

December 04, 2014

Vista Project I.D.: 1400885

Ms. Melissa Helton AMEC 9725 Cogdill Road Knoxville, TN 37932

Dear Ms. Helton,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on November 20, 2014. This sample set was analyzed on a rush turn-around time, under your Project Name 'Griffiss AFB'.

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

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

Sincerely,

Martha Maier Laboratory Director



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

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

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### Vista Work Order No. 1400885 Case Narrative

#### **Sample Condition on Receipt:**

One aqueous sample was received in good condition and within the method temperature requirements. The sample was received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

#### **Analytical Notes:**

#### **Modified EPA Method 537**

The sample was extracted and analyzed for a selected list of PFAS using Modified EPA Method 537.

#### **Holding Times**

The sample was extracted and analyzed within the method hold times.

#### **Quality Control**

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

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

Two internal standard recoveries were outside the limits listed in QAPP Worksheet #28b: the recovery of 13C-PFOS was 52.6% in the Method Blank and 49.3% in sample "GRIFS-GW-004". The recoveries of all other standards for the aqueous QC and field samples were within the acceptance criteria.

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# **Sample Inventory Report**

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400885-01	GRIFS-GW-004	19-Nov-14 08:55	20-Nov-14 10:21	HDPE Bottle, 125 mL
				HDPF Bottle 125 ml

Vista Project: 1400885 Client Project: Griffes AFB

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# **ANALYTICAL RESULTS**

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Sample ID:	Method Blank						Modifi	ed EPA Mo	ethod 537			
1	queous 125 L	QC Batch: B4L0014 Date Extracted: 01-Dec-2014 8:59					Lab Sample: B4L0014-BLK1 Date Analyzed: 01-Dec-14 18:18 Column: BEH C18 Analyst: VMO					
Analyte	Conc. (ng/L)	MDL	LOD	LOQ	Qualifiers		<b>Labeled Standard</b>	%R	LCL-UCL	Qualifiers		
PFBS	ND	1.57	4.00	8.00		IS	13C-PFHxS	90.5	70 - 130			
PFHpA	ND	0.949	4.00	8.00		IS	13C-PFOA	107	70 - 130			
PFHxS	ND	0.562	4.00	8.00		IS	13C-PFOS	52.6	70 - 130	Н		
PFOS	ND	0.922	4.00	8.00								
PFOA	ND	1.02	4.00	8.00								
PFNA	ND	0.807	4.00	8.00								

LCL-UCL - Lower control limit - upper control limit Results reported to the MDL

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Sample ID: OPR				Modified 1	EPA Method 537					
Matrix: Aqueous Sample Size: 0.125 L	QC Batch: Date Extracted	QC Batch: B4L0014 Date Extracted: 01-Dec-2014 8:59				Lab Sample: B4L0014-BS1 Date Analyzed: 01-Dec-14 17:53 Column: BEH C18 Analyst: VMO				
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL		
PFBS	16.1	16.0	101	70 - 130	IS	13C-PFHxS	94.0	70 - 130		
PFHpA	18.1	16.0	113	70 - 130	IS	13C-PFOA	113	70 - 130		
PFHxS	17.8	16.0	111	70 - 130	IS	13C-PFOS	60.2	70 - 130		
PFOS	16.6	16.0	104	70 - 130						
PFOA	18.0	16.0	112	70 - 130						
PFNA	18.0	16.0	112	70 - 130						

LCL-UCL - Lower control limit - upper control limit

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Sample ID:	GRIFS-GW-004								Modifie	d EPA Me	thod 537
Client Data			Sample Data		]	Labora	tory	y Data			
Name:	AMEC		Matrix:	Aqueous		Lab S	amp	ole: 1400885-01	Date Received:	20-Nov-201	4 10:21
Project:	Griffiss AFB		Sample Size:	0.155 L		QC B	atch	n: B4L0014	Date Extracted:	01-Dec-201	4 8:59
Date Collected:	19-Nov-2014 8:55					Date A	Anal	lyzed: 01-Dec-14 18:56 Colu	ımn: BEH C18 Ana	lyst: AC	
Location:								02-Dec-14 11:50 Colu	ımn: BEH C18 Ana	lyst: AC	
Analyte	Conc. (ng/L)	MDL	LOD	LOQ	Qualifi	ers		Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	15.4	1.26	3.22	6.43		I	S	13C-PFHxS	87.4	70 - 130	
PFHpA	54.5	0.763	3.22	6.43		I	S	13C-PFOA	118	70 - 130	
PFHxS	290	22.6	161	322	J, D	I	S	13C-PFOS	49.3	70 - 130	D, H
PFOS	3590	37.1	161	322	D						
PFOA	74.3	0.820	3.22	6.43							
PFNA	4.28	0.649	3.22	6.43	J						

LCL-UCL - Lower control limit - upper control limit Results reported to the MDL

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# **DATA QUALIFIERS & ABBREVIATIONS**

B This compound was also detected in the method blank.

D Dilution

E The amount detected is above the High Calibration Limit.

H Recovery was outside laboratory acceptance limits.

I Chemical Interference

J The amount detected is below the Low Calibration Limit.

P The amount reported is the maximum possible concentration due to possible

chlorinated diphenylether interference.

\* See Cover Letter

Conc. Concentration

DL Sample-specific estimated detection limit

MDL Method Detection Limit as determined by 40 CFR 136, Appendix B.

**EMPC** Estimated Maximum Possible Concentration

M Estimated Maximum Possible Concentration (CA Region 2)

NA Not applicable

RL Reporting Limit – concentrations that correspond to low calibration point

ND Not Detected

**TEQ** Toxic Equivalency

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

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# **CERTIFICATIONS**

Accrediting Authority	Certificate Number
Alabama Department of Environmental Management	41610
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-002
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-14-5
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

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# **CHAIN OF CUSTODY**

FOR LABORATORY USE ONLY	Storage Secured	
Laboratory Project ID:	Yes 🗆	No □
Storage ID_	Temp	°°C

							Storage ID	o°C
		-	#140	0885	2,49	<u>'</u> C		TAT: (Check One):
Project I.D.: Griffes	MF	- 6-						Standard: O 21 Days
Project I.D.:	131	12	P.O.#		Samp	oler:		Rush (surcharge may apply):
			3				(Name)	○14 days ○7 days Specify:
nvoice to: Name		npany	AMEL, A	ldress Quoto	in other	Pu City(	helmsteel State Tip Zip	Ph# Fax#
Relinquished by: (Signature and Printed N	ame)	JH.	Date: 11	My Time:	1700 Re	ceived by: (Sig	analup and Printed Name	Date: 11-20-14 Time: 10:33
Relinquished by: (Signature and Printed N	ame)		Date:	Time:	Re	ceived by: (Sig	gnature and Printed Name)	Date: Time:
			See "Sample Log-in	Checklist"	for additio	nal samp	le information	
SHIP TO: Vista Analytical Lab 1104 Windfield Way El Dorado Hills, CA	1		Method of Shipment:	Add Analysi	s(es) Requeste	d RANGS	THE	Strigg Strigg Strigg
(916) 673-1520 • Faz	k (916) 67	3-0106	Tracking No.:	Container				
Sample ID	Date	Time	Location/Sample Description	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<b>\$</b>   \$\\ 5\\ 5\\		\\$\\\$\\\$\\\$\\\$\\\$\\\$\	
G1145-6W-069	11/19/17	817	Committee	1 6-10 00				
		8						
						+++	<del>                                     </del>	
				1 1 1		++-		
					$\square$	$\vdash$		
	05.1	,,						
special Instructions/Comments:	M. F.C.	, I	May 12			ND NTATION	Name: Ame Company: Quo Address; 371	Mn office pure
						ULTS TO:	City: 4 helms fred	State: Mr Zip: 018.39
				7			Phone:	Fax:
Container Types: A = 1 Liter Amber, G	= Glass Jar		*Bottle Preser	vative Type: T =	Thiosulfate		Email:	
= PUF, T = MM5 Train, O= Other				r			×5.5	nking Water, EF = Effluent, PP = Pulp/Paper,
							SD = Sediment, SL = Slude AQ = Aqueous, O = Other	ge, SO = Soil, WW = Wastewater, B = Blood/Seru

WHITE - ORIGINAL

YELLOW - ARCHIVE

PINK - COPY

# **SAMPLE LOG-IN CHECKLIST**



Vista Project #: _	1400885		TAT	14
	D. (.T.	1 141 1	1	1110 3

	Date/Time		Initials:		Location	: W	2-2	
Samples Arrival:	1/20/14 1	021	140		Shelf/Rack: N/A			
	Date/Time	~ ~	Initials:		Location: UK-7			
Logged In:	11/21/14	0822	BB K		Shelf/Rack: 85			
Delivered By:	FedEx	UPS (	On Trac	DHL	1	nd ered	Other	
Preservation:	(Ice)	Blue	e Ice	Dr	y Ice		None	
Temp °C: a. Ч	(uncorrected)	Time:			Thormon	aotos II	D. ID 1	
Temp °C: 2.4	(corrected)	11116.	030		Thermometer ID: IR-1			

						YES	NO	NA
Adequate Sample Volume Rece	ived?					V		
Holding Time Acceptable?						V		
Shipping Container(s) Intact?		/						
Shipping Custody Seals Intact?				V				
Shipping Documentation Presen		V						
Airbill Trk # 8		V						
Sample Container Intact?								
Sample Custody Seals Intact?								
Chain of Custody / Sample Docu	ımentation P	resent?						
COC Anomaly/Sample Acceptar	nce Form con	npleted?			5777-22			V
If Chlorinated or Drinking Water	Samples, Ac	ceptable Pre	serv	ation?				
<u> </u>	Chlorinated or Drinking Water Samples, Acceptable Preservation?  Sample COC Sample Container						None	
Shipping Container	(Vista)	Client	F	Retain	Re	turn	Disp	ose

Comments:

# **EXTRACTION INFORMATION**

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**Process Sheet** 

Workorder: 1400885

Prep Expiration: 12/03/2014

Client: AMEC

Workorder Due:04-Dec-14 00:00

**TAT: 14** 

Method: 537 PFC 6 Analyte List DOD (LOQ as mRL)

Matrix: Aqueous Client Matrix: Aqueous

Percent Solids

Prep Batch:

B410014

Prep Data Entered:

Date and Initials

Initial Sequence:

S4L0002

LabSampleID

Recon ClientSampleID

Date Received

Location

Comments

1400885-01

 $\overline{\mathbf{X}}$ 

GRIFS-GW-004

20-Nov-14 10:21

WR-2 B-5

Vista PM:Martha Maier

Vial Box ID: \_\_\_\_\_

Sample Reconciled By:



12/1/14

Page 1 of 1

Project 1400885

D2216-90

Percent Moisture/Percent Solids

**BATCH ID** 

B4L0013

Analyst: E. Schneider

Test Code: %Moist/%Solids

Analyte:

Units: %

Dried at 110°C+/-5°C

HRMS-2

Date/Time IN: Date/Time OUT

	В	С	D	E	F	G	Н	K	M	N	0	Р
				Intial and Date:	88 12/1/14				83	2/1/	<u>~_</u>	12:
Pan #	SampID	Source ID	SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pĤ /	Acid Addod	CI-
#	1	Source ID	01	1.31	6.98	weight (g)	weight (g)	Del 1/14	1 1.7	AILEI	MA	0
	1400881-01		Sample	1.34				721919		2	PIA	6
	1400881-02	-	Sample		838				국	HH	-	_
	1400885-01		Sample	1.32	7.93 5.66				7	$\sqcup \sqcup$		0
	1400890-01		Sample	1.31		,	•		7	Ш	_	0
	1400894-01		Sample	1.32	9.31				7	Ш		0
	1400894-02		Sample	1.30	7.86				1			0
	1400894-03		Sample	1.32	9.42				7			၂၁
	1400894-04		Sample	1.32	7.22				7	ПП	7	O
	1400894-05		Sample	1.31	7.80				4	ПП		10
	1400894-13		Sample	1.31	7.26				4			0
	1400894-14		Sample	1.33	9,04				7			D
	1400894-18		Sample	1.32	6.37				7	7	<b>V</b>	Ø
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# **Aqueous Sample Size Determination**

Project: B4L0014

	Chemist/Date	Chemist/Date		
	88 1211114	es 121/14		
Sample ID	Containe	Sample Wt (g)		
	Full	Empty		
1400881-1	148.02	19.98	128.04	
881-2	145.22	19.91	125.31	
885-1	155.44	28.4(	127.03	
890-1	163.23	27.55	135.68	
894-1	141.16	19.80	121.36	
894-2	146.68	19.92	126.76	
894-3	156.93	27.79	129.14	
894-4	153.92	14.52	126.40	
894-5	154.47	24.59	126.88	
89413	14274	19.80	122.94	
894-14	146.83	20.07	126.81	
894-18	149,27	19.89	129.38	
	,	,		
		,		

#### Procedure:

- Tare the balance.
- Record weight of bottle/cap and sample.
- If all of the sample is used, drain overnight.
- Tare the balance.
- Record weight of empty bottle/cap.
- Enter Sample Weight in HALs and on the Extraction Sheet\*.
- \* Record in 'Liters', rounded to 3 decimal places; assumes density of 1 g/mL

### Notes:

AqWt 3/2007 rmh

### PREPARATION BENCH SHEET

• Matrix: Aqueous

B4L0014

Chemist: E Schulden

Prep Date/Time: 01-Dec-14 08:59

Method: 537 PFC 6 Analyte List

Prepared using: LCMS - SPE Extraction-LCMS

								W.	1 /	v~	C4	1000l	7	
С	VISTA Sample ID	Sample Amt.	IS/I CHEM DA	1/WIT	CHEM DA	I/WIT	Pre			traction		SPE	R CHEM DA	1/WIT
	B4L0014-BLK1	(0.25)	E3 16	12/1/14	بع	₾	N	A	N	( <u>A</u>	e8	12/1/14	68 N	5 12/1/14
	B4L0014-BS1	T			1	(			1			7.		
	1400881-01	0.14802												
	1400881-02	0.14522												
	1400885-01	0.15544												
	1400890-01	0.14323										-		
	1400894-01	0.14116												
	1400894-02	0.14668												
	1400894-03	0.15693												
	1400894-04	0.15392		,										
	1400894-05	0.15447												
	1400894-13	0.14274												
	1400894-14	0.14688				/								
	1400894-18	0.14927	1				1	<u>/</u>		$\sqrt{}$		$\overline{A}$		$\Psi$

IS Name	NS Name (v2)	CRS Name	RS Name (v2)	Cycle Time	Ext SOLV: NA	Check Out: Chemist/Date: 8 12/1/14
(v2)	$\smile$			Start Date/Time	SPE Chem: That x Aw 33 p	Chemist/Date:
14F1203, DM	14F1204,20ml	NIT	14F1206, 10ph	NA	Ele SOLV: 0.5% NHYOH	Check In: Chemist/Date:
				1001	10 Many	Chemist Date.
	•			_	Final Volume(s)	Balance ID: HRM3-2
		·		NIA		
					·	

Comments:

# SAMPLE DATA

# **Modified EPA Method 537**

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**Quantify Sample Summary Report** Vista Analytical Laboratory Q1

MassLynx 4.1

Page 1 of 1

Dataset:

L:\Masslynx Common\Q1\141201G3\_5.qld

Last Altered:

Printed:

Tuesday, December 02, 2014 16:48:43 Pacific Standard Time Tuesday, December 02, 2014 16:49:56 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38

Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

Name: 141201G3\_5, Date: 01-Dec-2014, Time: 18:18:46, ID: B4L0014-BLK1 Method Blank 0.125, Description: Method Blank

