

October 23, 2020

### Vista Work Order No. 2002050

Ms. Delaney Peterson Anchor QEA, LLC 720 Olive Way, Suite 1900 Seattle, WA 98101

Dear Ms. Peterson,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on September 30, 2020 under your Project Name 'A0I0499'.

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

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

Sincerely,

Martha Maier Laboratory Director



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

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

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## Vista Work Order No. 2002050 Case Narrative

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

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

### **Analytical Notes:**

### EPA Method 1613B

This sample was extracted and analyzed for tetra-through-octa chlorinated dioxins and furans by EPA Method 1613B using a ZB-DIOXIN GC column.

### **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. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

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# **Sample Inventory Report**

Vista Client Sample ID Sample ID Sampled Received Components/Containers

2002050-01 PDI-083SC-B-12-14-191022 22-Oct-19 14:07 30-Sep-20 10:18 Clear Glass Jar, 120mL

Vista Project: 2002050 Client Project: A0I0499

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# **ANALYTICAL RESULTS**

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Sample ID: Method Blank EPA Method 1613B

**Client Data** 

Name: Anchor QEA, LLC

Project: A0I0499 Matrix: Solid Laboratory Data

Lab Sample: B0J0108-BLK1

QC Batch: B0J0108 Date Extracted: 12-Oct-20 Sample Size: 10.0 g Column: ZB-DIOXIN

Matrix. Solid			1 1000 5	o orunnin	ZB-DIOAIN	
Analyte	Conc. (pg/g)	EDL	EMPC	Qualifiers	Analyzed	Dilution
2,3,7,8-TCDD	ND	0.123			16-Oct-20 13:24	. 1
1,2,3,7,8-PeCDD	ND	0.149			16-Oct-20 13:24	1
1,2,3,4,7,8-HxCDD	ND	0.142			16-Oct-20 13:24	. 1
1,2,3,6,7,8-HxCDD	ND	0.150			16-Oct-20 13:24	. 1
1,2,3,7,8,9-HxCDD	ND	0.155			16-Oct-20 13:24	. 1
1,2,3,4,6,7,8-HpCDD	ND	0.150			16-Oct-20 13:24	. 1
OCDD	ND	0.421			16-Oct-20 13:24	. 1
2,3,7,8-TCDF	ND	0.0798			16-Oct-20 13:24	. 1
1,2,3,7,8-PeCDF	ND	0.0881			16-Oct-20 13:24	. 1
2,3,4,7,8-PeCDF	ND	0.0896			16-Oct-20 13:24	. 1
1,2,3,4,7,8-HxCDF	ND	0.122			16-Oct-20 13:24	. 1
1,2,3,6,7,8-HxCDF	ND	0.113			16-Oct-20 13:24	. 1
2,3,4,6,7,8-HxCDF	ND	0.128			16-Oct-20 13:24	1
1,2,3,7,8,9-HxCDF	ND	0.166			16-Oct-20 13:24	- 1
1,2,3,4,6,7,8-HpCDF	ND	0.192			16-Oct-20 13:24	- 1
1,2,3,4,7,8,9-HpCDF	ND	0.182			16-Oct-20 13:24	. 1
OCDF	ND	0.177			16-Oct-20 13:24	
Toxic Equivalent						
TEQMinWHO2005Dioxin	0.00					
Totals						
Total TCDD	ND	0.123				
Total PeCDD	ND	0.149				
Total HxCDD	ND	0.155				
Total HpCDD	ND	0.150				
Total TCDF	ND	0.0798				
Total PeCDF	ND	0.0896				
Total HxCDF	ND ND	0.166				
Total HpCDF	ND ND	0.100				
Labeled Standards	Type		Limits	Qualifiers	Analyzed	Dilution
		% Recovery		Quanners	-	
13C-2,3,7,8-TCDD	IS	83.9	25 - 164		16-Oct-20 13:24	
13C-1,2,3,7,8-PeCDD	IS	86.7	25 - 181		16-Oct-20 13:24	
13C-1,2,3,4,7,8-HxCDD	IS	91.3	32 - 141		16-Oct-20 13:24	
13C-1,2,3,6,7,8-HxCDD	IS	91.5	28 - 130		16-Oct-20 13:24	1
13C-1,2,3,7,8,9-HxCDD	IS	87.8	32 - 141		16-Oct-20 13:24	1
13C-1,2,3,4,6,7,8-HpCDD	IS	81.3	23 - 140		16-Oct-20 13:24	1
13C-OCDD	IS	70.2	17 - 157		16-Oct-20 13:24	1
13C-2,3,7,8-TCDF	IS	81.0	24 - 169		16-Oct-20 13:24	1
13C-1,2,3,7,8-PeCDF	IS	95.4	24 - 185		16-Oct-20 13:24	
13C-2,3,4,7,8-PeCDF	IS	92.5	21 - 178		16-Oct-20 13:24	
13C-1,2,3,4,7,8-HxCDF	IS	89.3	26 - 152		16-Oct-20 13:24	
13C-1,2,3,6,7,8-HxCDF	IS	90.5	26 - 123		16-Oct-20 13:24	
13C-2,3,4,6,7,8-HxCDF	IS	86.9			16-Oct-20 13:24	
			28 - 136			
13C-1,2,3,7,8,9-HxCDF	IS	87.4	29 - 147		16-Oct-20 13:24	
13C-1,2,3,4,6,7,8-HpCDF	IS	80.6	28 - 143		16-Oct-20 13:24	
13C-1,2,3,4,7,8,9-HpCDF	IS	83.7	26 - 138		16-Oct-20 13:24	
13C-OCDF	IS	68.2	17 - 157		16-Oct-20 13:24	
37Cl-2,3,7,8-TCDD	CRS	92.6	35 - 197		16-Oct-20 13:24	1 1

EDL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

The results are reported in dry weight.

The sample size is reported in wet weight.

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Client Data Name: Ancho Project: A0I04 Matrix: Solid	r QEA, LLC 99		Laboratory Data Lab Sample: QC Batch: Sample Size:	B0J0108-BS1 B0J0108 10.0 g	Date Extracted: Column:	12-Oct-20 10:04 ZB-DIOXIN	
Analyte	Amt Found (pg/g)	Spike Amt	% Recovery	Limits	Qualifiers	Analyzed	Dilution
2,3,7,8-TCDD	19.7	20.0	98.4	67-158		16-Oct-20 11:52	1
1,2,3,7,8-PeCDD	103	100	103	70-142		16-Oct-20 11:52	1
1,2,3,4,7,8-HxCDD	94.4	100	94.4	70-164		16-Oct-20 11:52	1
1,2,3,6,7,8-HxCDD	91.9	100	91.9	76-134		16-Oct-20 11:52	1
1,2,3,7,8,9-HxCDD	90.2	100	90.2	64-162		16-Oct-20 11:52	1
1,2,3,4,6,7,8-HpCDD	98.8	100	98.8	70-140		16-Oct-20 11:52	1
OCDD	194	200	97.2	78-144		16-Oct-20 11:52	1
2,3,7,8-TCDF	18.8	20.0	93.9	75-158		16-Oct-20 11:52	
1,2,3,7,8-PeCDF	91.6	100	91.6	80-134		16-Oct-20 11:52	1
2,3,4,7,8-PeCDF	97.0	100	97.0	68-160		16-Oct-20 11:52	1
1,2,3,4,7,8-HxCDF	107	100	107	72-134		16-Oct-20 11:52	1
1,2,3,6,7,8-HxCDF	107	100	107	84-130 70-156		16-Oct-20 11:52 16-Oct-20 11:52	1
2,3,4,6,7,8-HxCDF	105 103	100	105 103	70-136 78-130		16-Oct-20 11:52 16-Oct-20 11:52	1
1,2,3,7,8,9-HxCDF	97.2	100	97.2	82-122		16-Oct-20 11:52 16-Oct-20 11:52	1
1,2,3,4,6,7,8-HpCDF	96.2	100 100	96.2	78-138		16-Oct-20 11:52	1
1,2,3,4,7,8,9-HpCDF OCDF	211	200	106	63-170		16-Oct-20 11:52	1
Labeled Standards	Туре	200	% Recovery	Limits	Qualifiers		Dilution
13C-2,3,7,8-TCDD	IS		82.8	20-175		16-Oct-20 11:52	1
13C-1,2,3,7,8-PeCDD	IS		88.8	21-227		16-Oct-20 11:52	
13C-1,2,3,4,7,8-HxCDD	IS		83.7	21-193		16-Oct-20 11:52	
13C-1,2,3,6,7,8-HxCDD	IS		84.9	25-163		16-Oct-20 11:52	
13C-1,2,3,7,8,9-HxCDD	IS		87.1	21-193		16-Oct-20 11:52	
13C-1,2,3,4,6,7,8-HpCDD	) IS		75.6	26-166		16-Oct-20 11:52	1
13C-OCDD	IS		65.3	13-199		16-Oct-20 11:52	
13C-2,3,7,8-TCDF	IS		77.4	22-152		16-Oct-20 11:52	
13C-1,2,3,7,8-PeCDF	IS		88.7	21-192		16-Oct-20 11:52	
13C-2,3,4,7,8-PeCDF	IS		85.4	13-328		16-Oct-20 11:52	
13C-1,2,3,4,7,8-HxCDF	IS		82.4	19-202		16-Oct-20 11:52	
13C-1,2,3,6,7,8-HxCDF	IS		84.4			16-Oct-20 11:52	
13C-2,3,4,6,7,8-HxCDF	IS		81.4	21-159		16-Oct-20 11:52 16-Oct-20 11:52	
* * * * *				22-176			
13C-1,2,3,7,8,9-HxCDF	IS		83.2	17-205		16-Oct-20 11:52	
13C-1,2,3,4,6,7,8-HpCDF			76.2	21-158		16-Oct-20 11:52	
13C-1,2,3,4,7,8,9-HpCDF			78.5	20-186		16-Oct-20 11:52	
11C OCDE	IS		66.0	13-199		16-Oct-20 11:52	1
13C-OCDF 37Cl-2,3,7,8-TCDD	CRS		95.3	13-199		16-Oct-20 11:52	

**EPA Method 1613B** 

Sample ID: OPR

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Project: A Matrix: Se	nchor QEA, LLC 010499 ediment Oct-19 14:07			Laboratory Dat Lab Sample: QC Batch: Sample Size: % Solids:	2002050-01 B0J0108 17.7 g 56.7	Date Received: Date Extracted: Column:	30-Sep-20 10 12-Oct-20 ZB-DIOXIN	
Analyte	Con	ıc. (pg/g )	EDL	EMPC		Qualifiers	Analyzed	Dilution
2,3,7,8-TCDD		ND		0.334			16-Oct-20 18:01	1
1,2,3,7,8-PeCDD		1.23				J	16-Oct-20 18:01	1
1,2,3,4,7,8-HxCDD		ND		0.433			16-Oct-20 18:01	1
1,2,3,6,7,8-HxCDD		3.36					16-Oct-20 18:01	1
1,2,3,7,8,9-HxCDD		1.06				J	16-Oct-20 18:01	1
1,2,3,4,6,7,8-HpCDD		91.4					16-Oct-20 18:01	1
OCDD		1820					16-Oct-20 18:01	
2,3,7,8-TCDF		0.747					16-Oct-20 18:01	1
1,2,3,7,8-PeCDF		0.648				J	16-Oct-20 18:01	1
2,3,4,7,8-PeCDF		7.31					16-Oct-20 18:01	
1,2,3,4,7,8-HxCDF		2.92					16-Oct-20 18:01	
1,2,3,6,7,8-HxCDF		2.45				J	16-Oct-20 18:01	
2,3,4,6,7,8-HxCDF		4.33					16-Oct-20 18:01	
1,2,3,7,8,9-HxCDF		0.794				J	16-Oct-20 18:01	
1,2,3,4,6,7,8-HpCDF		76.1					16-Oct-20 18:01	
1,2,3,4,7,8,9-HpCDF		ND		1.33			16-Oct-20 18:01	
OCDF		73.8					16-Oct-20 18:01	1
Toxic Equivalent								
TEQMinWHO2005D	ioxin	7.25						
Totals								
Total TCDD		5.45		6.21				
Total PeCDD		10.9		13.8				
Total HxCDD		29.2		29.6				
Total HpCDD		226						
Total TCDF		34.9						
Total PeCDF		74.9		75.2				
Total HxCDF		66.5						
Total HpCDF		164		165				
<b>Labeled Standards</b>		Туре	% Recove	ery	Limits	Qualifiers	Analyzed	Dilution
13C-2,3,7,8-TCDD		IS	87.6		25 - 164		16-Oct-20 18:01	
13C-1,2,3,7,8-PeCDI		IS	90.6		25 - 181		16-Oct-20 18:01	
13C-1,2,3,4,7,8-HxC		IS	95.4		32 - 141		16-Oct-20 18:01	
13C-1,2,3,6,7,8-HxC	DD	IS	97.9		28 - 130		16-Oct-20 18:01	
13C-1,2,3,7,8,9-HxC		IS	98.5		32 - 141		16-Oct-20 18:01	
13C-1,2,3,4,6,7,8-Hp	CDD	IS	90.2		23 - 140		16-Oct-20 18:01	1
13C-OCDD		IS	83.3		17 - 157		16-Oct-20 18:01	. 1
13C-2,3,7,8-TCDF		IS	87.3		24 - 169		16-Oct-20 18:01	1
13C-1,2,3,7,8-PeCDF		IS	88.9		24 - 185		16-Oct-20 18:01	. 1
13C-2,3,4,7,8-PeCDF		IS	91.0		21 - 178		16-Oct-20 18:01	. 1
13C-1,2,3,4,7,8-HxC		IS	88.4		26 - 152		16-Oct-20 18:01	
13C-1,2,3,6,7,8-HxC		IS	88.0		26 - 123		16-Oct-20 18:01	
13C-2,3,4,6,7,8-HxC		IS	87.3		28 - 136		16-Oct-20 18:01	
13C-1,2,3,7,8,9-HxC		IS	92.0		29 - 147		16-Oct-20 18:01	
13C-1,2,3,4,6,7,8-Hp		IS	91.3		28 - 143		16-Oct-20 18:01	
13C-1,2,3,4,7,8,9-Hp		IS	89.5		26 - 138		16-Oct-20 18:01	
13C-1,2,3,4,7,8,9-11p	CD1	IS	75.9		17 - 157		16-Oct-20 18:01	
37Cl-2,3,7,8-TCDD		CRS	106				16-Oct-20 18:01	
J, C1-2,3,7,0-1 CDD		CIND	100		35 - 197		10-061-20 10.01	. 1

**EPA Method 1613B** 

Sample ID: PDI-083SC-B-12-14-191022

EMPC - Estimated maximum possible concentration

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The sample size is reported in wet weight.

# DATA QUALIFIERS & ABBREVIATIONS

B This compound was also detected in the method blank

Conc. Concentration

CRS Cleanup Recovery Standard

D Dilution

DL Detection Limit

E The associated compound concentration exceeded the calibration range of the

instrument

H Recovery and/or RPD was outside laboratory acceptance limits

I Chemical Interference

IS Internal Standard

J The amount detected is below the Reporting Limit/LOQ

K EMPC (specific projects only)

LOD Limit of Detection

LOQ Limit of Quantitation

M Estimated Maximum Possible Concentration (CA Region 2 projects only)

MDL Method Detection Limit

NA Not applicable

ND Not Detected

OPR Ongoing Precision and Recovery sample

P The reported concentration may include contribution from chlorinated diphenyl

ether(s).

Q The ion transition ratio is outside of the acceptance criteria.

RL Reporting Limit

TEQ Toxic Equivalency

U Not Detected (specific projects only)

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

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# **Vista Analytical Laboratory Certifications**

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	19-013-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-23
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2018017
Massachusetts Department of Environmental Protection	N/A
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1521520
New Hampshire Environmental Accreditation Program	207718-В
New Jersey Department of Environmental Protection	190001
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-010
Pennsylvania Department of Environmental Protection	016
Texas Commission on Environmental Quality	T104704189-19-10
Vermont Department of Health	VT-4042
Virginia Department of General Services	10272
Washington Department of Ecology	C584-19
Wisconsin Department of Natural Resources	998036160

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

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# **NELAP Accredited Test Methods**

MATRIX: Air	
<b>Description of Test</b>	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated	EPA 23
Dibenzofurans	
Determination of Polychlorinated p-Dioxins & Polychlorinated	EPA TO-9A
Dibenzofurans	

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

MATRIX: Drinking Water	
<b>Description of Test</b>	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA
	1613/1613B
1,4-Dioxane (1,4-Diethyleneoxide) analysis by GC/HRMS	EPA 522
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	ISO 25101
	2009

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

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

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# SUBCONTRACT ORDER

# 8)

# Apex Laboratories A0I0499

2002050

Sample Name: PDI-018SC-A-04-05-1	90926	Sedimen	Sampled:	Relogged From A9I0890- 09/26/19 08:54	(A0I0499-27)				
Analysis	Drue	Expires		Comments					
1613B Dioxins and Furans (SUB)  Containers Supplied:  (C)4 oz Glass Jar	10/05/20 17:00	03/24/20 08	.54						
				Relogged From A9I0890-	-16				
Sample Name: PDI-018SC-A-05-06-1	90926	Sedimen	Sampled:	09/26/19 08:54	(A0I0499-28				
Analysis	Due	Expires	910	Comments					
1613B Dioxins and Furans (SUB)  Containers Supplied: (C)4 oz Glass Jar	10/05/20 17:00	03/24/20 08	:54						
				Composite of 29 & 30					
Sample Name: PDI-083SC-B-12-14-1	91022	Sedimen	Sampled:	10/22/19 14:07	(A0I0499-31)				
Analysis	Due	Expires		Comments					
1613B Dioxins and Furans (SUB)  Containers Supplied: (B)4 oz Glass Jar	10/05/20 17:00	04/19/20 14	:07		·				

Crossed off samples already shipped
Please analyze PDI-083SC-13-12-14-191022
and direct bill to Anchor QEA

Leleased By Date

Fed Ex (Shipper)

Received By

White

Fed Ex (Shipper)

Date

10:18

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Released By

Date

make July Julian

Date



# Sample Log-In Checklist

							Pa	age#_		of	_
Vista Work Order #: <u>2002050</u>											
Samples	Date/Tim				itials:		Loca	tion:	1	U2-2	-
Arrival:	9130	20	10:18		UR	N)	Shelf	f/Rack	: <u> </u>	A	
Delivered By:	FedEx	UPS	On Tra	ıc	GLS	DHL	-	Hand Delive		Oth	ner
Preservation:	(10	Blue Ice Techni Ice Dry				Ice	No	ne			
Temp °C:	q (uncorr	ected)	Probe use	əd.	VIÀ		Ther	moma	ter ID:	IR	.3
Temp °C:	(correc	ted)		<u></u>	- 70		THE				_
	通要但是								YES	NO	NA
Shipping Contain	ner(s) Intac	t?							V	110	147
Shipping Custody											X
Airbill 🛩	Trk	# 77/	0 62	-9	9 3	866	2		C	1	
Shipping Docume	entation Pr	esent?							4		
Shipping Contain	ner	,	Vista	X	Client	R	etain	Re	eturn	Dis	ose
Chain of Custody	/ / Sample	Docume	ntation Pr	ese	ent?				V		
Chain of Custody	/ / Sample	Docume	ntation Co	omj	olete?				/		
Holding Time Ac	Holding Time Acceptable?										
	Date/Tim	ne		lr	nitials:		Loca	ition:	WR.	-2	
Logged In:	10/01/20	<u> </u>	847		KS	1	Shel	f/Rack	:: <u>D</u> -	7	
COC Anomaly/Sa	ample Acc	eptance l	Form com	ıple	eted?						

Comments:

ID.: LR - SLC

Rev No.: 6

Rev Date: 07/16/2020

Page: 1 of 1

# CoC/Label Reconciliation Report WO# 2002050

LabNumber CoC Sample ID	/		Samp	oleAlias	Sample Date/Time	/	Container	BaseMatrix Con
2002050-01 A PDI-083SC-B-12-14-191022	Ø		A010-	499-31	22-Oct-19 14:07		Clear Glass Jar, 120mL	Solid
Checkmarks indicate that information or Any discrepancies are noted in the follow		th the sample label.						
		Yes	No	NA	Comments:			
Sample Container Intact?	-			,				

Container Type Appropriate for Analysis(es)

If Chlorinated or Drinking Water Samples, Acceptable Preservation?

Preservation Documented: Na2S2O3 Trizma None) Other

Verifed by/Date: DPO 10-01-20

Sample Custody Seals Intact?

Adequate Sample Volume?

Printed: 10/1/2020 11:08:00AM

# **EXTRACTION INFORMATION**

Work Order 2002050 Page 16 of 269

## **Process Sheet**

Workorder: 2002050

Prep Expiration: 2020-10-21

Client: Anchor QEA, LLC

Workorder Due: 21-Oct-20 00:00

**TAT: 21** 

Method: 1613 Full List

Matrix: Solid

Client Matrix: Sediment

Also run: Percent Solids

Prep Batch: B0T0108

Prep Data Entered: OD 10 14 20
Date and Initials

Initial Sequence:

5050055

LabSampleID

Recon ClientSampleID

**Date Received** 

Location Comments

2002050-01 A

PDI-083SC-B-12-14-191022

30-Sep-20 10:18

WR-2 D-7

WO Comments: Dioxin - 10g (dry weight)

Pre-Prep Check Out: 0 10/06/20

Prep Check In: 40/12/20

Page 1 of 1

#### PREPARATION BENCH SHEET

B0J0108	

Prep Date/Time: 12-Oct-20 10:04

Method: 1613 Full List

Method: 8290 2.3.7.8-TCDD Only

Prepared using: HRMS - Soxhlet

					Column Packer:	EM 10/13/20				
Sox	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS/PS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
CI.	B0J0108-BLK1	N/A	(10.00)	8111M 10/12/20	EU IM 10/13/20	EW 10/13/20	00 10/14/20	90 10/14/20	00 10/14/20	ao 14 10/14/20
C2	B0J0108-BS1	$\rightarrow$	(10.00)		$\overline{}$	T	41	+ 1	-	1,1
C3	2002050-01	17.62	17.72			AIM	black			
04	2002100-01	59.33	53.56	V 290x (01)		EM 10/13/20		<b>b</b>	₩ NA	V

a sample was dark of muddy wy odor fell 10/12/20

B packed sample to top of thimble full 10/12/20

Solid particulate formed on sidel of bundbottom after votovapina could not remove all of it gov acid partitioning, Rinsed roundbottom by DCM of continued by method Ell10/13/20

IS:	20F1101, 10 ML (4)		APP: SEFUN SOX SDS	Check Out: Chemist/Date: W 10/1420	Soxhlet Siphoned	Notes:
NS:	20F0107,10 ML (V4)	Start Date, Time	SOLV: 101	Check In: (All I a care	BILL 10/12/170	
PS/CR	s:20ED701, 10 ML V2	10/12/20 1400	Other NIA	Check In: Chemist/Date: UN 10/12/20	0001.07.07.00	
RS:	20E0702,10d(V2)	Stop Date/Time		Balance ID: <u>HPMS-0</u> 8	Vial Transfer Chemist/Date:	
Diox/I	PCB PAH PEST PBDE HCB	10/13/20 0621	<u> </u>		00 10/14/20	

Comments:

<sup>1 =</sup> Sample approached dryness on rotovap

<sup>2 =</sup> Sample bumped on rotovap; lost < 5%

<sup>3</sup> ple poured through Na2SO4 to remove water

<sup>4</sup> pitate present at Final Volume

<sup>5 =</sup> Sample homogenized in secondary container

<sup>6 =</sup> Sample clogged during extaction; pipetted and used Nitrogen to assist

<sup>7 =</sup> Sohxlet approached dryness

Batch: B0J0108

Matrix: Solid

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
2002050-01	17.72 √	56.73914	10.0542	20	12-Oct-20 10:04	EMM			Sediment	1613 Full List
2002100-01	53.56 √	16.85626	9.0282	20	12-Oct-20 10:04	EMM			Sludge	8290 2,3,7,8-TCDD Only
B0J0108-BLK1	10			20	12-Oct-20 10:04	EMM				QC
B0J0108-BS1	10		1	20	12-Oct-20 10:04	EMM	20F0107	10		QC

0 10/154/20

Printed: 10/14/2020 9:11:27AM Page 1 of 1

# Percent Moisture/ Percent Solids

D2216-90

BATCH ID B0J0066

Analyst: DG √	Test Code: %Moist/%Solids	
Analyte:	Units: %	Data Entry Verified by: (Initial and Date) 10/12/20
Dried at 110°C+/-5°C Oven ID: 01 √ 02		, ,

 Inst
 Date/Time IN:
 Date/Time OUT

 10/06/20 10/03
 10/12/20\_0824

	В		D	E	F	G	1. K			M	Ν	0	Р	
					DG 10/06/20 V	DG 10/12/20 V			DG 10/06/20	$\overline{\ \ }$		NA ·	$\sqrt{}$	DG 10/06/20
Particle Size	SamplD		SampType	Pan Tare Wt. (gms)	Wet Pan and Sample	Dry Pan and Sample Weight (g) 3.9200	Dry Sample Weight (g)	%Solids RawVal	Visual Inspection,	CI-	Before	pH After	Acid Added	Sample Homogenized*
	2002050-01	A	Sample	1.3100	5.9100	3.9200	2.6100	56.74	MUDV	NAY	NA	NAV	NA/	x ✓
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<sup>\*</sup>Sample homogenized in sample container unless otherwise noted.

BCH\_PMOIST\_B0J0066.xls

10/12/2020 8:41 AM

# Percent Moisture/ Percent Solids

D2216-90

BATCH ID B0J0066

١	Analyst: \Y	Test Code: %Moist/%Solids	
ᆀ	· 105		Data Entry Verified by:
-	Analyte:	Units: %	(Initial and Date)
١	Dried at 110°C+/-5°C		
	Oven ID: (01) 02		

Inst HRMS-8

Date/Time IN: Date/Time OUT

| 10/06/20 | 10/12/20 | 10/03 | 10/04/4

,,,,,	0		1003	0824											
	В	,4 C	D	E	. 10 mg <b>F</b> 10 mg 1 mg	H		K L M  1)6 10/06/20  Visual CI- pH  Inspection Before			N	0	P		
				Intial and Date:	VG 10/06/20	DG 10/12/20			06 10/0	6/2	0	NA		NG 10/06/20	
Particle Size	SamplD		SampTyne	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g) 5.9	Dry Pan and Sample	Dry Sample	%Solids	Visual	CI-	Ha	ρН	Acid	Sample	
i article Olze	Campib		Cump type	Tare Wt. (ams)	Weight (g)	Weight (a)	Dry Sample Weight (g)	RawVal	Inspection	١٠.	Before	After	Added	Homogenized*	
		I A		1 21	FAI	2 92	violgiie (g)	- Manva	MUD	_					
	2002050-01		Sample	1.31	3.41	5.74			עטרין	_					
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\*Sample homogenized in sample container unless otherwise noted.

BCH\_PMOIST\_B0J0066.xls

10/6/2020 9:45 AM

1 of 1

Work Order 2002050

# SAMPLE DATA – EPA METHOD 1613

Work Order 2002050 Page 22 of 269

U:\VG7.PRO\Results\201016D1\201016D1-6.qld Dataset:

Last Altered: Saturday, October 17, 2020 13:59:20 Pacific Daylight Time Monday, October 19, 2020 16:14:10 Pacific Daylight Time Printed:

Oy 10192020

Method: C:\MassLynx\Default.PRO\MethDB\1613\_rrt.mdb 06 Oct 2020 14:27:08 Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 201016D1 6, Date: 16-Oct-2020, Time: 13:24:53, ID: B0J0108-BLK1 Method Blank 10, Description: Method Blank

	# Name	Resp	RA n	y RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD		N	0 1.00	10.000	25.821		1.001				0.123	
2	2 1,2,3,7,8-PeCDD		N	0.935	10.000	30.166		1.001				0.149	
3	3 1,2,3,4,7,8-HxCDD		N	0 1.15	10.000	33.404		1.000				0.142	
4	4 1,2,3,6,7,8-HxCDD		N	0 1.02	10.000	33.514		1.000				0.150	
5	5 1,2,3,7,8,9-HxCDD		N	0 1.06	10.000	33.822		1.001				0.155	
6	6 1,2,3,4,6,7,8-HpCDD		N	O 1.00	10.000	37.201		1.000				0.150	
7	7 OCDD		N	0.952	10.000	40.383		1.000				0.421	
8	8 2,3,7,8-TCDF		N	0 1.01	10.000	25.173		1.001				0.0798	
9	9 1,2,3,7,8-PeCDF		N	O 0.998	10.000	29.019		1.001				0.0881	
10	10 2,3,4,7,8-PeCDF		N	0 1.07	10.000	29.974		1.001				0.0896	
11	11 1,2,3,4,7,8-HxCDF		N	0 1.05	10.000	32.494		1.000				0.122	
12	12 1,2,3,6,7,8-HxCDF		N	0 1.10	10.000	32.635		1.000				0.113	
13	13 2,3,4,6,7,8-HxCDF		N	0 1.09	10.000	33.306		1.001				0.128	
14	14 1,2,3,7,8,9-HxCDF		N	0 1.08	10.000	34.283		1.000				0.166	
15	15 1,2,3,4,6,7,8-HpCDF		N	0 1.13	10.000	35.953		1.001				0.192	
16	16 1,2,3,4,7,8,9-HpCDF		N	0 1.29	10.000	37.827		1.000				0.182	
17	17 OCDF		N	O 0.953	10.000	40.702		1.000				0.177	
18	18 13C-2,3,7,8-TCDD	9.40e4	0.77 N	0 1.17	10.000	25.786	25.79	1.026	1.026	167.80	83.9	0.770	
19	19 13C-1,2,3,7,8-PeCDD	7.57e4	0.63 N	O 0.914	10.000	29.974	30.15	1.193	1.199	173.40	86.7	0.565	
20	20 13C-1,2,3,4,7,8-HxCDD	5.83e4	1.28 N	O 0.634	10.000	33.394	33.39	1.014	1.014	182.65	91.3	1.14	
21	21 13C-1,2,3,6,7,8-HxCDD	6.67e4	1.27 N	O 0.724	10.000	33.503	33.51	1.017	1.018	182.95	91.5	0.995	
22	22 13C-1,2,3,7,8,9-HxCDD	6.33e4	1.25 N	O 0.716	10.000	33.769	33.79	1.025	1.026	175.52	87.8	1.01	
23	23 13C-1,2,3,4,6,7,8-HpCDD	5.41e4	1.07 N	O 0.660	10.000	37.181	37.19	1.129	1.129	162.67	81.3	1.43	
24	24 13C-OCDD	8.29e4	0.85 N	O 0.587	10.000	40.158	40.38	1.219	1.226	280.61	70.2	1.07	
25	25 13C-2,3,7,8-TCDF	1.32e5	0.76 N	O 1.02	10.000	24.882	25.15	0.990	1.001	161.91	81.0	0.641	
26	26 13C-1,2,3,7,8-PeCDF	1.28e5	1.59 N	O 0.842	10.000	29.046	29.00	1.156	1.154	190.86	95.4	1.39	
27	27 13C-2,3,4,7,8-PeCDF	1.19 <b>e</b> 5	1.57 N	O 0.802	10.000	29.933	29.94	1.191	1 191	184.93	92.5	1.46	
28	28 13C-1,2,3,4,7,8-HxCDF	9.02e4	0.51 N	O 1.00	10.000	32.538	32.49	0.988	0.987	178.59	89.3	1.20	
29	29 13C-1,2,3,6,7,8-HxCDF	9.29e4	0.51 N	O 1.02	10.000	32.669	32.63	0.992	0.991	180.99	90.5	1.19	
30	30 13C-2,3,4,6,7,8-HxCDF	8.36e4	0.52 N	O 0.955	10.000	33.233	33.27	1.009	1.010	173.80	86.9	1.26	

Page 23 of 269 Work Order 2002050

U:\VG7.PRO\Results\201016D1\201016D1-6.qld

Last Altered: Printed:

Saturday, October 17, 2020 13:59:20 Pacific Daylight Time

Monday, October 19, 2020 16:14:10 Pacific Daylight Time

## Name: 201016D1\_6, Date: 16-Oct-2020, Time: 13:24:53, ID: B0J0108-BLK1 Method Blank 10, Description: Method Blank

100	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
31	31 13C-1,2,3,7,8,9-HxCDF	7.50e4	0.51	NO	0.851	10.000	34.296	34.28	1.041	1.041	174.86	87.4	1.42	
32	32 13C-1,2,3,4,6,7,8-HpCDF	6.89e4	0.43	NO	0.848	10.000	35.798	35.92	1.087	1.091	161.25	80.6	1.34	
33	33 13C-1,2,3,4,7,8,9-HpCDF	5.26e4	0.43	NO	0.624	10.000	37.774	37.83	1,147	1.149	167.38	83.7	1.81	
34	34 13C-OCDF	1.00e5	0.92	NO	0.730	10.000	40.310	40.70	1,224	1.236	272.66	68.2	0.898	
35	35 37CI-2,3,7,8-TCDD	4.27e4			1.21	10.000	25.784	25.81	1.026	1.027	74.067	92.6	0.148	
36	36 13C-1,2,3,4-TCDD	9.55e4	0.78	NO	1.00	10.000	25.260	25.13	1.000	1.000	200.00	100	0.903	
37	37 13C-1,2,3,4-TCDF	1.60e5	0.76	NO	1.00	10.000	23.930	23.79	1.000	1.000	200.00	100	0.655	
38	38 13C-1,2,3,4,6,9-HxCDF	1.01e5	0.50	NO	1.00	10.000	32.990	32.93	1.000	1.000	200.00	100	1.21	
39	39 Total Tetra-Dioxins				1.00	10.000	24.620		0.000				0.0790	
40	40 Total Penta-Dioxins				0.935	10.000	29.960		0.000				0.0600	
41	41 Total Hexa-Dioxins				1.02	10.000	33.635		0.000				0.0819	
42	42 Total Hepta-Dioxins				1.00	10.000	37.640		0.000				0.0800	
43	43 Total Tetra-Furans				1.01	10.000	23.610		0.000				0.0315	
44	44 1st Func. Penta-Furans				0.998	10.000	26.750		0.000				0.0255	
45	45 Total Penta-Furans				0.998	10.000	29.275		0.000				0.0363	
46	46 Total Hexa-Furans				1.09	10.000	33.555		0.000				0.0655	
47	47 Total Hepta-Furans				1.13	10.000	37.835		0.000				0.101	

Work Order 2002050 Page 24 of 269

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\201016D1\201016D1-6.qld

Last Altered: Saturday, October 17, 2020 13:59:20 Pacific Daylight Time Printed: Monday, October 19, 2020 16:14:10 Pacific Daylight Time

Method: C:\MassLynx\Default.PRO\MethDB\1613\_rrt.mdb 06 Oct 2020 14:27:08 Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 201016D1\_6, Date: 16-Oct-2020, Time: 13:24:53, ID: B0J0108-BLK1 Method Blank 10, Description: Method Blank

#### **Tetra-Dioxins**

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1										LIVII O	, DE
Penta-Dioxins											
Name 1	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
Hexa-Dioxins											
Name 1	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
Hepta-Dioxins											
Name 1	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
Tetra-Furans											
Name 1	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
Penta-Furans function 1											
Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL

Work Order 2002050 Page 25 of 269

Page 2 of 2

Vista Analytical Laboratory

Dataset:

U:\VG7.PRO\Results\201016D1\201016D1-6.qld

Last Altered: Printed:

Saturday, October 17, 2020 13:59:20 Pacific Daylight Time Monday, October 19, 2020 16:14:10 Pacific Daylight Time

Name: 201016D1\_6, Date: 16-Oct-2020, Time: 13:24:53, ID: B0J0108-BLK1 Method Blank 10, Description: Method Blank

#### Penta-Furans

C DL	EMPC	Conc.	Resp	n/y 	RA	m2 Resp	m1 Resp	m2 Height	m1 Height	RT	Name
											lexa-Furans
C DL	EMPC	Conc.	Resp	n/y	RA	m2 Resp	m1 Resp	m2 Height	m1 Height	RT	Name
_			Resp		KA	mz kesp		mz neignt	- Height	- RI	Name

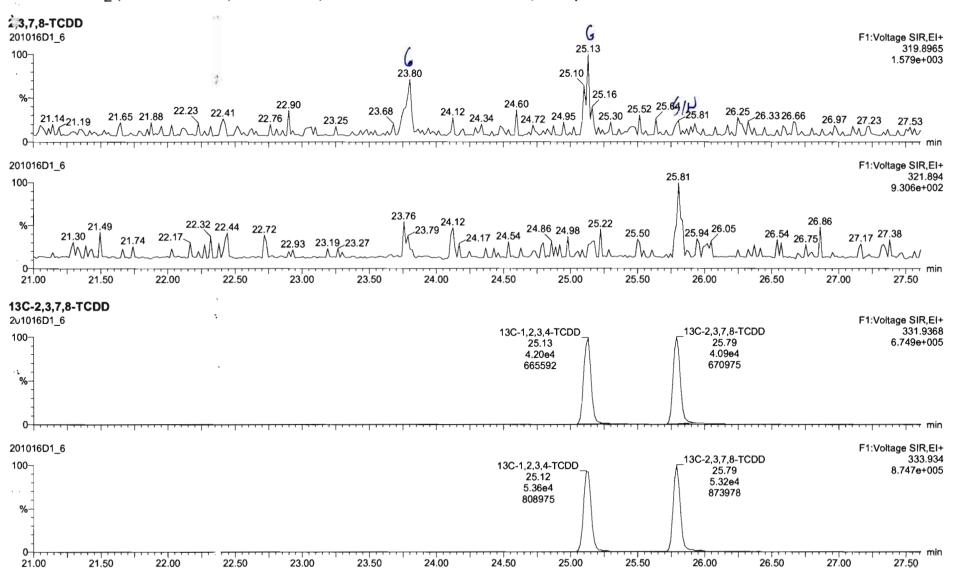
### Hepta-Furans

Name	RT	m1 Height m2 Height	m1 Resp m2 Resp	RA n/y	Resp	Conc.	EMPC	DL
1								

Work Order 2002050 Page 26 of 269

Untitled

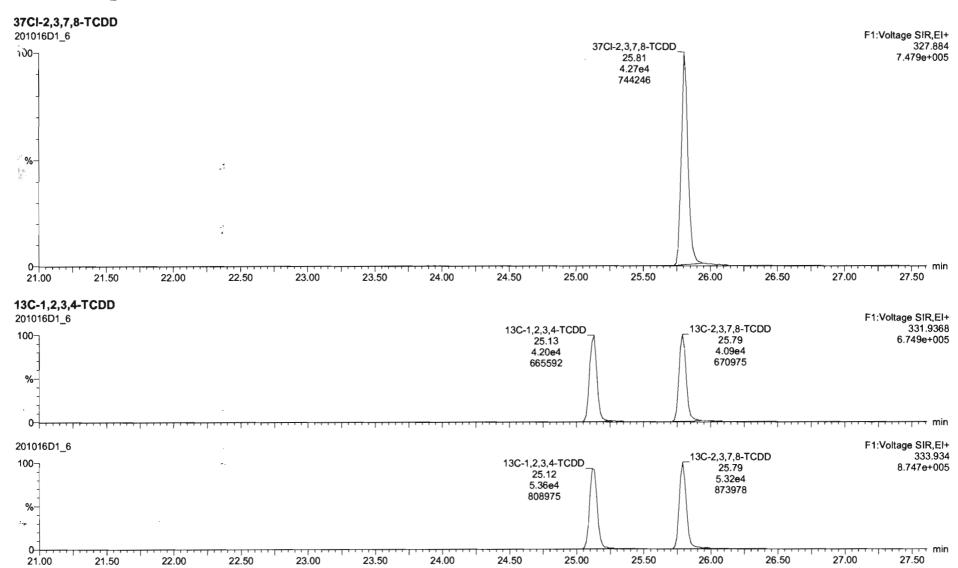
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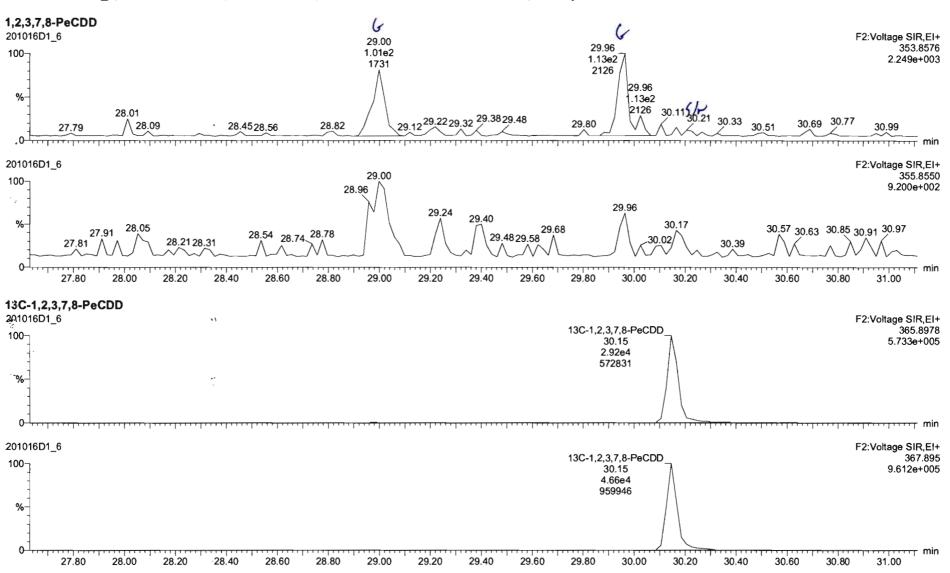
Last Altered: Printed:

Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time



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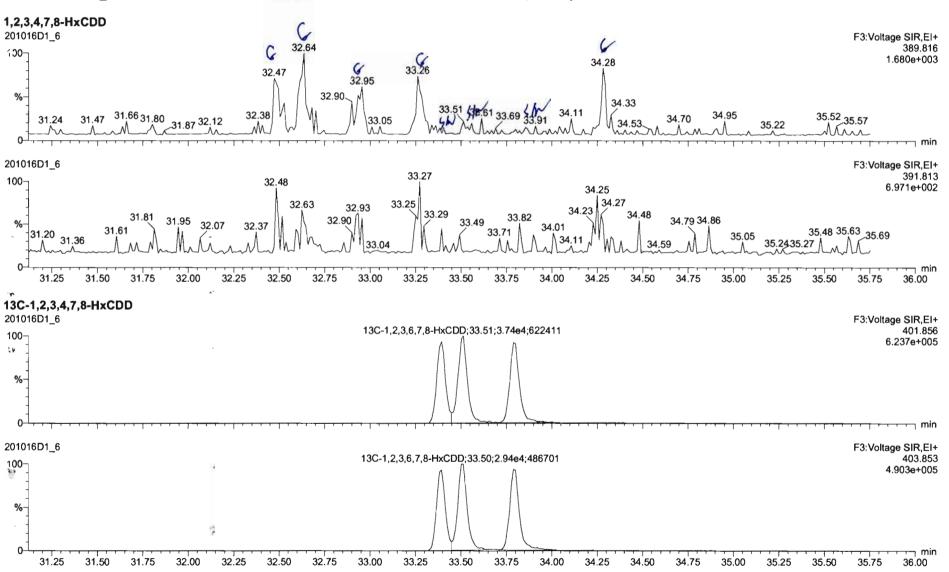
Last Altered: Printed: Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time



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Last Altered: Printed:

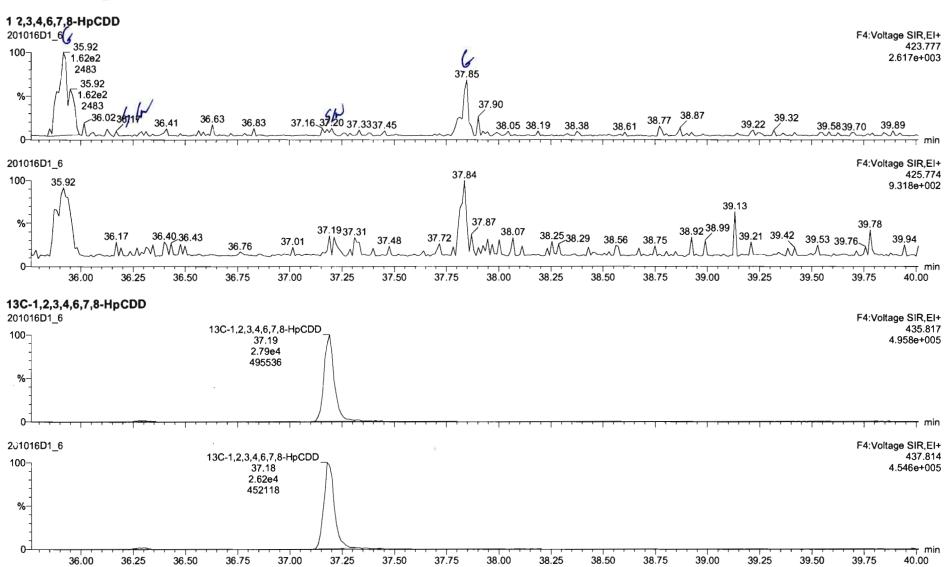
Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time



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Last Altered: Printed:

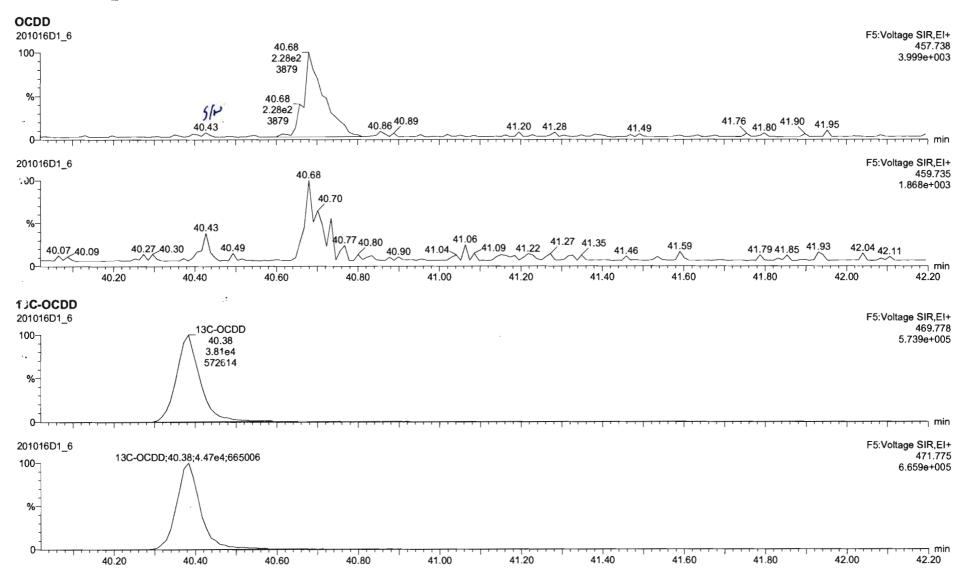
Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time



Untitled

Last Altered: Printed:

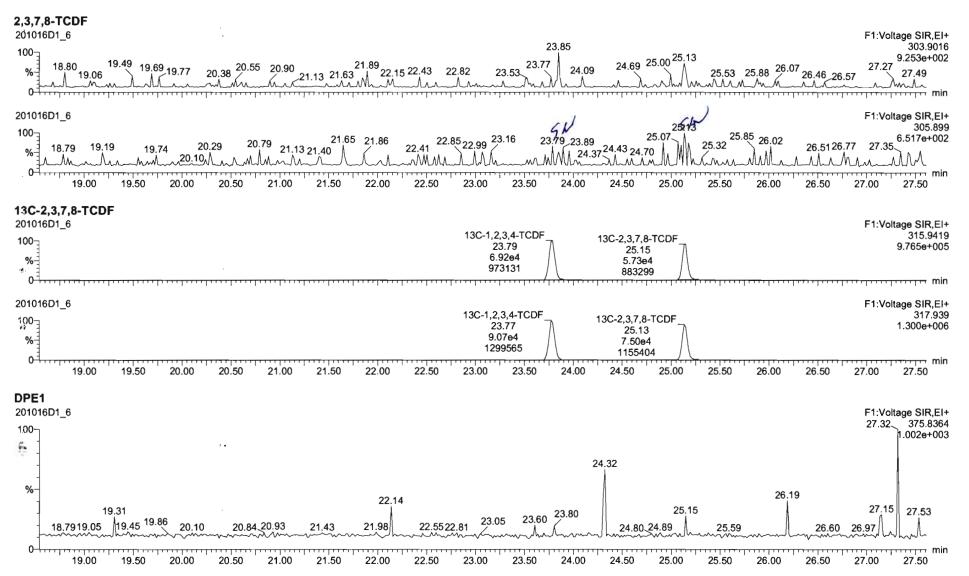
Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time



Untitled

Last Altered: Printed:

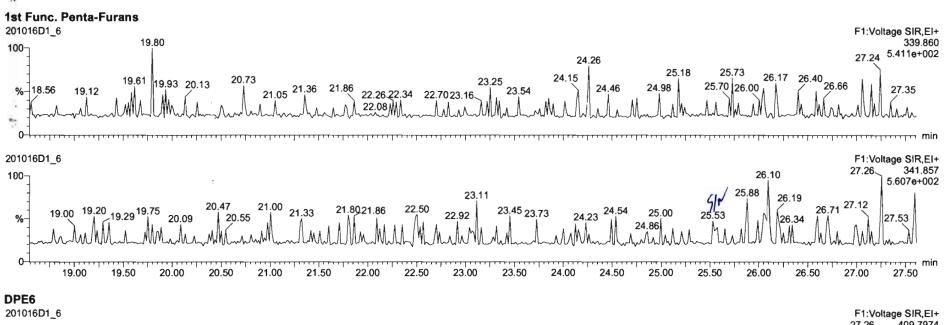
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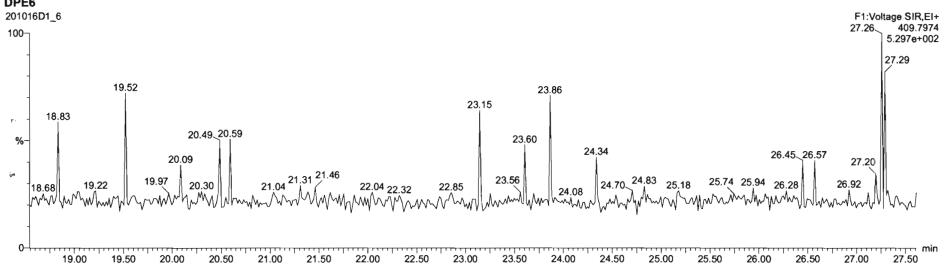


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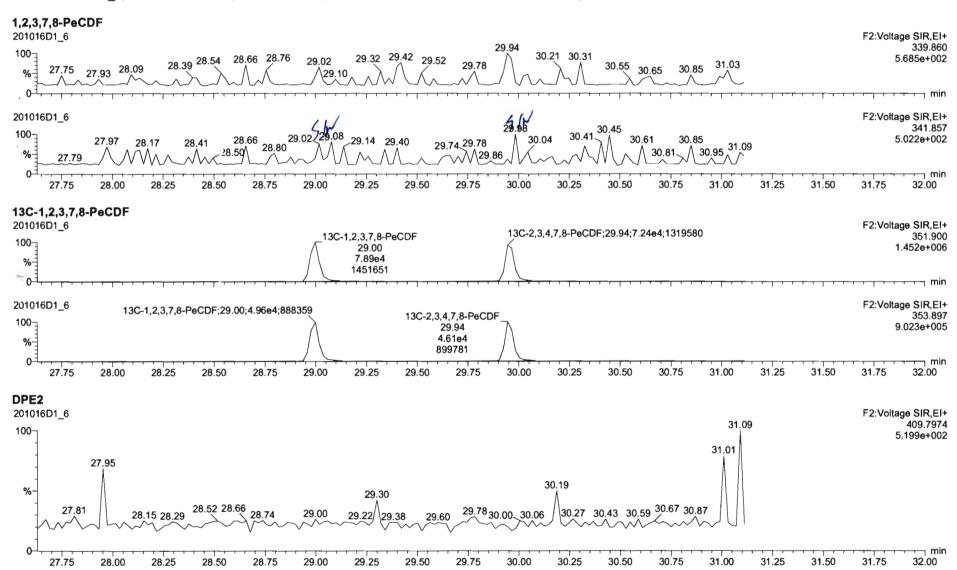
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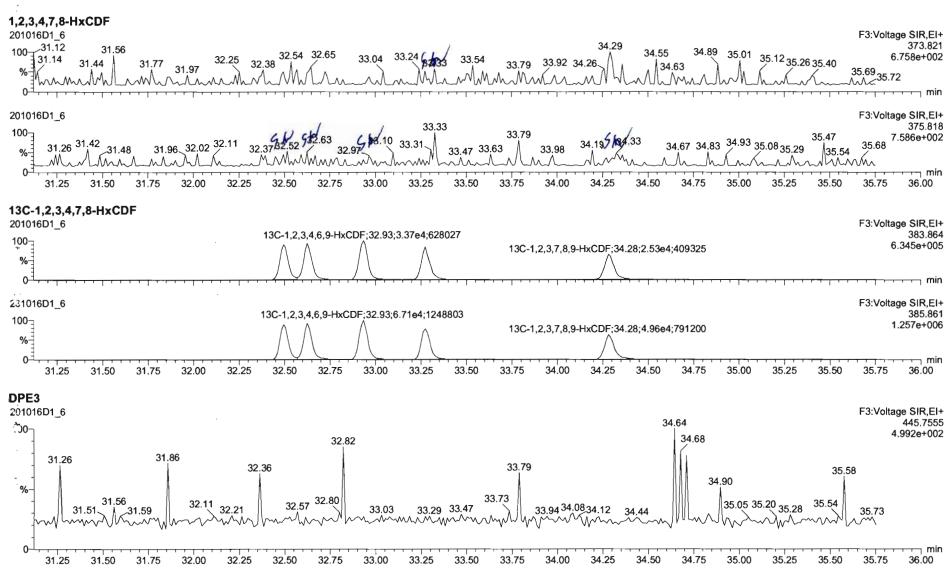
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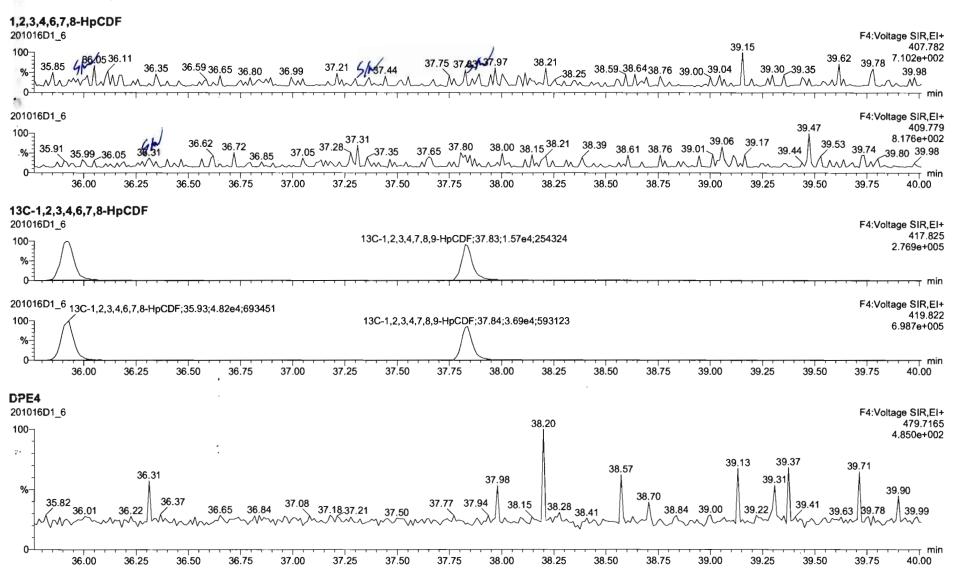


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Name: 201016D1\_6, Date: 16-Oct-2020, Time: 13:24:53, ID: B0J0108-BLK1 Method Blank 10, Description: Method Blank

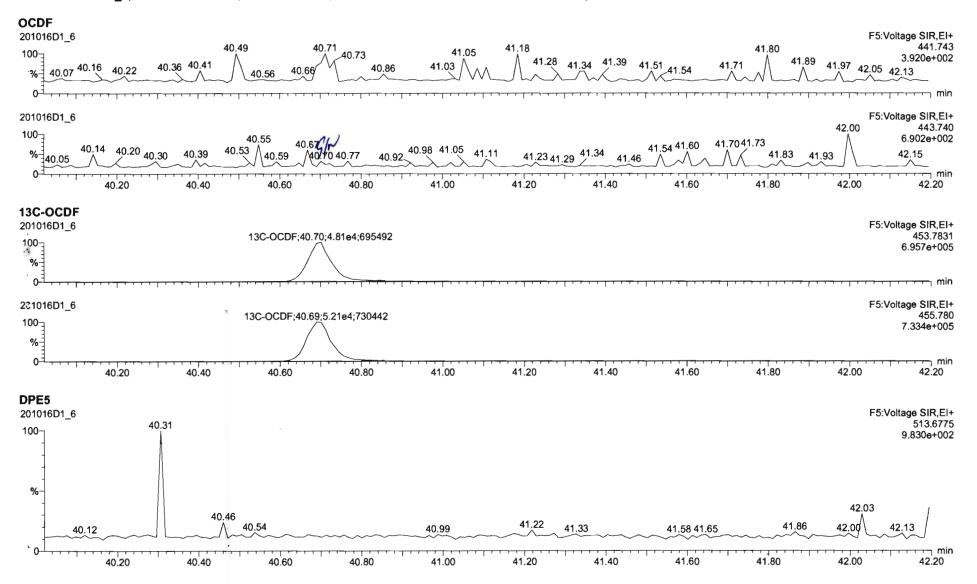


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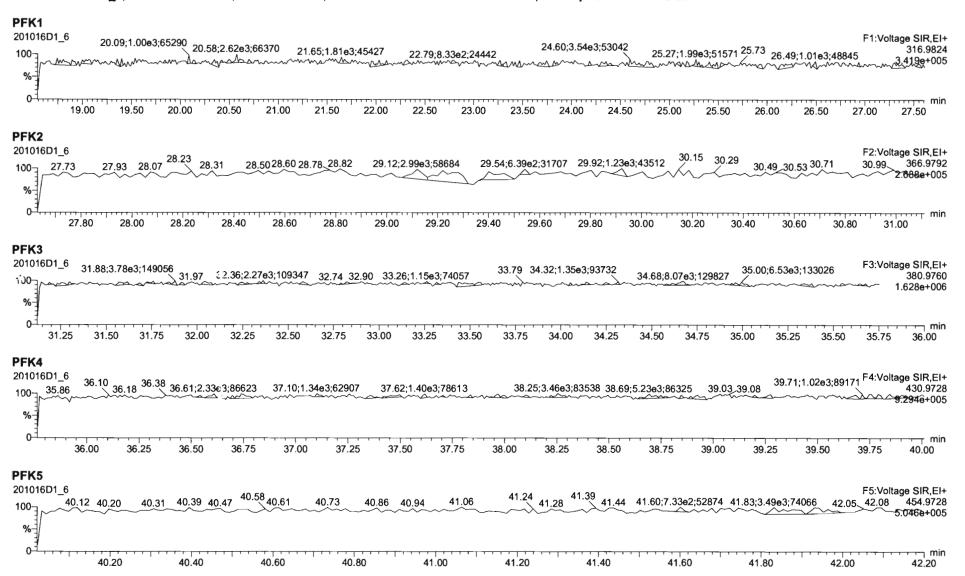


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Page 1 of 2

Dataset:

U:\VG7.PRO\Results\201016D1\201016D1-4.qld

Last Altered:

Monday, October 19, 2020 16:18:47 Pacific Daylight Time

Printed:

Monday, October 19, 2020 16:21:52 Pacific Daylight Time

CT 10/21/2020

Method: C:\MassLynx\Default.PRO\MethDB\1613\_rrt.mdb 06 Oct 2020 14:27:08 Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 201016D1\_4, Date: 16-Oct-2020, Time: 11:52:32, ID: B0J0108-BS1 OPR 10, Description: OPR

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	8.86e3	0.77	NO	1.00	10.000	25.806	25.79	1.001	1.001	19.680		0.177	19.7
2	2 1,2,3,7,8-PeCDD	3.62e4	0.63	NO	0.935	10.000	30.146	30.15	1.001	1.001	102.96		0.320	103
3	3 1,2,3,4,7,8-HxCDD	2.96e4	1.31	NO	1.15	10.000	33.382	33.39	1.000	1.001	94.369		0.480	94.4
4	4 1,2,3,6,7,8-HxCDD	2.97e4	1.28	NO	1.02	10.000	33.493	33.50	1.000	1.000	91.903		0.427	91.9
5	5 1,2,3,7,8,9-HxCDD	3.06e4	1.29	NO	1.06	10.000	33.812	33.79	1.001	1.000	90.223		0.428	90.2
6	6 1,2,3,4,6,7,8-HpCDD	2.53e4	1.05	NO	1.00	10.000	37,179	37.19	1.000	1.001	98.834		0.897	98.8
7	7 OCDD	3.64e4	0.88	NO	0.952	10.000	40.361	40.37	1.000	1.000	194.42		0.948	194
8	8 2,3,7,8-TCDF	1.22e4	0.73	NO	1.01	10.000	25.143	25.13	1.001	1.001	18.779		0.131	18.8
9	9 1,2,3,7,8-PeCDF	5.53e4	1.63	NO	0.998	10.000	28.998	29.00	1.001	1.001	91.562		0.299	91.6
10	10 2,3,4,7,8-PeCDF	5.78e4	1.57	NO	1.07	10.000	29.974	29.94	1.001	1.000	97.047		0.342	97.0
11	11 1,2,3,4,7,8-HxCDF	4.76e4	1.28	NO	1.05	10.000	32.483	32.49	1.000	1.000	106.75		0.750	107
12	12 1,2,3,6,7,8-HxCDF	5.19e4	1.23	NO	1.10	10.000	32.625	32.63	1.000	1.000	106.91		0.711	107
13	13 2,3,4,6,7,8-HxCDF	4.57e4	1.24	NO	1.09	10.000	33.295	33.27	1.001	1.000	105.37		0.768	105
14	14 1,2,3,7,8,9-HxCDF	4.04e4	1.29	NO	1.08	10.000	34.271	34.28	1.000	1.000	102.73		1.09	103
15	15 1,2,3,4,6,7,8-HpCDF	3.64e4	1.04	NO	1.13	10.000	35.943	35.92	1.001	1.000	97.223		1.06	97.2
16	16 1,2,3,4,7,8,9-HpCDF	3.11e4	1.04	NO	1.29	10.000	37.816	37.84	1.000	1.001	96.167		1.02	96.2
17	17 OCDF	4.98e4	0.90	NO	0.953	10.000	40.691	40.70	1.000	1.000	211.24		0.692	211
18	18 13C-2,3,7,8-TCDD	8.99e4	0.73	NO	1.17	10.000	25.756	25.77	1.026	1.027	165.52	82.8	0.507	
19	19 13C-1,2,3,7,8-PeCDD	7.52e4	0.60	NO	0.914	10.000	29.938	30.13	1.193	1.200	177.64	8.88	0.687	
20	20 13C-1,2,3,4,7,8-HxCDD	5.44e4	1.30	NO	0.634	10.000	33.372	33.37	1.014	1.014	167.32	83.7	0.949	
21	21 13C-1,2,3,6,7,8-HxCDD	6.31e4	1.28	NO	0.724	10.000	33.480	33.49	1.017	1.018	169.71	84.9	0.831	
22	22 13C-1,2,3,7,8,9-HxCDD	6.40e4	1.26	NO	0.716	10.000	33.747	33.78	1.025	1.026	174.29	87.1	0.841	
23	23 13C-1,2,3,4,6,7,8-HpCDD	5.12e4	1.02	NO	0.660	10.000	37.157	37.17	1.129	1.129	151.15	75.6	1.36	
24	24 13C-OCDD	7.86e4	0.87	NO	0.587	10.000	40.132	40.36	1.219	1.226	261.28	65.3	0.946	
25	25 13C-2,3,7,8-TCDF	1.28e5	0.77	NO	1.02	10.000	24.852	25.12	0.990	1.001	154.84	77.4	0.562	
26	26 13C-1.2.3.7,8-PeCDF	1.21e5	1.58	NO	0.842	10.000	29.012	28.98	1.156	1.154	177.47	88.7	0.978	
27	27 13C-2,3,4,7,8-PeCDF	1.11e5	1.72	NO	0.802	10.000	29.898	29.94	1.191	1.193	170.73	85.4	1.03	
28	28 13C-1,2,3,4,7,8-HxCDF	8.48e4	0.51	NO	1.00	10.000	32.516	32.48	0.988	0.987	164.84	82.4	1.05	
29	29 13C-1,2,3,6,7,8-HxCDF	8.83e4	0.50	NO	1.02	10.000	32.648	32.62	0.992	0.991	168.87	84.4	1.03	
30	30 13C-2,3,4,6,7,8-HxCDF	7.98e4	0.50	NO	0.955	10.000	33.210	33.26	1.009	1.011	162.80	81.4	1.10	

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Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\201016D1\201016D1-4.qld

Last Altered: Monday, October 19, 2020 16:18:47 Pacific Daylight Time Printed: Monday, October 19, 2020 16:21:52 Pacific Daylight Time

Name: 201016D1\_4, Date: 16-Oct-2020, Time: 11:52:32, ID: B0J0108-BS1 OPR 10, Description: OPR

1	1	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
31	. 10	31 13C-1,2,3,7,8,9-HxCDF	7.27e4	0.50	NO	0.851	10.000	34.274	34.27	1.041	1.041	166.36	83.2	1.23	
32		32 13C-1,2,3,4,6,7,8-HpCDF	6.63e4	0.43	NO	0.848	10.000	35.774	35.91	1.087	1.091	152.34	76.2	1.31	
33		33 13C-1,2,3,4,7,8,9-HpCDF	5.03e4	0.41	NO	0.624	10.000	37.749	37.82	1.147	1.149	157.07	78.5	1.79	
34		34 13C-OCDF	9.89e4	0.88	NO	0.730	10.000	40.283	40.69	1.224	1.236	264.20	66.0	0.760	
35		35 37CI-2,3,7,8-TCDD	4.26e4			1.21	10.000	25.753	25.79	1.026	1.027	76.216	95.3	0.0812	
36		36 13C-1,2,3,4-TCDD	9.26e4	0.78	NO	1.00	10.000	25.260	25.10	1.000	1.000	200.00	100	0.594	
37		37 13C-1,2,3,4-TCDF	1.62e5	0.77	NO	1.00	10.000	23.930	23.76	1.000	1.000	200.00	100	0.574	
38		38 13C-1,2,3,4,6,9-HxCDF	1.03e5	0.50	NO	1.00	10.000	32.990	32.91	1.000	1.000	200.00	100	1.05	

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Vista Analytical Laboratory

Dataset:

U:\VG7.PRO\Results\201016D1\201016D1-4.qld

Last Altered: Printed:

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Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 201016D1\_4, Date: 16-Oct-2020, Time: 11:52:32, ID: B0J0108-BS1 OPR 10, Description: OPR

## **Tetra-Dioxins**

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1 2,3,7,8-TCDD	25.79	6.390e4	8.773e4	3.860e3	5.002e3	0.77	NO	8.862e3	19.680	19.680	0.177

### Penta-Dioxins

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1 1,2,3,7,8-PeCDD	30.15	2.744e5	4.436e5	1.399e4	2.220e4	0.63	NO	3.619e4	102.96	102.96	0.320

