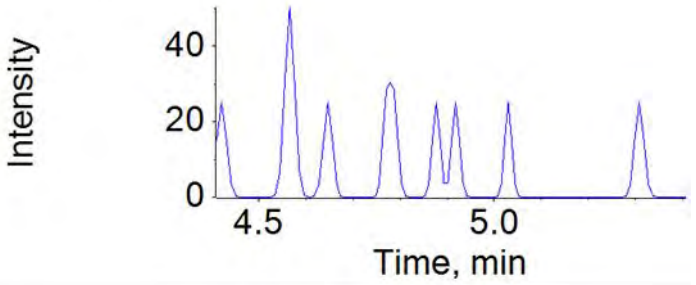
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



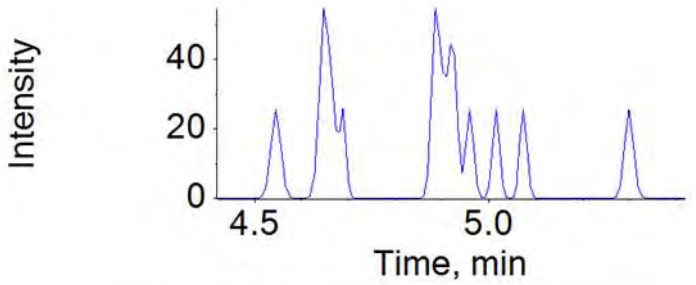
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



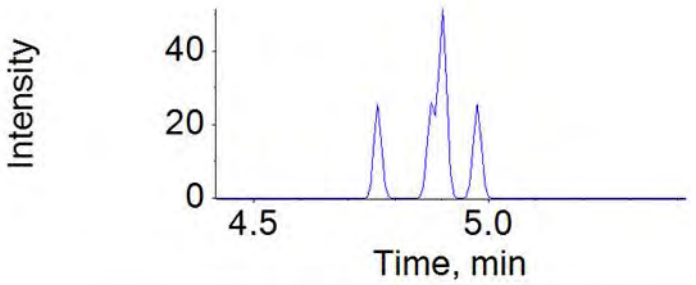
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



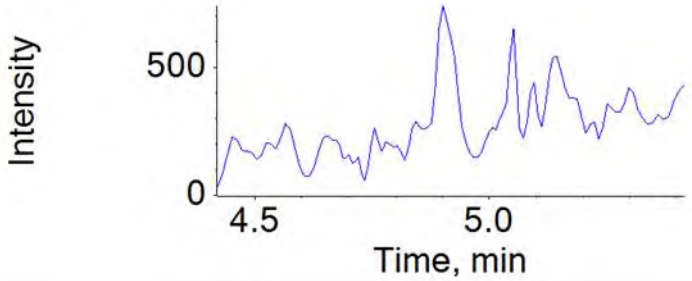
Component: PFHpS
Primary Mass: 449.0 / 80.0



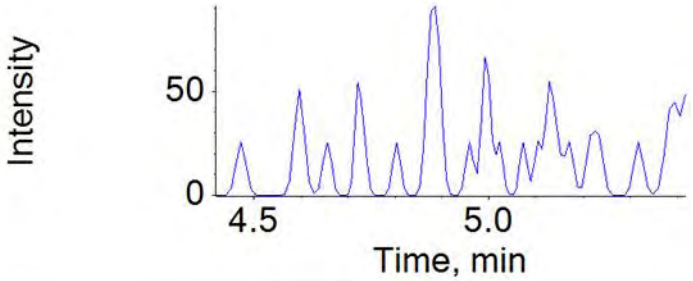
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



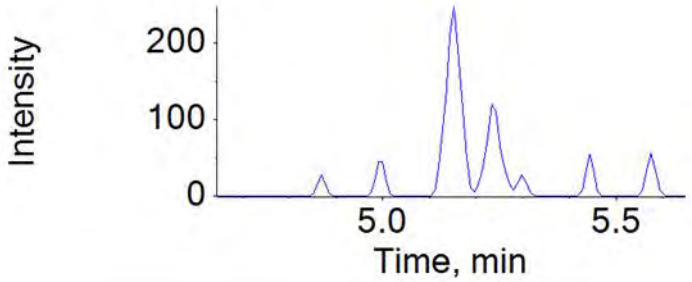
Component: PFOA
Primary Mass: 413.0 / 369.0



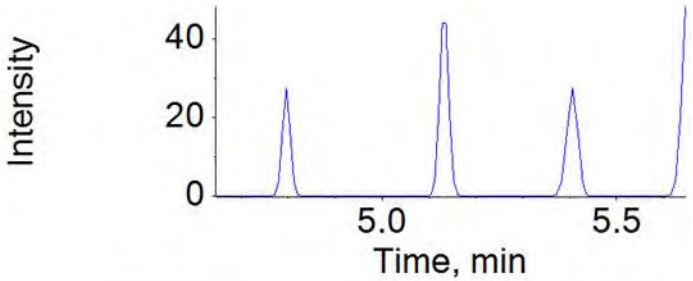
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



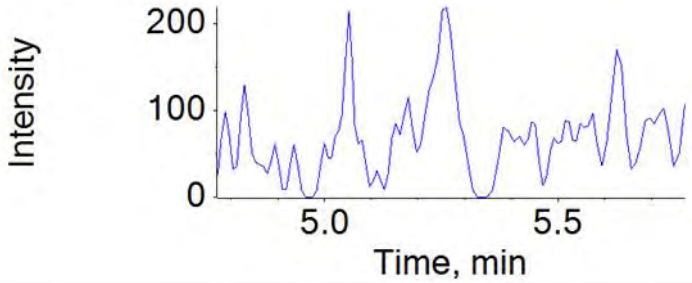
Component: PFOS
Primary Mass: 499.0 / 80.0



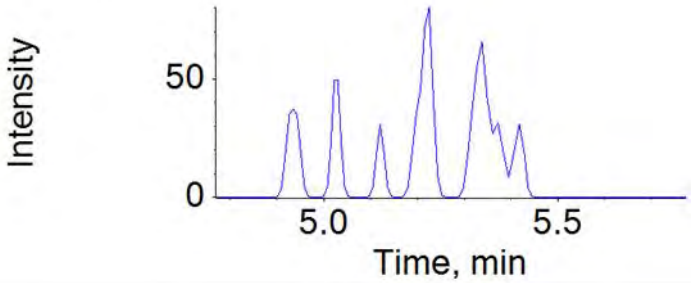
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



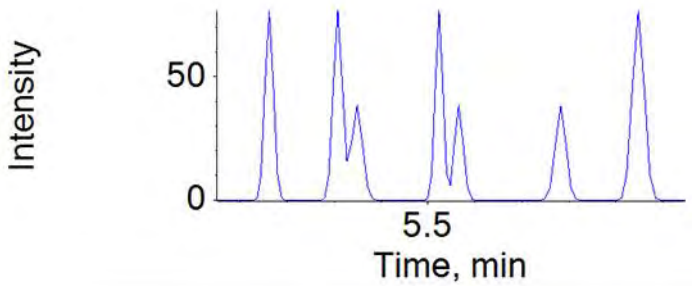
Component: PFNA
Primary Mass: 463.0 / 419.0



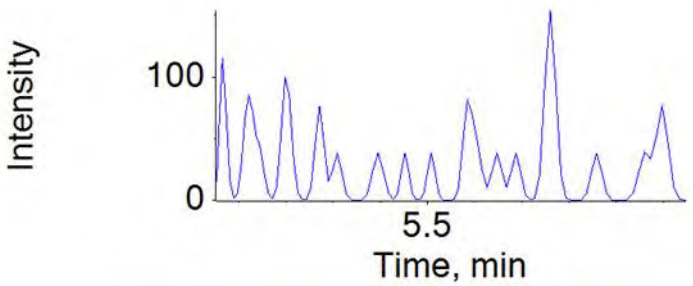
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