	# Name	Trace	Response	RRF	Wt/Vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7		1.421	0.125		Annual Control of the	
2	5 PFHpA	363 > 318.9		0.918	0.125			
3	6 PFHxS	398.9 > 79.6		1.029	0.125			
4	7 PFOS	499 > 98.7		0.939	0.125			
5	9 PFOA	413 > 368.7		0.764	0.125			
6	11 PFNA	463 > 418.8		0.606	0.125			
7	15 13C-PFHxS	403 > 102.6	2.64e4	0.463	0.125	4.36	72.4	90.5
8	16 13C-PFOA	414.9 > 369.7	4.80e4	0.713	0.125	4.69	85.4	106.7
9	18 13C-PFOS	503.2 > 79.8	1.74e4	0.909	0.125	4.98	42.1	52.6
10	19 13C-PFHxA	315 > 269.8	6.31e4	1.000	0.125	3.86	80.0	100.0
11	20 13C-PFDA	515.1 > 470	3.64e4	1.000	0.125	5.24	80.0	100.0

V6 12/2/14 12/2/3/14

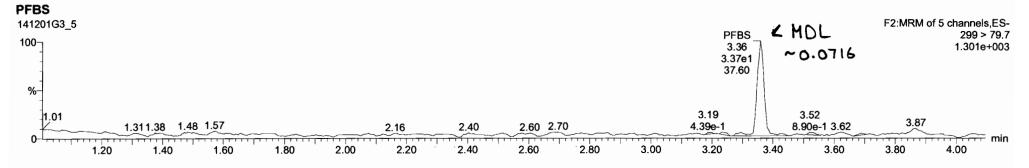
**Quantify Sample Report** Vista Analytical Laboratory Q1

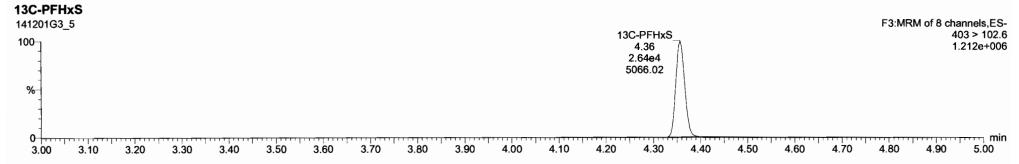
Dataset:

Untitled

Last Altered: Tuesday, December 02, 2014 16:14:05 Pacific Standard Time

Printed: Tuesday, December 02, 2014 16:14:31 Pacific Standard Time





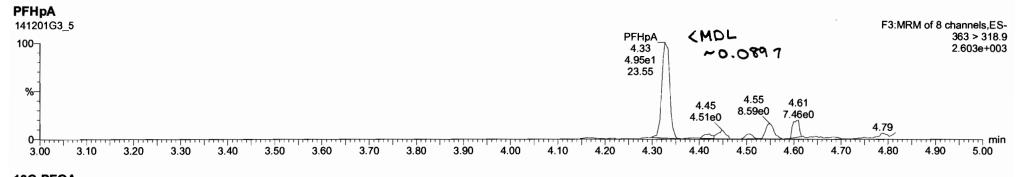
**Quantify Sample Report** 

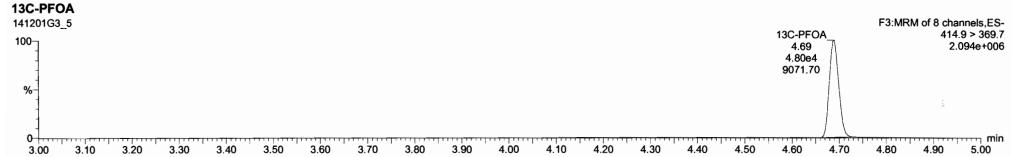
Dataset:

Untitled

Last Altered: Printed:

Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Tuesday, December 02, 2014 16:14:31 Pacific Standard Time





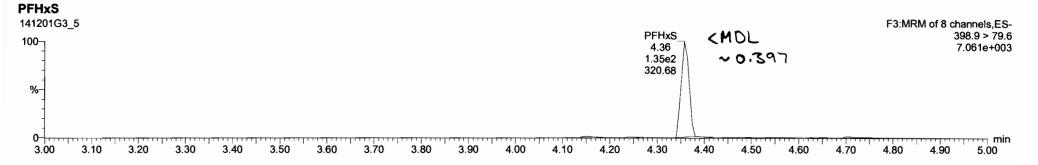
Dataset:

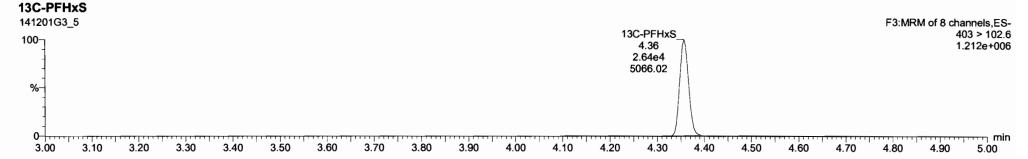
Untitled

Last Altered:

Tuesday, December 02, 2014 16:14:05 Pacific Standard Time

Printed: Tuesday, December 02, 2014 16:14:31 Pacific Standard Time





4.10

4.00

4.20

4.30

4.40

4.50

4.60

4.70

4.80

4.90

5.00

5.10

5.20

5.30

5.40

5.50

5.60

5.70

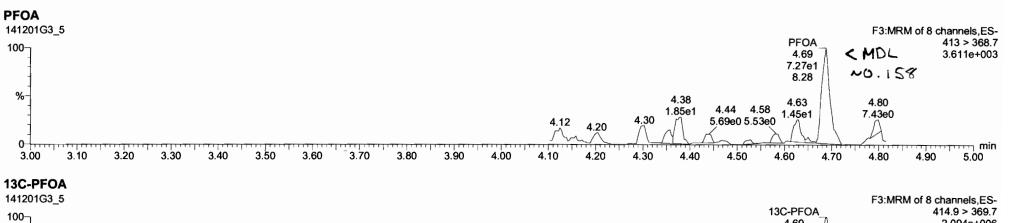
5.80

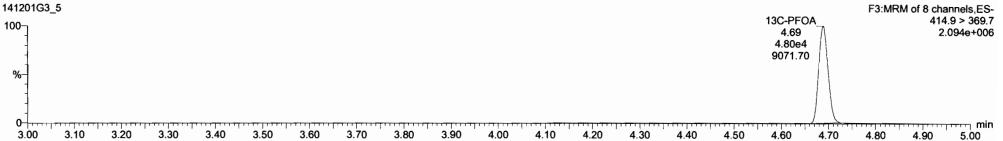
5.90

min min

6.00

## Name: 141201G3\_5, Date: 01-Dec-2014, Time: 18:18:46, ID: B4L0014-BLK1 Method Blank 0.125, Description: Method Blank



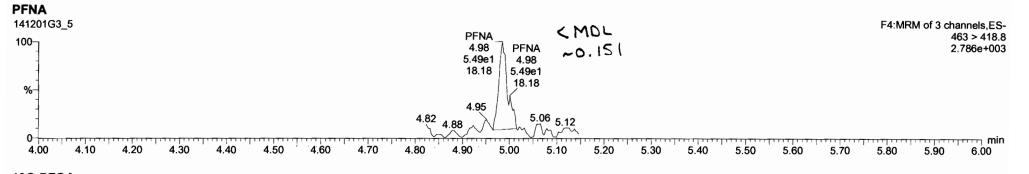


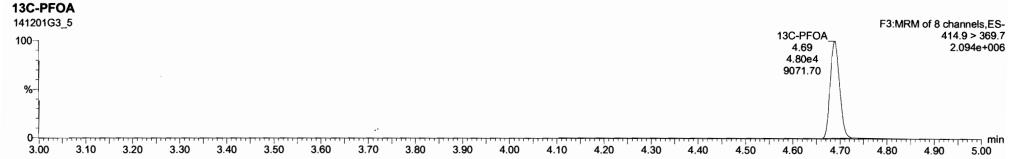
Project 1400885 Page 24 of 84

Dataset:

Untitled

Last Altered: Printed: Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Tuesday, December 02, 2014 16:14:31 Pacific Standard Time





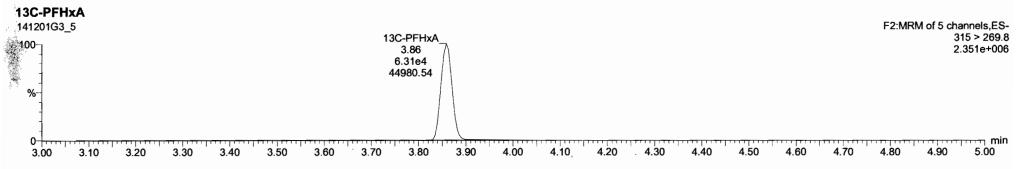
**Quantify Sample Report** 

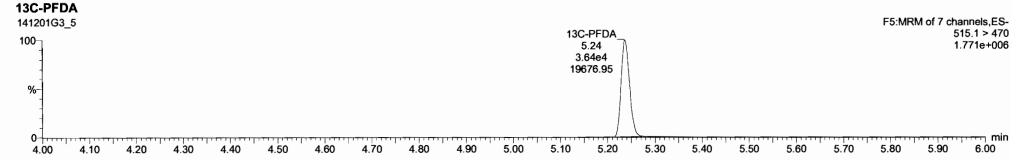
Dataset:

Untitled

Last Altered: Printed:

Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Tuesday, December 02, 2014 16:14:31 Pacific Standard Time





**Quantify Sample Summary Report** Vista Analytical Laboratory Q1

MassLynx 4.1

Page 1 of 1

Dataset:

L:\Masslynx Common\Q1\141201G3\_3.qld

Last Altered: Printed:

Tuesday, December 02, 2014 16:15:46 Pacific Standard Time Tuesday, December 02, 2014 16:43:59 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38
Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

Name: 141201G3\_3, Date: 01-Dec-2014, Time: 17:53:23, ID: B4L0014-BS1 OPR 0.125, Description: OPR

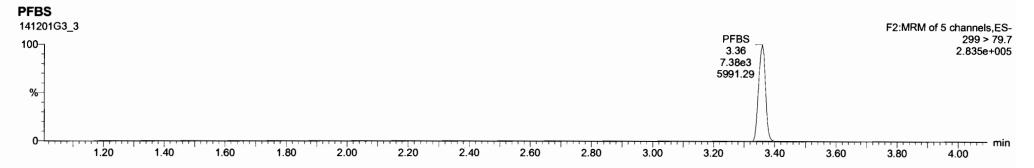
	# Name	Trace	Response	RRF	Wt/Vol	RT .	Conc.	%Rec
1	3 PFBS	299 > 79.7	7.38e3	1.421	0.125	3.36	16.1	
2	5 PFHpA	363 > 318.9	9.97e3	0.918	0.125	4.33	18.1	
3	6 PFHxS	398.9 > 79.6	5.91e3	1.029	0.125	4.36	17.8	
4	7 PFOS	499 > 98.7	3.45e3	0.939	0.125	4.99	16.6	
5	9 PFOA	413 > 368.7	8.24e3	0.764	0.125	4.69	18.0	
6	11 PFNA	463 > 418.8	6.55e3	0.606	0.125	4.99	18.0	
7	15 13C-PFHxS	403 > 102.6	2.58e4	0.463	0.125	4.36	75.2	94.0
8	16 13C-PFOA	414.9 > 369.7	4.80e4	0.713	0.125	4.69	90.7	113.4
9	18 13C-PFOS	503.2 > 79.8	1.77e4	0.909	0.125	4.98	48.2	60.2
10	19 13C-PFHxA	315 > 269.8	5.93e4	1.000	0.125	3.86	80.0	100.0
11	20 13C-PFDA	515.1 > 470	3.23e4	1.000	0.125	5.24	0.08	100.0

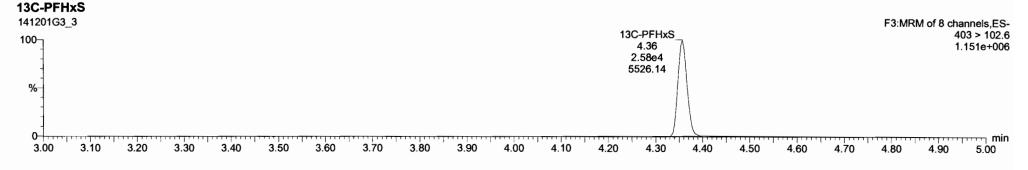
V6 12/2/14 N/212/14

Dataset:

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Last Altered: Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Printed: Tuesday, December 02, 2014 16:14:31 Pacific Standard Time



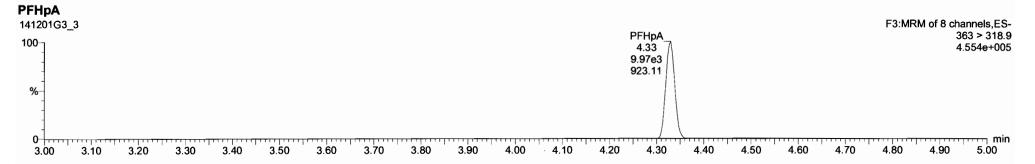


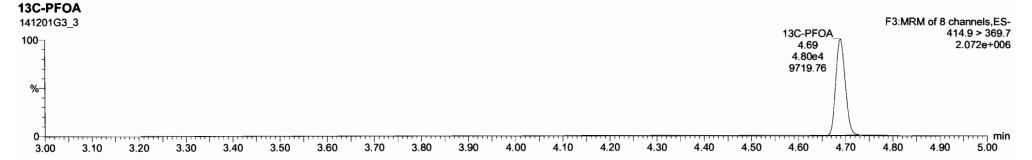
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Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Tuesday, December 02, 2014 16:14:31 Pacific Standard Time



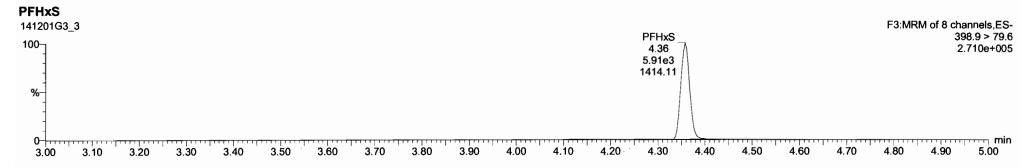


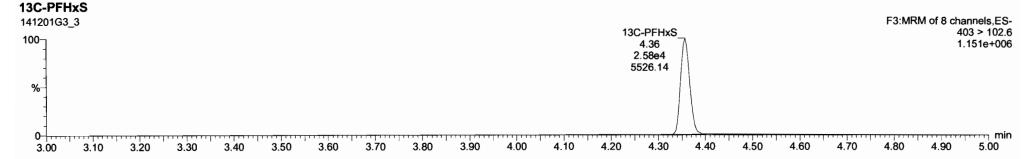
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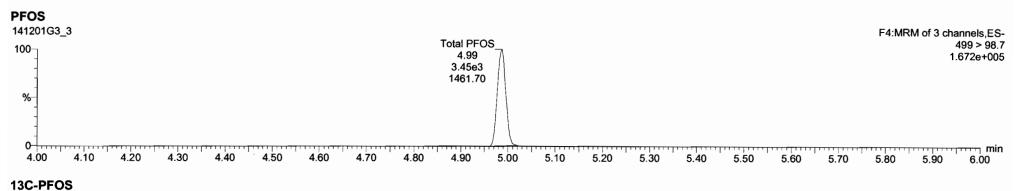