### **Hexa-Dioxins**

25 U	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,7,8-HxCDD	33.39	2.885e5	2.212e5	1.675e4	1.281e4	1.31	NO	2.956e4	94.369	94.369	0.480
2	1,2,3,6,7,8-HxCDD	33.50	2.737e5	2.182e5	1.666e4	1.301e4	1.28	NO	2.967e4	91.903	91.903	0.427
3	1,2,3,7,8,9-HxCDD	33.79	2.943e5	2.236e5	1.724e4	1.339e4	1.29	NO	3.063e4	90.223	90.223	0.428

## **Hepta-Dioxins**

Name	RT	m1 Height m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1 1,2,3,4,6,7,8-HpCDD	37.19	2.214e5 2.119e5	1.301e4	1.234e4	1.05	NO	2.535e4	98.834	98.834	0.897

### Tetra-Furans

P. 180. P.	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	2,3,7,8-TCDF	25.13	7.801e4	1.077e5	5.159e3	7.040e3	0.73	NO	1.220e4	18.779	18.779	0.131

### Penta-Furans function 1

Name	RT	m1 Height m2 Height	m1 Resp m2 Resp	RA n/y	Resp	Conc.	EMPC	DL
1								

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Vista Analytical Laboratory

Dataset:

U:\VG7.PRO\Results\201016D1\201016D1-4.qld

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Name: 201016D1\_4, Date: 16-Oct-2020, Time: 11:52:32, ID: B0J0108-BS1 OPR 10, Description: OPR

## Penta-Furans

10 32 33	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,7,8-PeCDF	29.00	5.784e5	3.713e5	3.428e4	2.103e4	1.63	NO	5.531e4	91.562	91.562	0.299
2	2,3,4,7,8-PeCDF	29.94	6.426e5	4.360e5	3.535e4	2.246e4	1.57	NO	5.781e4	97.047	97.047	0.342

# Hexa-Furans

7-12	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,7,8-HxCDF	32.49	5.246e5	4.096e5	2.669e4	2.092e4	1.28	NO	4.760e4	106.75	106.75	0.750
2	1,2,3,6,7,8-HxCDF	32.63	5.399e5	4.273e5	2.861e4	2.327e4	1.23	NO	5.188e4	106.91	106.91	0.711
3	2,3,4,6,7,8-HxCDF	33.27	4.748e5	3.730e5	2.526e4	2.044e4	1.24	NO	4.570e4	105.37	105.37	0.768
4	1,2,3,7,8,9-HxCDF	34.28	3.544e5	2.672e5	2.275e4	1.762e4	1.29	NO	4.037e4	102.73	102.73	1.09

# Hepta-Furans

18	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,6,7,8-HpCDF	35.92	2.671e5	2.525e5	1.862e4	1.783e4	1.04	NO	3.645e4	97.223	97.223	1.06
2	1,2,3,4,7,8,9-HpCDF	37.84	2.506e5	2.532e5	1.590e4	1.521e4	1.04	NO	3.111e4	96.167	96.167	1.02

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Quantify Sample Report Vista Analytical Laboratory MassLynx 4.1

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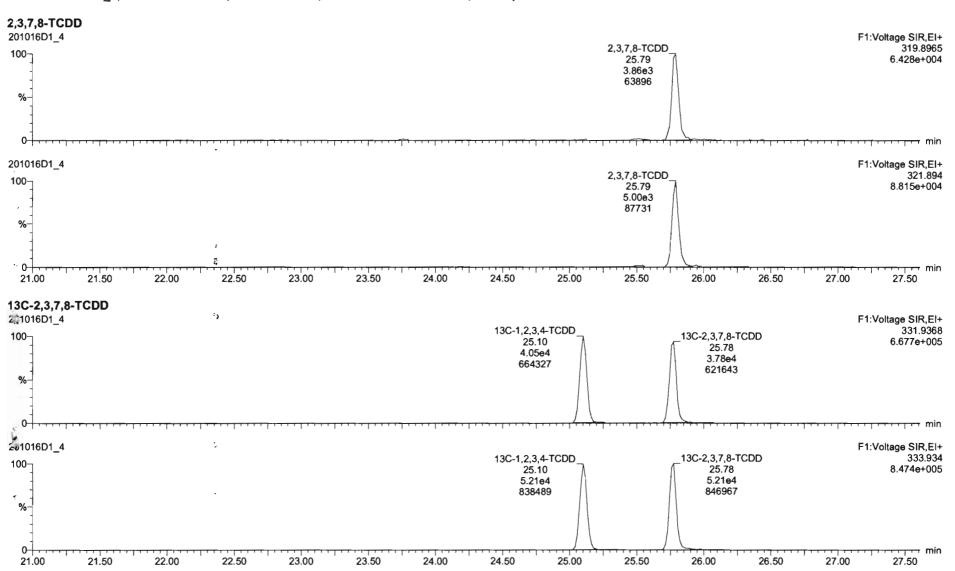
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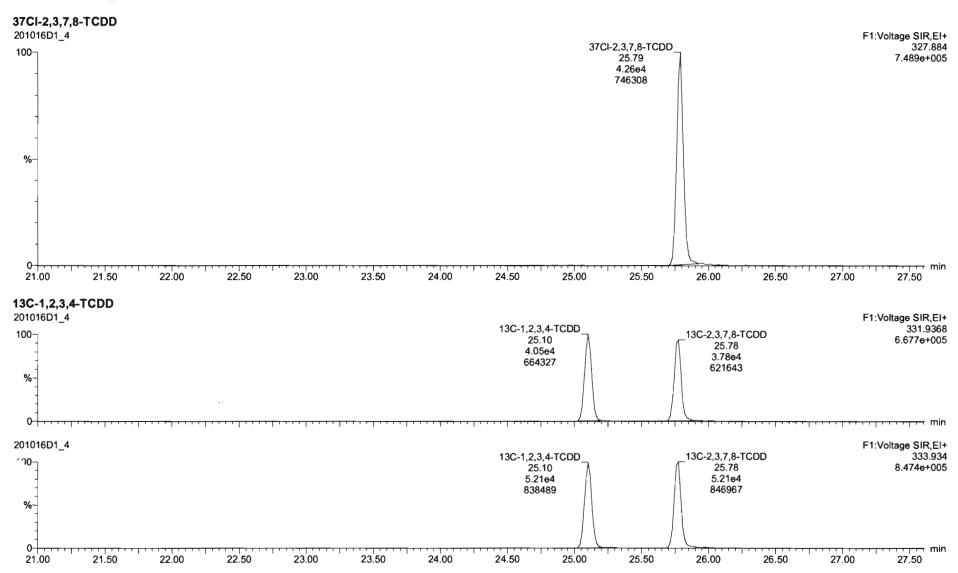
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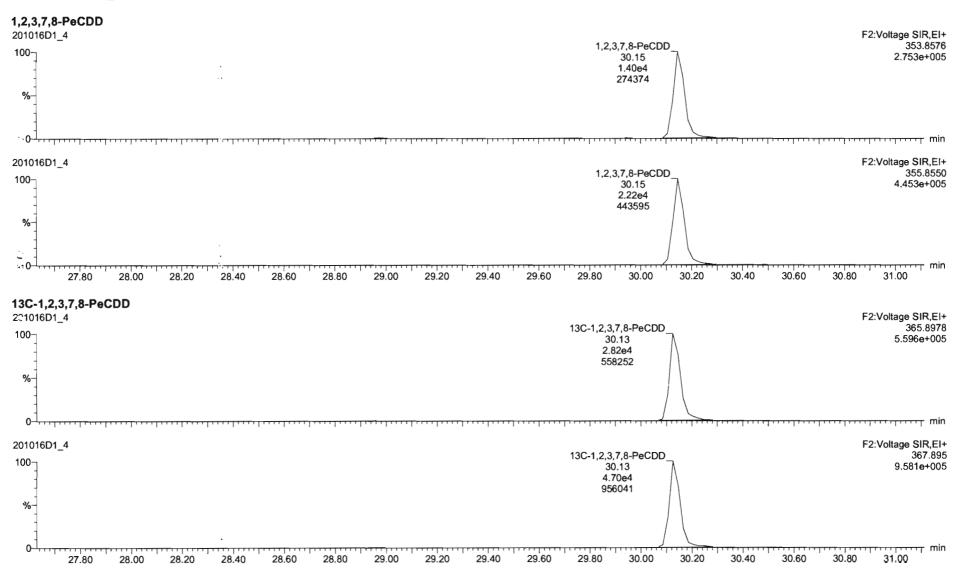
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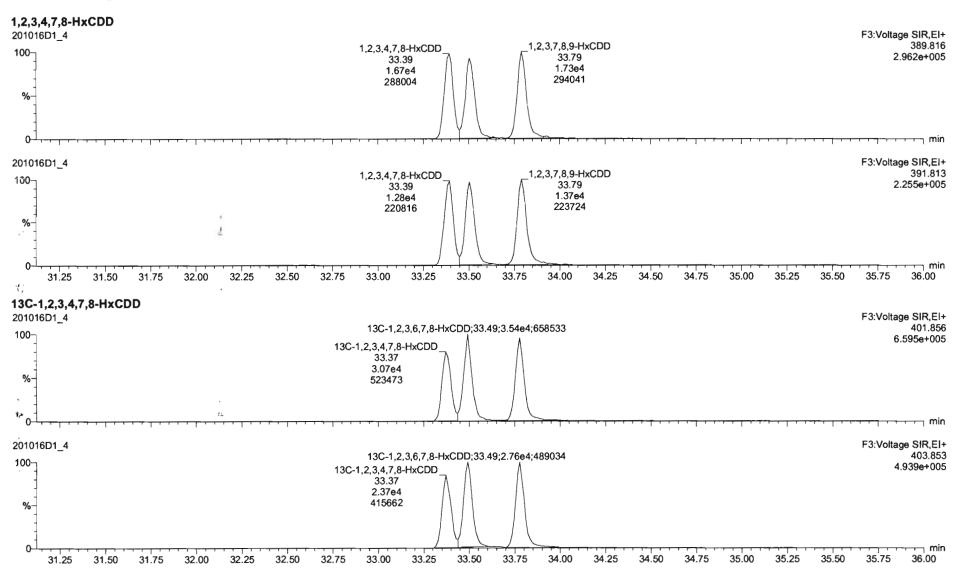
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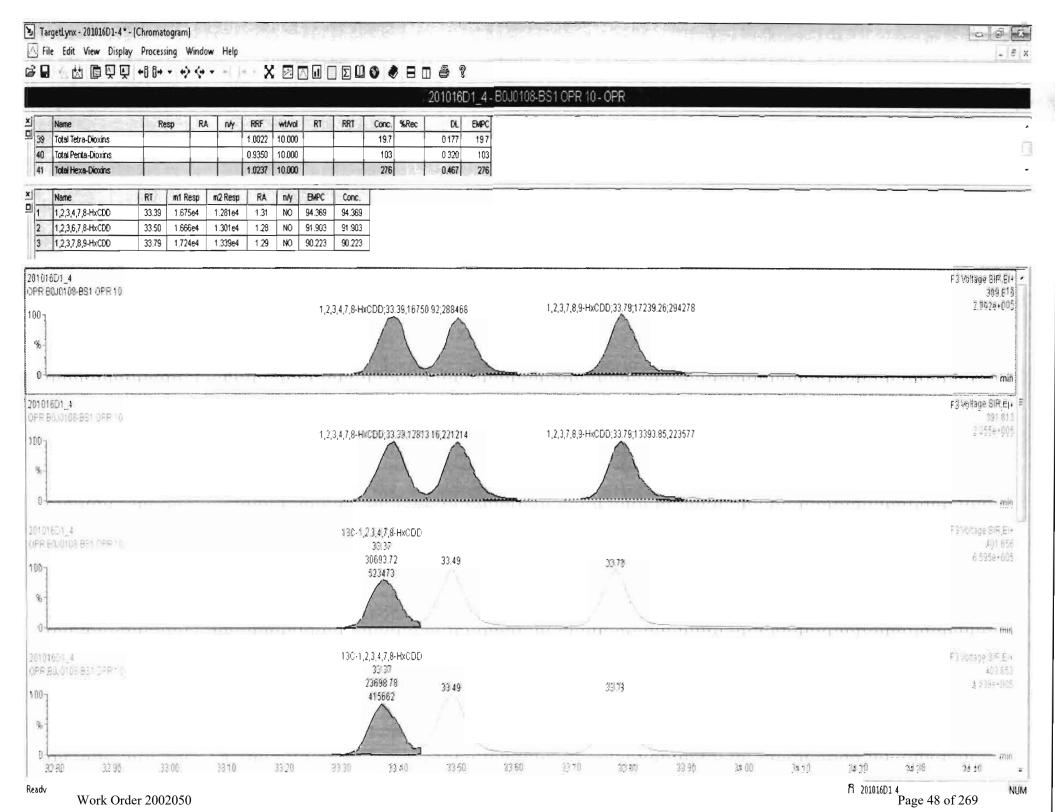
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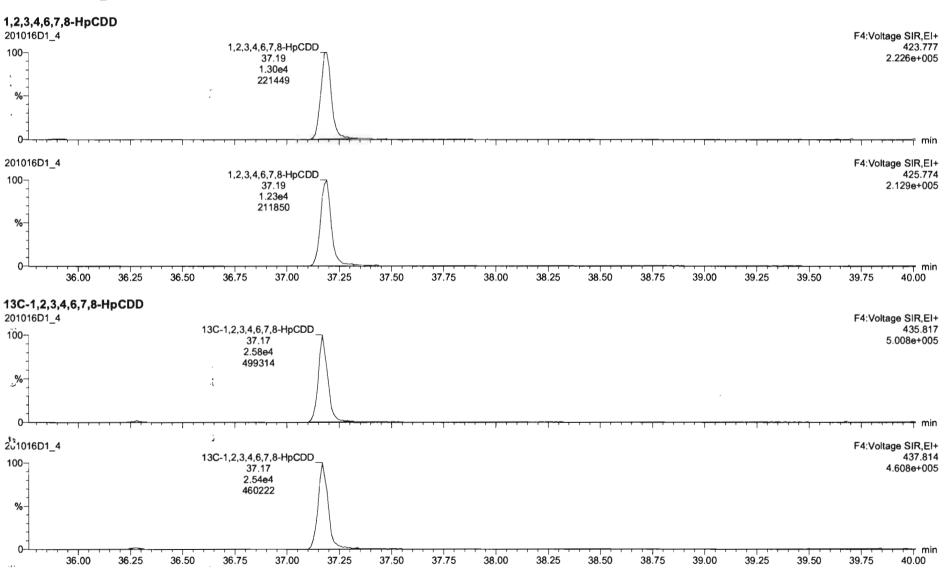


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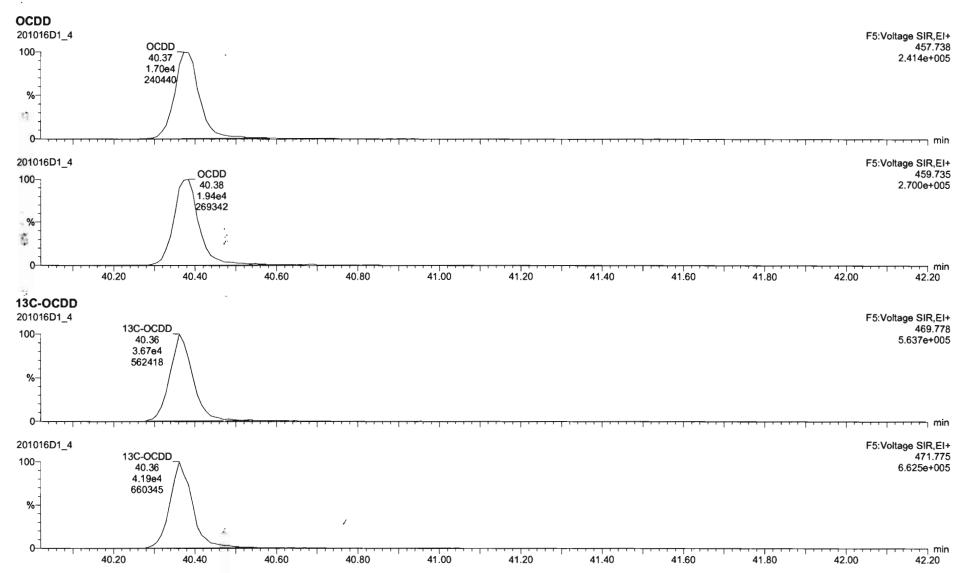
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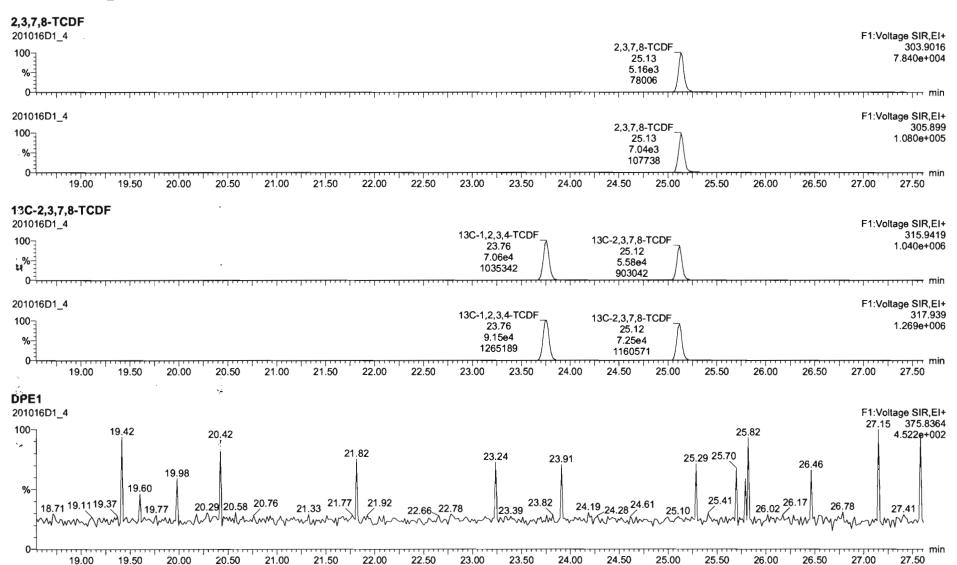
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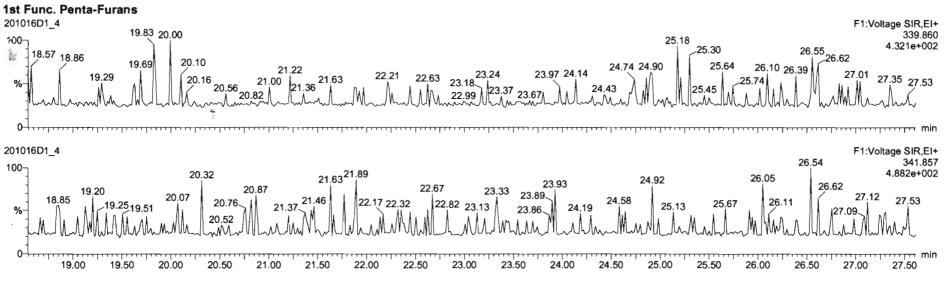
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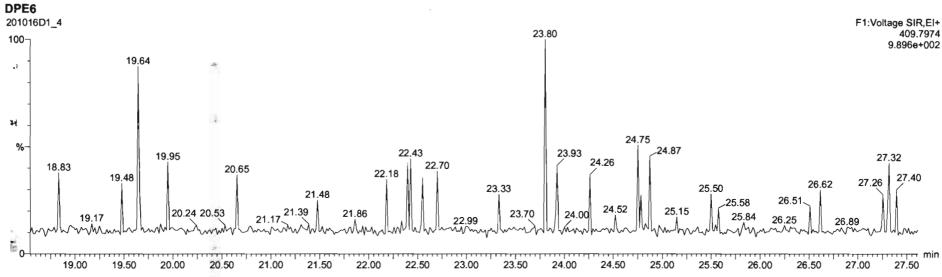


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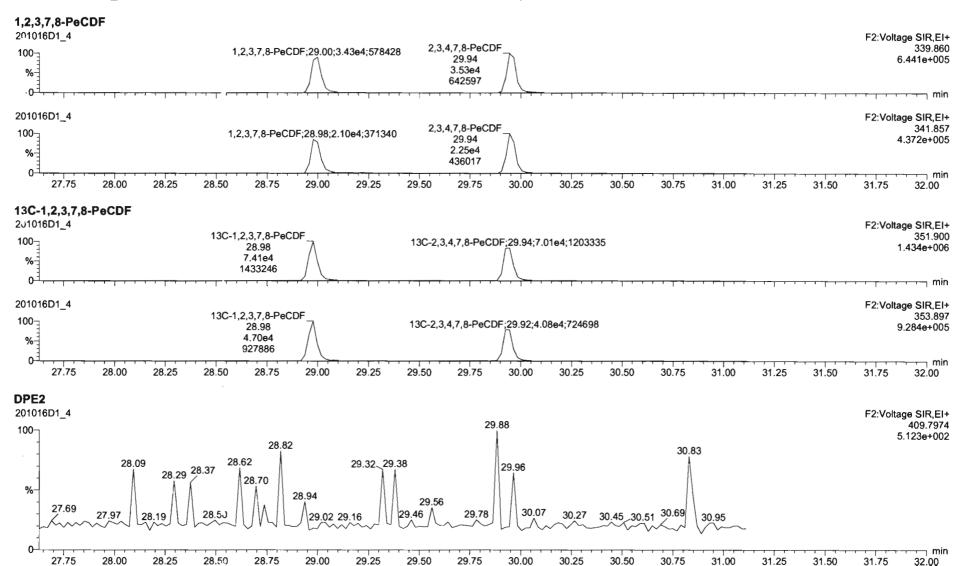
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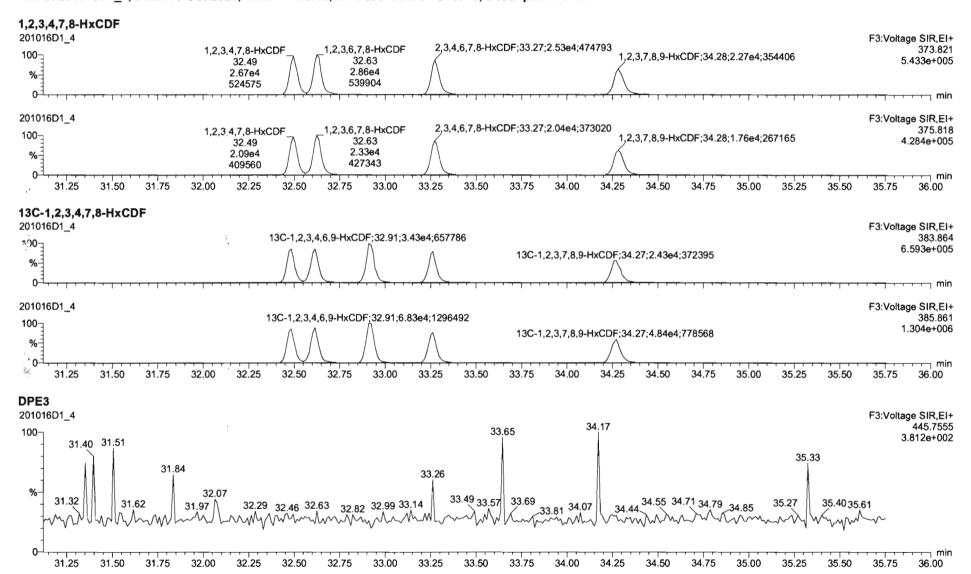
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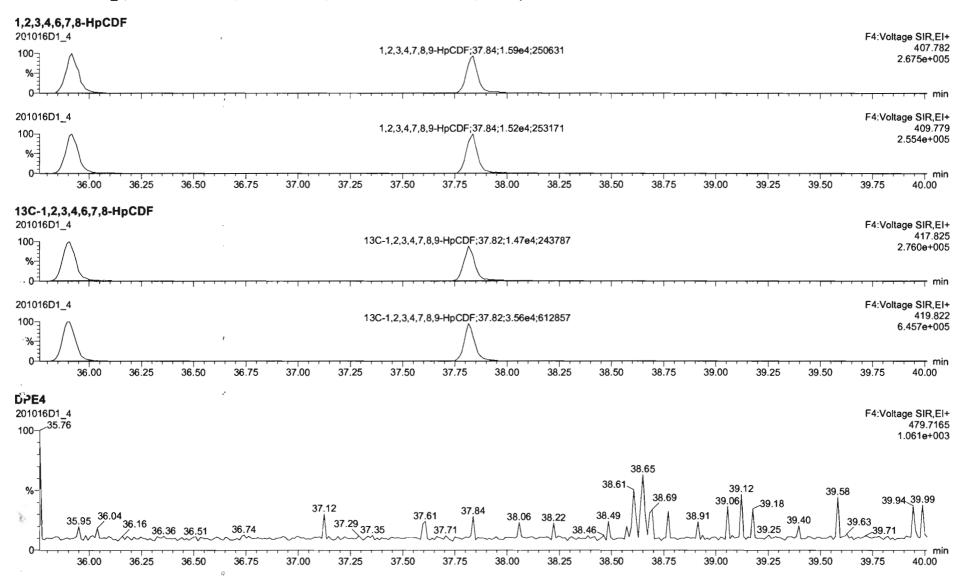
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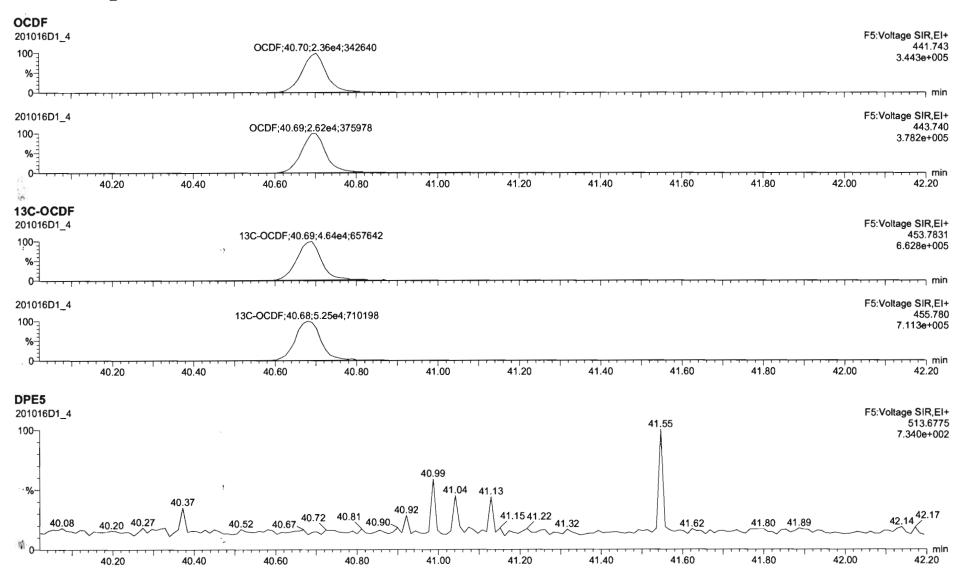
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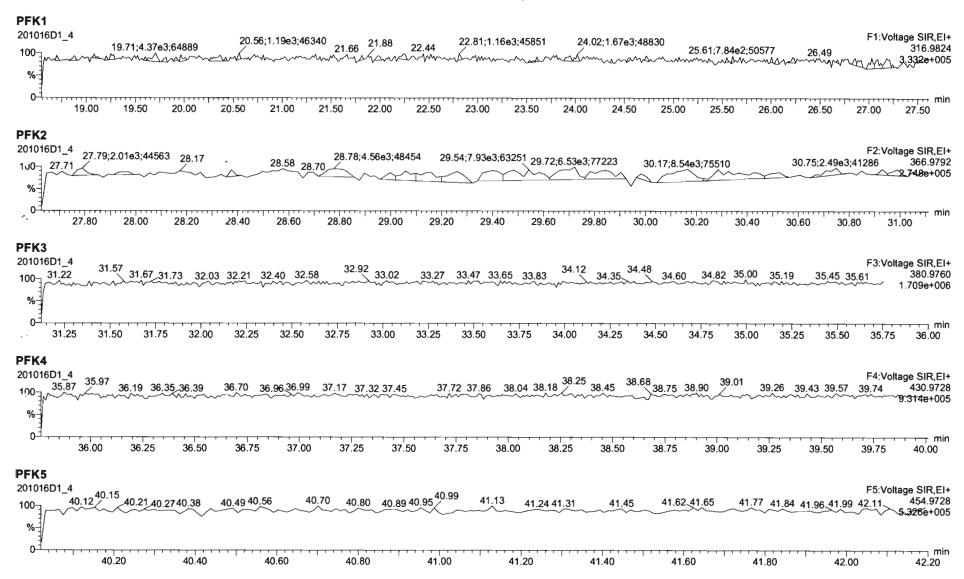
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Last Altered: Printed:

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MassLynx 4.1 SCN815

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Dataset:

U:\VG7.PRO\Results\201016D1\201016D1-12a.qld

Last Altered:

Thursday, October 22, 2020 15:18:08 Pacific Daylight Time

Printed:

Thursday, October 22, 2020 15:28:37 Pacific Daylight Time

en 10/23/2020

Method: Untitled 06 Oct 2020 14:27:08

Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 201016D1\_12, Date: 16-Oct-2020, Time: 18:01:49, ID: 2002050-01 PDI-083SC-B-12-14-191022 17.72, Description: PDI-083SC-B-12-14-191022

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	1 2,3,7,8-TCDD	2.54e2	0.50	YES	1.00	10.054	25.806	25.79	1.001	1.001	0.43644	SE E.A. TERSONI, a M. J. HHAI.	0.202	0.334
2	2 1,2,3,7,8-PeCDD	5.39e2	0.65	NO	0.935	10.054	30.167	30.15	1.001	1.000	1.2347		0.194	1.23
3	3 1,2,3,4,7,8-HxCDD	2.09e2	1.48	YES	1.15	10.054	33.393	33.39	1.000	1.000	0.48200		0.358	0.433
4	4 1,2,3,6,7,8-HxCDD	1.53e3	1.22	NO	1.02	10.054	33.504	33.51	1.000	1.000	3.3585		0.370	3.36
5	5 1,2,3,7,8,9-HxCDD	4.96e2	1.12	NO	1.06	10.054	33.812	33.80	1.001	1.001	1.0580		0.400	1.06
6	6 1,2,3,4,6,7,8-HpCDD	3.42e4	1.09	NO	1.00	10.054	37.191	37.19	1.000	1.000	91.390		1.48	91.4
7	7 OCDD	5.30e5	0.89	NO	0.952	10.054	40.373	40.38	1.000	1.000	1819.6		1.21	1820
8	8 2,3,7,8-TCDF	6.73e2	0.85	NO	1.01	10.054	25.158	25.15	1.001	1.001	0.74684		0.272	0.747
9	9 1,2,3,7,8-PeCDF	4.83e2	1.38	NO	0.998	10.054	28.998	29.00	1.001	1.001	0.64834		0.210	0.648
10	10 2,3,4,7,8-PeCDF	5.71e3	1.56	NO	1.07	10.054	29.974	29.96	1.001	1.001	7.3147		0.191	7.31
1173	11 1,2,3,4,7,8-HxCDF	1.70e3	1.40	NO	1.05	10.054	32.483	32.51	1.000	1.001	2.9160		0.262	2.92
12	12 1,2,3,6,7,8-HxCDF	1.51e3	1.16	NO	1.10	10.054	32.636	32.64	1.000	1.000	2.4487		0.275	2.45
13	13 2,3,4,6,7,8-HxCDF	2.46e3	1.37	NO	1.09	10.054	33.295	33.29	1.001	1.001	4.3282		0.293	4.33
14	14 1,2,3,7,8,9-HxCDF	4.22e2	1.22	NO	1.08	10.054	34.272	34.31	1.000	1.001	0.79438		0.356	0.794
15	15 1,2,3,4,6,7,8-HpCDF	4.17e4	1.04	NO	1.13	10.054	35.954	35.93	1.001	1.000	76.061		0.434	76.1
16	16 1,2,3,4,7,8,9-HpCDF	6.64e2	0.85	YES	1.29	10.054	37.827	37.83	1.000	1.000	1.4 <b>7</b> 32		0.459	1.33
17	17 OCDF	2.44e4	0.90	NO	0.953	10.054	40.691	40.70	1.000	1.000	73.835		0.448	73.8
18	18 13C-2,3,7,8-TCDD	1.15e5	0.79	NO	1.17	10.054	25.771	25.77	1.026	1.026	174.33	87.6	0.384	
19	19 13C-1,2,3,7,8-PeCDD	9.28e4	0.61	NO	0.914	10.054	29.956	30.15	1.193	1.200	180.26	90.6	0.389	
20	20 13C-1,2,3,4,7,8-HxCDD	7.54e4	1.29	NO	0.634	10.054	33.383	33.38	1.014	1.014	189.83	95.4	1.07	
21	21 13C-1,2,3,6,7,8-HxCDD	8.83e4	1.33	NO	0.724	10.054	33.492	33.50	1.017	1.018	194.65	97.9	0.939	
22	22 13C-1,2,3,7,8,9-HxCDD	8.79e4	1.27	NO	0.716	10.054	33.758	33.78	1.025	1.026	195.97	98.5	0.951	
23	23 13C-1,2,3,4,6,7,8-HpCDD	7.43e4	1.04	NO	0.660	10.054	37.169	37.18	1.129	1.129	179.51	90.2	1.29	
24	24 13C-OCDD	1.22e5	0.85	NO	0.587	10.054	40.145	40.37	1.219	1.226	331.21	83.3	0.909	
25	25 13C-2,3,7,8-TCDF	1.77e5	0.75	NO	1.02	10.054	24.867	25.13	0.990	1.001	173.61	87.3	0.470	
26	26 13C-1,2,3,7,8-PeCDF	1.49e5	1.64	NO	0.842	10.054	29.029	28.98	1.156	1.154	176.93	88.9	0.736	
27	27 13C-2,3,4,7,8-PeCDF	1.45e5	1.58 _	NO	0.802	10.054	29.916	29.94	1.191	1.192	180.93	91.0	0.773	
28	28 13C-1,2,3,4,7,8-HxCDF	1.10e5	0.49	NO	1.00	10.054	32.527	32.48	0.988	0.987	175.88	88.4	1.19	
29	29 13C-1,2,3,6,7,8-HxCDF	1.12e5	0.51	NO	1.02	10.054	32.659	32.63	0.992	0.991	175.09	88.0	1.17	
30	30 13C-2,3,4,6,7,8-HxCDF	1.04e5	0.53	NO	0.955	10.054	33.222	33.26	1.009	1.010	173.59	87.3	1.25	

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Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\201016D1\201016D1-12a.qld

Last Altered: Thursday, October 22, 2020 15:18:08 Pacific Daylight Time Thursday, October 22, 2020 15:28:37 Pacific Daylight Time

Name: 201016D1\_12, Date: 16-Oct-2020, Time: 18:01:49, ID: 2002050-01 PDI-083SC-B-12-14-191022 17.72, Description: PDI-083SC-B-12-14-191022

<b>表现。伊蒙</b>	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
31	31 13C-1,2,3,7,8,9-HxCDF	9.76e4	0.50	NO	0.851	10.054	34.285	34.27	1.041	1.041	183.10	92.0	1.40	
32	32 13C-1,2,3,4,6,7,8-HpCDF	9.66e4	0.44	NO	0.848	10.054	35.786	35.92	1.087	1.091	181.67	91.3	1.08	
33	33 13C-1,2,3,4,7,8,9-HpCDF	6.97e4	0.41	NO	0.624	10.054	37.762	37.83	1.147	1.149	178.13	89.5	1.47	
34	34 13C-OCDF	1.38e5	0.87	NO	0.730	10.054	40.297	40.69	1.224	1.236	301.78	75.9	0.648	
35	35 37CI-2,3,7,8-TCDD	5.73e4			1.21	10.054	25.769	25.81	1.026	1.027	84.232	106	0.105	
36	36 13C-1,2,3,4-TCDD	1.12e5	0.78	NO	1.00	10.054	25.260	25.12	1.000	1.000	198.92	100	0.451	
37	37 13C-1,2,3,4-TCDF	1.98e5	0.75	NO	1.00	10.054	23.930	23.77	1.000	1.000	198.92	100	0.481	
38	38 13C-1,2,3,4,6,9-HxCDF	1.25e5	0.52	NO	1.00	10.054	32.990	32.92	1.000	1.000	198.92	100	1.19	
39	39 Total Tetra-Dioxins				1.00	10.054	24.620		0.000		5.4465		0.202	6.21
40	40 Total Penta-Dioxins				0.935	10.054	29.960		0.000		10.871		0.194	13.8
41	41 Total Hexa-Dioxins				1.02	10.054	33.635		0.000		29.203		0.395	29.6
42	42 Total Hepta-Dioxins				1.00	10.054	37.640		0.000		226.29		1.48	226
43	43 Total Tetra-Furans				1.01	10.054	23.610		0.000		34.924		0.272	34.9
44	44 1st Func. Penta-Furans				0.998	10.054	26.750		0.000		39.839		0.0599	39.8
45	45 Total Penta-Furans				0.998	10.054	29.275		0.000		35.014		0.208	35.3
46	46 Total Hexa-Furans				1.09	10.054	33.555		0.000		66.516		0.293	66.5
47	47 Total Hepta-Furans				1.13	10.054	37.835		0.000		163.92		0.471	165

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# Quantify Totals Report MassLynx 4.1 SCN815

Vista Analytical Laboratory

Dataset:

U:\VG7.PRO\Results\201016D1\201016D1-12a.qld

Last Altered: Printed:

Thursday, October 22, 2020 15:18:08 Pacific Daylight Time Thursday, October 22, 2020 15:28:37 Pacific Daylight Time

Method: Untitled 06 Oct 2020 14:27:08

Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 201016D1\_12, Date: 16-Oct-2020, Time: 18:01:49, ID: 2002050-01 PDI-083SC-B-12-14-191022 17.72, Description: PDI-083SC-B-12-14-191022

## **Tetra-Dioxins**

Name	RT .	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1 Total Tetra-Dioxins	22.44	3.898e3	5.807e3	3.397e2	4.863e2	0.70	NO	8.260e2	1.4240	1.4240	0.202
2 Total Tetra-Dioxins	22.73	3.038e3	3.651e3	1.972e2	2.624e2	0.75	NO	4.596e2	0.79236	0.79236	0.202
3 Total Tetra-Dioxins	23.18	2.185e3	2.563e3	1.410e2	1.873e2	0.75	NO	3.284e2	0.56611	0.56611	0.202
4 Total Tetra-Dioxins	24.11	3.921e3	4.863e3	2.967e2	3.846e2	0.77	NO	6.813e2	1.1746	1.1746	0.202
5 Total Tetra-Dioxins	24.32	4.427e3	5.895e3	2.732e2	3.144e2	0.87	NO	5.877e2	1.0132	1.0132	0.202
6 Total Tetra-Dioxins	24.87	1.762e3	3.661e3	1.302e2	1.406e2	0.93	YES	0.000e0	0.00000	0.42909	0.202
7 Total Tetra-Dioxins	25.55	1.645e3	2.763e3	1.177e2	1.585e2	0.74	NO	2.762e2	0.47620	0.47620	0.202
8 2,3,7,8-TCDD	25.79	1.481e3	2.815e3	8.431e1	1.700e2	0.50	YES	2.543e2	0.00000	0.33414	0.202

## **Penta-Dioxins**

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1 Total Penta-D	ioxins 28.07	1.345e4	1.692e4	8.000e2	1.119e3	0.72	NO	1.919e3	4.3993	4.3993	0.194
2 Total Penta-D	ioxins 28.51	1.348e3	2.774e3	7.693e1	1.452e2	0.53	YES	0.000e0	0.00000	0.45638	0.194
3 Total Penta-D	ioxins 28.98	1.087e4	1.252e4	5.517e2	6.533e2	0.84	YES	0.000e0	0.00000	2.4417	0.194
4 Total Penta-D	ioxins 29.16	5.713e3	1.015e4	5.459e2	9.312e2	0.59	NO	1.477e3	3.3868	3.3868	0.194
5 Total Penta-D	ioxins 29.44	4.126e3	7.076e3	2.913e2	5.154e2	0.57	NO	8.068e2	1.8498	1.8498	0.194
6 1,2,3,7,8-PeC	DD 30.15	4.407e3	6.106e3	2.126e2	3.259e2	0.65	NO	5.385e2	1.2347	1.2347	0.194

### **Hexa-Dioxins**

1	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC.	DL
1	Total Hexa-Dioxins	31.77	5.576e4	3.911e4	2.660e3	2.124e3	1.25	NO	4.784e3	11.086	11.086	0.395
2	Total Hexa-Dioxins	32.36	7.773e3	5.603e3	3.852e2	2.867e2	1.34	NO	6.720e2	1.5572	1.5572	0.395
3	Total Hexa-Dioxins	32.66	4.576e4	3.585e4	2.964e3	2.276e3	1.30	NO	5.240e3	12.143	12.143	0.395
4	1,2,3,4,7,8-HxCDD	33.39	2.601e3	1.684e3	1.251e2	8.434e1	1.48	YES	2.095e2	0.00000	0.43297	0.358
5	1,2,3,6,7,8-HxCDD	33.51	1.538e4	1.383e4	8.404e2	6.863e2	1.22	NO	1.527e3	3.3585	3.3585	0.370
6	1,2,3,7,8,9-HxCDD	33.80	5.854e3	4.653e3	2.618e2	2.340e2	1.12	NO	4.959e2	1.0580	1.0580	0.400

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Vista Analytical Laboratory

Dataset:

U:\VG7.PRO\Results\201016D1\201016D1-12a.qld

Last Altered: Printed:

Thursday, October 22, 2020 15:18:08 Pacific Daylight Time Thursday, October 22, 2020 15:28:37 Pacific Daylight Time

Name: 201016D1\_12, Date: 16-Oct-2020, Time: 18:01:49, ID: 2002050-01 PDI-083SC-B-12-14-191022 17.72, Description: PDI-083SC-B-12-14-191022

# **Hepta-Dioxins**

Name	ART	m1 Height	m2 Height	m1 Resp	m2 Resp	⊪ RA ∥	n/y	Resp	Conc.	EMPC	DL
1 Total Hepta-Dioxins	36.29	3.913e5	3.714e5	2.606e4	2.438e4	1.07	NO	5.044e4	134.90	134.90	1.48
2 1,2,3,4,6,7,8-HpCDD	37.19	3.150e5	2.975e5	1.784e4	1.633e4	1.09	NO	3.417e4	91.390	91.390	1.48

## **Tetra-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	- DL
1. ***	Total Tetra-Furans	20.29	3.305e3	4.782e3	3.021e2	3.820e2	0.79	NO	6.842e2	0.75912	0.75912	0.272
2	Total Tetra-Furans	20.87	9.132e3	1.037e4	7.849e2	1.020e3	0.77	NO	1.805e3	2.0029	2.0029	0.272
3	Total Tetra-Furans	21.62	5.507e4	6.202e4	4.564e3	5.597e3	0.82	NO	1.016e4	11.275	11.275	0.272
4	Total Tetra-Furans	22.46	2.399e4	2.952e4	1.906e3	2.326e3	0.82	NO	4.232e3	4.6959	4.6959	0.272
5	Total Tetra-Furans	22.85	3.918e4	4.544e4	2.771e3	3.609e3	0.77	NO	6.380e3	7.0790	7.0790	0.272
6	Total Tetra-Furans	23.62	4.050e3	5.898e3	3.012e2	3.684e2	0.82	NO	6.696e2	0.74291	0.74291	0.272
7	Total Tetra-Furans	23.85	2.959e4	3.477e4	2.177e3	2.717e3	0.80	NO	4.895e3	5.4309	5.4309	0.272
8	Total Tetra-Furans	24.28	5.159e3	7.415e3	3.926e2	5.936e2	0.66	NO	9.862e2	1.0943	1.0943	0.272
9	Total Tetra-Furans	25.06	3.063e3	4.440e3	2.018e2	2.472e2	0.82	NO	4.490e2	0.49816	0.49816	0.272
10	2,3,7,8-TCDF	25.15	5.091e3	5.865e3	3.089e2	3.642e2	0.85	NO	6.731e2	0.74684	0.74684	0.272
11	Total Tetra-Furans	26.25	2.339e3	3.365e3	1.048e2	1.544e2	0.68	NO	2.591e2	0.28751	0.28751	0.272
12	Total Tetra-Furans	26.37	2.279e3	4.366e3	1.272e2	1.539e2	0.83	NO	2.811e2	0.31187	0.31187	0.272

### Penta-Furans function 1

lame	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	√ Ø DL
st Func. Penta-Furans	26.59	3.260e5	1.987e5	1.812e4	1.117e4	1.62	NO	2.930e4	39.839	39.839	0.0599

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Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\201016D1\201016D1-12a.qld

Last Altered: Thursday, October 22, 2020 15:18:08 Pacific Daylight Time Printed: Thursday, October 22, 2020 15:28:37 Pacific Daylight Time

Name: 201016D1\_12, Date: 16-Oct-2020, Time: 18:01:49, ID: 2002050-01 PDI-083SC-B-12-14-191022 17.72, Description: PDI-083SC-B-12-14-191022

# Penta-Furans

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
	Total Penta-Furans	27.93	1.022e4	7.641e3	5.739e2	3.999e2	1.44	NO	9.738e2	1.3242	1.3242	0.208
2	Total Penta-Furans	28.07	1.059e5	7.263e4	7.827e3	4.944e3	1.58	NO	1.277e4	17.366	17.366	0.208
3	Total Penta-Furans	28.64	4.315e4	2.520e4	2.707e3	1.607e3	1.68	NO	4.314e3	5.8658	5.8658	0.208
4	Total Penta-Furans	28.82	3.020e3	2.200e3	1.609e2	1.211e2	1.33	NO	2.820e2	0.38341	0.38341	0.208
5	1,2,3,7,8-PeCDF	29.00	4.812e3	3.079e3	2.799e2	2.032e2	1.38	NO	4.832e2	0.64834	0.64834	0.210
6	Total Penta-Furans	29.24	1.548e4	8.082e3	9.622e2	5.906e2	1.63	NO	1.553e3	2.1116	2.1116	0.208
7	Total Penta-Furans	29.80	2.516e3	2.123e3	1.429e2	1.261e2	1.13	YES	0.000e0	0.00000	0.31980	0.208
8	2,3,4,7,8-PeCDF	29.96	5.661e4	3.664e4	3.482e3	2.232e3	1.56	NO	5.714e3	7.3147	7.3147	0.191

# **Hexa-Furans**

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	- DL
Total Hexa-Furans	31.26	2.606e4	2.652e4	1.349e3	1.151e3	1.17	NO	2.499e3	4.3155	4.3155	0.293
2 Total Hexa-Furans	31.42	1.555e5	1.123e5	7.425e3	5.765e3	1.29	NO	1.319e4	22.774	22.774	0.293
3 Total Hexa-Furans	32.03	1.899e5	1.474e5	9.246e3	7.366e3	1.26	NO	1.661e4	28.683	28.683	0.293
1,2,3,4,7,8-HxCDF	32.51	1.888e4	1.297e4	9.927e2	7.105e2	1.40	NO	1.703e3	2.9160	2.9160	0.262
5 1,2,3,6,7,8-HxCDF	32.64	1.636e4	1.212e4	8.124e2	7.003e2	1.16	NO	1.513e3	2.4487	2.4487	0.275
6 2,3,4,6,7,8-HxCDF	33.29	2.254e4	1.728e4	1.421e3	1.036e3	1.37	NO	2.458e3	4.3282	4.3282	0.293
7 1,2,3,7,8,9-HxCDF	34.31	5.071e3	3.833e3	2.322e2	1.896e2	1.22	NO	4.218e2	0.79438	0.79438	0.356
8 Total Hexa-Furans	34.35	2.278e3	2.997e3	7.635e1	7.208e1	1.06	NO	1.484e2	0.25629	0.25629	0.293

# **Hepta-Furans**

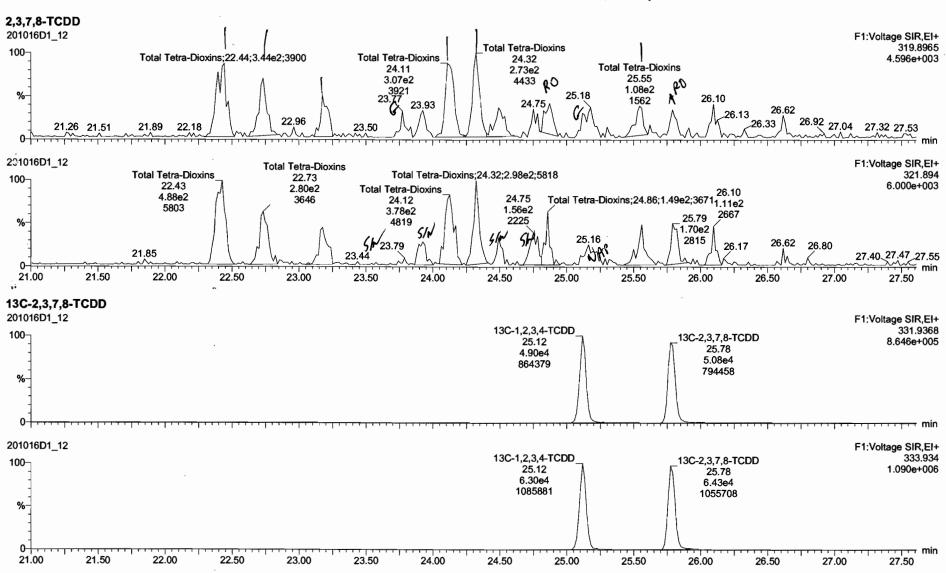
	Name	RT	n1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc	EMPC	- DL
	1,2,3,4,6,7,8-HpCDF	35.93	2.945e5	2.817e5	2.130e4	2.045e4	1.04	NO	4.175e4	76.061	76.061	0.434
2	Total Hepta-Furans	36.58	3.868e5	3.398e5	2.095e4	2.055e4	1.02	NO	4.151e4	87.854	87.854	0.471
3	1,2,3,4,7,8,9-HpCDF	37.83	4.659e3	6.573e3	3.049e2	3.586e2	0.85	YES	6.635e2	0.00000	1.3280	0.459

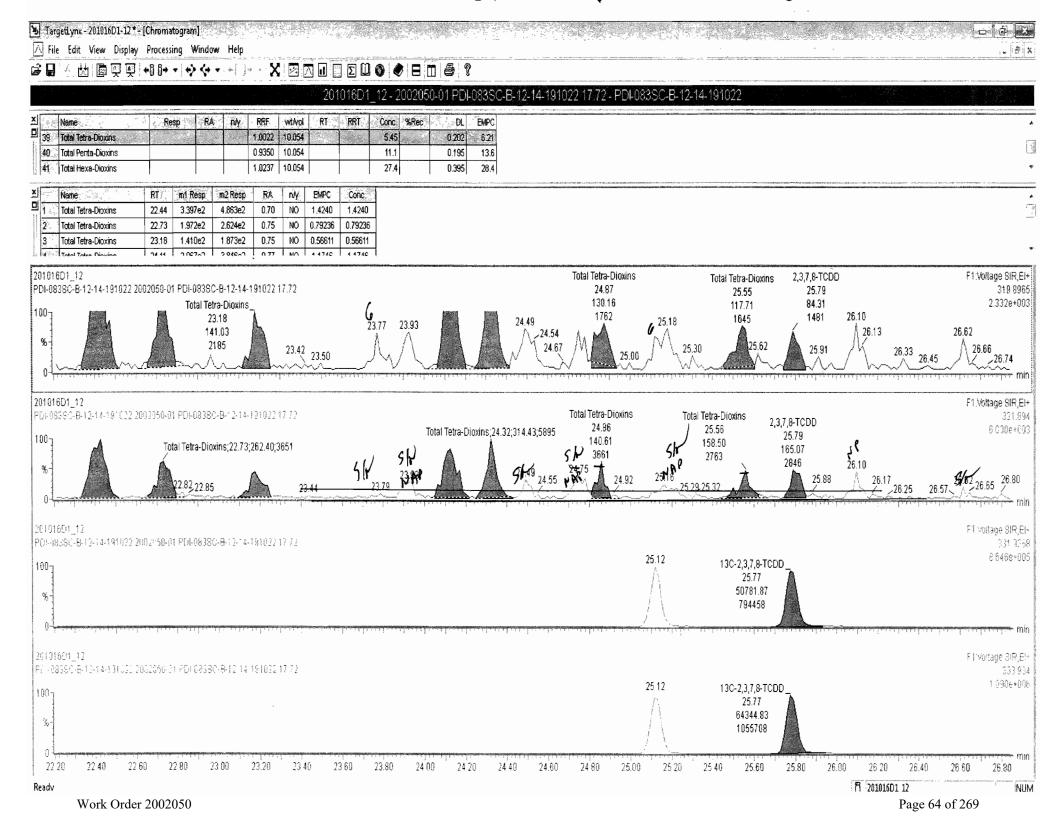
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Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time





**Quantify Sample Report** Vista Analytical Laboratory

MassLynx 4.1

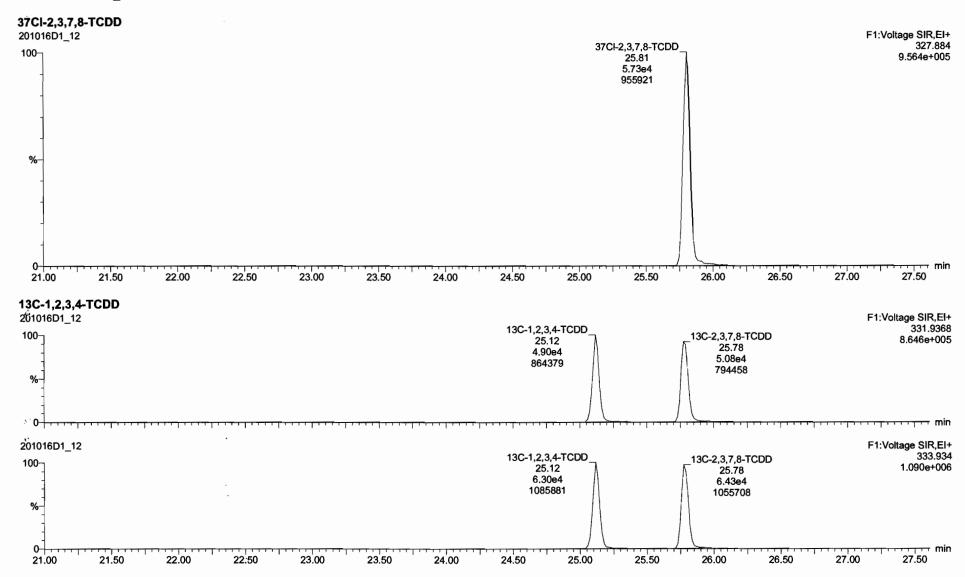
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Last Altered: Printed:

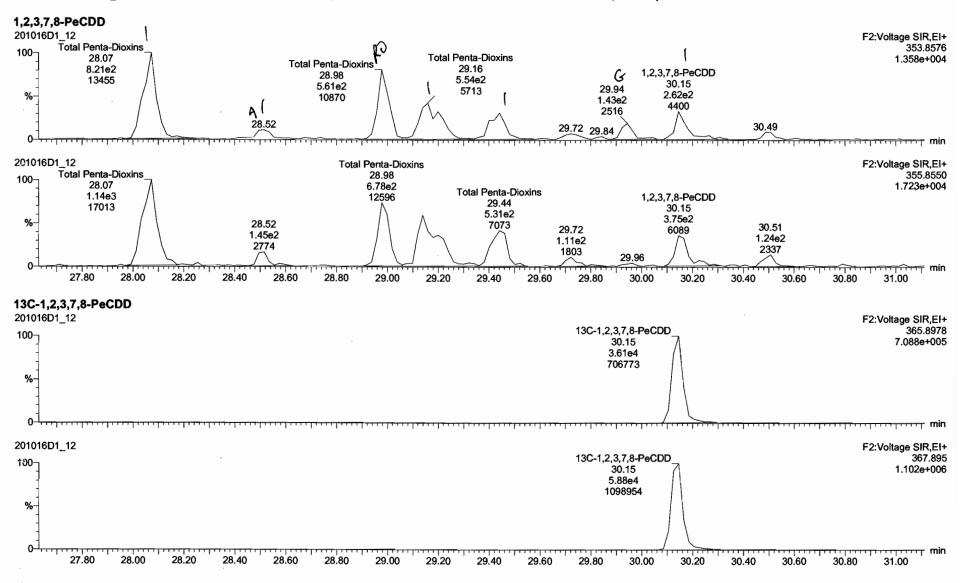
Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time

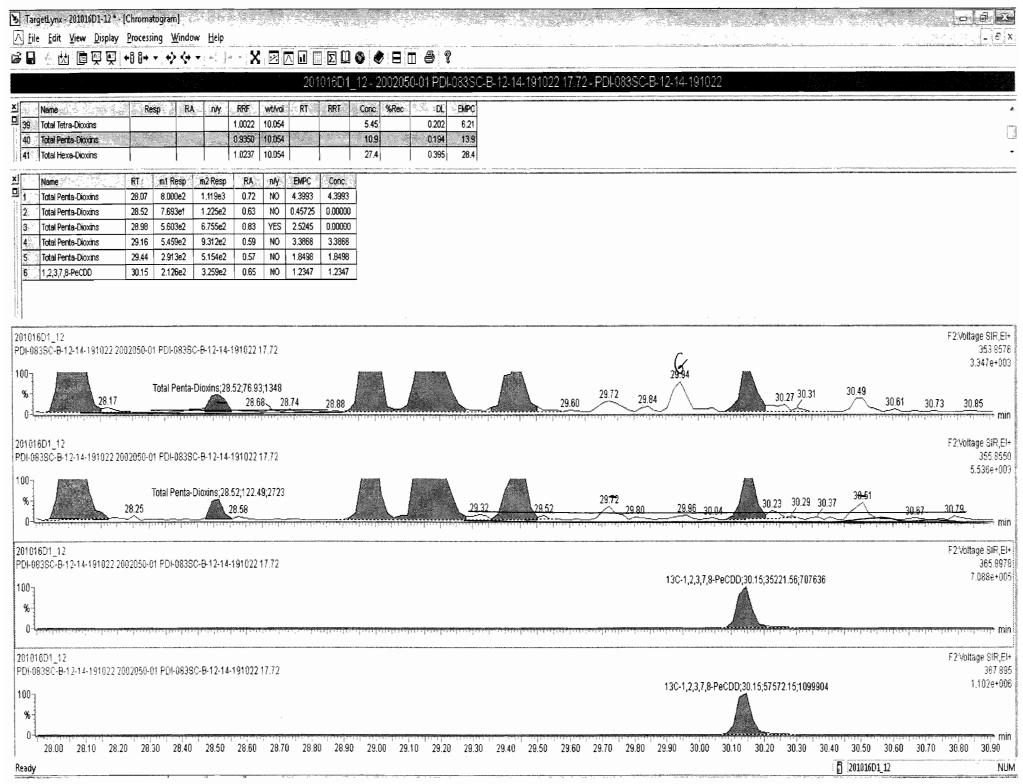


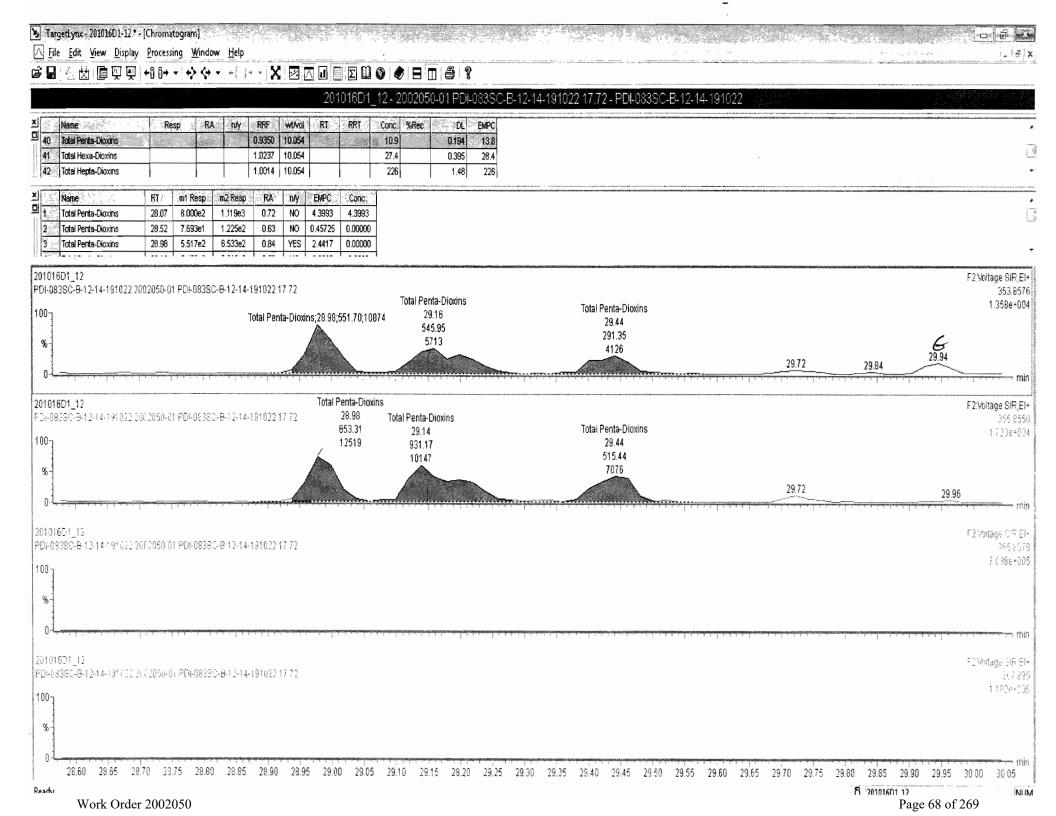
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Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time

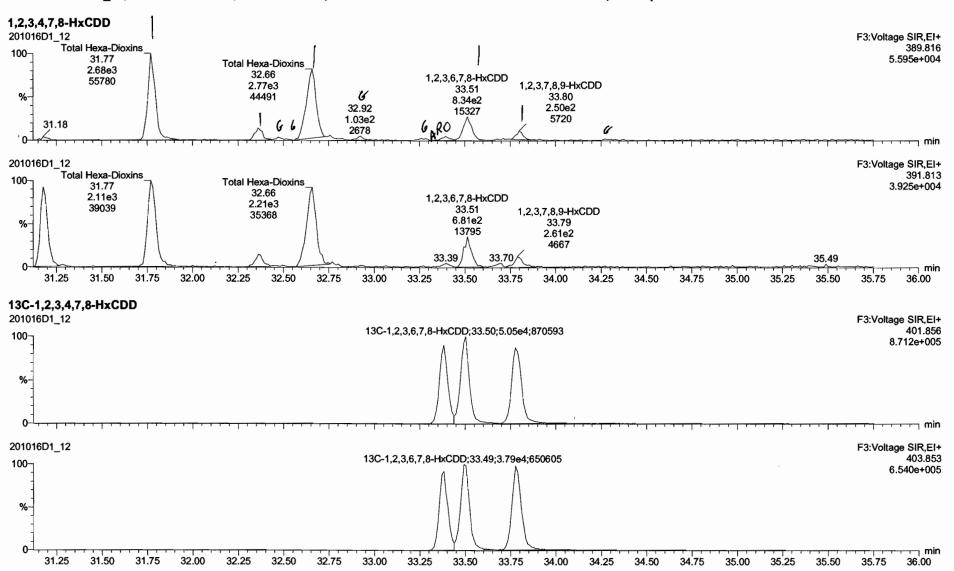


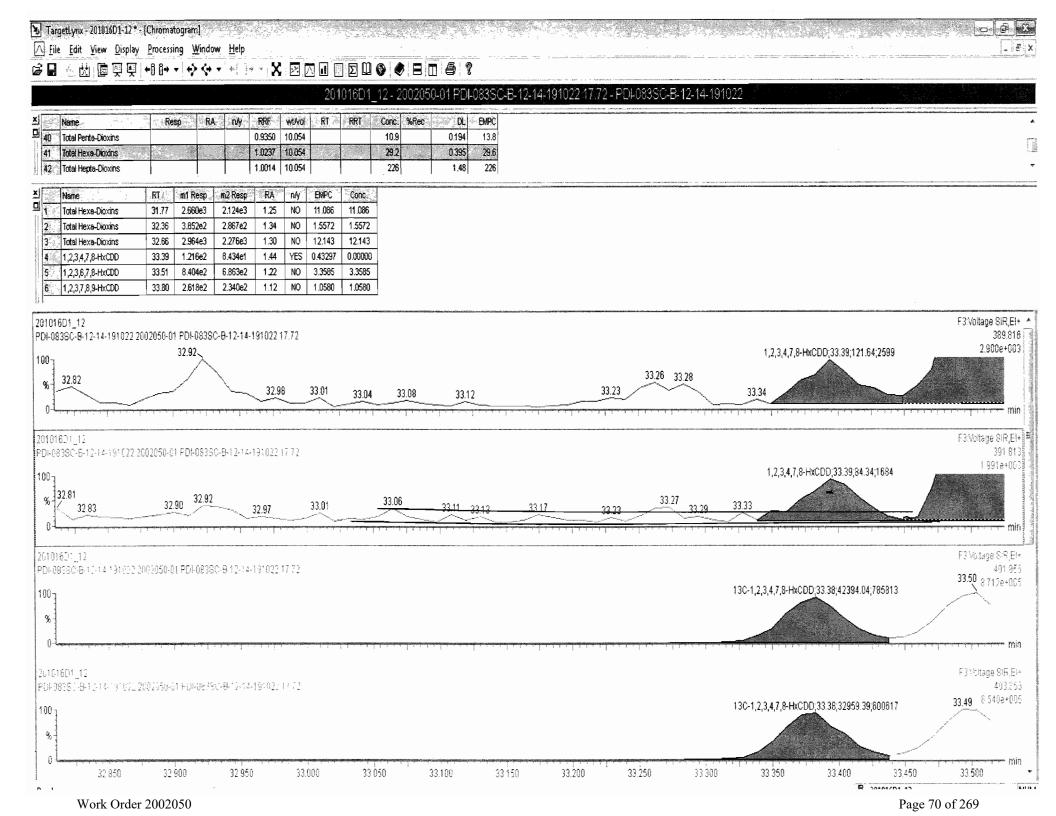


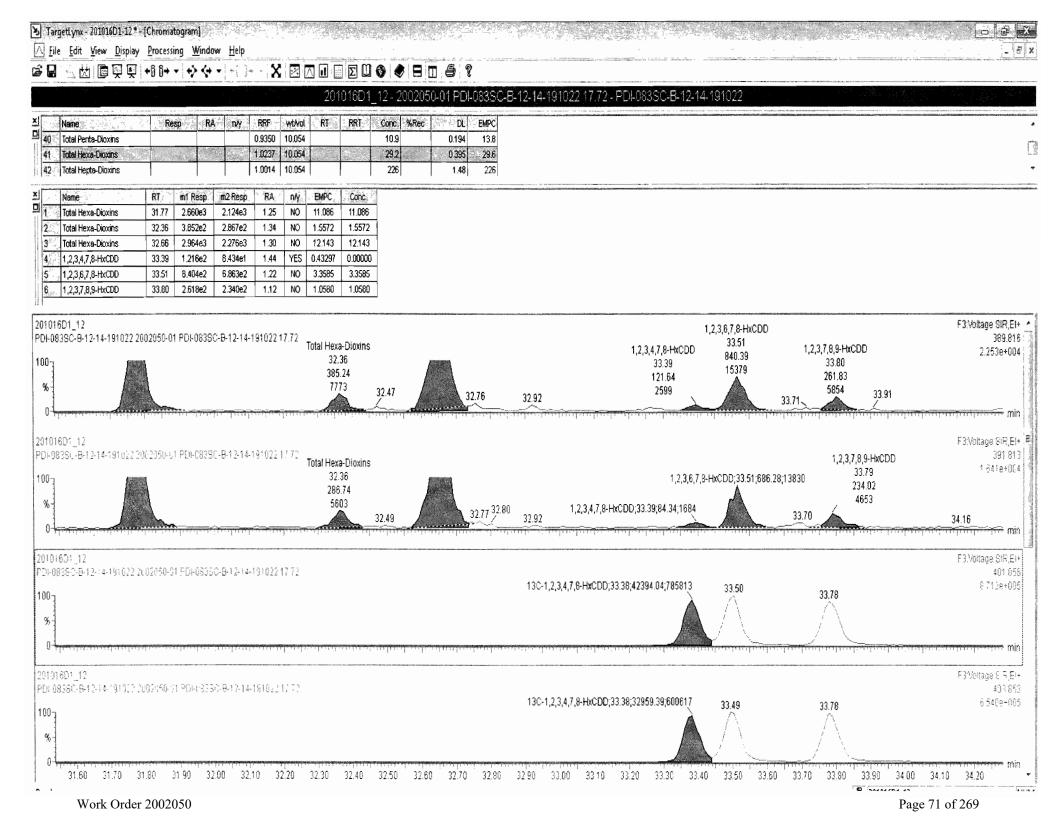


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Last Altered: Printed: Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time