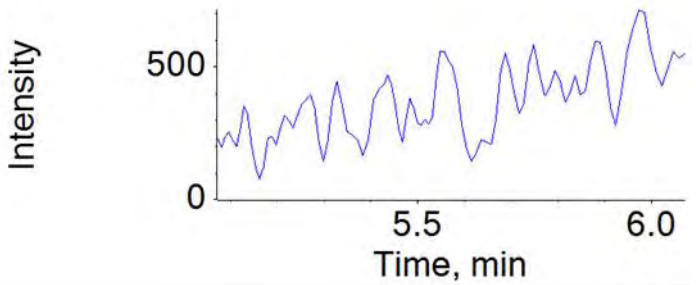
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



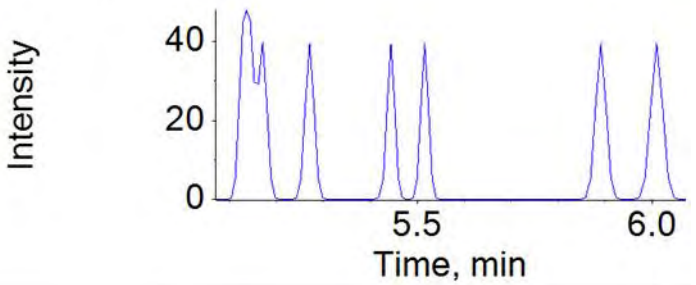
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

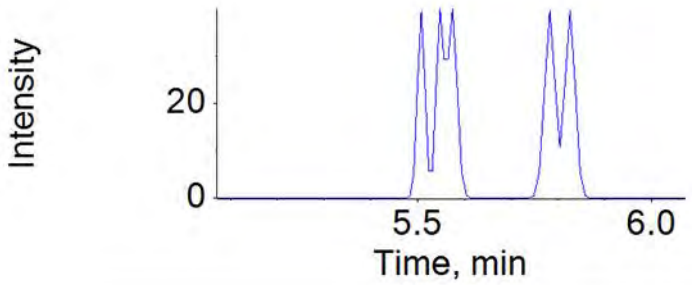
Component: PFDA
Primary Mass: 513.0 / 469.0



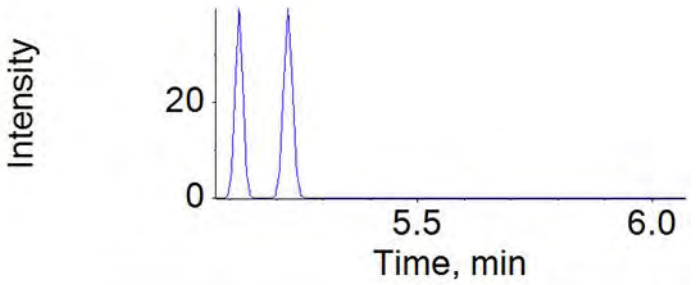
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



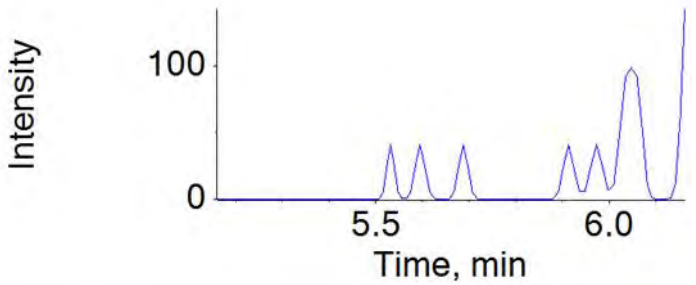
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



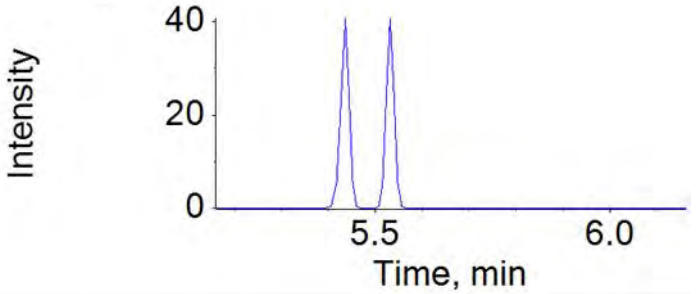
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



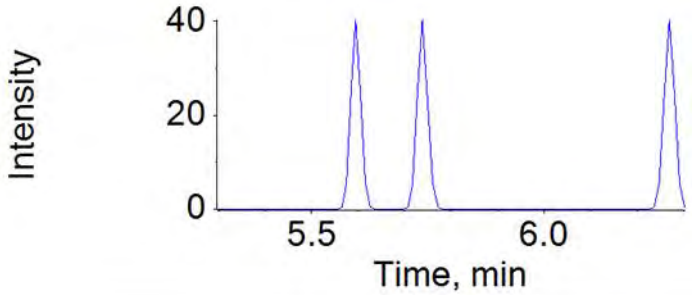
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



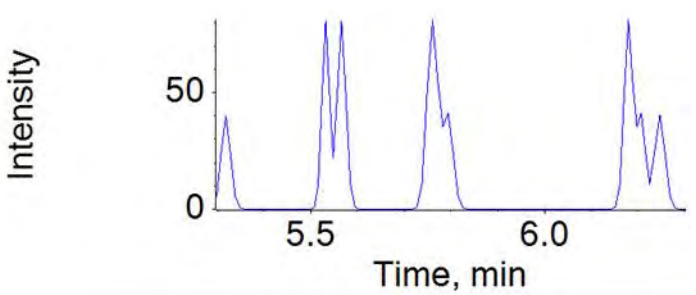
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



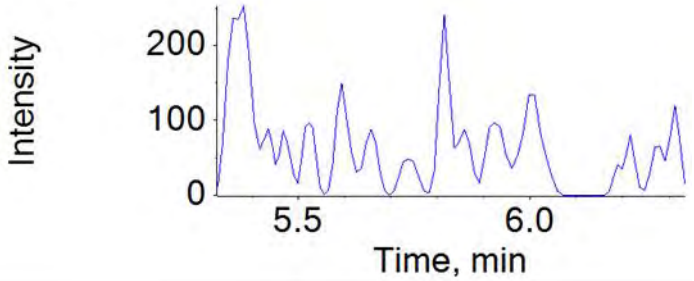
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



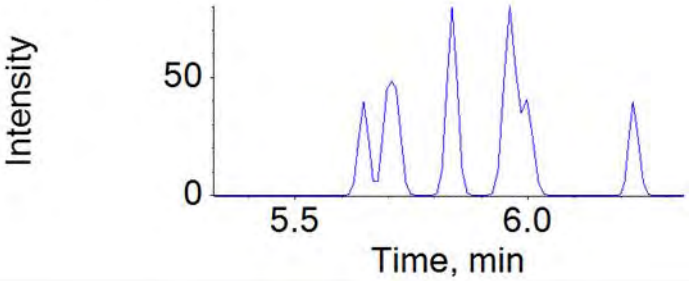
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

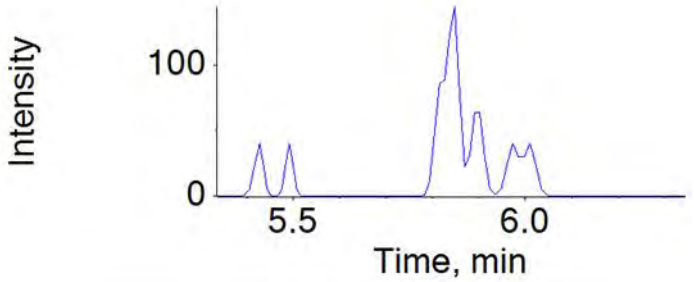
Component: PFUnDA
Primary Mass: 563.0 / 519.0



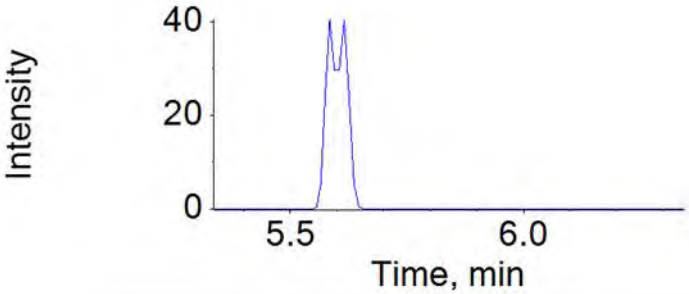
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