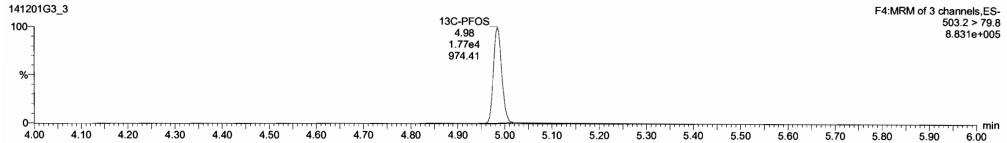


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Last Altered: Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Printed: Tuesday, December 02, 2014 16:14:31 Pacific Standard Time

Name: 141201G3\_3, Date: 01-Dec-2014, Time: 17:53:23, ID: B4L0014-BS1 OPR 0.125, Description: OPR





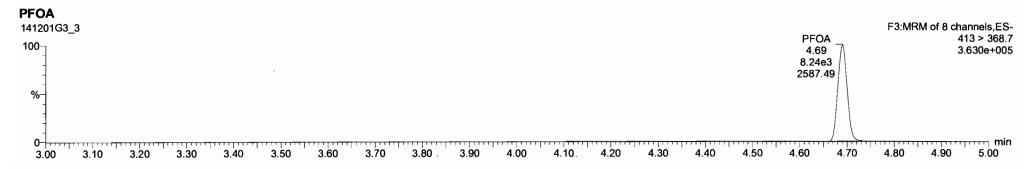
Project 1400885 Page 31 of 84

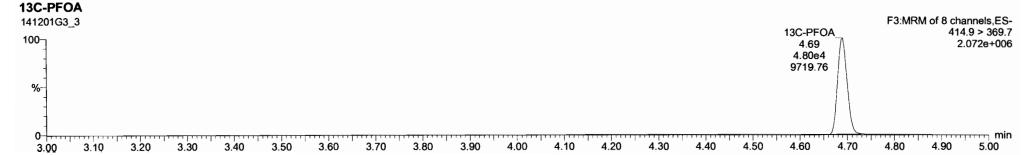
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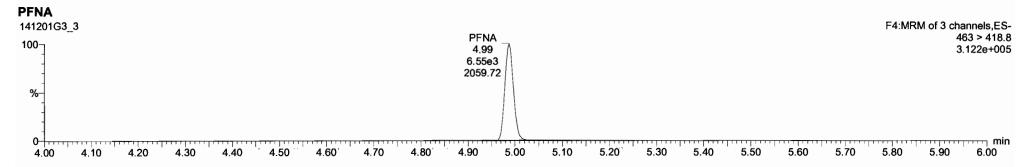


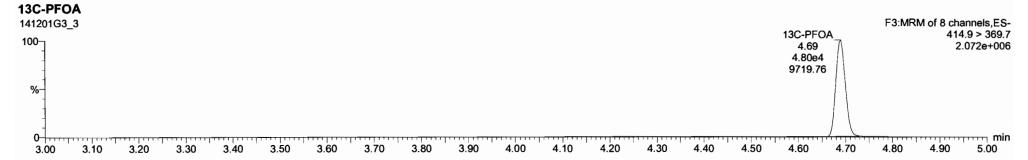
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Last Altered: Printed:

Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Tuesday, December 02, 2014 16:14:31 Pacific Standard Time



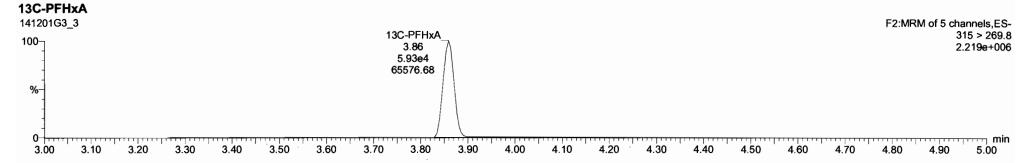


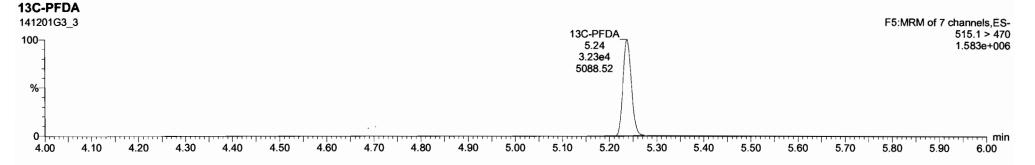
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Last Altered: Printed:

Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Tuesday, December 02, 2014 16:14:31 Pacific Standard Time





**Quantify Sample Summary Report** Vista Analytical Laboratory Q1

MassLynx 4.1

Page 1 of 1

Dataset:

C:\Projects\Method\_1694.PRO\Results\141201G3\141201G3\_8.qld

Last Altered:

Wednesday, December 03, 2014 13:22:33 Pacific Standard Time

Printed:

Wednesday, December 03, 2014 13:23:59 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38

Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

Name: 141201G3\_8, Date: 01-Dec-2014, Time: 18:56:50, ID: 1400885-01 GRIFS-GW-004 0.15544, Description: GRIFS-GW-004

	# Name	Trace	Response	RRF	Wt/Vol	/ RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	7.80e3	1.421	0.155 🗸	3.35	15.4	
2	5 PFHpA	363 > 318.9	3.72e4	0.918	0.155	4.33	54.5	
3	22 Total PFHxS	398.9 > 79.6			0.155		349 €	*
4	21 Total PFOS	499 > 98.7			0.155		3840 €	4
5	9 PFOA	413 > 368.7	4.22e4	0.764	0.155	4.69	74.3	
6	11 PFNA	463 > 418.8	1.92e3	0.606	0.155	4.99	4.28	
7	15 13C-PFHxS	403 > 102.6	2.30e4	0.463	0.155	4.36	56.3	87.4
8	16 13C-PFOA	414.9 > 369.7	4.77e4	0.713	0.155	4.69	75.9	117.9
9	1 <del>7-13C-6:2 FTS</del>	<del>429.1 &gt; 408.9</del>	<del>1.83e4</del>	0.167	0.155	4.68	124	192:1
10	18 13C-PFOS	503.2 > 79.8	7.48e3	0.909	0.155	4.98	13.6	21.2
11	19 13C-PFHxA	315 > 269.8	5.68e4	1.000	0.155	3.86	64.3	100.0
12	20 13C-PFDA	515.1 > 470	3.89e4	1.000	0.155	5.24	64.3	100.0

12/3/14 12/3/14

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MassLynx 4.1

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Vista Analytical Laboratory Q1

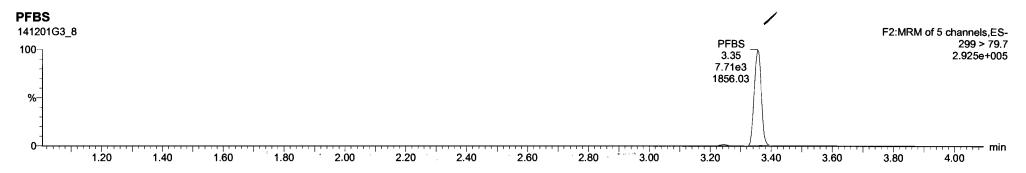
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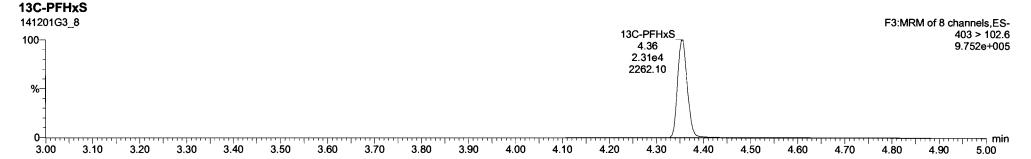
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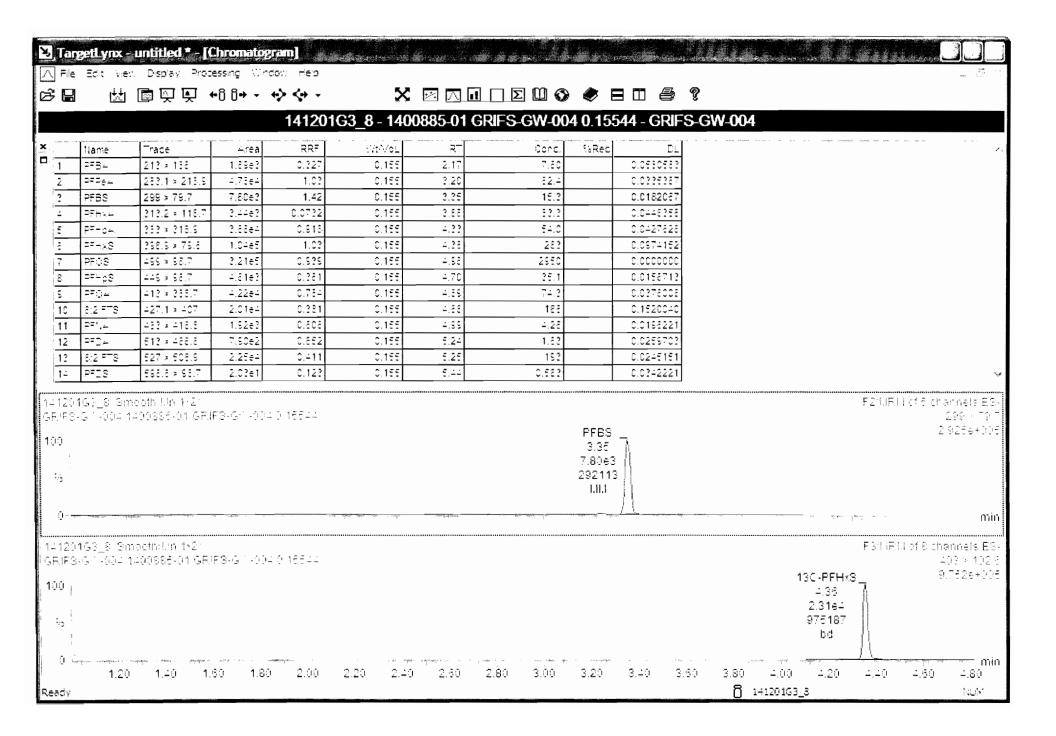
Last Altered: Printed:

Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Tuesday, December 02, 2014 16:14:31 Pacific Standard Time

Name: 141201G3\_8, Date: 01-Dec-2014, Time: 18:56:50, ID: 1400885-01 GRIFS-GW-004 0.15544, Description: GRIFS-GW-004







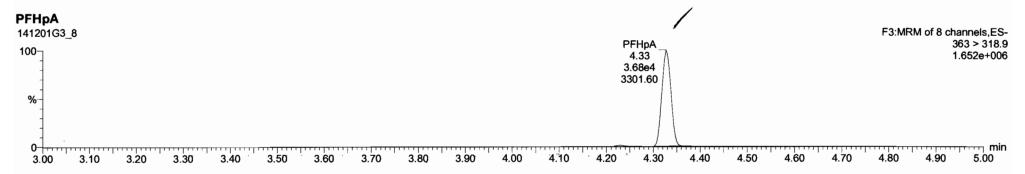
Project 1400885 Page 37 of 84

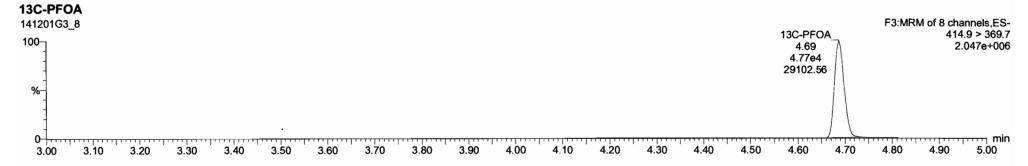
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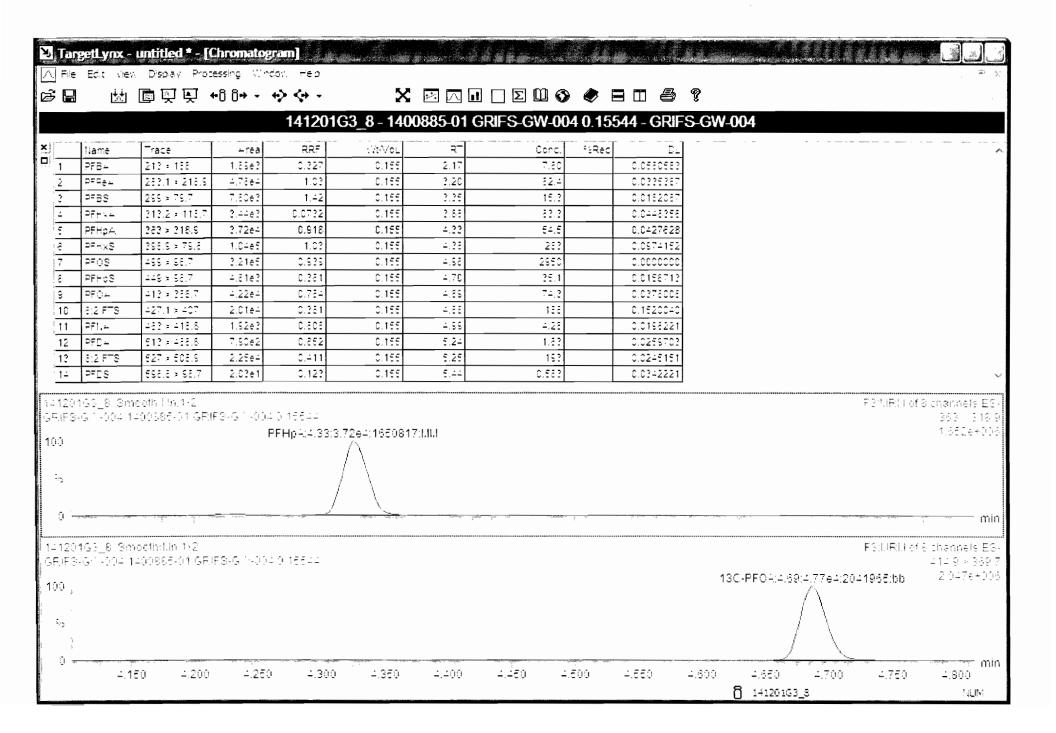
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Name: 141201G3\_8, Date: 01-Dec-2014, Time: 18:56:50, ID: 1400885-01 GRIFS-GW-004 0.15544, Description: GRIFS-GW-004





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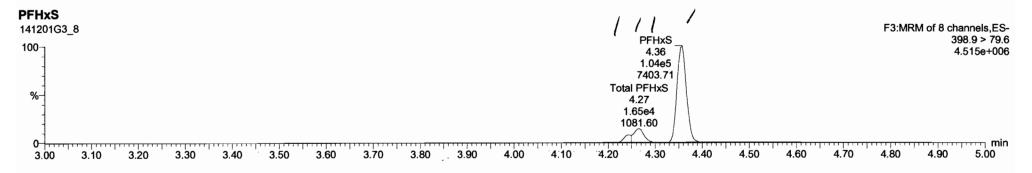
Vista Analytical Laboratory Q1