36.00

36.25

36.50

36.75

37.00

37.25

37.50

37.75

38.00

38.25

38.50

38.75

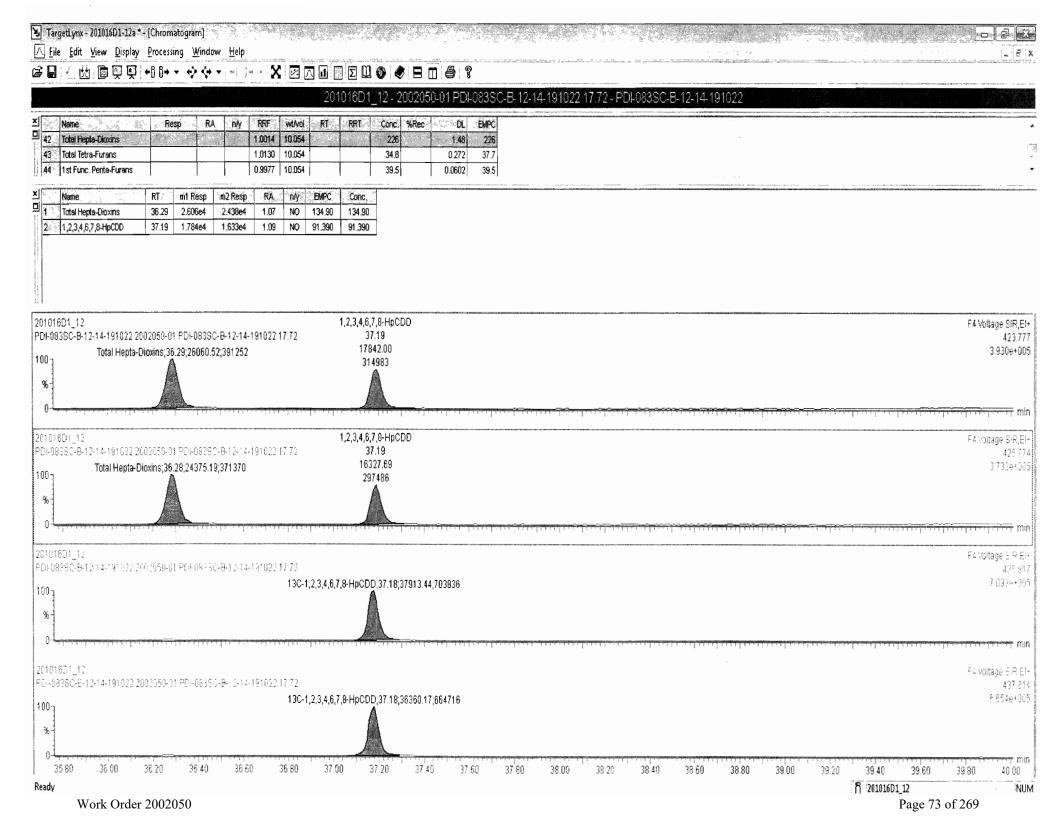
39.00

39.25

39.50

39.75

40.00

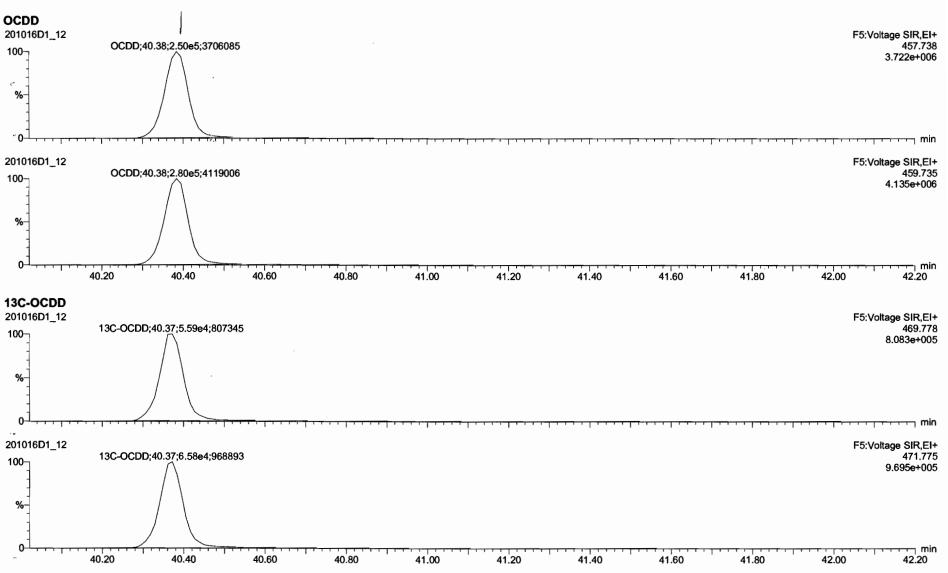


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Last Altered: Printed:

Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time

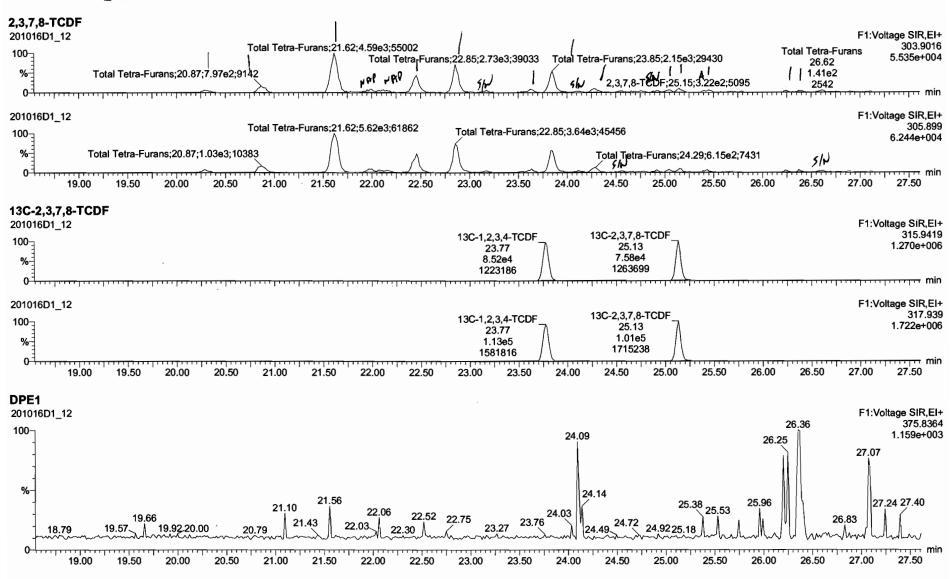
### Name: 201016D1\_12, Date: 16-Oct-2020, Time: 18:01:49, ID: 2002050-01 PDI-083SC-B-12-14-191022 17.72, Description: PDI-083SC-B-12-14-191022

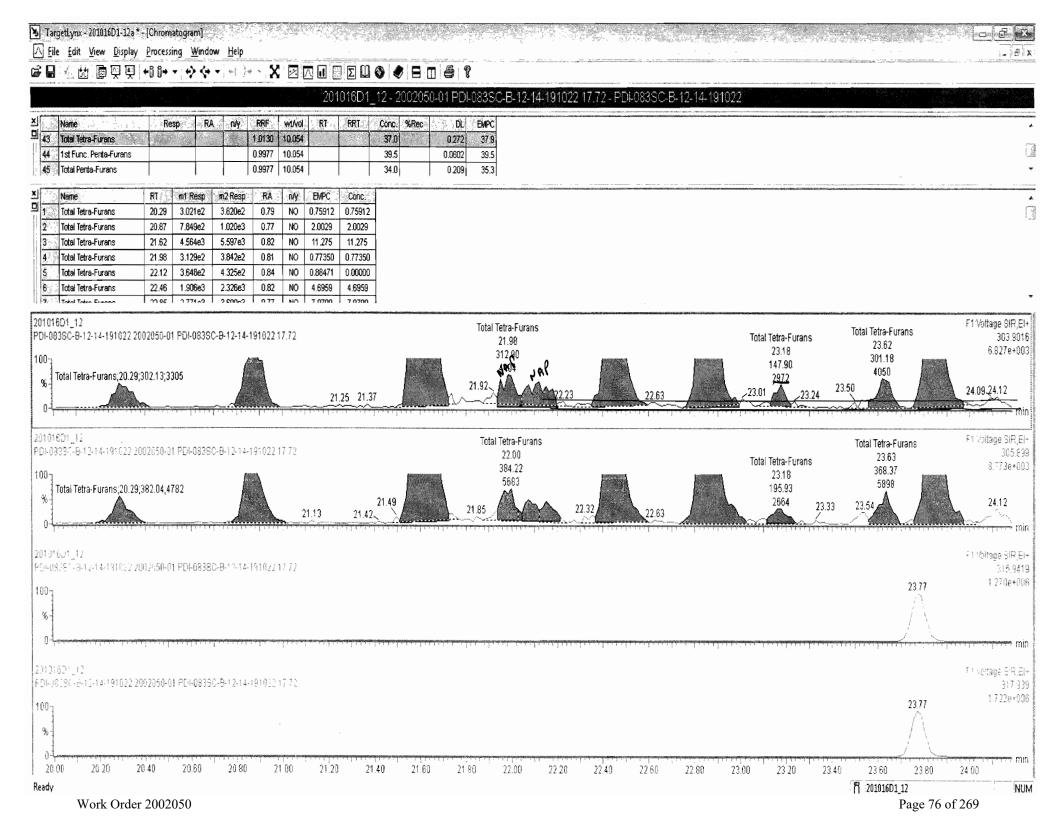


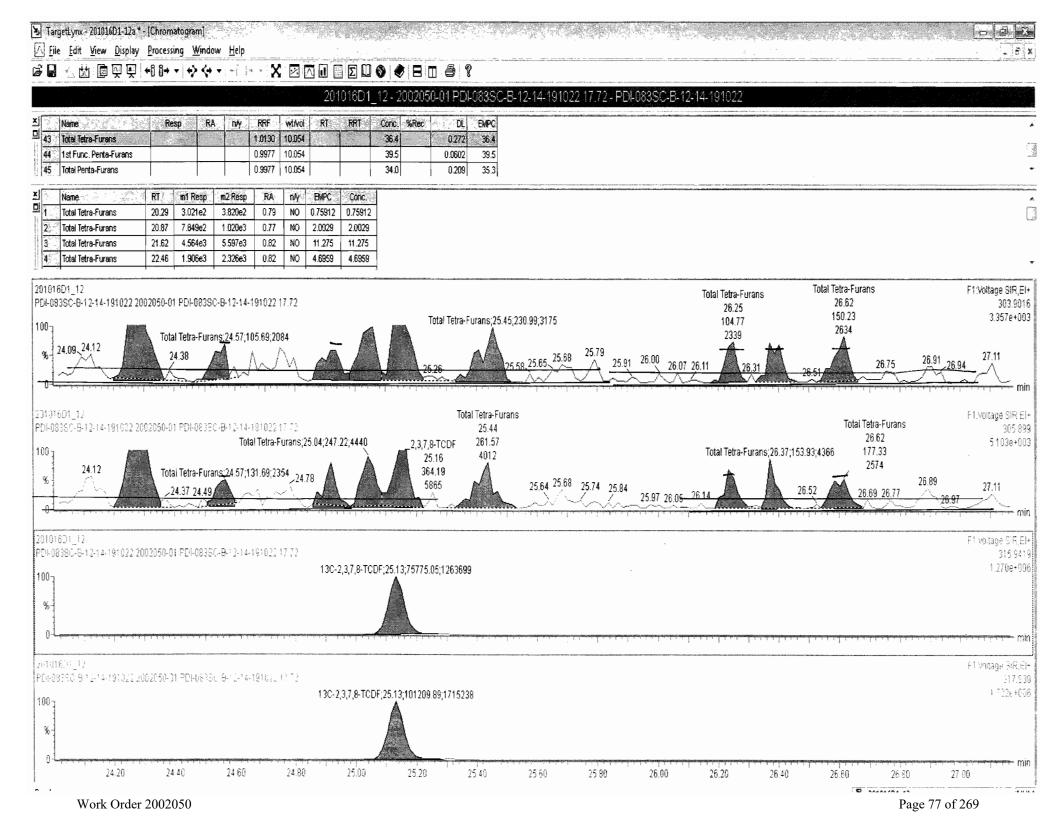
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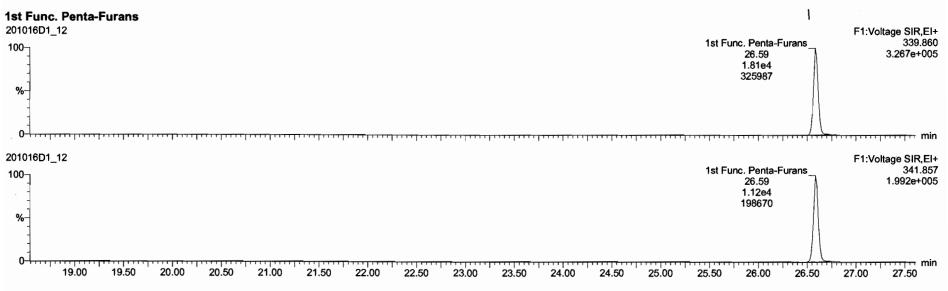


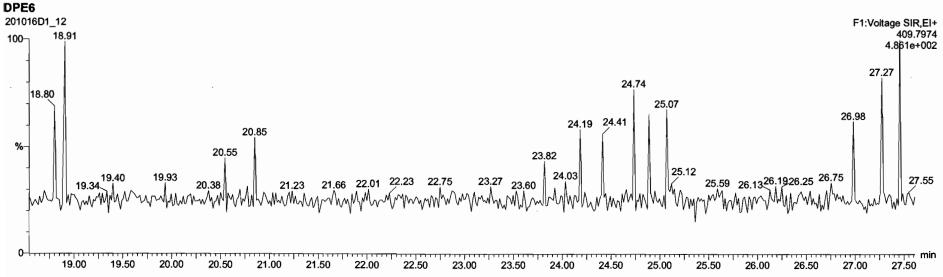
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Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time







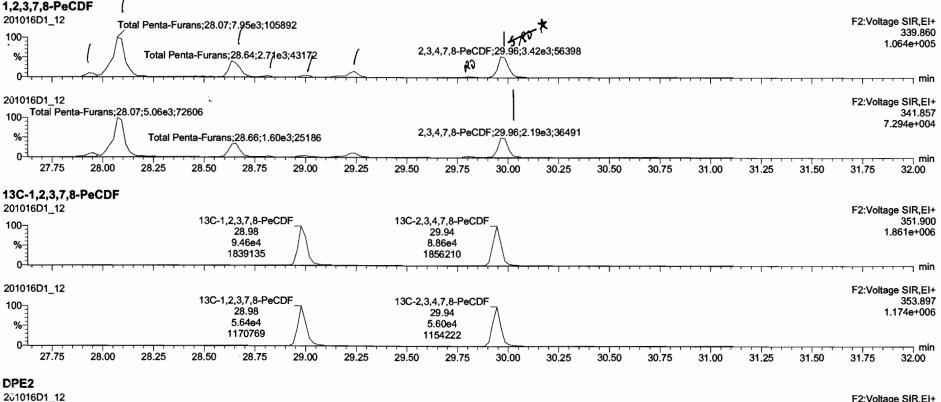
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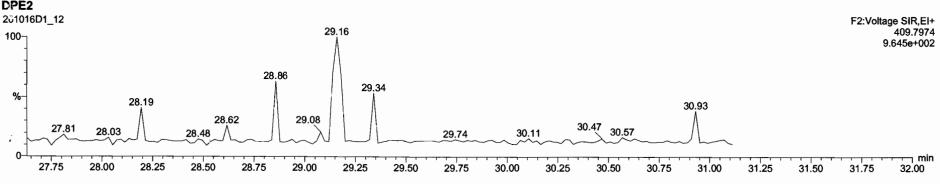
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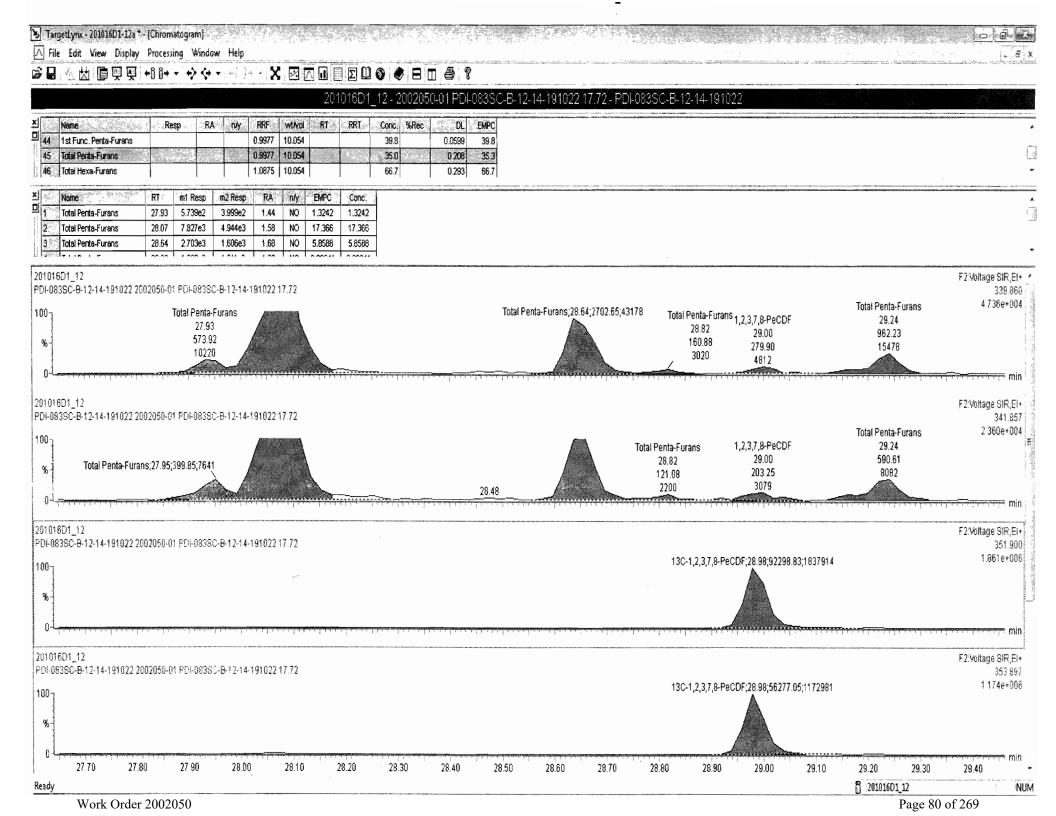
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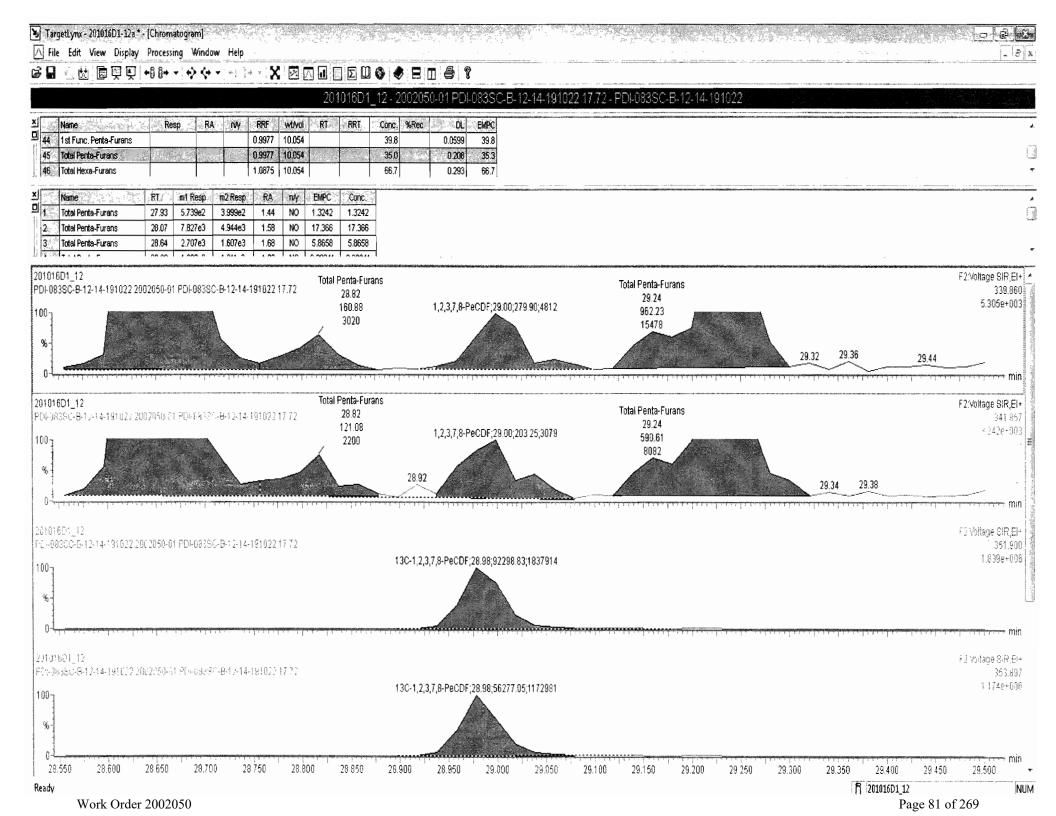
\* by 10-22-2020

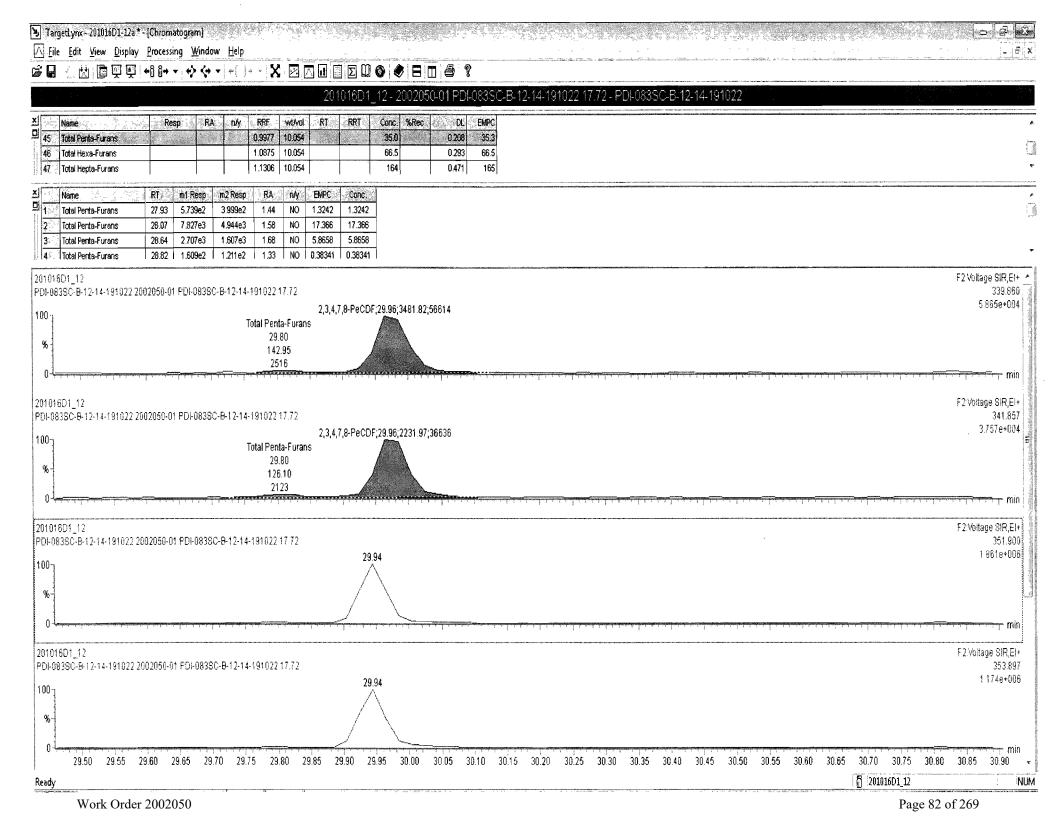
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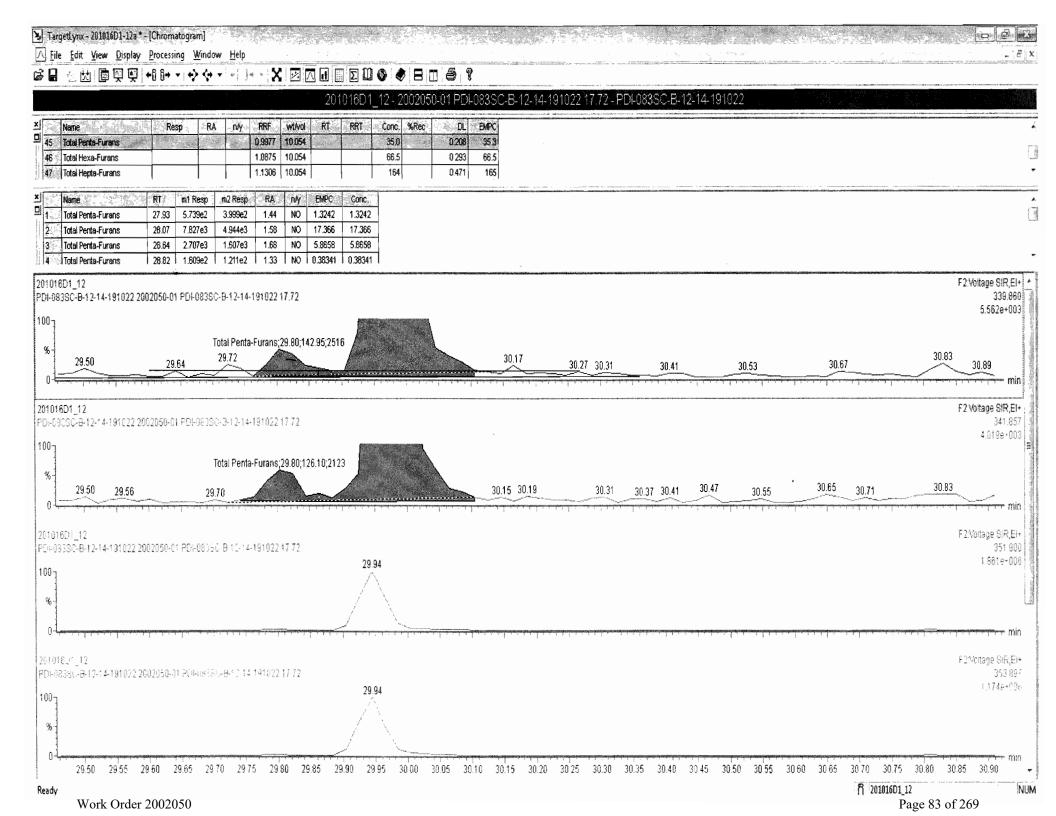










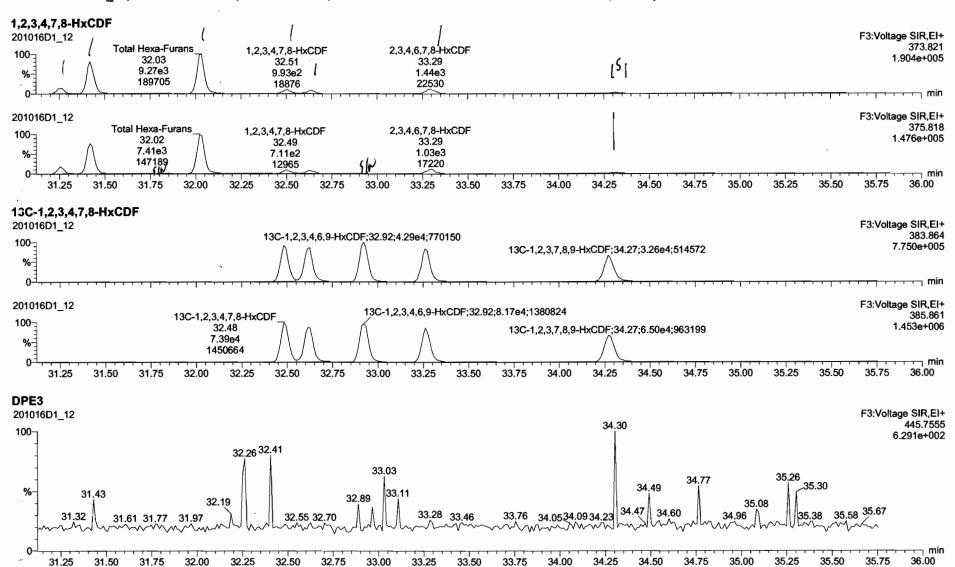


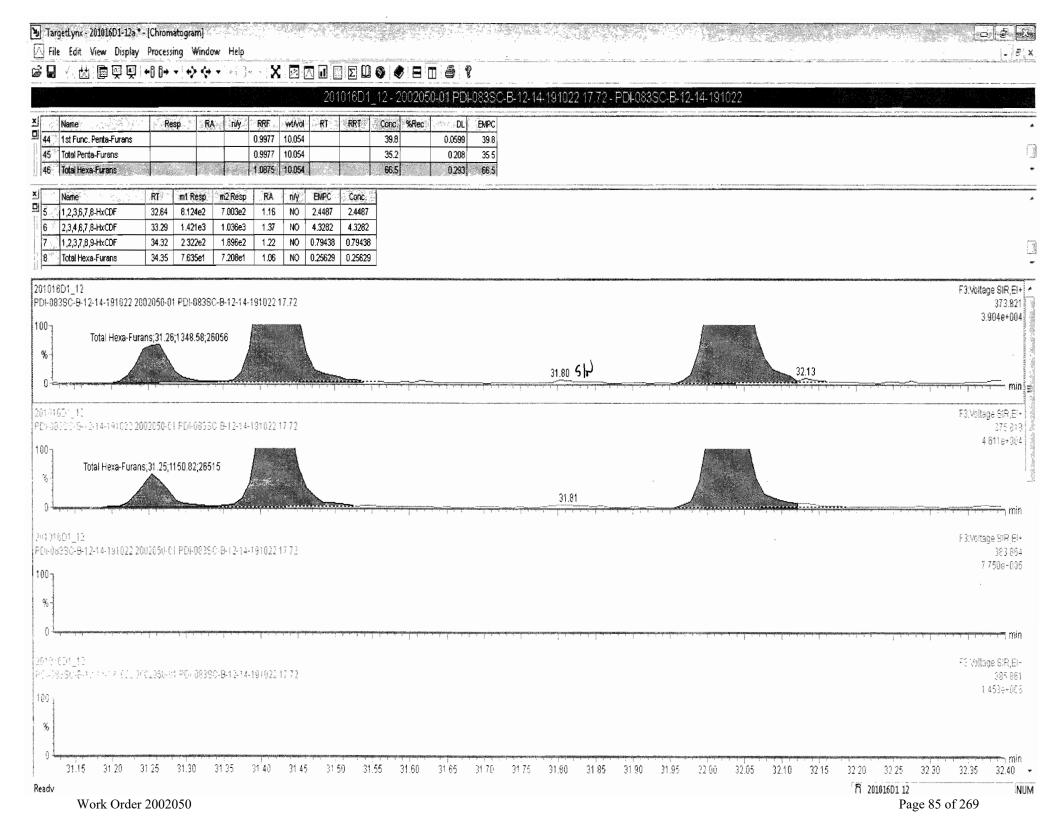
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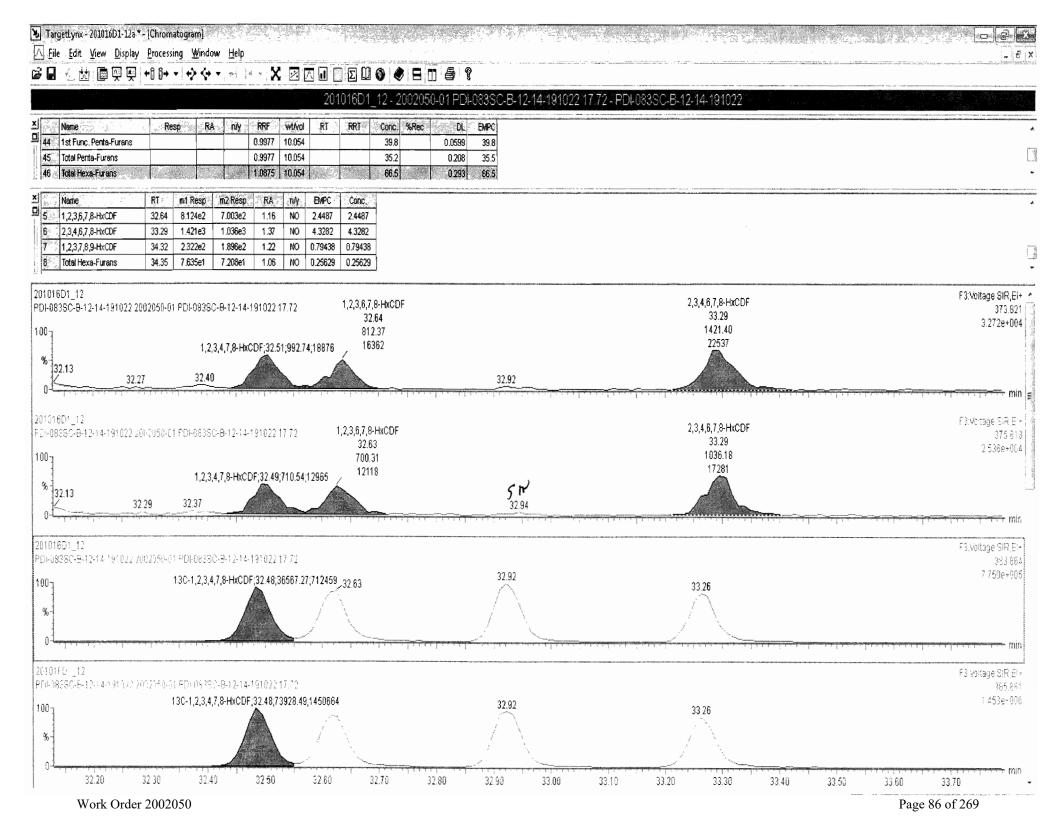
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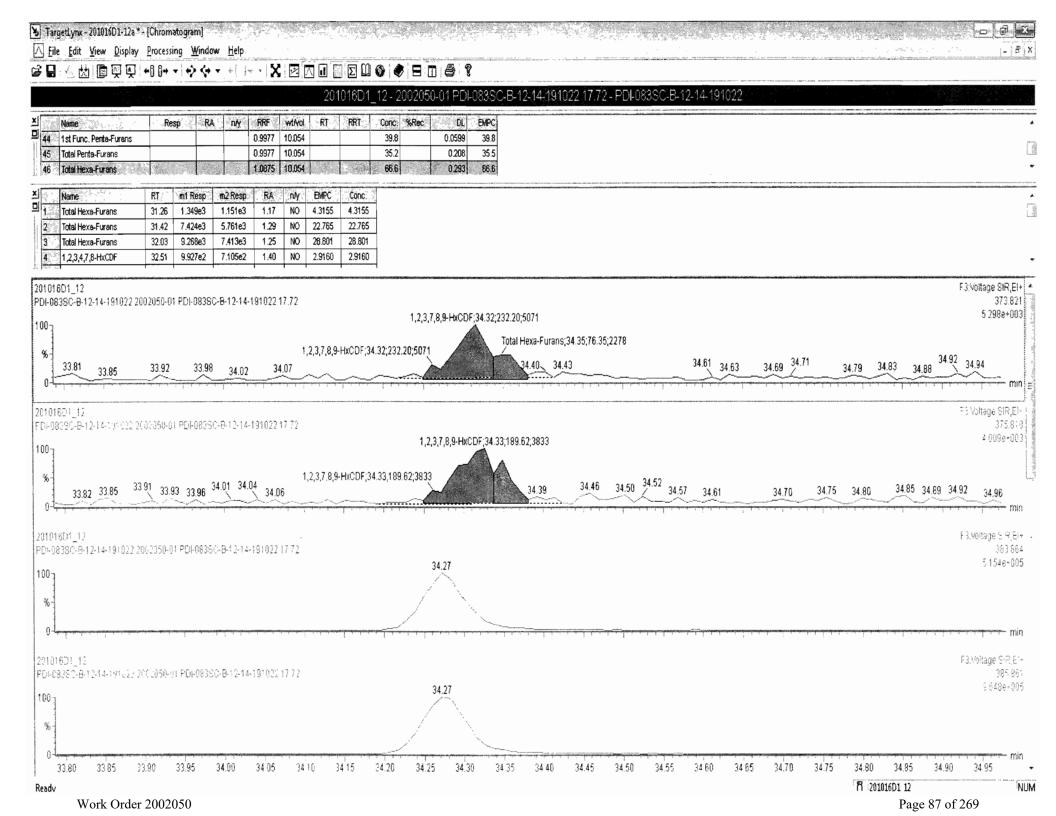
Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time

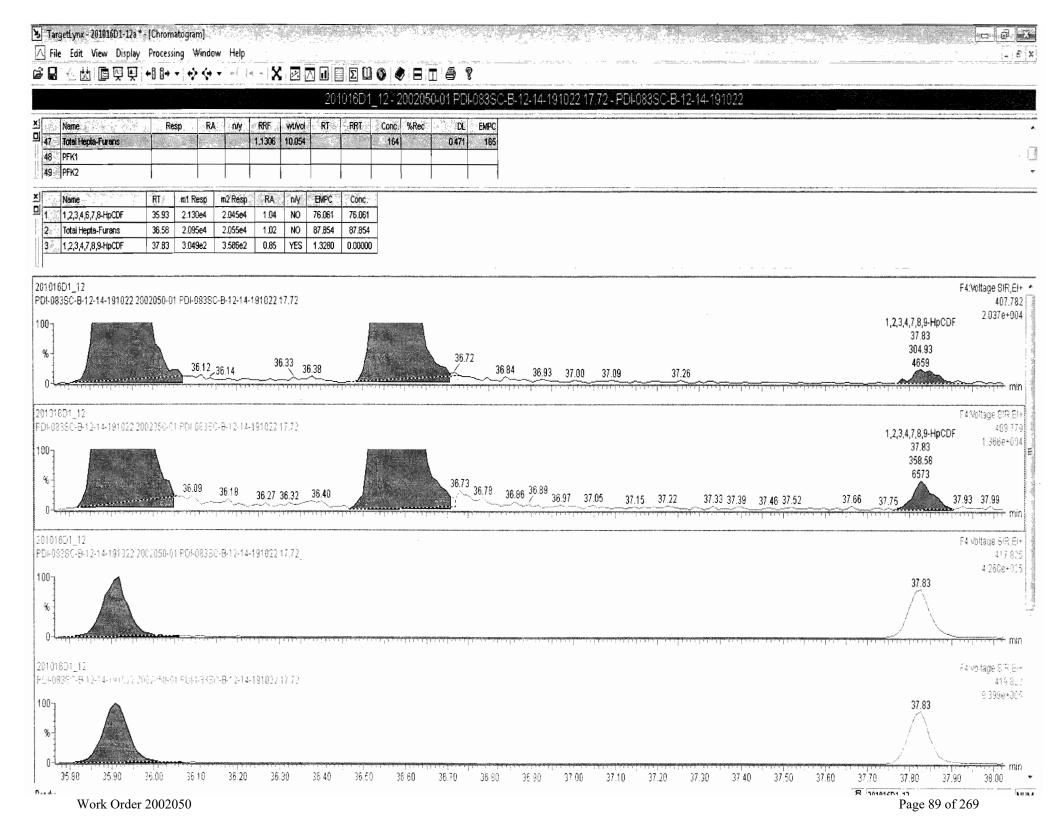
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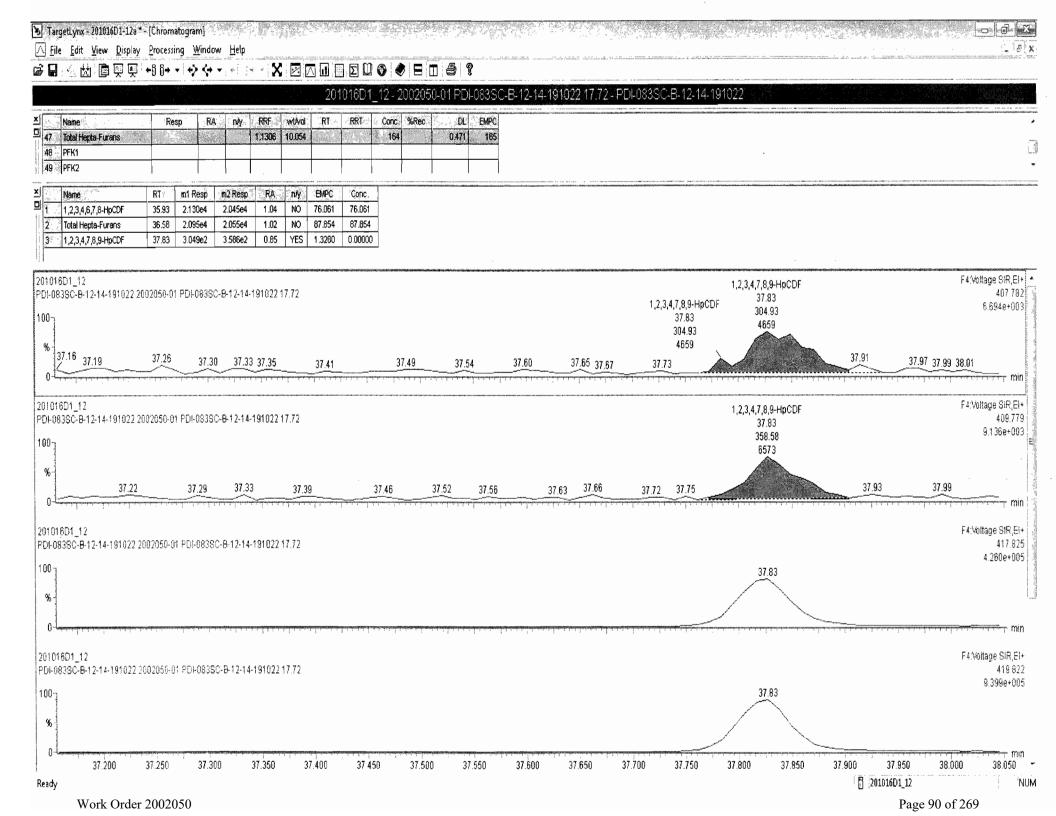










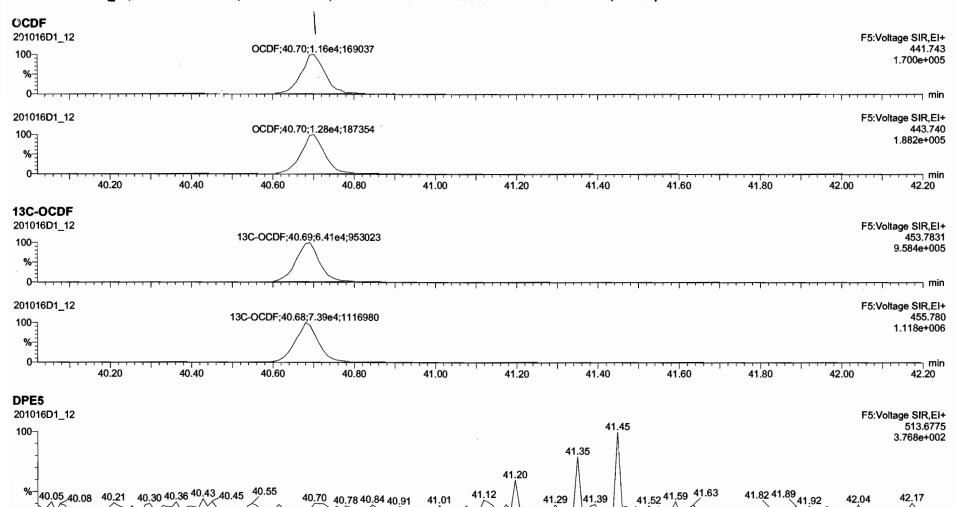


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Name: 201016D1\_12, Date: 16-Oct-2020, Time: 18:01:49, ID: 2002050-01 PDI-083SC-B-12-14-191022 17.72, Description: PDI-083SC-B-12-14-191022



40.20

40.40

40.60

40.80

41.00

41.20

41.40

41.60

41.80

42.00

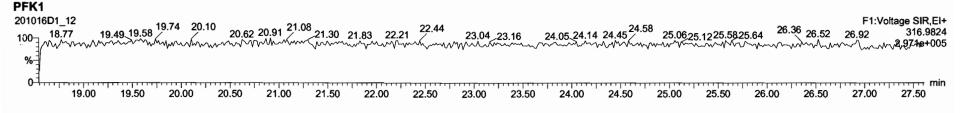
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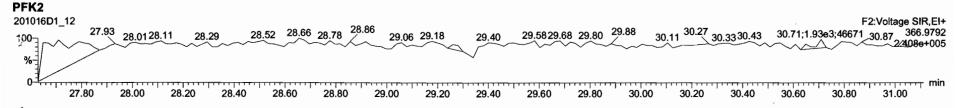
42.20

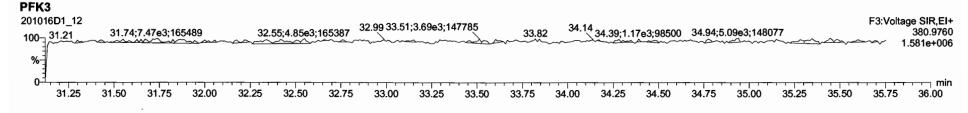
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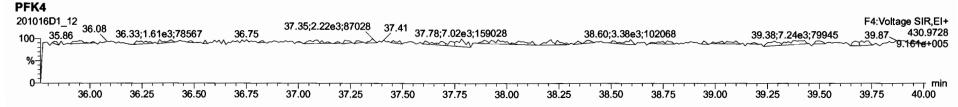
Last Altered: Printed: Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time

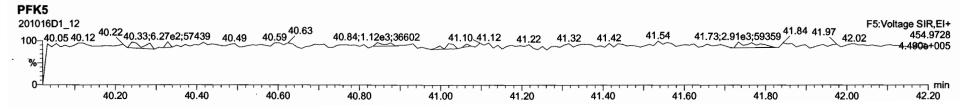
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# **CONTINUING CALIBRATION**

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## HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST201016D1-1	(C)	R	Reviewed By: GPB (0/20/2020	_
End Calibration ID: 5720101602-1	Beg.	End,	initials & past	Beg. End
Ion abundance within QC limits?	V	T	Mass resolution <u>&gt;</u>	
Concentrations within criteria?	Image: Control of the	V	□ 5k □ 6-8K □ 8K	
TCDD/TCDF Valleys <25%	7	Image: Control of the	Intergrated peaks display correctly?	
First and last eluters present?	7	Image: section of the sec	GC Break <20%	
Retention Times within criteria?	<u> I</u>	V	8280 CS1 End Standard:	
Verification Std. named correctly?	V	V	- Ratios within limits, S/N <2.5:1, CS1 within 12 hours	114
(ST-Year-Month-Day-VG ID)	9			
Forms signed and dated?	V		Comments:  (A) B some masses under 1012, o Kay	
Correct ICAL referenced?	H	th		
Run Log:			6 some masses under 10k, okay	
- Correct instrument listed?				
- Samples within 12 hour clock?	(Y)	N		
- Bottle position verfied?	1			

ID: LR - HCSRC

Rev. No.: 0 Rev. Date: 06/06/2017

Page: 1 of 1

MassLynx 4.1 SCN815

Page 1 of 2

Dataset:

U:\VG7.PRO\Results\201016D1\201016D1-1.qld

Last Altered: Printed:

Monday, October 19, 2020 11:38:36 Pacific Daylight Time Monday, October 19, 2020 11:39:13 Pacific Daylight Time

GPB 10/20/2020

Method: C:\MassLynx\Default.pro\Methdb\1613\_rrt.mdb 06 Oct 2020 14:27:08 Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 201016D1\_1, Date: 16-Oct-2020, Time: 09:34:43, ID: ST201016D1-1 1613 CS3 20F1105, Description: 1613 CS3 20F1105

#.Name	Resp	: IS Resp	RA	. n/y	RRF	Pred.RT.	RT	. RT Flag .	Pred.RRT	RRT	Conc.	. %Rec	STD out
1 2,3,7,8-TCDD	7.72e3	7.14e4	0.78	NO	1.00	25.81	25.79	NO	1.001	1.001	10.784	108	NO
2 2 1,2,3,7,8-PeCDD	2.47e4	5.02e4	0.61	NO	0.935	30.15	30.15	NO	1.001	1.001	52.672	105	NO
3 3 1,2,3,4,7,8-HxCDD	2.24e4	4.23e4	1.29	NO	1.15	33.39	33.39	NO	1.000	1.000	46.051	92.1	NO
4 1,2,3,6,7,8-HxCDD	2.41e4	5.04 <del>e4</del>	1.26	NO	1.02	33.50	33.51	NO	1.000	1.000	46.652	93.3	NO
5 1,2,3,7,8,9-HxCDD	2.38e4	4.77e4	1.26	NO	1.06	33.81	33.80	NO	1.001	1.001	46.940	93.9	NO
6 - 6 1,2,3,4,6,7,8-HpCDD	2.10e4	4.22e4	1.07	NO	1.00	37.19	37.19	NO	1.000	1.000	49.671	99.3	NO
7 OCDD	3.28e4	7.66e4	0.88	NO	0.952	40.38	40.38	NO	1.000	1.000	90.039	90.0	NO
8 2,3,7,8-TCDF	9.92e3	1.07e5	0.76	NO	1.01	25.14	25.13	NO	1.001	1.001	9.1913	91.9	NO
9 1,2,3,7,8-PeCDF	4.39e4	9.17e4	1.62	NO	0.998	29.00	29.00	NO	1.001	1.001	47.950	95.9	NO
10 2,3,4,7,8-PeCDF	4.43e4	8.12e4	1.62	NO	1.07	29.97	29.94	NO	1.001	1.000	50.723	101	NO
11 ,11 1,2,3,4,7,8-HxCDF	3.72e4	6.50e4	1.26	NO	1.05	32.48	32.51	NO	1.000	1.001	54.408	109	NO
12 1,2,3,6,7,8-HxCDF	4.01e4	6.91e4	1.27	NO	1.10	32.62	32.64	NO	1.000	1.001	52.795	106	NO
13 2,3,4,6,7,8-HxCDF	3.70e4	6.19e4	1.23	NO	1.09	33.31	33.28	NO	1.001	1.000	55.002	110	NO
14 1,2,3,7,8,9-HxCDF	3.08e4	5.52e4	1.31	NO	1.08	34.27	34.28	NO	1.000	1.000	51.451	103	NO
15 : 15 1,2,3,4,6,7,8-HpCDF	3.43e4	6.16e4	1.01	NO	1.13	35.94	35.92	NO	1.001	1.000	49.319	98.6	NO
16 1,2,3,4,7,8,9-HpCDF	2.88e4	4.37e4	0.99	NO	1.29	37.83	37.84	NO	1.000	1.000	51.250	103	NO
17 OCDF	4.71e4	8.74 <del>e4</del>	0.91	NO	0.953	40.69	40.70	NO	1.000	1.000	113.03	113	NO
18 13C-2,3,7,8-TCDD	7.14 <del>e4</del>	5.40e4	0.82	NO	1.17	25.75	25.78	NO	1.026	1.027	112.71	113	NO
19	5.02 <del>e4</del>	5.40e4	0.66	NO	0.914	29.94	30.13	NO	1.193	1.200	101.62	102	NO
20 20 13C-1,2,3,4,7,8-HxCDD	4.23e4	6.59e4	1.33	NO	0.634	33.39	33.38	NO	1.014	1.014	101.32	101	NO
21 13C-1,2,3,6,7,8-HxCDD	5.04e4	6.59e4	1.30	NO	0.724	33.50	33.50	NO	1.017	1.017	105.62	106	NO
22 13C-1,2,3,7,8,9-HxCDD	4.77e4	6.59e4	1.28	NO	0.716	33.77	33.78	NO	1.025	1.026	101.18	101	NO
23 23 13C-1,2,3,4,6,7,8-HpCDD	4.22e4	6.59e4	1.04	NO	0.660	37.18	37.18	NO	1.129	1.129	96.825	96.8	NO
24 24 13C-OCDD	7.66e4	6.59e4	0.91	NO	0.587	40.16	40.38	NO	1.219	1.226	198.18	99.1	NO
25 25 13C-2,3,7,8-TCDF	1.07e5	9.76e4	0.79	NO	1.02	24.85	25.12	NO	0.990	1.001	106.83	107	NO
26 13C-1,2,3,7,8-PeCDF	9.17e4	9.76e4	1.64	NO	0.842	29.01	28.98	NO	1.156	1.154	111.57	112	NO
27 , 27 13C-2,3,4,7,8-PeCDF	8.12e4	9.76e4	1.68	NO	0.802	29.90	29.94	NO	1.191	1.193	103.82	104	NO
28 13C-1,2,3,4,7,8-HxCDF	6.50e4	6.59e4	0.52	NO	1.00	32.54	32.48	NO	0.988	0.986	98.280	98.3	NO
29 13C-1,2,3,6,7,8-HxCDF	6.91e4	6.59e4	0.52	NO	1.02	32.67	32.61	NO	0.992	0.990	102.84	103	NO
30 13C-2,3,4,6,7,8-HxCDF	6.19e4	6.59e4	0.49	NO	0.955	33.23	33.27	NO	1.009	1.010	98.321	98.3	NO
31 13C-1,2,3,7,8,9-HxCDF	5.52e4	6.59e4	0.52	NO	0.851	34.30	34.27	NO	1.041	1.041	98.459	98.5	NO

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Page 2 of 2

Dataset:

U:\VG7.PRO\Results\201016D1\201016D1-1.qld

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Monday, October 19, 2020 11:38:36 Pacific Daylight Time

Printed:

Monday, October 19, 2020 11:39:13 Pacific Daylight Time

Name: 201016D1\_1, Date: 16-Oct-2020, Time: 09:34:43, ID: ST201016D1-1 1613 CS3 20F1105, Description: 1613 CS3 20F1105

# Name	Resp	; IS Resp;	RA	n/y	RRF	: Pred.RT	RT	RT Flag	Pred.RRT;	RRT	; Conc.	%Rec	· STD out
32 32 13C-1,2,3,4,6,7,8-HpCDF	6.16e4	6.59e4	0.43	NO	0.848	35.80	35.91	NO	1.087	1.090	110.10	110	NO
33 13C-1,2,3,4,7,8,9-HpCDF	4.37e4	6.59 <del>e4</del>	0.44	NO	0.624	37.77	37.83	NO	1.147	1.149	106.13	106	NO
34 34 13C-OCDF	8.74 <del>e4</del>	6.59e4	0.87	NO	0.730	40.31	40.69	NO	1.224	1.236	181.68	90.8	NO
35 37 CI-2,3,7,8-TCDD	7.56e3	5.40e4			1.21	25.75	25.79	NO	1.026	1.027	11.598	116	NO
36 13C-1,2,3,4-TCDD	5.40 <del>e</del> 4	5.40e4	0.77	NO	1.00	25.26	25.10	NO	1.000	1.000	100.00	100	NO
37 13C-1,2,3,4-TCDF	9.76e4	9.76e4	0.78	NO	1.00	23.93	23.76	NO	1.000	1.000	100.00	100	NO
38 38 13C-1,2,3,4,6,9-HxCDF	6.59e4	6.59e4	0.51	NO	1.00	32.99	32.93	NO	1.000	1.000	100.00	100	NO

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MassLynx 4.1

Page 1 of 1

Vista Analytical Laboratory VG-11

Dataset:

Untitled

Last Altered: Printed:

Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:02:10 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\1613\_rrt.mdb 06 Oct 2020 14:27:08 Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Compound name: 2,3,7,8-TCDD

1200	Name	ID	Acq.Date	Acq.Time
1	201016D1_1	ST201016D1-1 1613 CS3 20F1105	16-Oct-20	09:34:43
2	201016D1_2	QC201016D1-1 TCDF CPSM	16-Oct-20	10:21:13
3	201016D1_3	B0J0117-BS1 OPR 1	16-Oct-20	11:06:38
4	201016D1_4	B0J0108-BS1 OPR 10	16-Oct-20	11:52:32
5	201016D1_5	SOLVENT BLANK	16-Oct-20	12:38:43
6	201016D1_6	B0J0108-BLK1 Method Blank 10	16-Oct-20	13:24:53
7	201016D1_7	B0J0117-BLK1 Method Blank 1	16-Oct-20	14:11:03
8	201016D1_8	2002068-05 WC-G9001 0.94739	16-Oct-20	14:57:12
9	201016D1_9	2002075-01 NCPDI-061SW-201001-002 0.93	16-Oct-20	15:43:21
10	201016D1_10	2002011-02 PE1295-2ML 1	16-Oct-20	16:29:31
11	201016D1_11	2002011-02@20X PE1295-2ML 1	16-Oct-20	17:15:40
12	201016D1_12	2002050-01 PDI-083SC-B-12-14-191022 17.72	16-Oct-20	18:01:49
13	201016D1_13	2002050-01@20X PDI-083SC-B-12-14-19102	16-Oct-20	18:48:04
14	201016D1_14	2002100-01 Biosolids 53.56	16-Oct-20	19:34:11
15	201016D1_15	2002100-01@20X Biosolids 53.56	16-Oct-20	20:20:20
16	201016D2_1	SOLVENT BLANK	16-Oct-20	21:14:34
17	201016D2_2	ST201016D2-1 1613 CS3 20F1105	16-Oct-20	21:59:46
18	201016D2_3	QC201016D2-1 TCDF CPSM	16-Oct-20	22:45:54

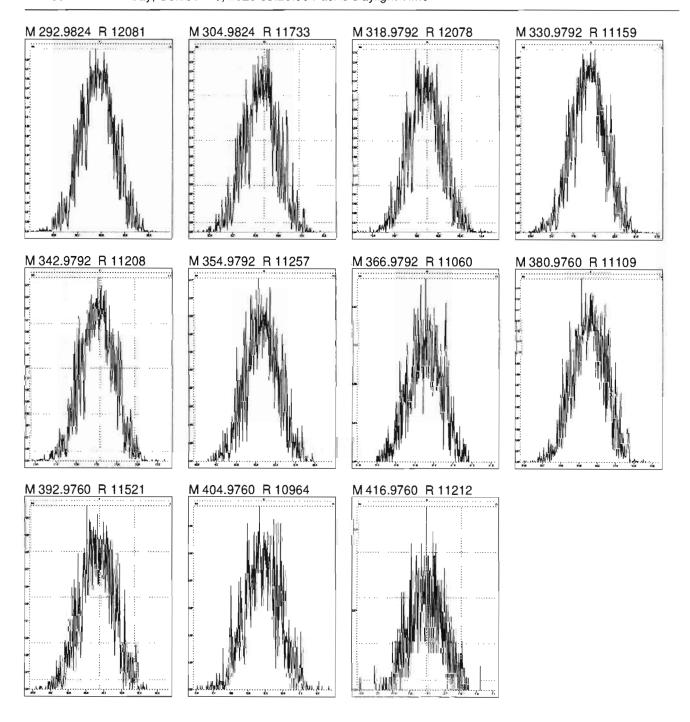
Work Order 2002050 Page 97 of 269

File:

Experiment: ocdd\_db5.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed:

Friday, October 16, 2020 09:26:56 Pacific Daylight Time



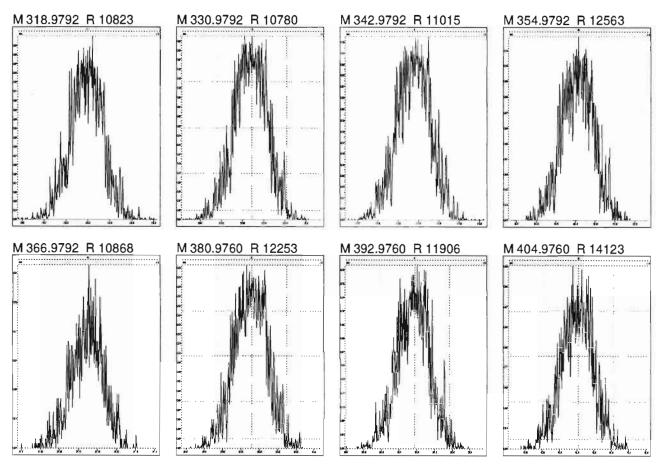
Work Order 2002050 Page 98 of 269

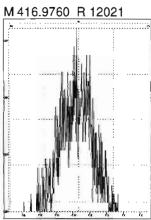
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Experiment: ocdd\_db5.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed:

Friday, October 16, 2020 09:29:25 Pacific Daylight Time

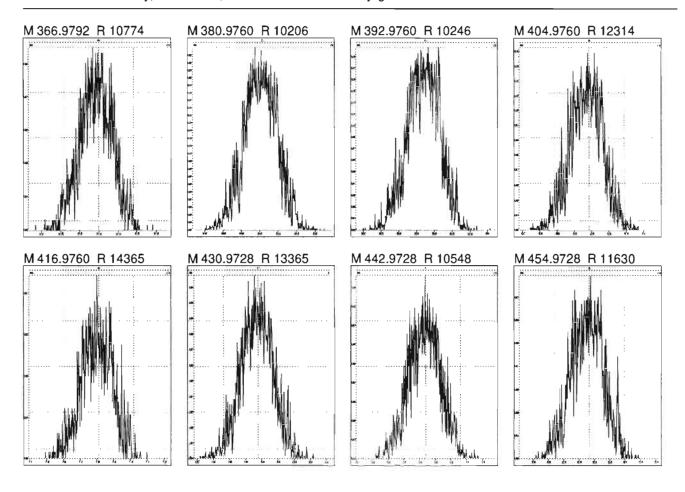




Work Order 2002050 Page 99 of 269

File: Experiment: ocdd\_db5.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Friday, October 16, 2020 09:29:56 Pacific Daylight Time



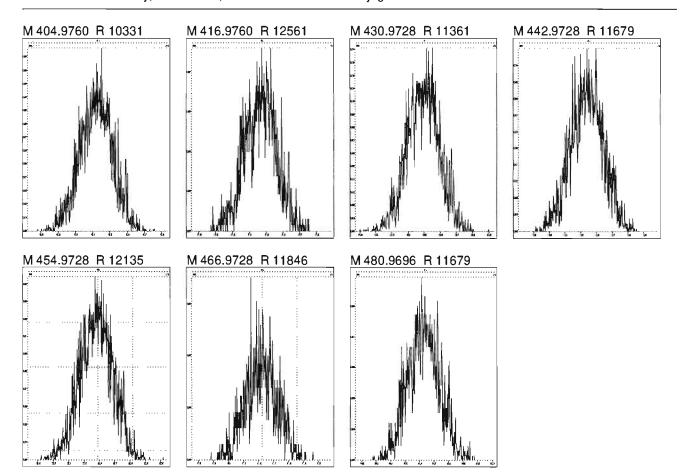
Work Order 2002050 Page 100 of 269

File:

Experiment: ocdd\_db5.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed:

Friday, October 16, 2020 09:30:30 Pacific Daylight Time



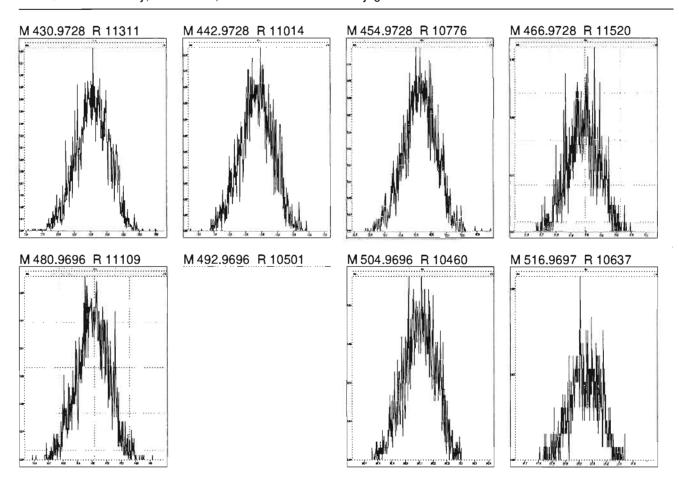
Work Order 2002050 Page 101 of 269

File:

Experiment: ocdd\_db5.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed:

Friday, October 16, 2020 09:30:51 Pacific Daylight Time



Work Order 2002050 Page 102 of 269

Page 1 of 1

Dataset:

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Last Altered: Printed:

Monday, October 19, 2020 11:14:20 Pacific Daylight Time Monday, October 19, 2020 11:14:42 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\CPSM.mdb 22 Sep 2020 09:44:55 Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 201016D1\_1, Date: 16-Oct-2020, Time: 09:34:43, ID: ST201016D1-1 1613 CS3 20F1105, Description: 1613 CS3 20F1105

- Elite	# Name	RT
1	1 1,3,6,8-TCDD (First)	22.37
2	2 1,2,8,9-TCDD (Last)	26.62
3	3 1,2,4,7,9-PeCDD (First)	28.05
4	4 1,2,3,8,9-PeCDD (Last)	30.49
5	5 1,2,4,6,7,9-HxCDD (First)	31.77
6	6 1,2,3,7,8,9-HxCDD (Last)	33.80
7	7 1,2,3,4,6,7,9-HpCDD (First)	36.30
8	8 1,2,3,4,6,7,8-HpCDD (Last)	37.19
9	9 1,3,6,8-TCDF (First)	20.24
10	10 1,2,8,9-TCDF (Last)	26.89
11	11 1,3,4,6,8-PeCDF (First)	26.54
12	12 1,2,3,8,9-PeCDF (Last)	30.83
13	13 1,2,3,4,6,8-HxCDF (First)	31.25
14	14 1,2,3,7,8,9-HxCDF (Last)	34.28
15	15 1,2,3,4,6,7,8-HpCDF (First)	35.92
16	16 1,2,3,4,7,8,9-HpCDF (Last)	37.84