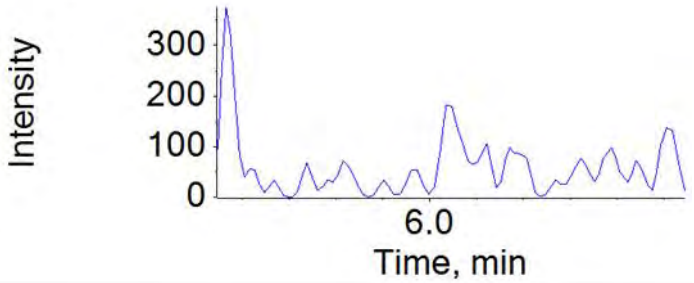
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



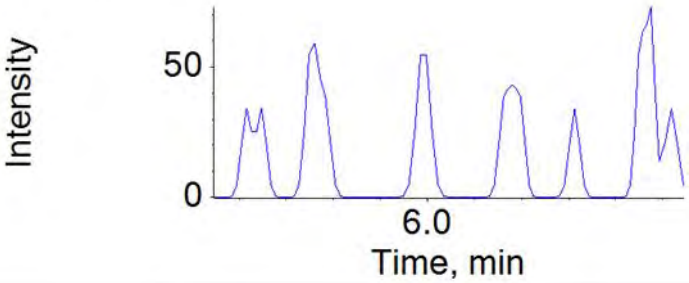
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



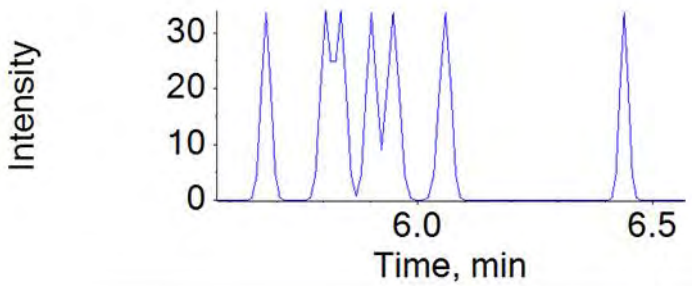
Component: PFDoDA
Primary Mass: 613.0 / 569.0



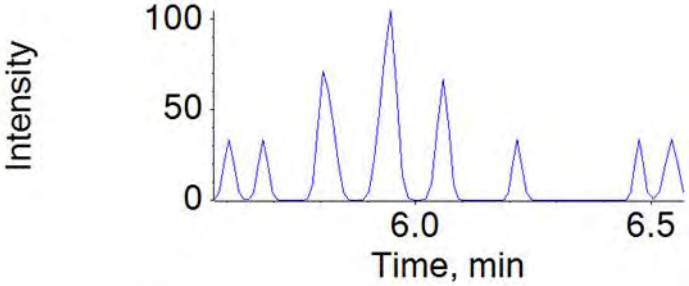
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



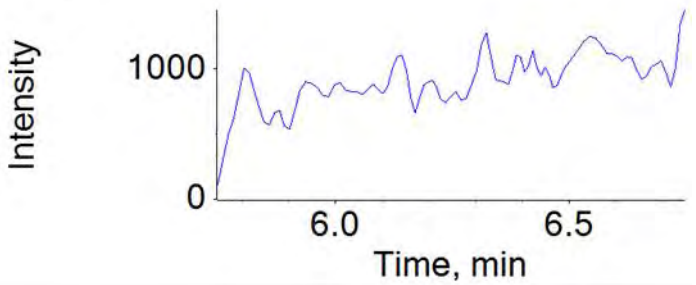
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



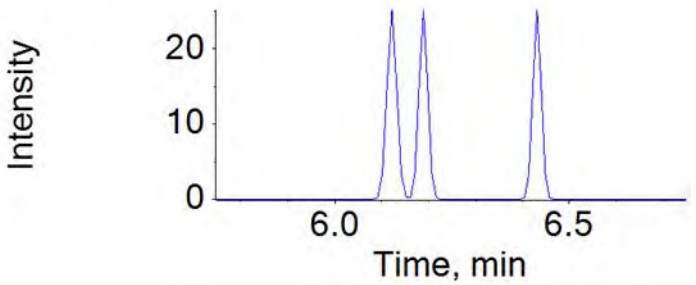
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



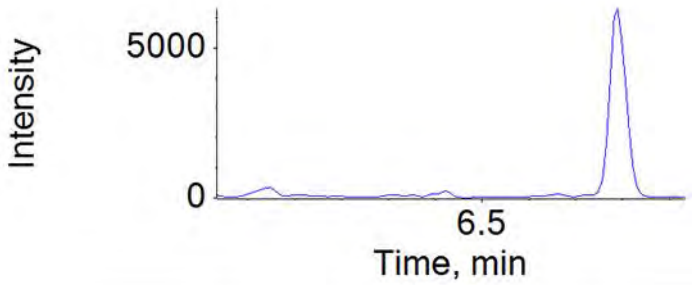
Component: PFTrDA
Primary Mass: 663.0 / 619.0



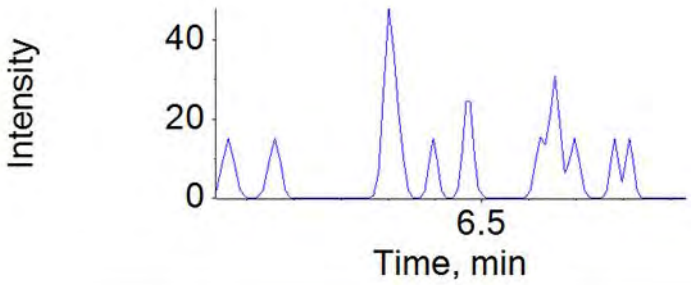
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



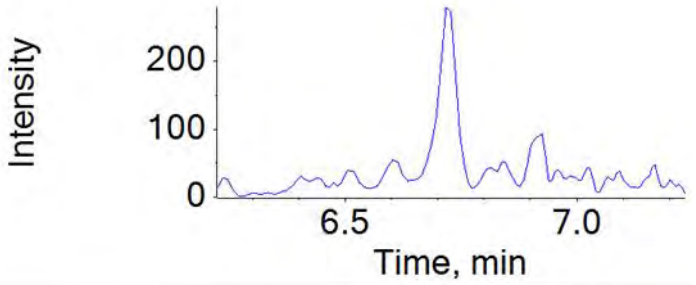
Component: PFTeDA
Primary Mass: 713.0 / 669.0



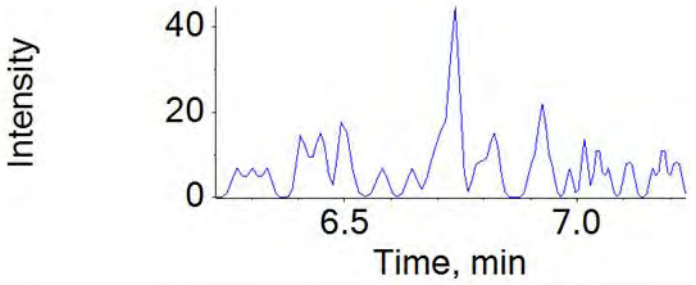
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



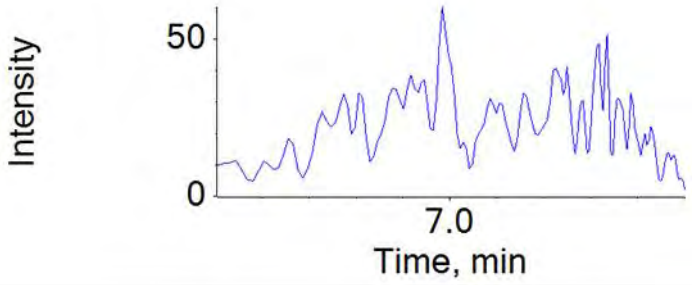
Component: PFHxDA
Primary Mass: 813.0 / 769.0