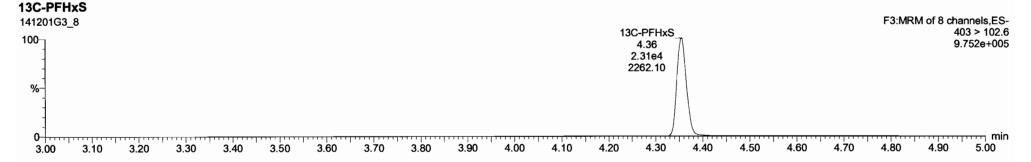
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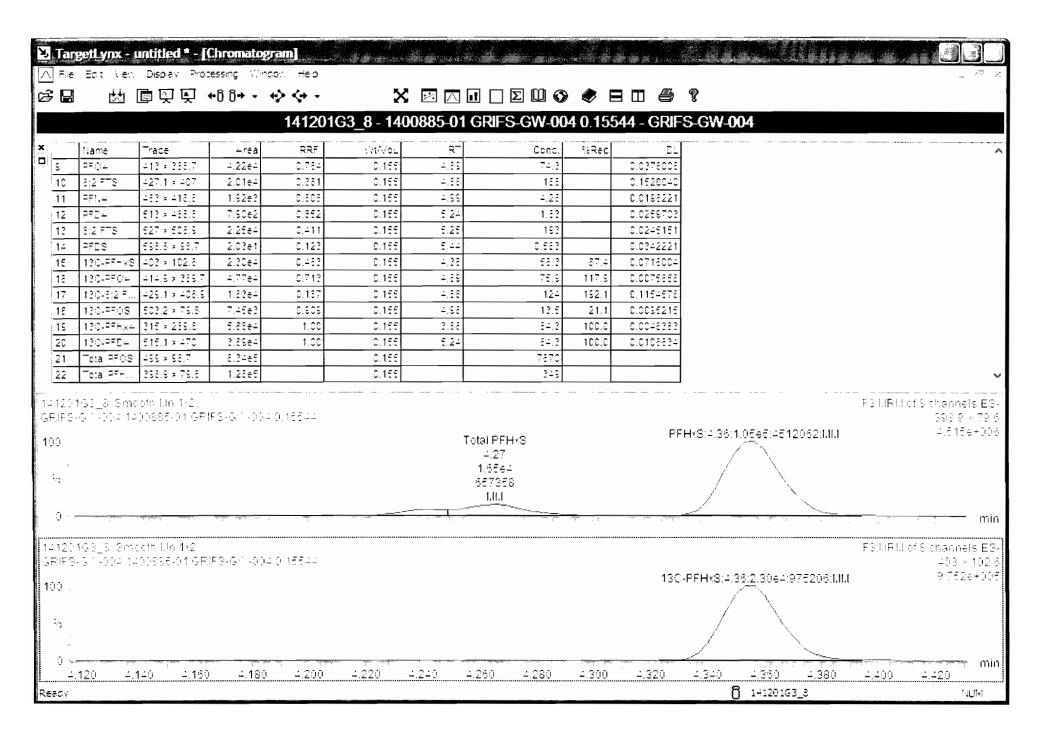
Last Altered: Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Tuesday, December 02, 2014 16:14:31 Pacific Standard Time

Name: 141201G3\_8, Date: 01-Dec-2014, Time: 18:56:50, ID: 1400885-01 GRIFS-GW-004 0.15544, Description: GRIFS-GW-004

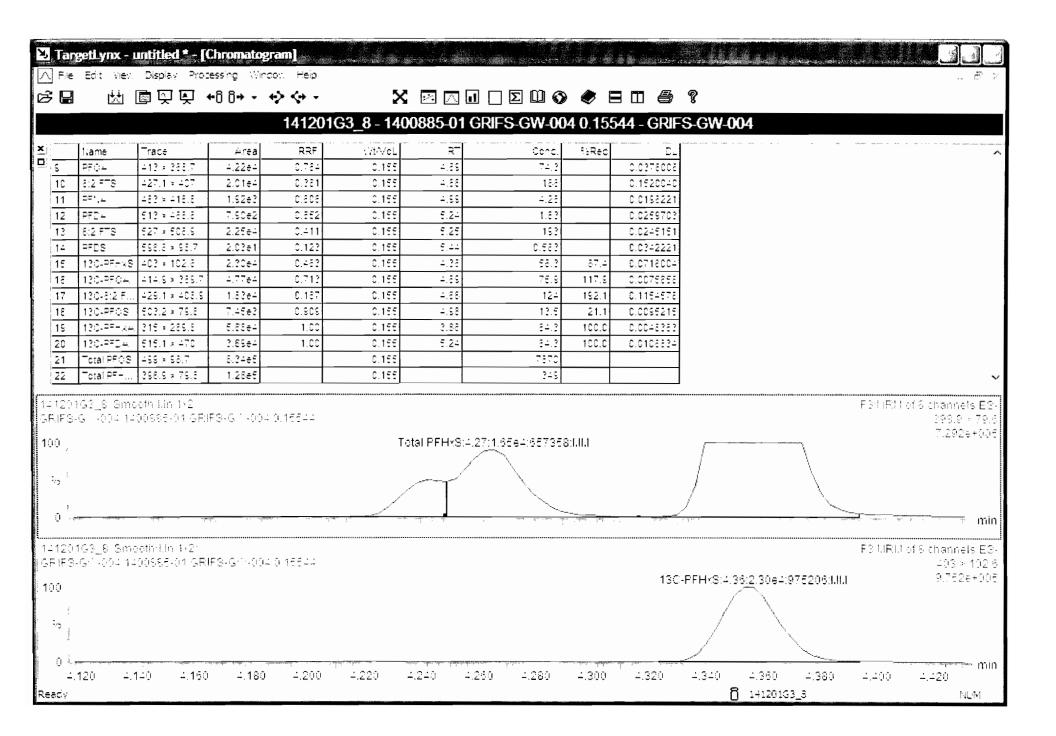




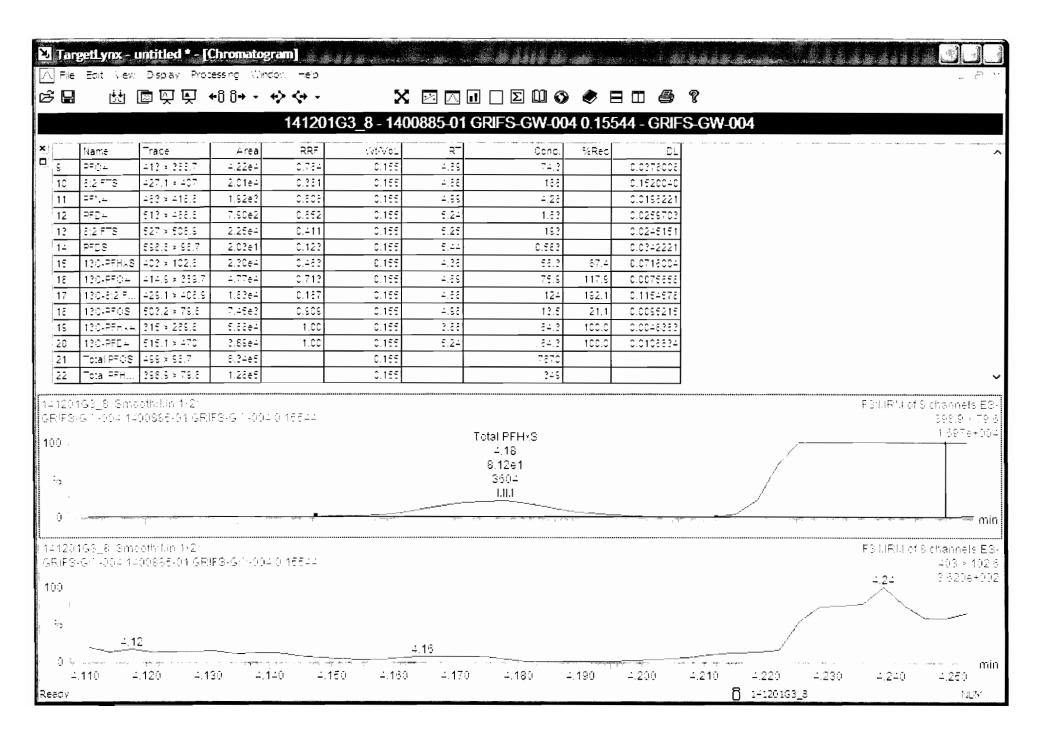
Project 1400885



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Vista Analytical Laboratory Q1

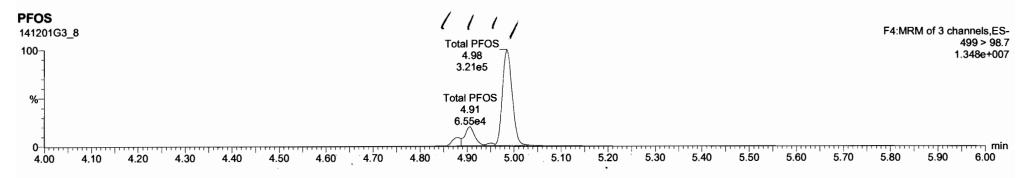
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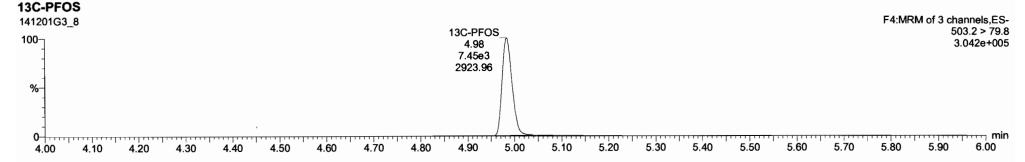
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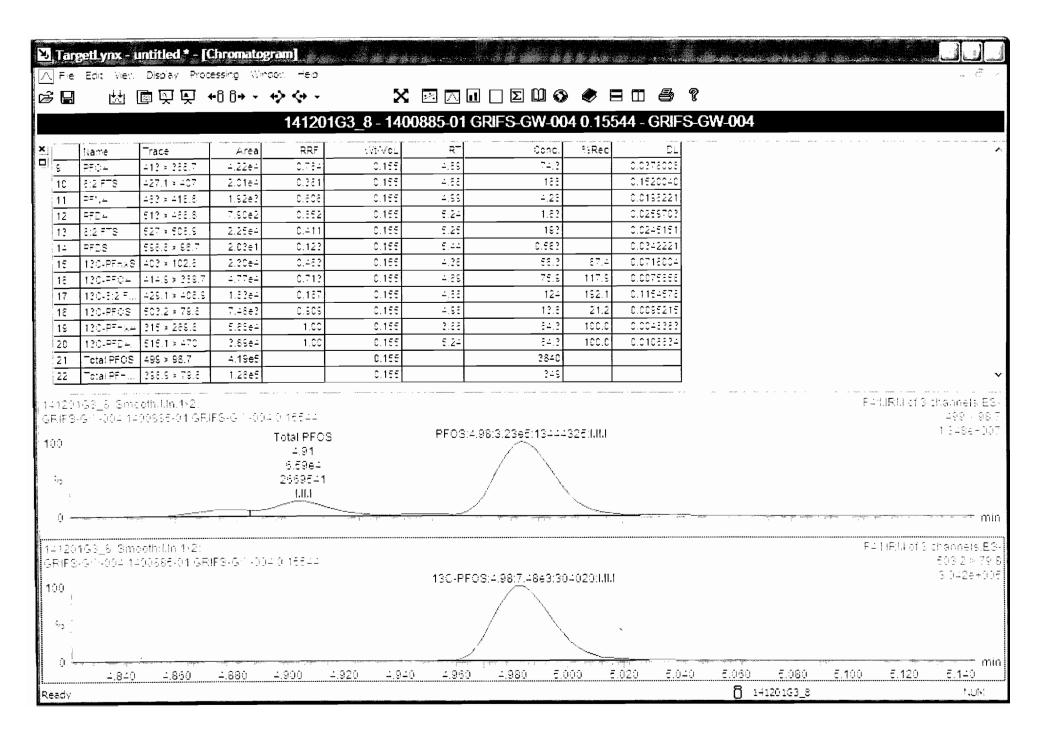
Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Tuesday, December 02, 2014 16:14:31 Pacific Standard Time

### Name: 141201G3\_8, Date: 01-Dec-2014, Time: 18:56:50, ID: 1400885-01 GRIFS-GW-004 0.15544, Description: GRIFS-GW-004

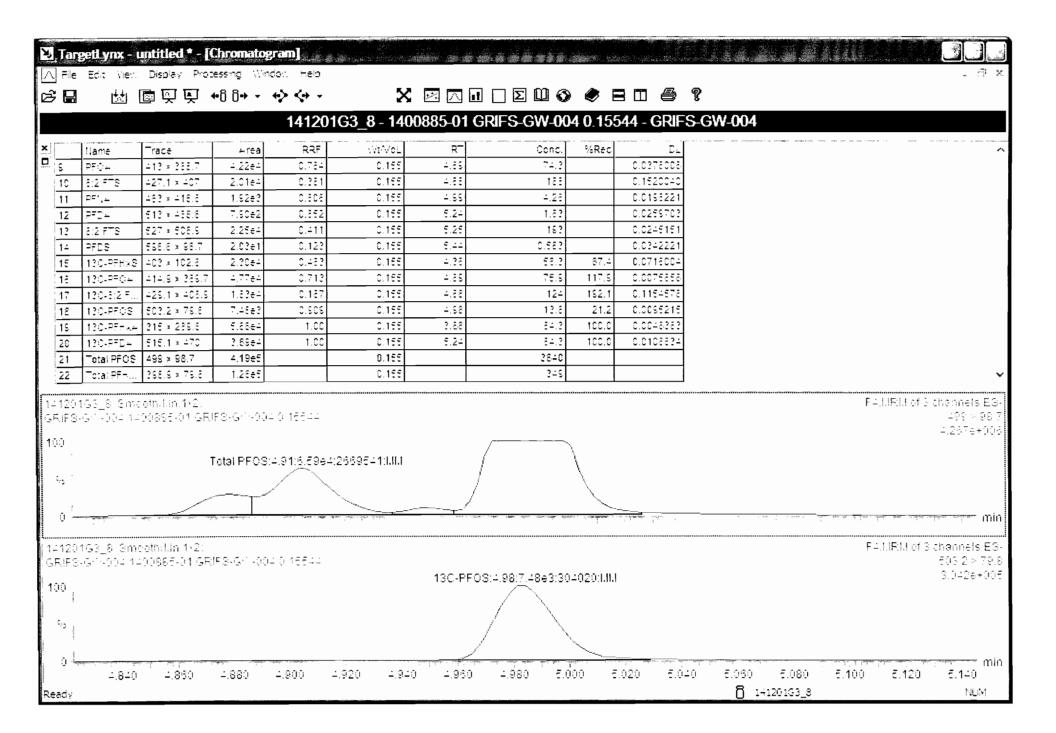




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Vista Analytical Laboratory Q1

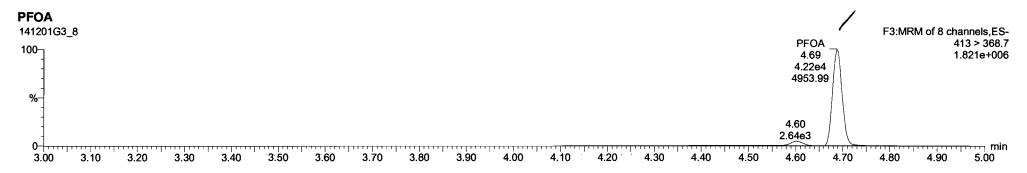
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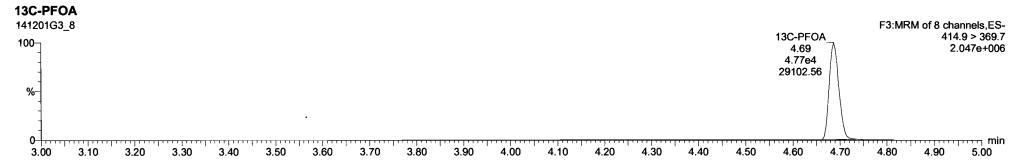
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Last Altered: Printed:

Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Tuesday, December 02, 2014 16:14:31 Pacific Standard Time

Name: 141201G3\_8, Date: 01-Dec-2014, Time: 18:56:50, ID: 1400885-01 GRIFS-GW-004 0.15544, Description: GRIFS-GW-004