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MassLynx 4.1

Page 1 of 1

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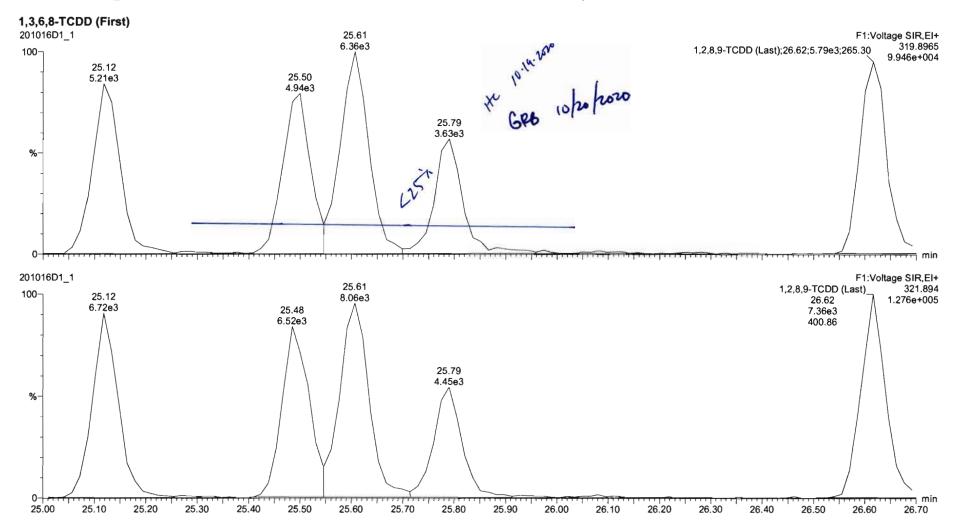
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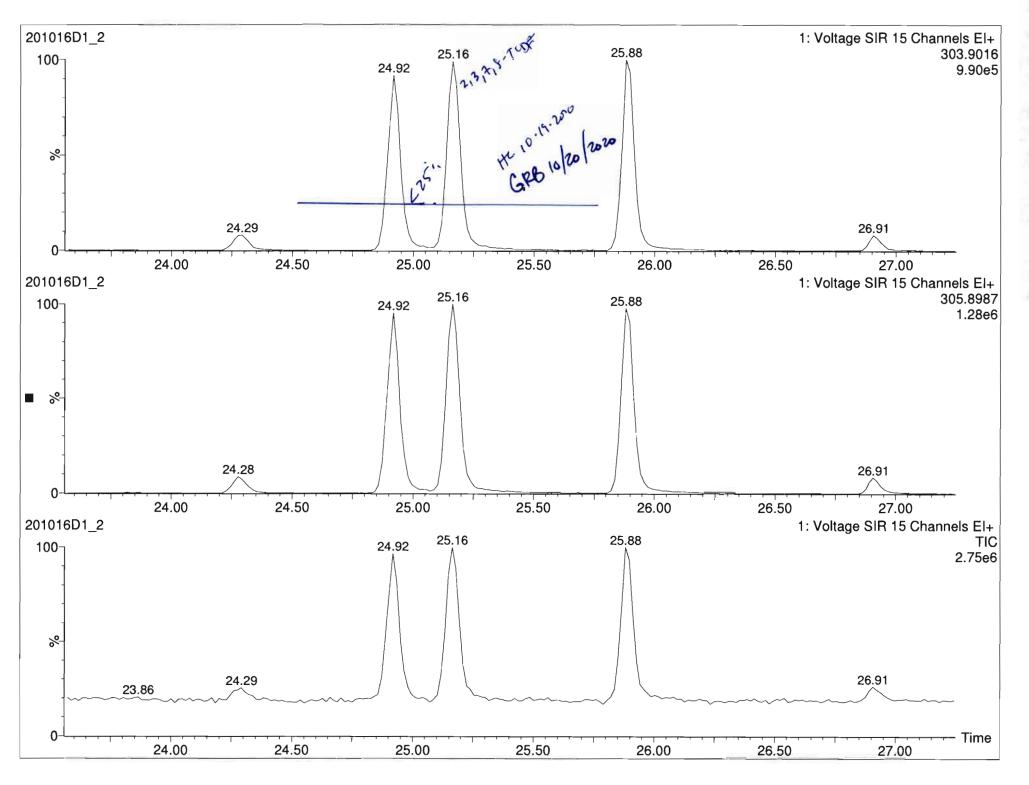
Monday, October 19, 2020 11:14:20 Pacific Daylight Time Monday, October 19, 2020 11:14:42 Pacific Daylight Time

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Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 201016D1\_1, Date: 16-Oct-2020, Time: 09:34:43, ID: ST201016D1-1 1613 CS3 20F1105, Description: 1613 CS3 20F1105





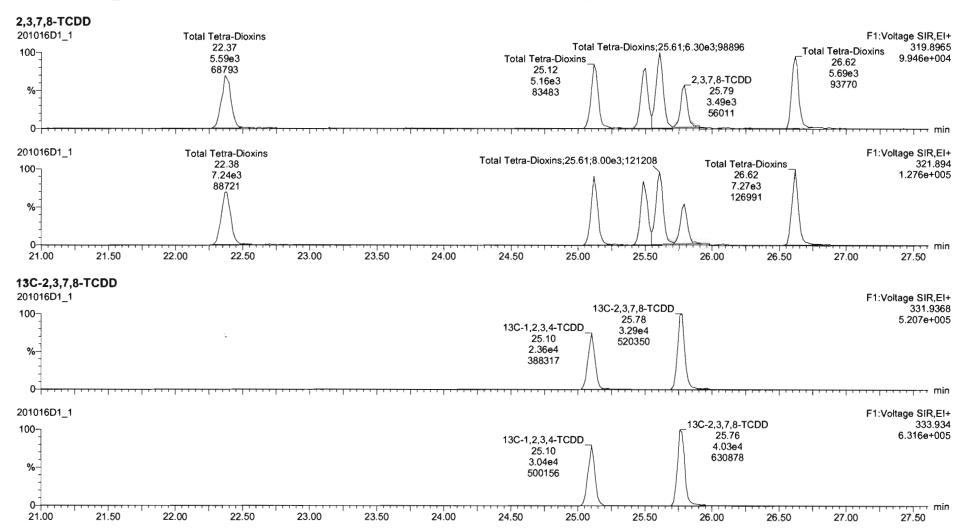
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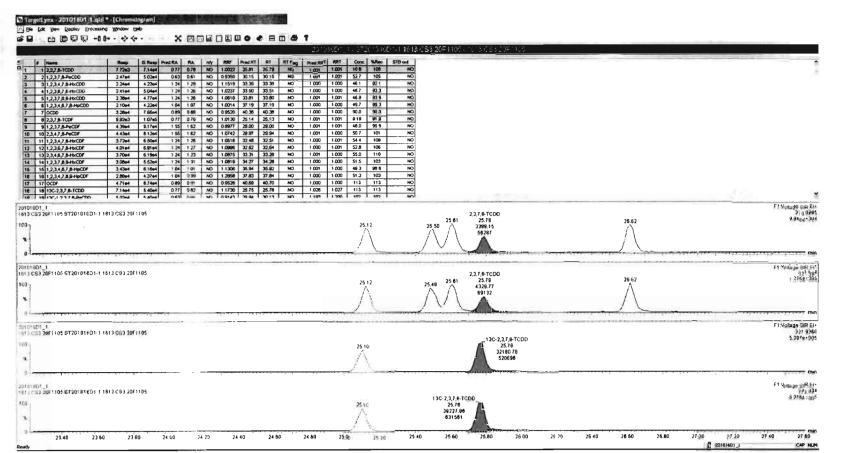
Last Altered: Printed:

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Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 201016D1\_1, Date: 16-Oct-2020, Time: 09:34:43, ID: ST201016D1-1 1613 CS3 20F1105, Description: 1613 CS3 20F1105





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Vista Analytical Laboratory

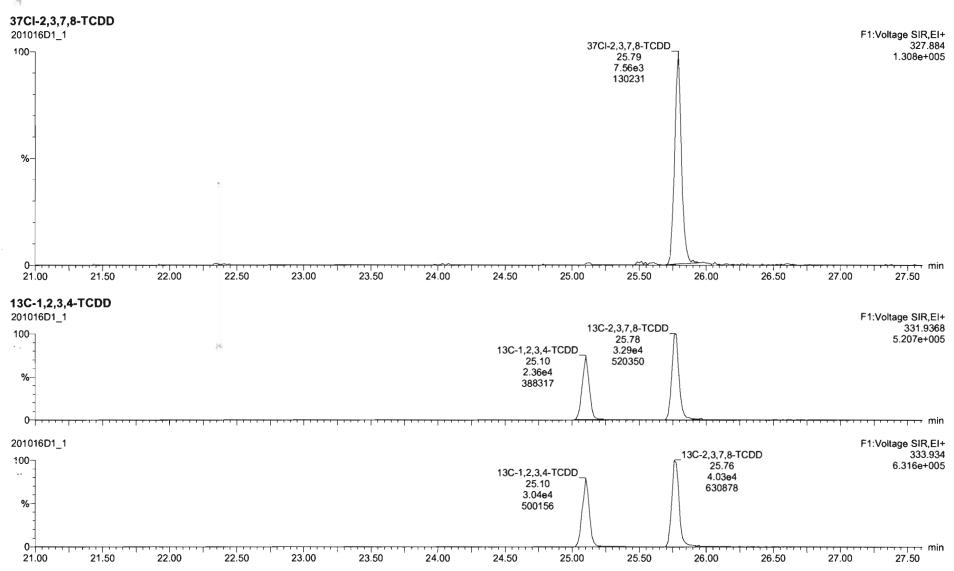
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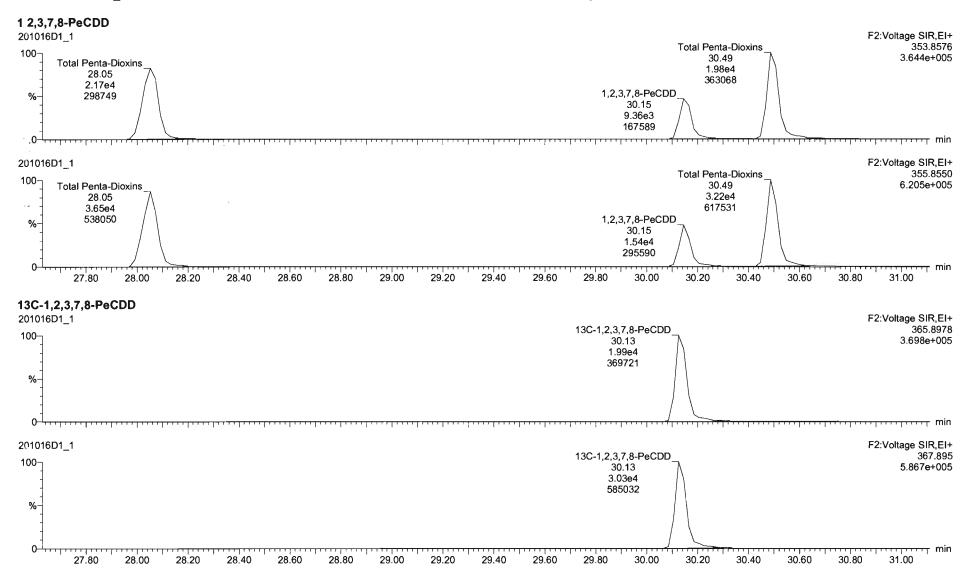
Vista Analytical Laboratory

Dataset:

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Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time



**Quantify Sample Report** 

MassLynx 4.1

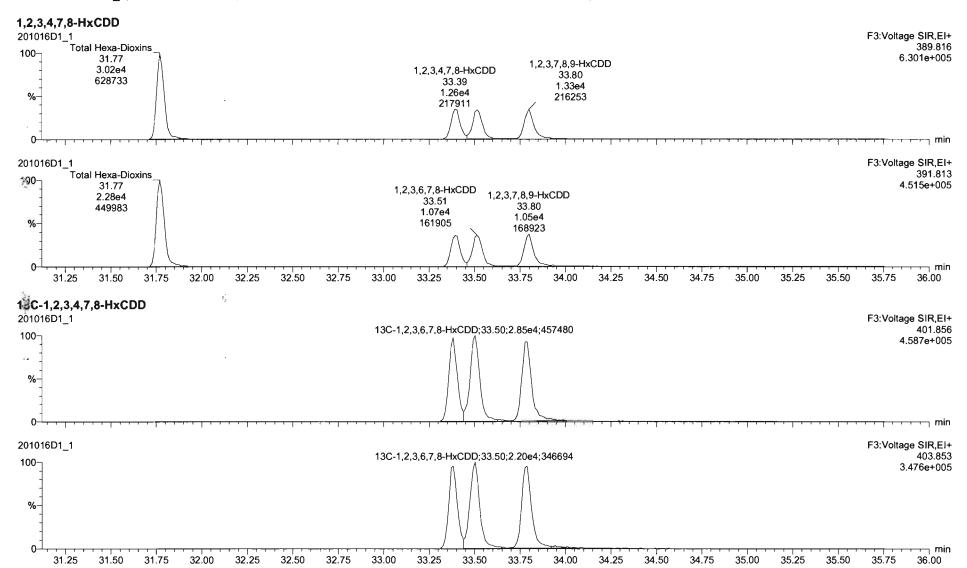
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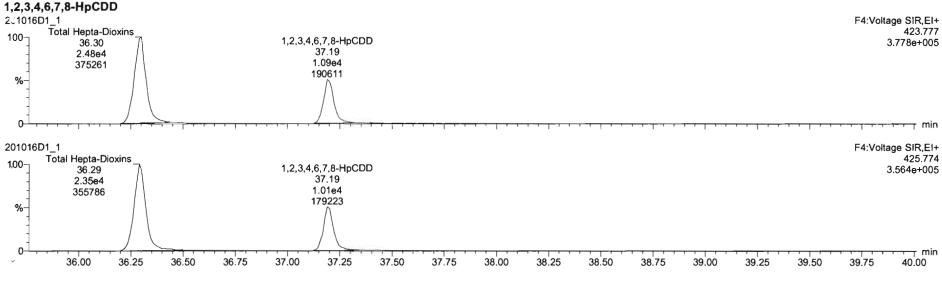
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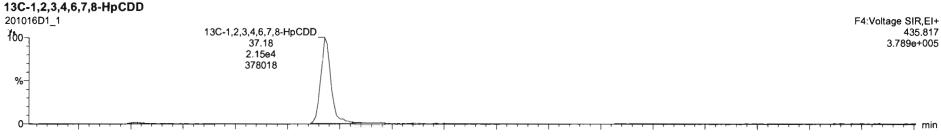


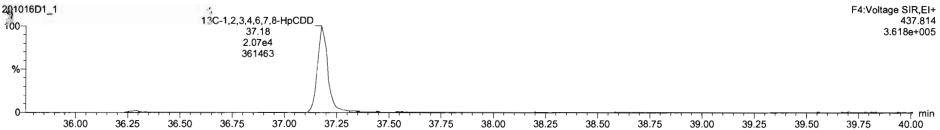
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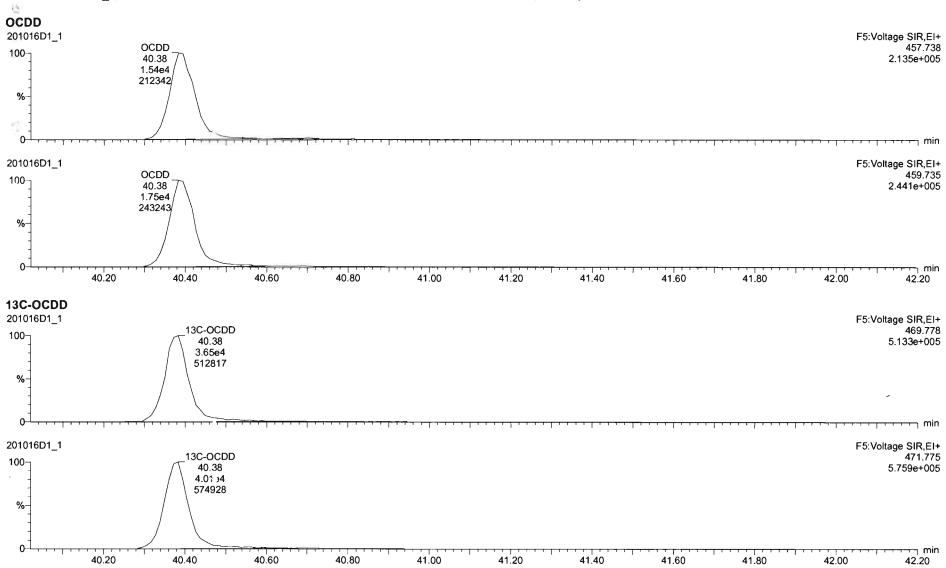


Detect

Dataset:

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Last Altered: Monday, October 19, 2020 11:01:41 Pacific Daylight Time Printed: Monday, October 19, 2020 11:04:13 Pacific Daylight Time

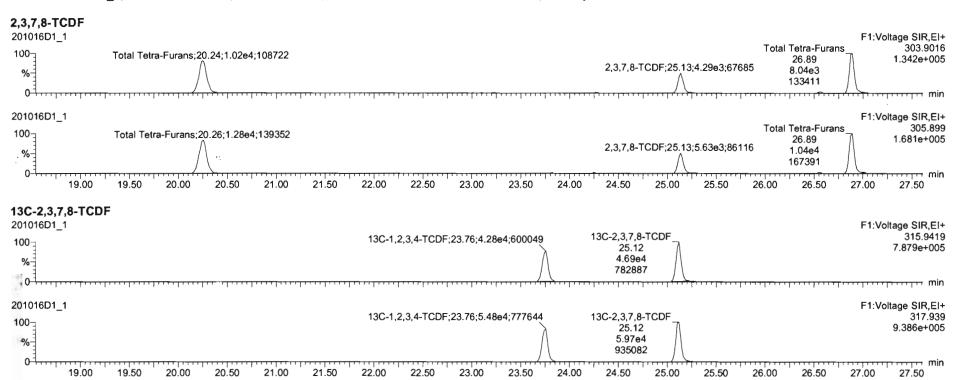


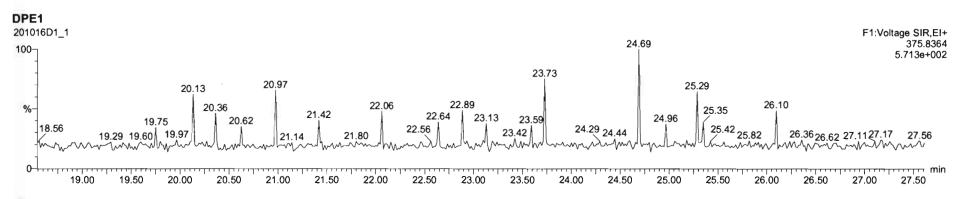
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Last Altered:

Monday, October 19, 2020 11:01:41 Pacific Daylight Time Monday, October 19, 2020 11:04:13 Pacific Daylight Time





Quantify Sample Report

MassLynx 4.1

13

Vista Analytical Laboratory

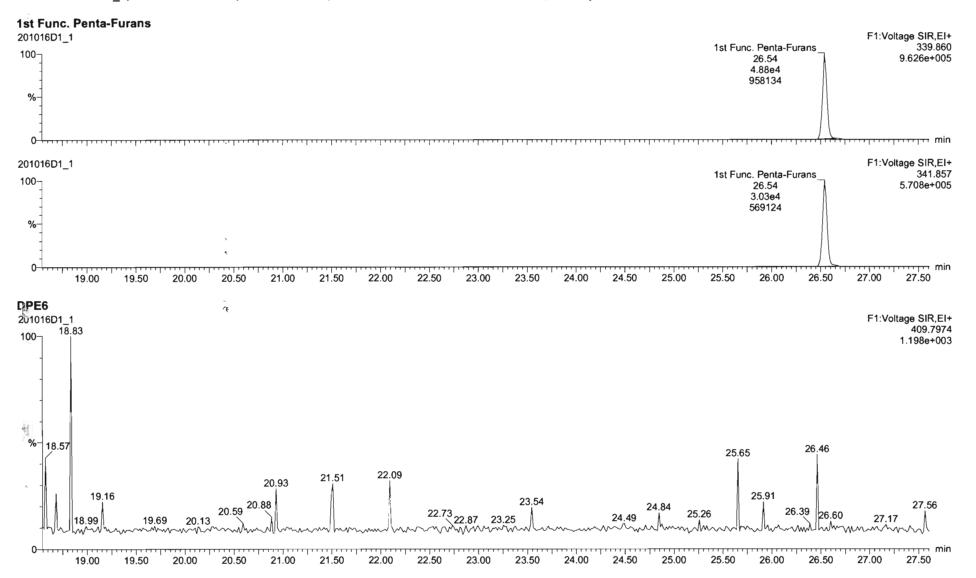
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10

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Last Altered: Printed:

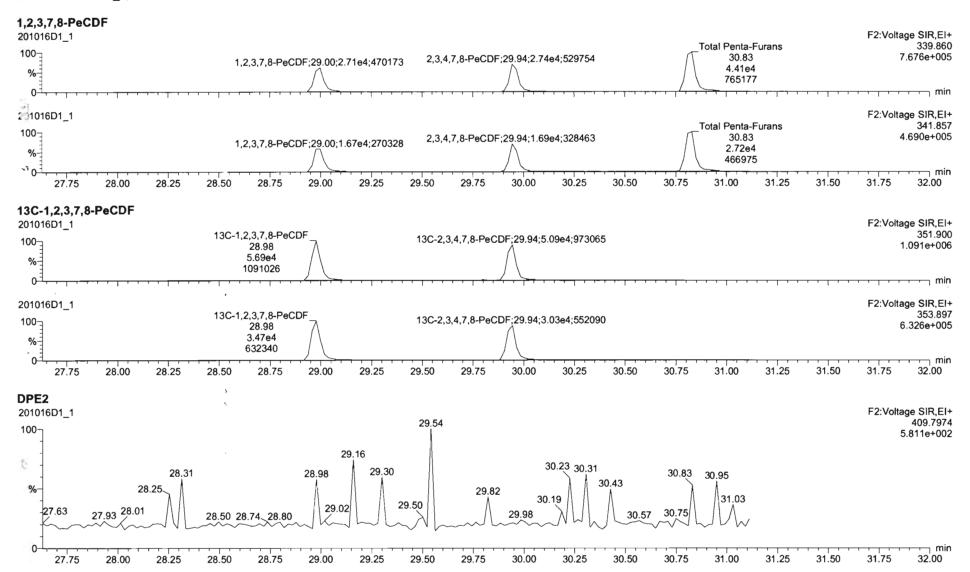
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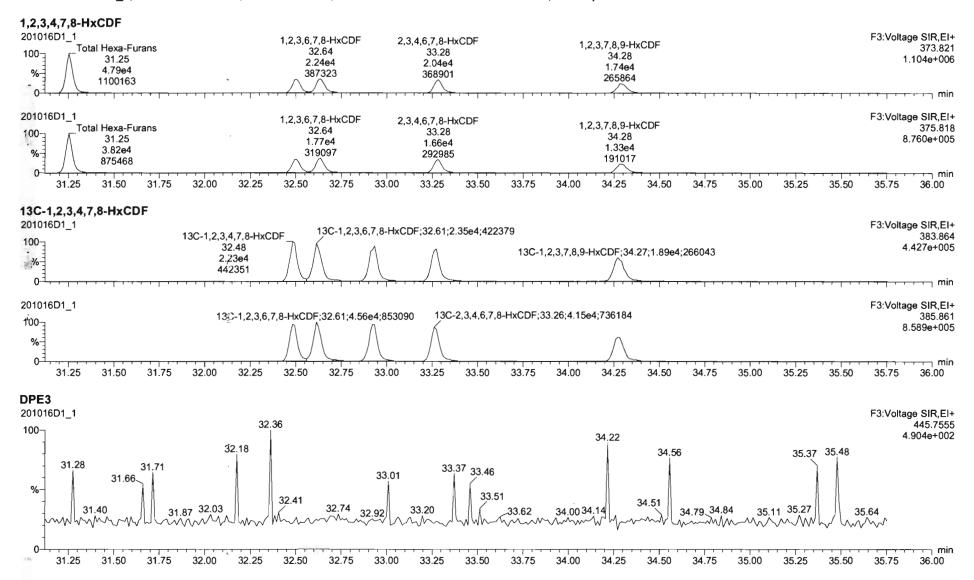
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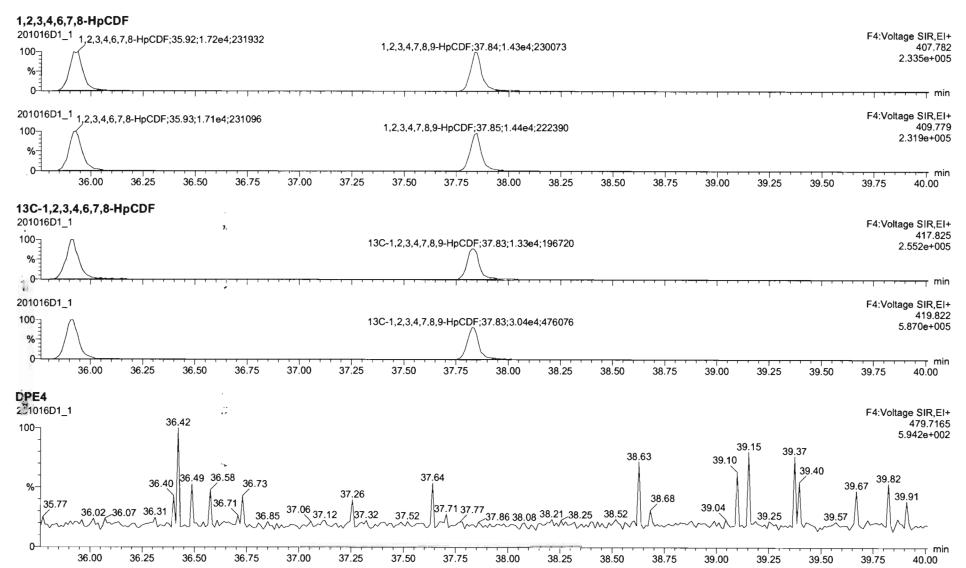
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L.st Altered: Monday, October 19, 2020 11:01:41 Pacific Daylight Time Printed: Monday, October 19, 2020 11:04:13 Pacific Daylight Time



Quantify Sample Report

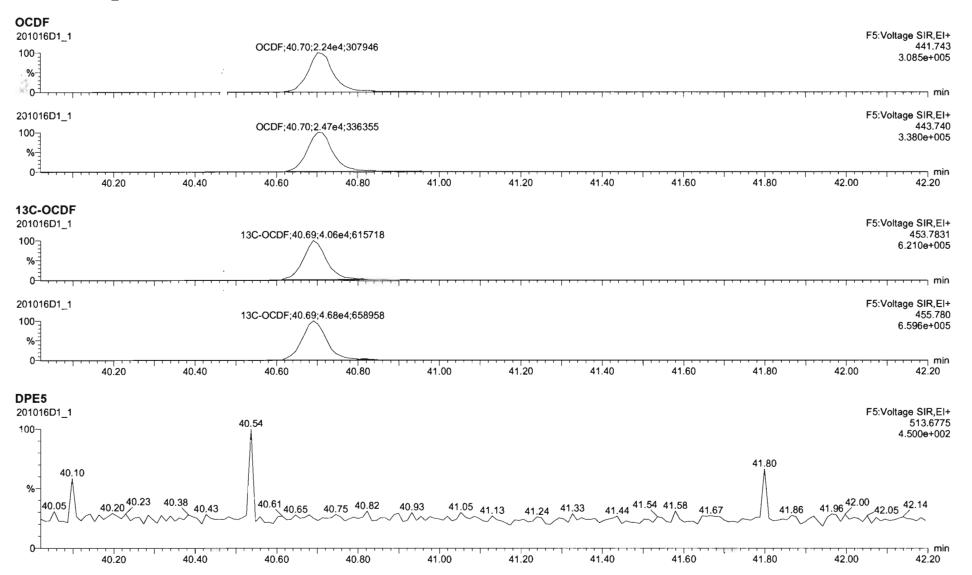
MassLynx 4.1

Vista Analytical Laboratory

Dataset:

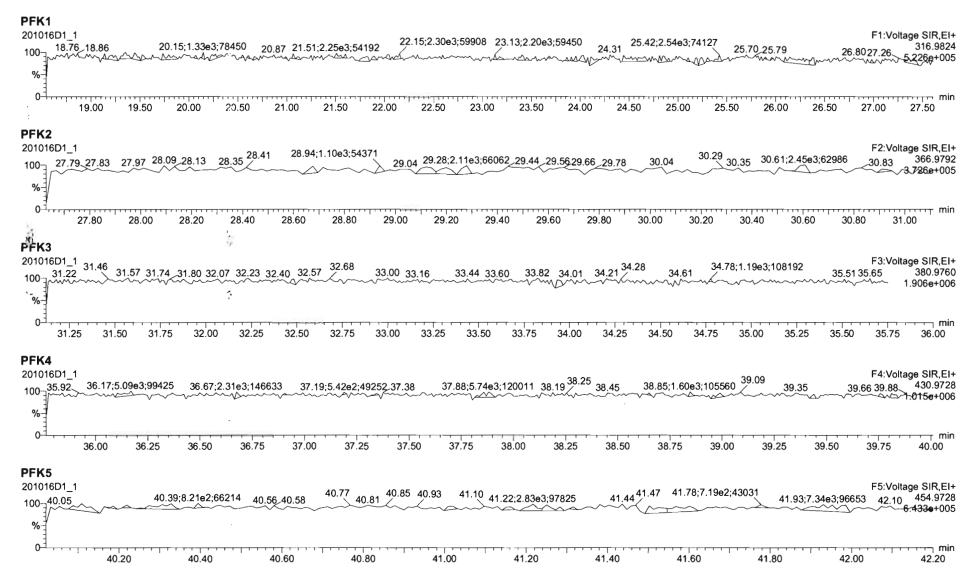
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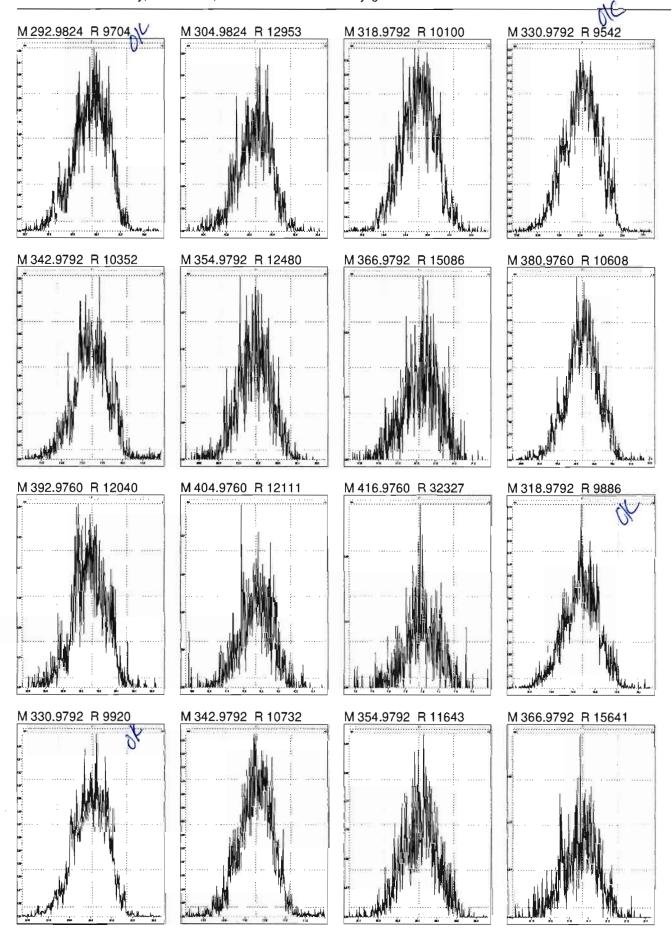
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Printed:

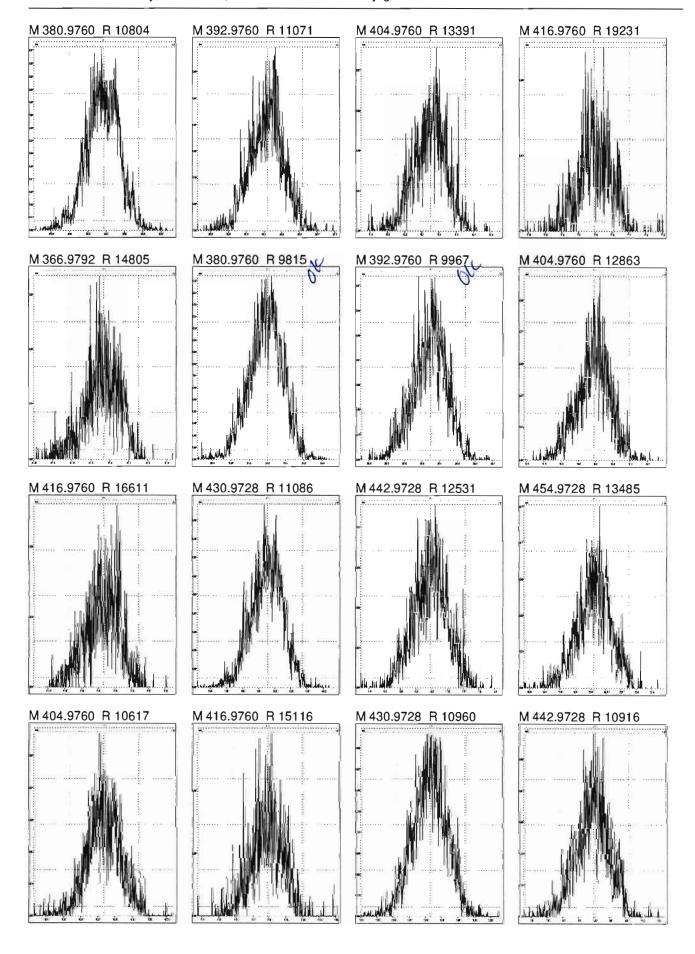
Friday, October 16, 2020 21:14:32 Pacific Daylight Time



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Printed:

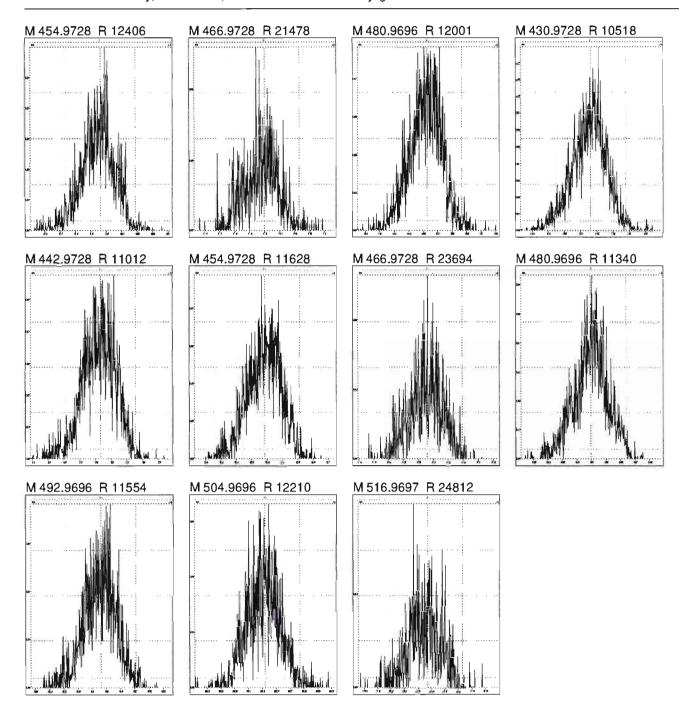
Friday, October 16, 2020 21:14:32 Pacific Daylight Time



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Printed:

Friday, October 16, 2020 21:14:32 Pacific Daylight Time



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# INITIAL CALIBRATION

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Quantify Compound Summary Report MassLynx 4.1

Vista Analytical Laboratory

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Dataset:

U:\VG7.PRO\Results\200930D2\200930D2 CRV.qld

Last Altered: Printed: Thursday, October 01, 2020 10:27:41 Pacific Daylight Time Thursday, October 01, 2020 10:31:30 Pacific Daylight Time

B 10/1

10/1/20 C1 10/01/2020

Method: C:\MassLynx\Default.PRO\MethDB\1613\_rrt.mdb 11 Sep 2020 15:14:27

Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Compound name: 2,3,7,8-TCDD

Response Factor: 1.00219

RRF SD: 0.105409, Relative SD: 10.5178

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

Curve type: RF

1000	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	0.250	0.67	NO	25.79	1.001	4.43e2	1.74e5	0.254	1.5	1.02	MM
2	200930D2_2	0.500	0.78	NO	25.82	1.001	8.87e2	1.77e5	0.501	0.1	1.00	MM
3	200930D2_3	2.00	0.80	NO	25.79	1.001	3.35e3	1.92e5	1.75	-12.7	0.875	bb
4	200930D2_4	10.0	0.77	NO	25.81	1.001	1.39e4	1.46e5	9.51	-4.9	0.953	dd
5	200930D2_5	40.0	0.76	NO	25.81	1.001	7.37e4	1.89e5	38.9	-2.9	0.973	bb
6	200930D2_6	300	0.78	NO	25.82	1.001	7.58e5	2.12e5	357	18.9	1.19	bb

Compound name: 1,2,3,7,8-PeCDD

Response Factor: 0.93495

RRF SD: 0.119844, Relative SD: 12.8182

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

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	0.62	NO	30.15	1.000	1.49e3	1.32e5	1.21	-3.3	0.904	MM
2	200930D2_2	2.50	0.66	NO	30.17	1.001	2.83e3	1.43e5	2.12	-15.1	0.793	MM
3	200930D2_3	10.0	0.59	NO	30.15	1.000	1.29e4	1.55e5	8.94	-10.6	0.836	bb
4	200930D2_4	50.0	0.59	NO	30.17	1.001	5.42e4	1.17e5	49.7	-0.6	0.929	bb
5	200930D2_5	200	0.60	NO	30.17	1.001	2.74e5	1.32e5	222	11.0	1.04	bb
6	200930D2_6	1500	0.62	NO	30.17	1.001	2.85e6	1.71e5	1780	18.7	1.11	bb

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Quantify Compound Summary Reporc Mass

MassLynx 4.1

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Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

Last Altered: Thursday, October 01, 2020 10:27:41 Pacific Daylight Time Printed: Thursday, October 01, 2020 10:31:30 Pacific Daylight Time

Compound name: 1,2,3,4,7,8-HxCDD

Response Factor: 1.15193

RRF SD: 0.107646, Relative SD: 9.34488

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

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	1.21	NO	33.40	1.001	1.43e3	1.01e5	1.22	-2.2	1.13	MM
2	200930D2_2	2.50	1.42	NO	33.40	1.000	2.77e3	1.06e5	2.27	-9.4	1.04	dd
3	200930D2_3	10.0	1.33	NO	33.39	1.000	1.21e4	1.17e5	8.93	-10.7	1.03	dd
4	200930D2_4	50.0	1.26	NO	33.40	1.000	5.14e4	8.84e4	50.4	8.0	1.16	bd
5	200930D2_5	200	1.29	NO	33.40	1.000	2.76e5	1.09e5	219	9.6	1.26	bd
6	200930D2_6	1500	1.27	NO	33.42	1.001	2.71e6	1.40e5	1680	11.7	1.29	bd

Compound name: 1,2,3,6,7,8-HxCDD

Response Factor: 1.02368

RRF SD: 0.0855683, Relative SD: 8.35893

Response type: Internal Std ( Ref 21 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	1.19	NO	33.50	1.000	1.43e3	1.19e5	1.17	-6.4	0.958	MM
2	200930D2_2	2.50	1.19	NO	33.53	1.000	2.93e3	1.21e5	2.37	-5.0	0.972	db
3	200930D2_3	10.0	1.26	NO	33.51	1.000	1.28e4	1.36e5	9.16	-8.4	0.937	db
4	200930D2_4	50.0	1.26	NO	33.53	1.001	5.15e4	1.01e5	49.8	-0.3	1.02	db
5	200930D2_5	200	1.23	NO	33.53	1.001	2.74e5	1.24e5	216	8.2	1.11	db
6	200930D2_6	1500	1.28	NO	33.54	1.001	2.69e6	1.56e5	1680	12.0	1.15	db

Compound name: 1,2,3,7,8,9-HxCDD

Response Factor: 1.06096

RRF SD: 0.104523, Relative SD: 9.85175

Response type: Internal Std ( Ref 22 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

14 84	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	1.28	NO	33.80	1.000	1.50e3	1.15e5	1.23	-1.9	1.04	MM
2	200930D2_2	2.50	1.26	NO	33.81	1.000	2.90e3	1.22e5	2.25	-10.0	0.955	bb

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Quantify Compound Summary Report MassLynx 4.1

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Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

Last Altered: Thursday, October 01, 2020 10:27:41 Pacific Daylight Time Printed: Thursday, October 01, 2020 10:31:30 Pacific Daylight Time

Compound name: 1,2,3,7,8,9-HxCDD

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200930D2_3	10.0	1.33	NO	33.79	1.000	1.28e4	1.34e5	9.01	-9.9	0.956	bb
4	200930D2_4	50.0	1.29	NO	33.80	1.000	5.21e4	9.97e4	49.2	-1.6	1.04	bb
5	200930D2_5	200	1.25	NO	33.81	1.001	2.84e5	1.22e5	220	9.8	1.16	bb
6	200930D2_6	1500	1.28	NO	33.82	1.001	2.81e6	1.55e5	1700	13.6	1.21	bb

Compound name: 1,2,3,4,6,7,8-HpCDD

Response Factor: 1.00136

RRF SD: 0.124298, Relative SD: 12.4129

Response type: Internal Std ( Ref 23 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

11300	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	0.92	NO	37.19	1.000	1.19e3	1.07e5	1.11	-11.0	0.891	MM
2	200930D2_2	2.50	0.95	NO	37.20	1.000	2.68e3	1.13e5	2.37	-5.3	0.948	bb
3	200930D2_3	10.0	1.04	NO	37.18	1.000	1.09e4	1.22e5	8.94	-10.6	0.895	bb
4	200930D2_4	50.0	1.05	NO	37.19	1.000	4.59e4	9.48e4	48.4	-3.2	0.969	bb
5	200930D2_5	200	1.04	NO	37.20	1.001	2.47e5	1.12e5	221	10.6	1.11	bb
6	200930D2_6	1500	1.04	NO	37.21	1.000	2.53e6	1.41e5	1790	19.6	1.20	bb

Compound name: OCDD

Response Factor: 0.952

RRF SD: 0.102145, Relative SD: 10.7295

Response type: Internal Std ( Ref 24 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	2.50	0.95	NO	40.38	1.001	2.06e3	1.81e5	2.39	-4.4	0.910	MM
2	200930D2_2	5.00	0.84	NO	40.39	1.000	4.26e3	2.08e5	4.30	-14.0	0.819	bb
3	200930D2_3	20.0	0.91	NO	40.37	1.000	1.88e4	2.10e5	18.8	-6.0	0.895	bď
4	200930D2_4	100	0.91	NO	40.39	1.001	7.84e4	1.63e5	101	1.1	0.963	bd
5	200930D2_5	400	0.90	NO	40.39	1.000	4.22e5	2.08e5	426	6.6	1.01	bb
6	200930D2_6	3000	0.91	NO	40.42	1.000	4.25e6	2.55e5	3500	16.7	1.11	bb

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Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

Last Altered: Thursday, October 01, 2020 10:27:41 Pacific Daylight Time Printed: Thursday, October 01, 2020 10:31:30 Pacific Daylight Time

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Compound name: 2,3,7,8-TCDF

Response Factor: 1.01297

RRF SD: 0.140498, Relative SD: 13.8699

Response type: Internal Std (Ref 25), Area \* (IS Conc. / IS Area)

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	0.250	0.79	NO	25.15	1.001	7.60e2	2.52e5	0.298	19.2	1.21	MM
2	200930D2_2	0.500	0.76	NO	25.16	1.001	1.27e3	2.58e5	0.484	-3.1	0.981	MM
3	200930D2_3	2.00	0.74	NO	25.15	1.001	4.49e3	2.68e5	1.66	-17.2	0.839	bb
4	200930D2_4	10.0	0.74	NO	25.16	1.001	1.88e4	2.10e5	8.88	-11.2	0.899	bb
5	200930D2_5	40.0	0.77	NO	25.15	1.001	1.04e5	2.57e5	39.8	-0.4	1.01	bd
6 **	200930D2_6	300	0.76	NO	25.16	1.001	9.86 <b>e</b> 5	2.88e5	338	12.7	1.14	bb

Compound name: 1,2,3,7,8-PeCDF

Response Factor: 0.997733

RRF SD: 0.105042, Relative SD: 10.528

Response type: Internal Std (Ref 26), Area \* (IS Conc. / IS Area)

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	1.56	NO	29.00	1.001	2.34e3	1.96e5	1.19	-4.5	0.952	MM
2	200930D2_2	2.50	1.49	NO	29.02	1.001	4.41e3	2.00e5	2.21	-11.5	0.882	bb
3	200930D2_3	10.0	1.59	NO	29.00	1.001	2.02e4	2.22e5	9.14	-8.6	0.912	bd
4	200930D2_4	50.0	1.63	NO	29.00	1.000	8.94e4	1.79e5	50.0	-0.0	0.998	dd
5	200930D2_5	200	1.61	NO	29.00	1.001	4.62e5	2.12e5	218	9.2	1.09	bb
6	200930D2_6	1500	1.61	NO	29.02	1.001	4.38e6	2.53e5	1730	15.5	1.15	bd

Compound name: 2,3,4,7,8-PeCDF

Response Factor: 1.07418

RRF SD: 0.141641, Relative SD: 13.186

Résponse type: Internal Std (Ref 27), Area \* (IS Conc. / IS Area)

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	1.58	NO	29.96	1.001	2.16e3	1.91e5	1.05	-15.7	0.905	MM
2	200930D2_2	2.50	1.60	NO	29.96	1.001	4.71e3	1.98e5	2.22	-11.3	0.952	bb

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# Compound name: 2,3,4,7,8-PeCDF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200930D2_3	10.0	1.62	NO	29.96	1.001	2.12e4	2.10e5	9.39	-6.1	1.01	bb
4	200930D2_4	50.0	1.62	NO	29.96	1.001	8.96e4	1.61e5	51.9	3.7	1.11	bb
5	200930D2_5	200	1.60	NO	29.96	1.001	4.79e5	1.98e5	226	12.9	1.21	bb
6	200930D2_6	1500 ₹	1.58	NO	29.96	1.000	4.65 <b>e</b> 6	2.47e5	1750	16.6	1.25	bb

Compound name: 1,2,3,4,7,8-HxCDF

Response Factor: 1.05155

RRF SD: 0.122186, Relative SD: 11.6195

Response type: Internal Std ( Ref 28 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	1.19	NO	32.50	1.000	2.00e3	1.64e5	1.16	-7.0	0.978	MM
2	200930D2_2	2.50	1.29	NO	32.52	1.000	3.98e3	1.72e5	2.21	-11.7	0.929	bd
3	200930D2_3	10.0	1.25	NO	32.50	1.001	1.75e4	1.84e5	9.00	-10.0	0.947	bd
4	200930D2_4	50.0	1.27	NO	32.50	1.000	7.44e4	1.40e5	50.5	1.0	1.06	bd
5	200930D2_5	200	1.25	NO	32.51	1.000	4.05e5	1.72e5	224	12.0	1.18	bd
6	200930D2_6	1500	1.26	NO	32.52	1.000	3.93e6	2.16e5	1740	15.7	1.22	bd

Compound name: 1,2,3,6,7,8-HxCDF

Response Factor: 1.09956

RRF SD: 0.12428, Relative SD: 11.3027

Response type: Internal Std ( Ref 29 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	1.24	NO	32.64	1.000	2.15e3	1.66e5	1.18	-5.8	1.04	MM
2	200930D2_2	2.50	1.33	NO	32.65	1.000	4.33e3	1.77e5	2.23	-10.9	0.980	db
3	200930D2_3	10.0	1.24	NO	32.64	1.001	1.87e4	1.88e5	9.03	-9.7	0.993	db
4	200930D2_4	50.0	1.26	NO	32.64	1.000	7.93e4	1.45e5	49.7	-0.5	1.09	db
5	200930D2_5	200	1.24	NO	32.64	1.000	4.22e5	1.75e5	219	9.6	1.20	db
6	200930D2_6	1500	1.24	NO	32.65	1.000	4.09e6	2.11e5	1760	17.4	1.29	db

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Compound name: 2,3,4,6,7,8-HxCDF

Response Factor: 1.08752

RRF SD: 0.136992, Relative SD: 12.5967

Response type: Internal Std ( Ref 30 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	1.25	NO	33.27	1.000	1.91e3	1.58e5	1.11	-11.0	0.968	MM
2	200930D2_2	2.50	1.28	NO	33.28	1.000	3.96e3	1.61e5	2.26	-9.6	0.983	bb
3	200930D2_3	10.0	1.26	NO	33.28	1.001	1.77e4	1.81e5	8.97	-10.3	0.976	bb
4	200930D2_4	50.0	1.23	NO	33.28	1.000	7.34e4	1.35e5	50.2	0.3	1.09	bb
5	200930D2_5	200	1.24	NO	33.29	1.001	3.94e5	1.60e5	226	13.0	1.23	bb
6	200930D2_6	1500	1.24	NO	33.29	1.000	3.89e6	2.03e5	1760	17.5	1.28	bb

Compound name: 1,2,3,7,8,9-HxCDF

Response Factor: 1.08188

RRF SD: 0.11347, Relative SD: 10.4883

Response type: Internal Std ( Ref 31 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

4	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	1.20	NO	34.29	1.001	1.74e3	1.36e5	1.19	-5.2	1.03	MM
2	200930D2_2	2.50	1.35	NO	34.30	1.000	3.56e3	1.44e5	2.28	-8.6	0.989	bb
3	200930D2_3	10.0	1.23	NO	34.29	1.001	1.49e4	1.55e5	8.87	-11.3	0.960	bb
4	200930D2_4	50.0	1.26	NO	34.29	1.000	6.56e4	1.20e5	50.6	1.3	1.10	bb
5	200930D2_5	200	1.29	NO	34.29	1.000	3.46e5	1.49e5	215	7.7	1.17	bb
6	200930D2_6	1500	1.25	NO	34.30	1.000	3.50e6	1.86e5	1740	16.1	1.26	bb

Compound name: 1,2,3,4,6,7,8-HpCDF

Response Factor: 1.13056

RRF SD: 0.148448, Relative SD: 13.1304

Rosponse type: Internal Std ( Ref 32 ), Frea \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	0.96	NO	35.93	1.001	1.81e3	1.38e5	1.16	-7.6	1.04	MM
2	200930D2_2	2.50	1.10	NO	35.95	1.001	3.59e3	1.45e5	2.19	-12.5	0.989	bb

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Compound name: 1,2,3,4,6,7,8-HpCDF

1 7 2	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200930D2_3	10.0	0.98	NO	35.92	1.000	1.52e4	1.54e5	8.72	-12.8	0.986	bb
4	200930D2_4	50.0	1.02	NO	35.94	1.001	6.77e4	1.17e5	51.2	2.4	1.16	bd
5	200930D2_5	200	1.04	NO	35.94	1.001	3.79e5	1.49e5	225	12.3	1.27	bb
6	200930D2_6	1500	1.03	NO	35.95	1.001	3.65e6	1.82e5	1770	18.1	1.34	bb

Compound name: 1,2,3,4,7,8,9-HpCDF

Response Factor: 1.28584

RRF SD: 0.156323, Relative SD: 12.1572

Response type: Internal Std (Ref 33), Area \* (IS Conc. / IS Area)

Curve type: RF

- 10	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	1.25	1.01	NO	37.84	1.000	1.49e3	9.84 <b>e</b> 4	1.17	-6.0	1.21	MM
2	200930D2_2	2.50	1.11	NO	37.85	1.000	2.96e3	1.07e5	2.16	-13.7	1.11	bb
3	200930D2_3	10.0	1.04	NO	37.83	1.000	1.31e4	1.10e5	9.19	-8.1	1.18	bb
4	200930D2_4	50.0	1.02	NO	37.84	1.000	5.55e4	8.69e4	49.6	-0.7	1.28	bd
5	200930D2_5	200	1.03	NO	37.84	1.000	3.19e5	1.13 <b>e</b> 5	219	9.7	1.41	bb
6	200930D2_6	1500	1.03	NO	37.86	1.001	3.13e6	1.37e5	1780	18.8	1.53	bb

Compound name: OCDF Response Factor: 0.952821

RRF SD: 0.11104, Relative SD: 11.6538

Response type: Internal Std ( Ref 34 ), Frea \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	2.50	0.92	NO	40.69	1.000	2.42e3	2.27e5	2.24	-10.4	0.854	MM
2	200930D2_2	5.00	0.88	NO	40.71	1.000	5.45e3	2.52e5	4.54	-9.2	0.866	bb
3	200930D2_3	20.0	0.87	NO	40.69	1.000	2.28e4	2.61e5	18.3	-8.6	0.871	bb
4	200930D2_4	100	0.90	NO	40.71	1.001	9.70e4	2.04e5	99.6	-0.4	0.949	bb
5	200930D2_5	400	0.89	NO	40.71	1.001	5.52e5	2.58e5	449	12.4	1.07	bb
6	200930D2 6	3000	0.90	NO	40.73	1.001	5.35e6	3.22e5	3480	16.2	1.11	bb

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Compound name: 13C-2,3,7,8-TCDD

Response Factor: 1.17295

RRF SD: 0.0331012, Relative SD: 2.82204

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.78	NO	25.77	1.027	1.74e5	1.48e5	101	0.5	1.18	bb
2	200930D2_2	100	0.78	NO	25.79	1.026	1.77e5	1.56e5	96.8	-3.2	1.14	bb
3	200930D2_3	100	0.75	NO	25.78	1.026	1.92e5	1.60e5	102	2.2	1.20	bb
4	200930D2_4	100	0.79	NO	25.79	1.027	1.46e5	1.27e5	97.9	-2.1	1.15	bb
5	200930D2_5	100	0.79	NO	25.78	1.026	1.89e5	1.64e5	98.4	-1.6	1.15	bb
6	200930D2_6	100	0.79	NO	25.81	1.027	2.12e5	1.74e5	104	4.2	1.22	bb

Compound name: 13C-1,2,3,7,8-PeCDD

Response Factor: 0.914327

RRF SD: 0.0634254, Relative SD: 6.93683

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

es.	Name	Std. Conc V	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.62	NO	30.15	1.201	1.32e5	1.48e5	97.3	-2.7	0.890	bb
2	200930D2_2	100	0.61	NO	30.15	1.199	1.43e5	1.56e5	100	0.2	0.916	bb
3	200930D2_3	100	0.63	NO	30.15	1.200	1.55e5	1.60e5	106	5.9	0.968	bb
4	200930D2_4	100	0.63	NO	30.15	1.200	1.17e5	1.27e5	101	0.6	0.920	bb
5	200930D2_5	100	0.63	NO	30.15	1.200	1.32e5	1.64 <b>e</b> 5	88.2	-11.8	0.807	bb
6	200930D2_6	100	0.64	NO	30.15	1.199	1.71e5	1.74e5	108	7.7	0.985	bb

Compound name: 13C-1,2,3,4,7,8-HxCDD

Response Factor: 0.633572

RRF SD: 0.0302093, Relative SD: 4.7681

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	1.30	NO	33.38	1.014	1.01e5	1.67e5	95.7	-4.3	0.607	bd
2 .	200930D2_2	100	1.29	NO	33.39	1.014	1.06e5	1.70e5	98.5	-1.5	0.624	bd

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# Compound name: 13C-1,2,3,4,7,8-HxCDD

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200930D2_3	100	1.28	NO	33.38	1.014	1.17e5	1.90e5	97.5	-2.5	0.618	bd
4	200930D2_4	100	1.27	NO	33.39	1.014	8.84 <b>e</b> 4	1.41e5	98.7	-1.3	0.625	bd
5	200930D2_5	100	1.28	NO	33.39	1.014	1.09e5	1.72e5	100	0.3	0.636	bd
6	200930D2_6	100	1.26	NO	33.39	1.014	1.40e5	2.03e5	109	9.2	0.692	bd

Compound name: 13C-1,2,3,6,7,8-HxCDD

Response Factor: 0.724314

RRF SD: 0.022761, Relative SD: 3.14242

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc ·	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	1.29	NO	33.50	1.018	1.19e5	1.67e5	98.7	-1.3	0.715	db
2	200930D2_2	100	1.25	NO	33.51	1.017	1.21e5	1.70e5	98.0	-2.0	0.710	db
3	200930D2_3	100	1.28	NO	33.50	1.018	1.36 <b>e</b> 5	1.90e5	99.3	-0.7	0.719	db
4	200930D2_4	100	1.26	NO	33.50	1.017	1.01e5	1.41e5	98.5	-1.5	0.714	db
5	200930D2_5	100	1.28	NO	33.50	1.017	1.24e5	1.72e5	99.3	-0.7	0.719	dd
6	200930D2_6	100	1.25	NO	33.51	1.017	1.56e5	2.03e5	106	6.3	0.770	db

Compound name: 13C-1,2,3,7,8,9-HxCDD

Response Factor: 0.7157

RRF SD: 0.0260814, Relative SD: 3.64419

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

100	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	1.25	NO	33.79	1.026	1.15e5	1.67e5	96.6	-3.4	0.691	bb
2	200930D2_2	100	1.30	NO	33.80	1.026	1.22e5	1.70e5	100	0.0	0.716	bd
3	200930D2_3	100	1.26	NO	33.78	1.026	1.34e5	1.90e5	98.7	-1.3	0.706	bb
4	200930D2_4	100	1.21	NO	33.79	1.026	9.97e4	1.41e5	98.5	-1.5	0.705	bb
5	200930D2_5	100	1.23	NO	33.79	1.026	1.22e5	1.72e5	99.2	-0.8	0.710	bb
6	200930D2_6	100	1.28	NO	33.80	1.026	1.55e5	2.03e5	107	7.1	0.766	bb

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Compound name: 13C-1,2,3,4,6,7,8-HpCDD

Response Factor: 0.660425

RRF SD: 0.0212049, Relative SD: 3.21079

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

-	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	1.09	NO	37.18	1.129	1.07e5	1.67e5	96.7	-3.3	0.639	bd
2	200930D2_2	100	1.06	NO	37.19	1.129	1.13e5	1.70e5	101	0.8	0.666	bd
3	200930D2_3	100	1.12	NO	37.17	1.129	1.22e5	1.90e5	97.4	-2.6	0.643	bd
4	200930D2_4	100	1.06	NO	37.18	1.129	9.48e4	1.41e5	101	1.5	0.670	bb
5	200930D2_5	100	1.04	NO	37.18	1.129	1.12e5	1.72e5	98.2	-1.8	0.649	bb
6	200930D2_6	100	1.06	NO	37.20	1.129	1.41e5	2.03e5	105	5.3	0.695	bb

Compound name: 13C-OCDD

Response Factor: 0.586504

RRF SD: 0.0345068, Relative SD: 5.88547

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

1023	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	200	0.88	NO	40.36	1.226	1.81e5	1.67e5	185	-7.4	0.543	bb
2	200930D2_2	200	0.87	NO	40.38	1.226	2.08e5	1.70e5	209	4.6	0.613	bd
3	200930D2_3	200	0.90	NO	40.36	1.226	2.10e5	1.90e5	189	-5.7	0.553	bb
4	200930D2_4	200	0.88	NO	40.37	1.226	1.63e5	1.41e5	196	-1.9	0.575	bb
5	200930D2_5	200	0.90	NO	40.38	1.226	2.08e5	1.72e5	206	3.1	0.604	bd
6	200930D2_6	200	0.91	NO	40.41	1.226	2.55e5	2.03e5	215	7.3	0.629	bb

Compound name: 13C-2,3,7,8-TCDF

Response Factor: 1.02208

RRF SD: 0.0125198, Relative SD: 1.22493

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

18.85	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.76	NO	25.12	1.001	2.52e5	2.46e5	100	0.1	1.02	bb
2	200930D2_2	100	0.80	NO	25.13	1.000	2.58e5	2.51e5	101	0.7	1.03	bd

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Compound name: 13C-2,3,7,8-TCDF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200930D2_3	100	0.80	NO	25.12	1.000	2.68e5	2.62e5	99.9	-0.1	1.02	bb
4	200930D2_4	100	0.78	NO	25.13	1.001	2.10e5	2.07e5	99.1	-0.9	1.01	bb
5	200930D2_5	100	0.78	NO	25.13	1.001	2.57e5	2.56e5	98.3	-1.7	1.00	bb
6	200930D2_6	100	0.77	NO	25.15	1.001	2.88e5	2.77e5	102	1.8	1.04	bb

Compound name: 13C-1,2,3,7,8-PeCDF

Response Factor: 0.841931

RRF SD: 0.0454656, Relative SD: 5.40016

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

-	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1/	200930D2_1	100	1.64	NO	28.98	1.154	1.96e5	2.46e5	94.8	-5.2	0.798	bb
2	200930D2_2	100	1.58	NO	29.00	1.154	2.00e5	2.51e5	94.6	-5.4	0.797	bb
3	200930D2_3	100	1.59	NO	28.98	1.154	2.22e5	2.62e5	100	0.4	0.845	bb
4	200930D2_4	100	1.59	NO	29.00	1.154	1.79e5	2.07e5	103	3.0	0.867	bb
5	200930D2_5	100	1.62	NO	28.98	1.154	2.12e5	2.56e5	98.3	-1.7	0.828	bb
6	200930D2_6	100	1.56	NO	29.00	1.154	2.53e5	2.77e5	109	8.9	0.916	bb

Compound name: 13C-2,3,4,7,8-PeCDF

Response Factor: 0.801596

RRF SD: 0.0468311, Relative SD: 5.84223

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	1.62	NO	29.94	1.193	1.91e5	2.46e5	96.9	-3.1	0.777	bb
2	200930D2_2	100	1.56	NO	29.94	1.191	1.98e5	2.51e5	98.3	-1.7	0.788	bb
3	200930D2_3	100	1.68	NO	29.94	1.192	2.10e5	2.62e5	100	0.0	0.802	bb
4 -	200930D2_4	100	1.67	NO	29.94	1.192	1.61e5	2.07e5	97.0	-3.0	0.777	bb
5	200930D2_5	100	1.60	NO	29.94	1.192	1.98e5	2.56e5	96.2	-3.8	0.771	bb
6	200930D2_6	100	1.63	NO	29.96	1.192	2.47e5	2.77e5	112	11.6	0.895	bb

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Compound name: 13C-1,2,3,4,7,8-HxCDF

Response Factor: 1.00275

RRF SD: 0.0328953, Relative SD: 3.28051

Response type: Internal Std (Ref 38), Area \* (IS Conc. / IS Area)

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.50	NO	32.49	0.987	1.64e5	1.67e5	97.7	-2.3	0.980	bd
2	200930D2_2	100	0.50	NO	32.50	0.987	1.72e5	1.70e5	101	0.7	1.01	bd
3	200930D2_3	100	0.50	NO	32.48	0.987	1.84e5	1.90e5	97.0	-3.0	0.972	bd
4	200930D2_4	100	0.49	NO	32.49	0.987	1.40e5	1.41e5	98.8	-1.2	0.991	bd
5	200930D2_5	100	0.51	NO	32.49	0.987	1.72e5	1.72e5	99.7	-0.3	1.00	bd
6	200930D2_6	100	0.51	NO	32.51	0.987	2.16e5	2.03e5	106	6.1	1.06	bd

Compound name: 13C-1,2,3,6,7,8-HxCDF

Response Factor: 1.01877

RRF SD: 0.0214481, Relative SD: 2.1053

Response type: Internal Std (Ref 38), Area \* (IS Conc. / IS Area)

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.50	NO	32.63	0.991	1.66e5	1.67e5	97.7	-2.3	0.995	db
2	200930D2_2	100	0.49	NO	32.64	0.991	1.77e5	1.70e5	102	2.1	1.04	db
3	200930D2_3	100	0.49	NO	32.61	0.991	1.88e5	1.90e5	97.4	-2.6	0.992	db
4 .	200930D2_4	100	0.50	NO	32.63	0.991	1.45e5	1.41e5	101	0.6	1.02	db
5	200930D2_5	100	0.51	NO	32.63	0.991	1.75e5	1.72e5	100	-0.0	1.02	dd
6	200930D2_6	100	0.51	NO	32.64	0.991	2.11e5	2.03e5	102	2.3	1.04	db

Compound name: 13C-2,3,4,6,7,8-HxCDF

Response Factor: 0.954976

RRF SD: 0.0233865, Relative SD: 2.44891

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.50	NO	33.26	1.010	1.58e5	1.67e5	98.9	-1.1	0.944	bd
2	200930D2_2	100	0.51	NO	33.27	1.010	1.61e5	1.70e5	99.2	-0.8	0.947	bd

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Compound name: 13C-2,3,4,6,7,8-HxCDF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200930D2_3	100	0.50	NO	33.26	1.010	1.81e5	1.90e5	100	0.0	0.955	bb
4	200930D2_4	100	0.50	NO	33.27	1.010	1.35e5	1.41e5	99.6	-0.4	0.951	bb
5	200930D2_5	100	0.51	NO	33.27	1.010	1.60e5	1.72e5	97.6	-2.4	0.932	bb
6	200930D2_6	100	0.50	NO	33.28	1.010	2.03e5	2.03e5	105	4.7	1.00	bb

Compound name: 13C-1,2,3,7,8,9-HxCDF

Response Factor: 0.851129

RRF SD: 0.0371274, Relative SD: 4.36213

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

15	Name	Std. Conc 1	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.51	NO	34.27	1.041	1.36e5	1.67e5	95.7	-4.3	0.814	bb
2	200930D2_2	100	0.49	NO	34.29	1.041	1.44e5	1.70e5	99.8	-0.2	0.849	bb
3	200930D2_3	100	0.52	NO	34.27	1.041	1.55e5	1.90e5	96.0	-4.0	0.817	bd
4	200930D2_4	100	0.50	NO	34.28	1.041	1.20e5	1.41e5	99.4	-0.6	0.846	bb
5	200930D2_5	100	0.52	NO	34.28	1.041	1.49e5	1.72e5	102	1.5	0.864	bd
6	200930D2_6	100	0.50	NO	34.29	1.041	1.86e5	2.03e5	108	7.6	0.916	bb

Compound name: 13C-1,2,3,4,6,7,8-HpCDF

Response Factor: 0.848459

RRF SD: 0.0316015, Relative SD: 3.72458

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.43	NO	35.91	1.091	1.38e5	1.67e5	97.7	-2.3	0.829	bd
2	200930D2_2	100	0.41	NO	35.93	1.091	1.45e5	1.70e5	101	0.6	0.854	bb
3	200930D2_3	100	0.42	NO	35.91	1.091	1.54e5	1.90e5	95.9	-4.1	0.814	bb
4	200930D2_4	100	0.43	NO	35.92	1.091	1.17e5	1.41e5	97.4	-2.6	0.827	bb
5	200930D2 5	100	0.42	NO	35.92	1.091	1.49e5	1.72e5	102	2.3	0.868	bb
6	200930D2 6	100	0.42	NO	35.93	1.091	1.82e5	2.03e5	106	6.0	0.899	bb

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Compound name: 13C-1,2,3,4,7,8,9-HpCDF

Response Factor: 0.624316

RRF SD: 0.0366881, Relative SD: 5.87653

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

-	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.42	NO	37.83	1.149	9.84 <b>e</b> 4	1.67e5	94.4	-5.6	0.589	bb
2	200930D2_2	100	0.44	NO	37.84	1.149	1.07e5	1.70e5	100	0.5	0.627	bd
3	200930D2_3	100	0.43	NO	37.82	1.149	1.10e5	1.90e5	93.3	-6.7	0.582	bb
4	200930D2_4	100	0.41	NO	37.83	1.149	8.69e4	1.41e5	98.4	-1.6	0.615	bb
5	200930D2_5	100	0.41	NO	37.83	1.149	1.13e5	1.72e5	105	5.4	0.658	bb
6	200930D2_6	100	0.43	NO	37.84	1.149	1.37e5	2.03e5	108	8.0	0.674	bb

Compound name: 13C-OCDF Response Factor: 0.72976

RRF SD: 0.042457, Relative SD: 5.81794

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	200	0.87	NO	40.68	1.236	2.27e5	1.67e5	186	-6.8	0.680	bb
2	200930D2_2	200	0.87	NO	40.70	1.235	2.52e5	1.70e5	203	1.7	0.742	bb
3	200930D2_3	200	0.88	NO	40.68	1.236	2.61e5	1.90e5	189	-5.6	0.689	bb
4	200930D2_4	200	0.88	NO	40.69	1.236	2.04e5	1.41e5	198	-1.0	0.722	bb
5	200930D2_5	200	0.88	NO	40.69	1.236	2.58e5	1.72e5	206	2.8	0.750	bb
6	200930D2_6	200	0.90	NO	40.71	1.236	3.22e5	2.03e5	218	8.9	0.795	bb