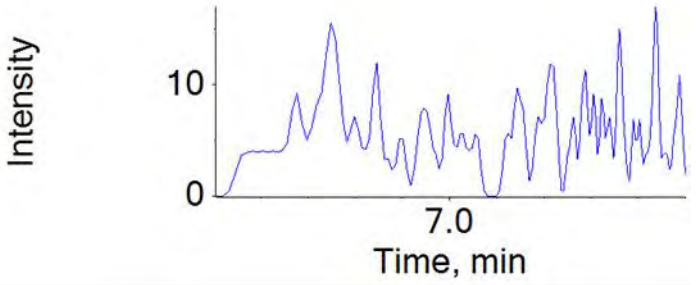
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



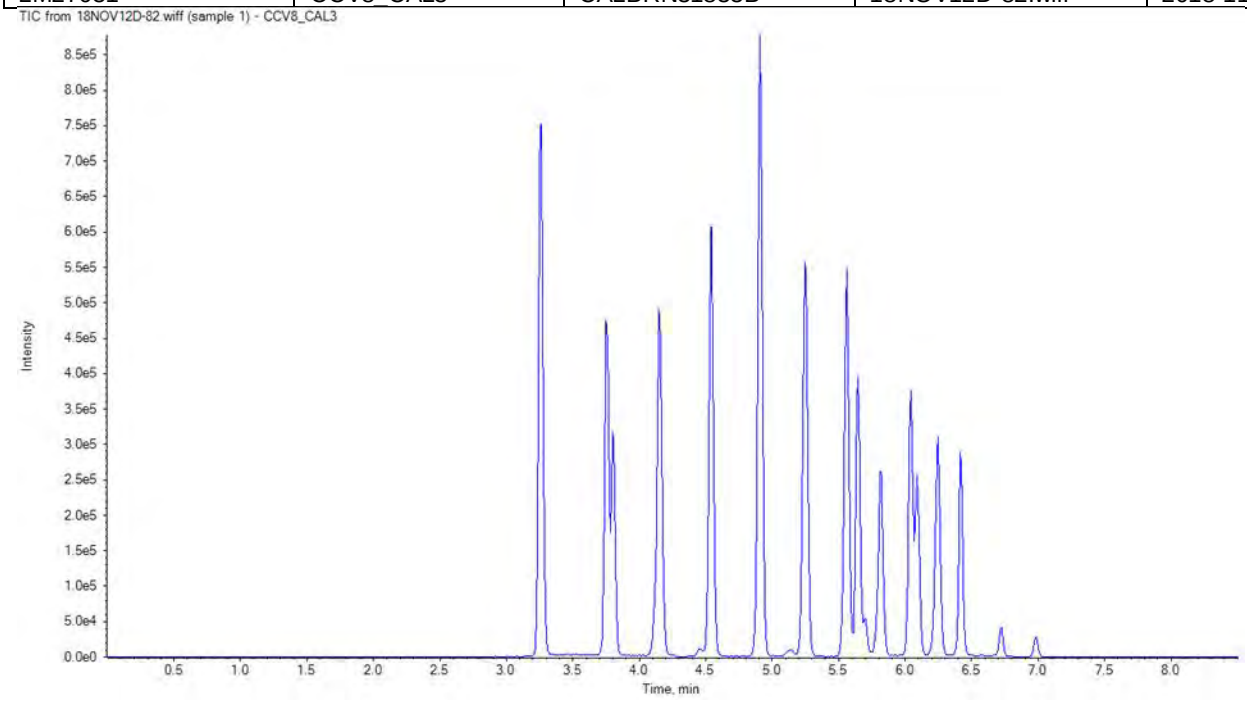
Component: PFODA_2
Secondary Mass: 913.0 / 169.0



Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV8_CAL3	CALBRN31833B	18NOV12D-82.wiff	2018-11-13T04:56:45



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	681190.3	659926.2	3	50	
13C2-PFOA	5.0	470825.9	450219.7	5	50	
13C4-PFOS	4.8	251642.4	249205.8	1	50	
13C2-PFDA	5.0	284301.1	278743.9	2	50	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV8_CAL3	CALBRN31833B	18NOV12D-82.wiff	2018-11-13T04:56:45

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	308804.4	10	13C4-PFBA	757660.6	5.0	0.408	3.26	1.000	2.000	2.258	13	30	
PFPeA	304750.1	12	13C5-PFPeA	747962.7	5.0	0.407	3.76	1.000	2.000	2.359	18	30	
PFBS	174556.6	11	13C3-PFBS	427774.8	4.7	0.408	3.80	1.000	1.770	1.941	10	30	
4:2-FTS	40895.9	11	13C2-4:2-FTS	50681.6	4.7	0.807	4.12	1.000	1.870	2.191	17	30	
PFHxA	370004.4	12	13C5-PFHxA	690137.7	5.0	0.536	4.15	1.000	2.000	2.239	12	30	
PFPeS	87020.0	11	13C3-PFBS	427774.8	4.7	0.203	4.17	1.100	1.880	1.975	5	30	
PFHpA	376582.7	12	13C4-PFHpA	510971.8	5.0	0.737	4.54	1.000	2.000	2.443	22	30	
PFHxS	126141.7	19	13C3-PFHxS	327576.8	4.7	0.385	4.54	1.000	1.820	1.867	3	30	
6:2-FTS	29590.6	11	13C2-6:2-FTS	36403.2	4.8	0.813	4.90	1.000	1.900	1.967	4	30	
PFHpS	129790.5	11	13C3-PFHxS	327576.8	4.7	0.396	4.90	1.080	1.900	2.086	10	30	
PFOA	391470.4	11	13C8-PFOA	888734.5	5.0	0.440	4.91	1.000	2.000	2.353	18	30	
PFOS	124465.3	22	13C8-PFOS	275696.6	4.8	0.451	5.24	1.000	1.850	1.974	7	30	
PFNA	305412.4	11	13C9-PFNA	476036.4	5.0	0.642	5.25	1.000	2.000	2.313	16	30	
PFNS	74922.2	11	13C8-PFOS	275696.6	4.8	0.272	5.54	1.060	1.920	1.901	-1	30	
PFDA	252739.7	11	13C6-PFDA	600485.3	5.0	0.421	5.56	1.000	2.000	2.231	12	30	
8:2-FTS	27233.9	11	13C2-8:2-FTS	28313.0	4.8	0.962	5.56	1.000	1.920	2.243	17	30	
PFOSA	274999.1	11	13C8-PFOSA	641397.5	5.0	0.429	5.64	1.000	2.000	2.094	5	30	
NMeFOSAA	29635.8	17	d3-NMeFOSAA	77954.3	5.0	0.380	5.70	1.000	2.000	2.149	7	30	
PFDS	59015.9	11	13C8-PFOS	275696.6	4.8	0.214	5.79	1.110	1.930	1.940	0	30	
PFUnDA	216603.5	11	13C7-PFUnDA	261493.7	5.0	0.828	5.82	1.000	2.000	2.165	8	30	
NEtFOSAA	26318.1	21	d5-NEtFOSAA	66527.7	5.0	0.396	5.83	1.000	2.000	2.074	4	30	
PFDoDA	256189.7	11	13C2-PFDoDA	550856.0	5.0	0.465	6.04	1.000	2.000	2.368	18	30	
10:2-FTS	19300.5	12	13C2-8:2-FTS	28313.0	4.8	0.682	6.06	1.090	1.930	2.271	18	30	
NMePFOSAE	176912.2	11	d7-NMePFOSAE	315412.2	5.0	0.561	6.10	1.000	2.000	2.334	17	30	
NMePFOSA	33428.7	11	d3-NMePFOSA	75152.9	5.0	0.445	6.10	1.000	2.000	2.194	10	30	
PFDoS	32284.6	11	13C8-PFOS	275696.6	4.8	0.117	6.21	1.190	1.940	2.051	6	30	
NEtPFOSAE	195653.9	12	d9-NEtPFOSAE	270298.9	5.0	0.724	6.25	1.000	2.000	2.322	16	30	
NEtPFOSA	27412.4	11	d5-NEtPFOSA	59560.6	5.0	0.460	6.26	1.000	2.000	2.114	6	30	
PFTrDA	195104.3	11	13C2-PFDoDA	550856.0	5.0	0.354	6.24	1.030	2.000	2.235	12	30	
PFTeDA	162073.2	10	13C2-PFTeDA	417234.9	5.0	0.388	6.42	1.000	2.000	2.177	9	30	
PFHxDA	79275.5	11	13C2-PFTeDA	417234.9	5.0	0.190	6.72	1.050	2.000	2.264	13	30	
PFODA	61825.4	10	13C2-PFTeDA	417234.9	5.0	0.148	6.98	1.090	2.000	2.064	3	30	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV8_CAL3			**Data File:**		18NOV12D-82.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-13T04:56:45
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV3-11
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	681190.3	659926.2	3	50	
13C2-PFOA	5.0	470825.9	450219.7	5	50	
13C4-PFOS	4.8	251642.4	249205.8	1	50	
13C2-PFDA	5.0	284301.1	278743.9	2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	757660.6	13C3-PFBA	681190.3	1.112	5.000	4.987	100	70-130	
E13C5-PFPeA	747962.7	13C3-PFBA	681190.3	1.098	5.000	4.925	98	70-130	
E13C3-PFBS	427774.8	13C3-PFBA	681190.3	0.628	4.650	4.433	95	70-130	
E13C2-4:2-FTS	50681.6	13C2-PFOA	470825.9	0.108	4.670	4.794	103	70-130	
E13C5-PFHxA	690137.7	13C2-PFOA	470825.9	1.466	5.000	5.295	106	70-130	
E13C3-PFHxS	327576.8	13C2-PFOA	470825.9	0.696	4.730	4.774	101	70-130	
E13C4-PFHpA	510971.8	13C2-PFOA	470825.9	1.085	5.000	4.889	98	70-130	
E13C2-6:2-FTS	36403.2	13C2-PFOA	470825.9	0.077	4.750	5.173	109	70-130	
E13C8-PFOA	888734.5	13C2-PFOA	470825.9	1.888	5.000	5.201	104	70-130	
E13C8-PFOS	275696.6	13C4-PFOS	251642.4	1.096	4.780	4.854	102	70-130	
E13C9-PFNA	476036.4	13C4-PFOS	251642.4	1.892	5.000	5.274	105	70-130	
E13C6-PFDA	600485.3	13C2-PFDA	284301.1	2.112	5.000	4.929	99	70-130	
E13C2-8:2-FTS	28313.0	13C2-PFDA	284301.1	0.100	4.790	4.967	104	70-130	
E13C8-PFOSA	641397.5	13C2-PFDA	284301.1	2.256	5.000	5.002	100	70-130	
Ed3-NMeFOSAA	77954.3	13C2-PFDA	284301.1	0.274	5.000	4.949	99	70-130	
E13C7-PFUnDA	261493.7	13C2-PFDA	284301.1	0.920	5.000	5.340	107	70-130	
Ed5-NEtFOSAA	66527.7	13C2-PFDA	284301.1	0.234	5.000	4.951	99	70-130	
E13C2-PFDoDA	550856.0	13C2-PFDA	284301.1	1.938	5.000	5.031	101	70-130	
Ed7-NMePFOSAE	315412.2	13C2-PFDA	284301.1	1.109	5.000	4.801	96	70-130	
Ed3-NMePFOSA	75152.9	13C2-PFDA	284301.1	0.264	5.000	4.803	96	70-130	
Ed9-NEtPFOSAE	270298.9	13C2-PFDA	284301.1	0.951	5.000	4.945	99	70-130	
Ed5-NEtPFOSA	59560.6	13C2-PFDA	284301.1	0.209	5.000	4.914	98	70-130	
E13C2-PFTeDA	417234.9	13C2-PFDA	284301.1	1.468	5.000	5.152	103	70-130	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