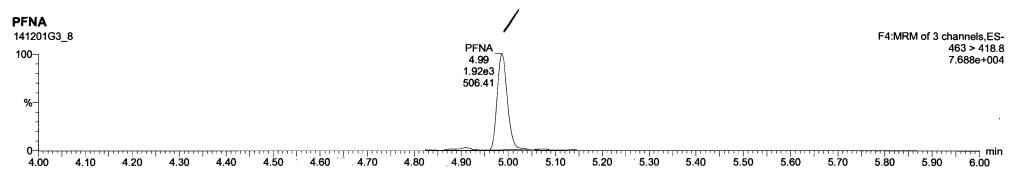
Vista Analytical Laboratory Q1

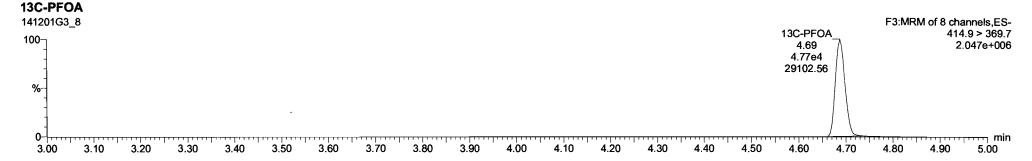
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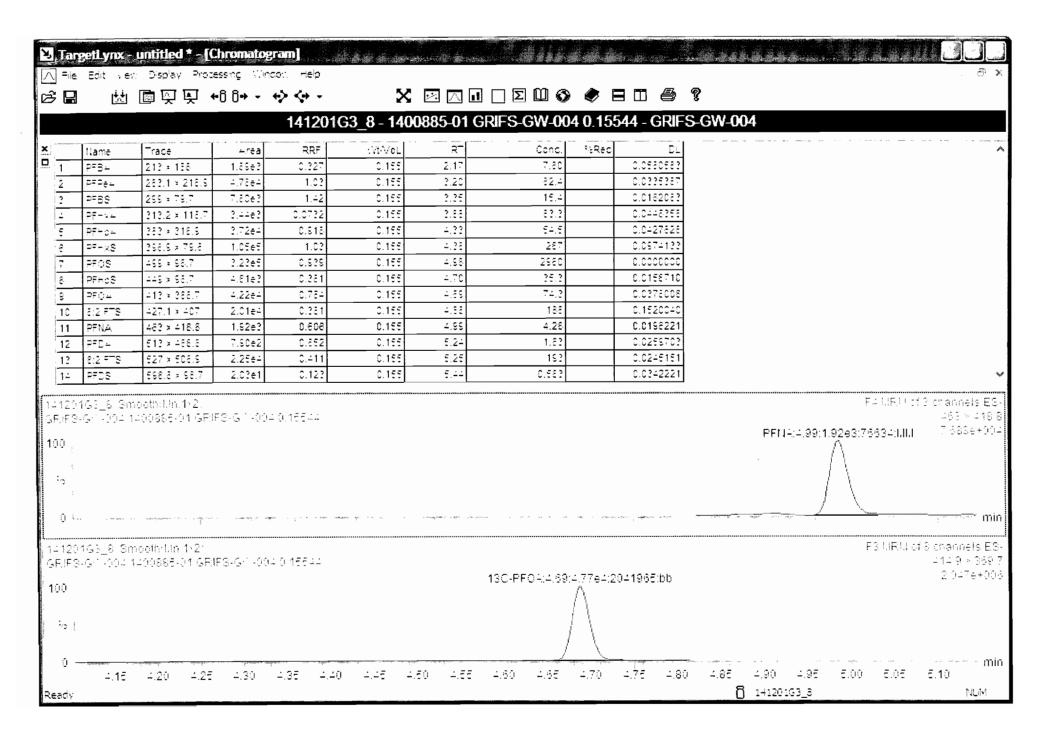
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Last Altered: Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Printed: Tuesday, December 02, 2014 16:14:31 Pacific Standard Time

Name: 141201G3\_8, Date: 01-Dec-2014, Time: 18:56:50, ID: 1400885-01 GRIFS-GW-004 0.15544, Description: GRIFS-GW-004







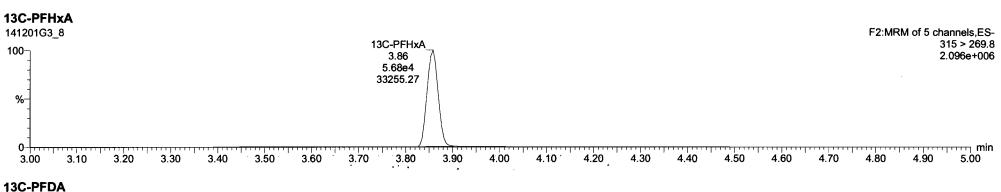
Project 1400885 Page 49 of 84

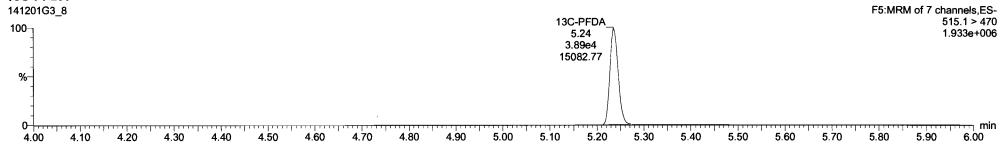
Vista Analytical Laboratory Q1

Dataset: Untitled

Last Altered: Tuesday, December 02, 2014 16:14:05 Pacific Standard Time Printed: Tuesday, December 02, 2014 16:14:31 Pacific Standard Time

Name: 141201G3\_8, Date: 01-Dec-2014, Time: 18:56:50, ID: 1400885-01 GRIFS-GW-004 0.15544, Description: GRIFS-GW-004





**Quantify Sample Summary Report** Vista Analytical Laboratory Q1 MassLynx 4.1

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Dataset:

C:\Projects\Method\_1694.PRO\Results\141202G1\141202G1\_12.qld

Last Altered:

Wednesday, December 03, 2014 13:40:28 Pacific Standard Time

Printed:

Wednesday, December 03, 2014 13:46:47 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38

Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

Name: 141202G1\_12, Date: 02-Dec-2014, Time: 11:50:43, ID: 1400885-01@50X GRIFS-GW-004 0.15544, Description: GRIFS-GW-004

	# Name	Trace	Response	RRF	Wt/Vol	RT	Conc.	%Rec
1	22 Total PFHxS	398.9 > 79.6			0.155		290	
2	21 Total PFOS	499 > 98.7			0.155		3590	
3	15 13C-PFHxS	403 > 102.6	2.49e2	0.463	0.155	4.36	43.2	67.2
4	18 13C-PFOS	503.2 > 79.8	9.31e1	0.909	0.155	4.98	31.7	49.3
5	19 13C-PFHxA	315 > 269.8	8.02e2	1.000	0.155	3.86	64.3	100.0
6	20 13C-PFDA	515.1 > 470	2.08e2	1.000	0.155	5.24	64.3	100.0

12/3/14

Quantify Totals Report MassLynx 4.1

Vista Analytical Laboratory Q1

Dataset:

C:\Projects\Method\_1694.PRO\Results\141202G1\141202G1\_12.qld

Last Altered:

Wednesday, December 03, 2014 13:40:28 Pacific Standard Time

Printed:

Wednesday, December 03, 2014 13:46:47 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38

Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

Name: 141202G1\_12, Date: 02-Dec-2014, Time: 11:50:43, ID: 1400885-01@50X GRIFS-GW-004 0.15544, Description: GRIFS-GW-004

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### **Total PFOS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	21 Total PFOS	499 > 98.7	4.88	1.43e2	9.31e1	105
2	21 Total PFOS	499 > 98.7	4.91	4.18e2	9.31e1	308
3	21 Total PFOS	499 > 98.7	4.95	2.48e1	9.31e1	18.2
4	7 PFOS	499 > 98.7	4.98	4.30e3	9.31e1	3160

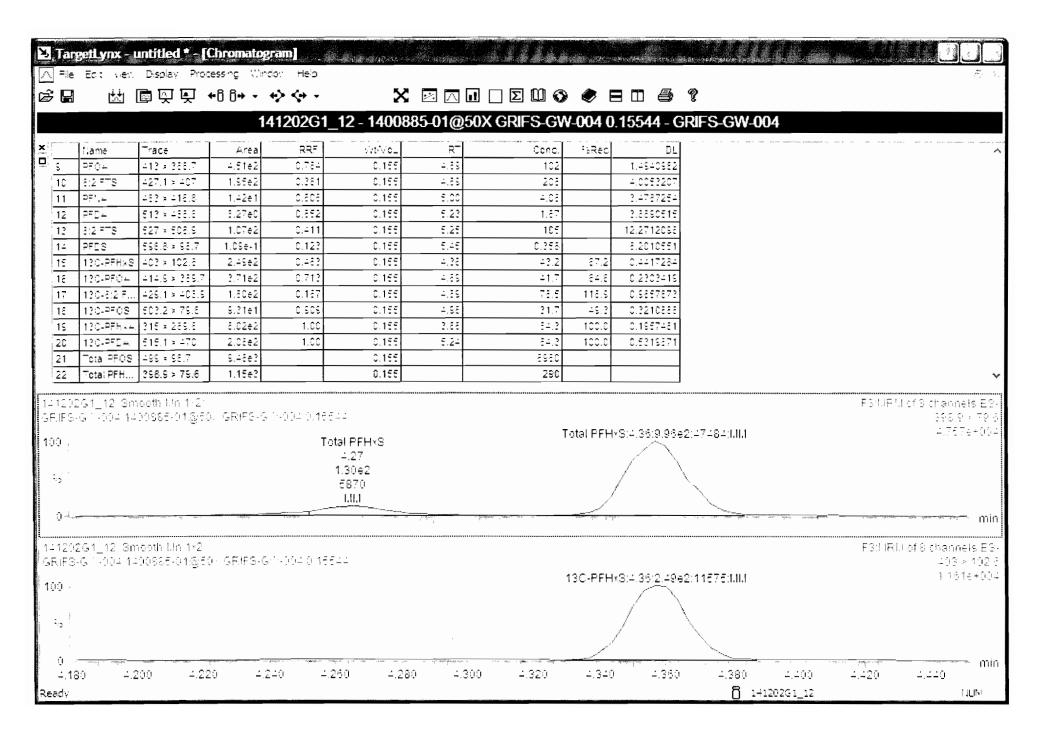
### **Total PFHxS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFHxS	398.9 > 79.6			2.49e2	
2	22 Total PFHxS	398.9 > 79.6	4.25	2.83e1	2.49e2	7.10
3	22 Total PFHxS	398.9 > 79.6	4.27	1.30e2	2.49e2	32.6
4	22 Total PFHxS	398.9 > 79.6	4.36	9.96e2	2.49e2	250

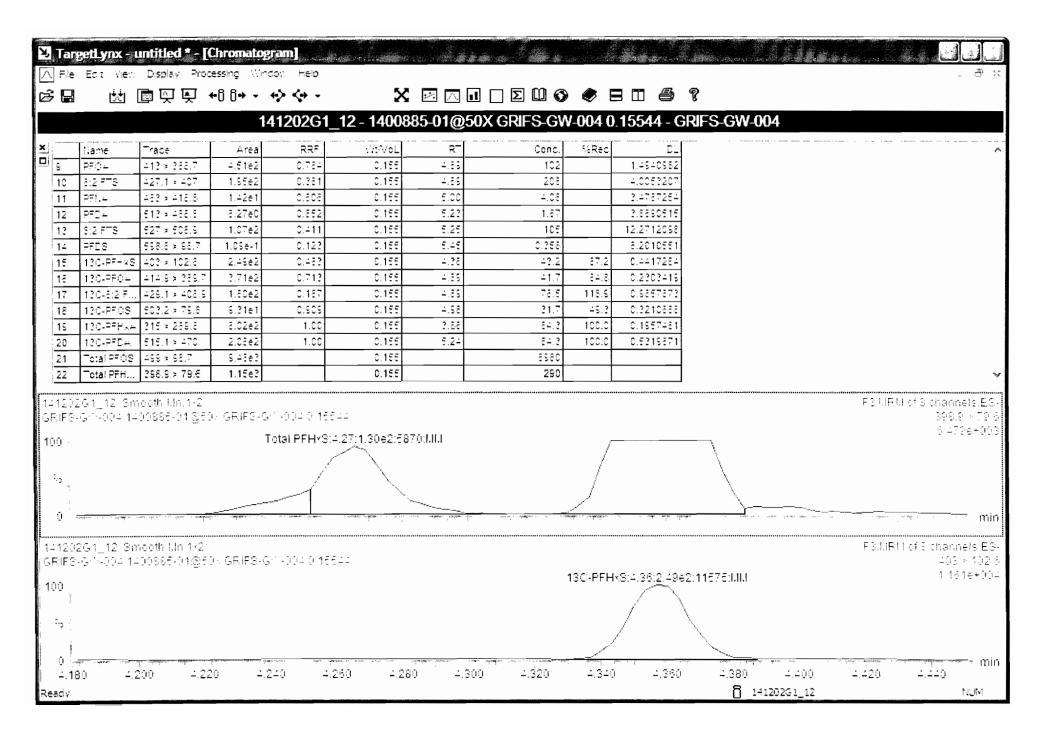
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#### 141202G1\_12 13C-PFHxS 403 > 102.6 100~ 1.161e+004 4.36 2.47e2 319.74 % --- min 4.40 4.60 4.70 3.70 3.80 3.90 4.00 4.10 4.20 4.30 4.50 4.80 4.90 5.00 3.30 3.40 3.50 3.60 3.00 3.10 3.20