Compound name: 37CI-2,3,7,8-TCDD

Response Factor: 1.2073

RRF SD: 0.177075, Relative SD: 14.667

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

1000	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	0.250			25.79	1.027	3.48e2	1.48e5	0.195	-22.0	0.941	bb
2	200930D2_2	0.500			25.81	1.027	8.95e2	1.56e5	0.476	-4.9	1.15	bb

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Compound name: 37CI-2,3,7,8-TCDD

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200930D2_3	2.00			25.81	1.027	3.83e3	1.60e5	1.99	-0.7	1.20	bb
4	200930D2_4	10.0			25.81	1.027	1.49e4	1.27e5	9.73	-2.7	1.17	bd
5	200930D2_5	40.0			25.81	1.027	8.56e4	1.64e5	43.2	8.1	1.31	bd
6	200930D2_6	200			25.82	1.027	5.12e5	1.74e5	244	22.2	1.48	bb

Compound name: 13C-1,2,3,4-TCDD

Response Factor: 1

RRF SD: 1.11022e-016, Relative SD: 1.11022e-014

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc 1	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.78	NO	25.10	1.000	1.48e5	1.48e5	100	-0.0	1.00	bb
2	200930D2_2	100	0.77	NO	25.13	1.000	1.56e5	1.56e5	100	0.0	1.00	bb
3	200930D2_3	100	0.78	NO	25.12	1.000	1.60e5	1.60e5	100	0.0	1.00	bb
4	200930D2_4	100	0.80	NO	25.12	1.000	1.27e5	1.27e5	100	0.0	1.00	bb
5	200930D2_5	100	0.79	NO	25.12	1.000	1.64 <b>e</b> 5	1.64 <b>e</b> 5	100	0.0	1.00	bb
6	200930D2_6	100	0.81	NO	25.13	1.000	1.74e5	1.74e5	100	0.0	1.00	bb

Compound name: 13C-1,2,3,4-TCDF

Response Factor: 1

RRF SD: 1.11022e-016, Relative SD: 1.11022e-014

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.79	NO	23.76	1.000	2.46e5	2.46e5	100	0.0	1.00	bb
2	200930D2_2	100	0.79	NO	23.79	1.000	2.51e5	2.51e5	100	0.0	1.00	bb
3	200930D2_3	100	0.79	NO	23.77	1.000	2.62e5	2.62e5	100	0.0	1.00	bb
4	200930D2_4	100	0.80	NO	23.77	1.000	2.07e5	2.07e5	100	-0.0	1.00	bb
5	200930D2_5	100	0.78	NO	23.77	1.000	2.56 <b>e</b> 5	2.56e5	100	0.0	1.00	bb
6	200930D2_6	100	0.77	NO	23.79	1.000	2.77e5	2.77e5	100	0.0	1.00	bb

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Compound name: 13C-1,2,3,4,6,9-HxCDF

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200930D2_1	100	0.50	NO	32.92	1.000	1.67e5	1.67e5	100	0.0	1.00	bb
2	200930D2_2	100	0.49	NO	32.94	1.000	1.70e5	1.70e5	100	0.0	1.00	bb
3	200930D2_3	100	0.50	NO	32.92	1.000	1.90e5	1.90e5	100	0.0	1.00	bd
4	200930D2_4	100	0.50	NO	32.93	1.000	1.41e5	1.41e5	100	0.0	1.00	bb
5	200930D2_5	100	0.50	NO	32.93	1.000	1.72e5	1.72e5	100	0.0	1.00	bb
6	200930D2_6	100	0.50	NO	32.94	1.000	2.03e5	2.03e5	100	0.0	1.00	bb

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Method: C:\MassLynx\Default.PRO\MethDB\1613\_rrt.mdb 11 Sep 2020 15:14:27

Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 200930D2\_1, Date: 30-Sep-2020, Time: 12:06:04, ID: ST200930D2-1 1613 CS0 20F1102, Description: 1613 CS0 20F1102

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	4.43e2	0.67	NO	1.00	1.000	25.806	25.79	1.001	1.001	0.25382	102	0.0728	0.254
2	2 1,2,3,7,8-PeCDD	1.49e3	0.62	NO	0.935	1.000	30.166	30.15	1.001	1.000	1.2082	96.7	0.0691	1.21
3	3 1,2,3,4,7,8-HxCDD	1.43e3	1.21	NO	1.15	1.000	33.393	33.40	1.000	1.001	1.2230	97.8	0.0942	1.22
4	4 1,2,3,6,7,8-HxCDD	1.43e3	1.19	NO	1.02	1.000	33.503	33.50	1.000	1.000	1,1702	93.6	0.0968	1.17
5	5 1,2,3,7,8,9-HxCDD	1.50e3	1.28	NO	1.06	1.000	33.822	33.80	1.001	1.000	1.2264	98.1	0.0981	1.23
6	6 1,2,3,4,6,7,8-HpCDD	1.19e3	0.92	NO	1.00	1.000	37.190	37.19	1.000	1.000	1.1122	89.0	0.126	1.11
7	7 OCDD	2.06e3	0.95	NO	0.952	1.000	40.361	40.38	1.000	1.001	2.3892	95.6	0.133	2.39
8	8 2,3,7,8-TCDF	7.60e2	0.79	NO	1.01	1.000	25.143	25.15	1.001	1.001	0.29805	119	0.0517	0.298
9	9 1,2,3,7,8-PeCDF	2.34e3	1.56	NO	0.998	1.000	28.998	29.00	1.001	1.001	1.1933	95.5	0.0539	1.19
10	10 2,3,4,7,8-PeCDF	2.16e3	1.58	NO	1.07	1.000	29.974	29.96	1.001	1.001	1.0532	84.3	0.0475	1.05
11	11 1,2,3,4,7,8-HxCDF	2.00e3	1.19	NO	1.05	1.000	32.494	32.50	1.000	1.000	1.1620	93.0	0.0554	1.16
12	12 1,2,3,6,7,8-HxCDF	2.15e3	1.24	NO	1.10	1.000	32.635	32.64	1.000	1.000	1.1771	94.2	0.0541	1.18
13	13 2,3,4,6,7,8-HxCDF	1.91e3	1.25	NO	1.09	1.000	33.295	33.27	1.001	1.000	1.1126	89.0	0.0620	1.11
14	14 1,2,3,7,8,9-HxCDF	1.74e3	1.20	NO	1.08	1.000	34.271	34.29	1.000	1.001	1.1851	94.8	0.0794	1.19
15	15 1,2,3,4,6,7,8-HpCDF	1.81e3	0.96	NO	1.13	1.000	35.942	35.93	1.001	1.001	1.1552	92.4	0.0711	1.16
16	16 1,2,3,4,7,8,9-HpCDF	1.49e3	1.01	NO	1.29	1.000	37.826	37.84	1.000	1.000	1.1745	94.0	0.0684	1.17
17	17 OCDF	2.42e3	0.92	NO	0.953	1.000	40.680	40.69	1.000	1.000	2.2409	89.6	0.0901	2.24
18	18 13C-2,3,7,8-TCDD	1.74e5	0.78	NO	1.17	1.000	25.755	25.77	1.026	1.027	100.51	101	0.402	
19	19 13C-1,2,3,7,8-PeCDD	1.32e5	0.62	NO	0.914	1.000	29.937	30.15	1.193	1.201	97.346	97.3	0.269	
20	20 13C-1,2,3,4,7,8-HxCDD	1.01e5	1.30	NO	0.634	1.000	33.383	33.38	1.014	1.014	95.728	95.7	0.421	
21	21 13C-1,2,3,6,7,8-HxCDD	1.19e5	1.29	NO	0.724	1.000	33.491	33.50	1.017	1.018	98.682	98.7	0.368	
22	22 13C-1,2,3,7,8,9-HxCDD	1.15e5	1.25	NO	0.716	1.000	33.758	33.79	1.025	1.026	96.579	96.6	0.373	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.07e5	1.09	NO	0.660	1.000	37.169	37.18	1.129	1.129	96.706	96.7	0.575	
24	24 13C-OCDD	1.81e5	0.88	NO	0.587	1.000	40.145	40.36	1.219	1.226	185.28	92.6	0.361	
25	25 13C-2,3,7,8-TCDF	2.52e5	0.76	NO	1.02	1.000	24.851	25.12	0.990	1.001	100.09	100	0.369	
26	26 13C-1,2,3,7,8-PeCDF	1.96e5	1.64	NO	0.842	1.000	29.011	28.98	1.156	1.154	94.839	94.8	0.310	
27	27 13C-2,3,4,7,8-PeCDF	1.91e5	1.62	NO	0.802	1.000	29.897	29.94	1.191	1.193	96.912	96.9	0.326	
28	28 13C-1,2,3,4,7,8-HxCDF	1.64e5	0.50	NO	1.00	1.000	32.527	32.49	0.988	0.987	97.726	97.7	0.445	
29	29 13C-1,2,3,6,7,8-HxCDF	1.66e5	0.50	NO	1.02	1.000	32.658	32.63	0.992	0.991	97.658	97.7	0.438	
30	30 13C-2,3,4,6,7,8-HxCDF	1.58e5	0.50	NO	0.955	1.000	33.221	33.26	1.009	1.010	98.888	98.9	0.467	
31	31 13C-1,2,3,7,8,9-HxCDF	1.36e5	0.51	NO	0.851	1.000	34.285	34.27	1.041	1.041	95.657	95.7	0.524	

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Thursday, October 01, 2020 10:33:19 Pacific Daylight Time

Name: 200930D2\_1, Date: 30-Sep-2020, Time: 12:06:04, ID: ST200930D2-1 1613 CS0 20F1102, Description: 1613 CS0 20F1102

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	1.38e5	0.43	NO	0.848	1.000	35.786	35.91	1.087	1.091	97.740	97.7	0.497	- 3
33	33 13C-1,2,3,4,7,8,9-HpCDF	9.84e4	0.42	NO	0.624	1.000	37.761	37.83	1.147	1.149	94.399	94.4	0.675	
34	34 13C-OCDF	2.27e5	0.87	NO	0.730	1.000	40.296	40.68	1.224	1.236	186.36	93.2	0.394	
35	35 37CI-2,3,7,8-TCDD	3.48 <b>e</b> 2			1.21	1.000	25.752	25.79	1.026	1.027	0.19492	78.0	0.0690	
36	36 13C-1,2,3,4-TCDD	1.48e5	0.78	NO	1.00	1.000	25.260	25.10	1.000	1.000	100.00	100	0.471	
37	37 13C-1,2,3,4-TCDF	2.46e5	0.79	NO	1.00	1.000	23.930	23.76	1.000	1.000	100.00	100	0.377	
38	38 13C-1,2,3,4,6,9-HxCDF	1.67e5	0.50	NO	1.00	1.000	32.990	32.92	1.000	1.000	100.00	100	0.446	

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Name: 200930D2\_2, Date: 30-Sep-2020, Time: 12:51:13, ID: ST200930D2-2 1613 CS1 20F1103, Description: 1613 CS1 20F1103

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	8.87e2	0.78	NO	1.00	1.000	25.821	25.82	1.001	1.001	0.50055	100	0.0605	0.501
2	2 1,2,3,7,8-PeCDD	2.83e3	0.66	NO	0.935	1.000	30.166	30.17	1.001	1.001	2.1217	84.9	0.0704	2.12
3	3 1,2,3,4,7,8-HxCDD	2.77e3	1.42	NO	1.15	1.000	33.404	33.40	1.000	1.000	2.2660	90.6	0.138	2.27
4	4 1,2,3,6,7,8-HxCDD	2.93e3	1.19	NO	1.02	1.000	33.514	33.53	1.000	1.000	2.3742	95.0	0.153	2.37
5	5 1,2,3,7,8,9-HxCDD	2.90e3	1.26	NO	1.06	1.000	33.833	33.81	1.001	1.000	2.2497	90.0	0.161	2.25
6	6 1,2,3,4,6,7,8-HpCDD	2.68e3	0.95	NO	1.00	1.000	37.201	37.20	1.000	1.000	2.3665	94.7	0.0876	2.37
7	7 OCDD	4.26e3	0.84	NO	0.952	1.000	40.383	40.39	1.000	1.000	4.3012	86.0	0.144	4.30
8	8 2,3,7,8-TCDF	1.27e3	0.76	NO	1.01	1.000	25.158	25.16	1.001	1.001	0.48435	96.9	0.0533	0.484
9	9 1,2,3,7,8-PeCDF	4.41e3	1.49	NO	0.998	1.000	29.018	29.02	1.001	1.001	2.2113	88.5	0.0589	2.21
10	10 2,3,4,7,8-PeCDF	4.71e3	1.60	NO	1.07	1.000	29.974	29.96	1.001	1.001	2.2165	88.7	0.0554	2.22
11	11 1,2,3,4,7,8-HxCDF	3.98e3	1.29	NO	1.05	1.000	32.505	32.52	1.000	1.000	2.2085	88.3	0.0509	2.21
12	12 1,2,3,6,7,8-HxCDF	4.33e3	1.33	NO	1.10	1.000	32.646	32.65	1.000	1.000	2.2276	89.1	0.0487	2.23
13	13 2,3,4,6,7,8-HxCDF	3.96e3	1.28	NO	1.09	1.000	33.306	33.28	1.001	1.000	2.2609	90.4	0.0596	2.26
14	14 1,2,3,7,8,9-HxCDF	3.56e3	1.35	NO	1.08	1.000	34.293	34.30	1.000	1.000	2.2843	91.4	0.0732	2.28
15	15 1,2,3,4,6,7,8-HpCDF	3.59e3	1.10	NO	1.13	1.000	35.964	35.95	1.001	1.001	2.1875	87.5	0.0754	2.19
16	16 1,2,3,4,7,8,9-HpCDF	2.96e3	1.11	NO	1.29	1.000	37.838	37.85	1.000	1.000	2.1582	86.3	0.0750	2.16
17	17 OCDF	5.45e3	0.88	NO	0.953	1.000	40.701	40.71	1.000	1.000	4.5423	90.8	0.0888	4.54
18	18 13C-2,3,7,8-TCDD	1.77e5	0.78	NO	1.17	1.000	25.786	25.79	1.026	1.026	96.769	96.8	0.372	
19	19 13C-1,2,3,7,8-PeCDD	1.43e5	0.61	NO	0.914	1.000	29.974	30.15	1.193	1.199	100.22	100	0.199	
20	20 13C-1,2,3,4,7,8-HxCDD	1.06e5	1.29	NO	0.634	1.000	33.405	33.39	1.014	1.014	98.510	98.5	0.441	
21	21 13C-1,2,3,6,7,8-HxCDD	1.21e5	1.25	NO	0.724	1.000	33.514	33.51	1.017	1.017	97.961	98.0	0.386	
22	22 13C-1,2,3,7,8,9-HxCDD	1.22e5	1.30	NO	0.716	1.000	33.780	33.80	1.025	1.026	100.00	100	0.390	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.13e5	1.06	NO	0.660	1.000	37.193	37.19	1.129	1.129	100.83	101	0.613	
24	24 13C-OCDD	2.08e5	0.87	NO	0.587	1.000	40.172	40.38	1.219	1.226	209.10	105	0.471	
25	25 13C-2,3,7,8-TCDF	2.58e5	0.80	NO	1.02	1.000	24.882	25.13	0.990	1.000	100.73	101	0.338	
26	26 13C-1,2,3,7,8-PeCDF	2.00e5	1.58	NO	0.842	1.000	29.046	29.00	1.156	1.154	94.617	94.6	0.364	
27	27 13C-2,3,4,7,8-PeCDF	1.98e5	1.56	NO	0.802	1.000	29.933	29.94	1.191	1.191	98.287	98.3	0.382	
28	28 13C-1,2,3,4,7,8-HxCDF	1.72e5	0.50	NO	1.00	1.000	32.548	32.50	0.988	0.987	100.71	101	0.407	
29	29 13C-1,2,3,6,7,8-HxCDF	1.77e5	0.49	NO	1.02	1.000	32.680	32.64	0.992	0.991	102.10	102	0.401	
30	30 13C-2,3,4,6,7,8-HxCDF	1.61e5	0.51	NO	0.955	1.000	33.243	33.27	1.009	1.010	99.175	99.2	0.428	ĺ
31	31 13C-1,2,3,7,8,9-HxCDF	1.44e5	0.49	NO	0.851	1.000	34.308	34.29	1.041	1.041	99.754	99.8	0.480	
32	32 13C-1,2,3,4,6,7,8-HpCDF	1.45e5	0.41	NO	0.848	1.000	35.810	35.93	1.087	1.091	100.64	101	0.494	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1.07e5	0.44	NO	0.624	1.000	37.786	37.84	1.147	1.149	100.46	100	0.671	
34	34 13C-OCDF	2.52e5	0.87	NO	0.730	1.000	40.323	40.70	1.224	1.235	203.36	102	0.391	

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Dataset:

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Name: 200930D2\_2, Date: 30-Sep-2020, Time: 12:51:13, ID: ST200930D2-2 1613 CS1 20F1103, Description: 1613 CS1 20F1103

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
35	35 37CI-2,3,7,8-TCDD	8.95e2			1.21	1.000	25.784	25.81	1.026	1.027	0.47558	95.1	0.0525	
36	36 13C-1,2,3,4-TCDD	1.56e5	0.77	NO	1.00	1.000	25.260	25.13	1.000	1.000	100.00	100	0.436	
37	37 13C-1,2,3,4-TCDF	2.51e5	0.79	NO	1.00	1.000	23.930	23.79	1.000	1.000	100.00	100	0.345	
38	38 13C-1,2,3,4,6,9-HxCDF	1.70e5	0.49	NO	1.00	1.000	32.990	32.94	1.000	1.000	100.00	100	0.408	

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Name: 200930D2\_3, Date: 30-Sep-2020, Time: 13:37:23, ID: ST200930D2-3 1613 CS2 20F1104, Description: 1613 CS2 20F1104

100	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	3.35e3	0.80	NO	1.00	1.000	25.806	25.79	1.001	1.001	1.7454	87.3	0.0590	1.75
2	2 1,2,3,7,8-PeCDD	1.29e4	0.59	NO	0.935	1.000	30.166	30.15	1.001	1.000	8.9436	89.4	0.0709	8.94
3	3 1,2,3,4,7,8-HxCDD	1.21e4	1.33	NO	1.15	1.000	33.393	33.39	1.000	1.000	8.9337	89.3	0.114	8.93
4	4 1,2,3,6,7,8-HxCDD	1.28e4	1.26	NO	1.02	1.000	33.503	33.51	1.000	1.000	9.1556	91.6	0.120	9.16
5	5 1,2,3,7,8,9-HxCDD	1.28e4	1.33	NO	1.06	1.000	33.811	33.79	1.001	1.000	9.0082	90.1	0.115	9.01
6	6 1,2,3,4,6,7,8-HpCDD	1.09e4	1.04	NO	1.00	1.000	37.179	37.18	1.000	1.000	8.9356	89.4	0.134	8.94
7	7 OCDD	1.88e4	0.91	NO	0.952	1.000	40.361	40.37	1.000	1.000	18.794	94.0	0.105	18.8
8	8 2,3,7,8-TCDF	4.49e3	0.74	NO	1.01	1.000	25.143	25.15	1.001	1.001	1.6566	82.8	0.0457	1.66
9	9 1,2,3,7,8-PeCDF	2.02e4	1.59	NO	0.998	1.000	28.998	29.00	1.001	1.001	9.1384	91.4	0.0784	9.14
10	10 2,3,4,7,8-PeCDF	2.12e4	1.62	NO	1.07	1.000	29.974	29.96	1.001	1.001	9.3871	93.9	0.0692	9.39
11	11 1,2,3,4,7,8-HxCDF	1.75e4	1.25	NO	1.05	1.000	32.483	32.50	1.000	1.001	9.0042	90.0	0.0728	9.00
12	12 1,2,3,6,7,8-HxCDF	1.87e4	1.24	NO	1.10	1.000	32.624	32.64	1.000	1.001	9.0344	90.3	0.0761	9.03
13	13 2,3,4,6,7,8-HxCDF	1.77e4	1.26	NO	1.09	1.000	33.295	33.28	1.001	1.001	8.9732	89.7	0.0765	8.97
14	14 1,2,3,7,8,9-HxCDF	1.49e4	1.23	NO	1.08	1.000	34.271	34.29	1.000	1.001	8.8694	88.7	0.111	8.87
15	15 1,2,3,4,6,7,8-HpCDF	1.52e4	0.98	NO	1.13	1.000	35.942	35.92	1.001	1.000	8.7232	87.2	0.121	8.72
16	16 1,2,3,4,7,8,9-HpCDF	1.31e4	1.04	NO	1.29	1.000	37.816	37.83	1.000	1.000	9.1888	91.9	0.123	9.19
17	17 OCDF	2.28e4	0.87	NO	0.953	1.000	40.680	40.69	1.000	1.000	18.281	91.4	0.0889	18.3
18	18 13C-2,3,7,8-TCDD	1.92e5	0.75	NO	1.17	1.000	25.771	25.78	1.026	1.026	102.22	102	0.316	
19	19 13C-1,2,3,7,8-PeCDD	1.55e5	0.63	NO	0.914	1.000	29.955	30.15	1.193	1.200	105.86	106	0.332	
20	20 13C-1,2,3,4,7,8-HxCDD	1.17e5	1.28	NO	0.634	1.000	33.383	33.38	1.014	1.014	97.531	97.5	0.351	1
21	21 13C-1,2,3,6,7,8-HxCDD	1.36e5	1.28	NO	0.724	1.000	33.491	33.50	1.017	1.018	99.251	99.3	0.307	
22	22 13C-1,2,3,7,8,9-HxCDD	1.34e5	1.26	NO	0.716	1.000	33.758	33.78	1.025	1.026	98.689	98.7	0.310	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.22e5	1.12	NO	0.660	1.000	37.169	37.17	1.129	1.129	97.425	97.4	0.540	
24	24 13C-OCDD	2.10e5	0.90	NO	0.587	1.000	40.145	40.36	1.219	1.226	188.69	94.3	0.406	
25	25 13C-2,3,7,8-TCDF	2.68e5	0.80	NO	1.02	1.000	24.866	25.12	0.990	1.000	99.924	99.9	0.356	
26	26 13C-1,2,3,7,8-PeCDF	2.22e5	1.59	NO	0.842	1.000	29.028	28.98	1.156	1.154	100.40	100	0.366	
27	27 13C-2,3,4,7,8-PeCDF	2.10e5	1.68	NO	0.802	1.000	29.915	29.94	1.191	1.192	100.05	100	0.385	
28	28 13C-1,2,3,4,7,8-HxCDF	1.84e5	0.50	NO	1.00	1.000	32.527	32.48	0.988	0.987	96.954	97.0	0.452	
29	29 13C-1,2,3,6,7,8-HxCDF	1.88e5	0.49	NO	1.02	1.000	32.658	32.61	0.992	0.991	97.404	97.4	0.445	
30	30 13C-2,3,4,6,7,8-HxCDF	1.81e5	0.50	NO	0.955	1.000	33.221	33.26	1.009	1.010	100.01	100	0.475	
31	31 13C-1,2,3,7,8,9-HxCDF	1.55e5	0.52	NO	0.851	1.000	34.285	34.27	1.041	1.041	96.035	96.0	0.532	
32	32 13C-1,2,3,4,6,7,8-HpCDF	1.54e5	0.42	NO	0.848	1.000	35.786	35.91	1.087	1.091	95.936	95.9	0.449	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1.10e5	0.43	NO	0.624	1.000	37.761	37.82	1.147	1.149	93.270	93.3	0.610	
34	34 13C-OCDF	2.61e5	0.88	NO	0.730	1.000	40.296	40.68	1.224	1.236	188.84	94.4	0.327	

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Vas:	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
35	35 37CI-2,3,7,8-TCDD	3.83e3			1.21	1.000	25.768	25.81	1.026	1.027	1.9864	99.3	0.0538	
36	36 13C-1,2,3,4-TCDD	1.60e5	0.78	NO	1.00	1.000	25.260	25.12	1.000	1.000	100.00	100	0.370	
37	37 13C-1,2,3,4-TCDF	2.62e5	0.79	NO	1.00	1.000	23.930	23.77	1.000	1.000	100.00	100	0.363	
38	38 13C-1,2,3,4,6,9-HxCDF	1.90e5	0.50	NO	1.00	1.000	32.990	32.92	1.000	1.000	100.00	100	0.453	

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Name: 200930D2\_4, Date: 30-Sep-2020, Time: 14:23:39, ID: ST200930D2-4 1613 CS3 20F1105, Description: 1613 CS3 20F1105

3-170	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	1.39e4	0.77	NO	1.00	1.000	25.821	25.81	1.001	1.001	9.5080	95.1	0.111	9.51
2	2 1,2,3,7,8-PeCDD	5.42e4	0.59	NO	0.935	1.000	30.166	30.17	1.001	1.001	49.698	99.4	0.181	49.7
3	3 1,2,3,4,7,8-HxCDD	5.14e4	1.26	NO	1.15	1.000	33.404	33.40	1.000	1.000	50.422	101	0.242	50.4
4	4 1,2,3,6,7,8-HxCDD	5.15e4	1.26	NO	1.02	1.000	33.503	33.53	1.000	1.001	49.826	99.7	0.270	49.8
5	5 1,2,3,7,8,9-HxCDD .	5.21e4	1.29	NO	1.06	1.000	33.822	33.80	1.001	1.000	49.221	98.4	0.250	49.2
6	6 1,2,3,4,6,7,8-HpCDD	4.59e4	1.05	NO	1.00	1.000	37.190	37.19	1.000	1.000	48.395	96.8	0.334	48.4
7	7 OCDD	7.84e4	0.91	NO	0.952	1.000	40.372	40.39	1.000	1.001	101.14	101	0.308	101
8	8 2,3,7,8-TCDF	1.88e4	0.74	NO	1.01	1.000	25.158	25.16	1.001	1.001	8.8783	88.8	0.0922	8.88
9	9 1,2,3,7,8-PeCDF	8.94e4	1.63	NO	0.998	1.000	29.019	29.00	1.001	1.000	49.989	100	0.142	50.0
10	10 2,3,4,7,8-PeCDF	8.96e4	1.62	NO	1.07	1.000	29.974	29.96	1.001	1.001	51.857	104	0.130	51.9
11	11 1,2,3,4,7,8-HxCDF	7.44e4	1.27	NO	1.05	1.000	32.494	32.50	1.000	1.000	50.500	101	0.220	50.5
12	12 1,2,3,6,7,8-HxCDF	7.93e4	1.26	NO	1.10	1.000	32.635	32.64	1.000	1.000	49.738	99.5	0.206	49.7
13	13 2,3,4,6,7,8-HxCDF	7.34e4	1.23	NO	1.09	1.000	33.306	33.28	1.001	1.000	50.165	100	0.237	50.2
14	14 1,2,3,7,8,9-HxCDF	6.56e4	1.26	NO	1.08	1.000	34.282	34.29	1.000	1.000	50.648	101	0.288	50.6
15	15 1,2,3,4,6,7,8-HpCDF	6.77e4	1.02	NO	1.13	1.000	35.953	35.94	1.001	1.001	51.219	102	0.334	51.2
16	16 1,2,3,4,7,8,9-HpCDF	5.55e4	1.02	NO	1.29	1.000	37.827	37.84	1.000	1.000	49.634	99.3	0.356	49.6
17	17 OCDF	9.70e4	0.90	NO	0.953	1.000	40.690	40.71	1.000	1.001	99.596	99.6	0.263	99.6
18	18 13C-2,3,7,8-TCDD	1.46e5	0.79	NO	1.17	1.000	25.771	25.79	1.026	1.027	97.942	97.9	0.382	
1.9	19 13C-1,2,3,7,8-PeCDD	1.17e5	0.63	NO	0.914	1.000	29.955	30.15	1.193	1.200	100.61	101	0.290	
20	20 13C-1,2,3,4,7,8-HxCDD	8.84e4	1.27	NO	0.634	1.000	33.394	33.39	1.014	1.014	98.658	98.7	0.415	ł
21	21 13C-1,2,3,6,7,8-HxCDD	1.01e5	1.26	NO	0.724	1.000	33.503	33.50	1.017	1.017	98.518	98.5	0.363	
22	22 13C-1,2,3,7,8,9-HxCDD	9.97e4	1.21	NO	0.716	1.000	33.769	33.79	1.025	1.026	98.480	98.5	0.367	1
23	23 13C-1,2,3,4,6,7,8-HpCDD	9.48e4	1.06	NO	0.660	1.000	37.181	37.18	1.129	1.129	101.49	101	0.587	
24	24 13C-OCDD	1.63e5	0.88	NO	0.587	1.000	40.158	40.37	1.219	1.226	196.23	98.1	0.349	
25	25 13C-2,3,7,8-TCDF	2.10e5	0.78	NO	1.02	1.000	24.866	25.13	0.990	1.001	99.133	99.1	0.390	
26	26 13C-1,2,3,7,8-PeCDF	1.79e5	1.59	NO	0.842	1.000	29.028	29.00	1.156	1.154	102.97	103	0.440	
27	27 13C-2,3,4,7,8-PeCDF	1.61e5	1.67	NO	0.802	1.000	29.915	29.94	1.191	1.192	96.981	97.0	0.462	1
28	28 13C-1,2,3,4,7,8-HxCDF	1.40e5	0.49	NO	1.00	1.000	32.538	32.49	0.988	0.987	98.799	98.8	0.562	
29	29 13C-1,2,3,6,7,8-HxCDF	1.45e5	0.50	NO	1.02	1.000	32.669	32.63	0.992	0.991	100.59	101	0.554	
30	30 13C-2,3,4,6,7,8-HxCDF	1.35e5	0.50	NO	0.955	1.000	33.233	33.27	1.009	1.010	99.579	99.6	0.591	
31	31 13C-1,2,3,7,8,9-HxCDF	1.20e5	0.50	NO	0.851	1.000	34.296	34.28	1.041	1.041	99.429	99.4	0.663	
32	32 13C-1,2,3,4,6,7,8-HpCDF	1.17e5	0.43	NO	0.848	1.000	35.798	35.92	1.087	1.091	97.444	97.4	0.468	
33	33 13C-1,2,3,4,7,8,9-HpCDF	8.69e4	0.41	NO	0.624	1.000	37.774	37.83	1.147	1.149	98.450	98.4	0.635	
34	34 13C-OCDF	2.04e5	0.88	NO	0.730	1.000	40.310	40.69	1.224	1.236	197.95	99.0	0.428	

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Dataset:

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Thursday, October 01, 2020 10:33:19 Pacific Daylight Time

Name: 200930D2\_4, Date: 30-Sep-2020, Time: 14:23:39, ID: ST200930D2-4 1613 CS3 20F1105, Description: 1613 CS3 20F1105

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
35	35 37CI-2,3,7,8-TCDD	1.49e4			1.21	1.000	25.768	25.81	1.026	1.027	9.7292	97.3	0.0917	
36	36 13C-1,2,3,4-TCDD	1.27e5	0.80	NO	1.00	1.000	25.260	25.12	1.000	1.000	100.00	100	0.448	
37	37 13C-1,2,3,4-TCDF	2.07e5	0.80	NO	1.00	1.000	23.930	23.77	1.000	1.000	100.00	100	0.399	
38	38 13C-1,2,3,4,6,9-HxCDF	1.41e5	0.50	NO	1.00	1.000	32.990	32.93	1.000	1.000	100.00	100	0.564	

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Name: 200930D2\_5, Date: 30-Sep-2020, Time: 15:49:01, ID: ST200930D2-5 1613 CS4 20F1106, Description: 1613 CS4 20F1106

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	7.37e4	0.76	NO	1.00	1.000	25.806	25.81	1.001	1.001	38.854	97.1	0.0708	38.9
2	2 1,2,3,7,8-PeCDD	2.74e5	0.60	NO	0.935	1.000	30.167	30.17	1.001	1.001	221.90	111	0.133	222
3	3 1,2,3,4,7,8-HxCDD	2.76e5	1.29	NO	1.15	1.000	33.404	33.40	1.000	1.000	219.24	110	0.210	219
4	4 1,2,3,6,7,8-HxCDD	2.74e5	1.23	NO	1.02	1.000	33.504	33.53	1.000	1.001	216.34	108	0.225	216
5	5 1,2,3,7,8,9-HxCDD	2.84e5	1.25	NO	1.06	1.000	33.823	33.81	1.001	1.001	219.54	110	0.229	220
6	6 1,2,3,4,6,7,8-HpCDD	2.47e5	1.04	NO	1.00	1.000	37.191	37.20	1.000	1.001	221.28	111	0.516	221
7	7 OCDD	4.22e5	0.90	NO	0.952	1.000	40.384	40.39	1.000	1.000	426.28	107	0.374	426
8	8 2,3,7,8-TCDF	1.04e5	0.77	NO	1.01	1.000	25.158	25.15	1.001	1.001	39.830	99.6	0.0601	39.8
9	9 1,2,3,7,8-PeCDF	4.62e5	1.61	NO	0.998	1.000	28.999	29.00	1.001	1.001	218.35	109	0.201	218
10	10 2,3,4,7,8-PeCDF	4.79e5	1.60	NO	1.07	1.000	29.974	29.96	1.001	1.001	225.85	113	0.162	226
11	11 1,2,3,4,7,8-HxCDF	4.05e5	1.25	NO	1.05	1.000	32.494	32.51	1.000	1.000	223.95	112	0.297	224
12	12 1,2,3,6,7,8-HxCDF	4.22e5	1.24	NO	1.10	1.000	32.636	32.64	1.000	1.000	219.12	110	0.284	219
13	13 2,3,4,6,7,8-HxCDF	3.94e5	1.24	NO	1.09	1.000	33.306	33.29	1.001	1.001	225.95	113	0.334	226
14	14 1,2,3,7,8,9-HxCDF	3.46e5	1.29	NO	1.08	1.000	34.283	34.29	1.000	1.000	215.45	108	0.399	215
15	15 1,2,3,4,6,7,8-HpCDF	3.79e5	1.04	NO	1.13	1.000	35.954	35.94	1.001	1.001	224.59	112	0.460	225
16	16 1,2,3,4,7,8,9-HpCDF	3.19e5	1.03	NO	1.29	1.000	37.827	37.84	1.000	1.000	219.44	110	0.460	219
17	17 OCDF	5.52e5	0.89	NO	0.953	1.000	40.691	40.71	1.000	1.001	449.43	112	0.339	449
18	18 13C-2,3,7,8-TCDD	1.89e5	0.79	NO	1.17	1.000	25.771	25.78	1.026	1.026	98.388	98.4	0.296	
19	19 13C-1,2,3,7,8-PeCDD	1.32e5	0.63	NO	0.914	1.000	29.956	30.15	1.193	1.200	88.219	88.2	0.204	
20	20 13C-1,2,3,4,7,8-HxCDD	1.09e5	1.28	NO	0.634	1.000	33.394	33.39	1.014	1.014	100.34	100	0.403	
21	21 13C-1,2,3,6,7,8-HxCDD	1.24e5	1.28	NO	0.724	1.000	33.503	33.50	1.017	1.017	99.250	99.3	0.353	
22	22 13C-1,2,3,7,8,9-HxCDD	1.22e5	1.23	NO	0.716	1.000	33.769	33.79	1.025	1.026	99.176	99.2	0.357	1
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.12e5	1.04	NO	0.660	1.000	37.181	37.18	1.129	1.129	98.247	98.2	0.525	
24	24 13C-OCDD	2.08e5	0.90	NO	0.587	1.000	40.159	40.38	1.219	1.226	206.10	103	0.403	
25	25 13C-2,3,7,8-TCDF	2.57e5	0.78	NO	1.02	1.000	24.867	25.13	0.990	1.001	98.299	98.3	0.313	
26	26 13C-1,2,3,7,8-PeCDF	2.12e5	1.62	NO	0.842	1.000	29.029	28.98	1.156	1.154	98.319	98.3	0.497	1
27	27 13C-2,3,4,7,8-PeCDF	1.98e5	1.60	NO	0.802	1.000	29.915	29.94	1.191	1.192	96.177	96.2	0.522	
28	28 13C-1,2,3,4,7,8-HxCDF	1.72e5	0.51	NO	1.00	1.000	32.538	32.49	0.988	0.987	99.701	99.7	0.382	
29	29 13C-1,2,3,6,7,8-HxCDF	1.75e5	0.51	NO	1.02	1.000	32.670	32.63	0.992	0.991	99.974	100	0.376	
3,0	30 13C-2,3,4,6,7,8-HxCDF	1.60e5	0.51	NO	0.955	1.000	33.233	33.27	1.009	1.010	97.627	97.6	0.401	
31	31 13C-1,2,3,7,8,9-HxCDF	1.49e5	0.52	NO	0.851	1.000	34.296	34.28	1.041	1.041	101.52	102	0.450	
32	32 13C-1,2,3,4,6,7,8-HpCDF	1.49e5	0.42	NO	0.848	1.000	35.798	35.92	1.087	1.091	102.27	102	0.410	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1.13e5	0.41	NO	0.624	1.000	37.774	37.83	1.147	1.149	105.42	105	0.557	
34	34 13C-OCDF	2.58e5	0.88	NO	0.730	1.000	40.310	40.69	1.224	1.236	205.63	103	0.367	

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	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
35	35 37CI-2,3,7,8-TCDD	8.56e4			1.21	1.000	25.768	25.81	1.026	1.027	43.240	108	0.0718	
36	36 13C-1,2,3,4-TCDD	1.64e5	0.79	NO	1.00	1.000	25.260	25.12	1.000	1.000	100.00	100	0.348	
37	37 13C-1,2,3,4-TCDF	2.56e5	0.78	NO	1.00	1.000	23.930	23.77	1.000	1.000	100.00	100	0.319	
38	38 13C-1,2,3,4,6,9-HxCDF	1.72e5	0.50	NO	1.00	1.000	32.990	32.93	1.000	1.000	100.00	100	0.383	

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Name: 200930D2\_6, Date: 30-Sep-2020, Time: 16:35:44, ID: ST200930D2-6 1613 CS5 20F1107, Description: 1613 CS5 20F1107

THE LAND	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	7.58e5	0.78	NO	1.00	1.000	25.837	25.82	1.001	1.001	356.63	119	0.0966	357
2	2 1,2,3,7,8-PeCDD	2.85e6	0.62	NO	0.935	1.000	30.167	30.17	1.001	1.001	1780.4	119	0.172	1780
3	3 1,2,3,4,7,8-HxCDD	2.71e6	1.27	NO	1.15	1.000	33.404	33.42	1.000	1.001	1675.8	112	0.517	1680
4	4 1,2,3,6,7,8-HxCDD	2.69e6	1.28	NO	1.02	1.000	33.514	33.54	1.000	1.001	1680.7	112	0.531	1680
5	5 1,2,3,7,8,9-HxCDD	2.81e6	1.28	NO	1.06	1.000	33.834	33.82	1.001	1.001	1704.1	114	0.514	1700
6	6 1,2,3,4,6,7,8-HpCDD	2.53e6	1.04	NO	1.00	1.000	37.212	37.21	1.000	1.000	1793.7	120	1.10	1790
7	7 OCDD	4.25e6	0.91	NO	0.952	1.000	40.405	40.42	1.000	1.000	3501.8	117	0.640	3500
8	8 2,3,7,8-TCDF	9.86e5	0.76	NO	1.01	1.000	25.173	25.16	1.001	1.001	338.16	113	0.0928	338
9	9 1,2,3,7,8-PeCDF	4.38e6	1.61	NO	0.998	1.000	29.019	29.02	1.001	1.001	1733.2	116	0.290	1730
10	10 2,3,4,7,8-PeCDF	4.65e6	1.58	NO	1.07	1.000	29.994	29.96	1.001	1.000	1748.5	117	0.254	1750
11	11 1,2,3,4,7,8-HxCDF	3.93e6	1.26	NO	1.05	1.000	32.505	32.52	1.000	1.000	1735.3	116	0.598	1740
12	12 1,2,3,6,7,8-HxCDF	4.09e6	1.24	NO	1.10	1.000	32.646	32.65	1.000	1.000	1760.3	117	0.578	1760
13	13 2,3,4,6,7,8-HxCDF	3.89e6	1.24	NO	1.09	1.000	33.317	33.29	1.001	1.000	1762.8	118	0.677	1760
14	14 1,2,3,7,8,9-HxCDF	3.50e6	1.25	NO	1.08	1.000	34.293	34.30	1.000	1.000	1741.6	116	0.787	1740
15	15 1,2,3,4,6,7,8-HpCDF	3.6 <b>5</b> e6	1.03	NO	1.13	1.000	35.964	35.95	1.001	1.001	1771.8	118	1.17	1770
16	16 1,2,3,4,7,8,9-HpCDF	3.13e6	1.03	NO	1.29	1.000	37.838	37.86	1.000	1.001	1782.6	119	1.19	1780
17	17 OCDF	5.35e6	0.90	NO	0.953	1.000	40.713	40.73	1.000	1.001	3484.8	116	0.570	3480
18	18 13C-2,3,7,8-TCDD	2.12e5	0.79	NO	1.17	1.000	25.786	25.81	1.026	1.027	104.16	104	0.286	
1/9	19 13C-1,2,3,7,8-PeCDD	1.71e5	0.64	NO	0.914	1.000	29.974	30.15	1.193	1.199	107.75	108	0.215	
20	20 13C-1,2,3,4,7,8-HxCDD	1.40e5	1.26	NO	0.634	1.000	33.405	33.39	1.014	1.014	109.23	109	0.282	
21	21 13C-1,2,3,6,7,8-HxCDD	1.56e5	1.25	NO	0.724	1.000	33.514	33.51	1.017	1.017	106.34	106	0.247	1
22	22 13C-1,2,3,7,8,9-HxCDD	1.55e5	1.28	NO	0.716	1.000	33.781	33.80	1.025	1.026	107.07	107	0.250	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.41e5	1.06	NO	0.660	1.000	37.194	37.20	1.129	1.129	105.30	105	0.429	
24	24 13C-OCDD	2.55e5	0.91	NO	0.587	1.000	40.172	40.41	1.219	1.226	214.60	107	0.280	
25	25 13C-2,3,7,8-TCDF	2.88e5	0.77	NO	1.02	1.000	24.882	25.15	0.990	1.001	101.82	102	0.296	
26	26 13C-1,2,3,7,8-PeCDF	2.53e5	1.56	NO	0.842	1.000	29.046	29.00	1.156	1.154	108.85	109	0.302	
27	27 13C-2,3,4,7,8-PeCDF	2.47e5	1.63	NO	0.802	1.000	29.933	29.96	1.191	1.192	111.60	112	0.317	
28	28 13C-1,2,3,4,7,8-HxCDF	2.16e5	0.51	NO	1.00	1.000	32.549	32.51	0.988	0.987	106.11	106	0.327	
29	29 13C-1,2,3,6,7,8-HxCDF	2.11e5	0.51	NO	1.02	1.000	32.680	32.64	0.992	0.991	102.28	102	0.322	
30	30 13C-2,3,4,6,7,8-HxCDF	2.03e5	0.50	NO	0.955	1.000	33.244	33.28	1.009	1.010	104.72	105	0.344	
31	31 13C-1,2,3,7,8,9-HxCDF	1.86e5	0.50	NO	0.851	1.000	34.308	34.29	1.041	1.041	107.61	108	0.386	
32	32 13C-1,2,3,4,6,7,8-HpCDF	1.82e5	0.42	NO	0.848	1.000	35.810	35.93	1.087	1.091	105.97	106	0.366	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1.37e5	0.43	NO	0.624	1.000	37.787	37.84	1.147	1.149	108.00	108	0.497	
34	34 13C-OCDF	3.22e5	0.90	NO	0.730	1.000	40.323	40.71	1.224	1.236	217.87	109	0.278	

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Name: 200930D2\_6, Date: 30-Sep-2020, Time: 16:35:44, ID: ST200930D2-6 1613 CS5 20F1107, Description: 1613 CS5 20F1107

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
35	35 37Cl-2,3,7,8-TCDD	5.12e5			1.21	1.000	25.784	25.82	1.026	1.027	244.41	122	0.0655	
36	36 13C-1,2,3,4-TCDD	1.74e5	0.81	NO	1.00	1.000	25.260	25.13	1.000	1.000	100.00	100	0.335	
37	37 13C-1,2,3,4-TCDF	2.77e5	0.77	NO	1.00	1.000	23.930	23.79	1.000	1.000	100.00	100	0.302	
38	38 13C-1,2,3,4,6,9-HxCDF	2.03e5	0.50	NO	1.00	1.000	32.990	32.94	1.000	1.000	100.00	100	0.328	

Work Order 2002050

MassLynx 4.1

Page 1 of 1

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, October 01, 2020 10:37:09 Pacific Daylight Time Printed: Thursday, October 01, 2020 10:37:36 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\CPSM.mdb 22 Sep 2020 09:44:55 Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 200930D2\_4, Date: 30-Sep-2020, Time: 14:23:39, ID: ST200930D2-4 1613 CS3 20F1105, Description: 1613 CS3 20F1105

1100	# Name	RT
1	1 1,3,6,8-TCDD (First)	22.41
2	2 1,2,8,9-TCDD (Last)	26.63
3	3 1,2,4,7,9-PeCDD (First)	28.07
4	4 1,2,3,8,9-PeCDD (Last)	30.51
5	5 1,2,4,6,7,9-HxCDD (First)	31.78
6	6 1,2,3,7,8,9-HxCDD (Last)	33.80
7	7 1,2,3,4,6,7,9-HpCDD (First)	36.29
8	8 1,2,3,4,6,7,8-HpCDD (Last)	37.19
9	9 1,3,6,8-TCDF (First)	20.29
10	10 1,2,8,9-TCDF (Last)	26.91
11	11 1,3,4,6,8-PeCDF (First)	26.55
12	12 1,2,3,8,9-PeCDF (Last)	30.83
13	13 1,2,3,4,6,8-HxCDF (First)	31.26
14	14 1,2,3,7,8,9-HxCDF (Last)	34.29
15	15 1,2,3,4,6,7,8-HpCDF (First)	35.94
16	16 1,2,3,4,7,8,9-HpCDF (Last)	37.84

Work Order 2002050 Page 152 of 269

Vista Analytical Laboratory VG-11

Dataset:

Untitled

Last Altered: Printed: Thursday, October 01, 2020 10:38:02 Pacific Daylight Time Thursday, October 01, 2020 10:38:09 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\1613\_rrt.mdb 11 Sep 2020 15:14:27 Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Compound name: 2,3,7,8-TCDD

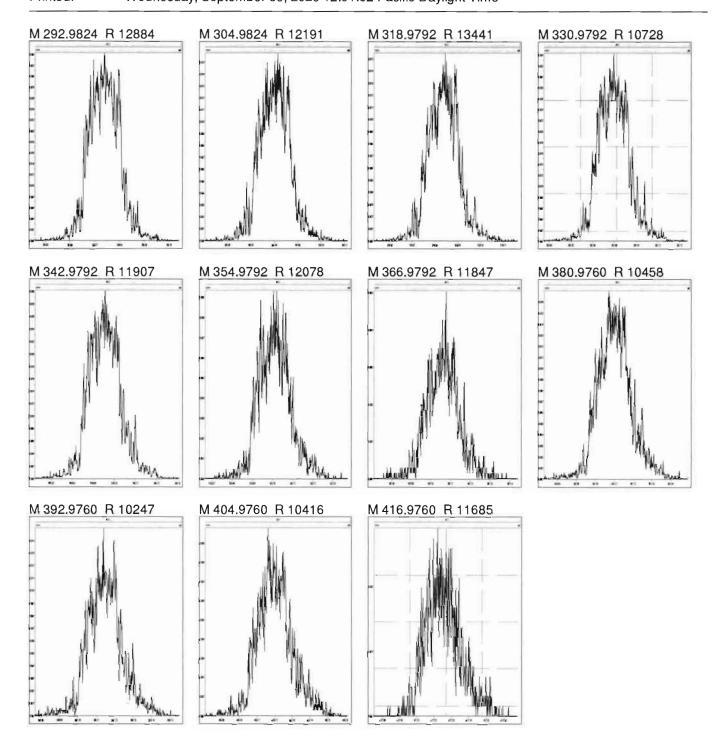
	Name	ID	Acq.Date	Acq.Time
1	200930D2_1	ST200930D2-1 1613 CS0 20F1102	30-Sep-20	12:06:04
2	200930D2_2	ST200930D2-2 1613 CS1 20F1103	30-Sep-20	12:51:13
3	200930D2_3	ST200930D2-3 1613 CS2 20F1104	30-Sep-20	13:37:23
4	200930D2_4	ST200930D2-4 1613 CS3 20F1105	30-Sep-20	14:23:39
5	200930D2_5	ST200930D2-5 1613 CS4 20F1106	30-Sep-20	15:49:01
6	200930D2_6	ST200930D2-6 1613 CS5 20F1107	30-Sep-20	16:35:44
7	200930D2_7	SOLVENT BLANK	30-Sep-20	17:21:53
8	200930D2_8	SS200930D2-1 1613 SSS 20F1108	30-Sep-20	18:08:02
9	200930D2_9	QC200930D2-1 TCDF CPSM	30-Sep-20	18:54:11
10	200930D2_10	B0I0193-BS1 OPR 10	30-Sep-20	19:40:20
11	200930D2_11	SOLVENT BLANK	30-Sep-20	20:26:29
12	200930D2_12	B0I0193-BLK1 Method Blank 10	30-Sep-20	21:11:54
13	200930D2_13	2002003-01 PDI-018SC-A-00-01-190926 10.15	30-Sep-20	21:57:18
14	200930D2_14	2002003-02 PDI-018SC-A-01-02-190926 11.65	30-Sep-20	22:43:26
15	200930D2_15	2002003-03 PDI-018SC-A-02-03-190926 10.16	30-Sep-20	23:29:40
16	200930D2_16	2002003-04 PDI-018SC-A-03-04-190926 11.5	01-Oct-20	00:15:48
17	200930D2_17	2002003-05 PDI-018SC-A-04-05-190926 10.06	01-Oct-20	01:01:11
18	200930D2_18	2002003-06 PDI-018SC-A-05-06-190926 10.33	01-Oct-20	01:46:37

Work Order 2002050 Page 153 of 269

Experiment: ocdd\_db5.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed:

Wednesday, September 30, 2020 12:01:52 Pacific Daylight Time

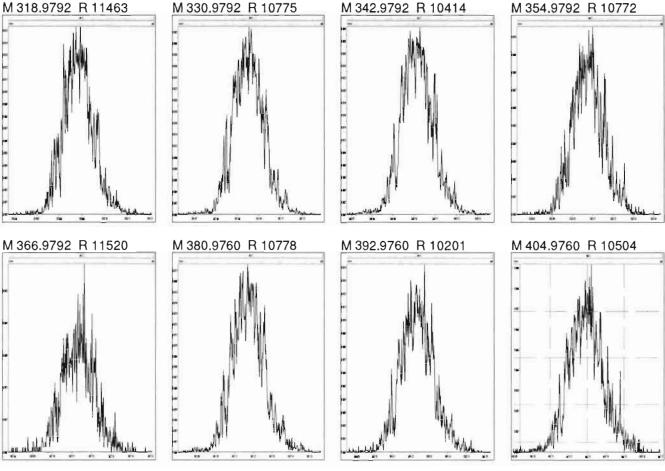


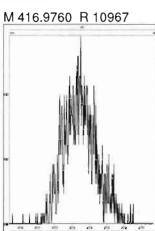
Work Order 2002050 Page 154 of 269

Experiment: ocdd\_db5.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed:

Wednesday, September 30, 2020 12:02:33 Pacific Daylight Time



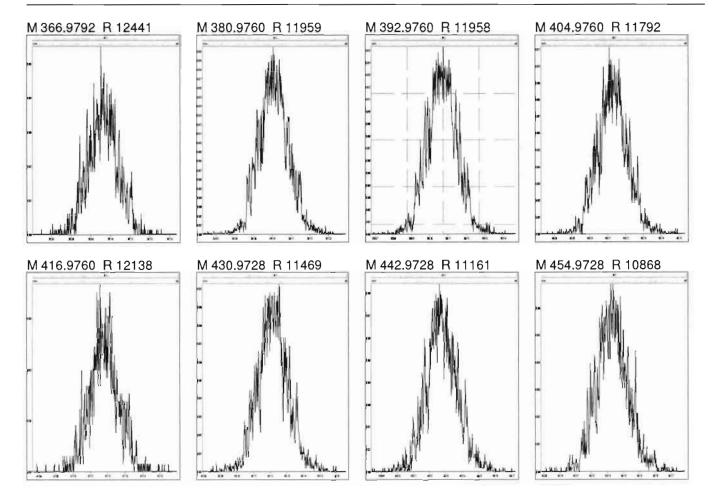


Work Order 2002050 Page 155 of 269

Experiment: ocdd\_db5.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed:

Wednesday, September 30, 2020 12:03:12 Pacific Daylight Time

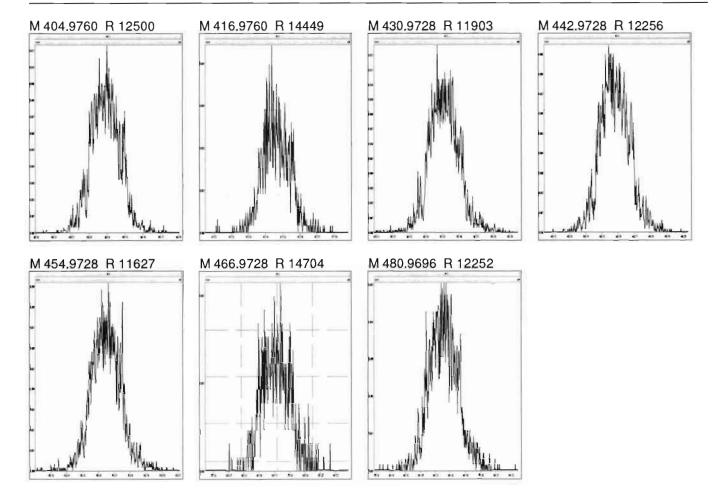


Work Order 2002050 Page 156 of 269

Experiment: ocdd\_db5.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed:

Wednesday, September 30, 2020 12:03:51 Pacific Daylight Time

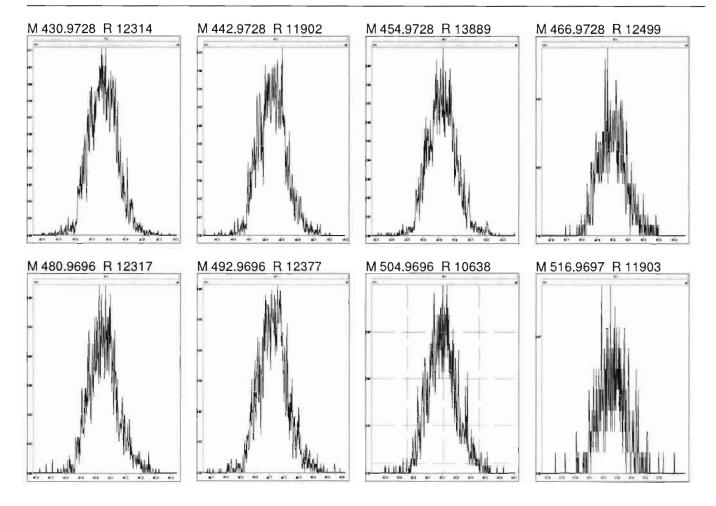


Work Order 2002050 Page 157 of 269

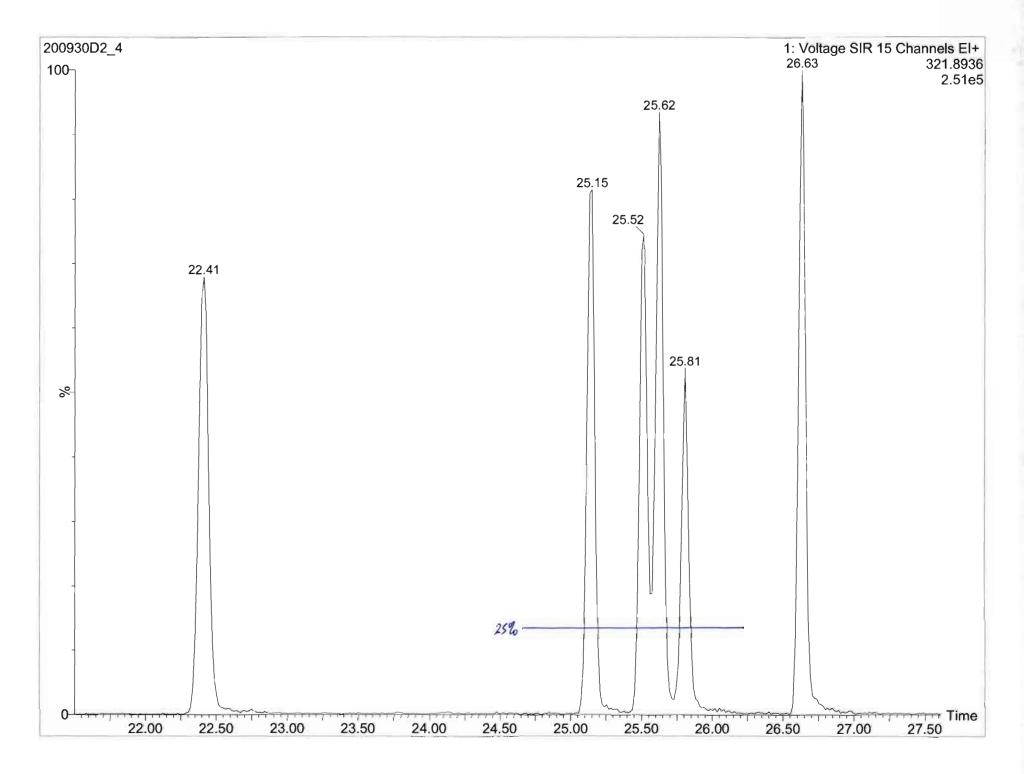
Experiment: ocdd\_db5.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

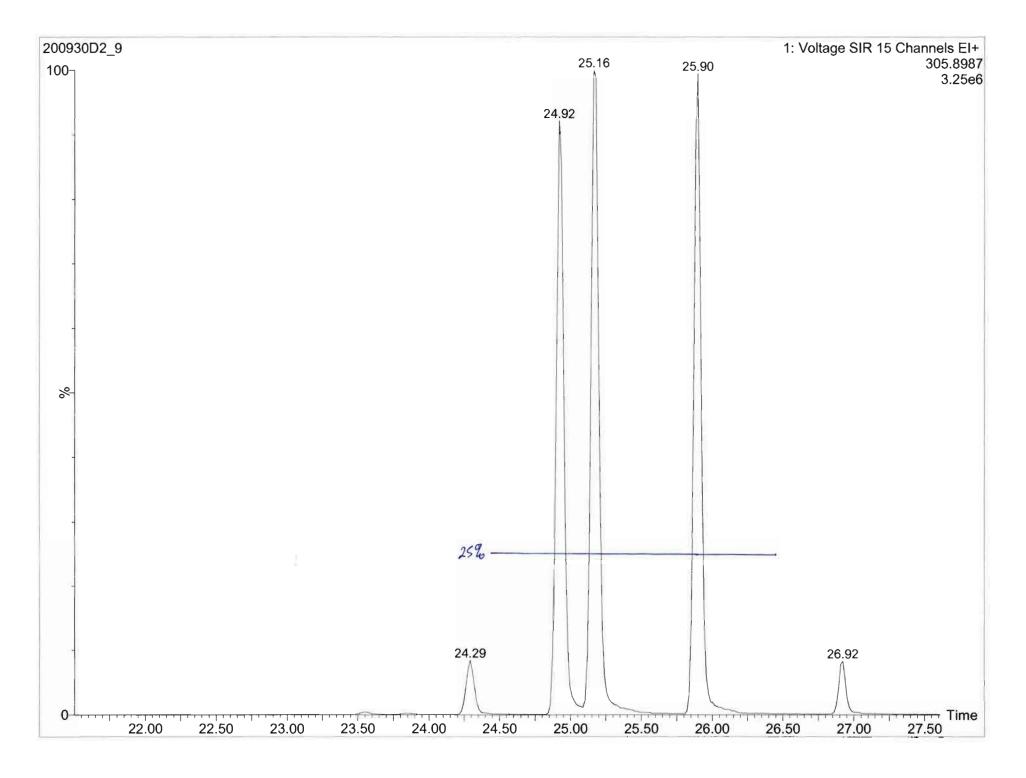
Printed:

Wednesday, September 30, 2020 12:04:30 Pacific Daylight Time



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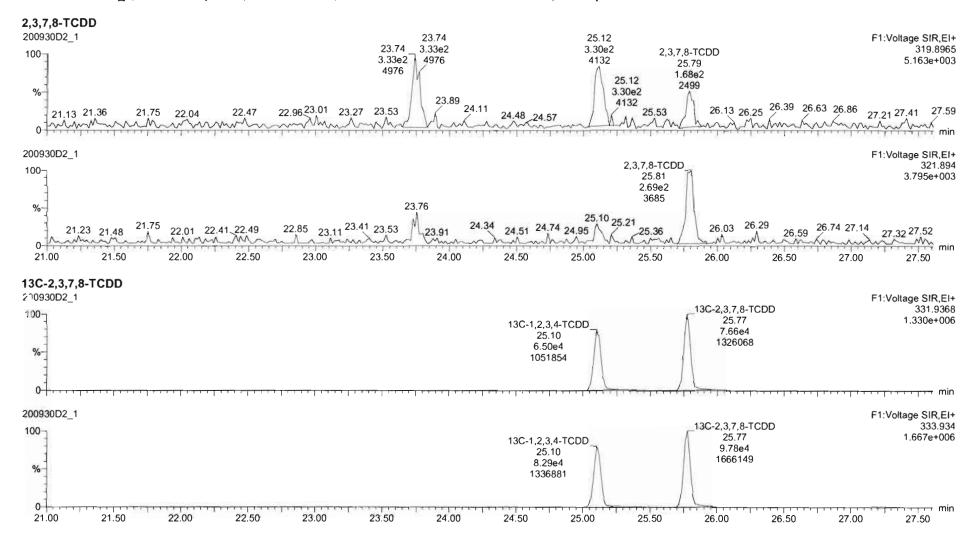
Work Order 2002050 Page 160 of 269

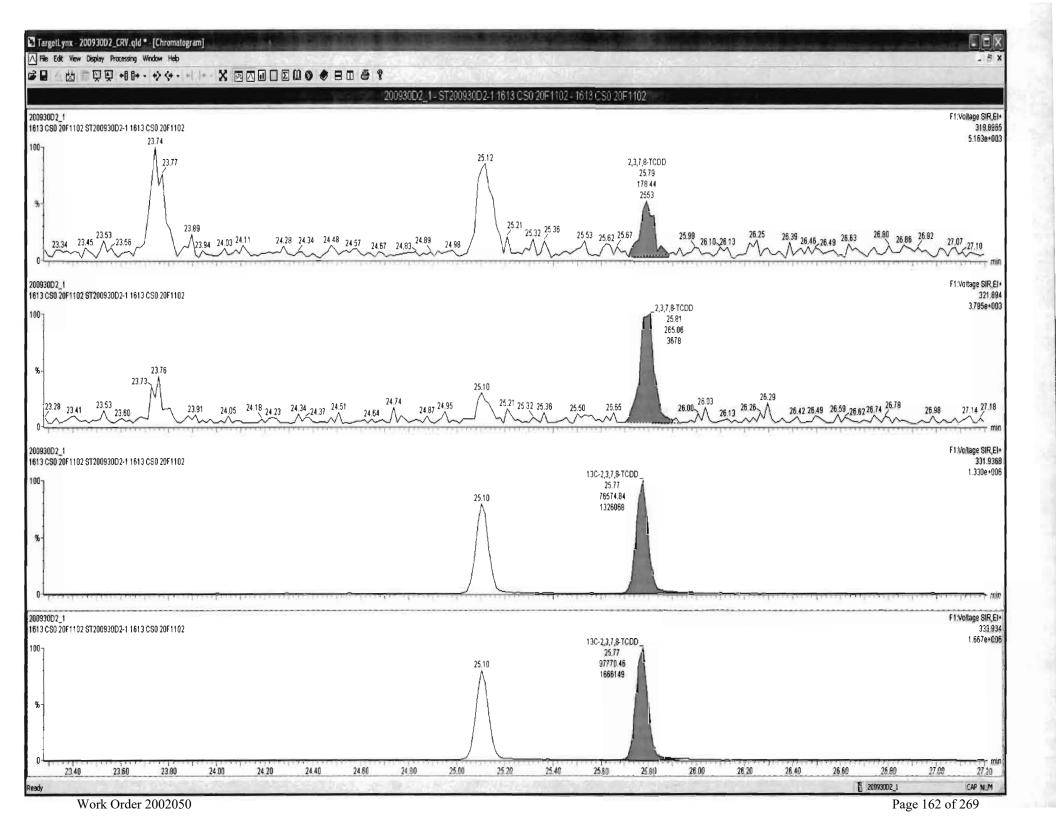
U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

Last Altered: Printed: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

Method: C:\MassLynx\Default.PRO\MethDB\1613\_rrt.mdb 11 Sep 2020 15:14:27

Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-8-20-20.cdb 21 Aug 2020 10:10:46