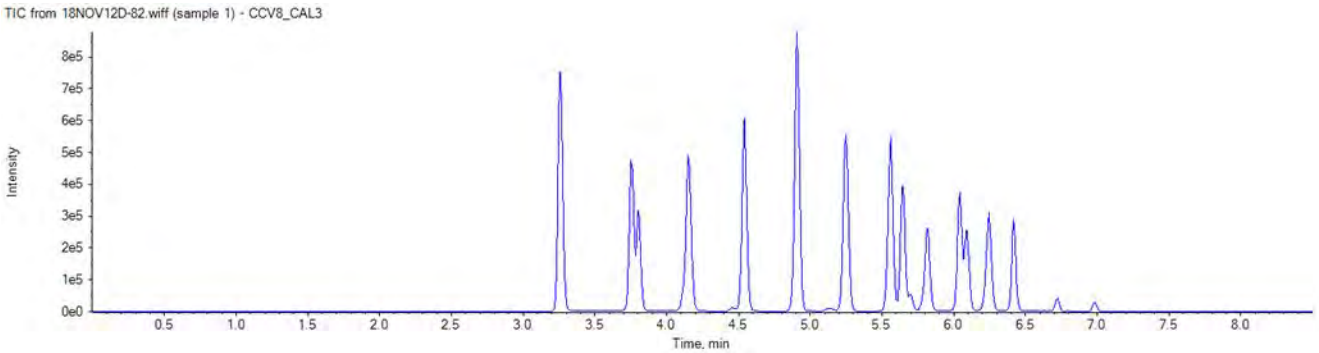
Analyte Quantitation Peak Table

Sample Name: CCV8_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12D-82.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	308804.4		A	13C4-PFBA	3.26	757660.6	0.408	2.258
PFPeA	3.76	1.000	304750.1		A	13C5-PFPeA	3.76	747962.7	0.407	2.359
PFBS	3.80	1.000	174556.6		A	13C3-PFBS	3.80	427774.8	0.408	1.941
4:2-FTS	4.12	1.000	40895.9		A	13C2-4:2-FTS	4.12	50681.6	0.807	2.191
PFHxA	4.15	1.000	370004.4		A	13C5-PFHxA	4.15	690137.7	0.536	2.239
PFPeS	4.17	1.100	87020.0		A	13C3-PFBS	3.80	427774.8	0.203	1.975
PFHpA	4.54	1.000	376582.7		A	13C4-PFHpA	4.54	510971.8	0.737	2.443
PFHxS	4.54	1.000	126141.7		M	13C3-PFHxS	4.54	327576.8	0.385	1.867
6:2-FTS	4.90	1.000	29590.6		A	13C2-6:2-FTS	4.90	36403.2	0.813	1.967
PFHpS	4.90	1.080	129790.5		A	13C3-PFHxS	4.54	327576.8	0.396	2.086
PFOA	4.91	1.000	391470.4		A	13C8-PFOA	4.91	888734.5	0.440	2.353
PFOS	5.24	1.000	124465.3		M	13C8-PFOS	5.24	275696.6	0.451	1.974
PFNA	5.25	1.000	305412.4		A	13C9-PFNA	5.25	476036.4	0.642	2.313
PFNS	5.54	1.060	74922.2		A	13C8-PFOS	5.24	275696.6	0.272	1.901
PFDA	5.56	1.000	252739.7		A	13C6-PFDA	5.56	600485.3	0.421	2.231
8:2-FTS	5.56	1.000	27233.9		A	13C2-8:2-FTS	5.56	28313.0	0.962	2.243
PFOSA	5.64	1.000	274999.1		A	13C8-PFOSA	5.65	641397.5	0.429	2.094
NMeFOSAA	5.70	1.000	29635.8		A	d3-NMeFOSAA	5.70	77954.3	0.380	2.149
PFDS	5.79	1.110	59015.9		A	13C8-PFOS	5.24	275696.6	0.214	1.940
PFUnDA	5.82	1.000	216603.5		A	13C7-PFUnDA	5.82	261493.7	0.828	2.165
NEtFOSAA	5.83	1.000	26318.1		A	d5-NEtFOSAA	5.83	66527.7	0.396	2.074
PFDoDA	6.04	1.000	256189.7		A	13C2-PFDoDA	6.04	550856.0	0.465	2.368
10:2-FTS	6.06	1.090	19300.5		A	13C2-8:2-FTS	5.56	28313.0	0.682	2.271
NMePFOSAE	6.10	1.000	176912.2		A	d7-NMePFOSAE	6.09	315412.2	0.561	2.334
NMePFOSA	6.10	1.000	33428.7		A	d3-NMePFOSA	6.10	75152.9	0.445	2.194
PFDoS	6.21	1.190	32284.6		A	13C8-PFOS	5.24	275696.6	0.117	2.051
NEtPFOSAE	6.25	1.000	195653.9		A	d9-NEtPFOSAE	6.24	270298.9	0.724	2.322
NEtPFOSA	6.26	1.000	27412.4		A	d5-NEtPFOSA	6.26	59560.6	0.460	2.114
PFTrDA	6.24	1.030	195104.3		A	13C2-PFDoDA	6.04	550856.0	0.354	2.235
PFTeDA	6.42	1.000	162073.2		A	13C2-PFTeDA	6.42	417234.9	0.388	2.177
PFHxDA	6.72	1.050	79275.5		A	13C2-PFTeDA	6.42	417234.9	0.190	2.264
PFODA	6.98	1.090	61825.4		A	13C2-PFTeDA	6.42	417234.9	0.148	2.064