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4.00

4.10

4.20

4.30

4.40

4.50

4.60

4.70

4.80

4.90

5.00

5.10

5.20

5.30

5.40

5.50

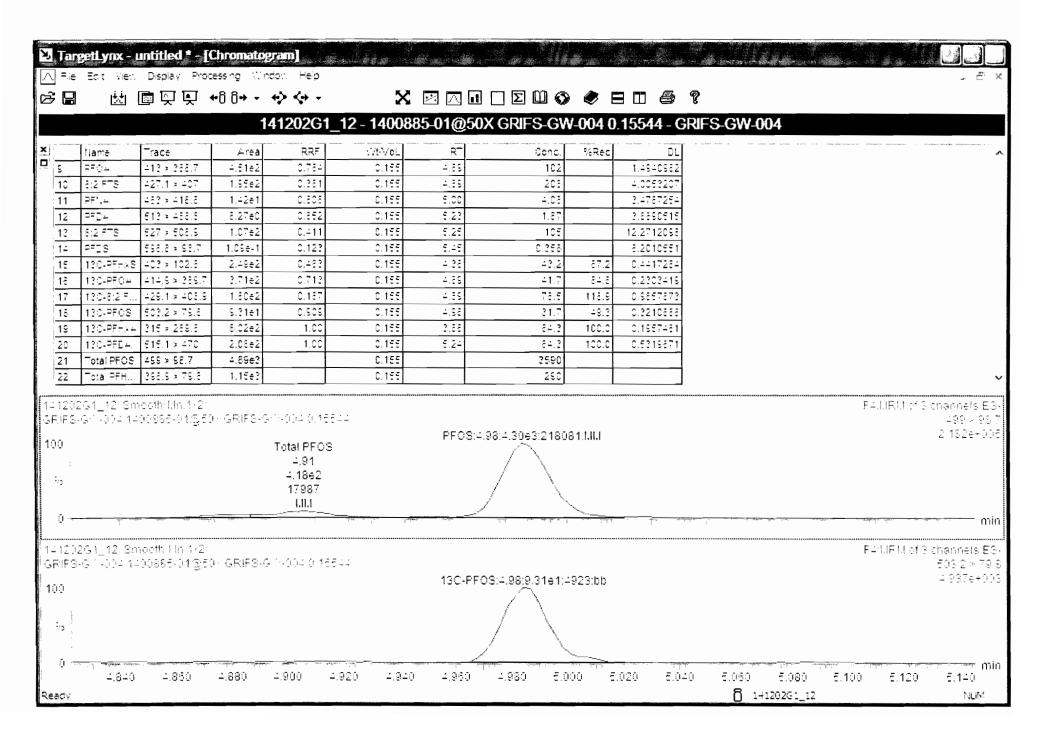
5.60

5.70

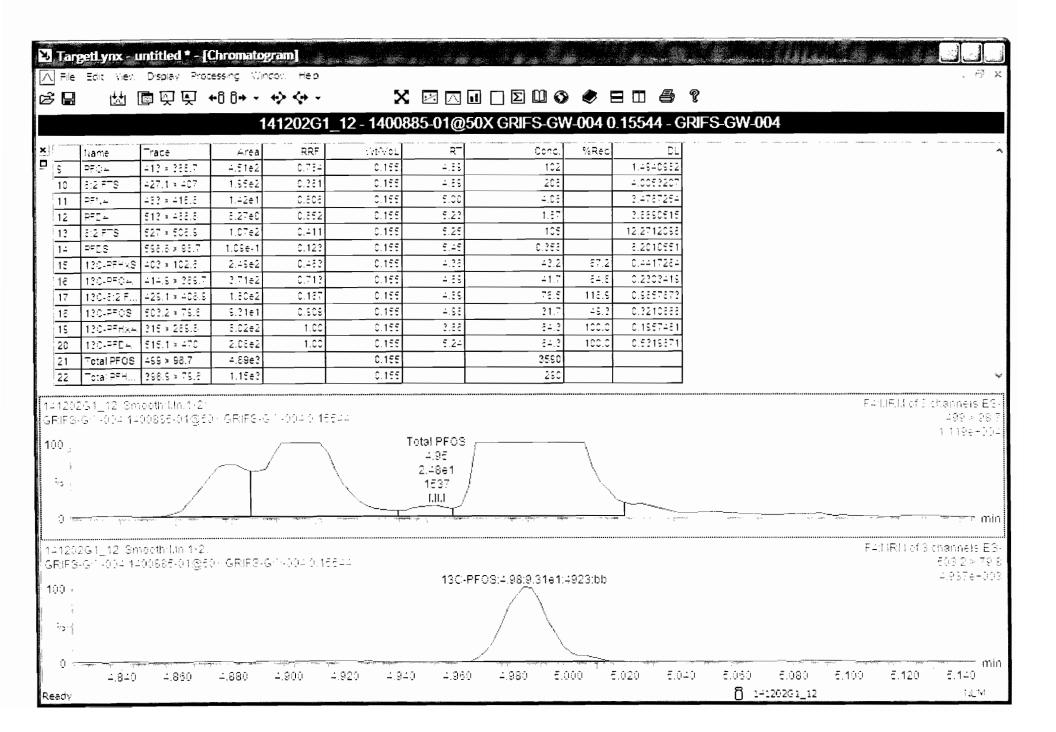
5.80

5.90

6.00



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5.00

5.10

5.20

5.30

5.40

5.50

5.60

5.70

5.80

5.90

4.00

4.10

4.20

4.40

4.30

4.50

4.60

4.70

4.80

4.90

min

6.00

## CONTINUING CALIBRATION

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Quantify Sample Summary Report Vista Analytical Laboratory Q1 MassLynx 4.1

Page 1 of 1

Dataset:

C:\Projects\Method\_1694.PRO\Results\141201G3\141201G3\_2.qld

Last Altered:

Wednesday, December 03, 2014 11:43:16 Pacific Standard Time

Printed:

Wednesday, December 03, 2014 11:44:19 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38

Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

Name: 141201G3\_2, Date: 01-Dec-2014, Time: 17:40:46, ID: ST141201G3-1 PFC CS1 14K0502, Description: PFC CS1 14K0502

	# Name	Trace	Response	RRF	Wt/Vol	RT	Conc.	%Rec		
1	3 PFBS	299 > 79.7	1.88e3	1.421	1.000	3.36	1.13	112.8	50-150	1.
2	5 PFHpA	363 > 318.9	2.31e3	0.918	1.000	4.33	1.11	111.2	- 1	JV 111
3	6 PFHxS	398.9 > 79.6	1.41e3	1.029	1.000	4.36	1.17	116.6	]	12114
4	7 PFOS	499 > 98.7	7.60e2	0.939	1.000	4.99	0.988	98.8		14-1
5	9 PFOA	413 > 368.7	1.76e3	0.764	1.000	4.69	1.02	101.9		
6	11 PFNA	463 > 418.8	1.44e3	0.606	1.000	4.99	1.05	104.8		
7	15 13C-PFHxS	403 > 102.6	1.17e4	0.463	1.000	4.36	7.99	79.9		
8	16 13C-PFOA	414.9 > 369.7	2.26e4	0.713	1.000	4.69	10.0	100.1		
9	18 13C-PFOS	503.2 > 79.8	8.19e3	0.909	1.000	4.99	7.07	70.7	$\mathbf{V}$	
10	19 13C-PFHxA	315 > 269.8	3.17e4	1.000	1.000	3.86	10.0	100.0		
11	20 13C-PFDA	515.1 > 470	1.27e4	1.000	1.000	5.24	10.0	100.0		

Quantify Compound Summary Report

MassLynx 4.1

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Vista Analytical Laboratory VG-9

Dataset:

Untitled

Last Altered:

Wednesday, December 03, 2014 11:53:10 Pacific Standard Time

Printed:

Wednesday, December 03, 2014 11:54:49 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38 Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

### Compound name: PFBA

		ID.		
	Name	ID	Acq.Date	Acq.Time
1	141201G3_1	Methanol	01-Dec-14	17:28:13
2	141201G3_2	ST141201G3-1 PFC CS1 14K0502	01-Dec-14	17:40:46
3	141201G3_3	B4L0014-BS1 OPR 0.125	01-Dec-14	17:53:23
4	141201G3_4	Methanol	01-Dec-14	18:06:06
5	141201G3_5	B4L0014-BLK1 Method Blank 0.125	01-Dec-14	18:18:46
6	141201G3_6	1400881-01 BERGS-FT023P-BLK01 0.14802	01-Dec-14	18:31:28
7	141201G3_7	1400881-02 BERGS-FT023P-BLK02 0.14522	01-Dec-14	18:44:09
8	141201G3_8	1400885-01 GRIFS-GW-004 0.15544	01-Dec-14	18:56:50
9	141201G3_9	1400890-01 BERGS-FT023P-BLK04 0.16323	01-Dec-14	19:09:30
10	141201G3_10	1400894-01 KELLY-SW-003 0.14116	01-Dec-14	19:22:12
11	141201G3_11	1400894-02 KELLY-SW-004A 0.14668	01-Dec-14	19:34:54
12	141201G3_12	1400894-03 KELLY-SW-005A 0.15693	01-Dec-14	19:47:34
13	141201G3_13	1400894-04 KELLY-SW-006A 0.15392	01-Dec-14	20:00:14
14	141201G3_14	Methanol	01-Dec-14	20:12:53
15	141201G3_15	Methanol	01-Dec-14	20:25:35
16	141201G3_16	ST141201G3-2 PFC CS7 14K2201	01-Dec-14	20:38:16

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# LC CALIBRATION STANDARDS REVIEW CHECKLIST, Q1

	ION Ratio	Concentration	<u>C-Cal</u> Name	Sign/ Date	Correct I-Cal	Manual Integrations	NA
Calibration ID: STI4 120 IG-3- I (L) M H	NA	<u> </u>					
Calibration ID: ST14 1201G3-2 L M(H)				$\checkmark$		$\checkmark$	
Calibration ID:L M H							
Calibration ID:L M H							
Calibration ID:L M H							
Calibration ID:L M H							
Calibration ID:L M H							
Calibration ID:L M H							
Calibration ID:L M H							
Calibration ID:L M H							
		Fu	ull Mass C	al. Date:_	11/11/1 <u>1</u>	<u> </u>	
		•	Commen	ts:			
Reviewed by: 12 3 14  Initials & Date							

Vista Analytical Laboratory El Dorado Hills, CA 95762

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Dataset:

C:\Projects\Method\_1694.PRO\Results\141201G3\141201G3\_16.qld

Last Altered: Printed:

Wednesday, December 03, 2014 11:47:33 Pacific Standard Time Wednesday, December 03, 2014 11:50:53 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38

Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

Name: 141201G3\_16, Date: 01-Dec-2014, Time: 20:38:16, ID: ST141201G3-2 PFC CS7 14K2201, Description: PFC CS7 14K2201

	# Name	Trace	Response	RRF	Wt/Vol	RT	Conc.	%Rec	
1	3 PFBS	299 > 79.7	9.72e4	1.421	1.000	3.36	46.2	92.3	70-130
2	5 PFHpA	363 > 318.9	1.11e5	0.918	1.000	4.33	50.2	100.3	3
3	6 PFHxS	398.9 > 79.6	8.17e4	1.029	1.000	4.36	53.6	107.1	1
4	7 PFOS	499 > 98.7	4.71e4	0.939	1.000	4.98	49.0	98.1	1   <b>                                   </b>
5	9 PFOA	413 > 368.7	9.94e4	0.764	1.000	4.69	53.8	107.5	5   1 1 1 1 1 1
6	11 PFNA	463 > 418.8	7.78e4	0.606	1.000	4.99	53.1	106.1	1 1 12/2017
7	15 13C-PFHxS	403 > 102.6	1.48e4	0.463	1.000	4.36	10.0	100.0	
8	16 13C-PFOA	414.9 > 369.7	2.42e4	0.713	1.000	4.69	10.6	105.9	9 🚶
9	18 13C-PFOS	503.2 > 79.8	1.02e4	0.909	1.000	4.98	7.64	76.4	4 •
10	19 13C-PFHxA	315 > 269.8	3.20e4	1.000	1.000	3.86	10.0	100.0	0
11	20 13C-PFDA	515.1 > 470	1.47e4	1.000	1.000	5.24	10.0	100.0	0

MassLynx 4.1

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Dataset:

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Last Altered:

Wednesday, December 03, 2014 11:53:10 Pacific Standard Time

Printed:

Wednesday, December 03, 2014 11:54:52 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38 Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

### Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	141201G3_1	Methanol	01-Dec-14	17:28:13
2	141201G3_2	ST141201G3-1 PFC CS1 14K0502	01-Dec-14	17:40:46
3	141201G3_3	B4L0014-BS1 OPR 0.125	01-Dec-14	17:53:23
4	141201G3_4	Methanol	01-Dec-14	18:06:06
5	141201G3_5	B4L0014-BLK1 Method Blank 0.125	01-Dec-14	18:18:46
6	141201G3_6	1400881-01 BERGS-FT023P-BLK01 0.14802	01-Dec-14	18:31:28
7	141201G3_7	1400881-02 BERGS-FT023P-BLK02 0.14522	01-Dec-14	18:44:09
8	141201G3_8	1400885-01 GRIFS-GW-004 0.15544	01-Dec-14	18:56:50
9	141201G3_9	1400890-01 BERGS-FT023P-BLK04 0.16323	01-Dec-14	19:09:30
10	141201G3_10	1400894-01 KELLY-SW-003 0.14116	01-Dec-14	19:22:12
11	141201G3_11	1400894-02 KELLY-SW-004A 0.14668	01-Dec-14	19:34:54
12	141201G3_12	1400894-03 KELLY-SW-005A 0.15693	01-Dec-14	19:47:34
13	141201G3_13	1400894-04 KELLY-SW-006A 0.15392	01-Dec-14	20:00:14
14	141201G3_14	Methanol	01-Dec-14	20:12:53
15	141201G3_15	Methanol	01-Dec-14	20:25:35
16	141201G3_16	ST141201G3-2 PFC CS7 14K2201	01-Dec-14	20:38:16

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Dataset:

C:\Projects\Method\_1694.PRO\Results\141202G1\141202G1\_2.qld

Last Altered: Printed:

Wednesday, December 03, 2014 08:33:55 Pacific Standard Time Wednesday, December 03, 2014 08:37:09 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38

Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

Name: 141202G1\_2, Date: 02-Dec-2014, Time: 09:43:49, ID: ST141202G1-1 PFC CS1 14K0502, Description: PFC CS1 14K0502

	# Name	Trace	Response	RRF	Wt/Vol	RT	Conc.	%Rec	
1	3 PFBS	299 > 79.7	2.02e3	1.421	1.000	3.36	1.21	121.2 50-150	
2	5 PFHpA	363 > 318.9	2.22e3	0.918	1.000	4.33	1.16	115.7	
3	6 PFHxS	398.9 > 79.6	1.29e3	1.029	1.000	4.36	1.07	106.8	
4	7 PFOS	499 > 98.7	6.81e2	0.939	1.000	4.99	0.921	92.1	NO/
5	9 PFOA	413 > 368.7	1.69e3	0.764	1.000	4.69	1.06	105.8	DV Int
6	11 PFNA	463 > 418.8	1.37e3	0.606	1.000	4.99	1.08	108.1	12/14
7	15 13C-PFHxS	403 > 102.6	1.17e4	0.463	1.000	4.36	8.06	80.6	17/21
8	16 13C-PFOA	414.9 > 369.7	2.09e4	0.713	1.000	4.69	9.33	93.3	W
9	18 13C-PFOS	503.2 > 79.8	7.87e3	0.909	1.000	4.99	9.03	90.3	212114
10	19 13C-PFHxA	315 > 269.8	3.14e4	1.000	1.000	3.86	10.0	100.0	INS1.1
11	20 13C-PFDA	515.1 > 470	9.59e3	1.000	1.000	5.24	10.0	100.0	

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Dataset:

Untitled

Last Altered: Printed:

Wednesday, December 03, 2014 08:53:45 Pacific Standard Time Wednesday, December 03, 2014 08:54:04 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38 Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

### Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	141202G1_1	Methanol	02-Dec-14	09:31:16
2	141202G1_2	ST141202G1-1 PFC CS1 14K0502	02-Dec-14	09:43:49
3	141202G1_3	Methanol	02-Dec-14	09:56:28
4	141202G1_4	1400894-01@10X KELLY-SW-003 0.14116	02-Dec-14	10:09:11
5	141202G1_5	1400894-02@10X KELLY-SW-004A 0.14668	02-Dec-14	10:21:50
6	141202G1_6	1400894-03@10X KELLY-SW-005A 0.15693	02-Dec-14	10:34:30
7	141202G1_7	1400894-04@10X KELLY-SW-006A 0.15392	02-Dec-14	10:47:11
8	141202G1_8	1400894-05@10X KELLY-SW-007A 0.15447	02-Dec-14	10:59:52
9	141202G1_9	1400894-13@10X KELLY-SW-001 0.14274	02-Dec-14	11:12:36
10	141202G1_10	1400894-14@10X KELLY-SW-002 0.14688	02-Dec-14	11:25:21
11	141202G1_11	1400894-18@10X KELLY-SW-008 0.14927	02-Dec-14	11:38:02
12	141202G1_12	1400885-01@50X GRIFS-GW-004 0.15544	02-Dec-14	11:50:43
13	141202G1_13	1400894-05 KELLY-SW-007A 0.15447	02-Dec-14	12:03:24
14	141202G1_14	Methanol	02-Dec-14	12:16:08
15	141202G1_15	Methanol	02-Dec-14	12:28:49
16	141202G1_16	ST141202G1-2 PFC CS7 14K2201	02-Dec-14	12:41:29
17	141202G1_17	Methanol	02-Dec-14	12:54:11
18	141202G1_18	Methanol	02-Dec-14	13:06:51
19	141202G1_19	1400894-13 KELLY-SW-001 0.14274	02-Dec-14	13:19:32
20	141202G1_20	1400894-14 KELLY-SW-002 0.14688	02-Dec-14	13:32:12
21	141202G1_21	1400894-18 KELLY-SW-008 0.14927	02-Dec-14	13:44:54
22	141202G1_22	Methanol	02-Dec-14	13:57:36
23	141202G1_23	Methanol	02-Dec-14	14:10:16
24	141202G1_24	ST141202G1-3 PFC CS4 14K0504	02-Dec-14	14:22:55
25	141202G1_25	Methanol	02-Dec-14	14:35:35
26	141202G1_26	Methanol	02-Dec-14	14:48:16
27	141202G1_27	1400880-04@5X BERGS-SO-004 1.17	02-Dec-14	15:00:59
28	141202G1_28	1400880-05@5X BERGS-SO-005 1.11	02-Dec-14	15:13:38
29	141202G1_29	1400880-11@5X BERGS-SO-022 1.2	02-Dec-14	15:26:19
30	141202G1_30	1400880-10@5X BERGS-SO-021 1.19	02-Dec-14	15:39:01
31	141202G1_31	Methanol	02-Dec-14	15:51:39