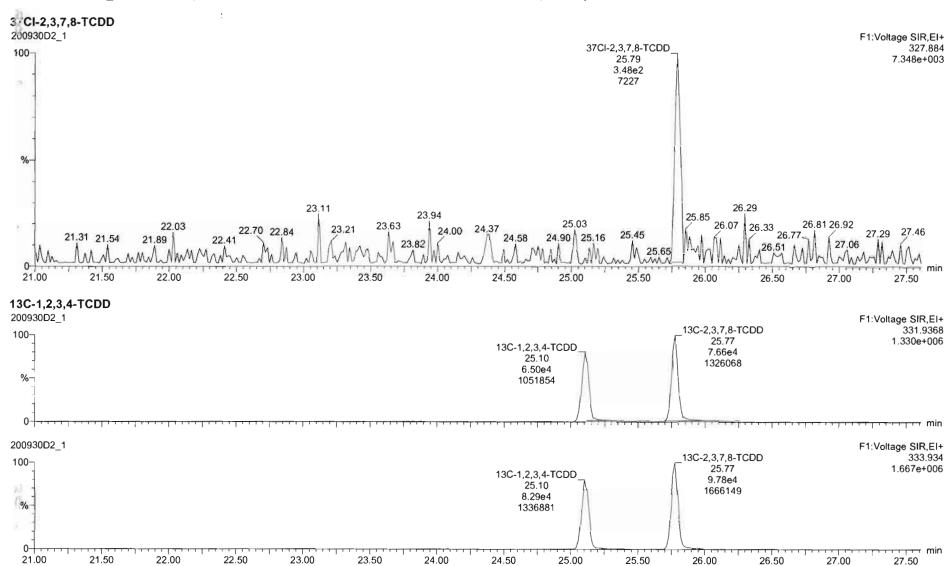




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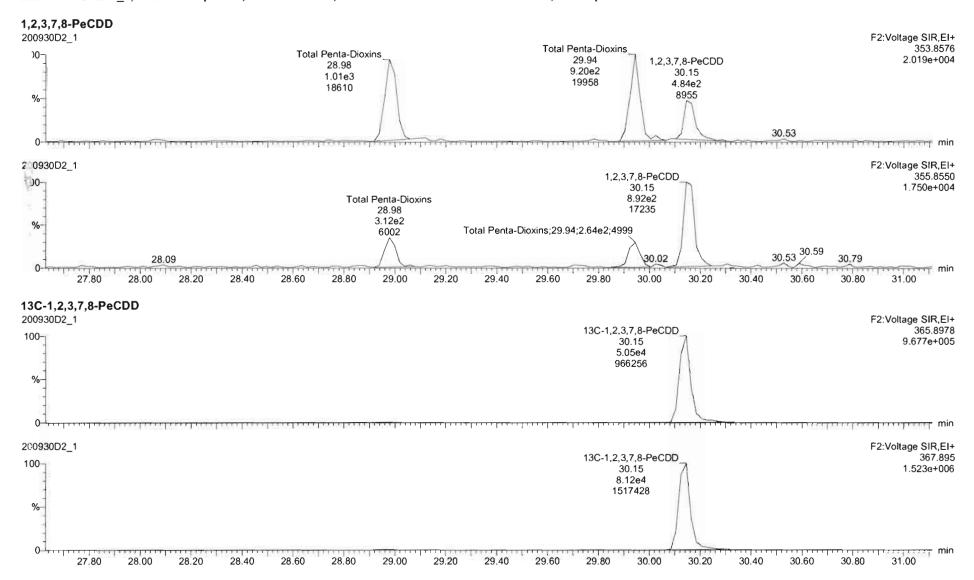
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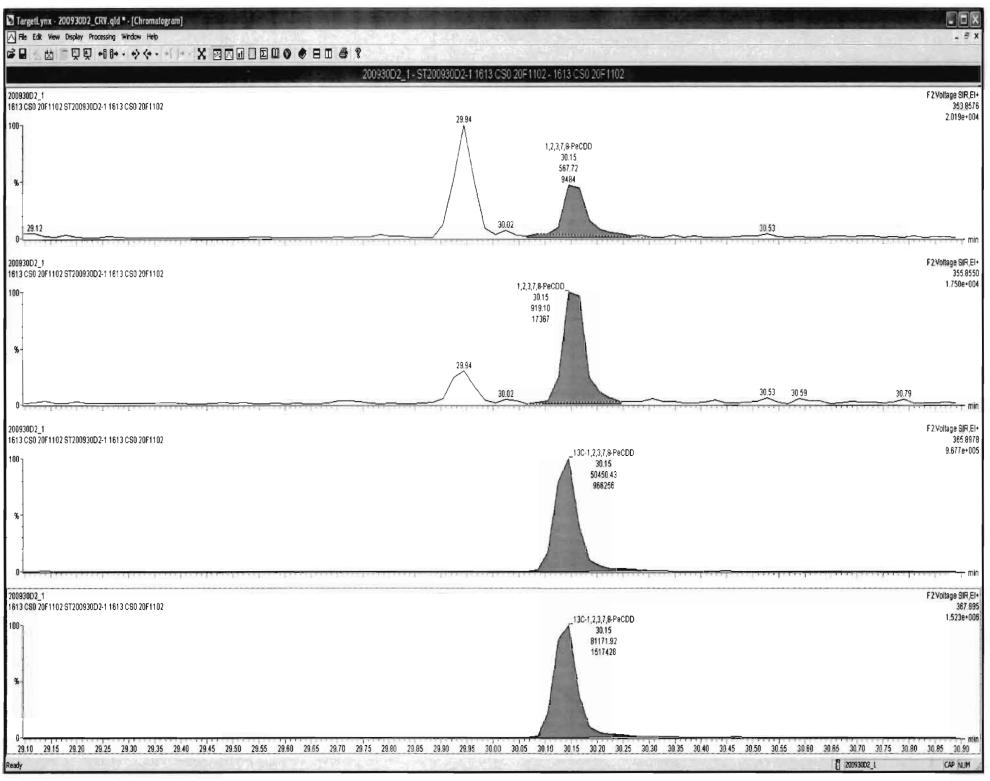
Last Altered: Printed: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time



U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

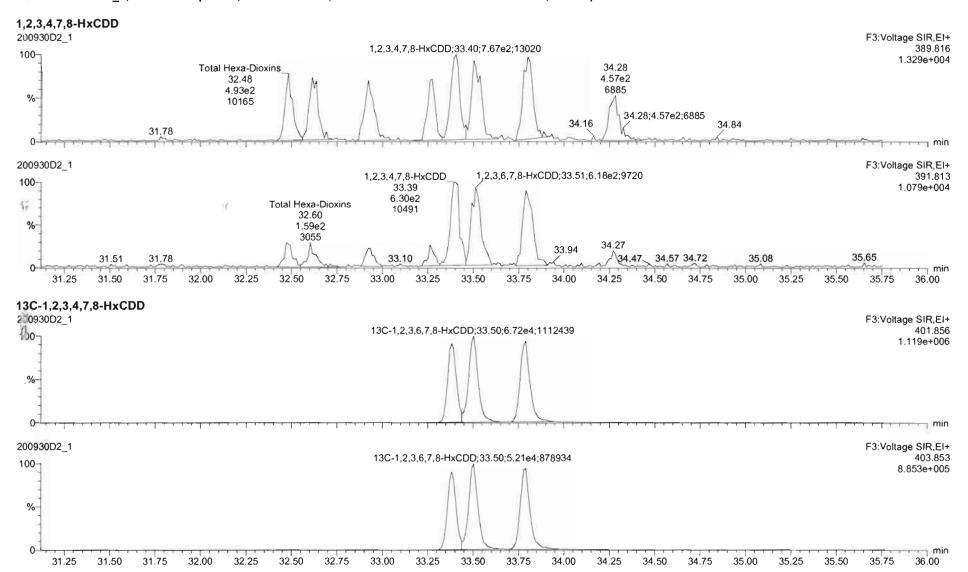
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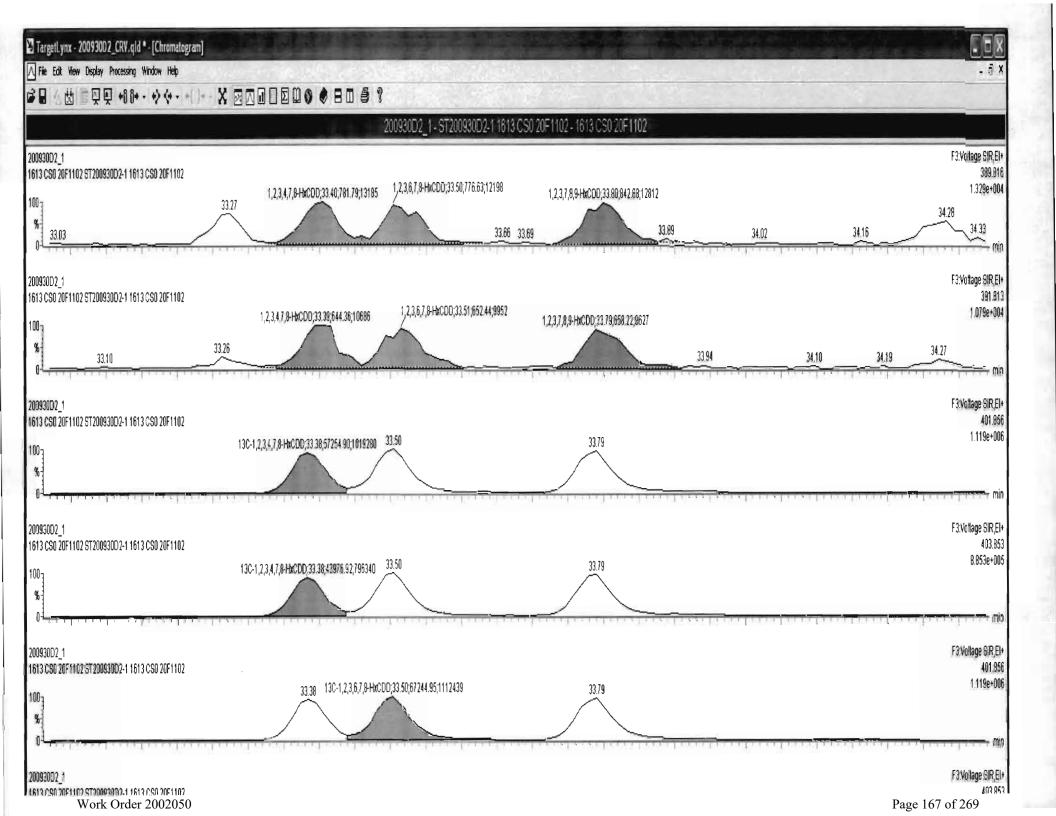




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Last Altered: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time





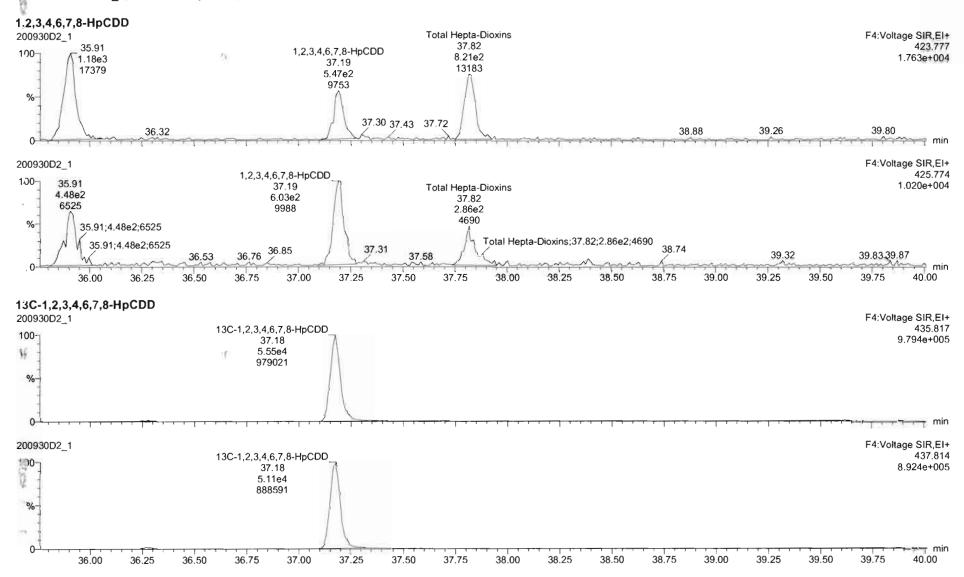
Page 5 of 78

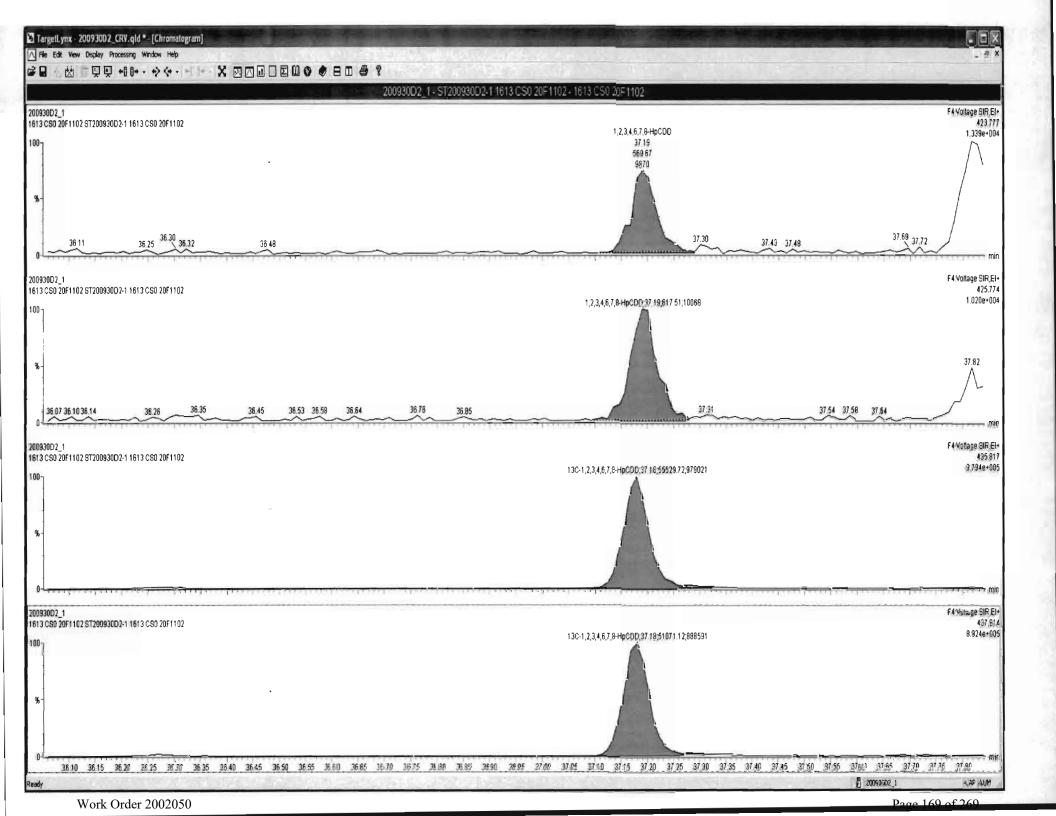
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U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

Last Altered: Printed:

Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

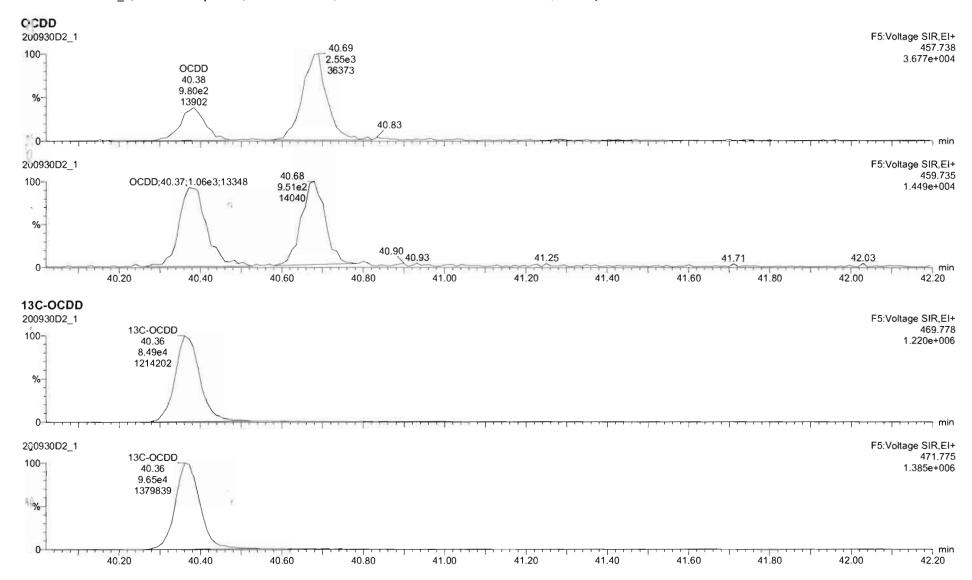




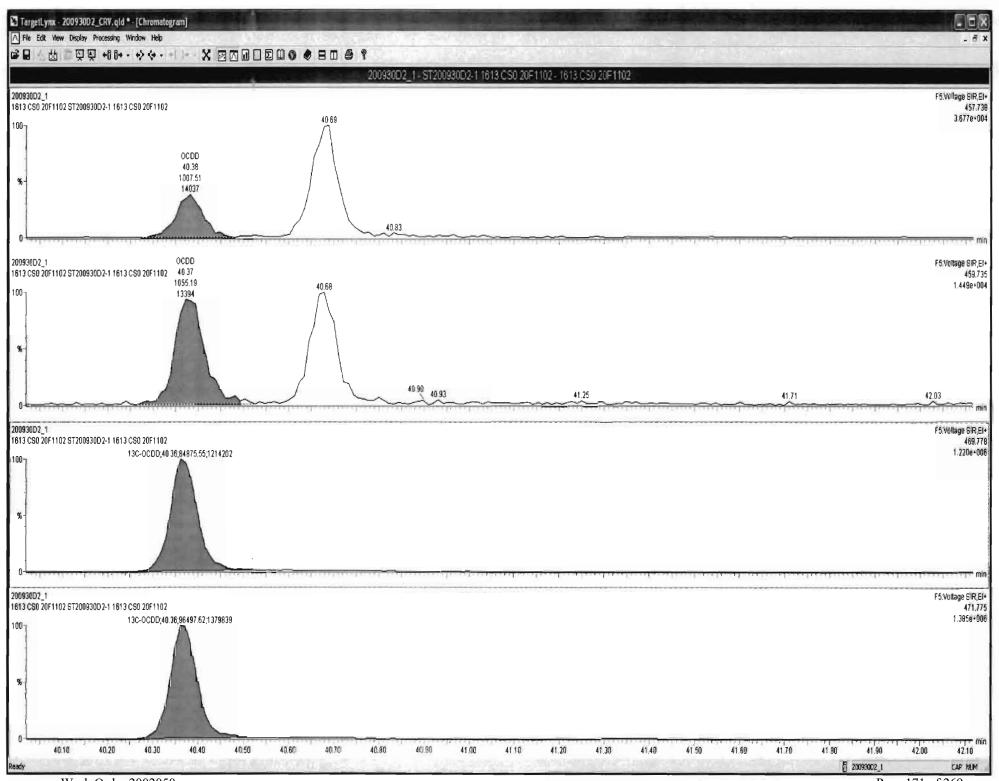
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Name: 200930D2 1, Date: 30-Sep-2020, Time: 12:06:04, ID: ST200930D2-1 1613 CS0 20F1102, Description: 1613 CS0 20F1102

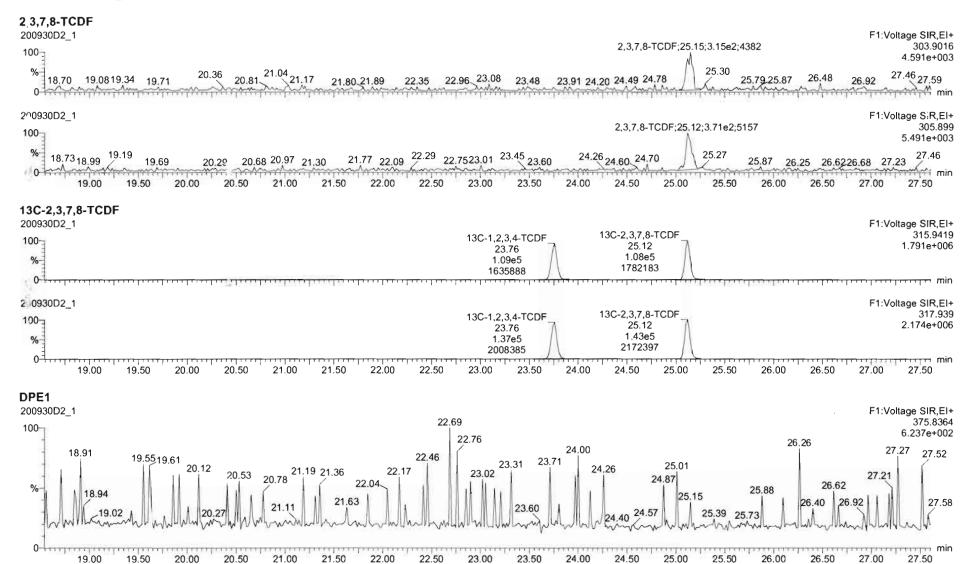


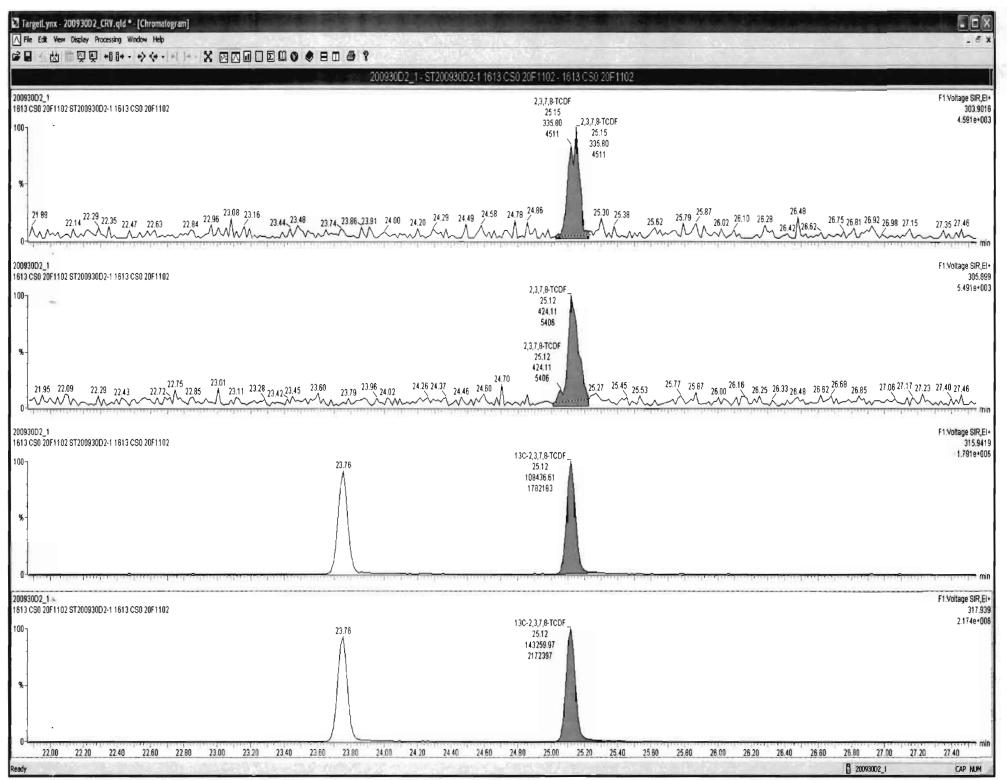
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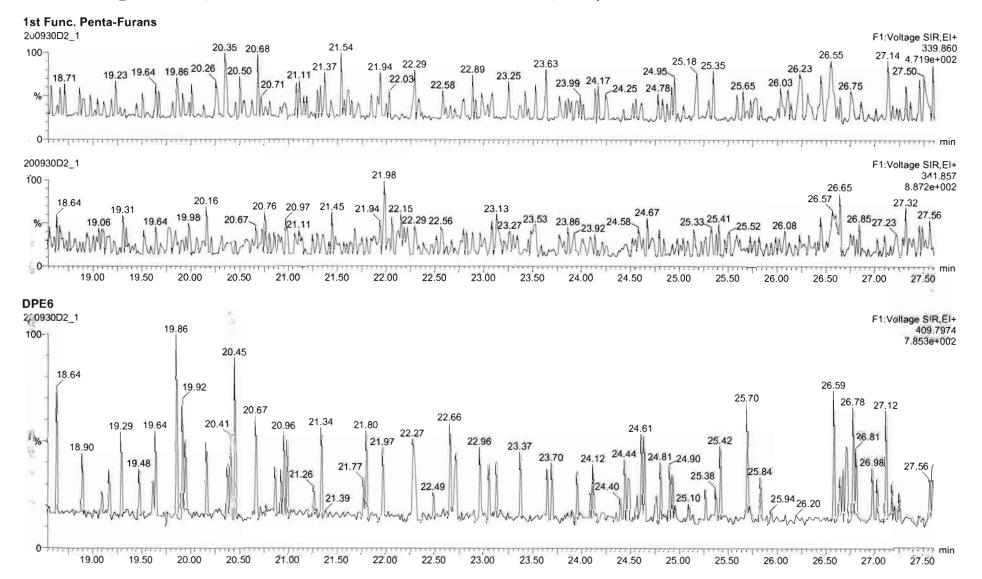
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U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

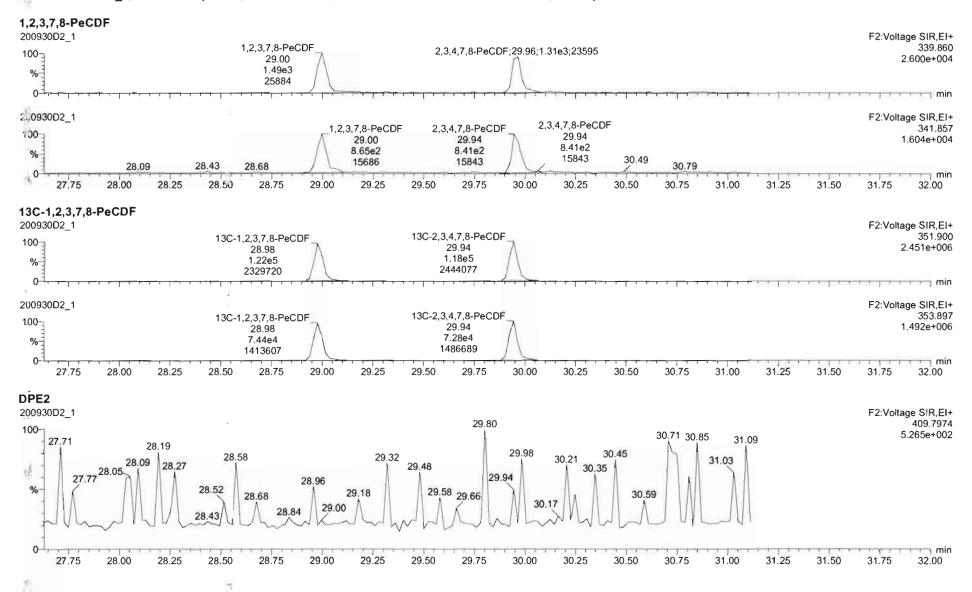
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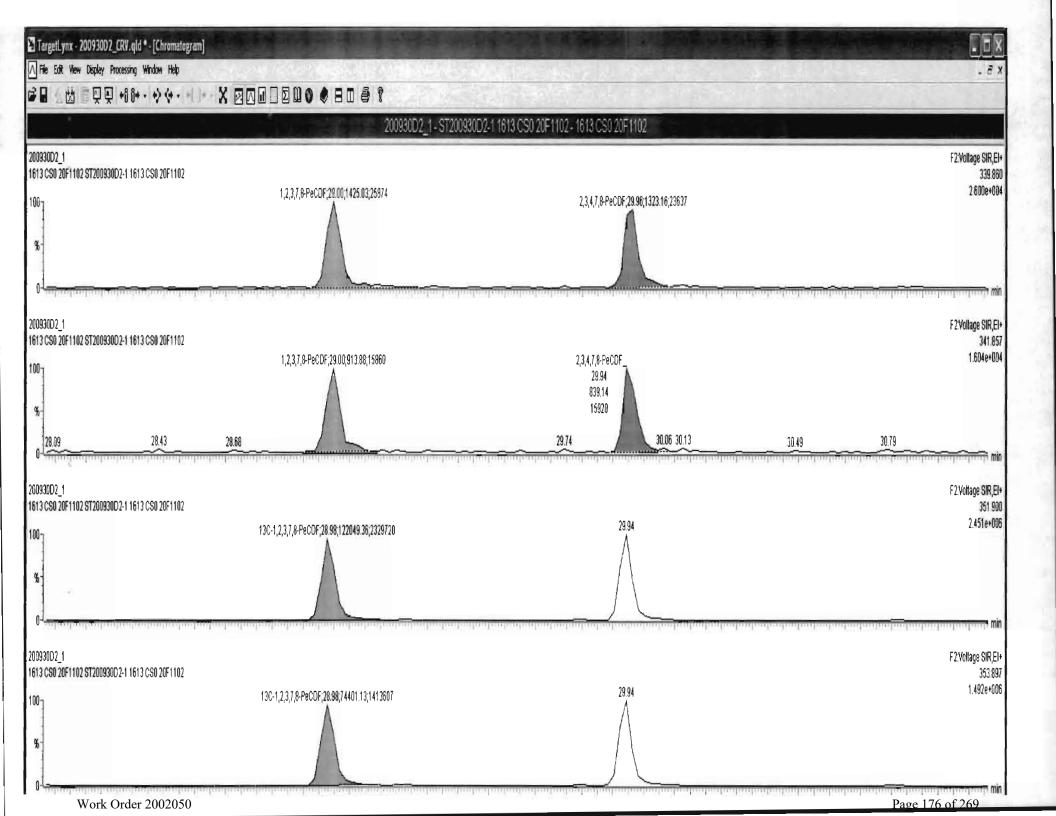


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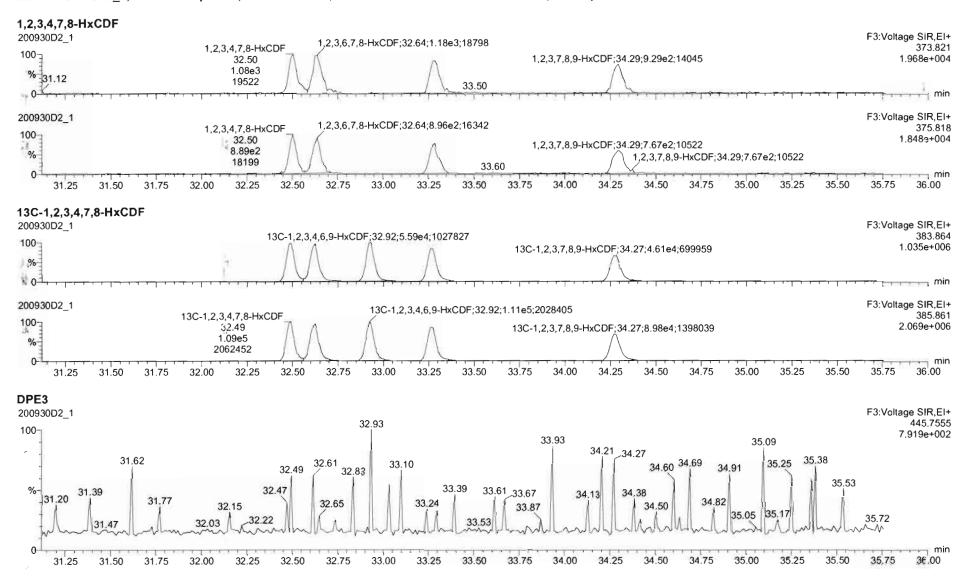


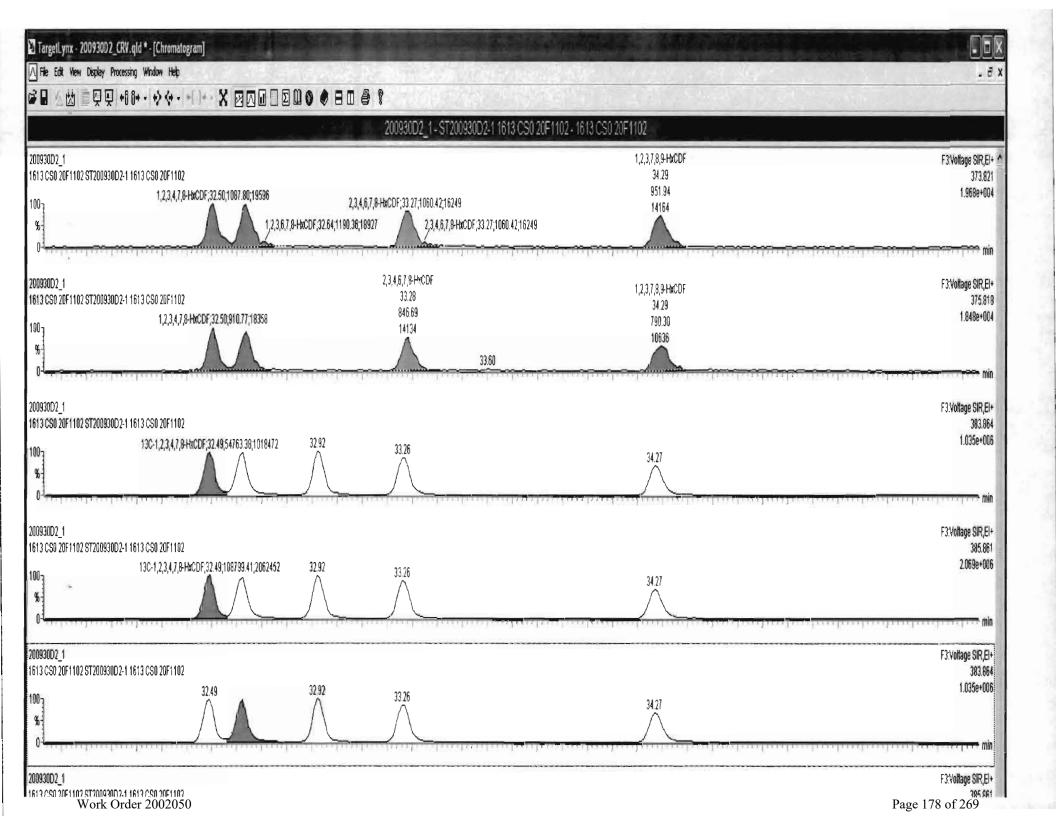


Dataset: U

U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

Last Altered: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Printed: Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

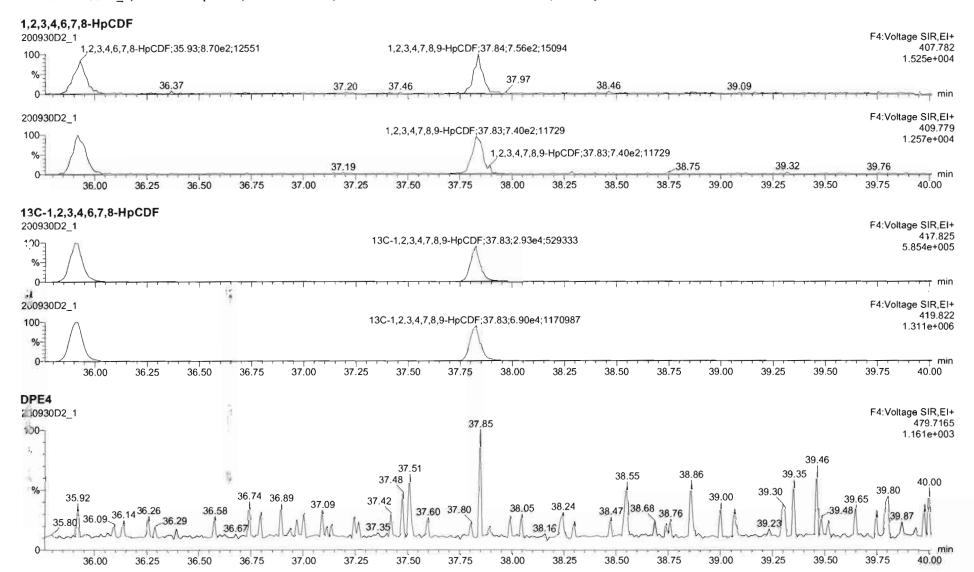


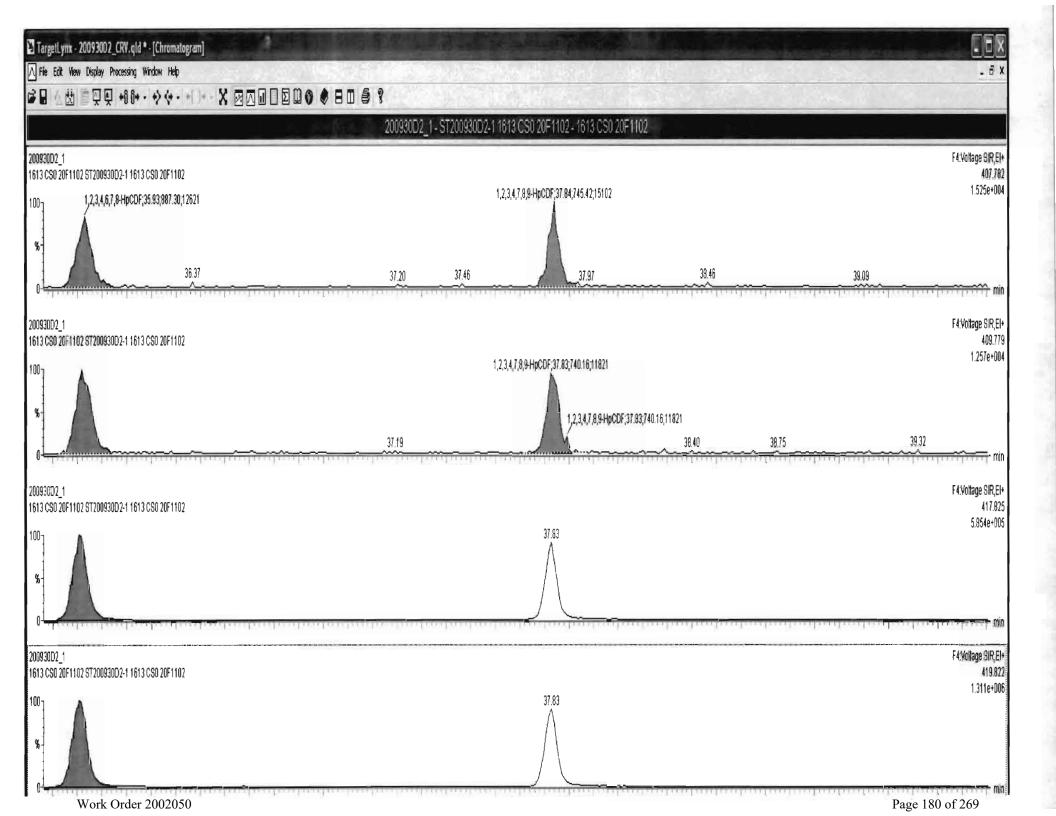


U:\VG7.PRO\Results\200930D2\200930D2 CRV.qld

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Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time





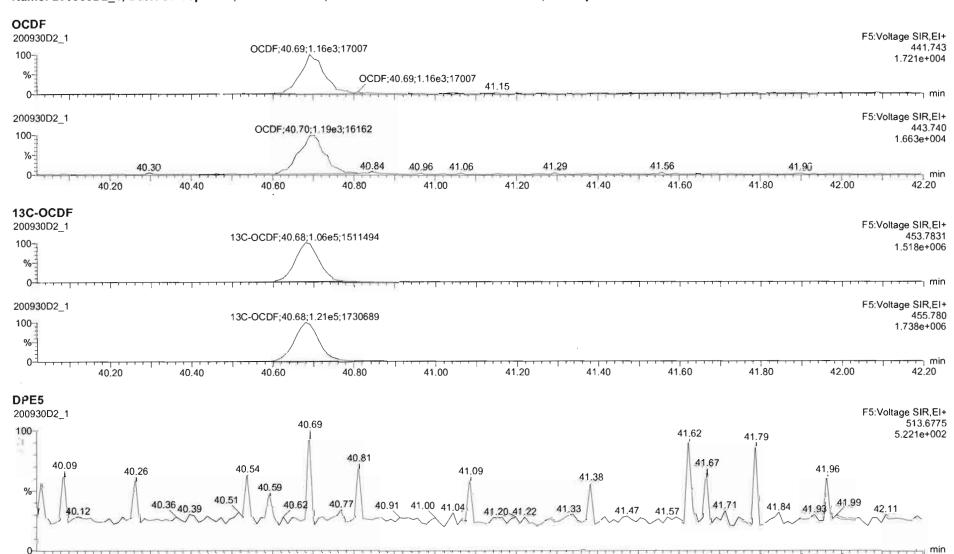
U:\VG7.PRO\Results\200930D2\200930D2 CRV.qld

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Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

Name: 200930D2 1, Date: 30-Sep-2020, Time: 12:06:04, ID: ST200930D2-1 1613 CS0 20F1102, Description: 1613 CS0 20F1102



41.00

40.80

41.20

41.60

41.40

41.80

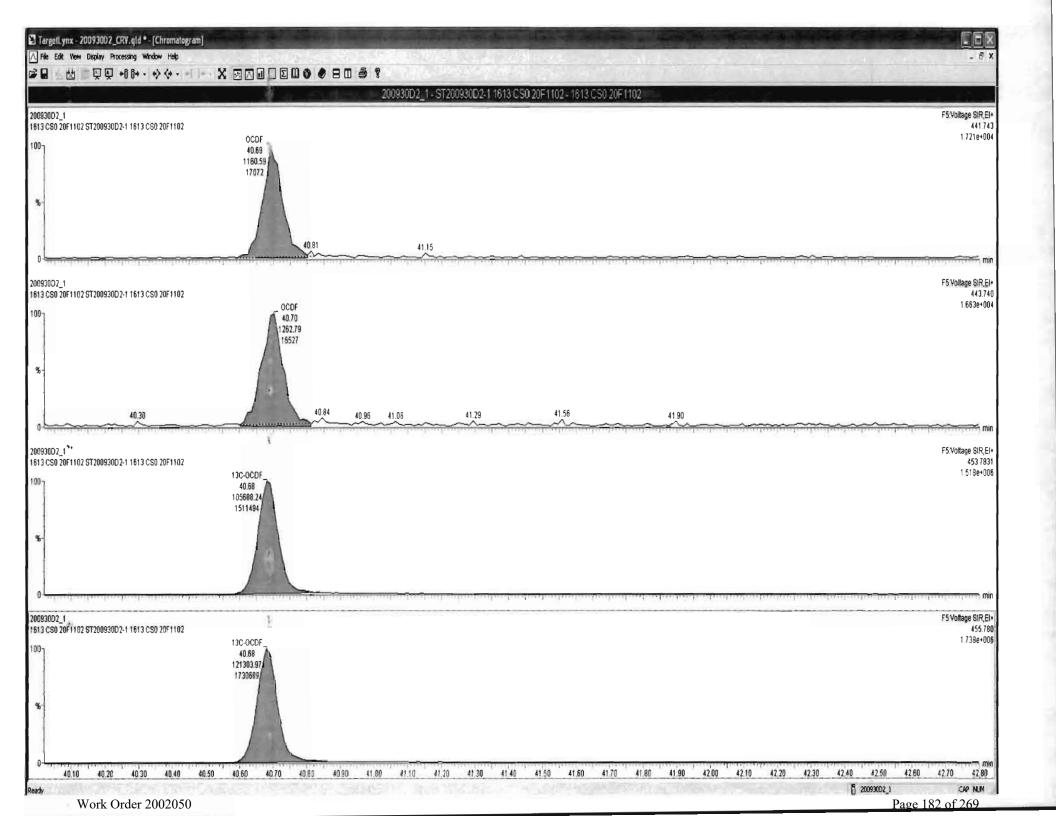
40.20

40.40

40.60

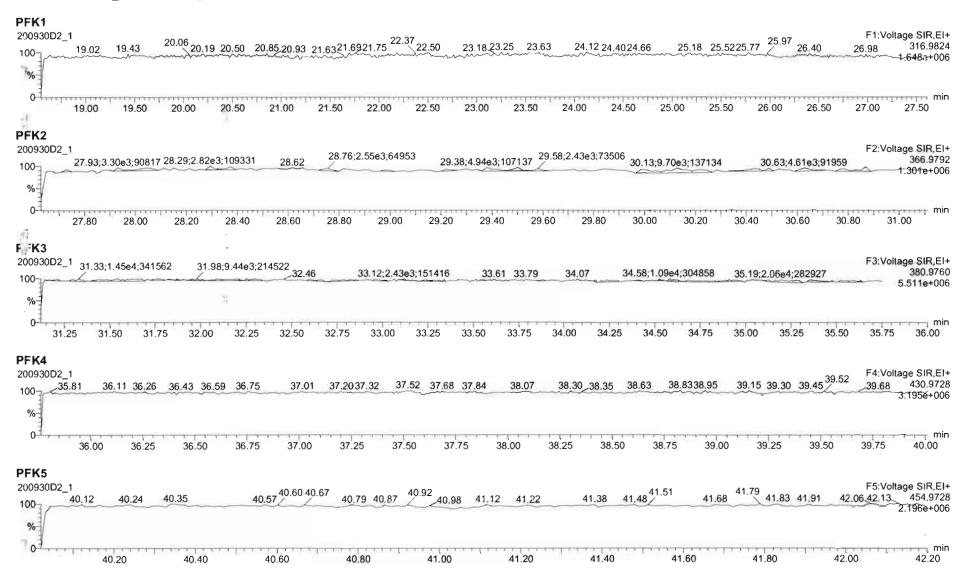
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42.00



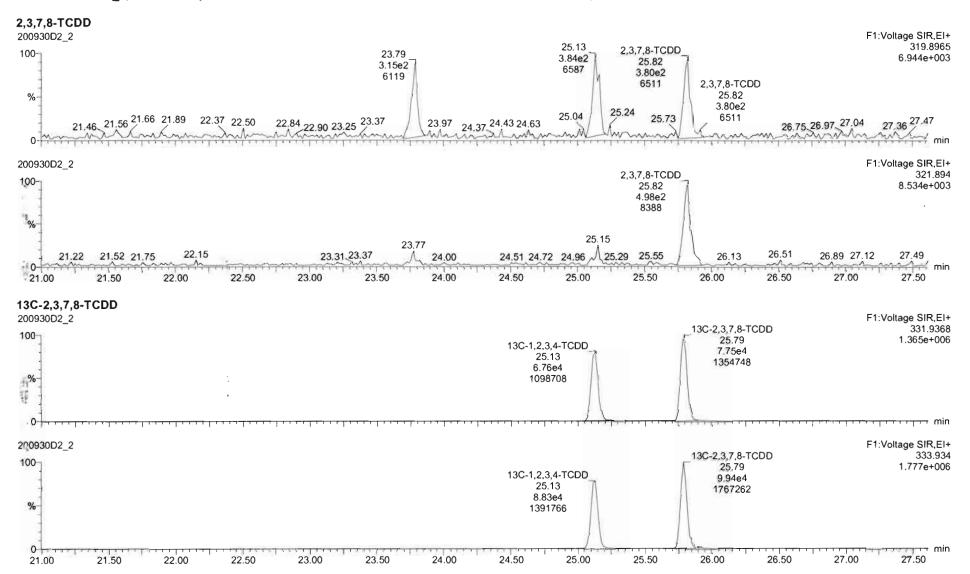
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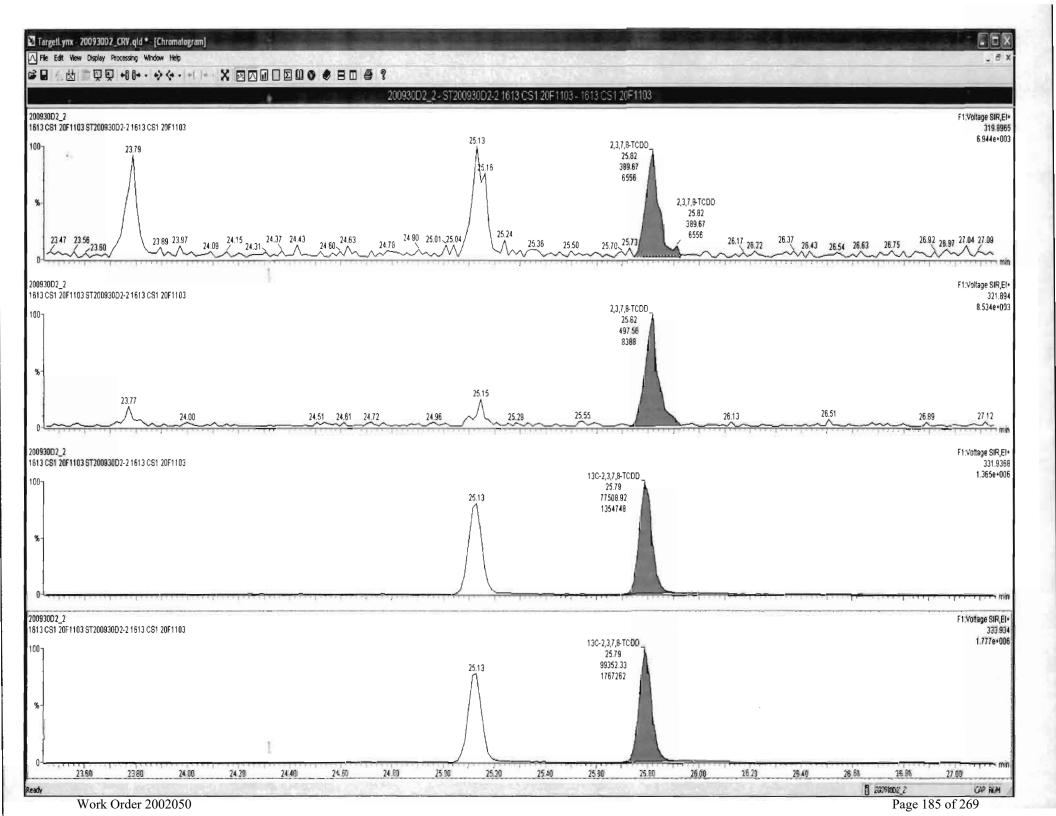
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U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

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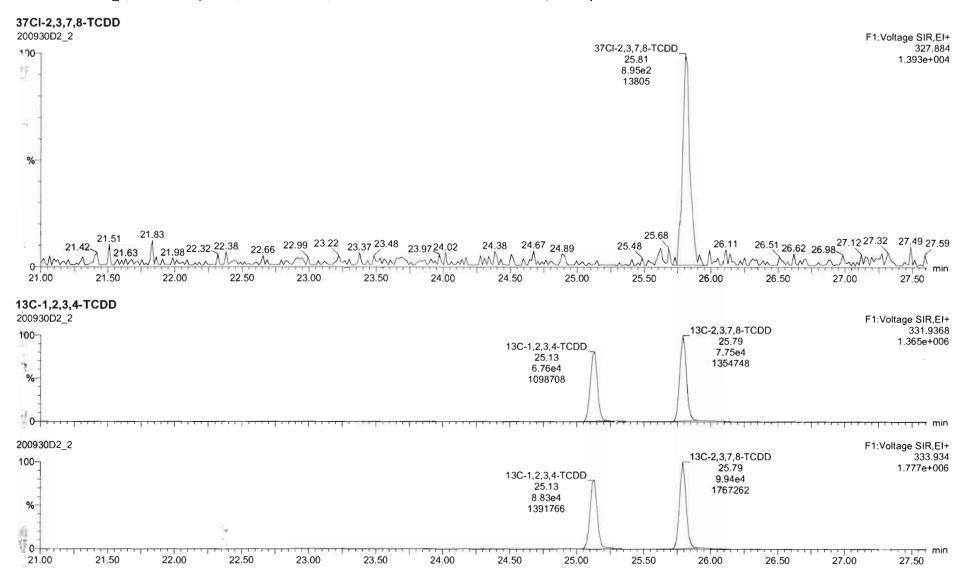




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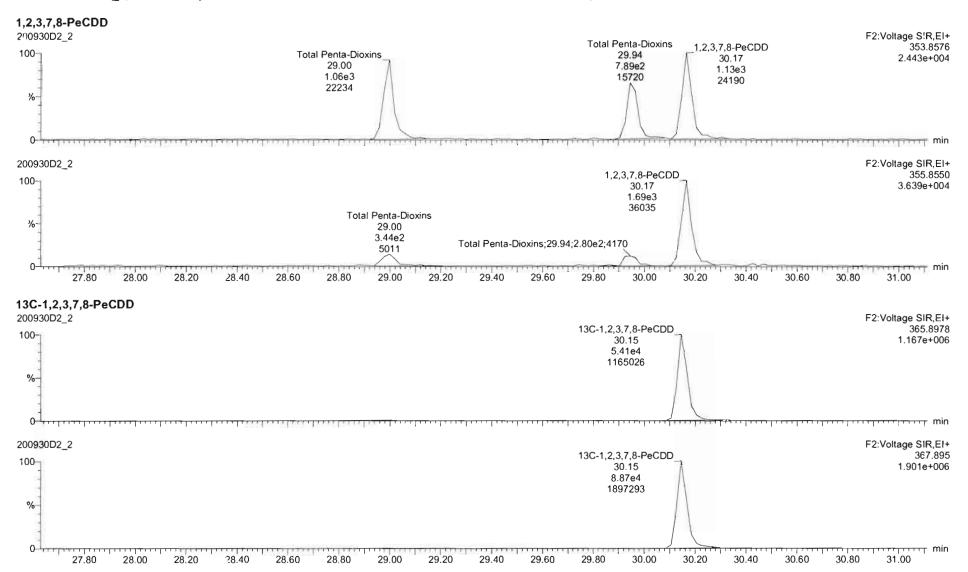
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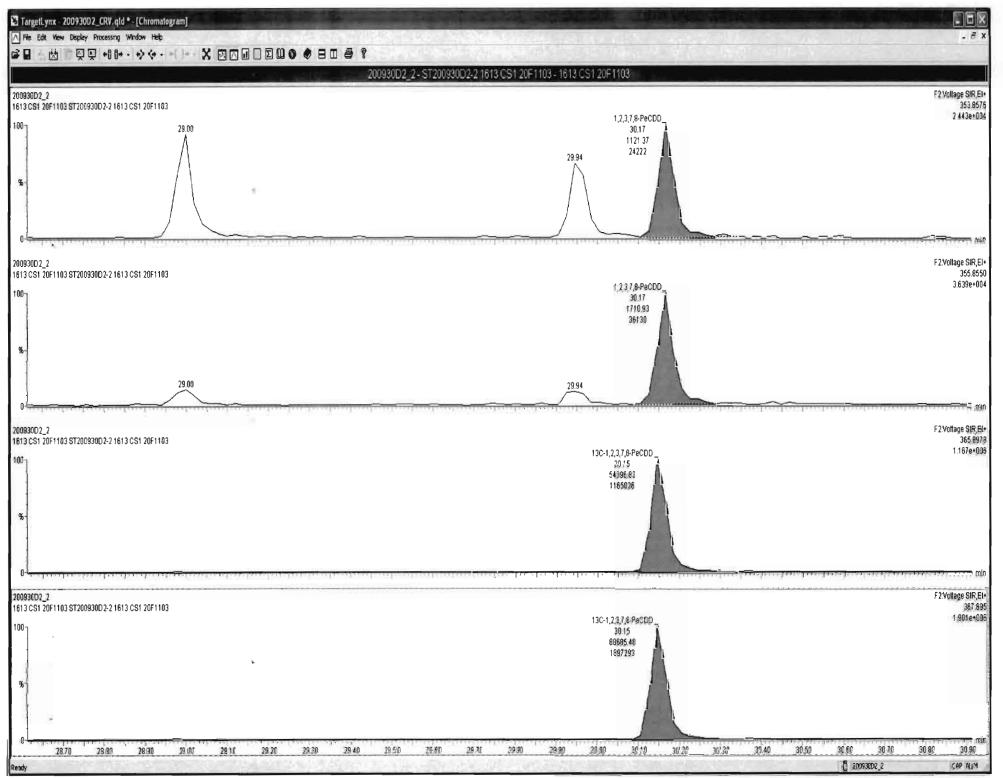
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U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

Last Altered: Printed: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

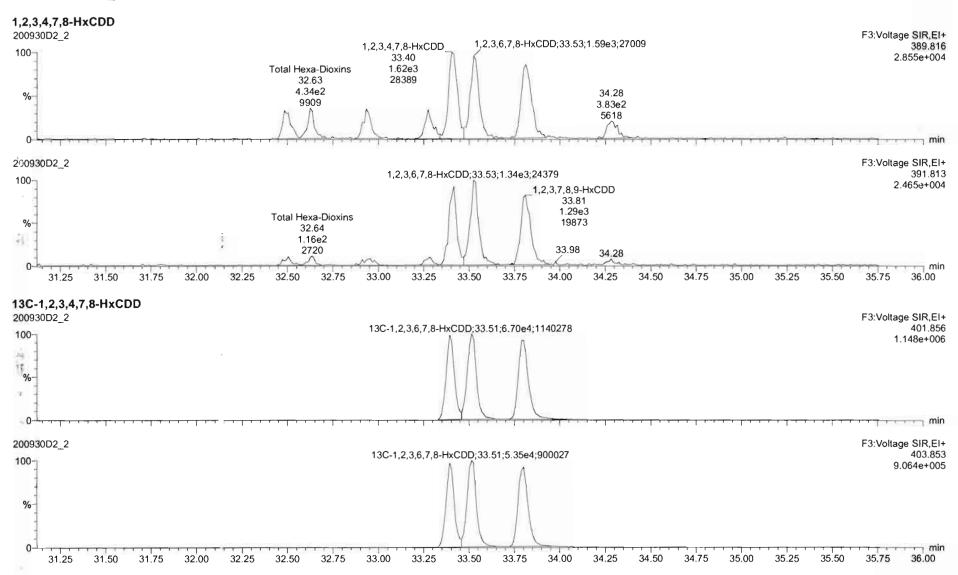




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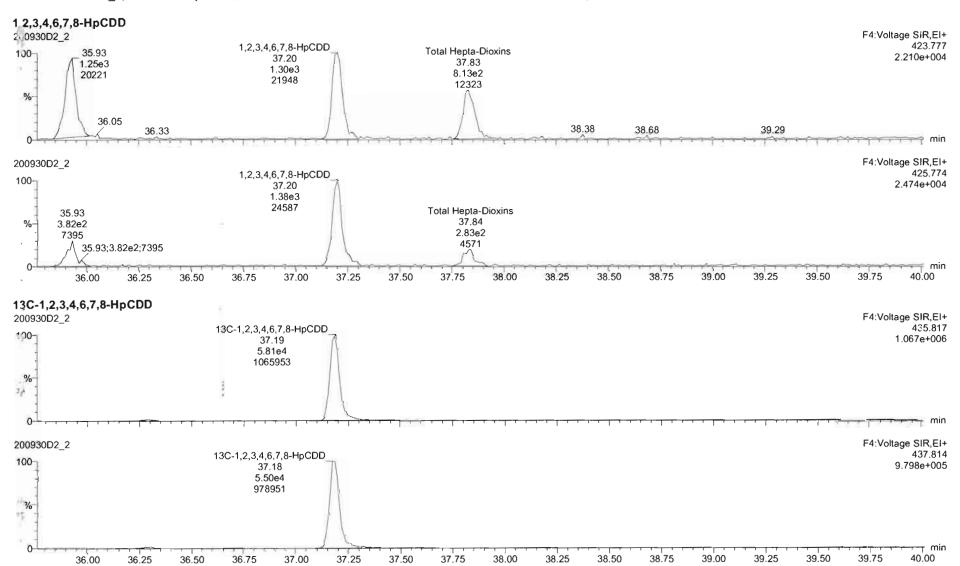
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Last Altered: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Printed: Thursday, October 01, 2020 09:58:35 Pacific Daylight Time



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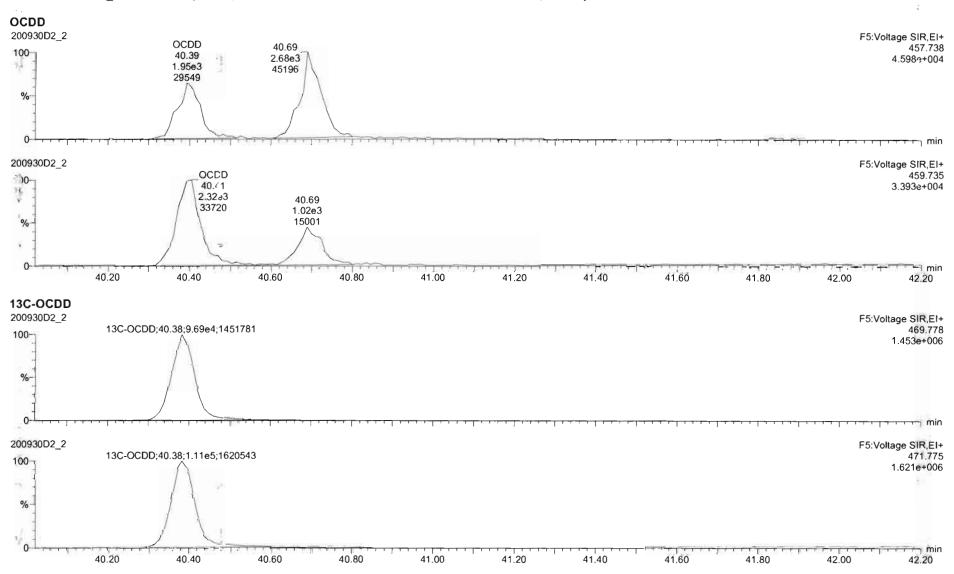


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Printed:

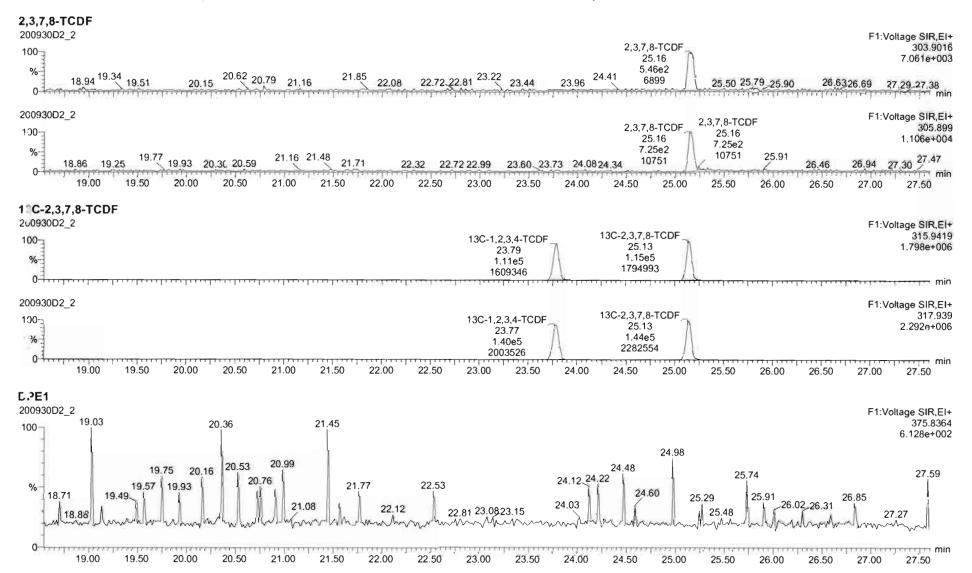
Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

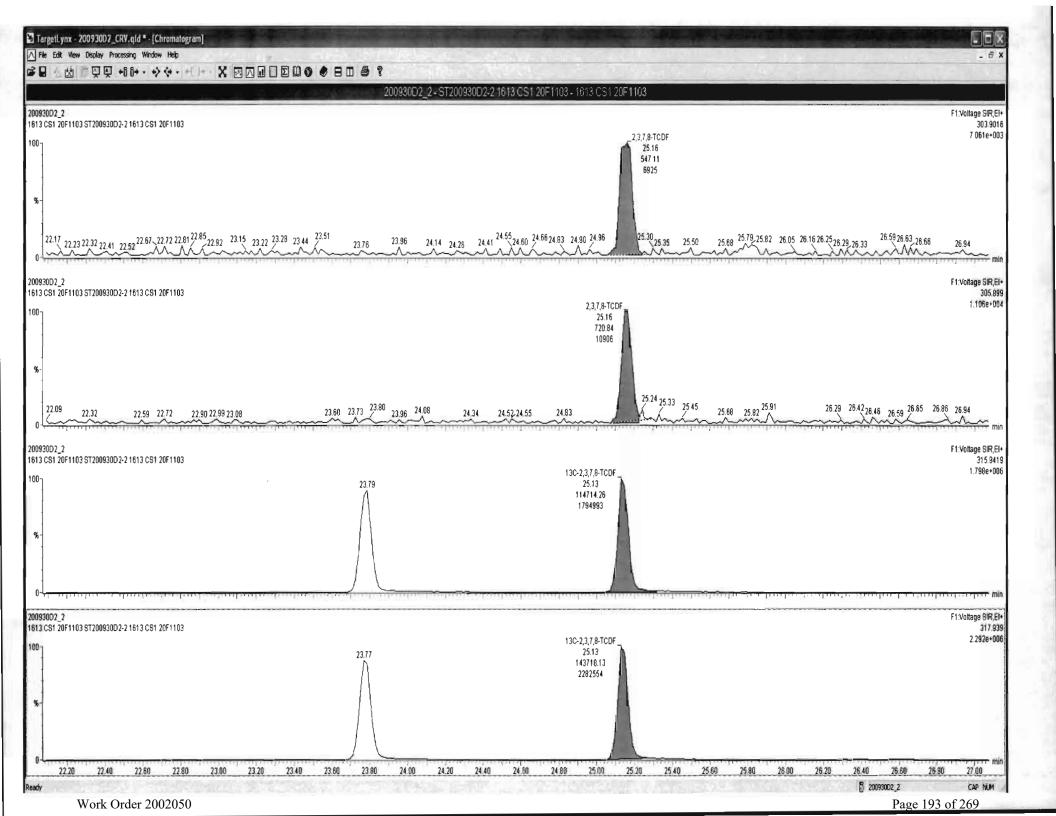


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Last Altered: Printed:

Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

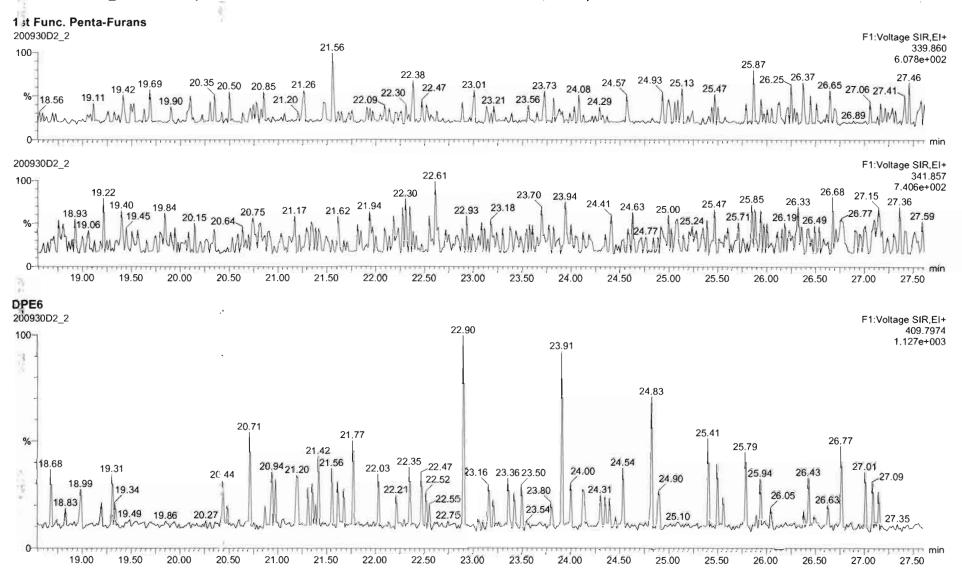




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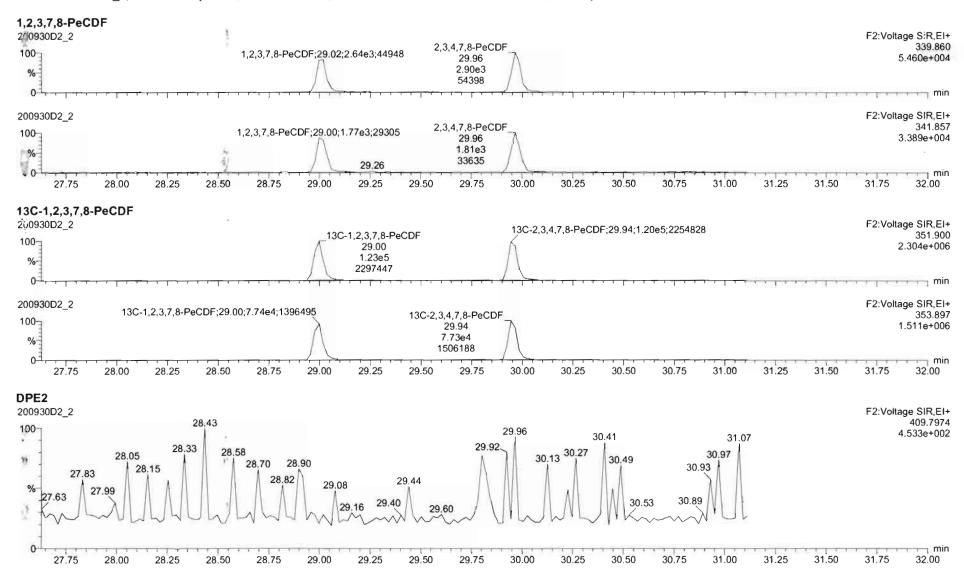
U:\VG7.PRO\Results\200930D2\200930D2 CRV.qld