Total Ion Chromatogram

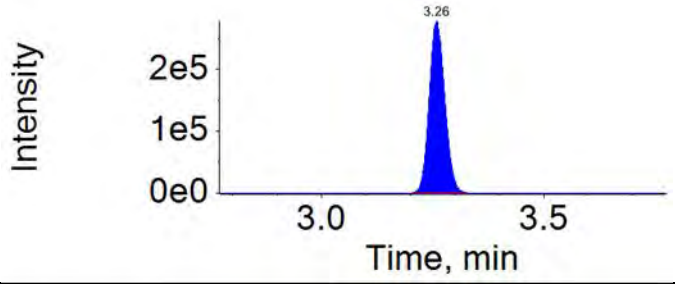


APPROVED
By JPT at 10:23 am, 11/13/18

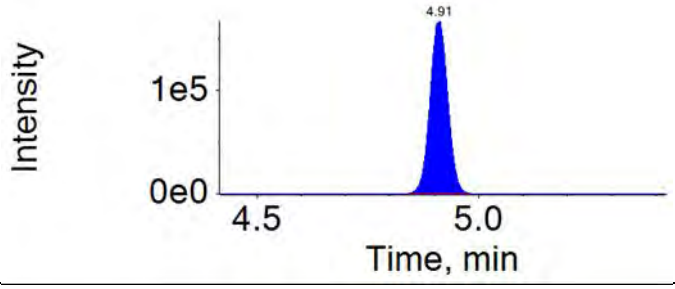
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

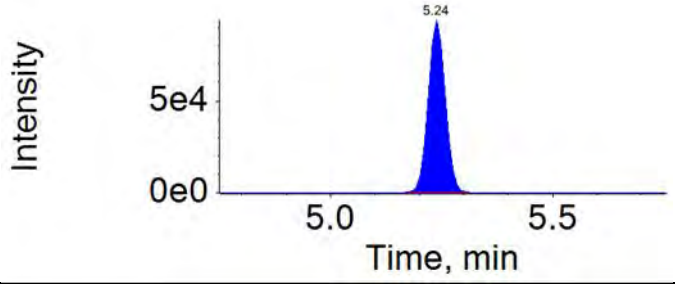
Injection Standard: 13C3-PFBA
216.0 / 172.0



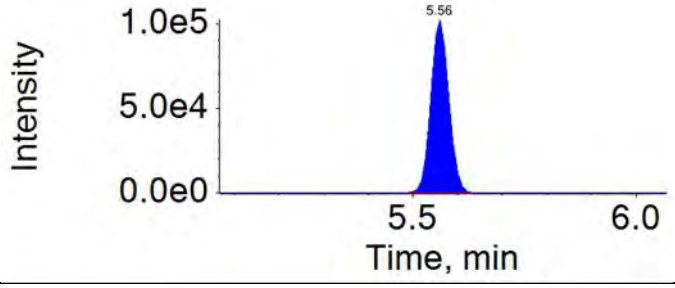
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



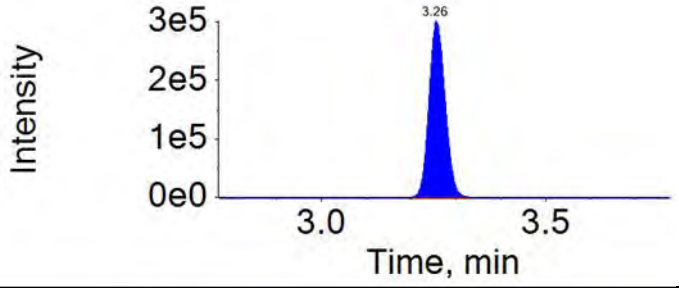
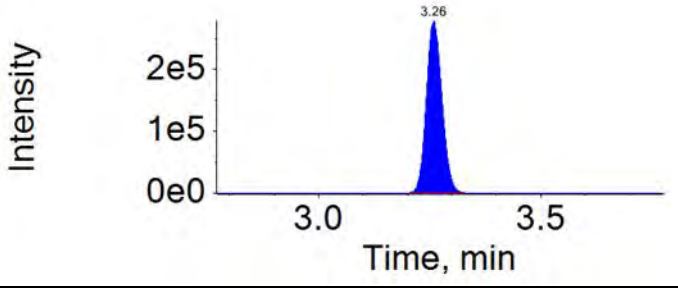
Injection Standard: 13C2-PFDA
515.0 / 470.0

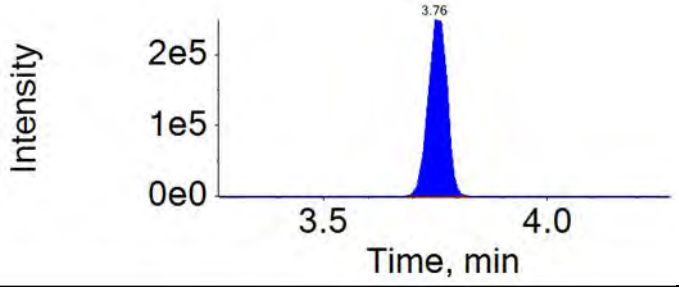
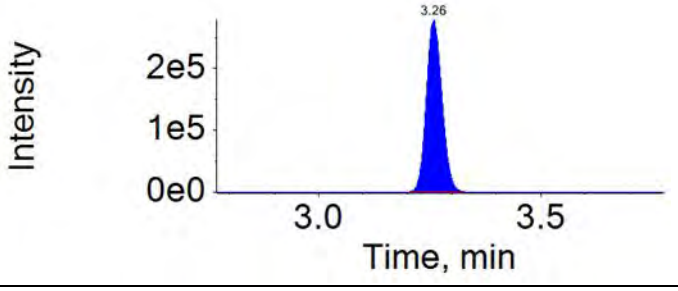


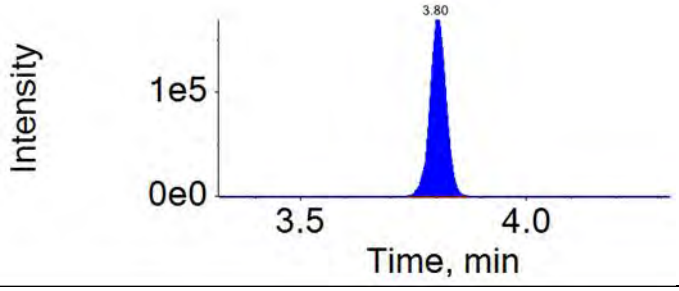
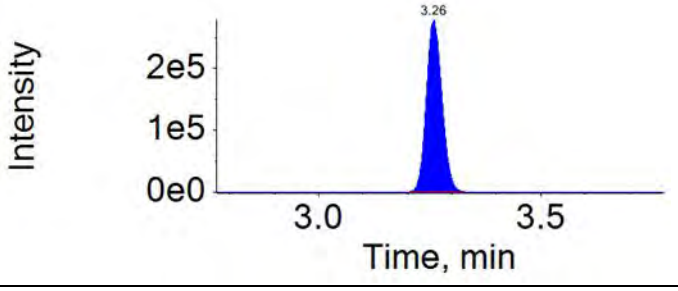
APPROVED
By JPT at 10:23 am, 11/13/18