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Dataset:

Untitled

Last Altered: Printed:

Wednesday, December 03, 2014 08:53:45 Pacific Standard Time Wednesday, December 03, 2014 08:54:04 Pacific Standard Time

### Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
32	141202G1_32	ST141202G1-4 PFC CS7 14K2201	02-Dec-14	16:04:20
33	141202G1_33	Methanol	02-Dec-14	16:17:01
34	141202G1_34	Methanol	02-Dec-14	16:29:43

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	ION Ratio	Concentration	<u>C-Cal</u> Name	<u>Sign/</u> <u>Date</u>	Correct <u>I-Cal</u>	Manual Integrations	M
Calibration ID: ST141202G-1-1 (L)M H	NA		<b>V</b>				
Calibration ID: ST141202G1-2 L M(H)							
Calibration ID: ST141202G1-3_L(M)H							
Calibration ID: ST14 1202G1-4 L M(H)							4
Calibration ID:L M H				X	$\Box$		
Calibration ID:L M H				$\Box$ ,			
Calibration ID:L M H							
Calibration ID:L M H							
Calibration ID:L M H							
Calibration ID:L M H							
		F	u <b>ii Mass</b> C	al. Date:_	<u>11/11/1</u>	4	
Reviewed by:			Commen	ts:			
Initials & Date							

Vista Analytical Laboratory El Dorado Hills, CA 95762

LC Calib.Stds.Review 2/2014 jm

MassLynx 4.1

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Dataset:

C:\Projects\Method\_1694.PRO\Results\141202G1\141202G1\_16.qld

Last Altered: Printed:

Wednesday, December 03, 2014 08:38:20 Pacific Standard Time Wednesday, December 03, 2014 08:39:18 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38 Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

Name: 141202G1\_16, Date: 02-Dec-2014, Time: 12:41:29, ID: ST141202G1-2 PFC CS7 14K2201, Description: PFC CS7 14K2201

	# Name	Trace	Response	RRF	Wt/Vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	9.55e4	1.421	1.000	3.35	43.9	87.8
2	5 PFHpA	363 > 318.9	1.17e5	0.918	1.000	4.33	51.5	103.0
3	6 PFHxS	398.9 > 79.6	8.05e4	1.029	1.000	4.36	51.1	102.2
4	7 PFOS	499 > 98.7	4.67e4	0.939	1.000	4.98	49.8	99.6
5	9 PFOA	413 > 368.7	1.01e5	0.764	1.000	4.69	53.8	107.6
6	11 PFNA	463 > 418.8	7.50e4	0.606	1.000	4.98	50.2	100.3
7	15 13C-PFHxS	403 > 102.6	1.53e4	0.463	1.000	4.36	9.76	97.6
8	16 13C-PFOA	414.9 > 369.7	2.46e4	0.713	1.000	4.69	10.2	102.0
9	18 13C-PFOS	503.2 > 79.8	9.99e3	0.909	1.000	4.98	7.99	79.9
10	19 13C-PFHxA	315 > 269.8	3.39e4	1.000	1.000	3.86	10.0	100.0
11	20 13C-PFDA	515.1 > 470	1.38e4	1.000	1.000	5.24	10.0	100.0

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Vista Analytical Laboratory VG-9

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Dataset:

Untitled

Last Altered: Printed:

Wednesday, December 03, 2014 08:53:45 Pacific Standard Time Wednesday, December 03, 2014 08:54:04 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38 Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

### Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	141202G1_1	Methanol	02-Dec-14	09:31:16
1	141202G1_1 141202G1_2	ST141202G1-1 PFC CS1 14K0502	02-Dec-14 02-Dec-14	09:31:16
2	141202G1_2 141202G1_3	Methanol	02-Dec-14 02-Dec-14	
3	_			09:56:28
4	141202G1_4	1400894-01@10X KELLY-SW-003 0.14116	02-Dec-14	10:09:11
5	141202G1_5	1400894-02@10X KELLY-SW-004A 0.14668	02-Dec-14	10:21:50
6	141202G1_6	1400894-03@10X KELLY-SW-005A 0.15693	02-Dec-14	10:34:30
7	141202G1_7	1400894-04@10X KELLY-SW-006A 0.15392	02-Dec-14	10:47:11
8	141202G1_8	1400894-05@10X KELLY-SW-007A 0.15447	02-Dec-14	10:59:52
9	141202G1_9	1400894-13@10X KELLY-SW-001 0.14274	02-Dec-14	11:12:36
10	141202G1_10	1400894-14@10X KELLY-SW-002 0.14688	02-Dec-14	11:25:21
11	141202G1_11	1400894-18@10X KELLY-SW-008 0.14927	02-Dec-14	11:38:02
12	141202G1_12	1400885-01@50X GRIFS-GW-004 0.15544	02-Dec-14	11:50:43
13	141202G1_13	1400894-05 KELLY-SW-007A 0.15447	02-Dec-14	12:03:24
14	141202G1_14	Methanol	02-Dec-14	12:16:08
15	141202G1_15	Methanol	02-Dec-14	12:28:49
16	141202G1_16	ST141202G1-2 PFC CS7 14K2201	02-Dec-14	12:41:29
17	141202G1_17	Methanol	02-Dec-14	12:54:11
18	141202G1_18	Methanol	02-Dec-14	13:06:51
19	141202G1_19	1400894-13 KELLY-SW-001 0.14274	02-Dec-14	13:19:32
20	141202G1_20	1400894-14 KELLY-SW-002 0.14688	02-Dec-14	13:32:12
21	141202G1_21	1400894-18 KELLY-SW-008 0.14927	02-Dec-14	13:44:54
22	141202G1_22	Methanol	02-Dec-14	13:57:36
23	141202G1_23	Methanol	02-Dec-14	14:10:16
24	141202G1_24	ST141202G1-3 PFC CS4 14K0504	02-Dec-14	14:22:55
25	141202G1_25	Methanol	02-Dec-14	14:35:35
26	141202G1_26	Methanol	02-Dec-14	14:48:16
27	141202G1_27	1400880-04@5X BERGS-SO-004 1.17	02-Dec-14	15:00:59
28	141202G1_28	1400880-05@5X BERGS-SO-005 1.11	02-Dec-14	15:13:38
29	141202G1_29	1400880-11@5X BERGS-SO-022 1.2	02-Dec-14	15:26:19
30	141202G1_30	1400880-10@5X BERGS-SO-021 1.19	02-Dec-14	15:39:01
31	141202G1_31	Methanol	02-Dec-14	15:51:39

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MassLynx 4.1

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Dataset:

Untitled

Last Altered:

Wednesday, December 03, 2014 08:53:45 Pacific Standard Time Wednesday, December 03, 2014 08:54:04 Pacific Standard Time

Printed:

### Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
32	141202G1_32	ST141202G1-4 PFC CS7 14K2201	02-Dec-14	16:04:20
33	141202G1_33	Methanol	02-Dec-14	16:17:01
34	141202G1_34	Methanol	02-Dec-14	16:29:43

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Dataset:

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C:\Projects\Method\_1694.PRO\Results\141202G1\141202G1\_24.qld

Last Altered:

Wednesday, December 03, 2014 08:40:23 Pacific Standard Time

Printed:

Wednesday, December 03, 2014 08:45:47 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38

Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

Name: 141202G1\_24, Date: 02-Dec-2014, Time: 14:22:55, ID: ST141202G1-3 PFC CS4 14K0504, Description: PFC CS4 14K0504

	# Name	Trace	Response	RRF	Wt/Vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	1.66e4	1.421	1.000	3.35	9.27	92.7
2	5 PFHpA	363 > 318.9	2.20e4	0.918	1.000	4.33	10.4	104.3
3	6 PFHxS	398.9 > 79.6	1.20e4	1.029	1.000	4.36	9.29	92.9
4	7 PFOS	499 > 98.7	6.62e3	0.939	1.000	4.98	9.32	93.2
5	9 PFOA	413 > 368.7	1.88e4	0.764	1.000	4.69	10.7	107.1
6	11 PFNA	463 > 418.8	1.36e4	0.606	1.000	4.99	9.73	97.3
7	15 13C-PFHxS	403 > 102.6	1.26e4	0.463	1.000	4.36	7.98	79.8
8	16 13C-PFOA	414.9 > 369.7	2.30e4	0.713	1.000	4.69	9.47	94.7
9	18 13C-PFOS	503.2 > 79.8	7.56e3	0.909	1.000	4.98	7.37	73.7
10	19 13C-PFHxA	315 > 269.8	3.41e4	1.000	1.000	3.86	10.0	100.0
11	20 13C-PFDA	515.1 > 470	1.13e4	1.000	1.000	5.24	10.0	100.0

12/3/14

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Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Wednesday, December 03, 2014 08:53:45 Pacific Standard Time Printed: Wednesday, December 03, 2014 08:54:04 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 26 Nov 2014 12:25:38 Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

#### Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
4	141202G1_1	Methanol	02-Dec-14	09:31:16
1	_	ST141202G1-1 PFC CS1 14K0502	02-Dec-14 02-Dec-14	09:43:49
2	141202G1_2			
3	141202G1_3	Methanol	02-Dec-14	09:56:28
4	141202G1_4	1400894-01@10X KELLY-SW-003 0.14116	02-Dec-14	10:09:11
5	141202G1_5	1400894-02@10X KELLY-SW-004A 0.14668	02-Dec-14	10:21:50
6	141202G1_6	1400894-03@10X KELLY-SW-005A 0.15693	02-Dec-14	10:34:30
7	141202G1_7	1400894-04@10X KELLY-SW-006A 0.15392	02-Dec-14	10:47:11
8	141202G1_8	1400894-05@10X KELLY-SW-007A 0.15447	02-Dec-14	10:59:52
9	141202G1_9	1400894-13@10X KELLY-SW-001 0.14274	02-Dec-14	11:12:36
10	141202G1_10	1400894-14@10X KELLY-SW-002 0.14688	02-Dec-14	11:25:21
11	141202G1_11	1400894-18@10X KELLY-SW-008 0.14927	02-Dec-14	11:38:02
12	141202G1_12	1400885-01@50X GRIFS-GW-004 0.15544	02-Dec-14	11:50:43
13	141202G1_13	1400894-05 KELLY-SW-007A 0.15447	02-Dec-14	12:03:24
14	141202G1_14	Methanol	02-Dec-14	12:16:08
15	141202G1_15	Methanol	02-Dec-14	12:28:49
16	141202G1_16	ST141202G1-2 PFC CS7 14K2201	02-Dec-14	12:41:29
17	141202G1_17	Methanol	02-Dec-14	12:54:11
18	141202G1_18	Methanol	02-Dec-14	13:06:51
19	141202G1_19	1400894-13 KELLY-SW-001 0.14274	02-Dec-14	13:19:32
20	141202G1_20	1400894-14 KELLY-SW-002 0.14688	02-Dec-14	13:32:12
21	141202G1_21	1400894-18 KELLY-SW-008 0.14927	02-Dec-14	13:44:54
22	141202G1_22	Methanol	02-Dec-14	13:57:36
23	141202G1_23	Methanol	02-Dec-14	14:10:16
24	141202G1_24	ST141202G1-3 PFC CS4 14K0504	02-Dec-14	14:22:55
25	141202G1_25	Methanol	02-Dec-14	14:35:35
26	141202G1_26	Methanol	02-Dec-14	14:48:16
27	141202G1_27	1400880-04@5X BERGS-SO-004 1.17	02-Dec-14	15:00:59
28	141202G1_28	1400880-05@5X BERGS-SO-005 1.11	02-Dec-14	15:13:38
29	141202G1_29	1400880-11@5X BERGS-SO-022 1.2	02-Dec-14	15:26:19
30	141202G1_30	1400880-10@5X BERGS-SO-021 1.19	02-Dec-14	15:39:01
31	141202G1_31	Methanol	02-Dec-14	15:51:39

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Quantify Compound Summary Report Vista Analytical Laboratory VG-9 MassLynx 4.1 Page 2 of 2

Untitled Dataset:

Wednesday, December 03, 2014 08:53:45 Pacific Standard Time Wednesday, December 03, 2014 08:54:04 Pacific Standard Time Last Altered:

Printed:

#### Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
32	141202G1_32	ST141202G1-4 PFC CS7 14K2201	02-Dec-14	16:04:20
33	141202G1_33	Methanol	02-Dec-14	16:17:01
34	141202G1_34	Methanol	02-Dec-14	16:29:43

Project 1400885

# INITIAL CALIBRATION

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Vista Analytical Laboratory Q1

Dataset:

C:\Projects\Method\_1694.PRO\Results\141122G1\141122G1 CRV.gld

Last Altered: Printed:

Monday, November 24, 2014 13:16:42 Pacific Standard Time Monday, November 24, 2014 13:18:55 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 14 Nov 2014 15:57:21

Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC Q1 11-22-14.cdb 24 Nov 2014 13:16:42

Compound name: PFBS Response Factor: 1.42124

RRF SD: 0.161773, Relative SD: 11.3826

Response type: Internal Std (Ref 15), Area \* (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF
1	1 141122G1_2	1.00	3.38	1.90e3	1.27e4	1.05	1.50
2	2 141122G1_3	2.00	3.38	3.77e3	1.14e4	2.34	1.66
3	3 141122G1_4	5.00	3.38	9.82e3	1.33e4	5.20	1.48
4	4 141122G1_5	10.0	3.38	1.78e4	1.20e4	10.5	1.49
5	5 141122G1_6	15.0	3.37	2.43e4	1.22e4	14.1	1.33
6	6 141122G1_7	25.0	3.37	4.52e4	1.34e4	23.7	1.35
7	7 141122G1_8	50.0	3.37	7.47e4	1.30e4	40.5	1.15

W/24/14

Compound name: PFHpA

Response Factor: 0.918307

RRF SD: 0.0963914, Relative SD: 10.4966

Response type: Internal Std (Ref 16), Area \* (IS Conc. / IS Area)

Curve type: RF

_	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF
1	1 141122G1_2	1.00	4.35	2.11e3	2.07e4	1.11	1.02
2	2 141122G1_3	2.00	4.35	3.46e3	1.70e4	2.21	1.02
3	3 141122G1_4	5.00	4.35	9.71e3	2.05e4	5.15	0.947
4	4 141122G1_5	10.0	4.35	1.69e4	1.86e4	9.88	0.907
5	5 141122G1_6	15.0	4.34	2.43e4	1.75e4	15.1	0.926
6	6 141122G1_7	25.0	4.34	4.76e4	2.17e4	23.9	0.879
7	7 141122G1_8	50.0	4.34	7.26e4	1.98e4	40.0	0.735