Last Altered: Printed: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time



U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

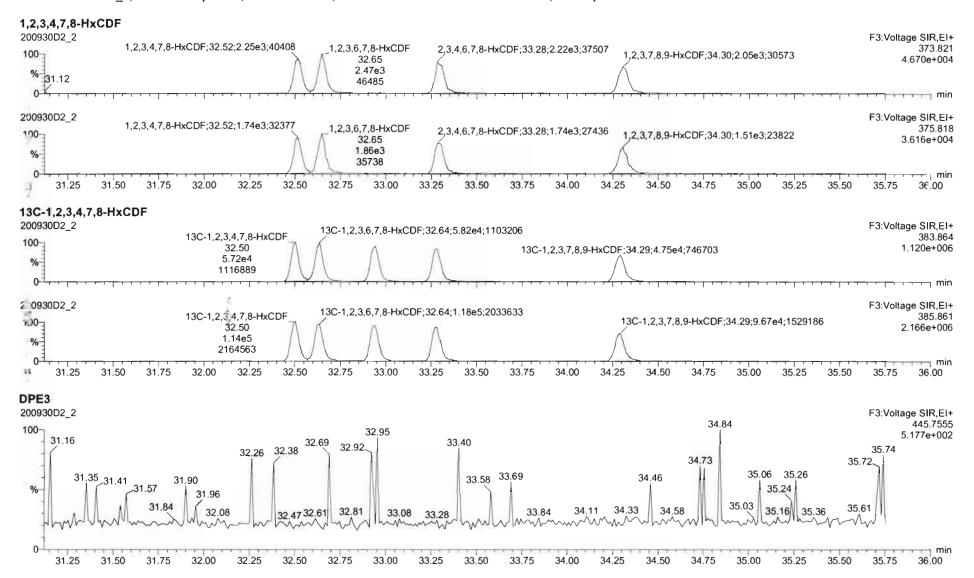
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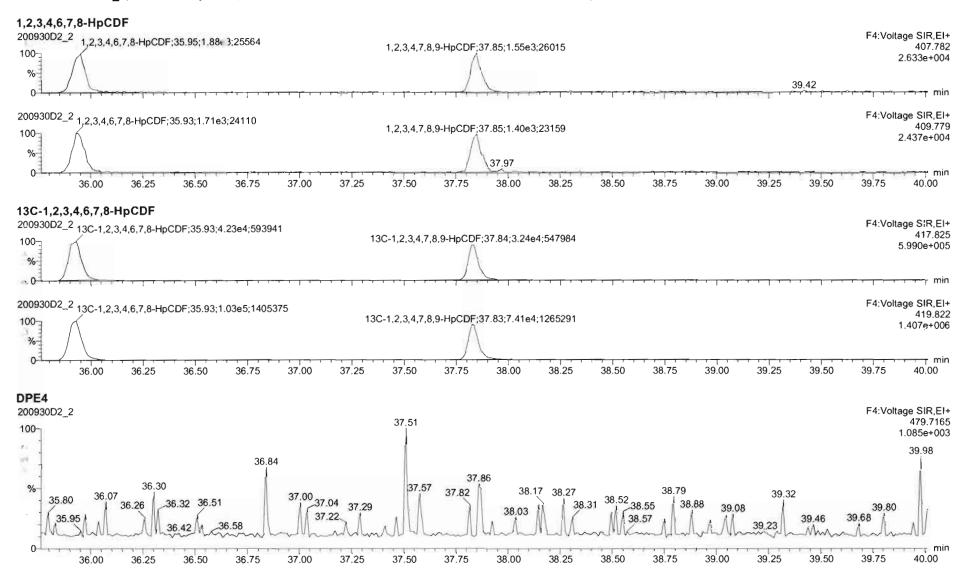
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Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time



U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

Last Altered: Printed: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

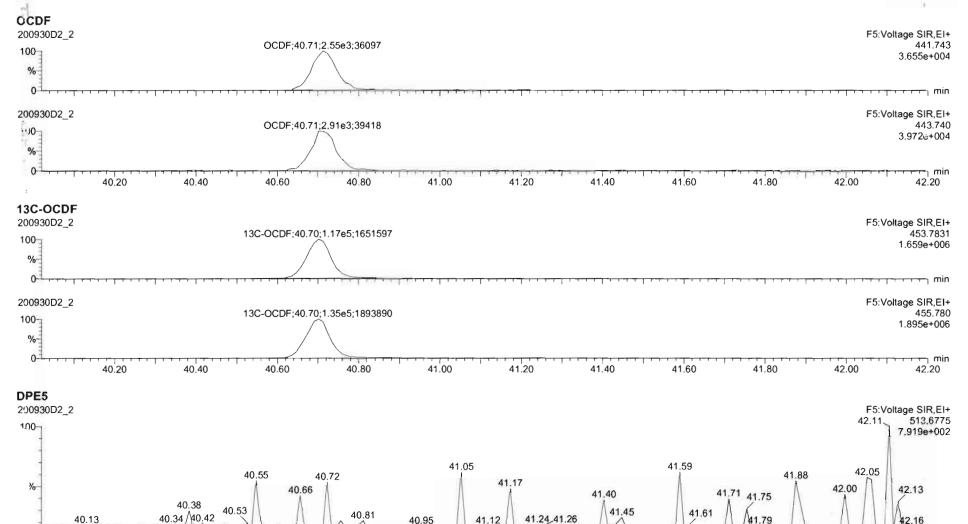


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Last Altered: Printed:

Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

Name: 200930D2\_2, Date: 30-Sep-2020, Time: 12:51:13, ID: ST200930D2-2 1613 CS1 20F1103, Description: 1613 CS1 20F1103



41.12

41.20

41.40

41.60

41.80

40.95

41.00

40.80

40.20

40.40

40.60

42.00

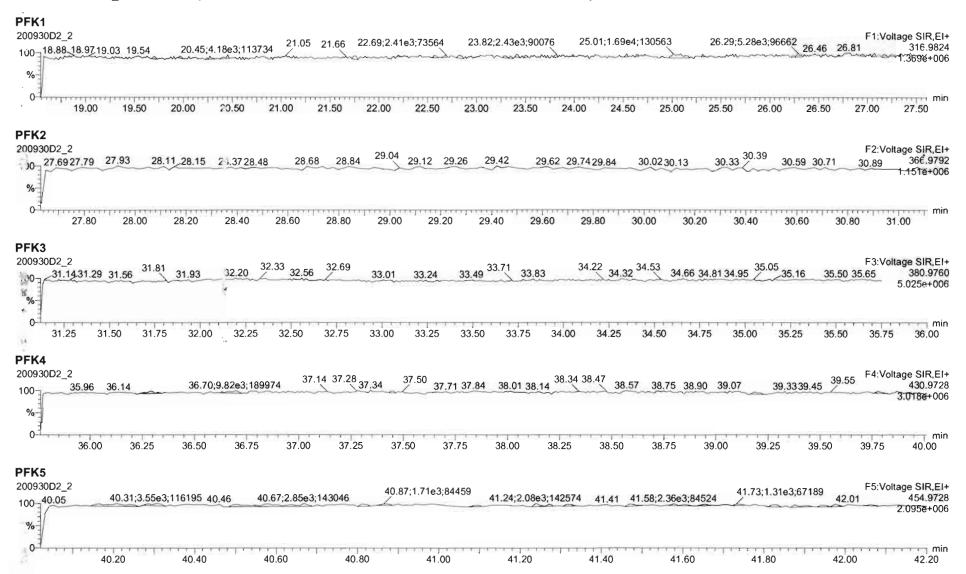
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min

42.20

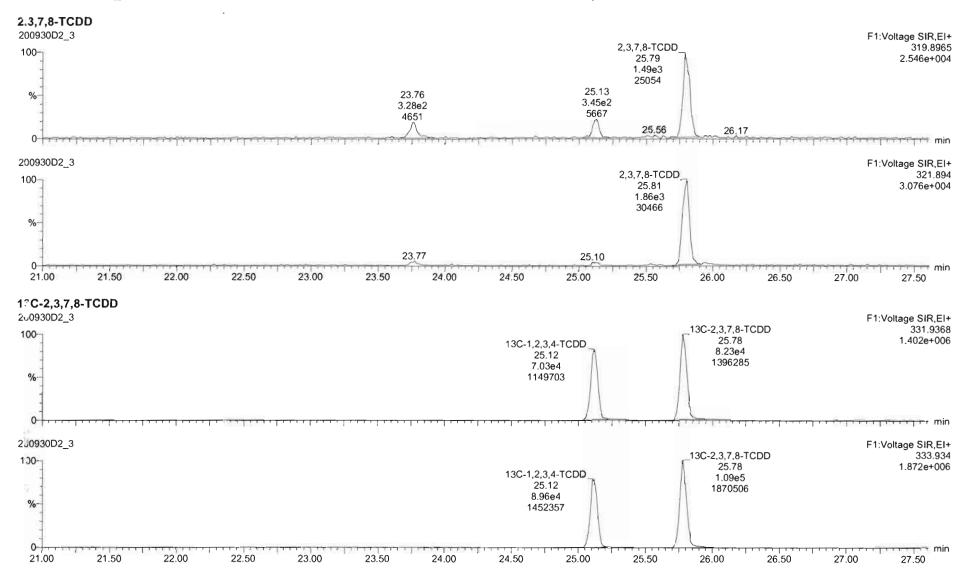
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Last Altered: Printed: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time



U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

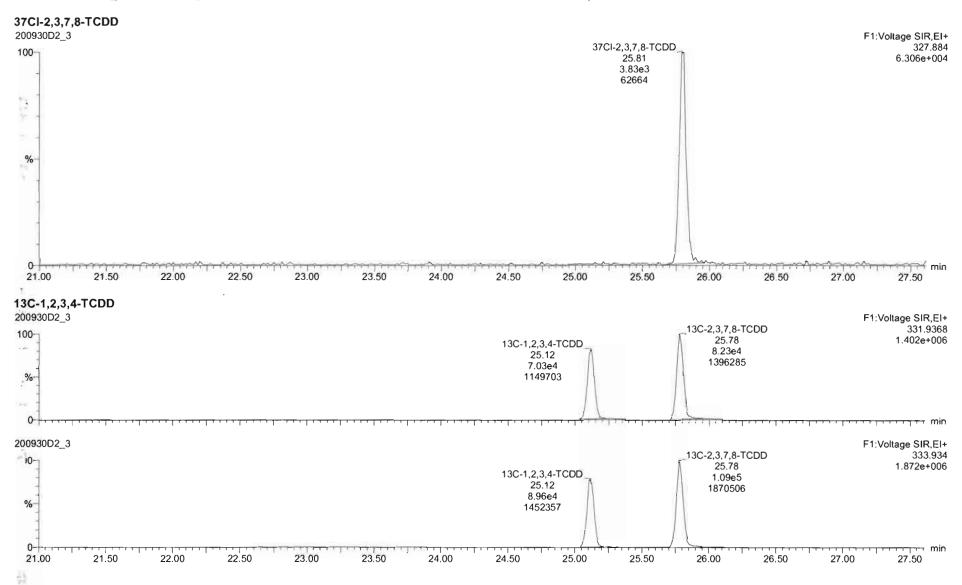
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U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

List Altered: Printed:

Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time



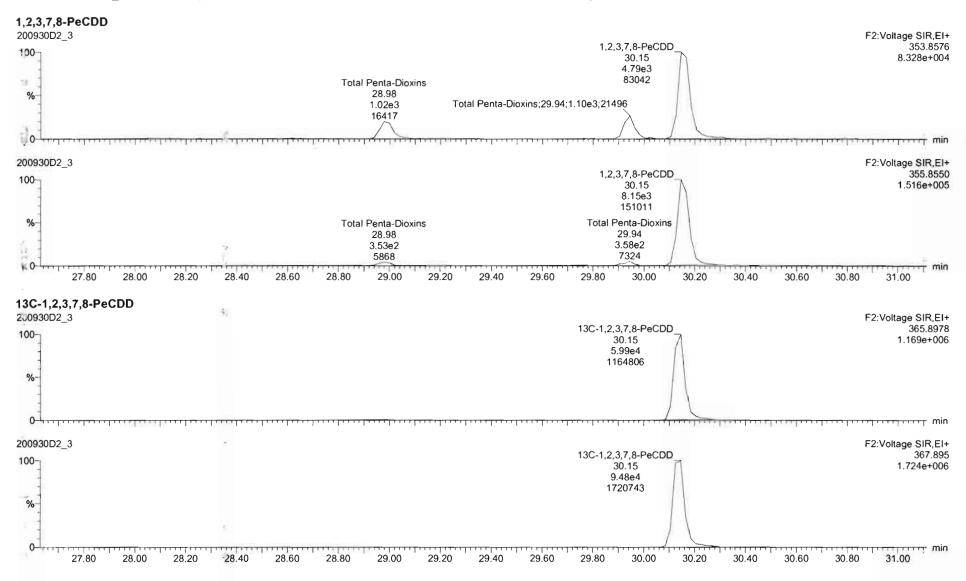
3)

Dataset:

U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

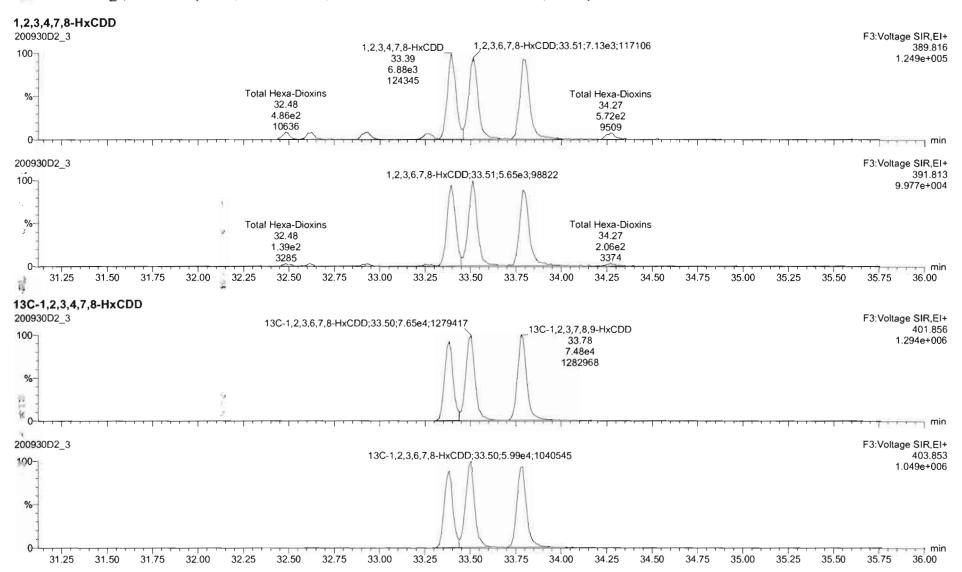
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Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time



U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

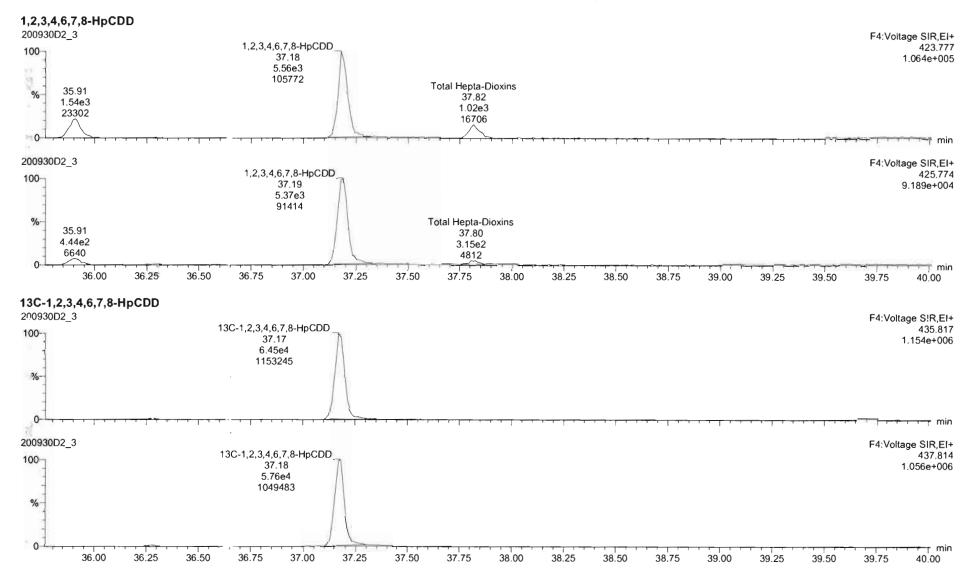
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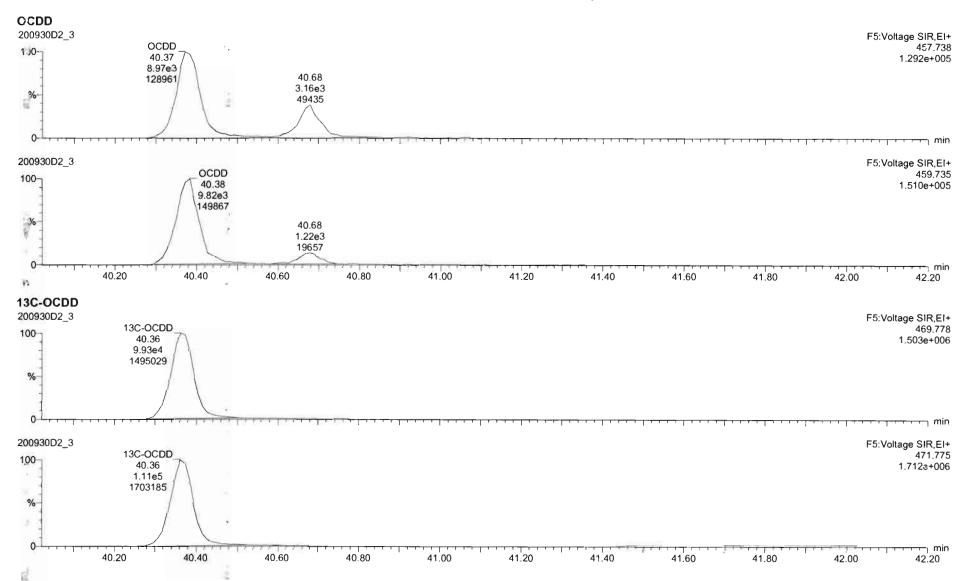
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Last Altered: Printed: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time



Dataset: U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

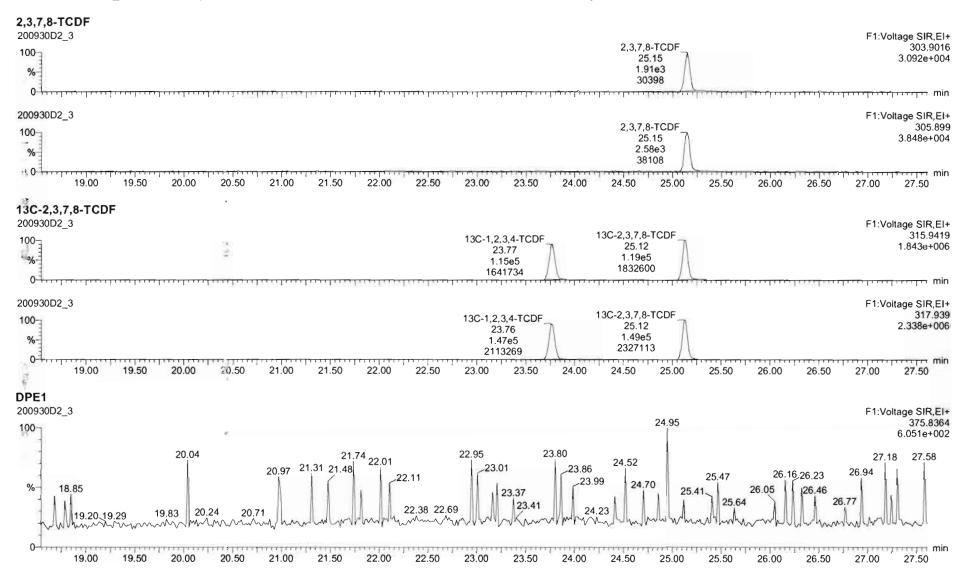
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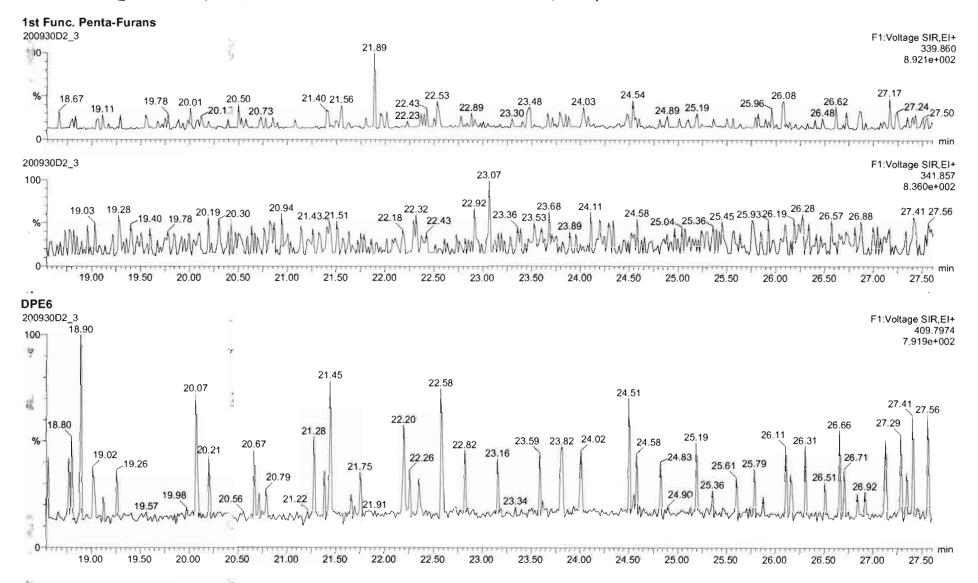
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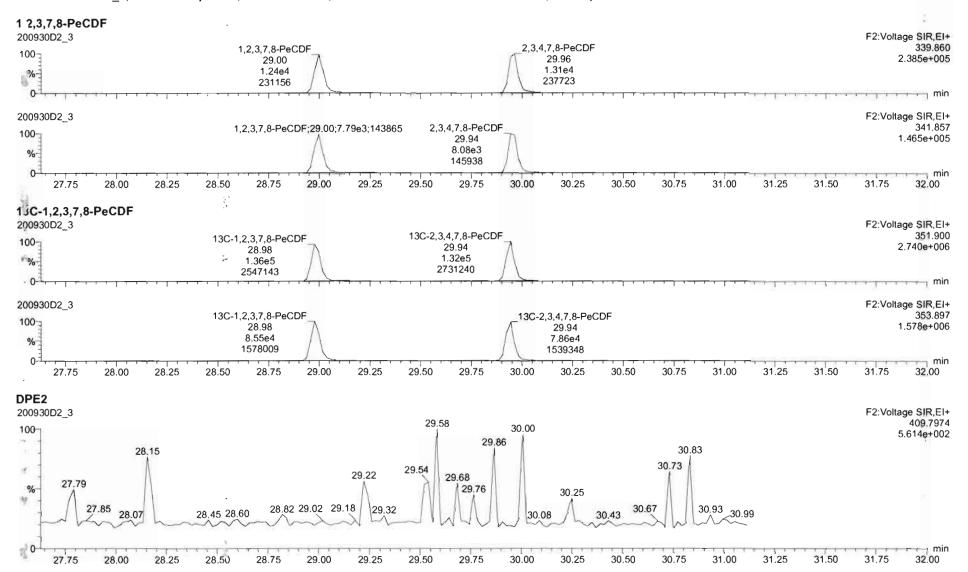
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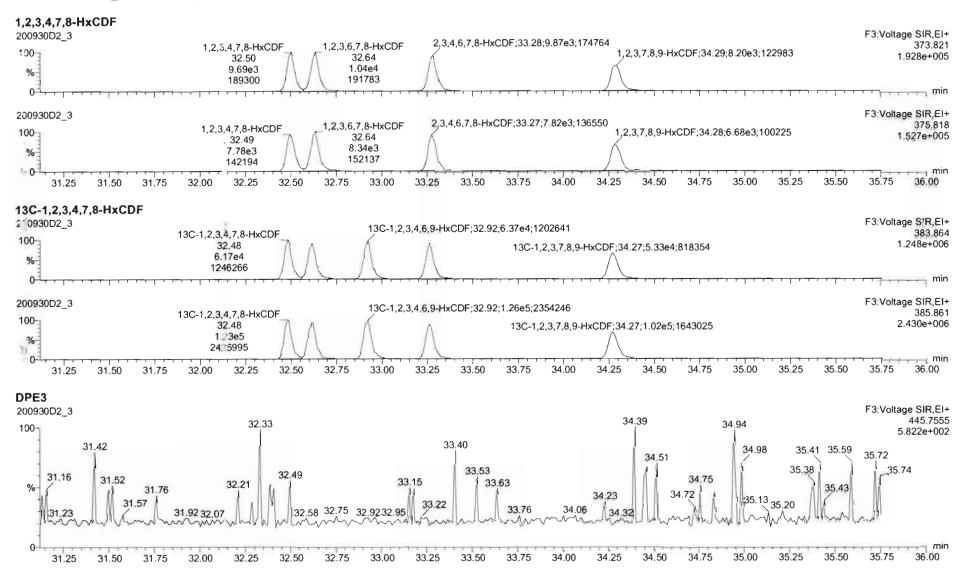
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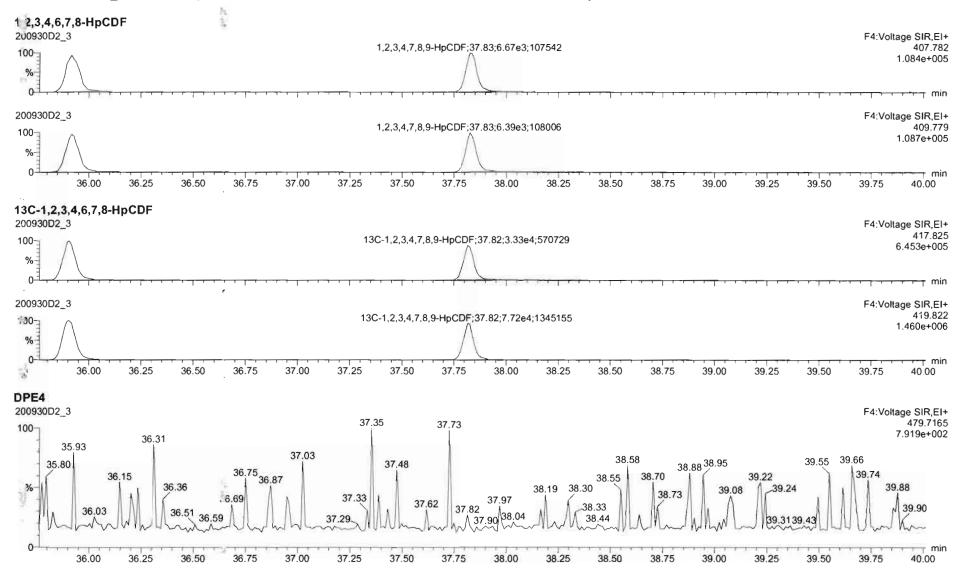


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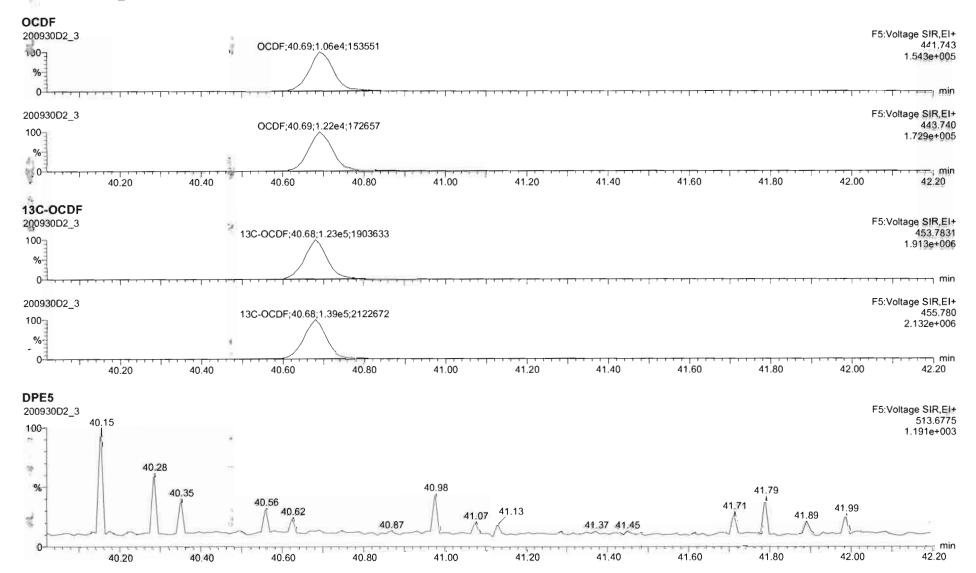
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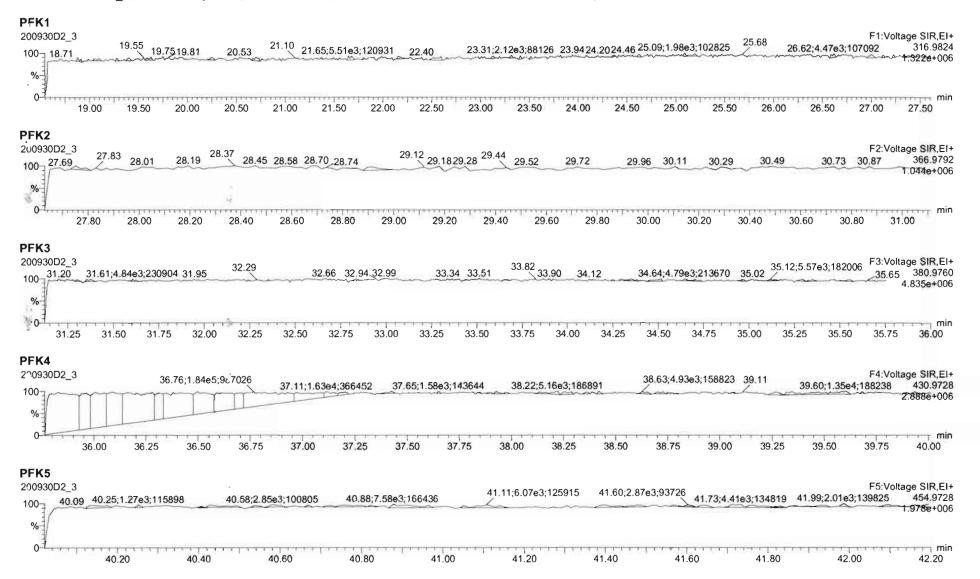
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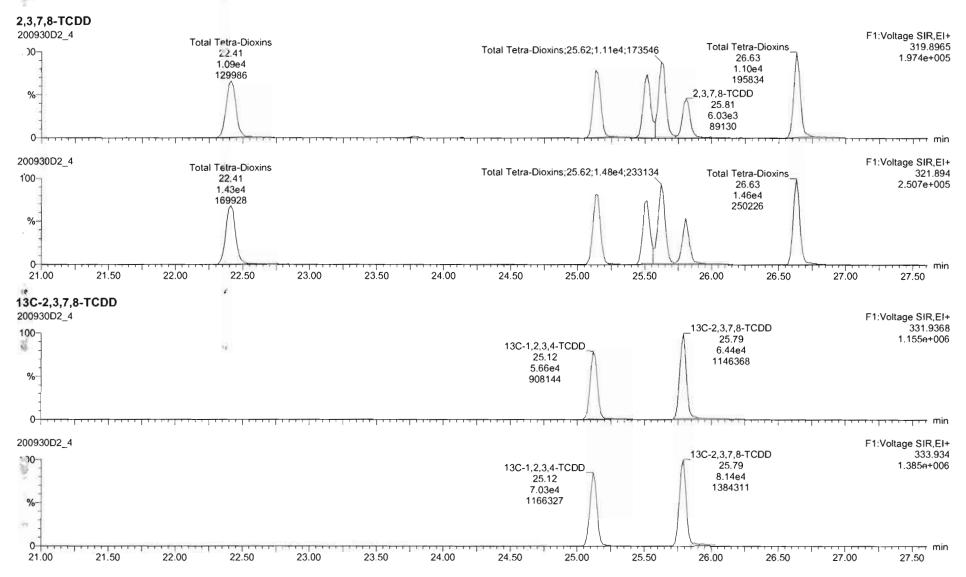
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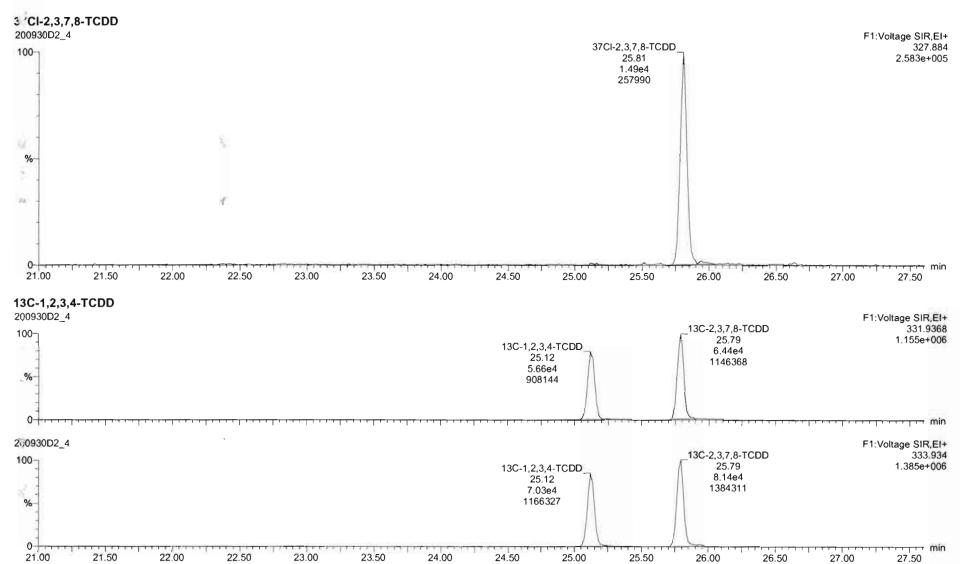
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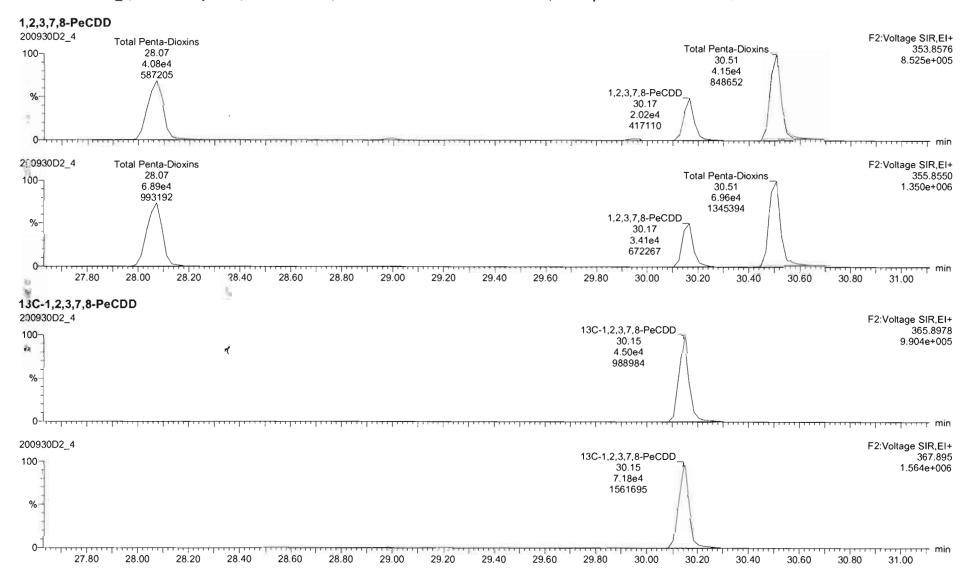
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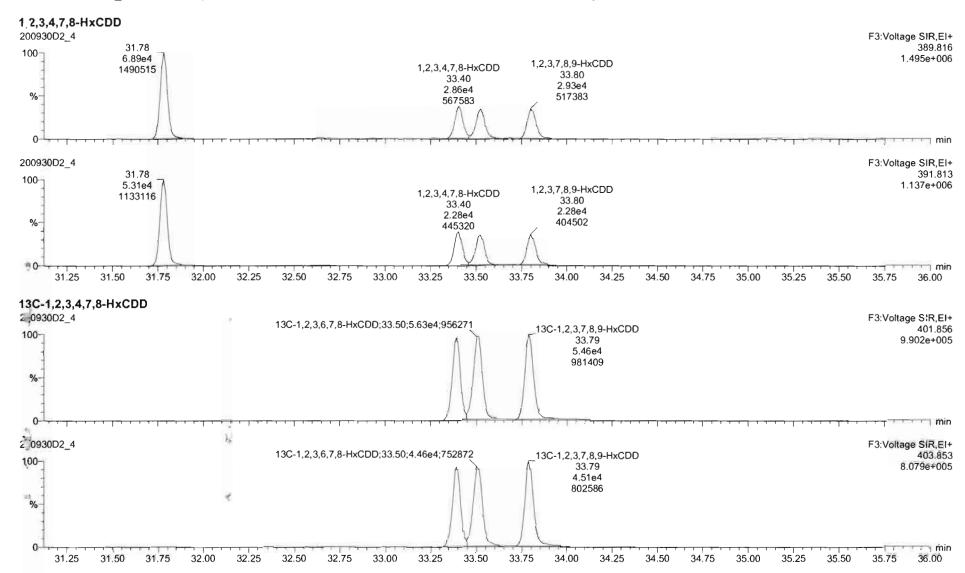
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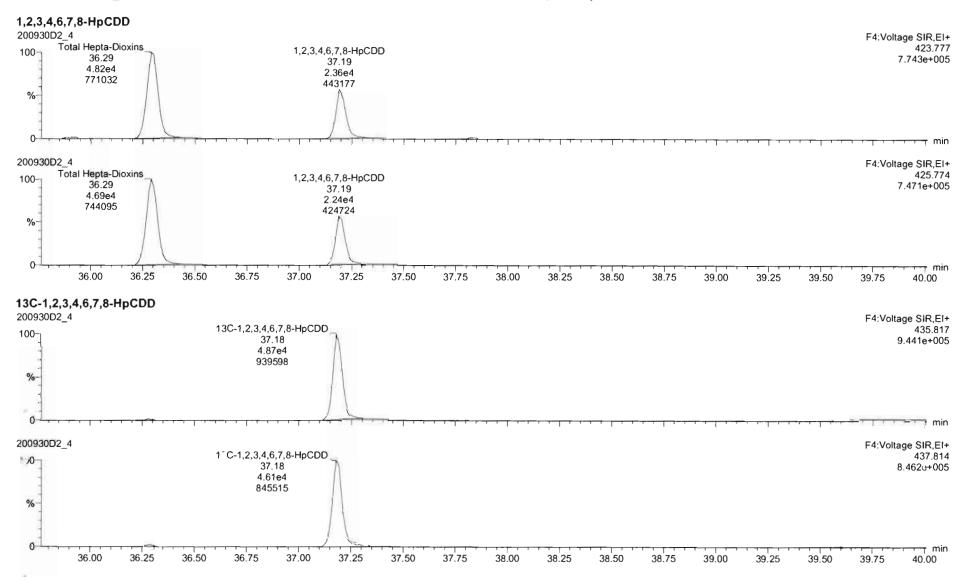
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Dataset: U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

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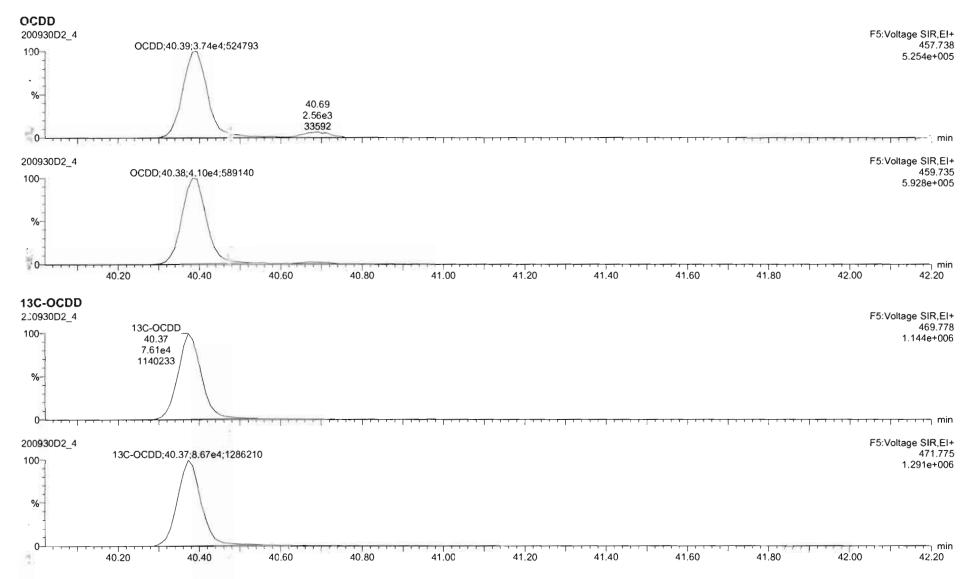
Vista Analytical Laboratory

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Dataset:

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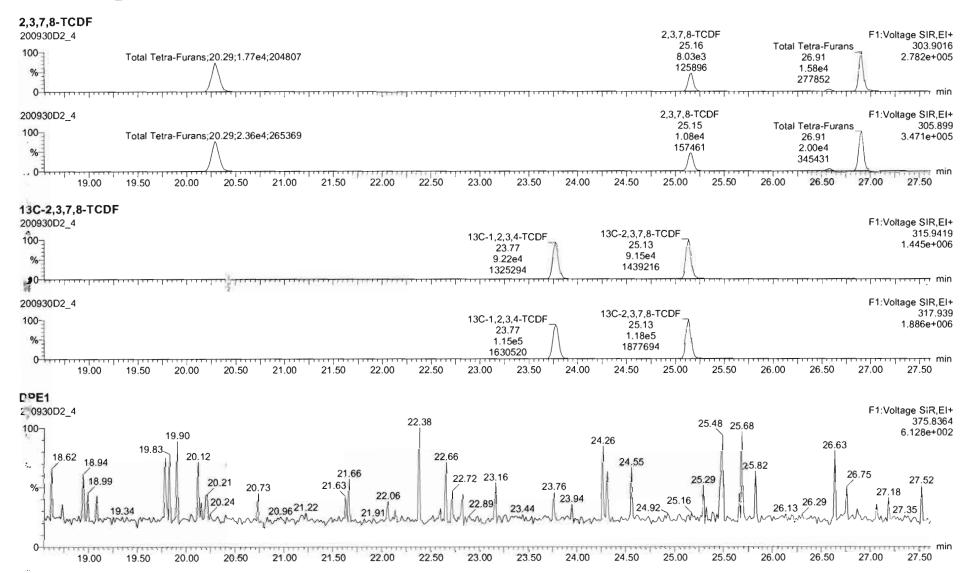


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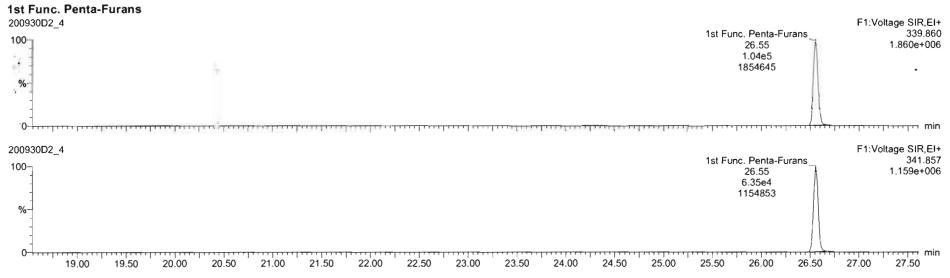
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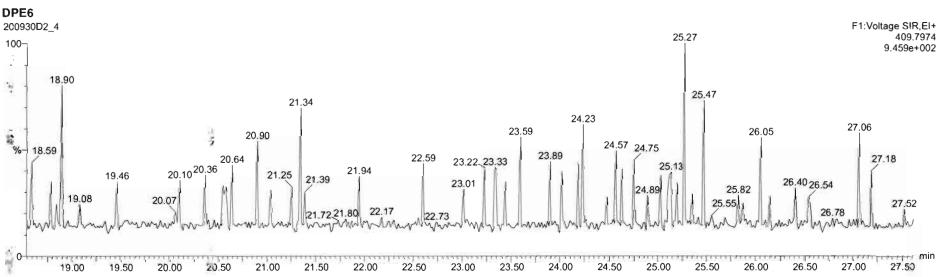
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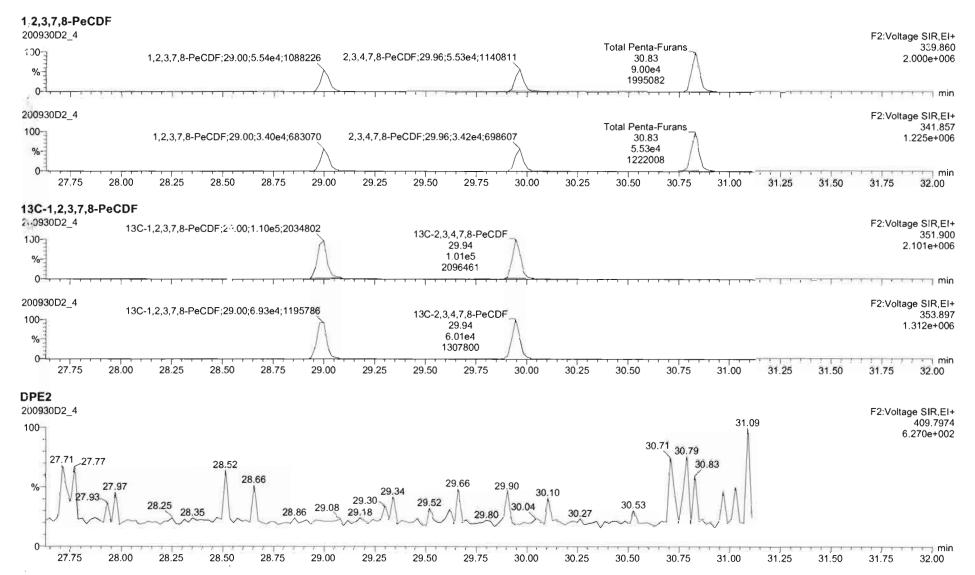




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U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

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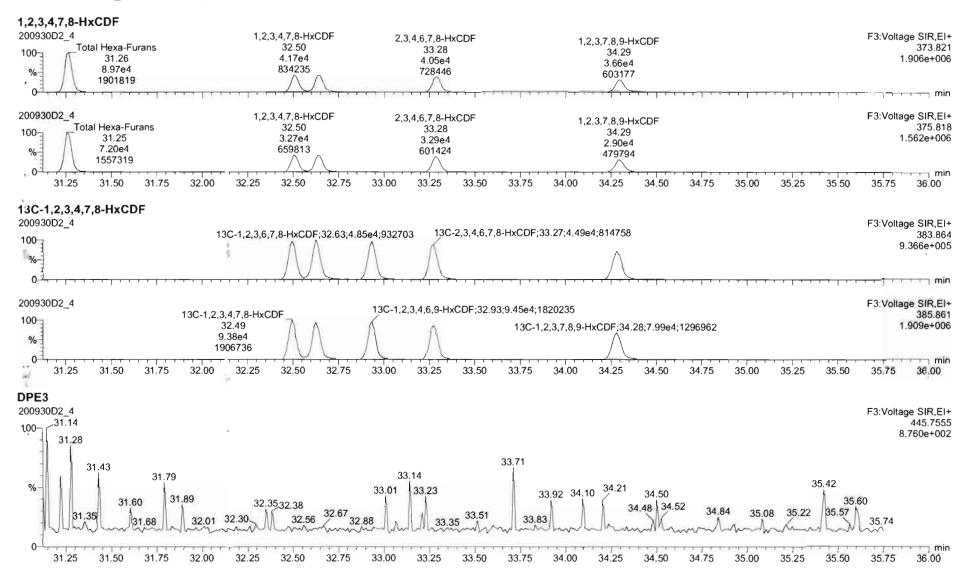


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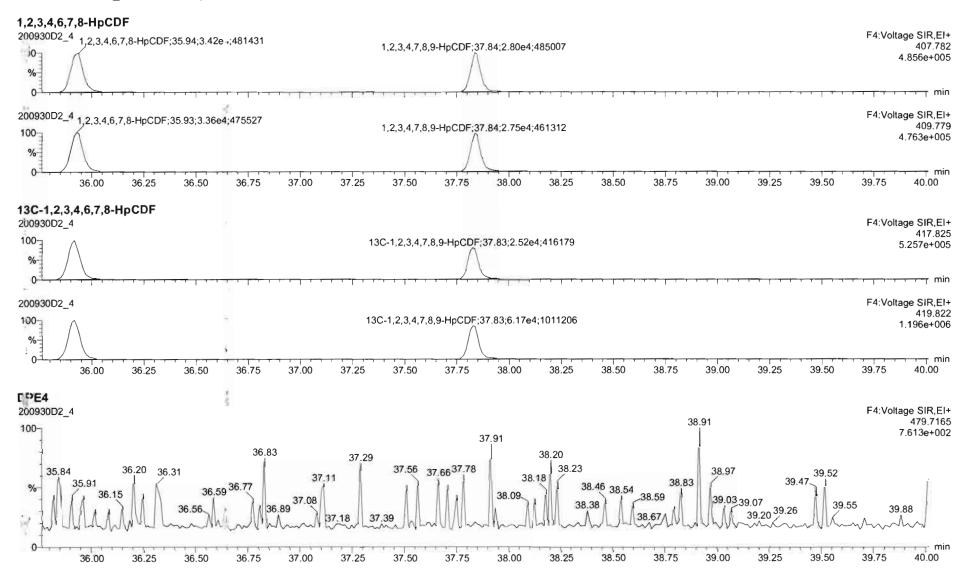
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U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

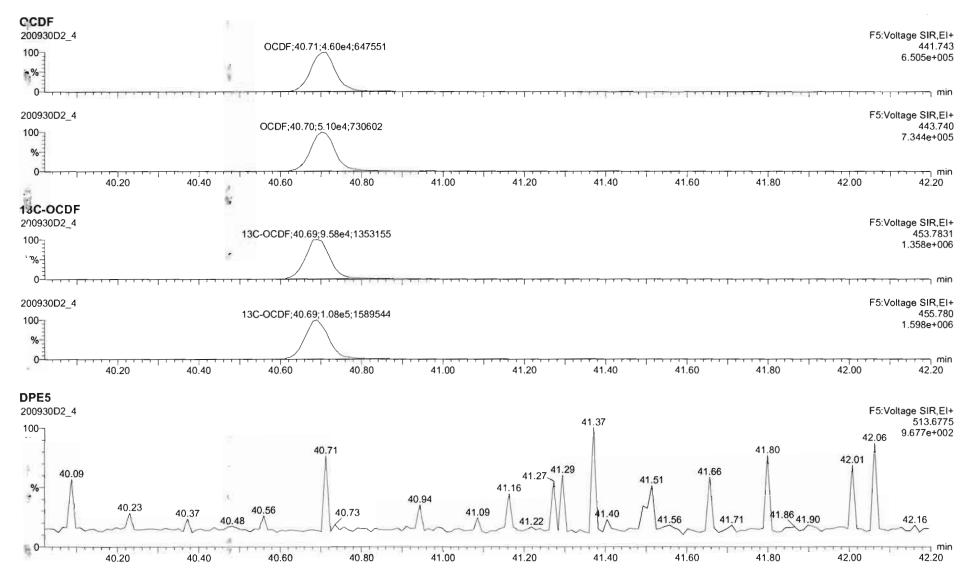
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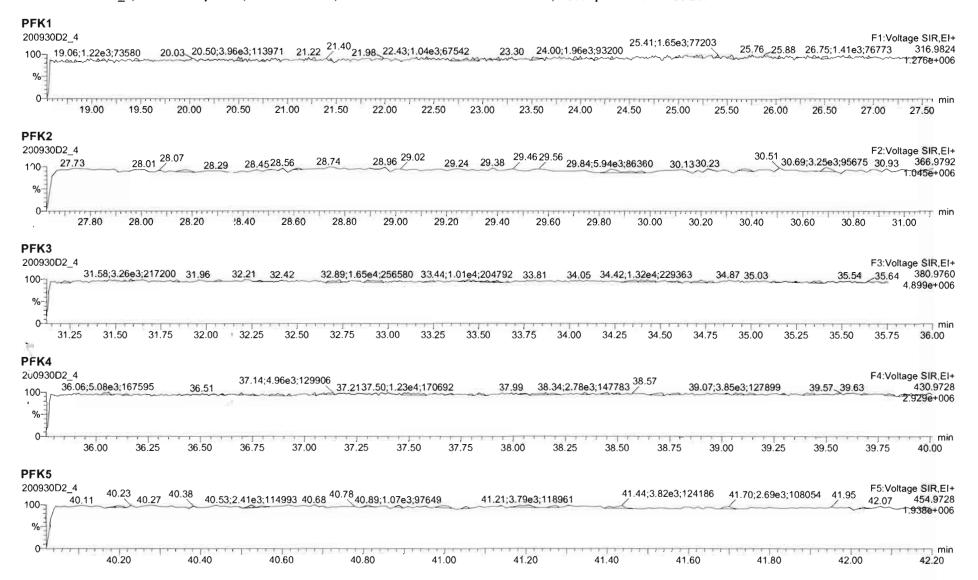
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Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time



Dataset: U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

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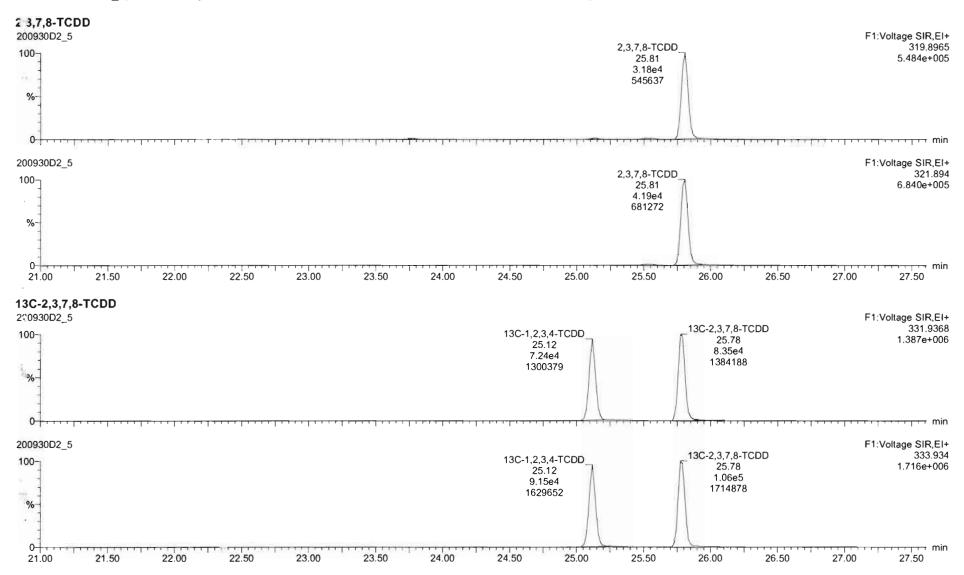


Vista Analytical Laboratory

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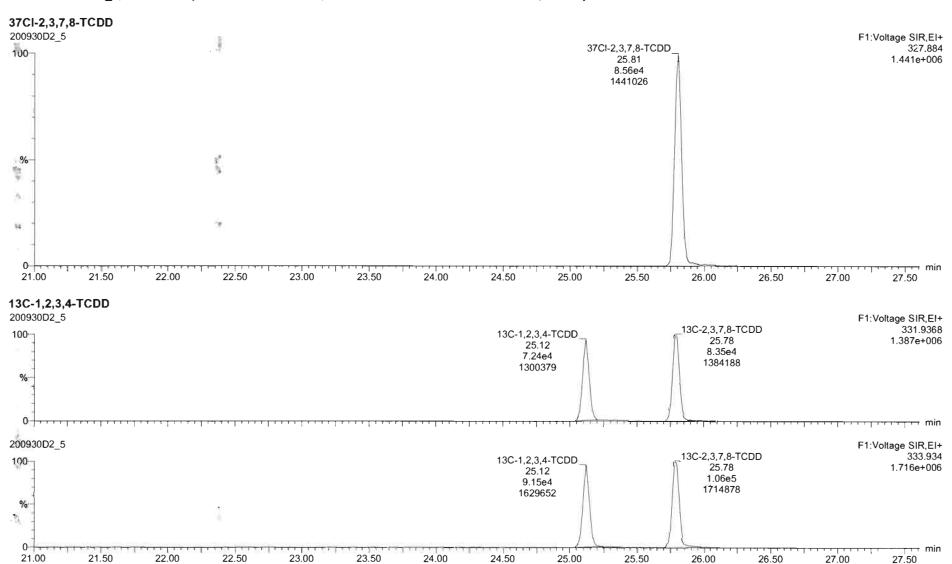
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Dataset: U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

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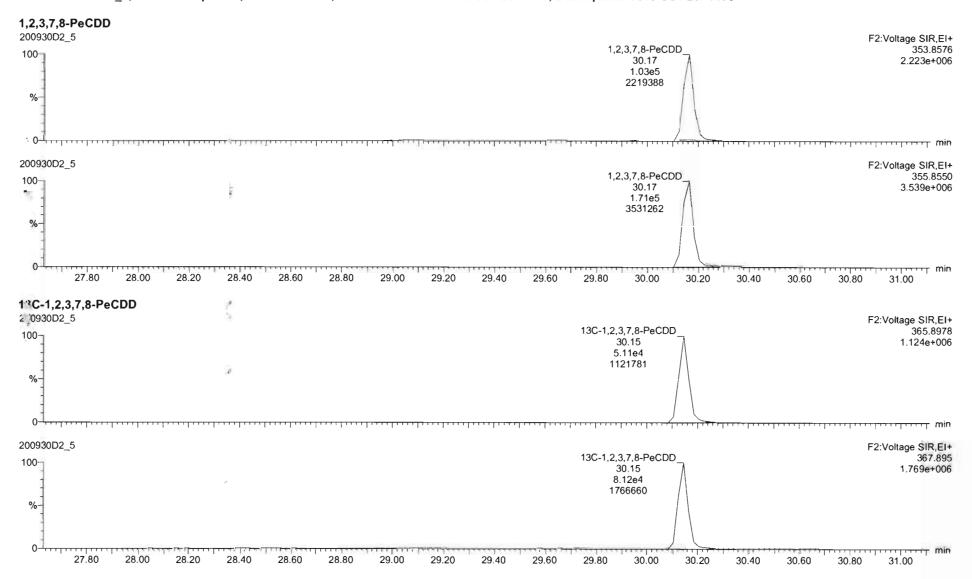
MassLynx 4.1



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

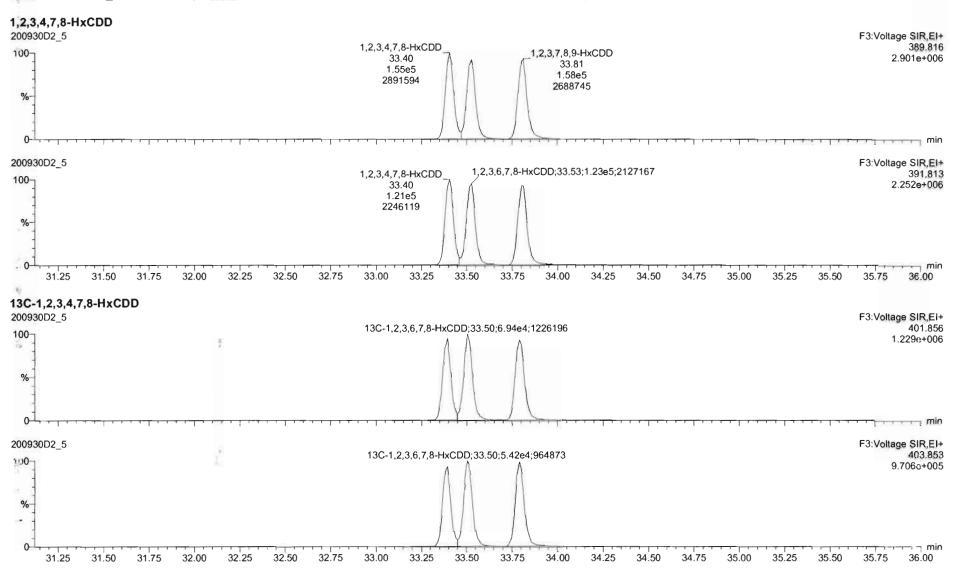
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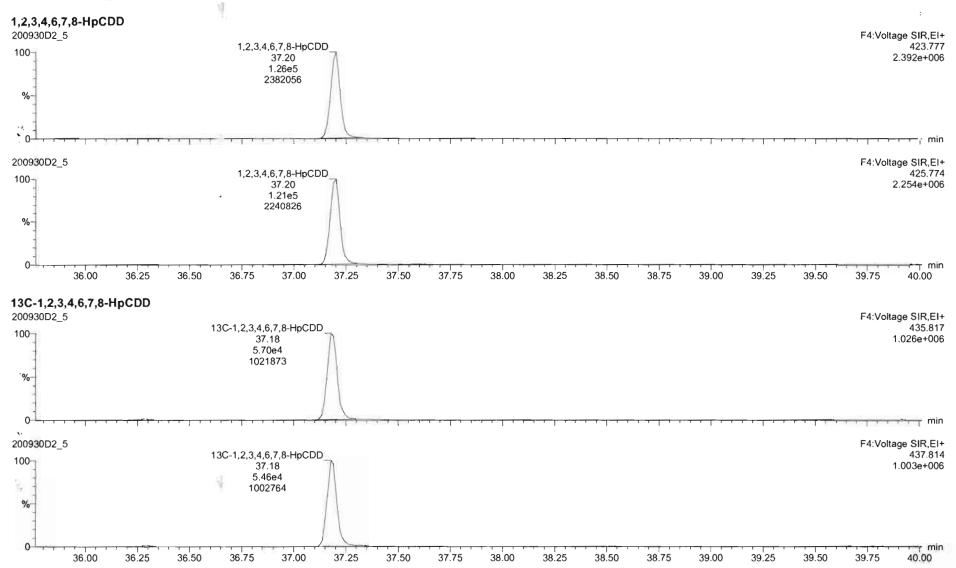
Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time



4

Dataset: U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

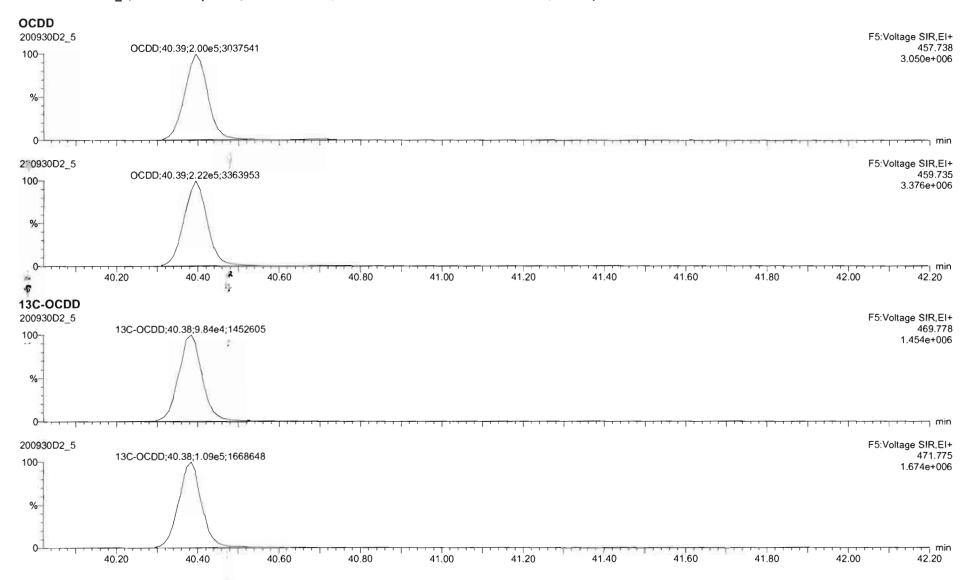
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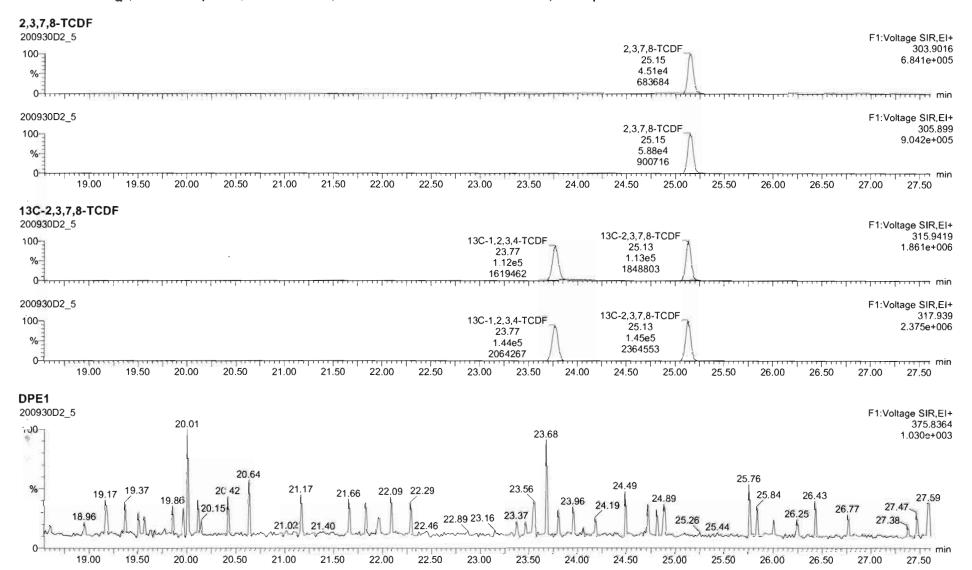
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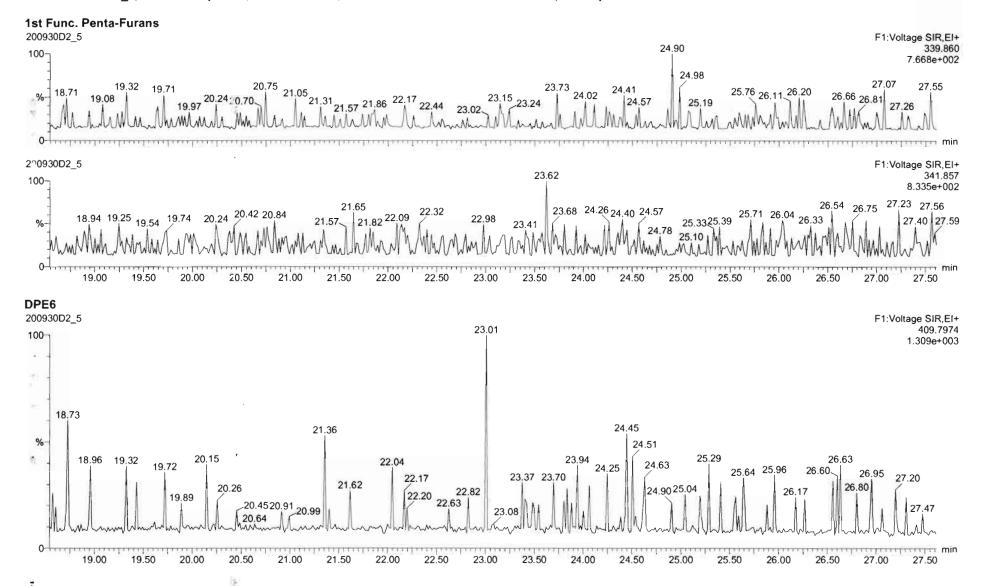
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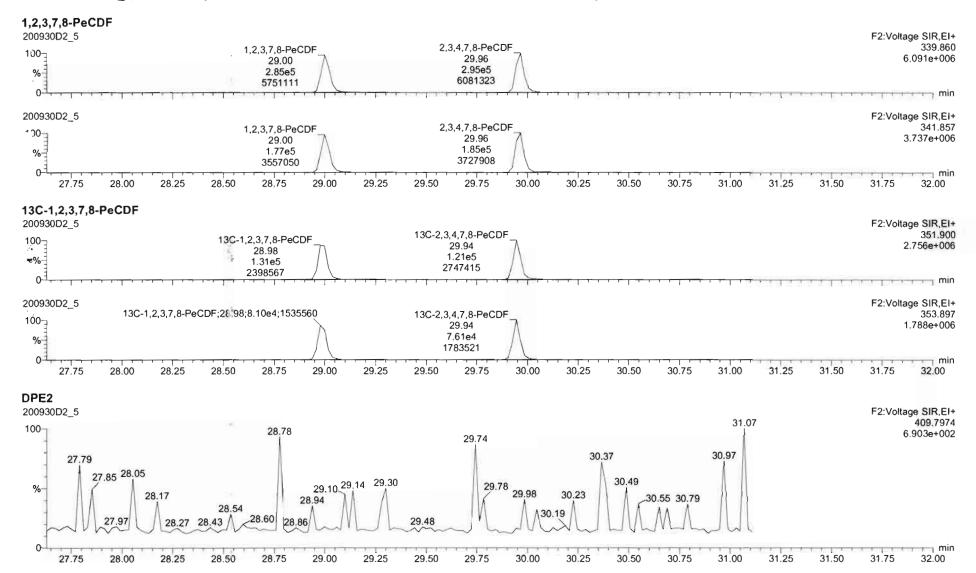
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34