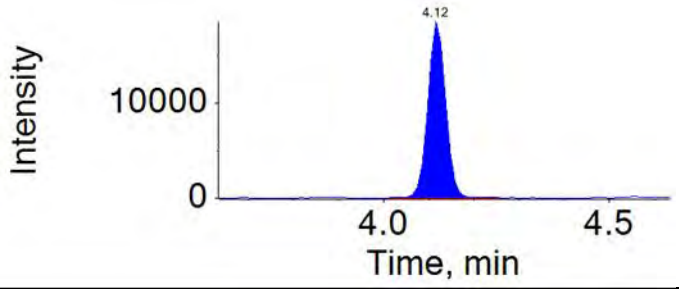
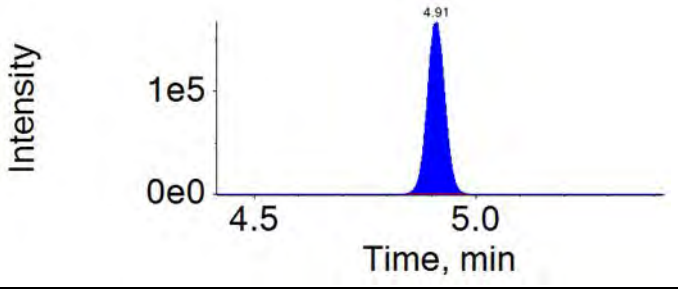
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

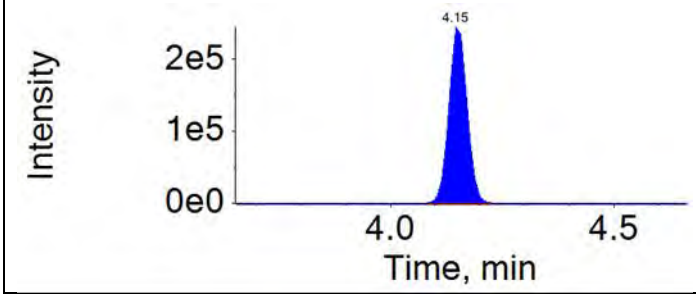
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

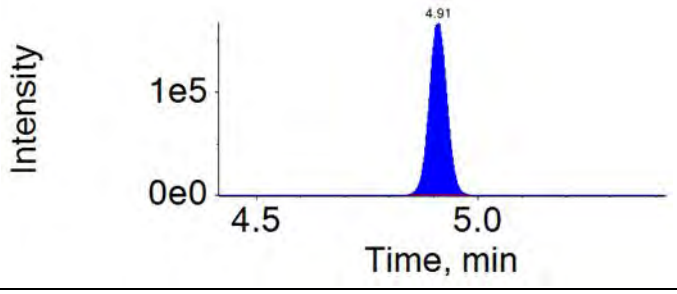
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

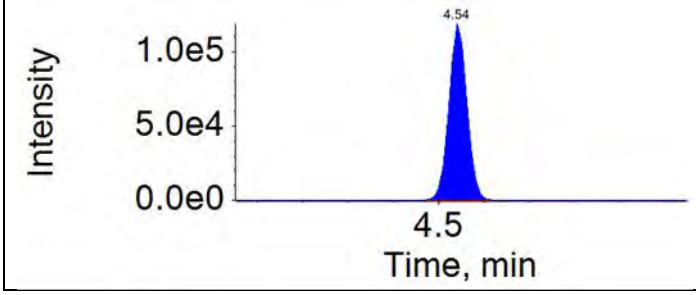
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

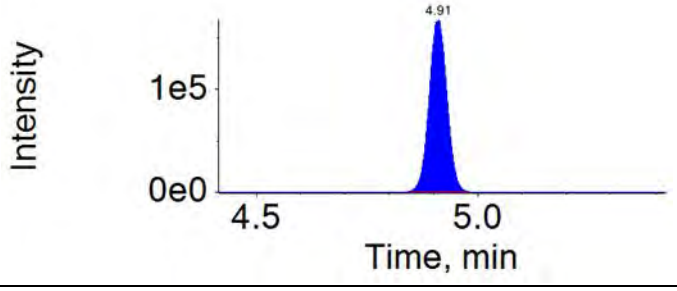
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



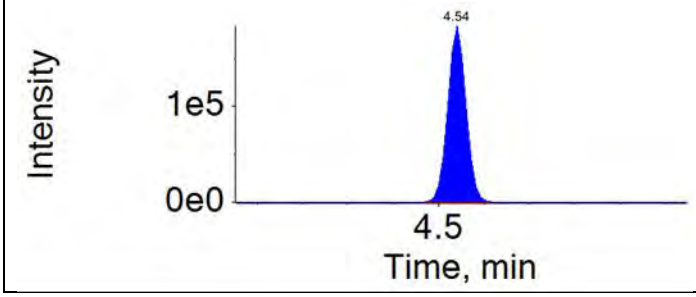


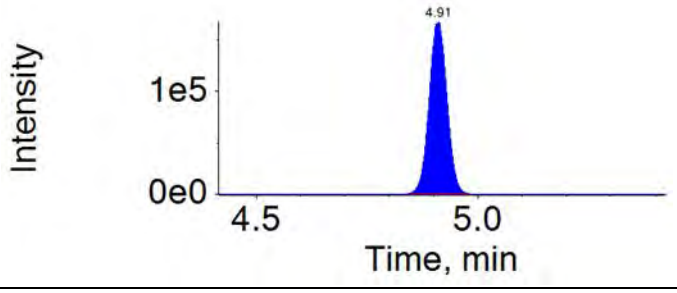
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



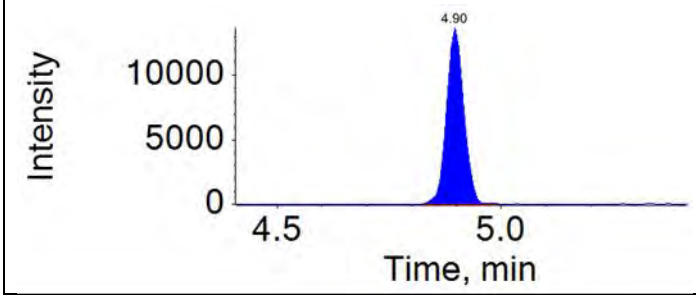


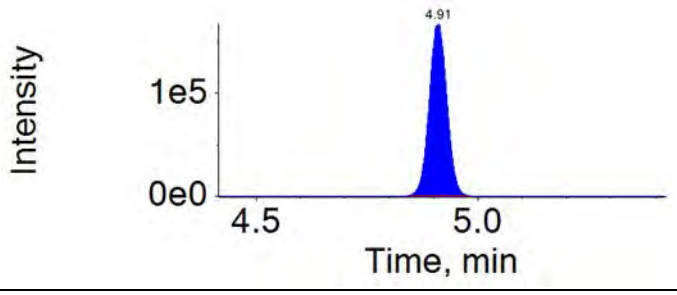
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

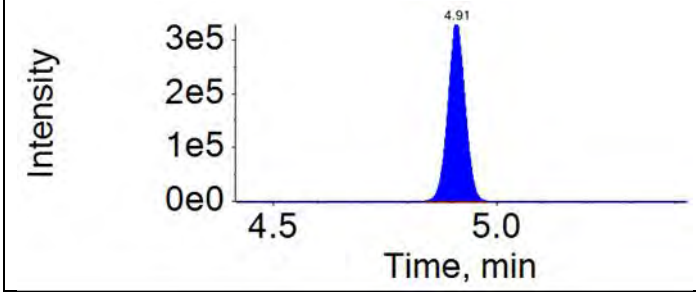
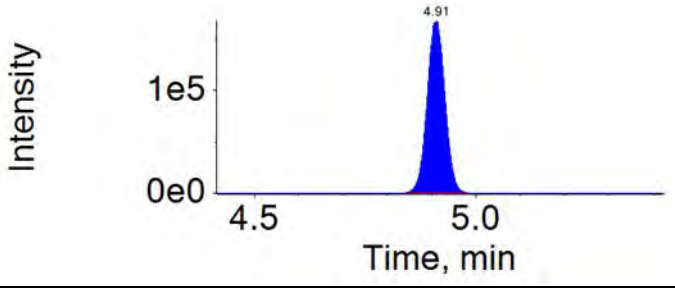