Vista Analytical Laboratory Q1

Dataset:

C:\Projects\Method\_1694.PRO\Results\141122G1\141122G1\_CRV.qld

Last Altered: Printed:

Monday, November 24, 2014 13:16:42 Pacific Standard Time Monday, November 24, 2014 13:18:55 Pacific Standard Time

Compound name: PFHxS Response Factor: 1.02867

RRF SD: 0.0203327, Relative SD: 1.97661

Response type: Internal Std ( Ref 15 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF
1	1 141122G1_2	1.00	4.38	1.27e3	1.27e4	0.969	0.997
2	2 141122G1_3	2.00	4.37	2.36e3	1.14e4	2.02	1.04
3	3 141122G1_4	5.00	4.37	6.80e3	1.33e4	4.97	1.02
4	4 141122G1_5	10.0	4.37	1.25e4	1.20e4	10.2	1.05
5	5 141122G1_6	15.0	4.37	1.84e4	1.22e4	14.7	1.01
6	6 141122G1_7	25.0	4.37	3.49e4	1.34e4	25.2	1.04
7	7 141122G1_8	50.0	4.37	6.82e4	1.30e4	51.1	1.05

Compound name: PFOS Response Factor: 0.939375

RRF SD: 0.0537608, Relative SD: 5.72304

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF
1	1 141122G1_2	1.00	5.01	6.16e2	6.83e3	0.960	0.902
2	2 141122G1_3	2.00	5.00	1.09e3	5.27e3	2.19	1.03
3	3 141122G1_4	5.00	5.00	3.58e3	8.35e3	4.56	0.858
4	4 141122G1_5	10.0	5.00	6.48e3	6.92e3	9.97	0.936
5	5 141122G1_6	15.0	5.00	1.03e4	7.02e3	15.5	0.973
6	6 141122G1_7	25.0	5.00	1.98e4	8.42e3	25.1	0.943
7	7 141122G1_8	50.0	5.00	4.77e4	1.02e4	49.8	0.935

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Vista Analytical Laboratory Q1

Dataset:

C:\Projects\Method\_1694.PRO\Results\141122G1\141122G1\_CRV.qld

Last Altered: Printed:

Monday, November 24, 2014 13:16:42 Pacific Standard Time Monday, November 24, 2014 13:18:55 Pacific Standard Time

Compound name: PFOA

Response Factor: 0.764494

RRF SD: 0.0240129, Relative SD: 3.14102

Response type: Internal Std (Ref 16), Area \* (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF
1	1 141122G1_2	1.00	4.71	1.62e3	2.07e4	1.02	0.782
2	2 141122G1_3	2.00	4.70	2.67e3	1.70e4	2.05	0.785
3	3 141122G1_4	5.00	4.70	7.54e3	2.05e4	4.81	0.735
4	4 141122G1_5	10.0	4.70	1.48e4	1.86e4	10.4	0.798
5	5 141122G1_6	15.0	4.70	1.97e4	1.75e4	14.7	0.749
6	6 141122G1_7	25.0	4.70	4.02e4	2.17e4	24.2	0.741
7	7 141122G1_8	50.0	4.70	7.53e4	1.98e4	49.8	0.762

Compound name: PFNA Response Factor: 0.606346

RRF SD: 0.032496, Relative SD: 5.35931

Response type: Internal Std (Ref 16), Area \* (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF
1	1 141122G1_2	1.00	5.00	1.21e3	2.07e4	0.965	0.585
2	2 141122G1_3	2.00	5.00	2.08e3	1.70e4	2.02	0.612
3	3 141122G1_4	5.00	5.00	6.37e3	2.05e4	5.12	0.621
4	4 141122G1_5	10.0	5.00	1.06e4	1.86e4	9.45	0.573
5	5 141122G1_6	15.0	5.00	1.64e4	1.75e4	15.5	0.626
6	6 141122G1_7	25.0	5.00	3.09e4	2.17e4	23.5	0.569
7	7 141122G1_8	50.0	5.00	6.51e4	1.98e4	54.3	0.659

Vista Analytical Laboratory Q1

Dataset:

C:\Projects\Method\_1694.PRO\Results\141122G1\141122G1\_CRV.qld

Last Altered: Printed:

Monday, November 24, 2014 13:16:42 Pacific Standard Time Monday, November 24, 2014 13:18:55 Pacific Standard Time

Compound name: 13C-PFHxS

Response Factor: 0.463167

RRF SD: 0.0550398, Relative SD: 11.8834

Response type: Internal Std (Ref 19), Area \* (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF
1	1 141122G1_2	10.0	4.38	1.27e4	3.09e4	8.88	0.411
2	2 141122G1_3	10.0	4.37	1.14e4	2.68e4	9.15	0.424
3	3 141122G1_4	10.0	4.37	1.33e4	3.12e4	9.21	0.427
4	4 141122G1_5	10.0	4.37	1.20e4	2.74e4	9.45	0.438
5	5 141122G1_6	10.0	4.37	1.22e4	2.41e4	10.9	0.504
6	6 141122G1_7	10.0	4.37	1.34e4	2.83e4	10.3	0.475
7	7 141122G1_8	10.0	4.37	1.30e4	2.30e4	12.2	0.564

Compound name: 13C-PFOA

Response Factor: 0.713413

RRF SD: 0.0776109, Relative SD: 10.8788

Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF
1	1 141122G1_2	10.0	4.71	2.07e4	3.09e4	9.43	0.672
2	2 141122G1_3	10.0	4.70	1.70e4	2.68e4	8.89	0.634
3	3 141122G1_4	10.0	4.70	2.05e4	3.12e4	9.22	0.658
4	4 141122G1_5	10.0	4.71	1.86e4	2.74e4	9.52	0.679
5	5 141122G1_6	10.0	4.70	1.75e4	2.41e4	10.2	0.725
6	6 141122G1_7	10.0	4.70	2.17e4	2.83e4	10.7	0.767
7	7 141122G1_8	10.0	4.70	1.98e4	2.30e4	12.0	0.858

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Vista Analytical Laboratory Q1

Dataset: C:\Projects\Method\_1694.PRO\Results\141122G1\141122G1\_CRV.qld

Last Altered: Monday, November 24, 2014 13:16:42 Pacific Standard Time Printed: Monday, November 24, 2014 13:18:55 Pacific Standard Time

Compound name: 13C-PFOS Response Factor: 0.909093

RRF SD: 0.146887, Relative SD: 16.1576

Response type: Internal Std (Ref 20), Area \* (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RŤ	Resp	IS Resp	Conc.	RRF
1	1 141122G1_2	10.0	5.00	6.83e3	7.49e3	10.0	0.912
2	2 141122G1_3	10.0	5.00	5.27e3	5.44e3	10.7	0.969
3	3 141122G1_4	10.0	5.00	8.35e3	9.34e3	9.83	0.894
4	4 141122G1_5	10.0	5.00	6.92e3	9.28e3	8.20	0.746
5	5 141122G1_6	10.0	5.00	7.02e3	7.80e3	9.90	0.900
6	6 141122G1_7	10.0	5.00	8.42e3	7.11e3	13.0	1.18
7	7 141122G1_8	10.0	5.00	1.02e4	1.35e4	8.34	0.758

Compound name: 13C-PFHxA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF
1	1 141122G1_2	10.0	3.88	3.09e4	3.09e4	10.0	1.00
2	2 141122G1_3	10.0	3.88	2.68e4	2.68e4	10.0	1.00
3	3 141122G1_4	10.0	3.88	3.12e4	3.12e4	10.0	1.00
4	4 141122G1_5	10.0	3.88	2.74e4	2.74e4	10.0	1.00
5	5 141122G1_6	10.0	3.87	2.41e4	2.41e4	10.0	1.00
6	6 141122G1_7	10.0	3.87	2.83e4	2.83e4	10.0	1.00
7	7 141122G1_8	10.0	3.87	2.30e4	2.30e4	10.0	1.00

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Vista Analytical Laboratory Q1

C:\Projects\Method\_1694.PRO\Results\141122G1\141122G1\_CRV.qld Dataset:

Last Altered: Monday, November 24, 2014 13:16:42 Pacific Standard Time

Monday, November 24, 2014 13:18:55 Pacific Standard Time Printed:

Compound name: 13C-PFDA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 20), Area \* (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF
1	1 141122G1_2	10.0	5.26	7.49e3	7.49e3	10.0	1.00
2	2 141122G1_3	10.0	5.25	5.44e3	5.44e3	10.0	1.00
3	3 141122G1_4	10.0	5.25	9.34e3	9.34e3	10.0	1.00
4	4 141122G1_5	10.0	5.25	9.28e3	9.28e3	10.0	1.00
5	5 141122G1_6	10.0	5.25	7.80e3	7.80e3	10.0	1.00
6	6 141122G1_7	10.0	5.25	7.11e3	7.11e3	10.0	1.00
7	7 141122G1_8	10.0	5.25	1.35e4	1.35e4	10.0	1.00

Project 1400885 Page 82 of 84 Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Monday, November 24, 2014 13:32:27 Pacific Standard Time Printed: Monday, November 24, 2014 13:34:48 Pacific Standard Time

Method: C:\Projects\Method\_1694.PRO\MethDB\PFC\_short\_100mm.mdb 14 Nov 2014 15:57:21 Calibration: C:\Projects\Method\_1694.PRO\CurveDB\C18\_VAL-PFC\_Q1\_11-22-14.cdb 24 Nov 2014 13:16:42

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	141122G1_1	Methanol	22-Nov-14	15:16:02
2	141122G1_2	ST141122G1-1 PFC CS1 14K0502	22-Nov-14	15:28:35
3	141122G1_3	ST141122G1-2 PFC CS2 14K0507	22-Nov-14	15:41:12
4	141122G1_4	ST141122G1-3 PFC CS3 14K0503	22-Nov-14	15:53:53
5	141122G1_5	ST141122G1-4 PFC CS4 14K0504	22-Nov-14	16:06:34
6	141122G1_6	ST141122G1-5 PFC CS5 14K0505	22-Nov-14	16:19:16
7	141122G1_7	ST141122G1-6 PFC CS6 14K0508	22-Nov-14	16:31:57
8	141122G1_8	ST141122G1-7 PFC CS7 14K2201	22-Nov-14	16:44:37
9	141122G1_9	Methanol	22-Nov-14	16:57:19
10	141122G1_10	Methanol	22-Nov-14	17:09:58
11	141122G1_11	SS141122G1-1 PFC SSS 14G1003	22-Nov-14	17:22:41
12	141122G1_12	Methanol	22-Nov-14	17:35:22
13	141122G1_13	Methanol	22-Nov-14	17:48:02
14	141122G1_14	B4K0085-BS1 OPR 1	22-Nov-14	18:00:46
15	141122G1_15	Methanol	22-Nov-14	18:13:23
16	141122G1_16	Methanol	22-Nov-14	18:26:04
17	141122G1_17	B4K0085-BLK1 Method Blank 1	22-Nov-14	18:38:45
18	141122G1_18	1400847-06RE2 @20X KELLY-SO-004 1.2456	22-Nov-14	18:51:28
19	141122G1_19	1400847-09RE2 @20X KELLY-SO-030 1.213	22-Nov-14	19:04:10
20	141122G1_20	1400847-10RE2 @20X KELLY-SO-031 1.3074	22-Nov-14	19:16:48
21	141122G1_21	1400847-03RE2 @50X KELLY-SO-001 0.6287	22-Nov-14	19:29:30
22	141122G1_22	1400847-04RE2 @50X KELLY-SO-002 0.5818	22-Nov-14	19:42:10
23	141122G1_23	1400847-05RE2 @50X KELLY-SO-003 0.5947	22-Nov-14	19:54:51
24	141122G1_24	1400847-07RE2 @50X KELLY-SO-028 0.603	22-Nov-14	20:07:34
25	141122G1_25	1400847-08RE2 @50X KELLY-SO-029 0.6037	22-Nov-14	20:20:12
26	141122G1_26	Methanol	22-Nov-14	20:32:52
27	141122G1_27	Methanol	22-Nov-14	20:45:35
28	141122G1_28	ST141122G1-8 PFC CS7 14K2201	22-Nov-14	20:58:15
29	141122G1_29	Methanol	22-Nov-14	21:10:56
30	141122G1_30	Methanol	22-Nov-14	21:23:37
31	141122G1_31	1400847-11RE2 @50X KELLY-SO-037 0.6206	22-Nov-14	21:36:18

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Vista Analytical Laboratory VG-9

Dataset:

Untitled

Last Altered: Printed:

Monday, November 24, 2014 13:32:27 Pacific Standard Time Monday, November 24, 2014 13:34:48 Pacific Standard Time

Compound name: PFBA

<del>-</del>	Name	ID	Acq.Date	Acq.Time
32	141122G1 32	B4K0085-MS1 @50X Matrix Spike 0.6326	22-Nov-14	21:49:01
33	141122G1_32	B4K0085-MSD1@50X Matrix Spike Dup 0.6201	22-Nov-14	22:01:42
34	141122G1_34	1400846-06RE2 KELLY-SO-019 1.131	22-Nov-14	22:14:23
35	141122G1 35	1400846-07RE2 KELLY-SO-020 0.6088	22-Nov-14	22:27:04
36	141122G1_36	1400846-09RE2 KELLY-SO-022 1.3129	22-Nov-14	22:39:45
37	141122G1 37	1400847-06RE2 KELLY-SO-004 1.2456	22-Nov-14	22:52:26
38	141122G1 38	1400847-09RE2 KELLY-SO-030 1.213	22-Nov-14	23:05:07
39	141122G1 39	1400847-10RE2 KELLY-SO-031 1.3074	22-Nov-14	23:17:48
40	141122G1 40	1400847-03RE2 KELLY-SO-001 0.6287	22-Nov-14	23:30:29
41	141122G1_41 🚱	1400847-04RE2 KELLY-SO-002 0.5818	22-Nov-14	23:43:08
42	141122G1_42 <b>\</b>	1400847-05RE2 KELLY-SO-003 0.5947	22-Nov-14	23:55:49
43	141122G1_43	Methanol	23-Nov-14	00:08:30
44	141122G1_44	Methanol	23-Nov-14	00:21:14
45	141122G1_45	ST141122G1-9 PFC CS4 14K0504	23-Nov-14	00:33:57
46	141122G1_46	Methanol	23-Nov-14	00:46:41
47	141122G1_47	Methanol	23-Nov-14	00:59:23
48	141122G1_48	1400847-07RE2 KELLY-SO-028 0.603	23-Nov-14	01:12:10
49	141122G1_49	1400847-08RE2 KELLY-SO-029 0.6037	23-Nov-14	01:24:47
50	141122G1_50	1400847-11RE2 KELLY-SO-037 0.6206	23-Nov-14	01:37:28
51	141122G1_51	B4K0085-MS1 Matrix Spike 0.6326	23-Nov-14	01:50:09
52	141122G1_52	B4K0085-MSD1 Matrix Spike Dup 0.6201	23-Nov-14	02:02:50
53	141122G1_53	Methanol	23-Nov-14	02:15:31
54	141122G1_54	Methanol	23-Nov-14	02:28:13
55	141122G1_55	Methanol	23-Nov-14	02:40:54
56	141122G1_56	Methanol	23-Nov-14	02:53:34
57	141122G1_57	ST141122G1-10 PFC CS7 14K2201	23-Nov-14	03:06:15
58	141122G1_58	Methanol	23-Nov-14	03:18:57
59	141122G1_59	Methanol	23-Nov-14	03:31:37

A Morethan 10 samples in sequence. Re-inject.

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