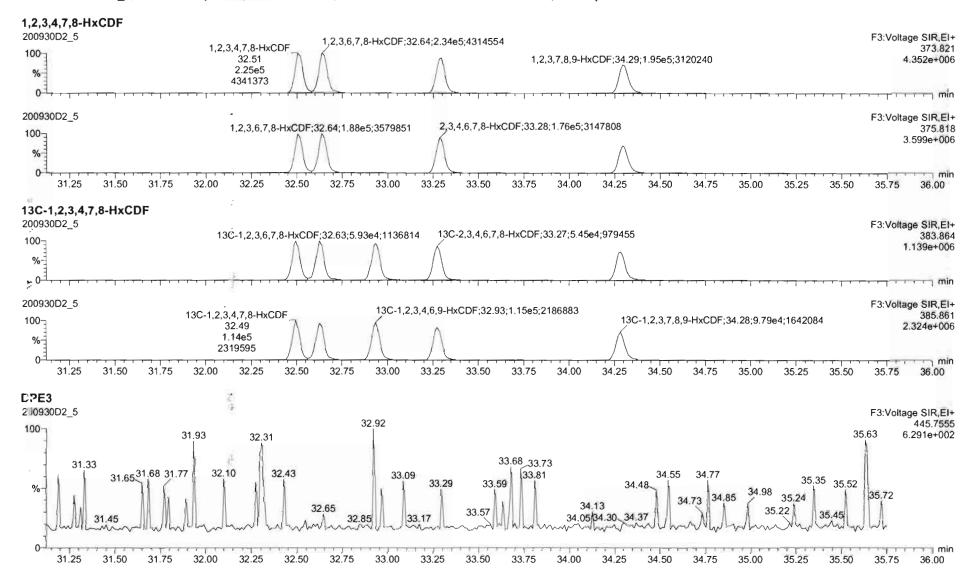
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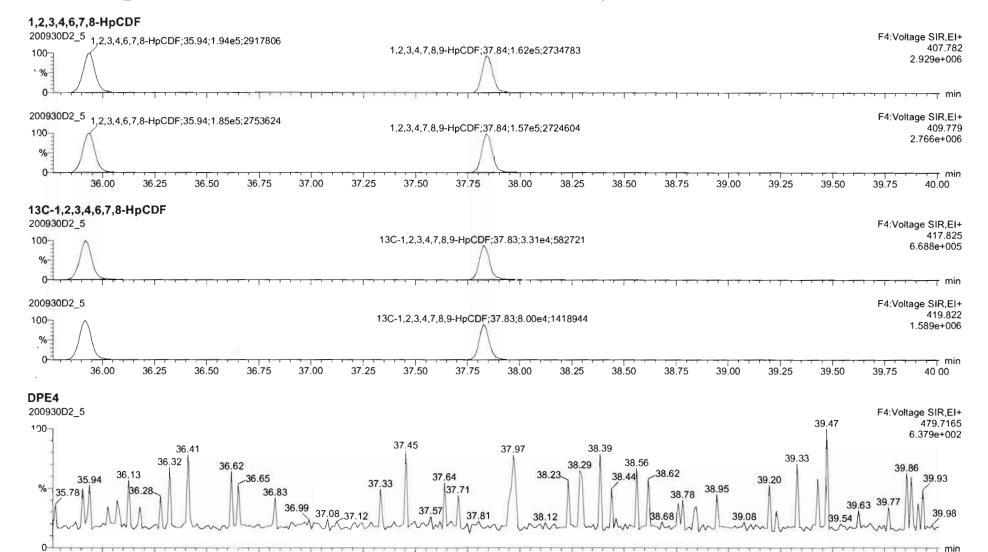
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U:\VG7.PRO\Results\2J0930D2\200930D2\_CRV.qld

Last Altered: Printed: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

Name: 200930D2\_5, Date: 30-Sep-2020, Time: 15:49:01, ID: ST200930D2-5 1613 CS4 20F1106, Description: 1613 CS4 20F1106



36.00

36.25

36.50

36.75

37.00

37.25

37.50

37.75

38.00

38.25

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38.75

39.00

39.25

39.50

40.00

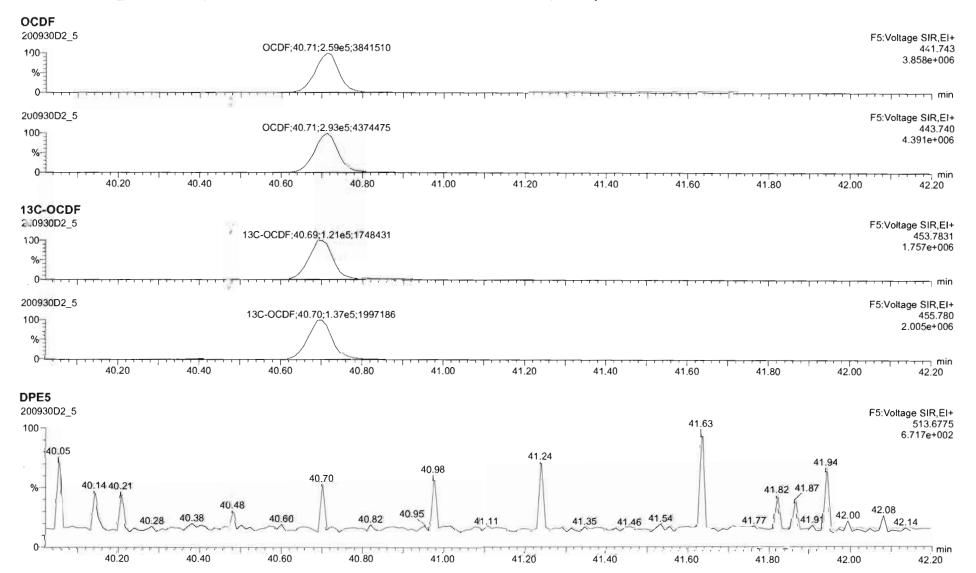
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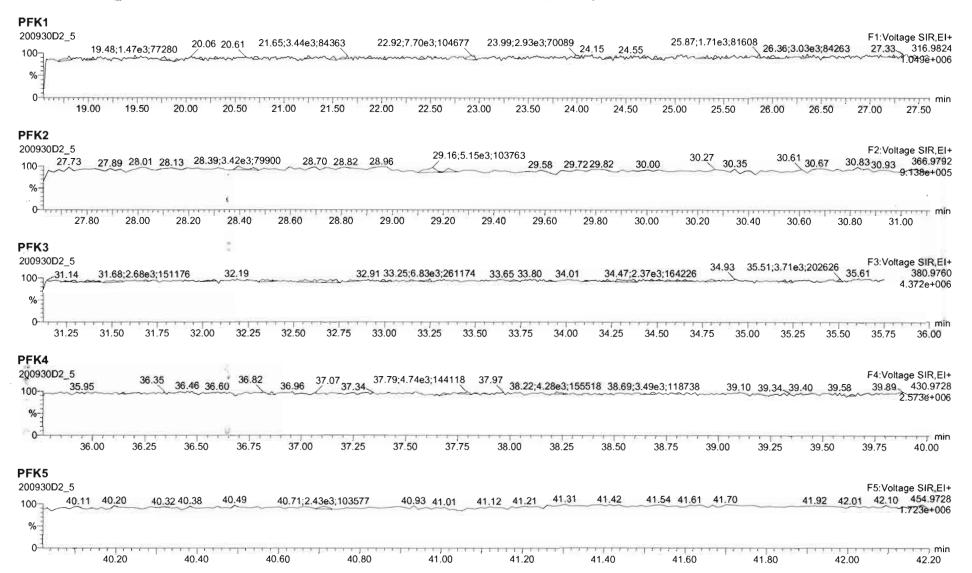
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10

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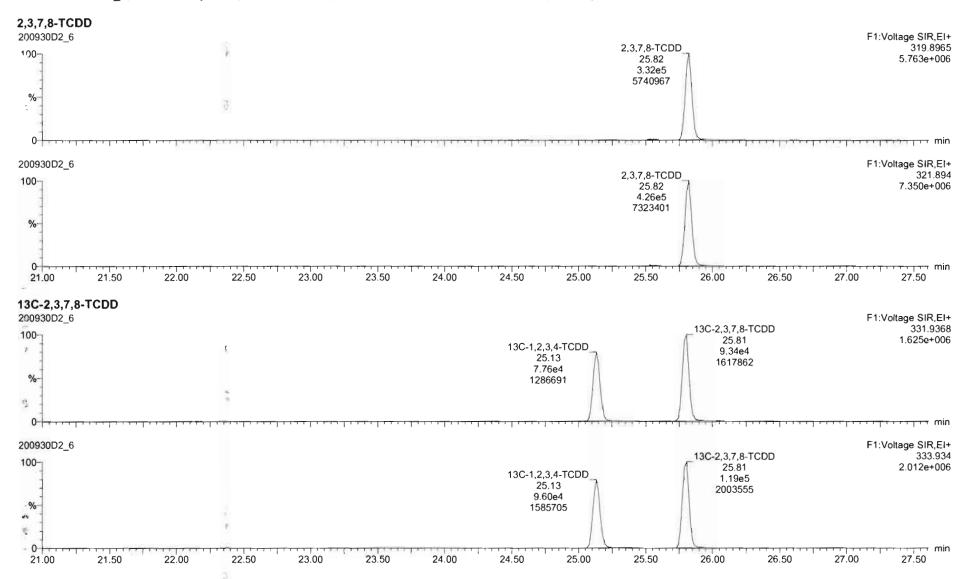
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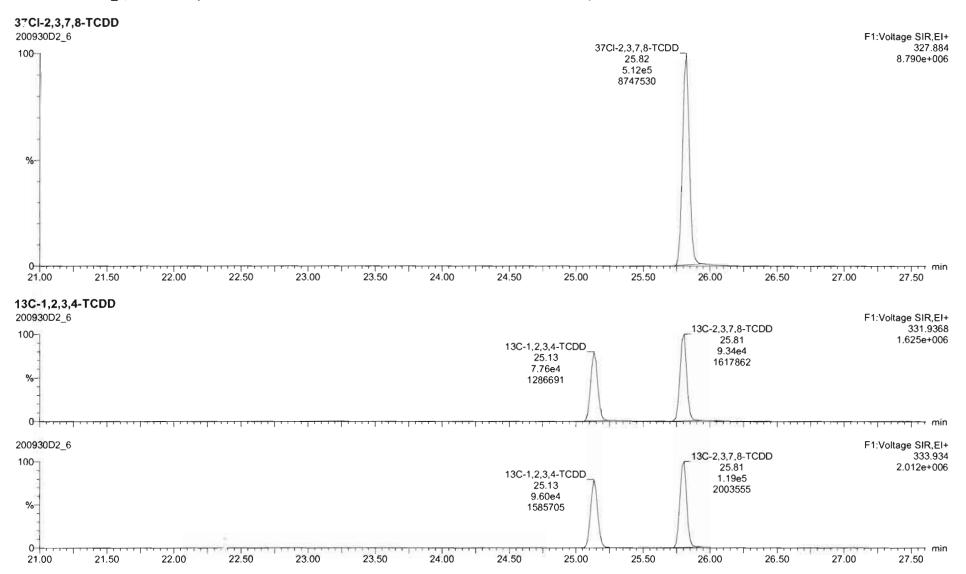
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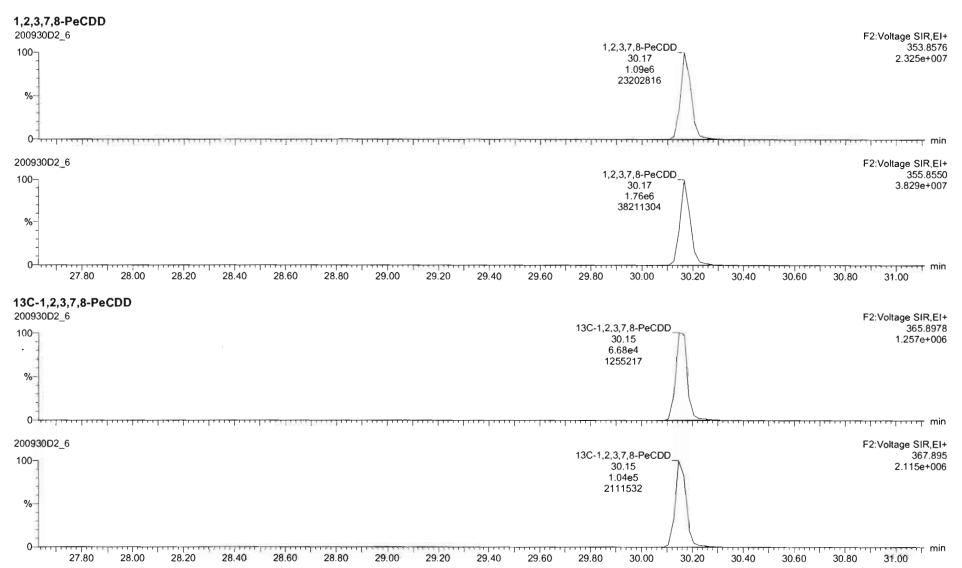
Page 68 of 78

Vista Analytical Laboratory

Dataset:

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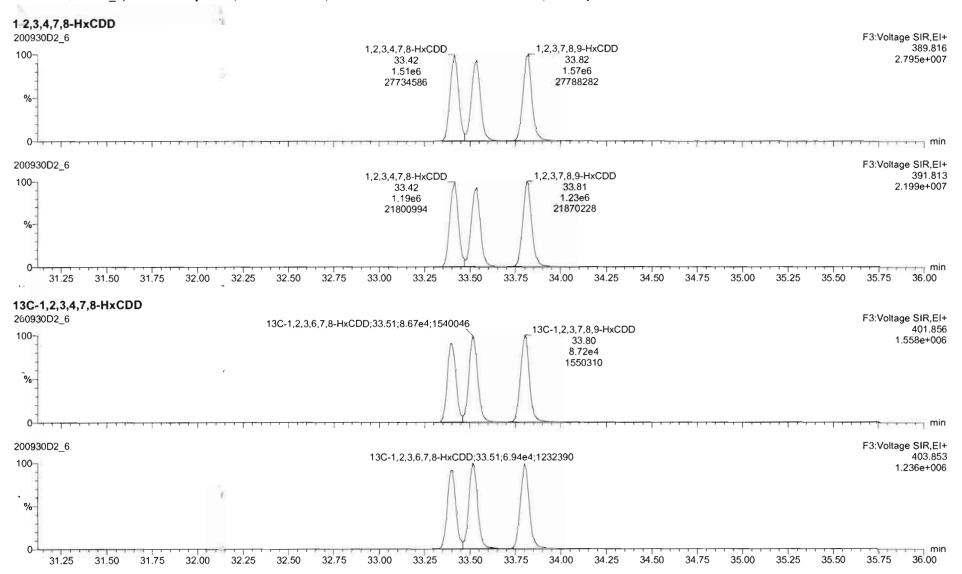


Vista Analytical Laboratory

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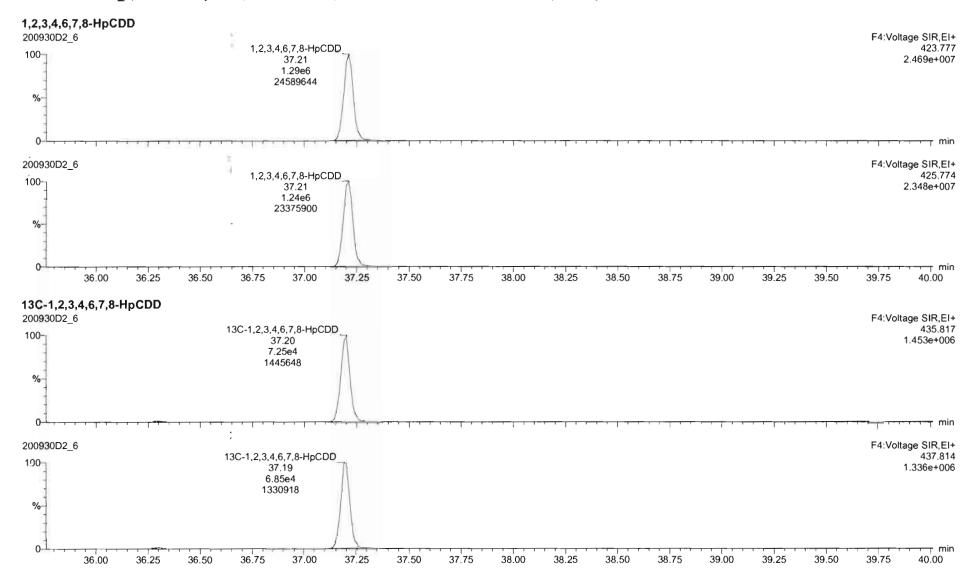
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U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

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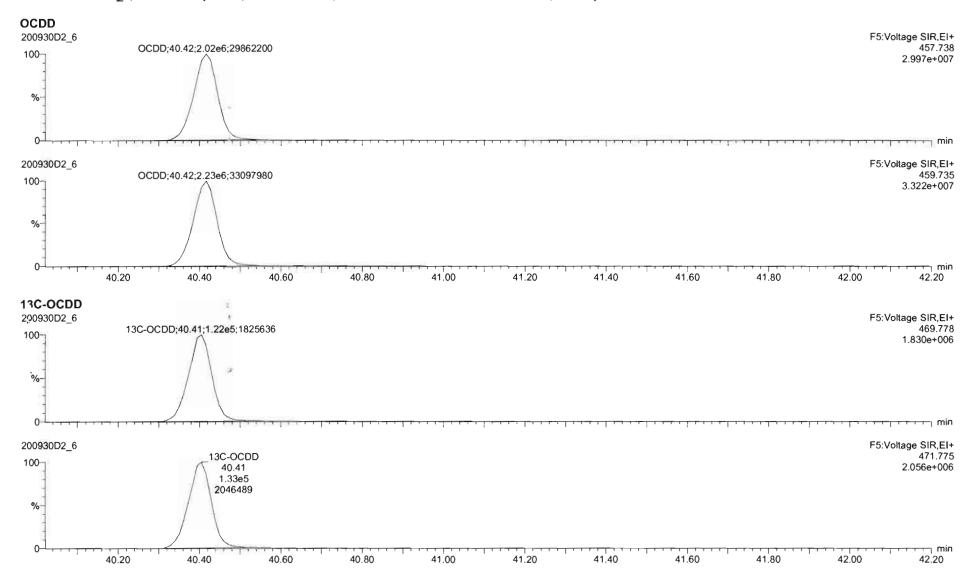


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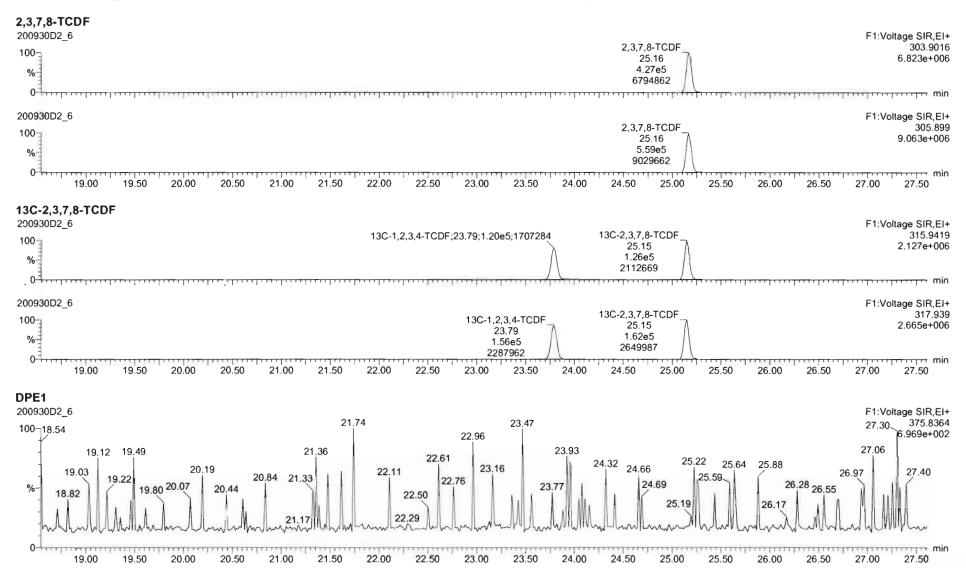
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Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time



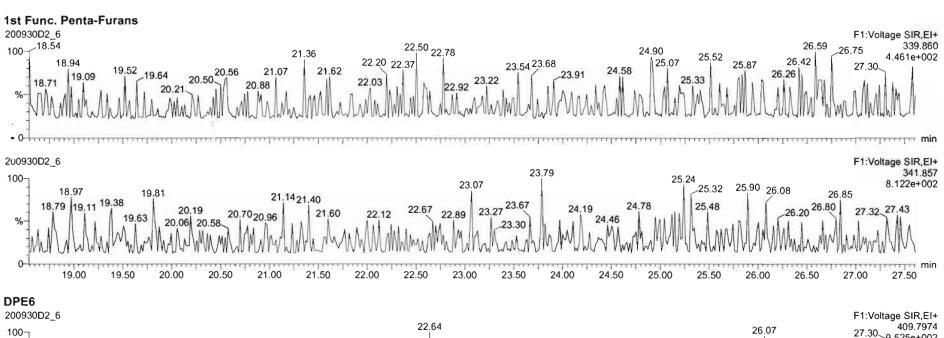
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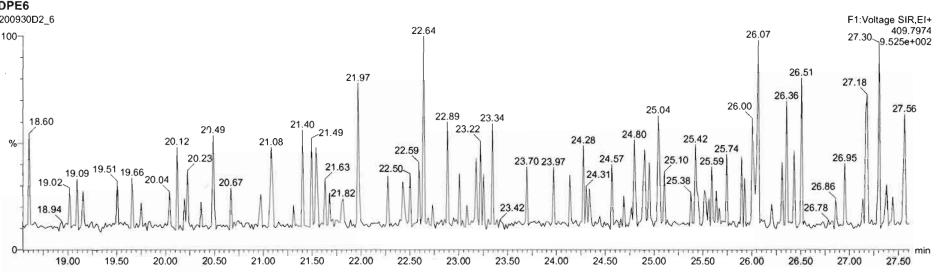
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U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

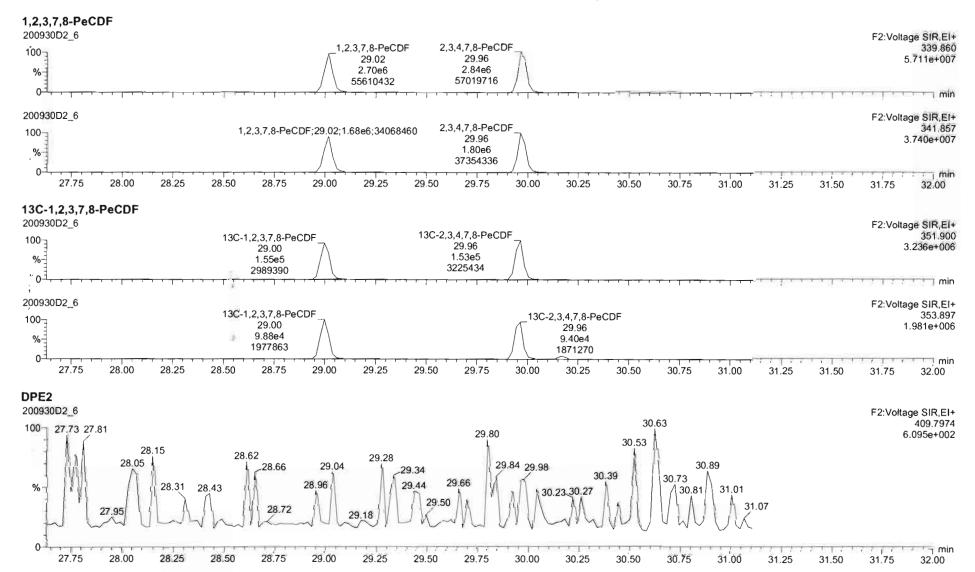
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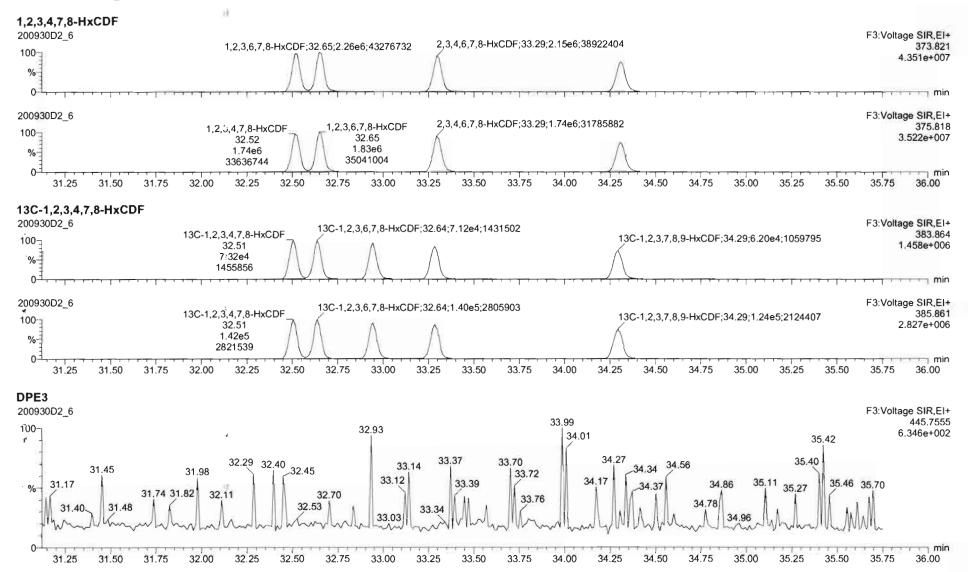
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U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

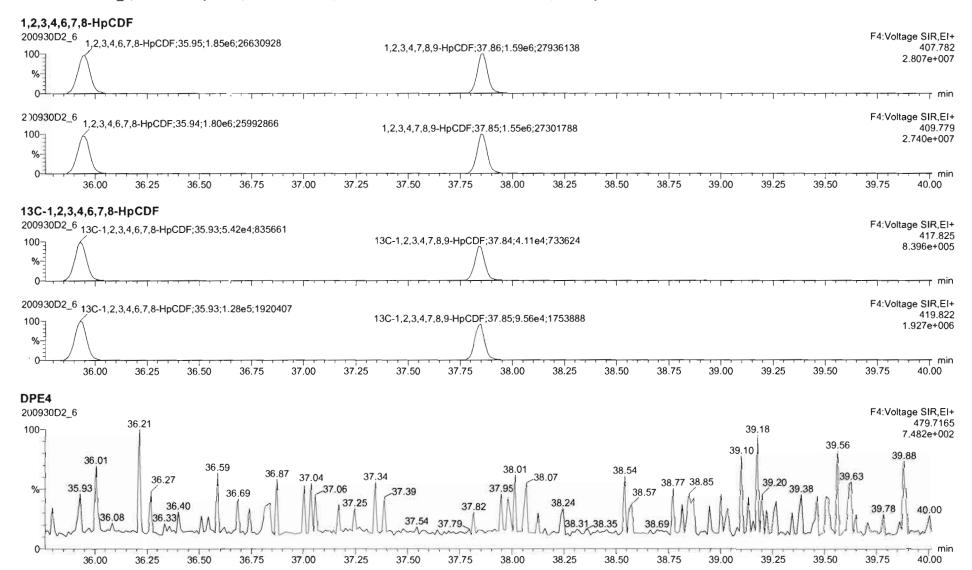
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Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

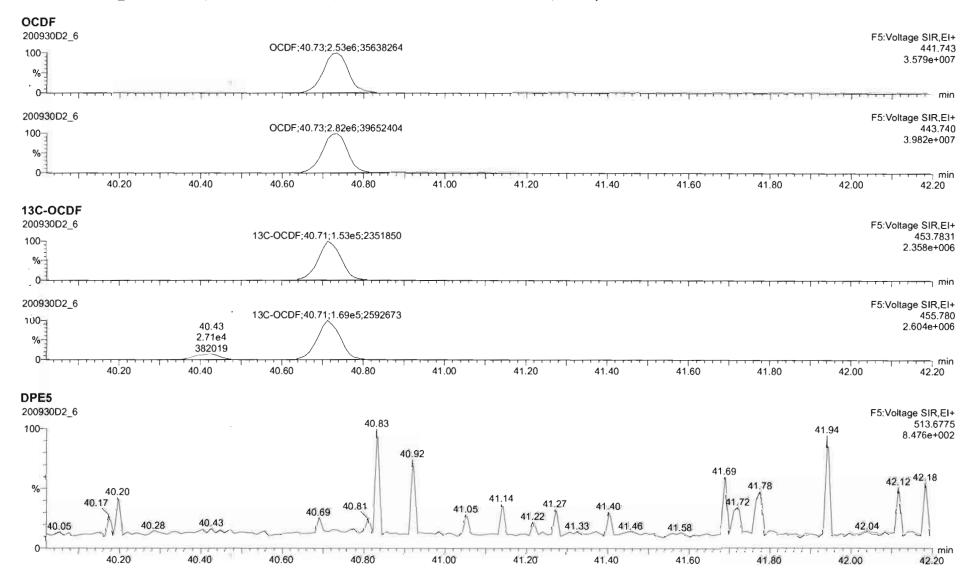


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U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

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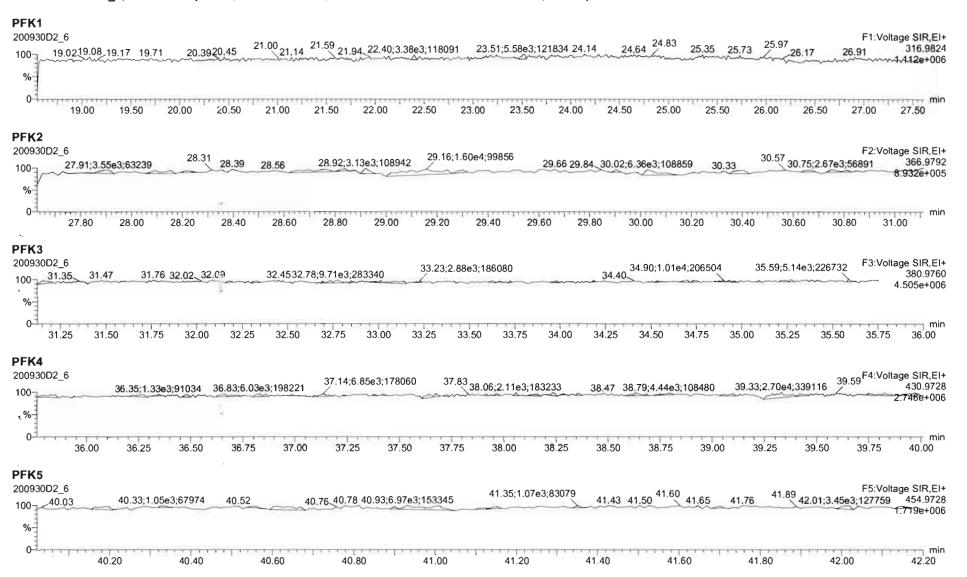


Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200930D2\200930D2\_CRV.qld

Last Altered: Thursday, October 01, 2020 09:56:59 Pacific Daylight Time Printed: Thursday, October 01, 2020 09:58:35 Pacific Daylight Time

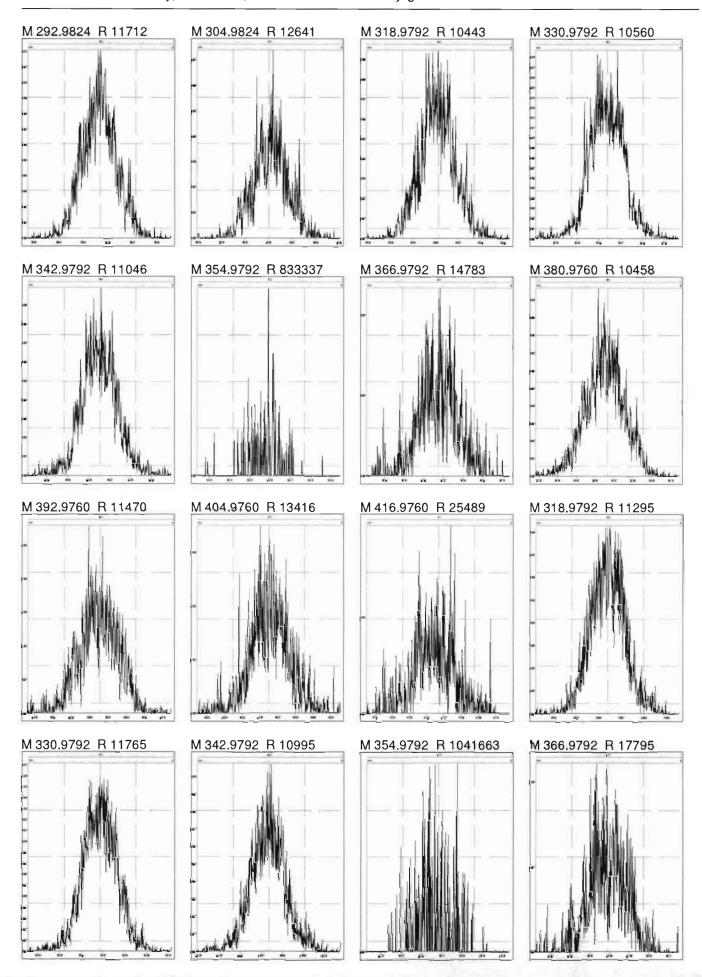
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Work Order 2002050

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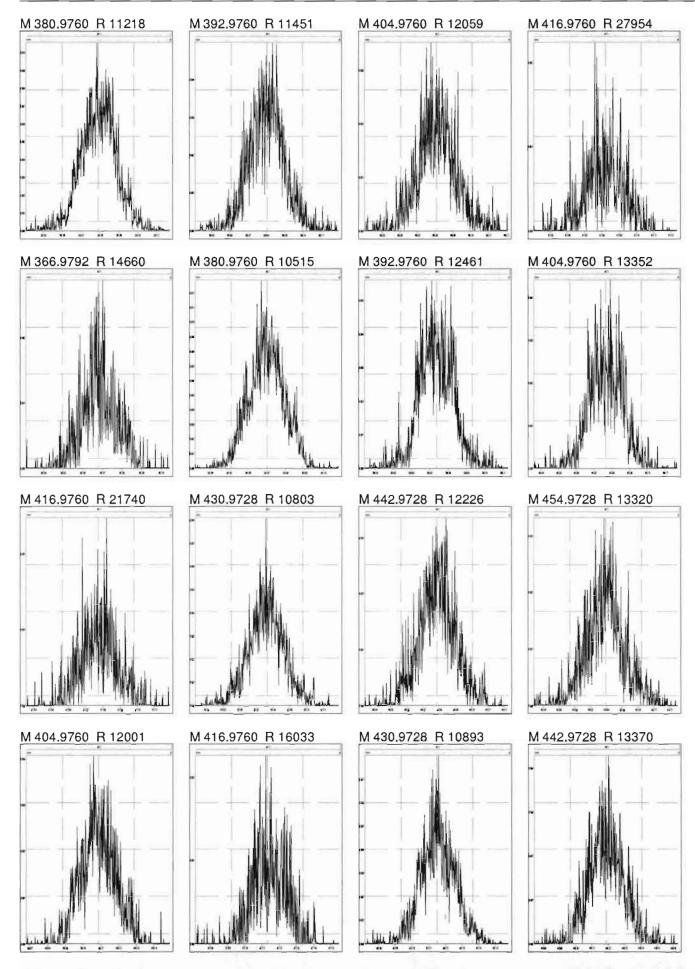
Thursday, October 01, 2020 02:40:50 Pacific Daylight Time



Work Order 2002050

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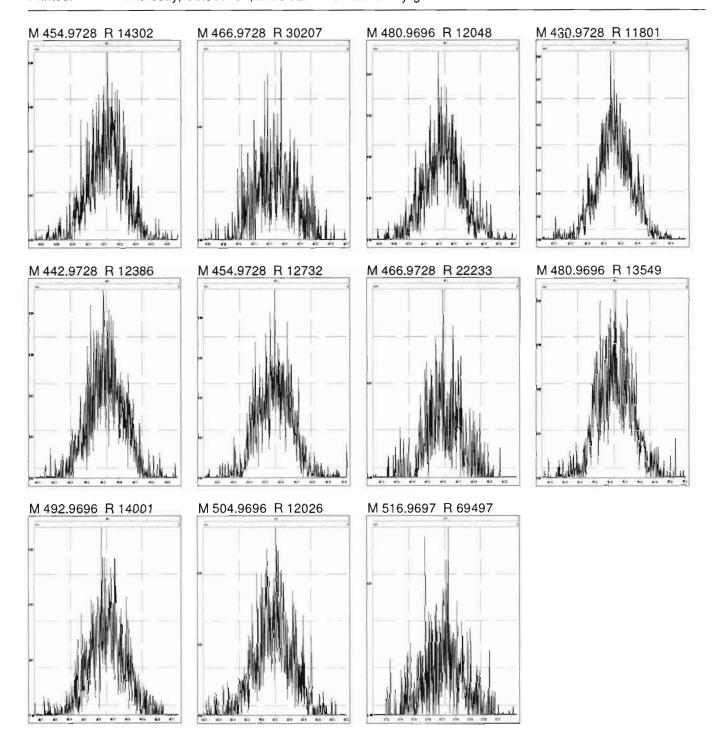
Thursday, October 01, 2020 02:40:50 Pacific Daylight Time



Work Order 2002050

Printed:

Thursday, October 01, 2020 02:40:50 Pacific Daylight Time



Work Order 2002050 Page 254 of 269

Vista Analytical Laboratory

Dataset:

U:\VG7.PRO\Results\200930D2\200930D2\_8.qld

Last Altered: Printed:

Thursday, October 01, 2020 10:40:53 Pacific Daylight Time Thursday, October 01, 2020 10:42:01 Pacific Daylight Time

DB 10/1/20 CT 10/01/2020

Method: C:\MassLynx\Default.PRO\MethDB\1613\_rrt.mdb 11 Sep 2020 15:14:27

Calibration: U:\VG7.PRO\CurveDB\ZB\_DIOXIN\_1613vg7-9-30-20.cdb 01 Oct 2020 10:27:37

Name: 200930D2\_8, Date: 30-Sep-2020, Time: 18:08:02, ID: SS200930D2-1 1613 SSS 20F1108, Description: 1613 SSS 20F1108

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	2.31e4	0.74	NO	1.00	1.000	25.821	25.82	1.001	1.001	10.260	103	0.0632	10.3
2	2 1,2,3,7,8-PeCDD	8.31e4	0.61	NO	0.935	1.000	30.187	30.19	1.001	1.001	53.368	107	0.106	53.4
3	3 1,2,3,4,7,8-HxCDD	7.77e4	1.26	NO	1.15	1.000	33.415	33.42	1.000	1.000	45.778	91.6	0.150	45.8
4	4 1,2,3,6,7,8-HxCDD	8.20e4	1.25	NO	1.02	1.000	33.526	33.54	1.000	1.000	47.955	95.9	0.161	48.0
5	5 1,2,3,7,8,9-HxCDD	7.98e4	1.27	NO	1.06	1.000	33.845	33.82	1.001	1.000	45.851	91.7	0.156	45.9
6	6 1,2,3,4,6,7,8-HpCDD	7.23e4	1.07	NO	1.00	1.000	37.213	37.21	1.000	1.000	49.364	98.7	0.231	49.4
7	7 OCDD	1.24e5	0.89	NO	0.952	1.000	40.395	40.41	1.000	1.000	100.14	100	0.175	100
8	8 2,3,7,8-TCDF	3.03e4	0.76	NO	1.01	1.000	25.174	25.16	1.001	1.001	8.5800	85.8	0.0490	8.58
9	9 1,2,3,7,8-PeCDF	1.26e5	1.58	NO	0.998	1.000	29.019	29.02	1.001	1.001	47.977	96.0	0.102	48.0
10	10 2,3,4,7,8-PeCDF	1.46e5	1.58	NO	1.07	1.000	29.994	29.98	1.001	1.001	53.283	107	0.0861	53.3
11	11 1,2,3,4,7,8-HxCDF	1.29e5	1.25	NO	1.05	1.000	32.505	32.53	1.000	1.001	56.257	113	0.172	56.3
12	12 1,2,3,6,7,8-HxCDF	1.36e5	1.28	NO	1.10	1.000	32.658	32.66	1.000	1.000	56.801	114	0.172	56.8
13	13 2,3,4,6,7,8-HxCDF	1.28e5	1.27	NO	1.09	1.000	33.328	33.31	1.001	1.000	57.613	115	0.191	57.6
14	14 1,2,3,7,8,9-HxCDF	1.06e5	1.25	NO	1.08	1.000	34.294	34.32	1.000	1.001	53.240	106	0.252	53.2
15	15 1,2,3,4,6,7,8-HpCDF	1.20e5	1.03	NO	1.13	1.000	35.976	35.95	1.001	1.000	52.614	105	0.212	52.6
16	16 1,2,3,4,7,8,9-HpCDF	9.52e4	1.03	NO	1.29	1.000	37.849	37.86	1.000	1.000	51.703	103	0.224	51.7
17	17 OCDF	1.66e5	0.89	NO	0.953	1.000	40.702	40.72	1.000	1.001	114.48	114	0.229	114
18	18 13C-2,3,7,8-TCDD	2.25e5	0.80	NO	1.17	1.000	25.787	25.79	1.026	1.026	94.491	94.5	0.271	
19	19 13C-1,2,3,7,8-PeCDD	1.66e5	0.62	NO	0.914	1.000	29.974	30.17	1.193	1.200	89.682	89.7	0.183	1
20	20 13C-1,2,3,4,7,8-HxCDD	1.47e5	1.28	NO	0.634	1.000	33.405	33.40	1.014	1.014	105.24	105	0.428	
21	21 13C-1,2,3,6,7,8-HxCDD	1.67e5	1.27	NO	0.724	1.000	33.514	33.53	1.017	1.018	104.35	104	0.375	
22	22 13C-1,2,3,7,8,9-HxCDD	1.64e5	1.25	NO	0.716	1.000	33.781	33.81	1.025	1.026	103.67	104	0.379	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.46e5	1.05	NO	0.660	1.000	37.194	37.20	1.129	1.129	100.22	100	0.415	
24	24 13C-OCDD	2.61e5	0.89	NO	0.587	1.000	40.172	40.39	1.219	1.226	201.24	101	0.287	[
25	25 13C-2,3,7,8-TCDF	3.48e5	0.73	NO	1.02	1.000	24.882	25.15	0.990	1.001	99.486	99.5	0.276	
26	26 13C-1,2,3,7,8-PeCDF	2.62e5	1.59	NO	0.842	1.000	29.046	29.00	1.156	1.154	91.006	91.0	0.298	
27	27 13C-2,3,4,7,8-PeCDF	2.55e5	1.67	NO	0.802	1.000	29.934	29.96	1.191	1.192	92.871	92.9	0.313	
28	28 13C-1,2,3,4,7,8-HxCDF	2.17e5	0.51	NO	1.00	1.000	32.549	32.51	0.988	0.987	98.055	98.1	0.333	
29	29 13C-1,2,3,6,7,8-HxCDF	2.17e5	0.52	NO	1.02	1.000	32.680	32.65	0.992	0.991	96.461	96.5	0.328	
30	30 13C-2,3,4,6,7,8-HxCDF	2.05e5	0.52	NO	0.955	1.000	33.244	33.30	1.009	1.011	97.072	97.1	0.350	
31	31 13C-1,2,3,7,8,9-HxCDF	1.83e5	0.53	NO	0.851	1.000	34.308	34.29	1.041	1.041	97.441	97.4	0.392_	

Work Order 2002050

Vista Analytical Laboratory

Dataset:

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Thursday, October 01, 2020 10:42:01 Pacific Daylight Time

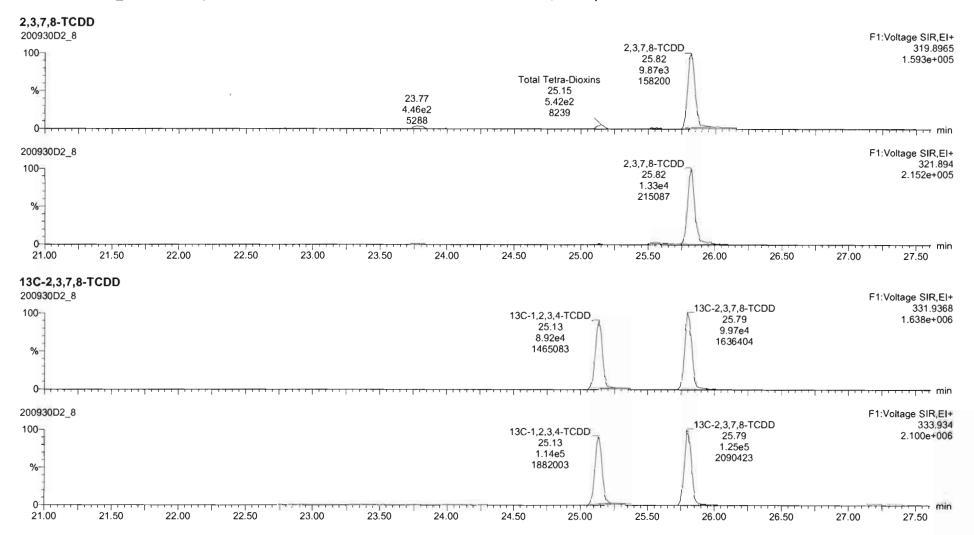
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32	32 13C-1,2,3,4,6,7,8-HpCDF	2.01e5	0.44	NO	0.848	1.000	35.810	35.94	1.087	1.091	107.16	107	0.390	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1.43e5	0.45	NO	0.624	1.000	37.787	37.85	1.147	1.149	103.84	104	0.530	
34	34 13C-OCDF	3.04e5	0.90	NO	0.730	1.000	40.323	40.70	1.224	1.235	188.59	94.3	0.259	
35	35 37CI-2,3,7,8-TCDD	2.38e4			1.21	1.000	25.784	25.82	1.026	1.027	9.7250	97.3	0.0428	
36	36 13C-1,2,3,4-TCDD	2.03e5	0.78	NO	1.00	1.000	25.260	25.13	1.000	1.000	100.00	100	0.318	
37	37 13C-1,2,3,4-TCDF	3.43e5	0.75	NO	1.00	1.000	23.930	23.79	1.000	1.000	100.00	100	0.282	
38	38 13C-1,2,3,4,6,9-HxCDF	2.21e5	0.52	NO	1.00	1.000	32.990	32.94	1.000	1.000	100.00	100	0.334	

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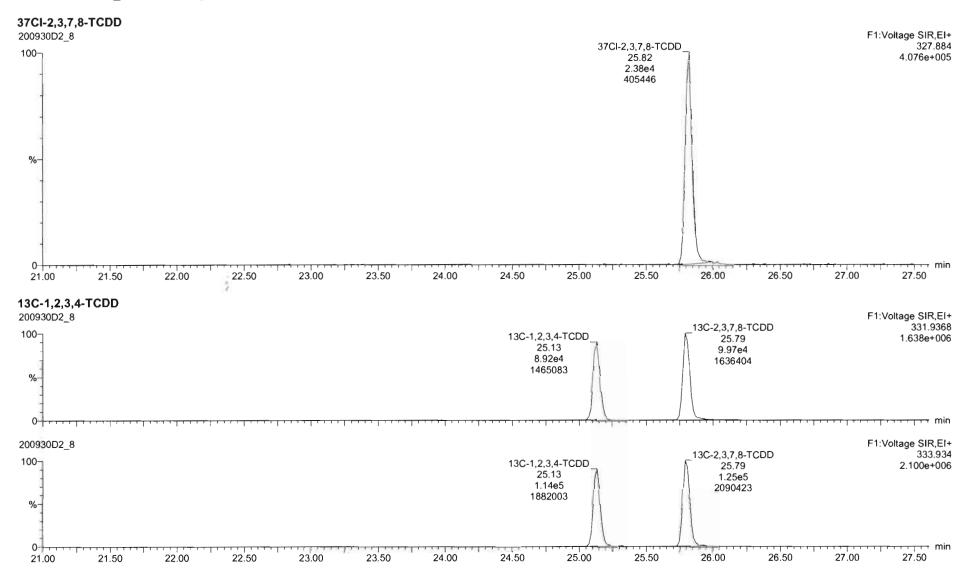


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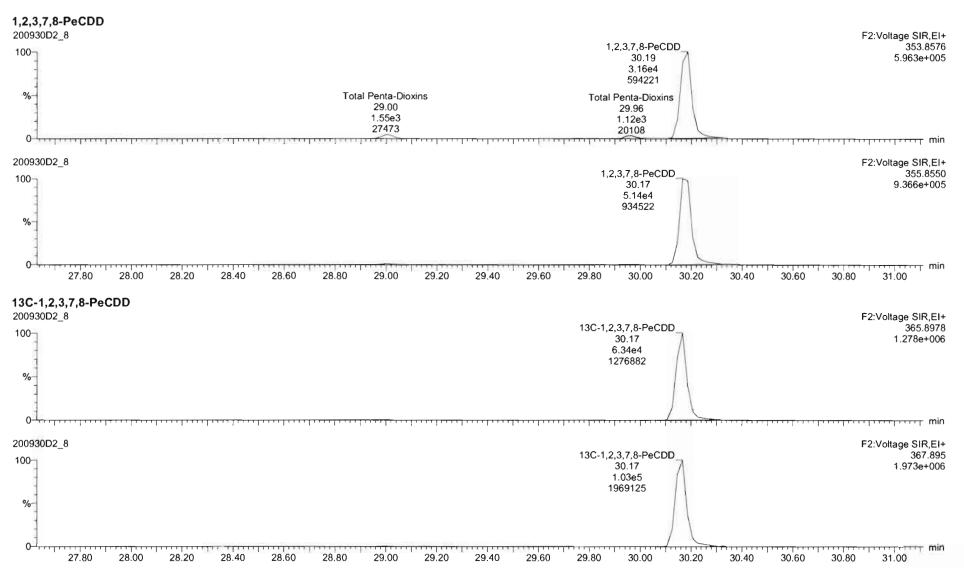
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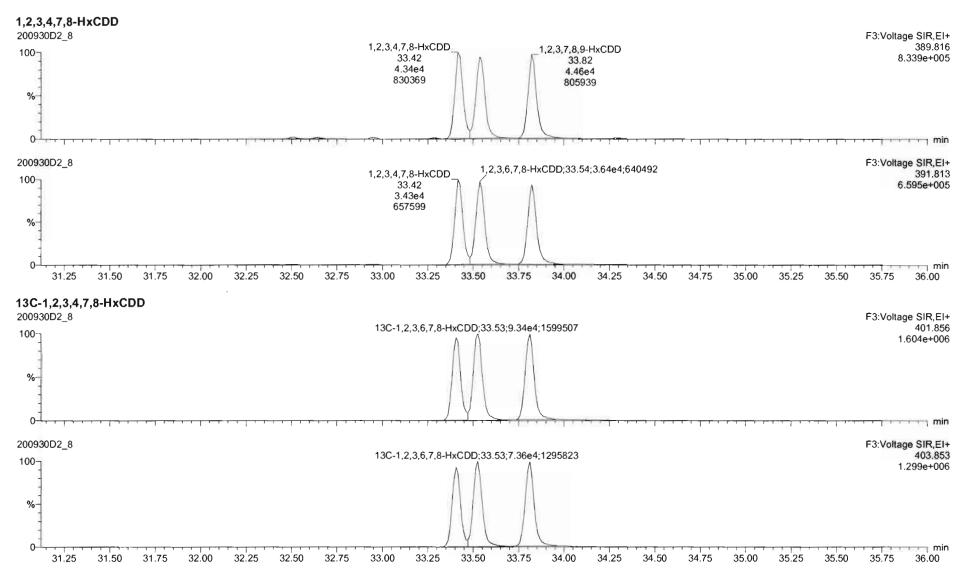
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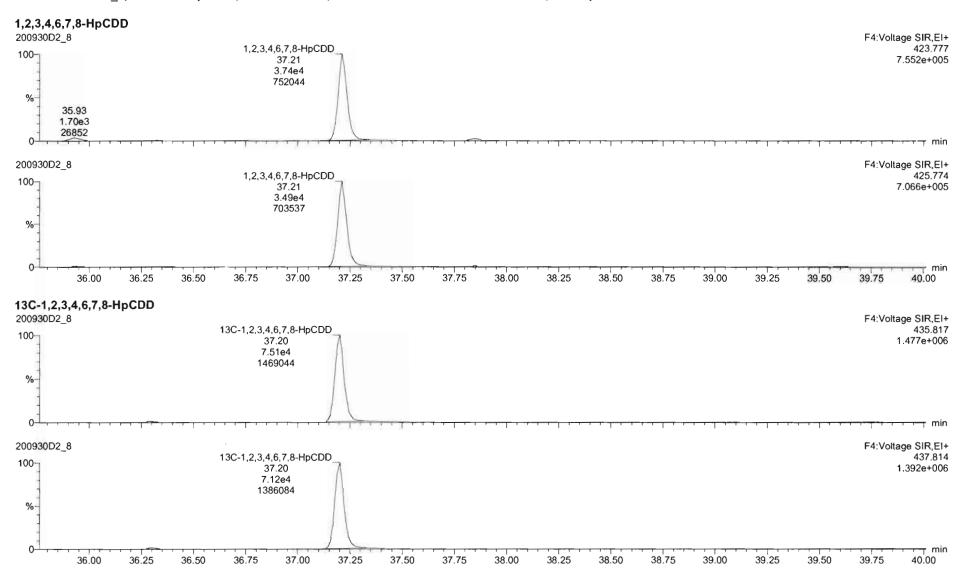
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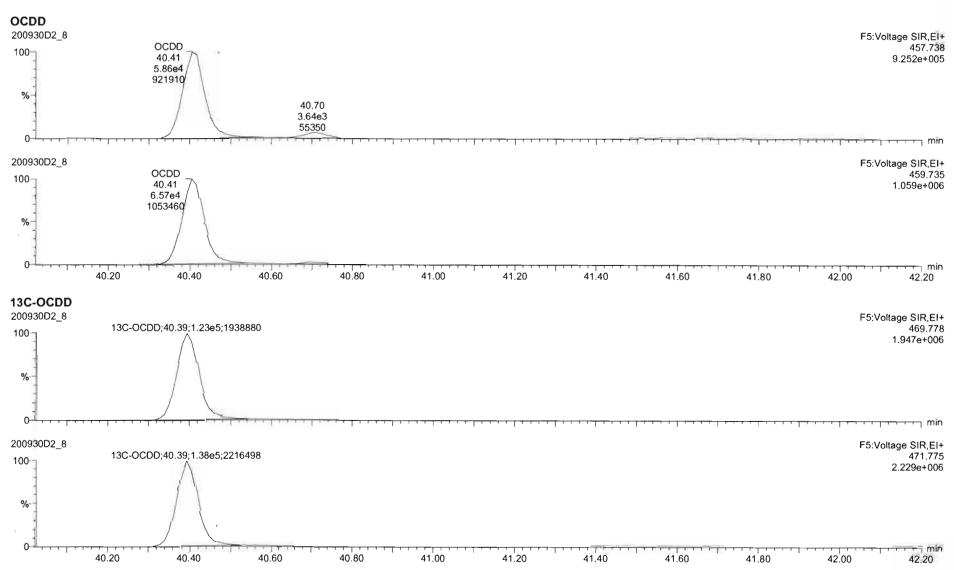


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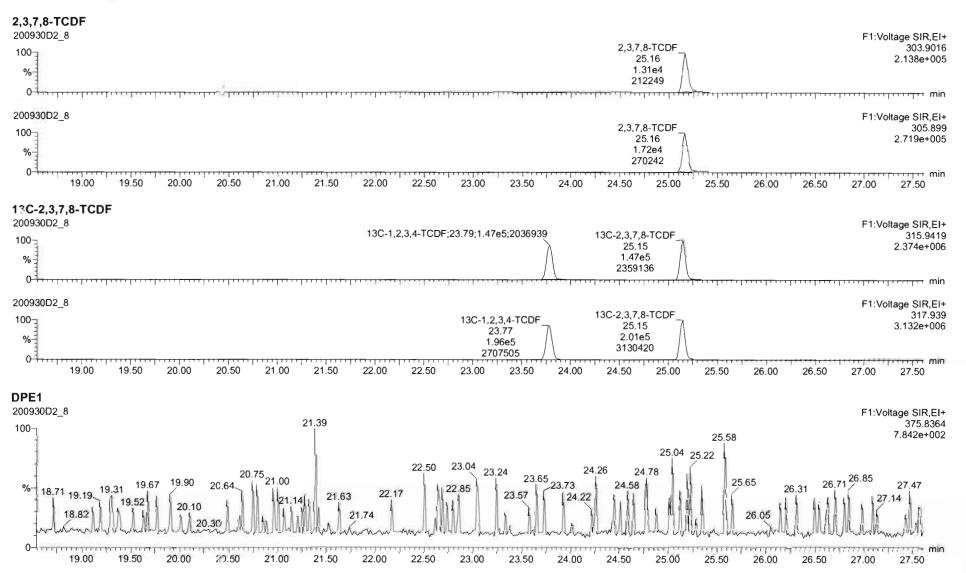
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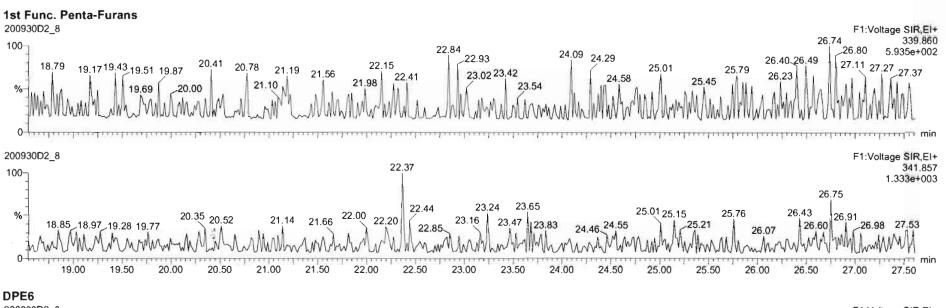
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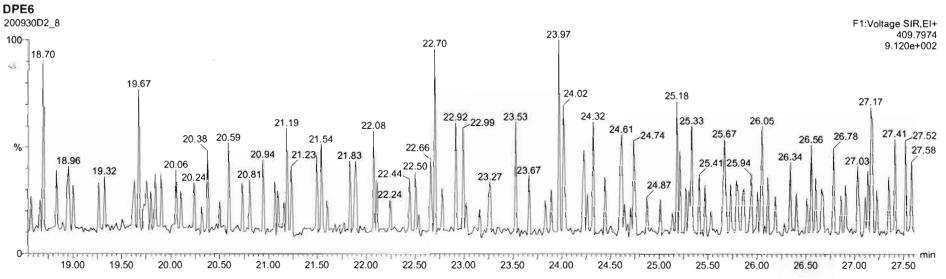
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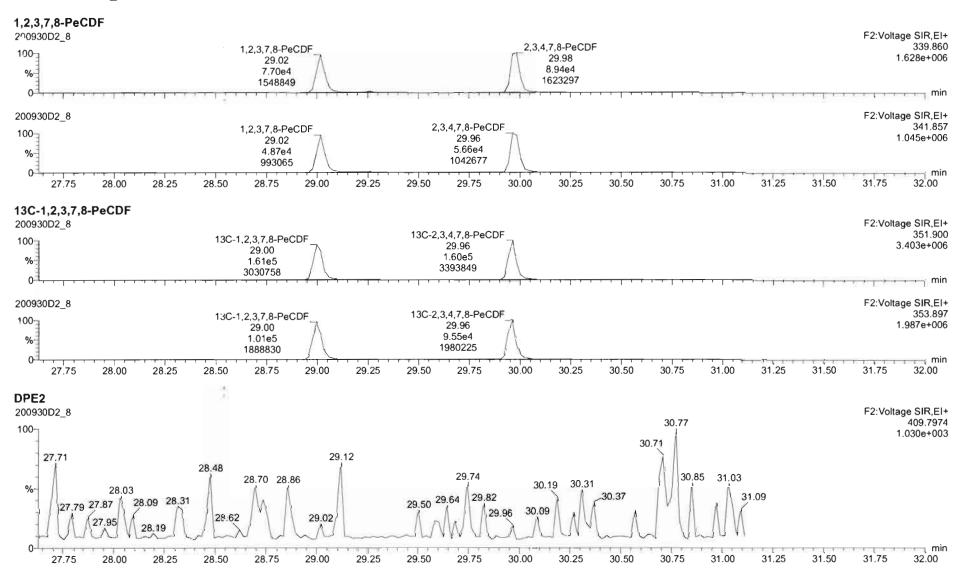
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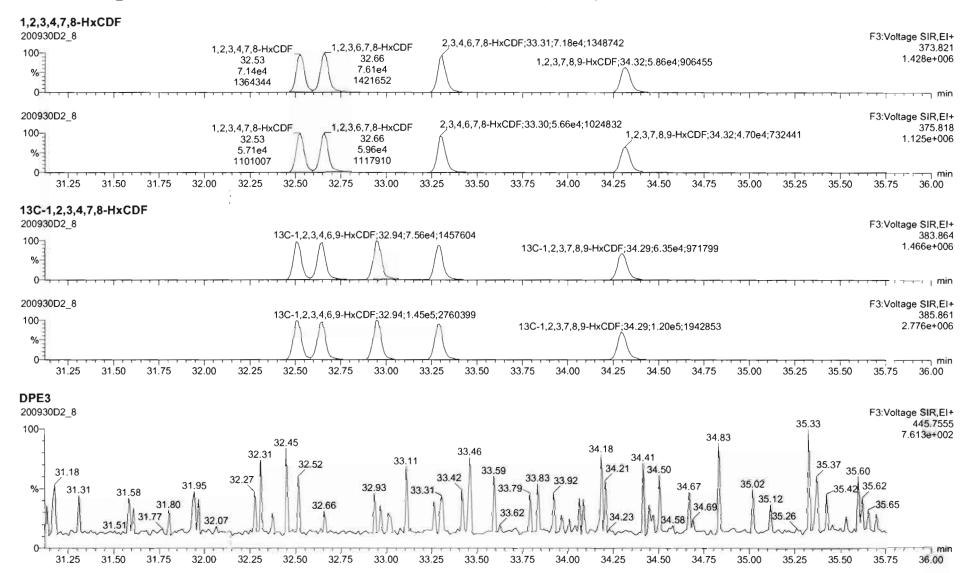
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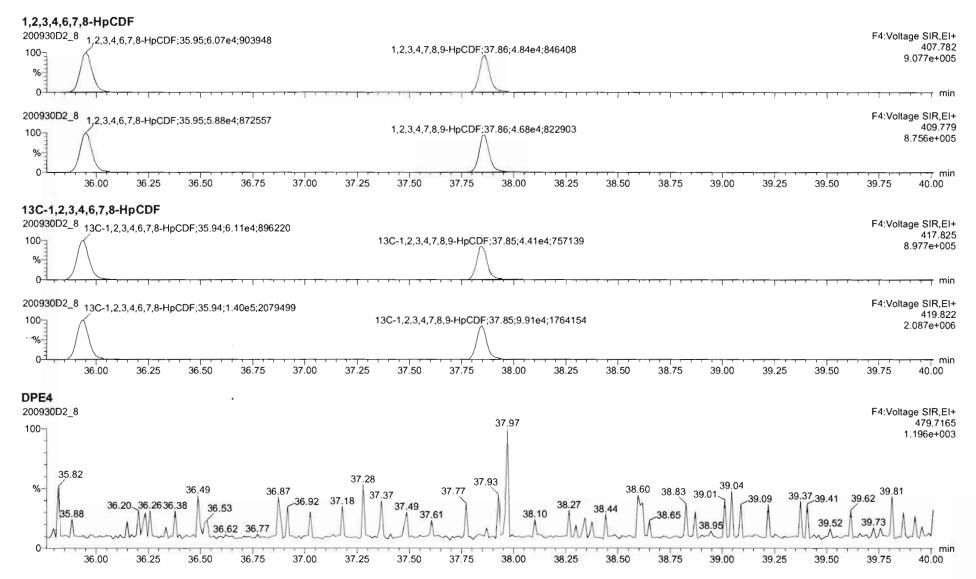
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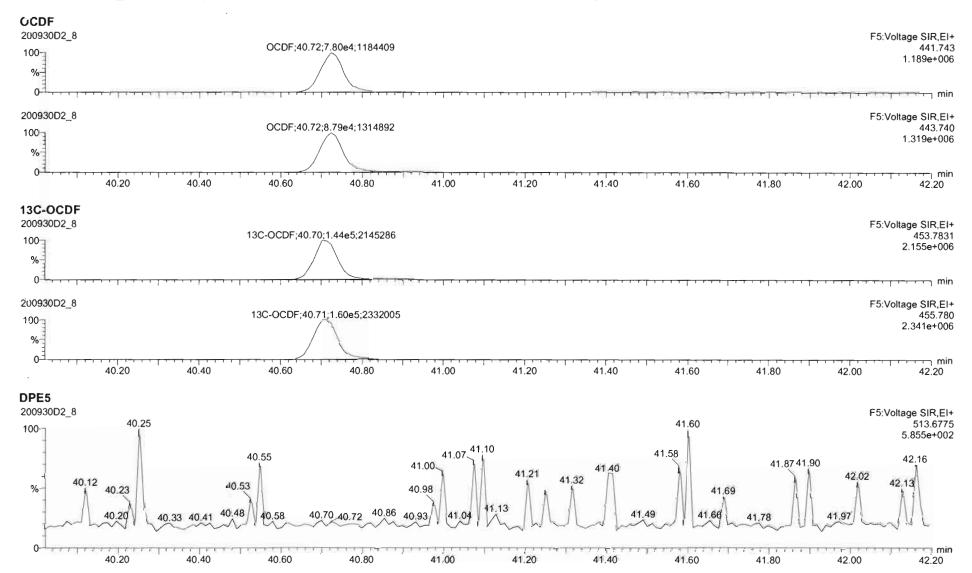


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