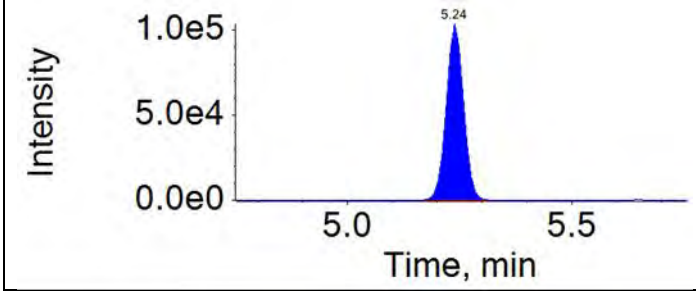
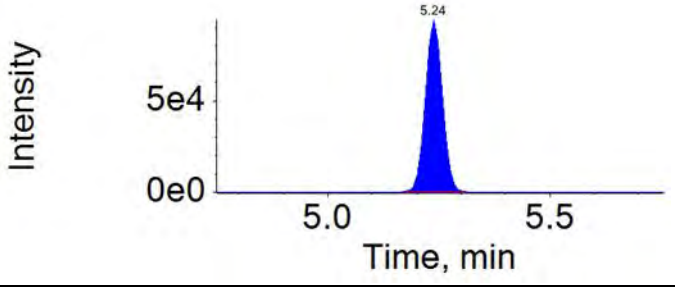


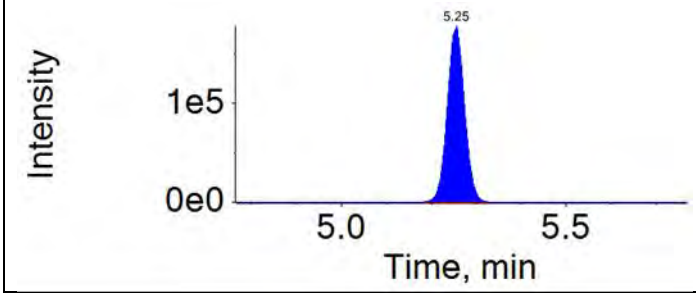
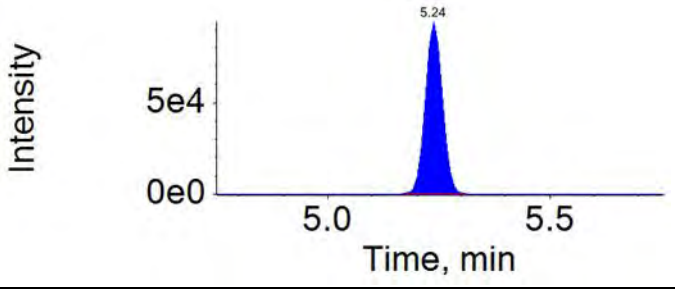
APPROVED
By JPT at 10:23 am, 11/13/18

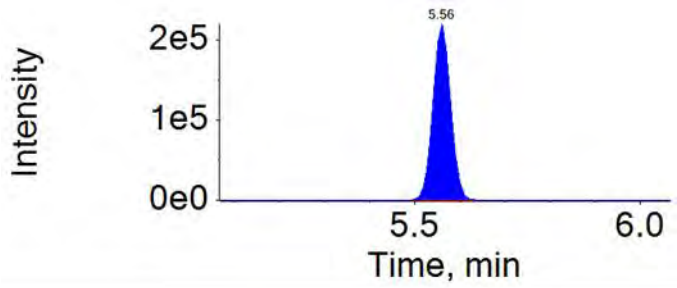
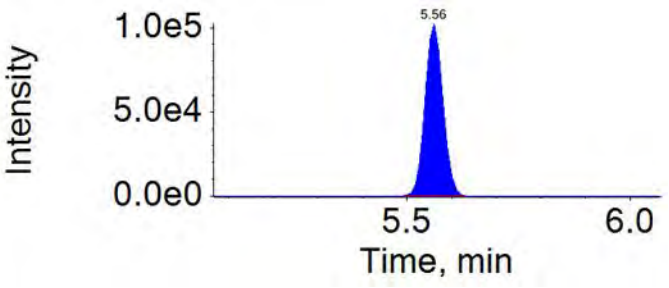
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

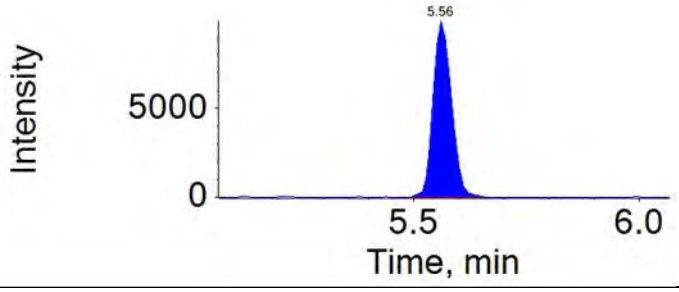
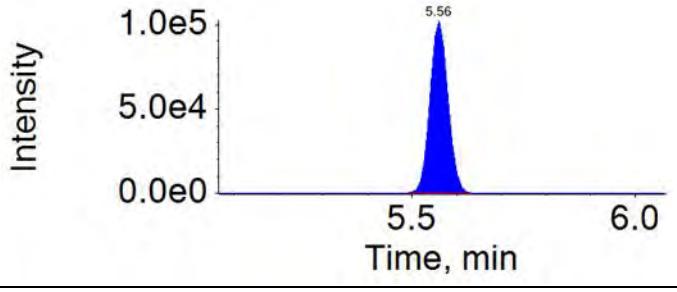
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

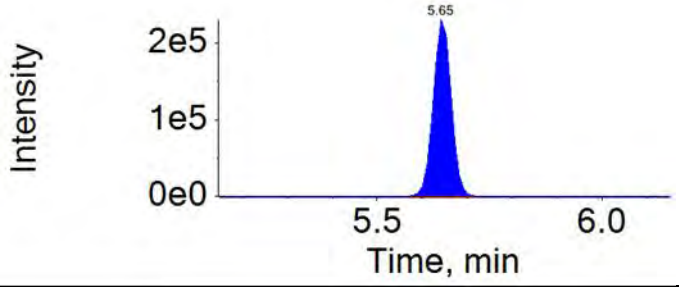
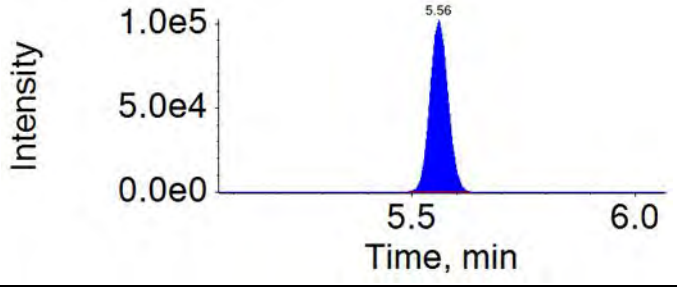
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

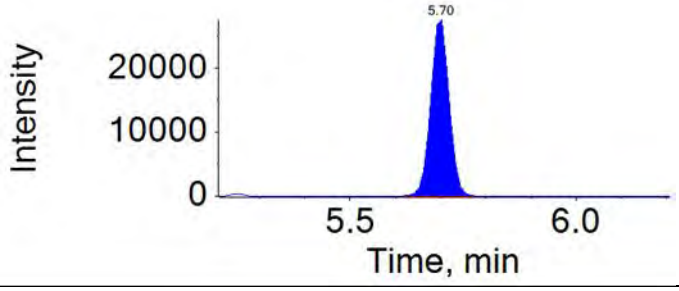
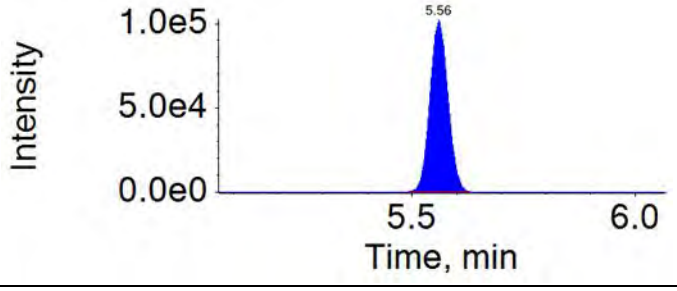
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
